

## Online Supporting Information S2: Proteins in each negative pathway

Index	Proteins
Negative_1	ADO, ACTA1, DEGS2, EPHA3, EPHB4, EPHX2, EPOR, EREG, FTH1, GAD1, HTR6, IGF1R, KIR2DL4, NCR3, NME7, NOTCH1, OR10S1, OR2T33, OR56B4, OR7A10, OR8G1, PDGFC, PLCZ1, PROC, PRPS2, PTAFR, SGPP2, STMN1, VDAC3, ATP6VOA1, MAPKAPK2
Negative_2	DCC, IDS, VTN, ACTN2, AKR1B10, CACNA1A, CHIA, DAAM2, FUT5, GCLM, GNAZ, ITPA, NEU4, NTF3, OR10A3, PAPSS1, PARD3, PLOD1, RGS3, SCLY, SHC1, TNFRSF4, TP53
Negative_3	DAO, CACNA1D, HMGCS2, LAMB4, OR56A3, PRKCQ, SLC25A5
Negative_4	IL5, LHB, PGD, ADCY3, ALDH1A3, ATP13A2, BUB3, CD244, CYFIP2, EPHX2, FCER1G, FGD1, FGF4, FZD9, HSD17B7, IL6R, ITGAV, LEFTY1, LIPG, MAN1C1, MPDZ, PGM1, PGM3, PIGM, PLD1, PPP3CC, TBXAS1, TKTL2, TPH2, YWHAQ, PPP1R12A
Negative_5	HK2, MOS, TKT, TNN, B3GALT4, B3GAT3, CASP7, CDH1, CYFIP1, EFNA5, EXTL1, FCGR3B, FGF20, GSTA5, GUK1, HSD3B7, ITGB4, MCM6, MYH3, NOD1, OR10H1, OR1C1, OR1E1, OR4C11, OR56A3, PPA1, PRKAA1, PRKAB2, RDH5, SLC27A1, SLC2A4, SMPD2, STK36, THBS1, SERPINC1
Negative_6	TNR, ATP5A1, CNGB1, CX3CL1, DEGS1, DNMT3B, EFN2, FMO2, GUCY1B3, JAG2, LARS2, NUMB, PCCB, PGAM1, PLA2G1B, PLOD2, PRDX6, PRPS1, RFXANK
Negative_7	FER, MVD, PAH, ACTC1, ADCY4, ADCY8, CBR3, CLDN16, CPT1A, DDOST, DDX56, DKK1, EFN1, EPHA8, FCGR3A, GLS2, GSTM1, GZMB, HADHA, IL13RA2, KIR2DS4, KLRK1, LAMB4, LGMN, MAGI1, NUDT2, OR13A1, OR11I1, OR4D11, OR4X2, OR6K2, OR8B4, OXCT1, PIK3R4, PPM1A, PRKAG3, SELP, SPHK2, SUCLG1, TAS1R2, TAS1R3, THY1, TUBA1C, ZIC2, AASDHPPT, SERPIND1
Negative_8	MTR, ACAT2, ADCY2, ATP5D, BMPR1A, CACNA1E, CD38, CYP2A7, DDIT4, EXTL1, FCER1G, FGD3, FZD5, ITGAM, MAPK8, NR4A1, OR10V1, OR4F17, OR52D1, OR8J3, PLD1, PPA1, PSEN2, SKP1, TACR3, VNN1, CTNBP1
Negative_9	APAF1, APOA1, CARD11, CCDC6, CSF3R, CYP4F2, DAPK1, FLOT1, GSTM1, IL2, KLRK1, LARS, NGEF, OR7A17, PFN3, PIGL, POLR2E, PPCS, RAF1, SEMA3C, SULT1A4, TAS1R1, TCF7L1, TRMT11, XIAP, TNFRSF6B
Negative_10	LPL, ADORA2A, ATP6V1H, B3GALT1, CLTCL1, CNGA4, DTX3L, IL23R, IRF5, NFE2L2, OR4M1, RDH12, SEMA4F, STAT5A, THBS4
Negative_11	AGL, CBS, FUK, ACSS1, ALAS2, ASAH1, ATP2A2, CD14, CD44, CLDN17, CYP11A1, DDX23, DNMT1, EFNA4, ENPP7, EPOR, EXTL1, FLT1, GFPT1, GRIA1, HAO1, HTR2A, IFNA4, LEFTY2, MTHFD2, NCR2, OR10A2, OR1L6, OR2L3, OR51M1, OR5B12, OR5M3, OR6C1, ORC3L, PLA2G2E, PLCB2, PTCH1, TAS1R2, ULK2, ATP6VOA2, CACNA2D3
Negative_12	BID, BPNT1, CACNA1D, CXCL16, ENPP7, EPHA1, FUT4, GMPS, GRIN2C, IBSP, IL22, IL2RA, LLGL2, MAPK13, MTFMT, MTHFR, NOS3, OR56A1, PAK2, PIGU, PLCZ1, POLR3B, PTPN6, RAPGEF4, TUBA8, TUBB1, TNFRSF12A
Negative_13	EGF, LTB, ACAT2, ADCY10, CCL26, CCNB3, CLDN1, DGAT2L4, DVL1, FBP1, IFITM1, ITGAE, LAMA4, MCCC2, NEU3, NKD1, NLGN1, NT5C2, OR10H4, OR1L4, OR2A42, OR2AE1, OR2Z1, OR4K1, OR51F2, OR5AK2, OR5V1, OR9G4, PDE1C, PIAS2, PPAP2C, PPP1R1A, RBL1, ROBO1, SEMA4C, THBD, TUBA1B, B4GALNT1, HSD17B10, TNFRSF18

Negative_14	MOS, OSM, WAS, AASDH, B3GALT2, B4GALT1, CDKN2A, CLDN19, DDX50, ENTPD3, F2RL1, GALNTL4, GNA13, HIF1A, IL12RB2, NAE1, NKD1, OR1J1, OR2M4, OR9I1, PLOD1, PLXNB1, SDHC, SH3BP2, STX6, TOLLIP, TUBB2B
Negative_15	ADK, CFH, DAO, F9, MUT, ADCY5, ADH1A, ALDH1L1, CARS2, CD14, CD79A, CTBS, CYP2A7, DGKH, DUSP10, DUSP16, DUSP5, DVL2, FGF21, GALM, GNAI1, GSTA2, HADHA, IDH1, IFNK, LDHD, LFNG, LTA4H, MASP1, OR10G8, OR51G2, PAX4, PIM1, RND1, TKTL2, TLR9, TNFRSF17
Negative_16	FUK, GH1, SPN, ACSM4, CACNB1, CACNB2, CCDC6, CCR4, CDK2, CKS1B, EHHADH, FADS2, GALNT12, GRIA1, HCLS1, HIF1A, HMGCS1, HMGCS2, IL3RA, ITPA, KCNB1, MAP2K6, MAPK8, MTHFR, MYH2, NTF4, OR10A5, OR1C1, OR1J2, OR2T10, OR52L1, OR5AK2, PDE8A, PIGM, PIK3CA, PIP5K3, PLCG1, POLE, SHC1, SKIV2L2, SV2B, TJP1, TKTL1, TUBA3C, UROC1, HLA-DPA1
Negative_17	CALML6, CDKN1B, EFNA3, OR2T4
Negative_18	ME3, ACOX3, ADORA2B, AKR1C2, ALDH9A1, ATP5F1, B3GAT3, BAIAP2, BMP8A, CXCL3, CYP1B1, DHRS4L2, HADHB, IDH1, IRS1, KLRC4, MAN1A1, MAP3K4, NKX6-1, OR1Q1, OR2B6, OR2H1, OR7G3, PDE1A, PECAM1, PGAM4, PIGX, PPP2CB, PPT1, RHEB, SLC2A4, SV2C, SYNJ1, TAP1, UGCGL1, WNT7B
Negative_19	CAT, CDA, LEP, PTS, B3GNT4, BLVRB, CLDN20, COASY, COL4A2, CTNNA2, EFNA1, FGF13, GALE, GBA3, GCNT3, GSTM4, HSD17B3, IL12RB1, IL2RB, IPPK, LRDD, MYH9, NOX1, NTF3, OR14C36, OR2T2, OR4K13, OR4N4, OR56A1, PDE3B, PIP4K2A, PTGFR, QARS, SPHK2, STK3, TP73, TUBA8, TUBB2A
Negative_20	AR, C8B, CTH, IL9, ALDH1A1, ALOX5, BCL10, CACNB4, CDC25C, FOXO1, GALT, GRIN2C, GSTT1, HAP1, IDI2, IL20, NRXN1, OR10C1, OR3A1, OR4K5, OR51Q1, OR7G2, OR8D1, ORC4L, PER3, PIAS4, SPRY4, UGCGL1, YWHAZ, ATP6V1B2
Negative_21	FMO3, GSK3B, HLA-F, NPAS2, NTSR1, OR1I1, OR1L1, OR1Q1, OR52M1, P2RX4, POLD4, POLE4, STX5, TNFRSF12A
Negative_22	PC, AASDH, ACP6, ALDH7A1, ASRGL1, CCR3, CDC16, CDH2, CNGB1, COL4A6, DRD1, EFN2, EIF4E2, FARS2, FBP1, GLI3, GNAI2, GRIN2C, GUCY1B3, HA01, HNF1B, OR6C6, OR7G1, PIK3R5, PPP3CC, PRNP, RASSF5, SLC9A1, ST3GAL5, TGFBRI, WNT9A, XCL1, YARS
Negative_23	ADA, C8G, IL8, AGPAT2, AMD1, CCKAR, COMP, DAPK2, EPHA2, GYS1, OR10J5, OR10K2, OR1L6, OR51T1, OR6B3, PARD6A, PDE2A, PPARA, RAPGEF2, RHOQ, SETDB1, SMPD4
Negative_24	AGK, FH, GPT, IL4, ARRB2, ATP6AP1, B3GALT6, CASP10, CCL24, CFLAR, CYP2A6, EPHA6, FGF1, FLT4, GALC, HBEGF, HSPA8, ITGAX, KNG1, MAP3K14, MAPK1, MGST2, MTFMT, NT5C1A, OR2A25, OR2L8, OR51G2, PKMYT1, POLD4, POLR3D, PPP1R3C, PRNP, PTGS1, RAC3, RASGRP2, RPIA, RPS6KB2, SLC33A1, ST3GAL3, STAT5B, TAS1R3, TLN2, ULK1
Negative_25	CKM, PDC, ALG5, ALPL, ANAPC4, ARSD, ATP50, BDH2, BMP5, CAV2, CES1, CXCL11, DHRS4, GALE, GAMT, HSD11B2, IFNA16, IMPDH1, IRAK3, MAP2K1, MAPK1, NADSYN1, OR13F1, OR3A1, OR52A5, OR5AK2, OR5P2, PDGFD, PIGT, PIPOX, PLAT, PNPLA4, PPM1B, PPP1R3C, RND1, RRM1, SEMA4A, TPH2, USE1, WNT5A, CACNA2D2, GABARAPL2, PRICKLE2
Negative_26	ADIPOR1, ALOX12, ALOX5, ATP5J, BCL2, CALML5, CD36, CFLAR, CLDN14, CREB3L1, CXCL9, CYP19A1, DPYD, ECSIT, EGFR, EPHA6, GALNT6, GBGT1, GCLM, HCLS1, KIR2DS4, KLKB1, LDHB, LHCGR, LIPC, LMO7, MAP2K3, MPST, NCF1, NRXN2, NT5C2, OGDHL, OR1B1, OR2T34, OR2W1, OR6A2, OR8B4, PIK3CG, PKMYT1, RDH8, SLC9A1, SMAD2, SMAD7, SPCS1, TAS2R42, TUBB2A, TUBB3, UCKL1, HLA-DQB1

Negative_27	IHH, ACAT2, BTRC, CDC6, CKS1B, CNTF, CREBBP, DRD1, GAPDH, GBA3, GIT1, GSTM1, ITGA11, JAK2, MOV10L1, NCOA4, ONECUT1, OR10C1, OR10S1, OR2T2, OR4K2, OR4M1, OR6C2, OR8G1, P2RX7, PFKFB3, PGAP1, PLXNC1, PPARA, PRKAA2, PRNP, PTPN11, SETD1A, SMARCA5, STK36, TGFB3, VAV3, XCL1, PDCD1LG2, PHOSPHO1
Negative_28	DCK, ID3, IVD, AKT3, APAF1, ARPC1A, B3GALT5, BIRC2, CACNB3, CREB3, CRKL, CX3CL1, CYP3A7, DTX4, FRAT2, GCLM, GMPS, GNPAT, GSTO1, GZMB, HNF1A, MAPK12, NAGS, NEUROG3, NUDT2, OR10G2, OR1A1, OR4N5, OR51A4, OR51G2, OR9Q1, OXCT2, PI4KB, PTGS2, RFXAP, RPS6KB1, RUNX1, SHC1, SLC9A1, SHK1, SRD5A1, TNFSF18, UGT2A1, WNT16, WNT3A
Negative_29	AARS2, ACSM1, C3AR1, OR5D13, SGMS2, TNFRSF14
Negative_30	C3AR1, PIP5K1A, UGCGL2
Negative_31	C4B, ACACA, ADCY2, ADIPOQ, CCL11, CD34, DDX54, DTX3, DTX4, ELK1, HAGHL, HEMK1, INPP5B, ITGB1, JAM2, LIAS, MAPK13, MAT2B, MPDZ, MTFMT, OR5AR1, OR6C75, OR6K2, OR7G1, OXTR, PDE2A, PHGDH, PIGO, PYCR2, RALA, RRM1, SETDB2, SH2D1B, SKP1, STAT2
Negative_32	CCL20, FUT6, ITGAE, OR2B6, OR5T3, PEMT, PPA1, PPP1CB, GABARAPL2
Negative_33	ME3, TNC, BACE2, C1QA, CASP8, CCNB1, CLDN7, COQ7, CRKL, CYP2A7, CYP2C9, CYP3A5, CYSLTR2, DAD1, DVL3, GALK1, GNPAT1, HLA-DRA, IFNA10, INHBE, MAPT, MTHFD1, MYH6, OR1B1, OR2T2, OR4C16, OR5D16, PDE4B, PDGFA, PIK3R5, PRKAA2, RALA, RAPGEF1, SESN2, SLIT1, STX2, TGF3, TJP2, UGT2B10, WHSC1, WNT7A
Negative_34	F11, FAH, FUK, ACAA2, ACTB, ACVR1C, ADCY6, AGRP, ATP5E, BLNK, CCNB1, CNTNAP1, DAPK3, DHRS4, ENTPD4, EPHA6, GNPAT, GZMA, HLA-DRA, HNF4G, ITGB3, MMP9, NCOR1, OR11H4, OR2V2, PANK2, PIGK, POLE3, POLR3D, PPP2R1B, PPP2R5E, PTK2B, RAP1A, TACR1, TRADD, UGP2, UNC5D, WARSS, EIF4EBP1, KIR2DL5A
Negative_35	F11, JUN, SFN, SMO, CACNA1F, CREBBP, GAD2, OR13H1, OR8A1, PARS2, PIP5K1C, POLE4, POLR2L, POLR3B, SESN1, UGP2
Negative_36	C8G, F10, FOS, ACTN2, ARG1, C4BPA, CACNB2, CCNG2, CD226, CD3E, CD99, CHD8, CPT1C, CSF1R, CSF2, CYP21A2, DERL1, DGKB, DUSP3, EI24, FGF9, IDI2, IFNA16, IL10RA, ITGA8, KLRD1, MAD2L1, MTHFD1L, MYH11, NRXN3, NT5M, OR1M1, OR52H1, PAK2, RASA1, RDH10, SETDB1, STX5, TICAM1, TOMM40L, UGCGL1, UNC5B, YES1, ZMAT3
Negative_37	MVD, CX3CR1, METTL6, OR4D5, RBKS, RPRM, RRAS2, SLC25A5
Negative_38	LAT, ADCY3, ARPC5L, ATG12, CD46, CDKN2D, COL1A1, DEGS1, DUSP5, HRAS, IKBKE, LDHD, MAP4K2, NFYC, PLXNB3, RBL1, SPRED2, SSH3, TJP2, VAMP1
Negative_39	CS, LTB, AARS, ABLIM2, ACOX3, AGPAT1, AGRN, ALDH1A3, ALG6, AMPD3, BBOX1, CAV2, CREBBP, CYP11B2, CYP2F1, EDAR, GNAI2, HPRT1, HSD17B4, IKBKE, LDHAL6B, MYH8, MYL5, NCKAP1, NT5C1A, OR2T11, OR51B4, OR52W1, OR6X1, OR8H3, PCYT1B, PDE3B, PIGV, PLOD3, POLR2K, POLR3G, PPP1R1A, PPP2R2D, PRKACB, RBPJL, RPS6KB1, STK11, SUCLA2, TJP1, TUBB1, TUBB4, UGDH, VCAM1, SERPINC1
Negative_40	ADC, ACSL5, ACTN2, ATP5E, CHST11, EXOC7, FOXO1, FZD4, FZD7, HADHB, HIF1A, ITGAE, MARS, OR14I1, OR4K17, PDE8A, PLCE1, PMM2, SNW1, SYNJ1, WNT4, CTNNBIP1
Negative_41	CFI, CGN, FOS, MVD, RFK, ACPP, ADRA1A, ARHGEF6, CCKAR, CCR8, CD72, DUSP1, EPHA7, EXT1, FGF2, G6PD, GSTA4, HPSE, HSD11B2, HSD3B2, IFNA10, IL10, IPMK, LLGL1, MARS2, MDH2, MYH14, NCOA4, NFATC2, NRG2, OR10AG1, OR52E2, OR5L2, OR8J3, PDHA2, PPAP2A, PTPRB, RALGDS, RFX5, RPS6KA3, SDC4, TJP3, TRAF3, UNC5D, TNFRSF10B

Negative_42	C3, F12, AARS, ADCY4, ADH5, ADORA2A, ADRA1D, ALDOA, ALG3, CNGB1, CNTF R, CXCL5, CXCR4, DGKA, DGUOK, EFNB3, F2RL2, FASLG, GDF6, GMPR, GMPS, G NAQ, IFNA14, IL23R, ITGAE, MAP3K14, MMP9, NAGLU, NEFH, OCRL, OR10G4, OR6S1, PCCB, PRKAA2, PSEN2, RFX5, SC4MOL, UGCG, SUV420H1
Negative_43	AK1, BAD, AADAC, ACLY, CLDN11, DDB2, GPT2, MYH10, PFKFB4, SPTLC2, TLR 9
Negative_44	ABO, LYN, SFN, SPN, ACTG2, ADH5, ALOX15B, BACE1, CDC2, CNTF, DDX23, IL 19, INPP5E, KIR2DL2, KIR3DL2, MAP3K3, NEU4, NKX2- 2, NTRK1, OR2Y1, OR8B4, PDE9A, RALGDS, RASGRP1, ROBO1, ST8SIA5, TAS2 R3, TLR2, TNFRSF4, TUBB4, UCP1, VEGFB
Negative_45	AK1, GSR, NLK, SYK, UBC, ACSM1, ALDH5A1, ALPPL2, B3GALT1, B4GALT1, C1 QB, CCNG1, CCR6, CD28, CD46, CDC25A, CTNNA1, DAPK2, DDX55, DUSP10, DU SP3, EPHA1, ETNK2, FABP4, FLOT2, HTR5A, IFNA7, IL1B, MAFA, MDM2, NRXN 2, OR4D1, PHKA1, PLA2G6, PON3, RDH5, RFDW2, SIPA1, SMAD7, SPRY2, SRGA P3, TLR9, TSTA3, PAFAH1B3
Negative_46	APOA1, CD19, OR10P1, RAC1
Negative_47	PGD, TXK, ACSM4, ARHGEF2, ARPC5L, CACNA1A, CAMKK2, COL4A2, CSAD, E2F 3, EFNA1, GNAQ, GNPDA2, HLA- DRA, ITGB1, OR1C1, OR1E2, PIK3R5, TUBB2C, ATP6V1G1, CACNA2D1
Negative_48	LTB, ACLY, B3GALT4, CREB3L2, CYP2F1, DHRS3, EPB41, GUCY2F, HSPA1B, I L12B, LIPC, MTMR6, NFYB, OR1B1, OR1D5, OR4A16, PIGW, SARDH, UGCG2, Y KT6, B3GALNT1
Negative_49	AK3, MAX, ADCY8, BCL2L1, BST1, CXCR5, CYP2J2, IL1R2, INPP5E, LAMB2, M BL2, MYH15, MYL9, NARS2, OR13C3, RASGRF2, RASGRP1, SHC3, SPRY3, GABA RAPL2, SERPINF2
Negative_50	ID2, ACMSD, CAMKK1, CCL28, CDC45L, CYCS, DAAM2, DCTN1, DOT1L, DUSP2, ENPP3, GDF6, IL12A, LAMB4, NAMPT, NEUROD1, OR4D5, PLA2G2D, PLXNA3, P OLR2D, PPAP2B, PRKAB2, PRKACA, PRKAR1B, PTPRJ, RDH8, SETD1B, TNFSF1 4, TUBB2B, VASP
Negative_51	GLS, ALDH4A1, ALOX15, ATP2A3, CPT2, CYBA, ELK4, FABP4, HADHB, IL8RB, IMPA1, ITGA6, NLGN3, NT5M, OR2L3, OR52R1, OR6B2, P2RX6, PGK2, PRKACB , PRODH2, YARS2, TNFRSF6B
Negative_52	CD4, CGN, FAS, PRL, ALDH4A1, ANAPC1, APOA1, ASS1, C5AR1, CPT1C, CXCL2 , DKK4, EFNA5, FZD10, NAGA, OR52E2, OR52W1, OR5M8, OR7D4, PDE2A, PON1 , PYCR1, RELA, RPSA, TAS2R16, TRMT11, UPRT, VAV3, VEGFB, ZFYVE16, ATP 6V1G3
Negative_53	IL9, ADCY1, AKR1C4, ATP2A2, BAAT, CLDN9, FMO1, GNAZ, IL10, IL2RG, IMP DH2, NME7, OR1L6, OR1N1, OR4F15, OR6C2, PLXNA3, PPOX, RDH10, ROBO3, S EPHS1, ST8SIA1, TUBB1, UGP2, HSD17B12, PLA2G12B
Negative_54	EZR, CSNK1G3, GLUL, PIGL, SEMA3D, STX18
Negative_55	ADH4, CSNK2B, DTX1, KNG1, PIK3C2G, TYMP
Negative_56	F5, SMO, CCDC6, CSF2, DFFA, HAGH, IL15, LRRC4C, MAOB, NCF4, OR10AD1, O R2K2, OR2Z1, PHPT1, PPARG, RAB23, RAP1B, SC5DL, ATP6V1B1, SERPINC1, SERPINE1
Negative_57	FES, MPZ, VCL, ABCC8, ALOX15, ASCC3, ATP5I, BMPR2, CPS1, CYP27A1, DHF R, DTX1, EFNA5, GALNT1, GCLC, GFAP, GNA12, GSTA3, HLA- F, HNF1A, IFNK, IRS4, NFE2L2, NUDT5, OR2M5, OR5B12, OR5D13, OR5R1, OR 8B4, PIGT, SOCS3, TAP2, TNFRSF18
Negative_58	HPD, AK3L1, ANAPC4, ATP2A1, DNMT3L, DVL2, ENO3, GALNS, GLB1, GLI1, IF NW1, IL6ST, LARS2, MYL2, OR5B21, RRM1, SDHB, TKTL2, TUBA1C, TUBB3
Negative_59	OGT, ARR2, ATF4, CACNG4, DGKB, ENPP7, FZD1, IL11, LCMT2, MAD1L1, OR1 3G1, OR2L13, OR2M3, PFKFB1, RPS6KA5, SPP1, TRAF6, YWHAQ

Negative_60	IL9, ALPP, APLP1, ARRB2, ATIC, CSNK2B, CYBA, CYP2E1, ENTPD4, HSD17B8, ITGA2B, MAP3K4, MGST1, OR2AG1, PAK2, POLR2I, POLR2J, POLR3K, PTPRB, SIGLEC1, SYNJ2, TACR2, TBL1XR1, TDO2, TUBA8, UROC1, VAMP1, ST6GALNAC4
Negative_61	GLO1, HLCS, ORC2L, PAK1, PPP1CA, PYCR1, STX8
Negative_62	CD2, HK2, MPZ, ACP5, ACTN2, AGPAT2, AKT3, ALDH9A1, ATP5G1, B3GNT4, CD3E, CDK5, CLDN11, COQ3, CREB3, F11R, FABP1, GMPPA, GNPAT1, HSD17B1, IQGAP3, ITGAD, LAMA4, LAMB1, LPAR1, MAD1L1, MAP3K4, MCM3, MCM5, MGAT1, MMP7, OR13J1, OR2K2, OR52K2, OR52R1, OR6K6, OR9A2, P2RX2, PDPK1, POLE4, PTGDS, RRM1, SCLY, SETD7, SMC1A, SULT1A4, YOD1, TNFRSF10B
Negative_63	AK1, DCN, MAG, ATP2A1, B4GALT3, CALML6, CCNB2, CD226, CDKN1B, CLDN22, CSF2RA, CYP2A13, DAD1, DGKB, DGUOK, GANC, GNAI3, GNAQ, GNMT, GSTM2, H6PD, HNF1B, IKBKG, IL2RB, LFNG, MECR, MTMR1, OR7A10, SH3BP2, WNT8A, PLA2G12A
Negative_64	BAD, ADCY10, ARPC4, ARRB1, CUL1, CYP11B2, CYP2D6, DDOST, E2F4, IDH3G, IFNA7, LAMA4, LIMK1, NFASC, NT5C2, OR10J3, OR2A14, OR51B5, OR52J3, OR5AR1, PGM2, ROCK1, TP73, WNT9A, AASDHPPT, ATP6V0E1, TNFRSF12A
Negative_65	ATP5J, FGF2, KIR2DL2, PDGFD, TRAF2
Negative_66	EBP, AACS, CAV3, CCND1, DNMT1, HSD17B4, IL28A, KIR2DL4, NNMT, OR6S1, PDE7A, PFKFB3, PHGDH, PLIN, PTDSS1, RDH16, SGMS1, SPCS3
Negative_67	ATM, GDA, JUP, ADAM17, APPL1, BDH2, COMP, CYP2S1, DGKG, DVL3, EFNB1, HEMK1, IQGAP1, LAMB3, NMNAT2, OCRL, OGDHL, OR1B1, OR6B2, OR9Q1, ORC1L, PDE6G, PDE8A, PRKACA, RIPK1, THY1
Negative_68	EGF, IL5, PTS, TXK, VTN, ABL2, ACADVL, ALG1, BIRC2, CHRM5, CNDP1, CRHR1, DDIT4, DDX18, DGKH, EIF4B, ENO3, FGF1, GRIN1, GRIN2C, HCCS, HLA-DOB, HSD17B8, HTR2A, KCNJ11, LIAS, MMP14, NFKBIB, NGEF, NLGN1, OR3A1, ORC1L, PDE10A, PIGP, PRKCB, PTGIS, RPS6KA5, SDHB, SEMA4C, SMAD9, SPRED2, SQLE, SRD5A1, SSH1, SUCLG2, TGFA, HLA-DPA1
Negative_69	ADC, EGF, ADCY3, ADCY8, AGPAT2, ALPP, AMY2B, APBB1, ARNT2, CACNG8, CCL3, CD44, CD82, CLDN11, CNTNAP2, DAXX, DERA, DGKB, DLL3, DOLPP1, DUSP16, ENAH, GAD2, GFPT2, HLA-DOB, HSD17B2, IL18R1, ITGAE, NCF4, NCKAP1, OR10H2, OR1L8, PDE4A, PIP4K2C, POLR2H, RALB, SOD1, SORBS1, TLR3, USE1, WNT6, XCR1, ZNRD1
Negative_70	CFH, NGF, PLG, TH, ABAT, ACP6, ACTG2, AQP7, BCL10, C1QA, CASP7, CCL11, CD244, DFFB, DHX58, DPYSL2, EIF4E, EPHA3, FARSB, FOXO3, GART, GCDH, GCNT4, GLG1, GPAM, GUCA1A, HLCS, KCNQ1, MAP2K2, MAPK12, MTMR2, NCK2, NFYB, NME6, NOX1, OR4S2, PIK3R5, PIM2, PKMYT1, PSPH, SKP1, SPI1, TAS2R48, TPH1, VAV1, CACNA2D4, PPP1R12A, TNFRSF18, TNFSF13B
Negative_71	AUH, OGT, PTS, SRF, ALDH3A2, ARAF, FGF9, GARS, INPP4B, IRAK3, LAMB1, NADSYN1, ORC5L, OSMR, PGAM1, PRKAR1B, ROCK2, TIRAP, TRIP10, SUV420H1
Negative_72	ADK, DBT, IL2, XDH, ACTG1, ARNT2, ATP5L, BET1L, CYP2A13, CYP2D6, EFNA1, EPHA5, IL3RA, IL7R, NAT6, NODAL, OR52H1, OR5D14, PARD6A, PHKG1, POLE, POLR2E, SEMA4G
Negative_73	LPL, BACE2, BIRC5, CCL20, COMP, GJD2, GRIN2D, IL28A, IL8RB, LCP2, LPAR1, NANP, NT5C3, PPP2R5A, TRADD
Negative_74	C8G, FAS, HK2, ACSS1, ALAS1, BMP6, CACNG7, CDS1, CLDN8, CSF2RB, CTNNA2, CX3CR1, GALNTL2, GPX7, GRIN2B, IL1R1, ITGB4, ITPKA, KDSR, MAN2A1, MEF2C, NFATC4, NLGN1, NRG4, OR10A2, OR9G4, PFKP, PLOD3, PTK2B, RDH16, SEMA4B, THBS4
Negative_75	ME1, CAV2, CCR8, FOXA3, IFNA17, IL2RG, LGMN, OR2T4, OR51M1, PAICS, PLXNB3, SC4MOL, SEMA4C, SESN3, TAS1R2, ULK3
Negative_76	ADCY6, ADCY9, AHCYL1, AKR1D1, AMY2A, BIRC3, C4BPA, CDH1, CPOX, CYP1A2, DRD1, DUSP14, FGF18, FTCD, GRIN2A, KCNJ11, KIR3DL1, MLYCD, MTMR6, OR13A1, PIP5K3, PRKAB1, SEMA3B, SOCS1

Negative_77	UBB, ACSL4, CSF1, CYP2A13, EPHB1, FGF10, HCST, IKBKB, IL28A, ITGB1, K LRC4, LAMB4, MAP3K6, OR5A2, OR5F1, OR8J3, PDX1, PGLS, PLXNA2, SLC25A 4, TJP1, TNFRSF1A
Negative_78	DDC, F2, GSN, AANAT, ACSL4, ACSM3, AGPAT3, APOA5, ASPA, CFL1, CHR1, CS DA, CYCS, DDX47, FGF1, FOXO1, GALT, HAO2, HEXB, HLA- G, IFNGR2, IL2RA, IMPDH2, LCP2, LDHAL6A, NR5A2, OR4X1, OR5M8, OR6C75 , OR9G1, PDE4B, PDE6G, PECAM1, PEMT, PIGH, PLAUR, POLR2I, PPCDC, PRKA R1A, RDH12, SORD, STX18, SUFU, TAS2R9, TRAF2, WNT1
Negative_79	C9, CKB, DCC, GP5, MET, OGT, ACVR2B, ADCY5, ADH7, ADRA1A, ALPL, ANAPC4 , ATP5L, BACE2, BIRC3, BST1, CDH15, CDK7, CHPF, COL11A1, DGKZ, FRAP1, GALNT3, IL13RA1, IL7R, KIR3DL3, LLGL1, MCM2, MTMR6, NAMPT, OR2A2, OR 4A15, OR4K15, OR4K2, OR51B2, OR52H1, PARVB, PCNA, PDGFB, PDHA2, PIGV , PTPRC, RPS6KA2, SEMA3G, SEPHS1, TGFB3, TJP2, WNT3A, ATP6V1G2
Negative_80	ATP2A1, ATP6AP1, BBC3, BCL10, CCL23, CLDN15, CNTNAP1, ERBB4, EXT1, F ZD6, NEFH, PFKFB1, PTGER3, PYGB, RXRA
Negative_81	MAT2B, MCAT, SULT1A1, TAS2R7
Negative_82	CAT, HYI, OTC, PTS, ADCY6, AMPD1, ARPC3, CARS2, CXCL2, CXCR5, DGKI, GN PDA1, IQGAP1, SELP, SRGAP3, UCKL1, UPP2, WWP1, SERPINE1, TNFRSF10A
Negative_83	SRM, ACVR2A, ATP5D, B3GALT1, C1QC, C3AR1, CACNG3, CD27, CLTA, CNTF, C NTNAP2, CTSB, DEGS1, DHRS9, GLDC, IL15RA, IL28A, MGAT5, MYH2, OR10J5 , OR13G1, OR2A2, OR2C3, OR4K17, OR51S1, OR6C2, OR8H3, OXCT2, PCYT1A, PERP, PLA2G5, PLCD1, PRPS2, RRM1, SEMA3G, SHMT1, STX6, CACNA2D1, MAP KAPK3
Negative_84	ABLIM1, ARPC5, ATP5A1, ATP5E, CNTNAP1, CYCS, ERBB2, HNF4G, ITGA3, MA P4K1, MCCC1, OR10H1, OR2G6, POLR2K, PTAFR, RALA, TSC2, XCL2, PNLIPRP 2
Negative_85	GP9, AARS2, ACTN1, ASS1, ATP5F1, BMP5, C4BPB, CCNB1, CD22, CDC42, CES 2, COASY, COL6A2, CXCL9, CYP27A1, CYP2C9, EFNA1, EGLN3, EPHA6, FGF2, FZD3, GALNT5, GGT7, GNB1, HLA- DOA, IKBKB, IL22RA2, KAT2B, LTA4H, NFKBIB, NTN1, OR4E2, OR5B3, P2RX1 , PAFAH2, PAK6, PCK2, PERP, PLCG2, PPID, SEMA4D, SESN3, SGPP1, SOCS7, SPHK2, SPTLC2, STAT2, VARS
Negative_86	ME2, ACAA2, APOE, CARD11, CMBL, DCXR, GNG12, KITLG, MCM5, NOTCH3, PIG L, POMC, PPP1R3D, PRKX, PTK2B, RASGRP4, SHC3, SMARCA5, SOAT2, STX7, T AS2R1, CACNA2D4, SERPIND1
Negative_87	MVD, BMP2, CCL5, CCR5, DERA, ENTPD5, F13A1, FARP2, GLB1, GNRHR, GSTM1 , IFNA4, IFNAR2, MGLL, MYL7, NFX1, NOX1, OR2F1, OR4C13, OR52N2, OR5A2 , OR5K1, PIK3C2A, PMVK, POLR2D, PPOX, PRIM1, PRKAA1, PRKG1, RARS2, RG S3, SPRY3, ST8SIA5, TNXB
Negative_88	CD01, DGKD, LTC4S, SGPP1, TNFRSF9
Negative_89	CR2, MOS, ABLIM3, ADSSL1, ALPP, ATP5H, BCAT2, BTRC, CCR6, CCR9, CDH1, CYP2E1, DDX51, DFFB, DGKA, DGKD, DLAT, FPGT, GALNT2, GJD2, GLI2, GPAM , HEMK1, HMGCL, IL9R, IMPA2, MGLL, NFKBIA, OR5AR1, PANK1, PDGFRB, PIK 3R1, PLAUR, PLXNB3, RASGRP3, ROBO1, SPRY4, SV2A, TGFB3, TIAM1
Negative_90	C8B, CDA, GPT, LAT, LEP, AADAT, ACSL1, ARPC5L, BBC3, C3AR1, CHR1, CIIT A, CKMT2, COL4A2, CPT1A, CRHR1, CSNK1A1, CYP2U1, CYP8B1, EGLN1, GALM , GALNS, GDF7, GZMB, HGSNAT, ITGA6, JAK1, KLKB1, MAP3K13, MGST3, MRAS , MS4A2, MTHFD1, MYL9, NFATC2, OR2B6, OR8I2, PDCD1, PIGO, PIP4K2B, PL CB3, PPP2R5B, PRKCA, PYGB, PYGM, SARS, TUBA3C, YOD1, SERPINB5

Negative_91	GNS, NGF, AANAT, AARS, ABL2, ACVR1, ACVRL1, ALG12, AMY2B, ARSE, ATP4A, CACNG7, CFTR, CHEK1, CSDA, CSNK2B, DAPK3, DLL1, EFNA1, ETNK1, GMPs, GRIN1, IL19, NADK, NFKBIA, OR11H1, OR14C36, OR1A1, OR2T12, OR4K1, OR4S2, OR51A4, OR51I1, OR52E2, OR56B4, PDGFB, PER1, PIAS1, PIGU, PNPLA4, POLR2G, PPP2R5A, RASA1, RUNX1T1, TAS2R48, TD02, TFPI, MAPKAPK5, PFAH1B3
Negative_92	ID3, TAT, TNC, ACTG1, ADSS, ALDH2, BNIP1, CYP11B1, CYP4A11, DDX47, DUSP7, DUSP9, E2F5, EDNRB, ENTPD2, FGF22, GAL3ST1, GALNT9, GNA12, GNPNAT1, GSTM4, GUCA1B, HPRT1, INPP5A, JAK2, LDHC, LIPA, LRDD, MAPK10, MGAT1, NR4A1, NRP1, OR10T2, OR2M5, OR4N4, OR51T1, OR56B4, OR6M1, PFAS, PLXNA1, PPP1R3D, PTPRJ, RASGRP2, SNAP23, UGCGL2, ULK1, UPB1, ZIC2
Negative_93	AR, CKM, HYI, STS, ACO2, ADCY9, ADH1B, ALAS2, ATP5C1, ATP6V1D, AXIN2, B3GAT3, BBC3, CCND1, CHRM3, CLDN5, COMT, CSF2RA, CYP3A7, DBF4, DDX19A, EIF4E2, ETS1, EVI1, FBXW11, GLG1, GNMT, GRIN2A, GSTA1, INHBA, IRF3, MAN1A2, MEF2C, NAGS, OR10G9, OR11A1, OR2W1, OR4K1, OR5I1, OXCT1, SC5, SDHA, TNFRSF4, UCKL1, WEE1, SUV420H2
Negative_94	CGN, GCK, GSN, TPR, ACAD8, AOC3, CNTFR, CNTNAP1, FGFR4, FZD1, HNF4A, HSD17B3, IL29, MTHFS, MYH9, OR10H1, OR1K1, OR4K15, OR4M1, OR5D16, OR6A2, OR6C3, OR8B4, OR8D1, PLAUR, PSEN1, SCP2, TMLHE, UCK2, WNT7A, WWP2, XCL2, ZNRD1, MAPK8IP1
Negative_95	ADC, CBS, TK1, ACADVL, ALDH1A2, APAF1, C5AR1, CCNG1, CDC25A, CLDN1, CTF1, CYFIP1, CYP3A7, FBP2, GBE1, GCNT2, GRM1, IARS2, IL28A, NEFH, NUDT2, OR2A2, OR2B2, OR4K15, OR5I1, OR6F1, OR9Q1, PIP5K3, PSENE1, PTPN1, RXRA, SARDH, SPTLC1, SSH2, TD02, TLR2, TUBB, ATP6V1G3, HLA-DQB1
Negative_96	IL4, LCK, LTB, ADSS, ADSSL1, ALG5, ASNS, C3AR1, C5AR1, CCL25, CTNNA3, EFNB1, EXTL2, FABP3, FARSA, FGF10, FRAT2, GIT1, GPX7, GRB2, HNF1B, IL28B, ITGAE, LCAT, MAP3K6, MAPK3, NKD1, NKX3-1, NR4A1, OR10Z1, OR1D5, OR2B6, OR2T33, OR52A5, OR9Q2, PCYT2, PDE11A, PIK3C2A, PON3, PRKACA, PRKCQ, SARS2, SHMT2, SLIT1, SPCS1, SRGAP2, SSH2, TAS2R1, WASF2
Negative_97	BTK, GDA, PLG, TK1, AKR1C3, ALG1, ATP5D, CD28, CSNK1G2, EXTL3, FCGR3A, GANAB, OR2L3, OR9G1, PTGER3, SLC25A5, B3GALNT1, PRICKLE1
Negative_98	ME1, ALDH9A1, DPYSL2, FABP1, GARS, LIPE, OR13H1, OR1I1, OR5AC2, SERPINA1
Negative_99	AK3, TPR, ADRB1, AGPAT4, ATP5F1, B3GNT5, CASP6, CDH5, CDKN1A, CSF2RB, FPGT, FRAP1, GALNTL4, HLA-C, IL17B, IL19, LRP5, MAP4K2, METTL6, MYH4, OR2H1, OR6K6, P2RX1, PDHA1, POLE2, PPP1R1A, PPP1R3C, PTCH1, PTK2, RPIA, SLC25A6, STAT4, STAT5A, TRAF3, VAV2
Negative_100	C1S, EGF, GBA, MAG, RDX, TNF, AARS2, ABAT, ABL2, ALAS2, CCL7, CER1, COQ5, CPOX, CYFIP1, CYP19A1, DHCR24, DUSP14, GGT6, GGT7, GUK1, GZMB, HLA-DOB, IL20RB, IL8RB, LRRC4C, MAD2L1, MAP2K4, MARS, MGAT4A, MINPP1, NLGN2, NT5E, OR2M4, OR9K2, PDE3B, PDGFRA, PHGDH, PLA2G3, PPAT, SRD5A2, THBS2, XIAP, SERPINA1
Negative_101	LPL, LTB, NOG, ABL2, ACSM5, ACVRL1, AMDHD2, B4GALT4, BMP8B, CCL2, CCL27, CDIPT, CFLAR, CLDN17, CREB3L3, CTNNA3, EFNB1, FZD6, FZR1, GALNT13, H6PD, HA02, IDI2, LIMK2, LTBR, MAOB, MGAT1, MLYCD, MPZL1, MYH10, NRXN1, NUDT12, OR6C2, PCNA, PLA2G3, PMVK, RPN2, SETDB1, ST6GAL1, SUV39H1, TAS2R49, TLR4
Negative_102	HGF, HK1, ACAA1, ACSM2A, ACVRL1, ATP5J, CACNG1, CFTR, CSAD, DHDDS, EIF4B, FARSB, FCGR3A, HSD17B3, IL20, IRS1, ITPKB, JAM2, KIR2DL1, KLRD1, NCOR1, NFKB2, NKD2, NLGN1, OR2M4, SLC2A1, SLC33A1, ATP6V0A2

Negative_103	GNE, PRL, ACAA2, CACNA1S, CDK7, CES7, CHST11, DGKG, ETS1, FTH1, FZD6, GUCA1B, HIP1, IFNA21, IL22RA2, NFATC1, OCRL, OR2T6, PARD6A, PIAS1, P OLR2H, POLR3A, PYCR1, RPS6KB1, SGMS2, ST6GAL1, UBE2L6, WASF3, XYLT1
Negative_104	GSN, ATP5H, ATP6VOB, CD19, CERK, ELK4, ESPL1, GRPR, GSTM4, OR2S2, OR6 C75, PIGO, PTGIS, PTGS1, SDC4, PLA2G12B
Negative_105	CR2, DCT, GBA, ADRB3, CCL5, CHKA, CHST12, CLDN14, CTBP2, CXCL2, CXXC4 , CYP11B2, DHODH, EFNA4, HSD11B2, IFNA14, IQGAP3, MKNK1, OR10R2, OR2 G3, OR2T8, POLR1C, POLR2D, PPP2R2C, RUNX1, SARS, SMC1A, SSX2IP, SUCL G1, TDO2, TGFBR1, TICAM1, UROC1, YKT6, GABARAPL2
Negative_106	TEC, ACADM, ACYP2, ATP2A1, CACNG5, CBR3, CDS2, CFTR, CTSS, DHRS4L2, F GF19, IARS2, ICOS, LPAR1, NME4, OR13H1, OR2T33, OR4C16, PDE7B, POLD1 , POLR2K, PRKAR1B, PTGS2, RAB5A, TSC2, UCP1, UPP2, WNT2B
Negative_107	ALDOC, BIRC2, C9orf95, CDC25C, FZD7, OR56A4, PAX6, PRKACG
Negative_108	ACYP2, ATP6VOC, B3GALT4, CACNA1S, CD72, CREB3, CYP2C8, ENPP1, FGF18 , GLI1, GNAS, GPD1L, HAGH, HRH1, HSD17B7, IL8RA, INPP5E, ITGA8, JAM2, MAD2L2, MAN2A1, OR11G2, OR2M7, PANK3, PDE5A, POLR1C, RBPJ, SLC33A1, SPAM1, STAT3, TAS2R49, TGDS, TRAF1, TUBA8, WNT8B
Negative_109	C5AR1, CD19, CD8A, COL2A1, CYP3A7, GAMT, MAP2K5, OR2T2, OR4S1, OR51A 4, OR5L2, P4HA1, PMAIP1, PON1, PTCH2, SGMS2, SLC25A6, TNFSF10, TUBB2 A, YARS, GABARAPL1
Negative_110	DUT, ID2, ACSM5, ALDH2, ATP5J2, B3GALT1, B4GALT6, CCL24, CCR4, CDC42 , CYCS, CYP1B1, DTX3L, EDN1, GDF5, GFAP, GMPR2, GPX7, GSTM4, HSPB1, IL 1RAP, IL2RG, IPPK, ITGA8, MAD2L1, MAN2A1, MGAT5, NMNAT3, NOX3, OR4F1 7, OR51I2, OR5F1, OR8B8, PGAM2, PHGDH, PLCG1, POLR2I, PPA2, SETMAR, S MARCA5, SOCS7, SPTLC2, TYROBP, YWHAZ
Negative_111	CP, HPD, ALOX15, CARS2, CUL1, EPHB2, F13B, GAMT, GNG3, MGAT1, MMP9, OR 12D3, OR52E6, OR8B8, ORC5L, PLTP, RBPJ, SLC33A1, SMURF2, TBXA2R, TUB A1C, CSGALNACT1
Negative_112	BACE2, CNTN1, MAOB, NTF4
Negative_113	LEP, ATP6V1H, BCL10, CACNB4, CCL19, CCR1, CDKN2A, CHST12, CXCL12, CX CR3, DUSP3, ENTPD1, GRPR, GUCA1A, HMGCL, MAP3K11, MAP3K2, MCCC1, MGA T5, NRXN2, OR6M1, PDHA1, PIK3R1, PPP2R5D, PSEN1, RAD51, SEMA4F, TFDP 1, TICAM2, ULK2, WARS, WBSR17
Negative_114	PML, STS, ABLIM3, ARSB, ASNS, CANT1, CCL13, CHKA, CREB1, CX3CL1, CXCL 12, GALNTL4, GBE1, GUCY2C, LAMB1, OR13D1, PFKFB1, RDH16, RPN2, SRD5A 1, HLA-DRB3
Negative_115	BAX, BTK, CTH, FUK, GDA, SYK, ARHGEF4, CDH1, CLDN11, CLDN22, CYFIP1, D HCR24, DUSP10, FZD6, IGSF5, MAGI2, PGAM2, PHKG2, PIP5K1B, PKMYT1, RA RS2, SAT1, SEMA3A, SREBF1, SRGAP1, TAS2R8, TICAM1, ZIC2, CACNA2D3
Negative_116	ID3, PLN, CMPK1, CNTNAP1, CSNK1G2, EPB41L3, EREG, GRB2, IFNB1, MGST3 , NAT5, OR1J2, OR2T34, OR52N4, PLA2G1B, PMM1, POLA1, PRKAG1, RPS6KA6 , SCIN, TCIRG1, THBS3, TNFSF12, TRIP10, UGT2B28
Negative_117	ACP5, ACY1, ALG10, ALG8, CCL24, CHUK, COL5A2, CREB3L2, CTBP2, GNAI3, GUCY2C, KIR2DL2, LAMB3, MAPK8, MINPP1, OR10G7, OR2D3, OR5L1, OR8B4, PLCE1, PPP5C, PSPH, RFWD2, ZNRD1
Negative_118	CR1, EGF, ACSM5, ATP5G2, CDK2, DDX19A, FABP1, IFNA17, IL18RAP, IL21, LTA4H, MAPK11, OR4F17, PDGFA, PDHB, PPAP2B, SCIN, SKP2, TUBA1C, TNFR SF11A
Negative_119	ADA, CADM3, COL4A6, CYP17A1, CYP19A1, ESAM, GALNT12, GRIN1, HSD3B7, OR2T12, OR51B6, OR6N1, OR9Q1, PARS2, RRM2B, SLC2A1, SPTAN1
Negative_120	GBA, ILK, VTN, AASDH, ADCY3, ALDH1A2, ATP5D, CCNG1, CCR4, CMPK2, DUSP 1, EPHB6, FDFT1, FUT8, GSTM5, IFNK, MAP3K3, NAGA, OR4M1, OR5K1, PDXK, RBPJL, RPIA, SARS, SLC2A4, ZFYVE16, TNFRSF18



Negative_121	MYC, ACTN4, ACVR2B, ADCY2, ANAPC5, BMP8B, C5AR1, COL5A2, COQ7, DTX3L, E2F5, EFNB2, FZD5, GNAI2, IL9R, KNG1, MAP3K14, MCCC1, NOD1, NT5C1B, NTF4, OR4A5, OR52E8, PER2, PITX2, PRDX6, RAP1B, SIAH1, TNFSF11, VAV2, PNLIPRP2, TNFRSF18
Negative_122	MIF, ACADM, AKR1C1, ATP2A3, CDIPT, CES7, CHIT1, CHRNA7, CXCL16, DHDH, EPOR, FGF22, FGFR3, GAMT, GCNT4, GMPPB, IFIH1, IL1B, LDHB, MYLK3, NARS2, NCAM1, ODC1, OR2T34, OR5I1, P2RX6, PAK4, PAK7, PANK2, PDE1B, PER1, PLA2G2F, PLCD3, PLCZ1, RDH8, SELE, SEMA3E, SH2D2A, SMAD9, STK36, UCP1, WNT3, PPP1R12A, TNFRSF10B
Negative_123	TNC, ADCY2, ADRBK2, ARG2, ARNT, ARPC3, BMPR1B, BRAF, CCR10, CD80, CFL2, CYP2D6, DHCR7, DPM3, EXT1, FGF13, HLCS, IRAK4, IRS2, KIR3DL3, KITLG, LDHAL6A, MCAT, NAT1, OR1A1, OR1J1, OR2D2, OR4K1, ORC6L, PCNA, PCYT2, PDE6H, PFKFB1, PIPOX, RAP1B, SHISA5, TACR2, ALDH18A1
Negative_124	CFH, ACTB, AFMID, AHCY, ALDH3A1, ALG8, CACNA1I, CLTCL1, COL5A1, CYP2D6, DIAPH2, EFNB2, ENTPD8, FUT6, GALK1, GDE1, GUCA1C, KCNJ11, LAMB2, MAN1A1, MAOB, MAP2K6, MAPK11, METTL2B, NAGA, NFASC, OR10G9, OR1E1, OR4E2, OR4K15, OR6B3, OR8S1, PCK2, PIGA, PRKAR2B, PRKX, SC4MOL, SNAP23, SRD5A2, TNFRSF4, TP73, TNFRSF12A
Negative_125	ADH7, APC2, DGKB, ENTPD2, IFNA16, IL17RA, LCAT, LYPLA1, MYH13, OR1J4, RBL1, RXRG, WASF2, TNFRSF1B
Negative_126	GCK, GSS, RDX, SHH, ALPPL2, ATP2A3, ATP6V1F, CD40LG, DCTN1, DGKH, GALNTL1, GBA3, HMGCR, MAML3, MTHFD1L, MTHFS, NKX2-2, OLR1, OR10X1, ORIG1, OR51D1, PPP1CC, PSME3, PTGES, PYGM, SHISA5, SMAD6, SOS2, TOLLIP, TPH2, TSC2, WNT6, GABARAPL2
Negative_127	IL2, IL5, LCT, AASS, ANPEP, CSAD, CYP26C1, DKK2, EFNA2, IKBKB, NAGS, OR2T10, OR5AR1, OR5R1, OR7C2, OR8D4, PIK3CB, TGDS
Negative_128	IL8, TYR, ADIPOR2, AGRP, ATP13A2, CCR9, CDC26, CXCL16, DDX56, FABP4, FUT6, GP1BA, HSD11B2, IBSP, MAP2K6, MGST2, NAT2, NEFM, OR10V1, OR10Z1, OR1I1, OR2L13, OR51D1, OR6B3, PAK4, PIGH, PIK3CB, PPCS, PPP2CB, PYGB, RAPGEF3, RDH8, TLR3, XCL1, ATP6V1B1, CTNNBIP1
Negative_129	GLA, OAT, PXN, AKR1D1, ATP6V1F, CASP7, CD22, CEBPA, CTNNA2, DARS, DDI3, DRD5, MDH2, NMNAT1, OR10H1, OR2K2, OR5A2, OR8H3, PI4KB, PRLR, TAS2R16, SERPINF2
Negative_130	CD6, UBC, ACVR1, ADH7, ALS2, ATG12, CCL22, CCND3, CD44, CD72, CDC42, CNTFR, CRY2, DNMT1, DTX1, ENTPD2, HADHB, HES1, HPSE, IL20, IL23R, JAK2, LCMT2, MAPT, MGAT3, MKNK2, MYH10, MYL2, NADK, OR10H4, PLXNC1, PROS1, RDH10, RPRM, SGMS2, SMPD4, STX3, SV2A, TGFB2, TOLLIP, TUBA1A, TUBB2C, ZIC2, HLA-DQA2
Negative_131	DCN, PGP, GMPR, MLYCD, NTF4, OR2M3, OR8B4, PDGFA, SETMAR, SH2D1B, STAT6, TUBB2C
Negative_132	IVD, ATP6V1A, CLDN7, CRLS1, OXSM
Negative_133	AKR1C2, CLTB, CMAS, GP1BA, IDH2, IFIH1, IFNW1, MYL2, NFE2L2, OGDH, PLA2G3, SLIT1, TRPM5
Negative_134	MET, OGT, AVPR1A, CYP2A6, DAAM1, FLT3, GSTZ1, IRS1, MAP3K1, NLGN1, OR4C46, OR51A2, OR5P3, PMAIP1, PON2, PPP2CB, PTPRR, SGPP1, ULK1, TNFRSF1B
Negative_135	BTK, GSR, ALG3, ANAPC10, ARPC1B, ATP2A3, ATP5I, B3GNT2, CADM1, CHKA, CHST13, CNGB1, CNTN2, CRKL, DPYS, FBP2, GPD2, GRIN2B, IL15, INPPL1, MYH10, NRXN2, OR13C9, OR2S2, PRKAA2, RAPGEF1, ROCK1, SDC3, SLC25A6, SOCS7, ST6GAL1, STK11, TSLP, VCAM1, ATP6V0D2
Negative_136	ME1, ACMSD, ALOX12B, ARG1, BIRC5, CACNA1D, CDH4, CHKA, COX15, F13A1, GDF6, GGT5, HADHA, HPRT1, IDH3B, MAGI3, OR1J1, OR2T12, OR51L1, PAICS, PDE6G, PHGDH, PNPO, PPP3CA, ROBO1, SOCS7, ULBP1, VKORC1, ST6GALNAC1

Negative_137	AK1, APP, DBH, ADRBK2, AK3L1, ATP6VOB, CANT1, CCL25, CD34, CHSY3, CNGA4, CREB5, CYSLTR1, DGKE, DGKZ, DPYS, EPHA7, ETNK1, FZD7, G6PD, HLCS, HPRT1, IL22RA1, IMPDH2, JAK1, KITLG, LAMB1, LCMT1, LGMN, MMP7, OPLAH, OR1F1, OR2D3, OR4C16, OR5AP2, P4HA3, PCCB, PHKG1, PSME1, SHISA5, SIGLEC1, STX12, TGFB2, ZBTB16
Negative_138	DCC, F5, GNE, TXK, ADORA2B, AFMID, ASRGL1, ATP50, BBOX1, CACNA1H, CD80, CLDN4, CYP4F3, DDX50, EPHB1, FGF14, IGF1, LAP3, MBL2, MICA, NR4A1, OR10AD1, OR13C3, OR4P4, OR52K1, OR6C1, PPP2R5B, PPP3R2, RAPGEF3, SAT1, STK11, TBL1XR1, TICAM2, TKTL2, TUBB3, VTI1A, WNT6, WWP1, ZMAT3
Negative_139	AGTR1, APOE, B3GALT5, CACNA1E, CCL7, CD247, CD40LG, CD8A, CPT1C, CRLF2, CXCL11, CYP3A7, DUSP16, DUSP2, ERBB3, FDFT1, FIGF, FOXO3, FSHB, GABARAP, GALC, GIT1, IL18R1, IL20RB, IL22, IRAK4, JAG2, KIR2DS5, LAMA4, LAMC1, NEFL, OR10K2, OR13C4, OR1L8, OR51B2, OR6N1, PPM1A, PPP2R2C, SRGAP3, SUV39H2, TPK1, ULBP2, UROS
Negative_140	GH2, NF1, AASDH, ARNT2, B4GALT1, CACNA1H, CCL23, CCNB1, CD3E, CD59, CFLAR, CSF3R, CYP2C19, CYP2U1, DDHD1, DLL4, DUSP2, E2F2, EFNA3, GADD45A, GALNT9, GRIA2, GRM1, IKBKG, IL18RAP, ITPKB, JAK3, JAM2, MAPK12, MCM7, MGAT5B, NAE1, NLGN3, NOTCH2, OR1N1, OR5M8, PDE1B, PER1, PLA2G6, RCHY1, RPSA, SCP2, SIAH1, SLC25A6, SLC33A1, SMAD2, TNFRSF6B
Negative_141	JUN, ALPI, CD58, CD8B, CDS2, CSF1, EDAR, HPRT1, HSD3B7, P4HA3, SOD1, WHSC1
Negative_142	AUH, ADAM10, C1QC, DGAT2, HARS, IFNA5, NEFH, NUDT8, OGDHL, PAK7, SMAD3, TBL1XR1
Negative_143	FAH, OAT, ALDH3B2, ALOX12B, AREG, ARSE, BCL10, CCL4, CHST11, CPT1C, CREB3, CYP3A5, EI24, ELK4, EREG, FZD1, GMPR2, GUCY1B3, HSD3B1, IDI2, IL25, IL2RA, ITGB3, LAMC1, LRRC4C, MCCC1, MDM2, MNX1, NARS, NGEF, PDE4B, PIGL, PIGN, PPP2R1A, PRKAG1, PRPS1, RAPGEF2, RBKS, RPS6KB2, TUBAL3, UGCG
Negative_144	C1S, ADCY3, APOC3, CD38, CDK7, CHST11, CIITA, F2RL1, GTSE1, HTRA2, OR8U1, TAS2R10, ALDH18A1
Negative_145	HGD, MET, CAMK2G, CCL5, CDKN2D, CSF1R, FUT3, IL22RA2, METTL6, MYH13, NRG4, NT5C1B, NTN1, NTRK2, OR10V1, OR6C4, PLA2G3, PPBP, RALB
Negative_146	ACPP, ALAS2, CARS2, CCR9, CHUK, CTF1, E2F4, GUCY2D, HLA-F, IFNGR1, NCSTN, NKD2, OR13C5, OR6C4, OR8J1, PITX2, POLR2J, PTK2, SIPA1, SSH2, STX4, TGFB2, TRHR
Negative_147	C6, EDA, IL6, AVPR1B, CREB3L2, CTLA4, E2F3, HCST, IKBKB, ITGA8, JAG1, MNX1, OR4K17, PNMT, SPTAN1
Negative_148	ADH7, CACNB4, CHRM3, CLDN10, COQ7, CRHR1, EHHADH, FM05, GLYCTK, HMOX1, HTR5A, LLGL1, MAGI1, OR10Z1, PFAS, PPAR, PRKAG2, SUV39H2, SV2C, TAS2R7
Negative_149	ASL, C6, MOS, CCR4, CYCS, ERBB2, GBE1, HSD17B7, NARS2, OR52B4, PANK4, PCNA, PIP5K1A, SPRY4, THY1, VTI1A
Negative_150	ARPC1A, CTNNA3, F2RL1, GNAI3
Negative_151	CKM, IL4, ACSL1, ACSM5, BST1, CACNB3, CCR9, CD22, CDC14B, CLDN18, E2F5, FOXO1, HADHB, HMGCR, IFNA4, IGFBP3, LRRC4C, NADK, NFATC3, NFYC, NLGN3, NOX3, OR11L1, OR13D1, OR13J1, OR52H1, PGM1, PNPLA4, SCLY, VAMP2, YWHAH, TNFRSF13B
Negative_152	INS, AARS2, ALDOC, CCNE2, CHRNA7, CXCR6, ENTPD2, LILRB3, MAD1L1, MASP1, OR6C4, OR7D2, PPP1R1A, PRKAA2, PVRL2, SDC4, VARS, WWP2
Negative_153	DDO, ADCY6, CD40, FGF18, FLOT1, FUT4, HLA-DOB, MTMR6, NFX1, SDC3, SKP2, TUBA1C
Negative_154	BUB1B, EPHA4, GNAI3, LIPE, MPST

Negative_155	ADK, PC, ADH1A, AKR1C4, CAMKK1, CD22, CHRNA7, COL4A2, CREB3L1, CTBP1, CYP26C1, GALNT2, GSTO2, KYNU, OR2A5, OR2L8, OXSM, POLR3G, PPAP2B, P PAP2C, PRKY, RPS6KA5, SHMT1, SULT1A4, UGT2B10, TNFRSF10D
Negative_156	BTD, CD3E, CXCL5, DHCR7, DIAPH3, FGF14, GALNTL5, GNAL, ITGAM, LAMC1, LIFR, MAPK9, MTR1, RAD51, TAS2R4, TAS2R5, TICAM2
Negative_157	F9, NGF, ABLIM2, ACO1, ACPP, CD8B, CDIPT, CLDN11, FLT1, GNPAT1, KARS , MAOA, NSDHL, OR11G2, OR56B4, PDE10A, PLA2G3, PLXNC1, SEMA4D, TUBB3 , ZAP70, HSD17B12, TNFRSF10A, TNFRSF17
Negative_158	C7, DBI, ADH1B, AFMID, ALOX15, CCL4, CYP2C9, DTYMK, GGT5, IFIH1, IMPA 1, IRAK2, ITGA6, OR1E1, OR1I1, POLR2A, PRKG1
Negative_159	FGF11, HLA-DMA, SMURF2
Negative_160	DBI, RET, ADH5, AHCYL1, ALG9, APC2, B3GAT3, CBR3, CCND2, CREB3L3, CSN K1G2, DGKD, DTX3L, FMO1, GNRH1, LAP3, MAD2L1, MAN1B1, MAP2K1, MYH11, NFKB1, NT5M, NTNG1, OGDHL, OR2A5, OR2T1, OR4D9, OR4K2, PDE3A, PDGFA, POLR3A, SLC27A1, SMPD3, SPAM1, SULT2A1, SUV39H1, THBS2, TIAM1, TUBB 6, UNC5C
Negative_161	KIT, ACAA2, ACO2, B4GALT4, BPNT1, C3orf10, CACNG4, DHRS4L2, EPHB3, F LOT2, GLUL, IDH3B, IQGAP3, LRRC4C, NFYC, OR1D2, PHKA2, TGDS, TLN1
Negative_162	C1S, EBP, F7, SRF, ACOT11, ADCY8, ALOX15, ATP13A2, BCKDHB, CACNA1B, C D80, CYP1A1, DUSP10, FDPS, FLOT2, GCLM, IL10RA, IQGAP1, KDSR, LAMA4, MGST2, MLLT4, MTR6, NKD2, OR10J5, OR4F15, OR7C1, PIK3C3, PIK3CA, PR DX6, RDH10, SCLY, SH2D2A, SIGLEC1, SLC2A4, VKORC1
Negative_163	CBL, AASS, ACSL6, ADAM10, ADH1A, AMPD2, ARRB1, CD59, CLDN17, CYP8B1, EARS2, ENTPD6, ERO1L, IL12A, OR10J3, OR10Q1, OR13C2, OR4S1, P2RX1, S CD5, SEMA7A, SHISA5, SOCS7, STK11, STX16, VNN1, WASF1, WNT7A
Negative_164	TPR, XDH, AADAC, ANAPC10, ANAPC5, CDC16, CDC7, DHX58, DUSP2, DUSP3, F MO2, GRPR, HHIP, KLK3, MAP3K3, MMP9, MYH2, MYL5, OR10A2, OR1E2, OR2T2 , OR6B3, PIGB, PLOD3, PLXNC1, PPP1R3A, PRSS2, PTPN7, PTPRM, RAC3, SAR S, SH2D2A, STAT5A, STX16, SYNJ2, TJP3, TPK1
Negative_165	FGB, ACP6, ADH5, BDH2, CTSL1, GGT6, GLG1, GNAI1, GNG13, GRB2, ITGAV, L ALBA, MAP4K1, NCAM2, OR6N1, PCCB, PPM1A, RAPGEF4, SEMA3C, PAFAH1B1
Negative_166	PDC, ADIPOR2, AGXT2, COL5A2, CSF1R, CYP2F1, DLL1, GNAS, HAGHL, HNF4A , ICAM2, LIPC, MTHFD1, NEFH, PIP4K2A, PPA1, PTK2B, RASGRF1, SKIV2L2
Negative_167	ADSSL1, ASPA, ITGAD, MAP2K2
Negative_168	CRH, GNS, ID4, LSS, ALG10, ALG9, ANAPC10, ATP5F1, B3GALT5, CNGB1, DAX X, ETNK2, GNAO1, GUCY2C, IL5RA, ITGA1, MGST3, MYL7, NME2, NRG2, OR52M 1, OR5B17, PCNA, PRKAR2A, SETD7, TJP1, ULBP2, UNC5A
Negative_169	NF1, ATP6AP1, CD46, GANAB, GNG3, HLA- F, INPP4A, KLKB1, MAFA, OR6F1, OR9I1, PHGDH, PPP1CB, PPP2R1A, PRKG2, PTGER1, SMAD6, STX1B, STX4, TACR1, HLA-DQA2
Negative_170	IL2, MAG, MVK, ATG12, BMP7, CDC26, CSF3R, CTLA4, CTPS2, CYP26C1, DARS 2, EPB41L2, GZMB, HPRT1, IFNA7, IL2RA, MAPK12, NCOA4, OR2T3, OR4A16, OR5A2, OR7G3, OR8B4, PAK3, PDHA1, PIK3R2, SPP1, TJP1, UNC5C, EIF4EBP 1, PRICKLE2
Negative_171	CFH, AACS, ADSS, ARNTL, COQ6, EHMT2, EIF4E, EPB41L2, EXT1, FGF7, FZD3 , HDAC2, LDHB, MADCAM1, MGST3, NRP1, OR10G3, OR13C2, OR4C11, OR56B4, OR6F1, POLD2, PPP1R1A, RASGRF1, SMPD1, SOD1, TBXA2R, TUBA1C
Negative_172	LHB, RB1, ALAS1, ATF2, BMP8A, CDKN2A, CERK, CHIT1, CXCL13, ELK4, EPB4 1L1, F13B, FLOT2, G6PD, GSTA5, GSTZ1, HAO2, HSD17B2, IL12A, KAT2A, NR 4A1, OR10Q1, OR14C36, OR5B17, OR6N2, ORC3L, PARD3, PDE4B, PITX2, PLA 2G10, PPP2R1B, PRKCZ, PRLR, RPS6KA5, RPS6KA6, TBL1Y, TJP3, UGT8, WAR S2

Negative_173	CD6, LYN, MPL, ADCY9, AGPAT1, AKR1C1, ALG12, ARHGAP5, ARHGEF2, ATP5F1, BUB1B, CASK, CCR2, CDKN2C, EPHA6, EXTL3, FGD3, G6PC2, HSPA1B, HTR4, IL18, IMPDH2, INMT, NCKAP1L, OR1C1, OR2S2, PLCD3, POLR1C, PRKCH, PRPS2, RELB, ROCK1, SLIT2, TPI1, EIF4EBP1, TNFRSF11B
Negative_174	C4B, EGF, FAS, GP6, ACSL3, ACTN2, AKR1C1, AKR1C4, ANAPC2, ATP5G3, CHD8, DUSP4, DUSP8, E2F2, EFNA5, FBP1, FZD3, HLA-DMA, IFIH1, IMPDH1, INADL, LMO7, MAG11, NCK2, OCRL, OR52M1, PDXP, POLR1B, POLR2G, PRNP, PTK2, PVRL4, SELE, SH3BP2, SHC3, SSH3, TPM3, TUBB3
Negative_175	ANAPC2, COL1A2, CTNNA2, DHRS9, GMPS, IL11RA
Negative_176	C8A, ACACB, B3GAT2, CBLB, COL4A2, DGKH, DGKI, FLOT2, GNAS, HDAC1, IFNA17, IFNA4, IL23A, MEF2C, MMP7, NAGK, NKX6-1, OR13C9, OR14I1, OR1D5, OR2AE1, OR2G6, OR2L2, OR5F1, P2RX6, P4HA1, PFKP, PIP5K1A, PLXNA1, POLR3H, PON1, TAS2R16, TSC1, WASL, ZFYVE16, CACNA2D3
Negative_177	CKMT2, CLTCL1, CYP2U1, DHDDS, DHRS4, DPM2, EHMT1, MYH8, OR10G7, OR10J5, PNMT, PSPH, SRGAP1
Negative_178	CYP19A1, IL1B, LFNG, MAP3K8, OR52M1, OR5AN1, SRD5A1, UGDH
Negative_179	CCL13, FUT1, PGAM1, SPHK2
Negative_180	FUK, GLA, SMO, ACADM, AKR1B1, ARAF, BACE1, BPGM, CAMK2G, CEBPA, CLTCL1, DPYD, DUSP6, EPHA8, FRAT2, FUT1, GDE1, HNF4A, IFNA16, ITGA11, KLRC4, MAPK3, NCF4, NCOR2, NOTCH1, OR2D3, OR2M2, OR4M2, PAK1, PDE8B, PIGX, PLIN, PLXNA2, POLD1, PPP2R5E, PRNP, SELP, SPRY3, STX4, THY1, TNFSF4, TUBA4A, ATP6V1G2, PLA2G12B, SUV420H2
Negative_181	CAD, CFI, LEP, RFK, B4GALT1, BMP5, CACNB4, CHKA, CYP2D6, DHFR, FGF13, FTMT, MARS2, MASP1, MYLK, NAT2, NCK2, OR5AC2, OR6A2, OR6C70, OR6C75, PHKG2, PPP2R2B, SPP1, TLN2, UGCGL2
Negative_182	F11, FES, HYI, ACOX3, ACSS3, ADCY4, ARHGEF6, ARRB1, CACNA1I, CHAD, CREB5, DDX19A, EDNRA, EHMT2, ENTPD5, ENTPD7, GMPS, GNG12, HPRT1, HTR7, IL1A, ITGA1, MAP3K12, MAP4K2, MYH8, NT5C1B, OR10J5, OR11G2, OR5C1, PIM1, PRKCZ, PTCRA, PTTG1, RASSF1, SORD, STAT3, STEAP3, TALDO1, TCF7L1, TNXB, UBE2K, UGT2B10, ULBP2, UXS1, SERPINC1
Negative_183	CD2, DHH, OTC, PAH, ACSM5, ASNS, BBOX1, BLVRB, CD8B, CDH2, CDH4, CNDP1, DDX51, DGAT1, DPAGT1, EPHA2, GOSR2, GOT1, GP1BA, HLA-DOB, HSD17B3, IDI1, NT5C1B, OR13C9, OR13H1, OR51T1, OR5T1, PIK3CA, PIK3R1, PTPRZ1, RAB5A, RRM2B, SESN2, SMURF1, STX18, TBXA2R, TLN2, WNT10A, YES1
Negative_184	EZR, PDC, ADRB2, ARPC4, CCR2, CD14, CD3E, CDH15, EGLN1, FADS2, GGT1, GSTM5, GSTZ1, HAP1, HIF1A, HRH1, IL15, KITLG, LDHAL6B, NAMPT, OR2D2, OR4F4, OR51B5, OR5T3, OR6K2, PLCG2, PRKY, QPRT, RETSAT, SGPP2, STX5, TM7SF2, TP53I3, UNC5D, WNT3, ZFYVE9, PNLIPRP2, SERPINA1
Negative_185	AR, SPN, ACOT12, ACP6, CCL3, CDC16, CDC25B, ECSIT, EFNA3, ENPP1, FGF10, GNAO1, GNPDA2, HARS2, HLCS, IFT57, IL29, INHBB, ITGA10, JAK1, LAMA4, LIAS, MTHFD1L, NARS2, OR6K2, PAK4, PLXNA2, SHC2, ST8SIA1, STAT3, TOMM40L, TRAF5, CACNA2D4
Negative_186	AUH, C6, GP5, ANAPC10, ATP5I, BMP5, CD46, CHAD, CHRNA7, DGUOK, DKK2, FGD3, GMPR, HSD11B2, IDI2, IKBKG, ITPKB, MPZL1, MYL5, NMNAT3, OR13C2, OR52B4, OR9A4, PAK2, PCYT1B, PIGS, PPP2R1B, RASGRP3, SMC1A, TAS2R48, THBS4, TUBB3, SERPIND1, ST6GALNAC1
Negative_187	BMP8A, FTMT, GSTM5, GYS1, LYPLA2, OR10A3
Negative_188	F5, ADIPOR1, AKT2, ATP6V1D, BUB3, CAMK2D, CD70, CLDN22, CREB3L3, CSNK1G2, DDX51, DGKE, EHMT1, FABP1, FGF23, GART, H6PD, IFNA7, KIR2DS5, KITLG, LEFTY2, MYH6, NR5A2, OR10H3, OR1A2, OR4C13, OR4C46, OR52B6, OR8B8, OR9Q2, PDGFRA, SPRED2, ST3GAL2, UGCG, WEE1

Negative_189	HYI, ABL1, ADRB1, CACNG6, CCL14, COQ7, CSNK2B, CTNND1, GNAZ, GRAP2, PFKFB2, POLR1A, RASGRP3, SFRP2, YARS2
Negative_190	NPY, AGPAT6, ALOX12B, ATP6V1F, B4GALT2, CBR3, CHD8, CLDN4, COL5A1, CSNK1E, CXCL6, ENTPD5, ETS1, GDF5, GIT1, GNA12, HSPA1B, KIR2DL2, MGST3, MOV10L1, MTHFR, OR10Q1, OR1C1, OR4P4, PDCD1, PPARG, PSPH, RFXAP, STK11, TAS2R13, WNT4
Negative_191	HK2, MYC, SDS, AMPD1, BLNK, BMP8B, CBR1, CBR3, DMGDH, F2RL2, FCGR2B, GBA3, GDF5, HADHB, ICOSLG, IL20, MMP1, MMP7, NCR3, OR10A4, OR56A1, OR5D16, PANK4, PDK1, PIM1, PTDSS2, QPRT, RASGRP2, SFRP4, SUOX, TAS2R48, TNFSF9, TPH2, USE1, YWHAB
Negative_192	ILK, KIT, RET, ACTA2, AK3L1, APOC3, ATN1, B4GALT6, CACNG2, CAMK2B, CCL19, CNDP1, CRY1, CSNK1A1, DDX54, DDX55, FGF4, GRM5, GSTM3, IL25, ITGB4, KARS, KLK3, LDHC, MAP2K6, NT5C1B, OPLAH, OR10T2, OR13J1, OR3A1, P2RX6, PAK3, PFKL, PIGF, PLCB4, PTCH2, RPS6, RRM1, SEMA7A, SLIT2, SUOX, TAS2R16, TNFSF4, ATP6V1E2, TNFRSF12A
Negative_193	UBB, AKR1C1, ALDH6A1, ALDH7A1, BMP8A, CACNB3, CD40LG, CYP2B6, DHCR7, DUSP1, ELK4, FGF14, GCLM, GMPPB, GSTO1, HTR5A, IL21R, MASP1, MGAT3, NAGLU, NANS, OR51E1, ORC1L, PAK3, PLIN, PRKACG, SMARCA5
Negative_194	C4B, HYI, MVK, ABLIM2, ACSL4, ACSL5, ACYP2, AKR1D1, ALG5, AMHR2, AOC3, APOC3, ATP6V1H, BCAR1, BMPR2, CSDA, CXCL10, EXT1, FGF1, FZD8, GLI3, GLS2, GSTK1, GSTZ1, GYS2, IFNAR2, IFNK, KNG1, MYH9, NCAM2, NLGN1, OR5R1, OR8D2, PGAM4, PKM2, PLCB3, PTPN7, RRAS2, SFRP2, SPHK1, STAT3, STX3, TAS2R49, THY1, TJP3, TRAF6, ATP6V1G3, MAPK8IP3, ST6GALNAC6
Negative_195	GNAQ, GOT2, OR13C2, PKMYT1, PLCG1, POLE3, TSHR
Negative_196	ACAD8, CD36, GRIN2C, OR4P4, PERP, TAS2R49
Negative_197	BTK, DLD, LTB, MPL, ABLIM2, ADCY6, BNIP1, CACNA1G, CD19, CHRM2, CTNND1, DTX3L, EPHA2, FPGT, FZD3, GALK1, GCNT4, HES1, IFNA2, ITPKB, JAK3, LDHD, LYZL1, MAML2, MAOA, MAP3K6, ODC1, OR10H1, OR2B11, OR2T4, OR4A15, OR56A3, OR6S1, OR8D4, ORC3L, PFKM, PLA2G2D, PRKACB, PTPRM, RENBP, SMAD1, SPTLC2, SQLE, TUBA1A, VTI1B, WNT6, WNT8B, CACNA2D1, TNFRSF10A
Negative_198	ACSL3, AMY2A, CLDN1, CX3CL1, CXCL10, DGKH, E2F4, GALNT7, GDF7, OR1A2, OR52M1, PDE7A, PHKA2, PI4KA, PPP5C, SH2D1B
Negative_199	ADRB1, CTSL1, IL25, OR10G7, OR5T3, PPAP2B, SREBF1, SLC25A31
Negative_200	IL8, ADCY6, ALDH2, ATP4A, DAPK1, DKK2, GALNT11, HSD3B7, KNG1, OR10K1, OR12D3, OR3A1, OR6K2, PTGES, ROCK2, TRPM5, TUBB, WNT3
Negative_201	ACSM4, ACVRL1, ALDOC, BMPR1A, CHEK1, CSF2RB, CXCL9, CYP2C18, DHDDS, DUSP6, F2RL1, FUT2, HEMK1, IL8RB, MLLT4, OR10V1, POLR3H, RAP1A, SMURF2
Negative_202	AK7, SYK, ACSL4, B3GALT1, BMP2, CAMKK2, CCL20, COMP, EFN1, ENPP6, GNA11, GOSR2, HMGCR, IRF7, NAT5, NCK1, NRCAM, NUDT2, OR52M1, OXTR, PLAU, POLR1C, PRKCG, RARS2, RBX1, SLC2A4, TLR9, WNT7B, WNT9A
Negative_203	CFI, ADAM10, ALG8, ANAPC10, ATP4A, CACNA1S, CCR5, CHRDL, CLCA4, DERL1, ECHS1, FGF6, FLT3, GBE1, GMPS, GNAI3, GRIN2B, IPPK, MTHFR, MYH7B, NAT1, NRG2, OR2G6, OR2T33, PRSS1, RBKS, RCHY1, RPS6, RPS6KA2, RUNX1T1, SELP, SYNJ2, TCIRG1, TUBB2A, VAV2, CACNA2D2
Negative_204	APOA2, APPL1, ASIP, CLDN2, CYP4A22, DDX54, DFFA, GSTZ1, LEF1, MARS, NR1D1, P4HA3, PAK1, POLE3, RBL1, RPRM
Negative_205	FOS, GK2, ACHE, ALG10, CLDN4, KIR2DS4, MTHFR, MTHFS, NEU2, NME4, OLR1, OR2T3, OR4C16, PLIN, SMAD7, SPRY2, TUBA8, TNFRSF1A
Negative_206	CGA, MYC, TPO, ACAA2, ADIPOQ, ALG10, APOA5, BCL2, C1QB, CCL17, CCL2, CD79B, CHRM5, CKS1B, CYP7A1, DHDDS, DUSP2, EGLN1, EPHA3, FABP1, FOXA3, FUT5, FZD2, GGT5, GSTA5, HES1, HNF4G, ISYNA1, ITCH, KLK3, L1CAM, LDHD, MAPK3, MAT1A, OR1Q1, OR2C3, OR7A17, PDE8A, PDK1, PPP2R5D, RAF1, RPN1, RPS6KA1, SARS2, SEMA7A, TBK1, WASF2

Negative_207	C3, AKR1D1, CALML5, EPAS1, GSTA1, IL12RB2, INPP5B, LIFR, OR2T8, OR51E1, OR51V1, OR5AP2, PERP, SKP1, STMN1, TYROBP, XIAP
Negative_208	AGXT2, ARPC3, CDH5, CMAS, COL2A1, EPAS1, MARS2, PKMYT1, PLA2G4A, PLD1, RAB23, SRGAP1, TUBB6
Negative_209	ZYX, AKR1C2, GSTM5, HAO1, HMOX1, HNMT, PEMT, SHC1, ST3GAL2
Negative_210	NLK, CYP19A1, FABP3, MAPK11, PTK2, ST6GALNAC1
Negative_211	DCC, IDS, TFG, ADCY5, CD36, DGKB, EFNA1, ENPP3, FDFT1, IL1A, MBL2, OR5AU1, ROBO1, HLA-DRB4
Negative_212	LAT, LCT, ACADSB, ACOT12, ACYP2, AKR1C4, ALDH2, ALOX15B, ALOX5, ATF4, CACNG1, CD27, CNTN2, CTSS, CXCL11, EFNB3, EREG, FLOT1, GAL3ST1, GALNT5, GATM, GLUL, GRIN2A, GUK1, IRS2, MAOA, MAP2K7, MYLK, OR2A42, OR2AG2, OR52K2, OR6K2, PDE8B, PHKA1, PHKG2, PLA2G2F, PPP1R3A, PRODH, SAT1, SELP, SMAD2, SSH3, SXX2IP, SULT1A4, TNFSF8
Negative_213	ENPP1, NTSR1, OR2D2, SLC2A1
Negative_214	AKR1C3, ALDH2, AMDHD1, BCKDHB, CCR2, CD44, CDC14A, CNTN1, CTNNB1, DUSP1, ERBB3, FDFT1, FGFR4, FZR1, GALNT9, GPLD1, GUCY1B3, HTR2B, LIMK1, NAT6, OR2B11, OR8B12, PTGIS, SPI1, STAT6, PRICKLE1, TNFRSF10B, TNFRSF12A
Negative_215	AK5, PGF, ACADM, ANGPTL4, ATG7, C9orf95, CDK2, DLL3, EGLN1, EXTL2, FGF9, FMO5, IDH3G, ITGA4, KIR2DS5, LCAT, MAP2K6, NEFM, NRXN3, OR13A1, OR52N4, OR52W1, OR6C6, OR8J1, PMVK, POLD3, POLR2F, PPP1R3C, SMAD7, SUCLG1, TLR2, TSLP, TUBA4A
Negative_216	ALCAM, B3GALT2, CDKN1C, CDKN2B, CYP26A1, GDE1, GRHPR, MMP7, OR1K1, OR51M1, OR8H2, PCYT2, PPP2R1A, PTCH2, SC4MOL, SPCS1, SUV39H2, TRHR
Negative_217	ALAS2, MAP4K4, OR4K15, OR5P3, RRM2
Negative_218	BCMO1, CACNB4, ENPP7, FLT4, HDAC2, IFNA5, IL13RA1, IL18, MECR, NME7, TPK1, TUBB6, WARS2, HLA-DQB1, PRICKLE1
Negative_219	ACSL1, ACSM5, CARS2, CCL5, CDC14B, CYFIP1, CYP2J2, DPM2, ENPP6, FARS A, IFNGR1, ITGB5, LTB4R2, NFKB1, PRKG1, TAS1R2, TM7SF2, VDAC1
Negative_220	C8A, AKR1B10, ALDH5A1, AMDHD1, CACNA1S, CNTNAP2, DPM3, DUSP2, FUT9, FZD1, GAB1, GALNS, GGPS1, INSR, MAP3K5, MDH1, MYH2, NLGN1, NOTCH1, NUDT5, OR10Z1, PIAS2, PLCE1, PPAP2A, PTGIS, RPS6KA5, SGMS1, TAS1R3, TNFSF14, ULBP1
Negative_221	EPO, ACO1, ALDH4A1, DFFA, OXSM, SPHK1
Negative_222	DBT, ID2, SDS, ACSL6, ACSS1, ARSB, BPGM, CD79B, CHEK2, CTNNA2, GRIN1, GUCA1A, GUCY2F, IFNGR1, ITGB2, KIR2DS4, KIR2DS5, KLRC4, MAGI1, MCM3, MFNG, MGST2, NEFM, OR11A1, OR13H1, OR1K1, OR4C12, OR51B4, OR52R1, PIGC, PTGS1, RAB5A, RAC1, RASA1, RHOD, RPS6KB1, SOD1, TAS2R48, TCF7L2, ZFYVE9, ATP6V1C1
Negative_223	CKM, IL8, JUP, PGF, RB1, ACADS, AGRP, ALG8, ALOX5, ALPP, ASAH1, B3GALT5, B4GALT5, BMP6, CAMK2A, CD58, CLDN11, CSNK1A1, DDX41, DGKH, DLST, HSP90B1, IL2RG, IRS4, ISYNA1, ITCH, ITGA11, MAP2K1, NCAM2, NEUROD1, NFKB2, NUMB, OR1L1, OR52E6, OR5M3, OR8I2, OR8U1, P2RX2, PGK2, PIGU, SEMA3G, TLN1, UNC5C, VAV1, WNT3, ATP6VOD1, SERPINE1
Negative_224	ID1, CREB3L3, EXTL3, F2RL3, FGF2, IKBKG, IL1R2, IL7R, ITGA6, LRP5, MADD2L1, NKD1, OR11G2, OR6C6, OR7G1, PLCE1, PPAT, PPP2R5D, SELL, WNT9A
Negative_225	AR, CKM, MIF, ALCAM, ATP2A1, ATP6V0B, B3GNT3, C3orf10, CACNG2, CACNG4, CDK6, CHIT1, COX10, CRLF2, CYCS, F13B, GBE1, GP1BA, IFNB1, IL20RA, MFNG, NFYB, NR5A2, NT5C2, OR10H3, OR13A1, OR2Z1, PIK3R1, PLA2G4A, PTGIS, SH3BP2, SLC27A1, SSH1, TUBA1A, USE1, WHSC1L1, SUV420H2
Negative_226	DBI, GPI, ME3, SI, ACAD8, AGTR1, ALDH3B1, ALDOA, CALML3, CASP6, CCL2, CD22, CHEK2, COL11A1, CSDA, CYP3A43, CYP8B1, FGFR3, FRAP1, GP1BB, IL11RA, IL15RA, IL5RA, IQGAP2, ITGA3, MAP4K3, MTMR1, OR10Q1, OR8D1, OR8D2, PPAP2A, PTPRR, SDHB, SSH1, THBS3, WARS, WNT10B

Negative_227	APP, FGB, GP6, GPI, PDC, PRL, AK3L1, AMY2A, ARSB, CPT1B, CSF2RA, GAD1, GDF7, GMPS, GNAL, GPX5, GPX7, HSPA8, IQGAP2, LYZL1, MAFA, MAP4K4, MGA T3, NEFM, NR4A1, OR13G1, OR3A2, OR6S1, PIAS1, PIGA, POLD1, PPCS, PRKC B, ROBO3, SETDB1, TXNDC12, USE1, WASF2
Negative_228	MAX, ABCC8, ARRB1, BMPR1A, CBR1, CDH1, CHRM5, CMBL, ESPL1, HMOX1, HTR 6, IL4R, KIR2DL4, LAMC1, MDH1, MGAT4B, OR10C1, OR2S2, OR4C16, PLXNC1 , PPP1CB, PTGER3, TIAM2, VANGL1, HLA-DPA1
Negative_229	ARPC5L, CBR3, CDC2, CNGB1, FARP2, FECH, FGF10, FUT8, GNB3, HTR7, KLRC 1, NCOR1, NTN1, OR10H1, OR1S2, OR51I2, OR51T1, PAX6, PDGFB, POLR1D, P RKCQ, PTGES2, STK4, TSLP
Negative_230	AMT, GK, MPZ, PXN, ACSM1, ACVRL1, ADSSL1, AOC3, ARHGEF7, ASPA, BMP8A, CCR10, CLCA4, CPT1B, FGF1, GNRH1, GUCY1A2, ITGAX, MAML1, MAPK12, MPP 5, NEU1, NEU3, NFASC, OR10A2, OR51S1, OR7A5, PDE10A, PDGFRA, PGM3, PI GC, PIK3CG, PPM1A, PPP1R1A, PPP3R2, PRKCQ, PRSS1, PRSS3, RDH5, SHC4, SV2A, UBA1, UGT2B4, WASF3, YARS
Negative_231	IL5, BAI1, CDC26, CHRM5, GALNT12, GNMT, GSTO1, IFIH1, LRRC4C, OR2M5, OR4K17, OXCT1, PHKB, PPP1R3D, PSEN2, ROBO1, SPRED1, SUCLA2, UNC5D, Y WHAB
Negative_232	BAD, C8B, ACHE, ACVR2B, ADCY4, APC2, ARNT, ATP5G1, B4GALT4, BCKDHB, B DH2, CAV1, CIITA, EDA2R, ENPP1, ENPP7, ERBB4, GAD1, GRIN2A, HPSE, HSP A1B, HTR6, IFNAR2, IL24, MTHFD1, OR10A2, OR10H2, OR1L6, OR4K14, OR7A 10, PAK7, PISD, SMAD5, TCF7, TRAF1, TUBB6, VAMP1
Negative_233	MSN, ACADS, ACOX1, B4GALT2, CACNG7, CCL24, CCL27, CDC2, CHUK, CYP26C 1, CYP2B6, CYP3A5, DHRS4, GNAT3, GRIN2C, HAGH, IRS1, L1CAM, MAP3K6, O R4D5, OR5P2, PIGM, PLA2G10, PLA2G5, PPAR, PPP3R1, PRSS3, RASSF1, SO CS4, TPH1, WNT7A, PPARGC1A
Negative_234	NPY, A4GALT, B4GALT1, CARS, CCND2, FGD3, FGF13, OR2M4, OR5AR1, OR9Q1 , POLD4, PPAP2A, SEMA7A, SENP2, TFDP1, TGFB2, CTNNBIP1, HSD17B12
Negative_235	F9, SHH, SMS, ADRBK2, ARSB, CD19, CLDN17, CPT1B, CTPS2, CYFIP1, DCTN1 , ECHS1, EFNA2, ENPP7, FGF20, G6PC2, GALNTL5, GGT7, HMGCS1, HTR7, IL2 ORB, IQGAP2, IRF3, KLRC1, MGST1, MYH3, NKX6- 1, NPAS2, NR1H3, OR52D1, OR6Y1, OR9G1, RAP1A, RPS6KA3, STX18, SULT2B 1, TGFB2, UPP1, WNT1, PAFAH1B1
Negative_236	CP, FAH, GLS, IL5, SDS, TPO, ADAM10, ALDOC, APOE, CNGA3, CRB3, DUSP1, E 2F4, GNA12, GNAO1, GNRHR, GYS1, KIR2DL3, LAMA3, LFNG, LIMK1, NEFL, NM E7, NTRK1, OR2H1, OR6T1, OR8H2, PAK2, PLA2G6, PLXNA3, POLR1B, POLR1D , PTK2B, RRAS2, TAS2R8, TBL1Y, TMLHE, TYK2, UGDH, VAMP2, YWHAZ, CTNNB IP1, TNFRSF1B
Negative_237	C3, CR1, NLK, ASCC3, CAV2, CCNG2, CDK7, COASY, CYP2A6, EPB41L1, EPHB6 , GCNT3, GNA13, HTR2B, ICOS, ITGA11, LAMB2, NCOA4, NCOR2, NPAS2, OGDH L, ONECUT1, OR13C3, OR4X2, OR6B2, PIGO, PLCD3, QPRT, RARS, SLIT1, SUL T1A4, TAS2R9
Negative_238	SDS, ARHGEF7, ASS1, BET1, CACNA1D, CKMT2, ECHS1, KNG1, LAMB4, PDK1, P ITX2, PSPH, TAS2R1, TLN1, VAMP2, SERPINA5, ST6GALNAC5
Negative_239	DBI, GGH, GSR, ID2, IL5, PGP, A4GALT, AGPAT3, B4GALT1, CACNB1, CD55, C DC16, CSF2RA, CSNK1G1, CYP1B1, DIAPH1, EPHB1, ERBB4, GRIN1, GRPR, GS TK1, IFNA14, IFNB1, IQGAP3, LEF1, MAPK7, NKX3- 1, NTRK2, OR6C70, OR7A5, PIGO, POLE, POLR2G, RASGRP2, SDHD, SH2D1B, T HBS2
Negative_240	CHD8, IL18RAP, LAMB1, MAP2K4, OR12D3, OR4K5, OR8K1, PAK4, RASGRP4, P AFAH1B1
Negative_241	HK3, ATG7, CYP2A7, DGKQ, EFNA5, GART, MAP3K4, MYH4, NFX1, OR4M2, PDE4 D, PERP, PIAS4, RENBP, RPS6, SMAD1, STX8, TALDO1, TAS2R60, TM7SF2, UX S1

Negative_242	CCNB3, MAP3K2, OR51E1, OR51Q1, OR8B4, SDC3, TAS2R49
Negative_243	EDA, FAS, SP1, SYK, TNF, B4GALT1, CACNA1S, CCNE1, CCNE2, CD74, CSF2RB, CYCS, CYP27A1, ENPP7, GLI1, GMPPA, GRPR, GUK1, HCLS1, IL19, INHBB, JAM3, LIPT1, OR10A5, OR10G8, OR2T6, P2RX4, PDE6G, PIGF, PIGH, PTPRM, RAB23, SEMA4D, TBL1XR1, VTI1B, WARS
Negative_244	C1S, C9, FN1, RFK, ACP5, ACSL5, ALG12, AMPD3, ASIP, CCR8, CDC20, CSNK2A2, DRD1, F13B, GNB3, GNRH2, HIBADH, HNF4A, IL23A, MADCAM1, NT5C1A, OGDHL, OR2B6, OR2L8, OR4D6, PAK6, PPP1CA, RALBP1, SUFU, THBS3
Negative_245	PXN, RPE, ACTC1, APOA5, AREG, DGAT2L4, HMBS, OR1M1, PTPRM, TOMM40, VCAM1, WBCSCR22
Negative_246	PC, ABI2, ADCY8, ATIC, ATP5A1, C3AR1, CASP10, CCNG2, CYSLTR1, EFNA3, FSHB, FUT8, GCNT2, GRIA2, HSPA8, IFNA21, IL1R1, IL1R2, LAMC1, LRAT, MAP2K3, MECR, MTHFD2, NR1H3, OR1N1, OR2AG1, OR4E2, OR51Q1, OR5D13, OR7C1, PDHA1, PLA2G2D, PPP1R3D, PPP2R5D, PRKCD, PTGS1, SDHA, STX10, STX7, SV2B, TAS2R40, TAS2R50, TMLHE, TRIP10, TYROBP, UCK2
Negative_247	EDA, NPY, ACVR1B, ALDH1A1, CHRM3, CPT1B, GSTK1, OR4C16, SAT2
Negative_248	ALDH1A3, COMP, DCXR, DHCR24, DUSP3, HIP1, IDH3A, IMPDH1, LIAS, MGAT5, MGAT5B, NR1D1, NUDT9, OR10A3, PORCN, RUNX1T1, STX5, YARS2
Negative_249	CCKBR, CSAD, GADD45G, GNA11, GRM5, IL2RA, MGAT5B, PANK2, PTGES, SSH1, TACR3, TOMM40L, UGP2
Negative_250	ANAPC7, BAIAP2, BCMO1, CASP6, CTNNA1, CYP11A1, DPYSL2, DTX3L, ENAH, ENPP6, EPHB2, EXOC7, EXTL2, FARP2, GNB3, METTL6, NEFL, OR10H5, OR51F1, PGM1, SOCS5, STEAP3, SULT2A1, TYMP, UGT2B11, VEGFC, TNFRSF14
Negative_251	CFD, EGF, GP5, GP9, MET, ACOT12, ADCY1, ADRB1, ALDH2, ARPC4, ASAH1, ATP5G2, ATP5G3, CDH3, CHIA, CHRM3, CLDN2, DHX58, EPHB3, FZD6, GAS1, HADH, IL10, KLK3, LAMB1, LDHB, MAP4K1, MTMR1, MYH13, MYH8, OLAH, OR10R2, OR10T2, P4HA3, PDE6G, PFKP, PIGB, PLOD3, SH2D1B, SLC27A5, ST3GAL2, UGT2A1, ATP6V0A1, B3GALNT1
Negative_252	FST, IL6, ACY1, ALDH6A1, APOA2, ATG3, BLVRB, CCR5, CD244, CYBB, DNMT1, DVL2, EP300, FGFR2, GAL3ST1, GRIA3, HARS, HTR4, IFNG, MAP3K4, MGST3, MYD88, MYH6, OR4B1, OR4F6, OR5L1, OR6B2, OR9A2, PIGH, PSEN2, PTSS1, RAD51, RDH16, STK3, STX16, TACR1, TACR2, ATP6V1C1, HSD17B12, SERPINC1
Negative_253	ACMSD, ARG1, ARNT2, DAG1, EDA2R, GALE, HADHA, INHBE, IQGAP3, LAMB1, NCF2, OR2H2, RRAS, UGDH, WNT7A, ZNRD1
Negative_254	BAX, CFI, RFK, WAS, ACLY, ACTN1, ADH7, ASS1, B3GAT1, B4GALT4, CACNG7, CACNG8, CCL21, CD48, CD74, CRB3, DIAPH1, E2F3, EIF4E2, FPGS, FZD7, GLI2, GNA13, GRM1, IFIH1, INPP4A, ITGB3, ITGB5, LAMB1, LLGL2, MAN1C1, MAP3K13, MYLK2, NFYB, OR11H6, OR8S1, PIAS4, PIK3CG, POLE4, PRKCQ, SEMA7A, SETD1B, SFRP1, TAS2R7, TOMM40L, VEGFB, WNT9A, ZFYVE16, HLA-DRB4
Negative_255	FAS, GGH, HGF, COL3A1, CYP2S1, DDX19A, FGF11, FGF5, FOXA2, GLO1, GRIN1, GSTO1, HLA-DRA, HLA-DRA, IL6R, INPPL1, ITGA10, MKNK1, MS4A2, MYH13, OCRL, OR2M2, PFN2, PIK3R3, POLR2B, PPAP2A, PPAT, ROBO2, TSLP, WASF3, PHOSPHO1
Negative_256	KMO, AADAC, ADRA1B, BIRC5, CCL5, CSF2RB, CYP3A5, DDX23, DPM1, ENPP3, KIR2DL3, LAMB3, UROD, TNFRSF11A
Negative_257	AUH, GP5, GSN, IL7, AARS, ACSS2, B3GALT2, B4GALT6, CACNA1B, CD3E, CHR1, CRHR1, DBF4, EFNA5, ENPP1, FLT4, FUT4, GUCY1A2, HLA-DOA, HPRT1, HSPA1B, IFNA2, IFNA8, IKBKB, MAFA, MEF2C, MYH8, NAGA, NFA1, NFA2, OR2G6, OR2L3, OR4D9, OR6C74, OR8D2, PARVB, PGAP1, PLA2G10, PPP3CB, PRKAA2, PRKAB2, RETSAT, SHC2, SMAD1, SUCLA2, TBL1Y
Negative_258	OSM, FGF5, IL6ST, KARS, OR8J1, RENBP, SCD5, STX7, TLR4



Negative_259	CR2, GPT, CD72, CDH2, EREG, FMO1, ITPA, KIR2DL4, OR3A1, OR4X1, OR51A7, OR5J2, PIAS4, PIK3CG, PRKACB, RRAS, TGFB3, TUBAL3
Negative_260	AMY2A, CD79B, CDC14B, DDX4, GZMA, HEMK1, IRF3, LCMT1, OR12D3, OR2AG2, OR6K3, POLR1A, RHOQ, RPIA, SC5DL, SDHD, SOCS3, TAS2R8, TBL1XR1, WNT8B
Negative_261	PLN, SDS, ABL1, AKT3, ATP2A3, CCL11, CCL16, DIAPH3, E2F2, EPHA2, ERO1L, GRIN2D, GSTO1, INPP1, MAPT, NCR3, NUDT8, OR10A2, OR1S1, OR2T29, OR52E2, OR6C75, P2RX6, PDPK1, PIK3CA, PLAT, SENP2, VANGL1, HLA-DPA1
Negative_262	LAT, ACSS2, ACTN4, CCL13, FZD6, GALNT12, PGM3, PIGN, PIK3R1, PLA2G1B, RASGRP2, SULT2B1, TAS2R3, THBS2, ULK2
Negative_263	IL7, LPL, ATP6V1F, COL2A1, DARS, DCXR, DGUOK, DKK1, GALC, GBE1, HIP1, IL11, IL1RAP, NRCAM, OR10H2, OR2L13, OR4M1, OR8D4, ORC2L, PGK1, POLR1C, RAC1, SEMA4C, VKORC1
Negative_264	APAF1, BDH2, BMPR1B, CACNA1S, CCNE1, CD86, CDC7, CDO1, CHKA, CHRM1, CSNK1G3, GRIA2, GUCY2C, HA02, HDAC1, HLA-G, HMGCL, IRF5, IRF9, MMP7, NAMPT, OR13D1, OR1F1, PHKG1, PPT1, PRIM1, RDH8, SCLY, SHISA5, STK11, SULT1A4, VEGFC, XYLT1, ST6GALNAC4, TNFRSF10C
Negative_265	AUH, CFD, CKB, ATP2A1, BCAT2, BLVRA, CACNA1G, CACNG4, CASP6, CYP2C9, DCTN1, DGUOK, DOT1L, EPHA8, EPHB1, FLAD1, G6PD, MAP3K5, MCM7, NCKAP1, OR13C2, OR2B2, PDE6H, PLCD3, SLC2A2, SMAD3, SMURF2, UGT8, MAP3K7IP1
Negative_266	C1S, DHH, FGB, ABL2, ALAS2, ALOX12B, BBOX1, CANT1, CD72, CREB3, CXCL12, IL12RB1, MAD2L2, PAK7, PCK1, PPM1A, ST3GAL3, SV2C, TAS2R38
Negative_267	C8A, SRM, ACOX2, ATP6V1D, CER1, CLDN8, CLTB, COL5A1, CXCR5, CYP4F3, DX51, FIGF, FOXO1, FUT5, GFPT1, ICOSLG, IKBKB, MYH11, NCF2, OR10AG1, OR5AP2, OR6C4, OR7D4, ORC1L, PCCA, PFKFB2, PGAM1, PITX2, PLA2G2F, PLAU, PPM1B, PSENEN, SHC4, SV2A, TAS2R10, TRHR, TSNARE1, USE1, ATP6V1B1, ATP6V1B2, ATP6V1C2, SLC25A31
Negative_268	FUK, HPD, ABCC8, ACTA1, ADH4, ATG12, BTRC, CLTCL1, CREB5, CXCL16, CYP1B1, CYP2C9, CYP8B1, DDX55, DPM1, EPHA8, EXTL3, FMO5, FZD3, GBA3, GLI1, HHEX, IFNA13, IL18RAP, MAPK7, OR4K1, OR52N1, OR5AU1, OR6C3, PNPLA3, RAF1, SMAD5, SPRY3, SV2A, XYLB
Negative_269	AK7, ACY3, B4GALT6, CTNNA3, GALNTL1, MAP2K6, MYLK, NNMT, OR10AD1, OR1G1, PLA2G2E, POLR2G, RPE65, SAT1, UGT2A1, ST6GALNAC4
Negative_270	ACADSB, ACTN4, BET1L, CMBL, CXCR5, GUCY1A3, IL23R, IRF3, MAML2, MYL7, OR2M4, PVRL2, ROCK2, SLC12A2, YWHAE
Negative_271	LEP, NPL, XDH, ACAD8, AGTR1, AMDHD1, APOA5, CARS, CAV2, CD274, CDKN1A, DDX23, DPYS, DUSP10, EFN3, ENPP2, FSHR, GRIA2, HMGCR, IQGAP3, ITGB1, MGST2, OR11H6, OR1J1, OR9A2, PFKFB4, PRIM1, RETSAT, RFXAP, SAT1, SETDB2, TAS2R41, TGFB3, UGT8, HLA-DQB1
Negative_272	EDA, MET, PAH, AASDH, ATF4, CANT1, CXCL3, ELK4, IFNA2, KITLG, LDHC, LMK1, METTL2B, MYH7, OR10AD1, OR13C3, OR4X1, OR5AK2, PDE6H, PHKA2, POLD3, PRKCD, RRM2, SHMT2, SMPD4, SUCLA2, WNT4, ATP6VOE1
Negative_273	PGP, CES2, CNTFR, GNA13, GSTO1, IFNB1, ISYNA1, OR11A1, OR5T2, PDE1C, PDGFA, PNPLA3, PPARD, RAPGEF1, TAS2R16, TCF7L1, TP53, HSD17B12
Negative_274	PTS, ADRB3, BDKRB1, CLCF1, CLTCL1, DAPK3, DDX4, HDAC1, HSD17B8, MYD88, OR10AD1, PHKB, PIGF, POLR2K, POLR3K, PTCH1, SDHC, SGMS2, SH2D1B, TGDS, TNFSF8, WNT2, ATP6VOA4, ATP6V1C1
Negative_275	CSK, GH2, HK1, PGP, ACVR2A, BMP8B, CDC42, CHIT1, COL1A1, DNMT3B, ENTPD6, GSTM1, GSTO1, HCST, HLA-DOB, IL10RA, INPP5E, MAPT, MS4A2, MYH11, PGAP1, PLTP, UGT2A3

Negative_276	ASL, ADSS, AMDHD1, APOA2, ATP5C1, BAIAP2, CCR3, CD46, CHKB, CSNK1G2, CTNNB1, EFNB2, GABARAP, GCNT1, IFNA7, IL12B, ITGAV, LAMA3, NAT1, NR4A1, OR52L1, OR5AR1, OR6T1, OR8K1, PCK2, RPIA, SRD5A2, SV2C, TLR3, TLR4, VNN1, PAFAH1B2, SUV420H1
Negative_277	FAH, B3GNT4, CXCR3, FZD1, GGT6, OR10H2, OR5AC2
Negative_278	GSS, CACNB4, CYBA, GIT1, KIR3DL2, LEFTY2, PDXP, PGK2, TBXA2R, UROS, CACNA2D2
Negative_279	IL6, CCL15, GNRH1, PFN3, VAMP3
Negative_280	ADRA1B, APOA1, CLDN7, CNGA4, FOXA2, IKBKB, RPS6, SERPINE1, TNFRSF10C
Negative_281	AGK, RFK, ALG5, C1GALT1, CBR1, CCNB2, CCNG1, CD40, CDC14B, CHIA, CLDN17, CSF2, CX3CR1, CYP2D6, EPHB4, ERBB4, LDHAL6B, MAT2B, NFE2L2, NOS1, NT5C1A, OR51F2, PIM1, PRODH2, RND1, SEMA3C, SFRP1, SLC25A6, SULT2A1, TPM3
Negative_282	CBL, DCN, HDC, AARS2, ACAD8, AMY2A, ASPA, BCAT1, CYP3A43, GNA12, HES1, HSD11B1, HYAL1, LAMC3, NFKBIA, OR9A4, PHKA1, PTK2, SFRP5, STX6, TLN2, TNFSF18, UGP2, VANGL1, ZAP70
Negative_283	AK5, MPI, AADAC, ACOX2, ACP2, AMY2A, APOA2, CDKN2A, DDX23, ENTPD6, ETS1, EVI1, GJA1, GNRH1, IL8RA, INPP5A, KLRC4, LIFR, LIPA, LTBP1, NRG1, NRG2, NUMB, OR1L6, OR2M2, ORC3L, PARVB, PDGFRB, SGPP2, SH3BP2, SMARCA5, SPRED2, SQLE, SV2B, TPM3, TRHR, UGDH, WNT10A, WNT2, WNT5A, HLA-DPB1
Negative_284	CFI, ACADL, AK3L1, CD8B, CPT1B, CTBP1, ETNK2, FIGF, GAD1, GALNT1, GCLC, GUCA1A, HIBCH, IDI2, OR2D2, PANK4, PER2, PFN4, POLE4, PRKCB, PRKCQ, SETD1B, SETD7
Negative_285	G6PC2, RRMI, SPCS1, UGT2A3
Negative_286	ADO, SMO, ACSM3, AREG, BLNK, CCR7, CD19, CHRNA7, CSNK2A1, CYFIP2, GAMT, MADCAM1, NAGLU, NEU1, PLAUR, SV2B, TAS2R8
Negative_287	GP6, ACAD8, ALOX5, AQP7, ARNT, CACNG3, CDH2, DHDDS, DPYS, ETS1, GNAO1, GUCY1A3, HRH2, ITGA2B, ITGAE, MAGI3, MYL5, NODAL, OR1L3, OR2T3, OR6A2, PERP, STK3, TLR4, CSGALNACT2, SERPINA5
Negative_288	IL4, CCR1, CD79A, DOLPP1, EDN1, FGD1, GNA14, IFNA6, L1CAM, OR5AP2, OR5A51, OR5M8, RBL1, XYL1, SUV420H1
Negative_289	AARS2, B3GALT6, CDKN2C, GSTA5, PLCD3, PPCS, PPP1R1A
Negative_290	DCT, ID2, MAG, CCDC6, DLL3, INPP4A, IPMK, ITPK1, LLGL1, PISD, PYGB, TGFB2
Negative_291	F5, LCK, PDC, ADCY7, ADRB3, B3GALT1, BAAT, BDH1, BMPR1B, CCDC6, CDC42, CLCF1, CNGB1, CREB3L1, CREB5, E2F1, EFNA5, EIF4E, EXTL3, GPX7, HAGH, HGSNAT, IRAK2, KIR2DL2, KLRK1, LRDD, MGAT3, OR4C16, OR6C6, P2RX5, PIGA, PLXNB2, PTPMT1, PTPN7, RAD51, SETD7, SH2D1B, STX1B, SULT1A1, TRADD, UCK2, C1GALT1C1
Negative_292	CP, IL4, JUP, LPL, TNN, WAS, ADRA1A, APH1A, CYP2S1, EFNA5, ENTPD3, FARP2, FGF22, GADD45B, GNAZ, GYS1, HSPB1, IBSP, IL17A, IL6R, KIR2DL4, KNG1, MAGI3, MALT1, MAPK1, MDH1, MYL9, NFKB1, OR10A5, OR13J1, OR52I1, OR5B12, PIM2, PLCB2, PLXNB2, PRPH2, RAC1, SAT1, SELPLG, SLC2A1, STT3B, TOLLIP, UGCGL1, WNT3, YARS, ALDH18A1, HLA-DPA1
Negative_293	BAD, FST, AKT2, EFNA5, EI24, FDPS, GRPR, GSTA3, GSTP1, HYAL1, IKBKB, IL28A, MGAT3, MPDZ, NR1H3, NR4A1, NRG2, OR13A1, OR2F1, OR5T3, OR6B3, OR7C1, OR8G1, PFKFB1, PPP3CC, PTPRZ1, RAP1A, RDH16, STX2, TNFRSF8, TSHR
Negative_294	BTK, DBT, DCN, FN1, ABL1, ADH1B, CCKAR, CCND1, CCR1, CNGB1, DGKG, EGFR, EPHX2, FZR1, GYS2, HCLS1, IFNGR2, KDSR, MALT1, MAPK10, MPZL1, NAT1, NAT2, OR11L1, OR52N1, OR56A4, OR8H1, PDHA1, PPP1R1A, PPP2R1B, SHMT1, TBK1, TOLLIP

Negative_295	CD6, CP, FOS, LCK, NPL, SMS, TAT, TNN, ACACA, ACSS3, B3GNT4, BDKRB2, BIRC3, CCL27, CD36, CDO1, CSF2RB, DTX4, EPHA3, ETNK2, FARSB, FPGS, GRM5, IL12RB2, LHCGR, MAP2K4, MITF, NEFL, OR10A5, OR10G9, OR13C4, OR4K2, PIK3R2, PRKAG1, PTPN1, PVRL3, RPRM, SEMA4G, SPRED2, TAP1, TAS1R2, TAS2R1, ZFYVE16, ATP6VOD1
Negative_296	FGB, GPI, ALAS2, BIRC5, BLVRB, CAPN2, CAV1, CCL15, DCTN1, GALNTL1, HS D17B4, KIR2DL4, KYNU, MAP3K12, MYL7, NAMPT, NEUROD1, OR10Z1, OR5AK2, OR8D4, PAX4, PIAS4, PTK2, PTK2B, PYGB, RDH5, RPS6KA1, SHC3, SOCS2, TAS2R3, WASF3, WWP2, MAPKAPK5, SERPINB5
Negative_297	DBI, TAT, CCL27, ELK4, OR10J1, OR5H6, SHISA5
Negative_298	DUT, AKT3, ATP5G2, FOSL1, MFNG, MKNK1, PIGW, RASSF5, TCF7L2
Negative_299	DCT, ABL2, ALG12, CACNA1C, CHST11, CSNK1D, GALT, HMGCL, ITGAM, MYD88, NCOA4, OR4F15, P2RX7, PIAS2, PIK3C3, PLAU, RPS6KA4, TACR3
Negative_300	KDR, LHB, BCMO1, FARP2, LILRB3, OR52I2
Negative_301	FGA, ACOT11, AGPAT2, AKR1B1, CCNB3, CD28, CDH2, CMAS, COL5A2, COQ7, DX54, DNMT3B, EGLN1, ENTPD1, ETNK1, FIGF, GNA11, GPT2, GRAP2, GSTO2, HMOX1, HSPA8, KIR2DL1, LTC4S, MAPK8, OR10C1, OR2A5, OR8I2, PIP4K2A, PIP4K2C, PON3, SH2D1A, TAS1R3, THBS4, TSTA3, UNC5D
Negative_302	F2, LEP, MOS, MVK, TK1, ACPP, ADAM17, ADCY1, B3GAT1, BUB1, COQ5, CPT2, EXT1, GLUL, GPAM, HCLS1, LARS2, MAOB, MYH7B, NCAM2, OR10J5, PLXNA3, PTK2B, TM7SF2, SERPING1
Negative_303	CFI, EPO, GGH, PXN, ACACA, ACSL3, ACTB, ATP50, CDC45L, CFLAR, CHRM5, CXCL9, CYP2A6, DAAM1, FMO1, GARS, GFPT2, GRIN2A, GSTM5, HA02, IL2ORB, IRS1, ITGA1, ITGB6, LTC4S, NLGN2, NRAS, OR4C13, OR4K14, OR51F2, OR52A1, OR5F1, PRKCB, PTCRA, SPRED1, TUBAL3, VANGL2, HLA-DPA1, TNFRSF13C
Negative_304	ACO2, ALG5, CAV2, CCL20, CCNA1, CREB1, DDHD1, ETS1, GSTM5, HLA-F, LCMT2, MAP4K4, NADK, OR10X1, OR1B1, ORC1L, PVRL4, SEMA3F, SLC25A4, SYNJ2, WHSC1L1, PDCD1LG2
Negative_305	PTS, TNR, WAS, ARPC2, CACNA1E, CACNA1S, CD28, CHRM5, GALNT8, KRAS, MGAT4B, MKNK2, NRXN2, NTN1, OR1N2, PRKAB1, PRSS2, PSPH, PTPRZ1, RARS, RDH16, RHOD, STAM, TUBB2A
Negative_306	BBC3, CNTF, FGF11, FGF19, GALNT9, GNAL, GSTO2, ITGA6, OR2L13, OR4D5, OXCT1, PHKG2, PPBP, RALB, ZFYVE16
Negative_307	AK2, ACADSB, ADCY2, AGPAT2, ALDH4A1, ALOX5, ATF4, CDC25A, CNTN1, COL1A1, COL6A1, ENO2, EPRS, FGF21, FLT1, GGT5, GLUL, GNAI3, GNPAT, GSTA4, ICAM3, KNG1, LDHD, METTL6, NGEF, NKX2-2, NQO1, NRXN3, OR10H2, OR56A1, OR5M8, OR6B3, OR6C75, PLAT, PPP2R1B, RASGRF2, SCD5, SETD8, SOCS7, ST8SIA5, STK11, TNXB, ATP6V1G1, PAFAH1B1
Negative_308	GHR, GLS, GPT, NF1, AGPAT3, ATP6V1H, CACNB2, CCL15, CHRM2, FGF21, FGF R1, GOSR2, HAP1, IFNA16, IL12B, KIR3DL1, LARS, NCF2, NCK1, RXRB, SLC9A1, UGT2B7, ARHGEF12
Negative_309	ACAD9, ACSM2A, ACYP1, ALDH5A1, APOE, ASPA, BMP4, BMP8A, CNTN2, COL4A1, CYP2A7, F2RL2, GLO1, HSD17B3, IL23A, NME2, OR6N1, PRKACA, RPS6KB2, TUBA3C, ZBTB16, SLC25A31
Negative_310	CDA, CGA, CRH, DAO, LAT, ABI2, ACYP1, ADRB1, AFMID, AGPAT3, ATP5A1, ATP5I, BCAT2, CCNG2, CDC20, CES2, CLCA4, CLDN9, CTSB, CTTN, CYP11B2, E2F4, ENPP3, GSTP1, HTR2A, LDHC, MAD2L1, NCOR2, NUMBL, OR13C8, OR1E2, OR1L1, OR2L3, OR52N1, OR5R1, OR8B12, PIK3R4, PRKCA, PTK2, SOCS5, SOCS7, ST8SIA1, TAS2R5, THBD, TPK1, TRADD, ATP6V1B2
Negative_311	SRC, ACVR2B, CACNG3, CLDN6, DHDH, EFNA3, FARP2, GMPPA, GNRH1, LALBA, MAD2L1, OR2A5, OR2T8, OR4A16, RHOD, SPTLC2

Negative_312	FOS, NOG, AXIN1, CACNB1, CASP9, CLDN18, COQ7, FRAP1, GNA11, GRIN1, IDH1, KLRD1, PITX2, POLR2L, SLC9A1, THBS1, TRHR
Negative_313	LHB, BAIAP2, C4BPB, CACNA1S, CARS, CCL26, CCND1, CD44, CDC25B, CDS1, COL2A1, DUSP16, DUSP5, FCGR2B, FGFR2, GNAI2, GSTO1, ITGA11, LDHA, MAP3K7, MAP4K2, OR2B11, OR3A3, OR4B1, PARVA, SARDH, SKIV2L2, SPCS1, STAM, TP53I3, UPP1, XYLB
Negative_314	IL7, ILK, SDS, TNC, ACVR2A, ATP5I, CDC26, CTBP1, DHODH, EPHA2, FCGR3A, FECH, FM03, FUT8, GADD45A, GLG1, GNA11, GNAI2, GNAO1, GP1BB, GRIN2A, HCST, KRAS, NAT2, OR13A1, OR1N1, OR2H1, OR2M2, OR2Z1, OR4D1, OR6K2, PARVA, PFKL, PIM2, PNLIP, PRKX, PTGER1, PTGS1, PTPRF, SC5DL, STAT6, TYMP, TYRP1, UCK1, XIAP
Negative_315	AGL, IDS, PGF, A4GALT, ALCAM, ALDH1A2, APOA5, CD47, COMT, CPOX, CYP8B1, DAXX, EDAR, GRIA3, ICAM3, IFNA6, IL20, ITGAE, JAK1, MKNK2, NFATC2, OR4N4, OR51E2, OR8D1, OXCT2, PDGFC, PIAS2, PIK3C2G, PPP2CA, PRKCI, RPS6KA3, SGPP1, ST3GAL1, TPH1, XYLT1, XYLT2
Negative_316	ALDH7A1, GRM1, PIK3R1
Negative_317	C6, CSK, DBT, XDH, ACVR1B, AOC2, B4GALT2, BACE1, CD38, CHRM5, CSNK1G1, CUL1, DARS2, DGKG, DPYD, F2RL1, F2RL2, GNA13, GPD1, HGSNAT, HLA-DRA, IL12RB2, IL7R, ITCH, MAML3, MAOA, MASP2, NCAM1, OR10Z1, OR2M2, OR4D6, OR51B2, OR6B3, OR7A10, PGS1, PIPOX, PLA2G1B, PPP1R3D, PRKAR1A, RASGRP2, RFXAP, SPRY3, TNFSF11, TP53I3, TYK2, UBE2K, ATP6V1C1, MAP3K7IP1
Negative_318	MET, A4GALT, AARS2, CERK, CHUK, COQ5, DLAT, FGF1, GART, GMPPA, GRB2, HNF4G, LAMA4, LRRC4C, MAP3K14, OR10Q1, OR2A12, PDE8A, PFKL, PIGQ, PLCB3, PPM1B, PRKG2, PRNP, SDC3, SEMA4D, SMAD9, SMURF1, SULT1A1, TPK1, TRAF2, WWP2, ZAP70, SERPINC1
Negative_319	GCK, SMO, ALDH2, ATP4A, CACNA1B, CACNG5, DUSP4, ENPP3, ENTPD5, EXOC7, IL21R, LIPA, MAML3, MAN1A1, MGAT2, NCOR1, OR13G1, OR2AG2, OR6C74, OR8H2, PFKFB1, PIGO, POLE2, PPARA, RAC3, SGPP2, TGFB3, UGT2B17, WNT9B
Negative_320	CR2, ADCY1, ARG1, CASP7, CBLC, CSNK2A1, CXCL13, CYCS, CYP3A5, EPAS1, FZD5, IDH3A, ITGB8, LIPE, MAP3K3, NEU2, NGEF, OR13D1, OR2T34, OR2T4, PIP5K1B, POLR2D, PRKCG, RDH11, SEMA3F, TGFB1, TSC1, UGT2B10
Negative_321	BAD, DCT, GK2, GP9, ALOX12, BLNK, COL6A1, CSF3, CTPS, CYP1B1, GTSE1, GUCY2F, LAMB2, MYL7, NAGK, OR13F1, OR1J4, OR1N1, PIK3CA, POLE, RAB23, SUOX, TAS2R3, TLR9, TPK1, UAP1, YKT6
Negative_322	ACSM2A, CD47, ETNK2, HAGHL, HMGCR, NFAT5, OR11H6, OR2A2, OR4M1, OR5M8, PGM1, SNAP23
Negative_323	GLS, HDC, KIT, MYC, ACADS, ACTN1, ADH4, ADSL, ALCAM, ALDH1L1, CACNA1B, CACNB1, CD44, CNTNAP2, EFNA3, EPHA3, IFNA17, MAP2K2, NARS2, NTF4, OR1K1, OR1S2, PLA2G2E, PLCZ1, PLOD1, POLR2F, PPARD, RBPJ, SRD5A1, TPM1, WIF1, CACNA2D3
Negative_324	BID, F3, ACAD8, ALDH7A1, DDX47, DGKG, NKD2, RDH12, RPS6KA2
Negative_325	F2R, UBB, ACTA2, ARPC5, CBLB, CCL22, CCNE1, CDC14B, CDK7, CER1, CSNK2A1, DDX50, DNMT3A, ENPP3, GATM, HSD3B1, IFNGR2, IQGAP3, JAG2, MAP3K14, MGST3, MICA, MYH11, NAGK, NQO1, OR5L2, PANK1, PGLS, PIGF, PMM2, PNP1, RARS2, RASGRF2, RDH12, SUFU, SULT1A4, SV2A, TP73, TPH2, UGT1A10
Negative_326	AASDH, B3GNT2, BACE1, CACNG2, CCL19, CCNH, CD70, CDC2, CHRM5, CNGB1, CNTNAP1, CTNNA1, EPHA8, FDFT1, FZR1, GANAB, GDF5, GRIN2A, HRH2, LAMA4, MAD1L1, MDH1, MYL5, NCK1, NT5C, NT5M, OR2C3, OR2G2, OR2Y1, OR52K1, OR9Q2, PDXK, SLC2A1, SOAT2, STX12, TGFB3, PLA2G12B, PNLIPRP2
Negative_327	CACNG7, CREB1, CSF1, CYP3A4, GSTP1, OR9I1, PPOX, PPP1CA, PTTG1
Negative_328	AUH, MUT, SDS, CASP8, CDKN1C, LIPF, MAP3K1, OR1N2, OR51A2, OR52I1, OR9K2, PAPSS1, TAS2R16, VAMP2, SERPINF2
Negative_329	GDA, NLK, CYP4F2, CYSLTR2, GSTA2, OR5C1, SLIT1, TIAM2, WWP1

Negative_330	BAX, FGA, ITK, LTB, PRL, ACSM3, ATP5D, ATP6V1F, CCL3, CD40, CDC25C, CSF3R, CYP3A5, FOXO1, GAB1, ITGB2, LEFTY2, LHCGR, MAP3K11, MGAT1, MYH9, NTRK1, PIK3R3, SLC2A4, SMAD3, SOS2, TJP1
Negative_331	FER, MSN, TPR, ACSM5, ANAPC10, CRLS1, CSF1R, CTNNA3, FADD, KRAS, LLGL2, LTC4S, OR52L1, PRKCA, SOCS7, SSH2, WNT10A, SERPING1
Negative_332	BTC, SRF, APC2, APH1A, ARSE, BAAT, CAMK2A, CCR10, CHRNA7, EPHA1, GNPDA1, GSTA5, IFNGR2, IL17RB, IL21, IPMK, JAG2, MITF, MYL9, OR12D3, OR51B4, OR51V1, OR5T3, PIGA, PMAIP1, PRKAB2, PTGS2, PYCRL, ROCK2, SC4MOL, SESN2, SLIT2, SNW1, SORBS1, SUCLG1, WASF3
Negative_333	CD2, CCL22, CDH3, CES7, CHIA, CLCA2, CSF3R, DCTD, GSTM3, IFNA14, LARS2, LCMT2, MGAT4A, OR13G1, PGM2, RERE, SEMA3D, SSH2, STX2, SUV39H2, TBXAS1, UROS, VTI1B
Negative_334	CFI, CGA, FAS, ACVRL1, ALDH3B1, ANAPC2, BIRC5, CDIPT, CYP3A43, DRD5, EFN2, GNMT, GSTO1, HRAS, IL17RA, IL20RA, MAOB, MYH11, NKD2, OR10X1, OR56A1, OR5K2, OR6A2, OR7A17, PDE1A, PFKP, PGK1, PHGDH, PRKACA, QPRT, RRM2, SDC1, SEMA7A, SH2D1A, STX2, TNFRSF9, TRAF1, TRAF6, SERPINC1
Negative_335	CKM, GHR, VCL, AADAC, ACADVL, ALG8, AMDHD2, BMPR1A, BST1, CD226, CHAT, CISH, CLDN16, CNGB1, COL6A1, CTNND1, DARS2, DHCR7, ECHS1, FGF11, GAMT, GFPT1, IPMK, MDH1, NR1H3, OR13A1, OR14A16, OR1M1, OR52R1, PIK3C2A, POLE, PPP1CC, PPP2R2D, RASA1, RRM1, RXRB, SYNJ2, TICAM1
Negative_336	IL5, MSN, ANAPC11, CCL11, CD46, ECHS1, ENTPD8, FGF1, FUT6, GATM, GRIN1, GSTM1, HLA-DOA, KCNB1, NEGR1, NFAT5, OR1N2, OR4D6, OR51I1, OR6M1, PHGDH, PPP1CC, PRKAG3, RAB23, ROCK1, VAV1, ZIC2, MAP3K7IP2
Negative_337	SYK, ADCY7, CACNG1, CACNG7, CREB3, CREBBP, CYP3A43, EPHB3, FARSB, GLDC, GLUD1, GNPAT, HNF4A, HSD11B2, HSD17B3, IL2RB, IRF5, KIR2DS5, MAPT, NT5E, NTF3, OR5AC2, PCCB, PDE7A, POLR1C, PVRL2, RASGRP3, SHC4, TJP2, PAFAH1B3, PNLIPRP2
Negative_338	SRF, TH, CCNA2, CD48, ERBB4, HMOX1, LAMC1, PRKCQ, SNAP23, SNAP25, TUBA3E
Negative_339	ID3, WAS, ATP5E, BAI1, CACNG4, CD19, CD58, CNTF, CYFIP1, DHCR7, EPAS1, FGD3, GALNT14, GLG1, GRB2, GRIN2B, GRM5, GSTO1, HEXA, HNMT, IL13RA1, IL1RAP, MAP2K3, MYH8, NFATC4, NFYB, NRXN2, NT5M, NUDT2, ONECUT1, OR2Y1, OR56A3, OR8B12, PARVG, PIAS2, PIGF, PIK3CD, PRIM2, PTK2B, PTPMT1, RUVBL1, SRD5A1, TLR5, TSLP, TUBB1, TYMP, WNT5A, ZIC2, MAPK8IP3
Negative_340	LAT, CXCL2, FCGR2B, ITGB7, OCLN, OR2V2, OR4E2, OR6C1, OR7A5, PAFAH2, PSME3
Negative_341	DHH, ABLIM1, CAV3, CNTNAP1, CSNK2A1, GCH1, GMDS, GNAI3, OR4P4, PTPN7, SHMT1, TUBA1C, VARS
Negative_342	ZYX, ABL2, GRAP2, IRF3, MAML1, OR10V1, OXSM, POLD3, UNC5C, PAFAH1B1
Negative_343	AK1, CTH, DCT, AGRN, ALG6, ARG1, ARHGEF1, ARHGEF6, ARNTL, ATP5C1, BAA1, CACNG6, CCL3, CHKA, CREBBP, DARS2, EVI1, FLT4, FZD1, GAPDH, HTR2B, HTRA2, KAT2B, MAP3K13, MMP7, MTFMT, NADK, NEUROD1, NODAL, OR2K2, OR2T8, OXCT1, PDGFC, PPP1CC, PRKAR1B, PRKAR2A, RPS6KA3, SELPLG, SH2D2A, STX5
Negative_344	ABO, FAH, GBA, HDC, PVR, ALDH3B2, CDC14B, CHPF, CHRNA7, CHSY3, DARS, DX52, DTX2, DTYMK, EHMT2, EI24, EIF4B, GSTO2, GSTT1, GUSB, HNF4A, HYAL2, IFNGR1, IL17RA, IL7R, NRG1, NRG2, OR2A25, OR51A4, OR6C4, OR6N1, PFKFB3, PIAS2, PIGN, PIK3R1, PLXNA1, PTDSS1, RALBP1, SETMAR, SOCS4, ST3GAL6, TNFSF9, VCAM1, PRICKLE2, TNFRSF18

Negative_345	CAT, GK2, PGF, SFN, ADCY1, ADRA1D, AMDHD2, BACE1, CCNB3, CCR9, CHDH, CXCL1, DPYD, EIF4E2, ENO1, ETNK2, FADS2, FMO5, GNAZ, HTRA2, ICOSLG, IL1R2, IL2RB, IRS1, LCMT1, MADCAM1, MAP3K3, MAPK11, MCCC2, MYL2, NCK2, NFKBIB, OR4K17, PDE1C, PDE2A, PDE8B, SIGLEC1, STX6, TAS1R3, THBD, TIAM1, TUBA1B, UGT8, ULBP1, UNC5D, ZFYVE9, TNFRSF10A
Negative_346	BCR, ADORA2B, ALDH6A1, BHMT, CD14, CLDN11, COL1A1, CSF2, CXCL5, CYFIP1, DHRS9, DPM3, DUSP3, EFNA3, ENPP3, ENPP7, FARS2, GADD45A, GOT2, HA01, HIP1, KLRC3, MAP2K5, MCCC1, MGLL, MPST, OLAH, ONECUT1, OR10AD1, OR1E1, OR1L1, OR2G3, ORC5L, OXTR, PDHA1, PNPO, PRSS1, RASGRF2, TOLLIP, VEGFC
Negative_347	C7, ALG6, CAMKK1, CLTA, CRY2, DDX54, ENTPD4, FZD9, GNAZ, GNPAT, GSTM5, HYAL1, ITGB8, LYZL1, MAGI3, MEF2C, OR10A3, OR1L4, OR51Q1, PPA1, PPT1, PRKAA2, PRKCE, RASA1, SHC2, SPP1, TNFRSF9, TOMM40L, XYLT2, MAPKAPK5
Negative_348	CFD, FN1, ARHGEF2, ATP5G3, ATP6VOB, CD19, CDC6, CMPK1, CRHR1, CSF3, EFNA3, EPHB3, IFNA17, IGFBP3, IRAK4, IRF9, ITGAD, MYH6, NFYC, NRXN1, OR10H2, OR2T33, OR51G1, OR5T2, PCK2, PNPLA3, POLA2, PROC, PRSS3, SAT1, TSC2, TYROBP, VAMP2, SERPINB5
Negative_349	CKB, CSK, RPE, ACPT, ADRB3, B3GALT6, B3GAT3, CACNG8, CCND2, CHKB, CLDN6, CSNK1A1, CYP4F2, ERBB4, GRIN2C, GRIN2D, HIBADH, HTR6, IGF1R, IL22, MAP3K2, MAP3K3, MITF, NKX6-1, NOS3, NRXN3, OR5AC2, OR8S1, PDIA4, PLCB2, PLCB3, PNLIP, POLR2J, PP2R5E, PSME3, ROBO3, SESN1, SQLE, SRGAP2, SV2C, YWHAQ, TNFRSF13B
Negative_350	CSK, GSS, PTS, PXN, AGMAT, AKR1A1, ALDOC, ALS2, CAMK2G, CCL20, CREB3, ELK4, FOSL1, GALK1, GGT7, GNA13, GSTZ1, IFIH1, IFNGR2, IFT57, KIR3DL3, LIPG, MYH6, NFKB2, NUMBL, OR11L1, OR4D9, OR4K14, OR4K2, P2RX7, PDE10A, PDIA4, PMAIP1, SREBF1, STX1A, STX1B, STX5, PAFAH1B1, TNFRSF12A, TNFSF13B
Negative_351	NOG, ACTN4, ARPC2, CDC16, CRB3, GPT2, GUCA1B, HSD3B2, ICAM2, IL13, LEFTY2, NCF2, NEFL, NRP1, OR2G6, OR6X1, TLN2, WBSCR22, PRICKLE2
Negative_352	SRF, ALG3, ATP5B, BDNF, CAMK2D, CDH3, CHUK, CLOCK, GNA15, IRF7, JAK3, MYH7B, NFKBIE, NKD1, NTF3, OR2T12, OR4K5, PDGFRA, PLA1A, PPP1R3B, PYGB, ROBO3, RPRM, SDC4, TJP2, ATP6VOE1, MAPKAPK5, SLC25A31
Negative_353	PVR, SRM, ACPT, ACSL4, ACSM5, ALPI, ANAPC11, APOA2, B4GALT5, B4GALT7, BIRC5, BUB3, CACNA1C, CYP19A1, DGKE, EXTL1, FARSB, FGF10, HSD3B7, IFNA6, IKBKB, IL1B, ITGB4, LAMC2, LYPLA2, MDH1, NCF2, NSD1, OR13J1, OR5AC2, OR5B21, OR8D1, PAX4, PIP5K3, PPP2R2D, PTPRC, RALB, RHOD, SARDH, SIAH1, SULT2B1, THBD, WHSC1
Negative_354	DAO, PXN, SMS, UBB, BMP6, CSNK1D, ENO3, FPGS, FUT2, GSTT1, IL13, MAGI2, MGAM, MGAT5B, RENBP
Negative_355	AK2, GSS, IVD, OAT, OSM, SRC, ACSL3, AGRP, ATG12, CACNA1D, CACNG4, CBLC, CPT1B, CYSLTR2, DCTN1, ENO2, GAB1, GALNS, GLG1, GNRHR, JUND, LIAS, LRDD, MMP9, NAE1, NRP1, OR10H3, OR10R2, OR1N1, OR51T1, OR52B4, OR56A1, PIP4K2B, RFX5, SENP2, SOAT2, SORD, SSX2IP, STAM2, SUV39H1, TCF7, TIRAP, TRMT11, HLA-DPB1, PAFAH1B2
Negative_356	AMT, PTS, TNN, AADAC, ACAA1, ACSS2, ADCY6, AVPR1A, CD19, CD27, CHRM5, F11R, FABP3, FPGS, GGT1, KARS, MAN2A1, NCR1, NLGN3, NME6, NTRK2, OR4K5, OR5D16, PECAM1, PGLS, POLR1A, PPM1A, SUV39H2, WNT2B, ATP6VOA1
Negative_357	BAD, AHCY, BACE2, CACNA1F, CHEK2, CKMT2, EP300, GALNTL4, IARS2, IL7R, MAP3K5, MCM7, NANS, OR4C16, PDE7A, PDHA1, PRKAR1A, PTGER3, SMAD5

Negative_358	GBA, HYI, MVD, CACNB1, CACNG8, CCL14, CCNB1, CD80, CDH3, CLDN8, CYFIP2, DERA, ENO1, FZD7, GAPDH, GNAS, HES1, HSD17B3, HSD17B4, KLKB1, KLRC1, MAP3K1, MYH11, NCSTN, NME7, NOTCH3, OLR1, OR2L8, ORC3L, PAFAH2, PERP, PLAT, PPP3R2, PRKY, SETD8, SGPP2, SHC3, SMPD4, SYNJ1, TMLHE, TNFSF8, TP73, TSLP, TYROBP, WNT9A, PLA2G12A, ST6GALNAC3
Negative_359	ADA, CTH, FER, ACAT2, AGMAT, ALG13, BMP2, CBR3, CSF3R, CTF1, CYSLTR1, DPM3, DVL1, EARS2, FGF23, GOT1, HHIP, HTR5A, IL17B, ITGA9, MAP3K7, MF2C, MFNG, NCK2, NFATC2, OPLAH, OR2A25, OR8G1, OR8H1, OR8I2, PCYT2, PDE10A, PFN3, PIK3R2, PIP4K2B, RUVBL1, SAT2, SUOX, C1GALT1C1, HLA-DRB5, PPP1R12A
Negative_360	ALAS2, AMD1, CLDN14, COQ3, CSNK1G1, CXCL6, DGKE, HMGCR, ICAM2, MGLL, OR1G1, OR4K13, OR6B2, OR8J3, OXCT1, PARD3, PHGDH, PLAU, PRSS2, SMPD4, MAPK8IP1, TNFRSF1B
Negative_361	AGK, DBT, DDC, GSR, NPY, CD44, CLOCK, CYP2C18, DGKG, FGFR4, GLYCTK, GNA13, GTSE1, HNF4A, MAML1, MCCC1, OR10G3, OR9I1, PLD2, TCIRG1, TMLHE, ATP6V1E2, TNFRSF10D
Negative_362	ADAM17, COL6A2, FUT8, NOD1, ULBP1
Negative_363	CGA, F11, PML, PRL, TNN, ALG8, ATP6V1A, CCL28, CD274, CD44, CYFIP1, DCXR, DEGS2, GALNT7, GNRH2, HADH, IL10RB, KAT2A, MAOB, MYLK, NME2, OR56A4, OR8B12, ORC6L, P2RX4, PAK7, PIGU, PLCD3, PPP2R5B, PRKACA, PSEN2, PTPRM, RXRG, SDC3, SMPD3, HSD17B10, SERPINA1
Negative_364	ATM, DBH, IL8, MVD, TKT, ACP6, ACSM5, ADH5, ADRB3, CANT1, CCNB2, CHAT, CNTNAP1, ENTPD1, GAB1, GAMT, HADHB, IPMK, MAP2K2, MTHFD1, NAGA, NKX3-1, NTSR1, PDHA2, PLA2G2D, POLR2D, RFD2, RXRA, TRAF2, UGT2B10, ATP6V0A4
Negative_365	FAS, GSN, ZYX, ADIPOR2, ADSL, ALDH1A2, C1QA, C5AR1, CD74, CDKN1A, CLTA, CLTCL1, CSNK1G3, CYP1A1, CYP2J2, DIAPH1, EXTL1, FECH, FGF23, FUT4, FZD1, IARS, LAMB4, METTL6, MYH10, MYH11, NFASC, OR10A2, OR10X1, OR2T12, OR2T8, OR4S1, OR51F1, OR52N4, OR6T1, OR8D2, PDE8A, PEMT, PPM1D, PPP2R2B, PRKCG, RDH10, SGMS2, SNAP23, ST3GAL6, SV2C, TACR1, TAS2R16, ST6GALNAC5
Negative_366	LTB, ATP5L, CACNG8, CASP10, CD55, CYBB, DARS, DFFA, FABP4, GALNT3, GALNT8, HGSNAT, IL19, IL25, MAD1L1, MAP2K5, MYH9, NFKBIE, OPLAH, OR2A12, OR2A25, OR2T4, OR6B3, OR6C75, PDGFD, PIM1, PRKCI, ROBO3, RRM2B, SLIT2, UBA7, WASF3, HLA-DPB1
Negative_367	ADORA2B, CERK, COL6A2, DNMT3A, MYH8, PLK1, SETMAR, STX7, UPB1, WASL
Negative_368	F10, KIT, ME1, NGF, TFG, ACADL, ACTC1, ADRB3, BCL2L1, BUB1, CD8A, DDX52, DHCR24, EPRS, GMPPB, HEXB, HSD17B7, ITGA5, MAP3K5, MYH15, NTNG1, OR7C2, PDE3B, PDE4D, PDHA2, PLAUR, PLCD4, PPCDC, PRODH, PTDSS1, PYCR2, RAPGEF4, RPRM, STK3, TACR1, TJP1, TOLLIP, TUBA1B, UCK2, ULBP1, WHSC1L1, YOD1
Negative_369	CNGA3, FM05, FOSL1, IMPDH2
Negative_370	PC, APOC3, ASNS, C1QB, CAMK4, CD55, CLDN6, CNTF, CRKL, CSDA, CYP2S1, DDHD1, FGF18, FPGT, GNB3, GPX5, GUCY2C, ITGAM, OR10H4, OR13C5, OR1L6, OR2A2, OR5T1, OR9A4, PLCD1, PLCD4, PLCZ1, PRKACB, SDHB, SELPLG, SFRP4, SMARCA5, SPTLC1, THBS4, TRDMT1
Negative_371	DCN, ACVR2B, AKR1C4, AOC3, ARPC5, ASAH1, B3GALT1, CACNG5, CDC2, CHIA, CLTCL1, COQ3, CTPS2, DMGDH, EPHA7, GGCX, GNB3, HSPA8, IKBKB, IL11, MAP3K14, NUDT8, OR10Z1, OR2M5, OR4C13, OR4D9, OR51A7, PAK7, PDE4D, PHKG1, PMAIP1, POLR2I, PPP5C, PRKACG, RHOA, SENP2, ARHGEF12, ATP6V1G3, ST6GALNAC6, TNFRSF10A

Negative_372	F2R, GHR, ACSM4, ACSM5, ADAM10, ARSA, CPS1, CPT1C, CX3CL1, DRD1, EGFR, ETS1, GALNT9, GANAB, GGT1, GNA13, GNMT, HSD17B7, HSD3B7, KRAS, NAGA, NR1H3, NRG3, OR10A7, OR10K2, OR11A1, OR14I1, OR4K17, OR51V1, ORC2L, POLR1D, PORCN, PTGER3, PYGB, RAC3, RHOA, SDC1, SMURF1, STX1A, SULT1A2, SYNJ2, TFPI, TNFSF4, TRADD, TUBB4, UGCG
Negative_373	C3, ALG12, ARD1A, CCR8, CDKN2B, DHRS9, F13B, GAD2, GMPR, HRAS, ICOS, I NPPL1, NR4A1, OR2G6, OR6C76, ORC2L, PFKFB3, RDH5, RPE65, RPS6KA1, SL C25A5, SPCS3, ST3GAL1, STT3B, TP73, TRIP10, UBE2L3
Negative_374	CRH, MPI, NF1, ADCY9, ATP6V1F, BCL10, CCR8, CLDN20, CSH1, CTBS, CUL1, GAD1, GALNT3, GCNT2, GCNT3, IL23A, IL24, ITGA9, MAP4K1, NCR1, NUDT12, OR10A3, OR14A16, OR2S2, ORC2L, PAK4, PDGFRB, PHKA1, PKMYT1, PSME3, RAF1, SCLY, TNFSF8, TNXB, UGCG2, WNT10A, PLA2G12A
Negative_375	CFD, DDC, F9, FGG, IHH, ACMSD, ACSS2, ALPI, CDC20, CES2, CLTCL1, CREB1, DDX19A, ELK1, G6PC2, GNPAT, GOSR2, GYS1, HLCS, HSD17B3, LCP2, LTC4S, NKD1, NR1H3, OR13J1, OR1C1, OR1K1, OR4N4, PCCB, PDE9A, PLCD1, PPA1, PRKAG3, PRKCB, RPS6KA4, RUNX1T1, SDC1, SEMA7A, SNAP25, SOAT2, SV2B, TAS2R50, TAS2R9, TNFSF14, WWP2, ATP6VOD2, CSNK1A1L, TNFRSF17
Negative_376	CAD, GBA, GK2, ME3, TNR, AARS, ALAD, ANAPC2, CBLC, CDKN2D, CLDN10, CLD N18, COQ6, CTSB, CX3CR1, CXXC4, DAAM1, FRAT2, FZD10, FZR1, GLDC, IARS 2, IFNA8, KARS, KIR3DL1, LARS, MYH8, NOS1, NR1D1, OR51F1, OR52A1, OR5 6A4, OR8D4, PCYT1B, PIK3C2G, PPP1R3C, PRDX6, PRPH, SETD1B, SETD7, SO AT1, SULT1A2, TUBA1B, VASP, WNT5B, YKT6, PPP1R12A
Negative_377	CGA, FAH, TH, AADAC, ATP5J2, B3GALT4, BCKDHB, C4BPA, CD44, CDC45L, CE BPA, CLDN3, CLOCK, CYP1A1, EFNA3, GALNT5, GNA11, GSTM5, HCCS, IGF1R, JAK2, LDHAL6B, LRP6, MYD88, MYLK3, NANP, NFYC, NSDHL, OR1D2, OR2A5, O R4D11, OR52R1, OR8D2, PDE4C, PIGT, PIP4K2B, PPID, SH2D2A, SOS2, TCF7 L2, TSC2, VAMP4, YWHAE
Negative_378	BET1L, C7orf16, CLDN4, IQGAP1, OR51A4, PIP5K1B, HSP90AA1
Negative_379	ME3, ADIPOR1, APAF1, APOA1, ATG3, BIRC2, BMP8B, CCL8, CES7, CMBL, COL 3A1, CSF1, CYP11B2, DCTD, DDX50, GALM, GRAP2, GRM5, HES1, INSR, KRAS, LAMC1, LDHAL6A, NT5C2, OR1J4, OR2C3, OR52N5, OSMR, PHKB, PRKCE, RDH8, SDC4, TAS2R42, TJP3, ULK1, VEGFB, ZNRD1
Negative_380	AK7, C6, GH1, ALG10, AMDHD1, CDC14A, DOCK1, EARS2, IL20RB, MMP14, OR8 K5, THY1, WEE1, WNT10B
Negative_381	ADA, APP, BAD, F5, GHR, OSM, ACSL3, ADRB2, AQP7, ATP13A2, CBLC, CES2, C HIT1, CYP2A6, DGKB, DTX3L, GARS, GDE1, IARS, IDH3A, IL12RB2, LALBA, M GAT1, OR4A16, OR6A2, PARVA, PHKA1, PIP5K1B, POLA2, POLE4, PRKCE, RAB 5A, RND1, SMAD6, SPRED2, ST3GAL3, SV2C, TBL1XR1, TJP2
Negative_382	FGA, HAL, PAH, VCL, ATG7, CBR1, CPS1, CYP11B1, DDOST, EPAS1, FASLG, GA B1, GLYCTK, GUSB, MAML2, NEU2, OR4S1, PLAT, PMM1, PPP3R2, RAB5A, SCD5, SPTLC1, STX2, UBA1, ST6GALNAC5
Negative_383	MOV10L1, NME7, PDE8B, RDH12
Negative_384	FES, IL3, ACSL3, ACSS3, ADH5, ADRA1D, ALDH7A1, ALDOB, BACE1, CADM3, C ALML5, COL6A1, HAGHL, IFNA5, IKBKE, ITGA9, ITGB8, MAPK3, NT5E, OR10A 5, OR4F15, OR5A1, SHC2, MAPKAPK3
Negative_385	MPL, ACSS1, ADCY9, CACNB4, CXCL1, CYFIP1, GMPS, GUCY1A3, MCM5, MDM4, OR5AC2, POLR2C, PPP1R1A, RAD51, SELL, SESN3, THBS1
Negative_386	ACVRL1, APLP1, GALNT3, GNG12, IDH3G, PPCDC, UGT2B28
Negative_387	GSS, ACAT2, CHRM1, CLDN5, GNB1, IGF1, MYL2, POLA2, PPP1R3C, SLIT1, TA S2R13
Negative_388	AHCYL2, ALDH2, APC2, ATG12, B3GALT6, CCNB2, CTBP2, CYBA, DAPK3, DLL3, EPHA7, GALNTL5, GNA14, IFNGR2, LAMB1, MGAT1, NEGR1, OR6B3, OR7A17, PYGL, SMAD1, SMPD4, SPTAN1, SRD5A2



Negative_389	ACADM, APPL1, CLOCK, CX3CL1, CYP3A7, DERL1, DIAPH3, ESPL1, GNA01, HNF4G, IL19, IL20RA, IL3RA, ITGA8, ITGAD, LCAT, MAP2K5, NRXN1, OR3A3, OR52D1, OR5T3, OR8D4, PGAP1, PITX2, PKMYT1, PRDX6, PTPN6, RFX5, RPS6KB2, SAT1, SMURF2, SSH3, TAS2R3, TYMS, UGT2B11, ULBP3, UPP1
Negative_390	AGPAT3, CHST12, CXCL16, GAS1, HNF4G, LAMC2, MAPK10, MFNG, OR9Q1, PGM1, PIK3C2B
Negative_391	GGH, GSS, RDX, CACNB1, CACNG1, CAV1, CCR2, COL6A1, CXCL1, CYP1B1, DDI3, DHRS9, EPAS1, EPHA5, G6PC, GLUL, GSTM5, GYS2, HARS, IDH1, JAG2, MAP2K5, MAPK13, MBL2, MCM2, MKNK2, MYH4, OR10Q1, OR2S2, OR2T3, OR4K5, OR8J3, OR9I1, P2RX2, PIK3R3, SEMA3C, SFRP1, SMARCA5, SYNJ2, TAS1R1, TIAM1, TRPC1, UBE2L6, UGP2, UPP1, VEGFA, ZAP70, ATP6V1C1, B3GALNT1
Negative_392	GHR, LCT, MUT, ACAD9, ALPL, BLNK, CYBB, DUSP6, FZD3, IFIH1, IL1R2, OR2D2, OR4C15, PIK3CD, RBX1, RPN2, SEMA3F, SRGAP2, TBL1Y, SUV420H1
Negative_393	ALCAM, DKK2, DOCK1, KLRC3, NOTCH2, NOX1, PCYT1B
Negative_394	CR1, ACP2, CACNG4, CASK, CAV1, CCL14, COQ3, DDX52, EDN1, EREG, ICAM1, MYH10, NEGR1, NUDT9, OR2AG1, OR6S1, SERPINB5
Negative_395	LIF, NLK, NOG, PTS, ABLIM1, ALDH3B1, ARD1A, ATIC, ATP2A1, BDNF, CD79B, CDC25A, CSNK1G1, CXCR3, DAG1, EIF4B, FPGS, GNA11, HSD17B8, IKBKE, IL1B, IL21R, MYH13, NCOR1, NPR1, OR11G2, OR3A2, OR4C15, OR5V1, POLE4, PPOX, STAT4, SUV39H2, TBK1, UGT1A10, PPP1R12A, SUV420H1
Negative_396	IL4, LHB, PGP, SDS, ABL2, ACP6, AGPAT6, BBOX1, CACNG5, CD55, CHKB, CRLF2, CYP3A5, CYP8B1, DDX55, ECHS1, FABP4, FASLG, FPGT, GAD1, GNAI2, GSTO1, HARS2, ICAM2, IFNA10, IL24, IPPK, MAP3K13, MAP3K2, MYH3, OR10H1, OR10S1, OR14A16, OR2T12, OR51A2, OR5D16, ORC3L, PAPSS2, PDE1C, PIK3CA, PIM1, POLR2K, PRODH2, SLC12A2, SPRED1, SRGAP1, ST6GALNAC3
Negative_397	FABP1, LLGL2, SPCS1
Negative_398	ABAT, ACTN1, AKR1C4, ALG13, AMY2A, ATP5J2, ATP5O, BCMO1, CACNA1E, CACNG1, CACNG7, CDC20, CHRM2, CLDN2, COASY, CYP1B1, DEGS1, FARSB, GLO1, GNA14, GRIA2, IL17B, IL20RB, JAG1, MINPP1, MMP1, OR13C5, OR2A4, OR6N1, OR6T1, OR8J1, PDE4B, PGM2, PHKB, PIK3C2B, POLE, POLR3B, PTPRM, SPRY2, STX1A, TRPC1, ATP6V1G3, PPARGC1A, TNFRSF17
Negative_399	OGT, AKR1B1, ALG1, ATP5G3, CD55, CHRM1, ENTPD8, EXTL3, FABP4, FRAP1, FTCD, FUT2, GFPT2, GP1BB, HSPA8, HTR6, IQGAP1, MAPK10, MICA, MYH7B, NADSYN1, NCK2, NMNAT1, NRG2, OR1F1, OR5B12, OR5C1, OR5H6, OR6K3, OR9A2, PFAS, PLCD4, PPP1CA, PPP2R5D, PYGM, RFW2, RGS3, SDC1, STX7, SULT2B1, THY1, TLR3, TUBB2C, KIR2DL5A
Negative_400	HYI, WAS, FGFR3, IL20, ITGA5, OR4K1, PLXNA3, STK3
Negative_401	AACS, ANAPC7, B3GNT2, BST1, GRIA2, HSD3B2, IL10RA, IL21R, MAOA, NCAM2, OR8K5, PON2, PPBP, PTPRM, SEMA3D
Negative_402	CDH1, DAD1, NRXN3, OR1M1, PPP1CC, PPP2R2A, RBKS, RFW2
Negative_403	CS, F7, ALOX15, B4GALT7, CASP10, CD19, DAPK2, FCGR3B, HAGH, HTR4, NOX3, OR10H1, OR51S1, OR52D1, OR8A1, PNPO, RDH5, SEPHS1, SLC33A1, ST3GAL3, ULK3, WASL, XIAP, CACNA2D2
Negative_404	AR, IDS, LEP, TNC, ALDH1L1, ARHGEF2, B4GALT6, BCL10, CARS, CASK, CLCA2, CLDN1, CLDN4, CMPK2, CXCL13, DKK1, DMGDH, ENO2, ENTPD7, FECH, GUCY2D, HTR5A, INPP4A, ITGB1, MDH2, NCAM1, NSDHL, OR10K2, OR1S1, OR2G2, OR2M7, OR52N5, OR5T1, OR6M1, ORC6L, P2RX2, PIP4K2A, PLXNC1, PPP2CA, PTPRC, RASA2, RELA, RRM2, STX6, TUBA8, UGT2B4, UROC1
Negative_405	LIF, SCD, SRF, TFG, CACNB2, CCL21, CD48, CFTR, CSF3, CYP2A13, DLL1, FGF11, GNA11, GNA12, GUK1, HAO2, HSD17B8, INHBB, IPMK, LAMB4, LDHB, LIPA, MCEE, NLGN3, NUMB, OR10Q1, OR2A14, OR7D2, PDGFC, PI4KA, PIK3C2A, PLEKHA8, POLR2F, PRLR, PTDSS2, QPRT, RAPGEF1, RRM2, RRM2B, SARDH, SORD, SRGAP2, SUCLG1, TUBA1C, PPP1R12A, ST6GALNAC1, TNFRSF1A
Negative_406	ACSL6, CXCL11, DUSP3, LRP5, OR1A2, SDC4, ULK1, SUV420H1

Negative_407	CD2, CFD, FES, AASDH, ABLIM3, ATP4A, B3GAT1, BHMT, BMPR1A, CCL25, DAA M2, DDX51, DEGS2, DFFB, EXTL2, GAD2, GALNTL5, LTA4H, MAP3K14, MCEE, N KX6-1, OR2F2, OR52B6, OR7G1, PLCB3, PPOX, PTPN5, PYGB, RPE65, SUV39H1, VAMP1, ATP6V0A2
Negative_408	AK2, APP, CD4, ACVR2A, ARSB, ATP4A, ATP5A1, ATP5I, ATP5L, CACNA1H, CD82, CHPT1, CLTC, CTSG, CYCS, CYP1A1, DHRS3, ERBB4, FARS2, GSTK1, HLA-F, ITPA, LEFTY2, MADCAM1, MAML3, NCF4, OR10A3, OR10K1, OR4C13, OR4C6, PANK4, PON2, PPP2CB, PPP2R5A, PRKAA2, RAC2, RELA, RPN1, SDC2, SDHA, SELL, SMPD3, SPRED2, SUV39H2, TCIRG1, WARS, WNT7B, ST6GALNAC6
Negative_409	HDC, ACSL5, APBB1, ATIC, CASK, CDKN2C, DEGS2, FABP1, FGF7, ITGB8, LRP5, MAPK3, NTRK2, OR5H6, PLA2G2E, POLR2L, SPRED1, TICAM1, CTNNBIP1
Negative_410	BAX, CSK, ID3, CCL28, COQ6, CTNNA1, EP300, EXT2, FGF20, GUK1, GYS1, IFNAR2, IGF1R, ITPA, MINPP1, NEU2, ODC1, OR2D3, OR4K2, PRKAA1, RALB, RASGRP2, RPSA, SETD8, TAS2R5, HLA-DPB1, ST6GALNAC4
Negative_411	C8B, GLS, IL3, ADCY2, ALG12, ALG9, BCKDHB, BHMT, CDK5, DHCR24, EPAS1, FASLG, FGF12, FUT4, GALM, GANC, HRAS, IL17B, LAMB3, LARS, LLGL1, METTL6, NLGN3, NRP1, NTSR1, OR11H4, OR13C5, OR2C3, OR2F1, OR8D4, PAX6, PIGN, PLXNA2, PTGER3, RBL1, RHOD, SLC9A1, SMAD7, STAT1, STX1B, STX3, TAS2R1, TGFA, TNFRSF9, UGDH, SERPING1, SUV420H1
Negative_412	GPI, MDH2, NCR1, OR2A42, OR52W1, SERPINA1
Negative_413	ACVR2A, ADSSL1, ATG12, BAAT, CCL1, CDH15, GRIA2, HNF4A, MARS2, MLLT4, NCOR2, NSDHL, OLR1, OR13C8, OR2L3, OR4B1, SFRP2, STAT5A, TAS1R3, WNT1
Negative_414	XDH, CACNB3, CALML5, CAPN2, CCL17, CNDP1, CREB3L4, CYP3A7, EPHA8, EPHB2, IL5RA, MCEE, OR1J2, OR6C3, POLD2, WNT10B, WNT4, SUV420H2
Negative_415	CD6, FN1, ACSS2, ALG8, ATP2A1, CACNA1D, CACNG6, CCNG1, CD8A, CES7, COL5A3, CTNNB1, DPM2, DUSP1, EXTL1, FSHR, GCAT, GSTO2, HPRT1, HSD3B1, INPP5A, MAPK10, MGAT5B, OGDH, OR2AG1, OR4F15, OR51Q1, OR5AU1, OR8B12, PAK4, PDE1B, PDGFD, PIGA, POLR2I, RAF1, RBPJL, ROCK2, STAT1, STK3, UNC5B, VAV2, HLA-DRB3, ST6GALNAC4
Negative_416	ALPI, ARPC1A, BMP6, CNTNAP1, CREBBP, EPHA3, GALNTL2, HSD11B2, ICOSLG, IFNA8, IFNG, IL10RA, IRAK1, IRS1, LAMC1, MAN1C1, NARS, NRG1, NRXN3, OR10H1, OR1D2, OR1J1, OR2B2, OR51L1, PDPK1, POLR1A, POLR3G, PRLR, SPP1, TCF7L1, SERPINF2
Negative_417	AMH, AMT, SRC, ADAM10, AGXT2, ALG12, ALPPL2, CD22, CSNK1E, DDX55, EGLN3, EXOC7, FABP4, FARSB, FGF5, FPGT, FZR1, GALNT2, GALT, GGT7, GLUL, GNA12, HA01, HMGCS1, HMGCS2, IL8RA, LDHC, MASP1, MDM2, MPDZ, NCR2, NFATC1, NPR1, OR1A1, OR2D3, OR2T6, OR4K2, PAK7, PDE7A, PLXNC1, RARA, RASA2, SETD8, SLC2A1, SPRY4, TBL1Y, TRAF6
Negative_418	SFN, AARS, LFNG, MDM4, NEUROD1, OR52L1, PPP2R5B, PTTG1, SETMAR, SMAD5, STAM2, ATP6V0A4, HSD17B10
Negative_419	FH, AMPD2, APPL1, AXIN2, BCL2, BCMO1, CCL13, CYP27A1, GRB2, MAD2L1, NCOR1, OGDHL, OR3A1, OR4D9, OR5T3, PIK3CA, PTDSS2, SFRP1, SHMT2, SSX2IP, PAFAH1B1
Negative_420	ALG3, ALG6, CASK, CLDN1, CLTC, COMP, ER01L, IFNA16, OR10H1, OR11H4, OR6X1, PFKFB4, PIGW, PRNP, SLIT2, WASF2
Negative_421	ACTG1, ALDH6A1, ALG9, ARAF, ARG1, ATIC, ATP4A, BCAT1, CCL17, CCL8, CHPF, COL2A1, COMP, CSF3, CSNK1D, DLAT, GNB3, GYS1, HPRT1, IPPK, IRF3, MAP3K7, MAT2B, MCM2, MYD88, MYH11, NAGS, NFAT5, OR10G8, OR1L6, OR51B4, OR5A2, PARVB, PIK3R1, POLR3B, PRKAB2, PRODH2, RPN1, SPCS1, TAS2R13, THBD, TRAF3, WHSC1, MAPK8IP3

Negative_422	HGF, ILK, RDX, ACAT1, ACSL6, ATP6VOB, CD244, CLCA2, CSNK2A2, CTNNB1, CYP11A1, DKK1, FGF17, FZD8, GNA12, IRAK3, ITGB1, MAPK3, MYH8, NFKB2, NT5C1A, OR1C1, OR2A2, OR4K2, OR4Q3, OR52N2, OR5B17, OR6T1, PARD6G, PK2, PIPOX, POLR3B, PPP2R2A, PPP2R2B, PRKAG3, PVRL4, SMAD4, SMURF2, SNAI1, TAS2R7, TBK1, TCIRG1, TRAF3, UGT1A10, WNT8B, GABARAPL1
Negative_423	CEL, GGH, BCAT1, GALC, GANAB, GYS1, IL6R, LIFR, LIPE, MAGI2, MAOA, MDH2, MGLL, NEU2, OR2AE1, OR2T8, OR5D18, ORC3L, PLXNB2, SOAT1, ST3GAL6, TPM3, VEGFB, WHSC1, WNT5A
Negative_424	CACNA1A, CACNG6, GSTO1, ITGB7, OR13G1, SELPLG
Negative_425	CAD, ME2, ADH7, AMY2A, AOC3, ARG2, B3GAT3, B4GALT2, BACE2, CD80, CNTN2, COL5A1, DDIT3, DTX4, E2F5, EARS2, EGFR, G6PC, GRLF1, GTSE1, GUCA1B, GUK1, HSD17B1, HTR6, IL15RA, IL1R2, MAP3K8, OR2AG2, OR4L1, OR6S1, PDE1C, PFN3, POLR2B, POLR2K, PRKAG3, RFXAP, SSH1, TRAF6, UGT1A10, WASF2, WNT8A, PDCD1LG2, PRICKLE2, SUV420H1, TNFRSF1A
Negative_426	EGF, ATP5J2, CADM3, CDKN1B, CERK, DVL3, ENTPD4, EREG, FASN, GMPS, LAMA4, LDHAL6A, MYH9, MYL2, OR10G4, PDHA1, RCHY1, SH2D1B, SLC2A4, SQLE, SSH2, TAS2R8, TRAF3, CTNNBIP1
Negative_427	GCK, UBB, ACP5, CADM1, CLDN4, DHRS4L2, DHRS9, DIAPH3, GSTM2, GSTM5, HEXA, HNF4G, HRAS, INMT, LHCGR, MYH13, OR10AD1, OR11H6, OR11L1, OR6C2, P2RX1, PFN2, PIGB, POLD4, PPP1R3A, PRKAG3, PTPRR, PYCR1, ROBO2, SLC27A5
Negative_428	CD2, CKB, ID2, KIT, ADH4, ADH5, ALCAM, AMY2A, ATP6VOB, CCL14, CSF2RB, DGAT1, EI24, EPHB4, FGF2, IDH1, KAT2A, MAGI2, MINPP1, NFYB, OR2B6, OR2T3, OR5K1, PFN1, PIK3C2G, PIP5K1A, PLXNC1, PNPLA4, POLR1D, PPM1A, PTCH2, SETDB2, SSH1, ST8SIA1, TAS1R1, TAS2R10, WBSCR17, HLA-DRB4
Negative_429	C8B, ILK, SCD, ADRB3, AKR1C3, AMD1, ARSE, CD8B, CHAD, CHRM3, CLTB, CREB5, CSNK1G2, CTNNA1, DIAPH1, FARSB, GALNT8, GGPS1, HIF1A, HPSE2, IDI1, IFNA16, IL11, ITGB1, MALT1, NT5C1A, NTNG1, OGDH, OR6N2, OR8D2, PDE6D, PIAS1, PIGF, PIM1, POLR1A, RBL1, RND1, ST3GAL4, STMN1, TAS2R14, TP53I3, TUBA8, UPP1, WNT2, ATP6V1E1, TNFRSF1A
Negative_430	MPDZ, NCKAP1L, OR4Q3
Negative_431	FN1, ATP5G1, BAIAP2, CCL20, CUL1, ECHS1, ELK1, ENPP7, NKX6-1, OR6C4, OR7G2, PLOD1, PPP2R2A, SMAD4, STK11, SUCLG1, UGT8, WNT16
Negative_432	SMS, TKT, ALPPL2, ARG2, CAV1, CD274, CD8B, CLDN2, CNDP1, CSNK1G1, DIA PH2, EFNA1, ERBB4, FUT7, GATM, GLB1, GSTK1, HSD3B1, KAT2A, LEFTY2, MYH9, OR13C9, OR13J1, OR2T8, OR5AK2, OR5D13, OR8B8, ORC2L, PCK2, PDE4D, PIK3R1, PLAU, PTGDS, PTGS1, SDHB, SLC25A4, UBE2K, UXS1, PLA2G12A
Negative_433	AGL, GNE, ALDH1A3, ALDH6A1, AMY2A, APH1A, CACNB4, CCND1, CHDH, EPAS1, FDPS, ITGA10, MPST, NCK2, NFATC1, NFYA, OR2Z1, OR8H3, P4HA2, PLA1A, PON1, PYGM, RUNX1T1, SNAI1, TUBB2B, TYRP1, UGCG, VASP, PLA2G12A
Negative_434	AMH, TK1, ADSSL1, ARHGEF1, CACNG7, CCL2, CD14, CDK2, CLDN16, CTSB, CXCL13, DDHD1, GALNTL1, GP1BB, HHIP, IFNGR1, IL12RB1, IL1B, LIPE, LTBP1, NEU4, NUDT2, OR4M1, OR5D16, PFN2, PPP5C, SUFU
Negative_435	GSN, ALDOC, APC2, ATP5I, ATP6V1F, CCL23, CES1, EFNA4, FTH1, HDAC2, HMGCS1, MCCC2, PFKFB1, PIM2, PRSS3, CACNA2D1
Negative_436	ALPL, CCL11, IL21, ORIG1, ORC4L, POLE4, WNT5B, HLA-DRB4
Negative_437	AK1, GPI, AGPAT6, BAAT, BPNT1, CACNB4, CASK, CREB3L1, CRLS1, CSDA, CSNK2A1, CTBP1, ECHS1, FDPS, HAP1, HSPA2, IGF1R, ITGA3, LAP3, MECR, NEUROG3, OLAH, OR13C4, OR1J2, OR1L3, OR4F4, OR52N2, OR5D16, OR5H2, OR6T1, PKLR, SEMA3A, WWP1
Negative_438	ADORA2A, AGPAT1, ATP6V1D, CACNB2, CD8B, CDH1, FCER1G, FZD2, GUCA1A, NMNAT2, NOTCH2, OR10H4, OR4D11, OR52E8, OR56A3, OR6K2, PCYT1A, POLD1, POLR2B, PTPRB, RHOD, SNAI2, TJP2

Negative_439	C4B, DUT, ACADSB, AGRP, ALG1, ARPC2, ARPC3, ATP5E, BBOX1, BCAT1, BPGM, CCL25, COL4A4, CYP1A2, DGKH, DHCR24, DHX58, DNMT3B, ECHS1, ENTPD4, EPB41L2, FGF22, FRAT1, GPAM, GRB2, HTRA2, INPP5A, ITGB1, MMP2, NAE1, OR10G7, OR10K2, OR13F1, OR2M4, OR6C6, OR7D2, POLE2, PVRL4, RBL1, RBL2, SMARCA2, SMPD4, SSX2IP, ST3GAL4, TUBA4A, WBSR17, WNT6, YARS2
Negative_440	AKR1B1, ARG1, CNGB1, FGD3, KIR2DL1, OR2T29, PLA2G4A, SMARCA5
Negative_441	AK2, AK5, TPR, ACSL5, BLNK, COL5A1, CX3CR1, IQGAP3, MAT1A, OR8J1, POLD3, SFRP5, STAT2, UBE2L6, UGT8, WNT3A
Negative_442	SP1, ADH1A, ARPC2, ATG3, BLNK, COASY, CXCL13, CXCL2, DGAT2L4, DPAGT1, DTX2, DTX3, EFNA5, FARSA, GARS, GNA11, GNB3, HPRT1, HSD11B2, IL4R, KCNQ1, KYNU, MAML3, MDM4, MGST1, OR10A2, OR10A4, OR2A14, OR4K17, OR7G1, OR9Q2, PGK2, PIGX, PPP2R2A, RFXAP, RPIA, SHC3, SLC25A6, TJP2, VDAC2
Negative_443	AGL, ACAA1, ACTA2, AK3L1, ALDH6A1, APBB1, APOC3, ATP50, CNTNAP2, CTNND1, CXCL13, CYFIP2, DOCK1, EDN1, GNA01, GP1BB, GSTM2, HTR2A, ICOSLG, IGF1R, IL18RAP, ITGB4, LEF1, MAP2K1, MAP4K2, NCOA4, OR3A2, PARD6B, PER2, PYGB, RASA1, SOCS7, STAT1, STK4
Negative_444	EPO, STS, ABL1, AGXT2, BRAF, CD79A, CFTR, COL2A1, CYP26C1, DDX52, ETS1, FGF1R, GSTM4, HIP1, IQGAP2, LEFTY2, MYH11, OR10G8, OR4B1, PARS2, PLCB4, PRIM2, PYGB, RAC1, TUBA1C, TUBB6, UGT2B11, WNT11, XYLT1, YES1, TNFRSF11B
Negative_445	DBT, GSS, SMO, ABLIM1, ADRA1B, ASPA, CNTNAP1, DDHD1, FZD4, MTHFD1, NT5E, OR51G2, PARS2, PER2, SREBF1, WASL
Negative_446	CR2, ADCY5, ADCY8, APAF1, APOE, B4GALT1, B4GALT3, CACNA1B, CACNB1, CADM3, CD3E, CHIT1, CYP19A1, CYP1A1, FGFR4, GADD45B, GGCX, GSTM5, HAGHL, HLA-DOA, HPSE, HSD17B8, KNG1, LRP6, OR2AT4, OR2V2, OR52R1, OR5D18, OR9G4, PCNA, PLA2G2F, PLXNC1, PMM2, POLR3H, SEMA7A, SPP1, TAS2R41, TBL1XR1, TNFSF10, TPH2, AASDHPPT, ARHGEF12
Negative_447	EPHA4, FGF9, IARS2, OR2T33, PANK2, PIK3R3, RAB5A, RAD51, RXRG, SEMA4A, TRHR
Negative_448	CTH, DCN, MVK, SCD, AGTR1, AKR1A1, ALG13, ALG2, APLP1, ATP6VOC, BBOX1, CDC14A, CDC7, CDH5, DKK4, ECSIT, FZR1, GCNT3, GNAZ, INHBA, JAG1, KLRD1, LDHAL6B, MAPK13, MTHFD1, NADSYN1, NUDT9, OR4C12, OR51L1, OR5AC2, OR5M9, PDE1A, PDK1, PIAS2, PIPOX, POLR3K, PRKACA, RERE, RHOQ, SLC27A4, SOAT2
Negative_449	AK5, CFI, LSS, ATP5G3, BACE2, BRAF, CLTCL1, CYP1A2, CYSLTR2, ENAH, FGFR2, FSHR, IL6ST, KCNB1, NAT5, NR1D1, NTF3, OR11H1, P2RX2, P2RX3, P2RX6, PER3, PIGL, PIK3CG, SETDB1, SMAD7, SPCS1, TCF7, TRAF5, UMPS, TNFRSF12A
Negative_450	DBT, PLG, ACP5, B3GAT1, CACNG2, CD40, CDH4, DARS2, DRD1, EHMT2, IL20, IL25, KIR2DL4, NEU4, OR2G3, OR52E6, OR5AR1, ORC3L, POLR2E, TGFB2, SERPINE1
Negative_451	EHHADH, EXTL1, GNAL, GNB3, HAGH, OR4K15, PCYT1B, SUFU, C1GALT1C1
Negative_452	CEBPA, DMGDH, FCER1G, ITGB5, JUND, KIR3DL1, MYH8, NT5C2, PPP3R2, TLR2, PAFAH1B1
Negative_453	CGA, HK1, NPL, ALG11, APOE, ARHGEF4, ATP5J, BLVRB, CCNB1, CCND2, CD46, CLTB, CPT1C, CYP2U1, EPRS, FOXO1, FUT1, HMOX1, MCM3, NR5A2, OR10H1, OR10H3, OR1K1, OR2Y1, OR5H6, OR7D2, PARVB, PIGU, PKLR, POLR2I, PRKAR2B, RASGRP4, SENP2, TAS2R48, TAS2R9, TUBB3, ULK3, CSGALNACT1, TNFRSF6B
Negative_454	ADC, SMS, ACOX2, ATN1, CALML6, CD40, GSTA4, LAP3, OR4D5, OR5J2, OR5L1, OR6C70, OR6M1, P2RX5, PPP1R3C, ST3GAL6, SULT2A1, TRDMT1, VCAM1, WNT10B

Negative_455	ABLIM2, AC01, ADH5, BLNK, C1GALT1, CAMK2D, DKK4, FLOT2, FUT9, GBA3, MTHFD1, OR1J2, PLAT, WNT6, XYLB, HLA-DQB1, TNFRSF14
Negative_456	GSR, IL5, ANAPC10, ATP12A, AVPR1A, BIRC3, CMPK2, FCGR2B, GCLC, GNMT, IL11, NUDT12, OR1F1, OR6N1, PFN4, POLR2L, SLC25A5, SLC33A1, TAS2R38, TAS2R9, TOMM40L, TUBAL3
Negative_457	ATP5C1, IRF3, MYL7, PIK3C2B, TNXB, WNT8B
Negative_458	GH2, ADRA1A, GALNT8, MAP2K4, MASP2, OR13C4, OR2K2, OR51F1, PFKFB2, SAT2, SC5DL, SSX2IP, STAM2
Negative_459	CKB, IL3, IL5, AANAT, AARS2, AKR1D1, ALCAM, AMY2A, ARPC5L, BCAR1, CFT R, CYP2C8, GGCX, LFNG, OR10H5, OR51A7, OR52B6, OR6Y1, PAPSS2, PDHA1, PRKAR2B, SC5DL, SULT1E1, TRHR, TRPC1, TNFRSF11A
Negative_460	B4GALT4, COL1A1, CYFIP2, DAPK3, GALNT2, GP1BB, IFNG, IL1RAP, IL22RA1, LYPLA2, MGAT4A, PDGFRB, STAT3, VAV3, HLA-DQB1
Negative_461	F2R, ACTN1, ITGAM, MYH14, OR2T8
Negative_462	DDC, XDH, APOA2, ARNT, B3GAT1, CCNB1, CHPF, CHSY1, CRLF2, FPGT, GNA14, HLA-DOB, HSD17B1, JAM3, KITLG, LDHAL6B, LYPLA1, MCM5, MKNK2, NFE2L2, NUDT2, OR10S1, OR2F2, OR4A15, OR4Q3, OR6Q1, OR7C2, PDE4B, PLAT, PLCG2, PLXNA3, PPP2R2C, PSME2, PYGL, TJP2, SLC25A31
Negative_463	C8A, DCK, FOS, NOG, ADCY3, ADH4, ALDH1L1, ALDH3B1, ARHGEF6, ATP6V1D, CALML3, CCKAR, CSNK1E, DGKH, DUSP4, ENPP7, EPHX1, ERBB2, ETNK2, HMGR, ITGA11, KIR2DL1, KIR3DL1, MAD2L2, MAN1A1, MAT1A, NAT6, NRG2, NRXN2, OR14C36, OR4F17, OR52M1, OR6K2, PGAP1, PIP5K1B, PRKCB, PSME3, PTDSS1, RDH11, SMPD2, TALDO1, WASL
Negative_464	C1S, AKR1C3, ATP2A2, BDH1, BMP6, CXCL13, GNG13, IARS2, PLA2G4A, PRKD, SH2D1B, SOS2, TALDO1, TRIP10
Negative_465	GPT, RB1, ACSM4, C4BPA, CD3E, CHAT, CLDN19, CLDN9, CNGA4, COQ3, CSF3, CXCL6, DDX47, ETNK1, HMBS, HTR2A, IL17B, IL1R2, INADL, IRS1, ITGAV, LRP5, MAPT, NAMPT, OR5T3, ORC1L, PDE7B, POLR2B, PPARA, PPP2R2D, PRKX, RRM2, SDC1, ST3GAL5, TRAF5, WNT6, TNFRSF10C
Negative_466	DLD, ABLIM3, ACMSD, ADH6, ALDOA, ARHGEF4, ATP5E, BDH1, BMP8A, C1GALT1, CACNA1C, CD19, CD226, DUSP3, DUSP7, FABP4, GART, GUCY1A3, ICAM2, IDH2, KITLG, MTAP, NAGS, NANP, NARS2, OR10AG1, OR10G2, OR13C4, OR2B2, OR2C3, OR52E8, OR52I2, OR52N5, OR5B17, OR5T2, PDGFA, PDGFRA, PIGV, RHEB, SFRP5, STAT1, STAT2, STK4, TAS2R9, VTI1A, WNT7B
Negative_467	GP5, MET, CACNA1S, CACNB1, CDC16, CHST13, CRY2, CSAD, DERA, FGF21, HADH, HSD17B1, IL1RAP, ITGA3, NFATC1, NFYB, NT5C2, OR10G9, OR10Q1, OR4N4, OR5M9, OR9I1, PIGX, PPP2CB, SOCS3, STX10, UGP2, WNT5A, CACNA2D2, HSD17B12
Negative_468	UBC, ABP1, ADRB3, ALS2, AXIN2, CPT1A, CXCL16, DHRS3, EGFR, HTR2A, IL25, METTL6, OR1L4, OR4K15, OR5AC2, OR7G2, RAB5A, RPN2, SLC12A2, STEAP3, TKTL2, TP73
Negative_469	DUT, FAH, MUT, OSM, ADSL, ARPC2, CLOCK, INPP5E, KIR3DL1, MFNG, NFKB2, ODC1, OR4P4, OR8J1, POLE4, POLR2F, PTGER1, RPN2, TUBB2B, UNC5A
Negative_470	OSM, PVR, ACO2, ANAPC10, AQP7, B3GAT3, CD226, CTLA4, CXCL11, FGFR4, GALNT12, GDE1, GJD2, IL17RB, ITGA5, ITGAL, LLGL2, MTFMT, NOD1, NQO1, OGDHL, OR2F2, OR51G2, PANK3, PCNA, PPP3CB, PROC, PSPH, ROCK1, SPTAN1, TRAF4, TUBB1, ATP6VOA1, SUV420H2
Negative_471	GSS, IVD, ME2, ALDH3A1, ANAPC4, APOE, CDIPT, CHUK, CIITA, CRLF2, CXCL1, CYP3A43, EARS2, EPHX1, FCER1G, GALM, GMPR2, HMOX1, HRH2, HTR7, IL18, IL22RA1, IL28A, ITGA1, ITGAD, KAT2B, KLRC4, LAMB2, MAPK7, MKNK1, NKD1, NME4, NUMBL, OR13G1, OR2L13, PGAM4, PIGH, PIP5K1B, PRPS2, SEMA4F, SMAD4, SOS2, SULT1A4, TYMS, VDAC2, XCL2, GABARAPL1

Negative_472	FGB, HAL, A4GALT, CD27, CXCL9, FZD10, GAL3ST1, GMPPA, MAPK11, NRG3, OR2C1, SRGAP2, TAS2R7, TAS2R9, TLN2, WNT1
Negative_473	CFD, DBT, F10, BET1, CACNG3, CMPK2, EDAR, EFN1, FADS2, FUT5, HTR2C, IDH2, IFNAR1, KLRC4, NFASC, NPR2, OR1S1, OR2T10, P4HA3, PANK2, PER2, PIGK, STK3, TUBA1B, PNLIPRP2, ST6GALNAC5
Negative_474	ACSL4, EPHA4, HEMK1, OR1L6, PAX4, SORD, TICAM1, TUBA3C
Negative_475	C8G, ALDH5A1, CACNG2, CDK7, CLDN17, CPT1A, CYP3A43, DDX18, G6PC, GLI2, GNPAT, HHEX, HNF4A, ITGA5, NODAL, OGDH, OR11H6, OR13D1, OR1E2, OR2A2, OR4K17, OR52A1, OR5M9, P2RX6, PGLS, PLXNA2, PPP2R5C, PRPH2, SRGA P1, STK3, ULK3
Negative_476	GK2, HYI, ALDH3A2, ARSD, ATP5G2, B3GNT3, B4GALT7, CASP3, CCL8, CDC42, CDKN1B, COL3A1, EPHA2, EPHX1, FASLG, FGF1, FGF22, GCH1, GFPT2, GNPA T, GRIN2A, HEMK1, HYAL1, IKBKB, LDHB, MLLT4, MYH13, OR10A2, OR51T1, OR5AP2, OR8U1, OXTR, PARVG, PCK2, PIAS4, PIP5K1C, PPP2CA, PRKAG1, PRODH, SHC3, SPRED2, TLR3, TNFSF11, UGT2A3, VAV3, WASF2, ATP6V0A1
Negative_477	FGG, BAI1, CAMK2B, CD40, EPHA1, FSHR, GLS2, GNA14, GRHR, HAGH, ITGAD, MS4A2, NR1H3, OR1L8, OR2H2, OR52H1, OR8H3, OR8J3, PFKFB3, PRSS2, RXRA, THBS2
Negative_478	HYI, PGP, ABLIM2, ACTN2, ACY1, ADRA1B, AGPAT4, B3GNT5, CALML6, CCL27, CREB3L4, CSF1R, CSNK2A1, CTBP1, CYP2C18, CYP2D6, DDIT4, EPHA8, FGF23, GNA11, GSTZ1, HMGCS1, KITLG, LEF1, MCCC1, MFNG, NARS2, OR1E1, OR2AG1, OR2L3, OR4C12, OR5AC2, PARD6A, PER1, PFKFB3, PIGP, PIP5K3, PLAT, PLOD3, POMC, RXRA, TRAF2, TRAF4, UROS
Negative_479	ARPC1B, ATP5H, BMP8B, BMP1A, CAMK2D, CD70, CDKN2B, CLDN7, CNTN2, COL5A1, COMT, EHMT2, FGF1, G6PC, GCLM, HTR5A, KYNU, LRP6, MKNK1, NEU3, OR13C3, OR1J2, OR1L6, OR2T12, OR4K13, OR52N2, OR5T2, OR6C3, OXTR, PAF AH2, PAK4, PANK1, PDE4A, SNW1, SOX17, STX4, SUCLA2, TFDP1, TFPI, TLN1, TUBA1B, TYMS, UBA1, UGT8, VAMP4, TNFRSF10C
Negative_480	SRC, ADCY3, ADCY7, AKT2, ASIP, ATP6V1D, CCKBR, CCL15, CHAD, CHRM2, CYP11B1, DVL3, EPHA5, EPRS, FECH, FGD3, FGF23, GNAZ, HMGCR, IL28A, KIR2DL2, MAN1A2, MAP4K3, NAGLU, NARS2, NFE2L2, NFKBIA, NLGN3, NOX3, OR5V1, PCYT2, PDIA4, PFAS, PLXNB1, POLR2D, PVRL3, SGMS1, VAMP3, VTI1A, WASF3, ATP6V0D1, HSD17B10, ST6GALNAC5
Negative_481	HDC, MVD, AMHR2, B4GALT1, CADM3, CAPN2, CCL8, CHIA, CHSY1, DPYSL2, EPHA4, FDPS, FZD5, GDF5, GSTO2, HAGH, HAP1, HIBADH, IL17RB, ITPKA, LIPG, MPP5, NAT1, NCR2, NOTCH3, NTNG1, OR11H6, OR4C12, P2RX3, P2RX7, PARVG, PDIA4, PFN4, PLA2G5, PLEKHA8, POLA2, PSEN1, PSME2, PTGES, SEMA4A, SETMAR, SLC33A1, SRD5A1, STAT6, UPB1, UROS, WNT9A, CACNA2D1
Negative_482	IL8, SDS, TK2, VCL, AACS, ANAPC10, ARPC5L, ATP6V1A, BCL2L1, BIRC3, CCL19, CDC7, CSNK1G2, CXCL5, CYP3A4, DAD1, DGUOK, DHCR24, EPHB4, FGF23, GANC, GGT5, GNRH1, IDI1, IL10RB, KAT2A, MAP3K14, MAP4K4, METTL2B, NCR2, OR51V1, OR8H2, ORC3L, PDE7A, PI4KA, PLA2G2A, POLR1D, POLR2G, PPM1A, PRLR, PSEN1, PTCH2, QARS, SDHA, SIAH1, ST3GAL4, YOD1, CACNA2D3
Negative_483	GSR, MET, ASAH1, ATP6V1D, ATP6V1F, CREB3L2, CSDA, CSNK1E, ERO1L, IDH2, IFNA10, ITGA11, LARS2, MEF2C, NFKBIA, OR52K2, OR8B8, PDK1, PLEKHA8, RAP1B, RARS2, SIAH1, TM7SF2, WEE1, ST6GALNAC3
Negative_484	ID4, AKR1C2, AMY2B, ATP6V1A, BDNF, CDC26, CRLS1, CYP2C9, EI24, FZRI, GALC, GCNT2, GRIN2B, IL2RA, IL5RA, KLRC1, P2RX5, RBL1, STT3B, TYROBP, WARS2, XCR1
Negative_485	CGA, DCC, F8, ACP2, ALDH4A1, C1QB, CER1, CTBP2, DLL4, FDPS, FUT4, GALK1, GNA13, GYS1, HMOX2, METTL2B, NMNAT2, NTF3, OR13C8, OR1J1, OR4K5, OR52E4, OR7A10, ORC6L, PDX1, PLOD3, PNPO, PTGIS, TAS2R49, TNFRSF10C

Negative_486	LAT, OAT, TFG, AFMID, BNIP1, CARS, CCL20, CD79B, CDC14A, CDS1, CXCL6, DAAM1, DHRS3, DRD2, FPGT, GDF7, GPAA1, GSTM2, HADHB, IGF1, ITGA11, KLKB1, NEU2, NT5E, OR10K1, OR6C74, OR9G1, PAFAH2, PLA2G5, PLOD2, RHEB, ROCK1, SHC3, TSHR, VARS, ATP6V1E2
Negative_487	CTH, HPD, UBB, AGPAT4, AGRP, CACNG8, CDC25C, CEST7, CHKB, COL11A1, COQ3, CPT2, CXCL11, EHHADH, GLG1, GLO1, IDH3A, IL22RA2, JAM2, KITLG, LIMK1, NRG3, OR2T4, OR51F1, OR51L1, OR5B17, OR6C6, POLR3B, POLR3G, PPP2R5B, PRIM1, ST8SIA1, TALD01, TAS2R7, TGFB1, TGFB3, VEGFC, ATP6V1G2, PHOSPHO1
Negative_488	ACSS2, GNPDA2, GRIA3, MGST3, SH2D2A, TAS2R38, ST6GALNAC5
Negative_489	ATM, ME3, CD40LG, CDKN1C, CNTN1, CSF3, DLST, DUSP4, EDNRB, GBE1, GCNT3, GFAP, IL25, INHBB, ITGAM, LAMC2, LRP5, MECR, NFATC1, OR1L6, OR51E2, PNPT1, PRKG2, SCP2, SMPD2, SOS1, XYLT2
Negative_490	AK5, ABLIM1, FARP2, PDHA2, PFN1
Negative_491	DDX55, IL13RA2, TAS2R5, TBK1
Negative_492	DBT, KHK, ARHGEF2, C4BPA, CBLB, CBLC, DMGDH, FOXO3, FZD2, GLUD1, H6PD, HAGH, HSD3B7, MTMR1, NOX3, NTSR1, OR4D9, PDE1C, PECAM1, POLE, PVRL4, RALB, VANGL2, VNN1
Negative_493	GRLF1, PFN1, UNC5A
Negative_494	DDB2, IFNA10, IL2RB, MMP14
Negative_495	CAT, F10, XDH, ACP2, AFMID, APBB1, ATP5G1, B3GNT2, BMP5, BRAF, CDC23, ENPP7, GSTM4, HCLS1, HTR5A, ICAM3, KCNB1, KIR3DL1, MAP2K1, MYD88, OR4N5, OR52R1, OR7A17, PHKG2, PPP1R1A, SH2D2A, SMAD1, STMN1
Negative_496	CSK, DCN, F12, HAL, ALG9, ATP4A, B4GALT4, CTNNA1, DHRS9, DUSP4, EIF4E, HNF4G, IFNAR2, LARS, NFKB2, NKD2, OR1J1, OR2V2, OR5B17, PPP1R3D, PTG1, RAPGEF1, ST8SIA5, STAT5B, TAS2R7, THTPA, USE1, VAV2
Negative_497	DBI, TK2, APRT, ARPC4, NUMB, OR14I1
Negative_498	GSN, OSM, ANAPC1, ARHGEF2, ATIC, ENTPD8, GRIN2D, HMOX1, KIR3DL2, NT5C1A, OR8G1, PDE1A, PTGES2, RAC1, ARHGEF12, MAPK8IP3
Negative_499	NOG, PRL, ACOT12, AMDHD1, BLVRB, CACNA1H, CACNG6, CDC16, CDH1, CLCA4, DGKB, EPHA3, F2RL2, FARP2, G6PC, GPLD1, LARS2, MAPT, MMP7, MS4A2, NTSR1, OR56B4, OR8H1, PARVB, PFKFB2, PIK3C2G, PPARA, PPOX, PPP1R1A, SETDB2, STAT2, STMN1, STX5, WNT10B, YWHAB, CACNA2D2, HLA-DQB1
Negative_500	DCN, F3, GP9, PGF, ALDH6A1, ALG2, AQP7, B3GNT3, BRAF, CACNG7, CCNB1, CSF2RB, DGKA, EGLN1, EXT1, FOXA2, GAS1, HAP1, HLA-DOA, ITGAV, ITPKA, JAM3, NTN1, POLR1C, PSME3, SH3BP2, SKP1, SMAD3, TRHR, UNC5B
Negative_501	ARPC2, B3GALT4, BLNK, CDKN1B, IFT57, ITGA7, KIR2DL2, LEFTY1, LILRB3, OPLAH, OR1L4, POLR3G, SMPD3, SSH1
Negative_502	CBS, ACTB, ACY1, ARHGEF2, CD99, CYP3A43, DDB2, DHDH, ITGB4, OR10J1, OR10J3, OR10K1, OR6N2, PCK1, SMURF2, TNFSF12, UGT2B4, ATP6V1B2, PLA2G12B
Negative_503	ATM, FUK, AKR1A1, B3GALT1, B3GAT2, BIRC5, CCND1, CYCS, CYP2J2, DHODH, DLAT, FLAD1, GALNT1, GNA12, GRIN2D, GSTM2, HCST, HRH1, HTR7, ITGAV, LDHAL6A, LTC4S, MAN1C1, MCM2, NLGN3, NMNAT1, OR4A5, PDCD1, PRKCB, RASSF1, SMPD1, ST6GAL1, STK3, UCK1
Negative_504	GBA, HGD, PGF, ADH7, B3GAT3, BBOX1, CCNA1, CDC25A, CFL2, CHRD, DDIT3, DGKD, E2F1, HSD17B2, IDH2, MKNK1, NFKBIA, OR13A1, OR4C6, OR4X2, OR5T2, OR8K3, RAC3, SARS2, STX2, TLR2, VDAC2, GABARAPL2, TNFRSF10B
Negative_505	SYK, BCAT2, C3orf10, CPT1B, DHODH, DVL1, EXTL3, FLT4, GALT, GARS, IMPA2, ITPKB, LAP3, LYPLA1, MPZL1, PLEKHA8, PLOD2, POMC, PTPN5, RETSAT, SSH2, ULK2

Negative_506	DBT, AADAT, ATG12, CCKAR, CKMT2, CYBA, GSTK1, IFNA7, IL1A, IL6ST, NAT5, NCR1, OR4L1, OR52I2, OR6C70, OR6C74, P2RX3, PCCB, PGK1, PIGU, PIK3CB, PLA2G1B, PLXNB1, PTGES2, RALBP1, SMAD5, SMARCA2, SPRY3, TUBA3E
Negative_507	ADO, CR1, ID3, WAS, ACAD9, ARPC3, CDKN1A, CDKN2B, IL12B, IL17RA, IL18, IRAK2, KLRC2, MASP1, MGAT4B, MMP2, MMP9, NARS, NLGN2, OGDH, OR10J1, OR10R2, OR6N1, OR8K5, PIP4K2B, PRKY, RAB5A, SLC2A2, TSHR, UGT2B11, VANG2, XYLB, HSD17B12
Negative_508	C7, CS, DHH, FER, PGD, RDX, ADH4, ALG5, ANAPC4, CACNG3, CD8B, E2F5, MCM2, MPDZ, NKD2, OR4B1, OR4X2, OR8G1, PFKL, PPAT, PYGL, WNT7A, ZFYVE16, TNFRSF13B
Negative_509	LTB, VTN, ACTN1, ACVR2A, ADH6, AGMAT, AGXT, AMY2A, ATG3, B4GALT2, B4GALT6, CD19, CD82, CDH4, CNTNAP1, CYP11A1, CYP3A7, DHCR24, DKK1, DPYS, ERBB2, ETS1, FDPS, GSTA4, HSD11B1, IDH1, IL15RA, LARS, MAML3, NMNAT1, NPR2, NUMB, P2RX2, PGM3, PLXNC1, PMM2, PNLIP, POLE2, PRKCH, PVRL2, RELB, ROCK2, ST8SIA1, THTPA, TUBAL3, TUBB4, WARS, CTNNBIP1
Negative_510	ADCY6, ADRBK2, ATP12A, AVPR1B, CCND1, CD59, CD80, COL1A1, ECSIT, EDNRB, FGFR2, HLA-C, ITPA, LDHA, LDHAL6A, LIPT1, LYZL1, NEFH, NFKB1, NLGN3, OR10A6, OR3A2, OR51G2, OR6C1, PDE11A, PLCD1, POLR2E, POLR3G, PPP3CC, RARS, SFRP5, SOCS7, STAT5A
Negative_511	VCL, ACSL1, AKR1C1, EIF4B, FM05, IL13RA1, IRS4, MYH6, MYL5, OR10A5, OR13G1, OR2S2, OR4K14, OR5A2, ORC4L, PIAS3, PRSS3, SEMA3E, TGFB3, TP73, SERPINF2
Negative_512	GSN, PML, AADAC, ACMSD, ALOX12, ALOX12B, B3GALT2, CASP3, CCNB3, CFLAR, CNGA3, CRLF2, DDHD1, DPYSL2, GALNTL2, GRIN2B, IFNA5, IGF1R, IL19, ITGAD, LARS, MAP3K8, MGAM, MPP5, NFKBIE, OR2T33, OR51B5, P4HA2, PLAUI, PPP2CA, PSEN1, PTK2B, PTPRJ, PYCRL, RAPGEF4, RHOA, ROBO1, SEMA4D, SHPK1, TUBA1A
Negative_513	ADK, BCR, CBL, CBS, CR1, CS, AADAT, AASS, ADIPOQ, ADSS, ALDH1L1, ALDOB, AMPD2, ANAPC5, ASIP, ATG7, BMPR1B, CALML6, CCNG1, FGF23, FZR1, GANAB, GMPPA, GRIN2B, GSTA1, INHBE, MGAT4B, OR10H5, OR4M1, PDHA2, PIGU, POLA1, POLR2E, PRLR, PRSS2, PTPN11, SUV39H1, TP53, YKT6, HLA-DQB1, SERPINC1, TNFRSF11B, TNFRSF12A
Negative_514	LPL, ACSM2A, ALOX12, ANAPC5, CCND3, CD247, CLOCK, CREB3L1, CXCL11, CXCR6, CYP4F3, DPM1, FABP4, FARSA, FGF19, GSGT1, HSP90B1, IFNGR2, ITGA2, MAP3K7, MTHFR, OR6K6, OR6Y1, ORC6L, PAK1, PNPT1, PPP2R2C, PSME1, RASGRP1, RASGRP2, SAT2, SCLY, SEPHS1, SMC1B, SPCS1, STK3, TBXA2R, TPST1, UGT2B17, VTI1A, YES1, PAFAH1B3
Negative_515	ADK, DDO, TBXAS1, TRPC1
Negative_516	AK7, HDC, MVD, AHCY, ALPL, ARSB, B3GALT6, CACNA1S, CACNB3, CACNG1, CD58, CDC26, CYP11B2, EIF4E, FLOT1, HEXB, IKBKE, IL28RA, LLGL2, MECR, OR1A1, OR4S2, PDE1C, PDE8A, POLR3D, PRKACA, PTAFR, PTEN, RAPGEF2, WNT5A, CSNK1A1L
Negative_517	BCR, TEC, ACOT12, APOA2, ARD1A, BCL2, C4BPB, CLDN18, CNTN1, CYP1A2, CYP2A13, DGUOK, DVL2, GALNT6, GGT1, GPD1, IL15, INPP4B, INPPL1, IPPK, JAK2, MTHFD1L, OR10A2, OR14J1, OR4D11, POLR3B, RETSAT, ST8SIA1, VARS, PLA2G12B, TNFRSF1B
Negative_518	AK5, BID, C1S, ACAD9, ACSL3, AOC2, ATP5G3, CYP2B6, ENTPD4, NFKB2, NFYA, OR2A42, OR4N5, OR56A1, PDE6G, PIP4K2B, PPP2R2B, PRKAG2, RAC2, RFX5, SGMS2, SLC12A2, TLN1, UNC5A, ZIC2



Negative_519	DBI, AARS, ABLIM2, ADCY2, AGPAT3, ARHGEF2, ATP5I, CACNA1A, CCL17, CC R5, CDH2, CDKN1A, CTSS, DDX54, DGKD, DHDH, EFNB3, FLAD1, GALK1, GATM, GCNT4, HSD3B2, ITPA, MDM4, NEGR1, NKD1, OR10K1, OR2A42, OR2H1, OR2T1 0, OR51I2, OR5A2, OR5AR1, PRKAA1, PTAFR, PTPRM, RRAS, SNAP23, TAS2R1 4, TICAM1, TPH1, TUBB6
Negative_520	DLD, LEP, NPY, TK1, ACADS, ACYP1, CDKN2A, COL2A1, CSF1R, CYSLTR1, DNM T1, EIF4E, FGF21, FRAP1, GCAT, GNG12, GRHPR, IL6ST, IPPK, MYH10, NAE1 , NANP, NEU4, NFKB1B, OR10G7, OR2A5, OR4N2, PCYT1A, PIP5K1B, PIPOX, P LOD1, POMC, PPP2R2D, RAPGEF1, SLC27A5, SOAT2, TUBA3E, ULK1, VEGFC, W WP2, CTNNBIP1, GABARAPL1, KIR2DL5A, PHOSPHO1
Negative_521	ACAA1, DDX52, FUT7, MYH6, NCK2
Negative_522	SMO, ATP5D, ATP5J, CBR3, COQ6, CSNK1E, ETNK2, FLT1, GAD1, GNAQ, HBEGF , JUND, MCM5, PDE6G, PFN3, PRLR, SARDH, SDC4, SELPLG, SEMA4D, TALDO1, UGT2B10, WNT1
Negative_523	CACNG5, CCNE2, DHDH, EPHB2, MTHFR, NME4, OR52M1, OR5J2, PHKG1, PIK3C 2A, PIPOX, SLC27A1, TRAF4
Negative_524	EBP, APAF1, BMP8A, DHRS4L2, EPRS, FGFR4, GOT1, HLA- F, IL17RA, LGMN, LHCGR, LTBR, MAPK11, OR4C12, PIK3CG, SDHD
Negative_525	FST, LPL, ME1, MET, ACTN2, ALDOA, APOA1, BIRC2, BMPR1B, CD47, CSNK1A1 , EXTL1, GALNTL4, GLUD1, HCLS1, HIP1, HNF4A, IL12B, MCM3, MIOX, MYH10 , MYH2, OR5J2, OR7A5, ORC2L, POLR3K, TAS2R7, TLN2, TYROBP, YWHAB
Negative_526	ASMT, BIRC2, CLDN3, CNTF, DOCK1, GALNT7, GIT1, IDH2, KIR2DL3, KIR2DS 5, NANS, NEU3, PIAS2, PIAS4, PNPT1, PPP2CA, PRNP, SMURF2, SOCS4, SPHK 1, STAT4, SULT2A1, TIRAP, TLR2, ZFYVE16
Negative_527	CCR1, PIK3C3, PTPRJ, TNFRSF14
Negative_528	FER, GHR, ALDH4A1, ALG11, CDH2, CLTCL1, CSNK1G2, GLI1, HMOX1, INMT, N KX3-1, OR4X1, OR6C1, ROBO2, SRGAP2
Negative_529	IL9, APOA2, CHIT1, GSTZ1, IFNAR1, IMPDH2, OR51F1, OR52B4, OR52R1, OR 5M3, OR5P3, PDGFRB, PER2, RPRM, TDO2
Negative_530	BTC, F2R, AKR1C4, ARG2, ARRB2, CCKBR, CDKN1C, CYP2C18, DOT1L, EXTL2, FUT4, GALNT5, GALNT6, GALT, GFPT1, GMPR2, GNB3, GSTM1, HEXA, HMGCR, I L22RA1, ITGB8, KARS, MFNG, MKNK1, NEFM, NRG1, NRG3, NUDT8, OR10J1, OR 2T33, OR6K3, P4HA2, PARD6G, PIAS1, PIGO, POLE3, PTEN, RBPJ, SC5DL, SH 2D2A, SMPD1, SNW1, TGFB1, TKTL2, VANGL2, ATP6V1E2, PRICKLE1, ST6GAL NAC6
Negative_531	EZR, LCT, MIF, TYR, AKR1D1, ALDH1A3, AMY2A, BMPR1A, BUB3, CCNE2, CHR D , CHSY1, CLDN16, CLDN2, DERL1, ENPP3, GFPT1, GRHPR, HSD3B7, IKBKG, IL 6ST, LDHAL6A, MAP2K5, MAP3K12, OR1L8, OR56B4, OR5B21, OR5T1, PSEN1, PTGIS, QARS, QPRT, RALA, RASGRP1, RELA, SEMA3C, VEGFC, ARHGEF12, SUV 420H1, TNFRSF1B
Negative_532	COQ5, GNAI1, NEU1, OR4C15, PLA2G2F, TAS2R9
Negative_533	GBA, SRF, APLP1, CLDN16, COL4A6, FZR1, GCDH, GNRH2, MCM2, NR5A2, PERP , PLA1A, PLA2G5, PRKAB1, RPS6KA3, SHMT1, TJP2, TPMT, TUBB6, UGT2A3
Negative_534	AGRN, AGTR1, AKR1C3, CSNK1G2, DGKZ, FGFR3, HPSE, IRAK1, METTL2B, NRX N1, NT5C1A, OR4L1, OR7C2, OR8J3, OR9Q1, PCYT1A, POLE3
Negative_535	CR2, ADCY10, ATP2A1, ATP5J, BMP8A, CDKN2C, CLDN2, DDIT4, GRHPR, IRS4 , MAPT, MYH1, NAT5, NPR2, POLR1E, RARA, SMPD4, SULT1A2, UGT8, XCL2
Negative_536	EXT1, ITGB7, PIK3C3
Negative_537	AR, HDC, MVK, ADH4, ANAPC1, BIRC3, CRLS1, FZD10, GNA14, GSTP1, HMOX1, INPPL1, LCMT1, OR13J1, OR1E2, PIK3CB, PLXNA2, PRKAR1B, PSEN2, TLR2, TUBB3, B3GALNT1, MAPK8IP3

Negative_538	DCC, TPO, ZYX, ACTB, B3GALT1, CCR10, CD47, CHAD, CLDN15, CSDA, DAXX, DTX2, FZD7, GANC, GDF7, GRLF1, GSTA4, IL1A, MCM4, MGST1, MLLT4, NUDT9, OR4C11, PFKFB2, PNLIP, POLR2K, PPP1R3B, PPP2R5D, PROS1, SLC2A1, ST8SIA5, TAS2R10, TICAM1, TNFRSF9, XYLT2, PRICKLE1
Negative_539	AUH, F8, ILK, IVD, PGF, SPN, ADRA1D, AK3L1, ANAPC10, AQP7, CD72, CHIT1, DAPK2, EIF4B, FCGR2B, FGFR3, FUT2, HDAC2, HNMT, IL28B, IMPA1, LALBA, MAOB, MAP3K5, MAPK3, NUDT2, OR10A4, OR4C16, OR52J3, OR8H3, PDPK1, PERP, PHKA2, PLCD4, POLD3, PPAP2C, PSPH, RASGRP2, SARS2, SEMA3F, SEMA7A, SUFU, UROC1, SERPINF2, TNFRSF13C
Negative_540	F9, FGG, ADRA1D, AKT1, ATP5J, BDH2, CHAD, CLDN6, CYP4A11, DHFR, E2F1, EPOR, EREG, ETNK2, GNPDA1, GRIA1, MLLT4, NFYC, OR52N1, PFN1, PIGB, PTGDS, PTGES2, PTPMT1, SPTLC2, STMN1, STX5, UAP1, UGT2B4, YARS, HSD17B10, TNFRSF10B
Negative_541	CYP1B1, ERBB2, FARS2, OR10Z1, PFKFB4
Negative_542	GAA, RPE, ACY3, ALPI, AMPD2, C3AR1, CBR3, CCNE1, COASY, COL1A2, CPT1B, EFN2, EPHB1, KAT2B, KIR2DL3, LAMB2, LIAS, MGAT5B, NFATC1, NOTCH2, OR4N5, OR56A1, OR5AC2, P4HA1, PIK3C2G, PPP2CA, PRPH2, TICAM1, TUBB2B, ARHGEF12, CACNA2D3
Negative_543	ARPC2, CSF3, GUK1, HLA-C, IL1RAP, IL23A, OR52E6, PDE1A
Negative_544	SMS, ALG9, CD46, CD80, DDX55, DPM1, EPHB6, GLYCTK, HIP1, IL5RA, IL7R, INHBB, ITGB6, KARS, MAGI2, MAP4K3, MEF2C, MGST1, MPST, NAGS, OLAH, OR1D5, OR2K2, OR4C12, OR4C15, P4HA3, PIAS3, PIGV, PPCS, RFXAP, SLC27A1, SMAD6, SOCS5, TAS1R3, TSLP, TUBB4, TYK2
Negative_545	AHCY, CACNA1D, CD36, CD55, CHIT1, CSNK1G2, CTNND1, CYBB, CYP2F1, DAPK3, EIF4B, ELK1, EPB41L2, FUT2, G6PC2, GADD45G, GDF5, GDF6, GNAZ, GNRH2, GZMB, HSD3B7, ICAM3, IL17B, IRF9, MAP2K5, MNX1, NR1H3, NUDT8, OR11L1, OR13F1, OR1B1, OR5L1, OR5M9, OR9Q1, ORC6L, P2RX1, PDE7A, PTPN5, RGS3, SELP, TKTL1, TP53, TXNDC12, MAPKAPK5
Negative_546	GDA, KHK, ACHE, ALDH1L1, C1QB, CCR9, CNTNAP1, CYBB, DEGS1, DLL3, IL1RAP, IL22RA2, ISYNA1, ITGB4, MYH15, NCKAP1L, OR10K1, OR2A2, OR4M2, OR6B2, OR8B8, PFAS, PIGT, PON2, PSEN2, RDH16, SARS, SDHA, SPRED1, TP73, TUBB3, HLA-DQB1
Negative_547	FGB, STS, CDH3, CDKN2C, EPHA6, MARS2, OR2L13, OR4M1, OR5B17, POLR1C, TAS2R7, VAMP1, WNT7A, PRICKLE1
Negative_548	CD2, GBA, LCK, MVK, AADAC, ACSM5, ASIP, BCAR1, BMPR2, CEBPA, CLDN16, CREB3L1, DAPK3, GPD1L, GSTM5, GUCA1C, ITPKB, MDM4, OGDH, OR2AE1, OR2K2, OR51B4, OR52B4, OR52N4, OR5P2, PLA2G4A, PLXNC1, SOAT1, SREBF1, STAT2, TYMS, UGDH, HSD17B10
Negative_549	GPI, UBB, ACVR1B, ARNTL, DARS2, FABP1, IDI1, LCMT2, NFKB1, PAX6, PDXP, RALA, SC4MOL, SHC1, SRGAP3
Negative_550	C6, PGD, ANAPC11, ASNS, BMP4, CCND2, CRLS1, CYP2C9, DERA, FZD5, G6PC2, GAL3ST1, HLA-DOB, NCK1, NPR1, OR10H3, SETD2, SOCS3, VAMP4, VEGFB, WEE1
Negative_551	C8A, GNS, MOS, AGPAT4, BDH1, CASP9, CCL14, CCL21, CCR6, CD74, CDC25C, CLTA, COL6A1, CREB3L4, DUSP7, FGF13, GARS, GATM, GFAP, GNPAT1, HAGHL, IFNA16, IRS4, ITGA6, KIR2DL4, LAMC1, MAP3K4, NUDT8, OR1J2, OR4M1, OR9Q2, ORC2L, PLOD2, PSEN2, RELA, RXRB, SLIT1, STAT5A, TRAF3, TXNDC12, ULK3, CACNA2D4
Negative_552	DBT, ILK, ACADVL, ACTA2, ATP4B, BCAT2, CASP8, CAV3, CCL28, CLDN10, CTN, FUT4, HDAC2, HTR2C, MGAT5, OR2H2, PPP3CA, PRKCD, SLIT2, TAS2R16, TOLLIP, UCP1, SERPINE1
Negative_553	FUT7, GNAO1, GRIN2A, GSTO1, MAD1L1, P4HA3, TCF7, WBSR22

Negative_554	ACADL, ADH5, ALAD, BST1, CARD11, CNTFR, CYP26C1, FGF12, GBA3, ICAM3, IL18R1, KDSR, MAP3K12, MOV10L1, NT5C1B, OR2M7, PDGFA, POLR2E, PRKCA, PRKCH, TAP2, TAS1R1, TPK1, ATP6VOD1, HLA-DRB4
Negative_555	ATM, C9, MVK, ACLY, ACSL6, ADIPOR2, APOA5, ARHGEF7, BET1L, CHIT1, CLDN15, FGFR1, GGCX, GSTM5, IDI2, IFNAR1, IL10, IL4R, ITGB7, LIPC, LMO7, LTC4S, MGST1, NR1H3, OR10J1, OR51A4, OR52J3, OR5L2, PDE4D, PDE9A, PHGDH, PLCB2, PPP2R5D, PTPN7, RAB23, SOCS7, TAS2R60, TGFB1, TRAF5, TSC1, TUBA3E, TUBA8, ULK3, ATP6V0E1, ATP6V1C2, MAP3K7IP1, TNFRSF10D
Negative_556	BTC, AHCYL1, ATP2A3, BCAT1, CSF3, CYFIP2, DNMT3B, EDA2R, EFNB3, EHMT2, FARS2, FARSA, FCER1G, FGF21, FLT1, G6PD, GALNT5, GGBT1, GNRH2, HGSNAT, HHEX, HMBS, HPRT1, HYAL2, IL13RA1, LILRB3, MDH2, NCOR1, OR11I1, PDHA2, PFKFB2, PKM2, PLCB2, PPP2R2B, PTGIS, RASGRP1, ROBO2, RPS6KA4, SUCLA2, TUBA1B, WASF3
Negative_557	CFH, AKR1C1, C3AR1, CCL3, CLTA, CYP11B2, EPB41L2, FTH1, GPX5, GRLF1, IL1RAP, INADL, ITGAM, KLRC2, OR10H4, OR4F17, OR52N2, OR5A2, PARS2, PGM2, YWHAZ
Negative_558	CR1, CRK, FAS, GK, KIT, MUT, ACTN2, AGTR1, AOC2, ATG3, CD48, CXCR5, CXCR6, CYP3A4, DDB2, DGAT1, DHRS3, EPHA7, EPRS, FECH, FGF22, GATM, GSTT1, HRH1, HTR2A, HTR7, IL12B, LAMB3, MCM4, MYL9, NCF1, NRXN2, OR2W1, OR52D1, OR52N2, OR8D2, PDCD1, PIGW, PLD2, PPP3CC, RARA, SH2D1A, TAS2R7, TUBB2B, YWHAH
Negative_559	DBI, GH1, LSS, TKT, A4GALT, ADH5, ADRA1A, ATP6V1F, BDKRB1, CD274, CHIA, CLDN18, CNGA4, CREB3, DDX41, GBE1, GLYCTK, GYS2, IFIH1, JAK2, KIR2DS5, MGAT4A, MKNK2, NCKAP1, OR1J2, OR5V1, OR6C75, OR8K5, OR8S1, PAK6, PIAS4, PNLIP, POMC, SEMA3E, SHMT1, SLC25A5, STX8, TRAF1, ATP6VOD2, PPARGC1A, SERPINC1, TNFRSF10D
Negative_560	A2M, AUH, C4B, MYC, ADCY1, AGPAT2, B3GALT2, BLVRB, BST1, EIF4B, EPHA1, FGFR3, GALNT13, GGT1, GNRHR, HMGCR, HNF1B, IL12RB1, LAMA4, LCP2, MAD2L2, MAP2K4, MAPK3, METTL6, MTFMT, MYH4, NRXN1, OCRL, OR2F1, OR51B5, OR5AU1, PANK2, PDE6D, PDE9A, POLR2L, PRKCE, RDH5, RHOD, SLC27A1, SPI1, TRMT11, UGT2B11, ULK3, KIR2DL5A
Negative_561	DCK, MOS, PLG, ALOX15, ATP5J, ATP6AP1, BDKRB2, BIRC2, CD44, CDC7, CDH5, CISH, CKMT2, COASY, COMP, CREB3, DHDDS, DTX3, ETNK2, FZR1, GCNT3, GUK1, HLA-DOB, HTR4, IFNA5, IGF1R, IRAK3, ITGB4, MAD2L1, MAFA, MBL2, MYLK, NAT2, NCAM1, OR2G2, OR5D14, OR7A17, OR9K2, PERP, POLR2D, PROC, PTGER1, ROCK2, STX6, TAS2R1, UBE2L6, UCK2
Negative_562	KDR, MPZ, ADCY8, ADRB3, BBC3, CASP8, CDK7, CSNK1A1, CSNK2B, CYFIP2, DLL1, DVL1, FZD1, GJA1, HCST, IL11, IL18RAP, IL21, MECR, MGAT2, NAGA, NEFH, OR2T6, PFKP, POLE3, PPP2R1B, QPRT, RASA2, SHMT2, SPI1, ST3GAL4, STK3, STX4, TUBB4, UBA7, YWHAZ, PLA2G12B
Negative_563	APP, FES, MPZ, AOC3, CSNK1A1, CXCL13, CXCL16, DAPK1, DAXX, DLL1, FGFR2, GGT5, GLYCTK, IL22RA1, ITGA3, ITGA5, KLRC1, NFKB1, NLGN2, NRP1, OR10Q1, OR1J1, OR4A15, OR4K13, OR51M1, OR5A1, PPAT, RASGRP3, RPN2, RPS6KA2, SELPLG, SHISA5, THBD, TRDMT1, ULBP3, GABARAPL1, HLA-DRB4
Negative_564	EZR, HAL, PRL, UBB, ACPP, CKS1B, CREB3, DGKA, DGKG, DPYD, EFNA4, EIF4E2, ENO3, GNB1, GNRH1, GOSR2, GOT2, GRIN2A, HLA-DOB, HNF4A, HSD17B4, IGF1R, IL21, MAP3K6, MGST3, OR14C36, OR1A1, OR1L1, OR2B6, OR4K14, ORC3L, PIK3C2B, PLCD3, PPAP2C, PPBP, PRIM2, PROS1, RBX1, RPS6KA6, SUV39H1, VAMP2, PAFAH1B2, SLC25A31
Negative_565	B4GALT4, CDKN1C, DDIT3, GMPA, GSTM5, KIR2DL3, LCMT2, MAOB, MGAT4B, OR14I1, PCYT1A, PPM1B, SOAT2, STAT5A
Negative_566	C4B, WAS, ARHGEF4, B3GALT2, DLST, GAPDH, GDF7, IL28A, MAPK1, MDM2, MECP, MTHFS, NRXN3, OR52N1, PFN3, RUVBL1

Negative_567	CDA, GPI, AASS, ACYP2, ARNTL, ATIC, CDK5, CXCL1, CYP1A1, FDPS, GDE1, H MBS, IL7R, LIPT1, LTB4R2, OR10H4, OR4Q3, ORC4L, POLE3, POLR3G, PPP2R 2B, PTPRZ1, RPS6KA4, SETDB1, TAS2R14, WNT9A, MAPKAPK2
Negative_568	AK2, BAD, FYN, GCK, HGF, MOS, PAH, PML, ACSM5, ALG6, ATP5B, ATP5J, BIRC 3, CLTCL1, CYP17A1, DAPK3, ETNK2, GLUD1, HDAC2, LIAS, MAP3K14, NAGA, NFATC2, NPAS2, NTF4, OPLAH, OR2B6, OR2T8, OR56B4, OR6T1, P2RX1, PFN2 , PKLR, PORCN, PRSS3, SPTLC1, STAT6, TNFSF9, TUBB6, UPRT, ATP6V1C2
Negative_569	F12, TFG, ACOX1, ACSL3, BRAF, CX3CL1, F2RL3, GSTM4, GTSE1, HSD3B1, IL 21, IL9R, LTBR, MAGI3, MALT1, ONECUT1, OR10J3, RPN2, SETD7, UNC5B
Negative_570	TK1, ATP2A1, CD82, DPYS, ENO2, EPHB4, FBXW11, FCGR2B, FMO3, GALNT2, G STK1, ICAM3, NCAM1, NRXN1, PIK3R3, PLXNA2, CACNA2D1
Negative_571	DBI, AADAC, ABAT, ABL1, ACOX3, ALG3, BBOX1, CDC25C, CDS1, CREB3L4, DO LPP1, EXT2, GALNT2, GALNTL4, GUSB, HSD3B1, IFNA8, IMPA1, JAK3, MAP3K 7, OR10H5, OR11H6, OR1G1, OR1N2, OR2A2, OR52A5, PDE4B, PGM1, PIGF, PI K3CG, PLA2G2D, POLR2F, PPARD, RFXANK, RPS6KB1, SEMA3B, SLC2A1, TP73 , TPH2, UGCGL2, ULBP3, VCAM1
Negative_572	IDS, RB1, ALDH1A3, CACNB3, EFNB3, FGFR1, GNA15, HSD3B2, INHBE, MAP3K 6, OR4C46, OR5V1, OXCT1, PANK4, POLR2B, PRKX, PTTG1, SMAD6, SULT2B1, ATP6V1E1, HLA-DRB3
Negative_573	CBS, MVD, AGTR1, CDC42, CTNNA1, DUSP14, EDA2R, ENPP7, FGF11, ITGAE, I TGB8, JUND, MDM4, NFKBIB, NR4A1, OR52E2, PROS1, TUBB2C, PDCD1LG2
Negative_574	GLS, PLG, RET, AGRN, ARPC5L, DHFR, GCNT2, HSD3B7, IFNA10, LTBR, OR10A 4, OR2T12, OR2T5, PCNA, PDE4A, PIGT, PPP2CB, PPP2R2B, SPTLC1, TBL1X, TBL1XR1, THTPA, TM7SF2, VARS, ATP6VOA4, B3GALNT1, PRICKLE2
Negative_575	DUT, FGA, LEP, TXK, WAS, ZYX, ADRA1B, APOA2, BET1, BNIP1, CACNA1S, CBR 3, CCL1, CD14, CNTNAP2, CSNK1G1, CXCL13, CXCL5, CYP1B1, ERO1L, GRIA3 , GSTP1, GUCY1A3, HSPA1B, IL6ST, INHBE, IPPK, LDHB, MAP3K12, MTHFR, N EU4, OR4F4, OR51F2, OR51Q1, OR52A1, OR52R1, PAX4, PGS1, PIK3CA, PPP2 R5B, PRKAG1, PTAFR, PTPN5, RRM2B, TGFB2, CTNBP1, HLA-DRB4
Negative_576	BTC, ALDH9A1, ALG11, APOA5, CDIPT, CISH, CLDN16, CNTNAP1, CPT1C, CYP 4A11, EFNA5, GNAO1, GNRH1, GRIA3, HEXA, HLA- DOA, IFNGR1, LARS, NFKBIA, NMNAT1, NR4A1, OR10H5, OR2M3, OR51S1, PDE 4D, PDHA1, PLTP, PSEN2, SPRED1, TAS1R3, UPP1, ST6GALNAC4
Negative_577	C8A, F11, SCD, COL6A2, DCTN1, GSTZ1, HSD17B7, IGF1, IL10RA, IL7R, INH BE, INPP5A, ITPK1, LIPT1, NAGLU, NME2, OR13J1, OR51I1, OR52R1, PPM1A , RND1, SGMS2, SORD, VNN1, YARS, CSNK1A1L, SERPINE1
Negative_578	SRC, GALNT7, WBSR22
Negative_579	F9, TKT, AHCY, CDIPT, DUSP2, GALNT5, GNA11, GNG12, IL1A, KITLG, OR13H 1, PER1, SMARCA5, TNFRSF13C
Negative_580	AVPR1A, CPT1B, FZD2, GNPAT, IRF5, OR2AE1, OR6C76, OR8D1, RALGDS, RPS 6, SRGAP1
Negative_581	TKT, ACAT2, ATP2A3, BDH1, BUB1B, CAV1, CCL13, CYP8B1, FTMT, GLUD2, MO V10L1, NFKBIA, NUDT5, OR5A1, PFKFB4, PGAM2, PHKA1, PPM1A, PTEN, SFRP 5, SHC2, SLC25A4, TACR3, UCKL1, XCL1, ST6GALNAC6
Negative_582	MPL, AACS, ACSM2A, ARPC4, AVPR1B, BDKRB1, BLVRA, CXCL5, FADS2, GADD4 5A, HEXA, HNF4A, IFNA14, IL8RB, LDHAL6B, MAGI3, MAOB, MCM4, MITF, MYL 7, NT5C1A, OR13C2, OR14C36, OR2Y1, OR4F15, PI4KA, PIGX, PPARG, ROCK2 , SMAD1, SOCS7, SRGAP2, TNFRSF10B
Negative_583	GP5, MIF, ADIPOR2, APOA2, ARD1A, ASAH1, BMP7, BMPR2, BNIP1, CAMK4, CC L17, CD38, CHIA, CLTC, COL3A1, FOXA3, GCNT1, GSTM3, HTR2C, ICOS, IL13 RA2, IL24, LEFTY1, MAPT, MDM4, NAT6, OR10A5, OR4C15, OR5C1, OR5V1, PI P5K1B, PNLIP, PPP3CC, PRIM2, PRPS1, RAC1, SNAI1, STEAP3, UGT2B7, ATP 6V1G1, SERPINE1, TNFRSF11B

Negative_584	ABLIM1, ADH7, ATG7, INPP5A, KLRC4, LPAR1, NEGR1, NRG3, OR13C5, OR1J1, PAK3, PARD6B, PRKAB2, THBS1, ATP6V1G1
Negative_585	CFH, EBP, GH1, PVR, ADCY1, ADH7, ALDH1A1, ARPC5, ARSD, BPGM, CCL13, CD C16, CDKN2A, COL4A1, CYP21A2, DERA, DLL4, E2F1, EPHX1, FGF20, GNPAT 1, HRH2, HSD11B2, HSPA1B, IDUA, IFNA21, KNG1, LAMB3, LLGL2, MCM7, MIT F, NOS3, OCLN, OR10H2, OR4A16, OR52N5, PARS2, PIGK, PLCG1, SFRP5, SPR Y2, STK4, TAS2R50, TNFSF12, TRPC1, UBA1, CSNK1A1L, PRICKLE2
Negative_586	C9, CCR5, DUSP1, DVL2, EGLN3, ESAM, NMNAT2, OR11H4, OR1L4, PDE8A, PIM 1, RERE, SPTAN1, TOMM40, TUBB2C, UBE2K, WNT8A, XIAP, YKT6
Negative_587	CBS, OCRL, OR2D3, TNFRSF10D, TNFRSF11A
Negative_588	AVPR1B, CDS2, DPYS, FGF14, GMPR, GNG12, OR4N5, PAX8, RALBP1
Negative_589	GDA, GP6, ZYX, ACADSB, ACSM3, ADH5, AKT1, B4GALT6, BIRC5, BST1, CD36, CD55, CLDN19, CLDN2, CLDN5, DDX51, EHMT2, FPGS, GALNTL2, LEFTY2, MAP 4K4, MYL2, NEUROD1, OR10Z1, OR13C5, OR14I1, OR1L6, OR7C1, OR8K5, PDE 5A, PGAP1, PKMYT1, POLR3G, RARS, RELB, SDHC, SHC3, SLC25A4, ST3GAL1, SULT1A4, SV2A, UBE2L3, VDAC1, VTI1B, ZIC2, GABARAPL2, SUV420H2
Negative_590	BID, CEL, FGA, A4GALT, ACVR2A, ACVRL1, ADAM10, ADCY4, ALS2, B3GAT2, B MP2, CCL15, CCL16, CCR5, CD244, CDS2, CHST11, CYP2S1, DDX52, E2F1, ED NRB, ENTPD8, ERBB3, GAMT, GBE1, GCDH, GUCA1C, IDH1, IDI2, MAGI1, MYH1 4, MYH2, NFYA, NFYC, OR10H5, OR13G1, OR14A16, OR1D2, OR4K5, PISD, POL R3B, PPP3CA, RAPGEF1, RFXANK, RPS6KA4, SFRP5, STX8, TJP3
Negative_591	FUK, GNS, PML, SPN, ADCY9, ALS2, APRT, AREG, CDKN2C, CER1, CSNK1G2, CT BP1, EHMT1, ENO2, EPB41L1, FZD10, GMPR, GUCY1A3, ITPKB, LAMB2, MAPK1, OR8S1, OXTR, PHKA1, POLR1E, POLR2K, PPM1D, RARA, SCD5, TPH2, UGT2A1
Negative_592	CP, FGB, GH2, RPE, TK1, ABP1, ACMSD, ACVRL1, ADAM10, ADCY9, ADRA1D, C1 GALT1, CASP6, CFL2, CX3CL1, CYP21A2, DTYMK, EXT1, GAMT, GSTM4, IL10R B, INHBE, MYLK3, NFATC1, ORC2L, PDXP, PGM1, PLCE1, SGMS1, SMAD6, TGFB 1, UNC5D, UPRT, VTI1A
Negative_593	DBH, ID4, TNN, BMP6, CACNA1G, CD44, CD47, CNGA4, CYP1B1, DDB2, DIAPH3, DLL3, F2RL2, FOXA2, FSHR, GNAI2, IFNA17, IL5RA, INPP5E, IRF7, JAK3, KIR2DL3, LLGL2, MAD2L1, MCM3, METTL6, MITF, OR13F1, OR2T1, POLR2C, P OLR2G, PRKG1, PTGER1, TAS2R4, TAS2R49, TCF7L2, HLA-DPB1, PNLIPRP1, TNFRSF10C
Negative_594	FADD, INSR, MYL7, OR10G9, STAT5B, WASL
Negative_595	BTD, C4B, CBL, KIT, AGTR1, CAMK4, CLDN19, GJD2, HYAL1, IRF5, MTMR2, NA NS, NAT1, OR10A3, OR4B1, OR51G2, OR6C3, OR8J1, PIAS4, PNPT1, PPP1R3C, PTK2B, RAC1, RAPGEF4, RFNG, ROCK2, RPS6KA4, TAS2R14, UGT1A10, VEGF C, HLA-DQA2
Negative_596	BAX, ME1, MVD, ALDH6A1, B3GALT1, CD40LG, MALT1, NTN1, NUDT2, NUMB, OD C1, OR5A1, PPP3R1, PRODH2, PTDSS2, RALGDS, TSHR
Negative_597	ARNT2, DHRS4, HARS2, KAT2B, MNX1, OR51A7, OR51B6, YARS
Negative_598	C6, C9, CS, EBP, FST, ACAA1, ACSL3, AKR1C3, ARHGEF6, ATP6V1A, CBLC, CD 28, CDC27, CDS1, CHSY1, COL4A2, CSF1, DDX54, DHRS4, DOT1L, F2RL2, FTC D, FUT4, GFPT1, GLB1, H6PD, IMPDH2, MYL2, NFYA, NME7, NMNAT3, OR10Z1, OR2A25, OR2H2, OR4D9, OR51I1, OR5M8, POLD2, POLR1D, PON2, PPM1B, PPP 3CC, PRPH2, RFXANK, SFRP5, STX8, SULT1A1, WNT10B, TNFRSF12A
Negative_599	MIF, PC, ACOX2, ACSL1, ATF2, CARD11, CASP10, CCND1, CCND3, CHAD, DNMT 3B, FPGS, FZD3, GAS1, LIPG, MAP2K4, MARS2, MTHFD1L, OR14A16, OR1G1, O R4K1, OR51F2, OR56A1, OR5H2, OR7C2, OR8I2, OR8K3, PISD, PRIM2, PYGB, RXRG, STAM2, STK36, THY1, TRAF1, TRAF2, WNT16, ZFYVE9
Negative_600	C8A, ACOT11, ADH5, AOX1, BMP8B, CACNG1, CACNG8, CLDN17, CYP2C9, DLL4, DUSP4, ESPL1, FADS2, GNPAT, IDH3A, IL18RAP, ITGA2B, LLGL2, MMP7, NM E2, OR11H1, OR2A14, OR51E2, OR52I1, OR6B2, PRKCI, RPS6KA2, RRM2, ST3 GAL1, PAFAH1B2

Negative_601	BAX, DUT, F2R, F7, GK2, ALG10, APC2, B4GALT3, B4GALT4, BPGM, CASK, CCL22, CCR9, CDK5, CLDN14, COQ6, CREB3L1, CSNK1E, DHODH, EDN1, EFNA1, GN A13, GOT1, GPD1L, IFNA6, IL2RG, INHBA, ITGA7, MAP3K5, MARS2, NMNAT2, NQO1, OR10X1, OR14J1, OR4D1, OR5A1, OR5M3, OR9K2, PIK3CB, PIK3R1, PP M1D, SLC12A2, SUV39H2, SYNJ1, THBD, TSHR, UNC5A, VDAC2, CSGALNACT1
Negative_602	FGD3, GRIN2B, OR52I2, OR9A4, PRLR, RARS2
Negative_603	ADC, C9, FES, KMO, ABI2, ARSB, CACNA1I, CDKN2B, CXCL10, DAXX, DTX1, DV L2, FARSB, GADD45G, GUCA1C, IL25, MECR, MYL9, NAT6, OR2AT4, OR5L1, PI K3C2B, PLCD3, RASA2, RASSF1, TBL1Y, TRAF5, SERPINB5
Negative_604	AARS2, ATP5F1, DDX41, MTMR2, NCOA4, OR4F4, PTCH2, SEMA4A, SLIT2, SUV 420H1
Negative_605	CBS, DCN, CACNA1F, CD80, CRLF2, EXTL3, HLCS, IL28B, IL29, MAPK11, MYH 4, NAGA, OR4F15, PDE8B, PDGFRB, PFKFB3, PIGU, PROC, SC4MOL, SORBS1, A LDH18A1, ATP6V1E1
Negative_606	C7, IVD, NOG, PLG, SRM, AKR1B10, APOA5, ATP4A, ATP5L, CXCR5, CYBA, CYP 26A1, CYP3A4, DFFA, DHRS4, DHX58, FCGR3A, FOXA2, FSHR, GALC, GALNT1, GALNT14, GZMA, HIF1A, HSPA1B, MAP2K6, MCM7, OR11H1, OR4C15, OR52N4, OR5I1, PRODH2, PVRL2, RHOQ, SLC12A2, SPRED1, SV2B, TICAM2, TJP3, TSC 1, UPB1, ZBTB16
Negative_607	CFH, ZYX, AFMID, ALOX12B, C1QA, CACNA1C, CCL21, CDC42, CSDA, CSNK2B, GUCY2F, IGF1, LPAR1, LYPLA2, MAD2L1, OR2L8, OR52A1, OR52B4, OR5M3, O R7G3, PI4KA, SIPA1, SLC33A1, SNW1, SOCS2, ZFYVE9
Negative_608	ALAS2, CD44, CDC20, CDH5, EPHB1, EPRS, GALNTL5, NTN1, OR1K1, OR52E4, OR5B3, OR5D16, PIP5K1C, UGT2B28
Negative_609	MPI, TNC, AKR1C3, CD82, DTX3, ENTPD3, HYAL1, MDM4, OR4Q3, PGK2, PRKCB , PSAT1, RPS6KB1, SDC4
Negative_610	A2M, MTR, PGF, TNF, WAS, ADH6, ANAPC4, CACNA1D, CACNB4, CFL2, CLCA2, C LDN20, CMAS, CPT2, CYP11A1, EFNA1, EFN3, FASLG, FGF22, FLT3LG, GNAO 1, GNAQ, HIBADH, HIF1A, ITGA8, LAMC3, MMP14, MYH11, NPR1, OR10K2, OR4 D5, OR6Y1, OR8B8, PAK2, PARS2, PLCD3, PNMT, POLR2K, PTGDS, RFWD2, SLC 25A6, SPCS3, VEGFC, ATP6V1B1, TNFRSF1A
Negative_611	ADH6, MPZL1, OR52N5, UNC5A
Negative_612	FGG, TPO, ACADS, CD79B, DRD2, IFNG, IL23A, OR1K1, OR51A2, OR7G3, PAK2 , PDE6G, PEMT, PER1, PI4KA, RASGRF1, RASGRP3, SETDB2, ST3GAL3
Negative_613	C8G, CCR10, DGKI, EPRS, F2RL1, GNRHR, GPD2, OR6A2, TGFB3
Negative_614	CFI, DLD, PVR, ALG10, CACNA1G, CACNG8, COQ5, GALT, GNG13, H6PD, JAM3, MMP14, NFKBIA, OR52E4, PARD6B, SDHB, SMC1B, SOCS4, VAMP1
Negative_615	TNC, ALG11, CDC14B, COL6A2, CTNNA2, CTSB, ENO3, FZD8, HMOX1, IFNA10, IL13, IL21R, NTF3, OR14I1, OR6C4, RXRB, SORD, UGT2B17, ATP6V1C1
Negative_616	CR2, SHH, ACP5, ACSM1, ADRB1, ADSS, APC2, CD226, CDC23, CDC42, CLDN4, COMT, CPOX, CXCL11, CYP3A7, DARS, DDX18, DPYS, DRD2, FGF13, FOXA2, GA LNT7, GLUD2, GPX7, GSTM4, GSTT1, IL1A, INMT, MCM5, OR10AG1, OR10C1, O R2G6, ORC2L, ORC4L, PCCB, PDE8A, RASGRP2, TGFB3, TNFSF8, UROC1, HLA- DPB1
Negative_617	C8G, IL5, ACACB, AGPAT4, AKR1D1, ATP6VOC, CTNNA2, DAPK2, DDX4, EARS2 , EPB41, EXTL1, G6PD, GMDS, GZMA, ITGAE, JAK2, KLK3, MDM2, MMP9, MYL7, NAE1, OR10J3, OR51A4, PGM3, PRLR, SMAD1, WNT2B, PPARGC1A, SERPIND1
Negative_618	C5, GDA, CBLB, CYP2C9, DTYMK, FOXA2, G6PD, GBA3, HAGHL, IL10RA, LEFTY 1, MDH1, P4HA2, SOCS1, UBA1, ARHGEF12
Negative_619	F11, FGB, IHH, INS, ASRGL1, BCKDHB, BMPR2, C3AR1, CAMK4, CCL22, CPT2, DAPK2, DBF4, GPX7, GUCA1B, IL12RB1, JAM2, KLRK1, LCMT2, MYH13, PAK4, PARS2, PDE9A, PERP, PIK3R1, PTPN11, PTPRM, SFRP5, TAP1, TOMM40, VAMP 2, XIAP, PPP1R12A

Negative_620	AK1, C8A, CD4, GHR, PDC, ACSL1, AGPAT4, AHCYL1, ARG2, B3GAT1, BLVRA, CNG2, CHSY3, CKS1B, CLDN11, CNDP1, COL3A1, CSF3, GALC, HNF4A, IAPP, IGFBP3, IL1B, ITGA2B, NOTCH2, NRCAM, OPLAH, OR2M2, OR4B1, OR51T1, OR5AP2, ORC2L, PDE7A, PDGFB, PLXNC1, POLR3H, PPM1A, PPP2CB, PRPH, RXRA, SCLY, SOCS3, THY1, TPK1, ZIC2, CSNK1A1L
Negative_621	ATG12, FZD8, IRAK4, LCMT2, PKLR, POLR2B, PRKG2, SETD2, TAS2R50
Negative_622	BTC, GNE, AARS2, AKR1A1, AMPD1, B3GAT3, BCKDHB, BPNT1, CANT1, CD99, CQQ3, CPT1C, CREB3L1, E2F1, EHMT1, FMO1, GADD45B, GP1BB, GRIA2, IGSF5, IL23R, IMPDH2, KDSR, MIOX, OR1E2, OR1L6, OR2B11, OR2T6, OR52A5, OR6C3, OR8G1, PHKA2, PLAU, RUNX1T1, UGT2B28, UGT8, XCL1, TNFRSF10B
Negative_623	CAT, DHDH, LAMC2, OR6C76, OR8B8, PRNP, RUNX1, SKP1, SMAD3, SUCLA2, PNLIPRP2
Negative_624	AGPAT6, CFTR, ENO1, HPRT1, IL18RAP, OR10K1, OR1K1, P4HA3, PFKM, RRAS, TAP1
Negative_625	PTS, AGXT, APOC3, CAMK2B, GSTT1, OR8B8, PIGT, PIM1, PLXNA2, PPP2R5B, SLC25A6, WNT3A
Negative_626	GNS, LAT, TEC, ACO2, CADM3, CALML6, CCR3, CD22, CD28, CHPF, COL4A6, CSAD, DDHD1, EXTL3, F2RL1, FASN, FBXW11, FDFT1, FZD1, GUCA1C, HARS2, IGSF5, IL12A, IL2RA, ITPK1, KAT2B, KLK3, NCSTN, NRP1, NSD1, NUDT5, OR11L1, OR12D3, OR4A5, OR4C12, PFN1, PLCG1, PRKACB, PSEN2, RASSF5, RDH16, SPHK1, STX1A, TBL1X, VAMP2, WNT5A, ATP6V1E1, SERPING1
Negative_627	AK7, F10, LPL, UBC, ACP5, ADCY8, AGPAT1, AKR1D1, CCNB3, CCR7, CD247, CDC45L, CDKN2A, COL11A1, CXCL1, DCXR, EVI1, FLOT2, GBE1, GFPT1, GRM5, GTSE1, HIF1A, IL17RA, IQGAP2, ITGAE, LALBA, LCMT1, LIPT1, MAP2K3, MAPK13, MYL9, OR2C1, OR4F5, OR9Q2, PI4KB, POLA1, PPP2R5D, RAPGEF4, SGM2, SOCS3, ST8SIA5, STX1A, STX1B, VAMP3, WHSC1, YWHAB, TNFRSF13C
Negative_628	LSS, C1GALT1, CCL27, FZR1, GLI1, HNF1A, LCMT2, OR4S2, PDGFB, PIK3R5, PVRL4, SULT1A1, TNXB
Negative_629	C1S, CBS, MAG, PAH, RET, ACSS3, ADIPOR1, ARPC1B, B3GNT5, C3orf10, CACNA1H, CARS2, CCL26, CD28, CDKN1C, CLDN3, CREBBP, CTSL1, DFFB, DIAPH2, E2F1, FARP2, FTH1, GADD45A, GBA3, IL6R, LIMK2, MAP3K2, NANP, OR2A5, OR52N2, P2RX4, PPCS, PRKAA1, PRSS3, RAPGEF4, RCHY1, SHC1, SMAD6, SMPD2, SNAI2, TAS2R3, TUBAL3, UBE2L6, VANGL1, WNT16, WNT2, PNLIPRP2
Negative_630	GPT, ACVR1B, AHCYL1, ARPC5L, BCL2, CD59, COL2A1, DLL1, DOCK1, HTR5A, IL23R, MGAT4B, OR10G7, OR1A2, OR2A25, OR4K2, OR4S2, OR56A1, OR5I1, OR5K2, ORC6L, PDGFB, PHKA1, PIK3R4, PROC, ATP6V1G1, KIR2DL5A, TNFRSF10B
Negative_631	ADRA1A, ATP5C1, B3GNT5, CCL25, CCND3, CCR10, CDC25A, CNGA3, DCXR, DDX52, DHRS4, DVL2, FARP2, GAB1, GALK1, GALNT8, GNA11, GNG3, HLA-DOB, IFNA10, IFNA8, IRAK3, KARS, MAP2K1, MBL2, NCOR2, NLGN2, OR4C13, OR4D9, OR51V1, OR6C4, OR6C6, OR6F1, OR8D4, PARS2, PFKP, PTGDS, RELA, SMAD2, TAS2R5, WNT11
Negative_632	CRK, SI, SYK, TYR, B4GALT7, BDKRB2, CDC16, CHD8, CLDN20, CYP8B1, DDX56, FGF22, FUT4, GADD45A, GNG12, HTR2A, ITGA9, ITGB6, KLKB1, LTBP1, MGAT4B, MGST1, MYH7B, OR4X1, PIGO, PPP1CB, PTPN1, RHOA, SETD1B, ST3GAL5, SUCLA2, TAS2R8, TBL1XR1, TLN2, ATP6V0D2, TNFRSF14
Negative_633	LPL, MAG, AMDHD2, B3GALT5, CHKB, COL2A1, CSNK2A2, GUCY2F, IL9R, ITGA2, NFKBIE, NOX1, OR8G1, SULT1A4, ATP6V0A4
Negative_634	CD79A, DUSP14, FADS2, INPP4B, IRS4, JUND, KIR2DS4, MKNK1, PAX8, PIGQ, PPARD, RDH11, SEMA4C, XCR1, ATP6V1C1, HLA-DQA2
Negative_635	APOA1, CNTF, CXCL10, EP300, GZMA, HADHB, KARS, MDM4, MTHFD1, NRAS, OR2M2, OR6C3, PTPRJ, RASGRP1, SYNJ2, UPB1
Negative_636	AK1, HYI, ID4, ATP6VOB, CYP2S1, FTCD, LDHA, MS4A2, OR2T3, OR4K1, OR5A2, PFKL, PNPO, PRPS2, RARS2, RPS6KB2, TUBB4Q, WASF1, SERPINE1

Negative_637	CS, ALDH1A1, B3GAT1, FOSL1, GMPS, INSR, ITGB6, OR2A4, PRKCI, THBS1, PDCD1LG2
Negative_638	HYI, KMO, ATP5A1, BCKDHA, FOSL1, GALNT11, NRG4, RASA2, CSNK1A1L
Negative_639	FGG, FYN, HK1, ACYP2, ATG7, ATP12A, ATP5H, B4GALT2, BAAT, BDH2, CACNG5, CCL16, COASY, CRLS1, EPHA4, GANAB, GCLM, IRAK4, KIR2DL3, LEFTY1, LRP5, MAML1, MGAT5, MGST3, MYH15, OR4C46, OR4F15, OR6C4, OR6C6, ORC3L, PIP5K3, PIPOX, PPP5C, PRPS2, RALBP1, SUFU, TAS2R41, THBS1, VDAC3, WNT2, WWP2, KIR2DL5A, SLC25A31
Negative_640	AK1, GPT, MPI, AARS2, ADCY7, ATF4, B4GALT1, CAMKK2, CHKB, COL1A2, CTBP1, DGAT1, DUSP8, FGD3, GDF7, GMPR2, GMPS, GRIN2B, GSTO2, HEXA, HSD3B2, IDH3G, IRF7, ITGA11, ITGA3, MAD2L1, MBL2, MDH2, NAGS, NFKB2, NRG3, OR10J3, OR2T8, PAPSS1, PRLR, PSME3, ROBO2, SDHA, SEPHS1, SGPP1, SLC25A4, THBS4, TUBA3C, UBA7, CACNA2D3
Negative_641	ME2, ACAA1, ACADVL, ACO2, ACTN2, ADCY2, ALG5, ALPP, AMD1, APOA5, BDKRB1, BMP7, CHDH, COL5A2, DDIT4, GAD2, GALK2, GGT7, GLUL, HBEGF, HPSE2, IFIH1, IL12A, IL20, IL23R, IRF3, ITPKB, KYNU, MITF, NMNAT3, ONECUT1, OR4C11, OR5M9, PCYT2, PLA2G2D, RDH11, RPIA, SMPD4, SULT1A2, TAS2R9, TBXAS1, THY1, VAV2, MAPKAPK2
Negative_642	GSS, ME2, PGD, ADCY7, ALDH9A1, ENTPD1, EXT1, HARS, IL1R1, IL22, INPP5A, ITPKB, LIPF, MAP4K4, NTF4, OR8H1, OR9G1, OXTR, SFRP5, STX1B, TAS2R42, TCF7L1, ZIC2
Negative_643	DERA, NOX1, TUBA4A, TXNDC12
Negative_644	C8A, TPO, AKT1, ALDH2, ALG12, ARHGEF4, ARPC1B, BCMO1, BMP6, CTTN, FAR2, FARSB, GJD2, GLG1, GSTM2, HMOX1, IL1R2, IRF5, KIR2DL1, MFNG, MGAT4A, MYH15, OR13G1, P4HA3, PDXP, PIGQ, PLCD3, RAPGEF2, SC5DL
Negative_645	F2R, PGD, ACTB, ADCY3, AHCY, CCNG2, CHSY1, EREG, F2RL3, GALNT3, HMGCS2, OR10H2, OR52K1, OR6T1, PDE8B, PIGX, PRIM1, PRKAR2B, SH2D1B, SMPD4, TSC1, UBE2K, XYLT2
Negative_646	MPZ, BLVRB, CCR5, CHIT1, CYP3A4, DDX55, GFAP, HRAS, LIAS, OR51B4, OR51B6, OR56A4, POLR1A
Negative_647	GSS, ANAPC1, AOC3, ARAF, ATG7, BLVRB, CAMK4, CCL26, CD47, DNMT3A, E2F2, EDAR, FGF18, GDE1, GNAI3, GRIA3, HRAS, IFNA8, IL2RA, JAG1, LAMA3, MAD2L2, NADK, NEU3, ODC1, OR4P4, PER2, QPRT, RAC2, SNW1, ST3GAL5, UNC5A, YKT6, CSNK1A1L
Negative_648	HK2, LPO, PLN, ACAA1, AGMAT, ARSD, AVPR1B, B3GALT1, CACNG6, CCL20, CDK5, CHDH, COX10, CXCL10, DPM3, DTYMK, GPX7, GSTT1, IFNA5, IFNB1, IL18R1, INPP4B, ITGAM, KIR2DL1, MMP14, OR1C1, OR8H3, PFN1, POLR2H, PTGS2, RFXAP, SLIT2, SRGAP3, TSC2, TUBA3C, TUBA3E, VAV3, ARHGEF12, ATP6V0D2
Negative_649	EDA, GSS, AGPAT3, AGPAT6, CACNG2, DHDDS, DOLPP1, E2F3, EFNB1, ENTPD7, FTMT, GALNT5, GANAB, GAS1, GUSB, IBSP, IFIH1, IGSF5, IRS4, KDSR, LDHC, MAP3K13, MKNK1, NT5C2, OR2A4, OR2H2, OR2T6, OR4C11, OR6X1, PDE5A, PGM1, PLD1, POLR3A, PYGB, SELPLG, SESN2, TFDP1, TRMT11, TSTA3, TUBB2C, ATP6V1E2, ST6GALNAC3, TNFRSF11B
Negative_650	ACADVL, CREB3L2, IL17RB, IL18, OR4C11, OR51D1, PRKCD, PTGER3, SGPP1, SMAD2, STAT4, SUV39H1, TUBB, UGCGL2, PPARGC1A
Negative_651	F8, IL9, TK2, CACNG4, COL4A4, COMT, CPOX, CREB5, DKK4, DPM3, DPYD, EFN2, HHEX, IFNGR1, IL12RB1, IL15RA, JUND, KRAS, LDHA, LIPA, NAGA, NCKA, P1L, NFKBIE, NTNG1, OR10H2, OR2AG2, OR5K2, OR5T2, OR8A1, PIGN, PIP5K3, PPP2R2C, SEMA4F, SETD1B, TAS2R49, TNFSF14, UPP1, VEGFA
Negative_652	DAPK1, KAT2B, LEF1, RRAS, SLC27A4
Negative_653	FOS, IL4, ANAPC1, CD27, COL1A1, CSF3R, FMO2, GANC, GP1BB, GSTM2, LYPLA1, MALT1, OR5P3, PIGN, RPS6KA1, TAS2R4, TUBAL3, TYMP, UBE2L6, ULBP3



Negative_654	AK3, ASL, BLVRA, FZD4, GFAP, IPMK, OR13D1, OR51S1, RASGRF1, SLC25A31, ST6GALNAC5
Negative_655	ID1, CSF2RB, GGT5, ITGB5, TBL1X
Negative_656	XDH, ACO2, ACOT11, CBR3, CCL8, CHST12, CXCR3, DTX3, EPB41L2, FGF9, FOXA3, FZD4, GRB2, LLGL2, MYH3, NR1D1, OR4C12, PAK4, PIM1, POLR3A, PTGES2, PVRL4, SDC4, SEMA4B, SFRP1, SFRP2, TUBA1C, TYK2
Negative_657	CRK, B3GALT4, ELK1, F11R, GUCY1B3, NKD2, WNT5B, HLA-DRB5
Negative_658	ADA, DCC, GAA, ME1, ADRB2, ARSB, ATP6VOB, CYP2C19, CYP3A5, DUSP3, DVL3, ENTPD1, EPHB2, FARP2, FCGR3A, FGF21, GALNTL1, GPD2, GRPR, KDSR, KIR2DS5, MAP3K8, NAMPT, OR1C1, OR4L1, OR4X1, OR51B5, OR5AU1, OR7D4, PAK1, PARS2, PDCD1, PDHB, PNMT, PRKACG, PRKCB, PRNP, PYGM, RBX1, RPE65, SEMA3D, TRAF3, TSLP, UBA1, WASF2, ZMAT3, ST6GALNAC6
Negative_659	F10, AANAT, ACMSD, ASPA, CBR3, CCR10, CCR3, CD38, CXCR5, DDX4, DDX47, FLAD1, FLT3, FRAP1, FZD4, GRAP2, HGSNAT, IL12A, LAMB4, MMP2, MYH10, NCAM2, NRG4, OR4X1, OR6N1, ORC6L, PCCA, PGM1, PIGX, PLA2G5, POLE2, PON1, PSENE1, QPRT, SFRP4, SGPP1, TUBB2C, ATP6V1B2
Negative_660	SPN, TXK, ACSM2A, ALOX5, ATP50, ATP6V1F, CCR1, CDKN1A, CXCR4, GCNT4, GGT1, GPT2, GUCY1A2, IFNA2, IL22, KLRC3, LDHD, MAP3K5, MYL7, NFATC4, NRXN3, OR1F1, OR4M1, OR51A2, OR51A7, OR52A1, PFAS, PIGF, RASA2, WHSC1L1, MAPK8IP1, PDCD1LG2
Negative_661	BTD, CFD, CFI, HYI, OTC, AK3L1, ALOX15, AMD1, ANPEP, ATP4B, B3GNT2, C4BPA, CACNG6, CAMK2A, COQ7, CTNNA1, CYP17A1, DCTN1, EIF4E, ENPP3, EPHA7, F13A1, F2RL3, FIGF, FUT8, GOT2, IMPDH1, INMT, ITGA10, MGAT4A, MYH11, NARS, OR10G4, OR4K5, OR6B2, OR6S1, OR8G1, PIGA, POLD2, POLR2G, PPP1CC, PTCRA, VASP, ZFYVE9, ATP6V1E2
Negative_662	BTC, ACP6, ADAM10, ANAPC5, ARRB2, ARSA, ATP5G3, ATP50, BUB1, CACNA1I, CHST12, DTX4, GADD45G, GALK2, GSK3B, GSTM5, IL8RB, IPMK, NR5A2, OR7G2, PDIA4, PPP2R2C, PTPRB, RAD51, SETD7, SETDB2, SMAD4, TSLP, ULK1, YWHAB, CSGALNACT1
Negative_663	C2, CD6, FES, JUN, LCK, ACOT12, ADRB2, AGXT2, CACNB3, CDK6, COQ3, DLL1, EDN1, FGF22, HSPA8, IFNA13, ITGA4, LRRC4C, NFAT5, ONECUT1, OR1B1, PDE1A, PDHA1, PDPK1, PDX1, PON3, RALBP1, RARA, RFNG, RFWD2, RPS6KA1, SCP2, SLC9A1, STX1A, TACR3, TAS2R38, TRPM5, TUBA4A, TUBAL3, UBE2K, UGCGL1, VEGFB, WASL, WNT2, XCL1, ZFYVE9, CACNA2D1, TNFRSF10B, TNFRSF13B
Negative_664	AGXT2, ARNTL, CCL1, CHUK, CMPK2, EARS2, EHHADH, GADD45G, LIPC, MAPK14, MCAT, MNX1, MYH1, NEFM, OR10G4, OR10Z1, OR3A3, PIGV, PIK3C3, SELP, SFRP4, STAM2, SUCLA2, TBL1Y, TNFRSF10B
Negative_665	CAT, EBP, HYI, KHK, SCD, ACAD8, ACADSB, AKR1C3, ALG5, AMD1, ANAPC4, AOC2, APLP1, AREG, ARNT, BIRC2, CES7, COX10, ENO2, FGF17, GALK1, GLUD2, HCLS1, IL12RB2, INPP4B, LRP5, LTBP1, MLLT4, MYLK, NRXN2, OR13C3, OR6C70, OR6F1, POLE2, POLR2L, PSAT1, PTPN11, RELA, ST3GAL6, STK3, SYNJ1, TRMT11, UPP2
Negative_666	CCL16, CDK2, CREBBP, CYP3A7, LCP2, OR2A4, OR52N1, RETSAT, SELP, TNFSF11, WBSR22, PPP1R12A
Negative_667	BAD, OTC, CD3E, CLDN10, COQ5, CXCR4, DGKG, DHDDS, F13B, FIGF, GLI3, HDAC2, IARS, IL13RA2, IL17A, OR10H1, OR52A1, PDIA4, PIP5K1C, PPP1CB
Negative_668	ACOX1, ACOX2, ACVRL1, AHCYL2, COQ7, CTSL1, EFNA4, EHMT2, FASN, FGF9, GALNT13, GSTA1, PDGFB, PFKFB4, SYNJ2, TLR4, TNFRSF9
Negative_669	CDC26, PRKCI, TNFRSF18
Negative_670	MUT, SFN, TKT, BCL2, CXCL12, E2F5, ESPL1, GUCA1B, HAP1, MAPK14, NRG2, OR10C1, OR6K6, PGS1, PIP4K2A, PON3, PYGM, QARS, RAC3, RASA2, SGMS2

Negative_671	CAD, ACAT1, ATP6AP1, CCL16, CCL26, CD48, CTSS, CTTN, E2F4, GALNT9, GUK1, IL12A, LDHA, NEUROD1, NFASC, NFE2L2, OR4N4, OR5AP2, PGAM1, PIGT, STK11
Negative_672	CBS, TNN, ACTA1, AGXT2, ALOX12, CBR3, CCKBR, CD46, CHEK1, CXCR5, CYP27A1, CYP8B1, ETNK1, GNAS, GSTK1, GSTM2, IGF1, INPP4A, JUND, LMO7, MAOA, MPDZ, OR3A2, OR4C15, OR4L1, OR6N2, P2RX4, PHGDH, PI4KB, POLR3A, PON3, PPP2R2B, PRODH, RBKS, RUVBL1, SULT2A1, TAS2R3, CACNA2D1
Negative_673	C2, IL6, JUN, NOG, CASP3, CSDA, CTPS2, ENPP7, EPHA8, EXT2, GALNTL1, GSTA4, NRXN2, OR51A2, OR5A2, OR7G3, ORC4L, PDE7B, PIGA, PLCB4, PNPO, POLD3, PROS1, PRPS2, SEMA3F, SMAD7, SRGAP3, STK4, UGT2A3, WNT3, ZFYVE16, PRICKLE1
Negative_674	JUN, OSM, PAH, PLG, AGMAT, ALDH3A2, ALG5, CCL16, COL6A1, CYP1A1, DDX41, EPHA6, FCGR3B, FZD1, G6PC2, GCAT, HARS2, IL17RB, MAPK12, MECR, MTHFR, NFAT5, OR10H4, OR2A12, OR2L13, OR2T10, OR56B4, OR5L1, P2RX3, PAK2, PFKFB4, PIGH, PLA2G2F, RASGRP4, ROCK1, RRM2B, UGCGL1, ULBP2, XYLB, MAPKAPK2
Negative_675	AUH, ILK, ITK, PC, ALG8, ATP5J, CAMK2A, CD28, CHEK2, CREB1, CRHR1, CSNK1G2, CXCL6, CYP3A5, DAG1, DPYD, EPHB4, F11R, GADD45A, GOT2, GRIA3, GUCA1B, HDAC2, IFNG, IL12RB1, ITGB6, MAPK14, MPZL1, NADK, OR10J5, OR13C9, OR1L8, OR2AG2, OR5A2, PCK2, PCYT1B, PMAIP1, RPS6KA2, SARS2, STMN1, STX18, TAS2R13, TPMT, WASL, PDCD1LG2
Negative_676	C1S, CR1, HDC, IHH, LIF, ACACA, ACOX2, ARNTL, C3orf10, CACNB3, CCNA2, CCR4, CTSG, CXCR4, DAD1, EFNA2, FIGF, FUT7, IL29, ITGB4, LIPA, MICA, MOV10L1, OR51S1, OR52L1, PARS2, PCNA, PGM1, PNMT, SH2D1B, TDO2, WNT3, TNFRSF1B
Negative_677	RET, CYP7A1, OR51B2, TUBB4
Negative_678	BID, CKM, ADSS, ALPI, AOX1, BCKDHA, CAMK2A, CD36, CHIT1, CMPK2, CRLS1, CTBP1, CYP2C8, DGKE, DOCK1, DPM1, EXT1, GALNT8, GNG12, GRIN2C, IFNGR2, ITGA9, ITGB6, LRDD, MAP2K6, OR2F2, OR2T29, OR51B6, OR51E2, PFN2, PIGT, PIGW, PPA1, SETDB2, SMC1A, TKTL1, TLR3, TPK1, TUBB4
Negative_679	BTK, NF1, TK2, ACP6, ACSM2A, ALAD, ASS1, CDKN1C, CRHR1, CXCL16, EFNB2, EPB41, FARP2, GCLM, GMPR, GNAT3, GRLF1, IFNA14, INPP5E, MAML3, NKX3 - 1, OR2T34, OR2Z1, PLA2G4A, POLR2H, PPP1R3D, PPP2R2A, PTGES, RBL1, ROCK1, RXRG, THBS4, YARS2
Negative_680	CBS, AARS, ADCY6, ALG5, CLDN7, CSF2RA, EFNA3, EPOR, GALNT7, MAD2L1, MAGI2, METTL6, OR8G1, PDGFA, PIP4K2C, PSME2, ZMAT3, ATP6V1E1
Negative_681	JUN, AVPR1A, CLDN1, CTNNA3, CYP7A1, FSHR, FZD4, G6PC, GJD2, JAG1, OR1F1, PTPN11, RDH5, STEAP3, ULK1, WARS
Negative_682	FGB, GPI, ACAT1, ANAPC7, ASIP, BDH2, CASP3, CD79B, CDC6, CES2, CRLF2, CSDA, EGFR, EVI1, GPT2, HTR2B, ICOS, IRS1, ITGB1, NTRK1, OR14I1, OR2M7, PAK2, PFKP, PLCZ1, POLR2K, PPP2R5C, PPT1, PRKAB2, PYCR1, RUNX1, SLC2A2, SOAT1, SPAM1, SUV39H2, THBS2, TJP3, TRAF3
Negative_683	FUK, NOG, CCDC6, CDH1, CDS1, CRHR1, CSF2RA, DPAGT1, EGLN1, EPHB4, EXTL1, FARSA, GMPPA, ITGB3, KIR2DS4, LIAS, NRG4, OR11H4, OR51Q1, OR8H2, OXCT1, PDE8B, POLR1D, PPA2, RPIA, SHISA5, SOD1, TPH2, YWHAH
Negative_684	PRL, ACSM2A, B3GAT2, CCL11, CCNB2, CYBA, DHRS9, FLOT1, HMBS, IFNW1, IL8RA, IRAK2, IRF3, LAMB3, LEPR, MAPK7, OR10A4, OR52A5, PDGFRA, PFKFB4, PHKA2, PIAS2, POLR2H, RHOA, RIPK1, SC5DL, SDC1, SPRY4, SRGAP3, TBXA2R, UCP1, YARS
Negative_685	EPO, FES, HK2, ADH1A, ADH6, APRT, ATP6V1A, BHMT, CACNB1, COL4A2, CRY1, CTSB, DAG1, DKK4, EPHB1, GLYCTK, IFNW1, IL6ST, KIR2DS4, LEPR, NGEF, NME2, OCRL, OR2V2, OR4D6, OR7A5, OR8K3, PDGFC, PIGH, PLEKHA8, PLXNA1, PPP1CC, ST3GAL6, UAP1, VANGL1

Negative_686	LPL, ACSL1, ALDH3B1, BIRC2, CASP6, CCL1, CMPK2, CYSLTR2, DGAT2L4, DIAPH2, DKK1, DPYD, GGCX, GNAT3, GSTA5, NUDT2, OR2L13, OR4K2, OR51V1, OR52N2, PKM2, PLXNA3, PSENEN, PTGS2, PTPN6, RAC2, SKP1, SNAI1, SPRED1, SPRY2, TP53I3, WNT10B
Negative_687	ASMT, DAPK1, HMGCS1, OR10A6, OR4X2, PARS2, POLR2J, SRGAP3, TNFRSF8
Negative_688	DAO, GLA, IL2, TNC, CBLC, ENTPD1, GALNS, HSD17B4, KNG1, LAMB4, MAPK11, MYH11, NCR2, PCYT1A, PIPOX, PROS1, SFRP4, TAS2R8, ZNRD1, ALDH18A1
Negative_689	ATP5G3, FGF14, OR5P2
Negative_690	ME2, AQP7, C9orf95, CIITA, COX10, CXCR6, CYP1A1, DERA, DHODH, EPB41, FUT4, HSPA2, LRRC4C, MAML1, MAP3K1, MCM6, NANS, OR51M1, OR52W1, OR5I1, PIK3CD, PLCB4, RFX5, SEMA7A, SESN3, SFRP5, TLR3, TRAF1, VAMP2, HSD17B10, TNFRSF12A
Negative_691	MPZ, CSF3, DKK4, FADD, CTNNBIP1
Negative_692	EZR, ID3, JUP, ME3, TK2, AKT1, ARHGEF1, BMPR2, CACNG6, GRHRP, IFNAR1, IL23A, KLRC1, METTL6, MYH15, OR10H2, OR10H4, OR52R1, OR5D14, PGLS, PIAS3, PTCRA, PTPMT1, TLR4, ST6GALNAC4
Negative_693	ALAS1, CD59, CDK4, CLDN9, COMP, CTBP2, DUSP4, ELK1, HMOX2, HSPA1B, IFNAR2, LIPG, MDH2, MYH11, NRG2, OR10AG1, OR1L8, OR2W1, OR5B12, PLA2G10, PLCB3, TGFBR1, TNFSF9, TUBB3, ULK1, VNN1, SERPIND1
Negative_694	TNR, ALDH3B1, CCL20, CCL24, CCL7, CCR9, CTNNA1, CXCL11, DLST, DUSP7, EDNRA, EPHA3, FGF2, H6PD, HYAL1, LIPC, OR10G7, OR11L1, OR2T8, OR8S1, RALA, SELL, SGPP1, SKP1, TNFRSF4, TPH2, TUBA1A, C1GALT1C1, HSD17B10, SUV420H2, TNFRSF10A, TNFRSF12A, TNFRSF18
Negative_695	GH2, ALDH1A1, ALDOB, ANAPC5, CCND3, CD74, CDC45L, CPT2, DTX3L, ERBB2, FUT5, GSTA2, HHIP, IL5RA, MYH10, OR1L4, OR4F17, PAX8, PGS1, PLXNB1, PPP5C, SDC2, SLC25A5, STK11, TAS2R48, TLR3, TRPM5, ULBP2
Negative_696	ABAT, ACAA1, ACLY, ADCY7, ADRA1B, B3GNT4, CACNB3, CCL11, CSDA, CSF3R, IL2RA, NOTCH3, OR51A4, OR5AR1, OR6F1, OR8G1, RFX5, SETD2, STX1B, SV2B, TGFB3, TRAF1, TSHB, TNFRSF12A
Negative_697	CD4, CRH, F2R, FAH, AGXT, ALDOB, ALPI, ASNS, ATP5I, CD14, CDK6, CHRM2, COL1A1, DPM3, DRD2, ENTPD8, FARSB, FCGR3B, FGF10, FUT1, GFAP, GNG12, GYS2, HLA-F, IKBKB, IL8RB, ITGA7, MYH3, NFX1, NUDT12, OR4L1, OR51B4, OR52J3, OR52R1, ORC6L, PFKL, PNLIP, PPP2R2A, PPP2R2C, PYGL, RETSAT, SEMA3A, SEMA4C, SKP2, SPRY4, STAT1, TAS2R49, THPA, WNT4
Negative_698	RDX, CD28, CDC7, TAS2R10
Negative_699	VCL, A4GALT, ACSL3, ALDOC, ANAPC5, C4BPA, CDC23, CLDN20, DUSP9, FM05, MYL2, NEFL, OR10G3, OR4C46, OR5D18, OR6C74, P2RX3, PISD, RPS6KA5, SUCLA2
Negative_700	FGB, ALDH5A1, BCL2L1, CLDN7, CREB5, CYP2S1, DPM1, DUSP3, E2F2, F13B, FLAD1, GAPDH, GARS, GFPT2, GNB1, GPD2, IL18, IL2RG, IL6R, MICA, MPST, NPR1, NRAS, OR4K1, OR8H1, PCCA, PECAM1, PFKFB1, PFKFB4, PFN2, POLR3B, PPP2R5A, PRKCG, SEMA3A, SETD1B, SPRY4, SULT1A2, TACR1, UCP1, WARS, WNT6
Negative_701	DDB2, ENTPD8, ERBB4, FBXW11, GALNT1, OR52A1, OR5D16, PDXP, RASGRP4, RHEB, RPS6KA4, SLC2A2, THBS4, VANGL1
Negative_702	CD4, TPR, ACPT, ADRA1A, ANGPTL4, ATN1, CDH5, CKMT2, CSH1, CSNK1D, DDX18, DDX19A, DGAT2L4, DUSP1, EPAS1, EPHB6, GMPR2, HPRT1, HSPA1B, IKBKE, ITGB8, KLRC3, MAP4K3, MCAT, MCM4, MPST, MTHFR, MYH14, OR10A5, OR2M4, OR4M1, OR52K1, OR56A1, P2RX2, POLD3, PPP3R2, PTCH1, PTPRC, SUV39H2, TALDO1, TAS2R8, TUBB4Q, WNT9B

Negative_703	ACP5, ACTB, ARPC1A, BDH2, CACNA1G, CDC26, CES2, CXCR5, ENTPD6, ERBB4, EXTL3, GGT1, GLS2, GNG13, HSD3B1, HSPB1, IMPDH2, INADL, INMT, KIR2DS4, LPAR1, MAT2B, NAGS, OCRL, OR5B3, OR7A10, OR7G3, PIK3R4, RAPGEF3, RASGRP1, SAT1, SGPP1, SIAH1, STAT5B, SYNJ1, TAS1R2, TNFSF9, TNFRSF10B
Negative_704	TNR, ARHGEF4, ATP2A3, CACNB1, COMP, DHRS9, ELK1, IL22RA1, ITCH, NOX3, OR2A25, PPP1R1A, PRKCQ, PSAT1, PTPRJ, TAS2R8, UGT2B7
Negative_705	PXN, CCKAR, CDKN2D, CHST11, DAAM1, DDX18, DKK1, FGD3, FLOT1, HTRA2, MCM6, MGAT5, OR13C8, OR5H6, PPP2R1B, PPP5C, SAT1, SFRP1, SMARCA5, SULT1E1, WEE1, WIF1, PAFAH1B3
Negative_706	ASL, ABL2, ADCY7, ADORA2B, AOC3, CAV1, CLOCK, CYP1A1, ITGA7, NTN1, NUDT2, OR8B12, PAK7, PCK1, RAD51, STX6, ATP6V0D2
Negative_707	BCR, C7, GNS, ID2, LAT, TH, ACP5, ACTC1, ACY3, ADCY6, APH1A, ARHGEF1, BCL2, BPGM, CCL11, CKS1B, CNDP1, CNTNAP2, CTSG, CYSLTR2, DLAT, DRD5, DTX1, ENPP2, ENPP6, FLAD1, GNB1, HAO1, HHEX, IL1A, JAM3, MCM5, NFATC2, PARVB, PNPLA3, TNFSF14, WNT6, XIAP, ATP6V1C1, SERPINA1
Negative_708	AK2, BCR, OGT, AARS, ADSSL1, AGPAT2, AGRP, CD14, CD226, CMAS, CSNK1D, DAPK2, DDX55, DGKH, DIAPH3, ELK1, EPB41, GALNT10, GLG1, GRIN2C, HMOX1, IRAK4, MAN2A1, NME2, NRP1, OR11H4, OR12D3, OR2AE1, OR3A2, OR4S1, ORC1L, P2RX2, PARD6A, PDIA4, PFN3, PLCE1, PLEKHA8, PMAIP1, PPA1, PPP1R1A, PSEN2, SEMA4F, VEGFC, ZMAT3, ATP6V0A2, HSD17B10
Negative_709	GP5, ID1, RFK, TK1, ACAA1, ALDH2, ALG6, ARPC2, ARSD, CD226, CD40LG, CD8A, DIAPH1, DLST, EDA2R, ENTPD2, GBE1, GGPS1, GNA13, HHIP, IDH3B, IRS4, LAMA4, LCMT1, LDHC, MAGI2, MAML2, MAP2K4, MDM4, NPR1, NQO1, OR2T29, OR4S2, OR51Q1, OR52B6, OR7A5, P2RX2, PDXP, POLD1, PPP1R3C, PPP2R5B, RALB, RRM1, SDHA, TRDMT1, TUBB4Q, VARS, VNN1
Negative_710	SFN, TNF, ALG3, ALPL, ARAF, ARPC3, BTRC, CD19, CD38, CLDN16, CPT1B, DHRS3, DUSP3, ENO3, ENPP7, GP1BB, GPX7, H6PD, HAAO, HSD17B2, IL12B, LAMB1, MCEE, MPDZ, OR2M3, OR5T3, OR7D4, PARD6A, PDE8A, PER2, PLCB3, PLXNB1, PPBP, PTGS1, SFRP5, ULBP3
Negative_711	ATP5G1, CDC23, CDH2, IFNA10, MYH14, OR4K17, PLD2, SC4MOL, VAMP4, KIR2DL5A
Negative_712	ADORA2B, ALPI, ANAPC4, BACE2, BNIP1, BST1, CCNE1, CSNK1E, CYP19A1, DGKG, EFNA3, FGF10, FMO1, GLG1, GMPPA, GRIN2C, HAO2, HPSE, HRH1, IPMK, ITGA1, ITGA3, KIR2DS5, LIPE, LRDD, NFE2L2, OR2T5, OR4F17, OR5K1, SEMA4B, SOAT2, ST3GAL1, STX6, TCF7L1, TIAM2, ZIC2, CSNK1A1L
Negative_713	CRH, AADAC, ACSS2, ACVR2B, B3GALT4, B3GNT5, BCKDHA, CACNG7, CADM3, CDK2, DUSP7, EFNA1, EP300, FARSA, FMO5, FPGT, GCDH, GNA12, GNG12, GNG3, GSTM1, HMOX2, HRAS, HSPA2, IFNA16, MAPK11, MAPK13, MARS2, MOV10L1, NCKAP1L, OR1K1, OR4D1, OR4K13, OR51L1, PAICS, PIK3R4, PON3, PRKACB, PRKCZ, ROBO3, SESN2, TAS2R10, TLR9, TOLLIP, CACNA2D4
Negative_714	CP, KDR, LPL, ME3, ACAD8, ACSM5, ADCY3, ADCY5, ADCY9, ALDOC, ARNT2, BCKDHB, BMP4, CDH5, CDK2, CYP26C1, DGAT2, DRD1, E2F4, ENTPD5, EPHB2, EXT1, F2RL2, GAD2, GLUL, GRPR, GSTM2, GSTM5, GSTZ1, GUCA1A, HDAC1, MYH13, MYL2, OR6C6, OR8H1, PDXP, PERP, PON3, PPP1R1A, PPP2R2C, PPT1, PTPMT1, TNFSF10, UNC5D, PPARGC1A, SLC25A31, TNFRSF6B
Negative_715	F2, RB1, TK1, ACPT, ADCY4, CD19, CSNK2A2, FTH1, HSPA1B, LIAS, MMP7, OR5AC2, PANK1, PFKM, SH3BP2, TRAF5
Negative_716	CSK, HK2, AKR1D1, ALPL, ANGPTL4, B4GALT1, CCL11, CDH3, CYP1B1, FGF18, GCAT, GRLF1, HBEGF, INPPL1, MAPK1, NT5C2, PIK3CG, PPA1, RUNX1T1, TAS2R9, TCF7, YARS2

Negative_717	FAH, GH2, MPZ, PLG, ACTN2, ATG12, ATP6V1F, BCKDHB, CCNE1, CD247, CD38, CDKN1C, CSNK1G1, CTNNA2, CYP2C18, CYP4A22, DFFA, DLL1, EPHA8, FGD1, LAMA4, MAFA, MAPK13, MCM2, METTL2B, NME6, NRXN3, OR10H4, OR11G2, OR51B5, OR5B3, OR8A1, P2RX4, PIK3C2A, PMAIP1, PPP2R5B, RASA2, RGS3, SM C1A, SNAI1, UGCGL1, ULBP1, XYLT2, ATP6V1C2
Negative_718	C8A, F5, LPL, PGF, ACSS2, ADH5, ARPC5L, CD27, DTYMK, FCER1G, GLS2, GLUL, GPX7, GSTA4, HPSE2, HRH1, IFNA8, IL22, LRDD, MAP2K7, MYL2, NOS3, NR4A1, OR2A4, OR2Y1, OR56B4, OR5D16, OSMR, PDHA1, PGM2, PLCB2, PPP2R5E, PRKAG1, STT3B, THTPA, TKTL2, UPB1, WARS
Negative_719	AK5, BNIP1, CMPK1, CSNK1G3, EPB41L3, FGF5, FGFR1, GUCY2C, HDAC1, IL12RB1, NAT1, OR5H6, PIGW, PLA2G6, PRKCB, PYGB, RXRA, SEMA4B, ST3GAL2, STT3B, B3GALNT1
Negative_720	GPT, SCD, COL11A1, GARS, PLA2G1B, POLA1, HLA-DPA1
Negative_721	GH1, BBOX1, GAS1, PLXNC1
Negative_722	MPZL1, NT5C1A, OR11H6, OR13D1, OR7C1, PDGFD, PRKAR1A, SERPINB5
Negative_723	CAMK2A, CCNH, DLL1, GRHRP, HRAS, ICAM3, IL18RAP, NOTCH1, NSD1, OR2B2, OR7G1, PGAM4, SLC27A5, ULK3
Negative_724	CFH, ABL1, ACTN1, APLP1, B3GALT2, B3GNT5, BAIAP2, CHPT1, CHRM5, CMAS, COX10, EDAR, FBP1, G6PD, GALE, GUCA1B, NTRK1, OGDH, OR1L1, OR2A12, OR2H1, OR4C12, OR4N4, OR52I1, PGK2, PHKA2, PHPT1, PIK3R5, PLA2G6, PMAIP1, PRKCD, PRODH2, PTPRR, RBL1, SDC1, SMARCA5, SNAP25, STEAP3, SULT1A1, UBA1, VTI1B, YKT6
Negative_725	AASS, EXTL2, GSTZ1, INPP1, MAP2K5, OR13C8, PRKAR1A, RBPJ, SLC9A1, WW P1
Negative_726	RFK, ACAD8, ATIC, CHST12, EFN1, KLRC4, MCM7, OR52B6
Negative_727	SYK, ATP5C1, BHMT, C1QC, CCR10, CD36, IL6ST, IRF3, LIPF, MPP5, MTMR1, OR13D1, OR2L8, OR51G2, OR51S1, OR52A1, PIGN, POLR2F, YWHAH, PAFAH1B2, SERPINA1, SERPING1
Negative_728	KMO, LTB, SCD, ADH1A, AKR1C2, AVPR1B, CCR1, CYP4A22, DCXR, DOT1L, EDNRA, FGF10, FM01, G6PC2, GLB1, HSD3B2, IL21R, IRAK4, ITGAV, LIPA, MYH13, OR10A6, OR2T12, OR51I1, OXSM, PDE1C, RPIA, SLC12A2, SPP1, SQLE, TP53I3, UGT2B17, WASF3
Negative_729	AGRP, ALS2, BMP8A, CCL16, CD34, CDK6, COL4A4, COL6A2, DVL2, EI24, GABARAP, GSTM2, GUCA1A, HAGHL, IAPP, IARS2, IL22, IL3RA, ITGA9, KLRC3, MAFA, MAPK10, MCAT, MCEE, MECR, NEU4, NUDT2, OR52W1, OR5T1, OR7C1, OR8J1, PCK1, PDE5A, PPP2CB, PPP2R2A, PTGS2, RDH11, SLC25A4, TD02, TLR2, TNFSF4, TUBA3C, TUBB4, UPP1, UPRT, PPP1R12A, TNFRSF6B
Negative_730	C5, MAG, ME2, PLN, CASP3, DGKA, DGKH, DOCK1, DPM3, FOXO1, LRRC4C, MAP2K1, MPZL1, PDXK, PIK3CG, PTGDS, SRGAP2, TNFSF11
Negative_731	ILK, ATP13A2, CXCL9, DNMT3B, GNRH2, HMGCS1, LAP3, LPAR1, P2RX5, PIGB, PLA2G2D, SLC12A2, ST8SIA5, STK4, TUBA3C, WNT9A
Negative_732	GSS, PVR, ACY1, AGPAT2, AGTR1, ALS2, APOC3, ARPC5, CCNA1, DDX4, DERA, FZD3, GNRH2, GRPR, HHEX, IL1R2, LIPA, MAP2K5, MAP3K11, MAP3K2, METTL2B, NR4A1, OR10J1, OR5F1, PANK3, PDIA4, PISD, PPP2R5D, PVRL4, SC5DL, SMARCA5, TOLLIP, TPI1, UCK2, WASF1
Negative_733	DAPK2, DUSP6, EDNRB, HCCS, PRKCE, YES1
Negative_734	BAX, CR1, GP6, LYN, AHCYL1, AKR1B1, AKR1C1, ARHGEF7, ATG7, ATP13A2, CNTFR, COX10, CYP1B1, FGF12, FZD1, GNG3, ITGA4, MAP2K3, METTL6, MGAT1, MGAT5B, NFYA, NUDT2, OR1A2, OR2B11, OR4C11, OR6T1, OR8D4, PDE4B, PI4KA, POLE4, POLR2F, PTTG1, RPS6KA5, TNFSF9, TOLLIP, XCR1, ZFYVE16, ATP6V0D1

Negative_735	TNR, ACADS, CAV1, CCNB2, CD22, CD58, CD82, CDH4, CHST12, COQ5, CRY1, CTSB, FUT3, GART, IL28B, KIR2DL3, KLRC1, KLRC3, LCMT2, LHCGR, LIMK1, MAP4K2, MNX1, MPZL1, NUMB, OR10AD1, OR10R2, OR13G1, OR1E1, OR4C16, OR51T1, PDX1, PKMYT1, SDHB, SEMA4A, SKIV2L2, TIRAP, TLR5, UNC5D, UXS1, CACNA2D3
Negative_736	C6, CSK, TPR, APC2, BCAT1, C3orf10, CISH, CSNK1D, EIF4E, HEXA, IFNA14, IL28A, KCNQ1, LDHD, MAPK12, MKNK2, NAGK, NFASC, NFYC, NME4, NOD1, NSD1, NUDT8, OR51A2, PDE10A, PIAS2, PRKCQ, SEMA3B, TRAF4, UBE2L3, UCK2, UGT2B4, VAV1, VEGFA
Negative_737	F10, OTC, ABL2, CALML6, CD3E, CD74, CES1, CSF3, CSNK2A1, DDX23, DGKZ, DRD1, GALNT5, GRIN2B, HARS, HSD3B7, IL17B, INPP5E, LAMC3, LEPR, LRP5, MAN1B1, MECR, NCAM1, NCF4, NGEF, NT5M, ONECUT1, OR1A1, OR2F1, OR4K5, OR52A1, PFN3, PIGK, PLIN, PLXNA2, PYGM, RDH5, RRM2, SCP2, SLC25A6, SLC2A4, TAS2R3, TUBB, TYROBP, XYLB, XYLT1
Negative_738	ALDH3B1, APOE, CCR7, GALNT10, ITGA1, LTBR, PLA2G2E, PPP2R5C, RAC1, SARS2, SEMA4G, SLC27A4, SOAT1
Negative_739	EZR, IL7, ACAA1, ADRA1D, ALOX5, CDH5, CFLAR, DLAT, E2F5, ENTPD4, GALK2, GFPT1, GNAL, HAGHL, INPP4B, MAPK12, MAPK13, MAT1A, MEF2C, MGAT1, MMP2, NAGA, OR1B1, OR2W1, PANK2, PDE1C, PDHA1, PER3, PIGS, PKMYT1, PLA2G2D, POLD4, PRKAR1A, PRKCD, SETD7, TUBB4Q, UGCGL2, VCAM1, WNT9B, ATP6V1B1
Negative_740	C1S, PLN, AMPD3, CACNA1H, CHUK, CYP1A2, E2F2, IL1B, JAK2, MGAT2, NEU2, OR2Y1, PDE4B, PIAS4, PIGV, PKMYT1, PLD1, RBX1, STEAP3, PLA2G12B
Negative_741	GP5, ACADL, CARS, CCL2, FADD, FGF13, FSHR, GALNT3, GLS2, HARS2, LCP2, LEFTY2, LIPF, MAOA, MINPP1, NCK2, OR1G1, OR2T5, OR52I2, OR5AP2, PITX2, PLCG2, PPP2R2D, PPP2R5E, PPT1, SMURF1, TJP2
Negative_742	MET, NLK, ADAM10, ADIPOQ, ARNT2, ASCC3, ATP5D, C9orf95, CCR7, CLDN17, CMPK2, COL5A3, CSNK2B, DAPK1, DGKD, DLAT, DLL3, FUT8, G6PC, GNG12, GSTA2, HSPA2, LIPT1, NPR1, OR4D2, OR52K1, OR5M3, PAK4, PHKG1, PIGF, PPAP2B, PPP3R2, PRKAG1, PTPN1, SDHA, SELL, SELP, SEMA4D, STK4, UGT2B28, UGT2B4, WEE1, XYLB, ZAP70, PRICKLE1, TNFRSF13B, TNFRSF14
Negative_743	DUT, ALDH1A1, ALDH3B1, ALDOC, ALOX15, CACNA1I, CAMKK2, CCR1, CDC25C, CDK4, CHRNA7, CNGB1, COQ5, DDX41, GNAL, HSD17B8, IFNA14, IL10RB, MAP2K7, MDH2, NRG2, NUDT9, OR5M9, PFKM, PIK3CD, PTK2, RRAS, SARS, SLC27A1, SMURF1, TAS2R40, TCIRG1, TUBB, WNT8A, B3GALNT1, HSP90AB1
Negative_744	CRK, DBI, IL4, SP1, ATP2A2, B3GALT2, CD3E, CHRM2, DNMT3A, DNMT3B, DUSP16, EPHB2, GRIN2A, HSPA1B, IFNA21, IL4R, IRS1, MAP2K1, METTL2B, MTMR6, NAT5, NAT6, OR13H1, OR13J1, OR2T8, OR5AR1, P2RX5, PARD3, PDE7A, PHKG1, PIGX, RARS2, SAT1, SMARCA5, SPTLC1, TBL1XR1, TRDMT1, TYROBP, ATP6VOA1
Negative_745	FGG, ARHGAP5, CCL5, CHPF, ETNK2, FPGT, HEXB, HSD11B1, JAK2, PTK2, RFXAP
Negative_746	HK3, SHH, ADCY7, AKR1D1, CALML5, CBR1, CDKN1C, DDX19A, DHRS3, DPYS, ENO1, GCH1, GFPT1, GRHPR, GYS1, HTR2C, JAM2, MLYCD, OR1L8, OR2A42, PIGF, PTGFR, RARS, SLC27A4, SV2C, TACR2, HSP90AA1
Negative_747	DCT, ID1, INS, IVD, TK2, WAS, ALDH1L1, ARPC3, ATP6V1H, CCL20, CCNG2, CNTF, CYP4A22, GALNTL5, GCNT2, KCNB1, KLRD1, NKX6-1, OR4C46, OR9K2, PGK1, PIGH, PRKAA2
Negative_748	ARNTL, FGF6, GALK1, LTBP1, NLGN1, RHOQ
Negative_749	BCR, GSN, ME3, ACADVL, ADH4, AMY2B, ASIP, CALML3, CALML6, CHUK, CMBL, CNTNAP1, CYP2C18, CYP2E1, FPGT, GNAT3, GNG3, GP1BA, IL24, ITGAV, MAGI2, MYLK3, NAGA, NCK2, NCR2, NMNAT3, NOTCH1, OR51L1, OR5B17, OR5K2, OR6C70, PDXP, POLE3, PPP1R3C, PRPH2, PTK2, SEMA3E, SREBF1, STX2

Negative_750	CTH, DDC, FH, FN1, IL6, ACOX3, ACY1, ACYP2, ADCY4, ATP5A1, BMP8B, CACN G7, CHST12, CPT1B, CSF2RA, DKK4, DUSP4, FSHR, FZD8, G6PD, GUCY2C, IDH 3G, IKBKB, IL1RAP, ITGAD, JAK2, MITF, MTHFD1L, MYH11, NKX6-1, OR5AN1, PAPSS2, PIAS4, PPP3CC, PPP3R2, RASA1, SETD7, SMAD5, STEAP 3, TAS2R14, TNFRSF8, TRAF2, TUBB3, WWP2, ZFYVE9, SUV420H2
Negative_751	A2M, LCT, ACMSD, ADCY4, AGPAT3, ALOX15B, AMPD2, ATP5I, CHKA, CLCF1, C RLF2, CSF1R, CTPS, FGF19, GRAP2, GRB2, HIBCH, HYAL1, IDH2, IFNA16, JA G2, NAT1, OR10G7, OR11H6, OR1B1, OR2M3, OR3A1, OR5P3, OR6N2, OR8S1, P MVK, PRODH2, RAP1A, SC4MOL, SELPLG, SOCS7, ST3GAL6, STX3, TAS1R1, TA S2R60, TXNDC12
Negative_752	CACNA1D, CYP3A5, EDN1, IL6ST, INPP5B, NTF4, OR5B12, PLOD2, SARS
Negative_753	ALDH1B1, FUT3, LALBA, OR2T29, OR51B2, OR8J3, PFN3, POLE4, PRKCQ, SNA P23, UBE2L3, VTI1B
Negative_754	CD4, F10, ALAD, BCKDHA, CCNG2, CD34, CDKN2C, DIAPH1, FGF17, FGF18, GS TM3, JAG2, MAP3K13, MCM4, NKD1, NRXN3, NT5C2, NTF4, OR10G7, OR10H4, O R4D9, OR52N1, OR5A1, OR6F1, PLXNB3, RALA, SOCS5, TM7SF2
Negative_755	AK2, EGF, GHR, MIF, AASDH, ACY3, ALDOC, ARPC1B, ASIP, ATP6V1A, ATP6V1 F, C3AR1, COX15, CSNK2B, DDX52, ENPP2, FOSL1, FOXO1, GJA1, HCST, HSD1 7B2, MAP3K7, MINPP1, ONECUT1, OR2D3, OR2T11, OR2T29, OR4P4, OR5A2, O R6K2, PIGP, PPAR, PRKY, RRM1, SARDH, STAT2, TUBA1C, TUBA3C, TUBA8, V AV3, WASF2, PAFAH1B1, PDCD1LG2, PNLIPRP2
Negative_756	DCT, ALOX15B, ATP5J, DGKE, DRD5, EHMT1, FCGR3B, GLI1, LIPF, NAGLU, OR 6N1, PTEN, RBL1, SDHC, SIPA1, TALDO1
Negative_757	HPD, KIT, MPZ, AHCYL2, CADM1, COL4A6, COQ5, CXCR5, CYSLTR2, DUSP3, EP B41L3, FLOT1, GALNT1, GPD2, IL19, IL29, KRAS, LIFR, LTA4H, MAFA, NCST N, NEGR1, NME6, NT5C2, OR13C8, OR2H1, OR4A5, OR51V1, OR5D18, OR5R1, O R5T3, OR9G1, PCNA, SEMA7A, SHMT2, SORD, SRGAP3, ST3GAL2, SUV39H2, TN FSF9, UNC5D, VAMP1, VAV3, WARS, WASL, XYLT1
Negative_758	CCNG2, CREB3, DHCR24, EDA2R, GGCX, GLUD2, ITGAD, OR4A5, PIK3C3, POLA 2, SHMT1
Negative_759	CAD, CGN, GK, HGD, ALDH5A1, ASAH1, CAMK2G, CHKA, CYP4A22, CYSLTR1, DG KA, DUSP9, GRM1, IL12RB2, ITGB5, NNMT, OR5D13, ORC5L, PAK7, PFKFB3, P FN3, SHC2, STX12, TAS2R3
Negative_760	SFN, ACYP1, ADORA2A, ARPC3, CADM3, CASP7, CDC45L, CTSL1, CYBB, CYP1B 1, DFFA, DHX58, ERBB4, FGF4, GALNT3, GIT1, IL15RA, IL1B, MYH14, NFAT5 , NRG3, OR10J5, OR56A3, PFKFB4, PIGL, PTPRM, RFX5, SMAD5, TLR2, ULK3, WNT7B
Negative_761	EPO, AADAC, AASDH, ACSL6, ACY3, AKR1B10, CD86, CLCF1, ENPP7, GAL3ST1 , GCH1, HTR4, LDHD, NRCAM, PDHA2, PIM1, RFXANK, SEMA4C, SMC1B, SMURF1 , UBE2L6
Negative_762	A2M, C4B, FH, ITK, LIF, SRM, ARSE, CBR3, DTYMK, E2F4, ENTPD5, INPP5E, M CM4, NFATC2, NRG3, OR10AD1, OR10G2, OR4S2, OR5A2, PLA1A, RBL1, RFNG, TLR5, TLR9, ZMAT3, ZNRD1
Negative_763	CS, TNF, BBC3, CCR6, CFLAR, CRKL, CSH1, DERL1, ENTPD5, EPHA4, GAS1, GC LC, GLI3, GPAA1, HAP1, HEXA, IKBKE, NLGN1, NME2, OR13H1, OR6N2, OR8H2 , PDE4B, PHKB, PLIN, PRKAR1B, PRPH2, PSME3, PYCR2, RPS6KB1, SMPD1, SV 2A, TAS2R41, TIAM2, TNFSF14, TP53, HLA-DQA2
Negative_764	F12, MAX, ACVRL1, AMPD3, B3GALT1, CACNA1I, CD38, CD55, CDC14B, DVL3, EFNA3, GNA12, HIF1A, MDH2, MTHFD2, NFKB2, OR13F1, OR2B6, OR4A5, P2RX 4, PFN1, PTPRM, STX2, TGFB1, HSP90AB1
Negative_765	DPYD, IFNA10, OR1F1, UGT2B10, UGT2B28

Negative_766	DHH, LPO, SDS, TH, ACOX1, ACVR2A, ADCY2, ALOX12, COQ6, DBF4, DPYS, DUS P14, ENTPD3, FZD6, FZD7, GP1BA, GRIA2, IGF1, IL3RA, IL6R, IQGAP1, MGS T1, NCAM1, OR11L1, OR5P2, OR6N2, P2RX1, PFKFB4, PGLS, PHKG1, PRKG1, P RKX, PRODH2, RPRM, SDC1, SDC3, SETD1A, SV2A, TAS2R1, TAS2R60, TNFSF1 4, TRHR, UCK2, VAMP2, WNT2, ATP6V0E1, CTNNBIP1, PNLIPRP1
Negative_767	CSK, NCF2, OR9G4
Negative_768	ARRB2, CCR2, DAPK3, GNPDA1, HSD17B7, KRAS, PIGK, PPP1R3B, TAS2R60, T LR5, TRAF6, MAPKAPK2
Negative_769	ALDH3B1, BDNF, CARS, CD44, CLDN10, CRKL, CXCL5, EIF4E2, ENPP2, GGT1, IARS, IFNA16, IFNA21, IFNGR1, IL7R, LDHC, LRAT, OR5T3, OR6C76, PON2, SEMA4A, SETD1B, SPHK2, HLA-DRB5
Negative_770	F9, ACOT11, CSH1, FGF3, FLOT2, GALNTL2, GNG3, MAOA, NEUROG3, OR52M1, PANK3, PIGP, PLEKHA8, PRKAA2, SMC1A, ATP6V1B2
Negative_771	F10, AMPD3, APOE, ATP6AP1, CCKAR, CDKN1B, CHST12, CLDN14, CXCL11, FD PS, HMGS2, ITGAL, KRAS, MAP4K4, NCF4, ONECUT1, OR2A4, OR4K14, OR52W 1, PAK3, POMC, PPAP2B, SETD2, TIAM1, TKTL2, VAMP2, VEGFA
Negative_772	TNC, DGAT2, OR4D11, PLD1, PRKAA2, VDAC2
Negative_773	GCNT4, HAGHL, IFNA16, PAK6, PARS2, PIGS, PLIN
Negative_774	ADCY10, AKR1B10, ALDH1A1, BAIAP2, BMP8A, CMBL, CSNK2B, CYP19A1, DPY D, DTX2, ERBB4, FBP1, GALNT5, HEXB, ITGA7, LYZL1, MAP3K6, NAE1, PHPT1 , POLA2, RASSF5, SMC1A, SMPD4, SOAT2, SULT2A1, TPK1, YWHAZ, PLA2G12B
Negative_775	AK2, CD6, CS, ACAA2, B3GAT3, CLCA4, DGAT1, FIGF, GNMT, GOSR2, IFIH1, I TGB4, KLRC4, NR4A1, PFKP, TUBA8, VEGFA
Negative_776	CDA, TFG, ASPA, CCL19, IL12RB1, PDE8B, PIGO
Negative_777	DBI, F2, COL5A1, CSF3R, DDX23, DEGS2, IL25, LEPR, OR10A6, OR2G3, OR8J 3, PFKFB1, PLCB4, PRNP, SEMA4G
Negative_778	F2, PRL, ACTA2, ACTG2, ADSS, AHCYL2, ALS2, B4GALT5, BCL10, CACNG1, CA V3, CCL15, CCNA1, CTF1, DHDH, FECH, GALNT13, GP1BA, IGSF5, IL21, MARS , MKNK2, MRAS, MTMR6, NAGLU, NFYA, NKX6- 1, ODC1, OR4A16, OR51D1, OR6C4, PARVG, PCK1, PIK3CG, PLXNB1, POLA2, P RNP, PSME1, PTK2B, SOCS7, TLN2, TNFSF12, TP53I3, UCKL1, UGDH, ULBP1, ST6GALNAC3
Negative_779	EDA, KDR, XDH, ABCC8, ACTB, ADORA2B, ADRA1B, ALDH9A1, ALPPL2, AMPD3, ANPEP, AXIN2, BDH2, BPGM, CACNA1B, CMPK2, CSH1, CYP2J2, DDX41, DGKD, DUSP7, ENTPD5, EXOC7, FZD9, IGF1R, IL24, LAP3, MDH1, MYH4, NR1D1, NUD T12, OR1A1, OR52H1, OR5R1, PDGFB, RFDW2, RFXANK, RFXAP, ROBO2, SEMA3 G, SFRP1, SLC27A4, SMURF2, TLR3, TNFRSF9, UROS, XCL1, MAPK8IP1
Negative_780	ATM, BAX, UBB, AARS, ACVR1B, ADRA1B, AKR1A1, ATP5F1, BMP8B, CACNB3, C HAT, EPB41L1, ETNK2, FZD10, GALK2, GCNT3, GLUD2, GRIA2, HGSNAT, HIP1 , ICAM2, INMT, KAT2A, LEFTY2, LRP5, MMP14, NSDHL, OR2T4, P4HA2, RBL2, SHMT1, STAT6, STX5, SULT1A4, TNFSF10, UCK1, UPB1, MAPK8IP3
Negative_781	CAD, IL3, APLP1, APPL1, ATP6AP1, BBC3, C3AR1, CASP7, CCL3, FZD9, GADD 45G, H6PD, IL10RB, LIMK2, MAGI1, MAP3K11, MAP3K2, MGAT4A, MYH3, NFAT 5, OR11H6, OR4C13, OR7A10, PCCB, PHKA1, PLCB1, POLR2K, POLR3D, PTCH1 , PTTG1, RALA, SPRY4, TAS2R40, WWP1
Negative_782	AK5, BTD, CD4, GSN, MTR, SRM, ACAA2, ACPT, AGTR1, ARG2, B4GALT5, BBOX1 , CDC14A, CHDH, CLDN9, CRY1, CTSL1, CYP2S1, DDX4, FGF12, FOXA3, FOXO1 , GGT7, GLI3, GRIN2D, IFNW1, IL2RB, INSR, IRAK1, NANP, NKX2- 2, OR10AG1, OR4A5, OR9Q1, PCYT2, PHKG2, PRKAA2, RHEB, VANGL2, MAPKAP K3
Negative_783	IL6, APC2, BIRC3, CD70, CD8B, CDH3, DARS, GMPPA, GPAM, ICAM1, OR52I2, OR5AC2, OR5M9, OR6B3, PDGFB, POLR3K, PRPH2, RALB, RARS2, TPI1, TPK1, ULBP3, EIF4EBP1, TNFRSF6B



Negative_784	AMT, C6, FUK, LCK, TNF, ACOX1, BAI1, CACNG5, CAPN2, CASP6, CCL27, CCNA1, CHST13, CLDN1, CYP2F1, DHX58, EDN1, GNG3, GUCY2D, LYZL1, MGAT4A, MIOX, NTF3, OR10A4, OR2A2, OR52N5, PDHA2, POLR1C, PRKCE, RAP1B, SC4MO L, SDC4, SNAP23, SOCS5, STK11, TAS2R38, TGFB1, TKTL2, TPI1, TRPC1, VAMP2, TNFSF13B
Negative_785	ATP4A, MGAT2, OR10V1, OR11A1, OR5AK2, PIK3R3
Negative_786	AMY2B, IGFBP3, IL18, KLRC3, NR1H3, OR2T1, OR6C2, PIGL, PLA2G2F, TLN1, TRDMT1, VASP
Negative_787	CBL, KDR, ACSL3, ADSSL1, AHCYL2, ANAPC1, ANAPC2, APAF1, ATP4A, ATP4B, CCNA1, CCNB2, CCR5, CD19, CER1, CHRM5, CYP19A1, CYP2F1, DGKG, ECSIT, ESPL1, FABP3, FBP1, GAD2, GFPT1, GGPS1, IMPA2, ITGB2, NMNAT3, OR10A G1, OR4C13, OR4F4, PGM2, PLXNB3, POLR3B, PRSS2, PSEN1, RAP1B, RRAS, SCP2, SLC25A6, SLC27A4, SSH3, TAS1R1, TOMM40L, TPH2, TPI1, PLA2G12B
Negative_788	AR, DUT, JUP, MVK, TNF, ADCY7, ADH6, ADRB2, ALOX12, C5AR1, CAMKK1, CCL20, CCL22, CDH3, CLDN10, CLDN17, DAPK3, DHODH, FBXW11, GALNT13, GLG1, GLYCTK, GMPR, GNPAT1, HSD3B1, IL2RA, IRF5, LAMB3, LRRC4C, OR1B1, OR4C11, OR4K15, OR5AK2, OXSM, PAK6, PDGFA, RAF1, RHOA, SC4MOL, SEMA3D, SKIV2L2, TRAF4, TRPC1, VANGL1
Negative_789	KMO, AANAT, CACNA1H, CALML5, DARS2, FGF14, FGF8, OR5T3, OR8B12, PPP2CA, PSME3, RALA, SSH1, TNFSF12, TUBA4A, UGT2B28
Negative_790	FUK, ALG2, B3GNT5, CES7, CYFIP2, DERA, GLI1, GSTA2, HADH, HSD17B7, LTC4S, MYD88, OR2L8, PRKAG2, SMURF1, UROC1
Negative_791	GP5, SRC, CHRM3, CTBS, DDX19A, DGKI, F2RL2, NLGN2, OR10A2, POLR1D, POLR2J, RXRB
Negative_792	AKR1B10, ATP2A2, CASK, CCND1, CLDN15, COQ5, CXCL2, CYCS, HAGH, HRH1, MAP2K7, NAT2, PIGB, PLCB3, PRKACB, PRKCD, RFXANK, SLC27A5, SPTLC1, WASL
Negative_793	VTN, ALDH3B2, ALG5, CACNG3, FADS2, GALNT10, GLI2, GNAL, GNAZ, IDH3G, IQGAP1, NT5C2, OR2D2, OR4D9, OR8B8, PFN3, PIK3C2A, POLA2, POLD1, SFRP5, SPRED2, UPB1, VKORC1
Negative_794	OR8G1, PISD, PMM2
Negative_795	ITK, XDH, ALG3, CACNG4, CAV1, CCL13, CCL19, CLDN8, DARS, EDN1, EIF4B, ENPP2, FM04, GCLC, GUCA1A, MAPK10, MAPK13, OR10J3, OR10P1, PDE1C, PFKM, PIGB, POLR2K, PRIM1, PTPN11, TAS1R1
Negative_796	FES, ARPC5, BMPR1B, CACNA1G, CDC26, CPS1, CREB3L4, CYBA, DCTD, GOT1, HSP90B1, INPP4A, KLRC1, NADSYN1, NFATC3, NPR1, OR51E1, PCCA, PDE8B, PI4KA, PRPS2, PTAFR, PTPN11, SOAT2, SPP1, SUV39H2, VEGFC, WNT6, ST6GALNAC6
Negative_797	CFD, EGF, FGG, GDA, LSS, ACOX3, ALDH1A1, ALS2, ANAPC10, CCL25, CCNE1, CYP2J2, DDHD1, G6PC, GALNT6, GAPDH, GGT5, GNA12, GUK1, IFNA13, IFNGR1, IL10, ITGB1, KIR3DL2, MYH3, NFATC1, OR13C8, OR4F15, PDE1C, PMM1, POLR3B, PPP2CA, TCF7, TMLHE, TSHR, TYMS, WNT8A, SLC25A31, TNFRSF10C
Negative_798	ADAM10, ADCY7, AKT3, DDIT3, FLAD1, FM04, GUCY2F, IFNAR2, ITGA1, MAGI3, MDH1, MLYCD, MTAP, P2RX4, PDE3B, PLCB1, PLCZ1, PPP3CB, RFNG, VEGFC
Negative_799	AK3L1, ATG3, BDKRB2, MAP2K5, MMP1, NOTCH2, OR52B6, RASSF5, RHOA, TNFRSF10C
Negative_800	ACOX1, ANAPC11, ATP2A2, CHRD, EXT1, FGF6, GAD2, GADD45B, GATM, OR2T1, OR52R1, PARVG, PIAS4, PIP4K2A, PIP4K2B, PRPH, SLC27A5, SOCS4, WNT5B
Negative_801	C6, F10, GPI, NOG, PGD, AMPD2, ASRGL1, CLTCL1, CPS1, CREB3, CYP7A1, DFFA, DKK1, EDA2R, FM01, HSD11B2, IFNG, IL9R, INPP5A, INPL1, LAMA3, NAT5, NTRK2, OR2H2, PIGH, PIPOX, PPP2R2B, PPP2R5C, RXRB, SGPP2, SH3BP2, HSD17B12

Negative_802	LTB, ACO1, AKT1, BMP8A, CPOX, DRD5, EFNA5, IL12RB2, IQGAP3, LRP6, MAM L3, MYH11, NCF2, NFYA, OR5AP2, OR5P3, PCK1, SELL, SUV39H2, YES1
Negative_803	CGN, PAH, ADRBK2, AHCY, APOA1, CASP6, CCR4, CDC45L, DDX54, DTX2, EHMT 2, FGF17, GADD45B, GALNT1, HLA-DMA, ICAM3, MKNK1, MTHFD1, PDK1, PROS1, SDC2, STX1B, TP53, TRDMT1, TUBB3, YES1, YWHAB
Negative_804	AK2, CD6, GSN, TFG, ABL2, ADRA1B, BMP2, CCR6, CHEK2, COX15, CREBBP, CX CL6, DAXX, DTX2, GAL3ST1, GLUL, GUCY2C, HIBCH, HSD17B1, HSPB1, INPP4 A, ITPKB, LAMC1, MLYCD, NAGS, NCF1, NUMB, OR10P1, OR13J1, OR2T10, OR4 S2, OR5I1, PCYT1A, PLA2G3, PLOD2, PYCR1, RXRA, STX10, SULT2A1, TIAM2 , WNT7A, WWP2, TNFRSF17
Negative_805	ANAPC10, ETNK2, HSPB1
Negative_806	AK1, BID, FAH, ALDH2, ATP2A2, IL20RB, KRAS, MMP14, OR1K1, OR5B3, OR5M 9, OR5V1, OR8H3, PGK1, RALGDS, SC5DL, SMC1B, STEAP3, WNT4, HSD17B12
Negative_807	B3GNT3, BMPR2, CCL19, CDC45L, DGKA, DHDH, ERBB4, OR10R2, OR7D2, QARS , ROBO3, SLC27A5, ULBP2, WBSR17
Negative_808	KLK3, SNAP23, TNFRSF6B
Negative_809	MVD, ALDH1A2, ALG12, AMY2B, CCL22, CMPK2, COQ7, CTSG, DBF4, DEGS2, HP SE, IL24, IL2RG, INHBA, LTBP1, NMNAT3, NRG4, NTNG1, OR10A3, OR10G7, O R4D2, OR7D4, PDE2A, PPOX, RAF1, RAPGEF3, RUNX1T1, SPAM1, STX8, UGCG, ST6GALNAC4
Negative_810	C8G, ALCAM, C3AR1, CCL25, CLDN3, DARS, DFFB, EGLN3, HTR5A, IL10RA, IL 23R, IRF7, MAP2K7, MMP9, NAT2, OR11G2, OR4X2, OR51F2, OR51T1, PDGFA, PIGB, PPID, PRPS2, PTAFR, PTCRA, RELA, SHC4, ST3GAL6, TUBB2A, UBA7
Negative_811	MTR, ARSE, CCNG1, IFNB1, MYH15
Negative_812	AMT, ABL1, CD38, CD40LG, CLDN3, CSNK1D, CYP2B6, GYS1, HYAL2, IFNA10, IMPDH1, LIAS, OR13C4, OR5M9, PDCD1, PSAT1, TKTL1
Negative_813	F2R, GGH, GSR, MET, ABLIM3, ACTN2, AGTR1, BMP5, CASK, CASP6, CCL1, CLC A2, COQ3, DVL2, FOXO1, NRG1, OR13C9, OR5V1, OR6Y1, PIGM, PSME1, RDH5
Negative_814	GK2, IL5, ADIPOR2, ANAPC5, ASRGL1, B4GALT3, CYP1A1, ENTPD6, EXTL2, H ADHB, INSR, ITGB2, LHCGR, MAPK1, MGAT5B, MYH9, NNMT, TRHR, UNC5A, YA RS2, PNLIPRP2
Negative_815	MYC, ACSL1, AKR1C2, ASIP, CACNA1G, CACNA1S, COL1A1, COL4A4, DMGDH, E NTPD6, FUT6, GFPT2, GRAP2, GRIA2, IFNG, LIPG, MAP3K2, MMP1, MRAS, NCK AP1, NUDT2, OR1K1, OR2Z1, OR4N2, PLAUR, PPP3R1, PRIM2, PRKCD, PRKG1, RAB23, RXRA, SPP1, XYLT2, TNFRSF13C
Negative_816	CBL, CD2, APRT, ARNTL, ARPC5L, CCL20, CHEK2, CHST11, DLST, EIF4B, FCG R3A, FZD10, GLI2, GMPPA, GNAO1, GNAT3, GSTA2, HHIP, HNMT, HSD17B7, IL 11RA, LAMB4, LTA4H, MAPK14, MARS, MYH2, MYH8, NEGR1, NME4, OR5P2, P4H A3, PDE6D, PPP1R3A, RFW2, SOCS7, STX6, PNLIPRP1, ST6GALNAC6
Negative_817	DLD, UBB, ACAT1, ACLY, ALPP, B3GAT2, C4BPA, CCL16, ENO3, EVI1, FBXW11 , GALNTL1, GNPAT, GRAP2, KCNQ1, KIR3DL2, MICA, OR10J5, OR10T2, OR2L1 3, OR5D13, POLD3, PON1, PPP2R5C, PRKG2, SDHB, SHISA5, SLC25A5, TJP2, TRAF4, UBE2K
Negative_818	ALG11, CD58, EREG, GLB1, GNG12, HNF1B, IL18RAP, IL2RG, MYH2, OR10J3, OR1G1, OR52R1, PGS1, PRNP, ROBO2, RPE65, UBA1, ULBP1, SERPINC1
Negative_819	AANAT, ABI2, ACTN4, ACVR2A, ADCY5, ADCY8, CYP2C8, EFNB2, EGFR, GLUL, GNAZ, GZMB, HEMK1, IMPA2, LDHD, LIMK1, NANS, NEU4, NME2, NOX1, OR10G4 , OR10H2, OR10K2, OR2S2, OR51L1, OR8S1, P2RX6, PIK3R5, POLR2E, RASGR P4, SOCS2, STX10, TP53I3, WNT11
Negative_820	AMPD2, OR4X1, OR5P2, PLAUR, RAB5A, RPRM
Negative_821	SRC, ASPA, CXCL12, GNRH1, GPD1L, NCR1, OR11L1, PPARG, PTPRC, ST8SIA5 , UCK1, PLA2G12B

Negative_822	KMO, MVD, ACADSB, ALG12, ASPA, ATP6V1H, B3GNT2, CHKB, COX10, CSNK1D, DDHD1, DNMT3B, EXTL3, F13A1, FGF8, FGFR4, GALNS, GUCA1A, HAO2, HAP1, HTR2B, IL29, IQGAP1, KIR3DL2, MAP2K7, MCM7, MTHFR, NOX3, OR10G7, OR1S2, OR4F5, OR51F1, OR52B6, OR6B2, OR7C2, OR9A2, PDGFA, PPP3R1, PSME2, SELP, TRPC1, UNC5D, ATP6V0A1, EIF4EBP1, ST6GALNAC6
Negative_823	CD2, CFH, IL7, ACSL5, ACVRL1, ADRA1D, ARSB, BCAR1, BMP4, BMPR1B, CAMK2B, CD48, CDC14B, CXCR4, CYP4A22, DGKB, E2F4, FMO4, GNAQ, HARS2, IKBKG, IL24, ITGA10, KRAS, LRDD, NME6, OLAH, OR2A25, OR4F17, OR51E2, PFN2, PIAS1, PIGX, POLR2B, PPP1CA, SDC2, SOCS5, SRGAP3, TM7SF2, PNLIPRP2, SERPING1
Negative_824	GBA, GH1, PML, ACAA1, ATP6V0C, BCAT2, C4BPB, CCL28, CPT1A, CYP11B1, CYP2B6, CYP4F2, DARS2, ENTPD1, EPHA6, GAD2, GPAM, GRIA2, H6PD, INPP4B, INPP5B, MAGI3, OR12D3, OR52N5, OR5T3, OR6Y1, OR7G3, PAK4, PER1, POLR2F, POLR2H, SPRED2, STAT1, VCAM1, YWHAH, ATP6V0A1
Negative_825	TPR, ARAF, ARPC1A, CD48, CD99, CHRNA7, CHST11, COL4A1, CYP26C1, CYP2S1, FZD3, GALNS, NUMBL, OR11A1, OR51I2, OR51M1, OR5AP2, PCK1, POLR1D, PPOX, RHEB, RPN1, SENP2, SQLE, SUOX, TNXB, SERPIND1
Negative_826	MVD, CCL2, CSF3R, OR2M4, OR8K3, PDE3B, PTPN1, SNAP23
Negative_827	DUSP9, GLI1, IFNAR1, OR51M1, PNPT1, PRKAG1, SEMA3E, STX3, WNT5B, PRICKLE2
Negative_828	ITK, SRM, AGPAT1, CD36, COL5A2, GGT5, HEMK1, HTR2B, IL2RG, LM07, MS4A2, NMNAT3, OR10G2, OR2H2, OR2T8, OR56B4, OR5L2, OR7D2, OR8D4, PARS2, PRNP, PYGM
Negative_829	GP5, HGD, CHST13, CNTN1, GALNTL5, GIT1, GNPAT, INHBC, MAOB, NRXN1, OR10K2, OR1L1, PIGN, POLR1A, PON1, SLC9A1, SMAD3, TFDP1, VAV2
Negative_830	AK2, SMO, AARS, ACSL4, ACTC1, ALDH5A1, CDK5, ICAM3, KLRK1, MTHFD1L, NFKB2, OR10Z1, PLOD3, PYCR1, SLC27A4, SOAT2, TAS2R10, TBL1X, TRAF4, UBA1, VNN1, SERPIND1
Negative_831	AK3, CTH, ID1, ADORA2A, CNTFR, DGKA, EIF4E2, PIK3R5, SPP1, TAS1R3, TGDS, VAMP3
Negative_832	ME1, OTC, ABP1, ADIPOR1, AXIN1, CHAT, CHST13, COL3A1, CXCR6, CYP2E1, DAPK2, DGKB, DHFR, DHRS4L2, EPHA2, ERBB2, F2RL2, GART, GNG12, GPLD1, GRHPR, GSTK1, HAO2, IFNA10, MAN1C1, MAPK7, NEFL, NOS1, OR10A5, OR10G2, OR10J3, OR2A2, OR52E8, RDH10, RUVBL1, SETD2, TNFSF9, TNFRSF13C
Negative_833	CLDN5, SHMT1, SLC2A2, UPRT
Negative_834	CR1, ALG5, CADM1, CCNB2, CPOX, CYP3A7, DGKH, DUSP7, GAD1, GGCX, GLI1, GUCY2F, IL15, NPR1, NQO1, OR6C2, OR9Q1, POLR3G, STK36, TUBB6, TNFRSF1A
Negative_835	AK7, ACVR2B, ATP5D, BIRC3, CD80, CSNK1G1, DAD1, EIF4E, FGF17, FGFR4, GRPR, IL2RA, MYLK, NAMPT, OR2T34, OR4N5, OR52B4, OR5P2, OR6C74, OR6K6, PFKFB2, PNPT1, POLR1E, PVRL1, RASA1, RBPJ, TAS2R49, TPK1, TUBB6, UGT2B10, SERPINA1, TNFRSF18
Negative_836	C2, KIT, LCK, ACP6, ALDOA, ATP5G3, CCL21, CCR7, CTLA4, DPM2, DUSP2, DUSP7, EPB41L1, FLT4, GALK2, GALNT5, GANAB, GNAL, IFNA6, IL22RA2, LAMB4, MAP2K1, OR11H1, OR4L1, OR4M2, OR4Q3, OR52K2, PDGFRB, PIGA, POLR2C, PPAP2A, PPM1D, RAC3, ROCK1, RPIA, STAT4, TGFA, UGT8, UMPS, UPP2, VANGL1, XCL1
Negative_837	ID4, ACSM5, AGPAT3, AGXT, ALDH2, ALDOA, ATG7, CD27, CD47, CDC45L, CLDN7, CNTN1, CXCR5, DHODH, DLL3, DMGDH, EFNA2, ETS1, FGF21, FIGF, FLT4, GLUL, HMBS, ICOS, IKBKB, LAMA4, LAMB2, MASP1, MYH1, NCF4, OR10AG1, OR10P1, OR2V2, OXTR, POLD1, PTEN, RRM2, STEAP3, STK36, TAS2R42, TAS2R49, TUBA4A, VDAC2, WNT10B, WNT11, WWP1, SUV420H2

Negative_838	AGXT, AMDHD2, CAMKK1, CRHR1, CTSB, EIF4E2, FGF13, FUT1, INHBB, NRG3, OR10G8, OR1L6, OR7D2, PDK1, PRKAG3, PYCR1, RARS2, TAS2R38, TNFSF10, UAP1
Negative_839	CD2, CSK, IL4, TYR, ACSM1, ADSSL1, GALE, GSTK1, GUCA1B, GZMA, IGF1R, IL22RA2, ITPA, LGMN, MAPK9, MDH2, MYH7, NAGLU, NFAT5, NRXN1, NT5C, OR10S1, OR2AG2, OR2T3, OR51E1, OR51Q1, OR52J3, PRKAG2, PTTG1, SDHC, SEMA4D, SEMA4F, SLC27A5, STT3B, TP53, TRADD, TRHR, CSGALNACT1
Negative_840	SRC, ACP1, CCKAR, FGF13, GAS1, IL13RA2, RPS6KA1, SPP1, TBL1X
Negative_841	UBB, CTSB, GALNT3, GCLC, ITGB8, KLRC2, OR10H2, OR5P2, PCCA, PCCB, SETD1B
Negative_842	CAMK2D, CLDN17, ITPA
Negative_843	AMT, DBI, NF1, AASDH, ACHE, AMY2A, CAMK2B, CD274, CDO1, E2F3, F2RL1, GIT1, GZMB, HSPA1B, HTR4, KAT2B, LARS2, MAPK9, MCAT, MFNG, NAT6, OR13C9, OR2T12, OR5I1, OR5P3, OR7G2, PIGK, POLD3, PPP1CB, PSME2, PYGL, RRS2, SDC3, STX4, TSC1, TUBA3E, XYLT1, SERPINA1
Negative_844	IL6, BPNT1, GCNT1, GRIN2D, OR5D16, PRKCB, RPS6KB1, SC4MOL, SEMA3G, SGPP1, SOCS4, STX16, UGT2B4
Negative_845	CLDN9, CTNNA3, ENTPD3, GGT7, GJA1, GNAT1, HLA-F, OR4D11, PANK2, PGM3, QARS, SDC3, SIAH1, TAS2R38
Negative_846	C8A, TFG, ACTC1, AHCYL2, BCL2L1, BDNF, CACNA1A, CACNB1, CCDC6, CCR9, CLDN10, COASY, COL4A4, CPT2, CYCS, DAAM2, DBF4, DHRS9, DRD5, ENTPD5, GABARAP, GANAB, GNPAT1, HHIP, ICOS, ITGA11, MAD1L1, OR10G3, OR10H4, OR2L13, OR4N2, OR6C76, OR7A10, PCYT2, PDE2A, PISD, PNPLA3, PPP1CB, PPP1R3B, PPP1R3C, PSME3, PYGL, RPS6KA3, ST6GAL1, TD02, ATP6V1G2, CACNA2D1, SERPINA1, SERPINE1
Negative_847	OAT, STS, ACTN2, ACVR2A, CHKA, CHRNA7, DGKZ, DGUOK, FGF7, GNG13, HDAC2, IRF5, JAG2, MYH9, NAT2, OR1J2, OR52E4, OR5P3, OR8B12, PGS1, PIGB, PIGV, PIK3C2G, PLA2G6, POLR1B, PPP2R2D, PRKCA, SEMA4B, SLC25A6, SPP1, STAT5A, TM7SF2, ULK3
Negative_848	NPL, AASDH, AXIN2, CACNB4, CBLC, CLCA2, FLT3, GNPAT1, GPLD1, HNF4A, HSD11B1, ICOS, IDI1, IL12RB1, ISYNA1, KLRC2, NME6, OR14C36, PRKX, SPRY1, TAS2R5
Negative_849	LAT, ME2, CD27, CYP2E1, DUSP2, GALE, GNPDA1, HNF4G, IL17A, KAT2A, MAPK11, OR10G9, POLR1E, PPP3CB, RDH16, SMURF2, TGFBR2, UGCG, XYLT2, ST6GALNAC6
Negative_850	GSN, CACNG5, CHAD, CXCR4, IL10RA, OR52D1, RRM2B, WNT8B
Negative_851	ABO, ALDH9A1, ANGPTL4, ARSB, CACNB4, CCL11, COL4A4, CTSL1, CYP1A2, CYP2S1, CYP3A7, CYP7A1, DPYS, FADS2, FGF18, FGF5, GSTO1, IL12RB2, IL18, IL24, ITGAM, MKNK1, NEFL, NKD1, NKX3-1, NSD1, NUMB, OR10X1, OR13H1, PDE7A, PDIA4, PECAM1, PIK3R5, PIP4K2A, PSME2, SELE, TSNARE1, UCKL1, UGT2B17, VAV2, SERPINE1
Negative_852	AGRP, ANAPC11, ATP5G3, CCL13, COL1A2, CYSLTR1, DDX51, FGF3, HHEX, ITGAE, PARVB, PIK3CA, PMAIP1, POLR1C, RBX1, RUVBL1, SPTLC1, TAP2, TJP2
Negative_853	MTR, ABLIM1, ACSL1, AGRP, ANGPTL4, APOC3, CAV1, CD72, EPHA6, FADS2, G6PC2, GAD1, GSK3B, HRAS, IL13RA1, MIOX, OGDHL, OR52K2, OR5AK2, OR5AR1, PCK2, PDE4D, PGAM1, PLOD3, PTPRF, SMAD3, TRMT11, TUBA8, TYMP, UBE2L3, VAMP1
Negative_854	AUH, C7, B3GALT4, B3GALT6, B3GNT5, COL6A1, CREBBP, CYP2C9, DKK4, EXT1, HCLS1, HLA-C, IFNAR1, IL1RAP, IL22RA1, ITGB2, KNG1, NEU2, OR2G3, PPM1A, SDC4, SH2D1B, SMAD2, ATP6V1G3

Negative_855	MIF, ACACB, ALG10B, ARPC1A, ATIC, CACNA1A, CCL27, CCL3, CNTN1, CREB3 L4, DDIT4, DEGS2, DGKQ, EFN1, EPHX2, HSD17B3, IDI1, IL2RA, JAM2, LAMC1, MAP4K3, MCM7, OR10K2, OR13C3, OR5A1, OR5K1, PCNA, PDGFC, PER1, P FAS, PGAM4, PLCD4, PRSS1, PYCRL, RPS6KA2, SEMA4F, TAS1R3, TJP3, TSTA 3, ATP6VOE1
Negative_856	IL6, BCKDHB, CDKN2D, CER1, CHKA, GALNT5, GSTK1, GUCY1B3, HGSNAT, NAT 5, PDE1B, PITX2, PPAP2C, PRKACB, PTGES2, SHC3, SOAT2, ULK2, ATP6V1E2
Negative_857	CEL, PTS, AHCYL2, AKR1B1, CALML6, CD58, COL6A1, CRB3, CXCL1, CYP26B1 , EFNA1, EPHB3, HARS2, HCCS, IL19, LTBR, MAN1A2, MASP2, MMP14, OR10A7 , OR14J1, OR2L3, OR4K15, OR4S1, OR52E2, OR5K1, PANK3, PGM3, PIP5K1C, POLR1E, PPM1A, RAF1, RARS2, RXRG, SPHK1, STAT6, SUCLA2, TRAF6, CTNNB IP1, PLA2G12A
Negative_858	ACSM2A, ADCY7, BLVRB, COL3A1, CSF1, CYP2B6, GALNT6, GJD2, GNA15, INH BA, MAPK8, NFAT5, NMNAT2, OLAH, OR10G3, OR10Z1, OR2A12, OR2T12, PER3 , PTGES2, TGFB3, TUBA8, TUBB2A, UCK2, VCAM1, HLA-DQA2
Negative_859	CNTN1, CYP2C9, OR8D2, PIGA
Negative_860	C1S, C3, KIT, MPI, RFK, AFMID, APM1A, ARHGEF1, ARSA, ARSD, BIRC3, CACN A1E, CANT1, CD79B, CHEK1, CPOX, EFN3, GRIN2C, HBEGF, IL20RA, INSR, KLRC4, LAMC2, MCAT, OGDH, OR10J1, OR2Z1, OR6C2, OR6C4, ORC3L, PDE4C, PDE8A, PIP5K1A, PLXNA2, POLA1, POLR2K, PRKG2, RFX5, SETD1B, SH2D1A, STX5, TLN2, TUBA4A, YOD1, SERPINC1, ST6GALNAC5, TNFRSF12A
Negative_861	AARS2, ACSS2, ACTN1, ADRA1B, AKT3, ALDH6A1, AMHR2, ATP5E, BACE1, CAC NG4, CAMK2D, CCNB2, CDKN2B, CISH, CTNND1, CUL1, CYP3A7, EDNRA, ENAH, FRAT2, GARS, GATM, GBE1, GCNT2, GSTM2, MAGI1, MPST, MTMR1, NFATC1, NF ATC2, OR5A2, OR8B4, OR8I2, PDE7A, PFKFB3, PHKG2, PIGV, PTGS2, SOS2, W ASF3, WNT6, ZAP70, CSNK1A1L, SERPING1
Negative_862	CFI, TK1, ACP6, APOA1, ATG7, BDKRB2, BIRC2, BTRC, CAV1, CMAS, COMT, CS H1, DARS2, DEGS1, DUSP6, E2F1, F2RL3, GALNTL4, GBE1, GLDC, GNB1, HLA-DMA, HMOX1, HTRA2, LCMT2, NADSYN1, NME4, OR51B2, OR5A1, OR5T3, OR7G 1, PDHA2, PDK1, PTGER3, PTGIS, PYCRL, RARA, SDC3, SFRP5, SV2B, TALDO1 , CSNK1A1L
Negative_863	CGN, EZR, OGT, UBB, ALOX12B, ATP6V1A, BDNF, CCR2, DTYMK, EXTL1, GDF6, KIR2DL2, LIPA, MAPK14, NAMPT, NAT2, NCF2, P2RX5, PDHB, PGM1, PI4KA, P LCD3, RGS3, SELP, SEMA4A, TGFB1, UBE2K
Negative_864	CFH, ACYP1, ALDH2, AMDHD2, AVPR1A, C5AR1, CD01, CLDN2, CLTB, COL1A2, CUL1, EPB41L2, GRIN1, IRAK4, LDHB, METTL2B, MGAT4A, NCK1, OR10A2, OR 4L1, P2RX4, PDE7A, PIGF, PLA2G2A, PLA2G6, POLR2F, SSH2, SV2C, TFPI, T RIP10, WNT16
Negative_865	ARPC1B, CES1, CYP4A11, DGKZ, IFIH1, IL23A, MGST2, MMP14, OR2AG1, P4H A1, ST3GAL4
Negative_866	LARS2, SYNJ2, ZAP70
Negative_867	AK1, ANAPC7, CCNE1, CYP4A22, ENO1, FADS2, GADD45A, GOSR2, ICOS, IFNA 2, INADL, INHBA, JUND, LCMT2, MAP2K4, MAPK1, OR10A7, OR2M3, OR51E1, O R5H2, OR6B2, OR6T1, OSMR, PIAS4, PIGS, PIGW, PISD, POLR2H, PPT1, PRKA CB, RAB5A, SETD7, SLC2A1, STAT5A, TAS2R1, WNT7A, YWHAH, ZNRD1, SERPI NC1
Negative_868	ME2, ANAPC11, BLVRA, CDH15, CHRNA7, CTBP1, GCLC, OR1J2, PFAS, PIGM, P TPRB, TCF7L1
Negative_869	ACPP, ACSM1, AGRN, ALDH7A1, ASS1, CALML3, CHRM3, CHST11, CPT1C, CRLS 1, CYP2C8, CYSLTR2, DDX18, DKK1, DUSP6, FM02, GALNT13, GMPR2, GTSE1, JAK2, MAPK7, MPP5, MPST, NRXN2, OR1L4, OR56A1, OR5A1, PHKG2, PIGW, PP P2R2D, SDC4, SKP1, SMAD6, SYNJ2, TAS2R16, TMLHE, TRAF4, ULBP1, VARS, WBSCR22, WNT4

Negative_870	CKM, AARS2, ACSL1, AGPAT2, ATP50, AXIN2, B4GALT2, CCR3, GGT7, GNAZ, G PAA1, IRAK1, ITGB6, MCM7, NEU2, OGDH, OR6B3, PIP4K2C, POLR2G, RAF1, S ARS2, SNAI2, SUCLG1
Negative_871	LYN, ATP13A2, CLDN16, EPB41L1, HSP90B1, MAD2L2, MARS2, OCRL, P2RX1, PAK6, PPP1CC, PTEN, PYGL, RAB5A, RBX1, RFXAP, SREBF1, TBK1, MAPK8IP3
Negative_872	GBA, ME1, TFG, ACAA1, ACOX3, ADCY1, BPNT1, CCKBR, CCL1, COL5A1, DLAT, EHHADH, GALNT6, GGT5, HADH, IFNAR2, INSR, IRAK4, LEF1, MADCAM1, MYH 4, MYLK2, OR4F6, OR6C4, PFKFB3, PIK3C2B, PLA2G1B, PLAT, PLCB3, PPAT, PVRL4, RASGRP4, RPE65
Negative_873	GK, PRL, ADIPOR2, ALPP, ARG1, CD72, CTSS, CYP4F2, DPM2, ENPP3, GCNT3, GLI3, GNAZ, GSTA4, ICAM2, IL20RA, LRDD, MAP4K2, MARS2, MTHFD1L, NCOR 1, OCRL, OR10A7, OR10H1, OR5P2, PDE10A, PIAS3, PLIN, SMURF2, STK11, S UCLA2, TAS2R10, TLN2, TLR2, VDAC1, ATP6V1C2, PPARGC1A
Negative_874	AADAT, ACHE, ADH1B, ADRBK2, ASRGL1, CHKA, CHRM3, CHSY3, CLCF1, COQ6, CTBP2, CXCL1, CYSLTR2, EPHA8, FLT3, FMO4, GFPT2, GMPPA, GRIA1, GSTA3 , GSTA5, IFNA17, IL1B, IL21R, IRAK3, MCM2, MGAT5B, NFYC, NOD1, OR11G2 , OR2T6, OR51I1, OR51I2, OR5P3, OR6N1, PARVA, PIGU, PIP5K1A, PPP1R3A , PPP2R5C, PRNP, RPS6KB2, SAT2, SRGAP1, STX1B, TRPM5, C1GALT1C1
Negative_875	RPE, ACOT11, ACOX1, ADRB3, AKR1A1, AKR1B1, ALG10, CCND1, CDK4, CKMT2 , CYP2C19, DHRS3, EPB41L3, ETNK2, FZD8, GDF6, GGT5, GMPR, GP1BA, IL10 , IRF9, KAT2B, NCKAP1L, NEU2, NR5A2, OR13G1, OR2F2, OR2G6, OR56A4, OR 5B21, OR5F1, OR6T1, PDE6G, PIGO, RPIA, SORBS1, ST3GAL5, STEAP3, TUBB 2C, ZNRD1
Negative_876	SP1, AGMAT, ARPC1B, ARRB2, CAMK4, CBLB, COL1A2, IL18, IL6ST, LLGL2, N CKAP1L, NEUROG3, PIAS1, PNPT1, PRKY, SEMA4G, UNC5B, ATP6V0A1
Negative_877	CRK, CKMT2, OR13J1, PFKM, PRKCH, VAMP2
Negative_878	ACVR1, BPNT1, GUCY2F, ITGA8, NME7, NODAL, NT5C, NT5C2, OR2T34, OR8U1 , PIK3CG, PLAUR, POLR2L, RPS6KA5, TACR1, VEGFA, PAFAH1B1
Negative_879	ACAT2, ALDH3A2, ANAPC11, CCR3, FRAT1, GALT, KIR3DL3, PPA2, PPP2R5D, RPS6KB2, STEAP3, WNT11, ATP6V1C1
Negative_880	DAO, FST, ADORA2B, AGPAT6, BTRC, DDX47, MDM2, NFKBIA, OR4K17, PYCR2, TRADD, TRAF3
Negative_881	AMH, GSN, HK2, KMO, LSS, ACSL4, AGRN, AHCY, ALDH1A1, ALG5, ATP5D, BBC3 , CCR7, CTPS, DPYSL2, DUSP6, EPHA2, FABP3, GNA14, IGSF5, IMPA2, MKNK2 , NCF1, OR4C15, OR51A2, OR51L1, OR7G1, OR8D2, PIGH, PIGT, PIGV, PLA2G 1B, PPP2R2B, PYCR2, RBX1, RPS6KA6, SETD2, SOS1, VAV1, MAP3K7IP1, ST6 GALNAC5, TNFRSF17
Negative_882	AK5, GLS, MPL, ACSS2, AOC2, ATP5C1, ATP6VOC, CADM3, CCR10, CCR5, CD27 4, CXCL11, CYP17A1, DOLPP1, FGF23, GLI2, HIP1, IFIH1, ITGA5, JAM3, KL RK1, MAP3K3, NME7, OR11H6, OR4D2, OR51I2, P2RX1, PDE8A, PFKFB4, PIK3 C3, PNPO, PTPMT1, PTPN6, RCHY1, SOD1, SULT1A1, TBXA2R, TUBA1B, ULBP3
Negative_883	ADAM10, ADCY7, ATP6VOC, CCR9, CUL1, DRD5, FGF4, FGF5, FGF7, METTL6, N OD1, NRCAM, OR5AR1, OR5D14, OR6C2, SETDB2
Negative_884	ADC, AK3, GK, ADCY5, AKT1, ALDOC, CHAT, CRHR1, DLST, EPB41L1, GNRHR, P SEN1, SESN1, VNN1
Negative_885	AADAT, ACVR2A, ALOX15B, ATP5C1, CCL23, CLDN19, CYP4F3, E2F1, EGFR, E HHADH, ENTPD7, EPRS, FUT1, FUT2, FZD9, HIBCH, IL15, JAM2, MAD2L2, MTM R1, NKD1, NOS3, OPLAH, OR13G1, OR5M8, OR6C1, PDHA1, PHKB, PIGU, POLR2 I, PPARG, RAB23, RAF1, RDH16, SETDB1, SIAH1, TUBB, UPRT, XCR1, MAPK8I P2
Negative_886	LHB, TYR, ABL2, ACP2, ACSM1, AMY2A, ANAPC2, ATP5G3, ATP50, B3GNT4, BP NT1, CACNB4, CLDN7, DHFR, FOXO1, GADD45A, GLI3, HCST, IKBKE, IL15RA, IPPK, MCM4, MTHFR, MYH1, OR7A10, PDE1C, PIGB, PNPLA4, POLR2J, SIGLEC 1, SPTLC2, ST3GAL4, STX12, SV2A, XYLB, ATP6V1B1, PLA2G12A

Negative_887	CCL2, MMP2, OR51B5, PIK3C3, RAB23, TAS1R1
Negative_888	DCT, DLD, AGXT2, AKT3, ANAPC2, BLVRA, CCNA1, DIAPH1, EIF4E, EPHX1, FA SLG, FRAT2, FUT6, GUSB, HCCS, LAMA4, NAT1, NUMB, OR51A2, OR52A5, OR52 R1, OR5J2, PDE1A, POLR3K, PRKACA, RFXAP, SEMA3D, SETD8, SHMT2, TUBA1 A
Negative_889	OR1D5, PIGM, PTK2B
Negative_890	ADRBK2, ALPP, BTRC, CHR1, CHRM3, DHRS3, FGF22, GAPDH, GSTO1, OR1J1, O R52N5, OR6N1, PPP1R3D, STX1A, TJP3, TOMM40, TSC2, VEGFC
Negative_891	CSK, PTS, ACVRL1, BAAT, BUB1, CANT1, CAPN2, CHDH, CXCL16, CXCL2, CXCL 5, CYBB, CYP2F1, CYP2J2, GNAS, HADHB, HMGCS1, ITGA10, JAM2, KLRC2, LA MA3, LDHB, NME2, OGDHL, OR1L6, PARD6B, PGM1, PPA2, RENBP, SLC2A1, TCI RG1, TGFBR2, HLA-DRB5
Negative_892	CBL, MPL, ARG2, ATP5G2, B3GALT2, CACNA1I, CDC42, CXCL11, DTX3, ENPP1 , FGD3, GALNT12, GGT7, GSTM5, IL8RA, INHBC, INPP4A, INPP4B, ITGA5, LA MC3, NFATC3, OPLAH, OR10J1, OR2C3, OR4D1, OR52M1, ORC3L, PGM1, PIGW, PON2, PPP2R2D, RALA, SLIT2, SPCS3, TM7SF2, UPP2, EIF4EBP1, MAPK8IP2 , TNFRSF12A
Negative_893	CFH, ACTC1, ACYP1, ALDOC, ALG1, BPNT1, CCND1, CD80, CFLAR, CHST11, CL TCL1, CSAD, CSNK1G3, DGUOK, DUSP7, FGF17, FGF7, GDF7, HNF4A, IFNB1, I FNG, IL23R, KLRC4, LIAS, NCF2, NCOA4, NCOR1, NT5C2, OR2G6, OR5L1, OR7 A17, PGAM4, PHPT1, POLR2F, PON1, PTDSS1, RASGRF1, RHOD, RPS6KA2, SMA RCA2, SMPD3, STMN1, TMLHE, TUBB2B, PRICKLE1
Negative_894	AK1, CGA, GSN, RFK, ACADM, ACTN2, ANAPC2, ASIP, ATG3, ATP6V1F, BBOX1, BCMO1, CCL4, CD22, CD38, CSF2, DDHD1, DDX23, EGFR, ENTPD4, EPHB1, GAB ARAP, GALNT2, GMPS, GOSR2, GPD1L, GRIN2A, ITGB7, ITGB8, LIAS, MGAT2, OR10G2, OR14I1, OR52A5, OR5B3, OR5M8, PLXNB1, SRD5A1, STAM2, TIAM2, TUBAL3, TYROBP, UGT2B11, ATP6VOE1
Negative_895	IL6, RB1, AKR1B1, ALG10B, BCAT2, BHMT, CCR10, CYP1A2, EARS2, FGF21, G LDC, KIR3DL2, MAP3K14, OR1L8, OR5B21, PIGF, PLA2G3, PLOD3, PRKG1, RB P JL, RDH5, SKIV2L2, STX7, TAS2R41, TLN2, TPH2, TYROBP
Negative_896	AKR1A1, ALDH5A1, CAPN2, DTYMK, FRAP1, GCH1, GRIN1, IMPDH1, MAGI2, MA OB, OR4C15, OR6K3, PFKFB3, RCHY1, SGPP1, STAT3, YWHAH
Negative_897	AK3, MOS, CHRM5, DCTD, SLC25A31
Negative_898	ADRBK2, CDH4, EPHA5, INPP5A, LDHD, OR13G1, OR1B1, OR4F4, PDE7A, PIK3 C3, PIM1, PLA2G2A, PLXNC1, POLE, RBX1, RRAS2, SPTAN1
Negative_899	DBI, ACVR1B, ARNTL, AVPR1B, BDH2, C4BPA, CCNB2, CRKL, CTNNA3, DDB2, D DX50, DGKG, DOT1L, DPYS, FGF10, GALE, HA02, IFIH1, INHBE, IPPK, KLRD1 , MOV10L1, NRG1, NUMBL, OR1K1, OR1N2, OR2B11, OR51Q1, OR52N5, OR5AS1 , OR6C74, PARD3, PDE7B, PDGFA, PIK3CD, PIK3R1, PTGES2, RELB, SETD8, S HMT2, SPTLC2, TLR4, TM7SF2, TMLHE, WEE1, GABARAPL1, TNFSF13B
Negative_900	GK2, HAL, APPL1, CDS1, CYP4F2, DGKG, HHIP, LIAS, OR56A1, OR5AK2, OR8I 2, OR8S1, PARVG, POLR1D, POLR2E, PTGS2, PTTG1, PVRL4, RAP1A, SGPP2, S HC2, TACR3, UGT2A3
Negative_901	ADC, F7, GP9, OTC, TFG, AASS, ACAA1, ACP1, ACP5, AGPAT4, AMY2A, ANAPC7 , ATP2A3, B3GNT3, CANT1, CNTFR, DARS2, DERA, DGKZ, FUT3, GALNT6, GLUD 2, HDAC2, HYAL2, IFNGR2, IRS2, KDSR, NODAL, OR2M4, OR56A3, POLD4, PPP 3CB, PSME2, PTCH1, RALA, RPS6KA4, RRAS2, SRGAP2, STAT1, STAT6, TGFA, CSGALNACT1, CSNK1A1L, SERPING1, TNFRSF10C
Negative_902	F10, INS, ACYP1, AGXT2, ANAPC4, ATP5H, ATP5J2, CHSY1, COL6A1, CYP2U1 , DNMT3B, GJA1, HAAO, HEMK1, HIBCH, KLRK1, NUDT5, OR2A4, PAK7, PAX4, P DE6H, PIGS, PIM1, PLA2G2D, PLA2G6, PPP1R1A, PPP2CB, PRKAB1, RBL1, SD HB, SIGLEC1, ST3GAL1, SULT1E1, TYK2, ST6GALNAC3
Negative_903	TNR, CBLC, CRB3, CTF1, EVI1, FARSB, GOT2, INHBB, IRS1, MAP3K4, MAPK12 , NAT6, OR10P1, OR9Q1, OXTR, PAK6, TP53, ATP6V1C2

Negative_904	AGL, CP, F10, MUT, ALDH5A1, ARPC1A, ASS1, ATP5H, B4GALT3, BCAT1, CCNB1, CNGA4, CRLS1, CYSLTR1, DIAPH2, DRD2, EFNB1, EPHA7, GALNT9, GNAS, GOT2, IL17RB, IRAK2, ITGA10, ITGA9, LEFTY1, MAGI1, MGST2, NME4, OR11A1, OR2AG2, OR2F2, OR4M2, OR5A2, OR7D2, ORC1L, PDE1A, PRSS2, RAC1, SETD1B, TRAF3, YWHAG, ZAP70, ZFYVE16, HLA-DQA2, MAPKAPK2
Negative_905	EPO, ADH1A, BCMO1, BMP8B, CCL21, CD55, CYBB, IQGAP1, MYH11, NRP1, OR10A3, PVRL1, SMAD7, VANGL1
Negative_906	GLS, ACADSB, ACOX2, ADRA1B, AGXT2, ATP6V1A, BACE1, CEBPA, CYP27A1, DAAM1, DAG1, DAXX, ENTPD2, EPB41L2, FGF1, GSTM2, IL22, OR10X1, OR4C16, OR4F6, OR51F1, OR5T3, PAK2, PNMT, PTDSS1, RAPGEF3, RXRA, SLC25A6, THBD, UGT8, VTI1A, CSGALNACT2
Negative_907	F2, F2R, LPL, ACAD9, B3GALT6, BAAT, CYP1A2, ENO2, GALNT7, GNAS, IL18RAP, IL28B, KIR2DL2, LAMA4, MAN1A2, NOTCH1, NT5E, OR4D1, OR5K2, ORC2L, PPP1R3D, PRKACA, RAB23, SOCS5, ST6GAL1, STMN1, TAS1R3, VAMP1, WNT10B
Negative_908	CCNE2, CLCA4, COL5A3, CYP2D6, DNMT3A, GLB1, GRAP2, IQGAP1, LEFTY2, MMP9, MTHFD2, MYH7B, NCOR2, OR2F1, OR2F2, OR2M7, OR2T2, OR2T33, OR9I1, ORC1L, PIGT, PIK3CB, PLXNC1, POLD4, POLR2I, PPP1R1A, PRPS2, SFRP2, SMAD9, TRHR, UBE2K, UROD, ZBTB16
Negative_909	AK2, FUK, TPO, ABCC8, ALAS2, ARPC2, CER1, FGF9, GAPDH, HA01, IL1B, LALBA, PIGC, PRKACB, PTGDS, RAP1A, UGT2B4
Negative_910	ACP1, ATP2A3, CACNG7
Negative_911	AMH, GHR, MUT, ACVRL1, C7orf16, CDS1, CREB3L2, DAG1, DGAT2L4, ENPP3, FARS2, FGF22, FTCD, G6PC, GNAI2, IARS, IL12A, IL1RAP, ITGA6, KARS, KLRC3, LIPG, NUMB, OR10G3, OR10Q1, OR1A1, ORC5L, PIGL, PIP5K1B, POLR2E, SARS2, TD02, TGFB1, THBS2, TNFRSF9, TUBB4, UBE2L3, WNT7B, MAP3K7IP1
Negative_912	CEL, FER, GCK, GSS, ARPC5L, BHMT, CD244, CD40LG, CD80, CDKN2A, CHAT, CHR3, CLDN18, COL5A2, CTBP1, DKK1, EDA2R, FGF23, GMPS, GSTM4, HSD17B2, HSD3B2, IFNW1, KNG1, LIPF, LRDD, MAP2K4, MIOX, MYLK2, NEU1, NRG4, OR10G8, PCNA, PFN1, PIGP, PLA2G2F, POLR3H, PSPH, RAC1, RFNG, WNT9A, PDCD1LG2
Negative_913	CAT, EBP, EZR, GPT, GSS, NPY, SP1, AGPAT4, ALDH6A1, ALOX5, ATG12, B3GAT3, BET1L, BIRC2, CAV3, CDKN2B, CHIT1, CNDP1, CSH1, DUSP8, GALE, H6PD, IL21R, OR10G3, OR10H4, OR4C16, OR5B21, PDHB, POLE4, PSME3, PTPN1, RBPJ, RRM2, SH2D1A, UGP2, WNT9A, TNFRSF17
Negative_914	ADH5, ALDH2, ASCC3, EI24, MAP4K1, NT5C1B, PARS2, SAT1, TMLHE, MAPK8IP1
Negative_915	KIT, ACACB, ALDH7A1, APC2, BUB3, CYP3A5, DAXX, DCTN1, DRD5, DVL3, EDN1, ETS1, FGFR3, FUT3, GNAS, HLA-DOA, MAD2L1, MAP3K14, MCCC1, NME6, NRG1, OCRL, OR11H1, OR2B6, POLR2I, PRKAB2, ROCK2, SEMA4D, ST3GAL2, SUFU, SUV39H2, TRIP10, UPRT, ALDH18A1
Negative_916	ID2, INS, MOS, ALG3, ATP5L, COQ5, CREB1, CSF1R, E2F3, FGF14, FUT1, IDUA, MAP2K2, MKNK1, OR1L4, OR4B1, PTGFR, RAPGEF1
Negative_917	ITGA11, LIPG, VDAC2
Negative_918	DCN, ABCC8, ADCY9, ATP6V1H, BPGM, CD226, COMT, CXCL2, FUT1, GP1BA, GUK1, IDI2, IL12B, KIR2DL4, OR2B6, PDGFRA, SDC1, TP53
Negative_919	B4GALT7, NAGK, NTF3, OR2T29, SETDB2
Negative_920	CTH, SI, ACSL1, ALDH1A1, ANPEP, ATP50, CALML3, CAMK2A, CAMKK2, CD3E, CYFIP2, CYP2A6, CYP2U1, DAG1, DDIT3, EFNB3, FZD5, GALNT13, GAS1, JAM3, LDHAL6B, LIPT1, MIOX, OR1L8, OR4C11, PANK2, PDE4D, PER1, PIGN, POLR1E, POLR3B, RALB, RDH8, RFNG, SGMS1, SMPD4, WNT10A, XCL1, MAPK8IP3



Negative_921	EBP, ACTG2, APC2, BTRC, CCNA2, CDC23, CDKN1A, CSNK1G2, EPHA6, IL12A, PDE3A, ST3GAL1
Negative_922	AVPR1B, CDC6, CSNK1A1, CYCS, DAPK2, FGF1, IL1RAP, LDHB, NAE1, TXNDC12, UXS1, HSP90AB1
Negative_923	AUH, ACACA, AKR1C3, CCL22, EREG, HAAO, OR4Q3, OR8D2, RPSA, SLC27A1, TYMP, PDCD1LG2
Negative_924	CP, TPO, ACOX1, ALPP, APRT, ATP4A, B4GALT2, C1QA, CACNG8, CCDC6, CCL21, CCR2, CLDN8, CRKL, CTBP1, CYP2C8, CYP2J2, CYP8B1, FCGR2B, FUT8, GCNT1, GNA11, IRF3, ITGAX, LTA4H, MAPK13, MCCC1, MTMR2, MYH7B, OR8K1, PCYT2, PITX2, PKMYT1, PRNP, PSME2, PTCH2, ROBO2, SIGLEC1, TGFB2, TGFB R1, XIAP, ZNRD1, C1GALT1C1, HLA-DQA2
Negative_925	BTC, FH, DUSP3, F2RL1, FM01, MTHFD1L, NMNAT3, PAK3, SLC25A6, TAS2R13, HSD17B12
Negative_926	PDC, TNN, ACHE, ACSL6, AHCY, AKR1B1, APOA1, CALML6, CD247, CDC7, CHEK2, CHKB, CHPT1, CISH, COL11A1, COQ3, DDX50, EDA2R, FGD1, FGF22, FUT8, IL6ST, ITGAM, MFNG, NEU2, OR10A6, OR10X1, OR1S1, PIAS4, PPP1R3C, PRPH, ROCK1, SMPD1, STX1B, TSC1, WNT10A, WNT2B, GABARAPL2, HLA-DQB1
Negative_927	IHH, IVD, LAT, ANAPC10, APC2, B3GAT2, CLDN15, CSF2RA, E2F1, EGFR, EPHX1, EREG, F2RL1, GALNT9, GBTG1, GCLC, IL11RA, ITGB1, LARS2, MAPK11, MCM4, MYH7, NAT5, NKX2-2, OR2T6, OR4F6, OR52I2, P2RX3, P2RX7, PEMT, POLE4, RALA, RFX5, ROCK1, SPRY4, SSH1, SYNJ1, TAS2R5, TRADD, UGT2B4
Negative_928	ACACA, HSD17B8, KIR3DL3, NT5C, OR4D9, PTCRA, TAS2R13, TNXB, WNT7B
Negative_929	FES, CDC20, CXCR3, DOT1L, HNF1A, NODAL, PLOD2, PPP2R2D, RCHY1, VEGFB
Negative_930	AARS, ACP6, ALOX5, CDS1, CHR1, DEGS1, ENTPD3, FASLG, GALNT8, HSPA8, IFNAR1, ISYNA1, MARS, NUDT2, OR10V1, OR1L1, OR4C13, PDCD1, PDPK1, PHP T1, PLA2G10, PMVK, POLR1D, PON1, RAF1, SETD8, SSH3, SULT2B1, TFDP1, TNFSF4, TRAF5, TUBB, UROD, KIR2DL5A
Negative_931	COL1A2, CSF3R, EFNA2, GALNT10, GNPAT1, MYH9
Negative_932	SDS, INADL, LAMB1, LAMB3
Negative_933	CS, TFG, ALG2, AMDHD1, APLP1, ASAH1, CARS2, CCL26, CTSB, EARS2, FGF23, GNAI3, IL25, IL4R, KIR2DS4, MAP3K11, NCOR2, OR10J3, OR1E2, OR5B21, OR8D1, PDE10A, PGM1, PNMT, PRKCD, PYCRL, RBPJ, SCD5, SOX17, STX3, TAS2R9, TUBB3, TNFRSF10B
Negative_934	SYK, CASP9, CCND3, CES1, CLDN20, CSF1R, CTLA4, EFNA2, ENO1, EPHX1, GOSR2, GSTM1, HTR4, LFNG, MCCC2, MPP5, OR52E2, OR56A3, PLCD3, PPCS, RBPJL, RPS6KB2, RUNX1, SGMS2, TCIRG1, TYMS
Negative_935	CP, ABAT, ACSS2, ACVR1, AHCYL1, ALDOB, BUB1B, CLCA4, CPS1, CXCR4, CYP3A7, DGKI, GLI3, GUCY1B3, HARS2, NFKBIE, NT5C1A, NUDT8, OR10R2, OR10S1, OR2T11, OR2Y1, PLCE1, ROCK1, TACR2, TLN2
Negative_936	CES1, EFNA5, IQGAP3, OR2T33, ROCK2, THBS2, SERPINF2
Negative_937	AFMID, CACNA1E, CDC7, DKK1, EFNB1, ENPP7, IFNG, LIPT1, NR1D1, PMVK, RAB5A, RBPJ, SMURF2, TJP3
Negative_938	KDR, FBP1, FZD3, IL3RA, MAP3K6, PPA2, SKP2, SORD, SUFU
Negative_939	ACADM, ALAS1, TNFSF4, TSC1, UGT2B11
Negative_940	IVD, CCL26, CYP27A1, EFNA2, GMPPA, IL6ST, MAP4K4, MAPK12, NEU3, NR5A2, OR4D6, PDE6H, PLXNB1, TSLP, HLA-DRB3
Negative_941	ACOX3, CES2, DDX51, FCGR2B, FZD2, GMPPA, IL22RA1, MYH10, OR9G4, PLXNA3, SARS2
Negative_942	GP9, ABLIM2, ADCY8, BCAR1, BDH1, CACNB4, CASP9, CDO1, CRY1, CSNK1A1, EIF4B, ENAH, GALK2, GRB2, GSTA5, HLA-DOA, HSD17B1, ICAM3, IFNGR2, IGF1, IL12RB1, ITGA3, MPP5, NAT6, NSDHL, OR52A1, OR9G1, ORC6L, PKMYT1, PRKAR2A, RGS3, SDC2, SMAD3, SMARCA2, SMC1B, SPRY3, TAS1R3, UBE2K, VTI1B, WNT9B, CSGALNACT2, HLA-DPA1

Negative_943	AK1, ADRB1, ALAD, AMD1, ATP5E, CD38, CNTN1, CTNNA2, EPHA5, F13A1, GLG1, GRHPR, GSTM4, HAAO, HYAL2, IRS4, LIPE, MAP3K13, MAPK8, MARS, NOX3, NT5C, OR2B2, PLA2G2D, PRKCA, PTPRZ1, PYGL, RENBP, RXRG, SETDB1, TCIRG1, TYK2, VCAM1, KIR2DL5A, PLA2G12B, TNFRSF10B
Negative_944	GGH, GK, PLG, ACOX1, ADCY7, ALOX15, APOA1, B4GALT7, BDH1, CD99, CDKN1B, CLTB, DAPK3, DIAPH3, DLL1, EPAS1, GALNT14, GNAI2, HSPA2, HTR6, IL28A, NCF1, NKD1, OCRL, OR2L8, OR52W1, OR5AK2, OR9A2, POLR2E, PRKCH, PTGER1, RASGRP3, RRM2, SGMS1, SHMT1, SMPD2, SPHK1, SULT1A2, TAP2, TSHR, SERPIND1, SERPINE1
Negative_945	FES, NPL, ACOT12, ADRB2, AGXT2, AMDHD1, ASIP, BMPR2, CCNH, DIAPH1, DRD5, ECSIT, EPHA3, HAGHL, IL10RB, JAM3, KNG1, MAN2A1, NCK1, NKD1, OR52I1, OR7G2, PAK6, PGS1, PRKAB1, PRSS1, RBPJ, RELB, SPP1, SUCLG1, TGFB2, MAP3K7IP1
Negative_946	RET, TPR, ALG12, ATG12, CALML6, DPM1, GOT2, HTR7, IQGAP3, NCOR2, NT5C3, PROS1, ROBO3, SESN1, SOCS4, WWP1
Negative_947	MUT, OSM, ACHE, ALDH1A3, CES2, CLCA2, CLDN22, CYSLTR2, DOCK1, EARS2, IL12RB2, LAMB1, LFNG, MAP3K6, NRG3, NT5M, OR1M1, OR2T2, OR3A1, OR6C1, OR8D1, OR8H2, OR9Q2, PLA2G10, PLD1, POLR3G, PPP2R2C, PRKAR2A, RFXANK, RPS6KA1, SKP2, SNAI2, SPRY1, STK3, UBE2L6, UCKL1, VCAM1, YWHAZ
Negative_948	CS, ITK, MYC, ADORA2B, ARHGEF4, BDNF, CCR5, CDS2, CHST12, CNTFR, CTBP2, CTNND1, CXCR4, CYP17A1, CYP2A7, DDX55, EFNA4, EHHADH, F13A1, FGF11, FGF6, GNA15, GPLD1, GUCA1B, MAP2K3, MGLL, NARS2, NCOR2, NLGN3, OGDHL, OR11L1, OR14I1, OR7D4, OR8H1, PCYT1B, POLR2B, PTCH2, RASGRP2, RASSF1, SARS2, STX18, TAS2R16, TAS2R48, TNFSF14, VNN1
Negative_949	LIF, NF1, TNN, CACNA1I, CDC2, CDKN2C, CTBS, DUSP14, EXOC7, FLAD1, GRIA3, GUCY2D, HSD17B4, IDI2, IRS2, KLRC1, MYH2, NGEF, NTRK1, OR10H5, OR1D5, OR1S1, OR51E1, OR5B21, OR5D18, OSMR, PPP1CA, PYCR1, SRGAP3, STX10, TAS2R8, UBE2K, UXS1, VANGL2, YARS, SERPING1
Negative_950	ADA, ADK, HK1, MVD, TH, ABLIM3, ADCY1, AKT2, ALOX12B, ARSD, ASS1, BMPR1B, CAMKK1, CASP3, CTPS2, CYP3A5, DEGS1, FUT7, HMOX2, HPSE2, MKNK1, OR56A4, OR8D2, PLIN, RRAS2, SMURF2, SUV39H1, SV2B, TNFSF18, TP53
Negative_951	CRH, TYR, ACADM, ARPC2, BCKDHB, BMP7, CACNB1, CCL21, CCNA2, CERK, CPT1C, DHDH, EDNRA, ENPP1, FZD2, HADHA, HARS, HMOX2, IL10RA, IL18RAP, INHBC, JAG1, LARS2, MAP3K8, MAPK3, MDM2, OR10A3, OR2AE1, OR2M5, OR4A16, OR52H1, P4HA2, PIK3CA, PIK3R4, SOCS1, STK4, UGT1A10, UGT2B10, UNC5A, WNT3
Negative_952	BCR, C3, DCT, HDC, NGF, ACP6, ATIC, B3GNT2, CAPN2, CCR1, CD244, COL3A1, CYP19A1, ENPP6, FTH1, GAD1, HCLS1, IL5RA, IRF5, ITGB3, LCMT2, MCM7, OR13J1, OR1B1, OR2M4, OR51B2, OR7A17, P2RX6, PHKA2, PIGB, PIK3R5, PLD2, POLE3, POLR3D, PRKCA, RBL2, SEMA4G, SIGLEC1, SMC1B, SOD1, SPAM1, STEAP3, UBE2L3, HLA-DPB1, PNLIPRP1
Negative_953	AMT, AREG, ARG1, CCL27, CYP2S1, DUSP4, EIF4E, ELK1, ERBB2, HMGCS2, IAPP, IL2RG, JAM3, KDSR, MCM6, MTAP, OR10AD1, OR4A5, OR52W1, OR5D18, OR7G3, PRSS3, SH2D2A, TAS2R7, TNFSF12, TOMM40L, WNT6, MAPK8IP2, ST6GALNAC6
Negative_954	CR1, F11, MVK, RB1, TK2, ACP6, ACSL4, ADCY9, AKT3, ALDH1A2, AMD1, AMPD3, ANAPC4, ARSA, ATP4B, C3AR1, CARS2, CCR5, CHST12, CLTA, COL4A6, CSNK1G1, CYP2J2, CYP2U1, DDX47, H6PD, HLA-G, ITGA5, ITGB4, MAP4K1, MTHFR, NOX1, NRXN2, OR2C3, OR2M4, OR4K17, OR51B6, OR51M1, PANK3, PFKP, PIK3R5, PMAIP1, PNPLA4, PPAR, RBX1, RPS6KA1, SMAD7, ATP6VOA2
Negative_955	ADO, BAD, C3, ASMT, CACNG7, CCNH, CD72, CDC26, CDKN1C, CLDN5, CREB3L1, EPHA1, ERBB3, FUT8, GAMT, GPX5, IFNAR2, IGF1R, NODAL, OR2T4, P2RX1, SLC2A2, WNT16

Negative_956	CLCA2, CPT1C, CTSS, FTMT, GNA11, OR13F1, PTPN7
Negative_957	TKT, ADSSL1, CDH2, CLDN5, EXTL1, FLT1, GALNT5, PDE5A, PIGW, TICAM2, W ASF3
Negative_958	AR, GDA, RDX, TKT, ACTG1, ALPP, ARHGEF1, BCKDHB, CCL5, CCNB1, CYBB, DU SP1, E2F3, HA02, IDH1, IFNGR1, IL17RB, IL20RA, ITGA11, MAP3K2, MCM7, OR51B2, ORC1L, PI4KA, PLXNC1, PPA1, PPP2R2C, RAC2, SC4MOL, SEMA4F, S ETDB1, SH2D1A, SNAP23, ST3GAL4, TAS2R40, THBD, TUBB2B, TNFRSF10C
Negative_959	C5, CCL25, CREB3, CXCL10, DDX23, DHCR24, EIF4B, FCER1G, IL21, IRF3, I TGA4, KITLG, KLRC3, LEF1, LIPG, MCM2, OR5B12, PAK6, POLD2, PYCR2, RBX 1, SEMA4A, SFRP4, STAT3, STMN1, TAS2R5, YARS2, ATP6V1E2
Negative_960	AGL, CSK, ID4, ACOX2, ADRB1, CAMKK2, CD48, CDS1, CHIA, DARS2, ENTPD3, GSTM4, GSTZ1, HAAO, HMBS, HYAL1, IL6ST, IRF5, MGAT1, MTMR1, NTSR1, OR 10Z1, OR4B1, PDPK1, PPP2R5E, SUOX, TAS2R40, TUBB4, PNLIPRP1, TNFRSF 10A
Negative_961	CBS, LPO, NF1, PGP, ALG9, ARHGEF6, CD226, CUL1, DUSP3, ENPP2, GZMA, PA X6, PI4KB, PRSS2
Negative_962	ABO, LCK, TNN, AANAT, CD74, CDS1, FABP4, GAL3ST1, GGT7, IRF7, MAP3K8, OR11L1, OR51V1, PLXNA1, PPP1CA, RALBP1, TSHR
Negative_963	LSS, ACSM1, C9orf95, COL4A6, CRLF2, CYBB, DDX50, FUT3, GPLD1, IBSP, I NPP5A, IRF9, ITGA3, NFKBIE, NUDT8, OR5V1, PVRL4, RASGRP3, SELL, SFRP 2, SKIV2L2, SLC2A2
Negative_964	CLDN3, PIP5K1B, STAT6
Negative_965	ALDH3B2, CISH, CRHR1, FZD6, GYS2, HADH, IL20, OR2A25, PIGW, PLAU, PLC B4, QPRT, SQLE, SV2B, TSHR, TYRP1, ATP6VOD1, HLA-DQA2
Negative_966	CDK5, ENO1, HADHB, NEGR1, OR3A1, P2RX2, PAICS, PIP5K3, VEGFC
Negative_967	ALS2, BIRC5, CKMT2, CSNK2A2, FUT3, GNAS, HMGCS2, IFNA13, IL21R, IMPD H1, NAGA, NMNAT3, ONECUT1, OR8I2, OXTR, PDE6G, PDGFB, PIAS3, POLR2F, PVRL2, ROCK2, SHC3, SUFU, TSLP, HLA-DPB1
Negative_968	CS, F5, SDS, ATP5E, CACNG8, CTF1, DVL2, HNF4G, HSPA2, IFNA4, KCNB1, MA ML2, MCM6, OR10R2, OR11H6, PHKB, PPP1R1A, PPP1R3C, PPP2R1B, STAM2, S TT3B, STX1A, UNC5A
Negative_969	DCN, ITK, LIF, RFK, SRM, STS, ABLIM2, ACADM, ACTN4, ADH5, AGPAT1, ANAP C2, ARPC5, AXIN1, BMPR2, CCDC6, CCR8, CSNK1E, CTNND1, CYP11B2, DAPK2 , DUSP7, EPHA7, FGF17, FGF22, FSHR, FUT4, GUSB, HLA- G, INPPL1, MYH7, MYLK2, NCF1, NCK2, OR10G7, OR52B6, OR6C1, OR6N2, PDG FD, PLA2G2F, PTDSS1, TGFB2, UNC5C
Negative_970	FOS, GSS, HK2, MPZ, ATP5G2, AXIN1, CPOX, CSNK1G1, CYP2C19, CYP2S1, DP YS, EPHA3, GNRH1, HTR4, KLRC3, MAML3, MEF2C, MTMR6, NME4, NODAL, NUDT 5, OR1S2, OR2A5, OR2B11, OR4M1, P2RX7, PDGFRA, PLCB4, PPP1CB, PTGER3 , RRAS, SEMA3F, SREBF1, MAPK8IP3
Negative_971	FAH, FST, JUN, LPO, TNC, ABCC8, ALAD, ALG1, ALG8, ARHGEF2, ATP6V1H, CA RS2, CCL4, CES1, COL6A2, CYFIP2, DHCR7, EGLN1, FADD, FUT4, FUT9, IFNB 1, IL29, IPPK, ITGAX, OR10H2, OR11I1, OR4D9, OR52I2, PCYT1B, PDE3B, PR KAG2, PSPH, PTDSS2, RBL2, RPN2, SELL, SLC25A4, SMC1A, STX12, UROD, WN T7B
Negative_972	GSR, NPY, ACOT12, ALDH1A1, ALG12, BATAP2, CCL26, CD79B, CSF2, DERL1, DGAT1, DGKE, DNMT3A, DTX3, ELK1, GALNT13, GUCY1B3, HLA- DOB, IL17A, INPP5B, IRF5, OR10J1, OR2A25, OR2M3, OR4C15, OR51E1, OR5 H2, OR5P3, OR6K3, OR7A5, PLA2G2F, PLAT, POLE3, SPRY1, STAT6, SUCLG1, SULT1A1, YWHAB, YWHAE, HLA-DQB1, ST6GALNAC1
Negative_973	ATM, BTD, CRY1, DHRS4, G6PC, INHBA, NUDT12, RAPGEF2, SDC1, TCIRG1, YW HAG

Negative_974	C9, F2, MPI, ACSS1, AGPAT2, ALDH6A1, B3GNT5, CBLC, CFLAR, CREB3L4, CR Y1, CXCL2, EPHB4, ETNK2, FGD3, FRAT1, IFNA8, JAK1, NCOR2, NOD1, ONECU T1, OR1L4, OR51E1, OXCT2, PARD6A, PAX6, PIK3R5, POLD3, PRKAR1B, PRKC G, PRPH, PSME1, RASGRP4, RDH10, SESN3, TAS2R3, TJP2, TLN2, TRPM5, TUB B2C, UPP1, WIF1, WNT10A, ZFYVE9, ATP6V1G2, PNLIPRP2, SERPINB5
Negative_975	GP5, ID2, ACTB, DUSP5, MAP3K8, MAT1A, NFKBIA, POLE, PRDX6, RASGRP2, R UNX1T1
Negative_976	APAF1, ELK1, GADD45A, GLI2, GNPDA1, MAP3K12, MAP3K2, MAP3K4, MECR, M MP14, MMP2, MYH11, NARS2, OR5M9, PIAS4, PLA2G10, PLA2G6, PMVK, PSEN1 , ROCK1, RRM1, SHMT2, ST8SIA1, TRAF2, MAPKAPK2
Negative_977	OGT, CCR3, CNGA4, FRAT2, IFNW1, OR2T3, OR6A2, RAB23
Negative_978	MTR, AADAT, ACADM, BACE2, CBLB, CBR1, ETS1, NCAM1, NFAT5, NR5A2, NUDT 12, PDGFB, PLAT, PLAUR, RAP1B, RFNG, TNXB
Negative_979	CAD, GK, AXIN1, BCMO1, F2RL3, G6PC, GALNTL5, GZMA, HMGCL, IL23A, ITGA 7, ITGAL, NFKBIE, OR2K2, OR2W1, OR6T1, OR8D2, PARS2, PARVA, PDE4A, PO LD3, PPT1, PTPMT1, PVRL3, TGFBR2, WASF2, PPARGC1A
Negative_980	F11, HPD, LCT, PAH, WAS, ALG5, APRT, BMPR1A, C3orf10, CACNA1I, CD3E, C DC42, CXCL1, CYP11B1, CYP4A22, ECHS1, EPHB6, FTCD, INSR, JAM3, LTB4 R2, OR4F6, OR4X2, OR6Y1, P2RX1, PDE4C, PPP1R1A, PRKACA, RELB, ROCK2, RPE65, RPS6, SH3BP2, VTI1B, ATP6VOD1, TNFRSF17
Negative_981	KHK, SPN, ACVR2A, ALDOC, CAMKK1, CASP10, COL2A1, COL5A2, CYP3A4, DDX 19A, DGKZ, DVL3, EPB41, FGF21, GCLC, GRIN1, IFNA21, IFNA6, IFNAR2, MA P3K8, NODAL, OR13J1, OR1G1, OR4C46, PDXP, PIGT, PPP1CC, PRKCG, RALBP 1, SIAH1, SQLE, STX4, TNFSF11, TOLLIP, WNT16, SERPING1
Negative_982	ACHE, ACTN2, ACVR1, ADSS, ALG3, ANPEP, BCKDHA, CLDN17, CSNK2A1, EPB4 1L2, EPHX1, FGF13, FM05, FRAT2, GUCY1A2, HADH, INSR, MAP3K14, MYH7B, NAGA, OR1L6, OR2T1, OR9Q1, P4HA3, PIGO, PLCD3, PLOD3, POLR2A, SH2D1B , SPAM1, C1GALT1C1
Negative_983	CR1, FGA, GP9, JUN, KIT, LCK, NNT, B3GALT4, B3GAT2, CHPT1, CHUK, CYP27 A1, EPHA8, GGT1, GSTP1, ITGAM, KCNJ11, NFKBIB, OR13C3, OR1J4, OR2D2, OR2M3, OR6Q1, PDGFC, PIK3CD, PIPOX, POLR2D, PPP2R2D, QPRT, SELL, SKP 1, SOAT2, TBL1X, TGFBR1, WNT16, PAFAH1B1, PRICKLE2, SERPING1
Negative_984	F5, CASP8, CES2, CSF1R, DDX52, DDX56, DKK2, FGD3, GRM5, GSTM5, HRH2, M FNG, MLYCD, MMP2, MYH4, NANS, OR10A6, OR1L6, OR4S1, OR5D13, PDK1, PPM 1A, PPT1, PRODH, PTAFR, STX1B, TRIP10, TRPM5, TUBA1B, YWHAB
Negative_985	HK3, AKR1A1, B4GALT7, CCL19, CPT2, DGKA, EPRS, FUT3, GALNTL1, HTR2C, IDH3B, IL3RA, ITGA2, MAP2K7, OR1D2, OR4X2, P4HA3, PLA2G2A, PSEN2, SL C2A4
Negative_986	ADCY9, CDK7, CLTB, EFNA5, GALNT6, HTR5A, IFNA4, MAPK1, NCOA4, OR13C4 , OR4C15, PPP1R1A, RDH11, SMPD2, TLN1, UGCGL1
Negative_987	C4B, LIF, SI, ALDH3A1, ANAPC5, CALML3, CKMT2, FZD5, GLI2, HMOX1, IQGA P2, LHCGR, MAN2A1, OR1D2, OR4D1, OR4M1, STK3, VAMP1, CACNA2D2
Negative_988	ACAT2, BTRC, CCL2, GRIN2C, HYAL2, ICOSLG, IQGAP2, LCMT2, MAPK8, OR5M 9, PRKAG1, TNFRSF4
Negative_989	AMT, PGF, ACAD8, BMP4, CACNA1F, CCL27, CCR6, CHST12, CHSY1, COASY, DG AT2, DGAT2L4, DTX1, E2F2, GPD2, GRIN2C, GSTM5, IKBKB, JAG1, KCNQ1, LY PLA1, MAD2L2, MYLK, NAGLU, OR13G1, OR51B6, OR6K2, PAX4, POLR1A, POLR 2E, SEMA4A, SMARCA5, XCR1, YWHAZ
Negative_990	SCD, ACSM3, ACSS3, ACVRL1, ATP5G3, BCL10, BMPR1A, BUB3, CD244, CHRNA 7, CLDN10, CSNK1E, CYP21A2, DDX41, DIAPH1, DUSP3, ESAM, FGF17, GOT1, GRAP2, IL17B, IL6ST, KLKB1, MAP4K3, MYLK2, NKD2, NKX3- 1, NRAS, NT5C, OR52E8, OR52N2, OR5R1, PAK2, PLAU, PRKCA, PRKCE, SOAT1 , TPMT, UPRT, WNT10B, PRICKLE2
Negative_991	ATP6AP1, CCND1, FUT8, OR5D16, POLE

Negative_992	AK1, GH1, SMS, ALOX15B, ALOX5, ARHGEF2, BIRC3, BUB1B, CCL19, CCL23, CD36, CD55, CDKN2B, CES1, CLDN1, COL11A1, CXCL6, CYFIP1, CYP2A13, DPA GT1, FUT1, GALNT2, GFPT2, GJD2, IBSF, IL18, JAM2, MTHFD1, MTHFR, NOTC H2, OR10P1, OR2B2, PTAFR, RASGRP1, RFXAP, SETD8, SLC25A6, SOAT2, SUC LA2, VAMP2, VASP, PHOSPHO1
Negative_993	ACOX3, ALG6, CDH15, CTSS, LDHD, OR3A1, ZIC2
Negative_994	DCK, F2R, SI, ACP5, APH1A, ATP6V1A, CCKAR, CCL16, CFL2, CHSY3, CLCA2, COL11A1, CTTN, EPHB6, FGF9, GZMB, MAP4K4, MAPK11, MCCC2, MGST3, NCF2, NCR3, NTSR1, OR10G9, OR10H3, OR52K2, OR52N2, PCK2, PIK3R4, PPBP, RA SA1, RPS6KA1, SCIN, SDC1, TACR2, TCIRG1, TNFSF11, TNFSF14, XYLB, HLA -DQA2, MAPKAPK2
Negative_995	BAX, CGN, FER, GPT, IL2, LHB, ACY1, AGTR1, B3GALT2, BDKRB2, CLDN1, CSF 1R, CXCL11, DDOST, FUT7, GMPPB, GNAI1, GUCA1A, IL29, MECR, MYH11, NAT 5, OR8J3, PFKP, PIGN, POLA1, RAC1, SIAH1, SULT1A2, TBL1X, TOMM40, UXS 1, VEGFA, YWHAE, YWHAZ
Negative_996	CGA, HK3, PML, ACSM2A, ADCY5, BACE1, CCR9, CD8B, COL5A2, DDX18, DGKE, EPHB4, GNB1, HLA- F, HSD17B4, IL6R, MAOB, NT5M, NTN1, OR14C36, OR4F17, OR51B2, OR51F1, OR52D1, OR56A4, OR8H1, PIK3R1, POLR1B, POLR2H, PRKCH, PSEN2, PYGM, R ELB, SLC27A1, TUBA1B, YKT6, YWHAQ, HLA-DRB3, PRICKLE2
Negative_997	GSR, RDX, AGTR1, ALDH2, ATG7, ATP6AP1, CASP6, CCR7, CYP27A1, DDX47, E NTPD7, EPB41L1, EPHB4, RELA, RHOQ, SCP2, SEMA4B, UGCG, TNFRSF13C
Negative_998	LCK, ACSL5, DAPK3, DDX50, ENPP1, FZD10, INHBB, ITGB8, LAP3, OR2M3, OR 52L1, PCCB, PRNP, TAS2R50, TYROBP, VAMP1, HSP90AB1
Negative_999	BAD, C8B, GP5, KDR, MIF, PVR, AADAT, ACOX2, ACSM3, ADH4, AHCYL1, BCKDH B, COL4A1, CREB5, DDX50, DHCR7, DTYMK, EFNA3, EFNA4, EPHA5, FBXW11, G MPPA, GNPDA1, H6PD, LAMB4, LCMT1, LDHA, MAPK3, MCM5, OR10AG1, OR52L1, PCNA, PDXK, POLR2J, SOS2, TRAF6, TRPC1, ULK1, VAV1, PPP1R12A
Negative_1000	CR1, GP5, IL5, SYK, AADAC, CACNA1H, CHSY3, DIAPH3, DTX3, DUSP10, EXTL 2, FGF3, IL11RA, LLGL1, MAPK9, OR10A6, OR2M7, OR51B4, OR51B6, OR56A1, OR5B21, OR6C70, OR8B12, PIGB, PYCR2, RALB, SC5DL, STK4, TP53
Negative_1001	FN1, ACSL3, ACTB, AKR1D1, ARNT, ARPC3, BCL2, BCMO1, CARS2, CNGA3, CSF 2RA, CSNK2A1, DRD2, HSD17B1, IFNAR1, ITGA3, KIR2DS4, LRDD, NUDT2, OR 12D3, OR4L1, OR4N5, OR51B6, SSH3, WARS, WNT3, YWHAB
Negative_1002	ALDH4A1, ALPI, B3GAT1, CACNB2, CCL23, CDKN1C, CLDN7, CTLA4, CYP2U1, GUCY1B3, ICAM3, IDH3A, KLRK1, MAD2L2, MAOB, NFASC, NRXN2, NTNG1, OR1 0H3, OR51Q1, OR9K2, PARD6G, PLOD1, PYCRL, RAPGEF2, RASSF5, ROCK2, SE TD2, SMC1B, SOCS4, SOX17, TCF7L2, THY1, TLR4, ZIC2, ATP6V0E1, B4GALN T1, TNFRSF10C
Negative_1003	CRK, EZR, GLA, TNC, AMHR2, B4GALT1, BST1, CASP7, CCL26, CMAS, CRKL, DH RS4, DOLPP1, FGF14, GDE1, IL7R, MGST2, PAK2, POLR3D, PRSS3, PTCH1, SM URF1, TCF7, TCIRG1
Negative_1004	ID4, NGF, ACOX1, ADRB2, ANAPC5, AOC3, GALNT7, IFNGR1, KYNU, MAD1L1, M APT, MAT1A, NODAL, PDGFB, PRODH, TNXB, UGT1A10, PRICKLE1
Negative_1005	HK1, ALG5, CD28, CXXC4, DDX23, ENPP1, GAB1, GART, NTSR1, OR51B4, OR52 E6, PIK3CD, PLA2G6, PRKACG, PSME2, RGS3, SC4MOL, ULBP1, PHOSPHO1
Negative_1006	F2R, ID2, MVD, TNF, ALDH3B2, ALPPL2, AMHR2, ARPC4, B3GALT2, CD8A, DDX 18, DIAPH2, DLAT, DPYD, EREG, HAP1, HSP90B1, IL13RA1, KCNQ1, LTBR, OR 51I1, OR52W1, OR5D18, PDE4D, PFKL, PIK3CD, PTCH1, RASGRP4, RASSF5, T RMT11, MAPK8IP1, ST6GALNAC6
Negative_1007	AOC2, B4GALT1, CNTNAP1, CYP26C1, DAG1, DGAT2, DTX2, GRIA2, HIF1A, IF NGR1, IL12A, IL25, ITGA10, KDSR, MS4A2, NUDT5, NUDT8, OR51S1, OR7D2, OR7G1, PI4KB, PIGL, PKM2, SLC27A1, SMURF1, SNAP25, SOCS5, TLR9, TNFS F9, HSD17B10, HSD17B12

Negative_1008	SDS, ABL2, ACVR1B, ADRA1B, APOA5, APOE, BTRC, CAV2, CCND1, CES2, CLTC, DDX18, IDUA, LCMT2, MYLK, OR13C8, OR2M5, OR2T11, OR9Q2, POLD1, RXRA, SEMA3B, SLC25A4, STAT3, STX4, UGDH, MAP3K7IP2
Negative_1009	AK2, ACADVL, ACTA2, ADRB2, ASCC3, ATP5L, AVPR1B, CREB3L3, DAD1, EXOC7, FGF9, GLG1, GSTA3, HPSE2, IL18R1, LAMB1, MAN2A1, MEF2C, MGST1, MTHFR, NCAM2, NME7, OR10K1, OR14C36, OR4C12, OR8D4, PCCB, PER2, PPP2R5C, PRODH2, PTGER3, SORD, TACR3, TRDMT1, UGCG, UPP2, XCL2, CSGALNACT1
Negative_1010	IL2, TYR, ARSA, ATP5J2, BBOX1, BST1, CACNA1G, CBLC, CCL26, CLDN10, COL5A2, DDX23, E2F1, ENTPD5, EXOC7, FUT8, GAL3ST1, GSTK1, GUCY2F, JAM2, KLRC2, LARS2, NMNAT2, NRXN2, OR2M2, OR2T2, OR51V1, OR5K2, OR5R1, OR8G1, PAX8, PDIA4, POLR3K, PRKAB1, PTGER1, PYGB, RPE65, STX1A, TAS2R48, TFDP1, TMLHE, UGCG, VDAC1, ATP6V1B1
Negative_1011	AGL, KDR, ACP6, ANAPC1, APAF1, BET1L, C7orf16, CSNK2A1, CUL1, CYP17A1, DLAT, DVL2, EFNA4, ERBB4, GARS, GBGT1, GUCY1A2, GUCY2C, HMGCS1, INMT, LIMK2, LTC4S, MALT1, MDH2, MYH15, MYL5, NUDT5, NUMB, OR1C1, OR2A25, OR4K15, OR6M1, PDGFA, PDPK1, PHKG1, POLR2I, PTGES2, PTPN5, RFWD2, TACR2, TAS2R4, TUBA3E, USE1, ATP6VOD1
Negative_1012	ACSL4, ALDOB, BET1L, CHIA, ITGB5, PIGT, SLC12A2, TAS2R5, TP53I3, VARS
Negative_1013	C2, GSTA1, PTDSS2, SRGAP1
Negative_1014	F2, SFN, SYK, B4GALT7, CES2, CKMT2, CYSLTR2, DHDH, E2F3, EFNB3, ETNK1, FASLG, FSHR, GALNT8, GLDC, GLS2, GNAI3, GNAZ, HMGCS2, IL23A, IRF3, MAP2K1, MAP3K11, MAPT, MTAP, NAGS, NT5C2, OR10Z1, OR4N2, OR52E8, OR52W1, OR7A17, PDHA2, PFKFB3, PPP2CA, PTK2B, RHEB, SORBS1, SRD5A2
Negative_1015	FOS, CHST12, COL1A2, CYP2C19, EFNA4, FGF1, GZMA, JAM3, OR6N2, PHKA1, PRDX6, RBX1, STX3
Negative_1016	CEL, CKM, F2, MET, PTS, RFK, AKR1C1, APBB1, APH1A, CD79B, CREB1, EFNA1, ENO1, EPHA3, OR11L1, OR1N2, OR2M3, OR7A5, PIK3R4, PLA2G4A, PLK1, POLR2F, RASGRF1, SOAT1, STX4, TGFB1, TMLHE, TNFSF10, TNFSF9
Negative_1017	BAD, C8A, MOS, ABAT, ATP5A1, CACNA1I, CALML3, CD38, CDC25C, CER1, CHR D, CREB3, CYP2F1, FZD10, G6PC2, GAL3ST1, GGT1, GNA12, GP1BA, GSTA3, GSTO1, HADHB, IL11RA, LYZL1, MAP3K2, NT5C, OR13A1, OR1B1, OR52D1, OR5L2, OR7C2, PHKB, PLA2G5, PRKCG, PSME1, RASA2, SELL, SLC33A1, SPTAN1, STX7, SV2A, TSHB, TYK2, VAV3, YWHAH
Negative_1018	HGF, ACOX3, ACVR1B, ADIPOR1, CHPT1, GNRH2, HMGCS1, IKBKB, LYPLA1, MIOX, RPN2
Negative_1019	MUT, AGPAT4, ALDOC, ATIC, BMP2, CNGA3, CREB3L1, ECSIT, FLT3, GDF6, GTS E1, HMGCL, HSPA2, ITGB2, KIR2DS5, MGAT4A, NCOR1, OR10C1, OR11H4, OR2C3, OR2L13, OR4N2, OR51L1, OR7G2, PARD6B, PGK1, PIK3CD, PRKCZ, SMPD4, UBA1, WBSCR22
Negative_1020	BAD, ACAA1, ACACB, ARPC4, ARSD, ATP5J2, CCR4, CDH1, CDKN2C, CX3CR1, CXCL2, DDX50, EDN1, EFNA1, FGFR3, FUT2, FZD5, FZD8, GDF6, GMDS, GPT2, GRIN2C, HSD11B1, IARS2, IL7R, ITGA11, NKD2, OR1K1, OR2A14, OR4P4, OR52B4, PFAS, POLR2F, SIAH1, SMC1B, SORD, ST3GAL4, STAM2, STX12, TDO2, UNC5D, YARS, MAPK8IP3
Negative_1021	C3, KHK, VTN, ACTG2, ANAPC11, ASNS, ATP6V1F, B3GNT4, BMPR1B, CCR2, CHPF, CXCL6, DAAM2, DGKD, EIF4B, GNAI1, GNAL, GNAT3, GNRH1, GRIA2, IFNAR2, IL1B, KIR2DS5, LYPLA1, MYH14, MYLK3, OR3A1, OR6M1, PDGFRB, PGS1, POLR3D, PRKCG, PRKCH, SEMA3B, SMAD2, SPHK2, STX12, SV2A, TRMT11, UNC5C, UPRT, WASL, YOD1, YWHAH, ATP6V1E1, TNFSF13B
Negative_1022	ABO, EZR, AKR1B1, ALDOC, ALG11, CCL3, CLDN6, CREB3L1, CYP2F1, DDX18, DVL1, EDNRB, ENPP1, GAD2, HCLS1, ICAM2, IL1R2, IMPDH2, MAPK8, OR1M1, OR4K1, OR51F2, OR51L1, PIK3C2G, PTPRC, RAPGEF3, SEMA3E, SH3BP2, SLC2A2, STX16, TAP2, VAMP2, VAMP3, KIR2DL5A

Negative_1023	CCL3, CYP2S1, EVI1, GADD45A, GAS1, HSD17B2, LEFTY2, NODAL, OR1S2, OR51T1, OR52E2, PARVA, PDE3B, PSME1, RGS3, SLC2A1, SULT2A1, TCF7L1, WNT10B, EIF4EBP1, PAFAH1B2
Negative_1024	ATM, SHH, ATP5C1, CCL17, CDKN2D, DGKG, FTCD, FTMT, IGF1R, IRF5, ITGA1, ITPK1, MAPK1, MDH1, NLGN2, OR2T4, OR8D2, ORC4L, PNPT1, PON2, PPARA, SARS2, SEMA4F, WIF1, XCL1, EIF4EBP1
Negative_1025	EGF, GLS, IHH, ACTC1, ADH1A, AGRN, ALDH7A1, C1QB, CADM1, CASP10, CD74, DHDH, EXTL2, FGF14, GPX5, GUCA1C, HDAC2, IAPP, ITGB1, ITPA, LEPR, MYH7, NANS, NFATC4, OR4C46, OR5B3, PDK1, PFKFB2, POLR3G, PSME1, PTCRA, PTEN, SOCS3, ST8SIA5, STX3, TAS2R9, TJP1, WIF1, WNT5B, WWP2, CACNA2D2, PAFAH1B2
Negative_1026	F10, AGRP, APH1A, ASPA, CACNA1C, CD3E, DGKH, FLAD1, GAL3ST1, GMPR2, GUCA1C, IFNK, IRS4, ITGA11, ITGA9, KLRC2, MAPK14, MYH14, NAT6, NCOR2, NPR1, OR2F1, OR2S2, OR4A16, OR4N5, OR52I1, PIGB, PPP1R1A, PPP3CB, PYCRL, RRAS2, SPTLC2, STMN1, TSNARE1, VDAC3
Negative_1027	ADK, PVR, APBB1, AXIN2, CACNA1C, CCND3, CD8B, GAB1, HLA-C, HMOX2, IDH3B, IL7R, LAMB2, OR2A25, OR6X1, OR8D1, OSMR, PDE7B, PDHA2, PIGC, PPP2R2A, PTPRB, RASGRP3, TICAM1, TRMT11, SUV420H1
Negative_1028	CDA, DDC, GLS, HK2, MTR, MUT, PGD, VCL, CBR1, CBR3, CLCA2, CLDN10, COL4A1, CXCL5, CYP1A2, DKK1, DPYS, EARS2, EDN1, EHMT2, ENTPD5, FCGR3A, GSTK1, IL1R1, INADL, ITGAE, ITGB2, MARS, NCAM1, NFATC4, NT5C, NT5E, NUDT2, OR10A5, OR4D6, OR52K2, OR6X1, PIAS4, PROC, RFXAP, SEMA3B, STAM, TACR2, TNFSF8, TRAF2, ATP6V1C2, SERPINC1
Negative_1029	CR1, FES, GAA, SMO, ACY1, AKT2, CALML5, CAMK2D, DGKB, EPHB4, GOT2, GRIIN2D, GUCA1C, LAMC1, MGAT1, OR5P3, OR6C6, OR8U1, POLR2A, RBPJ, MAPK8IP1
Negative_1030	ABO, CRK, ALPL, C1GALT1, CCL25, CHD8, CXCL1, DUSP1, E2F4, EGLN1, GLI1, HHEX, IL20RA, KLKB1, LDHC, NEU2, PDE1C, PITX2, TAS2R60
Negative_1031	CS, ACAD9, ACADSB, ALDH3B2, ALDH7A1, ALOX15, ANAPC10, ASS1, BCKDHB, BDKRB2, BLVRB, CHRM5, CHST11, CSDA, CYCS, CYP4F2, DGAT2L4, DGKQ, EFN A3, EFN B1, ENTPD7, FIGF, FMO4, GAL3ST1, GALNT7, HDAC1, HLCS, IFNA5, IFNGR2, IL2RG, MYH3, MYL2, NKD1, NT5C1B, OR9G1, PI4KB, PLD2, PTPRR, PYCR2, PYGM, RAB5A, RPS6KA4, SELE, SHC1, TYROBP, YWHAE
Negative_1032	AVPR1A, DTX3, IRF9, JUND, LYZL1, NUDT2, OR5AN1, P4HA3, PCYT1B, PHKA1, PIK3C2B, PPARG, SOAT1, TPI1, UGT2A1, B4GALNT1
Negative_1033	ABO, C8G, IL4, ATP6V1A, Bmpr2, CNTNAP1, FLOT2, GNRH1, HARS2, KLRC2, LRP5, OR1L1, OR5AR1, PDGFRB, PFKFB1, PNPO, POLD4, PPP2R5A, SCLY, SOX17, TAS1R1, TGFB1, ZAP70, HLA-DRB5, HSP90AA1
Negative_1034	TNF, ADAM10, CCR1, CSNK1G1, CYP2C18, EREG, GTSE1, IL23A, NT5C3, ORIN1, OR4D1, OR5B3, PGAM1, PIK3CB, SETD1A, ST6GAL1, TAS2R5, WNT3, YKT6, ATP6V1G1
Negative_1035	CFH, FYN, LPO, ACOT11, CCR6, CHRDL, CNGA3, CTSS, ENO3, FLOT1, HLA-G, IFNK, IL13, ITGAX, KCNQ1, MASP1, MECR, NAT1, NCR2, NEU4, NFYC, OR2AG2, OR8B12, PARVB, PIK3CB, PPP1R3D, RALGDS, STAT2, SULT1E1, THY1, TYROBP, UBE2K
Negative_1036	GK2, GNE, LHB, ACACA, ALDH1B1, ARHGAP5, CADM1, CCL3, CDC14B, CES7, CP T1A, CXCL13, DGKD, ENPP6, FBP2, FGF11, GBE1, GCAT, HYAL1, IFIH1, IKBKE, IL20RB, IL22, IRF7, MGAT4A, MTMR2, NEUROD1, NT5C1B, OR2H1, OR4C11, OR5P3, OR6T1, OR7C2, PDPK1, PFAS, POLR2K, PPP3CB, PRKCG, PRPH2, PRP S2, RALA, SHC3, SMAD1, SPRY1, STK11, TFDP1

Negative_1037	HAL, ID1, LAT, LPO, AANAT, ABI2, ABLIM3, ACO2, ALDH3A2, ALPL, ANAPC4, ATP4B, CCNG1, CDC7, DGAT2, DOT1L, GALNT2, GANC, IL2RG, INPPL1, ITGAM, LCMT1, MYH11, NKX6-1, OR2AE1, OR51S1, OR6C76, OR8H3, POLR1B, POLR1C, PSEN1, PTGFR, RELB, SCIN, STX10, TAP2, TBK1, TGDS, THBD, TIAM1, TICAM2, UNC5C, UPRT, PDCD1LG2, PRICKLE1
Negative_1038	FOS, OAT, ACTN1, ALDH4A1, B4GALT1, BET1, CLCA4, COL5A3, CYFIP1, EFNA4, EPB41, GMPA, GNA12, GUCY2D, HRH2, HSD3B1, ICOSLG, IRAK2, MAD2L2, MAFA, NAGLU, OR2T1, OR52B6, OR5P3, POLD2, RFX5, SETD1B, SOCS3, SOD1, STX1B, SULT2A1, TAS2R4, TGFB3, TYMS
Negative_1039	ACOX3, BACE2, BDNF, DDX18, FOXA2, GRIA2, MASP1, NCF4, ODC1, OR2T5, OR4F5, OR5C1, PER3, PGK2, PHKG1, PLCD4, PPP2R2D, PTPN7, RPIA, SMURF2, ST3GAL6, TAS2R16, TIAM2, TUBB2C
Negative_1040	ARPC1B, EHMT2, GLI1, MS4A2, OR10R2, OR1Q1, PLD1, PLXNB3, PPAP2C
Negative_1041	CRH, CES7, CSNK1E, OR4Q3, OR7D2, PNPLA3, SEMA4C, SETDB1
Negative_1042	DBT, GLS, DIAPH1, DMGDH, NEFH, PARD6B, POLR3A, PPCDC
Negative_1043	GP5, ILK, ADRB2, BCL2, BDH2, CASP6, CDH3, CRLF2, CYP1A1, FZD5, GLI2, GPLD1, ITGA2B, NOX3, NRG2, ORC4L, PIPOX, PTPN7, SH3BP2, STX12, UPRT, VCAM1, XCL1, ATP6V1B2, PLA2G12B, PRICKLE2, SERPINE1
Negative_1044	GP9, BST1, CDC25C, DDX23, GIT1, GLB1, GRB2
Negative_1045	AGK, EBP, CD70, CLCF1, INADL, MDM4, MIOX, OR1E2, PCYT2, RAC3, RASGRP1
Negative_1046	ACHE, ACVR1B, ADIPOR1, ALDH3B2, ALG2, ANGPTL4, CACNA1D, CCNB3, CD36, CDC14A, CES1, CYP2F1, DPYS, DVL1, FUT5, IDH3B, ITGA8, LRDD, NR1D1, ORCLN, OR51F2, OR52I2, OR5C1, POLA1, PPP2R2B, RALGDS, SHMT1, SNAI1, STX10, WARS, TNFRSF10A, TNFRSF17
Negative_1047	FGF8, FGFRI, GNAZ, NCR3, PRKG2
Negative_1048	ARG2, DGUOK, OR4C15, OR6B2, PDE11A, ST3GAL1, SUCLA2, THBS2, TRAF5, ZAP70, TNFRSF10A
Negative_1049	C3, GPI, ADCY10, CAMKK2, CD244, CDH3, CNGB1, FGF11, FUT9, GCNT1, HMGR, IL22, IL2RG, IMPDH1, INSR, JAM3, LPAR1, NRP1, OR10H5, OR2T1, RAPGEF4, TAS2R41, ULBP3, VEGFA, WBSR17
Negative_1050	EGF, HDC, ACMSD, ADCY6, BCMO1, CD28, CDC42, CLDN2, CLDN9, CNTN2, CYP2C9, DGKZ, DTX3, ENTPD8, EPHB2, GALNTL5, GRHPR, IL22RA2, MAP3K5, MAP4K4, OR10G2, OR52B4, OR5K2, OR7A5, OSMR, PCK1, PDE4B, PIGQ, PLAUR, POLD3, PPA1, RASA1, RFXANK, RPS6KA1, SARS2, SLC25A5, SLC2A4, SLC33A1, TASA1R2, TAS2R40, TGFA, TPM3, VDAC2, YARS2, ATP6V1E1
Negative_1051	CRH, DUT, RET, ADH1A, AGXT, AHCY, ALG6, ANAPC2, APH1A, ATIC, B3GALT4, C5AR1, CACNG4, CCNA1, CES7, COQ5, CXCR3, DNMT3A, DPYSL2, EGLN1, EPB41L2, GALNTL2, GGCX, GNAI1, GUCY2D, HES1, IGFBP3, IL20RB, LDHC, MAFA, MAP2K7, NADSYN1, NANP, OR10G8, OR11H6, OR14C36, OR1J4, ORC6L, P2RX5, PDK1, PGAP1, PHKA2, PLCD1, PPAT, RALBP1, TAS2R49, TGFB2, UXS1, SERPINA5
Negative_1052	ACSS3, ATP5J2, CCL3, DERL1, DGKQ, DNMT1, ICOS, IFNK, IGF1R, LARS2, MAOB, NFAT5, OPLAH, OR52B6, SUCLG1, SUV39H2, TYMP, C1GALT1C1
Negative_1053	ACAA1, ADRB2, B4GALT3, CCL4, CRY2, CTSS, CYP2C18, CYP4F2, EIF4E, OR10K1, OR3A2, PHKA1, PPP2R1A, SESN2, YOD1
Negative_1054	RET, HIBCH, OR5D13
Negative_1055	FGB, CD34, IL17RB, OR10J5, SNAI2, SOAT2, UGT1A10
Negative_1056	ACTB, ARNT2, B3GALT4, BAIAP2, CCR10, CD14, CLDN15, DIAPH2, DUSP16, ENO3, GALNT13, GALNT8, HADHA, HBEGF, IL10, ITGA9, MAGI3, NCOR1, NRG4, NT5C2, OR13A1, PGM2, PHKA1, PNPLA3, POLR1C, PPP2R5E, PPP3CB, PTGES2, PTK2, TLN1, TUBA3C, UXS1
Negative_1057	AGL, F3, CCDC6, CCR2, CDC45L, CDKN2D, EGLN1, EPAS1, HMOX2, NOTCH2, PGM1, PPP3CA, RGS3, THBS2, UGT2B28, MAPKAPK5



Negative_1058	ACADS, B4GALT1, B4GALT4, CCL25, CCL26, CD3E, DFFA, GLUL, HHEX, IL18, OR5AN1, OR5T3, PDGFD, PLA1A, PNPLA3, PPAP2C, PVRL2, RAP1B, THBS4
Negative_1059	CDA, ACOX3, ANAPC10, ASNS, CACNG1, CCL15, CLDN6, CSF1R, FGD3, FIGF, FZD5, GFPT2, GP1BA, IL1RAP, INPP1, ITGB2, MAD1L1, MAOA, MAPK13, MGAT1, MMP1, NNMT, OR2A12, PGK2, POLE3, POLR3B, QARS, SELP, TAS2R4, WWP1
Negative_1060	SMS, AMDHD1, EPOR, GART, GRIN2D, MAN1B1, OR10J1, OR13C2, OR2S2, OR2V2, PIGU, SEMA3C, TNFSF9, SERPINF2
Negative_1061	GK, BCL2, CAV2, CYCS, DTX4, FMO2, FOXA3, IRF3, NFKBIB, OR2L13, PFKFB3
Negative_1062	C8A, FGB, LPO, ABCC8, AREG, ARPC1B, CASP7, CD47, CD48, CDK7, DGKB, ENO3, GCDH, GDF5, IDH3G, IL25, ITGA6, LHCGR, NR1D1, OR2G3, PDX1, PNPO, POLR1E, PRKAG3, PTPN7, PYCRL, SMC1B, SNW1, TACR1, TP73, TSC2, UNC5A, WBSCR22, XCL1
Negative_1063	CGN, CR1, FUK, ME1, ACSS3, ADRA1A, ATP6V1F, ATP6V1H, CCNB2, CDC23, GNG13, HSPA2, IGF1R, IL23R, MYH13, NUDT8, OR14J1, OR5H2, OR6C4, OR9Q2, PFKFB2, PPAP2A, RXRB, SOCS4, ULK3
Negative_1064	HK1, ME1, ACADM, ACP5, ACVR1C, ALDH2, CCR9, CREB3L4, CSF2RA, CYP11B2, FZD7, GRIA2, IL10, LFNG, MAD2L2, OR2C1, OR2M4, PAFAH2, PCK2, RAPGEF3, ROBO1, SLC27A4, SREBF1, SRGAP2, TAP1, ATP6V1G1
Negative_1065	SP1, TPO, ALDOA, IDI2, KLKB1, PIP5K3, POLR2K, ST3GAL5
Negative_1066	BHMT, CHDH, OR8U1, PIK3R4, PLA2G4A, HLA-DQA2
Negative_1067	CIITA, CYFIP1, GARS, IL21R, NFX1, SV2C, TNXB, UNC5B
Negative_1068	ACTA2, ACTB, ALG5, BPGM, CAMKK1, CSF2, DIAPH3, FLOT2, FOXA3, GLYCTK, GNAS, IFNA16, IL5RA, LM07, LRP6, MAP2K6, NAT5, NFX1, NME2, OR4C15, PCB, PFKM, POLE4, SDC2, UNC5D, ATP6V1G2, MAPKAPK3
Negative_1069	CEL, HPD, ALS2, B4GALT7, CREB3L3, CYP19A1, ECHS1, EIF4B, FGD3, GNG3, HTR2A, ICOS, KIR2DS5, NFATC4, OR51S1, OR52R1, OR8D1, PPP1R3A, SPI1, TOLLIP, UROS
Negative_1070	CDA, ACADM, ACTN4, ALDH2, APOA1, ASMT, ATIC, BLVRB, CCNA2, CCNH, DDX51, DFFB, DHRS4L2, DVL2, GRB2, HARS2, HMOX1, IL21, IRAK3, ITCH, ITGA6, KIR3DL2, MAT2B, NCF1, NFE2L2, OR10C1, OR11A1, OR4P4, OR5AP2, PIGF, PLCD4, POLR2B, PPP2R5C, PRODH, PROS1, PTCH2, RASA2, SMURF2, SOS1, SV2A, TYRP1, UBE2L6, UGT2B11, VASP, YWHAE, SERPINB5
Negative_1071	GNRH2, LAMB1, PMAIP1, SEMA3E
Negative_1072	ID4, ADSSL1, CD59, CDH15, CRKL, CTF1, CXXC4, DIAPH3, EPHA2, FGF20, FUT7, GPAM, GRIN2D, HIF1A, HTR5A, MAP3K6, NTRK2, OR10X1, OR2B6, OR5A2, PIGX, PIP5K1A, POLE3, PPP2CA, TACR1, TP73, UGT2B4, KIR2DL5A
Negative_1073	AR, MET, APOA2, ARPC1B, BMP8A, CACNA1E, CLDN7, CRY2, EPHA6, EPRS, FMO1, FMO4, GMPR, LALBA, NEFL, OR1S2, OR2T6, OR52K1, OR5A2, PDCD1, PLA2G10, PPP2R2B, PTEN, PTGIS, PTGS2, RPS6KB1, SKP2, ST8SIA5, TFPI, TNFSF10, UBA1, WASF3, SERPINC1
Negative_1074	CRK, PVR, SRF, ATN1, ATP5A1, B3GNT2, C5AR1, CANT1, CYP11A1, DDHD1, ENTPD6, GNA13, GNB1, GRLF1, HTR2A, IMPA2, ITPKB, MAN2A1, MAP3K14, MAT1A, NKX3-1, NRG4, OR10Z1, OR1M1, OR2T8, OR4N2, OR5AU1, PARD6B, POLE, PPP3CA, PVRL1, RELB, SPRY3, ST3GAL1, VARS, ATP6V0A1
Negative_1075	F2R, UBB, AHCYL2, BACE2, GLI3, OR52K1, PCNA
Negative_1076	CKB, DHH, STS, ABI2, CLDN5, COASY, GDF5, LTB4R2, MAN1A2, OR4F15, OR4F5, OR7D4, PIGL, TGFA, UROS
Negative_1077	SRC, FRAT1, JAK3, OR52W1, PANK4, SEMA3A, SOS2
Negative_1078	DRD5, EFNB3, GALNT7, HGSNAT, VARS
Negative_1079	ADSS, ALPL, ARAF, CACNG5, CDKN2C, CHEK2, CHIT1, FASN, FOSL1, GRB2, INPP4B, NOS3, NUDT2, OR4N2, OR5A2, PPOX, PPP1R3A, RBPJL, TNFSF10
Negative_1080	ACP6, CTLA4, CXCR6, GARS, NAT6, WNT16

Negative_1081	BTC, CRH, CS, DBT, GDA, LIF, NPL, TAT, ACHE, ADORA2B, BAI1, CAMK2D, CHRNA7, CHUK, CLDN6, CXCL6, DPM1, GSTO2, GUCY1B3, HIBCH, MPZL1, MTHFS, OR10A6, PLXNB1, POLR3H, PRKY, SC4MOL, SUV39H1, TCF7, TGDS, TRHR, WIF1
Negative_1082	AK3L1, ALDH9A1, OR4D1, RGS3, RPE65
Negative_1083	INS, KDR, ACACA, AKR1B1, C1QC, CD48, CDC25C, DIAPH3, DUSP10, FCGR3A, FGF20, FLT3, G6PC, GNA15, HSP90B1, LAMC3, NCKAP1L, NCOA4, PAPSS1, PERP, PKMYT1, PLA2G4A, PLXNA3, POLR2F, PVRL4, RETSAT, SKP1, SKP2, SOAT1, TNFRSF9, TUBB
Negative_1084	CEL, ACADL, ACP6, ACSL4, ALG3, BMP8A, CACNA1C, CD34, CDK6, CYSLTR1, DAXX, ENTPD7, F13B, FDFT1, FOXA2, GCLM, GSTM3, GTSE1, HIP1, HPSE2, HSPA8, ISYNA1, MAPK13, MDH2, MGAT1, MGST2, OGDHL, OR10G3, OR13C2, OR52M1, PRODH2, PTPRB, PTPRR, RBPJL, SULT2A1, TAS2R40
Negative_1085	GK, LAT, LPO, AANAT, ATP6V0C, AXIN1, CDK7, CSNK1D, DLL4, DTX3L, FRAT1, GRIA2, HSPB1, IL21R, LCAT, MAML1, MDM2, NANS, NEU2, NRG3, NT5C1B, NUDT2, OR1N2, OR8K5, PPP2R5E, PTDSS2, RASGRF1, SCIN, SYNJ2, TNFSF11, TNFSF18, WNT3A
Negative_1086	MUT, ALG12, ATP5C1, C1QC, CAV1, CYFIP1, DUSP1, FGF18, GALNT13, GATM, GCLC, GMPPA, MADCAM1, NFX1, NKD1, OR1S2, OR2M4, PPA2, PRKCA, RDH11, SLC25A4, SOX17, SPP1, SPRED1, TBL1Y, HLA-DQB1
Negative_1087	NF1, ACP1, ACVR1, ARHGFB7, BBC3, CD40LG, CD80, CFL1, CHDH, CX3CR1, CYP1A2, DDX52, DGKG, DNMT3A, DUSP3, EPHA8, EPHB4, FABP3, FBP2, FGF20, FUT5, GJD2, GUCY2F, HLA-DOA, IGF1, IL10RB, IL12A, IL24, NAT5, PIK3C2B, PLAUG, PRPH, PSEN2, RRS, SELPLG, SFRP4, SUCLG1, TAP2, TGDS, TMLHE, YARS, SERPIND1
Negative_1088	DDO, FST, MOS, TNFR, ACSL1, ADIPOR1, ALDH7A1, AMPD3, CAMKK2, CIITA, CLDN2, CNTNAP2, DUSP16, EDA2R, ENPP7, EPHB3, FGF11, FRAT2, FZD2, GSTO2, HSD17B4, HSD3B7, IL15RA, IRF5, MAP2K6, MECR, MGLL, MKNK1, MTMR1, MYLK, OR10H5, OR1L4, OR2M3, OR56A1, OR9K2, PIK3C3, PIK3R5, POLD3, PRKCE, SORD, TGFB2, TRAF4, UBE2L3, UNC5C, USE1, VAMP3, PRICKLE2
Negative_1089	BTC, C7, CBL, EPO, MSN, SDS, UBB, ACSL6, AKT1, ALDH1A1, ALDOB, B4GALT7, BRAF, CNDP1, CNGB1, COL5A1, CREB5, CSNK1G2, DGKH, E2F2, ELK1, GANC, IFNG, IL2RG, ITGA3, MCM4, MDM2, METTL2B, NANP, NT5C3, OR10AD1, OR52E6, P2RX2, PDGFB, PDPK1, PIK3CB, PSENEN, RAPGEF1, RBL1, RPE65, TBK1, TLR3, WNT8A
Negative_1090	CASK, CD19, CD36, CLDN1, EFNA5, IL9R, IMPDH1, LEF1, NUDT2, OR51I2, PCYT1A, PFN2, PIGH, PTPN11, PVRL2, WNT11
Negative_1091	GH1, MVK, TK1, XDH, ACADVL, ALOX15B, ARPC3, C3AR1, CACNG8, CADM3, CCR1, CXCL6, DDIT3, DKK2, DNMT3A, EHHADH, EHMT1, ELK4, GNRHR, GSTM4, IL18RAP, KLRD1, MAGI2, MCM5, MGST2, NFKB2, NT5E, OR10H3, OR10K2, OR51V1, OR5R1, ORC3L, PAK7, PLA2G4A, PLXNC1, PVRL4, QARS, RRM1, SMAD3, SORD, UBE2L3, HLA-DRB3
Negative_1092	ASIP, CNTNAP1, CYP26A1, GUCY2F, NPR1, NRXN1, NT5C3, OR5H2, PAK6
Negative_1093	ME3, RPE, ACSL6, ALDH1A1, CAMK2G, CD80, CDH3, CDK7, CDKN1A, COQ5, CYFIP1, ENTPD7, EXTL1, GLI2, GOT1, GPD1L, HSD3B7, HYAL1, NMNAT1, PI4KA, PKMYT1, PRKAR2A, PRKG2, RASSF5, SEMA3E, TAS2R40, TRADD, TRHR, UBE2L3, UGT2B17, YWHAG, YWHAQ, HLA-DRB3
Negative_1094	ADRB3, ALDH1B1, AMPD1, APAF1, B4GALT3, CHIA, CKMT2, CLTC, CRY1, CTNNA3, DCTD, DDIT3, EXTL2, G6PC, IFNA16, IRAK3, MAN2A1, NR1H3, NUDT2, OR10P1, OR2AE1, OR5M8, OR6F1, PTGES, SAT1, SESN3, TRIP10, TYROBP, WNT2B, CACNA2D1
Negative_1095	ACAT1, ACOT12, ACTC1, AHCY, ARSB, DAPK3, DHCR24, FUT4, HNF4G, IL28RA, LTBP1, MAOA, MYH15, OR11H6, OR2S2, OR2T1, OR52A5, OR8H2, PAK1, PPP1R3B, PVRL1, SDHA, SETDB1, TRAF6, WNT9A

Negative_1096	CGA, CKM, FGB, OSM, SHH, ACSL5, ATG12, CCL5, CDKN1C, CYP2A13, CYP3A43, DVL1, ETS1, FZR1, GBTG1, IL13RA2, MAD2L2, MMP2, MTHFS, NAT5, NCOR2, OR10G3, OR11H6, OR5P2, PIK3CA, PIK3CG, PIM2, PRKY, PRSS3, SDHC, SHC2, SRD5A2, TAS2R40, TIAM1, TPK1, TRAF4, UBE2K, ATP6V1G2
Negative_1097	IL6, LPO, TYR, ABCC8, ABP1, ALDH4A1, ATP5H, AVPR1B, BCAT2, BPNT1, CHAD, CYP2A7, ECSIT, EDAR, GLDC, GUCA1C, GUCY2C, HLA-C, IL12A, ITGAE, MAPK3, OR13C2, OR2F2, PLCB3, POLR2B, POLR2H, PRNP, RPS6KA1, RPSA, SREBF1, SUCLG2, VKORC1, XIAP, YARS2, TNFRSF1A
Negative_1098	CACNA1A, FGD3, GNRHR, IRF9, ITGB8, SGPP2, SPRED1, TICAM1, TJP2
Negative_1099	CR2, F2, ALDH2, CDC25A, CLCA4, CMBL, CNTN1, CYP2C18, DGKB, ENTPD1, EPHB2, GNPAT1, GRPR, GUCY1B3, HSD3B2, IL17A, LDHC, LTB4R2, NCOR1, NME2, OR10H2, OR56A3, POLR2A, TFPI, TLR3, TRAF5, TUBA8, TYMS, ATP6V1E1
Negative_1100	IL3, ACTC1, AFMID, ALDH3B1, ALOX15, APAF1, BST1, CD47, CDKN2D, CHIT1, CXCR3, DEGS2, DPYSL2, EFNB3, EPHB1, FZD3, GUSB, HLA-DOA, ICAM3, IL15RA, IL21R, KARS, LILRB3, MAML2, MTMR6, MYL7, NCR3, OR1F1, OR2T1, OR6T1, OR9Q2, PDE2A, PLA2G2D, PLD1, POLR3D, PPM1B, RALB, RPS6KA6, SDHB, SOCS1, ST3GAL4, TSC1, TUBA3C, SUV420H1
Negative_1101	MPL, TK2, AARS, ADRA1B, ALG3, ALG9, ARRB2, CD19, CD247, CDKN1A, DLL4, ENTPD8, GRIA3, LALBA, LLGL1, OR4B1, OR6Q1, PIGF, PPP2R5B, RPS6, SMPD4, TUBB4Q, UGT1A10, VEGFB, VTI1B, SERPINA5, TNFRSF13C
Negative_1102	ADO, APOC3, CDC20, CHEK1, DGAT2L4, DGKQ, FSHR, INPP5B, IQGAP3, KCNQ1, LDHAL6A, OR10A4, OR2AG1, OR5A1, PDE6H, PIK3R3, PLCZ1, PTAFR, RBPJL, ROCK1, TXNDC12, HSD17B12
Negative_1103	IVD, ADCY5, B3GNT2, CMAS, OR6C1, OXCT1, PLTP, RDH5, STAT1
Negative_1104	JUP, PVR, APOE, APPL1, ARHGEF2, BMP7, CCR9, CERK, CPS1, CSNK1E, CTBS, DGKB, DPM1, GAS1, GSTM4, HAP1, IL18R1, LAMC1, LDHC, MAN2A1, OR2H1, OR52D1, PAK2, PAX6, PFAS, PFN1, POLD1, POLR2B, PPP1R1A, PPT1, SC5DL, SE TMAR, SMPD2, WNT11, WNT9A
Negative_1105	B3GNT3, BHMT, CCL22, CCND3, CLDN4, CSF3R, CSNK1G3, GALNT3, NSDHL, OR5V1, SOCS1, WBSR22
Negative_1106	FMO2, ITPK1, MYLK2, OR4S1, PAK4, TACR1, HLA-DRB4
Negative_1107	AK2, GNRH1, MITE, OR52N2, PRKAG2, PROC, RRM2, SSH1
Negative_1108	C7, F3, LPO, MOS, OGT, ACSS3, AHCYL1, ALG6, ARPC1B, ATP6V1D, CCND1, CFLAR, CLDN4, CLTB, DDX47, DERA, DKK1, DKK4, EFNA5, ENTPD8, FGF10, FGF11, GDE1, GLI1, GPT2, GUSB, HPSE, ICOS, ITGAL, KIR2DL3, KIR3DL3, MAD2L2, MAP3K4, NEFL, NRXN3, OR3A3, OR5K2, PDIA4, PRKG1, RAC3, RRAS, SKP2, SMURF2, SOS2, STAM, SERPINA5
Negative_1109	ID4, PVR, SPN, SRC, ALDH1A1, ALG12, ATP6V1F, BRAF, CDC14B, DDOST, DOK1, GALNTL2, HSD17B8, HSPA1B, IDH3A, LAMA3, LPAR1, NADK, NCK2, NEFH, NUMBL, OCRL, OR13C8, OR1L1, OR2T29, OR4K1, OR51I2, OR52D1, PCK2, PDE6H, PIGT, PRKAA2, QARS, SCP2, TCF7, TNFSF9, TRADD, TRDMT1
Negative_1110	ASS1, CASK, CCNA2, CCNB3, CD80, CER1, GLI1, IMPDH1, MCCC1, MKNK1, OXC T1, SEMA4A, SLIT2, SUCLG1, TNFSF18, UGT2B28, EIF4EBP1, ST6GALNAC4
Negative_1111	MIF, CD74, CDC2, CHKB, CHRM2, CTSG, CYP1B1, CYP21A2, CYP2C19, DEGS2, EDNRA, ENTPD8, FABP3, FGF9, GARS, GGPS1, GLUD1, GPLD1, GRIN2D, HES1, HGSNAT, HMOX2, IMPDH1, ITGA2, KLRD1, LAMC1, MAP2K4, MAP2K5, MLLT4, MYH11, NFAT5, OR10AG1, PLXNA2, POLE4, POLR2L, PPA1, PPP1R1A, PTGES2, RAC2, RND1, RPIA, SELL, SGMS2, SUCLG1, TNFSF18, TNFRSF13C
Negative_1112	GH2, TH, ABL2, ASCC3, ASPA, C1QB, CSNK1G1, CXCL10, DGKI, DPYSL2, EHHA DH, FARP2, FSHB, FUT9, GSTA3, NCR2, OR51E2, OR52I2, OR52N4, OR8H3, PLA2G2D, STAT3, TBXA2R, TCF7
Negative_1113	AOC3, APAF1, CHSY3, GARS, HSD3B7, MAPK11, PIK3CB, PLA2G3, PPP1R3D, S T8SIA1, TAS2R7

Negative_1114	APP, FAS, GK, GLA, AARS2, AHCYL2, ALOX12, ALS2, ANPEP, AVPR1A, BUB1B, C3orf10, CALML5, CD79B, CLDN18, CLDN5, CXCR6, DHCR24, DHFR, EDA2R, FTH1, GRPR, HADH, HAGH, IFNA14, IRAK2, MAP2K4, MAPK7, OR4M1, OR8K5, PCYT1A, PIK3C2A, PLA2G2D, PPM1A, PRKCE, PTPN6, RENBP, SAT2, SLC27A5, TRPM5, UGT2B4, WARS, PNLIPRP2
Negative_1115	GAA, PGP, SPN, CDC2, DERL1, DPYSL2, GALNT7, HRH2, HSD3B7, IFNA10, KIR2DL1, KYNU, OR4D11, OR5D14, MAPK8IP2
Negative_1116	FGB, GP6, CRLF2, CSF2RA, GOT1, GOT2, MAP3K5, MTMR1, OR2T12, OR5T3, PI4KB, PPAP2A, VCAM1, WIF1, ATP6V0A4, GABARAPL2
Negative_1117	CFI, F11, ABAT, BLVRB, CACNA1I, CAMK2B, CDK6, ENAH, FOXA3, IAPP, IARS, MAP3K12, MTMR6, MYH8, PAX8, PPP2R5B, SDHC, SHMT1, TPH2, TUBB3, VKORC1
Negative_1118	ALOX5, FUT2, OR10H1, SOCS3, YARS, ATP6V1G3
Negative_1119	BID, HAL, ACOX1, ACPT, AGPAT3, ALOX12, B3GAT2, BAAT, BCAR1, BMP7, CARD11, CCL17, CCL3, CDC42, CLDN3, CYP3A4, EI24, FADD, FECH, FGF19, FOXA2, FUT9, GGT5, GUCY2C, GYS1, HEXA, HSD17B4, MAFA, MYD88, OR10K1, OR10V1, OR1D2, OR5D13, OR6C76, PAK3, PDK1, PLCD4, RALA, RDH8, RELA, RHOQ, STX1B, TAS2R50, UMPS, UPRT, XIAP
Negative_1120	IL8, TH, TK2, VCL, ACAT2, AGPAT1, AKR1B10, CACNA1D, CALML3, CCR4, CD14, ENPP3, FGD1, FMO3, GSTA1, HTR2B, IL12RB1, IL25, LIPT1, MAP4K3, MGA T4A, NCF1, NEFH, OR10H5, OR13C5, OR14J1, OR1A2, OR4B1, OR52K2, OR5AR1, OR8H1, OXCT2, PARD6B, PIK3R2, PLA2G2D, POLR3A, PPP2R5A, PRKAA1, RRM2, SESN3, SMAD5, SMURF1, TAS2R60, ULK2, XCR1, ARHGEF12, CACNA2D1, MAPK8IP2
Negative_1121	AK1, GPT, LCT, OAT, PTS, A4GALT, ABLIM3, ADAM10, ATP4A, CACNA1D, CMBL, COL5A2, CPT2, CXCL13, DOCK1, ENTPD5, EPHA3, GPT2, HCST, HNMT, IFNAR1, LALBA, LRRC4C, MAN1B1, NTN1, OR1D5, OR4E2, OR5R1, OR6M1, ORC4L, PDGFA, PLCD3, POLR2H, QARS, RDH5, RERE, SMC1A, ST3GAL5, SULT1A4, TAS2R50, XCR1, ATP6V1E1, HLA-DRB3
Negative_1122	GP9, UBC, ALG9, CDIPT, CYP3A5, EP300, GGT1, NAT5, NCR2, OR10X1, OR2AE1, PIP5K1B, PTTG1, RBKS
Negative_1123	GH1, ALPPL2, APBB1, APOE, CAMK2G, CDC25C, COMT, CTNNA2, DUSP10, DUSP8, GTSE1, MPP5, PDE8A, PHKB, PMVK, PON1, PPT1, PRKAB1, ST3GAL2, TAS2R10, TLR5, UGT2B17
Negative_1124	ACAD8, C3orf10, CMPK2, DMGDH, MAP3K4, OR2M7, OR51S1, OR6C6, PDE6H, P OMC, PROS1
Negative_1125	C4BPA, CACNA1B, COL6A2, CSF1R, DCTN1, ICAM3, IL12B, ITGA1, PRKAG3, C SGALNACT2, SLC25A31
Negative_1126	ARSD, CACNA1H, CASP10, CRY1, CTSS, CYSLTR2, HLA-F, IL20RB, IL22RA2, OR2M7, OR5H2, POLD3, SQLE, TBK1, WNT1, MAPKAPK5
Negative_1127	F11, FES, TK2, AMHR2, ARHGEF6, B4GALT6, CCL8, CCNH, FUT4, IFNA4, IL11, LAMA3, LIPC, NANS, NCSTN, PIK3CG, SLIT2, TACR2, TAP2, TLN2, TYMP, CSNK1A1L, HSP90AB1
Negative_1128	AFMID, ASMT, DNMT3A, EREG, GALNT8, HRH1, IL13, INPP5B, IQGAP3, NT5E, OR2T12, PDE6G, TAS1R3, TCF7L2, WNT6, XCL1
Negative_1129	HGF, TNN, ABL2, ACTC1, BBOX1, CACNA1A, CCNA2, COQ5, CPS1, CREBBP, DGA T2L4, DHRS4L2, GMPR2, HCST, KIR2DS5, LRRC4C, OR10A6, OR10T2, OR4F5, OR51A2, OR6K2, POLR3G, RHOA, RPS6KA4, SLIT1, SOCS1, TNFSF10
Negative_1130	FES, AKR1C3, CADM1, CEBPA, CMBL, DAXX, DFFA, FMO2, MGAT1, OR2T34, OR51A4, PLTP, TUBB2C, HLA-DRB5
Negative_1131	ILK, PRL, ADCY5, AGRP, AKR1D1, ANPEP, B3GAT3, CCL26, CLCA4, CLDN18, D NMT1, DUSP4, FARSB, GALE, GALNT10, GPT2, IKBKB, ITGA4, ITGB7, KLKB1, MGAT4B, OR13C5, OR1E1, OR1M1, OR4C11, OR5I1, PARVG, POLR3B, PSME2, R OCK1, SGPP1, SOCS1, SOS1, UPP2, CTNNBIP1

Negative_1132	MYC, ADCY4, AKR1D1, ALDH2, ALG10B, LDHAL6A, MITF, NOX1, OR6B2, PIM1, PRPS2, RPN1, SGPP2, STX2, UGT2B4, VDAC1, CACNA2D2
Negative_1133	IL2, SRF, ACYP1, CACNG5, CDS2, ENPP1, EREG, F2RL2, FGD1, FGF2, GALE, G RIN1, HRH1, IL2RG, IL4R, MAP4K2, MCM2, NT5C1A, OR10K1, OR13C2, OR4D1 , OR5A2, OR5D14, OR6B3, PANK1, PTGS2, RHEB, SDHD, SESN1, SMAD5, SPTLC 2, TNFRSF4, TRAF4
Negative_1134	CP, FST, IL3, ALG10, CACNA1A, CACNG6, CACNG8, CD47, CYP2C9, DAAM2, DO CK1, DTX2, ENO2, FLT3LG, FUT5, GUCY1B3, KIR2DS4, KLKB1, MTFMT, NAT1, NEU3, NEUROD1, NFKBIA, NKD1, OR1S1, OR2AT4, OR2T12, OR51B6, OR5AR1, PHKA1, PIGT, PIK3R3, PIPOX, PRKCG, PTGES2, PTGS1, PTPN1, RDH16, SNAP 23, ST3GAL3, STAT5B, TAP2, TGFBR2, TLN2, TSTA3, VAV2, VTI1A, YARS2
Negative_1135	ACP1, ADAM10, AMY2A, CLTCL1, COL1A2, DAPK3, DLL1, EXTL2, F13A1, ITGA 4, NCF1, PRKCB, RASGRF2, UROD
Negative_1136	CRH, DDC, LTB, ATP5L, CDKN1C, DHRS4L2, EIF4E, EPHB6, KCNJ11, MAPK10, OR1L8, PDE5A, PDE8A, PPAP2C, PTCH2, RASSF5, SSH2, TAS2R14, VAMP2
Negative_1137	EGF, ATP6V1D, CACNA1A, CD38, CD79A, FUT4, IL24, IRS1, LIPT1, OR1L3, O R56A3, UROD, SUV420H2
Negative_1138	CRK, IHH, SCD, BACE2, CDK2, ELK4, FADS2, GP1BA, HMGCR, OR4X1, OR8D1, O R9A4
Negative_1139	GLUD2, MECR, RASGRF1, SELL
Negative_1140	CEL, SPN, ADSS, ALPI, AMDHD1, BMP7, CBLB, CDK2, CLDN19, DGAT2, DNMT3L , EDNRB, GALNT5, GYS2, HSD11B2, L1CAM, MGLL, MLLT4, MYH6, NSDHL, OR1L 6, OR4X2, OR5AC2, OR7D4, PGM3, PPA2, PRKAB1, PSME1, RASGRP1, SARDH, S AT1, SHMT1, SOAT1, TAS2R10, TP73, VDAC3, ST6GALNAC1, ST6GALNAC6, TN FRSF11B
Negative_1141	FGA, GDA, ACAA2, AFMID, DDX50, DEGS2, DHFR, DHRS3, DTX1, DUSP16, E2F5 , ESPL1, GJA1, GPX5, GRLF1, HLA- G, IL1RAP, LIFR, MAGI1, MAGI2, NTSR1, OR10C1, OR12D3, OR4N4, PANK1, P DK1, PER1, PFKFB1, PIGO, PPCS, RENBP, SMPD4, SULT2A1, TGFB1, TYROBP, WNT9B, GABARAPL1, HLA-DRB5
Negative_1142	GSR, EPHB1, HARS2, LEFTY1, SMAD4
Negative_1143	VTN, ATP5F1, CCR2, CHST13, DKK2, IL2RB, MAP2K1, MTMR2, MYL9, RBPJL, S OCS7, SPRY2, UCK2
Negative_1144	C5, TKT, ADRB2, AMHR2, AMY2A, APOC3, ATP5G2, BCL2, CCL23, CD80, CYP17 A1, DGAT1, DHX58, DLL1, FOXO1, FUT6, GOSR2, GPAM, HTR7, IRF5, ISYNA1, MARS2, NFASC, NFKB1, NFKBIB, NFYC, OR4K2, OR5I1, PCCA, PDGFB, PHGDH, PLA2G5, PLIN, PPOX, RASSF5, SCIN, SGPP2, SLC25A6, SLC27A5, SMPD1, SU LT2A1, UNC5D, YWHAE
Negative_1145	OSM, SP1, ACAD8, AFMID, CDK2, F11R, GSTK1, OR52A5, RGS3, TRHR, TXNDC1 2, YWHAG, PDCD1LG2
Negative_1146	F5, AXIN1, NT5C3, PLAUR, SMARCA5, UGT2B4
Negative_1147	ENTPD6, GALNTL4, PNPO
Negative_1148	AGL, BTK, IL7, MET, TK2, ARSE, ATP5J, CCNE1, CD74, CDC2, EPB41L2, IFNA 8, ITGA4, LAMA3, MMP2, NEFH, NMNAT1, OR52E4, PPOX, PTAFR, SMAD6, TSTA 3, VAV3, VEGFC, ZFYVE9, TNFRSF11A
Negative_1149	ACHE, ALG9, ATP12A, CACNA1G, CCL28, CLTB, COL2A1, CSF2RA, EPB41L1, G ANC, GRB2, GSTA4, GSTM4, HCCS, IDH3G, MGST1, MYH7, NRG1, OR13D1, OR1S 2, OR3A2, OR4L1, OR52B4, OR5AS1, PANK1, PANK3, PFN4, PRLR, PSME3, SEL L, SHISA5, SIGLEC1, SNAP25, ST3GAL1, SV2A, TIRAP, TSNARE1, SLC25A31 , TNFRSF13C
Negative_1150	C8G, MVD, TFG, ACSM4, ALDH3B2, B3GALT5, CAMK2B, CBLB, CHPT1, GUCY2C, IRF5, KAT2B, MFNG, NMNAT1, PRKAA2, SMARCA2, STAM2, STK11, TAS2R60, T RAF1, YWHAH, CTNBP1

Negative_1151	AK3, CFI, TFG, TK2, VCL, ACAA1, ACSM1, ADCY1, ALG10, ATP5A1, BMP8A, C4BPB, CD80, CLDN18, COQ5, CRY2, CSF2RB, DGAT1, ENO3, EPHB3, FGF20, FMO1, G6PC, G6PC2, GSTA4, HLA-DRA, HMBS, HNF1B, INPP4B, INPP5B, ITGA8, OR10T2, OR13C8, OR1N2, OR2F2, OR2W1, PLA2G5, PMAIP1, PPP1CA, PPP2R2C, RDH5, SELL, SETD7, SOAT2, STAT6, TKTL1, TPMT, ATP6V0A2
Negative_1152	UBC, AHCYL2, ALG6, ANAPC10, CACNA1C, CAV2, CFL1, CTNNA1, CXCL13, GGP S1, HMGCS1, IGSF5, LILRB3, MAP3K1, NCK1, OR4F17, OR4N2, OR52E2, OR6Y1, PARD6B, PFKFB1, PIGH, PLXNB1, PRKAG2, RBKS, RPN1, RPS6KA6, TAS2R8, WNT9A
Negative_1153	ID4, ACAD8, ACTN4, ALDH3B1, GALT, GSTM4, GYS1, HRH1, HSPA1B, IKBKB, LYPLA1, NT5C2, OR51L1, PTCH2, SHMT1, TRAF1, XCL2
Negative_1154	CFD, EGF, OGT, TAT, ACVR2B, B4GALT2, BCAT2, CBLB, CHR1, FADD, MTHFD2, POLR2G, PPAR, PRKCI, RIPK1, SEMA3F, SLC2A4, TACR1, UGT2A1
Negative_1155	ABO, ACLY, AGPAT1, CASP3, COL11A1, DHCR24, GSTK1, HLA-G, IFNA5, KCNQ1, NFATC4, OR8U1, RBL1, SMC1B, WNT3A, WNT6
Negative_1156	LYN, SDS, BRAF, CCL26, CCNG1, DGKI, GLO1, NCKAP1L, OR5M3, RHEB, VAV2
Negative_1157	LHB, ARRB1, CACNA1F, CNGA4, CREB3, CYP17A1, DLST, GALK1, GALNT1, GAN C, GNRH1, GSTA5, IFNA21, INSR, KIR2DL4, LRP5, OR12D3, OR2A12, OR4K2, OR6C76, OR7G2, PDGFB, PRSS1, PTCH2, RAPGEF1, RASA1, SEMA3C, SMAD3, SRGAP3, ST3GAL3, STAT6, TIRAP, TSHR, UBE2L6, WNT3A, YWHA, CSNK1A1L
Negative_1158	MSN, PAH, ADCY1, ALDH9A1, ASAH1, ATP2A3, ATP4A, CCL1, CD8B, CXCR5, DPM2, EFNA5, F2RL3, FGF21, FLT3, HEXB, HPSE2, IARS, IFNA21, ITGA3, LRRC4C, MAP3K2, NSDHL, NT5C, OR10J1, OR2L3, OR5B12, OR5H6, OR8K3, PDE1C, PGK2, PTEN, RASSF1, SGPP2, SLC27A1, SPRY3, SRD5A2, TAS2R13, TPM3, TUBA1B, VTI1B, XCL2, ATP6V0D1
Negative_1159	AGPAT2, ARRB1, CLDN4, CYP1B1, GALNT8, GDE1, ITPA, KIR3DL3, LCMT1, NUDT2, SUCLG2
Negative_1160	CFD, APAF1, ATF4, CYP3A7, FUT2, NEFM, NFYA, OR52I1, OR5P3, TAS2R3, TNFSF8, ATP6V0E1, TNFRSF10B
Negative_1161	HK3, AASS, ACOX3, BAAT, CCL11, CHST12, FARS2, FIGF, GSTK1, IBSP, IGF1R, INHBA, MBL2, MTMR1, MYH15, OR10A4, OR5A1, PIP5K1B, PPP1CC, RDH10, SSH3, TGDS, THY1, TOLLIP, UNC5A, ST6GALNAC3
Negative_1162	AHCY, FGF2, GRIA3, MAP3K13, MAP4K2, NEUROD1, OR2AE1, ORC4L, PDE5A, PHKA2, PTGER1, TRDMT1
Negative_1163	AK3, FES, ARNT2, ARRB1, ATIC, CACNA1G, CD55, CDIPT, CPT1C, CYP2C9, DAPK2, DHRS4, EDA2R, EFNA2, ELK4, FGF18, HTR2B, INADL, KCNJ11, MCM6, MC M7, NUDT9, OR10A2, OR2A5, PLD2, PLEKHA8, POLR1E, PPP1R3B, PRODH, RBX1, SDC4, SESN1, SETD7, SLC2A4, TGFB2, TUBB1, VAV2, CTNBNIP1, GABARAPL1, MAPK8IP2, ST6GALNAC1
Negative_1164	LYN, ABL1, ACSL5, AGPAT6, ALAS1, BBC3, CCNH, CHST11, CRLS1, DDX23, DGKE, DUSP3, FOXA2, GUK1, HSPA1B, IPMK, IRAK4, LEPR, MAOB, MAPK7, MTAP, NTF3, OR2T33, OR52B6, OR8S1, PAPSS1, PGAM1, PHGDH, PIP5K1C, POLR1A, PTPN11, SMC1A, STMN1, SUV39H1, TIAM2, UBE2L3, UGT2B28
Negative_1165	FER, ACTN2, AKR1A1, C5AR1, CASP10, CDKN1B, DUSP3, EDAR, GNRH1, MPZL1, NLGN3, NME2, NRCAM, OR2H1, OR52B4, PGM2, PIGB, PIP5K1B, PLCZ1, VAMP3, SERPINF2
Negative_1166	F10, HDC, ACTN4, ATF4, ATP2A2, CACNA1A, CASP3, CHPF, CRY1, CSDA, ECHS1, EREG, EVI1, GALNT2, ITPK1, LIPG, MTMR6, NSDHL, OR12D3, OR5M9, OR6K3, PRNP, RDH8, SH2D2A, SHMT2, SPRED1, STAT6, TD02, UNC5B, VTI1A, YKT6, SERPIND1

Negative_1167	GHR, APLP1, ATP6V1A, BACE1, BAIAP2, BCL2L1, CCNE1, CD34, CKMT2, CSNK1G2, CTF1, DUSP1, EPHB1, FSHB, GDF5, GYS1, IL21, INHBB, LAMB1, MAP2K2, MGAT2, MTHFS, MYL9, OR4C12, OR52N4, OR8K3, PDK1, RASGRP1, SHC2, SNAI1, SNW1, TNFSF4, TSHB, UPP1
Negative_1168	FOS, BMP2, CDS1, EPOR, GLUD1, NAE1, NTRK1, PARD6A, PER3, POLE3, SFRP5, SH2D2A, TGFA
Negative_1169	AGK, CAT, GH2, MUT, TPO, VTN, ACOX1, ACSM3, CCNA2, CLDN18, CYP3A4, DGA T2L4, DKK2, GALNT12, GRB2, GRM1, H6PD, HIF1A, IKBKB, KCNJ11, MAP3K6, MAPK10, MEF2C, MGAT4B, MKNK1, NLGN3, OR1L6, OR51T1, OR5F1, OR6T1, PHKG1, PLAUR, PPP2R1A, RALBP1, RBX1, RIPK1, RPN2, SMC1A, STAT1, TUBB2B, TYROBP, WNT3A
Negative_1170	CDA, GSS, RFK, APLP1, ARAF, ARHGEF2, ARHGEF4, BCL10, CARD11, CCR9, CLOCK, CYP27A1, DPM3, FARP2, FOSL1, FRAT1, GAD2, GSTA5, GUCY2C, GYS1, HAP1, HSD17B3, IFNAR2, INHBE, LIPE, NAMPT, NUMB, OR2A42, OR2H1, OR52A1, ORC4L, PDX1, PECAM1, PIGC, PROC, RALB, RBKS, SEMA4D, SHC3, STMN1, TAS2R38, TAS2R7, TGFBR1, TNXB, UGT1A10, UGT2B11, ULBP2, YWHAB
Negative_1171	EBP, GK, GSR, GSS, APAF1, CCR3, CD14, CMPK1, CTTN, DARS, DIAPH1, DOT1L, ELK1, EPHA8, FRAP1, ICOS, ITGA6, ITGA7, ITGA8, KCNJ11, MCAT, NFATC4, ODC1, OR2L3, OR4K1, OR4K13, OR4Q3, OR5L1, PAX6, PLXNA2, PTCRA, PYCR1, SNW1, SULT1E1, SV2C, TACR2, TGFB3, UBE2L3, PNLIPRP2
Negative_1172	CDC6, CDH4, CDKN2A, IKBKG, INHBE, ITGA11, LTBP1, NSDHL, OR8G1, PARD6B, PCYT1B, PGM2, POLR2I, PPAP2B, PRKCE, SGPP1, STAT3, VEGFC, ST6GALNAC5
Negative_1173	CXCL13, EXT1, FBXW11, G6PC2, GNAI3, IFT57, IRAK1, OR10G3, OR2A12, PDE8B, POLR2C, PYCR1, SOAT2
Negative_1174	ACSL4, AMDHD1, ANAPC2, BCKDHB, CARS2, COASY, CYP4A22, EHMT2, ENTPD1, G6PC, GLI1, MCM4, MYH10, OR10H5, OR51E2, OR6C3, OR8H3, PNMT, POLR2D, PTPN7, SLC25A4, TJP1, TRAF4, XIAP, MAPKAPK5, PAFAH1B1, SERPINF2
Negative_1175	AGL, C3, HK2, OSM, SDS, ABCC8, ADRBK2, ALPP, CACNB2, CD46, CD86, CLCF1, CSF2, CTPS, DHDH, ECSIT, EDN1, FMO4, GLDC, GPX5, GRIA1, GSTM5, IFNAR2, IL13, INPP5E, ITGB6, MAPK10, MAPK13, MCM5, MYLK, OR13G1, OR2K2, OR4F15, OR4F5, PLAT, ROBO2, RPRM, SOAT2, STX4, UPP2, WNT9A, YARS2, TNFRSF11A
Negative_1176	GLA, HPD, PGP, TK1, AKR1C3, ARPC5, ARPC5L, ATP5J, C4BPB, CCNB1, CISH, CYP1A1, E2F1, FGD1, HSD17B8, HSD3B2, IFNB1, IL18RAP, MAML2, MDM4, MGAT1, MGAT5B, NARS2, OR14I1, OR2M4, OR4C13, OR51M1, OR5A1, OR6K2, PPI1, PRKAR1A, SDHA, SMPD2, TNFRSF9, TSNARE1, UCKL1
Negative_1177	DAO, GBA, OTC, TPR, AGPAT6, AKR1B1, ALG11, AMPD1, ATP5J2, ATP6V1A, BAIAP2, CCKAR, CCNA1, CRKL, DRD2, G6PC, HBEGF, HCCS, IPMK, ITGA6, ITGB1, MAP4K2, MITF, MYH2, NME2, OR51Q1, OR6C75, PIK3C2B, POLE4, RASSF1, SARAH, TAS2R49, TBXA2R, UBE2K, WNT7A, HLA-DQA2, TNFRSF13C
Negative_1178	C6, MET, PXN, SPN, ALAS1, ESPL1, FCER1G, FGF17, FUT8, KIR3DL2, MAP4K4, NPR2, OCLN, OR4A16, OR51D1, PAFAH2, RFWD2, SOCS7, VAMP3
Negative_1179	AKR1A1, ATP6V1H, CAMK4, GSK3B, HES1, ITPA, ITPK1, OR2M3, PLA2G2D, PRKCI, SLC25A5, TNFRSF13B
Negative_1180	INS, CACNG7, CD8B, CSF3R, CYP2C8, HSD17B7, LAP3, OR2F2, OR6K6, OR8D2, PER3, PLCG1, PLK1, POLE, PPP2R2D, SFRP1, SOCS5, TAS2R49
Negative_1181	ACP1, ALDH5A1, CD38, CLTA, CYP26B1, DTX4, FGF21, GNG13, ICOS, INPP5E, LDHD, MYH1, NAGK, PARVG, PRPS1, PTCH2, RARA, UBE2K, WNT3
Negative_1182	CFH, FGA, LAT, ACAA2, ADRB1, ALOX15B, ANPEP, BAIAP2, CACNB1, CD40, CD01, CHPF, CLDN6, CSNK1G1, CTNNA2, DNMT1, FABP4, GRHPR, HSD17B3, INSR, NANS, NR4A1, NTNG1, NUDT2, OR1L6, OR9A2, PDE1C, RIPK1, ROCK2, RPS6KA1, SPHK2, STAM, STK4, SULT2A1, VARS

Negative_1183	GAA, ME3, WAS, B4GALT3, CD72, COL1A2, CTSL1, CXCL12, DGAT1, DUSP5, ERBB3, GAPDH, GLDC, HEXB, IL15, KAT2A, KCNB1, LARS2, LIFR, OR11A1, OR51S1, OR52N2, OR6B2, OR8K5, PDE1C, QPRT, RASA1, RERE, RPS6KA5, SETD2, SETDB1, TSC2, UGT2B11, HLA-DQB1, ST6GALNAC3
Negative_1184	GSR, IDS, LYN, PML, ADH1B, ANAPC10, ARD1A, ATP5G3, CD59, CD82, CEBPA, CTNNA2, EFNA2, GGPS1, GUCA1B, HRH2, IL2RB, ITGB8, MAN1C1, MAP4K4, MASP1, NCAM2, OR10G4, OR1E2, OR2A5, OR2S2, OR2V2, OR6C3, PIP5K1A, POLR1C, PTCRA, TAS2R38, TGFB2, TSLP, ULK1
Negative_1185	ILK, AADAC, ACOX1, APLP1, ARPC1A, B3GAT2, BMP6, CDC23, CDC27, CDKN2A, CLTCL1, CRHR1, CTSB, CUL1, CYSLTR2, DDX41, ESAM, FGF19, FGF4, FZD8, GUCY2D, HNF1A, IFNA7, IL17RB, IL20, IRF9, ITPK1, MAP4K2, MAP4K4, MAPK10, MCM3, MMP7, MYH2, NPR1, NT5C1B, OR10G4, OR10G8, OR1J4, OR2L8, OR5AR1, OR8D1, P2RX4, PDE1C, RASGRP4, SGMS1, SLC27A4, SPCS1, TSC1, UNC5B
Negative_1186	CR1, GCK, RET, ARHGEF2, BET1, CADM3, CARD11, CXCR6, DDX4, DRD1, ENTPD4, ERBB4, FTMT, FUT8, HADHA, IKBKE, IRS1, LAMC1, LAMC3, LIFR, NAGS, OR1B1, PDK1, PER2, PIK3R2, PPP1CC, PRLR, SKIV2L2, SORBS1, VANGL1
Negative_1187	ALDH1A1, CBLB, CSF1, HPSE, INPP1, ITGB5, ITGB6, LIMK2, MAML3, NCAM2, OR5M9, OR8U1, POLE3, RALB, STAM, TNFRSF10A
Negative_1188	UBC, CREB3L1, MAP3K4, OR2H2, SEMA3E
Negative_1189	CDA, CKM, JUN, ADCY1, ALOX12, ATP5B, ATP5E, CACNG3, CXCR5, ENTPD1, FGF20, GNA15, GOSR2, IL10RB, LDHAL6B, LTC4S, MAML3, OR1A1, OR4S2, PTPN7, SMAD7, B3GALNT1
Negative_1190	ABLIM3, CRY1, FGF6, HLA-G, IL18R1, MAP4K3, NPR1, OR2M3, OR4X1, OR51F1, OR8B4, PPP3R2, SMARCA2, SNW1, SORD, SUCLG1, TAS2R14
Negative_1191	F10, ALOX12, BBC3, CLDN17, DERA, DHRS4L2, EPB41L1, FABP3, FGF2, GARS, GLS2, GRIN2B, GUCY2F, KYNU, LDHD, LIPC, MAP3K13, MAPK11, MCM7, NFE2L2, OR4D6, OR5D18, PDE4B, PLXNB1, POLR1A, PRKAR2A, PRKG2, PRPS2, PSM E3, RBL2, TSC2, XYLT1, YWHAQ, HLA-DPB1, HLA-DRB5
Negative_1192	C4B, ARPC1B, B4GALT6, CHR1, CYBB, FABP1, FUT7, GCH1, ICOSLG, KIR2DL1, LAMA3, LRDD, NFKB1, PDE11A, POLE3, STAT3
Negative_1193	F8, RPE, TPO, XDH, AQP7, BAAT, BCMO1, CHIT1, CNGA4, CTPS2, CYP7A1, DVL3, E2F4, ENTPD4, FBXW11, FGF12, IRAK2, LLGL1, MPST, OR1F1, OR2W1, PFA S, PIAS4, PLA2G2D, PLA2G4A, PPAP2B, PRKAG2, ROBO1, SEMA4F, SMURF2, ST3GAL3, STX1B, UGT2B10, WNT6, ST6GALNAC3
Negative_1194	HYI, CASP10, CCR10, CHRM5, EPOR, EXTL1, FZD5, GNPAT, GRIN2D, IFNA21, MPDZ, NARS, NKX3-1, OR5T3, PTGES, RASGRP2, ROCK1, SDHB, SESN2, WNT5A
Negative_1195	AK3, AMH, FST, FYN, ALDH3B1, ATP5L, CXCL10, DARS, EHMT2, ESAM, F2RL1, GALE, MAN1B1, MAP4K4, MEF2C, MRAS, MYL7, NFKBIE, OR10H1, OR10J3, OR1L4, OR5AK2, OR6C6, OR6K2, OR6Y1, PGAM4, SHISA5, STK11, STX6, SYNJ1, TPH2, UGT1A10, YOD1, B3GALNT1, PNLIPRP2
Negative_1196	DBH, MAX, AACS, B4GALT5, BACE1, CCL27, CDH2, CDKN2D, CRHR1, CYP1B1, EVI1, FBP2, FLAD1, GGT5, GPT2, GYS2, IL2RB, MARS2, MDM2, MYH6, OR4N5, OR4P4, OR6C70, P4HA2, PRKAA2, RHOQ, SEMA4D, SPRY3, YOD1, ATP6VOD1
Negative_1197	GH2, TYR, ADSSL1, ALPP, ASIP, ASNS, C3AR1, CACNB3, CACNG1, CCL24, CDC25C, CHRM1, CLDN10, CLDN14, COL4A6, CUL1, DCTN1, ENAH, EXTL3, GAB1, GALNS, GIT1, GOT2, HAAO, HCCS, HSD11B2, ITPKA, MAP2K6, MTHFD2, NFKBIE, NRG4, OR52L1, OR6N2, OR6T1, OR7A5, OR8A1, ORC6L, PARVA, PDK1, PLD1, RDH5, SETD7, SMPD2, TBL1X, TM7SF2, TSHB, TYMS, WNT7B, ATP6V1B2
Negative_1198	CD48, GALK2, IFNB1, IL2RA, YWHA E
Negative_1199	ACTC1, CDH15, CXCL11, CYP1B1, DLL4, PPP3CC, PRPH2



Negative_1200	IL5, ABCC8, ARPC1A, BCAT1, CCNH, CNTF, DUSP9, EDNRA, FASLG, HSD17B1, IFNB1, IGF1, LCMT1, MGAT1, NOX3, NUDT5, OR4M2, OR8S1, OR9A4, PCYT1A, POLE2, PROC, RDH8, SLC2A2, TAS2R3, TCF7L1, TSTA3, VNN1, TNFRSF10A
Negative_1201	MPI, TNF, ACAA1, ALDH3B2, ANAPC4, BIRC5, CAV2, CDC7, EHMT2, GADD45A, GALK1, GIT1, GPAA1, GSTK1, HLA-DOB, IL24, KLKB1, MAP3K7, MGAT2, NFKB1B, PFKFB4, PRKAB1, PRKCH, PSEN2, RHOQ, SPRY2, THBD, YARS
Negative_1202	ADK, GBA, IL9, SRM, TNF, ACVR2A, AFMID, ATP4B, ATP5D, B4GALT2, GCNT1, ICAM1, MAP3K1, OR10A7, OR52N4, PLA2G2A, PPP1R3C, PPP2R5E, SELL, SUCLA2, TNFSF12, TRDMT1
Negative_1203	ACOT11, CCR1, OR2L8, UCK2
Negative_1204	ADA, CEL, ID3, PC, ACTB, ADCY8, ATP5F1, BMP2, CAMK2B, CDC26, CRHR1, CSNK2A2, DPAGT1, ENTPD4, ENTPD7, FGF6, GADD45G, GG CX, IL20RB, MAP2K7, MPP5, OGDHL, PPP2R1B, PSPH, SOCS1, TGFBR1, VASP
Negative_1205	ADH7, CANT1, CBLC, CCL14, CD22, CDC27, CDC6, CERK, CHSY1, FOSL1, GNB3, GPD2, IGFBP3, IL21, MTMR2, MYL5, OR2T11, P2RX2, PHKA1, PNPLA4, PTK2B, PYGL, RBPJ, STX5, TNFSF11
Negative_1206	HK2, DDB2, MYLK2, NEGR1, OR14A16, PLAU, POLE4, PPP3CB, PTGDS, CACNA2D4
Negative_1207	GK, AMY2B, CAMK2G, CHEK1, COMP, DPYD, ENTPD5, IL22RA2, OR13C9, OR13H1, OR52N4, PTGDS, PTTG1, SPRED1, TGDS, TMLHE, UBA7, WNT2B
Negative_1208	CCL20, CES2, CSNK1G3, DGAT2, EPRS, IL10, NOS1, OR10Q1, OR1K1, PRKACG, SEMA3E
Negative_1209	FGB, AVPR1B, CYP2A7, DLST, E2F4, GALM, GANAB, HSD3B2, IL2RG, KNG1, LEFTY1, MAP4K3, NMNAT3, OR1F1, OR2F1, OR2K2, OR2L3, OR51T1, PPP1R3B, PRODH
Negative_1210	ABO, CFI, DBI, F3, FER, NLK, ACOX1, ACY1, ASAH1, B4GALT7, ESAM, FTCD, GUCA1B, HAGH, INPP4A, PLA2G10, POLR1A, PPP3R1, PSENNEN, PTGS2, RPN1, ST6GAL1, STAM
Negative_1211	CKM, HDC, MVD, CDC14B, CDKN1A, CREB3, DARS2, DVL3, GLG1, GNG13, GUCY1B3, MTMR6, NFYA, NUMBL, PRKCI, RAPGEF1, SEMA4A, WNT10A, XCR1, PNLIPRP2
Negative_1212	C1S, EGF, ID1, TKT, TYR, ACOT12, AOC2, BUB3, CD8B, CDKN2B, CTLA4, CX3CL1, DRD5, EFNA2, FABP3, FECH, GCLC, GCNT4, GMPPB, GMPS, HADHB, HSPA1B, IL8RA, LAMC3, LARS2, MAP3K1, MAP3K6, MASP2, MGAT5B, MLYCD, OCLN, OR2M7, OR2T8, OR4D6, OR5D18, PGAM2, PHKA1, PTTG1, SARS2, SGPP1, SLC25A5, SMPD3, STAT6, VAMP2, ATP6V1G1, CACNA2D2
Negative_1213	DBI, GH2, PGD, TPO, ARPC5, CCR1, COMP, CPT2, CTNND1, DARS2, DLL3, EPHA5, F13B, FRAT2, GALNS, GCH1, MMP1, OR4K5, PFN3, SNW1, TRAF2
Negative_1214	GK, ACVR1B, ADORA2B, ALG6, ARRB2, CACNG3, CCKAR, CCL22, CCR2, CD226, CDH3, CSF1, DDX47, DFFA, DRD5, EFNA4, EPHX1, FLOT2, FLT4, GALK2, GLI3, IL8RA, ITGB5, ITGB6, ITGB7, MAP3K6, NFAT5, NME4, OR10G4, OR2T3, OR4C15, OR51A7, OR51B5, OR51M1, PAX8, PIGA, PIGW, PTGES2, SARS, TM7SF2
Negative_1215	AGL, AK5, C2, TAT, ACADSB, FOSL1, FRAP1, IQGAP2, MIOX, NCAM2, OR4D6, OR6F1, PGAM4, PIK3CA, PPOX, PYGB, SHC1, SLC27A5, SLIT1, TRMT11
Negative_1216	GDA, PGP, ACTG2, ADRB1, ATP6V1D, CAV2, ENPP2, HMBS, HTRA2, IFNA17, IFNB1, KARS, KLRC1, MAP3K5, MGAT3, MGST1, OR2T1, OR6C4, PDE11A, SH2D1A, TNFSF4, TNFSF8, TRAF2
Negative_1217	CCL11, CNDP1, ERBB4, GAD2, GALNT13, GNPDA2, MAGI1, OR2S2, OR51A4, RASGRP4, SUOX, WNT3

Negative_1218	ATM, BAX, CBL, ID3, ABLIM2, ATP4B, ATP5F1, B3GAT3, C1GALT1, CALML5, C CNH, CLDN14, DNMT3B, EFN2, EFN3, ENTPD5, EPHA1, FGF17, FGF18, GALK 1, GSTM1, IFNA17, ITGA8, NRXN2, NT5C, OGDH, OR1N1, OR2M4, OR6S1, OR9A 2, ORC3L, OXCT2, PDE10A, PYCR1, RDH12, SPTLC1, ST3GAL2, ST3GAL5, TCF 7L1, THBS4, WWP1, XYLT1, YWHAQ, ALDH18A1
Negative_1219	LDHD, MPZL1, NKX2-2, OR9I1, SEMA4C, SHC2
Negative_1220	DAO, JUN, ACTB, ALG1, ATP6V0B, BCMO1, C3orf10, CASP6, CLDN22, CLDN4, CLOCK, FZD4, GSTM3, IL28A, INPP5E, LEPR, NEFM, NOX1, OR4K15, PCCB, PO LR2K, SC4MOL, SHC3, SLC27A1, TBL1X
Negative_1221	PC, ACTG1, ALDH1A2, ALDH3B1, AMPD2, ATP12A, BACE1, CAMK2D, CCR2, CYP 2C8, DHCR7, DIAPH2, EDAR, GRIN2C, IFNGR1, INPP5E, LAMC2, MAP3K8, MGA T3, MYH2, NFKBIE, OR10J1, OR1N1, OR4L1, OR51E2, OR7D2, PCK2, PLA1A, P PP3R1, PRKACA, PSME3, PTEN, SKIV2L2, THBS4, TUBA3C, WNT8B, TNFRSF13 C
Negative_1222	AR, ADCY9, ARPC1A, CACNA1H, CCNA1, CCR2, CYP2S1, DUSP10, EFN1, ETNK 1, GCDH, GNRH1, GUK1, IL1R2, KIR2DS4, MDM2, MICA, MLYCD, NAGK, NEFM, N OTCH1, OR10C1, OR10K2, OR10V1, PHKG2, PLAU, PLXNA1, PRPH2, SH3BP2, S TEAP3, UROD, VAV3, XYLB, PRICKLE2
Negative_1223	MAG, ACSS2, AKR1B1, AKR1C3, ALG10B, ARHGEF7, CADM3, CCL3, CHUK, DDX5 6, DGKD, GAB1, GALNTL1, HGSNAT, HTR6, IRAK1, KYNU, LGL2, OR5B17, POL R2C, PON3, PTK2, ROCK2, RPE65, SDHD, SRGAP1, STMN1, TPH1, TYMP, WNT4
Negative_1224	C1S, ZYX, ACPP, AKT3, ALPI, ARHGAP5, BUB1B, CADM3, CCNB1, CXCR5, CYP1 B1, DEGS2, DGKB, EDA2R, EPB41L3, EPHB2, GLYCTK, KLKB1, LTBR, NMNAT2, OR10G9, OR6N1, OXCT2, PHKG2, PIP4K2B, POLA2, POLR3D, PTPRM, RDH16, T HBS1, UGT2A3, UGT2B28, UROC1, WNT9B, TNFRSF11B
Negative_1225	FGG, KDR, PGD, SMO, ARPC2, ATP5I, CASK, CHUK, CLDN20, CREB3L3, CTNND1 , DPM1, IFNA2, IL17B, IL22RA1, KLRD1, LCMT2, MAGI1, MAP3K8, METTL6, N AT5, NODAL, NQO1, NTF3, OR10AG1, OR1N2, OR3A3, OR5M9, PDXP, PMAIP1, P PP2R5A, SEMA7A, SSX2IP, TNFRSF4, ATP6V0A1
Negative_1226	KRAS, OCRL, WNT3A
Negative_1227	BAX, F3, FGB, GBA, GCK, AGXT, AKR1D1, B3GNT3, BMPR1B, CCR1, CCR9, CD3E , CDC14A, CDK6, CXXC4, FGF9, FUT3, GLI3, ICAM2, LDHD, MADCAM1, MAML3, NFATC4, NLGN3, NRXN3, OR10T2, OR4C46, OR52K2, OR5A1, OR5AU1, P2RX5, PAX4, PCCA, PIAS2, PON3, PTCH2, QARS, STAT5A, TACR2, TLN1, TYMP, UGDH
Negative_1228	GGH, MUT, PML, ALDH1B1, ATP50, BET1, MPP5, OR52A1, OR8J1, SFRP2, SHC3 , UGT1A10, ULBP2
Negative_1229	EZR, TYR, ADRA1A, AGPAT2, AOC2, AOX1, CCR7, CD19, CD40, CDKN2B, CHKB, CREB3L4, CSAD, IFNB1, ITPKB, LDHA, ORC5L, PARS2, PFKFB1, PHKA1, PIGT , SLC27A5
Negative_1230	GNAT3, ITGAD, TYMS
Negative_1231	C8G, FES, HK3, PML, ACPT, ANAPC7, ATP5L, BCL10, CACNB1, CCR10, COL5A2 , CYP1A1, GRHPR, GZMB, MAPK3, NAE1, NFYA, NLGN3, OR10R2, OR51E2, OR8J 3, ORC2L, PGS1, PNLIP, POLD3, POLR2J, PPA1, PPP2R2A, RUNX1T1, SH2D1A , SRGAP1, TAS2R9, TMLHE, ULK1, ULK2, YWHAH
Negative_1232	BMP5, CDIPT, DHFR, DUSP9, FOXA3, GAD1, HARS2, HIP1, IFIH1, PPP1CA, RA PGEF4
Negative_1233	FUK, ID1, RFK, ADCY9, ALDH2, APOC3, ATG12, CDC6, DHODH, DRD2, EFN1, I DUA, MYH4, NOTCH1, OR1I1, OR2M3, PAPSS1, PIGW, PPP5C, PPT1, SETDB2, C SNK1A1L, TNFRSF1A
Negative_1234	DCN, APOA1, CCL2, CHKB, COL1A2, COMP, CYP19A1, CYP26B1, DAXX, DNMT1, HES1, ITGB6, MTMR6, NEGR1, NR1D1, NR5A2, NUDT12, OR6K3, OR8B8, PORCN , PPP1CA, PTCH1, ROCK1, SPHK1, SPTLC1, UNC5B, VAMP2, VTI1B, WBSR22

Negative_1235	ADK, DLD, GGH, GK, ID3, SDS, TK2, AARS2, ACO2, AGTR1, AKT1, ALDH1A1, AMHR2, BNIP1, CCNG1, CD226, CHST13, CYP1A2, DPYD, DUSP16, EPHA4, FZD1, GAMT, GCLC, GSTM4, GUCA1C, HLA-F, HNF4G, HTR4, JAG1, KIR2DL2, KIR3DL2, LRP5, MTHFR, OR10A5, OR1E2, OR2B2, OR51D1, P2RX5, PIK3CA, PSEN1, PTPN11, RUVBL1, SETD8, SETMAR, SH2D2A, SULT1A2, TYMP
Negative_1236	ABO, ADCY9, AKR1B1, ARSE, GNRH2, ICOSLG, PLCG2, POLA2, WNT11, ALDH18A1, ATP6V1E2
Negative_1237	CFI, GSR, ALDH6A1, APLP1, B3GNT2, BIRC3, CACNB1, CES1, CYP11B1, FGF20, GABARAP, GSTM3, HARS2, IRF3, MYH14, OR51B4, OR6C70, P2RX3, PRKAG2, PTGFR, STK36, UROC1, PLA2G12B, SERPINF2
Negative_1238	ADK, GHR, MUT, MVK, NNT, ACYP1, ANAPC4, ARPC3, ATP6V1H, AXIN2, C3orf10, C5AR1, CADM3, CAMK4, CD47, CDK4, CREB1, CXCR3, DDX41, DPAGT1, ERBB4, FMO3, GANAB, GAPDH, GGT6, GLI2, HLA-DMA, IL8RB, MAP3K2, MCM6, OR13C2, OR2T8, OR5A2, OR5P3, OR8D1, OR9I1, PIP4K2B, PIP5K1C, POLR2D, PVRL3, SDC1, SETD2, SLC25A4, SMURF1, STAM2, STX1A, TALDO1, UROS, TNFRSF13B
Negative_1239	BTK, ACSM2A, ANAPC11, CCNA2, CCND2, CDC16, CDKN2D, CHPF, CLDN3, CYFI P2, DGAT1, ENO3, FPGT, FRAT2, FZD4, GALK2, LDHA, MAP3K8, NOX3, OR1E1, OR4X1, OR6K6, OR6N1, PIGO, PTPRJ, PTPRR, SCLY, SELPLG, SIPA1, SOCS1, SPTLC2, TP73, TUBB4Q, UCK1, PDCD1LG2
Negative_1240	LYN, AASDH, ACY3, ADRB1, CD55, DDX19A, ENTPD8, FCER1G, IL11RA, IL8RB, MS4A2, OR1I1, PDHB, PHGDH, PIK3R5, PRKCD, RHOQ, SLC2A4
Negative_1241	ADH1B, AGPAT1, AMDHD1, AVPR1A, CACNA1S, CACNB4, CDC14B, CFLAR, CLCF1, COL11A1, CYP8B1, ENO2, EPHB3, ITGA6, MAP2K3, NKX3-1, OR1I1, OR2T6, OR4K15, OR52N4, PIAS4, RAP1A, SLC9A1, SOD1, SULT1A2, TBK1, TLR4, UXS1, VANGL2, WBSR17, GABARAPL1
Negative_1242	DBI, DHH, CCNG1, CTF1, CYP2C8, DAAMI, DVL1, GCAT, GNB1, NTNG1, OR2M2, OR4A16, PIK3CD, PPCDC, PPP1R3A, TM7SF2, SERPINE1
Negative_1243	INS, AMY2A, AVPR1B, CD46, CTNNA3, CYP3A7, DARS2, DRD2, GART, GMPS, GRB2, HDAC2, LFNG, LHCGR, LRP5, LTBP1, MAPK1, OR1B1, OR1E1, OR52W1, PAK6, PFN1, PLIN, POLR2J, PROC, STX4, TAP1, TRAF1, YARS, TNFRSF10B
Negative_1244	ADCY9, COL6A1, ENPP6, HLA-DOB, MGAT1, MGAT2, NR5A2, OPLAH, OR6B3, OR7C1, ORC2L, PPM1A, PTGS1
Negative_1245	ADK, GSN, IDS, BTRC, CDK4, COL11A1, FGF19, FSHB, GNAZ, HLA-F, HSPA8, IL1R2, IL22, NEGR1, NOTCH1, OR10Z1, PDE8A, PLCZ1, POLE3, PSME1, TAS2R48, TBK1, TIAM1
Negative_1246	VCL, CHST11, CXCL9, ERBB3, EXOC7, GSTA4, HCST, IFNA10, MAP3K8, MMP14, NME2, PHPT1, PLCB1, POLR1C, TJP3, UXS1
Negative_1247	ID3, STS, CACNG2, CASP3, CD86, HDAC1, LAMB2, MAD1L1, TUBA3E, UGT2B7
Negative_1248	ITK, PVR, ANPEP, CCL16, CD3E, CFTR, COL4A4, CTNND1, GBE1, GNA11, LAMB3, MAML1, NMNAT3, OR11H1, OR2L8, OR4S2, OR4X1, PGAM4, PGK2, PIK3R4, P RPS2, RHEB, SEMA3C, SRD5A1, TNFSF18
Negative_1249	NKD2, OR56A3, TYROBP, CSGALNACT1
Negative_1250	FH, PDC, SFN, ASRGL1, B3GNT4, BCL2L1, CBR1, CYFIP2, DDX18, EPHA4, EPHA5, GADD45G, GCLM, GNA12, HMGCS1, HSD17B2, IFNW1, MAP4K4, MCM5, MDH1, MGAT5, NCK1, NUDT12, NUDT5, OGDH, PDE8A, PDGFA, PPM1D, PRKCZ, PTPN5, STK4, VEGFC, ATP6VOA4
Negative_1251	MIF, MPL, ACTB, B3GAT3, BCL2, BLVRA, BMPR1A, CACNA1B, CCR1, CDH5, CDK5, CTNNB1, DUSP14, EFN1, ENTPD7, ENTPD8, EPHA1, HSD17B8, HSPA8, IRAK1, IRS2, LTA4H, MGAT4A, NPR1, NTRK1, NUDT9, OR10G7, OR10H4, OR4C11, OR51F2, OR52K1, PAK2, PARVA, PHKG1, POLR3G, RELA, SEMA7A, TLR3, TNFSF11, UROC1, VAV2
Negative_1252	B3GALT6, MGST1, PGK2, POLD3, THBD, TM7SF2

Negative_1253	F3, F9, WAS, ABCC8, ACSM2A, AMDHD2, ANAPC2, DDX50, ENAH, EPB41L2, EPH A1, FARP2, FZD4, GSTM2, HGSNAT, IFNA4, IL12A, IL1R2, IRF9, JAG1, KIR2 DS5, LTA4H, MAP4K4, NLGN1, NOX1, OR10Q1, OR5D18, PIK3R4, PLA2G2E, PO LR1A, PTEN, SMPD4, UGT2B7, WARS, CTNNBIP1, PRICKLE2, TNFRSF12A
Negative_1254	CD6, CDA, GK, HAL, ALDH2, ALOX12B, AMDHD2, APRT, CHEK2, CLDN8, DKK4, F LT4, G6PC2, GUCY2C, HAGH, HARS2, IL12A, IL28A, MPP5, OR2A12, OR4F15, OR7D4, PLIN, PRKAB1, PRKG1, ZFYVE16, HLA-DRB5
Negative_1255	AK5, IL4, ACP5, ADIPOQ, AKR1C1, ALDH1A2, ARHGEF7, BDH1, BIRC2, C1QA, CD22, CLCA2, CPT1C, CSF2, CSNK2A2, CXCL16, DBF4, DUSP2, EIF4B, GCAT, GLI1, GNAI3, GPAM, GUK1, HSPA1B, KLRD1, OR5A2, OR5AU1, OR9A2, P2RX7, PRKCI, PRPH2, SARDH, SCLY, SEMA4G, SGPP1, SHC3, SIGLEC1, SKIV2L2, SP TLC1
Negative_1256	AK3, FAS, IL8, NPL, ADAM17, ADH7, AQP7, ASMT, ATP5G1, B3GALT5, CCL8, C HKB, CYP4F3, DAAM1, DUSP14, FGF18, FOSL1, GLUD2, GSTM5, HIBCH, HMGCS 2, HSPB1, IL2RB, KNG1, LDHA, LILRB3, METTL6, NAT6, NFYB, NUDT9, OR8B8 , PGM2, PRKAR2A, RASA2, SGPP2, UGCGL1, SERPINC1, SERPINF2, ST6GALNA C3
Negative_1257	AUH, C4B, FH, HK1, LEP, ACADVL, ACTB, ALDOC, BDH2, CAMK2B, CCL1, CCR5, CHRM3, COL5A2, CTNNA3, CTNNB1, DGKD, DNMT1, GALNT12, GJD2, GRHPR, IF NA6, IL6R, MYL5, NCAM2, NCOR1, NT5C2, NUDT8, OR51T1, OR8J3, PAK1, PIP 4K2C, PPARA, PSME2, SLC2A4, SMARCA5, STX18, TCF7L2, TRMT11, VTI1B
Negative_1258	C6, CFH, IL9, LPL, TAT, ALDOC, AQP7, ARPC3, BUB1B, COL5A2, DIAPH2, DOL PP1, FABP3, HTR4, LRDD, NFATC1, OR51S1, OR7G1, PCK2, PIK3R5, PIM2, PT K2, RAC3, TAS2R10, TCF7L2, TUBA1A, VEGFB, ZFYVE9
Negative_1259	EPHB4, HTR2B, LPAR1, NEFL, OR9G4, PCNA, VAMP4
Negative_1260	LTB, CCNG2, CXCL10, HARS2, MYL7, MYLK, PARS2, PPAP2B, PPCDC, TLR4
Negative_1261	MPL, SRC, ADORA2A, NFATC2, OR51V1, PDXP, PLXNA3, PTK2B, TUBA3C
Negative_1262	DLD, IL7, NOG, RET, SRC, ADH1A, AMHR2, ARPC3, CDH15, CDH5, CHPT1, DAAM 2, DGAT1, DOT1L, FABP3, FUT9, GLUD1, IL28A, INSR, KIR3DL2, KLRC1, LD HD, MGAM, MINPP1, NME2, NTRK2, OR10H3, OR10H4, OR10J5, OR2Y1, OR51M1 , OR7A5, OXCT1, PDE11A, PIK3R4, PTSS2, RARA, RRAS, SMPD3, STMN1, VDA C2, WASF3, WNT7A, SLC25A31
Negative_1263	EFNA2, GDF6, GNAL, LAMB1, NKD2
Negative_1264	CD2, ARSA, FBP2, JAM3, MECR, PAK4, ATP6V0A4, MAP3K7IP1
Negative_1265	ABO, F5, F8, IL2, MET, AHCYL2, ARHGEF4, CACNB3, CERK, DEGS2, DVL3, EPH A8, FRAP1, FZD6, GFPT1, GRIA2, IGFBP3, IKBKE, IL24, L1CAM, MTAP, NADS YN1, NODAL, NUDT9, OR10P1, OR2S2, OR2T11, OR5P3, PARD6A, PDE6D, PIGW , PLA2G2E, PLXNB3, POLR1D, PTPRM, RPS6KA1, SOS2, SREBF1, UPP2, WNT2B , HSP90AB1, ST6GALNAC4
Negative_1266	CCL28, CTSB, HDAC2, LAMC3, MAD2L1, MAPK14, OR10A2, OR4C6, PIAS4, POM C, PSME1, RAPGEF4, UXS1
Negative_1267	DCT, ALG11, BDKRB1, COL6A2, CYFIP2, KIR3DL3, ST8SIA1
Negative_1268	ACADSB, AGRN, AMY2A, CBLC, CCNE2, CCR2, CD34, CLDN8, CLTB, CTBP2, CYP 27A1, EI24, ERBB2, GALNT6, GALNTL4, GNA12, GNG13, GUCY1A2, HAGHL, HE XA, HHIP, ITGA9, MAP3K14, OR13J1, OR1D5, OR8U1, PLXNB1, SLIT1, SMPD3 , TAP2, UPRT, ZIC2, HLA-DPB1
Negative_1269	PDC, PLG, BMPR1B, CAPN2, DGKG, EXTL3, GRM5, METTL6, OR2M4, OR4C15, OR 5H2, ORC5L, RPSA, SHC1, SHC2, TAS1R2, ULBP2
Negative_1270	CKM, DDO, FGA, MPL, PXN, RPE, AGPAT2, ANAPC5, ASS1, CACNA1I, CAMK2G, C D34, CD40, CYP2D6, DHRS9, ENPP3, FGF3, FGF8, FM05, HSD3B2, IL24, IL6R , LARS, LARS2, MOV10L1, NFYA, OR2A14, OR2T11, OR9A4, ORC3L, PIGB, POL R2C, PRIM2, PRPS2, SARS, SLC27A4, SPHK2, SPRY4, STX5, TAS2R49, TPMT, TNFRSF10A

Negative_1271	BTK, ACP1, ACSL1, AHCYL1, AKR1B1, ARHGEF4, CARS2, CAV1, CCL3, CYP26A1, CYP4A22, EPRS, GALNT13, HSD17B8, INSR, NOD1, NRXN3, PAK3, PDE8B, POLR2F, PRNP, SDC4, SNAI2, TAS2R9, TSHR, CACNA2D2
Negative_1272	CYP26A1, GALNT9, HIBADH, MGST1, OR4K15, PDHB
Negative_1273	IVD, MUT, AMPD2, CXCL6, DDIT4, DDX54, DGKZ, EP300, FUT3, FZD3, HLA-DOB, IRF5, KIR2DL2, MDM4, NAE1, OCRL, OR11H6, OR11I1, OR4C15, OR51B2, RXRB, SETDB2, SGPP1, SORBS1, ZAP70, ATP6V1C2
Negative_1274	FPGT, IDH3A, IDI2, NAE1, PDE6D, PLD1
Negative_1275	F12, IHH, SRC, TNF, TPO, ACADM, ACSS3, ADRB3, CCDC6, CDC14B, CLCA4, CSNK2A2, CX3CR1, DKK1, FZD5, FZD7, ITGA8, ITGB4, KAT2B, OCLN, OR14I1, OR9K2, P2RX1, PRSS1, PTGES2, RASGRP4, SCIN, SOCS3, SRGAP3, SV2B, TGFB1, TSTA3, XIAP, ATP6VOA2, HSD17B12
Negative_1276	ABO, MAX, MPI, ACADL, ALPI, ARPC4, ARSD, ATP5J, C7orf16, CAMK2D, CCL15, CD86, CYP1A2, CYP2A13, CYP2F1, DGKH, DMGDH, EPHA1, FGF23, GRHR, GRPR, HHEX, IL28A, IL5RA, LAMA4, LAMC1, NKX2-2, OR2M2, OR4D9, OR4L1, OR6C70, OR6T1, ORC5L, PFAS, PHKA2, PIGO, PIP4K2A, PLCB3, PLXNA1, PLXNA3, SC4MOL, SH3BP2, SMAD1, TAS2R14, TCF7L2, TRDMT1, UNC5C
Negative_1277	OAT, CD3E, DNMT3B, EPHX1, FUT8, HSD11B2, ICOS, KLK3, MAPK11, NUDT12, OR2AT4, PDE7B, PRKCI, RXRB, SLIT1, UBE2L6, UGCG, PAFAH1B1
Negative_1278	ABL2, AGMAT, CYP2C19, HRAS, ITGA5, PER1, PIK3CB, POLR3A, TAP1, UBA7, UGT2B11, CACNA2D1
Negative_1279	IL5, NPL, AASDH, ABP1, ACSS1, ACYP2, AKR1B10, ANAPC2, C9orf95, CACNB2, CACNG4, CCL28, COL5A3, CSNK2A2, DARS2, DEGS1, EFNA1, EPB41, GDF6, GIT1, GPX5, IGSF5, IL5RA, IMPA2, MAP2K5, MYH7B, NOS3, NR1H3, OR11H6, OR12D3, OR2H1, OR52N5, OR5A1, OR5K1, PCYT2, PLA2G1B, PTPN6, SMAD5, TAS2R10, TNFSF12, TUBB2B, VTI1A, ATP6V1G2, CSNK1A1L, TNFRSF1B
Negative_1280	CS, AK3L1, ALG12, CHRM1, CXCL10, GALC, GCDH, HARS2, HDAC2, IFNA5, NCR3, OR1G1, OR1M1, OR2W1, OR4K2, PCYT1B, PFN4, PTPRC, TNFRSF9, VAMP4
Negative_1281	CKB, ACSM5, ADRA1A, AMD1, AOC3, ARNT2, C7orf16, CACNG4, CAMK4, CD244, CDC7, CHUK, CLDN2, CSF1, CYP1A2, DUSP2, ECSIT, EDN1, FTH1, GADD45G, GNAQ, HNF4G, HTR4, IDH3G, IL1RAP, KLRC4, LYPLA1, MTHFD2, MYH3, NPAS2, NSDHL, OR13C4, OR13C9, OR2A14, OR2T29, OR3A2, OR52K2, OR5P3, PARD6G, PFAS, RAD51, RCHY1, RPS6KA1, SYNJ1, UBE2L6, WNT9A, ATP6V1B2, TNFRSF11B
Negative_1282	FGA, GP6, PDC, ACACA, ACSS3, AMHR2, AMY2A, C3AR1, CACNA1A, CCNG2, CCR6, CD19, CDH5, CER1, CRY2, CTLA4, CXCL3, CYP26A1, DDX23, DLL1, DTX3L, EPHA2, GCNT2, GSTM2, HSPA2, HSPA8, IFNA21, INADL, KCNB1, KLRC2, KLRC3, KLRK1, MMP2, OR11L1, OR4N4, OR52N2, PFN2, PLAT, PROS1, RDH10, SGPP2, STAT6, STEAP3, TRADD, USE1, PDCD1LG2, ST6GALNAC1
Negative_1283	C5, CFD, DLD, IDS, OSM, AANAT, ADCY4, AHCYL1, CASP6, CAV2, CLDN17, CSNK2A2, EXTL1, GMPS, IARS2, IL11, ITGA2, ITGB3, MAD2L2, NLGN2, NTSR1, OR14C36, PANK1, PDX1, POLR2B, PTGDS, PVRL2, RRAS, SDHC, SEMA4B, UNC5D, WASF3, MAP3K7IP2
Negative_1284	ADA, AQP7, DDX55, DNMT3B, ETS1, IL10, MADCAM1, MASP1, OR13H1, OR4A5, OR6C6, PAPSS1, RUNX1, SOS2, TUBA3E
Negative_1285	TK2, ALDH7A1, CADM3, CCL2, CLDN20, DDX4, FMO5, GRIN1, GUCA1B, INPP4B, MAPK1, MTMR2, OGDHL, OR2A42, PIK3CB
Negative_1286	C2, CAT, HDC, AADAC, ACO1, ALOX15, AMPD1, ATP5A1, ATP5I, CCR8, CYP2C19, CYSLTR2, DKK4, DUSP5, EPHA3, GJA1, GLI2, KLRD1, NCOA4, NNMT, NTRK2, OR1L1, OR2C3, OR5H2, PANK3, PDPK1, PIK3R2, PYCR2, SGPP1, SMPD3, SOS7, THBS2, TUBB1, YWHAZ, HSD17B12, PPP1R12A, SERPINB5, ST6GALNAC6

Negative_1287	LIF, OSM, ACOX1, ADCY7, ARNT, ARSD, CBR3, CCND1, CD19, CD27, CDK5, DUS P2, ERBB2, FGD3, FLAD1, FZD5, GGPS1, GMPPB, GMPR, GNRHR, GPD1, IL12A, NCF4, NKD2, OR10H1, OR13D1, OR52N1, PDE7A, PLA2G10, PLCB1, PLCD3, POLD2, PTAFR, RFXANK, SKP1, SLIT2, SMPD2, SUCLG1
Negative_1288	GPI, GSS, ACAA1, AGXT, ALG10, CD82, CDC20, CPOX, FMO5, GANC, GAS1, GST O2, JAK2, KARS, MOV10L1, PIGQ, ROCK1, THY1, WBSCR22
Negative_1289	AR, AMPD2, COL4A2, CTTN, CYP2F1, DRD2, DUSP9, EPOR, GNA14, GSK3B, GUC Y1B3, ICAM2, LIPF, MYH7B, OR1L8, OR1N1, OR5H6, PIK3R2, PSME3, RASA1, TXNDC12, VAMP3, VEGFA, YWHAG, GABARAPL2
Negative_1290	LCMT2, OR5V1, OR7C2, POLR1B, TIAM1, TMLHE
Negative_1291	MTR, ADCY1, AGPAT3, ALDH3A2, ARAF, ARHGAP5, CACNG3, CD34, CDH2, DHDD S, EFN3, FUT9, IFNA7, IFNK, ITPK1, MAP3K11, MAPK14, MEF2C, MGAT5, MT HFS, OR10A7, PIPOX, PNPLA4, PPP2R1A, RPS6KB2, RRAS, SFRP4, SORBS1, S TAT4, TAS2R5, TUBB4Q, ULK1, VAMP4, VANGL1, WBSCR22, MAPKAPK2, TNFRS F11B
Negative_1292	ASL, TH, CCND3, CD38, CREB3, DHRS3, ENTPD7, EPB41, EXT2, GALNT5, GGT6 , GPAA1, HRAS, IL12B, JAG2, NAT6, NFATC4, OR10V1, OR2T11, PIP5K1B, RA D51, RASGRF1, RUVBL1, UGCGL1, UGCGL2, VARS, MAPK8IP2
Negative_1293	FAH, ID1, RPE, ALDH1A3, ANAPC5, CADM1, CAMK2B, CDKN2B, CD01, DKK4, EN PP6, FARSA, FIGF, GAD2, GUCY2F, GZMB, HLCS, HYAL1, MAPK13, MYH10, OR1 G1, OR52B6, PERP, PPP1R3B, SESN3, STAT4, TAS2R10, UXS1, VKORC1
Negative_1294	PC, ALS2, CACNB3, CCL19, CES2, FARS2, FZD4, HTR5A, ITGB2, LDHAL6B, PI AS4, PIGN, PIPOX, PLCG2, PLXNB2, PPARA, RBL2, RPS6, SC4MOL, SDHB, SES N2, SLC33A1, SRGAP3, TAS2R49, TNFSF10, TRAF5, UROS, WASF3, WNT10A, Y WHAZ, MAPK8IP3
Negative_1295	CS, DUT, LIF, SPN, ADSL, B4GALT3, BUB1B, CACNG6, COL1A1, FBP1, GLG1, G YS2, HEXA, IFNA4, ITGA2, ITGA3, ITPA, NFYC, NRXN3, OR1N1, OR2C1, OXTR , PCNA, PLA2G2A, PPP2R5D, PRDX6, ST3GAL5, TUBA8, XCL1
Negative_1296	SMO, DCXR, EXTL1, FGF4, IL22, MAP2K7, PDE10A, RAD51, SFRP5, TFPI, TKT L1
Negative_1297	JUN, AANAT, ALAD, ALDH1L1, ARHGEF7, CCND3, CCNH, CLCF1, DGAT1, ENTPD 2, EPHA1, FABP1, FARSB, FGF13, GALNT3, GPX7, IL1A, INHBA, KIR2DL3, LC MT1, LTB4R2, MYH1, NSDHL, OLAH, OR2T2, OR4P4, OR52N1, ORC2L, P4HA2, P CYT2, PIGA, PMAIP1, POLR2I, PPT1, SCD5, SLC27A1, SOAT1, ST3GAL5, WNT 7A
Negative_1298	ADK, C8B, CEL, EZR, SRF, APLP1, ARPC4, ATIC, CCDC6, CNTF, CXCL9, DGKD, FECH, FUT2, IL1B, IQGAP3, MECR, NAGK, NME7, OR10H3, OR1I1, OR4D5, OR4 X1, OR51T1, OR5AP2, ORC6L, PAK7, POLE3, PTGS1, PTTG1, SETD1B, SLC25A 4, SOAT1, TGFB3, HSP90AA1
Negative_1299	ABLIM1, AREG, B3GAT2, BCAT1, BMP8A, C4BPA, CAMK2D, CSNK2A1, CYP4A22 , DAAM1, DUSP9, GALNS, IL17A, MLLT4, OR2AG1, OR2T12, OR5T3, OR8B12, O RC4L, ORC5L, PFKFB1, PIGO, PLA2G2F, PLCB3, PPOX, PRKCE, RAC3, SELP, S RD5A2, TNFRSF4, UGT2B4, SLC25A31
Negative_1300	ADC, EBP, MAX, ALDH1A3, ALDH3B2, ARRB1, CCNA1, CTNNB1, DFFA, EGLN3, F OSL1, GNMT, HAGH, HLA- C, IL11RA, OR2G6, OR4Q3, OR7C2, OXSM, PDGFB, PLCZ1, PPP5C, PTPN5, SLC 27A4, SOAT1, SORD, SPTLC2, SV2B, TPK1, VAV1
Negative_1301	CFD, FGG, A4GALT, ADH4, ARG2, BPNT1, CDC6, CLDN9, DGK1, EIF4E2, EPHA7 , FZD2, GNAO1, GNG3, GRIN1, HSD17B7, IFNA2, INMT, KLKB1, LPAR1, MTMR6 , OR10A4, OR10G2, OR10J5, OR12D3, OR4F17, OR8B12, PDE3B, PDK1, POLR2 H, RXRB, SV2A, TAS2R48, TAS2R60, TPI1, TRPM5, WNT2B, XIAP, TNFRSF6B

Negative_1302	BTK, C2, CGA, EPO, TEC, AGMAT, ARNTL, ATP4B, AXIN1, B3GAT1, B4GALT5, CCL14, CCNA1, CDS1, CDS2, COL4A6, CSNK1E, DHDDS, DPM1, EREG, FGF12, FTMT, FZD3, GPX5, HNF1B, NAT5, NUDT8, OR5B3, OR5M8, OR9Q1, PDK1, PIGS, PLIN, PNPLA4, POLD1, PRKAA1, RELA, SDHB, SGPP1, TAS1R2, TCF7L2, TM7SF2
Negative_1303	GSR, MET, ARHGEF7, CREB1, EIF4E2, NME7, PRKAB1, QARS, SRGAP2, ST3GAL1, SULT1A4
Negative_1304	NPY, CD79B, DHODH, EFN2, GNAI2, IFNA16, NRAS, OR1A1, PARD6B, PRKAB1, RENBP, TGDS, WASL, WNT3A
Negative_1305	ACAT2, ARHGEF2, COL5A1, DVL3, ERBB4, IL23R, MAD2L1, OR2AG2, OR4S1, OR5L2, OR6T1, OR7D2, PAX6, PIAS4, PTGFR, SLC25A5, SOAT1, SPTLC1
Negative_1306	FUK, ABLIM1, AGRP, CDKN2B, FLOT1, KLRK1, LLGL2, MKNK1, MTHFD1L, OR5P2, PIK3R2
Negative_1307	C8B, CGA, CKM, F3, MPZ, SPN, ACSS2, ACVR1, AKR1C4, ANGPTL4, ARNTL, BET1, CAMK2A, DKK2, FUT5, FZD3, GCDH, HBEGF, IFNGR1, IL7R, IMPA1, JAK2, KAT2A, NEGR1, NRG1, NUDT2, OR10K1, OR10Q1, OR13J1, OR1A2, OR1G1, OR4F6, OR5AN1, POLE3, POLR2F, PRKAB1, PTPRM, RALBP1, RXRB, SARS, SIGLEC1, SORD, STMN1, SV2B, TAS2R14, TGFB1, TRAF4, ATP6V0A2
Negative_1308	ADC, ME2, ADSSL1, AMY2B, CACNG5, CCL24, CD34, CDKN2D, CYP2C18, EFNA5, ENTPD4, FABP1, HHEX, HSD3B1, IMPA2, LARS2, LPAR1, MYH11, NAT6, NFKB1, NOS1, NUMBL, OR52A5, PARVA, PIGQ, PIK3C3, PKMYT1, PPARG, PYCRL, SAT2, SDC2, SESN2, SIPA1, SMURF2, SPI1, TSLP, WNT11, PAFAH1B1, SERPINA1, SERPIND1
Negative_1309	ALAD, ALOX15, ATP6V1F, CDK7, IPPK, LGMN, MAPK11, MLYCD, NAGA
Negative_1310	CAPN2, CARD11, CDH4, CTTN, FABP3, GALK1, GOSR2, GP1BA, HNF4A, IRF7, ITGA2B, ITGB5, MAGI2, MAPK12, MYL7, NKD2, NKX2-2, OR10T2, OR2W1, OR6C70, PAFAH2, PCYT2, PFN4, PRKAB1, PRKACA, PTK2B, PTPRZ1, SDHA, SLC27A4, SMARCA5, STK11, TLR9, TPK1, WNT1, HLA-DRB5
Negative_1311	SMS, CAMK2A, CYP27A1, JUND, NAT6, OR2AG1, OR9A2, ORC3L, PIGV, PPAP2C, THBD, TYK2
Negative_1312	DCC, XDH, ADH1B, BDNF, CYCS, EPHX2, FGFR3, MAP3K14, NAT1, PPP2R5C, PPP3CB, PRKAG2, RRAS
Negative_1313	ALG12, CACNB1, KNG1, OR2T33, PER2, RUNX1
Negative_1314	ADSSL1, B4GALT2, CD80, CMPK1, DDX47, G6PC2, GOT2, GPX5, MAGI2, MAP2K6, PLCD1, RFXANK, SFRP2, SPI1, TUBA1A, WARS2, WNT3
Negative_1315	AHCY, CDH2, CDH3, CYP8B1, HMGCL, MAP3K4, MKNK2, PTGES, ST3GAL2
Negative_1316	ALDH7A1, ARNT2, CACNG3, CNTFR, CYBA, DVL3, HMGCS2, ITCH, ITGB4, JUND, KIR3DL2, MGAT1, MLYCD, OR51L1, OR8J1, OXCT2, PFKFB1, PIGU, PLCB2, PNPT1, PPARG, PPP2CB, PSAT1, RBPJ, RDH12, STX18, TSHB, WNT1, HLA-DPA1
Negative_1317	CKB, F7, AACS, AGMAT, CASP3, DDHD1, DIAPH2, FUT3, GNAQ, HCST, HSD17B1, IARS2, IL17RB, LDHC, LTA4H, MAGI1, MAP3K6, MYLK2, NOTCH1, OR1J2, OR2T6, OR51D1, OR5D18, OR5R1, PARVA, PERP, PKMYT1, PMVK, POLE3, RPS6KA1, RPS6KA2, SMC1A, SUV39H1, TNFSF14, TOLLIP, VARS, MAPK8IP3
Negative_1318	AACS, ABCC8, ACP5, ATF4, DGKA, DPM2, EGLN1, EPHA8, IL12RB1, IL19, ITGB5, LIPT1, MDH1, NOS1, OPLAH, OR4K13, OR4K15, OR7A5, PLCD1, POLR2L, PRKAG1, RUNX1, SETDB2, SV2A, XCL1, ZBTB16
Negative_1319	ABO, CFH, ANAPC1, CBR3, CCR1, HTR2C, ITGA3, MAPK12, MMP2, NAGS, NCAM2, NME2, NPAS2, NUDT8, OR10AD1, OR2T1, OR4M1, PLAT, POLR2F, PPP1R3C, RELB, TGFBR2
Negative_1320	AGL, C6, ADORA2B, AMPD1, ATG7, B3GALT4, C4BPB, CDC27, CHAD, CTSG, DAPK3, DKK4, ENTPD6, EXOC7, ICAM2, KLRD1, NAGK, NFYA, OR52W1, OR5T3, OR8U1, PAX6, POLE4, POLR1E, SHC2, STX1A, TUBA4A, UBA7
Negative_1321	B3GNT3, B4GALT7, FZD8, GCNT2, MMP2, PLCB4, SEMA3G

Negative_1322	MPL, CD40LG, CLDN4, CREB3L4, FGF1, FGFR4, GNG13, IFIH1, LAMB3, LRRC4, NFKB1B, NME2, NRXN1, NUMB, OR10K2, OR4F17, OR56A3, OR8D2, OR9G1, PIP5K3, SLIT1, TICAM2, TKTL1, ZBTB16
Negative_1323	RET, ALCAM, ARG1, CLDN1, CSNK1G1, CXCL10, DDX56, EARS2, FLT1, GOT1, HRH2, IL10RB, LDHA, NRG3, OR56A4, ORC3L, PIGV, RAPGEF4, RRM1, SPTAN1, STK3, TOMM40L, TYK2, WNT9B, ATP6V1G3
Negative_1324	AGRN, ATP5G1, BAI1, NCOR2, OR10A6, OR5B12, PRKAG3, SOCS1, TBL1XR1, TNFSF11, YARS, HLA-DRB5
Negative_1325	F8, SP1, AKR1C3, ALG6, ARSD, ATP5B, BCMO1, CACNA1H, CDC14A, CDK5, CXC1L9, CXXC4, CYP11B1, CYP21A2, DHRS4, F2RL1, FGF11, FM05, GLYCTK, GSTA4, IARS, IRF3, LAMB4, LCP2, NKD1, NME7, OR10C1, OR5P2, OR6A2, PERP, POLR2G, RFX5, SV2A
Negative_1326	AR, TFG, ACO2, ARRB1, DDOST, HEMK1, HLCS, HMGCS1, HSD3B7, IFNGR2, IL1RAP, INHBC, LTBR, MAGI3, OR52W1, PARVA, PCYT1B, PI4KB, PIGB, RBKS, SIGLEC1, UROC1
Negative_1327	AR, CREBBP, FABP3, IL2RG, MAP4K1, PVRL3, RAB5A
Negative_1328	CKM, F5, MAX, PDC, AGRP, CCR10, CD27, CD58, CDC25B, CER1, CMPK1, CTSB, CYP1A2, CYP2D6, DAAM2, DGKI, GNAL, HLCS, IBSP, IFNB1, MAN1A2, MAP2K1, MDM4, NAT5, NEU3, NFYC, OR51G1, PFN2, PHKA2, PLCZ1, PPP2R2D, PSME1, PTPN1, RARS2, RELB, SIGLEC1, SLC25A6, ST6GAL1, VEGFB, WNT7B, C1GALT1C1, HLA-DPA1, PPARGC1A
Negative_1329	CR2, GSS, SRC, ACSL6, ADIPOR1, ALDH3A1, ALG11, ARD1A, ARPC1B, CCL25, CCL28, CDC20, CLDN16, COL1A1, CYP2U1, EFNA4, FARSA, GSTO1, GUSB, HLA - DRA, INPP5A, LIAS, MADCAM1, MGAT1, MTAP, NCF1, NKD1, NME6, OR11H1, OR2H2, OR5A1, OR5AR1, OR6B3, ORC6L, PAK3, PDXP, PLK1, RAC3, RFNG, RGS3, RPS6KA6, SHC2, SLC2A2, ST3GAL4, C1GALT1C1, CSGALNACT1, PHOSPHO1, SERPINA5
Negative_1330	CYP3A4, FTCD, GADD45G, HSD17B3, IFNW1, IL20RB, METTL2B, OR10J5, PFKFB2, POLE3, RRAS, SELL
Negative_1331	C4B, CD2, TAT, AKR1C4, ATP5E, CACNG2, CD79A, CHEK2, CXCL11, DCTD, DLL3, DLL4, E2F2, ETK2, EXTL3, FUT8, GP1BA, HHIP, IQGAP2, LYPLA1, MAPK9, MYH7B, NTRK2, OR2T34, OR4C46, OR4F17, OR4K2, OR4M2, OR5C1, PDE4B, RALA, TFDP1, TRHR, SERPINC1, ST6GALNAC4
Negative_1332	SYK, GALNT8, OR5B21, OR6C74, QARS, STAT5B, TPM3, WNT5B, YWHAH, B3GALNT1, GABARAPL1
Negative_1333	EPO, AKR1B10, CD226, HSPB1, NUDT8, OR13C4, OR2F2, OR8G1, PIAS1, RAPGEF4, SCD5, TCF7L1, WNT9B
Negative_1334	AK3, CD2, GDA, NPY, ADCY1, ADRA1D, BCAT1, CACNG4, DUSP6, E2F1, ENPP2, HRH1, HSP90B1, IL3RA, KLRC4, MAP3K11, NEUROG3, OR4F5, PFKFB4, PTGER1, RDH8, SDC3, TACR3, TUBB2A
Negative_1335	AMT, OSM, ACVRL1, FBXW11, IQGAP2, LALBA, LAMC3, MDM2, MNX1, NAT5, NCF4, PDHA1, PRKAR1A, SFRP2, TMLHE, TYK2
Negative_1336	JUP, CD40LG, CTTN, CYSLTR1, IFNAR1, MMP14, OR2F1, OR56A1, PRKAR1B, TPST1
Negative_1337	F9, ACAD9, AKT1, BCKDHA, CDC6, COL4A6, CSF1R, CSNK2B, CYP1A1, DOCK1, EDA2R, EPHB4, FGF1, GNA14, GUCA1A, HLA - C, HMGCL, HSPA8, LAMB3, LGMN, NEU2, OPLAH, OR1L4, OR4A15, OR52H1, OR6C75, PDE2A, PI4KA, PIGU, PNPO, PRSS1, PTCRA, PTPN6, RASGRP3, RPN2, RUNX1T1, SMAD5, TAS2R4, UBA1, WNT6, ZBTB16
Negative_1338	ADK, F9, AARS, ACAT1, ACAT2, ACVR2A, ACYP2, APOA5, CCL23, CD36, CD38, CHAD, CTSB, DDHD1, DGKI, DHRS4, E2F2, ENTPD6, FARSA, LDHD, MICA, MPST, NCOR1, NSDHL, ONECUT1, OR2L3, OR6N2, PYGM, SETD2, THBS3, TNFSF14, TYK2, VDACC3, CACNA2D2, TNFRSF13B



Negative_1339	C9, SCD, ACYP1, BAAT, CCR10, CNGA4, DHX58, ECHS1, GNG3, GP1BA, GRAP2, LAMB3, LIPA, MCCC2, MGST2, MTHFD2, OR1E2, OR5L1, PDGFB, PGM3, POLE, P RODH, PSME3, RDH5, SH2D1A, TAS2R4, TGFB3, TOMM40
Negative_1340	C8G, C9, DDO, F9, MUT, ABAT, AOC2, CACNA1I, CDH15, CDK2, CHAT, CHRD, CH SY3, CSNK1D, CX3CR1, CYP2U1, FGF2, FGF9, FUT2, GALNT5, GNAI3, IDH3G, IDI1, JAK2, MYH7, NRXN3, OR1J1, OR52M1, OR8I2, OR8J3, PLA2G3, POLR2C , PPP2CB, PRKAG1, RAPGEF4, RASA2, SH3BP2, SKP2, TJP3, TXNDC12, XYLB, KIR2DL5A, MAPKAPK2, ST6GALNAC5
Negative_1341	ACTA1, DDX47, GSTK1, PLCG2, PTPRB, TGFB2, MAPK8IP3
Negative_1342	DAO, MIF, MPL, SHH, ATP12A, CLDN1, COL11A1, CXCL12, DGKG, FZD7, HRAS, IKBKE, INSR, IQGAP1, ITGB5, LRAT, NOTCH3, OR5T2, OR7D2, OR8I2, PFKFB 4, PLCD4, POLR2B, RALGDS, ST3GAL3, STX7, TCF7, TUBB2C, PAFAH1B1, PLA 2G12A
Negative_1343	APP, ACY1, ALDH1B1, ANAPC2, ARG2, ATP5J2, CADM1, DHCR7, DHRS3, DUSP4 , EPAS1, EXTL1, GALNT1, INPPL1, KIR3DL1, MAP3K2, NEUROD1, OR10G9, OR 10H2, OR51I2, OR7C1, PCCA, PDGFD, PFKFB2, PLCD1, POLR2A, POLR2G, PPT 1, RAP1B, SDC4, SGMS2, SGPP1, ST3GAL5, TRPC1, UGP2, ULK1, PNLIPRP1
Negative_1344	PGP, ALG13, CCL7, CUL1, EDN1, HADH, ITGAD, MS4A2, OR2F1, OR2H2
Negative_1345	FGA, GK2, ACSS1, AKRIC1, ALDH4A1, ATP6V0B, CHPT1, COX15, F13B, FGF20 , FOSL1, FRAT1, HAAO, IFNG, IL13RA1, ITGA4, MCAT, NAT2, OR51E2, OR5AK 2, OR8G1, OSMR, PER3, PIGV, PKM2, POLR1B, RAB23, RAPGEF3, RPRM, RUNX1 , STAT2, TALDO1, UGT2A3, TNFRSF1A
Negative_1346	CFD, ACOX1, AKRIC3, AMPD3, APOE, CTPS2, DAD1, FGF2, GALC, MALT1, OR10 J3, OR1F1, OR2M5, OR52I2, OR52N4, STAT2, SUFU, SUV39H2, TUBB2C, WASL
Negative_1347	C9, EGF, IDS, ILK, MPL, OSM, ATP5G3, B3GNT5, CCR6, CD22, CDH4, CERK, CH AD, CTSL1, CUL1, DAAM2, DDIT3, FGF6, GAD1, GMPPB, GNAS, GUCY2D, HSD11 B1, HSD3B7, LDHA, MAP3K12, MARS2, OR10AG1, OR10T2, OR5D13, OR6C6, PD E5A, PDGFRA, PIM2, PPBP, PPCS, RAP1A, RASA2, SOCS4, TCF7L2, TDO2, TPM T, UAP1, VAMP4, YWHAE, ATP6V1G2, TNFRSF18, TNFRSF1B
Negative_1348	FES, LYN, ABP1, AGXT, ALG9, CNDP1, CTNNA2, CYP3A7, ENTPD1, GRIN2C, GS TA4, KAT2B, LPAR1, NEU4, OR4B1, OR52N2, OR8G1, PIAS4, PLEKHA8, POLR1 B, POLR2F, PPP3CB, PRKACA, PRKAR2B, SEMA3D, SOCS3, TCF7, SERPINF2
Negative_1349	ARPC3, GALNTL1, INPP5B, OR2B11, PLA2G2D, PLCD3, ST3GAL2, YWHAG
Negative_1350	DUSP9, KIR2DL3, MGST3, OR8G1
Negative_1351	CGA, FER, ID2, ADCY10, ALG10, CLCA4, CXCL1, DNMT1, EGFR, HA01, HLA- DOA, IGSF5, MCM4, MLYCD, NCOR1, OR1I1, OR5K1, PCCA, PEMT, PYGM, RAB5A , SULT2B1, ZBTB16
Negative_1352	CACNA1G, DTX3, EIF4E, ENO3, MYH10, OR5H6, POLR2F, SARDH, SMPD2, TYRO BP, MAPK8IP2
Negative_1353	AKRIC3, BET1L, C3AR1, CCR4, CD80, CDKN2C, DEGS2, GALNT12, GCNT1, GDF 5, GDF6, HTR5A, LIFR, MYL7, OR10H4, OR51B6, P2RX1, PANK3, PDGFC, PGK2 , PYCR1, SDC1, TYK2, USE1
Negative_1354	ADRB3, FARP2, GOSR2, IL20RA, MMP2, MTMR2, POLR1D, PTTG1, UNC5C
Negative_1355	MOS, PGF, PML, AKT3, ATG7, BDNF, BIRC3, BUB1B, CACNB3, COASY, FZD6, GR IA2, GSTO1, INSR, OR13C5, OR8H3, P4HA3, PCYT1B, RASGRP1, RBL2, SHC3, SLC9A1, TICAM2, TLR3, WBSR22
Negative_1356	FH, SP1, ARHGEF2, CCR2, CLTB, DUSP5, GALNT6, GLS2, HADHA, IL8RB, IL9R , MDH1, NRP1, OR2A14, OR2T11, OR2T29, OR51A2, OR51A4, OR51B5, PGAM1, PKLR, PLXNB3, PRKCZ, RARA, RUNX1, SEMA3G, ST3GAL3, STAT6, STX8, TBL1 X, TBL1XR1, TCIRG1, TGFB2, UPP1
Negative_1357	SI, TNN, EP300, EPB41L2, GCLC, OR1S2, OR7C1, PANK2, PAX4, PVRL3, SRGA P3, TLR9, UNC5B
Negative_1358	INSR, OR14J1, PFN3, ULK3

Negative_1359	LEP, AKR1D1, ALG5, ALPI, ARHGEF7, ASNS, CCR3, CTSB, EIF4B, ESPL1, GCN T2, GNPDA1, HMGCR, LAMC3, LHCGR, MICA, NOTCH2, OR2L2, OR2T11, OR51S1 , OR52B4, PLA2G4A, POLR3D, PRKAB2, RPS6KA1, SAT1, STAM2, STX16, TGFB 2, TUBA3C
Negative_1360	PLN, TNF, ACADVL, ALG13, ALOX12B, AOC3, ATP12A, BMP8B, CCNB2, CLDN1, CNTN2, CRLF2, CSDA, G6PC, GLO1, GNMT, HADHB, HPSE2, IPPK, KLRC2, LEFT Y1, LIMK2, OR2M5, OR4F6, OR52E8, OR5D16, OR8K3, PEMT, POLR2A, PPARG, PRIM1, PSPH, RPS6KA6, SLC12A2, SLC25A5, SSX2IP, TAS2R9, TICAM2, UGT 2B4, YWHAZ, ATP6V1C2, ATP6V1G2, MAPKAPK5, PHOSPHO1
Negative_1361	IVD, PRL, TPR, ACADS, ADCY9, ALG3, ANAPC1, ASS1, ATP5B, ATP6V0C, CCL2 6, CD19, COL1A2, DDX19A, EDA2R, EFN2, F13A1, FUT2, GCH1, GNA15, IGF1 R, MPP5, NMNAT3, OR4C13, OR4D11, P4HA1, PARD6G, PCYT1A, PGM3, PPP3CA , PTDSS1, RPS6KB2, SPHK1, SUV39H1
Negative_1362	GAA, IL8, ADAM17, ADH1A, ALDH3A2, B3GNT2, BCKDHB, CACNB3, CASK, CDC2 5A, CDC7, CDKN1A, CDKN2C, CLDN22, CTNNB1, EPB41L2, FUT1, GATM, GNB1, GNG13, GRHPR, GRIN1, HTR4, HTR6, IDUA, IL19, MAP3K11, OR10A6, OR4C13 , OR4L1, OR4S2, OR51E1, OR56A4, OR5H2, OR6Y1, PAK6, PIAS4, PIGC, PIK3 C3, PRIM1, PRKY, SPRY3, YWHAZ, CACNA2D3, PRICKLE2
Negative_1363	TK2, ACMSD, AKR1C4, ALDH1A3, ATF2, ATP4A, BBOX1, BET1, C9orf95, CACN G8, CNGA4, CYP11A1, DDIT3, DLAT, DNMT3A, DTX2, ENTPD4, GNA12, GNPAT, GUCY1B3, HCCS, HEXA, HHIP, ICAM1, INHBC, IRF3, MARS2, MFNG, NCKAP1L, NRG4, OR13G1, OR4D9, OR52N1, OR5A2, OSMR, PIK3C2A, PMM2, PNPLA3, RAB 5A, ROBO3, SSH1, STAT3, SUOX, SV2B, TSHB, UCK2, TNFRSF1B
Negative_1364	ACSM3, ADH7, ALDH6A1, CX3CR1, DGAT1, DGKG, DLL1, DPM3, EPB41L2, FZD9 , GALNT3, GGT6, HSD17B3, IFNA21, ITPA, LDHA, LIAS, LRP6, MASP2, OR1A2 , OR2T2, OR52E8, OR6F1, PGAP1, PGM2, PGS1, PHKB, PRKY, SHC4, UGT2B17, WNT7B, XYLB
Negative_1365	APP, ASL, GLS, INS, TNF, ACTG1, ATP5I, BMP5, BUB1, CD55, CLOCK, DHRS4L 2, EPHB4, GAB1, GALNT6, MAGI3, MCEE, MS4A2, NODAL, OR2M4, OR4B1, OR5R 1, OR9Q2, PDK1, PON3, RAPGEF4, SETMAR, C1GALT1C1, TNFRSF10D
Negative_1366	C2, IDS, ACACA, ANAPC2, APLP1, BIRC3, C7orf16, CASP9, CD58, CDC7, CDK 4, CFL2, CSDA, CXCR4, CYP2A6, DBF4, FGF8, GLI2, GNG12, GRLF1, HSD17B4 , IFNA13, ITGA8, KLK3, MGST1, NCKAP1L, NCR2, NKD2, OR1L3, OR2A2, OR51 F2, OR51G2, OR8D2, PCYT2, PIGQ, PLXNB2, POLR3B, PSPH, PTPRR, STX5, ST X7, TACR1, TBXA2R, UGP2
Negative_1367	AK5, C1S, ITK, ACSM1, EGFR, GLI2, LMO7, NEU1, PDE6H, PIAS3, TRDMT1, VA MP4, ZFYVE9
Negative_1368	FER, CDS2, GARS, OR2B11
Negative_1369	DBT, ACACB, BBC3, FGF20, FGFR3, FPGS, FTMT, FUT9, GALNT3, GSTM4, NEFH , NFKB2, PDGFRA, PPP2CA, PTTG1, TBL1X, AASDHPPT, HSD17B10
Negative_1370	CSK, AMDHD2, ATG7, B3GAT2, BPGM, C4BPA, CAV1, CCR10, CD40, CHDH, CSF1 , DUSP4, ENAH, EPHX1, F2RL1, FARSA, FGF1, FGF13, FUT9, GALNT3, GAPDH, GMPR2, HLA- G, HSD11B2, IDH3B, IKBKB, KCNJ11, NFX1, OCLN, OGDHL, OR2A4, OR2T5, OR 4D1, OR51G1, OR5L1, P2RX4, PHPT1, PNPLA3, POLE4, PSAT1, PSME1, RBPJL , SMAD3, SPRY3, TOMM40L, TUBB4Q
Negative_1371	MPZ, NLK, UBB, ACSM5, C3AR1, DHRS4, GCNT3, GRHPR, GUCY1A2, IL17RA, IT GAE, LALBA, MAP2K4, MMP9, MYH7, NAE1, NAT6, OR4K5, OR7C1, OR8H3, PDE3 A, PIM2, PLCD1, PRKAB1, RENBP, SDHD, SETD1A, SMAD1, SRD5A2, SSH1, THB S4, TRAF3, UGCGL2, UGT2B7, VNN1, ATP6V0D2, HLA-DQA2

Negative_1372	CS, GCK, ADH1B, ARSE, B4GALT5, BDKRB1, CADM1, COQ5, CREB3L1, CREB3L3, DFFA, E2F4, FUT2, FZD5, GNAZ, IL17B, MICA, NSD1, OR11A1, OR14J1, OR2M5, OR6C74, OR6K3, PDCD1, PGM3, PHPT1, PLA2G2F, POLR3G, PRKAR2A, PTE N, RFNG, RRAS, SH3BP2, SYNJ2, TAS2R4, TKTL2, UBE2L6, ATP6V1C2, MAP3K7IP1
Negative_1373	DDO, NOG, ACACA, AGPAT3, CD72, CREB3L2, CTNNA2, CXCL2, CYP4F3, DDX18, DOCK1, GALNT7, HSD17B1, MASP1, NCOR1, OR4D6, OR4K13, OR5T3, PFAS, P MM2, PRIM2, RASSF1, STAM, SUFU, TUBB3, WNT9B
Negative_1374	BTB, C4B, LAT, PTS, ADH4, ALG5, CNGA4, CREB1, CX3CL1, EGFR, EPHA6, F2R L3, GAD1, GLDC, GSTA3, HLA- DMA, HSPB1, IL5RA, IMPDH2, INHBC, IQGAP1, JAG2, LCMT2, PAK4, PDE6H, P ECAM1, PFN3, PIAS1, POLE4, RASGRP1, RASGRP3, SMPD4, SPHK2, SSH3, SUV 39H1, TAS2R1, TD02, UGT2B17, VKORC1
Negative_1375	FGB, KIT, CHD8, CHKB, CHSY3, FGF11, GLG1, GSTM2, IL22, KIR2DS5, MAP2K 5, MPST, NRCAM, PTCRA, RENBP
Negative_1376	CAT, MIF, MPI, A4GALT, AMPD1, B3GAT2, B4GALT5, BBC3, CAMKK1, CARS2, C XCL2, DCTN1, DTX3, ENO2, FASN, FOSL1, GGT5, GJA1, IFNA14, ITGA2, LEFT Y2, LIPA, LLGL1, LM07, MLYCD, MYH4, OR10AG1, OR10X1, OR1K1, OR4X2, OR 52I2, PCYT1A, PDK1, PRKACA, RFWD2, RPSA, SV2C, UGT2B7, UPP2, VAV2, XC L1, TNFRSF10B
Negative_1377	C1S, CDH4, CLDN14, COL3A1, CSNK1E, DKK4, EVI1, FGF14, GALK2, GDF6, HC LS1, IFIH1, KIR2DS5, KIR3DL3, MAPK1, MGAT4A, OR13G1, OR2G2, OR4C11, OR4S1, OR51A2, OR5D18, OR5J2, OR9G1, PIM1, QARS, RBX1, SDHC, SMAD7, S ULT1A2, TUBB2A, TUBB2B, SERPINB5
Negative_1378	F12, FAH, GGH, GLS, LHB, MPL, NLK, ACACA, ALDH2, AMY2B, ARPC1A, ASS1, A TP5J, COL1A1, COL2A1, DEGS2, DGAT2L4, DHFR, DNMT3A, FGF8, GANC, HBEG F, HLA- C, HMOX2, HSP90B1, IFT57, INSR, ITGA11, ITGB4, LCMT1, MAN1A1, MAP3K6, MLLT4, MYH6, NCOA4, NFKB2, OR8B4, OR8D2, OR9Q2, PCNA, PTK2B, PTPMT1, RARS2, SOCS3
Negative_1379	MPI, ACOT12, ALDH6A1, AMDHD2, CXCL6, GYS2, IFNA13, JAM3, MGAT4A, NOS 3, NRXN1, ODC1, OR2M2, OR5F1, OR7C1, PER2, PFAS, PISD, PLOD3, PPP3R2, RALBP1, SC5DL, TBL1X, TIAM2, TRAF3, UNC5D, MAP3K7IP1
Negative_1380	COQ5, DKK4, EPHB6, F11R, FLT1, FTMT, FUT5, FZD1, GALNT13, GPAM, HIBCH, MRAS, NAGLU, NLGN3, NTF3, OR5AS1, OR6C76, PAK7, RPS6KA4, SETD1B, ST 3GAL6, TAS2R49, TCIRG1, TFDP1, TNFRSF8, UCKL1, ATP6V1G2, PNLIPRP1
Negative_1381	AR, SRC, ACAA2, ALDH1A3, BDH2, CDKN1B, GGT7, LYPLA1, MAGI1, OR11G2, O R13C3, OR6C3, P2RX4, PLA2G2A, SLC27A5
Negative_1382	F7, MVD, ACPT, ALOX15, BACE1, BET1L, CPS1, CYP11B1, DFFA, EPHA2, EXTL 1, F2RL3, FGF1, FMO1, GAD1, GALNT6, GCNT2, GDF7, GGCX, HSD11B1, IL18R 1, KAT2B, KIR2DL2, NCF4, NCR3, NEU3, NUDT5, OCRL, OR4X2, OR52E2, OR5K 1, OR6M1, PFKFB3, PGAM2, PIAS4, RAP1B, SEPHS1, THBS1, TPI1, TSC2, UBA 1, SERPINA1, TNFRSF13B, TNFRSF13C, TNFRSF1A
Negative_1383	ACP6, EPB41L1, EXTL3, LRP6, PAK2, SETD7, ST8SIA1, UGT2B4, PPP1R12A, TNFRSF10B
Negative_1384	CSNK1G3, CTBP1, NAT2, NME2, ROBO2, TIRAP
Negative_1385	CRH, FES, LYN, MAX, AADAC, ALDH1A1, ARNT2, B3GALT1, BMP2, CD55, CMPK1, CSF3, CYP4F2, EPB41L3, FGFR4, FUT5, IFNA16, INADL, JAK3, LDHA, MAN1 C1, MGAT4A, NMNAT3, OR1B1, OR1L3, OR2AG1, OR51G2, OR51S1, OR52L1, P2 RX5, PDHB, PIGM, PLCB2, PLCD4, POLD2, PPP1R3C, PTGIS, PVRL4, RASGRP4, SDC3, SETMAR, SMC1B, SPHK1, ST3GAL3, TJP1, TRIP10, UGT2A3
Negative_1386	CKM, DCT, FN1, HK2, NGF, PLN, TKT, COQ5, CYP1A1, DHRS3, HNF1B, IFNA4, I FNK, IL8RB, LCP2, MAPK8, NFATC1, OR13C3, PANK3, PIGT, PSAT1, SELE, ST EAP3, TNFSF11, USE1

Negative_1387	ALAS2, ANAPC2, ATP2A1, CDC25C, ENPP2, ETS1, GIT1, GPX5, NCKAP1L, NFY C, OXCT2, RARS
Negative_1388	HK3, PVR, ARPC3, CLDN11, CLDN3, CYP1B1, ENTPD5, NODAL, OR4P4, OR52K2, P2RX6, SLC2A1, STMN1, TAS2R10, TGFBR1, TRPM5
Negative_1389	AK7, RB1, CACNA1F, CLDN3, KCNJ11, MITF, NARS2, NOS1, OR4B1, OR8J1, PGAM2, PKM2, PRKAR1B, SHC1
Negative_1390	F5, IL3, OTC, ACSL6, ADH4, ALG11, BLNK, BMP4, BNIP1, COL4A2, CREB3L3, CTF1, CXCL13, CYP11B1, CYP3A4, DHCR24, EFN1, EFN2, EIF4E2, ENPP2, FGF10, FZD7, GFAP, GPX5, GUCA1C, HARS, MLLT4, NEFL, OR10T2, OR2A12, OR2H1, OR51V1, PPP1R3A, PPT1, RAPGEF2, SIPA1, SV2C, TSTA3, WIF1, WNT8B, CSGALNACT2, TNFRSF14, TNFRSF1A
Negative_1391	AKR1B10, DGAT2, DPM1, GNA14, OLAH, OR5D13, PAX6, PITX2, SESN2, TBL1Y
Negative_1392	PAH, ACVR1, ALDH3B1, BBOX1, BIRC3, C1QB, CAMK4, CCL1, CCNA2, CLDN1, CLDN16, CLDN5, COX15, CYP2C18, DRD1, EP300, FLT3LG, GADD45B, GCLC, GUK1, IFNGR1, IL9R, IRF3, LAMB3, MKNK2, OCLN, OR1C1, OR5P2, OR5T1, PDK1, PIK3CG, PKLR, PLXNA1, PLXNB3, PPP1R1A, PRNP, RAC2, RDH12, SEMA3B, SHISA5, SMC1B, SMURF1, ST3GAL4, TGFBR2, THBS2, UGCG1, UGT2B4, WNT10B, TNFRSF14
Negative_1393	F11, ANAPC1, CCL2, CLCF1, CTF1, FZD3, IFNA6, IL28RA, MAML2, OR9G1, PP2R2B, SDHA, SEMA4A, SNAI1, THBS2
Negative_1394	ALOX5, CARS, CDC2, CLDN22, GSTM1, NAT1, NFYC, NOX3, OR8K5, PARS2, PIGB, PIK3R1, ATP6V1G3, ST6GALNAC5, SUV420H2
Negative_1395	NPY, ADORA2B, ADRB3, AMPD1, CCL2, CLTB, CNTN2, COL1A1, DLAT, EFN2, FGF17, GNRH2, HMBS, HSD17B8, HSD3B7, IL1R1, IL6ST, INHBB, MECR, NUMB, OR10Q1, OR11H1, OR6C6, OR6C7, OR6S1, OR7G1, PIP5K1C, PLA2G10, PPP2R5D, PRKAA2, PRKAB2, QARS, RDH10, SFRP5, SMC1A, TUBA8, TNFRSF11B
Negative_1396	CLCF1, CYP26A1, FASN, OR8A1, OR9I1, P2RX2, PCCA, UGT2A1
Negative_1397	ABLIM3, ATP2A2, F13B, GRAP2, HYAL1, IL11, IL17B, NSD1, OR4F4, OR51T1, OR8B4, PFKFB2, PTCRA, PTK2B, THBS1, TPH1
Negative_1398	HK2, UBC, ACPT, ERBB4, MAPT, MGAT2, NFKBIA, NLGN2, OR5AS1, THBD
Negative_1399	CKB, ACSM5, ACTB, ACVR2B, ANAPC10, CACNB1, GNPDA2, IAPP, IL10, IRS1, OR9Q1, PDE6D, PDE9A, PHKG2, RAF1, UBE2L3
Negative_1400	C8G, KMO, MTR, ALDH3B2, ALS2, APOC3, CLDN7, CNGA3, DIAPH3, DPM2, DUSP14, EPHA8, FGF6, FLT4, GALK1, GANAB, GPD1L, HNMT, ICAM3, IFNA5, IL6ST, IRAK1, KLRC1, LCP2, LIAS, MNX1, MTAP, NSD1, NTN1, OR10A7, OR11H4, OR2F1, OR5AP2, OR5J2, PDE4B, PGM2, POLA1, PRKACB, PRPH, RAP1B, SC4MOL, SC5DL, SRD5A1, UNC5C, WASF1, SUV420H1
Negative_1401	F3, FGB, GK2, ACOT11, ATP5C1, CASP6, CAV2, CBLC, CCNE1, CCR2, CD27, CHSY1, DTX2, EPHA1, FLT1, FZD9, GGCX, GRAP2, HCST, HTR7, IDH3G, IL10RA, LEFTY2, MCM6, NTNG1, OR10J3, OR1Q1, OR2T12, OR4F5, OR8B8, PAX8, PFKL, PON3, PRKAB1, PRKCD, RCHY1, SCIN, SPRED1, SPTAN1, STX16, TAS2R42, TAS2R50, WWP1, YOD1, HLA-DPA1
Negative_1402	GBE1, HNF1B, SGPP1, SNAP23
Negative_1403	AK3, BTK, ACACB, DDB2, GALK1, GNAI2, GNB1, GUCY2F, LLGL2, MYH1, NT5C, OR4N2, TGFB3, SUV420H1
Negative_1404	AK5, ACSL1, ACTC1, ANAPC5, ATP5L, CCKBR, COL4A4, F11R, FGF1, GLUL, GUCY2C, IARS2, IDH3A, IFNAR1, IGF1R, IRAK2, MAPK11, MCEE, MMP9, MYH1, NKD1, NMNAT3, OR2M5, OR4M1, OR9A4, ORC2L, PAK4, PARD6G, PAX8, PLXNA1, PNPLA3, PORCN, PPAP2C, PRKG2, PROC, RAP1A, SELE, TSHB, HLA-DRB5
Negative_1405	AGK, OR5B21, OR8B12, SARS, TFPI, UCK2

Negative_1406	CD2, NOG, TFG, ACY3, AKT3, AMPD2, ANAPC1, ATG12, ATP5A1, ATP5J2, BIRC5, CAMK2G, CCL16, CHRM5, CYP3A4, DDX52, DEGS2, DLAT, DVL3, ENO1, EPHB2, FUT4, GNAT3, ICAM3, IL13RA2, MASP1, MAT1A, OR4Q3, ORC6L, P2RX1, PLA2G3, PMM2, PTPN7, SNAP23, SOS2, SPP1, TAS1R1, TAS2R49, TGFBR2, TRAF6, TNFRSF10B
Negative_1407	ADO, FER, AMY2B, ARNTL, ARPC2, CCL14, CCL24, CD01, CFL2, CLOCK, CTPS, CYP3A7, EFN3, EIF4E2, ENTPD4, FGF22, GALNT5, GPD1L, GSTK1, IL13RA1, LEF1, NGEF, NR5A2, NTRK1, OR2AG1, OR4K1, OR51E2, OR9K2, PAK2, POLR3H, PON3, PPID, PPP2R2C, PSME1, PTGES, PTPRC, RND1, TACR3, TBXA2R, THBS1, TLR5, TMLHE, TSC1, TUBA1B, WNT5A, HLA-DRB4
Negative_1408	FOS, MET, AGPAT6, AKR1C1, ALG1, CANT1, CCNH, CLDN6, DGKQ, DOLPP1, FECH, FGF3, GALM, GALNT10, GNA13, GNRHR, HLA-DRA, HSPB1, IGF1, IL5RA, IL7R, ITCH, ITGA11, MGAT5B, MYH3, NFAT5, OR2L13, OR51T1, OR5K1, OR8H2, PDIA4, PDK1, PEMT, PFN1, PFN4, PIAS2, PLK1, PTPN6, SCD5, SKP1, SOX17, SRD5A2, STAT5A, TNFSF11, UNC5B, HLA-DQA2
Negative_1409	C1S, SRC, ADRB3, AMHR2, ATP4A, BMP4, CSNK2A2, CYP2D6, DFFB, DGKA, DUSP6, DUSP9, ECHS1, EI24, FCGR2B, FGF23, FGF8, FOSL1, GGT1, GLI2, GUSB, IFNA17, LAMC1, LFNG, MGST3, NKX2-2, OR14A16, OR1L8, PDE4C, PIGM, PIK3C3, PIP5K3, PTPN6, RFX5, SELE, ST3GAL3, TKTL2, WEE1, XYLT1, ATP6V1G3, PPARGC1A
Negative_1410	AUH, IL5, NF1, FLT4, GLS2, NLGN2, NRG1, OR10R2, PLOD3, SKP1, TJP1, TUBB4Q, VAMP3, ZFYVE9
Negative_1411	ALG9, APBB1, BIRC2, CLDN6, CYBB, CYP2S1, DIAPH1, DUSP3, E2F2, GFAP, GNA14, HSPA1B, IL1RAP, ITGAX, LDHD, MTFMT, OR4M1, OR52L1, PIK3R1, POLA2, STAT6, TPI1, TYRP1, ZFYVE9, TNFRSF17
Negative_1412	EBP, SRM, ABI2, BDNF, C3orf10, CLDN18, COL1A2, ENTPD4, HDAC2, IRF5, NUDT2, OR4M1, PIAS1, PTCH2, ROCK2, SEPHS1, XCR1
Negative_1413	C1S, BMP4, BST1, FGF17, NANS, NCAM1, OR52N4, SV2A, TGFBR1, WNT10B, TNFRSF10D
Negative_1414	PDC, SRM, ADCY10, ALG10, ALG12, ARPC2, CAPN2, CASP6, CDH4, CHIT1, CLDN9, CTBP2, FGF3, GNG13, GYS1, INHBE, MAOA, MAP2K3, NUMBL, OR1C1, OR2A42, ORC1L, PER2, PLXNC1, PTPMT1, TYMS, VAV3, VTI1B, ZFYVE16
Negative_1415	AK3, GLA, GSS, LAT, PLN, ALG6, ATP5G2, ATP6V0C, C1GALT1, CDC25A, CFTR, DDX52, DEGS2, E2F1, EARS2, ENO2, ENPP2, ENTPD2, FGD1, FOXO1, GNB1, GOT1, HADHA, HLA-DRA, IRF7, JAK3, NEFH, OR4A5, OR51E1, OR5A1, OR5T2, OR5T3, ORC1L, PANK1, PANK3, PCYT1A, PDE1A, PMM2, POLR1C, POLR3B, RAD51, RASGRP1, RFX5, RPS6KA2, RXRG, STAM, TCF7L2, TLN2, WEE1
Negative_1416	F3, ACP5, BCMO1, BMP8A, CACNB1, CDK7, DDX55, EVI1, FGF23, GNG12, HIF1A, KAT2B, MAN1A2, MTHFD2, NME2, OR5AR1, PARD6A, RALB, RRM1, SETD2, SPRY4, TAS2R8, UBE2L3, UROD, ZFYVE9
Negative_1417	A2M, MPZ, ATIC, CHRNA7, GLO1, GMDS, HSD17B4, IFNA17, IL1A, INADL, JUND, NEUROD1, OR1D2, OR2AT4, OR4M2, PLD2, PPP2R1A, PSME2, ULBP2, ALDH18A1
Negative_1418	IL3, OSM, ACAT1, CASP10, CCL25, CTSL1, CYP2C19, DPYD, DVL3, EPHB3, FGFR4, GCNT4, GNAT3, GNG3, IFNA14, IFNA7, ITPKA, KCNJ11, MYLK3, NAT5, NMNAT2, OR1E2, OR4D2, OR52E8, PKM2, RALB, RASSF1, SH2D2A, SNW1, TAS2R4, XCL1
Negative_1419	GSTA1, NCF4, OR5L2, OR7A17, STX10
Negative_1420	LCK, ACTA2, BCL2, BLVRB, C1GALT1, CDK2, CDS2, CKMT2, CYP17A1, DGKZ, DHRS4L2, ECSIT, FCGR3B, FMO4, GNA12, GPT2, GRIN2D, HGSNAT, IKBKE, INHBE, LCMT2, MYH13, NME7, OR10C1, OR52E6, OR6C4, ORC6L, PER1, POLR2A, PRKAG2, RARS2, SLC2A1, SMAD3, SRGAP1, STAM2, SUCLG2, TLN1, UMPS, WNT9B, SERPINF2

Negative_1421	CAT, SMS, TXK, ACAA1, ALOX12, ARPC3, CD74, CDC2, CHRM2, CLDN2, CYP11A1, CYP1B1, DNMT3L, DPM1, DVL3, FGF8, FPGT, GRIN2C, GRM1, HTR2B, IL28RA, MAP3K2, NAT1, NCF4, OR51F2, OR9K2, PAPSS1, PDE8A, PDGFRA, POMC, PP2R1B, RELA, SEMA4G, TBXAS1, TGFB2, TNFSF8, VANGL2, VAV2, WHSC1
Negative_1422	ID4, TK2, AK3L1, ARNTL, DCXR, DDX47, GCLC, HPSE, IGF1R, IL2RG, OR6M1, PI4KB, PIK3C2B, RND1, SCP2, TUBB2C, UPP2
Negative_1423	AADAC, ADRBK2, AKR1C1, ALOX12B, CNGB1, CRB3, DFFA, OR13C4, SDHA
Negative_1424	F10, GSS, ID4, ASCC3, B3GALT2, CALML6, CES7, CHRM5, CXCL6, DVL2, EPOR, FGF8, FUT2, GALNT11, GSTA4, GSTA5, IFNA7, IL28B, JAM2, LEPR, LTBP1, METTL2B, NME6, NPAS2, NPR1, NRP1, NRXN1, OR10V1, OR2M4, OR2Z1, OR4K2, OR5F1, PAK6, PDE8A, PFKP, PRKAR1A, PTCRA, RARS2, RASGRF2, SIPA1, THBS2, VDAC3, B4GALNT1, HSD17B10
Negative_1425	NNT, AGXT2, AVPR1B, CDK7, CHEK2, CREB3L4, CTNNA3, FM05, GADD45A, KIR3DL2, MARS2, MYH6, OR1N2, OR2M3, OR4F6, OR6F1, OR8K3, POLD4, PSME1, RUNX1, SPTAN1, STMN1, TAP2, TAS2R49, TNFSF9, TPH2, UGDH
Negative_1426	HDC, TH, ACAA1, ACTB, AGXT2, ALDH4A1, ASPA, EGLN3, ENAH, EPHA5, EPHX2, FLT1, GNAS, GSTM5, HLA-C, MAP4K4, MAT1A, OR1L3, OR52B6, PFN1, PGM2, POLR2K, PRKAG1, RALBP1, SIAH1, TBK1, THBS3, TNFSF10, TRMT11, VAMP4, WASF2
Negative_1427	TH, ACAT1, ACO2, ARPC4, ARRB2, AVPR1B, C3AR1, CCNA2, CTLA4, EGLN1, ENPP3, FARSA, FBXW11, FLT3, GALT, ITGA2, NEUROD1, NME4, NMNAT1, OR10G9, OR4C46, OR51B5, OR8H1, PLA1A, POLD2, POLR1B, PVRL1, SIGLEC1, ST6GAL1, STEAP3, STX2, TRPM5, TUBA3E, TYMS, WWP2
Negative_1428	ALG6, CD274, HPSE, ITGA6, LILRB3, NFKBIE, PDE8A, TNFSF12
Negative_1429	MAG, ADRA1D, ADSL, ARPC3, CCL14, COL5A2, CSNK2A2, ETNK1, ITCH, ITGB6, JUND, MMP14, NRG1, OR14C36, PGM2, RAC1, SETD2, TAP1, UBE2L3, TNFRSF1A
Negative_1430	ALDH4A1, ASCC3, CYP11B2, DDX23, EPHB3, GNRHR, GRIN2D, HSPA1B, MPST, NODAL, OR11H6, OR1L8, OR5K2, OR6C6, OR9A2, PIAS2, PRDX6, PRPH2, RBX1, SGPP1, SHC1, STMN1, TAS2R1, TBK1, TNFSF18, VEGFC, WWP1, ATP6VOA1
Negative_1431	IL3, MIF, OGT, ACTN2, ARHGEF6, ATP2A1, CACNA1E, CAPN2, CDKN2A, CPS1, CSNK1G1, CYP2C9, DPYD, DTX1, DUSP4, ETS1, FGFR4, GUCY2C, IDH1, IL12A, IL15RA, LRDD, MAP2K2, MAP3K12, MAPK11, MYL9, NCR1, NEU2, NR1D1, OR14C36, OR2A14, OR52N5, PDE8B, PIAS1, PIGP, PLCZ1, POLD1, PRKX, PRSS2, RDH11, RDH16, RENBP, SCD5, SMC1B, SOD1, STAM, THTPA, UGT2A3, MAPKAPK3
Negative_1432	ADA, AR, BID, CGA, PAH, SDS, STS, AADAC, ADH1A, AKR1B10, APOA2, ATP5G1, BMP2, CCNG2, CCR4, CDS2, CREB3, ENO1, EPHB2, FBP2, FLOT1, HSD17B8, IL15RA, LRP5, MCCC1, NKD1, OR2M3, OR4F4, OR6K3, PCYT1A, PMM2, RASSF1, SEMA3B, SHC3, SLC2A4, TAS2R60, TM7SF2, UCP1, VANGL1, VAV1, SUV420H2
Negative_1433	INSR, OR4K14, POLR2F, SHC4, STAT4
Negative_1434	AASDH, DBF4, OR5L2, PDE6H, PFN3, PIK3R2, TAS1R2, TNFSF14
Negative_1435	BID, TPO, CCL25, CFTR, DGAT2, DHRS4, F2RL3, GLG1, GNAZ, HNF4A, IRS4, MAP4K3, MYL5, NRG1, OR1M1, OR51I2, ORC4L, PIGM, POLR3K, PRLR, PTGES, PTPRR, SLC2A2, WNT3
Negative_1436	ALPL, ANAPC5, APOA5, CCND2, DAAM2, FRAP1, HTR2C, MITF, OR51I1, PFKFB1, PIK3C3, PLA2G2D, PPAT, PPP2CB, PRIM2, RFXANK, THY1, TYK2, WNT3, PRICKLE1, TNFRSF13B
Negative_1437	DCC, CAMKK1, CCR1, CXCR3, DLL4, IQGAP2, NR1D1, OR4X2, OR5AC2, OR6C76, OR8H2, PIGQ, POLR1D, POLR2H, PRKAB1, TMLHE, TNFSF12
Negative_1438	CS, GDA, LSS, ANAPC5, ARD1A, CD19, FUT6, HEMK1, LDHA, MCCC1, NRG4, NT5M, OR10H4, OR11A1, OR52D1, OR52E8, PIK3C2G, PLCB4, POLR2C, SEMA4C, SGPP1, SNAI1, SPRED1, TGFB2, YWHAG, YWHAZ, GABARAPL2

Negative_1439	CD2, CKM, SP1, ACPP, C7orf16, CLOCK, CRLS1, DHRS4, DTX4, DUSP10, EP300, FGF23, GPD1L, HMBS, IKBKE, IL24, IL2RB, IPMK, OGDHL, OR13H1, OR2L8, OR5D14, OR5D18, OR8J3, POLR3K, THY1, TRAF3, TUBA1A, VDAC2
Negative_1440	APP, OGT, ABLIM3, ACOT12, ACSS2, ADCY5, ALG11, ARD1A, ARG2, ATP4A, BPNT1, CACNA1B, CACNA1E, CAPN2, CCNG1, CD247, CD80, CHEK2, COQ5, CRLF2, CYP4A22, ENTPD3, FUT4, GALNT8, GLI1, GPD1, GRIA2, ITGA4, MGST1, NTF4, OR13D1, OR1I1, OR2M2, OR5AK2, PHGDH, PIGA, PPP3CA, PTPMT1, RPS6KA4, RUNX1, SELE, SOX17, TAS2R50, TGFB1, THBS2, TSHB, TSLP, TUBB6, UGT2B28
Negative_1441	MVD, CARS, CRLS1, GFPT2, KDSR, MYL5, NQO1, PARD6G, PDE8A, PLCB4, PRKACB, SH2D1B, SLC25A5, SMAD1
Negative_1442	ADK, CCDC6, CCL7, CLDN20, IQGAP3, KYNU, MFNG, OR1L4, OR5V1, SERPINA1
Negative_1443	F10, AARS, AKR1D1, BRAF, COL6A2, GALNT8, GRHPR, IL3RA, LDHA, PDE8A, PFKFB3, PFN2, SLIT1, TKTL2, TUBAL3, VEGFA, WNT10B
Negative_1444	CAD, ACACA, AGXT, AKR1C3, ALG9, CCL21, CCL26, CCNB1, CDKN2D, CYFIP2, CYP3A5, DDX4, DNMT3L, FLOT2, FMO4, GNAQ, HHIP, IAPP, IL18R1, KLKB1, KLRD1, NFKBIE, OR13F1, OR1S1, OR4F15, OR5B21, PAK4, POLR2J, POLR3K, RELA, SARDH, SLC25A6, SOS1, TOMM40, ULBP1, XYLT1, ATP6V1B2, CSNK1A1L, PPP1R12A, SLC25A31, SUV420H1
Negative_1445	AK2, ATM, MET, CREB1, CREB3L3, DEGS1, FOSL1, GSTT1, MCCC1, NCK2, OR4D9, STAT5A, HSD17B10
Negative_1446	GLA, VCL, ACADS, ACVR1B, ALDH1L1, AOC3, ATP2A1, CACNA1G, CADM1, CHRM5, CTSG, CXCR3, CYP26C1, DUSP8, F2RL2, GSTO1, GUCA1A, HNF4A, LAP3, MAPK3, MAPK9, MMP7, OR10A3, OR10AG1, OR10H4, OR11H6, OR51B5, OR5AS1, PANK4, PIGT, POLR2I, PTPRZ1, QPRT, SRGAP3, STX10, UNC5A, WBSCR22, AASDHPPT
Negative_1447	STS, AADAT, BDH1, DBF4, HRH1, MCCC1, NME4, NRXN3, OR2Z1, PHGDH, PIGS, PTPRR, SMAD6, SRGAP1, CSGALNACT2
Negative_1448	CD2, CD6, FYN, ADSS, ALCAM, BMP7, CADM3, CDH5, CHRDL, CRLF2, EXTL3, FLOT1, GALNS, GPLD1, GUCY1A3, HAGHL, IL15, NOD1, OR10G3, OR56A1, PDIA4, PIP4K2A, PLA2G10, POLA1, SMARCA5, TICAM2, VEGFC
Negative_1449	CAD, ALDH4A1, AMY2A, B3GNT5, CAMKK2, CCNB1, CCND1, COASY, DCXR, DDB2, IGF1, NCF1, NFATC1, NLGN2, NRCAM, OR2B2, PTPRB, SUOX, TACR3, TAS2R38, THBS1, UMPS
Negative_1450	DDO, F9, ID3, GALNTL5, GRIA1, IFNA2, OR2T4, PRKAG2, HLA-DRB5
Negative_1451	FN1, FYN, IL5, SMO, ADAM17, CYP1B1, CYP2F1, DIAPH1, GGT5, IGFBP3, IL1RAP, IL28B, MCM6, OR1J2, OR5T2, POLR1E, SLC2A4, TIAM1
Negative_1452	ABI2, ALDH3A1, ASS1, ATP5I, CACNA1F, CDC23, CDH15, COMP, DTX4, FGF21, FGF4, GFPT2, GSTZ1, IKBKB, IL20RB, POLR2H, PPP5C, SDC1, SERPINF2
Negative_1453	CCL22, GUSB, ITGA11, KIR2DL3, OR13D1, POLD3, RCHY1, ROBO1
Negative_1454	GBA, GLS, ACAA1, ACSS3, ARHGEF4, ATP12A, ATP5G2, BCAR1, C4BPA, C5AR1, CBLB, CDK4, CLCA4, CLDN11, CLDN18, CSF3R, CXCR6, EHMT1, FGF4, HLAG, HMGCS2, HTR7, IL12A, KLRC3, MAP4K3, NFATC2, OR13G1, OR6K3, PAK4, PDE4D, PDE6D, PDPK1, PIP5K3, POLD1, PRKAB2, SGPP1, SMAD5, SPCS3, TGDS, VAV3, WASF3, ATP6VOD1
Negative_1455	PLXNA2, QPRT, TAS2R10, UROS
Negative_1456	F2R, ADH6, ADSL, AGPAT3, APLP1, ATF4, BTRC, CCL8, CCNE2, CD70, CYP21A2, EPHB3, FGF14, GGCX, IQGAP1, IRS2, MAOA, NEU1, OR10H3, OR2A12, OR5J2, PIK3R5, PIP4K2B, PPP1CB, PTGS2, RPSA, SDHD, STEAP3, TKTL1, TPH1, TPMT, UCK2, SERPINE1, ST6GALNAC3

Negative_1457	ASL, DCK, FUK, OAT, VCL, AADAC, ACOX2, ALOX12B, BMP2, CDC14B, CDC25B, COMT, CPS1, CRY2, DOT1L, DRD5, EFNA4, ENAH, GANAB, GJA1, GPLD1, GUCY2D, IL17B, LIMK2, MAP4K4, MEF2C, NCAM1, NEU3, NME7, NR1H3, OR13C3, OR4A5, PIPOX, PLAUR, PPAT, RAB5A, RDH5, RFXAP, RND1, SLC2A1, SORBS1, TCF7L2, TGFB2, TOMM40, UPP2, WBSCR22, WNT3A, WNT5B
Negative_1458	EGF, TNF, ACAA1, ACSM1, ALDOC, BCKDHA, CCL23, CCNA2, CD72, CD79A, CEBPA, CLDN14, CLDN15, CSH1, CYBB, EIF4E2, GCDH, GLI2, GLUD2, HMBS, HYAL1, IAPP, IGF1, IRAK3, ITGB8, MAP3K1, MDM2, NAT1, OR10A2, OR10C1, OR51I1, OR6C75, OR9Q2, PDCD1, PGK1, PIGK, PPP2R2B, PSEN1, SMAD5, UGCGL2, ATP6V1G1
Negative_1459	ASL, GPT, HPD, CCNA1, DCTN1, DDX4, DTX4, GALE, GALNT12, GNPDA2, HHIP, IL5RA, IRAK4, ITGA10, ITGA8, LLGL2, MAPK12, MARS2, NLGN3, OR11H6, OR1M1, OR2A12, OR2Z1, OR5A1, OR5J2, PAX4, PNMT, RRM1, SMAD9, TUBB6, UBE2L6, MAPKAPK5
Negative_1460	ADA, ALG6, ARHGEF1, FGF19, G6PC, NEFM
Negative_1461	IHH, TNN, ACHE, ADCY5, AMPD2, B3GAT2, CCL1, CD34, CTBP1, DAAM2, ETS1, EXOC7, FGF17, GALNT13, GJA1, HTR2B, MYL5, OR11A1, OR2M2, OR5D14, OR6C74, PANK3, PARD6A, PIK3CG, PLA2G4A, PMM1, PRKCB, PSPH, RBPJ, SPRED2, TPM3, TRAF2, UCK1, VAMP1, WHSC1L1
Negative_1462	DUT, RPE, ARG2, ARSD, CCR8, CD80, GALNTL1, GGPS1, GOSR2, GSTM2, GUCY1B3, HMOX2, HNF1A, ICAM1, IDH3B, INPP5A, INPPL1, MAP2K2, NKD2, OR2B6, OR5R1, OR8H1, OR9Q1, P2RX3, POLR3K, RPE65, RRAS, SCD5, SDC2, SPTLC1, ZFYVE16
Negative_1463	GP9, OSM, SP1, ACTN4, AMY2A, C3orf10, CCKAR, CDH1, CKS1B, DGKA, DLL3, ENTPD7, FGF7, GDF6, HGSNAT, IDH3G, IFNA21, IL18R1, INPP4A, ITGA2B, NATA2, NCAM1, NCOA4, NKX6-1, OR10G4, OR51V1, OR5T3, OR8B12, OR9Q1, PHKA1, PLXNA2, POLA1, PPP2R2A, PTPRZ1, SEMA7A, TNFSF18, TRDMT1, TUBB6, TYRP1, ATP6V0A2
Negative_1464	MAG, AANAT, ACVR1B, ADH7, AMY2A, FPGS, FZD8, HDAC1, IFNGR2, LHCGR, MYL7, OR13G1, OR1M1, OR4D5, OR52B6, PRKG2, PTGER3, RPN1, RPS6KB2, TALD01, UROD, ZNRD1
Negative_1465	ACLY, ALS2, ARHGEF1, ATP4B, BAIAP2, CHST13, COL3A1, COL5A3, DUSP1, IGSF5, OR51G1, OR5T2, OR6K3, OR6K6, PHPT1, PPAT, SEMA3C, STX4, TCF7L1, VDAC3
Negative_1466	TH, ADIPOR1, CACNA1I, CCND2, CNTNAP1, CSNK1D, DFFA, MAPK8, NCF1, OR13D1, OR1D5, OR4E2, PCCA, PPA1, PRPH2, ST3GAL2, STAT5A
Negative_1467	ASAHI, COL4A2, EFNA1, ENO3, IL7R, PCNA, PIPOX, PPARGC1A
Negative_1468	FOS, INS, ABL1, CD48, CDC2, CSNK1G2, DPM2, ENPP2, GAS1, IRF5, NOX3, OR6F1, PLA2G5, PRDX6, PRPS2, SELE, TGFB2, WNT2, ZFYVE9, HSP90AB1, MAPKAPK2
Negative_1469	DCC, PC, AARS, ACAT1, ALAS1, ALOX15B, AXIN1, B4GALT6, C9orf95, CBLC, COL4A6, CSAD, CTPS, CXCL5, EHMT1, FGF12, GALM, GALNTL5, GLI2, GSTM3, HADH, IPPK, IRAK3, LAMC3, LDHD, LIPC, MCM6, MLYCD, MS4A2, MYLK2, NME2, NRCAM, PCK1, PDE6H, PDE8A, PIP5K1B, PPAP2C, PRSS1, RETSAT, SPRED2, ST3GAL4, TNFSF11, TP53, TUBA8, ULK2, VDAC3, VNN1, YWHAQ, ZMAT3
Negative_1470	LCK, NPL, AK3L1, ANAPC5, CHKB, CNTNAP2, ENO1, FGF22, GRAP2, IDH3G, IRF3, LIPT1, MAPK9, NOX1, OR1F1, OR1L3, OR52J3, OR6N1, OR8D1, PCCA, POLD1, PPP2CB, PPP2R1B, PRKAR2A, PRKG1, PVRL1, RALBP1, RENBP, SMC1A, SSX2IP, TNFRSF8, UCP1, ULK1, VANGL1, XIAP, HLA-DRB3
Negative_1471	CCL13, GRIN2C, HSD3B7, SAT1
Negative_1472	GAA, SYK, ACP5, AGRP, ALOX12, ALOX15B, ATP5I, BDKRB2, CCL11, CDK5, CLDN9, DKK1, EPAS1, EPHX2, FBP2, HMGCS1, HSD17B4, KIR3DL2, LDHA, LEFTY2, NFX1, OR1K1, OR2T29, OR51M1, ORC4L, PDE3A, PGLS, PGM1, PI4KB, PON3, PTGES2, QARS, RAP1A, RFNG, TRAF5, UCP1



Negative_1473	APP, C8A, CD4, ATP50, CACNG1, CAMKK1, CCNB1, CCR1, CDKN1B, CHST11, CLCA4, COQ5, COX10, CPS1, CXCR5, CYP1B1, EHMT1, ENPP3, EPHA6, GLUD2, GRM5, HHEX, HLCS, IFNA5, IL7R, IRF9, MAP4K2, MCM2, MPZL1, NAE1, NR1H3, NSD1, OR10A6, OR13C3, OR13C5, OR1N2, OR51E1, OR5A2, PIK3R2, PVRL2, RRM2B, SLIT1, UGT2B4, WNT5B, SERPIND1
Negative_1474	GH2, GSN, MAG, ABL1, ACACA, ADH1A, ALCAM, AMPD1, ATP50, CACNA1S, CANT1, CD34, CXCL16, DHRS4, EPHA2, FZD4, GAD1, GALNT3, GPX5, ICOSLG, ITPA, KLRC4, LRDD, MGAT1, NCOR1, NFKBIA, NTN1, NUDT9, OR5H6, PKM2, POLE3, PRNP, PTCH2, RRAS, SDC1, SETD1B, SPTAN1, STAT3, TAS1R3, TPM3, HLA-DPA1
Negative_1475	CRK, DLD, ACSM3, ARD1A, BLVRA, CYP11B1, DUSP8, ECHS1, GFAP, GPX7, GRI1, GSTA1, IL18, IRF7, ITGB7, L1CAM, MYH11, NANP, OR10AD1, OR1C1, OR2AT4, PANK4, PCNA, PI4KA, PIK3CG, PRKAB2, RBL1, SDC1, SFRP4, SPRY2, SSH1, TLN1, TUBB2A, YWHAB, SERPINF2, TNFRSF6B
Negative_1476	AK1, C5, ACP5, CREB1, CXCR4, CYP26B1, DDOST, FZD1, IARS, IMPA2, IRF5, ITGA1, ITGAV, JAG2, MAT1A, MNX1, NFX1, NOD1, OR10H2, PIGQ, PON3, PRKA2, RPIA, TIAM2, UGT8, WEE1, ATP6V1G3, PPP1R12A, PRICKLE2
Negative_1477	CD6, IDS, KHK, MYC, PLG, PXN, ACTN1, AKR1A1, ARD1A, CALML3, CSF3R, DDX4, FCGR3A, GANAB, GOT1, IL10, L1CAM, OR10A7, OR1N2, PIK3R4, PIP4K2A, PRKAB1, PTAFR, PTPRF, RAPGEF2, RDH11, RPS6KA3, SOD1, CTNBP1, TNFRSF17
Negative_1478	OSM, RB1, KIR3DL2, MAP3K3, SLIT1
Negative_1479	GPT, IDS, OGT, APC2, BMP2, CCNB1, CD44, COL6A1, DNMT3A, DUSP14, ESAM, GCDH, GRIA2, HLA-DMA, IL17B, KLRD1, MAP3K14, NCF1, OR10A7, OR11G2, OR12D3, OR13C4, OR14A16, OR2B2, OR4A15, OR7C1, PDE3A, PDGFD, PEMT, PLA2G2E, PLOD2, POLR1B, RASGRF2, TGFB1, WASL, CSGALNACT2, PRICKLE1
Negative_1480	HK3, B4GALT2, CACNG6, CSNK1G3, DHDDS, MAP4K4, NPR2, OR2A4, OR9Q1, POLA1, PPP2CA, PRIM2, PRKAG3, TFPI
Negative_1481	BID, CBS, CDA, AARS2, CCR5, CDK6, CYP3A4, DLL3, DTYMK, EDA2R, ENPP3, GALC, GSTT1, ITGA3, LARS2, LHCGR, MAPK12, MYH10, OR13J1, OR2T3, OR5T2, OR9G1, PIK3CG, PTGS1, ST3GAL3, STX5, SUV39H2
Negative_1482	ACVR2A, APOE, C3orf10, CCL28, CD70, CDC27, CLDN4, CSNK2B, CYFIP1, EDNRB, FDPS, GALNT7, HPSE2, IFNAR1, IFNGR1, INSRR, ITPA, NT5E, ODC1, OR10H3, OR10Q1, OR2A4, OR3A2, PDE7A, PLEKHA8, POLR3B, PYCR2, RASGRP3, SV2B, TBL1XR1
Negative_1483	ADC, FH, LCK, OSM, PVR, AADAC, ABL2, ACSS1, AGPAT1, AHCYL2, ALG1, APC2, ATP13A2, B3GAT1, B3GAT3, BCL2, CACNA1E, CACNG3, CAMK2D, CLDN19, COL1A2, COX10, DNMT3L, EARS2, EGLN3, EHMT1, FLOT2, FOXA2, GALNS, GNA11, GNA12, MINPP1, NCKAP1L, NEFL, NNMT, OR10A7, OR4A5, OR4F17, PDE2A, P EMT, PIK3R4, PPP2R2A, RAPGEF2, RXRB, STX10, STX1A, SLC25A31
Negative_1484	JUN, ME1, ACADM, ADSL, ARRB2, ARSA, CD19, CLDN6, ENPP7, ERBB2, FUT7, GADD45A, HHIP, IRF3, LEFTY1, LTB4R2, NCF2, OR10S1, PGM2, PLA2G6, PPAP2B, PTK2, PTPN7, SELL, SGPP2, SPRY1
Negative_1485	AK7, APP, DAO, DBH, AKR1C1, ALDH6A1, CCL1, CDC14A, CDC45L, CMPK2, CNGB1, COL5A2, CPT2, CRLF2, DAPK3, DKK2, ETS1, FGF9, FRAT1, G6PC, GSTM5, HSD17B7, INPP5E, IRF5, IRF9, LIPC, NEFH, NFYC, OR2S2, OR52W1, OR5M3, OR6C1, PARD6B, PARVA, PPP1R1A, PPP2R5C, PPP2R5D, PRKCE, ROCK2, SHC4, SOCS3, ST8SIA5, TP11, YWHAB
Negative_1486	ACYP1, DAAM1, DAPK2, GSTA5, PAX8, PLIN
Negative_1487	ATF4, NRXN2, RRAS2

Negative_1488	DUT, PTS, UBC, AGMAT, ALDOB, ARHGAP5, CAMK2A, CCL14, CCND2, CHRDL, DGK G, F2RL3, FGF5, GALNT2, IL2RA, MAD1L1, NAT2, OR13C8, OR51F2, OR5T3, PDE1B, PIGA, PLD1, POLE, POLR2C, PRKG2, SEMA3E, SETD2, TBL1Y, UBA7, UC K1, UPRT, VCAM1, YWHAB
Negative_1489	CDA, FOS, IL3, NLK, AANAT, ACTA2, ALG13, APC2, BAAT, CBLB, CCL25, CRB3, DMGDH, EPB41L1, FMO1, FUT1, GNAZ, HSD3B7, HTRA2, IL5RA, ITGAE, KIR3 DL3, LRP6, NKD2, NR1H3, OR10K2, OR11L1, OR8I2, OXTR, PDE3B, PHKB, PRL R, PYCR2, SMAD6, SPCS1, SPRY4, SPTAN1, SRGAP2, UGT2B28, B3GALNT1, PA FAH1B3, SERPIND1
Negative_1490	ACO2, EDNRB, GAB1, GCDH, GUCY1B3, OR2K2, POLR3G, TAS1R1
Negative_1491	ADO, FUK, GCK, INS, ABP1, ACACA, ALDH1A3, APOA2, CASP10, CCR3, CISH, CLDN11, COL6A2, COQ3, DTX4, DVL1, GALNT14, GRIN1, INHBB, MADCAM1, MYH 7B, NAGLU, NME4, OR2A25, OR4D2, OR51F2, OR52E4, OR5AU1, OR5K1, OR8H1, OR9Q1, PDK1, PIGB, PIK3R3, PLAUR, PMAIP1, QPRT, RPIA, SNAI1, ST6GAL 1, TAS1R3, TNFSF9, TPI1, UGDH, YES1, YWHAQ, TNFRSF13B
Negative_1492	BTD, CRK, FAH, PGP, XDH, ACACA, ATP5C1, CCNB1, CHSY3, CLDN4, DUSP1, EN TPD5, EPHA4, EPHA7, IFNA14, IFNA4, IFNAR2, IL20RB, LYZL1, MMP7, NGEF, NT5C2, NTNG1, OR11A1, OR1D2, OR2D2, OR4D6, OR4M2, OR52E6, OR6F1, OR 8K3, PDE4C, PFKFB4, PNPLA4, PPP2R5B, PRNP, PRPH, SORD, TNFRSF4, TRPC 1
Negative_1493	DDO, EZR, INS, SRF, ALOX15B, APOE, AQP7, ARHGEF1, ARHGEF2, ARHGEF6, A TP5I, CACNA1E, CCL5, CDC16, CDKN2D, DDX41, DGAT1, DHX58, DLL3, E2F3, ESAM, GP1BA, GPX5, HEXB, IL1RAP, LDHC, LIMK1, LRP6, OR13C5, OR1G1, PA K3, PFN1, POLR3H, RFWD2, SOS2, TLR4, WNT11, B3GALNT1, GABARAPL1
Negative_1494	C4B, GNS, AGTR1, BMP6, CASP3, CCR8, CHD8, DDHD1, ENO2, FTH1, GALM, GCL M, HSD17B4, IL17RB, IL21, MAP2K7, NRG1, OR8J3, PLCD1, SGMS1, SRD5A2, SULT1A2, THBS2, HLA-DPB1, PNLIPRP1
Negative_1495	ATP2A1, B3GNT5, CNTN1, ENTPD4, FOXO1, HSD17B1, IL10, KAT2A, LTBR, MY L9, NRG3, STT3B, STX10, ATP6V1C2, SERPINA5
Negative_1496	DBH, ACADSB, ACTB, ADSL, ATP6V0C, B4GALT5, CCND1, CD274, CYP4F2, DTX 3, FBP2, LIPG, NPR1, OR11A1, OR2Z1, OR6N1, PDCD1, PGM2, POLR2B, PRKAA 1, TJP1, TJP2, ATP6V1E1
Negative_1497	HDC, ACAA2, AMY2B, BMP4, CD3E, DLL4, DTX2, DUSP4, FLT3LG, FRAT2, GALN T1, GRIN2D, IL21, JAG1, KIR2DL1, MAP2K5, MTHFD2, PLOD2, PLXNA3, PLXN B1, POLR1D, POMC, QARS, TSTA3
Negative_1498	ID1, B3GALT4, CD27, CNTNAP2, CREB3L2, CTBP2, CYP4A11, EFNA2, GPAM, M INPP1, NAT6, NFKB2, OR10A4, OR14J1, OR52M1, OR6K3, OR7C1, P2RX7, SCD 5
Negative_1499	ADA, APP, DBH, EZR, ALS2, CACNG7, CD72, CES2, CHPF, CNTNAP1, CRLF2, DM GDH, DNMT3L, EPHA4, FARSA, GLO1, GP1BB, GZMA, IFNB1, NPR2, OR10G8, OR 11L1, OR6K2, OR6M1, OR9A2, PPP2R5E, SEMA3E, SESN3, SOS1, TAS1R1, TPH 1, TPH2, WNT9A, ATP6V1E1, ATP6V1E2
Negative_1500	F8, FES, NPL, AKR1C2, CACNB2, CDC14B, MLLT4, OR10Q1, OR2T6, OR2W1, OR 5AK2, RALGDS, STX16
Negative_1501	C2, NF1, ACSM2A, BUB3, CDIPT, EFNB1, NFKB2, OR8A1, PLCB1, POLR1E, RAR A, STK11
Negative_1502	CFL2, E2F2, HNF1A, OR10C1, PPP2R2D, TSLP, UGT2B4
Negative_1503	FST, APC2, OR5T2, PDE1B, SC4MOL, XYLB, TNFRSF11B
Negative_1504	AMY2B, CLDN7, IL4R, LIPC, MAML2, NT5C1B, OR52E6, PLA2G2F, RRAS2, SLC 2A1, TGFB2, TUBA8

Negative_1505	EBP, FUK, LPO, PDC, ABLIM2, ACSM3, AGXT, CDC26, CHPT1, CYP1A1, CYP27A1, CYP8B1, FZD5, GLG1, GNA11, GRIN1, HLCS, HPRT1, HTRA2, IAPP, IBSP, IL11RA, IPPK, NFX1, NOX1, OR6C76, OR9I1, P2RX5, PARD6G, PLCB3, POLR2L, PTAFR, PTK2B, PTPRB, RDH5, SCP2, SDHB, SETD1B, SMAD2, TAS1R1, TAS2R41, TGFB2, TNFSF10, TUBA1B, VANGL1, VNN1, WNT1, WNT7A, MAPKAPK2
Negative_1506	GPT, RFK, ABP1, ARPC1B, ATP5A1, CD40LG, CSF2RA, ENPP6, FABP3, FGFR3, FLOT2, FM01, FOXO3, GSTT1, MAP2K2, MAP2K7, MDM4, OR10H3, P4HA1, PECA M1, PER2, PFAS, PPP1CA, PPP3R1, PPP3R2, PRKCI, SNAI1, WHSC1L1, ARHGE F12, KIR2DL5A, ST6GALNAC1
Negative_1507	AASDH, AKR1C1, ALOX15, ATP5B, BAIAP2, CCL17, CD46, CDC14B, CDC25A, C LTC, CSNK2B, CTBP2, DHCR24, DUSP8, DVL1, EGLN3, EPHB6, FLT1, GNAO1, I FNA2, IL17RA, ITGAE, ITPA, JAK1, LAMC3, MGST2, MYH7, NCF1, NCF4, NTNG 1, OR1Q1, OR2T2, OR52E6, PANK2, PAPSS2, PIAS1, PLCD4, PSENE1, RAPGEF 4, RRM1, SDC2, SOCS2, TNFSF11, TNFSF18
Negative_1508	ARHGEF4, ATP5A1, ATP6AP1, AVPR1B, BCL10, BHMT, CADM1, CALML5, CARS, CYP26A1, DAD1, DHDH, EXTL1, HADH, HDAC1, HLA-G, IL23A, JAG2, KIR2DS4, KLKB1, MAP3K3, MGAT4B, MYLK2, NAGLU, OR4C16, OR52E4, OR5D18, PMM2, POLR2H, PPP3R2, RFNG, RPSA, SSX2IP, STX4, TGF BR2, VARS, WNT7B, SERPINE1
Negative_1509	FST, IL2, PTS, VCL, ACSM4, ALG11, APOA1, BMP7, BUB3, CCL3, CD72, CLDN5, COL2A1, DUSP9, FUT7, GLI1, GLUD2, HMGCL, IDH3G, ITGA11, ITGB1, KLRC 2, LDHB, MAP3K12, MCM3, MCM7, OR10H2, OR2A4, OR7G2, PDCD1, PHKB, PIK3 CA, PIK3R2, PPCS, PRKAB2, RASGRF2, RRAS2, SMAD7, SULT2B1, TLR9, TNFS F18, VDAC3, WNT5A, WWP1, HLA-DPB1
Negative_1510	F12, GLS, ACAT2, CCNB1, CD19, CDKN1B, CDKN1C, CDKN2D, CYP4F2, DAG1, D DX55, DGKE, DHDH, DHRS4L2, EHMT1, FGFR4, FLOT1, GADD45B, GFPT2, HAP1, ITGA9, ITGAL, ODC1, OR10X1, OR5AU1, P2RX6, PITX2, POLR2D, PPAP2B, P RKCZ, PSME2, PTEN, RBL2, UNC5D
Negative_1511	RET, ARHGEF1, ATP13A2, CFTR, CHRM1, CRKL, CRY2, DAAM2, DARS2, ENPP6, ENTPD5, FECH, FLT3, FM03, FZD2, ITGA6, ITGB2, MAP3K13, MAP4K3, MDM2, OR1F1, OR52A5, PGM2, POLE4, PRKAG2, PTPMT1, PTPRM, RPS6KA6, SEMA3E, SEMA4F, SMPD3, WNT9A
Negative_1512	BUB1B, MTHFD2, SEMA3E
Negative_1513	AGL, BAX, APLP1, CARS2, CDKN1A, CHRM2, CLDN15, CYP3A4, DDHD1, FUT6, G STM4, IPMK, JAG1, LIFR, MAP3K7, NME7, OR13C3, OR5AU1, OR5L2, OR6C4, P FKFB2, PIAS2, PPA2, PPID, PTGES2, QARS, RAPGEF1, RPN2, TUBA3E, UGT2B 4, ZNRD1
Negative_1514	IL22, KCNQ1, MYH13, POLR3K, TCF7L1
Negative_1515	ADORA2B, AKR1B10, BTRC, CAV3, CDKN2D, DDX18, FADD, FARS2, GDF5, GLB1, IL17B, IL1A, IRAK1, ITGAX, LCMT2, NAMPT, NTF4, OR13C3, OR2T10, OR4B 1, OR4C12, OR52A5, OR5A2, OR5M3, PANK4, RAB23, SEMA4D, SETD2, SPRED2, SPTLC2, STX16, SULT2A1, SV2C, TACR1, TUBB2A, TUBB4, UAP1, UGT2A1, Y WHAZ, MAPKAPK2, TNFRSF10A, TNFRSF12A
Negative_1516	CS, GH1, KMO, ACADSB, AGRN, ATG7, ATP5A1, BDKRB2, CD8A, FZD3, GSTM4, L EPR, MGAT4B, OR51A7, PIP5K1A, RERE, SNW1, UGT2B17, WWP2, ST6GALNAC1
Negative_1517	BLVRA, BMP4, CADM3, CAMK2D, CNTNAP2, COL6A1, DGUOK, FGF4, GCLC, GLI2, GNB1, IRAK2, MAPT, NCOR1, OR2T8, OR6B2, OR6K2, RDH5, ROBO2, SHISA5, VAV2, WBSCR22
Negative_1518	DAO, FZD5, KIR2DS5, PRKAA2, ST6GALNAC5
Negative_1519	ID4, LPO, PTS, TNF, ABLIM1, ACSS3, ALPI, ATP6AP1, CSNK1D, CXCR3, DAAM 2, E2F3, EREG, F2RL2, FUT1, ITGA2B, ITGA5, KLKB1, MAML3, MAPK3, NTF4, OCRL, OR9I1, PDGFD, PTPRZ1, RASA2, RRAS, SH2D1B, SLC2A4, SMAD6, STK4, TAS2R7, TNFSF11, UROD

Negative_1520	A2M, ILK, KMO, B4GALT1, BCKDHA, CACNG5, CPT1A, E2F5, HSD3B2, IFNK, IL22RA1, NODAL, OGDHL, OR10Q1, OR2L2, PON1, TBXA2R
Negative_1521	APP, ATM, ID4, KIT, WAS, ACADVL, ADAM10, AKR1C1, CCR3, CD86, CHAD, CHIA, CYP11B1, CYP2S1, DGKI, DNMT1, FIGF, GALE, GLO1, HDAC2, HSPB1, IFNA5, IFNA6, IL20, INADL, INHBC, MGST1, MPDZ, NEU1, NRG1, OR1L4, OR4D2, OR4S1, PFKFB3, PIGT, PIP5K1C, PLK1, PLXNA3, PRKX, PSEN2, RAC3, RPS6KA6, SNAI2, TACR3, TAS2R8, TRAF6, TYRP1, HLA-DPA1, MAPKAPK2
Negative_1522	HK3, ACSM3, COQ5, CSAD, GFPT2, MAP3K1, OR10H4, OR2AG1, OR56B4, PTK2, PTPN7, SGMS1, STX18, SYNJ1, TCF7L1, TPH2, WNT7A, TNFSF13B
Negative_1523	ACO2, AKR1A1, ALOX12, ATF2, BLVRB, CCNE2, CDKN2D, CSNK1A1, CSNK2A2, CYP2C9, CYP2J2, DAPK1, DGAT2, EIF4B, GNAS, GPT2, GRIN1, HLCS, ICAM3, IL4R, LLGL2, LYZL1, MAP2K1, MAPT, NKX3-1, NOD1, NQO1, OR2W1, OR5D16, OR6M1, OR7C2, OR8U1, ORC1L, PDE10A, PIP5K3, PRDX6, PSEN2, SPAM1, ST3GAL5, TBXA2R, TGFB3, UGT2B7, ATP6V0D1
Negative_1524	ADH6, CACNG3, CDC7, CXCR6, DAPK2, DAXX, DDX51, DFFB, DGKA, EFNA4, ERB3, GNB1, GRLF1, HCCS, ITGA7, LHCGR, NFE2L2, OR10R2, OR1C1, OR2T3, OR5D14, PARD6B, PDPK1, PIK3R5, PRKACG, PRKCE, PTAFR, PTPN6, RRM1, SETD B2
Negative_1525	AGL, FGG, ITK, KHK, UBC, ARG2, ASS1, ATF4, B3GALT5, CD47, CXCL13, DGKH, EDN1, FIGF, GALNT2, ICAM3, IL18R1, INPPL1, KDSR, LTBR, MCEE, MYH7B, NCAM2, NTSR1, OR5AC2, OR5T1, PDE9A, PGK1, PIM1, PLXNB2, PRKAB1, SMAD9, SMPD2, SPTLC1, THBS1, CACNA2D1, MAPKAPK5, TNFRSF1B
Negative_1526	ADORA2A, AGPAT1, AOX1, BMP6, CD226, CD27, DCXR, DDIT3, FABP3, FSHB, GDE1, GUCA1B, HNF1B, HSD11B1, IFNG, ITPK1, ITPKA, JAG1, KAT2B, LILRB3, MTFMT, NKD1, NR5A2, OR10A5, OR4F4, OR51F2, OR51T1, OR6C6, OR8U1, PNMT, PPP3CA, SEMA4G, SETD2, ST8SIA5, TSHB, TSNARE1, CACNA2D3, PAFAH1 B1
Negative_1527	FZD3, GAL3ST1, GCDH, HMBS, IBSP, IL20, LLGL1, MAP4K3, OR10A4, OR1S1, OR4A16, SEMA3E, TOMM40L, HSD17B10
Negative_1528	OGT, C1QC, CREB1, CYP2A7, DDX23, DUSP9, GCAT, GSTP1, GUCA1C, HSD3B2, NME6, OR8D2, PARD6G, SC4MOL, TAS2R48, YARS, ST6GALNAC1
Negative_1529	ADA, CR2, FH, HGD, MUT, NNT, ACAT2, AGRP, ALDH3B2, ARAF, B3GALT1, BAIA P2, CAMK2B, DBF4, DGKE, FTMT, GPD2, GRIN2A, HARS2, HSD11B1, IL15RA, JAK3, MYH9, MYL9, NCR3, NT5C1B, OR1L1, OR2G2, OR2L2, OR4F4, OR56A3, OR5AK2, OR9I1, PAX4, PLCD1, PMM1, POLR2K, PPCS, PRKCB, PTAFR, PTCRA, PYCRL, RALA, RPS6KB1, ULBP1, PPARGC1A
Negative_1530	AUH, PAH, ACSS3, ADRB3, ALPL, ATP13A2, ATP4B, CD38, CHAD, CHDH, GSTA3, HAAO, HSD3B7, KCNB1, LEF1, MAP4K1, MGAM, NEUROG3, OR13C3, OR13F1, OR3A3, OR51L1, OR52K2, P2RX7, PPM1B, PVRL4, RASA1, SOAT1, STAT5B, SUL T1A4, SV2A, THBD, UCK2, UMPS, VDAC3, ZFYVE9, C1GALT1C1
Negative_1531	ASL, CCL15, CCL20, COL5A1, DLAT, ENAH, FASN, GCAT, GPX7, IL11, IMPA1, IRAK3, IRF9, NANP, OGDH, PTGER3, QPRT, SDHB, XYLT1, ZMAT3
Negative_1532	KMO, LTB, NNT, BDH2, C3orf10, CD70, CXCL12, FGF8, FRAP1, GMPS, GRIA1, HSD17B3, HTR4, IL10RB, IRF5, KCNB1, MDH1, MPDZ, MYH7B, NCR1, NFKBIA, NMNAT3, OR1I1, OR6X1, ORC2L, PAK6, PDE8A, PFKFB4, PRKG1, RASA2, RELA, ROBO3, SDC2, SGPP1, SH2D2A, SMARCA2, SPAM1, TYMS, VAMP4, PLA2G12A
Negative_1533	TKT, ACACA, APOC3, CDK4, CREB3, ENTPD4, FGF20, FOXO3, GALNT9, ITPA, OPLAH, OR51G1, OR5D13, PLXNA1, RPS6KB2, WHSC1L1
Negative_1534	C7, NF1, AOX1, BMP8A, CHIA, CRLS1, CTSB, DCXR, DDX51, DUSP1, DUSP2, FPGT, HNF4G, IDI1, KLRC4, KLRD1, NADSYN1, NUDT8, OR2AE1, OR4D9, OR51B4, OR51B6, OR52N4, OR5B21, OR5L2, P4HA2, PDE6G, PDE7B, PLA2G6, POLR1D, PTGER3, SEMA4A, SSH1, TAS2R5, TCIRG1, UGT1A10, UROC1

Negative_1535	EBP, KIT, ANAPC2, APBB1, ARSE, ATF2, ATN1, ATP5D, CDK2, COQ5, COX10, C SNK2B, HLA- F, INPP1, NNMT, NPR1, OR2H1, OR52N1, OR5F1, OR5T2, OR8B8, PCYT1A, PIA S2, PTDSS2, SESN1, TMLHE
Negative_1536	ADCY6, DDIT4, GFPT1, ITGAE, NCR1, SOCS7
Negative_1537	PVR, ACVR2B, ALG8, ARPC3, CD99, CSNK1D, CSNK1G3, CXCL6, CYFIP2, CYP2 A7, DERA, F13B, GPD1, GRB2, HMBS, HRH2, IL24, KIR2DL3, LDHAL6B, MTFMT , P2RX7, PKM2, POLR2K, SEMA4G, SSX2IP, TAS2R9, VAV2, VTI1A
Negative_1538	GSN, CAMK2G, FLT1, GFAP, GIT1, HTR2C, OR2V2, OR5AS1, OR6N2, PI4KB, PI AS4, PTPRC, RELA, SOX17
Negative_1539	IL9, ARG1, VAMP3
Negative_1540	ADO, FN1, OAT, ADCY10, ALDOB, FOXA3, FTH1, ITGB3, OR1B1, OR52L1, OR5L 1, PHKA1, SDHC
Negative_1541	GNG12, OR4M1, PITX2, POLR3G, SLC27A5
Negative_1542	CSNK2A1, CXCL6, MAP4K4
Negative_1543	GSN, HK1, ACP1, ACSS2, AGTR1, AHCYL1, BMPR1B, CAV1, CCND2, CD226, CDK N2B, CYP26B1, FADD, FADS2, GIT1, GRIN1, HRH2, ITGA9, LCAT, MARS, NEGR 1, NEU1, NKX3- 1, OR2K2, OR4C11, OR52A1, OR52D1, OR5AS1, PER3, PIGL, PIK3R3, PRKAB2 , PVRL4, PYCRL, SARS2, TAS2R3, CACNA2D4, GABARAPL1, HSD17B10, TNFRS F10B
Negative_1544	HPD, PRL, ADIPOR2, ARHGEF1, ATP6V1F, BMP5, CALML5, CAMK2A, CDC2, CHD 8, CKS1B, COL3A1, CTBP2, DUSP6, EIF4B, FMO2, GANAB, GRIA3, GZMA, HPSE , IFNK, MAN1B1, NCR2, OR2A25, PHKA1, PIGK, PLXNA2, PTGFR, SETD8, VASP
Negative_1545	AK3, GPT, ACLY, ADORA2B, ADRA1B, AKR1B1, ALG6, CAMK2B, CCL15, CDH2, C DKN2C, CPT1C, CYP2B6, DDX52, DHX58, DOLPP1, DPM1, DRD1, ECHS1, EI24, EPOR, EXT2, GUCA1B, IL11, INSR, IQGAP3, LAMB4, MS4A2, NFYC, NLGN1, O R10H2, OR13C2, OR4E2, OR6C3, OR7G1, P4HA1, PDE7A, PPCS, PRKAR2B, PTD SS2, RASGRF2, UBE2K, WBSCR22, WNT7B, ST6GALNAC1
Negative_1546	C8G, CBS, AANAT, ADCY4, ADRB3, AMY2B, ASRGL1, CCND3, CD247, CD27, CHR M3, CPT1A, ETS1, FGF22, GSTM4, GUK1, HSD17B8, IDUA, LYPLA1, MAP2K5, N ANP, OR1B1, PDGFRB, PFN2, PIGB, PLXNB3, PRPH, RXRB, STX16, UGT2B28, W NT9A
Negative_1547	FYN, ITK, TEC, ALAS2, CACNG6, CD82, CDK4, COL1A1, DDX52, DGKQ, EPRS, F LT3, GALNT1, GSTZ1, HIBCH, HMGCR, HSD17B4, MAN2A1, MAPK1, MCM2, NME4 , NMNAT3, NTF3, OLR1, OR13C5, OXCT1, PARS2, PDGFRA, PIGL, POLR3A, PRK CI, PRKCZ, SUCLG1, TCF7L1, CACNA2D2, ST6GALNAC6
Negative_1548	CGN, ID4, ACTA2, CASP10, CBLC, CCL28, CCR9, CHD8, CHRNA7, CNTN1, COL4 A6, COL6A1, CTBS, CYP2A7, DGKD, FRAP1, GNAI3, HMGCR, IL2RG, LFNG, MAS P2, MMP14, NAT6, NCSTN, NMNAT2, OR1C1, OR2Y1, OR4A15, OR51A7, OR51S1 , OR52K2, OR6K3, OR8H1, OR8S1, OXTR, PDE2A, PHKG1, POLD3, RBL1, RPS6, SESN1, SIPA1, TCIRG1, TGDS, TNFSF18, UNC5B, TNFRSF10C
Negative_1549	ME2, TPR, CCL16, CHPT1, CHRD, CLDN2, COL3A1, COL4A6, CREB3L2, CX3CL1 , CYP26C1, DHDDS, DOLPP1, ENTPD2, EPHX2, GGCX, GP1BA, HLA- G, JAK1, MDM2, OR1G1, OR2H2, OR51A2, OR5T3, PDE4C, PLK1, PPP2R1A, PRK ACA, SMAD7, STT3B, TRAF1, XYLB, XYLT1, ATP6V1C1, SERPINB5
Negative_1550	ACO2, AMY2A, DNMT3L, FPGT, GAS1, ITGB5, JUND, NEUROD1, OR4C13, PPA1, SDC2
Negative_1551	MTR, B3GAT2, FARSB, MAP3K11, MTHFR, PAPSS1, PAX6, PLEKHA8, RAPGEF3, RFWD2, SOCS2
Negative_1552	CGN, IHH, LSS, MIF, AASDH, ALG1, ALPP, AOC2, CNTNAP2, EXTL1, EXTL3, GN A12, HMGCS1, LIPG, MAML3, NTRK2, NUDT9, OR10K2, OR2AE1, OR2F1, OR2G2 , OR52L1, PDXK, PGAM2, PLCD3, PPP2R5E, RFX5, SEMA7A, SFRP1, SH2D2A, S MPD2, SNAI2, SUV39H1, TAS2R41, TRAF2, YWHAG

Negative_1553	EPHA7, HBEGF, IRS2, NFKB2, OR10S1
Negative_1554	TNF, ALOX12B, CD79B, DTX3L, GDF7, OR1J2, OR52M1, PRSS3, RASGRP1, SOX17, VARS, WNT8B
Negative_1555	C4B, FGA, ILK, ABP1, ACPT, BACE1, CD40LG, CD86, CYP2C8, DHODH, DPYS, DUSP14, EHMT1, GALNTL2, GSTA3, GSTM3, HLA-F, IL1A, LTBP1, MCCC2, NCF2, NFKB1, NTRK2, OR2B11, OR4K15, OR5K1, OR8B12, PIP5K1C, PLA2G2E, PRKCB, PSME1, PTPRF, PVRL3, RAPGEF3, STAT3, TNFSF8, ULBP1, XYLT2, CACNA2D2
Negative_1556	BTC, MPL, RFK, SI, SRF, ASS1, CCL14, CSAD, CYP11B1, CYP1A2, DRD1, FBXW11, GLG1, HLCS, HNF1B, IL22, IL28B, IMPA1, MAP2K3, MTFMT, OR2A5, PDHA1, PNMT, TGFB2, PRICKLE2
Negative_1557	DBH, IL5, OGT, TK1, ACO1, ADCY5, BCAT1, CCL19, DDX18, DGKE, DHRS9, DPM3, ELK1, EXT2, FGFR3, FPGS, FUT2, GALNT2, GSTO1, IDH2, IKBKE, IL18, LIPIA, MGAT4B, OLAH, OR13G1, OR2L3, OR3A1, ORC4L, PDE6G, PHKA2, RIPK1, SGPP2, SIPA1, SLC25A6, SORD, TAS2R1, TGFB2, TNFSF11, TNFSF18, CACNA2D3
Negative_1558	AK1, AASS, ADCY10, CDC7, CLDN20, CLDN3, CTNNB1, CXCR3, CYP2C19, EHHA1, EPHB6, GCLM, HAAO, IL29, IMPA2, ITGB2, MAP3K4, MGAT3, NAT5, NT5C, OR1L4, OR52I1, OR8B4, OR8J1, PER2, PFN2, PIK3R2, RALB, RASGRP2, RFX5, TNFSF14, TRHR, WNT8B, ATP6V0A1
Negative_1559	IHH, APOA2, BCL2, GABARAP, GALNTL4, GPD2, GUCA1B, ICAM2, IL20RB, IL3RA, IL5RA, OR1D5, OR4K17, PIGS, PIK3R5, PRIM1, ROBO2, TPI1, WNT2, TNFRSF17
Negative_1560	CAD, ACTN4, ALG10, ALG3, BCL2, BMP8B, BRAF, CCL16, CCNH, CDC42, CLDN4, CLTA, COQ5, DHRS9, E2F3, ENPP6, FZD1, GSTO2, HMGCS2, IARS2, IL20, IL4R, IL8RA, ITGAX, ITPA, LIMK2, MCM7, MLYCD, MYH7B, NSDHL, OR4C6, OR52M1, OR5AC2, OR7D2, PARD6B, POLR2E, SC5DL, SEMA3E, SEPHS1, SETMAR, SH2D1A, SHMT1, STAT5A, TAS2R1, THBS4, WARS2, WNT2B, B4GALNT1, C1GALT1C1
Negative_1561	DCC, GLS, ME1, TK1, CDC45L, CYP4F3, EPAS1, EPHA2, FZD1, GPX5, GSTM3, GSTZ1, ITGB3, LTBP1, MTFMT, NME7, OR52D1, OR56A4, PRKG1, RAC3, RAPGEF1, SOS1, TNFSF10, TUBA4A, TUBB6, UGDH, PRICKLE2
Negative_1562	ADA, FGA, FGB, PLN, UBB, VCL, ARG1, C1QC, CES7, CHEK1, CHRM2, CMPK2, CYSLTR2, DDX41, DHODH, DLST, DPM1, DRD5, DUSP14, DUSP16, EFNA2, FGF7, FGFR3, GNRHR, HLA-C, NCR2, OR1E1, OR51G1, OR52I1, PGM1, PGM3, PIGH, PLAT, PLCG2, PPM1A, PPP3R1, PRKAB2, RBKS, SKIV2L2, SOCS5, SPCS1, SV2B, TNXB, ULBP1, ATP6V1C2
Negative_1563	CDA, LEP, PRL, ADCY5, ALPL, CACNG3, CD14, CYSLTR1, DDX55, ENTPD4, FZD5, GGT6, GMPR2, MGAT1, NKX6-1, NRXN3, OR51B5, OR52H1, OR52K1, OR8I2, PAK1, PAK6, PPT1, PYGL, SPRED2, THBD, UGCGL1, UROS, ATP6V0A4
Negative_1564	ADH1A, ARG2, ARHGEF2, ARRB1, ATP2A2, BCL2, CCL21, CCL7, CDC7, COMP, E2F5, FARSA, GALNT5, GLUL, GNMT, HIP1, HLA-G, HSPA8, LAP3, LLGL2, LRRC4C, NFYC, OR1A1, OR1L6, OR2A14, OR51B6, OR5B12, OR8B8, PAK3, PDE4C, PDGFRA, PIP5K1C, POLD1, PPAT, PPP1R3B, PPP2R2C, RAPGEF4, RBL2, SETD1A, SLC27A4, ST8SIA1, STAT1, TRAF2, UGP2, YWHAH, SERPING1
Negative_1565	MOS, ABLIM2, ADSSL1, ALG2, APRT, ATF2, ATP2A1, B4GALT4, CCL28, CCNB3, CD72, CSF2RA, CXCR6, FUT4, IL2RG, LIPF, MAPK9, MCCC2, MYL2, OR10R2, OR4D2, OR6B2, PAPSS1, PDE7A, PIGN, PLA2G1B, ROCK2, SETD1A, STAT5A, TUBA1C, VAMP4, PPP1R12A
Negative_1566	CARD11, CREB5, MAPK14, OR10H1, SCLY

Negative_1567	CGA, GH2, LAT, ME1, ACVR2A, ACYP2, ARHGEF1, C4BPA, CDC14A, CFL2, CHRM2, CMPK1, CNTF, CNTFR, EFNB3, EIF4E, ENPP6, ETS1, EXTL2, FGD1, FGFR1, FUT4, GRB2, HNF4G, HYAL2, IL12RB1, IRF3, ITGA2, LAP3, MTMR6, OR10R2, OR4D6, OR4N4, OR6Y1, PAX4, PDCD1, PGS1, PIM2, PLCB3, PPP1R3B, RXRG, SPRY2, SUV39H1, CACNA2D4, HSD17B10, SERPINA1, SERPING1
Negative_1568	ABO, EGF, ACP1, AKT1, ANPEP, CACNA1C, DUSP8, MYH3, PDHA2, PKMYT1, PTEN, TAS2R42
Negative_1569	GBA, CYP2B6, CYP4F2, DOT1L, ENTPD4, ENTPD8, FUT5, GALNT8, GMPPB, GRM1, ITGB2, ITPKA, MTAP, NCR1, OR4N2, OR6X1, PDIA4, PLCB4, PLCE1, PPAP2A, PPP2R5A, PRSS1, TAS2R8, THBS2, TNFSF11, TUBA1C, TNFRSF10D
Negative_1570	CDA, ADCY1, CLDN6, COQ6, CSF3, GRIN1, MYL2, NEGR1, PTGES, RAB5A, SUOX, MAP3K7IP1
Negative_1571	CTH, GLA, ATP50, BET1, FUT3, HPRT1, IL20RB, KLRD1, MAP3K14, MLLT4, NAGLU, OR51S1, PTPN1, RPS6KB2, SEMA4G, SNAP23, SUCLG1, UAP1, WEE1, PPP1R12A
Negative_1572	C7, F11, ACADSB, ACAT2, ADH4, ATP5F1, AVPR1A, B3GALT4, BIRC3, CACNG3, CCL26, CD40LG, COL1A2, CYP4A22, DLL4, DNMT3B, ENTPD5, GLYCTK, HLA-DOA, IL1B, INPP5E, LDHAL6A, LTA4H, MASP2, NAGK, NARS2, NAT1, NFYC, OR10K1, OR2G6, OR6F1, PDCD1, PDGFA, PIGX, POLA1, POLR3A, POLR3H, PPA2, RUNX1, SCD5, TNXB, TRAF1, TUBAL3, XYLT1, ARHGEF12
Negative_1573	ADK, IL2, ACAD8, AK3L1, CYP2F1, DAPK3, DHDDS, EPHX1, FGF1, HYAL1, MAT2B, NOS1, OR13C2, OR1Q1, OR2M4, OR5M9, OR6C3, OR9Q2, PLEKHA8, RAPGEF4, RHOQ, RRM2, SDC4, SRD5A1, STAT1, SUCLA2, TOMM40, VEGFC, WASF1
Negative_1574	CRK, ID3, STS, ACSS2, ATG12, B3GNT4, CCKBR, DFFA, GNA14, GRLF1, HDAC2, IL15, IL19, LARS, NRG3, OR12D3, OR4E2, PAPSS1, POLR1D, PPP2R2B, PRODH, RAD51, TALD01, SERPINF2
Negative_1575	IL5, SRM, ADCY4, ARSE, ATP6V1A, CASP10, CCNE2, CD27, CD34, CYP2C19, EHMT2, GALNT7, GMDS, GNA01, GSTA2, IFNA21, IFNG, IL22RA2, IRAK4, LLGL1, NFATC4, OR2AT4, OR2F2, OR2L8, OR4C11, OR4D6, OR52N5, PRKCH, PTGER3, RDH11, SIPA1, UBE2L3, VAMP1
Negative_1576	F2R, INS, RB1, ADORA2B, BLVRB, CASP7, CCNA2, EARS2, GNRH2, HIF1A, MAP3K8, OR10H4, OR52K2, PPP1R3D, PPP2R2A, PPP3R1, PTGIS, SELL, HSD17B12
Negative_1577	FST, ACAA2, AKR1C4, ALDH5A1, B3GAT2, C3AR1, COL3A1, DPM2, GYS2, IFNA4, IL21R, MCAT, NODAL, OR4F17, OR51T1, OR52R1, OR5AC2, OR5R1, PCYT2, PLA2G6, POLA2, PRKCH, RRM1, SESN1, SLIT1, SREBF1, TAS2R16, HSP90AB1
Negative_1578	C8B, FOS, GCK, TH, ACTN1, AGRN, ATIC, BIRC3, BLVRA, CALML5, CCL3, CCR5, CDH5, DFFA, DKK1, DPM1, DRD1, EPHA3, EXTL2, GALM, GCLM, GSTM5, HNF1B, IDH3A, IL11RA, IL22, KAT2A, MAGI2, NUDT5, OR10P1, OR2F1, OR52I2, OR6B3, OR8I2, PLXNA1, POLR2L, PSME2, RASGRF1, RRM1, SARDH, SEMA3A, SETDB1, SLC2A4, SULT1A1, SV2B, UGT2B7
Negative_1579	MAG, ADCY3, ALDH1A1, ASRGL1, BTRC, CAMK2A, CCL23, CCR3, CD44, CDC20, CES7, CSNK2A2, EFNB3, F13A1, FGF22, FGF8, FTCD, GALM, GALNT1, GSTA2, IFNA7, IL18RAP, ITGA4, JAM3, LTBP1, OR6Q1, PFKFB1, PLCB2, RBPJL, SARDH, SHMT1, SKIV2L2, SMC1B, TAS2R40, TPMT, UGT2B10, WHSC1L1, B4GALNT1
Negative_1580	B4GALT4, CALML3, EFNB1, HDAC1, ITGA9, OR52H1, RETSAT
Negative_1581	C9, CD2, SRM, ARHGEF7, C1QB, CARS2, CCND3, CD19, CD36, CD72, CLDN17, CSAD, ENO2, FCGR2B, GNA15, GPD1L, GRAP2, MECR, OR10G8, OR2D3, OR2T10, PARD6G, PGK1, PHPT1, POLR2A, PRIM1, PRKG1, PRPS1, RPS6KA6, SH2D1B, SLC27A1, SLC2A1, SOCS5, SPP1, SREBF1, STAT5B, VEGFC, YOD1
Negative_1582	B4GALT4, CLDN5, CSNK2A1, LIMK2, NANS, OR4A5, OR52E4, PDE1A, PFKFB4, PPBP, WEE1

Negative_1583	OSM, ACADSB, ACYP1, AGPAT2, ALAS2, BMP6, CCL21, CLDN20, COL1A1, CPT1 C, CTNNA3, CYBA, EFN3, ENPP7, EPHA4, EXT2, FPGS, GALNT12, GBA3, GMPR2, GNB1, GNPAT, GRIN1, GSTA4, IFNA2, IL1R2, KLRK1, LAMA4, LEFTY2, MAPK3, MAPK9, MDH2, OR10Q1, OR13C4, OR2T3, OR5AR1, OR8H3, PAX6, PCNA, PDE4C, PGLS, PLXNB1, RPS6KA3, TP73, VAV2, CACNA2D4, SERPIND1, TNFSF13B
Negative_1584	BAX, MUT, ABCC8, ALDH5A1, CD28, CDC25C, CSF2, DKK4, DUSP9, GZMB, HAGHL, OR10T2, PHKA1, PHKB, PNMT, PTCH2, RPS6, STK4, UROD
Negative_1585	DBH, DDC, GLS, GSN, ARAF, ARPC3, ARRB2, ATP5J, CD70, CHKB, COL4A6, ERBB2, F13B, FGF7, FPGS, GALNTL1, GMPR2, HSD17B4, IAPP, IFNAR2, IL19, IL1R1, IL1R2, ITGAV, MAGI3, MAPK10, MLYCD, MYL9, OR10Z1, OR2T10, OR5T1, OR8K5, PKM2, PNPLA4, PPID, PPP3R1, PRDX6, PRKAR2B, PTGIS, SDHB, SEMA4A, SEMA4B, SPRED1, TUBB4, ZMAT3, PNLIPRP2, SERPINA1
Negative_1586	HAL, PLG, ACSL5, ACVR2A, ACY3, ADIPOR1, ANAPC1, BMP2, CHRM5, CLDN2, CPMK1, CPT2, CREB3L3, DUSP3, ENTPD6, FABP3, GCDH, GMPPB, GPAA1, HAO1, HTR2B, IAPP, IL29, ITGB2, KNG1, LAP3, LDHA, MAD2L1, OR10G7, OR10H3, OR52I2, PFKM, PGK2, PPM1D, PPP3CB, RDH11, RHOD, SAT2, ST3GAL5, TAS2R7, UBA1, XCL1, YWHAG, MAP3K7IP1
Negative_1587	CRK, DDC, HDC, WAS, ADRA1D, ARG1, BMPR1A, CCL2, CCL4, CD247, CLDN6, CSDA, DKK1, EFNA5, F2RL1, FARS2, HPRT1, HPSE, IFNA8, IGSF5, JAM2, KAT2A, MAD2L1, MCEE, NAT6, OR10C1, OR10T2, OR1D2, OR2AT4, OR2Y1, OR6A2, PDE1A, PGAP1, PNPT1, RHOQ, RRAS, SLC27A1, SMC1B, TBXA2R, TUBA1B, ZAP70, ATP6VOD2
Negative_1588	SP1, ANAPC7, APOA1, BCMO1, CDC14A, DNMT3B, F2RL1, FGF23, ITGA7, MCM3, NUMB, OR10H2, PCYT1A, SMPD2
Negative_1589	AMT, LSS, ADSSL1, ALPPL2, APRT, BET1, CHKA, DERA, DLL1, DPAGT1, ETS1, FRAT2, FSHR, GNPDA1, GRM5, GRPR, MAP3K8, NCKAP1, OR2Z1, OR52J3, RASGRF2, SMPD2, SNAP23, TUBB4, UPRT, USE1, WNT16, CSGALNACT2
Negative_1590	CKB, ME3, ACACA, ACAT2, ACVR2A, ALG2, CD244, CDK5, CDKN1C, CHSY1, CRY1, DBF4, FPGS, GGT6, GLI2, GNPAT, GNRH2, HARS, ICAM1, MAN1A2, NEFM, NEGR1, OR10G8, OR10K1, OR2S2, OR4S2, OR4X2, OR51L1, PDE4A, PFN4, PHGDH, PIK3CG, PLOD1, POMC, PPAP2C, PPP2R1B, RASA2, RASGRP4, RDH10, RPRM, RPS6KA3, STX1B, UCP1, WBSR17, ZAP70, EIF4EBP1, TNFRSF1A
Negative_1591	ACP2, CCL23, CD38, CERK, CHAT, DLST, DUSP3, MAT1A, NME4, NR1H3, OR51E2, PFKL, POLA1, PYCR1, SQLE, TAS2R1, TRPM5, WWP2
Negative_1592	AMT, ADCY6, GART, GRIN2D, HSD11B1, OR4X1, OR5B12, PNPO
Negative_1593	LHB, TAT, CACNG2, CHRM5, CLDN19, CNTNAP1, CXCR4, EXT1, HSD3B7, INPP4B, KIR2DL3, KLRD1, MAPK1, NAMPT, OR51I1, PON1, PPA2, RFNG, SUV39H2, TNFRSF12A
Negative_1594	IDS, ME3, AADAC, B3GALT6, BUB1, CALML3, DCTD, DERL1, DUSP16, EFNA4, ENTDP3, EPOR, EXTL2, F2RL2, GALNT14, GFPT2, IL12B, MDM4, NTRK1, OR4K5, PANK1, PDGFB, PIGU, PLCZ1, PMAIP1, PPAP2C, PPP2R2C, PRKG2, RAC1, RASA1, STX18, TAS2R14, TJP1, TLR5, TUBB6, ULK1, VKORC1, ZFYVE9, HSP90AA1, TNFRSF1A
Negative_1595	CDA, OGT, ACADM, ACSL4, ALDOC, C5AR1, CREB3L3, GCLM, NTF4, OR4F5, OR4X2, PCCA, SPTLC2, TGFB2, TLN2
Negative_1596	EBP, EGF, GHR, GP6, AARS, ADRA1B, CDH4, CRB3, CTNNA1, CTPS2, DDX51, DOT1L, FGF7, GRIA1, IFNAR2, IL28RA, LCP2, NAMPT, NQO1, OR51B4, PIGP, PLOD2, PVRL3, SEMA3F, TNFSF14, TUBB4Q, SERPINC1, SUV420H1
Negative_1597	BTD, C6, HYI, MAX, PGP, SI, ADORA2B, ALDH3A1, AMDHD1, ATG12, BCAR1, CCL27, CD55, CFLAR, CHUK, DAPK1, DLL1, DNMT3L, FOSL1, GPLD1, IL23R, LIPA, MAP3K11, METTL2B, MGAT5B, NAT2, OR10A2, OR10J1, OR1L6, OR51B5, OR51D1, PAK6, PNPLA4, PSENEN, SKIV2L2, SLC27A4, TSC1, UCKL1, WNT8B, MAPK8IP2, SERPIND1, ST6GALNAC5



Negative_1598	C5, OTC, ACY3, ADORA2B, ALG9, ATP6VOC, CYP19A1, DDX50, EFNA3, ENAH, F RAT2, GALNT13, LAP3, LIPA, LRRC4C, NCF2, NCF4, NME4, OGDHL, OR10H5, O R10J1, OR10Z1, OR11G2, OR1G1, OR1J1, OR2C1, OR2T34, OR4A5, OR5A1, OR 5AS1, PLA2G5, PPM1B, RARS, RDH16, RPS6KA3, SETD8, SPCS3, TRAF4, UCP1 , UXS1, WBCSR22, ATP6V1B2
Negative_1599	AR, F9, MPZ, PGP, ACMSD, ADCY10, BMP4, CACNG6, CD48, CLDN9, DUSP1, EFN A1, EIF4E2, EXOC7, EXTL2, GALNTL5, GGT7, ITGA7, MS4A2, MYH10, OR10H1 , OR2L13, OR2V2, OR4D1, OR51D1, OR8G1, PECAM1, PLAUR, PLTP, POLR2F, P RLR, PSENE1, RRAS2, RXRB, SESN1, SETD7, SMPD3, SOS2, SRGAP3, STX1B, T ICAM2, TRAF2, TRPM5, VCAM1, WNT8B, YWHAG
Negative_1600	CNGA3, DAG1, TSHR
Negative_1601	JUP, SDS, ACSS3, ADCY4, CYP2E1, DHRS9, DVL3, FASLG, GLDC, MGAM, NCF4, OR2S2, OR5J2, PAICS, PPARA, PRKCG, PYGM, SMARCA2, TBL1Y, VEGFA
Negative_1602	CDA, GP5, ALDH9A1, AREG, ARHGEF2, ATN1, ATP5C1, CCNA2, CDC45L, EXTL1 , FLT1, HMOX1, HTR2B, KLRC2, MAP2K6, NUDT8, OR6T1, STT3B, SYNJ1, THBS 2, WBCSR22, SERPINA1
Negative_1603	F5, GHR, MTR, ARHGEF6, ATP4B, AVPR1B, CACNB1, CD58, CSNK2A2, ERBB2, F GFR1, FPGS, GFPT1, GPD1, GSTM1, HAGH, IFNA7, LAMA4, LIMK1, MAD1L1, NO TCH1, OCRL, OR6F1, PIGH, PRKAR1B, RFWD2, SEMA3A, SMURF1, STK11, TAS1 R2, TBXAS1, TPK1, TSNARE1, UNC5D, WEE1
Negative_1604	ACAD8, ALOX12B, ANAPC2, C5AR1, CACNA1H, CHPF, CHRM5, CLDN22, CLDN4, CSNK2B, CTBP2, DCXR, FCGR2B, FMO4, GAD2, GGPS1, GNG13, LAMB3, ODC1, O R4C16, PCK2, PIGH, RDH8, SLC2A1, TIAM2, TSC1, UNC5D, VARS, SERPINB5
Negative_1605	BTK, C8A, CR1, MAG, ACYP1, B3GALT5, BTRC, C1QC, CACNG8, CLDN6, CSF3, E 2F3, EGFR, FADS2, FGF4, FGF8, GAL3ST1, LAP3, MAP3K14, MKNK2, MPDZ, MY H6, OR1J4, OR2H2, OR2T1, OR3A1, OR52R1, PAK6, PANK2, RARA, RRAS2, SDC 4, SEMA3F, SLC12A2, SOX17, TIAM1, TRADD, TSHB
Negative_1606	F8, GK2, PRL, CARD11, GGPS1, MAP3K8, OR2T33, OR52E6, PANK3, PLCB1, PO LR2L, RASA2, RPS6KB1, TBL1Y
Negative_1607	PVR, ACOT11, ACSL3, ACTG1, AKR1C3, ALOX15B, APRT, ARSD, CCL24, CXCL1 0, DNMT3B, GMDS, HTR5A, IFNA13, ITGA1, LYPLA2, MAOA, NAMPT, OR3A2, OR 9Q2, PGM3, PMAIP1, PMM1, POLR3K, QPRT, SNAP23, STAM, SV2A, TAS1R2, TJ P1, TNFRSF8, TYMP
Negative_1608	FUT6, PRKAA1, TNFRSF9, TRAF2
Negative_1609	GLA, GP9, BCL2, BMP4, CASK, CDC16, FGF2, FZD5, HDAC2, MAP4K1, MAPK11, NMNAT1, OR51G1, PAK2, PPP3CA, RERE, THBS3, TUBA1C
Negative_1610	HGD, IL6, LEP, OAT, ACAT2, ATP4A, CHPT1, GMDS, KIR2DL4, NUDT5, OR10A4 , OR5D13, ORC5L, PNPO, SULT2B1, TGFB1, UGP2, ZAP70
Negative_1611	OR4K1, PIK3CA, PLA2G12A
Negative_1612	AR, SMO, ALDH4A1, ALPL, ARPC5L, BIRC3, CADM1, CASP6, COASY, FGF18, FG F5, GALNTL1, GNAS, GRHPR, HLA- F, IRS1, NCK1, OR2A14, OR52I2, OR8J3, PDE1B, PPP5C, RASGRF1, SHC2, TK TL2, UGT2A3, WASF2
Negative_1613	MSN, PAH, ABCC8, ARHGEF6, CLDN11, CREB3L4, CSAD, CYP26C1, DAXX, EIF4 B, ENTPD2, GSTT1, HMOX1, IQGAP1, MAP3K2, OR4S1, OR52B6, OR8J3, PARD6 A, PRKAG2, QPRT, UGCG
Negative_1614	BTK, EZR, LHB, NOG, OTC, ACVR1C, AGRP, BMPR1B, C4BPB, CCNA2, CDC23, CS F2RB, DNMT3B, DOLPP1, DOT1L, FCGR2B, FUT4, ICOS, IL13, IL21, IL23A, I MPDH1, INPP4A, ITGA5, KLK3, MAD1L1, MAPK11, NME7, NUDT2, OR10J5, OR2 A2, OR51A7, OR52H1, PEMT, PLOD1, POLE2, RAC1, RBL1, RBPJL, RHOD, TAS1 R2, TPH1, VEGFC, ST6GALNAC5
Negative_1615	ABAT, ACY1, ALCAM, ARHGEF6, CCNB3, CLDN18, CSF2RA, CYP1A2, CYP2D6, G RIN2D, HSD17B7, MECP, METTL6, MYL5, OR51B5, OR5R1, P4HA3, RBPJL, RCH Y1, SFRP1, TAP2, TRAF6

Negative_1616	ATM, PDC, ADRB3, AGPAT4, B3GNT2, CADM1, CYSLTR1, E2F5, GPD1, HBEGF, IKBKE, IL7R, ITGB4, ITPK1, MCM5, MCM7, NAGLU, OR10J5, OR13A1, OR2AG2, OR4M2, POLR2D, RRAS, SEMA4F, THBS3, UGT1A10, UMPS, VASP
Negative_1617	CGN, FOS, KMO, ACTN4, ADRA1B, BDKRB2, C1QC, CAPN2, CCR2, CMAS, CNTFR, CSDA, CSF1, CXCL3, CYP19A1, CYP2B6, CYP2D6, FGF5, GLUL, GNPAT, GSTA5, GUCY2C, HMOX1, HSD17B1, ICOSLG, IFNA4, IRF7, KLKB1, LIMK1, MAP2K6, MIOX, NOX1, NSD1, OCLN, OR56A1, OR7C1, PAK6, PARD3, PDPK1, PIK3CB, PLCB1, SNAI2, ST3GAL4, TUBB2B, UROD, YWHAB, CSGALNACT2, PPP1R12A
Negative_1618	BTD, IL12RB2, PDGFB
Negative_1619	FH, EREG, IL18RAP, LCMT2, NRXN1, PLA2G4A
Negative_1620	A2M, LHB, ABI2, ACVR1B, ADIPOR1, ATP5G3, CCKAR, DUSP1, DUSP10, ENO3, GDF6, GNMT, IRAK2, LRP5, MNX1, MYH13, OR4K17, PLA2G10, POLR3A, SHC1, SLC2A2, TRIP10, VEGFC, WNT1, ARHGEF12, CACNA2D1
Negative_1621	AK5, AMT, CKB, MPL, ABAT, ACTA1, APOE, BCKDHB, CCR6, CHSY3, CLDN15, CNGA3, CXCR3, CYP2J2, E2F3, ENO1, FABP4, GALC, GAS1, GDE1, GNB3, GUCY1B3, IFNW1, KLRK1, LDHD, MCM6, MYLK2, NAMPT, NAT1, NOTCH3, OR52E4, OR5A1, PAPSS1, PIK3R5, PRKAG2, SDC2, SEMA4D, TAS2R8, TOMM40, TYMP
Negative_1622	AK7, FST, GAA, ANAPC2, APH1A, CACNA1D, CACNA1E, CCL16, CCR1, CD80, CHEK1, CLDN8, COQ6, F2RL1, GDF6, GLUD1, HSPA2, HYAL2, IDH3G, IFNAR1, IFNGR2, IL3RA, LCMT2, MMP1, OR10Z1, OR11H4, OR2M7, OR2T5, OR5D16, OR6C2, OR6C74, PARS2, PARVB, PIAS3, PPP2R5B, PPP3R2, PRKAB2, PTPRB, RAC3, RPSA, SARS2, SOS2, TLR3, TUBA1B, TUBB2C, ZFYVE16, ATP6V0A1, ATP6V1C2, ST6GALNAC6
Negative_1623	GH1, ITK, LSS, ACADSB, ACAT2, ACTC1, ARSD, ATP5J2, B4GALT4, C9orf95, CACNB2, CDIPT, CTSG, CTSS, CYP3A43, EPHA3, EXTL2, FGF14, GP1BB, HADHA, HCST, HNF4G, HSD17B2, HSPB1, HTRA2, LYZL1, MCM6, NEFM, NFYC, NTRK2, OR10G4, OR11H1, OR1J1, OR1S1, PKMYT1, PNPLA3, PON3, RASGRP1, RPS6KA1, SPRY2, TGFB1, TLR9, TNFSF8, UNC5C, HLA-DRB3, TNFRSF1A
Negative_1624	ACAD9, ALG1, CAV1, CCNH, FABP3, IFNK, MYH6, NFE2L2, OR11L1, OR13G1, PER3, POLD2, SCLY, VAMP3, TNFRSF11A, TNFRSF6B
Negative_1625	ABLIM3, ALG12, APOC3, CCL13, CCL5, CDKN2B, CSF2RA, FOXA2, HHIP, IL11, IL12RB2, KITLG, NFATC3, OR1S2, OR3A2, OR4K17, OR5J2, OR6T1, OR7G3, P2RX3, PDHA2, PIK3CA, PIP5K1A, PPP2R5D, RBPJ, SFRP5, STX1A, TAS2R14, WHSC1L1, PAFAH1B3
Negative_1626	CDKN2D, CHIA, CNTNAP2, IGF1, MICA, NOX3, OR4X2, OR6C2, PRIM1, SKP2, TNFSF8
Negative_1627	GP6, JUP, OGT, TAT, ACAT2, APOA5, CAV3, CCL19, CCNB1, CD99, CER1, CPT1B, ENTPD6, F11R, F13A1, FLAD1, GPD1, GRB2, HTR2A, IARS2, LAMB1, LCMT2, MAD2L1, MPDZ, NCR3, NT5C2, OR8G1, OR8H3, OR8J1, PAK3, PRPS2, PSEN1, RPS6KA3, RPS6KA6, TAS2R60, TCIRG1, TLR2, UPRT, WNT11, WNT5B, ZIC2, HSD17B10
Negative_1628	DGKB, PPARA, PTCRA, STX16
Negative_1629	F11, ACSS3, ANPEP, CCKBR, CCL7, CD86, DDX19A, GLUL, MGAT4B, NOTCH3, OR4K1, OR8D1, PLAT, SETD2, TBK1
Negative_1630	SPN, CYP2B6, EXT1, FARS2, ITGA2
Negative_1631	GSS, IL8, SP1, ADCY7, AGPAT6, AMHR2, CSAD, CSNK1D, DDX19A, E2F1, EPHA8, EREG, FZD9, GANC, GPLD1, IL13, ITPKB, KLRK1, MAP3K8, MAPK1, MLLT4, MYL2, MYL9, OR4K13, OR4S1, OR6N1, ORC5L, PRPH2, PSENEN, PTGFR, SETD1A, SLC27A4, TCF7L1, TNFSF18, TSHR, B3GALNT1, CACNA2D3
Negative_1632	F2, ID1, ANPEP, CDKN2C, GJD2, HPSE2, LIPT1, NFKB1, OR1L1, TBL1Y, TUBA1B

Negative_1633	CRK, AARS, ACSM1, ACTN4, CAMK2G, CDKN2C, CREB3L3, CRKL, DKK2, EDA2R, FZD3, GALNT8, GIT1, IL18R1, MCAT, NFATC2, OR13C5, OR2G3, OR6T1, PFKFB4, PIP4K2C, POLR3K, PPCDC, PRKAR2A, PTPMT1, PTPN6, PTPRM, RAP1A, SP CS3, STX1A, SV2B, TNFRSF4, VAMP3, WNT4, CSNK1A1L
Negative_1634	CD2, CFI, DAO, ACSL6, ALS2, CCNA1, CHRNA7, CRLS1, CYP2D6, DHDDS, ENPP6, EXTL1, FOXA3, GUK1, MYLK, NANP, NCKAP1L, OR4K15, PPP2CA, PRKAG3, RASA1, SLC25A4, SPP1, SPTLC1, TNFSF4, ATP6VOD1, ST6GALNAC3
Negative_1635	AK3, LCK, PVR, TPR, ACO1, CASK, CDKN1B, CXXC4, DDX54, EPOR, HES1, HSPA1B, INHBE, LIFR, MAP3K7, OR4K15, PDGFC
Negative_1636	C6, ME1, ARPC5L, B3GNT5, CACNG1, CDC25C, CNGB1, COQ3, DHRS3, EXTL1, FGF23, GGPS1, GLDC, HDAC1, LDHD, OR1A1, OR4K14, OR51G1, PCYT1A, PHKA1, POLA1, PPP1R3A, RPS6, RUNX1T1, SMAD7, TAP1, YOD1, ATP6VOD2, SUV420H1
Negative_1637	C8A, NOG, AACS, ADH5, APC2, CACNG2, CAMK2A, CRKL, DDIT4, DPYS, FGFR4, HIF1A, HSD17B2, KLRC1, LDHB, LIPF, LIPG, MFNG, NCOR1, OR10K2, OR3A1, OR4D5, OR52N1, OR6M1, PARVG, PDPK1, PLOD1, PPP1R1A, PRKAR2B, PTGES, SSH1, THY1, TM7SF2, UPB1, WNT16
Negative_1638	F7, ITK, PGD, ALAD, ANAPC4, BLVRA, BTRC, CSF2RB, DRD5, DUSP7, EFNA5, FGF8, FMO5, GALNTL5, NOS3, OR52R1, PFKFB1, PGS1, PLA2G2D, PRKAG1, SNA P23, ST3GAL3, TAS2R41
Negative_1639	AHCYL1, ALDH7A1, ANAPC10, BET1L, COQ3, E2F4, MYH14, OR13C5, OR51A4, OR5C1, OR8J3, PFN3, POLE2, PPAT, PPP3CB, PTGIS, SETD1A
Negative_1640	ALG10B, ATP5C1, ATP6VOB, BAAT, CCL25, DDX18, FADD, FLOT2, GOSR2, HRA S, HSD17B4, IL7R, ITGA7, LILRB3, MPDZ, MYH8, OR10AG1, OR6M1, OR7G2, PFKP, PPP3R1, SDHC, SGMS2, TRDMT1, XCL1
Negative_1641	HGF, KDR, MSN, NNT, AASS, ACACA, ADCY10, ADCY7, AKT2, ALDH6A1, ASPA, B CAT1, CAPN2, CD55, CD58, CHAT, CHRM5, CHST13, CNGA3, COASY, DLL1, ERB B4, GALNT9, GPD2, GSTO2, HHIP, IL11, IL1B, IMPA2, ITGAD, LTA4H, MICA, MITF, OR12D3, OR4D5, OR4D6, OR5M8, OR6C70, PHKB, POLR3H, PRKCQ, PTGI S, STX10, UBE2L3, ULBP2, UROD, VAV3, CSNK1A1L, HLA-DQB1
Negative_1642	GP9, TXK, ACADVL, ACOT12, ALG2, ARHGEF1, BMP4, BMP7, CHST11, DARS, DU SP6, ENTPD6, GRIN2B, HSD3B7, IL2RA, IL3RA, IQGAP2, IQGAP3, LAMC1, MA FA, MCM7, MYH11, NCAM1, NFYC, OR6T1, P2RX1, PIAS2, PLA2G6, PLXNA3, PS EN1, RGS3, RRM2B, SLIT1, TAS2R42, UGT2B28, VNN1, ATP6VOA4
Negative_1643	BCKDHB, BDH1, CASP6, CHIT1, CYP27A1, ERBB4, GAL3ST1, GFPT1, HES1, IL 8RB, MAML3, OR10C1, OR11A1, OR2A42, OR51F2, P2RX4, PARD3, PDE3A, PIK 3CA, PRKY, RPE65, SEMA3G, SEPHS1, SGMS2, SOCS1, SPAM1, SPRED2, STX6, TAS2R41, TMLHE, WNT6
Negative_1644	DBT, FN1, NPY, AADAC, ABLIM1, ACO2, ACSM2A, ANAPC2, ARHGEF1, BBC3, CT SL1, CX3CR1, DHDH, ENO1, GSTP1, IFNA17, MGST2, OR4F4, OR6C1, OR9A4, P PP3R1, PRKAR2A, PTGDS, SPHK1, VANGL2
Negative_1645	C6, GPT, HAL, HK3, LCT, ACAD9, ACOX1, CACNA1B, DDX18, FOXA3, GNPDA2, H MOX1, OR10A7, OR5H2, PIGX, PTGER1, SOCS4, STK11, TGFB1, TRAF5
Negative_1646	C8A, CFH, DAO, AARS2, ACPD, ACSS1, CCND3, CD3E, CD79B, CPT1C, CXCL16, FCGR3A, GDF7, GRIA3, HEMK1, HRH2, ITGA9, MAPK12, MITF, MKNK1, MMP14, NR4A1, OR4B1, OR4M1, OR5D14, OR5D18, OR5P3, OR8S1, OXCT1, OXSM, PIGH, PNLIP, POLA1, PPA2, PRKCI, SPTLC2, TSNARE1, TYRP1
Negative_1647	FN1, DEGS1, ERBB2, LEF1, ATP6V1G1
Negative_1648	CS, MPL, NPL, AKR1C3, C1QC, CDH1, CDH2, CREB3, FGF5, FUT5, GCAT, GSTA3, IFNK, LEF1, MCM6, NCAM1, NME7, OR1J1, OR2A14, OR5AU1, OR5R1, OXSM, P AFAH2, PDE8B, PSME3, PYCRL, RAF1, SETD7, STAT1, STAT5A, SULT1A1, UGT 2B17, ZFYVE9

Negative_1649	FAH, GP9, AMY2A, ANAPC4, AVPR1A, B3GALT2, ENTPD2, IL25, ITGB5, KLRC3, MAP4K1, OR10A6, OR10AG1, OR4A15, OR51E1, PFKM, PIGC, PIK3R1, RRM2B, STX6, TUBA1B
Negative_1650	ALOX12, HMGCS1, PON2, UGCGL1
Negative_1651	MOS, COQ5, CYFIP1, EGLN3, ITGB7, LIFR, NME2, NRXN2, OR10X1, PPP1R3C
Negative_1652	TFG, CACNA1F, DDX23, ETNK1, FGF4, HHIP, MAGI2, MAP3K4, NR5A2, OR13C9, OR1N1, OR8K3, PAK7, RALB, SLC33A1, SPHK2, SERPINA5
Negative_1653	GBA, AKR1D1, AREG, ARPC3, ATP5E, C3AR1, CTLA4, CXCL9, GLS2, GPD2, HADH, HSD11B2, MAPK13, NT5C2, OR4M2, PRSS1, PTEN, PTGES, SCP2, SULT1A4, XCR1, ATP6V1C2
Negative_1654	GPI, LIF, B3GNT2, BLVRA, CAPN2, CD19, CHST12, DNMT3L, DTX4, EFNA4, EPHX1, FGF3, FPGT, IRS4, JUND, LIMK2, MYH4, OR9I1, P4HA1, PLXNB3, RERE, SC4MOL, SHISA5, SKP1, SLC2A2, SMURF2
Negative_1655	CGN, DCT, FGG, MAG, ACOT11, CAMK2G, CDKN2B, CLDN9, CMAS, ETNK2, FCGR3A, HLA-C, IFNA4, LIPC, NCAM2, OR4D11, PDE6H, PER1, POLR2E, PTPN6, SEMA4B, STX10, TBXAS1, TNXB, WASL
Negative_1656	ABO, CDC7, PFN1, STT3B, YWHAB
Negative_1657	MSN, ACSL6, ALOX15, ANAPC1, CCL25, CCL5, CDC7, CLCA4, COL6A2, CXCL10, EXT2, GDF5, GLUD2, IARS, LCAT, MGAT5B, MYH13, OR2A12, OR2K2, OR5H6, OR6C3, PAX8, PLIN, RAPGEF3, SMAD2, STAT3, STX8, TBK1, TUBA3E, ATP6V0D2, PPP1R12A
Negative_1658	OTC, TNC, WAS, CES1, CHKA, CLDN15, CYP4A22, CYP7A1, EDN1, EPHA4, FLT1, GIT1, GRM5, HEMK1, HSP90B1, IL6R, INMT, NAGLU, NAT5, NFAT5, OR14C36, OR1A1, OR2T29, OR3A2, OXTR, PFKFB3, PLAUR, PNPLA3, POLR2F, POLR2G, PTGS2, RAD51, SKP2, SULT2A1, SULT2B1, TIRAP, TLN1, TNFSF4, ULK3, PNLIPRP1, TNFRSF10D
Negative_1659	CDC25A, DRD1, GNG13, ITPA, OR52I1, PLXNA2
Negative_1660	F12, GBA, WAS, ALG2, B4GALT7, CCDC6, CD8B, CDH1, CDK7, CKS1B, COX10, CPT1B, CYP4A22, EI24, FUT6, FZD2, GALC, GNRHR, GUCY1A3, IL23A, IL2RB, MAT1A, NT5C3, OR2F2, OR2T29, OR2Y1, OR4C12, OR52E8, OR5T3, OR6C70, OR6N1, OR7A17, PCYT1A, PGLS, PIK3R1, PRKAB2, PRKCA, PSAT1, SAT1, SELP, SSH1, SUV39H1, TGFB1, TUBA1C, VEGFA, YOD1
Negative_1661	PGF, TPO, ABL2, ABLIM1, ASAH1, ATP5I, CPT1B, DBF4, FGF7, GMDS, GNAT3, GOSR2, GSK3B, HIBADH, HTR6, IFNA17, IQGAP2, LDHB, MMP9, NAMPT, OR11H1, OR2M2, OR5D16, PARVA, PIK3R4, PTGDS, PTGER3, PTK2, SHISA5, SPP1, TM7SF2, UGT2B7, ATP6V1G3, ST6GALNAC3, TNFRSF18
Negative_1662	OTC, ACO1, ACSL1, ARSD, ASCC3, ATP5I, CADM1, CCL20, CCL22, CCL4, CDC26, CDC45L, CLCF1, COL1A1, COX10, CYP2A6, CYP3A7, DDX4, EXT1, GALNT5, GLUD1, GMPPA, GNPAT, HSP90B1, IL25, MAPK14, NT5E, OR2L13, OR2T29, PLA2G2E, PMM2, POLR2I, PPP1CA, PPP2R2B, PTEN, RAC3, RASSF5, RDH12, RFX5, SFRP5, SIGLEC1, TGFB3, TGFB2, TJP1, TKTL1, TMLHE, TRIP10, UGT2B28, XYLT2
Negative_1663	ITK, ADRA1B, AGTR1, ALG1, APC2, APOA1, C5AR1, CHAT, CHST11, CSNK2A2, EXT2, FRAP1, GNA12, HTR2A, IFT57, IL29, ITGA7, MTMR2, NOTCH2, OR2T5, OR4K17, POLD2, SNW1, ST3GAL3, UCK2, WNT4, SERPING1
Negative_1664	ATM, BTK, GP6, OGT, AKR1C2, ALAS2, AXIN1, AXIN2, CASK, CD8A, CNTNAP2, COX10, CXCR3, CYP11B1, CYP3A7, DHRS4, FGF9, HHEX, HMOX1, HRH1, IL10RB, INSR, IQGAP2, KLRC1, MAN1B1, MAP3K5, MAP3K7, MGST1, MYH6, MYH7B, OR1J1, OR51E1, OR6Q1, ORC1L, PKM2, PPARG, ROCK2, SRD5A2, TUBA1C, TUBB, UGCGL2, UROS, ZBTB16, ZIC2
Negative_1665	ATM, ACTG1, ASS1, B3GNT3, BIRC3, CDC27, CNTFR, GCDH, GDF6, GNRH2, GUCY1A3, HSD17B4, LAMB2, LIPF, OLAH, OR4A15, OR4N5, OR52D1, PRIM2, PSEN1, SH3BP2, SUCLA2, VAMP3, CSNK1A1L

Negative_1666	CBL, F5, ACACB, APRT, ARPC2, ATP2A1, DBF4, DDX4, GALK1, GLI2, GNRH2, I DH3G, MAOB, OR52B4, OR6X1, SUCLG1, TAS2R48, PDCD1LG2
Negative_1667	AR, EBP, ADH6, ATP13A2, CCNA1, CDC25A, CDIPT, CLDN10, CLDN9, CPT1C, C YCS, EIF4E2, FGF13, GAL3ST1, GALNT7, GLI1, GLI2, HCCS, HMBS, HMGCL, H NF4A, IDI1, LIPE, METTL2B, MYH13, NTRK2, OR11H4, OR56A3, PDE4C, PFKP , PHGDH, PLOD3, POLR2L, POLR3D, PORCN, PRKAA1, PTPRC, RARA, SAT2, SMU RF2, SNAI1, SNW1, SPRED1, SUCLG2, TUBAL3, CTNNBIP1
Negative_1668	APOC3, CCND3, COL6A1, COL6A2, DGKE, HSD17B2, IRAK4, MYH4, NOX1, OR10 S1, PRKAG2, RALBP1, RFXAP, UCK1, MAPKAPK5, PHOSPHO1
Negative_1669	CFD, ARPC1A, ARPC2, BDH1, CCR2, CCR5, CYP4A22, DDIT4, FUT7, HRH2, IL8 RA, INADL, OR10A2, OR1C1, OR5T1, PRLR, PTTG1, SEMA3F
Negative_1670	FYN, HK3, SCD, ACAA1, ALDH3B1, C7orf16, CASP8, CLDN2, CNDP1, CYP1A2, EPHB4, ESPL1, GGPS1, GOT1, IDH1, IKBKB, ITGA5, KIR2DL3, KITLG, MAP3K 2, NOS1, NRG2, OR10A6, OR10AD1, OR10H5, OR1L6, OR1Q1, OR2A42, OR51B6 , OR52H1, PDHA1, PGLS, PIGS, PLD2, PPP1R1A, PROS1, SRGAP2, ATP6VOE1, MAPK8IP3
Negative_1671	FOS, GK2, ARNTL, DDX50, DDX56, FGF2, HNF4A, L1CAM, NME2, OR5M9, PAK6, PIGA, POLR1D, SMC1B, SOX17, TAS2R1, TAS2R42, TKTL2
Negative_1672	CBS, GBA, GLS, LTB, NLK, STS, AASDH, AGRP, AMDHD1, B3GALT5, BCL2L1, CA PN2, CCKAR, CCL24, CCR7, CDC23, CLTCL1, CXCR6, CYP19A1, DCXR, ENO3, E PHB4, FGF9, GALNT1, GNA15, GNPDA1, GSTM1, IL13RA2, IL1R2, INHBB, KLR C4, MAGI2, NARS2, OR2W1, OR5C1, OR6K3, PDE4A, PLTP, POLR2F, PPM1B, PT CH1, SMAD3, SMAD4, SPRY2, SUCLG1, VAV3, ATP6VOD2
Negative_1673	C7, COL5A1, CTNND1, CYP2D6, IKBKE, OR1D5, PDE6D, PFKFB2, PPM1A, PPP1 CC
Negative_1674	EBP, SRC, ALDH1A3, ALOX5, ATP13A2, CAMKK2, COL3A1, CXCL13, DOLPP1, D TYMK, ETNK2, INADL, MAP2K4, MAP3K12, MYH1, NARS2, OR2A12, OR2M2, OXC T2, POLR2I, PPID, PRKG1, PYCR1, RERE, SKP1, SOCS3, SSH1, TRAF4, WNT3, XYLT2, ATP6V0A2, TNFRSF13C
Negative_1675	CAD, CD2, ID4, ALDH1L1, APRT, ARRB2, AXIN2, CD244, CDKN2C, CER1, CNTF , CNTNAP2, CSH1, CXCL16, CYP26B1, CYP8B1, CYSLTR1, EDN1, ETS1, FLT3L G, GIT1, GP1BB, GRIN2C, HSD11B2, HTRA2, IFNG, IL24, IRF9, KYNU, NR1D1 , OR2AG2, OR2B2, OR2T11, OR4N2, OR6C70, PDGFA, POLR2K, PPAT, PPP1CB, PPP2CB, PTEN, SAT1, SCP2, TAS2R41, TGFB1, VANGL2, VAV2, WASF2, MAPKA PK3
Negative_1676	C1S, GLA, LHB, ALG6, DDHD1, DDOST, DDX19A, ENPP1, EPRS, GJA1, GUCA1B, HSD17B2, IL20, MAOA, MDM4, MYL9, NEGR1, NT5M, OR4N4, OR5M9, OR8K1, OX SM, PLA1A, PPARA, PTDSS1, RALGDS, SAT2, SETD8, THBS3, TRPC1, SUV420H 2
Negative_1677	MUT, WAS, AARS, ACTN1, AMHR2, APH1A, ATP6AP1, CHUK, CLDN2, CLDN22, CP OX, CREB3, CXCL3, DPM1, DUSP5, EREG, EXTL3, F13A1, F2RL2, FABP1, GAS1 , GNAT3, GPD1, GRIN2B, GTSE1, LALBA, LPAR1, MGAT1, MPZL1, MTAP, OR13H 1, OR4N2, OR5AS1, OR5AU1, PANK1, PIGB, POLR1A, PPP1R3C, PRPH2, RCHY1 , RPSA, SOCS4, SOS1, STX1B, SUCLG1, THBS1, TXNDC12, UCK2, ULBP2
Negative_1678	IL3, TXK, ACOT11, ALDH1A1, ARRB1, ASAH1, AXIN1, CACNB3, CD244, CLDN1 1, CSNK2A2, DAD1, DGKE, FMO4, GCH1, GNAS, GNPDA1, GOT2, HSD17B8, IFNA 4, IFNGR2, MAP2K4, MAPK14, MDH2, MTMR2, NOX3, NT5E, OR56A3, OR5A2, OR 5T1, OR6K6, ORC6L, PANK3, PLXNC1, POLE3, PPARG, RIPK1, SSH1, STAM2, T MLHE, TYMS, WASL, YES1, ALDH18A1
Negative_1679	IL5, MAG, PGD, RPE, STS, ACVR1B, ACY3, ALG12, AMD1, CD274, CD48, CD79B , COL3A1, CYP2B6, DUSP5, EPHA5, FGF14, GALNTL2, IFNB1, IL21R, INSR, L YPLA1, NEFH, NMNAT2, NRXN2, OR2T6, OR52J3, OR7G2, PAX4, PLD1, PPBP, P PP2R5B, PPP2R5D, PRIM1, SEMA3B, SESN3, SKP1, TCF7, THTPA, HLA- DRB5, SUV420H1, TNFRSF14

Negative_1680	ACSM2A, ACTC1, AGPAT2, AGXT, AMDHD2, ANAPC1, ATP5E, B3GNT4, BDH1, CA CNA1D, CCR8, CDH2, CTBS, FGF10, FMO3, FTH1, GLI2, HAP1, IFNW1, ITGA4, ITGA9, MS4A2, NAT1, NFAT5, OR10G7, OR13C8, OR1L4, OR4N4, OR52N4, OR8 H2, PAX8, PHKG1, POLE3, PPP2CA, PPP2R2D, RASGRP2, RDH10, RELA, SPP1, SUCLA2, TRPM5, CSGALNACT2, MAP3K7IP1
Negative_1681	DAO, HGF, IL4, LCK, ADRB1, ADSL, BMP5, C9orf95, CACNG7, CD3E, CD44, CD 47, CMPK1, CTTN, EGLN3, ENTPD7, GPD1, GSTA1, GSTM1, HMOX2, IFNAR2, OR 5I1, OR5V1, PGM3, PIK3C2G, PLCB1, PPP1R3D, PSAT1, PTGER3, RENBP, SMA RCA2, STX5, TAP1, THBS3, TJP2, VEGFA, ST6GALNAC6
Negative_1682	CAPN2, NAE1, QPRT
Negative_1683	GDA, GLS, LYN, OGT, VTN, AKR1C3, ATP13A2, B3GALT4, BBOX1, BMP4, CYP2A 7, ECSIT, ENTPD1, FBP2, FGFR1, FLT1, GFAP, GRLF1, IRF3, ITPKA, LTBR, M TFMT, NCOR2, NME4, NT5C, NTF3, OR2T12, OR51D1, OR51E1, OR5M8, OR6C2, OR6N2, PDE2A, SC4MOL, SMAD6, STAT1, TAS2R4, TNFSF4, UGT2B10, C1GALT 1C1
Negative_1684	C4BPA, GJA1, PLCD3
Negative_1685	CD2, HGF, CCL7, COASY, ETS1, FOXA3, HLCS, OR5R1, PANK1, PTPRB, HLA- DRB3
Negative_1686	DBH, LIF, MAX, PRL, RB1, ACPP, ACVRL1, ATP5D, CCL16, CD19, CDKN1A, CHE K1, CTNND1, DMGDH, FRAT2, GLS2, GUSB, HPSE, IFNK, INHBC, ITPK1, JAG2, MAP3K2, MMP9, MYH13, NAT2, NT5C1A, OR2T1, OR5B3, PFAS, PIP4K2C, PLA1 A, PON1, PORCN, PPBP, PRKG1, RASGRP2, RASGRP4, SC4MOL, SOCS7, SREBF1 , TALDO1, TAS2R8, TJP1, UGCG1, WASF1, CSNK1A1L, SERPINA5, TNFRSF1A
Negative_1687	GNE, KIT, AADAT, ACOX2, ACSL3, ACTN2, ADCY6, AMDHD1, AVPR1A, BPGM, CO ASY, DVL1, DVL2, ENO3, FADS2, FRAT1, GALE, GALNT10, GMPPA, HSD3B7, IL 10, IL24, IRAK4, LAMA3, LRDD, MYL7, NEGR1, NQO1, NR5A2, NTF4, OR2T2, O R4F6, OR51A4, OR5M8, POLD3, PSME2, PSME3, RELB, SSX2IP, ST3GAL2, TBL 1XR1, TP53I3, HSD17B10
Negative_1688	SI, ACAT2, ADCY9, AGPAT1, AHCYL2, ALDH1A3, B3GAT1, B3GNT5, BNIP1, CA V1, CCL26, CDKN2A, CSF2RB, CTSB, CYP21A2, CYP3A7, DEGS2, EPHA7, ERO1 L, EXTL1, GRM5, HMGCL, IAPP, ICOSLG, INHBA, LIPE, MAP3K13, MARS2, NEU 1, NFYB, OGDHL, OR1S2, OR2B11, OR2T34, OR51F2, OR52K1, OR5T2, P2RX5, PGM1, PTDSS1, PTGFR, PYCRL, SDHA, ST3GAL2, UGCG, UGT2B7, WNT7A, ATP6 V1G3, ST6GALNAC5
Negative_1689	OAT, CCL13, CD3E, CSNK2B, DIAPH2, FOXA3, GALNTL1, IFNK, IMPA2, MAT2B , NCOA4, OR52A1, PGM1, POLR2A, RERE, RFNG
Negative_1690	GSN, BLVRA, DLL1, DUSP14, MAD1L1, MMP7, OR4C16, SMAD2, SULT1A2, TGFB R2
Negative_1691	ALG9, CCL25, CCR7, CYP2C9, CYP3A7, FGF21, GARS, GSTA1, OR1J2, OR2S2, OR5K2, OR8U1, PGM1, RASGRP1, SLC27A1, TBL1Y
Negative_1692	CAD, CD2, MYC, TNF, CCL15, CCR2, CLTA, DIAPH2, FLT1, GALC, HADHA, IL18 R1, LARS2, MYL9, OR10A4, OR11H1, OR2A25, OR2H2, OR8S1, PCYT1A, RENBP , SEMA3E, TGFBR1, TRIP10
Negative_1693	CFI, CRH, CRK, PXN, TNC, ACLY, ACSL4, ARHGEF1, ATP13A2, CACNA1I, CCR6 , CLCF1, CLDN20, CRY1, CYP1A1, DPM2, FTCD, GADD45B, HAGHL, HYAL1, IRF 5, JAG2, KLRK1, LIMK2, LIPF, NRCAM, OR10G8, OR3A2, P2RX3, PHKG2, POLR 3A, PPP2R5C, SDHC, TGFB3, TUBA1A, UGT2B4, WNT16, TNFRSF11A
Negative_1694	GP6, GSR, MPI, OGT, SFN, ADRA1B, AGPAT1, ALG1, ALOX12B, ATP5H, CALML3 , CDC14B, COQ5, CYCS, DUSP6, EDAR, FBP1, HLA- F, IFNA13, IFNA21, ITGB1, JAK2, JAM2, MEF2C, MGAT3, OR14C36, OR2T5, O R4M2, OR51V1, OR5B21, OR7A10, P2RX2, PDCD1, PDGFRB, PERP, PIP5K1A, P ON2, PPM1A, PTGES2, RDH10, RPSA, SMURF1, SPHK2, SPP1, THBS4, UPP2, KI R2DL5A, PHOSPHO1

Negative_1695	LSS, PAH, PXN, TKT, AKR1C4, ASS1, ATP5F1, CADM3, CCDC6, CES7, CREB1, CYP3A43, EFNB3, ETS1, FASN, FGF7, FRAP1, FZD7, GABARAP, GALNT12, GLS2, GOT1, HHEX, IFNGR1, IL1B, IL3RA, KAT2A, OR10V1, OR1D2, OR6C6, PAK6, PDHA2, PIP4K2B, PLOD1, POLD3, POLR2L, PRKG1, TAS2R10, HSD17B10, SERPINC1
Negative_1696	EPO, MSN, TFG, AMDHD1, ATN1, BHMT, BMP7, CBR1, CCL1, CNDP1, CYP2C9, GL01, GRIN2A, IFNA17, ITPKA, LEFTY2, MAP2K2, MGAT5, MGST2, MTHFR, NANS, OR4D2, OR51L1, OR7A5, TLR9, ZBTB16
Negative_1697	C1S, CTH, ACTN4, ADH6, ASMT, DGKZ, HPRT1, IL20RA, ITGB6, LAMA3, OR5B21, OR7C1, PLD1, PLK1, POLD2, PPP2R5B, PRKG1, PSEN2, SARDH, SIGLEC1, SMAD6, ST3GAL6, THBS3, UGCGL2, UGT2A1, WNT8B, GABARAPL2, TNFRSF11B
Negative_1698	AGK, TNF, UBB, ADCY8, CD47, CYP4A11, FARSB, FGF21, GALNTL1, GARS, GRAP2, MAP2K4, NR5A2, OR10J5, OR52M1, POLE3, RBPJ, SUFU, TAS1R1, TUBA1A, WASF1, CACNA2D2, HLA-DRB3
Negative_1699	CDC14A, FASLG, FGF5, IL21R, MTHFS, MYH11, OR10J5, RRM2, SPRY3, THBS3, AASDHPPT
Negative_1700	CFI, GP6, HGF, IL7, LTB, AACS, ACMSD, ADCY9, ALAS1, AMY2A, ANGPL4, ARHGEF1, ARNT, B3GNT5, BACE1, CAMKK2, CD40, CYP3A7, CYP4F2, DHDH, DHRS9, DRD5, ENPP1, EXT2, FGF18, FZD7, FZD9, GNAT3, IL19, NR5A2, OR6K3, OR6Q1, OR8J3, OR9Q2, PLD2, PPP2R5D, PTPMT1, RAC2, SCIN, SKP1, STX1B, TIAM1, UGCGL1
Negative_1701	F10, ABLIM2, ENTPD3, IDH3B, IGF1R, IKBKG, ITGA4, JAG1, NT5C2, P2RX6, PCNA, PDE2A, PIK3R5, PPT1, TAS2R49, TBL1XR1, TUBAL3
Negative_1702	FYN, RFK, ACVR1C, ADCY8, AHCYL1, ARSB, ASCC3, CDC25B, CEBPA, CHEK1, GIT1, GNMT, HIF1A, IGSF5, IL2RG, IPPK, ITGA2B, METTL2B, MYH2, MYH9, NRP2, NRXN1, OR2B2, PLCG1, POMC, PYCR1, RAF1, ROBO2, SEMA4D, SETD8, STAT3, TNFSF4, ARHGEF12, MAPK8IP2
Negative_1703	C6, CKB, RPE, ACSL1, ASIP, BMP2, CACNG7, CADM3, CALML3, CCNE1, CD3E, CSF2RB, CYP2S1, DPM2, ENPP7, FGF13, G6PC, GALK1, GZMB, IL12RB2, IL17B, IL7R, ISYNA1, MAP3K4, MAPK8, MGAT5, MGST2, MTHFR, NME2, OR10H4, OR3A3, OR4C6, OR5H6, PLK1, POLR1A, POLR3G, PPP1CA, PPP5C, PRPS2, RENBP, SEMA3C, SIGLEC1, SLC25A4, SORBS1, ST3GAL5, STX4, TICAM1, VDAC2, ATP6VOA2
Negative_1704	BAD, BTC, PRL, WAS, ADRA1B, AGPAT1, ALG10, BACE2, CDH4, CFLAR, CLDN18, CSF1, CTBP2, CYSLTR2, DARS2, DGKA, E2F5, IDH3A, IFNA14, IKBKB, IL20RA, IRS1, PRKY, PVRL1, RUNX1T1, SEMA4D, SMAD6, TGFBR2, THBD, THBS1, TNFSF10, VAV2, PAFAH1B3
Negative_1705	AMT, ATM, OAT, AMDHD2, AOC3, ATG3, B3GALT6, B4GALT6, CD14, CD8A, CDKN2D, CPT1A, CYP4F2, DAAM2, EPHA6, FARSA, FTMT, GNG13, HGSNAT, IDUA, IFNG, IL21, ITGA5, LRP6, MCM5, METTL2B, MGAT2, NME7, OR2L3, OR2Z1, OR4C13, OR6N1, PTGIS, PTGS2, SETDB1, SMAD7, TAP1, TBK1, KIR2DL5A
Negative_1706	UBC, ABL2, C9orf95, CAV3, CCR6, CMPK2, COQ7, CSNK2A1, DKK4, DNMT3B, EHMT2, FLT3LG, FZD3, GAB1, GGT1, GRLF1, GUSB, ICOSLG, IL17RA, LIPF, LYPLA2, OR10J1, OR10V1, OR1J1, OR2D3, OR5K2, PHKA1, PLD2, PRPS2, PSENN, TGFB3, TNFRSF9, VDAC3, ATP6V1C1, HLA-DPB1, HLA-DQB1
Negative_1707	AR, BAX, XDH, ADSL, AKR1C4, APH1A, ATP5B, B3GALT6, BLVRA, CCND1, CYP3A5, CYP4A11, FMO1, GALNT7, GAS1, GNPDA2, HEXA, IL15, INHBE, KLKB1, KLRC1, KLRC4, LARS, MMP1, OR1M1, OR2L3, OR2M7, OR4L1, OR6F1, OR8K5, PLA2G3, PRODH2, PTK2B, SDHA, SEMA3E, SH2D1A, STAM2, SULT2B1, TUBB6, TYROBP, UBA7, UPB1, VARS, VTI1A, YOD1
Negative_1708	APP, BCR, F2R, GPI, PGP, AGRP, CCNE1, CHEK1, CHRM5, COQ6, DIAPH1, DVL3, GAD1, GNRH2, GSTM4, ICOSLG, IL10RA, JAK1, MAP3K8, NCKAP1, OR5B12, ORC1L, PANK2, PDE9A, PLA2G2D, POLR2B, RHEB, SETMAR, SNW1, TAS2R41, TUBA8, TUBB4

Negative_1709	ABO, PXN, AKT3, ARG1, CYP2F1, DARS, DNMT1, MAP3K13, OR10H5, OR2T11, OR8I2, PIGS, POLR2H, SFRP2
Negative_1710	GLA, JUP, ACSM1, ACYP2, CASP7, CCKAR, CCNA2, CCND2, CHST12, CIITA, CLTB, CUL1, CYP2A6, CYP4F3, DAPK2, DIAPH2, DRD2, EHMT2, GART, GAS1, GJA1, HNF1A, HSD3B1, IL1R1, IRS4, ITGB7, NAE1, NAGA, OR13G1, OR2A14, OR2Y1, PLXNA1, RASSF5, SOS1, SPCS3, TRAF3, TSHR, SERPINB5, ST6GALNAC3
Negative_1711	SMO, TK1, ACYP2, ASCC3, CAMK2G, CD82, CHD8, GBA3, PIP5K1C, PLEKHA8, PLXNB1, PRKG1, SEMA3E, SETDB2, SHC3, SNAP23, SQLE, SRGAP3, TRPC1, WWP2
Negative_1712	F10, ALDH9A1, CCL19, CCNE1, CLCA4, CNTNAP2, CYP2F1, FBXW11, GNAI1, MARS2, MGAT2, OLR1, OR5F1, OR6C1, PFN2, PIK3CD, PIP5K1B, PPM1D, PSEN1, SHC1, SYNJ2, TACR2, TGFB2
Negative_1713	ADA, C5, PGF, PRL, STS, ACSL1, ADRBK2, AMD1, CACNA1F, CCL28, CCL3, CYP2A13, EDA2R, ESAM, FADS2, GDE1, GSTK1, INHBA, IRF5, MAPT, NAT1, OR4D2, OR4M2, OR52N4, OR6C4, PAK3, PDE10A, PDGFD, POLR2E, PTPN11, PVRL1, PVRL2, SGPP2, SNAP25, UGCGL2, VAV1, WNT10A, WNT16, WNT5B, XYLT2
Negative_1714	LPO, ABI2, ACSL6, ALDOC, ALG11, ATP50, CD38, CEBPA, CHIT1, CLDN22, COL3A1, CREB3L1, CYSLTR1, DFFA, DUSP1, EI24, GALNT14, GLUL, GSTZ1, IL1R2, MPZL1, NRXN2, OR2A4, OR2L3, OR2T29, OR56A4, PI4KA, POLR3B, RAF1, RRM2, SOCS2, UPB1
Negative_1715	FES, MIF, TNN, ADORA2B, ARHGAP5, ARPC1B, CCL2, EFNA3, EFNA4, GNAI1, IL17RB, IPPK, LYZL1, NRP1, OR5H2, OR8J3, ROCK2, SMURF1, ULK1, ULK3
Negative_1716	C5, C9, DCK, MET, SP1, A4GALT, ATP5B, B4GALT2, BCKDHB, BMP8A, CACNA1E, CHDH, DGKA, DHDH, EDN1, EIF4B, ELK4, ENTPD8, FGF20, GALNTL1, GDF6, GNAZ, GUK1, IRAK3, KIR2DL1, LEPR, LIFR, LIPE, LRP5, NPAS2, OR1N1, OR2M4, PLA1A, PLCB1, PRIM1, PRKCI, PRLR, SCP2, SLC25A5, TYROBP, UBE2K, UGT2B28, WHSC1, TNFRSF10B
Negative_1717	AKT3, CD38, CSF1, DUSP4, DVL1, EI24, GSTZ1, HEMK1, ITGAD, MTHFD1L, NFKBIA, NLGN2, OR51L1, ORC5L, PSME1, RAB5A, RRM1, SOCS2, SRGAP3, SV2A, TNFRSF13C
Negative_1718	MUT, ADCY5, ALDH1B1, ARPC2, ATP6AP1, CCR7, CDC27, CD01, CERK, CTF1, CYP2D6, CYP4A22, DDIT3, DERL1, F2RL1, FGF3, FGF8, FUT7, FZD1, GNAI2, IFNA10, IL21, MAN2A1, MGST1, MMP9, NCKAP1L, OR13C4, OR2A14, OR52K2, OR5C1, OR5I1, PARD6B, PFKFB4, PGS1, PHGDH, PIM1, PLA2G5, PLCB3, PLCG1, PRKCQ, RERE, SEMA4D, TAS2R40, UAP1, WNT7B, XCR1, YWHAG, TNFRSF10B
Negative_1719	ALG12, ATP6V1D, CRB3, EIF4E, HSD17B2, SESN1
Negative_1720	MTR, CD38, CSNK2A2, ITGB5, MAML3
Negative_1721	ABO, GPI, HDC, NNT, PLG, ACAA1, AKR1A1, ATP5L, B4GALT3, BMP8A, CACNA1E, CACNA1S, CD01, COL11A1, COL1A2, CREB5, DDX47, FBP2, FLOT2, FMO4, GAD2, GALNT7, GRIA3, HSD17B4, MAPK10, MCAT, OR1C1, OR2C1, OR56A1, PANK4, PAPSS1, PCK2, PIK3CA, PPARG, PPP2R2A, PSME2, PTGS2, PTK2, RAPGEF1, SMPD1, TBL1X, TNFRSF4, TRAF6, UGT2B7, VKORC1, PAFAH1B2, PHOSPHO1
Negative_1722	AK1, BCR, ID3, LCK, TPR, AK3L1, ATP5G1, BIRC3, CACNA1H, CARS, CCL27, CCR5, CLDN9, CXCR3, DERA, DGKI, DHDDS, DUSP2, EPHB3, EXT1, FGF6, GNA11, HTR5A, HTR6, IDH3G, IFNW1, IL24, MYH7B, OR11L1, OR52N1, ORC2L, P2RX6, PIGO, RHOQ, RND1, RPS6KB1, SOCS7, ST3GAL6, TOLLIP, TPH1, ULBP2, WHSC1L1, ZMAT3
Negative_1723	ARNT, ATP2A1, CHIT1, FPGT, GNAZ, IFNA7, OR10A4, OR10G2, OR13G1, OR7A5, OR7D4, OR8K3, PAK6, PDE6H, PKMYT1, PLK1, RXRG, SOCS1, TUBA1A, TYMS, UCK1, VEGFB, WNT7B
Negative_1724	LYN, ADIPOR2, B4GALT7, CAMK2D, GCH1, GNG12, NKX3-1, OR5P2, PARD6B, PIGX, PIK3C2G, RASGRF1, UBA1, UGT1A10, TNFRSF6B



Negative_1725	CP, F3, OTC, CACNA1C, CCR2, CD79B, CSNK2A1, CXCL3, DDX54, DKK1, ERBB2, ERBB3, IKBKG, JAG1, LLGL1, MMP14, MYH7, OR3A2, OR4C12, OR5T1, P2RX4, PDGFB, PMVK, ROCK2, SDC2, SOD1, TUBA8, WNT6, YWHAE
Negative_1726	C8G, FAS, FGA, OTC, AHCY, BMP2, CACNA1H, ENTPD4, IMPDH1, LARS2, OR2M5, PANK4, ULK2
Negative_1727	DBT, KIT, ADIPOR2, CLDN18, DAXX, DOT1L, EPHB1, GALE, IL12B, IL18, IL18RAP, MAN1C1, MAPK14, MTFMT, NADSYN1, NKX6-1, OR51B2, OR51B4, P2RX4, PDE4D, PIGA, PLOD1, POLR2C, PRKCB, RPN1, SMURF1, SPI1, STAT1, TAS2R13
Negative_1728	BCR, DHH, F7, GAA, GP5, PGD, ABL2, ARHGEF4, ATP4A, CRHR1, CYP26A1, GAD45A, HSD17B8, IFNG, IL13, KIR2DL1, LAMC1, MAGI2, MAPK3, NAGA, NCF1, NOTCH1, OR6Q1, PANK2, PERP, PPP2R2B, PROC, RDH8, SH2D2A, STAT5A, TACR1, UGT2B17, HSD17B10
Negative_1729	OGT, ACP5, ALAD, CHSY3, DHCR7, FGF10, MAP3K5, MLLT4, NCR1, OR4A15, PLCG1, PTGS1, UGCG, TNFRSF10D
Negative_1730	MPI, ACSS3, ATN1, B4GALT2, CACNA1D, DNMT3B, EXOC7, FLT3, GPX7, HAP1, IQGAP1, JUND, LALBA, MAP3K5, MECR, NCKAP1L, OR51I2, OR52B4, OR52B6, OR8D2, PAX4, PHKG2, PIGM, PTPRJ, RALBP1, RPS6KA6, SEMA3D, SESN2, TJP2, TUBB4
Negative_1731	ADCY1, AKR1B1, AKR1D1, ARG2, ARHGEF6, ENO1, FLOT2, FUT4, ITGA6, ITGB1, LCAT, MPP5, NEUROD1, NKX2-2, NTRK1, OR13H1, OR1L1, P2RX1, P4HA3, PDE11A, PIGF, PPP3R1, TAS2R9, TGFBRI, THY1, TRADD, WASF1, WNT5A
Negative_1732	ID4, AMDHD2, ATP2A1, BCAT1, BDKRB1, CCL19, CDC42, CTNNA3, FABP4, GMP, IL19, ITPKB, LAP3, MAP2K5, MCAT, OR1J1, OR2L3, PFKFB1, PLCZ1, PPM1B, PPP2R2B, PRKCG, SAT2, SGMS2, TLR3, TSHR, TUBB6, MAP3K7IP1
Negative_1733	CKB, IL9, ACAA2, ACY3, AXIN1, BMPR1B, CDKN2C, CES2, CLDN11, CLDN20, ECHS1, ENTPD3, FSHB, GCNT3, GNAQ, GNG3, ITGA2, ITGAE, ITPKB, MCM3, NODAL, OR11L1, OR2M7, PI4KA, PIGV, POLR2E, PRKAB2, PRKCE, PVRL4, RAC1, STX8, CSGALNACT2
Negative_1734	CAT, ACOX2, ADSL, AKR1D1, CDIPT, CDKN2A, CSF2RB, HYAL2, MAP3K2, NCSTN, NT5C1A, NTSR1, OR4D1, OR5AC2, OR5AS1, PARD6A, PPP1CC, PPP2R2B, PVRL3, SETD8, SHC2, SUOX, TAS2R13, TP53I3, VAV2, WNT6, WNT7A
Negative_1735	IL7, MVK, ABLIM2, ACADM, ACP6, AKR1C3, AKR1D1, CAMK4, CD47, COL4A1, EPB41L2, GNMT, HAGHL, HLA-DRA, HSD17B1, IFNA7, IFT57, IL29, NCKAP1L, OR1A1, OR2T34, OR4C13, OR6T1, OSMR, P2RX7, PARVB, PIP5K1C, PPP3R2, TAS2R9, TIAM2, TYMP, WNT10A, GABARAPL2
Negative_1736	ADORA2B, ANAPC11, ARHGEF1, ARSA, CACNA1H, DAG1, DTX3, EPRS, FGF6, GGT5, GNPDA2, IGF1R, LIPC, MYH1, NMNAT2, OR13A1, OR51E1, OR6T1, ORC1L, PDE4A, RERE, RPS6KA5, SDHC, SLC2A4, SMC1A, ST3GAL3, SUOX, TFPI, TM7SF2, TNFSF12, TUBB, TUBB3
Negative_1737	DBI, HGD, PLG, ABLIM3, ACADSB, ALPL, C5AR1, CAMK2B, CAMKK1, CDK6, CLDN2, FSHR, FZD1, GUCA1B, HARS2, ICAM2, ISYNA1, MTMR2, NOTCH3, OR51F2, OR5H6, PHKG1, PLCG2, POLR1E, PPCDC, PPP3CB, SDC2, SRGAP3, STAT2, TNFSF18, VAV1
Negative_1738	ACO2, CASP6, DAPK3, E2F4, IL8RA, MGAT3, OR8D2, PPP2R5E
Negative_1739	ID2, IL2, APOA5, ATG7, ATP4B, BCL10, CTPS2, DAPK3, ENPP6, GALK1, GLI3, GLYCTK, HTR2A, MAGI1, MAP2K1, MYH8, OR5B3, OR5D18, PPAP2A, PRKG2, STX6, TJP2, TLR3, TPMT, WNT8B
Negative_1740	ALDH1A2, ASIP, EREG, HLCS, MAN1A2, MINPP1, NRG3, PRKAR2B, RCHY1, UGCG1, PAFAH1B3
Negative_1741	ADCY6, ARNTL, ATP2A3, CCNH, CLDN8, GGT5, MAP2K4, NTRK2, OLAH, OR13C9, OR2T10, OR4A16, PER2, PMAIP1, PRKAB2, RUVBL1, STAT1

Negative_1742	DAO, GNE, SHH, UBC, ACTA2, AGXT, AKR1C4, ATP5D, ATP5I, B3GALT4, BCAT1, CCL16, CCNB1, CDC16, COL4A4, COL6A1, CPOX, CTSL1, DPYSL2, FZD4, GALNT8, GCH1, HTR2C, LIPF, LRP5, MAD1L1, MAOB, MPDZ, OR1C1, OR4D9, OR52K1, OR52N2, OR6C6, OR8J1, PANK4, PHGDH, PLXNA1, RCHY1, SMAD9, SMARCA5, SNAP25, STX8, TAS2R49, TAS2R60, TCF7, TNFSF4, UGCGL1
Negative_1743	DAO, LPL, AGTR1, ARPC3, ATP6V1A, CDIPT, CDKN2C, CLCA4, COL5A2, CSAD, DDX23, ERBB3, FUT7, FZD7, GCLC, GGPS1, GLO1, GRIN2D, GSTM3, HGSNAT, IL17RA, ITGB2, MAGI2, MICA, NODAL, OR4N4, OR6C76, PROS1, PTCH2, RALBP1, RASGRP1, ROBO2, RXRA, SFRP5, TRAF1, TSHB, UGCGL1, YES1, MAP3K7IP2, SERPINF2
Negative_1744	ALG6, ARPC5, CLDN11, GAL3ST1, KDSR, MAN2A1, PGLS, RAC3, RDH5, ST6GAL1
Negative_1745	CAT, DAO, HK1, HYI, INS, OGT, ACOX3, CDKN1B, CPT1A, CYP2C8, CYP3A4, DUSP1, FGF9, FUT5, IL13, IL20, KLRC2, LTA4H, MAT2B, MTMR2, OR10A5, OR1L8, OR2A14, OR2D3, OR52E6, OR5AC2, OR5AS1, PER3, PFKFB3, PGM1, PTCH1, SPRED2, SULT1E1, UBE2L3, WASF2, SUV420H1
Negative_1746	AMH, GP6, MPI, ACAA2, AMDHD1, ARPC3, ATF4, ATP4A, BDH1, BIRC3, CSF2RB, CTTN, DHDH, ERBB3, GRAP2, GRIN1, HLA-DOA, IFNA5, MAFA, NKD1, OR1I1, OR2A4, OR51A7, OR6F1, OR8B12, PDE4B, PIM1, POLR2D, PPT1, PRKACB, PTGES2, PYCRL, SEMA3G, SIAH1, TLR5, WASF1, WNT10B, SERPINA5, SERPIND1
Negative_1747	ABO, PGF, TNF, AANAT, ACP6, ADAM10, CDH2, CXCL13, CYP4A22, CYSLTR1, DUSP3, EIF24, EIF4E, EXOC7, FGF20, GJD2, GNAI1, GNAL, GSTA2, HNF1A, HSD17B8, IFNA2, IRAK4, KIR2DS5, LIFR, LILRB3, LTBP1, MAML3, MDM2, NAE1, NCAM1, NME2, NTRK1, OR13A1, OR13G1, OR52N2, OR5M3, OR8G1, PDE10A, PDE7A, PHKB, POLR3D, PPA1, PRKACB, PRKCG, ROCK2, SARS2, SOS2, ST3GAL6
Negative_1748	AR, C8A, DCK, GAA, IL8, PTS, ALG3, ANAPC7, ANPEP, ARPC1A, BBOX1, CACNB3, ELK4, ENPP2, EPHB4, GALNT5, GCNT2, HLA-C, ITGA2B, LAMB1, LAMB4, MAML1, MAPK11, MCM4, OR13H1, OR52E4, PLXNB3, POLR3D, PSME3, RCHY1, RHEB, SPRY2, VCAM1, XYLT2
Negative_1749	CFLAR, CYP3A4, DGKQ, PIP5K1A, PNPT1, UROC1
Negative_1750	ADH5, ADSS, CAMK2B, CARS2, CYP1A2, DPYD, DUSP16, EPHB4, HNF4G, MLLT4, MLYCD, OR4D5, OR51F1, OR52K1, OR6K3, OR6X1, P4HA1, PCYT1A, PIGF, PPOX, PRKCB, PTPN1, SDC4, SOS1, TCF7, TICAM2, WNT2, TNFRSF10B
Negative_1751	CD2, FGB, GBA, PML, BPGM, CDC7, CTSL1, CYP3A7, DDX56, DPM1, F13B, FMO3, FZD4, GAD2, GALNTL1, GNAI1, GNAI3, GNAL, GSTM2, HARS2, ITGA11, KCNB1, KCNQ1, LCMT2, LDHB, MAP3K13, NEFM, NFKBIB, NT5E, NTRK2, OR10A4, OR1N2, OR2H1, OR51B4, PIK3R3, POLR2B, RAB23, SYNJ1, YWHAH
Negative_1752	C7, ACP1, CD44, CD79B, FZD4, PARVB, PFKFB4, WBSR22
Negative_1753	ADA, AK1, GNE, ADRA1D, BMPR2, COASY, GLUD2, GRB2, GUCY1B3, MGST3, MYLK, NNMT, OR2L2, PLA2G1B, SIAH1, STX1A, UPP2, VDAC2, ATP6V0A4, B3GALNT1, HLA-DPB1
Negative_1754	CBS, CFD, SYK, TPO, ADSSL1, B3GALT4, C3orf10, CDK2, CYP2C18, EHMT2, MITF, MMP14, NFATC4, OR10C1, OR4N5, PIP5K1B, PLA2G2D, PRKAA1, RPS6KA5, SLC27A4, SMC1B, STK36, STT3B, TALDO1, TNFSF14, TPK1, TRAF1, VKORC1, WNT10A, ST6GALNAC4
Negative_1755	CCL15, CCL21, CNGB1, CTNND1, HARS, MAPK11, MAPK8, MDM2, PIGM, THBD, TIAM2, UGCG, WNT11, TNFSF13B
Negative_1756	ADO, ADCY9, BNIP1, CCL15, COL2A1, IDH3A, IFNA21, NAGA, NOTCH3, PLA2G5, PPM1A, RXRA
Negative_1757	AKR1B10, CXCR4, CYP3A5, DARS, GBA3, GNAS, LEF1, LIPT1, NKD2, OR2AT4, OR4X2, OR6C76, PPP1R3C, PSEN1, SETD2, SLC9A1, WEE1
Negative_1758	B4GALT6, CCL26, EHMT1, FGF17, HPSE2, NPR1, OR2T34

Negative_1759	C6, HK2, TFG, CAMKK2, CCL3, CD36, CD79B, CDC27, CLDN20, COL4A1, CYP11A1, EDNRA, ENTPD1, EPHA8, GLYCTK, GRPR, HHEX, HLA-DOB, IRF3, LAMB1, NCOA4, NLGN2, OR10G7, OR10S1, OR11H6, OR4C12, PDGFD, PLA2G4A, PMM1, PON2, PRNP, RALGDS, SOCS7, SORD, STX10, TACR3, TAS2R38, TLR2, YWHAQ
Negative_1760	DCK, CLDN2, ESPL1, EXTL1, INHBE, MAP3K4, OR14J1, OR4E2, OR5A2, OR5M9, PHKG2, PIK3R1, PKLR, SSH3, TAS2R42, WASL, C1GALT1C1
Negative_1761	F2, LEP, AK3L1, BBOX1, CASP9, CDC16, CISH, CLDN8, CMPK2, DLL4, DTX1, DUSP7, ECSIT, FTMT, FUT2, GNPDA2, GPX7, GRLF1, GRPR, INPP4B, KRAS, NPR1, OR1L6, OR4K5, OR5A51, PDGFB, PDK1, PIGW, PISD, PPOX, SLC2A1, SORD, SOS2, SYNJ2, TAS2R4, TRPM5, XYLT1, ZFYVE16, ZMAT3
Negative_1762	IDS, LTB, ACO2, ACSM1, ACTN2, ARG2, ATIC, CARS2, CCL22, CHRNA7, CSF1, DDX18, DGKQ, DIAPH2, DTX3L, EIF4E2, GALNT6, HEXA, MAN1A1, OR1L3, OR52K2, OR56B4, PLCG1, PTPN1, TAS2R3, ZMAT3, CSGALNACT1
Negative_1763	BTC, C7, FGA, LEP, LHB, TNN, ANGPL4, BCL10, BST1, C1QB, CDH5, CHKA, CHRM1, CXCL9, CYP3A5, CYP4A22, ENTPD8, EPB41, FARP2, FGF7, FSHB, GNAO1, IL4R, ITGAE, MAP3K12, MDH1, MEF2C, OR2A2, OR2D3, OR52A5, PDE4A, PDI4A, PLCB4, PLIN, PRKAR1A, RASSF5, RPS6KA3, SFRP5, SMC1B, ST6GAL1, TYROBP, VANGL1
Negative_1764	DDC, GNE, GPI, LHB, PVR, RET, ACAT2, ALDH3B1, ARPC5, CALML3, CCL25, CD46, CDH1, CDH4, CDKN2A, CSNK1E, CTSB, DGKH, DLL4, DPM2, FTMT, GSTM2, HAO2, IAPP, ICAM3, IRAK1, KLRC2, MGST3, MYH8, NEGR1, OR10G7, OR2F2, OR51E2, OR51M1, OR6C3, OR7G3, P2RX3, PIGO, PMVK, POLR3D, RPS6KA5, ST6GAL1, TCIRG1, TRDMT1, UROD
Negative_1765	PC, ALOX15, CD14, OR51Q1, PER1, PRDX6, SEMA4B, SPP1
Negative_1766	GALNTL1, MAN1A1, RBPJ, SDC2
Negative_1767	CKB, PTS, CBR3, CCL5, CCNA1, CDC6, CRB3, CYP2C18, G6PC, NFE2L2, OXCT1, POLD1, PSEN2, PYCR2, SDC4
Negative_1768	DCN, GGH, GNE, KMO, AKR1B1, ARNT2, CD44, CD59, CDS2, CSDA, DIAPH2, FZR1, LEFTY1, NRG4, OR10K2, OR51F1, PERP, PLA2G1B, PMM2, TBK1, TFPI, TYMS, WIF1
Negative_1769	MSN, ADRA1A, ARPC5, B3GNT4, CCR3, COL5A3, CYCS, DLST, GAMT, GPT2, HSD11B2, KIR3DL3, LAMA4, LCP2, MAD1L1, MAML2, MAP4K4, OR51A2, OR51F1, ORC2L, PAPS2, PRKY, SLC25A4, STAT2, TAS2R1, TCF7L1, TP53I3, TYRP1, WARS2
Negative_1770	C1S, PC, ACAA2, ALG5, BET1L, CD59, CPT1B, CSF3, EVI1, HARS2, HNF1A, IFNW1, OR1L4, OR4F6, OR51M1, OR9I1, PISD, RAP1B, ST6GALNAC5
Negative_1771	AKT1, ATN1, ATP5C1, CCL1, CDH4, CRY2, DAD1, EPB41, GADD45G, GUSB, HSD11B2, IL4R, NME6, OR2T12, OR56B4, ORC5L, PHKG1, PIK3C2B, PPP3CC, TAS1R3, ST6GALNAC1
Negative_1772	CHAD, COQ5, FBP2, G6PC, GOT1, PIK3R5, TLN2, VANGL2
Negative_1773	BTK, C5, OAT, PVR, AGPAT3, COX15, FMO2, GALNT12, GGPS1, GLB1, HIF1A, HMGCL, MMP2, NAT5, OR2T34, OR52R1, OR5K1, PON1, PPM1B, RPS6KB2, SETDB2, SMAD9, SMURF2, TSC2
Negative_1774	KHK, SMS, ADRB2, AVPR1A, B3GNT4, CARS2, CCR9, DDX23, DUSP3, EFNB2, FGF22, GNAO1, GPLD1, GPX7, GRIN2B, HADHB, HDAC2, IFNAR2, IL10RB, IL19, IL29, ITGA11, ITGA8, LALBA, MAPK7, MYD88, MYH15, MYLK3, NME4, OR1E1, OR2A5, OR51A4, OR51V1, OR52N4, OR5B12, OR5D16, OR7D2, PLCG2, PPP3R2, TAS2R14, TRIP10, TRMT11, TUBAL3, TYRP1, WNT7A

Negative_1775	CBS, F9, GP9, ID2, MSN, XDH, ABLIM1, ACPT, ARNT, ATF4, BACE1, CACNA1C, CACNG1, CD40LG, COQ3, COX10, CTPS2, CXCL10, CYP2A7, CYP2B6, DDX47, E LK1, GMPR, HGSNAT, HLA- DMA, HSD17B8, INHBA, INHBC, KIR2DS5, LAP3, LARS2, MRAS, NR4A1, NT5C1 B, OR14C36, OR2H1, OR4K17, OR9Q1, PCYT1A, PIK3C2B, RBPJ, SMARCA2, SU LT2B1, TAS2R7, ATP6V1C1, GABARAPL2, TNFRSF13B
Negative_1776	F2, ADSSL1, CACNA1G, CACNB4, CALML5, CAMKK2, CHST11, DAD1, DFFB, DUS P9, EPHB3, FLOT1, FZR1, GSTM3, IFNAR1, IL21R, MDH2, MDM4, MGAT3, MMP1 , NCF1, NCKAP1L, NR4A1, NSD1, NT5E, OR2T4, OR4F17, OR52L1, OR5F1, PDE 5A, PIP4K2A, POLE2, PRKG2, RRAS2, SEPHS1, STX6, SULT1E1, UGT1A10, TN FRSF17
Negative_1777	SPN, TAT, ACVRL1, ADIPOR1, ALDOB, ATP6V0C, CCR5, CDC27, COMT, CYP4F3 , CYSLTR1, DEGS2, DPM2, F13A1, FUT7, GCNT2, HAP1, HMOX1, HTR4, LEF1, M MP14, NOTCH2, NRG4, OR8D1, PDPK1, POLR3G, RDH12, RENBP, RPRM, RUNX1, SEMA7A, SNAP23, SOS1, TFDP1, UGT2B11, ATP6V1B1
Negative_1778	FGG, GH1, ACAA1, AGPAT6, ALG3, ATG3, CCL22, CNGB1, DOCK1, FECH, GADD4 5G, IMPA1, MCCC2, MKNK1, MYH15, NCF2, NCK1, OR2T11, PGAM1, PNLIP, PNM T, POLD3, POLR1C, PTPN7, RAP1B, SSH1, TAS2R41
Negative_1779	RDX, CAMKK1, CCL21, FRAT2, HSD17B3, MAP3K8, OR4D1, OR7C2, PFKFB2, PT PN1, PYGB, TSHB
Negative_1780	MASP2, OR5D14, PFKFB4, VAMP2
Negative_1781	ACAA2, ALDH1A2, ALDH9A1, ALOX5, ANAPC1, CASK, CRLF2, EFNA3, NTRK1, O R1J1, PITX2, RUNX1, SESN2, TNFSF9, TRAF5, UGT2A1, ULK1, YWHAE, SERPI NE1
Negative_1782	AK5, GBA, ATP13A2, B3GALT1, CCNA1, CD46, CDC25C, CHKA, COL2A1, CRB3, CSF2RB, DERA, ECSIT, OR2T1, OR51B2, PIGV, PPARG, PPP2R2D, PRKCE, RAS GRP2, SFRP5, SPRED1, SUCLG1, SV2B, TBXA2R, TNFRSF10A
Negative_1783	AK2, ACOT12, ALOX15, APPL1, B3GAT3, BUB1B, CACNG4, CLDN4, CLDN8, CMP K2, CRLS1, CYP2A7, E2F3, F13B, FBXW11, FGF1, FUT4, GCAT, GRPR, GZMB, H AP1, HLA- C, IDH3B, IL12A, MMP14, OR1L6, OR2M4, ORC1L, PDGFRA, PDIA4, PFKFB3, P LA1A, PRKAB2, RUNX1, SEMA4F, STX10, UGT8, ULK1, HLA-DPB1, SERPINA5
Negative_1784	C6, LTB, MSN, ALDH3B1, ARPC4, B3GALT2, CACNA1C, CCR6, CD99, CYP2A13, DEGS1, DERA, DRD2, FUT4, GADD45B, HAGHL, HTR2B, IL7R, MFNG, NAT6, NCK 2, NCSTN, NFASC, NUMB, OR10A6, OR51B2, PFN4, PLA2G2F, PTPRF, RAPGEF2 , RIPK1, ROCK2, SETD2, SMURF2, STX5, TAS2R42, THY1, TSLP, ULK3, UPRT, WASF2, TNFSF13B
Negative_1785	LCT, TK1, TK2, ABL1, ADCY7, ALAD, APC2, CD226, CDC45L, CLOCK, DDX51, G ADD45B, KLK3, KLRC2, MAN1A2, MAPK3, MCCC1, NCSTN, RASGRP3, SCIN, SKI V2L2, TRPM5, TYMS, UNC5A, SLC25A31
Negative_1786	APP, LEP, ACOX1, AHCY, ARPC1B, B3GALT6, BCMO1, BDH2, CLDN6, CXCR4, CY P11B2, FASLG, FPGT, G6PD, GLI2, HLCS, IDH3A, ITGAM, JAM3, LEFTY1, NAT 5, OR2T11, OR5AR1, OXCT2, PPP3R1, RPS6KA2, SENP2, TP53, CACNA2D2
Negative_1787	EPO, HDC, IL6, TK2, BMPR1B, CACNG4, COQ7, CYP2C18, DAPK1, GALNT1, GGT 5, GP1BA, GPT2, GRLF1, HSP90B1, IFIH1, ITGA2, MAP2K3, MYH1, NTRK1, OR 10H4, PARD6B, PARVB, PFAS, PHKA2, PLOD3, SARS, SEPHS1, STX4, SULT2A1 , VDAC1
Negative_1788	CBL, CGN, GNE, HK3, ACTG2, ALOX15, AREG, CCKAR, CCR3, CD80, CRY2, DEGS 2, DHCR7, E2F2, EHHADH, EPHA7, FARP2, FASLG, FZR1, G6PC, GADD45G, GAL K1, GJD2, HNF1B, IGFBP3, IL13RA1, ITGB2, LAMB3, LCAT, MAPK1, NCKAP1L , NCSTN, NFKBIB, OR14C36, OR5T1, OR7C1, ORC4L, PDE7B, PFAS, PIGV, PRI M1, PRKAB1, RRM1, TMLHE, TRAF6, UCKL1, VAV1, ATP6VOE1, ATP6V1E1
Negative_1789	C2, B3GNT3, CASP7, DDB2, DDX50, FGF12, HSPA2, IFNA16, OR52E8, OR56B4

Negative_1790	EPO, ACADSB, ACP6, ACTN2, ARPC5, DAG1, FUT6, FZD5, HEMK1, ICAM1, ICAM2, LAMB1, LIMK1, NMNAT3, OR4M1, OR6C2, PDXP, PLEKHA8, POLD3, POLE4, P ROS1, PTTG1, RASSF1, RFNG, ROBO2, SMAD4, STAM, SERPINF2, SLC25A31
Negative_1791	GH1, CXCL1, OR6A2, PDE3B
Negative_1792	DDO, TKT, CCL13, CHPT1, DHFR, ENPP3, ER01L, FZD2, IL3RA, NR1H3, PFN3, PLAUR, POLR2D, SCP2, SFRP2, SPCS3, TUBAL3
Negative_1793	MAG, ACADM, ACO1, ACSM5, ACVRL1, AKT2, COL5A2, DAG1, DAXX, ENO2, FARS B, FLAD1, GAD2, GUCY2F, HLA- DOB, INPP4A, IRF9, NCAM1, NFKBIB, NUDT12, OR1D2, OR1S1, OR4N2, OR5J2 , OR9K2, PAX8, PDIA4, PIP5K1A, PSEN2, PYCR1, RBL2, RBPJ, TPK1, TPMT, U GT2B17, UGT2B7, UPP2, ATP6V1E1
Negative_1794	AKR1D1, CACNA1B, RXRA, TLN1
Negative_1795	HGF, LCK, LTB, NLK, ASAH1, B3GALT6, B3GNT5, BET1L, C1QC, CDKN2C, CSF1 R, CXCL3, DAD1, EARS2, ESAM, FDPS, ITCH, LIMK1, MNX1, NPR1, OR1L4, OR1 L8, OR2L13, OR6C74, PDGFA, PFN4, PLA2G4A, POLD2, SOX17, WNT16
Negative_1796	CAMK2G, CRLF2, DNMT1, ELK4, GRPR, GSTT1, IL12A, IL4R, IMPA2, LALBA, N R1H3, OR10G8, OR2B2, OR5D13, PER3, PIAS4, PIM2, PMVK, SDC3, SMPD4, UR OC1, MAPK8IP2
Negative_1797	DAO, IL6, IL7, MTR, SRC, ADCY2, ADRA1A, ADRB1, AKR1C4, BLVRA, BMPR1B, CCL11, CXXC4, ER01L, GCH1, GMDS, GP1BA, HAO2, MAOA, MCM3, MTHFR, NCKA P1L, OR2G3, OR2L13, OR51M1, OR52E6, OR5AK2, OR6M1, OR7A5, P4HA3, PAR D3, PARVA, PDE8A, PIGO, POLR1A, PPAR, PYGL, RAC3, RASGRF1, RDH10, SD HA, SLC25A4, TCF7L2, TSNARE1, WNT6, YARS2, B4GALNT1, PLA2G12B
Negative_1798	DDC, ATP6VOC, ATP6VIH, BCAR1, BLVRB, CREBBP, EIF4B, FUT9, GGT6, GNPN AT1, HLA-DOA, IL21, IL25, JUND, MAP2K2, MKNK2, MLLT4, MYH15, NKX6- 1, NT5M, OLAH, OR5B12, PDE2A, PHKA1, PIK3CD, PIP4K2C, PIP5K1C, PPM1A , PTGDS, SMARCA5, THTPA, UMPS, VKORC1, ZFYVE9, PHOSPHO1
Negative_1799	DDO, GSN, ALAS2, ARAF, ATP5G2, CD82, CLTA, CYP26A1, DIAPH2, ENPP7, ER BB2, FBXW11, FGF17, GCNT4, GPT2, HSD17B4, HTR2C, IPPK, LARS2, MAP4K4 , NAGK, NKD1, NKX3- 1, NME7, NRCAM, OR2B11, OR4S1, OR5AP2, OR5P2, OR8D4, PDGFC, PFN3, PIG T, PITX2, PPM1B, RAF1, RELB, SMAD6, SPAM1, SRGAP2, STT3B, SUV39H2, TU BA3C, TUBB, ATP6V1B2, SERPINF2, TNFRSF10B, TNFRSF12A
Negative_1800	DAO, F2, CDKN1B, HTR2C, RUNX1
Negative_1801	EDA, IL7, ZYX, ARNT, GGT1, IFNA4, KLRK1, RAC3, RAPGEF1, RPS6KA4, SDC2
Negative_1802	DCT, GAA, NLK, ABLIM3, ACADSB, ACSM2A, ACSS2, ADRA1B, B4GALT7, CACNG 6, CHSY1, CREB3, CYP11A1, DDX4, DGAT2, DPM3, DVL3, GOT2, GSTP1, GUCY1 A2, IDI1, IL25, MAFA, MAP3K14, NFASC, NRG3, OR51B2, OR8H3, PDHB, PMM2 , PRKACG, RASGRP4, TCIRG1, TJP2, UGT2B10, UGT2B17, WARS2, YOD1
Negative_1803	TFG, XDH, AADAC, ADCY3, ADORA2B, BST1, CD244, CHAD, CHKA, CHPT1, CKMT 2, CLTA, CTSL1, DARS2, DDHD1, DDX52, DHRS4L2, DLST, FBP2, FGF8, GALNT L2, GPX5, HARS2, HNF1B, ITGA2B, KDSR, MAP3K4, MCM6, NCF2, ODC1, OR1G1 , OR2T33, OR4F4, OR4K1, PAK4, PMAIP1, PPAP2C, PRPS1, SELE, SLC2A2, SO CS5, TJP1, TPH1, TUBB3, UNC5A, VDACL1, VTI1A
Negative_1804	SFN, ADRB1, ADSSL1, APPL1, CLDN18, FMO4, GRIN1, GUCA1B, HADHB, IDH3B , IL2RA, JUND, MAP4K4, NPR1, OR1L3, OR5H2, OR6K3, OR9G4, PKMYT1, PPP2 R5B, PYCRL, STX6, TCF7, WBSR17, MAPKAPK2
Negative_1805	ALG3, OR2L2, TRAF2
Negative_1806	ALDH1B1, ATP13A2, CD40LG, CREB3L2, CSF3, CTNNA3, ENTPD5, FGF17, GOS R2, KLKB1, OR10H4, OR4K2, OR6C70, OR9G1, PPOX, PPP1CC, SUFU, SERPINB 5
Negative_1807	EPHA3, MAPK10, MRAS, PPM1D, PPP1CC, RFX5

Negative_1808	ZYX, ACSS2, AGXT2, ALDH9A1, ATP6VOC, CCR1, CREB1, CTSB, CX3CR1, FBP2, HTR6, ICOS, JUND, OR2A25, OR2T12, OR5AU1, OR6N1, OXCT1, PGAM2, PIK3CA, PLAT, POLD1, POLR3A, PTPRR, SEMA4G, STK36, TAS1R3, TAS2R14, UGCG L2, VEGFA, WARS2, WHSC1, WNT8B, HLA-DRB3, PAFAH1B1
Negative_1809	ILK, SHH, SP1, AFMID, ATP5A1, CCR6, DDIT4, ENTPD7, FGF4, GPD1, HTR6, MARS2, MKNK2, NFKB1B, NKD2, OR4C46, PLEKHA8, PRKAG3, YOD1, ATP6VOD1
Negative_1810	ATP6VOC, CYP26B1, DHCR24, DLAT, OR5P2, OXCT1, PER2, WEE1, ATP6V1B2, ATP6V1C1
Negative_1811	CRH, CS, PGD, TYR, ACSS2, ALDH3B1, AVPR1A, BACE2, CDC2, CDC25B, CFL2, COL1A2, CSF3R, DCTD, ENO3, GDE1, GNA15, GPD2, GZMB, HADHA, IDI1, IFNA2, IPMK, KCNQ1, LALBA, MAP3K7, NAE1, NLGN1, NTRK2, ONECUT1, OR2M7, OR2T5, OR4L1, OR51B2, OR52E6, ORC2L, PAPSS1, PDE10A, PIGX, PLCB4, PPP3R1, PTGER1, SEMA3D, TIAM1, TNFSF11, TUBB6, WNT2B, ARHGEF12, ST6GALNAC5
Negative_1812	GSR, TNF, ABCC8, ALG10, ARNTL, ARSB, B3GAT1, BCKDHA, BMPR1B, CACNA1E, CACNG7, CCL21, CHRDL, CNTF, CYP2F1, DDX54, DVL3, EDNRB, EPHA2, FGF6, GAD1, IL28RA, LAMB1, MIOX, MKNK2, NCR3, NNMT, NR5A2, OR2T11, OR4C16, OR4K1, OR7G1, OR8D4, P2RX3, PDE3A, PDE9A, POLA2, PPARA, PTGER3, RALGDS, RPS6KA3, SIPA1, SMURF1, SORD, TAS2R60, TLR4, UGCG L2, WNT7B, YARS2
Negative_1813	STS, ALDH6A1, GADD45G, GUCY2C, JAM3, MAP3K4, MAP3K7, OR10G7, OR10Z1, OR52N4, SETD1B, SKP1, TACR3, TGDS
Negative_1814	KHK, LSS, NOG, ACSL4, ACVR2B, AKR1C1, ARG2, ASRGL1, BNIP1, CAPN2, CNTF, CPOX, CYP17A1, DHCR7, ENTPD1, FLOT2, GNRH1, GRPR, GSTO1, HPSE2, IAPP, IFNA8, IPMK, JAG2, MMP9, MNX1, NCF2, NRG3, OR2B2, OR2Z1, OR4C11, OR52A5, OR52K2, OR5B12, PFN4, PIK3CA, PLA2G6, POLR3B, PPT1, PRKAR2B, RAPGEF1, RDH5, SIPA1, SMARCA2, STAM2, TBL1X, TMLHE, PPP1R12A
Negative_1815	BST1, CLDN17, COMP, NCOR1, OR9K2, PIK3C3, PRKCQ, RARS, SLC2A4, TAS2R7, ULBP2
Negative_1816	EPO, FH, MPL, MUT, SP1, AARS2, ADSS, ALAS2, ALDH1A1, C3AR1, CCL15, CFL2, COL5A1, CXCL5, DDB2, DDX19A, GP1BA, HHIP, HPSE, IL23A, MGAT4B, NEFM, OR52J3, OR6C76, PLIN, PNPO, POLR2F, PRKAR2A, PTAFR, PTK2B, RAF1, TCIRG1, TUBB4, ARHGEF12, ST6GALNAC3
Negative_1817	ADK, GNS, HGF, AGPAT2, ALDH1A2, ALPP, ATP2A1, CD247, CES2, CTPS, EHMT2, EXT1, FGF23, FZD10, IFNA8, ITGA11, LILRB3, LIMK1, LRP5, MAP2K6, MAP3K1, MYH11, MYH2, NCR1, NR1H3, OGDH, OR2B2, OR52L1, OR9G4, PGM2, PIGC, PIK3C3, PTPRB, RPS6KA6, SEMA3D, SEMA4C, SLC25A5, SULT2B1, TAS2R48, UBA1, ULBP3, VDACC2, VEGFB, WBSR22, ATP6V1B2, CACNA2D1
Negative_1818	MYC, ADH1B, AGRN, ARSE, CCNG1, CERK, MAP3K5, OR51M1, PIGF, PRKG2, SMPD1, UNC5B
Negative_1819	AMT, SMS, ADRB2, EXT2, FARS2, HEMK1, OR13G1, OR1G1, PLCE1, PSME3, TRIP10
Negative_1820	HGD, RB1, TEC, ABL1, ACSL4, ATP4A, BST1, CCKAR, CCL15, CCR2, CD19, CD244, CDC7, CHAD, CYP2S1, DPAGT1, ESAM, FUT9, GMPPB, HTR2A, ITPK1, LIMK2, MAPK7, MASP1, MCM3, MIOX, MPDZ, NR4A1, NT5E, OR2L8, OR4F6, OR5AN1, PHKG2, PLA2G4A, PRKCQ, PRKCZ, PSME2, PTGER1, SLC2A1, SLIT2, TAS2R4, TAS2R41, TSC1, ULBP3, ULK1, UROC1, WASF2, SERPINA5
Negative_1821	AMH, GHR, MAX, PGP, TNF, ADAM10, ALDH1A3, APOC3, ARRB1, CCDC6, CD80, CHEK1, CHRDL, CLOCK, CSF2RB, CYP3A4, DHRS3, EPHB1, FSHR, GLDC, ICOS, IFNA21, IL11, IL12RB2, LCAT, MAP3K12, NFATC1, NFATC4, NRG3, NTSR1, OR2M7, OR7D4, PARD6A, PEMT, PIP4K2A, POLD2, POLR2E, PPP2CA, PRKCD, SEMA4A, SEMA4F, TOMM40L, UBE2K, UGT1A10, VAMP1, WBSR22, WNT11, ATP6V1G2, HLA-DQB1
Negative_1822	PXN, ACP5, CDH2, CDH4, FBP1

Negative_1823	CACNA1F, GUCY2C, PTAFR, RPS6KA2, TAS2R3
Negative_1824	NNT, ADCY1, AGTR1, AKR1C2, APPL1, APRT, ATP5C1, BMP7, CPS1, EGLN1, FARS, HRAS, METTL2B, MTHFD1L, MTMR2, OR1B1, OR1L8, OR2A12, OR5L2, PAICS, PDE2A, PDGFRB, PGAM4, SEMA4D, TDO2, TNFRSF12A
Negative_1825	FST, AMD1, CADM1, DUSP4, EPHA5, IL12RB2, IL3RA, OR10H2, P2RX3, PIGW, PRPS1, RGS3, SOX17, TOMM40L
Negative_1826	FGB, ARHGEF6, CD40, CDS2, CNTN1, CYP2D6, FLT3, GNAO1, INADL, LILRB3, MYL7, NANP, NCK1, NEU1, PLA2G5, PTPRB, SEMA4D, SUV39H1, ZMAT3
Negative_1827	DLD, HK2, MPI, PTS, AGPAT4, APOA1, CLDN18, CPT1C, CYP2C9, ENTPD2, ITGA2B, MAN1A2, MAP3K11, MTMR1, NEFH, NMNAT2, PIGK, PIPOX, PLA2G2F, PLCZ1, PRKACB, PRKAR1A, SDC1, ST3GAL5, TAS2R40, TRPC1, UGT1A10, UGT2B7, PLA2G12B, SERPINA5, SERPING1
Negative_1828	CRH, DBI, FUK, HGF, SFN, AMD1, ATIC, BTRC, CACNG8, DIAPH2, GNRH1, HLA-DOA, ITGAD, MGAT5, NCF1, OR3A1, OR4M1, OR5I1, PDE6D, PFKL, PLA2G2F, P YGB, SEMA4A, STX5
Negative_1829	CR1, IVD, SP1, TH, BCL10, C1GALT1, C1QA, CCDC6, CNGB1, CSDA, CTSB, FGF8, GALNT13, GLB1, GLO1, GNA12, GNG12, IFNA17, IGFBP3, IL17RA, IL8RB, ITGA8, MYH4, OR10K1, PGAM2, PIGU, PIP4K2B, PLCB4, STAM, TNFSF18, TPH1
Negative_1830	C4B, CBL, ITK, ABCC8, ACACA, ACTG2, ACTN2, ACVR1C, ARRB1, ASPA, BACE1, CBLC, CD59, CDK6, CDK7, CDKN1A, CHEK2, CLTB, CNTNAP1, CREB3L3, CRHR1, CXCR6, CYP11A1, CYP26A1, DHDH, DOLPP1, EPHX2, HCCS, IFT57, INSR, MAP3K4, MASP1, MYH1, NFKBIB, NRP1, NUDT8, OR10G3, OR2L13, OR52D1, PER2, PHKG1, PMAIP1, PORCN, PTPMT1, SMURF2, TNFSF8, ZFYVE16, ATP6VOD2
Negative_1831	DCK, MUT, APC2, ATP12A, ATP5C1, CUL1, PDE4A, PPP3R2, PRKAR2B, PTPN6, SPRY4, STAM, SULT1A1, YES1
Negative_1832	ACAA1, ADCY8, ARPC1B, ARSD, ASMT, B3GALT2, B4GALT7, CACNG4, CACNG6, CCL20, NTNG1, OR2T11, OR52A5, RAC1, SPHK1, UXS1, SERPINA5, SERPINB5
Negative_1833	ATM, HYI, ME3, MVK, PLN, PTS, RFK, TFG, ACP5, ADIPOR1, AKR1C3, AMPD1, ANAPC7, CLTC, CPT1C, DHFR, FGF7, GSTP1, HCCS, KIR3DL2, MMP2, NFX1, OR10A7, OR6M1, OR8H3, PCK2, PHPT1, PLA1A, PNPT1, POLR3G, PPARA, RAF1, SLC9A1, SPP1, ST8SIA1, SV2A, TUBB4, UNC5B, VTI1A, HLA-DRB3
Negative_1834	ATM, GSR, IHH, SHH, AKT3, ATG12, BDKRB2, CD80, CLDN14, CLDN8, CTF1, DKK1, DNMT3A, DPM1, FADS2, GRHR, HNF4A, HSD3B2, IL22, ITPK1, MFNG, MNX1, NADK, OR8I2, ORC4L, PCCA, POLR1B, POLR2G, STX16, TNFRSF9, TPH2, UROC1, WNT8A
Negative_1835	BTD, ACVR1B, ACYP1, ALG12, ALG5, APOC3, ATP5H, C3orf10, CCL4, CD14, CHKA, DDX51, DGAT2, DOLPP1, DPM1, DUSP2, E2F2, ENTPD2, FGF22, GABARAP, GALNS, IL29, LAMC3, NFKBIA, OLR1, OR2AE1, OR2M4, OR2T34, OR2T6, OR4X2, OR51B2, OR5L1, OR6N1, PDHB, PPP2R2A, PPP3CC, PSME1, RAPGEF1, RPIA, RPS6KA3, SORD, STAT3, TGFB3, TPM3, TUBB6, VEGFB, AASDHPPT, ST6GALNAC5
Negative_1836	CGA, ADSSL1, ARPC3, GALNT6, GALNTL4, GRIA1, IL8RA, LILRB3, NCOR1, OR1L1, OR52E2, OR52L1, PANK3, PIP5K1A, VAMP3, ATP6VOA2
Negative_1837	DCK, IL9, WAS, AHYC, ARHGEF6, AXIN2, CAMK2G, CASP6, CDC16, CDKN2B, CREBBP, CSNK1G1, EFNA1, FCER1G, FZD8, IDH1, IL8RB, ITGA10, KLRC2, MYH2, NCOR1, NR1D1, NR1H3, OR10A7, OR4C15, OR5D13, P4HA2, PDE4D, PIGA, RAPGEF1, ROB3, SCP2, SLC27A4, SLC2A2, SYNJ2, TAS2R9, THBS1, TIRAP, TLR4, TUBB2B, UGCG
Negative_1838	GLS, MTR, TK2, ACVR1C, AMHR2, DHRS3, DIAPH3, DKK4, FGF23, GRB2, KIR3DL2, LMO7, MAML1, MTMR2, OR1A2, OR52N1, SRD5A2, ST8SIA1, SYNJ2
Negative_1839	ETNK1, HRAS, OR52N5, SETMAR, SPCS1
Negative_1840	ACP6, ATP5G1, NT5C2, RPS6KB2
Negative_1841	PDHA1, THY1, TRPC1

Negative_1842	AK7, MAG, SMO, ACO2, ADAM10, ALDH1A1, CACNG4, CALML6, DKK1, DLST, DUSP1, FIGF, FRAT1, HADHA, HSPA1B, LAMB3, LTC4S, MCM6, NADSYN1, NOTCH2, NT5C2, RASGRP3, SLC27A1, TUBA1A, UGT2B17, ATP6V0A4
Negative_1843	ADA, ATP5G2, BMP2, COL3A1, CRKL, CTNNA1, CYP4A22, DLAT, FADS2, IRF9, MAP3K11, MAPK10, OR13C5, OR2H2, P2RX2, PMAIP1, PPA1, ST3GAL6, TUBA8, VDAC2, WNT7B
Negative_1844	CD6, CFI, CD274, CDKN2A, CEBPA, CYP2A7, GABARAP, NAGA, OR4C46, RGS3, STX5, TNFRSF13B
Negative_1845	CRK, AACS, ACSM1, ACSS1, AKT1, ALCAM, ASPA, ATP5H, B3GNT2, CLDN17, DNMT3L, EXTL2, FOXO1, FUT6, GCNT3, GUCY2C, HEXA, IDH2, IL8RB, IQGAP3, ITGAV, MTMR2, MYH6, NAT5, NCOR1, NTRK2, OR10P1, OR1N2, OR4A15, OR4C16, OR4L1, OR4X1, OR9K2, P2RX1, PHKG1, POLA2, PPARA, PPP3CA, PRKAR2B, SMPD2, ATP6V0A4, C1GALT1C1
Negative_1846	MOS, AARS, ADRA1D, AHCY, APBB1, C1QA, CACNA1A, CARS2, CCL17, CCR1, COQ5, DCXR, DHRS4L2, DTYMK, EXOC7, FGF20, FGF23, FGF9, GADD45B, HEXB, IL24, JAG1, NAT2, OR14C36, OR2T1, PIAS1, PPP5C, PRKG2, RBX1, RXRA, SETDB1, TICAM2
Negative_1847	ADA, ACACA, ACOX2, ACSM4, BNIP1, CARS2, CCL11, CCL5, CDC25B, CKS1B, CLDN17, COL6A2, CSNK1E, DARS, EPHA3, GCNT3, HNF1B, IBSP, LRAT, NAT6, NMNAT2, NUDT12, OR10A6, OR10J3, OR3A3, OR52K2, OR6C3, PDHA1, POMC, SC4MOL, SDC4, TLR3, TP53, TPH1, UPB1
Negative_1848	DBI, GAA, CACNA1D, GLI2, HMOX2, SULT1E1
Negative_1849	KDR, LIF, STS, ACMSD, ACSM4, ADCY10, ADRA1B, AGPAT6, AKR1B10, AKT1, C3AR1, C3orf10, CCL16, CD274, CKMT2, CSNK2A2, CTNNA2, DAG1, ENPP7, FLT3LG, GALNT2, GALT, HMGCS1, HNMT, IFNA2, IL12B, IRS1, LCP2, LIPA, MDH1, NAGLU, NEFH, OR2M3, OR4A15, OR4D2, PEMT, PIGV, PLXNB2, PPP1R3D, PPP3CC, PRKCQ, PRLR, SOS2, TACR3, TAS2R5, TP53I3, WNT4, PDCD1LG2, ST6GALNAC5
Negative_1850	BAD, GDA, IL6, ALOX12B, ATP5C1, CASP7, CD72, CYP2F1, DEGS1, GALC, GPT1, GSK3B, HCLS1, IBSP, IRAK2, ITPKA, MARS, MCM5, NEFM, OR52K2, ORC6L, PDE4C, PDE8B, PIGC, PRKAR2A, PTGDS, SC5DL, SDC4, TNFRSF11B
Negative_1851	CGA, DCT, ACAD8, ADCY8, CACNG4, CCR8, CDC14B, CD01, CNTF, DDX41, DHRS4L2, E2F2, EXTL3, FARS2, GALC, GRM5, HYAL2, IFNA5, IQGAP1, ITPKB, LCAT, LYPLA1, MTFMT, OPLAH, OR10A2, OR52E4, PGAM4, PTGES2, RBL1, TGFBRI, TRDMT1, TUBA1C, UNC5B, HLA-DQA2, HLA-DRB5, SERPINA1
Negative_1852	CD4, AGRN, B4GALT1, CCNA1, CMBL, CSNK2A2, CYP2U1, DAAM1, DDX54, DERL1, DGKD, EHMT1, EPOR, HSPA8, LAMB3, MCM2, NAGS, NCSTN, NUMB, OR5J2, PLOD1, ROCK2, SARDH, SMARCA2, STX5, TALD01, UGT2B17, WASF2, ZFYVE16, HSD17B12
Negative_1853	FGB, GLA, ADH1A, ALDH4A1, B4GALT4, CSF2, CYP26A1, EIF4B, GALNT9, JAG2, KIR2DL2, LYPLA2, OR10C1, PANK1, PDGFRA, PRKAG3, SETD7, SRGAP2, UGT2B11, VANGL1
Negative_1854	AK3, HK2, NLK, RET, ABL2, ACVR1B, ADCY4, ATP5B, B3GNT3, BRAF, CACNG8, CAV1, CES2, DTX4, EARS2, FOSL1, IGF1, IMPDH1, IMPDH2, ITGB8, MYH11, MYH4, NLGN1, NMNAT3, NOS3, OR10J3, OR11G2, OR4D1, PDIA4, PRKCG, SHMT1, SLC9A1, TAS2R50, THBS2, TRAF6, TRPM5, YARS, AASDHPPT
Negative_1855	ACSL1, ACTB, ASMT, CCR10, DDIT3, MGAT3, MYH2, NT5C1B, OR6X1, PANK2, PDLR2K, RPRM, SH3BP2, UXS1, TNFRSF18
Negative_1856	AGXT, ALG6, CACNB2, CD58, CLDN14, EPHB6, GRM1, INSRR, ITPK1, MINPP1, NNMT, SFRP1, PLA2G12A



Negative_1857	BCR, GP5, NNT, SRF, ADRB3, ALCAM, ANAPC10, ASPA, BCAT2, CASP9, CCL5, CLDN9, CYP3A4, DAD1, DERL1, DFFA, DGAT2, DPM1, ELK1, ENTPD8, EPHB1, EP HB6, EXTL2, FARS2, GNG13, HAO2, HDAC1, IRF9, LGMN, MAP3K3, OR10G4, OR 10R2, OR1S1, OR2B2, OR5AK2, OR5L2, OR8B4, PFKFB3, PGAM1, PKLR, PLD2, PORCN, PPP3R2, SNAP23, STX2, SUFU, TAS2R5, UGDH, SUV420H2
Negative_1858	ATF4, B4GALT6, DRD2, GALNS, ITGA6, MRAS, NMNAT2, OR10X1, PAK6, PER1, PLOD3, PLXNC1, PPM1A, XYLT1
Negative_1859	F11, FGG, NPY, PC, PGF, PLG, ACP6, ACSL3, ADCY7, AKR1C3, B3GNT5, CD72, CD8B, CER1, CHSY3, CLDN14, CXCL6, CYP2E1, DFFA, GALNT7, GMPR2, IL23R , MADCAM1, MTHFD1L, MYH8, OR2F1, OR4F6, OR6C76, ORC1L, ORC6L, PDGFA, PKM2, PRKAA2, PRPH, ROCK2, RPS6KA4, SELPLG, SEPHS1, SH3BP2, SLC9A1, SPTLC1, TAS2R16, TGFA, WNT16
Negative_1860	ACTG1, ACY3, ARHGEF7, GMSD, ITGAD, PRKG2, RASGRP2, UPP1
Negative_1861	NOG, ADIPOR2, ADORA2A, ANAPC10, CCNG2, CCR4, CDK2, CLDN1, CLDN22, DD X47, EPB41L2, FSHR, GIT1, GJD2, GRM5, HAO2, HSPA1B, IL2RB, LAMC2, LMO 7, MGAT4B, NFKB1B, NRXN3, OR1S2, OR2T1, OR51B4, OR51S1, OR56A1, PARD 6G, PGAM2, PPP1R1A, SCIN, ULK3, ATP6VOE1
Negative_1862	ADC, BAX, F10, LIF, UBB, AASDH, ALDH5A1, ANAPC5, B4GALT6, CCL17, CCL1 9, CCR1, CNTFR, DAAM2, EDNRA, EPHA6, GAB1, GLDC, GUK1, LDHB, MMP7, NAT 2, OR10G9, OR13A1, P2RX1, PLD1, PNMT, POLR1D, PPBP, RAC3, RASGRP1, RA SGRP4, SDHC, SEPHS1, SULT2B1, TAS2R9, TGDS, UGCG, TNFRSF12A
Negative_1863	ARPC2, DLL1, ERBB2, OR10H5, OR2T4, OR8H2, SETD8
Negative_1864	ADK, BAD, GK2, MTR, ACO1, ADCY9, ATP4B, CACNA1A, CACNA1D, CACNA1S, CA NT1, CASP9, CCL23, CD40LG, CDK2, CHST13, CRY1, CXCR3, DGKH, DOCK1, FB XW11, FSHB, HA01, HHIP, HTR4, IMPDH2, ISYNA1, ITPK1, MAP3K4, NAT1, NC KAP1L, NRXN2, OR13G1, OR4E2, OR52L1, PAPSS1, PERP, PIAS1, PPAP2C, SL C27A1, SMAD3, SORD, TAS2R38, TLN2, YWHAH, ZBTB16, ZFYVE16, PNLIPRP1
Negative_1865	IL8, ACTC1, ACVR1B, ADCY9, ADH7, AK3L1, ATP5I, CD47, CYP2C18, EPB41L 3, FMO1, GALNT2, GOSR2, IL17A, ITGB2, KIR3DL1, L1CAM, MYH3, NUMB, OR1 0T2, OR13C3, OR4N4, OR51F2, OR8B12, OR8D1, OR8D2, PPARG, PRSS2, PSME 3, RPS6KA1, RRM2B, SDHA, UGCG, ATP6V1C1, HLA-DRB4
Negative_1866	CKB, F9, PAH, ADCY1, ADH7, ALDH9A1, ALG12, ATP6V1D, CCL4, CDK6, CKS1B , CLDN3, CRLF2, ELK4, FASN, FZD4, IFNA4, IL1A, IQGAP2, IRAK4, ITGAX, K ITLG, LFNG, MCM7, OR10H4, OR51G2, PLA2G10, PLD1, PLTP, PPBP, PTGES2, RBL2, RND1, SPI1, TICAM2, TYROBP, UGCG, SERPINA1
Negative_1867	C4BPB, CACNA1E, DHRS4L2, DUSP5, KAT2A, LIFR, MAPK13, OR4S1, PARD6B, PDE11A, PFKFB3, PHPT1, PLA2G3, PNLIP, PPA2, PRKAG3, PTDSS1, RHOD, RU VBL1, SEMA3B, STAT5A, STMN1, TAS2R48, TNFSF10, TUBA1C, HSD17B12
Negative_1868	ADA, CLDN20, EPHA2, GZMB, NOX3, OR51I2, OR52E4, PDPK1, POLR1C, POLR3 D, PYGB, QPRT, RHOA, RPS6KA3, SESN1, TPK1, ATP6V1C2
Negative_1869	DDHD1, JUND, MOV10L1, NEU3
Negative_1870	ALDH3A1, CCL27, E2F4, FTH1, MYH9, PI4KB, PPP2R5B, ST3GAL6
Negative_1871	ATP4A, MYH15, OR4M2, PMM2, TAS1R1
Negative_1872	ATP5J2, CCNH, CER1, EPHA8, NCR1, OR4D11, PRKCI, SMURF1, VAMP1
Negative_1873	CR2, ARHGEF1, BCAT2, BMP4, DHFR, EPHX2, GNPAT1, GPX7, HBEGF, MAP4K4 , NEU2, NQO1, OR2AE1, OR5J2, OR6C3, OR8H1, ORC5L, PMM2, PSEN1, RBX1, S ELP
Negative_1874	ADO, APP, F5, GSR, ID2, UBC, ACTN1, ACTN2, ALDH1A2, ALOX15B, ATP2A1, A TP6VIH, CD8B, CLDN7, COL11A1, COL1A2, COL5A3, CYP1B1, DUSP8, DVL1, E REG, GALNT8, GPT2, HADHA, IL8RB, MAPK9, MCEE, NOTCH2, NUDT2, OR51B5, OR51T1, OR5T1, OR6C3, POLD2, PON2, PPP2R2B, PYGM, SESN2, SPRED2, TP5 3I3, TUBA4A, UGT2A1, ULBP2

Negative_1875	ADA, NLK, PGP, ACAT1, ADH7, ATP6AP1, B3GNT2, CCL21, CLDN19, COQ6, CYP8B1, ERBB2, FABP4, GALNS, GALNTL5, GNA15, GSTA3, IDH1, IL23R, ITGA6, ITGB6, LAP3, MAP2K5, NCKAP1, NEFM, NLGN1, NRAS, NRG1, OR10C1, OR10T2, OR3A1, OR5L1, OR6F1, OR7A10, OR8J3, PCYT2, PIK3C2G, PIK3CD, PITX2, POLE3, PPP2CA, PTEN, ST3GAL1, TAS2R13, YWHAQ, ATP6V1C1, PPARGC1A
Negative_1876	TYR, ACAA1, GALK2, IMPA1, TJP3
Negative_1877	DBI, ID4, MSN, ARHGAP5, AXIN1, CDKN2D, EREG, HEXB, IL17RB, MAN1A1, MPST, NFASC, NFAT5, NR1H3, OR52E2, OR6C74, PDIA4, PHPT1, POLR2F, POLR3D, PPP2CA, SMAD1, STK36, ULK2, YWHAZ
Negative_1878	IL4, ACTN2, ADSS, AQP7, ARHGEF2, CD55, CD01, CNTNAP1, DPYSL2, FGF22, FOXO1, FUT2, FUT8, GALNT12, GBE1, LIPC, MYH1, OR13A1, OR2L8, OR4F4, OR5D14, OR7C1, PDE1C, PLCD3, RPIA, SESN2, SPTLC2, TGFB2, TPI1, UBE2K, WNT3
Negative_1879	C8B, FGB, GSN, ACAD8, APOE, CACNG2, CCNB2, CD247, CHRM3, COL1A2, CYBA, CYP2C9, DCTN1, DOCK1, DTX1, E2F4, ENTPD7, FGF2, GNMT, GNRHR, HHEX, H NMT, HSD11B2, IDH1, IFIH1, IL28RA, LIPC, MAGI2, NKD2, NKX3-1, NR5A2, OR13G1, OR1D5, OR52N2, PFKM, PIAS4, PMVK, POLR2I, PPA2, PRKAG2, RAC1, RAP1B, RPIA, SHC4, SNAP25, TSC1, YARS, PAFAH1B3, TNFRSF10D
Negative_1880	CCNE2, NADK, PFN4, TFPI, TOMM40, ZFYVE9
Negative_1881	FGG, ATP5F1, ATP5G2, B3GALT5, BACE1, CAMKK1, CDK4, COL2A1, GNRHR, HCLS1, HTR6, MCM7, OR52A5, OR5P3, OR6A2, OR9G4, POLR2E, PTGES, RHOA, RUXN1T1, SELPLG, UGT2A3, VDAC1, TNFRSF10A
Negative_1882	C6, DCC, AASS, ACOT12, ACPT, ACSM2A, ACVR2A, ADCY8, ALG9, ARPC1B, B3GALT1, B4GALT2, CAMKK2, DDX56, EDAR, FCER1G, HARS, HTR7, IFNA7, IL10RA, ITGAL, LLGL1, MYLK3, NMNAT2, NT5M, OR10P1, OR2L8, OR5L2, PAPSS2, PAX4, PDE1C, PDE9A, PLA1A, POLR3A, POMC, PVRL4, SEMA3G, STEAP3, STK4, TUBA1A, UBA7, YES1
Negative_1883	TPO, C1QB, COL3A1, CSF1, CYP2C18, DDIT3, GALNT9, GSK3B, IFNGR2, ITGA6, ITGB4, LCP2, LFNG, NCK2, NOTCH1, NRG1, OR2Y1, ORC3L, PRKY, PRSS1, RFX5, RPN2, TOMM40, VEGFA
Negative_1884	CES2, MNX1, SETD8
Negative_1885	CCL14, CYP2C9, MAML2, OR7A10, GABARAPL2
Negative_1886	ACO1, ADCY5, ALDH6A1, ANAPC11, ATP13A2, CCNB2, CLDN5, CTBS, CYFIP2, DGKH, FM04, GDF6, GPX7, GRIN2C, INPP5B, NOS1, OR10R2, OR4F6, OR52A5, OR56A1, OR5M3, OR5R1, OR9Q1, PARD6A, PDE10A, PHKA2, PLCG2, POLR2B, PP2R2B, PRKAR1B, RAC1, TPK1, UGCGL2, UGT2B17, ULK2, HLA-DRB5
Negative_1887	TPR, ACP5, ADRB1, AKR1C1, ATF4, ATP5E, BIRC2, CD82, CNTNAP2, DDX41, HTR2B, IFNA14, KLRD1, LTA4H, MCCC1, OR13A1, OR5T3, PIM2, POLR3A, SAT1
Negative_1888	IL7, ALG12, ANAPC11, ARHGAP5, ARNT, ARPC1A, ATP6V1F, CHEK1, COL5A2, DGUOK, DHFR, DUSP4, FM04, GGT5, GLB1, GLI3, GSTO2, H6PD, IL23A, LRP5, NCAM1, NF1, NF1X1, NR1H3, NT5C, OR2Y1, OR51S1, OR5V1, OR6N1, OR9A2, ORC5L, PI4KA, PLD1, PRKG2, PTCRA, RAPGEF1, SEMA4A, SMAD5, SPHK2, SREBF1, TCF7, TUBB2B, TUBB4, YOD1, GABARAPL1, HSP90AB1, SERPINA5
Negative_1889	CGA, CKB, GSN, PC, ADCY4, B3GNT2, CACNG7, CD40LG, CD79B, CHUK, GLO1, GLS2, GSK3B, HDAC2, LYPLA1, NRG1, PDHB, PKM2, PRNP, SARS, TAS2R41, TUBB6, TYRP1, CACNA2D2
Negative_1890	ACAD8, ACO2, BDNF, CCL27, EPHA4, EXTL2, IL20RB, NFE2L2, OLR1, OR2W1, OR4N5, PMM2, PRPS1, PTGES, RASA1, RUVBL1, TAS2R3, TRAF4
Negative_1891	DHH, LSS, AADAT, ADRB1, ALDH5A1, ARNT2, ASIP, BLVRA, BUB1B, CASP7, CD244, CTNNA3, EIF4B, FUT3, GADD45G, GALNTL4, HNF1A, IFNA14, IL17RA, IPPK, NTNG1, OR6C70, OXTR, PDE3A, PIK3C2G, PMM1, PRIM2, SPTLC1, ST3GAL5, STX2, TP73, TPI1, TRAF3, WNT4

Negative_1892	CD44, CHSY3, COL5A1, ENPP1, EXT2, HAGHL, JAK1, MMP9, POLD2, SPCS1, SP RY3, TSNARE1, VDAC2
Negative_1893	HGF, ACLY, AKR1C2, ALDH6A1, ALS2, C1QC, CACNA1E, CALML6, CD22, CD38, CES7, CHRM3, DDX23, DUSP10, ESPL1, FGFR2, IKBKB, IL10RA, INPP1, IRS1 , JAG1, LYPLA2, OR13A1, OR2A42, OR4S2, OR7G3, OR8S1, P2RX5, PDXP, PLC D4, PLCE1, PNMT, PRKAA1, PTGIS, RXRB, SIPA1, SKP1, ST3GAL4, TRAF6, TY MP, WBSCR17, ATP6V1E2, TNFRSF18, TNFRSF1B
Negative_1894	DDC, F5, GNS, ME3, ABCC8, ACSL6, ADCY1, ALDH2, ATP5A1, CDC25C, CDC27, CREB3L2, CSNK2B, CXCL13, DGKZ, GALM, GNAT3, GSTT1, HARS2, HNMT, IDH2 , IDH3B, IGSF5, IL8RB, ITGAD, LCP2, OR1A1, OR52N4, PDE4D, PFKFB2, SPR ED1, SSH1, UBE2K, VDAC3
Negative_1895	BTC, PDC, ADSL, ALPL, B3GALT2, CDKN2C, CHEK1, DTX3, HA01, HSD17B7, LY ZL1, MYH13, NKX2- 2, OR2A12, OR51A2, PPP2R1A, PYCR2, RELA, SESN1, TAS2R41, TAS2R42
Negative_1896	BID, LHB, MVK, AGXT, CDKN1C, COL4A6, CXCL5, GALT, IFNA4, IL15RA, KAT2 A, KITLG, NPR1, NRCAM, OR4C12, P4HA2, PDE3A, PIGU, PLCE1, RAP1B, RDH1 1, SOCS7, SPHK2, UGT2B7, VANGL2, WNT2B, MAPKAPK5
Negative_1897	GGH, TYR, ABLIM2, CDH2, CFLAR, FZD4, GAD2, HTR6, IFNA5, IL9R, MAP3K5, MPDZ, NT5E, OR10K2, OR10T2, PDE5A, PIGO, PIGX, PRPH2, PTPRZ1, SMAD5, TUBB3, VEGFC, YOD1
Negative_1898	ARPC4, CCNG2, DGUOK, FGF5, FUT3, GLI2, GNG13, HA02, HIBCH, IARS2, IKB KE, KLRD1, NCOR2, NT5C, PAICS, PLA2G4A, POLR3A, PRKAR2B, ROCK1, SCIN , SELE, TMLHE, TUBA1A, UXS1, SERPINB5
Negative_1899	ALG1, CNGA4, CXCL3, GNG3, NKD2, PIGX, PYCR2, STX12, TAS2R8, CACNA2D1
Negative_1900	FGB, LIF, ACAD8, ALG12, CYFIP2, CYP4F3, F2RL3, GLB1, IGSF5, IL13RA1, MGAT5, OR10A6, OR1L1, OR2T34, OR6B2, PIGU, PIGV, POLR2C, PRKACA, PRN P, PRSS1, PTGFR, RAF1, RPS6KA3, RRM1, STEAP3, SYNJ1, TAS2R13, TUBB2B , UCKL1, UGCGL1, VCAM1, ATP6V1C1
Negative_1901	FH, SDS, ACHE, ACPT, ADRA1D, BDKRB2, CCNB3, CXCR5, CYP2C8, CYP2E1, CY P4F2, FDFT1, FECH, FUT2, HHEX, IRS1, JAK3, MAD2L2, MDM4, OR7C1, OR9G1 , PPM1D, PRLR, STX16, TAS2R60
Negative_1902	ACACA, ALDH5A1, AQP7, CLDN2, G6PC2, GUCY2F, HADHA, IQGAP1, MAP3K3, N CF1, PLK1, PTGS2, SELL, SEMA3D, WNT2B, KIR2DL5A, TNFRSF11A
Negative_1903	OTC, CXCL10, DERL1, DUSP1, HPRT1, IFNA8, OR4K14, OR52K1, OR7G1, SRD5 A1, WNT2B
Negative_1904	ATM, DDC, DDO, GLS, LYN, ACP6, ALG11, ATP6V1D, BBOX1, CTBS, DGUOK, DOL PP1, DTX3, DTYMK, DUSP5, ENPP3, F13A1, GRIN2C, HAGHL, HSD17B1, IFNA5 , ITGA3, ITGA5, MAP3K12, NEFH, OR4K17, PDGFA, POLR2L, PPM1A, PRKCH, P TDSS1, SMPD4, STMN1, STX7, SV2C, TICAM2, TYRP1, UGP2, PNLIPRP1
Negative_1905	C9, F8, CAMK2D, DUSP16, GALNT7, GSTM5, OR52B6, PRKCH, PRSS3, SKIV2L2 , STAT3, ATP6V0E1
Negative_1906	PVR, SFN, ADSSL1, ALG5, APAF1, B3GNT4, B4GALT5, CASP6, CCL17, CDKN2A , CFL1, COL5A1, CYSLTR2, DKK2, DLST, DUSP6, EHMT1, EREG, GAD1, GALNTL 2, GRLF1, HADHA, HIBCH, IL1A, LIFR, MTHFD1L, NTF3, OR1S1, OR2Z1, OR51 B2, OR51I1, OR6B3, OR6S1, PLA1A, PLA2G4A, POLR3K, PPP1R3B, TUBAL3
Negative_1907	AKT3, FGF17, ITGB6, OR2G2, TPK1
Negative_1908	LTB, AACS, ALOX15, BUB1, CHKB, CLDN15, CYP11B1, CYP17A1, DAD1, DCXR, DDX23, DPAGT1, DTX1, E2F2, FIGF, FMO4, GALNT14, GALNTL4, IARS2, IFNA 7, IL6R, MCCC1, MGAM, MS4A2, MYH14, OGDH, OR4F17, OR51E2, PAK6, PIGN, PORCN, PPP2R5D, PTCH1, STAT6, TAS2R5, TCF7L2, TUBB
Negative_1909	ACVR1, ADCY2, CD8B, CLDN18, HIP1, IRS2, MCM3, MDH1, OR1A2, OR51L1, OR 5B12, PDGFC, PDXP, RDH11, SDHB, SPCS1, TAS2R49, TUBB2B
Negative_1910	ENPP1, IL12A, MAPT, MAPK8IP2

Negative_1911	TNN, AADAC, CACNG5, EREG, LAMC2, MYH8, OR5T2, PLA2G2D, PLAU, PLOD3, TCF7L1, TYK2
Negative_1912	DBI, EZR, ACSL4, ARPC1B, ATP4A, CHRNA7, CRLS1, CYP11A1, DGAT2, DHFR, HMGCS2, HTR2B, IL12A, IL1B, MYL9, NCOA4, NOX1, OR10V1, OR52N4, PFKM, PSENE1, SUCLG2, SUV39H1, TCF7L2, TNFRSF8, WNT11, HLA-DRB5
Negative_1913	ACPI1, C1QB, GPAM, KLRK1, NRAS, OR1N2, PLOD1, PTPRM, TNFRSF13B
Negative_1914	CEL, ACOX1, ACSS2, AK3L1, ANAPC4, AOC3, B3GAT1, CLTCL1, DLL4, ESPL1, GALNT7, GBA3, GLO1, GPD2, GSTK1, GUCA1C, ICAM1, INPP5E, KDSR, MAP3K3, MCM4, MPDZ, MTFMT, NEUROG3, NR1D1, OR10A7, OR2AG2, OR52E8, OR9A4, PCYT1B, PHKG2, PLA1A, PPAP2B, RARS, RHOA, SETD2, TLR4, TNFSF10, XIAP, ATP6VOA1
Negative_1915	INMT, OR52R1, OR9G4, PPP2CA
Negative_1916	BAX, PGD, ACHE, ACOX1, CNTN1, DAPK3, HSD17B7, IGSF5, KLRC2, MAPK10, MAPK14, MCM4, OR10S1, OR2M4, WIF1, CACNA2D1
Negative_1917	HPD, SP1, ADCY9, ADH7, ARHGEF4, CD79B, CXCL9, CYP3A43, DEGS1, EHMT1, EPHB6, FGF8, FOSL1, HSD11B2, IL29, LDHB, OR2A5, OR4S1, PLA2G2A, TXND C12, UROC1, TNFRSF10D
Negative_1918	ADA, CAT, CSK, GGH, ASRGL1, CACNG8, CSF2RA, CYP2C8, DCXR, GCNT4, GUCY1B3, HSPA8, HTR7, IL15, LRAT, MAFA, MASP2, OR6X1, OR9A2, PI4KB, PPP3CA, SDC2, SNAI2, TUBAL3, UGT2A1, UGT2B28
Negative_1919	KMO, SRM, ABLIM3, ACOX1, ADH4, AKR1B10, ATP4A, ATP5H, CAMK2B, CDH4, CHSY3, CLDN10, CTNNA2, CYP2U1, DEGS1, DHX58, ECSIT, FGF6, GNRH1, GUCA1B, HSD17B2, JAM3, MAP3K6, METTL6, MTHFD1L, OR1D2, OR6N2, PIGO, PTDS S1, PTGFR, PVRL4, RPSA, SC5DL, SDHC, SETD2, SOCS1, TAS2R40, UAP1, UGT2B4, EIF4EBP1, HLA-DQB1, SERPINA1, SUV420H2, TNFRSF1B
Negative_1920	ACY1, APOC3, BET1, CCR1, CDK2, CSNK1G3, DDX41, EIF4E, GNG12, OR2T1, OR51V1, OR6C3, TAS1R2, UGCGL2, WNT8B
Negative_1921	FGG, AADAT, BIRC3, CDKN2A, COASY, CSH1, DUSP7, GANC, GATM, GRHR, GRI N2D, GUCY1A3, HCLS1, IRAK1, ITPK1, LEFTY1, OR51G1, OR52R1, TAS2R50, TRAF4, TRHR, WNT11, ZBTB16
Negative_1922	ACSL1, ALDH1B1, AMPD2, ARPC5, ATP13A2, BCMO1, BTRC, BUB3, C4BPA, DGKA, DNMT3A, EPHA6, FGF5, IL23R, ITPKA, MAP2K4, MTAP, NEU2, NEU3, OR2T11, OR4X2, PKLR, POLR1D, SULT1A4, TRIP10, TUBB, ATP6V1G3, CACNA2D2
Negative_1923	C2, CTH, FYN, GH1, KMO, ACSS2, AK3L1, B3GALT5, BET1L, CD27, CD74, CSF2, CSNK2B, DLST, ENTPD6, EPHA1, IL18, MAPK8, MMP2, MYLK, NCF2, OR4D5, OR4N4, OR51I2, PAK4, PDE4D, PLA2G3, PPP3CB, RUNX1, SETDB2, SIGLEC1, ST3GAL1, TCF7L2, TJP2, PPARGC1A
Negative_1924	HGF, ACP2, ALAS2, ARHGEF6, CD59, CREB3L2, GRAP2, GUCY1A3, HLA-DOB, IFNA17, LFNG, LIAS, MAP4K1, NCOR2, NRAS, OR52K2, PDE4C, PDE6G, PGK2, PI4KA, PIP4K2A, PNPLA3, RASGRP4, HSD17B10
Negative_1925	DHH, AANAT, ACVR2A, CASP8, CCR1, CDH2, EP300, EPHB4, FGD3, G6PC, GNAQ, IDH2, IFNA5, IL1R1, IRF7, JUND, KIR2DS4, LCP2, MAD1L1, MGAT1, NKD1, OR13A1, PARD6G, PLAT, PLXNA1, PMM1, SGMS2, SOX17, STK11, TACR1, UBE2K, WNT5A, CSGALNACT1
Negative_1926	F8, ME1, TKT, ACP1, ACTB, ACY1, ALAS2, ALG1, CALML6, CAMKK1, CCL23, CDH3, FUT5, HLA-G, JAM3, MYH11, NCOR2, OR10A4, OR10S1, OR52I1, OR6A2, PIM1, PLCB2, PNPLA3, PPARD, PRNP, RFXANK, SOD1, XYLT1
Negative_1927	ALAS1, ARHGEF2, NOS1, OR6K6
Negative_1928	CD4, ACTN4, GANAB, GCNT4, KRAS, LRP6, OR5M9, WNT11, MAPKAPK2
Negative_1929	C8A, FGB, ADSSL1, AHCYL1, ASRGL1, CD8A, CDC14A, CLCA2, DIAPH3, FIGF, GALNT1, GMPPB, HMGCS1, NLGN1, NQO1, OR51V1, ORC3L, PDHA2, PGS1, PKM2, PRKAB1, PRKAB2, SEMA3A, TUBA3C, UCKL1, WARS2, WNT8B
Negative_1930	CCL5, EFNB3, IDI2, LEPR, OR3A3, RRAS, UGT1A10, YWHAZ

Negative_1931	RB1, ADCY7, AHCY, AHCYL1, ALDH1L1, BCL2, CDC27, CDKN1A, CLDN17, CMBL, CSF1, CSF3, CXCL16, DNMT1, EFNA1, EIF4E, FMO1, GLI1, GNAI2, GSTM4, HSD17B1, HSPA2, HSPA8, IFNA17, IFNB1, IL11, LAMB4, MAP2K2, OR51D1, OR56B4, PIGK, PIK3CB, PIK3R1, PMVK, PTGDS, STX12, TNFSF18, SERPINA5
Negative_1932	LCT, ALDH5A1, BACE1, CLTC, EFNA4, ENTPD1, GALNT3, GFAP
Negative_1933	C7, CBL, LCT, ACSS3, ARHGEF7, ATP5L, BIRC2, C4BPA, CCR1, CNTN1, CREB3, CSNK2A2, EFNA2, ETS1, GCNT2, GPT2, IL17A, INPP5A, INPPL1, ITCH, KIR2DL3, LYZL1, NAE1, NAGLU, NARS, NAT5, NCF4, NCOR1, OR11H4, OR1N2, OR52E8, PARVA, PGM3, PRKX, RPS6KB1, SFRP4, SLC2A1, SPCS3, SV2A, TUBA3C, VAV1
Negative_1934	C5, DCN, GCK, IHH, KHK, AADAC, ACO1, ACVR1C, ADH6, CCL2, CTSS, CYP26C1, DAAM2, DGKB, DUSP3, ERBB4, FGF14, FGF22, GPAA1, HSD3B7, IDUA, ITGB6, LIPG, MAN2A1, MAP3K13, MCCC1, MGAT4B, MKNK1, NARS, OR10G3, OR13C3, OR4F17, PIAS2, PIGC, PPAP2C, PPP2R5D, PTPMT1, PVRL1, RAC3, RDH5, RELA, SOX17, WNT4, YWHAH, SUV420H2, TNFRSF17
Negative_1935	GSS, LSS, NF1, PML, TYR, ACAD8, ACSM1, AGPAT1, BBOX1, CAMK2A, CASP9, CCL13, CHIT1, CXCL13, DLST, FLAD1, GAB1, GRLF1, HADHA, HSD11B1, IL15, IL21R, MAD2L2, NAGK, OR4D1, OR51B6, OR52B4, OR8U1, PCNA, PIK3R2, PRKAG3, PRPH, SELP, SLC25A5, SMPD2, SQLE, TAS1R2, TCF7L2, TM7SF2, TYROBP, YWHAH, ZFYVE16, HSP90AA1
Negative_1936	APP, HYI, ADCY7, ALOX12B, B4GALT1, BCAT1, BMP7, CAMK4, CCND1, CD36, CDH4, CEBPA, COL3A1, CREB5, CSF1, CXCL13, DCTD, DHRS3, EFNB3, FGF1, FTCD, GALNT6, GRPR, GUCY2D, IDH2, MMP7, MPST, MTHFR, NOTCH2, NT5C1A, OR52I1, OR52L1, OR5D16, OXCT2, PHGDH, PIGB, POLD4, PSENN, ROBO2, SELP, SLC25A5, SMAD6, SNAP25, SUCLG1, TAS2R10, TYMS, WHSC1, YWHAQ
Negative_1937	EBP, TAT, ATG7, FGF21, HEXA, HMGCS1, HTR4, METTL6, OR2A4, OR4D5, PIAS4, PIP5K1A, PRSS3, PYGB, ATP6V1G2
Negative_1938	CRH, GNS, SI, ADIPOQ, CACNA1B, CSF3, CYP7A1, DHRS3, FGF20, FZD9, GAMT, GSTA4, HNF4G, IMPDH2, IRS4, ITGB8, LIPT1, MAP2K6, MKNK1, MS4A2, MYL5, NCKAP1L, NR4A1, OR10C1, OR10H4, OR1L3, OR4E2, OR51F2, OR5B3, OR6X1, PDGFRA, PEMT, PFAS, PFN2, PPP1R3B, RDH5, RETSAT, SARS2, SCD5, STAT5B, TACR2, TAS2R40, TAS2R7, TLR3, UCK1, ATP6V1G3, PRICKLE1, SERPINF2
Negative_1939	SDS, ARPC3, ARSA, B3GNT4, CD86, CX3CL1, FSHB, GCLM, ITGA9, MAP3K14, NCSTN, NKX3-1, NOD1, NSD1, OR10S1, OR1L3, OR5L2, PLEKHA8, PMAIP1, POLR3K, PTGFR, PTK2B, RPIA, SOAT1, STAT4, THY1, TYMS
Negative_1940	BLVRB, CDKN1A, GNB3, MAML2, NEUROG3, OR5B17, PSME2, RPN1, SERPIND1
Negative_1941	C1S, CDA, CGA, EZR, ID3, ACY1, ARHGEF7, ARPC5L, CACNA1S, CCNE1, CDC26, CLCA4, CXCL1, DARS2, DFFA, DLAT, DVL2, FGF18, GANAB, GCLM, GLDC, GSTM1, HADH, IL6R, INPP1, JAK1, KAT2A, MAGI2, NEU2, NRAS, OR11L1, OR52I1, OR5M3, OR5M9, OR6N1, OR8D4, PAK6, PDE4A, PDE8A, PLK1, RHOA, TLN2, UCK1, UGDH, UGT1A10, YOD1, MAPKAPK2, PDCD1LG2
Negative_1942	C7orf16, COL11A1, DMGDH, DUSP2, EHMT2, FASLG, NUDT5, OR1J1, OR4K15, OR52I1, OR6C76, OR7D2, OR7G3, OR8D4, PPP2R5B, PTK2B, SDHB, TAS1R3
Negative_1943	STS, ABP1, ALDOA, B3GAT3, BRAF, CACNB4, CARD11, CSH1, CTBP1, CTF1, DGKZ, DPM3, DRD1, DUSP14, FABP4, FGFR4, FMO4, GALNTL5, GNA15, GRIN2D, GSTO1, GUCY2D, HPSE2, HSPA1B, IL22RA1, ITGB8, MAML1, MAP2K1, NCAM2, NCR2, NRXN1, OR51A7, OR5AU1, PDGFC, PKMYT1, POLA1, PPP1CC, RBX1, SULT1E1, TIAM2, TRAF4, TYK2, ULK1, VAV3, YWHAZ
Negative_1944	IL7, AARS2, ADCY9, APAF1, CDIPT, GCNT3, GLI1, GUCY2D, IFNA13, INPP4A, LDHA, NEU2, NTF4, OR2F2, TGFB1, TXNDC12, ULBP1, YWHAQ
Negative_1945	AK1, CBL, LTB, AOC2, APRT, BNIP1, MAP2K3, MYL9, OR13F1, OR2A25, OR51B6, PLA2G3, PMM2, RPS6KA1, SLC2A4, SMPD3, TNFSF4, MAPKAPK2

Negative_1946	AARS2, ACADVL, AFMID, ATP5D, CD34, CDS2, CYP2C19, DUSP4, E2F1, GALNT2, GALNTL1, HSD11B2, IFNA16, LIPC, MGAT3, MYD88, OGDH, OR4F15, OR5AS1, OR7A10, PDX1, PTGER1, PVRL3, WNT9B, MAP3K7IP1
Negative_1947	F3, GH2, ACSS1, CADM3, CKMT2, DDX47, EPHX1, GYS2, HNF4A, OR3A2, OR8B12, OR8S1, PKMYT1, PLXNA3, PPBP, SRGAP2, STT3B, SYNJ1, TCF7, TNFSF4, VEGFB
Negative_1948	DAO, GDA, MVD, ACADL, AMD1, ATN1, B4GALT7, CACNA1B, CDKN1A, CXCL16, DTX3L, HEXA, IL5RA, KIR2DL1, LDHD, MNX1, NCAM1, NFASC, NPAS2, PAPSS2, PPAP2B, PPP1R3A, PPP3R1, PRKX, QARS, SEMA4D, SMURF2, STX7, TAS2R38, TAS2R5, YARS
Negative_1949	LSS, SFN, ARPC5, BUB1, CYBA, DPYSL2, FRAT1, HMBS, MAT1A, NUDT12, OR10C1, OR52K1, OR6C6, ORC5L, PIK3R2, PIM2, POLR2F, SEMA3E, TUBA1B, WNT3, WNT8A, B4GALNT1
Negative_1950	AK3, CACNA1G, IARS2, OR1L3, PRPH, ATP6V0E1
Negative_1951	ADO, ATP2A3, B3GALT5, DDX51, GSTK1, HAO2, IL29, IRF3, LRRC4C, MTFMT, OR13J1, OR2T4, OR51Q1, PORCN, SEMA4A, TALDO1, TNFSF9
Negative_1952	CR2, FYN, IL5, TNN, TPR, ALG8, ATP5C1, BIRC5, CAMK2B, CHEK2, COL1A2, CREB3, CXXC4, DPM2, ELK1, EPHB3, FARS2, GALNTL5, HAAO, IFNGR2, IL13, IL2ORB, KLRC4, LTA4H, MAML2, NRAS, OR10G3, OR2T11, OR4Q3, ORC3L, PDGFRB, PLA2G5, PRODH, RALGDS, RXRA, SGMS2, ST3GAL2, TUBB2B, TUBB6, UROD, WBSCR22, CACNA2D4, MAPKAPK3, PRICKLE2, SERPINF2
Negative_1953	CFH, ID1, AKR1B1, ATF2, AXIN1, CMPK2, CREB3, DAPK2, DUSP8, ENTPD4, GLUD2, GRM1, ICAM3, IQGAP3, ITPKA, MALT1, MAN1A1, MAPK7, NAGA, NAMPT, NLGN1, OR10H4, OR1J1, OR2L2, OR4A5, OR5H2, PCYT1A, PLA2G6, POLR3K, PTPN1, RAC2, SC4MOL, SEMA4G, SHMT2, TAS1R3, TP53I3, VAV2, MAPK8IP3
Negative_1954	HDC, OSM, TH, BCKDHB, BST1, CKS1B, CMPK2, CREB3L3, DIAPH3, EPHB1, ESAM, FGF10, FGFR4, FLOT2, GGPS1, GRIN2B, ICAM3, KIR2DL2, LIAS, MAP4K2, OR2M7, OR52I1, OR6C1, OR8B12, P2RX1, PLXNA2, PON2, PPP1R3D, PPP2R1A, RFNG, RFXAP, RUNX1T1, SDHC, SOS1, VAV1, WNT11
Negative_1955	RET, CACNG5, EPHX1, FZD3, GALE, GLUL, GNB1, HAAO, HAGH, MARS, MYH11, OR1J4, PLIN, PRKAG1, SMC1B, TAS2R13, TAS2R49
Negative_1956	F2R, C3AR1, CADM3, CCNE1, CD47, CDH5, DVL1, E2F4, EDA2R, ETNK2, GALNT13, GART, GNRHR, GPD1L, GRIA3, IL23A, INMT, IRF5, MAOA, MCEE, MDM4, OR14C36, OR2H2, OR51B2, OR52N5, OR7A5, PARD3, POLR2F, SEMA4C, SEMA4F, SFRP4, SLC25A4, SUV39H1, TAS2R1, TAS2R40, THBS2
Negative_1957	ADO, DCC, GPI, HGF, KDR, TK1, ABL1, ACAD9, AKR1C4, APOE, ARHGEF2, B4GALNT1, BCAT2, CTNNA3, HNMT, IL12RB1, IL12RB2, LYPLA2, MASP1, MLYCD, NCR1, OR13D1, OR13F1, OR2T10, OR4A16, OR4F5, OR7G1, OR8S1, PAK7, PARD6G, PDE1A, PFKFB3, PFN4, PTGDS, PTK2, TGFA, VAMP3, VANGL1, VNN1
Negative_1958	PGP, ADCY8, CALML3, CHST13, RASSF1, SPI1, VAV1
Negative_1959	GSN, MPZ, ALDH4A1, AOC3, ARSA, BCL2, CDKN2C, CNTF, CSNK1A1, DDX51, HTR2B, NFYA, NME2, NRXN1, NTRK2, NUDT5, OR4A16, ORC5L, PDHB, TD02, TLR3, WNT8A, YKT6, HSD17B12
Negative_1960	C8B, OTC, ACPT, ATP6AP1, C1QA, CCL20, DGUOK, DVL2, GPT2, IAPP, IARS, IL4R, JAK3, LIMK2, MTMR1, OR1E1, OR6N1, PIK3CD, PRKCI, PRKCQ, YWHAH, ZMAT3, TNFRSF1B
Negative_1961	DCT, GSN, ACAT1, AHCYL1, AMY2B, AOC3, ARSE, ATP5J, B3GNT5, CACNG6, CES1, CSF2RB, CYP2D6, DRD1, DTX3L, DUSP4, EFNA2, GMDS, GRIN2C, IFIH1, IL23A, INPP4A, IRF3, MMP9, NGEF, OR2T3, OR8G1, POLR2H, POLR2J, PPP2R5D, RAB5A, SARS, SELPLG, SEMA3B, SORBS1, SPRED2, STK36, B3GALNT1
Negative_1962	CR1, LAT, ACTA1, C1GALT1, CD44, CLDN18, CTSG, CXCL5, CYP2C18, DNMT3B, FADD, FMO4, GALNT3, GNRH2, GUCY1A2, GUCY2F, HAAO, INHBB, MAP3K12, MAPK14, MCCC1, MYH7, NFYC, PNPT1, PPP2R5D, PRKCD, RUNX1T1, SHISA5, STMN1, TBL1X, TJP3, VTI1B, TNFRSF1B

Negative_1963	F12, JUN, AKR1B1, ALOX15B, CADM3, CDC25C, COL4A4, CSNK2B, CYP11B2, E FNA2, EPHA6, F13A1, GDF7, GRIN2B, GUCY1B3, HTR2A, IFNW1, KARS, MAN1A 2, MAP4K1, MAPK11, MEF2C, NME4, NUDT2, ONECUT1, OR2F1, OR2T6, OR4A15 , OR4D11, OR4E2, PIP4K2B, PLOD3, POLR2H, PPM1B, PPP3CC, RBL1, RPS6KA 1, RPSA, SETD8, SMC1A, SPHK2, ATP6V1G2, ST6GALNAC6
Negative_1964	APP, GH2, HPD, LYN, ME2, ALDH1L1, ALDH7A1, ALG8, CCKBR, CCL8, CHD8, CL DN19, CLDN4, CLDN9, CLOCK, CSF3, CSNK1G3, CTNNA3, DPYD, FZR1, GABARA P, GALNS, HLA- DOB, IL2RG, MALT1, MAP2K5, MAP2K7, MAP3K13, MMP9, NCOA4, NEU3, OR1J2 , OR52H1, OR56A4, OR5T2, OR8K5, PARS2, PLCB3, PRLR, PTPRR, RBPJ, ROBO 1, SMURF1, TAS2R38, TFDP1, TICAM1, TLR3, TUBB4Q, HSP90AB1
Negative_1965	GP6, ITK, CREB3, EIF4E2, MAP3K14
Negative_1966	C1S, CFI, ACTN2, AVPR1A, BPNT1, C3AR1, CCL24, CLCA4, CYP4F3, DPYD, DU SP2, DUSP3, EFNA5, ETNK1, FSHB, GNAT3, HLA- F, HYAL1, MAP4K3, MYH6, NEFH, OR10Q1, OR4C13, OR51I1, OR52B4, PFKFB2 , PFKL, POLD2, PPP2CB, PTGS2, PTPN6, SPAM1, TNFSF18, WNT1, TNFRSF11B
Negative_1967	BID, FAH, GDA, HK3, IL2, RPE, TPR, ACY1, CACNA1H, CES2, CXCL10, CXCR5, CYP3A43, DHODH, ELK4, EPHX1, GALNT13, HBEGF, HIF1A, IL12RB1, IL20RB , KIR2DL1, MFNG, OR3A3, OR4B1, OR7G2, OR8K1, PEMT, RHEB, SLC25A4, SLC 27A4, TSHR, VAV1, PAFAH1B2
Negative_1968	ARD1A, CDK6, CNTNAP2, DLL4, EPHA3, FGF2, HGSNAT, INHBB, LEFTY2, TLR2 , TUBB6
Negative_1969	CBL, GNS, MOS, STS, ABLIM2, ACPT, B4GALT6, CALML3, CHAD, CXCR5, CYP8B 1, DDX54, FADS2, GLI3, GNG12, HBEGF, HCCS, INPP1, MKNK2, NCR2, NFKB1, NR1H3, OR11G2, OR4A5, OR51B2, OR8B4, PCYT1B, RBL2, SMPD3, STK11, STX 3, SUCLA2, TAS2R42, THBS1, VAV2, YKT6, ATP6V1E2, PDCD1LG2
Negative_1970	BTC, DDO, SI, APOE, ARNTL, CLDN17, DLL3, F13B, FMO5, GUCY1A2, IDI1, JA K3, NME7, NMNAT3, SDC1, SETDB1, ST8SIA1, TACR1, TNXB, ATP6V1B1, MAPK 8IP1, SERPINA1
Negative_1971	AKR1D1, GALNT12, HAP1, HARS2, IL10RA, IL8RA, NOS3, PARVG, PPP1R3C, S V2C, TACR3
Negative_1972	BAD, EZR, ALDH9A1, ALG11, AOX1, BIRC2, CREB3L1, DDX55, GNAZ, IFNG, LY PLA2, MTMR6, NUMB, OR52B6, SRD5A1, TIRAP, UXS1
Negative_1973	CACNB2, CCNB3, CISH, CNTFR, FBXW11, FLT3, GALK2, IFNGR1, ITPKB, KLRK 1, LAMC3, OR2T8, PLD2, QPRT, SFRP5, SV2C, UGCG, UGT2A1
Negative_1974	BTC, CR1, DBT, FGB, ADCY8, ANAPC4, APOA2, CCL5, CDH3, COL5A2, CYP11A1 , DOLPP1, EPHB4, FRAP1, GALNS, GCAT, GGT1, GPX5, GRIN2D, HEXA, KCNB1, LM07, MYH8, MYL5, OR4X1, OR52K1, PCYT1B, PDE4C, PDE7A, PDIA4, PIGA, P LD2, POLD2, PROS1, PYCRL, RAB23, TIAM1, YOD1, CACNA2D4, PNLIPRP1
Negative_1975	GNS, PDE7B, PIK3C2G, PVRL4
Negative_1976	AGPAT4, ARPC3, CACNA1A, CD48, CD79B, COMP, DLL4, ERBB3, GNAO1, H6PD, HMGCR, IL18, LDHAL6B, MAP4K1, OR2H1, PAFAH2, PIGC, RBX1, SMURF1, THB S1, TRAF1, WNT5A, WWP2
Negative_1977	MUT, ATP50, CCR7, GBE1, IL1A, OR4D6, PRIM2, RPS6KA4, STK3, TYROBP, WI F1, CSGALNACT2
Negative_1978	CR1, TNC, ABLIM3, ACADSB, ALAS2, CYFIP1, EDNRA, FUT2, HAAO, KLRC2, MA SP2, MGAT3, MLYCD, OR10R2, OR5C1, PPCDC, PRKCZ, SIPA1, ST3GAL1, UMPS
Negative_1979	ACPT, ALAS1, FOXA3, GALNT1, IL10, NFYC
Negative_1980	PAH, AGRP, ALG11, CD99, DAG1, FOXA2, GP1BA, GZMA, MGAT2, NADK, NAGLU, NAT6, NQ01, NTRK1, OR2A42, OR2M3, OR4K15, OR8I2, PIGB, SELE, TRPC1, V ANGL2, MAPK8IP2

Negative_1981	TNF, ACADL, ADRA1D, CASP10, CCKBR, CSAD, CTNNA3, CYFIP2, DHCR24, E2F2, EHMT2, ENTPD4, ENTPD8, EPHX1, FPGS, FUT7, IFNA13, IL5RA, IRF3, LIP1, MAP2K5, NAGLU, OGDH, OR10X1, OR1L1, OR2A42, OR4P4, OR6T1, PANK1, PANK4, PFKFB4, PNPO, PRPS2, PVRL1, RALA, SGPP1, SH2D2A, STX16, SULT2A1, TAS2R1, TIRAP, VEGFA, VTI1A, HLA-DRB4
Negative_1982	DAO, KDR, OSM, TXK, ACACA, AOC2, ATN1, CAV2, CDH15, CDKN2A, CDS1, CFL1, COL6A2, CYP2B6, DLL1, ENAH, ETS1, GAD1, GPX7, HAP1, HEXA, HMOX1, HTR2B, IFNA6, IMPA2, ITCH, ITGA2B, KDSR, LRP6, NAGLU, NCOA4, OR2C1, OR4D9, PISD, PPP1R3B, RARS, RDH10, SULT1A2, ST6GALNAC6
Negative_1983	KHK, ALDH1A3, APAF1, DDHD1, DRD2, GJD2, MAP3K3, OR5P3, PKLR, POLR3G, PPP3CC, SUV39H2, PAFAH1B2
Negative_1984	AK2, WAS, AMPD1, ATP5C1, BDH2, CCNA1, CLTA, CTS1, EARS2, ENTPD5, FGF3, GALM, GNA01, IL6ST, LAMA4, LEFTY2, MAML2, NEU1, NFATC3, OR2A2, OR4C15, OR4D11, OR6N1, PCCB, PDHA2, PHKB, PIGK, PRODH, SEMA3G, SESN3, SMAD5, TAS2R1, TLR2, TMLHE, WNT16, SERPINE1
Negative_1985	AGK, DAO, EZR, GH2, ACVR1C, ADSL, ATP6AP1, AVPR1A, B4GALT1, BPNT1, CP2, FMO2, FRAT1, GMDS, GNA15, NAT6, NFKB1, OR12D3, OR2C3, OR6C74, PDCD1, PDXP, PIGA, PON2, PPA1, PYGM, RPS6KA3, SDC3, SEMA4C, SUFU, TSNARE1, YWHAG, CSNK1A1L, SUV420H1, TNFRSF10A
Negative_1986	FOS, UBB, AASDH, ACADSB, ACVR2A, ALDH1L1, ARG1, BPNT1, CCL2, CRLF2, CTTN, CYFIP2, DDIT3, FZD8, GAL3ST1, GRIN2A, GSK3B, HRAS, HSPA2, INSR, MPZL1, NRP1, OR10A3, OR2L2, OR2W1, OR6X1, OR7G2, PDE3A, PKMYT1, POLR2H, POLR3H, PON3, PPAP2C, RDH8, ROBO1, SEMA4A, SGPP2, TAS2R4, UBA1, CACNA2D2, CACNA2D4, MAP3K7IP2
Negative_1987	GP5, IL3, ACOX1, ALDH1A3, ATP5J, CLDN8, GAL3ST1, GPAM, GPX5, GRIA2, GSTP1, HAP1, MMP9, NR1D1, PIGT, PIGX, PLXNB2, ARHGEF12
Negative_1988	CDA, LCT, RPE, ADRA1D, AGXT, ALPPL2, ATIC, BACE1, CCL17, CCNG1, CDH1, CNGB1, CREB5, CSF2RA, CXCR5, DTX3, FMO3, GIT1, HEMK1, HSPA2, HTR2A, IFNA6, IL20RA, MFNG, MGLL, OR1L3, OR2T4, OR5B17, OR9Q2, P2RX4, PAK7, PHGDH, PITX2, PLCD3, PNLIP, PPP1R3C, PRKY, RALB, SLC27A1, SMAD7, SPRY2, SPTAN1, TAS2R60, TBXAS1, VAMP2, WASF2, PHOSPHO1, PRICKLE2, TNFRSF10D
Negative_1989	CFI, FES, ADCY8, ALDH7A1, CNTN1, CREB1, CYP26C1, DDIT3, DEGS1, DGKQ, ECSIT, FABP1, GNA11, IFNA13, IL4R, LDHC, MCAT, MMP14, NEFL, NFYB, OR2T2, OR4B1, OR52R1, OR5A1, PIP5K1B, POLE, PPAT, PPP3R1, PTPN7, RASA2, RPSA, SH3BP2, SNW1, VANGL2, ATP6V1G2
Negative_1990	C6, NGF, ZYX, ACSL4, ACVRL1, B3GAT1, B3GNT4, BHMT, BMP8B, CD226, CD274, CYP2B6, DDX23, DERL1, DUSP2, EPAS1, FSHR, GLB1, GNG3, GUK1, IARS, IDH1, INPP5B, IRS1, LGMN, NOTCH1, NOTCH2, OR2T12, OR4A5, PANK4, PLXNB1, PRNP, RASSF5, SCD5, SFRP5, SSX2IP
Negative_1991	ACSM1, CACNG3, CAMKK2, CYP2C8, DDX50, FTMT, GALK2, GCNT2, GFAP, GGT6, HRH2, IBSP, IL25, IRF3, KLRC1, MGST2, NFKBIB, OR2M3, OR51A4, OXSM, PKM2, PLCB4, PLXNB1, POMC, PPM1B, RALGDS, RDH16, SEMA3G, SLC2A4, TUBA1A
Negative_1992	FGG, APLP1, APOA5, ARPC5L, BMP6, CD274, CHEK1, CRY1, CSF1, CSNK1G1, CYP3A7, DAD1, IFIH1, LMO7, MYH13, NEFH, OR2T2, OR5K2, POLD2, POLR3G, PRKCB, RAPGEF3, RFNG, WNT2B, EIF4EBP1
Negative_1993	AGL, CFD, DCK, FH, FOS, ACVR2B, ALDH4A1, CBLC, CDC23, COX15, CYP2C18, DGKG, FGF11, FGFR2, IFNA2, JAK3, KARS, LLGL2, MNX1, NKX2-2, OR2M3, OR52L1, OR6N2, PARD6A, POLR1D, PRKAB1, PTCH1, SRGAP2, TBXA2R, TUBB2B, TUBB4, UROC1
Negative_1994	DGAT1, DGKA, DTX1, FECH, FZD10, GALNT13, GLS2, IGF1R, IL1A, KCNQ1, NK2, NRXN2, OR2Z1, SEMA3F, SMARCA2, WNT5B, SUV420H1



Negative_1995	CHRNA7, DGKH, DIAPH3, FBXW11, FPGT, FZD10, FZD8, INPP5E, NRXN1, OR2A2, OR4K5, OR52E6, OR8D1, OR8K3, PPM1A, PRKAA2, SULT2A1, TNFRSF10C, TNFRSF1B
Negative_1996	CDA, GH1, OSM, RFK, SRM, TNN, ALDH4A1, ASRGL1, B3GALT4, CACNA1E, CLDN7, CNGB1, CYP2C9, DKK1, E2F5, ENO3, FASLG, FASN, FLT3LG, GPAM, GPX7, H6PD, LCAT, MAPK10, MITF, MYH14, OR10H4, OR2A12, OR3A3, OR4D1, OR4K17, OR4L1, OR52E6, OR56A3, OR8J3, PITX2, PMAIP1, STAT4, TAP1, TSC2, UGT2A1, ULBP2, UMPS, UPB1, VEGFC, SERPING1, TNFRSF11A
Negative_1997	BTD, F2, GLS, ACVR2A, BMP5, CCR8, CDH15, CFTR, CMPK2, COQ3, CPOX, CYP19A1, DGUOK, DUSP16, ECHS1, HLA-DRA, INHBB, LIAS, MYL2, OR10G2, OR2M7, OR6M1, P2RX1, PAX4, PCNA, PIK3R1, PPP1R3B, RHOD, ROBO3, RPS6KA4, SPRY4, STAT5A, ZNRD1, SERPINC1
Negative_1998	DBI, KMO, MAG, ME1, XDH, ACVR1B, ADCY3, ADH4, APOA2, CASP9, CCR4, CD86, DGKZ, DUSP2, EPHA5, ESAM, FBP2, FGF18, FUT6, GALNT11, GNAI2, GSTA4, HTRA2, IFNA6, MAP3K12, OR10K1, OR5AN1, OR5AU1, OR5K1, OR5V1, OR6K3, PCYT1B, PGK2, PGM3, PIGX, PTPN11, PVRL1, SETD7, SHC4, TGFB2, VDACC2, ATP6V1B2, MAPK8IP1
Negative_1999	VTN, B3GALT2, B3GAT3, BMP4, CHEK1, CLDN3, CNTNAP2, CPOX, CSH1, CTBP1, EFNA1, EP300, EPB41L1, FBXW11, GMPPB, GNAI1, MAN1B1, NCAM1, NCF1, NME6, OR10G8, OR2T29, OR2T3, OR4C11, OR52N4, OR5AS1, PDE1A, PLCG2, PP2CA, PRKY, SMURF2, STK11, TAS2R50, PPP1R12A
Negative_2000	BID, GNS, HYI, ILK, MIF, AKR1B1, AKR1C1, ALDH9A1, AMHR2, ATP6V1F, B3GALT6, CACNA1B, CACNB1, CCR8, CDH4, CLDN9, CLTB, CYP4F2, GNAI3, HSD3B1, HSD3B7, IRF5, ITGA5, KIR2DS5, MDH1, MYD88, MYL2, NAGK, NT5E, OR10H2, OR2G2, OR4K2, OR52B4, OR6C76, OR7A5, PGK1, PIK3R4, POLE2, PTPRM, P YGB, QARS, RUNX1T1, SCP2, SMPD1, TCIRG1, ATP6V0E1
Negative_2001	EGLN1, OR6B3, OR6K2, OR6N2, RARA, SCLY, TRAF5
Negative_2002	CAT, IL4, TEC, ADH7, ALG3, AMDHD2, ATF4, CDC14A, CIITA, DGKE, FOXO3, FRAP1, FRAT1, GNPDA2, HNF4A, HTRA2, KLK3, MAPK14, MGST3, OR4C13, OR51G2, PIK3CB, PLXNC1, PPP2R2A, RARA, RRM1, SH2D1A, SPHK1, STAM2, TRAF6, YWHAE, TNFSF13B
Negative_2003	IL4, VCL, AOC3, ATP6V1F, CCL3, CD22, CD55, CDKN2C, CMAS, DUSP14, FRAP1, GMPPB, HSD11B1, HSD17B4, MOV10L1, OR2A4, OR6T1, SMAD4, SPRED2, SV2B, TPM3, UGDH, UROS, VKORC1, GABARAPL2, TNFRSF1A
Negative_2004	BAX, ACOX1, BUB1B, CD55, E2F4, HAAO, IL10RA, IL18R1, ITGB4, LIPT1, LYZL1, NNMT, OR1L6, OR2K2, OR2L13, OR6A2, P2RX2, RASA2, SMAD2
Negative_2005	MVD, C1GALT1, CNTN2, FBP2, FOSL1, HTR6, PIGC, PPM1A, RALGDS, SELPLG, SETDB2, WHSC1, ATP6VOD1, HSD17B12
Negative_2006	CAT, PC, ACSL1, ACYP2, ARPC1A, BUB1B, CD28, CLDN6, CYP21A2, EHMT2, FRAP2, FBXW11, IFNK, LIMK1, MAGI2, NFE2L2, OR11L1, OR2G6, OR2M4, OR6T1, PAK2, PDE1C, PIP4K2B, PLA2G2F, PLCZ1, RBPJ, RPN2, RXRB, SFRP2, ST3GAL6, TAS1R3, TGFB3, UPB1, PDCD1LG2
Negative_2007	GCNT3, P2RX6, PAK7
Negative_2008	ACACA, ACSM5, ALG2, CRKL, CXCR5, DDX51, ETS1, EVI1, FOXO1, GALE, GTSE1, HTR5A, ICAM1, IFNA14, IL8RB, IRF9, LCMT1, MAP2K3, MAT2B, MECR, MINPP1, MYH11, NR1H3, NR4A1, OR10A6, OR2A12, OR2T5, OR2T6, OR4A15, PDGFA, PISD, POLR2F, PTAFR, RBX1, RFX5, SLC25A4, TCIRG1, WNT9A, HLA-DRB4
Negative_2009	C2, ACTG1, FASLG, GANC, IFNA2, ITGB4, ITGB5, OR4D11, OR51B2, PCYT2, HLA-DRB3
Negative_2010	ASL, KHK, MPI, TPR, ADRA1A, ADSSL1, ALG11, B3GALT6, BMPR1B, CCNA1, CCND3, CD38, CSNK2A1, DAAM2, DAG1, FGF19, FRAP1, GALNT5, IFNG, KARS, LCMT1, NEFH, NFX1, OR51B2, OR5T3, OR8H1, OR8J1, OXCT2, PLA2G10, SHISA5, SLC33A1, ST3GAL3, SULT1A2, TP53I3, TRDMT1, VTI1A, ZNRD1, ST6GALNA C6

Negative_2011	APP, CFD, NPY, A4GALT, ABLIM2, ACP1, ATP2A1, DEGS2, FUT2, LEF1, NLGN1, PDE3B, RBPJL, SORBS1, TDO2, UPP2
Negative_2012	F10, NLK, SYK, UBC, ACTG1, ADCY10, ALAD, ALDH3A1, ALPL, B3GALT5, BMP4, CCR8, CPT2, CYP7A1, ENTPD4, FMO2, GPD2, HDAC1, HMGCS2, HSPB1, IL6R, IMPDH2, ITGA2, LIPE, MYH6, NTNG1, OR12D3, OR1E2, OR4C15, OR8B8, P2RX5, PDE2A, PRDX6, PRIM1, PRPH, RHOA, SHC1, SMPD4, ATP6V1B1
Negative_2013	HGD, TH, ADCY3, ATP2A2, BHMT, CD48, CD55, CDKN2A, CSDA, CYBB, OR10T2, OR4K2, OR56A4, ORC3L, PANK2, PLCZ1, POLR1A, SPI1, TAS2R41, ZBTB16, SUV420H1
Negative_2014	AK7, MVD, OSM, PTS, ATP5H, BLVRA, CCR2, CHUK, COL2A1, CSNK1E, DMGDH, EPOR, ITGA2B, LDHB, METTL2B, MGAT5B, NRAS, NTF4, NTSR1, OR51A2, OR6Q1, PIAS1, SLC25A5, TAS2R9, UNC5C, YWHAG
Negative_2015	EBP, GBA, GK2, PLN, ADCY1, ARPC3, ATP2A1, CD38, CES1, CLTC, CNTNAP1, COX3A1, CPT2, CYP1A2, CYP2C19, CYP2C9, EPHX2, FGF2, FRAT1, FZD4, GBTG1, GNA13, GNAL, GNAO1, GRIN2B, HTR2C, IRF9, MICA, MTHFD1, NCAM2, OR2A25, OR4P4, OR51B2, OR51F2, PAPSS1, PARD6B, PLIN, POLD4, PPP1CA, RASGRP4, RPS6, SCP2, TNFSF8, WHSC1, ATP6V0A2
Negative_2016	F9, KIT, ME2, NNT, ABAT, ACY1, AKR1C4, ALDH1L1, ANAPC1, B4GALT7, BAAT1, BACE2, CLDN2, COL4A6, CXCL13, DUSP14, EP300, GLUD1, GUK1, IL17B, IL22RA1, INPP5B, IRAK3, LAMC3, MAP3K6, MYH11, NKX6-1, NUMBL, OR14J1, OR2AE1, OR4C6, OR4X1, OR7D2, PPP2R1B, PRKX, SKIV2L2, SLC27A4, SLIT2, SNAP25, TNFSF14, ATP6V1G2, CSGALNACT1, TNFRSF10B
Negative_2017	ATP6AP1, B4GALT7, GSTM1, LLGL1, LRDD, PPAR, TRADD, ATP6V1C2
Negative_2018	F9, SFN, SYK, TPR, AANAT, ALDH1A1, ALDH3B1, ALPPL2, CAMK2A, CHRD, CSNK2A2, CYP4A22, DRD5, DVL2, FGF4, GLUL, HMGCS1, IFNA21, IL15RA, INPP5A, KCNQ1, LDHAL6A, NRXN1, OGDH, OR1Q1, PIAS2, PLA2G4A, PPP2R1A, TJP2, TRIP10, WNT7B, ATP6V0D2
Negative_2019	GSN, SFN, ACADSB, ACSM2A, ACTC1, ATP5H, C4BPB, CDH1, CDKN2A, COQ3, CTSP2, CTTN, CXCL9, EFN2, ENTPD6, FOXA2, GUCY2F, HAO2, IGSF5, ITGAL, JAK2, KYNU, MAPK11, NANP, NFATC1, NPAS2, NT5C2, OR14J1, OR2M2, OR8H1, PANK4, PARS2, PCCB, PIGU, POLR2K, PRKACG, SHC1, SIGLEC1, TAS2R16, TBA2R, TNXB, TUBB2A, WNT11, HLA-DRB3
Negative_2020	BAX, ZYX, AARS, AASS, ACP2, ATF2, ATP2A1, ATP5J, B3GALT1, BMP6, CDC14B, CHKB, CREB1, EPHA6, F13A1, FASLG, FLOT2, GANC, GLYCTK, GPT2, GSTA5, GUCY1A3, HEMK1, HSD3B2, IDH3A, IL24, LAMC2, MCM2, MYH9, NEU3, NOTCH3, OR1B1, OR51L1, OR5K1, OSMR, PAK3, PPP2R2C, RASGRP4, RDH11, SLC27A5, VTI1A, WNT2, YWHAZ
Negative_2021	MVK, SPN, ZYX, AMPD1, ATF4, C1QA, CACNG2, CD8B, CD99, COL1A2, CREBBP, CXCL13, CYP17A1, DDX47, ENO3, GCLM, IARS2, IL1RAP, IL22RA1, LIAS, LTC4S, MAP2K3, MCM4, MYD88, NLGN1, NT5C1A, OR10H5, PAK2, PCNA, PDHA2, PECAM1, PLD1, POLR2F, RXRG, SDC3, SDHC, TDO2, VCAM1, WNT3, WWP1, YWHAH, SUV420H1
Negative_2022	ACSS2, ALDH6A1, CFL1, CHPT1, CYP3A7, DNMT3A, FPGS, GABARAP, GCAT, GRA1A, HGSNAT, IL11, IL12RB2, MCM7, MECR, MYH7, OR5L1, OR7C2, OR7G2, PCYT1A, PDE8A, PPARG, PPOX, PPP1CB, PTGFR, SEPHS1, SETD1B, TJP1, UPP2, UPRT, WNT4, TNFRSF17
Negative_2023	CAD, DBH, GK, NNT, STS, ACADSB, ARPC2, CACNG5, CLDN11, CYP4F2, EPAS1, EPHA1, IL28A, ITGA6, MAP2K7, NCOR1, NMNAT1, OR4E2, OR6C74, RBX1, RRS
Negative_2024	ICAM1, ICOS, MAOB, TAS2R13

Negative_2025	ACVR2B, AMD1, ATP5G1, ATP5J, CCND2, CMBL, COQ6, CXXC4, EFNB2, EIF4E2, FUT2, GALNT1, GNA14, HGSNAT, IFNA10, IFNA21, IL18R1, KCNB1, KDSR, LIFR, MAPK7, MCM7, MTHFD1L, NARS2, NEFL, NLGN1, OR11G2, OR1D2, OR2A25, OR51F1, OR56A3, PAFAH2, PFKP, PLCB2, PPAR, PYGM, RAPGEF2, RHOD, SDHD, SHC4, SSH1, TALDO1, TLR5, UNC5D, YWHAH, ATP6VOD2, PPP1R12A, PRICKLE2
Negative_2026	ACAD8, B3GNT4, CDK2, CHRM3, ENO2, GALNT14, GRLF1, GSTT1, IL13RA1, ITGAE, MGST1, MPST, MYH14, NCK2, NCKAP1L, NFYC, OR2L2, OR4K15, OR52R1, PAPSS2, PPAR, RELB, RPS6KB2, SEMA3D, SGMS2, SMAD4, TAS2R9, TD02, TRAF4, WASF1, ATP6V0A1, HLA-DPA1, TNFSF13B
Negative_2027	F5, PAH, ACO1, ADH7, CCL17, CXCL12, ENO1, ESAM, FASLG, GAL3ST1, GART, GDF7, GNA12, HAGHL, HES1, IL22RA2, KCNQ1, LMO7, MCEE, MCM7, MGLL, MITF, MTHFD2, NEU4, OR2B2, OR4K15, OR51V1, PGAM4, PHGDH, PLA2G3, PLCZ1, PPA1, PPP2CB, RELB, RFXAP, SEMA3F, SESN2, SRD5A1, SULT1A1, TACR1, TUBA8, UGT2B11, WBSR17, WNT16, HLA-DPA1, PNLIPRP2
Negative_2028	C2, ME3, ACSS1, ADCY10, APOA5, ATG12, BCKDHA, CCL2, CCL7, CCR3, CISH, CLDN4, DDX47, DLST, DVL1, FCER1G, GAMT, GGT6, GJD2, ICAM2, IL19, INPP5A, MAGI1, OCLN, OR13D1, OR14I1, OR2G3, OR4A15, PAX6, PLCB2, POMC, PON1, PPP1R1A, PROS1, PTPN1, SOD1, ST3GAL4, TAS2R42, TAS2R48, TCF7, UCK2, UGT8, VANGL2, PNLIPRP1, SERPIND1, TNFRSF10A, TNFRSF13C
Negative_2029	FYN, IL4, MPL, AADAC, ALG11, CACNG2, CASP10, CD79A, CDH5, COL4A4, CX3CR1, CXCL11, DGKD, DPM3, GART, GPD1L, GRIA1, HLA-C, HNF1B, IFNA8, IL12B, IL19, KARS, KIR2DL2, MASP2, MCCC1, MICA, NTF3, NTN1, OR10AG1, OR2A25, OR4F6, OR4N4, OR8K3, PAK2, PFKL, PGS1, PRODH2, PSME1, PSME3, RAPGEF2, TUBA4A, VAMP3, WASL, YOD1, YWHAQ, KIR2DL5A
Negative_2030	DBF4, DRD5, GADD45A, HLA-C, HSD17B2, KLRD1, NUDT12, OR51I1, SULT2B1, TCIRG1, TNFRSF12A
Negative_2031	CAT, MSN, APOE, ATP5E, BET1L, CHST12, DEGS1, FGF19, GBT1, GMPR, GSTM3, HLA-DRA, MAP3K8, MKNK1, OR10A3, OR1A2, OR2H1, OR2T10, OR52M1, OR7C1, OR8G1, PIP4K2B, QARS, VANGL1, GABARAPL1, TNFRSF10D, TNFRSF12A
Negative_2032	B3GAT1, B3GNT5, BLVRB, BMPR1B, CARD11, CSF1, GALNT8, OR2G2, OR52B4, PLOD1, POLA2, PVRL1, SNAI1, SYNJ2, ZFYVE16
Negative_2033	DCN, ATP5F1, CCL16, IFNA21, MAPK7, OR6K3, PAK2, PLXNA1, XCL2, HLA-DQB1
Negative_2034	ADA, AMH, APP, DBT, LIF, OAT, ACAA1, AGMAT, ARNT, BAI1, CALML5, CBLC, CD86, CSNK2A2, DVL2, EIF4E, GADD45G, GLI2, GOT1, HNF4G, IPMK, ITGAX, LAP3, MGAM, MYH13, NCSTN, NFKBIA, OR11H1, OR13A1, P2RX6, PARVG, PGK2, PHKB, PIGV, POLD4, PRPS1, RASA1, RBKS, RELB, RFXAP, RGS3, RPS6KA2, SEMA3A, SPCS1, SPRY2, TIAM1, HLA-DQB1
Negative_2035	AARS2, ALAS2, BMPR1B, EFNB1, MYH10, OR10T2, OR2B11, OR4K5, PARD3, TNFRSF11B
Negative_2036	BCR, CAT, DDO, F9, FER, HYI, MSN, ALG11, ARNT2, CD22, COX15, CTLA4, EPB41, GALE, GNMT, GSTT1, GZMA, HTR2B, IFNW1, IL22, JAK2, NME2, OR2B2, OR56A4, OR6C6, PANK4, PPAP2B, RDH10, RPS6KA6, SARS2, TAS2R13, THBS3, TNLN2, TPM3, TUBB4Q, ST6GALNAC3
Negative_2037	F3, IL6, ACAT1, BMP5, CD8A, CHR, CNTN1, CREB1, CRHR1, CSDA, DDX4, DUSP7, EDAR, FRAT2, GALNTL4, GCNT4, HSPA8, KLRC4, KYNU, LLGL1, MAD2L2, OR1N2, OR2T12, OR2T2, OR2T29, OR5AN1, PLCE1, PRKAG1, WNT8A
Negative_2038	PXN, SRF, TNN, ACOT11, ACTG1, ACTG2, ADORA2B, ATP4B, BIRC3, BUB1B, CALML6, CCNA2, CUL1, EGFR, F13A1, GARS, GNA14, GSTK1, HAGH, HMGCS1, IFNA14, IL18RAP, KLKB1, LAMC2, NME4, OR11L1, OR2AE1, OR2AG2, OR2G2, P2RX1, PIP4K2C, POLE2, POLR2J, PON2, PPAP2C, PPP2R1A, PTPN5, RENBP, RHOQ, SELL, TUBAL3, UAP1, UCP1, VNN1, HLA-DPA1

Negative_2039	MPL, AGPAT4, AMD1, ANAPC11, CRB3, DDIT3, DGKE, ENTPD7, GLG1, PTGES, PTGES2
Negative_2040	SMS, ACVR1C, IL17RB, LAMC3, LDHC, OR13C2, PIGK
Negative_2041	APP, NPY, APOA2, B3GNT3, CACNA1C, CCL26, FGF1, GNAI1, HMGCR, IFNA13, OR10T2, PGK1, RND1, SHISA5, SPHK2, SUFU, WNT4
Negative_2042	CKB, ALDH1L1, ARPC1B, ATP4B, DAPK2, FARP2, FPGS, GALNT6, GGT6, HSPA8, IL11RA, IL1R2, IQGAP3, NT5E, OLAH, OR10G8, OR52H1, OR52I2, P4HA1, PAK1, PCYT1A, PMM1, PRKCB, ST8SIA1, VANGL1, WASL, ATP6VOD1, ATP6V1G3
Negative_2043	CCL15, FGF5, LRP6, PAK3, PFN3, PLCB4, SEMA3F
Negative_2044	A2M, DUT, F2, MAX, ACYP1, AKR1B1, ANAPC2, APRT, AQP7, C1QA, CDK6, COL4A2, COMT, CXCL13, DIAPH3, EPHB4, FSHB, G6PD, GALNT6, GNPDA1, HAO2, HSD17B8, IFNA7, IL17RA, IRAK2, MYH8, NANP, OR10H2, OR1J2, OR5C1, OR8H2, PFN2, PGAM2, PI4KB, PIK3C2B, PIP5K1A, PLCD3, PLXNA2, SDHB, SEMA4A, SGMS2, SPRED1, STT3B, STX3, UCKL1, UGT8, MAPKAPK3, ST6GALNAC4
Negative_2045	F2R, GK2, MTR, ALDH3B2, AMDHD2, AMHR2, ATP5H, BDNF, BLVRA, CCL22, CCL27, CCND3, CIITA, EFN2, EXTL1, GJD2, GLB1, IFNK, IL2RA, INPP4A, JUND, LAMA3, MGAM, NLGN2, OR2AG2, OR4N5, OR52E8, OR6C70, PDE5A, PIP4K2B, POLR2J, SC4MOL, SDHA, SRGAP3, STAT6, HLA-DPB1, ST6GALNAC5
Negative_2046	TNC, VCL, AXIN2, CCL23, CRY1, DVL3, PDE5A
Negative_2047	DAO, EDA, LEP, SI, ACOT12, ADRB3, AKR1B1, B4GALT7, CTLA4, EXT1, GNAI3, HTR2B, ITGA6, LIPA, MYH6, NANP, NEU4, OR13C5, OR4A5, OR52E8, OR5D14, PAK6, POLR3D, THBS3, WNT6
Negative_2048	EPHB1, GALK2, GLUD2, KCNB1, MAP2K4, OR6B2, PIP4K2A, SULT1A1, TUBB4, VANGL2, ATP6V1C2
Negative_2049	MYC, ACAT1, ACP5, ATG3, ATP5B, CASP10, CASP7, CLDN16, DLL3, FSHR, GNA15, GPX7, INHBE, LIFR, MYL2, NFYA, PPP2CA, PRDX6, PRKCA, RXRA, TAS2R48, TNFRSF4
Negative_2050	C2, DRD5, DUSP8, IFNAR2, NME4, OR5I1
Negative_2051	CR2, LPO, UBB, ACAT1, ADH4, ARPC3, CCND3, CCNE1, CDC14B, CYBA, DGAT2L4, DHDH, DUSP6, EGLN3, FZD5, HDAC2, HMGCS1, MAP3K8, NFKB1, OR1S1, OR2AG1, OR4M2, OR51A2, OR5C1, PGLS, POLR2L, PRKAR2B, PRSS1, PTDSS1, STAM2, STX8, UGT2A3, PLA2G12A, SUV420H1
Negative_2052	C7, HGF, AMY2A, ARPC4, ATP5E, BMP8A, BNIP1, C5AR1, CREB3L2, CYCS, DDI4, DDX4, DDX55, FBXW11, GNAS, GSTA2, HAP1, IFNA16, IL17RA, ITGA11, LDHC, MAP3K14, NKX3-1, NTF3, OR51E1, OR6K2, OR9G4, PAK3, PAX6, PLOD2, POLE4, POLR3B, PRKA1, RAD51, STAM, TUBAL3, ATP6V0A1
Negative_2053	ADC, KHK, LYN, ANPEP, APBB1, ARG1, BLNK, CCL7, CXCL11, FUT6, GIT1, GNA11, HARS2, HYAL1, IL9R, KLRC2, LCMT1, LDHD, LEFTY1, LIPA, MAGI2, MASP1, NOX3, OR13A1, OR1L8, OR2T8, OR4K13, OR5P2, OR8S1, PIGA, PIK3C3, PIP5K1A, PPCS, PPP3R1, RASSF1, RBL1, RRAS2, STX1A, STX6, VNN1
Negative_2054	AUH, TNC, ACSS2, ARNT, CCNE2, CHIT1, EGLN1, EPHA7, FBXW11, GALC, GCNT2, GP1BB, HIP1, ICAM1, IFNA7, ITPA, NFKB2, NME6, OR11H6, OR1N1, OR4C16, OR4F4, OR51S1, OR56A3, PPP2CB, PRSS2, RRAS2, SELL, SLC27A4, SMAD1, SV2B, TSHB, TYRP1, XYLT2, ATP6V1B1, EIF4EBP1, MAPKAPK3, ST6GALNAC6
Negative_2055	BDKRB2, CXCL1, IL20, MYL2, OR2T12, PYGM, RASGRP3, STK3
Negative_2056	FAH, KMO, PGF, TYR, ABLIM3, ALOX15, BACE1, CACNA1G, CCKAR, CCL27, CHEK2, COL4A1, COMT, CSF3R, CXCL16, CYP1A1, DHODH, DHRS9, GADD45B, GALNTL5, GRHR, H6PD, IL17RA, IL9R, LRP6, MYH8, NR5A2, OR10H4, OR2K2, OR2T10, OR4A15, OR4C16, OR8H2, PANK3, PGAP1, POLR3D, PSEN2, RBL2, RDH12, SDHB, SFRP1, SMARCA5, SOCS5, TLR4, UNC5B, WWP2, EIF4EBP1, HLA-DRB3, PDCD1LG2

Negative_2057	BAX, DCN, AMHR2, BCKDHB, CCNE2, CSDA, DTX3, EPHB3, IRS1, OR52H1, SEMA3G
Negative_2058	DCC, LCK, TFG, XDH, AGPAT1, AK3L1, ANAPC11, CACNA1I, COMP, CYP2B6, DAPK1, EIF4E2, FASN, GCH1, GLI2, GSTK1, ICAM3, ICOSLG, IFT57, KCNJ11, LIAS, NFYB, ONECUT1, OR5AR1, OR9A2, PPP2CB, RPS6KA2, RPS6KA5, RXRG, SPRY1, TLN2, EIF4EBP1, ST6GALNAC6
Negative_2059	AK3, GK, IL3, TPR, ACO2, ADCY1, AGRN, ARHGEF1, CDKN1C, CLDN14, CLTB, CLTCL1, CNTNAP1, CYP17A1, DDX23, DPM2, DTYMK, ENTPD6, GNAT3, GSTA2, H NMT, HSD17B8, IL28RA, IQGAP3, KIR2DL4, MAD2L1, MAGI2, MAPK10, MKNK1, NEU3, OR51B2, OR5AR1, OR9G4, OXSM, PHKA1, PIP4K2A, PISD, PNPO, POLR1D, PSME1, RUNX1, SEMA4D, SOCS5, SV2B, ATP6V1E1
Negative_2060	BCR, CEL, CGA, IDS, IVD, STS, TPO, ARSB, ATP4B, B4GALT2, B4GALT5, CCND2, CCNG1, CYSLTR1, G6PC, GCLC, GLDC, HAAO, IL12A, IMPA2, ITGA3, MAP3K6, MICA, NOS1, OR10A2, OR10G4, OR10H5, OR1M1, OR3A1, OR9A4, ORC2L, PDE5A, PDXK, PIAS1, PIK3R1, PRKAG3, PSAT1, PTDSS1, PTGES2, RHOQ, RPRM, SEMA4C, STX5, TALDO1, TAS2R60, TPM3, VAMP1, VANGL2, MAPKAPK5
Negative_2061	ADH1A, ALOX15B, B3GNT3, BAAT, COL3A1, COQ3, CYP2A7, GUCY2C, ITGA7, ITGAE, LRP5, MAD2L2, MAP4K2, METTL2B, MYL9, NEGR1, OR51B2, PIAS2, POLA1, RDH11, SPRY4, SUCLA2, TRAF5, TNFRSF12A
Negative_2062	ALDH9A1, BCL2, CDH2, CYP2S1, EHHADH, FGF5, GP1BA, IL10, IL15RA, KCNJ11, LIPA, MAP3K5, PIPOX, SV2A, TNFRSF8, WNT16, MAPK8IP3
Negative_2063	CD28, CDC20, CSDA, EPHB1, IL8RB, LCMT2, NUDT9, TP53I3, TPI1, WNT6
Negative_2064	SRC, ARRB1, DPAGT1, ENTPD8, HSD11B2, IBSP, ITGA7, PDHA1, PLXNA2, SORD, THBS3
Negative_2065	AMH, FST, GGH, LCK, RB1, SI, AASDH, ACO2, ACTN1, ARPC1B, BLVRB, C1QA, CACNA1C, CD247, CD8B, CD01, CTSB, CXCR4, CYP26C1, CYP4A22, DDIT4, EIF4E2, EPHB1, IKBKE, ITGB3, LEFTY1, MAP3K5, MAPK12, MOV10L1, MYH1, NAT1, OR10J5, OR2G6, OR4K17, OR51B2, OR6Q1, OR8B8, OR8K1, PAK2, PPP2R5B, PRPH, PVRL1, RPS6, RPS6KA5, SEMA4B, SOAT2, SSH3, TSHR, ULBP1
Negative_2066	LEP, CMBL, EGFR, GSTM1, MAPK11, NLGN1, PI4KA, RFWD2, SOCS7
Negative_2067	HK1, ME2, NLK, ALPL, BDNF, CACNG3, CD40LG, CREB3L4, DHDDS, EI24, ENTPD1, HLA-C, OR10Z1, PIP5K1B, PLCB2, PRKCG, PTCH1, RETSAT, TNFSF4, XYLB, ARHGEF12
Negative_2068	F9, GNE, ID4, ATP2A1, ATP2A2, BCL2, CASP6, CCL2, CES7, CHSY1, CLDN4, COL3A1, CRLF2, DKK4, DPM2, EPHA3, ERBB4, GBE1, GLG1, HIF1A, LDHD, MAD1L1, MAP3K14, OR13C2, OR1L8, OR52B4, OR5D13, PLOD2, POLR3G, PPP2R2D, SELP, SOCS3, SUCLG2, TGFB1, VASP, CSGALNACT2
Negative_2069	HK2, ACSM4, ARSD, BPNT1, DGAT2, GRLF1, IRF9, MIOX, OR1C1, OR2M7, PIK3CB, PRKAR2A, PTGER3, PTGS2, SESN1, STX10, TGFB2, ATP6V0A4, TNFRSF10B
Negative_2070	PDC, ACOX3, AGPAT1, ATN1, CCNB2, CMPK1, CREBBP, CSF2RB, CXCL9, DGAT2, DVL2, EIF4E2, ENTPD4, ERBB4, EXT1, GALE, IGFBP3, IL9R, JAG2, MCM2, NAT2, NUDT12, OR2A12, OR4B1, OR5D13, OR9G4, OR9I1, PAX6, PIGA, PIPOX, PPP2R2C, PPP2R5A, PTGES, PTGES2, RGS3, SLC27A5, SLC2A1, SRGAP1, SSX2IP, TLR9, TNFRSF4, UGT8, GABARAPL2
Negative_2071	ALAS1, AMPD2, ATF2, ATP2A3, CACNA1I, CDC25A, CMPK1, G6PC2, GMPR2, GNA11, GSK3B, IL23R, JAM2, MAP2K6, OR10AG1, OR5K1, PCYT2, PPM1A, PTAFR, RPS6KA4, MAPK8IP3
Negative_2072	DAO, EPO, ALG3, AMY2A, APOA5, B4GALT1, CACNA1A, CD226, CDKN1A, CYP11A1, F2RL2, FGF20, GNAI3, MAP3K14, MAPK10, MTHFS, NRP1, OR2M4, OR51F2, OR52R1, OR56A4, PIGL, PIM1, PIPOX, PRPS1, PTDSS2, RHOD, SEMA7A, STAT5A, SULT1A2, HLA-DRB5, SUV420H1

Negative_2073	ADRA1A, ATG12, CBL, CD28, CNTN1, IL20RB, IRF3, MAP3K12, NTF3, PDE8A, SESN2, SETDB1, PAFAH1B3
Negative_2074	FES, AKT3, APOA1, BMPR2, CACNB4, CCKAR, CDC25A, CXCL2, CXCR6, DDX50, DEGS2, DUSP5, ENO1, GPT2, HARS, HCLS1, HDAC1, KRAS, MYH1, NEU3, NLGN3, NSDHL, NT5C3, OR1K1, OR5AP2, OR5K2, P2RX1, PIGM, PROC, PSPH, PTGES2, SSH2, SUCLG1, VAV2, PNLIPRP2
Negative_2075	GSN, HK2, ACVR1, ADH7, ALDH3A2, BMP2, CFTR, DHCR7, EDNRB, ENPP1, GRIN2D, IL18RAP, IL8RA, INPP5E, JAK2, LTC4S, NRCAM, OR1C1, OR2G6, OR51A4, OR5C1, OR8D2, OR8U1, PGAM2, POLE4, PRSS2, PTAFR, RARS, RPE65, ST3GAL3, ST3GAL4, SV2C, TBXA2R, TLR2, TUBA1A, ULK3, UPB1, VAV2
Negative_2076	TNN, CCR8, CD58, CYSLTR2, DGKQ, EDA2R, EPHB3, GADD45B, GNG12, GPX5, OR2A5, OR4Q3, OR6K6, OR8J3, PTPMT1, TLN1
Negative_2077	DAO, ALDH3A2, ALPPL2, AMHR2, ANAPC4, APRT, CACNB3, CHRM3, CLTC, DTX1, DUSP6, FASN, FBP1, IFNB1, ITGA3, KCNQ1, MAML2, OR13C5, OR2A12, OR56B4, PCNA, PDX1, PFKM, PFN3, PLCB2, POLR2G, PPP2R5D, PTGS1, PTK2B, PTPN11, RAPGEF3, SFRP4, TKTL2, TRAF2, UGT2B17, WNT10A, ALDH18A1, HSD17B12
Negative_2078	MOS, PGP, TFG, ANAPC10, BCKDHA, CASP3, CCL8, CSNK2A2, E2F3, GCAT, GSTA3, IDH3G, IKBKG, LCMT1, LGMN, LRP5, MAP3K1, MYL5, NCF1, OR1J2, OR5AP2, OXCT2, PHGDH, PPAT, PYCR1, SDC1, SLC9A1, TAP1, TSNARE1, UGT2A3, UGT2B7, VEGFB, YWHAQ, MAPK8IP2
Negative_2079	DUT, TXK, ALOX12B, ARPC1B, CASK, CDC6, EPHA1, JAG1, JUND, MNX1, MYH9, NFKBIE, OR1N1, OR2Z1, OR4D11, PIK3R2, POLR2H, RARS2, STAT2, TXNDC12
Negative_2080	BTK, PGD, STS, ACACA, ADAM10, ADCY4, B3GAT1, CAV1, CCL21, CMPK1, COL1A1, CYP17A1, DAPK1, ENPP1, FDPS, FUT5, GSTA1, HPSE, IFNW1, IL17RB, LAMB3, LMO7, MAPK3, NEUROG3, OR5P3, OR8J1, PFKFB1, PPP2R5B, RFXANK, ROBO1, ST6GAL1, WWP2, ZMAT3
Negative_2081	ALOX12, CAV2, FBP2, MAP2K3, MICA
Negative_2082	C8G, FST, LSS, ACTG1, AKR1C4, ALDH6A1, ALG13, CCL27, CD3E, DGKE, DKK2, DLAT, EDA2R, IFNAR2, KIR3DL3, LAMA4, MAD2L1, MAP3K4, MAP3K7, NEFM, NME7, PDGFC, PIK3C2A, PORCN, PRKAR2A, PTGER3, RPE65, SMC1B, TNFSF12, TNFRSF10D
Negative_2083	C1S, FH, LT, MVD, ALPPL2, AMDHD2, APBB1, B4GALT1, BDKRB1, CAMK2B, CASP3, CBR3, COL3A1, COL5A2, DGAT2L4, EPHB2, FDFT1, FGF21, GNAQ, GNMT, GZMA, HGSNAT, HIBCH, IFNGR1, MAN1C1, MCM4, OR10G9, OR14J1, OR1S2, OR4C46, OR4K5, OR51D1, OR51V1, OR52A1, OR52R1, OR52W1, OR8D4, PPAP2A, RPE65, SFRP5, SULT2B1, TRIP10, TSHR, VDAC1, WNT6, MAPK8IP3, PLA2G12A
Negative_2084	NPL, ACAA2, CD8B, DDHD1, FSHB, FTMT, MAN1A1, OR56A1, OR5R1, PIK3R3, RFD2, TNFSF12
Negative_2085	CR2, TNC, BCAT2, CCND3, CSNK1G1, DTX2, EI24, ENPP7, EVI1, FGFR1, FUT8, GGT6, IGF1, IL10RA, IL2RB, IL6R, IMPDH1, KLRC2, LTA4H, MAPK12, MCCC1, NR1H3, OR1C1, OR2G3, OR4C13, OR4N4, OR51L1, OR6C75, PARS2, PDE8B, PLA2G2F, POLR2K, RBPJL, RUVBL1, SDC4, SEMA4G, SV2C, THBS3, TLR4, TYMS, VEGFC, WWP1, XYLT1, XYLT2, ALDH18A1
Negative_2086	ABO, BT, CBL, ATP5G3, BCL2L1, CHRM3, CNTN1, CSF3R, DPM1, EPHB2, FASLG, GFPT1, GFPT2, HSPA2, IL21R, IL24, IL28RA, INHBB, LHCGR, MAP3K14, MAPK1, MAPK12, OR11A1, OR4P4, OR52K2, OR7A10, OR8J3, PFKFB1, PNPLA4, PPAT, RBX1, SEMA3E, SLC27A4, ST3GAL2, STK11, THBS1, TNFRSF9
Negative_2087	ABO, C8G, ABI2, ACAT2, ACOT11, ACTG2, AHCYL1, ATN1, CCNE2, CDC25C, CDK2, COL2A1, CSNK1A1, DPM1, DUSP8, EPHA2, F2RL2, FARP2, GRIA3, HSPB1, HTR4, OR13D1, OR2M3, OR51A7, OR52A5, OR5AP2, OR6M1, P2RX7, PDGFB, PLAU, PLTP, PNLIP, PPAT, PRKAR1A, PRKCI, PRPH, SC4MOL, SH3BP2, SHMT2, SLC27A1, SPRY2, THBD, ULK1, VAV1, VEGFB, TNFRSF10D

Negative_2088	OGT, GPT2, P4HA1, PIK3R2
Negative_2089	MVK, AGRP, ALDH7A1, CAV2, CCNH, ENPP1, GBA3, MGAT4B, NOD1, OR4A15, ORC3L, P4HA1, PDK1, PMM2, PPM1B, SHMT1, YARS
Negative_2090	LPL, ACAA2, ACSM4, AMPD1, BDKRB1, CDH3, CNDP1, COQ5, DAAM1, EARS2, FABP1, FRAT2, FZD10, GYS1, HLA-DOA, IDH2, MCAT, MTAP, MYL7, OR10K2, OR4C12, OR52E2, OSMR, PDE2A, PPP3R1, PRKAG1, PRKCI, PTCH2, RCHY1, RDH8, SDHD, SKP1, SOCS4, STK4, STX3, TBL1X, TNFSF4, TNXB, TP73, TUBA8, UNC5A, YES1, ATP6V0A1, ATP6V0D1
Negative_2091	EGF, EPO, F10, ATG12, ATP5G1, CAV3, CD47, CYP2A13, CYSLTR2, DGKB, DPYSL2, FARSA, FTMT, FZD8, GMPPB, GOT1, GPD1L, GRIN2B, HARS, IDH3G, IFNA10, IL15, IL2RB, KIR3DL3, NAGS, OR4C11, OR8B12, OR8D2, OXCT1, PDE6D, PLCB2, SULT1A2, TAP2, TAS2R7, TSLP, UGCGL1, WASF3, HLA-DRB3
Negative_2092	GZMB, KLRC1, MEF2C, PFKFB4, PLOD2, TPMT
Negative_2093	AMH, GCK, ACP6, ACSS3, AQP7, ARHGEF7, CACNB2, CREB3, CSF2, CTNNA3, EXTL2, FIGF, FLT3, GCNT2, IL1A, ITGA10, NME2, OR51F2, OR5V1, OR6N1, P2RX5, PER2, PLK1, POLR1E, PTPN6, QPRT, SDC2, THTPA, TP73, ATP6V0A1, ATP6V0D1, HSP90AA1, TNFRSF10C
Negative_2094	CS, ME1, MPI, ACSM2A, ACTN2, ALG10, ATP2A1, CD55, COL6A2, CUL1, CYP2E1, DMGDH, FGF18, FMO4, FPGS, HIF1A, IL20, LCMT2, MAD2L2, MS4A2, NCOR1, NFKB1, ODC1, OR10G2, OR13C8, OR4F6, PAFAH2, POLR2J, RDH11, SDHA, SMPD1, TLR2, UPP1, VAV3
Negative_2095	F11, ID2, PGD, A4GALT, AHCY, B3GNT4, C1QA, CAMK2G, CARS2, CCND3, CER1, CKS1B, CLDN1, FECH, FZD5, GRIA1, GUCA1A, HCCS, HIP1, HLA-DMA, HSD17B8, ITGA8, LIMK1, LRP6, MADCAM1, OR7C1, PKLR, PLTP, PTPRZ1, SELP, SMC1A, TXNDC12, UGT2B28, VCAM1, WEE1
Negative_2096	BBC3, CLDN4, DNMT1, KCNJ11, MTMR1, OR4P4
Negative_2097	SFN, ABI2, ADH1A, ADIPOR1, B4GALT5, CDKN2A, CES2, CYP3A7, GFPT2, GMP S, GNAQ, GNRH1, GSTM2, MASP2, NEU2, NMNAT1, NTF4, OR2F2, OR51M1, OR5D13, PDE8B, PLCG1, PRODH, TIAM1
Negative_2098	AK7, MAG, AARS2, ALAS2, ATP6V1D, BMP4, COQ6, CSF2, CYP19A1, CYP8B1, DDIT4, DGKB, ENTPD2, ENTPD6, EPHA3, FMO4, GALNTL4, GNA15, GRHRP, IL25, INPP4B, ITPKA, KIR3DL2, MAPK3, MTHFR, NUDT8, OR13D1, OR1E2, OR2T33, OR52A1, OR9A4, PIAS4, POLE2, SARDH, SENP2, SETD1B, SRD5A2, STK4, TAS2R14, TFDP1
Negative_2099	AK2, IL6, MVK, SRM, ACAD9, ACO1, ADH7, AMPD1, AOX1, ARHGEF6, C9orf95, CAV1, CCL22, CCR1, CCR4, DDX55, DKK2, EPHA2, FGF8, HSD3B7, IGF1, IL9R, IRS2, ITGAE, LAP3, MAP3K2, MBL2, MNX1, OR2T1, OR4K13, PLA2G3, PLOD2, PVRL4, PYGM, RAPGEF3, STAT5B, WNT8A, ATP6V1G1, CSGALNACT1
Negative_2100	CP, ALG10, ALOX12, CASP3, CCL15, CD38, CNTFR, DTX4, ENPP2, EPHA8, FUT6, GALNT2, IL21, IRAK4, ITGA8, MAP3K6, NMNAT2, OR5M9, OR6K6, OR7A5, PDE6D, PPM1B, SETD7, SKIV2L2, SOD1, VAV2, MAPK8IP2
Negative_2101	CSK, KHK, ACAT1, ACVRL1, ADCY5, B3GNT4, CAMK4, DDX18, EFNA4, EPHA4, ETNK1, F2RL1, FGFR1, G6PD, GLS2, HDAC2, HMBS, HNF1A, IFIH1, MADCAM1, MAP3K1, MCM4, MLLT4, NFKB1, NSD1, ODC1, OR56B4, PIK3CB, PLD1, PLXNB3, RIPK1, ROBO3, TACR1, TLR5, WNT16, XYLT1
Negative_2102	CAT, ACVR1B, AGMAT, AGPAT3, CCL23, HSD3B1, MAFA, OR13F1, OR2G2, PIGH, PLXNA1, SPRY3, SRGAP2
Negative_2103	CD6, ADCY9, AKT3, BCAR1, COMT, CX3CL1, CYFIP1, DLAT, EPB41L1, FDFT1, GLG1, GSTZ1, GUCY2F, IDH2, LCP2, LDHA, LIMK2, MAGI2, MAML3, MPP5, MYLK3, OR10T2, PIGX, PLA2G4A, PLA2G5, PMM2, POLR2E, PVRL2, RAB5A, RARS, RPN2, RRM2, SGPP1, STX3, STX8, TBL1XR1, TUBA8, UBE2L6, TNFRSF13B

Negative_2104	AASS, ADH7, ALPI, AOC2, BCM01, CAMK2D, CDKN2C, CMPK1, CMPK2, DDX54, DLL4, DRD5, DTX3L, EPAS1, EPRS, G6PC2, GNA12, GNA15, GSTA3, GUCY1A3, LEPR, MTHFD1L, NLGN1, OR8I2, PLXNC1, POLR2L, PPP2R1A, PRKCD, PSEN1, SV2A, HSP90AA1
Negative_2105	C6, AARS2, BIRC5, CARS, CCL22, CDC42, CHAT, CSDA, EPHA4, LLGL2, NCR3, NT5C1A, OR1K1, OR4C15, OR51A4, POLR2F, PSENNEN, RPS6, SH2D1A, SLC33A1, UGP2
Negative_2106	COL5A1, FGF21, IKBKE, MAN2A1, POLR1E, SENP2
Negative_2107	ACTN4, ATG12, BCM01, GADD45B, ITGA8, ITPK1, JAK3, MGAT2, OR2H2, OR5A1, PIGA, YOD1
Negative_2108	PML, ALG5, TUBA8, TYMP
Negative_2109	PDC, B3GAT3, EPHB1, NAT5, OR13A1, OR51E1, OR5P3, SCLY, SPTLC2, UGT2B4
Negative_2110	KCNJ11, OR2Y1, OR8K1
Negative_2111	ABO, CRHR1, CRLS1, CUL1, DGKQ, INHBB, LIPA, MAPK9, ORC2L, PNPO, PPAP2A, PPP3R2, PTDSS2, YWHAE
Negative_2112	ADO, AK3, APP, GK2, NPL, SYK, ACAD9, ALDH3B1, ALG6, AREG, CAMK2G, CD80, CLDN4, CLTB, CRB3, CTF1, CYP2D6, DHRS3, DNMT3L, F2RL2, FMO3, FUT1, GALNT3, GPAA1, HIBCH, IFNA6, IL23R, MAOA, MAP4K3, MAPK3, MFNG, NFKB1, NRG1, OR10G4, OR3A3, OR5M8, OR6B2, OR9A2, PPP1R3C, PTGS2, RFXANK, RXRB, SARDH, TSC2, WNT3, TNFRSF10C, TNFRSF14
Negative_2113	IL3, ABAT, BET1L, COQ5, CXCR4, DHCR24, FGFR4, FZD8, LCMT1, MAP2K3, OR10A2, OR4Q3, PLA2G6, RPS6KA5, SDHA, SMAD5, UNC5D
Negative_2114	SMS, AGPAT2, CDK6, CRB3, DHCR7, ENTPD2, FUT4, GGT6, HADH, IBSP, LEFTY2, MRAS, NFATC2, NGEF, NME2, OR56A4, OR5H2, ORC5L, P2RX7, PRKAG1, PYCR1, ROCK1, SEMA3C, SETDB2, SPHK1, TGFA, ATP6V0E1, ST6GALNAC3
Negative_2115	DDC, KHK, MVD, AASDH, APAF1, CBR3, CEBPA, CNDP1, IL1RAP, LGMN, MAP2K7, NEUROD1, OR2AE1, OR5A1, PIK3CD, PNPT1, POLR3A, RAB5A, RELA, SDHB, ST3GAL5, STX3
Negative_2116	GNE, GP9, ACOX3, ACSL6, AGPAT3, ARPC2, ATG12, CAMK2D, CCL15, CD14, CD45L, CLDN7, CREB5, CTPS, CYP11A1, DPM1, FGD3, FZR1, HAGHL, HIF1A, IKBKG, IL1R1, IL20RA, INPP5A, JAM3, MGAT4B, MMP1, NFATC1, NTF4, OR10K1, OR2B2, OR2L8, OR2M3, OR4D2, OR51F1, PIGB, PIM2, PLOD1, PRSS3, PTAFR, RAC1, RRAS2, STX8, TUBA3E, ULK2, UROD, WNT7A
Negative_2117	IL6, TH, AASS, ACADSB, CASP6, CDH5, DHX58, HAP1, ICAM2, IL29, IL4R, INPP1, IRS4, MGAM, NCR1, NFKBIE, OR52R1, PLA2G2D, POLR2B, SOCS3, VKORC1, SERPIND1
Negative_2118	ACADM, BDKRB2, COL4A2, GNAZ, ICAM1, IL6ST, PANK1, PDE3A, PPP2R2A, SHC3, HLA-DRB4
Negative_2119	ATP5G3, ATP6V1D, BBC3, BTRC, CCL22, CDC45L, CLTB, CRY2, DGKG, DTX1, ENAH, FTH1, GALC, GALK1, GALM, GNAS, GYS1, HIP1, HNF1B, HTR5A, JAK1, LAMB3, LDHC, MAPK12, NADK, NKX6-1, OLAH, OR13J1, OR3A3, OR4D2, OR4P4, OR52D1, OR56B4, OR8H3, OR9A2, OSMR, PARD3, PHKB, PKM2, SFRP4, TMLHE, UXS1, SERPINE1, TNFRSF17
Negative_2120	AMH, TNF, BMP8B, CAMK4, CD58, CD80, CSF2, CYP26C1, DTX4, EGLN1, GALK2, GIT1, GMPR2, GRIA3, GUCY1A2, HMOX2, IFNA7, IL18R1, ITGA8, LALBA, LAMB3, MAP4K3, MPZL1, MYH14, NR1H3, OR1E1, OR1F1, OR4L1, OR5M9, OR7A10, PIK3R3, PNLIP, POLR1D, PROS1, PTK2, RAC1, RRM1, SLC2A1, SLC2A4, SUCLA2, TGFB3, TNFRSF9, VDAC1, SERPINA5, SERPINF2
Negative_2121	F12, F8, ITK, LPO, ACACB, ACYP1, ADAM17, ADIPOQ, ARHGEF6, ASAH1, B4GALT6, BMP5, CACNG6, CASP10, DERA, FMO3, G6PC2, KLRC1, MGAT1, NEFL, NODAL, NPR2, NRG1, NRP1, OR10H3, OR1L8, OR2B11, OR4C13, OR52E6, OR56A1, OR5A2, OR7G1, PDE1C, PGAM2, PTCH1, RDH11, RXRG, SDHA, SEMA3E, SMAD6, SPRY1, TSLP, UNC5D, ATP6V0A1



Negative_2122	BTC, CP, GH2, ACTC1, ADSS, AOC3, BCL2, BMP6, BMPR2, DGAT2, DUSP7, ENPP3, ETS1, EXT2, GLUD1, GNAO1, GNAZ, HLA-F, IL1B, KAT2A, MAGI1, MFNG, MYH15, NCF1, NEGR1, OR10A6, OR52W1, OR56A3, PIAS2, PIGT, PIK3CB, PPARA, PRKX, PTCRA, RDH16, SKP2, SOCS3, TALD01, TJP3, UBE2L3, XIAP, YWHAH, B4GALNT1
Negative_2123	ALDH1B1, ATF4, B3GALT2, DAAM2, GFAP, INSR, MLLT4, OR13C8
Negative_2124	ARSA, AVPR1A, CAMKK1, CYP19A1, DIAPH3, F13A1, GALNTL5, GLG1, GRPR, I NHBA, ITGB1, LIPC, LRP6, MINPP1, MYH7B, NFATC2, NRG4, OR8J1, PIGT, POLR2D, TLR2, TUBA1B, TYRP1, UROD, VEGFC
Negative_2125	CGN, EGF, FGA, LCK, ACHE, ACP6, ADCY7, BAI1, BDKRB1, C4BPA, CCNA1, CDC7, EPOR, FRAT2, GADD45A, GSTT1, HEMK1, IDI2, MAP2K4, MPP5, NEU3, NUMBL, OR10J1, OR12D3, OR2T33, PAK1, SELPLG, SETD2, STEAP3, STX18, TUBB, TYMS, UGT2B17, UPP2, MAP3K7IP1
Negative_2126	EGF, ACADVL, DOT1L, FGF5, OR56A1, OXTR, UGT8
Negative_2127	AK5, GDA, ADH1A, ANAPC7, BMP7, CLCA2, DPYS, EREG, FABP4, INHBA, PLOD1, PPP2R2C, ROBO2, SLIT2, TBL1X, HLA-DQA2
Negative_2128	ATP4A, GPAM, NME6, PRIM1, RAPGEF4
Negative_2129	DPM3, FMO5, OR51E1, PFKP, PLA2G6
Negative_2130	GH1, RB1, BDH2, SMAD2
Negative_2131	LCT, ATP6VOC, CADM1, MAOB, OR52A1, PLCG1, PRKCE, SPP1, SSH3
Negative_2132	ACSL5, CALML3, CNTN1, EPHA4, EPRS, F13A1, FCGR3A, ITGA1, MCM5, PNPO, PTCH2, PTGER3, SPHK2
Negative_2133	ADC, F11, ASCC3, CAMK2B, CPS1, DDX19A, DUSP6, EPHA2, GFPT2, GUCY1A2, HPRT1, IDI1, IL10RA, IRAK2, OR2T29, OR4B1, PTCH1, TNFSF8, WNT7A, TNFRSF12A
Negative_2134	JUN, NPL, ACOT11, ACTG2, ADH5, ALG12, ALOX12B, CCKAR, CHAD, CYP2A13, CYP2C9, DDB2, DTX3L, EGLN3, HDAC1, ICAM3, IFNA17, IL10, IL17A, ITGA6, JAK1, KIR2DL3, MINPP1, MYH4, NCAM2, NFAT5, NQO1, OR1M1, OR51T1, PIK3R4, PLA2G10, PLXNA1, PMAIP1, POLD3, PON1, PPP1CA, PRPH2, RARS2, RPS6KA5, RRAS2, SETMAR, SMAD6, STK4, THBS4, UGCG1, WARS2
Negative_2135	DFFB, DHFR, FDPS, GLG1, ROCK2
Negative_2136	CFI, F7, GGH, GSS, PVR, TK2, ACSM4, ADAM10, ADRB3, ADRBK2, AFMID, ATP5O, BMP6, CASK, CD79B, CER1, CIITA, DNMT3B, DUSP16, DUSP7, EPHB6, FGF20, FGF22, GPAA1, IL8RB, KIR2DL3, LRP6, NAMPT, OR11H4, OR2T11, OR52E2, ORC6L, PDE4A, PLCD3, PNIP, PPAP2A, PRKAB2, PTPRM, RAB23, RELA, RXRA, TAS2R16, TAS2R40, TAS2R41, THBS3, TNFSF11, TNFRSF1B
Negative_2137	ACO1, ALG8, BCL10, CCND2, DAAM1, EPHA1, EPHA7, GAD1, LIMK1, LRP6, NEFH, OR4S2, SMAD7, UGT2B7
Negative_2138	DHH, CCR7, CNTN1, FASN, GART, JAG2, OR4K14, OR5M9, RALGDS, RASA1, RERE
Negative_2139	ADA, AK1, CR2, IL7, AARS2, ACAA1, ACAT2, ACSL6, ADCY2, ADCY3, AK3L1, CHD8, CPT2, CYP11B2, DDHD1, EDNRA, EPHA6, F2RL2, FRAT1, GLI1, GUCY2F, HLCS, IAPP, IL19, IL22, IMPA2, INADL, KLK3, OR10AG1, OR6N2, OR8H2, PDE6H, PPP1CB, RALB, RPS6KA3, SEMA3A, SLC25A6, SPRED1, TUBA3C, TUBB3, UPRT, ATP6V1E1
Negative_2140	CFD, MTR, MVK, TAT, AKR1A1, BPGM, CALML3, CD14, CDK6, CDKN1A, DDX50, GCNT4, GNG13, GSTM4, GUCY2C, GZMB, HPSE2, HRH1, IFNA6, IL2RA, IL6ST, ITPA, MAP4K3, OR1D2, OR2D2, OR6C74, OR7D4, PGK1, POLA1, PRKACB, PTPRF, RAB23, RFXANK, SMAD9, SOS2, STAT6, STEAP3, SUV39H1, TACR2, TGFB3, TPST2, WASF2, WBSR17, XYL, CACNA2D3, PAFAH1B3
Negative_2141	ARD1A, ARHGEF4, COQ7, CYP4F2, DDIT4, DPM3, E2F3, ENTPD3, FGFR1, MAP3K8, OR51T1, PGM1, PIGL, PRPS2, PTPN6, SH2D1A, SKIV2L2, TAS1R1, UCK1
Negative_2142	ACACA, AK3L1, C9orf95, EIF4B, ENPP2, FTMT, FZD3, HSD3B7, MYH3, POLD4, PRKCA, TRDMT1

Negative_2143	FAH, ARG1, ARPC1B, CES1, MGAT4B, NME6, OR2G6, OR56A1, PANK3, PPAP2A, SV2C
Negative_2144	ADK, BID, GPT, PVR, AFMID, AGMAT, AGPAT4, ALG6, APOA1, C4BPB, CACNG7, CDC6, CLDN3, CYFIP2, CYP26A1, CYP4A11, DDX18, DIAPH3, ENTPD3, GFPT2, GNRHR, KLRC1, LTBP1, OR5B3, PER1, PPP1R1A, PPP1R3A, PRKCI, PSME2, P TGS1, PYCRL, RALA, SDHC, SMAD7, TUBB1, USE1, B3GALNT1, ST6GALNAC3
Negative_2145	AGK, BCR, HK1, WAS, ADRA1D, AOC2, ATP4B, B3GALT2, BIRC2, DGAT2, FGF14, FRAT2, FZD6, HMGCL, IARS, ICAM2, IL17A, ITGB6, KAT2B, MAPK1, MYLK3, NAGLU, PAX8, PIK3CG, SFRP4, SSH2, UGDH, ALDH18A1, PPP1R12A
Negative_2146	HGF, KDR, TFG, CASP8, DIAPH1, FUT5, GLB1, GMPR, OR13C2, OR5D13, SNAP2 5, PNLIPRP2
Negative_2147	F12, GSR, ADH4, ASRGL1, CACNA1C, CCND3, CD19, CYP1B1, CYP3A5, CYP4A1 1, GNRHR, HLA- G, IAPP, ICOSLG, ITGA10, LIPT1, MAML1, MAP4K1, MCM5, NCOR1, NUDT2, OR 2A2, OR52N4, OR5L2, OR8J3, PLCZ1, PTCH1, RAP1B, RPS6KA1, TAS2R48, TN FSF18, UGT8
Negative_2148	CRK, DCC, AANAT, ACTG1, ALDH4A1, ALG10, AOC2, APRT, ATP5G3, CACNG8, C XCL13, CYP11B2, DDIT4, DDX54, DPYD, EI24, EXT1, GSTO1, HTR4, IFNA5, L AMA4, MTHFS, NANP, NEFH, OR2F1, OR51G2, OR52A5, OR9G4, PDE5A, PDGFA, PGAM1, PGAM2, PGLS, PKLR, POLA1, POLE, PSME1, RAC1, ST8SIA1, SULT2B1, TAS2R9, TCF7L2
Negative_2149	GCK, GDA, TNF, AKT2, ALAS1, B4GALT1, BPGM, CD01, CLTCL1, CREB3, CSDA, CYP3A43, DUSP3, DUSP9, EPHA2, EPHB3, FGD3, FGF2, FZD6, GANAB, GNG3, G RIA3, GRM1, HGSNAT, IL12RB2, KIR3DL2, LTBP1, MAP3K1, NEFH, OR13F1, O R4A15, OR4K1, OR56A4, OR5M8, OR7C1, PANK3, PI4KB, RHOA, RUNX1T1, SC4 MOL, ST8SIA5, STX12, THBS4, TICAM1, SUV420H2, TNFRSF6B
Negative_2150	MAX, RPE, ACTC1, CHKA, CSNK2A1, CTSL1, CXXC4, DDX54, GLB1, GNRHR, ICA M3, IL10RA, KIR3DL3, LRDD, MAD1L1, MKNK1, OR2T8, OR2W1, OR4C16, OR4K 14, OR52D1, OR56B4, PAX4, PSME3, SHISA5, SRGAP2, TMLHE, VTI1B, XYLT2, MAPK8IP3, TNFRSF11B
Negative_2151	AKR1C4, ARHGAP5, BAIAP2, CADM3, CAMKK1, CHD8, DTX1, HSD3B1, IL20, KI R3DL3, MCM6, OR2T4, OR51I2, OR56A4, PANK1, PIGW, RETSAT, WNT5A, CSGA LNACT2
Negative_2152	CR2, TXK, AASS, ACSM3, AMPD1, APPL1, CACNA1S, CRHR1, FGF3, FM03, HRAS, HSP90B1, KIR2DL2, NARS, OR2T33, OR5T2, PRPS2, RXRA, TUBB4, TNFRSF1 B
Negative_2153	DHH, FN1, FUK, AADAT, ABP1, ADIPOR2, AGPAT4, ALDH2, ARRB2, B3GNT3, CX CL11, CYP21A2, CYP26C1, DDX51, DHDDS, GMPPA, HAGHL, IL12B, ITGA10, L ILRB3, LRDD, LYPLA1, MTHFR, NRP1, NUDT9, OR11L1, PDCD1, PFKL, PIPOX, PPP2R1B, PPP2R5A, PRKAR2A, PTEN, PTPRM, ROCK1, SHC3, SLC25A5, SNAI2, STAT5B, TRAF1, WWP2
Negative_2154	AGL, F7, LIF, AKR1B1, APH1A, ATP6V1A, C3orf10, DAPK1, FOXA3, FZD2, GA DD45B, GRM1, LIPG, NCF2, NPR1, OR10A2, OR1J1, OR4C12, OR52E8, OR6B2, P2RX6, PIGT, PLA2G2D, PPP1CC, PRKAA2, PRKY, RCHY1, RENBP, SELP, SEMA 3B, SEMA4F, TSLP, UGT2B28, UGT2B4, TNFRSF11B
Negative_2155	CCL2, LCAT, LCMT2, LIPA, OR11G2, PPP2R5E, SOS2, VAMP1, ATP6V1G1
Negative_2156	COL11A1, EPHB3, HMGCS1, MAP4K2, NOD1, PRPH2, SHC4, TGDS
Negative_2157	ACHE, ADRB3, AK3L1, APC2, GLI3, P2RX2, SNAP25
Negative_2158	UBB, AASDH, BCAT1, CBR3, CREB1, DDX55, DRD1, EFN3, FZD5, GALC, GALNT 10, NME2, OR2T12, OR6C4, OR7G1, OR8H3, PHKG2, SDC1, TJP3, TYROBP, ST6 GALNAC3
Negative_2159	IL3, OGT, TK1, DBF4, DDX54, GRPR, HNF1A, OR13J1, OR1K1, OR8A1, OR9I1, PFKFB1

Negative_2160	CBL, GCK, ME2, AARS2, ADRA1A, APOA2, ATP6V1H, BBOX1, C3AR1, CACNB3, CACNG6, CAMK4, CDC20, CDK5, CLDN9, CTSB, CYP2D6, EREG, FGF11, FSHR, GADD45G, GUK1, HIBCH, HTR2B, MAT2B, MGAM, MMP9, MTFMT, NADK, OR10A3, OR7A10, PCCA, PCYT1B, PIM2, PORCN, SDC4, SIPA1, TAS1R1, TAS2R1, TAS2R49, THBS4
Negative_2161	DAO, FAH, GPI, ADRB1, ALDH5A1, ATP6AP1, BMPR2, CD79B, CLDN16, CTLA4, CYP1A2, CYP4F2, DHFR, DRD5, EFNA2, ENTPD6, GP1BA, IL13, IL6R, ITGA3, KNG1, LFNG, LIMK2, MYH7B, NLGN3, NOTCH1, OR1L1, OR2K2, OR52I1, PDXK, PORCN, PPAR, SAT2, SEPHS1, SOCS7, SPHK1, SULT2B1, WNT1
Negative_2162	PDC, ACTB, AKT2, ALAS2, ANAPC1, ASMT, ATP5L, C3orf10, CCKAR, CCNB3, CDC16, CRLF2, CTLA4, CYP2S1, CYP4A22, DAXX, EDAR, EFN2, EPHB2, F13B, GALK1, GNRH2, IMPDH2, INSR, ITGA2B, KLKB1, MPZL1, OR1N2, OR4E2, OR51G2, OR7A10, PCCB, PGAP1, POLR2J, RELB, SRGAP1, UGDH, ULBP2, WNT7A, ATP6VOE1, CSGALNACT2, MAPK8IP3, SUV420H1
Negative_2163	ABO, AK1, C1S, FUK, GHR, GK, TEC, ARHGEF1, ARPC4, BDH1, CCNA1, CDC25B, CHRDL, CLDN15, CMAS, COL5A1, CXCL9, DLAT, EFNA1, ENTPD6, GALNT14, GAPDH, GRLF1, HIF1A, IDI2, IL13RA1, IL18R1, ITGA9, OR51E1, PDPK1, PTAFR, PTDSS2, RALGDS, RENBP, RIPK1, SAT1, SC5DL, SETD1A, SLIT2, TOMM40L, WASF1, ATP6V1E2
Negative_2164	HGD, IHH, IL6, ADCY2, ALDOC, ANGPTL4, CDC25A, CDH1, CXCR6, CYP2U1, DHRS3, DLL3, DNMT3L, ERO1L, FUT7, GSTM3, GSTO1, HCST, IARS2, IFNK, ITCH, MAGI2, MMP9, MPST, NMNAT1, ONECUT1, OR1S2, OR2G6, OR8J1, PAPSS1, PDE8A, PLA1A, PRKAA2, PTCH2, SOS1, SQUE, STAT4, STX1A, TNFRSF9, TNFSF18, UGT2A1, VTI1A, TNFRSF1A
Negative_2165	CAT, PAH, ATP5D, BMPR1B, IFNB1, LDHD, OR2Y1, PVRL1, QPRT, ROCK2, SETD8
Negative_2166	ADA, AGL, FAS, MOS, PGD, ACADS, ADCY10, ADCY3, AKT2, AMDHD2, AMHR2, ARG2, ATP5G2, BIRC2, BPGM, CACNB1, CALML6, CBLB, CD19, CD40, CD74, CHKA, CISH, COL4A1, CREB3L3, CYSLTR1, DPM3, DTX3L, GAS1, HMOX2, IRF5, ITC, KIR2DL4, MAN1A1, OR1F1, OR52N5, OR5L1, PGM2, PIGO, PRDX6, PRSS1, SELP, TBXA2R, TRHR, TSTA3, UPP1, ZIC2, KIR2DL5A, SUV420H1
Negative_2167	MVK, BET1L, C3AR1, EPHB1, FCER1G, KLRC1, MPZL1, NADK, PLOD1, RHOA, SLC25A4, SMAD2, SPRED1, SUOX
Negative_2168	ALG11, ARHGEF7, CAPN2, CPOX, CYP2J2, DGKA, DGKQ, MAP3K1, MDM4, PPP1R3D
Negative_2169	FN1, IL6, LSS, ALDOC, ALG10B, CACNB3, DAPK1, DAXX, DVL1, ENO2, FZD7, GALNT9, HAAO, HSD17B3, LDHD, LGMN, MICA, MTHFD1, NCR3, NODAL, NRG3, ODCC1, OR8U1, PCYT1A, POLR2F, PPM1A, PPP2R5C, RASGRP2, UGP2, VAMP4, VDAC1
Negative_2170	CFH, MTR, ALDH2, C4BPA, CAMK4, CHST12, DAG1, EPHA7, HCLS1, MAP3K4, MFRNG, NKX3-1, OR2L8, OR7D4, PECAM1, SESN2, SHMT2, STX2, TYROBP, SERPINF2
Negative_2171	APP, IL9, AARS2, ADH6, AMD1, ARPC5L, BST1, CTNNA2, CYP2C18, DHCR24, LAMB4, MTAP, NRAS, OR11G2, OR2D2, OR2M7, OR52K2, OR5C1, OR5D18, OR6C6, PGM1, PIK3R2, PPM1D, SELP, SHMT1, TAS2R49, UBE2K, HSP90AB1
Negative_2172	BMP8B, CPT2, GALM, NOS1, PLA2G6, PPP2R2C, RAPGEF3, RPS6KA2
Negative_2173	AACS, AADAT, ACVR1B, ADAM10, CAMKK2, CCNG1, CCR5, CDIPT, CDK6, CYBA, CYP2A7, DGKG, GDF7, GP1BA, HES1, IQGAP2, MAP3K2, MAPK9, NRG2, NT5C, OR10A2, OR4A5, OR4M1, OR4X2, OR56A3, OR7D4, PI4KA, PIGO, PPT1, PTPRZ1, SEMA4B, ST3GAL4, TRAF3, TUBB2B, WNT3
Negative_2174	F10, ME2, PAH, ATP12A, EVI1, FGF14, GYS2, HLCS, MDM4, OR11H1, OR6C2, OR8J1, PER3, SH3BP2, TGFB1, MAPKAPK5, TNFRSF11B

Negative_2175	RET, ADRB2, AFMID, ATIC, ATP5L, CAMK4, CHEK1, CREB3L1, CXCR5, CYP11A1, DLL4, EXTL1, FPGT, G6PD, GALM, GARS, GGCX, HAP1, IL17B, LAMB1, MAD2L2, NKX3-1, NR1D1, PDE4B, PNPLA4, PRKACG, PVRL1, RASA2, SETD7, TIAM1, TJP3, CS GALNACT1, ST6GALNAC5, TNFRSF1A
Negative_2176	ALDOA, CCR5, CYP4F3, DKK1, PLXNA1, PTPRF, PTPRR, SPCS1, SERPINA1
Negative_2177	DBT, GSR, ADIPOR1, ANAPC7, B3GALT1, B4GALT6, BDH1, CHD8, COQ6, CSDA, CSH1, CTSS, DLL3, EPHB3, ERO1L, GALNT12, GOSR2, HNF4A, HPSE, IL28B, IL2RG, INSR, MASP2, NCK1, NKX3-1, OR10J5, OR11H4, OR2C3, OR6S1, OR8K1, OR8K5, PANK3, PCK1, PIGB, POLR1A, POLR3B, PPAT, PTPN7, RASGRP2, SMAD7, TAS2R13, TSC2, WNT2B, YWHAH, HSD17B12, PAFAH1B1
Negative_2178	AMT, CGN, ACOT12, ACTN1, AKR1C4, APOC3, APRT, ARRB1, ATP5F1, CADM3, DAD1, GMPPB, GUCY1A2, IL29, ITGA5, OR10A6, OR13C3, OR1L6, OR4A16, OR4N2, OR51I1, OR52J3, P2RX1, PDE3A, PER1, PGS1, PIAS4, POMC, PTK2, SC5DL, SDHA, SQLE, STX12, TGFB3, TNFSF9, TPH1, UGP2, YWHAZ, ATP6VOD2
Negative_2179	LEP, ABL2, ALDOC, ATP2A1, BUB3, CD59, CDC6, CSF2RA, CX3CL1, CYBB, CYP21A2, CYP27A1, FCGR2B, GNAI1, GNAQ, HSP90B1, LAMB1, LAMC2, LTBR, MASP1, MS4A2, NFATC3, OR10K2, OR51L1, OR6X1, PDGFC, PDGFD, PGS1, PIGP, PLA2G10, PLAUR, PLD2, POLR1B, PPOX, PTGER1, SOCS1, SRGAP1, VEGFB, YWHAH, ATP6VOD1, SERPINA5
Negative_2180	ALDH3B1, HADHB, UNC5C
Negative_2181	GSR, LIF, ALDH1L1, CD8A, CDK7, CLDN10, CSNK2B, DPM3, ENTPD6, GALM, GMD5, GNPDA2, MAFA, NAGK, NCR1, OR6C75, OR6K6, PECAM1, PTGES2, PTK2, TGFB3, WASF3, WHSC1L1, XYL, YWHAZ
Negative_2182	C2, ACSL4, BMP7, CPT1C, DFFA, DVL2, EFN1, EVI1, GALNTL1, GPAA1, NARS2, PARVA, RENBP, TRIP10, C1GALT1C1, CSGALNACT2, SLC25A31
Negative_2183	LEP, LPO, ABI2, ACSL5, ALG5, ARPC5, CAMKK2, CCND3, CCR3, CLTA, CMPK2, CNDP1, CYP2C19, DNMT3L, GAPDH, GCNT1, GLI3, H6PD, HHEX, INHBA, LIFR, LRP6, MAP3K2, MAPK13, MIOX, NKD2, NOS1, OR1N1, OR2B6, OR5P3, PGM2, PKM2, PLCB4, POMC, PPP2CB, ROCK1, RPE65, SETD1B, TAS2R14, TCIRG1, WHSC1, HSP90AA1
Negative_2184	GAA, IL9, AMD1, BDNF, CD59, CXCL2, FASLG, GNB1, MAPK7, OR2T1, OR51M1, PDE4D, PLA2G2A, PLIN, PMM1, PPCDC, PRPH2, QARS, SESN3, WNT16, XCL2
Negative_2185	F7, GLS, LPO, SHH, ACTA2, ACTG2, AKR1C3, ALDH7A1, ARPC2, ATP5J2, CCL23, CD79B, CRKL, CTLA4, EHMT2, ENTPD8, ETNK2, GSTA4, HTR4, IAPP, IL8RA, IRAK1, KIR2DL1, MAD2L2, OR5AC2, OR5M8, OR6B3, PARD3, PDXP, PIK3R1, PPBP, PPID, RENBP, RFNG, SPCS3, SPRY2, XYL, ATP6V1B1, SERPINA5
Negative_2186	GP5, MAG, AKR1C2, AKR1C3, DAAM1, FGF8, FPGS, GFPT2, HSD17B3, KIR3DL3, NME7, NT5E, OR10A4, OR7A10, PAK2, PPP1R3C, SOS2, TUBA1C, YARS2
Negative_2187	IL3, ADRB1, FGF19, NGEF, PEMT, PPP2R5A, UXS1, MAPK8IP3
Negative_2188	AGL, DCK, LSS, ARHGEF7, CCL1, CDK4, CDK5, CDKN1C, DGKG, EARS2, EFNA4, FCGR3A, FGF20, FUT8, FZD9, ITGB1, NAGS, NCAM1, NEU1, NFKBIB, NRXN1, OR52J3, OXTR, PDHA1, PLCB3, PLCE1, PLEKHA8, PON2, PPBP, TAP2, TGDS
Negative_2189	ANAPC10, ATP6V0B, CASP6, CBR1, CCNA2, CCR5, CD14, CLTC, CTSL1, DGKD, F13B, IDH3A, IL6R, IRF9, MAP3K14, MAPK13, OR1L6, OR2A14, OR2T12, OR51B4, OR52W1, PARD6G, PDE8A, PPP2R2B, PPP2R2D, PYCRL, RND1, TP53
Negative_2190	TEC, ACPT, AKR1D1, ANAPC11, CBLB, CBR3, DCXR, GSTO2, ICAM3, IGSF5, IL2RB, IRAK3, MAPK9, NRAS, OR11G2, OR2Z1, OR5AK2, PDE10A, PTPN6, SV2B, TLR2, GABARAPL1, SERPINA1
Negative_2191	CGA, GNAS, NANP, OR13C8, OR4X2, TAS2R4

Negative_2192	F12, PTS, ACPT, AGXT, AKT2, AMY2A, ARHGEF1, CARS2, CDH4, COX15, CYP27A1, DPM1, ENPP7, ERBB2, FZD9, GALNT14, GNAI1, HAO2, IRF5, JAK2, KLKB1, LAMC2, MTAP, OR13C2, OR4N2, OR51F1, OR52K2, OR5L1, OR5R1, PRKCG, TRPC1, VEGFA
Negative_2193	FAH, HK3, AK3L1, ARD1A, BMP8A, CCNB3, CCNE1, CLDN14, CLDN7, CREB3L1, CYBB, FZR1, GLDC, GRB2, HTR5A, KLRD1, MAP3K8, MARS, NR1D1, NT5C1B, OR1S1, OR4F5, OR4N4, OR52K2, OR5L2, OXCT1, PIK3R5, POLR1C, PRKX, RDH12, RELB, RXRB, SETMAR, SNAP25, TACR3, TBL1XR1, VDAC1, VDAC2, WNT7B, ATP6V0A4
Negative_2194	CGA, GP6, NPL, ADCY6, AGXT, AHCYL2, ALG5, BPNT1, BST1, CD48, CISH, CPT1A, CSNK1G2, CYP4A22, FZD5, GBA3, GLDC, IFNA4, IL17RB, IRF5, LRRC4C, MYLK, NAT6, NKD1, OR10A6, OR5P3, OR6C6, ORC5L, P2RX4, PDGFD, PI4KA, PIAS1, PIGM, PLCE1, PRKAB2, PRKCI, PRSS2, RALA, RAPGEF4, RND1, STX12, THBS3, TPI1, UNC5D, ATP6V1E1, SERPINC1
Negative_2195	B4GALT4, CACNG2, CCR9, CD226, DUSP9, ENPP3, EPHA5, GGT7, GSTA3, IARS2, JAM3, LAMA3, NCF1, OR10H1, OR2T11, PANK1, PDE9A, PLXNB1, POLA1, POLR2D, POLR2G, POLR2K, PORCN, RDH10, SLC27A1, SOCS4, SPTLC1, TUBA3C, VAV3, WNT6
Negative_2196	ATP5G3, BCAT2, FABP1, HCST, PFN4, RBKS, STAM2
Negative_2197	CKM, HPD, SI, ATP6AP1, BACE2, CACNG4, CLDN20, CRKL, DIAPH2, EPHA4, FADS2, FASN, HIP1, KLRK1, LALBA, MYH1, NPR1, OR2M3, OR2Z1, OR52B4, OR6C70, ROBO2, RPS6KB2, SLC27A4, TBL1X, TLN1
Negative_2198	ABO, DBT, HGF, PGP, ACP1, AGXT, AHCYL1, ARPC2, CCL28, CDK7, DHCR7, IL2ORA, IQGAP2, KARS, LRRC4C, MAGI1, MCM2, NANP, NOX3, OR10S1, ORC6L, PANK1, PHKG1, PRKACA, SELPLG, SNAP25, SOS1, ST8SIA1, TFPI, TNFSF11, WASF2
Negative_2199	CAD, F2R, ARPC5, ARSE, BAAT, CACNA1I, CDK4, CHIA, CSF2, FABP1, GNAL, GPD2, GRIA1, IFNGR1, KLKB1, MYH7B, NMNAT1, OR4N2, OR9Q2, POLR2A, PPID, PPP3R2, PRKCI, RASGRP3, RDH8, SEMA4C, SENP2, SMAD9, TPMT, WHSC1L1
Negative_2200	IHH, AKR1C4, ATP5J2, DDX52, GOT1, MGAT1, OR4F15, OR5AS1, YWHAE
Negative_2201	CBL, F2RL1, MAN1B1, OR2A2, OR8B4, PHKA2, PIK3CG, PRKCG, SDC1
Negative_2202	C8A, HPD, AHCYL1, ARNT2, CACNB4, CCKBR, CCL22, CD247, CDH3, COMT, CTNA3, CXCR5, DDX50, ELK4, HEXA, IKBKG, JAG1, LAMC1, PDE4A, SIGLEC1
Negative_2203	SMO, ACTC1, ALDH1A1, APAF1, ASPA, CCL24, CD72, DHCR7, HEMK1, ITGB2, MCAT, NRG2, OR9A2, PANK4, PAX6, PIM1, PPP1R3D, SOAT1, TAS2R9, VNN1, WNT5A
Negative_2204	CR1, AGPAT1, ALOX12, AMY2B, AXIN1, CCKAR, CDC20, CDH2, CYP8B1, DDX51, DOCK1, DUSP3, ENTPD4, FM05, GFPT2, IDUA, IFT57, IL15, IL23A, IL2RG, LTA4H, MAP3K6, MAPT, MARS2, MKNK1, NNMT, NTF3, NTSR1, OLAH, OR1A1, OR1D5, OR51F2, OR5AR1, PFKM, PIK3CG, PPP1CB, RAC3, SENP2, SMAD7, STK36, TAS2R50, TBXAS1, TLR4, TNFSF8, TPMT, UGT2B17, WIF1, TNFSF13B
Negative_2205	BID, ACSL4, ACY1, CCL26, CCNG2, CDC6, CFL2, CPT1C, CYP2U1, E2F3, FGF18, FPGT, FZD9, GALNT2, GRIN2B, IL7R, ITGA6, LAMC3, LGMN, MAOB, MTMR6, OR1D2, OR52L1, OR9G1, P2RX2, PIK3R2, PLCD1, PPARA, PPP2CA, RBL1, SRD5A1, TBK1, THY1, TIRAP, TRDMT1, UGT2B7, TNFRSF17
Negative_2206	DCK, FER, FGB, IL2, TAT, AASDH, AHCY, ALDH3B1, APOE, B3GNT3, BBOX1, BUB1, CCND1, CHPF, CLDN20, COL2A1, COQ5, COX15, CYP26A1, DHDDS, DPAGT1, GNPDA1, HAGHL, HRAS, IL18R1, IL19, IL28A, ITGAE, KCNB1, LAMC3, LIFR, MAML3, MAP3K11, MTHFD1L, MYH13, OR10A3, OR2B2, OR51B4, OR51T1, PGA P1, PIK3C2A, PRKCG, RDH16, RHEB, SETDB2, SHC2, TLR4, TRPC1, WNT7B
Negative_2207	AK7, KIT, ALDH1L1, ALDH2, ASAH1, ATP5D, ATP5J2, B4GALT6, CADM1, CCND2, CCNE2, CSNK1D, CSNK1E, CYCS, CYP2U1, EHMT1, FGD1, GJA1, HCLS1, HNF1A, HSP90B1, IFNG, KLKB1, LCMT2, MAP3K5, OR10A3, OR2H2, OR2T3, PAICS, PFKFB2, PRKY, RPS6KB1, SEMA4A, ST3GAL1, TRAF5, ZNRD1, PPP1R12A

Negative_2208	LAT, ADCY3, BCAT1, BNIP1, CRY2, CYSLTR2, DARS2, DUSP5, EARS2, ENPP3, IL1B, LMO7, MAP2K7, OR10G3, OR2L13, OR2T29, P4HA1, PRKAA1, PTPN1, STX3, STX5, WNT8B
Negative_2209	NGF, ARPC4, CNGA3, HIP1, IDH3B, MYH7, NSD1, OR11H4, OR1M1, PPP2R2C, SMAD3, SMURF2, STAT6, CSGALNACT1, PHOSPHO1
Negative_2210	GHR, KDR, TK2, ALDH2, ALG11, AMDHD2, ANAPC2, BMP4, CAMK2A, CAV3, CCND2, CCNH, CD27, CD72, CDKN1B, CLDN15, CTNNB1, CX3CR1, DMGDH, EPHB3, EVI1, FUT8, HEXB, ITGAX, LEF1, LIMK2, MGAT5, NRXN3, NTRK2, NUDT2, OR11A1, OR11G2, OR1C1, OR9G1, PARD6A, PARVB, PAX6, PDE3A, PNLIP, SKP2, SOS3, SOS2, ST3GAL6, SUFU, TAS2R8, VAMP1, AASDHPPT, PHOSPHO1, ST6GALNAC6
Negative_2211	C9, HDC, HGD, ADCY2, APOA2, ASRGL1, B4GALT5, BCAR1, BMP7, CACNA1S, CDH3, CLDN4, COL3A1, CYP11B1, CYSLTR1, ELK1, FABP4, GNAZ, GP1BA, GRB2, IFNA5, LIPG, MDH1, OR10A2, OR13G1, OR3A2, OR4D5, OR4M2, OR5D13, OR6T1, OR7D4, OR8D2, PAX8, PDX1, PGM1, PIK3R4, POLR2L, PPP1R3A, PTPN6, RARS, RPN2, SC4MOL, SDC2, SPRED2, TNFSF10, TRAF1, TSHR, WNT8B
Negative_2212	ACAT2, APC2, ARNTL, BMP4, BMP8B, CCR7, G6PC2, MAML3, MASP1, METTL6, OR13C5, OR2D2, OR2M3, PANK3, SDHC, SRGAP2, TUBA1C, UBE2L6, UNC5B, WNT16, PHOSPHO1, PNLIPR1
Negative_2213	AARS2, BCAT1, CACNA1B, FGF17, FGF19, GNRH1, IL5RA, INHBA, ITGA4, MMP9, MYH15, MYLK2, NEU2, NLGN3, PLCB1, PMVK, POLR3H, PTGER3
Negative_2214	APP, CAD, CS, CTH, FER, FGA, PLG, TPO, AKR1D1, B3GALT5, BACE2, CACNG2, CASP10, CCL19, CCR9, CTSL1, CYP7A1, DAPK2, DUSP6, FOXO1, GNA15, GRAP2, HPSE, HTR7, IL15RA, INPP4B, NFKB1, OR10Q1, OR13C5, OR2T34, OR51I1, OR6C1, OR6X1, OR7A17, OXCT1, POLD2, PPP5C, PYGB, SARS, SETD1A, SLC25A6, SOX17, STAT3, TAS1R1
Negative_2215	ATP5B, DGKI, LIMK2, LTA4H, OR10A5, OR5T2, P4HA3, RBPJL, TAS1R1, UNC5C, CTNNBIP1
Negative_2216	IL6, CACNG8, IMPA1, ITGAE, ITPA, MYH7, NRCAM, P4HA3, TGFB3, TUBB6
Negative_2217	CTNND1, DGAT1, GDF6, OR6C3, OR6C4
Negative_2218	MAX, ALOX15B, GSTA2, KARS, LTB4R2, NFATC2, OR14C36, PTAFR
Negative_2219	CD6, ADRB3, AGTR1, ALDH3A1, CACNB1, CD27, DDX55, EVI1, GBE1, GIT1, HHIP, IFNA6, JAK3, MCM5, MTHFR, NLGN2, NME6, NMNAT3, OR52N1, OR9K2, PDE4B, PMM2, SULT1A1, TAS2R8, TUBB4Q, WNT4
Negative_2220	ACACA, APH1A, BMP8B, CDH1, CDIPT, CHST12, CTSL1, CTTN, DDX54, DGKG, DIAPH2, EPHB1, HDAC2, IL12A, NCK1, OR6M1, PARS2, PDIA4, PHKB, TALDO1, TSNARE1, UGT2B10, ULK2, XIAP
Negative_2221	MVK, ACOT11, ACPP, ACSM5, ALDH2, ARNTL, ASAH1, AVPR1B, BCMO1, CACNG1, CACNG5, CD226, CD28, CMPK2, CSDA, DHRS4L2, ERBB3, FOXA3, GNA13, GNPAT1, GPD1, GPD1L, GPT2, HNMT, HSD17B2, IDH3B, IQGAP2, LPAR1, NFAT5, NQO1, NTF3, OR1L4, OR2C1, OR2G6, OR4A15, OR5AN1, OR6C2, OR6Y1, PAK1, PERP, PIAS2, PIP5K1A, PORCN, SLC12A2, SORBS1, SPAM1, TNFSF12, VAMP3, B4GALNT1
Negative_2222	ESAM, GALNT14, MNX1, PANK1, ZBTB16, PPP1R12A
Negative_2223	L1CAM, OR2T29, PLCE1, PTPRJ
Negative_2224	ACADM, ARPC3, DNMT1, TACR1, USE1
Negative_2225	ID3, CTSS, DGAT2, GGCX, GSTM5, IL22RA1, JUND, MYH10, NKX6-1, OR4C11, PIGU, PLCD4, PLXNB1, PRKCG, RAP1A, VEGFA
Negative_2226	GPI, RDX, SRM, TK2, ACTA1, ACTB, ALDH3A1, ARPC1A, ATP5C1, CHRNA7, CSH1, CSNK1G3, CTF1, CYP11B2, CYP2C19, FCGR3B, ITGB4, MCAT, NT5C2, OR14A16, OR2F2, OR5V1, OR8D4, PANK1, PDE7A, PDXK, PPARA, SNAP25, WNT3A, ZNRD1, HLA-DPB1, PDCD1LG2
Negative_2227	ASPA, DAPK2, PDE4B, PHKA2, SUCLG1

Negative_2228	CP, F9, LIF, AARS, DCXR, DEGS2, IFNAR2, INPP4A, NEU1, OR4C11, OR51F1, OR6C76, OR8S1, PRKAR1B, SH2D1A, SREBF1, SRGAP3, ST8SIA5, SUFU, WASF1, CSNK1A1L
Negative_2229	F11, FOS, ADH1A, FSHB, GOT2, HADHB, IFNK, INSR, MASP1, NFATC3, NRCAM, OR1L3, OR4K5, OR8J3, PARD6G, PDE3A, SLC27A4, SLIT2, WNT1
Negative_2230	ZYX, ADCY8, ADRBK2, APOE, DDIT3, ENPP1, FARSA, FGFR3, GCNT2, GLYCTK, HMOX1, HNF1A, IDI2, IFNAR2, IKBKB, JAM2, KCNQ1, MAP3K11, MAP3K8, NEUROD1, NFATC1, NMNAT3, OR4A16, PIK3CB, PPP1R3C, PYGM, RPS6KA2, SFRP1, SLC27A1, SMAD4, SMPD1, SPRY3, SULT2B1, THBS3, TUBB6, UGT2B28, WNT10A, SLC25A31
Negative_2231	AMH, NNT, TEC, ACVR2A, ASRGL1, AXIN2, CD36, DAPK1, FGFR3, FZD1, IKBKB, IL1R2, INPP1, JAM2, MAOB, MCM5, MGST1, MINPP1, NAT1, NFYA, OR14C36, OR2H1, OR2T5, OR5T1, OR8K3, PIK3C2G, PKLR, PPP5C, SPRY1, TCIRG1, TUBB, WASF2, YOD1, TNFRSF11A
Negative_2232	JUN, BCL10, ITGA2B, NT5C1A, OR14C36, OR2F2, PDGFR, PLAT, POLE4, PRKCG, PTGFR, STX16, WASF2, ZMAT3
Negative_2233	PTS, ABL2, ACSM4, ALAD, CDC27, FMO4, FPGT, HMOX2, OR5A5, OR5M9, OR5P3, PLA2G5, PRPH, PTAFR, SOS1
Negative_2234	PC, ATG7, ATP13A2, CAPN2, CCL1, CLDN1, CYP7A1, DAG1, DHRS4, DUSP8, GUCY2C, HEXB, MAGI3, NCR1, NGEF, OR13H1, OR51T1, OR5M9, PIK3C3, PROC, RASGRF1, WNT1, SERPINB5, TNFRSF13B
Negative_2235	HYI, NPY, TKT, ACVR1B, B3GALT2, BPGM, CHRDL1, CNGA4, COL1A1, CPOX, CRLF2, CYP4F2, DDX54, ENAH, GALNT1, GALNT11, GNAO1, GPX7, GTSE1, GYS1, HNF4A, IL28B, IRF5, ITGA4, ITGB1, KLRC4, LIPC, LTB4R2, MAPT, NADK, NCOR2, NTF3, OR4C11, OR9K2, PHKB, PIAS4, PIGV, POLR3B, RARA, RDH16, RPN2, SLC12A2, TNFSF11, TRIP10, VKORC1, WASF3, TNFRSF10A, TNFRSF10C
Negative_2236	ATM, CFI, DLD, LIF, SYK, ABAT, ABLIM2, ADCY6, ARG1, ARNT2, ATF4, CACNA1D, CDC16, CDC45L, CMAS, CYCS, CYP11B2, EFNA5, ENTPD8, EPOR, F2RL3, FBP1, GNAO1, GNG12, IL17B, IL17RA, IQGAP3, KCNQ1, KIR2DS4, KIR3DL1, MAP3K2, METTL2B, MGAT5, MYD88, NMNAT3, OR10J5, OR13G1, OR51A7, PIAS1, PLXNC1, POLR3A, PON1, RPS6KA1, SELPLG, TCIRG1, TKTL2, UGT2B7, CACNA2D4, TNFRSF13C
Negative_2237	AMH, IL5, TKT, ACO1, AGMAT, ATG3, CLDN16, COX15, FASLG, HSPA8, IFNA10, MAP3K6, NFE2L2, OR10G9, OR2T34, OR2T5, OR5K2, OR6C3, PIGM, SELL, UNC5A
Negative_2238	LCT, TEC, AADAC, AGPAT4, CDC7, CYP8B1, FGF4, IL10, ITGA11, LRAT, MGAT2, NEU3, NOX3, ODC1, OLR1, OR1J2, OR52E8, PDE7B, PGM3, PRKCA, SCP2, SEMA4D, TLR9, UNC5A, WNT8A, HSP90AB1
Negative_2239	OTC, ABL2, ADH4, CMAS, GAMT, MCM7, MEF2C, ST3GAL5, STAT6
Negative_2240	ADAM17, CACNA1D, CYP3A5, NCR2, ZNRD1
Negative_2241	HDC, MPZ, TPO, ADRB3, ARG2, B3GALT6, CACNG2, CDC23, DDX19A, EPRS, GCNT2, GLI2, GNA12, GPLD1, HSPB1, ITGA7, MAP3K14, MTHFR, MTMR6, NME2, OR11G2, OR14A16, OR2M4, OR2W1, OR52H1, PAK1, PAK3, PDGFRB, POLR2H, PPP1R3D, RAP1A, RDH10, SSX2IP, SULT1E1, UBA1, VANGL2, WEE1
Negative_2242	BAD, CKB, IL6, SP1, ADCY7, ATP6AP1, CCL7, CLCF1, DDIT4, E2F5, EFNB1, ENPP6, F2RL3, FIGF, GMPR, GNAI2, GNAL, GNPAT1, HADH, HCLS1, HDAC2, MALT1, MAPK8, NCOR1, NQO1, NRG4, NT5C3, NUDT9, OR1S2, OR7C1, PARVB, PDE6H, PGK1, PLOD1, PNLIP, POLR3H, PVRL1, RALGDS, RFXAP, STX12, TKTL1, UNC5D, UXS1, CACNA2D4, TNFRSF6B
Negative_2243	ALCAM, OR12D3, POLE3, WWP1
Negative_2244	C6, DDC, SHH, APOA5, AQP7, ATG7, BET1L, CDC42, CDH5, CEBPA, CSF1, CXCR5, DDX23, DKK4, FGF5, HGSNAT, IFNA4, NFATC4, NME7, OR10H5, OR9K2, OXCRT2, PAK7, PDE8B, PDHB, POLE3, PPCS, PRKCG, PRODH, PSME1, PTGDS, RFWD2, STX4, ZMAT3, PPP1R12A, ST6GALNAC5

Negative_2245	SRM, TNN, ADRBK2, ALCAM, APC2, ATF2, ATG7, BIRC5, CREB3L2, CTNNA2, CTSS, DDIT4, FGF7, FRAT2, GYS1, IQGAP1, ITGAM, KAT2B, MGST1, NODAL, OR13C2, OR2AT4, OR4A16, OR8B4, PARD6G, PIK3C2A, PIP5K1B, PLA2G4A, PLAT, PPP1R3C, PPP2R1B, PRKAG2, RPS6KA6, TUBB2C, UGT2B17, ATP6V0A2
Negative_2246	ADH5, ADRA1A, GPD2, UROC1, TNFRSF12A
Negative_2247	IL4, AANAT, AFMID, ARPC2, ARPC5, ATP5G2, BMP8A, BUB1, BUB3, CREB5, EHMT2, FLT4, GALNT12, GRM5, GUK1, IL15, ITGA10, JAM3, LAP3, MGAM, MGAT1, MGST2, MITF, OR11L1, OR2M3, OR51I1, OR5H2, OR9I1, PROS1, RAP1A, SHC1, SKP1, TGDS, TUBB1, ATP6V0E1, TNFRSF14
Negative_2248	EZR, CHRM1, CMPK2, FUT5, GGT5, IDH3G, LLGL2, OR10AD1, OR4P4, OR6N2, OR7G1, PDX1, PFN3, ROCK2, YWHAB
Negative_2249	GCK, GH1, ME3, UBB, ADRA1A, ALOX12, ALPP, AMD1, CADM3, CD36, CDS2, CSNK2A2, CTF1, CYBB, CYP1A2, CYP2C8, CYP4F2, DHDDS, DPM1, EXTL3, FADD, FLT3, GALNT7, GATM, GPD1, HAO2, HEXB, HLA-G, INPP5B, LILRB3, LIPE, MAPK11, MGST2, MYH2, NUMB, OR10S1, OR13F1, OR4C46, OR56A3, PAK7, PLCD4, PLXNB3, POLR2J, PSEN2, PTDSS1, SEMA4G, WIF1, EIF4EBP1
Negative_2250	AK3, GCK, PGF, ACVRL1, AGXT2, ALDOB, AOX1, ARSD, CD22, CYP7A1, ENPP6, FGF14, GDF7, GUCY1A2, HLA-G, ICOS, IL10, IL11RA, IL19, JAG1, LDHAL6A, MADCAM1, MYL7, NEFL, NEU2, OR10G2, OR4X2, OR51E2, OR6S1, OR8A1, PIK3R1, PIP4K2B, PPP2CB, PSEN1, PTGS2, PTK2, PTPN7, SHMT2, SLC27A5, SPHK2, TLN1, TPM3, TRDMT1, TUBB2A, WNT6, MAP3K7IP2
Negative_2251	ADC, CRK, ACAT1, ACVR2A, BDH2, BPNT1, CD79B, CDC25C, CES7, CYFIP2, DFB, EIF4B, FABP4, FBP2, FGF6, GNAI1, HPRT1, IFNA21, IKBKE, INHBA, KAT2A, LIPA, LPAR1, MAPK7, MGAT2, NTN1, OR51A4, OR8D1, PDE9A, PRKY, PTGES, RBL2, SDHC, ST3GAL3, TACR3, TICAM1, TLN1, TYMS, UGT8, PPP1R12A
Negative_2252	FES, INS, LCT, APC2, ATP2A2, CAMK2B, CCL3, CD46, CHST11, COL11A1, CSNK1A1, DGKG, DOT1L, EPHA3, FUT2, GALNT14, GIT1, GNAQ, GNRH1, MPZL1, OR2C1, OR6C1, PHGDH, PYCRL, SAT1, ST3GAL1, ATP6V0A1
Negative_2253	CDA, KDR, ACS3, AGPAT2, AKT3, AMDHD1, AOC2, ARHGEF6, CACNA1G, CD3E, CD86, CDC45L, CKS1B, CSNK1A1, CYP2S1, DGKZ, GJA1, HDAC2, IGFBP3, MGAM, NT5C1B, OR10K1, OR2G6, OR5AP2, PIAS1, PTPN5, RAP1A, RFXAP, SEMA7A, TICAM1, TLR4, TOMM40, VARS, HLA-DRB3, MAPK8IP1
Negative_2254	BTC, ALPL, COL11A1, GCNT1, GNAZ, GSTO1, IARS2, IRS1, ITGA8, MAPK12, OR1N2, OR4A15, OR4K1, OR5T3, PAK2, PAX6, PDE8B, PIK3R5, PLOD1, PNMT, PQLR1E, PRKCG, RALB, SAT1, SMAD7, STMN1, TAS2R38
Negative_2255	NF1, ABP1, AC02, AQP7, CHSY1, CSF3, ERBB3, GNRH1, HMGCS1, IPPK, MAGI2, OR13C8, OR2L8, OR4K1, OR52L1, P2RX2, PIP5K1A, PRIM1, PRKY, PTGES2, RPS6, UGCGL1, ULK1
Negative_2256	BAX, CEL, CP, GGH, JUN, ABP1, ACTA1, ALDH7A1, C9orf95, CACNA1F, CNDP1, CXCL9, DCTN1, DLAT, DNMT3A, DUSP4, FPGS, GNPAT1, GPD1L, HSD17B7, IFIH1, IL28RA, IL8RA, ITGA7, MYH4, NCOA4, OLR1, OR51L1, OR5H2, OR8H3, PIAS4, PLCG1, PVRL4, RFNG, SLC12A2, TRADD, CACNA2D1, GABARAPL2
Negative_2257	AGL, ACAD8, CES1, EDN1, GNAI1, MAP4K3, PLCG2, PTEN, SKIV2L2, TLR5
Negative_2258	AASDH, ACAT1, COQ7, DPM3, FDFT1, FGF4, FMO3, INPP5A, LAMA4, NFASC, OR1N2, OR2H2, OR9G1, SMC1B, SOS1
Negative_2259	C7, DBT, ALDOC, ARHGEF2, B3GNT2, BBOX1, BCKDHB, BIRC2, CD8A, CRLS1, GSTO2, GUCY1A3, HCST, IDH3B, IL2RB, IL2RG, LLGL1, NCF2, NEU4, OR2A2, OR4D9, OR6C1, PCCB, PDXK, PIGC, PRPS2, RUNX1, RUVBL1, SORBS1, TPH1, TRADD, TSHR, UCK2, PAFAH1B3, TNFRSF1A



Negative_2260	SI, ACAT1, ALDH9A1, AMD1, ATP12A, B4GALT4, CCL19, CD80, CRLF2, DMGDH, KCN11, KLK3, LARS, LIPC, LLGL2, MAPK11, NLGN1, OR1E2, OR2T12, OR51A4, OR8D4, P4HA2, PDE8A, PECAM1, PSEN1, RALA, RALB, RDH16, SESN1, ST8SIA1, SUCLG2, TAP2, TPH2, UGCGL1, ZNRD1, PPP1R12A, SERPINE1
Negative_2261	C8A, PC, TNC, ABL1, ACPP, ACTN2, BMP2, CACNA1C, CALML5, CBR3, CDK7, COQ7, DDX52, DFFB, DUSP4, ETS1, GALNT6, GNA14, IRF9, ITGA2B, JAG2, KIR3DL3, MAN1C1, MTHFD1L, OR2C1, OR2T1, OR4N2, OR51A7, PANK4, PIK3R3, PI5K1A, PLXNB2, PPP1R3A, RFXAP, SETDB1
Negative_2262	CS, APAF1, BACE1, BTRC, EXTL2, MYLK, NRXN3, PITX2, PPP2R5A, PRLR, SLC27A4, STAT5A, YKT6
Negative_2263	GCK, GLA, AGTR1, CLDN17, EDAR, FGF11, FGF17, FLT4, FZD3, GJA1, GLB1, IL4R, LYZL1, MAN1B1, MICA, MTFMT, NAGS, NCAM2, OR13C3, OR2Y1, OR52N2, OR52N4, PARD6G, PDE10A, PIGA, SNAI2, SNAP25, TNXB, GABARAPL2
Negative_2264	ALPP, BCMO1, CD47, CDC27, CYFIP2, ELK4, OR2K2, PEMT, PLCB1, POLA2, PRKAA2, PRSS1, SEMA3D, SMPD1, WNT3
Negative_2265	BTK, CSK, EPO, SHH, SRF, TK1, AHCYL2, ALDH3A2, B3GALT2, BLNK, CCL22, CEBPA, CFTR, CSNK2A1, DGKH, DRD1, DTX2, FGF20, GALNT14, GALNT6, GCDH, GNA01, IL13RA1, IL4R, IL8RA, MAP2K5, NSD1, NT5C3, OR11G2, OR4C6, OR7C2, PANK1, PIGL, PLA2G2D, PPARA, PPP3R1, PRPS1, PYGL, RHOQ, SDC1, SIPA1, SMC1B, ST8SIA5, STK4, SULT1A2, TGFB2, TOMM40L, TPH1, XYLT1
Negative_2266	ACPP, AGXT2, CTBP1, CYP11A1, ENO1, ENTPD1, F11R, FCGR3A, FGF21, GADD45A, IGF1, LTC4S, MGLL, NOS1, NT5C3, OR2A14, OR2G6, PIGU, PLCE1, PRKA1, PTDSS2, PTPN6, RPS6KA1, STK4, TIAM1, TNFSF8, TUBB3, WNT1, SERPINF2
Negative_2267	ADK, AR, KDR, ABLIM2, ADCY4, AGRN, ANPEP, CACNA1A, CCL23, CCNH, CHUK, COL4A1, CTPS, CXCR6, DAAM1, DEGS1, FIGF, FMO4, GAPDH, GSK3B, HAGH, IRAK4, ITGB5, MTAP, OR2Y1, OR4F5, OR4K2, OXTR, PGAM1, PGAM4, PI4KB, POLR3K, PPAP2A, PRKAR1B, PRKCA, PTGER3, SCLY, SDHC, SEMA4A, SEMA4D, SRD5A1, TAS2R7
Negative_2268	C4B, CCL3, CDKN1B, CREBBP, EFNA4, ENTPD2, EPHA2, FTMT, GUCY1B3, ITCH, LAMB3, MITF, OR11G2, PDCD1, PGK2, PGM1, PIK3C2A, PNPO, POLR1C, PSME2, RDH11, RPSA, SPI1, TIRAP, TLN1, TNFSF4
Negative_2269	CR2, ADAM17, ADIPOR2, ADRA1D, ALDH3A1, CCR10, CHPF, CYP1A1, DNMT1, DDT1L, GPT2, NFKBIE, OR1E2, PDK1, PFKFB2, PIGX, PNLIP, SV2B, PAFAH1B1, ST6GALNAC1
Negative_2270	ACP1, AKR1C2, CASP6, CDC25B, DIAPH1, DUSP10, DUSP2, EDAR, GPD1L, ICAM1, ITGAM, ITGAX, MAPK7, MYH8, NEGR1, NUMB, OR11G2, OR6F1, PFKFB2, PIK3CD, PPP2R2D, PRSS1, SMAD7, TPH1, ATP6V0E1, ATP6V1E1
Negative_2271	ADC, PDC, ACAA2, AGPAT3, ANPEP, CCNA2, CMPK1, CSAD, IGF1R, IL18R1, INPP1, LLGL2, NFX1, NFXB
Negative_2272	DUT, NPL, PRL, SP1, ACPT, ACSS1, ACTC1, BLVRA, CACNB1, CDH4, CHUK, CLDN11, COX10, CYFIP1, DLL1, DOLPP1, DVL1, FOXO1, FZD2, GLI2, GRM1, HSP90B1, IARS, IDH3G, ITGA9, JAK2, KLRC4, MAPK1, MAPK13, OR10H4, OR52D1, OR52K2, OR52L1, P2RX3, POLR2L, PPOX, PTTG1, PVRL3, RUNX1, TAS2R5, TNXB, PPARGC1A
Negative_2273	FST, AANAT, ACAT2, ALDOC, CNGB1, CNTN1, DUSP10, F2RL3, FGF22, HYAL2, ICAM3, MAN1C1, MDH1, NUDT5, OR10AG1, OR2G6, OR2V2, OR52I2, P4HA3, PARVB, PFN1, PPOX, PTPRZ1, RPS6KA3, SNAP23, STX4
Negative_2274	ATM, CCL15, FZD1, GNRH2, OR5AU1, PTTG1, UGT2A1
Negative_2275	ADSL, AGPAT4, AGXT2, CMBL, CYP1A2, GSTA5, GUCY2D, HSD11B1, LLGL1, LRP6, OR2D2, OR6B3, PDE6H, PLOD3, ROCK1, TAP2, TBL1X, TGFB1, TUBB1, WBSCR22, ST6GALNAC5

Negative_2276	F11, LPO, MPL, ABI2, ACVR1C, ACVRL1, ALOX15B, CD79B, CDH4, CLTA, CXCL2, DCXR, DDX41, DLL4, ELK1, EPB41L3, EXTL1, FGF19, FIGF, GAL3ST1, GAMT, GNPAT, HPRT1, INPP1, IRAK3, KARS, LARS2, MAT1A, MCCC1, NFKB2, OR10A5, OR12D3, OR13G1, OR4F4, OR4K2, PFKFB2, PHGDH, PIP4K2C, POLR2C, POLR2I, PPP1R3A, PROC, RALB, SIGLEC1, SLC25A6, SMAD3, TYMS, GABARAPL2, TNFRSF13B
Negative_2277	KIT, SRM, ZYX, AARS2, ACPP, ACTN1, APOA1, CACNA1C, CLDN11, CNDP1, DNMT1, EFN2, ERBB3, FARSA, GALNT8, GSTM3, HMOX1, IFNAR1, KLRC3, NRG3, NTNG1, PDIA4, PFKFB1, PIGA, POLR2J, PPA2, PPARG, PSME2, RARA, RPE65, RXRG, ST8SIA1, SUCLA2, UNC5A
Negative_2278	C4B, CGN, F11, HAL, ACTG2, ARPC3, BDH1, C9orf95, CALML5, CDKN2C, COL5A2, CYP2E1, DGAT2L4, DHRS9, DNMT1, EPHA1, EPHA6, FSHR, HARS2, HSD17B3, MAP2K2, MMP2, MYD88, NCF4, NUDT5, OR10G9, OR1D2, OR4F6, PORCN, PPA2B, PTPRB, SMARCA5, TAS1R2, TUBAL3, UPRT
Negative_2279	FH, IL9, TK2, ALG12, CACNB3, CPT1A, CPT2, CX3CL1, DDHD1, FRAT1, FSHB, GLI3, HTRA2, IL12RB2, IL20RB, ITPK1, JAM2, MAGI2, MMP1, MYH4, OR10S1, OR2T33, OR6Y1, OR8G1, PLCZ1, PPM1A, PTPN6, RAPGEF3, ROCK2, SETD1A, SETDB1, SULT1A2, TIRAP, TRAF3, VAV2
Negative_2280	DDO, MTR, PGD, AADAT, ARHGEF6, CBR3, CD244, CD8B, CDC27, COL1A1, CYP2C8, DARS, ELK4, GCLC, GOT2, GUK1, LYPLA2, MAP3K1, MYH7B, OGDH, OR1L1, OR2A12, OR51F2, OR5P2, OR6N1, OR7C1, PARVG, PDE8B, RARS2, RASA1, RASSF1, SOCS3, UPP1, WARS2, WNT8B, ATP6V1E1, PDCD1LG2
Negative_2281	C7, CRH, DHH, HYI, IDS, NPL, AARS2, ALG6, BMP1A, CD36, CHEK1, CLTCL1, CMPK1, CXCL2, CYP4A22, DGKG, EDN1, FGF9, GCLC, GLUD2, HLA-G, HNF4A, HTR6, IFNA10, INPP5E, KLRD1, LALBA, LDHD, MITF, MPZL1, MYD88, NAT2, NKX6-1, OR1F1, OR51B5, OR5P3, SCD5, SLC9A1, SNAI1, TAS2R16, TBK1, WHSC1, MAP3K7IP2
Negative_2282	CD6, ABC8, CCL3, CDC25B, CLDN22, COL1A2, FGF1, GPT2, IFNA16, IRS1, MTHFD1, OR56A4, POLD1, PPP2R5B, PRKCI, PTGES2, RAB5A, RXRB, SESN1
Negative_2283	HK1, LPO, NOG, ADCY5, BET1, CCR8, CYP2C18, DPYS, FRAT2, ITGAL, MYLK2, NAGK, NARS, OR4A5, OR4F4, OR51G1, OR51V1, OR56A1, PCK2, PRKAA2, PRKG1, ZFYVE16, TNFRSF10B
Negative_2284	GLA, ALAS2, OR5M3, RXRB, THBS4
Negative_2285	CRH, ACO1, ADRA1A, B4GALT2, BCL10, CD48, COQ5, CUL1, E2F1, EPHA2, EXT1, GALNT5, GCH1, GCNT3, HNF1A, HRH2, HSD3B1, IFNA10, IL10RA, MAP2K5, MAP3K11, MAP3K7, MAPK13, MYH9, NADK, OR10AD1, OR2T11, OR52H1, OR6B2, PI4KB, PPP2R5C, PRIM2, SH2D1B, ST8SIA1, STAT2, STX4, TAS2R8, ULBP3, VAMP3
Negative_2286	FES, INS, LCK, AASS, ADRB3, BIRC5, BPNT1, COMP, CXCL10, DTX3L, FUT9, INPP1, INPP4B, IRAK1, JUND, MMP14, NFKB2, NMNAT1, NPAS2, NT5E, OR2A42, OR2B11, RHOD, SMAD5, TRPC1, TUBA1B, UCP1
Negative_2287	GLS, ACSL3, AKR1B10, AKR1C1, ATP5J, CD19, CYP3A5, ELK4, FBXW11, FUT3, GNAI3, HIBCH, IL13, KLKB1, LIPE, MAPK14, MFNG, NR1H3, NUDT9, OR10G9, OR2B6, OR2F2, OR2T2, OR4A15, OR5T2, PCYT1B, PDE9A, POLR2J, PRKAA2, RASGRF2, RBPJ, SUFU, TBXA2R, XIAP, ATP6V1G1, ST6GALNAC3
Negative_2288	CCR3, CD36, DGKQ, IL22RA2, NADK, NOS1, OR4F6, OR4S2, PEMT, PYCR2, RAC3, RAP1A, SCP2, SPRY4, TPM3, TRPC1, WNT4
Negative_2289	BCR, CDA, CRK, CTH, PML, AKR1A1, APRT, ARPC5, BBOX1, BUB1B, CCL23, CCR7, CD40, CERK, CLDN1, CNTNAP2, COL5A3, CTSL1, CYP26B1, CYP3A7, DUSP8, ENTPD5, FBXW11, FGF1, FZD8, GALT, GRAP2, HSD3B7, IKBKB, IL10RA, IL13RA1, IL18RAP, MAOB, MAP4K3, MKNK1, MYL9, OR10V1, OR4C12, PIP5K1A, PLCZ1, PLOD1, POLD3, PPM1B, PROC, SEMA3D, SLC2A1, SMAD4, YES1, ALDH18A1

Negative_2290	IL8, AMHR2, CDS2, CHD8, CLDN8, CNTN1, CXCL1, DKK1, DVL3, EFNB1, EPHA2, IFNA21, MAPK13, NPR2, OR2T11, PIK3CD, PPP2R5D, TJP1, TPM3, UAP1
Negative_2291	NPY, ADRA1B, ARPC2, B4GALT5, C3AR1, CDKN1B, DGKD, DGKH, DHCR7, ELK1, FUT7, GCNT1, HTR2B, IFNG, IFNK, IL13, LAMB3, LCP2, OR10R2, OR2AG1, OR8I2, PI4KA, PRKAB1, RRAS, SMURF1, TIAM1, UXS1
Negative_2292	CEL, DLD, GSR, TEC, ABL1, ARD1A, ARHGEF6, ARSD, ATP5G3, CCL23, CDC25C, CMPK2, CREB3, CSF3, CYP27A1, EXOC7, FARSB, FZD10, FZD5, FZD9, GMDS, IL21, IL6R, JUND, KAT2B, LFNG, MAD1L1, MLLT4, NME2, NOTCH1, OR10X1, OR2C3, OR51A4, OR5T1, OR6Q1, OR8D4, PLXNA1, PYGB, RENBP, SCP2, SDC4, SLC33A1, SMAD4, TAS2R10, TUBA1A, UBE2L6, VTI1A, SERPINC1
Negative_2293	AK3, C8B, EPO, ADCY6, ARNT2, B4GALT4, BET1, C4BPB, CCL2, CD48, CD82, CLDN22, ENPP7, FGFR2, GALNTL4, GRM1, GSTA3, GSTO1, IARS, MYL9, OR2A2, OR5D14, PLK1, POLR2H, PPT1, RALA, SLC27A1, SPI1, THBS3, TLN2, TRADD, UROS, ZMAT3, SERPING1
Negative_2294	CFI, CCL27, CXCL11, FGF5, PPP2R1B, SEMA4C
Negative_2295	ACP2, ATF4, ATP50, CCR1, CYP3A43, DAXX, ENTPD1, FGF6, FLT1, FPGS, GCA T, GPLD1, GRIA3, GSTM3, INSR, ITGB8, LDHAL6A, LIMK1, LRDD, MAD2L1, OR52B4, PIP5K3, PRKY, STAT4, TICAM1
Negative_2296	LHB, ADH6, ALDH3B2, AMY2A, B3GAT3, CALML6, CSF3, CTBS, CYP2B6, DAPK1, DERL1, GANC, GRB2, GRIA2, GSTA4, IFNG, IL1A, INPP4A, JAK3, KAT2B, NUMB, OR13A1, OR2B2, OR2M7, OR4B1, PAPSS1, PGAP1, PLA2G5, PRDX6, PRKACB, RAP1A, SARS, SELL, TRDMT1, TUBB2C, WNT3A, WNT7A, PPARGC1A
Negative_2297	DBI, LEP, TFG, TKT, CCL4, CD8B, CDC7, CNGA3, COMP, CTPS2, INPP4A, IRS2, OR4C12, OR51A7, OR5J2, OR6C2, OR6F1, PARVA, PDE2A, PDGFA, RELB, UCK1, ULBP3, UNC5D, UROS, B3GALNT1
Negative_2298	AK2, FN1, HGF, TK2, ACVR1, AK3L1, CCND3, CHIA, CREB3, DIAPH2, FCGR2B, GLI1, HSD3B2, IDH3G, MYH6, NTRK2, OR13G1, OR52E8, OR5T1, P2RX4, PPA1, PRKAB2, SGMS1, TAP1, TRMT11
Negative_2299	AKT1, CREB5, CYP3A4, FZD6, GUCY1B3, ITCH, KLRC4, PER2, PRKAR1B, YWHA E
Negative_2300	ADRB3, CLTC, EPHA5, PRKAB1
Negative_2301	GP5, MVD, CACNA1G, CADM3, CHRM5, CLDN22, CLDN6, CRHR1, CYBA, CYP4F2, DTYMK, GNB3, H6PD, HSD3B1, IL21R, IRF3, LIFR, MTHFS, OR2T3, OR51A2, OR52K2, OR8J1, PANK2, PLXNB2, PMAIP1, POLD3, PPP2CB, PPT1, RRM2, RUNX1T1, SEMA4A, TLN1, UNC5A
Negative_2302	FUK, ID4, KDR, ACSM1, ALAS1, ALDH3B2, AMDHD2, AMPD3, APPL1, ATP5L, ATP6V1H, CLTCL1, CYP2U1, DNMT1, EFNA5, FUT4, GCDH, IDH3B, ITGB1, KLRC3, LAMB4, LYZL1, MAD1L1, NEUROD1, NR4A1, OR10A7, OR2A2, OR51D1, OR51V1, OR8B8, PARVG, PFAS, PPAR, PPP1R3C, RAC3, SAT1, SMAD4, SMURF1, STAT4, SV2B, TKTL2, TLN2, WARS, WNT4
Negative_2303	MVD, ASCC3, CACNG6, CHRM3, CRB3, IL17B, KIR2DL4, OR52N1, PHKA1, TPMT, WASF1, TNFRSF10C
Negative_2304	EZR, TFG, ACSL3, ADCY6, ADH7, CCL28, CIITA, CXCL9, DHRS4L2, FLT4, GAB1, GLYCTK, GSTZ1, GUCY2C, IL2RG, MGAT5B, OR52E4, OR6Y1, PFKFB4, PLA2G1B, PLCG2, PLOD3, PTEN, RASA2, SCIN, SEMA4D, SLC27A5, SOX17, TCF7, UGP2, ATP6V1G3
Negative_2305	AUH, C5, C7, CAD, CR2, SRC, AACS, ABL2, ABLIM1, ACSS1, CDKN2A, CDKN2D, CYP1A2, DHDH, DRD5, DTX3L, EDN1, FARSB, GAPDH, GFPT1, GOT2, GYS1, IFNA6, IL21R, MAP3K12, MCM5, MYLK, OR13G1, OR4S1, OR5AN1, OR6K6, OR7G2, PAK7, PCNA, PIP4K2A, PPP2R5B, PRKCI, STK3, TGFA, TUBA8, TNFRSF10C
Negative_2306	AKR1A1, AMHR2, APOA1, BAIAP2, BDNF, BUB1B, CD70, GNRH1, GRIA3, HAAO, HAGHL, HTR5A, IL9R, LEPR, LFNG, OR2T4, OR51B2, PAK3, PANK1, PDE8A, PRIM2, TAS2R13
Negative_2307	ALPL, CDIPT, G6PC2, LCAT, OR51B4, RPIA, STX2, TJP3

Negative_2308	CHPT1, COL4A2, GCDH, HRH1, OR6A2, PPP1R3C, SHMT2
Negative_2309	C2, IHH, TYR, ADCY3, ARG1, ASAH1, AXIN2, BBC3, CACNG7, CAMK2G, CD3E, CD46, CD74, CERK, CXCL11, EFNA2, FBXW11, FUT4, GADD45A, GNAZ, GNG3, HIBADH, IFNAR1, MAN1B1, MAP4K1, MEF2C, NUMB, OR2W1, OR5L1, OR5M3, OR6Q1, OR7A5, PDE3A, POLD3, PPM1A, PRNP, RFX5, RHOQ, SETD7, SPCS3, SPHK1, TALDO1, VDAC1, WNT2B
Negative_2310	TNN, ACAD9, CFTR, IBSP, ICOSLG, IL22, LRP5, MAN1A1, MAP2K7, MAP3K11, MGST3, OR10A7, PLA2G1B, PPCS, PTGIS, STX10, VEGFB
Negative_2311	ARHGEF7, ARPC3, ATP5E, BDH2, CDC16, CDC25B, CNTFR, COX10, CTNNA1, DFB, DGKB, DGKD, ESAM, FGF3, FSHR, FZD3, GALNT9, H6PD, IKBKG, INPP4A, ITGA9, KARS, LAMA3, LILRB3, MAOB, MICA, OR11A1, OR11H4, OR1L6, OR2C1, OR52A5, PDE6D, PER2, PIGP, PPAR, PPM1B, PPP1CB, PRDX6, PRKCG, RAC3, RELB, ROBO1, SHMT1, SMPD3, TLR5, UPP1, WASF3
Negative_2312	TNR, ACP1, ACTN1, CES1, EI24, FMO3, FZD7, GMPPA, INHBC, MGAT1, MOV10L1, MYH13, PIGF, PIK3R2, RALB, TACR2, ALDH18A1
Negative_2313	MVD, SRM, AARS, ACY3, ADH4, ARPC5, ATP5L, CACNB4, CCND1, CCR6, CD40LG, CYP26B1, DAPK3, EDNRB, GUCY1A3, IFNA2, IL12RB2, IL17RB, IL1R1, MCM4, NFKBIA, OR51A7, OR52D1, PCNA, RARS2, RPS6, SCLY, SESN3, STX18, TSNARE1, TYMS, UGT2B4, ZNRD1
Negative_2314	F5, OSM, ABCC8, ACACB, ACLY, ARD1A, ATP6AP1, CCNG1, CD38, CLDN1, CXCL1, CYP2C8, FGF4, GALM, GGT1, GNA15, GSTO1, HADH, IFNA8, IL19, IL20, KLRC3, MAD2L2, MAP3K5, MMP7, MPST, NCOR1, OR1S1, OR2K2, OR4B1, OR8B8, ORC2L, PFKL, PNPLA3, PPP1R1A, PPP2R5B, PTPRB, SCLY, SETD1B, STT3B, TASSR50, ULK2, PDCD1LG2, PRICKLE1
Negative_2315	CKM, NGF, DDIT3, EP300, EPB41L1, HMBS, LIMK2, OR2M3, PLA2G2D, PRKCZ, SMAD5, MAPK8IP3, TNFRSF1A
Negative_2316	ALOX15, B4GALT4, CCNG1, CTSB, DKK2, FGF19, HMOX2, IDH3B, IL13, IL23A, ITGB4, MAP3K4, PAK3, PTPN7, SOAT2, TXNDC12
Negative_2317	BAD, LIF, ALDH1L1, ANAPC10, ARPC2, C5AR1, CLOCK, CXCL13, DAPK2, DGKQ, FRAT1, GCNT1, GSTM2, IL18, IL19, IRAK1, NEU2, OR4N2, PCK2, PFKFB4, PPI1CC, STAM2, STX4, TNFSF10, TSC1, TUBA3C
Negative_2318	A2M, C8A, GGH, ME1, XDH, AKR1A1, ALOX15, ATP12A, BCAT2, CD46, CHST13, CLDN18, CTPS2, DDX18, FECH, FMO1, FZR1, GDF6, HSP90B1, MCAT, NOTCH1, OR2T3, OR4S2, ORC4L, PARD6A, PEMT, PLA2G5, PSME3, SKIV2L2, SLIT2, SPRY1, VAV3, YOD1
Negative_2319	ARG1, CCR4, CDC6, CYP1B1, ENPP3, EXT1, FARSB, GUCA1A, JAK3, JAM2, MAP4K2, NKX2-2, OR14I1, OR4X1, PIK3C2B, PIP5K1B, PRODH, QPRT, RHOD, STX7, THTPA, TUBA4A, ALDH18A1
Negative_2320	CEL, HK2, MET, TNF, AANAT, ACAD9, ACADVL, ASAH1, ATP5C1, BAAT, BCKDHA, CAMK2D, CD22, CSAD, CYBA, DDHD1, DNMT1, FBP1, GALNT5, GALNT6, GP1BA, GUK1, IFNA13, IFNG, ITGB1, ITGB5, LAMA3, MLYCD, OR4D5, OR4M2, OR6C74, OR6K6, OR9K2, PAPSS1, PCNA, PEMT, PIAS2, PIP5K1C, PLA2G10, PMM1, SEMA4A, SNW1, SV2B, TM7SF2, ATP6VOA2
Negative_2321	CGA, GDA, HPD, ID1, AADAC, ADH1B, ALG10, CCNG2, CMAS, DARS, E2F5, GGT7, GSTT1, HEMK1, IBSP, IDI1, ITGAM, MAT2B, MGAT2, NOTCH2, OR52H1, PTPN7, PTPRZ1, SEMA4G, UCP1, VANGL2, TNFRSF10D
Negative_2322	BAD, PML, ALDH1A3, CARS2, CCND1, CD36, CHKB, CHR1, CHSY3, CLDN2, CNGB1, COQ3, EFNA2, GLI3, GSTA1, HTR6, IL22, MYH10, MYH7, NKD1, OR52I1, OR5B12, OR5H6, OR6F1, OR7D2, OR8H1, PARS2, PER2, PLEKHA8, SETD7, SH2D2A, SMPD1, SOCS3, YWHAQ
Negative_2323	MPI, ABL1, FARSB, FGF8, IFNA7, RBL1, SPHK1, STAM

Negative_2324	PGP, ACSL5, ACVR2B, ADH1A, BMP8A, CCL3, CCNE2, CSNK1G2, CYP3A5, DUSP14, EDNRA, FGF23, GFPT1, IL22RA1, LAMB4, LARS2, MARS2, MDM2, NFYB, NOTCH3, NSDHL, OR4S1, OR5M9, OR6C6, OR6C74, PLA2G2D, PLCB3, PMAIP1, PP1A1, PROC, PSME1, SELP, SHC1, TBL1Y, VDAC3, MAPKAPK3
Negative_2325	AGL, GK, ACAT2, AGRN, BAAT, BMPR1A, BTRC, CHRM3, CRB3, CREB3, CTNNA2, CYP19A1, CYP3A7, EXTL1, FADD, FOXO3, FZD7, GCNT2, GSTM5, HPRT1, JAK3, MAP2K1, MAP3K11, MCCC2, MPP5, OR2T2, OR52E8, OR52I2, PDE1C, PIGA, PIK3R4, POLD2, SEMA3B, SLC27A1, MAPK8IP1, TNFRSF1A, TNFRSF6B
Negative_2326	F2R, NOG, ADH1A, ADIPOR2, ATP6AP1, BUB1, COL5A1, CTSG, CYP2C18, DARS, DGKD, GLYCK, GSTO1, HEXA, IRS1, MKNK1, MYD88, MYH6, OR4N4, OR52A5, OR52M1, OR6C74, OR7D4, PDE1C, PITX2, PRKX, RAB5A, RDH8, SNAP25, STAT1, SV2B, UCK2, PPARGC1A, SERPINA1
Negative_2327	ACOT12, DHRS3, DUSP4, GALNT6, GRHPR, GSTT1, LAMB1, MAP2K2, NRXN2, OR10A2, OR52E4, OR6C1, OR6K6, PLAU, PRIM1, PSEN1, PTDSS1, SPRY1, THY1, TNFSF11, TPMT, TUBA3E, YWHAQ, PHOSPHO1, PPP1R12A
Negative_2328	SMS, ATP5J, CD247, CYP19A1, GNAO1, GSTA1, IRAK1, OGDH, OR2G3, OR2L8, PRKAR2A, PTCH2, SEMA4F, WNT8A, CSGALNACT2, MAP3K7IP2
Negative_2329	GNS, SFN, ALG10, AMDHD2, AXIN2, BET1L, CD274, CXCR3, DDX4, DRD2, DUSP1, GALNT12, GLG1, GMPR2, GNAT3, GUCY2F, IL23R, IL9R, MAML3, MTMR1, NME7, NSD1, OR6S1, OR7A5, PIK3R4, PLA2G5, PLAT, PYCRL, RFXAP, UNC5A, ZAP70
Negative_2330	AQP7, COL3A1, HAO2, IL28RA, PAFAH2, PKMYT1, PRKCE, YKT6
Negative_2331	AGL, LTD, AMPD2, CD274, CD40, CTBP1, ENTPD5, FADD, GNMT, HAO1, IFNA8, ISYNA1, MAGI3, MYL5, P2RX5, PLCZ1, PRSS2, VAV3, ZIC2
Negative_2332	CRK, ID3, TEC, B4GALT6, GLI3, GSTM4, HSP90B1, MYLK, NMNAT3, SEMA3D
Negative_2333	MET, PGF, ADCY9, ARSA, ATP2A3, BLVRA, BLVRB, BNIP1, C4BPB, CASP9, CCD6, CD59, CFTR, CNTN2, COL4A2, CTBS, ECSIT, EIF4E2, EXTL3, F2RL3, FLT3, IGF1R, IL18, IL22, ITGA7, ITGAV, MGAT4A, MGST3, MTHFD1L, NLGN2, OR1J2, OR2T4, OR4M1, OR51G2, OR6C76, P4HA2, PIP4K2B, POLA2, RPN1, SLC27A5, STMN1, TNFSF12, TNFSF14, TRAF5, UAP1, UGCG, HSD17B12, ST6GALNA1, TNFSF13B
Negative_2334	AK5, TEC, CCR1, COX15, DDX54, FGF19, FZR1, IL28A, MAP3K4, OR10H1, OR2T8, PER2, PNPLA4, SARS, SLC27A5, SPHK1, THBS4, TSHR, ATP6VOA4
Negative_2335	F10, HK2, ACSS2, ADRB2, CACNG6, GRB2, IFNG
Negative_2336	CR1, ACADSB, ALDH3A2, ATP6VOC, AXIN1, CAMK2A, CBR3, CD79B, COL3A1, CSDA, CTBS, CTTN, DHCR7, DIAPH2, DVL2, FLT3LG, FZD6, FZD7, HNMT, IL23A, LCP2, LIPC, MAP2K4, MAP3K12, MECP, OR2G2, OR4C11, OR4X1, OR52K1, OR5M3, OR9K2, PAK7, PECAM1, PITX2, PPP3R1, PTPN1, RDH16, RPRM, SELL, SEMA3G, SMC1A, SNAI1, SRGAP2, ST3GAL6, TICAM1, TKTL1, TNFRSF4, TPH1
Negative_2337	CRK, FGG, ID1, JUN, STS, ACACA, ADCY9, ADH5, ALG8, AOC3, BMP5, CACNG5, CCL13, CD34, CDH1, CREB3, CRHR1, EARS2, FOXA2, GAL3ST1, GNA15, IL12RB2, IRF5, ITGB5, MAOA, MASP2, MTHFD1L, NCOR2, OR10AD1, OR14J1, OR4A16, OR4N2, OR8I2, PIK3C2B, PPP2R5D, PRSS2, PTCH1, PTGIS, PYCRL, SREBF1, TAS2R49, TOMM40, WNT9A, ATP6VOA2
Negative_2338	A2M, DCT, F2, IL9, ACHE, APPL1, ATP4B, BMPR1B, CCL21, CDC6, CRLS1, E2F2, EFNA4, ELK4, GSTO1, GZMA, HCCS, HSP90B1, HTRA2, LYPLA2, NANS, NAT5, NCR1, NT5C3, OR1F1, OR51B5, OR51E2, OR5A2, PDE9A, POLR2C, PRKAB1, RALF1, RALB, RENBP, RRAS, SPHK1, WNT16, ALDH18A1
Negative_2339	ALOX15, DHRS4L2, FGF17, IQGAP1, NRG1, PPA1
Negative_2340	GLA, CAMK2D, COL1A1, CXCL1, DAPK2, DHRS3, FGF17, GAD1, GCNT2, MAFA, NCR3, NUDT5, OR10K1, OR1J2, OR4D1, PARS2, PDE3A, PRKAB2, PTGES, PVRL1, SEMA3A, SETDB1, ST6GAL1, THBS2, WIF1, CSNK1A1L
Negative_2341	CXCL1, DDX51, EFN2, GALC, GNB3, GRIA1, KIR3DL3, OR1J1, OXTR, PAX4, SDC2, TAS2R5, THBS2, UNC5C, AASDHPPT

Negative_2342	AK1, FGG, MIF, ACPP, ACSM3, ADSL, AGRN, AMY2B, B3GALT6, BCAT1, CDK7, C SNK2A1, CTNNB1, ERBB3, FCGR3B, FLOT1, GALNT14, GBGT1, GFAP, GFPT1, G LO1, HARS2, HIF1A, IFT57, IL12A, ITGA10, ITGB3, LIMK2, NKX2- 2, NSD1, OR10G7, OXCT2, PDE5A, PHKG1, PIK3C2G, PTGES2, RAB23, RASA1, RPS6KA5, SEMA3B, STX3, THY1, TUBA4A, HLA-DQA2, HSD17B12
Negative_2343	F8, FER, RPE, ACTG1, ACVR1B, AOC2, ATP5C1, ATP5F1, B3GNT2, BAI1, BMP7 , C1QA, CCL16, CNTNAP2, DDX54, FDFT1, H6PD, HEXA, ICAM1, IL22RA1, MAM L2, NAT5, NRG1, NRG4, NT5C2, OR4Q3, OR51B2, OR51E2, OR6C75, OR8J3, OX SM, PIK3R4, PLA1A, PPP1CB, PRPS2, TAS2R4, TGFBR2, THTPA, UROD, WARS, WARS2, ATP6V1G3
Negative_2344	MPI, MPZ, AGPAT3, CCR4, COL3A1, GLDC, GL01, HTRA2, IL18, OR10C1, OR6B 3, OR8I2, POLA1, PRKCH, GABARAPL2
Negative_2345	ASL, DDO, F12, AGPAT3, ASS1, BCM01, BMP6, CTSL1, DUSP2, GAPDH, GIT1, G PT2, GRIA3, HTR2A, IRF3, MTHFR, OR10A3, OR10A4, OR10H3, OR52E8, OR5F 1, PPP2R1A, PTPRM, WEE1, SERPINC1
Negative_2346	ABL2, ALG13, ARRB2, C7orf16, CCNB3, CD79A, CHIA, CLDN17, EPB41L2, FA SLG, GMPS, GRAP2, MAGI2, NFATC2, OR2M3, PLCD3, PMM2, PRKCE, ROCK1, SU LT2A1, THBS2, WASF1, XYLT1, MAPK8IP3
Negative_2347	ALDOC, ANAPC1, CACNA1H, CD247, F13A1, FADD, FUT9, GAPDH, GBE1, HSPA2 , NMNAT3, OR1L3, PIGW, TAS2R8, TCIRG1
Negative_2348	GSR, MUT, ACTA1, AGXT2, BCM01, BMP8A, CDC16, CHSY3, CTBP2, DHCR7, FMO 4, FSHB, FZD1, GALK2, GLUD2, GMPR2, HYAL2, IL28RA, IL8RA, JAK3, NGEF, NUMBL, OR10S1, OR11G2, OR13A1, OR6C70, OR6T1, PIGM, PLA2G2F, PLA2G3 , PLD1, RND1, SCIN, SEMA4B, SHISA5, SMAD7, SNW1, STAT6, ATP6VOD1, PPP 1R12A
Negative_2349	ALPL, ATP6V0C, CCL14, CXCL2, DUSP2, DUSP3, GDF6, HGSNAT, HIBCH, IKBK E, ITGA10, MAPK14, MLLT4, OR1J4, OR51B5, OR5A2, P2RX1, PGAM2, PIK3R3 , PLTP, PRKY, SETD8, SLC12A2, TACR2, TD02, TICAM2, CSNK1A1L
Negative_2350	CACNB1, OR5AK2, OR5B17, PLXNB1, POLR2L, TLR2, VANGL1
Negative_2351	CTNNA2, HSPA2, JAM3
Negative_2352	CP, HGD, ABLIM3, B3GALT4, B3GNT4, CCL7, CTNNA2, CYFIP1, KLRC1, LYPLA 2, MIOX, MMP9, OR10G7, PCYT2, PLXNB3, SPI1, TLR9
Negative_2353	FOS, TPR, ABLIM1, ADCY5, BET1, CASP8, CCND1, CCR4, CLDN1, CMAS, CXCR4 , EDN1, EPHA4, FMO3, FRAT1, FUT7, GMPPA, GP1BA, HA01, HARS, HIF1A, HSD 3B2, IDUA, IL18R1, IL21R, IQGAP3, KCNJ11, KIR2DS4, LIMK2, LIPE, LRDD , NRXN3, OR2A14, OR5P2, OR9A2, PCCA, PHKG1, PHKG2, PPP2R5B, PTPRJ, RE TSAT, RPS6KA4, SLIT2, SOCS3, CSGALNACT1
Negative_2354	GCK, NOG, SHH, ZYX, A4GALT, ADCY1, ADRB2, ADSL, ATP5F1, ATP5J, AXIN1, BST1, CACNG5, CCNE2, CKMT2, CLTA, DDX18, DDX19A, ENPP6, FASLG, GCNT4 , GNB1, GOT2, GSTK1, HSD3B1, HSPB1, ITGA6, MDH2, MMP9, MYH2, NT5E, OR2 B2, OR5H2, PDGFC, PDGFRA, PIK3R5, PKMYT1, PMM1, PNPT1, RRM2B, SGMS2, SMPD2, SOS1, UCK1, WWP1
Negative_2355	ADO, GLA, IL5, MSN, PGD, ACAA1, ATP2A1, BDKRB1, CAPN2, CASP6, CCR10, C SF2RB, DDOST, EFNA3, FIGF, GGT7, GNB3, GPLD1, IL15, IL3RA, JAG1, MCM6 , NMNAT2, OR2M5, PAFAH2, PAK7, PHKA2, PISD, PLA2G1B, PPP1CA, PRSS2, Q ARS, SH2D1A, TACR3, UGT2B7, VANGL1, WNT8B, ZAP70, ALDH18A1
Negative_2356	BID, ADCY10, ARNT, B3GNT2, OR8J1, PLXNB1, PRKAG1
Negative_2357	ACMSD, AHCY, APLP1, ARHGEF2, ATP5E, AXIN1, BUB1B, CDC20, CNTF, CRY1, CYP19A1, FGF2, GLUD2, GMPR, GSTA2, HCLS1, HLA- DRA, HPRT1, IFNG, IKBKG, NAGA, OR4K15, OR52A1, OR6C74, RARA, RELA, SD C2, SGPP2, SH2D1A, SMC1B, ST3GAL3, YWHAZ, CTNNBIP1, PRICKLE2
Negative_2358	CRK, BET1L, SQLE

Negative_2359	ACAA1, AKR1C3, AMY2A, CALML6, CCL21, CCL4, CDC42, CDC45L, CNGA4, CYP3A7, DUSP2, EGLN3, EHMT1, FCGR3B, FMO4, FUT4, HES1, HSD17B3, HTR2A, IFNW1, IKBKE, NOD1, NOS3, OGDH, OR4K17, OR51D1, OR8K1, PPP2R2B, PRSS3, PTCRA, SFRP5, SLC2A1, TAS2R8, TGDS, VTI1B, WWP1, ST6GALNAC3, SUV42OH2
Negative_2360	C8A, HGD, IL2, ACSS3, ADCY6, AQP7, CCL2, CDK2, COASY, COL2A1, CSDA, CYSLTR1, E2F2, EXTL3, FGF3, FGF4, GCH1, GMPPB, HGSNAT, HSD3B1, IFNAR2, ITPK1, KAT2B, MAP2K2, NCOR1, NFATC4, NTF3, OR10H3, OR2M4, OR4C11, OR5L2, OR6C1, OR6S1, PAK6, PAPSS2, PARS2, PIK3C2B, SPTLC2, SV2A, TUBB6, YWHAZ, PPP1R12A
Negative_2361	ALPPL2, APH1A, ATP5J, CDC25A, CSNK1E, GOT1, GUCY1A2, HSD3B1, ITGA11, NUDT2, OR1L8, OR6B2, PLA2G10, RAPGEF3
Negative_2362	AK5, ACOT12, AGPAT4, APAF1, CCL22, CD82, DAPK1, GARS, OR4M2, OR7G2, OR8H3, PPP2CB, RASGRP4, SMARCA2, TNFRSF1A
Negative_2363	ABI2, HAGH, MIOX, NCAM2, OR52H1, PLEKHA8
Negative_2364	CKM, GPT, NGF, SRC, TNF, ABCC8, ATP2A3, BAI1, CER1, CNGA3, CSNK1D, DEGS1, EIF4E2, FLT3, GLG1, GNAS, ITGA2B, LAMB2, LDHAL6A, MAN1C1, MCCC2, OR10A7, OR13C5, OR5A1, OR9Q1, OXCT1, POLD1, POLE3, PPP2R5B, PRKCE, SHC4, SHISA5, SLC2A4, SPHK2, STAT3, SV2B, TAS2R8, TCF7L1, TRPM5, WARS2
Negative_2365	AKT1, CACNG7, DGKA, DOLPP1, EREG, EXT2, FUT5, GALNT3, GRIN1, ITPKB, JAK2, MGAT3, MYH6, NFATC2, NR5A2, OR4X1, SPRED1, TDO2, TLN1, UGCGL1, UROS, YWHAQ
Negative_2366	ACLY, BCAR1, CCNG1, ENTPD6, ITGB5, MYL7, OR8U1, SIPA1, TSC2, TYMS
Negative_2367	C4BPB, CTNNA2, CYP27A1, ENPP7, ETNK1, LLGL2, NOS1, OR5C1, RPS6KA2
Negative_2368	GP6, SYK, AGXT2, ALOX5, ARPC3, CD74, CHRM5, FABP1, FMO3, GSTM4, HLCS, NEFL, NFATC4, OR2B11, OR6S1, POLR3G, PPA2, PVRL3, RASGRP4, SETD7, SOCS5, SPRY1, TGFB2, TLR3, UMPS, SERPINA5, ST6GALNAC4
Negative_2369	BAX, TK2, AACS, ABLIM1, ATP6V0C, BDH1, BDKRB1, CRLS1, CXCL2, DCTD, DGUOK, DNMT3L, EGFR, FGFR1, GPLD1, GRIN2B, HLA-G, HSPA8, IFT57, IQGAP1, IRAK2, MCM3, MPDZ, OR10R2, OR3A2, OR6Y1, PIK3CG, PIK3R3, PON3, PRKACB, RXRG, SGMS1, SH2D1A, SOD1, SOS1, SOX17, SRGAP3, SSSX2IP, ST3GAL3, SULT2B1, TAS2R3, TPI1, TRAF3, TRPM5, PDCD1LG2
Negative_2370	CP, EPO, IL9, MPL, ABL1, ACADSB, C7orf16, CD22, CD44, CERK, CTSL1, DUSP14, EPHB6, GLUL, GSTM1, H6PD, HTR2A, KNG1, LRRC4C, MAP4K1, OR10G2, OR5AP2, OR7A10, OXCT1, PDIA4, POLR2C, PTPN6, TAS2R48, TPM3, TYMP, SUV420H1, TNFRSF13C
Negative_2371	FST, IL2, ACTA1, ADIPOQ, ATP5G3, CCKAR, CCL17, EIF4E, IFNA13, KLK3, LAP3, MAP3K14, MFNG, OR2A14, P4HA2, PIGF, PPP1CC, RRM2B, TRAF5, WASF2
Negative_2372	DBH, ID1, LSS, ACHE, ALPI, CACNG1, CCL2, CD46, CD47, CD79B, CLDN18, CLDN4, DDX55, DFFB, GMPR, GRIA1, HNMT, IRS1, MAP2K1, NLGN2, OR2F1, OR51B5, OR7D4, PIM1, PLEKHA8, POLD4, ST3GAL2, ST6GAL1, TAS1R3, TBXAS1, TFDP1, UBE2K, UNC5C, CSGALNACT2, PRICKLE2
Negative_2373	ALDH3A2, CCNB1, GDF6, GLI3, GUCY1A3, MITF, TNFRSF9, UBA7, ULBP2
Negative_2374	ZYX, FUT8, HSD17B2, MAGI3, NEFL, NRP1, OR8H2, PDIA4, PRKAR1A, RPS6KA3, UROS
Negative_2375	C1QA, CNTN2, NUDT12, SENP2, TIRAP
Negative_2376	F3, AKR1D1, CDC26, CMAS, CSNK1A1, FUT1, IFNA16, IL28RA, MAGI1, OR1M1, OR1N2, OR5P3, PGS1, POLR2D, SPHK2, TAS2R40, TLN2, TLR9, MAPK8IP2

Negative_2377	AR, ABCC8, ACVR2B, APLP1, BAI1, CCL25, CCNE2, CD36, CISH, CSNK2A1, EHMT1, ENTPD8, FOXA3, GAD1, GALNT8, GDF5, HSPB1, IL17A, IL22, ITPKA, LDHB, MAN2A1, MASP1, MYH14, NFYC, OR2B11, OR4C16, OR6M1, PAK3, PDE3A, PIK3CD, PLA2G3, SLC25A5, SMAD7, SULT1A1, TAS2R4, TCF7, TSC2, UBA7, ARHGEF12, PPARGC1A, TNFRSF17
Negative_2378	FGB, ACOX1, ANAPC5, ARNT2, COL4A2, IL10, KIR2DL4, NFATC3, PGS1, PIGH, RFX5, SELP
Negative_2379	ADK, AGL, AK3, B4GALT6, DUSP2, FUT8, GRLF1, GSTT1, HLA-DOB, IL13, ITGAL, LEFTY2, NRG2, OR51V1, OR52E4, PDE6H, PDXP, PIGB, PLA2G3, POLR3B, PPP1R3B, PTGS1, PTTG1, RRAS, SLC2A2, SNAP25, TAP1, TJP3, ATP6V0A4
Negative_2380	ANAPC10, ARSD, BCL2L1, CACNB4, CDKN2C, CMPK1, GALNT11, HNF4G, IFNGR2, JAM3, LAMC3, MAGI3, PLXNB3, PTK2B, PYGL, SGPP1, MAPKAPK2
Negative_2381	GDA, GGH, LEP, APOE, ARHGEF2, DGAT1, DPYD, FOXA3, ITGA10, LMO7, OR13C8, OR5F1, OR6K6, PIP5K1A, RPN1, ATP6V1G3, MAPK8IP1, MAPKAPK3, TNFRSF18
Negative_2382	AMH, CFD, IL3, LSS, PLG, ALAS2, ALG12, AXIN1, BDH2, CCDC6, CCL16, CCNB1, CRB3, CYP11B2, EPHB4, FUT9, GSTA4, HTR2A, IRF3, MAD1L1, MAD2L2, METTL2B, MGAT5B, MYL7, NOX3, OR14J1, OR2F1, OR5A1, PLK1, PRKAR2A, PRKCE, PTGER3, PTPRF, RHEB, SH2D1B, SREBF1, ST3GAL1, TAS2R48
Negative_2383	FN1, ACHE, ADH1B, COX10, DUSP2, FZD2, HCCS, HLA-DOA, LPAR1, NAE1, OR2G3, PPP2R5D, SMURF2, TUBA3E, TUBB
Negative_2384	CRLF2, GAL3ST1, NKD1
Negative_2385	CRH, ACADM, ADCY4, ADORA2A, AGXT2, ATP5B, C1QC, CCNB3, EPHB6, FADS2, FPGT, FRAP1, GPAA1, IFNA8, IFNAR2, LEFTY2, LGMN, MCCC2, NTNG1, OR2K2, OR4K13, OR4K2, OR51E2, OR52I1, OR7G3, P2RX6, PARD6A, PTEN, PTGES2, STAM2, TNFSF8, ULK1, B4GALNT1, CACNA2D2, ST6GALNAC6
Negative_2386	BAI1, CARD11, CD8B, IL10RB, ITGA9, PAX4, RUNX1T1, SMARCA2, STMN1
Negative_2387	AKT2, AOC3, B4GALT7, OR10A5, OR52I1, OR52N1, PFKP, PPP2R1B, PYGB, RFX5, RPRM, RUNX1, XYLT2
Negative_2388	ADC, LPO, ADCY1, ALPP, APPL1, BMPR1B, CACNB1, CDC14B, DHRS4L2, DUSP8, EGLN1, FCER1G, FUT7, GMPS, GOSR2, GSTM2, GUK1, IDH3A, MAN1B1, OR11H1, OR1S1, OR4F6, OR51L1, OR52R1, OR8I2, PDE5A, PFKFB1, PGAM1, PLAUR, PPAP2C, PRKCB, PRKX, PTGER1, SEMA3G, SETD1B, SUFU, TJP3, TNFSF8, CSNK1A1L
Negative_2389	LEF1, LRP6, MAP2K7, OR2H2, OR5A1, OR9K2, PIGL, SELE, HLA-DQA2
Negative_2390	HDC, LAT, LCK, TK1, ABL2, ACTN1, ADSL, ARNTL, ASCC3, ATP6V1D, BDKRB1, CACNA1B, CDS1, CHPT1, CMAS, CNTNAP2, CREB3L4, CSDA, CXCR4, ENTPD3, ERTL3, FGF4, GALNT11, GRHPR, HSPA1B, ICOS, IRF3, LARS, LTBR, NEU2, OR10G7, OR52E4, P2RX7, PARVG, PLK1, POLE, PPP1R1A, PRKAB1, PTPN1, SLC2A4, ZNRD1, PAFAH1B1
Negative_2391	TK1, TKT, ATIC, ATP5G2, CALML3, CASP7, CCNE2, COQ3, GPX5, IFNA17, IL17B, IL9R, LTC4S, OR1C1, OR52A1, OR5H2, PPAT, PPP2R2A, SGPP1, SKP2, SULT1E1, TNFRSF13B
Negative_2392	AK7, GBA, ARHGEF7, ARPC3, ASS1, ATP12A, BACE1, CALML3, COL2A1, DAD1, DTX3L, FCGR3A, FUT4, GNA13, IFNA17, IL10RA, IL17B, IRS1, LAMC2, NCAM2, NEFH, NEFM, NMNAT2, OR7C2, OR8B4, ORC3L, PAX6, PLA2G2E, PLCB2, PLK1, PON3, PSAT1, PVRL1, PVRL4, RPE65, SDC4, SETMAR, SNAI2, SOCS2, SUV39H1, SUV39H2, TUBA1C
Negative_2393	DHH, ABL2, CLDN5, CSF2RB, IFNA8, IL17RB, MAP2K4, MPZL1, PLAU, QPRT, SETDB1, SOS2



Negative_2394	ALG8, ALPP, CACNB1, CDK2, CXCR4, CYP2C8, EGLN3, EI24, FRAT1, GART, GP D2, IL12RB1, IL15RA, IL20RB, ITGB1, JUND, LIPF, NFKBIB, OR7G2, OXSM, PDHA1, POLR3D, PPA2, PPP2R5E, PTPN6, RDH16, RFX5, STX2, TSHB, VEGFC, ST6GALNAC5, TNFRSF13C
Negative_2395	CGN, NPL, PGF, CCL1, CDC2, F2RL2, FGF21, GSTM5, IL22, IL9R, OR10AD1, P FKFB1, SLIT1, TOLLIP, WNT3, ST6GALNAC6
Negative_2396	IL9, ABP1, AGRN, CD82, CLDN8, CLTCL1, GCNT3, GNAS, GNG13, IARS, INPP5 E, MAP3K1, MMP14, NCF4, PARD6G, PDGFRB, PDHB, PDX1, PROS1, RXRG, SORB S1, SPTLC1, TCF7L2, THBS2, TLR5, TUBB2C, UNC5C
Negative_2397	ITGA9, LEFTY2, PTDSS1, ST3GAL4
Negative_2398	AKRIC2, ARHGEF2, B3GAT2, CACNA1H, CLDN22, COASY, CREB1, CSF1R, DDX4 , DGKI, GAD1, GUCY2F, OR10G8, OR10K1, OR13J1, OR1C1, PFN2, PLA2G5, RE RE, RPS6, SLC27A4, STX3, SUFU, TAS2R50, TBL1X, TGFB2, TOMM40, HSP90 AA1
Negative_2399	AGL, DBT, ALDH5A1, CHEK1, CXXC4, DUSP2, FCGR3B, IMPDH1, INPP5B, LTBR , OR3A2, OR4F6, PNPLA3, PPP1R3B, TAS1R1, TFDPI
Negative_2400	CD6, GSS, LCT, ABAT, ACACB, ALDH3A2, AMD1, B3GNT3, CCL24, CD70, EPHA5 , FABP1, GADD45A, GMPPB, GNA14, IDUA, MAP3K1, MARS2, MPZL1, OGDH, PIK 3R5, SLC27A4, SV2A, UBE2L3, UBE2L6, VEGFC
Negative_2401	A2M, C4B, SMO, ADH4, BDKRB1, BIRC3, BUB1, CDKN1C, CKS1B, CTTN, DAPK2, DGKI, ENTPD6, FGF22, FM03, GFAP, GGT1, GSTA4, KLRC4, MYL5, NARS, NOTC H1, OR1E2, OR2AT4, OR4C11, OR4C13, OR5AU1, PAPSS1, PER2, PRKCH, PRKG 2, PROS1, RAB5A, RASSF1, SHISA5, SPCS3, STAM2, SULT1A1, TGFA, TPH2, T UBA1A, TUBA8, ST6GALNAC5
Negative_2402	KIT, CX3CR1, IRS1, MYL5, OR10Z1, OXSM, PRKACB, PRKAG2, SETD2, THBS4, TRMT11, WNT7A, YARS2
Negative_2403	C8A, ACAA2, ACPP, AKRIC1, ALDOC, CASP8, F2RL1, GRIN2B, IL6ST, ITGB7, MGAT4B, OLR1, OR6C4, PDGFB, RBL1, TSLP, WASF1
Negative_2404	CD4, F9, ADCY4, ALCAM, BDKRB1, CD19, CHRM2, CYP2U1, DCTN1, ENO2, GRIA 2, MAP3K6, MTMR2, OR4C46, OR4M1, PCCA, RARS2, TYK2, UCP1, PRICKLE2
Negative_2405	ACSS2, CD34, DVL3, PNLIP
Negative_2406	BCR, EGF, LHB, TEC, AADAT, ACY1, ALDOC, ATP5G1, CCNG2, CD86, CDH1, COL 4A2, CYFIP1, DDX41, EPHA4, F13A1, F13B, FCGR2B, FZD3, FZD5, GALNT12, GNAO1, HMGCL, HTR2A, IL10RB, ITPKA, MBL2, MTHFD1, NFATC3, OR52B6, OR 52W1, PDE3A, PER1, PLXNA1, PPARA, PRKAB1, RETSAT, SPTLC1, SUCLG1, TA S1R3, TNFSF10
Negative_2407	LPL, UBC, APOA2, C1QB, CACNA1B, CCR5, CMPK2, COL4A1, CSNK1G3, EPAS1, FZD4, GJA1, GPLD1, LAMC2, LTBR, MCM5, NT5C, OR14J1, OR1L8, OR2AG1, OR 4K2, OR5F1, PIGM, PIGS, PLA1A, PLCE1, PON1, SHISA5, SPTAN1, SSX2IP, S TX12, UCK1
Negative_2408	ADH6, ARSE, CALML6, CCL11, CYP11B1, DARS2, DCTN1, ENTPD2, ESPL1, FGF 7, MDH2, NTNG1, PARD6B, PLCG1, PPA2, TRAF2, WNT16
Negative_2409	ACAA1, ACSM3, B3GAT2, BAIAP2, CACNG8, CCL25, DGKI, DOT1L, HAGHL, IDI 2, LYZL1, MTHFD1, NFKB2, OR4C12, OR51F1, OXSM, PDGFC, PIK3C2A, RHOA, VAMP3, SERPINC1, TNFRSF1B
Negative_2410	ACPI, BNIP1, FM01, HRH1, IL22RA2, LAMA4, MAPT, NUDT8, OCLN, OR10V1, O R2T5, PAK6, PPP2R2A, RASGRP2, STAT3, STX2, TPH1, TYRP1, WEE1
Negative_2411	CCL15, CHSY1, DHDH, SPCS1, STK36
Negative_2412	ADA, ADCY2, ADH6, CASP10, CDIPT, CIITA, CXCR3, DEGS1, EPHA1, EXTL3, F PGS, FZD1, FZD3, GNAI2, HNF1B, IL10RB, IL15, IQGAP2, ISYNA1, KITLG, L AMC1, MAPK9, NCKAP1, NCR3, NFATC3, OR10H1, OR1G1, OR4P4, OR51E2, OR5 1V1, OR6C6, PDE4C, POLR3B, PPP2R1A, PPP2R5B, PRKAA2, PRSS1, PRSS3, R DH16, RDH5, TAS2R1, TNFSF4, WNT9A, YWHAB, PNLIPRP1

Negative_2413	AK2, F11, HAL, IL2, ACTG2, ADAM10, B4GALT7, CASP6, CD8B, CYP3A4, ESPL1, ETNK2, FGF1, GALNTL5, GBE1, IFNGR1, JAM2, LCAT, MAP3K4, METTL2B, NCOA4, OR4N4, OR7G1, PFN2, POLR2I, RAB5A, RASA2, RBX1, UROD, UXS1, WNT8A, PPARGC1A, SUV420H2
Negative_2414	ADC, ATP13A2, DEGS1, GJA1, HLA-DMA, HSD3B1, IRF9, LIPG, OR1J2, OR2T1, OR4C6, PDE7A, PDE8B, PIGX, PKM2, POLR3D, SH2D1A, SLC2A2, SMAD6, SMC1A, SPRED1, TCIRG1, UGT2B28, PAFAH1B2, PRICKLE2, SERPINF2
Negative_2415	CGN, GCK, ACHE, APOA5, ARHGEF7, CACNG7, COX10, FGF23, FGF9, HBEGF, HNF1B, IFNA21, IFNA5, INPP4A, KYNU, LIPC, LTBP1, MAGI2, MAN1A2, MS4A2, NCAM1, NT5C, OR2G2, OR4K1, OR52L1, OR6A2, PDE5A, PIAS1, PRKAB2, PRKCB, RELA, SHC2, SOCS7, SULT1A4, TAS2R3, TFDP1, TIAM1, UGT1A10
Negative_2416	GPI, PGP, TNC, AARS, ACP2, ACTC1, CLDN10, CXCL16, GAD1, GYS2, NUDT9, OR51I2, PIAS3, PLK1, POLR2E, PPCDC, QPRT, RAB5A, RASGRP3, SRGAP2, TAS2R50, UGT8
Negative_2417	AK2, GSN, IVD, AGXT, ALDOB, CACNG6, CAMKK2, CCR7, GALNT10, HSPA8, IL7R, KRAS, LRP5, MAPK13, MASP1, MCEE, NLGN3, OR4S1, OR51Q1, PAICS, PENT, PRKCD, RAF1, RBPJL, SELP, SH2D1A, SMAD1, SORBS1, TBL1Y, TGDS, TUBAL3, WARS, ATP6V1G2, PDCD1LG2
Negative_2418	LTB, AGPAT1, ALDH3B2, APOE, ATP5G2, BCMO1, CAMK2B, CCL11, CDC25C, CHUK, DGAT2, ENO2, FMO4, FUT8, FZD3, GALE, GSTM5, HCLS1, HIBCH, IARS, INPP5E, KCNB1, MAP3K12, OR11H4, OR2AT4, OR2T8, OR4P4, PDGFRB, PFN3, PGAP1, PIGP, PLAU, PPP3CA, PTGS2, RRM2B, RUVBL1, SOCS2, TAS2R3, TUBA4A
Negative_2419	ABL1, AGXT, AMY2A, ASPA, ATF4, ATP5H, CCL24, CCR6, CD36, CHRM1, CYP26C1, DLL3, FLAD1, GALNT9, GBGT1, HLA-DOA, ITGB6, MAPK8, NEUROD1, NKX3-1, NME7, OR12D3, OR2T29, OR8D2, P2RX2, PAK3, PGAM2, PIK3R1, PLA2G5, PID, SKP2, SPTAN1, STK3, STX4, TACR1, TAS2R10, TAS2R60, TJP2, TM7SF2, TPK1, UPP1, VDAC2, HLA-DQA2, MAPK8IP2, MAPKAPK2
Negative_2420	GNS, GP6, CD27, CPT1A, IBSP
Negative_2421	ITK, AACS, ACO1, ACVR1C, AKR1C3, B4GALT1, CAPN2, CCL1, CCL3, CFLAR, CHR5, COL4A4, CYP2D6, FGF22, HSPB1, IL1R2, INPP1, NCAM1, NFKBIE, NMT, OR52E2, OR5H2, OR9I1, OXCT2, PDXK, PIGH, POLR3K, PRKCD, RUVBL1, SFRRP1, STK3, TAS1R1, TRIP10, UGT2B10, MAPKAPK2, ST6GALNAC4, TNFRSF11A
Negative_2422	LPL, STS, ACOT12, ADRB3, B3GALT6, CACNA1H, CCR4, CD226, CSF1R, DDHD1, E2F4, GNPDA1, HAGHL, IL13, INPPL1, ITGAE, NMNAT3, NR1H3, OR10H4, OR2A42, OR2AG2, OR4C12, OR52A1, OR9Q2, PDE4B, PDIA4, PHKA1, PKM2, PRDX6, PTPN11, TICAM2, TLR2, UCP1, ATP6VOA2
Negative_2423	AKR1B10, CHD8, GAD2, OR4C6, PLCZ1, PYGB, TAS2R38, WIF1, TNFRSF6B
Negative_2424	SCD, ACSL6, ADH7, ADSSL1, BDH1, C7orf16, CREB3L1, DRD1, ERO1L, GALNT11, OR12D3, OR1D2, PHGDH, PRKACB, PTCH1, SHISA5, SLC27A4, SPRED1, STEAP3, TAS2R49, THBS3, TP73, UROC1
Negative_2425	AK3, GP5, AKR1B1, ALG12, AOX1, BTRC, CCL13, CLTB, CNTN1, DERL1, EFNA4, ETS1, GRIA2, HRH2, ICAM2, MAOB, OR52L1, PYCR2, TGFB3, CSGALNACT2
Negative_2426	C8G, CTH, F2R, SRC, TAT, TKT, ADCY4, ADORA2A, ALDH9A1, APC2, BET1L, CACNA1H, CAMK2A, CDC14A, CFLAR, CREB3L3, DDHD1, EDNRB, FZR1, GADD45G, GART, HSD3B1, IFNB1, LCP2, LTB4R2, MAT2B, NFATC2, OR11H6, OR2M4, OR2V2, OR4P4, OR9K2, PDHA2, PIK3C3, POLA1, POLE2, PPAP2C, PPP2R1A, SSSX2IP, TAS1R1, TMLHE, TRDMT1, WHSC1L1, WNT2, CACNA2D3, MAPKAPK3
Negative_2427	GDA, BCKDHB, BDH1, CDC14A, CXCL10, EFNA1, FABP4, FMO3, GALM, NRXN1, OR10J3, SPTAN1
Negative_2428	DLD, BMPR1B, DDX51, EFNA1, GADD45A, HADHB, MKNK2, NEU1, NFATC4, PLA2G5, RGS3, SHC1, TXNDC12

Negative_2429	GP6, MET, ALDH3B1, AMY2A, CDC45L, CHR1, CX3CR1, DDX4, GARS, GLUD1, IL20RB, NKX6-1, OR10J1, RASGRF1, RBPJ, RPS6KA2, RRM1, SETD1B, ST3GAL2, STX10, SUV39H1, PHOSPHO1
Negative_2430	CACNA1B, GAL3ST1, OR6C6, RBKS, SRGAP2, TPMT, TYMS
Negative_2431	IL2, SDS, ADH7, ALG13, ALG2, B3GALT4, CCNE1, CD01, COL4A4, DVL3, GGBT1, GGCX, GNA12, GNA13, INPP4A, IRS4, MAP3K14, MAP3K6, MAP3K7, MTFMT, NT5C1A, OR10G3, OR1J2, OR2F1, OR2T10, OR4K17, OR52L1, OXSM, POLE, POLR1A, PPP2R5D, SGPP1, TPH1, TSC1, WASL, HSP90AA1
Negative_2432	AKT3, B3GAT1, GAB1, GNPDA1, KIR2DL4, NCOR1, SRGAP3, STAT3, STX3, TUBB2A, WNT2B
Negative_2433	FGB, LAT, SHH, TK1, ALDH5A1, ALPI, ARHGEF4, BDH2, C4BPB, CD79B, CDKN1C, COL5A3, DGKA, ENPP3, EPHB2, FGFR3, GGT7, GSTK1, HAGH, HIBCH, ICAM3, IL13, IL5RA, KIR3DL3, LDHAL6B, LTA4H, MARS, MTHFD2, MYH2, MYH9, NAT6, NKD2, NME4, OR2C3, OR2T2, OR6K6, OR9G1, PARS2, PDE11A, PIGP, PIGQ, SIAH1, SLC27A1, SPTLC2, ST6GAL1, SUCLG1, TRAF2, TUBA1A, WWP1
Negative_2434	F12, MUT, AKT3, ALPL2, FLT3, GALNT9, GFPT1, LAMB1, OR8S1, PAPSS2, RRM1, SV2B, TP73
Negative_2435	AGRP, HARS2, MAP3K5, MGAT4B, NKX6-1, OR8J3, PANK2, PYGM, SPAM1, HLA-DPA1, SERPINA5
Negative_2436	CS, TNN, ALDH1A2, CSDA, EDA2R, GALNS, GRIN1, PDE1A, SDC4, UGT2A3
Negative_2437	ACSS1, ADH6, ARNTL, ARPC1A, B3GALT6, CAMK2B, FMO3, GCNT3, HDAC1, HLAG, KIR3DL2, NAGA, OR10Q1, OR2L8, OR2T33, OR4N2, OR5K2, OR7G2, PAK3, PAK6, PKM2, POLA2, POLR3K, PPP2R1A, RARA, RRAS2, SARS2, STK3, STX2, TIAM1
Negative_2438	ACLY, ACOX1, ACPP, AMD1, AMDHD1, ATP2A2, CAMK2D, COQ6, CYBA, DHDH, EC1SIT, FPGT, GUCY2D, IL18, IL28A, ITGA7, ITGB4, MAP3K4, NFATC2, NT5C, OR10A6, PDXP, PIAS2, PLAU, PMM2, RDH8, SETD2, SETD7, SUCLG1, TM7SF2, TP53I3, TRAF3, TUBB, UGCGL2, WNT2B, YKT6
Negative_2439	CD2, EBP, F8, ID4, RET, APOE, ARHGEF6, CDC20, CX3CR1, CXCR6, DDX18, DGKQ, F11R, INHBC, INPP1, ITGA10, MTMR2, MYH7B, NCF4, NEFH, NKX2-2, NME7, OR12D3, OR13C3, OR52N5, OR5K2, PISD, PLCD1, PPAP2C, PPP1R1A, PSME1, PTCH1, RBL2, RPS6KA5, SOCS7, SQLE, STX10, STX1A, TACR1, WBSCR17, WNT10B, TNFRSF13C
Negative_2440	C5, SRM, TEC, TNF, BTRC, CCL26, CCNG2, CSH1, CXCL16, DDHD1, DDX41, DDX47, DNMT3B, GPD1L, GYS1, IFNA21, MAPK14, MAT2B, MGAT4A, NMNAT2, OR10X1, OR11H6, OR2G6, OR2T34, OR52I2, OR6N1, OR6Q1, OR8H1, OXSM, PANK3, PDE4D, PGK2, PLCG2, POLR3A, PTSS1, RARS, RASGRP3, RND1, SMAD7, SPTAN1, ST3GAL3, TIAM2, TP73, TUBA1B, TUBB2B, YARS, TNFRSF10A
Negative_2441	DDC, IL3, IL7, ACSL4, AHCYL1, ALOX12, ALOX5, ARG1, CACNA1F, CADM3, CD19, CHAD, CHRNA7, CREB3L4, CYP2S1, DDX23, DVL3, EARS2, GFPT2, GOT1, GSTA1, HBEGF, HLAG, HNF1A, HNMT, MAP4K1, MAPT, MPDZ, NAGLU, OR2L2, OR2W1, OR4A5, PLCB4, POLR3G, PTK2, SDHA, SFRP4, TAS2R41, TUBA3C, PNLIPRP2
Negative_2442	ALDH2, ANAPC2, ATP5C1, B4GALT6, CCR2, CHEK2, ENPP7, F13A1, FGF2, GALNT5, HCST, ITGAD, ITGB1, LIPE, LIPF, MAP3K6, MGLL, MTMR6, NCKAP1L, NT5C1A, OR2D2, OR4A5, OR52J3, OR8I2, ORC6L, PAX8, PHPT1, PIM1, PON1, PPP2R1A, RAC2, RPRM, RPS6KA6, SULT1E1, TAS2R50, TCF7, THBS3, UNC5A
Negative_2443	C2, AVPR1B, CSF3R, DDX56, GSTM4, IL17A, MAP3K4, OR5L1, PI4KB, STX7
Negative_2444	C8G, TNN, ALAS1, APC2, APPL1, ATP6AP1, CASP8, CCDC6, CCND2, CYP3A4, GCNT1, GDF6, HARS, IL11, IL29, KYNU, LTBP1, OR1E2, OR4F5, OR6C74, PDIA4, PON3, PPP2R1A, RASGRP2, RFX5, TALDO1, ULBP3

Negative_2445	B3GAT2, CAPN2, CHST11, COX10, DLL3, FARS2, GRIN1, IFNW1, PRKAG3, RHEB, SETDB1, TP73, UGP2
Negative_2446	ACSS2, ARNT, ATP5G2, CHIA, ENTPD3, EPHB1, HMGCR, HTR6, IL1R2, LARS2, LIPG, MAP2K5, OR51L1, RPSA, STX5
Negative_2447	DLD, GSN, LPO, ADCY3, ADRA1A, ALDH1A1, APAF1, DBF4, HIBCH, IMPA1, MAD2L1, OR11H1, OR6Q1, PDE6D, PIAS1, PTDSS2, SELP, TUBA1B
Negative_2448	CBS, EDA, LPO, MAX, ACO2, APBB1, DFFA, DHRS4L2, FGF21, GALNT11, IRAK2, LHCGR, LILRB3, MYD88, MYH10, OR13C8, OR4S1, PDE3A, PLCG1, PLTP, RAS A2, SSH3, STAM2, SUCLG2, TACR2, WARS, YARS, ATP6V1G1
Negative_2449	BTK, AGMAT, APOA2, ATP2A2, ATP5L, BMP4, CLDN3, COX15, CPOX, CRLS1, DD X18, DKK4, FZD5, GCLC, GNB3, HAGHL, IL22, ITGA6, JAK2, KDSR, KRAS, LARS2, LIPE, MAP3K12, MTHFR, NEU1, OR10V1, OR2D3, OR51B5, PHKG1, PPP1CC, PPP3R1, RXRG, SEMA3B, TAS2R10, THBS1, TKTL2, UCP1, VKORC1, TNFRSF13C
Negative_2450	ATG7, ATP5H, FGF4, FIGF, OGDH, OR8B8, POLR2B, YWHAE, HSD17B12
Negative_2451	C2, C5, CAD, CDA, IL3, IL9, ADCY7, ALS2, ANAPC7, ATP50, BMP4, CCL13, COL5A1, CXCL12, CXCR4, CYP11A1, GLI3, HARS, IL23A, IL8RB, MAP2K2, MFNG, NADSYN1, NRG4, OR1D2, OR1D5, OR2T3, OR51F1, PCK1, PDE1B, PDE6D, PER3, PFKFB3, PGS1, PIGB, PRKAR1B, PRKCH, SARS, SLC25A4, TAS2R40, TAS2R49, WASF3, HSP90AB1, MAP3K7IP2
Negative_2452	HGF, ID4, MUT, NNT, ABCC8, ACAD9, AGMAT, ALPL, AMDHD1, ANAPC7, ARHGEF2, ATP5E, BNIP1, CACNB4, COQ3, CXCL9, DCTN1, FPGS, GNA13, GNMT, HES1, KIR2DL1, MALT1, MAML2, MMP2, NUDT2, OR2H1, OR2T6, OR3A1, OR51I1, OR5V1, OR6M1, PDGFRA, PLOD3, PRPH, PRPS1, PTGES2, PYCRL, RAPGEF2, SPCS3, STAT5A, STX4, SULT2A1, TGDS, TGFB2, HLA-DPA1, SERPINE1, SERPING1
Negative_2453	CD79A, HCST, MAPK7, NCAM1, OR51T1, TPI1
Negative_2454	FST, IL3, OSM, RDX, ACTN1, ALG6, ATP5F1, BTRC, CDC25C, CSNK1E, DUSP5, E2F1, GCDH, GCNT4, GNAI2, GNAT3, MYL9, NTN1, OR2A2, OR4E2, PLCB1, PPP2CB, SLC25A5, STX2, TAS2R50, TNFSF14, TUBA3E, UGT2B7
Negative_2455	SMS, ARPC5L, CACNA1D, CXCR6, MAP2K5, NOTCH1, NQO1, OGDH, OR52B6, PAR3, PKM2, PRKACA, PRKCH, RDH5
Negative_2456	OTC, SP1, CD72, CPT1A, CXCL6, KYNU, MYLK, OR2T10, RELA, TUBB2A, TYROBP, YES1
Negative_2457	CEL, FZD1, IFNA17, OR6K2, PAK4, PIGL, CTNNBIP1
Negative_2458	AK1, AGPAT2, B3GNT3, IFNA13, IL9R
Negative_2459	BPNT1, CAV3, CREB3L2, CXCL3, ECSIT, KIR2DL1, METTL6, OR9A2, PAX6, PDE1C, PI4KA, SEMA4C, SNAI1, TRAF3, TNFRSF10B
Negative_2460	EZR, ATP6V0B, BCL2, BMPR2, CDC23, CLDN5, COX15, CSNK1D, CYP11B1, CYP2C8, DHCR7, IARS2, IFNA7, IMPDH1, IRAK2, JAG1, MAPK1, NUDT12, OR10A7, OR13A1, OR2AG1, OR2T33, OR2T34, OR4C15, OR4P4, OR52A1, ORC3L, PCK2, PGAM2, PLAU, WARS2, PAFAH1B2
Negative_2461	AK5, AASDH, ACTG1, ALOX15B, APC2, ARHGAP5, C9orf95, CHEK1, CLCA2, CLDN18, CXCL9, DDB2, EPHB4, FCGR3B, FGF12, FGF13, GADD45B, GALE, HRH1, IL13, IL22RA2, IMPA1, LIPG, MGST1, OR10X1, OR2A4, OR2M4, OR2T10, OR51L1, OR52N5, OR5D13, P4HA1, PPARG, PPP3CA, PRIM1, PRKCE, SLC33A1, TSXC2
Negative_2462	TAT, AADAC, ACLY, CCL20, CCNG2, CSNK2B, FTH1, GSTA3, GYS1, NEU4, SMAD4
Negative_2463	AGRN, GMDS, IL17RB, PPP2R1A
Negative_2464	A2M, C9, F10, GGH, TPO, ALG11, B4GALT6, CACNG4, CLDN19, DHDDS, DIAPH2, DNMT3L, EI24, EIF4B, EPAS1, FGF11, FZD8, GALC, GUCA1A, IL1R1, ITGA2B, METTL2B, OR12D3, OR52E2, OR52I1, OR52K1, PIGC, PLAT, POLA2, POLR2C, PRKCZ, RASGRP3, SKIV2L2, SPRY3, SERPINA1

Negative_2465	AR, BID, CD4, CRH, MAX, APOA5, ATP5G2, B3GALT4, BST1, C3AR1, CHPT1, CLDN14, CNDP1, CYP2J2, DGKA, DPYD, DUSP4, GLUD2, GPLD1, HPSE2, LAMC3, MAPK7, NOTCH2, NT5C, NTRK1, OR2V2, OR52N5, PDE3A, PER1, PGAM4, PLCB1, PON2, PPT1, PTPN5, TNFSF12, TUBB2C, UNC5B, ATP6V1G3, PPARGC1A, ST6GALNAC6, TNFSF13B
Negative_2466	MYH7B, SH3BP2, SLC27A4
Negative_2467	TPO, ACVR1B, CAMK4, CD247, NCR2, OR6Q1, AASDHPPT
Negative_2468	TNC, ACHE, ADORA2B, B4GALT2, BRAF, COQ3, CXCR5, CYP2D6, DHFR, EPHB3, EXT2, FARP2, FCGR2B, FGF12, GLS2, HEMK1, IKBKG, LLGL2, MCM3, NFE2L2, NOS1, NTF4, OR4D6, OR5B21, OR5V1, PAFAH2, PDE11A, PDGFC, PDGFD, PLAT, PPP2R5C, PPP3CB, SETDB2, TD02, TUBA1A, UXS1, WNT2B, PRICKLE1, TNFRSF13C
Negative_2469	FGF3, KAT2B, NME4, OR2T5, SEMA3B, SMAD9, STAT3, WNT6
Negative_2470	CGN, AANAT, AGPAT6, APOA2, ATP4A, BLVRB, CACNA1A, CASP10, CCR2, DDX50, EFNA2, F13B, GRIN2A, GUCY1A2, HRAS, IL1A, ITGB1, LDHA, MTHFS, OR10V1, OR2T33, OR6N2, ORC1L, PMM2, PRKAR2B, RIPK1, RPS6KA3, SH2D1B, SMC1B, SULT1E1, TALD01, TLR2, MAPK8IP1, PDCD1LG2
Negative_2471	EDA, ACTG1, AGPAT1, ALOX15, ARG2, ATP6V1A, BCKDHB, CTNNA1, FARSA, IFNA2, IFNA6, IKBKG, IL15, MYL7, OR2K2, OR51V1, OR5T1, PAK1, PDE7A, PKG1, PHKB, PHKG1, PLCD4, RBL2, RPE65, SREBF1, TAS1R1, UCP1
Negative_2472	GPT, ADCY1, ADRB2, CD01, CES1, CHEK2, DDHD1, DPYD, ENTPD2, IL17RA, IRF9, KLRC2, LAMC3, MAP2K3, MCM5, MKNK2, MYH15, NAE1, NPR2, OR10G3, OR14C36, OR1E2, OR4D5, OR52E6, OR5M8, OR7G1, PLXNA1, POLE2, POLR1B, PPP5C, SNAI2, STX7, TYROBP, XYLT1, ARHGEF12, KIR2DL5A, PNLIPRP1, PPARGC1A
Negative_2473	CKM, CRK, RDX, BTRC, CALML6, CASP8, CD14, CDC26, CHAT, CHST11, CLDN7, CPOX, CSNK2A1, CTNNA3, CX3CL1, DGKA, DGKH, DGKQ, DUSP1, ENAH, GALE, GALNS, GALT, GGT1, IARS, IFNA7, INSR, ITGA1, MGST3, NRXN3, OR13G1, OR4S1, PDE3B, PDXP, PLCB4, RBL2, RBX1, RPE65, SOAT2, STX12, TMLHE, TRMT11, CACNA2D2, HLA-DRB4, HSD17B10, TNFRSF11A
Negative_2474	LCK, PLG, ARPC2, ATP2A1, CTNNA1, CX3CR1, CYP2C19, ENTPD4, EPHA6, FBP2, FGFR1, FZD4, GGT5, GJA1, HAGH, HSD3B1, IFNA14, IGF1, INPP5B, KITLG, KNG1, MGST3, NLGN2, OR1L3, OR1L8, OR2T2, OR52L1, PCCB, PSAT1, RDH5, STAT1, STK4, TNFRSF8, UGCGL1, PHOSPHO1
Negative_2475	ATF4, BCL10, COQ6, EPHA6, GUCY2C, HIF1A, TSTA3
Negative_2476	CCL24, OR52B4, SFRP4
Negative_2477	WAS, ADRA1B, ALPP, BRAF, CACNA1B, CDKN1B, CLTCL1, DVL1, EPB41L3, FPGT, IDI1, IFNA14, IL5RA, IMPDH1, INADL, KLRC2, LRRC4C, MAP3K14, MAPK9, MCM5, OR10G7, OR2T11, OR4F5, PANK4, PAPSS1, PARD6B, PCCB, PFN4, PGAM4, POLR1C, PPCDC, PSEN2, PVRL4, RBKS, SEMA3F, TOLLIP, VANGL2, B4GALNT1, CACNA2D3
Negative_2478	DDO, PAH, ACAA1, ACSS2, ALAD, APPL1, ARRB1, BST1, CD79A, CLTB, CNGA3, COX10, FGF20, FGF5, GNAI1, GYS2, ITGA3, LIPC, MADCAM1, NRXN1, OR52A1, OR6C3, PFKFB1, PPARA, PPP1R3A, RCHY1, RELB, RHOA, SCD5, SELP, SULT1A4, THBS2, THBS4, TPH1, TUBB4, UROS, VDAC1, VKORC1, WASF1, ZIC2, ATP6VOE1, ATP6V1C2, B3GALNT1, ST6GALNAC5
Negative_2479	C7, SRC, ADCY8, ANGPTL4, B3GNT5, CNTF, CRB3, DDIT3, HPRT1, IGF1R, LIPF, MYH7B, NOS3, OR4K15, PCNA, RALBP1, ST3GAL3, WARS, YWHAE, SERPIND1, TNFRSF14
Negative_2480	CUL1, LIPF, MAP2K7, POLA2
Negative_2481	C5, DCN, ARPC5L, ARRB2, B4GALT2, C1QB, CACNG2, CCL21, CD8B, CHST12, CREB3, DGAT1, DPM1, FGF9, GUCY1B3, GYS1, IFNW1, MFNG, NFATC1, NFYA, OR4D9, OR52E4, OR52E8, PLXNB3, PTGIS, RPRM, SLC25A4, ST8SIA5, STX2, TAS1R3, TD02, TFDP1, THY1, TKTL2, PLA2G12A, PPP1R12A, SERPIND1

Negative_2482	GPT, OGT, TFG, TNF, AGTR1, AHCYL2, ALDH2, ALDH3B1, BLVRB, CAMK2A, CDC26, CHR1, CHRM1, CXCL5, CXCL6, CYP3A7, ECHS1, FTMT, GADD45A, GBA3, GFAP, GGT1, GNAT3, GNPDA1, IL20RB, IRAK2, JAG1, JAK2, JUND, MAP4K1, MIOX, NCR1, OR2M7, OR52R1, OR5F1, PARVA, PIP4K2A, PSME1, RDH5, SLC2A1, TICAM2, TUBB2B, TYMS, VEGFC, PDCD1LG2
Negative_2483	FST, CCL4, CHRM2, EGFR, OR11L1, OR2H2, OR4D1
Negative_2484	HDC, IL3, ACSL3, ALS2, APBB1, CASP9, CCNE2, CHRM5, DAPK2, DRD1, EHMT2, EIF4E, GAD2, GGT5, GUCY2C, ITGA11, MAPT, MYL2, NR5A2, OR10T2, OR2A25, OR4D5, OR5A1, OR8H1, PDE4B, PDXK, PPP2R2B, PROS1, SHISA5, TIAM1, UGT2B28, ATP6V1E2
Negative_2485	CR2, EDA, GP6, TFG, XDH, ACVRL1, ADH1A, ARHGEF4, BIRC5, CCL28, CCR4, CFL2, CIITA, CREB3L3, CSNK1E, CTNNA1, CYP2C19, DFFA, DOT1L, EPHA1, GAB1, GAS1, GRAP2, GSTK1, HTRA2, MAGI3, NEFH, OR13F1, OR2T11, OR4D2, OR7G1, OR8S1, P2RX6, PHKG2, PRIM2, PRKCB, PRKG1, RDH5, TBXAS1, TGFB2, TRAF3
Negative_2486	GLS, ACADVL, ACSL1, AGXT2, ALDH3A1, AMPD3, APOC3, ATP5J, CARD11, CDC16, DUSP14, EFN1, FGD1, GALC, GALNTL5, GGPS1, GGT1, GNPAT1, HAGHL, HRH2, IFNW1, INSR, MICA, OR11H1, OR2M7, OR51F2, PGAM2, PPP1R3B, PYCRL, RARS2, TOMM40, VCAM1, WBSR22
Negative_2487	KIT, AASS, ACSL3, ANAPC7, ARPC1B, ATP6V1F, B3GALT5, CYP19A1, DDOST, DDX19A, DTX2, ENTPD3, EXOC7, GARS, GNG13, H6PD, ICOS, NOTCH2, OR10C1, OR13C9, OR1L8, P2RX3, POLE4, SIPA1, TAS2R1, TGDS, TNFSF4, TUBB4, XYLT1
Negative_2488	SMS, ACOX1, ACTG1, BCMO1, CCL11, CTPS2, CXCL3, DUSP16, EHMT2, EPB41L3, FZD10, GNPDA1, GP1BB, HSPA2, HTR2C, KIR2DL3, MAGI3, MAP3K6, NANS, NCF1, NUDT12, OR2W1, PARVA, PDGFB, PIAS1, PIK3CA, PLA2G1B, PPAP2A, PPP1R3B, PTPN7, ROCK1, RPS6KB1, RUNX1, SLC12A2, STX10, ULK3, VNN1
Negative_2489	CBL, HYI, ADIPOR2, ALDOA, APOC3, CACNA1I, CCNB2, DDX54, EPHB3, GSTM5, PSEN1, SDC3, SETD2
Negative_2490	C9, CERK, DAPK3, DKK1, OR5P3, OR8J1, RASGRP3, WNT10B
Negative_2491	PML, ACYP1, ARPC1B, ATP5G1, ATP6V1A, CD274, CSF3, CXCL1, FDPS, GLS2, HADHB, IL1R2, IL22RA1, IQGAP2, KLKB1, NRG3, OR10S1, OR13F1, OR1F1, OR1L8, PDE3A, PFKFB3, PGAP1, PLAT, PTPMT1, RAF1, RDH11, SOCS4, SPTLC1, SV2B, TBXAS1, TYROBP
Negative_2492	ALG13, CNTN1, CNTNAP1, FBP1, GALNTL4, GBA3, GNAQ, HLA-G, HTR2C, IFNA4, IL12RB2, IL2RG, ITGA1, MAP3K13, NMNAT2, OR1A1, OR4D5, OR4F5, PDGFD, PIK3CG, PLXNB3, RAC2, SMAD9, TJP2, UGT8, WNT4, CACNA2D3, GABARAPL1
Negative_2493	F3, ACSM5, IGF1R, KLK3, NUDT9, OR9K2, SCLY, TALDO1
Negative_2494	CEL, HK1, HYI, TK1, TYR, UBC, ADH1B, AOC2, CACNB4, CCL11, CCL14, CCNA1, CD8B, CFL2, CREB5, CXCL10, CYP2A7, DAPK2, DDX50, EHMT1, ER01L, FGF9, FZD1, GSTT1, HSD3B7, HTR4, KLRC3, LARS2, MAP4K1, OR10A2, OR11G2, OR52E6, OR6C6, OR6X1, PDGFC, PHKB, PRKCG, PTGS2, RRAS, SARDH, SOCS4, STX3, SULT1E1, THBS1, ULBP3, VANGL2, WNT5B, EIF4EBP1
Negative_2495	GNE, ADCY1, ARRB1, CXCL11, DUSP8, EHMT2, OXTR, TAS2R16, WHSC1
Negative_2496	ADRA1D, CYP21A2, FZD7, GNAI3, LYPLA2, SFRP1
Negative_2497	ADA, DAO, AKR1C1, AXIN2, GRHR, GSTT1, IAPP, IL12A, IL3RA, KCNJ11, LCAT, LDHAL6B, LTBR, MAPK11, NLGN1, PFKFB1, PIK3R5, PPP1CA, PPP1R3A, PRKAB1, PRKAR1A, PVRL4, RAPGEF3, SDC3, STX12, SULT1A2, THBD, TNFRSF4, SERPINA1
Negative_2498	ACPT, APOA5, ATP5J2, CACNA1A, CD46, CFL2, CLCA4, DTX4, EPB41L3, FUT4, GALNTL4, GCH1, GLI2, GUCY1B3, IL18, IQGAP3, IRAK3, IRF7, MECR, NEU1, NOTCH3, NSD1, OR10P1, OR1L8, PFN1, PLCD1, PRKCQ, RPRM, RRM2B, STAT5B, STX10, TBK1

Negative_2499	C4B, CAD, JUP, MOS, OGT, ACVR1C, ATG7, ATP6V1H, CHAD, COL5A1, CYP2J2, DHRS4, EHMT2, FGF4, GMPR, GNG3, HSD3B1, IL20RA, ITGAM, MAD2L2, MAG11, MGAT5B, NFATC2, OR10A2, OR2L3, OR4F6, OR51G1, OR52B4, OR5M3, OR9Q1, OXCT2, PIGW, PLXNB3, PRKAG1, PTEN, RAB5A, SDHA, SFRP1, SOCS2, TJP2, TUBB6
Negative_2500	ANPEP, KNG1, NRG4
Negative_2501	MVD, WAS, B3GALT5, CASP9, DGAT1, DUSP10, GUK1, ITPKB, SDHB, STAT4, YWHAZ
Negative_2502	AOX1, ARG2, CCL13, CCL15, CDH3, CRY1, CYP26A1, DBF4, DCTD, DUSP16, GLUD1, HIBCH, IDI2, IFNA13, IL28RA, OR2W1, OR7D4, PARD6A, PDE4D, PPP3CA, PTGFR, RAF1, TLN1, TRAF2, TUBAL3, YARS
Negative_2503	ABCC8, ADH4, AGTR1, AOX1, BMPR1A, CCNB1, DAAM2, GBA3, GPX7, NUMB, OR4A15, OR51A4, OR5K2, PSENN, RALBP1, RFX5, SMAD7, STEAP3, TAS2R13, VDAC3, CACNA2D3
Negative_2504	DCN, NNT, SRC, ADIPOQ, ARPC5L, BST1, DUSP2, GLUD1, IL5RA, IPPK, MGST1, TAS2R38, TIRAP, HLA-DRB4
Negative_2505	C2, MOS, ATP50, COQ7, CXCL3, ERBB3, GDF6, GLUD1, GSTM5, HCLS1, KIR3DL2, LGMN, NFKBIE, NLGN3, OR10K1, OR11H6, OR4K14, OR4N5, OR51M1, PNPLA4, PPP2R1A, SMPD2, TUBA8, UNC5C, ZBTB16, MAPK8IP1
Negative_2506	C8A, LCT, ADRBK2, ALG2, B4GALT5, BCL2, BHMT, CACNA1E, CRHR1, CXCL2, GAMT, GNPAT, HIF1A, IDUA, IGFBP3, IL22RA2, IL25, IL2RB, ITGA9, LEFTY1, LGMN, MYH4, OR2D3, OR4D1, ORC1L, OXTR, PDE9A, PGK1, PLCD3, RAB5A, RAC2, RAPGEF3, SKP2, SLC27A4, UGT2B28, AASDHPPT
Negative_2507	ACADM, ACPP, NSD1, OR1N2, PPP3R1, TAS1R1
Negative_2508	BID, F11, IDS, ACYP1, AGPAT4, ALG2, ARNTL, B3GALT4, CALML3, CD38, CD4OLG, CD72, CERK, CSF2RA, DAPK1, DERA, DHCR7, DUSP6, EPHB2, EVI1, GALNT6, GUCY2C, IL6R, LAP3, MCM7, MTHFD1, MYL7, OLAH, OR10J1, OR3A3, OR4C16, OR7A10, PPP2R5E, RAB23, SLC25A4, STX1A, SULT2B1, SUV39H2, TGDS, TRHR, UROD, ATP6V1C2, SERPIND1, TNFRSF6B
Negative_2509	CGA, EPO, SFN, AARS2, ALDH1A3, ARNTL, ATP5G1, BTRC, CHDH, COX10, CRY1, CSNK1G1, CYP7A1, FMO2, FZD9, GNAZ, GNG12, IL6ST, ITGA3, KLRC1, KLRK1, LIMK2, MAT1A, OR2C1, OR2W1, OR4L1, OR5AC2, PDE11A, PIGA, PIGV, PTPRC, RARS, SEMA7A, SOS2, TCIRG1, UNC5A, ATP6V0A2, TNFRSF10A
Negative_2510	ATM, ACAT2, ACSS1, ARHGEF4, ARPC2, CDK4, DDX50, DUSP3, EXTL3, GART, GCNT4, HNMT, MICA, NAGLU, NUDT12, OR1Q1, PIM1, PLAUR, PTAFR, TAS2R9, WARS, SUV420H1
Negative_2511	FER, SMS, TKT, ACTG2, CCKBR, COQ5, EGFR, EGLN3, FDPS, OR10AD1, OR52A5, PDGFB, PIGA, PKMYT1, SOCS1
Negative_2512	CYP17A1, OR10Q1, SEMA4G
Negative_2513	DUT, FH, IL8, ACTN1, B3GALT1, BCKDHB, BRAF, BUB1B, C9orf95, CASP7, CCL17, CREB3L1, DGAT2, DUSP14, EPB41, F11R, GALNT9, GPAA1, IL15, IRAK1, IRS4, KIR2DL2, MPZL1, MYH15, NME6, NUDT5, OR1A2, OR4D9, OR5D16, OR8H2, OR8K5, PGLS, PIP4K2C, POLR3D, PRKCE, PTAFR, RASSF1, SDC4, SDHA, SESN3, SKP2, SPRY4, TBXA2R, XIAP, ATP6V1E1
Negative_2514	ABL1, ATP6V1F, CHDH, CPOX, CREB1, EPHA3, GADD45G, GDE1, HSD3B2, IFNGR2, ITGA6, KIR3DL1, LCAT, OR10R2, PIP5K1C, SNAI1, SRD5A2, VCAM1, WNT10B
Negative_2515	ADO, C1QB, CDH15, CREB3L2, DDX56, EPHB3, FGF5, GARS, HMOX1, IARS, IRAK1, NEUROD1, OR1L1
Negative_2516	PGD, ASNS, B3GNT3, BLVRA, CLDN2, CXCL6, ESPL1, IARS, PCK2, PIM1, ATP6VOA1
Negative_2517	ITGA10, MYL7, GABARAPL1

Negative_2518	SHH, ATP2A2, ATP6V0C, CACNG7, CDC6, COL1A2, DOCK1, EVI1, HCCS, HGSNA T, HSPB1, IFNAR1, MPDZ, NKX6- 1, OR1S1, OR2V2, P2RX1, PTAFR, TGFBRI, WASF2
Negative_2519	MAG, SMO, ACADL, ATG3, CNGA3, DRD1, DUSP2, EREG, FLT3, FZD2, ICAM1, IT GA3, OR4F5, OR5J2, PIK3C2G, PITX2, PTPN6, PTPRM, SEMA3E, WNT1
Negative_2520	ACTN2, CASP9, CCL14, FGF11, FUT3, SDHC, HSD17B12
Negative_2521	BTK, FAH, GSR, SCD, SPN, AXIN2, BAAT, BCL10, CACNA1E, CD79B, CYP1A1, C YP26C1, FCER1G, FLT4, GALNT9, ISYNA1, MYH3, OR10T2, OR1J4, OR2T6, PA NK1, PER3, PRKAR2A, PTPRZ1, SHC2, TALD01, TAS2R16, TAS2R4, TNFSF13B
Negative_2522	BTK, ACSS2, ALG1, APPL1, BCL10, CADM3, CTNNA2, EFN3, GMPR, GSK3B, HM OX1, LIPT1, MYH7, NFASC, NFKBIB, ODC1, OR2W1, OR4P4, OR52N1, PARD6A, PDHA2, SHC1, SPRED1, STK3, TAS2R8, TNFSF10, UPP2
Negative_2523	KHK, SMO, ALOX5, ATP12A, CADM3, CNTFR, DDX19A, DGKI, DPYSL2, EPB41L1 , FGF9, FOXA3, GBA3, GDF7, HHIP, IL10RA, MYH7, NKX2- 2, NLGN2, NUDT9, OR10A3, OR13A1, OR2Y1, PARD6A, PDGFA, PLA2G10, RAC1 , RASGRP3, RASSF5, RPE65, SELPLG, SEMA4C, THBS2, UGT2B10, GABARAPL1
Negative_2524	CGA, FAS, IL2, ACY1, ALG10B, ARHGEF1, B4GALT7, CDK6, CNTNAP1, CXCL10 , FARS2, FGF11, FUT7, FZD2, GNAI3, HIBCH, HIP1, HMGCS2, IL10RA, MYH13 , NFKB2, OPLAH, OR6Y1, PGS1, PIAS3, PLXNB2, POLR1D, POLR3D, PPP2C2B, R AB23, SLC12A2, STEAP3, TAS2R14, TM7SF2, TYMP, UBA7
Negative_2525	APP, ADCY4, B4GALT4, CD48, MCM4, OR2T11, OR4C11, OR52E2, OR56A3, OR5 A1, SMARCA2, TPMT, UBA7, WNT2
Negative_2526	CRK, CCL7, FGF17, GGT1, OR10T2, PLAT, PRKAG2
Negative_2527	GSS, BCL2L1, CCL15, CDIPT, CSF2, CTBP1, CYP11B1, CYP2B6, E2F5, FGF20 , LEF1, MEF2C, OR10G3, OR4X1, OR52D1, PDK1, PLTP, RAC1, SEMA4D, SOS1, TNFSF9, TP53I3, VEGFC
Negative_2528	MTR, ALAS2, ALG13, APLP1, ARPC5L, AXIN1, B4GALT1, CCNE2, CRHR1, CTNN A3, DERL1, DHRS4, DHRS4L2, DUSP7, EFNA1, EFNA3, FUT4, FUT8, FUT9, GAM T, GCLM, GLUD2, GNAS, HDAC1, ITGB3, MCM6, NEGR1, OR51D1, OR52R1, PANK 2, PFKFB1, PFN1, PFN2, PGM3, PLA2G10, PNLIP, PPAP2B, PPP1R3A, RDH11, RUNX1, SFRP1, SULT1E1, TP53I3, VAV2, YWHAQ, PLA2G12A
Negative_2529	ALDH2, ATP6V0B, CCL25, CCND3, CD3E, CHRM2, CRLF2, DUSP5, EPHB4, HMOX 1, HPSE, IL20, LAMB2, LDHAL6B, MTAP, OR52A5, OR5K1, OR6S1, P2RX6, PAK 3, POLR3G, RAC1, SARS2, VNN1, WNT7B, YWHAZ, HLA-DRB3, HSD17B12
Negative_2530	ARNT2, B4GALT4, CACNG2, CCR2, CD58, CLDN20, CRB3, DGUOK, GCNT2, HTR4 , IL8RA, L1CAM, MAPK3, MGLL, NANS, OR2K2, OR52A5, PCCB, PHKG1, POLD4, POLR1D, PSENEN, PSPH, RDH8, TPH2, UCKL1
Negative_2531	ADIPOR2, ALOX12B, APOA5, CLDN1, DCTD, IL12A, MAPK9, MYH14, NKD1, OR5 AC2, OR6S1, OR8D2, POLE, POLR2A
Negative_2532	IL9, INS, SFN, SRF, VCL, ABAT, ARHGAP5, CACNG3, CD27, CD38, CD80, COL1 A2, COL5A1, DPAGT1, ENPP3, FBXW11, FGF23, FLOT2, GNAL, HTR6, KAT2B, L AP3, LARS, MAP3K5, NPR1, OR2L3, OR4C15, OR8A1, ORC2L, PMVK, POLR2C, P OLR3B, PTK2, PYGB, RAB5A, ROBO2, SUV39H1, USE1
Negative_2533	BTC, HAL, ACSM1, DMGDH, DTX1, GALNT9, GNG12, IDH3B, IRAK3, MAPK11, NE U4, OR11L1, PCYT2, PIGU, RDH16
Negative_2534	ID2, ARHGEF1, FUT1, HCCS, HNMT, KRAS, LAMB2, LEPR, NFE2L2, OR10G8, OR 2L8, OR4K15, OXCT1, POLR3B, PTPRZ1, RPIA, SEMA4D, ST3GAL3, TUBA3E, S ERPINB5
Negative_2535	RB1, CYP2C19, OR11H1, PTPN1, TNFRSF10D
Negative_2536	IL2, ANAPC2, BNIP1, DEGS1, DGAT1, OR4K17
Negative_2537	STS, CD28, DUSP14, ENO2, FRAT1, LAMB4, LIMK1, NR1D1, OR2T1, OR5B21, P IAS3, POLR1D, YWHAZ, ZFYVE9, HLA-DPA1
Negative_2538	ACADVL, ACOX3, CHR1, DNMT3L, GARS, IL28A, IRAK1, KLK3, L1CAM, LFNG, M RAS, NCR3, PAX4, PIGM, PRKAR1B, PRODH, RARS, TGFBRI2, TLN2, TNFSF9



Negative_2539	FAH, ADRB3, APH1A, APRT, CCNE1, GMPPA, GUCY1A2, IFNAR2, OR13A1, OR1A1, OR5B21, PLA2G2D, PPP2R5E, PTGDS, SC5DL, SHC4, SREBF1, SRGAP3, STSIA5, WNT2B, ATP6VOD1, MAP3K7IP2
Negative_2540	ADO, GK2, HK1, AGMAT, ALDH4A1, ALG13, ARAF, BACE1, CACNA1S, CASP9, CC R1, CD27, CFTR, CHUK, CSNK1D, CYFIP1, DDX47, DUSP10, E2F3, GPAM, HES1, ICOSLG, IL1R2, KIR2DL3, NADSYN1, OR10A5, OR10V1, OR4M1, PDE7A, PDX K, PRODH, PTDSS1, PYCRL, QPRT, SLC2A1, SMPD2, SPRED2, TCF7L1, TFDP1, WARS2, WNT11, ZIC2, ATP6V0A1, TNFRSF1A
Negative_2541	ACTN1, ALDOB, BCAT1, CLCA2, FOXA2, GCNT1, GLB1, GSTZ1, HNF1B, HSD17B2, HSD17B8, IL10, LAMB1, MALT1, OR1D2, PDE10A, PDE7A, PDE8A, PGS1, PL A2G2A, POLR1C, PRKACB, RFXAP, RPSA, SMAD6, SOCS4, SUV39H2
Negative_2542	AMT, DDC, A4GALT, ACPT, ACVR2A, ADRB2, ALDH4A1, ARRB1, BCL2, CCR7, CD44, CHRM1, CMPK2, CYP4A22, EI24, FGF14, GALNT12, GUCA1C, GUK1, MYH2, NAGLU, OR51D1, OR52K1, PDE4B, PIK3C2A, PITX2, POLR2D, PRSS1, RAF1, S HMT2, SRD5A2, TNFRSF17
Negative_2543	F12, ACOX1, ACSM2A, ATN1, CCL4, CD3E, CD58, CERK, CLDN5, CTPS2, CYBB, DPYSL2, E2F5, EFNA4, ENO1, EPHA3, EPHX2, FLAD1, FZD10, GJD2, GSTK1, H IF1A, IFIH1, INADL, INPPL1, KLRK1, NAT2, NR1H3, OR10V1, OR52J3, OR56 B4, PIP4K2A, PIP5K3, PPP1R3B, PPP2CB, RAB23, RALBP1, SETDB1, ST3GAL3, STK36, TAS2R4, TCF7, TSNARE1
Negative_2544	FES, FUK, OAT, AFMID, ALG2, APOA5, CACNB3, CCNB2, CX3CL1, DUSP3, EFNA1, EPB41L2, EPHB3, ERO1L, FABP3, GMDS, LDHA, NCK2, NODAL, NOX1, OR1S1, OR6C76, PAK3, PFKFB2, PHGDH, PIGW, PLXNA3, PPP2R2D, PPP3CA, RAPGEF1, RENBP, SDHA, SMAD3, TSHB, UBE2L6, MAPKAPK3
Negative_2545	FH, AGTR1, GLUL, MYH3
Negative_2546	CDC20, CTSL1, CYP3A7, ENTPD7, IGFBP3, IMPA2, INPP5B, ITGB3, OR13D1, OR4K1, PFKFB2, PMM1, SLC25A4, SLC27A1, TNXB, TPI1, TNFSF13B
Negative_2547	ASMT, DDB2, HSPA1B, IFNGR2, LTA4H, MAN2A1, OR10C1, OR13C4, OR5F1, PA FAH2, PRKCQ, SEMA3B, SENP2, WASF2
Negative_2548	C1S, FGA, GGH, MYC, ACOX1, ALOX15, CDKN2A, CSH1, CTBP1, CYP2U1, DDX4, ELK4, ENTPD3, EPHA7, EPHX2, FZD7, GFPT2, GSTM3, GUCY2D, GUK1, HAO2, I L19, INHBB, JAG2, MAN1B1, MAP3K1, NME2, OR10H2, OR4D6, OR4K14, OR51G1, OR5A2, PDE6G, PLA1A, PLA2G10, POLR1D, PPP3CA, PVRL3, RAC1, SFRP1, SMAD2, SOCS7, STK11, TAS2R50, TKTL2, WNT10B
Negative_2549	ACSM5, FARSB, IARS, MAP3K2, OR52I1, PARVA
Negative_2550	INS, ACADSB, ACSS3, ALPP, BNIP1, CFL1, CHST11, CPT1C, EHMT1, FGF21, I TPA, MAP3K14, MLLT4, NCOR2, OR13C8, OR14C36, OR6Y1, PDE2A, PIGT, SUV39H1
Negative_2551	GRM1, OR5J2, PRKCD
Negative_2552	DCC, F8, HDC, ACTN2, BCL10, CHKA, FGFR1, IFNA17, IL18R1, IL7R, ITGB1, MTHFD1, NEFL, OR14I1, OR51G2, POLE, RAC2, RBL1, SRD5A1, SUOX, UGT2B7, WHSC1L1
Negative_2553	FST, AADAT, ACOX1, ALG10, B3GALT6, BNIP1, C9orf95, CASP10, DCTN1, DN MT3B, DUSP14, ETNK2, GCAT, HDAC1, HSPA2, IFNGR2, IL13RA1, NUDT2, OR4 C46, OR5AR1, P2RX3, PGM1, PPAT, PPP1R3A, PRKACG, SMURF2, SOAT2, SPP1, TIAM2, UGT1A10, VAMP1, VTI1A, PHOSPHO1
Negative_2554	ADA, C9, EBP, GNS, LCT, LPL, PDC, ADIPOR1, AGRP, ALPPL2, AMPD3, BAIAP2, BBC3, CDKN2C, CTSS, CYFIP1, DAXX, DDX18, DDX54, DNMT3A, EDNRA, ENPP7, HLA-DMA, IDH1, IRS2, LYZL1, NCOA4, NLGN3, OR10H1, OR4F4, PDE4B, PIGN, PIK3C2G, PLK1, RAF1, RBX1, RIPK1, SELP, SMAD9, SPRED2, TAP1, WASF1, SERPINA1

Negative_2555	C3, GLA, OTC, ACVR1, BDH1, BHMT, CCNE1, CDH1, CHRM2, CSF2, CYP4A11, DLST, EPOR, FOXA2, IL12RB1, ITGA4, MGAT4A, OR2T33, OR4K14, PLCG1, PNMT, C1GALT1C1
Negative_2556	DGAT1, LPAR1, PIGQ, WNT9B
Negative_2557	BTC, MPI, ALOX12, CNTN1, CPOX, CRB3, DVL1, GNG13, IL19, IRS1, KLK3, NGEF, OR12D3, OR13C4, OR51B4, OR5B3, OR7A10, PAK2, PDE6H, PIGH, PIK3R2, PPM1A, RPS6KA5, SCP2, SEMA3C, TACR1, TAS2R16, TPK1, TUBA3C, UPP2
Negative_2558	KIT, AHCYL1, CD80, CNTF, CSF2RB, DHODH, EVI1, FRAT2, FZD4, HPRT1, ITGA10, ITGAL, SETD2
Negative_2559	LLGL1, OR11H4, PFKFB4, SESN1, WNT3, WNT5B
Negative_2560	ALDH3A2, VEGFC, WNT16
Negative_2561	CKB, AACS, ADCY5, AFMID, AOX1, ARPC5, CACNG3, CACNG6, CCL13, CCR2, CHSY1, CSF1R, DAG1, FGF10, GIT1, GMPR2, GRLF1, GSTT1, HIF1A, IFNK, IL28B, KLKB1, NAMPT, OR4B1, OR7D4, PECAM1, PPBP, PTGS1, RPS6KA2, SYNJ2, TYMS, TYROBP, CACNA2D4
Negative_2562	HAL, PDC, RFK, AANAT, ALOX15B, CDC23, CDS2, CHDH, CRY1, CXCL11, EDA2R, GSTM3, HAAO, HHIP, IL25, MTHFD2, NOS1, OR8D2, PEMT, PPID, PPP1CB, PP2CB, PRSS3, SHC3, SOCS2, SPRY1, ST3GAL6, TIAM1, CTNNBIP1
Negative_2563	HGD, MOS, ATP6V1F, AXIN2, CACNG2, CAV1, CDC26, CDH15, CLDN14, CYP8B1, DDHD1, DEGS2, DTYMK, EHMT1, GALNT11, GALNT14, GMPPA, GMPR2, HEXB, HSD17B2, LLGL1, MMP7, MYH7B, NFYC, NMNAT3, NSDHL, OLAH, OR2T2, OXCT1, PAFAH2, PDE4A, PDPK1, PER1, PHKA1, PIK3R1, PIK3R3, PPP3CB, ROBO1, SMPD4, TRPC1, UNC5D, VEGFA, WNT9B
Negative_2564	AK5, FGG, NLK, ADORA2B, ALDH7A1, BCAT2, CACNG7, CASK, CCNG2, CHRM2, CLDN3, CXCL3, CYSLTR2, DAXX, EFN2, FUT3, GALNT6, GNRH1, GPT2, IARS2, ICAM3, IGF1, IL2RG, IRS1, KCNJ11, MYH10, NEU4, NOX1, OR2AE1, OR2L2, P GAPI1, PITX2, PKM2, PSME2, RFWD2, SDC2, SREBF1, TYMP, ATP6V1G2, CACNA2D2
Negative_2565	GMPPA, MGAT5B, OR10H4, OR13C8, OR5AR1, PNMT, STX1B
Negative_2566	MAX, MOS, AARS2, ACO1, ALDOC, ALOX5, AQP7, BMP6, CCL16, CD22, CDH2, CHIA, CLDN8, COL4A1, CXCL3, CYSLTR1, ENTPD3, EPHA1, EPHB4, FMO2, GAD1, IDH3G, IL19, IL2RB, IPPK, ITGA1, MAP4K2, NFKBIB, NFYB, OR2L13, OR2Y1, OR4K13, PAK3, RPN1, SENP2, SNAI1, SSX2IP, STK3, TAS2R4, TYRP1, WASF1
Negative_2567	AK3, CGA, IL3, ACOT12, ACSS1, ALDH1B1, ATP5H, B3GALT5, CASP3, CCL24, CD3E, CDH15, CLDN2, COL4A6, CYP2J2, FCGR3A, GRIN2D, IL17RB, IL1A, ITGA3, ITGB6, KLK3, LAMA3, MAN2A1, MAP3K12, NME6, OR10H3, OR2L2, OR4K15, OR51B2, OR5J2, PIGK, PLA2G3, PLD1, PMM1, PYCR1, RBPJ, RDH16, ROCK2, SORD, SPRY2, TAS2R42, TCF7, TNFSF9, ULK1
Negative_2568	ATM, BID, C4B, ID3, ASIP, B3GAT1, CD34, CNDP1, COQ7, DHRS4, DUSP14, DUSP9, ERBB3, GDE1, GNRHR, HRH1, HSD17B3, LAP3, MGAT4B, NOTCH2, OR10G7, OR4D2, OR7D4, PLTP, PLXNC1, SOS1, SULT2B1, TAS2R38, THBS1, TNFSF11, TOLLIP, TUBA1A
Negative_2569	APP, HGD, ID2, TH, ATP6V1D, CCNB2, COX10, CSNK1G1, CYP3A7, CYSLTR1, DUSP16, GALC, GCNT2, GLB1, GNRHR, IRF7, MAPK9, MCCC1, MYH9, NLGN1, OPLAH, OR51F2, OR6X1, P2RX7, PGM3, PHKA2, PIAS3, PLA2G5, PPID, PRKACA, S OCS3, TAS2R48, TNFSF14, UBE2L3
Negative_2570	CYP8B1, FGF13, FZD9, IL17B, KDSR, NFYB, NUMB, OR1L4, OR4K17, OR52N1, RBPJ, SOAT1, TAS2R8
Negative_2571	C6, SMS, ALDH3A1, B3GALT1, BAI1, BTRC, CASP7, CCNE1, CHST12, CREB3, CREB3L3, CYP11B1, ECHS1, FZD5, GMDS, GNMT, GPT2, IDI1, IL19, KIR2DL1, LCMT1, NFYA, NFYC, OR51L1, OR5K1, OR6T1, PCK1, PIM1, PRKX, PTGER1, RUVBL1, SPCS1, SQLE, SULT2B1, YWHAE, ZMAT3, ATP6V1G2

Negative_2572	MSN, ACSL5, BCL2, BMPR1B, CD48, ENPP3, GAL3ST1, ITGA4, OR10G2, OR10H1, OR10H2, PDE6G, SEMA7A, TSC1, CSNK1A1L
Negative_2573	CAD, FAS, GPI, ACHE, ALG6, BMPR1A, CHRDL, CYP2C8, HYAL2, IRS1, ITGB3, LAMB3, NAT2, OR11I1, PLXNA1, PRKCE, PRKCI, PSAT1, SC4MOL, SETD1A, TJP1, TLN2
Negative_2574	GLS, AHCYL2, ATG3, CAV2, CCNA2, MYH13, OR4K14, OR5K2, POLR1A, PPARA, SLIT1, UCK1
Negative_2575	ACAA2, ACY1, APAF1, CD70, IL8RA, NTRK2, OR10AG1, OR2G3, PYGB, SETDB1, UCK2, ATP6V1G1, PPP1R12A
Negative_2576	A2M, AK7, DCC, DCK, EDA, OTC, RB1, AOC3, ARG1, BIRC5, CFTR, CHUK, CPOX, CTPS, DCTN1, DMGDH, FCGR3B, GLB1, GPD1, GSTA3, HHEX, HSD3B1, HTR2C, IL22, ITGB5, JUND, KIR3DL2, MECR, MGAT4B, NAT1, NCAM2, ODC1, OR2T2, OR51I2, PIAS4, PIM1, PKMYT1, RAD51, RUNX1, SPRY1, VARS, ATP6V1C1, MAP3K7IP1, TNFRSF1B
Negative_2577	HK3, IL8, ABLIM3, ACO1, ADH1B, ADIPOQ, B3GALT5, CASP9, CHKA, COL1A1, CTBP1, DKK1, DNMT3L, EHMT2, EPB41L2, FCER1G, GLG1, HARS2, IL20, ITGA2B, KITLG, MAP2K6, MTHFR, NAGA, NCSTN, NFATC3, NFKB1, NFKBIB, NOTCH1, OR13C4, OR1E1, PARD6A, PLAU, PLOD1, PLTP, POLR2F, PRKAR2B, SAT2, SPRED1, SPRED2, STAT1, STK4, THTPA, ULK3, YWHAH, ATP6VOD1, ATP6V1G1
Negative_2578	A2M, AK2, GDA, MVK, ACSL5, ATP6AP1, CANT1, CD27, CTSB, DDX4, DPM3, DUSP8, ENTPD4, FADS2, FCGR3A, FGF19, FSHR, GALNT1, GALNT11, IL28RA, IMPA2, MAML2, OR10J3, OR10S1, OR1L3, OR1N2, OR52E8, OR6C2, PIK3C2B, PIK3C2G, PLA2G2A, PLTP, PLXNA1, POLE, POLR3G, PPP2R2C, PTPMT1, RAPGEF2, SKP2, SLC2A1, SOCS5, SUOX, TAS2R10, VDAC3, WIF1, XYLT1
Negative_2579	CR1, ACO2, ACOT12, AKR1D1, ALG1, ALG5, ARPC5L, ARSA, B3GALT4, CSNK1G3, CTNNA3, CYBB, DDX41, GSTP1, ITPK1, JAK1, MASP1, MCM4, NFKBIB, OR10Q1, OR14C36, OR4C15, OR6C3, PDE8A, PIGK, PLCB3, PPARD, PPP2R5A, TAS2R7, ULK2, MAP3K7IP1, PDCD1LG2
Negative_2580	HK3, LPL, ALDH1A1, ARNTL, ATP5H, CBLB, CD22, CLDN18, CLDN22, CTLA4, CX3CR1, FARS2, FARSA, FM04, GADD45B, GLG1, GLUD1, GRIN2C, HARS2, IDUA, IFNA4, KIR2DS5, MAD2L1, MMP2, OR2G6, OR52W1, OR8B8, PARD6G, PIGS, PIP4K2B, PIP4K2C, PLCD4, PLOD1, POLR1E, POLR2K, PPP1CC, ROBO2, SOCS1, SPRY1, STAT1, THY1, ST6GALNAC5
Negative_2581	CCNG2, DGKZ, EDNRB, GSTA4, IL12B, OR2T10, PDGFA, SOCS7, UCP1, HLA-DRB3
Negative_2582	AKT1, B3GALT5, CTSB, DAAM1, ESAM, NAGLU, NOD1, OR51S1, RFX5, TBK1, HLA-DQA2
Negative_2583	AR, ACSM3, APLP1, CDC7, CDKN2A, CYSLTR1, DHRS4, EPHA1, GAL3ST1, LRAT, MAP3K6, NAT6, NTN1, OR7G3, PMVK, RDH8, RERE, RFNG, SETD1B, TAS2R41, TNFSF11, USE1, PDCD1LG2
Negative_2584	F2, BNIP1, DPYSL2, GLUL, GUCY2F, MAP2K1, MYH4, PLA2G2A, PLOD3, ULK3
Negative_2585	AHCYL2, EDNRB, GAD1, IL1R2, LRAT, NTF3, PIK3CA, PRODH2, RFX5, ATP6VOD1, MAPKAPK2
Negative_2586	FAH, FUK, IL7, MET, AGPAT4, ARNT, CARS, CCNE1, CD55, CDH1, CEBPA, CSNK2B, DDX23, DKK2, FDPS, FGF20, GNAO1, HSPB1, INHBC, KRAS, MCM5, METTL6, MTHFD2, NEFH, NKD2, OR4N4, OR4S2, OR51S1, OR5AK2, OR5D18, OR5P3, OR5R1, OR5T2, OR6A2, OR7C1, P2RX2, PIGQ, PLD1, POLR3H, PPP2R5D, RPS6KA3, SLC25A5, STAM2
Negative_2587	CFH, CGA, KDR, MET, MPZ, MYC, ASCC3, ATP5J, B4GALT5, CASK, CD70, CDK2, CDK6, CTSB, ENPP6, ENTPD3, EP300, FOXA2, FZD9, GALK2, GALNT5, GCNT3, HAP1, IARS2, IL20RA, MAP4K1, OR13A1, OR2G2, PARD3, PLXNC1, PRKCA, PRPH, PTPN1, PTPRB, RPS6KA5, SEMA4G, SMURF2, SV2C, TUBB, CACNA2D4, TNFRSF14

Negative_2588	TEC, AACS, ACSM3, ADCY3, AMHR2, ASPA, CACNB2, CALML5, CD247, CD38, CFL2, CNGA3, CSAD, CYP4F2, DIAPH1, EFNB1, FGF8, FLT1, GALNT10, GRIA1, GSTA2, HMGCS2, IFNA7, IL10RA, KLRK1, LIPF, LRRC4C, NSDHL, OR10S1, OR2T29, OR51I2, OR51Q1, OR51T1, OR51I1, PCYT1B, PDE11A, PDE1A, PDGFRB, PI4KA, PRODH2, PTGS1, RPS6KA4, SELL, SOS2, STAT4, THBD, TLR9, TXNDC12
Negative_2589	LYN, CACNB2, CAMK4, CHST12, MDH1, OR11A1, OR2A4, TJP1, YARS2
Negative_2590	FGA, RFK, AANAT, ACSM5, AMPD3, ARRB2, AXIN2, BCL2, CCNA1, CDH2, CHRDL, CLDN16, CYP21A2, CYP2A13, EIF4E2, GGT1, GMPR2, HCCS, INHBA, ITGAE, LAP3, LIMK2, MTHFD1, NAGLU, OR1E1, OR6C2, OR7C1, PDE10A, SEMA4B, SHISA5, SPRED1, STAT5A, TAS2R7, UPRT, B3GALNT1, PAFAH1B2
Negative_2591	ATM, AREG, CCL14, CDS2, FGF11, G6PC2, GALNT5, GGT6, HCCS, NCKAP1, NME2, OR10A5, OR10J1, OR2A4, OR5L2, PFKFB3, PFKM, SPRY4, ST8SIA5, TAS1R3, TLR9, VAV2
Negative_2592	CHRM1, CSF2, FGFR3, INPP1, MAPK7, OR4K14, OR8H3, SSH3, EIF4EBP1
Negative_2593	ADC, CKM, FN1, PAH, ACAD8, ACTG2, ADCY8, ADRB3, ATP5A1, CARD11, CBLB, CES1, CHKB, CYP2F1, DAPK1, DDX41, FGF18, FRAT1, GSTZ1, HEMK1, KAT2A, LDHA, MYH13, NADK, NRG3, OR2L2, OR2S2, OR3A3, OR7C2, P2RX1, PARVA, PCYT2, PPM1A, PPP1CB, PPP2R2C, PTGS2, SETDB2, SMAD5, SOCS1, TRAF2, MAPKAPK2, PHOSPHO1, SERPINA5
Negative_2594	ME1, MUT, OTC, AASS, ARAF, ATP5G1, BMP2, CACNG8, CCNB1, CLOCK, CYP2A7, DNMT3L, EPB41L2, FGF19, FGF3, GFPT1, GMDS, GUK1, HEXA, IFNA8, IGF1, JAG2, KIR2DS4, MAP3K3, MMP7, OR8H3, ORC5L, PRKCQ, RFW2, SGPP1, TCF7L1
Negative_2595	LCK, TAT, ALDH3B1, BCL2, CCL20, COQ6, CSNK1G3, EPHX2, EVI1, F11R, GAPDH, GAS1, GGT6, GRIN2B, IL4R, INPP4A, MAGI3, MAT1A, MYH10, MYH15, OR5T2, OR9A4, PAK1, POLE3, POLR3H, PRKACG, PTPN5, PTPRM, RASA1, RDH11, SLC2A1, TPK1
Negative_2596	C1S, F9, ERBB3, IL15, RAC1, WNT1
Negative_2597	ADC, C4B, SDS, SP1, AACS, ACPT, ALDH3B1, ARPC4, ASPA, BPNT1, C1QB, CNTFR, CYCS, ERBB4, GADD45B, GRIN2D, HPSE, HPSE2, ICOS, IRS1, L1CAM, LDHD, MGAT4A, NFX1, NUDT2, OR2AE1, OR2M2, OR2Y1, OR4A16, OR52M1, PLA1A, PTPRF, RBL1, SETD2, SNAI2, MAPKAPK3
Negative_2598	F10, HPD, PML, UBC, ACSS3, ARRB1, GCLM, HRH1, IGFBP3, KIR2DL2, LAMA3, LTA4H, MASP2, OR1D2, OR2T10, OR52M1, OR5AU1, PAK7, PARD6G, PDX1, PLCG2, POLD2, RDH12, RFXANK, TRADD, TUBA1A, UGT2B10, UNC5A, VDAC2, MAPKAPK2, SERPINE1
Negative_2599	ASL, BAX, ACADSB, ACVR2B, APLP1, C5AR1, CD34, CLDN3, EPHB2, HEMK1, IDH3G, LAMB4, NFKBIE, OR4F5, OR51A4, PDE1A, PLK1, RAC3, RUNX1T1, SLC2A2, SNAI2, TKTL2, ULBP2, KIR2DL5A, MAP3K7IP2, MAPKAPK5
Negative_2600	ADK, SPN, ACACB, CIITA, HADHB, ICOS, IRAK3, MAT1A, OR13A1, OR2D3, OR4A15, PLA2G5, SELP, TOMM40, UGT2B17, ATP6V1C2, GABARAPL1
Negative_2601	FAS, LPL, CYBB, DAPK2, DDX47, FLOT1, GRM5, MAT2B, NOTCH2, NPR1, OCRL, OR2L2, OR2Z1, PPP1R1A, PTPRJ, RPIA, SCD5, SCIN, SETD8, SULT1A2, TCF7L1, TGFB1, UCP1, ST6GALNAC5
Negative_2602	CACNG1, GALNT2, IDH3G, IL10RA, ITGA10, OR10Z1, OR2Y1, PAX6, PLA2G2D, PRODH2, RHOQ
Negative_2603	IL9, CHRM5, CXCL11, FASLG, FGF6, GGCX, IFNA4, IRF3, MAP2K6, OR10J5, PSENEN, RENBP, ROBO2, TAS2R5
Negative_2604	CYP4F2, EI24, FSHB, IFNA14, PDE9A, PDGFRB
Negative_2605	CDC7, PIGQ, SULT2A1
Negative_2606	FYN, ABL2, ACSL5, ALG12, ATP5J, B3GNT5, CDH2, CES7, CLDN20, CPT1A, CYP2J2, DGAT2, DGKB, DTX4, FLOT2, GSTP1, HADH, ITGAL, LAMA4, LCP2, NAT5, NFATC2, NOTCH3, NTF4, OR2B6, OR2H1, OR6C1, OR9Q2, PPP3CA, SH2D1A, TJP1

Negative_2607	TAT, TYR, BCAT2, CHAT, GNB1, IDH2, IRS2, LIMK2, NCAM1, NCOR1
Negative_2608	C2, CBS, MET, SMS, VCL, WAS, ADRA1A, ALG3, AOX1, ARNT, C9orf95, CCR3, CFL2, CHST13, DKK2, DUSP1, EXT1, FGF8, HADHB, INPP5A, LDHAL6B, LLGL2, MPP5, OR13C4, OR11I1, OR2L8, PAX8, PKM2, PLAUR, PPM1A, PPM1D, PPP1CB, RDH5, SFRP5, TNFRSF4, TUBA1B, CSNK1A1L, PNLIPRP2
Negative_2609	MVK, ADH1B, ATP5C1, CCR10, CRKL, DKK1, DTX2, ENTPD1, FADS2, GRIN2C, HADH, HNMT, IGSF5, MCM3, MYH7, NKX2-2, NUDT9, OR1F1, OR2M4, OR52E4, POLR1B, PRKAG3, RASGRF2, TGFB2, XCL2
Negative_2610	MPI, AASDH, ADCY8, ADRB3, AHCYL2, CACNA1I, CAV3, CTSS, EFNB3, ENPP7, GSTA4, GUCA1A, HHIP, LAMB2, MAPT, MITF, NCF2, NEU1, NME6, OR4X1, OR51A4, POLD1, PRKAR2B, PRODH2, SLC27A4, SNAP25, SRD5A1, TAP2, TAS2R50, TSNARE1, VNN1, SERPIND1
Negative_2611	AGK, DBH, NF1, ACADSB, ACOT12, ADCY2, AKR1B10, AOX1, APH1A, BDH2, C3AR1, CACNG8, CCL28, CLDN5, CTSS, DHRS4L2, ENTPD7, FGF10, FGF9, GALNTL1, GCAT, GUK1, HMOX2, IBSP, IL23R, IL2RA, MAP3K7, NCF2, OR10G2, PARD6G, PI4KB, PRKCH, PTPRF, SLC2A2, TAS2R40, TBXA2R, UCK1, VAMP2, ATP6V0D1, HLA-DRB4
Negative_2612	DHH, ADORA2A, AGTR1, ATP5A1, CACNB4, CEBPA, CNDP1, DNMT3L, FTCD, GLB1, GSTM2, GUK1, MAT2B, RDH11, RPS6KA2
Negative_2613	AGL, C8G, CFI, PXN, ACTA1, ACTC1, ACY1, ADH1A, ARRB1, BAAT, CACNB3, CCR5, COMT, COQ6, CSH1, CYP2C18, CYP2S1, DOLPP1, FGF17, FPGT, GALNT9, GALUL, HADH, HSPA1B, HTRA2, IL15, LAMB2, MAP2K2, MARS, OR1Q1, OR4K1, OR52L1, OR8J3, PAK6, PPCDC, RXRA, SMAD6, STAT2, VAV2, ZFYVE9, ATP6V1B1, HLA-DPA1
Negative_2614	GGH, IL3, ACAD9, ACP6, ACVR2B, ADH6, CBR3, CCL26, CD55, CDC7, CNGA3, CRY2, CTBP2, EARS2, F2RL1, FTMT, GALNTL1, GCNT4, GNAI3, GNG3, GNRH1, GRIN2C, GSTO1, IL2RB, JAG2, LDHAL6A, LM07, LTBR, MCCC1, MFNG, NCF1, NFKBIE, OR2T11, OR4K17, OR6C4, PIAS1, PITX2, PLA2G4A, PPCS, RAC1, SEMA4B, SLIT2, UGT2B7, PAFAH1B2, TNFRSF18
Negative_2615	CRK, ACAA1, ALDH3B2, BMP8B, CDS2, CES7, CHUK, CUL1, CX3CL1, CXCR3, DDHD1, DUSP16, EPHA4, FGFR3, GNPDA2, GRIN2B, HLA-C, HYAL2, ITGB1, LAMB3, MYD88, MYL2, NFATC1, OR2AG2, OR4C15, OR4F17, OR7A10, OR7C2, PDE10A, PPARD, PPP2R2B, PYGM, RALA, RARS2, RETSAT, RPS6KA1, SMPD2, SNAP23, STK4, STX16, TPI1, WNT9B
Negative_2616	MET, CACNA1E, CD34, CLCF1, DUSP14, GFPT1, GLUD1, IFNA21, KIR2DL3, NCR2, NPR2, OR10A3, OR10G3, PDE8A, PFN4, SDHC, TCIRG1, TFPI, UBE2L3, UGT1A10, WHSC1, TNFRSF1B
Negative_2617	ACOX2, ADH6, B3GALT6, CD40, CYP2D6, DAAM2, EGLN3, FLOT1, GGT1, GJA1, GPD1L, HTR7, IL17RA, MGAT2, MYH6, OR8H2, PDE10A, POLR1A, RALA, RARA, RPS6KA3, SLC2A1, SMC1A, SOCS7, SPTLC1, SUCLA2, TM7SF2, TPK1, TNFRSF1A
Negative_2618	LAT, ARPC5L, ARRB1, ATP2A3, ATP5G1, CACNA1A, CDC14A, CLDN2, CNTN2, CXCR6, CYBA, CYP2S1, EFNB2, FGF6, FOXA3, GZMA, HNF1A, HSD17B2, ISYNA1, MAP3K8, MGAT5B, MTMR6, NCR2, NEFL, NFASC, OR4M1, OR51F1, OR52B6, OR5T1, OR6Q1, OR6Y1, PIAS2, PIGL, PPP3R1, RALBP1, RBPJ, SEMA3C, STK11, THBS1, TJP1, UGP2, PPP1R12A
Negative_2619	MVD, CCL26, CLDN2, MAPK8IP3, SERPINE1
Negative_2620	CKB, ACSL6, ATF2, ATG7, ATP6V1A, CD14, COL4A4, CSNK1G1, CTSB, CYP3A7, DDX47, EFNA4, ENPP3, FSHR, GUCA1A, HSD3B1, HTR2A, IRS1, MAP3K5, MGA T5B, MICA, MLYCD, NTN1, OR2F2, OR4P4, OR7G3, PFN1, PIK3C2A, PLA2G3, PTPRB, RPS6KB2, SMAD3, SRD5A1, TNFSF4, VAMP3
Negative_2621	SDS, ALDH9A1, GALNT9, TAS2R41, TOLLIP
Negative_2622	ACO2, CRLF2, CYP3A4, FIGF, FZD3, NEFM, OR13C2, OR4Q3, RELB, SUCLA2, T AS1R2, TGFBR2, WBSR22

Negative_2623	AUH, CBS, EGF, ID1, SMO, ACSL3, ALDH5A1, B3GNT5, BMP4, BUB1, CLDN1, CXCL11, CYP26B1, DCXR, HLA-F, HSD17B3, IL24, IMPA2, ISYNA1, NT5C, OR13C5, OR5AP2, OR6N1, OR9G1, PLA2G3, PTGS2, RPS6KB2, SMPD2, SSX2IP, STX1A, TAS2R1, TAS2R14, TRDMT1, UNC5D
Negative_2624	AK2, CR2, GAA, GSR, ACAA2, ACSM2A, AGPAT3, ARNTL, ATP6AP1, C1QA, CDO1, COL4A6, DDOST, GAD1, HSPA2, IDI2, IKBKE, ITGA8, ITGAM, LIFR, LYPLA1, MAPK1, NLGN3, NTRK1, OR5AS1, PIP5K3, PLD1, POLR1B, POLR2K, PRIM1, PTDSS1, PTGER3, RASGRP4, SHMT1, SPAM1, SUOX, UPP2
Negative_2625	CAD, GH2, IL5, LCK, ADCY9, ALDH3A2, ALOX15, ARAF, ARPC1B, BDKRB2, CCL28, DHRS4, EFN1, FLT1, GNPAT1, IRS2, JAM2, MAP3K14, MGLL, NOS1, NOX1, OR10A4, OR10Q1, OR52N4, OR6C1, OR7A17, PANK1, PDGFA, PPM1A, PRKCZ, PSAT1, SPRY1, UAP1, UGT2B7, ULBP3, YWHAB
Negative_2626	SCD, ADIPOR1, ARRB1, CCL15, CISH, MAPK12, NKX3-1, OR1C1, OR52N5, OR8U1, PPP1CC, PTEN, RRAS, SPTAN1, ZMAT3
Negative_2627	CP, ACTG2, CD82, CPOX, CREB3, DGKG, DHDDS, FGF20, GGT6, GLI1, GMPA, HADHB, IDH3A, LTA4H, NRG1, OR2Z1, PI4KA, PIK3R5, SMAD3, TAS2R50, YARS2, CACNA2D4
Negative_2628	CSNK1G3, HADHA, OR10P1
Negative_2629	IVD, LTB, ARHGEF6, BCKDHB, CERK, CLDN20, CTF1, CYP3A4, DGKH, GADD45G, GLI3, HEXB, IL2RG, MDH1, MLLT4, MTHFD1L, OR56A3, OR5L2, PLCB4, PSME1, PTPN11, SC5DL, ST3GAL3, STAT6, TAS2R48, UPRT, UROC1, ATP6V0D1
Negative_2630	C2, CBS, IL7, ACOT11, ACVR1, ALG10B, ATP5L, B3GALT5, CACNA1H, CADM3, CALML5, CASP9, CD34, CLCF1, CXCL3, CYP26C1, DCTN1, DERA, FZD4, GALNT14, GSTA1, IL1R1, IQGAP2, MAP3K12, MYLK, NCSTN, OR10H5, PIGX, PLCD1, PLOD3, PON3, SIGLEC1, ST3GAL4, TP73, CACNA2D3, HLA-DPB1
Negative_2631	APP, IL2, PGF, ATP6V1D, DAPK3, DEGS2, FARSA, FPGS, G6PD, GNAL, GNG3, MDM2, OR2A14, OR6B2, PARVG, PPP2R2A, SOCS2, TNFRSF9
Negative_2632	ADRA1D, AMPD1, IFNA16, INHBB, NRXN1, PHGDH, PLAU, SMC1A, STX7
Negative_2633	GPT, INS, ACO2, ACP2, ACP6, ACSS1, AGXT, ASPA, BAIAP2, DLAT, ERO1L, FARSA, FGF21, GART, GLO1, HMGCS2, HSD17B2, IL10, IL20, IRS4, KLRC3, LIMK1, MAML1, MAPK9, MTMR2, NME2, OR10G7, OR14C36, OR2L3, OR51B4, OR5K2, OR6C74, P2RX6, P2RX7, PHKA1, PYGM, RUNX1, SLC27A5, SMAD1, SMC1B, STX1B, THBS3, TUBB6, UCKL1, UNC5C, WNT1, XYLT2, HLA-DQB1
Negative_2634	RPE, ABL1, ADCY7, ATP5H, B3GNT5, DUSP9, FMO3, GALM, GRPR, ITGA10, MECR, MTHFD1L, NFATC2, OR2Y1, OR52E2, OR5J2, PARVG, PER3, PON1, SOCS1, SUV39H1, ATP6V1G1, CACNA2D4, MAP3K7IP2
Negative_2635	ADK, C8B, CR2, ACO2, AMDHD2, AMPD3, ASRGL1, ASS1, ATP6V1A, B3GALT6, BMR1A, CCL22, CCR8, CERK, DGKI, DTX4, DUSP8, EFN2, EXOC7, GALNT11, KLRC4, NME4, NTN1, NTSR1, OR10H4, OR10J1, OR11G2, OR2B2, OR4K15, OR5M9, OXCT2, PARVA, POLD1, PRKCG, RRM2, SCD5, SNAI1, TACR2, TRAF3
Negative_2636	CR1, FES, SCD, SRF, ACSM5, AMDHD2, BCAT2, BHMT, CACNA1S, CDC25A, CDKN2B, CLOCK, CLTA, CSF3R, CYBA, CYCS, CYP2S1, DERL1, DVL1, EPHA4, GNPDA1, GPLD1, GRLF1, GSTA2, ITGB2, KIR3DL3, MAD2L1, MMP9, MYH6, NAE1, OR11L1, OR1B1, OR51V1, ORC5L, PAFAH2, PTPRB, SLC25A6, STAT4, TBL1X, YWHA, TNFRSF13B
Negative_2637	BAD, ITK, ALDH1L1, AMHR2, APOA5, ATG3, ATP5L, CNTFR, CTNNA1, DUSP5, EHMT1, FABP1, GALNS, GCAT, HMGCL, HSPB1, HTR4, LAMC2, LIAS, LYPLA2, MCM3, OR13C9, OR2A42, OR2M3, OR7D2, OR8B4, PDE7A, PIK3CA, PTCH2, PTGFR, PTGIS, RAC1, SENP2, SOCS3, STEAP3, SUFU, TACR2, UGT2B17, UGT2B28, WNT16

Negative_2638	C4B, C6, EGF, FER, GAA, ADIPOQ, ALS2, CCND3, CCNH, CCR10, CD8A, COL6A2, CREBBP, CYFIP1, EPHA1, EPHA2, GAS1, GJD2, GNPDA1, ICOSLG, IFNA16, IFNA8, IL17RA, IL6R, MAP3K5, MAPK12, NKX6-1, OR2L3, OR5AK2, PCNA, PVRL3, SARS, SLC2A4, SMPD1, SPTLC1, ST8SIA5, TUBB, ARHGEF12, ATP6V1E1, SUV420H2
Negative_2639	ASL, C3, EGF, F10, MSN, ABAT, ABL2, ARPC5, BAAT, CACNA1G, CANT1, COX15, CYP3A5, DDX18, DUSP8, E2F1, EDNRA, ELK1, GLYCTK, GSTA1, ICAM2, IRF9, LAMB1, MARS2, MCM6, MTFMT, NFKBIA, NR5A2, NT5C1A, OR1B1, OR9G1, PDE6D, PDGFRB, PDIA4, POLR1E, PPP1R3A, RAPGEF3, RCHY1, RPIA, SELE, TAS2R10, TNFRSF8, UROD, VCAM1, ATP6VOE1
Negative_2640	CCNE1, CDK5, CLDN7, CXCL6, ENTPD2, ICAM2, LDHC, NT5E, WNT8A
Negative_2641	PGP, ACAA1, ADH1A, BLVRA, C9orf95, CCNB1, CCNH, COQ6, CSF2RB, CSNK1D, EPHA8, FLT3LG, FLT4, G6PC, GRLF1, HTRA2, IL10RA, IL25, IL8RA, KLRC2, LAMB3, MGAT1, MGAT5, MLYCD, NT5C2, OGDHL, OR1S2, PAPSS2, PDGFD, PIK3CB, PPID, PPP1R1A, PPP2R2B, RUVBL1, SDHB, SFRP1, SFRP4, SLC25A5, SOAT2, STK3, STX3, TAS2R13, ULK3, YARS2
Negative_2642	E2F3, EFN1, FM03, GALNT7, IL7R, MAPK14, MDH1, MGST2, MMP9, OR2B6, PI4K2C, POLR2G, PPP1CB, PRODH, WHSC1L1, TNFRSF14
Negative_2643	AGL, CAT, ACADSB, ADCY6, ADSL, ALDH1B1, ALG11, APBB1, ARPC1A, CACNG4, CER1, COQ5, CREB3L4, CTNNA1, CTSL1, DDHD1, DGKE, EDA2R, EXT2, GNRH1, GPD1, HMGCS2, IL13RA2, KLRD1, LIPF, MAP3K8, MGAT2, MYLK3, OR11H1, OR1G1, OR1L4, OR4D6, PAK3, PIK3R2, PLA2G2F, PORCN, RAP1B, RBL1, ROCK1, SMAD1, STAT3, TAS2R38, UGT2B7, WASF3, WEE1, HSP90AB1
Negative_2644	ACO1, ACOX2, TLR2
Negative_2645	FER, HAL, IL3, PVR, ACVR1B, ANAPC2, BMP7, CCDC6, CDKN2D, CLDN16, CRB3, CXCL5, DFFB, GLUL, HTRA2, IFT57, IL11, IL22, IL2RB, IMPA2, IRAK1, IRF5, LLGL2, MYL5, NEFH, OR1L3, OR2L13, OR52W1, OR5P3, OR8K3, OR9A2, PAK7, PDE4B, PIP5K3, PORCN, PPAR, PPP1CC, PPP3CC, PTTG1, SDC3, SEMA7A, SENP2, SESN2, SMAD5, SOAT1, TD02, VAV2
Negative_2646	C8A, ALG13, BDH1, CREBBP, FM03, FRAT1, MYH11, NPR1, OR14C36, OR14I1, OR51B4, PDE2A, PLA2G4A, SARS, SH2D2A, HSP90AB1, PAFAH1B1
Negative_2647	CR1, F7, FAS, HAL, NLK, STS, ACP6, AGRP, ALDH3A2, AOX1, APOA5, AVPR1B, B3GNT3, BDKRB1, CACNA1E, CD3E, CDC42, CDK7, CDKN2C, CLDN4, CPS1, CYCS, DERA, EFNA5, EXTL3, FUT7, HARS, HLA-DOB, HRH2, IMPDH2, INSR, JAG1, LIFR, MAP2K1, MAP3K11, MAPK14, MCEE, MKNK2, NPAS2, OR14I1, OR52A5, OR6C3, OR8D4, PSENEN, PTGES2, PTGFR, SHISA5, SMAD7, TNFRSF12A
Negative_2648	HPD, ARSD, ATP5J2, CCL8, CSNK2A2, DHX58, DLAT, FLOT1, GATM, GNAI2, GUCY2F, HCCS, HSPA1B, IRAK1, ITGA11, METTL2B, NADSYN1, NT5E, NTSR1, OR1L3, OR2T2, OR4N5, OR6C1, PDGFB, PIGS, PRNP, SETDB1, SMURF1, TPI1, UNC5D, VAV3
Negative_2649	FADS2, MMP9, OR7C1, POLR2L, PTPRC
Negative_2650	DAPK2, FSHB, HCCS, OR10AG1, OR5A2, PDHB
Negative_2651	DAO, GP5, ACMSD, ACVR2B, AKR1C4, ATP5E, BST1, CNTN1, CSH1, E2F4, ENTPD5, FGF23, FGF9, GLUL, GRIN1, HSD17B8, LCMT2, MAP4K3, MASP2, MDM2, NCOR1, OR2C3, PGAP1, PLAU, PRKAB1, PRSS1, SEMA7A, ST8SIA5, SULT2A1, TUBAL3
Negative_2652	CBS, DLD, ABP1, ATP6AP1, BCMO1, BMP8B, CARD11, CCL26, CD46, COASY, ETNK2, FGF18, GRIA3, IL12RB2, LDHAL6B, NEU4, NFE2L2, NOX3, OR4D11, PDGFD, PLA2G2E, PRDX6, RALBP1, UNC5D
Negative_2653	BBC3, BLVRA, CALML3, CAMK2B, CCKAR, CD44, CNTNAP2, DUSP9, EPHB6, FGF9, ITGB8, LAMA4, MAD2L1, MAPK10, NCR3, OR11G2, OR2Z1, OR3A1, P4HA2, PDPK1, PERP, PLOD3, PRIM1, RFWD2, RPIA, SPRY3, TAS2R9, TNFRSF8, TNFRSF9, TNFRSF1B

Negative_2654	LTB, PAH, ANAPC7, AVPR1B, B3GALT5, CCR3, CD40LG, CDKN2B, DDOST, FMO3, GPX7, GRIA1, H6PD, HLA-DOA, INHBA, INSR, MCM2, MYLK2, NKX3-1, NOS3, OR10K1, OR7A10, OR8J3, ORC1L, PHKA2, PIK3R1, PRKAG1, PSME3, ROBO2, SH3BP2, ST3GAL2, PAFAH1B2, SERPINA5
Negative_2655	CAMK2B, MYH6, NEFM, STX4
Negative_2656	AK3, BAD, ABLIM1, ACACB, ANGPTL4, APOA2, ATP4A, ATP6V0B, BDNF, CAV3, CCL17, CCNE2, CDC25C, COL5A2, FSHR, FUT4, FUT9, GJD2, GLI3, IMPDH1, LAMB1, LAMB2, LEFTY1, LYZL1, MAP3K6, NUDT9, OR10G7, OR1S2, OR2T33, OR4F17, OR4K13, OR56B4, PCCB, PCK1, PDE6G, PPP2R5C, PYGL, RARS, RXRG, SNAP23, TBL1Y, TICAM2, TPI1, TUBA1C, WHSC1, HSD17B10
Negative_2657	AMH, CBL, IDS, LCT, ALOX15B, ALPP, BCL2L1, CACNG6, CARS, CCL14, CCL26, CD27, CNTN1, CXCL11, CYP1A1, CYP2A13, CYP2C9, EDN1, EGFR, EIF4E2, F13B, FECH, GNA15, GSTA1, HHIP, INPP4B, ITGA3, ITGA5, ITGB2, ITGB7, LCP2, LEFTY2, MYL9, OR5L2, PCYT1B, PLK1, PSENEN, PTDSS2, STAT5A, STX8, TAP1, TFDP1, THBS3, TIAM1, TUBAL3, VDAC3, TNFRSF10B
Negative_2658	GADD45G, GALK2, HCST, P2RX3
Negative_2659	BTC, C1S, CR2, AACS, AARS2, ADRA1A, ALG12, ANPEP, ARPC5L, CACNG7, CCKAR, CDH3, DDX52, DIAPH3, FARSA, GMDS, IL25, MPP5, OR4F5, PRKAB1, PRKCQ, RHOD, SETD1A, SMPD2, SPTLC2, STAT1, SUCLA2, UBE2L3, VAV3, WNT1, ATP6V1E1
Negative_2660	ACPI, CKMT2, CNGA3, CSNK1G3, DGAT1, DOCK1, DTX2, EIF4E, EREG, F2RL1, FOSL1, GSTM5, GZMA, KIR2DS4, MAP3K3, NAGK, NEUROD1, OR1E1, P2RX4, PI5K1C, PLOD3, POLD3, PPP1CB, RIPK1, SLC2A1, SMAD7, SMURF1, SOX17, SPCS1, SPHK2, VANGL1, VDAC1, VDAC3, WNT10B
Negative_2661	ASL, FN1, MSN, NNT, ACAD9, BBC3, CEBPA, CLDN9, CSNK1D, CTBS, EPB41, EPB41L1, EPHA2, GATM, GGT6, GOSR2, GP1BB, GPT2, GRIA3, IFNW1, IL18RAP, MAPK1, MCM6, NT5E, OR56A4, OR5AU1, OR8K1, PIAS4, PPP3R1, PRKAR1B, PRKCQ, PRKG2, PRSS3, PTPRF, RPS6KA2, SELL, SKP1, SOAT2, SOX17, SPRED2, THBD, TYK2, WNT6, YKT6, MAPKAPK5
Negative_2662	A4GALT, EPHX2, ERO1L, GZMA, HTR2A, LCMT1, OR4E2, OR4X1, PRKAR2A, WNT9A
Negative_2663	ADH6, ARHGEF1, BACE2, CCL1, CSNK1G2, CYP2A7, EVI1, FBP2, IL12RB2, MGI2, OR4B1, PIK3R3, PRKCD, SMAD7
Negative_2664	ALDH1A2, ALDH3A1, AREG, BPNT1, DBF4, HDAC2, OR8K5, PAX8, PDE7A, PKM2, ROBO2
Negative_2665	ME2, AKR1C1, CDC14A, CLDN3, CSNK2A1, DARS2, EFNA4, EPOR, FZD6, GNG12, GPT2, HIBADH, HSPA2, KIR2DS4, NAGS, NRP1, OR10AG1, OR2A12, OR5B3, OR5L1, PARD3, PLXNB2, PRKCD, ROBO1, SSX2IP, SV2C, UCK1, WNT4, WNT5B, XIAP, HSD17B12
Negative_2666	GP6, TNN, AASDH, ACSL6, ALPP, BAI1, CLDN18, DVL3, EPHB4, FGF7, GSTM3, IL10RB, INPP4B, NPR1, OR11G2, OR13C3, OR2T11, OR51A2, OR51B4, OR51B5, OR52E8, PARVG, RASGRP1, SDC4, SETD1B, TBK1, TIRAP, TRAF5, VEGFA, YWHAQ, SERPINF2, TNFRSF11A, TNFRSF17
Negative_2667	AR, ALOX5, CDC6, CSF2RA, DDX18, DGKG, OR2K2, ORC2L, PDE1B, PFAS
Negative_2668	CDA, SRC, VCL, ACVR1B, APLP1, CCNA2, CD55, CTBP1, FLT1, GJA1, GPD1L, HSD3B1, IL15, IL1A, INSR, IRS2, MAP3K11, MPZL1, OR51Q1, OR52L1, OXSM, PIAS1, PIK3C2G, RAC2, WNT6, ATP6VOE1
Negative_2669	CACNB2, JAM3, OXCT1, SMAD5, TUBA3C
Negative_2670	AK3, ACOX2, ACPP, ACTA1, ADRA1B, ALDH1A3, B4GALT4, CSNK1G1, DRD2, GNA14, GPD1, GPLD1, GTSE1, GUCY1A3, ITGA2B, OR8J3, SHMT1, TUBB2A
Negative_2671	BCL2, EXOC7, PCK2, TFDP1



Negative_2672	ADC, CDA, ADSS, APPL1, CACNG6, CBLB, CLDN1, CPOX, CYP2C18, CYP4A11, DX52, EPHB6, EPHX2, FOXO1, GAMT, IL19, IL4R, IPMK, MASP1, METTL6, NANP, NCSTN, NR1H3, NT5C1A, OR1J2, OR5B12, OR6C1, OR6N2, OR7G2, PDE9A, PDPK1, POLR2B, PPA1, RALB, RELA, SDC4, SELL, SMAD9, TJP2, CTNNBIP1, PNLIPRP2
Negative_2673	DBI, KDR, LAT, LPO, ACTN1, ALDH3B1, ALG1, ARG2, ARPC1B, ATP6V1A, BMPR1A, CCKBR, CLTB, CTBS, CXCR6, ELK1, GNAL, GRHR, GSTK1, HIF1A, IL20RB, MGAT2, NCK1, NFE2L2, OR4N5, PPAP2C, PTPRR, SARS, SNAP25, TACR3
Negative_2674	SI, ADAM10, AKT1, BPGM, CDKN2C, CHST13, CSNK2A2, DHFR, EPHA1, FLOT1, FSHB, LLGL2, LTC4S, NFATC1, NTF3, OR3A2, OR51F1, OR52N5, OR8K3, PDE8B, PIAS1, POLR2L, RFXAP, SLC27A1, SMAD6, TNFSF8, UCK2
Negative_2675	EZR, ARSB, CACNG3, MAP2K4, OR1C1
Negative_2676	HDC, CCR4, CLDN8, DGUOK, FABP1, GAMT, GFAP, IL4R, NODAL, OR2D3, OR2T3, OR4N4, OR52K2, STT3B, THY1, TJP1, TUBB2A
Negative_2677	BID, DUT, VCL, ADIPOQ, DCTN1, EPHB2, FUT6, IL1R1, INPP5E, INPPL1, KITLG, NRG2, OR4X2, OR5AP2, OR6Y1, OR9G1, PDE3B, PDGFD, TSC2, XYLT1, PLA2G12A
Negative_2678	BCR, C4B, C9, DLD, F7, MPZ, PC, SDS, AASDH, ACTN2, ALG1, AMY2A, BMPR1A, CHIT1, CHRM3, DAPK1, DDIT4, ENO2, ERBB3, FBP2, FUT1, IPPK, IRAK4, LALBA, NEFM, NME7, NOX1, OR2S2, OR4B1, OR4C15, OR4K1, OR51B4, OR52A1, OR6S1, PPM1D, PPP3CC, ROBO3, SLIT1, STAM2, TLR9, TUBB4Q, WBSR17, ATP6V1E2
Negative_2679	GP6, SI, ADH5, ADSS, ARPC4, CD44, CD8A, CDKN2C, CES2, DTX3L, GSTK1, HGSNAT, HNF1A, IFNA8, IFNGR1, KCNQ1, LAMA3, NCF1, OR10G9, OR2D3, P2RX4, PLAU, PPP2R1A, TRIP10, WNT7A, WNT8A, CSNK1A1L, HSP90AB1
Negative_2680	CRH, HK1, ACSS3, ALDOC, ALS2, BPGM, CD59, CSNK1A1, CTBS, FMO3, HAP1, NCR3, NFAT5, RELB, STAT5A
Negative_2681	LAT, ADCY9, ALDOA, CARS2, CD46, DPYSL2, E2F5, EPHA5, GLUD2, OR10A2, OR7G1, ORC6L, SEMA4G, STMN1, PLA2G12B
Negative_2682	GCDH, PIK3C3, TLN2, TPI1
Negative_2683	SRC, AOC3, CDC45L, CDH5, CHRM1, DDX4, DRD2, ECHS1, EFNA4, FDFT1, GLS2, HRH2, IL15, IL20RB, OR51B2, PDE6D, PFKFB1, PLCE1, POLE4, PRKAA1, PSME3, PTPRF, SRD5A1, ST8SIA5, TAS2R1, ZFYVE16
Negative_2684	KDR, AKR1D1, ARNTL, CRKL, FGF6, FLT4, FPGS, GADD45A, MAP3K3, NFKB1, OR1L6, OR2L2, OR2M4, OR4A16, OR51D1, OR5B21, SHC1, SKP1, STAT4, TFDPI
Negative_2685	ADH5, ALOX12B, B3GNT3, BLNK, CCNA1, CKMT2, CSNK1G1, CYP3A4, DAAM2, DAXX, DTX1, EPB41L1, EPHA4, FBP2, FLOT1, HARS2, HTR7, IL12B, IL3RA, IL8RA, JAK3, MAPK1, MOV10L1, OR3A2, OR4F6, OR4N2, PFN4, PLXNA3, PNPLA4, PTGER1, RPS6KA4, SGPP1, SLC12A2, SLC2A1, SSH1, SUCLA2, SUV39H1, TLR9, TNFSF18, WNT9B, SERPINB5, TNFRSF17
Negative_2686	APOE, FGF11, GLYCTK, MYH11, NRG1, OR2C3, OR6B2, OR6X1, OR8B4, PDE1B, PTCH1, SLC25A4, UNC5A, VARS
Negative_2687	GAA, ACADL, AGMAT, ALCAM, ALDH5A1, CYP26B1, CYP3A43, DUSP3, ENPP2, EPHB1, IFT57, IL12B, MAP3K8, MGAT4B, MGST1, OR10X1, OR1C1, OR4K5, ORC3L, PARD6B, PCK2, PRKCB, SOCS3, ST3GAL6, TSHR, UBA7, GABARAPL1, HLA-DRB3, PRICKLE2, SUV420H2
Negative_2688	SI, ACTA2, OR2Z1
Negative_2689	ACHE, ATP4A, CAV2, CD226, COX10, HEXA, MYH6, NFATC1, OR4F6, PLXNB2, PLXNB3, VAMP1, WNT1
Negative_2690	CSK, FGA, GH1, AARS2, AGRN, CDIPT, COL6A2, IDI2, IL10RB, LDHAL6B, MCM4, NFKBIA, NTRK2, OR5B12, OR6B2, ORC3L, STK11, TAP2, TJP2, TRDMT1
Negative_2691	NF1, NLK, RDX, TKT, ACVR2A, CDC7, DDX41, ERBB3, IFNA8, IFNB1, IL22RA2, KIR2DL2, OR51A2, PROC, RPN2, RPS6KA3, RPSA, TNFRSF12A

Negative_2692	ACAT1, CAMK2A, CCNG2, DGUOK, EP300, FGF3, GRM5, HTR7, IL24, MAP3K4, OR2T34
Negative_2693	WAS, APAF1, ARPC2, CBR3, COL1A2, CSNK2B, CXXC4, DAD1, ENPP3, ETNK2, FGF23, GNA13, GNPDA1, INHBA, JAK3, KCNQ1, LDHC, NAT5, NODAL, OR12D3, OR52D1, PCYT1A, PDXK, POLR2G, PTK2B, SESN1, SH2D1B, SMARCA5, TLR4, VTI1B, XYLB, ATP6V0A2, CSGALNACT1
Negative_2694	C7, ACAT1, CDC26, EDA2R, FGF4, MTHFR, MTMR2, NTSR1, PDE7A, PHKA1, POLR3B, B4GALNT1, TNFRSF13C
Negative_2695	PC, ALPPL2, ASCC3, ATP5D, CCKBR, CD72, CDH1, CLDN18, CSNK1G3, CSNK2A1, DPYSL2, ERBB4, FBXW11, GMPR, GPAA1, GSTM5, IRAK2, ITGB5, LYPLA1, MYH1, NRCAM, OR2AT4, OR56A3, OR5H6, PIGU, PLOD1, POLR2B, PPP2R5B, PRIM2, PRODH2, PTPN6, RHOQ, STX18, STX3, SUCLG1, WBSR22, ATP6V1C1, CACNA2D1
Negative_2696	BCR, ID4, ABLIM3, ACY3, ADORA2A, ALDH1A3, CDH3, CYCS, DGUOK, DKK2, FGF17, GFPT1, GMPPB, GNAZ, GNPAT1, HLA-F, IL1R2, IRAK2, ITGB5, MAP2K3, MCM3, NCOR2, OR2H2, OR2T6, OR52N5, OR6C6, POLR3K, PPT1, RBX1, SEMA7A, SGMS2, SOCS5, SPCS3, SULT1A1, VAV3
Negative_2697	BTC, GP9, APOA2, B3GALT6, C1QB, CACNG3, COL1A1, CYSLTR2, EPHA5, FADD, FGF14, GNPAT, IGFBP3, LCP2, NCSTN, NT5C1A, OR2G3, OR6X1, PDCD1, PIGF, POLE, POLE2, PPM1A, RAP1A, STAT5B, CSGALNACT2
Negative_2698	F10, ACSL1, ADRA1A, ALDH1A2, ARHGEF2, ATP5B, ATP5G3, B4GALT1, BPNT1, CD40, CDKN1B, CMPK2, CXXC4, EFNB2, FGF5, FGF7, GNA13, HTR5A, IRF7, MAP4K3, MECR, MYH15, NEFM, NR5A2, OR2S2, PMM2, POLE3, PVRL2, PYCR1, PYGM, RASSF5, SMAD3, TAS2R48, TBL1XR1, UCK2, YWHAE, ATP6V1G1
Negative_2699	AUH, ADCY3, ASS1, CRLS1, CSF3, FABP4, FDPS, FZD4, GUCA1A, HCST, IL23A, IL4R, PAK2, PNMT, PRKACA, RHEB, ZBTB16
Negative_2700	BTK, CCR4, HRH1, SC5DL, STK11, UNC5D, SERPINA5
Negative_2701	CKB, F8, ID4, AMHR2, ATP4A, BBC3, CD247, CD274, DGKZ, ENPP1, FGF2, GNRHR, HGSNAT, IL13, LDHA, MTFMT, NFKB2, OR2B6, OR2T10, OR4C13, OR4K17, PIK3C2A, PRKCE, RHOD, RND1, SGPP1, SMAD3, SOAT1, SPHK1, SRD5A1, TGFB2, THBS4, TRPM5, VAV2, PPP1R12A
Negative_2702	FGG, CNTNAP1, HADHA, HLA-DMA, OR2M2, PPP1CB, TICAM1
Negative_2703	GNS, STS, ACSM5, ANPEP, AVPR1A, CACNA1C, CD79A, CTPS2, CTSB, CYP2A13, DGKZ, DUSP7, FSHR, GAL3ST1, GCH1, HGSNAT, HMGCL, INMT, OR6C4, OR7A5, PDE6H, PIGK, SPTLC1, TAS1R1, TCF7L1, VAMP2, ST6GALNAC5
Negative_2704	A2M, DDO, GPT, PGP, ACADL, ACTB, ALS2, AMDHD1, BMP5, CREBBP, CUL1, ECSIT, EIF4E2, ESAM, GCLC, GOT2, GPT2, IL12RB2, IL13RA2, ITGA7, JAG2, KA2B, LDHB, MINPP1, MTHFR, MTMR1, NTF4, NTRK1, OR10H4, OR4F6, OR51A7, PDE4B, PDGFD, RBX1, SARS, SEMA4C, TAP1, TAS2R3, TNFRSF4, TNFSF12, TNFSF4, TYROBP, CTNBP1, TNFRSF10C
Negative_2705	BAD, ACP6, ALAS1, ALDH1A3, ARSB, ATP12A, ATP5C1, ATP5F1, CAMK2G, CD14, CHPF, CHRM5, EDAR, FBP2, GGCX, GP1BB, GUCA1C, IDH3G, IL15RA, KCNQ1, MOV10L1, MPST, MTHFS, NAT5, NT5C1B, OR5H6, OR8D2, PAICS, PCNA, PIGF, PPP1R3A, PRDX6, PRKCQ, PTGDS, SLC2A1, STAT2, TRAF5, UGT2B28, SERPINF2
Negative_2706	SFN, CDK2, GALNT9, HAAO, NEU1, NR1D1, PDE6H, PIAS4, POLR1D
Negative_2707	C8G, CR2, ADIPOR1, AKR1B1, BPGM, COX10, CPT2, EGLN1, F13A1, GRIA1, IGF1R, FBP3, IL11, MAP2K4, MYH1, NCKAP1, OR1D5, OR4C15, OR8S1, PDE5A, SMAD5, UGCGL2, CACNA2D3
Negative_2708	PGF, ADRA1D, KCNB1, NARS2, OR4F15, PTEN
Negative_2709	CDC26, CTSG, GALK1, GUSB, RXRB, ST6GAL1, WNT9B

Negative_2710	AK3, LHB, LPO, ACADVL, ATP5F1, CAMK4, CCR6, CD226, COL11A1, CTNNA1, CXXC4, ENTPD3, GBA3, GCNT4, GFPT2, GMPR, HAP1, HMGCR, IL1R2, INHBA, IRF7, LGMN, LRRC4C, MAPK11, MAPK9, OR13G1, OR2T2, OR56A3, POLA1, PTAFR, SFRP1, SFRP5, SGMS1, SLC2A1, SORBS1, SV2A, TNFRSF8, ZNRD1
Negative_2711	ANAPC10, CKS1B, CTF1, DUSP3, OR2T34, OR3A2
Negative_2712	C6, GNE, MAG, OSM, ADRA1A, ADRBK2, ALG13, ANAPC10, CACNB4, COMT, CXCL3, DDX41, DLL3, DTX4, EIF4E, ENPP7, FADS2, FUT2, GJA1, GPLD1, HMBS, HTR4, IL13RA2, MCM7, OR2Y1, OR4F5, OXCT1, PDE6G, PLAUR, PLD1, RALGDS, RPS6KA2, VEGFA, YWHAB, SERPIND1
Negative_2713	BCAT2, CACNG8, DEGS1, GLUD2, MADCAM1, OR4C46, OR8I2, PLAT, PLXNA2, PP3R1, PTGS1, RPRM, RPS6KA4
Negative_2714	LIF, ACVR1, BET1, BMP6, CCNG2, CHAT, CSNK1E, CYCS, CYP2F1, DDX56, DHD DS, DOT1L, ENTPD7, ETNK2, FABP1, FMO4, FUT1, FUT4, GLI1, IFNB1, IL7R, ITGAD, ITGAX, MAPK14, MYL2, ODC1, OLR1, OR11L1, OR56A4, PDCD1, PLTP, PLXNA3, PRKG2, RAC2, SEMA3E, SFRP1, ST3GAL6, SUV39H1, THTPA, TP53, TYMP, XYLT1, GABARAPL1
Negative_2715	F10, TFG, APPL1, BCL2, CALML6, CCDC6, CCR9, CLDN18, CYP11B2, DIAPH3, FGF10, FZD4, GLI1, HCCS, HPSE, IL1R2, LIPE, MAML1, MAP3K6, MDM2, NRXN1, OR4A16, OR51G1, OR6C70, PARD6G, PDCD1, PIK3R4, POMC, PON3, PPP2CA, RPS6KA3, SHC4, SPTLC1, SULT1A2, TAS2R3, TGFB1, TUBAL3, WNT11, HLA-DPBI
Negative_2716	CLCA4, ENPP6, IL11, MAP2K1, MAPK11, OR2M2, OXCT2, POLE3, SESN2, STX5, TYRP1, ST6GALNAC5
Negative_2717	FST, GNS, LEP, PAH, SYK, ACSL1, ADRA1D, AFMID, AGPAT2, ALOX15, ARNT, ATP4A, BCAT1, BMP8B, CLDN14, CSNK1G1, CYP2J2, DOLPP1, DTX1, EDA2R, GALK2, GLI3, IAPP, IDUA, IRAK3, ITGB7, KIR3DL1, MAOB, MLYCD, NCAM1, OR1F1, OR2L8, OR52N4, PDHB, PLA1A, THY1, TNFSF8, ATP6VOA2, MAPK8IP2, PPARGC1A
Negative_2718	DUT, FES, KHK, ACPP, APOA5, BCL2, CCL13, CUL1, DIAPH3, DPYSL2, GNPAT, KLRD1, NME4, POLR3G, SDC4, SERPINA5
Negative_2719	ADA, ABL1, AMDHD1, APLP1, GFAP, HDAC1, HLA-G, ITGAD, LIAS, NUDT2, OR5B3, RRAS2, ULBP2, CACNA2D4
Negative_2720	CRK, GCK, PRL, ADSL, B4GALT1, BET1L, CCR3, CHRDL, DLST, ENAH, OR2F1, OR8G1, OR8H2, OR8K3, PDXP, PKLR, POLD1, PPP2CA, PRSS3, PVRL3, SCIN, TAP2, TP53I3, ZMAT3
Negative_2721	INS, PVR, APOE, CNTN2, DERA, GAD1, GARS, INPP5A, MYD88, OR10A4, RAP1A, PHOSPHO1
Negative_2722	BCR, PRL, ADCY10, ATP6V1D, CACNA1C, CARD11, CCL2, CD274, DDX56, DPM2, EFNA3, EPHX2, FADS2, FTMT, GART, GPAM, IGF1, IL4R, KLRD1, MDH2, NFYB, NGEF, OR12D3, OR4S1, PROC, RUNX1, SEMA3B, SHC1, STX18, TAS2R7, PPARGC1A
Negative_2723	DCN, SRC, ACAD8, ADAM10, ALG10B, AMHR2, ATP5F1, CPOX, CYSLTR2, DDHD1, EFNB3, FUT8, FZD4, GGPS1, GLI1, GSTO2, IL1A, ITGB1, ITPKA, KAT2B, LDHAL6A, OR10R2, OR2L3, OR2T4, OR8D1, PIGV, SRGAP3, TLR3, UPP1, VDAC1, WNT3
Negative_2724	DBI, PRL, SCD, AHCY, ALG2, ANAPC7, ARHGEF4, BCL2L1, CD274, CD36, CDH15, CDH2, CLDN15, CSNK2A1, CXCL5, CYP2U1, EPHX1, FARS2, FGD1, FGF10, FLT1, GNAS, GNPDA1, IFNK, IL20RB, MCM6, NKX2-2, OR4X1, PIPOX, RDH16, RPS6KA3, SMAD2, SULT1A4, TAS2R40, THBS3, WNT10B
Negative_2725	C5, CSK, DBH, F8, HDC, TNN, AHCYL2, B3GALT2, BAAT, BHMT, CHRDL, EIF4E2, ENTPD8, FRAT2, GNA12, IFNG, IL13, INHBB, L1CAM, LAMB3, LCMT2, MALT1, MYH10, OR10A7, OR13C4, OR52W1, PDE4C, PI4KB, PON2, TUBAL3, WASL, TNFRSF17

Negative_2726	F2, IL4, LIF, ACOT12, ANAPC11, BMP5, CCL22, CCL23, CD46, CLCA2, CRKL, DAPK3, GALNT1, GNAL, HNF4A, MAP2K6, MAPK14, MPST, NFYA, NME6, OR10H5, OR8U1, OR9G1, PDE8B, PNLIP, POLR2F, PTGFR, PTGS2, RASSF1, RXRG, SOC S4, WARS, XCR1, SERPINA1
Negative_2727	ACTG1, BET1L, C5AR1, CD247, CDH5, COL5A3, EFNB3, FABP1, G6PD, H6PD, H EXA, ITGAM, MAP3K3, NLGN2, OR2C1, PON2, SH2D1A, SMAD1, ST3GAL6, STX1 2, TNFRSF8, TRAF2, WNT4
Negative_2728	ACADVL, ACOX1, AMHR2, APOC3, BIRC2, CAMK2G, CLDN7, COL4A4, CRY2, CSN K2A1, DNMT1, DRD2, EARS2, ENO3, ETS1, FMO5, FUT6, GUCA1A, GUCY2C, HSD 17B2, HSPA8, LAMC2, LEF1, MAN1B1, MAP2K4, OPLAH, OR10H2, OR10T2, OR1 E2, OR2M5, OR4M1, OR4N5, OR52B4, PIGV, PNPLA3, POMC, PRSS1, PYGL, SKP 1, SNAP23, SOCS4, SRD5A2, SULT1A1, TAP1, TAP2, TLN2, TSTA3, VAV1, VDA C3
Negative_2729	RPE, ALPPL2, CD55, OR10K1, OR2A2, OR8K3, THBS1, VAMP4
Negative_2730	F12, LIF, ADRB3, CCL25, CEBPA, GRLF1, HSD11B2, ITGAM, KIR3DL2, MITF, OR10C1, OR2W1, OR51S1, PLTP, POLR3G, RDH8
Negative_2731	AARS, ITGA5, OR2T2, OR8H2, ST6GALNAC3
Negative_2732	CRK, DGKD, ELK4, NRCAM, OR10G4
Negative_2733	F9, FOS, MUT, RPE, ACTC1, AOX1, ARHGEF2, B3GNT5, BLVRB, BMPR1A, CASP1 0, CREB3L4, DTX3, GALNTL1, GLUD2, GNB1, IBSP, ICOS, INPP5E, KITLG, LA MB1, LGL2, NUDT9, OR13C2, OR2D3, OR2L8, OR6N2, PAX6, PDE8B, PDIA4, P FN4, PLA1A, PPP1R3C, PRKCA, PYCRL, RFXANK, RPS6KA4, RRM2B, SOAT1, SV 2C, TAS2R13, THBS4
Negative_2734	ADIPOR2, BET1, METTL6, MYH13, NUMBL, OR51L1, PIP5K1B, PNPLA4, PPCS, SLC27A4, SLC9A1, ST8SIA1
Negative_2735	LPL, CLDN20, CTLA4, CTNNA3, CYSLTR2, DGAT1, DGKG, EP300, EXTL3, FARS A, GNRH2, GPD1L, GZMA, IL22RA1, LDHAL6B, MAP3K5, NEU4, OR10R2, OR1C1, OR2H2, OR6C6, OR7A10, OR8H1, PKMYT1, SMARCA5, TAS2R14, TPH1
Negative_2736	C8B, ACP6, ADCY7, BMP2, CD72, CTSS, DUSP9, ELK4, FABP3, FZD3, GLO1, GN AQ, GSTA1, HLA- DOA, INSR, LIPA, MAN1A1, MAPK1, OR2Y1, OR4M2, OR51L1, OR8D1, OR9Q1, PIK3C2B, SELL, SPRED2, AASDHPPT, HSD17B10
Negative_2737	GP5, IL6, ADCY1, AKR1C1, ALDH1A2, ATP5J2, CHKB, DHCR7, DPM2, FGF2, GC AT, IL7R, LTBP1, MAD2L1, MAPK14, NEU2, NFAT5, OR7C1, PHKA1, PI4KB, PR KAR2A, PROS1, SEMA3B, UBE2K, UBE2L3, VEGFA, WBSR22
Negative_2738	AMH, IL4, NPY, BCAT1, CACNA1G, CBR1, CCL25, CDK4, CLCA4, CLDN3, CYP2D 6, EFNB3, FGFR1, GFPT1, GUCA1C, ICOS, LAMB2, LYZL1, MAP2K6, MCEE, MYH 10, NCF2, NTNG1, OR10P1, OR8U1, PAPSS2, PDE3A, PDE4D, PLA2G6, PSEN1, PTPRZ1, SH3BP2, TAS2R49, TBL1XR1, VARS, CSGALNACT2
Negative_2739	GK2, ADIPOR1, APOA2, ATP5G1, B3GALT2, BCL10, CTPS, DGKH, FRAT1, GRIN 2B, INSR, JAK1, KIR2DL1, LEFTY1, MPST, NMNAT3, OR5K2, OR8K5, OR9A2, PERP, RDH10, TRAF6, TUBA3C, UGT2B4, UPB1, KIR2DL5A, SUV420H1
Negative_2740	C8B, CGA, CRK, LCT, ZYX, ADH1A, AGRN, ALDOC, ARRB2, ATF2, CDH15, CHKA, CSF2, DUSP4, EGLN1, ELK4, FGF22, GMPR, IL24, INPP4B, ITGA5, MAGI3, MY H1, NFYA, NRG2, OR52D1, PEMT, PFAS, PIGL, PIK3C2B, PLAT, PSME1, PVRL3, RASSF5, SOCS7, STAT4, TIAM1, VCAM1, WNT4
Negative_2741	C4B, FST, HPD, PDC, PLN, ADH5, ALOX15, B3GNT3, CD14, COL6A1, CSF3, CTB P1, FPGS, GCH1, GRIA3, GRM1, IFIH1, IL22RA1, IL28B, ITGA2, ITPKB, MAF A, MKNK2, OR4F6, PDX1, PFKFB2, PI4KA, PIGP, PLA2G2F, POLR2J, POLR3H, PPP2R1B, PPP2R2C, PTK2B, RALGDS, RDH8, RRAS2, SEMA7A, SLC2A4, SMAD4, SMC1A, TUBB2B, ULK1, UPP1
Negative_2742	CFI, DCN, SP1, ADSL, ANAPC4, CACNA1F, CCNG1, CD38, CREB3L4, ETS1, FBX W11, FGF14, GALNT13, HNF1B, IL7R, MDH2, OR10A7, OR10G7, POLR3B, PON1, PPCDC, SMAD7, ST3GAL6, TSC2, WASF2, ST6GALNAC6

Negative_2743	BAX, SMS, AHCYL1, ARG1, ARSD, ATP5G2, BIRC3, DAG1, DPM1, DUSP14, DUSP5, DVL1, DVL2, E2F5, EREG, GADD45B, GALNTL1, GMDS, GPLD1, GUCY1A2, GUCY2F, HLCS, IKBKB, IL6ST, ITGA11, NPR2, OR10H4, OR1N1, OR4E2, PAK1, PGAP1, PGS1, PLA2G2F, PNPLA4, POLD3, POLR2B, SPCS3, TFDP1, UCKL1, UGDH, GABARAPL1
Negative_2744	BMP8A, CACNG4, CRLS1, CTTN, CXCL13, DHCR7, FUT5, GLUD1, HAAO, HSD17B3, IFNW1, KIR3DL3, KLRK1, LAMB3, LCMT1, OR11H1, OR2T33, OR5V1, PDGFA, PLA2G1B, RHOD, THTPA, TJP1, VARS, WWP1
Negative_2745	GDA, ABL2, AKT2, ASCC3, CCNB1, CYP1B1, DDHD1, DUSP3, GRAP2, GUCY1B3, IL22RA2, ITGB6, NCKAP1L, OR10J3, OR3A1, OR6Q1, OR8U1, P2RX2, PGAM1, PLAU, PLCD3, PYCR2, SIGLEC1, SYNJ1, TAS2R60, TPM3
Negative_2746	IHH, ALG13, DHX58, IDH3A, LDHAL6B, NAMPT, NT5C1A, OR10C1, PDE4A, PGAM2, PLOD2, PPP2CB, RBL2, ROBO1, RPN1
Negative_2747	CDA, ACTN4, CBLC, DOT1L, ELK1, ENTPD3, IKBKB, IL2RB, ITGB7, MAP3K2, MAPK12, NAMPT, NTN1, OR4F4, OR8B4, PTPRZ1, SMAD5, TACR3, VNN1, XYLB
Negative_2748	C4B, CTH, ADSS, BCL10, C3AR1, CACNA1E, CCNB3, CLCA4, DDX19A, FASLG, GAPDH, MADCAM1, NAT1, NCOA4, OR4F5, OR51M1, PAFAH2, PDCD1, PLXNB1, RAD51, TNFRSF12A
Negative_2749	DDO, ID1, IL9, ACADSB, ARHGEF6, ATP50, B3GNT4, CYP11B2, DOLPP1, DUSP2, EHHADH, FASN, FDPS, GMPPB, GNPDA2, GPT2, IDI1, IFNA10, IFNG, IL8RB, MMP9, NFKBIE, NR5A2, OR10G7, OR2AG2, OR51D1, OR8B12, PON3, PRPS1, PSME1, SHC3, SLIT2, SMURF1, TICAM1, TOMM40, HLA-DPA1, SERPINB5, SERPINC1
Negative_2750	AK2, ATM, HK1, ACAA2, CRKL, DNMT3L, DVL2, HCLS1, IFNA5, IL17A, MARS, OR14A16, PRLR, PTPN6, RAC2, RBX1, SPI1, TNFSF18
Negative_2751	LAT, LYN, B3GNT2, BET1, CD58, CISH, CNGB1, CTBS, ENTPD8, FZD10, GAPDH, KIR2DL3, MCM4, NKX3-1, NME4, OR51V1, OR5D16, PDCD1, PLCG2, PLXNB3, PRPS1, PSME2, RBPJL, SETD1B, SMURF1, SPRY1, TLR2, TSNARE1, PAFAH1B2
Negative_2752	C4B, GNS, ACVR2A, ADRA1D, AOC2, ARPC5L, B3GALT6, B3GNT5, C7orf16, CAMKK2, CAV1, CDC26, CNTN2, CXCL10, DFFB, ENPP2, FASN, FZD6, GATM, GLI3, HLA-DMA, HTR2B, MAP2K6, MAPK3, NADK, NR1D1, OR13C9, OR13D1, OR1J1, OR1K1, OR4D6, OR52A1, PAICS, PLXNB2, POLR2B, TAS1R2, TM7SF2, TNFSF10
Negative_2753	ADIPOR1, BMP4, CHD8, COMT, CRLS1, HTR4, IL17RB, KIR2DL1, LCMT2, MNX1, PI4KA, PIGH, PIK3R3, PROS1, RXRB, TRAF4, UGT2B11
Negative_2754	CR2, INS, MPZ, PGP, ACTB, ACVR1, ALDH9A1, CACNA1F, CCNA2, CCNG1, CCR8, CDC23, CLDN10, COL5A1, CYSLTR2, EDNRA, ENTPD2, GNA13, GNMT, GPD1L, GSTM3, IFNAR2, LYZL1, MMP1, OR14J1, OR2G2, OR2L8, OR2T33, ORC2L, PAK2, PCYT1B, PDGFRB, PGM3, PGS1, POLR3D, PPP2R5E, RASSF5, RBX1, SMARCA5, SOCS1, STX4, TLR2, TNFSF12, TUBB4Q, USE1, ZBTB16, ATP6V1G2
Negative_2755	NOG, ACAA2, ACAD8, ACP5, ALDH3A1, ALG11, APH1A, ATP5A1, BCKDHB, CCDC6, CD79A, CTF1, DUSP6, GALNT12, GNA11, GPD2, LPAR1, LYZL1, METTL6, NSD1, NUDT8, OR10R2, OR2A5, PPP2R1A, PVRL4, PYGL, QPRT, RAC3, RAP1B, RFXNG, SMPD2, SOCS2, TSLP, ATP6V1C1
Negative_2756	CSK, DBT, FAS, ACPT, BLNK, BMP8A, CADM3, CCNB3, CD22, COMP, COQ3, CUL1, CYBA, CYP2S1, DRD5, EDA2R, ENPP7, GSTA2, GSTA4, HES1, HTR6, IRS1, ITGB2, LDHAL6B, MMP14, MTHFD1, MYL5, NCR1, OR2A12, OR2L3, OR51E2, OR52K1, OR52R1, PDHA2, PLCD1, POLR2G, PRKCH, PSEN2, PTAFR, PVRL3, SFRP4, SMAD6, ST3GAL3, STX3, STX5, TAS2R60, YARS
Negative_2757	CD80, CTNND1, EPHA5, FDPS, HES1, IL23A, JAG2, PI4KA, TOMM40L, B4GALNT1
Negative_2758	GH2, ALG3, BCAT1, FGF3, HSD17B7, OR52J3, PDE8A, POLR1C, RERE, SEMA3E

Negative_2759	NF1, ADH7, AKR1B1, ARHGEF7, BRAF, CACNA1I, CHEK2, CSNK1D, FABP3, FLA D1, GSTM3, HA01, HPSE2, IL22RA1, MAGI2, MCM4, NAT6, NME7, NRAS, OR5M8 , OR5T1, PDE4C, PLA2G6, PPA1, PTPRR, RASGRP3, STMN1, TXNDC12, VCAM1, XYLB, B4GALNT1, PNLIPRP1
Negative_2760	MPZ, AGMAT, COMP, GALNTL5, GNB1, IFNA16, OR6C74, OR7A10, PIGF, SETD8 , TAS2R40
Negative_2761	FN1, IL7, TNF, ABLIM1, ACY3, ALAD, ARPC1B, ARPC4, ARSB, BET1L, CAMK2A , CDC25A, CXCL3, CYCS, DDIT4, DVL1, EPHA6, FADD, FGF6, FSHB, GBE1, GST M3, HTR5A, IFNGR2, IL19, ITCH, MDM2, NCF1, OR10A7, OR10G9, OR13C9, OR 51G2, OR5B17, OSMR, PDE6G, PGAP1, PIP5K1C, PPP1R3B, PPP3R1, PTTG1, S LC25A4, SMAD7, SUV39H1, TLR3, VKORC1, WNT8A, XCR1
Negative_2762	ACP2, GANAB, RPS6KA2, RUNX1T1, VNN1, PHOSPHO1
Negative_2763	DBH, AFMID, CCL14, CHIT1, CRY1, DGKE, DGUOK, GNPDA1, ITGA4, ITGB8, MA PK9, NCAM2, PLCB2, PLCE1, PLD1, RAPGEF1, SAT1, SMAD5, UGT2A3
Negative_2764	F7, GSS, MET, PAH, ADRB3, AMY2B, BHMT, CXCL13, DOLPP1, FCGR3A, GLUD1, HSD17B7, MAGI1, NANP, NOTCH3, OR7G3, PIGX, POLR3A, PTK2, PYCR1, TRAF 3
Negative_2765	F12, FGB, RPE, ADCY1, ADH1B, ADIPOR2, AGPAT4, ALOX5, APH1A, CDC26, CD KN2D, COX10, CRHR1, EIF4E2, ENTPD5, F2RL1, FGF2, INPPL1, LIPG, MAML2 , NTRK1, OR4F17, OR51F2, OR5L2, PEMT, PGM1, PIP5K1C, PON2, PRKX, PRLR , RND1, SLC33A1, TOMM40, UMPS, HLA-DQB1, HLA-DRB5, MAPKAPK5, TNFRSF11A
Negative_2766	ABLIM1, ACLY, ADSS, ALOX12, BDH1, C9orf95, CD27, CLDN20, CRLS1, DDIT 3, DKK2, E2F4, EPHB2, EXOC7, FOSL1, FZD9, G6PC, GNAL, GRIA3, GUK1, IL1 8RAP, KAT2A, KLRC4, MAPK3, MTHFD1, NMNAT1, NOTCH3, ODC1, OR10X1, OR4 K1, OR51V1, OR52E6, PFN4, PSEN1, SARDH, SETD2, SIAH1, STT3B, TSHR, UR OS
Negative_2767	BAD, DBI, AKR1D1, ALDOB, ALG6, CACNA1S, CD44, CSH1, EDA2R, FBP2, GAB1 , GUCA1B, NEU4, NNMT, PDE4D, PKM2, PPAP2C, PPP1CC, RPS6KA4, SSH2
Negative_2768	BAD, DERL1, FGF5, FUT5, HNF4G
Negative_2769	ABAT, ACOX2, CDC42, CHSY1, CLDN18, CYP21A2, CYP2S1, DDIT4, GP1BA, IF NA5, LIAS, LLGL2, MAP3K13, MCM7, MPZL1, NEU4, OR10G8, OR4D9, OR51L1, OR5H2, PMM1, POLR1B, PRKACG, RBPJL, ROB02, RPS6KA1, RUVBL1, SHC4, SK IV2L2, SLC2A2, STX16, TBL1XR1, TUBA1C, UPB1, UROD, VARS, VNN1, CSNK1 A1L, HSD17B10, MAPKAPK2, ST6GALNAC1
Negative_2770	DCC, ITK, AKR1D1, ATF2, ATP2A3, CDH5, CHSY1, CLDN22, CNDP1, CXCL2, DA G1, FUT5, GPX7, MAP2K6, NAT2, NEU2, NPAS2, OR5L2, OR5M9, OR7A5, OR7C1 , OR7C2, PLCG2, PLXNB1, SKP1, SOS2, THBS2, VDAC3, WARS, WEE1, YES1
Negative_2771	CKB, LSS, ABCC8, ACTA2, AK3L1, AKR1B10, ALOX12, AMPD2, ATP5E, B3GALT 5, CDKN2C, CTLA4, DUSP3, EPHA2, FGF1, FGFR1, GALNT13, GCLM, GSTM2, GU CA1C, HBEGF, HRH1, IPMK, KIR2DS4, KLK3, MAP3K12, MFNG, MTHFR, MYD88, MYH15, MYH9, OR5H6, P2RX7, PDGFRB, PIGL, PIP5K3, PLCB4, PLXNA1, RAP1 A, SPRY2, TUBA3C, TYK2, UBE2K, UPP1
Negative_2772	C4B, CRK, FGA, PLG, ACY1, ALG9, ATP5J2, BCL2, CBLB, CTSS, EGLN1, ENTPD 4, EPOR, F2RL2, FGF22, FUT1, GTSE1, GUCY1A3, MTHFD1L, NADK, OR2A25, O R4D6, OR51A7, OR5AS1, OR6T1, PPA2, PRKAR1A, SELPLG, SMAD9, SMC1A, SM PD1, TGFB2, THTPA, VAV3, WNT11, XYLT1, SERPINB5, TNFRSF13B
Negative_2773	APP, GAA, ALPPL2, ATP5D, BMP6, GNPAT1, HAGHL, INHBE, NCR1, PARD6B, P ER1, PFKP, PSEN1, PTDSS2, SMAD6, SPAM1, TAS1R1, TUBB2C, WNT5A, ZAP70
Negative_2774	LHB, STS, AACS, ACAT1, ACSS2, ADCY10, ALG6, ARSB, ATP5G1, C1QC, CDH2, CNTF, COL2A1, CTNNA1, EFNB1, F13A1, F2RL2, GALNTL4, GBA3, GCLC, GLUL , GRM5, GSK3B, HDAC2, HTRA2, ITPA, KIR2DL1, LHCGR, LLGL2, MCM2, MYH7B , NEU2, OCLN, OR2H2, OR2L3, OR51F1, OR51S1, PFN1, PIGQ, PLA2G10, PLD1 , POLR2E, PRKY, SHMT1, STX6, TAS2R48

Negative_2775	BIRC2, MYLK3, RDH16
Negative_2776	AR, DBT, EBP, FAH, SI, ADRB2, ALDH1A1, ALDH4A1, CAMK2D, CASP10, CLTA, CLTCL1, DUSP7, GANC, GP1BA, HLA- DRA, HPRT1, IL22RA2, INADL, IRS4, KRAS, MAP3K14, MAP3K2, MRAS, NCF2, NFATC3, NFKB1, OR13H1, OR1J4, OR2G2, OR2M3, OR4F5, OR51A4, P2RX1, PF KFB3, PLA1A, PPBP, PRPH2, SHISA5, SLC25A5, SPRY4, TALD01, TCF7, TCF7 L2, UGCGL1, UGDH, CACNA2D1
Negative_2777	EDA, ACACB, ADRB2, AK3L1, AXIN2, B3GALT5, C7orf16, CCNE1, CDKN2B, CO L5A3, DGKQ, DLST, FBXW11, FCGR2B, GSTA5, IL20RA, ITGAD, LAP3, LARS2, LIFR, OR10AD1, OR5L2, OR8H2, OR8S1, PIAS1, PPARA, PROS1, PSENE1, PTC H2, SCIN, SKP1, SLC12A2, ST3GAL6, SYNJ1, ATP6V1B2
Negative_2778	LAT, UBB, ACADVL, ACOT11, BET1, BMP5, CACNG3, CCR5, CD44, COL1A2, CYP 2S1, CYP3A4, DDX47, DGKB, FECH, GMPPB, GSTP1, HDAC2, IL15, IMPDH1, IR F3, MDH2, NCAM1, NRCAM, OR1A2, OR2AG1, P2RX3, PFKL, PIGX, PLA2G1B, PL A2G4A, PYGM, RAP1A, SCP2, TAS2R50, UCK1, VEGFB
Negative_2779	CTNNA1, CXXC4, DDX23, MYH13, ATP6VOA4
Negative_2780	ASAH1, BHMT, CDKN1B, DTYMK, FARP2, GALNT10, GCLM, GLDC, MYLK2, PRDX6 , PTPRJ, RPS6KA6, SMC1A, STAT5A, TAS2R38, TUBA3C, ATP6V1G3
Negative_2781	CYP4A22, GRIA3, OR1S1, OR5T3
Negative_2782	BAD, BCR, LHB, ACADM, ADCY4, CADM3, CCKAR, E2F1, EDN1, FGF13, G6PD, GA LK1, GGT6, GNAT3, GNPAT1, GOSR2, HADH, IL13, ITGA4, LAMC2, LRP5, MAP K7, MGAT4A, MGAT4B, MYH1, NCR2, NFATC4, OR1J2, OR2C1, OR5P3, OR5T2, P AK6, PIGA, PIP5K1A, PLTP, PPA2, PPM1D, PPP2R2B, PRKAR1A, PRODH2, TAS 2R1, TGFA, WNT9B, MAPKAPK5, SERPINA5
Negative_2783	PRL, ALDH3A2, ALDH7A1, B4GALT2, BUB3, CACNG7, CD14, CDH5, COL4A4, CO L4A6, CSF2, CYP2E1, DHRS4L2, GALNT14, GLUD2, GNA15, IFNA13, INPP5E, KLRC1, LTBR, MCM2, METTL2B, MPST, OR2M2, PFN1, PIP4K2C, SPAM1, SPRY4 , SULT2A1, SV2B, TAS2R13, TUBB2C
Negative_2784	EHHADH, GATM, LARS2, MCM7, NUDT5, PDE8B, PPCS, PRKAB1, SESN3, SORD, T IRAP
Negative_2785	LPO, APOA1, CD86, DGAT2L4, FBP1, FBP2, FMO5, IQGAP2, LTB4R2, OR52D1, PPP2R2B, SHC1, ST6GAL1, SUCLA2, TFDP1, TOLLIP, TYMP
Negative_2786	AK3, ACACA, ARPC5L, CAPN2, CCL3, CD40LG, CREB3L1, DPM1, DRD1, GNA11, GNPDA1, HLA-DMA, HLA- DRA, IRAK3, KIR2DS5, LDHAL6B, MCM4, NARS2, OR10G9, OR1L4, OR6B2, OR7 G1, OR9G4, PAFAH2, PARD6A, PNPT1, POLD2, RAPGEF4, RASSF1, SOCS7, TNF SF8, VCAM1, YES1, HSP90AA1, SERPINA5
Negative_2787	BID, FGG, ADIPOR2, ADRB2, AMPD3, BDH1, BIRC2, BPNT1, CDC20, CSF3R, CT PS, CX3CR1, CXCL6, EFNA4, ESPL1, FCGR3B, GDF5, GRIA1, IDH3B, IL2RA, K CNB1, LALBA, MAD2L1, MAP3K11, NANS, NFYA, NMNAT3, OLR1, OR10Z1, OR2A G1, OR2AG2, OR51T1, OR8B8, P2RX6, PDGFD, PER2, PIK3R4, PRKCQ, SNAP25 , STAT6, STX12, TNFSF9, WNT7A, YWHAH
Negative_2788	PGF, CD14, CDC27, CHUK, COL4A4, COL5A3, DGKZ, FCGR3B, GADD45A, IL2RA , NFATC2, NME7, OR4F17, OR56A4, PARD3, PFKFB3, PIGA, RRAS2, STAT4, AT P6V1G2, CACNA2D1, PDCD1LG2
Negative_2789	FN1, ACSM2A, ADCY4, ADSL, CALML6, CAMKK2, CD22, CDH1, CTNNA1, FCER1G , FLT3, GAS1, GCLC, GPD1, GUCY1A2, HA01, HYAL2, IL21R, ITGB3, KIR2DL1 , LDHB, MAOB, MMP14, NTF4, NUDT5, OR1I1, OR6C3, OR7A10, OR9I1, PARS2, PDE3B, PLA2G10, PLA2G2D, PLCG2, POLR2D, RASSF1, SHC3, SIGLEC1, UGT2 B17, VAMP1, WWP2, XCL2, HSP90AB1
Negative_2790	ATP5A1, CACNG1, CSNK1E, DUSP8, IRAK1, LTA4H, MAN1A2, OR2T6, OR52E8, OR52I2, PPP3CB, SOD1, TGFB1, TUBAL3, PHOSPHO1

Negative_2791	CR1, DCK, LTB, RFK, AK3L1, AKR1C2, BMP4, CEBPA, CLDN2, CNGA3, CRKL, CYP26A1, CYP2U1, CYP4A11, CYP4F3, DVL2, ENTPD3, GALNT3, GALNT5, GPX5, GSTA2, HLA-F, HMBS, LILRB3, MAD2L2, NAT5, OR4X2, OR51A4, OR52A1, ORC2L, PIGF, RF XANK, RXRA, SMPD3, SORD, SPTLC1, TNFSF18, UBE2L3, PNLIPRP1
Negative_2792	AK1, ILK, AGPAT4, CD79B, CER1, CREB3, CREB3L2, CSNK1G1, DDX50, DKK2, DNMT1, F11R, FGF13, FLT3LG, HLA-DMA, NCKAP1L, NEFH, OR1E2, OR2L2, OR2M7, OR4K17, OR5K1, PLCB4, POLR1D, POLR2C, PORCN, PTGS1, PTPN5, RPS6KA5, SKIV2L2, SMAD1, TAS2R49, TCIRG1
Negative_2793	IVD, ADRA1A, ALDH1A3, ASIP, CAMK4, CFL2, CFLAR, CHKA, COQ3, DDOST, DD X23, DOCK1, ECHS1, FGF14, JAK1, KIR3DL2, LAMA3, LMO7, MAP3K14, NOS1, OR4K13, PDXK, PPCDC, PRKACA, PRKAR1A, RHOD, STK4, TCF7, TGDS, TXNDC12, PNLIPRP2
Negative_2794	ID3, ADCY9, CD38, CDK7, CPT1C, EFNA5, ENTPD2, EPB41L1, HDAC2, NT5C1A, SDC3, TLR2
Negative_2795	AK3, C4B, CTH, TNF, ADH4, ADRB3, AKR1A1, ALS2, ATP6V1A, B3GALT1, CBLB, CCNB3, CD79B, CHAD, CSNK1G2, CXCL3, GSK3B, HYAL1, MAP3K2, MRAS, MYH15, NMNAT1, OR10J1, OR10Z1, OR1I1, OR3A1, OR5D14, OR9Q2, PCNA, PCYT1A, PDE1B, PHKA1, PORCN, RRM2, SUV39H1, TUBA1C, EIF4EBP1
Negative_2796	HK2, IL5, ACP6, ACSL5, B4GALT2, CACNG3, CCL21, CCR3, CX3CR1, CYP1A1, DUSP5, EPB41L2, HNF1A, IRF9, MAPK12, NFAT5, NRXN2, OR4C12, OR6C4, OR6C76, PARVG, PFKFB2, PGK2, PIGH, POLR1C, PPP1R3A, RPS6KB2, STMN1, STX8, WNT5B, WNT9A, ZFYVE9, HSP90AB1, MAP3K7IP2
Negative_2797	GK2, MET, SRF, ACP1, ACP5, AGPAT2, ATP5J, CCL1, CDC42, CHKA, CNTF, CRLF2, CXXC4, DFFB, EGLN1, ENPP3, FGF9, FLT3, GLI2, GNAI3, GNRHR, HAGH, HAGHL, HAP1, IL1R1, IL9R, INHBA, KLRC2, LCMT2, LDHAL6A, LMO7, NADSYN1, NPR1, OR13G1, OR2T1, OR8H2, PAK3, PCYT1B, PLCE1, PTPN6, RAC1, SLC25A4, SMURF1, TCF7L1, TNFRSF9, WNT10B, SERPINA5, TNFRSF13C
Negative_2798	ACOX3, AKR1B1, ALG8, DDX55, FGF13, G6PD, H6PD, KNG1, NFKB2, ONECUT1, OR1L4, OR52L1, PHGDH, TLR9, TNFSF10, YWHAZ
Negative_2799	ALDH4A1, DAD1, DTX4, GALNT2, OGDH, OR4F15, ORC4L
Negative_2800	CR2, FH, GP6, MOS, PAH, ACAT2, AGXT, ALAS2, ATP5C1, BMP6, CCL19, CCL27, CD58, CLDN11, CLDN5, CRB3, DAAM2, DDX52, GNA14, GUK1, IL17B, INHBC, KIR2DL3, LEF1, MBL2, NEFL, NTNG1, OR7A10, PDE2A, PDE8A, PLCD4, RAP1A, ROBO3, SFRP4, SLC25A4, SNAP25, SPRED2, SSH2, TIAM2, TYMS, VKORC1, WNT7B, CACNA2D1
Negative_2801	CFH, GLS, MUT, TNC, ACADM, ACSM4, ADCY9, ASCC3, AXIN2, BMP4, CDIPT, CHRNA7, CLTA, CSF1, CTSG, DOT1L, GALNT7, GSTA3, GYS1, IL12RB1, ITPA, KLKB1, LDHA, OR1D5, OR1J4, OR52A5, PAX4, PIAS1, PIGT, PIGU, PLOD2, SUV39H1, TUBB6, MAPKAPK3
Negative_2802	C5, GK2, TK2, CACNB4, CASK, DDX41, EREG, FBXW11, FMO1, HTRA2, MDH1, NOX1, OR51B5, PAK2, PDE1C, PIK3R4, PRSS3, RDH10, SOCS2, STAT5A, TBL1Y, TUBA1B
Negative_2803	HGF, ACYP2, ARNTL, ASPA, BMPR1A, CDC2, CLDN3, CLTCL1, GCAT, HLA-DRA, IL1RAP, NADSYN1, OR2W1, OR52A1, OR5F1, OR8S1, PPP3R1, RARS2, RPS6KA1, UBE2K, WNT10B
Negative_2804	ADK, CD6, GK2, ABLIM2, ARHGEF4, BPNT1, CACNG8, CLTB, CNDP1, CNTN1, CP S1, CXXC4, CYP1B1, DAD1, DPM1, EIF4B, GARS, HTR7, IL22RA2, ITPKA, LRA T, MINPP1, NAGLU, NEFM, NFATC2, NRG2, NTRK2, OR13C2, OR4D6, OR6C6, PA RVA, PAX6, PIGU, PISD, POLR2A, POLR2J, RASGRP2, RPN1, SFRP1, SKIV2L2, SLC25A5, UBE2K, VAMP1, WASF1, WNT5B, PLA2G12A



Negative_2805	ADCY1, ADSS, CCL7, DGKZ, DIAPH1, DTYMK, FECH, FUT8, HLA-G, IL6ST, ITGA8, MGAT5, OR10A2, OR1L3, PCYT1A, POLR2B, PTGS1, RPIA, S OCS1, SPI1, UBE2K
Negative_2806	CEL, GCK, IL8, OSM, ACOT12, ACTG1, AGRP, ALDH3A2, AMHR2, ATP5E, CASP8, CD8B, CDH4, CYP11B2, CYSLTR1, DNMT3L, DOCK1, E2F4, FGF20, FGF9, GALNT11, HSD3B1, IL1R1, KCNB1, NCAM1, NOX3, NTN1, OR10A7, OR13C2, OR1L4, OR1M1, OR4L1, ORC4L, PDXK, PLXNB1, PYCR1, SEMA3E, SULT2B1, SUOX, TGF2, WNT16, CSGALNACT2, ST6GALNAC5, TNFRSF10A
Negative_2807	ADO, DLD, ACTA2, ACVR2B, ALCAM, AMY2B, C9orf95, CADM3, CAMK4, CCL26, CDIPT, CEBPA, CHUK, CNGA4, CYP2S1, DAG1, E2F2, E2F5, FZD1, GALNT10, HMOX2, HTR2C, IFNA10, IL12RB2, IRAK4, ITGB8, KAT2A, LDHAL6B, MGAT1, M TMR1, NCOR2, NT5C, OPLAH, OR51S1, OR5H2, OR6C74, PAFAH2, PDK1, PIK3C D, SMPD4, TAS2R38, TAS2R50, UGT2B17, PAFAH1B2
Negative_2808	IL6, ACP1, ACTA1, ACVR1, CCL20, CD22, CRKL, CYP11B1, CYP1B1, DGUOK, E DAR, EPHA7, FOXO1, ITGA9, LIPA, MAFA, MAPK3, NCKAP1, NME7, OR10A5, OR 2T6, OR4K13, OR8G1, PIGN, PTDSS2, SCD5, TGFBR1, TYMS, WNT3, EIF4EBP1
Negative_2809	ASL, CCNE1, CLDN10, CYP2S1, E2F1, FTCD, GYS1, IL28B, JAM3, TMLHE
Negative_2810	AMT, DAO, BAIAP2, CXCL12, DAAM1, FZD3, MAP2K1, MYH1, OR2M2, OR2T11, O R4K2, PAPSS2, RDH11, RPRM, WNT6
Negative_2811	NF1, ACACA, ACADM, AGMAT, AGTR1, ATP5H, BLVRA, CALML5, CD72, CHDH, CH PT1, DUSP9, EPHA1, EXTL2, FGF5, FLT1, FSHR, FZD3, GUCY2F, HMGCR, IFNA 7, IFT57, IKBKG, LCMT1, MYL2, OR10K2, OR4C15, OR52N2, PIK3C2B, SCIN, SEMA3B, SH3BP2, TAS1R1, TNFSF12, TP53I3, TRDMT1
Negative_2812	DBH, EBP, GCK, ACADM, ACMSD, ACVR1, APOA1, BACE1, CD14, CD99, CYP11B2, IL10RA, INPP4B, KIR2DL1, NPAS2, OR4M2, POLR2D, PRODH2, SELP, SKIV2 L2, SRD5A1, ST3GAL5, STX7, TD02, THBD, UCP1, HSD17B10, MAPKAPK3
Negative_2813	CD274, GFPT2, GNA12, IFNA14, NUDT5, OR10G7, PHOSPHO1
Negative_2814	OR51A4, PDK1, PFN2, TPH2
Negative_2815	CAT, NPY, ACACA, ACSL3, AKR1B1, ATP6V1A, BUB1B, CACNA1A, CCNG2, CERK, CHRM2, CHRNA7, CSF3R, CYP26B1, CYP4F3, DPYD, EPHA2, GBA3, IKBKG, IL 7R, JAK3, LDHB, MAP3K3, NT5C2, OR11H4, OR1L4, OR2AG1, OR2T12, OR2T29, OR4C6, PCYT1A, PCYT1B, PFN4, SLIT2, TD02, TLN1, TOLLIP
Negative_2816	LCK, MTR, MVK, TNR, ACSS3, ALDH9A1, ASCC3, C1QB, CACNA1F, CASP3, CCL2 0, CCR10, CD58, CKS1B, COL5A1, CSNK2B, DGKH, DKK4, E2F1, GLG1, HEXB, H MGCR, HSD3B2, IGFBP3, IL19, KCNJ11, LCP2, LIMK2, MAP2K3, MAPK14, MMP 1, MYL7, OR8K3, ORC2L, PDK1, PIP4K2C, POLR1A, PTCRA, RAB23, SELPLG, S EMA4A, STAT6, SUV39H2, TIAM2, TSC2, ULBP1, VEGFC, WNT3
Negative_2817	C8G, CRK, F11, GNE, NPL, ACSS2, AMY2B, ARNTL, ATG7, BLNK, CXXC4, DHRS4, DNMT3A, GCLM, GDE1, GGT1, GNRHR, GRIN1, HNF1B, HSD11B1, IDI2, IFNA1 7, IFNA4, IL15RA, ITPK1, LDHA, LIFR, MAPK7, NCK2, NLGN3, NTN1, OR10H2, OR2K2, OR51E1, OR9I1, PAK2, PCCA, PGAM2, PPP2R5C, PRKAG3, PRKAR1B, STAM2, STAT3, THBS2, VANGL1, VTI1B, WNT10A, CACNA2D1, ST6GALNAC3
Negative_2818	CR2, A4GALT, AARS, ACOT12, AKR1D1, ALG12, ARRB2, B3GNT3, CRY1, DGAT2, EXTL1, FZD5, GOT1, HMOX1, IKBKE, ISYNA1, MAPK9, ODC1, OR12D3, OR8G1, PGAP1, PIGV, PLA2G2D, RND1, SDHD, SLC2A4, STAM, USE1, VANGL2
Negative_2819	EBP, IL4, ALDH1A3, ALOX15, ATIC, BCL2L1, CALML5, CALML6, CDC14B, CDC 23, CLDN19, DDX19A, FUT5, GGT1, HARS2, HGSNAT, IFNA10, ITPKA, LYPLA2, MDM2, MTHFD1, NCR1, NCR3, NCSTN, OR4D1, PAX6, PLCB3, PNMT, PRKCE, RA PGEF2, RHOA, SMURF2, TRPC1
Negative_2820	CSK, ADCY7, ALOX12, AVPR1B, CACNG4, CHKB, DDX4, GAMT, IL12RB2, MAP3K 2, NR1H3, OPLAH, OR5B12, PPARD, RASGRP2, TNFRSF9, TP53, TRPM5, UGCGL 1

Negative_2821	PC, ABL2, ABP1, ACO1, ADIPOQ, ALOX15, ALPPL2, ASAH1, B3GALT5, BCL10, CAMK4, CDK5, CHAT, CHRM3, CNTNAP1, CYP7A1, DAPK1, DEGS1, EPHA3, FGF6, GFAP, HAGHL, IL28RA, IMPDH1, ITGAE, LIPG, MAGI2, MAN1A2, MAN1C1, MAOA, MGST2, MTMR1, NEU3, NT5C1B, OR10H4, OR2A25, OR4K2, OR51B2, OR5V1, OR7D2, PGM3, PLCZ1, PMAIP1, POLR3K, PPP5C, SELP, SHISA5
Negative_2822	RB1, BMP6, CCR7, CDK4, CHRM2, CSAD, CTPS, HMOX2, IPMK, OGDHL, OR10A3, PDE4D, PDXP, PIGV, PPAP2C, PPP1R3B, STAT6, SUOX, TRDMT1
Negative_2823	ABLIM1, AMDHD1, CCL22, CCL27, CDC25C, CXCR5, CYP2C8, DCXR, DNMT3L, EPAS1, FTH1, HSPA1B, IFNAR2, KLRD1, MAP2K2, OR4K14, PLCZ1, PLEKHA8, POLD3, PPP2CB, RAP1B, SORD, TOMM40L, UGT2B10, TNFRSF1B
Negative_2824	C6, APPL1, ATP5A1, ATP5J2, CBR1, CD99, CYP26B1, DLL1, ENAH, GART, GSTO2, HMGCS2, INPPL1, MAD2L2, OR11H6, OR5B17, PIP4K2C, ROBO1, WASF3, B4GALNT1
Negative_2825	GK2, ALDH3B2, BMP8B, GAS1, NOX3, NT5M, PRKAA1, SUOX
Negative_2826	ADRBK2, AKR1D1, BMPR2, CCL8, CD36, CSF1, DUSP1, GBA3, GPD2, ITGAL, KIR2DL1, MAML1, MAP3K4, MAPK7, OR5D13, OR6C76, PI4KA, POLR3D, PTK2, ST6GAL1, SUCLG1, TIRAP, MAPKAPK5, PHOSPHO1
Negative_2827	CCR4, CLTCL1, CPT1A, ENTPD4, FADS2, FZD6, GNAO1, GUCA1A, HSD17B8, HYAL2, IFNAR1, LIPF, MOV10L1, NOTCH2, NRXN3, OR2F2, PIK3C2B, PLIN, SEMA3E, SPHK1, STX1B, TALDO1, TAS2R40, TICAM1, TJP2
Negative_2828	CD4, GLA, AKT1, ALDH1A3, ASPA, ATP50, BMP5, CASP9, CCL23, CD72, CLTCL1, CMPK1, CYP2J2, DAAM1, DGKE, DPM3, EXTL2, FGF13, FTCD, FZD1, HMGCS1, HMOX2, ITGB8, LEFTY2, MAP2K5, MMP14, MYH6, NCK1, NUDT8, OR10G3, OR2D3, OR4K13, PAICS, PMVK, PNLIP, POLR3A, PPM1B, TJP1, PAFAH1B3
Negative_2829	BAD, LTB, PTS, ACAA2, ADH7, COL1A1, DAAM1, DUSP8, F13B, G6PC, IL17B, OR8D2, PLK1, RBPJL, SAT1, SEMA4A
Negative_2830	A2M, CAT, CGA, GP6, SRM, ACADVL, ACY1, ARNT2, ARRB1, CASP6, CFTR, EFNA2, ENTPD7, GADD45G, KCNB1, LAMA4, LEFTY2, LIMK2, MGAM, MITF, MYH4, OR10A2, OR10A4, OR13D1, OR1A2, OR1F1, OR4M2, OR4X1, OR52W1, OR8B4, OXC T2, PIGT, PIP4K2A, PIP4K2B, PPP2CB, PVRL3, RASSF5, SOCS3, TAP2, TLR3, TUBA1B, TXNDC12, UGT2A3, WNT1, XCL1, ATP6V1C2, GABARAPL2
Negative_2831	FAH, FAS, HYI, WAS, ACVR1C, ASCC3, ATP2A2, CACNB1, CD19, CER1, CSF3R, DHCR24, GALNT10, GANAB, GDF6, GSK3B, HMGCR, HPSE, ICOS, IL2RA, IL2RG, ITGB1, NAMPT, OR56A3, OR5K1, PCYT1A, PPP1CB, ROBO1, SDHD, SEMA3A, SMAD9, TNFSF9, TSC2, UNC5B, YWHAB, TNFRSF14
Negative_2832	ABLIM1, ADIPOR2, ALAD, ALDH1A1, BCAT1, DAAM2, DARS, DARS2, DDX50, GLS2, MDH1, NME7, OR1J4, OR52K2, OR5B17, PDE6G, PIAS2, PIGL, PLA2G5, PLTP, PTCRA, RDH12, TCIRG1, TXNDC12, SLC25A31, TNFRSF13B
Negative_2833	COASY, MAGI2, PCYT1A, PPP5C
Negative_2834	GNS, OTC, TNC, ATP2A2, ATP6VOB, CCR8, DHRS4L2, FPGT, PPP1R3A, PRKCE, PTGS2
Negative_2835	CR2, ACLY, APOA2, ARG1, BBC3, BCL2, CCL13, CCND1, CCR9, CD22, CLDN15, GPT2, GSTZ1, ICAM1, INPPL1, MAN1A2, MAP4K2, MOV10L1, NTNG1, ONECUT1, OR10A4, OR10Z1, OR4K1, POLR2F, RAPGEF1, SDHC, ST3GAL6, TAS2R38, TCIRG1, TRAF2, TUBA1B, VAMP1, WNT7B
Negative_2836	ID1, AADAT, ACPT, ACYP1, ADCY10, ADORA2A, ALDH7A1, AREG, BIRC2, CHST11, CHST12, CLDN4, CRY1, CYBA, EPHA3, GNAT3, HMBS, IGSF5, ITPK1, LCMT1, MAPK12, NAGS, NCKAP1L, NFKBIA, OR10H2, OR2L8, OR2M2, OR4F15, OR4K13, PIP4K2B, PROC, PRPH2, RIPK1, SCLY, SEMA3G, TNFRSF8, UGT2B28, PAFAH1B3

Negative_2837	AGK, BID, CTH, F11, FYN, GHR, PTS, WAS, ARHGAP5, CDC2, CHSY1, COL4A1, CXXC4, CYP3A4, DFFB, ELK4, EPB41L1, FECH, GBT1, GNA12, GUCA1C, GUCY2C, IL15, ITGB5, JAM2, LRAT, MAD2L2, NMNAT3, OR1C1, OR2T8, OR52N4, OR5L1, P2RX3, PDGFA, PDGFC, PDK1, PLCG1, PLXNB3, PPP2CA, SEPHS1, SETDB2, SSX2IP, SV2B, TCF7, UCP1, UGT2A3, CACNA2D4, TNFRSF13B
Negative_2838	ILK, MTR, PLN, AKR1B10, CAMK4, CCL19, CCNH, CES7, CNTNAP1, CSF1R, DERL1, DPYS, GALNT7, HNF1A, IL11, MYH14, OR56A4, OR9A4, PPP1R3A, RENBP, SETD1A, STAT5B, STX10, THBS4, WHSC1, WNT1, TNFRSF11A
Negative_2839	TXK, ADAM17, ADH4, ALPL, CDKN1B, CLDN17, COL4A1, CTLA4, DGKZ, DUSP3, FARSA, FUT8, GMPR, GNRH2, HRH2, IGSF5, LIAS, MYH4, OR6A2, PDHB, PECAM1, PHGDH, PPOX, SGPP2, PLA2G12A
Negative_2840	F2, CHRM5, CPT2, CREB3L1, CYP11A1, DCTN1, DIAPH2, ENTPD6, FSHR, GDE1, GLI3, GYS1, H6PD, HLA-C, IL29, KNG1, LILRB3, MKNK2, MTFMT, OR2L2, OR52D1, OR6C1, PDXP, PI4KB, POLR3A, PROC, RARA, SPCS3, TAS2R7, WNT9B, YWHAH, ATP6V1E1
Negative_2841	SCD, MAD2L2, MNX1
Negative_2842	MPL, CCNE1, ENTPD4, OR5P2, SEMA4C, TOLLIP, TRADD
Negative_2843	IL6, AADAT, ACYP1, AKR1C1, ALG10B, ALG12, ATP5C1, ATP5G2, CAMK2A, CCL25, CHEK1, CREB3L2, CYP2S1, ENO3, FTH1, GNB3, GNRH1, HNF1A, IARS2, INHBA, INHBC, INPP4B, ITGAM, KYNU, LDHAL6A, NCKAP1, NPR2, OR1N1, OR2AG2, OR52E6, OR5H6, PDXK, PLCZ1, PLOD2, RHEB, SETDB1, SH2D1B, TBXAS1, TJP2, TLN1, TPI1, TRADD, TRHR, WASL, CSGALNACT1
Negative_2844	C9, ACSM2A, CACNB2, CCL5, CMAS, COASY, DNMT3A, EDNRB, IL15RA, INHBC, MINPP1, MMP7, NCOA4, NOD1, NR1D1, OR2AG1, OR5H2, PARD3, PDE1C, PTPN1, STEAP3, EIF4EBP1
Negative_2845	AK3, IVD, ADH4, BLNK, CACNA1I, CALML6, CD274, CRHR1, CSF3, DAAM2, GALNT13, GALNT6, HRH2, IL12B, NR5A2, OR1L1, OR4K1, OR52W1, OR7A10, PAICS, PARVB, PCYT1B, PLA1A, PNPO, POLR3B, SELP, SLC27A5, SOAT2, SOS2, ULBP1, WARS, ZNRD1
Negative_2846	ADK, ALG3, ATP6V1H, C1QA, CACNA1E, DGKA, EIF4E, EPHX2, GALNT2, GNPNT1, IRF5, ITGA11, ITGA8, LHCGR, NFKBIE, OR2K2, PAK3, PARVA, PPP2R2C, PPP3CA, PPP3R2, PRDX6, SH3BP2, SMPD3, SOD1, TCF7
Negative_2847	PGD, FABP4, PAX6, PCK1, SCD5, UMPS
Negative_2848	ACTA2, CTBP2, GALNT9, GUCY2C, HDAC2, HEXA, NCF2, OR1J2, OR4K2, P4HA2, PDE4B, PLA2G4A, TUBB4Q, UGT2B28, VTI1B, WASF3, PAFAH1B3
Negative_2849	CD6, PC, ACSL6, ACTN4, ADAM10, ADCY4, ANAPC2, AOC3, ASNS, DBF4, DRD5, EPHB1, FARSA, FLT3LG, IDUA, IFNA7, IL29, KYNU, NPAS2, OR4K15, OR6C3, PIK3CA, PSPH, RBPJL, SETD8, SGMS1, SLC27A4, STAM2, TUBA1A, WNT1, XYL B, CACNA2D2
Negative_2850	C7, DHH, GNS, PLG, ACPT, AGPAT3, ATP13A2, C1QA, CDC20, CDK7, CERK, CLTA, DAD1, DOT1L, FARSA, GP1BA, IL20RA, JAK1, OR1D5, OR1N2, ORC1L, PAFAH2, PAK7, PARVA, PIGL, PLA1A, PLA2G2F, PLCD4, PNMT, PPP1R3B, RARS2, RASGRP1, RPSA, SOCS2, SRGAP2, TCF7L1, TGFB3, TNFRSF1A
Negative_2851	ALAS2, ATG7, CREB1, DLL1, ENPP3, EPHB3, FUT2, GMPR, HIF1A, LRDD, LTBR, OR5P2, PLCB1, PRPS1, STX1A
Negative_2852	ADAM10, CCNG1, CLCA2, IKBKB, OR14A16, OR4S1, PCCB, RXRG, TLR4
Negative_2853	F9, HPD, ME1, MTR, ACSMSD, ACSM2A, ALDH3A2, ARRB1, BUB3, CACNB1, CACNB4, CCNE1, CDC23, CDKN1B, COL11A1, CXCL11, CYP26B1, EPHB6, FGF17, FGF8, FMO5, GAD1, GCLM, GLI1, GUCY2C, HAO2, HMGCR, KLK3, LTB4R2, MGLL, MYLK3, NFYC, NOTCH3, OR6C70, ORC1L, PANK4, PAX4, PDE4D, PIGT, PIGU, PIK3C2A, PPP2R2B, PTGES, RASGRF1, SELP, SLIT1, WHSC1L1, WNT3A

Negative_2854	F12, ACVR2B, ALAS2, APC2, ATP5E, CLDN16, CYP11A1, EPHX1, GAD1, GALK2, GALNT11, HSD17B4, MAML2, MMP2, NFAT5, NUDT8, OR10H2, OR4K5, OR7D4, PDE11A, PGM3, PIK3C3, PRKAR2B, PRKCB, PVRL4, RFNG, SETD1A, TAS2R1, TMLHE, UBE2L3
Negative_2855	IL9, SCD, TFG, ACYP2, APBB1, CCR2, CMBL, DAD1, EPB41L1, FARSB, FASLG, FMO3, GPT2, GPX7, GRAP2, GRIA2, HADHB, IDI1, IL20RA, IRAK3, LDHB, LTB4R2, NOTCH1, NPR1, NTSR1, OR10G2, OR1A1, OR51B2, OR51I2, OR5T3, ORC6L, PGM3, PKLR, PKM2, PRKAR1A, PRODH, PVRL2, SETDB2, SMPD2, SPP1, VCAM1, PPP1R12A
Negative_2856	ADK, GPI, PC, TEC, ACADL, ALG13, AMY2A, ARPC3, ATP5A1, BMPR1A, CD99, CNTF, CXCR5, DBF4, DDX4, DGKB, FGF10, GLUD2, GPD2, GSK3B, GSTM5, HCST, HMGCR, ICAM2, KLRC4, MYH10, NT5C, OR13G1, OR2D2, OR4F17, OR5L1, PGAP1, PHKA1, PIK3CD, PRKAR2A, RBX1, SARS2, SOCS7, TAP2, TAS2R38, TBXA2R, TFDP1, THBD, TUBB, WNT7B, CSGALNACT2, SERPINC1
Negative_2857	AR, ID4, ALDH4A1, ATP6VOB, CACNA1H, CCL5, CFLAR, CLDN18, CXCL5, GMPPA, GNAI3, IL10RA, IL10RB, IL17A, NCF2, NEUROD1, OR1C1, OR4D5, PTGES2
Negative_2858	ME2, ACSL5, ADRA1B, AOC3, ATP13A2, BAIAP2, CCND2, CYP2E1, ERO1L, FCGR2B, GCNT4, NFYB, PI4KA, POLR2G, RRAS2, TAP2, TAS2R1, TBXA2R
Negative_2859	AK3, DCN, HGF, SRF, A4GALT, ADRA1A, ARPC1B, ATP6VOC, B3GAT2, BACE1, CR6, CHKB, CSNK1G2, ENTPD2, GALNT1, GNA14, GNRHR, GRIA2, GZMA, IL22, MGLL, OLR1, OR1L4, OR6N1, PFN3, PLOD1, POLR2B, RFWD2, SCLY, SELL, SMARCA5, UGT2B17, VAMP3, VAV2
Negative_2860	BTK, AADAT, ACO1, ACTB, ANAPC7, CCND1, CDC26, CYP17A1, DAXX, EREG, FCER1G, GIT1, HSPA2, JAK2, MAP2K7, OR10G7, OR1E1, OR5AC2, OR6C4, PARD6G, RBPJL, TGFBR2, TRIP10
Negative_2861	KIT, ALOX15B, GPAM, ICAM3, LTC4S, PIK3R4, TPH1
Negative_2862	AK3, CEL, GAA, JUP, ALOX15, ATP5G2, CACNG4, CLDN18, CXCR5, DHRS3, DKK2, ELK1, FGF12, IFNA16, IL22RA1, ITGA11, MAN1C1, MTMR6, MYH9, NOD1, NUDT2, OR14A16, OR4D6, OR5AC2, OR6C74, OR9A2, PCYT1A, SV2C, ATP6V1E1
Negative_2863	PGP, AKR1C2, CDKN1C, COMT, INHBC, MAOB, NCKAP1, OR51A2, P4HA1, SLC25A4, SQLE, ATP6V1B1
Negative_2864	FOS, RDX, AHCYL2, ANGPTL4, ATG7, ATP5G2, CNDP1, CRY1, CTPS2, DUSP8, F2RL1, FUT8, HDAC2, HSD17B8, IDI1, IMPDH2, ITGAV, ITGB4, JAK2, LRP5, MCAT, MYH4, OR1Q1, OR2AT4, OR4C16, OR51E2, OR6S1, OR8K5, ORC4L, PLCB1, PLCD3, PRKAR2B, PRKCQ, PSME1, SLC2A2, SMPD3, SNAI1, STAT1, TBXAS1, VAMP4, HLA-DQB1, ST6GALNAC3
Negative_2865	MPZ, BCAT1, BDKRB2, C1QC, CARS2, CCDC6, CD244, CD70, CHRNA7, CYBA, CYP11B1, CYSLTR2, GOSR2, GSTM3, IDH1, IRAK2, IRS2, MYH3, NPR2, OR4Q3, PDE2A, PLTP, PPOX, PPP2CB, PRKCD, PYCR1, STK11, TCF7, MAP3K7IP1
Negative_2866	ABO, PML, ADIPOR2, AKT3, AOC3, ATP2A2, C5AR1, CACNG1, CCL19, CCNE1, CDC42, CXCR3, DGKH, FGF4, HARS2, HPSE, HSPA1B, KCNB1, MYH13, NCF1, NFYB, NR4A1, NRG3, OR8B4, PDE1B, PDGFC, PIGP, PIP4K2C, POLD2, PTPN11, SSH2, ST6GAL1, UGT2B28
Negative_2867	DBI, ADSSL1, ATP2A3, COL6A1, EVI1, FLAD1, GADD45A, MAP3K8, MAPT, MCA T, MYLK3, OR4D11, PLCB3, POLA2, PPP2R5C, PRDX6, SESN2, STAM2, STK11, STX4, TCF7L2, ULBP2, GABARAPL2
Negative_2868	BAAT, BPNT1, EPHA8, PDHB
Negative_2869	GLA, JUP, ATP5G3, NAT6, RXRA
Negative_2870	FOS, PGF, AADAC, ADIPOR1, B3GAT1, BCL2L1, CTLA4, CYSLTR2, DCTD, DDIT4, EIF4E, EP300, GALNT6, GSTZ1, HMOX2, HSD11B2, IL13, IL1RAP, MAPK12, OR10H1, OR10X1, OR1E1, OR4C46, OR52E6, PDE3B, PDE4C, PIGV, POLD3, PPARA, PPAT, PRKACG, SHC3, SOD1, SSH1, UGT2B28, VAV1, WWP1, MAPK8IP1
Negative_2871	GLS, AMDHD2, B4GALT7, BCKDHB, CACNG5, CD274, COL6A2, DRD2, ENTPD3, IDI2, KCNJ11, NOTCH3, OR5A2, OR6N1, PPP3R2, RFWD2, STEAP3, TJP2

Negative_2872	AGK, AUH, DCN, F11, GP5, NOG, ACSL5, ATP50, CCL4, CD80, CNTF, EPHB3, GN RHR, GSTK1, GSTT1, GZMA, KLRC2, MAP3K11, NKD1, OR1C1, OR2B11, OR2F2, OR51F2, OR52N4, POLE3, PTGIS, SOCS1, SPI1, SSH2, STX16, TAS2R8, VNN1
Negative_2873	LPO, CACNG7, CCL13, CD79B, CMPK1, COL3A1, CXCL12, FLOT1, GAB1, GRIA2 , HTR6, IRF9, ITGAX, KIR2DL2, MITF, MYH7B, NLGN1, OR10X1, OR1N2, ORC4 L, OXSM, PCNA, PIP5K1A, PIPOX, SEPHS1
Negative_2874	BRAF, C5AR1, CLDN16, COL1A1, DGKA, HDAC1, IL1R2, MAPK1, NME6, NT5C2, OR1B1, OR4F17, OR4K2, PDE1A, PGM1, RPRM, UCP1, UGP2, VAV2
Negative_2875	FGB, GLA, HGF, TK1, BMP5, C3AR1, CDKN2B, CNTNAP2, CYP2B6, DGKB, DUSP1 6, ENTPD1, FARP2, FOXA2, GALM, GALNTL4, ICAM2, IFIH1, IFNA10, LEF1, M AGI1, MTAP, NAGLU, NKD2, NUDT5, OR1S1, OR4K17, OR52B4, OR6C3, PRSS2, RIPK1, SOD1, TNFRSF13C
Negative_2876	MPI, SI, AADAC, ACAA1, ACSS1, ADCY5, ADRA1D, ALDOB, ALG8, ARNTL, AVPR 1A, BHMT, CACNA1E, CAV2, CSH1, DHFR, EFNB1, FARP2, FBP2, FLT3, GCNT2, GSTM5, GSTP1, GYS1, HPSE2, HTRA2, IL10RB, INPP1, INPPL1, MDM2, OR10Q 1, OR1B1, OR2M4, PIGH, PLXNB3, PRKACB, PRKG2, SKP2, TAS2R7, TSNARE1, WNT1, WNT2, CACNA2D3, PLA2G12A, PLA2G12B
Negative_2877	CNTNAP1, OR1M1, PPP2R5C
Negative_2878	DUT, HK3, ACO2, AKT2, C3AR1, CUL1, FMO3, MAPK13, POLD3, PSEN2, ROBO2, HLA-DRB5
Negative_2879	C5, MVD, CACNG4, CSNK1A1, IL10RB, MAP2K7, PCYT1B, TXNDC12, UNC5C
Negative_2880	DBH, ALDH5A1, ASAH1, BIRC3, CCL27, CLDN17, CRLF2, CYP4A22, DDX47, DN MT1, ENO2, ETNK1, HARS2, IL13RA2, IL23A, ITGA11, METTL2B, MYLK, NAT2 , NFKB2, OR10A2, OR10G8, OR5R1, OR6K3, OR9A2, PIK3R1, PPP1R3C, PTEN, RIPK1, SIAH1, STAM2, STEAP3, STX1A, HSD17B12
Negative_2881	F7, E2F4, GJA1, GLB1, GMPS, ITGA4, LCMT1, MYH6, OR2T12, PAPSS1, PARVA , PLA2G4A, PRPH2, SMPD2, TLR2, WNT16, HSD17B10
Negative_2882	NOG, ACADS, ACSM2A, AGMAT, ARHGEF6, ARNTL, AVPR1B, C4BPB, CHST11, CN GA4, CXCL1, FMO4, GALNT5, GUCY2F, IQGAP1, LAMB1, LAMC3, NEU2, NLGN2, NME6, NR1D1, OR2AG2, OR4C13, OR4D9, OR51Q1, PDE7B, PIGM, PIK3CB, PNP LA3, POLR3G, UROS
Negative_2883	DCK, NPY, TKT, BCMO1, CMPK2, DTX1, ENTPD8, EPRS, FGFR1, GALNT6, GGPS1 , GSTM5, IL12B, KIR3DL3, LAP3, MGST1, NANP, NCOR1, OR2C1, OR3A2, OR5H 2, PCNA, PDE4C, PIAS2, PIGM, POLE, POLR2E, PPCDC, PRKAB2, RASGRF2, TR PC1, UXS1, VEGFB, CACNA2D2, CSGALNACT2, GABARAPL1
Negative_2884	GDA, HCCS, KITLG
Negative_2885	GP9, ADCY1, ALDH1L1, ASMT, CDC42, CSF2, EDA2R, GALNT12, GALNT14, GMP R, HPSE2, IPPK, ITGA1, ITGB5, OR2A2, OR51I2, OR52A1, OR52A5, OR8J3, O R8K5, PON3, PPARA, PPP1R3D, PRKCZ, SOX17, STX4, VANGL2, ATP6V1B2
Negative_2886	CMPK1, GLG1, KIR2DL2, LEF1, MAP4K2, MAT1A, OR7A10, RFNG, SOAT2, UGT8
Negative_2887	LCK, PTS, AGXT2, AREG, ATG12, BMP2, CCL25, CNTF, CPOX, DGUOK, DHRS4, G CLM, GIT1, ITGA8, JAK2, KLKB1, MCM6, MS4A2, MYH6, NEU1, OR10AG1, OR10 J5, P2RX5, PAPSS2, PLCB3, PLCE1, SLC25A6, SMARCA5, STMN1, TRAF4, VDA C2, YES1, CSGALNACT2
Negative_2888	C4B, F9, IL3, SMO, TNF, ACADVL, ACTC1, B3GALT2, CCKAR, CCL3, CTNNB1, C TTN, CXCL16, EFNB3, IKBKB, IL23A, IL7R, IRAK1, LEFTY1, MAPK7, MKNK2, NKX6-1, OR10S1, OR4C6, PPAP2C, RHOA, TOMM40L, TUBB2A, VAMP4, WWP1
Negative_2889	GP9, OTC, XDH, APOC3, CAV1, CD22, EPHX1, FGF18, FTH1, GAD1, OR10G7, OR 1K1, OR2D3, OR2L2, OR4F15, OR5AU1, PDE9A, PTGIS, PTPRB, RAF1, SEMA4D , TAS1R3, TIRAP, TNFSF11, UGT2A1, CSNK1A1L, SERPINF2
Negative_2890	AMY2A, CNDP1, INPP5A, NOS3, OR1J1, PTK2, SELP
Negative_2891	PML, ADSSL1, ATG7, ATP50, CCL28, F2RL1, FGF6, GOT2, MNX1, OR13F1, OR2 Y1, OR4C6, POLE, PTDSS2, SLC2A4, TBXAS1

Negative_2892	ACOX2, ATP5H, EPHA7, GALE, GNG3, GRIN2B, NADSYN1, NAT5, P2RX3, PPP5C, PSPH, SARDH, SOCS2, ST3GAL4, TRAF1
Negative_2893	CGA, PML, ACADSB, AOX1, ATP2A1, ATP5J2, CACNA1D, CCR7, CDKN1A, CLDN10, CLDN4, CREBBP, DGKZ, DHRS4L2, DPM1, FABP4, GADD45A, GCNT2, GFPT1, GRPR, IL23R, MPDZ, MTHFR, NAT1, NMNAT3, OR10H2, OR52E6, OR56A3, PDE9A, PIP5K1B, PTEN, PTPN11, SH2D2A, SOCS1, TAS2R9, TGDS, THTPA, TNFSF12, XCL2, TNFRSF1B
Negative_2894	GH2, KMO, TK1, BHMT, BMP6, CCL7, COMT, CREB1, FASLG, FGF18, FZD10, GALE, GALNT7, GGT6, IKBKKG, LEFTY1, MYH7B, MYLK3, OR10A6, OR1D5, OR2M3, OR2V2, OR52A1, OR5P3, OR8K5, RFX5, SETD2, SULT1A2, TRHR, TYRP1, UGT8, VDAC1, WNT9B, ZBTB16, CACNA2D2
Negative_2895	DLD, GK, ACAA1, ACOX2, CSH1, ERBB3, GALE, GMPPB, KLRC1, NTNG1, OR14A16, OR52B4, PAICS, PIK3C3, TICAM1
Negative_2896	CKM, TNC, ARNT2, EHHADH, IL1B, IRF5, OR10A4, OR2T2, PPP2R1B, PPT1, RND1
Negative_2897	CFI, F12, ANAPC11, ARSE, CD14, CDC27, CDK4, CHKA, CLDN17, CSF3R, DDX55, GSTA1, KAT2A, LTBP1, MYH14, NFAT5, NFKBIA, NUMBL, OR4D2, OR5K1, OR7D2, PDE4D, PRDX6, RCHY1, RDH11, RPIA, TCF7L2, TCIRG1, TUBA1A, TYMP, UGT2B17, VAMP4, YWHAZ
Negative_2898	ACHE, AGPAT2, DGUOK, IL22RA2, INSR, KLK3, NPAS2, NRG2, NRG4, OR2A5, OR4D1, ORC2L, PLXNA3, PORCN, SMPD1, UPP1, SERPINF2, TNFRSF1A
Negative_2899	EGF, JUN, COL3A1, OR4F5
Negative_2900	SPN, ABL1, ACYP1, ADH4, ADRB1, ADRBK2, AMPD3, ATP5G1, CBR1, CDKN1C, CFLAR, CKMT2, CNTNAP1, CREB3L2, CSNK1D, DHCR24, DTX4, DUSP16, EXT1, F2RL3, FCER1G, FGF11, GJD2, GRB2, IL18, MAPK11, MTHFD1L, MYH2, NARS2, NEU1, OR14J1, OR2A12, OR51Q1, OR52N4, OR52W1, PANK1, PLXNA3, PRKAG1, TRDMT1, UXS1, VAV1
Negative_2901	SFN, ALG3, APLP1, CDC20, CSF2, CTF1, DTX3L, DUSP8, FSHB, FZD5, GALNT2, IFNGR2, IGF1R, IMPDH2, LIMK1, MICA, MYD88, NEUROD1, NKX3-1, OR10G9, OR8K1, PIK3CB, PPM1A, PTPRZ1, RALGDS, STX12, TACR2, TUBA3E
Negative_2902	B4GALT7, BDH1, CNGA3, CPT1C, CYP1A1, DIAPH3, FGFR4, GADD45A, GNAZ, HADHB, KCNB1, LAMB4, NFYC, OR2T1, OR4D6, OR51A7, PGAM2, PRKAG3, SMPD1, TNFRSF4, HLA-DRB3, HSD17B12
Negative_2903	AR, ALAS2, ARAF, AVPR1B, CACNG7, COL6A1, DNMT3L, DTX3L, FZD9, GIT1, IL6R, INHBC, MAN1A1, NOX1, OR5B21, OR6C70, PANK3, TRAF4
Negative_2904	CCL5, CD99, CDC26, DAG1, FGF10, FGF12, FLT1, FZD9, GNB3, HMBS, IBSP, IL9R, IRAK3, MAN2A1, MAP3K7, NCR2, OR4F5, OR7G3, PLA2G2E, PPP1R3D, PP2CB, SGPP2, SYNJ1, TAS2R50, TM7SF2, AASDHPPT
Negative_2905	FOS, ALPL, BHMT, CDC6, COL3A1, DHFR, DPYSL2, FZD10, IFNA8, IL11, ITGAL, LDHC, MAGI1, NAT2, PDE1B, PGM2, PIGW, PKM2, RBKS, SUCLG1, TIAM1, TLR9, ZBTB16, ATP6V1G3
Negative_2906	TPR, ARNT, BCMO1, CMAS, CPT1C, DTX3, EARS2, ENPP7, ITGA6, LAMB2, NFASC, OR52R1, PRKG2, RRAS, SRGAP1
Negative_2907	ALG10, GCNT3, GNA12, GPAA1, NPR1
Negative_2908	A2M, DBH, AADAC, AGRN, APLP1, CALML5, CD79A, CER1, CRLS1, CTNNA2, CYP21A2, DEGS2, DGKZ, DVL2, FRAP1, GLUD2, LPAR1, MAGI2, MAGI3, MAOB, MIOX, NCAM1, OR13C4, OR2D2, OR51L1, OR52K1, OR8H3, PFN3, POLR2B, POLR2H, PPAP2A, RARA, RXRB, SEPHS1, SMURF1, THBS1, TRHR, TSNARE1, VCAM1, VDAC3, WHSC1L1, WNT5B, SUV420H2
Negative_2909	AGL, KHK, ALDH3B1, BCL2L1, CSNK1E, CYBB, DERA, DOCK1, FLT3LG, FZD1, GGT6, HEXA, IL4R, MYH3, NCAM1, OR4K5, OR52E4, OR56A4, PGAM4, RDH11, SELPLG
Negative_2910	CKB, DVL3, EPOR, OR5B3, UNC5D, YKT6

Negative_2911	ATG3, SOCS2, PRICKLE2, TNFRSF13C
Negative_2912	ME1, TXK, ACSS1, APC2, ARPC1B, CARS, CD79A, CLDN4, CLDN7, CTF1, CYP1A1, DNMT3A, EPHB1, FGF2, HTR6, IBSP, IL11RA, NKX2-2, NTNG1, OGDH, OR10G2, OR2M7, OR2T11, OR3A2, OR4F15, OR51I1, PAX4, PDE3B, POLR1A, PON2, PROC, RBPJ, SLC33A1, TAP1, TKTL1, TRAF4, TYMP, CSNK1A1L, HSD17B12
Negative_2913	LPO, ARNT, BCKDHB, CLDN1, EPHB2, GRIN2C, MKNK1, OR51S1, OR5M8, ST3B
Negative_2914	MAOB, OR10P1, OR52N4, SIGLEC1
Negative_2915	IDS, ADCY3, ADH4, ADH6, ALDH1B1, ALG8, B4GALT3, BLNK, CD59, CLTCL1, CNTN2, CYP4A22, DKK4, EPHA1, EPHB4, GALNTL1, GSTA5, GUCY1B3, IL17B, IPMK, MARS2, NTSR1, OR6T1, PGK2, PIK3C3, POLD3, RENBP, RPSA, SEMA3D, SEMA7A, SIAH1, SMAD7, SMURF1, TAS2R9, TNFSF10, ULBP1, ULK3, SERPINA1
Negative_2916	GOT2, PIAS2, RAC3, TAP1, TBL1XR1, TNFSF11
Negative_2917	F3, ADSS, ALDH9A1, BMP8A, CYBA, EARS2, ENTPD6, GPAM, GSTK1, HCST, INADL, IPPK, MLYCD, NRXN3, OR2T10, OR5D16, PDE2A, PTTG1, PYGB, SETD8, TAS2R40, TUBA3C, TUBB4, TUBB4Q, VDAC2
Negative_2918	KHK, MTR, AACS, ABCC8, ACTA1, AKR1C2, ALG8, ANAPC10, APOA2, ARAF, BDH1, CACNG8, CCL1, CCL8, CLDN8, CNDP1, DUSP7, EPHA2, ERBB3, FGF4, GPLD1, HIF1A, IFNA17, LYPLA1, OR10K2, OR5T3, OXTR, PFKFB3, PIAS3, PLOD2, PMM1, RASGRP4, STAT3, THBS2, TRAF3, VEGFB, SUV420H1
Negative_2919	ARAF, CCL13, CHST11, FDPS, HHIP, INPP1, PFKFB3, PIM1, PLXNC1, TICAM1, TNFRSF6B
Negative_2920	CTNNB1, FGF10, FSHB, GCDH, IL4R, MAP3K13, MYL5, NRG3, NTSR1, OR10J5, OR13D1, PDXP, PIGC, PTPRF, PTPRM
Negative_2921	CACNG1, DPM2, HTR6
Negative_2922	PML, ATP2A1, BLVRA, CYP19A1, DFFB, DGUOK, FGF23, LRP5, POLR1B, PRKG2, PTGES2, SEMA7A, TLR3, ATP6VOD2
Negative_2923	DBH, AFMID, CCNA1, CTNNA3, EDNRB, EFN2, ENTPD1, FADD, FMO3, FZD4, GRLF1, HAGH, ITGA1, LAMB4, METTL6, MICA, NPR2, NUDT8, OR10G2, OR5A1, OR6K6, OR8H3, PAPSS1, PRDX6, PROS1, PYGB, RAP1B, RFXANK, SOCS2, SPP1, TNFSF9, WASF2
Negative_2924	CSF2RA, OR4D2, OR5L2, OR6C70, VAMP4
Negative_2925	FGG, FUK, C1QC, CCDC6, CCL27, CD44, CYP11B1, DUSP14, DVL1, ENPP7, G6PC, GCDH, IFNGR2, INHBA, LIMK1, MYH2, NODAL, OR10K2, OR11L1, OR8K5, PKLR, PLA2G1B, PRKX, RAPGEF1, RAPGEF4, SNW1, SOCS1, TNFRSF10C
Negative_2926	LYN, ACADS, ADIPOQ, CCL17, CDS2, CSF3, CYP19A1, ENPP3, FARSB, FLAD1, G6PD, GALNT14, GLI1, GSTM1, ITGB5, OR2AT4, OR4M1, OR52D1, OR8D1, PLA2G5, PPT1, SYNJ1, TCIRG1, TGFB1, TYK2, UROD
Negative_2927	EZR, SRC, ACSM2A, ALDH1A1, AMY2A, BPGM, CCL3, CCNB2, CDC14B, CDH15, CDK2, CHAD, CHEK2, CNTNAP1, CREB3, CTSG, CTSL1, DTX2, FBXW11, FCGR3B, FMO3, GGT5, HIF1A, IFNA14, IL25, LCMT1, MPST, NGEF, NUDT2, OGDH, OR10G9, OR3A1, OR4M2, OR6C4, P4HA3, PCK2, PCYT2, PLA2G10, PLA2G2D, PTGFR, RDH16, RERE, SELP, SEMA4G, TYMP, B4GALNT1
Negative_2928	GDA, HK3, ANGPTL4, C4BPB, CFLAR, CPOX, CREB3L1, F2RL1, GAD2, GUCY2D, GZMA, HDAC1, IFNA13, IFNA14, JUND, MAOB, MS4A2, MTHFD1L, OR10A7, OXSM, PAPSS2, PDIA4, PIK3R4, PITX2, POLD1, POLR2A, POMC, PYCRL, PYGB, RUX1T1, SLC25A4, STX10, WNT16, WNT4
Negative_2929	C8B, CBL, TK2, ACACB, ACTN2, ALOX12B, CACNA1E, CXCL2, CYP26C1, CYP3A5, DIAPH2, DPYS, EPB41L3, GCNT2, GTSE1, HNMT, IQGAP1, ITPKA, LIPE, OR1L8, OR2AE1, OR4A15, OR5M9, PDE1C, PFKFB2, PFN1, PIGO, PPP3R1, PRKAA2, RASGRP1, SDHA, SLC2A2, SMPD1, SPRED2, SSH1, TBL1X, UNC5C, VAMP2, ZNRD1, ARHGEF12, CSNK1A1L, SUV420H1

Negative_2930	BAX, DCK, ACP2, ACSM2A, ADCY7, ADSSL1, ALPP, ASCC3, ATG7, AXIN2, CCL2, CD59, CTNNA3, CYP2S1, DDX51, FGF12, HIBADH, HTR2B, LDHAL6A, MAN1B1, MASP1, MGAT3, NRXN3, OR10G8, OR6C75, PGK1, PLA2G2F, PSEN2, RDH5, SPHK1, ST8SIA5, TNFSF14, TOMM40, TUBAL3, VAV2, VEGFA, ATP6V1B1, B3GALNT1, SERPIND1
Negative_2931	DCN, INS, A4GALT, CD70, EPB41, EPHB2, FGF3, IFNA21, JAM2, LIPC, MAP2K4, MDM2, OR2G3, OR2L2, OR4D6, OR52E4, PLAT, RASSF5, SHC1, SPRY3, TAS2R14, UAP1, YWHAB, CSGALNACT1
Negative_2932	PML, SMS, OR10T2
Negative_2933	AR, UBC, ACPP, ALDH9A1, ATP6V1A, CLDN1, HHIP, HMBS, IRS1, METTL2B, NFKB1, OR2T29, OR4C13, PLXNA2, PMVK, SCIN, SUOX, TLR9, TSC1
Negative_2934	F8, FGG, B3GALT6, CCNE1, DDB2, DUSP1, GNAL, HEXB, HLA-C, HSD17B3, NAGS, OR5A1, POLR1D, SKP2, SOS1, ST3GAL5, TAS2R48, TRAF4, TRHR, USE1, HLA-DRB3
Negative_2935	C8A, HYI, ITK, AK3L1, BCMO1, CCL17, CDK7, DFFA, DLAT, DPAGT1, ENPP6, GRIA2, GSTA1, GUCA1A, HPSE2, HSD17B2, IFNA21, KDSR, MTAP, MYH13, OR13C4, OR2S2, OR4M2, OR8D2, PIM1, PLD2, PPCS, PRKCG, PSEN2, RUVBL1, SEPHS1, SLIT2, THBS4, TUBB, TYRP1, ULBP2, XYLT1, PNLIPRP2
Negative_2936	DCT, EPO, ALDH1B1, ALOX12, APPL1, ARHGAP5, ARNTL, BACE1, CD8B, CREB5, CSF2, GNAQ, HLA-F, IFNA6, IGFBP3, LAP3, LDHC, LRDD, MAP3K11, METTL6, NRCAM, OR2A5, OR2AT4, OR5V1, PCYT2, PDE2A, PIP4K2A, POLR3G, SLC25A6, STX10, UGT2B10, UROS, ALDH18A1
Negative_2937	ACTN1, OPLAH, PGAP1, RASGRP1, STX5, TNXB, ATP6V1B1
Negative_2938	ACVR1B, ADSS, ATP5E, DHFR, GRLF1, KIR2DL4, NQO1, OR11A1, OR4C15, OR4C46, SMAD5, SPCS3, TACR2, TPH1
Negative_2939	SDS, BIRC2, CYP2F1, DEGS2, EDNRB, GALNT7, HYAL2, IL23R, OR4A16, PDE11A, RFWD2, UGT2A3, MAP3K7IP2
Negative_2940	GH2, ANPEP, ARRB2, BMPR1A, CCR4, CLDN1, CTSG, EPB41L1, FGF11, GALM, GALNT3, GRIN2B, GSTO2, H6PD, HNF4A, IL17RB, KAT2B, NCR3, NEFL, OR52E2, OR52I2, OR6C2, PAICS, PRODH2, PTPN5, RALBP1, TAS2R3, TP53, TRDMT1, WNT7A, YARS
Negative_2941	AK5, C7, FUK, GH2, OSM, APOA2, APPL1, ASAH1, ATP12A, ATP6V0C, CCR4, CDKN1A, DAAM1, EFNA3, EPHA3, ETNK1, F2RL1, FGF11, GCLC, IKBKE, IL1B, IL21R, MCM3, MMP7, MYL9, NR4A1, NUDT9, OR13J1, OR4D6, PGAM4, PLA2G10, PORCN, PPID, SEMA4C, STAM2, TLR4, TSLP, TUBB3, UGT2B28, WNT5A, XIAP, PHOSPHO1
Negative_2942	LCT, BBOX1, COL1A2, CXCL13, CYP4F3, DDX41, DUSP6, FOXO3, KRAS, LALBA, OLR1, OPLAH, PER3, TSC2, SLC25A31
Negative_2943	C1S, NNT, SYK, ALCAM, ATP5F1, BCAT1, C1QA, C1QC, CAMK2B, CASP7, CCNB3, CDH2, CLCA4, COL4A2, EFNA4, FIGF, FUT4, FZD5, HLA-DMA, ITGB5, LCMT2, MAPK11, MASP2, MGAT5, NEUROG3, NFYB, OR10K1, OR4C15, OR4K1, OR4K15, OR51M1, OR5AK2, PDE5A, PIGO, PIK3C2B, RPS6KA4, SEMA4C, SHMT2, THY1, TNFSF12, TRDMT1, UGCG, PAFAH1B1
Negative_2944	CDH3, FGD1, OR4D6, RFWD2, VEGFB, YWHAQ
Negative_2945	GSR, ACVR2B, CD27, DAXX, EARS2, ENPP7, FM05, GANAB, IL1A, IL3RA, ITGB1, MAN1B1, OR1L4, OR5H6, P4HA3, PAK4, PARS2, PCK1, PIGV, PLCD3, PRPH2, PVRL4, RRM2, RUNX1, SAT1, SMAD3, TRAF3, UCK2, YWHAG
Negative_2946	C4B, CR2, PDC, TNF, ABP1, ACVRL1, ADORA2B, ALAS1, ATP5E, ATP6V1F, CD59, COL4A4, COL4A6, CSNK1G3, EHMT2, GALNT3, HPSE, ICOS, ITGA1, MCCC2, MCM5, MPST, NSD1, OR2T33, OR2T5, OR4F4, OR4K14, OR4X2, OR5I1, OR8J3, PGM3, PHGDH, PPM1D, PPP1R3D, PPP2R5B, RBL1, SELP, SLC33A1, SNAP23, SPRY4, TAS2R16, THBS4, TUBB3, TYMS, UGT2B10, UPB1, WNT6



Negative_2947	ITK, KIT, TEC, ADH5, ARHGEF2, CDC25B, CDC7, CLDN2, CYP4F2, DAPK2, G6P C, GALNT1, GANC, GBE1, HLA-C, HSD11B1, INPP4B, IQGAP3, MAN1A2, MMP7, MYH14, OR10G7, OR2T33, OR8 S1, PDGFC, PFN3, PISD, RFX5, RRAS, SDC3, SMAD3, SNAP23, TPMT, WNT7B
Negative_2948	IL8, BBOX1, CD247, CD36, CLDN16, COQ7, CYSLTR1, DPYD, ELK1, GADD45B, GGCX, GLO1, HAP1, NKX6-1, OR10H3, OR13J1, OR2A4, OR51B4, PANK1, RAB23, SYNJ2
Negative_2949	GK, KMO, LHB, AK3L1, B4GALT3, CCKBR, CFL1, CHST11, DNMT1, EDA2R, EIF4 B, FARSA, FDFT1, NME7, OR1F1, OR3A1, OR4B1, PPA2, SDHA, SMPD4
Negative_2950	ACTN4, ADCY10, ALDH3A1, ATP6VOC, CD59, DAPK1, GALNTL1, IMPA1, KIR2D L4, LPAR1, LRRC4C, MAN1B1, NEU2, NGEF, OR10G9, OR6B2, PAPSS2, PFKFB2 , POLR3H, SUFU, WNT1
Negative_2951	AMT, CP, GGH, NOG, PGD, ARHGEF1, B4GALT7, BLVRA, CCL13, CDKN2D, CSF1, CSNK2B, DGKG, DKK1, DKK2, DOLPP1, EGLN1, EHHADH, FPGT, GNRH2, GSK3B, GUCA1C, GUCY1A3, IDUA, IFNGR2, LAMB4, MECR, MYH9, NAT2, OR14C36, OR1 J4, OR2AG2, OR4M2, OR5AN1, OR6Y1, OR8J1, PERP, PRKCI, PVRL4, RXRB, SH MT2, SIGLEC1, ULK2, UNC5A, VAMP1, WNT7B, PPP1R12A, SERPING1
Negative_2952	GSS, ADCY2, ANAPC2, AOX1, CNGA4, EIF4E, ENPP1, GNAQ, HSD17B7, MAP3K4 , MCEE, NMNAT2, OR51E1, PDE9A, PIK3R3, PRKCI, RFXANK, SESN3, TRPM5, Y ES1, ATP6V1B2, GABARAPL2
Negative_2953	SRM, ACVRL1, CCNG2, CD40LG, CD01, CERK, FASN, FCGR2B, GRLF1, IL9R, OR 2L2, OR2T1, OR4S1, RBPJL, SMAD1, WNT2B, TNFRSF17
Negative_2954	FGB, PRL, ABCC8, ABL2, ACADS, COL5A2, CREB3L3, DDHD1, DRD2, DUSP8, F2 RL2, FGF5, HLCS, HMGCS1, IFNA13, IRF9, MAD2L2, MAPK3, MAPK7, MGLL, NA T6, OR10V1, OR4P4, OR6K6, ORC4L, OSMR, PAX4, PLD2, RDH5, SPRY1, VAMP2 , B3GALNT1
Negative_2955	FAH, RFK, ARSB, ATP6V1H, CCDC6, CYP1A2, EPB41L3, FLT3, FOXO3, HIBCH, IDH3G, IFNAR2, IFNW1, IL17RA, MAP2K5, NLGN2, NT5C2, NT5E, OR2T8, OR5 1A4, OR52L1, P4HA2, PLA2G3, PRKCB, RAB23, TCF7L1, TGFB1, UBA7, WNT5A
Negative_2956	GH2, ALDH3B1, ARPC5, CCNB3, CCR5, CDKN2C, CHR1, CTNNA2, DAAM1, FZD3, GPAM, OR51B2, OR8U1, PIAS1, PPP2R5B, RPIA, RXRA, SETDB2, TGFB2, SER PINC1
Negative_2957	TEC, BMP5, CCNA1, CXCL3, DPM2, DUSP7, DUSP8, FSHR, GNRHR, LFNG, LTBP1 , MKNK1, OR1A1, OR2T5, UNC5A, HLA-DQA2
Negative_2958	C3, DLD, SHH, TFG, ACSL1, ACTC1, AFMID, ATG12, ATP5J2, BTRC, CHPT1, CT NNB1, DDHD1, EPB41L3, FGF7, GCDH, GSTA3, HMGCR, IL12RB1, IRS2, ITPK1 , JUND, LAMB3, MAP4K1, NANS, NPAS2, OR11L1, OR1N2, OR2T1, OR4K5, OR6C 1, PCNA, PIAS4, PPP2R5E, PPP3CB, PYCR1, RRM2B, STAT6, UGT2B4
Negative_2959	ABO, ALG6, APC2, DCTN1, FGF3, LCAT, LRAT, OGDHL, OR1N1, OR4K13, PDK1, WNT8A
Negative_2960	ADC, CAD, MVD, SRC, AARS, BCAT2, CYP26B1, DDX19A, EFN2, FGF18, FIGF, GALNT12, GNG13, KLRK1, LARS2, LCAT, LCP2, MAP3K8, NAT2, NUDT8, OR11H 4, OR13C3, OR51A7, OR51B4, OR5B21, PPP3CC, RDH12, UGT2A1, WIF1, PPP1 R12A
Negative_2961	C1S, HGF, ABLIM1, ACOX3, ADORA2A, ALG3, ANAPC1, BCAR1, CD40LG, CHST1 3, FUT4, HSD17B8, IFNG, ITGB1, LCMT1, MARS2, MYH7B, OR3A1, OR4K14, OR 5T3, OR6N1, OR6Q1, PFKFB1, PIK3CG, PIP5K1B, PRKAB1, PROC, PTGER3, RH OQ, STX10, HLA-DPA1, TNFRSF13C
Negative_2962	CACNG8, CCR1, DAD1, DAPK3, DHCR7, EDAR, EDNRB, ENO1, EPHA1, GADD45A, HADHA, HIBADH, HLA-DMA, LIFR, MASP1, MTHFD1L, NFASC, ONECUT1, OR4N4, OR52D1, OR5AK2, PD E6D, PNMT, ROBO2, RPS6, TP53I3, WNT7B
Negative_2963	DCC, MPL, ABI2, ASIP, GLS2, GNB1, IFNA7, IL6ST, KLK3, MASP1, MRAS, MYL 9, OR13G1, OR2F2, OR51B2, PDE1A, TAS2R1, TFDP1

Negative_2964	FST, BUB1, DTX3L, HAO2, HSD3B1, JAM3, LYZL1, NFAT5, NLGN1, PIGP, PLCD1, RXRG, SMAD1, STAT5A, TJP3
Negative_2965	CSNK2A1, ELK1, EPHA2, FGF22, LAMB2, MCCC2, TYMP
Negative_2966	EZR, ACTN1, ACY1, IL11, SETD2
Negative_2967	ACSM1, ALS2, ASNS, ENO2, EP300, FZD2, GMPPB, GNA12, IFNA17, IL5RA, INPP5B, MAP3K1, MAPK10, MAPK11, METTL2B, OR2G6, PDHB, PLOD1, POLR2F, PPI1CA, PRPH2, XCL2
Negative_2968	AARS, ALDOB, DUSP14, PANK2, PGAP1, TMLHE, YARS
Negative_2969	DBT, DCN, EZR, FYN, SYK, ALDH1L1, ALG11, ARPC4, B3GAT2, BCKDHA, BDH2, BLVRA, CASP3, CASP7, CKS1B, COX10, CXCL2, DDHD1, DKK4, EI24, EPB41L3, FOSL1, GSTA2, GSTO1, HDAC2, HTR2C, IFNA17, IL20RA, MAP3K11, MYH13, NEUROG3, NKX3-1, NME6, NOTCH2, OR13C4, PPBP, PPP2R2B, PRKCA, PSME2, PTAFR, PTPRZ1, SPCS1, SPHK1, TNFSF11, TPH2
Negative_2970	CBL, GHR, JUP, ACAA1, ADORA2A, AKR1B10, ALAD, BCKDHB, CACNA1S, CSNK1E, CYP3A4, DAAM2, FGD1, GLUD1, GNAZ, ITGAD, JAM2, MTHFD1, MTHFR, NKD2, OR10G8, OR2AE1, OR3A2, OR52N2, PDIA4, PLXNB2, PPP1CA, SMAD9, SPRED1, SRD5A1, ST8SIA1, TFDP1, TLR9, UXS1, VAMP4, VAV2, VCAM1, WARS2, WHS C1L1, TNFRSF14
Negative_2971	LSS, PML, ACY1, BAAT, C3AR1, CALML3, CALML6, CD48, DRD2, GALNT3, LAMC3, LIPF, OR11G2, OR2A4, OR4D2, OR4X1, UBE2L3
Negative_2972	AMH, FAH, ID2, LCK, ME1, ACAD8, ADORA2A, ADRA1D, ATP5G2, CDH1, CMPK1, CSH1, CYFIP1, CYP2A7, EPHB1, FGF17, GALNT9, GGCX, HTR5A, IL17RB, IL18RAP, IMPDH2, ITGB1, MAP3K1, MAP4K4, MDH2, MLYCD, MTHFR, NEFH, OLAH, OR14I1, OR2B2, OR4K13, OR5M8, OR6C75, PHKA2, POLR2I, PORCN, PRPH, RELA, SEPHS1, SETD7, TAS2R1, TFDP1, TGFB2, UBA1, WASF2, SERPIND1
Negative_2973	SRM, TPR, CCL23, CLOCK, GOT2, HNMT, POLD4, SLC27A4, TLR4, UGCGL1, XYL T2
Negative_2974	PML, BUB1B, CACNG5, CFTR, COL1A2, DCXR, FIGF, GSTO2, HNF1A, IFNA14, LRP6, NAGA, NFATC2, PGM3, RPS6KB1
Negative_2975	ALG8, CLCA4, DCXR, GGT5, OR2AG1, OR2F1, OR51I1, PPM1D
Negative_2976	AK5, C9, CS, TNR, VCL, ARSE, B3GALT1, CHKA, CTTN, DVL2, EFNA5, IPMK, MTHFR, NAGA, OR10AG1, OR10G2, OR10G8, OR2T12, PARD6B, PGM2, RBL2, SCIN, SOS1, SUCLG2, TRAF4
Negative_2977	BST1, CYP17A1, ECHS1, NME6, RPS6KA4, TP53I3, WNT6
Negative_2978	NPY, ACSM2A, CBLC, CCL7, CCNE1, CCNH, CDC25B, CHEK1, CLDN4, ENTPD7, FGF21, GNRH2, HCCS, IRS1, ITPKA, MAP2K2, NAMPT, NUMBL, OR10G9, OR2AG1, OR51Q1, OR8K5, PIK3R3, RBX1, RFXANK, RPSA, SH2D2A, STAT3, STX8, UGT2A1, WWP1, TNFRSF13B
Negative_2979	GCK, ADORA2A, ALOX15B, C1QB, CACNG1, CARD11, CCR6, CXCL3, CYP2D6, DD X19A, DGKQ, DHRS4, EPAS1, EPHB3, FARSA, FGF23, FZD3, GNPDA2, IL10RB, LAMC1, MAP4K4, NCSTN, OR11H6, OR6C75, OR6X1, PAPSS1, PIGV, PIK3C2A, PIP5K1A, PLA2G1B, PLIN, POLA1, POLR3B, PPARG, PPP3R2, RAB23, RASA2, SARS2, SENP2, SMURF1, SOCS7, TGFB1, TSTA3, WARS2, XCR1, YWHAG, CTNNB IP1, MAP3K7IP1, PAFAH1B3
Negative_2980	DCT, ACSS1, ACSS3, ACTN2, AK3L1, ALAS2, B3GALT4, BCKDHB, CAMK2A, CCL11, CCR2, CDK5, CIITA, COL4A2, CRLF2, CUL1, CYP2S1, DAAM1, DGKD, DHRS3, EXTL1, GAL3ST1, GART, GNAQ, GUCY1A2, IL18R1, ITGA2B, ITPA, LDHD, MOV10L1, MYH1, NCF4, NKX3-1, NUDT12, OR10V1, OXCT1, PNPT1, PRDX6, PTGS2, RDH12, RIPK1, SCP2, SEMA3B, SIGLEC1, SMAD3, TRAF1

Negative_2981	KMO, ACACA, ALDH3A2, ATP5A1, C4BPA, CAMK2G, CCL7, CYP2B6, FADD, FOXA3, GLI1, GNAI3, GPX7, HARS2, IFNA17, IQGAP2, IRF9, LTBP1, MAP2K2, MAP4K1, NEFH, NEUROD1, OR1L3, OR1Q1, OR4K15, OR51D1, OR9A4, PDE9A, PER3, PI4KA, PLCB4, POLD2, SEMA4C, ST3GAL4, SUOX, SV2A, TAP1, VAV2, MAPKAPK3
Negative_2982	INS, LPO, MVK, OGT, ALDH3B1, BDKRB1, CARS, CHDH, DLL4, DOCK1, DRD1, FUT8, GUCA1C, IDH3A, IDH3B, IFT57, LIPE, NAT2, OGDHL, OR1D5, OR5I1, PDE7A, PDK1, PEMT, PER1, PTPMT1, SC4MOL, TBXA2R, WNT16, YOD1, HSD17B12
Negative_2983	AR, FES, ID2, ACAD9, ACO2, ALG3, ANPEP, BIRC5, C9orf95, COL4A1, COL4A2, CSF1, ECHS1, GLUL, IRF5, LARS2, LDHC, MAP3K6, MAPK3, NFKBIB, OR10A, G1, OR2T10, OR2T11, OR4N5, PDE4C, PDK1, PFKL, PIK3R4, PLA2G5, PLCG2, PRKY, PSME1, SDC3, TAS2R42, TICAM1, TUBB, ATP6VOA1, HLA-DQA2, HLA-DRB3, PHOSPHO1, PLA2G12B
Negative_2984	F7, LPL, NNT, OSM, ACADM, ACVR2B, ANGPTL4, APOA1, ARD1A, ATP5F1, C1QB, CDKN2C, CMBL, CREB5, DGKZ, DUSP16, ENO1, HMGCL, KIR2DS5, MYH6, NUDT8, OR10A7, OR52H1, OR8D2, PAICS, PDCD1, PDE11A, PRKCE, PTK2B, SH2D1A, STK36, TAS2R49, TLR2, TNFSF9, WNT16, WNT8A, XYLT2
Negative_2985	BID, AMPD3, CHIA, CXCR3, DCTN1, PDE8B, PIGB, PPP2R2D, SLC2A4, HSD17B10
Negative_2986	FYN, JUP, LPL, PRL, ACSM4, APOC3, B3GAT2, CBLC, CD244, CDH1, CDK5, CLCA2, CYFIP2, FZD10, GAD2, GFPT2, GRM1, HSD3B2, IL10RB, ITGAE, KLRC4, LDHB, MCM2, NKX2-2, OR7A5, OR9G4, PANK4, PDE4B, PDGFA, PPARD, SEMA4C, SUV39H1, TSHB, UNC5D, VNN1, YKT6, ATP6V1C1
Negative_2987	PXN, TNR, ALG8, ARD1A, ARHGEF7, ATP6VOB, B3GAT1, B4GALT3, BET1, C1QA, CDC25B, CHSY1, COL6A1, DIAPH1, DNMT3B, EPHB1, FGF2, FOXA2, FZD10, GCDH, GMPPB, GNB3, HIF1A, IL13RA2, IRF7, LTBR, MBL2, MGAT2, MGAT4B, MKNK1, NAT5, OR2AG2, OR2T4, OR2W1, OR51M1, OR5F1, PARS2, PLXNC1, POLR2F, ROCK2, SESN1, ST3GAL5, STK3, UBE2L6, XCL2, SLC25A31
Negative_2988	CCKAR, CD46, FZD7, GNAI2, RAP1A, RBKS, TYRP1, UNC5A
Negative_2989	ABLIM1, ACSL3, ACTN4, APH1A, CCL24, COL5A2, CTBP1, CTSP2, GLI2, GMPPB, IRAK3, LFNG, LHCGR, LIPE, MMP2, OR12D3, OR2T6, OR4C15, OR52E6, PCCB, PDE2A, PFKFB3, PHKA2, PIP5K1B, SOCS2, SPAM1, SV2A, TRPM5, TNFRSF14
Negative_2990	GK, SP1, ALDOA, APOC3, CACNA1E, CCL27, CD99, CDC42, CDH2, CXCL16, CYP2J2, DHX58, DLL3, DUSP10, DUSP7, EPHA1, FDFT1, FGF11, GALNS, GGPS1, GOT1, GPD2, HLA-DOA, IFNB1, IKBKG, IL13, IPPK, JAK1, LARS2, LRAT, MYH15, OR4A16, OR4S1, PDGFC, PIPOX, PLA1A, PRSS1, ROCK2, SFRP2, SLC2A4, SULT1E1, TAS2R42, VDAC1, HLA-DRB5, SLC25A31
Negative_2991	CRK, TXK, AANAT, ACOT11, ADCY3, AHCY, CACNB2, CCL23, CLDN7, CYCS, DPM1, DUSP8, EPHB3, ESPL1, FGF3, HSD3B7, HTR4, IL11, IL1R2, IRF9, IRS1, JAM2, LCMT2, MMP9, NCK2, OR10H3, OR2B11, OR4L1, OR51A7, PLA2G2F, RHEB, SLC27A4, ST3GAL6, TFPI
Negative_2992	AK1, BCR, CSK, LYN, AANAT, APOA2, CLDN22, CREBBP, CYP3A43, DCTN1, DUSP14, EFNA1, EFNA5, ERO1L, FGF19, FGFR1, FLOT1, FUT9, GRM1, HTR5A, ITPK1, L1CAM, LIPE, NARS2, NEUROD1, NTRK2, OR2D2, OR2T33, OR51I1, OR6C3, OR8G1, PGM1, PIGV, PON1, PPP2R5A, PPP2R5B, RDH8, SMAD4, SOCS3, SULT1E1
Negative_2993	C2, DDC, LYN, AASDH, BCAR1, CISH, DAG1, DLL3, MPST, OR5M9, PLAUR, SELE
Negative_2994	EBP, MTR, HSD11B2, HSD3B1, MDM4, NME4, OR52K1, STAT6, SUCLG1, UBE2L3, UCK1

Negative_2995	GH1, XDH, ADIPOQ, ALDH3B1, CASK, CHRM3, CXCL10, DNMT3A, DTX2, EARS2, EDNRB, F11R, HLA-DOA, HSPB1, IL22RA1, ITPK1, MARS2, NFKBIA, NT5C, OR2T5, PCYT2, PGAM2, RAF1, RUVBL1, ST6GALNAC4
Negative_2996	BTC, PC, SPN, ADAM10, ATP5D, CCL8, CDH2, CSH1, CSNK1G2, DGAT2L4, EPB41L1, GADD45A, GGT6, ITGA2, ITGA5, LAMC2, LEFTY1, OR10C1, OR8B8, PIP4K2B, PLCG2, SH2D2A, SLC2A4
Negative_2997	ARNTL, HSP90B1, PKLR, SERPING1
Negative_2998	C3, GDA, GNE, KDR, TYR, ADRA1D, AGPAT4, ATN1, B3GAT2, CCR1, CHEK1, COL6A1, DHCR7, EPHB1, FOXO3, GALNT8, GDF7, HARS2, LDHC, NEU4, OR13C4, OR14J1, OR2L2, OR4F4, OR5M8, PANK1, PGM1, PPA2, PPARG, PRLR, RBX1, RPS6KA5, ST8SIA1, THBS3, UBE2L6, MAPK8IP2, ST6GALNAC3
Negative_2999	LCT, ACPP, ADH6, B3GALT2, BNIP1, CD70, CD80, CDS1, CHRM2, CIITA, CYP11A1, DUSP8, E2F3, GP1BA, IL12RB2, IL13RA2, IL22, KLRD1, NOS3, OLAH, OR10A4, OR2F1, OR8J3, OR8S1, PFKL, POLD2, PPAP2A, PPP1CA, PTGES2, SESN2, SOCS4, ST3GAL6, STAT4, THBS2, TRHR, WNT2B, ATP6VOD1, ATP6V1C1
Negative_3000	LPO, ACOT11, AKR1C4, CACNG6, CACNG7, CDIPT, CFTR, CHST12, DARS2, ENP1, HLA-G, IARS, MKNK2, OR1E1, OR2W1, OR7A17, SV2C, CACNA2D3, SERPIND1
Negative_3001	IL3, B3GNT4, IL17RB, NEFH, OR52W1, OR6K3, OR9Q1, PKLR, POLD4, ST8SIA5, TRIP10
Negative_3002	PGF, ALAD, AOC2, ARHGEF4, BCL2, BHMT, C1GALT1, CREBBP, CSF3R, CTF1, CYP3A4, ERBB4, GSTM5, GSTO1, HYAL2, KAT2B, NADSYN1, NEFM, OR4N5, OR52K1, PAPSS2, PCCA, PIM2, PRIM2, PTGFR, SGPP1, SOD1, SRD5A1, TALDO1, VN1, WASL, TNFRSF17
Negative_3003	ANAPC7, CPT2, SLC9A1, SSH3, THBD, TRIP10
Negative_3004	DBT, DDO, GLA, A4GALT, ACSM2A, AGXT, B3GAT2, CAV3, CIITA, CXCR6, DARS2, EDNRA, G6PD, GADD45A, GLI3, GSTZ1, IL29, ITPK1, MYL9, OLR1, OR1C1, OR2Z1, OR51I2, OR5AC2, OR6C75, OR8H2, OXCT1, SETD2, ST8SIA5, TGFBR2, TLR4, TRMT11, VEGFB, TNFRSF18
Negative_3005	ACSM3, BPNT1, CNGA3, FABP1, GARS, ITGB6, MAD2L1, MAN1A2, MAP4K2, MDH1, OCLN, OR1J2, OR1J4, OR51A2, OR5D13, OR8K3, PDE10A, PLA2G6, PLXNC1, RFXANK, RFXAP, SEMA4F, STK3
Negative_3006	CGA, CRK, DBT, CCL15, ERBB4, FGF19, MAT1A, MYH11, NKD2, PIGN, PRKCE, THBS3, TNFRSF8
Negative_3007	AGL, EGF, ACACA, ACSL6, ADIPOR2, AKT3, CAPN2, CCND2, EPHB2, FMO1, GNA12, GRIN1, HLCS, INSR, MAT1A, NAT1, OR10H3, OR1N2, OR2A12, PDGFD, PIAS4, PIGW, PIK3C2G, PIP5K1B, RFX5, TLR9, UPP1, UROD, VTI1B, WNT7A
Negative_3008	FAH, PTS, A4GALT, ATP5A1, BIRC2, CMPK1, DPYD, DRD1, F13B, FLOT1, GALNT3, GMPS, GNMT, GUCY2F, HIP1, HSPA2, IFNA10, IL10, IL20, IL28A, KIR2DS5, P2RX7, PON1, PRKCH, RFNG, RPS6KA4, SAT1, TPMT, TUBA1B, UROS
Negative_3009	CAT, GGH, HK3, NOG, PVR, SRF, ADCY6, C9orf95, CD36, CLDN19, CMBL, CNGA4, DDOST, DEGS2, DUSP8, FBP1, FGF17, FUT6, GAPDH, IARS, IDH1, KAT2A, KAT2B, NRXN2, OR1N1, OR1S2, OR2K2, OR4A5, OR8H3, P4HA2, PDE1B, PEMT, PIGO, POLD3, PTCH1, RELA, SCP2, SENP2, SIGLEC1, SLC27A1, SLIT2, SPRED1, STX18, THTPA, YWHAQ, MAPKAPK5, ST6GALNAC3, TNFRSF13B
Negative_3010	ATM, FGG, GGH, ALPL, ATP5G2, B4GALT1, CAMKK2, CCL7, CD55, CDH4, CYBA, CYP17A1, DFFA, DHCR7, ETNK1, GALE, GDF5, GNAT3, GNPAT, HLA-C, IKBKE, IL7R, MAML3, MAPK12, MCM2, MYH7B, NCAM1, OR10G7, OR10G8, OR1J4, OR2M7, OR4C6, OR7G1, PDE4A, PDE8B, PGAM1, PPID, PRKCA, PSME1, PTPRF, SETD2, SUCLG1, SUCLG2, TUBB4Q, UGT8
Negative_3011	CR2, HDC, HK2, AGMAT, CAV1, IDH2, LIPT1, LTC4S, OR11L1, OR2AG1, OR2M7, OR2S2, PGM1, SETD1A, SOCS1, WASF3

Negative_3012	CCNG1, CD3E, CHRM2, COL5A1, CREB5, DEGS2, FZD9, ITGA9, JAK3, NNMT, OR6C2, OR7G3, PARD3, PDGFRA, PIGQ, PIK3CD, PMM2, PPM1D, RHEB, SMPD1, THTPA, YWHAE
Negative_3013	ALDH3B2, ATP6V1A, EXTL3, FIGF, FLAD1, LRP6, NCK2, SLIT1, TAS2R7, ATP6V0A4
Negative_3014	GAA, ME3, MET, AKR1C4, BIRC3, CCL25, CD80, COQ7, CREB5, CXCL12, DKK4, GLUD2, GNAQ, GZMA, HSD17B8, NT5M, PPIID, RFXANK, SPI1, TAS2R8, YWHAE
Negative_3015	PRL, CASP3, CCL26, CDKN2D, CXCL12, CXCR6, ENTPD6, FDFT1, ITGB7, OCRL, OR10H2, OR2Y1, OR51Q1, OR6X1, PCK2, ROB03, UGP2, VAMP2
Negative_3016	AGK, AUH, FES, ID2, TFG, ACP6, ACSM5, AFMID, ALDH3B1, ARHGEF7, B4GALT3, CADM3, CASP8, CMAS, CSNK1G2, DOCK1, ERBB3, ERBB4, EXTL2, FABP4, FZR1, GART, GNAS, IRF9, LRDD, MAP4K4, NEUROD1, NOS1, OR2AG1, OR3A2, OR4D6, OR4M1, OR6C3, PARD3, PDE1B, PLOD2, PLTP, PPP3R2, PRKAB1, RBL1, STAT3, TPH1, TYRP1, VEGFB, WNT9A
Negative_3017	F2R, FGA, AGPAT1, ARG2, C4BPB, DAPK2, DTX3, FGF3, GCNT3, GNB3, GRB2, GSTM3, ITGB7, OR4L1, PDGFB, PTPN6
Negative_3018	CBS, IHH, TH, ALPI, B3GALT4, DRD2, GALNT9, GNA12, GPLD1, GZMB, HSPA8, IGF1R, OR1J1, OR2M5, ULBP2, WNT10A
Negative_3019	CD2, NGF, ABP1, ALPP, ALPPL2, ATP6V1A, BUB1B, CCL15, CCR5, CER1, CFL2, DARS, DHX58, DLL1, DRD1, GLI2, GNPDA2, GSTA2, HMBS, IL11RA, MAP3K3, MDM2, MYLK, NTF3, OR2T1, OR51F2, OR51V1, P2RX2, PANK2, PARD3, PDGFA, PIGK, PPP2R1A, RASA2, RETSAT, SLC33A1, STX12, STX6, TLN1, TP73, TPH1, TYK2, UCP1, UGT2B17
Negative_3020	ACP6, ALPPL2, CYP2C8, DAD1, FGF12, HAP1, NFATC4, PIGN, SEMA3G, ST6GALNAC5
Negative_3021	DCK, NNT, RPE, ADH1B, ADH5, AVPR1B, B4GALT1, C7orf16, CD79B, CD99, CER1, CHAT, CYP2F1, EVI1, FGF20, FGF8, FTMT, FZD8, GPAM, GPX5, HTR2B, ITGAD, KIR2DS4, KIR3DL2, MAGI3, MGAT5, NFASC, NGEF, OR4A15, OR7D2, PIGM, PRIM2, PRKAR1A, SDC2, SDC3, SIAH1, SKIV2L2, SLC25A6, SQLE, STEAP3, GABARAPL1, TNFRSF1B
Negative_3022	BAX, NNT, ACAT1, ACSL6, ARNT2, CD3E, CTNND1, CXCL6, DARS2, DDX55, DTX4, INPP4B, KLRD1, MGAT5B, MMP2, NANS, NFASC, NT5C1A, NUDT5, OR11H1, OR2L3, PIGT, PITX2, PMM1, PNLIP, PRKCD, PSME1, SGMS2, SOAT2, WNT10B, ATP6V1B1
Negative_3023	IL7, ILK, ACY1, ALDH1A2, AMY2A, ARPC3, B3GAT2, C3orf10, CES7, CYP11A1, EXTL2, IFNK, ITGAX, ITPKB, JAG1, PAFAH2, PCK2, PIGQ, PSAT1, PSPH, SLC2A1
Negative_3024	CBL, EDA, GAA, GHR, ABLIM1, ATP2A2, CASP9, CBLC, CMAS, DGKB, ENTPD7, EPB41, EPHA1, FABP1, FGF11, GATM, GUSB, IL12RB2, ITGB3, LEF1, MAP3K8, MAPK1, MCM2, MMP9, NR1D1, NTN1, OR2AG1, OR52I1, OR5AK2, PAK2, PIAS4, PLAT, PLCZ1, PRODH2, RXRB, SHC1, SRGAP3, WASF1, ATP6V1C1, PPARGC1A
Negative_3025	AMT, C1S, GP9, HGF, IL3, PTS, ABL2, ACADSB, ALOX15B, ARSE, ATP5H, BET1L, CAMK2A, CHKA, GMPPB, HCST, HIF1A, ITGA9, KLRD1, MAD1L1, MAPK14, OR11L1, OR2M3, OR4A16, ORC5L, PGK2, PIK3R3, QARS, RDH10, RFNG, SMC1B, TAS2R48, TP53I3, TYROBP, UGT2A3, VTI1A, WWP2, ATP6V1C1
Negative_3026	HAL, ACAD9, ARHGEF7, ARNT2, CD44, E2F4, HNF1B, HTR6, KARS, LAMC2, MAPT, MLYCD, MYLK2, NARS, OR10A4, OR14J1, OR1S1, OR4E2, OR52I2, PAPSS1, PPARG, QPRT, RAD51, RAF1, SPRY3, STX10, VDAC2, VDAC3, WNT16, ZIC2, CACNA2D3
Negative_3027	MPZ, ADSSL1, ANAPC5, ANAPC7, B3GNT3, CLDN17, CYP1A1, DDX55, GJD2, GLDC, GNPDA1, HSD17B8, MYL2, NOX1, OXTR, PPP2R5E, SEMA4G, SMAD5, SMAD9, SPRY2, SUV39H2, VAMP4, CACNA2D1
Negative_3028	BID, ID4, ACACB, ACTN1, CCL16, CHDH, CYP2S1, FZD5, FZD8, HLAG, LILRB3, NT5M, OR2T10, PRKAG3, SCD5, STX6, TP53I3, ULK3

Negative_3029	FGB, IHH, CD38, COL4A1, CSNK1A1, DHDDS, GSTK1, IL17A, MAP3K12, MAP3K4, MGST3, NTNG1, OR1N2, P4HA1, PAICS, PDHA2, PIGW, PPCS, PPID, PSME1, RUVBL1, SETD8, UCKL1
Negative_3030	DUT, HGF, ME2, ATP5L, BMP6, CCNB1, CLCF1, CYP19A1, GGT1, GPD2, GRIA1, INADL, ITGA9, ITPK1, LEF1, MAP2K3, MYH13, NFX1, NME7, OR1E2, OR2B2, OR4F5, OR51D1, OR6Y1, PARD6A, PDGFA, PTPRC, SNAI1, STX7, TBXA2R
Negative_3031	C4B, LCK, ME3, AKT2, ALG8, ATP5J2, BET1L, FBXW11, FDPS, GNPDA1, IDH2, IFNA17, IL13, IL15RA, MAGI3, NMNAT1, NR1H3, NTRK2, OR10A6, OR2C3, PCYT2, PIGV, PLCD3, RASGRF1, SNAP23, TICAM1, TSC2, WEE1
Negative_3032	CAT, FST, HAL, KIT, ABLIM2, ACADM, ADCY10, AOC2, BHMT, C7orf16, CD58, DIAPH1, FGF2, FIGF, FUT1, HEMK1, HMOX2, LIPT1, LTBP1, MAP2K2, OR2W1, OR6N1, OR8J1, ORC2L, PAK7, PDPK1, PHKG1, PIGM, PIM1, POLR1D, PTPMT1, SCP2, SHC3, TUBB6, ZBTB16
Negative_3033	C5, C8B, CS, FGA, PC, PVR, ASNS, CARD11, CASP3, CD22, CTSS, EDN1, EXT2, FASN, HSPB1, INMT, MAPK3, NRG4, OR2M5, ORC2L, PARD6G, PDE4D, PDGFB, PDKAA2, PSME2, RFXAP, TJP3, VKORC1, PAFAH1B1
Negative_3034	C7, AASS, ALDH3B1, ARHGEF7, CACNG3, CLDN20, FUT8, ICOSLG, IDH1, MECR, NCOA4, NUDT8, OR14A16, OR1N1, OR5AC2, OR6B2, PIP5K1B, PMM2, RENBP, SELE, TUBB4, UCP1, SERPINA1, TNFRSF10A
Negative_3035	EGF, C4BPB, DDX52, EPHA6, FGF6, GMPR2, GNA15, GUCA1B, JAK2, LCAT, MGA T5B, OR11H6, PDIA4, RAC1, RPS6KA5, SDHA, ST3GAL6, TNXB, TOMM40, TRAF2, TYK2, ST6GALNAC6
Negative_3036	WAS, XDH, ADH1B, AMHR2, ARD1A, ARHGEF2, BCKDHA, CCKBR, CDK4, DDB2, DE RA, DUSP4, GDF6, GRIN2D, HAAO, HPRT1, IL23A, MCM3, OR10K1, P4HA1, PRK Y, PSME3, RPS6KA5, TACR3
Negative_3037	CDC14A, CISH, ITGA2B, PDCD1, PIK3C2B
Negative_3038	CBS, GNS, NPY, SHH, ABLIM2, ACACB, ACTA1, ACYP2, ALAS2, ALCAM, BCKDHA, CASP3, CCL13, CDC42, CES2, CLDN9, COL1A1, CTPS2, CXCL3, FPGS, GCNT3, HA01, MTHFS, NKD1, NOTCH2, OR10H3, OR1S2, OR4N2, OR52I1, PDCD1, PIM2, PPP2CA, PTGFR, PTGS2, QARS, RAC3, SEMA4C, SNW1, STX2, TAS1R2, TSC2, VAV3, WNT16, HLA-DPA1
Negative_3039	CBS, HGD, NPL, ACAA1, ADH7, ARPC5, ASRGL1, ATP4B, BMP5, BNIP1, CD14, CD72, CDC20, CDKN2D, CFL2, CHRM1, CYP2C8, ENTPD8, F11R, FGD1, FGF2, GNAT3, HDAC1, IAPP, LDHC, LIMK2, MCM3, NCOR1, OR10J5, OR2W1, OR2Y1, OR4E2, OR4K1, OR52E8, OR52J3, OR8J3, PFKFB1, PFKFB3, PPP2CA, RASSF1, SH3BP2, SMAD7, SPHK2, STAT5A, TUBA3C, UGT2B28, YOD1
Negative_3040	BTC, CCR10, CD38, COL4A6, GALNT5, MAPK14, POLR2D, SDC4, SRGAP3
Negative_3041	CTH, BET1L, CEBPA, CSF3, ELK1, F2RL3, FZD8, GABARAP, GADD45A, GUCY1A2, IFNW1, IL21R, INPPL1, MAP3K5, MMP14, OLAH, OR5AU1, UBE2L6
Negative_3042	ATP5L, DIAPH2, GSTA1, GUCY2D, ITGB4, LTBR, OR4C15, OR52N1, PROC, RUVBL1, SOD1
Negative_3043	CS, MYC, ADAM10, ARRB1, ATP5J, CACNA1I, CD14, CDH3, CISH, COL1A1, CXC R6, CYP2C18, DTX1, EFN3, EHMT1, GCDH, GGT7, IARS2, IL12A, IL6R, LAMA3, LAMC3, MARS2, MYLK, NFX1, NTRK1, OR2H1, OR2T11, OR52B6, PIGP, PNPT1, RRM2, SDC2, SNAI1, SRD5A1, TACR1, TMLHE, UCP1, UGT1A10, ULK2
Negative_3044	C8G, EPO, IVD, PGD, PTS, AMPD1, ARPC5L, B3GNT5, CACNA1E, CDH1, CNGA3, CNTF, CPT1C, CRLF2, DGUOK, ERBB3, HLA-DRA, NOS3, OR10X1, OR1L3, OR1S2, OR4K5, OR5M3, OR5T1, OR7A10, OR7A5, PCNA, PDE6H, PDXK, PFN4, PIGT, PTK2B, RDH11, RPS6, RPS6KA6, SH2D1B, SH3, TPMT, UGT8, VAMP2
Negative_3045	IL4, ALDH1A3, ALOX12B, BCKDHB, CAV2, CCDC6, CSNK1E, CTF1, DTX3, EPHA4, FGFR3, IMPA1, OR8J3, PDE10A, PDGFRA, PIGW, RALB, SEMA4B, STX18

Negative_3046	C2, HYI, MVK, SDS, ALPPL2, ATP4A, BBOX1, CRY2, CYSLTR1, EPHB2, FOXO3, GOT2, IL20RB, IL5RA, ITGB4, ITPA, NRG2, OR13C2, OR2L3, PIGS, PTPN7, R APGEF3, ST3GAL6, THY1, MAPKAPK3
Negative_3047	NNT, B4GALT2, COL1A1, F13A1, G6PD, GMPS, LALBA, MAFA, MALT1, OR10K1, OR1S1, OR2T12, OR7C1, PIGP, SNAP25
Negative_3048	C8A, RET, E2F5, EDN1, NCKAP1, OR4A5, OR6C76, PPBP, PPM1B, TXNDC12
Negative_3049	GPI, HDC, ZYX, AOC3, APOA1, ARRB2, BACE2, C9orf95, CASK, CDK5, CSF3, C YP4A22, DHRS4, FDFT1, FGF19, GALNT6, GNG12, KNG1, MAP3K3, MASP2, MET TL6, OR1E1, OR4A5, OR4C12, OR8K1, RFXAP, RHEB, ROCK1, SMPD1, TMLHE, U GT8, VAMP4, ZMAT3, GABARAPL1, SERPINF2, TNFRSF13C
Negative_3050	IVD, ACTN2, ACYP1, ADCY3, ANPEP, ARRB2, ATP5B, CDK4, CLTA, EPHB3, HAO 1, HAP1, IDH2, IDI1, IL28B, IL8RA, IRAK4, KIR2DL4, KLRC1, LHCGR, METT L2B, MPDZ, NPR1, NRG4, OR4D11, PAK4, PDGFRB, PGAM1, PHKG2, PIGL, POLR 2F, PPP1CA, PRPH2, THBS3, TSTA3, TYMP, TYMS, VEGFC, TNFRSF11B
Negative_3051	UBB, HPSE, IL13, NOS3, PRKAR1A
Negative_3052	CTH, RET, SP1, ACAA2, ADH5, ARHGAP5, B3GNT4, CANT1, CSF2RB, CTPS, CYP 26C1, DLL1, FARSA, IFNA8, IL13, IL15RA, KCNJ11, MAOA, MFNG, OR10H3, O R8U1, PIGM, PSAT1, RPS6KB2, SEMA3F, SMAD1, SUCLG2, TUBB2A, ULBP2
Negative_3053	ID4, CACNG8, EDA2R, NR1D1, OR11H1, PDE1B, PDGFC, PIP5K1B, PTGS2, WNT 1, CACNA2D4
Negative_3054	PDC, CNTF, CRY1, DDX55, GUCA1B, IFNK, IPMK, IRS1, LAMC3, NAMPT, NUDT2 , OR4C6, PCCB, PGM3, SC4MOL, TBK1, TCF7L1, TNFRSF10A
Negative_3055	C7, CSK, GBA, GP9, ALCAM, DOLPP1, F13B, OR2B11, OR2Z1, OR9G1, PIK3C2G , RAD51, RAPGEF1, SLC27A4, THBS2, TNFRSF8, UCKL1, TNFRSF13C
Negative_3056	CRH, KDR, UBB, ALG5, AMPD1, ATP5C1, CAMKK1, CASP8, CCL11, CCL28, CNGA 4, COQ6, CRLF2, FZD4, GALNTL5, GSTK1, HSD17B2, MLYCD, NADSYN1, NQO1, NTRK2, OR10AD1, PER1, PHKG2, PLCB3, PLXNB2, POLR2K, PTPN6, PVRL3, PY CR2, SEMA7A, STAT4, SYNJ1, TSC1, YARS2
Negative_3057	ITK, AADAC, ACSL6, ADCY3, ADCY6, ADIPOQ, AGTR1, ALAD, ALG8, CDKN1C, C HRM1, COQ7, DDX50, DVL3, FSHR, GMDS, IDH3B, IL12B, IL18R1, NCF1, NRP1 , NUMB, P2RX2, PAK3, SELE, SETD1A, SKP1, SUCLG1, TACR1, TPH2, B3GALNT 1
Negative_3058	CR2, ID2, SDS, ALDH6A1, ATP6V1H, CHST13, CLCA4, COL4A2, DERA, HSD3B1 , IRAK2, KNG1, LAMA3, LDHC, MCM7, METTL2B, MYLK2, OR10A6, OR10X1, OR5 1A4, PRPH, RAB23, SOAT1, TBL1XR1, TCF7L2, VCAM1, PHOSPHO1
Negative_3059	AK1, TEC, ACTN4, ALAS1, ATP5G3, CCL1, CD59, FGF23, FRAP1, GNPDA1, IL2 2RA2, LDHC, MAP2K6, MCM5, MTAP, MTMR6, NOD1, OR4K14, PAK7, PIP5K3, ST EAP3, UBE2K
Negative_3060	ARRB2, CKS1B, CXCL12, FZD10, LAMA4, OR6C6, PDE5A, PPP2R1A, PTGES
Negative_3061	FOS, IL3, LCT, SRF, ADRB3, ALG11, ATP5C1, B4GALT3, CALML3, CCL25, CD3 6, CD59, CLDN1, FGF13, FLAD1, FZD4, GCLC, HRH2, IDH3B, IL15RA, IMPA1, ITPK1, JAK1, JAM2, KDSR, KIR3DL3, LDHAL6A, LRP6, MAP3K12, OR10G4, OR 2G6, OR5J2, OR7G1, OR8D1, PFN4, PLA2G3, PLCD4, PLXNA2, POLR2H, PPM1B , PPP1R3C, RRM2B, TAP1, TMLHE, ULK2, WASF3, HSP90AB1
Negative_3062	DHH, F10, FGB, TYR, ACTA1, AKT1, ALDH3B2, APRT, ARHGEF6, ARPC3, BDH1, CALML3, CAMK2D, CD38, CLDN22, CPS1, CXCL13, FGF21, FGFR1, FTCD, GALC , GALNT13, GCLC, HMGCL, HMOX1, IL29, IL4R, KIR2DS4, NAT5, OCLN, OR13D 1, OR2AG2, OR4C46, OR4S2, OR52B6, OR52R1, OR9K2, POLD2, PTK2, RASGRP 1, SLIT1, SULT2A1, TCF7L2, ALDH18A1, ATP6VOD1, CACNA2D3, ST6GALNAC 5
Negative_3063	DAO, GK2, ITK, MVD, PTS, AFMID, ARNT, COL6A1, CSF2RB, DDIT3, HBEGF, IL 22RA1, MCEE, OR13C9, POLR2I, SHISA5, TSHR

Negative_3064	AGL, F11, KHK, MYC, ACVR2B, BUB1B, COQ6, CX3CL1, GBE1, INHBB, LIPC, LPAR1, OR4P4, P2RX7, PRKCE, SCIN, SELE, SIPA1, TAS1R1, UROC1, CSNK1A1L, HLA-DRB3, TNFRSF13B
Negative_3065	FN1, ILK, TEC, ALG13, CDK6, CLDN7, DDIT3, DDX55, DOCK1, EP300, FGF5, FGFR3, GALNT6, GYS1, IDI2, INPP5B, JAG1, MAD2L2, MYLK, NCSTN, OR52N2, OR5AK2, PARD3, PFN3, PGAM4, PLXNC1, QPRT, SH2D1B, SIGLEC1, STEAP3, UGDH, HLA-DPA1, KIR2DL5A
Negative_3066	CAT, CFD, MPL, TKT, ARSD, ASNS, CACNA1C, CUL1, DCXR, GCLM, IL21R, ITGA8, MAP2K7, MAPK8, MYLK, OR2M7, OR6S1, P4HA1, RALGDS, RENBP, SARS, SEMA3F, SFRP4, TNFSF18, TUBB2A, VDAC1, ZIC2, ATP6VOD1
Negative_3067	F5, XDH, ATP6V1D, CLDN16, CNTNAP1, CPT2, CREB3, DUSP9, EGLN3, EXTL2, FCGR3A, FOXA2, FZD10, GALNTL2, GSTT1, HRH2, IL18RAP, IL6R, IRS1, LIFR, MGAT2, NEFL, NRG1, NTF4, OR4N2, OR5B12, OR5B3, PRKCA, SRD5A2, TAS2R7, TPH1, TXNDC12, ATP6V1C1
Negative_3068	AGL, MUT, SYK, ABP1, ACOX2, ACTB, ALDH6A1, APOA1, CACNA1E, CACNA1I, CCL26, COL5A3, CSF3R, CYP1A1, DGKZ, DHX58, EXT1, GNB3, GRIA3, GRIN1, HPR1, INPPL1, IRF3, ISYNA1, ITGB2, LAMA4, MAP2K6, NGEF, OR13D1, OR2AG2, OR2B2, OR9G4, PDE11A, PIGP, POLE3, PRKAB1, SESN2, SETDB2, TIAM1, TRAF6, UBE2L3, UGDH, YWHAE, TNFRSF14
Negative_3069	F3, AGPAT6, APC2, ARRB2, ATP5G1, ATP6V1D, BPNT1, CDC25B, CEBPA, CLTC, CSNK2A2, DHCR7, DIAPH1, ERBB4, FASN, FMO2, GNRHR, HA01, HGSNAT, ITPK1, LEFTY2, MAP4K2, MRAS, NKD2, NSD1, NUDT2, OR1L1, OR7D4, PCYT1A, PIK3CG, PLOD2, POLR2E, PPAP2C, PRKCB, PRKG1, PTGES, PTPRJ, ROBO1, SAT2, TIRAP, TP53, TYRP1, UGT2B17, WNT1, ZFYVE16
Negative_3070	ABI2, ALOX5, AOX1, BMP6, COL4A2, CPS1, ENO1, ESPL1, FUT4, IGF1, KIR2DL4, LAMC1, MAP3K13, MTMR1, NAGK, OLAH, OR10J3, OR2K2, OR5H6, OR8A1, PMM1, PTGER1, RND1, SAT2, SCD5, SDC4, SEMA3F, TP53I3, TRDMT1, VAV2, WNT2, ATP6V1C1
Negative_3071	CCR9, EXOC7, MFNG, UPP1
Negative_3072	ADRB3, ALCAM, CCL1, ERO1L, NUDT8, OR3A2, PCK2, PLCD3, PLXNC1, PPP1R3D, SAT2, SEMA7A, WBSR22
Negative_3073	ADK, DCK, DHH, ACOT11, ACSL1, ADAM10, ALAD, ARD1A, ATP5G1, CHPF, CHST13, CMPK2, CSAD, CYBA, ENPP2, GAS1, GNA15, GSTA4, KCNB1, KLRC4, LRAT, MAPK3, MAPK8, OR51S1, OR6T1, PAPSS1, PARVG, PFKM, PISD, PPARG, PRKAR1A, RPS6KA3, THBS2, ATP6V1B2, ATP6V1G1
Negative_3074	ACPT, ANAPC1, INPP4A, ITGAX, MGAT2, NCAM2, PRKCD, TUBA8, WARS2, TNFRSF11A
Negative_3075	BID, BTC, CD4, IHH, ACTC1, AGRN, ARSE, ATP5E, B3GALT5, CCL20, CDC25A, CES1, CYP4F2, DGKB, F11R, FBP2, FCER1G, GALNT13, GLI1, GNAS, GRIA3, GSTA4, IDH2, IDUA, LALBA, LDHD, LMO7, NCF1, OR2L13, OR4D9, OR52K1, OR7G1, ORC3L, PIGO, PPP2R2B, PSME1, SLC25A5, TACR1, TAS2R40, TNFSF14, ATP6V0A1, TNFRSF11B
Negative_3076	SMS, TNR, TPO, AKR1C4, ARSA, CACNA1E, CDC14A, CXCR3, EPHA8, FASLG, MGI2, OR52N2, PFKFB4, PPP2R1B, SELE, SLC33A1, TAS2R38, TAS2R41, UGT8, VDAC2, WNT2B
Negative_3077	SHH, ASAH1, AVPR1A, CADM3, CAMK2A, CLDN2, GCLM, HRH1, INPP5A, LRAT, MTHFR, OR14I1, OR52N2, OR7A17, SEMA3F, SSH2, SV2B
Negative_3078	IL9, AASDH, ALOX15B, ALPI, ATP6V1F, C1GALT1, CCL7, CD28, CDKN1A, CTSG, CYP3A5, DKK2, DUSP6, ESPL1, FABP1, GLB1, HNF4A, ICAM1, INPP5B, JAM3, LCMT1, LCP2, MAML2, MAN1A2, MAPT, MAT2B, MFNG, OR2K2, OR5AK2, OR5V1, OR6T1, PIP4K2A, PLA2G2F, PPARG, PRIM2, RFDW2, ROBO3, SCD5, SEMA4G, SOS1, STX16, TAS2R49, TBL1X, TGFB1, TRPM5, TYROBP, TNFRSF6B



Negative_3079	IL6, ALG3, ARPC1B, ATP5A1, B3GALT2, C3orf10, CASP9, CCNA1, CDH1, CHS Y1, CNTNAP2, COX15, CTNND1, CYP2C18, GALNT5, IL6ST, MYH13, NRXN1, OP LAH, OR10G2, OR2A42, OR2AG2, OR4D1, OR56A3, OR5AN1, OR5AP2, PDE1C, P DE4D, PDHB, PIK3R3, PLCZ1, PPAP2A, PPARD, PPP1CA, PTPN5, RARS2, RHOA , RRAS2, SELPLG, SLIT1, SLIT2, STK11, TAS2R16, TAS2R60, THBD, TICAM1 , VANGL1, VDACC3, PRICKLE1
Negative_3080	C4B, TYR, ATG12, C1GALT1, FMO4, GALE, IMPA1, LAP3, LDHB, LDHC, LEF1, M AP3K6, NEU3, NRG2, OR52B4, OSMR, PARD6G, PDHB, PER2, POLR2F, STMN1, S V2C, WNT16
Negative_3081	DHH, MTR, ALPI, ATP6AP1, B3GAT3, C7orf16, CD72, CHIA, CXCL6, DGKH, EG FR, EXT1, FLT1, FRAP1, GADD45G, GPX5, IL10, IL12B, LIMK2, MAP3K13, NC F1, NMNAT3, NRG2, OR2H1, OR4D1, PIGB, PPP2R2A, SAT2, SETD8, SH2D1B, S LC27A5, SLC33A1, TFPI, TJP2, TNFSF10, TOLLIP, ATP6V1G1, PRICKLE1
Negative_3082	CR1, PGF, ADCY9, CACNB2, CAV3, CLTCL1, CSNK1D, DHX58, DIAPH1, ENPP6, FASLG, FPGT, FTMT, IFNG, KLRC2, LIPT1, OR13C8, OR13F1, OR51V1, OR52K 1, OR5B21, OR6S1, PAK4, PLCE1, PPP2R5C, SETD1A, SMPD3, SOCS1, SORD, S SH3, SUCLG1, TAS2R38, TLN2, ST6GALNAC3
Negative_3083	F3, GP5, ID4, SHH, AREG, ARPC2, BMPR1B, BNIP1, FCGR3B, HTR4, IFNGR2, M APK1, MARS, NARS2, OR1K1, OR2B6, OR2D3, OR2L2, OR2T29, OR3A3, OR4A15 , OR4D6, OR52E4, OR52N1, OR5A2, OR5AS1, PDE1A, PDXK, PERP, PPP1R3C, P RKACA, PTGES2, RRAS, SCD5, SCIN, SEMA3B, TBL1Y, TICAM1, TOLLIP, TUBB 4Q, UAP1, WARS, WNT6, ZNRD1, SERPINB5
Negative_3084	DDC, MYC, ALPL, ATP5J2, CDC27, CLDN6, COL4A2, CX3CL1, DTX2, FPGS, FZD 6, GDE1, GJD2, GNAI1, GRIN2A, HSPA8, IL24, IL6R, IL6ST, ITGB8, JUND, L IMK1, NODAL, OR2T33, OR2T8, OR56A1, OR56A3, OR6C70, OR8D4, PARD3, PI GH, PIGT, PLCG2, PPP1CA, PPP2R2C, PSAT1, QARS, SCD5, SH2D2A, SLC25A5 , SOCS7, SSH2, TIRAP, TUBA4A, UGCGL1, UGT2B7, WNT3A, PAFAH1B2, ST6GA LNAC6
Negative_3085	HK2, NPY, TK2, ACADS, ANAPC7, ARD1A, BCL2L1, CACNA1A, CCL21, CD14, CD 27, CTNND1, CYP17A1, DDX23, DDX52, DTYMK, EPB41L2, ERBB2, ERBB3, FRA T1, G6PC2, GALNT1, GSTA3, HGSNAT, IL23R, INPP1, MYH14, MYL7, NAT5, NF ATC2, OR11H4, OR14I1, OR1J4, OR5B17, OR5C1, OR5P3, PDGFB, PIK3C2G, P LCG1, PMM2, PPP2R1B, RAPGEF3, SNAI1, UBE2K, VAMP4, VANGL2, ATP6VOE1 , HSP90AB1, PLA2G12B
Negative_3086	ACOX1, BPNT1, CCND2, GALNT1, GOT2, MAML2, NR1H3, OR10A4, OR9A4, P2RX 4, PAK3, PIP5K1B, PTPN5, SHMT2, SRD5A2, TCIRG1, TNFRSF4, TUBA3C, ATP 6VOD2
Negative_3087	AGL, AMH, C8G, EDA, GPI, PDC, TKT, AOX1, ARSA, ARSE, CBLB, CD14, CLDN9, CLTB, COL11A1, CRHR1, CYP2A6, DHDH, DTX2, FASLG, FUT7, FZD10, FZD3, G ALNTL1, HAGH, IARS, IBSP, ICOS, MGAT3, MGAT5, MYLK, NFATC2, NGEF, NT5 C1B, OR1E2, OR51I1, OR51L1, OR52K2, PDE3B, PLCB2, PLCB4, RXRA, SMC1A , ST3GAL4, TAS2R5, VAMP4, WNT10A
Negative_3088	ACHE, BLVRA, GRIN1, MCM6, NOS1, PMM1
Negative_3089	ADK, DBI, SHH, ADORA2A, AQP7, ARPC1A, ATP5H, BCKDHA, BCL2L1, CCR3, CI SH, EXTL2, FUT9, GSTP1, HLA- G, LRAT, MYH8, NFATC3, OR1E2, OR2T2, OR5C1, OXCT2, PIGV, PKMYT1, PPM1 A, TKTL1, UBE2K, UGT2B7
Negative_3090	APP, CFD, CP, LHB, OTC, AADAT, ACP1, ADCY10, ALDH1A1, AOC3, BCL2L1, CA CNG5, CCL1, CCNB1, CD40, CDC42, CYP27A1, CYP2A6, DOLPP1, ENTPD5, FAD D, FARSB, FECH, GBGT1, GUCY1A2, GZMB, HTRA2, IMPDH1, INPPL1, JAG1, LC MT1, MDM2, MYLK2, NFAT5, OR11A1, OR13J1, OR1S1, OR5AN1, PDGFRA, PDHB , PIGP, PISD, PPT1, SEMA3D, SOCS5, TJP1, VANGL1, WWP1
Negative_3091	C8A, OSM, BPGM, CDC16, CNTN2, CREB3L3, GALNS, LLGL1, MAP3K14, PTPN1, TM7SF2, TUBB1, ZAP70, HLA-DQA2

Negative_3092	ADCY6, ADCY8, ADCY9, ADRA1D, ALDOC, ALPI, ARHGAP5, BCL2, BMP8A, CCL1 6, CTPS, CYP2D6, DHRS3, DUSP7, ERO1L, EXOC7, FGF22, GADD45G, IL23A, K IR2DL4, MARS, MYL7, NAT6, NCR1, NEU1, NLGN2, NR1D1, NUDT8, OR13C5, PA RD6G, PDGFD, PKLR, POLR2D, PTK2, RPIA, TLN1, TRIP10, VDAC1
Negative_3093	AGPAT1, CFTR, CYP2E1, CYP4A22, GUSB, OR8H1, SEMA3G, SIAH1, TSHB
Negative_3094	DCK, AARS2, AQP7, ASIP, BMP8A, CAV2, CHR1, CKS1B, CLOCK, COL4A6, CYP2 C19, DDX50, DPYD, DUSP1, EPB41, EPHB6, F13B, FUT4, GNA01, GSTO2, IRAK 2, ITGA2B, JAG1, L1CAM, LCMT2, MYH10, OR13G1, OR51B6, OR52K1, OR52N1 , PFN4, PLCD1, PLCZ1, PPP2R1A, PPT1, PRKCA, RAC1, RENBP, TLR4, TP53, T UBA8, CSGALNACT2, PLA2G12B
Negative_3095	FES, MSN, RFK, ACHE, ALDH4A1, ASAH1, ASPA, CD80, CDC25C, CXCL9, DDX54 , DLL4, DVL2, F2RL1, HCLS1, HLA- DOA, HSD17B8, MPST, OR1N1, PARVA, PCYT1A, PLCZ1, POLR2D, RASA1, RPS6 KB2, ST8SIA1, SULT1A4, TICAM2
Negative_3096	HYI, CAMK2G, CD38, CDKN2D, CRLF2, CRY2, DAG1, DUSP4, ENPP6, EPRS, ERE G, FOSL1, FRAT2, GARS, GRIA1, HEXB, IFNA10, IL1R2, KITLG, KLRK1, L1CA M, MYLK, PDE5A, PIGH, RPS6, SHISA5, UNC5C, XCR1, SERPINA5
Negative_3097	ILK, MPI, ABCC8, ALDH3A1, BAI1, DLL1, INPP5B, MARS2, PGS1, RHOQ, SEMA 4F, TYMP
Negative_3098	AK1, GNS, ADCY10, BBC3, CACNA1E, CCR3, CCR5, CLTC, DLL4, DPYSL2, GRLF 1, HNF4A, HTR2B, IFNA4, ITGA8, ITGB1, LAMA3, LIMK1, MYLK, NCAM2, OR1D 5, PIM2, PTPRR, RAP1A, RBX1, THBS4, TNXB, CACNA2D1, CSGALNACT2, PAFA H1B3
Negative_3099	F7, FOS, ADH1A, AGXT2, ANGPTL4, ATG7, ATP5D, CACNA1B, CARS, CLDN6, CO L1A1, DFFA, EIF4E2, EPHA5, FARS2, FGF23, GLUL, GMDS, GUCA1A, HSD11B2 , IL20RA, MGAT3, MGAT4A, NCF2, PCYT1A, PFN4, PIP4K2C, PIP5K1A, PKMYT 1, POLR2E, PRKACA, PRKAR2A, PVRL1, SHISA5, SOCS4, STAT6, UCPI1, YWHAB
Negative_3100	IL2, ALG10B, B3GALT1, CTPS2, FBP2, GAPDH, NCR3, NNMT, PIK3R5, PPP1R3 A, PTPN7, SNAI1, PRICKLE1, ST6GALNAC3
Negative_3101	HYI, B4GALT1, CHAD, CHKB, CKS1B, CLDN2, CYP26C1, EFNA3, FDPS, GOT1, I CAM1, IGSF5, IL17RA, IQGAP2, MKNK1, NCF4, NUDT9, OR4S2, OR52E6, PANK 4, PAPSS2, PIGU, PON3, PPARG, SLC25A4, SMAD2, TP53I3, TUBB2A, CACNA2 D4, SUV420H2
Negative_3102	CFI, DCT, MET, ACSS3, ALDOB, AMDHD1, ANGPTL4, ARPC4, ATP5H, BDNF, CAM K4, CREB3, CXCR4, FBP1, FGF1, FLAD1, NUDT8, OR13C4, OR14A16, OR5R1, P DE4C, PDE6H, PIK3CG, PRKCB, RAF1, RAP1A, ST3GAL5, STX3, SUCLG1, ATP6 VOE1, SERPINA1
Negative_3103	ILK, PLN, ALPPL2, ANGPTL4, CARD11, CCL1, CCNG1, CHR1, CLDN19, CYSLTR 1, EXOC7, FARSB, FGFR4, GRIN2B, GSTA1, GSTA3, IAPP, ITGA3, MAFA, NGEF , OR13G1, OR52R1, PRKCD
Negative_3104	AVPR1B, CDC26, CRY1, FUT9, GALM, PLEKHA8, PRIM1, SHC3, ST6GALNAC5
Negative_3105	APP, CSK, EDA, MPI, TFG, ALDH3A1, ASCC3, BMP4, CLDN20, COASY, CYP2E1, DHDDS, FCGR2B, GALK1, GSTA5, GUK1, IGFBP3, IL22RA2, ITGA2B, ITGA4, M AP4K3, NSDHL, OR10K1, OR13C3, OR2G2, OR4M2, OR52N1, PDXP, PGM1, PRPS 2, RELA, SETD1A, SMAD1, SULT1A1, TPH1, WNT11, CTNNBIP1, HLA-DPB1
Negative_3106	A2M, CR1, DLD, MPI, ADRB1, APOC3, CD79A, CHST13, CMPK2, CNTN1, CXCL13 , CYSLTR2, DPYSL2, EPHB2, FARS2, FBXW11, FGF6, GALNT3, GAMT, GLI2, GN RHR, GRAP2, GSTZ1, IDH3B, IL24, MAP2K4, MAP3K14, METTL6, NEFM, NMNAT 1, NSD1, OR2S2, OR4S1, OR6C1, PGK2, POLR3H, PTDSS2, RAP1A, SAT1, SEMA 3F, SEMA4D, SETD1A, SFRP1, TNFSF18, WNT8B

Negative_3107	CD2, CEL, CFD, CRH, FOS, MYC, TK2, ADIPOR1, ALPPL2, AOX1, ARPC3, ATP6V1H, BCAT2, CACNB2, CCL8, CDK4, CES7, CHIT1, CNTNAP2, COASY, CX3CL1, CXCL6, CYP17A1, DERA, EDAR, EIF4B, FLT1, GALNT14, GSTM3, IFNA16, MADCAM1, OR13D1, OR52D1, OR6K6, OR8A1, OSMR, PCK2, PDE6H, PLA2G1B, POLR2D, PPOX, PRKAR2A, RAB5A, SDHA, SLC9A1, UGT1A10, MAPK8IP1
Negative_3108	HK2, ACADL, ACTG1, ADH1A, ARD1A, ATP6V1A, BIRC3, CADM3, CAPN2, CCL11, CCR4, DFFA, DUSP10, FPGT, GRIN2A, HADH, HLA-F, HMBS, IL1A, IL1R2, ITGA10, MAP3K14, MFNG, MICA, MMP2, NFE2L2, NKD1, OR5B21, OR5T3, PERP, PNMT, RPS6KB2, SLC27A5, SMC1A, TRAF5, TYMS, ATP6VOD1, TNFRSF14
Negative_3109	GP6, ADCY3, ALDH1A3, ARHGEF1, AVPR1B, BDH2, CYP2C18, DERL1, DMGDH, EGLN1, FGF21, GLI2, GNA12, HARS, HSD17B1, IFNK, IL21R, IL6R, IL8RB, KIR3DL2, LARS2, MCM4, OR10Z1, OR4N2, PDGFRB, PFAS, PIGM, PKLR, PKM2, POLR3B, RFX5, RPS6KB2, STAM, STX3, SULT2B1, YWHAG
Negative_3110	C4B, PLG, ACP5, ADRA1B, ARSB, B3GALT5, CTBP2, ERBB3, FCGR3A, GNAI1, HAAO, INPPL1, IRAK3, KIR3DL3, MALT1, NUMB, OR10K2, OR1C1, OR2L3, OR52B6, P2RX1, PCCB, PGM1, PMM2, PPP1CC, PPP2R1B, PRPH, RALA, SETD2, TRAF2, TRAF6, UGDH, SLC25A31
Negative_3111	AR, AUH, BAD, BCR, ACSS1, ACTN2, ALG2, CACNB2, CAPN2, CDC14A, CLDN1, CLDN17, DARS2, DCTD, DHRS9, DUSP6, EFNA3, F2RL3, FGFR1, GCNT2, GGT1, GSTP1, HAO2, IKBKG, LIMK2, MAML2, MAN1A2, MKNK2, MPDZ, NFE2L2, NTF4, OR10AG1, OR1A1, OR51A7, OR52E6, PCK1, PIP5K1C, RRM2B, SARDH, SLC25A4, SOAT2, SPI1, SPRED2, TAS2R48, TAS2R50, VCAM1, XCL2
Negative_3112	CGA, FUK, GLA, ABLIM3, ACADVL, ACSS2, ARPC5L, ATP6VOC, C1QA, CAPN2, CDH1, CNTN1, CYBA, DGKA, DUSP5, ENPP2, FGF5, FGFR1, GDF6, IFNA2, IL13, MTFMT, NT5C1A, OR2F1, OR51E2, PFN1, PGAM1, POLR2J, PPP1R3A, PPP2R5B, PTGES2, RIPK1, RPS6KA1, RXRB, TNFRSF9, XYLB, PAFAH1B1
Negative_3113	DHH, F7, GP5, ME3, PLN, ACSL5, ADIPOQ, AMPD2, APOA1, COL4A6, CSNK1G2, EIF4E, GLI2, GSTA2, GSTZ1, HNF4A, KLRC2, MAP4K1, NTF3, OR10G4, OR1C1, OR1I1, OR52A1, OR5D14, OR5L1, OR5P2, OR5T1, PGS1, PIAS4, PLA2G5, SOCS4, SOX17, ST3GAL4, TBL1XR1, CACNA2D4, PLA2G12A
Negative_3114	MIF, TNF, AMY2A, ATP2A3, CCL28, CD38, CYP3A43, DUSP7, F11R, F13B, FGF1, GRIN2B, IFNA2, JAG1, LIPF, LYPLA2, MGAT4B, MGST3, OR11H4, OR1C1, OR2AE1, OR2B2, OR4E2, OR5J2, ORC5L, PAK7, PCCA, POLD2, PSME2, PVRL2, RAC3, SULT1A1, TGDS, TUBA3E
Negative_3115	CD6, ACAD8, ACTN2, AKT3, B3GALT6, BLVRB, CARS, CD36, CDK5, CDS2, CMBL, CTPS, EXOC7, F2RL2, FDPS, GALM, GNPAT, HTR2A, ICAM2, LARS, NTF4, OR6C74, PAK6, PNPT1, PRODH2, PTPRC, RARA, SAT1, THBS3, TOLLIP, TUBB, UCG, UPRT, WARS2, YWHAG
Negative_3116	AMT, ASL, DDC, GCK, IL9, MPL, SDS, ARHGEF2, CCL23, CHRDL, COL1A1, CYP4A22, DAD1, ENPP3, FGF10, FGF12, FLT1, FSHR, GAD2, GALNTL4, GFPT2, GRIN2B, ITGA5, LIPT1, MCM2, MCM7, MPST, NME4, OCLN, OR10A2, PIK3R3, POLD2, PTTG1, PVRL1, QARS, RASA2, RHOQ, SMPD1, SOCS5, SPP1, STX7, PNLIPRP2
Negative_3117	MTR, ACACA, ACOX3, ANAPC10, ATP5A1, CCL2, CCNA2, CHSY3, CYP21A2, EFN1, GLI3, GRIN2D, IL25, IL8RB, MAPK9, MCM2, MKNK2, MTHFD1L, NRXN3, OR52K1, OR6C75, PAX4, PDE1B, PHKG1, PIGA, PLCE1, SELP, TAS2R49, TSLP, WASF3, XCL2, MAPK8IP3
Negative_3118	C8G, DDC, DDO, NGF, ACADM, ALDH5A1, ARD1A, COL11A1, CTBP2, DGAT1, EPHB1, FARS2, FLAD1, FSHR, FTCD, GMPS, GP1BA, KIR2DL4, MTAP, MYH13, MYH7B, NEU1, NUMB, OR10A7, OR10G9, OR13D1, OR2M4, OR52R1, OR8B4, OR8I2, PIGH, POLR1C, PPP1CA, PPP2CB, SMC1B, TNFSF9, YKT6, YWHAG, TNFRSF13C
Negative_3119	AGTR1, ALDOB, FRAT2, FTMT, GPD1, HSPB1, ITGA6, PGK2

Negative_3120	AUH, CFD, DLD, FGG, IL2, ALDH3B1, AOC3, BLVRB, CCL17, CCR5, CES7, CXXC4, DARS2, FLT1, GSTM4, IFNA13, ITGB2, KCNJ11, LDHAL6B, LIAS, OR10G2, OR4K5, OR51B5, PDGFRB, PLXNB3, PRIM2, PRKAR1B, RBL2, RETSAT, RXRA, SCIN, SHC3, SMARCA5, SRGAP3, SUV39H1, WBSCR22
Negative_3121	HGF, ACADVL, ACSL1, BAIAP2, CAMK2B, CBR1, CCR2, COL11A1, CSNK1D, GGT1, GOSR2, GAA1, GSTA5, HADHA, HIF1A, INMT, IPMK, LLGL2, MALT1, NOTCH1, PLA2G2F, PRKACB, PTPN7, ROBO1, SGMS1, THBS4
Negative_3122	MYC, ABLIM1, AOX1, ARSD, ATP5L, B3GNT4, CCL21, CD226, CD27, CDC20, CD23, CXCR3, DAAM1, DHFR, EPHA2, FUT4, GCNT1, GLB1, GOSR2, GRIA3, IDUA, IL22, INADL, IPMK, ITGA11, KIR3DL1, LEFTY1, MAN1A2, MGST2, MYH1, OR2W1, OR5D18, OR8I2, P4HA3, PER2, PGK1, PIGS, ST6GAL1, WHSC1L1, PPP1R12A, SERPINC1
Negative_3123	ADC, GCK, IL2, ACTA2, ATP50, BACE1, CCL11, CCL3, CD22, CXCR5, DHRS9, DPAGT1, ENO1, FIGF, GMPPB, GNMT, GUSB, HNF1B, HSPA8, IAPP, ITGB6, L1CAM, MAP3K1, MAPK11, MRAS, NFKBIA, NT5M, OGDHL, OR4N2, OR5K2, OR6C3, OR6C75, PDHA2, PGM1, POLD3, POMC, PRIM2, PRKAR2B, PSME2, PTGDS, PTGS2, QARS, SEMA3G, SOCS1, TJP2, TUBB1, TUBB2A, WIF1
Negative_3124	GH1, PVR, ENPP3, MTMR6, PDGFRB, TKTL1, VDAC2, ATP6VOA2
Negative_3125	ACADS, CACNG8, DDX56, DIAPH1, DLL4, DRD1, FECH, INSR, MGAM, MGAT4A, MPZL1, OR10J5, OR10Z1, OR2A2, SGMS2, STX3, TBL1Y, ULK1, VDAC2
Negative_3126	GHR, LCT, ACAA2, ACAT2, ACP5, ADCY1, ARSA, CD38, CES2, COQ3, CRLS1, CYP27A1, HSD11B1, IL9R, MAML3, MAP3K7, MAPK7, MKNK1, NCKAP1, OR11I1, OR1J4, OXTR, PMAIP1, PPAR, PYGB, RALBP1, SDHC, SETD1B, STEAP3, TPH2, YARS2, YWHAH, HLA-DRB5
Negative_3127	ADO, AMDHD2, ATP6VOB, CHST11, CMAS, COL4A1, DUSP8, GGPS1, GMPPA, HSD3B2, MAD1L1, MAP3K3, PDGFRA, SULT2B1, TAP2
Negative_3128	AK7, ADCY9, ADIPOR1, ALG13, ALPPL2, ARAF, BAAT, CDC25C, EFNB1, FOXO1, GALNT13, LIPE, MLLT4, NFKBIE, OPLAH, OR2K2, OR51Q1, OR5P2, PIK3R2, PYCRL, TGDS, TP53
Negative_3129	BCR, GSN, IL7, LPL, STS, TNF, ABAT, ALDH7A1, ATP6V1D, AXIN1, C1QC, CCR6, CD82, CLDN4, CXCL13, GRIN2D, JAM2, LALBA, LEFTY2, MLLT4, OR10Q1, OR2A12, PIK3R2, RHEB, STEAP3, ZFYVE16, PPP1R12A, ST6GALNAC5
Negative_3130	ATM, B3GNT4, CDC14A, CDC20, CDC25A, CFTR, CYFIP1, DHRS9, GSTA4, OR56A3, PIGQ, VKORC1, PRICKLE1
Negative_3131	F3, NOG, SP1, ADCY2, ATP2A1, CAMK2B, CCL13, CDH3, CYP4A22, DDX18, EPHB1, GCLC, GRB2, HSD3B2, MADCAM1, MAN2A1, MCM3, NAGLU, NAGS, OR1B1, OR52A5, PLCD1, PLXNA1, PPP2R5A, PRIM2, RDH11, SETMAR, VEGFC
Negative_3132	CFH, CKB, MOS, ARG2, ATP5J, B4GALT7, DTYMK, ETS1, GZMA, IL22RA2, NEU1, OR2L2, OR8K5, PLA2G2A, PPP2CA, PRKCZ, RAP1B, SLC2A1, SRD5A2, SSH3, TNFSF18, VEGFA
Negative_3133	STS, BNIP1, BUB3, CAMK2G, CCL25, CTBP2, CYP4F2, DDX47, DUSP14, ENTPD7, FGFR3, FZD7, GALK1, GCLM, HAAO, HAO1, HLA-DOB, HSP90B1, IFNGR2, IL25, ISYNA1, LAMC3, LARS2, LYZL1, MAP3K5, MPDZ, OR14J1, OR5AS1, OR7G3, PDE1B, RRM1, SEMA7A, SESN2, SRD5A2, SUV39H2, TYMS, ULK1, WNT9A, MAP3K7IP1
Negative_3134	FGG, SCD, VTN, ACVR1C, ADIPOR1, AQP7, ATP6AP1, BCL2L1, BET1, BLNK, CASP7, CCL23, CDKN1C, CNGA3, DPYSL2, DUSP2, EDA2R, ENPP1, H6PD, HHEX, IL5RA, MMP9, NFKB1, OR4Q3, OR51E2, OR5M9, OR6K3, OR6N1, P2RX1, PAK3, PHKG2, PLA1A, PPP2R2C, PRNP, PVRL2, RAB23, SARS, STX1B, TCIRG1, TGFBF1, TNFRSF8, UGT2B17, CACNA2D4, PRICKLE1
Negative_3135	OSM, CALML5, CDK6, CYP2B6, FGF20, IL1A, ITGB4, MAPK1, NCK2, OR13C3, PIK3R5, POLR2D, POMC, SMC1A, VAV3
Negative_3136	C5, GH2, IL5, LIF, CACNA1E, CACNA1G, DHRS4L2, GALNT6, HSD17B2, HTR2C, INSR, OR51M1, OR8S1, ORC2L, PNLIP, POLE4, SNAI1

Negative_3137	AK5, TNF, VCL, ACTN4, APRT, CDC14B, CLTCL1, CXCL9, DAD1, DGKQ, GALNT6, GJA1, GNAI2, HEXA, HTR5A, IL6R, ITGAD, MTHFD1, OR9G4, POLR3D, RPS6K A4, SLC2A1, SNAI1
Negative_3138	BCKDHB, IL11RA, OR4D1, PNLIP, PRKAR1B, RAP1B, TYK2
Negative_3139	CD4, GK, GSR, RFK, ACAA2, ACAT2, ACVR1, ATP2A3, ATP5F1, CD27, CLDN22, CXCL3, CYP2D6, F13B, GFPT2, GRHPR, GSTM5, LAMA4, MYH10, MYH4, NNMT, NOX3, OR5D14, PECAM1, PER1, SCLY, SDC4, SRGAP3, STX16, TAS2R40, TGDS, TIRAP, TM7SF2, UGDH, USE1, WASF1, B3GALNT1
Negative_3140	AK1, LCT, NPL, SCD, AXIN2, BACE1, CACNA1B, CASP6, CCR9, CD3E, CDKN2B, CSNK1G1, CYP11A1, CYP26B1, DRD5, ETNK1, FMO4, FZD1, HSD17B3, IL1R2, IMPA1, ITGB3, KIR2DS5, KITLG, NAGK, NRG3, OR52R1, PIAS3, PSEN1, PTPN6, SEMA3E, SHMT1, TAS2R42, TFPI, THBS3, TNFSF10, TPH1, VEGFB, WNT16, WNT2, SUV420H1
Negative_3141	STS, BET1L, CALML6, CAMK2B, CCNE1, CRB3, E2F1, FADD, FGF13, FOXO3, HSD17B3, HTR7, IFNA13, IL10RB, IL22RA2, LEFTY2, MAP3K2, MAP3K5, MYLK2, NUMB, OR10H1, OR1K1, OR2Z1, OR4K17, OR5H2, OR5H6, OSMR, POLR3K, RAGEF3, SDHA, SEPHS1, SMC1A, SMPD2, SPRY1, STAM2, SUOX, TAP1, VDAC2, MAPK8IP2
Negative_3142	IL4, TNN, ABLIM2, AGRP, ANAPC4, ASRGL1, BUB1, CES7, CNTNAP2, CYP2C18, DVL3, FZD6, GAS1, GGT5, GIT1, GRIN2D, HMGCS1, IAPP, IDH3B, IFNA2, IL10, IL23A, MALT1, MAML1, MAP3K3, NEFL, NFATC1, NTF3, OR13C8, OR2D3, OR4F15, OR8K1, OR9Q1, PDGFC, PERP, PIGC, POLR2L, PPA2, PPP2R2A, PPP2R5A, PPP3CA, RALBP1, SEMA4F, SLC2A1, STX3, TBXA2R, YKT6
Negative_3143	ACOT12, ACSL6, BMPR1B, CEBPA, CXCL1, DKK2, ENO3, FGF6, GRHPR, HEMK1, ICAM1, MAOB, MAPK3, MASP2, OR1F1, OR51G1, OR6C70, ORC5L, OSMR, PIP5K1A, ROCK2, SOAT1, SOD1, SSH2, STAT3, TGDS, VAMP1, VDAC2, WNT1, XYLB
Negative_3144	RFK, SMS, A4GALT, AADAC, ATIC, ATP5G1, B3GAT3, BCL10, CACNA1B, CAV3, CD40LG, CDH4, CMAS, CNDP1, CSAD, CTTN, CXXC4, DIAPH3, DLAT, ENTPD1, FGF6, HADHB, HSD3B2, IGF1R, IL25, ITGAV, KIR3DL2, LDHD, MALT1, MAML3, MIOX, NFKBIB, OR2G6, OR4A16, OR6C4, OR7D2, OR8A1, OR8D2, PTCH1, RASSF1, RBL1, SNAI1, SORD, ST3GAL4, TRMT11, WNT5B, WNT6, ARHGEF12, TNFRSF10B
Negative_3145	SHH, ISYNA1, METTL2B, PANK3, PGM1, PLXNA2, SH2D1B, ULBP3, XIAP, TNFRSF10B
Negative_3146	MVK, ALG5, ALPI, CDC26, CHKA, CHRM2, CMAS, CSF2, CUL1, CXCL12, IL1B, M-TAP, OR2T1, OR8S1, PFKFB3, PLCB2, PRKCB, RAC3, SEMA3E, WHSC1, HSD17B12, MAP3K7IP2
Negative_3147	LCK, SRF, ACAD8, ACOT12, AXIN1, B4GALT7, CALML6, CD99, CMPK2, NCR3, OR1N2, PPP2R2B, STAT5B, TAS2R4, UCK1, UROC1, VEGFB, PNLIPRP1
Negative_3148	BTD, DCN, ALDH1L1, CCND2, CFLAR, EPHB6, HGSNAT, KIR3DL2, OR10S1, OR5A1, PIP4K2A, RAP1A, RASGRP2, RASSF5, SEMA3C, SMURF1, SRGAP1, STX16, STX7, TD02, TGFA, TMLHE, CSGALNACT1
Negative_3149	ACSS2, ACVR1B, ALDH1A2, ALG11, ASRGL1, ATG7, BET1L, CCL3, CCNH, CYP2C8, DDX55, DHRS4L2, DVL2, FGF12, GMPPB, GNRH2, GPD1, HNF4G, IDH1, IGF1R, IL1A, IL6R, IL8RA, ISYNA1, LILRB3, MAML1, MPDZ, MYH10, NT5C1B, OR1S2, OR2B2, OR7A10, PDX1, PTGER3, SLC25A6, STX1B, TAP2, ZFYVE16, ZFYVE9, PDCD1LG2, TNFRSF13B
Negative_3150	CRK, IL7, CCL5, CCNB1, CDC45L, CDIPT, CYBA, DTX3, GALNT2, HAGH, INPP5A, ITGAV, MAPK11, OR1S1, OR4S2, OR51I2, OR5M3, POLA1, PRKAR2B, SCD5, SMAD1, SSX2IP, SULT1E1, TAS2R42
Negative_3151	C1S, F11, XDH, ALDH1L1, CACNA1F, CCL4, CDIPT, CSF3R, DNMT3A, DUSP16, F2RL1, F2RL3, FTCD, GLUL, HARS, HEXB, IKBKB, IPPK, KLRD1, MAP2K3, MAP3K4, MLLT4, MYL5, NOD1, OR8I2, PDE10A, PER1, PLCE1, POLR3D, PRKAB2, SC5DL, SREBF1, TACR1, XCL2

Negative_3152	AASDH, ACVR2B, ASCC3, CD99, DPM3, GGT6, MAD2L2, NFYC, UGT2B11
Negative_3153	DBT, GSN, KHK, ACTA1, ASMT, B3GALT4, BCL2L1, CACNA1E, CDC2, CDC42, CHRD, CLTC, CXCR6, DVL1, FABP3, FLT3, GLI3, HMBS, IFNA16, LARS2, MAN1A1, MMP7, MTMR1, NOS3, NR1D1, NRG4, NUDT5, OR10H5, OR10R2, OR52N2, PCK1, PDE10A, PDE5A, PLCB4, POLD4, ROCK1, SDC2, SENP2, SOCS1, TAS2R38, TAS2R40, KIR2DL5A
Negative_3154	AGK, STS, ADH1A, AGPAT1, AHCYL2, ALG1, ALOX15B, APOE, ATP2A1, CAMK2G, COL6A2, CTSS, DDX4, DGKE, DRD1, DTX1, ERBB2, FGFR4, GNG13, GUCY2F, HIP, LTBR, MAN1A2, MPST, OLAH, OR2A2, OR4C6, OR56A3, P2RX3, PDGFB, ST3GAL5, XYLB
Negative_3155	C4B, CAT, BCKDHA, CACNA1G, CDC25C, CYP2C9, DHCR7, DTYMK, ELK4, GAMT, GARS, GNG12, HTR2A, IFNGR2, JAG2, OR6C1, P4HA1, PDHA2, PIK3R2, RAB23, RBKS, TNFRSF9
Negative_3156	C5, CAT, HK3, ID2, UBB, ADAM17, AKR1A1, AKR1C1, CMPK1, CNTFR, CRLS1, FIGF, FPGT, GALNT2, HTR6, IL17RB, LIPT1, MAPK8, NAGK, OR10AG1, OR1M1, OR52D1, PRKAA2, RCHY1, SESN1, SGPP1, TJP2, WARS
Negative_3157	C5, A4GALT, ADCY7, CAMK2B, CDK7, CSF2, DLL1, EPB41L1, IFNAR2, MAPK1, NADK, OR5C1, RAPGEF4, SAT1, TUBA1A, VAMP4
Negative_3158	DBH, MIF, A4GALT, AGPAT6, CARD11, CAV1, COL4A2, CXCL11, DGKA, DIAPH2, DVL2, GRIA1, IL18, LARS2, OR10G7, OR2B2, OR2G6, OR4C6, OR4E2, OR6N1, OR8A1, PIP4K2A, PLCD3, PNPT1, PRPH2, PTDSS2, PTGFR, STX7, MAP3K7IP2, PPARGC1A
Negative_3159	PC, AARS2, AASS, AKR1D1, ALG10, ANAPC10, CCL19, CYP2B6, CYP3A5, ENTPD2, GUCA1A, IFNA7, LARS, MAP3K13, MYL9, NAT2, NLGN2, NOX1, POLR1A, PPBP, TAS2R16, TYMP, UCP1, UNC5A, USE1, WNT10A, AASDHPPT, ATP6V0A4, B4GALNT1
Negative_3160	CRK, SRC, ALDH1A2, BCKDHA, CCND1, CDO1, CES1, CHPF, CTLA4, CXCL13, EFNA4, FECH, FGF20, IKBKE, IL10, ITGA11, LDHC, LTBP1, MYL7, MYLK3, PPA1, QPRT, TLR9, UGT2A1, ST6GALNAC3
Negative_3161	EPO, SRM, ACACA, ACTB, ADCY8, ATP13A2, B4GALT6, CCKAR, COQ5, CSNK2A2, DHFR, DUSP8, ENAH, GALT, GJD2, IL7R, LLGL1, MAFA, MYLK3, NCF1, NCSTN, OR6B3, OR6Y1, PAX6, PPARG, PRKAB2, RBPJL, ROCK2, TAS2R8, TBXAS1, THY1, UBA1, SERPINE1
Negative_3162	MPZ, ACTN1, ALG12, APOA5, ASAH1, B3GNT3, BDNF, CNTF, CYP8B1, FDPS, FGD1, FOXA3, GALNT13, GFAP, ICAM1, ICAM2, IL8RB, INSR, KIR2DS4, MAOB, MPST, MYH10, NEU2, NKX2-2, NRXN1, OR13G1, OR1S1, OR2A25, OR2F2, OR5J2, OR7G2, PHGDH, PLA1A, PLCE1, PPP1R3B, PVRL2, SEMA3A, ST3GAL4, THBD, TOMM40L, TRHR, WNT10B, WNT11, YOD1, ZMAT3
Negative_3163	ABO, AUH, C2, DPYSL2, FZD2, GGT7, GMPR, MTFMT, SFRP4
Negative_3164	CD6, IDS, TK1, ACSL4, ALDH1A3, ATP6VOB, CCL2, CCL25, CES2, CKS1B, CYCS, ENTPD2, ENTPD6, EPOR, GUCY2C, H6PD, HGSNAT, IL22, ITGA4, LYPLA1, NT5C3, NTF3, OR2A25, OR5A2, OR5AP2, OR6X1, PAK4, PDGFRB, PLOD2, POLR2K, PRKCE, SEMA3E, SOD1, STAT5B, UCK2
Negative_3165	RB1, ADCY10, ALDH1L1, ARPC5L, ATP6VOB, C4BPB, CCNG1, COL1A1, DHRS4, EGLN3, ENPP7, EPOR, FMO4, FTH1, FZD1, IQGAP1, LIPC, MAPT, OR1E2, PIP4K2A, PRKCQ, SGMS2, SOAT2, SOCS2, SORBS1, TNFRSF13C
Negative_3166	GDA, LTB, NGF, NPL, ABP1, DGKG, EP300, EPAS1, FCER1G, FTH1, IL20RA, IL5RA, INHBE, NARS, OR2V2, OR51S1, OR8D2, OR8I2, ORC3L, TKTL2
Negative_3167	ADIPOR2, AOC2, ARHGEF1, ARPC5L, AVPR1B, B4GALT7, CCND2, CDH15, CLDN15, EFNA5, EIF4B, GALK2, GLUD2, GNAZ, IFT57, IKBKB, IRS2, ITGB7, NLGN2, ONECUT1, OR1S1, OR51A4, PI4KA, POLR2B, POLR3A, PPOX, PRKCQ, PTTG1, SFRP1, TRAF6, TSTA3, TYROBP, PHOSPHO1
Negative_3168	EPO, FUT7, PIP4K2B

Negative_3169	PRL, ADSSL1, BMP5, CARS, CLDN19, CMAS, CREBBP, CYP2C19, DUSP5, FDFT1, FZD4, ITGA7, MYH7, OR7C2, PDE2A, PGLS, PNLIP, PRKAR1B, RPE65, SEMA3C, VANGL1, PPARGC1A
Negative_3170	ABL2, ACSM4, ACVR2B, ATF4, CALML5, CD79A, DGAT1, ENPP3, EPHA5, LTBR, MMP14, NAGLU, NEU1, OR1M1, OR2A4, OR4A16, OR4K2, SOAT1, TAS2R8, TLR4, WNT3
Negative_3171	EFNB2, GGT7, GNAQ, OR13C4, OR4K13, P2RX1, PARVA, PPP2R5A, PTPN5, STAT3
Negative_3172	CD4, CKM, F11, MOS, ACSS1, CD70, COX15, DHRS3, ENO2, FTCD, GALNT7, GANC, GCLC, GDF6, GRB2, HDAC2, HLA-G, HSD3B7, HTRA2, ITGAD, KLRC1, LAMC3, LDHAL6A, LLGL2, MCM7, NOTCH1, OLR1, OR10P1, OR14J1, OR4B1, P2RX5, PFKFB4, PIGB, PROS1, SFRP5, SNAI1, TGDS, UGT2B17
Negative_3173	BCR, PXN, ACAA2, ACSM5, ALAS1, ATP5G2, CHKA, CLDN10, CYP2A13, EXTL2, GLUD1, GNAZ, GRIA2, GUCY1A2, IDH3A, IFNG, KLRC4, MARS2, MCEE, NCOA4, NKD2, NR1H3, OR51Q1, PNPO, PPP2R5D, SEMA4A, SNAP23, TLN1, UGT2B17
Negative_3174	EPO, GSR, NPL, ARSE, ATP5G3, CD40LG, CDC16, CRKL, DHRS4L2, DPM3, GFAP, HMGCR, MAP4K2, NAGK, NEU4, OR51T1, PIGV, PIK3C2B, POLR2F, PPAP2B, PP2R5E, PRKCI, PRPH, PYCR1, RDH10, RHOQ, SDC4, SLC33A1, SPAM1, TGFB2, TNFSF8, WARS2, WNT5A, PAFAH1B1
Negative_3175	ABL1, ACVRL1, ARSB, ATG3, CLOCK, DGAT2L4, ENTPD3, EPHA2, FDFT1, HLA-F, HMOX2, KCNJ11, MAML1, OR10Q1, OR51M1, OR5AR1, OR8D1, OR8H2, PDX1, SENP2, SETD2, TUBB3, XCL2
Negative_3176	AUH, TEC, TNN, ALCAM, ARPC2, BCL10, CAMK2G, CES7, CLDN8, CTBP1, CTTN, CXCL9, DPM3, EGLN1, ENTPD3, EPHA5, ESPL1, EXT2, GNG13, GUCY1B3, HEXA, HLCS, HSD11B1, IFNG, LAMB3, MAP3K8, MAP4K2, MCCC1, MCM4, MDM2, NT5C2, PNPT1, PTPN7, SH2D1A, SHISA5, SIGLEC1, STX4, TLN2, TNFRSF9, TPH1, CACNA2D3, PAFAH1B1, PLA2G12B
Negative_3177	A2M, CBR3, GFPT1, GNAI1, ITPK1, PGAM1, PIGM, POLR3A, SAT1, CACNA2D3
Negative_3178	C1S, C8B, UBB, ACADVL, ACSM4, B4GALT1, BBC3, CDC27, CHRM5, COL5A2, DGKA, DUSP3, EPHX2, GADD45B, GNAI2, HLA-DMA, HPSE2, IL1R2, LEPR, MGAT2, MTMR1, OR13C5, OR1C1, OR1L1, OR2M4, OR52W1, P2RX6, PIGN, PLCG1, PON1, PTCH1, SELP, TFPI, TIRAP, VCAM1
Negative_3179	FUK, ADH6, ALDH7A1, ALG10, ALG9, AMDHD1, AMPD2, AMY2B, APOC3, BNIP1, CD72, CDK2, COL5A1, CXCL10, CXCR4, CYP11B1, DAAM2, EDA2R, GAMT, GUCA1A, IBSP, ITPK1, LRP6, MAN1B1, MAP2K5, MCCC1, MDH2, NRG1, ODC1, OR10G7, OR10G9, OR2AT4, OR8D2, OR8U1, PIAS2, POLR3B, PTGIS, RAF1, RARS2, SC5DL, SPCS1, SPHK1, TAS2R48, VAMP4, WBSCR17, XYLT2, YKT6, PNLIPRP1
Negative_3180	C8G, DBI, ABLIM2, BDNF, CALML5, CCL25, CTBP2, CTNNB1, CXCL16, CYP2C18, CYP8B1, DLAT, FCGR2B, FZD5, GALNT11, GJD2, GUCA1A, GUCA1B, IL20RB, ITCH, MAP3K3, MCM2, MLLT4, NFASC, OR2A4, PIK3CG, PLXNB1, SPP1, STK36, STK4, SULT1E1, TBK1, TNXB, TRDMT1, TUBA1B
Negative_3181	ACOX1, ALDOB, CD247, CLOCK, EDAR, EIF4E2, GAD2, IQGAP1, NME7, OR10A4, PRKAG3, PSENE1, RDH11, SETD1B, TGFBR2, TPI1, WNT9A
Negative_3182	GPI, HYI, C4BPA, CACNB2, DARS2, DIAPH3, ENO2, FMO2, NMNAT1, OR1L4, TACR3
Negative_3183	CACNB2, CACNG3, EIF4B, ERBB4, GPLD1, PIK3CD, PLD1, POLD1, POLR1B
Negative_3184	F9, IL2, ACTA2, ATP4A, B4GALT1, CXCR3, EXTL2, FCGR2B, GARS, IL18RAP, OR13C8, OR13G1, OR52A1, OR52B6, OR5L1, PAPSS2, PFKM, PIAS3, PPP2R2B, ATP6VOD2
Negative_3185	CS, FGA, KHK, VCL, ACO2, ATP5J, BCL2, CARS, CSNK2A2, DHDH, ELK1, FADD, FGF11, GNRHR, IAPP, IFNA10, MAP3K7, MARS, NLGN3, NMNAT2, OR1A1, PLTP, RARS2, SOX17, TNFSF18, WNT9B, MAP3K7IP1

Negative_3186	CSK, HYI, PLN, ADCY5, AMDHD1, ATP5E, CACNG8, CASP8, DIAPH2, DTYMK, GCNT3, HSD3B2, IL10, L1CAM, LIPT1, LLGL1, MARS, NME6, NRAS, OR14A16, OR2L3, PANK3, PDGFB, PIM2, PKM2, PLCD3, PRKAA2, PRPH, QARS, RALBP1, RPS6, SETMAR, TYK2
Negative_3187	EPO, FYN, MPL, PAH, ACSM3, ARPC2, ARSA, CCDC6, CCNB2, CHRM3, CMPK2, COL1A1, CSF3R, CXCL5, CXCR6, ENTPD3, FGF9, GNA12, GRLF1, HLA-F, HSP90B1, IFNA14, LAMC1, MTHFD1L, MTMR1, MYL7, NFX1, NKX2-2, OR14I1, OR1A1, OR2A12, OR56A1, PGM3, PLA2G2F, PPP3CB, PRKCH, PRPH, PTDSS1, PYCRL, RDH12, RUNX1T1, SARS2, SEMA7A, SEPHS1, SNAI1, SOCS5, TNFSF10, XYLT1
Negative_3188	DAO, F5, SRC, ACO1, ACSS3, AGPAT6, ALDH7A1, BAAT, CACNG7, CLDN16, CLDN7, CXCL1, ENTPD7, FUT6, GALNT2, GYS2, HRAS, HSD3B1, ITGA6, MAD2L1, OLAH, OR4D5, OR51I1, OR8B12, PSME2, PYGB, SUV39H2, SV2A, TAS2R38, TBXA2R, VAMP4
Negative_3189	CCL2, CCR8, INHBA, POLD3, SUV39H1, TAS1R1
Negative_3190	IVD, MIF, ATP5D, CACNA1E, FLT3LG, HMBS, HRH2, INPP5A, MMP7, NOS1, OR10A2, OR10H2, OR51E1, OR52I1, PNPO, CSGALNACT2
Negative_3191	AK2, EDA, F7, FGG, FH, TK1, ACSM2A, ACSS3, AKR1B1, ALG6, ASNS, CARS, CBLB, CRB3, CRHR1, CYP1B1, DAAM1, DLST, DVL1, FCER1G, GCDH, GSTM4, GUCY1A3, GUCY2D, IDH3A, IGF1R, KIR2DS4, MALT1, OR10G2, OR11H4, OR2F2, OR2T10, PPID, PPP3CC, SLC25A5, SMC1A, STX7, SUV420H2
Negative_3192	DDO, EGF, ID1, ME3, AASS, ACPP, ADCY1, ADCY8, ALG12, ARSD, ATP4B, CD22, CLDN8, COL6A1, DHDDS, DHRS4L2, FLAD1, GTSE1, HNF4G, HTR2A, HTR2C, IFNG, IL22RA1, IRF5, MASP2, MITF, NRXN2, OR51E2, OR52J3, OR8I2, P4HA1, PARVB, PDE4B, PLA2G6, PLD1, PPP1R3B, PSME2, RPN2, SLC12A2, SMURF1, SQLE, TAS2R4, TGFBF1, TICAM2, TRPC1, YWHAZ, ATP6V0D1, CTNNBIP1, HLA-DRB4
Negative_3193	ALDH1L1, APRT, ARG2, DPM3, EPHA6, GOT1, OR2A4, PIGB, PRKCZ, PTPN1, STK11, PRICKLE1
Negative_3194	C9, F7, FOS, GP6, ADSS, ADSSL1, ALG1, ALG11, ATP5L, CDK5, CLDN5, CLDN6, CLTC, CMBL, CSNK2A2, EPHB6, EPOR, GUCY2D, IGF1R, MAGI3, MYH2, NFATC1, NODAL, NRAS, NRXN1, OR1D5, OR2G6, OR8D1, PERP, PIGH, POLR1A, RUNX1T1, SULT2B1, XYLT2
Negative_3195	MUT, ACSL1, CLDN14, CREB3, CXCL11, FADS2, GSTP1, HEMK1, HMGCL, IL28A, NFE2L2, OR13C2, OR4Q3, OR5T3, OR8B12, USE1
Negative_3196	PARVA, PI4KB, PSEN1, UGT2A1
Negative_3197	DBI, FGG, GPI, UBB, ADIPOQ, ATP5B, AVPR1B, BDNF, CACNA1F, CREB3L4, CRHR1, CYFIP2, ENTPD8, FLT3, FRAT1, FZD4, GADD45G, GFAP, GRIA2, HMGCL, IFNA14, IFNA6, IKBKG, IRS4, JAM2, KIR2DL2, LDHC, LEF1, MAPK12, OR52B6, PARS2, PFKL, PIGS, PPARG, PPOX, PPP1CB, PTPN11, PTPN6, RPS6KB1, STX1A, TAS1R2, TP53I3, TUBB6
Negative_3198	BID, CAD, CEL, AADAT, ACPT, ACSM2A, CSF1R, DUSP14, FOXA3, HSD17B8, IFNA8, INADL, LLGL2, MAP3K6, NUMB, OR10V1, OR1J4, OR2A12, OR6T1, PCNA, POLR2I, RPS6, RRM2B, TOMM40L
Negative_3199	FUK, GNS, NPY, ADRA1A, CD8B, CDC27, CLDN22, FUT4, HTR5A, JAG1, LAMB1, LDHA, MMP14, NTN1, OR10R2, OR2AE1, OR4D2, OR56B4
Negative_3200	ADO, GSS, ACYP1, APOE, CACNA1F, CDC45L, CMAS, CSF3, ESPL1, GATM, GNA15, HTR7, KAT2B, NR1D1, OR4D6, OR51G1, OR51I1, PGS1, PIGS, ROBO2, SCIN, SOS1, ATP6V1E1
Negative_3201	APP, ATM, FYN, ID2, IL9, ABLIM2, ADSS, AKT2, ARNT, ARSE, BET1, CDKN2B, CKMT2, CTSL1, CXCR6, CYP11B1, DGKA, EDAR, EIF4B, FRAT2, GRIN2B, HSD17B1, IL6R, IQGAP1, MPST, NARS, OR4X2, PLCZ1, POLR2C, RGS3, SETD7, SHMT1, SLC25A4, SLIT1, SOX17, ST3GAL3, TPH2, UBE2K, UBE2L3, UXS1, XYLT2
Negative_3202	KRAS, TAS2R16, TGDS



Negative_3203	ABP1, CACNA1C, CCKBR, GAPDH, HEMK1, LDHAL6A, NCK1, OR2T8, PDE4C, RAP1B, RAPGEF1, SERPIND1
Negative_3204	CKM, RPE, ACVRL1, ALAS1, ATP13A2, CDC23, CTTN, CXCL13, CYP2A7, GFPT1, HGSNAT, IL28B, KIR2DL3, OR4K14, PIK3R2
Negative_3205	C8B, CFD, PAH, UBB, CLDN20, ERBB2, FMO1, OR1L4, OR6C4, OR6N1, OXCT1, S T3GAL2, TD02, TM7SF2, TNFRSF4, TP53I3, YKT6
Negative_3206	MVK, ACTG1, ADSS, AQP7, CDKN1C, DCXR, DERA, DGAT2L4, DNMT3L, GNPDA2, HTR4, IFNK, IQGAP3, LAMC3, LRDD, LRP5, MAPK14, MCCC1, OR2T34, OR4L1, PDHA2, PLCB2, PVRL1, WHSC1
Negative_3207	C8G, FER, LHB, ACSL1, ADORA2A, AKR1C2, AREG, ARNT2, BMP8A, CDKN2B, CHRM2, CLDN18, CSNK1G1, EPHA1, F2RL1, FZD8, GZMB, HLA-DMA, ITGAD, KARS, OR13C8, PDE1B, PDE6D, PIK3CA, PRODH2, RAB5A, RFNG, SGPP1, TBL1XR1, WNT7B
Negative_3208	EPO, FGA, ZYX, B3GALT4, BACE1, CAMKK2, CCNE1, CCR8, CHD8, CYP3A43, DIAPH2, GCNT1, HLA-G, HPSE, IFNA21, MINPP1, NEGR1, NT5C, NTRK1, OR4M1, OR6B2, PCK1, PDE9A, PGLS, POLA1, RELA, RFXANK, SEMA3A, SPRED2, CSGALNACT1, SLC25A31
Negative_3209	CKB, ABAT, ALAS2, CTBP1, CTLA4, DFFB, DGAT1, DGKE, FLT1, FUT2, FZD2, GARSA, GLDC, IGF1R, IL20, ITGB7, LAP3, OR10Q1, OR1S2, OR2AT4, OR2G3, OR5K1, PDE5A, PPP2CB, PSEN1, TALDO1, UAP1
Negative_3210	GLS, ABI2, AMPD3, ANAPC11, B3GALT6, CD79B, CSNK1D, DDB2, EPHA6, GBTG1, HSD17B2, JAK1, LEPR, PPAP2C, SOAT1, SPHK1, TMLHE
Negative_3211	IL5, ME2, ALDOB, AOC2, ASRGL1, ATF4, ATP5B, BLVRB, CCL27, CLCF1, COX10, CSF2RB, CYP27A1, DFFA, FGF5, FOXA3, FZD6, GMPR, HMBS, ICAM1, IL28RA, ITGB4, KDSR, MGLL, NADSYN1, OR10J5, OR2A5, OR51Q1, OR5AR1, PKMYT1, POLR2A, POLR2K, POMC, PRIM1, RCHY1, ROBO1, RRAS2, SMAD3, SOCS5, SOCS7, TAS2R4, WBSR22, ZNRD1, MAPK8IP1
Negative_3212	LCK, SRC, C4BPA, DDX50, DUSP1, EARS2, FGF22, FGF8, FPGT, GNRHR, GPPA1, GRIA1, GRM1, GSTA4, GSTO1, GUCY1B3, IL2RB, MAPK12, NLGN1, OR11L1, OR1D5, OR2L8, OR2M3, OR4C13, OR4C15, OR6C3, PHKB, PLXNC1, POLD1, POLR2H, PTEN, PTPRC, PYGM, RAB5A, SGMS2, SULT1A2, TACR2, TUBB, ATP6V1G2, SERPINB5, TNFRSF18
Negative_3213	KDR, ACHE, ACOX3, CACNG4, CASP10, CDH2, CES2, CLOCK, DGAT1, DLL4, FRA1T1, GABARAP, HAAO, IDH3A, INSR, LAMB4, MAPK1, NCR3, NUMBL, OR2A42, OR4K1, OR7A17, PAPSS1, PDE7A, PHKA1, PIPOX, PLCD4, SDC1, SETD7, SUFU, TUBB1, WNT5B
Negative_3214	DCC, GNE, ACTG2, ALDH1B1, ATP5B, ATP5G1, BBOX1, BCAT2, CAPN2, CCNE1, CCR1, CHR1, DRD5, GPX7, HIBADH, MYH6, NCK2, NKD1, OR13C9, OR1E1, OR2M7, OR4A16, OR4D6, OR51S1, OR52E2, PARS2, PLA2G2F, POLR2K, SC5DL, TRAF5, VTI1B, ATP6VOA4, EIF4EBP1, PLA2G12A
Negative_3215	C1S, DCN, STS, TAT, AARS2, ACSS2, ADCY3, ADH7, ALDH3B1, APOE, CHD8, CLDN7, CRHR1, CSAD, CTNNA2, DGAT2, ENO2, FZD4, HA02, HSD11B1, IL1B, IL22, JAK3, NFATC3, NTF4, OR10V1, OR2A14, OR4F15, OR51E2, OR5F1, OR6C6, PDGFC, PIK3R4, POLE2, PRKAR1A, PRKCE, PSME1, PTPRF, RRAS2, SPRY3, TRAF3, TRMT11, TUBA3E, WNT5B, SERPINA5, TNFRSF18
Negative_3216	BTC, ADCY9, ATP4A, BACE1, CCL15, CDKN2D, COQ3, CTNNA1, CYP21A2, FGF19, FMO3, FMO4, FPGS, FRAT2, FSHR, GALM, GALNT14, GNAT3, GNAS, HSD17B3, IL20RA, KLRC4, LALBA, MAPK3, MAPK7, MFNG, NANS, NCOA4, OR13C4, PDE6D, PPP2R2C, PSME3, PYGL, RPSA, RRM2B, SEMA4B, SIPA1, SMPD1, SMPD3, TNFSF4, WEE1, WNT9B, WWP1, ST6GALNAC4
Negative_3217	ADK, LTB, PLG, SDS, ZYX, ATP6VOC, B3GAT3, B4GALT3, C3AR1, CALML5, CASP10, CCL15, CNGB1, CRLS1, CYP27A1, DDX51, FTMT, GNAQ, GSTA3, IL11, LILRB3, OR10A4, OR10AG1, OR1B1, OR1F1, OR51E2, OR5B12, OR5H2, RAB23, SEMA4C, TCIRG1, TGFB1, B4GALNT1, MAPK8IP2

Negative_3218	DAG1, E2F5, EHMT2, GCLC, GJD2, ITGB2, LAMC1, MAGI3, OR5M3, RELA, SAT1, TLR2
Negative_3219	ATM, DAO, NLK, ACVR1C, AGPAT4, CAMK4, CXCL6, DCXR, ETNK2, GGT5, GNA13, GNAZ, IL15, NT5C, OR10T2, PDE2A, PPAP2A, SDC4, SELE, WNT3, PAFAH1B3
Negative_3220	BAX, DCC, FOS, NLK, ACADSB, AKR1C2, ALDH7A1, C1QA, CES7, CHKA, CLDN18, CMPK2, DLL4, EPHA6, FGD3, FZD9, GNPDA2, IRS1, LIPE, MAP3K14, MGAT4B, MINPP1, MMP14, NEUROG3, NME7, OR1M1, OR4S1, OR52K1, OR6K2, PDXP, PLA2G2E, PLA2G2F, PLAUR, PTPRZ1, SLC25A6, SLC27A5, SPTLC1, STAT2, SUL T1A2, TLR3, VDAC3, VEGFC, ZNRD1, CSGALNACT1, CSNK1A1L, KIR2DL5A, TNFRSF13B
Negative_3221	C6, CAD, CR1, MPL, ADH4, B4GALT7, CNTN2, COL4A1, CREB3L3, CSNK2A1, CXXC4, DDIT3, DLAT, ETNK1, GBA3, GCAT, GOT2, GSTM4, HNF4G, IL20RA, IL22RA2, ITPKB, JAK1, LIPT1, NFKB2, NFKBIA, OPLAH, OR10H3, OR2L2, OR2T5, OR6X1, PIP5K1A, PLA2G2E, PNPLA3, PTPRC, SMAD5, SPP1, STX1B, TALDO1, TAS2R4, TPH2, UGCG, VASP, YOD1, ATP6VOD1, CACNA2D2, PHOSPHO1
Negative_3222	ALDH3B2, ANGPTL4, GNG3, IFNW1, OR2Y1, STK4, TYK2
Negative_3223	DBI, FH, HK3, ACAD8, ADCY6, ARHGEF4, CD70, CHRM3, FGF20, GADD45G, GALNTL4, LAMA3, MAPT, MTHFD2, MYLK2, OR1K1, OR5AS1, PCYT1B, PLCE1, SIGLEC1, TAP1, TP73
Negative_3224	BTC, CGN, EPO, MPL, ALAD, CARS, CD8A, CLCF1, CSNK1G3, CXCL12, FTMT, ITGB6, NCF2, NCK2, NFATC3, OR10S1, PCCA, PGS1, PHKA1, PIK3R5, PLCB4, POLR2K, PPP1CB, RASGRP4, SENP2, SOCS7, STAM2, TNFRSF14
Negative_3225	F2, ADRA1D, CNTFR, JAG2, MDH2, PHKG2, PLCZ1, SCIN, SMARCA5, VCAM1
Negative_3226	AR, DDO, JUP, MTR, TNF, ADRBK2, BST1, CHDH, COL3A1, DDX19A, EFN1, EIF4B, GANAB, HSPA2, HTR2C, IFIH1, IFNA4, IRAK4, ITCH, ITGA7, MGAT5, MMP7, MYH10, NAE1, NAT5, NCF4, NFKBIA, OPLAH, OR5AU1, OR7G2, OR7G3, PAX4, PCYT1A, PLA2G1B, PLCB4, POLR3B, PRKACG, RDH5, SFRP1, SIPA1, STX5, TGF2, THBS4, TJP2, TNFRSF9
Negative_3227	CAT, IL3, CACNG1, CCL15, CERK, EDNRB, HTR6, IL25, ITGB3, KIR2DL3, KIR3DL1, LIPE, NMNAT3, OR5AR1, PDGFB, PHPT1, UGT2B10, UNC5D, YOD1
Negative_3228	ADC, HK2, LCT, ADAM17, BMP2, CRLF2, DDX47, EHMT2, FGF12, G6PD, KLRC1, MDM4, OR52E8, PRKACB, PTGS2, PVRL4, SEPHS1, ST8SIA1, STAT5A, TAS2R7, TYMS, VAV1, XYLT1, YWHAE, HSP90AA1, SERPINC1
Negative_3229	CSK, ADRB1, CCKBR, CYP26A1, DAPK1, FMO4, GNRHR, IFNA14, IFNGR1, IL15, MAT1A, NCR3, NOTCH2, OR1L1, PARD6B, PDE1C, PKMYT1, PLA2G5, PLCB3, PP2R1B, PPP3R2, PYGL, RDH11, SEMA3A, SMURF1, TRAF1, VAMP3
Negative_3230	VTN, AGRN, ALPPL2, BAI1, CDC27, CYP3A7, EFN3, ENTPD8, FGFR3, FPGT, GPX7, HPSE2, IRF5, NCSTN, NEGR1, OR51B2, OR52B6, OR5M9, P4HA1, PLCB2, PMM2, POMC, TNFRSF8, TPM3, WNT5A, YWHAH
Negative_3231	CCL24, ENTPD7, KLRD1
Negative_3232	BTK, CD6, EDA, F9, FGG, LEP, ABLIM1, ACADSB, ADCY8, ARAF, CARD11, CCL25, CCR1, CHSY1, CTBP1, CTSS, CYP4A22, DCXR, DNMT3B, EDNRB, ENO3, ERBB2, GNB3, GNMT, GSTM5, GUCA1A, HIF1A, IRF5, ITGB3, KNG1, LAMA4, LDHAL6B, MYL7, OR1D2, OR5D13, OR5F1, PDE3A, PIGL, PIGX, PLA2G2A, PLA2G5, ROCK1, SESN1, SMARCA2, SUV39H1, UGCG, UGP2, SERPINF2
Negative_3233	IL5, PLG, ACP1, AMDHD1, CACNA1D, CFLAR, CTBP2, CXCR6, DUSP1, EARS2, EI24, GRM1, GSK3B, HNMT, IL20RA, IRF9, OR10K2, OR52K2, P2RX5, PIM2, PLOD2, PNPLA4, RASGRP1, SV2C
Negative_3234	CDA, FGFR3, GDF5, NUDT9, PLCZ1, PPP2R2B, UGT2A1
Negative_3235	CYP21A2, EFNA1, FGF7, KIR2DL2, OR4D2, PLIN, SPI1, TGDS
Negative_3236	CFH, VCL, CTNNA1, CYP2J2, DDX47, EPB41, FUT1, GCLM, GLG1, GPX5, IFNA7, LAMB2, MAP3K2, NRG1, OR2T1, OR4K13, OR5K1, OR8B8, PON2, SV2A, TAS2R1, TAS2R10
Negative_3237	BCAR1, CACNG4, IFNGR1

Negative_3238	ADA, AGK, DUT, EDA, MYC, ACSS2, ADH4, ALDH3A2, ASPA, ATP5E, ATP5F1, CC KBR, CSNK2B, CXCL10, EFNA5, EHMT1, ENTPD7, F13B, GAD2, GFAP, GSTK1, G STM4, GTSE1, HMGCR, IL10RB, KIR2DL1, LTBR, MAP3K7, MDH1, MMP7, NAE1, NCKAP1L, NLGN1, NRAS, OR4F15, OR51G1, PDE1A, PEMT, SFRP4, SPP1, SPRY 2, STAT4, TCF7, TICAM2, TJP2, TNFRSF8, TNFSF14, TRHR, WIF1
Negative_3239	LCK, MPI, TYR, AKR1A1, ALPP, AXIN1, B3GNT2, CX3CR1, CYP2C8, DAPK3, FA RSA, FGF11, GNAO1, HLA- C, MAD2L2, MPZL1, OR10J3, OR10P1, OR13C4, OR14I1, OR2A5, OR2L2, PAIC S, PAX6, PFKP, PYGB, PYGL, RALBP1, SEMA3B, SEMA4B, SLC25A5, SMPD2, TL R3, TRPM5, TUBA1A, GABARAPL1, ST6GALNAC6
Negative_3240	AMPD1, ANAPC1, DHODH, ERBB2, GUSB, KLRC4, METTL2B, NCK2, PDXK, POMC, RAD51, SLC27A1, TNFSF14, XYL, ALDH18A1
Negative_3241	ACADS, CCL17, CHRM2, CHUK, CLTCL1, COL1A2, CSF2RB, CTTN, CXCR5, EDN1 , EXTL1, FOXA3, GLDC, GNPDA2, GYS1, IRF7, METTL2B, OR2A14, OR2T29, OR 8H3, SOCS3, TGFB1, TIRAP, TP53
Negative_3242	NOG, RPE, ALG9, ARHGEF1, BACE1, C9orf95, CCL13, CD82, CDC16, CDC26, C HEK2, HTR2A, IL10RA, IL28A, MIOX, NEU3, NFKBIE, OR2M5, OR4A15, OR52L 1, PGAM1, PIGT, SAT2, SHMT2, TKTL2, CSGALNACT2
Negative_3243	DBT, MIF, ACAT2, ARG2, CACNA1I, CCNB3, CHIA, DGKG, DHRS4, DKK4, DNMT3 L, FZD8, GALNTL2, GLUL, GMPR, GNAI2, IFNW1, IL13RA1, MAGI3, MAPK11, O R1A2, OR4D9, OR4F5, OR52B4, OR5B21, OR8S1, PDGFC, PGK1, PLCG1, RBL1, RDH11, ROBO3, SEMA7A, SOCS4, XCL1, YARS2, ATP6V0E1, TNFRSF10A
Negative_3244	ATM, SP1, ACADS, ALOX12B, AMDHD1, AMPD2, CCNH, CCR8, CD38, CDH2, CDS2 , CFTR, CSF3R, DAPK3, DKK4, EPAS1, FUT6, GNG12, GRIA1, HTR7, IFNAR1, I L28A, JAM3, KLKB1, MAP3K3, MARS, MGAT4B, MTAP, NAMPT, NEFL, NEUROD1, NT5C, OR1E2, OR2T3, OR4K2, OR9A2, PAK3, PDGFB, PPP1R3A, RALBP1, RAPG EF3, SMAD1, SOD1, TUBB2A, WEE1
Negative_3245	PVR, CHD8, COL3A1, CXCR4, DPM3, IAPP, MYH11, OR10G2, OR14J1, OR2AE1, PIGB, RND1, TIRAP, YOD1, PHOSPHO1
Negative_3246	CD2, HPD, ACY3, ADH4, AK3L1, ARSD, B3GALT4, B4GALT7, CASP3, CBLC, CCK BR, DAPK3, DEGS2, E2F1, EPOR, FARP2, FCGR3A, FZD2, GMD5, GTSE1, HSD11 B1, IDH3G, IL20RB, ITPKA, MTAP, NAGLU, NPR2, NT5M, NTSR1, OR11H4, OR1 F1, OR2T34, OR4C15, OR51B6, OR6K6, OR8J1, PRKCH, PTGS2, RAF1, SAT1, S LC9A1, SLIT1, SMARCA2, STAT6, SUCLG1, TRPC1, UROS, WNT2
Negative_3247	LYN, ADRB1, BIRC5, CDC42, HYAL2, NCOR1, NKD1, NPR1
Negative_3248	ALDH1A2, CCNG1, CDKN1B, CHD8, CLDN4, CSF2RB, CXCR4, CYP3A43, F2RL3, IL20, INPP4A, KIR3DL1, L1CAM, MAP3K12, OR2T11, OR2T29, OR4N2, OR51G 1, PECAM1, PYCR1, SHMT2, SNAI2, TALDO1, TAS2R8, TUBA1A, PRICKLE1, ST 6GALNAC6
Negative_3249	ANAPC10, C7orf16, CD40LG, CTSS, CYFIP1, ENTPD1, SV2B
Negative_3250	IL8, RFK, ABP1, ACO2, ALCAM, ATP6V1A, EGFR, EPAS1, GPD1L, HRH1, MAP4K 4, NMNAT3, RARS, RDH5, SHC2, SMURF1, TNFRSF1A
Negative_3251	ABO, C5, F8, MPZ, SYK, ADCY5, ARRB1, BUB3, C7orf16, CACNA1D, COL1A2, C SF3R, CXXC4, CYP4A22, DAG1, DDIT4, EPHA4, F2RL1, FGF7, FGFR1, GBT1, GNPNAT1, IL12RB2, IL15, IL28RA, ITPKB, MAGI3, MYL7, OR1I1, OR4L1, OR 52H1, PANK1, PANK4, PDE1B, PDHA1, PIP4K2C, PLXNA3, PTEN, RRAS2, SHC1 , STK4, TMLHE, TPMT, VNN1, PAFAH1B3
Negative_3252	CCL25, CMPK1, F2RL2, GNG3, IDI1, INPPL1, MYH13, OR2T11, PRKCH, ULK3
Negative_3253	CCL23, GADD45B, NFKBIB, OR2G2, OR6N2, UGT2B17, ZAP70
Negative_3254	ACO1, ADCY7, AKR1C1, ARHGEF6, B3GALT1, CACNB3, CACNG7, F13B, GNRHR, GSTA4, HTR4, IL10, INHBE, MALT1, MMP2, MYH6, NCR2, NT5C3, OLAH, OR10K 2, OR2T5, OR8B4, PAICS, PARD6G, PHPT1, SDC3, UPB1, ZNRD1, ATP6V1E1, T NFRSF1A

Negative_3255	EBP, HDC, APC2, CD58, EFNB3, FZD3, GNAO1, HAGH, HTR2A, LDHD, MYH1, NEU2, OR10H4, PANK4, PIK3CG, RBX1, TAS2R5
Negative_3256	GLA, ARG2, CD47, CPT2, DKK1, FDPS, HSD3B7, LAMB4, LTB4R2, OR2T1, OR4L1, PFKFB2, SETD2
Negative_3257	GPT, MVD, CD36, DUSP6, FUT6, GRIN2A, HSD11B1, IL21R, KLRC4, MAPK1, NANS, OR1L8, PDPK1, PISD, PLAUR, POLR1B, PPP3R1, SEMA3A, SEMA4F, SETD7, SLC27A4, SSX2IP, TPM3, CACNA2D3
Negative_3258	PDC, SCD, ATG3, CBR1, CDC42, CSH1, DUSP9, EPAS1, GSK3B, GSTO1, GSTZ1, IFNW1, IL20RB, INPP5E, MOV10L1, MTMR6, NT5C3, OR1K1, OR8S1, PPP2R2B, PRKCB, RAF1, RAP1B, RASGRP4, RFWD2, RPN2, SMAD2, TCF7, TCIRG1, TPM3, TNFRSF13C
Negative_3259	C8A, DCC, GNE, VCL, A4GALT, APH1A, ATP5C1, CACNA1I, CYP3A4, ETNK2, GART, GMPPB, HSD11B1, ITGA9, MAGI1, OR52D1, PIK3C2B, PIM2, PLA2G2F, PRKCZ, RAF1, RDH8, SMAD4, STX8
Negative_3260	ID1, ADCY6, AMDHD1, CACNA1A, CLDN6, FGFR3, GNAL, HPSE2, OR10H3, OR10X1, PTPRM, RPSA, SYNJ2, TNFSF8, ATP6V1G2, MAPK8IP2
Negative_3261	DCC, GK, LIF, ADCY2, CHKB, DTX3, EDAR, IL1A, ISYNA1, MAT2B, OR6S1, PCYT2, PLXNA2, PPP2R1A, HLA-DRB4
Negative_3262	CR1, F11, LTB, ME2, ASMT, BBOX1, BLVRB, BMP6, CACNA1B, CANT1, CMAS, COL11A1, CSNK1E, CXCL1, CYP19A1, DPM1, EDNRA, ENPP6, FGFR3, HNF4A, IL22, LDHB, LIMK2, OR2G3, OR8J3, PCYT2, PIGC, PSEN1, RCHY1, RGS3, SESN3, SH2D1B, ST3GAL6, STK36, STX8, TIAM1, TPH1, TUBA3C, PNLIPRP1, PPP1R12A
Negative_3263	EPO, EFNA2, HSPA8, MARS, RXRA, TAP2
Negative_3264	C5, GDA, GNS, AASDH, ALG1, ALG12, ARRB2, CAMKK1, CTSL1, DAPK2, DPYSL2, FGF14, GADD45A, GNB1, LRP6, NTRK2, OR4Q3, OR4X1, OR5K2, RASGRP1, TRMT11, UGT2B7, VKORC1, MAPK8IP1, SERPINE1
Negative_3265	CKB, ID1, NLK, ADAM17, ALDOA, B3GAT1, CDC25C, CLDN9, CSH1, FGF13, FGF R4, GGT1, GNAI3, IL28B, ITGB1, NARS2, PHPT1, PIK3C2G, PIPOX, POLR1A, RALGDS, SMAD5, SORD, STX2, TNFRSF9, UBA7, UGT2B17, YWHAH, ARHGEF12, CSGALNACT2, SUV420H2
Negative_3266	KIT, XDH, BIRC3, CCNE2, CD19, CD79A, COL3A1, CXCL12, CYP2U1, DAAM2, DARS, GBGT1, GPT2, HADH, IFNA17, ITGAV, LAMB2, LRP6, MGAT5, MYH8, NAGA, NFKB2, OR6C70, OR8I2, PDE1B, PFKFB1, RASSF5, RPS6KA1, SEMA3G
Negative_3267	DBI, DHH, FYN, HAL, LIF, AGPAT1, ALCAM, ALG5, C7orf16, CACNB4, CD19, CSNK1A1, CSNK1D, CTNNA1, EARS2, EFNA5, EPHB3, FGF2, FM03, GDF6, GOSR2, GSTA4, IFNA13, IL10RB, INSR, LEFTY1, LTC4S, MAML1, MGAT5B, OR51B2, OR51G2, OR5B12, PANK1, PCNA, PGAP1, PHKG2, PIK3C2A, PPAR, PPP1R1A, SORD, TGFA, TGFBR2, THBS4, TRAF3, VAV1, WNT11, YES1
Negative_3268	ALPI, APH1A, CACNA1C, CHRM3, DGAT1, IL6ST, NAGA, NCF1, OR3A2, OR5L2, OXTR, POLR2D, SERPINF2
Negative_3269	GK, ALDH3A1, ATP5G2, CHRM5, CLDN8, CYP2S1, DDB2, ENO3, EXTL1, FGF3, HIBADH, HLA-DOA, HLA-G, INHBB, ITGA2B, LTBR, MYH3, OR10AD1, OR2A4, OR4B1, OR7C2, OR8B8, ORC3L, P2RX5, PAX6, PIK3R2, PTPRR, RALGDS, SETD8, SFRP4, SKP2, SRGAP1, TSC2, SERPINC1
Negative_3270	ASL, GCK, MET, ACAA1, ACY1, ADRA1B, ASIP, CCL3, CCND2, CD28, CDC20, CDH4, CNTNAP2, CYP2B6, DRD2, DVL1, FSHR, GALNT14, HBEGF, IARS, IL10RA, ITPK1, LEFTY1, OR10A2, OR10G9, OR13J1, OR4X2, OR51B5, OR6C74, OR6N2, PARVB, PDE1A, PDIA4, PLXNA1, POLR3H, PTCH2, RND1, SH2D2A, TOMM40, UGCGL1, UGCGL2, WNT6, SERPINA1, TNFRSF14, TNFRSF1B, TNFSF13B

Negative_3271	DBH, FGG, RPE, ACAA2, ADCY1, ATP2A1, B4GALT4, CACNA1S, CACNG8, CALML3, CASP9, CCL1, CCR4, CD274, CYP7A1, DCTN1, DGAT2L4, FGF10, GCNT1, GJD2, GNMT, IL10RB, KIR2DL3, MAP4K2, MAPK8, MLYCD, NCK2, NKX2-2, OR1F1, OR1S2, OXCT2, PFKFB1, PRKY, PRODH, RDH8, RPIA, RPS6KA1, SMA D4, SUV39H1, ULBP1, WASF3, WNT5B, AASDHPPT, ATP6VOA2, KIR2DL5A, ST6 GALNAC4
Negative_3272	CR1, GK2, MAG, ACADSB, ACP6, ACPT, ALG3, CES1, CYP4A11, DHDH, DPM2, DT X2, GLUD2, GRIA1, OR10G4, PDE6D, PDGFC, PFAS, PIK3C2B, POLR3H, PPBP, UAP1, UBE2L3, ZNRD1
Negative_3273	JUP, APRT, CREB3L2, FGD3, FMO4, GFPT1, GSTO1, HSPB1, INPP5E, NNMT, NT F4, OR2T11, OR5V1, OXSM, PAK7, PERP, PLXNB1, POLD3, RPS6KA6, SETD2, T NFRSF8, TNFRSF10D
Negative_3274	ME2, ADRA1A, AGXT, CXCR6, EHMT2, EPHA1, EPHA5, GSTA4, IARS2, OR8B8, O RC4L, PCCA, PIAS2, PRDX6, SEMA3F, WNT6
Negative_3275	AGTR1, PDIA4, TIAM2, UGDH
Negative_3276	MVD, SHH, ADH1B, AGPAT4, B3GALT1, CACNB3, CCL17, CD46, CD48, CEBPA, C YP17A1, CYP3A5, DDX47, FZD10, FZD7, GCNT2, GMPS, GNA11, GSTM4, HSD3B 7, MAP3K12, MAP3K8, MYH7B, NOTCH1, OR2T5, OR4D11, OR4M2, OR51V1, P4H A2, PDGFB, PIK3R2, PLA2G2D, POLR3B, PPP2R5B, PRKAA1, PTK2B, SMURF2, TBL1XR1, TNFSF8, TRAF5, VAMP2
Negative_3277	C8G, ARHGEF7, ATP6VOC, B3GALT6, C1QA, CACNG5, CARS, CCL13, CHRDL, DLL 3, E2F2, FUT4, GOT1, IKBKB, LAMC2, MAGI3, NTRK2, OR5D14, PIGS, PIK3R5 , PLCZ1, POLD3, PRKAR2B, RPIA, STX12, STX1A, TJP2, TYMS, WNT2B, YWHAG , HLA-DRB4, PPP1R12A, ST6GALNAC1
Negative_3278	CDIPT, EGFR, MAPK11, OR13C9, OR2T10, P4HA1, UROD
Negative_3279	GPT, RB1, UBC, VCL, AASDH, ACPT, ACVR1B, ASIP, ATP6V1F, CACNG3, CLDN6 , CYP2S1, EHHADH, EXOC7, GALK2, HPRT1, HTR2C, IFNA14, INPP4B, LDHD, L IPT1, MAP3K3, NGEF, NLGN1, OR2M7, OR2Y1, OR5R1, PLXNC1, PRKY, SIPA1, TAS2R48, UAP1, VANGL1, PDCD1LG2
Negative_3280	CEL, ADCY9, ADIPOR2, AMPD3, CCL7, CD27, CSAD, CYP4A11, CYP7A1, DCTD, FUT9, GZMB, HTR5A, ITGAL, KIR2DL1, KIR2DL3, LIMK1, MMP14, OR10S1, OR 2A14, OR2C3, OR4S1, OR52J3, OR8D4, OR8U1, ORC3L, RELB, SULT1A2, WIF1
Negative_3281	CS, CD79A, CLTB, CNTFR, DHDDS, GFAP, IRS1, ITGB4, NPAS2, OR5B12, PAPS S2, PARS2, PGAM2, PRKAR2A, RRM2B, TUBB2C, ST6GALNAC1
Negative_3282	LCT, LYN, NLK, ADIPOR2, BCKDHA, CSF2RB, CYP26C1, DHFR, DOT1L, EREG, F ZD9, FZR1, GLI3, GNG3, IKBKE, IL22, IL25, MAOB, NFX1, NRG1, OR10AG1, O R1J1, OR5AK2, OR5AN1, OR6A2, OR6N1, PER1, PIK3R3, RBKS, SFRP2, SGMS2 , SPHK2, ATP6VOD1, PHOSPHO1
Negative_3283	LIF, C3AR1, CCL15, CD22, CNTN1, DHRS3, IGF1, IL11RA, LARS, MAD2L1, MY D88, OR2L3, OR3A1, PIGW, POLE4, SIPA1, SLC25A6, STT3B, SULT2A1, SUOX , ATP6VIC2
Negative_3284	CHEK2, EDNRB, EGFR, GRAP2, GRLF1, IL28B, LAMA3, MYH8, OR51B4, PTPRR, TFDP1
Negative_3285	NPL, CARS, CDS2, CLDN20, CTLA4, GBA3, IL10, INMT, OR11H1, OR1L6, PDGF RA, AASDHPPT
Negative_3286	CTH, ACAA1, ADH1B, AKR1B1, ATP5J, CBLB, DAPK2, DCTN1, DLL1, DTX4, GAL NT11, GMDS, IL20RA, KITLG, MADCAM1, MYH9, MYL2, OR1G1, OR4E2, OR51M1 , OR6Q1, PFKFB2, RASSF5, STX1B, STX3, TLR3, VKORC1, WASF3, TNFRSF13C
Negative_3287	CLDN3, CLTA, CREB3L4, GMPS, MGAT3, MTHFD1L, NFKBIB, SH2D2A
Negative_3288	ACSS3, C3orf10, CARD11, CDC2, CLDN4, CYFIP2, LCAT, MGAT5, MYH6, OR5D 13, OXTR, ATP6VIC2
Negative_3289	GPI, AKR1C3, BDH2, CHAD, CLDN3, CSF3, CTNNA1, FMO4, IL17B, ITGA3, ITG A5, MARS, OR11G2, OR1J2, PANK2, PRLR, PYCR2, UCP1, UGCG2, ULBP2

Negative_3290	EPO, GLS, ADCY1, B3GAT3, BAAT, BBC3, CACNG1, CACNG2, CCL25, CD8A, CII TA, CMBL, CYSLTR1, DUSP16, EFNB3, EGFR, FMO5, FUT1, GALE, GDF6, GNPDA 1, GSTO2, HAO2, HPSE2, HRAS, HTR7, INPP5A, IRS4, OR10V1, OR13H1, OR9Q 2, PHKA2, PIK3C2G, PLD2, PLXNA2, POLR3B, RAPGEF4, SETDB1, THBS1, ULK 3, CSNK1A1L
Negative_3291	HK2, ADRA1B, BIRC3, DDHD1, FGFR2, HIF1A, HSD17B7, IDH3G, ITGA1, MAPK 3, NEUROD1, OSMR, PISD, PLCD1, PPP3CA, TNFSF4, VTI1A
Negative_3292	C3, FUK, LYN, ACVRL1, AGPAT4, AHCYL2, ARHGEF2, B3GAT2, CDH4, CHEK2, E XOC7, FGD3, GALNTL2, GNPAT1, IARS2, IL13, ITGAD, LIPG, LMO7, MAPK12 , NLGN1, NOTCH3, OCLN, OR11A1, OR4A15, OR4N5, OR8K5, PDPK1, PLOD2, PY CR1, SKP2, SLC2A1, SMAD7, SSH2, STX2, SUOX, TFPI, TICAM2, TLR9, UGCG, VASP
Negative_3293	HDC, ACPP, ALG2, AOC2, CACNB3, CCL8, CD22, CDK6, CTF1, DEGS2, DUSP1, E GFR, ENPP6, EPB41L1, FCGR3B, FGFR4, GDF6, GFAP, GZMB, IFNA6, IFNG, IK BKB, IL12RB2, ITPA, KIR2DS5, LTB4R2, MAP3K5, NME6, OR8S1, PER1, PLAUI R, PRIM2, PRPS2, QPRT, SMPD2, SNW1, TAS2R5, TBL1X, TRDMT1, ULK3, XYLT 1, ATP6VOA2, GABARAPL2, TNFRSF10D
Negative_3294	C1S, LCK, LIF, SHH, AKR1C3, AKT2, APBB1, ARNTL, ATG7, CASP9, CDC6, CIS H, CSAD, EFNA3, FGF14, FGF19, IL1B, IL2RB, LTBR, MAP3K8, MGAT4B, MTMR 1, MYLK2, NADK, NTNG1, OR4A15, OR4C15, OR5AP2, PLCB3, QARS, TAS2R3, T NFSF18, TSHB, CSGALNACT1, PAFAH1B3, SERPINC1
Negative_3295	B4GALT6, CCR2, DKK2, GCNT1, ICOSLG, ITGA4, KLRK1, MAP3K3, OR1K1, OR4 A15, PIGO, PRSS3, RASGRP4, RPS6KA6, TUBA1A
Negative_3296	CDA, RFK, ACVR1B, ASAH1, CASP9, CDH4, DDX47, DGKI, GCNT4, GSTM1, HPSE , IL1R1, MAN1B1, MAP3K13, MMP1, NADSYN1, NEGR1, OR1L4, OR7C1, PLCE1, PTPRF, SGPP2, TAS1R3, THBD, XYLT2
Negative_3297	CAT, GSN, ATP6V1A, AVPR1B, AXIN2, CCL19, CD19, CHST11, CSNK1A1, GAD2 , HGSNAT, IL11, IPPK, KIR3DL2, LRAT, MYH4, OR10Z1, OR6Y1, PAK3, PAPSS 1, PGM1, PIGK, POLD2, RIPK1, ROCK2, SMPD3, SSH3, TSLP, TUBB2C
Negative_3298	C8G, CMPK1, DDX55, GJD2, LAMA3, OR2A42, PIP5K1C, TGDS
Negative_3299	AHCYL2, DBF4, DDX19A, DDX23, E2F4, GAL3ST1, GFPT2, HMGCS1, IFIH1, IF NK, IL6ST, INPPL1, IQGAP2, MDM2, MTMR2, OR52E2, PECAM1, RAP1B
Negative_3300	DBT, BCAT1, BCKDHA, BUB1B, C3orf10, CACNB3, CD47, CER1, FGF3, FUT1, G ARS, GLUD1, GSTM4, ITGA8, ITGB5, MCM5, OR2A2, OR2G6, OR51F1, OR9G1, P FKM, PGM2, PIGC, PIGU, PIK3C2G, PORCN, PPBP, PRKCD, PTCH1, PTPRM, PTP RR, SRGAP1, TSHR, TYMP, XCL1, SERPINF2
Negative_3301	F12, TYR, ADIPOR2, B3GAT3, CCR1, CD14, CD40, CD99, CDC14A, DGAT2L4, D HX58, EFNA3, FLT3LG, FMO2, FMO3, FOSL1, FSHB, GALNT1, GAPDH, GIT1, GN AT3, GSTA5, GSTZ1, HNF4A, HSPA1B, ITGAM, LAMB4, MAOA, MPST, NTRK1, OR 1C1, OR5D13, OR6N2, P4HA1, PAK2, PDE7A, PIP4K2B, PSENE1, RXRA, SMAD5 , SPHK1, TGFBR2, UCKL1, UPP2, TNFRSF6B
Negative_3302	DBH, ME1, ACTB, ADCY2, ADRA1B, BMP4, CCR6, DPYD, FUT8, IKBKE, LCAT, MA P3K3, NCSTN, PLXNB3, PRKX, PTPN6, RUVBL1
Negative_3303	AK5, ACTA1, CACNA1G, MAD2L2, MGST1, NFX1, OR2A12, OR5D18, SULT2A1
Negative_3304	TPR, ACTG2, AKR1B1, ALG6, B4GALT7, BUB1B, C3AR1, CACNA1F, CNGA4, COX 15, CSNK1D, CXCL1, DARS, DGAT1, EGFR, ERBB4, GMPPA, GNAI2, HADHB, HSP B1, IL17RA, ITGA9, MAP4K4, MGST3, MYH4, NEGR1, NOX1, OCRL, OLR1, OR2Y 1, OR6C70, PNMT, PTAFR, SGPP2, SLC2A4, SOCS4
Negative_3305	HDC, HK3, ALDH3B2, ALG5, ARHGEF6, ASMT, ATF2, CACNG8, CDC25B, CYP2E1 , NRG3, OR14A16, OR4E2, OR6C74, PTGES2, RFNG, SLC33A1, ATP6V1G3, MAP KAPK2
Negative_3306	ACVR2A, ADRA1D, ALDH3A1, CACNG8, CYP27A1, GNPAT1, GRIN2C, INHBC, I TGA1, L1CAM, LLGL2, MGAT5B, NFKBIA, PFKL, PIGS, RRAS2, SREBF1, TUBB4 Q, VDAC1, WNT2

Negative_3307	MPZ, COL4A2, DKK1, DUSP14, GLYCTK, IL19, ITGA11, KARS, MAP3K3, NT5M, OR51S1, OR8H3, PDE4B, PNLIP, SNAP25
Negative_3308	CEL, IVD, ACSS1, APRT, CAV3, COL6A1, CRLS1, EFNA1, GALNT1, GBGT1, MYLK3, NLGN1, NT5C3, OXSM, POLR2L, PSAT1
Negative_3309	PDC, ATP6V1D, CCL5, CFL2, DBF4, EXTL3, GALE, GNPDA2, HEXA, HLCS, NCF2, NNMT, PRPH, SMARCA5, ST6GAL1, VAV3, WARS
Negative_3310	AK3, DCK, GNE, LCT, SRM, ACAA2, ARHGEF6, ARHGEF7, CCR8, COL4A1, DEGS2, DHODH, DIAPH1, EDNRA, EPRS, GAB1, GBE1, GDF7, GNA13, GSTO1, ICAM1, IRAK4, MAN1C1, MAP3K12, NAGS, OR10A4, OR11I1, OR2L8, PIGN, POLR2H, SDC4, WARS
Negative_3311	ANAPC7, CARD11, CBLB, CCNH, CYP2C18, FARP2, FGF11, GGCX, ITGAD, LAMB4, MMP2, NARS2, NEU1, RPN2, UGT2B4
Negative_3312	ADO, ACVR1C, ACY1, AK3L1, ANAPC11, ARD1A, ASMT, CAMK4, CLDN1, DEGS2, FABP3, FGF1, GP1BA, HSD3B1, IAPP, IRF3, LAMC1, NFATC1, NR4A1, OR2A42, OR2F1, OR52A1, OR5AU1, OR5D18, PARVB, PGM3, PLA2G4A, PPP3CA, PRKCB, RASA1, SMAD7, STK3, SYNJ2, TRAF1, ATP6V1G3
Negative_3313	CD4, CFH, GBA, ACOX3, AOC3, BUB1, CD79A, E2F4, FGF6, GNG13, ICOS, ITPK1, LPAR1, OR5M3, PGAM2, POLR3B, RASA2, WBSCR17, WNT1, TNFRSF14
Negative_3314	HAL, AADAC, AMDHD1, CXCL6, GNA15, GUCY2F, HMBS, HMGCL, OR14A16, PDGFRB, PGK1, PGS1, PSPH, STX4, UCK2
Negative_3315	CS, TK2, ALG10B, ARHGEF4, ATF2, BIRC2, CDKN2C, DBF4, FCGR2B, GNA13, HGSNAT, ITGAM, ITGB4, KCNJ11, MAGI1, MAPK14, MASP1, OR2B11, OR6N2, P2RX5, PLCD4, RASGRF1, RPS6KA2, SMAD2, ST3GAL3, TCIRG1, VEGFB
Negative_3316	EDA, ADCY6, BMP6, EPHA8, FGF7, OR2H2, PDE8B, PFKFB3, PGM3, PON3, PTPRR, RXRB, SETDB1, SMAD5, SUV39H2, TPM3
Negative_3317	LYN, ACADSB, ACTC1, CASK, FABP3, FADD, FZD8, HHEX, IL6ST, MCM4, MTAP, MYH14, NKK3-1, OR10K1, OR2AG1, OR51E1, OR51L1, OR52A1, ORC2L, PDIA4, PIK3C2G, POLR2H, POLR3D, PON3, RARS2, RXRB, SDHC, SNAP25, SOCS4, SPRY4, SSH3, STX16, TRMT11, UROS, TNFRSF13C
Negative_3318	CGN, EBP, FOS, GH1, SMO, ADH4, ATG12, CMAS, CTF1, DAG1, FGF22, GRIN2D, HADH, IL17B, MAP2K3, MCM6, PON2, PPP2R2A, PRPH, SETD8, SGPP1, SUV39H2, TAS1R1, TAS2R9, TJP3, TXNDC12, UGT2B28, PHOSPHO1
Negative_3319	ID2, PSEN1, SEMA3D, TAS2R60, TIRAP
Negative_3320	CD19, CDKN2D, CLDN3, COQ3, CYBB, DARS, EPB41L3, KIR3DL1, MAPK9, NUDT5, P2RX3, PAX8, PFAS, PLD1, TKTL2, TUBB, TYRP1, YWHAE
Negative_3321	ATP5L, B3GAT2, CACNG3, CD8A, CDH4, CLDN5, CRB3, CSF2RB, DARS, DPYSL2, ERBB2, FZD1, GNA13, GTSE1, HSD17B8, IL15RA, IL22RA1, INHBB, INHBC, ITGA8, LRP5, MAPK7, MGAT4B, MTHFS, MYH3, NOD1, OLR1, OR10A5, OR11A1, OR52B6, PAFAH2, PIP5K1C, PLIN, PPID, PPP1CA, PTPN5, SCD5, TRPM5, YOD1, MAP3K7IP1, PPP1R12A
Negative_3322	ADAM10, ALDOA, ATG12, CLDN3, CNDP1, DNMT3L, E2F1, GP1BA, GRIA3, HTR6, INSR, IRAK3, OR4K5, OR6A2, PIGK, PLD1, PLXNA1, POLR2D, PRSS3, ROCK1, SDHC, TAS2R38, UGCGL1, ULK2, ATP6V1G2
Negative_3323	AGMAT, ALPP, CACNB3, CD40LG, CDH3, CLTB, CREB3L1, CYP3A5, DAD1, EHHA, ENO3, FUT6, GNAT3, HCCS, IL12A, MITF, MS4A2, OR2T34, OR4K17, OR8B8, PAPSS1, PFAS, POLR2F, PPP2R2B, STX3, TPI1, ZMAT3, TNFRSF13B
Negative_3324	C5, DCK, CSF3R, PGLS, PIM1, TBL1XR1
Negative_3325	ADH4, CCL22, CYFIP1, DAAM1, DARS, EARS2, EXOC7, FARSA, GUCA1A, IL1B, ITGA2B, ITGAX, MAP2K7, MAP3K6, OR1S2, OR2M4, OR5AS1, OR5B12, OR9A4, PAK2, PPP3R1, RBX1, SETDB2, SMPD1, THBS1, TNFRSF14
Negative_3326	F2, AGMAT, CLDN22, FGF19, FRAT2, GALNT12, GNA13, HADH, HHIP, INPP4B, MCEE, NOTCH2, OR51A4, OR6N2, PDHA1, PGK2, PRKAG3, TAS2R13, UNC5B

Negative_3327	LHB, ACVR1C, ADRB3, APBB1, CAMK2G, CISH, CPT1B, DCXR, GRAP2, HIBCH, HLA-DOA, KIR3DL3, NFKBIA, OR1E1, PIGL, PLA2G2A, TJP2, WNT11
Negative_3328	EPO, ITK, NF1, SP1, ADH5, ADORA2B, ARPC1B, CYP3A7, IL6R, MTHFD1, MYH7, NRP1, OR2M3, OR52E6, PIAS2, PLA2G2D, PLOD3, PRKACB, RASSF1, RGS3, CSGALNACT1
Negative_3329	VCL, CAV2, FOXO1, OR4F17, PTPRM
Negative_3330	ALDH4A1, ALS2, ASRGL1, CACNA1C, CCR2, CCR9, ERO1L, EXTL3, GGCX, IFNAR1, NAE1, OR2Z1, PLOD3, STX6, WNT5A
Negative_3331	ARPC5, BMP8B, CCL17, DFFB, EPHX2, IL25, MAP2K4, OR11H1, OR5B12, PAK1, RXRA, SETD8, SMAD5
Negative_3332	BTD, CFH, ACSS1, ATP5C1, BPNT1, CACNA1D, CHPF, CLTCL1, CSAD, CYBA, FABP3, FGF11, FGF2, IFNW1, KARS, NADK, OR13D1, OR51Q1, OR51S1, OR8H2, PIK3CG, PIP4K2C, PRSS1, RPS6, SEMA3C, SESN2, STAT2, TUBB4Q, UBA7, ULBP2, WNT9B
Negative_3333	GK2, PLN, ABP1, ACVR2A, ADRA1A, CCL26, CD27, CFL2, CSDA, CYP4A11, CYSLTR2, EPHB6, GALNT6, HBEGF, HHIP, HSD3B7, ITGB8, MAML1, OR52K1, OR52W1, OR6Y1, PDCD1, ROCK1, SLC33A1, SMAD9, TAS2R1, UCKL1
Negative_3334	ACAT1, ADCY1, ALOX12, ARAF, BDH2, BET1L, CLDN18, CREB3L1, CXCL11, EFNA1, FDFT1, GCDH, GPT2, GUCA1A, IL9R, IMPDH1, KCNQ1, MAFA, METTL6, OR2T4, OR6C74, PFKFB3, PIGN, RRM2B, SHC3, SOCS3, SPRED2, TBL1Y, VCAM1, ZBTB16
Negative_3335	F7, IL9, VTN, AKR1A1, ATP6V1A, DAAM1, DARS2, DUSP3, FZD3, GALNT2, GLI3, GPD2, GSTO2, HAGHL, HNMT, IL7R, MALT1, MAT2B, MIOX, NCR3, NEU2, OR2G2, PCYT1B, PDE7A, PIP4K2C, PLA1A, POLA1, POLR2C, PON2, PPBP, PSME2, RAF1, RASSF1, RUVBL1, SMAD4, SMURF2, TMLHE, TUBB2A, TYK2, VAMP1, HSD17B12
Negative_3336	HPD, MVD, RFK, ACADL, B3GAT1, C1QA, CCNB3, CDS1, CMPK1, DDX52, EPHB4, FARSB, FGF20, FUT9, GALNT9, GCH1, GNA11, GNA12, HGSNAT, JAM2, OR2L2, OR2M3, OR51A2, OR5A1, OR6C74, POLR2E, RBPJL, SH3BP2, TYMS, AASDHPPT
Negative_3337	C8B, ACVR1B, AGPAT3, CYP2U1, MDM2, MYH15, OR6C76, PLCG2, UPP2
Negative_3338	APP, MOS, ADH6, ATP12A, BRAF, CCL16, CLDN15, DDX19A, DUSP4, DVL1, EI24, FGFR4, GNAI1, IDI2, NMNAT2, NUDT2, OR51I2, OR6K3, PRKACG, RASGRP4, UBA1, USE1
Negative_3339	ARPC5, CHPF, DPYS, EFNA2, IL18RAP, LRP5, MAP3K4, MEF2C, PIGC, PPARA, PPOX, PPP1R3C, PTCH2, SULT2A1, ULK3, SERPINB5
Negative_3340	CGN, GAA, AK3L1, CAMKK2, EPB41L3, HMOX2, OR10V1, OR4C15, OR5B21, PAK7, POLR2L, PPP2CA, PRKAR2A, TMLHE, HLA-DQA2, MAPKAPK2
Negative_3341	LIF, CHEK2, CNGA3, CPOX, DCTD, DRD2, FABP1, G6PC, GRIN2D, GSTM5, GUSB, IL4R, ITGA9, KYNU, OR4K14, OR5B12, OR5L1, OR5R1, OR6C2, PPAP2C, RGS3, RPE65, SEMA4A, SUOX, WNT2B, ARHGEF12, TNFRSF13C
Negative_3342	A4GALT, ALOX12, AMD1, CCL19, CD70, CYP1A2, DUSP14, GSTO2, IFNA10, IL22RA1, KDSR, NFX1, NMNAT3, OR52E8, PRKCG, PVRL2, SMPD4, SOCS2, STX2, TNFRSF4, USE1, WBSCR22
Negative_3343	CD2, CS, NPL, ALDH1L1, ARSB, ASIP, ATP5C1, CD01, CLCF1, DUSP2, EVI1, GAL3ST1, GCLM, GLB1, HAO2, IDH3A, ITPA, MAP3K11, MCM3, NCF4, NEU2, NEU3, OCLN, OR1A2, OR1L8, OR2A14, OR5H6, ORC6L, P4HA1, PRKAA2, RARS2, SDHC, SV2B, THY1, TSC1, TUBB1, UPP2, XCL1, MAPKAPK3
Negative_3344	CD8B, FOXO3, OR3A1, OR5L2, OR6F1, PRICKLE1
Negative_3345	GSS, ALG10B, BMP2, CMPK2, FTMT, FZD1, GNA15, HLA-DOB, MTHFR, OR2G2, OR5A1, PAICS, PTK2, SETMAR, SH2D2A



Negative_3346	CAD, ID4, KHK, AASDH, ADCY10, ADSS, AHCYL1, ALDH9A1, ATG3, ATP5J, CCD C6, CDH15, CSAD, DGAT2L4, DPM3, EPB41L3, FDFT1, FGF19, FIGF, GABARAP , GOT2, HSD11B2, ISYNA1, MLLT4, MYH13, NAGS, NCK1, OR13D1, OR51L1, OR 9Q1, PARVB, PIGF, PLTP, PTPRB, PYCRL, RIPK1, SMPD2, SREBF1, TJP1, TXN DC12, UROS, ZMAT3, HLA-DQB1
Negative_3347	AKR1C3, CDS1, CEBPA, CYP2C19, DDX55, DHX58, GRIN2D, OR10S1, OR2A5, O R52H1, ORC5L, PLXNA3, PRKY, SV2B, TM7SF2
Negative_3348	VCL, AACS, ACTB, B4GALT2, BCAT2, COL1A2, IL22RA2, INHBE, INPPL1, NAT 1, OR4C46, OR5R1, OR5T1, PCCA, RPN2, TAS2R42, WNT7B
Negative_3349	FST, GSN, NPL, PAH, ACAA1, ACAT1, ACTC1, ADSL, ARPC1A, BAIAP2, BNIP1, CCL23, CD27, CHPT1, CYP26C1, DHCR7, DIAPH2, EDNRA, EVI1, FCER1G, IFN A13, IL28A, KNG1, LAMC2, LTBR, MAGI3, MYD88, NQO1, OR1B1, OR4X1, OR51 E1, OR5AS1, PIGB, PIP5K1B, PRSS2, RPS6KA1, SETMAR, SSH3, SSX2IP, SUC LA2, SULT1A2, TBK1, TICAM1, TSHR, UNC5B, VAMP1, SERPINA5
Negative_3350	BUB3, CCL2, CDC25B, CSF3, CSNK1E, CXXC4, CYP21A2, CYP2U1, DOCK1, EFN B2, FGF3, GCNT1, GGT5, HMGCR, HSD11B2, HSD3B7, IL20RA, ITGB7, KIR3DL 2, MARS, MIOX, NCOA4, NEFL, OR10G4, OR3A3, OR4P4, PHKG1, PLA1A, PLXNA 2, PNMT, PPP2CB, RAF1, RPS6KB2, SETMAR, SGPP2, SH3BP2, SKP2, SLC25A4 , SNW1, SPCS3, STAM, STX1B, TUBA4A, UAP1, ZBTB16, ZIC2
Negative_3351	ACSL4, ADRBK2, ARRB2, BMP6, CACNA1A, CES1, CNGA4, CYP3A43, DDHD1, FT MT, GALNT12, GALNT2, GBA3, GNB3, HAO2, HSD11B2, IMPA2, IRS4, MGAT2, N NMT, OR4K15, OR4X2, OR5D13, OR6N2, ORC2L, P2RX3, PFKP, PGS1, PIK3C3, PSENE1, PTPRJ, PYCRL, ROB1, SAT1, SHMT2, SOCS7, TKTL2, UCK1, VAV1, W WP1, ATP6V1B2
Negative_3352	ACVR1, ADIPOQ, ATP5J2, BDNF, CFLAR, CHAD, CTNNB1, CXCL16, MYH14, NMN AT2, OR6Q1, PIGQ, PIK3CD, SESN3, TRAF1, UGP2, HLA-DRB5
Negative_3353	FN1, ATP12A, CLDN14, CLDN3, CYP11A1, FGD1, GNMT, IL12B, MARS, OR52R1 , PRKCD, SDC3, YKT6
Negative_3354	ME2, PXN, BET1L, CD226, CD36, CLDN1, EXOC7, GALNT2, GLI3, GYS1, HSD11 B1, IBSP, LAMA4, MAGI2, MAN1B1, MAOA, MAT2B, MPZL1, NUMBL, OR2D3, OR2 T33, OR4D5, OR52W1, OR9Q2, ORC4L, ORC5L, PLD2, PNMT, POLR3A, SELE, SG MS2, SPRY3, SQLE, UBA1, CACNA2D3, TNFRSF1A, TNFRSF6B
Negative_3355	CR2, PML, ALG13, AMPD1, ATP6V0C, BMP4, CCL14, CHKA, CHR1, DDX54, EPHB 3, GALNT14, IARS, IL12B, ITGB5, NOS1, PDPK1, PIGF, PKMYT1, SEMA3E, TN FSF14, TUBA1A, ZMAT3
Negative_3356	C4B, F3, GSS, ATP5A1, ATP5J, ATP6V1D, AVPR1B, CCNA1, CDC25A, CHIA, DD X18, DERL1, EPAS1, FRAP1, GAB1, GARS, GMPS, GOSR2, GOT2, HYAL2, IL5RA , KAT2A, MAOB, MAP4K2, MIOX, MYL5, NKX2- 2, OR13C9, OR4C15, OR4K15, OR51M1, PFAS, PFKM, PGS1, RBL2, SEMA3F, SL C12A2, SMAD2, STX1B, SUV39H1, TJP3, TLR5, UBE2L3, VANGL1, WNT2, MAP3 K7IP2
Negative_3357	CBS, FAS, KIT, AASS, ACAT2, ALDH3B2, BCL2, BDNF, BLVRB, CTBP2, CTBS, E RBB2, FGF13, GBA3, GSTA1, IFNA8, INHBC, ITGB6, OR1A2, OR4C46, PIGH, P IK3R2, SMAD3, TCIRG1, CTNNBIP1
Negative_3358	AGL, ABLIM1, ASS1, EDNRB, FABP4, IFIH1, LCP2, MAN1A1, MCEE, OR6C74, S MURF2, TNFRSF10A
Negative_3359	AMH, CKB, ILK, LSS, ME1, MVK, NLK, VTN, ATP4B, BCAR1, CAV3, CCL3, CDKN1 C, CHRM3, CHRM5, DDX47, DUSP10, DVL1, EGFR, FGFR1, FUT1, GPLD1, GRAP2 , IL28B, ISYNA1, KIR2DL1, OR10P1, OR13C4, OR13J1, OR2B2, OR2S2, OR4X 2, OR51M1, OXSM, PFKFB3, PPAP2C, RHEB, SEMA3D, SESN1, SMURF2, SRGAP2 , TAS1R2, TAS2R42, THY1, UGT2B10, WHSC1L1

Negative_3360	GSN, SRM, TFG, ACTA1, APOA1, ARPC1B, ARPC4, BMP8A, CANT1, CCL20, CCNA1, CDC14A, CES1, CYFIP2, DHDDS, EFNB3, MAPK14, MPDZ, MTAP, ONECUT1, OR11H4, OR2A42, PARD3, PFKFB2, PFN2, PPAP2B, PPP1CA, PSPH, PTPRC, PTPRM, TCF7L1, THBS4, WNT7A, YWHAB, ZIC2, HSP90AA1, PNLIPRP1
Negative_3361	MUT, ADCY4, BLVRB, FMO4, IL15, ITGAM, KAT2B, MNX1, NT5C1B, PARD6A, PDGFRA, PLCB3, PLOD3, PTDSS1, SLC2A4, SRGAP1, WHSC1L1, YARS, MAPKAPK2
Negative_3362	F11, JUP, ACO1, CLDN3, DUSP5, GARS, OR10J1, OR8K1, PISD, PPOX
Negative_3363	ADCY10, ADCY3, B3GALT2, B4GALT1, B4GALT5, CCL21, CDKN2B, CSF3R, FGF9, GCNT3, GGT1, GMPPB, HDAC1, ITGA9, L1CAM, NT5E, OR2H2, OR4C6, OR51B5, OR5M8, OR7D2, PAICS, PANK3, PDE6D, PLAT, PLCD3, SMPD3, SSX2IP, SYNJ1, THBD, TNFSF14, VTI1B, PLA2G12B
Negative_3364	PCYT1B, PLAUR, ROBO3, VAV1
Negative_3365	PDC, ABL2, ACYP2, ALDH2, ATP5C1, CACNB4, CDK4, CERK, CHST12, COQ6, CXCR4, CYP26A1, CYSLTR1, EGLN3, FLOT2, FPGS, GALNT14, GSTM4, GYS1, IQGAP1, MECR, MYH8, NADSYN1, NKX6-1, OR1B1, OR2A2, OR4C11, OR52B6, PDE6D, PDGFA, PDK1, PPA1, PPP3CA, RCHY1, SNAP25, ST3GAL1, TCF7L2, TOLLIP, TRAF4, WIF1, XIAP, YWHAH, PPP1R12A
Negative_3366	ID3, SHH, ACY1, BCKDHA, CARS2, CCNE2, CCR9, DHFR, FCGR3A, FGF11, FGFR4, GALM, GCLC, IFNA8, IL18R1, IL1R2, INADL, NFASC, NR4A1, OR5K2, OR6X1, PDE7B, PMVK, POLD3, PRIM1, PRPH, PTEN, SPI1, ST8SIA1, TUBB4Q, VAMP3
Negative_3367	RPE, TNF, ACMSD, ARRB2, CCL15, CCR1, DUSP3, ENTPD6, FABP3, IL21, KLRC4, LCMT2, NCAM2, NR1H3, OR2T12, OR56A4, PARVA, PER3, SDHD, SETD1A, UGT2B17, WNT10A
Negative_3368	ACTG2, CCNG1, DDX23, FMO4, G6PC2, GLB1, GNA14, HA02, IRF7, KIR3DL3, LRP5, ONECUT1, OR10A5, OR2G6, PCYT1A, PLCB4, PPP5C, PRSS1, SESN1, SMA D9, SPRED1, ZFYVE16, AASDHPPT, TNFRSF11B
Negative_3369	GBA, IHH, ABAT, ABLIM2, ACAD9, APOA5, CARD11, CCL7, CD44, CHD8, DDX54, EPB41L2, FGF13, FLAD1, FLOT1, GALNT5, GALNT7, GBA3, IQGAP2, MAP2K1, OR10A3, OR1A1, OR2AG1, OR51A2, OR8J3, OR8K3, PPM1D, PRKAG1, RASSF5, ST3GAL5, TBK1, TRPM5, UGCG, VAV3, VEGFA, WBSCR22, PNLIPRP2
Negative_3370	ATP6V1F, CACNA1E, CACNB2, CAMK2B, CDH15, CFLAR, CHRM5, CLDN8, CLTA, CYP4A22, DERA, EDAR, EPHA6, GNAI2, IFNA7, LEF1, MAP2K3, NCOA4, OR6C2, OR8D2, P2RX4, PDE4A, PIK3R5, PNPLA3, RPS6KA2, SCD5, SMC1B, TPH2, TUBB3, UPB1, XIAP
Negative_3371	HK1, TKT, AXIN1, BDH2, BMP8B, CPS1, DLAT, DUSP16, EDN1, ERBB3, GALNT6, HBEGF, NFKBIE, OR2T3, OR5L1, PARS2, PPCDC, SLC12A2, TNFSF8, TUBB4, UROD, WWP1, HLA-DQB1
Negative_3372	C5, MPL, SMS, ACTG1, ATP5D, ATP5L, BUB1, CAMKK2, CD8B, CFLAR, CHEK2, COL3A1, CPT2, DDIT3, DDX19A, EFNA3, F2RL2, FMO5, HRH1, IFNG, IL22RA2, KLRD1, MAP3K1, MTAP, NNMT, NOTCH1, OR56A4, OR5AN1, P2RX1, P2RX2, PDE8A, PLD2, PON3, PRKAR1B, PYCR1, SMURF2, SOCS2, SQLE, UCP1, CACNA2D4, TNFRSF11B
Negative_3373	AK5, PLG, ACSM5, ADH7, APPL1, BDH1, BET1L, BIRC5, CCR4, CD19, CTBP1, DAPK1, DGAT1, DIAPH3, ENPP3, FMO4, GMPPB, GSTK1, IL1R1, INSR, ITGA1, LTB4R2, MICA, MTHFR, OR10A5, OR10Q1, OR2T2, OR52N2, OR5V1, PDXK, PIK3CA, PIK3R2, PLCZ1, POLR3B, PSME2, RAF1, ROBO2, SDC2, SNAP25, SULT1E1, TJP3, TUBB4Q, WBSCR22, XYLT1, ZIC2, HSD17B12
Negative_3374	DDC, XDH, ACTC1, AGPAT1, AGXT2, ATG12, ATP5I, BMP2, CDC45L, CSF1R, CXCL3, FARP2, GNPDA2, LIPF, MAFA, MAP2K1, NOS1, NR1H3, NT5E, OR11G2, OR4A5, PIP5K1B, PLCG2, PRLR, PTEN, RBKS, RDH16, SOCS2, STX3, ZFYVE9, B4GALNT1, CSGALNACT1, MAPKAPK3, PNLIPRP2

Negative_3375	AKR1C3, ALG8, ANPEP, CCNB3, CDC14A, DDIT4, EGLN1, FECH, INHBC, OR13H1, OR51F1, PDE8A, PLD2, PNLIP, POLR1E, RELA, RFXANK, SETD7, TGFBR1, UCK1, UGT2B28
Negative_3376	F8, LPL, ASCC3, CD44, CLDN8, CYP27A1, CYP4F2, DPYS, EPB41L3, GBA3, GNB3, GUCY2F, HSD11B1, IFNA7, IL10RA, IL12B, IL1R2, MAP2K4, MAPK11, MIOX, OR1J4, OR52I1, OR52I2, PAFAH2, PDE3A, PIP5K1B, PLXNB2, POLR2F, PPARA, PTGS1, RDH5, SGMS1, SUCLA2, TAS2R49, TNXB, TUBB2C, TUBB4Q, TXNDC12, ZBTB16, PLA2G12B
Negative_3377	ACVR1B, ADORA2A, B4GALT4, CREB3L2, CSNK1G2, DAPK1, DGAT1, DGKZ, DNM3A, DTYMK, EPHB1, FGD1, FLT3, GAMT, GBA3, GNG3, IDI1, IL17RA, IQGAP3, NFKB1B, OR10J3, OR2T2, OR4C6, PHKG2, PKM2, SDC1, SPRY1, TGDS, TRAF1, TSC1
Negative_3378	RET, ADCY6, ADRB3, AK3L1, ASPA, C4BPA, CDH5, COL4A2, CXCL2, F13B, FGF2, GAS1, IFNAR2, ITPKB, MAP3K7, MARS2, OR2T6, PDCD1, PPAP2C, PRKAA2, RASSF5, RBKS, RBX1, RDH5, TIAM1, UPRT, VASP, WNT5B, ZAP70
Negative_3379	DBH, ACO2, CTNNA3, CYP2U1, DAPK2, FLT3, GAD1, GATM, GSTM4, MTAP, OR10X1, OR1L8, OR2B6, OR9A2, PTCH1, ROCK2, SKIV2L2, SREBF1, WHSC1
Negative_3380	FST, LEP, SHH, TKT, ARHGEF7, ARNT, ATP4B, CACNA1I, CDKN2D, CXCL12, CYP2A13, CYP3A5, EIF4B, GCLM, GNRH1, ICOSLG, IL9R, IPPK, LCP2, MAN1C1, MECR, MPZL1, MYH11, MYH3, NRAS, NRG2, OLAH, OR52N4, POLE, ROCK2, RUNX1, SOCS3, SULT1A4, MAPK8IP3
Negative_3381	CFI, F2R, APRT, ENPP3, F13A1, ITGA9, MAP2K5, RAPGEF3, STX5, TAS1R1, UGT2B10, HSD17B12
Negative_3382	A2M, CS, FAS, IL2, MUT, PGP, SMS, ABL2, ACTA2, ACVR1C, ALCAM, APOC3, BUB1, CACNB3, CAMK2G, CD99, CDS2, CLDN5, CLTCL1, DGKE, EDA2R, FARSB, FASLG, GALNT2, GBE1, HSPA1B, IL11RA, INHBE, LIPF, NR4A1, NUDT5, OR4K15, OR4X1, OR5P3, OR9G4, PIK3R1, PLAU, PPID, RPS6KB2, SQLE, STAM2, TOLLIP, ATP6V1E1, CSGALNACT1, TNFRSF1B
Negative_3383	AMT, DDC, F8, ATG12, AVPR1B, CDH15, CRLF2, GOSR2, IL12B, LIPT1, OR13H1, OR56A1, PFAS, PFKFB1, PPP2R2D, PTPN6, RPS6KA3, TOMM40L
Negative_3384	FAH, HGF, MPI, ALG2, ARG2, B4GALT2, CD274, CDH15, CHR1, CYP2F1, FUT3, MYLK2, NFKBIE, ONECUT1, OR4K13, OR56A3, OR8J3, PANK4, SORBS1, TAS2R38, TNFRSF9, UGCGL1, YWHAQ
Negative_3385	LPO, ACSM5, ATG3, BHMT, FGF8, IL17RB, LLGL1, MAD2L2, NFATC4, OR13C8, PER2, PLOD3, TNFSF12
Negative_3386	BAX, ABI2, ACP1, ALDH1A1, ARHGAP5, B3GNT5, BMP7, CYP2E1, FPGS, FZD9, GNG12, IFNA10, OR10H4, OR2A12, OR5T3, OXCT1, PAK7, PCYT1A, PI4KB, POLR3D, PTGS1, RBKS, WNT3A, ZMAT3, CACNA2D3
Negative_3387	CS, F8, LTB, ADH7, ALPL, B3GAT1, BMP4, BMP8A, CCR7, COL1A1, CREBBP, CX3CR1, DVL3, EPB41L2, FUT2, GALT, GLI1, GUCA1C, HIBADH, HSP90B1, IL10, LMO7, LPAR1, MASP2, MYL2, NME7, OR10A6, OR13D1, OR5T1, ORC1L, OXCT1, PDE6H, PPP1R3A, PPP2R2C, RRAS, RRAS2, SESN3, SHC3, SLC27A1, SLC2A1, SMAD1, TLR2, WNT3, XIAP, XYLT2, YOD1, ST6GALNAC6
Negative_3388	TFG, ACP5, ALDH7A1, FZD5, GPLD1, MYLK, OR10J1
Negative_3389	ADO, AMH, DLD, ID4, XDH, AADAC, ACACB, AHCY, ALDH4A1, ARPC3, CBR3, CDK2, CDO1, CHAD, COL4A4, DCXR, DPM1, ENTPD6, FGF3, FZD8, GCDH, GNAQ, HHI1, IL17RB, INADL, ITGA9, LRAT, MTFMT, NCKAP1, NFYC, NT5C2, OR10A2, OR2A5, OR2B2, OR3A2, OR4D2, OR4F15, OR52N2, PAFAH2, PIP4K2B, PRKAR2B, PTGS1, PTK2B, SOX17, TNFSF11, ATP6V1G1, HLA-DRB5
Negative_3390	BTD, IL6, TNF, ANAPC7, ARPC3, ATP5B, BCKDHA, DDIT3, DIAPH2, DTX2, ERB2, GUCY2F, ITGA4, NEGR1, OR11G2, OR13G1, OXTR, PDE6D, PRPS2, RPS6KA5, STAM, ATP6V1E2, TNFRSF10B

Negative_3391	ADK, GNS, IL9, ACTA2, ATP2A2, BCAR1, CACNG4, CCL8, CD28, CDH2, CRLS1, FIGF, FZD2, GLUL, GRIA1, GUCY1A2, HEXA, IQGAP3, ITGA9, OR2M4, OR6N1, PDE3A, PIGV, PMVK, PTGER1, TLR2, WNT1, TNFRSF6B
Negative_3392	CBS, HGF, ACOX2, ALG9, ALPP, AMDHD2, BMP5, CCL14, CCR5, CXCR4, DBF4, EIF4E2, FM03, GNAT3, HA01, HCCS, MAPK1, MAPK13, OR10J5, OR14I1, OR2G2, OR6C75, PARVB, PDE5A, PROC, PYCR2, RXRA, SETD1B, SRD5A1, ST3GAL1, SULT2A1, TGFB2
Negative_3393	C4B, CRK, LCK, SP1, ALPI, APH1A, ATN1, B4GALT5, CAV2, CEBPA, CLTA, COMT, CRLS1, CSNK1A1, CTSS, DCTN1, DDX4, DHCR7, EPHX1, FGF10, GALNT3, KLK3, MAGI2, MCM7, MDM4, NRCAM, OR10G3, OR10G8, OR11G2, OR2G2, OR4N5, OR52I2, OR8K5, OR8U1, PDPK1, PIP5K1C, PNPLA3, POLR1D, POMC, PRIM2, PVRL3, RBKS, SDC4, SLC25A5, SMAD6, TAP2, TAS2R5, ATP6V1E1
Negative_3394	ID2, ANAPC4, ARHGEF6, CADM1, CD86, CLDN22, CXCR3, DHCR7, DUSP6, FASN, FTH1, GARS, GFAP, GMPR2, GSTA4, HNF4A, IL9R, KRAS, MAPK3, MGAT4B, NME2, NOTCH3, OR11L1, OR51Q1, OR5T1, OR7A5, PGAM4, PIGF, PPM1B, PRSS3, RDH12, RGS3, STK4, THBS3, THTPA, TIRAP, VEGFC, WASF2, ZFYVE16
Negative_3395	GNS, LCK, NPL, ACAT1, ACTN2, AGXT, ALOX5, AMHR2, APOA2, BMP7, CHEK2, CHKA, CLDN3, DIAPH3, FASN, GALNT6, GALT, GJA1, GP1BA, GRIA1, HCST, HMGCL, IL28B, LAMC2, NEFM, NEUROG3, NFATC4, NFYA, NUMBL, OR13H1, OR2T1, OR4N5, PDGFD, PHKG1, SPRED2, SUCLG2, TD02, UGT2A3, WNT9A
Negative_3396	CCR5, CHR1, CYP2C8, DPYD, GSK3B, ITGAM, OR2F2, OR51G2, SMARCA2, SOAT2, ST6GALNAC6
Negative_3397	F8, LHB, B4GALT2, BBC3, BCM01, CACNG5, CCL7, CLTC, CREB3L3, EIF4E, HDAC2, HSD11B1, LRRC4C, NCOR1, PDHA1, PDXK, PPAP2C, RPS6KA3, RPS6KA4, TYRP1, UGT2B4
Negative_3398	CD4, HAL, ACTA2, CAMKK2, CD28, CD72, CLTC, CPT1C, CRLF2, CSF2, DLST, ENPP1, GALNTL4, ITGB4, KLRC4, NRG3, NT5M, OR10H3, OR13J1, OR5K1, OR9A2, OR9I1, PEMT, PER1, PIGL, PIP4K2A, PPP1CA, TCF7L1, TSNARE1
Negative_3399	PXN, PLA2G1B, RPN2
Negative_3400	CS, FAS, GNE, KHK, LAT, MVK, PLN, XDH, ACADL, ACOX1, ATP4A, ATP5J, CCL2, CREB3L4, EARS2, IDI2, IFNA13, IL11, INPP5A, MAML2, MMP7, NAT6, OR2T29, OR4S2, OR51A7, OR6C74, OR6C75, OR6K6, OR9A2, PIK3C3, PLXNB1, PPIR1A, PTPRM, SELP, SPHK1, ST3GAL3, STK11, TACR3, TUBA1B
Negative_3401	IL4, PGP, CASP10, GADD45B, IARS2, IL11RA, OR4K1, PARD6A, RASA2, SEMA3B
Negative_3402	AR, CAD, TFG, TNF, ADRB3, APOE, BIRC5, BPGM, CRB3, CYP27A1, DTX3, EFN1, EFN2, EHMT2, EPOR, FGFR1, FUT3, GGT6, GNG13, GUK1, HSD11B1, IRS4, MAP3K11, MYL2, NGEF, OR13C3, OR4P4, OR51F2, OR6C3, OR6T1, OR9K2, OXC2, PDCD1, PDE3B, PGAM2, PLA2G6, PLCZ1, PLOD2, PLXNC1, POLD1, POLD3, PRKAA1, PRKAR1A, PTGER3, PTGS2, USE1, WNT7A, YWHAG, TNFRSF18
Negative_3403	CSK, GK2, WAS, ALPP, ATN1, CCL28, CCR8, CD19, CSAD, CYP11B2, DTX4, DUSP1, ETNK1, FLOT2, GAB1, GALNTL4, GNAI1, HSD17B1, HTR2A, IMPA2, KCNB1, MAP4K4, NAMPT, NOTCH1, NRXN2, NTN1, NUDT9, OR2T29, PARD6A, PCYT1A, PLAT, PLAUR, PPAP2A, PPAT, PVRL4, RALA, SMC1B, SMURF1, STX2, TSHR, VDAC1, ATP6V0D1
Negative_3404	C8G, CBL, GK2, INS, ADIPOR1, ALCAM, ALOX12, AVPR1B, BAAT, BDKRB1, CBR3, CDC16, COL6A2, DGAT2, DIAPH1, DPYS, DTX4, ENTPD6, FADS2, FGF8, FLT3LG, FUT1, GALNT9, GMPPA, KAT2B, KCNJ11, MASP1, NANP, OR10G9, OR2C1, OR4D2, OXSM, PTGDS, RBPJ, SFRP1, SMARCA5, SPHK1, STAT1, THTPA, TOLLIP, MAPK8IP1, PHOSPHO1
Negative_3405	GK, LHB, ANAPC11, CD70, CD8A, CYP1A2, DDOST, DUSP3, EFNA1, ENPP6, EXT1, GRIN1, IPPK, OR10AG1, PIK3CG, POLR2E, SHMT2, SOS2, TNFRSF18

Negative_3406	ACOX2, ACPT, ALG3, CACNA1E, CDH4, CYSLTR2, EDA2R, EFNA3, EI24, HAP1, HSPA1B, LCMT1, LEF1, MOV10L1, OCRL, PPP3R1, ROBO2, RPS6KA3, SNAP23, TPMT, VANGL2
Negative_3407	GPT, ACHE, ACPT, CCL24, CCNE2, CCR10, CKMT2, CNGA3, ECSIT, EPAS1, HAR S, ICOSLG, ITGB1, MAN1C1, OR1L6, OR52I2, PDE7A, PMAIP1, PPP3R2, PRKA R2B, PYGB, SAT1, SEMA3F, SPTAN1, SRD5A1, STX1B, STX2, TUBB2A, VAMP3
Negative_3408	BAX, MPI, RPE, ADH7, ADRB2, ALCAM, ASNS, BPGM, CPOX, CYP3A4, ENO3, ENT PD6, FABP3, GPX5, HLA- DOB, IDI1, IFNA4, INPP5B, IRS4, KNG1, LGMN, LTBR, MCEE, NCAM2, NOTCH3 , NRG2, OLR1, OR51B4, OR52E4, OR6Q1, OR8D4, OXTR, PECAM1, PLCG1, PLTP , PPARG, PRKG1, QARS, RPS6KA3, SELL, SKIV2L2, SYNJ2, TAS1R3, TIRAP, T LR5, TYK2, UGT1A10, UMP5, WARS
Negative_3409	PRL, ACADM, ALDH3B1, ALDOA, ANAPC1, BCL10, CACNG8, CBR1, CD47, CDC25 C, CDH2, CDH4, CHAT, CHUK, CYSLTR1, DGKI, DPM2, DPYSL2, DTX4, E2F5, EN O2, GRIA2, GSTM4, HPSE2, HTR6, IARS, ICAM3, INHBC, IRF5, LIFR, MAML3, MYH10, OR11G2, ORC6L, PAK6, PDGFRB, PPP2CB, RPS6KB2, SESN2, SETDB1, SLC33A1, TNFRSF4, UNC5A
Negative_3410	SHH, AKR1C3, ALOX12, ARHGEF6, AVPR1B, CCNB3, CD46, DOLPP1, ENTPD2, E RO1L, ESPL1, F13B, MAP4K3, NT5C2, OR1G1, OR4P4, P2RX3, PIK3C2A, PTGE R3, PTPN11, RPN2, RXRG, SC5DL, SEMA4C, SH2D1A, SHISA5, SLIT1, TBXA2R , TGDS, TUBA3C, VDAC1, YWHAH
Negative_3411	DDC, F12, FER, GGH, HK2, SCD, ACO2, ACSM4, ACYP1, ADCY9, ALDH3A2, ANAP C2, ASIP, ATP5F1, CD82, CNDP1, DDX56, DUSP9, DVL2, ENTPD7, EPRS, FLAD 1, FZD7, GBT1, GCNT4, IFNGR1, IL17RA, INPPL1, KLRC3, MAP3K3, MAPT, M ETTL2B, MTHFR, OR10A6, OR10T2, OR4C11, OR6K2, PERP, PIGA, PIGX, RAC3 , SELP, SOCS4, THBD, TRAF2, ATP6V1E2, TNFRSF11B
Negative_3412	GH2, HK2, ID1, LCT, ATG7, CCR1, CDH1, CHKB, CLDN15, CNTN2, CYP3A43, CY P3A7, ENO1, FASLG, FMO1, GAB1, GDF6, HBEGF, IFNGR2, LEF1, MAD1L1, MAP T, MFNG, MMP1, NMNAT2, NT5M, NTRK1, OR2A2, OR2B6, OR2H1, OR4C16, OR4N 2, OR4P4, OR51A7, PLCG2, POLD2, RERE, SLC2A2, SSX2IP, STAM, TBK1, TBX AS1, TGFA, TNFSF18, ZFYVE16, HSD17B12
Negative_3413	CCR7, CHST13, GUCY1A2, OR2H1, OR5H2, PCK1, PLCB4, RASGRP3, SLC12A2
Negative_3414	KDR, ME1, MYC, ACOT11, ACSM3, AGRN, ATP6V0B, CLDN4, COQ7, CSAD, FGF13 , FGFR2, GALNTL4, GCH1, GOT1, HSD11B1, IL7R, KDSR, MAFA, MAP4K1, NFAT C4, OR2T12, OR2T33, OR4C11, OR6B2, PITX2, PPP2R1B, RAPGEF1, SESN3, S LIT2, TNFSF18, TRAF6, TUBB6, UGP2, YWHAZ, HLA-DPB1
Negative_3415	B3GAT1, CTSL1, ELK4, GAMT, GPAM, OR1J4, OR2G6, OR4F17, OR52E8, OR8H2 , PIGA, PPAT, UGCGL1
Negative_3416	CFI, FES, GK, OTC, ASRGL1, ATG3, C1QC, CHPF, CNGA3, CPT1A, CREB3, DHX5 8, DLL1, EPAS1, FGF4, FUT2, JAM2, MAN1A1, MAP3K13, MFNG, NCF1, NFATC1 , OGDHL, OR1D2, OR8K5, PDE8B, PLXNC1, PRKCZ, RDH8, RFXANK, SETD1B, SP AM1, SUOX, PNLIPRP2, TNFRSF10C
Negative_3417	IL5, OGT, ANAPC5, ATIC, CASK, CCR3, CLDN19, CLTC, CYP1B1, GAD1, GBA3, GNB1, IL13RA1, IL21, JAK1, LDHD, MAN1A2, MCEE, MYL2, NAT5, OR3A3, OR5 2E2, OR6C74, OR9I1, PDE10A, PDE2A, PLA2G6, PLCG1, PPP3CC, RDH8, SELP LG, SRD5A2, TSTA3, UGCGL2, TNFRSF13B
Negative_3418	IDS, ABI2, ACAT1, ADSL, AMPD2, BMP5, BUB1B, CASP6, CASP8, CCL25, CDS2 , CNTN2, CXCL9, EIF4E, EPHA5, ERO1L, FPGS, GMPS, GP1BA, HDAC2, HSPB1, HTRA2, IL6ST, ITGB1, MAD1L1, OR10R2, OR51D1, OR56A4, PARD3, PIK3R4, SC5DL, SEMA3G, SESN3, SORD, THTPA, TNFSF8, WNT1, CTNNBIP1
Negative_3419	AK7, NOG, SYK, ACADVL, AMHR2, CCND2, DERA, GGT7, HSPA8, OGDHL, OR4B1, P4HA2, SNW1, SERPINC1

Negative_3420	ADK, ATM, CAT, CD6, ACVR1C, ADIPOQ, ALDH1A2, ANPEP, ARPC1B, ATN1, CCN B1, CCR9, CDK5, DDIT3, DVL1, FDF1, FZD7, GLG1, GNA13, GNPDA1, IARS2, IDUA, IL28B, LEFTY1, LYPLA1, MAN2A1, MAP4K1, MCM3, OR10A6, OR4E2, OR 51B2, OR5AS1, PDXK, PGM2, PIAS1, PIK3R2, PRKAR1A, PTEN, PTPN1, RFWD2 , SDHC, SETD1A, STAT3, STX2, ULBP1, ULK1
Negative_3421	AGK, C1S, CD2, CGN, ACACA, ACADSB, ALG8, BUB3, CACNG3, CLDN3, CNGA3, C OL5A1, COX10, CREBBP, CTNNA1, CXCL3, CYFIP2, ENTPD5, GALNT8, GMPR2, GPX5, IGF1, MYH9, NCF4, NOX1, NSD1, NSDHL, NT5C1B, OR10A2, OR10G7, OR 10J3, OR52B6, OR52W1, OR6A2, P2RX5, PCNA, PGM3, PIK3C3, PORCN, RFWD2 , RXRA, SEMA4G, SETD1A, SLC9A1, TAS2R9, TJP3, HLA-DQA2, PPP1R12A, TNFRSF13C
Negative_3422	AGL, C2, HK3, RPE, ADH1A, AGXT, ALDH3A1, ALG2, BCKDHA, C7orf16, C9orf 95, CCKAR, CLCA2, CLDN9, CRY1, DHCR7, ENO3, ENTPD2, GAD2, GALNT10, GS TA2, HTR6, IFNA10, IFNA13, IL15RA, KLRC1, KYNU, LCMT1, NAE1, NEU3, OR 2T10, OR5F1, OR5T1, PDGFRB, PERP, PIGF, PITX2, PTAFR, SHMT1, SLIT1, S PHK2, SRGAP2, TAS2R5, UPP2, VARS, YES1, MAPK8IP3
Negative_3423	PTS, CD99, ETS1, FZD3, OR4F17, OR6C1, PAK2, PPP1R3D, TAS1R2
Negative_3424	AKR1D1, DDX55, HTR2C, HTR6, NKX2-2, PDE1A
Negative_3425	C8G, TNF, AFMID, CCNG2, CLDN9, CPT2, CYP2A7, DDB2, ECHS1, EPB41L1, GA LNT5, GNA12, GNRH2, GRIN2A, GRM1, LIMK1, MCCC1, MYH8, OR2A42, OR7C1, OR8K1, ORC6L, PIP5K1B, PLCB2, PLEKHA8, POLR1C, PTK2B, SUV39H2, TAS2 R5, TRPC1, ZAP70
Negative_3426	GH2, TXK, ACSL3, CCL1, CLDN16, ERBB2, IRS1, NR1D1, PDGFD, PGM1, PIP5K 1C, STAT5B, SULT1A4, WNT9A
Negative_3427	F5, NOG, PGP, ADH4, ASMT, ATP5H, BCL10, CACNG2, CAV1, CES1, CHSY3, CLT B, CYP27A1, CYP3A7, DDX4, FUT4, GATM, GNA13, GPLD1, HTR2B, IL7R, MLLT 4, NAGA, NARS2, NFATC3, OR13D1, OR56B4, OR9Q2, ORC3L, P4HA1, PANK3, S PTLCL1, TGDS, TLR9, TUBA1A, WHSC1L1, WNT11, WNT2B, TNFRSF17
Negative_3428	LPL, LPO, ACP2, AGXT, CACNG5, CLDN18, CLDN22, CLDN7, COL5A1, ENPP7, I FNA16, ITGA3, OR52E4, OR5F1, OR8H1, PDE1B, PIGQ, PLOD1, RPS6KA1, ULB P3, XCL1, ATP6V1E2, HSP90AB1
Negative_3429	ALG13, CCNA1, DARS, DGKG, DHRS4, FARSB, GGT7, GIT1, GUCY1A3, INMT, OR 14I1, PLCB4, PRKAG2, TAS2R49, TLN1, TLR3, UGT2A3, WBSR22, PDCD1LG2
Negative_3430	BMPR1B, CSNK2A2, DDX56, DFFB, GART, GMPR2, GSK3B, IDH3G, KDSR, MAGI1 , NRG2, OR10P1, OR10T2, OR11A1, OR51G2, OR52I2, OR7A5, P2RX1, P2RX6, PDK1, PRKCE, SEMA4A, SULT2B1, TLR9, TNFRSF4, TNFSF4, TYRP1, CSGALNA CT2
Negative_3431	FGB, FH, ADRA1A, ALG10B, ANAPC10, ARNTL, BCL10, BMPR1B, BNIP1, CACNG 8, CCNG2, CLDN1, CMPK1, COL6A2, CREB3, CREB3L3, DPYSL2, ENTPD7, FCGR 2B, FGF20, FPGT, GAD2, GMPS, GUCY2D, IL20RA, INHBC, INSR, IRAK3, MCM4 , MTFMT, MTHFD2, NSDHL, OR2L2, OR4N5, OR52K2, OR5AN1, PDE7A, PFKFB1, PRKACB, RASA2, SESN1, STAT3, SULT1E1, TUBB2A, UGT2B7, ATP6V1E2
Negative_3432	CD2, CKM, MET, ANAPC11, ANPEP, CD247, CDC7, DDHD1, DHRS3, EDAR, EFN3 , EGFR, EPHA7, FASN, FGF5, FSHB, FUT3, FZD4, GNRH2, ITGA1, JAK2, LIPC, MAP2K6, OR2D2, OR2M2, OR4D11, OR51M1, PIGN, PLA2G1B, PRSS1, RRAS2, S CP2, SMAD5, SPRY2, TGFB2, TYROBP, WNT5A
Negative_3433	LSS, DLAT, RAPGEF3
Negative_3434	ABP1, ALAS2, CFL2, CSNK1D, EFNA4, EPHA2, GGT6, GLI1, IFNA2, MAP3K1, M AP3K12, MAP3K4, NT5E, OR2F2, OR51S1, OR52L1, OR56B4, OR5B3, OR5M3, P LCG2, SPRY3, STX3, TUBA3C, HLA-DRB5

Negative_3435	CBS, AMHR2, ARPC5L, BBC3, BST1, CACNA1B, CD274, CHSY1, CLDN1, CTBP2, DAPK1, EDA2R, EPB41L2, FSHR, GALNT13, GANC, GAS1, GCNT1, HLA-DOB, IKBKE, NCF1, NEU3, OR5B21, OR6K3, OR8G1, PARS2, PGK2, PIGX, PLTP, POLE, POLR2J, PPP1CA, RERE, ROBO2, SDC2, SEMA4C, SEMA4G, SLC2A1, STAT6, TP53, TUBB1, UCK2, WEE1, WNT10A, CACNA2D1, SUV420H1
Negative_3436	BCR, DBI, ACSL1, ATG3, BLVRB, CAMK2B, CBR1, CD40, CD48, CD86, CDC25A, COL6A2, CSF2RA, CTSL1, CYSLTR1, DGKA, DHRS3, ECSIT, ESAM, GDF5, GNB3, HLA-G, ICAM2, ITGB6, LCMT2, OR10G3, OR1I1, OR1L3, OR4L1, OR4Q3, OR51E2, OR51M1, PAX4, PFKFB3, PON2, PPM1B, PTTG1, PYCR2, PYGL, SOD1, SRGAP3, WIF1, WNT7B, TNFRSF13B
Negative_3437	RPE, ACTB, ALDH1A1, B3GNT5, CKS1B, CNTFR, CYSLTR1, GALK2, GRIN2D, GSTA1, HLA-C, ITGB3, ITPKA, MCM3, METTL6, MLLT4, MTHFS, NME4, NPAS2, OR4C11, OR5V1, OR7A10, OR7G2, PGK1, PRKCG, PTPN1, TM7SF2, TSTA3, VAV3, VTI1B, XYLT1, YWHAQ
Negative_3438	AMPD1, CAMK2B, CLDN1, CPS1, CSNK2B, DRD5, FGF4, GMD5, IL20RB, PRKG1, RBX1, TUBB2A, TNFRSF10B
Negative_3439	PLG, ADCY7, ATP6V1H, BCL2, BMPR2, CHSY3, CRY1, CYP1A2, EPHB3, EREG, FCGR3B, FOSL1, GALNT9, GCDH, GMPPB, IFNA4, IFT57, IL12B, MAN1A1, MAPK14, MGST2, OR10AG1, OR4K15, OR51M1, PCYT1A, PDHA1, PI4KB, PIM1, PIP4K2A, POLR2J, YARS2, ATP6V1G3
Negative_3440	C9, AASS, B4GALT3, CD82, CDKN1C, FGF3, FLAD1, HLA-C, IL25, ITGA9, NRCAM, OR5T3, PARD3, PIP4K2B, PLA2G2E, PLXNA2, PPARD, PTPN6, SLIT1, SMURF2, TIAM1, TRAF2, YWHAQ, ATP6V1E1
Negative_3441	INS, ADRB2, ARHGEF2, BCAT1, CCNA2, CD14, CFL2, CHIT1, F2RL2, FLOT2, FUT9, GBE1, LAMB3, MAP4K2, MGAM, MGST1, MKNK2, MPST, NEGR1, OR10G8, OR13C9, OR1L3, OR2AG2, OR2M4, OR51I2, OR7G1, PLCB4, PLCG1, PLXNC1, POLE2, RERE, RHOQ, RPE65, RPN2, SLC27A1, SMPD1, SORBS1, STAT1, SUV39H2, TBXA2R, TGFB3, TNFRSF18, TNFRSF6B
Negative_3442	HK3, ACVR2A, AK3L1, ALAS1, CD44, CHPF, CSAD, CYP7A1, DGKH, ENTPD5, EXTL3, LYPLA2, MCM3, MEF2C, OR52K2, ORC2L, PIK3CD, PPP2R5C, SOD1, SV2B, UNC5B, WASF3, MAP3K7IP2
Negative_3443	F11, GHR, HK2, HK3, ABI2, ACOT12, ARRB2, COQ3, CPT1A, CYBB, DHFR, DNMT3B, EPHX1, F2RL1, FASLG, GAPDH, GOSR2, GSTA2, INADL, LAMC3, LTA4H, MAOA, NEFH, NFASC, OR1A2, OR4D6, OR56A1, OR6S1, OR8K3, OR9A2, PDE4A, PIK3R2, PPM1A, PPP1CB, PRKAR2B, RFXANK, SEMA4C, SETMAR, STT3B, STX3, VAMP3, VDAC1, VTI1A, ZMAT3, HSP90AA1, SERPINE1
Negative_3444	CBS, CGN, DBI, ALDOB, ALG13, ALPL, BMP7, CTNNA2, EVI1, GADD45G, GATM, GJA1, GMPPB, IPPK, ITGA4, LIMK1, MYH7B, MYL5, OR1S1, OR52K1, OR8I2, OR8K5, PDGFD, PIK3CA, PPP3CB, RELA, STAT4, TAP2, TJP1, WBSCR22, XCL2
Negative_3445	CGA, MPI, MSN, TFG, ACADM, ALG10, APOA2, ARPC1B, CFLAR, CLDN22, CXCL9, CYP3A5, DAAM2, DEGS2, DNMT1, ENO2, EPHB1, FSHB, GNAO1, HEXA, IDH3G, KARS, LDHD, MAGI3, MYL7, NOTCH1, OCLN, OR1L4, OR2L2, OR52I2, OR52K2, OR6K6, PDK1, PIAS2, PLCB1, PNMT, POLR1D, PPP1R1A, PRIM1, RXRG, TAS2R14, TICAM1, TRAF3, UCKL1, VANGL2, ATP6VOD1, ATP6V1C1, GABARAPL1, SERPINC1
Negative_3446	IL6, ITK, SP1, ACTN1, ADRA1A, ANAPC1, ATP5J, BLVRA, CDC27, CFLAR, CHKB, CSF1, CSNK1G2, DLL1, DMGDH, EPHA7, EXTL1, GNPAT1, HLA-DOB, HMGS1, IL1B, IL2RA, ITGA7, MAP3K11, MAP4K3, MS4A2, NAT1, OR10H3, OR13C9, OR13D1, PDE6H, PPAP2B, PTDSS1, RAF1, SEMA4F, SKP2, SMARCA2, SRD5A1, SRD5A2, UMPS, WHSC1L1, WNT2, WNT8B, XCL1, YWHAQ, ATP6V1C2, HLA-DPA1, TNFRSF13C

Negative_3447	ME3, ADCY10, ATP5F1, FGD3, FUT8, GSTM3, HCST, INMT, LILRB3, MAP3K13, MAP3K7, MAPK13, NT5C1A, OR1L4, OR2G6, OR52B4, WBSR22, YOD1
Negative_3448	STS, TK1, ADCY8, ALDH1L1, ALDH7A1, BMPR1A, CLDN16, CYBB, CYP2A7, DHO DH, FMO5, GLI3, HCST, IL17B, INPP5E, NGEF, OR2L8, OR51A7, OR5H2, OR7A 17, PDHA2, PER1, PFKFB3, RGS3, STK4, TPI1, WWP1
Negative_3449	CSK, PLG, TAT, TNN, ASAH1, BUB1, CCL1, CD59, CDKN1B, CSF2RA, DLL4, DTX 3L, EPHA2, EPHB1, EPHB2, FBP1, FGF23, FLAD1, FZD5, GRIN1, HLA- G, HSP90B1, LALBA, NCKAP1, NFX1, OR1A1, OR2D3, OR52J3, PIGA, PPP2R5A , RASSF1, SOCS7, TCF7, TNFSF12, UBA7, UPP1, YOD1
Negative_3450	BTC, CKM, UBB, ACMSD, ALPL, APOA1, BUB3, C3AR1, CACNG1, CANT1, CASP10 , CBLB, CDKN2A, CD01, CHAT, CLDN17, CREB3L4, DKK2, DNMT3B, EXTL2, HAR S, INPP5B, LARS2, MAP2K1, MGAT1, NAT2, NT5C1A, NTSR1, OR10G2, OR10K1 , OR1L4, OR51T1, PDE2A, PIGV, PPP1R1A, PRKY, RUNX1, SFRP5, SMPD4, SOC S1, TGFB1, TSHB, WIF1, WNT10B, WNT3, ZFYVE16
Negative_3451	BID, CRH, NPY, SDS, TNF, AGPAT6, ASS1, CYP21A2, DDIT3, DNMT3L, ECSIT, FGD1, GALNT1, LILRB3, MAN1C1, OR10H1, OR10K1, OR9Q2, PLA2G10, PPM1B , PPP2R2C, PTGDS, SEMA3C, TOMM40
Negative_3452	LYN, ACP2, AMPD3, CACNB3, CHRM5, CLDN2, CYP1B1, GGT5, GRIN2A, GSTA5, HSPB1, LYPLA1, MNX1, MPDZ, PDE7B, PIGS, PLA2G2D, SC4MOL, STX4, TXNDC 12, CACNA2D4
Negative_3453	LPL, B3GNT4, BCKDHB, CACNG4, CAPN2, CD58, CDC42, CHSY3, COL1A1, CTLA 4, DERL1, FBP2, FBXW11, GUCY2F, ITGB8, MAD2L1, MAP2K1, NMNAT2, NPR2, PCCA, PDE4B, POLR2K, PRNP, SOS1, STAT6, SULT1A4, TAS2R8, ATP6V1G2
Negative_3454	C8G, GNE, UBB, AASS, ADRB2, ALDH4A1, B3GALT2, CCNE1, CD22, CES2, CHPF , COMT, CXCL1, CYP11A1, DARS2, DHDH, DTX3L, ENO1, GLI1, GNG12, GNP NAT 1, GRPR, ITGAM, ITGB2, KIR2DL3, KLK3, LRP5, MAPK1, MMP9, NFYC, OR5M8, PLCZ1, POLE3, PPARA, PPAT, PSEN2, PTCRA, PTGS1, RASGRP4, RXRB, RXRG, SLC25A6, SLC9A1, SRGAP3, TNFRSF13B
Negative_3455	GPT, LYN, TH, ACLY, ACMSD, B3GAT3, B4GALT1, BMP2, CAMKK2, CFTR, CLCA4 , CLDN1, DHRS4L2, DPM2, FGF7, FGF9, GAD1, GJA1, HPSE, ICAM2, IFNW1, IL 1RAP, ITGB6, LAMB1, MAP4K3, NCAM1, OR10G3, OR51F2, OR52W1, PDE9A, PH PT1, PLAU, POLR2J, POLR3H, PPP2R2A, PRKCB, RPSA, SESN1, SFRP5, SLC2A 2, STK11, WWP2, XYLB
Negative_3456	ADK, AR, TPO, ALDH4A1, ALG13, ATP12A, CDC42, COL2A1, CYSLTR2, DAAM2, DDX52, FGFR1, GALNT3, GP1BA, IL2RB, JAM3, MCM7, NFX1, NOTCH1, OR52L1 , PRKAB2, PROC, SAT1, SEMA4F, SH2D1A, TUBAL3, UROS, ATP6V1G2, PLA2G1 2B
Negative_3457	TKT, TXK, ACTN2, ADORA2B, ALDH1A2, ARHGEF1, ASIP, C7orf16, CCL21, CC L4, CD82, CLDN4, DGAT2L4, DUSP3, EFN3, FGD1, FSHB, GCLM, GNAQ, HCST, HTR7, INADL, ITGB8, LCAT, MAN1A1, MTHFD1, NKX2- 2, OR10A6, OR10T2, OR4P4, P2RX5, PDGFD, PIAS2, PPARD, PYGB, RBPJL, RG S3, RPRM, SARDH, SELL, SHMT1, SNAI1, SV2C, TSHR, UBE2L3, ATP6V0E1
Negative_3458	BAD, C2, CSK, FGG, WAS, ABI2, ATP4B, ATP5L, C1GALT1, CCL14, CDC20, CTN ND1, DDX56, EPB41, FECH, FGF9, GBE1, GCLM, GRLF1, HIBADH, IQGAP2, KIR 2DL2, LAMA4, MMP2, NCAM2, NPR2, OR2T12, OR5P2, OXCT2, POLR3B, PPP1R3 C, RDH16, SIPA1, SMPD2, STEAP3, THBD, UCP1, UPB1, YWHAQ, HLA- DQB1, HSD17B10
Negative_3459	ALDH1B1, ALPL, AQP7, BDH1, EPRS, ETS1, FUT6, GAS1, MYH2, PROC, CACNA2 D2, SERPIND1
Negative_3460	UBC, B4GALT7, CSF2RA, DNMT1, H6PD, LILRB3, MICA, NFKBIA, OR52A1, PDX P, TLR5



Negative_3461	BCR, CAD, PAH, ACOX2, CBR1, CNTN1, COL5A3, COMT, CRLS1, DDX50, DHCR7, DIAPH2, DKK1, E2F5, EFNA4, GNG12, HTR2A, IFNA16, IL28RA, JAK2, LDHA, MAP2K5, MMP1, MMP9, MPP5, MYL9, OR10H1, OR12D3, OR4C15, OR4D6, OR6C74, P2RX1, PCYT2, PDIA4, PLXNB1, POLR2K, PTPN11, RASGRP1, RDH16, RPN2, SETD7, TAP2, TAS2R7, TRDMT1, TRPC1, UROD, ATP6V1G1, C1GALT1C1, HLA-DRB4
Negative_3462	CTSL1, CYSLTR2, EFN1, FZD5, HAAO, MAP3K14, METTL2B, NANS, NCOR2, NFATC2, NRCAM, PARD6B, SMAD6, STT3B, TUBB1
Negative_3463	TFG, TNN, AADAT, ACADSB, ACSL4, ADIPOQ, AMDHD1, ANPEP, B4GALT2, CACNG5, CASP9, CCL16, CCL27, CCR8, CES1, CLTA, COL1A2, DNMT3B, ESAM, FOXA3, GLUD2, GNA11, IFNA7, IL17B, MAP2K3, MPZL1, NTF4, OR13C2, OR2A2, PDE7B, PKLR, PRODH2, PTPRZ1, PVRL4, RRM2B, SHC2, SLC2A2, TAS2R14, TUBB
Negative_3464	ABO, CDC23, CLDN18, HIBADH, LCMT1, OR10A4, OR2M3, OR6T1, PDE6H, PDE8A, PRKAA2, PTCH1, TBXAS1, TCF7L1, TUBB2B
Negative_3465	ACTG1, CDH4, CHIT1, DRD5, GLO1, HLA-DOB, INHBA, OR4K2, OR6C75, PANK2, PIK3R1, PLA2G1B, RENBP, SV2C, TAS2R1, WHSC1, WNT11, YOD1, PAFAH1B2, SERPINE1, SUV420H2
Negative_3466	CBS, GLS, AKR1A1, ARSB, CAPN2, CDIPT, CLTA, COQ7, CTLA4, CYP1B1, EDAR, ENO2, FLT3LG, FUT6, GALNTL2, GRIN2A, KIR2DL4, LEFTY1, NRCAM, OR1S2, OR51F1, OR6T1, PLCB3, PLXNB1, SCD5, WASF2
Negative_3467	PGF, CAMK2B, GNAS, OCRL, OR3A3, OR4S1, OR6F1, SESN2, TGFBR1, MAPKAPK2
Negative_3468	C4B, LTB, SMS, ACADL, ADRB2, ADRB3, AKR1A1, ASCC3, CCL4, CREB3L1, CXC4, DLAT, EDN1, EPHA8, FZR1, GALNT11, GLO1, GSTA3, HLA-F, IMPDH1, KLRC2, OR2T33, OR8J1, PDK1, PLAU, PPM1A, SMAD5, SSH1, ATP6VOA1, ATP6V1E1, MAPKAPK3
Negative_3469	PGP, AASS, ACAA1, AKR1B10, CADM1, CCL26, CRY2, DAXX, F11R, HADHA, NAGS, NCR3, NSD1, OR10A5, OR5L2, PDHA1, PLXNB2, PMAIP1, PPP2R2B, RAP1B, TPH2, CSGALNACT2
Negative_3470	ALG12, CAMK2A, CYP11A1, DPM2, OR8H1, UMPS
Negative_3471	GCK, NPY, CYSLTR2, E2F5, EFNA5, GMDS, IKBKG, OXSM, P2RX1, PHPT1, PPP1R3D, PRKACB, SLC25A6, THBS4, TRAF5, PAFAH1B1
Negative_3472	ATM, GNS, HK1, MPL, SHH, ACADS, ACTN1, ADH7, AGMAT, AOX1, CBR3, CCL16, CHST12, CPS1, CYP1A2, DUSP16, ESAM, FGF12, FUT5, GCNT4, GOT1, HLA-C, ICOSLG, IFIH1, IL17B, IL18R1, ITGA2B, ITGAE, LAMC1, MIOX, MMP2, NR4A1, NUDT5, OR10H2, OR10K1, OR5A2, OR5H2, PIP4K2A, PRSS2, PTGER3, RPS6KA2, SCD5, SOAT2, SOCS2, SUCLA2, SULT2A1, ULBP2, ATP6V1E2, TNFRSF11A
Negative_3473	LPO, CD44, CLDN20, CSNK1E, DDX47, HAO2, OR5P2, OR5T2, PARD6A, PTPRZ1, RASSF5, SDHD, SUFU, TUBA1B, UGT2B4, ST6GALNAC4, TNFRSF11B
Negative_3474	GNG13, OR10A7, OR1S2, P2RX1, PANK1, SPTLC2
Negative_3475	FAH, GSN, HGD, HYI, ANAPC5, C7orf16, CDC25C, CHPF, CLDN19, COL4A1, COL4A4, CXCL11, DAXX, DVL1, ENTPD5, FGF2, HDAC1, HMOX1, IFNA14, IL20RA, LAMC3, MADCAM1, MGST2, NRP1, OR2T4, OR5H2, OR8J3, PDK1, PFKFB4, PIK3C2B, PLA2G6, PLXNB3, POLR1E, RHOQ, RUVBL1, SLC25A4, SLC25A5, SULT2A1, SYNJ2, TYMS, VARS
Negative_3476	ASL, C6, HGF, LAT, SPN, AKT1, CD34, CLDN18, CXCR6, DDX19A, HMGCR, MLLT4, OR1L1, OSMR, PPA1, PPP1R3C, PYCRL, RPN1, ST3GAL1, UBE2L3, SERPINA5
Negative_3477	EDA, F12, OTC, TNN, VTN, ACSS2, AKT1, ALOX12, C3AR1, CCL28, CDH1, COL3A1, CYP2D6, ELK1, EP300, EVI1, FABP4, FGF23, GUCA1C, IL12RB1, INHBA, LAMC1, OR1J2, OSMR, PER3, PGK1, PI4KA, POLR2L, PSAT1, RAC1, RARS2, ROBO3, RXRB, SHMT1, SMPD4, STAT6, STMN1, UGT8, ATP6VOA2, PPP1R12A

Negative_3478	C3orf10, CHPT1, CYP2A6, IQGAP2, MCM3, OR11H1, OR52H1, OXCT2, SOAT1, STX5
Negative_3479	CPT1A, FGD3, GSTM4, ITCH, MTFMT, NEUROD1, OR9Q1, RHOA, TGFB1, ATP6V0A2
Negative_3480	CCL5, CLDN17, MITF, HSD17B12, ST6GALNAC4
Negative_3481	DBI, TNF, ADSL, ALDH3B2, ALPP, C1QC, CLDN1, CYP4A11, GPD2, MAP3K6, MAPK10, MGAT5B, NADK, NCOR1, OR1S1, OR4S1, OR51M1, PANK4, PDE7A, SNAI1, TAS2R1, UBE2K, WNT8A, SERPING1
Negative_3482	IDS, PTS, AKR1B1, AXIN2, CRHR1, DHRS9, EXT2, GNG3, HEMK1, HEXB, IFNB1, JAG1, LRAT, LTC4S, LYPLA2, NLGN3, OR10G9, OR1J1, OR6C76, OR6Q1, RARS, SEMA4C, SPRY3, UPRT, VASP, WBSCR22, HLA-DRB5, SUV420H2
Negative_3483	ASL, F9, BIRC2, COL6A2, CTBS, STX3, TLR3, MAPKAPK3
Negative_3484	F9, SRM, ALG1, ATP5H, CCKAR, CRLF2, EREG, FUT7, FZD4, GAS1, GSTM2, IFNW1, LDHAL6A, MAPK3, NCKAP1L, NFKB1, NRAS, PCK1, PIK3R3, POLR3B, PRK CZ, SETD1A, SIPA1, SNAI1, SOCS3, VARS, TNFRSF10D
Negative_3485	C7, CFH, MET, ACAT1, ALG11, AMD1, B3GALT4, BMP8A, CD58, CD86, CDC25A, CDS2, CYP2A7, DHDH, DUSP16, FBXW11, FCER1G, GALNTL4, GIT1, GSTP1, ITGA11, MCCC1, NKD1, OR10V1, OR1E2, OR52N4, OR8U1, PAX8, PDE10A, PIGN, PRKAG2, SEMA4G, SRGAP3, TAS2R4, TCF7L1, UGDH, USE1, WASL, WNT2B
Negative_3486	CP, FER, IL2, ALOX5, ANAPC2, APOC3, BACE1, BUB1B, CCL27, CD247, CDC25A, CDK2, CES1, CMPK1, CYFIP1, DAPK3, DDIT4, EXTL1, GLYCTK, INPP1, ITGA9, NFATC1, OR2A25, OR5I1, OR6Y1, PMM1, PPP3CC, PRKACA, PTTG1, SDHC, SULT1A2, TBXA2R, THBS3, TXNDC12, UPB1, XCL2, TNFRSF12A, TNFSF13B
Negative_3487	ABL1, ACOT12, ACTN2, CCL24, CCR5, CDC7, DHCR7, ERBB2, GPX5, GPX7, GUCY1A2, HRH1, KIR2DL2, LRP6, MGST3, OR6C76, PARVB, PCK2, PDE2A, SLIT2, SNAI1, TNFSF10, TUBB, XCR1
Negative_3488	CDA, CS, UBB, AGTR1, ALAD, ALCAM, ARSA, ATN1, C3AR1, C3orf10, CCL7, CMAS, CREB3L1, EFNA5, IDI2, IL10, NKX2-2, OR6Q1, PIGC, POLR2J, RBX1, STK11, TNFSF8, TYMP, ATP6V0E1, HSD17B10
Negative_3489	GPT, SRF, ACSL1, ARSB, ATP6V1D, BLNK, BMP5, CACNA1H, CAMK2A, CASP6, CCL25, EPHB1, FARS2, FPGT, GADD45A, HHIP, HSD17B1, IFNB1, MTHFR, OR10Z1, OR6F1, OXCT2, PIK3C2B, PIK3CB, RASGRP2, RPS6KA3, TBXAS1, WARS2, SERPIND1
Negative_3490	AK3, ABLIM1, ACADS, BMP8B, CDC6, CHPT1, COL6A2, CYP21A2, DAPK1, ENTPD1, FRAP1, GRIN1, GSTA2, ITGB8, MOV10L1, OR10AD1, PAK7, PGAM4, POLE2, PPA2, TD02, CSNK1A1L, HSD17B10
Negative_3491	MTR, ALDH3B2, ATG12, CACNA1S, CDKN2A, CLDN1, DHCR7, DHDDS, EHHADH, EPHA2, FGF4, GLO1, GUCA1C, LCAT, MDM4, METTL2B, MGAT1, MYL2, NAMPT, NQO1, NTNG1, NUDT12, OR10Q1, OR2A5, OR8D2, PDIA4, PKM2, POLR3A, PTDSS2, RHEB, RRM1, ST3GAL1, TGFB3, TNXB, TOLLIP, UCKL1, VTI1B, CSNK1A1L, TNFRSF13B, TNFRSF1A
Negative_3492	CAMKK1, DNMT3L, DPM3, IGF1R, NT5C3, OR1K1, OR2T3, OR7C1, PAK4, PIGL, PLCZ1, POLD2, PPP3CC, PRKAB1, SOS2
Negative_3493	FUK, ACAA2, ACO2, APOA5, ATP5A1, CHSY3, CPT2, DDX19A, DUSP3, DVL3, GNB1, GRM1, IL1R2, IL3RA, LEFTY2, MAGI2, MAP3K3, MYH10, OR10X1, PGK1, PLCD3, PMM2, PSME3, SETD7, SLC25A4, SLIT1, SMPD2, TAS2R48, TLR5, TNFSF9, TSC1, UBE2K, UGCG, HSD17B12
Negative_3494	HK3, IDS, SI, SRM, ACTN2, AGMAT, AGXT, AMDHD1, ARPC5L, AVPR1A, BMP7, BST1, CHRDL, CXCR4, EFNA3, HHEX, IDH3B, IL10RA, IL10RB, KIR2DL1, KIR2DS5, MAP3K3, MGST2, MYH2, MYH3, OR1K1, OR2A4, OR2T2, OR4F15, OR5F1, OR9K2, PHKA1, PRSS2, PTPN5, RAPGEF2, RPS6KB2, RRAS2, SNAP25, SPHK1, TACR2, ULBP2, ATP6V1E2

Negative_3495	MAX, ACMSD, ACTN2, ACVR2B, ALG9, BMP8A, C1GALT1, CARD11, CCNB1, CD226, CDK4, CLDN3, CNGA4, DDX50, DRD5, GMPA, HIP1, HMGCS2, IFNB1, KCNQ1, L1CAM, MASP1, NCKAP1, OR52A5, PDE7B, PPCDC, PSPH, SFRP2, SMAD4, SUL1A2, ULK2
Negative_3496	SYK, ENPP2, KITLG, OR10R2, OR5P3, OR7G2, ST8SIA1, TAS2R50
Negative_3497	AR, CCNE1, CD27, ENTPD3, GNMT, IFNA16, LAP3, METTL6, MTHFD1, OR52B6, OR56B4, PDE2A, PIPOX, STX1A, TPI1
Negative_3498	DAO, FES, IL2, ALOX12B, ARHGEF2, CCL7, CD19, CNGA4, ENO2, EXTL3, GFAP, GNAL, IL10, LRDD, NOX1, OR4A5, OR56A4, PAK4, PAX4, RASGRP4, SOAT2, SPTLC1, ST8SIA5, TAS2R7, UGT2B11
Negative_3499	AUH, DBT, VTN, ABLIM3, CDK7, DUSP2, ENAH, EPHB4, IDH3A, IRS1, ITGAL, OR4B1, PPM1B, TLR9
Negative_3500	CFI, ACACB, ACOX1, ACSL4, ACYP1, ADIPOQ, AGPAT2, AK3L1, AKR1C2, ARHGEF2, AXIN1, CACNA1B, CBR1, CCL21, CDC20, DNMT1, DPYS, EPHB6, F2RL3, FGF12, FLOT1, FOXO1, FZD5, GSTM1, INSR, ITGA2B, KITLG, KLRK1, LDHA, MGST2, NCOR1, OR1L1, OR52M1, OR6N2, OR7A5, PIM1, POLR1C, SOAT2, TAS2R14, TFPI, WASF3, WIF1, MAPK8IP3, ST6GALNAC4
Negative_3501	MPZ, ABLIM3, ALDOA, CACNA1C, CACNG4, COX10, DHODH, DIAPH3, E2F1, ENP6, IL21, LAMB2, MPDZ, NAT6, NQO1, NT5C1B, OR14C36, RALGDS, RARS2, TRDMT1, UGCGL1
Negative_3502	ASL, CS, MSN, ABLIM1, ACADSB, ACSL4, CCL1, CREB3, CSF3, CYP2C8, DAAM2, DDX55, DPM2, ENAH, FZD8, GARS, GSTA1, GSTT1, H6PD, HBEGF, HMGCR, HMGCS2, HRAS, IFNGR1, IGSF5, ITGA3, ITPA, LTC4S, MAP3K5, NCAM2, OR1E2, OR2M3, OR51A2, PDGFD, SHC4, SOCS4, SPRY4, ST8SIA1, STX1A, TOMM40, TSC1, TSHB, WHSC1
Negative_3503	CSK, CRKL, NLGN3, OR11L1, OR4F15, PPAP2B, RHEB, RND1
Negative_3504	BAD, CEL, ADCY9, ASPA, BCL2L1, BIRC3, BMPR2, CCL5, CDC42, CRY2, CYP11B1, CYP17A1, DDX54, FLT3LG, GGCX, GGT5, GPD1L, GUCA1C, JAK1, MMP1, MPDZ, NAT6, NRP1, OR2A4, OR2D2, OR6C4, OR9K2, PDGFA, SCLY, SDHA, STK11, VANGL1, WARS2, WNT11
Negative_3505	ACAA2, APOA5, APOE, ATP5G2, BIRC2, CACNA1G, CDC25C, CPT1B, CREB3, GPAM, HAGH, IL22RA1, LIPA, NOX1, OR7G1, OR8H1, PLXNB2, PON2, PPAT, PPP3CB, PSME3, UBE2K
Negative_3506	A2M, AK3, FES, ALAS1, ASAH1, BMP6, CSNK1E, CYP1A1, DDIT4, E2F1, FASLG, GCLM, GNA12, HLA-C, ITPKA, MKNK2, MPP5, OR4C6, PHPT1, PPP2R2D, PRDX6, RPS6, SC5DL, ST6GALNAC5
Negative_3507	AK1, GSR, LSS, APRT, ATP5G3, CHST13, CXCR6, DAPK1, DDX51, FGF21, GPD1, GRHPR, HCST, NFX1, NT5C, OR2T29, OR5AC2, PCYT2, PI4KB, PIAS2, PKMYT1, PLA2G2D, PLA2G2F, PMVK, PPP2R5D, PRNP, PVRL3, RIPK1, RPS6KA4, SEMA4D, SHC2, SULT2A1, TBXAS1, UCK1, UCP1
Negative_3508	CAD, IL6, ADH6, AGPAT2, B4GALT1, CDKN2C, DUSP1, FMO1, KIR2DL1, LAMC3, MASP2, MCCC1, NRXN3, OR10S1, OR51B6, PLA2G1B, PPP3CB, RENBP, STK3, STX7, TAS1R3, UROC1, WNT8A, PPP1R12A, TNFRSF11A
Negative_3509	OTC, SPN, AARS, AGMAT, ATIC, CCL26, CD55, CNDP1, CXCL16, DOT1L, EPHX1, GALNT1, HADH, NTRK1, PHPT1, PLCG1, PNPLA4, POLR2D, PRKCA, RPS6KB2, SLIT2, SUCLG2, SULT1A1
Negative_3510	CTH, NNT, ACSL1, CHKB, CSF3R, CYSLTR2, MCM7, OR8A1, P2RX5, PPP3R2, PRKAB1, PTPRB, TAS2R38
Negative_3511	NFKBIB, PLXNC1, TUBB6

Negative_3512	ADA, CFH, CSK, F2, FAS, ME3, PTS, SDS, ALDH9A1, ARPC2, CES2, CLDN20, CLOCK, CLTC, CXCL10, DDX41, DHDDS, DIAPH3, DLL1, ECHS1, ENTPD2, GBE1, G LUL, GNB3, HCST, IL18RAP, IL8RA, MAML1, MAPK12, MAPK13, NFKBIE, OR1A1, OR1F1, OR56A3, PARD3, PARD6G, PDE2A, PHPT1, PLXNB1, POLR2G, POLR2K, PPP3CB, UGT2A3, UNC5C, VTI1B, ZAP70
Negative_3513	FES, GP9, LCT, ADCY8, ALAS2, ALCAM, ATP4B, ATP5G2, CDK6, CRY2, CXCL3, EFN1, GALT, GNAI1, HEXA, IQGAP2, ITGB5, LEF1, NOX3, NRAS, OR14C36, OR51I1, OR6K2, PDE1A, PDGFB, PIGB, PRKCG, PRLR, RASSF1, RBX1, SKP1, UP P2, UROD, VAV2, WNT10B, PHOSPHO1, TNFRSF10C
Negative_3514	DHH, GNS, AREG, CKS1B, CSNK2B, DDX55, GRAP2, IL21R, MAP3K2, MCM5, OR51G1, ORC6L, RPSA, TACR2
Negative_3515	CRK, MTR, AGPAT6, ATP6V1A, CCR6, CXCR4, CYP2J2, DMGDH, DPYS, EHMT1, F UT1, GANC, HDAC1, HTR2B, ICAM3, IFNA5, IGSF5, IL20, INPP5B, INSRR, IT CH, KLRC4, MAP2K5, MAP4K3, MCEE, NCKAP1L, NRG2, NT5E, OR10G8, OR2A2, OR2L2, OR4X2, OR7A5, P2RX2, POLR1C, PTEN, PTGER3, PYGM, RARA, SEMA4D, SEPHS1, UAP1, UGT2B7, UPP2, VAMP4, PHOSPHO1
Negative_3516	AMY2B, BMP6, CYP3A5, IFNGR1, ITGB3, KIR3DL2, MAGI2, NOX3, OR5B3, PPI D, RPS6KB1, TGFA, TPMT, VEGFA
Negative_3517	BMP8B, CLDN6, MAP3K7
Negative_3518	CCL23, CD59, DUSP5, DVL3, E2F3, GLI1, GNRH1, MAOB, MGAT4B, NCAM2, NRG3, NTF3, OR2L2, OR4K2, OR5I1, OR5L2, PDE1C, PHKA1, PIGQ, PLAUR, POLR2B, PPP3CA, ROBO2, SDHA, SPI1, SQLE, SREBF1, SRGAP3, TYK2, UGP2, WHSC1L1, PRICKLE1
Negative_3519	CBR1, CFTR, CYP2C18, DRD1, ETNK1, GNA15, ITGB8, LAMC3, MCM4, MMP9, MY H11, NARS2, OR2A2, OR51F2, PDE4B, PIP5K1A, PTPN5, RAPGEF3, VNN1
Negative_3520	ATP5I, BPNT1, FARS2, YKT6
Negative_3521	F8, PGF, ADRA1A, ALG5, CCR7, CD36, CD40LG, CD48, CDH1, CDKN2D, COQ3, C SNK1G1, DGKB, E2F5, EPHA3, ERBB3, F13B, GALNT13, GCNT2, HTR2B, IL13, IRS2, ITGAM, KNG1, LEFTY2, LIAS, MARS, NRCAM, OR12D3, OR5AK2, OR8B8, OR8D1, PDE11A, PDE7B, PLOD3, PLXNB1, SLIT2, STX12, TAS2R60, UNC5D, V AMP3, VTI1B, PRICKLE2
Negative_3522	INS, FOXO3, MAP3K12, MKNK1, NCSTN, PHKA1, SLC2A2, SMARCA2, TBXA2R, TUBA3C
Negative_3523	ACSL4, ASAH1, CCR4, DARS2, DLL3, FZRI, NEGR1, OR1L6
Negative_3524	OGDH, OR4Q3, RARS2, RPS6
Negative_3525	ILK, TNN, ACAT2, ACHE, ACSL5, AGTR1, APH1A, ATP5G3, CCL5, CDIPT, CHIT1, DLL3, DRD1, EDNRB, HSD17B3, IL6R, IMPDH1, LCP2, MAML2, METTL2B, METTL6, NPR2, OR10A4, OR11A1, OR6K2, OR7C1, OR8B8, P2RX6, PDK1, PER2, P GK2, PIGC, RAF1, SETMAR, STAT1, STAT2, SUV39H1, TAS2R5, TJP1, TYMS, H LA-DRB3
Negative_3526	PDC, ATIC, ATP4A, BIRC5, CD70, CD80, CEBPA, CPT1C, CXXC4, CYP17A1, FG F2, FOXO3, GCNT2, GSTM2, IGSF5, IL17A, LAP3, MCM3, MITF, NLGN1, NRP1, NRXN1, OR10G4, OR10H1, OR1L6, OR2T33, OR2T5, OR4P4, OR6B2, PIK3C2B, SDHB, SHC3, SIAH1, SMARCA2, TAS1R3, TLR5, TNFSF12, UGP2, ULK1
Negative_3527	CD2, AKR1B1, ARRB1, ARRB2, ATP5H, BDH2, BUB1B, CACNB1, COL4A6, DGKG, DHDDS, ENTPD5, OR2C1, PLCD4, PTPRJ, RASGRP4, ROBO1, TLR9, VDAC2, WAS F3
Negative_3528	ACTN4, AKR1C3, ATP5I, ATP6AP1, B4GALT5, C1QA, CD14, CD27, CD79B, CYP27A1, CYP2D6, DHODH, DTX3L, ENPP2, ENPP6, FABP3, FASN, FMO1, FMO5, FP GT, GALE, GRAP2, HSD3B7, IGFBP3, IL20RB, IL21R, ITGA3, JAM2, MAP4K2, MGAT4A, MTHFR, MYH9, NCF4, NTF4, OR1A2, OR1J2, OR4K15, OR52I2, OR6Q1, PIGP, SDC3, UGT2B10, WNT7B, HLA-DPB1, ST6GALNAC5

Negative_3529	C5, F2R, HK2, JUP, BET1L, CD19, CDH1, CES1, CNTF, DPAGT1, ENO3, EXT2, FGF13, GSTO2, HSD17B1, LYPLA2, MOV10L1, MTMR2, MYL5, MYL9, NEU4, OR13C4, OR13C5, OR1J2, OR1S2, OR51G1, OR52E8, OR6K6, OR8D4, PFKP, PORCN, PPP2R1B, PPP2R5A, PPP3CA, PRKAR2B, SPAM1, UPP2
Negative_3530	LRAT, OR14A16, POLR2C, SELL
Negative_3531	IL6, ACOT11, CACNG2, EHHADH, FUT5, GALC, GRIN2D, INPP5A, KYNU, LRDD, MYH1, NFKBIA, OR2T29, OR2T33, OR5D13, OR5K2, OR9A4, OXCT1, PRKAR1A, SLC2A4, TNXB, UCKL1, UGT2B11, WNT3
Negative_3532	ADIPOR2, ALG5, CD28, CDC42, HSPB1, NRG1, NT5C1A, TAS2R60
Negative_3533	CRH, OAT, ALDH1L1, B3GAT2, CD79B, CTNND1, DGKG, FGF6, GRPR, IDI1, ITC H, MGAT4B, NLGN3, OR2AG1, OR52E8, OR5D13, PDCD1, PROC, SCLY
Negative_3534	BCR, ACADS, ATP5H, BIRC2, CTTN, GMDS, GZMA, IL12B, KAT2B, MAP4K2, NCS TN, OR13D1, OR9G4, ST3GAL2, STX10, TBXAS1, TLR3
Negative_3535	ACP1, ADRBK2, ANAPC10, AVPR1A, C1QC, CACNG4, CCR10, CDC20, CDH3, COX10, CPS1, CYP4F3, DGAT1, GMDS, HLA-DRA, HLA-F, IL20RA, IRS1, MAGI3, MCM4, MRAS, NCKAP1, NSD1, OR10G2, OR11H4, OR2A12, OR51B6, OR52A1, ORC1L, PECAM1, PIGN, PIK3CB, PNPO, PRKAB2, RAC2, RAP1A, SGMS2, SHC1, ST3GAL3, SULT1E1, UGT2B11, YWHAZ, MAPKAPK3, ST6GALNAC3
Negative_3536	ACSM2A, ADRB3, ANAPC4, CACNA1D, CACNG5, CHSY3, CYBA, CYCS, CYP3A7, DBF4, EPOR, G6PC2, HCCS, METTL6, OR1J2, OR56B4, PAK7, PIK3R5, PLTP, PRKAR2A, PVRL3, RPS6KA6, SDC1, SEMA3F, SMAD6, SRGAP2, ST3GAL6, STAT3, TAS2R16, TRMT11, UCKL1, ULBP1, ZIC2
Negative_3537	DBH, LSS, ME2, OSM, RET, SHH, AANAT, ACSL6, ACTB, ADAM10, CAMKK1, CAV1, CD27, CSF2, CTF1, CX3CR1, CXCL2, CYP4F2, DGUOK, EFNA4, FGF8, GRIN1, HLA-DMA, IL13RA2, ITGA3, KIR3DL2, MAGI3, MASP1, NFYA, OR2T6, PANK3, PHKA1, PLXNC1, PPCS, PTPRM, RAF1, STK36, TAS2R1, TJP3, TNFSF10, TRPC1, TUBA1C, UPP2, VARS, WWP1, ZAP70
Negative_3538	EZR, FER, MAG, ACP6, ALCAM, ARRB1, C3orf10, DEGS1, EDA2R, FASN, FGFR1, FLAD1, FTMT, GRAP2, HMGCR, HMOX2, HSPA8, ITPK1, MMP14, NCK2, OR51S1, PDE8A, POLR2A, PRKG1, PYCRL, SAT1, SEMA3D, SKIV2L2, SMAD1, SNAI1, STMN1, TICAM2, TP53, HSD17B12
Negative_3539	DCC, GNS, LAT, ALG13, ARD1A, ATP50, CD48, CD86, CDH5, CLCA4, CNGB1, DC TN1, DGAT2L4, HLA-DOA, IL21R, ITGA9, KARS, KCNB1, MGAT4B, NKX2-2, OR2A4, OR4C13, PPP2R2A, PPP3CA, PRKCI, PSME3, RDH5, STK36, SULT2B1, UGCGL1, WNT3, PHOSPHO1
Negative_3540	TYR, ACSM3, ADH4, AGRP, AKR1C1, ATG12, B4GALT5, C1QA, CACNA1B, CAMK2B, CCNE2, CD70, CDC2, CLDN19, CSH1, CXCR5, CYP4F2, DAPK2, DOCK1, DUSP4, E2F1, EPHA3, G6PD, ITGB1, LARS2, MAP3K6, MDM2, MYH14, NLGN1, OR2M5, OR6B3, OR8D1, ORC4L, PDX1, PHKG2, PORCN, SH3BP2, SSH2, TNFRSF10B
Negative_3541	OR10C1, OR13A1, OR4E2, PDE7A, PFN4
Negative_3542	ACSL4, ARNT2, CHUK, CLTB, EPHA1, EXTL3, GSTZ1, IDH3A, IL1R2, JAM2, NCAM1, NCOA4, NFATC4, NUDT12, PARD6G, PDXK, PIP5K1C, PITX2, POLR1B, PTPN7, RBKS, SEMA3A, SEMA4B, SLC2A1, SRGAP1, SSX2IP, STAT1, TAS2R13, TAS2R4, TBXAS1, TLR3, TUBB4, UROD, VAMP4, HLA-DPB1
Negative_3543	DUT, NF1, AMHR2, BBOX1, BMP8A, CCL15, CD40LG, CDH15, CDKN2A, CLDN1, COL6A2, CPT1C, CSNK1G2, CYP2A13, GMPR, GSTM2, HLA-C, ICOSLG, IFNA4, IL22RA2, IRS2, KLRK1, LIFR, MAP3K11, MGAT5, NEU3, NRXN3, OR10H1, OR10Q1, OR1L1, OR7D4, PCK2, PDE4D, PRODH, PTAFR, ZNRD1, PAFAH1B1

Negative_3544	LCK, LEP, LSS, ABLIM3, BMPR1A, CACNA1B, CCNA2, CD48, CLDN5, CNGB1, COL4A2, COQ6, CREB3L2, CXCR3, EPHX2, EXOC7, FLT4, GNRH1, HMGCS2, IL1A, NRG2, OR2T34, OR4D9, OR51S1, ORC6L, P4HA1, PECAM1, PLAT, POLD1, PPM1B, PRKAG2, PTPRM, RUNX1, SULT1E1, TBK1, TNFSF12, WNT5A, ATP6VOA4, PAFAH1B3, SERPIND1, TNFRSF10B, TNFRSF10D
Negative_3545	C4B, SMS, ACACB, CAV3, CTNNA1, EPHB1, FGD3, GCNT2, GNG3, IL28RA, MAPK14, MGST1, OR1A1, OR51Q1, OR5F1, PDIA4, PTGES2, PLA2G12B
Negative_3546	GMPR, GNAQ, HES1, LIMK1, MGAT3, NCAM1, PFAS, PHGDH
Negative_3547	GLS, HAL, HGD, MVD, RDX, TKT, ACAA2, ALOX15B, AOC2, ARPC5, BPGM, CAV1, CCL15, CRLF2, CYP2A7, DTX3L, ENPP1, EPHA4, EPHX1, FLOT1, FLT3, FOXO3, GALNT14, GFAP, GLI3, GRIN2B, HIF1A, IBSP, IDI1, IL7R, INSR, KYNU, MAPK12, NEUROD1, OR2T1, OR8I2, PIP5K1C, ROCK1, SEMA4D, SLC27A1, STAT3, TAS2R42, TUBB4, WNT7A, MAP3K7IP2
Negative_3548	IL9, MPL, SI, VTN, ADRA1A, AKT1, ALG12, ARG2, ARRB2, AVPR1A, BAI1, CACNA1E, CACNG3, CADM1, CERK, COASY, CREB3L2, CREB5, CSNK1A1, DRD1, DRD5, GLUD1, GOT2, HDAC1, HNF1A, IFNA5, IL22, ITGB7, LTBR, OR4N5, OR51I1, OR5R1, PIK3CB, PIP5K3, POLD1, POLR2J, PTPN1, RFXAP, STAT5B, TBK1, ULBP1, WNT3, ATP6V1B1
Negative_3549	FST, PAH, AGTR1, ALG5, B3GNT3, B4GALT2, B4GALT7, BCMO1, CACNG6, CASP6, CCL19, CHR1, E2F5, ETNK2, FMO3, FRAT2, HAGHL, HPSE, MMP9, MYH9, NMT, OR4F4, OR4K14, OR5V1, PLXNA3, PMVK, POLR3D, SEMA3D, TGFA, TJP2, TLR2, UGT2B7, VAMP3, WNT7B, MAPKAPK2, PPARGC1A
Negative_3550	IMPDH1, LDHB, MAP3K6, PRPS2, TAS2R4, YWHAE
Negative_3551	PTS, SI, B3GNT3, BAAT, CDK4, GBA3, GGCX, GNA13, GUCA1C, IL1RAP, OR52L1, P2RX1, PLAUR, POLD1, PRDX6, PRPS2, PTCH1, SEMA4G, SMPD1, ST3GAL4, STAT4, TUBB4Q, YWHAE, ZIC2
Negative_3552	ADH6, IDUA, IL18R1, PMM1, STX6
Negative_3553	AKT1, ALG10B, CNGA3, GABARAP, IDH2, IL1A, INMT, OR51E2, PARVB, TLR5
Negative_3554	F12, AKR1C2, APBB1, GMPBB, MAGI2, SEMA4D
Negative_3555	RB1, ASMT, CDC6, CDK4, DBF4, EPHB3, FDPS, FZR1, GNRH2, GUCA1B, HTR2C, IFNB1, IL1R2, OR9I1, PCK2, PTPMT1, SMPD1, STX2, TPMT
Negative_3556	CRH, IL2, ACSL3, ADCY3, ALG10, ARHGEF7, CRLF2, CXCR3, CYP4A11, GALNT2, GRIN2C, GSTM3, IDH1, OR10A3, OR2V2, OR51B5, OR5AS1, OR9Q2, ORC2L, PDE3A, PFN3, SEMA3F, SEMA4B, SH2D2A, SMARCA2, TGFA, TPM3, USE1
Negative_3557	GPT, SI, TFG, ACADL, ACMSD, ACSM2A, ALDH1B1, ALOX12, APLP1, C1GALT1, CD72, CDC20, CYP26A1, CYP26B1, DPM3, GPD1, HMGCS1, IDH2, IFNA4, NOS3, NOX1, NR5A2, OR2B6, OR2L8, OR4A15, OR4C15, OR7G2, PANK4, PDE1B, PHT1, SOAT1, SORD, SPAM1, ATP6V1G1
Negative_3558	DAO, HDC, SMS, ACSL3, ADIPOR1, BRAF, CALML5, FGF14, FRAP1, FZD5, HAO1, HLA-DOB, IRAK4, LHCGR, MLYCD, NTF3, OR8J3, PAK1, PDE1B, PDE7B, PIAS2, RUNX1, SORBS1, ST3GAL1, UCK2, PAFAH1B2
Negative_3559	CASP7, FOXA2, GALNT8, GUCA1A, OR9Q1, CSNK1A1L
Negative_3560	A2M, BTC, DDC, F2, KMO, NPY, ACTN4, CASK, CHUK, CNGB1, CPT1C, CSF2, CSNK1E, CYFIP1, DCXR, DDX52, DKK4, DPM1, EPHA8, FGF7, FSHB, FZD7, HSD17B1, LYZL1, MAOA, MGST1, MKNK1, MMP7, MYD88, MYH13, NAGS, OR14J1, OR52B4, OR56A1, OR5C1, OR6Y1, PFN1, PHPT1, PLCB1, PRPS1, SOCS4, THTPA, WNT7B, YES1, MAPK8IP1
Negative_3561	GGH, MTR, AGPAT2, AKR1C1, ALG9, CADM1, CLDN20, DDX41, EGFR, HMOX1, MMP2, MYL9, NAE1, NME2, NMNAT3, NOTCH1, NRG4, OR10S1, OR4E2, OR4N2, PGK1, PIGQ, PKMYT1, POLR3H, PPP3CB, PPP5C, RBKS, SHC4, STAM2, TPMT, TUBB2B
Negative_3562	ADSS, ALG6, ANAPC7, GUCY2C, KRAS, OR1D5, PIK3R5, PTPMT1, SMARCA5, UCKL1, ULBP3

Negative_3563	GSN, ID1, TYR, BCAT2, CACNB4, CD44, CD8A, CDH1, CDKN1B, COMT, CRY2, CY P1A1, DGKQ, DNMT1, EPHA4, EPHB1, FAPB4, FTCD, GAL3ST1, GBA3, GCNT2, G JD2, GNG12, IFNA2, IL1B, LAMA3, LEFTY1, MCEE, NR4A1, OR10G7, OR1E2, O R1M1, OR5M3, P2RX4, PFKFB1, PFN4, PLA2G1B, POLR2D, PPP1R3A, RASGRP1 , RFXANK, ROB01, SDC4, SULT2B1, TUBA4A, TYROBP, VEGFC, ATP6V1G3
Negative_3564	ABO, CP, DCT, F8, IL8, KDR, PXN, SRF, ALCAM, ALG2, ARG2, ATP50, B4GALT3 , BIRC2, CHAT, COX10, DDOST, DDX41, DLL4, ELK4, ENTPD3, FGF22, GAD2, G NAQ, HBEGF, LRAT, NOS1, NRCAM, OR2T33, OR4D1, OR7A17, PPAT, PPBP, PPP 3R1, PSAT1, PTAFR, PTK2B, SLC25A4, ST3GAL2, ZBTB16, SLC25A31
Negative_3565	CTH, HGD, HK2, PAH, ACO2, ADRB2, AMDHD1, ANAPC5, BMP6, BNIP1, CBR3, CC ND2, CCR6, CSF2, CXCR6, DGAT2L4, ERBB2, FUT2, GCNT3, IPPK, LDHAL6A, L DHAL6B, LDHC, MGAT5B, OR2C3, OR2D2, OR4C6, OR5A2, OR5L2, OR6C76, OR9 K2, PAK3, PAPSS2, PFAS, PIGW, PLOD1, PPP3CC, PYGL, RASA1, RUVBL1, SMA RCA2, SMPD3, ST8SIA1
Negative_3566	AUH, CCL2, IRF7, MOV10L1, PDGFA, PISD, TACR3, PDCD1LG2
Negative_3567	GK2, DAD1, GZMB, IFNA8, MYH7, NRAS, OR2T29, OR4D5, OR6K6, OR8D2, PIAS 1, PRODH2, SOCS4
Negative_3568	MOS, ACTN2, ADRBK2, ALDH6A1, ALG6, AMDHD1, ARHGEF4, BBC3, CADM3, CFT R, CHIT1, CKMT2, CLDN8, CTS1, DAPK2, DHCR7, EGLN1, GAD1, GNPAT1, GP X5, IDH3A, IL18, JAK1, MAGI1, MTFMT, OR13C3, OR4K17, OR4Q3, OR52E4, O R5D18, OR5L1, OR8J1, PDE11A, PIK3C3, PRKCA, PTK2, PVRL1, SDHD, SEMA4 B, SV2A, TAS1R2, TOLLIP, TPH1, UCK1, WASF2, ATP6V1G1, TNFRSF14
Negative_3569	BAD, CD6, GSR, ACP6, ALDH6A1, BUB3, CCL14, CCL3, CTBP2, DCTN1, EFNA2, EPHA3, FLT3LG, GALK2, GNRHR, IGSF5, IRS1, OR2D3, OR5T1, PLA2G2A, PLA 2G4A, PRKACB, PTPRR, PVRL1, PYGB, SCIN, SULT2A1, THTPA, TSHR, PHOSPH O1
Negative_3570	ACADM, CHPT1, CYCS, FOSL1, HEXB, MAPK7, MGAT5B, OR2Z1, RPS6KB2, TRPC 1
Negative_3571	ALPI, ATP5D, CCR8, CD70, CD8A, CLDN4, CREB3L3, FGF2, FGF9, FOXA3, FPG T, GADD45B, GALNT6, GLUD2, GNG12, GPT2, HARS2, HPSE2, HSD11B1, IDH2, IPMK, MAML3, MAP3K1, MKNK2, OR2F1, OR2M5, OR2T2, OR5T1, OR6X1, OXSM, PDXP, PECAM1, PIK3R3, PTPN1, RAP1B, RXRB, SEMA7A, SMAD7, SREBF1, TKT L1, TPH2, UGT2B10, WNT10B
Negative_3572	CTPS, PDHB, UGT2B28
Negative_3573	SMO, ATP6VOC, AVPRIA, C4BPB, CACNA1D, CASP8, CCL8, CCR8, CD27, CDC23 , CTBP1, CXCL12, DDX19A, DDX52, DIAPH2, ETNK2, FGF7, FOXO3, GMPS, GST M3, GUCA1C, IFNA13, MAP2K1, MKNK2, NRG3, NT5C, NUDT9, OR2A25, OR2T6, OR5P3, OR6Y1, ORC2L, PCYT2, PFKM, PIGF, POLR1A, PRPH, PTGS1, RAC3, SH 2D1A, SMARCA2, STAT1, TACR3, UCK1, TNFRSF1B
Negative_3574	FYN, IL5, SCD, SRM, ASNS, ATP5B, CAPN2, CCNH, CD59, CDK5, COL4A4, CYFI P1, GADD45B, GALT, GLUD1, GSTT1, HLA- DOA, ITGA3, ITGB3, JAM2, MAP2K7, NCAM1, NR5A2, OR3A1, OR4C11, OR52W1 , PCCB, PDHA2, PIK3C2B, PLCG1, POLD3, POLR2K, PTGES, RDH8, SMARCA2, S MURF1, SPRY3, TAS2R7, TCF7L1, TRHR, WWP1, ATP6V1C2, CTNNBIP1, SERPI NB5
Negative_3575	AK5, ACO1, ATP5D, LIPG, OR4F17, OR51B4, PPP2R5B, TJP3
Negative_3576	AK1, CKM, FAH, ACSL3, ADH7, ANAPC7, B3GALT5, BCKDHB, BCL2L1, CACNA1C , CBR3, CCNE2, CLDN2, CRLS1, FLOT1, FUT2, HAP1, HMGS2, IKBKG, IL12RB 1, IL21R, IL28RA, LAP3, LTC4S, NFX1, OR1E1, OR2T10, OR2T33, OR4K1, OR 8K3, OR8K5, OXTR, PDPK1, PLA2G1B, PLA2G4A, PTGES, PTPN1, PVRL2, RND1 , SOAT2, STX5, TAS2R4, TUBA1A, ULBP2, SERPINE1

Negative_3577	ID2, INS, ALG12, ALPI, APBB1, ATP5G3, CARS, CLDN18, CREB5, CSAD, CYP11B1, DOLPP1, EDAR, FGF19, GAS1, HSD11B1, IL11RA, INPP5E, KCNB1, LYPLA2, LYZL1, NRAS, OR13C4, OR1F1, OR4C6, OR5A51, OR5D16, OR6T1, POLR1D, SLC2A4, SERPINE1
Negative_3578	C6, DBH, ADRBK2, AKR1B10, ALDOB, ALG13, ARHGEF6, BDKRB1, CCL21, CCR2, CHAD, COL4A6, CRKL, CYP26A1, CYP2A13, EPRS, FGF21, GLUD1, GOT1, GPA1, GPX7, GSTA3, ICOSLG, IDUA, IL2RG, IRAK4, NOS3, OR10H4, OR2C3, OR4L1, OXSM, PAK2, PPAP2B, PPM1D, PTGIS, RFX5, RFXANK, ROCK1, RPS6KA3, RPS6KA5, SNAP25, THTPA, HLA-DRB4
Negative_3579	IHH, ACAA2, FGF13, OR4D6
Negative_3580	DCC, CD27, IFNA21, NPR1, OR2A42, PPARD
Negative_3581	AK5, DLD, GAA, LCT, CXCL6, DUSP10, FUT9, GRIA1, OR5D13, OR5P3, PER3, PFN1, PHPT1, PTGDS, SNAP25, SV2B, UGCG, ULBP1, UNC5A, AASDHPPT
Negative_3582	CAT, NF1, SPN, TH, ADCY5, ADCY7, AMDHD2, ARPC1B, ATP2A3, CD55, CDKN2A, CYFIP1, DGKH, DHDDS, FABP3, GSTZ1, INPP5B, ITGB8, KIR2DL3, LHCGR, NCF4, NRG2, OR4C16, OR56A1, OR8H1, PANK2, PHPT1, PYCR1, SDC1, SULT1E1, SV2A, TGFBR2
Negative_3583	PXN, WAS, CCDC6, COL5A1, GSTP1, HHIP, IFNA14, MAPK10, MOV10L1, OR3A2, OR4N4, SKP2, SMAD5, UPP2, TNFRSF10C
Negative_3584	DBH, OGT, AARS2, ABAT, ALAS2, ATP5F1, CACNA1A, CACNA1I, CACNG3, CCL27, CCL8, CDK2, CMAS, DUSP3, FSHR, GFPT1, GNB1, KLRD1, LHCGR, MAPK7, MITF, NEFH, OGDHL, OR13C4, OR51B2, OR6N1, ORC5L, PGM1, PLA2G2A, PLAT, PLTP, PRKCG, PRKCI, SC4MOL, SLC25A5, SLC2A4, SMPD1, SORBS1, TUBB6, UBA7, UGT2A3, VKORC1, KIR2DL5A, MAPK8IP2
Negative_3585	CGN, ALDH3A1, ATIC, B4GALT6, BBOX1, BIRC3, BMPR1A, CACNA1S, DCTD, DGUOK, FMO3, GNB1, INPP4A, MYH9, NCOR2, ODC1, OR4L1, OR5AK2, OR9G1, PDE4C, PDE7B, PFKFB2, PIP4K2A, PLA2G2D, POLR2H, PRKCA, PSME2, PTGES, RPE65, SDHB, SLC2A4, THTPA, UGT2B10, CSNK1A1L
Negative_3586	HGD, NPY, ACO2, ADH1A, BAIAP2, BMP2, CD48, COL6A2, CRY1, CTSG, CYP2C19, CYP2C9, DRD5, HAGH, HEXB, IFNB1, INPP1, KLRC3, LRP6, MTHFD2, MTMR1, OR10G7, OR1A2, OR1D2, OR2T4, OR7A5, RDH16, SETDB2, UGT2A1, SLC25A31
Negative_3587	CD2, CSK, DDO, IL2, ACACA, ACO1, ACYP2, ALG10B, AMPD1, AMPD3, ARD1A, CBLB, CCL13, CCNB2, CCNE1, CNDP1, COL5A1, COMT, CSF1, CXCL12, EP300, FARP2, FGF7, HMGCS1, IL21R, ITPA, MTHFD2, NSDHL, OR13C5, OR51L1, OR5AR1, PAX8, PLCD3, PLOD2, POLR3D, PTPN1, RCHY1, SELL, SPRY2, SPTLC2, TAS2R7, TPMT, TRAF4
Negative_3588	MVK, TFG, ARHGEF4, CYFIP1, GBGT1, ITGA6, MGAT5B, NAGK, NOTCH2, PFN3, PLD2, TRAF4
Negative_3589	ATN1, ATP12A, ATP5G1, CPS1, LIPE, NAMPT, NKX2-2, RPS6KA5
Negative_3590	GLS, NOG, PC, STS, TK2, AARS, ABCC8, ACMSD, ACSL4, BCMO1, CACNG2, CCR10, CDC26, CDC45L, CHAT, CLCA2, CNTN2, EXT1, FECH, FPGS, GRIA3, HIP1, IDH3B, KIR3DL3, MAPK10, MYH9, OR10A2, OR2H2, OR4N5, OR6X1, OR8K3, PARVA, PGAP1, PPP2R5A, PRKY, PYCR1, RRM2, SDHD, SLC27A4, SPI1, SPTLC1, UNC5A, VKORC1, C1GALT1C1
Negative_3591	ACYP1, B3GALT4, BCL2L1, GFPT2, MLLT4, NCF4, OR5J2, PKMYT1, TOMM40L, UGP2
Negative_3592	FOS, ACP6, CACNB4, CAV2, CNTN2, CREB5, CTLA4, CYP2C18, EPHA2, GALNT12, GUSB, MAD1L1, OCLN, OR2D2, OR2T33, PPT1, RRM2B, UGT1A10
Negative_3593	CD58, NEU1, POLR3A
Negative_3594	C5, ACSS2, ARNT, CCR3, CDC14B, CHDH, CNGA4, COL4A1, CYP26B1, CYP2S1, DIAPH2, DKK2, DNMT1, HSPA2, NARS2, OR4F17, P2RX1, PDE11A, PRODH2, PTGIS, TAS2R50, TUBB3



Negative_3595	BAX, KHK, ACADSB, ARRB1, B3GALT2, CASP3, CASP7, CCL22, CHUK, CKS1B, D HDDS, EPHA7, FUT6, GPD2, GRIN2D, GRM1, GSTP1, HSP90B1, HSPA2, IL11, I TGB4, ITPK1, MAOA, MARS, MMP1, MYH15, NAMPT, NKD2, NLGN1, NLGN3, NME4 , NOTCH2, OR1L6, OR2A42, OR52N1, OR5AK2, OR5R1, PARVG, PGK1, PRKAR2B , PVRL1, RCHY1, RRM2B, RXRB, SDHA, SETD7, SMAD2, ST6GALNAC3
Negative_3596	CFLAR, GBGT1, GPD1L, GSTM4, P4HA3, PRNP, TNFRSF11B
Negative_3597	BTC, PRL, AANAT, ADH1B, ADRA1A, ANGPTL4, CDKN2A, COL5A2, DUSP2, DVL2 , GGT6, GSTT1, IDUA, IFNA14, ITGAL, LALBA, MCEE, MCM6, NRG4, OR2G3, PA X8, PERP, PIP5K1B, PLXNA1, POLA1, PPAP2B, PRKAA2, PRKG2, RPS6KB1, ST AT2, TGFB2, TLN2, WNT9A
Negative_3598	BTK, FGB, PGF, ACSM1, ARSD, CCL21, CSAD, CSH1, CYP19A1, DDIT4, DGKB, G GPS1, GNA13, ITGAM, LGMN, NEUROG3, NUDT9, OR10J3, OR13J1, OR3A2, OR5 1B6, PANK3, PDGFRA, PKLR, PTGER3, RAC2, RASSF1, STK4, ULBP2, VTI1A, W ASF2
Negative_3599	CACNA1I, IL17RA, OR10H3, OR7D2
Negative_3600	CD2, IL5, ACP1, ANAPC11, ASIP, BMPR1B, CALML6, CCL28, COL4A6, COQ5, C TNN2, ERBB4, GFAP, IQGAP2, MYH13, OR2A14, OR2T29, OR51B5, OR5AU1, O R5B3, OR5D13, OR8B12, OR9A2, PNMT, PPP2R5D, PRKAG1, SEMA4C, SH3BP2, ST3GAL3, UROS, ZBTB16, ZNRD1
Negative_3601	LPL, MPI, NGF, NLK, ABI2, ACADVL, ALDOC, BPGM, CACNG2, CLDN18, CSF1R, DKK4, DTX4, DUSP1, FUT4, GARS, GLI1, GOT1, GPD2, GUCY1B3, HMGCR, HSD1 7B1, MYH13, NFYB, NFYC, NR5A2, NUDT12, OR10A5, OR13J1, OR51E1, OR8S1 , PAICS, PDE6G, PER2, PGM2, PIGV, PIK3C2G, PIP4K2B, POLR2K, PRLR, PTP N6, RFNG, RXRG, SOCS1, SRD5A2, UGT2B11, UGT2B7
Negative_3602	SFN, ABL2, ACLY, ADH6, CDIPT, CNTN2, DTX3, F2RL2, FOXA3, GALNT6, IFNA 8, KIR2DL1, MTHFD1, OR52D1, OR52E6, SENP2, SGMS1, HLA-DRB4
Negative_3603	OR10G4, OR2B2, TNFRSF10B
Negative_3604	ASL, GK, GPI, SDS, AHCYL2, APOA2, ATP6VOC, BIRC2, CACNG6, CCL1, CCL21 , CHIT1, CNGA4, CYP11A1, DUSP5, EARS2, EFNA3, ESAM, FSHR, GNPDA2, GST M3, GUCA1B, HCCS, IFNA10, IL1R1, ITGAX, LAMB1, MGAM, MYD88, NCAM1, NM NAT2, OR10A4, OR52N1, OR52N4, OR56B4, OR5AP2, OR5L2, OR7G1, PARS2, P LAU, POLR2D, PPARD, SKIV2L2, SLC33A1, TSLP, VEGFA
Negative_3605	ACTG2, ACYP1, E2F5, ENO1, FASLG, MOV10L1, NUDT8, OR52R1, OR9I1, TUBB , PNLIPRP1
Negative_3606	DBI, PGF, TEC, ARSB, CD8A, DDX23, DUSP14, EGFR, ESAM, FOXO1, HEXA, HRH 2, HSD17B1, IL1R1, IQGAP3, LALBA, MASP2, MKNK1, NUMB, OR3A3, OR51D1, OR9G4, PHGDH, PKMYT1, SMAD6, SRD5A1, ATP6V1B2
Negative_3607	AGK, GSN, ACTG1, AKR1C2, ARRB2, BPGM, CD244, CRLF2, CXCR6, DIAPH2, DP AGT1, EPB41L1, FADS2, GRLF1, HAGH, IL15, MGAT5B, NAGA, NAGS, PFAS, PI GP, PLAUR, PON3, PVRL4, RENBP, SQLE, STX12, TJP3, UAP1, UBE2K, VNN1, W NT11, B3GALNT1, SERPINB5
Negative_3608	IDS, NPL, ADCY10, ALOX12, ALOX15, ATP2A2, BMPR1B, CCNE2, CYCS, EFNB2 , FLAD1, GLUL, GSTM3, IL1A, LIMK2, MAP2K1, MYH2, NUDT8, OGDHL, OR8H1, OR8K5, PIM2, PVRL2, RALBP1, ROBO3, SORD, SULT1A1, TAS1R1, TSTA3, TUB A1C, XCR1, PLA2G12A, SERPINA5
Negative_3609	ANAPC7, ATF2, ATN1, ATP5I, B3GALT1, BLNK, CCNA2, CCNH, CCR4, CCR6, CH RNA7, CYFIP1, CYP7A1, EPHX2, FDPS, GADD45A, GCH1, GNPAT1, GRAP2, IN PPL1, KCNQ1, LAMC1, LILRB3, MAPK14, MAPK7, MNX1, NAT1, OR10T2, OR2A2 , OR56A3, OR5D18, OR6C2, PARD6G, PCYT1B, PIPOX, PLCE1, PRKAR2A, PRKC A, RASA1, RXRA, SLC2A1, SMAD6, STX16, SUCLG2, TAS2R13, WNT16, WNT5A, CSGALNACT1, SERPINC1

Negative_3610	CFI, MPI, MSN, ADH6, ALG13, B3GNT4, CCNE2, CCR6, CHAD, COL4A1, CXCL11, DUSP10, GAD2, GOT1, HMBS, IL17B, IL1RAP, MYL2, NAE1, OR5D13, OR5L1, P4HA2, PARD3, PARS2, PDE8A, PDGFC, POLR2I, PRKCG, SDC1, SHMT2, STAM, TAS2R40, UNC5B, VKORC1, WNT5A, SERPING1
Negative_3611	PGP, ABCC8, ARPC2, ATP5B, B3GNT3, BCAT1, C3AR1, CACNA1C, CHEK1, CHST11, ERBB2, FARS2, FBP2, FSHR, GUCY2F, HDAC2, HLA-G, OR7A10, PCYT1A, PFKFB3, PPT1, PTPRJ, PVRL3, ST3GAL5, TUBB2C, VEGFB
Negative_3612	NGF, ALDOA, COL6A1, FUT8, IRAK2, OR4Q3, TAS2R60
Negative_3613	BMP4, CLOCK, CYP3A43, FOXO3, GGCX, OR3A3, OSMR
Negative_3614	CD2, DCK, FGA, FST, ACOT12, ACOX1, ADORA2B, ATP5A1, CCR1, CD79B, CHRNA7, DRD1, EDA2R, EDN1, EPHA2, FRAT2, FUT6, GNPAT1, GNRHR, GOSR2, HTR2A, IDH2, ITGB3, LIPC, MALT1, MMP2, NCK1, OR13A1, OR1J4, OR2H2, OR8K3, PAK4, PDE3B, PGAM2, PTPRF, SELL, SH3BP2, SLC2A2, SMC1B, SOCS5, ST3GAL4, YWHAH
Negative_3615	HK3, AARS, ADCY8, B3GALT4, CCR1, CDC20, CRY1, CXCR4, EDN1, EREG, GSTA3, HHEX, ITGA6, NEU4, NME6, OR51I2, OR5V1, ORC4L, PFKL, PIAS2, PIAS3, PLA2G4A, RPSA, SESN2, SLC12A2, SRD5A2, STX4, TYMP, VDAC1, ZAP70, SUV420H1
Negative_3616	TFG, TKT, ADRA1B, AGXT2, AKT1, ANAPC4, ARRB1, BMPR1A, CAV3, CNTN1, CYBA, CYP3A5, DLL4, DPM1, EGFR, ENTPD2, EPB41, FGF13, FUT9, GADD45B, GO2, GP1BB, GUCY2F, GUK1, IL28A, LDHD, MECR, OR13H1, OR1L3, OR51S1, PLOD2, PPP1R3A, PTPRM, RALA, SDHA, SGPP2, SPP1, STAT5A, UNC5B, WNT7B, TNFRSF6B
Negative_3617	IL7, NPY, ABI2, ALDH3B2, ASCC3, CARS, CD22, EPHA3, EXT2, GAD2, IL28B, ISYNA1, MNX1, NFYA, OR1A1, OR5AN1, OR5B17, PIK3CB, PLA2G3, PRKY, RAS A1, TNFRSF1A
Negative_3618	C4B, DDO, GCK, ACYP2, ALDH2, ANAPC2, CCR8, CPT1B, CXCL12, FGF13, FLOT2, GZMA, IDI2, ITGA1, MAP4K1, MFNG, OR2T33, OR3A2, OR5B17, OR8D1, P2RX4, PDGFC, PIGQ, PTGS1, RASGRP4, SDC1, SDC2, SPRY2, STT3B, TACR1, YARS, CSGALNACT1, TNFRSF11B
Negative_3619	F7, IL7, SPN, ACADSB, ACO2, ACVR1, ASNS, CADM1, CALML5, CAPN2, COL6A1, CSF2RA, CXCL2, GGT7, GLUL, GRIA1, HAGH, HAGHL, HCLS1, HLA-C, IKBKB, IL13, IRAK4, LEFTY2, MBL2, MCEE, MDH2, MKNK2, MPDZ, MRAS, NEU1, OR13H1, OR4P4, PDE8B, PIP4K2B, PMM2, RAPGEF3, YOD1
Negative_3620	FER, GSN, HDC, SFN, ZYX, ACVR1C, ADH4, ADORA2B, AKR1C4, ALDH1A2, ALPL, ANAPC4, ARSA, CACNA1B, COL1A2, COL5A2, CYP26B1, FARSB, FGF4, FLT1, GRIA2, NOS3, NRG4, PCK2, PDHA2, PTPN7, TNFRSF9, TUBB4, WNT10B, ZFYVE9, PAFAH1B3, TNFRSF10C
Negative_3621	CGA, DBT, HK2, ABLIM1, ACAD9, ACADSB, ADH6, ADRB2, ALG8, ARHGEF6, CCL7, CNTF, FARS2, GNPDA2, IL18RAP, INADL, IQGAP2, KIR2DL4, LYPLA1, MAP3K14, OR1F1, OR2M7, OR6B2, OR6K6, PDE6D, PIGK, PLA2G1B, PPP5C, RAPGEF4, SHC4, TUBA1A, ULBP1, WNT2, HSP90AB1, PPP1R12A, TNFRSF18
Negative_3622	AGK, AMH, C1S, HK1, ID1, AASDH, ACOT11, B4GALT7, CACNA1F, CCL7, CHRM3, CYP4F3, DOT1L, DPYD, DUSP5, GDF7, ICAM3, ITPKB, MYD88, MYL2, NCR2, NFATC2, NLGN1, NSD1, OR13D1, OR1A1, OR4P4, OR52K1, OR6M1, OR8H2, PAK7, PGAM1, PIGT, PLA2G1B, PLD1, PMM2, PPT1, RRAS2, SH2D1A, TP73, ATP6V0A4
Negative_3623	AK2, AK5, FAH, SRC, ACPP, AGXT, ANAPC5, CDC2, CDC25A, DTX3, DUSP7, FABP3, G6PD, GDF7, ITGB1, KIR2DS4, LAMA3, LHCGR, LIPC, MCM4, NCOR2, NEU2, OR13C4, OR1F1, OR4C11, OR4D11, OR56A3, OR5M9, OR5R1, RAP1A, RPS6KA4, SFRP2, TLR2, ULK1

Negative_3624	DBI, MET, TPR, ADCY6, ATP5D, BACE1, CSNK1D, ECSIT, GALM, HNMT, IFNA4, IFNAR1, IL13, IL2RB, MAML3, MAP2K7, MKNK1, OR4F17, OSMR, PDGFB, POLR3H, PRKAA2, RND1, SCD5, STAT6, TSC1, TUBA1C
Negative_3625	C8G, CR1, ITK, OSM, AGPAT6, ALG13, ATP6V1F, BMP6, CCL25, CDK2, CRY2, DKK2, FMO2, GMPPB, HSD17B1, LDHC, NCKAP1, NCOR1, OR4D6, OR7D4, OR8D1, PLAUR, PLCD4, PRKACA, PRPH, PTGER1, RENBP, SGMS2, SKP2, STX7
Negative_3626	MET, CCR7, IRAK2, OR2A2, OR52N1, PFKFB4, PLXNA2, PPM1B, SEMA7A
Negative_3627	DBH, PML, TNN, ACPT, AHCYL2, ALPP, ARRB2, ATP5J, ATP6AP1, BMP7, CACNA1B, CASP3, CCL23, CCNA2, CLDN1, COMT, CYP21A2, DGKE, ENTPD3, EPHB2, FABP4, FPGT, GALNT5, GRM1, H6PD, IL11RA, METTL6, MPDZ, MTAP, NFYC, OR11A1, OR51A7, OR51I2, OR5AC2, OR5B17, OR5D18, OR5P3, PARD6B, PCCB, PIGN, PIGV, PRKAA1, XIAP
Negative_3628	GDA, ACSL1, ATIC, ATP2A1, CNDP1, CXCR6, GADD45G, HSPA2, NPR1, POLR3K, RFX5, ATP6V0D1
Negative_3629	AK3, FOS, GP9, LEP, AGPAT3, ANAPC5, ATG7, ATP12A, BAAT, CSF3R, CTBS, CYP2E1, DIAPH2, EGFR, ENO1, FZR1, GAS1, GGT1, IARS2, IL10, IMPA2, LIPA, MAP3K2, NCF2, OR1K1, OR4F17, OR51V1, OR6T1, OR6Y1, PGK2, PHKG1, PIM1, PLCG1, PRKG2, RDH5, ROB01, SC5DL, SEMA3E, SETD8, SGPP1, SHC2, TICAM1, TUBA1A, UGT1A10, ATP6V1B2, ATP6V1C2, PRICKLE1
Negative_3630	GPI, LYN, SMS, TEC, APOA1, ARPC1A, BIRC2, CDKN1A, CSNK1G3, DPM3, DUSP4, EHHADH, EIF4E2, EPB41L1, FOXO1, GNG12, HTR5A, IDUA, IFNA10, IGF1, KCNJ11, MAD1L1, MCM7, MGLL, NFATC3, NFKBIB, NLGN2, OR10A2, OR5AP2, OR6C76, OR8S1, PLA2G4A, POLR3A, PPP3R1, PTPN11, PTPRZ1, RGS3, SEMA4D, SH2D1B, SH2D2A, SHC4, SOAT2, ST3GAL5, STX1B, TJP2, TRMT11, VDAC1, WEE1
Negative_3631	FUK, MTR, NNT, ACSM1, CACNG4, CCR10, CD22, CD86, CDH5, CLDN9, COL1A1, CREB3L3, CSF2, CSF3, CYP8B1, ERBB2, FGFR1, GUCY2C, GUK1, HMGCS2, NANP, NFKBIB, NTF4, OR11A1, OR2A12, OR3A2, OR6C1, PI4KB, PLCD1, PPAP2B, PPP2R2D, RALGDS, RERE, RRM2B, RXRA, TPM3, TRAF6, ULBP2, TNFRSF10D
Negative_3632	HK1, AK3L1, BST1, CCNE2, CDC23, CER1, GALT, GNAO1, IFNA13, KIR2DL3, NAE1, NT5E, OR2T3, OR52A5, OR7G2, PIGP, PLXNC1, PRKAR1A, STX12, TYROBP, XCR1, ZNRD1, HSP90AB1
Negative_3633	ACADM, ACTG1, ALG2, ATG3, ATP2A2, BACE1, BMP4, CBLB, CCL7, CFL2, CHRM3, DCTN1, ENTPD5, ESAM, GABARAP, GNAL, GRM1, HSPA8, HTR5A, IFT57, IL25, INHBE, KLRC2, MECR, MTAP, MTMR6, NEU2, NTSR1, OR10A6, OR2B2, OR2T12, OR4X2, OR52E8, OR5R1, PLA2G2D, POLR2K, PPP1CA, PRKCZ, PSPH, SNAI1, SPTLC2, STAT4, SV2A, TAS2R5, VAMP3
Negative_3634	CCL1, COX10, DDX50, EPHA5, FZD9, LAMC2, LLGL1, MAP3K7, MECR, OR2AG1, OR6K2, PIGC, SHC1, TRPC1, VEGFA
Negative_3635	BTD, LSS, SYK, ACMSD, ALG11, ARHGAP5, ASIP, ATP5H, CACNG8, CCNA1, FMO3, HAGH, HES1, IDI2, IFNGR2, LDHA, MAN1A2, MGAT4A, MNX1, MTFMT, NANP, NANS, NR1D1, OR10J3, OR2L3, OR5D13, PCYT1A, PLXNA1, PRIM2, PRODH, RP S6KA2, SDHD, SHC1, SUV39H2, TNXB, TRAF1, TRAF6
Negative_3636	JUP, PML, ABLIM1, ACADL, ACTA2, AGPAT1, ARHGEF7, BBOX1, CTPS, CTSG, CYP1B1, CYP2A6, ENPP3, ENTPD4, EPHB4, GADD45G, GAPDH, HLA-DRA, IL22RA2, MAP4K4, OR7A17, PIP4K2C, PTGDS, RAB23, RARS2, RASGRF2, RXRG, SUCLG1, TNFSF11, TNXB, XYLT2, HLA-DQB1
Negative_3637	ADO, GLS, IL6, NNT, ACACA, AGPAT3, ALDH3B2, ALDOB, BMP5, BTRC, CAMKK1, CAMKK2, CD48, CDC26, COL6A1, DERA, DOCK1, FECH, FUT6, GALNT5, GPT2, GSTA4, HSD11B2, KIR2DL1, LIPE, MIOX, NR1H3, OCRL, OR10A4, OR2H1, OR2T4, OR4S2, OR5R1, PDGFD, PDHA1, PHKG1, PIP5K1B, PLA2G1B, PLA2G2D, PPBP, PTPN1, RXRB, SC5DL, SDHA, SMARCA2, SOAT2

Negative_3638	TK1, ACSL4, ACSL6, ALDH3A1, ALDOA, AOC3, ARHGEF4, CCNG1, CLCA4, CNGA3, DAXX, DLL3, FASLG, LEFTY1, MTHFD1L, NCF1, OR52A5, PANK4, PDE1B, PP1CC, PSME2, RPS6KA1, RPS6KA3, SEMA3A, SRD5A2, UPP1, ATP6V1B2
Negative_3639	AK7, FOS, ADH5, ALDH7A1, CACNA1D, CHRM5, CTNNA1, CXCR3, CYSLTR1, DGUOK, DKK2, EDAR, EIF4E2, F13B, FABP3, FGF1, IFNA16, IGFBP3, IL8RB, IRF3, MAOB, MYH4, NME7, OR4F17, OR4L1, PFN1, PGM1, PIK3R2, PLA2G10, PLXNB1, POLR2F, PPP1CB, PRPS1, RAP1A, RFNG, RFX5, RRM2, SMPD2, TNFSF12, TUBA3C, UGT2B10, ULK3, HLA-DQA2
Negative_3640	ACTA2, BCAT1, GALNTL4, GMPPA, PTPRR, RERE, TCIRG1
Negative_3641	FOS, IDS, LEP, ALPP, ATF2, CES2, COQ3, COX10, CXCR3, DHRS9, DUSP6, F2RL2, FZR1, HNF4A, IMPA2, NEU3, NOTCH3, NRG1, NUDT2, OR10G3, OR11H4, PDIA4, PIGV, PPP2R5B, PTGFR, SDHD, SELL, STAT1, UGP2, WNT10B, WWP2, ST6GALNAC1
Negative_3642	ASL, DAO, F2, F3, RDX, SPN, ADH5, AHCY, AKR1C4, ALDH4A1, ATP5G2, BLVRA, BTRC, CD226, CFL1, CFL2, CHPF, CYBA, FGD3, GAS1, HIBADH, HLA-F, HSPB1, LAMB1, MECR, MGAT5, NEU1, NR5A2, NTF4, OR5AS1, OR5T2, OR8B12, ORC3L, PIGS, PIK3C3, PON1, PRSS2, PTGIS, RAC3, RUNX1, SEMA4F, SH2D2A, STK4, STX12, STX4, TRPC1
Negative_3643	BAD, ALOX12B, APLP1, BDKRB2, CACNA1B, CHKB, CHST11, CISH, FGD3, IL22RA2, LIMK1, MAOA, MAP3K1, MYH2, NODAL, OR10G3, PDE3B, PIGW, PIK3R3, PI5K1C, POLR2D, PPP2R2D, RALA, RBPJL, SLC2A4, SV2A, UCK1, VAMP2, ZMAT3, HSP90AB1
Negative_3644	ILK, ADSSL1, BET1, OR5I1, ORC1L, PTK2, TALDO1
Negative_3645	GSS, PAH, SMO, ACTB, BMP7, CCL4, CHIA, COL4A2, CYP2C19, EPRS, EXOC7, FGD3, FUT1, GLI2, GSTO2, HLA-C, IL21R, IL24, IRAK2, IRS2, MAP2K5, MTHFD2, NCOR2, OR10G2, OR13A1, OR4K2, OR52A5, OR6C76, OR6N1, PDE6D, PPBP, PPP1CA, TRADD, HSD17B10
Negative_3646	CR1, TK2, AANAT, AFMID, BCMO1, CSNK2B, DGKQ, DUSP16, EPHA3, FECH, GUCY1B3, HMGS1, KCNQ1, MYL7, NANP, OR2AG1, OR6X1, PAK4, PDGFA, PDGFB, PER1, PLD1, POLR3D, POMC, PRKAG1, PRSS2, RDH12, RRM1, SETD7, SIGLEC1, SMAD3, SNAP23, SOCS1, TNFRSF4, TP73, YARS, PNLIPRP2
Negative_3647	F12, OSM, ALG11, ANAPC10, APOA1, APOA2, BLVRB, BST1, C3AR1, CACNA1D, CACNB4, CBLC, CDC14A, CPT1C, CYCS, CYP26A1, DPYS, ENPP6, FLOT1, IDH2, MAP3K1, MDH2, OR51E2, OR5AC2, OR5H6, OR5I1, OR7A17, OSMR, PFKFB3, PGS1, PIGP, PLD1, RARS2, RPS6KB1, SH2D1B, VAMP2, WNT2, MAPK8IP1, SERPINB5
Negative_3648	DCC, IDS, RB1, ACAT2, ALG2, AMHR2, BMP2, CAMK2A, CCNA2, CFL1, CHD8, CYSLTR2, DCXR, FTH1, FZD7, GBE1, GCH1, HIBADH, IL28A, IRS2, MAPK3, NCOR2, NUMB, OR2T29, OR4F4, OR4K15, OR6K3, OR6Y1, PAX6, PDE7B, PPAP2A, PRKCE, ROCK2, SMPD4, TRHR, UPB1, UROC1, SERPIND1
Negative_3649	AGK, AK5, ITK, LCT, TH, AGPAT4, AKR1C4, CACNA1A, CLDN10, CXCL1, FOXO3, FUT8, HIBCH, IL22RA2, LM07, MAP2K7, MDH1, NCF1, OR4C16, OR5D14, PLC E1, PLXNB3, PRODH, PRPS1, PTCH1, PYCR1, SNW1, UGT2B11, HLA-DQB1, PAFAH1B3
Negative_3650	AR, CRH, HGF, TPR, AKT1, APOC3, BET1, BIRC2, BIRC5, BMP5, CDH3, COQ7, CYP7A1, ELK1, EPRS, FUT3, GALNT14, GLI3, GSTA2, IRS2, KDSR, KIR3DL1, NAE1, OR14I1, OR1L1, OR56A1, OR5D13, OR6T1, OR8B12, OR8K1, PAK1, PDE3A, PDIA4, PGK1, PLA2G2F, PRODH2, RFXANK, RPSA, SELE, TAS2R50, TFDP1, TNFSF12, TSTA3, TYRP1, VDAC2, WWP1
Negative_3651	DUSP3, EDNRA, FGF17, GPAA1, IL23A, OR11H6, OR4L1, OR5H6, POLR3B, PPAR, PTPRJ, RAB23, ULBP3
Negative_3652	AASS, ACSM3, BMP2, CAV3, CDC25C, CHSY1, CTTN, DDIT4, EDA2R, FDFT1, GADD45G, IRAK3, LAP3, LIPT1, OR4D9, OR8H3, ORC5L, P2RX6, PDHA1, PHPT1, PLXNB2, POLR2E, PON1, RAP1B, RARA, RPS6KA5, TXNDC12, ATP6V1G1

Negative_3653	AK1, ASL, AGRP, AKT2, B3GALT1, B4GALT2, CD27, CDKN2C, CFLAR, CPT2, FD PS, FGF2, FGFR1, GAB1, GLG1, HLA- DOB, HMGCS1, IDI1, IFNA8, ITGA9, MAP3K14, MGAM, MIOX, NFE2L2, OR52D1 , OR6C4, PANK1, PIGA, PIGH, POLR1A, PON3, PRKX, PTTG1, SREBF1, STAM2, TAS1R2, TRADD, USE1, WIF1
Negative_3654	GHR, ADRBK2, BPGM, CYBA, CYP4F2, DFFB, DKK1, PPP2R5B, SDC2
Negative_3655	ID1, ZYX, B3GALT2, CARD11, CERK, CLDN14, CLDN5, COL2A1, CYP4A22, DPY D, GADD45A, GRIA3, INPP1, JAM2, JAM3, MDH1, NFKB1, OCRL, OR10J3, OR11 H1, OR2L2, OR4D9, OR56A1, OR5B21, OR6M1, PARD6A, PARS2, PAX8, PLAT, P LCZ1, PLXNC1, PPP2R2D, PRKAG2, PYCR2, QPRT, C1GALT1C1, TNFRSF13C
Negative_3656	ACSS1, ADRA1D, ATP5L, CSF2, FGF21, LRAT, MCCC1, MCM2, OR4E2, PGM2, PL CB4, RPS6
Negative_3657	IL3, ACTA1, AGXT, AKT2, AOC2, BACE2, CACNG8, CD46, CDC23, CREB3L2, CX CL1, DDX50, DKK2, DOLPP1, ELK4, FBP1, FGF8, HIP1, JAM3, MAPK8, NEU1, N MNAT1, OR1F1, OR5L2, OR5T1, PSEN1, PTGIS, RALBP1, SH2D1A, SULT1A4, S V2C, TAS2R49, TLN2, TMLHE, TUBB4Q, UGT2B4, VDAC3, MAPKAPK2
Negative_3658	GSS, A4GALT, ACMSD, ACP6, AKR1B10, ARPC3, ARSD, B4GALT2, BCAT2, BDH2 , CD8B, DAPK1, DARS2, DGUOK, DHCR24, EFNA4, ENTPD6, EXTL1, FASN, FZD3 , GADD45A, GALNT10, GMPPB, GNAI3, HNF4G, HRAS, IFNA7, LCP2, MGAT4B, N AMPT, NFKBIE, OGDHL, OR10H1, OR13C9, OR1S2, OR4D2, OR4S1, PPP1R3C, P PP2R5A, RUNX1, SEMA3F, STK3, STX1B, STX2, SV2C, TMLHE, HSD17B10
Negative_3659	CACNG6, FGF18, ITPKB, LAMC1, NGEF, OR4F15, PPCS, TUBA1C, HLA-DRB3
Negative_3660	DDO, CLDN3, CYFIP1, GCH1, JAM2, LLGL2, MMP14, TFPI
Negative_3661	CFI, ABL2, ACADVL, ACSL1, ADH1B, ALDH1A1, CCR5, CDO1, DUSP6, EFNA2, G UCA1A, H6PD, MAP3K5, NRP1, OR7D4, PIGC, PLA2G2A, PPAT, PTPN11, RETSA T, RPIA, SEMA3F, SLC27A5, UCK1, YWHAH
Negative_3662	F9, ID2, MYC, ASRGL1, CACNG7, CPT1B, CREB3L4, CSF3R, DAXX, FARS2, FGF 11, GMPR, IL17A, LFNG, OR14C36, OR2T1, OR52I1, P4HA3, PLOD2, PPP1R3B , PPP2CB, PRSS1, RAD51, RASA2, SPRY2, TCF7L2, UROC1, ATP6V0A1, TNFRS F10A
Negative_3663	ALAS2, APH1A, CCNB2, CCR6, FGF4, FRAT2, GDE1, MAML3, MAOA, OR51V1, OR 7A17, PRKCD, PTCRA, TBL1XR1, WNT16
Negative_3664	DLD, TH, AKR1A1, ARNTL, ATIC, CD36, CFL2, CLDN17, DLL3, ENPP7, FGF14, GNAT3, HNF4A, KIR2DS5, KLRC2, MYH13, OLR1, OR3A2, P4HA2, RFX5, TGFB1
Negative_3665	CAT, ACADSB, CLTA, COL6A2, CSNK1G2, EPHB3, GJD2, MAD1L1, NOX1, NT5C2 , OR5M8, PKMYT1, POLD2, SDC3, TGFA
Negative_3666	HGF, MPL, ABLIM1, ALDH1A1, ATP5G3, BIRC5, HSD11B2, MAOA, PIAS4, POLR 2G, SCP2, VARS, VEGFC
Negative_3667	CFD, GALNT12, OR10A4, OR51S1, PTGS2
Negative_3668	ABO, UBC, ACAA1, AGRN, ALDH5A1, ANAPC7, ATG3, B3GALT4, BACE1, CSNK1G 3, CSNK2A2, CXCR4, CYBB, CYSLTR2, DARS, DBF4, DTX3, FABP4, FLOT1, FZD 2, GDE1, GNG13, MGAT4B, MGLL, MTHFD2, NMNAT1, OR2D2, OR2G6, OR5D14, O R6K3, P2RX4, PER2, PIP5K1B, PNPLA4, POLA1, PTPN5, RPS6KA4, SCP2, SMA D5, SPRY4, TAS2R3, VTI1A, WNT6
Negative_3669	CANT1, CCL7, CD14, CFL1, DLL4, EFNA2, FGF20, IL10RA, IL18R1, MAML1, M AN1C1, MAP2K5, MAP3K12, OR11G2, OR2AE1, PCNA, RAP1B, STT3B, VTI1A
Negative_3670	GH2, ACVRL1, BBC3, CSF1, CYP21A2, FARSB, FGD1, GALK2, IL23R, MTHFD1, OR10Q1, OR2H1, OR5R1, P2RX4, PER1, PMM2, POLA1, PRKAR1A, PRKCQ, PRKY , SESN1, SQLE, TAS2R4, TBXAS1, UGDH, UGT2B10, VCAM1, HLA- DPA1, TNFRSF14, TNFRSF1A
Negative_3671	COMP, DDOST, OR5A1, PPP2R2D
Negative_3672	AR, CACNB2, CDC2, HDAC1, IFNA2, IFNA6, LALBA, LIMK1, LIPC, MALT1, SFR P4, SH2D1B, MAPK8IP3

Negative_3673	ACADVL, CXCR4, PIGW, RPRM, SELPLG, ST3GAL2, HLA-DQB1, MAPKAPK3, MAPKAPK5
Negative_3674	AK3, HPD, ACMSD, ADAM17, APOE, ARSB, ATP5H, BCL10, BET1L, CARD11, CFLAR, CTNNA1, DCTN1, ENPP6, FGF19, GAL3ST1, GNAI2, GRM5, INHBA, NNMT, OR10H2, OR10H4, OR13D1, OR2B11, OR51B5, OR6C74, PLA2G6, POLR1C, RAC2, TPK1, WNT5B, TNFSF13B
Negative_3675	ACOT11, CCNH, CD99, KIR2DL3, NRP1, OR2V2, TKTL2, TUBAL3
Negative_3676	AASDH, AGMAT, CBR1, CREB5, CYP1B1, GADD45B, INHBB, MAPK1, NT5C3, RRS2, STAT2
Negative_3677	ARNTL, CBR1, CXCL1, CXCL12, CYP2C19, DDX52, ENPP6, GPX5, IFNA13, INP5E, MAN1A1, NT5C2, OR2A42, OR3A1, OR4C46, OR4K1, OR51S1, OR52B4, OR52E2, PHGDH, PLA2G2A, PPM1D, RDH16, SETD1B
Negative_3678	DUT, MVD, OGT, SRC, ACSL6, ALDH5A1, APPL1, ARHGEF7, ASNS, CCL3, CCNG2, CD244, CXCR6, CYP2S1, FIGF, GFPT1, GNPAT, GPD2, LAMA3, LGMN, MYH8, NADSYN1, OR1A1, OR2C1, OR2T5, PDHB, PIGK, PMM2, POLE4, PPP3R2, PTPRB, RPS6KA2, SARS2, SEMA7A, SGMS1, SOD1, TUBA1C, TUBA4A, VAMP2, CACNA2D1
Negative_3679	IL3, ADORA2B, AKT1, CARS2, CDC6, CLDN16, COQ3, DARS, DOT1L, DPYSL2, DUSP10, DVL3, EFNB3, FIGF, GALNT1, GRLF1, HRAS, IFNG, IL15RA, ITGAE, JAK3, KITLG, MRAS, MYH11, NT5C, OR11A1, OR52D1, OR52I1, OR8U1, PANK2, PDK1, PIAS3, PPP3CA, RAP1B, RDH8, SETD7, SHMT1, SPRED1, TGDS, TIRAP, TSC1, TUBB6, VAMP3, VAV1
Negative_3680	SMS, AARS, ACVR1B, ANAPC1, ARHGEF6, B4GALT5, BCL2, CADM3, CAV1, DDB2, DUSP16, EPHA3, EPHA4, FOXA2, FZD6, GGT1, GNA11, IL17A, KLRC1, MARS2, MDM2, MMP2, OR2AG2, OR2C1, OR2L2, OR6B3, PCK1, PDX1, POLR2D, PVRL4, RPS6KA1, RUNX1, SEMA3C, SFRP2, SUCLG2, TAS2R5, TAS2R7, WASF2, WNT6, XYLB
Negative_3681	F11, FOS, CD80, CREB3L4, CTSL1, FUT5, GCNT3, HNF1B, IBSP, ITGA10, KCN J11, LRP6, MAPT, MCM7, MGST3, OR12D3, OR4D5, OR4X1, OR5M9, PHKB, SEMA3G, STAT6, TSTA3, PHOSPHO1
Negative_3682	GH2, SRC, ACADS, ADCY9, ADIPOQ, AREG, BAI1, CACNA1I, CAMK2G, CCL23, CDC26, CEBPA, CLCF1, CNGB1, FRAT1, FUT5, LARS, MAT2B, MINPP1, NCOR2, NTN1, OR11G2, OR2AG1, OR8G1, PAK1, PIP4K2C, PTCH2, SULT1A2, SULT1E1, TACR2, TCIRG1, WNT10A
Negative_3683	C8B, FGB, NF1, AXIN2, CCKBR, CES1, CLDN5, CLTA, CNTNAP1, CRY2, CTNNA1, CYCS, DUSP2, ETNK2, EXTL1, FUT9, GSTO1, HNMT, IL21R, IL8RB, ITGB4, LAMB4, MAGI2, MGST3, NFKB1, OR10J3, OR2T11, OR3A2, OR6C76, PDHB, PFAS, PHKG1, PLAT, RFWD2, RPN1, SGPP2, STX18, THBS2, WWP1, XYLT2, HLA-DQA2, MAPKAPK5
Negative_3684	GNS, MAX, WAS, CD28, ENO2, ENPP2, FADD, GSTA4, KDSR, MYH1, OR8D4, PDE1B, PDE1C, ST8SIA1, TXNDC12, UCP1, VAV1, CSGALNACT2, HLA-DRB5
Negative_3685	AK5, CFI, AMY2B, BBC3, CLDN10, GNA12, GNG12, ITGB4, MPST, NEFH, OR10K2, PARS2, PFKM, TUBB2C, UGT2B28, HSD17B12, PRICKLE1
Negative_3686	FER, HDC, MVD, ARPC1A, CASP9, CERK, COASY, CSH1, CYP26C1, DIAPH1, GNAI1, GZMB, OR4F15, PDE6H, PGM3, SNAP25, ST3GAL3, TRIP10
Negative_3687	SYK, ABCC8, ADCY6, ALG2, BACE1, C3AR1, C4BPA, CD70, CFLAR, CMBL, CPOX, CSNK1E, CTNNA1, DAD1, EFNB3, EGLN1, EPHB1, GGT7, HNF4G, JAM3, LRP5, MAFA, MTFMT, NCF2, OR2T10, OR51F2, OR52A1, OR5M9, PAX8, PDE4B, PDGFR A, PIGU, PPP2CB, PTCH2, ROBO2, RPSA, SMAD2, SMURF2, STK4, STX1A, STX4, TAS1R1, TOLLIP, VEGFA, HLA-DQB1, ST6GALNAC3

Negative_3688	EGF, INS, KMO, ADRA1B, ALDH1A2, ANAPC1, ARRB2, BAIAP2, CACNA1E, CHSY3, COL2A1, COL5A1, COL5A2, CREB3L4, CTSB, DHRS4, FABP1, FARSB, FGFR1, GADD45G, GAS1, IKBKB, KIR3DL2, LCMT1, LEF1, LILRB3, LRDD, MGST1, NAT2, NOTCH3, OR4E2, OR4K13, OR4K14, OR6N1, OR6T1, PAPSS1, PARS2, PLA2G3, PRKAR1B, RALA, RBL2, SELE, SNAI2, SV2C, TRAF3, TRPM5, WASF3, ZAP70, ZFYVE16
Negative_3689	ATIC, BST1, CSF3R, DOLPP1, FGF3, FLT3LG, IFNK, MAD2L2, OR5B17, RPN1, STAT6, TCF7L1
Negative_3690	B4GALT2, BST1, CSF1R, POLD4, RASGRP3, SLC2A4
Negative_3691	GNE, ABP1, BIRC5, CCKAR, CCL24, CD99, CES7, CREB3L2, CYBA, ENPP3, GSTM1, MYH13, NKX3-1, OR3A2, OR51A7, OR52N4, OR5D14, OR6C1, PDE7A, PIK3R4, PRKAA2, RDH8, RELA, SLC27A5, SOAT2, STX1A, TJP1, TRMT11, ULK3, UXS1, VAMP1, AASDH PPT
Negative_3692	ATP2A3, CBR3, DAAM2, DAXX, FZD10, GALNT14, GGT6, HIBADH, KLRD1, MGST3, OR2B6, PPP1CC, RELB, RPE65, TNFRSF12A
Negative_3693	ACSL4, ALDH4A1, BCKDHA, CXCL16, DARS2, EPHA1, GSTA1, GSTA2, ICAM1, JAM2, MYH11, OR4M2, OR56A1, OR5M8, OR9Q2, ORC3L, POLE, UGT2B28, CACNA2D3, CSGALNACT2
Negative_3694	CAV3, COASY, COL6A1, FZD7, HLA-DRA, INPP5B, IRF7, NKD2, OR8D2, PLCZ1, PLEKHA8, ULBP1
Negative_3695	APP, F2, GH2, KMO, ACAT2, AOX1, ARHGEF1, AXIN1, CAV1, CCL14, CD40LG, CDC26, CFTR, COQ6, CXCR3, CYP2S1, DGAT2L4, DGKZ, G6PC, GALNT12, GARS, GLB1, GNAS, GPX7, GSTA2, GSTM3, HAGHL, HSPA8, HTR7, IKBKG, LDHB, MAP4K2, MCM3, OR11A1, OR2T6, OR2T8, OR6S1, OR9Q2, PIM1, PRLR, SARS2, SGMS2, SOX17, SPRY1, STAM2, ZFYVE16, ATP6V1C2, SERPINF2
Negative_3696	ATP2A2, CACNA1I, CCL19, CCL27, CLDN17, CYP3A4, DPAGT1, EPHA4, GALNT6, KNG1, LAMB2, LILRB3, MAP3K12, MASP2, MPZL1, OGDHL, PDE6H, PPP3R2, UBE2L3
Negative_3697	LCT, ADCY10, ALDH3B1, ALDOA, AOC2, B3GNT2, CDH4, CDK5, CDS2, CHIA, DFEB, EPHA7, FGD3, GMPPB, GMPR, HADHB, OR11H6, OR51A4, OR5M9, OR5R1, OR7G3, PDE5A, PIK3C2B, PRIM1, PRPS2, RUNX1, SESN3, SETD2, SMAD5, TBL1X, ST6GALNAC4
Negative_3698	TNR, ACSM2A, ARRB2, B3GAT1, CCL13, CYP4A11, DHDDS, EPHA7, ERBB2, FBXW11, FSHR, GJA1, GSTA5, MAN1A1, OR10V1, OR4D1, PDE1C, POLR2D, RGS3, SGPP1, STK4, STX6, TGFB2, TNFSF8, WASF3, PPP1R12A
Negative_3699	AMY2B, CYP2C19, EARS2, EGLN1, OR6C1, PLXNA3, TAS2R5
Negative_3700	CGN, TNF, ADRB3, ALDH1L1, ATIC, B4GALT1, BMPR1A, CDKN1A, CDKN2B, CES2, CHPT1, DBF4, EFN2, FGF12, IL12RB1, MAP3K13, MYLK2, NAGLU, NUDT12, OR2G2, OR2G6, OR2Z1, OR8J1, PI4KB, STK11
Negative_3701	ABO, CGN, F9, ALDH4A1, ATP5J2, B3GALT2, B3GAT1, BUB3, CCNE1, CD72, CDC23, COMT, DGKE, E2F4, GRHR, ICOSLG, IRS4, LAMA4, MECR, NEFM, NTF3, OR5B12, PNPO, POLR2A, PTPRB, RND1, TACR1, TP53, TRDMT1, ULK3, WNT10B, CSNK1A1L
Negative_3702	ID3, ASIP, BPNT1, C1QC, CCR9, CMPK2, CRY2, CXCL6, EPHB4, FGFR1, FGFR3, GUCA1C, HPRT1, KIR2DL4, NCOR1, NMNAT1, OR4S1, OR6T1, OR7A5, OR7G3, OR8B8, ORC4L, P2RX5, PGK1, RAB5A, RBKS, RPN1, SORBS1, TACR1, TAS2R10, VAV3, TNFRSF10B
Negative_3703	CSK, ACP6, ASMT, BMP8B, CAV3, CD59, CD79A, CLDN1, CYP11B2, DKK4, DLL3, ENAH, FUT4, INMT, LALBA, MYH13, MYH9, NARS2, OR4L1, OR8K3, PDE7A, PIK3C2B, RUVBL1, YARS2, ATP6V1B1, SERPINF2, TNFRSF18

Negative_3704	C8G, CRH, DCN, F3, IL6, AKT1, ALPI, ASRGL1, B4GALT2, CACNB4, CD14, CDC27, CPT1B, CSDA, CXCL12, DDIT4, DNMT1, DVL2, FUT5, GATM, GSTA1, HLA-DMA, HSD3B7, ITGA10, KLRC1, MAP2K4, MCCC1, NFATC1, NODAL, NOX1, NTSR1, OR10P1, OR11H1, OR2C3, OR2H2, OR7G3, PARVA, PARVB, PLCD4, PLXNC1, PON1, RERE, SDHD, SGPP1, SLC27A5, SUCLA2, TGFB2, TP53, TPH1
Negative_3705	A2M, RET, TKT, ARHGEF6, ATG7, ATIC, BDNF, CCL20, DPYS, EPB41L2, EPOR, FZD9, GAPDH, GNAL, HMGCL, HYAL2, ICAM1, LDHB, MICA, NLGN2, PAK1, PGK1, POLR1C, POLR2G, PTPRB, PTPRF, PYGL, RND1, RPSA, RRM2, SEMA4G, TP53, TUBB4, WHSC1
Negative_3706	ADA, ADO, GP9, ATP5B, MGAT1, RPN2, STAT1, TNFRSF4
Negative_3707	ACTA2, CACNA1E, CADM1, DPM2, F13B, FLT3, HMOX2, IL22RA2, LAP3, LCMT2, MAP2K1, NRG4, OR14J1, OR6X1, PIK3R3, KIR2DL5A
Negative_3708	ACO2, ACTB, ANAPC11, APRT, B3GNT4, CHST12, CLDN20, CYP26B1, DOT1L, FGF13, FM04, GSTK1, HTR2A, ITGA6, JAK2, MAP3K11, MAPK8, MINPP1, NCK1, OR52E8, POLE3, PTCH1, PVRL3, WNT3
Negative_3709	HGF, STS, ABP1, ARSD, CCL22, COL4A1, CXCL16, CYP2C9, DPM2, EPHA8, FUT7, FZD9, GNAS, HNF4G, IFNA16, IL9R, MAD2L1, OR11H6, OR5D16, PLA2G10, PLCG2, RDH8, SC5DL
Negative_3710	BTD, ID2, STS, ADH1A, C1GALT1, CACNA1G, CD38, CREB3L1, CYP4A11, DDX4, FBP2, FTH1, GALNT3, GP1BB, HTR5A, ICAM1, IL1RAP, MTHFS, NFYB, OR1A1, OR2S2, OR2T29, OR51B5, OR5K1, OR5L1, PCCA, PDE5A, PFAS, PIAS1, PIGS, PKLR, RELB, RPS6KA4, SFRP5, SLC2A4, SPRY3, STAM, SULT2B1, TAS2R41, UGDH, UGT2A1, UPRT, VAMP2, XYLB, ST6GALNAC4
Negative_3711	CTH, DHH, FOS, NF1, ALDH1B1, ATP2A1, ATP6AP1, B3GAT2, CDKN2A, COL5A1, CREB3L3, CYP19A1, DARS2, DDX19A, EREG, FARSA, FUT6, GAL3ST1, GALNS, GPLD1, IFNA7, INHBB, ITGA8, MAN1C1, MS4A2, NEU2, NFATC4, OR10J1, OR52K1, PCYT2, POLE3, POLE4, POLR1B, PPP3R2, PTPN7, RALA, ROCK1, SC4MO1, SEMA3E, SHC3, SPRY2, STX2, TCIRG1, TIAM2, TSHR, UBE2L3, UPB1, PAFAH1B2, TNFRSF13C
Negative_3712	GK, TK1, ADCY6, C1GALT1, C1QB, C3orf10, CCR10, CDC20, COQ5, CRHR1, CSAD, CYP2A6, ENPP2, F2RL3, FCGR3B, FLOT1, FOXO1, GALNS, GALNT8, GCNT4, GDF5, GNPAT, GSTM2, IBSP, MYLK, OR4S2, OR5D13, PARVB, PIK3R1, PIK3R4, PIP5K1C, PLOD2, PLXNA3, POLR3K, PTDSS2, PTPN5, SARS2, ULBP2, VAV1, WNT16, WNT3
Negative_3713	GK, GPI, ACO1, ACTN1, BBOX1, BDKRB2, BMP2, CCL19, CHDH, CHIA, CKS1B, CLCA4, CYP2C18, E2F2, EGLN3, ERBB2, FABP4, FGFR4, GNA13, HYAL1, IFNA7, INHBA, JAK2, KIR2DL4, LEFTY2, LRP5, MAP3K13, NEFL, OR10G4, OR13D1, OR2W1, OR51M1, ORC2L, PDE11A, PER3, PIK3R5, PIPOX, PLAUR, SOD1, STAM2, STX12, TBL1XR1, ZAP70, ARHGEF12, TNFRSF6B
Negative_3714	ALPPL2, ITGA10, OR11H6, PIK3CB
Negative_3715	CAT, CBS, FOS, IHH, PAH, SHH, TYR, ACP5, ALAS2, BCAR1, BCMO1, CACNB1, CR6, CYP2U1, DRD1, EPHA3, FABP3, FBP1, FOXO1, GDF5, GGT6, HES1, IFNA16, IL12A, IL22RA1, MAFA, OR5D13, OR5K2, OR6C76, P2RX4, PDPK1, PERP, PHGDH, PLA2G1B, PPT1, RRM2B, RUNX1, SEMA4D, SH2D2A, SHMT2, TNFRSF4, UGCG, UROC1, YWHAQ, CACNA2D1, MAPKAPK3, SERPINC1, SERPINE1
Negative_3716	ATP6V1D, CANT1, CCL1, CDC25A, CLDN6, COASY, IL20, MAP4K1, OR2Z1, OR7C1, PIGP, PLCB2, UAP1, WNT11
Negative_3717	AK7, IL7, ABCC8, APOC3, ARPC1B, ARSE, B4GALT5, BCAR1, CACNA1B, CACNB4, CCR8, CHIT1, CHST13, CTNNA3, CTSB, CYP2S1, DDX18, DIAPH2, FGF21, GBE1, GPD1, GSTA2, HCCS, IL22, IL2RG, IRS1, ITGB7, KITLG, MYL9, OR13C3, OR2A5, OR51A2, OR7G1, OR8S1, PAK2, PAK3, PIGN, PLOD3, PLTP, PPARA, PID, PROC, PVRL4, RASGRP1, TUBB3, ZFYVE9, SERPINE1



Negative_3718	OGT, TYR, ALG10, B3GAT1, BCKDHB, CACNG4, CERK, CHD8, CHIA, DDX50, DLS T, GALM, GGPS1, IPMK, ITGB3, KLRC4, NR1D1, PRIM1, PRIM2, RRAS, SCP2, UGT2A1, SERPING1, SLC25A31
Negative_3719	ACVR1B, ALDH3B1, CD79B, FGF18, IFNA10, PIGP, UGT2B7, YARS
Negative_3720	MVK, ADSS, CD01, DEGS1, OR11H1, PIK3C3, PRKCH, SRD5A1, UGCGL2
Negative_3721	LCT, AFMID, BRAF, CACNA1G, CXCR6, CYBB, CYP27A1, DGAT2L4, EXTL2, FAB P1, FOXO3, FUT7, HMBS, IL1R1, ITGA10, ITGB2, NAT2, NFATC4, NFKB2, OR1 D5, OR1M1, OR4K2, OR6Q1, P2RX1, PDE4A, PDHA1, PGM1, PIK3R2, PLA2G3, P MVK, PTGER1, ROBO3, RPS6KA3, SFRP2, SIGLEC1, SREBF1, STAM2, TAS2R14 , WNT4, TNFRSF17, TNFRSF6B
Negative_3722	MVD, PXN, ABAT, ADRBK2, ARSA, ASIP, B4GALT4, CCR6, CDK5, CHPT1, DGAT2 , GALNT10, KRAS, MADCAM1, MGAT3, OR2M3, OR2Z1, OR4M1, OR6K3, PCCA, PD IA4, PFN2, PHKG1, PMVK, POLR3G, RASGRP4, SDC4, SDHD, STX4, TAS2R9, TB K1
Negative_3723	ALDH7A1, DDX19A, FZD8, MIOX, UGT1A10, VEGFB
Negative_3724	FGA, MPZ, RET, TEC, ALOX15, ATP5C1, BDH2, CCL14, CLDN15, CPS1, CREB3L 1, DAXX, EFNA2, EPB41L3, FMO3, GDF6, GLYCTK, IL8RA, ITGA6, ITPK1, MAP 2K4, MCM4, NAT2, NEU4, NLGN2, NR4A1, OR10G4, OR11G2, OR5A2, ORC4L, PA RVG, POLR3B, PRKCQ, PSME2, RRM1, SPHK1, STAT5B, SULT1A4, TBXAS1, TGD S, ULBP1, WNT5B, WNT6, YWHAB
Negative_3725	CBL, HAL, MET, ABL2, ACOT12, ACSS1, ACVR1B, ALDH2, ALG9, ATP4A, ATP50 , CDC42, CRB3, CSNK1D, CYP3A43, DDX54, EXTL2, FGF18, FGF19, FRAP1, GA NC, GART, GNPDA1, GPD1L, HDAC2, IFNGR1, IL10RA, IL23A, ITGA1, MPP5, N RG4, OR11H4, OR13C4, OR2AG1, OR2C1, OR52J3, OR5F1, OR5T3, OXCT1, PDE 4A, PIM2, PISD, PTPN6, RAB5A, RBX1, TBXA2R, ATP6V1G1, TNFRSF12A
Negative_3726	SRM, ASPA, BHMT, BLVRA, CCR4, CD58, CHRM3, CLDN7, CSNK1E, CYP2U1, CYP 3A7, DDX50, ECSIT, ENTPD3, FZD4, GMPR, GNA12, HTR5A, ICOS, IFNA4, IL2 RA, INSR, MASP2, MYL9, NEU1, NOS3, OR10G3, OR4K17, RALA, RAPGEF1, RAR S, SCLY, SLC2A4, SOS1, SOS2, TUBA1B, WARS, SERPINE1
Negative_3727	CRH, IL6, TNF, ACAD9, ACMSD, ACSS1, ACY1, ADORA2B, ALDH3A1, AOC2, BIR C5, CHRM1, CLDN6, CYP26C1, DDIT3, DDX41, E2F1, EDNRB, FCGR3B, FTCD, F UT2, GALNT11, GALNTL5, GRIN2B, HAP1, IFNGR2, IL15, INPP4A, MYH3, NFY B, OR4F6, OR52E6, ORC5L, PANK2, PFN1, PIP4K2A, PLAU, POMC, PSAT1, RAD 51, ST8SIA1, TAS2R3, TOMM40, TUBA8, TYK2, WNT1, HLA-DPA1
Negative_3728	ALG2, ANAPC1, CPT1A, CYP2S1, DTX3L, GSTZ1, MASP1, POLR2C, SHC4, STAM 2
Negative_3729	ASL, ALDH3B1, DHRS4L2, DHX58, GMPR, GNRH2, HCLS1, JAM3, OR5A1, SH2D1 A, UGT2B4, YARS2, TNFRSF13B
Negative_3730	AGL, ACAT1, ACSL4, ITGA3, MYH14, OR10G8, OR2T4, OR52W1, PANK4, SH3BP 2, TNFRSF8, HLA-DPB1
Negative_3731	CKB, CTH, INS, ARPC3, CACNG5, CANT1, CCND1, CDC14A, CNTN2, DMGDH, DUS P10, ENO3, GGT7, IL10, IL8RB, IRAK4, MGST2, OR10A4, PDE1B, PLAT, PNPT 1, RASGRF1, RBL2, RPS6, SFRP2, SMAD7, STX1B
Negative_3732	BTC, ADIPOQ, BCL2L1, GMDS, IL29, KYNU, MAP4K3, OR10A2, PDE4D, PGAM4, PGK1, POLR1A, POLR2A, ZFYVE16
Negative_3733	GP5, HPD, CPOX, CXCL1, ITGA5, ITGAM, LEPR, NAE1, NR1H3, OR9G4, PPM1A, PYCRL, SNAP23, STAT4, HLA-DQA2
Negative_3734	AMH, C6, DBI, IL3, ACVR2A, AHCY, ALDH3B1, ALDH5A1, CACNG7, CD86, CLCA 2, DAAM1, DDX19A, DTX3L, E2F5, ESAM, GALK2, GNA13, GP1BB, GPAM, GYS2, IL17RB, MNX1, MYD88, NAGLU, NEUROG3, OR2D3, OR6Q1, PFKFB1, PGAM2, PG M3, PPP3R1, PRKCA, PRKCE, RELB, RHEB, RRM2, SEMA3B, SMC1A, SMPD2, SOX 17, TPMT, TRDMT1, WNT7B, WWP1, PLA2G12B
Negative_3735	UBC, AHCYL2, ALDH3A1, ARHGAP5, CHPF, DGKE, F2RL3, ITGA6, ITPKA, MALT 1, MAPK14, OR2G3, PCNA, PER3, PPP1R3A, PSME2, RRAS, UCK1, PDCD1LG2

Negative_3736	IARS2, OR51E1, TCF7L1, TJP1, WNT4
Negative_3737	FH, GH2, RPE, VCL, ADRA1A, ATP6V1F, BMPR2, CARS2, CD58, CDH3, EPB41L1, F2RL1, FGFR1, GNA12, HLA-DOA, HSD17B7, IL22RA1, IRF9, KLRC2, KRAS, MAPK14, MCM6, MTMR1, MYLK3, NEFL, NPR1, NT5C1A, OGDH, OR10G7, OR2A14, OR2H2, OR5D14, P2RX3, POLR2F, POLR2K, PPP2R2C, RALBP1, RPS6KA6, SMPD2, SOS2, SUV39H2, TAS1R1, THTPA, ZAP70, EIF4EBP1, MAP3K7IP2, PAFAH1B3
Negative_3738	SDS, ACTN1, ACVR1C, ALDH3B1, ALDH5A1, ARHGEF2, BLVRB, BPNT1, CCNA1, CCR6, CCR9, CHIT1, COX15, CSF2, CXCL10, CXCL11, CYP11B1, DGKQ, DLL3, GADD45G, GCNT3, GRIA1, HYAL2, IFNGR2, IL6R, IQGAP3, OR51A4, OR6M1, P2RX1, PDIA4, PHGDH, PHKG1, PPAP2C, PPP2CB, PRKCA, PRKCG, PYGB, RDH8, RPN2, TAS1R3, TFDP1, TUBB2A, WNT6, XCR1
Negative_3739	XDH, ACAA2, ALDH7A1, ARNT, CHD8, CPT1A, CSNK1G2, CTLA4, CXCL2, DARS2, DDIT3, DIAPH2, DRD5, GAS1, GCLC, HADH, HSD3B1, IGF1R, LMO7, MAP2K4, MGAT1, MYH4, NME4, OR10A2, ORC2L, PIGO, POLA2, PRPS2, SDC2, ST3GAL5, VAV2
Negative_3740	BID, EBP, TNR, ADCY6, AHCYL2, ALG6, ATP5F1, ATP6V1A, AXIN2, C4BPB, CACNA1D, CCL27, CLDN6, CREB3L1, CTBP1, CYP8B1, DCXR, DUSP5, ECSIT, ERBB4, GDF5, HAGH, HGSNAT, HSD17B2, HTR6, LCP2, LDHA, MINPP1, MIOX, MYH1, NRG1, OR10J5, OR51M1, OR6C74, OR9G4, ORC3L, PGK2, PNLIP, RAP1B, UPB1, UPRT, TNFRSF13B
Negative_3741	GCK, GDA, GPT, ACSL4, ADRB1, AOC2, AVPR1A, CNTF, E2F4, FLT1, GALNT2, HAAO, HIP1, IDUA, ITGA10, KARS, KLRC1, MS4A2, MTHFD1L, NCOR2, OR4F15, OR52I2, OR7A10, ORC4L, OXCT2, PAX8, PDE8B, PNMT, PPP2CB, PPT1, PSEN1, PTGES, SMPD3, TNFSF11, TRAF4, VAMP1, WNT16, WWP1
Negative_3742	CGA, CKM, LYN, SP1, ALAD, ASIP, ASMT, CDKN2D, CSF1R, CSNK1G2, DLL3, EPHA4, ERBB4, FDPS, FMO5, GGT7, GNPDA2, HTR2B, IL21R, NLGN3, NOS1, OR10H4, OR2T8, OR4F4, OR9Q1, P2RX4, PCCA, PYGL, ROBO2, SNAP25, SOCS3, STAT2, VAV2, WNT3, WNT9B, TNFRSF14
Negative_3743	CAD, F10, GAA, LSS, SHH, SPN, AGMAT, AKT1, ALDOA, CES2, CLDN16, CSNK1E, CYP2F1, DGAT2, EXT1, GLS2, GUCY1A2, HA02, INMT, MAPK13, MYL2, OR13C3, OR2M7, OR2T1, OR51A2, OR5T1, OR6C70, OR9Q1, PPARD, PRKAA2, PSEN2, SMARCA2, SORD, TPM3, VAV2, WNT7A, WWP1, ATP6V1C1, KIR2DL5A
Negative_3744	FCER1G, HMGCL, IPMK, LIPG, MPZL1, OR4C11, PAK6, PARD6G, PPP2R5A, PYCR2, THTPA, UGT2B4, GABARAPL2
Negative_3745	CD274, CYP3A7, LDHD, MPZL1, OR5AR1, PRKAR2B, RPS6KB2
Negative_3746	ABLIM2, ACTG2, CACNA1F, CCR4, CD40, CDC2, CES7, CHIA, CTSB, CXCR4, ENPP1, EPHA1, FGF5, GALNT10, GBA3, GNAI2, IFNA14, IL17A, IL6ST, INHBE, ITGA8, ITGB2, LDHAL6A, MAP2K4, MAP2K7, MFNG, MTMR6, OR13C4, OR11I1, OR2M2, OR2M5, OR2T8, ORC3L, PDHA2, PLAUR, PSME2, RBKS, RELA, SFRP1, SHC2, TBL1X, TGFBR1, TRAF5, TUBB4, VAV2, VTI1A, WASF3, WNT11, CSGALNACT2
Negative_3747	C5, GOSR2, NOTCH2
Negative_3748	KMO, NOG, ACSM3, ATP6AP1, BET1L, CACNA1S, CHEK2, DLL3, FRAT2, FUT4, HAGH, KAT2A, KCNB1, MASP2, NT5C3, OR4F17, OR4N2, OR52K2, OR5AC2, PDE8A, PIK3R2, PLAU, RELB, SCLY, TACR1, UPP2, ATP6V0A4
Negative_3749	ALDH5A1, ARPC5, ATP5E, CFLAR, CSNK1G1, F13B, FLT3, GNA11, LGMN, NAT1, OR13C9, OR51I1, OR5B21, OR6C4, TNFRSF4, TUBA3C, YWHAB
Negative_3750	CD2, DHH, ID1, PRL, SDS, ADH1A, ADRB1, B4GALT1, BMP8B, CLTA, CYP1A2, IL20, MAOB, MAPK3, MTMR2, MYL7, NTN1, OR10R2, OR13D1, OR7G2, PDHA2, PP3R2, PRIM2, PRSS3, THBS3, VEGFA, ST6GALNAC4

Negative_3751	EZR, ASCC3, BCL10, C5AR1, CHIT1, CHSY3, CLDN1, CREB5, CSF1, CYCS, CYP2J2, DARS, DPM1, DTX3L, EFNB2, FZD5, GALT, GNG12, IL1R1, IL9R, IRF7, KCNQ1, LALBA, LMO7, OR4Q3, OR5H2, PITX2, PLA2G2A, POMC, PTDSS1, RASGRP3, RASSF1, SEMA3E, SETDB1, SH2D1B, SPAM1, TNFRSF8, UGT2B28, VAMP1, WEE1, ZNRD1, ATP6VOD2, SERPINC1
Negative_3752	BID, GBA, UBB, AKR1C2, ALPPL2, ATP6V1H, CACNG1, CAV2, CCR3, CD19, CD79B, CYP19A1, DDX54, DUSP7, EP300, FGF6, GAD2, ITCH, ITGAV, KLRC4, LCM T1, LCMT2, MAP2K4, MAP3K2, OR1L8, PAK4, PIGA, PKM2, PLCG2, PPP2R1A, P PP3CA, PPT1, PRPS1, RALBP1, RBPJ, RHOA, ROCK2, SESN3, SFRP4, SSH2, SS X2IP, TLR4, UNC5A, VAMP1, WNT5A
Negative_3753	GGH, NGF, AKR1D1, APOC3, ATP4B, BIRC2, CACNA1H, CAMK2G, CDC16, CDK7, CDS1, CLCA4, CREB5, DEGS1, E2F5, FOXA3, GNAI2, GUCY1A3, HADHA, HMOX1, HSPA1B, IRS1, MAPK10, MARS, MASP2, MTAP, MYL2, MYLK, NOD1, OR4K2, OR 9Q2, PDXP, PFN1, PLXNA2, PRDX6, PRIM1, PRSS2, PTGIS, RHOD, RRM1, SETM AR, TKTL1, TOMM40, ULK2, UPP2, WNT10A, XYLT2, ZIC2, ATP6VOD1
Negative_3754	GDA, SDS, SRC, ADCY5, AHCYL2, ALDOA, ANAPC5, BUB1, CD48, CRLF2, CYP2A 7, DHRS9, F13A1, FASLG, GADD45A, GLUD1, GP1BB, HA01, MTMR1, NFKBIB, O R1L4, OR5C1, OR8A1, OR8H2, PFN2, POLR3G, PTTG1, SDHA, TAS2R41, ATP6V 1G1
Negative_3755	BTD, CGN, GCK, LTB, NNT, RB1, ALDH3B1, ARNTL, ARSD, ATP6V1F, C7orf16, CADM3, CCL24, CDH3, CLDN6, CYSLTR2, DHRS4L2, E2F3, FGF20, GNA11, GRM 5, HNF4A, IARS, IMPDH1, NODAL, NT5M, NTRK1, OR10AG1, OR11L1, OR1J4, O R2A2, OR2A25, PCYT2, PIP5K1C, RUVBL1, SGPP1, SHC4, SORBS1, SPAM1, SS X2IP, STX1B, SUOX, WWP1, ATP6VOD2, KIR2DL5A
Negative_3756	F3, GPI, HGD, TYR, ACOT12, ACVRL1, ALDH1A3, ARD1A, ARPC4, CAMKK2, CCL 13, CD82, CDH5, CEBPA, CYP2D6, DAG1, DGKE, DHFR, EIF4E2, ENO1, EPRS, F GD1, FLOT1, FUT8, GMPS, GNMT, ICOSLG, IQGAP1, IRS4, KLRD1, LARS2, OCL N, OR52B6, PIP4K2A, PISD, PPP1R3B, PRKACG, PROC, RARA, RBL2, SNAI1, S SH1, TAS2R41, TPM3, VAMP1, VAMP2, VCAM1
Negative_3757	C8B, PML, UBB, BUB1, CHIT1, CREB3L3, CXCL2, CYBA, EPOR, FRAP1, GLUL, I L10RA, MTMR1, NQO1, OR2T3, OR4K1, OR52N1, PHKG1, PLEKHA8, PON2, PTGI S, PTPRJ, SEMA4B, SMAD9, SNAI1, SRGAP2, SUV39H1, TPM3, TRPC1, VCAM1, PAFAH1B1
Negative_3758	AGK, GGH, IL6, IL8, KIT, NF1, VCL, ATP13A2, CHUK, CYP2F1, ENPP3, GLDC, HBEGF, HLA- G, MAP3K14, MMP9, OR10H2, OR2L3, OR52K1, OR5P3, OR7D2, PANK1, POMC, P TAFR, PTK2, SEMA4G, ST6GAL1, STAT4, TAS2R41, UNC5C, WARS
Negative_3759	CKB, ACSS3, AGPAT6, BCL2L1, CAMK2B, CD40, CD48, CD70, COL5A2, CSNK1D, CSNK2B, DUSP2, FCGR3A, GMPR, GNG13, GUCA1C, HEMK1, INMT, MTMR6, OR1 1L1, OR1Q1, OR5L1, PIM1, PMAIP1, PPP2R5B, PROS1, PTCH2, RASGRP2, SHC 4, SMURF1, SNAP23, VAV3
Negative_3760	CTH, GGH, RET, SI, ZYX, ARSB, ATP4B, CCND1, CD19, CD22, CD55, CSNK1G1, CXCL6, DLL4, EPHB6, GCLM, GPD1L, HSD11B2, HTR2A, IL18R1, IL1R2, ITGB 3, OR2A25, OR2L8, OR2T11, OR52D1, OR52N4, OR8K3, PDE10A, PIGB, PLOD3, PRKAB2, QARS, RPS6, SC4MOL, SH2D1A, TRDMT1, TSC1, UGT2B17, AASDHPP T
Negative_3761	GLA, LHB, NOG, ALAS2, ALOX12, AMD1, CACNA1E, CD14, CXCL13, DGAT2L4, E CSIT, FBXW11, FGF7, IFNA14, IL1R1, IL20RA, MCM7, METTL6, MMP1, MMP9, NRXN3, OR51F1, OR7D4, PCYT1A, PGAM4, POLR1B, PPAP2C, SFRP4, SOAT1, T AS2R60, TKTL2, TNFSF11, VTI1A, YWHAE

Negative_3762	GSR, ACTN4, ALDH1L1, APH1A, ARPC5, B3GNT5, BDH1, CACNA1G, CCR6, CNTFR, CYP2S1, DUSP6, GSTA5, HGSNAT, HNF1A, IL8RA, INHBA, LHCGR, LIPC, MKNK2, OR10K1, OR13H1, OR2T3, OR51F1, OR6C76, OR8J1, PIGF, PKLR, PLA2G10, PRKAA1, PVRL2, PVRL4, RUNX1, SETD1B, SLC27A1, SOCS3, TCF7L2, TRAF6, VTI1B
Negative_3763	ADH5, ATF4, CLDN6, CYP19A1, DHRS4, FGD1, GUCY1A2, IFNA17, IL15, LCMT2, LDHAL6B, LTC4S, OR51B6, PDXP, SPRED2, UNC5C, PLA2G12B
Negative_3764	BAX, ATP5G3, B4GALT7, BLVRB, CCNG2, CDH1, CSNK1G3, DDIT4, IL1A, IMPA1, NLGN2, OR10A3, OR5AS1, OR9I1, PCK1, PKM2, STK3
Negative_3765	C3, PGP, AASDH, ADH6, AGMAT, ALDOB, B4GALT5, BMPR2, C1QB, CAV1, CES2, CHRM1, COL5A3, DAAM2, DFFA, DRD1, DTX3, DUSP8, EP300, FGFR2, FLT4, GCNT3, GGT1, GNAQ, GUCA1C, IFNA2, IL17A, KDSR, MMP2, NME6, OR10K2, OR1K1, OR2M2, OR52D1, OR52R1, OR5V1, PARVG, PDCD1, PIK3CA, PIK3CD, PIP5K1B, PPCDC, PRKAB1, SEMA3C, SGMS1, SMURF1, ULK3, SERPINC1
Negative_3766	HPD, LYN, NNT, ALDH4A1, ARPC5, B4GALT5, CAV3, DRD5, EDNRA, EFNA1, ENTPD1, EPHX2, FLT3, GNRH1, HIF1A, HMGCS1, HTR2C, IL13, MAML2, NGEF, NSD1, OR10H5, OR12D3, OR4M1, OR7G3, PDE5A, PIGW, PLEKHA8, PTGER1, RBL2, ROCK2, RPIA, TRAF4, UAP1, UCPI, CACNA2D1, SERPINB5
Negative_3767	ANAPC5, BDKRB2, PIAS2, PTCRA, TAS2R3
Negative_3768	LHB, RPE, AGPAT1, ALG2, ARPC5, BAI1, BMPR1A, CD70, CLDN19, CSNK2A2, DX54, FASLG, FLOT2, FZD5, GNB1, GNMT, H6PD, INPP5B, ITGB1, ITPKB, MTA P, OR10H4, OR5AU1, OR6M1, PLXNA3, PVRL2, RALA, TKTL2, UGT2B10, MAPKAPK2
Negative_3769	BTK, DBI, DHH, ALDH3A2, ARHGEF4, BDKRB2, CCND3, CPT1B, CYP2C9, FLAD1, FZD5, GUK1, HAP1, IL2RA, KITLG, LDHC, NCOR1, NOD1, OR8S1, PTCRA, SELL, THBD, TRAF5
Negative_3770	GK2, A4GALT, ARG2, CCL8, CDKN1B, COL1A2, COL4A1, COL5A2, CXCL3, DAPK3, FBP2, GBE1, GRB2, HEXB, INHBA, MCAT, MFNG, OR2A42, OR5A1, OR6C75, PHGDH, PPP2R1A, PRKAA1, SAT1, SH3BP2, SPRY3, TAS2R3, TAS2R5, WNT2B
Negative_3771	UBB, ALDH3A2, CCND3, CYP26C1, DIAPH2, GNPDA2, GRIN2D, ITGA6, ITGB7, KLRC2, LARS2, NEFH, OR5AR1, POLR2B, PPAP2A, PSAT1, RXRB, SHISA5, SPRY1, VNN1, ATP6V1E1, TNFRSF13C
Negative_3772	ADA, ARSA, EPHB6, F2RL3, GALNT1, GRM1, GSTA2, GSTO1, IRAK2, LFNG, MAGI1, NEFH, P2RX6, XYLB, TNFRSF6B
Negative_3773	ACY3, ARD1A, EGFR, UPB1
Negative_3774	NPL, ACSL3, ACVRL1, B3GAT3, BUB1, INPPL1, ITGA11, MRAS, NSDHL, NT5C
Negative_3775	CR2, ADAM10, BAI1, CDKN2B, CFL2, CYP2U1, MALT1, MAP4K3, MGST2, NANS, NFX1, OR10G4, P2RX2, PIK3C2B, POLD3, RAP1B, SGPP1, SMC1B, SOD1, ST3GAL4, GABARAPL1, MAP3K7IP1
Negative_3776	CD4, ACOT11, ATP5G2, CACNG8, CCR5, CD38, CD44, CREB5, CX3CL1, DDX50, F11R, F2RL2, FZD8, GALNT7, GFAP, IFNB1, IL15RA, IMPA2, JAM2, MAD2L1, NTRK1, OR12D3, OR2AT4, OR2C1, OR4S1, OR52R1, OR7G1, PARVA, PECAM1, PFN3, PHGDH, SIAH1, SMPD4, TACR3, TAS2R10, TYK2, UGT1A10, CACNA2D3
Negative_3777	BUB1B, C1GALT1, CLDN4, CTSB, CYSLTR2, DAG1, DDX51, DHODH, GRIN2C, HHX, IDI2, MAP3K5, OR2F2, OR5K2, PDGFB, PIK3R1, PRNP, RALA, ROBO2, RUVBL1, SEMA4C, ATP6V1G3, MAPK8IP2, TNFRSF10B
Negative_3778	DDC, GBA, JUN, TFG, ALAD, ALDH1A2, ALPI, ARNTL, CD28, CLDN5, CSF2, CTBS, CUL1, CYP2J2, EFNA3, GNAS, KYNU, LEPR, LTBP1, LYPLA1, MAPK3, MYH7, NNMT, OR10AG1, OR2A12, OR2A25, OR52B4, OR7G1, OR8H2, P4HA1, PANK3, PLA2G2F, PPP2R1B, PRDX6, SEMA4G, STAT2, SUFU, ATP6V1G3, SERPING1, TNFRSF13C
Negative_3779	IL4, PLG, ADAM10, ATP6V1H, CDK2, CLCF1, DARS, FECH, ITGB8, MCM5, NEU4, PPP1CB, RAD51, TFDP1, TNXB, VAMP1, WBSCR22, WNT2B

Negative_3780	FGA, ADCY8, ADH1B, CD38, CDC16, CREB3L3, CSF1R, FZD3, GALK1, IFNA10, IRAK3, KCNB1, LIPF, MMP9, OR13C2, PARVB, PDE5A, PLA2G2D, SGMS1, SLC2A1, SOCS5, SOS2, STAM2, VTI1A, MAPKAPK2
Negative_3781	ACP2, ACSS2, ACVR1C, CCL13, CHAD, CLDN3, CYP1A2, DGAT2L4, EP300, FGF12, FZD2, GDF5, HMGCS2, IL20, MYH3, OR3A1, OR5B3, PPOX, PRKAR2B, RASGRP2, RPS6KB2, SH3BP2, UGT2A1, WHSC1
Negative_3782	GK2, AGXT2, AMY2A, ARNTL, ATP5G2, ATP6V0B, CCL26, CCL8, CSNK2B, CTNNA1, CTSB, HAP1, INHBB, JAG1, LIPT1, LYZL1, MYL9, NFKBIA, OR2M3, OR4C46, OR5A1, OR5AP2, PRNP, PTGS1, RPIA, TAS2R7
Negative_3783	C7, ACSL1, ACVR2B, C4BPB, CDKN1B, DCTN1, DGKE, FUT6, GALK1, GNA11, HSPA1B, IDH1, IL15, JUND, LMO7, LRDD, NOTCH3, NUDT8, RRM1, SAT2, SEMA3G, ST3GAL1, STK4, ULBP3, PHOSPHO1
Negative_3784	FGG, ACVR1C, AKR1C3, ALG6, ARNT2, ATP5G1, CD80, CDK5, FARSB, FGFR4, HVAL2, IL11RA, LIPT1, MRAS, OR11A1, OR7G3, PLA2G3, PLCB2, PPAT, RAC1, ROCK2, SC5DL, SMPD4, TRAF4, UBA1, ATP6V0D2
Negative_3785	F2R, AFMID, AVPR1B, CFLAR, FMO2, GCNT1, GLDC, IFNB1, ITGA2, ITGB5, KCNQ1, MAPT, OR13F1, OR52H1, PFKFB1, PFN1, PHKB, PLA2G2D, PLCD1, POLD3, SDHA, SETD1B, SV2C, TD02
Negative_3786	IL6, OAT, ACSM4, APAF1, B4GALT7, CLDN20, CNGA4, ENPP6, IFIH1, IL1R1, KLKB1, MAPK8, MTAP, NPR1, OLAH, PPP1CC, PTK2B, RASGRP4, SPRED2
Negative_3787	MVK, ARG1, OR4X2, OR9I1, SPTAN1
Negative_3788	AR, AGPAT3, CES7, EIF4B, MTHFD1L, NLGN2, PIK3CG, PMVK, PRDX6, STX18, VAMP2
Negative_3789	ME3, PXN, ARRB1, CAMKK2, CASP3, CCNB3, CDC16, COL4A4, EI24, EIF4B, HMGCS2, HTRA2, IFNA13, IL6ST, IRS1, ITGA6, KAT2A, LTC4S, MIOX, NUMBL, OR11G2, OR52E6, PDE6H, PRNP, PTPRZ1, PVRL1, PRICKLE1
Negative_3790	PLG, ATP5I, CDC26, GALNTL4, OR6F1, TBL1X, TBXA2R, THBS1, UAP1
Negative_3791	NOG, ACOX1, ALDH3A1, ALDH6A1, APBB1, ARHGEF2, ASAH1, ATP2A1, B4GALT5, C7orf16, CCL16, CCL28, CDK6, DAPK2, GDF5, HSPA8, IL23R, LTB4R2, MYH6, NOX3, NRG2, NUDT12, OR5C1, OR6K2, P2RX5, P2RX7, PCYT2, PKLR, PLA2G10, POLR3A, PPP2R5D, PTPRZ1, SETD7, SOD1, STK36, WNT1, HLA-DPA1
Negative_3792	VTN, ACHE, ALOX12B, CCKBR, CD27, CES1, CLDN10, CYP2A13, ECSIT, EFNA1, ENPP1, EPHA5, EPHB3, FASN, FCER1G, FOXA3, GNPDA1, GUCY2D, HLA-DOA, IL21R, IQGAP1, ITGAV, NKX3-1, OR10J5, OR4X1, P4HA2, P4HA3, PDE2A, PGAM4, PTGDS, SEMA4B, SETDB1, TYMS, UROC1, VASP, ATP6V1C1, KIR2DL5A
Negative_3793	ADC, MPZ, ACADL, ADCY1, ALDH1A3, ATP5F1, CASP10, CCL5, CD72, CDC26, DRD5, FABP3, GSTZ1, ICOSLG, LDHC, MLLT4, NANP, NCR2, NTF4, OR3A2, OR4S1, OR51M1, OR56A1, P2RX3, PDE1C, PRKAA2, RBX1, SARDH, ST3GAL6, PLA2G12B
Negative_3794	ADAM17, APOA1, AVPR1A, CCL22, CKS1B, GPAM, IL11RA, IL1R1, IL28RA, IL3RA, KYNU, LIMK1, OR4A5, OR4E2, OR8K1, PIP5K1A, RPSA, SLC2A4, CSGALNACT1
Negative_3795	F8, MIF, TK2, ACYP2, AGPAT3, AVPR1B, B3GNT5, CANT1, CFL2, CRHR1, CYP2A6, DFFB, DUSP16, EXT1, EXTL1, HPSE, LAMA3, MAP2K2, MAPK1, MTHFS, OR10A6, OR4A16, OR5B3, OXTR, PAX6, PIK3R3, PLD2, PON3, PPP3CA, PRKCE, PRKCG, RASSF1, RDH16, RETSAT, STAT1, SULT1A1, VAV3, WNT5B
Negative_3796	DCN, C9orf95, GARS, GNAZ, HSD3B2, MAPK1, NAT1, NR1D1, OR6N2, PRKY, PTPRC, TAS2R40, VCAM1
Negative_3797	GK2, ATP13A2, BDKRB1, CKMT2, GJD2, GSTM3, IL1R2, MPP5, NEFH, PITX2, PLCB2, PLCB3, POLA1, PON2, PTAFR, STEAP3, UCK2
Negative_3798	CYP1B1, GSTA3, GUCY1A2, LDHAL6A, MECR, NUDT9, OR14C36, OR2C3, PDE9A, SFRP1, ST3GAL2, TP53I3

Negative_3799	BTD, GPI, MIF, ZYX, ADCY1, ADH1A, BMPR2, CD8B, CDC20, DVL1, EFNB3, FGD3, FMO3, GTSE1, HSPA1B, LIFR, OR7D2, PRKAG2, PRPS2, TAS1R3
Negative_3800	C9, AARS, ADCY9, ALDH6A1, ANAPC5, ATF4, BCMO1, CD59, COQ7, CTBP1, DGKG, DHDDS, ECHS1, EFNA1, GJD2, HMGCL, IFNA6, IL2RB, INPP4B, ITGB4, ITPA, ITPKB, MAP4K4, MCM7, MLLT4, MYH4, MYL7, NKX6-1, OPLAH, OR13C2, OR2A5, OR2L13, OR51A7, OR5L2, OR6N1, OXCT1, PMM1, P RPH, RPN2, SDC1, SOCS2, SRGAP2, ULK1, HLA-DPB1
Negative_3801	CKB, FES, GSR, ARHGEF2, CD44, CHPT1, EARS2, FGF8, GGT1, GLS2, GNRHR, I L6ST, IRS2, NKX2-2, OR1I1, OR4F4, OR8J1, PGK1, PIGX, PIK3R2, PIM1, PPP2R2C, PTCH2, PVR L3, SETMAR, SPAM1, STT3B, UGT2B28, ST6GALNAC1
Negative_3802	C2, F2, GDA, LTB, OSM, PTS, ACOT12, CNTNAP2, COL1A1, FDPS, FGF9, IDH3A , OR2M4, OR6C74, PPARD, PVRL1, RAPGEF1, SH3BP2, TUBA3E, CTNNBIP1
Negative_3803	AK7, DCC, LCK, TH, ACAT2, ACSL1, ACTN1, ADRA1A, ADRA1D, ALAD, ANAPC11 , ARD1A, ARHGEF4, CCL17, CDK2, CFLAR, CLDN19, CXCL12, DNMT1, ENTPD7, FGF10, FGF23, FLOT2, GPLD1, IFNGR1, IKBKB, IL1R1, LDHD, MAML1, MASP2 , MYLK, OR4D6, OR51A2, OR51M1, OR56B4, OR5D18, OR8H2, PAK6, PCCB, PDG FD, PER2, RETSAT, SFRP2, SSH2, SUCLA2, TAS2R50, TBL1Y, UGT2B28, UNC5 B
Negative_3804	AK3, APP, ATP5B, C4BPA, CACNG6, CD28, ECHS1, FASN, FGF21, FGF4, FTH1, GUCY2C, HNF1A, HRAS, HTR4, LDHA, OR4F15, OR6Y1, PROS1, RFXANK, SFRP2 , SHC4, MAPK8IP1, TNFRSF11B
Negative_3805	GNS, GSS, MVK, RB1, ACAD8, ARPC5, CCR4, CPOX, DERL1, EFNA5, FGF11, FMO 5, GLI2, GPX5, HLA-DOA, IL18R1, KARS, LIPE, MGAT1, NAGLU, OR52A1, OR8D2, PARS2, PLOD3, P PP1R3D, RFXANK, ST3GAL2, UROC1, WNT2B, XIAP, YARS, ZFYVE9
Negative_3806	AK1, FGA, IL9, ACADSB, ACADVL, ASPA, ATF4, ATP4A, B3GNT2, BLVRB, CKMT 2, COL11A1, COQ5, CSNK1G1, CXCL11, DIAPH3, ECSIT, EFNA3, FZR1, GFAP, GSTP1, GUCY2C, IL20, MGLL, NFKB2, OR2B11, OR4X2, OR5P3, OR7A10, PAK6 , PDHB, PDK1, PGLS, PLCG2, PLXNA1, PNLIP, POLD1, POLR1B, RDH16, SEMA3 F, SPRY2, TCF7, UGCG, ULK1, WASL, WNT5A, MAP3K7IP2
Negative_3807	TAT, ACADVL, ALAD, ARSB, B4GALT5, CCNB1, DPM2, FGF3, HRH1, IL19, ITGB 4, LDHAL6B, MAP2K1, MAP3K1, MYH4, OR1N2, OR2Z1, OR4M1, OR52A5, PIK3C 2B, PIK3C2G, PPA2, PRKACA, PRKX, SMPD3, SPAM1, ST8SIA1
Negative_3808	ACAA1, ADCY5, AMDHD2, CRKL, CRLF2, CRLS1, CUL1, EDN1, EPOR, HSD3B2, I DH1, ITGA7, ITGB6, LCAT, MAN1B1, OR6K6, PGK2, PGS1, SLC12A2, SLC2A4, TAS2R7, TCF7, TUBA3E, WNT4
Negative_3809	ADSS, AGPAT2, CCNA1, CDH3, CDKN1C, CHSY3, COL5A3, DPYD, DVL2, EXTL3, GRIA3, HAAO, LIFR, MPZL1, NPR2, OR6C1, OR8G1, POLR2B, PRODH, PTAFR, T P53, WNT10B, YWHAZ
Negative_3810	EBP, FGB, APM1A, ARHGEF6, CBR3, DDX23, ENO3, FGFR2, FLAD1, MAD1L1, MA P2K4, NMNAT2, NRG1, ONECUT1, OR10G2, OR4K5, OR52B4, OR5AU1, OR9G1, P APSS1, PARVG, PPARD, PRPH, PTPMT1, TUBB4Q, UGT1A10
Negative_3811	CFH, CR1, DCN, GK, HGF, NGF, AANAT, B4GALT7, BCAT1, C9orf95, CCR9, CHS T12, CLDN8, CYP2A6, DDX19A, EXTL2, GCAT, GGT1, GNA15, GNPDA1, GRIN2D , GUCY2C, GUK1, HSD17B8, LARS, LIPF, NFAT5, NOX1, OR6C75, PANK1, PDX1 , PIP5K1B, PLCE1, PRKG1, TAS2R48, ULK2, WNT16
Negative_3812	ME2, ARPC2, ATF2, ATP5A1, ATP6V1F, BCKDHA, CCL14, CYP2C19, DDX56, FR AT2, FZD6, GANAB, HTRA2, IL10, IL28B, IL2RA, KLRC4, MAD1L1, MAD2L1, M ADCAM1, NODAL, OR4Q3, OR52R1, PARVG, PCNA, PIP5K1C, TAS2R14

Negative_3813	ADK, ASL, CBS, FOS, ME2, BBOX1, BCL2L1, CDK4, DLL1, DUSP5, EPB41, EPB41L1, EPRS, FABP1, G6PC2, GAB1, HSD17B1, ICOSLG, IDUA, IL11RA, ITGA2, LRAT, MAML2, MAP3K4, MMP14, OR2D3, OR8H3, ORC6L, PER2, PGM3, PIGU, POLE, PRSS1, PTPN11, RALB, SELE, SEMA4B, SNAP23, ST3GAL6, TCF7, WNT8A, ZBTB16, SLC25A31, TNFRSF1B
Negative_3814	HY1, ACTN2, ATIC, ATP5J, CD247, CLDN7, EPHB3, GNPAT1, HIBCH, IL21, MAML1, NFKB1, OR11A1, OR51B2, PFKFB4, PGK2, PKMYT1, RUNX1, TIAM2, TJP1, YWHAQ, CACNA2D3
Negative_3815	MTR, AGPAT3, FUT6, OR5L1, PANK1, PDE10A, SOCS1, VEGFA
Negative_3816	ALDH1A2, BMP8A, SLIT2, TM7SF2
Negative_3817	SDS, ALPPL2, CACNA1I, CACNG1, CAMKK2, CCL5, CHEK2, CIITA, DARS2, DDX55, DGKB, DHRS4, DOT1L, E2F2, EFNB2, ENPP3, EPHA2, EPHA3, FECH, FRAT2, HADH, IL22RA2, ITGA2B, LAMB4, MAP4K3, MARS, MTMR6, MYH4, NFKB1, ONECUT1, OR10H2, OR1F1, OR6N1, OR8J1, PFKFB4, PIK3R2, PRDX6, PTCH2, RASA2, SEMA3D, SHC2, SHISA5, UGDH, MAP3K7IP1
Negative_3818	ACTC1, ADCY7, ADRB3, CACNG2, CAMKK2, CXCL11, EIF4B, GAB1, IFNA2, IL1RAP, MPZL1, OR5J2, OR5K1, OXCT2, POLD3, POLR2J, RASA1, SMAD3, KIR2DL5A
Negative_3819	CRH, DCN, F2, INS, NGF, ACADM, ACPP, ACSL6, ALG13, AMDHD2, AMY2B, ANPEP, ATP5C1, CACNA1B, DNMT1, ENPP2, GPX5, HRH1, MDM4, NRXN2, OR10H1, OR10Q1, OR1J4, OR4C13, OR4D1, OR51B2, OR52D1, PGM2, PIP5K1C, PLA2G2A, POLE4, PPM1A, PPP2CA, RPS6KA6, SELP, SEMA3C, SETMAR, STAM2, STX12, STX4, TAS2R38, TGFA, TGFBI, TLN2, WNT6
Negative_3820	GPT2, OR13J1, SERPINE1
Negative_3821	MVK, ADAM17, ARHGEF7, CLDN18, CMPK1, CNDP1, CRHR1, DAAM1, DDX19A, DLL1, FUT1, FUT7, GSK3B, HYAL1, IL11, IL2RG, NOX3, P2RX3, P2RX6, PAPSS1, PCK2, PDE1A, PPP2CA, PYGB, SDC1, SMC1B, SPRED2, WNT5A, EIF4EBP1
Negative_3822	ADC, BTD, C6, C8B, EZR, MIF, AHCYL2, AKR1C1, ARPC5, B3GALT5, CACNA1G, CD8A, CSF2RB, CSNK1E, CYP3A5, DDX41, DDX56, EFNA2, GPD1, HSD3B7, HTR4, LALBA, LHCGR, MAP4K3, MGAT4B, NTRK2, NUDT2, OR1L4, OR1S2, OR2C3, OR4A5, OR52E8, PCYT1B, PLOD1, POLA2, POLE3, POLR2D, PPP1R3C, SETDB2, TAS2R9, TJP1, TKTL2, TNFRSF4, UCP1, VANGL2, WNT6, YWHAQ, ATP6V1C1, EIF4EBP1
Negative_3823	ABO, LYN, ACTG1, CDK4, CERK, CYFIP2, DGKE, GLB1, GNA12, HNF1B, IL21, IL25, KLRC1, MAN1A2, MAP3K11, NME7, OR52J3, OR6C70, PDGFD, PRKAG2, SOAT2, STAT6, TAS2R41, TBXA2R, THBS1, UNC5D, UPRT
Negative_3824	CR2, CRK, GGH, LIF, ATG7, CACNA1D, CDC25B, CDH3, CDK6, CTBP2, CYP7A1, DARS2, DIAPH2, FGF9, GGT6, GNPAT1, GRIA2, GRPR, GSTM5, HLA-DOA, ITGA8, LALBA, LDHC, LIPE, MAT1A, MNX1, MTHFS, NT5M, OR13C4, OR4F17, OR4F5, OR4X1, PAFAH2, PDK1, PNMT, PNPLA4, PPA2, PTGER1, RXRA, SLC25A4, SOAT1, SPHK2, SV2C, TSC2, UGT2B28, ARHGEF12
Negative_3825	BAX, HGF, MSN, AGXT2, ARPC5L, BCAT1, CACNA1C, CALML5, CYP2U1, DDIT4, DFFB, DOCK1, FASLG, FLOT2, GSTA3, GUCA1C, KLKB1, KLRD1, LDHAL6A, NKX2-2, NME2, OR5AR1, PCYT1A, PGK1, PITX2, PLA2G4A, PNLIP, PPP3CA, PRKCI, PTDSS1, SDC1, SUCLG2, THY1, CACNA2D2
Negative_3826	F11, IHH, RB1, AGPAT2, AKR1C1, BACE1, BDH1, BPGM, CADM1, CFL1, CXCR5, CYP11B1, DPM2, EHMT2, ENPP3, FLT3LG, NEU4, OR4N4, OR52N5, OR7A5, PAK1, PIGA, PPARG, PTAFR, RDH16, RRAS2, SYNJ1, TRAF1, TSHB, TYK2, UPP2, YOD1

Negative_3827	GPI, LPL, ACSL4, ADAM17, ALDH5A1, C9orf95, CMBL, CREB3, DERA, DGKQ, G RM5, HSD3B7, IMPA1, INSR, ITGA2, KIR3DL2, KLRC2, LPAR1, MAP3K2, MCCC 2, MGAT1, MIOX, NAT5, NKX2-2, OR3A1, OR4K2, PAICS, PCYT2, PDE1A, PDE6G, PIGF, PPP2R5B, PRKAR1A, PRSS3, RRAS2, SHC2, SLC2A1, SOS1, ST8SIA1, SV2A, TBL1Y, TD02, TSHB, W NT10A
Negative_3828	AMHR2, DHCR24, GMPS, KAT2B, LIMK1, LIPG, NTRK2, OR4K5, TACR2, UCKL1
Negative_3829	ALDOC, CCR7, CD244, CNGB1, COASY, CYBB, DHDDS, IAPP, IFNA21, KAT2B, L AMA3, MBL2, NFKB2, OR10K1, OR6C75, PERP, PGAM4, PIM2, POLR1C, PVRL3, SMAD5, STX2, TYMP, UGT2B10, VNN1, WNT1, MAPKAPK3
Negative_3830	EZR, PTS, TXK, APOC3, ATP50, CD48, CTTN, ERBB2, HSPA8, ITGB8, MTAP, NU MBL, OR51V1, OR8H3, PFAS, PIK3R5, RFX5, STK36, UGT2A3, UNC5B, WNT5B
Negative_3831	PDC, SRF, ADCY9, ADH7, AHCYL1, ALDH1A3, BLNK, BTRC, CCL17, CCL22, CD4 4, CPOX, CSF2RA, FGF3, FZD10, GSTP1, HTR2A, IDI2, IQGAP2, ITGA10, ITG A8, KCNJ11, MAGI1, NEFH, NUDT9, OCLN, OR2F1, OR5AU1, OR5L1, OXTR, PDE 6G, PHKB, PIGB, RBPJ, RPS6KA6, SMAD3, SPRY3, SPTLC1, SUCLG2, TAS2R60 , TBL1XR1, TNFSF18, TYK2, UCKL1, UGT2A3, XYLB, YWHAZ, TNFRSF11A
Negative_3832	FOS, CKMT2, CNTF, COQ5, GNAI1, OR2B11, OR5I1, PLA2G2A, SRGAP1, TIAM2 , TXNDC12
Negative_3833	GMPR, GRPR, POLR1E, TAS2R1
Negative_3834	F12, NPL, ACTG1, ACYP2, CEBPA, DCXR, GJD2, GRHPR, PTGER3, WNT4
Negative_3835	CBL, ACY3, AGTR1, ALOX15, BIRC2, BLVRB, C1GALT1, C1QA, CASP10, DDX4, DGAT1, DOLPP1, ETNK2, FZD4, GALNT2, GATM, IFNA10, KLRC2, LILRB3, MYH 13, MYL5, NAE1, OR1N2, OR2A4, OR2M5, OR2T4, OR51T1, PHKB, PRKY, PSAT1 , QARS, SPHK1, STX2, TBK1, YKT6, ZIC2, HLA-DRB3
Negative_3836	GH2, HYI, ALG10, ARNT2, CNGA4, DLL3, MAML3, MAP4K3, NCK1, NTN1, P4HA3 , PPP2R5A, TFPI
Negative_3837	ADCY4, CCND3, CD274, GPLD1, HAAO, OR52N2, PAPSS1, PFN3, RAC2, RPS6KA 5, TOLLIP, WWP1
Negative_3838	MET, OTC, SRM, ACSL4, ACTN1, AKT2, CAMK2G, CDH5, DDIT4, EHMT1, EPB41, EXOC7, EXTL1, FGD3, GAB1, GALNT1, HEXA, IFNAR2, IL12A, INADL, KITLG, LAMB4, MAP2K7, MAP3K8, MGAT3, NLGN1, OR2A12, OR2L3, OR52E2, OR52K1, OR6C76, PIK3C3, PIK3R5, PIM1, SIAH1, TAS2R13, TRAF3, TRIP10, ZFYVE9 , ATP6V1G2
Negative_3839	AADAC, AKR1C2, ANAPC10, BUB1B, CDH1, CES7, CHRM1, CLDN1, CMPK2, CREB BP, DARS, ENTPD2, EPB41, GRM1, HDAC2, IRAK4, KCNQ1, MAN1B1, MLYCD, NE FL, NEU4, OR2A2, OR3A1, OR51A7, OR52B4, OR5P2, OR8S1, PDHA1, PDHA2, P FKP, PGM2, PGM3, PHKB, PIGQ, PLA1A, PPAP2A, PPP3CA, PTPRM, RAF1, SH2D 2A, SULT1A1, TLR4, UGCGL2, WNT11, ATP6V1B2, GABARAPL2, HLA-DRB3
Negative_3840	DDO, F2R, MAG, MPL, TYR, ABLIM2, ACSL5, ADH1A, AGTR1, APAF1, ARG1, CAL ML6, CAMKK2, DTX3L, E2F3, ERBB2, FGD1, FZD7, GALNT3, GALNT6, HSD11B2 , HTR6, INADL, ITGB7, LRP6, MAN1A1, MGAT4A, NUDT8, OR10G4, OR2L13, OR 3A2, OR4D11, OR51E2, PFKFB4, PGAM2, PHPT1, PLAU, RASSF1, RFNG, ROCK1 , SEMA4F, SOAT2, TGFB2, TUBA8, UGT8, XIAP
Negative_3841	ACO1, AKR1C2, BMPR1B, CNTF, DDX41, GLI2, MBL2, MYD88, OR2A2, PIGL, PL XNB3, PTPN7, RAC3, RBPJ, UGCG, UGT2B7
Negative_3842	CKM, ILK, ACSM4, ARPC4, CACNB2, CD86, CEBPA, DAD1, DGKH, DUSP14, EHMT 1, FGD3, GGPS1, GOSR2, ICAM2, IL1B, ISYNA1, MAPK13, MYD88, NT5E, OR2H 1, OR7D4, PARVG, PIK3R2, PPA1, RPN2, TSTA3, ULK3, SERPINF2
Negative_3843	AMH, DUT, BAAT, CAV3, CDKN1A, CEBPA, DGAT2L4, ENTPD6, GPX5, IL12RB2, OR2T4, OR5L1, SHC4
Negative_3844	APP, IL4, ALG12, BCAT1, CHSY1, COL3A1, IDH3A, MAT2B, MDM4, MGAT2, OLA H, OR1E1, PCK2, PTCH1



Negative_3845	ACACA, APOA1, APOE, ARSE, B4GALT4, BBOX1, CPS1, CREB3L4, DBF4, EFNA1, ERBB2, FARSB, GFPT2, GRIN2A, HTR2A, KAT2A, MAML2, OR51I2, OR52N4, OR5T1, OR8A1, OR9Q2, PERP, PRKAB1, SEMA3G, SMAD7, SNAI2, TGFB3, TNFRSF6B
Negative_3846	EDA, KHK, SHH, TNN, ACSM5, ACVR1B, ADH1B, CACNB3, CCNG1, CDC14A, CES2, CYCS, CYP11B2, DBF4, GRIN2A, GRIN2C, IL6R, LCP2, NCK1, OR1D2, ORC1L, PFKFB1, PGS1, PIGH, PLA2G1B, POLE3, STX18, UGT2A1, WIF1
Negative_3847	CAT, F2, KIT, KMO, PC, RB1, AGMAT, AMDHD1, ANAPC1, ASIP, ATP5D, ATP6V1H, CACNA1G, CACNA1S, CCR6, CDC27, CYP11A1, CYP2A13, CYP2C8, DAD1, DBF4, ENPP3, EVI1, FABP1, GALE, GNG13, HSD17B4, IDH3B, ITGA10, MCM3, NR1D1, OR2T4, OR2T5, OR51B5, OR5J2, OR8B12, PIGQ, PLD2, POLE4, PORCN, PP1CB, PTGS1, RCHY1, SLC2A4
Negative_3848	FER, HGF, NNT, ACPP, B3GALT2, CCNE2, COL5A1, DERL1, GALNT11, GOSR2, GUCY2C, IKBKE, ITGB1, LAMA4, LAMB4, MGLL, OR4D5, OR4X1, OR51F2, OR5A2, PLCE1, PPP1R3A, PVRL1, RPS6KB2, SARDH, SCLY, SMAD1, SNAI2, SUOX, UB E2L3, WNT5A
Negative_3849	DBT, RDX, TNC, AGPAT1, ALOX12, APLP1, B3GAT3, BST1, CD72, CD80, CD86, CHEK1, COL1A1, COL5A1, DDX54, EPAS1, ETNK2, FRAT2, GSTM1, HEMK1, HMOX2, IARS, IFNG, IL1B, IL21, IPPK, IRF7, NCOR2, NMNAT1, NUDT5, OR10A3, OR1A2, OR1J1, OR5B21, PARS2, PDGFA, PDGFB, PDX1, PGK1, PLCE1, POLA1, RAP1A, RARS, SLC9A1, TALDO1, THBS2, TSHR, HLA-DRB5
Negative_3850	AGPAT6, ASNS, ENTPD4, ESPL1, FADS2, IL23A, LLGL1, OR2F1, PRIM2, ULK1
Negative_3851	OGT, AGPAT4, ALOX15B, CCL14, CCR6, CLDN15, DPM3, GNAI3, INSR, LYZL1, MAGI2, MAPK1, OR14J1, PCCB, PDXP, PIP4K2A, SPTLC2, WHSC1, WIF1, ST6GALNAC1
Negative_3852	AGL, CAD, DCK, FGB, ABL2, ALDH3B2, ANAPC10, CBLB, CCL13, CCNB2, CCR3, CSNK1E, DDX52, FLT3LG, GIT1, GSTZ1, IL5RA, KIR2DS4, MCM5, MCM7, MDM4, NFKB1B, NMNAT3, NTSR1, OR5J2, OR6Q1, P4HA1, PCYT2, PDE1C, PDE6G, PRKG1, SLC9A1
Negative_3853	ACP5, ADH6, ALAS2, ATIC, AVPR1A, CMPK1, CSF2RA, DTYMK, DUSP9, EPHB3, ERBB4, HYAL2, IFNA14, IL20RA, MAML3, MCM3, MNX1, MYH3, NRXN2, OR2A5, ORC4L, PRKAA1, SESN1, SMC1B, WIF1, CACNA2D2, PAFAH1B3
Negative_3854	CACNA1D, CCNG1, CSNK1E, CXCL13, CYP8B1, G6PC, GNRH2, IBSP, IFNAR2, IMPDH2, NEU4, PFN2, PKLR, PSME3, THBS4, TUBB2A, TNFRSF17
Negative_3855	ACVRL1, ADRB1, ALDH7A1, ARHGEF4, CDC25A, CDC6, CSH1, DHX58, DLAT, EPHB6, FARP2, FDPS, GNA11, GPD2, HMGCL, INPP4B, ITGA2, KARS, KDSR, MAP3K4, MCM4, MYLK2, OR10G7, OR2S2, OR7D2, OR8U1, PLK1, RELB, RPIA, SLC27A4, STX3, TRAF1, UCKL1, UGT2A3, PPARGC1A
Negative_3856	DUT, LPL, MUT, SFN, ADCY6, AKT1, ATP5H, CARS, CAV2, CYFIP1, CYP2E1, G6PC2, GALNT10, GCH1, GNMT, IL21R, LILRB3, LYPLA1, MAP2K4, MAPK1, MTHFD1L, OR10H5, OR1F1, OR2D3, OR2H1, OR6S1, PAK2, PPP1CC, PRKAR1B, RBX1, RCHY1, SCP2, SESN2, SLC33A1, TAS2R16
Negative_3857	IL7, AASDH, AKR1C2, CCKBR, CCR9, CD28, EHHADH, FGF6, GFPT1, IARS, IFNA5, IL11, KLK3, KLKB1, LDHD, MGAT1, NFKB1, OR4K2, OR52H1, OR52L1, OR5I1, OSMR, PDE8B, PRSS3, PTPRC, RBPJ, RFXANK, UNC5C
Negative_3858	GP5, IL9, SRF, ACTB, BCL2, BHMT, CAMK2A, CSH1, CTNNA1, E2F1, HAP1, IFNA2, KITLG, KLK3, NANP, NQO1, OR1A1, OR2T2, OR3A2, OR5L2, PAK6, PIGT, PLA2G10, POLD1, POLR1B, POLR2H, PRKY, PRPS1, RERE, RRAS2, SLC25A4, SPAM1, TACR1, TRAF6, TRDMT1, TRHR, UCP1, UGCG, ULBP1, VDAC2, ZAP70
Negative_3859	HK3, ARSE, BCKDHB, CDS1, CLTCL1, E2F1, GJD2, GMPR, KCNB1, OR51A2, OR51G1, OR5R1, PDGFD, PLD2, POLR2K, STK11, TMLHE, UNC5C, VTI1A

Negative_3860	CRK, ABI2, ABL1, ADH1A, AMPD1, BMP7, CADM1, CD38, CDK2, DTX3, ERBB2, E XOC7, GLUL, GNAL, GYS2, HTR2A, HYAL1, IFNAR2, IL11RA, IL25, INPP5E, I TGA5, ITGAD, LCMT1, LEFTY1, LYPLA2, MAPK11, MGST1, MYH3, NAT2, NRG4, OR10J3, OR14A16, OR56B4, OR8S1, P4HA1, PDE1A, PHKA1, PLCB4, RETSAT, SETDB1, SMURF1, SNAI1, TAS2R16, TM7SF2, TNFRSF1B
Negative_3861	C8A, ALAS1, ALG10B, ALG8, AREG, BCAT2, CAV3, CCNB3, GNA11, IFNB1, MAD 1L1, NPR1, PVRL4, SLC25A5, SPTLC1, STX8, WNT5B
Negative_3862	BTK, TFG, ABLIM3, ADAM17, ASMT, B3GALT6, B4GALT4, CACNA1H, CALML6, C ASP7, CCNE2, CCNH, CD59, CDC20, CHRM1, CSAD, DGKI, DPM3, DRD2, FLT4, F ZD10, GAPDH, GSTK1, ICOS, ITGB3, MAPK14, MYH11, NOTCH3, OR2Y1, OR6C7 5, PTPRJ, RARS, RDH8, RUNX1, SIAH1, TCF7L2, TICAM2, UNC5A, WNT2B, YWH AZ, CSGALNACT1, SERPINB5
Negative_3863	FYN, GK, AKR1B10, BMP4, CDK4, COL4A1, FLAD1, LAMA4, PDE6D, PI4KB, RDH 11, RELA, ST3GAL1, TUBA3C, HSP90AB1
Negative_3864	ABO, DDO, FAS, ID1, IDS, LIF, ACOT12, ARHGAP5, B4GALT6, CACNB2, CCL26 , CD79B, COL4A1, CTBP1, DLST, DOT1L, E2F4, ESAM, ETS1, GBE1, GNG13, IF NGR1, MAPK10, MTHFD1, NME2, NR4A1, OR10G9, OR10V1, OR11A1, OR1E2, OR 2C3, OR51T1, OR6F1, OR8B4, PAK2, PDE1A, PDE7A, PTCH2, RFX5, SETD1B, S FRP5, TIRAP, TUBA8, UCK1, UROC1, ATP6V1G2, ST6GALNAC1
Negative_3865	C8A, C8G, CKB, DLD, FGB, ACAT2, ACY3, ARHGAP5, ARPC3, BCAT2, CD59, CMP K2, CYP3A4, DDX51, DUSP4, E2F1, ELK4, ENTPD5, FZD10, GLDC, GNAZ, GSTA 2, HCST, IL18, IL1RAP, IMPA2, KDSR, LAMB3, LCP2, LEF1, MAP3K8, NTF4, O R4C12, OR4P4, OR4X1, OR51B5, OR6B3, OR6C1, PIK3R5, PNMT, PPP1R3B, PP P1R3D, PTDSS1, PTK2B, RXRG, SGPP1, TUBA1A, XCR1, SERPINF2
Negative_3866	ALG2, CCNA1, CTTN, DDHD1, DHFR, ERBB3, MEF2C, NCR3, OCRL, OR10H4, PDE 11A, POLR2E, RPS6KA5, SCD5, WNT5B
Negative_3867	FYN, TKT, CCNB1, FGF6, FZD6, GRIN2B, GSTA3, ITGAE, MYH1, NCF2, OR11G2 , PPAP2B, C1GALT1C1
Negative_3868	F2R, ALOX15B, PDXK
Negative_3869	CD2, CKM, F2R, GPI, AARS2, ACSL5, ADORA2B, AFMID, AGPAT4, ATF4, C3AR1 , CASP7, CTS1, CYP27A1, CYP2E1, DDX56, DHDDS, DLL3, E2F5, FCGR3B, FG F20, GPD2, HAGHL, HSPA2, KLRK1, MTHFD2, NFYA, OR13C2, OR2A4, OR2T34, OR51A2, OR6N2, OR8A1, PDE6D, PHKA1, PHKA2, PKMYT1, PPP5C, PTGIS, PTP MT1, SGMS2, SOCS5, ST6GAL1, TAS1R2, THBS4, TYK2, VANGL1, WEE1, HLA- DPA1
Negative_3870	C9, CFD, FES, JUN, A4GALT, AGPAT3, ALDH3B2, CACNA1D, CDC45L, CSDA, CY P2C9, FUT2, GALNT12, GUCY1B3, INPP5A, ITGA5, ITGB2, NFATC2, OR13C3, PFKP, RBPJL, SPRY4, TCF7, ATP6V1E1
Negative_3871	AARS2, ADSS, CDKN1C, CMBL, CYP1A2, FASLG, IMPDH2, NRXN1, PRKAG2, VAM P3
Negative_3872	ACVR1C, AKR1D1, CIITA, CISH, DHDH, DPAGT1, ENO1, FABP1, GCLM, GDE1, G RIA2, HRH2, HSD3B2, IL17RB, ITGA4, MAD2L1, NEU1, OR2M4, OR6C1, OR8U1 , PLA2G4A, PPP1CA, SARS2, SLC27A4, SMAD4, TAS1R2, ATP6V1E2, TNFRSF1 0C
Negative_3873	ADO, GP9, HPD, NF1, NNT, ACP1, ADORA2B, ATP6V1F, CACNA1B, CD244, CRY2 , CSNK1D, CTPS2, CTS1, DDX18, DPM2, DPYS, EFNA1, FGF17, GNAZ, GNG3, G NPDA1, GRIA3, GSK3B, GSTK1, GUCY2F, IFNA2, MDH1, MGAT5, NUDT9, OR4C1 6, OR52I1, OR5A2, OR6A2, OR6X1, PDGFRA, PIGC, PLXNA1, POLR3A, PPP3R1 , PRIM2, PSEN2, RARS, SLC12A2, STK4, TGFB1
Negative_3874	ABP1, CDKN2D, CHR1, G6PC2, GALNTL1, INHBA, OR4K15, RPIA, RUNX1, SHC3 , TAS2R42
Negative_3875	ABO, ITK, ABAT, ACSM3, ATP6VOB, B4GALT2, BIRC3, C1QB, FGF3, FZD8, GLU D2, IL24, KCNJ11, NAT2, OR14I1, OR4K1, OR4N2, OR6X1, PDPK1, PFKL, PGM 1, POLR2H, PVRL3, SSH1, SULT1A2, WASF3

Negative_3876	GDA, GGH, ALCAM, CHRM5, CLCA2, CSAD, DTX4, FGFR2, GOT1, GRIN2A, GUCY2F, HRH2, IDUA, IFNK, IL6R, ITGB5, LIMK2, NFYA, NODAL, OR10G3, OR5B3, OR8I2, PARVB, PER1, PI4KB, PIK3CB, PIM1, PLCB4, PPBP, SORBS1, SSH1, THY1, ATP6V1G2, KIR2DL5A
Negative_3877	FGB, BHMT, GDF6, GSTZ1, LCMT2, RBKS, SEMA4C
Negative_3878	LSS, CACNG4, CANT1, DDX18, MDM4, POLR2D, PORCN, PTGER3
Negative_3879	ACSL6, AKR1B1, ALDH3A2, ARSA, DPM1, DPYD, EIF4E, FARSA, FRAT2, OR1A2, OR2B2, PRKCD, RALB, SULT1A4, TPK1, TRPM5, VEGFB, MAPKAPK3
Negative_3880	BAD, CAD, GBA, ADH4, ATP6V1F, BMPR1B, CD59, CDC25C, CD01, CTBP1, CYP26A1, DARS2, DHRS4, IFNB1, IL11RA, INPP4A, INPP5E, PIGB, PRKAR1A, PTEN, RPS6KA5, SHC2, SOCS7, THTPA, TYROBP, WNT6
Negative_3881	DUT, EZR, RB1, VCL, ABLIM3, APH1A, CACNA1A, CCL14, CCL20, CLDN1, CSNK1G2, CSNK2B, CTSG, DLL4, ENPP2, GAS1, GRIN1, HLA-DMA, IDH1, IL3RA, KITLG, LAMC2, MAN1B1, MYH6, MYH7, NEFM, NT5M, OR5B17, OR5J2, PARD3, PDCD1, PIGL, PIGU, POLR2H, PPP2R5D, PRDX6, PRKCI, PTEN, RASGRF1, SH2D1B, SLC25A6, SMPD4, SOS2, STX5, TBK1, TBL1XR1, SLC25A31
Negative_3882	MVD, ADH1A, CD70, CDK7, CYP2C18, DPYS, DTYMK, GNG12, IFNA8, IL2RB, MAP2, NTNG1, OR2A14, OSMR, PIAS2, RGS3, SLIT2, TAP1, VEGFB
Negative_3883	CR1, HGF, ACTA2, ALDH3B2, ALG2, B3GNT5, BCMO1, BLVRA, BRAF, C4BPA, CASP10, CCL4, CSF1R, DAAM2, DAXX, DOLPP1, ENTPD1, FGF12, GADD45G, GDF6, GFPT2, GMPS, HADHA, HSD3B2, IFIH1, IFNB1, IL13RA1, IL1B, MAPK10, NLR2, OR13G1, OR1L3, OR4K1, OR52I1, PDGFRA, PGS1, PPP3R2, PTCH1, RASGRP4, ROBO3, SQLE, ST3GAL1, TPMT, UGT2B11, UNC5C
Negative_3884	CDA, TH, ACAD8, ARPC3, BMP4, CASP10, CHRM1, CHRM2, COL11A1, CSNK2A1, CTLA4, DRD2, ENTPD8, GNG13, GNRHR, JAG2, L1CAM, LHCGR, LIPA, MAPK3, MYLK3, NEFM, OLR1, OR2A25, OR4C13, OR6C4, OR8G1, PGM1, PIGA, PTGER3, SFRP5, SLC2A2, SYNJ1, TACR2, VKORC1, YES1, TNFRSF13C
Negative_3885	AK5, ASL, F5, GDA, GSR, MPZ, VCL, ACACA, ALG1, ARAF, CACNA1I, CCL13, CD59, CDH1, CLCA4, CLDN6, CYP8B1, EDNRB, ENTPD1, EPHA7, EPHX1, EXTL2, GOLT2, HSPB1, IDUA, IL15, JAK1, KLRC1, LAMC1, NUDT12, OR1B1, OR1N2, OR2A4, OR2AG2, OR2T5, OR5I1, PAX6, PLXNC1, PSAT1, PSEN2, PTCH2, QPRT, RHEB, ROBO2, SLC27A5, WNT16, CTNBP1, MAPKAPK5
Negative_3886	CP, HGD, MOS, B4GALT6, CD19, FZD10, GALK1, ITGB5, KLK3, MTMR6, NSD1, NTRK2, PFAS, PFN4, PPP2R1A, SETD1A, ULBP1, WBSR22
Negative_3887	AR, BTBD, DDC, AANAT, B3GAT2, B4GALT3, CSNK1G1, EPHA5, IL10RB, IL1B, OR10S1, OR2T11, OR9G1, PARD6A, PMM2, POLR1C, PPM1A, PPP3CB, PRKAB1, RPS2, RGS3, STK36, ULK3, TNFRSF17
Negative_3888	OGT, AKR1B10, B3GALT2, BIRC5, CD8A, CDIPT, CLDN6, DERL1, DHRS4, EPHB2, FGF22, GALNT2, GATM, HNMT, HSPB1, ICAM2, MYH7, NOD1, NPAS2, NRG3, OR10G3, OR4K17, OR8K3, OXCT1, PDHB, PFN3, PIGM, PPCS, RPS6KA2
Negative_3889	NPL, ABLIM2, ACADVL, AGTR1, AMY2B, APH1A, APOE, ATP4B, ATP5A1, BET1, CD19, CD36, CYP4A22, GAPDH, GNAZ, IL10RA, IL1RAP, MOV10L1, NLGN3, NMNAT2, OR13J1, OR2T4, OR4D5, OR4N2, OR52R1, OR8A1, PANK1, PFKFB3, PIP5K1A, PLXNC1, ROCK2, SDHA, SPRY3, TPH1, TRMT11, TUBA1B, VCAM1, WHSC1, YARS2, ATP6V0E1
Negative_3890	DAG1, DHODH, GPAM, IQGAP2, MTAP, NEU3, OR2M7, OR4N4, OR51A2, POLR3G, SOCS5, TALDO1, TGFB1
Negative_3891	AMH, VTN, ALG8, ANAPC1, ANAPC7, C4BPA, CCL20, CD19, CUL1, CXCL1, DDIT3, DDX47, DEGS2, ENO3, EPHB2, GAS1, GSTM1, HDAC2, IL24, LLGL2, LYPLA2, MTAP, NCR2, OR13C9, OR2M2, OR4P4, PPAP2A, PRKCB, PTGER1, RAB23, RASGRF1, SMC1A, TSLP, UGT8, VDACC3, WBSR22, KIR2DL5A, ST6GALNAC4

Negative_3892	ADAM17, APC2, ATP5J, CLTA, CSNK1G2, CYP2J2, FGF7, HEXA, HSP90B1, IFN W1, MAPK3, OR10P1, OR13C8, OR9G1, PER1, PGLS, PHKA2, PIGM, POLA2, RHE B, RHOD, RPE65, TAP2
Negative_3893	TKT, AACS, ACAT1, ALCAM, CES2, CISH, CLTB, COL5A3, EPHA4, LDHAL6A, MA PK1, PHKB, WNT7B, CSGALNACT1, MAPKAPK3, TNFRSF10A
Negative_3894	BCR, HK1, TK1, ALG1, AOC2, ASAH1, ATP5G3, CCL28, CLTA, COL4A1, DFFB, F GD1, FGF14, GMSD, HIBCH, IL13RA1, JAG2, LDHB, MAP3K2, NLGN3, NRAS, NR XN1, OR10G7, OR1L1, OR4D2, OR51I2, OR56B4, OR5B12, P2RX6, PIK3CD, PO LR2K, PPAR, PRKACG, PRKAG2, PRSS1, PRSS2, SOS2, STT3B, UGT1A10, ZIC 2, MAP3K7IP1
Negative_3895	LAT, TPR, ACPP, ALOX12B, C3AR1, C5AR1, CAMK2B, CCKAR, CERK, CXCL3, CY P4A11, CYP4A22, DCTN1, FGFR4, GALNTL1, GCLC, MALT1, MICA, MTHFD2, MT MR6, NCOR2, NUDT12, OCLN, OR2G3, OR2T29, OR51B2, OR52B4, OR5L1, OR6C 76, PDK1, PFKL, PIP5K1C, PPP1R3B, PRKAG3, RAB23, STX8, TAS2R49
Negative_3896	C2, DCN, FN1, IL6, OAT, CD27, CD3E, CISH, CXCR3, FARSB, GGT1, GNG3, GNR H2, HIF1A, HTR2C, IFNK, IL28B, KNG1, MALT1, NRG4, NTNG1, NUMB, OR7A17 , PER2, PRSS3, PTCH2, RFXANK, TSTA3, AASDHPPT
Negative_3897	AUH, GH2, ACP6, ADRB1, ALDH3B2, AQP7, CCL4, CCR3, CHIT1, CYP8B1, DCTD , DDIT3, DDOST, E2F2, F2RL2, ICAM2, IL3RA, NOTCH1, OCLN, OR8K5, PARS2 , PDGFC, PPP2R2B, PTGS1, TP53I3, TUBA4A
Negative_3898	GPI, JUP, MTR, AARS2, ADH1B, ALOX12B, ARNT, CADM1, CCR3, CD274, CLTA, CSNK2A2, DDX18, GCNT3, GSTA5, ICAM1, IDH1, IL11RA, IL1R2, INHBE, MAP 4K1, MS4A2, NUDT9, OR10R2, OR4N4, OR5AP2, PAK6, PIGF, PIGO, PIP5K1A, POMC, PRKCZ, RRM1, SPP1, STAT5B, TLR4, TLR9, TSHR, SERPINC1
Negative_3899	SP1, AANAT, ALG10B, ARSD, CCL19, CYP26A1, DGAT2L4, DIAPH1, EDA2R, EP HX2, ESPL1, GP1BB, GRIN2D, GRM1, INHBB, IQGAP1, KCNQ1, MTHFS, OR4A5, OR52B4, OR52I2, PAICS, PARD6A, PHPT1, PIGW, PLCZ1, POLR1A, PTK2, RAS A1, SH2D2A, TUBB4Q, UAP1, UGT2A3, WNT16
Negative_3900	LCK, AGPAT3, ATIC, CBR3, DDIT4, OR9G1
Negative_3901	CPT1A, CYP26C1, EXTL1, JAG2, MALT1, OR1J4, RIPK1
Negative_3902	CFH, GSN, ITK, ARRB1, CDK2, CYP8B1, EDAR, FGFR3, GGPS1, HYAL2, IL15, I L7R, MAN2A1, MAP3K12, NFYB, OR14J1, OR2C1, OR5C1, OR5M9, OR6B2, OR7D 2, P2RX6, PDGFA, PERP, QPRT, SFRP1, SPAM1, SSH2, TRPM5, TNFRSF6B
Negative_3903	ACACA, ALDH1A3, ATP6V1A, CHPT1, GALK2, GLB1, ITGA1
Negative_3904	ADC, EDA, GP9, ME1, AGMAT, ALDOC, CAPN2, CCNB3, CCR10, CDKN1B, CNDP1, COMT, CYP2D6, DDX4, DDX55, DOCK1, DPYD, GMPS, KIR2DL3, MAP3K12, MAP4 K4, NFYA, OR52N1, OR5D16, OR5F1, PIGV, PPM1B, SARS, SHC4, SIAH1, SMAR CA2, SRGAP2, ST6GAL1, SV2B, WARS2, SUV420H1
Negative_3905	DCK, LPL, ABL2, ALCAM, ALDH3B1, ATP6VOB, BUB1B, CACNB1, CAMK2D, CDK2 , CTNNA3, DIAPH2, DUSP2, DVL2, ENTPD4, EPHX1, FGF8, GLI2, GSTM1, HLA-G, HSD17B7, IARS2, IFNA21, IMPDH1, MAPK7, MDM4, MYH11, NADK, NANP, OR 2M4, P2RX6, PARD6A, PECAM1, PFN3, PLAT, POLE, PPP2R2C, SMC1A, SMPD2, ST3GAL4, TNFSF10, TXNDC12, WNT5B, TNFRSF1A
Negative_3906	DAO, GP9, JUN, AKT3, ALCAM, ALPPL2, ANAPC2, APRT, AXIN2, CCND3, CES1, CXCL3, DHRS9, EXTL1, GNAI3, GNAQ, GNPDA2, IFNG, INPP1, KNG1, LDHAL6B , NFYA, OR10Q1, OR4C6, OR52J3, OR7D4, POLA1, PPBP, SFRP4, SHC2, SLIT2 , SOAT2, SPHK2, SPTLC1, TACR2, TAS2R13, TAS2R42, WARS, SERPINA1
Negative_3907	ALOX15, ATP6V1F, BIRC3, NAT2
Negative_3908	CACNA1D, GRB2, KCNQ1, MCCC2, ORC4L
Negative_3909	DLD, FUK, ID3, TAT, ACSM2A, ANAPC11, APPL1, C9orf95, CHAD, COL2A1, CS F2RA, DDX47, EPHA8, FASN, GNAZ, ICAM1, IL13RA2, MKNK2, NAT1, NFYA, NO TCH2, NRG2, OR10A3, OR10H3, OR51B2, OR51E1, RASGRP1, RASGRP3, STX16 , TUBA1B, TYK2, VDAC2, WNT10B

Negative_3910	EBP, LEP, LPL, TXK, ACSL6, ALG8, AOC2, BCM01, CAMKK1, CD48, CDKN2A, CYP1A2, DHRS3, EXOC7, HSD3B7, HYAL2, IFNA17, LDHA, MAP2K4, MAP2K6, MFNG, OR11H4, OR13A1, OR4L1, OR4M2, OR5A1, OR5H6, OR5T3, PIAS2, POLE, RAD51, SPRY4, TAS2R5, TGDS, TJP1, VDAC2, VEGFA, ZMAT3
Negative_3911	F3, GLA, ACLY, ADAM17, ADORA2A, BMP8A, CD226, CD38, CDC2, CLDN20, CNTR, CYP11A1, DAPK1, DGKQ, DNMT3L, DRD1, EPOR, GALNT9, GCNT1, GRIN2B, HDAC2, ITGA3, LAMB2, MAPK9, OR52K2, PCYT2, PIK3CD, POLR2H, PON1, PRODH, PRSS3, RASSF1, RFX5, SCIN, SDC3, SMAD7, TYMS, UGDH, XYLT2
Negative_3912	GLS, LHB, MPL, ACADL, ACO2, ACYP2, AOC3, ASS1, BMP8A, C5AR1, CHIA, CHKB, CLDN20, DNMT3L, E2F2, E2F5, EPHA3, FGF1, GABARAP, GGCX, HNF4A, IKBKE, IRAK4, KIR2DS5, MGAT1, MYH6, NCF4, NME2, OR8B12, PDE7A, POLR2E, PRKAG3, SMPD1, STX10, TSTA3, WEE1, ATP6V1G2
Negative_3913	CD2, ABAT, APOC3, AXIN1, BDH1, BUB1B, EARS2, GCAT, HTR4, KNG1, OR8A1, PPP2R5E, RAC3, RUNX1, HLA-DRB4, PAFAH1B3, ST6GALNAC3
Negative_3914	C9, IDS, MAG, ACY1, ADCY6, ALPI, CDK6, CER1, CNDP1, COL4A1, CYP2B6, CYP3A5, DGKD, EGLN3, EPOR, FGF6, GSTM3, HSD11B2, HSPA1B, HSPA8, ICOS, IL10RA, IMPA2, LCAT, LTBP1, NCR1, NRXN3, PPOX, PPP2R1A, PROS1, PSPH, SDHB, TFPI, VKORC1, WARS2, HLA-DPB1, HLA-DRB4, TNFRSF11A
Negative_3915	TNF, AARS2, ACAD8, ATP4A, BAAT, CLDN14, CLDN16, CNTF, COMT, CTF1, CYP26C1, CYP2A7, CYP2B6, DGKZ, DRD1, EPHA7, FZD7, HSP90B1, IDH3B, IL25, ITGB5, KIR2DS4, LTC4S, MAN1A2, MAP2K6, MLYCD, OR1E2, OR2T29, OR51B4, OR6C1, OR8K3, PGAM4, PITX2, PLCD1, PRKY, PTCRA, PTPN1, PYCR1, RBL1, SEPHS1, ATP6VOA1, CACNA2D4, SERPINC1
Negative_3916	BTD, DHH, F8, PVR, ABL1, ABLIM3, ACSL6, ADCY5, ALDH1B1, ARPC1B, ARRB1, ATP5J2, B3GAT3, BCAR1, C5AR1, CACNG3, CFLAR, CKS1B, DHX58, DKK4, DMGDH, DUSP1, EDA2R, EPHB3, FLOT2, FZD9, GSTM3, GSTZ1, IL29, LIPF, MAP3K5, MGAT3, OR2G3, OR4X1, OR52I2, PPP1R3A, PVRL4, SGMS1, SPTAN1, TP53I3, UCP1, WNT3, WNT8B, SUV420H2
Negative_3917	ACP5, ADCY3, CXCL6, NAMPT, NMNAT1, OR6K2, PYGM, RELA, SEPHS1, UAP1
Negative_3918	CHPF, CIITA, CLDN4, GMPA, NRG2, OR2T10, OR4Q3, PLCZ1, PNPLA3, PPP1R3D, PRKACG, SLC27A4, MAPK8IP1
Negative_3919	C1S, GK, IL7, LYN, ADRA1B, ATP4A, B3GAT1, BET1L, BUB1B, CDC27, DAAM2, EIF4E2, ENAH, GLI1, GSTO1, HARS2, ITGA6, LAMA4, LLGL2, NRXN2, OR2AG1, OR6B2, OR7C2, OR9I1, PIK3R5, PPP2R5C, PTGER3, RAF1, RXRA, SUCLG2, TAS2R13, TAS2R49, TLN1, WNT7A, YWHAG
Negative_3920	GIT1, HTRA2, IARS2, IFIH1, IGF1R, ISYNA1, MAD2L2, NOTCH2, NT5C, PDE7A, PLXNB1, PPT1, PTGES, TMLHE, TNFRSF18
Negative_3921	C9, ENTPD1, GNAL, POLR2K, TRPM5, WNT7A
Negative_3922	ACVR2B, ALOX15, AQP7, AXIN1, BLNK, CACNA1I, CD34, CER1, CLDN6, CLDN9, CNTF, CPS1, DDX56, EPHA2, EPHA4, FGF7, FGFR2, GMDS, IGFBP3, LDHD, NAT5, NT5C, OR5L2, PARD6A, PARVG, PDX1, PFN3, SESN3, SKP2, STAT5B, STAT6, TBL1X, TIRAP, TNFSF12, TUBB, UBE2L3, UMPS, VAMP4, ATP6V1C2, PAFAH1B1
Negative_3923	TNC, ADORA2A, ANPEP, APH1A, BMPR2, CAMKK1, CSNK1E, CX3CL1, CYP3A7, ETS1, FABP1, FMO5, GADD45B, GALNT9, HMOX2, IDH3B, LEPR, MAPT, MDM2, MEF2C, MGAT4B, NOTCH3, NUMB, OR4N5, PARD6G, PYCR2, SC5DL, TPMT
Negative_3924	CD2, CFI, PXN, SMO, ARHGEF4, CHEK2, CHKB, CKS1B, CTSG, DUSP16, IL29, MMP7, MTFMT, PDX1, PLCB2, PYCR1, RASGRP4, VANGL1, WNT3, WNT4
Negative_3925	CRK, DCK, IL9, OTC, ACY1, ADCY3, ALPP, ARSB, CBR1, CDC16, CPT1A, DUSP16, ELK4, EPHA3, EXT1, GALNT13, GAMT, GSTO2, HLA-DRA, HTR7, IFNGR1, ITGA9, JAG1, MAP4K2, MAPK1, MCCC1, OR2AG1, OR4F15, OR5M3, OR6N2, PAK4, PIAS1, PPP1CC, RASSF1, RFXD2, SQLE, STX16, TUBB2C, UCKL1, WNT7B, ATP6VOA2, PAFAH1B1

Negative_3926	MET, PLG, SPN, TK2, TNN, ALPP, ARG2, BMPR1A, CACNG8, CBR1, CCL8, CCND2, CCNH, EI24, EPHA4, EPHX1, FASLG, FTCD, IGF1, IL13RA2, IL15RA, IPPK, ITGB5, NT5C1B, OR13C2, OR1L1, OR7A17, PCYT2, PDE11A, PDK1, SUFU, TUBA1B
Negative_3927	AR, B3GALT1, CCNB2, CTSS, DARS2, EDA2R, ENTPD4, GDF7, HPSE, LIAS, MASP1, MGST2, NCF4, NKD2, PDK1, SDHD, SEMA3B, VDAC3
Negative_3928	FH, TK1, AVPR1B, C1QA, ENTPD3, FZD1, FZD9, GALNTL5, GPAM, GSTM2, GUSB, IRF5, MALT1, MAML3, MAP4K2, MKNK2, NKX6-1, NME6, NSDHL, OR10A2, OR4P4, OR51A4, OR5B3, OR6C3, PDE6D, PIK3CD, PI4K2C, PTPMT1, RARS, RASSF5, TPMT, ATP6V1G1
Negative_3929	C4B, DBI, PRL, AKR1C2, ALDH1A3, APOE, CACNA1F, CNTN1, COL4A6, FZD10, GTSE1, HHIP, LGMN, OR5B21, PAK7, PFAS, RAP1A, SMURF1, ST6GAL1, TSHR, ST6GALNAC4
Negative_3930	GBA, ACSM1, ADCY5, CASP7, CDS2, CLCF1, DGKD, ERO1L, HAGH, HEXB, HTR2C, MYH4, NFASC, OR2AE1, OR4F4, OR52N1, PARD6A, PIK3R4, RIPK1, STX6, TASS2R4
Negative_3931	HYI, AADAC, ACOX1, AHCYL1, APBB1, CASP10, CCL3, CLDN8, CREB1, CYP2F1, DLL1, DPYSL2, FLOT2, GALT, GNAZ, GSTO1, HMGCS2, IFNA4, IRF3, MAOB, MGA5B, MYL2, OR11L1, OR4F15, OR5P2, OR8B8, PER2, PHKA2, PIGK, PPAP2B, PYCR1, RUVBL1, SEMA4B, SOAT1, ST8SIA1, THBS2, TJP2, UGT2B17, WBSR22, WNT1, WNT2, YWHAE, ATP6V0E1
Negative_3932	TNC, ACTA1, ACVR1, ADCY1, ADCY3, ALDH1L1, APC2, ATG3, B4GALT4, CYP7A1, DHRS9, EHHADH, ETS1, FCER1G, FZD4, GCLM, GIT1, GUCY1B3, LIPA, MS4A2, NPR1, NRAS, OR3A1, OR4B1, OR4K1, OR5T2, OR7C2, OR8D2, PANK3, PPM1A, PRKY, PRPH2, PTGES, RBL1, RBX1, SEMA4G, SOAT1, SPHK2, TLN2, WNT1, PPIR12A
Negative_3933	CGN, F8, GP6, ME3, ABLIM2, AKR1D1, ALCAM, ANPEP, BIRC5, CARS, CLDN11, CNTN1, CPT1C, CXCR6, CYP27A1, FCER1G, GNG3, ICAM1, IDH3B, IL1A, LIPG, LYZL1, MAML3, MYLK2, OLR1, OR2A42, OR2A5, OR5B3, OR5D14, PIGK, PLA2G10, SOCS4, TNFSF10, ULK2, WEE1, CACNA2D1, PAFAH1B2, PLA2G12A
Negative_3934	HAL, ACSS3, CHAD, DEGS2, DFFB, DHCR7, GAD2, GLUD2, HADH, HYAL1, MAP3K13, NME7, NR5A2, OR10A5, OR4A16, POLE4, POLR2B, TUBB2B, UPB1
Negative_3935	GCK, ACOT12, ALG10B, BAI1, CD86, DHCR24, DPAGT1, ERBB4, GRM1, ITGA9, KLRK1, MAPK14, MAT2B, OR10AG1, OR51B4, POLE3, POLR3K, PPBP, PRKCB, SEMA3E, SRGAP3, ST3GAL2, WNT11
Negative_3936	C8G, MTR, AADAC, ACAD9, ASAH1, ATP5G3, BMP5, BMP8A, CLDN1, CTBS, DDIT4, DGKA, DHCR24, EDNRA, EIF4B, ESAM, FGF1, FLOT2, FTCD, GART, GCAT, GYS2, LIMK2, MAP4K3, MAPK12, METTL6, MITF, NCKAP1L, NFKBIE, OR2A25, OR7G2, PRKAR2A, PRSS3, RASA2, SDC1, SPAM1, SREBF1, STEAP3, SUV39H2, TPM3, TUBA1C, UGDH, VASP, SERPINB5
Negative_3937	CAT, CACNB4, CADM1, CCL24, CD244, CXXC4, CYP11A1, GNRH1, GSTA4, GUCA1C, MAN1A1, MAN1B1, P4HA2, PGAM4, PIK3R1, PLEKHA8, PLTP, PTPRR, RASA2
Negative_3938	ACACA, B3GALT6, CBLB, CCL16, CD79B, DHCR7, HSD11B1, IL17RA, INHBC, MALT1, NAT2, NME2, NMNAT3, NUDT8, OR6T1, PLCD4, UROD, VANGL1
Negative_3939	FAS, GSS, APAF1, CFL1, CHRM3, CHST11, CSNK1A1, DDX18, DUSP6, DUSP8, ETNK2, GANC, GPD1, GRIA3, IL17RA, OR52E8, PDE6D, SAT2, STX3, THBS2, TRADD, ATP6V0A1, TNFRSF10D
Negative_3940	GNRH2, IAPP, ITGA4, NFYC, SOCS3
Negative_3941	BCL10, CASP10, CHEK2, CHRM2, CREB3, GSTA1, IFNW1, IL2RB, INADL, NRXN1, OR2AE1, OR2AG2, OR2W1, OR51G1, OR5T2, OR6C76, P4HA1, PAK1, PCK1, PDHB, PFKFB4, PLA2G5, POLR2B, PTGS1, TRPC1, HSD17B12, MAPK8IP3

Negative_3942	BTD, LTB, SPN, ACO1, APPL1, AQP7, ARHGEF7, ATP5G3, BMP2, CCL16, CCNE2, CYP2J2, GADD45A, GOT2, GYS1, H6PD, HTR2C, IFNA2, ITGA4, ITGA6, MAP3K3, MGST1, MYH7, NOS3, OR1J4, OR1L4, OR51Q1, OR8K1, PDE1B, PDE8B, PKLR, RARA, RASSF5, RRM2, TAS2R7, UPRT, WNT3, ZMAT3, ATP6V1E1, SUV420H1
Negative_3943	GDF5, OR7G3, P2RX6, PIGV, ATP6V1E1
Negative_3944	ILK, ACP5, ACPT, ADIPOR1, ANAPC11, CNTN1, DDX23, EDAR, EXTL2, ICOS, IL2RG, KIR3DL2, MAP2K5, NCK1, NCOR1, OR1J4, OR2Y1, ORC2L, PIK3CB, PITX2, PPP1CC, SARDH, TNFRSF8, TP73, TNFSF13B
Negative_3945	BID, SRM, CACNA1D, CCNB3, CSF1R, CYP4F3, GRIA2, GSTK1, KLRK1, MPP5, OR5V1, OR6K6, PRKG1, SOCS2, TICAM1, HLA-DRB5, TNFRSF13C
Negative_3946	AK1, CSK, FST, AMDHD1, BAIAP2, C1QB, CYP26C1, CYP2B6, DAG1, DDX56, FARSB, GIT1, GJA1, GUCY2D, IDH1, IMPA1, JAM2, KLRC4, LAP3, LARS2, LIAS, MAD1L1, MAD2L1, MAP3K13, MGST1, MPDZ, MTHFR, MTMR2, MYLK2, NFYA, ONECUT1, OR2T1, OR5B12, PIGM, RETSAT, SCIN, SEMA4B, SHISA5, SMAD5, TAS2R4, TGDS, TLR3, TNFSF18, TRAF6, TYMS, WHSC1, WNT4, TNFRSF10A
Negative_3947	LPO, ME2, AFMID, ALDH1L1, AOX1, ARHGAP5, BAIAP2, CALML5, CLDN16, COL4A6, DGKD, EDAR, ENTPD6, F2RL2, HEXB, IFNA6, IL24, KLRK1, MAPK8, OR2F1, OR4L1, PCCB, PDE3B, PDHB, SQLE, TIRAP, TPK1
Negative_3948	HGF, ACTA2, CSNK1G1, FRAT2, OR51B4, RPE65, SMPD1, TNXB, WNT2
Negative_3949	TK1, ACHE, ALDH1B1, ARPC1A, ATP5B, BAAT, BDKRB1, COMP, CXCR5, EFN2, GCDH, GGT7, GUSB, HIF1A, HLA-DMA, HNF1A, IDH1, ITGA2, ITGB1, MAPK10, MINPP1, NRAS, NRCAM, OR1E2, OR2A2, OR5A1, OR5L1, OR6C2, PANK1, PIP5K3, PLXNB1, PPOX, PRKX, PRPS1, PTK2, RASSF1, SETMAR, SOCS2, SPHK2, TGFB1, WEE1, C1GALT1C1, PNLIPRP2
Negative_3950	ATG3, DOT1L, IL18R1, KITLG, P2RX2, PTCH1, TAS2R40, WWP1, ARHGEF12, CSNK1A1L
Negative_3951	RET, TFG, UBB, AASS, ABLIM2, AFMID, ALS2, B3GALT1, CCL3, CHST11, CXCL2, CYP1A1, CYP26B1, CYP2C19, DNMT1, E2F3, EHMT2, ENTPD8, EPB41L2, FADS2, FGF2, GOSR2, GRIN2B, HCLS1, IDI2, INPP5B, IQGAP1, LM07, MAP3K3, MYL9, OR10K2, OR4C16, PGS1, PHKB, POLR1C, POLR3A, SELL, SEMA4F, STX6, TYMS
Negative_3952	CHAD, COL1A1, GDE1, NFYA, OR13C2, PPP2R5E, VASP, VDAC2
Negative_3953	GHR, MIF, ACAT1, ALOX12, CAMK2A, CD8A, CMBL, CSF2RA, CYP27A1, EGLN3, ENTPD4, FCGR3A, FMO4, GNAI2, HARS2, MYH7B, NR5A2, OR10H3, OR8H1, PFN4, PI4KA, PRKAR2A, RERE, SSH2, TBXAS1, TPMT, TUBB2B, WNT4, ATP6V1G3
Negative_3954	SI, BUB1B, CYP2C9, GIT1, IL22RA2, MAP2K5, NFYB, OR1E1, MAPKAPK5
Negative_3955	DLD, ACAD9, ACVR1C, ARHGAP5, ARNT2, ATP6V1A, B3GNT3, CCL28, CD14, CD74, ENPP2, EPB41L3, ERBB3, FGF1, GFPT1, HMGCR, IPMK, ITGA7, KCNQ1, KLK3, KLRC1, LYZL1, MAP2K2, MRAS, NR5A2, OR14I1, OR1S1, OR2T10, OR4L1, OR5AN1, OR6K2, PLAUR, PLXNB2, PMM1, POLR1B, POLR2I, SARS, SELPLG, SH2D2A, SMARCA2, STX5, WNT8A
Negative_3956	CFI, ID4, ACTA2, ALAD, ATP5F1, CAMK2G, CCND2, CHRM2, CSF3R, CSNK2A2, HMOX1, NCOA4, OR4X2, OR7D4, PANK4, PTCRA, TAS2R14, TUBA4A, WASF2, XCL1
Negative_3957	MSN, ACSM2A, ADSSL1, BACE1, CHRM1, CHST12, COASY, DLL3, FMO3, GGT7, HSD17B2, IDH2, NQO1, OR51F2, OR52I1, OR5B21, OR9G4, PDHB, PFKFB3, PIK3C2G, PIP5K3, RCHY1, STEAP3, SULT2A1
Negative_3958	CBS, MSN, ASAH1, WNT5A
Negative_3959	ME2, ALDH3B1, ARD1A, CD74, MAT1A, NAT1, ONECUT1, PFKP, TNFSF13B
Negative_3960	ADK, CS, DBI, IHH, PRL, SRM, CCL13, CCL4, CCR4, CNTF, CSNK2A1, CXCL5, DEGS2, DHRS4L2, DPM3, ESAM, FGFR2, GLUD2, GPAA1, HYAL1, MAP3K6, MAP4K4, MGAT3, OR10G2, OR11A1, OR1S2, OR2AG1, PARD6A, PIGA, PLA2G6, PPAT, RND1, STX7, TAS1R2, THBS1, TUBB3, ULBP3, VTI1A, ATP6V1E2, PAFAH1B3

Negative_3961	ACADM, ATP50, CCL8, CCNH, CDKN1A, CLTCL1, CREB1, CSNK1A1, CXCL13, GALNTL4, GPD1, HSD17B7, IL21, IL21R, IMPA1, LTBP1, NFKB2, OR10Q1, OXSM, PARD6G, PHGDH, PSEN2, RFX5, TGDS, TSTA3, HLA-DPB1
Negative_3962	ZYX, BMP8A, BMPR1B, CACNA1H, CHAT, CNGB1, CNTFR, CREB3L1, CXCR3, CYP3A7, DTX2, EPHA3, EPHA6, F2RL3, FLOT1, FUT8, GALNT8, GNAS, GNRH1, GSTA2, HSD3B2, LRRC4C, MAP4K1, NAGLU, OR51D1, OR52K2, PDE8A, PER2, PIK3CA, THBS2, TRADD, ATP6V1E2, CACNA2D4
Negative_3963	C8A, CRHR1, HDAC2, INMT, LCP2, MAPK3, PLXNC1, PPBP, PTPRF, RAB23, RFNG, TOLLIP
Negative_3964	EGF, GP6, TK2, AARS, ALDOC, ARG1, ARHGEF4, ATP4A, CD3E, CTSB, CYP7A1, IL21R, LMO7, MYH10, NARS, NME7, NOX3, OR4S2, OR8J3, PAFAH2, PGLS, PIAS1, PIK3R4, PLCB4, PON3, SEMA4D, SOCS7, TGDS, TLR3, TOMM40L, ATP6V1C1
Negative_3965	ACADL, ACOX1, ACTA1, ALG12, CASP10, CCND2, CDH3, CHKB, FMO1, FPGT, GMD, HBEGF, HCLS1, IFNA4, LDHAL6A, LIMK1, MAP2K7, NUMB, OR10G2, OR2D2, OR51F2, PLEKHA8, PLXNB2, POLR2D, POLR2K, PTPN1, PTPRM, RRM2, SELE, SGMS2, TNXB, UNC5A, VDAC2, WASF1, TNFRSF14
Negative_3966	ACAA2, ADCY5, CD8A, CLDN9, COL6A2, CTSS, ENTPD6, GYS2, IDH3G, MAP4K3, MGAT2, NFKBIA, OR10S1, OR4K1, OR6K2, PNPLA3, RPS6, SETMAR, SLC12A2, SLC2A1, STAT4, ULK1, VDAC3, YWHAG
Negative_3967	MAX, MPI, SRM, ACHE, ACSL6, ADCY3, ALS2, ATP5G1, ATP5J, BACE1, BUB3, CD44, CLDN18, CLTC, CTF1, DAPK1, DDIT4, DDX47, DPYD, H6PD, IL28RA, MAPK3, MYL2, NUMBL, OGDHL, OR10A6, OR51G2, OR52E8, OR7A17, PCYT2, PHKA2, PIK3R1, PKM2, YWHAZ, TNFRSF13C
Negative_3968	AK2, FYN, NNT, AACS, AKR1B1, ALOX15B, ARSE, ATP5C1, BIRC2, BST1, CCL4, CCL7, CYP2A13, DUSP5, EDNRB, EPHA5, FZD6, HLA-F, IL22RA1, IRS2, LTBR, NGEF, NT5C1A, OPLAH, OR4C12, OR51A2, OR51S1, P2RX3, PDE6D, PLD2, SMAD4, SMAD9, STAT5B, TAS2R1, TRAF3, TUBB4Q, WNT11, TNFRSF13C
Negative_3969	JUP, IL20, LIMK1
Negative_3970	ATP5G3, CD47, FZD8, OR2D2, PROC, SDC3
Negative_3971	SP1, ACAA2, ADRA1B, APBB1, ATP6VOB, BCL10, CACNA1B, CCR8, CD14, CD44, CDKN2A, CLDN5, COL4A4, CSDA, DDX54, EPHX1, GNAI1, IKBKB, KIR2DL3, LDHA, MCM5, NAE1, NKD2, NMNAT3, OR2W1, OR4C12, OR4F5, OR4F6, OR5A2, OR5T1, PAK2, PAX4, PFN1, PLOD3, POLD3, POLR3K, PRKG2, SEMA4C, TICAM1, TNFSF10, TYRP1, UCK1, WNT5B, ATP6V1C2, CACNA2D4
Negative_3972	AK1, RB1, ADRA1A, AKT1, CHDH, COL4A6, CREB3L2, CX3CR1, CYSLTR2, DHRS4, DRD5, GALNT11, GANC, NARS2, NCOA4, OR1L8, OR6M1, OR9Q1, POLA2, PRIM1, SLC27A5, TIAM2
Negative_3973	ACSM4, DDX47, FGF5, OR10H3, OR4C12, OR4L1, OR52E4, OR5C1, RDH5
Negative_3974	CD2, GBA, TYR, ALCAM, ALDH1A3, CCNG1, CD55, CD79A, CLDN20, COL2A1, DDHD1, DDX41, FLT3, GNB1, HLA-DRA, IL6ST, KRAS, MAML1, MAN1A1, MPZL1, NFYB, NUDT8, OLR1, PDE3A, PIGB, POLE3, PPP3CC, PTGER1, PYCRL, RAPGEF1, SLC27A4, SORBS1, MAP3K7IP2
Negative_3975	ASL, EBP, MTR, SYK, ACACB, ADH4, ADIPOQ, ALG13, ARSA, B4GALT3, CDC42, CDH4, CLDN17, DNMT1, DUSP14, ENTPD3, EXT1, FMO2, GALE, GALK1, GALK2, GLUD1, GNAI3, GNPAT1, IL1R2, INHBC, INPP1, IRF5, LRP5, MAFA, MGAT3, NUDT2, OR11G2, OR11I1, OR3A2, OR4K5, PANK3, PDPK1, POLR1D, PRKCE, RASGRP1, SMURF2, STAT2, TACR1, TAS2R5, TIAM1, TOMM40, WWP1



Negative_3976	C1S, GH2, LPO, TNN, ALPI, ATP5C1, CACNA1S, CCKBR, CLTA, CLTCL1, CMAS, DDIT3, DDX19A, DIAPH3, FMO5, FZD2, GALC, GBA3, GLYCTK, HEXB, HSD17B7, IL18R1, INPPL1, IQGAP2, NARS2, OR1M1, OR2T34, OR8H1, OR8K3, OR9A2, OSMR, PECAM1, PHKB, PNPO, PPA2, PPP1R1A, PPP1R3B, PRKAG3, PRNP, RERE, SULT2B1, SYNJ2, UBE2K, VTI1A, WASF3, YARS
Negative_3977	TK2, ADRA1D, ARSE, B4GALT7, CACNB1, CD58, CDC14A, DEGS2, GPT2, GRIN2A, HHEX, IFIH1, IL10RB, IRAK4, LAMB1, LILRB3, MIOX, MYH7B, MYLK, NCK2, NCKAP1L, NME2, OR2T1, OR5B21, PARD6G, PIGP, PTK2B, PTPMT1, PVRL2, PVRL4, RFXAP, UBA7, UCK2, B3GALNT1, TNFSF13B
Negative_3978	ESPL1, GLG1, OR9A4
Negative_3979	FYN, HYI, SCD, ACLY, ACOT11, AGPAT3, CDC2, CDC23, COASY, CSNK2A2, CYP2C19, DVL1, GALE, GARS, GMPPA, GP1BA, GPD2, HGSNAT, HNMT, HPSE2, INPP4A, ITPKA, MARS2, MGAM, MKNK2, OR4C6, OR4M2, P2RX2, POLA2, RPS6KA5, SMC1A, TFPI, THBD, TRAF4, TRPM5, TNFRSF10D
Negative_3980	IKBKB, OR5H6, OR5P3, PRKAR1B, SPRY3, UGT2B10, YWHAH
Negative_3981	AMT, ID3, ARPC2, C1QB, CD70, CHRNA7, CYP1B1, EIF4E, GDF5, GLI3, GUK1, HADHB, IFNA16, IRAK3, KLRC2, METTL2B, NR4A1, OR10G7, OR1L4, PAPSS1, PGK2, POLD2, PTPN5, RPE65, SLC2A2, TACR2, UGP2
Negative_3982	ATM, CBL, EDA, FST, TK2, AADAT, AMPD2, C5AR1, CHPT1, CYBB, CYP2C19, E2F5, FCER1G, FGFR3, FLT3LG, FOXA3, GGCX, GGT6, GZMA, HSD3B2, JAM3, KIR2DS5, NARS, OR6C2, OR8A1, PGAM4, PIK3C2G, PIK3CD, POLR2A, PRKCA, RRM1, SHC2, ATP6V0A1, HLA-DRB3, HLA-DRB5
Negative_3983	NLK, RB1, ADRB3, AGPAT2, AGXT, AK3L1, AKT2, ALDOA, ANAPC1, APOA2, B4GALT7, BCAR1, CDC2, CDKN1C, COX10, CYP2A7, DOT1L, G6PC, GNAL, H6PD, IDI2, IKBKB, IL15, IRS4, ITPKA, KLKB1, MCM5, MFNG, NCAM1, NFATC2, NFKB1A, NFKBIE, NOX1, OR10C1, OR8G1, PIGT, PIK3CG, PMM2, POLR3G, PON1, PRPH2, PTGES, RRM2, SMAD6, TLN2, WNT11, ATP6V1G2, HSP90AB1
Negative_3984	CR1, F2, GAA, MUT, ABLIM3, ATF4, CCDC6, CNDP1, CNGA3, COMP, CRB3, CTSB, CYBB, CYP27A1, CYP4F2, E2F1, ELK4, FARSA, FGF14, GALNT11, GALNT12, GALNT6, GLUD2, GUSB, HSD11B2, IL13RA1, MYH14, NAMPT, OR52N4, OR5B12, OR5P3, PANK4, PDE3A, PDGFRB, PI4KA, PIK3CD, POLR3D, PROS1, SLC2A2, SPTAN1, SRGAP2, TDO2, TRIP10, TYMP, WNT9B, EIF4EBP1
Negative_3985	ALDH4A1, CACNA1I, DHRS4L2, GALNT9, MYH4, NT5C, OR1A1
Negative_3986	LHB, ADH1A, ALG3, APOA2, ATP4A, BAIAP2, FCGR3B, GANC, ITGA1, PDGFC, RFNG, TAS1R1
Negative_3987	DDC, AMPD1, ANAPC4, ARNT, ATP5A1, B3GNT5, CDKN2A, DAXX, DUSP10, GNA13, GPX7, GSTT1, HTR2A, MAGI3, MGST1, MYH3, NARS2, OR13H1, OR14I1, OR4C13, OR51B6, OR52E8, OR5A2, PPP3CA, TJP3, TOMM40L, ATP6V1B2
Negative_3988	CFD, CR1, FAH, ACADVL, ATP5B, CLDN9, CYP11B1, DVL2, ENO2, FZD2, HLA-F, HTR2C, IFNB1, IL1RAP, IRS2, MAPK3, MGAT2, NFATC4, NRXN3, OR10H2, OR4C15, OR52M1, OR5B21, PERP, PIGS, PLK1, PTPN6, TUBA8, ATP6VOD1
Negative_3989	C8G, PLG, ACAD9, AMPD2, ATP5D, BET1, BET1L, CCDC6, CCL13, CCL2, CFTR, CLDN2, COL3A1, EFNA3, FLAD1, FMO2, GNRH1, ICAM3, IL1B, ITGB1, KIR2DL4, LTC4S, MAD2L2, METTL6, NEUROD1, OLR1, OR10P1, PGAP1, PLCE1, PLCG1, PPID, PPP2R2A, PRPS2, RETSAT, RRM2B, SDC2, SHMT1, STAT2, TAS2R41, UGP2, WHSC1, HLA-DRB3, HLA-DRB4
Negative_3990	APP, DAO, GNS, ACVR2B, ALPPL2, ATP6V1A, B3GNT4, CCR3, CYCS, CYP2C9, CYP4A22, CYSLTR2, DDX47, FBP1, GARS, GCLM, NANS, NRXN1, NUDT2, NUMB, OR4K2, OR8K3, PDE6D, POLR3H, PPP2R1A, PTPRM, RAC1, RXRG, SEMA3G, TAS1R1, TAS1R2, TKTL1, TUBB3, ZFYVE16, ATP6V1E2, CTNNBIP1, TNFRSF11A
Negative_3991	CAT, DAAM1, ITGB1, OR52M1, PRKAR2B, SREBF1, SSH2, TIRAP, TNFRSF1A

Negative_3992	BPGM, CACNA1A, CACNA1C, CACNB1, CD22, CD8B, CHD8, CKS1B, COL6A2, CSN K1G3, DLAT, E2F2, ENPP7, ERO1L, GAL3ST1, GCH1, GNRHR, HTR7, ITGA1, KC NQ1, MAGI2, NEFL, OR1G1, OR2L3, OR5AS1, OR6C2, PDE1A, PNPLA3, PRSS1, RHEB, RRM1, SULT1E1, SV2C, TUBB2C, VAMP2, WNT16
Negative_3993	CEL, EDA, HYI, SDS, ADAM17, AKR1B10, ALG9, AMD1, ATP4A, ATP5A1, ATP6V 1H, CD59, CHRM5, CLOCK, CTNNA1, CYBA, CYP2J2, ELK4, FZR1, GDF7, GGT6, IFNA7, NCKAP1L, NFATC4, OR11H4, OR5K2, PCK2, PFKFB4, PKMYT1, PPCDC, RALBP1, TAS2R41, UNC5C
Negative_3994	APP, F12, GHR, GK, VCL, ADCY6, CER1, CHDH, DAAM2, FZD9, HAGHL, MCM2, MR AS, NEFH, NEU3, OR52K1, P4HA3, PFN1, PIGB, SESN2, SLC33A1, SMARCA2, T NFSF18, UAP1, VAMP4, B3GALNT1
Negative_3995	F12, INS, IVD, JUP, NF1, PVR, ALG9, ATP5D, ATP50, CCDC6, CCR1, CD48, CD 74, CES2, CSF3, CYP4A22, DDX52, DOCK1, E2F1, EGLN3, FARSB, FGF17, FLO T2, GNAL, HSD17B7, LRP6, MAP2K2, NANP, NCK2, NCR3, NOX1, OR10AG1, OR5 2E6, OR6C75, ORC1L, PAK6, POLA1, POLR3A, PPP1R3C, RHOD, SMPD2, SOD1, SSH3, TRIP10, VCAM1, VDAC1, XYLT2, ST6GALNAC6
Negative_3996	CCL26, GRHPR, IL1A, NT5C, OR51D1, PIP4K2B
Negative_3997	BCR, CD4, KHK, ME3, MYC, DBF4, DUSP4, E2F5, EHMT2, FADS2, FM01, IL22RA 1, IL23A, LCAT, LYPLA2, PARVB, PFN1, PIK3CA, POLR3B, PRKAB2, SDHA, SM AD6, SMURF1, TOMM40, UAP1
Negative_3998	IL6, ALDH3B1, CD47, CLTA, DEGS1, DTX2, EHMT2, IFNGR1, NTN1, NTRK2, PI GM, PIGW, PLXNB2, TBL1Y, UGT2B11
Negative_3999	SI, AGPAT2, AGXT2, BAAT, BCL2L1, CAPN2, CCR5, CXCL9, GRIN2A, IRF9, OR 2B2, OR4E2, PHPT1, PVRL4, RAP1B, SIGLEC1, TSHR, WNT7A
Negative_4000	CBS, CS, ARG1, CDC7, CLCA2, DUSP2, FIGF, FUT7, GMPR, GNB1, HMOX2, ICAM 3, IL10RA, IMPDH1, NKX3- 1, NUDT5, OR10AD1, OR2A14, OR2K2, OR2M3, OR2T10, SEMA4F, SEMA7A, STX 12, TGFB1
Negative_4001	CBS, CRK, LCT, ALG9, ATP6V1F, B3GALT5, B4GALT6, BIRC2, CACNB1, CAMK2 G, CCND2, CCNH, CCR5, CCR6, CD70, CDC14A, CD01, CYP2E1, DRD1, EI24, EP HA2, GUSB, HTR2A, IL28A, IL9R, INHBC, INMT, LAMC2, LIMK2, LTBR, OR10K 1, OR11H4, OR13J1, OR1L8, OR8A1, OSMR, PDX1, PIGK, PPP3CC, PRKAB2, PR KCQ, PSENE1, SESN3, SH3BP2, STK3, THBS2, TSC2, VAMP1, TNFRSF17
Negative_4002	CD4, GP9, CFL1, CLDN19, DDX23, DUSP9, FABP3, FDPS, GSTP1, HSD17B2, IF NGR2, KLRC1, MDH1, NFKBIE, OR10AG1, OR4Q3, OR51B6, OXSM, PNPLA3, PRK AG3, RFXANK, SOCS3, SULT2A1
Negative_4003	EBP, ABLIM2, AKR1B1, ATF4, CAPN2, CCL16, COMT, CSNK2A2, DTX3L, FSHB, GALNT11, GRB2, IBSP, ITGB4, KLRK1, LYZL1, NSDHL, OR2L2, OR2M3, OR5D1 6, OR6C75, OR8K1, PDE7A, PIK3C2G, PPARG, PVRL2, RAB23, RAP1B, RASGRP 3, RERE, RRM2, RXRG, SEMA4F, SEPHS1, SNAP25, UROS, ST6GALNAC4
Negative_4004	APP, ACLY, ALG8, BIRC2, DHRS4L2, GLS2, GUCY2D, IFNA16, IL10RA, NARS2 , OPLAH, OR10A5, OR2AG1, OR4A5, OR4K17, OR51E1, OR52B4, PANK3, PARD6 A, POLR3B, RFXAP, SCD5, SDHD, TBL1X, TUBA3E, UGT1A10, VAV1, XYLT2, AT P6V1C1
Negative_4005	C8B, AGPAT4, BMP6, CDC45L, CTSB, FUT9, GRIN2A, LAP3, LDHD, MAP3K6, MY H1, POLD3, PTK2, PVRL4, SUV39H1
Negative_4006	ADH1B, CHRM3, CLCA4, CNGB1, CRY2, GFPT1, IL20, NNMT, OR51G2, OR6K3, S EPHS1, SMAD3, TNFRSF11B
Negative_4007	AASS, CADM1, CDC25B, CXCL2, GNAI1, OR4F6, POMC, RRM2, SYNJ2
Negative_4008	GGH, MUT, TNC, ANAPC4, AQP7, CAMK2D, CARD11, CCL1, COL5A1, COX15, EPH A7, GALT, GLS2, GNAO1, GTSE1, IL10RB, INPP4B, INPP5E, IRS1, LTC4S, MM P7, OR13H1, OR2C3, OR7A5, OR9I1, PIGB, PPP1R3A, SPRY4, TRAF1, UNC5D, UXS1, B4GALNT1, TNFRSF17

Negative_4009	AK5, TNR, ALOX15B, AREG, BLNK, CDC23, CFTR, CNTF, CYP27A1, DGKZ, GADD45G, GNG3, GNMT, GRHRP, GSTA1, HES1, IDH2, ITGA11, LEFTY1, MCM5, MYL5, NRXN1, OR1L1, OR2T6, OR4F17, OR5AK2, OR9G4, PHKA2, POLR1B, RAC1, RE, RHEB, RPS6KA3, SC5DL, SOS2, SPP1, SV2B, TLR9, WNT7B
Negative_4010	B3GALT4, CSF1R, DHDDS, IL17A, MAP3K2, PPARD, THBD
Negative_4011	BAX, ACVR1B, ARHGEF1, BLVRB, CCNB3, NUDT12, OR52T1, PAPSS2, PVRL4, T, RAF5
Negative_4012	FYN, IVD, LIF, AGRN, ALG5, ASCC3, ATP6V0B, AXIN2, CACNA1F, CCL16, CCR8, CYP3A5, DKK4, F11R, FGF2, GLUL, GNB3, HSD3B1, IFNA4, IRAK1, KCNB1, LIMK2, MTAP, NAE1, NAGS, NCF4, OR5A2, ORC5L, PMM2, PSME3
Negative_4013	GSR, NLK, NPL, TYR, ABLIM3, ACACA, ACP6, COL4A6, FZD4, IFNA7, IFNB1, IL5RA, IMPA2, MCM6, MGLL, NFKB2, NOX3, NUDT12, OR12D3, OR4K2, OR8H3, P, APSS2, PLA2G2D, RPS6KA1, RPS6KA3, SEMA4D, ST3GAL2, STAT2, VAV3, WNT10B, PLA2G12B
Negative_4014	F7, LTB, PML, TNN, ACSM4, ALDH1A2, ANAPC11, ARPC5, ASRGL1, BAIAP2, CCL2, CCL25, CDC2, CHSY1, CSDA, CSF1R, CYP8B1, DDIT4, EDNRB, EIF4B, FZD1, GLUD1, HPSE2, IL10, IL15, OR12D3, OR4F15, PHKG1, POLR1E, PTCH2, RALBP1, RPRM, ST3GAL5, TAS2R48, YWHAH
Negative_4015	ACTN1, CD244, NT5C2, OR10G2
Negative_4016	AK7, CEL, DCN, AKR1C2, AKR1C3, ALDH9A1, ARSD, CAPN2, CCNB2, CREBBP, DX4, DKK2, FLT3LG, GATM, MAD2L2, MCCC2, MYH6, NAE1, OR1D2, OR1J2, OR5B17, OR6C3, PLA2G4A, PLA2G5, POLD4, POLE2, PTPRB, SLC25A4, SLC2A2, ST3GAL4, TPI1, ULK3, WNT5B, ATP6V1G1
Negative_4017	C7, ALAS2, BCL10, C1QC, CES2, CLOCK, CYP4A11, DDX4, FZD10, GSTO2, NFX1, OR52L1, PDXK, PPP2R2B, TRPC1, WASL, YWHA, CACNA2D3
Negative_4018	AK3, MSN, PML, ADCY6, ATP5L, C4BPB, CCR4, CHRM2, DEGS2, DVL1, IL13, NPAS2, PFKFB1, PRKACA, PRPS2, SDHD, THTPA
Negative_4019	BTD, SRM, XDH, ACHE, CLDN11, CYFIP1, DIAPH3, FCER1G, GDE1, GRIA2, MAN1C1, OR5D14, PFAS, POLR1A, RHOQ, SEMA4G, WNT8B, ZAP70, ATP6V1G1, CACNA2D3, TNFRSF11B
Negative_4020	AK2, FN1, GP6, PGP, ACVR1C, ALS2, ATP5G1, CCR3, COL4A4, EXTL2, FZD10, GALNT1, GAPDH, HAO1, IL28B, ITGA8, KCNJ11, MAP3K2, MAP3K5, METTL2B, MTHFD1, MYLK2, OR7A10, PIK3CG, PNPT1, PRODH2, PTCH2, RARS2, RASA1, T, LN1, VAMP2, YARS2, ATP6V0A4, HLA-DQB1
Negative_4021	AK5, BTK, HGF, TKT, AKT1, ANAPC11, B3GNT2, BDKRB2, CACNB1, DIAPH1, DRD2, ENAH, FZD10, GSTO1, HSD3B2, MAP3K6, NEFH, OR1N1, OR7A17, PGK2, POLR2K, PRSS2, PTGES, RASSF5, SPRY3, THBS1, THBS3, ULK3, ZNRD1
Negative_4022	ADK, AMT, EGF, TNR, ZYX, ANAPC5, B4GALT4, CCL1, CFTR, ENPP1, FGF20, FUT8, GAMT, GUCY1A3, LYPLA2, MAP3K5, MGAT5B, OR1S2, OR4F6, OR51B6, OR8U1, PPARG, PRKACB, ST3GAL3, TAS2R10, TJP1, WNT7A
Negative_4023	F8, HDC, LAT, PC, PVR, B3GALT4, B3GAT2, BPGM, C4BPA, CLDN2, CPT1C, CYP1B1, DDX18, DGKQ, FGF2, FUT5, G6PC, GUCY2D, GZMB, HDAC2, HSP90B1, IL19, IRS1, LIPA, MTMR2, NTRK2, OGDHL, OR2B11, OR7G2, PARD6B, PLA2G2F, POLR2G, PRIM1, PRPS1, PYCRL, RASA1, SORD, TNFRSF10A
Negative_4024	TFG, ACP5, AGPAT1, CHR1, CXCR5, CYP2U1, CYP7A1, FMO1, IDI2, IFNK, INSRR, LARS, NKX2-2, OR12D3, OR1L6, OR4S1, OR51V1, PFN2, PIK3CG, POLR3A, TM7SF2, TSHB, UROC1
Negative_4025	CASP10, GALNT11, NPR2, OR2F2, OR2G3
Negative_4026	CGA, ACSS2, CERK, E2F5, NANP, OR51B6, OR51D1, PAK3
Negative_4027	C8G, ADRA1A, ARRB2, CCR2, CDC25B, CDC7, DGKG, FMO3, HHEX, IL11, INPP4B, ITGB3, MAPK11, OR52I2, PIK3R2, PPBP, TSHB

Negative_4028	ABL1, CCL13, CD14, CYP17A1, DHODH, EDNRB, FABP4, GGT6, GSTO1, IL13RA1, LIPA, MASP1, NCAM2, OR2T8, OR3A1, OR56A3, OR6N2, PIGL, PSME3, RPN1, STAT6, TNFSF14, VTI1A, XCR1
Negative_4029	APP, ARPC4, BCKDHB, BMP6, CHRM3, ENAH, GRIN2D, IFNA14, PHKG1, PMAIP1, SOS2, SPTLC1, WEE1
Negative_4030	FGG, AHCYL2, B3GNT3, CAMK2G, CCDC6, CD8A, CDC7, CHKA, CHKB, CSNK1D, DX50, ENTPD8, FGF11, HTR2B, IL11, KIR3DL2, MAP3K14, MAT2B, NARS2, OR1L8, OR2Z1, OR6C3, OR9K2, P4HA3, PIP4K2A, PLA2G5, PLXNA1, PPP2R5E, PTCRA, RND1, SEMA3F, TAS2R4, TOMM40, TNFRSF11B
Negative_4031	GP6, MYC, ACAT2, ACSS1, ARHGEF2, ARRB2, CALML6, P2RX5, PDE10A, PLOD3, PPAT, TALDO1
Negative_4032	C9, ACOT12, ACOX1, B3GNT5, CFL1, DHCR24, EPHA5, GCAT, GNB3, GUSB, HAGHL, HTR7, IFNA13, LRRC4C, MTMR6, OR2K2, OR3A3, OR7C1, POLR2K, RAP1B, SLC33A1, SOCS7, ZMAT3, PAFAH1B1
Negative_4033	F11, TFG, ADH7, ARHGAP5, CACNG1, CPT2, CSNK1G3, CYP2A13, CYP2C18, DDOST, DHCR7, DTX4, EFNB1, FCGR3B, GRIA1, HBEGF, HHEX, IBSP, IDH3A, IDH3B, IL11RA, IL29, IL6ST, INHBB, MCM3, MTHFD1, NMNAT1, OR10G2, OR11H4, OR2T3, OR52I2, OR5AR1, PAPSS1, PLCE1, PLCG1, POLR3A, PPP2R2C, PROS1, RAPGEF2, RARS2, RPRM, RRM1, SFRP5, SMURF2, ST3GAL4, STMN1, TXNDC12, WARS2
Negative_4034	BTK, ACO2, ADORA2B, ALG3, EXT2, FZD8, GP1BB, IL12B, NEFH, OR2G3, OR52N2, OR6B2, OR7A17, PLXNA2, RRM2B, SHISA5, SERPIND1
Negative_4035	FGG, PGF, HHIP, IL18, OR51I1, PFKP, PSEN2, THBS4
Negative_4036	ADK, DCK, ALG8, ALOX15, ATP6V1A, BPNT1, CACNA1A, CALML6, CD70, CTBP1, DUSP6, ELK4, EPHB2, FUT1, IFNW1, IL6R, IL8RA, KIR2DL2, LAMA4, MYH11, OR2T5, OR51A7, OR51B6, OR52I1, OR5A1, OR9Q2, PDGFRA, PIP5K1B, POLR3D, PPP2R2B, PRSS2, RASA2, ROBO3, RPN2, SELE, TACR2, TBK1, HSP90AB1
Negative_4037	SPN, ACACB, ADCY8, APOA1, CCR10, CD46, DEGS2, ESAM, FGF21, GLUL, GRIA2, GUCY1B3, HPSE, ICAM2, IL20, IL22RA1, LRDD, MAML2, MTHFD1L, MYLK, NEFL, NLGN2, NPR2, NUMB, OR4C15, OR8B8, PDE6D, PPP2R5D, PROS1, PSEN1, PTGER1, RPS6KB2, SPRY1, SUCLA2, TACR1, TAS2R48, TNFSF8, TSHB, UROS, UXS1, VANGL1, WNT4, WNT7A, ZFYVE16
Negative_4038	ADK, TK2, ACTB, ADAM17, BBC3, CACNB4, CYCS, DOCK1, G6PC, G6PC2, GNAI3, GOT2, GUCY1B3, HTR2C, IRF5, ITCH, LCAT, LDHAL6A, LEFTY2, LTBR, MAP2K1, NFKBIE, OR13C3, OR2G2, PDE1C, PIK3CB, PTEN, SETD8, SMARCA2, TUBB2A
Negative_4039	DHH, FGB, SYK, ACAD9, AOC2, ASAH1, DOT1L, EFNA1, EHMT1, FDFT1, GRLF1, HMBS, KLRK1, LPAR1, MDM2, OR10Q1, OR1D5, OR2T6, OR8B8, OR8S1, PIGT, PLCD1, POLR2L, PPAP2C, PRKCB, PRODH, PROS1, SESN1, SORBS1, SRGAP1, ST3GAL6, TAS2R41, TLN2, VANGL2
Negative_4040	TNF, BUB3, CD226, CDIPT, CIITA, CNTN1, CSH1, CTSB, DAG1, GGCX, HAP1, MAGI3, OR2T29, OR8D1, P4HA3, PDE1A, PLD2, PMM2, PNLIP, POLR3A, POLR3H, PPID, QARS, SMAD7, TRAF4, TSHR
Negative_4041	CGA, ACVR2B, ALG13, OR52E4, PIM2, PPM1D, TAS2R16, UGT2A3, MAPK8IP3
Negative_4042	ADK, ADCY5, ARPC4, ATP6V1H, CBR1, CDC14A, CREB3, CRKL, DCTD, EDNRA, FOXA2, INHBC, ITGB5, MAN1B1, OR1J1, OR1M1, RENBP, SNAI2, TAS2R7, VAV1
Negative_4043	C9, HGF, LPO, ADH6, ATG7, CHST13, CMPK2, CYP2A13, CYP2F1, ETNK2, FBXW11, FUT1, GALNTL2, GRIN2D, HTR2B, NRXN2, OR4Q3, PDXK, PRKACB, PSME2, PTAFR, RRM1, TAS2R8, UGT2B11, UPP1, SERPINA1
Negative_4044	ABLIM2, ACPT, CCL27, CTNNA3, GNA12, GRM1, HMGCL, MGAT4B, OR2M7, OR2T8, OR52E2, OR52E4, PYCRL, SEMA4G, SH2D1A, SKP1, SMAD6, SULT2A1, TBL1X
Negative_4045	CACNA1H, CD44, CDKN1C, CSNK1D, CX3CL1, IL17RB, MAN2A1, OR5D16, OR6C70, OR8H1, PIGQ, SPAM1, ARHGEF12

Negative_4046	ACADM, ADH4, ALOX15B, ANAPC10, ARG2, ATF2, ATF4, BIRC5, CACNA1G, CDC26, CIITA, CRHR1, CTLA4, DUSP1, EPHA6, FGF7, FPGT, FUT7, FZD1, GPAM, GUCA1C, GYS2, GZMB, HSD17B4, HTRA2, IL5RA, INSRR, NCF1, OPLAH, OR11L1, OR4C6, OR4K14, OR51B6, PDE5A, PON1, PTGDS, RAB5A, RASGRF1, RGS3, ROBO1, SMARCA5, SSH1, ST3GAL5, WNT11, ZBTB16, C1GALT1C1, PLA2G12A
Negative_4047	GAA, APBB1, CD28, CLDN5, GFPT1, IFNA16, IRAK4, MCM4, OR5D18, OR6C75, PNMT, POLR2D, PPM1D, RFXANK, TMLHE, VAMP4, YWHAQ
Negative_4048	CFD, IL2, LSS, AGXT, BCKDHA, CACNA1B, CD47, CD59, CDK2, CLDN3, DGKE, DLL3, DOCK1, DUSP6, EGLN1, GPX5, LARS2, MAP2K6, OR10G7, OR52B4, P2RX2, PPA1, PRKCG, SEMA4C, TAS2R1, TAS2R14, TBL1XR1, TYMP, ATP6V0E1
Negative_4049	LEP, ACAA1, ACOX2, ALDH4A1, ARG2, COMP, CTNNA2, CXCL12, CXCL3, CYP2B6, DPYSL2, EREG, FUT4, FZD10, GPD1, HAO2, IFNGR2, IKBKE, IL18, ITGB6, KLRC2, LRP6, MYH7, OR10A2, OR4A5, OR52R1, OR6B2, PGAM2, PIK3CG, POLR3H, PRNP, PTGER1, PTGER3, PYCR2, ROCK1, TUBA3C, UROD, EIF4EBP1
Negative_4050	DCK, GP6, C1GALT1, CACNA1I, CCNA2, CD40LG, CDKN1A, CXCL2, CYSLTR1, FGD3, FGF14, GNRH2, GPAA1, GRIN2C, HLA-DRA, HRH2, KIR3DL3, NT5C1A, NUDT5, OR14J1, OR2A2, OR2T8, OR52I1, PCYT1A, PFKFB3, PIP4K2A, RUNX1T1, SCP2, SDC3, SMURF2, TSNARE1, VANGL2, HLA-DRB5
Negative_4051	IDS, BHMT, C9orf95, CADM3, CLDN6, COL4A6, DAD1, DDX55, DFFB, HAGH, INPP4A, LDHAL6B, NT5C1B, OR52K1, PDXP, POLR2D, PPID, PTPRB, RFXANK, SGPP1, SKIV2L2, TBK1, TGFB3, PRICKLE1, SLC25A31
Negative_4052	ADRB2, CYBA, FGF8, MAPK10
Negative_4053	KMO, TEC, ADCY1, ALDH2, APAF1, B4GALT3, BCL2L1, BMPR1B, CACNG8, CAMK2G, CASP6, CDK6, CRHR1, CSF1, CSH1, CYP4A22, FADD, FASN, GGCX, GGT7, GNB3, IDUA, IFNK, IKBKG, LRAT, MNX1, NOD1, NRG4, OR10A3, OR13C2, OR1L8, OR52A1, OR52N4, OR8H2, PIK3CG, PNPT1, PORCN, SOCS2, ST3GAL1, TAP1, YOD1, HSD17B12, TNFSF13B
Negative_4054	CKB, PLG, RET, WAS, ACP1, CFTR, CHAD, MAPK13, POLR2C, PPAP2A, PRKCE, P RPS1, PTPN11, SHC4, STX7, SUCLA2, SULT2A1, UGCGL1, UROC1, WASF1
Negative_4055	AKR1C2, OR11H4, OR52E2, ZBTB16
Negative_4056	FAS, ME1, ALG5, ASS1, ATP5L, B4GALT7, BCL2L1, BDH1, CLCA2, CNGB1, CYP4A22, FCGR3A, GALT, GDF7, GSTM3, GSTM4, IRS1, KRAS, LAMB3, MOV10L1, NCK2, NOTCH1, OR5D16, OR5F1, OR8H1, P2RX7, PDE4B, PDE6D, POLD4, PPM1D, PPP2R2A, PRKG1, RBKS, RPE65, SPP1, STAT5B, SULT1E1, TNFRSF8, TNFSF12, TUBB2A, VANGL1, WNT9A
Negative_4057	GSN, ABCC8, ACSS1, ALDH3B1, ARSA, BLVRB, CCL20, CD34, CD99, CMPK1, CREB3L4, DERA, DFFB, EGLN3, FLT1, GNA14, IL12A, MGAM, NAMPT, OR10T2, OR2M4, OR4L1, OR51G2, OR51S1, OR8K3, PARVG, PDE7A, PIK3C2A, POLE3, PRSS3, SRGAP1, ST3GAL2, TYMP, ATP6V1G1, SERPINB5
Negative_4058	GK, GNE, MAX, ACSL3, BMPR1A, CACNG7, CSNK1D, EHMT2, EP300, MAP3K8, NAGLU, PDPK1, PTPRZ1, RENBP, ROCK2, RPS6KA3, SRGAP3, SULT2B1, TBL1XR1, THBS2, UGT2B4, WNT8B
Negative_4059	RDX, ARHGEF4, CACNG1, CAMK4, CCR1, F13A1, GALNT6, GSTA1, HPSE2, IFT57, IL6ST, MAP3K6, MAP4K4, MDM2, MGLL, NCR3, OR2T4, PLA1A, POLD4, PSENEN, PTSS2, PTGDS, PTGFR, RDH12, SEMA3F, TRDMT1
Negative_4060	NGF, AGRN, ALDH1A2, ALG9, APC2, C1QB, CACNA1I, CAV2, DMGDH, GCNT2, GO T2, GRM5, HMBS, IKBKG, IL10, LCMT1, MS4A2, NEFH, NUDT2, OR10H5, OR52A5, OR52E6, OR52N5, OR9A2, P2RX2, PIK3R5, PPP2R5C, PTCH1, SULT2A1, TAS2R16, TFPI, TNFSF10, VAV2, ATP6V1B1, MAPK8IP3
Negative_4061	TFG, ACSS1, ASPA, CDC25A, CDH2, CLCA4, CLDN17, CNTF, COL4A2, DDB2, DPM2, ECSIT, ENO2, EPRS, GCNT4, GNAQ, HHIP, MMP2, MTAP, OR8B4, PAICS, PGAM4, PRPH, PTPN7, RPS6KA4, SEMA3C, SH2D1A, SHMT1, STAT5A, TUBA3C, UPR T, VAV3, VTI1B

Negative_4062	CR2, ACO1, ACTA2, ACTC1, ATP6V1F, B3GALT1, CAMK2D, CBLB, CDKN1B, CHR D, CNGA4, DDB2, EPB41L1, GAMT, IFNK, IL20RB, IPPK, MAFA, OR1L1, OR6N1, OR8K5, PCK1, PLXNB1, PPAP2B, PYCR2, RBPJL, STX16, TAS2R5
Negative_4063	BCR, C8B, MPI, PML, ACMSD, ADCY4, B3GALT4, CCL4, CDIPT, CTBP1, DTX3, F ADS2, FGF3, FGFR2, FTMT, GNA11, GNAI1, GNAI3, GNAT3, GNPDA2, HSD17B1, IL1A, KCNB1, KCNQ1, MAPK10, MGST3, MYL7, NCSTN, OLAH, OR10R2, OR14C 36, OR2A14, OR51L1, OR52N4, ORC1L, P4HA1, PDE3B, PDGFRA, PNPO, SPHK1, TLN1, TUBA3E, UBA7, WARS2, TNFRSF10A
Negative_4064	CBS, ABL1, ACTG2, AVPR1A, CACNG4, CAV2, CCR3, CD28, COL6A2, CYP21A2, DGUOK, EFNA1, ENPP6, GLB1, GNA11, IFNA21, IPPK, IRS2, ITGB6, KIR2DS5, NRG4, PCYT1B, PLA2G10, PLCG2, PPM1A, PSEN1, RAP1B, ROBO1, SEMA4A, S NW1, SQLE, TAS2R13, TGFBR1, UCK2, UGT2B28, UMPS, SUV420H1
Negative_4065	GK2, SMS, B4GALT5, BLNK, CSAD, CYP2D6, DGAT2, EPHA2, NFATC1, OR2AT4, OR4F5, OR6C1, PDHA1, PTGS2, RAD51, ZBTB16
Negative_4066	GP6, HGF, BTRC, CSNK1G2, GLS2, GTSE1, NFX1, OR4C12, SELP, TAS2R16
Negative_4067	CR1, IHH, TK1, AACS, ACTG2, AHCYL1, APOA2, ATG7, CAMK4, CEBPA, CLDN17, COL3A1, COQ3, CREB3L3, DAPK3, EFN3, FSHB, GALNTL4, GNB3, GSTO2, IR AK2, ITGA1, ITGA11, LAMC2, LCMT1, MYH10, OR11L1, OR6N1, OR7C1, PARD6 B, PDE2A, POLR1E, SEMA7A, SETDB1, SMAD6, STAT2, UPRT, YARS2, CTNBP1
Negative_4068	CRK, GSS, RDX, VCL, ARSA, CD99, CLDN5, CLTCL1, COMP, CREB3L3, EARS2, F GF10, FZD10, FZD4, GADD45B, GPAM, IRF7, LARS2, MAML2, NTF4, OR10H3, O R2M7, OR2T2, OR4S1, OR5H2, OR6T1, PDE4B, PER3, PISD, PPAR, PTGS1, PT PN5, SOS2, TBXA2R, TCF7L1, TUBAL3, VCAM1, YWHAZ, HLA-DRB4
Negative_4069	ILK, ADRB1, AKR1C4, AKT1, ALDOA, ALG3, ALOX12, AMDHD1, C1QC, CACNA1S, CARS2, CCNA2, CD46, CHAT, CHST11, CHST12, DDB2, DUSP9, NCKAP1, NEFM, OR4C12, OR6N1, PDE2A, PER1, PGAP1, PLIN, PRPH2, PRSS1, RPN2, SARS, S FRP5, SMAD1, TAS1R2, TAS2R38, TPI1, UGT2B17, PRICKLE2
Negative_4070	APOE, CLDN3, CLDN4, CXCL2, EPHA6, NUDT2, OR5AN1, ULK3, ATP6V1C1, HLA -DPA1
Negative_4071	UBC, CD82, CSNK1G1, CTPS, FGF2, GBGT1, IL11, MCAT, POLR2F, PPT1, RAPG EF2, SHMT1, SPHK1, THBS4, EIF4EBP1
Negative_4072	F8, ACSS1, ACTA1, ALDH1B1, APOA5, ATG3, B3GAT3, CD79A, CNGA3, CNTNAP 2, CRY2, CYP26C1, DPM2, EFNA4, FM01, FPGS, GAB1, GAS1, GNAI1, LAP3, LT B4R2, MAP3K12, MAPK11, NUDT2, OR2T6, OR51F1, OR52N4, OR6X1, POLR1A, POLR3B, PRSS3, SHISA5, SLC25A5, ZAP70, HSD17B12
Negative_4073	GGH, ACVR2B, ALPPL2, BLVRA, C4BPB, CASP9, CBLC, CCL2, CYP2B6, CYP8B1, DDIT3, DDX47, DRD1, E2F1, FOXO3, GAPDH, IL12A, IL2RG, OR10J3, OR13D 1, OR4K1, PMAIP1, POLD1, POLR1A, PTGER3, RAPGEF3, RPRM, STX2, TUBAL3
Negative_4074	MPL, ACAA1, CCNB2, CPT1B, CYP2S1, HCST, IDH3A, IFNA5, MINPP1, OR5I1, PIK3CG, PTAFR, YWHAZ, ATP6V1C1
Negative_4075	CKM, ID2, SMS, TEC, ADIPOQ, AGPAT6, BMP8B, CDC14A, CDKN2D, CHIT1, DPY D, GNG12, GRM5, HMGCS1, KLK3, MDH1, OR10V1, OR1S1, OR4L1, P2RX2, P2RX 3, PER1, PLA2G6, PPP3R2, PRODH2, SDC3, SFRP1, WNT11
Negative_4076	MVK, ADCY2, ADCY7, AKR1A1, ARSB, CHIA, CTNNB1, FZD3, GALNT1, GNAZ, HR H2, ITGAV, NFKBIE, OR9I1, PAK4, PDE3A, SCIN, SLC33A1, SMAD5, THBS3, T LR9, TSHB, TSLP, TUBB2C, UNC5C
Negative_4077	FH, PGF, DAAM2, FGF3, GFPT1, HSD17B7, NCK2, NMNAT2, OR13C9, PAICS, PV RL3, SH3BP2, UROS, VDAC2, WNT8A
Negative_4078	AK1, ABLIM2, APAF1, APLP1, ARPC2, CHAD, CKS1B, CUL1, CXCL16, DTX3L, E HMT2, ENPP1, F2RL1, GNRH2, GPLD1, GPX7, IL12A, INHBB, ITGAD, LAMC1, N ME6, OR2A12, OR2A2, OR2G6, OR2T33, OR5H6, OR6F1, OR7C1, OR9G4, PIGT, PIK3R3, PRKX, RENBP, SEMA4D, SIGLEC1, SPCS1, TSLP, UCKL1, ULK1, PPP1 R12A, TNFRSF6B

Negative_4079	CAMK4, CSF2, DLL3, DOLPP1, ERBB3, IARS2, LIMK2, POLR1D, RPSA, VTI1A
Negative_4080	CRH, OAT, ADH5, AKR1C3, ALDH3A1, CALML6, CASP8, CHKB, CNTN2, COMP, GNA13, ITGA1, KAT2A, MNX1, NOS1, OR2D3, OR2G2, OR4F17, OR5L1, ORC6L, PDE8B, PIK3CA, PIK3R5, PPP3R1, PTGES, PTPN1, PTPRR, SEMA3F, SHC2, SORBS1, SYNJ1, WNT9B
Negative_4081	ACACB, BUB1B, DDX51, GALNT12, HNF1A, NFE2L2, OR6N1, STAT4, TNFRSF13C
Negative_4082	CLDN4, CUL1, HDAC1, MTMR1, PPCS, PRPH2, XCR1
Negative_4083	AK3, F11, FGG, MET, RB1, TEC, ACSM5, BCMO1, CKS1B, CYP11A1, DHDDS, E2F5, GAMT, GCLM, GDF7, GGPS1, IL13, IL20, LIPT1, MMP14, NAT5, NCK1, OR13C2, OR1D5, OR2A4, OR2T11, OR7A5, PAFAH2, PDE6G, POLR3B, PPP1R3B, PPP3CC, PTPRZ1, RCHY1, RXRA, SOX17, STAT4, XYLT2, PLA2G12B
Negative_4084	DIAPH1, DTX3L, GSTO1, MAN2A1, MAP3K4, PDGFA, PLAU, RFWD2
Negative_4085	EPO, F9, SHH, ATP5L, B4GALT4, BMPR1A, CCDC6, CCL11, CCR2, CD226, CNGA3, COX10, EDNRA, ENTPD6, EPHA3, ERBB3, EVI1, FUT7, G6PD, GNRH1, GSTO2, ICAM2, IFNA8, KARS, KCNB1, KLRC3, LDHD, MYLK2, NCKAP1L, NFKBIE, OR51E2, OR56B4, PDHA1, PPP1R3A, PRKY, RASGRP1, SELP, SGMS2, ULBP1, ZNRD1, MAPK8IP2
Negative_4086	ABL2, ACY1, CCR9, CDS2, CMBL, DAD1, DDX23, EPB41L2, EXTL3, FGF22, FGF3, GALNT7, GAMT, GLI1, GMDS, IFNK, IL12RB1, MAP3K3, MNX1, NEGR1, OR1A2, OR5V1, PRKAG1, RELB, SEMA3B, SNAI1, SUV39H2, WWP2, PHOSPHO1
Negative_4087	DUT, IL2, ACP1, APBB1, ATF2, CAV3, CD44, CDC25B, CDKN1B, CLDN5, COL4A1, CYP2B6, DGUOK, GOSR2, JAK1, LCP2, LRP6, MITF, MYH15, OR2K2, OR2L2, OR7A5, PIGB, PIM1, PVRL4, RHEB, SARS2, SC4MOL, SC5DL, SSH3, THBS1, TUBA8
Negative_4088	GH2, FSHR, HCCS, HTR4, IFNAR1, MAPT, NOTCH3, OR4D6, PAX6, PGK1, PITX2, SMAD5, SOD1, PNLIPRP1
Negative_4089	F3, OGT, SCD, ADH1B, AFMID, AGPAT4, AGRP, AMY2B, AQP7, ATP4A, BCKDHB, CAMK4, CCR1, CRY1, DDOST, DHODH, EARS2, EPHA8, GDF6, GSTZ1, GUCY2D, IL28B, MKNK2, MLYCD, OR10P1, OR2A42, OR4K2, POLD1, PRKCE, PTPN11, RAGEF3, SHC4, SLC27A1, SOS1, ST3GAL4, TAS2R38, TLN1, TRAF4, UBA7, UGT2A1, UGT2B11, WBSCR22
Negative_4090	FH, GAA, AHCY, ALDH4A1, ATP5B, CCR8, CDH15, COQ7, CUL1, DAAM2, DDIT4, ENTPD6, FARSA, FLT3LG, GADD45B, GFPT2, GPAM, GRIA2, GSTO1, HMGCS1, HRH2, IL28A, MAP3K4, MARS, MYH10, NFYA, ODC1, OR5D18, OR5K2, OR7C1, OR7G1, RALA, SPCS1, SQLE, STAT5A, TGFA, USE1, VAV2
Negative_4091	BAX, CAD, B4GALT2, BDH2, CCL4, CHPT1, CXCL1, CYP2C19, DDX55, GYS2, IL18, IL2RA, ITGA8, KIR3DL2, OGDHL, OR1Q1, PARD6A, PPP1CB, PYGB, RALB, STAM2, STMN1, SUV39H2, TALD01, TAS2R8, WNT16, XYLB, TNFRSF10B
Negative_4092	BTC, F12, ACAA1, CASP3, CASP7, FGFR2, FOXA2, GART, KLRK1, OR4D2, PAPS1, PFN1
Negative_4093	AGK, C7, MPL, TEC, ADH4, AGXT, ANAPC5, BCAR1, CASP8, COL5A2, CSF2RB, DNMT3A, GALC, GDF5, GLI1, GNAO1, GNPDA2, GNPAT1, IDH2, IFNA4, IL4R, IMPA1, ISYNA1, KCNJ11, NR5A2, OR13C5, OR14J1, OR2AG1, PGAM2, PIGH, PON2, PPP2R5A, PRKAR2B, SIAH1, SPTLC1, SULT2B1, VAV1, VEGFC, WNT8B, HSD17B12
Negative_4094	F10, B4GALT6, BDNF, BPNT1, CYFIP2, EPHA6, HSPA1B, IL2RB, MAP2K6, PRKAR1B, RND1, SMURF1, TNFRSF10B
Negative_4095	CGA, MVK, ACLY, ANAPC7, BNIP1, CACNA1D, CCKBR, CCNB3, CD74, CDKN2B, CHD8, CMPK1, CMPK2, COL5A2, CTF1, CXCR3, CXCR6, DDIT4, DGKA, DUSP16, FCGR3B, GADD45G, HLA-G, IL22, ITCH, LILRB3, MAFA, MYH1, NFATC4, OR10G8, OR1F1, OR2L3, OR4A15, OR56B4, OR6K6, OR8K5, POLR2F, POLR2H, PPP2R5A, PRKACG, SARS, SYNJ2, TP73, WBSCR17, CACNA2D3

Negative_4096	ADK, GCK, MPZ, SRC, AGXT2, CD44, CHRM1, COQ3, CREBBP, CRY2, CYP26B1, D HRS4, EPHB4, EPOR, GNAS, GP1BB, IFNA13, IGF1, IL17RA, LIPC, MAP2K2, M KNK1, MYH2, NFKB2, NFKBIE, NME7, NR1H3, NRXN3, OR11G2, PLXNB1, RPS6K A4, SPHK2, STAM2, STX6, TAP2, TNFRSF4, TRAF5, TUBB3, VCAM1, CSNK1A1L
Negative_4097	F7, KDR, TH, CCNG2, CXCL9, DDX19A, DHDDS, EFN1, FZD7, LDHAL6B, MGST1 , NLGN1, OR2AG2, OR5T2, PLAT, PRKAG3, PROS1, PRSS1, RAPGEF3
Negative_4098	AUH, FGA, ATP6VOB, CCL14, CCL19, CCR1, CD48, DNMT3B, FARSB, G6PD, GDF 7, GSTA5, IMPDH1, ITGA2, ITGB8, MAML3, MGAT2, NME7, OR51B4, PEMT, PPP 1R3C, SPRED2, SV2C, TCF7L2, THBS1, TYROBP, WNT6, ATP6V0D2
Negative_4099	DUT, ADCY9, ALG12, ATP5G1, BPGM, C3orf10, CLDN20, DCTD, DGKA, ICAM3, PTK2, SETDB2, USE1
Negative_4100	CYP1A2, EPRS, LIMK1, LLGL1, MGST1, NFX1, PTPRM, RARA, STAT4, MAPKAPK 2, PDCD1LG2
Negative_4101	FH, GSS, PLG, ARAF, COX10, CXCL13, HMGCL, MAP3K7, MAP3K8, MAPK7, MCM5 , MMP2, OR10H1, OR2A2, PLCB3, PLOD1, SREBF1, SUFU, WARS2, SUV420H1
Negative_4102	FYN, ACSL6, ALAD, FGD1, GRIN1, HTR5A, IFNAR2, IL20, IPPK, KLRK1, MCEE , NANP, PCYT1B, PIGA, PIGK, PPP2R2D, PPP2R5A, RPS6KB1, SPI1, SPRY1, X YLT1, PPARGC1A
Negative_4103	BTD, IHH, AXIN2, FTH1, GNPDA2, IDH3G, IFNB1, KITLG, LCP2, METTL6, PDI A4, PPAP2A, SEMA4G, UNC5D, XCR1, YWHAG
Negative_4104	APP, C6, CGA, AASS, ALOX12, ASMT, CACNB1, CCR5, CD36, CHSY3, COASY, DO LPP1, EDNRB, ENTPD2, EPOR, ERBB2, FCGR3B, FUT5, GGT5, GNG13, GRIA3, H AP1, HMGCL, HSD3B7, IFNA10, IFNG, IL25, IL6ST, IPPK, IRS2, LIPA, LIPT 1, MAT2B, MEF2C, NEUROD1, NFKB2, OR2T6, OR5A2, OR5AP2, PER1, PER2, PG M1, PLCG1, PTGES, QPRT, RENBP, SULT1A2, TSC1
Negative_4105	C8B, CR2, F12, F9, GK2, AOC3, B3GNT4, BUB1, CBLC, CKS1B, CYFIP1, F11R, GAPDH, GCLC, GPAA1, HSD3B7, IL7R, MAPK1, MFNG, NRXN3, NTN1, OR13G1, O R14I1, OR2T2, OR5B3, PANK2, PLIN, PPARG, SHC2, SOCS7, SV2B, TGFB2, U LK1, ZFYVE16
Negative_4106	PGD, ACSM3, ADRA1A, ADRB2, B3GNT4, BNIP1, CARD11, CD48, CLDN3, DLST, ETS1, GANC, GCH1, GFPT2, MAP2K5, MGAT5B, NRXN1, OR10H2, OR10J5, PCCB , PHKA2, PLAT, POLR1C, PPP1R3A, PTCH2, ROCK1, RPS6KB2, RXRA, SHC3, SL C27A5, SLIT2, SOCS2, STT3B, WARS2, WNT3A, XYLT2
Negative_4107	AK5, C5, ABP1, ATIC, CACNB4, CAMKK1, CDC25A, CYP2S1, DGKD, DPYSL2, EH MT2, ENTPD8, FECH, FPGS, FTMT, GAD1, GJD2, IL9R, INPPL1, ISYNA1, ITPK A, LLGL1, MAP2K7, MYH2, NOTCH3, OR13F1, OR2A14, OR2K2, PIK3CG, PIP5K 1B, PLCB4, PLEKHA8, PMM2, POLR2J, PRKAA2, PRKCZ, RARA, RIPK1, SLC12A 2, SULT1A1, TGFB1, ZNRD1, MAP3K7IP1, PAFAH1B3, PLA2G12B
Negative_4108	BTD, HPD, CES2, CLDN8, CSF3R, ENTPD5, GLG1, HYAL2, IL15RA, MAGI3, MYH 9, OR6K2, PCYT2, PGAM4, SULT1A2, VDAC2
Negative_4109	GLA, E2F5, FPGT, GALNTL5, GLO1, IL5RA, NADK, PARS2, TIAM2, ATP6V1E1
Negative_4110	C2, FN1, GNS, HPD, STS, ADCY6, CASP3, CPT1B, DDB2, DKK2, GCAT, GGT6, GU CY2C, IL18, IL25, KCNJ11, LIPG, LTC4S, MAP2K1, MGST1, MKNK2, OR10H5, OR2T34, P2RX4, PPP3CC, PTK2, RELA, RFXAP, SARDH, SLIT2, SPRY3, STAT2 , UCP1, UROC1, WNT2B, ATP6V1B2
Negative_4111	APP, ITK, SFN, ZYX, ATP5G1, CD74, CDK7, CHAT, CYP2A13, DCXR, DGKB, EDN 1, FGF2, FTCD, LIPA, MAPK7, NSDHL, OLR1, OR2T34, OR3A1, OR6C6, OXCT2, PIGM, POLR3A, PRODH, STMN1, SYNJ2, TPI1, VCAM1, YES1
Negative_4112	HK3, LYN, APLP1, ARSB, BMP5, FMO1, GSTA2, PIGM, PIGQ, UGT2B11, VAV1, A TP6V0E1
Negative_4113	ATP5B, BMP5, CACNG7, CCNG1, CD86, CDK2, CYBA, F13A1, GAPDH, GNAI3, IL 13RA1, INPP5E, ITGB1, MAP2K7, NQO1, OR4C13, OR5D16, P4HA2, POLR1C, P RPS1, SGMS1, SUCLG2, UGT2B4, AASDHPPT, HLA-DQB1



Negative_4114	F10, ACACA, ACACB, ACPP, ACY1, ADCY2, ADH1B, AOC2, BUB3, CCL16, CLDN19, CREB1, DKK2, GNRH1, GSTA5, HBEGF, HCCS, IDUA, IL6R, ITPK1, JAK2, MA RS, OR2D2, OR2T33, OR4M1, OR6M1, OR7A10, OR8S1, PAK3, RAF1, ST8SIA1, SULT1A4, TLR4, TUBB2B, VAV3, WHSC1L1, ATP6V1B2
Negative_4115	ADC, APP, C8B, FGA, TAT, ABLIM1, AFMID, AK3L1, ANAPC4, CLTCL1, CPT1C, DDX23, DHX58, DLL1, DTX4, EFN1, EIF4E2, EPHB3, EXT1, FGF21, HSPA2, I MPDH1, IQGAP1, IRS2, ITGA6, LRP6, MMP7, OR12D3, OR511, PLA2G5, PLCB2, PLOD1, PLOD2, POLE3, POLR3K, PPM1A, PTPRB, ROBO2, RRM2B, SCIN, SFRP5, SV2A, TAS1R3, MAPK8IP1, TNFRSF11A
Negative_4116	XDH, ALDH3A2, BMPR1B, CDC16, CRHR1, CTBP1, HMGCL, LAMC3, NFASC, NR1H3, OR6C74, PIM2, PTGER3, SLC25A5, SLC25A6, TNFSF11, TNFSF8, WNT7A, S ERPINA5
Negative_4117	BAX, KMO, NLK, TNC, ADCY10, C5AR1, CACNA1G, CDH1, CER1, GALNT2, GSTO2, HPSE, IL17RA, IQGAP2, MAP3K6, NAMPT, NCK1, NPR2, ORC5L, PFKFB4, PI4KA, PIM1, PPP1CA, RPS6KA6, RPS6KB1, SIAH1, VAMP2, VNN1
Negative_4118	CEL, GSR, OSM, PLN, ACPT, ANAPC5, ATP12A, B3GALT4, B4GALT5, CERK, CNG B1, DDX52, DLL3, EP300, FGF22, GPLD1, HEXA, HSD17B3, IFIH1, IL7R, LYP LA1, MYH7, NT5C3, OR10K2, OR2A2, OR2L13, OR6C76, PANK3, PDE7B, PDPK1, PLA2G2A, PMM2, PON2, PPARD, RXRB, SETD7, UCK2, WASF2, YWHAE, CSNK1A1L, PPARGC1A, SERPINE1
Negative_4119	GH2, ME1, BDKRB2, CYBB, DAAM1, FMO2, HLA-DOB, KIR2DL1, MTAP, NTNG1, PDE1A, PTPRM, TDO2, TLR4, UBA7
Negative_4120	GNE, RPE, ALOX5, CD70, CLDN16, G6PC2, GADD45B, GAPDH, IFNAR1, IL12A, IL22RA2, ITGAV, JAK3, LIMK1, LYZL1, MCM4, OR2K2, ORC5L, PRKG2, STX12, USE1, WBSR22, YARS2, PPARGC1A
Negative_4121	A2M, EDA, ABLIM1, ACSM1, ALDH3B1, ARPC4, CADM3, CD36, CD59, CXCL10, D GAT2, FZD10, GNRHR, IL11, IL12A, KYNU, LRDD, OR11L1, OR52A5, PIK3R5, PTPN1, RHOQ, SPTLC1, STX4, TAS2R14, TNFRSF18
Negative_4122	C4B, C8B, TK2, ADRB2, CANT1, CCL24, CD82, CHST11, CSF3R, F13A1, FOXA3, FZD8, HPRT1, INSRR, KLKB1, NANP, OR4S1, PDE5A, PDXK, PPP1CB, PPP2R5E, PRLR, SCP2, SETDB2, TNFSF8, TSHB, C1GALT1C1
Negative_4123	MPL, NF1, ACAA2, ACAD8, AOC3, ATP6V1H, CAMKK1, CCNA2, COASY, CYP26A1, DAD1, EFNA1, ENPP6, GNRH1, GSTA4, IL18RAP, ITGA6, JAM3, KLK3, LDHAL6B, LEPR, LMO7, MGAT1, MGAT5B, MTAP, NEU2, OR6C6, OR8B12, PFKFB2, PRK AB1, RAF1, RGS3, RXRB, SEMA3D, SHC1, SLC9A1, SPAM1, STK3, SV2A, TACR2, TLN1, TUBB4Q, UGT2B17, VDAC1, XCL1, ATP6V0A4, HLA-DQB1
Negative_4124	C8A, CEL, DBI, HPD, ARPC1A, BMP5, FUT5, GLB1, ICAM2, IFNAR2, LAMB2, MY H14, OR10H5, OR2L13, PAK2, PAX6, POLD3, PPCDC, RDH16, SESN3, SGMS2, S PRED2, TRHR, TXNDC12, UGT2B11, MAP3K7IP1
Negative_4125	BID, EDA, ACADM, AKT1, AMD1, ARPC5, CLDN2, CYBB, FGFR2, GALNTL2, GRIN2C, GSTO2, HAGHL, HRH2, KLRC1, LAMC1, LAMC3, MYH1, NEFL, NMNAT3, NPR2, OR1K1, OR1L4, OR2T2, OR4D6, ROCK2, RXRG, ST3GAL4, TBK1, ST6GALNAC5
Negative_4126	UBC, ALG5, ARAF, ATN1, CACNA1A, CDKN1B, DHRS4L2, IFNB1, IL24, IL5RA, ITGA4, NKX2-2, OR4B1, PARD6G, PDGFB, PPBP, PPP2R1B, RPS6KA5, ST3GAL5, STAT6, STX1B, YWHAB, SERPING1
Negative_4127	ILK, ACADM, AKT3, ATP5C1, ATP5E, BDKRB1, BUB1, CDC27, CYP2S1, EPAS1, ICOS, IL20RA, IRAK3, MYH6, NAT2, PAX4, PFKFB4, PLXNA3, ST6GALNAC5
Negative_4128	ACP2, ADCY8, CISH, CTNBN1, CYP3A5, GADD45G, GCNT1, ICAM2, NFATC2, OR1G1, PARD6B, PGLS, PLCD1, PYCRL, STX4, TNFSF10, TRIP10, VTI1B, ATP6V1B2, HLA-DQB1, SERPINC1
Negative_4129	PLG, ALCAM, CACNA1B, GL01, NT5C, OR4B1, PLD2, SEMA4D, SOCS1, TRAF2, UGT2A3

Negative_4130	ADO, CTH, DCT, GLS, ABL2, AGMAT, AKT3, ASPA, BMP2, CDH2, CEBPA, CES7, C REB3L3, DLL1, FGFR4, FUT4, FZD10, G6PC2, GZMA, IQGAP2, LTBP1, MTHFR, NFX1, NFYA, NPR1, OR2F2, OR5B21, PCCB, PCK2, PDHA1, PIK3R4, PPP1R3C, PRKACG, PRODH, RPS6, RRM2, SEMA3E, TAS2R8, TRPC1, YWHAG, PLA2G12A, P NLIPRP1, SERPIND1
Negative_4131	ACTG2, ADRB3, BAIAP2, BTRC, BUB1, COL11A1, CYP2U1, DARS, ETNK2, FGF1 , IKBKE, IL1B, OR13C3, OR13F1, OR3A1, OR5P3, PNPO, PPOX, PPP1R3B, PRS S3, RBL2, RDH10, SULT1A2, WNT5A, XCR1, B3GALNT1
Negative_4132	IL9, ACAA1, B4GALT5, BDH2, CCL25, CDKN2C, EIF4E2, GALM, HNF4A, NCK2, NTN1, OR10A6, OR2B6, OR4D1, OR4F5, OR8U1, PARD3, PLCG1, PLCG2, ROCK1 , SMAD2, SMAD4
Negative_4133	MOS, ACTA2, ADIPOR2, ALPL, APOA1, BDKRB2, CYP2U1, GMPPA, GNG12, GNRH R, GP1BB, IARS, IL1R1, ITGA6, ITGA8, KLRC1, LYPLA1, NCAM1, NFKB1B, OR 10G9, OR2H1, OR4D2, OR4F4, OR51B6, OR8J3, P2RX3, PIGX, PLTP, POLR2A, PPT1, PTGDS, RALGDS, RASSF5, SDC2, SETDB1, SNAP23, TAS1R3, WASF3
Negative_4134	ID3, ADRB2, FGF8, FGFR1, FZD8, HMGCR, IL13, NKD2, OR52M1, OR5M9, OR6Y 1, PIK3R4
Negative_4135	AKR1A1, ARSD, ATP5G3, CARS2, CD74, DAPK3, EXOC7, GAPDH, GSK3B, INHBE , NCAM2, NEU1, OR11I1, OR5B21, P4HA2, PISD, PLCB3, PROS1, PRSS3, RAPGE F3, RPIA, RUVBL1, RXRB, SAT1, SLC27A1, SNW1, ST3GAL5, TCF7L2, TGFB2R2 , TUBA1B, TUBA8
Negative_4136	GAMT, KLRC4, MMP7, OR1E1, OR5R1, PAX8
Negative_4137	LYN, ADH1B, ALDH6A1, ALS2, ARPC4, ATP5F1, B3GAT2, CACNA1S, CARS2, CC L26, CD48, CDH1, CER1, CFLAR, CLDN11, DDX56, EGFR, ENTPD3, GFPT1, GNA 14, GNPDA1, HTR6, IFNG, IL11, ITGA6, MPZL1, MTHFS, NR4A1, OR2A14, OR3 A3, OR5AK2, PARD6G, PDGFA, PMM1, POLA1, PPP1R3C, PPP2R5B, RAC2, RALB P1, SEMA4B, TAP1, TGFB1, VARS, ATP6V1B2
Negative_4138	CDA, BDH1, CACNA1A, CCL28, CYP2A6, ERBB4, LAMA3, OR1N2, OR9A4, VDAC1 , WNT3A
Negative_4139	BID, BTC, BTD, MUT, ADAM17, ATP5D, B4GALT7, BST1, E2F2, FABP1, FIGF, F MO3, FUT4, GSK3B, IL5RA, IL7R, KITLG, MAN1A1, MDH2, OR10A2, OR4A5, PA ICS, PDE2A, PDHB, PLOD1, PPAP2B, RPS6KB2, SHC1, TCF7, TGFB3, TUBB2A
Negative_4140	CRH, FER, NF1, ACTG2, ANAPC1, ANPEP, CACNA1G, CCL5, CHR1, CREB3, CYP2 A7, DFFB, DPM3, FLT3LG, FUT5, GALM, GP1BA, GUCY2F, IFNAR1, IL18, IL2R B, ITPA, JAM2, MAP2K5, MYH8, NAGLU, NPR1, NRAS, OR4K5, OR5L1, OXCT1, P IM2, PTDSS2, PVRL1, RAPGEF2, RBKS, SFRP2, SUOX, WHSC1L1, WWP2, ZNRD1 , MAPKAPK2
Negative_4141	LSS, ALDOB, CFTR, GAD1, MOV10L1, NSD1, ATP6V0D1, HLA-DQB1
Negative_4142	GCK, LYN, PLG, PTS, ADRA1B, ALG9, B4GALT4, CCL8, CD8A, CYP3A7, EGLN1, FBP1, GALM, GRIN2B, IBSP, ICOSLG, IL1A, IL20RA, JAG1, JAG2, MDH2, MGS T2, NAMPT, NFYC, NUMBL, OR1S1, PIGT, PIP5K1A, PLA2G10, POLE2, POLR2B , POLR2L, PSEN1, RARA, RPS6KB1, SEMA3C, SESN1, TAS2R1, TLR9, TNFSF4, TUBA1A, UGDH, CACNA2D2, SERPINA1
Negative_4143	LIF, ACTA1, AGRN, ALG9, ATP50, BMP6, CACNB4, CDS2, CHAT, CYP2U1, EXT2 , GSTZ1, IGSF5, ISYNA1, KCNJ11, KIR2DL3, NAGLU, OR52N2, OR5T1, POLR3 K, PPP1R1A, SELL, SEMA3B, SLC25A6, YWHAQ
Negative_4144	ME3, SI, ADCY8, ADORA2B, ADRBK2, AKR1A1, ATP5H, BET1, CYP1A1, EPHA3, GNAO1, GRM1, HAP1, IFNA6, IL28RA, MAD2L1, NAE1, NAGA, ONECUT1, OR10A 7, OR11H1, ORC5L, OXCT1, PARS2, PLA2G6, PLCG1, POLD3, TAS1R2, TPH2
Negative_4145	ADC, DBI, ACO1, AHCY, ATP5G2, B4GALT6, BMP6, CBR1, CHD8, DAPK1, DGKE, EPHB2, EXT1, FBP1, GUCY2D, HADH, HSPA8, IDH2, ITGA9, LGL2, MAN1A2, N EFM, OR10AG1, OR1S1, OR2T4, OR4F4, OR8U1, PDK1, PFN2, PIK3CD, POLR2B , PPP1CC, RERE, SCIN, STAT1, TP73, HLA-DPB1, MAPK8IP1

Negative_4146	FGB, ALDH3A2, BDH1, CCNG1, CD244, FTH1, IL10, IL1RAP, IL22RA2, ITGB2, NOTCH2, OR7A5, PLXNB2, PNPLA3
Negative_4147	ABCC8, ALPPL2, ARPC1B, ATP5E, CSF2RB, CX3CL1, DAAM2, DPM1, GMPPB, IL1R1, IL22RA2, IL6R, IRF3, KIR2DS5, KLRC4, NCR2, NEUROG3, OR51A2, OR5D13, PLCD4, PPARG, TAS1R1, TSHB, ZFYVE9, TNFRSF10B, TNFRSF11A
Negative_4148	HGD, PLN, ADCY4, AKT1, CCKAR, CEBPA, CHD8, CHEK2, CHST12, CTTN, ENO1, GMPPB, GNA13, GNAI1, GNMT, HEMK1, HMOX1, MEF2C, NOTCH2, NT5C3, OR10H5, OR4P4, OR51E2, PFKFB4, PGAM1, POLR1A, PRKY, RAB23, TM7SF2, ATP6V0E1
Negative_4149	F10, F7, GDA, KMO, SDS, AGMAT, ANAPC4, CACNB4, CCNH, CSNK1G2, CXCL1, CYP2J2, CYP7A1, DNMT3L, FGF1, GSTA5, IFNA5, ITGB5, NT5E, OR10C1, OR11H1, OR4P4, OR52M1, ORC1L, PIGX, PIP4K2A, POLR3G, RFXAP, SMAD3, SV2B, SYNJ2, UBA7, MAPKAPK3
Negative_4150	CD6, FYN, CNTN2, CSNK1G3, DPM1, EPHA3, EPHA6, GLUD2, OR2H1, OR51S1, OR7A10, PRIM2, PYCR2, TAS2R50, TSC1, SERPINA5
Negative_4151	GSN, ACSM3, ALOX12B, B3GNT4, CPOX, CPT1C, DCTN1, GNA15, KCNB1, MYH8, OR6C75, PON3, SLC27A5, TXNDC12
Negative_4152	IL2, VTN, ADRA1A, AGPAT1, AMPD1, BMP8A, BUB1B, CCNB3, CLDN4, CSF3, ERBB3, GALNT13, GLI2, GMDS, GNAI1, LIPA, LRDD, SC5DL, SPI1, WNT11, CACNA2D1
Negative_4153	C7, CFH, AMPD3, ARPC1A, B3GALT2, B4GALT6, CD74, CLOCK, DGKI, FZD3, GAD1, GNB3, IFNGR2, IFNW1, ITGB5, ITGB6, LGMN, MKNK2, NAGLU, NCOR1, NSD1, OR7D2, PRKAB2, PRKY, RDH16, RFXANK, SOCS2, SULT2B1, TALDO1, TNFSF12, UMPS
Negative_4154	B3GALT4, B3GNT2, BRAF, CD34, CXCR4, DDHD1, EPHA6, ITPA, JAK1, KIR2DS5, MAN1C1, MMP7, NTF4, OGDH, OR10AD1, OR1N2, PTPN7, RAC1, SDC2, SOCS1, VASP, ZFYVE9
Negative_4155	DCN, LHB, PXN, AADAT, ACSS1, AKR1C4, CCL28, CHRDL, DGKB, DHRS4L2, DTX3, DVL2, ENO2, IL28RA, INPP5B, MAN1C1, NT5C1A, OR4S2, OR51Q1, OR5B3, OR6C75, OR8S1, PRKCI, PTK2B, RALB, RASGRP2, RPS6KB1, SETMAR, STK36, UGT2A3, WARS, ATP6V1B2, ST6GALNAC1
Negative_4156	IL12A, MALT1, NEUROD1, NOTCH3, OR11I1, PPP1R3D, PPP2R5E, MAPKAPK2
Negative_4157	CD2, HPD, FGF21, H6PD, MGAT4B, OR6S1, UROS
Negative_4158	HYI, BCAR1, BMP4, CBLC, CD82, CHRM2, CLTCL1, CYP2C18, DTMYK, ERBB2, GALNT13, GNB3, GNG13, HDAC2, IL10, IL20, ITGA8, KCNQ1, LIPF, MDM4, OR13C5, OR2K2, OR4F5, OR5L1, OSMR, PDE1C, PTGER1, RFXAP, RXRB, SGMS2, SH2D1A, SHC2, SPCS3, TNFSF9, XCL2, MAPKAPK5
Negative_4159	ACSS3, CCNG2, DGKZ, ELK4, GANC, GLDC, HDAC2, IARS, IPMK, MRAS, OR10A3, OR10J3, OR10T2, PIK3C3, PLEKHA8, POLD1, PTCH2, QARS, TLN2
Negative_4160	C3, GSS, PGP, APH1A, ARSE, CDIPT, CDO1, CFL1, COL5A2, CYP19A1, DDHD1, DGKG, DGUOK, GANAB, GUSB, HMOX2, MTAP, MYLK2, NFYC, NTN1, OR13A1, OR13H1, OR1Q1, ORC2L, ORC3L, PDE10A, PER3, PGAM4, PKM2, PLA2G2D, PLA2G6, PNLIP, PPP2CB, RALA, SARDH, SETMAR, TNFSF18, CSNK1A1L, GABARAPL1
Negative_4161	ADCY8, ALG13, GGPS1, HADHA, KYNU, NNMT, OR2T4, PLA2G3, TGDS
Negative_4162	MET, PTS, ARPC1B, BDNF, C3AR1, DGKI, FLOT1, GNAT3, GRIA2, HBEGF, LMO7, MCM2, MTHFS, NCK2, NCSTN, NRAS, NT5C2, OR10H5, OR52D1, P2RX6
Negative_4163	IDS, ACVRL1, APC2, ATP6V1F, CLDN15, DGKA, EDNRB, FMO4, GRPR, IL28RA, ITGA2B, LEFTY1, MGAT2, NT5C1A, OLAH, PPM1A, PPP2R2D, SDC4, TRAF4, WNT10B
Negative_4164	BCR, LCT, PTS, ALOX12, ATP5D, CERK, CSDA, FABP3, FCGR3B, FSHR, GADD45A, GRIN2D, IL21R, ITCH, ITGA7, MASP2, NPR2, OR10A7, OR1J2, PIM1, PIP5K1B, PRKAR2A, RBL2, RPS6KA3, SLC27A1, SOS2, TLR4
Negative_4165	EPO, AKR1A1, B3GNT4, C4BPB, CDC25B, CYP2C9, EREG, HNF4A, IL6R, PYCR2, ST3GAL4, PRICKLE2

Negative_4166	ADA, F3, HGD, AASS, ACP6, ARHGEF7, ARRB1, BIRC5, CTSG, CYP2E1, GSTM5, HMOX2, ITGA1, ITGA9, KARS, LHCGR, MGAT4A, MGST3, MYH3, OR51D1, OR52J3, PIGM, PPP3R1, TFPI, UNC5A, UPRT, VEGFC, YWHAE, CTNNBIP1
Negative_4167	BAAT, BET1, CBR3, DDB2, DLL1, DUSP16, FGF8, FUT3, GNPAT, ITGAV, LPAR1, MGAT5B, MYH14, OR10H4, OR14C36, OR4A16, OR5C1, OR6M1, PLOD2, PRKCB, SGMS2, SPHK2, TAS2R8
Negative_4168	CARS, CTNNA2, LIMK2, OR2C3, OR6X1, PCYT2
Negative_4169	F5, GH2, SI, TYR, ACTB, AGXT2, ALAS1, ARHGEF2, ATP6V1D, CD74, CLDN19, CXCL2, DDB2, DGKH, ENAH, GRIN2B, HDAC2, HNF1B, IL20RA, ITGB2, MMP14, NCOR2, OLAH, OR1A1, OR1D5, OR2A4, OR5AK2, OR5P2, OR8U1, PDE9A, PIGQ, PIK3CB, POLE2, POLR2J, PPA1, RBL2, SELPLG, SEMA4F, SETD8, STX5, TJP1, TKTL1
Negative_4170	DBI, ACSM3, ALDOC, BCKDHA, BUB3, CD40, COL6A1, COX15, CSF1, CSNK1G2, DAD1, DDX54, DERA, DHFR, GALNS, GALNT6, GSTM5, HTRA2, IL18RAP, IL21, IL24, IRS1, MGAT3, MIOX, OR13C5, OR4B1, OR51L1, PIGN, PLAT, PORCN, PS ENEN, PTDSS1, PTGS1, TRAF1, TRAF5, TUBAL3, VAMP1, WNT3A, PHOSPHO1, TNFRSF18
Negative_4171	APP, NPY, AKT1, ATP5D, CCL4, CCR4, CDKN1A, CNDP1, COL4A6, CXCR3, DLL1, IRF9, ITGA4, LTBR, NRP1, OCLN, OR6K3, OR6Q1, PECAM1, PMM1, SFRP1, SMPD1, SOAT1, SULT2A1, TNFRSF17
Negative_4172	CR2, DHH, GDA, ASIP, CCR8, FDPS, HGSNAT, HIF1A, ROCK2, SELP, TLN1
Negative_4173	GDA, TPO, CADM1, CCNA2, OR52A5, OR5H6, PIAS3, PIGX, UPRT, UROS
Negative_4174	AGL, BTK, C2, CP, PGP, ACSS3, ADH4, AGMAT, AKR1B10, ALG2, ALOX15, CCL25, CNTF, EFNA2, F2RL2, GCDH, GGT7, GIT1, GLG1, GSTA1, HIF1A, HLA-DMA, HSD17B7, HSD17B8, IDI2, IL12RB1, IL1A, INHBE, KLK3, LARS2, LCP2, MAPK14, MTFMT, NEFM, OR10A4, OR4D9, OR4M2, OR4N5, OR52K2, OR7A17, PDGFRB, POLE2, PYCR2, SIPA1, SMAD1, SSH1, TNFRSF17
Negative_4175	GH2, ALG1, AXIN2, CD70, CTSS, EXTL3, FASN, FLT4, FUT4, GNG13, HNF4G, ICOSLG, IL6R, MMP7, OR1J2, PCK1, PIGA, SETMAR, TAS2R4
Negative_4176	ACOX1, ANAPC10, CHPF, EPAS1, FGF11, IFNA8, KIR2DS4, NNMT
Negative_4177	CR1, LPO, ACOX1, CACNA1H, CCKAR, CLDN14, ENTPD6, ERBB4, INPPL1, MAN2A1, NAT1, NCSTN, OR4C13, OR9Q2, PHKG2, PIK3C3, PLAU, RPIA, SETD2, TAS1R2, ATP6V1C2
Negative_4178	CYP4A22, DNMT3B, IRS4, JAG1, NUDT5, OR5C1, OR5L1, SETD1A
Negative_4179	CD4, CFI, F9, AGPAT3, AK3L1, AKR1D1, ALG2, AQP7, ARD1A, ATN1, CDK7, CLCF1, CYP2A13, DARS2, DGKE, ENTPD6, ERBB3, FSHR, GGT7, GMDS, GSTO1, IFNA8, IQGAP3, ITGB7, LYZL1, MAP3K1, NPAS2, OR10K2, OR51S1, PNLIP, PPP2R2D, RFXANK, SFRP5, SOCS2, TD02, TPH1, TRAF4, UBA7, VAMP3, HLA-DQA2
Negative_4180	CFH, GAA, AGPAT2, ANGPTL4, CLDN1, GALNT12, LAMC3, NRXN3, OR51D1, OR8H2, PLAT, POLR1D, PTDSS1, ROBO2, YKT6, TNFRSF12A, TNFRSF1B
Negative_4181	F8, GPAM, METTL6, OR52N4, OR6C76, SLC2A1, SULT2B1, PRICKLE1
Negative_4182	BAX, CDA, DCC, SI, ABLIM1, ADIPOQ, ARRB1, B4GALT6, CACNG8, CDC2, CFLAR, CHD8, DPYSL2, DUSP16, EGLN1, EI24, HEXA, IL13RA2, IL17A, IL22, IL28B, INHBE, KIR3DL1, LALBA, MAP3K2, NFKBIA, NMNAT1, NR1D1, NRCAM, OR4D6, OR51I2, OR51L1, PIGL, PPP2CA, PRIM2, RBL1, SPRED2, TAS2R16, TAS2R42, TPK1, TRDMT1, UGT2B17, MAPKAPK5, PRICKLE2
Negative_4183	CTBP1, OR56A1, RAB23
Negative_4184	CRK, DLD, IL2, MTR, SRF, ABAT, AKR1B10, ALDH3A1, ANAPC10, ATP5J2, ATP6V1H, CHEK2, DGKI, DNMT3L, EPB41L3, GLB1, GNG3, GZMB, HIP1, HMGCS2, HRH2, HSD17B3, HSD3B1, INADL, L1CAM, NCF4, NKX3-1, NQO1, OR2M3, OR4F6, OR4X1, OR7A10, PARVB, PCNA, PIGA, PLA2G4A, PRKACA, RERE, RPSA, SETD2, SRGAP3, STAT4, TNFRSF6B

Negative_4185	DBH, VTN, AMY2A, ANAPC5, CDC45L, CFL1, CNTN1, CTBP2, CXCL3, DDX55, ETNK1, HLA-C, HMGS1, IL15RA, IL28A, INPP4B, IRF5, JAG2, KLRC1, MADCAM1, MICA, NUGBL, OR2A4, OR52A5, OR5F1, OSMR, PARD3, PLD2, PRKCI, RASGRP1, SPRED2, TCIRG1, WNT3, WWP2
Negative_4186	ACACA, ACTN4, ASS1, C1GALT1, CD36, DDX47, F2RL1, FGF8, FZD8, GMDS, KI R2DS5, MARS2, NFKB1, NFKBIE, NME7, OGDH, OR10A4, OR51L1, TSC2, B4GALNT1
Negative_4187	ALDH3B1, AREG, ARHGEF7, ESPL1, ETNK2, GGT5, IMPA2, OR2F1, SOCS2
Negative_4188	CD2, CFH, FAS, GK2, WAS, ADCY4, ADH1A, ALDH1B1, ALDH5A1, ALDH6A1, CCL2, CHEK1, CXCL10, CYP3A5, FGF2, FLOT1, GNAI2, GSTM1, GUSB, IL17RA, NT5C1B, OR3A1, OR4D1, OR52N5, OR56A1, OR6C74, OR8G1, PAK2, PNPLA4, POLR2D, PRSS2, PTPMT1, SFRP1, SRGAP2, STAT1, TNFRSF4, VAV1, YES1, PDCD1LG2, PNLIPRP2
Negative_4189	ANAPC10, FGF10, NFKBIA, OR1E1, PPP1R3B, RPS6KA3
Negative_4190	AKT2, ATP13A2, ATP2A1, BAI1, CCL21, E2F1, GLDC, HLCS, NADK, OR2D2, OR5AC2, PDHB, PLOD3, PPA1, PPP1CB, PTPN7, PVRL4, RHOA, SARDH, SEMA3F, SLC25A4, UGT1A10, VANGL1, WNT5A, ST6GALNAC6
Negative_4191	C8B, FER, TNC, ACTA1, ATP6V1H, CCNE2, CDC2, COQ3, CYP2A13, GYS2, HSD3B7, INHBB, ITGAE, LCAT, MDM4, NUDT5, OR1A2, OR2T29, OR8S1, PAK2, PANK2, PFKFB4, PIP5K1C, PPP2R2C, RFDW2, VAMP4, ATP6VOD1, MAPK8IP3, SERPINF2
Negative_4192	ACSS1, ADH5, CSNK1G3, EPHA5, EVI1, EXTL1, GDF6, GLI2, GOT2, IL24, MGS T1, PFKM, RUNX1, TPMT, WNT7A, C1GALT1C1, MAPKAPK3, PNLIPRP1
Negative_4193	AK5, FAH, ACVR1, ADRB1, ARHGEF2, ATP13A2, CLDN5, CRHR1, DTX3, FGFR1, GSTM2, LAMB1, LTBR, MAP2K4, MPP5, NR4A1, OR10K1, OR2A25, OR2A4, OR2B11, OR52E6, PDE8B, PLAU, PTGER3, UCK1, VCAM1
Negative_4194	DLD, RFK, BMP4, CACNA1I, CCNG2, CREB5, DOLPP1, EPHA1, GFAP, GMPR, HCL S1, HTR2C, LDHAL6B, MAN1A2, MAP2K7, MCAT, MYH7B, OR2A5, OR5V1, PGAM1, PMVK, PPP1CC, ST8SIA5, VAV3, WBSCR22
Negative_4195	C7, ABL2, ARAF, BUB1B, CYP4F3, DAAM1, EHMT1, ENPP7, FBP2, GDF6, GZMA, HHIP, INPP4A, ITGA2, NCK1, NRXN3, OR2L2, PRKAR1B, RDH10, SCD5
Negative_4196	F10, SDS, AACS, ACHE, ACYP2, ATP50, CD226, CHAD, CLDN20, CREB3L4, CTP S, CYP8B1, DLL4, EPHB3, FABP1, GRIN2D, H6PD, IRF3, MIOX, MPST, MYH6, N OX1, NRCAM, OR1G1, OR1J1, OR2T6, OR4M2, OR51E1, OR5L2, PLCB1, PORCN, PPT1, SDHC, STAT5B, TALD01, TBXAS1, TICAM2, TM7SF2, TOMM40, TRADD
Negative_4197	AK2, C9, CBS, PC, SMO, AARS, ABLIM3, ACY1, ARPC1A, BLVRA, CAMK2D, CCL23, CDKN1C, CHRM1, CHST12, COL2A1, COL5A2, COMP, CTNNA3, DUSP5, ENO3, FRAT2, HTR2A, IRF9, MAML1, MKNK2, NARS, NCAM2, NEU1, NFKB2, OR1F1, OR1L1, OR52N5, OR52R1, OR56A1, PCK2, PPARG, PPP2R5E, PRKCD, RPSA, SDHB, SMC1A, SPRY3, STEAP3, TJP1, WNT6, WWP2, ATP6V1C2
Negative_4198	BTC, FN1, HK2, PVR, ABAT, ACOT12, ADRB3, ALPI, ATP5B, ATP6V1A, B3GALT1, CD74, CDH4, DDX23, DTX2, EFNB2, GALNT8, GLYCTK, HSPA1B, ITGA4, LCM T1, MCAT, MYH2, NADSYN1, OR10J1, OR51B2, OR5D18, POLD2, POLD4, PRKAA2, PTGER1, SDHA, SGPP2, SOCS4, SPRY3, ATP6V1G1, PHOSPHO1
Negative_4199	ACSM3, BET1, BMP7, CHPT1, CREB5, CUL1, CYP2A13, GNG3, INADL, KLKB1, L YZL1, MAN1A2, OR14I1, OR2AT4, OR2T10, OR4F15, OR51F2, PANK2, PDCD1, PIM1, RBPJ, SARS, SC5DL, SETD1A, TAS2R41
Negative_4200	CBS, ALG9, BCAT1, CREB1, HSP90B1, ODC1, SULT2A1, THY1, VDAC1, HSP90A B1
Negative_4201	ADCY4, ALDH5A1, ANAPC2, ARSE, CLDN2, EGLN1, GALNT2, GRIN2A, IRF9, IT GA10, NRG3, OR7A17, OR8U1, PLA2G3, RRM1, THBD, TRAF3, TUBB, VEGFC, WN T3, WNT7A

Negative_4202	AADAT, ALG11, B3GALT2, CCL17, CLDN15, FZD6, NLGN2, OR14I1, OR1J1, OR52E6, OR5K1, PTSS1, TAS2R8, ULK2, ZBTB16, MAP3K7IP1
Negative_4203	CCDC6, NLGN1, PAFAH2
Negative_4204	C1S, LAT, LHB, ABCC8, AKR1B10, ALDH1A3, ALG10, ALG10B, BDH2, CASK, CLDN4, CREB3L3, CTSB, DKK2, FGD1, GADD45G, GALNT5, HBEGF, IFNA8, IL18R1, ITGA9, MTFMT, OR1C1, PARD6B, PIM1, PLA2G2A, PRODH2, RALA, SEMA3F, TRPC1, UPB1
Negative_4205	ADH5, AMD1, CACNA1F, CACNB3, CYP1A1, DHRS9, DUSP1, FARSA, FGF5, GGT1, GLUD2, GP1BB, GUCY1A3, IRF3, NARS2, OR13A1, PRSS2, PTAFR, RXRA, SGP P1, TUBB6, WNT8A, ZIC2, TNFRSF10A
Negative_4206	ITK, ABLIM1, AK3L1, AKR1C2, AKT2, CADM3, CCL4, CLDN6, DGKH, DLAT, EXT L1, GBT1, GNPAT1, GUCY1B3, IARS, IGF1R, IL13RA2, NFKB1, OR2Z1, OR4A16, OR8D4, PLXNB3, PTGIS, STAT1, TSC1, YWHA
Negative_4207	AK5, F5, ACADM, ACSM2A, ALG11, ANAPC1, ARAF, BPGM, COL4A6, DAD1, DGKH, FUT8, GALM, GALNT2, GBT1, ITGA3, ITGB7, LEF1, MCM2, NT5C1A, OR4P4, OR52N2, POLR2G, PYCRL, RARA, SSX2IP, TM7SF2, TNXB, VTI1B, ATP6VOA2
Negative_4208	AK3, ASL, CD6, CFI, MSN, OSM, ADCY4, ALG11, ALG6, ANAPC4, BAI1, CDK7, CNDP1, COL11A1, CSNK1G2, CYBB, CYP2C8, DAAM2, DCXR, DGKD, DLAT, EPHA5, ETNK1, FUT8, GALNT13, GALT, GGT5, GNAT3, GRM1, IL10RA, IL15RA, JAK1, METTL6, MTMR1, NANS, NLGN1, OR6T1, POLR1C, SETDB2, SFRP2, SLC25A5, SOCS4, STX2, SV2C, TLR2, TPH2, ST6GALNAC3
Negative_4209	RB1, ATP2A3, DHCR24, FOXA3, FUT6, NKD2, NOS1, NT5E, OR2G6, PGK2, PPP1R3B, RASSF1, SKP2, SPRY1, STAM, TUBA1A
Negative_4210	FH, BDH1, CADM1, CCR8, CES1, FMO5, IFNA2, IL20, MCCC1, MKNK2, NRXN1, OR2H1, PRKAB1, RHOD, SC5DL, TYMP
Negative_4211	AK5, MTR, NNT, ACSS2, AGPAT3, AMHR2, AOX1, AQP7, CASK, CPT2, CRKL, CSF1R, EXT1, F13B, FZD10, GPX5, GRIN1, GRM1, HHEX, KIR3DL1, MTMR1, NCKAP1L, NCOA4, OR13H1, OR1J4, OR52A5, OR8A1, PHKA2, PIP5K3, PKMYT1, PLA2G1B, PRKG1, PTCRA, RALA, RND1, RXRG, SORBS1, TPM3, UBA7, VASP, VTI1A, B3GALNT1
Negative_4212	NGF, ABI2, ACAT1, ADCY4, ALOX15B, AMPD3, ATP2A1, BDNF, BMP5, BUB1, CACNG7, CALML3, CCR10, CLCA2, CREBBP, EGLN1, EPHB6, EXTL3, FBP1, GSTM2, HAO2, IL1RAP, NFATC4, NOX1, NRXN2, NTF4, OR10A4, OR10K1, OR13C2, OR2F2, OR52N1, PHKB, PPP1R1A, TSNARE1, VDACC3
Negative_4213	PAH, AMY2B, FMO1, IL25, MGAT4A, NRCAM, OCRL, OR6Q1, OR7A5, PIP4K2A, PRKAR2A
Negative_4214	MIF, MOS, ACACA, BRAF, C1QA, CARD11, CCDC6, CCKAR, CNTNAP1, IL24, LDHC, MCAT, MCM5, MNX1, MYH4, NFYB, NKX6-1, NODAL, NR4A1, NTSR1, OR10H5, OR1N2, OR2G2, OR6B2, PEMT, PRKAG3, PSME2, SNAP23, TFDP1, TPI1, C1GALT1C1, MAPK8IP3, TNFRSF1A
Negative_4215	UBB, ACAT1, ALDH1A1, CASP3, CCNG2, CYP7A1, EP300, GAS1, H6PD, IFNA7, MAD2L1, NOTCH1, OR10P1, P2RX1, PANK4, PDE1A, ST3GAL3, TGFB2, TGFBRI1, TSTA3, B3GALNT1, TNFRSF11A
Negative_4216	ACSS2, BST1, CFTR, CRB3, CRLF2, CSF3, FUT9, GSTA3, NOD1, PMM2, PRKCZ, RASGRP3, TBL1Y, GABARAPL2
Negative_4217	AK3, MSN, ACADS, ACOX3, APC2, B4GALT6, CAMK2G, DAAM1, DLAT, DTX2, EIF4E, FGD1, IL25, ITGB5, NFYC, OR1J4, OR4Q3, OR6C74, RBPJL, SNAP25, UGT2B11, WARS
Negative_4218	ATP5B, BMP2, COL4A2, CREBBP, GBA3, IL17B, MGAT1, OR2B11, OR2T10, OR6C70, OR9G1, PIGS, PNMT, PTGES, SPRY2, YWHA, ATP6VOE1, SUV420H1
Negative_4219	FGA, PVR, RDX, ACO1, CER1, CHD8, CRB3, DAPK1, DARS2, DMGDH, DTX4, GNAT3, GRAP2, IL10RA, MAT1A, OR1D5, OR1G1, PIGM, PPAP2A, PRKAG3, PTPRF, RHOA, RHOD, SDC4, TKTL1, TSC2, UPB1

Negative_4220	DCK, SPN, ARD1A, CDKN2C, DGAT2, DTX2, DUSP4, ELK1, EXT2, GGT7, GPX7, G STZ1, GUCA1A, HDAC1, IAPP, ITPA, KYNU, LARS, LCMT1, MAPK9, NANP, OR10 A4, OR2G3, OXSM, PIK3C3, PIK3CA, PIP5K1A, PLAU, PPP1CB, RASGRP3, ROB 03, RPE65, SELP, SMARCA5, TRAF5, TRAF6, UGP2, ALDH18A1
Negative_4221	AGL, F3, F7, ACSM1, ACY3, ASRGL1, C3orf10, CASP10, CCR8, CHSY1, CREB3 L1, DHX58, ETS1, FLOT2, FZD4, GALE, GALK2, GALNT5, GART, KCNB1, KIR3D L1, LCP2, OR6C75, P2RX1, RHOA, RXRA, SMAD7, SPHK2, UGT2B4
Negative_4222	ARG1, CCND2, CTSS, FGF12, FGF18, NT5C, PON1, TNFSF10
Negative_4223	GP5, TAT, TFG, ACP6, ACTB, AKR1C1, ALG6, B3GNT4, C3orf10, CD99, CDH3, CREB3, DDX56, FASLG, GAB1, HES1, IFNA16, IL10RA, IRAK1, IRAK4, NFASC , NFE2L2, NFX1, NPR2, NRXN2, OR13H1, OR4K5, OSMR, PFKFB1, PPA1, PRDX6 , PRKAA1, PRKG2, SSH1, TACR2, TNFSF18, TSTA3, ULBP3, UNC5A, HLA- DRB4, MAPK8IP2, ST6GALNAC3, TNFRSF1A
Negative_4224	ADORA2A, AHCYL2, ALAS2, APOA1, ATP2A2, ATP5B, ATP5F1, CD47, CDKN2D, ENAH, EXTL2, FGF11, GALC, GLI3, HSPA1B, IFNA13, IRAK4, ITGA5, KIR2DS 5, LAMC2, MCM2, NAMPT, NARS, NCOA4, NOX3, OR13G1, OR2AG2, OR4A5, OR51 E2, OR51S1, OR52L1, OR6F1, PDE4B, PITX2, POLR2A, PTPRB, RAC1, RENBP, SEMA3G, SPRY4, TAS2R49, PPARGC1A, ST6GALNAC3
Negative_4225	A2M, GP6, BCAR1, CDC6, CFL2, CYP2C18, DGKG, ESAM, F2RL1, FGF22, ICOSL G, IRS4, KNG1, LIPA, MAP4K2, NAT2, PIGP, PLCB4, PRIM1, PTPRJ, RAPGEF1 , RND1, SEMA4G, TBXA2R, TSC1, VKORC1, WNT5B, CACNA2D2
Negative_4226	CASP6, MGAT4B, OR2B11, PDGFA, PLA2G5, PLCD3
Negative_4227	DDC, RB1, RFK, ALAD, BDKRB1, CCL4, CCNE2, CHKB, CHRM5, CSNK2A1, CXCL9 , CYP2A13, CYP3A43, CYP3A7, DDB2, ERBB3, GALM, GUCY2F, HSD3B1, IGF1R , INHBE, MAP2K5, MARS, MEF2C, MYH7B, NOS1, NRG2, OR13C8, PCCB, PIGM, P LCD1, PNPLA4, PPM1A, PRKAG1, PTPRJ, RRAS, SDHA, SPHK2, TRHR, XYLB, B4 GALNT1, CACNA2D2
Negative_4228	C3, TFG, ACVR2A, CYP26B1, FGF17, GLG1, HHIP, MAP4K2, OR13C4, POLE, SE SN3, UROD
Negative_4229	GHR, APC2, BLVRB, BTRC, CYP2D6, DUSP9, FGFR4, FIGF, GALNS, GALNT2, GM PPB, GNPDA1, IBSP, ICOS, IL1A, INSRR, JAG1, OR51E1, OR51F1, OR6M1, PP CS, RASA2, RASGRF2, RDH10, SDC2, TAP2, UGT2B7, WARS2
Negative_4230	F5, GSS, ACVR1B, ADCY3, C9orf95, CCL11, CCR3, CD226, CLDN15, COQ3, CX CL16, EIF4E2, EXOC7, FGF9, GNAL, HADHB, HAGH, IFNA6, JAK1, MYH10, NRX N3, OR10H3, OR14C36, OR1L8, OR1Q1, OR5P3, PFKFB4, PPM1D, PRKAB1, PTG FR, RPS6KB2, RRM2B, SPTLC2, STT3B, SYNJ2, THBS3, UCKL1, VNN1, YWHAG, CSNK1A1L, HLA-DPB1, SERPINB5
Negative_4231	ADSL, ARHGEF4, CPT1B, CYP2A6, EPHA6, FUT8, GBE1, GCNT3, HTR2B, ITGA8 , NFKB1, PHPT1, PRKAB2, PRKAR2A, PRSS1, PSEN1, STAT6, STEAP3, ATP6V1 C2, SLC25A31
Negative_4232	C9, ACSL1, ALDH1L1, ALG10, ATIC, ATP6VOC, BDH2, CALML5, EFNB2, ELK4, GALNT11, GPT2, IGF1R, MGAT4B, NRAS, NUMB, OR10A2, OR10P1, PDPK1, PIA S4, PIK3C3, PPP3CB, RIPK1, SDC2, SUV39H1, TNFSF8, ATP6V1C2
Negative_4233	C7, ABL1, ABP1, ACSM2A, ATG7, ATP6V1A, BUB3, CNTF, G6PC, GSTM1, HEXA, HLA- F, IFNB1, IL22RA1, LAMB3, LYPLA2, NCR3, NFYB, NNMT, OR10R2, OR2B2, OR 52A5, PAK3, PFKFB1, PPARA, PPP2R5E, PRKAR1A, RAC2, SULT2B1, TUBB2A, VEGFC
Negative_4234	ATM, BAX, F10, ME3, TYR, ACSL6, BMP8B, C3orf10, CLTB, ELK1, G6PC, GNA1 1, IL13RA2, INHBB, ITGA11, ITGA4, LDHAL6B, OR11L1, OR1S1, OR4C15, OR 4C6, OR51I1, OR7C1, PHPT1, POLA2, PPARG, PTGDS, RHEB, UCP1

Negative_4235	FN1, GAA, ABL2, AGXT2, AKT2, ALDH1A1, CDKN1A, COL2A1, CSNK1G3, CXCL16, DOCK1, DUSP16, ENO1, ENTPD5, FPGS, IFNA6, IPMK, KAT2B, MAP3K4, NT5C, OR52I1, OR5AK2, PIK3R5, POLA2, PPP3CC, SNAI2, SSH2, SULT1A2, TP53I3, UBE2L6, UGT8, MAPK8IP2
Negative_4236	GAA, ACOT12, ADRBK2, ALDH3B1, DTX1, INPP5A, MECR, NOX3, NRXN3, PFKP, POLR2E, RXRG, SEPHS1
Negative_4237	DBH, GBA, ID4, IL2, SI, AKR1C1, ATP5B, CLDN9, CSF3, FGF21, IDI2, MASP1, MCCC1, MCM6, OR52W1, PFKFB1, PLA2G5, PLCD1, PRSS2, RIPK1, SMAD3, SP, CS3, STAT2, XCL2, MAP3K7IP2
Negative_4238	AGL, EPHA3, FMO1, GALNT3, GNAI1, IQGAP2, TBXA2R
Negative_4239	CR1, DLD, F5, GP5, SRF, ABAT, ALG11, ANAPC11, ATP5L, B4GALT7, CD58, COL6A1, CREB3L2, CYSLTR1, FMO5, HADHB, HSD17B3, IARS, IMPDH1, INMT, INPPL1, ITGB4, MGAT5, NNMT, NODAL, NQO1, ODC1, OR10J3, OR10P1, OR11H6, OR51G2, OR52I2, OR6K6, PGM3, PKLR, PLA2G5, POLR3A, RRM2, SDC1, SOCS7, TACR1, USE1, XCR1, TNFRSF17
Negative_4240	GP9, ALDH1L1, CALML6, CDC20, EHMT2, FRAP1, TM7SF2, WNT8B
Negative_4241	MVD, ADIPOQ, CDS2, GLI1, ICOS, OR2C1, OR52K1, PDK1, SDHD
Negative_4242	AUH, LTB, ATP6V0B, C4BPA, CDC23, CYP27A1, DAAM1, OR10C1, OR1N1, POLR2J, SSX2IP, UBA7, WNT10B
Negative_4243	ADO, CFH, MET, STS, ACPP, ARSE, COQ3, DERL1, DUSP9, GBGT1, GRIA3, GUCY2D, IL22RA1, JAG2, LEPR, LGMN, MAT2B, MCM7, MLYCD, MYH11, NADK, NKX3-1, NSDHL, NTN1, OR10S1, OR52K2, PAICS, PER2, POLE2, PPP1R3A, RHEB, RRM1, SC5DL, SHMT2, SMAD3, SNAI1, SPAM1, STX8, SULT2B1, TCF7L2, TIAM1, VAMP2, WNT16, ATP6V1G3, HSP90AB1, TNFRSF12A
Negative_4244	ANAPC2, ASS1, BACE1, C1QB, CCKBR, CCNB2, CDKN2A, COMP, CRB3, CSF1, EPHA2, ERO1L, FGF23, FGF4, GUCY1A2, IL6ST, LDHAL6A, MYL2, NANP, NSDHL, OR2AT4, OR5B12, PDE5A, POLR1D, POLR2F, SESN1, WNT3A, XCR1
Negative_4245	AUH, C2, DUT, TPO, AGPAT3, ALPPL2, AMPD1, ASMT, CMAS, COMP, DPM2, EPHA7, F2RL3, FABP1, FLOT2, FZD8, GANAB, GLI3, HLCS, HTR5A, IFNA6, ITGA9, LYPLA1, MAP3K3, MCAT, MKNK1, NT5C, OR51I1, OR5B21, PDE1A, PPCS, PPP1CB, PRPS1, RBX1, SFRP4, SMC1B, TAS2R14, THBS2, VASP, WIF1, ATP6V1G1, GABARAPL1
Negative_4246	ADA, HPD, ACVR1B, ADIPOR1, ARPC4, CES7, COQ6, DGKG, DHDH, DUSP1, E2F5, ENTPD3, GNAI1, GSTM2, GUCY1A3, HSD17B4, HTRA2, IDI2, IL13, LTBR, MAML2, MITF, MYH10, ONECUT1, OR4C12, PDE8A, PGS1, PIK3C3, QARS, RBL1, RFNG, SDC4, SELL, SEMA3E, SMARCA5, STX3, TGFB2, UGCGL2, WNT6
Negative_4247	FAS, GPT, IL4, ACSM2A, ARHGEF2, ATP2A2, CAMKK1, CBR1, CHUK, CISH, CYP4A11, DDX18, DDX19A, DMGDH, EFNA2, EPHA7, GCH1, GLUL, GSTT1, HEXB, IFIT57, IL22, KIR2DL2, KLRC2, LAMA4, NODAL, OR2S2, OR4D1, OR52A5, OR52K1, OR51I1, PPP2R5D, PTPN5, PVRL1, RXRG, SDC2, SGPP2, SHC4, STX6, TBXAS1, ATP6V1E2, MAPK8IP2
Negative_4248	ACMSD, ALAS1, BLVRA, CASP10, CD55, CHPF, EHHADH, FIGF, GAB1, GSTO1, HAAO, HBEGF, HSD3B1, HSD3B7, IBSP, LAMA3, MGAT4B, NODAL, OR10J1, OR2T3, OR4Q3, OR52W1, PDE11A, PDE4A, PGM1, PGM2, PLCG2, RDH10, SULT1E1, TASA2R5, TGFB2, THTPA, TLR5, TNFRSF18
Negative_4249	DBI, AARS, ACTC1, AHCYL1, DDX4, DGUOK, ENPP7, GSTM1, HARS2, IL13, ITGA8, KIR2DL1, LIFR, LRRC4C, MKNK1, OR2T8, ORC6L, PMVK, PRKG1, SESN3, TSC2, UROD, WNT7A
Negative_4250	BAD, ALAD, ALDH3A1, ALG8, BLVRB, CCR8, CD3E, CSNK1G1, ETNK1, HCCS, MLLT4, MTMR6, MYH2, NADSYN1, NAT5, PLTP, PNMT, SOCS1, SULT1A1, MAP3K7IP1



Negative_4251	AGL, F11, JUP, ABLIM2, ACOX1, ACSS3, CHST11, CHST13, CLDN14, CRY2, EP H8, EPHX2, FMO4, GCLC, GRIN2B, HADHB, HEXA, IL22RA2, IL29, IQGAP1, J UND, LIMK1, OR10A2, OR10R2, OR11H4, OR13C9, OR4K1, OR51F1, OR51M1, O R5K2, PHKG2, PIGL, PON3, PPP1R3D, PRKCE, PSME2, PTPRF, SARS, SHMT2, S MAD6, ST3GAL4, STX18, TUBB2C, WNT1, YES1
Negative_4252	NGF, RET, ADSSL1, ANAPC10, ANGPTL4, ARSD, BDH2, BMP4, CDC16, COL3A1, CPS1, CSF3R, DLL3, DPYD, GALNTL4, GCLM, GDF7, GIT1, HAGHL, HLA- C, IDUA, IKBKG, JAG2, KIR3DL1, KNG1, LDHB, MIOX, NTRK2, OR1J1, OR5H2, PIAS4, PLCB4, PPP2R1B, PPP2R5D, PSAT1, PVRL4, SHC1, ST8SIA1, SUFU, T NFSF4, TRPM5, UBE2L6, UROS, WNT1, ATP6V1B1
Negative_4253	CD4, FES, ARHGAP5, CNTN2, DARS2, DOT1L, GBE1, GLB1, HTR4, ICAM1, MCM2 , MTHFD1L, MYH8, NRXN2, OR2A5, OR4K15, PLXNA1, TAS2R38, UCKL1, ATP6V 0A2, TNFRSF11B
Negative_4254	ACACA, ADH7, ATP2A1, ATP5G2, B3GALT2, BCAT1, CD226, CDC25A, CLDN17, CLDN20, CNTFR, CSNK1G3, CXXC4, DAPK3, DPYD, DRD2, FDPS, GDE1, GJD2, G RM5, IARS, INPP5E, ITGAD, KNG1, LDHA, MAP4K2, MYH9, OR2H2, OR52B6, PF N4, PIK3R2, RAPGEF1, RASA2, SMURF1, TUBB2C, UGT2B4, UXS1, CSNK1A1L
Negative_4255	C4B, DBT, RET, AMPD1, CHRM1, CTBS, FGF7, FUT7, ITGB2, MAN2A1, OR4C11, OR51B2, OR51F2, OR6T1, OXCT1, PDE8A, PDXK, RAC3, UNC5D
Negative_4256	C8B, DLD, EGF, ACVRL1, ANAPC10, APPL1, BCL2L1, CDC27, CHKA, CLDN19, C LDN7, COL4A4, DBF4, GALNTL2, HAP1, ITGA1, LTBP1, LYPLA1, MAPK3, MGAT 2, MYH1, NFYC, NUDT9, OR2AT4, OR4D6, ORC6L, P2RX2, PLXNC1, POLD3, PON 1, PPARA, PPARG, PVRL2, PYGL, RASGRP1, SDC4, SYNJ2, TPMT, VAMP1, VASP
Negative_4257	CS, ACADS, ALCAM, B3GNT3, C1GALT1, CYP2F1, DIAPH3, DUSP2, F13A1, FCG R2B, IDUA, MMP1, NME6, RAP1A
Negative_4258	FYN, ACVR2B, ATP2A3, CISH, DGKA, H6PD, LPAR1, MAPK7, MTHFS, MYH11, MY L2, NLGN1, OR10G2, OR10J5, PIK3R2, RDH10, RPS6KA1, TGFB1, TUBB4Q, UC K2, HLA-DQA2
Negative_4259	AK5, C8A, CAD, CD6, CTH, INS, LPL, AGPAT6, AKR1B1, ALOX15B, BUB3, CACN G1, CDK6, CDK7, CTBP1, EREG, GALNT6, GNRHR, IDH2, IL11, JUND, LDHC, LI AS, MCM4, MGAT4B, NCR2, NEU1, NEU2, NKD1, NRG4, OR2A25, OR4D9, OR56A1 , OR5F1, OR6C75, PDPK1, PRKCI, RALB, RAP1B, TAS1R2, ATP6VOD1
Negative_4260	AGL, CD6, CS, DUT, AACs, ACTB, ARPC4, B3GNT4, CCL2, CD58, CNTNAP2, CXC L16, CXCR6, DTYMK, EFN2, F2RL3, FGF3, FGF9, GUK1, HMGCL, HMOX1, IBSP , IL12RB2, IL20RB, JAM3, NRAS, OR10A6, OR1J2, OR2A42, OR5B17, OR6C1, P2RX4, PFN3, PIK3R1, PLCG2, PNPO, RASSF1, RERE, RHOQ, SLC33A1, TJP2, TPM3, UGT2B10, ZFYVE9, TNFRSF18
Negative_4261	BCL2L1, CCKAR, ITGB6, MYH11, NCF2, NRG1, OR5K1, PARD6B, PYCR2, RFX5, STT3B, SYNJ1, UGDH, XYLB, ZMAT3
Negative_4262	CTH, SRF, TNF, ACADS, ALCAM, AMPD2, BCL2, BLNK, CASP7, CKS1B, COL4A6, CREB3L1, CYP2B6, DRD1, FLOT1, FZD7, GCNT4, HDAC2, ICAM3, IL17A, MAT1 A, MPP5, MYH14, NAE1, NFATC4, NUMB, OR2A14, OR4A15, OR4K5, OR5K1, PTK 2B, RASGRP1, ST8SIA1, TJP2, UGT2B7, VDACC2
Negative_4263	C9, GSN, ADRA1D, AGRP, BBC3, BLVRA, CACNG2, CNGB1, ENPP1, GNAQ, GRIN2 B, INHBA, MAP2K5, MAP4K4, NANS, NEUROD1, OR8K1, OXCT2, POLR2E, RASGR P2, SMAD6, STK11, TRAF6, ATP6VOD2
Negative_4264	ALPPL2, ITGA9, NR1H3, OR8A1, PFKFB4
Negative_4265	DCK, FH, ADRBK2, ALDH4A1, APBB1, CAMKK1, CD55, CEBPA, CNTFR, COQ7, CY P4F3, DDB2, DHRS4L2, DNMT1, F2RL3, FCER1G, GPT2, GPX5, IBSP, IL13, IL 6ST, IQGAP1, KIR2DL2, KNG1, NCKAP1L, OR1D2, OR4S2, OR4X2, OR6C2, OR8 D1, OR8H3, POLR2K, PRKX, SEMA4C, SETD1B, SH2D1A, SORBS1, SPP1, ST3GA L4, TCIRG1, TJP3, TMLHE, TSC2, TSLP, VAMP2

Negative_4266	ASL, HK1, JUN, MAG, SMS, ALG2, ALG9, ALOX12B, APBB1, CACNG3, CBR1, COL5A2, CX3CR1, CXCL16, DPAGT1, DUSP16, EPHA2, EPHB4, GALNT12, GALNT13, GMPR, IRF3, LAMC2, MGAM, MNX1, MTMR2, NAT2, NSD1, OR13C5, OR1F1, OR2T4, OR5B17, OR6N1, PIK3C3, PLXNA1, PRODH2, PSME1, RPN2, SDC4, SOAT1, SUV39H1, TAS2R1, TCF7L1, TDO2, THBD, TOMM40L, ZFYVE9, ATP6V1G3, TNFRSF1A
Negative_4267	CAT, GH1, AARS, ACADM, ACY3, ADCY9, AKT3, ALDH3A2, ALOX5, BCAT2, BLNK, BUB1B, CCKBR, CCNB3, CHRM5, CMPK1, CXCL5, CYP8B1, DUSP7, FOXO3, GALK2, GALNT1, GBE1, GMPA, GSTM3, HSD17B1, IL22RA2, MAT2B, MLLT4, MRAS, NAMPT, OR10H5, OR1I1, OR4X1, OR5AN1, PIK3R3, PPAP2B, PTAFR, PVRL2, RPS6KA5, SAT2, SELP, SEMA3C, UGCG, CACNA2D1, HLA-DRB3, TNFRSF10C
Negative_4268	MSN, NPY, SRF, BCKDHA, CCKBR, CLTA, CSF2, CXCL16, DVL3, FLT4, GMPR2, IDI2, IL22RA1, OGDH, OR10G9, OR10R2, OR1J2, OR2F2, PFKP, PPOX, RPS6KA2, SKIV2L2, UGT2B10, ATP6V1E2
Negative_4269	IL4, MPZ, UBB, ACLY, AKR1C4, CD80, FGF2, FLAD1, HMGCS1, IDH3G, IL1R1, IL20RB, LHCGR, MCM5, NME7, OR13C8, PARD6A, PDGFC, PFKFB4, PIK3C2B, P OLR2F, PVRL3, TBL1X, THY1, VTI1B, PLA2G12B
Negative_4270	CAT, ABCC8, ACVR1C, AKR1B10, ALOX15B, ASMT, C1GALT1, CCL1, CCL3, CCNG2, CNGB1, DDX56, ENPP7, EPHA7, HLA-DRA, HNF4G, IAPP, ITGAE, MMP2, MYLK3, NSDHL, OCLN, OR10A3, OR5D16, ORC3L, PPP2R2D, PRKACB, QARS, SMAD7, STX6, SUCLG2, TPK1, XCL2, XCR1, YARS2, SLC25A31
Negative_4271	CR1, DBI, LPL, SP1, TNF, AGPAT6, BAAT, CAMK4, CCKAR, CFLAR, CHRM1, CSNK1D, DFFB, DHODH, DLL4, DRD1, DVL3, ENTPD8, ETNK2, FADD, FGD3, GBT1, GPAA1, HLA-DOB, IGF1R, INPP5E, IRAK4, ITGAD, MAPK10, MDH1, OR10A2, OR4D5, OR4D6, OR5P3, OR7D2, PARVB, PNLIP, PRKCB, PTPRZ1, RAC3, RFXANK, SFRP4, TYK2, TNFSF13B
Negative_4272	IL6, ACTN1, CD274, CD28, CD8B, CMAS, CSNK1E, DGUOK, EARS2, FGF18, FGF23, GAD2, GLG1, IRAK4, KLRK1, MYH1, NAGK, NANS, NEU2, NGEF, NUDT5, OR5B3, OR8D1, PPP2R5D, RUVBL1, SGMS2, SSH2, STX7, SUV39H1, TRAF6, VTI1B, CSGALNACT2, MAPK8IP2
Negative_4273	BDNF, OR10A5, PCK2
Negative_4274	LPL, CCNH, CFLAR, CYP2C9, DBF4, FGF19, FLT4, FRAT1, GALNTL1, KAT2A, NCKAP1L, NCOR1, RUNX1, SRD5A2, WNT6
Negative_4275	HPD, JUN, LPL, MVD, ABCC8, ABL2, GLUD2, IKBKB, MAN1B1, NARS2, OR2AG1, OR2H1, OR4K5, PIK3R5, PORCN, RARA, TFPI
Negative_4276	DCT, AMY2B, B3GNT4, CREBBP, ITGB3, LAMC3, OR2S2, PGM3, PIK3C2G, PPP2R5D, PRKAR1A
Negative_4277	CXXC4, FUT1, FUT5, GOSR2, KARS, MYL5, NCF4, PDE6G, PPA2, SEMA3B, YARS2
Negative_4278	APP, ASL, ADH1B, AGTR1, ANAPC2, B4GALT4, C3AR1, CACNA1B, CD86, CFL2, CHST11, COL1A1, CYP4F2, DDX19A, G6PC2, GCLM, IFNA13, IL17B, IL6R, MAPK10, OR1D5, OR2Y1, OR3A3, PLAUR, PLD2, PPARG, RHOD, TAS1R2, TAS2R13, TNFRSF12A
Negative_4279	ADO, AGK, GLA, INS, ME2, ACY1, ATG7, CD79B, CFL2, CHKA, CLDN19, CTPS, CXCL6, ERBB4, F13A1, GPX5, GRB2, GRIA2, GSTA2, HSD17B7, ICOSLG, IKBKG, IL8RB, ITGB2, ITGB8, MMP7, NANS, NPR1, OR52I1, OR7C2, PFKP, PHGDH, P LCG1, PLTP, PTK2, PTK2B, PYGL, SCP2, ST3GAL3, SYNJ1, TCF7, TRAF4, WIF1, ATP6VOA1
Negative_4280	TAT, KDSR, THTPA
Negative_4281	ACHE, CLDN14, GLG1, IL1R1, ITGB3, TDO2, WHSC1L1, MAP3K7IP1, TNFRSF1A

Negative_4282	EPO, FH, ACSL6, ADCY4, ATP5G2, CACNA1B, CPT1B, DPM2, FASN, GALK1, GUC A1B, INPP5E, KYNU, MDM2, NME2, OR4K13, OR51A4, OR5A51, OR7D4, PLD2, P NPLA4, PORCN, PPA1, PPP2R5A, PVRL1, RAC3, SEMA3A, SPAM1, SPRY3, UGCG L2, XYLT2
Negative_4283	AGL, EGF, AGXT2, ATP12A, CNTN2, FGF20, GCNT4, ICAM1, IFNA5, IFNB1, LC P2, NSD1, OR1E1, PIGA, PIM1, SHC3, SMURF1, SSH1, STX16, TAS2R1, TRIP1 0, TRMT11, VCAM1
Negative_4284	IDS, ADAM10, ALDH3B1, ATP6V1F, BDH2, ERBB2, HPRT1, LAMA3, OPLAH, RAC 1, RAC2, SULT1A1, SYNJ2, TBL1X, TJP2, WASF1
Negative_4285	ADK, AK7, F12, ME1, SPN, XDH, AANAT, ACSM5, ATP6VOB, BDKRB1, CXCL11, C YP1A2, DHRS9, DRD1, EXT1, EXTL1, GBGT1, GNG12, GRIN1, IFIH1, IFNA21, IFNA5, IL3RA, INHBC, IRAK2, MAP2K3, MAPK11, MCM3, MGST2, OR4C11, OR4 K5, PDE7A, PIAS4, PLK1, PPP2R5A, PRKAG2, PTK2B, PYCR1, SEMA4B, SULT1 E1, TPK1, TUBAL3, UGT2B4, UGT8, PDCD1LG2
Negative_4286	C8B, KIT, TNC, ABLIM1, ADCY6, ALDH6A1, ALG5, APOE, ARSD, B3GAT3, CACN A1H, DAPK1, DDX23, DGKB, ERBB2, F2RL3, FARS2, FCGR2B, FDFT1, FGF6, GF PT2, GRIA1, KIR2DL3, MYH9, OR11A1, OR4S2, OR5R1, OR5T2, PCYT1A, PDE8 A, PRKCH, RBKS, SMAD7, SMPD2, SNAP25, SOX17, THBS3, TICAM2, TNFRSF4, UPP2, ATP6V1C1, TNFRSF13B
Negative_4287	AMH, GSN, HGD, CCL23, CDK4, CLDN18, CLDN9, CMBL, CPS1, CSNK1A1, CXCR6 , CYP11B2, CYP2S1, DPM2, EGLN3, GSTA5, IDH3A, IL8RB, INPPL1, LARS2, N MNAT1, NRG2, NRG4, NT5M, OR2AE1, OR2AG1, OR51A4, OR5L1, ORC5L, PDE4B , PDE8B, PHKG1, PMM1, POMC, PPP2R2B, PPP3CC, PPP3R2, PRKAA1, PTK2, RR M2, RUNX1T1, SETD2, SRGAP3, TCIRG1, TUBB6, UNC5C, VAV1, GABARAPL2, M APK8IP1
Negative_4288	DHH, ADRA1B, CCL25, DAG1, DAPK2, DDOST, ELK1, EP300, EPHB2, ERBB3, HL A- G, ITGA1, NFYB, PFN3, POMC, PTPMT1, RASGRF2, RDH12, RETSAT, STAM, TAS 2R16, XIAP, ATP6VOA4
Negative_4289	FH, IL5, PVR, TKT, ACACA, ARHGAP5, BDKRB2, CPT2, CRLF2, CSF3R, DAD1, G ALK1, GJD2, GRHPR, HIF1A, HNF4G, MYH7, NFKB2, OPLAH, OR2G2, OR51F2, O R5B21, PFN1, PLA2G2D, PLD2, PNLIP, PPP5C, TRAF3, UBE2K, WNT1, ZAP70
Negative_4290	EZR, FGA, MVK, BDNF, CHAD, FGF22, GAD1, HSD17B7, OR1L1, PHKA1, PTPN7, RAC3, SKP1, VAMP1, PRICKLE1
Negative_4291	AGL, F7, GK2, HK2, HYI, OTC, SMO, AARS2, AKR1C3, ASNS, BMPR2, BUB1, CAM K2B, FABP1, GLI1, GNAI2, GRIN1, HAO1, HEXB, HLA- DOA, HMBS, IL1R2, IL22RA1, ITGA4, ITGB1, MAOB, MAP3K5, MCEE, MGLL, NT RK1, NUDT12, OR10A5, OR51A2, OR8K1, PANK3, PGK1, PGLS, PGS1, PIGO, PI K3R4, POLR2K, RDH5, SOAT2, STAT1, TLR9, TPH1, TUBB2C, ZFYVE16, SUV42 OH1
Negative_4292	GBA, ALOX5, ALPP, CRLF2, GALNS, GRIN2B, LEF1, OR4C12, PDGFD, PPP3R1
Negative_4293	C5, F2, IHH, SRC, ADAM10, AGXT, ALG1, ALG6, BUB3, CREBBP, DHDDS, DKK2, DPM2, GRIN2A, GSK3B, GSTA2, IFNK, JAM2, MAPK10, METTL6, MNX1, OR4F6, PAK1, PDPK1, PIM1, PRKAB2, PRKAG1, PSME2, SUV39H1, THBS1, PNLIPRP1, TNFRSF6B
Negative_4294	INS, ACTN4, AKT2, ASPA, ATG3, ATP5J, CNGB1, DUSP4, GRM5, HLCS, IFNA14 , IFNA2, INPP5B, LAMC2, LDHC, MGAT1, NAGS, OR9G4, PGK1, PRKCE, RPS6KA 5, SNAP25, SOS2, SPRY2, SULT1A4, TNFSF14, TSC2, TUBA3C
Negative_4295	HK2, MVD, B3GALT6, CD34, CDKN1B, CTTN, CXCL11, DBF4, GALNTL1, GNP NAT 1, GRIN2C, HSD11B1, ITGA5, MAML1, NRG2, OR1E2, OR4K1, PON2, PTGFR, PT PN5, RALA, SARS2, SHC3, TAS2R10, THBS1, TNFSF10, TUBB2A, HLA-DPB1
Negative_4296	CYP3A4, FARSA, GNP NAT1, HMOX2, IFT57, MAOB, MITF, NCSTN, OR1J1, OR6C 6, OR6N1, PLXNB1, POLR1D, RASA1, SEMA3C, SYNJ1, ST6GALNAC1, TNFRSF1 B

Negative_4297	DBI, PXN, ACACB, ALG13, ATG12, CACNA1F, CACNG4, CDH1, CPS1, CUL1, CYP1A2, CYP2B6, DUSP3, FPGS, FUT5, GCDH, GIT1, GPAA1, GRIA2, IFNA21, KDSR, LIMK1, LTA4H, NMNAT3, OR10AD1, OR14J1, OR1L3, OR4A5, OR5AC2, PARS2, PARVG, PFN4, PRKX, PTGFR, RAF1, RHEB, RPS6KA1, SLC12A2, SNAP25, ST3GAL6, TAS1R2, TBK1, TRMT11, XIAP, HLA-DPB1, SERPINE1
Negative_4298	F5, INS, OSM, ALOX15, CREB3L4, CSF3R, DUSP9, GALNT2, GCNT3, HIBCH, MITF, OR11A1, OR4K14, OR52E8, OR6N1, OR9A2, P2RX6, PIK3R4, POLR2K, PRKCE, RPS6KA4, RRM2, SEMA3B, SMC1B, SOAT2, STX10, TAS2R50, TBK1, WBSCR17
Negative_4299	ADA, ATM, BAX, MET, CD8A, CLDN6, CYSLTR1, DUSP14, DUSP4, FTCD, HLA-DOB, KNG1, MAD2L1, MAN2A1, OR2B6, OR2M7, OR4D11, PDHA1, PGS1, POLR3H, PPP2R5D, SCP2, VAMP1, HSP90AA1
Negative_4300	C7, CFH, F11, NPL, AASDH, ACPP, ADIPOR2, ALG3, ATG3, CFTR, CHPT1, DTX2, ECHS1, FABP4, FGD1, FGF9, GNAT3, HMOX1, IFT57, IL6ST, MAP2K7, MAP3K14, OR10A2, OR2F1, OR2M2, OR4F17, OR56A1, OR5B3, OR6K2, ORC2L, PDXP, PPP1R1A, PPP2R2A, RAP1B, SLC9A1, SPRY2, VEGFC, YWHAQ, ATP6VOD2
Negative_4301	BAD, FES, IL8, SHH, SMO, TNC, ABLIM2, ACVR2A, AGPAT2, AGXT, ALPP, B4GALT3, BMP8B, CAPN2, CLDN18, CXCL12, DIAPH1, GNPAT, GYS2, HADHA, NAMPT, NCK1, OR4K2, OR5AS1, OR5T2, OR7C1, OR7G3, PCCA, PORCN, PRKG1, RAPGEF2, SULT1E1
Negative_4302	IL9, AGPAT6, CD274, COL1A1, EDN1, GALNT10, GALNTL5, GSTA3, GUCA1C, IL12RB1, INHBC, IPMK, IRS1, ITGA2B, MAP2K2, MKNK1, MYH7, OR13J1, OR4L1, OR5M9, OR8A1, SPAM1, STAT1
Negative_4303	BTC, HAL, LYN, NPL, ACTB, ADH4, ATP5A1, BHMT, C3orf10, CACNA1B, CCL5, CHRM3, CNTNAP1, CREBBP, CXCL10, EFN3, ENTPD8, GFAP, GGT1, HADHB, IMPA2, KRAS, LAMC3, LEF1, MAOA, MCEE, NANS, NMNAT2, NOTCH2, NTSR1, OR1Q1, OR5P2, OR8I2, PI4KA, PLTP, PLXNB1, PYGM, RPS6KA4, SIAH1, SIGLEC1, SLC2A1, STMN1, TAS2R13, TLR2, TNFSF11, TRPM5, YWHAH
Negative_4304	ARSD, IFNA7, PTGER1
Negative_4305	DAO, FGA, GAA, HGD, ADRB3, AKR1C3, ANAPC1, CARS, CD36, CD48, CDIPT, CHST11, CNDP1, DCTN1, DUSP1, ERBB4, FGF20, GLDC, GNA14, HIF1A, HIP1, INPP4A, MAD2L2, MDM2, NCKAP1L, NRG2, OR10T2, OR11L1, OR2B6, OR4D11, OR52H1, PGAM4, PPOX, PPP1CB, PSAT1, PVRL3, RFXANK, ROBO3, SETD7, SLIT1, SRGAP1, STAT6, TUBA1B, WNT10B, GABARAPL1, TNFSF13B
Negative_4306	AMT, F10, ACPT, ACTA2, CSNK1G3, FZD8, GPD1L, HYAL2, OR5M8, PARD6B, PRNP, STMN1, YKT6
Negative_4307	AMPD1, GNG13, IL2ORB, KIR2DL3, OR11H6, PDHA2, SDC4, SESN2, TYMP
Negative_4308	ADA, HGD, AADAC, ACAD9, ADH1A, AMD1, CHST11, CRKL, CTSG, CXCL16, IDH3A, IFNW1, IMPDH2, LLGL2, LRAT, NEFH, NR5A2, NRG2, OR10A5, OR2L3, PFKFB4, PIK3CA, PIM1, SGMS1
Negative_4309	COL4A2, E2F2, OR9A2, SSH3
Negative_4310	CD44, FOXO3, IGSF5, LEFTY1, OR2C1, OR52N5, RASGRF2, SEMA3F
Negative_4311	NPL, SCD, ADH1A, APC2, BMP5, CYSLTR2, ENTPD7, GNA13, MMP7, MPP5, OR4D2, PYCRL, SUCLG2, B4GALNT1
Negative_4312	AKR1A1, ATP5G2, CHST11, CYP2S1, DDX23, FOXA2, GABARAP, GDF7, GGT5, GRIN2C, GSTM5, HLA-C, HLA-DMA, LTC4S, MAP2K7, NT5M, OR10T2, OR1E1, OR2AT4, OR5M8, PIK3CB, SRGAP3, TACR3, WHSC1L1, SERPIND1
Negative_4313	GSS, AREG, ATF4, ATP4B, ATP5G3, BCL2, CDH1, DUSP6, EI24, FZD9, ITGAX, JAG1, MYL2, NKX2-2, OR2D3, PFN2, POLR2C, SARDH, SNAP25, UGT2B4

Negative_4314	GP5, IL7, SRM, TEC, ACSM5, AKR1C1, ALAS2, ANAPC2, ARHGEF7, CARS2, CCL1, CCL16, CCL21, CDK5, CFL1, CYP2C8, E2F1, FOSL1, HAGH, HPSE, IRAK4, K YNU, MAN2A1, MCEE, NEU1, OGDH, OR10J1, OR10S1, OR1L6, OR2A42, OR8J3, PI4KA, PNMT, PRKAR1A, PRKCA, PRPS1, ROBO2, SEMA3B, SLC27A1, SLIT2, S T3GAL4, STX3, TAS2R49, VANGL1
Negative_4315	CR1, APAF1, CCL8, CD274, CHPT1, CLDN20, CREB5, CTNNA1, DUSP9, EXOC7, GALNT7, GRPR, HIP1, MKNK2, MYH11, NCK2, OR2T11, OR52A5, OR5B17, PLA1 A, PLXNB1, POLD2, POLR2D, POLR2F, PPP1CB, PRKY, SUCLG1, UROC1, HLA-DQA2, PRICKLE2
Negative_4316	CD4, DCC, CACNA1S, CADM3, CD74, DAD1, IL3RA, INSRR, ITGAV, OR10Q1, OR 1A1, OR2A42, PFKFB1, PHGDH, PLA2G2A, POLD4, PYCRL, SDHA, SUOX, TAS2R 8, TYRP1, GABARAPL2
Negative_4317	CKM, HK3, LIF, SRC, ACADVL, ALDH9A1, ARPC5L, BMPR2, CCL20, CDC14A, CD C2, CSF1, F11R, GRIN2D, GSK3B, ITGB1, LRRC4C, MMP9, OR2T8, OR4A5, OXC T1, PFAS, PIP5K3, PRKY, RALA, SFRP4, THTPA
Negative_4318	ALS2, BACE1, BACE2, BAIAP2, FADS2, HSPA8, NUDT2, OR1S1, PFN4, PPP3CC
Negative_4319	OAT, ALDH3B1, CAPN2, GLUL, NCOR1, SHC2, TAS1R3, TJP3
Negative_4320	BAX, TAT, AASS, ALDH4A1, BMP8B, CD247, CLTCL1, CYP2C9, DAPK3, DUSP7, GRIN2B, IFNA17, IRF5, LIMK2, LRAT, MASP1, MYL9, NCKAP1, OR3A2, ORC5L , PDE6G, PDX1, PFN4, PIK3CB, PRKX, RAB5A, RFNG, SNAI2, WNT2B, YWHAH
Negative_4321	IVD, LCK, PC, CDC25C, DFFA, DFFB, DUSP10, EDN1, EGLN3, ENTPD1, EREG, F UT8, G6PD, HIF1A, IL10, MDH2, PIAS4, SETDB1, THBD
Negative_4322	FES, GGH, IHH, MPZ, MVD, PVR, RFK, AKT1, AXIN2, BMP6, CACNA1S, CDC20, C TNND1, EFN3, ENTPD5, FZD10, GNAL, GRIA2, HMGCS1, HNF4A, ITPK1, KAT2 A, MAD2L2, MYH1, MYH15, OR11G2, OR51A4, PCCB, PDE10A, PDXK, PIGH, POL R1E, PTGS2, PTPN5, PYCR1, RASGRF2, SDC4, SETD7, SOS1, TAS2R5, MAPKAP K3, TNFRSF10C
Negative_4323	ARHGEF6, BAIAP2, BBC3, CACNA1E, CD46, CPOX, EPHB4, FARSB, NOX1, NSDH L, OR2F1, OR4F15, SHC4, TRAF2, WEE1
Negative_4324	IFNG, ITGB4, MCCC2, OR52A5, PKLR, RASSF5, TNFSF10, EIF4EBP1
Negative_4325	VTN, CCNB3, DEGS2, FUT2, PLAU, SHC2, STEAP3, VCAM1, SERPINC1
Negative_4326	HAL, CACNG3, CLDN19, DDX52, EARS2, ENO3, LDHAL6B, LEPR, NFKBIE, OR51 L1, PAX6, PDHB, SMPD2, ST3GAL6, SV2A, TNFRSF6B
Negative_4327	AHCY, CACNA1H, CCL11, CCL8, CPOX, CYP7A1, DDX47, FLAD1, HTR2C, IL15, IL6ST, OR5AC2, P2RX1, PFAS, PKMYT1, PVRL4, QARS, TUBB
Negative_4328	C8A, F2R, FAS, FES, SI, SMO, ADH5, APOA2, ATP5J2, BMP7, CASP7, CD34, CD 47, CFL1, CHIA, COQ7, COX15, CSDA, CTTN, DARS, DEGS2, FGF14, GSTO2, HM OX2, IL28A, IL8RB, LDHA, MKNK2, OR10G3, OR10H1, OR11H4, OR2A14, OR2L 8, PDE4B, PHKA1, PLAUR, POLR2E, PPAR, PPAT, PSME1, RENBP, SKIV2L2, S LC2A1, TUBB1, UBE2L6, UNC5D, GABARAPL1
Negative_4329	C7, DBI, HK2, IHH, VTN, AANAT, ABP1, ACLY, ARNT2, ASAH1, B4GALT4, BLVR A, CCL20, CCNH, CER1, CHKA, CHUK, CLCA2, CTBS, GMPR2, HAP1, HTR2C, LPA R1, MAPT, MITF, OR2S2, OR4F6, OR4Q3, OR52J3, OR5D18, ORC4L, PAK2, PAR D6A, PAX8, PER2, RASSF5, RENBP, SFRP4, TICAM2, YWHAZ
Negative_4330	GP5, ALDH1A2, BLVRA, CCNB2, CIITA, IL22, IL28A, OR10J1, OR2C1, OR56A 1, QARS, RDH5, ROCK1, TPMT, UGCG, WASF2, ZFYVE9, ST6GALNAC1
Negative_4331	TK2, BDKRB1, CCL1, CRKL, CYP2D6, DGKQ, FASLG, HLA-G, OR2L13, PFN1, PLCZ1, ST6GAL1, TOMM40, WASF1, CACNA2D3, HSD17B12
Negative_4332	CR1, F10, F5, ACOX2, CDC42, CDS2, CSNK1E, CXCL9, CYP1A2, DLAT, FPGS, G ALE, GAMT, GDE1, GIT1, GPX7, GSK3B, GSTZ1, GUCY2D, IDH3G, INHBE, LIPE , LTC4S, MAPK9, MGAT5B, NCR1, NEU2, OR10A5, OR4N5, OR52R1, OR9G1, OXT R, PANK2, PGAP1, PGLS, PI4KA, POLD2, PPAT, PRDX6, SOCS3, ST3GAL6, SUC LG2, ULK3, ST6GALNAC1, SUV420H2, TNFRSF10D
Negative_4333	OR5M3, OR6M1, P2RX4

Negative_4334	CERK, COQ5, F11R, NCOR2, PNPO, SMAD4, TRAF1, VAV2
Negative_4335	BTK, CAT, ACSM3, ADRA1A, AGRN, ATN1, CACNB2, CARD11, CD38, CD3E, CD8B, CDKN2C, CPT1C, CSNK2A1, DGKG, EPHB6, ERBB3, FGF2, FMO2, GLB1, GNA14, GP1BB, IFNA13, IFNA4, MAML1, NEU1, NFKBIA, OR52H1, OR5AK2, OR5C1, ORC4L, PPCDC, RALA, SEMA3B, SMPD1, SOCS7, TACR1, TSTA3, CSGALNACT1, HSP90AB1
Negative_4336	ATG7, FABP1, GADD45B, GNRH1, IARS2, OR5B21, OR7G1, SHC3, TAS2R49
Negative_4337	MVK, ACOX1, ACTA2, ADRA1A, ALG5, ATP13A2, BCAT2, CTF1, DAXX, EGLN1, FGF21, GALNT6, GALNTL1, GYS2, HIBCH, HSPA8, ITGAL, ITPKA, KIR3DL1, LDHAL6B, MAP2K7, MGAT5, MITF, MYH8, NSDHL, OR2T8, PDE11A, PGAM2, PLA2G4A, PLD2, SLC27A4, SPCS3, TCF7, TLR9, TNXB, TUBB2A, VAV3
Negative_4338	HK2, ID2, LSS, PAH, TFG, ABL2, ACADL, ACYP2, ALG10B, ALPP, AQP7, BBC3, BCKDHB, BST1, CCKAR, CFTR, DEGS2, DGKA, DGKB, DGUOK, GMPR, HAGH, HCST, HLA-DOB, HNF4A, HYAL2, LARS, MALT1, MAP4K1, NCOA4, NME4, OR10J3, OR11A1, OR51I2, OR52W1, OR56A1, PDE11A, PFKP, POLR2E, PPP1R3B, PSPH, PTGES2, SOCS2, THBS4, TNFSF8
Negative_4339	ALDH1L1, CDH4, CDKN1C, FGF13, HLA-G, MYLK, OR52M1, PLA2G2A, PROS1, PTPRR, TPK1, YWHAB
Negative_4340	LHB, MUT, ACSL4, AGRN, ALG3, ANAPC7, B3GALT4, CCL26, CCND3, CPS1, CREB3L3, CSF2RB, CYP2A13, GANAB, KARS, MCM6, OR1L8, OR51B4, ROBO3, SAT2, SELE, SETD1A, SLC9A1, SOAT2, ST3GAL6
Negative_4341	CASP6, CCL28, CISH, COL2A1, DCXR, DPM3, EPHA2, FTCD, GUCA1A, ITGA7, LIMK1, LMO7, MAPK14, MGAM, NEU4, OR10C1, OR14I1, OR8K5, SMAD4, TRAF3, WNT10B, ATP6V1B1, KIR2DL5A
Negative_4342	C3, DCK, F8, GNE, AKR1D1, AMDHD2, BDH1, BMP8B, CASP9, CDH2, CHRM3, DGKH, DPYD, DUSP9, FARP2, GLUD2, KCNJ11, MAPK3, MARS2, MDH2, NCOR1, NRG3, OR1A1, OR4D2, OR6S1, PCNA, PHPT1, PLCD1, PRODH2, RAB5A, SEMA4A, SLIT1, SOD1, TAS2R38, ATP6V1C2, CSNK1A1L
Negative_4343	BID, HGD, AKT3, BIRC3, HSPB1, INADL, IRAK1, KRAS, MPP5, NEU4, NKD2, OR10H4, OR13C8, OR2T5, PDPK1, POLR2H, PPP3CA, PRKAB2, STX7, TLN2
Negative_4344	LSS, PML, AADAC, ACOT12, BMP4, CDC2, CREB3, CTLA4, CTPS, DGAT2, DPYSL2, FGF1, FGF8, FZD6, GADD45B, GPX5, HMGCR, IFNGR2, IKBKG, MDM4, OR13C2, OR2T4, OR4A15, OR4F5, OR6Y1, PIGS, PPP2CA, SHMT2, SOCS4, SSH3, STX3, TRAF4, TNFRSF14
Negative_4345	AARS2, ASMT, ATP5J, B3GAT1, CD40LG, COL1A2, COL6A2, COQ5, CSF1R, DPYD, FGF1, HNF4A, LALBA, MCM4, OR6N2, OR7G2, OR8J1, ORC2L, OXCT1, PARS2, PI4KA, PLA1A, PLXNB2, RPN1, SETDB1, SFRP1, SPP1, TRPC1, UGT2B10, MAPKAPK3
Negative_4346	EZR, ALOX12, CALML5, FARP2, FGF1, FGF4, GGT7, GZMB, HDAC1, ITGAL, NODAL, PIAS1, RFWD2, SLC2A2
Negative_4347	C8B, F5, ALDOC, BIRC2, CASP7, CCL27, CCR8, CDC26, EPHA1, FUT8, HAGH, IL22, IL2RG, OR2AT4, OR2T29, PCK1, PIK3C3, SHC3, SPP1, SUCLG1, TAS2R13, TBL1X, UNC5A, MAPK8IP2, SERPINA5
Negative_4348	CEL, B3GALT1, BMPR2, CLDN7, DKK1, GSK3B, IL10, IL18RAP, IL22, LCMT1, MYH6, NR5A2, NRG3, OR10G2, RELB
Negative_4349	CTH, ME3, MTR, ABL2, AKT2, ARSA, CD46, CDC2, CFLAR, EARS2, FGF22, G6PC, GDF5, GLI3, GMDS, HADHB, HSD11B2, IFNGR1, IL17B, ITGB7, LTBR, MCM2, MMP9, MYH1, MYH11, NFASC, NFAT5, OCRL, OR10X1, OR11L1, OR4F6, OR5B12, P2RX4, PDE3B, PLOD2, POLR2H, PON2, PPP2R5D, RAF1, SELP, SHMT2, SLC2A1, STK4, SULT1A4, TAS2R50, UMPS, VASP

Negative_4350	C2, HYI, UBC, ADCY6, APLP1, ARHGEF6, C1QC, CCL8, CD79B, CSNK1G1, CXCL12, DHX58, DUSP4, EPHX1, FCGR2B, GALNS, GALNT3, GPX7, HAP1, ICAM3, IDI1, INPPL1, ITGAL, LAMC1, MAGI2, MAPK7, OR2T11, OR9Q1, PDE2A, PFKFB4, PIAS3, PPP2R1B, PYGM, SC5DL, SESN3, SMPD3, TGDS
Negative_4351	ABP1, ADCY10, DGUOK, HMOX2, ICOSLG, IL1R1, IRAK3, IRS2, MASP1, OR10S1, OR4K15, OR4K17, P2RX2, PPP1CC, PVRL4, SDC1, ULBP1, UROD, TNFRSF1B
Negative_4352	BDNF, CCR3, PRKCH, TAS2R3, TAS2R5
Negative_4353	AK1, DCN, GNE, IVD, LPO, LSS, SRF, ACAA1, ADAM10, ARRB1, ATP5C1, C1QB, CACNG1, CALML3, CCNE2, CDC14B, CDC20, CDK4, COQ6, CRKL, DDHD1, DDX56, DGAT2L4, EPHX1, ESAM, FDPS, FSHR, GALNT12, GCNT3, GNRHR, IFNA6, IL1R2, IL20RA, IMPA1, LCMT1, NCK2, NFATC2, NUMBL, OR2G2, OR4C46, OR4P4, OR51E2, PRPH, SSH2, TAS2R38
Negative_4354	DBI, F9, LIF, ZYX, ACTA1, CER1, DFFB, DTX1, DVL3, EPB41L1, FGF9, GIT1, GRB2, IL1R1, KCNQ1, MAT2B, MGAT3, NAGA, NCR3, NOD1, OGDHL, OR1A2, OR51B2, OXTR, PERP, PIK3C2G, PLCB4, SLC2A1, SREBF1, ST3GAL1, TIRAP, TNFSF4, TUBB2A, UMPS, UPP2
Negative_4355	APP, AR, GCK, NLK, ACVR2B, ALDH1A3, ATP2A1, ATP5D, ATP5G1, ATP6AP1, BCL10, BIRC3, CADM3, CNTN2, CSDA, CTNND1, DHX58, EP300, FMO4, GIT1, GLYCTK, GNAI3, GUK1, HHEX, HMOX1, IL1RAP, IQGAP3, KIR2DL2, LCP2, MAP3K5, OCLN, OR2B11, OR2D3, OR4K14, OR7A10, OXCT1, PRDX6, PRKCD, PSENEN, SMARCA5, TNFRSF9, TYRP1
Negative_4356	DDC, GPI, ID1, ACSL5, ACSM3, ARHGEF7, CHKB, CREB1, CYBA, DARS2, DGUOK, DKK4, DPM2, DUSP3, FSHR, GNRHR, GRIN2C, GUCY2F, IKBKB, IL8RA, IRAK3, ITGAV, LIPE, MCCC2, OR9G1, PDE1C, PFAS, PHKB, POLE, PRKCZ, PSME1, PYCRL, RASGRF2, RBL1, SDHB, STK3, STK36, TAS2R13, TAS2R60, TOMM40L, TSNARE1, TUBB, PNLIPRP2
Negative_4357	GALE, GSTM3, IFNA8, LIPC
Negative_4358	IL5, JUN, ACACA, ARRB1, CHAD, CLCF1, CTNNA2, OR8H1, STAT5B
Negative_4359	UBC, ENO2, LIPF, NEU4, OR6C70, PIGF, PLCG2
Negative_4360	SHH, TEC, ACADL, CMPK1, E2F4, FARSA, FGFR3, GJD2, GNA12, GNG12, GRIN1, GSTT1, HMGCL, HSPA8, KLRC4, NCSTN, PCK1, PSME1, PVRL4, RPE65, STX10, TIRAP, ULK1, WWP2
Negative_4361	CD6, IL9, AADAC, ACACB, ADRBK2, B4GALT6, CCL2, CHRDL, FABP1, FUT2, GALE, IFNA17, MAPK10, NRAS, OR2L3, OR2Y1, OR51E2, OXCT2, PIGF, PKM2, PMVK, PVRL2, RGS3, SETMAR, SULT1A4, HLA-DRB5
Negative_4362	APP, DDC, PLG, ASS1, BCAT2, CAV2, CHDH, CLDN17, CLDN18, DGKB, EHHADH, ENTPD3, EPAS1, FZR1, GALNT5, GNPAT, GRIN2C, HDAC2, IDH3B, LAMC1, MEF2C, MINPP1, NEU1, OR1N1, OR2A12, OR2G6, OR51G1, OR5M3, OR6C1, OR6C2, OR6M1, PGM3, POLR2G, PTGES, PTK2, PTPRC, RASGRP3, ROBO3, SDHD, SUCLG1, TBL1XR1, TKTL2, TNFSF9, ULK3, VANGL1, WASL, YWHAZ
Negative_4363	ACSL4, ADCY1, ALDH4A1, ATF2, ATP5I, CAMK4, CCR4, CHSY1, CLCA4, CLDN9, DRD1, EPRS, EXTL1, FGF17, GALNTL5, GLG1, GLI2, GNPDA1, HSPB1, IARS2, KIR2DL4, MYH8, NR1H3, NTNG1, OR51A4, OR6Y1, OR9A2, PDE4A, POLR2B, RDH5, SFRP4, STX10, TUBA3C
Negative_4364	CBS, HK1, ATF4, CLDN10, CLDN15, CSNK1G2, CXCR4, DRD2, FUT6, GADD45B, IL22RA1, KLKB1, OR13D1, PHGDH, PIK3R4, POLE3, PRKAB1, TAS2R14, TJP3
Negative_4365	CKB, GSR, AGPAT3, ALDOC, APLP1, BRAF, CCR2, COX15, FZD4, FZD5, NEU4, NFAT5, OR13C4, OR5T1, POLA2, PTPMT1, SETD1A, SETD8, SPRY1, TAS2R10, TNXB, TUBA1B, WNT7A, KIR2DL5A
Negative_4366	CBL, OTC, AREG, C7orf16, CAV2, CCR2, CREB3L3, FOXA2, IL28B, MAPT, NFAT5, OR2M7, PCK2, WHSC1
Negative_4367	ASL, FGB, IL3, MVK, GALNT9, NRG2, OR1B1, OR9G4, ORC6L, PTGES, SDC4, SLC25A6, TAS1R1, TAS2R42, TLR4, UGCGL1, WASF2

Negative_4368	ADC, F9, SMO, ACTN1, ADCY7, AVPR1B, BAI1, CACNA1E, CACNA1G, CACNG2, CHDH, CHST11, CTBP1, EFN1, EPHB2, FASLG, GART, GDF5, GLS2, HLA-DMA, HMOX1, IMPDH1, ITGB4, LRDD, MKNK1, NLGN2, NOX3, OR1L3, OR2A25, OR51A2, OR52W1, OR5AR1, OR5D16, OR8K3, OR8K5, PCCA, PDE1A, POLR2J, RAC3, RAPGEF4, RPIA, SARS, SHMT2, TNFRSF4, TRADD, C1GALT1C1
Negative_4369	AR, F2, APPL1, BET1, CARD11, CLDN14, EXTL1, GGCX, GSTM5, HARS, HSD11B1, HSD17B2, LIPF, MPP5, NFKBIA, OR4K17, ORC4L, P2RX5, PDE8A, PFKFB3, PPARA, PTCH2, TBL1Y, TSC2
Negative_4370	CDA, CS, F8, GK2, PML, ACSL3, AGPAT1, ARG1, ARNT2, CACNA1E, CDH5, CFLAR, COQ3, CSNK1G3, GNA12, GSTM5, IDH3A, IL2RA, ITGA2B, ITPK1, NTN1, OR1A1, OR1S1, OR2L13, OR4X2, PFAS, POLR1E, PTPRR, PTTG1, RALGDS, RASGRP2, SC5DL, WASF2
Negative_4371	AGMAT, ALG13, CCL11, CD99, CLDN19, DGKH, EDNRB, FGF9, G6PC, GOT1, GUCY1A3, IGF1R, INHBE, ITGB5, LRDD, MAPK14, NCF1, OR6Y1, PPP1CB, RALA, SLC27A5, SQLE, SV2C, TYRP1
Negative_4372	BID, ILK, APBB1, CDH3, CTSL1, HADHA, MAGI1, MARS, NKD1, NKX2-2, OR51E1, PAFAH1B2
Negative_4373	TPR, ABCC8, ARPC5L, CLOCK, FGF22, GSTK1, HMGCS2, ITGA3, NCOA4, OR10H5, PIGO, POLD1, RALB, RUNX1T1, SH3BP2, SOS1, WBSR17, MAPKAPK3
Negative_4374	ATM, TPO, AADAT, ACVR2B, B3GALT4, BMPR2, CAMK2A, CHRM2, CTSS, CXCR3, DGKZ, EFNA2, FZD1, KLRC3, MAD2L2, NEFH, NUDT2, STK11, TUBB3
Negative_4375	BTK, EFNA3, MAPKAPK2
Negative_4376	ADK, ILK, MAG, TEC, ACAT2, ADRB3, ALDH3B1, ALG6, ARHGAP5, CACNA1A, CD25A, CDH4, CPT1A, E2F4, EPRS, FTH1, FZR1, GOT1, GRIN2A, HTR2C, IRAK3, LAMB1, LDHAL6A, MGLL, NANS, NCR1, OR4F5, OR4N4, OR6C70, PCK1, PCK2, PLAU, PRKAG2, PVRL4, SETD7, SLC9A1, TP53I3, TYK2, PRICKLE2
Negative_4377	BTK, CSK, DHH, UBC, CAV2, CD34, CTNNA1, DDIT4, PDHA1, PLCD4, PTPN1, RND1, XCL2
Negative_4378	C6, CKM, SI, ARG2, ARHGAP2, ARNT2, CD3E, DAAM1, EPHB6, ERO1L, FZD6, GALT, GGPS1, GMPR, IL17B, IMPA2, LLGL1, MAP3K4, MAPK13, MTHFD1, NT5C2, OR2M4, P4HA2, PHKG1, PRODH2, PTGS1, PVRL3, RAPGEF4, SCD5, SKIV2L2, SMAD2, SOCS1, SPAM1, TACR1, PPARGC1A
Negative_4379	FGB, ABAT, ACADS, ANAPC10, CADM3, CAMKK1, CHKA, CLDN16, CYP2C8, FGF1, GALNT1, GSTK1, HNF1B, IKKB, IL21, LAMC1, LRDD, LYPLA1, MAP3K5, NR1D1, NRXN1, OR2L3, OR2M3, PAICS, PCYT2, PPARA, RBKS, RPRM, SCD5, WNT8B, CSNK1A1L, SLC25A31
Negative_4380	ASL, BID, TPR, ACAA1, ACSM5, ANAPC4, AOC2, ATP5J, B3GALT4, B3GNT5, CDKN1C, ENTPD3, F13A1, FADS2, FCGR3B, FLT4, FTH1, FZD1, GALK2, HRH2, IFNAR1, IMPDH1, LIPA, MASP2, METTL2B, MYH7B, NAGLU, NEFM, OR13G1, PANK3, PDCD1, PNPLA4, POLR2F, PPA2, PPP2R1A, PPP2R2B, PPP2R2C, PRKACB, PRKAR2B, PTCH2, PTPN6, PTPRB, SOAT1, SORBS1, STAT5A, STEAP3, TGFB1, WNT8A, CSGALNACT2
Negative_4381	B4GALT5, GCH1, RAC3, SFRP1
Negative_4382	KHK, MTR, ACTN1, APRT, BBC3, CCR5, CXCL10, CYP1A1, DAG1, ENPP2, HIBADH, IL13, IQGAP2, ITGB8, KIR2DS4, MAP2K1, NFKBIE, OR10H4, OR52B6, OR5T2, OR7G2, PGAP1, SERPINA5
Negative_4383	RET, BHMT, BIRC2, CCKBR, CCR9, CSNK1A1, DNMT1, EXTL2, FGF18, FGF19, GNG13, HSD17B3, HYAL2, IL10RB, ITGA2, KITLG, LRRC4C, MYL5, NAGS, NFYB, NGEF, OR1C1, OR1D5, OR6K3, P4HA1, PARD6B, RASA1, SNAP25, TRAF1, ALDH18A1
Negative_4384	LCK, AKR1A1, ALPP, AMDHD1, BNIP1, C4BPA, CDS1, CNTN2, DDX23, EGLN3, ENAH, FGF1R, FTMT, FZD5, GAL3ST1, GMPS, GRM1, HGSNAT, HSD3B2, IL5RA, IRS4, MCM6, OR5K1, P2RX5, PAFAH2, PANK3, PI4KB, PIGO, PIP4K2A, PKM2, PLA2G4A, PMM2, PNPO, PPP3CC, PTEN, VDAC1



Negative_4385	PPAP2A, SPRY4, STT3B
Negative_4386	CBL, DUSP14, LALBA, RARA
Negative_4387	CBLC, GFAP, OR51E2, PAK7, TNFSF14
Negative_4388	F7, FGA, LPO, PTS, SI, TH, TNR, UBB, ABAT, ACSS2, ADRA1D, ALDH3A1, ARHG EF1, BIRC2, CTBP1, EPAS1, FGFR2, GLO1, IFNA17, IGFBP3, IL23R, ITPKA, KIR2DL2, LFNG, LIPG, LM07, MYH4, NOS1, OR4X1, OR51I2, OR52W1, P4HA3, PDE1C, PDE6D, PFKFB3, PSME3, PTPRC, SDC2, SETD1A, SRGAP3, ST8SIA1, T IRAP, TPH1, TUBB1, YKT6, ST6GALNAC5
Negative_4389	EBP, LPL, CCNG1, CD28, CTSL1, CYP1B1, CYP2C18, CYP2F1, DGKH, EFNA3, E NPP3, IFNAR1, IL21, IL29, LAP3, LDHC, MS4A2, NCF1, PFKFB1, POLA2, POL R2K, PPARG, PTK2, SLC27A5, SMC1A, STX10, TPI1, MAPKAPK2
Negative_4390	GSS, PAH, AGPAT4, BDKRB2, DTX2, ENTPD7, GSTM5, HADH, HTR4, LCMT2, LRR C4C, MAFA, MAGI1, MAGI2, NFASC, OR2L13, OR4N4, PGK1, PIK3R5, PRKY, TA P2, TM7SF2, TYK2
Negative_4391	AK3, IDS, LIF, SRM, ACAT1, CD86, CIITA, COQ3, CYBA, ENPP6, ENPP7, FMO5 , HADH, HA01, IL18, MAP2K6, MAPK3, MPDZ, NFKB1, OR10C1, OR10G7, OR4F4 , OR6C4, PIGS, PLCE1, POLR3H, RASGRP4, SEMA3G, TAS2R38, UGT1A10, USE 1, ALDH18A1, HSP90AB1
Negative_4392	BID, CAD, FH, GK2, JUP, KIT, MSN, ALG9, ASS1, ATP6V1D, B3GAT3, B4GALT3 , C3AR1, CCL14, CCL3, CCR8, COL1A2, FMO3, FUT1, FZD4, GLG1, GLUD1, GNG 12, GSTP1, KAT2B, LEFTY1, NTN1, OR1J4, OR52B4, OR6F1, OR7A5, OR9G1, P OLR1C, SESN2, SHMT2, STAT5A, SULT1A1, SULT1E1, TAS2R13, TUBA3C, UPP 1, XCL1, ATP6V1C1
Negative_4393	CAD, FST, LSS, ACSL5, ACSM3, ACTN1, C4BPA, CD59, CSNK1G1, DGKQ, DLL3, DNMT3L, FGF4, FLT3LG, FUT4, GALT, GNAI3, GNG13, GOT1, IFNA7, IL17RB, ITGAD, MAFA, MAN1C1, NRCAM, OR4C6, OR56B4, PDGFB, PLD2, PNPLA4, PPP2 CA, PSME1, RBX1, RRM1, SETD1A, SLC27A4, SPCS1, UGT2B7, PRICKLE2
Negative_4394	ADCY5, CACNA1B, CD74, EVI1, MRAS, P2RX5, RAP1A, RPS6KA1, SIGLEC1
Negative_4395	F7, ADRB2, CD82, CDK4, CREB3L1, CYP26A1, CYP2A13, DDX50, DGAT2, DGKD , DKK2, DOCK1, EPB41L2, GART, GFPT2, GNPDA2, GUCA1B, HIP1, IAPP, ICOS LG, MYL2, NEU4, NFATC3, NRG3, NSD1, OR10J3, OR2A42, OR2T4, OR4K13, OR 5AK2, PGAM4, PIGF, PLA2G3, PNPO, PTDSS2, PTPRR, PYGB, RND1, RXRB, SDC 4, SETD2, SFRP4, ST3GAL4, TAS1R2, TPMT, TRAF2, WASF3, WNT5B, TNFRSF1 4
Negative_4396	MIF, ATG7, CADM1, CXCL2, ETNK1, FCGR3B, FRAT1, GSTM5, HHEX, IMPDH2, M ETL6, NADSYN1, OR2G2, PON1, SPI1, TUBB4Q, UBA1
Negative_4397	C4B, ACY3, ECHS1, IFNA6, NCR3, OR51I2, PDE1A, PIK3C2A, TIAM1, ATP6V1 G3
Negative_4398	PLG, ADORA2B, BUB1, EIF4E2, GDF6, LIAS, OR2T1, PDXK, SCD5, SEMA3D, TH BD
Negative_4399	CAV3, CCNB2, FGFR1, MCAT, OR10K1, PRKCG, PRNP, SCIN, SESN1, TAS2R10
Negative_4400	IL7, MPZ, ABL1, ACADM, ACSL3, ALOX15B, ANAPC2, BHMT, CCL22, CDC25B, C DH5, CLDN14, DPAGT1, DTX2, EFNB3, EP300, EPB41L2, GGCX, GNA15, GZMA, IRAK3, ITPA, LCMT2, MALT1, MCAT, MCM3, OR10P1, OR11G2, OR13F1, OR1I1 , OR1S1, OR2AE1, OR5B12, OR6C6, OR6N1, PDE6H, RPN2, SDHC, SFRP4, SLC2 5A6, SOCS1, TNFSF14, TUBB3, UGT2B4, YES1, SERPINB5
Negative_4401	EPO, FH, ACSM1, AGRP, ALDH1A1, APOA5, ATP5F1, CCNA1, CCR8, CHSY1, CTS B, CYP27A1, CYSLTR1, FOXA2, GALNT8, GUCY2F, GZMA, INSRR, ITGA2B, MAF A, MAP3K14, MCCC2, MDH2, MECR, NFASC, NUMB, OR10G7, OR14A16, OR2B6, O R4C6, OR51B2, PARVG, POLR2H, PRKCA, RASGRP3, SPRY4, SSH1, SUV39H2, T AS2R50, TRAF5, UCP1, VAMP4, VEGFC, WNT9A, YWHAZ, HSD17B12, SERPIND1

Negative_4402	BCR, CR2, MPL, ABLIM1, ACSL5, ANAPC5, ARRB1, BUB1B, CALML3, CCNA1, CDKN1A, CNTFR, DLST, DTX3, E2F1, FABP3, FABP4, FARSA, HDAC1, IL7R, LDHC, LEFTY2, LIMK2, LTBP1, MGAT1, MOV10L1, MYH11, MYLK, NRAS, NRG1, OR4N2, OR4Q3, OR51M1, PLCG2, PPP2R5E, RASGRF2, SNAP25, SUCLA2, TAS2R3, TAS2R49, TBL1XR1
Negative_4403	AKR1D1, ALDH1A2, ATP6V0B, AVPR1A, BDKRB2, BMP5, CACNG7, EHMT2, ENPP3, GGT6, HRH2, ICOSLG, MAP3K11, NPAS2, OR6C75, OR8H2
Negative_4404	ADA, LEP, CARS, DGKI, GNAI3, IL21R, KAT2A, MAFA, MKNK2, NCF2, OR5AU1, PDGFRB, RFXANK, SAT1, SOAT2, TACR2, TRPC1, UGCG
Negative_4405	CAD, IDS, OTC, SMO, ACAT2, ACP2, ADCY8, ADIPOR1, ALG8, ALG9, ANAPC11, APRT, CARS, CHRM3, CXCL1, DHRS4L2, DIAPH2, DKK4, FMO2, FPGT, GJD2, GNA11, GUCY1A2, HARS2, HPSE, IL12B, ITPKA, KAT2A, KIR2DL4, LAMB1, LIPF, MGLL, MYH3, NKX6-1, OR1A2, OR2C3, OR52E8, OR52H1, OR6Q1, PPARG, PRKCG, PTK2, RAD51, RASSF5, RFXANK, SFRP1, SMURF1, SSH1
Negative_4406	DBH, GPT, ARPC2, CACNA1A, CALML5, CD36, DUSP2, ENTPD8, GNMT, GNRH2, GOT2, HARS2, IFNAR1, IL28B, JAK1, MAGI3, MAPK9, OR2L3, OR4F6, PANK2, PPP1CC, RALGDS, RASSF5, SEMA3G, STAT3, STK11, STX4, TGFBR1, TOMM40
Negative_4407	LCT, SP1, ALDH6A1, ASS1, BLVRB, C1QA, CD86, CHIA, CHKB, COL1A2, CTSG, CYP26C1, DPM1, DPYSL2, DRD1, EPHA2, EREG, G6PC2, ITGA5, MYH13, NEU4, NFATC2, NME7, OR11L1, OR1J2, OR4S2, OR6C6, OR6C75, OR6N1, ORC2L, PFN2, PGM2, PIK3CD, PLA2G5, PLCG2, PMM1, POLR2D, PRKAR1A, RAB5A, RUVBL1, SDC4, SH2D2A, SLC25A6, SOCS4, TCF7L2, TNFRSF9, HLA-DRB5
Negative_4408	ATP5J2, CD58, CLDN22, CREB3L4, CXCR6, CYP2J2, GPD1L, IFNA16, IFNW1, P2RX6, PIAS4, SRGAP3, STAT2, ZFYVE16
Negative_4409	PDC, TPR, ACVR1C, CACNB1, CMBL, GNAL, MAT2B, OR51S1, PDE4B, RAC3, RPSA, SOCS7, SERPING1
Negative_4410	DBI, HDC, ZYX, ATP50, B3GALT4, C7orf16, CHEK1, CXCL13, CYP2S1, DUSP8, DVL3, ELK4, EREG, F2RL1, FARSA, FGD3, GGT5, GRIN1, HLCS, IL17RB, IL2RB, INADL, INPPL1, NME7, OR11H4, OR51L1, OR5T3, PDE6G, PFN3, PIGS, PRNP, RUVBL1, SEMA4G, SESN3, SHISA5, SMAD2, SMPD4, TSNARE1, CSGALNACT2
Negative_4411	FAH, ALG5, APC2, BMP8B, CACNG2, CRKL, EPHA4, HSD17B1, LIPT1, METTL2B, NKD1, NTRK2, OR4S2, OR5A2, OR6K3, PDIA4, PRKACB, PTEN, RFWD2, SUCLG1, TCF7L2, PRICKLE2
Negative_4412	IDS, PGF, ABLIM3, ACVRL1, ADCY5, AKT3, ASS1, AVPR1A, BCL10, CAMKK1, CBR3, CES7, CHUK, CLTC, DEGS2, DPYS, ETS1, FGFR4, GALNT14, GGT5, GLDC, HTR2C, IFNA6, MAML2, MYH10, NAGLU, OR11I1, OR2L13, OR4A15, PIM2, PKM2, PPP3CA, PRKAB1, PTGFR, PVRL3, PYGB, SLC25A5, TUBB6, UBE2L6, UGT8, ULK2, TNFRSF11A
Negative_4413	EPO, ARG2, CACNA1B, CARS2, CHSY1, CLDN6, CYBA, DDB2, ENTPD6, GDF5, GPT1, GP1BB, GUK1, HHEX, ITPKA, MAT2B, MDH2, NEU1, NMNAT2, OR6N2, PIP4K2B, PTK2B, RASGRP1, TICAM2, VNN1
Negative_4414	DBI, TFG, AGTR1, AKR1B10, ATP2A2, CDK7, CLDN3, CPS1, CPT1A, CTF1, DUSP4, GALNT10, NPR2, OR1L4, OR5L2, OR8D4, PANK3, PIM2, PRSS1, SEMA4A, TAS2R9
Negative_4415	AK7, KMO, CYP26B1, IL12RB2, LAMB2, OR4C16, TRAF4
Negative_4416	RPE, ALDOA, ALG10B, ASS1, ITGA5, TAP2
Negative_4417	BTRC, PDHA2, PIP5K1C, QARS
Negative_4418	CAT, SI, AKT3, ALG11, ANPEP, B4GALT5, CTSB, DFFA, DFFB, FOXO3, GLS2, GMPR2, GPD1, GPD1L, MAN1A1, NME2, OR6C76, PGM1, PLAU, PRODH2, RFNG, SLC12A2, SMAD9, SMPD4, TKTL2, TLR9, TNFSF10, TPI1, TUBB2B, TYK2, UAP1
Negative_4419	AK1, BCR, IDS, ME2, NNT, ABL2, CAMKK1, CANT1, CLTC, CREB3L2, ENAH, GRLF1, GUCA1C, MAML3, OR8I2, PARVA, PRKAB2, PRKCH, TACR2, VEGFC

Negative_4420	ASS1, CD8A, CSF2RB, DERA, FPGT, GRLF1, LALBA, NR4A1, OR4C11, PFN2, PLXNB1, PPAP2B, PTCH1, SHC4, SLC2A4, SNAI2, SORD, ATP6V1C2
Negative_4421	DDO, FN1, LPL, ACOT12, ADH1A, ALDH1B1, ARRB1, CAV3, CD274, CNTN1, CYP2C8, GALNT10, GLDC, HPSE2, IL19, ISYNA1, MAP2K7, OR4F4, OR9G1, OXTR, PAK7, PARVA, PGM1, PPM1D, PSPH, RBL2, SMPD1, SMPD3, SPHK1, STAT5A, TRHR, TYROBP, UGCG, UMPS
Negative_4422	ATP5H, MCM3, NPR2
Negative_4423	FN1, ID2, MYC, SMS, AGMAT, ARPC5L, BDH1, CCR3, CD274, CLDN10, CPT1A, DGKE, DHRS4, GOSR2, KCNJ11, NCF4, OCLN, OR10Q1, OR5D16, OR5P3, PLA2G4A, PPP2R5A, PRKAB2, PRPH, RDH12, TLR9, VAV1, WNT11, GABARAPL1, HLA-DQA2
Negative_4424	CBL, IL6, ALDH3B2, ANAPC7, CYP2F1, DKK4, ETS1, GATM, GCNT1, GGCX, IFNA8, LDHAL6B, LRP5, OR14J1, OR52R1, OR6S1, OXCT2, PFKM, PIPOX, PLTP, STK4, TJP3, TRIP10, ATP6V0A4
Negative_4425	CGN, FUK, ARSA, CCL21, GNG13, ITGA7, MICA, OR13D1, PFKFB3, SEMA3C, TRDMT1, PDCD1LG2
Negative_4426	ACSS1, CDC42, CHRM2, CLDN6, DPYS, EDNRB, EFNA5, FLT3LG, GSTM4, HCLS1, L1CAM, MGST3, NOTCH3, NT5C1A, OR8S1, PLA2G2D, PRKAG2, RASSF5, SOX17, SPAM1, UCK1
Negative_4427	FN1, ABCC8, ATG7, ATP5F1, B3GNT4, BDH2, C3AR1, CALML3, CCL17, CCL22, CDH5, CER1, CHUK, COL3A1, DHDDS, EXTL1, FUT8, HEMK1, HMOX2, HRH1, HSD3B2, IDI1, INSR, JAG1, MEF2C, MKNK2, MS4A2, NCOR2, NGEF, NOX3, NT5C2, OR13D1, OR1D2, OR2D2, OR5P3, PHKG2, POLR3K, RASA2, SMAD4, SMURF2, SPI1, TLR9, TNFRSF4, TRPC1
Negative_4428	F2, GNS, SPN, ACSL3, ALCAM, ALDH3B1, ALDH6A1, ALPP, ARHGEF1, ASRGL1, B3GNT3, C1QB, CCL13, COL11A1, CPT1B, CPT1C, DKK1, GALNT11, HSD3B7, ICAM2, INPP4A, IRAK4, MAD2L1, OR1A1, OR4S1, OR51A4, OR51G1, PIGC, TGFBR1, CSGALNACT1, MAPKAPK3, ST6GALNAC4
Negative_4429	CRB3, DLL1, HCST, IL17RB, NOTCH1, NOTCH3, OR13C8, PEMT, SETDB2
Negative_4430	DHH, ACSS2, BMPR1B, CER1, CYP1B1, FGF20, GSTT1, MPP5
Negative_4431	NPL, PTS, ACSL4, APH1A, ARNT2, BUB1, CAMK2D, CDKN2B, CX3CL1, E2F1, OR52E6, PANK1, PNPT1, POLR2F, RPIA, TKTL2
Negative_4432	GHR, ENO2, EPOR, HSD11B2, OR4D2
Negative_4433	ADH7, BCL2, DLAT, ENPP2, EPHB3, EPOR, FZD5, GALK2, GNB3, IFNW1, NOD1, OR1D5, OR5M8, PFKFB1, PIK3C2B, PIP4K2B, SIGLEC1, UGT2B28
Negative_4434	IL8, AMHR2, CCND3, CDC14A, DTX1, PFKFB4, SPCS3, TIAM2, PLA2G12A
Negative_4435	ADC, ME3, ACVR1C, AKR1B10, ARNTL, ATP5A1, B3GALT1, B3GALT4, BMP5, CD38, CSF3, EXTL3, GSTA5, IL9R, NOS3, OR14J1, PLXNB1, PPP1R3B, PRKAA2, RAP1B, SMARCA5, TAS2R41, TP73, HSP90AA1
Negative_4436	CDA, ID2, SP1, ACADS, ACY1, AKR1C3, ALDH1A2, AMY2B, AREG, ARPC1B, ARPC4, CCL1, CCL7, CXCL5, DUSP5, EIF4E2, F2RL2, FLT4, GUCA1B, IL11RA, INSR, KDSR, LARS2, LIPG, MALT1, MGAT4B, MYH7B, NUDT8, OR2T12, OR5H6, OR6C4, OR6Q1, PDXK, PIGX, PIK3R3, PIM2, PRKCQ, SPRY2, STX7, SUOX, TCF7L1, TUBA4A, ARHGEF12
Negative_4437	C8A, CGA, DBT, F8, LCK, ABCC8, ACSL4, ADIPOR1, AGPAT4, ARPC1B, CACNG4, CDS2, CHRM5, CLTCL1, CYP2C8, DUSP10, DUSP14, ETS1, GLB1, GUCY2C, GYS1, HIBADH, HSPA2, IL15RA, IL23A, LGMN, NOS3, NPR1, OR2A4, OR2H2, OR4X1, OR51E2, OR8G1, PAX6, PISD, PTGIS, SNAP23, ST3GAL4, TNFSF8, TPK1, TUBA1B, UCP1, VCAM1, MAPKAPK3, SERPINF2, SERPING1
Negative_4438	GPT, OSM, AADAT, ALDH1A1, ALDH3A1, ALDH7A1, BCAT2, CADM3, CCL5, CYP11B1, FPGS, GYS1, HADHA, IFNGR1, IL22RA2, JAK1, LCP2, MKNK1, MTHFS, NFATC3, OR1A2, OR1J2, OR2Y1, OR5AR1, P4HA2, PER1, PIAS3, POLD1, PSME1, PSME2, PTCH2, PTCRA, PTEN, PTGER1, RALBP1, RAP1B, TRPM5, WASF1

Negative_4439	ATP12A, CD38, CNGA4, CXCR5, GAD1, GOT2, GUCY1A2, IFT57, IGSF5, JAK1, NEUROD1, PAK3, PFKL, PIP5K1C, PLD2, PNPO, PRLR, PRNP, TJP3, TNFSF8, TP53, TPH1, TRAF1, UROS, ATP6V1E1
Negative_4440	F12, NGF, ANAPC7, CD36, CD40LG, CLDN10, COQ5, CSF2RB, CSNK2A1, DDX18, DOCK1, FGF13, G6PC2, GUCA1A, IL23R, MAP3K6, MLLT4, MTHFD1L, NKX2-2, OCRL, OR10Z1, OR51A7, OR7C1, OR9K2, PDGFD, PFKFB3, PGK1, PHKA1, PP3R1, PSENNEN, PTGDS, TGDS, TGFB1, TGFB1, PAFAH1B1
Negative_4441	ADO, F10, IL6, ACSL4, ALPP, APOA5, BCL2L1, BMP6, CCL15, CPS1, CRLS1, CSNK2B, DDX23, HLA-DRA, ITGAE, LAMC3, MTAP, NCF2, NFATC3, NGEF, NKD2, NQO1, OR10T2, OR2B2, OR51F2, OR5J2, PCNA, PLAU, PPAP2C, PPBP, PRKAB2, PRKACA, PRKACG, RGS3, SMARCA5, CACNA2D2, HLA-DQA2
Negative_4442	DHH, F2R, FAS, CDKN2B, CLCF1, DDX47, DPAGT1, ENPP2, ENTPD3, FZD9, GBA3, GMPBB, NAGS, ONECUT1, OR2A25, PAK6, PTPMT1, SELP, SKIV2L2, ST8SIA1, STX1A, TAS1R3
Negative_4443	AK5, IVD, ABL1, AHCYL2, ALOX5, ASRGL1, B3GAT1, BAAT, BAIAP2, CACNA1H, CALML6, CCL16, CCR1, CD34, CDH3, CDKN2D, CHIT1, CHPT1, CLDN18, CSF1, DLL3, DRD5, DUSP2, ENAH, FGD1, FRAT2, HYAL2, IMPDH2, LIFR, MCCC1, OR1D2, OR1N2, OR52M1, OR7A10, P2RX1, PLCB3, POLR3A, POMC, PPAP2A, PPP3R1, PVRL3, QARS, RPE65, SDHA, TJP3, UBA7, ATP6V1C1, SERPINF2
Negative_4444	F10, ME1, ADCY6, ADRBK2, ATP5A1, B4GALT2, CD244, CD38, CHSY1, DDX23, DHRS9, DVL2, FADD, G6PC2, GALNT3, GNAI3, HTR6, IFNW1, ITGA1, MAN1A2, OLAH, OR5AS1, OR5M3, PDGFA, RAC3, RASGRF2, RASSF5, RFX5, RPS6KA5, SH2D1B, SPRED2, SULT1E1, TXNDC12, UGDH, WNT7B, ATP6V1G2, ST6GALNAC6, SUV420H2
Negative_4445	CDH4, CSNK1G3, DUSP7, FMO2, HTR2A, NRXN2, PGAP1, PPARD, PRKCI
Negative_4446	ABAT, ACOX1, ADCY9, AGRN, ALDH4A1, ARPC1B, ASPA, ATF2, B3GAT3, B4GALT2, CDH5, CMPK1, CREB3L1, CREB5, CTSL1, CYFIP2, CYP1A1, FCGR3B, FGF20, GALNT14, GFPT1, GPLD1, KIR3DL1, LIFR, LIPF, MAGI2, MAN1A1, MGAT5, NMNAT1, NT5E, OR14A16, OR51M1, OR9I1, OXCT2, PDE4D, PECAM1, POLE3, PPT1, PRSS3, PTTG1, RERE, SOCS1, SPRY2, SULT2A1, SYNJ2, UCK1, UGT2B28, ZNRD1
Negative_4447	DAO, IL7, LEP, OGT, PRL, ACAA2, AHCYL2, ALG13, ANPEP, APLP1, CHRNA7, CYCS, DUSP8, EGLN1, FGF4, GRIN2D, ITPK1, MMP9, MTHFD1L, NAGA, NLGN3, NME7, OR10G4, OR10Z1, OR2A2, OR2T12, OR52E8, OR5J2, POLR2F, PTPMT1, RELB, SPTAN1, UBE2L6, UCK2
Negative_4448	BMPR1B, DHFR, EPHA5, GAD2, HLA-F, IL12RB1, INHBA, IRF3, NFATC2, OR52I1, OR9I1, POLA1
Negative_4449	GH2, IL8, ADIPOR1, ARRB1, ATG3, B4GALT1, CCL8, GANAB, GSTM3, IL20, LRC4C, NRCAM, OR10K1, OR3A3, OXSM, PANK2, PIGM, PLK1, PPM1B, PPP5C, RDH16, RPS6KA6, RXRA, SHC2, SORD, STAT4, ST6GALNAC4
Negative_4450	FST, PGF, A4GALT, ABL1, ABLIM1, ALDH9A1, ALPI, ARHGEF4, ARNT, ATG7, CR2, CD244, CLTC, CRKL, CXCL1, CYP19A1, DARS2, FBP1, FGFR4, FLAD1, GAL3ST1, GSTA2, IL12RB2, IRAK1, LPAR1, MAPK11, MTFMT, OR13H1, OR5R1, OR8H3, PDPK1, PGK1, PIP5K1A, PLAU, PNPO, PRKAG1, PTPRB, RAB5A, SEPHS1, SETD7, SMPD4, SSH1, SULT2B1, TAS2R8, TSC2, VASP, VAV2, TNFRSF1A
Negative_4451	GP5, OGT, B4GALT1, BBOX1, CACNB2, CCL25, CHEK2, CPOX, DUSP2, EPHA1, EPHA5, GFPT1, HSD3B7, HTR6, NSD1, ODC1, OR51T1, OR52W1, P2RX7, PARD6A, PIPOX, PTPRF, UGT2B10, UROC1, WIF1
Negative_4452	DVL3, GALNS, HNF1B, MDH2, POLE2, TGFA, WNT6

Negative_4453	CS, DBI, NPY, ACYP2, ALG9, ASPA, CAMK2G, CD79A, CDH4, CDKN1A, CFL1, CSNK2A1, CYBA, CYP1B1, DCXR, DDHD1, DHRS3, DTX3, FARS2, FRAT1, GNAI3, GSTA1, HMOX2, HTR2A, ICAM1, IL11, MAN1B1, MAN1C1, MYL9, NCF4, NEFM, NSD1, NUDT5, OR2B6, OR4N4, OR52R1, OR5I1, PDE10A, PPARG, RALBP1, RAP1A, RASGRF2, SGPP1, SOCS5, THTPA, TUBB4, UBA7, ARHGEF12, HLA-DPA1
Negative_4454	ASL, F11, GH1, GPI, PTS, ZYX, AASS, ADH7, ALG9, BCAT2, CAMK2G, CFLAR, DAAM2, GRIN1, ITGAL, LFNG, LIAS, OR10Q1, OR1N2, OR2A14, P2RX7, PFKM, PIP5K3, POLA2, PPP1R3B, PTGIS, RFWD2, SDC3, UROC1, WASF2
Negative_4455	F2R, MTR, RPE, ACVR2A, ADH6, AKR1C2, AMPD3, APOE, CASP10, CHIT1, COL6A1, CXCR4, DTYMK, EFN2, ENAH, EXT2, FZD8, GUCY1B3, HMGCS1, LDHD, MAP3K13, MLLT4, MPP5, MYH4, OCRL, OR10A6, OR2T29, OR4F17, OR5B17, POLR2D, PPA1, PPP1R3C, PTK2B, SEMA3G, SHC4, TBL1XR1, TSHR, WNT1, ATP6V1B2, CSNK1A1L, MAPK8IP1
Negative_4456	HYI, CCKAR, CHEK1, CHRM3, CPT1C, CUL1, GALNT7, GUCY1A3, HARS2, OCRL, OR13G1, OR4L1, OR8K3, PARVB, PIK3R1, POLR3D, PPAP2A, PRKAR1A, RBPJL, SLC25A5, SRD5A2, WNT3A
Negative_4457	JUN, ME1, TNC, ACSL5, AKR1C4, ALDH5A1, APLP1, CACNA1B, CCNG1, CD86, CDKN2A, COQ3, CRY1, DDX51, DGKA, DGKB, GMPS, GPD2, GSTM2, IL1R2, LPAR1, MALT1, NUDT2, OR10G4, OR10J3, OR2M7, OR51I2, OR5AR1, OR8G1, ORC2L, PIK3R4, POLR2F, PRKAR1B, PTK2, ROCK2, RRAS2, SCP2, SGMS1, TBXA2R, UPPI, VKORC1, HSP90AA1, TNFRSF1B
Negative_4458	SRC, ARPC4, ATP6V1A, CLDN7, CRY2, CYP2A13, CYP3A7, DDX23, GGT1, GRHR, GSTO1, GSTZ1, GUCY2D, HARS, ICOS, LIMK1, MKNK1, NEFM, NT5C1B, OCLN, OR2T10, OR4F6, OR51G2, PDE4C, PIGK, POLR2I, POLR3K, PPP2R2C, PSAT1, RASA1, SH2D2A, TCF7L1, VTI1B, WARS, ATP6V0A1, HSP90AB1
Negative_4459	AGK, IL5, AADAT, ABCC8, ACTG2, ATP6V1F, CDC25A, COQ6, CPT1C, DFFB, DGAT2L4, DUSP3, DUSP4, EPHX1, FUT8, KLKB1, MARS2, NCR3, OR6C74, PARS2, PDGFC, PPT1, RAP1B, RASGRP3, RFXANK, RHOQ, RUNX1T1, SUV39H2
Negative_4460	SRM, AGPAT6, CCNG2, CDS1, CHRNA7, CYFIP1, DGKA, DHFR, DMGDH, F13A1, GUCY2C, NMNAT3, OR6C4, PGLS, PPP2R1B, RALB, ULBP2, ATP6V1G3, CACNA2D2
Negative_4461	CAD, DCT, SRM, ACTA1, ADRA1B, BMP8B, CCNA1, FZD7, GNRH1, JAK3, KCNJ11, MARS, MASP1, MGAT2, OR10G2, OR1C1, OR2C3, PDE4B, PDE7A, PFKFB1, PFN3, PGAM1, PHKG2, PIK3R5, PPP2R2B, RBL1, RPS6KA1, SORBS1, TAP1, TBL1XR1, TUBB4Q, HSP90AB1
Negative_4462	CRH, ABLIM2, AKR1C3, ALDH6A1, ATP6V1A, BAIAP2, CALML3, CYP11B2, DPYSL2, ERBB2, GLI3, GRM5, HTR2A, IFNA8, MAP4K3, MTMR1, OR51B6, OXCT2, PFN4, PLCG2, POLR3K, PTPN11, RASSF5, UGT2B4, ULK3
Negative_4463	C6, IL8, ADAM17, CD247, CSNK1G3, CSNK2B, CTBP2, DDX50, FCGR3B, FM05, GMPR, GNRH2, HMOX2, IRAK2, MGAT2, MYH1, OR12D3, PAK7, PFN1, PGM1, SELLE, TAS2R1
Negative_4464	ADK, TPO, ATP6V0C, CD38, GUCY1B3, IDH1, IL6R, IMPDH1, MGAT4A, NEFH
Negative_4465	GLA, CD38, E2F5, EDA2R, FGF5, GUK1, IFNAR1, IL22RA2, IL24, PANK2, PDHA2, RDH16, SFRP1, THBS3
Negative_4466	HYI, DFFB, EFNA2, FGF11, FZR1, HPRT1, KARS, KIR2DL2, MAD2L1, MAPK3, MTHFD1, OR10P1, OR13C8, OR1L8, PAK4, PIK3C3, PRODH2, SDC1, SESN1, SLC25A5, SPRY2, TAS2R10, SERPINA1
Negative_4467	DAO, ATN1, B4GALT4, CCL5, CKS1B, FGF23, GAD1, NFAT5, NMNAT1, OR2M7, PHKA2, TFPI, UGT2A1
Negative_4468	KLRC1, MMP2, THY1
Negative_4469	ATM, ATP2A1, CACNG3, CBLC, CCL28, CNGA3, E2F3, IL13RA1, MAP3K11, OR12D3, OR5K1, PDE10A, PDX1, PDXP, PLAU, SIAH1, SIGLEC1, SYNJ1, TAS2R38, TNFSF9, UGCG, B4GALNT1, CTNBP1

Negative_4470	AMH, PGP, ADH7, BMPR1B, CCL11, CD19, CLDN16, CREB3L1, CRKL, CRY2, CTNND1, CX3CR1, DLL3, DPYS, EFNA4, ENTPD3, FLOT1, FUT5, GALC, GALNT3, GUCY1A3, IARS, IL1R1, LGMN, LIPF, LTA4H, OR4F17, OR4F4, OR5J2, OR7A17, OR8D4, P4HA3, PLCD3, POLD2, PPP2R2D, PVRL4, RASGRP2, SLC25A6, SREBF1, TGFB3, TRAF3, TRDMT1, UCP1, UNC5C, XCL1, SERPINB5
Negative_4471	ADIPOQ, AKT2, CD82, CTPS2, DTX4, EPHB4, GALNT9, GLDC, KLRK1, NMNAT2, OR10H3, OR4F5, OR52L1, OR5D18, PNPLA3, PPA1, PTGFR, RENBP, SUV420H2
Negative_4472	ACSM1, ADCY9, CHSY1, CLCF1, COL4A4, DEGS1, GNG13, OR1E2, OR52N4, POLR3D
Negative_4473	C5, ALDH4A1, ALG1, ALOX5, AMY2A, CDC42, CNGA4, CPT2, DNMT3A, DUSP6, DVL2, EFN2, F2RL1, FTH1, G6PC2, GALNT6, GDE1, GRIN2C, NEFL, OR10T2, OR1J2, OR4A5, OR52B6, OR5D13, OR9G1, PAK3, PIGB, PKMYT1, PLCB2, PPM1A, PTPMT1, RELA, RERE, SDC3, SEMA7A, SPTLC2, SUV39H2, UCK2, VAMP1, WHSC1L1
Negative_4474	IL8, ADRA1A, AHCYL2, ALOX15, ANAPC11, BACE2, CACNA1D, CACNA1G, CCL17, CFL2, CLDN20, IL18, IL5RA, OR6T1, P2RX2, PPP2CA, SNAI2, TDO2, TRADD, UAP1, ULK2, VTI1A
Negative_4475	GH2, ANAPC1, ATF2, CACNA1S, CASP10, CLDN22, CLDN4, COX15, CTNNA1, CYP2B6, DNMT3B, GFPT1, HIBCH, LDHC, NCR1, OR2T3, OR2Y1, OR4D6, OR4D9, OR4P4, OR5V1, PIP5K1B, RRAS, STAT3, SYNJ1, TAS2R9, WHSC1L1, WNT10B, ATP6V1C1, MAPKAPK5, TNFRSF10C
Negative_4476	CD6, INS, NPL, ATP5F1, CD28, CD59, CLDN15, COL4A1, DEGS2, ERO1L, FUT8, G6PC2, IL5RA, ITCH, LEF1, LPAR1, NAT5, NFKBIA, NUMB, PDE6H, PIGO, RAP1A, RASGRF2, SETD2, SLIT1, SMC1B, SPI1, TAS2R42, TYROBP, VAV1, XCL1, PPP1R12A
Negative_4477	PML, AACCS, ADH4, ALDH6A1, ANAPC10, CD55, CDC45L, CMBL, CRLF2, DAAM1, DUSP4, FLT4, IAPP, IFNAR2, IFNK, IL13RA1, MLYCD, OR10G7, OR1A2, PAK7, PDGFB, PRKG1, RFX5, SMAD5, TGFB2, UBE2K, XCR1
Negative_4478	ACAT1, ACOT11, AOC2, B3GNT5, CTNNB1, GPD1L, OR10A2, PRKCE, SMAD4, SMURF1
Negative_4479	CDA, ID1, OSM, PDC, UBB, ABLIM2, ACO2, ALG3, AREG, CD79A, CD8B, CNTNAP2, CXCL11, CYP3A43, E2F2, GGT7, GLO1, GUCA1C, HCST, IDH3G, IFNA21, IKBKE, IMPDH2, LRAT, MYH15, NFATC4, OR10P1, OR1D5, ORC5L, PDGFB, PDX1, PHKA2, PHKG1, PI4KB, PIK3CA, SOCS5, ST3GAL5, SUL1E1, WBSR22, WNT9A, PRICKLE1
Negative_4480	AK2, GP6, ALG8, CBR1, CLDN5, FZD7, GALNTL1, IDH1, OR52I1, PIGW, PRPS1, TKTL1, WNT3
Negative_4481	MPZ, MUT, AXIN2, CREB5, DAPK2, DERA, EXT2, LARS2, MYH8, OR4D6, OR4S2, OR51B2, P2RX7, PI4KB, PKM2, RPS6, SHMT1, TNXB, TRIP10, VAV3, ATP6VOD1, GABARAPL1, MAPKAPK5
Negative_4482	ITK, TXK, ADRB3, ALAS1, AQP7, ARNT2, B3GNT2, CANT1, CD244, CDKN2D, CNTNAP2, CRHR1, DERA, DTX1, EARS2, FABP3, FARSB, FGD1, GCAT, GUCY2D, ITGB3, KAT2B, LPAR1, MAP4K2, MFNG, MKNK2, NOTCH3, NR1D1, NT5C1B, OR1D2, OR1I1, OR4C11, OR4X2, OR52E2, PDE3B, POLR1E, SMARCA5, SPP1, TBXAS1, TRAF1, TRPC1, TSTA3, UROS, WASL, WNT5B
Negative_4483	C8B, ACSL3, ADRA1D, BIRC2, CCND2, CDC27, CXCL2, EDAR, GALM, LIFR, NT5C1B, OR5K1, OR8U1, SFRP5, TAS2R14, TRDMT1, UPRT, VAMP2, MAP3K7IP2
Negative_4484	CDKN2D, CYP19A1, DUSP7, HTR5A, IRS4, RENBP, RFXAP, RPE65, SQLE
Negative_4485	AK7, GP9, NPY, PML, PRL, AADAC, AARS, ABAT, ACY1, ADH7, DUSP5, EPHA4, GCDH, HEXA, HSD17B1, HSD3B1, LEFTY2, MTFMT, MYH10, MYL7, NEGR1, NRG2, OR10H4, OR2A14, OR52I1, PPP1R3B, RHOD, SDC2, SH2D2A, TLR2, VTI1B, HLA-DRB5
Negative_4486	RPE, SHH, ACP1, APRT, CD27, CDC23, CFL1, CHRDL, CKS1B, CLDN10, GNA14, OR10G4, OR1G1, PAX8, SOCS5, ST3GAL4, TDO2, TICAM2, VASP, TNFRSF17

Negative_4487	BTK, CKM, INS, MYC, ACY1, AMPD1, ARPC5L, CCL3, CD14, COL5A1, CYP2C9, CYP2D6, DGKI, DRD5, GNG12, HHEX, HIP1, ICOS, OR1Q1, OR6Q1, P2RX3, PANK2, RASGRF1, RPIA, SHC4, STAT1, XCL2, XYLT1, ST6GALNAC5
Negative_4488	VCL, APRT, ASS1, EPHB3, GALNTL4, HTR2A, LAMB4, OR4A5, OR5R1, PDE1B
Negative_4489	PDC, SMO, TPR, AGXT, CCNG1, CDKN2A, CHRM1, CLDN14, CTNNB1, CTSL1, CYP3A43, DDX4, DERA, DNMT3L, DUSP16, FGF12, GAL3ST1, GALT, HTRA2, IFNA6, IFNAR2, IRAK4, IRS4, ITGA2, KIR2DL4, LHCGR, LLGL1, MS4A2, NPR2, OR11H6, OR1N2, OR4D11, OR51B4, OR8D2, PDGFRA, PIK3R2, POLR2D, PRSS3, PTDSS2, RAPGEF4, THBS3, TRAF6, UNC5B, WNT7B, YKT6, AASDHPPT, HLA-DQB1
Negative_4490	AR, GGH, LPL, RET, AKR1A1, BPGM, BST1, C9orf95, CACNG2, CFLAR, CHSY3, DAPK2, DHCR24, GALK2, HSD17B4, IDH3A, JAK1, LFNG, OR10X1, PDX1, PIAS1, PPP2CA, SMAD6, STX12, SUV39H1, TBXAS1
Negative_4491	VTN, BMP8A, CXCL11, HES1, HGSNAT, IL25, MTHFR, NFKB1B, OR13A1, OR1L4, OR5H2, SLC25A4, TM7SF2, UGCG, VAMP1
Negative_4492	AMH, AMT, GLS, KDR, ACVR1B, ADRBK2, ALOX5, AQP7, B3GAT1, BLVRA, C4BPB, CACNA1A, CAMK4, CYP2C19, CYP3A7, DDOST, DDX54, DUSP9, GLS2, ITGA9, LRRC4C, MAP2K4, NCF4, NEU3, ODC1, OR2A42, OR4C11, OR51B5, PARS2, PER1, PLA2G10, PPP2R2A, PSME1, PTGS1, RASGRF1, SMPD1, SPTAN1, SULT2A1, ULBP3, WNT3, XCL1, PAFAH1B2
Negative_4493	C9, GBA, GDA, CDC2, CTNNA1, CYFIP2, DIAPH1, LMO7, OR10A2, OR10C1, OR10G9, OR13J1, OR2C3, OR4D1, OR7C2, PDE3A, PDX1, PLAU, PPARG, PTDSS2, PTGIS, PTGS2, RASSF5, TGFB1, TRPM5, TXNDC12, PLA2G12B, SERPINE1, TNFRSF13B
Negative_4494	F2R, MUT, AGXT, ALG1, ALG13, ATN1, ATP5G1, BIRC2, BMP2, CYP1A2, FADD, GNAL, IKBKKG, LAMA3, MLYCD, NSDHL, ONECUT1, OR5L1, OR6C75, OR8D2, PDGFC, PIAS1, POLR3G, POLR3K, PPID, SEMA3B, SESN2, SHC3, SPRY2, ST8SIA1, VARS, ATP6V1C2
Negative_4495	AUH, IL5, MTR, AGRP, ALPPL2, AMHR2, APOC3, ASAH1, ATP5B, BUB3, CCNB2, CHST12, DDX18, DGAT1, ENO3, EREG, GRM1, GRM5, GSK3B, HNF4G, IL19, IMPDH2, ITGB6, KIR2DL2, MAPK10, MECR, NCOR2, NUDT9, OR10T2, OR2T12, OR52E8, OR5P3, POLR3B, PPP2R2C, PTPN11, PTPRC, STMN1, SULT1A1, HLA-DRB3
Negative_4496	UBB, CCR8, DHX58, GADD45A, ITCH, MALT1, NTF3, OGDHL, OR7C2, PTPRF, RFW2, TAS2R48, CSNK1A1L
Negative_4497	CLDN8, CSNK1A1, FGF12, RALB, SPHK1
Negative_4498	ATP2A1, CD80, CD8A, CLDN14, COQ5, CXCL6, CXCR5, GCNT2, GPX7, GRAP2, GSTM3, IL8RA, JAM3, LAP3, MAML3, NADK, NEU4, OR2T3, OR51B4, PTCRA, SCP2, SELL, STX3, ZBTB16
Negative_4499	CD4, F2R, GPT, RPE, AGPAT4, ALDH5A1, ATP5F1, AXIN1, CACNG8, CCL21, CLDN20, COL5A1, CYBA, DDX47, DUSP8, EPHB4, HTRA2, IGF1R, LAMB2, MAML3, OCRL, OR5L2, P4HA2, PANK4, PDE8A, RAB5A, RAPGEF4, SOCS3, TLN1, TRAF2, ULBP3, WASF3
Negative_4500	AR, GK, GP9, AASDH, ACADM, ACOT11, ALDH1B1, ARPC4, B4GALT3, CALML5, CASK, CAV3, CCNE1, CD274, COL4A6, CSH1, EFNB2, ENO1, FGF1, FMO5, GCNT4, GLI2, IARS, IGFBP3, IL12RB2, LYPLA2, MCCC2, MTHFD1, NADSYN1, NAGLU, NCAM2, NME4, ODC1, OR10K2, OR2H1, P4HA2, PLEKHA8, RPSA, STAT5B, STX12, TSNARE1, YWHAB, TNFRSF10B
Negative_4501	MPL, AASS, ACVRL1, ADCY2, ATP5I, BPGM, CACNA1C, COASY, DDX50, GNG12, HCST, NFATC2, OR10A5, OR10R2, OR14J1, OR56A4, OR6X1, PCCB, PIGS, POLR2K, PRKG2, PYCR2, RPRM, STK11, THY1, TXNDC12, TYMP, WNT10A, XYLT1
Negative_4502	IHH, PRL, ADSL, BET1, C3orf10, CACNB1, CES1, CLDN19, COQ7, CSDA, CXCL2, FADS2, FRAT1, FZD7, GMPR, IFNK, MAP4K2, NT5C2, NT5C3, OR8B12, OR9A4, PAFAH2, PLA2G4A, POLA2, POLR2I, PPBP, PPM1B, PTPRF, SMARCA2, TAS2R41, TNFRSF13B

Negative_4503	SHH, AGXT, CCKAR, CHRNA7, CPT1B, CSH1, DUSP3, FTH1, GNRH1, HCST, HSD3 B7, HTR6, IL28A, ITGA8, KIR3DL1, LDHAL6A, LRRC4C, NADK, OR10G4, OR1L1, OR4C46, OR5AC2, PMM2, PPM1A, PTPRB, PYCR1, RDH16, RPE65, SETD1B, S TX6, THBS2, TKTL2, TNFSF18, TSTA3, UGT8
Negative_4504	B4GALT7, CD86, FARSA, ITPK1, PIGS, SOCS7, VASP
Negative_4505	CGN, GGH, JUN, LTB, MSN, OAT, SHH, ARPC3, ATP5J, BAAT, BCMO1, BNIP1, CA CNA1I, CMBL, CSNK2A1, DGAT1, E2F2, EARS2, EP300, FBXW11, GUCA1A, HAD HA, HDAC2, HPSE2, INSR, MAOB, MYH7, NODAL, OR11H6, OR51B2, OR51B5, P DE11A, PIGB, PIP5K1A, RDH8, SPP1, TNFRSF4, TOLLIP, TUBB, UGT1A10, WN T9A, MAP3K7IP2
Negative_4506	FGG, ACHE, ATP5H, CYFIP2, FZD3, GNA12, HMGCL, HSP90B1, IL3RA, MGAT2, OR10AG1, OR13C8, PIGL, RUVBL1, TAS2R3, THBS3, WNT10B
Negative_4507	SI, VTN, ACPP, ALG1, BUB1, CALML3, CCNE1, CYP2C19, DHCR7, ENO1, FSHB, FZD6, G6PC, GADD45B, GADD45G, HLA-F, LIPC, MAML1, OR10J3, OR2T5, OR52I1, PANK2, PLXNB2, PRODH2, RDH5, S ULT1A1, TNFSF11, WASF2
Negative_4508	AK5, IL9, AKR1C4, BAAT, CHR, CLCA4, DHCR7, DIAPH3, ENTPD3, EPHA3, EP HA6, FOSL1, FTH1, GLUD1, HAP1, ICAM1, IFNA14, IL1R1, ISYNA1, JAK3, KC NQ1, MAPK14, MTHFD2, NCAM1, OR10A2, OR10AD1, OR1L3, OR2T1, OR51B4, O R6C3, OSMR, PSEN1, RASGRP2, SDC3, TAP1, TGFB1, WNT9B, ATP6V0A2, HSP9 0AA1, MAPK8IP3, PDCD1LG2
Negative_4509	AKR1C4, CCL8, GUCY2D, IFNGR1, IL18RAP, ITGB3, NCAM2, OR6X1, PI4KB, P LCB3, PLXNB3, POLR3D, PRKAB2
Negative_4510	GP6, MAG, AASS, ACVRL1, ADSL, ATP2A3, BCAT2, CD82, CMAS, COL1A1, DAPK 3, DGKD, DHODH, EPAS1, GPT2, GPX7, HSPA1B, LFNG, OR10H4, PIGV, PPP2CA , RFX5, RRM2B, SOCS1, SPAM1, SQLE, TJP2, TNFSF14, UPP1, USE1, WNT16, W NT4, MAPK8IP1
Negative_4511	C8B, PGD, ADH5, AKR1B10, AMPD1, ASMT, C7orf16, CACNA1D, CCNB2, CLDN6 , CXCL16, CYP2C18, FDFT1, FGF2, FGF4, GPD2, GPX7, HEXB, IFNB1, OR3A1, OR4C6, OR51A7, OR6C70, PEMT, PHGDH, SCLY, SREBF1, VAMP2
Negative_4512	AK2, AUH, KHK, ALAD, B4GALT2, BAAT, CDKN2B, CMAS, DCXR, DDX47, DIAPH3 , DMGDH, DUSP7, G6PD, GNAI1, GSTM1, HBEGF, IL11RA, IL20RB, METTL6, NC R1, NEFM, NFATC2, NRCAM, OR2A4, OR56A4, PLCD4, PLCG1, RETSAT, RPS6KB 2, SMPD1, SMURF1, VARS, WBSCR22, YARS2, PLA2G12A, SERPINC1
Negative_4513	CD6, ADH7, ALDH1A2, ALDH1L1, ALG12, CFL2, CISH, CLCA4, CXCL11, DDX54 , EPHA5, FM05, GOT2, GPD1, IMPA1, IRF9, LAMC3, LIPT1, MALT1, MAPK7, MG ST1, MKNK1, MYH10, NUMBL, OR13C3, OR2M2, OR52B6, OR8U1, ORC4L, PDE3B , PDXP, RAP1B, RAPGEF2, STX4, TCF7L2, UPP1, WNT9A, ATP6V0D1, ATP6V1E 2
Negative_4514	CDC14B, DAAM2, ENO1, FADD, GALK2, GLS2, GUCY1B3, IL7R, ITGA4, NTRK1, OLAH, OR4F4, OR4X1, OR9K2, PCYT2, PDE3B, PFN1, PIGQ, PLCB4, POLE4, SE MA7A, UGT2B4, WNT5A, HSP90AB1, SERPIND1, TNFRSF18
Negative_4515	CP, ACMSD, CD40, DLL4, EFNB3, GRLF1, IRF7, KLK3, NAMPT, OR12D3, PCK1, PIAS1, PTPN6, SLC27A5, TAS2R40, TUBB3, MAP3K7IP1
Negative_4516	CFI, CLDN9, CYCS, IL3RA, MAML1, MAP3K7IP1
Negative_4517	CEL, SDS, VTN, ADRBK2, AREG, CACNB4, ENTPD8, FZD5, HMOX2, HTR5A, IL9R , LARS2, MDH1, MGAT3, OR1S1, PIK3C2B, PRKCE, RPS6KA6, ST3GAL1, SULT2 A1, TBXA2R, VAV1, WNT2
Negative_4518	CKM, DDO, DHH, LTB, ACSL1, CALML3, CCL3, CDC27, CPT1A, CREB1, EIF4B, F GF9, GSTT1, HTR6, ITPKB, LTA4H, MAP3K1, MAT1A, MAT2B, NRG1, OR2M2, OR 2T11, OR4B1, OR52A1, PARVB, PGLS, PI4KB, PIK3CG, POLR2B, PPP1R3C, PT DSS1, TAS2R10, TBXAS1, WNT9B, CACNA2D1, GABARAPL1, HLA-DRB3, PAFAH1B1



Negative_4519	AK1, KDR, TPO, AGTR1, ATP5J, B3GALT6, CD3E, CDC25A, CLDN14, LCMT1, OR13G1, OR1N2, OR2A4, PLD2, PTPRB, SLC2A4, SMARCA2, STX2, TP53, WEE1
Negative_4520	AR, IDI1, ITGB4, PLK1
Negative_4521	ABO, TK2, TPO, ACSM3, ALG10B, CACNG4, CD19, CSNK2A1, CTSL1, CXCR5, CYP2A6, FUT4, GP1BB, ITGA2B, KIR2DL3, MAP2K7, MAPK12, MYL7, OR1F1, OR4C16, PFKFB2, PRIM1, RPN2, SEMA4A, SGPP1, SPCS3, UAP1, WNT16, PPP1R12A
Negative_4522	WAS, ALDH3B2, CLCF1, CSF1R, DIAPH1, FZR1, GNPAT1, HAGHL, IL12B, IL1A, IL2RB, ITGAL, MGAT1, OR5H2, PAX4, PDCD1, PDE3A, PDK1, PIGH, PPCS, PRKAB2, PSME3, PTGS2, TUBA3C
Negative_4523	IL3, MSN, ARHGEF2, CCL20, CCR8, CDC6, CDIPT, CRLS1, DRD5, DUSP7, FCGR3B, FGF3, FMO5, HSP90B1, OR10G3, OR10K1, PAK2, PIK3CG, RALBP1, RPS6KA5, SHC2, SORBS1, SV2A, WNT5A, ATP6V1C1
Negative_4524	ASL, CFD, ADH5, BMP2, BMP5, CDK2, DDX51, DHRS9, DIAPH1, FCGR3B, FZD5, HARS2, KIR2DL1, LIFR, NKD1, OR2D2, OR5P3, ORC2L, PKLR, SLC27A5, TAS2R16, TRADD, TNFRSF10C
Negative_4525	CAT, DLD, ABCC8, ABLIM3, ACOT12, ACTA2, ANPEP, AOX1, AREG, BAI1, BPGM, BUB3, CD48, CLDN4, CLTB, DGKA, E2F4, EFNA5, EGLN1, EPB41L1, FGF20, FPGS, GALNT3, GALNTL5, GGT7, GNPAT1, GSTP1, GUCY1A3, HNF1A, MAML2, OR2T11, OR51L1, OR5B17, OR8H2, PGAM4, PIGF, PLA2G2D, PPARG, PTGES2, PTK2, RBKS, SETD2, TRAF2, TUBA1A, ULBP1, TNFRSF14
Negative_4526	ABO, C6, MUT, ACTA1, ADORA2A, DPAGT1, ERBB3, IL2ORA, ITGB2, MAP3K13, NUDT2, OR13C8, PFKFB2, PFKL, PLOD3, PNPT1, SMPD2, ST6GALNAC3
Negative_4527	ATP6AP1, CXCL1, FLT3LG, GRIA2, IFNW1, JAK2, KIR2DS5, PTPN7, SETD1A, SLC27A4, SMAD5, STX2
Negative_4528	CRK, ADH7, ATP5D, BMPR2, CACNG4, CAMK2B, CDC23, CES7, CREB3L2, CXCL12, DHRS4, EDNRB, EPHA7, FZD9, IL20, IL22, ITGA10, KARS, KLRC2, L1CAM, MGAT4A, NFYC, NRG2, OR52H1, OR6C2, PDGFRA, PGK2, PPP2R1A, PRKAG2, PTGES2, PTPRB, SMURF1, TIAM2, UCKL1, ATP6VOA4, ATP6V1C2
Negative_4529	CNTFR, DOT1L, RASGRP4
Negative_4530	ATM, DBH, SMS, ACACB, ADRA1A, AGPAT4, ALDH5A1, ARG1, CLDN15, CLDN18, DRD1, EFNB2, EGFR, ENTPD1, EPHA2, FRAP1, IARS, IRS4, MGAT5B, OR1A2, OR2T5, ORC1L, ORC3L, PDE7B, PRIM2, PRKCI, PRKCQ, PTCH2, RPS6KA6, TP73, TPI1, UPB1, WIF1, HLA-DQA2, MAPK8IP2
Negative_4531	BTK, F12, ATP5G2, C1QB, DBF4, EPHB1, FMO2, HLA-G, IL18, IL28A, MAPK3, MYH7B, OR10G9, OR10J1, POLR1B, POLR2K, PRKCD, RND1, TJP1, TNFSF10, TRADD, UGT2B7, GABARAPL1, ST6GALNAC4
Negative_4532	EBP, GP9, TK1, ACSL5, ADH7, ADSS, AGMAT, BLVRA, CACNG6, CCL16, CDKN1B, CREB3L3, CSNK1G2, DTX3, GALM, GDF6, GLI2, GRIN2D, GSTA1, IL23R, ITPKA, KLRC4, LIPF, LPAR1, NGEF, OR4N4, OR51F2, OR52B4, OR5F1, OR7A5, PARS2, SORBS1, SREBF1, SYNJ2, TAS2R41, TNFSF9, TRMT11, ULBP3
Negative_4533	ACVR1, BDH1, IL17RA, MAN1A2, NFKBIE, OR4A15, UNC5D, WNT7A
Negative_4534	CGA, DUT, FH, GCK, TNN, TPO, ADH5, AGTR1, ALG10B, BLNK, CCL22, CCR2, CD40LG, CDC6, CHPT1, COL2A1, CSF3R, CSNK2A1, CTPS, E2F5, GATM, GBE1, GIT1, GZMB, IDH3A, IL3RA, ITGA4, MTFMT, OR52D1, PDE8A, PIP4K2C, POLE, SFRP1, SPI1, SUV39H2, TACR3, UGT2B7, WASF3, TNFRSF17
Negative_4535	RPE, AGPAT6, GGT6, GZMB, OR7G2, P2RX6, PTGDS, PYCRL, TGFB3, WNT1, XYL2
Negative_4536	RPE, ALDH1B1, CCL7, CD274, CNGB1, CTNND1, EXTL2, GNPAT, GRM1, HNMT, IL6R, OR52E2, PRKCI, TLN2, MAPK8IP1
Negative_4537	GLA, GNE, PGD, ATP5G2, ATP6V1H, BIRC5, CDC2, CMAS, COL11A1, COL5A2, COX15, CXXC4, DAG1, DUSP1, GNB3, HHIP, IL12RB1, IL12RB2, IL19, LRAT, MAPK7, MITF, MTMR1, NCOR2, NME6, OR6C3, PGAM4, PHGDH, POLR2C, PON1, STAM2, WWP2, SUV420H2

Negative_4538	ACHE, ACSL1, DKK4, ORC5L, PLA2G6, PPP2R1A, SC4MOL, AASDHPPT
Negative_4539	F2, SRF, AARS, ACTC1, AGTR1, CDKN1C, CREB3, DDX4, FABP3, FASLG, GLUD1, HLA- DRA, IDH3G, IGFBP3, IL23R, LILRB3, MLLT4, NFKBIA, OR13A1, OR2B6, OR4N5, P2RX3, PLK1, PPM1B, PRKCQ, RDH11, SOS2, SUCLG1, TAS1R3, TIAM1, TP53I3, XCR1, MAPK8IP1
Negative_4540	TXK, ADCY7, BCMO1, BMP7, CCNB3, CCNH, CD8B, CDC42, CPT2, CTF1, CUL1, CYP2A6, DLL3, EFN1, ELK1, GDF5, GMPR2, HSD11B1, IL1B, KIR2DL3, MAP3K11, NAGK, OR6C1, OR8K1, PLA2G5, PPP2R1B, SH2D1B, SHC1, UCK1, MAPK8IP1, TNFRSF14
Negative_4541	ADH4, ATP4A, CACNA1I, CACNG8, CCR4, CEBPA, CHPT1, COMT, CRKL, CSNK1G3, CXCR5, CYP17A1, CYP2A7, DGAT2, DHRS9, DLST, DUSP1, DVL1, EPAS1, EPB41, FGF1, FGF10, FZD4, GRM5, HEXB, IKBKE, IMPDH1, JAK3, LIMK1, MDM2, MFNG, NFATC1, OR10A3, OR5H2, OR6C75, PERP, PIK3R1, POLR2D, SETD8, STX18, XYLT1, MAPK8IP3
Negative_4542	DBT, ADSS, ASS1, CLTC, DGAT1, DUSP8, GALNTL4, GUCY1A3, MYH7, NTSR1, OR2C1, OR8D2, OR8J1, OR9A4, PLAUR, PLOD1, RUVBL1, STAM, UGT2B10, ARHGEF12
Negative_4543	APP, ACSS2, B3GAT1, DPYD, FGF12, GRB2, HDAC2, HIBCH, IL18R1, KAT2B, KCNJ11, MAML3, NRP1, OR5A2, OR7C2, PRPH2, THBS1, THBS2
Negative_4544	AGL, ANAPC5, ARHGFE2, C3orf10, CASP7, CHEK1, CREB3L2, CYP21A2, GDF7, ITGA11, ITGA2B, MMP14, NARS2, NRXN1, OR2M7, OR4C12, OR6S1, SORD
Negative_4545	C3, FGG, SFN, TK2, ACMSD, ACPT, ATP50, CACNG1, CBR3, CCL1, CDC45L, CDKN2C, CHKB, CPOX, DGKH, DHRS4, EPB41L1, GLG1, HLA- C, ITGA2, LYZL1, MAP3K11, NADSYN1, NARS, NAT5, OPLAH, OR51E1, OR51G2, OR8D1, PARD3, PIK3R3, PRKAR1A, PRKCA, RAF1, RALB, RBL2, RIPK1, SEMA4D, SLC2A2, SPRED2, SULT1A2, SULT1A4, TJP1, TSHB, UGT2B17, WEE1, YES1
Negative_4546	ITK, UBC, ACOX3, ADCY2, AOC3, APOC3, BBC3, CREB3L2, CXCL10, CYP26B1, FCGR3A, FGF18, GALM, GDF5, GSTM4, JAK2, NOS3, OR1E1, OR8K3, PCK1, PLA2G2A, PPP2R2C, PRKAB2, SEMA7A, WNT3A, SERPINA5
Negative_4547	GPI, HPD, ITK, B3GNT3, B4GALT4, FDPS, OR52N2, PDGFB
Negative_4548	ALG9, AMHR2, COL4A2, HLA- C, IKBKB, INPP5E, LTBP1, POLE4, RASA2, RASGRP3, SULT1E1, HLA-DQB1
Negative_4549	HGF, TNN, ACTN4, ADCY10, ADRB3, ALOX5, BPNT1, BRAF, C1GALT1, CACNB2, CALML3, CCNA2, CLCF1, CLDN15, CLTA, CRY1, DGUOK, DHDDS, EHHADH, EPHA8, FMO3, GCLM, HRH2, IFIH1, IFNK, MAP2K1, MAP3K11, MPDZ, NT5C1B, OR10H5, OR2D2, OR2Y1, OR7C2, OR8I2, PCYT2, PDE6G, POLE4, POLR1D, PRODH, PTGER3, STAT5A, SULT1A2, TAS2R38, TAS2R60, TP53I3, TRAF3, TUBB1, UROC1
Negative_4550	ID1, ADCY4, ARPC5L, B4GALT5, CACNA1B, CLCA4, FBP1, FCGR3A, FGF9, FOXO1, GNA13, KCNJ11, LEFTY2, MAD2L2, OR2T34, PFKFB3, PLCD1, POLE4, TBL1Y, TNFSF11
Negative_4551	MVD, CFTR, CLDN6, GABARAP, GALM, NLGN3
Negative_4552	AUH, ME2, SRC, ACOX1, ALG10, AOX1, APRT, ARRB1, BPNT1, CASP6, CCL16, CD59, COASY, CREB3L3, DPYD, EFNA3, ENO2, ENPP3, EXTL3, GCLC, HRH1, ICA M1, IFT57, IL7R, NT5C2, OR10AG1, OR8I2, PPM1A, PPP1CC, PPP2R5B, RAC1, SAT2, SEMA4C, SLC12A2, TGFB2, TGFBR1, TUBB2B, VTI1B, WBSR22, TNFRSF6B
Negative_4553	C3, MPL, SDS, BCMO1, CDC7, CYP2F1, DTX3L, EFNA5, EPHA8, FGF22, GAL3ST1, GALE, GLI3, GNMT, HDAC2, HSPA1B, KITLG, LILRB3, MAGI2, MGAT5, OR5M9, PFAS, PLA2G6, POLR1A, PPP1R3B, PSEN2, UPB1, WASL, WHSC1, ATP6VOA1

Negative_4554	BACE2, BRAF, BUB1, CACNG4, CARS, CCL2, CDH5, CDKN2C, CFLAR, CHPF, CNTF, CRY2, CXCR5, CYP11B2, EFNA1, ENTPD7, FUT1, HARS, HTR5A, IL4R, ISYN A1, ITPKB, KIR2DL1, LTBR, NCR2, NEU3, NOTCH3, NRG2, OR2M2, OR5J2, OR6 C70, OXSM, PIAS2, PIGB, PIGF, POLR2D, PPAT, PPP1R1A, PRSS2, PTPN1, SC 4MOL, SDC1, SGPP1, SIGLEC1, STK4, UBE2L6, YWHAH
Negative_4555	ADC, ATP50, CRKL, GYS2, MYH11, OR5H2, PMM1, POMC
Negative_4556	IL4, ACHE, ADCY4, FGD1, MPP5, NUDT5, NUMB, OR5P3, SPAM1, SULT1E1, TYM P, UPP2
Negative_4557	BCR, PLG, ACTB, AHCY, BLVRA, BMP5, CARS2, CAV2, CD38, CDKN2C, CSF2RB, CXCL13, DPM1, EDNRA, EREG, GMPR, HMGCR, IDI1, MAN1A2, MTMR2, NR1D1, O R1D2, OR6A2, OR6C6, ORC1L, PHPT1, PLCD1, PPA2, PRKACG, PRKCE, PTCH2, RCHY1, SGPP1, ST3GAL6, SUCLG1, TAS2R9, VANGL1, ST6GALNAC3, TNFRSF1 A
Negative_4558	PXN, ACTA1, ALG12, ASCC3, CACNA1C, CCND1, CXCL16, DAAM1, DNMT3L, DUS P9, FCGR3A, GPD2, MPDZ, MPZL1, MYH15, OR13C5, OR51A4, OR51E2, OR56A1 , PDE8A, RFXAP, SMURF2, STK4, VEGFA
Negative_4559	AGK, BAD, TFG, ACACB, ACMSD, AGMAT, AGXT2, ATIC, ATP5B, CHDH, CSF2RA, DGUOK, DPYSL2, FGF21, GDF5, GLI2, GNAL, HARS2, HMGCS2, HTR6, LDHAL6B , NEFL, OR2C3, OR51A7, OR56B4, OR6M1, P2RX5, PAPSS2, PDGFA, PGAP1, PI GM, PLCG1, PPP1R3A, PPP2R5A, PTGS1, SIPA1, TNFSF14, UGT2B7, VNN1, AT P6V0A4, SERPINF2
Negative_4560	CHST11, G6PC2, NCAM2, OR4K14
Negative_4561	CAD, ADCY10, ARNT, ECHS1, FMO2, GART, HBEGF, IFNAR2, IFNGR1, MICA, OR 5C1, PFKFB3, RUNX1T1, TIRAP, TUBA8, WHSC1, TNFRSF12A
Negative_4562	DRD2, GALNT14, NOS1, NUDT5, SPRY4
Negative_4563	ALOX15B, ATP6V1D, MTAP, SMAD1, TNFRSF13B
Negative_4564	CKM, FUK, SYK, ADCY5, AGXT, B4GALT1, BPNT1, CCNG2, CHIT1, CHST11, CLD N1, COL1A2, COL6A2, CRB3, CTNNB1, CTTN, DOT1L, EHMT2, FZD9, GLS2, GLU D2, GNA12, GNG3, LIPT1, MAP3K12, OR2T2, OR51B5, PDE7A, PIK3CB, PNPLA 3, POLR2J, PPP1R3A, PRKACG, PTCH1, PTPRZ1, RPS6KA6, SULT2B1, TRPM5, TSNARE1, WASF2, WNT5A, YWHAH, HLA-DPA1
Negative_4565	KHK, TYR, ACOT12, AGMAT, CAV2, CAV3, CCNH, CSNK1G3, DUSP3, FGF14, GST M5, HEXA, HEXB, MGLL, NEFL, NME4, NNMT, OR10Z1, OR11H6, OR3A2, PARVA, PCCB, PFKM, PHKB, POLR2F, PTPRZ1, RASGRF2, RXRB, ST8SIA5, TRHR, UGP2
Negative_4566	ILK, SMO, ABLIM2, ACP1, ACSM5, ADCY3, AKT1, ARSA, CD14, CDH5, CDS1, CF L1, CHPF, CLDN22, CPT1A, CSNK1G3, EIF4E2, EPHA5, FCER1G, GALNT6, GCH 1, GCNT4, GGT1, GSTM5, MLLT4, NKD2, OR13C8, OR2T6, OR4B1, OR4S1, OR52 E2, OR7G2, PCNA, PIAS3, PLA2G2D, PTGIS, PVRL2, RASGRP4, RBL1, RCHY1, ROCK1, SH2D1B, STK36, VANGL1, WNT1, ATP6V1B2, MAPKAPK3
Negative_4567	C4B, C8B, PGF, ACSS2, AMPD2, APRT, ATG7, BST1, CD46, CFL2, CHEK2, CRHR 1, MGAM, NFYA, NRAS, OR1C1, OR51V1, OR8D2, PDXP, PPP2R5E, VAV2
Negative_4568	C3, FST, ID3, ABAT, B3GNT5, BBC3, BCL2L1, CDC25C, CDH15, CSNK1D, CXCL 5, EPRS, FGF1, FMO5, FZD4, GADD45G, GALNT12, GANAB, HEMK1, IL10RA, IN HBC, ITGB4, MAP3K1, MAP3K3, MAPK10, MPP5, NADK, OR2T6, OR5K1, OXCT2, PFKFB3, PIGF, POLR2L, PPM1A, PRKAB1, PTK2, SGPP2, TBXA2R, TGFB1, UG T2B17, WNT1, WNT3, TNFRSF1A
Negative_4569	CD4, FYN, ACYP1, B3GNT4, CDK6, CLDN7, DHRS4L2, DPYD, ENO3, EXTL2, GAL NT11, GALNT2, GRM5, LTC4S, MAP4K4, OR10G3, OR10G7, OR13A1, OR4C15, O R4Q3, OR4S1, OR5H6, OR7D2, PDE1A, PIP5K1B, POLR3A, PRKAR1A, PSENE1, SEMA3E, SLC27A5, SOCS7, STAT6, STX4, TCF7L2, TIAM1, TNFRSF8, WNT5B, ST6GALNAC5
Negative_4570	NGF, AOX1, BMP8B, CTPS2, FGFR1, GADD45B, MYLK3, NR5A2, PHKA1, PLCD3, POLR3K, WNT2

Negative_4571	CBL, CGN, ACTN4, ADORA2A, ALOX5, CAMKK2, CASP6, CAV3, CCND1, CD48, CD C27, CLDN15, DPYS, DUSP8, FGFR2, HIBADH, HPSE2, JAM3, NUMBL, OR52N4, OR5AP2, PLA2G10, POLR1D, POLR3H, PPP2R2C, PTK2, RALB, SOCS1, TYK2, V AV2
Negative_4572	ABO, ADO, FGG, IL5, ABI2, AKR1C3, ALDOA, ALG10B, ALG13, ALPI, ALPL, BH MT, BPGM, CDH4, CFL2, CNTFR, CRY2, CTSB, DLL3, EGLN1, EXT2, GNG3, GPD1 L, GUSB, IDUA, IL15RA, IL28B, IRS2, KARS, NME7, NOTCH3, NTNG1, OR2Y1, OR51L1, OR5A1, P2RX1, PAK2, PLCE1, PRODH, SC5DL, SELL, TAS2R13, WNT7 A, TNFRSF12A
Negative_4573	C8A, AGTR1, ALAD, APC2, ATP50, BCAT2, CANT1, CCL23, CLDN5, CYP3A43, D GKQ, DVL3, F2RL1, FLAD1, GRIA1, GSTM2, IPPK, LAMA4, MAP3K5, MTMR2, NC R1, NFAT5, NFKBIA, OR10A2, OR2B2, OR4A16, PFN1, PPARA, PPARD, PPP3R2 , SEMA4D, SEPHS1, SMPD2, TBXAS1, TPMT, YWHAE, SERPINC1, TNFRSF6B
Negative_4574	LSS, RFK, ADH7, AGPAT2, ALDH3A2, ALG10B, BIRC5, BUB3, CASP7, CCR7, CD 79A, CDC23, CDC26, CHUK, CRY2, CXCL13, CYP1B1, ELK1, ENTPD7, EXTL2, G LS2, IL1R2, IL20RB, IL6ST, NAMPT, NAT6, NRAS, OR13C8, OR52N1, OR8D4, OR8H3, P2RX6, PIGM, PIK3CD, PLA2G2F, PLOD1, POLD3, POLR2D, SELE, SPT AN1, STX7, TGFB2, TICAM2, WNT16, WNT7B
Negative_4575	GLS2, PRKCD, YWHAB
Negative_4576	IL7, ARPC2, ATP2A2, BCAT2, CREB3L4, DNMT3L, GALNTL5, METTL2B, PIK3R 5, PRKCA, RHOQ, RND1, VAMP1, VARS
Negative_4577	ABL1, ACADS, ACHE, ACSM5, ACTC1, ACTN1, APRT, ATP4A, C5AR1, CAV2, CPT 1C, CXCL11, CYP26A1, CYP2C9, FPGS, GYS1, IL13RA1, IL6ST, KIR2DL1, LA P3, LDHA, LIFR, LTBR, MAML2, MAP3K6, MYH15, NCOR1, OR10A4, OR2A42, OR 2B11, OR4S2, OR8U1, PIGM, POLR2B, PPP3CB, PRDX6, ROBO1, SEMA3B, ST3G AL3, ST8SIA1, STK3, THBS3, UGT8, ULK2, HLA-DQB1, TNFRSF13C
Negative_4578	C7, IL4, SMO, ABLIM1, ACAT2, ALOX15, ANPEP, B4GALT7, BIRC5, CACNG8, C DK7, CREB5, DBF4, DHRS3, EIF4E, ETS1, FGF18, FLAD1, FZD3, GSTM4, IL1R 2, ITCH, MAP3K4, NR5A2, OR13D1, OR2S2, OR52I2, OR5P2, OR6B2, OR6C70, OR6C76, POLR1A, PON1, RPS6KA5, SFRP1, SOCS3, SPTLC1, TBL1XR1, WNT10 A, AASDHPPT, PNLIPRP2, SUV420H2
Negative_4579	BACE2, DUSP9, FABP1, FZD7, IL17RB, PANK3, PFKP, PNPLA4, SHC4, PPARGC 1A
Negative_4580	CFI, ALS2, CYP26C1, GPT2, HRH1, LAMB3, NKX6- 1, NRG2, STX7, TXNDC12, YARS
Negative_4581	ADA, AK5, CBS, NNT, SYK, TYR, ACAT2, ACSM3, ADCY3, ALDH9A1, ARD1A, AVP R1B, BDKRB1, C9orf95, CACNA1C, CAMK2A, CDC25C, CMBL, COL1A1, CTSS, C YP2B6, CYP3A4, EPHX2, GDF5, IFNA8, IL18, IL20RA, INHBC, JAG2, LARS2, LIPE, MAP2K3, MYH9, NPR1, NR1H3, OR10K2, OR2V2, OR4D5, OR4K5, OR5F1, OR6C3, PANK1, PFN1, PGK1, TUBB4, ULBP1
Negative_4582	F7, MET, PML, SP1, ADRB3, ARHGEF6, B3GAT3, CACNB2, CCL14, CD22, CDH5, CHRM2, CLDN22, CSNK1G3, ENO2, EPHA1, FGFR4, FUT4, FZD7, GJA1, HIBCH, IBSP, IL20RA, MDH1, MPZL1, MYH14, NADK, NRXN2, OR13C8, OR4B1, OR4F15 , OR5M3, OR8K3, POLE4, PPAT, PTGES, RAD51, SMAD7, TKTL2, TUBA3C, WWP1 , XCL1, SERPIND1
Negative_4583	ACLY, CDH5, CDKN2B, DPM1, MAN1C1, MRAS, STK11, TLN1, VANGL2
Negative_4584	GSS, ALG1, ALOX15B, BCAT1, C1QC, C5AR1, CDH15, CFLAR, CPS1, CXCL10, E NTPD2, EPB41L1, EPHB6, FZD8, GCNT3, GDF7, HMGCR, IGF1R, MGAT5B, NNMT , OR13C8, OR1E1, OR52J3, OXTR, PAX4, PFKL, PLA2G6, PYGB, RASGRP3, REL A, SARDH, SIPA1, SLC25A5, SPRY1, STK3, TAP1, TAS2R16, TLR3, VEGFA, B4 GALNT1, SERPINA5, SUV420H2
Negative_4585	ADRA1D, CSF2, EPHA8, GLO1, GNAT3, KLRK1, LGMN, MYH8, PTEN, RHOA

Negative_4586	AGL, MUT, ACAT2, ADCY4, B3GNT4, B4GALT6, BUB1, CLDN1, FASLG, FGF11, GNA11, GNAL, HMGCS1, METTL2B, OR1A2, OXSM, POLD4, PPP1R3A, RASGRF2, SEMA4F, SLC25A4, TGFB1
Negative_4587	APOA5, BDKRB2, CDC42, CYP8B1, GZMB, PLCB2, TJP2, ZAP70
Negative_4588	DCC, TNN, TPR, VTN, ACACB, AC02, CKMT2, COMP, GALNT2, GDF5, GSTT1, IFNG, KLRC1, MCM4, MYH8, NT5C2, OR4S1, OR52K1, OR6C1, OR9Q2, PANK2, PGLS, PLA1A, PLTP, POLR3K, PTGDS, RALA, SDC3, TAS2R50, TRAF2, VCAM1, VNN1, XYLT2, ZMAT3, HLA-DRB5, ST6GALNAC1
Negative_4589	IL6, ACYP1, CMBL, CTNNA1, CXCL10, EHMT1, ITGA5, LDHC, MAOB, OR9A2, PRKCE, TM7SF2, WNT9B
Negative_4590	CRK, LEP, TNC, ADRA1D, ATP6VOC, B4GALT1, CD40LG, CD70, ERO1L, GAMT, IL17RB, PGM1, PIK3R2, RALB, RPS6KB1, RRAS, RRAS2, SLC9A1, SMARCA2, TFDP1, TRPM5, TYMP, MAP3K7IP2
Negative_4591	PRL, ARD1A, ASIP, ATP6AP1, CD47, CD70, CHPT1, CLDN2, CNTNAP2, CSH1, CXCL10, DLL1, F2RL3, FDPS, GAPDH, GFAP, GNAI1, HSD3B2, ICOSLG, IFIH1, LDHA, MAP2K2, MYH15, NPR2, NRG3, NUDT9, OR1J2, OR2A4, OR2F1, OR2T3, OR4F4, PANK2, PDGFA, PIPOX, POLE4, PON2, PPP2R5B, RALB, RALGDS, RPE65, SHC4, STX16, TAS2R4, TYMP, GABARAPL2, MAP3K7IP2, TNFRSF12A
Negative_4592	RET, ALDH1B1, ARSE, CACNG7, CRY2, ENTPD7, FMO4, FRAP1, IQGAP3, LIPC, LTB4R2, MAP2K5, MIOX, MKNK1, NFATC2, OLR1, OR10G2, OR4S1, OR52K2, OR5M8, OR6N1, P2RX3, PANK1, PFN2, PIGV, POLR3K, PPAP2B, PRPS1, QARS, RRAS, TAS2R13, TICAM2, TUBAL3, WNT7A
Negative_4593	PVR, WAS, ADSSL1, ARRB2, CCL2, CXCL16, CXCR3, EGFR, EPOR, GLG1, GNAT3, HLA-F, LDHD, MAP2K7, MYL7, OR14A16, OR56A4, OR6K2, PFN1, PGK1, ROBO3, SDC1, SUV39H1, TKTL2, TLN2, TP73, TRADD, TSLP, UGCGL2, WNT10B, WNT2, AASDHPPT
Negative_4594	CACNG1, CAMK4, CCR7, COASY, LHCGR, OR10T2, OR1J1, OR5M3, OR8D4, PAK3, SEMA4B, WASF1
Negative_4595	NGF, ATP5E, COASY, DRD2, IL7R, MYH14, PIGX, RPS6KA3, TDO2, WNT10B
Negative_4596	CFI, FUK, AFMID, AKR1C2, C5AR1, CCNB2, CHSY1, CMBL, FMO5, GSTA3, MAPK1, MAPK3, NCOA4, OR1K1, OR2A2, OR52N1, PIGO, PPP1R3C, PRKAR2A, RAP1B, RARS2, SMAD5, SOAT1, TAS2R49, YWHAQ, ATP6V0A2
Negative_4597	BAD, CR2, LTB, ATN1, B3GNT5, B4GALT2, CASP9, DOT1L, HGSNAT, ITGAM, OR10A4, OR2T34, OR4F15, PLCG2, STK3, TGFB3
Negative_4598	ADRA1D, ATP5H, CAMKK1, CCKAR, CD72, CD82, CD8A, CDKN2B, CFL1, CYP2C18, E2F4, IMPDH1, KLRD1, NCF4, OR5D14, PERP, PPP2R1A, PRKAR1B, TFPI, TUBA1C
Negative_4599	CTF1, IPMK, OR2Z1, TBL1X, TPH2
Negative_4600	APP, ACAA1, ANAPC11, BMP5, CD58, CTBP2, ITGA9, PFN1, PPA2, PPP2R1A, RPIA, SMAD9, THTPA, TP53I3
Negative_4601	FOS, NPY, SCD, ALAS1, ALDH4A1, AMY2B, APPL1, ARRB2, ATP6V1H, BST1, CCL23, CD82, CFL1, COL1A2, COQ5, CXCL12, DHRS4, DHX58, DLST, EDN1, ENPP1, FUT7, G6PD, IDI2, IFNK, IL10RA, IQGAP1, MAPK11, MARS, MGAT5B, MYH13, NEUROD1, NFKB1, NRG4, OR11A1, OR4K1, OR6X1, OSMR, PIAS1, PIP4K2A, PLK1, POLA1, PPP2R2C, TAS2R5, WNT10A, CACNA2D4
Negative_4602	ITK, MAG, OTC, AARS, APC2, ARNT, CYP2F1, DUSP8, GSTM5, HHEX, IGF1, MAGI3, MTHFD1, NCR1, NOTCH1, OR1K1, PAPSS2, POLD1, POLR3D, RALB, RDH12, STK36, STX1A, WNT10B
Negative_4603	CD6, FST, GCK, IL9, LSS, TNN, ACSM4, ACVR2A, ALCAM, ALDH1B1, AQP7, BDH1, BLVRA, C9orf95, CCL26, CD99, CDC27, CD01, CMPK2, CNTN1, CNTNAP2, CSNK1E, ENTPD8, FGF18, GALNT8, GNA13, HES1, IPMK, MADCAM1, MAP3K6, MAPT, MINPP1, MYH14, OR2T34, OR56B4, OR8S1, PCK2, PDE9A, PSEN2, RASSF1, RPS6KA5, SEMA4A, SESN3, SLIT2, TAS2R4, TLR2, UAP1, WASF2, WNT8A

Negative_4604	DAO, TNN, ARG2, ATP6V1D, CLDN9, CYP2A13, DUSP10, FLOT2, GNRH1, GRB2, GUK1, HAP1, HGSNAT, HLA-G, IFNA5, IPMK, OR1I1, ORC3L, PDE7B, PFKFB1, PIAS1, PMVK, PRPH2, SOCS2, STAM, STEAP3, TNFSF18, WNT3A, HSD17B10
Negative_4605	AGL, SP1, CDC27, CHRM5, CSNK1G2, DUSP5, EIF4E, FARSB, FGF18, GCNT3, GMPA, HEXB, HMGCL, IDH3G, MAPK11, NCAM1, OR13H1, OR4F15, OR4X2, OR51Q1, OR8A1, PDGFA, PFN1, PGM1, PRIM2, TLR5, UGT2A3, VAMP3, XYLB, HLA-DRB4
Negative_4606	GNE, ATP6V1F, CARS2, HNF1B, IL13, KIR3DL3, OR1G1, SCIN
Negative_4607	CCR5, DHDDS, EPHB3, GAD2, OR6C2, RCHY1, PAFAH1B2
Negative_4608	NGF, OSM, ACYP2, ADAM10, AGMAT, CACNG5, CLDN15, GALT, IFNGR2, KIR3DL3, OR1J2, OR1M1, OR2K2, OR4D9, P2RX6, PIAS3, PSME3, RAPGEF3, TPM3
Negative_4609	AK1, BTC, SI, CSAD, DRD2, FECH, FGD1, IFNGR2, MMP14, NT5E, OR5D14, RBPJ, RPS6KA1, TRADD, UGT1A10, VEGFB
Negative_4610	DLD, ADRA1D, C4BPA, CD274, CD58, CHKB, FDPS, FMO3, GAPDH, GNAL, IFNA5, IL10RB, IL21R, IL24, MDM2, OR1B1, OR2B2, PAX4, PFN2, PIM2, PRDX6, UB E2K, UGT2B10
Negative_4611	C6, FH, GSS, ADAM10, AFMID, ALG10B, ARHGAP5, ASPA, ATP5J2, BMP2, CCR2, COMP, CPT1A, CPT1C, CYCS, DAAM1, EXTL1, FDFT1, GNAZ, GNRH2, GPAM, HS D17B7, INADL, LYPLA2, MGST2, NMNAT3, OR10A7, OR10H1, PDIA4, PFKFB1, PHPT1, PIAS4, PNMT, RBPJ, RDH8, SMURF1, SUCLA2, TAS1R1, TAS2R40, THY1, TJP2, TPM3, MAPKAPK5
Negative_4612	DDC, GBA, GNS, PLG, ANAPC4, ATP5J, AVPR1B, BLVRA, CMPK2, COL4A4, CSNK2A1, CTBP1, CYFIP1, CYP1A1, DHCR7, FDFT1, GALNT14, GNG13, GNRH1, HADH, HARS, IL18, ITPK1, LAMA4, LEF1, NFYB, NKX3-1, NME6, NTF3, PRKCZ, SDC4, SFRP1, SOCS2, TD02, TLR4, TUBA4A, YOD1, ATP6V1C2, ST6GALNAC4
Negative_4613	IHH, ACSM5, APOA2, BLVRA, CCR9, DDX23, EXTL3, GABARAP, OR4C46, PRPS2, RAPGEF3, STK36, STX18
Negative_4614	AK1, GCK, GH1, IL9, ADH6, APH1A, ARG1, ARPC1B, CARD11, CBR3, CCL7, CLDN7, COX10, CREB3L4, CTNND1, CYP11B1, CYP2A6, DAPK2, DDOST, EPB41L3, ETNK2, FADS2, FDFT1, IL23R, JAK2, LDHAL6B, MAN1A1, NCAM2, NOD1, OR10G3, OR5L1, OR8D4, PDGFRB, PDHA2, PLA2G5, RPS6KA6, VASP, MAPKAPK5
Negative_4615	CFI, FAH, JUN, MOS, ALG11, ASIP, CARS2, CHEK2, CTLA4, CX3CL1, DDX4, DFB, DHRS4L2, HSD3B2, IFNA2, IL20RA, KLK3, LIAS, MAD2L2, MAP3K1, MARS, NT5E, OR1D5, OR4P4, OR52K2, OR5D14, PER2, PFKFB3, PLK1, PLXNC1, POLA1, PRKCA, RALBP1, SETDB1, SIPA1, TGFB2
Negative_4616	BTK, ACPT, CAMK2G, CDH2, DGKQ, EPHA2, MYLK2, OR2B6, OR2L8, PTEN
Negative_4617	IVD, AHCYL2, ALDH1A2, ASNS, BCMO1, CCL8, CD74, CHSY1, CPT1A, DDX23, DKK2, FGF9, GALNT7, GALNT9, IL2RG, IL9R, INSR, MAML1, NFKBIE, OR10K2, OR2C1, POLR3A, PTGES2, RAB23, SNAI2, SULT2A1, UGT2B10
Negative_4618	C2, ZYX, ALAS2, ATP5G3, BCKDHB, CACNA1H, CALML6, CD22, EREG, FGF12, GGT6, GRIA2, HDAC1, HTR5A, IGF1R, KCNQ1, NANP, OR4K14, OR51S1, OR52R1, P2RX2, PAK3, PDE5A, PEMT, PKLR, POLR2L, PRKCI, STAT4, STX4, TAS2R5, WHSC1, WIF1
Negative_4619	BAX, TK1, ADH1A, AMPD2, BMP4, C7orf16, CCL15, CD55, DARS2, DDX23, DGKE, EPHA7, G6PC2, G6PD, GSTM4, IL23R, KLKB1, MAP3K8, MDM2, OR14I1, OXTR, PRKAG3, PTGER1, SEMA4A, SETDB2, SH2D1B, STX3, SULT1A4, TSLP, UNC5A, WNT2
Negative_4620	APOE, CD8A, CMAS, EPHA2, EVI1, FMO3, FOXO1, GAD2, HSD3B7, IDUA, LDHC, LLGL2, MAP3K8, MAT2B, MCM5, NFKBIB, OR4A16, OSMR, PIGP, PRKCG, PRSS1, PRSS2, PSME2, SQLE, SUFU, TAP1, UCKL1
Negative_4621	C3, ID2, ACSS2, ARSB, CACNB4, CCR8, GALM, GPD2, IL23R, OR2A12

Negative_4622	APP, C9, RB1, ALDOC, ARHGEF1, B3GAT1, CASK, CHRM3, CHUK, CSF2RB, CSNK1G2, DARS2, DDIT3, DHRS3, DUSP3, FGF18, FLT1, FZD2, GRIN2D, GSTO1, GUCY1B1, GUSB, HTR5A, IL21, IL22, ITGAL, ITGB2, MAPK12, MGAT4A, NUDT9, OLR1, OR4K15, OR52I2, OR5D16, OR6K2, PFKFB4, PHKG2, PRKAG2, SEMA4G, SPTLC2, ULBP2, WNT7B, ARHGEF12, ATP6V1E2, ST6GALNAC3
Negative_4623	KHK, KMO, ALPPL2, B4GALT1, CCND3, CD14, CX3CR1, CYP2C18, EHMT1, FZD9, IL17RB, IQGAP2, JAK2, LDHB, LFNG, MCCC1, NFYB, OR11L1, OR14C36, OR52N5, OR5AP2, OR5AS1, ORC5L, OXTR, PIGP, RASSF1, RFX5, SCD5, SMC1B, SMPD2, SULT2B1, TBL1Y, TYRP1, WARS2, TNFRSF10A
Negative_4624	BMPR1B, CDKN2C, F13A1, NNMT, NRAS
Negative_4625	ABCC8, ACSM1, ACTB, AMDHD2, ARPC5, CACNA1F, CD80, CER1, CHST13, CLTA, COQ7, CTSG, CXCL9, CXCR6, DDX4, DHDH, DUSP9, EIF4E, ENPP2, FMO1, GALNT11, GGT1, GPD2, HNF1A, IRS1, ITGB4, LYZL1, NAGK, NAGS, OR3A1, PIK3R3, PPA1, PPP2R2C, PTK2B, RAP1B, RBPJ, SDC4, SMPD3, STX5, TAS2R16, TRAF5, YWHAH, ATP6V1G2, TNFRSF13B
Negative_4626	TH, LGL2, RASGRP2, TUBB4Q, YWHAH, ATP6VOA4
Negative_4627	GGH, GP9, PDHA1, SULT1A2, CSGALNACT1
Negative_4628	DCT, AFMID, ATG3, BRAF, CACNB4, CD8B, CIITA, CXCL2, DAG1, EDA2R, G6PD, GALNT2, GLYCTK, IDH3G, KIR2DS5, LAMC1, MTFMT, OR8J3, POLR2F, PPP2R1B, RASSF1, TUBB1, UGT2B17
Negative_4629	ADC, ALOX12, EHHADH, GALNT5, ICOSLG, LM07, NPR2, OR2T1, OR4A16, POLR1C, PPT1, SCLY, STAT5A, TBL1X, TBXA2R
Negative_4630	EZR, GH2, PTS, ADSL, AKR1C1, ALPP, B3GALT4, CCL28, CDC42, CTF1, CYP4A22, DPM2, DUSP8, FLT3LG, GCNT4, HCLS1, IDI2, MDH2, NMNAT2, ODC1, OR2T33, OR51S1, OR7C2, OR7G2, OR9Q2, PAK7, PDE6H, PIGH, PIGX, PIM1, POLR2D, PRPH, RDH10, RRAS2, UBE2L3, XYLB
Negative_4631	GH2, ITK, LEP, ANAPC4, BACE2, BCAT2, CACNA1G, CCL4, CLDN9, CMBL, CNTFR, EXT1, GAL3ST1, GCDH, GGT5, HPRT1, IGSF5, IL17B, IRF3, MAOB, MAP4K4, MAPK8, MYH7, NAT1, NR1H3, OR4N4, OR5C1, OR6C6, PAK7, POLR2B, PPAT, PYCRL, RBX1, RPE65, SMURF1, TCIRG1
Negative_4632	CBL, AFMID, AKR1B10, AKR1C1, AMDHD2, ATP5I, ATP6V1A, CES2, CHST13, CNGB1, CREB5, DCXR, ENTPD7, EXOC7, GNRH1, HTR2B, IDUA, IL1B, IL21, L1CAM, MYH13, NMNAT2, OLAH, OLR1, OR13C8, OR13G1, OR2C3, OR2M4, PDE7A, PIGU, PLCB4, PRKCE, SGMS2, SYNJ1, TMLHE, UCKL1, CTNBP1, HLA-DQB1, TNFRSF11B
Negative_4633	AMH, HK1, ID3, ME3, ALG13, AMD1, ANGPTL4, ASCC3, CACNA1H, CXCL16, CYP19A1, DGAT2, EFN2B, FLOT2, GALNT3, LAMC1, LYPLA2, MAT2B, MMP1, MYH10, NKX3-1, NPR1, OR1E2, OR4C12, OR51Q1, PERP, PLA2G2E, TGFB2, TIAM2, TPI1, UBA7, WNT10B, YWHAH
Negative_4634	FGG, IL5, LHB, XDH, ARHGAP5, BLNK, BMP8A, CPT2, DARS2, DTX3L, EIF4E, FARP2, FGF1, FMO4, G6PD, GRIN2C, GZMB, HHEX, IL21R, ITGAL, JAG2, MAPK3, MCEE, NFKB2, NME7, NRG2, OGDHL, OR10A7, OR2T2, OR2T4, OR56A3, OR5B21, PIP4K2C, PLXNB1, PRKACA, RASGRF1, RASGRP1, RDH8, RUNX1T1, RUVBL1, SELE, SEMA3F, STX2, SYNJ2, TICAM1, VDAC3, ATP6VOA2
Negative_4635	CFI, ABCC8, BCAT2, CHRNA7, GGT5, HADHB, IFNA4, MMP9, PDE4D, PECAM1, PIK3C2B, PLD1, PPM1B, PPP2R5D
Negative_4636	PML, ABAT, ARPC5L, B3GAT3, CD55, CHEK1, CREB3L1, CYP1A2, HTR7, IDH1, JAG2, KIR3DL1, KLRC2, LGMN, LRAT, MAGI1, MAP4K4, NAE1, OR2A14, OR2A25, OR51F2, OR52J3, PAK6, PDE9A, PLCB1, PON1, PON2, PSAT1, SFRP5, SNAP25, TUBB3, ATP6V1B1, MAP3K7IP1, MAPKAPK2
Negative_4637	TK1, ANPEP, ATP4B, CACNG2, CDK6, CPS1, CYSLTR2, DDIT3, FMO2, FTCD, GMD5, GNPDA2, ITGAE, NLGN2, NT5C1B, OR10G3, OR11A1, OR52E4, P2RX6, PAK3, PER1, PIP4K2C, RFXAP, SELPLG, TBK1, UCK2, VNN1

Negative_4638	CKM, GLS, INS, NGF, TKT, ACAD9, ACOT11, ACOX1, ACSM1, ACY1, ADCY3, AK3 L1, AKR1C3, ARSD, B3GNT5, CD8A, CLDN10, COQ6, DTX1, DTX3, EPHB3, FUT3 , FUT8, GBE1, GNG3, HLA- C, HYAL1, IL9R, ITGA6, KIR2DL1, MRAS, MTHFD1L, NAT5, OR1E1, OR2AT4, O R2L2, PKLR, SDC3, SH2D1B, SULT1A1, TAS2R14, TPH2, UROC1, VCAM1, YARS , ARHGEF12, HLA-DQB1
Negative_4639	BTK, C3, GK2, SYK, AHCY, AMPD3, AOC2, APBB1, BCL10, CCL5, CCNB2, CD36, CFTR, CX3CL1, CXCR4, EPB41, F2RL1, GABARAP, GCLC, GIT1, HLCS, HNF4G, IL15RA, JAK1, LHCGR, LPAR1, MGST2, NME6, NOTCH1, NTRK1, OR10Q1, OR2D 3, OR51F2, OR51S1, P2RX2, PPP2R5E, PPP3R1, RDH11, SOCS5, STAT2, STAT 5A, STX18, TPI1, TUBB2B, UBA7, ATP6VOA1, PAFAH1B3
Negative_4640	A2M, LTB, ACPT, ACVR1, ADIPOR1, ARPC3, BCL2L1, CCNE2, CCR6, CD34, CDC 42, CER1, CERK, CNTN1, DAAM1, E2F4, ENPP2, FECH, GALNT7, HTR2B, IBSP, IFNGR2, LLGL2, LRDD, NAGA, OR2G2, OR51A2, OR52E4, OR8H2, PDCD1, PIGQ , PMM1, POLR2D, PTK2, RALBP1, RARA, RASSF1, SMAD7, VEGFA, WARS2
Negative_4641	HYI, CCNB2, COL5A3, CSF1, F2RL2, FDPS, FSHR, IMPDH1, NARS2, SDHA, SRG AP1, WASF1
Negative_4642	BTD, ACHE, ADCY8, ALDH3B2, ATN1, CDC6, CYP1B1, ETNK1, FGF20, KAT2B, M APK11, NAT2, NODAL, NRCAM, OR13C2, OR2T29, OR7C2, PAPSS2, PPM1A, PRK CA, SPRY1, ST3GAL4, YWHAH
Negative_4643	PLN, ABI2, DGKB, FZD9, GPX7, IFNA6, IL12B, KIR2DL3, LYZL1, OR52B6, OR 5F1, OR8K3, TGFBR2, THBS1, TIAM1
Negative_4644	CAD, GPI, MUT, ACADVL, ASPA, ATP5C1, CCL22, CXCL12, CXCR5, ERO1L, FZD 8, GLG1, GNAI1, GRPR, HEMK1, IRAK1, LAMB2, MDM2, MS4A2, MYLK3, OR10G8 , OR4K17, OR51I2, OR7C1, OR7C2, OR8K1, PDE10A, PDE2A, PPT1, PRKCI, RB X1, SMAD9, SPRY2, TAS2R48, WNT16, WNT7A
Negative_4645	ADK, AK2, CDA, FGB, GGH, LCT, ABP1, ACTB, BST1, CSH1, CYP2C18, DARS, DH FR, DIAPH1, ERO1L, F2RL3, GALK2, GTSE1, IL22RA1, IL6ST, IL7R, KCNJ11 , LAMB1, LDHC, MAP2K1, MAP3K1, MYH14, NPR1, OR10J5, OR2Y1, OR3A3, OR6 T1, ORC6L, PARD3, PNLIP, PPP1CA, PPP2R1B, PRSS1, SORD, STAT2, TLR5, U ROD, SERPIND1
Negative_4646	ABI2, ADH1B, ADH4, CAMK4, CCNE1, CDC6, EP300, FASN, HCST, INMT, MYH11 , OPLAH, OR10X1, OR1K1, OR52W1, PIGP, PLCE1, PVRL4, SOS2, STK3, TAS1R 3, TJP1, TSLP, VDAC2, XIAP
Negative_4647	LSS, LYN, MUT, A4GALT, ACSM1, ACY3, ARPC4, ASAH1, CACNA1E, CALML3, CC L2, CLDN8, CXCL2, DGKH, DGKZ, EPHA1, GALC, GRIA2, GRIN2C, GSTA1, HTR2 C, LCP2, LGMN, LIMK2, LTBR, MTMR1, MYH10, NCR3, OR1E1, PDE3A, PIGA, PO LR2D, RXRA, SMAD6, ST3GAL1, TNFSF18, TYROBP, WNT5A, SUV420H1
Negative_4648	DDC, AKT1, B3GNT4, CAMK2A, CLDN6, CLTA, DAPK1, FBP2, GNPAT1, GPX5, G RHPR, IBSP, IMPA2, IPMK, MTFMT, MYD88, OR14C36, P2RX4, PRNP, PTAFR, R DH5, RPS6KB2, SETD1B, VARS, VDAC2
Negative_4649	FAH, HPD, ID2, KHK, ME3, ARHGEF2, ARPC1A, BBC3, CCL3, CERK, CPT1C, DKK 1, EPHA1, FRAP1, GCLM, GGCX, GLUL, GNRHR, GRIN1, HRH1, IRF3, LTBP1, MA PK1, MCCC1, MGAT4B, MTFMT, MYLK2, NCSTN, NFX1, NOTCH3, OR10A7, OR4K1 4, OR5A1, OR6B2, OR6K2, OR8K3, SEMA3F, SPI1, SUCLG1, SULT1A1, TAS2R5 , UCK1, VDAC1, WASF1, ATP6V0E1
Negative_4650	CHIT1, CLCA4, FCGR3B, OR13C9, OR8D1, PPA2, SEMA4B, SERPINE1, TNFRSF 12A
Negative_4651	CFD, ADH5, B3GALT6, BDH1, CD55, CHRNA7, CPT1C, EHMT2, FGF12, FPGT, LD HC, MAN2A1, MYH8, NANS, OR10A5, OR2A14, OR51A7, OR5M8, OR9A2, PDE5A, PDE7B, PFAS, PKLR, POLR2L, PPARA, SCIN, STX1A, UAP1, HSP90AA1
Negative_4652	MPZ, SYK, ALDH6A1, ALOX12, CYP11B1, DDX52, DUSP7, EFNA2, GCNT1, GRIN 1, IL20RB, MICA, NOX3, OR10K1, OR13J1, RASGRP3, SEMA4C, SETD8, SHC4, TAS2R40, TJP1, TUBB3, XYLB, B3GALNT1



Negative_4653	GPT, RDX, ACSM4, ATP6V0C, AVPR1B, CCR6, CKS1B, CLDN18, CXCL11, DAAM1, DUSP2, GNMT, GRIA3, GRIN1, GUCY2C, HSD3B1, IARS, IL28RA, IL5RA, MTHFD1L, NRCAM, NSDHL, OR4A15, OR6C70, PCK2, PGK2, PIK3CB, SHC4, STK3, S TX6, WNT10B, WNT7B
Negative_4654	AMT, ME1, RDX, ACPT, ACTN1, ARAF, ARSA, CCKAR, CD48, CDH3, CDH5, CYP2S1, CYP3A5, DIAPH3, FASN, FGF21, GDF7, GFAP, GNAS, HEXA, IL23A, KIR2DL4, LAMB4, LILRB3, MAP3K1, MMP7, NEFH, OR13A1, OR14C36, OR7C2, PCNA, PRKAA1, PRKAR2B, PSPH, PTPN11, RARS2, RPS6KA5, RPS6KB2, SEMA3C, TACR3, TYMP, WHSC1, WNT5B, XYLT1
Negative_4655	C8A, BUB1, DHDDS, LAMB3, NFKBIB, OR11H1, OR4S1, OR8H1, PPAP2C, SDC2
Negative_4656	NPL, AASDH, ADCY8, ALDOA, AQP7, CLTCL1, CREB1, EDNRA, GAPDH, HAP1, HLA-A- DRA, HTR7, IL17A, LLGL1, LPAR1, NFYA, OR4D6, OR4F15, PANK4, PCNA, PIK3C2A, PRKCB, PTPN5, SFRP5, TLR9, ULK1, WHSC1, WNT7A, MAPKAPK2
Negative_4657	MAX, BIRC3, CCNA2, HLA- DRA, HPRT1, INHBB, LAMC2, LIMK1, OR13D1, OR1E2, OR5L1, OR5T1, ORC4L, PARVB, PIGV, TUBA1A, YWHAH
Negative_4658	BAX, C9, ABCC8, ALDH4A1, ALDOA, ASNS, B3GAT1, BPGM, BUB1B, CES2, DOLP1, DRD2, FTH1, GAB1, GUCA1A, GUCA1C, IFT57, IL6R, LRP5, MYLK, OR51Q1, OR6M1, OR6X1, PDE1C, PIGB, PLXNA3, PNLIP, SDC1, SHMT2, TCF7L2, TGFA, UGT2B28, VDAC1, WNT4, WNT9A
Negative_4659	AGL, CDKN2B, CSNK1D, IL28RA, LRRC4C
Negative_4660	ZYX, AKR1B10, ARSD, CACNG6, CSNK2A1, NRG4, PARD6B, TUBA1C
Negative_4661	ATP5E, GRIA3, RAF1, TRAF3
Negative_4662	GALM, PRLR, PVRL1, UPP1
Negative_4663	ID2, LCT, CCNE2, CHST13, DDIT4, ICOSLG, ITGA9, ITPKA, LYPLA1, MAP2K7, MAPK12, MAPK13, OR4D11, SEMA4G
Negative_4664	APP, CTH, VTN, ACPT, CCL20, CCL28, DFFB, FABP4, FZD9, GAPDH, HLA-C, IRAK3, MYH2, OR1N1, OR2C3, PAX6, PIM2, PPP2R2D, TBL1Y, TRMT11, WNT7B
Negative_4665	ACOT12, ARNT2, CXCR6, DARS, MCCC2, PIGA, RND1, USE1, WARS2, ATP6VOE1
Negative_4666	ARNTL, AVPR1B, FZD2, FZD3, HEMK1, NFASC, OR10A5, PLXNB2, PTDSS2, RAGEF2, SLC27A4, SULT1A2
Negative_4667	GP5, ID1, LHB, MVD, AHCYL1, ARHGEF4, AXIN2, BMP8A, BUB1, CCNB3, CD58, CHRM3, CLDN3, COL5A3, CTNNA2, DGKH, FGF19, GCNT4, GNPAT1, HCST, HTR6, LEFTY1, LIPF, OR14J1, OR1K1, OR4C13, OR5B3, RARS, RHOD, RPS6KA1, SEMA4A, SORBS1, ST3GAL6, TAS2R3, TOMM40L, TRAF4, UGT1A10, VEGFC, CACNA2D2
Negative_4668	A2M, IL2, CD80, GFPT2, MMP14, NT5E, OR4C12, ORC2L, SLC27A1
Negative_4669	CACNG1, CDKN2D, EIF4E2, GNA13, IDI2, P2RX2, PPP1CA, RFNG, SMARCA2, S TAT5A, TRPC1, MAP3K7IP2, ST6GALNAC4
Negative_4670	C2, GNS, ACO2, ADRA1D, ARHGEF4, CD79B, CLDN10, CLDN19, CLDN5, CSNK1G1, CYP2A7, DTX3L, DUSP2, EXOC7, FCER1G, GPLD1, IDI2, ITGA10, KARS, MIF, MTHFR, MYH7B, OR2K2, OR51F2, OR52D1, OR52K1, PDXP, PPP2R2C, PPP2R5E, PSENE1, PYGB, SEMA7A, SH2D1B, UNC5B, VDAC1, YWHAZ
Negative_4671	C3, GNS, HYI, ME1, NGF, ATP5C1, DARS, ECSIT, EXTL2, GNA12, GRIA2, IFNB1, OR2A4, OR2F1, PHKA1, PLD2, POLR2K, UGCG
Negative_4672	CTH, ACYP2, ADH4, ALDH1B1, CCR8, CHAD, CSF1R, DLL1, EPHX1, FGF13, FGF17, FGFR4, FRAT1, FUT6, FUT9, GFPT2, GLI2, GNA12, HPRT1, IL17A, IL5RA, LCAT, MAML1, MEF2C, NODAL, ODC1, OXTR, PDIA4, PIK3CG, PORCN, PPCDC, PRKCZ, PRKY, SNW1, SPHK1, TALDO1, TAP1, THBD, TUBB1, WNT16, ATP6V1E1

Negative_4673	KHK, AARS2, ABLIM2, ACO2, ADORA2A, ADRBK2, ALOX12B, ARSB, ATG3, BUB1 B, CACNB4, COQ7, DNMT3A, ETNK2, FGF14, G6PC2, GRIA2, IL2RG, ITGAE, KL RD1, MAP2K2, MOV10L1, NEUROD1, OR1N2, PISD, PNPT1, QPRT, RASGRF2, SE TD1A, SLC27A5, TAS2R38, UPP1, SERPIND1
Negative_4674	LEP, CARS, CHSY3, DTX2, EDNRA, EPHA5, OR10Q1, OR51F1, OR6C74, PCCB, P DXP, PRLR, PVRL1, SPRED2, TFPI, TUBAL3, UGT2B17
Negative_4675	ADA, CRH, GH2, CASP9, CLTCL1, GLI1, GSTA2, HMGCS2, OR10G2, OR12D3, PI K3C2A, PRDX6, PRSS2, SLC27A5, TMLHE, TNFSF11, TXNDC12, WNT4, SERPIN C1
Negative_4676	ACOX2, ALG6, EARS2, MDH1
Negative_4677	ASL, GNE, IHH, TNF, AGMAT, ALDOC, ANAPC1, B3GNT2, BIRC5, BMP4, CACNG1 , CSNK1G1, EFN2, EPHX2, FUT2, GLS2, GNB3, HAGH, IFNGR1, IL5RA, LDHD, MAP3K7, NEU3, NRG4, OR5D16, OR8B4, OXTR, P4HA3, PLA2G3, PNPLA3, PPP2 R5E, SDHB, SLC33A1, TLR3, WARS, MAPK8IP1, PAFAH1B1, ST6GALNAC6
Negative_4678	CPT1C, OR5AN1, PPP5C
Negative_4679	ADCY4, ARSE, ASAH1, CDS2, CHIT1, DAAM1, DGUOK, ITGAV, PORCN, PTCRA, T BL1X
Negative_4680	F5, ALG11, B3GAT3, B4GALT4, CCNB3, CDC14B, CLDN10, GRIN2B, HSD11B1, KIR3DL3, NCR1, OR12D3, OR5AP2, OR5H6, OR8U1, PGM2, RDH11, SDHD, SLC2 5A4, SPHK1, SRD5A2, STX1A, VANGL2, PPP1R12A, SLC25A31, ST6GALNAC3
Negative_4681	ANAPC1, CD34, CD55, CDS2, CLDN1, CLDN2, CYP2U1, CYP3A43, DVL1, FGF11 , GLUL, GNRH1, IL6ST, MAP3K7, NEFH, OR10A7, OR51D1, PDE7A, PDHB, PIGP , PRDX6, PTGFR, PTPN5, PVRL2, SEMA3G, SGPP2, STX2, UGT8
Negative_4682	F2R, GGH, GH1, HPD, MVK, ZYX, ADCY2, ADSL, AKR1B10, AKR1C4, ALDH1L1, B DNF, BIRC2, BIRC5, CCNG2, CDC42, CDS2, CES7, CSNK1A1, DPYD, FZD9, GRL F1, GZMB, HAGHL, IFNG, IL17RA, KIR3DL1, MAOB, MAT2B, MDH1, NEGR1, NKX 6-1, OR2G3, OR2V2, OR52D1, PARD3, STK36, TOMM40L, TRADD, TRAF4, TYK2, V ARS, VASP, HSP90AB1
Negative_4683	GHR, DAG1, EPB41L3, FADS2, FARP2, GALNT11, LIAS, MAPK1, NCAM2, OR11G 2, PTGES, RAPGEF3
Negative_4684	ARPC3, BET1, BMP6, COQ7, CSF1, DVL2, F13A1, ITGA5, MAN1C1, MAP3K12, N ANS, OR2T34, OR5AS1, PCYT1B, POLR3K, PSEN1, RRAS2, RRM2B, SMAD9, PPA RGC1A, TNFRSF1B
Negative_4685	IL2, CHST12, IFNA7, OR10Q1, SLC25A5, TNFSF4
Negative_4686	CSK, FAS, TFG, ABL2, ACO1, ATP2A3, CACNG2, CD27, CSNK1G3, CYP3A7, ENT PD3, ESPL1, FOSL1, GALNT5, KIR2DL1, LAMB4, LLGL2, LTC4S, MARS2, OR1C 1, OR3A2, OR4D2, OR8G1, PLXNB2, PRKACG, RFX5, RRM2B, SHC4, STT3B, UGT 2B11, TNFRSF18
Negative_4687	LPO, MPZ, NGF, ALPL, C1QC, CADM3, CSNK1A1, DOLPP1, GUCY1B3, IRF5, LFN G, NR4A1, NUMBL, ONECUT1, OR1L4, OR2AG2, OR2M3, OR7A5, ORC2L, PARVB, PLXNB2, PNMT, PRKCE, PTPRJ, SC4MOL, SPRY3, SULT1A1, VARS
Negative_4688	ITK, RB1, ANAPC4, ARNT, CD47, ENPP2, FM05, GALNT11, GNRHR, GPAA1, HSD 3B1, IDH3B, KCNB1, LDHA, MGST2, NARS, NKD2, OR10A2, OR10Z1, OR1S1, OR 2T3, OR52M1, PISD, POLR3D, PPP3CC, PSME1, STX18, TAS1R3, TAS2R1, TYR P1, WBSCR22
Negative_4689	ADH1A, ARSB, BTRC, CYP7A1, DGAT1, ENTPD3, HMBS, IDH3G, LCAT, MAP3K14 , MYH1, NFYC, NMNAT1, PRKAB1, RIPK1, SEMA3E, SORBS1, TACR1, TNFSF4, Z MAT3
Negative_4690	AMT, SP1, ALAS2, BCL2, C4BPB, CCR5, CDC26, COL6A1, COQ5, CXCL11, DAD1 , EGLN1, EPHX2, FUT5, GADD45B, HADHA, ICAM2, ITGA2B, MADCAM1, MTHFS, NEFL, NFATC4, OR10G8, OR10T2, OR2M4, OR4C6, PCK2, PIP4K2C, PNPO, POL A1, POLR3G, PRODH, PTGS1, PYCR1, SCD5, STAT1, VAV3, VDAC3

Negative_4691	FN1, ID2, IHH, IL3, IL8, ABCC8, ACADVL, AMPD2, ATP6VOC, CCL20, CNGB1, CXCL16, DGKQ, DUSP14, F11R, F2RL2, FECH, FGF9, GSTO2, IFNGR1, IL10, MAD1L1, MAD2L2, MTAP, MYL9, NCOR2, OR10J3, OR1S2, OR2A14, OR51A4, OR52E2, OR52L1, OR6C4, OR8H3, PDGFC, PDXP, PFAS, POLD1, PRNP, RASGRP4, RFNG, SPCS3, SPRY4, TIAM1, UAP1, UGCG, CSGALNACT2, HLA-DQB1
Negative_4692	CD82, DUSP14, NUDT5, TRAF2
Negative_4693	BAX, AGTR1, EFNA1, ENTPD7, GRIN2C, HARS2, HLA-G, MMP7, NME2, NRXN2, PIAS2, RFXAP
Negative_4694	C2, GP9, TNF, ACP1, ATP6AP1, B3GNT2, CALML3, CBLC, CD79B, CDC20, COL5A1, CYP17A1, DBF4, DNMT1, FSHB, IL17RB, MYL9, NEUROD1, NFAT5, OCRL, OR13A1, OR14C36, OR2C3, OXSM, PDGFRA, PGAP1, PGK2, PIK3C2G, PLAT, POLA1, POLR3H, PRNP, PTCH1, RETSAT, SETDB1, ST8SIA1, TSC1, UGCG, VAV1, WNT6, PRICKLE1
Negative_4695	EDA, FAS, FH, GK, GLS, PGF, ADIPOR2, ATP2A1, CDH2, CDH5, CHKA, CHRM2, CKS1B, CSNK1G3, CYP26A1, DHDH, EPHX2, FGFR3, GSTM3, HLA-F, IL12RB1, JAG1, LLGL1, MAML2, MARS2, MGAT4A, OR1M1, OR6C4, ORC1L, PDE3B, PHKG2, PLA2G1B, PNPLA4, PPARD, PTPRZ1, QPRT, RASGRP3, RDH10, SETD8, SMURF1, SPI1, STMN1, SYNJ2, USE1, VANGL2, VASP, VDAC1, VDAC3
Negative_4696	C2, IL8, MVD, A4GALT, ADH7, AQP7, CASP6, CASP8, CTBS, DUSP2, FBP1, FCE R1G, GALNT8, GLI1, GMPS, NFATC3, OR52M1, OR56B4, OR6N2, ORC1L, OXCT2, PLXNB1, PPP2R1B, RUNX1T1, SEMA3F, SFRP1, SQLE, STAT3, TUBB3, TYRP1, VNN1, WNT4, HSD17B12
Negative_4697	CD2, F8, PTS, SCD, ALDH7A1, AMPD2, ATP4B, CAMK2A, ETS1, GAD1, GSTO2, I NHBA, LCMT2, MAP3K13, MAP3K4, NAT1, OR13J1, OR51B6, OR6C75, OR6F1, P OLE4, PRKAG3, SELPLG, SETD7, YKT6, HSD17B10
Negative_4698	GP5, TXK, ARPC5L, CXCL3, HSD17B3, JAK2, KLK3, OR10G7, PON1, UGCGL2
Negative_4699	AK7, CFI, GNE, NGF, ACADS, ATF4, CACNB1, CASP9, CD36, CDKN1A, CHAD, CH KB, CPT2, DDX47, ETS1, FCER1G, FGFR3, GUSB, GYS1, HLA-DMA, HSD3B7, HTR2A, IL9R, LDHB, LDHC, LIPT1, MGAT4A, MMP7, MTHFD1L, O R1E1, OR52N5, OR6F1, OR6N2, OR8K5, OXSM, PAK1, PAX4, PCNA, PDE5A, PGA M1, QARS, RARS2, RHOD, SDC4, SGPP2, ATP6V1C2, MAPK8IP1, ST6GALNAC5
Negative_4700	CCNA1, CCNB1, CDC25C, CYP2C19, DMGDH, FTCD, GCH1, GNA13, HSPA2, IL18, OR2S2, OR4A16, SOCS1, TBK1, UCP1
Negative_4701	IHH, PLN, AFMID, AGRP, CARS, CD01, CLOCK, ETNK1, GRIA3, HEXB, NCKAP1, OR2C3, OR2L3, OR52I1, OR5K2, OR5M8, OR7G1, PIGK, PLCD4, PRKCQ, PRPS1, RASA1, STX16
Negative_4702	ID2, RDX, SRM, TAT, VCL, ADRBK2, ALG3, B3GALT4, B3GAT1, CCL21, CDC2, C YBB, DPM2, DUSP16, FUT6, HADHA, KCNQ1, MAP4K3, NR1D1, OR52E6, OR56A1, PANK1, PDE11A, PDGFRB, PKMYT1, PPAP2A, PPP5C, SDHB, SMC1A, TYRP1, U BA1, WBSR22
Negative_4703	AASS, ADAM10, ADCY2, ALPP, ATP5J, CAMK2A, CD70, DNMT3A, EI24, FGF1, G BA3, GCNT1, GUSB, ITGA10, NCF2, OR2T34, OR2T8, OR6N1, PRKAA1, TICAM2
Negative_4704	ADCY1, AGRN, AKT1, ALDH1A2, ANPEP, ASS1, ATP5J, BIRC5, BUB1, CACNG8, CD40LG, CERK, CSNK1D, EXT1, FGFR3, GAMT, HDAC2, IDH1, IL1R1, IL29, IN SR, ITGB2, LPAR1, MAN1C1, OR4K17, OR5T2, OR9Q2, PCK2, PDE4A, PPA1, PP P2R5E, PRKAB2, PTGDS, RASGRP2, RFWD2, UCK2, UNC5D, MAPK8IP2
Negative_4705	JUN, AKR1C3, ALDH1A1, ALDH6A1, ASMT, CSF2RA, DDX52, DPM1, FGFR1, GGT 6, GMPR, GPX5, IL22RA2, KIR2DS4, LIMK1, MFNG, OR2A25, OR4C15, OR4F6, PKM2, TLR2, TUBB6, MAPKAPK2
Negative_4706	SYK, AGPAT1, BCAR1, BST1, CACNG1, CPOX, CX3CL1, DERA, E2F1, EPRS, ERO 1L, FGF18, GALNS, IPPK, ITGA3, KIR2DL4, NCK2, OR2T10, ORC2L, PAX4, PE MT, PIK3CB, PMAIP1, RPS6KA6, TRPM5, UGT2B28, UNC5B, UPP1, USE1, VANG L1

Negative_4707	ADCY1, BUB3, CDC25B, COL5A2, DOT1L, ENPP6, GAL3ST1, GOT2, GRIN2B, HDAC2, IMPA2, KIR2DL4, NCF1, NEUROG3, NT5C1B, NUMB, OR10G2, OR51A4, SESN1, SUV39H2, TAS2R14, TUBB2C
Negative_4708	CTH, F2, RPE, ATP5C1, CDK6, E2F2, FGF5, GALK1, IFT57, LAMC1, MAD1L1, OR2L2, OR51L1, PIK3C2A, ST3GAL5, USE1
Negative_4709	ACY1, ADIPOR1, APC2, CYP2C9, DAPK1, EPB41L3, GNAQ, GP1BB, IRAK4, NEU3, PLIN, POLR3G, SDHD, TAS2R4, TOLLIP
Negative_4710	EPO, CYP3A4, PAPSS2, PHKA2, PPA2, HLA-DRB3
Negative_4711	DBH, HK1, BMP7, CCL19, CCNA1, CTNND1, CYP2B6, ERO1L, F2RL3, FADS2, GNPAT1, GZMB, KIR2DL2, NKD1, TAS2R1, TBXAS1, ULBP1
Negative_4712	CDC7, CXCR5, DPAGT1, FGF18, GLG1, IL23A, NCK2, PGAM1, PRPS1, SUCLA2, TAS2R16, TXNDC12, WNT7B, ZNRD1, PNLIPRP2
Negative_4713	ADO, GSN, JUP, PGD, SRC, TK1, TNF, ALG11, CAMKK1, CSNK2B, CXCL11, MAPK7, OR51A4, OR56A3, SFRP2, SMPD1, STAM2, TAS2R48, TYROBP, ATP6V1B1, MAPKAPK5
Negative_4714	C4B, ACSS2, ARPC1A, ATP5L, CFTR, CRB3, CTNNA3, FZD9, GNG12, LYZL1, PTGIS, PTPRJ
Negative_4715	C2, F10, GSR, HDC, NPL, AASS, ADIPOQ, ALOX12, ANAPC4, BIRC5, CCNB2, CLCA4, CMPK1, COQ7, FABP1, GSTM4, GSTO1, GUCY1A3, HDAC2, LARS2, MAP3K14, MGAT1, MIOX, MYH8, OR10Q1, OR2D3, OR52I1, PNPLA3, ULK1, YWHAG
Negative_4716	ALDH1B1, DIAPH2, ENO1, FADD, GDF5, MAML1, MGAT5B, PPAP2C, WNT16, YOD1
Negative_4717	ADA, BTC, LPO, NNT, AANAT, ACOX3, ACP5, ACTN1, ADRB2, ALDH1L1, BHMT, CACNB1, CCL8, CHAT, CTBP1, CYP1B1, EXT2, FLOT2, GAD1, HEXA, IFNG, ITGA2, ITGA4, MARS, MTHFD1L, NCOR1, NCR2, NMNAT2, NOS3, NRAS, OR10H2, OR12D3, OR2H2, OR2T6, OR3A1, OR4S2, OR51A7, OR7D2, PLTP, PLXNC1, PRKCI, PTDSS1, SELL, SLC2A1, SSH1, UXS1, SERPINA1, SERPINE1, TNFRSF13B
Negative_4718	ACOT12, BPGM, CCR7, CD80, CDC25A, CLDN18, CXCR5, FUT8, GGT1, GNG3, HIP1, KCNB1, KIR3DL3, LIPA, MAPK14, OR4C13, OR5AN1, PARVA, PIK3C2A, PRKAR1A, PRKY, RAP1B, SLC12A2, TAS2R1, TNFSF18, UCP1
Negative_4719	A2M, GSN, AGPAT2, BMP6, BMP8B, CNTN2, COL4A1, CXXC4, EXOC7, GAS1, GSTM2, IL9R, NTSR1, OR2F2, OR6M1, OR6N1, OR7A10, TAS2R41, UGT2B11
Negative_4720	GSS, SMO, TFG, TPO, ANAPC10, ATP5C1, CCKAR, CCNB1, CMPK2, CPT1A, CSF3, CXCL10, CYP2D6, FZD1, GNA15, GSTA3, IFNK, IL12RB1, MDH1, MOV10L1, NOTCH1, OR10G7, OR10J5, OR51S1, OR52A5, OR5M8, OR6C1, POLR3A, PPP2R5B, PTGES, RASGRF1, SC5DL, SEMA3E, SIAH1, SLC27A1, SMURF2, TUBB4Q, UGT2B7, CACNA2D2
Negative_4721	C6, AKT1, AKT2, CACNA1H, CD19, CERK, CLDN4, CSNK1G2, DTX4, FLT4, GABARAP, GFAP, GSTK1, HMGCS2, IDH3A, ITGA6, LAMB3, NEUROD1, NPR2, OR2A5, ORC4L, PARS2, PCCB, PDHB, PER3, PFKFB1, PTK2, PTPN7, SMAD3, USE1, WSCR22, WNT7B
Negative_4722	CYP4A22, HMGCR, PCCA, ULK2
Negative_4723	ADA, MET, MSN, NLK, ANAPC11, CES7, CHIT1, COL5A3, CSNK2A1, CTPS2, CXCL1, DFFB, DOT1L, ENTPD2, ERBB3, FBXW11, FOXA3, FZR1, GAD2, GNA15, GNG3, IRAK2, MAD1L1, MAP3K7, MEF2C, NAT6, NFYB, NLGN1, OR13J1, OR2AE1, OR52I1, OR6C2, OR8H3, P4HA1, PPA1, PPP1R3B, PRKACA, SLC25A4, SMAD4, SSH2, STX4, SUCLG1, TPI1, GABARAPL1
Negative_4724	ALG8, CX3CL1, PCCB, TNFRSF14
Negative_4725	EBP, RFK, ALDH1A1, B3GNT2, B4GALT5, B4GALT6, BMPR2, CDKN1B, CDKN2B, CDKN2C, CNTN1, COASY, COL4A6, CYP2A7, DCXR, DGKA, ENTPD1, GALE, GALNT10, GDF6, IDH3A, IFNB1, JAM2, KAT2A, KAT2B, KIR2DL2, MAT2B, MGAT3, NFKB1, NODAL, OR2T8, OR5P2, PIGK, PIGP, PRLR, PTPN6, RPS6KA5, SELL, SPPLC2, STX4, TPH2, WNT3A, SERPINE1

Negative_4726	CCL14, COL5A2, CX3CL1, EPHX1, FARSB, IFNA10, IL1A, LMO7, MKNK1, OR1M1, OR5D18, PRKG1, PTCH2, SMAD9
Negative_4727	CLTC, DHX58, NEFM
Negative_4728	C9, DBH, TNN, ALAS2, ANAPC7, CASP10, CPT2, CREB1, DDX55, DIAPH2, EPHA3, FSHB, GGT1, GNA14, HSD17B7, IL1RAP, NPR2, OR14J1, OR1N1, OR2B6, OR6K2, OR9A4, PDXP, PPP2CB, PTPN1, RARS2, STT3B, SV2A, UCP1
Negative_4729	CISH, CYP1B1, GALE, OR2M3, PRODH2, SHC2, TRDMT1, SERPINA1
Negative_4730	GDA, BMP4, CCNH, CDH3, ERBB3, GALNTL2, GRIN2C, GZMA, IFNA8, MTHFD1L, OR8A1, PPP2R2C, RPSA, SMAD3, TOMM40
Negative_4731	ACP5, BMP5, DGKB, FGF1, GDF5, GNAQ, IKBKG, MASP2, MDM2, ORC5L, PHKB, RASA1
Negative_4732	IL6, LIF, ACAA1, ACSS3, CCNB3, CD19, GALNT11, HCST, HIBADH, KYNU, OR2M2, OR9A2, PIK3R1, PRKCB, SLC27A5, SNAI1
Negative_4733	GPT, ACSL6, ADAM10, ALDH1A3, AREG, BCL2L1, CDH4, CMPK2, CTSS, F2RL2, FGF7, FM01, G6PD, GZMA, HLA-DOB, ISYNA1, KAT2A, KCNJ11, LLGL1, MS4A2, NADK, NFX1, PDE4C, PPAR, PP2R5A, RHOQ, RIPK1, SORD, TAS2R10, TAS2R40, ATP6V1G1, CACNA2D3, MAPKAPK5, SERPING1, TNFRSF17
Negative_4734	GLA, GNS, ID3, LIF, PDC, PTS, TNN, AGXT, ALDH3B1, B3GAT3, BCAR1, C5AR1, CACNA1S, CADM3, CDKN2C, CLOCK, COL1A2, COMT, CSAD, CSF2RA, DHRS3, FOXA3, GNAI3, IL18RAP, ITGAE, LAMB2, LMO7, MFNG, MINPP1, MLLT4, NFATC4, NKX3-1, OR4C46, OR52K1, OR52N1, PGAM1, POLR2D, PRKAG1, RRM2B, SC5DL, SPCS3, TKTL1, TUBB6, HLA-DPB1, KIR2DL5A
Negative_4735	F2R, PGF, ACP2, APOC3, CLDN9, DPYS, DUSP2, EPB41L2, MAP2K3, MPST, MYH14, NTRK1, OR56A3, OR6K6, OR6Q1, PIAS3, PIK3C2B, PLOD2, STX16
Negative_4736	JUN, ABAT, CALML6, CCL11, CCNE2, CYP19A1, CYP2C19, EPB41, FRAT2, FZD9, HSP90B1, LYPLA1, MAD1L1, NARS2, OR10H4, OR7D4, PIGO, PPOX, PSME3, SDC2, STAM2, TNFRSF4, ULBP1
Negative_4737	F2, GPI, ALG1, ANPEP, ARHGEF1, ARPC1B, CCL28, CDKN1A, CFL2, DDX23, FADD, FGFR2, FOXA3, GALK1, ICOS, ITGA2, JAK1, MAGI3, MASP1, NAGK, NNMT, NOS1, OR13A1, OR4A5, OR4D9, OR51G1, OR6K2, PARD6A, PDE1C, PDHA1, PI4KA, PLA2G1B, POLR3G, PPOX, RPS6KA3, UGT2B10, UNC5B, WNT5A, XYLT1, ZFYVE9, MAPKAPK3, ST6GALNAC5
Negative_4738	ADC, C6, F2R, LHB, MVD, PVR, SCD, WAS, ALDH2, ATP4B, CD274, DCTN1, DEGS2, DNMT3L, EPHB6, FGF9, FLOT2, FUT4, FUT8, GOT2, GPX7, IFNG, MCEE, MGA1, MMP2, NGEF, NR5A2, P2RX1, PLA2G10, PLK1, POLR1B, POLR3H, RPS6KB1, SOCS4, TCF7, YOD1
Negative_4739	MOS, ACP1, ADCY9, ALG6, ATP6VOC, B3GAT3, CHKA, CPT1B, CXCL11, CXCL2, DOCK1, FOXO1, FZR1, GNAL, MCCC1, NFX1, OR10G2, OR10H2, OR2Y1, OR51A7, OR51T1, PIAS2, PISD, PPP3CB, PRKAB2, PRKY, PRSS1, RPN1, RPS6KB1, RRM2B, SUCLA2, MAPK8IP1
Negative_4740	AGK, FAS, ADCY9, ADSS, B4GALT3, C1GALT1, CACNG6, CCL17, CCL4, CDH3, CLCF1, CLDN22, COQ6, CYP1A1, CYP2A6, DAG1, FARSB, FGD3, FGF13, FGF8, GAD2, GALT, GALE, GALNT10, GATM, GYS1, IDH3A, IMPDH1, MBL2, PIGN, PTTG1, RAC1, RHOA, SFRP2, SGPP1, SMARCA2, SPTLC1, TCIRG1, TRDMT1, TRHR, UBA7, UBE2L3, UGT8
Negative_4741	FGA, GLS, AADAC, ACOT12, ACOX3, C3AR1, CASK, CER1, CHD8, CLDN9, CYFIP2, DNMT3L, EPHA3, GAAA1, GPD1L, GRIA3, GRIN1, GSTK1, GUCA1A, HAGH, HS17B2, IL24, IRAK3, LRP5, MCM4, NCAM1, OR10A4, OR2T8, OR56A3, OR5D14, PDE6G, PDHB, PGAM4, PIGC, PLXNA3, POLR2I, RFNG, SDHD, SORD, STAT4, VEGFA, WNT16, YOD1, HLA-DRB3

Negative_4742	CP, MOS, ABLIM3, ACPT, ADH4, ALDH4A1, ALOX12B, BMP5, CLCF1, CXCL11, DKK4, DRD1, E2F2, GBGT1, GPAM, IFNG, LTBP1, MAP3K1, MAPK12, NFKBIB, NUDT8, OCRL, OR10R2, OR1J2, OR4C15, P2RX4, PAK7, PIK3C2A, STAT5A, TAS1R1, UGT2A3, UGT8, VASP
Negative_4743	AGXT, AKR1C2, AOC3, CCNA1, EGLN1, ELK4, EPHB3, FGF7, IL5RA, MAN1B1, MDH1, MTAP, NFATC4, OR52N4, PFN4, PRKAA1, PTEN, SELE, TAS2R16, TAS2R48
Negative_4744	GP6, IDS, AOC3, ATP5C1, ATP5G1, ATP6AP1, CISH, CYP11B1, CYP3A4, DGAT2, EARS2, GCNT2, HEMK1, ITGB6, LAMC3, LARS2, NADK, OR2G2, P2RX2, P2RX3, PGAM2, RAB23, UGCGL2, ATP6V1E2, GABARAPL1, TNFRSF10C
Negative_4745	CLTC, IARS, MARS2, NKD1, OR2A42, SMURF2
Negative_4746	CALML6, CCL27, CDC42, CFTR, CHSY3, COL4A2, DEGS1, DUSP14, GNA15, ITPKB, OR10G8, OR1M1, OR4C16, OR51A2, OR51I2, PDGFC, SLC25A4, TGFB2, TNFRSF8, VDACC3, ALDH18A1, EIF4EBP1, TNFRSF10B
Negative_4747	BID, ARSB, BIRC5, IFNA7, IL22RA1, SEMA3A, TUBB4
Negative_4748	DBT, ALG2, B4GALT2, BTRC, BUB1B, CACNA1I, CCDC6, COQ5, CYP2A13, DOCK1, DTX4, EXTL1, FZD3, GNA12, GNMT, GSTZ1, HPSE, LARS, MAT1A, OR2L13, OR2M7, OR51A2, OR51I1, PDE1C, PIGB, PIK3CG, PLA2G2E, PLCG2, PLIN, PTDSS2, PTPRJ, RFXAP, SOX17, STX1B, WWP1
Negative_4749	GSTM2, PTCRA, PTPN1
Negative_4750	F12, AASDH, ALDH5A1, ARPC1A, ENPP7, MAP2K4, OR4D1, PPARG, PRKCD, PRPS1, RDH11, SARDH, SESN1, TICAM2, TUBB2B
Negative_4751	ALOX5, ARD1A, COL2A1, GP1BB, INPP5B, NT5C, PLA2G5, PPM1B, SYNJ2, TAS2R10, TAS2R9, UBE2K, HLA-DRB5
Negative_4752	CGA, GLA, NOG, ACVR1, ALG8, B4GALT6, CACNA1D, CACNB3, CD44, CLCF1, DKK4, ENTPD4, FUT8, HHIP, IRS1, LAMC3, LDHAL6A, MGLL, MMP14, NAGK, OR13C3, OR2L2, OR51M1, OR8D4, OR9G4, PGAM1, PIGV, PRKAB2, RELA, SIGLEC1, THTPA, WNT16
Negative_4753	DCC, ACAT2, AKT3, ATP6AP1, B4GALT7, BUB3, CD72, CIITA, COX15, CXCL2, ESPL1, FMO4, GCNT4, HLCS, HTR5A, IDI1, IMPA1, ITGA8, NLGN1, NRG1, OR4K15, OR4Q3, OR51B5, OR6T1, PIGK, PPP1R3B, PRLR, RASGRP2
Negative_4754	F12, LPO, TK2, ACTN2, AMDHD2, AMY2A, ANAPC10, ASAH1, ATP2A2, ATP5J, CADM3, CALML5, CYP4A22, DDX51, EFNA2, ENTPD5, ETNK1, GADD45G, HSPA1B, ITGA11, ITGAX, LYPLA2, NEU3, NPR2, OR13C3, OR1E2, ORC6L, PDE3B, PGK2, PTGS1, RBKS, ROCK2, SLC2A1, SOS1, SOX17, SPTLC1, SSSX2IP, STX16, TAS2R1, VAMP3, SERPINE1
Negative_4755	DUT, GSN, LAT, C4BPA, CALML5, COL6A1, DHDDS, DTX4, EFNA2, FRAT2, FZD5, GADD45A, HLA-DMA, HYAL2, IL1A, INHBE, KLRC4, LDHA, LEPR, LILRB3, LTA4H, MMP9, OR10G7, PLA2G2D, PRKX, PTCH1, SPTLC1, TAS2R14, ARHGEF12
Negative_4756	BTK, DBT, FGA, LCK, TPR, ADIPOR2, AMHR2, B4GALT6, CAMKK1, CCR5, CCR6, CD70, CHKB, CSNK1G3, CTSG, DTX1, ECSIT, EFNA5, EPB41L3, FARP2, FSHR, GAD2, GNG13, HCLS1, HES1, ICAM3, IFNB1, IMPA2, LRDD, MAP3K7, MYH13, NMNAT1, OR13J1, OR52A1, OR7A5, PLXNC1, PRKY, PSPH, PTSS1, PTK2, PYCRL, STAT1, TGDS, THBD, YES1, ATP6VOD1, MAPKAPK3, SERPINC1
Negative_4757	FLAD1, IL11RA, MTFMT, SMAD3
Negative_4758	CFI, EZR, F2R, F5, LPL, AGTR1, ATP5H, B3GALT5, BMP2, BMP8B, BRAF, CAMK2, CD3E, CD8B, CDKN2B, CTSB, CYP2A6, DDX52, DOT1L, DUSP8, EPHX1, FLT1, HMOX1, IL11, IQGAP2, KCNB1, KITLG, NMNAT3, OR4A15, OR4C46, OR4D5, OR4K1, OR5C1, PARS2, PIGL, PLXNB2, PRKAB1, PYCR1, RASGRF1, SETD7, STAT4, TAP2, TGFB3, WARS2, TNFRSF10A
Negative_4759	B4GALT7, CD34, PPA2, RRM1, TUBB4Q, MAPK8IP3

Negative_4760	BAX, TNR, ALG1, B3GALT6, B4GALT3, CPT1A, CSNK1G3, CTF1, DUSP16, E2F5, ETS1, HIBCH, IL18RAP, IL4R, KRAS, LIPT1, MEF2C, MYH2, OR8K5, PAK4, PRKCG, RFWD2, SETD2, TJP2, TUBA8, UNC5D, PAFAH1B2
Negative_4761	BTC, HYI, ADSL, AKR1D1, DDX23, DUSP6, FZD10, GLUD1, IL22, LAMB1, LIPE, MAP3K1, MBL2, NCK1, OR1D5, OR1N1, OR2M7, OR4C12, PDHA1, PLXNB1, PPP3R1, SMPD1, SPCS3, TUBAL3, WNT8A, PDCD1LG2, ST6GALNAC5
Negative_4762	ALG9, CBR1, CCNG2, CD28, CD86, CDC14B, CD01, CKMT2, CSNK1A1, CXCR5, IL2RA, IMPDH1, MGAT3, MTMR6, OR6B2, PDE3B, PDHB, PLXNC1, RUVBL1, SOCS1, TAS2R5, TCF7L1
Negative_4763	EDA, ARPC5, ASNS, CCNB1, CYCS, EPHX2, GNAT3, GPAA1, GPD1L, HHIP, INADL, ITGB8, MYL7, OR10H3, OR13C9, OR5B12, POLA2, POLR2I, STX8, TBXAS1, UGT2B10, ATP6V0D1, TNFRSF1A
Negative_4764	MYC, NPY, ADCY7, ALDH1B1, B4GALT7, BAI1, BST1, CCNG1, EPHX1, FMO2, GRM1, IFNA14, MMP7, NRAS, NUMBL, OR52A1, OR5AP2, OR7A10, PARVB, PDCD1, PDK1, PLA2G2D, PLXNB3, RHEB, STK3, SUCLG1, TAS2R60, XCL2
Negative_4765	C4B, RFK, SMO, AANAT, ACYP2, ARRB1, ATP6V1H, BCAR1, CNTN2, DDX56, EXT1, FOXO3, HLA-DMA, ICOS, IL28A, LILRB3, LIPT1, MFNG, MGAT1, NEFM, NUDT5, OR51A2, OR6K6, PANK4, PER1, PFKFB3, PIGX, PIK3C2A, PISD, PSENN, RAB23, RFXANK, SKP1, ST3GAL6, TRAF4, TSHB, ULK1, VAV3, YWHAB, TNFRSF1A
Negative_4766	F5, GK, ADH6, APPL1, ARNT2, CCL8, E2F2, ENPP7, FBXW11, FZD1, GSTO1, HTR4, NCR2, OR10H1, OR8B8, PARS2, PIGA, PIGK, PORCN, PTPN5, SPRED1, TCF7L1, TNFSF10, UCK1, UNC5C
Negative_4767	AK2, FER, GH1, ACTB, ADORA2A, ARNT, CCR6, CTSS, DFFB, DNMT1, EFNA3, EPHX2, FZD5, GLG1, GNAI3, HSPB1, IL11, MAP2K7, NT5E, OR2A4, OR4F17, OR51M1, OR8B12, POLR2I, PPP1R3A, PPP3R1, PYGB, RASSF1, SLC2A4, STX18, TOMM40L, TRAF5, TRPM5, VEGFA, ALDH18A1
Negative_4768	DHH, FUK, ACSL5, ARPC1A, CAMK2G, CDKN1C, DVL2, ECHS1, EGFR, EIF4B, FADD, FARSB, FDFT1, IL11, IL13RA1, JAG1, NPR1, OR2H1, OR51A2, PANK4, PPP2R2C, PVRL1, ULK1, UNC5A
Negative_4769	ILK, BMP6, IDH3B
Negative_4770	F8, PXN, ARSA, BRAF, CDC2, GAPDH, NPR2, NR4A1, PPP1CB, TAS2R50
Negative_4771	ABO, TPO, AOC2, ARHGAP5, ARPC1A, ASS1, ATP13A2, BDNF, CD36, CERK, COL5A3, CRY1, CYP2S1, DNMT1, FGF4, GALC, GGPS1, GMPPB, GSTO1, HSPA2, IL1R2, ITPKA, LYPLA2, MAPK14, NEU2, OR1J1, OR2AG1, OR51B5, P2RX5, PAX8, PGAM1, PHKG1, PSEN2, SCP2, SESN1, SPHK2, SPTLC2, TNFSF10, TYRP1, YARS2, ATP6V1C1, TNFRSF13B
Negative_4772	APP, EGF, SI, CACNA1F, CCNG1, CSF1, DOT1L, GBE1, LIPE, OR1L3, OR8D4, PDE7A, PYCRL, SCIN, STX3, TRPM5, WHSC1
Negative_4773	EDA, GLS, ME1, OGT, STS, ARG2, C9orf95, CCNH, CES1, CKMT2, CSF2RA, CTSLL1, CYP4A22, EP300, FZD9, FZR1, GSTM5, HNMT, HPSE, HTR2C, HTR5A, INPP5A, LGMN, MAD2L1, MAP2K2, MAP3K12, MAP3K6, MPDZ, MTAP, NMNAT1, OR1D2, OR1G1, OR2A42, OR52N4, OR5P3, ORC1L, PDGFB, PGS1, PLOD2, PRKCE, RUNX1T1, STAM, STX5, TIRAP, TRIP10, TUBB3
Negative_4774	MVD, CD36, DLL4, DVL1, FASLG, GAD1, HAP1, IBSP, ITGAV, MDM4, MTHFR, NGR1, OR5AP2, OR6C6, PRNP, RPS6KB2, SEMA4C, SUOX, EIF4EBP1, PRICKLE2
Negative_4775	ATM, BCAT1, CBR1, CCND2, CDC16, CHAT, CLCA4, CRLF2, DAAM2, DCTD, HTRA2, IL21R, LARS, MAP4K3, MYH1, NKX6-1, OR9G4, SMPD4, SOAT2, ULK3, UPP1, VAV1, ZFYVE9
Negative_4776	CFH, IL4, LEP, LTB, ACADS, AXIN1, B4GALT7, BMPR2, C4BPA, CXCL5, CYP1B1, DUSP7, GALNS, GUCA1A, GUCA1B, HES1, HTR2C, IL1R2, IRF7, LAMB4, MICHA, NAGK, NRG2, OR4D6, OR4F17, OR6C3, PAPSS2, PDE1A, PDE4A, PLEKHA8, PPP3CC, PRSS1, PTCH1, PYGB, RARA, RETSAT, UGCGL1
Negative_4777	GANC, OR4C11, PPP2CA, PPP2R5D, ST3GAL5, VDAC1

Negative_4778	GH2, LTB, ACAT2, ACP6, ACY3, ADRA1B, AGTR1, B3GALT2, CAMK2A, CCL3, CD55, CRB3, CSF2, CSNK1A1, CXCR3, CXCR5, CYFIP1, DGKB, DOLPP1, GJA1, GPD1, GSTA4, IL2RA, ITGA3, MTHFS, OR5M9, OR5P3, OR8B8, PAFAH2, PRPH2, RPN1, TNFSF8, TSHB, ZAP70, ATP6V1E1
Negative_4779	ATP5E, FGF5, HNF4G, HSPA2, POLR2F, SDC4, UNC5B
Negative_4780	MPI, MVK, NLK, PGD, ACVR2A, ALPI, ARHGEF6, ATP5F1, BLVRA, BUB3, CAV3, CCND2, CTSG, CXCL16, CXCR6, DHCR24, FUT8, GCLM, ICOS, IGF1, LDHA, LMO7, LRDD, NAE1, OR10A6, OR2A12, OR2T8, ORC3L, PEMT, PIGK, PLCG2, POLR3D, PRKCI, RCHY1, SETMAR, SFRP1, SIAH1, SPRY2, UNC5D, VAMP3, VNN1, YARS2, HLA-DPB1
Negative_4781	APP, BAX, ACAD9, B4GALT1, CDC14B, CER1, CHRM2, COL4A1, CXCR4, HNF1B, IL13RA1, IL1R2, MAGI2, MAP3K5, NFKBIE, OR1A2, OR4M1, OR4X2, PARVB, PCCA, PDE4A, PIP5K1B, PRKAG3, RXRB, SGMS1, THBS3, TUBB6
Negative_4782	CALML5, IFNA8, INADL
Negative_4783	DAO, ACY1, CTBP2, HNMT, MOV10L1, PTGIS, RUVBL1, TAP2, TBL1XR1
Negative_4784	UBC, ACO2, ACSM1, ATP5I, BST1, CLCA4, CYSLTR2, DAPK2, E2F4, FMO5, ITGB4, LGMN, NAT2, OCLN, PTEN, RPRM
Negative_4785	F10, F2, HPD, AMD1, ECHS1, ICAM3, ITGA3, OR7C2, PGM3
Negative_4786	FUT3, RALA, ST8SIA1
Negative_4787	ABL2, AKR1C4, AKT1, BAI1, CCR7, EVI1, FUT7, GOSR2, IFNA16, IL3RA, IL6ST, ITGA4, LPAR1, MCEE, OR3A2, OR7A10, PPCS, QARS, RPSA, RRM2, TBXA2R, ULK1, ATP6V0A1
Negative_4788	C8B, F9, ACTG2, AKR1C3, CD55, G6PC2, GGT6, GNAI3, LRRC4C, MYH10, OR52E8, OR8K1, RAPGEF3, SH2D1B, TNFSF10, TOMM40, MAPKAPK3
Negative_4789	WAS, ACO1, ATP50, B3GALT5, BLVRA, EPAS1, FLAD1, GARS, GNAO1, IL6R, IRAK2, ITCH, ITGA2, KARS, LALBA, MAD1L1, MAD2L2, MCM2, NRXN1, OR2L8, OR4Q3, OR56B4, OR5AN1, OR5C1, OR6C3, PANK1, PLAUR, PLXNB2, RAB23, RAF1, SDC1, STX1B, TSC2, UGT2B11, WASL, SERPINE1, ST6GALNAC6, TNFRSF11A
Negative_4790	C7, ACTB, AGXT2, COX15, CUL1, DNMT3A, EGFR, FARS2, FUT1, HYAL2, IDH3G, IFNG, MAD2L1, MAML3, NKX3-1, NR1D1, NTN1, ORC4L, PDE8B, RENBP, RPS6KA5, SEMA4G, SULT1A2, SV2A, ALDH18A1
Negative_4791	ACTA2, ANAPC2, CDH15, ENPP1, ENTPD3, ER01L, GGT5, GSTM4, ITGA4, NRG4, ORC3L, POLR2H, PTK2B, SHC3, SLC25A5, TGFB2, WNT2
Negative_4792	HYI, ADRA1D, ALAS2, ALOX12, AREG, ATP5G3, B4GALT6, BIRC2, CASP10, COL4A6, CPOX, CUL1, CYP2A13, DARS2, DERL1, DPM1, EPB41, FABP1, FADD, FGF1, FTCD, FZD7, G6PC, GAD2, GUCA1C, IFNA21, IQGAP3, LIAS, MAN1A2, MINPP1, NTSR1, OR10R2, OR6M1, OR8B4, ORC3L, PAK2, PLAU, PLCZ1, PNPO, PRKAG1, SLC25A4, SLC2A2, STX12, XCL2, ATP6V0A2, TNFRSF14
Negative_4793	ABO, ASL, CGN, FUK, GDA, PTS, ACO1, ALG6, ATF2, AVPR1B, BLVRB, CCL21, CNTF, COMT, CRLF2, CYP2U1, EGLN3, ENO2, GNB1, HLA-DOB, IBSP, IFNA4, IFNB1, IRS2, MGAT3, MPP5, MTHFD1, MYH9, NAT6, OR13J1, OR1F1, OR2A25, OR4F5, OR51M1, PDHA2, PMM2, PRIM1, RPE65, STX3, SULT1A4, TOMM40, ULK1, WNT8B, HLA-DRB3
Negative_4794	FGB, TEC, ALAS1, BCAR1, BDKRB2, CACNG5, CCL1, CCR6, CDC25B, COX15, DDX50, DNMT3L, ENPP3, FOXO3, FSHR, GLS2, GOSR2, HSD17B3, IL11, IMPDH1, MAP4K3, MMP2, MTHFR, NRG1, NUDT5, OR2G3, OR6C70, ORC4L, PCCA, PRDX6, PRKAR2A, PRKCZ, PTGS2, RASGRP3, RDH16, SARS, STAT5B, TAP2, TAS1R1, THBS3, TPH1, WNT8B, ZNRD1, B4GALNT1
Negative_4795	F12, JUP, ADRB2, AKT1, ANAPC2, ARSE, ATP5L, BCAT1, BMP8B, CD3E, CDH1, CSF1R, CTSG, CYP1B1, E2F1, EXT1, F11R, FABP1, GGPS1, IL17B, KAT2B, LM07, MASP2, MTHFD1L, NFYB, NUDT2, OGDH, OR2A4, OR5AR1, OR6B2, PAK6, PRKCI, SMAD7, SOCS1, STX3, SUCLG1, TAS1R3, THBS4



Negative_4796	IL7, LAT, ACSM4, ALDH3B2, ARNT, CBR3, CDH15, CHRNA7, CHUK, CLOCK, DAPK1, EFN1, FZD10, HLA-F, ITGA9, MAN1B1, NLGN2, OR10J5, OR2C3, OR4D6, OR51G2, OR5B17, OR7G3, PARD6G, PIK3C2B, POLA2, POLR3A, PRKAB2, RASGRP2, SPRY1, STX4, THBS3, TKTL2, TPK1, B4GALNT1
Negative_4797	DUT, EPO, IL4, BHMT, C4BPA, CCL22, CX3CR1, CXCL6, CYP2A13, CYP2F1, CYP3A5, GALNT10, GCDH, IFNB1, MAP3K6, NCK2, OR10H1, OR13C9, OR51L1, OR51Q1, OR9G4, PAPSS1, PCK2, PDHA2, POLR2F, PON1, TAS2R41, UXS1, YWHAH
Negative_4798	PLG, ABI2, CNTNAP2, CRB3, CREB5, CYSLTR1, FARSB, FM04, GALNS, GLS2, GRAP2, HTR7, IFT57, ITGA7, ITPA, KLRC1, MAP3K12, NT5C3, OR4C11, OR9G1, PARS2, PPP3CA, SELPLG, SEMA3B, SEMA4A, SSH2, THY1, PNLIPRP2
Negative_4799	APOE, CTF1, EIF4B, PPP3CA, SEMA4B
Negative_4800	IL9, ABP1, ACTA1, ADH5, AK3L1, ATG3, CACNB2, CNGA3, COL4A6, CSNK2A1, EGLN1, GOT1, HMOX1, MAPK7, NARS, OR2T2, OR5T2, TAS2R4, TAS2R8
Negative_4801	BAD, CFD, DCK, ITK, LAT, MPZ, ADCY2, ALDH2, B3GNT2, CES1, CHKB, COASY, CREBBP, CYP4F2, DPYS, ETS1, FM05, GCNT4, GMPS, GNMT, GOT2, GRHR, HMOX1, HNMT, HTRA2, ICOS, IDI1, JUND, KARS, MECR, MIOX, OR10A6, OR1L6, OR2F1, OR5H6, OR6K2, PDE6D, PGM2, PLTP, RFX5, SRGAP2, ST3GAL5, STK4, TASS1R1, TUBA1A, MAPK8IP1
Negative_4802	TNC, ADRB1, CDC14B, CDKN2B, CTSB, DUSP16, EPAS1, ESAM, FGF11, FLT1, GDE1, KLRC2, NAGK, NEFM, OR6K3, OR7G3, PIK3R1, PITX2, POLA1, PPP1R3D, PPP2R5E, PRKAR1A, PTGS1, RAP1B, SMAD9, SPTLC1, SSH1, UGT2B28, CACNA2D4, PPARGC1A, SERPINA5
Negative_4803	LYN, PGD, ADSSL1, CD40, CXCR5, DLL4, EFNA2, EFNA5, GFAP, GLUL, HADH, HSD11B1, OR10J3, OR11H4, OR4A15, PIK3R3, PPCDC, PRPS2, PTK2B, PVRL3, QARS, ROCK1, SMAD4, SMAD7, SSH1, STT3B, TACR2, TNXB, UMPS, PAFAH1B1
Negative_4804	ATP5H, COX10, DLAT, EPHB1, FZD6, IFNGR2, LAP3, OR4C15, OR7C1, TNXB, CSNK1A1L
Negative_4805	FGA, GNE, ID2, RDX, UBC, ABLIM3, ADCY1, ADCY3, BDH1, C7orf16, CNTFR, CYSLTR2, DGUOK, ESAM, GGCX, MAP3K4, OR14C36, OR51G2, OR5AP2, OR5T3, PAR6B, PTPRJ, PYCR1, RFX5, TLR4, ATP6V1B2, CACNA2D4
Negative_4806	CEL, DGKH, LEPR, LRP6, MAPK10, NCOR1, OR4A5, OR6C70, RDH11, TCF7
Negative_4807	PAH, AHCYL2, AKT3, CCL26, CD22, CHEK1, COL6A2, DDIT4, FLT3, GCH1, GCNT1, GNAO1, GRIA1, HAO1, NAE1, ORC3L, OXCT1, PI4KA, PRKACG, SEMA4F, ST6GAL1, SYNJ1, TRDMT1, WSCR22, WNT10B, WNT11
Negative_4808	AMPD3, ATP5B, DPM1, EFNA2, EFNA3, FADS2, FGF8, LCP2, MAN2A1, MGAT2, OR6N2, PAK1, PCK1, PRKCD, SOCS1, STX6, TNFRSF1B
Negative_4809	C7, FGG, ACP5, ASMT, CACNG7, CCR7, CDC16, CSF3, CYP2S1, FZR1, GALNT12, GNPDA2, IL22RA2, IRF5, ITGA1, NOX3, OR10H5, OR2M5, OR5AR1, OR5AS1, OR5L1, PDXK, PFN3, PLA2G1B, PRKACA, PVRL1, RDH11, SEMA4G, TACR1, TUBA1B, HSP90AA1
Negative_4810	ARG1, B3GAT1, CCL22, CCND2, CLDN5, COL1A1, DOCK1, ESPL1, GOT2, INHBC, MDH1, OR2L3, PDE7B, PFAS, PRKAG1, PVRL1, RFX5, SETDB2, TGFB2
Negative_4811	TNR, ANAPC4, ATF2, ATP2A1, CCL21, CCNB1, CDS1, CHEK1, DUSP4, FPGT, FTMT, GABARAP, IL13RA2, IQGAP2, LDHAL6A, MLLT4, MMP9, MYH14, NCKAP1L, OR10A7, OR51D1, PDE4C, PFN1, PLA2G3, PTGES, ST3GAL6, TAS2R40, UCKL1, MAPK8IP1
Negative_4812	FER, AVPR1A, CERK, CLDN10, CLTC, FLT3, IFT57, NEU1, OR10H1, OR52A1, PDK1, PIGK, PPAP2A, PTTG1, WNT5B, ATP6V1G3
Negative_4813	CSK, B4GALT3, CCKAR, CSF2, EPHA1, LYZL1, MYH7B, NKX3-1, OR10P1, OR8H1, PDE4D, PDE6G, PMM2, PPT1, PSEN2, RRM1, TAP1, ULK1

Negative_4814	ADC, FAH, ID2, KMO, UBB, ALPI, APH1A, CASP8, CDH4, CHUK, CREB3L1, CSNK1G1, DAPK2, DDX52, DOCK1, EFNA1, GALC, GALNT7, GALNTL2, GCNT4, GAAA1, IBSP, INPP4A, ITGB1, NFATC3, NRG4, OR10G9, OR13C5, OR1E2, OR2A25, OR2A42, OR2T12, OR4C13, OR52E8, OR5D13, P4HA1, PIGP, PIK3R5, POLR1E, RCHY1, SFRP1, SLC9A1, SOD1, SPTLC1, STEAP3, TRIP10, UCKL1, UXS1, ATP6V1B2
Negative_4815	MSN, ARHGAP5, CCL1, CCL11, CHRM1, FGD3, GAD1, IDH3B, OR7C2, ORC2L, PHKG2, POLE, PTPN6, TP53, TRAF3, WASL, EIF4EBP1
Negative_4816	DLD, ADSL, ALDH1A1, CACNB2, CALML3, CALML6, CPT1A, CYP2C19, DUSP16, INMT, LALBA, MLYCD, MYH6, NCAM1, NTNG1, OR5V1, PLK1, POLR1D, RBL2, SFRP2, STX6, SUCLG1, TNFRSF8, CACNA2D3, HLA-DPB1
Negative_4817	CDA, IVD, KIT, LCT, ACSL6, ACVR2A, ADH4, AGPAT2, ALAS1, APOA1, ARPC1B, CD34, CDKN2D, CLDN4, DAPK2, DUSP3, EDNRB, FMO2, GCNT2, GNA12, GPX5, IFNA7, IL12RB1, IMPA2, MAGI2, MAP3K1, NAT1, NAT6, OR10T2, OR4A16, OR4C16, OR4D2, OR51Q1, PAX6, PDIA4, PLA2G2A, PLAT, PLCD1, PLXNC1, PNPLA4, PRKCI, PRLR, PTCH1, UNC5C, VAV3
Negative_4818	DCC, ACAA1, ADCY9, ALG10, AMDHD2, BCAR1, CAMK2A, CAMK2D, CHST13, CIITA, CSNK1G1, CYP27A1, DAD1, DDX41, EPHB6, FABP1, FGF12, FOXO1, GMPPA, GRB2, HSD17B1, IDH2, IL12RB1, ITGB6, MMP9, NFKB2, NOS3, OR11H1, OR2AG2, OR2K2, OR4C15, PCYT2, PDCD1, PGK2, PRSS2, PVRL2, SMARCA5, SMURF2, TAS1R1, WNT2, CACNA2D4
Negative_4819	FST, ACTN2, ACYP2, AMDHD1, ARPC1A, ASCC3, B3GNT5, B4GALT3, CACNG6, CND3, CDK4, CHEK2, CYP1A1, DUSP1, ENTPD5, GALNT10, HSPA2, IFNA8, IL21R, IMPDH2, MAGI3, MAN1A1, MINPP1, MYH9, NFKB2, OR10AD1, OR14I1, OR1J1, OR2T5, PDGFB, PIK3C3, PRKCZ, ATP6V1E1, PNLIPRP2
Negative_4820	ADC, AK3, ALDH1A1, BLNK, BLVRB, C9orf95, CDK4, CHR1, COMT, DNMT3L, GALNTL4, GMPR, GNAZ, HLA-DOA, ICAM2, IQGAP1, ITGA2, ITGAV, LLGL1, MAD2L2, MAP4K4, MINPP1, OR4X1, OR7A17, PIGL, PON2, PRKX, PTPN11, PVRL2, SENP2, ULK2, VARS, WARS, XCR1, MAPKAPK3
Negative_4821	TXK, AGXT2, AHCYL2, CCL2, CERK, DDX18, DERA, EPHB4, FZD1, GALNT3, HMGCL, KIR2DL2, LAMB3, MGAT5B, OR2T33, OR52D1, OR52I1, OR6N1, OXSM, PTGES, QPRT, SHISA5, TP73
Negative_4822	C4B, GGH, GPT, IHH, PML, RDX, TXK, AK3L1, BDH2, CCR9, CDC7, CDS1, CHPT1, CREBBP, CSNK1G1, CYP3A43, DHDDS, ENO1, FOSL1, GAL3ST1, GNAI3, GPD2, HCST, HRH1, ITGB1, LIMK1, MAML2, MDH2, MGST3, MYLK, NCAM1, NCSTN, OR13A1, OR4A15, OR4C12, OR5K2, PARVA, PDE4B, PDGFRA, PERP, PHKB, PIM1, PNPLA4, POLR1A, PPAP2B, PRODH, PRODH2, RHEB, SRGAP2
Negative_4823	ABCC8, B3GNT2, CCR2, CD47, CREB5, EPHA1, IFT57, NCR2, NPR1, OR51B4, PTER1, RDH11
Negative_4824	AK7, C8G, CRH, PTS, ADIPOR1, ASAH1, CASP8, CCDC6, CCR4, CSNK1E, DAG1, DLST, FGF13, GOT1, IL28A, KLRC1, LYPLA2, MADCAM1, NFKBIB, OR4S2, OR51B4, OR51F1, OR51S1, OR5D14, OR5M9, OR7C2, PDE2A, PDK1, PFAS, PLCB1, PPID, PRODH, ST3GAL5, THY1, VEGFC, YARS, MAPK8IP1, MAPKAPK2
Negative_4825	C5, CR1, NPL, OAT, ACP6, AGPAT3, CTBP1, CYP2F1, DAPK3, DDX56, HMGCL, IFNA5, IL10, INHBB, ITGAE, ITPKB, MAPK3, MGAM, MYLK, NFATC4, NOS1, NRG1, OR10X1, OR1S2, OR6K2, P4HA1, PIGC, PIK3CB, PIM2, PIP4K2C, PLCB4, POLD4, RAP1B, SEMA3D, SETD8, STAT6, UGT1A10, WASF1, YOD1, HLA-DPB1
Negative_4826	CD6, CKM, ME2, XDH, AKT3, ARHGEF4, ATP2A1, EFN1, EPHA5, FABP1, FGF12, FSHR, HLA-DMA, MAML1, MCM2, NMNAT1, OR10G8, OR2C3, OR3A1, PIGT, PIGW, PIP4K2C, RBX1, SELPLG, SEMA3F, SMURF1, SOAT1, TNFRSF14

Negative_4827	GPT, IL2, AKR1B1, ALPPL2, ARSD, CACNB3, CADM1, CAMKK2, CASP10, CASP9, CLDN20, CPT1A, CREB3, CRY1, CTSS, EGFR, ENTPD7, EPB41, FUT5, GALNT1, GLI2, GMDS, GSTZ1, IL2RG, LAMA4, LIPC, MAP3K2, MASP2, MCM4, MITF, NFAT5, NFATC1, NPR2, OR4C11, PGK1, PIK3R1, PKLR, PLA2G6, PLEKHA8, SOCS3, STX3, UBE2K, MAPKAPK5, SUV420H2
Negative_4828	IVD, STS, AASDH, ACVRL1, AHCYL1, ALG12, APLP1, C9orf95, CDKN1A, CHST13, CNTN1, COL2A1, CTSB, EPAS1, FARS2, FDFT1, FGF22, FTCD, GP1BA, GSTM4, GSTO1, IL15RA, IL9R, KIR2DL1, LRP6, MDH2, MGAT5, OR1S1, OR52B4, OR5A1, PLA2G6, POLR2B, RBL1, RPS6KA2, TJP2, TNFRSF8, VEGFC
Negative_4829	SHH, ACYP2, ALOX12, ASIP, BAAT, CAMKK1, CCL16, CD8B, CD99, CDK7, CHEK2, CTNNA1, CYP1B1, DGAT1, DUSP7, GAB1, GMPR2, GPAM, GTSE1, INPP4B, LTB, MAML1, MAP4K3, MPZL1, MYH14, NAMPT, NFKB1, NT5C1A, NUDT5, OR10A3, OR2B2, OR51G2, OR51S1, OR5AR1, OR6X1, OR8H3, PAK4, PCNA, PDE3B, PFN1, PPA1, RHOA, SETMAR, SPRY3, SV2C, TRPM5, AASDHPT, ATP6V0A1, ATP6V1G2
Negative_4830	ACO3, AKR1D1, ATP13A2, DDX54, GSTM3, ICAM3, ITPKA, NRCAM, OR4C13, OR6Y1, PAICS, PARD6G, PRKY, RAPGEF3, STEAP3, TAS2R14, TIAM2, TYROBP
Negative_4831	CAT, INS, SHH, TNF, ADCY5, AGXT, ALG12, CIITA, DAG1, GPAA1, GPLD1, IFNA8, LAMA4, LCP2, LIPA, OR10R2, OR2D2, OR51G2, OR52B4, OR52I2, OR5F1, PDE6D, PIP4K2A, POLR3G, PPAP2C, RASSF1, RBPJL, RIPK1, RXRG, SEMA7A, TIAM1, TKTL2, TRAF1, TSTA3, WNT1, ST6GALNAC1
Negative_4832	ME3, MYC, UBC, AADAT, ACOT11, CX3CR1, DDX41, EPAS1, F2RL2, GALE, GNA11, GSTA2, IL19, IL1A, IPPK, ITGAX, KLKB1, MARS2, MDH1, OR4N4, OR51L1, OR6C2, OR7C1, ORC6L, PIAS3, PKLR, POLR1A, PPP3CC, PRKG1, PTDSS1, PVR, L2, RAC2, SELL, SLC27A5, SNAI1, SSH3, STAM, TAS2R41, TLR4, TUBA1C, TUBB6, WNT7B, ATP6V0D2, HSD17B12, MAPK8IP2, PPP1R12A, ST6GALNAC6
Negative_4833	CBL, ANAPC1, ASMT, B3GALT6, CHSY1, COL4A4, CYP8B1, DVL2, E2F1, FOXA2, GCNT4, MGAM, NEFH, OR11H6, OR2T29, OR6C6, PDHA2, PFKL, SETD1B, SPTLC1, TAS2R48, TNFRSF11A
Negative_4834	DBH, FER, GSS, NPY, ACAT2, ACOX2, ACSM2A, BCKDHB, CCNB1, CDKN2D, CHRM1, CSF2RA, CSF3R, DGKI, FMO3, HLA-DMA, HSD17B7, IL17B, JAK2, MAP2K1, MAP3K2, MYH14, NEFH, NTN1, OR10G2, OR4E2, OR4F4, OR4Q3, OR51E1, OR8D2, PDE6G, PGM3, POLA2, SOAT1, SOS1, SPAM1, SSSX2IP, ST3GAL4, VEGFC, GABARAPL1, MAPKAPK2, SERPINC1
Negative_4835	OGT, TNF, ARNT, ATP5F1, B4GALT7, CPS1, FZD8, ITGAM, LGMN, PAPSS1, PPA1
Negative_4836	IL3, ABP1, ACSM5, ARRB1, CD14, CLDN4, COQ5, CYFIP2, GNRHR, GRIA3, JAM2, LIPC, MINPP1, NFE2L2, OR4E2, PIP4K2B, PLA2G10, POLE3, PPT1, SOCS1, ST3GAL5, THBS2, TIAM2, TPK1, TUBB, XCL2, EIF4EBP1, SERPINA1
Negative_4837	KHK, CD46, CHD8, DFFB, DVL3, EI24, FGF19, GNAS, IL29, NR1H3, OR11H4, OR13C9, OR9A2, PDE4B, PFKL, PNPLA4, PPP2R1B, PRKCI, RASGRP4, RPN2, SMC1A, TNFRSF10A
Negative_4838	BAD, RPE, ADCY4, AMPD1, ARHGEF4, BLVRA, CHIT1, E2F3, EXOC7, FCGR3B, GBE1, GLB1, IFNA5, IL12RB2, ITGAD, JAM2, LIPE, LYZL1, MAGI3, MAPK10, MAPK8, MKNK1, MYL2, NTNG1, OR10J1, OR1E1, OR1J2, RAB23, RERE, RPS6KA1, RAS2, RUNX1T1, TAS2R14, UPB1, ATP6V0D1, ATP6V1G3
Negative_4839	ACY3, CAMK4, CDH5, COL4A2, CXCR6, FGF18, FRAT1, MAOA, MAP3K12, MAP3K14, OR10G7, OR2A2, SOAT1, TBL1XR1
Negative_4840	EBP, AGXT, ALDH9A1, ARNT, COX15, CYP21A2, EFNA5, ETNK1, FGF6, FZD7, HSD11B1, HSD3B1, HTR2A, INSR, KLKB1, LTBP1, MGAT5, MMP14, MYD88, NT5C2, ONECUT1, OR5D14, OXSM, PGAM1, PMM2, PPP1CA, PPP2R5A, PROC, PYGL, SPRY1, STX18, SV2C, TGFB3, TSC2, USE1, VDAC3, WNT8B
Negative_4841	BAD, F2R, PDC, FGF18, IRF5, ITGA5, NPR2, OR8K5, PLA2G6, WASF3

Negative_4842	C1S, TKT, ACHE, ACO1, AGRP, AKR1A1, ALAS2, ARHGEF2, BLVRA, BMP5, CNTNAP2, CYP3A43, DRD1, ENPP1, HSD3B7, IARS2, IDI1, IL2RG, MAN1A1, NFATC4, NRP1, OR4C46, OR51E1, OR51T1, OR7A17, OR7G1, PFN3, PGAM4, POLR2G, POMC, PYCR2, SMAD5, STX6, TBXA2R, TYROBP, XCR1, ZMAT3, CACNA2D1, ST6GALNAC1
Negative_4843	C8B, DCC, MOS, MPI, ACPP, APOE, ATP13A2, CALML3, CCL21, CHRDR, CTTN, CXCR5, CYBB, EFNA3, GALNT14, GMPPA, GNPDA2, KIR3DL2, LAMB3, MYLK3, NFATC2, PDX1, PHPT1, PKLR, POLR2B, PPP3R2, RPN2, STAM, SULT2B1, TNFRSF6B
Negative_4844	FGF7, GNMT, INPP5A, SEMA4C, WASF2
Negative_4845	FST, ACSL6, BIRC2, CDK2, CSNK2A2, INPP5A, ITGAE, LIPF, OR1K1, OR52E8, PIK3CD, RASGRP4, WASF2, WNT10B
Negative_4846	ALPL, GALC, OR2AT4
Negative_4847	CD80, DOCK1, IFT57, LEFTY2, NCR3, PRPH, TRAF4, WNT2B
Negative_4848	DDO, GPT, PTS, AACS, ACADVL, ADSS, ARPC1B, ARPC3, ATP6VOC, CD82, CD86, CXCR4, DLL1, DPYD, EGFR, EPHA3, FPGS, GNAS, GNG3, GSTO2, IRS4, MCM7, MYL9, OR4X2, PAK6, PPAT, PPP2R2C, PTPN5, RAC3, SELE, SEMA4F, ST6GAL1, THBD, YOD1, B3GALNT1
Negative_4849	F11, MVK, OSM, ACTG1, AGRP, APOA5, CACNG3, CCND2, CD44, CRY2, CSF3R, CTPS, DDOST, DUSP3, ENO1, ENTPD1, FCGR3B, GFAP, GJD2, GNAQ, GOT2, HNF4A, IL22RA2, IMPA1, ITGA8, MAP3K13, MAP3K5, MAP3K8, MAP4K3, MYD88, OR2A4, OR4N5, OR52N5, PIGQ, PIK3CA, PKMYT1, POLR2L, PPP1R3C, RASGRP1, RENBP, SQLE, STK36, TCF7L1, TDO2, TUBB, ULK1, UNC5A, WEE1
Negative_4850	CKB, F9, PC, ACADM, ACSM1, ADAM17, ALDOB, B3GNT5, BIRC2, CDKN1C, CHAT, CNTNAP2, CTNBN1, DDX51, GALNTL2, GNAQ, GUCY1B3, HNF1B, LRP5, MAPK9, OR10A3, OR10A5, OR1E2, OR4D11, OR52W1, PTPRB, RALB, SEMA3A, SETD1A, SOCS2, SORBS1, STX2, TYMS, WASL, YOD1, ATP6VOD2
Negative_4851	GLS, MSN, STS, TPR, ACAD9, AGRP, ATF2, BST1, CACNA1I, CNTN1, CRY2, DAG1, DARS, EHMT1, ESAM, GAL3ST1, GPX7, HTR7, KIR2DL3, KNG1, MAOA, MAOB, MAP2K6, MARS2, MTHFD2, NFKB1, OR5AR1, OR5T1, OR8D4, OR8S1, OXSM, PAK7, YWHAZ
Negative_4852	ACLY, ACSM5, BTRC, CDK4, CTF1, IDH1, STX10
Negative_4853	DCC, ATP5D, C3orf10, CCR7, CDC14A, CDK4, CLDN6, CSNK2B, CYP4F3, DDOST, DTYMK, GAL3ST1, HCST, HMBS, IMPDH1, KLRD1, KNG1, MAPK3, MARS2, MCA1, MYH4, OR51G1, PARD6A, PDE2A, PIPOX, PRKACB, RAD51, TBXA2R, TFPI, C1GALT1C1
Negative_4854	DDC, IL8, KHK, SRF, AASS, ACSS3, ALDH1A3, CCL20, CD40LG, CLCF1, CYSLTR2, FOXO3, FPGS, GADD45B, GCLC, GUCA1C, HTR2A, IKBKG, IL11, IL18, IMPDH1, INPP5B, MAP3K1, MAP3K3, MAP3K4, METTL6, MYD88, OR10R2, OR1D2, OR2M5, OR4P4, OR52I1, OR8H1, OR8J3, PAPSS1, PLCE1, PRKG2, PRPH2, RASGRP1, SLC2A2, ST3GAL6, TNFRSF8, TNFSF8, TSC1, PDCD1LG2
Negative_4855	SCD, ACVR1, AMDHD2, AXIN1, CACNB3, CXCL10, DHCR24, GPAA1, HLA-G, MAT1A, MYH8, OR51F1, OR52N2, SEMA3A, SMAD3, ST8SIA5, TJP2, XCL1, C1GALT1C1, SUV420H1
Negative_4856	FGA, FUK, HK3, PVR, B3GALT4, BMP7, CAV2, CHEK1, CLDN5, CSNK1G2, DDHD1, EPOR, FGF7, GLI2, GNMT, MAPK8, NKX2-2, OR14C36, OR2B2, OR2C1, OR5B3, PAX4, SOAT1, SPTAN1, SRD5A2, STX8, TACR1, VAV3
Negative_4857	IL9, OTC, BUB1B, CANT1, CLTCL1, CYP2C19, DHDH, ENPP3, GALNT13, GNAZ, INPP4B, IRAK2, KLRC3, LCP2, LYZL1, MAN1B1, MAPK3, MAPK8, OR2M4, OR5H6, PNPT1

Negative_4858	IL5, LAT, RET, ACOX1, APAF1, CYP2B6, DTX3, EFNA4, EFNA5, EPB41L1, FGF22, FUT2, FZD1, IFNA7, INPP4B, IRAK1, ITGA6, ITGAM, JAK3, MTMR6, MYH8, NRXN3, OR2L3, PIGK, PLAU, POLR3A, PPP1CA, PPP2R5B, RUNX1T1, ST3GAL4, TNFSF12, TP53, TUBB, VTI1B, SERPINF2
Negative_4859	CSK, PXN, ADORA2B, ATP5F1, CCKAR, CES7, CSNK2A1, CYP7A1, GCLM, GSTO1, HTR4, IL12A, ISYNA1, ITGAL, ITPK1, MYH8, OR13C2, OR13F1, OR52N2, OR8B4, PHKA2, PNPO, PTTG1, SETD1A, TBL1XR1, TPMT, TRAF3, TUBB2A
Negative_4860	INMT, POLR1D, SLC27A1, UROD
Negative_4861	DBH, FGB, AGPAT1, AKR1C4, AOX1, ARAF, CBR3, CXCL12, CXCL13, FZD4, GLU1, GOSR2, GUSB, HMGCL, IL19, MARS, MTHFR, NQO1, OR10T2, OR13C8, OR2A14, OR2A2, OR4C6, PGAM4, PGM1, PLXNA1, POLR2G, PTGIS, SMAD2, STAT2, UGT1A10, VEGFA
Negative_4862	ABO, CSK, MAX, ALDH1L1, ALPPL2, ATP5I, ATP5J2, BBC3, CHAT, CRY2, CTNNB1, CYP26C1, CYP3A7, EPHB1, FLOT1, GNPAT, GRIA2, HA01, IQGAP1, MAP4K3, MBL2, MCM3, NMNAT1, OR4M2, PDGFA, PIGB, PLAU, PPA1, TUBB2C, PAFAH1B1
Negative_4863	AK7, DCK, EZR, ACVR2A, ALDH1A3, ARRB2, ASCC3, CALML6, CASK, CCDC6, CCND3, CCR10, CD36, CD99, CRLF2, DARS, DLL1, ESPL1, FZR1, HNF4G, ITGAE, ITGB6, LGL2, NTF3, OR1N2, OR4F6, PIP5K1A, PRLR, RBPJL, SORBS1, SPAM1, ST3GAL6, TAS1R2, ULK3, ZAP70
Negative_4864	C3, F7, ID3, MPZ, ACTG1, ADRA1B, B3GAT3, BUB3, CDC25A, CHD8, CREBBP, DLAT, EPRS, FOSL1, HTR7, IFIH1, NCR1, NKX2-2, OR2L8, OR51B2, OR51B5, OR52N1, OR6C76, PGM1, PI4KB, PON1, RPE65, SNW1, SUCLA2, SULT1E1, TPI1, TUBA8, UCKL1, TNFRSF17
Negative_4865	DLD, ACOT12, ATG7, BMPR2, CLDN4, CSNK2B, FPGS, GFPT1, HRH2, INPP4B, LAMB3, MAP3K14, OR2AT4, OR5C1, PARD6A, PISD, PRPS2, SETD7, STX10, TSHR
Negative_4866	GPT, IDS, MIF, ALPP, DPM2, EARS2, ECHS1, GNAQ, GRIA1, IL15, IL17B, LAMB3, MYH13, NOS1, NOX1, OR10J3, OR14I1, OR1I1, P2RX7, PDE3B, PDE6G, TSLP, VDAC2, ST6GALNAC4
Negative_4867	SCD, ACO1, APC2, ARPC3, CCL25, DDOST, FGF21, MTFMT, TUBA8, UROS, WNT3
Negative_4868	RB1, ACP6, ADRB2, BUB1, CCNA2, CHRM1, CYP11B2, DGAT1, GLG1, ICAM2, SUCLG1, SV2A, TUBA3E, TUBA4A
Negative_4869	CS, DCC, FUK, RB1, AK3L1, ANAPC4, ATP5F1, CCL7, CDC6, CDK2, CYP4A22, DAD1, DHRS9, EHMT2, EXOC7, FZD9, GADD45G, GALNT7, HSD11B2, IL3RA, INPP5B, JAM2, MMP7, OLAH, OR56A3, OR5P3, OXCT2, PANK1, POLR3A, PPP3CC, PTPRB, RPSA, SCLY, SCP2, SORBS1, TALDO1, TAS1R2, TNFRSF11B
Negative_4870	AGK, IL6, ACSM4, ALPI, ALPP, B3GNT4, C1GALT1, CACNA1G, CCL20, CCNB1, CDH3, COL4A1, EFN1, ENPP2, GLUD2, HLA-DOA, IL20RA, LIMK2, MYH4, NAGA, OR1J1, OR51G2, OR52I1, P2RX3, PGAM1, PIK3R5, PPBP, PPCS, PTGER1, PTK2B, PYCRL, RPIA, SKP1, SKP2, TSNARE1, UGT2B7, ULBP2, ST6GALNAC1
Negative_4871	CRI, CSNK1A1, CXCR3, DGUOK, GALNTL4, GLUD1, GPD2, IAPP, MITF, MS4A2, OLAH, OR10G4, OR4K17, OR8G1, P4HA3, PRPH2, SLC27A4, STX8, WARS, WNT9A, ZBTB16, ALDH18A1
Negative_4872	ACYP2, BACE1, BAIAP2, CACNA1H, CKMT2, GGCX, IFNGR1, MAP3K13, MYD88, OR52D1, PFN3, CACNA2D4
Negative_4873	AK2, CS, ACTG2, ACYP2, ARSE, CLCA4, COL3A1, DTX4, FZD3, LRAT, OR4K14, PRKCH, RAC2, STX4, SULT1A4, TAS2R1, ULK3, XCL2
Negative_4874	CACNG3, DPYD, GRIA2, IL28A, INPP4B, MYH9, RDH10, SMPD1
Negative_4875	CD6, GHR, SHH, ACMSD, ACVR2B, ALPI, BDH1, CACNA1B, CACNB4, CCR6, CDC25B, CNGB1, CPOX, CYP2E1, DTX2, ERBB2, FABP4, FZD4, GNA14, GNPAT, GRM1, HAP1, LAMC3, LIMK1, MAML2, MAPK8, MYD88, PAX8, PIGL, PNMT, PPA1, RFXANK, SPCS3

Negative_4876	ACAT1, ALDH6A1, AVPR1B, CD72, CDH15, CD01, CER1, CSF2RB, DDX41, ENTPD5, EPHB6, FTH1, GPD2, GZMA, HLA-G, IL13RA2, IMPDH2, MAP3K2, MOV10L1, NTSR1, OR14A16, OR2G3, OR2T34, OR2T5, OR4C6, OR4F17, PAX4, PCCB, PFKFB1, PIGN, PSEN1, PSPH, SEMA4D, SFRP2, SHISA5, ST6GAL1, TAS2R60, UAP1, UGDH, ATP6V1E2
Negative_4877	JUN, KLKB1, LAMB4, PLA2G4A, POLR2I
Negative_4878	C8G, CTH, FUK, GCK, IL4, ADIPOR2, ARNTL, B4GALT7, BAAT, CACNG5, CMPK2, CPOX, DDX52, DEGS2, GNA11, GNAQ, GSTK1, GSTZ1, GUK1, LYZL1, MAPK11, MAPK7, MGAT4A, NRG3, OR1J2, OR4D1, OR52N1, OR5J2, OR8D1, PIK3R3, PRKAR2A, PRKX, RALA, RPSA, SH2D2A, SMURF1, TIRAP, MAPK8IP2
Negative_4879	INS, AASS, ADCY10, ADSS, CCNE1, CDS1, CLDN9, CREBBP, CSF2RA, CSNK1D, CYBA, DUSP16, DUSP6, EPHB6, FOXA2, GADD45B, GTSE1, IL20RB, INPP4B, IQGAP2, ITGA2, KAT2B, MAN1B1, MAPK1, MINPP1, MMP14, MYH11, NAT2, OR10G8, OR51V1, OR5I1, OR5M9, PDE9A, PPP1R3C, PRNP, RAB5A, RFWD2, UBE2L6, ULBP1, WNT2, ATP6V1E1
Negative_4880	C1S, HGF, AASDH, ADIPOQ, ALG1, ARHGEF4, ATP4B, AXIN2, CD74, CDS1, CHR3, CMBL, CSAD, CTNNA3, DDX47, FGF17, FOXO1, GNRH1, IL23A, INHBB, KIR2DL4, KLRC3, NLGN3, OR13C5, OR2M2, OR8K1, PRKCH, PSAT1, RASA2, RASSF5, RPRM, SAT1, SCIN, SETD2, THBS2, TLR9, TRAF1, UGCGL1, WBCSCR22, PPP1R12A
Negative_4881	CARS, CCL3, FBP1, GCH1, HSD17B8, INHBA, KCNJ11, OR7G2, OR8H2, POLR1E, PPP2R5E, SCLY, UGT2B4, XYLT1
Negative_4882	DDO, ACP2, ACY1, ADCY3, B3GNT3, BMPR1B, CACNA1F, CCNA1, CD40, CD44, CDC14A, CFL2, CXCL13, CYP2C19, CYP3A43, DGAT2L4, F2RL3, GAS1, GBA3, GDF5, GSK3B, HIBCH, LYPLA1, MAD2L2, MAML2, MAT1A, MYLK2, NR1D1, OR1D2, OR4F17, OR5D18, OR8B8, PDE7A, PRKAG3, RAP1A, RASA1, SMPD4, SUV39H2, TRPM5, UGCG, ULBP2, UROD, UXS1, WNT5B, ALDH18A1, ATP6V1C1, MAPKAPK5
Negative_4883	DUT, JUN, OSM, ACSL5, ARHGAP5, ARPC1B, ASCC3, CCL5, CCNG2, CES7, CSF1R, DGKI, EPB41L3, FGD1, G6PC2, GALNT3, HDAC2, HMOX2, IFNGR1, KLRC1, NTF5, NTF4, OR13A1, OR3A1, OR6C6, PHKB, PPM1A, PRKACB, RDH16, RPSA, SETD2, SPRED2, SQLE, SSH2, STK11, TAS2R60, TUBB1, TUBB4, UGCG, WBCSCR17, XCL1, SERPINE1
Negative_4884	AK5, APC2, APH1A, ATP5G3, CISH, FRAP1, GLB1, GNAI2, INMT, MYH7, PFKP, TRDMT1, MAP3K7IP2
Negative_4885	AGK, CRH, DDO, F5, FAS, GSS, CACNG4, CARS2, CCKBR, CD82, CRY1, CTSG, CYP2D6, DPAGT1, ECHS1, FASLG, FGF21, FUT4, GALNT2, GCDH, GNA15, GSTA3, IFT57, IL20RA, INPP5B, LARS2, NEUROD1, OR2F1, OR51I2, OR56A1, OR5D18, PGAM1, PLA2G2D, PPM1D, RUVBL1, SHC1, STX5, SULT2A1, TAS2R13, TSHB, WNT8A, ATP6V1G2, TNFRSF13B
Negative_4886	ADK, DLD, EZR, GLA, IL3, SI, ATP50, CCND3, DTX1, ENO2, FGF12, FRAT2, FZD10, GARS, GLI2, GSTM1, IL28B, LYPLA2, MYL5, NPR2, NUDT12, OR11G2, OR5B12, OR5T2, PER1, PFKM, PIK3R2, PLAU, POLR3D, PRKACB, SDC2, STAT1, XCL2, PAFAH1B2, ST6GALNAC6
Negative_4887	HK1, MAG, ACTA1, B4GALT4, CACNA1C, CCNB3, CSDA, EGFR, FGF11, GGT7, GRIN2C, LCP2, NCR2, NFKB1, NOS1, OR10T2, OR8J3, PARVB, PLTP, SCP2, SETDB2, TALDO1, TKTL2, TPK1, VARS, WHSC1L1, CACNA2D1
Negative_4888	ALG3, BCL2, CDKN2C, CSNK2B, GMPR, HSPA1B, LGMN, SC4MOL, STX5, TNFSF4, UGT8
Negative_4889	BTC, C1S, PXN, ACP6, ALDH1A2, ATP5B, BDH2, BMP2, CHEK1, CLDN16, CLDN4, CLOCK, CSF2RA, CXCR5, DKK2, ELK1, EPB41, ETS1, FUT3, GGT6, IFNA2, ITGA9, MKNK2, MYD88, NCF4, OR10G7, OR1F1, OR2M4, OR4E2, OR5M9, PARD6A, PECAM1, PGK1, PIAS2, PIGV, PLCZ1, POLE, PRSS2, SKIV2L2, SLC9A1, SOCS4, SOS1, TAS2R60, THBS4, WASF3, MAPK8IP2

Negative_4890	A2M, ALOX12B, AMHR2, AMPD1, CAMK2A, DAAM2, DPM1, DVL1, GAS1, GMPR2, MCM4, MGST2, NAE1, NEU3, OR14I1, OR2AE1, OR2T8, P2RX4, PFKFB2, POLR2I, PRDX6, PRKACA, PRNP, RASA2, ROCK1, SDHC, SEMA3G, SGPP2, TAP2, TRDMT1, VDAC3, ATP6V1B1
Negative_4891	LEP, ACP2, ACVRL1, ALDH3B2, CD19, CLDN18, GFAP, ITPKB, KARS, MAP2K3, MGAT5, OR10J1, OR52W1, OR5B3, OR5C1, PMAIP1, PRIM1, PTGES
Negative_4892	GLA, ITK, ABP1, ACAD8, ACOX2, AHCY, ATN1, BIRC2, CACNG7, CADM3, CLTC, COL4A1, CTF1, CYSLTR1, DLL1, GAMT, GNB3, LPAR1, MAGI3, MAML1, MAP4K3, NCF4, NRG3, OR10G4, OR13C5, OR2B11, OR4M1, OR8D4, PANK3, PDE4B, PGK1, POLE3, PTK2, PTPRJ, RDH5, SORD, TACR1, TGFB1
Negative_4893	PGP, AVPR1B, BDNF, CTSB, FGFR3, HIBCH, IFNA4, OR4X1, OR5B21, SEMA4G, SPRED1, TUBA1B, CSGALNACT2
Negative_4894	CRH, IL4, SCD, SRF, SYK, TKT, ADAM17, ALG8, CDKN1C, CHAT, CRB3, CSNK1A1, CYBA, CYP11B1, DPM3, ERBB4, FADS2, GARS, GLB1, HDAC2, HMOX2, MAT1A, MGST2, NOX3, NT5C2, OLR1, PAK4, PIK3C2B, PLCB2, SHMT1, SOS1, STX12, TIAM1, WIF1
Negative_4895	C4B, GDA, ADCY4, ADCY7, ANAPC7, OR9I1, PAK4, PANK1, PARD6B
Negative_4896	APP, EBP, HK3, MPI, ALDH7A1, APOE, AREG, ARPC2, ATP5E, CACNG3, CAV2, CD28, CLDN22, COQ6, CXCL12, DAXX, DTX3, ENTPD2, GLI2, GMPPB, HTRA2, IL28RA, OGDHL, OR10A5, OR14I1, OR2W1, OR4Q3, PAICS, PIGC, PLCZ1, PNLIP, PPP1R1A, PRKG1, PYCRL, RPSA, SEMA3C, SHISA5, STX1A, SUV39H2, UGT2B28, UGT2B7, YARS2
Negative_4897	LCK, WAS, ATP12A, BCKDHA, C3orf10, CBLC, CYP1A2, DFFB, DHRS4L2, DTX3L, FLOT2, FOSL1, GRPR, GUCY1B3, ICAM1, IL5RA, INHBC, ITGB6, LTBP1, MAP3K1, MCCC1, NCR3, NFAT5, OR10C1, OR52K2, OR52L1, OR5T3, OR9K2, PPP2R5D, PTGER1, RASGRP1, RDH12, SELE, TAS2R50, TRAF4, YKT6, TNFRSF13C
Negative_4898	GPD1L, HNF1A, PAK6, POLR3D, PPP3R2
Negative_4899	AMH, F10, GSN, ADRA1D, AKR1C4, AQP7, ATF2, BLVRB, CACNA1S, CAMK2D, CLDN6, DHCR24, ECSIT, GLUD1, IFNAR1, ITGB8, MDM4, METTL2B, NADSYN1, NAGLU, NMNAT1, OR2A42, OR2M4, OR4S1, OR51B6, OR52A1, OR52N5, PLOD2, PNPO, POLA1, POLR1A, SCP2, THTPA, UGT2B17, VANGL1, WNT10B
Negative_4900	C7, ACAA2, ACOX2, AKT2, ARPC4, ATP50, CACNG2, CBLB, CLDN5, CRLS1, ECHS1, EFNB1, ENTPD1, FM03, GAL3ST1, HPSE, ICAM1, KIR3DL2, KYNU, MCM6, NCF4, NR4A1, NRG1, NTNG1, PCK2, PFKFB2, PRKAA1, PRKAR2A, PRSS3, STX5
Negative_4901	LEP, AKR1D1, APBB1, CDK5, CYP2D6, KIR2DL1, NFAT5, PFKL, PPP1CC, PTGFR, RDH11, RHEB, RXRB, SOD1, SOX17, ST3GAL2, STX1A, TAP2, TAS2R9, UBE2K
Negative_4902	LIPG, NFYB, PRKCQ
Negative_4903	RET, CES2, CHAT, E2F1, FZD10, GPX5, IL21, ITGB7, ITPKB, JAK3, LEFTY1, MARS, NME7, PTGIS
Negative_4904	DDC, NNT, ACAT2, CACNA1S, CD40, CDC6, CNDP1, CPT1A, CXCL2, CXCL5, DDOST, DDX47, ERBB4, FGF1, HSD17B7, IARS2, IL10, IQGAP3, LIMK2, LRRC4C, MBL2, OR10A7, OR11H6, OR4B1, OR4F15, PDGFRB, PIK3C3, PPAT, PPP2R1B, SEMA3E, SLC27A4, TACR3, TAS2R41, UPP1, VDAC2, ZFYVE9, PNLIPRP1, TNFRSF11B
Negative_4905	ABCC8, CAMK4, MYH15
Negative_4906	CD8A, CHRD, DDX41, GNRH2, OR1J2, OR9G1, PLD1
Negative_4907	FOS, GAA, ACSM2A, ALG6, ATP2A2, BCL2L1, CDC26, CHKB, COL4A1, COX15, CSNK1G2, EPHB6, FLAD1, HMOX2, LAMC3, LRRC4C, NEU3, NFYC, OR10H5, OR2C3, OR2T34, OR6N1, OSMR, PDE6H, PFKL, POLE, PYCR1, RPRM, RRM2B, SDHB, SELPLG, SMAD9, SULT2A1, SV2B, SYNJ2, TAS2R49, TCIRG1, WASF3

Negative_4908	PLN, ACACA, ACY3, AKT1, ALOX12, ANAPC4, ATP2A3, B3GALT4, BCKDHB, CAS P3, CLDN2, CLDN3, CREB3L1, CSNK2A2, DUSP16, ESPL1, FGF21, GAB1, GPX7, GUCY2C, IDH3G, KIR2DL4, LYPLA2, MTHFD1, NCK2, NFATC1, OR52E4, PLA2 G5, PROC, RAC3, SCD5, SEMA3F, SETD8, SMAD6, SULT1A2, SV2A, TJP2, TNFR SF9, TRAF4
Negative_4909	AK1, MSN, ACSM4, ALOX5, BDH2, CD28, CXCL5, DPM1, FZD2, LARS2, OR6A2, P PAP2C, PPP1CA, PTGDS, SHC4, ST3GAL3, UGP2, ULK3
Negative_4910	KHK, NGF, ASRGL1, BBC3, CCR8, CDK7, CHR1, CYP2D6, DHCR24, DTYMK, ELK4, FSHB, FZD3, GDF7, GSTO1, IFNA14, IL11, ITGAV, KYNU, LMO7, MAD2L1, NF ATC1, NRG3, OR1J4, OR2H2, OR52A1, OR5M8, PCCA, PCCB, PDE4A, POLR2E, P PP2R5E, PTGS2, PTK2B, RBKS, SPCS3, STX12, TSNARE1, UGT2B17, WWP2
Negative_4911	ACVR2A, ALDH1B1, CACNG6, CD3E, CDC14A, CLDN19, CXCR3, ENTPD2, ENTPD 6, ENTPD8, GMPPA, ITGA5, KITLG, OR10X1, OR2F2, OR6A2, PSME1, RUNX1T1, SARDH, STX8, TNFSF9, TPH1
Negative_4912	CSK, EGF, IL9, ABLIM3, ADCY3, ATP6V1H, CLDN17, COL3A1, CYP11B1, DDOS T, DGAT2, DVL2, GALNTL4, KITLG, MAN1C1, OR4M2, ORC6L, P2RX7, PAK2, PO LR3G, RUNX1, SFRP4, SHC4, SLC33A1, STAT4, XYLB
Negative_4913	NLK, ACSM5, ALG2, CCR4, CDKN2A, HMGCR, IL20RB, ITGAV, MYH10, NCK2, PI AS3, PPARG, PPAT, RRAS, SPRY4
Negative_4914	CRH, MAX, OTC, ACACA, B3GALT4, BBC3, CANT1, CHRNA7, CXCL2, DGKQ, DPM3, HPSE2, IL17A, ITGA4, NFATC4, OR52D1, STX18, TBL1XR1, TRIP10, VKORC 1, VTI1B
Negative_4915	CAT, GK2, MPL, MYC, CYP11B2, DNMT1, E2F3, GALNT11, LTB4R2, MYH10, NEG R1, OR11H4, OSMR, PIGT, PLXNC1, PNLIP, PVRL3, RALGDS, RETSAT, ROCK1, SLC12A2, SRD5A1, UROC1
Negative_4916	ACOT11, CREB3L2, SAT1, SH3BP2
Negative_4917	WAS, ASCC3, CACNA1G, CHSY3, CSNK1A1, FRAT1, GNB1, KCNB1, MGAT1, NEU1, OR10A7, OR2F1, OR8A1, ORC1L, RASSF5, TNFRSF11B
Negative_4918	AADAT, EXOC7, KIR2DS5, NRCAM
Negative_4919	GP6, KHK, ALG9, ATP5B, BCMO1, BMP4, CALML6, CAMKK2, CCL8, CMPK2, CTNN B1, CYP2A6, DUSP10, ENPP6, FGF4, GLUL, KIR3DL3, LDHD, NRP1, OR2T1, OR 3A3, OR4S1, OR6C75, PLCE1, PMAIP1, PPID, PPP2R5E, PTPRZ1, RXRG, SEMA 3A, SREBF1, TFDP1, TFPI, TJP3, VCAM1, WHSC1
Negative_4920	IDS, MUT, PXN, SMO, TFG, TPR, ANAPC7, ATP5G2, CACNB2, CCL25, CMAS, CSN K2A2, CTSS, CYP3A4, CYSLTR2, DDX4, DOCK1, ERBB4, FTMT, GAPDH, GARS, G MPR2, GPAA1, IL25, MAOB, MASP1, MYLK, NPR2, OR2L2, OR5AR1, OR6C3, PRP H2, RPN1, RPS6KA6, RXRG, SCD5, SEMA7A, SFRP2, ST3GAL5, TUBB2A
Negative_4921	CAD, CD4, CR1, DBI, GH1, GH2, CACNG7, CALML3, CASP3, CD01, CREB1, EXT1, GALT, GRPR, LCMT2, MYH14, NAT5, OGDHL, OR1L3, OR4K13, PIK3CD, PIK3R 2, SETDB1, SMAD4
Negative_4922	EGF, PLN, ACAT1, ACOX3, ACP6, ADCY7, AHCYL1, C9orf95, CAMKK2, CHUK, C LTA, EI24, EPHA6, EPHX2, GALNT10, GARS, GNG13, IL20, INPP5B, LAMB3, L RP5, MYH10, NCAM1, NCKAP1, NCR2, OR1D2, OR2T10, OR51G2, P2RX2, PNPLA 4, PRPS2, PYGL, RBL2, SMARCA5, SOX17, UGT2B28, VAV3, CSGALNACT2, TNF RSF10A
Negative_4923	C3, DDC, LCT, MVK, SRM, TFG, CDC25C, CDK4, COL5A1, CYSLTR2, DDX18, EPB 41, GSTO1, GSTT1, IFNA5, LAMC3, OR52I1, OR5AU1, PDE4C, PIK3CA, PIK3R 2, STAT6, STX1B
Negative_4924	AMDHD1, CXCR3, INPP1, OR10A5, OR2T12, PLEKHA8
Negative_4925	DBI, MVD, ACLY, ARHGEF4, ASNS, CHEK2, CLTB, CTF1, DEGS1, DGKE, EXOC7, FGF9, GAPDH, GLO1, HCCS, HLCS, HPSE2, IL12RB1, IL13RA2, JAK3, MAP4K1, OR4D2, OR8B4, OR8H3, OXTR, PERP, PPP2R1B, PTGS2, PTPN1, STMN1, ZFYV E9



Negative_4926	BTK, SI, ATP5C1, DHDH, GPAM, LEFTY1, LIPE, MKNK2, NEFH, NEU1, RPRM, SULT1E1, TAS1R1, TAS2R41, TUBB4, UAP1
Negative_4927	FGB, SRM, ARPC2, CAMK2G, CCND1, CLDN17, ENTPD4, FABP4, GSTA1, IL13, LDHB, MAD2L2, MAN1A1, NCOA4, OR1J4, OR2Z1, OR4A15, OR52N2, OR5B17, PDGFD, PISD, SGMS1, STX1B, TLR4, TRHR, ATP6V0A1
Negative_4928	ADRB2, ATP6V1A, BCKDHB, BPGM, C3orf10, CLDN7, DGKB, DLST, ENTPD1, GDF5, GNA11, HLA-DMA, IRF3, MYH15, OR4D11, OR51B6, OR8D2, PDXK, PHKG1, PIP4K2A, PLA2G2E, PLCB1, POLR2I, PPP2R5E, RPS6KA6, SEMA3F, SEMA4G, STX1B, TACR3, TASA1R2, TUBA1B, VEGFC, WNT10A, CACNA2D4
Negative_4929	BID, ALG11, AMD1, CDC16, GALNT10, GMPR2, OR4C12, ORC4L, PLA2G2E, SHISA5, ST3GAL2, EIF4EBP1
Negative_4930	ADC, GDA, GH2, AGMAT, ARSB, BDH1, CXCR5, CYP2E1, GMPPA, GNB1, GRIA3, HIF1A, HRH2, HSPA8, IL17B, IL24, PDE8A, PTK2, RAPGEF1, ST3GAL4, TPM3, TUBB2A
Negative_4931	AUH, C4B, DBT, LSS, ALPL, ARNT2, ATP5L, CCL23, CCR4, CIITA, CLCA2, CYP4A22, EDNRA, ENO1, ENO2, GSTO2, KIR2DL2, KIR2DS5, MARS2, NKX2-2, OR4F15, OR5T2, OR8B4, ORC2L, PDCD1, PDGFC, POLR1D, SH2D1B, SOAT1, SULT2B1, UBE2K, ZFYVE16, ATP6V1B1
Negative_4932	F7, OTC, ACSL3, ADRA1D, AHCY, ALG5, AVPR1A, CCL3, CHEK1, CPS1, CTPS2, CTTN, DHODH, EPHB1, EPHB2, F2RL2, FUT1, GBE1, GRAP2, HHIP, IL12A, ITGA2, LTBP1, METTL6, NOX1, OR11G2, OR2H2, OR2Z1, OR4F4, OR4X2, OR5A1, OR5AC2, OR6N2, PGS1, PRKCZ, RAD51, RAPGEF3, RHOA, RUNX1, SPHK2, STX10, TRAF3, VANGL2, ATP6V0A2, HLA-DQB1
Negative_4933	ADO, GP5, LIF, SMS, UBB, ACVR2A, ADCY1, AMHR2, ATP5G3, CANT1, CREB5, CSNK2A1, CXCL16, ESPL1, GMPPA, HLA-DRA, IFNGR1, IL12B, MAN2A1, MAP3K5, NLGN1, OR11I1, OR5AK2, OR6A2, OR6C74, PDE1B, PIGP, POLR2C, PPP3CB, RAD51, RBKS, RFNG, TNFSF9, TRAF6, TUBA1B, UXS1, VAMP3, VAV3, WNT11
Negative_4934	INS, ATP5G3, BAIAP2, DARS2, FABP3, GALNT6, IDI2, IL20RB, MYH14, OR10H2, OR8H2, PDE4D, PTGIS, RFX5, STAM2, YES1
Negative_4935	AK5, EBP, ADRB2, ASRGL1, BACE2, CD40, CFL2, CLDN9, CXCR6, EPHA4, FRAP1, GFPT1, GOT2, HDAC2, HLA-DOB, HSD3B2, IFNA6, IL1R1, IL20RA, ITGB7, MAGI2, MGAT2, MGST1, MKNK2, MYH7B, NFATC2, NRCAM, NT5C3, NT5E, OR1F1, OR1J4, OR2L8, OR4D9, OR6C75, OXTR, PCK1, PIK3CA, PIP4K2C, PPCDC, RASA2, SULT2B1, TAS2R14, TAS2R60, UGT2A3, VKORC1, PLA2G12A, ST6GALNAC6, TNFRSF1B
Negative_4936	SMS, ADSSL1, CDK5, CKMT2, CTSL1, DBF4, FOSL1, GNA14, MAOB, NCF4, OR4K1, OR8U1, PRKAG1, SC4MOL, STX12, VDAC3
Negative_4937	MAX, ALOX15B, ATP2A2, CACNG5, CADM1, CDC6, CXCL2, CYBB, FOSL1, G6PC, GALE, GALNT7, GLI3, IL8RB, ITGA3, MAT1A, MPST, OR13C8, PI4KB, PLA2G1B, PRKAR1A, PRPS1, RAB23, RRAS2, SPCS1, TAS2R42, TFPI, YWHAE, TNFRSF14
Negative_4938	C5, SI, ALS2, BDNF, BMP2, CHAT, CKS1B, GLS2, GSTM4, OR52E4, RPS6KA1, SRD5A1, SRGAP3, VDAC2, ATP6V0D1
Negative_4939	AUH, KIT, ADCY8, ATG12, CALML6, COL4A2, DDX23, EP300, FRAT1, HTR4, MC2M2, PDE4C, POLE2, PPP2R5A, STK36, TCF7
Negative_4940	F11, ACTA2, ADCY9, ATG7, CYP2S1, FGF11, GALNTL5, GAPDH, KLKB1, MAD2L2, NEUROD1, OR2AG2, OR2H1, OR6B2, PARD6A, POLR2A, SORBS1, TSNARE1, UROD, WNT3A, MAP3K7IP2

Negative_4941	AMH, DLD, GGH, GLS, LAT, ACTB, ADCY5, ALAD, ANGPTL4, BDKRB2, CCND1, CHPF, COL5A1, CPT1A, CSF1R, DUSP14, ENPP7, EXOC7, EXT1, FGF17, FGF20, HARS2, HYAL2, IDH3B, MAOA, MCM2, MYH11, OR10T2, OR14I1, OR4D2, OR5M8, OR8H3, PIGA, PIP4K2B, PLD2, POLE, PPP2R5D, PRKAG3, SMURF1, SNAI2, SNAP25, SRGAP2, STX12, SUV420H1
Negative_4942	C4B, HYI, RDX, AARS2, AMDHD1, ARHGEF4, ATP6V1H, BLNK, BPNT1, CSF2, CYBA, DRD1, FBXW11, FTH1, FZD8, GCNT2, HBEGF, HSP90B1, IDH3B, INSR, JAK3, LTB4R2, MGAT2, MYH1, NCKAP1L, NMNAT3, OR11H1, OR2G6, OR51D1, OR51E1, OR7A5, OR8K1, ORC2L, PLK1, PRKAA2, PRKACA, PROC, PTGES, RARS, SMPD2, SYNJ1, WBSR22, KIR2DL5A, PNLIPRP1
Negative_4943	SRF, SRM, ACPP, ATP6V1F, CKMT2, CYP4F2, GUCY2C, HLA-C, HNF4A, HSPA2, LTBP1, MIOX, OR2AG2, OR4F17, OR52K1, POMC, PTGES, RENBP, RUVBL1, SKP1, WHSC1L1, XYLB
Negative_4944	AGL, FES, FST, ID2, IL6, ALDH1A3, ANAPC2, ARNT, BNIP1, FGD3, FGF3, FZD4, GRIN2D, GUCA1C, HSD11B1, HSD17B8, HSPA1B, IFNA5, IPMK, ITGA6, JAM2, MGST3, NCR2, OR10A6, OR6B3, OXSM, PDIA4, PRDX6, PTPRC, RALA, RAP1B, SETDB2, SULT2A1, TLR3
Negative_4945	BAX, IL5, TNN, ALDH3B2, ARNT, BCKDHB, BIRC3, CACNA1A, CACNA1E, CCL13, CCL28, CCL4, CD8B, CDKN2A, CRB3, EIF4E, GPT2, IFNAR2, LAMC2, LEFTY1, MAP3K14, NOTCH1, OR4C16, OR51V1, PARD6A, PARS2, PARVA, PDE1C, PFKFB1, PGM2, PLCB4, PSAT1, RUVBL1, SCIN, SFRP1, SPP1, TIAM2, WWP1
Negative_4946	AMT, LCT, C4BPA, CACNA1I, CYP2D6, EXTL1, GALNT3, IFNGR2, LDHC, OR10H4, RFXAP, SOS1, UGT2B4
Negative_4947	EXOC7, FCER1G, GNAS, OR4Q3, OR8B4, TBK1
Negative_4948	BTD, F12, SRC, TNR, ACTG1, ADORA2A, BDKRB1, CREB3L1, DNMT3A, GPD2, GZMB, OR10K2, OR2D2, OR2M3, OR4D9, OR4P4, ORC4L, PPP3CC, RAC3, SETDB2, SLC33A1, SYNJ2, MAPKAPK2
Negative_4949	AGL, ABLIM3, ABP1, B4GALT2, CACNB2, CASP9, DKK2, DNMT1, DPYS, EPB41L3, GANAB, GBE1, IDH1, LCMT2, LEF1, MAP3K4, MGAT1, ODC1, OR13C9, OR51B6, OR7C1, PDE8A, PFKFB2, POLR2A, PRKAA1, SDC3, SOAT1, SYNJ1, VKORC1, HLA-DQB1
Negative_4950	AK7, LIF, CDS2, DOT1L, E2F4, FGF13, GALC, ICOSLG, NTRK2, OR10G3, OR4C13, OR4L1, OR51B4, OR8D4, OR8J3, PRKACB, SPCS3, TUBAL3
Negative_4951	BTD, F7, LIF, ABLIM3, ARRB2, B3GNT4, BCMO1, BDH2, CD46, CD59, COL4A2, CYP4F3, DEGS1, DNMT3B, ECHS1, FGF4, FLOT1, HDAC2, HNF4A, HSD17B3, IL21, MPST, NME6, OR10AD1, OR10G7, OR10S1, OR2L2, OR52B6, OR52N5, PDIA4, PPA1, PRKCH, PSAT1, RAPGEF2, RPS6KA5, SIAH1, SRGAP2, SSX2IP, TNFSF9, TUBA3C, ZNRD1, CACNA2D3, PRICKLE1
Negative_4952	ARHGAP5, CCNH, CD47, COQ7, FSHB, HAO2, IFT57, OR10H1, RAC2
Negative_4953	F2, RDX, TPO, AGMAT, CAMK2A, CAV3, CLDN11, CRY1, CX3CR1, FRAT2, FZD5, GSTA1, GUCY2F, HSD17B4, IKBKB, OR2T12, OR2T8, PORCN, PPA2, RBPJ, SARS, SMURF1, WNT10A, B3GALNT1, HLA-DRB5
Negative_4954	ACVR2A, AKR1B1, AKR1B10, B3GAT2, CCL27, FGF2, GZMA, KLRD1, OR10G7, OR2T8, YES1
Negative_4955	VCL, ACAA1, ACVR1C, ASRGL1, BCL10, C3AR1, CACNB2, CCR8, CD55, CYP1A2, CYP26C1, CYP3A7, DUSP6, EPB41L3, FLOT1, GBGT1, GCNT3, GDF7, HMBS, ICOSLG, IFNA10, ITGA7, JAG1, MGAM, MITF, OR13C4, OR2M5, OR2Y1, OR7A17, P4HA2, PDXK, PGAM2, PLXNB2, POLE, PPARA, PTAFR, SCP2, SETD1B, SETDB1, SMC1B, SV2A, UCK2, YKT6, ATP6V1G1
Negative_4956	CSK, WAS, ERBB3, GALNT11, GLB1, GOT2, MAP3K4, MGAT4A, NT5C2, OR52I1, OR6K3, PRPS2, PTGER1, RPS6KA6, SRGAP3, STK36

Negative_4957	ADC, F7, GK, ACADS, ALPPL2, AMDHD1, APOA5, BCL10, CREB3L3, CYP2A6, DDOST, DEGS2, DUSP1, ENPP3, EPHA3, GALNTL5, GBE1, GNB1, GP1BA, GRIN1, GSTM4, GUCY1A3, IL13, ITGAD, KIR3DL1, LLGL1, LRP6, MAP3K1, NFKBIB, OR2T3, OR4C13, PAK2, PIK3R5, PLAT, PNLIP, PRKAA1, PRKAR1B, SCIN, SELL, SHMT2, SKP1, SMAD3, SPTLC1, STAT2, SUCLA2, HLA-DPB1, HLA-DRB4, MAPKAPK3
Negative_4958	FN1, PTS, ACSL4, ITGB6, MAPK7, PDXK, SOAT1, SPTAN1
Negative_4959	AR, C5, CGN, DLD, F11, SMS, ACSS3, ADCY8, AGPAT3, ALG13, CAV3, CCNH, CD8B, CMBL, DTX1, EFNA1, EPHB6, F13A1, FLT4, GAD1, GALK2, GCNT1, GNA12, GSTM4, LMO7, MFNG, MGAM, NCF4, NOX1, OR10K2, OR13G1, OR14J1, OR1S1, OR51V1, OR5B21, PAICS, PAPSS2, PIP5K1C, POLR2F, POLR2K, PRKACA, PRKG1, PRPH, SFRP1, SUV39H1, TP73, VTI1A, HLA-DQA2
Negative_4960	DBH, LPO, NNT, TEC, ARD1A, B4GALT3, CDS1, CPT1C, DHRS4, DMGDH, E2F2, FARSA, FM03, FSHR, GALNTL5, GGCX, GSTA3, GUCY2D, HEXA, HLA-G, HTR2A, HTR2C, LDHAL6B, LIFR, NQO1, OR51F1, OXCT1, PLA2G5, PPA1, PPAP2B, PPID, PPM1B, RFNG, STT3B, TYMS, WBSR17, WNT2B, WNT4, PNLIPRP2, SERPINA1
Negative_4961	GLS, HTR2A, KIR2DL2, PRDX6
Negative_4962	HGD, ADRBK2, ADSS, ALOX5, ARPC1B, ARSE, CES2, CHKA, CLDN15, CPT1A, CXCL9, GSTT1, IDH3A, IKBKG, LGMN, MAGI2, NCAM2, OR10K2, OR1L6, OR2A25, PLD1, RASGRP2
Negative_4963	ACSL3, ATP4B, BUB3, CACNA1S, CLCA4, CLDN11, CYP2D6, KLRC1, OR2T12, SESN2, VAMP1, WNT10B, TNFRSF1A
Negative_4964	AR, EZR, ACSL4, ADRB3, ALG10, ANAPC2, APPL1, ATP6VOC, CCL22, CHST11, CLDN3, CPT2, CYBB, DARS, DARS2, GUCY1B3, HTR5A, IMPA2, ITGA10, MYH9, NLGN1, NR1D1, NTRK1, OR10A2, OR4C12, PAPSS2, POLR2L, PPP2R5A, SETD1B, SH2D2A, SPTLC1, STX10, STX3, TAS2R38, TBXAS1, TUBA3C, TUBB, WNT7B, PNLIPRP2
Negative_4965	CR1, PAH, ASMT, ATP13A2, CANT1, DEGS1, IFNB1, IL10RA, MGAM, MGAT4A, MTHFS, MYH9, NANP, OR10J5, OR13G1, POLR2L, PPP2R2D, PRKY, ROB03, SUV420H1
Negative_4966	GGH, TYR, ALDH3B1, ALG2, CD40LG, COL1A2, CPS1, E2F5, EPB41L1, MTFMT, WNT10A
Negative_4967	GCK, TH, AKR1B1, BNIP1, CDKN2C, CNGB1, COMP, GALK2, GAPDH, GLDC, HMOX2, IFNAR2, MTHFS, OR2A5, OR6S1, RCHY1, SPP1, TYROBP
Negative_4968	IHH, CASP3, GNAQ, GRPR, MAPK1, CTNNBIP1
Negative_4969	C4B, PGD, ADSS, AKR1A1, CFL1, COL5A3, CXCR3, CYSLTR1, DNMT3A, GALK2, GGT1, GMPR2, HPRT1, IARS2, IFNA14, MAP4K3, MARS2, OR11H1, OR1L8, PHKG1, POLR1A, RASA1, SMAD4, SMAD5, STAT2, STK36, UGT2B28, VDAC3, WNT9B, WWP2
Negative_4970	CD2, F2, ACOX3, ACSL3, AKR1B1, ASAH1, CCR10, CRY2, CTLA4, DUSP8, EHHA DH, FGF1, FGF19, FTCD, GDF6, GNPAT, GPD1L, IL13RA1, ITGA11, MAP3K4, MCM5, NFYB, OR2B11, OR4A5, OR4N5, PIPOX, PKM2, PLXNB2, RGS3, SDHD, SOS1, TP53, TSNARE1, TSTA3, UBE2L6, WASF1, YWHAH, PAFAH1B1, PRICKLE1
Negative_4971	ANAPC10, CSNK1D, DDX23, IL1A, ITGAX, OR5H2, PSPH, STX4
Negative_4972	AGPAT2, LIPA, PLXNB1
Negative_4973	CAT, LEP, ADIPOR2, ALDH3A2, CACNG1, CDC25B, DHX58, EGLN3, FSHR, GAS1, HIBCH, ITGB8, MCM7, NOTCH2, NR1D1, OR2C1, PLCB3, RARS2, VEGFC, ATP6V1C2, SERPINE1
Negative_4974	DBH, EPO, IHH, TK2, ALDOC, AMY2A, BET1L, CALML5, CDKN2A, CHST13, DGUOK, GALNT6, GOT1, IGSF5, IL7R, ITGA1, LILRB3, LIMK2, MDH2, NRG2, OR5AN1, PDE11A, PDGFRB, PPP1CB, PRKCA, RARS, RPRM, SCLY, UGDH, MAPK8IP1

Negative_4975	C8B, GP9, ACOT12, ACY1, ALCAM, ARRB2, CCR6, CD40, CDC45L, CHAD, CXCL5, CYP7A1, DHCR24, EPHA1, ERO1L, FGF23, GATM, GNG13, GPX7, GSTA1, GUCY1A2, HTR2A, IARS, IL23A, IL5RA, ITGB7, KLRC4, NKX3-1, OR1J4, OR4M2, OR52M1, OR5M8, OR8H1, PER3, PFKL, PLA2G10, PRKCB, PRKCQ, PRKX, RAPGEF2, ROCK2, SPTLC2, UAP1, UNC5C
Negative_4976	ALDH1A1, ALPI, BDKRB1, CYP3A5, DDX56, IL24, MAML1, OR6C6, OXTR, PARVG, PSME2, PYGM, SOD1, STAT1, SULT1A1, VDAC2
Negative_4977	BAX, OAT, PRL, TNR, ACSL3, AXIN1, CACNB1, CACNG6, CCR3, CDC25A, DPAGT1, ENPP6, EPB41L3, FMO4, GALNT6, HRAS, IFNGR1, IFNW1, IRS2, MBL2, OR10A7, OR2G3, OSMR, POLR2H, PPM1A, PPP2R5A, PRKACB, RASGRF2, RPS6, SPP1, STAT5A, TRHR, TUBA3E, TUBA8, TUBB2C, ATP6V1C2
Negative_4978	DDC, EBP, LTB, MUT, ALOX12, ALOX15B, ARHGAP5, CCR6, CLDN10, CREB1, DPYS, ENPP1, GALNT12, GALT, GLYCTK, GNA12, GRIN2B, GSTM2, HMOX1, HSD17B4, IL18, INSR, MAOB, MGAT1, MPST, OR13A1, OR2G2, OR51I2, OR52N5, PFN2, PIAS1, PPAP2A, RELA, RND1, RUNX1T1, SOS2, TFPI, WNT10A, ATP6VOA1, SERPIND1
Negative_4979	IL20, NTF3, POLR2F
Negative_4980	MVD, CD47, CYP2A13, DKK2, FARS2, GUCY2F, OR2L13, POLR3D, TOLLIP, XYL T1
Negative_4981	LCT, SPN, ACAA2, ACAT1, ACOT11, ARSB, CACNG6, CCNG1, CDIPT, CYP2C8, NCR3, NT5M, OR11H4, OR51T1, PRKY, PTPN1, SEMA3E, SETDB1, SOCS4, SOD1, SRD5A2, SYNJ1, TAS2R8, WNT3A, ATP6V1B2, SERPIND1
Negative_4982	KHK, CDC25A, G6PD, GUCY2F, KLRC4, TACR2, TAS1R3, TUBA1C
Negative_4983	BTC, ME3, AMD1, CCL2, GALNT3, IKBKE, IL22, NFKBIA, OR1M1, OR2AG2, PIAS3, RAC3, SPRY2, TBXAS1, XCL1, MAPKAPK5, SERPING1
Negative_4984	ACADM, ACVR2A, EPHB4, FUT3, INHBC, NODAL, OR2AG2, POMC, PRKG2, PSENN
Negative_4985	OAT, COX10, DDIT4, HTR2C, IDH2, INHBE, IQGAP3, OR5P3
Negative_4986	CR2, LAT, OGT, ARHGEF1, CALML5, COL11A1, COX15, DHODH, FOXO3, GCNT3, GSTO1, IRAK1, LIPT1, MAPK14, OR10H5, OR10R2, OR2Z1, PFN4, PIK3R4, PPM1D, SUCLG1, TAS2R42, WNT5B, WNT9A
Negative_4987	CARD11, DNMT3L, GALNT14, GALNTL4, HARS2, IFNA5, IL25, IRS2, ITGA2B, L1CAM, NGEF, NKD2, NT5C1A, OR2G6, OR52E2, P4HA3, PEMT, PPCDC, PPP1CB, PRKAB2, PTPRF, PYGM, RDH12, SDHD, SYNJ1, ZAP70, PRICKLE1
Negative_4988	COL4A1, LEPR, OR11H1, OR6X1, PLA2G4A, PYCRL, RUNX1
Negative_4989	CTH, ALDH1A1, DDX50, FGF23, IL23R, NADK, OR10A3, PCYT2, ST3GAL5
Negative_4990	C2, LAT, ADH7, ALDOA, ALG10, ATP2A1, CHAT, COL5A1, CYP21A2, DPYSL2, DTYMK, GPT2, HAAO, IL2RB, ITGA3, ITGA4, LPAR1, MAP3K7, MAPK8, NAGLU, NFKB1, OR52E4, OR8S1, PHKG1, PIK3R1, PRDX6, RPS6KA5, SMAD3, STX18, STX7, TAS1R1, TGFB3, THBS3, WBSCR17, WHSC1L1, ARHGEF12, HLA-DRB4
Negative_4991	HDC, HK2, LIF, MPI, ACVR1C, ALDH4A1, ALDOA, AMD1, BET1L, CAMK2G, CHPF, CLCA2, CYP4A22, DHRS4L2, DIAPH2, DUSP7, EDNRB, ENTPD1, FOXO3, FZD10, IGFBP3, INADL, MDH1, NADK, NGEF, OR10A4, OR1A2, OR1J2, OR4F6, OR51Q1, OR6N2, PCCB, PMM2, PRKAA1, RPSA, RRM2B, SLC27A4, SMARCA2, SOAT2, SPRED1, ST3GAL4, TOMM40L, TNFRSF11A, TNFRSF1A
Negative_4992	F2R, IL2, ACP6, ARSE, BAAT, HMOX1, LYPLA1, NMNAT3, NOX3, OR51G2, PIP5K1A, SELP, ATP6V1G2
Negative_4993	PLG, TNN, ACAA2, ACTA1, ALDH2, ARPC3, CASP3, CHD8, CXCR3, CYP17A1, DFFA, DHDDS, DNMT1, EFNA4, EFNB2, GALNT1, GSK3B, GUK1, GYS2, H6PD, IL3RA, ITGA11, ITGB4, KAT2B, KLRC4, LAMC2, LEFTY1, MAT2B, METTL6, NTF4, NTRK1, NTRK2, OGDH, OR10Z1, OR4C46, OR52E4, OR6C76, PDCD1, PON2, PRKCI, PTTG1, RAB5A, RAPGEF1, RBPJL, SEMA3A, SKP1, TUBB4Q, VAV3, HLA-DRB4

Negative_4994	CD4, GBA, ME3, ATP50, CDC25A, CYP2E1, FGF7, GART, GP1BA, HTR2A, OR2C3, PIGH, PRPH2, RFXANK, SEMA4A, WNT10A, MAPKAPK5
Negative_4995	C2, DCN, FOS, PGF, TYR, ZYX, ACP5, ARNTL, AXIN2, CDC45L, CPS1, CYBB, EFNB3, FGF9, FGFR3, GLDC, GNAL, IL13RA2, ITGA5, LLGL1, MAPK3, METTL2B, MYH2, OR2F1, OR6C2, OR6K6, OR7D4, PGK2, PI4KB, PIGU, PLA2G10, PLAUR, PNPLA3, PPP3CC, PRKY, PRSS2, RPRM, SGPP2, SOCS3, TLR4, ZIC2, SERPINA5, SERPINB5
Negative_4996	A4GALT, AKR1B10, AOX1, ARG1, B4GALT7, BMP5, BUB1B, CCL15, CCL24, CCNB1, ENO1, FBP1, FGF7, HIP1, ICOS, KARS, KLRD1, LFNG, LTC4S, MAT2B, MGA T5B, MIOX, MTHFR, OR2T33, OR51B5, OR5B21, OR5B3, OR7A17, PDE3A, PDE4C, PDGFA, PDGFB, PIP4K2C, PLA2G2D, PLCG1, PSME2, RDH8, STEAP3, STX10, TNXB, TP53, UROD, MAPKAPK2
Negative_4997	ITK, ASPA, COL5A3, CRKL, EGLN1, FOSL1, IDH3B, IL2RA, ITCH, PFKFB2, PHGDH, PIPOX, PPP5C, SEMA7A, SNAI1, UGT2B10, WNT5A, YWHAB, ZMAT3, ATP6VOE1, HLA-DRB4, HSP90AB1, SERPING1
Negative_4998	BAX, CD2, IL9, TPR, VTN, APC2, CAV2, CCNB2, CD3E, CHDH, CHR1, CSF2RA, DLL4, DVL2, FGF19, FMO2, GNB3, IL17A, IL23A, IMPDH2, LAMB4, LEFTY2, LRAT, NCOR1, NUDT2, OR10G7, OR12D3, PDGFB, PPBP, PRKCG, PRPS1, PTGS2, PYCR2, SKIV2L2, STX1A, UBA1, USE1, VNN1, SERPINA1
Negative_4999	SHH, ACSL1, CDC16, FRAT1, GGPS1, IFNA6, MEF2C, OR12D3, SC5DL, SV2A
Negative_5000	DPAGT1, ENPP7, GCLC, IDH3B, MYH3, PHKA2, PRKCE, SDC4, SPRED2
Negative_5001	BCR, ALOX5, BET1, BLVRB, CIITA, CLDN1, CLDN18, DOT1L, MAPT, MCM3, MGA T3, NCKAP1L, OR10J5, OR2M5, OR5M8, PDE3A, PDE8B, PRKAB2, SLC9A1, TUBB, UCK1, TNFRSF6B
Negative_5002	TNR, ACSL4, AVPR1A, CCL22, CLCF1, CLDN14, CPT2, CYP2A13, DDOST, E2F3, GPLD1, GSTA4, H6PD, HSD11B1, IBSP, KIR2DL2, KLRK1, MCEE, MKNK1, NT5C, OR10X1, OR5T2, PLCZ1, POLR1D, PTEN, PYCR1, SETD2, TNFSF12, WASF1
Negative_5003	DCT, F3, AACS, ASNS, CD38, EHHADH, FDPS, GNPAT, GPD1, LEFTY2, MAP3K13, MTHFD1, OR2T1, OR2T33, OR4K1, OR4K14, OR4S1, OR7G3, PFKFB2, PGAP1, PLXNB1, POLR2F, PPID, SGPP1, STAT1, UCP1
Negative_5004	BLVRA, CBLB, FGF20, GALNT2, IRAK1, OR5AS1, ZNRD1
Negative_5005	FST, ALDH1A3, AOX1, ATP5G1, ATP50, C3AR1, C9orf95, CCKAR, CNTF, COQ5, DDX4, FBP2, FSHR, GBA3, HLA-G, HMGCS2, IRS2, ITGA1, MAML1, MPST, NUDT9, OR10G9, OR13C3, OR51V1, OR56A1, OR5C1, OR6B3, PDGFRA, PIK3CG, PPP1CB, PPP1R3D, PSENE1, RELB, SLC2A4, TBL1XR1, TKTL1, TNFRSF11A
Negative_5006	CFD, GP5, ACTC1, ALDOC, ALG1, AOC3, ATP5G3, CAMKK2, CCL21, CD55, CDH1, CIITA, COL5A2, CYP21A2, CYP2D6, ESPL1, FABP3, GALNTL2, HADHA, HLA-C, HRH1, HSD17B7, INHBA, JAM2, LRDD, MRAS, NFATC4, OR13A1, OR1J4, OR6C2, PLXNB3, PVRL1, SHISA5, SOCS4, TBK1, UNC5D, AASDHPPT
Negative_5007	AKR1D1, BHMT, C4BPB, E2F5, NFATC2, OR1L3, OR5I1, OR6S1, PFKFB2, PPP2R5A, PVRL1, SGPP2
Negative_5008	CCR4, CXCL12, IL8RB, OR13G1, OR1D2, PIGS, YARS
Negative_5009	A2M, EBP, ACSL4, ASRGL1, CAMK2G, EPHB6, IFNB1, IL23R, JAG1, LFNG, MYH6, OR2M5, OR51S1, OR8J1, PIGN, POLR3D, RBKS, RELB, RUVBL1, SEMA4C, SV2A, TUBA4A, UBA7, ULK2, WBSCR17, YWHAB, B4GALNT1
Negative_5010	C8B, CS, HGD, LCT, OGT, ACY1, ADCY7, ALDH1A2, ARNT2, ATP5L, ATP6AP1, BMP6, BMPR1A, CACNB1, CBLB, CLDN2, COASY, CRY1, CTNND1, CYP3A4, DCXR, DNMT3B, EDN1, EXT2, FRAT2, IL10, IL13RA1, IL22, KIR2DL3, LEF1, MASP1, MYL7, NEUROD1, NOTCH3, OR51A2, OR5B21, OR9G4, PLTP, POLE2, POLR1E, PRKCC, PRSS2, SIPA1, TUBB1
Negative_5011	TYR, ATP4B, CHST12, HSD17B3, IQGAP1, OR1L8, PRKAR2A, SUV39H1
Negative_5012	LSS, MTR, ADCY8, ATP5B, BUB1B, CFL1, CNDP1, CTBP1, PHKG2, SSH3, SUCLA2, TUBB4Q

Negative_5013	CAD, GLS, MIF, ZYX, ABL1, C3AR1, CACNA1A, CCL24, CDC25A, CDKN1B, CHAT, CYBA, DCTD, ENTPD6, EPRS, EXT1, FGF11, GGT6, GLI2, GPD1L, GSTM1, IFN A5, KIR2DL3, LEPR, MAP3K3, MLLT4, NFATC4, NFYC, NTSR1, OR11H1, OR13C3, OR2L13, OR4K14, OR4K2, OR52N5, OR8K1, PFKFB1, PIGC, PIGO, POLR2C, PRIM2, QARS, SARS2, SEMA3D, SEPHS1, VAMP4, ARHGEF12, MAP3K7IP2
Negative_5014	BAD, C2, C5, FOS, FUK, GDA, HPD, MPI, PAH, CACNG2, CCNG1, CD244, CTNNA1, CYP3A43, DDX18, DRD1, GAB1, GCLM, IFNA2, IL17B, LTC4S, MCM6, MMP1, M RAS, OR2A12, OR2W1, OR4A16, OR6A2, PLCB3, POLR3G, RETSAT, SFRP5, SKP 2, SLC12A2, UGT2B28, HLA-DQB1, ST6GALNAC1
Negative_5015	ATM, FES, HAL, IHH, ACAD9, ALG6, ASAH1, AVPR1A, BCL2, CCL21, CD55, CDC 7, CLOCK, DUSP8, FASN, FPGS, GAMT, GARS, GLS2, GNRH1, GSTM3, GUCY2F, I FNW1, IL3RA, LDHD, NEFM, NPR1, NT5E, OR10H1, OR13F1, OR1C1, OR4D6, OR 51B5, OR52E4, OR5D13, PDE4B, PFN4, PLA2G2A, RARS, ROBO3, SESN1, SMAD 4, SOX17, SULT1A1, TXNDC12, UGT2B17, VAV1, WNT3A
Negative_5016	ALDH6A1, DKK2, IL11, IL18, NAMPT, TGDS, TNFRSF6B
Negative_5017	MPI, CD36, CDC23, COX15, DLL3, DUSP1, EGFR, GDE1, IL11, IRAK4, OR51A7, PCCA, PDE1C, PDE4C, PTPRC, SMAD5, TCF7, ULK1
Negative_5018	C5, ALDH3A1, BCAR1, CHST12, CLDN11, COL6A1, CXCL9, CYP2A13, EGLN1, F BP1, GLB1, GP1BB, IGFBP3, ITPKB, LAMC2, LIAS, MS4A2, NFE2L2, OGDHL, O R10AD1, OR2T11, OR4C12, OR4K1, OR52J3, P2RX3, PANK1, PDE1A, PDXK, PO LD4, POLR3D, PRKCD, PTPN6, RALGDS, RAP1B, RBPJL, SEMA3F, SH2D1A, SPH K1, STAT4, SUCLA2, TYMS, UMPS, WARS, MAPKAPK2, MAPKAPK3, TNFRSF17
Negative_5019	JUP, TPO, ACTA2, ACY3, ADCY9, B4GALT7, BLNK, CALML3, CCL28, CCR6, CHR M3, CISH, CRY1, DPM1, GRLF1, IMPDH1, KLRC1, LARS, LIPF, NLGN2, NOS1, O R13H1, PARVB, PLAU, PLCB1, PPP2R2D, PRKAA1, RARA, SMAD3, SMC1A, ST6G AL1, TACR3, TNFSF10, TUBB3, PLA2G12B
Negative_5020	F8, FH, ACSM4, ARNTL, B3GALT6, CTPS2, CYP2J2, DGAT2L4, DUSP14, E2F2, E2F3, EPHA2, ESPL1, GSTM3, IL15RA, IL20RB, IL22RA2, MYLK3, NARS2, NF YA, OCLN, OR52B6, PIPOX, TGFB3, TPH1, MAPK8IP1
Negative_5021	JUN, CCL25, CD70, CDH1, DDX41, FABP3, HSD11B2, KCNB1, NEU2, OR10J5, O R4A16, OR56A4, PDGFRB, PTCRA, TCF7L2, UAP1, WNT3, ATP6VOD1
Negative_5022	AADAT, AGXT, AQP7, ATP6AP1, CHKA, CPOX, ITGA8, KCNQ1, NT5M, OR11H4, P DE1B, PFKL, RASGRF2, RENBP, SDHB, WNT2B, WNT9B
Negative_5023	AK3, CR2, LCK, MPI, ACADM, AKR1C3, ANAPC1, ASS1, ATP6V1D, CCL11, CD72, CHST13, DRD5, DTX2, EPHB3, FGFR1, KIR2DS4, NRAS, OR10K1, OR4F6, OR5 V1, PLCB2, RFXAP, SESN2, SETMAR, SPAM1, CACNA2D3, SERPINF2
Negative_5024	C5, ACAD9, CSAD, CSDA, CYP2E1, DAAM1, GADD45G, GCDH, IL6ST, MINPP1, N ARS, OR2T5, OR5M3, PSME2, SGPP1, WNT3A, YWHAQ, SUV420H1
Negative_5025	CD6, GSS, ACAD8, CD14, CDH5, FIGF, FZD1, GRM1, IARS, IL2RB, ITGA4, KLK B1, MADCAM1, OR4C16, OR52I2, SHC3, THBS4, VEGFC
Negative_5026	ADCY2, ITGA8, OXSM, PIAS1, STX12, TACR1, XYLB
Negative_5027	FST, SRM, ACOX2, ADIPOR2, ARPC1B, BMPR2, CCL23, CD46, CD82, CNDP1, CY P11B1, DLAT, ERO1L, EVI1, F2RL1, FGF9, FOXO3, FSHB, FUT6, GANC, ITPKA, LAMB4, LDHA, LDHD, MAML3, MAPK9, OR11A1, OR4C46, PDGFB, PDXP, POLR2 H, RALA, SHC2, SQLE, TPH2, TSLP, HSD17B12, PRICKLE2
Negative_5028	AGXT, B4GALT2, CCL8, CLDN11, DGKI, DPYS, FZD7, GNPDA2, GSTM3, HAAO, M S4A2, NEU1, OR6B3, OR8U1, PARD6B, PIGW, PMAIP1, RPSA, WNT5B, MAP3K7I P2
Negative_5029	AGPAT6, GPAM, PIGS
Negative_5030	AANAT, ADIPOR2, ADORA2A, AHCY, AOC2, CASP9, CLTCL1, ENTPD4, FGF19, H LCS, IL1A, LAMA4, MAN1A2, MAP3K6, NCOR2, NCR3, NEU4, OR11G2, OR13J1, OR1E2, OR5A1, OXTR, PRKG2, SEMA3E, SLC33A1, UCPL1, WNT1

Negative_5031	KDR, LCK, ACADL, AFMID, ALG1, ALG11, ATP6V0C, CAMK2D, CTSS, EIF4E2, GPD1, GUK1, HTRA2, IFIH1, ITPA, KAT2B, LTA4H, MAFA, MCM7, NCK1, OGDH, OR13F1, OR2L2, PDE7A, PDGFRA, PFKL, PLCG1, PLOD1, PPP2R5A, PRODH2, SD C3, SPTAN1, ST3GAL1, STAT5B, TNFSF9, WNT3, TNFRSF11A
Negative_5032	F10, FH, BLVRB, BMP5, CHAT, CLDN7, CNGB1, COMT, CRLS1, CRY2, GNG3, GRL F1, IFNA13, IFNA21, IGF1, ITGAL, LTA4H, MAN1A1, MCM3, OR2B6, OR4K15, OR52K1, OR5D18, PON1, PSAT1, RALGDS, RXRB, TAP2, TAS2R13, TRAF4, URO C1
Negative_5033	ALG8, ALS2, C3AR1, CASP6, CHKA, CLTB, DNMT3A, EPHA3, ERBB2, ETS1, GAD D45G, GFPT2, GRIA1, GSTO1, HYAL1, IDI1, ITGA3, ITGA6, NAGK, NT5M, OR1 3C5, OR13G1, OR4D1, OR5I1, PAPSS1, PCYT1A, PLA2G2E, PPP2R5B, SOCS5, SPRED1, SQLE, STX16, STX1B, TAS1R2, TCF7L1, TD02, TSLP, UBE2K, UGT2B 10, YOD1, YWHAG, ST6GALNAC4
Negative_5034	AUH, ALPL, AMHR2, CAV1, CTBS, DHODH, DVL2, FOXA2, GCNT4, IKBKG, INPP5 A, IPPK, LRRC4C, MAP2K5, MCM2, OR10G4, OR13C3, OR2W1, OR9I1, PER2, PF KFB4, PROC, SEMA7A, SH2D1B, SKP2, SMC1B, SOAT1, THBD
Negative_5035	NOG, ARPC3, GSTA3, HLCS, KCNB1, KLRD1, MAP3K8, MMP1, NQ01, OR51A2, PL XNB2, RPRM, UCK1
Negative_5036	DHH, ADIPOQ, CNTNAP1, EFNA4, GALK1, GALNT1, GSTK1, HLCS, LYPLA2, MPZ L1, NR1H3, OR5T3, PGAM2, SEMA3F, SEMA4A, SETD7, SPRY3, STX10, VCAM1
Negative_5037	LHB, OAT, TFG, TNF, ACTG1, AGRP, ALDH4A1, ALDOB, AXIN2, C4BPB, CACNB2 , CHIT1, CLCA4, CYP2F1, DHCR7, DPM2, DVL1, EI24, GBGT1, IARS, IFNA16, KCNB1, KCNQ1, MAPK10, MAPK3, NEUROG3, NUMB, OR10G3, OR13G1, OR1E1, O R4K5, OR51G1, PIGT, PPP1R1A, PRKCE, PSME3, PTPRM, RFNG, SH2D2A, SUOX , SUV39H2, TAS2R9, TGFBR1, ULBP3, ST6GALNAC6, TNFRSF10A
Negative_5038	ADO, ABP1, ACSM5, CCND3, CXCL2, DDIT3, DNMT3B, ETS1, FGD3, GALK2, HAD HA, IGF1, MADCAM1, OR2S2, OR2T3, OR4K14, PGLS, PON2, PRKCH, PRLR, QPR T, RARS2, SC5DL, SCLY, SMPD1, SNAP25, TGFBR2, WNT11, WNT2B
Negative_5039	AMH, CD4, IL3, MIF, ACAD9, B3GAT1, CAMK2B, CASP8, CMPK1, CPS1, CXCR5, GALNT10, GALNT13, GALNT14, HPSE, LIAS, MAGI3, MGAT3, NRG1, NSDHL, NU DT5, OR13G1, OR4C6, OR6F1, OR7G3, PARD6G, POLR1B, PPP2R5C, RPS6KA6, SETD1B, SV2B, TAS2R3, TGFB2, TNFSF9, TNXB, TSNARE1, UAP1, HLA-DPB1
Negative_5040	F7, BDH1, COL4A6, CYP17A1, EXT1, GALNT5, IFNA10, MAP4K4, NKD2, NUMB, OR10H3, OR1C1, OR4L1, PAICS, PIP4K2C, POLD2, PVRL1, RBL1, SGMS1, TAS 2R4, TP73
Negative_5041	HDC, TAT, VCL, ALDH9A1, ARNT2, BMP6, CASK, CCL19, CCL3, CCR1, CMPK1, E VI1, FZD8, GAD1, GLG1, GLUD2, HAO1, LAP3, MGST2, OR52E2, OR5K1, OR9Q2 , PIP5K1B, PPP2CB, PPP2R1A, PRIM2, PTGES2, RBX1, SHC2, TNFSF4
Negative_5042	ID2, ME3, RDX, ACSM4, ACVR2B, ALAS1, BMPR1A, CD27, COL1A2, CREB3, DHF R, FCGR3B, FZR1, GALC, GTSE1, HSD17B2, IQGAP2, ITGAL, KIR2DS5, MAN2A 1, MAP4K2, MAPK12, MYH8, OR11H1, OR51V1, OR6K6, OR6N2, PDE9A, PER2, P HKB, PIGH, POLE, POLR1E, PRIM1, PRKCB, PRKCH, PRLR, SENP2, SOCS7
Negative_5043	DCN, ME1, ACOX3, B3GALT5, C1QA, CLDN22, CLDN9, CYP2C19, DNMT3L, FZD3 , JAK2, KNG1, MYH3, NCF4, NCR1, NT5C, OR51B4, OR5D14, PCNA, PIK3R1, PI P4K2B, PORCN, RASGRP2, ROBO1, RPRM, SAT2, SDHB, TAS2R5, TBXAS1, TGFB R1, TYRP1, UBE2K, VARS, CSGALNACT1, HLA-DRB3, HSD17B10, PRICKLE1
Negative_5044	HAL, RB1, ACACB, ACADL, ALOX12B, CCL25, CD8B, CHKB, COX10, CXCR4, CYP 2C9, HTR2B, IRS4, PLOD1, PRKAA1, PYCR1, SELP, TBL1XR1, TLR2, TUBB6, W NT5B, YWHAB
Negative_5045	GRIN1, PARD6B, PGM1, PTPRM, STT3B
Negative_5046	CD2, IL8, LCT, ME2, MPZ, ACYP2, CHPT1, CLTB, DHDDS, EI24, ENTPD6, FMO4 , FOXA3, GRM1, HSPB1, IL25, LAP3, LDHC, LRAT, MAP4K2, MCCC1, MLYCD, NF E2L2, NUDT9, OR10H4, OR2Y1, OR52R1, P2RX3, PDE3B, PDPK1, PFN2, POLE4 , PPP1R3B, PPP2R2A, RPSA, TBXAS1, TLR5, VEGFC, SUV420H2

Negative_5047	CD14, HAGHL, MAP2K3, PLXNA2, VANGL2
Negative_5048	AMDHD1, HEMK1, OR7D4
Negative_5049	AGRN, BDNF, FZD9, GAB1, NUDT12, OR52E6, TGFBR1
Negative_5050	CAT, CKM, SYK, ACADSB, CACNG2, CD19, CDK7, CFTR, CLDN19, CSNK1D, CTSB, CXCL1, CYP11B1, E2F4, EPHA1, GALT, HSD17B1, MAP3K13, NFKB2, NRXN1, OR2A5, OR4K2, OR5D16, OR6C4, OR8D4, PPID, PPM1D, PPP2R2B, PRPH2, PYGB, SNW1, SPRY3, TRAF5, UNC5B, VAMP2, XYLB, ATP6VOD1, CSGALNACT1
Negative_5051	LCK, GMPR, PCYT1B, RELB, SIGLEC1, SORBS1
Negative_5052	KDR, AADAT, ADRA1B, AKR1B1, AOX1, ARG1, ATP6V1D, BMP4, CASP9, CHDH, CSNK2B, CYP19A1, CYP2C19, DDB2, DGAT1, DUSP8, FGF2, FLOT2, GALNT8, GLUD2, H6PD, HLA-F, HMBS, IBSP, INPP5B, KAT2A, OR10V1, OR5D16, P2RX6, PIGM, PIPOX, PLOD3, SH2D1B, SMAD1, SMAD7, STAT5A, TRPC1, UGCGL1, UNC5C, UROS, WBSCR22, ATP6VOA4, CACNA2D4
Negative_5053	CES7, EPHB1, FADD, OR56B4, XYLB
Negative_5054	DDC, VCL, ABL2, APOA1, CBR3, CDC23, CDKN2C, CYP17A1, CYP2B6, DPAGT1, EFN2, FGF12, GDE1, GSTP1, GUCA1A, GUCY1A2, INPPL1, KLRC3, MAML2, NRR1, NRXN2, OR1L3, OR2M4, OR3A2, OR51S1, OR5AS1, OR6A2, OR8H1, PIK3CA, PLA2G1B, PLCD1, PNLIP, RALBP1, SETD7, SH3BP2, TPH1, UCP1, ZMAT3, FAH1B1
Negative_5055	CHIA, GSTA2, IL10, IL21R, NEU4, PANK3, PLA1A
Negative_5056	AUH, FOS, FYN, GPI, GSS, ADORA2B, ADRB1, AKR1B1, BDH1, CAV2, CCNE2, CD40, CLTC, CSNK1A1, CYP4F2, DNMT3B, GMSD, HES1, IL24, INPP4A, IPMK, ITGA7, MGAT5, NOS3, NRG1, NT5C3, OR10J3, OR10K2, OR51G1, OR5H2, PANK4, PERP, PHKG2, PIK3R3, PLOD2, RELB, RUNX1, SEMA3C, SEMA4B, SLIT1, SOCS4, ST6GAL1, TIAM2, HLA-DRB4, SLC25A31
Negative_5057	SYK, AGPAT2, CRLF2, MTHFR, NR5A2, OR2T4, OR51G2, PTPMT1, TAS2R4
Negative_5058	EPO, ABL2, ACY1, ADIPOR1, AK3L1, ALOX15B, AMD1, CFL2, LIPT1, MDH2, OR14J1, OR1D5, OR2C1, OR2T29, OR52J3, OR52N1, PLA2G2A, RPRM, TNFRSF13C
Negative_5059	BMP8A, CAV1, CDH5, CDIPT, CXCL11, CXCL2, CXCL9, DHX58, DPYD, FBXW11, FCGR3A, GALNT3, HTR6, HTRA2, IFNA17, MAPK10, NFASC, NRXN1, OR6A2, SMAD7, STMN1, TAS2R9, TCF7L1, PNLIPRP1
Negative_5060	AGL, AUH, NPY, CACNA1C, CALML6, CSNK2B, EPHA2, FZD3, HSD3B2, OR6C1, TD02
Negative_5061	TPO, DDIT3, GMPA, GSTM5, HSD11B2, LTBR, NCF4, NCK2, NPR1, OR2C3, ATP6V1G3
Negative_5062	KDR, ACY3, AKT3, ARPC1A, CACNA1H, COL2A1, CTSS, DDX47, GSTA3, IL1R2, ITGAE, ITPK1, KIR2DS5, LEFTY1, NEU2, NLGN2, OR11I1, OR2C1, OR6C1, PHKA2, PPM1D, PTGES, RAF1, RAPGEF1, SORBS1, TUBA1B, WIF1, WNT3
Negative_5063	MPZ, SMO, ADH4, ASS1, ATP5G3, CCL13, CD40LG, CD58, CDK7, CYP3A5, EXTL2, GNAQ, GNRHR, ICAM1, IL2RG, KLRC4, LARS2, LIPE, MADCAM1, MAP2K2, MAP3K12, OR2H2, OR4N5, OR51A2, PAK1, RHOQ, SEMA3G, SLC2A2, TACR1, TMLHE, TUBB3
Negative_5064	GNA11, GYS2, HLA-DMA, SSH1
Negative_5065	AARS2, ALDH1A3, ARSD, ATP5E, B3GAT1, CPT1C, CYP2B6, DDX55, DHRS3, EGF, GFPT1, GLUL, HIF1A, IRAK1, LAMC2, MAP3K3, MGAT4A, MYH2, NEFH, OR2T10, OR2T34, OR4K15, OR7G1, ORC1L, P2RX6, PPP1R3D, PTPN1, RDH8, STAT6, ZAP70, HSD17B12
Negative_5066	GDA, TYR, ACP1, ACSS3, ACTA1, ATP5G3, BMPR2, CADM3, CD58, CRY1, DKK4, DPYSL2, EP300, FSHB, G6PD, HLA-DOB, HSD3B7, IL13RA1, MAP2K6, MAPK9, NGEF, NKX3-1, OR10C1, OR1S1, OR52E6, OR5C1, P2RX5, PANK1, PDE2A, PLCB3, PPA2, PSME1, PTCH1, RAB5A, RAP1A, SEMA3G, SOCS5, PNLIPRP1



Negative_5067	LIF, ACOX1, ALG12, APOA1, BUB3, CD226, CD274, CD79B, CFTR, CHIA, COL5A2, CPT1C, CRHR1, ENTPD7, FBP1, FGD1, LEF1, MMP14, OR2T1, OR2W1, OR4D1, OR8D4, PAK7, PTCH1, PTPRB, SCLY, SETD1A, SHC4, SIPA1, TAS2R40
Negative_5068	GNA14, OR6C76, OR6K6, PARD3, SPRY4
Negative_5069	CTH, MSN, SMO, TNF, AADAC, ACSM3, ADCY8, ALG3, ANPEP, AOC2, ATP5D, CD58, CXCR5, FGFR1, GALC, GRIN2D, IDI1, IKBKG, IL1RAP, IL24, INPP4A, MAP4K4, MTAP, NUMBL, OR13C5, OR13F1, PAX4, PDE6H, PPAP2A, PTGS2, TAS2R5, TRMT11, TSNARE1, VDAC3, WARS2, ATP6V1G3
Negative_5070	GH1, BAI1, CCL27, CDC42, DPAGT1, DTX3L, DUSP8, GALNT5, GCLM, GNA15, GSTK1, IL15RA, IL6R, NCOR2, OR10C1, OR2L3, OR56A1, PDE9A, PLIN, PMVK, POLR2D, PPP1CB, RDH5, SOCS5, TNXB, ATP6V0A1, HLA-DQB1, MAPKAPK5, SERPINC1
Negative_5071	CD2, EPO, F12, GBA, OAT, ALDH1B1, CYP2A7, DAD1, DGKD, DGKG, DVL3, EFNA4, GPD1L, HADHB, IMPDH2, NOD1, OR4S2, OR6C75, PDE5A, PHKG1, PRSS1, PTGS1, RPS6, TAS2R9, TNFSF10
Negative_5072	DCT, EDA, GP6, NGF, ABI2, ACPT, ALG11, ASPA, BMPR1A, CACNA1S, CAMKK1, CDS2, CHAD, CHKB, CRKL, CXCL13, CXCR4, DGKH, EPHA5, G6PC, GCNT1, GSTK1, HRH2, IFNA7, IL15, ITGA9, MAD2L1, MYLK2, NAT5, OR13J1, OR1C1, OR1E1, OR4C16, OR9G4, PDPK1, PLCB1, PLK1, PRLR, RALB, RASGRF2, RASGRP1, SDC4, SRGAP2, THBS1, TICAM1
Negative_5073	DBI, LAT, AASDH, ACAT1, ALPPL2, APOC3, ASMT, BCAT1, CCL17, CCL27, CD40LG, CDC7, CD01, CFLAR, CLDN10, COQ5, CTPS2, CTSG, DAD1, DVL1, FZD8, GADD45A, GALNT7, GNG13, GYS2, HNF1A, LDHB, NFASC, NFATC2, OR11L1, OR1E2, OR2T3, OR4F5, OR51E2, OR5B3, PDX1, PFKFB2, PGAM2, PLA2G10, PNMT, PPP2R2D, SESN2, SPHK1, ST3GAL3, TPMT, ATP6V0A2, CACNA2D2, CACNA2D4
Negative_5074	ACOT12, ALOX15, ANAPC4, CCND3, CD247, CDC25C, CHPF, COL6A1, DGUOK, EDAR, FCER1G, GALNT12, GNPDA2, HLA-G, IRF9, KNG1, LYPLA1, MAN1B1, OR10K1, OR5B17, OR5L1, PCYT1A, POLR2J, PVRL3, RDH12, SLC9A1, TGFB2, ATP6V1E2
Negative_5075	CYP4F3, GRB2, HIP1, IL12RB2, IL2RB
Negative_5076	GLS, HAL, IL5, ACADM, ACLY, CADM3, CAMKK1, CD27, CMPK1, CYP26B1, DDX55, DLL4, DVL1, FUT3, GBA3, GUCY2F, HAGHL, HLA-DOA, IL10, IL10RB, LRP6, MAN1B1, NAT1, NFYB, OR11G2, OR2B2, OR56A1, OR56A4, OR5P3, OR8K5, PER2, POLE2, PPP3R2, RAPGEF2, RPN1, TRDMT1, TSTA3
Negative_5077	GLS, ACVR1C, ACYP1, AMY2B, CCL7, COX10, CSAD, DAPK1, DGKQ, DGUOK, EXOC7, GDF7, GMPPB, GRIA2, IL17B, MAP3K12, MAPK9, MGAM, NARS2, NAT1, NCO R1, OR1Q1, OR2T4, OR2W1, OR7G2, OR8I2, POLR1B, RASSF1, SKP2, STX12, SUV39H1
Negative_5078	CASP8, DOT1L, EDNRA, ENAH, ETNK1, EXOC7, IFNA10, NAGLU, OR52D1, PPP1CC, PYCR2, TOMM40
Negative_5079	AARS, CFL1, FGF22, HRAS, NCOR2, OR11H4, OR6K3, OR6N1, SERPINB5
Negative_5080	GP5, PRL, ACAD9, ACHE, ACOX1, ACPP, ATP6V1F, CCR3, CD72, CDH5, CSNK1D, CXCL11, DDX50, ERBB3, GDE1, GRIN2D, HRH2, IFNA14, IFNAR1, ITGAL, LFN G, NEGR1, NTF4, OR4C16, OR52L1, OR56A3, OR5I1, OR5P3, ORC6L, PIGQ, PSAT1, SC5DL, SLC27A5, TRDMT1, UBA7, WASL, HSD17B12, HSP90AA1
Negative_5081	UBC, ALDH2, CACNG1, CCL8, CCNE1, CD40, COQ7, CREB5, CYP19A1, DUSP10, FUT9, GALNT10, HSPA8, ICOSLG, MOV10L1, NARS, NFAT5, NFATC4, NFX1, OR4A16, OR5M9, OR6X1, OR9Q2, PAICS, POLD4, PRPS2, PRSS1, RBL1, RDH16, SDC2, SELP, SEMA3D, SPHK2, SUCLG2, TRDMT1, TRPM5, TSNARE1, UCK1, WNT1, WNT5B, ZMAT3, CSNK1A1L, PNLIPRP1

Negative_5082	AR, BID, C8G, NF1, SI, ACACB, ADCY8, AGMAT, ALDH1B1, ALDH7A1, CDK4, CDK6, COL2A1, DHX58, EXT1, GCDH, GP1BB, IRAK4, MAML1, MCCC2, NTF4, OLR1, OR10A6, OR1L1, OR4F5, PIP5K1B, POLR3B, PPCDC, PRSS3, RPS6KB1, ST3GAL2, STK4, TAS2R40, TNFSF11, UNC5B, CACNA2D1, ST6GALNAC3
Negative_5083	C3, CD40, CYP11B2, FBP2, FGF2, NOTCH1, PIGL, SUCLA2, TNFRSF10B
Negative_5084	CAD, CR1, ILK, UBB, ADCY4, ALDH5A1, B4GALT2, CAMK2D, CCR10, CPT1A, CYP4A22, DGKB, DKK2, DKK4, EPHB4, FRAT2, GGPS1, GPX5, GSTM4, IFNK, IKBKG, IL5RA, ITGA2, KIR3DL2, LEPR, LIPA, MAFA, NFKB1B, NOX3, NT5C1A, OR10H4, OR13H1, OR6K3, PARVA, PDE8B, PPT1, PRKAB1, SEMA3F, SHC1, TGFB2, ULK1, UNC5A, CACNA2D3, CTNBP1, PLA2G12B, SERPINA5
Negative_5085	ABO, ADA, AGK, AMT, DUT, GNE, GP6, IDS, AACS, ARNT2, DNMT3B, FGF3, G6PC, G6PD, GALNS, GDF5, HAGH, HLA-G, ICOS, IMPDH1, NKX3-1, NRAS, NUDT5, OR4C46, OR51A4, OR8H2, PAK2, PDCD1, PDX1, POLR2I, POLR3G, PRKACB, PRKAR2B, PYGB, SEMA4F, SH2D1A, UPP1, TNFRSF11A
Negative_5086	CRK, TPO, ADCY1, ALG13, CCR4, CD72, CDC6, CTPS, CTPS2, DRD1, DUSP8, EPHA7, EPHX2, FGF18, GAD1, GMPPB, IFNB1, ITGA8, KIR2DL2, MAP3K11, NTRK2, OR14A16, OR11I1, OR4A15, OR5T1, PDE4C, SARS2, SETD2, SNAP25, SULT1E1, SV2A, TACR3, TLR4, TNFRSF9, TYMP, UGT2A1, UNC5D, UPB1, ZFYVE9
Negative_5087	ANGPTL4, ATG12, BLNK, CD55, CHDH, CHEK2, CRY1, CSAD, CSNK1D, CTSB, DDX4, F2RL1, GPAA1, IAPP, ITGA2, ITGA4, LAMA4, OR2AT4, OR8G1, OR9K2, PLAU, PLK1, RAC1, RFX5, RPN1, SEMA4D, SMAD2, STX10, TUBA1A, UCP1, XCL2, YWHAH
Negative_5088	BTK, FH, GH2, AACS, ABL2, ADCY7, ADORA2A, ADRB3, ATP4A, B4GALT6, CCNB3, CD80, CDKN1A, CLDN19, COL6A2, CXCL3, DARS, DUSP16, E2F5, FGF12, FRAP1, GPT2, GUCY1A2, GUCY2D, IGF1, IL25, ITGB6, LEFTY2, MAML2, MAP3K14, NAGS, NCK1, NCR1, NCR3, OR10G9, OR1A2, OR2D2, OR2T5, OR51B5, OR51G2, OR52R1, PDGFRB, PFKFB3, PPP2R1B, RAP1B, SMURF1, TRAF1, TYMP
Negative_5089	CS, LCK, B4GALT5, C3AR1, CHD8, DAAM2, EPHA2, GCH1, GUCY2C, IFNA16, IFNW1, MMP9, MTHFD1L, OR11H4, PNPLA4, PRDX6, TLR4, UGDH, VNN1, WNT11, ZBTB16
Negative_5090	AK2, BTK, GP9, GSN, WAS, ADAM17, ADCY5, CMPK1, CYP27A1, EPHX2, FZD8, GAD2, GSTA5, HGSNAT, HPSE2, IL24, IQGAP1, MAML3, MASP1, MYD88, OR14A16, OR4X2, OR5A2, OR5R1, OR6C1, OR8B8, OR9G1, OR9G4, P2RX1, PDE1A, PDGFRA, PIAS2, PLA2G5, PPCS, TAS2R42, THBS3, TLN2, VAV3
Negative_5091	HAL, ABCC8, ADH1B, CHIA, CXCL6, DNMT3A, FGF23, IL1B, P2RX1, PPARG, PRKAB1, RRM2B, SMARCA5
Negative_5092	CAT, GPT, IVD, AACS, ADCY6, ALDH9A1, B4GALT7, CTF1, DCTD, EXTL2, GALNT5, GALT, GPX7, GUSB, HAP1, IL17A, INSR, ITGA11, MCM3, MYH9, NFATC3, NFX1, OR1Q1, OR2T8, OR4E2, OR7G2, OR8D2, PANK3, PIK3R2, PPP3CB, PTSS2, PTGS2, SEMA3F, SMURF2, TAS2R3, TNFSF4, WARS2, HLA-DPA1
Negative_5093	AMT, C9, CRH, LIF, ALDH1L1, BCL2L1, BLNK, CCL26, CHAT, CREB1, CSF2RB, CSNK1G2, CTNNA1, DRD1, DVL2, E2F5, ELK4, ENTPD2, FLOT2, GLUD1, GNAQ, IL15RA, MECR, MYH8, NAMPT, OR2T11, OR4P4, OR52N2, PLCD1, PPP1CA, PRODH, RAP1B, RHOD, SC4MOL, SLC27A1, SLC27A4, SOCS1, SUV39H1, WNT8A, TNFRSF13B
Negative_5094	TH, ACAT1, AKR1C2, CALML3, CFL2, CLDN11, DCXR, GALNTL1, GNG13, GOT2, ITPK1, KITLG, KLRC3, MYH15, NME4, OR1L3, OR52E8, OR8U1, PANK3, PCK2, PDX1, PFN3, TAS2R38, XYLT1, CACNA2D2
Negative_5095	DAO, GPI, SCD, AACS, ALG1, ANPEP, ARNTL, B4GALT2, B4GALT6, BLVRA, BMP7, CACNA1B, CCKBR, COL5A2, FUT9, GBE1, GPT2, GRIA2, GRLF1, HGSNAT, HSPA2, IFNA4, IL10RB, KLRK1, LAMB4, LHCGR, NKX2-2, NTF4, OR51G1, PISD, SAT1

Negative_5096	APP, LPO, ACAT1, ACTG1, ACY3, AHCYL2, ALPL, ARRB1, AXIN1, BET1, CCR10, CHAT, CSNK1E, CYP3A5, DGAT1, FRAT1, GALT, GSTT1, LIPA, NAT1, NCF2, NPAS2, NUDT2, OR51B2, PPM1D, RASGRP3, SETD1A, SH2D1A, TACR1, TCF7L2, TICAM1, TRADD, UGCGL1, UGT2B28, UGT2B7, PAFAH1B1, PAFAH1B2, ST6GALNAC1
Negative_5097	FST, C5AR1, CMPK2, OR1C1, OR51Q1, P4HA3, PPAP2C, SCD5, UBE2L3, ATP6V0A2
Negative_5098	CSK, FGA, ABLIM1, ADCY4, ALDH7A1, CCL27, COL5A3, DLL4, ENAH, GNA11, HLA-G, KRAS, LAMB2, LPAR1, MGAT1, MYLK, NAGK, NSD1, OR13C4, PDE4A, PFN1, PI4K2A, PLA2G1B, PLCB4, PPAP2A, RXRG, TUBA4A, UCP1, B4GALNT1, MAPK8IP3
Negative_5099	AR, BAD, CAT, GP5, ACSL5, CCR1, CSF2RB, CXCL6, DTX4, EHMT1, GSTA5, HLA-DOA, ITGB4, MAP2K5, MAPT, MGAT1, NCR3, NNMT, OR5I1, OR5K2, PDE9A, PECAM1, PTDSS1, STX18, STX1B, TGDS, HSD17B12
Negative_5100	IL4, INS, ABLIM1, ACYP1, ADH1A, ANAPC2, ATP5G3, BUB3, CDC25C, CRY1, ERBB3, FM01, HADHB, KLRD1, LMO7, MTAP, MTHFR, NFATC3, NTNG1, OR13C3, OR2L8, OR4C15, PPP3CC, PRKAR1A, RDH8, RHOA, RPN1
Negative_5101	DDO, PLN, CD99, CYP2B6, MPST, OR3A2, OR56B4, PIAS1, SULT2B1, TRPM5, UGT1A10, CACNA2D1
Negative_5102	BTC, BTD, AKT2, BMP6, CBLC, CD82, CSAD, EIF4B, ENPP2, GABARAP, GCNT2, GNMT, GRIN2A, GSTA4, HMGCL, HRH1, HSD17B1, HSP90B1, IL20, ITGA7, MAOB, NKX2-2, OR10G3, OR1A1, OR2T12, PANK4, RENBP, SENP2, TNFSF8, PPP1R12A
Negative_5103	DMGDH, ITGB6, OR2M2, PIGW
Negative_5104	MTR, ACADSB, ADSS, AFMID, AGPAT1, AKR1C1, BCAT2, BDKRB2, CACNA1E, CCL22, CCL5, CCNG2, CYP3A5, DNMT3B, DVL3, ENTPD6, FGF13, GYS2, HSD17B7, HTRA2, LIPC, MBL2, MTMR1, OR2L2, OR2T33, OR8B8, OR8G1, PAICS, PIP5K1C, PKMYT1, PLCG1, PTPN1, RUVBL1, SC4MOL, SMAD2, SRGAP2, ST3GAL4, STEAP3, TGFB1, THY1, TJP2, TP53I3, UROD, SLC25A31
Negative_5105	XDH, ASS1, CXCR6, FTMT, GNPAT1, HSD11B2, ITGA7, MLYCD, NFATC3, OR5A2, OR5L2, RDH10, SLC27A5, SMC1B, TUBA3C, ATP6V1G1, PAFAH1B1
Negative_5106	CRH, ACTC1, ATF2, ATP5E, CARS, CCND3, CDC23, CLDN8, CNTN2, CSAD, CYP4F3, DDX4, DGUOK, GNAT3, GUCY1A3, HARS2, HNMT, IL22RA1, ITGA2B, ITGB5, LTBP1, MAP2K7, OR14J1, OR1D2, OR4F6, OR8D1, PIK3R1, POLA2, RALBP1, SEMA3E, SMAD9, SMPD1, SRD5A1, STAM2, STX4, TUBB2A, UNC5C, VDAC1, TNFRSF17
Negative_5107	F10, HK3, PAH, ADIPOR1, B4GALT2, CCL3, CCNA1, CRLF2, EPB41, FGF10, GADD45G, MTMR2, NEFL, NUDT8, OR1A2, OR1M1, OR51F1, OR52A5, PDE4A, PGAM2, PIGK, SLC27A1, SMC1A, HLA-DPA1, TNFRSF10D
Negative_5108	CSK, LTB, ACSL5, ADCY3, ALDH3A2, ALOX15B, CACNA1E, CFLAR, CSNK1G1, CXCL12, DGKH, DTX1, EPHA7, GALNT7, GALNTL4, GLI1, GNA14, HSD17B4, HSPA1B, IFNAR1, IL17RB, INMT, ITGAL, KLRK1, OR11A1, OR11H6, OR4D5, OR5E2, OR52I2, OR5D13, OR6C74, PLK1, PMM1, PPP1R3B, PPP2R2C, PRKAA2, PTGFR, SEMA3A, SEMA3F, SEMA4G, SNAP25, SPRY2, STX18, STX4, TUBB2A, UNC5D, WNT5B, SERPINA1, SERPINB5
Negative_5109	HSPA2, NCOR2, OR6K3, PGAM4, TUBB6
Negative_5110	GK2, HGD, ACADS, ALOX15B, CACNA1F, CAV3, CD79B, CDC42, CHEK1, CLDN9, CYP11A1, CYP2A6, CYP2C8, DUSP16, EGFR, FM02, GALNT13, GANC, HLA-C, HLCS, HTR2A, IL22, IL6ST, IRS2, KIR3DL2, LMO7, MAN1C1, NEFH, NGEF, NMNAT3, OR6C2, PIGB, PIK3R3, PIM1, QPRT, RBL2, RPN1, STK36, SUFU, TAS2R4, TRMT11, TYMS, VDAC3, VEGFB, YWHAB
Negative_5111	BMP6, COASY, ENTPD2, MAP2K4, NCOR2, PIGF, TRAF3

Negative_5112	ATM, KMO, ACP5, ATP5E, CCL1, CCL11, CCR5, CLDN8, CNTFR, CPOX, CSF2RA, CTNNA1, DAXX, DLST, E2F5, EPAS1, ETS1, IDH3B, ITCH, JAK1, KARS, MYH1, MYLK3, NFATC3, NMNAT3, OR10H1, OR2T12, OR4C6, P2RX3, PCNA, PDE3A, PPAP2A, SARS2, SGPP1, SPRY3, XYLB, SERPINC1
Negative_5113	TFG, ADH1B, AGPAT2, ATP50, GATM, HHIP, NRXN2, OR10H2, OR2T5, OR51M1, PDX1, PLD1, SUV39H2, TMLHE, CACNA2D4
Negative_5114	ADK, C3, CSK, MUT, BCKDHB, CASK, CD86, CDKN2D, CYBA, FGF2, GADD45B, GR1A3, IFNA14, IL7R, NCF2, NT5C, OR1J2, OR5AN1, OR6A2, OR8H2, PAK1, PDE8B, PLCB4, POLR2E, POMC, PRODH2, SETD1B, SNAI2, ST8SIA1, TGFB1, TLR9
Negative_5115	ADK, FGB, FYN, GDA, PDC, AGXT, ALDH6A1, AMD1, BAI1, CCR4, CNGA4, CNTN1, DCTN1, DHRS3, GANC, GMPS, GNAI1, GNPDA1, HCCS, HMOX2, IL17RA, INHBA, INHBB, ITGA9, MAPT, MPP5, NANP, NUDT8, OR10AD1, OR1E1, OR1F1, OR2T6, OR4E2, OR5AP2, OR6Y1, P2RX5, P2RX6, RHOQ, SGMS2, SLC27A1, SLC33A1, STAT1, STEAP3, TRAF2, ATP6V1G1, CSGALNACT1
Negative_5116	BID, FH, NPL, SMO, ADRB2, ALDH1B1, BMP8B, CACNA1C, CCL7, CCNB3, COQ6, CSNK1G1, DHX58, FGF22, FGF3, GUCY1B3, HCCS, HEMK1, IFNA4, IL12A, IL22RA1, LAMA3, LIPE, LIPF, MAT1A, NAGK, NOD1, NSDHL, OR4B1, OR52H1, OR5D18, OR6C75, PAK7, PDE3A, PGAM1, PI4KB, PIP5K1A, PISD, RBPJ, RFNG, RP S6KB2, RRM2, SEMA3A, SEMA4D, SLC2A1, SMAD4, STAT6, THBS3, WNT10B
Negative_5117	ATP2A2, BMPR2, C9orf95, CASP3, CDC20, CXCR4, CYP11A1, DPM1, ENO1, FCGR3A, GIT1, HLA-F, MYLK2, NTRK1, OR1L3, OR5J2, OR6B2, OR8I2, PAFAH2, PDGFA, PER2, PPBP, RAPGEF4, RASGRP4, RPE65, RXRB, SSX2IP, STK4, TCF7L2, VAV3, WASF2, HLA-DPA1
Negative_5118	BID, GSN, MPZ, AARS2, BDKRB1, CASP6, CD80, CDC6, CHST13, CSF1R, ENPP2, ETS1, FGF13, FOXA3, GGCX, GGPS1, GNAI2, HSD3B7, IL15, IL3RA, IMPDH2, IRAK2, ITGB5, MCM7, MMP7, MYH11, OLR1, OR10AG1, OR4C13, OR4D1, P2RX1, PNMT, PRKCA, PRKCH, PTK2B, SDHB, SETD1A, SSH2, STT3B, TNFRSF8, TRMT11, VAV2, ZNRD1, ALDH18A1, CACNA2D4, PNLIPRP1
Negative_5119	APP, KDR, ALG12, CCNA2, CCR5, CHSY3, CSF1R, CXCL12, DKK4, GLO1, HADHB, IRAK3, LCMT2, MGAT3, OR1C1, OR4A5, OR56A1, ORC1L, PARD3, PLA2G2D, P NPLA3, PORCN, PRKAB1, PRODH2, PTTG1, RASA2, RETSAT, SMAD3, SORD, SPC S1, SULT1A4, TNFSF14, ZBTB16, PRICKLE1, TNFRSF14
Negative_5120	C2, CBS, ACSL5, B3GNT4, CFTR, CHEK2, CLDN1, CNDP1, CYP11A1, IFNA2, IL28B, INADL, MPST, OR52A5, OR5B21, PIK3R1, PLCD1, PMVK, RAPGEF2, SEMA4B, SOCS4, THBS3, TYRP1, UBE2L3, WNT8A, ATP6VOD1, SERPINC1
Negative_5121	A2M, ACVR2A, ADH1B, ADRA1D, AGPAT1, ANAPC2, CACNG7, CCL23, CHPF, CPT1C, CYP2S1, DHDDS, DHDH, EI24, ENTPD8, EPB41L1, HAO1, IL13, IL1R2, MA D2L2, MADCAM1, NCAM1, OR5AP2, OR5L1, OR8B4, OR8K1, PDE1B, PIGK, PLAUR, PPP1CB, PTPRM, PVRL3, SARS, SPP1, SYNJ2, TAS2R38, UGT2B28, VAV2, ATP6VOD1
Negative_5122	B4GALT7, CCR8, EXTL1, GP1BB, GRIA3, KCNB1, LAP3, NOS3, NTRK2, PLA2G1B, PPCS, TGFB1
Negative_5123	CFD, ALDH1A1, ATP5G1, B3GALT6, CACNA1A, CHKA, EFN1, FARS2, HPRT1, LIFR, MAGI1, MMP9, OR1L8, OR1N1, OR1Q1, OR2G6, OR2L3, PFKM, PFN3, RUVBL1, SGMS2, SULT1A2, TAS2R7, WNT3
Negative_5124	GDA, HK1, CCKBR, CSF2, GALNT1, GGCX, GUCA1B, GUCY1A3, HGSNAT, HSD17B7, IFNA17, ITGA11, ITGB1, KCNB1, LAMA4, MDH2, NUDT9, OR10AD1, POLR1B, PPP1R1A, SV2C, TUBA1A, UGCGL1, MAPKAPK3
Negative_5125	ACSL3, ADSL, AGXT2, ALCAM, ALDH3A1, ATP5G2, CCR9, CFL1, CLCA4, COQ3, DGAT2, DLAT, EPHX1, FARSA, GADD45A, GGT7, GRM1, GSTM4, IFNW1, JAG1, KIR2DL3, MAPK14, MCM4, OR13C2, OR14I1, OR4L1, OR5C1, PAK6, PIAS4, PRKACG, PVRL1, SNAI2, ST3GAL4, ST8SIA5, YKT6
Negative_5126	EBP, OR5M8, PPP2R5D, PSME3, RFX5

Negative_5127	ADIPOR2, CLDN6, DIAPH2, HTRA2, OR10J5, PLCB2, YARS
Negative_5128	C8B, DBI, IL8, LPO, ACVR1, ADCY10, BCAT2, CDC25A, CRLF2, DUSP8, FARP2, FOXA2, OR2L8, OR2M3, OR4D2, OR6B2, PLCE1, PON2, RASGRP4, SOAT1, UPR T
Negative_5129	ACVR1B, ARD1A, CD46, CD80, CXCL12, DIAPH1, FBXW11, IL28A, ITGB3, KIR2DL3, MAN2A1, MTHFD2, NARS, NCKAP1L, NCOR1, NOS3, OR2T10, OR9G1, PAX4, PIP5K1A, PRNP, RARS2, RELA, TLN1
Negative_5130	F12, FOS, ADCY4, ASCC3, ATF2, B3GALT2, CCL7, CD22, CTNNB1, DDIT4, DGKE, DGKH, ELK4, ENTPD2, FBXW11, GLYCK, GUCA1B, HNF1A, IL8RA, OR9I1, OR9Q2, ORC2L, P2RX4, PIAS2, PLA2G1B, SELP, TUBA1B, TUBB2B, WNT16
Negative_5131	CBS, FYN, ME2, ADORA2B, ADRA1D, ADSS, AKR1A1, AKT2, AXIN2, CD38, DVL2, ENO3, ENPP1, FLT3LG, HMGCR, HRH2, IL25, KLRK1, MAN1A2, NFE2L2, OR5A1, PARD6G, PDE7B, PRKAA1, PYCR1, SMAD5, TALDO1, TLN1, WASL, WNT2B, SUV420H2
Negative_5132	ACTA2, AMD1, ATP12A, CHSY1, CREB3L1, CYP11B1, DNMT1, IL4R, MIOX, MMP9, OR52E6, POLR1B, RDH10, ST3GAL5
Negative_5133	EPOR, MAPK9, VDAC3
Negative_5134	SPN, ATP5A1, B3GALT1, CCDC6, CCL19, CD28, GSTA4, JAK3, LIPE, NCR2, NR4A1, OR52N5, OR5M8, PLCE1, SHISA5, SUOX, THTPA, WNT6, XIAP, MAPKAPK2
Negative_5135	EGF, LYN, MOS, PDC, PRL, RDX, ABI2, ACHE, AHCYL2, ALOX15, ARSD, CAPN2, CCDC6, CDH5, CDS2, DUSP4, DVL3, FOXO3, GAMT, GDF6, GSTA3, HADHA, HA01, HLA-C, HMGCR, IL18RAP, INPPL1, ITGA1, LYPLA2, NFBYB, NKX3-1, OR2W1, OR52B4, ORC1L, PARD6B, PDE5A, PON1, PPM1A, PSENE1, SDC4, SLC2A1, SLC2A2, TAS2R60, TNFSF12, TRAF5, XCL1, ATP6V1C1
Negative_5136	ADK, DLD, HPD, RFK, ACSM2A, ACSS3, AGPAT6, ALG3, AMPD2, C5AR1, CNTN2, CX3CL1, CXCR4, DTX1, ECSIT, F2RL3, GSTM3, IDH3G, IL23R, IPMK, KCNQ1, LEPR, OR10A5, OR10T2, OR13D1, OR4N4, PDE7A, PI4KA, PIAS2, PPP3CA, RPSA, SDC3, SKP2, SPRED2, TGFB2, THBD, TUBB4, UGCGL2
Negative_5137	ADO, ADCY3, ALDH9A1, ANAPC2, B4GALT6, C3AR1, CACNA1C, CCL11, CCL17, CCNE1, CD244, CFL2, DIAPH1, EDA2R, EFNA3, EFNB2, GPD1, ITGAV, KLRC4, MAP2K3, MAT2B, MDM2, NCR2, NPR1, NR4A1, OR10A2, OR2T34, OR51S1, OR52N2, OR5K1, OR8D4, PAICS, PGM3, PRPS1, SLC2A1, ST3GAL2, TAS2R49, HSD17B10
Negative_5138	PDC, SCD, CCNA2, EPB41, ER01L, FGF2, GSTO2, MAPK1, NT5C, OR14I1, OR4D6, OR51G2, OR5D14, MAPKAPK2
Negative_5139	OAT, IFNAR1, MAP2K4
Negative_5140	GP5, MIF, ABAT, AKR1C4, ALG11, B3GALT1, CCR4, CHSY1, COL4A4, CTBP1, FASLG, IRAK4, KIR2DL4, LIAS, MAP3K1, MECP, NADK, NFATC3, OPLAH, OR10V1, OR14A16, OR2AG2, OR4C6, OR51G2, OR6C2, PDE2A, PDE9A, PGM2, PI4KA, PLXNB2, PRKAB2, RBL2, SEMA3G, SLC25A6, TAS2R42, TOMM40, ULK3, YKT6, CACNA2D2, PAFAH1B3
Negative_5141	CP, AHCY, B3GAT2, B3GAT3, IMPA2, MCM5, TUBB4, VTI1B
Negative_5142	GBE1, PDCD1, PPT1, STT3B
Negative_5143	GNS, MTR, AGPAT4, BCL2, CLDN16, CRY2, ENTPD5, ENTPD6, MAPK8, MECP, NARS, NCF1, OLR1, OR4K15, POLR2H, SEMA3F, SESN3, SMC1B, THBS2, TSHR, TUBA3E
Negative_5144	CFI, PGF, TH, AKR1B1, BAI1, BLVRB, BRAF, CD14, CDH2, CHST11, CLTA, CTBP1, CYP2C9, E2F4, GARS, GP1BB, GYS2, KLK3, KLRD1, MAPK7, MAT1A, NRP1, OR10T2, OR6K2, OR6T1, PDE1A, PHGDH, PLXNA3, PPP5C, PSENE1, RASSF5, STX2, TBL1XR1, TMLHE, YWHAQ
Negative_5145	HDC, KMO, AGTR1, ALDH3A1, ALS2, AMD1, APC2, AREG, ARG1, ARPC5, ATP5J, BCL2L1, CAMK2A, CCL23, CDH15, DGKH, FCER1G, GSTM1, HPRT1, IFT57, METTL6, MGAT2, OR8A1, PIGX, PITX2, PNPO, SCLY, UGP2, WNT3, WNT5B

Negative_5146	B3GNT5, CACNG3, CLDN17, GALNT3, GNPDA2, INSR, LGMN, LRRC4C, MYH6, NC F4, NFATC3, NT5C3, OR2T2, OR51F1, PLCB1, PNPT1, PPT1, RALB, SEMA3G, T YMP, WNT8B, SERPINE1
Negative_5147	SMO, ACSL4, ACSL6, ADCY3, ATP5G2, CACNA1A, CMBL, COQ6, DAPK3, DKK2, D USP5, FGD1, IL12B, IL13RA1, IL13RA2, KIR2DL4, LRDD, MTAP, MYH10, OR5 2L1, PDCD1, PDE1A, PRKAG1, RASGRP4, RFXAP, SUOX, ATP6V0A1
Negative_5148	DAO, GSR, TPR, ADORA2A, AGRP, ASIP, BCKDHA, BCL10, BMP2, CALML6, CCL2 , CDKN1B, DOT1L, FMO3, GCLC, GCNT2, HHEX, IFNA21, LIAS, MYH13, MYLK3, NAGLU, ODC1, OR10R2, OR2D3, OR5M9, OR6K6, PGAM2, PIGQ, PIM1, PTGES, P TGIS, RAB23, RFNG, RUVBL1, RXRB, SMPD3, SNAI1, TAP2, TJP2, TPMT, WBSC R17, EIF4EBP1
Negative_5149	ATM, IHH, OAT, TNR, ACOT12, B3GALT2, DGAT2L4, EPAS1, FGFR2, GALNT9, G NA12, GRAP2, GUCY2D, IL21R, IRF7, ITGA4, ITGA6, KAT2A, KLRK1, MKNK2, MTHFR, NAGLU, OR14A16, OR1G1, OR2B2, OR2C1, OR5M8, OR6C4, ORC6L, PDX P, PIK3R5, PLK1, PLXNB2, POLD1, RFNG, RFXANK, SKP1, TP73, ATP6V1B2
Negative_5150	IL15, NGEF, TUBAL3
Negative_5151	F8, ANAPC7, CRHR1, KLRK1, MTMR6, OR10H3, OR1A2, OR5H6, PFKFB1, PIK3C B, SLC2A4, TUBA3E
Negative_5152	RFK, ALAD, APOC3, BHMT, CAMK4, HSD3B1, LAMC3, LTBP1, UROS
Negative_5153	FUK, ALG3, APPL1, ATP5I, CDS1, CLDN1, COL4A4, CXCL11, FSHB, GALNS, GA TM, HMGCS2, ITGB8, NKX3-1, NLGN3, NTF3, OR1A1, OR1F1, RAC2, RFX5, STAT1, UGT8, UNC5C
Negative_5154	BTK, CRH, CSK, CTH, GK, MSN, ADRA1A, AKR1C4, ARSB, ATP5J2, BPGM, CCR5, CD44, CDC25C, CKS1B, DDX52, EDNRA, EPHA7, EPHB4, FGF18, FRAT2, HTR6, IL18R1, KIR3DL3, MAP4K1, NLGN3, OR13C5, OR1Q1, OR2D3, OR56A1, OR5F1 , OR5P3, OR7C2, OR8I2, OR9I1, PDE1C, PLCD4, POLR3A, PSEN1, RGS3, TYK2 , UGT2B11, TNFRSF6B
Negative_5155	ADA, ZYX, ACAD9, ACOX3, ATP5I, BAI1, CCR4, DAG1, EGFR, ERO1L, GCNT4, H SD3B1, LAMB3, LRDD, MAD2L2, NCR1, OR4F6, PDE8A, PDHB, PGM1, PLEKHA8, RAB23, SGMS1, SH2D1B, SLC27A4, SMPD3, SSH3, ST8SIA5, TLR3, ULK2, VAV 2, VCAM1, ZIC2, GABARAPL2
Negative_5156	GP5, LYN, AARS2, ADH4, C1QB, CHST11, CYP3A5, DEGS2, EFNA4, EFNB2, IPM K, MAOB, MAPK14, MASP1, OR10G3, OR2F1, PLAT, PLCG1, PON1, RAC1, SCIN, SPCS1, TXNDC12, TYRP1, CSNK1A1L
Negative_5157	CEL, ACY1, ADH1A, CDC42, CHRM3, CSH1, DUSP10, GGT1, HLA-DMA, HLA-G, IMPDH2, INHBE, MAPK10, NUMBL, OR6K2, OR7D4, ORC2L, PARD3, PDE7A, R ASGRP1, MAPK8IP2, SERPINE1, TNFRSF13B
Negative_5158	HGF, ACP6, ACPT, AGMAT, ALDH2, APOA2, ASIP, CDK6, CES7, CLDN22, CMPK1 , DARS, FMO2, GAD1, GCLC, GLO1, GNG13, HAGHL, JAG2, KRAS, NEFM, NLGN1, OR1K1, OR2M5, OR4A16, OR51T1, OR52L1, OR5A2, P4HA2, PDE10A, PDE1A, P DE5A, PDE7A, PLAU, PRKCI, PTK2, RBX1, SDHD, SPRY1, SUCLG2, TAS2R41, T AS2R48, TUBA1A, TUBB2B, VAV2
Negative_5159	AK3, AK5, CD6, CGN, F10, IL2, APOA1, ATP6V1A, B4GALT3, CD27, CD59, CHU K, COX15, CRY2, CSNK1G1, CTPS, CXCL1, CYP26B1, FGF3, GADD45A, GSTA5, HNF1B, LDHAL6B, MAD1L1, MCM3, MYLK2, NAT6, NRXN3, NT5C3, NTF4, OR1K1 , OR3A1, OR9Q2, PCK1, PIK3C3, PLA2G5, POLR1C, PYCR1, RBL2, SEMA4B, SO CS4, STK3, STK36, TNFRSF8, TNFSF8, WARS2, XCL1
Negative_5160	HK3, INS, LSS, ACO1, ALG12, APOA5, BMP7, CFLAR, CYP2U1, DDX54, DHDDS, DPAGT1, HPSE, IAPP, IKBKE, IL10, ISYNA1, MYH10, OR51L1, OR52I1, P2RX 3, PDE8A, PIK3CG, PRKAA1, PYCR2, SCD5, SPRY3, TAS1R2, TKTL1, TKTL2, T YMS, USE1, VEGFA, WNT2, PRICKLE2, TNFRSF18
Negative_5161	BUB1B, CAMK2G, CLTA, DAPK2, FGF5, GALNT1, GNA12, H6PD, IARS2, KLRC3, LCMT1, OCRL, OR10G9, OR4D2, OR7G3, OR8K3, PCCB, PPP2R2B, PRKCZ, RPE6 5, SULT1A2, TLR2, WNT16

Negative_5162	ABL1, ALPPL2, ARNT, BAAT, E2F1, FMO2, GALNTL1, GALNTL4, GLI3, GNAL, G P1BB, GRM1, HYAL1, ITGB7, LRDD, NRAS, NTF3, OR13D1, OR4S1, OR51B2, OR C1L, PPP3R1, SAT1, SLC27A5, SMAD6, SOAT1, SOS1, TBL1Y, TLR4
Negative_5163	AANAT, ACSM5, ALG10B, APOA1, ARPC2, ATP12A, CHKA, CLCA2, CREB3, CSNK 2A2, CYP2F1, DERL1, ECSIT, EHMT2, GRHPR, GRIA2, IPMK, ITGB7, KLRC4, M BL2, MMP2, MTFMT, NKX6-1, OR10A4, OR6S1, PDCD1, SEMA3C, SNAP25, SULT1A2, TPM3, TSNARE1, UBE 2L6, ZMAT3, ATP6V1G3, SLC25A31, TNFRSF14
Negative_5164	LHB, PGF, SCD, ADAM10, ASRGL1, ATP6VOC, CACNG4, CDK7, CHEK2, CHST13, CNTNAP2, CXCL6, CYP7A1, DDIT3, GAD2, LTB4R2, MAML1, NPAS2, NUMBL, OL AH, OR1J2, OR2T12, OR4D5, OR4N4, OR6C70, PAK1, PDE9A, PIGW, PIK3R1, P LA2G5, PMM1, RAF1, RBL1, UBA1, VAMP3, ATP6VOA2
Negative_5165	CD6, F11, HK2, IHH, ANAPC10, CACNG3, COL3A1, CTSL1, DUSP2, FGFR4, FMO 3, GALNT11, GPX5, GRIN2C, GSTO2, IFNA10, LAMC3, LARS2, LRRC4C, MAPT, OCRL, OR10X1, OR13C9, OR1M1, OR2G6, OR51Q1, OR52I1, OR6C74, PI4KA, P IP5K1B, POLR2C, PVRL3, RALBP1, RARS2, SEMA4C, SOS2, SPRED1, SUFU, AT P6VOD2, HSD17B12, TNFRSF13C
Negative_5166	CD4, RFK, TNN, ACAD9, AGMAT, AMY2A, ATP13A2, B3GALT1, B3GAT2, C3AR1, CCR2, CDC20, CHD8, CHEK1, CTSL1, CYBA, FABP3, FARSA, GALM, GNAI3, GRI N2B, GSTA5, HES1, IARS2, IL2RB, ITGA2, LAMB2, LGMN, NRG4, NUDT8, OR10 AD1, OR2T5, OR5AC2, OR6C3, OR8D4, PAK7, PLXNB3, PVRL3, ST3GAL4, TNFS F10, MAPKAPK2
Negative_5167	BMPR2, CD226, CPOX, CYP4A11, DCTD, MDH1, ODC1, OR56B4, PFKP, RAC3
Negative_5168	KHK, ACVR1C, AKR1B10, ALDOB, DLL1, GALNT5, IQGAP1, MCAT, OR11L1, OR1 4J1, OR2AG2, OR4D6, OR4K17, OR52I2, OR5AC2, PCK2, PFKFB4, PLA2G1B, P TGFR, RBL1, SNAP25, TCF7, TUBB4, PPP1R12A
Negative_5169	ABO, ADRBK2, ALDH4A1, ALG9, AOX1, ATN1, CBLB, CCL1, CD3E, COQ6, DDX56 , EPHX2, FLT3LG, GNAI1, GNAQ, GNRHR, HCCS, IGF1, IL25, ITGAE, LIAS, MA N1A2, NTN1, ONECUT1, OR13G1, OR4F5, OR4F6, PIGX, RPS6KA6, TNFRSF8, T RIP10, B3GALNT1
Negative_5170	C1S, GP6, HDC, B3GALT1, CCNA1, CRLF2, CXCL10, DFFB, FOSL1, GALK1, GLI 1, ITPKA, MYH8, MYL7, OR51M1, PAX4, PIGO, PPP3R2, PPT1, SMURF1, WNT7B , PAFAH1B3
Negative_5171	AGL, ALDH1A1, BRAF, CASP6, CD99, CLTB, GMPR, OR10H2, OR13C4, SIAH1
Negative_5172	FST, MPI, ALDH1A2, ARG2, B3GAT3, CADM3, COQ3, DUSP1, DUSP14, FLT1, GL UD1, HSP90B1, HTR5A, ITPKA, MYH2, NAGLU, NEFL, NOD1, OR4A15, OR4A5, P 2RX2, PARS2, PAX4, PDE1C, PDE6D, PPP1R3A, PSAT1, RDH12, RFXAP, SV2B, ULBP1, EIF4EBP1, HLA-DPA1
Negative_5173	AGK, BTC, MAG, ABCC8, ATP5I, CLTA, CSNK2B, FGF21, ITGA10, L1CAM, NCK2 , OR10A5, OR10J5, OR2T11, RASA2, SLC2A4, VKORC1
Negative_5174	F8, LPL, MET, PGD, TNN, ACO1, ALDH3A2, ALOX12B, ANAPC7, ARSB, C1QC, CC R6, CD19, CHAT, CHRNA7, DDB2, DUSP4, EHHADH, ERBB3, GALNT10, GMPPA, G NAS, HIP1, HSD17B8, ITGA5, ITGA7, KCNQ1, KLRK1, LAMA4, LIPE, OR13H1, OR8K3, P2RX4, PCYT1B, PDGFB, PER2, PKMYT1, POLR2I, PTDSS1, PTK2B, RA LB, RBL2, RPSA, SAT2, SLC9A1, TGFBR1, WASF3, ATP6V1E1, CTNNBIP1
Negative_5175	GPI, ACSM5, ALG13, ATP13A2, BUB3, CACNA1G, CACNG3, CASP8, CCNG1, CD8 0, CYP27A1, GCDH, GGT7, KCNQ1, NOTCH3, OR11H4, OR2L13, OR5M3, OR8K1, PLCB3, PPP1CC, PTPN5, RRAS, STAT6, TUBB3, UROD, MAPKAPK2
Negative_5176	ACSL4, CASK, CHEK1, ENPP3, IFNW1, OR2AG2, OR4C16, OR51F2, PER3, SPTL C2
Negative_5177	BTK, F12, PLN, ABL2, ACAD9, ACTG2, ADH1A, ASCC3, ATP5G2, CDK6, CLDN14 , CTBP1, DVL1, GFPT1, GMPR2, GRIN2A, IGF1, MCEE, NRXN3, OR52E4, OR9K2 , PAX6, PGK2, PIGO, PLCG1, PRKG1, PSME1, QARS, SAT1, SSH1, ATP6VOD2
Negative_5178	BDKRB1, CCNB2, OR10A7, OR5P3, PLA2G3, PTAFR, TACR1, HLA-DQA2

Negative_5179	IDS, IL6, A4GALT, BMPR1B, CASP10, CCNB2, CCND1, CCND2, CHRM2, COL5A2, CTTN, DDIT3, ENO1, ENTPD7, FUT5, GCH1, HHEX, KLRK1, MAP4K2, MKNK1, NUDT2, OR10X1, OR11H6, OR51G1, OR6N2, OR6Y1, PFKFB3, PPARG, RDH5, RIPK1, ROCK2, SSH2, SUOX, TAS2R9, TGDS, TP53I3, TNFRSF11B
Negative_5180	ILK, MOS, MSN, NPY, RDX, ACVR2B, AGXT2, ARAF, ATIC, BCAT1, CASP6, CD74, CDK6, CHST11, COL2A1, DGUOK, DVL2, E2F4, EGFR, F2RL1, FCGR2B, FIGF, IL10RA, IRAK4, MMP9, NFKBIE, NOS1, NOTCH1, NUDT2, OR10AG1, OR1B1, OR1D2, OR4A15, OR51F2, OR5L1, OR6N2, PDHA1, PIAS4, PRIM2, RDH8, RERE, SCP2, SUFU, TRAF6, TRPC1, TUBB, VAMP2, WNT9A, XCL1
Negative_5181	HGF, ADCY2, ALG6, AMPD1, BCL10, CSF1R, CXCL12, CYFIP2, DHCR7, IL28B, IPPK, ITGA1, LLGL1, NCK1, OR2H2, OR2Y1, PANK2, PLCD3, PLCE1, ROBO3, TLR3, TNFSF11, TYROBP, WASF3, YES1
Negative_5182	HGD, ALDH1A3, CSF1, E2F3, GPLD1, IL24, SC4MOL, TALDO1, UBA1
Negative_5183	CCL1, CYP2C9, HLA-DOA, MARS2, MECR, MYH10, OR4D6, TNFRSF17
Negative_5184	C8G, CRK, GGH, LAT, NLK, ALAS2, APBB1, APOA2, ARHGEF1, B3GNT4, CASP6, CAV3, CCR9, CDKN1C, CTSG, CX3CL1, CYP27A1, DPM2, FGF21, FLT3, GABARA P, GNA12, GRM5, HSD3B2, IL17A, INPP1, LIFR, MGST1, OR14A16, OR4Q3, OR52N2, PGM1, PPP3CC, SEMA4F, STK36, SUCLG2, THBS2, TIAM1, TJP3, TSHR, TUBA1B, TUBA3E, TUBB, WNT5B, ATP6VOA1
Negative_5185	LCK, WAS, ACMSD, ACSL5, ARAF, B4GALT5, CACNA1F, CCL20, CHUK, CMAS, CNTNAP2, DGKH, DMGDH, FGF12, FMO5, FSHB, FUT5, IFNA4, IL22, IL8RA, JAG1, MAP4K1, MASP2, NODAL, OR10H3, OR2C1, OR2M5, OR5AK2, OR7G3, OR9G1, P2RX2, PAICS, PIK3CB, PLCD1, PPARG, PTCH2, SELE, SH2D1B, SMAD2, SMAD6, SNAI2, SPHK1, STX16, TAS2R4, TBXAS1, TNFSF8, UGCG, WNT2B, HSP90AB1
Negative_5186	AMDHD2, CAV3, CCL13, CTSB, CTTN, ENTPD8, ESAM, FMO3, FZD5, GLYCTK, GPD1, GSTA2, GUCY1A2, HIP1, KLRC2, NADK, NEFH, OR10G3, OR2D2, PANK4, PDE11A, SEMA4D, STK11, TAS2R14, TAS2R48, TIAM1, TJP2, VAMP4, VANGL1, YWHAQ
Negative_5187	GP9, GSTM2, IL28RA, IL8RB, PDE4D, RPS6KA4, STT3B, MAPKAPK2
Negative_5188	EBP, GCK, ETNK1, GDE1, KIR2DL3, NT5C, OR1D2, OR52H1, PITX2, PRKAG3, RARA, THBS2, TUBB2B, PNLIPRP1
Negative_5189	C1S, INS, TYR, ABLIM1, ATP6V1A, BAAT, BIRC2, CCNE2, CD74, CD79A, CLDN9, DDIT3, DDX23, DHRS4, DPM2, EPAS1, EPHB6, HNF1B, HSD11B1, MTHFD1L, OR10G7, OR1S2, OR4F6, OR6B2, OR9A2, POLR2K, PRKAB2, RAF1, RND1, SELP, TAS1R2, TAS2R49, TJP2, UGT2B4, UPP1
Negative_5190	ABP1, ACADL, ACY3, APOC3, CAPN2, CFL2, CFTR, CNTNAP1, FCGR3B, FGF1, FUT3, GFPT1, MCM2, NEU4, OR2A25, OR4N2, ORC1L, PDE10A, POLR1E, PROS1, RALBP1, SUV39H2, UPP1, WBSCR22
Negative_5191	ADO, AMT, GLA, MPL, ACSS2, ARSA, B4GALT1, BBC3, CARS, CDC25A, CDH2, CHIA, CHKA, CNGB1, EFN2, FGF11, IAPP, IDH2, MAN1C1, OR9G1, OXSM, PDE8B, PIGS, PTCH1, RFXAP, SHC2, SHC3
Negative_5192	AK1, BTDR, KDR, RB1, SCD, ARPC2, CSNK1A1, CTNNA1, CYP1B1, DTX4, GARS, GP1BB, HTR2B, JUND, KRAS, LAMB3, NEGR1, NKD1, NPAS2, PRSS3, PVRL2, SEMA3G, TAS2R5, UPP2, PDCD1LG2
Negative_5193	MSN, PGD, ACVR1B, CALML6, CANT1, CHUK, CIITA, CNDP1, CNTN1, DUSP3, EFN3, FGF18, FLT4, G6PC, GCLC, GLYCTK, GUCY1B3, HAAO, IRAK2, MYH10, NFATC4, NTN1, NUMB, OR10Q1, OR10V1, OR2T3, PRODH2, PTPRJ, RALGDS, RERE, SMURF2, TGFB3, UGT2A3, WNT8A
Negative_5194	HDC, BAIAP2, EHMT1, FRAT2, GALNT9, NRXN2, VDAC2, HLA-DRB3, PAFAH1B1
Negative_5195	AGXT2, CHEK2, CSF1R, HARS, PGAM4, PLXNC1
Negative_5196	B3GAT1, CYP1A1, FGF20, GALNT5, IPMK, PRKCZ, RASGRP4, TNFSF11
Negative_5197	BIRC2, CFTR, CLDN18, CYP7A1, DDB2, EDAR, GCLM, MADCAM1, NCR1, OR2A14, PON1, WNT1, ARHGEF12, ATP6V1G3
Negative_5198	CD40LG, DUSP9, GLUL, HLA-DOB



Negative_5199	PLG, ACSM5, ACTN4, ALDH1A3, APRT, ASIP, ATP50, BCKDHA, CCKAR, CDKN1C, CSNK2A1, CTNNA1, CYP26A1, DDX47, DERA, EPB41L1, IARS, LCMT2, MAPK13, NMNAT2, NOTCH3, NR4A1, OR10J1, OR1L8, OR51E2, OR51S1, OR52R1, OR6F1, PAK3, PAK4, PIK3C2A, PPP2R1A, PRKCD, SMAD6, STAT1, THBS2, TRPM5, TSC1, PRICKLE1, SERPINA5
Negative_5200	AKR1B10, AREG, C7orf16, CDK5, CISH, COL6A1, CSF3, CX3CL1, FTMT, IFNW1, IL10RA, IL24, LRAT, NCF1, NRG2, NRXN1, OR1B1, PHKA2, PVRL3, TAS2R9
Negative_5201	AUH, GP9, MPL, ACADS, ACP5, ALAS1, ALDOA, APPL1, AVPR1A, BMP4, C5AR1, CAPN2, CCL28, CCL4, CD27, CHD8, CSNK2A1, CYFIP1, DARS2, DBF4, DDX4, DHRS9, FGF6, FUT6, GALNT2, GALNT7, GPD2, INSRR, ITGA7, LIPE, MAGI1, MYL9, NUMBL, OR10R2, OR51I1, OR8B4, PLXNB1, PPBP, PTPRJ, RASGRP1, SUFU, TFDPI, TUBA1C, WNT11, WNT7B, CSGALNACT2, PNLIPRP2
Negative_5202	ARD1A, ATP6AP1, CANT1, IFNA6, ITGA2B, NT5C1A, POLE4, PRKACB
Negative_5203	GP6, IHH, TH, CASP8, CCR6, CYP3A7, DERL1, EFNA2, EPHB2, FUT1, GALNT7, GMPPA, GNA11, IL10, IL23R, ITGA8, MAP3K3, MEF2C, MGAT4A, MTHFD2, OR51B4, PAK7, PGLS, PRKCB, PTPRZ1, RALA, RAPGEF4, UAP1, XCL2, HSD17B12
Negative_5204	CD6, GGH, LPO, AADAT, ACTG1, ALPL, BMP8A, CACNG8, CSF3, GADD45A, GAPDH, GCLM, GLS2, GSTZ1, HA02, HSD17B4, IL22RA2, KIR3DL3, NQO1, OR4C16, OR6X1, PANK2, PCYT2, PFKFB1, PHKG2, PLA2G2A, PLA2G6, PTTG1, RAC1, RPS6KA6, SELPLG, SIAH1, SLIT2, SPCS1, SPCS3, SPRY2, STX10, TALDO1, TNFSF9, TUBA8, VNN1, GABARAPL2, PAFAH1B2
Negative_5205	PGP, SYK, ACTN4, AMPD1, CCL26, COL5A1, CYP3A43, CYP7A1, DDHD1, EPHA6, F2RL3, GAL3ST1, GALNT10, GSK3B, GSTP1, HRH1, IL12RB2, MAD2L2, MAOA, MAP3K11, MAP4K3, MGLL, NRXN2, OR2K2, OR2T8, OR6K6, OR6T1, PANK1, PDE6D, PIAS4, PPP1R3C, UGT2B11, VANGL1, TNFRSF10A
Negative_5206	AK7, C1S, GPT, HGD, ME2, ACACA, ADORA2B, ALOX12, ATP2A2, BMP5, BMPR2, C5AR1, CACNA1H, CAPN2, CCL17, CCR9, CER1, CHKA, CHRM1, CLTC, CX3CR1, CYP27A1, DHRS4, ECHS1, ENTPD1, FABP4, FGF3, GALK1, GALNT13, GRM5, GSTZ1, IL7R, ITGA2, L1CAM, OR1A1, OR1A2, OR51F2, OR5T3, PFKL, PLA2G10, PNMT, PRIM1, PSAT1, PSENE1, RBPJL, UGT2B7, SERPINA5
Negative_5207	AKR1A1, OR1S1, STX5
Negative_5208	BAD, F9, INS, ME3, ALCAM, AQP7, CREB3L1, CYP4A11, DDOST, DDX52, EFNA5, GNAS, GPD1L, HARS2, IL29, OR2F2, OR4A15, OR4D1, OR6X1, PDE4A, PLA2G2F, PMM2, POLR2I, PPP2R5B, PTPRR, RRM2, SELPLG, SGMS2, SSH1, ST8SIA5, TAS2R3, TGFB2, TSLP, VAMP3, YWHAE, PDCD1LG2, TNFRSF13C
Negative_5209	CHKA, EDNRB, HADH, MGLL, MTHFD2, NME2, RND1, ROBO2, SEMA4C
Negative_5210	ACAD8, ACSL1, ACVR1, CCL21, CHST12, DLAT, EDNRA, FADS2, NKX3-1, OR2M2, POLD1, POLD3, PTPRB, RBL2, SETD1A, TAS2R50, UROC1, XYLT1
Negative_5211	ALG8, ATP5C1, CXCL2, DDX51, FECH, GCNT1, HCST, ITGA9, KLK3, NCSTN, NFX1, NTNG1, OR11L1, OR52D1, OR8D2, RFNG, SDHC, TAS2R1
Negative_5212	MET, ACTG1, ALDH1A1, ARSB, ATP12A, C1QA, CAMK2B, CRLF2, CXCL13, CYCS, CYP2A7, DHRS3, EXOC7, FBXW11, GSTM1, HIF1A, INPP5E, LPAR1, NCR1, NRG1, OR13C9, OR1G1, OR2M2, OR52N2, OR5AR1, PHGDH, PI4KB, POLA1, PPM1A, PRKX, PSME2, RBPJ, RHOA, ROBO2, SAT1, SULT2B1, TAS2R16, WNT6, YWHAE, SERPINB5, ST6GALNAC5
Negative_5213	C2, IL7, ABLIM3, AVPR1A, CD55, CTBP2, CXCR6, FGF21, FIGF, FLAD1, GCDH, HSP90B1, HSPA2, IQGAP2, MCM2, NODAL, PNPLA3, PTGES2, STAT1, STX12, STX7, WASF3
Negative_5214	FYN, LPL, ACSL5, ACVR2B, AGRN, CYFIP1, EPHA5, FABP4, FGF13, FGF3, GLI1, HLA-C, IDI1, IL17RA, IL1A, LIPF, NAT5, NCK2, OR10A4, OR1S1, OR56A3, OR6M1, P2RX7, PDE1B, PIK3CD, PNPT1, POLR3H, PTPRB, RPIA, SOS2, SUV39H2, TYROBP, UROS

Negative_5215	CP, PGF, COL4A4, CXCL9, DGKG, EPHB3, HLA-F, KIR3DL1, MAGI2, NFYA, OR4F6, PGM2, PIP5K3, SCD5, TOMM40L, TNFRSF10C
Negative_5216	ATP6AP1, FASLG, FZD4, LDHD, NFYC, NRXN1, PDE8A, PPP1R3D, PTTG1, RPS6KA3, STX12, STX1B, TJP1, TUBB, ULK3, ST6GALNAC5
Negative_5217	ALDH5A1, ALG5, ALOX12, B3GAT1, BAIAP2, BET1, CACNB3, CASP8, CCR9, CES2, CHEK1, COX15, CSNK2B, FTH1, GAS1, GRHPR, NAT5, OR1J4, OR1Q1, P2RX2, PDE6G, PIAS2, PIGL, POLA2, PPAT, PPT1, PTGES2, RDH12, RPN1, TACR3, TAS1R3, TAS2R3, TNFRSF9, WNT2, ZNRD1
Negative_5218	OAT, PDC, ADSSL1, CCL17, CD80, GSTZ1, ICOSLG, IL17A, OR2A42, PLA2G2D, PLCE1, PPM1A, PRPS2, RARS2, WASF2, SERPINA1
Negative_5219	ATP6V1H, CAMK4, CBR1, CCKAR, CD47, CTNNB1, CTSB, DKK1, FOXA3, GCLM, GTG6, HTR4, ITGAX, MCCC2, MGAT1, MGST3, MYD88, NR1D1, OR10A3, OR4M1, PAK6, PDE4D, PPP1CA, PRKAB2, SERPIND1
Negative_5220	ADSL, CD244, DKK1, IQGAP3, OR5B12, RALA
Negative_5221	GALNT11, GFPT2, POLR3K, TCF7L1, YARS2
Negative_5222	PC, ACADL, AKR1B1, UROD, ATP6V1G3
Negative_5223	ACACA, ALDH1A3, AOX1, CCDC6, CD59, CD79A, CRHR1, DAAM2, DRD5, ELK4, FGFR3, FUT1, GFAP, GSTA3, IKBKG, LAMA3, LGMN, MAGI3, MTMR2, OR5AP2, PANK1, PLD2, PRKAG1, SARS2, TNFSF4, TNFSF9, YWHAH, CSNK1A1L, HSD17B10, KIR2DL5A
Negative_5224	BTC, FGA, FN1, GP9, JUP, MAX, SRF, ABLIM1, ACAT2, ACOX3, ALG13, ALG6, ANAPC2, CCL24, CD34, CDK4, CNGB1, COX15, CREB1, F11R, FBXW11, GRIN2B, NEU3, NME7, OR1B1, OR2L13, OR3A3, OR7C1, OXCT2, OXSM, PFKFB3, PIGU, PRKCQ, PRSS2, PRSS3, SPRED1, TAS2R60, THBS4, UGCGL1, B3GALNT1, TNFRSF12A
Negative_5225	TFG, ACTN2, ACVRL1, AGRN, ATP6V1D, CDKN1A, CLDN1, CTNNB1, CYP11B2, CYP2C9, CYP4A11, DGKE, DHX58, DPAGT1, EDAR, EPOR, F13B, GGT5, GSTK1, HTR2A, HTRA2, IL18RAP, INPPL1, KAT2A, LARS, NCOR2, OR11H4, OR13G1, OR5D13, OR7A5, PIGN, PNPO, POLR3D, PPOX, PRKAG3, PRKCQ, PSPH, SEMA3A, SH2D1A, SIPA1, TP73, TRAF6, TUBB2B, ATP6V1G3
Negative_5226	C4B, FH, TNC, ARAF, CLDN22, CSNK1D, CXCL10, CXCL11, DGAT2, DUSP9, FDF1, FLT3LG, GMDS, GP1BA, IL22, IMPA1, ITGB8, LFNG, MAP3K4, OR4X1, OR6Q1, PIGM, PPID, PRKARIA, TNFRSF9, TPH1
Negative_5227	F3, CCL16, CLTB, GALNT8, GNRH1, KLK3, OR10G3, OR10G9, OR2F2, SOCS5, UAP1
Negative_5228	TKT, TYR, ACAA1, CKMT2, CYBB, GAPDH, NFYA, NRXN2, NTNG1, OR2B11, OR6C6, THBS4, VTI1B
Negative_5229	EIF4B, HNF4A, KYNU, MCM6, OR52D1, OR8G1, PCCA, PLXNA1, POLR2K
Negative_5230	C8G, TPO, ACTG1, AMDHD1, ATP5D, CDK5, EIF4E, FGF10, FGF23, HADH, IL20RA, IMPA1, KAT2A, KLRC1, LTA4H, MAOB, NCR2, NR1H3, NUDT8, OR14I1, OR8D4, OXSM, PIK3R1, PLXNC1, PRSS2, PTGS1, RAP1A, SUFU, TAS2R14, TSLP, TUBA3E
Negative_5231	FUK, LCT, ADRA1B, ALDH3B1, CARS2, CCL4, CCNB3, CDKN1B, COL1A2, CTSS, DAPK2, DERA, DPYD, ENTPD8, FARP2, GNPDA2, MAD2L2, MS4A2, MYH8, OCRL, ODC1, OR10AG1, OR10T2, OR2L8, OR51Q1, OR6C74, PGAP1, PLAU, PPP2R2C, PRKAA1, PTDSS1, PVRL2, RPN2, RPS6KA5, SOD1, ST3GAL1, TCF7L1, UGT2B7, VAMP4, VAV2, MAPKAPK3
Negative_5232	C4B, ALDH5A1, ATP6V1H, CCL2, CCR6, CDC27, FGF14, LAMC2, MTHFD2, P2RX5, PRPH, ROCK1, SIGLEC1, ST8SIA5, UCP1
Negative_5233	LEP, ACVR2A, ALOX12B, APRT, CCL24, CDH15, CDKN1A, COX15, EPHA8, GLI2, ITGB3, MCCC1, OR10P1, OR51B4, OR52E8, OR5I1, OR5L1, P4HA2, PIP5K1A, PTGFR, RCHY1, RPS6KA1, RRAS, UBA7, YWHAG

Negative_5234	NPL, PAH, UBC, ARHGEF4, CCDC6, CCL21, CCR5, CHEK1, CLTCL1, CNTN2, COQ6, CSNK1G3, DHRS9, DPM1, EDAR, EDNRA, EFNA1, EPHA5, G6PC2, GALNT10, G LUD1, GSTM4, HMGCS2, IL20RB, MAP3K2, MMP7, NRG1, OR1A2, OR1B1, OR2T12, OR51F1, OR51S1, OR5L2, PGS1, PLCD4, POLR2D, POLR3B, PRKAB2, PRKCG, PTGS1, ROBO1, RPE65, SLC2A1, SPHK1, THBD, TP53I3, TUBB4Q, UBA1
Negative_5235	EZR, GLA, NPL, MAD2L1, P2RX1, P2RX5, P2RX6, PAFAH2, POLA1, PPARD, STX1B, ULK3
Negative_5236	ME3, NGF, SRF, SYK, BBOX1, CHKA, FOXA2, OR1S1, PIK3R2, POLR3D, RDH5, S DHB, PPP1R12A
Negative_5237	AMH, JUP, ACAA1, ACOX1, ALDH1A3, ALG8, ARSE, ATP5D, BDKRB2, BMPR1A, C DH1, CTNNA1, CXCL2, DGUOK, E2F5, EHMT1, ENO1, ENO2, ENPP3, FGF13, FZD6, GFAP, GNAO1, HTRA2, IFNA6, IFNGR1, IL1R2, ITGA1, ITPK1, KLRC2, MBL2, MCM5, MGAT4A, MYH13, NFYB, NME7, OR4D2, OR51B6, OR52J3, OR8D2, POLR1B, PTPN6, SARS2, SETD7, ST3GAL5, TAS2R48, TLR4, TPH1, UXS1
Negative_5238	RDH16, SSH3, B3GALNT1
Negative_5239	BTC, CFH, SRF, ACACA, AMHR2, AOC2, ARHGAP5, ARNTL, ARRB2, CASP10, CES1, COQ5, COX15, CREB3L4, CXCL16, DAD1, DUSP5, E2F5, ERBB4, GAMT, GCLC, GRB2, IDI2, IL1RAP, KAT2B, MAPK11, NUDT8, OGDH, OR10K2, OR1I1, OR2T6, OR52H1, OR5R1, PDGFD, PFKP, POLR2B, POLR2K, RENBP, SMPD1, SOS2, STAT2, SULT1A2, TAS1R2, UGDH
Negative_5240	ADC, C1S, CRK, DBT, TK1, ANAPC5, BMPR2, CCL13, CHDH, CLDN2, CREB3L2, G PX5, HMGCL, ICOSLG, IL13, KCNB1, KLRK1, OR10G8, OR2AG2, PFKP, POLR2A, SRGAP1, SSH3, TGDS, TLR3, TPH2, TPI1
Negative_5241	FST, AASS, ALDH3B1, B4GALT1, BUB3, CD3E, CDC2, DLL4, DPYSL2, FUT9, IG F1, IL22RA2, IL4R, ITGB1, LDHD, OR10P1, OR2D3, OR5L2, PPP5C, RAB5A, R PSA, SEMA4F, SH3BP2, TAS2R13, WNT7A, ATP6V0A1
Negative_5242	C3, PGD, UBC, ADH1B, AKR1B10, BCKDHA, BUB1, CALML3, CCL20, CCNA2, CCN D2, CD46, CD55, COMT, CPS1, CRB3, CYP3A5, DDX41, DUSP5, EHMT1, GAD2, G IT1, HCCS, IQGAP1, ITGA3, MAP3K7, NCR3, NFX1, OR4D6, OR6B2, OR6X1, PD E1B, PKLR, PLA2G1B, PLA2G3, PNLIP, PPP2R5A, PSME1, RALB, RAPGEF1, RN D1, RPSA, RRM2B, SRGAP2, TAS2R13, TAS2R42, UBE2L3, VEGFB
Negative_5243	FAH, FH, CAMK2G, CHST12, CYP1A1, CYP3A5, DKK1, EIF4B, FDFT1, GALNTL1, IL15RA, JAG2, NFATC1, NRG4, NUDT9, OLR1, OR2A2, OR2AE1, OR4A16, OR4 N5, OR9A2, PAK3, RHOQ, SARS, TM7SF2, ULK2
Negative_5244	ILK, LCK, ADIPOQ, ARAF, ASPA, BPNT1, CACNG3, CCL23, CCR4, CLDN5, CSNK 1E, E2F2, GNG12, HSPA2, ITGB4, MAP3K13, MAPK3, MYL7, NKX2-2, OR2AT4, OR6C2, PPP2R5A, SGMS2, SLC2A1, SUV39H2, TSHR, WASF3
Negative_5245	CCL25, CFTR, CTNNA1, HSD17B3, LDHD, OR2T29, PER3, PTGS2
Negative_5246	CFH, DLD, F3, LAT, NLK, ACP6, ADCY5, ALOX12, ALOX12B, ARPC4, ATP13A2, CAMKK1, CFL2, COL3A1, COL4A6, CYP3A4, DDX23, DHRS9, FGD1, FGFR2, H6P D, LEFTY1, MAP4K4, MGAM, MGAT2, NFAT5, OR10C1, OR10S1, OR1J2, P2RX4, PDE3A, PDE6G, PHKA2, PIGB, PRKCE, PROC, PRODH, RALGDS, RUVBL1, SH2D1 A, SORD, UAP1, HSD17B12
Negative_5247	ABCC8, ACAA2, CCL20, GDE1, GLUL, OR2L3, OR2T1, THBS4
Negative_5248	CTH, GP5, TFG, TNN, ACMSD, ACVR1, ADH1A, CCL15, CD226, CHST13, CHSY1, CREB3L4, CSNK2B, DAPK2, ENPP1, FGF9, GALK1, HAP1, IFIH1, IFNK, IL20R A, KLKB1, LEFTY1, OR1K1, OR4K1, OR51G1, OR8H2, PHKB, PPOX, SETD1A, SF RP1, TIAM2, TOMM40L, MAP3K7IP1, SUV420H2
Negative_5249	BPGM, CAMK2D, CD247, CLTA, CMAS, CYCS, CYP2A6, DGUOK, EFNB2, FMO1, GC DH, IFNAR1, IFNK, MAFA, MAPK10, MASP1, MMP9, NPAS2, NTNG1, OR6N1, PHK G2, PPA1, RCHY1, SETD1B, SIPA1, SPTLC2, TPI1, ARHGEF12, SERPINA1
Negative_5250	SCD, ACSM1, ARPC3, CD58, CISH, ITGAX, LRP5, NEFH, NOS3, NPR1, OR2M2, P FN1, PLA2G1B, PLCG2, PRKCQ, SCLY, SOCS3

Negative_5251	CKM, IL3, TH, ABI2, AKR1C2, CD244, DDX50, F2RL2, NFKB2, P2RX4, PLCB1, POLR3H, PRKACG, SSX2IP, TGFBR1
Negative_5252	CGN, CP, AKR1B10, ALG8, COX15, CTBP2, CTPS2, DERL1, ENTPD7, FGF6, FUT7, GSTP1, HSD17B4, NAT1, OR1A2, OR4C11, PPP2R5C, PTGES2, PTGFR, RASGRF2, SV2C, SLC25A31
Negative_5253	EDA, NNT, CAV1, FM01, GMDS, ITGA3, KAT2A, KIR2DS4, NAT6, PIK3C2B, PLXNA3, SPRY4
Negative_5254	IL9, ARRB1, BLVRA, CCL16, DLL4, FGF20, PDGFD, PMAIP1, PTPN5
Negative_5255	F12, PC, ACOT12, ACSL4, AKR1C3, AMDHD1, ANAPC1, CD79A, CSF1R, CSNK1G1, DAAM1, GBA3, GSTM4, HBEGF, HLCS, IL22RA1, IMPDH2, LDHAL6A, NFYA, OR1A2, OR52A1, OR5D13, PDHA1, PI4KA, RPS6KA6, SDHB, ST8SIA5, STX4, TAS2R5, VAMP3, ATP6V1E2
Negative_5256	ADRA1D, ARHGEF6, B3GNT2, CLDN8, DLL3, DVL1, EDAR, FLT1, FZR1, HNMT, JAG2, KIR2DL1, OR4N4, PER3, PLAU, RDH11, SV2A, TBL1Y, THBS2, ATP6VOA1, HSP90AA1
Negative_5257	EPO, GH2, MVK, PGD, ADCY10, ATP5D, CREB3L2, CTLA4, ENPP3, FRAT1, HES1, MCAT, MFNG, MYH3, NAGS, OR11H6, OR2S2, PIGK, PIP5K1C, RALGDS, SETD7, STAT4, SV2C, TAS2R8, TNFSF8, UNC5D, WARS2, ATP6VOE1
Negative_5258	TFG, ADCY8, ATP5L, CAMK2D, GUCY2F, MAP2K3, OCLN, OR13D1, OR1N2, OR2T6, OR4C15, OR4F6, OR51G2, OR5P3, ORC4L, P2RX2, PVRL1, SLC27A4, VAMP4
Negative_5259	TNC, CLTC, EPB41, HDAC1, IMPA2, LEF1, OR2B6, PLAT, RAC1, SDC3, SKIV2L2, UBA1
Negative_5260	CD4, NNT, TNF, ACSL5, ACTB, ALG12, ALPL, HSD17B1, OR5AN1, PDE11A, PRODH, SYNJ2, CACNA2D3
Negative_5261	FSHR, OR4C6, RPS6KA5, SERPING1
Negative_5262	ACVRL1, ALDH6A1, APC2, DGKA, IFIH1, MGAT4B, POLE2, SEMA3E, STX5, TLN2, TUBB2A
Negative_5263	GADD45B, IL28B, LAP3, MDM4, OR4K2, SMAD6, ULBP3, VANGL2
Negative_5264	CLDN6, EPRS, PDE3B
Negative_5265	AGL, F2, LAT, ACP6, ANAPC2, AVPR1B, BMP2, BMP8A, CCKAR, CREB3L4, ELK4, GABARAP, GRIN2B, GSTA1, IFNW1, NKD1, OR1A2, OR2T12, OR4F17, P2RX6, SHC2, SMURF2, SRGAP1, TRDMT1, WNT9B, WWP2, CSGALNACT1, CTNBP1, HLA-DQB1
Negative_5266	BTC, BTK, IL4, ASIP, CIITA, GPT2, INSR, NUDT8, SFRP1, SNW1, PLA2G12A
Negative_5267	CR2, ACVR2B, ADAM10, BAI1, C1QC, C5AR1, CD274, CNGA4, CYP2E1, DDB2, EREG, FRAP1, GADD45A, GGT5, IL22RA2, IL5RA, KIR2DS4, LAMA3, LIMK1, MNX1, NCF4, NFATC4, OR10V1, OR52K1, PDE3A, PFKM, PIGN, PLIN, POLE2, PROC, PTPRM, PYCR2, RALA, RASGRP2, RRAS2, RRM1, SNAP23, SUCLG1, XCL2, ATP6V1B2, MAPKAPK3
Negative_5268	CTSG, IL18R1, KYNU, MAN1C1, OR52N2, PKMYT1, TRPC1
Negative_5269	CTPS, OR1N1, OR5K1
Negative_5270	C3, ABLIM3, AOC2, BIRC5, CDK6, CNTNAP2, COL5A2, CSNK1G3, CTNNA1, EDNRB, FGFR1, GUCA1C, HES1, INPP5A, IRF3, JAK1, LIFR, LRP5, NCKAP1, NFKBIE, OCLN, OR2B6, OR51M1, PIAS2, PPAR, RAPGEF4, SCD5, SCLY, SLC2A1, SRGAP3, ST6GAL1, TKTL2, YARS2, YWHAG
Negative_5271	ID3, IHH, BPNT1, CCKBR, COL5A3, CYP4F2, GNRH2, GYS2, IPMK, KLRC3, MCM7, MMP1, MMP14, NFASC, OR14J1, OR6K6, OR6S1, PIK3CB, PLA2G2F, ST8SIA1, TALDO1, TNFSF4, TUBA4A, YKT6, HLA-DQA2, HSD17B10, MAPKAPK5
Negative_5272	NOG, TFG, VTN, ABLIM2, AMPD3, AREG, CACNG3, CD8A, CHEK1, CSH1, CYP2C9, DAXX, ENPP7, GALNT2, GALNT5, LYPLA2, MLLT4, NKX2-2, NOS3, NOTCH3, NR1H3, OR6C76, PAK7, PDE4D, POLR2G, PPP2R5A, PTGDS, RXRB, SUFU, TBXAS1, UNC5A, HSP90AB1

Negative_5273	A2M, PAH, TH, ALG6, AMD1, ARPC1B, ATP5H, CD58, COL5A1, DDHD1, DTX3L, ITPA, MDH1, MYH3, NCK2, OR1F1, OR3A2, OR5F1, POLR1B, RALB, TFPI, TSC1, UCK1, WNT10A
Negative_5274	SCD, TAT, ASIP, ATP6AP1, CCL24, COQ3, EXT2, KAT2B, MAP2K2, OR11H6, OR2H2, OR4D1, PARD6A, STK3, XCL1
Negative_5275	F2R, KDR, ADCY7, CACNA1A, DGKI, ERBB3, IARS, ICOSLG, IL11RA, IL8RA, NFATC4, OR1F1, OR56A4, OR8J3, PFAS, PFN2, PISD, PRKAA1, RASGRP1, RFXANK, SPRY1, TAS2R4, VANGL2, MAPK8IP3, PRICKLE1
Negative_5276	C4B, GLS, PDC, RPE, ACADSB, BCAR1, CD8A, COX15, CXCL2, GSTA4, ITGA1, KNG1, LDHA, MAFA, MYD88, NPR1, OR4F15, OR5B21, OR6B2, PDIA4, PRDX6, PSME1, SREBF1, SV2C, TNFRSF9, TPH1, UGT2B7, VDAC3
Negative_5277	GCK, ACO2, AGXT, AKT1, ALDOC, AMY2A, BET1, BET1L, BPNT1, CACNB3, CFL2, CTPS, DHDH, DPYSL2, DRD2, EDN1, FABP3, HMGCL, HNF1A, LEF1, MAOB, MAP3K5, OR14I1, OR6A2, PFKFB2, PIGH, PRIM2, PRKAR1A, PTGS2, PYCR1, QPRT, RALGDS, SLC25A4, SUV39H2
Negative_5278	F9, ACADVL, ARHGEF1, BCAT2, CACNA1E, CCL7, CYP17A1, CYP2C8, DKK4, DUSP9, FLT4, G6PC2, INSR, IRF9, MYL5, NAMPT, OGDHL, OR2T34, OR4K1, OR52B4, OR5A2, PPAT, PRKCH, RDH8, TAS1R1, TYK2, HSD17B12
Negative_5279	FYN, ID4, ILK, INS, ACSM2A, ALDH3B2, ALDH5A1, AMD1, BET1, CCND3, CHD8, CHUK, COX15, CSNK1A1, DDIT3, DDX19A, DERA, DVL1, EPB41L2, ETNK1, EXTL3, FGD3, FGF10, FGF21, FGF4, GAD2, GAMT, GRIN2C, IRS2, MCM7, NCSTN, NT5C, OR52B4, OR52N5, OR6S1, PLCD1, PMM2, PPM1B, PPP2R5D, PRPH, RALB, RFW2, RUVBL1, SCP2, SULT1A1, UGT2B28, WNT1, WNT7A, YOD1
Negative_5280	FES, GSR, APRT, BDKRB2, CCL1, CDH3, CHST12, CNDP1, CSF1, CYP2A13, CYP2C19, DPYD, DTX1, DUSP8, EDA2R, ENPP7, EXTL3, GRHR, HSD17B1, HTR2B, KAT2A, KRAS, LIMK2, MGLL, MGST2, NFKBIE, NKD1, NRCAM, OR10H4, OR10X1, OR13A1, OR1L1, OR1N1, OR2G2, OR2M4, OR52H1, OR56A4, OR5F1, OR5H6, OR5M3, PFN4, PIGP, PIP4K2B, RPS6KA2, SNAI1, SPAM1, ULK2, UROS
Negative_5281	AKR1B10, ALOX5, BST1, CNTNAP1, CRY1, LARS2, MCM3, OLAH, OR1E2, OR51A7, PLA2G10, TAS2R4, ARHGEF12, ATP6V1B2
Negative_5282	HK1, ITK, NGF, TH, AK3L1, ANAPC4, ASMT, CER1, CYP26A1, F11R, FGD3, IL1RAP, ITCH, LYPLA1, NFASC, OR7A17, PPP2CA, PRODH, HLA-DRB4
Negative_5283	CRLF2, CYSLTR1, PNPT1
Negative_5284	GK2, CTSG, DLL4, EXTL3, LLGL2, OCLN, TIAM1, ST6GALNAC6
Negative_5285	MAX, AADAC, ACP1, ADH1B, CYSLTR1, DHRS9, DKK2, DPYD, EPHA3, GAB1, GJA1, HCST, MAPK7, NFATC2, OR2M7, OR51A4, OR52I1, POLR1E, POLR3G, PPP2R1A, PRKAR2A, PTK2B, RFW2, RHOQ, SOS2, TNXB, UCKL1, WNT9A, YWHAB
Negative_5286	FUK, BPNT1, BUB1, CXCL6, HAGHL, KLKB1, LLGL2, YWHAH
Negative_5287	OSM, TEC, CAMKK1, DPM1, FMO3, GRIN2A, ITGA9, LDHAL6A, MKNK1, PRODH2, TALDO1, VAMP2
Negative_5288	ACOT12, ACYP2, ALG12, CCKBR, CMPK1, CSNK2A2, DVL3, FCGR2B, GRIN2D, HNF4A, IFNGR2, ITGA2B, MAP4K3, NCKAP1L, OR1S2, PIAS2, PLD1, POLR2F, PVRL1, SFRP4, SMAD3, TLR3
Negative_5289	F11, F9, UBC, CHAD, COASY, EHHADH, MYLK2, NRP1, OR52I1, SHC1, TFPI
Negative_5290	IL7, TPR, ALDH3A1, APPL1, B3GNT2, CCL2, CCR2, CUL1, EHMT1, GFPT2, GPX7, HLA-F, HSD17B2, INPP5A, ITGAD, LIPE, LIPF, MAP3K4, MTMR6, NFKBIB, NKD2, OR9G4, PAX8, PDCD1, PSEN2, RUVBL1, SDC3, SELE, SFRP5, SMURF1, SOAT1, STX12, STX3, THBS4, TJP1, TPI1, WARS2, WASF1, WEE1, WNT7B, XYLB, SERPINB5
Negative_5291	BIRC5, DUSP10, IFNAR2
Negative_5292	CCL20, IDI2, PPP2R1B

Negative_5293	GNS, MVD, PDC, AASDH, ACO1, ALDH4A1, ALDH6A1, APAF1, ARSD, CCL4, CCL7, CSNK2A1, EPHA1, FBP2, HLCS, HRH1, IL1R1, LAMC3, MAP2K4, MLYCD, MTHF D2, MYH7B, OR10G8, OR10Q1, OR11H6, OR11L1, OR13H1, OR14A16, OR4S1, OR8D4, PI4KA, PIK3R2, PIM2, PLTP, PPP2R5D, PVRL2, PYCRL, SETMAR, TJP3, YES1, ZNRD1
Negative_5294	TK2, ADRA1B, ARPC4, CD19, FGF20, GMPR2, LCMT1, NCR2, OR5L1, PAX4, PDE1C, PPP1R3B, SMAD7, SULT1A1, TAS2R13, WASL
Negative_5295	HPD, AADAC, ACAD9, APOA5, BHMT, CCL5, CDC26, CES2, CLDN9, CTSS, CYP2D6, FLT4, GALNT13, GNA14, NCKAP1L, NCOA4, NMNAT2, OR10J1, OR4K13, OR52K1, OR56A3, OR6K6, PCK2, PDGFD, PGAM2, PPP1R3B, SKP1, SLC25A6, ST3GAL1, TALD01, TNFSF12
Negative_5296	IDS, MYC, AANAT, ABL2, ACAA1, ACYP1, ALPI, B3GALT4, CACNG4, CALML5, CND2, CXCR3, EXT1, GALNTL1, GMPPA, HTR2B, IGSF5, MAP3K14, NAE1, OR10C1, RENBP, RPS6KA3, SNAP25, TBL1XR1, VAMP3, VDAC3
Negative_5297	AR, FH, AGPAT3, ALG5, B4GALT4, BAIAP2, CACNA1E, CACNG4, CD46, CDKN1B, CHDH, CLDN7, CLTB, CMPK1, CNTNAP2, CTPS, CYP26C1, FZD5, IFNGR2, IL10, PCYT1A, RPE65, RPSA, STX4, STX7, VAMP4, CSNK1A1L, HLA-DPB1, PAFAH1B3
Negative_5298	CD6, F10, FES, ACO2, CLOCK, CLTCL1, IL22, ITGAD, NEU2, NTRK2, PDCD1, PDE11A, PERP, SETD1A, SIAH1, SULT1A2, PPP1R12A, SLC25A31
Negative_5299	C6, RFK, SHH, ALG13, ALPPL2, ANAPC4, ARPC1B, CACNB1, CD274, CSF1R, CTPS, CXCL11, CYP2B6, DHX58, ENO1, F13A1, FDPS, FM01, GALNS, GARS, GCDH, GUCA1C, HLA-DOA, ICOS, ITPKA, LEFTY1, MARS, MCM6, MYL2, NCK1, NTRK1, NUDT12, OR4K15, PDE9A, PGS1, PLCE1, POLR2H, PPAR, PTPN1, RDH10, SFRP4, SMPD1, SPHK1, TYRP1, UROS, XIAP, PHOSPHO1
Negative_5300	CS, EGF, SP1, GP1BA, OR4F5, OR8B12, PER1, SEMA4C, TUBB2C, XYLB
Negative_5301	ASMT, CALML6, CAMK2A, CBR3, CSF2RB, DAPK3, FZD7, GDF6, IFNB1, MAGI2, MAGI3, MAPK8, MINPP1, MYH6, MYH7B, NRG2, OR4M1, PPP2R5D, RPS6KB1, SAT1, STK3, TBXA2R, ATP6V0A4
Negative_5302	ABLIM1, ACSS2, ALOX5, CDC2, CYBA, FGF18, GDF5, IL21, LCAT, LIPT1, MAN1B1, OR1L8, OR2B6, OR51Q1, TPH2, TPK1, TUBA3E, TUBB, ATP6V1G1, PAFAH1B3
Negative_5303	F10, JUP, MUT, B4GALT5, CD274, CD72, CSF3R, CYP4F2, DDX56, DERL1, DVL1, EGFR, EGLN1, F2RL3, HA02, IL13RA2, MAP3K5, NRXN2, NTSR1, OR11I1, OR2AT4, OR4K17, OR7A5, OR7D4, PDXK, PLA2G6, PLCB1, RPS6KA5, SDHA, SRD5A1, TGFA, TYK2, UGCGL2, VAV3
Negative_5304	HPD, ALCAM, ATF2, ATP5E, CREB3L4, CRKL, CTPS2, CYP3A43, HLA-DOA, HSD3B1, MAN2A1, MDH1, NRCAM, OR2T3, OR52E6, PLCB3, TBXA2R, WASL
Negative_5305	ACAD8, ACAD9, ALG3, ARD1A, ASIP, ATP5E, B4GALT4, BAI1, CASP3, CCR9, CD58, CDC20, CFTR, CHST12, ENPP2, EPHA7, EVI1, HSD17B3, NFE2L2, OR3A2, PARVA, PTGS2, RXRA, SARDH, SMPD2, TACR3, VNN1, TNFRSF10C
Negative_5306	BTK, GK, HGD, ATG7, CCL11, CCR6, CLTCL1, CREBBP, CTSG, FOXO1, GALNT1, HCCS, HPSE2, IFIH1, MAML3, MAP2K2, MTHFD2, NTF3, NTF4, OR14C36, OR5T3, PIP4K2A, PPARA, PTTG1, QPRT, SFRP1, SGMS1, SH2D2A, SHMT2, TRMT11, VANGL1, VDAC2, YWHAH, CSGALNACT1
Negative_5307	CGN, CR2, FOS, GSR, ADCY2, ALDH7A1, B3GAT3, CCL13, CLDN16, CYP2C8, DGKH, GRIN1, MAP3K11, NTSR1, OR1D2, OR2G6, OR52K2, OR5K1, POLE3, SMAD4, SMARCA2, THBD, TLR3, TNFSF4, TPK1, YWHAB
Negative_5308	EZR, TH, ACAD9, ACVR1, ADSS, AMD1, AOX1, CASP9, CD19, CRKL, CYP3A7, FASN, FLT4, GNB1, GSTM2, HNMT, IKBKE, IL28A, METTL6, MYLK, NCK2, NMNAT2, OR10G2, OR2F1, PRPS1, PTPN1, SH2D1A, UPP1, C1GALT1C1, MAP3K7IP1, MAP3K7IP2

Negative_5309	KIT, LHB, MUT, PTS, ABLIM3, ADORA2A, ARHGEF6, ATP6V1D, BAIAP2, BCL2, CALML6, CHKA, CHUK, DVL3, EXOC7, GALNT13, GARS, GJA1, HARS, IPMK, IRAK4, MAP2K5, MTHFD1L, OR10V1, OR11H6, OR13J1, OR4A5, P2RX7, PIGH, PPA1, PPP2R2A, RARA, RPS6KB1, SGMS2, SLIT2, SMC1B, THBS4, TNFSF9, ULBP2, VDAC2, ZMAT3, MAP3K7IP2
Negative_5310	ADSL, B4GALT5, IL15RA, OR5A1, PRODH2
Negative_5311	LCT, PVR, SMS, ACOT12, ACY3, B3GALT6, B3GAT1, B4GALT4, BMP6, CASP3, CXCR5, CYP2A13, DDIT3, DUSP1, EIF4B, HSD11B1, LEF1, OR1A2, OR1M1, OR4K5, PIGS, PKLR, PRKAR1B, RFW2, ST8SIA5, STX8, TBL1X
Negative_5312	ACADL, APLP1, CCR8, CDC25C, CHRNA7, CKS1B, CTSL1, CYP11B2, FBXW11, FGF10, FSHB, ITGA7, MCM5, MYLK3, NRXN2, OR2B2, OR4C12, PIGO, PLA2G5, PLD2, PRSS2, SORBS1, SYNJ2, TLR3, WARS2, SERPINB5
Negative_5313	SYK, ACADS, ACAT2, ALG5, ARPC1B, ATP6V0B, COL1A2, FLT4, HA01, IDH2, ITGA1, PGK1, PNMT, PPP1CB, SMC1B, ULK2, YES1, TNFRSF10A
Negative_5314	PLG, UBC, CACNB4, DGAT2, FLT3LG, GFPT1, GMPPB, GSTA3, LDHD, MAPT, NFKB1E, OR10G2, OR52N5, OR6C70, PMVK, TAS2R4, YARS2, PPARGC1A
Negative_5315	ASL, CFH, MPL, AKR1C3, ATF2, CAMK2A, CCL20, CD226, CD47, CLDN3, DDB2, DPM1, DUSP10, EARS2, ERBB4, HSD17B8, ICOSLG, ITGB2, KLRD1, OR1Q1, PDGFRA, PLA2G1B, POLR3A, PPAT, PRPS2, PVRL1, RAPGEF1, RETSAT, SFRP4, SOD3, TGFBR1, TLR3, TNFRSF4, TSLP, ARHGEF12
Negative_5316	ADK, CD4, GAA, MPL, UBB, ACTA2, ACVR1C, ADH6, ASMT, ATP5J2, BDKRB2, CALML3, CCKAR, CLDN9, CNTF, DGKA, ELK1, EPHA3, EXT2, FUT9, GLG1, GOSR2, HMGCS1, HTR5A, IL23R, IMPA1, IRF5, IRF7, ITGA8, LIMK1, MADCAM1, MITF, MYH14, OR8H2, PANK4, PFKFB4, PGK1, POLE3, PPP2CA, PRODH, ST8SIA1, ST8SIA5, TBL1Y, TGFB3, TP73, UCP1, TNFRSF18
Negative_5317	NNT, ACP6, ALDOC, ANGPTL4, ARG2, BCL2, CD226, CDC42, CUL1, EPHB3, EXT2, GRIN2A, GSTK1, IARS, IFNA2, IL18, IL28B, MAP4K2, NR1H3, NT5C3, OR5B17, POLR2E, PPP2R2D, PRKAR2B, PRKX, RDH12, RDH5, ROBO3, RUNX1T1, SARAH, SKIV2L2, TGFBR1, TRHR, TUBA3C, TYRP1, ULBP3
Negative_5318	CBL, FOS, HGF, LAT, RDX, TPR, ABI2, ACSL1, BACE1, C4BPB, CCL21, CD79A, CDC7, CHPT1, CKS1B, DLAT, EFNA1, F13A1, FGF8, GNAQ, GSTM3, ITGB4, LILRB3, MAFA, MAPK11, MYH13, NKD2, OR2T8, OR4K17, OR5A2, OR5B3, OR8H3, PARD6G, PPP3CA, PRKACB, PRKAR2B, RENBP, SLC25A6, TOLLIP, TRDM1, UCG, WNT5B
Negative_5319	BAD, CP, FST, GSS, KMO, SDS, ADCY6, AHCYL2, ARNT2, ATP12A, B4GALT7, CAMK2A, CFTR, CRLS1, CTNNA1, CYP2A6, DKK1, EPHA2, EPHA3, ETS1, HA01, HDAC2, IL22RA2, IQGAP3, MAPK11, MGAT4B, MYL2, MYL5, NRXN1, OR11H6, OR51Q1, PDCD1, PIK3C2B, PIP4K2B, PTCH2, PTPRZ1, RHOA, SETD8, SV2B, TNFSF4, TP53I3, WWP1, YES1
Negative_5320	ATIC, CTF1, DKK4, FGF23, OR5AU1, OR5B3, PIGX, PIP5K1B, PKMYT1
Negative_5321	CBL, MVD, NLK, ALDH9A1, BCL10, CACNG3, CNTN2, CYP17A1, DDX41, FABP1, IL12RB2, ITGA11, MYH2, MYL2, NCR3, NEGR1, OR2H1, OR4C6, OR52H1, OR52R1, OR9G1, OXSM, PRKAR1B, PTGES2, TNXB, VDAC3, WNT3A, CSGALNACT2, TNFRSF10A
Negative_5322	CCL21, OR2T11, OR51A4, OR6C2
Negative_5323	GK2, KHK, MET, SDS, TK2, APAF1, CAV2, CD79A, CHPF, CLDN16, CNGA3, CREB3L2, CXCL1, DARS, DGKA, DOT1L, DTYMK, ENPP1, F11R, FGF11, FUT9, GZMB, HTR5A, ICAM3, IMPDH1, INPP1, KCNB1, LTB4R2, MKNK2, NEFL, NEU2, NLGN3, OR1J4, OR2L2, OR4S2, OR52A5, OR5D18, OXSM, P2RX3, PARVA, PDIA4, PIGH, PIGK, PLCE1, SMURF2, ST3GAL2, TAS2R40, WHSC1

Negative_5324	CSK, F5, HK2, PTS, ARD1A, ARHGEF6, ATG7, CACNA1D, CASP7, COQ5, EIF4E, FLT3LG, G6PD, HEXB, IL1B, LIPF, LYPLA2, MAP2K4, NAGA, NLGN2, NOX3, OR4C11, OR4D2, OR4K2, OR52B4, OR7G1, PDE8B, PLIN, POLR2L, PRDX6, RALGDS, RPS6KA2, SMAD5, STX4, SULT1A1, TRAF5, TSC2, UPP1, VAMP3, WNT2, ATP6V1G1, CACNA2D1, TNFRSF11A, TNFRSF13B
Negative_5325	GBA, ALG12, AOX1, ARNTL, BCL10, CAMK2D, CD44, CD99, COL5A2, CREB3, CSH1, CSNK1D, ENPP7, FZD1, GDF6, HMGCS2, HSD17B2, IL21, INPP5B, MAP2K5, MYLK2, NRG2, OR1Q1, OR5V1, OR6M1, OR8B4, ORC1L, PAX8, PFKL, PGAP1, PIGF, PLOD1, PRIM2, PTPRM, RASSF1, SEMA4F, STAT2, SUV39H1, AASDHPPT, KIR2DL5A
Negative_5326	ACVR2B, CLTC, ESPL1, FRAP1, OR13J1, OR1A1, RASSF1, SETD7, TNFRSF8
Negative_5327	LSS, OTC, RDX, SRC, ALG12, C3AR1, CDC25A, CDH2, CEBPA, CNTF, CSNK2A2, CTNNA2, FSHR, GSTM4, GSTO2, IL24, LAMB1, LRP5, LRP6, MYH13, NFAT5, NLGN1, OR1I1, OR2H1, OR4C16, OR4K1, OR6C3, PLXNB3, PRKAG2, PRSS1, PYGL, SELE, SEMA3D, SESN2, SETD1A, SGPP2, SPP1, TRDMT1, HLA-DRB3, HSP90AB1
Negative_5328	ADK, ABAT, CHRNA7, DDOST, GFPT1, ITGAM, OR2L2, OR4S1, P2RX6, PDHA2, PDX1, PFKFB1, PMM2, SDC2, ST8SIA5, TKTL1, TP73, VASP, ATP6V1G1
Negative_5329	GSR, TNN, ACTC1, AKR1C1, BMPR1A, CALML5, MCM5, PLAUR, RPS6KB2, TJP2
Negative_5330	IHH, LIF, ADCY10, ARG2, CHRM5, CLDN6, DGUOK, GCLC, GLDC, GLI2, GNPAT1, INPPL1, MAP3K1, OR51D1, P4HA1, PSEN2, TSHR, XYLB, TNFRSF13B
Negative_5331	IDS, ACTG2, CYCS, GZMA, HGSNAT, HSD17B7, OR10J3, PTGS1, UROC1
Negative_5332	NGF, AKR1C3, ARG1, AXIN1, BDKRB2, BIRC3, CCND3, CHRNA7, CTSG, FUT5, GNA12, HSD11B1, HSD17B8, IL8RB, ITGB1, LRDD, MGAT3, OR4A16, OR5B3, OR5D14, PAFAH2, PARVB, PDE4D, PLXNC1, POMC, SELP, SMAD9, UGCG, UPB1, SUV420H1
Negative_5333	C1S, CTH, GH1, RDX, ACSM3, AKT2, AKT3, ARD1A, BDKRB2, CD247, CDK4, CDKN1C, CHRM1, COL2A1, CYBA, CYP1A1, CYP2C9, EPHB4, F2RL2, GPD1, HARS, HSPA2, KIR2DS5, MAP3K14, MYLK, NAGA, NEFH, OR10A4, OR1N1, OXCT2, PI4KA, PLA2G2E, POLE4, PPP5C, RELA, SGPP2, SMPD3, SUCLG2, SUV39H1, TPM3, UGT2B10, MAP3K7IP1, MAPK8IP3
Negative_5334	ADH6, AXIN1, CCNE1, ENPP2, GJD2, ITPK1, MFNG, MPST, MYH2, OR5K1, PDXP, PEMT, RUNX1T1, SUOX, TGFB2
Negative_5335	ACTG1, ACVR2B, BACE1, CANT1, CCR5, EXT2, GALE, IL6ST, ITGA1, NTF4, OR4F6, OR51B2, OR51F1, OR52A5, PGAM1, PIGS, PIGV, PLCE1, PRKCI, SMC1B, TSHB, UBA7, WNT2, WNT8A
Negative_5336	DBT, F11, FN1, GNS, LPO, TKT, B4GALT1, CASK, CDH3, CHIT1, CLTC, CNTNAP2, EPHA7, FPGT, GABARAP, GCH1, HSD3B1, KLRC4, LILRB3, LTB4R2, NFYC, NOX1, OR13C5, OR51E2, OR5AS1, OR5D14, PANK3, PIGL, PON3, PPAP2B, PYCR1, RAPGEF3, RDH11, RDH8, SC5DL, TUBB2B, VAV1, WBSCR22, YWHAE
Negative_5337	CYP11A1, OR4S1, PLCG1
Negative_5338	DCC, F7, ACVR2B, ARHGEF6, ARPC4, ATP2A2, CBLC, CCL22, CDC6, CFL2, CREB3L1, CXCL11, GAS1, HCLS1, HTR2A, ITGAX, ITGB3, KLRD1, MAD2L1, MAPK8, MYH15, NAT1, NNMT, OR4N5, OR8K1, PGAM2, PPM1D, PRODH2, PRPS1, PTPRC, RASSF5, TSHB, ULBP1, XCL1
Negative_5339	BAX, CKB, ID2, SYK, AKR1A1, ANAPC7, APAF1, CALML6, CCR7, CHPF, DDX23, DGUOK, ETNK2, FGF5, GMPA, GRIA2, HADHB, HMGCR, IARS2, ITGA7, MTHFD1, OR2G3, OR2T2, OR52B4, OR5F1, ORC1L, PAK2, PCYT1A, PDE6D, POLE, POLR2E, POLR2H, PRKACB, PRKCZ, SH2D2A, SNAI2, SRD5A2, TJP2, TUBB2C, UGT1A10, YKT6, PHOSPHO1, TNFRSF10B
Negative_5340	EHMT2, IKBKG, STX8, ULBP1



Negative_5341	ILK, LCT, RPE, ACP6, ADH5, ADRA1B, ADSL, ALDH9A1, CACNA1C, CACNB1, CA SP3, CHIT1, CMPK1, CTSB, CXCL6, DOT1L, DPM1, EP300, EPHA2, GRIA3, GST P1, GUCA1B, HARS, IL17A, IL3RA, LTC4S, MALT1, MGST2, MRAS, NTF3, ODC1 , OR52K2, PAK3, PDE1B, PLCG2, POLD2, PPP1R3B, PRKCE, PTGER1, RPSA, SA RS2, SEMA3G, TAS2R1, TGFB2, UMPS, HLA-DRB4, HSP90AB1, PAFAH1B2
Negative_5342	CDKN2C, CSNK1E, DCTN1, GSTA3, IFNA6, LEFTY2, ONECUT1, OR9G4, PPOX, P RKACG, HLA-DRB3
Negative_5343	AK5, GCK, GSN, PVR, ACADVL, ADIPOQ, CCR2, CNGA3, CYP4F3, DDOST, EPB41 , FGFR3, GNG12, HGSNAT, HSPA8, HTR2A, LRP5, LTBP1, MAP3K13, MAP4K1, M AT1A, MDM4, OR10J3, OR2M4, OR7G1, PCYT2, PDPK1, PIM1, PLAU, STX1A, TA S2R10, UGT2B28, YWHAB, TNFRSF10B
Negative_5344	BMP8B, EPHB6, LCAT, OR10J3, OR4E2, PLXNA3, POLE3, PPM1A, PSENEN, SLC 33A1, SPRED1, THTPA, PNLIPRP2
Negative_5345	IVD, TPO, AASS, ACAA1, BRAF, DFFA, DHCR24, EREG, FGF23, FLAD1, FZD9, M CM5, ORC1L, P2RX4, PIK3C2G, PTSS2, PTPN6, PYCR2, THBS3, TUBB4Q, ZFY VE9, HLA-DPA1, ST6GALNAC1
Negative_5346	BTC, FGG, ID1, OAT, SP1, ACSM3, AKR1C3, ALDH1A3, BMP7, CFTR, CNDP1, CR B3, EHHADH, GJA1, GRHR, GUCY1A2, HHEX, HSD3B7, INMT, KIR2DL2, KITLG , MDH1, MKNK1, MYH3, NCK1, OR2S2, OR4K13, OR51E2, OR6Y1, OXTR, PGAM4, PIGL, PTPN11, TUBA3C
Negative_5347	C6, AHCYL2, ALDH6A1, ALPI, ATP6V1D, CAV3, CCL5, CCNG1, CD40LG, CD79B , CDKN2D, CPT1B, CYFIP2, CYP21A2, DHCR24, GALT, HAGH, HAO2, HDAC2, HS P90B1, IL20RA, IPPK, IQGAP3, KLRC4, MMP9, OR10J1, OR2F2, OR51B2, OR6 C6, PER2, PPOX, PTPN7, RASGRP2, ROCK1, SELL, XYLT2, CACNA2D3
Negative_5348	AGL, LPO, RET, TNN, ACOX3, ACSL5, ALDH1A3, CKMT2, CMAS, CMPK2, COL4A4 , CSNK1E, CYP2J2, DUSP6, E2F4, EPB41L1, FZD10, GADD45A, GMPPA, HAO2, IL11, LTBP1, NLGN2, OR10AD1, OR4S1, OR5K1, PGAM4, PKLR, POLR2E, PRKY , RASA1, ROBO3, STX8, SULT1A4, TNFSF14, UBE2K, ATP6V1G3, TNFRSF10A, TNFRSF10D
Negative_5349	AK3, CKB, LHB, CHST11, E2F1, EFNA3, FCER1G, HSD3B2, IL23R, INPP5A, LR AT, NR5A2, OR6C3, PPP2R2A, SFRP1, SIGLEC1, SOCS3, VAV1
Negative_5350	ATP5G3, CPT2, CXCL2, ENAH, VARS
Negative_5351	CBL, TH, ABI2, ACLY, ALDH9A1, ALPI, ARD1A, ASS1, ATP50, CARD11, CCND1 , CDH1, CHAT, CLDN3, CLTA, CREB3L3, CYFIP1, CYP17A1, CYP3A4, DIAPH1, HADH, IL1B, ITGB8, LAMC1, NKX3-1, OR10G2, OR1J2, OR2M3, OR4K14, OR4K2, OR52E2, OR5C1, OR6C2, OR6C4, PTPRM, RBPJ, RELB, RFXAP, STAT4, STEAP3, SUV39H2, TNFSF11, ATP6V1C2
Negative_5352	OTC, VCL, ALG10B, BCL10, CCL2, CCR2, CDH2, CREB3L3, CSNK1E, DUSP5, FG F22, FLT3, HMBS, HYAL1, IFNA16, IFNAR1, LTA4H, MAD2L2, MGAT5B, OR2T3 4, PFN3, PPP1R3C, PSME3, PSPH, SARDH, SH2D1B, TCF7L2, UBE2L3, UMPS, A TP6V1B1
Negative_5353	CS, ME2, ADH7, AMHR2, ARRB2, B3GAT1, BCAT1, CLDN22, EDNRB, EGLN1, EIF 4E, FCER1G, FLOT2, GZMA, IL12RB2, KARS, LHCGR, MAP2K3, OR52E4, OR5V1 , P2RX3, PARD3, PDGFB, PFAS, PNLIP, POLE3, POLR1C, PPP2CB, PRPH2, SHC 1, SPHK1, TCF7L1, UAP1
Negative_5354	EBP, TPO, AKR1C4, AMY2A, BBC3, BCL2, CDH2, CLDN3, CLDN8, CRY2, DAD1, D HRS4, EFN1, GNG12, HPSE2, HRH1, HSD17B3, IFNA5, IL12A, INADL, ITGA2 B, KLRC2, MAP2K1, NNMT, NOTCH2, OR2W1, OR7A5, PDPK1, PER2, PIK3R4, PP P2R2D, PSME3, ROBO3, SPRED1, SQLE, STAT5A, SULT1A1, HSD17B12, PLA2G 12A, ST6GALNAC6
Negative_5355	FH, STS, ACVR1, ADCY9, ANGPTL4, CCL20, CCND2, CXCL1, CXCL9, DTX3L, FD FT1, FGFR2, GNAI2, GRPR, HTR2B, INHBE, JAM2, MAPK3, NCK2, NCKAP1L, NR G2, OR4C11, OR4F17, PDE4A, PFKFB2, PIK3R2, PIK3R3, PSEN1, RRM2, SARS , SRGAP2, SSH3, TBL1X, TBL1XR1, TGFB3, TP73, TUBB4Q, UCKL1, ZIC2

Negative_5356	AMT, HAL, ABL2, FZD9, PIK3CG, PRPS2
Negative_5357	RPE, ASPA, ATP5E, CBR3, PTGFR
Negative_5358	ID4, SRC, ACSM5, CCL23, CDS1, DERA, DGKE, ENTPD2, EVI1, FARSA, FGF18, FUT2, IMPDH2, ISYNA1, ITGB5, MAP2K7, NCKAP1, OR2A4, OR2Z1, OR4D1, PD E3A, PGK1, POLR2F, PRKAB1, PRKAG1, SDC1, TJP1, TUBA3C, WNT7A, XYLT1, CSGALNACT2, SERPING1
Negative_5359	ADO, HK1, ME3, OAT, ACVR1C, AFMID, APOA2, ARNTL, ARPC3, CXCL2, DIAPH2, E2F1, ENTPD3, ENTPD6, EPHA6, FGFR2, GALNT5, GJA1, GRIN1, HTR5A, IL1 3RA1, IL4R, MAML1, MAPK11, MPZL1, OR10A6, OR10C1, OR2AE1, OR52H1, OR 5M8, PGM1, PLK1, PLXNB3, POLE4, PSME1, PTPMT1, RETSAT, SDC1, SDC2, ST X10, UGT2B28, UROD
Negative_5360	ID4, ARG1, CYP27A1, EPAS1, GNPAT, IFNA5, IL2RG, OR10T2, OR6K3, PIGH, PLA2G2A, PON2, STAM2, UPB1, ATP6VOD1
Negative_5361	FH, KMO, MAX, ATP5G2, CDC26, CDH1, FUT2, HSPA2, IRAK2, ITPKB, NCF2, NF YC, OR2C3, OR4K17, OXTR, POLE, PPP2CB, PPP3CA, PRKCZ, PTAFR, SPRY3, T RIP10
Negative_5362	C8A, CBS, FOS, A4GALT, ACADSB, ATP5G3, C1QB, CACNG6, CDH4, CTBS, DRD2, EPHA7, ETNK2, FBP2, FGF20, FLT1, FUT8, GALNT12, GNAI1, GNMT, GYS2, H LA- DRA, IARS2, IDH1, IL5RA, IRF3, ITGB8, NCOR2, OR52K1, P4HA2, PAX4, PDG FB, PDGFRA, PGAM4, PIP4K2B, PLD1, POLE4, POLR1C, PROS1, PYGL, RAF1, R RM2B, SQLE, THY1, TPI1, UNC5D, TNFRSF1B
Negative_5363	DAPK2, LEPR, OR4C12
Negative_5364	LAT, BCKDHA, CACNA1H, CCL28, GART, INPP4A, OSMR, WNT6
Negative_5365	AHCYL1, ALPPL2, BCAR1, CTSL1, CXCL12, EPHB2, FCER1G, HTR2B, IL21, MG AT3, OR2L2, OR2L3, OR4E2, PDXK, PLCD4, RCHY1, RELA, STAM, SUCLG1, TPM T, MAPK8IP2, SERPING1
Negative_5366	DBH, ID4, BUB1B, CCL28, CD74, CHAD, CLDN3, CREB3L4, E2F4, EVI1, FGF9, FPGT, HPRT1, IL1R1, INMT, MAN1A1, NFE2L2, OR10G4, OR2A5, OR5AU1, PDE 11A, PLOD1, POLD1, PPP2CA, PSEN2, PTGES, SELL, SH3BP2, MAPKAPK5
Negative_5367	LEP, OSM, ACSS2, ADIPOQ, AKR1C1, ALPL, ATP5G3, CDS2, CES7, EFNA3, HTR 6, IL24, KLK3, MAN1B1, OR14I1, OR1L8, OR6B3, OR6M1, PAPSS2, PNPT1, PO LR3G, RASGRP4, SUCLG2, TAS2R1, TSLP, VASP, WARS2, WASL, WIF1, XYLT2, CSNK1A1L, TNFRSF11A
Negative_5368	BCR, SMS, ADCY7, C3orf10, CDC2, CD01, CHKA, CLCF1, CYSLTR2, DDIT3, ED N1, FGF17, HAGH, HRH2, LYZL1, MAD2L1, MGAT4A, NCKAP1, OR52H1, PFN4, P IP4K2A, RPS6KB1, TNFSF9, WNT3A, WNT5B, WNT7B, MAPKAPK2
Negative_5369	BTK, OGT, SDS, ACSS2, ADCY9, ALDH5A1, ARRB1, BMP4, C1QA, COL4A4, EVI1, HIF1A, IFNA17, IRAK3, LDHA, LEPR, MGAT4A, MGLL, NFE2L2, NFKBIB, NFY A, OR1J1, OR2G2, OR7A5, PER1, PLCD4, PPP2R5B, QPRT, STAT4, STEAP3, SY NJ2, TALDO1, TRMT11, WNT10B, WNT2
Negative_5370	AMT, EPO, NPL, TNF, ACLY, ADCY10, ATP5D, CADM3, CLCA4, CSNK1G3, CXCL9, DDX54, DIAPH3, DOCK1, FBP1, GCNT4, GUCY2D, HIF1A, HSD17B1, ITPKA, I TPKB, MAOB, MOV10L1, NT5C1B, NTRK1, OR2L13, OR51V1, OR5B21, OR5H2, P LA2G10, RAPGEF3, RASGRP4, RFXANK, RPS6KA6, SLC25A5, TUBB1, UAP1, UL BP3, WNT2, PAFAH1B1, TNFRSF1B
Negative_5371	BAD, AACS, ADCY8, CACNB2, CDH4, CYP2A13, FZD5, HSPA2, ITGB7, MTFMT, N RG1, PDE9A, RELB, VTI1B
Negative_5372	CR1, COQ3, DDX4, IL22RA1, PRNP, TOMM40L
Negative_5373	HAL, SPN, CDC16, CDS1, ERO1L, ETS1, HPRT1, MTHFD1, OR5M3, PLTP, PPOX, SHMT1, TBL1X, UBA1, CSGALNACT1, TNFRSF1A
Negative_5374	AGK, IL9, ABL1, AKR1B1, CD58, CLDN15, COL11A1, ELK1, FABP3, ITGAM, KL RK1, MTHFR, MYH8, NME7, OR1J1, OR1Q1, OR51L1, SC5DL, SDC4, SEMA3B, ST AT6, TBK1

Negative_5375	DLD, AGMAT, AGTR1, ALAS2, ALDH3A2, AMDHD1, APOA1, CCL25, DEGS1, DHRS9, FARP2, GCNT2, IFNA4, MDH2, NRG2, NRG3, OLAH, RASGRF2, STAT2, TBL1XR1, TUBA1B, ATP6VOA4
Negative_5376	CAMK2B, CAV3, CISH, GARS, NTN1, SEMA3C, SPTLC1, TOMM40
Negative_5377	F11, LPO, AADAT, ACTA2, B4GALT5, BCAR1, CANT1, CDKN2A, CHD8, COL5A2, CRY1, CYP27A1, EVI1, FGF18, GDF6, GNA15, HPSE2, IBSP, IDUA, IL28RA, I NSRR, ITGA10, MAD1L1, NKD2, NME7, NR4A1, NT5C1B, OCRL, OR8B4, PLAT, P OLR2I, PRKACG, SEMA3E, SMAD3, SSH3, TALD01, TAS2R40, TUBA1C, UGT8, U LBP3, WBSCR17, TNFRSF18
Negative_5378	FM04, FZD5, PIAS3
Negative_5379	AK5, GK2, SPN, ACOT12, ALPL, ALPP, CD226, CD34, CDH2, COQ3, COX15, GAL NT13, GANAB, HAAO, KLRC3, LEFTY1, MAP3K6, MECR, NCR2, OR2L13, PDE4C, POLR2K, PPCS, PPP2R5C, SV2A, VAV3, TNFRSF6B
Negative_5380	CFD, DNMT1, MCCC1, PIK3C3, TNFRSF18
Negative_5381	JUP, NF1, PAH, ACSL5, AHCYL1, CACNA1H, CASP8, CNTFR, DAD1, DGKG, GCNT 2, GGT6, ICAM3, ITGB5, OR5P3, PFN3, PHPT1, PLAT, PSME2
Negative_5382	C7, CAT, IL5, BAIAP2, CALML3, CD274, CHAD, CPS1, DHFR, DMGDH, DTX3L, G ALNT1, HES1, IFNA16, IMPA2, ITGA2B, LTB4R2, OPLAH, OR8K5, POLR2L, PR KAB2, SFRP2, TAP2, TRADD, TUBA4A, WARS, WNT6, SERPINF2
Negative_5383	BAX, ASIP, CCNA1, CCNE1, COL4A2, CYBB, GPX5, MCM4, NEU3, QPRT, RAPGEF 3, RCHY1, SETD8
Negative_5384	BCR, GNS, ACAD9, ARD1A, ARG2, ARPC1A, ATP5F1, B3GALT4, B4GALT2, CDH1 5, COL5A3, GALE, GALNTL1, GTSE1, HCCS, HSD17B8, HSPB1, IGFBP3, IL6R, LIPF, MAP2K7, MASP2, NEU4, NMNAT1, OR6C74, OR7A17, OR8G1, POLR1C, PO LR2E, PRNP, RARS2, SEMA4B, SQLE, ST8SIA5, TAS2R3, TAS2R60, TIAM2, TY RP1, C1GALT1C1
Negative_5385	ADCY3, CDH3, CHEK1, GATM, GMPR2, IL1RAP, OR8J1, PGAM1, RENBP
Negative_5386	C4B, GNS, PTS, ACYP1, ASAH1, ETNK1, GSTA2, OR10T2, OR2T6, OR4C16, OR5 C1, OR6B3, PDCD1, SPTLC2, ULK1, UROC1
Negative_5387	TKT, ACTG2, ATP5G3, BDH2, GAD1, HEMK1, HYAL1, MAP4K4, MNX1, P2RX1, MA PK8IP3
Negative_5388	SMO, ABP1, B4GALT1, CSNK2B, HBEGF, LIAS, NOS3, OR6K3, PDE1A, PPP2R1B , PRKCE, RAPGEF1, STX7, TAS2R3, UCP1, HSD17B12
Negative_5389	ACPP, ADCY10, ALDH6A1, ANAPC11, CACNB1, CCNA1, CD274, CD44, CDC25A, CDS2, CLDN19, CTNNA2, CYP2E1, EFNB1, FGF9, G6PC2, GOSR2, GSTA3, IFNA 7, ITGA2, KIR2DL4, LAMB1, LARS2, MAP2K6, MAP3K2, MAP3K8, MDM2, MYH10 , MYH13, NFYC, NPAS2, OR10AD1, OR2M3, OR8B12, PCYT1A, PLCG1, PLK1, PR KCH, RFX5, SNAI2
Negative_5390	TH, CES1, CHRM3, CMPK1, ECSIT, FGF22, FUT4, GRAP2, PDE6H, ST3GAL1
Negative_5391	F2R, IL7, BLNK, CCL22, E2F3, GALNTL1, KIR2DS4, MAPK11, MTHFS, OR13J1 , OR4A15, PAICS, RASGRP3, RPS6KA4, SPRED2, STAT2, TGFB3, TNFSF10, TN FRSF10B
Negative_5392	C1S, GNS, ADAM17, AGPAT4, ALCAM, ARG2, BBC3, CD86, DGAT1, ENO3, FTCD, GALNT2, ITGA7, MTAP, MYL2, OR51M1, PRKAG2, PRKG2, RBPJ, SETDB2, TLN2 , UGP2, XIAP, YES1, TNFRSF18
Negative_5393	DDC, LTB, OGT, ABLIM1, ATP5E, CCL15, CDH4, CDS2, CLTB, CNDP1, CSNK1E, DAAM2, EVI1, FARSA, FLT4, FUT3, GCNT1, HRAS, HRH2, IL23R, KIR2DS5, KL RD1, OR5D16, ORC5L, PRKAG1, PSME3, PTCH1, SMAD1, SPRY4, SUV39H1
Negative_5394	CD4, MPZ, NF1, ABCC8, AKT3, ASIP, ATG12, BACE2, COL5A2, COQ5, DDB2, DD X47, DLST, EPHA2, FGFR3, GCNT2, GGCX, GLUD2, GNRHR, GUK1, GUSB, IFNA4 , IFNA7, IL12RB1, IRAK2, MAFA, MGAT1, OR13A1, OR4C46, OR52I2, OR5AK2 , OR6C75, PDGFC, POLE2, PTDSS2, RARS2, SLC2A2, ULBP1, B4GALNT1
Negative_5395	ME2, ACSS3, ALOX15, ATP5G3, CBLC, LTB4R2, MAPK10, NAE1, OR2A5, PDE6D , STX1A, UROS

Negative_5396	CKM, AMY2B, CDS2
Negative_5397	TAT, ACPP, BUB1B, CDH3, CSNK1G3, ELK1, ENTPD8, FGF22, GBA3, GSTA5, MYLK, NCF2, NEU2, OR10G4, OR10K2, OR1L8, OR4K5, PCYT2, PTK2, SDC1, SDC3, SEMA4C, UXS1, VEGFB
Negative_5398	OTC, ASPA, ATP2A2, ATP5F1, B4GALT2, COQ3, EDN1, FGF10, IL23A, ITGA8, LEFTY1, MCAT, NFASC, OR11H1, OR2B11, OR52N1, OR5M8, OR7A10, PAFAH2, PDE3A, PDX1, SEMA3B, SHC2, SLIT1, SMAD9, TPH1, UGDH, TNFRSF10B
Negative_5399	ALDOC, CCL1, CDK5, CXCR6, DVL2, F2RL1, FGFR3, GBE1, MAP4K2, OXCT2, PECT, RPE65, WNT16, ATP6V1B2, TNFRSF1A
Negative_5400	DBI, AKR1C4, BUB1, COL11A1, EDNRA, ETNK2, GALNT6, IL23R, LIPG, NFAT5, NRG3, OR4N4, PPP1CC, PRKCI, SLC12A2
Negative_5401	GGH, ADCY2, ALOX12B, ATP6V1D, BUB3, CCNE1, CCNH, CHKB, CYP2S1, ENTPD6, GALM, GAMT, GLYCTK, GYS2, IRS1, ITGAM, MAFA, MBL2, NAGLU, OR1A2, OR4K17, OR52N1, ORC1L, P4HA3, POLR1A, PVRL3, RAP1B, RBX1, TGFB3, HLA-DRB5
Negative_5402	AMT, EBP, TFG, ACPP, ACVR1C, AMPD1, BDH2, BLNK, CAMK2B, CCL19, CD86, CYP2C9, FADS2, FBP1, FBP2, GCAT, GCNT3, GNAO1, GRIN2D, GSTA5, GSTM1, HLA-C, IL6ST, KIR2DS5, MAP3K8, MGAT5B, ONECUT1, OR14C36, OR52H1, OR9K2, PDE11A, PHKA1, PTCH1, RHOD, ST6GAL1, STX1B, SULT1A4, THTPA, TRADD, TSC2, UGT2B28, WNT9A, ARHGEF12, PAFAH1B3
Negative_5403	ACVR1B, DGKD, EFN1, FGF21, OR2K2, TGFB1
Negative_5404	AMH, GLS, OTC, ACACB, ACSM5, ARSA, ATP50, CACNA1H, CD28, GSTA2, IL1RAP, INPP1, LRAT, OR10A4, PAK4, PDE8B, THY1, ST6GALNAC6
Negative_5405	GNS, TXK, ALDH3B1, BCL10, CACNA1E, COL6A1, COQ3, FUT6, GNG12, ITGAX, MARS, MDM4, MYL5, NGEF, OR4F15, OR8I2, PDE8A, PNPLA4, PYGB, RDH11, RPSA, VAMP4
Negative_5406	CTH, ACADS, ALOX12, AMDHD1, CYP2A6, CYP2C18, DDIT4, DDX56, ECSIT, HRAS, IFNA14, IGF1, LRDD, MTMR1, MTMR2, NUMB, OR10Q1, OR2D2, OR51I1, OR6C2, OR6F1, OR9Q2, PARVG, PDE4C, PRIM2, PRODH, PTEN, RALBP1, RXRG, SD C2, SETD2
Negative_5407	ATM, C5, F12, GNS, IL2, ACOT12, AHCY, ATP5J, BMP6, CLTB, CYP3A4, EPHA2, FOSL1, FZD10, GART, GCDH, LDHC, LFNG, NPR2, NUMB, OR4S2, OR51B5, OR51V1, OR5AK2, OR5I1, PAK2, PFKL, PHPT1, PPP3CC, SMAD9, TNFRSF9, TUBB2A, TUBB6, ATP6V1G2, CACNA2D2, TNFRSF13C
Negative_5408	LHB, C4BPA, CFLAR, CHRM5, CHST11, CISH, FECH, FRAT1, GPD2, ITGAD, LRP5, MGST3, OR5K1, OR8J3, PDE3B, PIK3C2G, POLR3K, PPP2R5E, TNFRSF4, TUBB2B, ULK2
Negative_5409	HSD17B8, IL17RA, MAP3K2, OR56A3, OR6C75, PKMYT1, SLC25A5, UAP1
Negative_5410	AMT, ADCY9, ALG10B, B3GALT2, B4GALT4, CD36, CD8A, CHRNA7, CLDN6, COQ6, CSF3R, DARS, DDX52, DFFA, DTYMK, FZD3, GALNT2, HTR2C, IL20RA, IL28B, IRAK1, ISYNA1, LILRB3, LRP5, MLLT4, MYL2, OR10G4, OR1A1, OR1G1, OR2A2, OR5M9, OR6N1, OR8J1, POLR2A, PRPS1, PTPRR, RAC3, SARDH, SETD1A, ST6GAL1, SUFU, TAS2R49, TSC2, VARS, XIAP, XYLT2, HLA-DPB1
Negative_5411	KHK, BDKRB1, CAMK4, MGST1, PIK3C3, PLA2G3, PPP2R1A, SNAI2
Negative_5412	HDC, CACNG8, EXTL1, GLO1, HYAL1, LIPC, MAFA, OR4D6, OR4F4, PCK2, PDE6H, TGFB1, WNT16, YARS, PPP1R12A
Negative_5413	ADIPOR1, AK3L1, BTRC, EPB41L3, GSTA4, HSPA8, PPP3R1, RAPGEF4
Negative_5414	F7, ANAPC4, CHST12, HCLS1, RPS6KA5, SHMT1
Negative_5415	EZR, PDC, RB1, TNN, TPO, ACSS2, APAF1, ARSB, CDKN2C, CRKL, DDX47, ECSIT, ETNK1, GZMA, HTRA2, IL17RA, IL1R2, IQGAP1, LIPC, MYD88, NTRK1, OR1E2, OR1S1, OR8A1, ORC1L, PTTG1, RPN2, SARS, SH2D2A, SIPA1, SNAP25, TAS2R16, TLR5, VAMP3
Negative_5416	GNAS, IKKB, LRAT, MINPP1, PDE11A, PRPH2, RPS6KA5, TNFRSF11A

Negative_5417	ALDH3B2, BBC3, CLDN20, CXCL10, DLST, GFPT2, GGCX, GGT5, GNPAT, HTR4, IL18R1, MAP2K6, OR13D1, TP53
Negative_5418	AHCY, APBB1, CCL8, FBP1, GAS1, GBE1, OR10K2, OR6B2, OR6N1, POLE4, PTGIS
Negative_5419	AADAC, BUB1B, CUL1, DCTN1, GAD2, GNPDA2, IL13, OR5C1, POLR3A, SENP2, SETD2
Negative_5420	ALG10, CCND2, CSF2, DTX3L, IFNK, ITGA2B, LIPG, MAPK8, MYH14, OR7G3, OR8G1, PTPN5, ROCK1, TPK1, CSNK1A1L
Negative_5421	CCKBR, CSNK1D, ENPP3, GNAQ, IARS2, LYPLA2, NANS, OR4F15, OR4M1, OR5T2, OR6F1, OR9Q1, P4HA3, PPA1, PTPN5, SMAD1, TOMM40, UCK1
Negative_5422	EZR, GH2, TAT, ADRB3, ADSS, AGPAT6, ALDH9A1, ARHGEF6, ATG3, ATP6VOB, CLDN3, COMP, CTNNA1, CXCL16, DDB2, DNMT3L, E2F2, ENO1, F11R, FARSA, GNAI3, GSTZ1, ISYNA1, ITPKA, JAK3, KAT2B, MITF, NEU1, NFATC4, P2RX6, P OLR2L, PPBP, PPP2CB, PPP5C, PTAFR, PTCRA, STX18, SV2A, TAS2R3, TRAF3, UBE2K, ATP6V1B1, HLA-DRB5
Negative_5423	ADA, MSN, B4GALT3, CCR1, CD48, CLDN4, DDX47, GALC, HLA-DRA, NRCAM, OR10P1, OR52I2, PDPK1, PLA2G2A, PLXNB1, PON2, PPOX, RAPGEF2, RPE65, SAT2, SC5DL, SEMA3B, PAFAH1B3, TNFRSF18, TNFRSF1A
Negative_5424	ADH1B, LTBR, OR13H1, OR2V2
Negative_5425	CACNA1B, ECSIT, LIPE, OR1L4, PRKAB1, HLA-DRB4
Negative_5426	AR, CD6, HAL, TNR, ACHE, ATP2A3, ATP6V1H, B3GNT2, C1QB, CCL28, CDKN1C, CSNK2B, CYBB, CYP1B1, DGUOK, DIAPH1, DLL4, EDNRB, FABP1, GLO1, IARS2, LHCGR, MAPK9, MEF2C, OR2T11, OR4K2, OR5T2, ORC6L, PKLR, PLA1A, PTGIS, PVRL2, RHOD, RPS6KA3, UCK1, UPB1, VDAC2, VEGFB, VKORC1
Negative_5427	FAH, NPL, AOC2, CDS2, CIITA, CYBA, CYP4A11, H6PD, JAK2, LLGL1, PPP2R5D, TAS2R4, ATP6V1E2
Negative_5428	HAL, MAG, MVK, ACY3, AOC3, ARHGEF4, BAIAP2, CCL7, CDC25A, CLDN16, CREB1, CX3CL1, DOT1L, DUSP9, EVI1, FGF20, FRAT1, FUT3, GALNT8, GNRH1, HCLS1, HPSE2, INPPL1, IRF3, ITGB8, MAP2K1, MGAT5B, OR10G8, OR5A1, PDE1C, PIK3CA, PPCS, PPP3CA, PPP3R2, PRKAB2, RAC3, RASGRP1, RBPJ, SFRP2, SNAP23, SORD, ST6GALNAC3
Negative_5429	LEP, HADHA, PRKAA2
Negative_5430	AR, ACTN1, AGXT, ALG3, ATP5D, CD74, CDH5, DNMT1, FUT6, HMOX1, NME7, NR4A1, PIGM, PRLR, PTGES2, PTPN5, SESN1, SLC2A1, YWHAE
Negative_5431	JUP, ACTG1, ADH7, AKR1C2, ALDOA, ALPL, ARG2, ARRB2, BUB3, CACNA1E, CALML6, CAMKK2, CLDN3, CYP27A1, DDX41, FADS2, FMO1, FUT3, GDE1, HNF4G, KIR2DL2, LIAS, LPAR1, MAGI3, MAP2K3, MMP2, MS4A2, MYH14, NCR1, OR13C5, OR6K3, OR7A5, PIK3C2B, PMM2, PNPO, PPP2CB, PPP2R5C, PRPH2, PRSS1, RASGRF2, SLC27A5, ATP6V1G1, TNFRSF1B
Negative_5432	AGPAT6, CALML5, CXCL3, EIF4B, GAB1, GADD45B, GIT1, GLUL, GNAI3, GSTO2, HYAL1, IQGAP3, ITGAV, ITGB7, LAMB3, NLGN3, OR10H5, PLOD1, PPP1R3D, PRKAG3, PRNP, RERE, SELE, TNFSF10
Negative_5433	IL6, CANT1, COMP, CYP3A5, DDX19A, EPHA2, GSTO2, IL2ORB, MGAT5B, NCK1, OR5I1, PDCD1, PDHA2, PIK3C3, PON3, PRKAR2A, PRODH, PTGDS, SKP2, SUCLA2, SULT1A4, TAS2R50, VEGFA, HLA-DPB1, SUV420H1
Negative_5434	TNN, APPL1, CCR9, CDH1, FCGR3B, GGT5, GNAS, MAP3K5, MCM3, NKX2-2, OR2V2, PHKA1, PPP2R5E, PRKAG2, SRGAP1, ST3GAL5, TSTA3, PAFAH1B2
Negative_5435	PGD, ADSSL1, BDH1, CERK, CSF1, MAFA, MASP2, NTRK2, OR2A12, PYCR2, RRS2, SLC33A1, SERPING1
Negative_5436	ADK, EDA, GHR, IL8, ABAT, ACADL, ATP6V1A, C9orf95, CD38, CDH15, CHAT, CXCL13, DCXR, DGKZ, FDPS, GMPS, HADH, HTR4, MGAT4A, MTAP, OR2A12, PLCG2, PPP3CB, PRKCQ, SUV39H1, TNFSF11, TP53I3, UGT2B7, TNFSF13B
Negative_5437	PAH, CHRM3, CSF3, DGKD, GSTM2, HHIP, IFNA21, IFNW1, LAMA4, LTB4R2, NARS2, OR7A5, PIPOX, PLAU, SUV39H2, TNFSF18

Negative_5438	GK2, ABLIM3, ACACB, ARPC1B, BCMO1, BUB3, CHSY3, CKMT2, CNTFR, CYP2C18, FLT4, FZR1, GUCY1A3, IDI2, ODC1, OR10X1, OR11H1, OR2G3, OR2T4, OR51I2, OR52N1, OR8J3, PVRL3, RIPK1, SH3BP2, STEAP3, TSTA3, SERPINC1, SERPINE1
Negative_5439	ADCY5, ALDH3B1, CYP2C18, ENPP7, GYS2, MAPK3, OR5B21, OR8J3, PRKACA, SCP2, SMPD1, TACR3, VAMP1
Negative_5440	CD79B, DTX3, GNAS, PTCH1
Negative_5441	ACTA2, ALDH9A1, ATP5J, ATP6V1A, B3GNT2, CCL16, CD19, CDIPT, CXCL1, F2RL1, HHEX, IFNA14, IL2RB, MAPK3, NGEF, PDE9A, PLCD3, RFXAP, ROBO1, UBE2L3, UGT2B17, VAMP4, TNFRSF10C
Negative_5442	ACY3, CDH4, CNTFR, FASLG, PANK1, TUBA4A
Negative_5443	GLS, PRL, AASDH, ACAD8, BACE2, CASP10, CHEK1, DAAM2, FABP1, HTR7, OR1L8, PARS2, PCCA, PCCB, PFKFB2, PPP5C, PVRL2, THBS2, TP53
Negative_5444	CAT, F2, F3, ACTN2, ALG6, AMHR2, ATP6VOC, BMP6, CCKBR, COMT, CXCR4, DDx54, DLL4, DNMT3L, EXT2, FADS2, FGF13, IFT57, KIR2DS5, KLRK1, KRAS, NTS5M, OR7A5, PAK4, PDE8B, PDXK, PPP5C, PRSS1, PYCR1, RDH8, RPS6KB2, SLC25A5, SMURF2, SOCS7, STX1A, TALDO1, TYK2, WEE1, PLA2G12A, TNFRSF1B
Negative_5445	CR2, LYN, ACACA, ADRB2, ETNK1, EXTL1, GALNT1, LDHAL6A, OR1S1, OR2L8, PFN4, RPS6KA5, ST3GAL3, TAS2R9, TRPM5, ATP6V1G2, MAPKAPK2
Negative_5446	F10, SMS, ADCY1, AKR1C4, ALDH5A1, ASRGL1, B3GNT2, B4GALT2, CACNA1A, CANT1, CCL26, CCR4, CD3E, CDKN1C, CIITA, COMP, CPOX, CYP4A22, DHCR24, DLL3, E2F1, EFNA2, ETNK2, GALM, GLI1, GUCY1A2, HHEX, HMGCR, MGAT4A, NEU2, OR10S1, OR11H1, OR13C2, OR13D1, OR2D3, OR2M4, OR2T2, OR6C3, OR9G1, PFKFB4, PFN2, RHOA, RPN2, STX16, SULT1E1, TAS2R1, HSP90AA1
Negative_5447	ACSL6, B3GALT5, C1QC, CDH3, CXCL2, IL17A, NLGN1, PIGK, PPAP2C, SLC27A4, SSH1
Negative_5448	CR1, SHH, ADH7, ADORA2B, ATP5D, BNIP1, CACNB2, CDC23, DDX55, DTYMK, FGF12, GART, GUCY2D, GZMB, HARS, HMBS, HMGCL, HNF4G, IDH3A, IL11RA, IL12RB2, INSR, IRS2, LIPT1, ONECUT1, OR10A3, OR10H5, OR2F2, OR4X2, OR52E4, OR8K5, P2RX3, POLA1, POLR1C, POLR2A, RERE, SELPLG, SMURF1, UCK2
Negative_5449	CKB, DDC, F2, PDC, ACADS, ACOT11, ADCY5, ALDOA, ANAPC2, AOC2, CCL11, CR6, DDB2, DRD5, E2F5, FBXW11, FSHR, FZD6, GP1BA, GPX5, IL23A, ITGA7, ITGB1, MAD2L2, NFATC1, NOX1, OR10H3, OR10J1, OR14A16, OR4D5, PDE7B, PLOD1, RARS2, RXRG, SEMA3D, SGMS2, STK36, SUOX, TAS2R41
Negative_5450	ADCY9, ATP5C1, BMP2, CD58, CLDN5, CNGB1, CYP3A43, DDX50, EPHA5, ERBB2, FLOT2, IDUA, NR4A1, OR10S1, OR4C11, PARS2, PFKFB4, RHOD, RPS6KA3, TBL1XR1, TOLLIP, WASF1, XYLT1, SUV420H1
Negative_5451	EBP, SRM, ADRA1D, AHCYL1, APOA2, BET1L, CD82, CDC2, CDKN2C, COMT, DRD2, F13A1, FDPS, FUT9, GALNT1, HSD11B1, IL5RA, IMPA2, INPP4B, LAMB4, MMP14, PAICS, PFKFB1, PFKFB2, PIP4K2B, POLR2J, POLR2L, POLR3D, PRPS2, RBKS, SMAD4, TLR5, ULK3, VDAC1, VDAC3, SERPIND1, TNFRSF11A, TNFRSF6B
Negative_5452	C4B, HK1, ACP6, BDNF, CXCL13, CXCR4, DDX52, DNMT3B, FGF21, GLB1, GNB1, HMOX2, INPPL1, LYZL1, MARS, MYH6, NAGS, OR4A16, OR4F6, OR52R1, PDGFA, PDGFC, PHGDH, PIP5K3, PRKCQ, PSME2, PTPRJ, TAS2R7, TXNDC12, PDCD1LG2
Negative_5453	AGPAT3, ALDOC, APLP1, BACE1, BCAT2, BDH2, CACNG5, CES7, CYP1B1, GRIN1, HPRT1, MDH2, NTRK2, OR13J1, PIGB, PRKCG, PRKG2, PTPRZ1, SARS, TOMM40L, TUBA3E, TUBAL3
Negative_5454	GP5, LPL, TK2, C3orf10, CD01, CNTN1, CYP2U1, ERBB4, FLAD1, HTR4, HTR6, MTHFR, OR1J4, OR4F17, OR52E4, OR5B3, OR5M3, PARVG, PCYT1B, PDCD1, PDE3B, PDXP, PIGK, PIK3R5, PNPO, PPP2R1A, PRKCB, PRPS1, RAD51, RRM2B, SUFU, TAS2R4, TBXA2R

Negative_5455	DBH, F5, IL4, IL8, ATG3, CASP9, CD72, CSAD, ENTPD3, FGF12, GNAS, HNF1B, HSPA1B, IARS, IL22RA2, ODC1, OR4K13, SMAD6, STK36, TKTL1, WHSC1
Negative_5456	FUK, TAT, ACTN4, ASCC3, ATP5J2, DUSP10, GNMT, NFBYB, OR8H3, PPP1CB, SE TD2, TXNDC12, ZBTB16
Negative_5457	IRF5, PCYT1B, ATP6V1B2, PRICKLE2
Negative_5458	C5, AADAC, ALG10, AMY2A, ANAPC5, ARRB2, ASAH1, BMP2, CCNG1, CDH2, CHK B, DGAT1, DHDDS, EFNA3, EHMT2, EI24, ELK4, ESPL1, GAD1, GALNT14, GP1B A, GSTA4, GSTM1, GSTO2, GUCY1A2, IDH1, IRAK3, IRF9, ITGA10, LDHAL6B, LLGL2, MYH1, NEUROG3, OR2Y1, OR5D13, OR6C3, OSMR, POLE2, POLE4, POLR 2K, STK4, TKTL2, VCAM1
Negative_5459	DCN, APPL1, B3GALT5, CACNG2, CERK, CRY1, HSD17B2, IL12RB1, IRF5, LLG L2, MAP3K3, MAT2B, MTMR2, OR1A2, OR1L3, OR2A4, OR2W1, OR6K6, OR8S1, P 2RX6, POLA2, PRKACG, RALB, SOCS4, SYNJ1, TRHR, VEGFA
Negative_5460	CR1, EZR, ACTG1, C5AR1, CFLAR, CSDA, EPHX2, F2RL3, GSTM5, IL6R, LAMC1 , NOS1, PFKL, PRSS2, RPS6KB2, STAM, WHSC1L1
Negative_5461	AADAC, ALPPL2, BCL2, CNTF, DDOST, ENTPD3, IL2ORB, L1CAM, MAML3, NAGA , NMNAT1, OR1E1, OR2V2, POLR2F, SKP1, SULT2A1, UGCG, ULBP3, UNC5B
Negative_5462	ACTB, ACVR2A, CCL15, CLCF1, DDX23, DFFA, ENTPD8, FOXA3, GAL3ST1, GAL C, HEMK1, HMBS, HRH2, IFIH1, INPP5A, IRS4, LGMN, MAPK8, NT5E, OR2L13, OR4M2, OR5K2, PDE4D, PIAS4, PKMYT1, POLR1D, RASA1, RND1, WNT11, YES1 , ZIC2, TNFRSF18
Negative_5463	CGA, FGA, ADRA1A, CXCL12, CYP17A1, FRAT1, MAN2A1, MAT2B, OR2K2, OR2M 5, PDK1, PGM1, PTDSS2, TLR3, TNFSF10, UMPS, MAP3K7IP1
Negative_5464	IL9, ARPC2, CCKAR, CD48, CHST11, COL3A1, CXCL2, DDB2, DLL3, EHMT2, FG FR3, GAD2, GALNTL2, GNPDA1, GUCY2C, IBSP, IFNG, INPP4A, ITGB8, JAK3, KIR2DS4, KLKB1, LIPE, LRP6, MAD2L1, OR10H3, OR10J5, PARD6A, PIGK, PI K3R5, RAC2, SGMS1, SLC25A5, SMURF2, UNC5C, AASDHPPT, ATP6V1B2, ATP6 V1E2
Negative_5465	F3, AKR1B10, BMP8A, CAMKK2, CD44, CDH4, CSF3R, CTBP2, CYP2F1, DARS, E CSIT, FGF2, FMO4, GALNTL5, GMPPA, GNB1, GPX5, HPSE, HPSE2, IL1A, MAN2 A1, MAP3K3, METTL6, NCR1, NNMT, OCLN, OR11H4, OR52I2, PDGFD, PGAM1, P PP1R3D, PTGES2, QPRT, RALA, RASSF5, RHOD, RUVBL1, STX1A, TAS2R1, TJP 2, TUBB4, TXNDC12, VARS, ZFYVE16
Negative_5466	ACY1, CACNA1I, CDC27, ENTPD4, GCNT4, GNA14
Negative_5467	ADO, CASP10, CLDN15, CYP2F1, DDX51, DTX1, GSTM2, NFKB1, OR10A3, OR2A G1, OR4D1, OR51E2, OR51I, RFWD2, SAT2, STX5
Negative_5468	C5, CD6, EBP, ABCC8, ACAD8, AQP7, COQ5, COQ6, CTNNA1, CYP3A4, DDX41, E NAH, EPB41L2, GANC, GGCX, GP1BA, HSD17B8, IFNG, IL1R2, IL9R, INPP4A, INSRR, ITGAV, ITGAX, LAMB1, LRAT, MAML1, MMP9, NOTCH1, OR14A16, OR1L 4, OR1Q1, OR4D11, OR4F15, OR52K1, OR52K2, OR5AC2, PIP4K2C, POLR1E, S LC2A2, ST3GAL4, TBL1X, TUBB4, CACNA2D1, GABARAPL1, SUV420H2
Negative_5469	BID, IDS, ACOX2, ADORA2B, ALDH3A2, ALPL, ARG1, ARNTL, ASCC3, BCKDHB, CCL17, CMBL, DIAPH1, ERBB3, FUT8, GADD45G, GANC, HHEX, HMOX1, IL7R, I NHBE, NR4A1, NRG2, OR11A1, OR51I1, OR5A2, OR5T2, PDHB, PER3, PPP2R2D , RARS, STX1B, TRPM5, UBE2L3, VANGL1, WWP2, HSD17B10, HSD17B12, SERP ING1
Negative_5470	AK7, CACNG5, CUL1, FLOT2, LDHAL6A, OR2C3, PGAP1
Negative_5471	CAD, ATP6V1A, BCAT2, BMP7, CD8B, FGF4, FUT4, LAMB3, OR4F4, OR51E1, PM AIP1
Negative_5472	ADCY4, DNMT1, PFAS, PLA2G2D
Negative_5473	ABL2, ACAA2, ARPC5, B4GALT1, CDS1, DDX23, DEGS2, DHRS3, GALM, MGAT1, MGAT4A, NT5C3, OR2L13, OR2T4, OR52E4, OR5L1, PLA2G3, PPP2R5A, RND1, SEMA3E, SETD2, SGPP1, SHISA5, SOCS3, STAM, SV2A, SERPIND1
Negative_5474	CD27, IL1B, IL5RA, IRF9, MAML1, OR4K1, OR5R1, PFN3, PRICKLE2

Negative_5475	MYC, ADCY6, AGPAT6, ALCAM, CCNA1, CD244, CD38, CDC25A, CDH1, CHRNA7, CYP2J2, DDX47, EARS2, GMPR2, GNAI2, GOSR2, IL2RB, IL6ST, ITGB2, LCMT1, LHCGR, MYH1, OR10Z1, OR5C1, PFKFB3, POLR2H, POLR3D, PPP2CB, SPCS3, ST3GAL3, STEAP3, SUCLG2, SYNJ1, TBL1Y, TUBA8, WNT3, ZNRD1, HSD17B10, PPARGC1A
Negative_5476	CHRM3, DUSP1, GNAI2, HLA-F, HMGCS2, ITGB7, KIR2DL4, NTN1, OR2AG2, OR52B4, POLE, UGP2, B3GALNT1
Negative_5477	ABO, AASS, ADH1B, BLVRA, CAMK2D, CCL4, CX3CL1, CYP3A4, EGFR, EHHADH, GALNT5, GCNT1, IBSP, ICAM2, IPPK, LCP2, MAML3, MAOA, NPR2, NR1D1, OR1B1, OR51A2, OR51B2, OR51E2, OR52E8, OR9A2, P4HA1, PDE6H, PNPO, PPP2R5A, SDC4, SEMA3B, STX12, TAS2R3, TPH1
Negative_5478	KMO, ACTC1, ARHGEF7, ATP6AP1, CCNG2, CHKA, CLDN11, CPT1A, CYFIP1, DARS2, EHMT1, MAD2L1, MAP3K4, OR2M7, PIK3C2A, PRKCZ, RPS6KB1, SUV39H2
Negative_5479	BTD, ABL1, ACTG1, AKR1C2, ALG3, BET1L, CCR9, CYFIP2, DERA, DNMT1, FTH1, GGT5, GLI2, GUCY1A3, H6PD, HLA-DOA, MKNK2, NFYC, OR14C36, OR1C1, OR4D11, OR52H1, PARVB, PLA2G2A, PLAT, PON1, PSEN1, PTPN7, SHC4, STK3, TAS2R41, TNFRSF4, TRAF3, TYK2, UGCG, UGT2B11, PAFAH1B2, TNFRSF11A
Negative_5480	F12, MUT, ACADSB, BUB3, CACNA1I, CAMK2A, CD14, CLDN18, DLL4, FABP1, FDFT1, FGF21, GNAO1, HMOX1, IL13RA2, IRF9, LDHAL6A, LRP6, MS4A2, MYH7B, NADSYN1, NT5M, OR10T2, PANK4, PDE6H, PIGN, PLTP, PON3, PPP5C, PTPRF, SGPP2, SNAI1, ST8SIA1, SUFU, TSC2, UCKL1, ATP6VOD1
Negative_5481	DCN, JUN, PAH, AANAT, EPHA7, GLI1, GUCA1A, OR5C1, PDHB, PIM1, PRKCQ, SHC1, TPK1, VAMP3
Negative_5482	AARS2, ARPC3, DGUOK, DHRS4, DTX2, FCGR3B, HRAS, IFNAR1, IL15RA, IL17RB, MAGI1, MAP3K13, NR1H3, OR4K1, PIGF, PPAR, TCIRG1, TJP2, ZMAT3, PFAH1B1
Negative_5483	JUP, LPL, CSF3R, CYP2B6, DAD1, EIF4E2, GLO1, HHEX, NCKAP1L, NRG4, OR8H1, TM7SF2, TNFSF14, UBA1
Negative_5484	ACSL1, ACTN4, ADH7, AGPAT3, ALDH1A1, ARPC4, ARRB1, B3GALT4, BPGM, CD20, CFLAR, CHSY3, CLCF1, CSNK2A2, DDX52, FRAT2, GOSR2, HMGCR, HNF4A, ITGB5, ITGB8, MAGI3, MAOB, MFNG, MYL9, OR10C1, OR11A1, OR2L13, OR4L1, OR6K3, OR6T1, OR7G3, PAX6, POLR2B, PROS1, QPRT, SELE, SLC25A6, SPRY2, STEAP3, UBA1
Negative_5485	XDH, ACSL1, B3GALT5, CSNK1D, CYP2J2, EIF4B, ENTPD1, FDFT1, GSK3B, GSTM2, HSD3B7, IFNA17, IQGAP1, ITGA11, ITGB4, KIR2DS5, MASP2, MYLK3, OR10A6, OR2T11, OR4A16, OR52J3, OR6C1, PFKFB4, PLXNB2, RARA, RHOA, SFRP5, SUV39H1, TAS2R50, HLA-DRB3, SUV420H1
Negative_5486	DCT, DHH, ACAT2, ALG8, AMD1, CASK, CD19, GLDC, KIR3DL1, P2RX6, PRKAA1, STK11
Negative_5487	AUH, C7, CDA, VCL, ADAM17, ALOX5, AMDHD1, AVPR1B, BBC3, CACNA1D, CD55, CHKA, CLDN4, CTPS2, CYP3A5, DDX18, DHDH, FGF18, FGF22, FGF8, FIGF, FLT1, FPGT, HSD17B7, IFNA21, IFNAR1, IKBKG, LILRB3, LTBR, MAFA, NFATC2, NT5C1A, P2RX5, PAX6, PLTP, RASGRF2, RPS6, RRAS, SENP2, SORBS1, SPRY2, SULT1A1, TRAF1, TUBA4A, VDAC3, YWHAG
Negative_5488	ID4, MVD, ACADM, ACADVL, ACTN2, BLNK, BMP7, BUB1B, CRY1, FTMT, GLDC, GPLD1, MYH15, NEU4, NOTCH1, OR2L3, OR3A3, OR4X2, OR56A3, POLR2G, PPBP, RDH5, YWHAQ, TNFSF13B
Negative_5489	DCK, IL5, LCK, NOG, ADCY1, ALG3, ANAPC11, BACE2, C4BPB, CASP9, CD38, CHDH, CLCA2, CNTN2, DAAM1, DKK1, DRD1, EGFR, FSHR, GSTM4, HRH1, HSD11B1, IL3RA, IQGAP2, ITGA1, KYNU, MAP2K6, MAPK12, MCM7, NUDT5, OR10H1, OR10H5, OR11H1, OR1S2, OR4K1, PCNA, PMM1, PPP2R5A, PTGFR, PTPRF, TAS2R38, TYMS, VAMP4, WARS2, B4GALNT1, CACNA2D3, SERPINC1



Negative_5490	EBP, F5, ME2, OAT, PGD, PXN, B4GALT5, CACNG8, COL2A1, CYP2C9, DGKI, ENTPD4, ETNK2, EXOC7, GPD2, GUCY1A2, IARS, IFNA7, IFNW1, INMT, LIPC, MAP3K11, NOTCH1, OR1E2, OR4C16, OR9I1, PDE10A, PPP5C, SELL, SEMA4F, SHISA5, SQLE, SUFU, UBE2L3, UGT2B11, VASP, WBSCR22, WWP1, ATP6V0A1
Negative_5491	OR51L1, RFX5, TUBB2C
Negative_5492	ARHGEF6, BDH2, CDC14B, CTPS2, DGAT2, EDAR, GALC, GALNS, HCST, IMPDH2, NCOR1, NNMT, OR6K3, PGM2, PLA2G3, PPM1A, SMAD3, STAM2, TRAF2, TUBB2A
Negative_5493	NME2, OR2M2, PIGF, PIP4K2A
Negative_5494	AASS, AGPAT2, IRAK3, NFKB1, NKX6-1, NT5C1A, OR7C1, PIK3CB, ARHGEF12
Negative_5495	IL5, ACY3, ADCY8, C4BPA, CARS2, CBR3, CCL15, CCL2, CLDN10, CNDP1, CNTF, CUL1, FOXA3, FRAP1, GADD45B, GNAO1, GNRHR, GSTO1, HTR7, ICAM1, IL13RA2, ITGB8, KIR2DS5, LYPLA1, MINPP1, MMP7, MPP5, NCAM1, NCR1, NME2, OR14A16, OR51V1, OR52J3, OR5P3, OR5T2, PMAIP1, PNPLA3, PPP1CC, PSME2, RRM2, SOAT1, TAS2R13, TNFRSF9, TUBA1B, YARS2, CTNNBIP1, PPARGC1A
Negative_5496	SI, GLUL, ORC2L, PKMYT1, PORCN, SFRP5
Negative_5497	ASIP, CASP10, CHKA, CNDP1, CRY2, CTPS, CXXC4, CYP2S1, CYP2U1, DDX50, DGKI, EXTL3, FZD5, GALM, GNG3, HSD3B7, IL1R2, INPP1, KCNB1, LTA4H, MAN1C1, MGST1, MIOX, NAT6, NEUROG3, NGEF, NT5M, NUDT9, OR2T4, OR4N5, P2RX5, PANK1, PDE4B, PON3, RDH12, RPS6KB2, SUCLA2, TAS2R1, TAS2R38, TM6LHE, SERPINA5, TNFRSF10A
Negative_5498	WAS, ACOT11, ALDH1A3, ALPPL2, APOA1, ATP5B, CADM1, CYP2J2, MAGI2, NOTCH1, NTNG1, OR5P3, PLOD3, SORD, TUBB6, ATP6V1C1
Negative_5499	KMO, ASMT, ATIC, EPHA2, FGF1, FZD3, KCNQ1, MGST1, PLEKHA8, SETD1B
Negative_5500	ADA, CD6, EBP, HK3, IHH, ABL2, ALG12, BHMT, CAV2, CDC26, CXCL12, DBF4, GNG12, GNMT, GRIA2, IDUA, KLRC4, MYH8, OR10A4, OR2T1, OR4C13, OR51B2, OR52N2, OR6Y1, PDIA4, PRKG2, PRKX, PTPN11, PTTG1, ST8SIA5, STX5, TPSTH2, UGCGL2, ATP6V0A1, CACNA2D2, CACNA2D3
Negative_5501	ADH5, FM01, HIF1A, ITGA1, OR2G6, OR3A2, POLE4
Negative_5502	NPY, ATIC, CDC16, CEBPA, CYP2C8, FCGR3A, GSTM3, GUCY1B3, HLA-DOA, HSPA2, OR12D3, OR52A5, PDHB, PDX1, PLAT, PPP2R2A, PPP3CC, PVRL1, RHOD, SGPP1, TUBB4Q, UAP1
Negative_5503	LCT, ADRBK2, ATP5I, BBC3, CACNG5, CCL25, CYP2U1, EFNA5, GCNT1, GNPDA2, IL17B, MAT2B, OR2A2, PDE2A, SPTLC2, TAS2R3, ZFYVE9
Negative_5504	AK1, CD4, CR2, ME1, AARS2, ACMSD, ATP5G2, ATP6V1H, CCR1, CD34, CYP1A2, DGKI, EFNA2, FDFT1, FGF19, GAD1, IL7R, INHBC, IQGAP1, JAG1, NT5E, OR13C8, OR13G1, OR2A42, OR3A3, OR4K1, OR51A2, OR6T1, PHGDH, PIGV, PROCN, PRPS1, PTPN7, PVRL2, PYGB, RPN2, UBA7
Negative_5505	DBI, FN1, GAA, ID3, ACVR1C, AHCYL2, ALDH2, ASPA, ATP12A, BIRC5, C1QC, CACNG7, CCNB3, CLDN20, COASY, CPT2, ENPP7, EPHA7, FDPS, FGF1, FUT5, GAPDH, HMGS1, IL1R1, LIFR, MAN1A2, MAP2K6, NEFH, NUDT12, OGDH, OR10S1, OR1I1, OR2Y1, OR56A4, ORC3L, PGS1, PLD2, RASGRP4, RCHY1, RPS6KB2, TFPI, TGFA, TRADD, XCR1
Negative_5506	ALG9, CCR2, FGF19, OR13J1, OR2AE1, OR4K17, OR6C2
Negative_5507	OSM, SPN, CHST13, CYP2A13, DARS2, EFN3, FGF22, GMPR, GNRH1, GSTA4, ICAM1, KLRC4, NEU3, OR10V1, OR4C46, OR5AS1, PAK2, PDK1, PNPT1, POLE2, PVRL3, RFXAP, RPS6, VEGFA, MAPK8IP1
Negative_5508	CGN, FER, TXK, ADRA1D, AGPAT4, APPL1, AXIN2, CCDC6, FTH1, ITGB2, NLGN2, NOD1, OR8J3, PDGFA, PRKCE, PYCR2, RDH10, SNAP25, SOD1, SUCLG2, TGFBR1, UCK2, ULBP3, CTNNBIP1
Negative_5509	OAT, PLG, SPN, ADSL, AKR1B1, AMPD3, APOA1, ATG7, C5AR1, CCL25, CLOCK, CPT2, EPHA8, EXT1, FARP2, FOXA2, FUT9, GADD45G, GLI2, GNA11, MAGI2, MTHFS, NAGLU, NPR1, NRG4, NTNG1, OR2D2, OR2G2, OR8D2, PDXK, PFKFB4, PTGFR, SETDB2, SQLE, SUCLG1, TRAF5, TXNDC12, UROS, XCR1

Negative_5510	AMY2A, CCL5, CD3E, CD40LG, CHRNA7, CPOX, CRY2, CXCR4, CYP2E1, CYP4A11, GNA11, IL10RA, KITLG, LIPF, NPR2, PTSS1, SDC3, TRAF2, SUV420H1
Negative_5511	HAL, ACMSD, ASNS, CD46, CYP1B1, CYP2A6, DGKB, ENTPD4, EPHA3, GNPDA1, HAGH, HNMT, LAMA4, NFATC2, OR10P1, OR1A1, OR5I1, OR7D2, PCCB, PTPRF, SDHA, STAM, STX7, ATP6V1C1
Negative_5512	CAD, GK, IL5, NGF, PGD, ACP1, ADCY4, ALDOA, ATP5D, ATP5H, CAMK2B, CCNH, CDK6, CISH, CLDN15, CRLS1, DEGS2, DGKQ, EI24, EPHB6, ERBB2, EXT2, FCGR3A, FSHB, GALNT1, GMPR, GRIN1, HCLS1, MAGI2, MAP3K5, NAMPT, NOS1, NOTCH1, OR13C3, PDE5A, PIP5K1B, PLCB3, PLOD3, PLXNA3, ST3GAL4, ST3GAL5, TRAF5, TUBA1C, TUBA8, VEGFA, ST6GALNAC1
Negative_5513	A2M, CAD, HYI, CYP21A2, CYP4A22, CYP8B1, DDX51, FLT1
Negative_5514	GBA, NOG, ALAS1, ALOX12, ATP50, ATP6AP1, B3GNT3, CDKN1A, CES1, CRLS1, DUSP3, GCAT, GLI1, GYS1, HBEGF, INPP1, KIR2DS5, LMO7, MAP4K2, MTHFD1, OR10G8, PSME1, RBL1, RELB, SEMA3E, STX16, SUCLG2, MAPK8IP2, SERPINC1
Negative_5515	IL9, KIT, ACPP, ARPC4, BMPR2, CCNG2, CYP11B2, CYP2A6, CYP3A4, DDB2, DTYMK, EFNA2, GP1BA, HMGCL, HMOX1, IL2RG, LCP2, LTBP1, MAP3K14, MAPK14, MFNG, MYH15, MYLK, OR2A25, OR4C12, OR51L1, OR5V1, OR6N2, PCYT2, PLCB3, PRIM1, PTPRC, QARS, RPS6, SENP2, UMPS, VAV1
Negative_5516	ACACB, ACSL1, ALDOB, GSTM4, IFNA7, IL10RA, MALT1, NUDT2, PCCB, PLA2G3, PLAU, PPP2R2A, PSME3, RXRA, SCIN, ZIC2
Negative_5517	BTD, CTH, ACAA1, ACVR2B, AGRP, ALDH2, CLDN19, CNTN2, CYP2D6, DGKD, DGUOK, DLAT, HEXA, HTR2A, INPPL1, NFASC, NME4, OR11H4, OR1L8, OR6C6, PAK6, PIK3C2A, PKM2, PPP2R5A, SLIT2, SMC1B, SPCS1, SV2B
Negative_5518	BAX, GLS, ANAPC1, B4GALT7, CDH1, COL2A1, COQ6, GNAI2, LRP5, MAGI1, MAPK14, NFATC4, NME4, OR4P4, RHOA, WWP1
Negative_5519	CS, ABLIM1, ALG1, ALPP, CAV3, CCL27, CLDN5, CYP8B1, DUSP10, E2F1, FZD9, GADD45B, GNAI1, GOT1, GPX5, HNF4A, IL9R, KCNQ1, LAMC2, MAP2K3, MAP4K4, MMP1, NANS, OR11A1, OR2T2, OR52B6, OR5K1, P2RX1, PDGFD, PIAS4, PLOD1, RDH10, RDH5, RPS6KA2, SEMA3E, SETDB1, SKP2, SOCS3, SRGAP3, VANG1, WBSR17, WEE1, WNT2B, WNT4, HLA-DRB5, PPARGC1A
Negative_5520	FOS, ATP5H, CLDN9, CLOCK, DAXX, DGKH, FTCD, GCLC, GUCY1A3, HNF1A, IKBKG, LYPLA1, MAN2A1, NADK, NEFH, OR51Q1, OR52K1, OR5C1, PDE9A, PHPT1, POLD4, RAB5A, SARS2, ST8SIA1, STEAP3, TPI1, WNT7B, ZFYVE9
Negative_5521	ME3, MVK, EPHA6, GALNT2, GNPDA1, HMBS, IGSF5, OR2M4, OR4A15, OR6C3, PCK2, PRKG1, PYCR1, TUBB1, B3GALNT1
Negative_5522	FST, ADCY9, ANAPC2, AVPR1B, CDS2, FGF3, GPX5, GUCY2C, HMGCR, HNF1A, ILL17RB, INHBE, IRS4, MCCC2, MCEE, NAT6, OR12D3, PFN3, PLA2G2E, PTGES, PTPRF, RASSF1, RDH10, TRPC1, HLA-DQA2, PAFAH1B1
Negative_5523	FAS, ACVRL1, AMHR2, APRT, CD8A, CFLAR, CLDN15, DCTD, DGUOK, E2F5, EXT1, GANC, GDE1, GRIA3, GUCA1B, HRAS, IL25, IPPK, KDSR, KLRC2, OR1N1, OR8I2, PFKFB2, POLR3K, PRKX, SFRP1, SIPA1, SULT1A2, TBL1Y, TNFSF4, UNC5B, MAPK8IP3
Negative_5524	C8B, CKM, JUN, MPL, ACSM4, BRAF, CCND3, CSF3, CSNK1G1, DEGS2, FGF17, FOXO3, FUT4, GYS2, HEXA, ITPKB, MAGI2, MTHFD1L, NKD1, OR1L4, OR6C2, OR6K6, OR8D1, P2RX4, PDE8B, PPP1CC, PSEN1, RASSF1, SNAI1, SULT1E1, THBS3, TOLLIP, TYK2, VEGFA, WASF3, HSD17B10
Negative_5525	CFH, MYC, ACOT12, AMD1, DDIT4, DUSP14, EHMT1, FSHB, HLA-DMA, MAT1A, NCR1, NFATC3, OR10Z1, OR5P2, PARD3, PIK3R5, TJP2, ATP6V0E1
Negative_5526	BCM01, CACNB3, CES2, CHPF, CLDN4, DHODH, ECHS1, ENO3, FGF7, GGPS1, GL01, IFNA14, IL1R1, INSR, IQGAP3, LAMA4, LDHA, MYH14, NKD1, NKX6-1, OR2T33, OR5R1, PIAS2, PLXNA1, PLXNA3, POLR1B, PPP2R5C, PTSS1, RHOD, SLC33A1, SULT1A4, TUBB, MAP3K7IP1

Negative_5527	AK7, CD4, ANAPC2, ARSD, BPGM, CCL27, CDKN2A, CSNK1A1, CXCR6, CYP4A11, DAPK2, DDB2, DIAPH2, FTCD, FZD4, G6PD, GRM5, GSTM1, IFNA14, IL28B, IL4R, MITF, MOV10L1, NKD1, OR5A1, OR5D16, OR5M8, OR6K6, PANK2, PFKFB3, PGAM1, PPAR, PPM1A, PPP2R5D, PVRL2, RALBP1, RPS6, SMAD1, SOCS2, SSH1, UCP1, PRICKLE2, SERPINB5
Negative_5528	CYP3A7, DGKD, EPHA2, IFNA16, PCNA, PGK2, POLA2, TAP2
Negative_5529	MUT, AARS2, ATF4, CCL26, CLTCL1, COL4A1, CXCL11, CYP2A6, DDIT4, EGLN1, GMDS, GOT1, MAD2L1, MAOB, MAPK14, OR13F1, OR2A12, OR8B12, PKMYT1, POLR1D, RENBP, SELP, SPTLC2, STT3B, STX1B, TAS2R9, TRADD, UPP2
Negative_5530	GLA, ADCY3, CLDN1, INSR, LRP5, MAP3K8, OR7A17
Negative_5531	ACHE, BDNF, CHRM5, COMP, FDPS, GNAT3, GP1BA, GPAM, LEPR, MMP1, NCR2, OR4D1, OR4K5, OR52J3, PDE3B, POLR2K, POLR3G, PTCH2, SPHK1, STK11, VAV1, VAV3
Negative_5532	DBT, NPY, ABLIM3, ACSL3, AK3L1, ARNT, ATG12, CACNA1G, CCL26, CD28, CLOCK, CNGA4, FUT5, GALNTL1, GGPS1, IDI2, MAPK9, OR56B4, PIK3R5, PPM1B, PTGDS, PTGES2, PYCR2, RBL1, RCHY1, SETMAR, TACR1, TAS2R7, WNT3, YWHAQ, ATP6V0D2
Negative_5533	SMO, ARSA, BLVRA, CARD11, CLDN9, COL3A1, CYP2S1, EPHB6, FADD, FGF5, FGFR4, FZD9, GCAT, GLI3, GNG13, GRIA3, GSTA2, ITGAE, KNG1, LTA4H, OR13A1, OR1A2, OR2AG1, OR5B3, PGK1, PLA2G6, PLCB3, POLR1B, PTPRF, RUNX1T1, SLC27A5, SSH3, ATP6V1C1
Negative_5534	RB1, ADCY9, ADRB1, AHCYL1, AKT3, CCNA2, CD46, CHRM2, COQ6, FADS2, HMGCL, IDH3G, JAM2, MGST1, NFKBIB, OR10H3, OR2H1, OR2M2, OR52E6, OR5B17, OR8D1, PAPSS1, PDGFD, PHKG2, POLR3G, PPA1, PPP3R2, PRKCI, PTAFR, SPRY1, TAS1R2, SERPINF2
Negative_5535	C8G, HK1, MOS, ACLY, AGPAT4, ATP12A, BAAT, BDH1, BDKRB2, BMP5, CACNA1I, CACNG4, CACNG7, CACNG8, CAMK2B, CCL11, CCL26, GCNT2, GGT1, GNRH2, GUCA1B, IFNK, ITGA2B, LYZL1, MAP3K13, MDM2, MGAT5B, MGST3, MTHFD1, NADK, OR10J1, OR13J1, OR6K2, OXCT2, PLA2G2F, PRSS3, RPS6KA6, TFPI, TGF3, TM7SF2, TYRP1, B4GALNT1, TNFRSF12A, TNFRSF6B
Negative_5536	FUK, AARS2, ADAM10, ADCY1, ADCY10, CBR1, CCL27, CDC2, CDH4, CDK6, CHUK, CYP2A7, DGAT2, EFN3, EPHA3, FABP3, FIGF, FUT1, GRHPR, HLA-DOB, HTR5A, IFNA4, IL10, IL13RA2, IL2RA, LAMA4, LTB4R2, MDH1, MGAT1, OR1L4, OR2AE1, OR2T29, OR2W1, OR4C16, ORC6L, P2RX4, PDE4D, PERP, PIK3C2A, PIP4K2B, PPP2R5E, PRKAB2, PTPN11, SDC2, WNT7B, SERPINB5, TNFRSF12A
Negative_5537	BAD, CAD, KDR, SFN, AARS, ACSL4, BMPR2, BUB3, CD14, CD19, CD274, CLDN1, CREB3L3, CXCL10, CYP4A11, DDX51, E2F4, EIF4E, GADD45B, GLUL, GSTM1, IFNA4, IL12B, IRAK4, KYNU, MAP2K2, MAP3K2, MAPK13, NCAM2, OR10K1, OR13C3, OR2T11, OR51S1, OR6Q1, PHKG1, PIGN, POLD4, PRKAR1B, SESN3, SLC25A4, SPTAN1, STX10, TAS1R2
Negative_5538	AGK, DBH, ACO2, ACTC1, CASK, CD72, CFLAR, CXCL2, DEGS2, DFFA, DHDDS, EPHB6, EREG, GUCY1A3, HSPA1B, HTRA2, IBSP, IDH3B, IL13RA2, IPMK, MAD2L1, MTAP, MYH7, MYH7B, NAGS, NR1H3, OR10P1, OR2A12, OR51B6, OR8I2, OR8U1, PIK3C2A, PRDX6, SLC27A4, TCIRG1, UROS, CACNA2D4
Negative_5539	AK7, AACS, ARNTL, ATP2A1, B3GAT2, CDKN2B, CDS2, CLDN3, CTNNA1, CYP2U1, EPB41L3, GIT1, GNRHR, NT5C1A, OR10A7, PGK1, RCHY1, SFRP5, SPP1, UNC5C, ATP6V0A2
Negative_5540	GP6, GSR, TFG, ADRB3, AKR1D1, ATP5G2, BCMO1, CASP9, CD3E, CDH15, COQ3, CXCR6, DLL4, IARS2, MGAM, NOS1, NT5E, OR1L1, OR6K2, PER1, PLAT, POLR2K, WWP1

Negative_5541	DBH, GLA, GSR, OTC, ADIPOQ, BBC3, CALML3, CAV1, CD244, CRKL, DHFR, DLL3, DLST, GPX7, IL8RA, INPP1, INPPL1, IRF9, KYNU, LALBA, LHCGR, LIPF, L RRC4C, MADCAM1, MAN2A1, MASP1, MDM2, MDM4, MTHFD1, NEU4, NR1H3, NRXN2, NUDT9, OR1A2, OR52E8, OR6Q1, PANK2, PARD6G, PLA2G2A, PTGES2, PTPRJ, RAPGEF3, RENBP, SDHD, SHC3, SHISA5, SMAD9, TUBB6, UAP1
Negative_5542	FGG, ACSM5, BCL10, HEXA, MAN1B1, OR12D3, OR52K1, OR7D2, ORC4L, PCK1, SOCS1, TGFA, TSC1, ULBP1, WIF1
Negative_5543	F11, MYC, TNF, ABLIM1, ACLY, ADCY1, CCR6, CD82, FADD, HAAO, HARS, HTR6, IL13RA2, IL3RA, JUND, LAMA3, NTRK1, OR10G3, OR2L2, OR6C76, PAFAH2, PAK6, PPP2R2A, PTPMT1, RHOA, TAS2R5, WASL, SERPINF2
Negative_5544	GK, PVR, BIRC3, CD34, CPT2, CX3CR1, CYP1B1, FUT3, GALK2, GALM, HYAL1, JAK3, MTMR1, NUDT5, OR4F6, OR4K5, ORC5L, PDHA1, PIGU, PLA2G2D, PRKAR1B, STEAP3, SUV39H2, TNXB, PAFAH1B1, TNFRSF10B, TNFRSF11A, TNFRSF11B
Negative_5545	AK5, GK, PC, PML, ACVR1B, ALPI, ARPC5, B4GALT6, CLDN22, CMBL, CREBBP, CTLA4, DCTD, DLL4, DPYSL2, DUSP16, FGFR3, GMPPB, GUCY2C, HLA-DRA, HLA-G, IFNB1, LYPLA1, MAPK1, MYH7B, NAE1, NEU4, NPR1, OR2D2, OR4E2, OR5AK2, OR8I2, PDE7B, PGS1, PKM2, POLR1C, PRPS1, RDH8, RENBP, SETD1B, STX6, UROD, WNT4, TNFRSF17
Negative_5546	EPHA8, NTN1, OR2T3, OR7A5, PPM1D, SNAI2, STX3
Negative_5547	DDO, F3, PRL, ABP1, ACOX3, ACSL6, ATP5G1, BDKRB2, C1QB, CHSY1, CTSS, EPHA8, HLA-DRA, IL15RA, IL1B, IL23R, ITGA11, ITGB4, KIR2DL4, NKD1, OR4C12, OR4K13, ORC5L, P4HA2, PANK2, PCK1, PIGT, PIK3C2G, PIK3C3, PMM2, RDH11, SH2D1A, SMAD7, SORD, TPMT, TUBA4A, TUBB6, VAV3, WNT10B, AASDHPPT
Negative_5548	DDO, DLD, IL4, IL7, ADH1B, ATP6V1D, CER1, COL2A1, COL5A2, COQ5, CTNNA3, CYP26B1, CYP2A7, DHCR24, FZD10, GANAB, GNA11, GSTA5, HSD17B2, IL18, IL20RA, KLRC1, LAMB1, LAMC3, LDHD, NFASC, NFKBIA, NTSR1, OLAH, OR4C15, OR7A17, OR7G3, OR9A2, PFAS, PIK3C3, POLR1B, PPM1D, PPP2R2A, PRKAR1B, RHOQ, RRAS2, SUV39H1, TLN1, TNFRSF8, ULBP1, VAMP2, WNT9A, ARHGAP12, ST6GALNAC3
Negative_5549	C7, FUK, HGD, LCT, B3GNT3, CLCA4, CYP26C1, GNMT, GUCA1C, HTR2A, IPMK, KNG1, LAMC3, OR2AG2, OR2M2, OR4A15, OR4F4, OR6C2, OR8D4, PDE11A, PHKA2, RENBP, ST8SIA5, VAMP1, WNT7A, XYLB
Negative_5550	AGK, ADRA1A, COASY, DNMT1, DUSP7, ERO1L, GNMT, IMPA2, KCNB1, MAP3K6, MTFMT, OR12D3, OR5B17, ORC6L, PAX8, PLD1, PPP2R5A, PROS1, PTGER3, RPK1, SOCS5, SOS2, TIAM2
Negative_5551	C7, ACAD9, ALG2, ASS1, BMP2, CD19, CFL1, CPT1A, CREB3L4, CRHR1, CSF2, CSF2RB, CXCL13, DAD1, DGAT2, DOCK1, EFNA3, ENPP2, GUCA1B, HEXB, IL11RA, LEFTY2, LIPT1, MIOX, MYLK2, OR10AG1, OR1J2, OR2B2, OR2G6, OR5AP2, OR5H2, OR5M8, OR6C3, P4HA2, PIP5K1B, PLCB2, PLCD1, PLCG2, PLXNA2, RASA2, RFX5, RPS6, SESN3, SETD2, STK3, SUOX, ATP6V1C2, MAPK8IP1, TNFRSF12A
Negative_5552	BTD, CR2, F5, IL7, B3GALT6, CACNA1S, CYP2C18, ENO2, GNAI1, GOT1, HADHB, HTRA2, IL2RA, ITGA3, ITGA4, LAMB1, MGAT4A, MMP7, MTHFD1L, NLGN3, PAK7, PSPH, SRD5A2, STX2, TUBB3, CSNK1A1L
Negative_5553	AKR1C3, C4BPB, CCNG2, CXCL2, EDNRB, ENPP3, EPHB4, FGF13, FOXA3, FUT9, GPD1, GSTA4, HHIP, LLGL2, OR10C1, OR2A4, OR2T33, OR51B6, PGS1, PLCE1, SH2D2A, STK3, TRDMT1, UBE2L3, ALDH18A1, HLA-DQB1, TNFSF13B
Negative_5554	GH2, GP6, IL4, MPI, B3GNT3, BACE1, BBOX1, BET1, CACNA1C, CDH4, DUSP10, EPHA4, ICAM2, MASP1, NFKBIB, NTRK2, OR51B4, OR51G1, OR52K1, PDE2A, PLCB2, PON2, PPBP, PPP3CB, RAC1, SMAD3, SOCS2, SOS2, TLN1, TNXB, TOLLIP, UGCG1, VTI1A, CSNK1A1L, GABARAPL1, MAP3K7IP2

Negative_5555	RFK, ABLIM3, CCR4, EFNA2, ITGAL, KITLG, NUDT8, OR10Z1, PAX4, STX6, SERPIND1
Negative_5556	ADRA1A, CMAS, DTX4, ENAH, F13B, MDH1, OR4K14, OR8K3, PPP1R3A, PPP2R2D, RPN1, SMAD3, TYROBP
Negative_5557	IL8, ACADS, AGMAT, AMPD3, CACNG6, CSNK1E, ENPP1, GTSE1, HMOX1, IL21, LAMB2, LDHAL6B, MGAT4A, MGAT4B, NEFH, NKX3-1, OR2L13, OR52N2, OR56A1, OR5D14, PDGFRA, PHKB, PLCG2, PTPRB, PYCRL, RRAS, SDHB, STAT4, THBS4, TNFSF14, VTI1B, YARS2, PNLIPRP1
Negative_5558	DLD, F2, GH2, MVK, ADRA1A, ALG13, AMD1, ANAPC7, APAF1, ARG1, BDKRB1, CADM3, CD3E, CES2, CLTCL1, CMPK1, CYP26B1, DFFA, GALM, GRAP2, HHIP, HSD17B7, HTR5A, IDUA, IL13RA2, IL17A, IRS2, LCAT, NRXN2, NRXN3, NT5C3, OR10H3, OR2AE1, OR51I1, OR56A1, PLA2G4A, PPID, PRNP, PTGIS, RAP1B, SLC27A5, TAS2R60, TRDMT1, UGT2B28, ULK1, YKT6
Negative_5559	IL8, LCT, PGP, ALG11, ANAPC11, AQP7, B3GNT3, BCKDHB, CD22, CXCR3, CYP2C8, CYP4A22, DAAM2, DAD1, DGKA, DHDH, DHRS4, FGFR1, GARS, GNG13, HTR2B, IL10RB, IL12A, INPP4A, ITGA9, LTA4H, LYZL1, METTL2B, NCR2, NFX1, OR8B4, PDE8B, PRSS2, RPN1, TKTL2, TNFRSF4, VAMP2, CACNA2D2
Negative_5560	CD4, GSN, ITK, NGF, ACACB, ACP6, ADCY10, AGRP, ARG2, ARHGEF7, CSNK2A1, DGKA, DPM1, ELK1, FARP2, GFAP, IAPP, MGAT4A, NEFM, OPLAH, OR11G2, OR4N5, PER1, PGAP1, PIP5K1B, PRSS3, SH2D1B, SRD5A1, STX18, UGCG, WHSC1L1, ATP6V0E1
Negative_5561	AUH, ID3, ITK, KMO, NLK, SMS, ACSL3, AMY2B, APOA2, ATP5J, B3GALT2, BBC3, BPNT1, C3orf10, CNTFR, CXCL1, DDX23, DLAT, ELK4, ENO3, FZR1, G6PC2, GALT, HNF4A, IL2RA, LAMC1, MYH7B, NRG2, OR4C13, OR4E2, OR52L1, OR7D4, OR8I2, P2RX6, PIAS3, PIK3CD, PLAUR, PLXNA3, SFRP2, SMAD7, TCIRG1, WASL, PRICKLE2, TNFRSF17
Negative_5562	F7, FAH, TNN, ALDH6A1, B3GNT3, CDC45L, COL6A2, COQ5, CREB5, EXT2, GLI2, GLUL, IL17A, IL4R, JAK3, LIMK1, MAFA, OR13C5, OR2L8, PPP1CC, PRIM2, RDH11, RPS6KA5, SOAT1, SULT2B1
Negative_5563	GH1, MUT, ALDH3B1, CACNG7, CASP10, CYP2F1, DGKB, DOLPP1, GCLC, GNA12, MYL9, OR6F1, ORC2L, CSNK1A1L, PLA2G12B
Negative_5564	NOG, ACACB, CANT1, CD226, DUSP7, GALNT11, HIF1A, ITGA10, NAT6, OCRL, OGDHL, OLAH, OR2A25, RASGRP4, SPRY4, ST6GAL1, TNXB
Negative_5565	CAD, EPO, F2R, NNT, ATF2, OR52K1, PRKAR1A, ATP6V0D1, ST6GALNAC6
Negative_5566	C8B, EZR, IL2, RDX, VCL, ADCY5, ALDH4A1, ARPC1A, ATP4B, BPNT1, C1QC, CALML5, CAMKK1, CDC26, DERL1, DUSP3, EPHA5, KLKB1, LDHA, MAD1L1, NAGLU, OR11H6, OR1A1, OR51I2, PARD6B, PRKAA1, RALB, SDHA, SFRP5, SULT2B1, TAS1R3
Negative_5567	SP1, ADH7, ARPC5, CACNA1E, CDC14A, CLCA4, COMP, EXOC7, FUT1, GALNT8, HYAL1, ICAM2, IL1A, MAOB, MGAM, NEUROG3, OR2C3, OR4C11, OR51B5, PPP2CA, SC4MOL, SCIN, STAT4, TJP2, TNFSF10, TOMM40, TRHR, VAMP2, HLA-DRB3
Negative_5568	F8, APH1A, CACNB4, CHKA, DGKB, GMPS, HPSE2, NCK2, OR1L3, OR1L8, ORC5L, P2RX3, PCCA, PDE10A, POLR3H, TNFSF12
Negative_5569	AUH, DHH, FUK, LTB, MPI, OSM, SDS, AACS, ACVR2A, ALG6, CAV3, CDC25B, CNGB1, CYFIP1, FGF1, FMO5, GATM, HNMT, IFNA17, IL13RA1, IL2RG, KIR2DL1, MAPK14, MLYCD, NAT5, NCK2, NUMBL, OR10G3, OR11L1, OR4K15, OR51E1, OR8K1, PPARG, PPP1R3C, PRKCH, RAP1B, RERE, RPE65, SEMA3B, SHISA5, TNFSF11, VDAC2, WHSC1L1, WNT4, MAPK8IP2, TNFRSF11B
Negative_5570	BID, FAH, ADH5, ADORA2A, BLVRB, CACNA1A, CCL5, CDC26, CNTNAP2, COX10, CYP2A7, DUSP16, IRAK1, OR1N1, RFXANK, SPRED2, TPM3, MAP3K7IP1, SUV420H2
Negative_5571	MUT, ADCY10, ATP6V0B, BCMO1, BMP6, CDKN1C, DHFR, EFNA2, GDF6, GDF7, MAP2K6, OR4K5, OR6Y1, OR8D1, PPAT, RPS6KA1, ST3GAL6, TNFSF4

Negative_5572	LHB, AARS, ANAPC10, ARPC5, BIRC2, BNIP1, CCL16, CDC6, EIF4E, FARSB, GALK2, GRM5, HDAC2, IDI1, IFNA16, IPMK, NCAM2, NUDT9, OR1M1, OR6B3, OR8D1, PANK2, PCYT2, PLCB1, PLXNB1, PRKACB, PRSS3, SOCS4, TRAF6, HLA-DPB1, PLA2G12B
Negative_5573	BID, GP5, INS, ACAA1, ACHE, ASPA, CCR3, CHUK, DAAM1, EARS2, GGT5, GNAL, GPX5, GSTM4, GUCY2D, HADHB, IL1B, ITGAD, LCAT, OR11A1, RAPGEF3, SHC4, SRGAP1
Negative_5574	CR1, ATP5A1, BCL10, CCL8, DBF4, E2F4, EPB41L3, GGT5, GSTM5, HEXA, IL1RAP, LILRB3, MAPK1, OR4C11, OR4K13, PDE6G, PER2, SLIT1, STX18, TPH2
Negative_5575	ATM, DDC, IHH, ACSM1, ANAPC7, ASRGL1, ATP2A3, ATP5H, CDS1, CLTCL1, CXCR3, CYP7A1, DGUOK, EGFR, FGF8, GALNT11, GALNT13, GMPR, HAGH, IL6ST, KDSR, KIR2DL4, KITLG, LAMC2, MAP3K8, MCM4, MTFMT, NFAT5, NFX1, NTF4, OR4K13, OR9A2, OR9A4, OR9Q1, PCK1, PFKFB1, PGK1, PTGFR, PTPRB, SPRY1, TLR9, TUBA1C, WWP2, PLA2G12B
Negative_5576	ACVR1B, B4GALT7, CCNA2, CD226, CDKN2C, CXCL12, EPHB4, FCGR2B, GALK1, GP1BB, IKBKB, IL6R, OR5D18, OR8G1, ORC6L, PSEN2, PTEN, TNFRSF8, VEGFA
Negative_5577	AGRN, LEFTY1, PFKL, SIAH1, UXS1, WIF1
Negative_5578	EDA, LEP, SYK, ADRA1B, ASRGL1, BET1, CDC27, CHDH, CTSB, GCNT1, JAG1, LGL1, MAPK13, OR2M3, OR2T34, OR51B5, OR8G1, PAK1, PIK3C2B, PKLR, PTPN11, SPAM1, TOMM40, UGT2A3, PAFAH1B3, ST6GALNAC1, TNFRSF10A
Negative_5579	ALG6, ATP6VOC, CDH2, CYSLTR1, DARS2, DDX55, ENTPD7, GALC, GNRH2, H6PD, IL18RAP, JUND, NTN1, OR2H2, OR8J1, ORC2L, PDGFB, PERP, PRLR, PRPH2, TYMS, UGCG
Negative_5580	CAD, CAT, CEL, TYR, ADH7, ALDH3B2, CAV3, CMAS, COL1A2, CYBB, DHDDS, EFNA4, GNAI2, GNAT3, MLLT4, OR2AE1, OR4F15, PGAM2, PGM2, PLOD2, PTGES, RAC1, SYNJ2, TRAF4, UROC1, UROS, WEE1, PDCD1LG2
Negative_5581	C1S, C7, HK1, ASRGL1, B3GALT6, COL6A1, CTF1, CXCL1, FOSL1, GGT5, GGT7, GNAI1, GNAZ, GRIA3, IQGAP2, IRF3, ITGA4, LAMA3, LAMC3, LIPT1, MAP2K3, MAPK8, METTL6, NCK2, OR13H1, OR1B1, OR2M2, OR51B2, PHKG1, PKMYT1, PLCE1, POLR3B, PPP2R1A, PRODH2, RUNX1T1, SETDB2, TJP3, ULBP2, ZNRD1, SUV420H1
Negative_5582	C4B, ACAA1, ATP2A1, BET1L, CLDN16, DARS2, ECHS1, EXT2, FGFR2, FGFR3, HAGH, IKBKB, NOS1, NT5C1A, OR8K1, RAPGEF3
Negative_5583	DCT, MTR, ABL1, ACPT, ADCY9, ALDH3A2, ATG7, ATP5B, BNIP1, CCR10, CDC7, CDK2, CDK4, CLDN19, CLDN22, COL3A1, CREB3L2, CTNNA2, GNAI2, HNF1A, HYAL1, INPP5A, IQGAP3, ITGA8, LCMT1, MAP2K6, MAP4K1, NFKBIB, NOX3, NRG1, OCRL, OR2A14, OR2M7, OR52A5, OR5AP2, OR5H2, OR5P3, OR9Q1, OXSM, PLXNB1, PPP1CB, PPP2R5A, PYGL, SEMA3F, ULBP2, UNC5C
Negative_5584	ABO, CD2, FN1, GNE, HK3, IDS, LPO, LSS, SFN, ACAA2, ALPI, APOA2, APOC3, BST1, CD274, CD46, CDC20, CHST12, CSF3R, CYP1B1, CYP2U1, DAAM1, DDIT4, DPM1, EDN1, ENTPD6, EPHX2, GMDS, HTR2A, IFNGR1, INSR, LAMC1, MYH1, OR4C46, OR4K15, OR4K2, PIGF, POLR1D, PPP2R2C, PRSS1, ROBO3, TAS2R1, TAS2R7, TUBB4, ATP6VOA4
Negative_5585	CBL, ADCY1, ANAPC7, B3GALT4, B3GALT6, CDC14A, CSNK1G2, DUSP2, OR6N2, TRAF3, TRMT11
Negative_5586	CREB3L1, HSP90B1, LAMB4, NTNG1, OR5B12, WHSC1
Negative_5587	ARD1A, ATP5E, BACE2, BCAT2, CAV2, CCNB1, CDKN2C, DGKZ, FZD4, HLA-DOB, IL23R, KLKB1, MAP2K1, NTF3, OR10H1, OR10H5, P2RX3, PPP3CB, PTGER1, SHMT2, SPCS3, UNC5B, WNT2B
Negative_5588	BTC, CCND2, CHKA, IRS1, MCAT, OR4N2, P2RX1, SQLE
Negative_5589	CCR4, IL1RAP, MAP3K4, PDK1, PTPRB, RFWD2, TCF7, TNFRSF9, UPB1, WARS2

Negative_5590	ID2, ACAA2, ACACA, BRAF, CCL17, CDC14A, CDC26, CDC7, DGKD, FSHB, GART, GIT1, GJA1, GUCA1C, HSD17B8, JAM2, KLRC1, LDHB, MAP3K7, NTF3, OR10J3, OR13C2, OR2T1, OR2T8, OR2W1, OR52A5, PCNA, PDE2A, PFKFB2, PIK3C2G, PIK3C3, PNMT, POLR1E, SETDB1, SMPD3, ST3GAL6, TPH2, WWP1, ALDH18A1, ATP6V1E2
Negative_5591	B3GNT5, CHSY3, CSNK1G2, DOLPP1, DOT1L, ENAH, GRIN2D, HSD3B2, IDI2, IFNB1, ITGAL, KCNQ1, KIR2DS5, MADCAM1, MEF2C, MTMR6, MYH8, OGDHL, OR11H6, OR14C36, OR1E2, PFKM, PIK3CB, PLCB2, PLCE1, PPP1CC, RPIA, TUBB1, UROD, WARS2
Negative_5592	C8B, CD2, NNT, ACAA2, ALG10B, ALPL, CDC14A, E2F2, ENPP1, GADD45A, GALNTL2, HSD17B3, IAPP, IKBKG, LDHB, MAT2B, MYL2, NUDT9, OR10G3, OR13C5, OR2A12, OR51V1, OR5D13, OR6B2, OR8J3, PNPLA3, POLR2E, POLR3K, PSEN2, RARS, SETD7, SOS2
Negative_5593	JUN, LPL, BDKRB2, DHDDS, GATM, GLG1, HTR4, IFNW1, IRF3, OR1Q1, OR4Q3, OR8U1, P2RX1, PANK4, POLR3B, PTGIS, RASGRP2, SETMAR, SNAI2, SOAT1, STX10, TSLP, UNC5D, XYLT2
Negative_5594	PXN, APC2, CHRNA7, CHSY3, CMAS, CPOX, CSNK2A1, CYP3A5, DDIT3, ENO3, FGF11, G6PC2, GPX5, H6PD, INADL, IQGAP3, LDHD, NPAS2, OR10Z1, OR4C13, OR52K1, PDE6D, PDGFB, PNPT1, PSME2, RERE, RRM2B, SDHA, SHC1, SPCS1, TNFSF12, TOLLIP, ULK1
Negative_5595	EBP, APOC3, ASCC3, CACNA1C, CAMK4, CHIT1, CLTCL1, DRD2, DTX3, EFNA3, FUT5, GRIN1, ITCH, ITGA1, NR5A2, OR10AG1, OR4D2, OR9A4, PDE4A, PIK3R2, PRKACA, PTK2B, PYCRL, SC5DL, ZIC2
Negative_5596	MPL, ACSL1, ALAS2, ARG2, AVPR1A, BCMO1, CD27, DGKI, GALNT6, MYL7, NME6, NR1D1, NT5C, ODC1, OR10A6, OR4A5, OR4N4, OR5I1, OR5M3, OR9A2, POLD3, PPP2CA, SMAD2, STAT2, UGT2B28, WARS2, HLA-DPA1, SERPINF2
Negative_5597	AMT, DBH, UBC, AARS2, ADH1B, ALDH1A2, ARSB, CNDP1, CX3CL1, CXCL11, DGKA, EVI1, FADD, FZD8, GALNT12, GDE1, HTR5A, IMPDH2, NFYB, NTSR1, OR10K1, OR8H1, PDE8B, PFN2, PLCZ1, PNPT1, PPP2R5D, RPS6KA6, RUVBL1, SIAH1, SOCS1, THBD, UBE2L6, VANGL1, WIF1, PAFAH1B1
Negative_5598	ARAF, OR2M5, QARS, TUBB2C
Negative_5599	TAT, ALG13, BBC3, GRM5, IL1R1, MCM7, OR7C2, RPN2
Negative_5600	VCL, ACP5, ACYP1, ALDH7A1, ALG6, ANAPC1, ATP5L, BUB1, CACNA1D, CCR10, CD247, CYP3A5, FSHR, GALT, HAGH, IL17B, KIR3DL1, LCMT2, LRAT, MAP3K14, ONECUT1, OR1J2, OR2L3, OR5B3, OR9A2, PIK3C2G, PPM1B, RARA, RASGRP1, SAT2, STK11, STX16, STX5, TACR1, TUBA3C
Negative_5601	CD38, CYCS, DDX23, DVL3, FSHR, OR13F1, PDIA4
Negative_5602	SMO, ABAT, ACSS2, ALOX12, AMDHD2, ATG12, ATP5B, CCL2, CCNB3, CERK, CLDN1, COMT, DPYD, EP300, GOT1, HMGCS2, HSD17B1, LAMC1, LDHD, MGAT3, NOX1, NUDT9, OR1E2, OR7A17, POLD1, POLR2C, RAP1B, RPS6, SAT2, SCD5, SELL, SMC1B, THBS1, MAPKAPK2
Negative_5603	IVD, SP1, TNN, ACTG2, AKT2, APOE, ATP4A, ATP50, BBOX1, CCDC6, CCR7, COX15, CTBP1, ENO3, GCNT4, GDF5, IL6R, INPP5A, ITPKB, LTBP1, MYH4, NAT6, NR4A1, OR10Z1, OR11A1, OR1A1, OR2T33, OR2T4, OR4C46, OR6T1, OR7A17, OR8H3, OR9Q1, PCYT2, PLK1, PNPLA3, PON3, PPP2R1B, RBPJ, RRAS, SETD1B, SGMS1, ST3GAL1, TGFBRI, TRAF3, TRIP10, HSP90AB1
Negative_5604	F10, AKR1C4, ALG10B, B4GALT3, CDC6, CDKN2D, CXCL10, FGF17, FZD10, KLRC1, MAD2L1, MAN1B1, MMP9, MYL9, NADK, NADSYN1, OR10V1, OR13A1, OR2AG1, OR2T33, OR5K1, OR5L1, OR6B3, OR8A1, PDE4C, PGM1, PIGC, POLD4, PTEN, PTGDS, RALGDS, RARS2, SEMA3B, TCF7L2, TNFSF10, TOMM40L, WNT11, MAPKAPK5
Negative_5605	ACYP2, ALDH5A1, ATP5D, B3GALT4, CACNG7, CCNB1, CYP2A6, DDIT4, DDX55, GZMB, IFNA5, MAN1A1, MGST3, MYH15, NR1H3, OR4M1, PDHA2, STAT5A, THBS4, VTI1A

Negative_5606	MVK, CSNK1D, GNRHR, IL9R, LAMA4, OR10G4, OR10H3, RRM2
Negative_5607	FH, MET, AKR1B1, APLP1, CCNG1, CREB5, EFNB3, EPHB6, EXTL3, FARS2, FPGT, GCNT1, GGPS1, GNG13, HAAO, IDH3G, IL23A, IL28B, IL8RA, KCNJ11, MYH9, OR13C4, OR4D2, OR8I2, ORC4L, ORC6L, PHKB, PLXNA1, PRKCB, PTEN, QPRT, RELA, SH2D1B, SHMT1, SMC1B, SPRED1, SRD5A2, SRGAP1, TNXB, TP53I3, WWP2, ZFYVE9, ATP6VOA4, B4GALNT1
Negative_5608	DDO, OAT, OGT, UBC, ADH1A, CDH1, COX10, CXCL12, CYP21A2, DEGS2, DGAT1, EFNB1, ERBB4, FUT2, GAD2, GNA12, GPX7, GUCY2C, HES1, ITGB8, KIR3DL1, KLRC1, METTL2B, NRXN3, OR11L1, OR13C3, OR2L3, PLOD1, PPP1CC, STAT5B, TSLP, UBE2L3, ULK1, TNFRSF6B
Negative_5609	F2R, ABLIM3, CCR4, CYP2A6, DEGS2, EPHA4, FARSB, GCLC, IL1A, ITGAL, LAMB2, LYZL1, MAD2L2, MAP4K4, MTHFD1, OR51B5, ORC5L, PDGFRB, PIAS3, PLA2G10, POLE, POLR2B, POLR3B, PRKAB1, PRKACG, RELA, RPS6KA2, WWP2, MAPKAPK2, ST6GALNAC4
Negative_5610	C2, HAL, ADAM17, ALDH1A2, ALPL, ATIC, B4GALT4, C1QB, CLDN9, CLTC, FOXA2, GSTZ1, HYAL1, IDI2, IFNA4, IL11, ITGA5, LYPLA2, MYH11, OR1N1, OR56A4, OR5P3, OR6K6, PLCB4, PPP2R2C, SLC25A6, SLC2A1, SOCS1, TAS2R3, YWHAE, PDCD1LG2, TNFRSF18
Negative_5611	APOA5, CYP2A13, IL18R1, LHCGR, LIAS, NCOA4, NFAT5, PHKA1, PRKCZ, SLC25A6, TRPC1
Negative_5612	ATP6V1F, CYP2C9, GALNT13, NFATC4, POLR1D, ULBP1, MAPKAPK3
Negative_5613	EGF, IL4, NNT, AHCY, ARHGEF4, BCKDHB, BIRC3, DERL1, FZD8, GAD1, GALNT9, GDF6, GOSR2, MAP4K3, NFX1, OR10X1, OR14J1, OR52L1, PNPO, PPP2R1A, SOAT2, TAS2R1, TGFBRI, TKTL1, TNFSF9, TUBB6, UCP1, WARS, WNT5B
Negative_5614	CFI, ARSD, BDKRB2, CASK, CCL26, HTR2B, SEMA3A, UGT2B11
Negative_5615	AUH, KIT, ME1, TEC, APLP1, BHMT, CACNA1F, CCNG2, CCR3, COMP, DDX23, EVI1, FPGT, FUT4, HRH1, LCP2, LMO7, NAT2, OR2Y1, RPS6KB1, SEMA4G, SPTAN1, SRGAP3, TAS2R16, TICAM2, TLR2, UPP1, UROC1, TNFRSF14
Negative_5616	C6, DCT, DDC, ADH6, AKR1C2, AKR1D1, ALG6, ARSE, ASPA, BCL2L1, CCL3, CDH1, CLDN7, DHCR7, EPHB2, FGF5, FZD4, FZD7, HMBS, HMGCS2, HTR6, IL12B, INSR, KIR2DL4, LCP2, MFNG, MLYCD, NANP, NR1D1, OR2T8, OR8D1, PDX1, PIGX, POLA2, PTPN11, SDHA, ATP6VOA2, ATP6VOE1, TNFRSF10A
Negative_5617	LTB, ARR2, FPGT, OR4A16, PIK3R5, POLR3G, CSGALNACT2, TNFRSF1B
Negative_5618	CAD, TPO, CD44, CDC6, CLCA4, ENPP3, FLT3LG, NT5E, OR4D5, OR9Q2, PEMT, RASGRF1, TAP2
Negative_5619	ILK, LTB, ME2, TKT, ALG2, ATP4A, CACNG8, CAMK2A, DGAT1, EARS2, FGF21, GJA1, GNA11, HCCS, IARS, IFNA21, LIFR, NEU4, NFKB1, NGEF, NPR2, OR10K1, OR13A1, OR2F2, OR51B4, PARD6B, PAX6, PHPT1, PIAS2, PIP5K1B, PLA2G5, PON3, PPAP2C, PVRL3, SEMA4G, SLIT2, ST3GAL1, TRAF6, ARHGEF12, TNFRSF14, TNFRSF1A
Negative_5620	CR2, DHH, ILK, BACE2, CACNA1B, CD8B, CDC25B, CRB3, CYFIP2, DGAT2L4, DUSP4, EPB41L2, GLDC, GUCY1A2, H6PD, HTR7, ITGA10, ITGB2, LIAS, MAP3K3, MGLL, NCK2, OR2T33, OR2Y1, OR51I1, PIGS, PIP4K2A, PITX2, PLEKHA8, PLXNB1, PPM1D, RALA, SCP2, SOD1, SPCS1, SV2B, TNFRSF17
Negative_5621	FOS, IL3, ALDH1A2, B3GAT1, B3GAT2, CASK, CDH1, CHIT1, CLDN8, COL4A4, CXCL16, DDX18, EFNA4, FUT5, HES1, HTR7, LDHA, MAML3, MAP4K1, MASP1, NFKBIA, NME4, OR14I1, OR1E2, OR1L6, OR2AG2, OR2S2, OR4C13, OR51B6, OXSM, PARS2, PDHA1, PER3, PHKG1, PIGO, PIGU, PIGW, PPP2R2C, PPP3CC, RALGDS, RPN1, SMAD1, SNW1, TAS2R7, TNFRSF9, TP53, UNC5B, VDAC3, PNLIPRP2
Negative_5622	IL2, MAG, ACADSB, ARPC5L, ARSD, CD01, F2RL1, IDI1, IL13, LARS, OR2Y1, OR6C2, PCCB, PLCE1, PYGB, RBPJL, SLC27A1, TGDS, UGT2B28



Negative_5623	DDO, HDC, ACPP, ATP12A, BCM01, BLVRB, CD244, CXCL5, CYP17A1, DFFA, DHRS3, FGF3, FRAT1, G6PC2, G6PD, GMPR2, HSD17B8, IL19, MAN1C1, MBL2, M OV10L1, NCR2, OLAH, OR6M1, OR7D4, PANK4, POLR2L, PPAP2A, PSAT1, UNC5A, WARS2
Negative_5624	ADCY9, B4GALT5, CHEK1, CPT2, CTBP1, CTSB, DIAPH1, ECHS1, EFNA2, EFNA5, EHMT1, FZR1, GAS1, HMGCR, HSPB1, ITGA4, KAT2A, KCNQ1, KIR3DL1, KLC2, LILRB3, MAML2, MAN1C1, MYH8, NAE1, NAT5, NODAL, OR51G1, OR8B12, OR8K1, OR8U1, PAX6, PER3, PI4KB, PPCS, PRKAR2B, PRODH2, RBL1, SETD2, ST3GAL4, STX1B, TBL1XR1, TGFBR2, TYMP, HLA-DPA1, TNFRSF10B, TNFRSF17
Negative_5625	AK1, GP6, GSR, VTN, AASDH, ACVR2B, AQP7, ARNT, ATP6VOC, AXIN1, CCNA1, CDK5, CDK6, CES1, COL5A2, CREBBP, DCXR, DDX19A, F2RL2, FGF18, FGF20, FUT3, GNG12, GNG3, GSTA2, IL2RA, IRAK2, KLRD1, MAN1B1, MAP3K8, OR10A D1, OR51B6, PCNA, PDHB, PIK3C2A, PLA2G6, PPP2R5C, RND1, SPP1, SULT2A1, TM7SF2, TRDMT1, TUBB, UGCGL1, VKORC1, ATP6VOA4
Negative_5626	ATP5E, EXTL2, GNAI2, IFNAR1, LAMC1, MAP3K2, OR1N2, OR2C3, OR6N2
Negative_5627	GSR, MAG, NOG, ADH1B, ADRB1, AKR1B1, ALDH1B1, ALDOC, APOA1, CACNA1B, CCL16, CD79A, CDK7, CHUK, CLDN5, DGKI, DNMT3L, EHMT2, ELK4, GRIA2, HNT, IFNA13, INPP4B, ITGB2, LIPC, LIPF, LYZL1, MAML2, OCRL, OR1J4, OR2M4, OR2T29, OR56A3, OR8K1, OR9K2, PDE3B, PPP1R3B, PRODH2, RASGRP1, RPS6KA1, STEAP3, TKTL2, TRAF5, UCKL1, UGT2B28, XYLT2, ATP6V1B1
Negative_5628	IL10, OR3A2, OR4F4, PIGQ, SULT1E1
Negative_5629	GBA, ACADS, AMPD1, CACNG6, CLDN8, CPT1C, CXCL3, DAPK3, DGAT2, ENPP2, GATM, GNG13, GOT1, IKBKE, IKBKG, IL13, LEFTY1, NCK1, NOTCH1, NTRK1, OR4C15, OR51E2, OR56A1, PAK1, PGK2, PGM3, PIK3C2A, PRKG2, PTGER3, RDH16, SETD1A, STMN1, TAS2R16, TIAM1, TNFSF4, TUBA1A, YWHAG, ATP6VOD1
Negative_5630	BAX, BTK, CFI, TPR, ACLY, ACSM3, AMY2A, ATG12, BET1, CRY2, CYP11A1, CYP26B1, EPHB1, FGD3, FLOT1, GUCA1A, GUCA1C, HEMK1, IFNG, KLK3, OR2A25, OR2T1, OR4C16, OR52E6, OR9A2, PIAS2, POLE, PTCRA, RAC3, SIAH1, SSH2, STAT5A, STX8, TGFB2, WBSR22, PAFAH1B3
Negative_5631	ITK, TFG, AARS2, ACOX1, ALDH1L1, ATP5C1, CD79A, CDC25A, CNGA4, DDX18, DUSP1, GLO1, HSD17B1, INPP4A, ITGA2B, MAP3K8, MPST, NAE1, NR5A2, OR10J3, OR2T1, OR3A3, OR51B5, OR9G1, PRSS3, PTPRC, ST3GAL6, PDCD1LG2
Negative_5632	ADH1B, BDNF, CACNG5, CASP7, CDC45L, CNTFR, DDX19A, IRS4, OR1N1, OR2Y1, OR7C1, PEMT, RAD51, RDH12, RPS6, TM7SF2, TRAF4, TYROBP, VDAC3, SERPINB5
Negative_5633	KMO, CALML3, CCR1, CHRNA7, CLDN9, CYP26B1, GP1BB, OR4Q3, OR52B4, SLC2A4, TCF7L2, SERPINA5
Negative_5634	EZR, NGF, CAMKK1, CD47, CYP1A1, DRD1, ENPP2, GART, IL19, MAP2K1, MARS2, MEF2C, PDGFC, ULK3, WNT3A
Negative_5635	C3, ATP4B, AVPR1B, BLNK, CDKN1A, E2F3, EPHB4, EXTL1, FTMT, GNMT, GRIA3, MAP2K3, MYH8, MYH9, OR14I1, OR1L6, OR4A5, PDE6D, PDK1, PIP4K2A, PNPO, PTPN1, RAPGEF1, RASGRP1, SMAD3, WNT10B
Negative_5636	ABL2, FZD6, HPSE, OR2D2, OR4X2, OR5AS1, PLD2, PTPN11, SH2D1B, TLN2, V ANGL2, ATP6VOA2
Negative_5637	ACO1, COL5A3, GJA1, HAGHL, HNF1B, MTHFD1L, OR4D1, OR4S1, ROCK1, TAP1, TUBA3C, TUBA4A
Negative_5638	CDC25B, IL11RA, OR11L1, PLOD2
Negative_5639	F11, SMO, ALOX15, AMDHD1, APOE, CDH1, CNTNAP1, CSF2, CTLA4, CX3CR1, DAPK1, EFNB2, FZR1, GSTA5, HAP1, HES1, LTB4R2, NEU4, OR13C9, OR4E2, OR5P2, PIGH, PIK3R3, PIP5K1A, PLA2G2E, PRKX, SMAD9, SULT2A1, TAP2, TBL1Y, UGDH, UGT2B7, USE1, VCAM1

Negative_5640	AK1, AUH, CRH, ACTN1, ADAM17, ADCY2, APBB1, BUB1, C9orf95, CCL25, CPS1, CSF2, DHRS4L2, DLAT, EFNA2, ENTPD3, EPHX2, FARS2, GPAM, GUCA1A, MKNK2, OR2C3, OR8I2, PCYT1B, PDE3A, PIAS1, PIAS2, PIGQ, PIP5K1B, PLA2G6, PMAIP1, POLE, PPBP, PRKAG2, PTGES, RAB23, RAP1A, RARS2, RASGRP1, RBKS, RETSAT, RPS6KA1, SESN1, SLC12A2, SPHK1, SPTAN1, TCIRG1, TPI1, VAV1
Negative_5641	C2, GSN, IDS, PAH, TK1, APPL1, ATP5A1, C4BPA, CARS, CMBL, CPT2, ESPL1, FGF19, FZD1, GALNT2, GGT5, GPD2, HSD3B2, IDI1, IQGAP1, KIR3DL3, LGMN, LRAT, MAD1L1, NCR3, NEGR1, OR13C4, OR13G1, OR2AE1, OR2F2, PANK4, PDXP, POLR2A, PPP2R2A, PRKCQ, PRPH2, RAPGEF1, RHOD, RXRA, SARDH, SEMA4G, SLC2A1, SMURF2, SV2B, TFPI, TICAM1, HLA-DRB3
Negative_5642	GLA, MAX, NLK, SRF, ACO2, AKR1C4, APOE, ATP5F1, ATP5H, BMP8B, CACNA1I, CCL21, CDC7, CHDH, CHRM2, CHST13, COL5A1, EPHA6, F11R, FGF3, FMO3, GT5, IFNG, IL15RA, KLRC4, MTHFD1L, MYH7, MYH8, OR13C4, OR13J1, OR1N1, OR4C12, OR4Q3, OR4S2, OR5R1, OR6K2, PDE4A, PFKFB1, RDH5, SEMA3C, TCIRG1, TM7SF2, TSTA3, WNT5B
Negative_5643	F3, GP5, BDH1, BLNK, CCL8, CCR7, CIITA, CLDN20, COL4A1, COQ7, CTSS, CYP19A1, ENTPD6, ERBB2, FIGF, GAB1, GSTM5, ICAM2, IRS1, LAMC2, MTHFS, NUMB, OR10G8, OR1I1, OR4C12, OR4D2, PAICS, PERP, PIP4K2A, POLE3, SLIT1, STK3, TNFSF4, UNC5A, WHSC1
Negative_5644	CKB, FH, GLA, ADH5, BTRC, CASP3, CRY1, DDHD1, DDX19A, DPYD, EPHA8, EPHX1, FGF17, HMOX2, HSPA8, HYAL2, IFNA14, ISYNA1, LALBA, LARS2, LIPT1, OR12D3, OR5AP2, OR5L1, OR6C1, OR6K2, OR6T1, OR8I2, OR8K5, PKMYT1, POLR2D, PPP3CA, RASSF5, STX12, SUV39H1, TNFSF4, MAP3K7IP2
Negative_5645	ALDH4A1, CHKB, CTBP1, CXCL12, DFFB, EPHB6, IDH1, OR1A1, OR7G1, RDH12, ST3GAL2, WNT3A, SERPINB5
Negative_5646	DBH, ABLIM3, CCND3, CLCA4, CYP2S1, EFNA1, GAB1, GALNT7, GPAM, GRM5, GSK3B, GUCY1B3, IL1R2, LIPG, OR2F2, OR6C6, OXTR, PDE8A, PFAS, PIGX, PLXNA3, PRKAR2A, PRKY, RCHY1, SESN1, SRGAP2, TBK1, ATP6V1G3
Negative_5647	JUN, CDC26, DLL4, GPD2, LAMB2
Negative_5648	F2, ALG3, ALG9, ARHGEF7, ATP5J2, BMP4, BMP7, CAPN2, CARD11, CCL23, CHAT, DARS2, DDX52, DGKD, EARS2, GFPT2, GSTA5, ICAM1, IL10RA, ITGA3, NAT6, NME7, NOTCH3, NRXN2, OR9A4, PDE3A, PTCH1, PTGES2, PTPMT1, SELL, ATP6VOE1
Negative_5649	BTK, CASP8, FGF10, ITGAV, OR8H1, RND1, UCK1, PRICKLE2
Negative_5650	HGF, AK3L1, ATP6VOC, BDH2, CCDC6, CCL16, COMP, DTX4, DUSP14, LARS, OR7D2, PGAM4, PLCD4, PLIN, RHEB
Negative_5651	GNE, HPD, SP1, BMP8B, CD226, CXCL3, FGD1, GALNT13, GNAL, HAGHL, IFNA8, IRAK3, MAP3K8, MGAT3, MIOX, NCAM2, NOS1, NT5C1B, OR6B2, PCNA, PIP5K1A, POLD4, PRODH2, SENP2, SLC12A2, SNAI1, YWHAQ
Negative_5652	CBL, ME1, ALDH1L1, ALG3, ATP5D, CDC6, CMAS, CPT1C, CX3CL1, EPHX2, FABP3, FZD7, GL01, JAG2, MAP3K14, MYLK3, NKX6-1, OR10C1, OR1N2, PLEKHA8, PPA2, RBX1, SESN1, SYNJ2, TAS2R16, TAS2R4, TRAF1, TUBA4A, WARS
Negative_5653	OSM, SDS, ACTG2, AKR1C3, CADM3, DDIT4, FGF4, GGT1, HSD17B7, KIR3DL1, MAGI2, MCM6, MGAT2, NT5C, OR2T33, PER3, PERP, POLD3, POLE3, PRKCA, RAD51, RCHY1, SOAT1, TUBA3C
Negative_5654	CLCA4, CLDN9, COX10, DOLPP1, EVI1, GRIN2B, LRDD, MTMR1, NODAL, PFKL, PIP4K2B, PPP2CB, TLR3, VDAC1
Negative_5655	AANAT, ACSL3, ADH7, ALG13, CCL15, DDIT3, DGKI, DGUOK, DVL1, INHBC, OR6K6, OR7G3, PDE5A, PRKAG2, PRKG1, PTCRA, SETD1B, ST3GAL6, TBL1XR1, ZFYVE16, HLA-DQA2
Negative_5656	AK3, NGF, TNF, ALDH2, ARPC2, C5AR1, NME7, OR51A7, OR5A1, OR6K6, PAK4, STX1B, TPM3

Negative_5657	FAS, GLA, MVD, ALOX5, B3GAT2, BCL2, CCL1, CCL21, CDC45L, CPT2, FGF23, GGT5, HNMT, IL8RB, LAMB1, NAT2, NKD2, OR2T34, OR4C15, OR52B6, PGS1, PLCZ1, PPP1CA, RHOQ, ROBO3, SH2D1A, TDO2, TIRAP, HSD17B10
Negative_5658	C3, GPI, ABAT, CACNB4, CD244, CREB3L2, IL13RA2, ITGB4, LIPF, MCM4, NARS, NCF4, OR5M8, PIGK, RAC1, RUNX1, ST8SIA1
Negative_5659	F7, MIF, ACOX2, ALDH1A3, ANAPC2, CCR9, IL13RA1, IL1A, ITGA8, KIR2DL3, OLR1, OR4K5, OR5B12, PFKFB3, PLCD4, QARS, SESN2, STEAP3, STX10
Negative_5660	BMP5, CCNB1, CFTR, CYP11B1, GALNT2, MYH1, OR2A2, PDGFA, PDGFRA, PPAP2C, PRKAG1, SCLY, SETD8, STAT1
Negative_5661	ADA, GDA, LAT, ACVR1, ARD1A, ASNS, BUB1B, CNTF, CYFIP2, FGF6, GGT7, GJA1, GOT1, GSTA4, HSPA1B, IFNK, MAP3K8, MINPP1, MMP1, PGLS, PLCB1, RAC3, RFNG, SMPD3, STX18, TLR4, TNFSF9, UXS1
Negative_5662	NLK, LAMA4, MAP4K1, PPAR, PPP2R5C, STX3, TIAM1, WNT2
Negative_5663	FUK, GSS, IL4, MAX, ALG10, ALPLP2, B4GALT1, BCAT1, CACNA1F, CBR3, CDC14B, DHRS3, ENTPD6, FGF18, FZD5, IL25, IMPA1, ITGAX, NFATC2, OR2F1, OR4A15, P2RX2, PIGC, PTGER1, TAS2R9, TGFB1, TGFB3, UGT2B17, ATP6VOA1, MAP3K7IP2, TNFRSF12A
Negative_5664	CR2, ACTA1, ATP5L, CCNB3, CXCL13, DDX50, GAPDH, GLDC, GUCY1A3, IDH1, IL1A, MMP9, OR10H5, OR7C1, OR8H3, RHEB, UNC5B, ZFYVE9
Negative_5665	MOS, MVD, RDX, SMO, AGPAT2, ARPC4, CX3CL1, DERA, DUSP6, EXTL1, GFPT1, GNG13, HLA-C, IL12RB2, ITGA3, MAP2K2, MTAP, NOTCH1, NT5M, OR56A1, OR7G3, OR8K5, ORC4L, PLXNA2, PNLIP, RPS6KA4, SC4MOL, SLC27A5, VEGFB, ST6GALNAC3
Negative_5666	C5, DCT, MOS, NGF, TH, AADAC, ADH4, AKR1C4, ALG2, ARSD, CCR5, CHIT1, DTX2, GLUD2, GOT2, HNF4G, ITGA6, KCNJ11, KLRC2, MAN2A1, MAP2K6, MTFMT, NKX2-2, OR10C1, OR4N5, OR52M1, OR52R1, OR5D14, PAX8, PFKFB1, POLR2C, PVRL2, RFX5, RPS6KA2, SHISA5, SPRY4, SUCLG2, UGT2B17, SUV420H1
Negative_5667	ATM, CGA, ACOT11, ACSS3, ARSA, ARSD, CCDC6, CDH3, CYP2A13, DGKH, DUSP9, G6PC, MAPK11, NTNG1, OR10G7, OR52K1, OR5F1, PDGFRB, PPP2R2A, PTEN, RRM1, SIPA1, SPRY4
Negative_5668	GP6, NGF, AGPAT2, B3GALT5, BST1, C1QA, CD86, CDC45L, CLCF1, CNGA3, FUT7, GNPAT1, HRAS, IL8RB, MAP3K1, MCCC1, NUDT9, PDE3B, PLXNA1, PRKAR2B, PTPRR, SDHD, SOS1, TNFSF14
Negative_5669	ATP5B, CD79B, CHAD, CLDN3, CX3CR1, DOLPP1, HPRT1, MAP3K7, OR10Q1, PFKFB1, PFKFB3, PIGS, TUBA3E
Negative_5670	MET, ABCC8, ACAD9, ACSS3, ALG13, ANPEP, BAAT, CACNG5, CCL5, CTNNA1, DPAGT1, ENTPD7, FRAT2, HSD17B1, IKBKE, INMT, IRF7, L1CAM, LDHAL6A, NFX1, NKD2, OR13H1, OR4K17, OR52N1, OR52N4, OR5J2, OR7G2, OR9G1, OR9Q2, PARD6A, PDHB, PGAM4, PKLR, PLXNA1, POLD1, PORCN, PRPS1, PTCH2, SMPD2, TAP2, TRPC1, WARS2
Negative_5671	GSN, MAX, NT5C, OR4B1, OR5T3, PCCB, PRKAB1, UXS1
Negative_5672	CFH, MUT, VCL, ACSL3, ADH5, AKR1C2, ALOX12B, BMP7, BRAF, CAMK2D, CARD11, CCR4, CD36, CD40, CHKB, COL5A2, CSDA, DAD1, DDIT3, F2RL3, GCNT2, HTR2A, IL22RA2, ITGA1, KIR2DS5, MAP3K1, MCCC1, OR13G1, OR2A12, OR4C12, OR8A1, OR9A4, PARD6B, PFKL, PFKP, PTPRB, PYGB, PYGL, SLC25A4, SMAD4, STK36, TDO2, ST6GALNAC5
Negative_5673	KMO, ABCC8, ACAA1, ACADL, ATP12A, CACNA1F, CD48, CDIPT, CYP2C8, CYP3A5, DGKG, DUSP1, EARS2, EFN1, FZD10, FZD9, GYS2, GZMA, JAG1, MAP3K6, MCCC1, MTHFR, MYH1, NCKAP1L, NFKBIA, OGDH, OPLAH, OR10A3, OR1S1, OR2F1, OR4E2, OR5P3, PAK1, PDCD1, POLR3K, PPM1B, SHMT2, SLC27A1, STX4, ZBTB16, ATP6V1G2

Negative_5674	C5, CFH, IL8, MVD, PRL, ADH1B, ADSSL1, ALG1, ATP5G3, BIRC5, BMP7, CDK4, CDKN1A, CDS2, CLDN3, DARS2, ENTPD4, FGF6, IL10RB, ITGB1, MAP3K11, NPR1, OR1B1, OR52L1, OR52N2, PHPT1, PIGH, PNMT, PPARD, PRPH, PTAFR, SOCS4, TGFB2
Negative_5675	AMDHD2, ATP5A1, CACNB1, CHEK2, CRKL, HMGCS1, JAM2, KCNJ11, OR9A2, PDGFC, PLCE1, RPS6KB1, YWHAB
Negative_5676	EGF, IL8, SYK, VCL, CDC25A, CHDH, CSNK1A1, CTSG, EPHB4, GALNT14, HEXB, ITGA7, JAK1, LIAS, PLXNB2, PSEN1, PSPH, PTPRM, RBL1, SESN2, TUBB, VANG1, ATP6V1E2
Negative_5677	GDA, MVK, ACADVL, ADRBK2, CHPT1, CREB3, CSF3, DVL1, EDA2R, GPAM, GSK3B, IL23R, ITGA3, LRP6, MAP3K3, MTHFS, NFX1, OGDHL, OR10H5, OR2A25, OR2L2, OR56A4, OR6C74, PECAM1, PLIN, PLXNA1, PPID, PPP1CB, PPP3R1, PTCRA, RBPJ, RXRG, SC4MOL, SDC1, SHISA5, SUCLG1, UPP2, YWHAB, AASDHPPT, ATP6VOA4
Negative_5678	FGA, GK2, UBB, UBC, AMD1, B4GALT7, CCL24, CNTN1, CRLF2, CXCL11, DDB2, DDX18, DNMT3L, HADH, HAGH, LAP3, LLGL1, OR1J2, OR1K1, OR4F4, PDHB, PIK3C2B, PIK3CG, PPP2R5A, ULBP3, XYLT1, ST6GALNAC5
Negative_5679	FGFR3, PIP5K1B, PTEN, QPRT
Negative_5680	ATF4, GAL3ST1, POLD4, RPS6KA6, THTPA, TYROBP
Negative_5681	ACP1, AMY2A, CLDN1, CSF2, CYP1A1, GNB1, HNF1B, MAGI1, NFAT5, OR4C11, PFN1, RFXANK, SCP2, WNT3A, CACNA2D1
Negative_5682	ACTN4, ADRBK2, CACNA1D, CDH5, GALNT13, MASP1, MASP2, OR51F1, OR5M9, PFKL, POLR3D, RUVBL1, SEMA4G, USE1
Negative_5683	GDA, GP9, UBB, ACSM5, ADCY1, ADIPOR2, ALPI, AMY2B, ARPC4, ATP4B, ATP5J, B3GAT3, CD55, CHDH, DGAT1, DLAT, DPM3, EPHB2, EPHB4, EPHB6, FBXW11, HSD3B2, IL20RB, NCKAP1L, NCR3, NT5C2, NT5C3, OR4X1, OR51I2, OR52E2, OR52N1, OR6K3, OR6N1, PDIA4, POLR1E, PORCN, PPBP, PPP5C, PRLR, PTPN5, RPS6KA3, SMAD6, TOMM40, TRPM5, ATP6VOA2, CSGALNACT1, TNFRSF17
Negative_5684	IL2, TK2, ABP1, ACADSB, AGXT2, AKR1C2, ALG11, CD3E, CD79A, CEBPA, CHPT1, DAAM2, DCTD, FRAP1, HNF4A, ITGA5, ITGAL, KIR3DL2, LAMB2, MCM5, MRAS, NCOR2, NQO1, OR10A7, OR10V1, OR12D3, OR2AT4, OR2T5, P2RX6, POMC, RRM2, TAP1, TKTL2, UPB1
Negative_5685	GP5, ACVR1, AMY2B, ANGPTL4, ATP4A, ATP5G3, BDKRB1, CHRM5, CLTCL1, CNTN2, CREB3, CRHR1, CXCR4, DAAM2, DERL1, DGKG, DHDDS, DLL3, DPM1, FOXA3, GLI1, GP1BB, HPRT1, HSPA2, IRS1, KIR3DL3, LIPA, MAD2L2, MAP3K6, MAT2B, MLLT4, MTHFD1L, MYLK, NCOR1, NEFL, OR1E2, OR51G1, OR51Q1, P2RX1, PCYT1B, PIAS3, PRKCD, RPE65, SESN2, SETD2, VAMP3, VAV3, ZNRD1, MAPKAPK2
Negative_5686	BBOX1, CYP2A7, G6PC2, GBE1, HCCS, IL29, SMAD9, SUV39H1, THY1
Negative_5687	GH2, ADCY4, CNTN1, CRY2, CSF3, CYP1B1, HIBADH, MAP2K2, NAT5, NPR1, OR8K3, PDGFD, PHPT1, RDH12, RPN2, STAT4, TLR4
Negative_5688	ABO, AADAC, ALG9, ARHGEF6, ARRB2, BACE1, CAMKK2, CBR1, CCL22, CDC45L, CLDN18, CMPK2, CX3CL1, CX3CR1, DBF4, DUSP5, ENTPD1, EPHA6, FGF3, GFPT2, GYS2, HGSNAT, IRS2, JAM3, MAD2L1, MAGI2, MMP7, MPP5, OR10AG1, OR11L1, OR2AE1, OR2G3, OR5B21, OR8D2, PIGN, PIM2, PKM2, PTGIS, PTPN6, RPS6KB1, RRM2B, SMARCA2, TAS2R8, TIRAP, TRAF6, WNT10B, TNFRSF11B, TNFRSF6B, TNFSF13B
Negative_5689	CTNND1, IL17B, UNC5B
Negative_5690	DBI, FAS, HPD, ME1, MUT, ACSM3, ADRB1, AGXT2, ATP12A, BIRC3, CCNE1, CXCL2, CYP1A2, DRD1, FDFT1, FGF11, GALT, GNAQ, GNAT3, IDH3G, INSR, KDSR, MTFMT, NCOR2, OLR1, OR2F2, OR4C11, OR9I1, PIP5K1A, PITX2, PLIN, SPCS1, STAT4, TUBB4Q, VANGL2, WNT7B, XCL2, ARHGEF12, SERPIND1
Negative_5691	APC2, CACNA1S, CDS2, HADHA, HSD3B2, IARS, IL8RA, ITGB1, MAD2L2, PFN4, RALGDS, SYNJ1, TRIP10, YWHAB, PAFAH1B1

Negative_5692	ID3, IL5, ACADVL, CTNNA1, DEGS2, DHDH, HADH, IL8RA, ITGAX, NSD1, OR10A3, OR1S2, OR51B5, OR8H1, PDE3A, SETD7, SORD, TAS2R40, TSLP, YOD1, PD CD1LG2
Negative_5693	AK7, IHH, KHK, PLG, ACP1, ADCY9, APRT, ATP6V0C, BDH2, BUB1, CAMK2A, CD C45L, CYP4A22, CYP4F3, DGKB, EPHB2, FLT4, GALNTL4, GNAL, GP1BB, HLA-F, HTR6, IL8RB, KLRC1, MLLT4, OR4D5, OR6B3, OR6X1, PANK2, PGAM2, PGM3, POLR3A, PPP1R1A, PPP3CB, PSPH, RALA, RFWD2, SLC2A2, SPCS3, STAT4, T XNDC12, YWHAG
Negative_5694	HK3, MVK, STS, ACP5, ACTA1, ACTA2, AKR1B10, BCL10, CD72, CDC27, CHST12, DAPK2, DTX4, EGLN1, FECH, FGF9, GATM, HMGCR, INHBC, MPDZ, NAE1, NTRK1, OR10J3, OR1A2, OR6K2, PDE2A, PI4KA, SARS2, SETD1A, SV2A, THBS2, T HBS4, TNFSF18
Negative_5695	ADSS, ALDH7A1, BLVRA, CDC6, CDKN2D, CFLAR, CNTN1, GPX5, PRKAG1, RAB5A, RAD51, SLC2A4, UROS, ST6GALNAC4
Negative_5696	AUH, ACP1, ADRB1, ARPC5, ARSA, B3GAT2, CACNG2, CARS, CD47, CDIPT, CLC A4, CYP4F2, DPM2, E2F3, ETNK1, FUT1, GLUD1, GNG3, GPD1L, GSTZ1, IL17A, JAK2, KIR2DS5, MAP2K1, MGAT4A, MYL5, NAGK, NFATC2, NOX1, NRG3, OR5A S1, OR5AU1, OR5M3, OR8K3, PANK1, PLAT, POLD1, POLR3G, STAT5B, TACR2, TAS2R9, TCF7L1, TGDS, TPI1, VAV1, WNT9A, ST6GALNAC3
Negative_5697	CD80, CLCA4, EPHA7, EPHX1, HES1, IBSF, KLRC1, KLRC4, LFNG, MAP3K7, OR 5P3, SCP2, SFRP5, UBE2L6, UPP2, ZMAT3, ALDH18A1, ATP6V1G1
Negative_5698	BACE1, BCKDHA, CBLB, CDC6, CHAD, CHEK1, CLCF1, DUSP10, LIMK2, OR2L2, PTGES, SGPP1, SIGLEC1, TLR3, TNFSF14
Negative_5699	DCN, GK2, GLA, ABL1, ACMSD, ATP5E, B3GALT4, CLOCK, COQ7, CREB5, DUSP10, FGF2, GALC, GNAS, HHIP, HNF4A, IARS, IL8RA, INADL, LCMT2, LLGL1, NM NAT1, OR11H4, OR4F17, OR51B2, PAPSS2, PDE10A, PLCB1, PPP1R3C, RAPGE F2, RDH5, RFX5, RFXANK, RPRM, SPHK2, STX16, TAS2R60, TAS2R7, WNT1, YW HAG, KIR2DL5A, SERPINB5, SERPINF2
Negative_5700	C4B, CRK, ACOX3, ALOX15B, BLNK, CACNA1H, CACNG3, CES7, CLDN19, COL2A1, CYP2A7, EDNRB, FARSA, GALC, GNA11, GPX7, GSTM4, HA01, INPP5B, ITPK A, LIPC, MAOB, MKNK2, NANP, NCAM1, NT5E, OR2G6, OR2H1, PCCB, PIGB, PIK 3CD, PLCD3, PLD1, POLR3H, PPP2R2B, PPP2R5E, PRKAB2, PRKCQ, PTCH2, RB L2, SDC1, STX1B, SULT1A2, ATP6V0A4, CSGALNACT2, HLA-DPA1
Negative_5701	APP, FH, NGF, TNC, ARHGEF2, ATP6AP1, CDH2, COX15, CYP21A2, DAXX, EGLN 3, IFNK, LIPT1, NADSYN1, NUDT12, PLD1, PLXNB1, PRKAA1, RENBP, SFRP2, SRD5A1
Negative_5702	INS, ITK, ACSM2A, ATP5L, CACNG5, CCL19, CCR9, CD48, CYP21A2, EFN2B, F ARSA, FOXA3, GCNT1, HIP1, HMGCS1, HTR7, IL22RA1, ITGA1, JAK2, MAOA, M ETTL6, OR5AS1, OR5D14, OR6C1, PER1, PHPT1, PIGX, PIK3R1, RASA2, UCKL 1, UROC1, PPP1R12A
Negative_5703	ADC, C7, GGH, ACVR2B, AMDHD2, BMPR1A, CACNA1E, CCNG2, CD74, CHRNA7, C OL11A1, CXCL2, DAPK2, DNMT1, EFNA4, EPHB4, HYAL2, IL13, IL2RG, LDHAL 6B, NCAM1, NCR1, OR13G1, OR4S1, OR5B3, OR5T1, OR8D1, PHKA1, PPP2R5D, PRSS1, PTEN, RAB5A, SDHC, SOCS7, STX8, TAS2R60, TOMM40, UGCG, UGT2B4, YES1, ATP6V1G1, HLA-DPA1
Negative_5704	UBC, ACP1, ACP6, AGMAT, ALPL2, ASS1, BET1L, CHKA, CISH, CXCL11, DDB2, ENPP7, GFPT1, GMPS, GSTZ1, IDI2, KIR2DL3, LCP2, NEUROD1, NFATC3, NR XN3, OR1L4, OR2A14, OR2F2, OR4C46, OR6B2, PARD6B, PTAFR, RBX1, RDH8, RRM1, SELPLG, SIGLEC1, SMURF1, STAT6, STX3, TBL1X, UCK1, UNC5A, UROC 1

Negative_5705	EGF, IL6, KMO, ACADVL, ADSL, ALG10B, ATP5I, ATP6V0B, CD44, CDH5, CHRDL, CLDN5, COL4A4, CTSL1, CYP1B1, CYP2C8, DDX47, E2F1, EPB41L1, FGF3, GALE, GZMA, HBEGF, IARS2, LILRB3, MAP3K14, MBL2, NOTCH3, NT5M, NTN1, OR52I2, PDGFRA, POLE2, QARS, SARS2, SHISA5, SMARCA5, TAS2R38, TBL1XR1, TCF7L1, TNFSF14, YWHAH, ZAP70, ARHGEF12
Negative_5706	UBC, ACP6, ANAPC5, C1QC, GGT1, GUK1, HTR2A, IFNK, MGLL, NME7, NTF4, OR10V1, OR5B3, PFKFB4, PLCG2, PLK1, POLE, PORCN, SRGAP3, PPP1R12A
Negative_5707	GSR, ACVRL1, ACYP1, ACYP2, ADSL, AKR1C3, APPL1, CASP7, CLTB, CTNNA1, DHCR24, EDA2R, FABP1, FLT1, GALC, HLA-DOA, IGSF5, IL25, INSRR, ITGB6, KIR3DL1, LIFR, LM07, OR10K2, OR10Z1, OR11H6, OR5L1, OR8K1, OXCT1, PDE6G, PDE6H, PPP1CC, PRKAR2B, RPS6KA5, RPS6KB1, SORBS1, TGFB1, TIAM1, TUBA4A, VASP, WNT8A, XYLT1, TNFRSF13C, TNFSF13B
Negative_5708	IL3, ACS3, ALDH3B2, B3GALT1, CACNA1G, CACNG7, CASP6, CD80, CLDN8, CYP2A7, CYP2C8, DHODH, EIF4B, ETS1, GDF7, GMPR, GP1BA, HHEX, HMGCS2, IFNA21, IL1B, ISYNA1, ITGB8, JUND, MAP4K1, MGST2, MOV10L1, OGDHL, OR51B4, OR52W1, OR5B12, OR8A1, PDE5A, PTGIS, QPRT, SEMA4G, SLIT2, SPRED1, TAS1R1, TGFB2, TUBA4A, TYRP1, ULK3, AASDHPPT, HLA-DRB5, PAFAH1B2
Negative_5709	NPL, ACTA1, ATG12, B4GALT1, CCL7, CXCL11, CYP4F3, DAXX, EDA2R, ENTPD3, GAS1, HSPA2, LCP2, MAML2, MYH7, NFKB2, OR13C3, OR52B6, OR52N2, PMM1, PMM2, POLR3K, PRPS1, SHISA5, SMARCA2, STX2, TUBAL3, VTI1B, ATP6V1B1
Negative_5710	ABLIM3, ACVR2A, ADRA1A, ALG9, ALOX12, ANAPC1, APOC3, ATP4A, B4GALT1, BIRC5, CACNG7, CAMK4, CCL5, CCNE2, CD19, CD22, DDX47, DDX56, ERO1L, FSHB, GADD45A, GGT1, GLUD1, HEXB, ICAM2, IL22RA1, IRS4, ITGA7, MGAT2, MGST3, MYLK2, NCF4, ONECUT1, OR10C1, OR1J1, PAK1, PARVA, PDE10A, PFAS, PIM1, POLD2, PTEN, PTPRB, RBKS, RFXAP, SSX2IP, TAS1R3, UGP2, PPP1R12A
Negative_5711	CTH, EDA, TPO, ABI2, ACSM3, ATP5G3, BAI1, BMPR1A, CACNG3, CCKBR, CHPT1, COQ6, CYP2F1, DUSP14, ERBB3, FASN, FGFR2, GBE1, GLO1, GNA15, GRIA1, IL11, IL20, IRAK2, KLRC1, NCK1, OR1L3, OR51I2, OR52W1, OR8J3, PFAS, PPP2R2B, RDH11, RHOQ, SELP, SELPLG, STX16, TD02, TOLLIP, VAMP1, WNT7B, ATP6V1C1
Negative_5712	MVK, ACAA2, ACAT1, ACTA1, ALG8, BTRC, CD28, CDKN1B, CDKN1C, COL4A4, CTNNA2, EPB41L3, EPHA2, FMO3, GCNT2, GNRHR, GRAP2, HMGCS2, ITGA6, LAMB4, NUDT9, OR2AT4, PARVB, PDHB, PEMT, PGAP1, RPN2, SH2D1A, STK3, SUOX, TCF7L2, TLN1, TNFSF8, WASF1
Negative_5713	ADC, EDA, FH, IL9, ALDH5A1, ANAPC2, C4BPB, CACNA1I, CD3E, CHRDL, CKMT2, CREB3L4, ENO1, FGF13, GALNTL4, GP1BA, GRAP2, IFT57, IKBKE, JAK2, JUND, LRP5, MCM3, MTHFD1, ONECUT1, OR10AG1, OR4M2, OR5B17, PLA1A, POLR2K, PRKACA, RDH12, SFRP2, ST3GAL4, STAT3, STX4, TAS2R10, ZNRD1
Negative_5714	FES, PVR, SCD, ACSM4, ACYP1, B3GALT6, CCND1, CD36, CDC45L, CLDN11, COL1A1, CREB3L2, CTSS, DAPK2, DNMT1, EPHB2, FARP2, FBP1, FLT1, GALNT6, IGSF5, IL10RB, IL3RA, KIR2DL1, LARS, MAP2K3, MGST2, MS4A2, MYH4, OR13C3, OR13F1, OR2AG1, OR7C1, P4HA2, PDE4D, PDGFC, PFAS, PIGW, PSME2, RARS2, SMPD2, STX18, UGDH, UROC1, YKT6, MAPKAPK3, PRICKLE1
Negative_5715	CTH, MVD, MYC, ARSD, ATP12A, ATP6V1H, COQ5, CYP2C8, CYP2F1, DAD1, DTX3, EFNA2, EHMT1, FZD7, GSTA3, HSPB1, IL24, INPPL1, LTB4R2, MECR, NME7, OCLN, OR10R2, OR13C4, OR2AG2, OR2D2, OR5T3, PDHA2, PIK3CB, PPCDC, PPP1CB, RRM2, SNAP25, SPRY4, TBL1Y, TP53I3, VEGFC, XCL1, MAPK8IP3
Negative_5716	HDC, XDH, ACOT12, APOC3, C1GALT1, CACNG7, CD226, CES2, CNTN2, EIF4E, HTR2A, IL6R, IRF9, MAP2K7, MAP3K12, MYH8, OR52K1, OR5T1, OR6C74, OR8J3, PAK1, PDGFRA, TBL1XR1, TGFB1, THY1, TLR2, TP73

Negative_5717	FST, ME2, FUT5, HMGCR, IL10RA, PIK3CD, PLA2G6, TBXAS1
Negative_5718	DBH, DLD, AGPAT2, ASPA, C1QB, CBLB, CD14, CFL2, CLDN4, CRLF2, CTSB, CY P2S1, DVL1, EPHA6, FABP1, FGF3, GALNT11, GCNT3, GOT2, GP1BB, HSD11B2 , IL3RA, IPMK, MAPK8, NEU1, NME7, NUDT12, NUDT9, OR10G9, OR5AN1, POLR 2J, STMN1, TAS2R41, TCF7L1, TOMM40L, WNT9B, ATP6VOA1
Negative_5719	ADO, CSK, PAH, ACOX3, ACTN4, APH1A, BDNF, BPNT1, CACNG2, CCL17, CDC45 L, CDK5, CHD8, CLDN17, CNTNAP2, COL2A1, CSAD, CSH1, CTBS, EFNA4, GLYC TK, IL17RA, IL18, MAP4K3, MTHFD2, OR10P1, OR2L3, OR6T1, P2RX6, PRODH 2, PRPS2, SLC2A4, TAS2R5, TOLLIP, TRADD, TRAF4, TRPM5, UGT1A10, SERP INF2, TNFRSF18
Negative_5720	AGK, BTK, AHCY, ALAD, ARPC4, ARSB, CCR2, CFL1, DDX19A, E2F4, FZD6, GAL NTL5, GJD2, GNAO1, GSTA4, HLA- G, IL28RA, INPPL1, ITGAV, LAMB1, LAMB4, MTFMT, NCSTN, NME7, OR52E4, O R52E6, OR5F1, OR6K2, OR8H3, P2RX7, PKLR, RASGRP1, SORD, WBSCR22
Negative_5721	ACHE, AKR1A1, ALDH2, CACNB1, CALML3, CDS1, DKK2, FARSB, FGFR3, GRIN2 A, HCST, HIF1A, IL18, IL1RAP, IL22RA2, INPP4B, ITPKB, JAG2, LEF1, MGS T1, MTHFD1L, MYD88, OR1A1, OR2T12, OR5B3, PIGM, PIK3R5, PPP2R5E, PRK AG2, PRODH2, PTCH1, RND1, ROCK1, SEMA7A, STAM, TP73, TRHR, WARS, YARS
Negative_5722	IDI1, AMY2B, CACNA1C, CCR9, CTLA4, MGAT5, MRAS, MYH8, SPRY1, STX6, SUC LG2, UNC5A, YWHAQ
Negative_5723	AK5, DBI, HDC, LTB, MPL, OSM, STS, ABLIM1, ACSM3, ACVR2A, CDC7, CLDN6, CTNNA3, CYBA, DGAT2, DHODH, FOXO3, GALNT1, GPD2, GSTM3, HLA- DOB, HMOX2, IL15, IMPA1, LCMT2, LEPR, METTL6, OR1F1, OR2T34, OR52M1, PDE8B, PIGW, POLR2G, PTCRA, PYCR1, RALA, RAP1A, RPS6KA5, SKP2, SP11, TLR2, TUBA1C, UBE2K, PLA2G12A, PNLIPRP1, SERPINF2, ST6GALNAC4
Negative_5724	HK3, RET, SDS, AHCYL1, AKT2, ALS2, ATP5J2, CCNE2, CHIT1, CLDN10, DVL2 , EPHA7, EPHA8, ESAM, FGF7, FGF9, FLT3, GART, GGT6, GNAZ, GUCY2D, IARS , IL9R, ITGB3, L1CAM, LYPLA1, LYZL1, MAPK7, OR10A7, OR10H5, OR1S2, OR 52K2, OR6C70, PARVA, PHKG1, PRLR, PRNP, PTTG1, RRM2, SOS2, ST6GAL1, T AS2R41, PAFAH1B2
Negative_5725	TH, ACAD8, CAMK2G, CCR3, CYP26C1, DKK2, FARSA, GMPR, IL19, NCF2, NUDT 2, OR4D1, PFN4, PIGA, PLXNA1, POMC, SMC1B, UBA7, UCP1
Negative_5726	F2, HAL, ACYP2, ADAM10, ADRB2, AGPAT1, AKT1, AOC2, ASNS, CCNA1, CLDN7 , DAAM2, DHFR, IFNA16, IFNGR1, IKBKE, IL10RB, IL17A, IL23A, ITGB6, MA T2B, MMP2, MYH2, OR11H1, OR2V2, OR5AK2, OR5F1, ORC1L, PIP5K1C, PLA2G 2A, PTDSS1, RASGRP2, SEMA4D, SETD2, SOCS4
Negative_5727	ARG2, ASRGL1, CREB3L3, CYP1A2, GMDS, GNPAT1, HTR2A, IL21R, IL22RA2 , IL6ST, IMPA2, LAMB2, LEFTY1, LLGL2, MAP4K3, NEUROG3, NTSR1, OR2A4, OR4A5, OXCT1, PAFAH2, PDGFA, PHKA1, PIK3R2, PRKAA1, PTPRR, PTTG1, SH 3BP2, TSLP, TNFRSF1A
Negative_5728	DCC, GGH, IL6, NF1, ALDOB, ALG11, AOC2, ARG2, ATF2, BMP4, CD19, COL1A1 , CTSB, DHCR7, DHRS9, DRD1, DVL3, EPHB2, FARSA, HYAL1, IL10RB, IRS4, L CMT2, LRAT, LTB4R2, OR52N4, ORC5L, PARVA, PIK3C2G, PLXNC1, PPP2R1A, PRPH2, ROBO2, WASF1
Negative_5729	EPO, GK2, AKT1, ARD1A, ASS1, CACNA1C, CCND2, CCR5, CLTA, COL2A1, CXCR 4, EDNRA, EPB41L1, FOSL1, FUT9, GP1BB, IRS4, MEF2C, MS4A2, NAT1, NKX3 - 1, OR2G2, OR2T34, OR4M1, OR52L1, PIAS4, PLA1A, PMAIP1, PPP1CC, PTDSS 2, PTGES, RAB23, RASA1, RDH10, RDH12, SLC25A4, SMPD1, SPTLC1, TAS1R2 , TAS2R16, WNT1, YOD1, CACNA2D4
Negative_5730	FES, IDS, TXK, ACADSB, ADH1B, AGPAT6, ALDH1A3, ALDH3B2, ATF2, BACE2, BDKRB2, CDC16, CDC45L, CHRM2, CREBBP, DDIT3, DNMT3B, FCGR3B, GRIN2B , NUDT2, OR4K13, OR5AU1, P2RX2, PLA2G2E, POLA2, POLR2E, RXRA, SEMA3C , STX7, ATP6V1C1, SERPING1, ST6GALNAC1, TNFRSF10D

Negative_5731	ATP5D, ATP5J2, ATP5O, BAAT, BBC3, BCAR1, BDNF, CCDC6, CDK7, CHD8, CRY2, DHCR24, EHMT2, FBXW11, FGF18, GALNT1, GART, GUCY2C, HYAL2, IAPP, I FNAR1, IL20, IL29, L1CAM, LPAR1, MYLK2, NAT1, OR1F1, OR2A42, OR4F15, OR51G1, OR7G3, PAPSS1, PIK3C2B, PPCDC, PPP1R3A, PPP3CB, PSPH, PTGES2, RRAS2, SOS2, ST3GAL4, TNFSF14, TPH1, TPMT, TYROBP, ALDH18A1, SERPINE1
Negative_5732	AASDH, GDE1, MYH8
Negative_5733	IVD, AQP7, AREG, CCL28, COX10, DPM1, GRHPR, IL11, IL28A, IL8RA, IPPK, LARS, MKNK1, NT5C, OR10G7, OR10R2, OR8J1, OR8K1, PTPN11, TAS2R42, TNFRSF11B
Negative_5734	F11, IL5, BUB3, CCL7, CDH1, CNGA4, CRKL, DNMT1, DUSP6, EPHB3, FGF2, GDF7, GOT1, GRIN2D, HIF1A, HTR2A, IRF3, LDHAL6B, NMNAT3, OR10C1, OR2F1, OR2T1, OR3A3, OR51F1, OR6Q1, OR7D4, OR8D4, OR9A2, PFKM, PIGH, PISD, PLTP, SPI1, SPRED2, SRGAP3, ST3GAL6, STT3B, TBL1X, THBS4, TKTL1, TNFSF4, VEGFA, WBSR17, SERPINE1
Negative_5735	CD4, MPZ, BDKRB2, CCND3, COL2A1, COQ7, DUSP9, FMO3, GAL3ST1, IL19, IL22RA2, MAOB, NAT6, NCK1, NFKB2, NFKBIE, OR10G7, OR10H2, OR1E2, OR2T4, OR4M1, OR6M1, P4HA2, PIK3R3, PIPOX, PKM2, PLCB2, POLR1B, PRKAR1A, PRKY, RBL2, RXRB, STX2, TPK1, UCK1, UNC5B
Negative_5736	CSAD, ENPP7, OR5AR1, OR6N2, ULBP2
Negative_5737	AASS, ACLY, CEBPA, CHAT, FTCD, GCNT1, GNAQ, GSTM1, IRS2, ITGB3, OR4F15, OXSM, PIK3R1, PLA2G5, POLR1C, RAP1B, ROCK2, SETDB1, SOCS7, SRGAP2, STAM2, UGT2B17
Negative_5738	CR2, ALPL, ASMT, CD8A, COL5A2, DHRS9, DPM1, LEFTY1, MASP1, MKNK2, MYH7B, PER2, PNMT, SGPP1, SMAD4, STX8, SV2B, TKTL1, TNFSF9, TUBB6, VAV2, PPARGC1A
Negative_5739	MUT, ACSL5, AKT3, APOA5, ATP5J, CALML5, CCL13, CCL14, CX3CR1, DDX41, DUSP16, FGF23, FMO2, FZD1, INPPL1, IQGAP3, MAPK9, MYL9, OR1A2, OR3A3, OR52I2, PDE1A, PIK3C2A, PLCG2, POLE3, POLR3K, PON1, RBKS, SARS2, SDHD, SKIV2L2, SULT1E1, TUBA8
Negative_5740	ADC, TKT, AOC3, ATIC, BNIP1, C1QA, CACNB4, CALML6, CCR3, CDC27, CDIPT, CYP1B1, CYP2E1, DLL4, GCAT, GCNT2, HPRT1, HPSE2, IFNA13, IL21R, LIAS, OR2G3, OR2V2, OR4N5, OR8B4, OR8H1, PGAM4, PHPT1, POLE, POLR2H, PPARG, PTPN11, RAPGEF3, SEMA3B, STAT6, SUFU, TACR3, TAS2R5, THBD, TP53I3, UNC5C, UPRT, VNN1, YWHAB, SERPINF2
Negative_5741	GCK, ADIPOQ, AKR1C3, CPT1B, FGF22, KLRC3, LILRB3, MCM6, SESN3, SOS1, TAS2R38, VAMP2
Negative_5742	ACTB, CACNB1, CTLA4, GLS2, IMPDH2, OR13C8, PIK3C2G, PLA1A, POLR2H, SETDB2
Negative_5743	NF1, ACVR1, AKT2, ALG8, BACE1, BCL2L1, DUSP10, GALK2, GCNT2, GSTM4, ITGAM, LIAS, MYH8, NT5C1B, OR1N1, OR2AT4, OR51V1, P2RX7, PRKAB1, PRKG2, PRKX, SENP2, SIGLEC1, SLC27A5, SMPD3, SMURF1
Negative_5744	IL3, ACVR1C, ADRA1A, AKR1C4, ANAPC2, CANT1, COQ5, CSF2RB, DDX50, DPM2, DTX3L, DUSP10, EDNRB, EFNA2, FCGR2B, FZD6, MBL2, NCF4, OR1E1, PHKA1, PIGF, PLCE1, POLD1, PPARD, PTPN1, RAB5A, RARA, RDH5, RHOQ, SETD1A, SPRED2, TAS2R16, TRADD, YWHAZ, HLA-DRB5
Negative_5745	TNF, ACAT2, ACTA1, ATP5G2, CACNA1C, CAMK2B, CBLC, CCL11, CD59, DARS, FRAT1, GART, GCNT4, GLG1, MAGI2, MGLL, NTRK1, OR4K14, PAX8, PLXNA1, RFXANK, TPK1, WARS
Negative_5746	CPOX, DFFB, ENPP1, FBXW11, FCGR2B, MCM4, NPR2, OR4A15, PIGQ, SULT1A2, TACR3



Negative_5747	BTK, CKB, GNS, ME1, ME2, SHH, UBC, ADSSL1, AMPD3, ATP13A2, B3GAT2, BMP5, C5AR1, CAV3, CCL15, CHST11, DKK4, FUT5, FUT7, HARS2, HLA-DRA, IDH1, IL23R, IMPA2, KLRD1, MAGI2, MINPP1, NT5C3, NT5M, OR2T34, OR52K2, P2RX1, PGK2, PLTP, PLXNA1, POLR2B, PRIM1, TBL1Y, TLR3, TRADD, UBA1, ATP6V1G1, ATP6V1G3, SERPINF2, TNFRSF17, TNFRSF1B
Negative_5748	C9, ACY1, ADRA1B, AHCYL2, ALDH3B2, APBB1, B3GNT4, CACNA1H, CDH15, COL11A1, CSF3, CYP2F1, DUSP6, EGLN1, FGF8, GGT6, HSD17B2, IRS2, MLLT4, NCOA4, NCOR1, OR2A25, OR2L2, OR2S2, OR4C15, OR4X1, OR6K2, PARS2, PTGES, RUNX1T1, STK11, TBL1X, THBS3
Negative_5749	C9, FGG, AGXT2, APAF1, B4GALT7, BMP5, BMP6, BUB1B, CLDN15, DHCR7, HARS, HMGCL, ICOSLG, NCK2, NTF4, OR13C5, OR13C8, OR2T5, OR4D5, OR8K3, PIAS4, PIGN, PPP1R1A, PRKCD, SCLY, TNFRSF10B
Negative_5750	ATP5G1, CXCL12, DLL3, KLRC3, NEU3, STX2, WEE1
Negative_5751	ALAD, ECSIT, ENPP2, FZD6, HLA-C, HTR6, OR9I1, PHKG1, PIP5K1B, PPAP2A, PPAT, PRKACB, PRKCZ, PRPS2, PTCRA, SLC25A4
Negative_5752	ACSM5, ATP5F1, CACNG2, CSDA, CYP2A6, DOT1L, EP300, HMOX1, IL28RA, LAMB3, PARD6G, PSME1, PYGM, SNAI1, STX8, SUV39H2, UGT2B4
Negative_5753	ACHE, FGD3, IFNA8, IFNW1, SULT2A1
Negative_5754	ATM, F11, ALG2, ATP5L, CALML6, CD244, CLDN17, DERA, DLL4, DUSP16, GFAP, GSTM4, IL13RA1, IL21, IQGAP1, IRF7, NFATC4, NFKB2, OR11H4, OR14I1, OR2V2, OR5L2, OR6N2, OR6T1, PHKA2, POLR3D, PRKAG1, PRKAG2, PTGDS, SHC3, ST3GAL4, UPP1, UROC1, HLA-DPB1
Negative_5755	ACAD8, ATP5G2, CHRM3, FRAT1, HSD3B1, NME6, NRG4, SELL, UPP1, TNFRSF11B
Negative_5756	HDC, IL7, AASS, ACADVL, ADORA2A, ALDH1A3, DAXX, EFNA3, FGD1, FUT4, GZMA, IL8RA, KAT2A, LAMB2, MTHFD2, OR2AG2, PIP4K2B, POLD3, PPT1, STX5, HLA-DPA1
Negative_5757	FOS, INS, PRL, PTS, ACTB, ACY3, AKR1C3, ALAS2, APRT, ATF2, CCL21, CCR4, CRLS1, CTLA4, CYP2E1, DGUOK, ENO2, FMO2, HLA-DOB, HPRT1, HSD3B2, ITGA7, ITGB5, JAK1, KLRK1, MAP2K5, MAPK13, NLGN2, OR2T2, OR52L1, OR5AK2, P2RX6, PDHB, POLR3K, PPP2R2A, PRKAR1A, PRKCA, RASSF1, RPS6KA2, SGMS2, SLC12A2, SMPD3, SMPD4, THBS2, THBS4, TSNA RE1, WARS, WNT2
Negative_5758	HK2, ITK, ADCY5, BIRC3, C7orf16, CLTB, CTBP2, CYP2B6, DAAM2, ENO3, GMPS, IGSF5, MAP3K1, OR1E1, OR2AG2, OR6C74, THTPA, TYK2, YWHAQ, CACNA2D3
Negative_5759	CD4, ME3, MTR, TK1, TNF, VTN, ALDH9A1, ALPPL2, ASNS, ATP5C1, B3GAT2, C5AR1, CD40, CLDN2, DGKH, ESAM, GIT1, GOT1, GPAA1, GSK3B, ITGA5, KIR2DL1, KYNU, MTMR6, OR10H3, PIK3C2A, RETSAT, SEMA3A, SETD1B, SLC33A1, SPTLC2, TLN2, TRAF6, XIAP, ZNRD1
Negative_5760	HAL, IL9, PRL, SYK, ADSS, ALAD, ANAPC5, B3GALT2, CCR3, CHDH, CHIT1, CSF1, DGKA, DLAT, E2F2, FLOT1, FRAT1, FUT9, HMBS, IGF1R, IL11RA, LIPE, LRR4C, MAP2K7, MAP3K11, MYH7, OR13J1, PGAM4, PGM2, PHGDH, PIK3C2G, PLCD3, POLR1D, PRKX, PTCRA, PYGL, SEMA7A, SLC2A1, SMPD1, PNLIPRP2, SLC25A31
Negative_5761	CR2, DCC, OTC, RFK, WAS, ALDH1A2, AMPD3, ARSB, BDNF, CAMKK2, CD40, CTNNA2, CXCL10, DOLPP1, EPAS1, FMO2, GALNT13, GCNT2, GGT7, GLG1, GNAI3, GNAQ, GYS1, HSPA8, IRAK2, ITGB5, MGAT4B, MYH9, NUDT9, OR1M1, P2RX4, PDE6D, PLCB2, PLXNB2, PNPLA4, POLR1D, POLR2I, RFXAP, RPE65, SENP2, SESN1, SH2D1A, ST3GAL2, VDACC2, WNT9A
Negative_5762	BLVRB, CD72, FOXO1, HMGCS1, LAMA4, RAPGEF4

Negative_5763	ILK, ACAA2, ARHGAP5, AXIN1, CACNA1F, CHST13, CTBP2, CTLA4, CYP4F3, DX56, ECHS1, GALNT2, GDF6, GFPT2, GNRH2, IL10RA, IMPA2, LIPE, METTL2B, MIOX, MLYCD, NAGS, NLGN1, OR10H1, OR13D1, OR4N5, OR8K3, PDE1A, PDPK1, POLR2I, PON1, PPID, PRIM1, PTPRJ, RHOD, SENP2, SOCS2, WNT3, EIF4E, BP1
Negative_5764	SMS, UBB, ARHGAP5, ARSE, B3GALT6, BCAR1, BLVRB, BST1, CD274, CD79A, CYP19A1, GDF5, GUSB, IPPK, MAML2, MAP3K13, NOX3, PCCA, PGAM2, PLEKHA8, RASGRP2, SNAP25, WNT7B, ATP6VOE1
Negative_5765	CDA, IL8, NF1, ATG3, ATG7, ATN1, ATP5H, ATP50, BACE1, CBLB, COQ5, CSF1, CSNK1E, CUL1, CYP4F3, DAPK2, DDHD1, DDX56, DHDH, EPHA3, FMO4, GALC, GAS1, IDI1, IL15, LRRC4C, MTMR1, NANP, NR5A2, NRXN3, OR11H4, OR51I2, OR6F1, OR8J3, PANK3, PDE3B, PIGQ, PIP4K2A, PNPT1, PSEN1, SEMA3G, SETD1B, STX2, TNFSF18
Negative_5766	GNS, ACTN4, GUCA1B, IFNK, IL20RB, LEF1, MGAT5B, OR4B1, POLA2, POLR2H
Negative_5767	HYI, OAT, AASDH, ADH4, ATP5E, BCL2L1, CACNG7, CALML6, COASY, CTPS, DLAT, FGF22, FGF9, HIP1, ICOS, INSR, INSR, MCM3, MYH11, NMNAT2, NOX3, OR10H4, OR14C36, OR2T8, OR51A2, OR5T3, OR6T1, OR8K5, PAICS, PAK1, PDE3A, POLR1E, PPA1, PPARA, ROBO2, ROCK2, RPN1, SARS, SLC2A2, SYNJ2, TAS2R5, TGFB3, TJP3, ATP6VOD1, HLA-DRB4
Negative_5768	CFD, CRK, EZR, NPY, ABI2, ACO1, ACSL6, ACSM5, ADCY8, AKR1C1, AVPR1A, CR1, CDC27, CHEK2, CHST11, EPHA7, GLUL, HLA-DOA, IFNA4, IL13RA2, IL6R, INPP5A, LAMB3, MAP2K6, MAT1A, MITF, MTHFD2, NCSTN, OR51Q1, OR52K1, PAK6, PDCD1, PDE10A, PDE6D, PSEN2, PSENE1, PTGS2, RPS6KA6, SULT2A1, VDAC3, HSP90AB1, ST6GALNAC5
Negative_5769	CD4, SRC, AGRP, ALG12, B4GALT5, BMPR1A, C9orf95, CCND3, CXCL10, DGKQ, FLAD1, FZD10, GOSR2, GUK1, HSD17B4, HTR4, IL5RA, INHBB, LDHB, MAD2L1, NCAM1, OR13C5, OR4D5, OR51A2, OR5B17, ORC3L, PLA1A, PLA2G2F, POLR2I, SPAM1, SV2B, TAS2R16, TRADD
Negative_5770	ABO, MSN, ADRBK2, ARHGAP5, ARNTL, MAML1, PIGL, PLCD3
Negative_5771	ACACB, ACADS, ADSSL1, ATP5H, B4GALT5, CCL4, CLTA, CTF1, CXCL2, DLST, ECSIT, EGLN3, FGF10, GSGT1, GGCX, GNG13, GPD1L, HARS2, IL2RG, MYH7, NTRK1, OR6C1, P2RX7, PHKG2, PIGT, POLE, PON3, PPBP, PPCDC, PTPRF, WNT5B, XCR1
Negative_5772	ACP6, AKT3, ATP5G1, CLCF1, DGUOK, GADD45A, GAPDH, GLUD1, NFKBIB, OR13G1, OR2T33, PFKFB2, RAB23, RPS6KA3, RRAS, SDC4, STX12, MAPK8IP3
Negative_5773	ENPP1, GPX5, IRS4, ITGA2
Negative_5774	CR1, SCD, ABL2, ALG12, ALG6, ARSE, CD22, CSAD, CYP1A1, DUSP6, EPHA5, GSTM3, HADHB, HARS, IFNA4, IL20, MYH1, NCR1, OR10J3, OR1C1, OR2L3, OR4K5, OR6N1, OXCT1, P2RX4, PDE4C, PLXNA2, PRPH, PTPN5, RPN2, SMAD3, STAM2, STK36, STX18, SULT1A1, TAS2R13, UPP1, ZBTB16
Negative_5775	FGA, CD01, IL28B, OR10G2, OR8A1
Negative_5776	GPAA1, IL10, LTB4R2
Negative_5777	ID4, PLG, SDS, SHH, CACNG6, CCL1, CDH2, CEBPA, CSNK1A1, CXCL2, CYP2B6, DHRS4, EFNA3, ENTPD5, FGD3, GGT5, GMPR2, GPAM, GRIN2A, HLA-F, LIMK2, MAP2K2, MRAS, OR2T10, OR51E1, OR5D16, OXTR, PCK1, PDHB, PIP5K3, PLXNC1, POLR1D, PTTG1, PYCRL, SAT2, SHMT2, SUCLG2, TAS2R49, TP73, TUBB2C, UNC5D, ATP6VOE1, ST6GALNAC1
Negative_5778	MAX, MET, MOS, ACY1, BBC3, BPGM, DGAT2, EPHA6, EPHB3, FLT3LG, GAMT, GMP, HSD17B7, MFNG, NFAT5, NOX1, OR4C13, OR7A10, PCYT2, PDGFC, PITX2, RASGRP4, SETDB1, SKP1, SULT1A4, WNT3, PRICKLE1, ST6GALNAC1, TNFRSF1B
Negative_5779	ABLIM2, AKR1B10, ALDH7A1, BUB1, DOT1L, HTR6, IKBKE, IRS4, KLRK1, LTC4S, MTHFD2, OR4Q3, PPN2, PIGU, RFNG, SARS, SCD5, STAM2, STX5, SUOX, SV2A, TBXA2R, VAMP3, GABARAPL1, GABARAPL2

Negative_5780	ACYP2, ASCC3, ASS1, CXCR4, CYBB, DEGS2, OR10K2, OR14A16, OR1N2, OR4X1, PLAUR, PPP1CA, RCHY1, UROD, B3GALNT1, SUV420H2
Negative_5781	ADSSL1, AFMID, AKT3, DERL1, LTB4R2, PFKL, RXRA, UBA7, VEGFC
Negative_5782	AGRN, CLDN20, FGFR4, GUSB, HHIP, LDHC, OR10C1, OR8H3, PIGM
Negative_5783	AK1, CTH, SFN, ACMSD, CCKAR, CDKN2B, CSNK1G1, CTSL1, GALNT5, GLI1, GN RH1, IDH3B, IL13, NOX3, OR4K17, PDE6D, TUBAL3, UGDH, WNT7B
Negative_5784	ATP12A, DAPK1, GADD45G
Negative_5785	ID4, ACADVL, ALG11, COL6A2, EHMT2, HSPB1, OR4A15, OR51E2, OR8K3, SPT LC1, TBK1, B4GALNT1, GABARAPL2
Negative_5786	F8, GSS, ACYP1, ADCY5, ADCY9, ALDH3B2, ALG1, AOC2, C1QA, CACNG1, CD74, CDC14B, CFL1, CTTN, CYP2U1, DDX51, DDX54, DGKZ, EPHA7, FGFR4, FUT6, GTSE1, HMGCR, HPRT1, ICAM2, IL21R, INPP1, MAP3K13, MAPK1, MYH11, NODAL, OR1S1, OR2AT4, OR3A3, PNMT, PTPN7, PTPRR, RIPK1, THBS4, UCK1, UNC5C, VEGFB, WASL, YKT6, ATP6V1G3
Negative_5787	EZR, ADRB3, CACNB3, CDH1, CD01, CLDN18, FGF3, GADD45B, GALNT6, HNF4G, LAMB4, LGMN, NRG3, OR10A4, OR10S1, OR14A16, OR2A2, PDE10A, PLD1, PROS1, STAT2, TUBA1C
Negative_5788	IDS, ACSL3, ALDH1A2, ATP5G2, BLNK, CDC16, CDC25A, CDK5, EXT2, MLLT4, PFKFB1, PRKX, RRM2, TSTA3, UNC5B, GABARAPL1
Negative_5789	EZR, VTN, B3GALT1, CD36, CHIA, CNTF, CSNK1G2, CXCR5, EGLN1, FGD1, FLT4, FZD3, GCAT, GJA1, IMPA2, MYLK, PFN3, PLCB3, POLD1, RAC2, RARA, SESN2, SH3BP2, TBXAS1, TSTA3, UBE2L6, ULK1, WNT9B, ATP6V1B2, PLA2G12B
Negative_5790	EZR, AMY2B, CD55, CD99, CX3CL1, DIAPH3, EFN1, FUT4, GALNT12, IL4R, MAML3, NARS2, NOTCH1, NRXN2, OCLN, OR13C8, OR2T8, PIP5K1C, PLXNC1, PT CRA, THBS4, UPP2, CACNA2D2, PDCD1LG2
Negative_5791	ALPI, BAI1, CDC7, CHKB, CLOCK, CPOX, CREB3L4, CXCL9, FGF1, FUT8, GCNT2, GMPPA, GYS2, OR6B2, OR8I2, PIGL, POLR1B, ST8SIA5, STAT6, TAS2R40, TNFSF18, TRAF1, ULBP1, WHSC1L1
Negative_5792	ADIPOR1, ADRA1B, CACNG2, CD226, GDF5, GNA15, LIPF, NOS3, NPR1, ORC2L, PLA1A, PLA2G6, POLA2, SH3BP2, PLA2G12A
Negative_5793	ASL, BTC, F2R, ACSM5, ALG1, ATP2A2, CACNG7, CD19, CD59, DCTN1, DGKQ, D HRS4, DUSP6, EIF4B, ESAM, FLOT1, FUT8, GJD2, HADHB, HIP1, HSPA8, LIPT1, MECR, NLGN3, OR8D2, PCCA, PDE10A, PFKM, PMM2, PPAP2B, PPARG, PRODH, SDC1, ST8SIA5, YWHAZ, ATP6V1B1, SERPINB5
Negative_5794	CEL, LEP, SMO, TXK, ADRA1B, ASMT, B4GALT5, CCNB1, CD86, CRHR1, CYP2A7, DVL2, EHMT2, ETNK1, GABARAP, GALNT5, GALNTL2, GART, GDE1, GNPAT1, LDHAL6A, LTC4S, MTHFR, MTMR2, NUDT12, OR10C1, OR1L4, OR4D2, OR6K3, PDPK1, POLR3A, PPP2R5B, PRKAR1B, PRPH2, PRPS1, RAB23, SOX17, TBXAS1, TRHR, UGT2B28, ULBP1, SERPINF2
Negative_5795	NEUROD1, SULT1A2, TNXB
Negative_5796	BTD, INS, ADCY2, ADRBK2, AGMAT, ALDH1A3, BHMT, CD72, CLCF1, CSF2RB, CXCR6, CYP3A5, DAXX, E2F2, ENPP7, FZD6, GNA01, GPLD1, HLA-DRA, HMOX2, IFNAR2, IFNB1, IMPA2, LALBA, MAD2L2, MAN1C1, MAPK7, MGAT5B, NCAM1, NOD1, OPLAH, OR13D1, PARD6G, PDHB, PHPT1, PI4KB, PIK3R5, PPP3R1, PRKCH, PTPN5, RIPK1, SOCS5, TAS2R38, TAS2R5, TKTL1, ST6GALNA C3
Negative_5797	A2M, FGB, FUK, ID2, ACSL6, ADCY10, ALPL, APPL1, ASS1, AXIN2, CASP9, CD55, CSNK1A1, CXCR4, CYP8B1, DTX2, GNA14, GPAM, GRIA2, GSTM5, IFNA6, IFNK, IRF5, NT5C2, OR4K17, OR51E2, OR5H6, OR5T2, OR5T3, OXTR, PMM1, PN PLA4, POLR3D, PTCH1, SARDH, SIGLEC1, SOX17, SULT1E1, TNFSF12, TUBA3E, ZBTB16, ATP6V1C2, CACNA2D1
Negative_5798	CKM, ATP6V1D, CCL5, ELK1, IKBKE, IQGAP3, METTL6, MGAT4A, NFATC2, OR2T2, OR4C15, OR51D1, OR52D1, PTDSS1, PVRL2, RCHY1, SMPD2, SNAI1, VKOR C1, WNT9A

Negative_5799	F2, ACSS1, ACYP1, ADCY8, ALDH1A1, AMY2B, ARAF, ARNT2, CLDN16, EPHB1, FABP3, FDPS, GALNT11, GNG12, MCM6, NT5C1B, OR4D6, OR51B5, PAPSS2, PM AIP1, PMM2, PPOX, RAD51, SLC27A1, SMPD3, TIRAP, UCK1, UGT2B11, WWP2, XCL2
Negative_5800	FGG, SP1, ALDH1A1, ATP5G3, CD27, COL4A1, CSNK1A1, JAK3, MCCC1, NEFH, NQO1, OR2T1, PIAS4, PTAFR, TBL1Y, TNFRSF11A
Negative_5801	DAO, HK3, AGTR1, B3GNT5, COL4A6, CSDA, CTBP2, DDHD1, EVI1, GOSR2, HSD 17B4, INADL, MAD1L1, MAP3K4, MDH2, NAT5, NEFH, OR4F6, OR51E2, PLA2G3 , PMM2, PRODH, RAD51, RASA1, SEMA3C, SH2D1A, ST8SIA1, UPB1, YWHAH
Negative_5802	DBI, LEP, ACSS3, ALOX15, CNGB1, CRY1, CXCL16, DDX51, DDX55, DRD5, FUT 3, GRM1, GYS2, IL10, INADL, ITGA5, LFNG, MCM6, OR4D5, PERP, PIM2, RXRG , TBXAS1, TKTL2, VAV2
Negative_5803	OAT, PC, AKR1C3, ALAS1, ARHGEF6, BCL2, CHAT, DHRS4, DPM1, FDPS, FMO3, FRAP1, HYAL2, ITGA8, MKNK2, NAGA, NFKBIA, PDHA1, PIK3R4, PLCB3, TUBA 1B
Negative_5804	MVD, ACAT2, ACP5, AGPAT1, AKR1A1, ALG5, CACNA1A, CCNG2, CD47, CDS2, C TPS, DUSP6, FBXW11, GART, IDH3B, IL11, IL13RA2, JAK2, LAMA3, NCKAP1, NFKBIB, NRG3, OR1F1, OR1J2, OR1J4, OR2T8, OR5T2, OR6C4, PDE1C, PFN3, PGM3, PRPS2, RBKS, SCIN, ST6GAL1, STAT1, TAS2R10, TAS2R14, TAS2R48, THTPA, TUBA3E, ULK1, YARS, SERPING1
Negative_5805	DBH, TK2, ANPEP, ARPC5L, CACNA1I, CAV3, CD38, CDC2, CNTNAP2, COL4A1, GGPS1, GRHRP, IFNA10, IFNA14, IL2RB, KLRD1, NCSTN, NLGN2, NSD1, OR2F 1, OR2H2, P2RX1, PCK1, PLA2G2A, PLA2G2E, HLA-DPB1
Negative_5806	ALAS1, CXCL6, CYP2C19, DGKA, FUT5, GGBT1, IL13RA2, LRRC4C, OR1B1, OR 7G1, TUBA1A, YWHAQ
Negative_5807	APP, ALAS2, C1QA, CALML6, CCNA1, COASY, CTNNB1, DAPK2, DGKH, ENAH, FG FR4, FOXA2, GNAO1, GOSR2, GSTZ1, IL22RA2, IL8RB, LDHA, MAP4K2, MPST, MYL9, OR51L1, OR52K1, OR56B4, PIGX, PLA2G2A, SULT2B1, TUBB2B, VAMP2 , WNT1, ST6GALNAC5, TNFRSF10C
Negative_5808	ABO, HAL, PC, SCD, ACACB, ADH4, AHCYL2, AKR1B10, CADM3, CAMK4, CHDH, C YP2J2, DAPK1, DGKQ, EPHB2, FGF3, GALNT2, IL18RAP, IMPA1, LAMA3, LYPL A1, MAN1A1, OCLN, OR13G1, OR6C3, PARVB, PLXNB2, RAB5A, RBL1, SOCS1, S T3GAL2, TAS2R40, TAS2R48, TBXA2R, TCF7L1, TICAM2, TOLLIP, UBA7, MAP KAPK3, SERPINA1
Negative_5809	CRY2, GALC, IL6ST, KYNU, LDHA, P2RX7, PIK3CD, POLR1B
Negative_5810	ADCY9, CACNG5, CDKN2C, CPOX, DAXX, FTH1, HSD17B1, HTR2A, MCM4, NAE1, OLAH, PPBP
Negative_5811	ADCY8, ADORA2A, AGXT2, ALDH3A1, BMP5, CACNA1H, CIITA, CNTN1, FMO4, G CLC, GUCY2F, INPPL1, KLRK1, LIMK1, NAGK, OR10G4, OR4N2, OR5K2, OR9G4 , PIP5K1B, POLR3G, PPP5C, PTGFR, RARS2, ROBO2, SMPD2, TAS2R60, ULK2
Negative_5812	AK5, ATM, B3GNT5, CACNA1F, G6PC, GCNT1, GDF6, GNA11, HNF4A, IL10RA, I L4R, ITGA3, MCM4, MTR6, MYH3, NFATC3, NLGN3, OR10AD1, OR13C2, OR51M 1, OR52E2, OR8J3, PARD6G, PARS2, PGM1, POLR1D, PPP2R5E, PRPH2, RASGR F1, RBL2, RPS6KB1, RUNX1T1, SETD1B, SLC27A1, TAS2R50, THBS3, TNFSF1 4, TPMT, UGT2A3, YES1, ZMAT3, ATP6VOA2
Negative_5813	HAL, APAF1, CACNG1, CAMK2B, DTX3, GGT1, IL25, IL3RA, KLKB1, KNG1, MAM L3, MAP4K2, MCM6, NEUROD1, NOS1, NRXN1, OR2A2, OR3A1, OR4P4, OR52D1, PPM1D, RPE65, SEMA3E, SUCLG1, TGDS, XCL1
Negative_5814	CD6, ACY1, AHCY, AKR1C4, ALG10, ALOX12, APOA5, DAG1, GALNT14, GSTM4, LAMC1, NMNAT1, OR1G1, OR56A4, PERP, TSLP, UNC5A

Negative_5815	HGF, MAG, SCD, TEC, ABLIM2, ACVR2B, AKR1C2, ALG1, B4GALT2, B4GALT5, BDKRB2, CHAT, CHST13, DAPK1, DNMT3B, EDA2R, EXTL3, GALNTL4, GRIN1, GRIN2A, GSTA4, GUCY2D, IFNA8, INPP4B, MINPP1, NEGR1, OR14A16, PDE3A, PLCB4, PPP1R3B, PRKAA1, PROC, PVRL4, RASSF1, RFXAP, RIPK1, RPS6KA4, SETD8, SLIT2, SMC1B, SPHK1, TLR2, TUBA8, UNC5B, PPARGC1A, SERPINF2
Negative_5816	ASL, GP6, MOS, SRC, ADH6, AGPAT4, ALPPL2, ANGPTL4, ATP2A2, BUB3, C9orf95, CLDN1, CXCL10, CYP26A1, DOT1L, DTX4, EGFR, F2RL3, GOT2, GUSB, HAAO, IDH3G, IGFBP3, IKBKG, IL13, IQGAP3, KLRC2, MAP3K2, NT5C1A, NTRK1, OR13C3, OR2M3, OR3A3, OR5AR1, ORC2L, PDGFA, PKLR, RAC2, RPS6KA4, RRAS2, SLC2A4, SNAI1, SYNJ1, TGFBR2, TNFSF4, USE1, XYLB, CACNA2D2
Negative_5817	C1S, CD2, JUP, MVD, AANAT, ALG3, CCNB3, CREB3L3, DIAPH1, EDA2R, IL10, LDHAL6A, MOV10L1, NANS, NRG4, OR2A5, OR2G2, OR6N1, PDE8B, PRKY, PTPN11, SPRY2, TJP3, ULBP1, WNT4, ZMAT3
Negative_5818	ATP6VOC, BCL2L1, BLVRB, CFLAR, CLDN20, DUSP10, ENTPD2, GALNTL4, HAO1, NUDT9, P4HA1, PRODH, PTDSS2, RIPK1, RRM1, SEMA4F, SOCS1, SREBF1, YES1
Negative_5819	ADK, ADO, AK5, GK2, TNF, ABAT, AMDHD1, B3GNT5, BCAR1, C3AR1, CCL20, CDH4, CLCA2, CXCL2, CYCS, EPB41L1, ETNK2, G6PC, GAD2, GRLF1, GSTM5, IL18, IL22, JAK2, KLRC3, KYNU, LEFTY2, MAT2B, MYH7, NANS, NOX3, NRXN3, OR1D2, OR3A2, OR4A16, OR52R1, OR5AR1, OR5B17, OR6C1, PTCH2, SC4MOL, SHISA5, SLC27A5, SPTLC1, TSNARE1, WWP1, SERPINC1, TNFRSF17
Negative_5820	TNN, APPL1, CDH1, CNGB1, CSAD, ETNK1, ETS1, GGCX, IL6R, JAK1, OR5K2, PNFN4, PIGX, PIP4K2C, STAM, STX7, TDO2
Negative_5821	C7, DCK, F3, NGF, ACAA1, ALDH9A1, ALPP, BMP8A, CCNB1, CDH2, CNTF, CXCR5, DDX19A, DMGDH, E2F3, EARS2, ENTPD8, EPHA6, FLAD1, GRPR, HHIP, HSPB1, INMT, LCP2, LTA4H, MGAM, MMP9, MYH1, NFKB1, OR4P4, OR4S2, POLR1D, PPP3R1, PRKAG3, PRKCZ, RASGRF1, RHOA, SH2D2A, SNAP23, SPTAN1, SPTLC2, ST8SIA1, TPK1, YWHAZ, ATP6VOD1
Negative_5822	GH2, ALG10, AMDHD1, AMPD1, ASMT, ATG12, ECSIT, GLI2, GSTM1, HARS2, HSD17B3, IL12A, IL1RAP, KIR2DL1, NNMT, OR5AR1, OR6Y1, PHKA1, PPP3R2
Negative_5823	SDS, AANAT, ACSL5, AFMID, AGPAT1, AKR1A1, BCMO1, CD80, COL1A2, CRLF2, CTBP1, CXCL10, CYP11B2, DUSP8, EDNRA, FGD1, FGF11, HCLS1, HSD3B1, IL28B, IMPA2, JAK2, MAPK14, MTMR2, OR10G4, OR2F1, OR51B5, OR56A3, PDGFA, PDIA4, PFKM, POLE, POLR3D, PTK2, SEMA4C, SLC27A5, SPHK2, STAT2, TKT2, UROD, UXS1, WNT3, TNFRSF6B
Negative_5824	TNN, ADCY6, AMY2B, EFN1, ITGB5, MAPK12, MAPT, NFAT5, OR51G2, P2RX2, UGT2B4
Negative_5825	CKM, SCD, TAT, AARS, ADRB1, ALOX5, ATP50, C7orf16, CD46, CDKN2D, CHEK1, CIITA, CSH1, DDX51, FBXW11, FUT9, GYS1, HSD17B8, ICOS, IL5RA, MYL5, NT5E, OR10G7, OR11G2, OR51B5, OR5M9, PIP4K2C, RASSF1, SNAI2, SOCS4, SPTLC1, SUV39H2, TCIRG1, PHOSPHO1
Negative_5826	ACADM, CCNB1, ITGB3, LIPT1, OR5AK2, PTEN
Negative_5827	CTH, ATP4A, CSNK1G3, CYP3A7, EPHA2, GLDC, IDI2, INPP4B, MAGI3, OR4C15, ATP6V1B1
Negative_5828	AGL, AUH, CGN, EDA, A4GALT, ACLY, AGPAT1, ARHGEF7, ASAH1, CHST11, CLOCK, DIAPH2, DMGDH, DTX3L, ENTPD2, FGF1, FUT2, GCDH, HTR5A, IL13RA2, IL18RA, ITGB5, ITGB8, L1CAM, LIPT1, LLGL1, MAPK14, OR1E2, OR2S2, OR7G2, OR9G1, PDE3B, PKMYT1, PPP2R5A, PRKCD, PTK2B, RPE65, RPS6KA3, SEMA3C, SETD1B, SPRED1, TPK1, UCP1, YKT6, SERPINA5
Negative_5829	BID, AFMID, BIRC3, CAV2, CDC2, CHAD, CNTN2, CYP1A1, CYP1B1, DHFR, EGLN3, FARP2, FZD2, GNG3, GRHRP, IKBKE, INHBC, LIMK2, MAOA, MEF2C, NSD1, PDE7B, PFKFB3, PMVK, PPAT, PPCDC, PPP2CA, SOCS7, UGCG1, ZFYVE9, PHOSPHO1

Negative_5830	CEL, CGN, F10, KMO, LYN, RPE, STS, ALDH2, ATP5J, B3GAT2, B4GALT5, BBC3, C4BPB, CCL16, CCL27, COL5A1, CSH1, CXCR5, CYP3A4, EPAS1, FADD, GCNT2, KITLG, LAMB1, NAGA, OR10A3, OR1L8, OR1Q1, OR2T10, OR4X1, POLR3G, P PP1CB, PRKCG, RPIA, SLC12A2, SYNJ2, TNFRSF4, TUBAL3
Negative_5831	ADH7, CACNA1C, CHAT, CRLS1, DRD1, GALC, HLA- DOB, MAFA, MAP2K7, MPST, NCF1, OR5A2, PDK1, PGK1, PGS1, PPAT, STX12, T LR9, VKORC1, TNFRSF13C
Negative_5832	DHH, F8, MVK, NF1, ADCY4, ARPC2, C1QC, CCNH, DUSP8, GNA14, GRAP2, IFNA 21, JAM2, LCP2, MGAT5, MIOX, OR1F1, OR2L13, OR4N5, OR6F1, PGLS, PPP2C A, RRAS2, SOD1, SV2A, UGCG, UPB1, CSGALNACT1
Negative_5833	LCT, LSS, MVK, ADCY3, AKR1C2, ALG1, ATP6AP1, BACE2, BMP7, CFTR, CNGA4 , CYBB, DBF4, FUT3, GALNT13, GALNT6, H6PD, HIF1A, IFNW1, ITGA9, LAMC2 , LTBP1, MCEE, METTL2B, NUDT2, OR10AG1, OR10J3, OR1G1, OR1I1, OR9Q1, P2RX4, PCYT2, PDE1C, PDHB, PFKFB2, PIK3C2B, PLCG2, PLXNA3, SDC3, SMC 1B, SOCS3, SULT1A4, TNFRSF4, TSC1, UGT2B11, UROD, TNFRSF13C
Negative_5834	GP5, PRL, ACP5, ADCY7, ARPC5, CHRNA7, CMBL, DGKA, ECHS1, ENPP2, GALNT L4, GSTK1, GSTM4, HIF1A, HSD3B7, IFNB1, IL11, ITGAL, KLRC2, KLRC3, MA FA, NMNAT1, OR1J1, OR4Q3, OR9Q2, PER1, PIAS4, PNPLA4, POMC, PPA1, PRK AB1, PTPRB, SAT1, SMPD4, ST3GAL4, TLR2
Negative_5835	PXN, BCAT2, CCNA2, CDC14B, CHKB, DDB2, GSTM5, MYH7, NTN1, OR4M2, OR6Y 1, OR9G4, PIAS2, PRSS2, PTPRC, WARS2, WASF3, ST6GALNAC1, TNFRSF10B
Negative_5836	AK5, FER, SRC, ACSL5, APRT, BCL2, BMPR1A, DPYS, GRPR, HTR6, KAT2A, KIR 2DL1, MAGI1, MECR, NFATC1, OR2T34, OR6C70, PAK4, PARVG, PGK2, POLD2, POLR2G, RBPJ, SEMA3F, SEMA7A, SLC9A1, SMARCA5, SV2A, THBS3, TRPC1, U LBP3
Negative_5837	CKB, TYR, ALDH6A1, ATP5A1, CD72, CDC25A, COL1A2, CXCL3, CXXC4, CYP1A 1, CYP2E1, EDNRB, ELK4, EPHA7, EPHX1, GALNT1, HMGCL, HRH2, ICOSLG, IL 17RB, NFKB2, OR1E2, OR2C3, OR2T6, OR2V2, OR56B4, PIGU, PSAT1, PTCH2, PTGIS, RALA, ROCK2, SMPD4, VAMP2
Negative_5838	C2, ALDH1B1, CCL23, CCNG1, CD22, CHIT1, CLCA4, CMPK1, DOLPP1, ENO1, H HEX, IL1B, IL22, IL2RG, KLRC4, LIAS, MAGI3, MNX1, NAE1, OR10AG1, OR2B 2, OR4N5, PIGL, PPP2R2C, RXRG, SLC2A2, TYRP1, ZIC2, SUV420H1, TNFRSF 11A
Negative_5839	GDA, IL8, ADRBK2, AXIN2, CYP11B1, ETS1, EXT2, FARP2, GCNT4, GUK1, HNF 1A, IL13RA1, LYZL1, MAP4K3, NEGR1, NOTCH1, NOX3, OR5D14, PARVB, PIK3 C3, PLCB3, PLCD3, PLCG1, PPOX, PPP3CA, RAP1A, TCF7L2, TRAF2, VANGL1, WNT4
Negative_5840	CACNB2, CER1, FASN, GNA13, KITLG, MADCAM1, PLCG2, PMM2, PPT1, PRDX6, RHEB, SH2D1A, SPTLC2, SSH3, ALDH18A1, ATP6V0A1
Negative_5841	CSNK1E, IMPDH1, MAP2K3, OXSM, TRPM5
Negative_5842	ABO, IL5, TNC, ANAPC1, ATP5J2, BMP6, CD19, CDKN2A, CXCR6, CYP11B1, EI F4E, IRS1, LARS2, NAGLU, NKD2, NOS1, NRG1, OR1F1, OR2T11, OR4B1, OR8H 1, PLAT, POLR3A, PRKAB1, RHOA, SCIN, SLC2A4, TAS2R10, UGCG, UGP2, VDA C1
Negative_5843	CKM, EBP, F3, ID3, OAT, RB1, AANAT, ADSS, ARHGEF4, ATP5C1, BCKDHB, BNI P1, BUB1B, C1QA, CACNA1G, CDH5, CNTNAP2, COASY, CREB3L1, DHX58, DLAT , EIF4E2, ENTPD2, EPHA7, EPHB2, FARSA, GFPT2, GNB3, ITGAD, LRRC4C, MM P1, NGEF, OR13C2, OR51D1, PDE4C, PIK3CB, PLCD3, POLR3B, PPAT, QPRT, S DHA, SMPD1, SOAT1, ST6GAL1, TFDP1, TUBAL3
Negative_5844	NNT, APOC3, C3orf10, EI24, FZD5, GALK2, GSTA2, INPP5B, NT5M, OR4C16, OR4D6, UGT2B11, VDAC2, MAP3K7IP2, TNFRSF6B
Negative_5845	CKB, MAT2B, OR7C1, PFKL, POLR3K, PPP2CA, STEAP3

Negative_5846	BTK, C7, SYK, ALOX15B, B3GALT5, B3GALT6, C5AR1, CACNB2, CHPF, COL4A4, CYP4A22, GNRHR, GSTT1, HSD17B1, IFNG, IL21R, IL7R, INHBB, INPPL1, MAP2K7, MYH7B, ODC1, OR5H2, P2RX3, PARVB, PIGA, PPAP2A, PSENE1, PSPH, RAPGEF1, RERE, RIPK1, RRM1, SORBS1, ATP6V0D1
Negative_5847	AK7, C3, EZR, ACSL3, ACTG2, ALG10, ALG9, BIRC2, BMPR1B, BUB1, CACNA1I, CD14, DHRS9, ENPP1, EPHA2, FCGR3B, FUT1, FUT2, GJA1, GSTA3, HTR2B, HTR7, LYZL1, MPP5, NCAM2, NCOA4, NEU2, OR10Q1, P4HA3, PLA2G2D, POLD1, POLE, POLR2E, PRKAG2, PTGFR, ROCK2, RPS6KA5, SEPHS1, SNAP25, SPTAN1, STK4, TRPC1, UGT2B4, VAMP3, WARS, EIF4EBP1, TNFRSF1B
Negative_5848	ACPI, DDX52, DUSP10, FPGT, GSTA1, IFNB1, LCAT, LDHA, MYD88, NFATC2, OR13G1, OR1L1, OR4K17, OR52N2, PDCD1
Negative_5849	BTD, DCC, F9, ABLIM3, ACVR1B, AKR1A1, ALDH1A2, APAF1, BACE1, BCL2, CCL4, CLDN2, CSDA, CSNK2A1, CXCL1, CXXC4, DARS, DHRS3, EPHB6, EPRS, ERBB4, GALT, GDF6, HSD11B1, IL21, LARS, OR13C2, OR2L8, OR4K13, OR8J3, PCYT1B, PFKFB1, PGS1, PIGL, PLA2G3, SETD7, SMAD9, STAT5B, TAS2R48, TICAM2, ATP6V1B2
Negative_5850	CR1, ACVR1, ADRB2, ALDH1A2, AMDHD1, ATP5J, CD244, ERBB3, GGCX, GGT5, GSTM5, IFNA21, IL12A, JAM2, KIR3DL2, LYPLA2, MYL2, MYLK3, OR1L3, OR3A2, OR52D1, OR6C4, PARD6G, PDE6G, PDGFRB, PFKP, PGAM4, PIAS1, PIGO, PI4K2A, PISD, PPP5C, PTDSS2, PTPN1, PYCRL, RARA, RXRA, SESN1, ST3GAL4, UCK1, WWP1
Negative_5851	CYP1A1, DPM3, MAD2L1, ODC1, PIGP, PPP2R2A
Negative_5852	OTC, GNAI2, SRD5A1, TAS1R1
Negative_5853	GLA, ABLIM2, ADCY8, ATP5D, CCR3, CTNNA2, DHRS3, ERO1L, ITGB7, NCOR2, PDE4C, SMAD5, SMPD4, TAS2R8, HSD17B10, TNFRSF17
Negative_5854	DAO, AKR1C2, MDM2, OR4C15, OR51T1, OR6Q1, PDXK, RARS2, SEMA4A, TAS2R42, TUBB3, ATP6V0D1
Negative_5855	TNF, ALG6, CIITA, CMAS, FGF20, GGT5, HMGCR, MAPK12, MAT2B, OR10G4, OR1S2, OR4P4, PDE6D, PIK3CA, PPP2R2D, RAP1A, SELL, TBL1X
Negative_5856	CKM, ACAA1, ACPP, ADCY7, ADSSL1, ARPC3, ATP4A, ATP5B, B3GALT6, BMP6, CDC20, CYP2C9, CYP2D6, DARS2, EVI1, HIF1A, IBSP, LIPT1, MGLL, NFYA, NMNAT3, NR5A2, OR10G7, OR10S1, OR8D4, PANK4, PIAS2, PIAS3, PIGH, PIGL, PMAIP1, POLR3D, PPP2R1B, PTAFR, PTPRC, VEGFB, ATP6V1E1, ST6GALNAC4
Negative_5857	DAO, ASMT, CYSLTR2, GP1BA, GUCY2F, IL21R, MS4A2, NT5C, PLXNB1, POLD4, SLC25A6
Negative_5858	GH1, IVD, ACMSD, ANPEP, BACE2, CRLF2, CYP11B2, DDX55, DHODH, E2F1, FUT6, GNG12, HCCS, MAOA, MAP2K7, NRG4, OR2T6, OR5D13, PLCB3, PLCD3, PYGM, SPTAN1, TBXA2R, TUBB, ZIC2
Negative_5859	CFI, NLK, SCD, ACTG1, ADCY6, ATP50, B3GNT2, CASP6, CASP8, CBR1, CDKN2A, CEBPA, CLCA4, CXCL16, ENPP2, ENTPD2, FCGR3A, FUT4, FUT8, FZD3, GRHR, NCOR2, OR10J5, OR2A5, OR2T12, PER2, PKLR, PRKAR2A, RELA, RFXANK, ATP6V1C2
Negative_5860	ADH1B, ATP5J, CD8B, HRH2, ITGAE, LMO7, OR2D2, OR51E2, OR5H6, PIK3R3, PPP2R1A, SCIN, UGT2A1, ATP6V1G3
Negative_5861	ADC, LAT, TAT, ADCY2, CYSLTR1, DIAPH1, HSPB1, ICAM1, ISYNA1, LHCGR, LRAT, NOS1, ODC1, OR1N2, OR4N2, PRKAB2, PTPRZ1, STAT2, TFDP1, VAMP4, ATP6V1B1, HSP90AB1, ST6GALNAC3
Negative_5862	AADAC, ACTA1, ALDH3A1, ALG9, CMBL, DHDDS, GSTA1, LCAT, PLXNA2, PYGM, SMAD2

Negative_5863	FAH, FGA, IL8, ADH4, AKR1A1, ALDH2, ATP5H, B3GALT4, B4GALT4, CACNA1B, CADM1, CCL21, CCNA2, CCND1, CD14, CD40, CD47, CDK2, CLCA4, CLDN20, C OL4A6, CXCR4, CYP2A6, DEGS2, EPHA1, EXTL1, FBP2, FUT3, GANAB, HTR2B, IL23A, IL2RA, IRS2, LIPC, NAMPT, NCAM2, NOD1, OR10AG1, OR1S1, OR5F1, OR7C2, OR9G4, PLCG2, PLOD2, POLR2I, PTK2, RXRG, SETD1B, TUBB1
Negative_5864	CD6, GPAA1, HYAL1, IL23A, PON3, PTPMT1
Negative_5865	LAT, ACVR1, B3GNT5, BCKDHA, CDC23, CFTR, EPHA1, F13B, GALNT6, GRB2, G STM2, GSTM5, IFNA6, IL17RB, IL19, ITGB1, OCLN, OR2M4, POLR1E, PPP1CC , SETD2, SFRP1, SV2A, UPB1, YKT6
Negative_5866	CAD, TKT, ABAT, B4GALT3, CAV3, CDS1, CYP8B1, DDHD1, IL10RA, LRDD, MCM 2, OR3A2, OR4D1, OR52E4, OR8H2, PPP1R3A, PTDSS2, RBKS, SLC27A4, SLC2 A4, SMARCA5, YES1, C1GALT1C1, PNLIPRP2, TNFRSF13B
Negative_5867	SRM, CALML3, CREBBP
Negative_5868	CTH, EBP, NPY, ACSS2, ATP4B, CCR4, CDS2, COL6A2, CSH1, CTBP2, CXCL12, CXCR4, DGKD, DGKI, EGLN1, ELK1, F2RL2, GAL3ST1, HPSE2, IL17B, MCM2, M TAP, NARS, OR5K1, PLA2G2A, PNPLA3, PPP2R5B, RASGRF2, SETD8, SKP1, SL C27A5, SNAI1, TOLLIP, VANGL2, VEGFC
Negative_5869	C2, PXN, CDKN2A, CLDN18, DTX4, HLA- G, ITGA9, LPAR1, MPP5, OR10H1, PLA2G2F, WASF1
Negative_5870	DCK, KMO, ACLY, AMY2B, CCL17, CCL24, CCR9, CD44, CLTA, CYP11B1, DRD1, DUSP10, E2F3, EARS2, EDAR, FZD2, GSK3B, GSTO2, HPRT1, IDI2, IMPDH2, M AOA, MGST3, MS4A2, NME4, NOD1, OR10H4, OR7D2, OR8B4, PDGFA, POLD3, PO LR2K, POLR3A, PRSS2, RBX1, RELA, RELB, SFRP2, SOCS4, SPAM1, SPRY1, ST 8SIA1, TAS2R4, TFPI, THBS2, YWHAG
Negative_5871	CBS, SPN, TK1, ACADVL, ARHGEF4, CCL25, CD19, CD244, CER1, DHODH, EXTL 2, GAMT, GBE1, GSTA3, GTSE1, HEMK1, INHBB, IRS2, ITGB1, KCNB1, MARS2, NFKB1B, NME7, OR2T4, OR5C1, OR6K6, PLA2G4A, POLR3K, PTPRF, SARDH, SE SN2, SPRY1, TAS2R10, ULK2, VAMP2, XYLT2, MAPK8IP3, SERPINA1, SERPIN B5
Negative_5872	MET, ACSM1, AGPAT6, AMD1, AMPD3, BET1, CAMKK1, COQ6, CTSL1, DCXR, DER L1, ELK4, EPHA3, GADD45A, GALNT2, GGCX, GNAL, GOSR2, GPAA1, HLA- G, IDI1, IFNK, IL18RAP, LAMA4, LIPA, OR2T34, OR5AK2, OR5K2, PGAM2, PO N1, PPCS, PRSS1, PTTG1, SETMAR, SGPP1, SLC2A4, TGDS, TJP2, TPI1, TRAF 3, TSC1, UGDH, UGT2B7, VARS, PHOSPHO1
Negative_5873	C7, EBP, FES, GPT, LEP, MVD, PLN, ABL2, B4GALT1, CCR3, CLDN20, CNTNAP2 , CREB3, DCTD, DGKA, ENTPD4, EVI1, FGF1, GALNT13, GPAM, HNMT, ICOS, IT GAV, KIR3DL2, LDHA, NAGLU, NRG4, OR10G8, OR10R2, OR2H2, OR2K2, OR2M7 , OR2T11, OR5D13, OR6A2, PDGFA, PIP5K1A, PLAU, PRKAR1B, RUVBL1, SMAD 6, SORBS1, TNFSF11, WEE1, TNFRSF10D
Negative_5874	INS, ACOX1, ARPC4, BMP5, BMPR1B, CBLC, CDK4, CHDH, COL1A1, CX3CL1, DD OST, FCGR3A, FGF1, FGFR2, FUT8, HA01, OR3A1, OR6B3, PDE5A, PGAM4, PIK 3CD, PISD, PLCB4, RASGRF2, SEMA3G, TAS2R16, UROC1, PAFAH1B1, PLA2G1 2A
Negative_5875	RDX, ADSS, CCNB1, DKK2, DUSP2, DUSP6, LAMA4, OR1G1, RALA, RFXAP
Negative_5876	IDS, ARPC1A, CAMKK1, CCNE2, CXCL10, DRD1, FUT5, GATM, GNPDA1, HRAS, I BSP, LIMK1, NCF1, OR1B1, OR7A17, PANK3, PCCB, PGLS, PPAT, PRNP, TP53, VANGL1, WBSCR17, WNT16, B3GALNT1
Negative_5877	ACTG1, ARSE, ATP50, B3GAT1, CCND1, CCNE2, CHST11, CTNND1, DDX23, FMO 5, HMOX1, IL1R1, KCNJ11, MTHFD1, NTSR1, OR52M1, OR6C1, OR6X1, OR9Q2, PRKAG1, PTK2B, SOCS1
Negative_5878	ARG2, CXCR4, FLOT1, GGT6, GNAZ, OR13C5, POMC, TNFSF12



Negative_5879	EGF, GCK, OSM, STS, ALDH3B1, AMDHD2, APOC3, ARPC3, ASNS, BCL2L1, CAV1, CLDN14, CLDN18, CYCS, DMGDH, ELK1, FZD8, H6PD, LAMC2, LCMT2, LIPA, M, AP3K14, MYH7, NARS2, NEUROD1, NOD1, OR1L6, OR2T29, OR4F5, OR51G1, OR51I1, OR51V1, OR52A1, OR7A5, PANK3, PHKB, PISD, PTGS1, RRM2, SIAH1, SNAP25, SV2C, TYMP, VAV1, WHSC1L1, WNT11, XIAP, CSNK1A1L, TNFRSF10D
Negative_5880	ACVR2B, AGXT2, ALOX15, CYP3A5, ECHS1, GALNTL2, GGT1, GUCY2C, IL11, LFNG, LPAR1, OR10J5, OR2A42, OR2H2, OR4C11, OR6K2, PANK4, PKM2, POLR1C, PPA1, QARS, RALBP1, RARA, STAM2, ZFYVE9, ATP6VOD2, MAPK8IP1
Negative_5881	ALDH3A1, AOC2, ATP5D, BDNF, BHMT, BUB1B, CCL24, CPT1C, CTPS, DHRS9, DKK1, DOLPP1, FBP2, FGF4, FUT4, GLG1, GRIN2D, HTR2A, IMPA1, ITGB3, KIR2DL2, MAGI2, MALT1, MYL5, NCK1, NTRK1, OR52E8, PDE3B, PDE9A, PLAUR, POLD3, PPP2R2D, PTPRZ1, PYCR1, RALBP1, RASGRF2, RRAS2, SPHK2, TRMT11, TUBB, UROC1, WNT2B, ZNRD1, CSGALNACT1
Negative_5882	CTPS2, CYP2A7, E2F3, FBXW11, GCH1, GMDS, GMPR2, GNA14, RDH16, STAT5B, TCF7L1, ARHGEF12, ATP6V1G2
Negative_5883	LPL, NF1, SI, ACTA2, CACNB4, CANT1, CD38, E2F4, EFN3, ESPL1, FARP2, GMPR, HADHA, IL18RAP, NCOA4, OR10C1, OR2M5, OR4A16, PIGK, PIGS, POLR3B, SH2D1B, SMAD4, SNAP23, TPH2, ST6GALNAC3
Negative_5884	ABO, TH, ATP5H, BAIAP2, COQ7, CPT1B, FZD5, GALNT8, HLA-DRA, KLK3, LTBR, MPZL1, OR10Q1, P4HA1, SULT2B1, VANGL2, VAV3, PHOSPHO1
Negative_5885	TKT, ARSE, ASIP, CASP10, CCL22, CCND2, COQ6, CYCS, CYP3A43, DAAM2, DUSP5, E2F5, FBP1, FZD7, GMPPA, HRAS, HSD17B2, IL28RA, INPP4B, LAMC3, MALT1, NNMT, NODAL, PDIA4, PGS1, PLA2G2D, RRM2B, STK36, WASF2, WBSR22, XYLT2, CACNA2D2
Negative_5886	ADIPOQ, DLST, MMP7, NFAT5
Negative_5887	ACP1, ALS2, ARAF, ARPC2, ATP5G1, BCKDHA, CLCA2, CLDN11, COL2A1, CYP17A1, CYP19A1, CYP4F3, DDX23, ENO3, GDF6, GRLF1, IL12RB2, ITGB1, KIR3DL2, KLK3, NOX3, NTRK1, OR1J4, OR2AG2, OR2F2, OR4F5, OR5P3, OR6N2, OR7C2, POLR3H, PPP1R3C, PPP2CA, PRKCI, ROCK2, RPS6KB1, SMAD7, STAT2, TASP2R14, TCIRG1, TRAF5, UGT8, VANGL1, ST6GALNAC1
Negative_5888	GBA, IL7, WAS, ABI2, AK3L1, AKR1C1, ATF4, ATIC, BPGM, CARS2, CHDH, CHEK1, CLDN14, CLTA, DFFA, EFNA4, FZD6, GALNS, GANAB, HMBS, IQGAP3, LMO7, MIOX, NFASC, NFKBIA, OR4C46, OR51I1, OR5AS1, OR9A2, PPP1CB, RALB, RDH16, SIPA1, SOAT2, TALD01, TAS2R14, VEGFC, WNT8B, XYLT2
Negative_5889	ABLIM2, ACSL1, BLVRB, CDH4, FARP2, INPP5E, ITGAL, MAPT, OCLN, OR10A2, OR13G1, OR1A2, OR4B1, OR4C46, OR52K2, PAFAH2, PAK1, PNMT, POLE2, PTPRZ1, RALA, RETSAT, RPN1, SERPINC1
Negative_5890	AQP7, CACNA1B, F11R, GSTZ1, IL20, NKD2, POLR1B, PRKAR1A, PSME2, PVRL3, SCD5, SLC9A1, ULBP1, YWHAG
Negative_5891	ATP4B, CD44, CDKN1A, CHRM5, CLTB, COASY, COMP, CSAD, CYP19A1, DNMT3B, DPYS, ECSIT, ETNK1, FPGS, IL10RA, LAMB4, LDHAL6A, LIPG, MAD1L1, MAP2K6, MCM4, NFAT5, OCLN, OR10G2, OR10S1, OR11G2, OR2C1, OR7G1, PNPLA3, PPP2R1A, RDH16, SLC25A4, SRD5A1, ST3GAL3, VAMP1, WNT1, WNT9B
Negative_5892	GNE, HK1, OSM, ACSL5, AGMAT, AQP7, CCL22, CCNB2, CD70, CHAD, CLDN17, CRY1, GSTA5, GSTP1, GYS2, HCCS, IFNA4, INPP5B, IPMK, LAMC2, MAP3K3, MAP3K7, MCM2, NAT6, NT5C3, OR2B2, OR2T10, P2RX5, PMAIP1, POLD4, PPCDC, PPP2R5B, PTGER3, SEMA4F, SETD2, SGMS1, SMURF1, TAP2, TYMS, ZMAT3
Negative_5893	ALDOA, CCL21, OR13C5, PLXNB2, STX1A
Negative_5894	ITK, ASPA, CRY1, ENPP1, GRB2, LIAS, OR51S1, OR5AN1, OR8K5, STAM, TUBA1A, WNT9B
Negative_5895	ATP2A2, FGF20, GALNT12, ITGB7, NRXN1

Negative_5896	GP5, CNTF, CYP26B1, DAAM1, FTCD, FZR1, GARS, GLUD2, HSPA2, HTR7, INHB C, INPP5B, LARS, NCF4, NTNG1, OR4D2, PGK1, PLD2, PPP1CB, RRAS, SARDH, SLC2A1, ST3GAL1, TLR4
Negative_5897	LPL, B4GALT3, FBP2, LAMA3, LTB4R2, OR2W1
Negative_5898	GNE, ALG10, ATP5L, BDKRB1, CAMK2G, CCND2, CREB3, DUSP1, FGF19, FMO1, GALNTL2, HRAS, KLRC1, KRAS, LALBA, LRAT, NOTCH1, NR1H3, OR10A7, OR10 H3, OR51F1, PIGW, PLOD2, PVRL1, SEMA4A, SEMA4B
Negative_5899	IVD, PGP, ABP1, BACE2, C5AR1, CACNG6, CHDH, CHKB, DNMT1, EFNA3, ENO2, FDPS, FGD3, HSD17B8, IL15RA, ITPKA, MAP2K3, MAP3K3, MAPK11, OR10H1, OR8S1, PPP1R3D, SFRP4, UXS1
Negative_5900	AKR1B1, CLDN7, CYP3A5, EFNB2, IDH2, MAP3K11, OR10G8, OR6C4, OR7G3, P DE8B, PDHB, SMPD4, SPHK2, TUBA1A, TXNDC12, HSP90AB1
Negative_5901	IDS, CASP10, CD226, CDK5, CFL2, CHRM5, CISH, CRY1, DDIT3, GNRH1, HSD3 B2, IQGAP3, LMO7, MLLT4, MTMR6, OR4D6, OR8G1, PNLIP, PPBP, WHSC1L1, W NT9A, MAPKAPK3
Negative_5902	CSF2RB, EPRS, GNRHR, GOT1, ITGAD, MYH10
Negative_5903	AK2, GDA, JUP, ZYX, ABLIM1, AGXT, CD55, CDH3, CHKB, CXCL10, CXCL12, CY P2S1, DPYD, ESAM, FGF21, GNA13, GRIN2C, H6PD, HMBS, HNF1A, HSP90B1, K YNU, LCMT1, MLLT4, NEU1, NMNAT3, OR51A7, OR5D16, PARVA, PARVB, PGM2, PLCD4, PYGB, RUNX1T1, SMAD2, TNFSF8, TXNDC12, UCK2, ULK2, WASF3
Negative_5904	PC, ASIP, B4GALT3, CACNA1A, CHRM3, CNTN1, FIGF, HBEGF, IL25, JAK2, MC AT, MGLL, NCAM2, OR2AG1, OR2D2, OR2T8, OR8I2, PRKAA2, SETD7, ST8SIA5 , STAT6, STEAP3, MAPKAPK3
Negative_5905	GLA, ACHE, AKR1A1, APLP1, ARPC5, ATP6V1H, CCL7, CLDN8, CYP3A7, DDX55 , FGD1, GBE1, GPAM, IL18R1, LIPF, LYPLA2, MLLT4, OR8U1, STAT4, SUCLA2 , CTNNBIP1, HLA-DRB4
Negative_5906	FH, PVR, ACY1, ANGPTL4, ARPC5L, ARSE, ATP5H, B3GNT2, CASP10, CCL3, CD K7, CES7, CLDN16, CLDN9, CNGA4, GCLM, GNAI1, GNAI3, GSTA1, IDH3B, IFN A13, IL1R2, IL22RA1, IL29, IL9R, IPMK, LEFTY1, NRXN3, OR13G1, OR51E2 , OR52N1, OR8U1, PAX6, PCK2, PGK2, PHPT1, PIM1, PRKAB2, RASGRP1, SEMA 4A, STAM, TAS2R5, TLR3, TRIP10, ULK2, MAP3K7IP2, TNFRSF11A
Negative_5907	TAT, UBC, ZYX, ACVR1B, ALG10B, ATP5J, CFLAR, CHIA, CHKB, COL5A2, CYP2 6A1, FGF9, HPRT1, MAML3, OR51T1, OR5P3, PFKFB1, PLEKHA8, PNPT1, SDHB , SEMA3D, TNXB, CSNK1A1L
Negative_5908	ACVRL1, ATP6V1F, CCNA2, CSNK1G1, FZD4, IRAK2, KLRC3, MAP3K3, PLCD4, RAC3
Negative_5909	VTN, ATP6V0C, CDC20, CHIA, COL5A3, CTBP1, CTNNA2, DUSP9, ESAM, FGF1, GALNT7, ITGAD, NCR3, NKD2, OR2C1, OR2T4, OR5AR1, PIK3R5, PMM1, PRIM2 , SARDH, SETD8, SOCS7
Negative_5910	ADC, AK7, FOS, ID1, IL5, ALOX12, ATP2A3, B3GAT1, CD79B, CDKN2D, CHPT1 , DOLPP1, FUT2, FZR1, GCNT1, GLDC, HIP1, IFNB1, ITPKB, KCNB1, KLKB1, L DHAL6A, LRDD, MDM4, MKNK1, OR1D5, OR52N4, OR56A4, OR5A1, OR5B21, ORC 1L, PDPK1, PLEKHA8, PLK1, POLA2, POLD3, POLR2L, PPP1R3B, PRKX, PTGES , RXRB, SETMAR, SOCS2, ST3GAL1, STK4, SULT1A2, TLN2, TOMM40
Negative_5911	DCK, MAX, AANAT, ACOX3, ADCY1, AMPD3, APOA1, BAIAP2, CARD11, CD274, C SF3, CYP2C19, GALK1, GUK1, HSP90B1, IL4R, LIPC, LRP6, NARS2, NCF4, NP R1, OR10G9, OR4F15, OR4S1, OR51B2, OR56A1, OR5D18, PLD1, PLOD3, PRKA A2, RAP1A, RARS2, RELA, SCD5, SLC2A1, SMAD2, SOS1, TAS1R1, TPI1, CSNK 1A1L
Negative_5912	AR, CAT, F11, FOS, ILK, LSS, MET, TPO, ACVR1, AKR1D1, ANAPC10, AXIN1, C CL16, CD36, CYP1B1, CYP4A22, DIAPH1, DKK2, FGF12, FUT8, FZR1, GCLM, G NA15, INADL, LAMB1, MAOB, MPZL1, NEU1, NOS3, NRG4, P4HA2, PPCDC, PRIM 2, SPRY2, SPRY3, TOMM40, UCK2, YES1, SERPINF2, ST6GALNAC1
Negative_5913	CNTNAP1, STX18, WNT7A

Negative_5914	AGL, ACHE, ATP2A1, BACE1, CCR4, CISH, GNA11, HGSNAT, MCCC1, MCM3, MGA T2, NTSR1, OCLN, OR13H1, OR1G1, OR2A14, OR8K3, PIGM, SDHB, TP73, ATP6 V0E1
Negative_5915	TPR, ACOX2, AGRN, BAI1, BTRC, CDKN1B, CLCA4, CREB1, CXCL9, CYP1A2, DB F4, FCGR3A, GALNTL5, HARS, MAP2K6, OR5H6, OR8K3, PNMT, PRKACG, PTPRM , RBKS, TUBB3, UGT2B4, VEGFA, ZFYVE16, CSGALNACT2
Negative_5916	C4B, GNE, BDKRB1, CACNB4, CASP6, CCR5, CHUK, FCGR3A, FGFR2, GSTP1, GU CY2C, IL19, ITGA10, MGLL, MRAS, OR5D14, OR8A1, PAK1, PCYT1A, SIGLEC1 , TAS1R3, TBXA2R, TKTL2, B4GALNT1, HSD17B10, PAFAH1B1, ST6GALNAC3
Negative_5917	APLP1, ATN1, ATP6V1D, B3GAT2, BCL2, BDKRB1, CACNA1D, CD36, COL4A2, C YP26B1, DNMT3L, FGF19, FTMT, FZD10, GCNT3, IRF9, NFATC4, NFKBIE, OR1 OZ1, OR4N5, OR5B3, PAK3, PDE7A, PER2, PLD1, PTK2, RASGRP1, RRAS2, SAT 1, SEMA3A, SMAD4, TAS2R49, UGT8, VNN1, VTI1B, WHSC1L1, ZAP70
Negative_5918	CS, ID3, MYC, SMS, TPR, ADCY3, ALDH2, ATP5G1, C1GALT1, CACNG1, CDKN1A , CNTNAP1, COL6A1, CXCR4, CYP4F3, DIAPH2, ENO2, F2RL3, FGF6, G6PC2, G ALNT10, HADHB, IFNA8, ITGAE, JAG2, LDHD, NADSYN1, OR2C1, P4HA3, PPP3 R2, PRKAR1A, PRKCA, RUNX1, SEPHS1, ST3GAL4, THBD, TNFRSF4, UBA1, VAM P1, WWP2
Negative_5919	HK3, NF1, RDX, ALG13, AMHR2, APAF1, ATP6V1A, C3AR1, C3orf10, CCNE2, C FL1, CYSLTR2, DLAT, ENO2, ENPP3, EPHA3, EPHX1, GADD45A, GPD1, HSD11B 2, IL11, KDSR, KYNU, MGLL, MYH7B, NLGN2, OR51B4, OR51I1, OR51L1, OR5P 3, OR5V1, OR8A1, PGS1, PTK2, RASGRF2, RBL1, SETD2, SIAH1, SKIV2L2, SR GAP3, STAT1, UCK2, UNC5D, WNT2, XYLT1, ALDH18A1, ATP6V1G3
Negative_5920	GNS, PLG, PRL, TK2, ACOX2, ACY3, ADAM17, ADH5, ALDH1A1, ATP50, CERK, C HDH, CNTNAP1, CREBBP, CTF1, DAAM2, DDX41, DDX52, EPHA2, GALNT7, GPLD 1, GRIN2A, HTRA2, IKBKB, IL15, IL1R2, INPP5E, LAMB4, LFNG, MAOB, MDH1 , NME7, OR2A12, OR52L1, P2RX4, PAK2, PANK1, PDE7B, PLXNB2, POLR3D, PP AT, PPM1A, PRIM2, SEMA3C, STAT5B, TNFRSF4, TOMM40, UBA7
Negative_5921	LYN, CHST11, CYSLTR2, FARP2, FGF8, GUCY2C, LM07, PKM2, STX5, TNFRSF9 , YOD1, TNFRSF6B
Negative_5922	F2R, HGF, BBC3, CBLB, CCNB1, CLDN16, GUCY2F, IL2RB, IRAK3, LIPT1, MGA T5, MYH9, NFATC4, OR10A5, OR52E6, PLA2G1B, POLD4, TAS2R3, TNFSF18, T PI1, SERPING1
Negative_5923	TPO, AVPR1B, EXTL1, PFAS, RAF1, TUBB2C
Negative_5924	ILK, ACTN2, E2F2, EPRS, EXT2, GOT2, GPD2, HTR7, IARS, IRAK3, MAOB, MAP 2K3, NT5C1A, PDGFC, STAT2, TRAF3, TUBB2C, UPP2, ATP6V1G3
Negative_5925	DDC, F12, FER, FGA, ACADVL, ACSM2A, ADRBK2, ANAPC5, CDC6, CLDN8, COL6 A1, CRKL, CXCL16, ERO1L, EXTL1, FMO4, FRAP1, HEMK1, HIBADH, HSD17B2, IBSP, IFNA10, ITGB1, MAGI3, NFKB1, NFKBIA, NOX1, NTNG1, OR10A3, OR10 H2, OR13C4, OR2A42, OR6K6, PDE8A, PIGH, POLR2G, POLR3H, PRKAA2, PSEN EN, PTSS1, RASSF5, THBS1, TNFSF8, CSGALNACT1, TNFRSF12A, TNFRSF1A
Negative_5926	ALAS1, EDA2R, MINPP1, NAE1, SETD1A, TYROBP
Negative_5927	DBT, ARPC3, BMP2, CLDN20, CRKL, DAAM1, FGF3, HNF1B, ICOSLG, OR52N1, P IK3C2B, PTPRR
Negative_5928	CTH, FOS, LSS, ADCY10, ALS2, BMP5, CCKAR, CHSY3, CLDN3, DCXR, DGKZ, EN TPD8, FUT3, GCH1, IFNGR1, IMPA2, LAMB4, MCM3, MYL2, OR2M5, OR51F2, PD E3B, SETMAR, SHISA5, SLC2A4, TRADD
Negative_5929	CKB, FN1, KIT, SFN, ACAD9, ACOT11, ADH7, ARSD, BDNF, BMP8A, DGKI, DOT1 L, DPM1, EXTL3, FABP4, FPGS, GALNT10, GNAI3, GRIN2A, IL22, KLRC2, MMP 1, MMP14, MYH10, OR1L3, OR7D4, PIGK, PROC, SOX17, SPTAN1, ST6GAL1, ST K36, TAP1, TRADD, TUBA1C, WARS2, GABARAPL2
Negative_5930	PC, ATP5D, ATP5G1, CACNG6, CXCL9, HMBS, HTR5A, JUND, MYH11, NME6, OR1 1H1, OR52K1, PLEKHA8, POLD3, PRKAB1, RALA, SKP2, SNAP23, TJP3, VAMP3

Negative_5931	TKT, ABCC8, ACACB, B3GNT4, CHPT1, COQ3, CSNK1G2, EPOR, FASLG, FGF9, IL10RA, IL1B, ITGAX, OR2G2, OR4A16, OR5L2, PRKCH, SGMS1, SPRED2, STX1B, SUFU, TUBB6, VANGL2, ZAP70
Negative_5932	EPHA5, IL12RB1, OR8D2
Negative_5933	CDK5, CPT2, CYP27A1, IL18RAP, NMNAT3, SERPINC1
Negative_5934	ADA, ADH7, ARSB, DRD1, GSTM4, IGFBP3, NUDT5, OR6C75, PRSS3, RERE, ROB02, SAT1, SH2D1A, TAS2R48, TNFRSF10B
Negative_5935	GAA, IL8, TYR, ACSL4, C3orf10, CACNA1S, CSNK1E, DDX55, EXOC7, ICAM1, IL23A, LAMB4, LTC4S, MECR, OR1F1, OR1S1, OR6A2, OR6M1, PLXNA1, POLR2L, PSEN2, ST3GAL6, VDAC3, WNT6, YWHAE
Negative_5936	C5, PLG, DAG1, FPGS, GLI1, NTRK2, OR51M1, PIGS, PIM1, SPHK1, STX10
Negative_5937	AGL, ATP5F1, CAMK2D, CCNB3, CCNG2, CCR9, CD99, CSF2RA, CYFIP2, EGLN1, GNAI2, GOT1, GSTA4, IFNK, MAP4K4, MTMR6, OR11G2, OR1L8, OR2C3, OR4C46, PFKFB2, PLA2G2E, STAT6, YWHAQ, PHOSPHO1
Negative_5938	AK3, HK1, OGT, VTN, ACP5, ADCY3, AMPD3, ASCC3, CCL25, DAG1, ERBB2, FGF21, FOXO1, GBGT1, INPP1, ITGA2, ITGAL, LAMB3, LILRB3, MAP3K2, METTL6, NFKB2, NOTCH1, OR2W1, OR4K2, PHKA1, PRKX, PRNP, PTGES, RFXANK, SRD5A1, ST3GAL6, XYLB
Negative_5939	GP6, SRM, ACAT2, ACVR1C, AKR1B10, AREG, ATF4, CACNA1C, CALML6, CLDN14, DCXR, EPB41, EPHA4, FGF8, FZD10, GJD2, GNB1, ICAM1, IFNAR1, ISYNA1, ITGAD, ITPA, LEF1, MAOA, MGST3, MTHFD1L, OR10H4, OR1C1, OR2F1, OR51B4, PHKB, PSME1, PYCR1, SGMS1, STMN1, TM7SF2, TRMT11, UBE2K, VANGL2, XYLT1
Negative_5940	SMS, CALML5, CASK, CCR2, CDKN2C, CYP2B6, GYS2, IFNA14, KYNU, MDH2, MTR1, MYH2, NFKB2, NFYA, PFKL, PLA2G3, PLA2G6, POMC, SEMA4B, SLC33A1, TAS2R4, TAS2R9, THBS3, TIRAP
Negative_5941	AADAT, CYP26A1, IL18, IRS2, OR2D2, OR4K2, P2RX6, SETD1A, TSNARE1
Negative_5942	AGPAT6, BTRC, CNGA4, DGAT1, GALNTL2, GP1BA, HTR4, IL15, IRAK1, OR1M1, SMAD6, TCF7L2, WASF2, HLA-DRB4, SUV420H2
Negative_5943	CSNK1G2, CTPS2, FZD4, HBEGF, TNFSF12, WNT2B, PAFAH1B1
Negative_5944	PTS, AMHR2, BET1L, CLDN14, KCNQ1, KIR2DS5, PCNA, RAPGEF3, STAT6
Negative_5945	DHH, HPD, MPI, ACTG1, ADCY1, AMDHD1, CASP7, CHRM2, CTLA4, CYP3A43, ENO2, FARP2, GGCX, GGT7, HTR4, IL2RG, IRS1, MAP2K4, MGAT4B, MYH1, NANP, OR10A7, OR14C36, OR2T34, PCNA, PDE4B, PIGH, PIP4K2A, PRKAR2A, PRKCA, PRKCI, SESN3, SETD8, SOCS1, SPTAN1, SRD5A1, TKTL1, TNFSF8, VAMP3, WIF1
Negative_5946	LEP, AMY2A, ARAF, EVI1, GP1BA, IL1R1, JUND, MASP1, NEUROG3, OR2Y1, SLC25A4, TSHR
Negative_5947	ATP4A, CD47, FUT7, GMPPA, GSTA5, HPSE, IL8RA, INPP1, MAP3K3, NEUROD1, OR4K13, OR8G1, UCKL1
Negative_5948	A2M, BTD, IHH, LCT, MVD, RET, AASDH, ACYP1, BPGM, CDC2, CDKN2B, CX3CR1, DERL1, DRD2, DUSP7, ENTPD5, ETS1, FGF11, FTMT, GGCX, GJA1, IL1A, IMPA1, INMT, JUND, MGAT5, NAGLU, NMNAT3, OR10J1, OR10X1, OR11L1, OR13J1, OR1L1, OR4E2, OR5L2, OR7A5, PDE1B, PFN4, PPAP2C, PPP2CB, RALBP1, RASSF5, ROCK1, RPRM, SDC1, SETMAR, STX12, SYNJ1, SERPINA5
Negative_5949	DBI, VCL, ACHE, ALG12, ATP5L, CACNB3, CHSY1, CMPK2, CPS1, CXCL6, CYP1B1, DGKI, DUSP14, DUSP5, FARSA, FPGT, FUT8, GMPPB, GNAZ, HLCS, HSD17B2, ITGAD, LAMC2, MAPK13, NANS, NT5C2, OLAH, OR14A16, POLR3K, PRKACG, PRPS2, RALBP1, RAP1A, RHOD, RIPK1, SFRP4, TAP1, UGDH, UGT2B4, ULBP3, TNFRSF10C

Negative_5950	BID, BTC, C2, CKM, DBH, GGH, GNS, ACSS1, ACSS2, ACVR1, ADAM17, AKR1C2, ALG10B, ARG1, ARRB1, BCAR1, CCR5, CHRNA7, CMPK1, CSNK1G3, DGKA, DHCR24, ERBB3, GAD1, GMPR, HMGCL, HMOX1, HNF1B, HSD3B1, JAK1, JAM3, KCNQ1, LAMC1, LLGL1, OR2M7, OR8I2, OR9G1, P4HA1, PCCB, PIK3CG, POLA2, PPP1CC, TAS2R42, TKTL2, TUBB3, UBA1, YKT6
Negative_5951	ATP5A1, IDI2, ITGAV, NFX1, QARS
Negative_5952	MVD, TK1, ALG5, APAF1, ATP5I, AXIN1, BAAT, CALML3, CBR1, CD22, CD70, CLCF1, CYP2C9, CYP4F3, DFFB, DGAT1, DIAPH2, FGF2, GAD2, HSPB1, IRF3, ITPA, LARS, OR13F1, OR2L8, OR51A4, OR51I1, OR6S1, PAK7, PDHA1, PDHA2, PGK1, PLK1, POLR1A, PON2, PVRL3, RDH12, SSH1, STT3B, TSLP, UCKL1, ULK1, YARS2
Negative_5953	DHH, ALDH3B1, ASS1, BMP5, CD247, DAXX, DLAT, DUSP9, FZD3, GATM, IL17RA, ITGA10, MAP2K4, MGAT3, OR10AG1, OR51G2, P4HA2, PDE4B, PDGFC, PIGP, PIK3CD, POLD3, PPBP, PPP2R5D, PRKCZ, PTEN, SARS, SLC25A4, SLC27A4, SRGAP1, CSGALNACT1, HLA-DRB3, SUV420H2, TNFRSF10B
Negative_5954	CBL, ILK, ALOX15B, BHMT, CACNG7, CALML3, CCKAR, CNTNAP2, FABP1, FUT2, GNAT3, HAGH, HRH1, HSD17B8, IL12A, IL13RA2, MAD2L2, NFKBIA, NR4A1, NRG3, OR1N2, OR5H2, OR6C70, PIM1, POLR2J
Negative_5955	DCK, TFG, ALDOC, ATG7, ATP6VOC, B3GNT3, CAV3, CCR3, CD22, CD01, CTPS2, DNMT3B, FADD, FGF5, FOXA3, FTH1, GALK2, GNAI1, GSTP1, HGSNAT, HYAL1, ITPKB, MCCC2, MCEE, NFATC4, NUMBL, OGDHL, OR52E2, PDHB, PPP1R3C, QPRT, RBX1, SDHB, SLC33A1, SNW1, XIAP, CACNA2D3
Negative_5956	LSS, ACTN4, ALG10B, ARHGAP5, ASMT, BDH2, CACNA1A, CSNK1G1, ECHS1, FADD, FGF14, GRM1, HADHB, HAGHL, HEXA, HSD17B8, KAT2A, MAP2K5, MCCC1, MYH11, NRG4, OR10H4, OR6C76, PKMYT1, PRKAB2, PSAT1, STAT4, TLN2, UGT2B4, UPRT, TNFRSF12A
Negative_5957	BCR, CD4, ADCY10, ATP6VOB, CCND3, CRKL, DUSP14, EDAR, ENPP1, EXTL2, GNA14, KLRK1, LLGL2, LTBR, MAP2K2, NADSYN1, NEUROD1, OR10G3, OR13C8, OR2M3, OR2M5, OR9G4, PMVK, PRKAR2B, RAB5A, WNT8B
Negative_5958	C1S, OGT, SYK, TAT, ADCY8, ADRB3, ANAPC4, BMP7, CCR4, CD46, CDH4, DHDDS, EGLN1, EPOR, GOT1, GSTT1, IFNG, MGAT1, NADSYN1, OR10A3, OR10K2, OR4D9, OR52E6, OR8S1, PCK1, PLCB2, PTPN11, ROCK1, SARS2, SLC12A2, TBL1XR1, THTPA, UNC5A, ZMAT3, HLA-DRB3
Negative_5959	LPL, UBB, CCL8, CFLAR, GUCA1C, IRAK4, MGAT1, NTF3, PGM2, UBE2L6
Negative_5960	LYN, ACSS3, ALG6, ALPI, AOC3, CAV1, CCL16, CDC7, CHEK1, CLDN2, CYP19A1, CYP4F3, CYSLTR1, FGF14, FGF9, GADD45B, GALNTL5, HAGH, HLA-DMA, HSD11B1, IKBKG, IL13RA2, IL1RAP, IL2RA, IL7R, ITPKB, NKD2, OR10T2, OR5AC2, OR6K2, OR7G3, PFKFB4, PPP2R2B, PSPH, RAPGEF4, RFX5, SCD5, SHC3, SRGAP1, STK3, STK36, STX7, TRMT11
Negative_5961	NNT, PC, ACAD9, ACVR1B, BCL10, CCL24, CDC25C, DGKH, DPYD, DTX1, DUSP7, E2F5, ER01L, FOXA2, GALNT11, HAGHL, HIBADH, INSRR, ITGA2B, LEFTY2, MIOX, NFYA, NOTCH2, OGDH, OR4K13, OR4K2, OR52N2, OR8I2, OR8K3, PDPK1, PIK3R2, PLAU, PRKAB1, SAT1, SDHB, STAT5B, TAS2R7, TBK1, TNFSF10, VTI1B, WNT6, HLA-DRB4, MAPK8IP1
Negative_5962	ADC, CCL26, CPT1A, CPT1B, DEGS1, DHFR, EXOC7, FUT9, GALE, GCH1, GNA15, HAP1, HMGR, IAPP, IL10RA, ITGAM, KARS, KNG1, MMP7, NPAS2, NQO1, OR10A6, OR1A1, OR1S2, OR51L1, OR7D4, PAK6, PLOD1, POLR2E, PPP1R3A, RAP1B, RFXANK, SDHA, THY1, TIAM2, SERPINA5
Negative_5963	GP5, ACADS, BMP2, CCR4, COX15, F2RL3, FOXO3, GSTM4, GUCY1B3, IGSF5, ITPA, PGAM2, PLCG1, POLA2, SUCLG1, SERPINE1

Negative_5964	C1S, C9, DD0, LSS, APOA1, ASPA, ATF4, ATP6V1A, B4GALT3, BCL2, BHMT, CACNG2, CLDN5, CYP26C1, DHRS9, DPAGT1, FDFT1, FIGF, GPAM, HSD3B2, ITGA5, LCP2, LM07, MCM2, MMP2, NPR2, NR4A1, OR11H1, OR13C4, OR1J2, OR2AG2, OR5AS1, OR6C4, OR7C1, POLR2D, POLR3A, PON1, PRPH2, PTPRM, PYCRL, SD C4, SENP2, SLC2A2, SMC1B, TYROBP
Negative_5965	CACNA1S, CACNG6, CNTN2, DHDDS, DPM1, DUSP4, EPHA8, FASN, GSTO1, MOV10L1, NCR3, OR11L1, OR2AG2, OR4C15, OR4F6, PDPK1, PLA2G4A, PRKCZ, SFRP5, SH2D2A, TRMT11
Negative_5966	LIF, PGF, ACOT12, AHCY, CDH1, CHIA, CLDN4, CSF1R, DGKZ, GADD45A, IDH2, IL1RAP, ITGA2B, ITGB1, KCNB1, MGAT5B, NSD1, OR2V2, OR51A4, P2RX1, PDE2A, PDXP, PGAM4, SH2D2A, SMAD6, SMURF2, SPTLC2, VKORC1, YWHAH, HSP90AA1, MAPKAPK5, SERPINB5
Negative_5967	ADC, ID3, NGF, ACVR1B, APOC3, CACNA1B, CDC14A, CDKN2C, CNGA3, COMP, EHMT2, ENAH, FBXW11, FRAP1, GDF6, HTR5A, LFNG, MYLK2, OR2F1, OR56A3, OR5P2, PAICS, PDHB, PHKG2, PIP5K1A, POLR1D, SESN1, SHMT1, SLC2A1, STAT6, TNFSF18, TOMM40, WHSC1L1, YWHAH, TNFRSF10A
Negative_5968	ADK, FGG, GP5, ACP1, ACY3, ADRB2, AGXT2, BDH1, CALML5, CCL24, COL5A2, CREB3L3, CXCR5, FGF12, FMO5, HMGCS1, ITGB8, NCAM2, NCOR1, NR4A1, PDE7A, PIK3C2B, PLA2G3, RARS, SFRP4, TAS2R40, VAV3
Negative_5969	DCN, DLD, FN1, KHK, ALPL, AOX1, ATP6AP1, C3orf10, CACNG6, CANT1, CBLB, CIITA, CLDN3, CREB1, CTLA4, DGAT1, EGLN1, EPHB2, GBE1, GNA14, GRLF1, GSTA5, GSTP1, HMGCS2, ICAM1, IFNA10, IGSF5, IL28B, ITGB1, LEFTY2, LIAS, MMP2, NCR2, NEFM, NMNAT1, OR2G2, OR4X1, PAK4, PDE7A, POLA1, POLR3G, RAP1B, SNAP23, SSSX2IP, TUBB2B, WARS2
Negative_5970	FUK, TFG, TKT, ALAS2, B3GNT2, B4GALT7, CCR5, CHKA, CLDN9, CNTNAP2, DD X23, DFFA, FGFR2, GABARAP, GGPS1, GLI1, GNPDA1, IL23R, INMT, ITGA10, MYH2, NCOA4, OR11H4, OR12D3, OR1L8, OR2AG2, OR2K2, OR4S2, PLD1, PMM1, POLR1B, PRLR, PVRL4, ROCK1, RRM2B, TRAF4, YARS, CSGALNACT2, HSD17B12
Negative_5971	NGF, ACSL1, AMY2B, AREG, CDC2, EXTL1, GAB1, IL19, PKM2, PPP2CA, TAS2R48, TCF7L2, WIF1
Negative_5972	AKR1B1, ATP6VOC, BPNT1, CRY1, DGKB, ENTPD5, GALNT1, GUCY1A3, HSD3B7, ITGA9, KIR2DL1, MTMR1, NFKB1B, P2RX2, PCYT1A, PIGU, PPAP2A, TAS2R16, ZFYVE16
Negative_5973	CTH, INS, ACVR2A, ADH1B, ADRB1, ALOX5, CD46, CNTFR, CSNK1E, CTBP1, EPHA1, FGF14, FSHB, G6PD, GART, HLA-DOA, IL18R1, IRAK4, LIMK2, NAMPT, OR10G3, OR51B6, OR52I2, OR8D2, PDE9A, PHPT1, PLA2G5, PLCZ1, PPAP2B, PPP2CB, RALA, RPS6KA6, SETD1A, SH2D1B, SHMT2, SLC2A2, SULT1A4, SUOX, TAS2R5, TGFB2, TNFSF4, TRAF4, UCP1, UGT2B4, WNT8A, YWHAQ, KIR2DL5A, MAPKAPK5
Negative_5974	C8A, DAO, GNE, RPE, WAS, ABP1, AKT3, CD8A, CDC26, CXCR6, ENPP1, HDAC2, LAMA4, MAP3K12, MS4A2, NRAS, OR2A4, OR8K3, PIK3C2B
Negative_5975	HYI, AGPAT3, AMY2B, DHDDS, F13A1, FMO2, GLG1, GLUD2, HAGHL, HSPA8, INSR, LDHAL6B, OR5AN1, OR8D4, ORC1L, PAK1, PDE4C, PRKCE, TBL1Y, TJP2, SLC25A31
Negative_5976	ADO, ACP1, APOE, CACNA1S, CD40LG, CYP4F3, DGKD, FGF22, FMO3, GARS, GDE1, GNPDA1, HMGCL, IFNA2, IRF3, MAN1A1, NFATC2, NFKB1, OR1K1, OR4C15, OR52N1, OR5B21, OR6C4, P2RX3, PIAS4, PIGW, POLR2C, SPHK1, TAS2R3, T KTL2, HSP90AA1
Negative_5977	DDO, SDS, CD79A, CHDH, CHPT1, CYP2C19, CYP3A5, ENTPD3, FLT3LG, GANC, GLG1, IL28RA, IPPK, ITGA9, NRAS, NSDHL, OR1D2, OR51A7, OR51I2, PFKM, PRPH2, PRSS2, PTPN5, ATP6V1G3
Negative_5978	NNT, IL2RA, MYL9, PRODH, SRD5A1, TAP2

Negative_5979	ACP6, B3GAT1, BDKRB1, ERBB2, GNPAT, IFT57, IL21, INSR, MAN1A2, OR13D1, PIP4K2C, POLR2A, PPCDC, TICAM2, TRPC1, UBA7, ST6GALNAC3
Negative_5980	ADO, PLG, SMS, ADRA1D, B3GALT2, B3GAT2, CCR9, CHRM2, CHSY3, CYP26C1, CYP3A4, FASN, GGPS1, GMPR, IFNAR1, LYPLA1, OR2L3, OR5L2, PARD6A, PDGFC, PLA1A, POLE, RAPGEF2, ROBO1, SCLY, SNAI2, SOAT1, SULT2B1, TP73, WNT2, HLA-DQA2, ST6GALNAC6, SUV420H2
Negative_5981	ATM, GK2, PXN, SP1, AARS, BCL2, CCL14, CCR9, CER1, CLCF1, DPYSL2, ECST, EDAR, EHMT2, FUT4, GCNT3, GJA1, GOT1, IFNG, IQGAP2, MAGI3, NCOR2, NKX6-1, OPLAH, OR10K1, OR10T2, OR1S2, OR2T34, OR51B6, PARD6G, PIP5K1B, PISD, PLA2G1B, RBPJ, SOAT1, TSNARE1, WARS, B4GALNT1
Negative_5982	AADAC, ABLIM2, ACSM2A, AK3L1, ANAPC4, CANT1, CD27, CDH1, CREB3L2, CYP11B2, DAXX, DGAT1, EFNA5, EGFR, ENTPD5, F11R, FADS2, GOT2, GPAM, HNM T, IQGAP1, LYZL1, MAPK14, MDH2, MOV10L1, NUDT5, OR10S1, OR4K15, ORC6L, PIGW, PLA2G2D, PTPRR, RBPJ, SARDH, SPRY1, STK4, TLR4, TPH1, TRAF3, VAV2, ATP6VOE1, TNFRSF12A
Negative_5983	AXIN1, CDH3, CXCR5, ESPL1, FGF11, GDF6, HSD17B8, ITGAX, OR2T3, OR4F5, SMARCA2, TSHR
Negative_5984	AK2, CR1, GSR, PLN, TPO, ACPT, ACYP2, CCR6, CD79B, CRY1, CUL1, CYP17A1, DBF4, ENTPD8, FTCD, GALNT9, GUCA1A, HMOX1, IFNA8, IFNK, IL12RB1, IL25, LCMT1, MAPK11, MCM3, MGAT4B, NCK2, NUDT5, OR10J3, OR4K17, OR51A2, OR52B6, OR5B17, OR6Y1, PANK4, PARVG, PDE1B, PLXNB2, PPP1R1A, PRKCE, STX1B, TP53, TRDMT1, TRIP10, WASL, WNT2, YKT6, ZMAT3, TNFRSF14
Negative_5985	MUT, ADSS, ALDOA, CALML6, CDC23, CKS1B, FGFR1, GCDH, HNMT, PLOD1, SKI V2L2, UGT2B11
Negative_5986	LPL, NF1, CREB1, IL13RA1, PIGK, PIP5K1B, POLE3, ROBO1, SEMA4B
Negative_5987	CR2, HAL, PDC, ACADM, ADRA1A, ARRB1, BACE1, BUB1, CASP7, CCL28, CES2, CHAD, CRKL, CSNK2B, CYP11B2, DNMT1, E2F5, FZD1, GRIN1, HIP1, IL15, IL20, INADL, LFNG, LIMK2, MAP2K6, MASP1, MDM4, NCR1, NRP1, NT5C, OR10X1, OR13C5, OR4D9, OR4K5, OR5M3, OR5P2, OR9K2, POLR2I, PRKCI, SMC1A, SOCS1, TIAM1, ATP6V1B1, PPARGC1A, TNFRSF14
Negative_5988	FGG, ACADVL, B4GALT7, BDNF, CACNG8, CFTR, FECH, GNAT3, GNRH1, IL24, MYH9, NMNAT3, OR2T34, OR5M9, PDE3B, PDGFRB, PPP2R5D, PRKCA, RGS3, ROCK1, SETDB1, STAT4, TPI1, UGT2A3
Negative_5989	AMY2B, CYP2D6, HNF4A, IFNA6, OR2T10, ORC2L, EIF4EBP1, TNFRSF11B
Negative_5990	CBL, TNC, ACOT12, ADCY4, ALG6, ARPC5, C1QC, CCL1, CCL4, CD40LG, CPT2, DHRS4, E2F5, ENTPD7, EPAS1, GADD45B, GRM1, HNF1A, ITGA6, LRP6, MDH2, MYH10, NLGN3, NR1H3, NSD1, OR10J3, OR4K5, PANK2, PDE3A, PGK2, PMM2, PPM1D, PPP1R3B, PRKAB1, PRPH, RASA2, UCK1
Negative_5991	LIF, TNC, ADAM17, AMPD3, ASPA, BIRC2, COL2A1, CYP26A1, CYP2A6, IL12A, INSR, ITPA, KLKB1, MAP3K1, MRAS, NLGN2, NUDT8, NUDT9, OR1M1, OR2F2, OR4F17, OR4K13, OR52W1, OR5L1, PGM1, PIAS2, RARS, RDH5, SPRY1, TAP2, TMLHE, EIF4EBP1
Negative_5992	HAGHL, OR2T3, OR5R1, WASF3, WWP2
Negative_5993	MAX, ARNTL, ASIP, CCR3, EARS2, GSTM5, LALBA, NAE1, OR1A1, OR4N5, PIPOX, TICAM2
Negative_5994	CXCL11, GALNTL4, GNAI2, OR4D5, OR5L1, PIGH, PTPRB, VAMP1
Negative_5995	ACO1, C1GALT1, DGUOK, IL10RB, IL2ORB, NFKB1, PGS1, RBPJ, VDAC2
Negative_5996	B4GALT3, CCNB2, CHPF, CHRDL, CLDN1, CSNK2A2, FZD9, GART, GGT6, GLI1, GNMT, OR56A1, POLE, PPP2R2C, RASSF5, SGMS2, STX7, TSC1

Negative_5997	PVR, AACs, ALG1, ALG11, B3GALT1, BPNT1, CCNB1, CCNH, CCR7, CD3E, CD82, COL1A1, CXCL3, DUSP3, DVL3, EPHB1, GLI1, HNMT, HSD3B2, IFNA7, NCR3, NKX3-1, NOX1, OR5AS1, OR5T1, PANK3, PANK4, PLCZ1, RFXANK, RPS6KA6, RXRB, SELE, SETDB2, SMARCA5, SMURF1, STX2, TAP2, TNFSF12, TRAF4, ATP6V1B1, CACNA2D1
Negative_5998	APP, CAT, CBS, JUN, ACHE, ACP1, ANAPC1, B3GNT2, CCR5, CCR6, CDC23, CSNK1G3, CTNNA1, CYP3A7, DDX18, DDX47, EPHA5, FGF21, FUT8, GGPS1, GMDS, GNAI2, HLA-DOB, HSPA8, HTR5A, IRF7, NTNG1, OGDH, OR1L6, OR2V2, OR52D1, OR6C76, OR6Y1, ORC6L, PLAU, POLD1, PRKY, RALA, RHOA, SDHC, SEMA3E, SLC25A6, TGFBI, TNXB, UNC5D, WBSR17, CTNNBIP1, PNLIPRP2
Negative_5999	AK5, BCR, FGA, FYN, MPL, AASDH, ADRA1B, BACE2, BCAT1, CCL27, DFFA, DGKG, DUSP7, ETNK2, HMGCS2, HSD17B2, HTR7, IL11RA, ITGA5, MAN1A1, NFATC2, OR10AG1, OR13C8, OR1B1, OR1J1, PARVA, PDE2A, PFKFB2, PIK3R3, PLA2G10, POLD1, PRKCD, SDHC, SHISA5, SLC2A4, SLIT1, SULT1A2, TNFSF9, PRICKLE1
Negative_6000	ACOX1, AFMID, ALOX12, ANAPC1, ARSD, CD28, CDKN1A, COQ3, CYP11B2, DDX50, DUSP4, FLT1, FOXA3, FUT5, GUCY1B3, HIBADH, HSD17B7, MDH1, NFX1, NLGN1, OR2L2, OR4K17, OR4N2, OR51A4, OR6K3, PKM2, TBXAS1, TUBA1B, WNT11
Negative_6001	LPO, AGTR1, ATP6AP1, CNDP1, CTNNA3, CYP21A2, FLT3LG, GPAM, IL11, IL2RB, INHBE, OR2A5, OR5B3, RFNG, SSX2IP, TSHR, TUBB6
Negative_6002	B3GNT5, CDS1, OR5R1
Negative_6003	C4B, INS, ADIPOR2, ARG2, ARHGEF4, B4GALT1, BAI1, BIRC5, CACNA1S, CD70, CFL1, CYP11B1, DOLPP1, EPHB2, JAG2, LAMA3, MCM4, OR4A5, OR51Q1, OSMR, PIK3C3, PRKCH, RBL2, SHC4, SMAD2, STX5, WNT5A, HSD17B12, HSP90AA1
Negative_6004	MPZ, AMPD1, AMY2B, APOA5, ARSE, B3GAT3, CLDN8, CYP21A2, CYP2A7, DHRS9, DUSP16, EPHB6, EPRS, FUT1, GALK1, GCH1, HAP1, IL20, IL28A, KDSR, LRC4C, OR10A2, OR10P1, OR13F1, PAX8, PDE11A, PLAUR, PNPLA4, PTGES, RXRB, SEMA3G, SKP1, SPRED2, SULT1A4, WWP1, YWHAB, ZFYVE16, CTNNBIP1, MAPK8IP1, TNFRSF11B
Negative_6005	FH, MSN, ATP50, HNF4A, INMT, PDE10A, PTPRF, TNFSF12
Negative_6006	CGA, CKB, CR2, FGA, AASS, AKR1C1, ATIC, CADM1, CCL16, CCNG2, CD226, COQ5, CYFIP1, DGKE, DHRS4L2, EIF4B, FUT7, GSTO1, HSPA2, MAFA, MAP3K13, MASP2, MGAT4B, MYH3, MYL5, MYLK, MYLK2, OR2M3, OR2T2, OR4C6, OR51I2, PCYT1A, PDGFC, PER1, PFKP, PHKB, PIGF, PLCB1, POLE3, PRKAA2, PTGIS, RALB, RND1, STK3, UGT2B17, VAV2
Negative_6007	ABL2, ALAD, AMPD2, ASMT, B3GAT1, CBLB, DDX51, ENTPD2, FZD4, GADD45A, GALM, GCH1, GLI3, GYS2, HCST, MAPK1, OR4D9, PDE5A, SNAI1, SRGAP3, TACR3, TMLHE
Negative_6008	GLA, ID1, PLG, TEC, ANAPC7, ATP2A1, C1GALT1, CCKAR, CSF2RA, CUL1, EPHA8, GNA11, LIPC, LPAR1, MBL2, NSD1, OR51F2, OR56A3, OR5L2, OR8K5, PARVA, PAX4, PLCD1, PMVK, POLA1, PPAP2A, PRKACA, PTPRF, RAC3, RASA2, RCHY1, SARDH, SMPD2, TIAM1, TLN2, TRAF4, WNT1, WNT2B, ST6GALNAC4, TNFRSF6B
Negative_6009	TFG, ADORA2A, ATP5F1, EGFR, TAS2R5, VAMP2, B3GALNT1
Negative_6010	ZYX, ACADL, ALDOA, EPB41L2, GSTA3, ITGAX, MTHFR, OGDHL, OR51B2, OR52B4, OR8B4, POLR1D, SMAD4, TLR3, TSC2, UGT2B4



Negative_6011	GSN, ACVRL1, ALG10, ALG13, ASRGL1, BDH1, CCL24, CDC25B, CLDN18, CSNK1A1, EXTL3, GALNT3, GIT1, GNPAT, HSD17B3, IFNA5, IPMK, ISYNA1, ITGA9, KNG1, LCP2, MAP4K2, MGAT5, NFKB2, NMNAT2, NRP1, OR13J1, OR51A7, OR5L2, OR5P3, OR8H1, PAK4, PDGFRA, PEMT, PIK3R4, PLAU, PTGFR, RASGRP1, RPK1, STX3, TAS1R1, UPB1, WNT3A, YWHAQ
Negative_6012	ATP5I, CFL1, CRKL, DIAPH2, FGF14, GCNT3, MAP2K4, NEFH, SELP
Negative_6013	FGB, MNX1, NR5A2, PSME1, RAC2, SEMA4A, STAT5A, TPI1, VAMP1
Negative_6014	MET, ACSS2, ADCY6, ARNT, CCL13, CD36, COL5A3, CRB3, CSNK1D, EFN3, ENPP3, GNA12, HLA-DOA, HSD3B1, MIOX, NUDT12, OCLN, OR1L6, OR2AT4, OR56A1, OR5D13, OR5H6, PAPSS1, PIAS1, PIGL, PIM1, PLCG1, PON2, PPM1D, SPTAN1, TBL1XR1, UGP2
Negative_6015	NPL, CREBBP, CYCS, F2RL3, GSTO2, IL7R, MGAT5B, NCAM2, OR2B2, OR5I1, PDE5A, PHKA1, PIK3CB, PPP2R2C, WASF3
Negative_6016	C8G, IL4, CHST12, CNGB1, FGF4, GMSD, GUCY1A2, ITGA1, KIR3DL3, MMP14, MYH9, NAT6, OR10G2, OR10J1, OR4C16, OR8K3, PDE6D, PIAS3, PIK3C2G, POLR2K, SEMA3D, SMAD4, TPK1, TSTA3
Negative_6017	ACTN4, ADRB1, BDKRB2, CRHR1, DOCK1, EPHB6, GTSE1, ITGA7, PNMT, PPP1C, RAC1, SEMA4B, WNT7B
Negative_6018	DDO, NOG, PTS, CD22, CNDP1, COQ6, CREB3L3, CTSG, DDIT4, DGAT2, GUCY2F, IL1A, IL1RAP, IL22, KLRC1, LMO7, MCCC2, METTL2B, NTN1, OR2G3, OR4K5, OR51B6, OR7G1, OR8S1, PGLS, PIGT, SELPLG, SMARCA2, SOX17, SRGAP3, STEAP3, MAPKAPK5
Negative_6019	JUP, ALDH3B1, ALOX5, CYP11A1, EGFR, FCGR3A, FGF9, GCLM, GLI3, LARS, LTBR, MAPK13, OR7G2, PAK6, PLXNA2, PNPT1, POLR1D, PPOX, PTPRZ1, RPN2, SARDH, SOCS4, ST3GAL4, WIF1
Negative_6020	AASS, ACSM3, APOA2, ATP13A2, CNTN2, DDHD1, GP1BA, HADHB, HDAC1, ITGA2, MAPK1, MAPK9, MARS, MEF2C, MYH10, NTF4, OR2K2, PPM1D, STK3, TSNARE1, UPP1, HLA-DRB5, TNFRSF1B
Negative_6021	ID3, NOG, GPT2, GRIA3, HTR5A, NAGLU, OR10H1, OR52L1, OR5D16, OR5L2, PHKG2, PIK3C2G, POLR2H, SNAP23, SOCS4, SV2A, TMLHE, TSC2, UMPS
Negative_6022	ADK, GGH, PAH, TNC, ACSS1, ADH1A, BDKRB1, CDC23, DBF4, DDHD1, EPHA7, FUT3, GCH1, HRH2, ICOS, IFNA6, ITGAV, LIPG, MAP4K1, MECR, MTMR6, ODC1, OR1F1, OR1N1, OR2H2, OR2M4, OR4A5, OR6C4, PDGFC, PLCZ1, PLEKHA8, POLR2A, PROC, RDH12, RXRB, SKP2, STX16, SUCLA2, TFDP1, TRPM5, UBA7, WNT10A
Negative_6023	BNIP1, COMP, EGLN3, FUT4, ITPK1, NEU1, NFKB1, OR1A2, PDE6D, PDGFRA, STX1A, SUV39H2, UBE2L3, ULK3, YKT6, MAP3K7IP1
Negative_6024	AK2, GSR, CAMK2B, CLTC, GCLM, GNAI2, HMGCS2, LAMB1, MTFMT, NFX1, NME2, PGM2, PIAS2, POLA2, RDH8, RRM2B, ST8SIA1, VAMP4, VKORC1, WNT8B, XIAP, ATP6V1B2, HSD17B10
Negative_6025	CGN, CCL17, EPHB6, PON2, SFRP2
Negative_6026	PGD, ABLIM1, ARSB, ATP5B, ATP5F1, ATP5G3, CCL1, CCL21, CERK, CTF1, CTLA4, ENAH, EXTL3, FBP1, FGFR4, GCNT2, GGT1, GGT7, HMOX2, MAP2K7, MYH2, NME6, OLAH, OR10A3, OR10T2, OR11H1, OR2A5, OR4M1, OR51G1, OR52H1, OR8H3, PARS2, PAX8, PIP4K2A, PRKCE, RAC1, SPHK2, TALDO1, TUBB4, SERPINC1
Negative_6027	HPD, CDC26, CHPF, CHRM1, CSF3R, CYP11B2, ENPP6, LTBP1, NKX3-1, OR4A15, OR4A5, OR6K6, PRDX6, RRM2B, SMAD1, SMAD4, TAS2R41, YOD1, PLA2G12B
Negative_6028	AADAC, ADH1B, ATP5D, BDH1, BPGM, CYBB, EGFR, FGD1, GALNT6, GLS2, HSD17B1, MAP4K3, NANP, NOS1, OR10H1, OR1G1, OR2A12, OR6K3, RENBP, STAT3, KIR2DL5A

Negative_6029	MET, ACSS2, ADIPOR1, AGXT, ALCAM, B3GALT4, CPT1B, ETNK1, GNB3, IL12RB1, IL4R, OR4C13, OR52E4, SDHD
Negative_6030	CEL, KMO, ANAPC5, ATG12, B3GALT6, BACE1, BMP8B, CBR1, CREB3L3, DDX23, ELK1, ENTPD1, FASLG, HSD11B1, INPP5E, LEF1, NT5C, OR4K2, OR51B2, PIM1, PVRL1, STX2, SV2A, WASL, TNFRSF11A
Negative_6031	C4B, ALDH4A1, CTSL1, OR9Q2, PER2, PIGV, PLCD3, PRKCD, PRODH, RAB23, UCKL1, VAV3
Negative_6032	NLK, SRM, STS, ADH7, ALPP, ARPC5, CACNB3, CBR3, COL4A6, CSNK2B, CX3CR1, DAXX, EDNRB, GDF6, GSTM5, HLA-F, HYAL1, IRF9, ITGA11, LIPG, NQO1, NTRK1, NUDT9, OR11A1, OR5AU1, OR9G4, OR9I1, PDE11A, PDGFD, RIPK1, RRAS2, SGPP1, SOX17, TNFSF14, MAPK8IP1, ST6GALNAC5
Negative_6033	DAO, GLA, ID4, ILK, MAX, ACSL5, AKR1D1, ATG12, B3GALT6, BCKDHB, CARD11, CCL3, CCR1, CD70, CDH3, CES1, CRY1, DOT1L, DRD5, GALNT6, IAPP, IFNA10, IL18, IL18R1, KIR2DS4, MPST, NANP, NFX1, OR10H4, OR13D1, OR2A42, OR2L13, OR4B1, OR5AS1, OR6C76, RFXANK, SC4MOL, SEMA4B, SEMA4G, SMPD3, SPTLC1, SUCLG2, SULT1A4, YWHAZ, ATP6V1C1, GABARAPL1
Negative_6034	BID, CTH, DCC, GBA, ID1, UBC, ADRB2, AMPD3, BMPR2, CD72, CMPK1, CTPS, CXCL2, CYP4A11, CYP4F2, DFFA, DUSP14, EDAR, ERBB2, EXTL1, FDFT1, FZD8, GSTO1, LYZL1, NRG3, OR1B1, OR3A1, OR5P2, OR6C4, OR7G2, P2RX3, PDE8B, PIGU, PIK3C2B, PORCN, PRIM2, PRPH, PSAT1, RDH11, RPS6KB2, TAS2R14, TD02, TLR5, VARS, YWHAB, SUV420H1
Negative_6035	IVD, CNGA3, DDIT3, GFAP, NFKB2
Negative_6036	ACACB, APOC3, ARPC1B, CASP7, CCL13, COL6A1, CYP3A5, FSHR, LAMA4, PDE4D, SPP1, SPTLC1, TBL1XR1
Negative_6037	DDO, MAX, ADCY8, ADORA2A, AGPAT6, ANAPC7, B4GALT4, BDKRB2, CACNA1I, CCR7, CDC14B, CX3CL1, DAAM2, FGF9, FMO3, FPGS, GALNT10, HLCS, OR1S2, OR4A16, OR51T1, OR52I1, OR5R1, ORC2L, PDE8B, PIAS1, PIGO, PIGV, POLR2I, PSEN1, RRM1, SKIV2L2, SLC25A4, SMURF1, SORBS1, STK36, SULT1E1, TALDO1, TP73, TPM3, UGP2, XYLT2, MAPK8IP2, PLA2G12A, TNFRSF17
Negative_6038	AASS, AGPAT3, BLNK, CAMK2A, CD72, DDX4, EHHADH, FABP3, GCLM, GLG1, GSTM2, IBSP, IL9R, IRF3, ITGA1, ITGA6, NFATC3, OR10T2, OR52N1, PDHB, PIGC, PLXNA1, SARDH, SHMT1, STAT5B, TNFRSF18
Negative_6039	GPI, OGT, WAS, ACSM1, CACNG4, CCL17, CDC25C, CES1, CHRM3, DUSP6, FRAT1, GANC, GART, GNAS, GNRH2, GSTT1, GYS2, IL21, MAD2L1, METTL6, NCR3, NPR2, OR1L1, OR1L6, OR5AN1, OR6K6, OR8H2, PDE3A, PDGFRB, PIGC, PIK3C2G, PPP2R5A, PTPN1, PYGM, SESN3, SFRP5, SLC2A4, SMAD4, STAT5B, TGDS, TGFB3, TRAF3, ULBP2, UPB1, WNT5B
Negative_6040	HYI, LAT, CDC6, CREB3L4, DDX55, DTX4, EFNA5, ESAM, FBXW11, FMO4, GALC, GAPDH, GSTA1, GTSE1, GUCY1A2, HYAL1, INHBE, ITCH, LGMN, MKNK1, NEUROD1, OR4B1, OR4F6, PFKFB3, PNPLA3, POLD4, RARA, SETD8, STAT3, TICAM1, TRADD
Negative_6041	ADCY5, ADCY9, APPL1, ATP5J2, BMP6, CACNG7, COL2A1, EIF4E, EPHA7, FAR2, FGF12, FGF18, GALNT14, GALNTL1, HSD17B7, INHBB, ITGB5, LAMA3, NTRK1, OR2M3, OR4C13, OR51L1, OR9K2, PDE7A, PNPLA3, SESN2, SOS2, VASP, TNFRSF13B, TNFRSF13C
Negative_6042	AANAT, B4GALT1, CACNA1D, CSF1R, FADD, HADHB, HSPA8, IL1B, NCR2, OR1K1, OR5P2, PGS1, PIK3CD, PLOD3, ST3GAL1, STK11, TAS2R48
Negative_6043	B3GALT6, CCL14, CCL22, CDC14A, CLDN3, CREB3L2, CRKL, CTSB, CXCL12, EP300, FZD8, GLUD2, GNA15, GNAI1, GNAZ, HSD17B7, HSPA2, ITGA3, L1CAM, NCKAP1L, NSDHL, NT5C1A, OR10C1, OR11A1, OR11H4, OR13C5, OR4C11, OR52R1, OR6K6, PIGA, PPP2R5C, PPP2R5D, PPP3CC, PRODH2, PTGS2, PTK2B, PTPRF, RAF1, SMC1A, ST6GAL1, UMPS, WNT9B

Negative_6044	PVR, ACACA, ACVR2A, ALDH4A1, AMDHD2, ANAPC1, BBC3, BCAR1, CDC25A, CHUK, CLDN3, CNGA4, CYP4A11, DGAT1, DLAT, DTX2, DUSP4, EP300, F13B, FADD, FBP1, FPGT, GGPS1, GPD2, HLA-DOA, LARS2, OR51E1, OR51I1, OR51S1, OR7A10, OR8D1, OXSM, P2RX5, PAK4, PDGFA, PGAM2, PIGW, PMM2, PON2, PPP3CC, PRNP, RASSF1, RPN1, RXRA, STAT5A, SYNJ1, TACR2, TPK1, ATP6V1G2
Negative_6045	FGA, NOG, ADH1A, CLTC, DGKE, EHMT1, GALC, HSD17B2, HSD17B3, OR2F1
Negative_6046	CAD, TPO, ABL2, ACOT12, ACP5, ACVR1C, ACY1, ADAM10, ALDH7A1, APAF1, ARG1, ATP5A1, ATP5J, CBR1, CD14, CRY1, CTNNB1, CYP2A6, DGAT1, DGKI, E2F2, EIF4E, HMGCS1, HSD17B8, IL13RA1, IL17A, ITPKA, LM07, MDM2, NAGA, NUDT9, OR10G7, OR10K2, OR14J1, OR2T3, OR3A1, OR4B1, OR6K6, PDE6G, PTDSS1, TLN2
Negative_6047	CGA, GLS, KIT, LEP, ATIC, CADM3, CD244, CNTN1, CSNK1G2, CYP17A1, CYP4A11, DDX23, FDPS, HCCS, MAP4K4, NTF4, OR51F1, OR5P3, PAX8, PDE4D, POLR1D, RPS6KA3, SDHB, SH2D2A, SUCLG2, TYRP1, VTI1B, AASDHPPT
Negative_6048	ACPT, ADSL, C7orf16, CD8B, CXCL6, EPHA3, ERBB2, KIR2DS5, LAMB2, MTMR2, SOCS1
Negative_6049	ACTN4, AXIN1, ENTPD5, GNA12, MAP4K2, OR4D2, OR51G2, OR52E2, PIGP, SETDB1, SYNJ2, TLR9, TSLP, ATP6VOA2, ATP6VOD2
Negative_6050	GP9, ABL1, ABLIM1, AKT3, ATP50, CD72, CDC23, EHMT1, ENTPD2, IL5RA, INPP4A, ITGA11, NFX1, OR2A42, OR5B21, OR7G1, PAK2, PAPSS1, PIK3R2, SHMT2, YWHAG, ATP6VOA1, SERPINA1, SLC25A31
Negative_6051	CR1, C1QB, CSNK1A1, DFFA, TBXAS1
Negative_6052	ALDH2, CHR1, CMPK1, CSNK1D, CUL1, CYBA, FGD3, MCM5, NEGR1, OR4C46, OR52W1, PDE6D, PLA2G2F, SKIV2L2, SYNJ1, ATP6VOD2
Negative_6053	HTR2A, IL12A, OR51L1, PLOD3
Negative_6054	TNC, ACHE, CACNG5, CADM3, CLDN3, GALNTL1, GUCA1C, MAPK9, NANP, NKD1, OR4P4, OR5H6, PDXK, PER1, PRKACA, RDH12, TNFRSF4, TSLP, UGCG, VNN1
Negative_6055	AASDH, ACTN4, ADIPOR1, ATP13A2, CACNA1C, CCL8, CDS1, CREB3L3, DGKG, DUSP2, E2F2, ELK4, FPGS, GPD1, GSTO2, HLA-G, HLCS, IL12A, LYZL1, MYH7, NOS1, OR1Q1, OR2B11, OR52B6, PIAS3, PLOD1, PLXNB1, POMC, PPP2R1B, RPS6KA1, SHC3, ST6GAL1, STAT4, TLN1, TNFSF12, TRAF1, TNFRSF10A
Negative_6056	STS, ACSL3, ADRBK2, CCL20, CSNK1A1, EHMT2, KRAS, LALBA, MTHFD2, OR10K1, OR2AE1, PER2, SMAD6, SULT1A1, TAS2R48
Negative_6057	DCK, F10, F9, JUP, SPN, ABL2, ACSS3, ALDOA, AMY2A, ATG12, ATP6V1H, BCL2L1, CADM3, CAMK2A, CANT1, CBLB, EFNA5, ETS1, EXT2, F2RL3, HHEX, HTR2A, IDH2, IFNA6, IL1B, NQO1, NR1D1, NRXN3, NT5C2, OR2T5, OR51S1, PDE2A, POLR3K, PRLR, PRSS1, RARS2, RASA2, RDH8, RPS6KA3, SIPA1, SMPD4, SPAM1, TRDMT1, TUBB, VEGFA, ATP6V1E1, PAFAH1B1, PPARGC1A
Negative_6058	CSK, DBH, GNS, ADCY6, ATP5G1, C3AR1, CHUK, CYP3A7, EGFR, FGD1, GOT1, IDH1, ITGA4, L1CAM, MPDZ, NMNAT3, NSDHL, OR6K3, PCCB, PCYT1A, PDE6G, PIK3R3, PPP1CB, RPS6KA1, STK11, STX4, SYNJ2, UNC5D
Negative_6059	CS, ABLIM1, ACTG2, CLTC, CPT2, ENTPD8, H6PD, OR4K5, PIGS, PPP3R1, RFW D2, RGS3, SCP2, SGPP2, SLC25A5, UNC5C
Negative_6060	INS, OTC, CCL23, CIITA, CSNK2A1, DIAPH2, DLL3, EPHB2, MAP3K6, NPR1, NUDT12, OR10A3, OR4M2, OR9G1, POLR1E, RBPJL, TAS2R48
Negative_6061	CEL, FYN, B4GALT5, CFTR, CHEK2, GLDC, GNAI3, GNAZ, HAGH, IL15RA, INADL, LGMN, MFNG, NANP, OR8H1, PDE7A, PGS1, PIGA, PIK3C2A, SKP2, SMAD7, ST6GAL1
Negative_6062	ADK, C9, F12, FYN, HAL, MSN, ACAA2, ACVRL1, ALG11, CCL22, DAD1, DAPK3, DGKA, FGD3, FTCD, GSTK1, HTRA2, IFNA6, IL20, MAML1, MASP2, NRXN2, OR14J1, OR4K14, OR4X1, OR5R1, OR5T2, OR6C70, PHKB, PLA2G2F, RIPK1, RPS6KA4, TP53, TRIP10, VAMP4, VNN1

Negative_6063	CD2, FGB, TH, AQP7, ARSA, BDH2, BMP5, CLDN1, CNTFR, CYFIP1, CYP2S1, DAM1, DOLPP1, FGF13, FUT1, INADL, MCM2, NCF4, OR51I2, PFAS, PFN2, PIK3R5, PLA2G2D, SDHD, SGMS1, TAS2R10, TM7SF2, TMLHE, SUV420H1, TNFRSF10B
Negative_6064	AOC2, CMAS, CSAD, DAAM1, LRAT, SNAI2, SOS1, HLA-DPA1
Negative_6065	CBS, ZYX, ACY1, AHCY, ARHGEF4, CACNA1C, CCNG1, CCR8, CD226, CDS2, CHIT1, CLDN3, CXCL2, DGUOK, DHDH, FBP2, GPT2, GRM1, HTR2A, HTR6, IL1B, IL8RA, INHBB, ITGA8, KNG1, MARS2, MBL2, MDH1, MGAT2, NODAL, NR5A2, NTNG1, OR10K1, OR52W1, OR7D4, PDPK1, PLAUR, PMAIP1, PRKCE, RALA, RASSF1, SEMA3E, SHMT2, TAS2R3, TAS2R41, VAMP2, ZAP70, ZFYVE16, ST6GALNAC4
Negative_6066	A2M, C9, FST, ME3, ACACB, ADCY3, ANPEP, B4GALT6, CACNA1I, CAMK2A, CASP10, CDK7, CDKN2C, CNGA4, CRKL, CYP2S1, EFNA5, EIF4B, F2RL1, GCLM, GRAP2, ICAM2, IFNB1, LRP6, MAP3K3, MDH2, MMP9, OR10R2, OR13C4, OR1G1, OR52I2, OR5B12, OR6N1, PPOX, PRKAB1, RPN1, SORD, STT3B, TBL1XR1, HLA-DRB3
Negative_6067	ACADSB, ADH1B, ANGPTL4, APOA1, CARD11, CFLAR, CHST13, DDX19A, GCLM, HSD17B3, LDHB, OR4K1, OR56A4, OR8K1, PLA2G5, POLE, PPARA, TUBA3C, UB E2L6, WARS2, HSD17B12, HSP90AA1
Negative_6068	DDC, GAA, ADSS, AHCYL2, ANAPC1, ARG2, ATF4, CCL8, CD226, CDC23, CDH15, CDS1, CLDN17, COL6A2, COQ7, DHRS4L2, DIAPH2, EHMT1, FADS2, GMPS, HPSE, IL12RB2, IL28RA, IL3RA, LDHA, MAFA, MAN1B1, MCM6, NCK2, OR14A16, OR2T8, OR8H3, ORC6L, PARVA, PCK2, PIP4K2A, PLA2G2A, PPM1A, PTGFR, QARS, SETD7, SNAI1, STAT1, STX2, TRMT11, TUBA3E, TUBA4A, WNT3
Negative_6069	IL9, KHK, OAT, ACADVL, APRT, ARSD, ATP5G3, AVPR1A, BNIP1, CYP2A13, ESPL1, EXOC7, EXTL3, GALNT8, GLS2, HEXB, HIBADH, KLKB1, MEF2C, MYH7B, N FYB, NT5C3, OR4C12, OR8H3, PRPH2, PTPRZ1, RAD51, SCIN, THBS4, ATP6V0D2, MAPKAPK5, PDCD1LG2
Negative_6070	F2R, PVR, ABL2, ADSSL1, BST1, CCL16, CD80, CDS2, COL4A6, CTSS, DGAT2L4, GALNT5, IL18RAP, IL7R, NCAM1, OR10H5, OR13C8, OR6C3, OR6C74, PIGN, PLXNC1, ROBO1, SLC2A4, STAT5B, TAS2R13, VASP
Negative_6071	BHMT, BLNK, CNTN2, COL4A1, CYP11A1, DVL2, FBP2, GALK1, MCCC2, OR1G1, OR4S2, OR7C1, ZMAT3
Negative_6072	GH1, ADCY2, ASAH1, ATP6AP1, CCL16, CDS2, DOT1L, ELK4, GRIA1, GSTM3, IGF1R, MAP2K7, MPZL1, NT5C1B, OR51B4, ORC3L, PDGFA, PNPT1, PTGER1, PYCR1, RASGRP1, SCLY, SLC27A1, UPP2, B4GALNT1, CTNNBIP1, PPARGC1A
Negative_6073	F5, ATP4A, CDKN1B, CDKN2B, CXCL16, DAG1, ERBB2, GJA1, GNA11, GYS1, LDHA, MAFA, MAPK10, NAT1, NCF1, OR11H6, OR1L8, OR5K1, PDGFRA, PFKFB1, PRKACG, PRKY, PSPH, SEMA3F, SEMA4B, SLIT1, SPRY4, ATP6V1B2, CSNK1A1L, TNFRSF13C
Negative_6074	FST, AKR1D1, ASCC3, CX3CL1, CYP19A1, DDX41, ETS1, FARS2, GNG3, IL22RA2, MAPK11, NFASC, OR5C1, OR9A4, SESN2, SH3BP2, SULT1E1, TGFA, TRAF6
Negative_6075	A4GALT, B3GALT4, CACNA1I, CHRM2, CPT1C, CYFIP2, CYP3A4, EPHA4, HTR2A, LIMK2, NAGA, NKD1, NOD1, NR5A2, OR10A3, OR5B12, RUVBL1, TPI1, ZIC2
Negative_6076	ALAS1, CCL4, CNTN1, CREB3, CTBP1, CYFIP2, EPHA4, FUT6, HLA-F, ITPKB, NCF2, NR5A2, OR1S1, OR52A5, PFN2, POLR2E, PTDSS2, RASSF1, SETMAR, SLC27A5, SSH1, TAS2R13, WNT4, PAFAH1B2
Negative_6077	MAG, PAH, CD19, COL4A6, COL5A2, DNMT3A, EHMT2, ENO3, F2RL1, FGF18, GLUD2, GUCY1B3, HDAC1, IL17RB, IL18R1, MAP2K2, MAPK8, MCCC1, MMP1, NFKBIB, NGEF, NMNAT3, NQO1, NTNG1, OR10G4, OR2A14, OR52I1, P4HA1, PAX8, PER1, PLA2G1B, RAPGEF2, SEMA3E, SLC2A1, SOCS3, SRGAP3, STX18, TACR3, TRAF3, XIAP

Negative_6078	OSM, ALAS2, ASPA, ATP2A1, B3GALT2, BRAF, C5AR1, CD86, CDC20, CNDP1, CNGA4, CX3CL1, CYP4A11, DUSP6, FDFT1, FOXO1, GMPPA, GNA15, GNMT, IFNA10, IL15RA, IRS1, LRDD, LRRC4C, MAN1B1, MAP4K2, MAPK12, NAGA, NANP, NMNAT3, OR10A7, OR4C11, OR52A1, OR56A1, OR5B3, PFN4, PLCD3, PVRL4, RRM2B, SC4MOL, SMARCA5, SORBS1, STX4, SUV39H1, TAS1R3, TUBA1A, UGT2B17, CTNNBIP1, TNFRSF12A
Negative_6079	BTK, F9, GNS, MIF, MSN, RB1, ADAM17, AKR1C3, AQP7, ARRB2, B3GAT3, BAIA P2, CMPK1, COL4A1, CSF1R, DAD1, DMGDH, ECHS1, EFNA2, EREG, FGF20, FOSL1, GAS1, GFPT2, GLO1, GZMB, IL7R, INHBC, IPMK, LAP3, LFNG, MKNK2, NEFH, NRP1, NRXN2, OR11H4, OR1E2, OR4K13, PAFAH2, PIK3R3, PLOD1, PNLIP, RBL2, RERE, RPIA, SOCS3, TIAM2, TUBAL3, ALDH18A1
Negative_6080	AGK, DDO, EZR, FUK, ME1, TNC, AKT2, ASS1, CAMKK1, CASP7, CDC42, CTSL1, CYP2B6, CYP3A43, DAPK3, DCTD, DFFA, EFNA1, EPHA1, FECH, FGD1, GCH1, GCNT4, HARS2, HIP1, ICAM2, LIPG, METTL2B, MPZL1, MRAS, OR10A4, OR2Z1, OR4Q3, OR5T1, OR8S1, PLAT, PPP2R5A, PPP3CC, RBPJ, SARS, SDHB, SLC27A4, SLIT1, TGFB2, TRAF2, VAMP3, WARS, YARS
Negative_6081	C2, F11, MPL, ACADVL, ACY3, ADSS, AMY2B, APOE, ARNT2, CCL21, CD34, CSF1R, DAAM2, GALE, IL10RB, IRF9, ITGA9, ITGB3, KIR2DL3, KLK3, MFNG, MYH4, NME7, NMNAT2, OGDHL, OR3A3, OR52N2, OR5C1, OR6C70, OSMR, PDGFC, PDGFRB, PGS1, PI4KA, PIP4K2B, PPP2R5A, PYCR1, RGS3, SMURF1, SOAT1, SSH2, STAT3, TAS2R8, TCF7L1, TNFSF10, TSC2, TSNARE1, WNT7A, HSD17B12
Negative_6082	ACTA1, DDX18, DUSP2, EGFR, GAL3ST1, IGSF5, IL1A, IRAK4, ITGAV, MAGI3, PRSS2, RPIA, RPS6KA1, SMAD2, WASF2
Negative_6083	HGD, ME3, WAS, AKR1D1, ALCAM, ALOX12, ARHGEF6, ATP12A, CCNG2, CDKN2D, EFNA4, EGLN3, FGFR3, FZD8, GNPAT1, GUCA1A, IL1RAP, INSR, JAM2, KIR2DS4, LYPLA1, MAP3K4, MMP14, OR10H1, OR2A25, OR2T10, OR5AU1, OR8B12, PAK4, PDE6D, PGM1, PGM2, PPP3R2, PSAT1, RFNG, RGS3, ROCK1, RPS6KA5, SARS2, SDC1, SRGAP1, SULT2B1, UBE2L3, VCAM1
Negative_6084	C4B, CFI, AASS, ABL2, ALDH7A1, ALS2, ATP2A3, CAMK4, CEBPA, CHST13, CLDN9, CNTFR, CSNK2A1, DDX55, EDA2R, FZD10, GADD45A, GLO1, GPD1, H6PD, IFIH1, IL15RA, IL6ST, MAML2, NCK1, NQO1, OR10AD1, OR10C1, OR10Q1, OR2T2, OR4D1, OR4K17, OR51D1, OR5F1, PPCDC, PRDX6, PTPN7, RPRM, SUV39H1, SUV39H2, TAS2R14, TAS2R3, TRADD, UNC5C
Negative_6085	TNC, BMP1A, CACNG2, GSK3B, KIR2DS5, OR4S1, SMARCA2, TNFRSF10D
Negative_6086	CDK2, COL6A2, OR2A14, TUBB1
Negative_6087	F11, ILK, PVR, AADAT, ATF2, ATP50, B3GALT5, BMP5, CLDN5, COL1A2, CREB3L2, CYP8B1, DOLPP1, ENTPD8, ESAM, F13A1, FGF21, FLT4, FZD10, GALM, GUCY1A2, GZMA, HTR4, IL1B, KCNJ11, OGDH, OR10G3, OR4X1, PDE5A, SFRP2, SLIT1, TAS2R5, VCAM1, WARS, WNT5A, ATP6V1G3
Negative_6088	E2F5, ERBB3, OR52B6, RBPJ
Negative_6089	DCK, IL3, AGPAT4, ALOX5, ATP5J, CACNG2, CXXC4, E2F2, FZD5, GSTM2, HADHA, HTRA2, OR4A5, OR8B8, RIPK1, SDHD, ST8SIA5, TNFSF4, AASDHPPT
Negative_6090	CCR3, CD27, FGF4, IL10RA, OR13C4, OR14A16, P2RX4, SNAP23, VTI1A
Negative_6091	TPO, ALOX12, AMDHD1, ARHGEF4, CHPT1, DDB2, DHX58, FUT8, GBGT1, GCNT2, GNA13, GRHPR, LEPR, NAT2, NEFL, NOS1, NRG2, OR4D6, OXTR, PDE8A, PIP5K1B, PRKCZ, SEMA4C, SNAP25, ST3GAL1, TBK1
Negative_6092	ALPI, ATIC, BAI1, SIGLEC1
Negative_6093	F8, FGB, HK2, IHH, ALAS1, BMP8B, CCND3, CD47, CDC27, CDH4, CDKN2C, CPOX, DDHD1, DKK4, DOT1L, EDAR, EIF4E2, ENO1, GCLC, GRHPR, GSK3B, HADHB, HAGHL, HA01, IAPP, LIPT1, MINPP1, NOD1, OR11H4, OR2Z1, PTPN5, RASA2, SLC27A5, SPRY3, STAT4, SUV39H2, VAMP4, WNT7A, TNFRSF17
Negative_6094	SI, CAMK2D, CASP8, CHPT1, CISH, CXCL3, DGAT2L4, GUCA1C, IDH3A, MAP2K2, MINPP1, OR4A5, OR52R1, OR5V1, PER3, PPP1CB, PPP1CC, PTCH2, SLC33A1, SPRY3, SSH3, TNFRSF18

Negative_6095	FST, CD55, CYP17A1, DCXR, DGKE, EXT1, GDF5, HIF1A, KIR2DL2, OR6N2, POLA1, PPP1R3C, RUNX1, STAT5B
Negative_6096	C1S, GNE, AMPD3, APC2, CACNA1S, CDC16, CES1, CHSY3, CNGB1, COL3A1, EFNA3, ETS1, GRIN2A, GSTM4, ICOSLG, IFNW1, IMPDH1, ITGB5, KIR3DL1, LTB4R2, OR52E2, OR5AK2, PIK3C2B, POMC, PPP1CB, PRODH2, RAPGEF2, STAT4, TAS2R50, TGFBR2, TIAM2, WWP2, PNLIPRP1
Negative_6097	DDO, F10, FGB, CCL13, GLS2, GPAA1, IQGAP2, OR5T2, PLA2G2E, PLCE1
Negative_6098	AK7, DCT, FYN, GNE, IL2, JUP, ACAD8, ACMSD, ACSL5, ACTG1, ATP6V1A, BLVRB, CFTR, CYP19A1, DKK4, ENPP3, GALNT12, GFAP, GGT6, HARS2, HSD11B2, MAPT, NEU1, NTNG1, OR2A14, OR4Q3, OR9A4, OSMR, PARVB, PFKP, PNPLA4, PNPO, PPARA, PRKAB2, PTGS1, RHOA, SNAP25, SULT1A1, UBE2L3, UGT2B17, CACNA2D3, PLA2G12A, PPARGC1A, PPP1R12A, SERPINA1, SERPINE1
Negative_6099	EDA2R, GMPR2, MYH14, PIGA, TAS2R8
Negative_6100	EPO, ADH6, ALDH2, CLTC, DAPK3, EFNA3, MAPK13, NCOR1, PLOD3, PRKAB2, PTPRF, RPS6KA2, SETD1B
Negative_6101	CAT, MVK, SI, SMO, ACOX1, AKT1, ATP5G2, CHPT1, CLDN17, CYCS, CYP2C19, DOCK1, FGF22, G6PC2, GLUD1, HTR2C, ITGB7, MAP2K1, MYH13, NKD2, OR13G1, OR2K2, OR3A2, OR5B17, P4HA3, PARD6A, PRKCB, PRODH2, SEMA3C, SETD1A, STK36, TLR2, TLR9, TUBB2B, WNT4, XYLT1, XYLT2, ZFYVE9, HSP90AB1, ST6GALNAC3
Negative_6102	CSK, FLT1, GART, IL18, MITF, OR4K17, OR6Q1, SH2D1B, TLR2
Negative_6103	C4B, RPE, ACTN1, ACYP1, ALDH1A1, ALG9, COQ3, CYP8B1, EPAS1, FM05, GALK2, GGX, GPD1, HAO1, JAG1, KNG1, LARS, LCP2, NRXN3, PIK3R3, SETD1A, SLC2A4, TCF7L2, THBS2, UGT2A1, WNT2B
Negative_6104	DHH, CACNA1I, FASN, FGF5, GFPT1, GRM5, LILRB3, MAPK7, PFKFB3, RHOD, ST8SIA1, WHSC1L1
Negative_6105	GSR, HK2, ABLIM2, APOA2, ATP6AP1, CADM3, CCL19, CFL2, CLDN15, DOCK1, DRD5, EARS2, EPB41L1, GALC, GAS1, GGT6, GUCY2F, HCCS, HSPB1, KYNU, LYZL1, MYLK, NFATC1, OR2T4, OR4K5, OXCT1, OXSM, PFAS, POLR1E, RDH8, SMA D2, SOAT2, TBL1Y, TNFSF12, TP53, UPRT, VDAC1, YWHAQ, HSP90AB1, PNLIPRP1
Negative_6106	ASMT, ATP2A1, CACNA1S, CARS, COL1A1, DHCR7, IPMK, ITGAX, LIMK2, OR1S2, OR4N5, PCK2, PTPRF, SAT1, SGPP2, SPI1, TJP1, TPM3, UNC5B, YWHAB, PAFAH1B1, TNFRSF10D
Negative_6107	AMH, LYN, MPI, ACOT12, ACVR2B, B3GAT2, C3orf10, CLDN3, E2F2, GLUL, KLKB1, OR1F1, PLCB1, PPP2R5E, PTPRR, TAS2R8, THBS4, WNT10B, MAPKAPK5
Negative_6108	AR, C9, DCT, FH, GK, SRC, TXK, ACAT2, ATP2A2, ATP6V1D, BCAT1, BTRC, CHRM2, CXCR4, DHRS4L2, DPYS, FGF17, FUT2, GALNTL4, GNPDA2, GUCY2D, HLA-G, IL12RB2, LTA4H, MYH11, MYH7B, OR1E1, OR2A42, OR4C12, P4HA1, PDE7A, PTGER1, PYCRL, RAPGEF2, SDHC, SETD2, SOCS4, SQLE, TAS2R42, TCF7L2, TGDS, THBS2, UGT2A3, MAPK8IP2
Negative_6109	CCL2, EPOR, FIGF, GRIA1, MTFMT, MYH11, PAFAH2, POLR1C, PTGDS, WEE1
Negative_6110	AGRP, F2RL1, OR4B1
Negative_6111	AK1, ALOX15, ASCC3, CCR2, CXXC4, DARS2, GALNTL4, GRPR, HAO1, HPSE, HSD17B2, HTRA2, INMT, LAMA3, LCMT2, MAP3K4, MPP5, NCR2, NPR1, NTN1, NUDT2, OR2T2, OR2V2, OR4K2, PDE4A, PDGFRA, PERP, PRKY, PTPN7, RENBP, TBK1, TKTL1, TSTA3, UBA1
Negative_6112	IL3, ACP5, ACSL1, ACSS3, ALDH3A2, ASCC3, BAI1, CACNG3, CALML6, CD34, CLDN22, CRHR1, DCXR, E2F2, EDNRB, ELK1, FABP4, FZD3, GNG3, HCST, HSPA1B, IDUA, IL18, IRAK2, KLRK1, LLGL2, LRAT, MAN1A2, MCM7, NAE1, OR52N2, PDE1C, PDE8A, PLA2G6, POLR2D, PPCDC, RARS2, RXRG, SCLY, SEMA4A, SETDB2, SOS2, ST8SIA5, STX1B, TLR2
Negative_6113	MUT, ACSM2A, CTSS, CYP2E1, DDX56, ERBB4, GPAA1, HAGH, IL13RA1, ITGB6, NCR2, NEFM, OR4S2, PDGFD, SETD1B, SMURF2, SPRY3, VASP, WNT8B

Negative_6114	C4B, IL2, ACY1, AMHR2, BDKRB1, CACNB3, CD14, CD44, CD01, CFLAR, CHAD, CHEK1, COL4A6, CREB3L2, ENTPD4, ERBB3, ERBB4, FGF18, FMO2, FZR1, GALNTL1, GNA14, HA02, IFNA14, IKBKB, ITPKA, KIR2DL1, LDHD, LYPLA2, MAPK1, MYL9, NCOA4, NKD2, NOD1, OR10A3, OR10G8, OR2M2, OR52K1, PDE5A, PLAU, PNMT, PPA1, RAP1A, RDH11, SEMA4C, THBS1, UCK1, ULK3, HLA-DRB3
Negative_6115	CBL, TFG, ACVR1, AGMAT, C5AR1, CALML6, CAMK4, CDC42, COL4A6, DDX18, EDNRB, FZD6, GALNS, GALNT10, GALNT3, GCLM, GMPS, GNG3, IKBKG, MAOB, MAPK7, MPDZ, MPP5, NARS, NCR1, ONECUT1, OR10A3, OR5P3, OR7A10, PKM2, POLR2K, SETD1B, SMURF2, STK3, STK4, TICAM1, TNFSF8, TRHR, AASDHPPT, SLC25A31
Negative_6116	BTC, CFI, OSM, RFK, ABP1, ACOX1, AHCYL2, BBC3, BMPR2, C1GALT1, COQ7, CX3CR1, CYBB, DTX3, FUT5, FZD2, GNRH2, IRAK1, LFNG, NCKAP1, OPLAH, OR52E6, OR8I2, PDPK1, PFN3, PIGS, PIGT, RRAS, SDHA, SLC9A1, SMC1A, SUCLG1, UCK1, ZFYVE9, TNFRSF1A
Negative_6117	A2M, DDC, LTB, MAG, PLG, TNF, ALAS1, APOA1, APOA5, ARHGEF6, CD8A, CHEK1, CHPF, CSH1, CXCL10, DPAGT1, DPM2, DVL1, EPB41L2, ESAM, INPP5B, NCAM1, OR52E8, PLCB4, PPP2CB, PTPRB, RRAS2, SLC27A4, SOCS4, SOCS5, TLR4, TYK2, WNT16
Negative_6118	BTK, ASS1, CTNNA1, DAG1, DDIT3, DDX51, DNMT3B, F13A1, HIP1, INHBE, IRF7, IRS4, ITGAX, LAMB4, LIPG, MAP3K13, OLR1, OR12D3, OR1C1, OR1L4, OR2AG1, OR2C1, OR6C76, OR6Y1, PIK3C2G, PIK3R4, PLA2G5, PLCZ1, POLE2, PPP2R2B, PSPH, RHOQ, SEMA4D, SFRP4, SMPD3, SOAT1, ST8SIA1, STAT2, THBS4, TLR3, TUBA3C, TYROBP, VANGL1
Negative_6119	CDA, FUK, HYI, ADSS, AGMAT, AK3L1, ALDH1A3, ALG12, APBB1, BACE1, CLDN4, CLTA, CNGB1, DGKB, FBP1, FOXO1, HES1, IGF1R, IL24, ISYNA1, ITCHE1, MYH11, NCAM1, NFE2L2, NQO1, OR10A6, OR1L6, OR2A4, OR2M7, PKMYT1, PLD1, RAPGEF1, RAPGEF4, RASA1, RASGRP1, SMURF1, SV2A, UGT2B28, VKORC1, ATP6V1B2
Negative_6120	ID4, ATP13A2, LAP3, OR2M3, PLCE1, UPP1
Negative_6121	CS, MET, ABL1, ATP5G1, CLDN20, CSF1, CTBP2, CYP2E1, CYP2J2, EFNA5, ENTPD5, EPHB4, IFNGR2, IL24, LAMC1, LTB4R2, NME7, NRXN1, OR14J1, OR1C1, OR4C46, OR6C70, OR9G1, PDPK1, PFKFB4, SC4MOL, SEMA3B, SMAD6, SOCS7, STK36, TAS2R40, TGFB2, VANGL1, XIAP, XYLT1
Negative_6122	DCK, HAL, HGF, LEP, MAG, MET, MPZ, ACY1, ADSS, CCL5, CFLAR, CSDA, CYSLTR2, DAPK1, DBF4, ECSIT, F2RL2, FMO3, G6PD, GALNTL2, GCDH, GSTM1, HTR6, IL13RA1, LTBP1, MAFA, MAP2K4, MAP3K12, MCCC2, MCM5, MTHFD1, NCF1, OR2A25, OR2D2, OR8B4, PI4KA, PIK3R1, QPRT, RAPGEF3, SMARCA5, ST8SIA5, STK3, TUBA1B, CSGALNACT1, SUV420H2
Negative_6123	BTK, C5, GLA, SPN, ACOX1, ACTA2, CD274, CERK, COL5A2, CTBP2, FGF13, GDF6, GNRHR, GUCY2F, HGSNAT, HTR7, IDH1, KAT2A, LEFTY1, OR2M7, PDE1B, PGS1, PMAIP1, POLD4, PPP1R1A, PPP3CA, SEMA4D
Negative_6124	AMPD2, CD86, CYP17A1, DGKD, DHRS9, FMO4, KLRD1, NNMT, OR1D5, OR52W1, STEAP3, TSHB, VCAM1
Negative_6125	PGP, CYCS, MADCAM1, OR1F1, PIGO, SRGAP2, SV2C, TGDS
Negative_6126	C2, ACADM, B4GALT2, DTYMK, EFNA2, GALNT10, GSTA4, ITGA4, KITLG, MAN2A1, NAE1, NAT5, OR2A4, PGAM2, PPP2R2A, ULBP3
Negative_6127	CACNA1D, ENO1, GLS2, HTR7, NAGS, OR6Q1, POLR3A, RENBP, SFRP5, SORBS1, TICAM2
Negative_6128	HYI, OAT, ZYX, ALG2, ASRGL1, CACNA1S, CCDC6, HAGH, IL13RA2, IL15, ISYNA1, LALBA, NAT2, OR7D4, PDE4B, PRKAB2, PYGB, SETMAR, TOMM40L, TUBB4, TNFRSF10A
Negative_6129	AREG, GDF7, KITLG, PON3, RDH12

Negative_6130	ATM, DCN, ID2, ADCY8, AGTR1, ALG13, ANAPC10, ATP5I, CEBPA, CYP4A22, DVL1, E2F1, ENPP6, FOXA2, GALNTL1, GLS2, GUCY1A2, HTR4, IFNA14, IL4R, JAM2, KCNB1, LIPF, MAN1A2, MAPK7, MPST, MYH1, MYH9, MYL7, OR10A7, OR1K1, OR4C12, OR4M1, OR4N5, OR51B5, OR9Q1, PGLS, PIM2, PRKCA, PYGM, RDH10, RND1, STK4, UBA7, UCK2, VANGL2
Negative_6131	ACTN1, ACVR1, ALOX15, BDH1, BUB3, CAMK4, CAV1, CHDH, CTNNA3, CYP2C8, ESAM, GUCY1B3, HLA-DMA, IDH1, ITGA4, MKNK1, NEGR1, NOX3, NUDT5, OR1N1, OR56B4, OR5T3, OR8B4, PIGS, PPCDC, PSAT1, RPS6KA6, SLC9A1, SMAD6, SMPD4, TIAM1, TJP2, TUBB2B, VNN1, YWHAQ, MAPKAPK3
Negative_6132	MAX, ZYX, AASDH, ADCY5, BMP8B, CLDN6, CSDA, DPYS, EPB41L3, F2RL1, LIMK2, LTB4R2, LYPLA2, OR6M1, OR9A4, OR9Q2, PTPRB, RAC1, STMN1, VARS
Negative_6133	ADC, DDC, HYI, SP1, ALDH5A1, ARG1, ENTPD5, EPB41, OR1L8, ORC4L, PTCRA, TPH1
Negative_6134	HK2, PML, ACSM2A, ACYP1, ADCY5, CDC26, COL5A1, COL5A2, CREB3, DERL1, F2RL2, IFNA17, IL25, IL2RB, KCNB1, OR10A6, OR10G7, OR2M7, PFKFB1, PLCD4, PRSS2, PSEN2, SOAT2, TGFB3, TRAF5, UGT2B10, YWHAE, SERPIND1
Negative_6135	C4B, DUT, ACTN2, B3GALT2, CDC25A, CDC45L, CDS1, FADD, GRM1, HIF1A, IL1R1, KLRD1, MAP2K1, OR10A2, OR10C1, OR9K2, PDE3A, PLAUR, TUBB4, UNC5D, YES1, PRICKLE1
Negative_6136	F10, F8, FES, KDR, NLK, SFN, ACTB, AMPD1, ANAPC5, CCNG1, CSNK2A2, CTBP2, CTLA4, DTX3L, EXT1, FGF22, GALNTL1, IFNA13, NRG1, OR10C1, OR4C11, P2RX2, PLAUR, RAD51, SMAD4, MAP3K7IP1
Negative_6137	FST, GLA, MVD, ACAT2, AGTR1, BDKRB1, CAV2, CD36, CYP8B1, ENTPD8, FGF5, FIGF, GLG1, HDAC1, HLA-DOB, KLK3, METTL6, NNMT, OR10G8, OR1C1, OR2AE1, OR9A2, PDE6G, PGK1, PIM2, PRKCI, SHMT1, ST3GAL6, STK36, SULT1A4, VAMP1, ATP6V1B2, SERPINC1
Negative_6138	GCK, MVK, ADCY2, ATP5J2, CADM3, DGAT2L4, GALNTL1, HTR5A, IFNGR2, KIR2DL3, LCP2, MAD2L2, OR5T2, PCNA, PHKA2, PIGC, PLA1A, PLA2G2E, PORCN, PRKCZ, RPS6KA1, CTNNBIP1
Negative_6139	MPZ, TKT, C3AR1, CD80, CES7, DHDDS, HAGHL, HA01, IPMK, IRF5, LRP6, MAML1, OPLAH, OR4A16, OR5B3, PCK1, PROS1, PTPRF, SYNJ2, TACR1, ATP6VOA2
Negative_6140	FH, PVR, CAMKK2, CASP3, CCL16, CCL28, CD19, CD79A, CFL1, CHST12, CNTN2, CX3CR1, EPHX2, FMO5, GUCA1B, INPPL1, IRF5, KAT2A, MAN1A2, MAP3K3, MAP3K5, MYLK2, OR11A1, OR2A42, OR52N2, OR52N4, PLA2G2A, PLD2, PYCRL, SEMA4B, SETDB2, STAT6, SUFU, TAS2R9, TOMM40, WWP2, XYLT2, YES1, ATP6V1C2
Negative_6141	BTC, OTC, ADCY9, ADIPOR2, ALAS1, ALDH3B1, BNIP1, CD44, CDC16, CFLAR, CISH, CLDN3, CYP11A1, FBP2, FECH, FGF3, FLT4, FRAT2, G6PC, GALE, GCNT4, GOT1, GPX5, GRIN2A, IFNB1, MPDZ, OR1S1, OR2M7, OR4Q3, OR51E1, OR51F2, OR8J1, OR9I1, PLA2G2D, PRKAB1, RASGRP4, SDC2, STAT5B, STK3, SUCLA2, TRMT11, VEGFC, VTI1B, WNT7A, CSGALNACT1, SERPINC1
Negative_6142	PDC, TNF, CD59, DLST, METTL2B, NANS, NEGR1, NLGN3, OR51Q1, PGM3, STX12, TAS2R14, TRAF6
Negative_6143	DDC, CACNA1E, CAMKK1, CCL25, CD22, CD8B, CNGA3, CNGA4, CSF2, CSNK1G1, DDX51, DGKE, FGF23, GCAT, OR10H3, OR1I1, PITX2, PRKACG, RXRB, SETD2, SHISA5, SMPD1, TAS1R3
Negative_6144	NNT, PVR, SMO, TPO, ACTG1, ALDH1A3, ATP5J, B4GALT5, B4GALT6, BBC3, BIRC2, BMPR2, CACNG4, CCL22, COX15, CSNK2B, CYP4F3, ENTPD5, FGF12, FSHB, GAL3ST1, GCDH, GP1BB, HMGCL, MAP2K4, NEU1, NFYB, OGDH, OR51B6, PANK4, PON2, SESN1, SPAM1, TAS2R60, THY1, TJP3, TKTL1



Negative_6145	TNR, ARHGEF4, BUB1, DDX52, F13B, FZD4, GARS, GLI3, HLA-DOB, IFNAR1, LLGL2, MPP5, MTMR6, OR2M7, PDE4A, PRPS1, PTK2B, SETD2, SULT2A1
Negative_6146	IL8, OSM, SPN, ACHE, ANGPTL4, APLP1, ATP5E, BAAT, CCL7, CDC14A, DDX52, GNAI2, GNAI3, HTR6, IL17RB, IL21, MAGI2, MARS, NEU4, NLGN3, NT5C3, OR13F1, OR2K2, OR51D1, OR56A4, OR5F1, PDE1C, PHKB, PI4KB, PLTP, POLR2A, PPAP2C, PTPRM, RPS6, SDHA, SDHC, SMAD5, STX7, WASF2, WNT10A, YARS, B3GALNT1, GABARAPL1, GABARAPL2
Negative_6147	C4B, CD6, EGF, SRF, ABL2, ADIPOR2, ALDH9A1, CNTN2, CYFIP1, EPHX1, FGF9, FTCD, FUT8, GDE1, GNAI3, GNB3, ITGA8, KIR3DL3, MAP3K14, OR10G7, OR13C2, OR13C8, OR2AG2, OR4K1, PKLR, PLA2G4A, SMAD6, TLN1, XYLT1
Negative_6148	CR2, ACTA2, ATP6V1H, CCNB1, CD70, CHAD, FGF4, NTF4, OR2AG1, P4HA2, PLCG1, PMAIP1, POLR2E, PRKAR1A, PTPN11, PTPRF, STAT4
Negative_6149	ALG3, ATP6AP1, B3GAT3, CD8B, CHAD, CHIA, CNTNAP1, EGLN3, ETS1, FBP1, FGF6, GNMT, GNPDA1, GUCA1C, ITGA7, KIR2DL3, OR2T29, PIGT, PPM1D, RBKS, SENP2, SHMT2, SMPD2, SPAM1, STMN1, CTNNBIP1
Negative_6150	MPI, CAMKK1, CXXC4, ETS1, OR10H4, OR2L3, STK36, UGT2A1
Negative_6151	CD6, HPD, RFK, SDS, ADCY10, ADRBK2, ALPPL2, ASIP, CSNK1G3, CTNND1, CXCL13, DHRS4, EFN1, ENPP2, FBXW11, FLT3, FLT3LG, GGT7, GPX5, GRPR, HCST, HDAC2, HEXB, HTR5A, IL22RA2, IL8RA, MCM6, NOTCH3, OR13F1, OR2T34, OR51I2, OR5A1, OR5T2, OR6B3, OR9Q2, P4HA3, PLCD4, PPP3R1, RRM2B, SORBS1, SPP1, TBL1Y, WNT10B, WNT3, TNFRSF17
Negative_6152	FH, ABLIM3, ACP1, BIRC2, BLVRB, BNIP1, CCL26, CCNG2, CERK, COL1A2, CREB3L2, CYP3A43, DOCK1, GUCY1A3, IL10, IL17B, MAML2, MGLL, NCKAP1L, P2RX2, PLD2, SELPLG
Negative_6153	CR1, GPI, KMO, RDX, ACOT12, ACTA2, BHMT, CDH3, CNDP1, ENO1, FOXA3, MTHFR, PDE4D, PFKP, POLR2A, PPOX, PPP1R3A, PTPN7, PTPRJ, SESN1, SGMS2, SHISA5, SLC9A1, TIAM1, TRHR, VNN1, WARS2, HLA-DQB1
Negative_6154	AGL, AK3, BID, DCC, ILK, OGT, TK1, ABLIM3, ARHGEF4, ASIP, CAMK2G, CD14, CD274, CD55, CHIA, CHR1, CSNK2A1, CX3CR1, DIAPH3, ESPL1, FASN, FMO4, FTH1, IFNAR1, IL15RA, LMO7, MCCC2, MMP2, NFKBIA, OR2L3, OR4P4, OR5T3, OR8J3, PAK7, PFN1, PON1, PPA2, PVRL3, RPN1, SARS2, SNAP23, STK11, TASA2R38, TIAM1, UGT2B7, CACNA2D4, PAFAH1B1
Negative_6155	MSN, CD28, NT5C, POLR1A, STK36, TJP1, WNT7A
Negative_6156	FOS, GPI, LHB, SPI, CD44, CDK5, COL6A1, EARS2, FPGT, GANC, GOT1, GSTT1, GUCY1B3, LAP3, MAGI1, NFKB2, OR2V2, OR5AC2, OR5P2, PLCE1, POLA2, POLR3D, RDH16, STAM, TGFB2, TPH1, TUBB4Q, TYK2
Negative_6157	ASL, CS, IL5, ADCY10, ALDH1A3, AREG, ASRGL1, CBR1, CCKBR, CMPK2, CSF2RB, GALE, GALK1, GRIN2A, GZMB, HLA-F, HTR6, IMPDH1, NNMT, NT5C1A, OR5D14, OR6X1, OR8S1, PDX1, PLK1, PPM1A, SELE, SRD5A1, STX18, TGFB2, VTI1B, WNT2B
Negative_6158	AK2, APP, F12, GK2, ALDH3B2, BET1, CD247, CPT1A, CSNK1A1, CYFIP1, CYP2A7, DDX55, DOCK1, EGLN3, EIF4B, ENPP7, EREG, FGF21, FZD4, GRLF1, HPS E, IGFBP3, IL12A, IL15, INSR, ISYNA1, KIR2DS5, LAMB2, NANS, NCR3, NR4A1, OR10G3, OR10S1, OR51F1, OR52N1, OR5T1, ORC3L, PLCB3, PNPLA4, PRKAG2, PRKAR2A, ROBO1, SPHK1, STK4, YWHAB, ZNRD1, ATP6V0E1, HLA-DRB4
Negative_6159	C8G, MUT, SHH, ACTG2, ADCY8, ADORA2A, ALAS1, ALDH3A2, BCAR1, BCL2L1, C4BPB, CYP1A1, CYP3A43, DDX55, EFNA3, GAD2, IARS2, LIPT1, MAP2K6, MAPT, MCM2, NR1D1, NT5C1A, OR4C11, OR4C16, OR9G4, PDHA2, PISD, PPAP2B, PVRL1, SMPD2, SOCS3, SUCLG1, TACR3, TUBB4Q, VAV1, VTI1B, SLC25A31
Negative_6160	AK7, IL4, CFL2, DGAT1, EFN1, EPB41L2, GLO1
Negative_6161	CTH, CDC25B, CLDN18, CSNK2A2, EFNA3, ELK4, GBGT1, HMGCS1, HYAL2, INPP5B, KIR3DL2, NRAS, OCRL, ODC1, OR1L6, OR2AE1, OR52K1, OR52R1, OR8H1, PDE5A, PPP2CB, PRKAR2A, RHOQ, SOCS1, TRAF1

Negative_6162	ACLY, ADAM10, ADH5, ASNS, CARS, CBR3, CD59, CNGA4, CREBBP, DPM3, DUSP7, DUSP8, GRIN2C, IFNA21, ITGAL, KYNU, NTNG1, OR4P4, OR6B3, OXCT2, POLD2, SEMA3G, ST8SIA1, STAT2, TICAM2, TNFRSF10D
Negative_6163	GDA, HK1, SHH, ACSL5, AMPD2, CD247, CES7, CNTNAP1, CSF2RA, CTPS, CYP2U1, DFFA, DLST, ELK4, FGFR3, FZD1, GMPR, GP1BA, GPT2, GSTZ1, HSPA8, IFNAR1, IL13, IL6R, MGST1, OGDH, OR2A12, OR2M2, OR6C3, P2RX1, PCK2, PGAM2, PLAT, PLCD3, RFNG, RXRG, SH2D1B, SMAD1, SRGAP2, TSHB, TUBB4, UROD, SUV420H1
Negative_6164	C7orf16, CACNA1G, DPAGT1, FGD1, GAPDH, MAP4K1, OR10A4, OR2H2, OR52E6, OR7A17, PDE10A, PDGFD, POLR1E, PPP3R2, MAPKAPK2
Negative_6165	FN1, CHDH, CYP2C8, GSTM4, PDE4B, PIM1, PPP1R1A
Negative_6166	ACAT2, ALG10B, ALG9, ASS1, BMPR2, CAV1, CCNB1, CD72, CSNK1G3, DDOST, DTX3, OR13C4, OR6Q1, POLR2F, POLR2G, SMAD5, STX18, WNT2B
Negative_6167	CDKN2B, CXCL10, CYP4A22, EPAS1, EXTL1, F2RL3, FECH, NR4A1, OR1S1, OR52E4, TBXAS1, TSNARE1
Negative_6168	AR, C2, JUN, PLN, SMS, ACAA2, ADSSL1, AHCY, ALG5, ARRB1, ASS1, ATP6V1D, B3GNT2, CLCF1, CLDN16, CLDN22, CREB3, CTSB, DHRS3, DNMT3L, HARS, HS P90B1, HYAL2, IARS2, MADCAM1, MMP14, MPDZ, OR10AD1, OR2A42, OR2T11, OR5AP2, OR5C1, ORC6L, PDGFB, PIP4K2A, PLA2G10, RXRB, SMPD4, STX4, THBS3, TUBB2A, UCK2, VASP, SERPINB5
Negative_6169	FH, CERK, SHC1
Negative_6170	ADK, AUH, GSR, IL6, SCD, ANAPC2, AXIN2, B3GAT3, CACNB2, CACNG8, CCL28, CYP4A11, KRAS, MYH11, NRCAM, OR10AG1, OR4A15, OR4K1, OR52N4, PAX6, PEMT, PIGS, SETD2, PNLIPRP2
Negative_6171	KMO, ALOX15B, BAAT, CDC42, CDS1, CSNK2A1, FUT6, HNF4A, MTHFD1L, NUMB, SETMAR, SLC25A5, STX7, TMLHE, TSC2, WNT1
Negative_6172	SYK, ASPA, CSDA, E2F1, FABP4, FGD3, LAMA4, MTMR2, OR6C70, PIGU, RAPGEF2, ST3GAL6
Negative_6173	C7, F10, GHR, GLA, ME3, NPL, ADH1B, AKT1, ATP6V1A, BCL2L1, CARD11, CFL1, COX15, CSDA, DKK2, DKK4, DLL1, DUSP10, E2F4, EFNA5, EXTL2, FGF14, IL20, NRCAM, NTRK2, NUDT8, OR10A5, OR13C9, OR4D6, OR51B2, OR5B21, OR6Q1, PER2, PIGQ, PIK3CA, PIK3R2, PRKAB1, PTGES, SGPP1, TSLP, WNT11, YWHAQ, TNFSF13B
Negative_6174	C9, ME3, MSN, SMO, CD86, CHPT1, E2F3, ERO1L, ETNK1, FLOT1, GMDS, GTSE1, HTR2C, IL13RA2, INSR, JAK1, LIPF, MAN1C1, MAT1A, MTHFD1L, NODAL, NT5C, NT5C1A, OR10A4, OR1S2, OR51E1, OR51F1, OR6Q1, PAFAH2, PDX1, PER1, PHKG2, PYGM, RASGRP1, SC4MOL, SDC2, SEMA3B, SHISA5, SSH3, STX10, WNT6, YOD1, AASDHPPT, TNFRSF10B
Negative_6175	DBH, FOS, GSR, HDC, MTR, RET, ABL1, ALS2, CAMK2B, CD28, COASY, CYP26C1, DTX2, EPB41L3, FGF1, GLS2, IL20RB, JUND, MAP3K3, MITF, OR12D3, OR51A7, OR7D4, PISD, PLXNA3, POLR3G, PPP1R3D, PPP2R2C, SUOX, TFPI, TLR4, UROC1
Negative_6176	GSTO2, HYAL2, WNT3A
Negative_6177	GP6, ACOX3, ALDH5A1, APLP1, ATIC, CASP8, CD72, CMBL, EGFR, EIF4B, ETS1, GJA1, GOT2, HSPA1B, IFNAR2, ITGB7, MAPK10, MTFMT, MYH4, NCSTN, OR2T4, OR8B12, PLCB2, PLCB3, POLR3A, PTK2, PTPRB, PTPRM, SHISA5, SMURF1, TAS1R1, TIAM2, TNFRSF11B, TNFRSF13B
Negative_6178	BTD, CS, FAS, MVK, ADRBK2, CANT1, CDH5, CTNND1, CXCL6, CYP2J2, DGKD, FSHR, FUT3, HYAL2, ITGAE, KLRC3, LALBA, LRDD, MRAS, OR2D2, OR4A5, OR56A4, P2RX5, POLR2A, PPP2R2C, PRKAG1, PVRL4, RASGRP3, RBL1, TAS2R13, THY1, WNT4, B4GALNT1, ST6GALNAC5
Negative_6179	CFI, HAL, ANAPC4, APC2, CFTR, COMT, DGAT2, GUCY2C, GUCY2F, ICOSLG, INHBE, KLRC1, MAPK11, MYLK, OR2H2, OR2M2, ROCK1, SHC4, TPK1, VKORC1, C1GALT1C1

Negative_6180	FH, KMO, ACP1, ADAM17, ALG5, ANAPC11, CHUK, COL4A6, CYP11A1, CYP2J2, DUSP8, ERBB3, GMPR, GNG3, GRIN2A, IL28B, MAP3K4, MAPT, NT5E, OR2AG1, OR4N5, OR52J3, OR5AK2, OR5T1, PCYT1A, PHGDH, PIGB, PVRL3, PYCRL, RAPGEF1, RBX1, TAS2R16, TCF7L2, TGDS, TNFRSF10B
Negative_6181	CSK, HK1, TFG, ALDH7A1, ALOX5, C3orf10, CREB3L1, CSNK1E, CTNND1, DDX50, FABP1, FUT6, GLO1, GNPAT, GNPDA2, IL2RB, INHBB, MARS, MYLK2, NRG3, OR10A5, OR2W1, OR51G1, OR6C74, OR7D2, OR8B12, PAK2, PPP5C, PYCR2, SLC27A5, SPRY4, TFPI, TGFA, TUBB2C, UGCGL2, ALDH18A1, PAFAH1B3
Negative_6182	VTN, CYFIP1, INPP4B, OR10A7, OR9G4, PAK4, POLR2I, PTDSS2, TKTL2
Negative_6183	CFD, GP9, ADCY8, ADIPOR1, AKR1A1, ALDOA, ALG6, CDS1, CRKL, CSDA, CYP11B2, CYP3A5, CYP4A22, DDHD1, GALC, GSTO2, IL18, NANP, OR4K2, PON1, PP1A, PPP2R5D, PRODH, SAT1
Negative_6184	PDC, SCD, ACTN1, ACVRL1, B3GALT2, CACNA1S, CACNB1, CCL5, CCR8, CSNK1G3, CTSG, CYBA, CYP2B6, DDX23, DDX47, DDX54, HCLS1, IKBKB, IL19, IL21R, IL6ST, INPP4A, IPMK, KDSR, MAPK3, MGAT3, NAGK, NCAM1, NFATC4, OR10Q1, OR13D1, OR56A1, OR8K3, PIP5K1B, PRODH2, PTPMT1, RAPGEF4, RARA, SMAD6, SNW1, STX7, TAS2R38, TAS2R5, TBXAS1, THBS1, TUBAL3, TUBB2B, UGT2B4
Negative_6185	AK2, ARPC5L, CASP3, CCL8, CDKN2B, CYP2U1, DKK4, ENTPD5, FGFR2, GSTZ1, ITGAM, OR2T8, OR5H2, SUCLA2, TNFRSF17
Negative_6186	STS, APOC3, CALML3, COMT, CTNND1, CYFIP1, CYP17A1, EHMT1, ERO1L, FBP2, HLA-DOA, IL6ST, OR1D2, PDE3A, PDGFA, PDK1, PPAR, SLC2A4, SMAD5, STX1A, VAV2, VEGFB, WHSC1, WNT16
Negative_6187	ID3, AKR1C3, FGF12, GANAB, GZMB, KCNB1, MYH13, PTGDS, RALB, SOAT2, STAT3, TNFRSF8, ULBP2, VKORC1
Negative_6188	SMO, ABP1, ACP1, ALPP, AMY2A, ATP2A3, B3GNT5, C1QB, CD274, CD38, CSF3R, CXCL13, CYP11A1, ENAH, EPHB3, FASN, FLT1, GCNT4, GDF6, HLA-DOA, KLRC4, KYNU, LIPG, MGAT4B, NFE2L2, OR5D14, PLK1, PPAP2C, PYCRL, RAC3, SEMA7A, SLC27A4, TBL1Y, TGFB3
Negative_6189	EPHA6, JAK2, PIAS4, YARS
Negative_6190	ACTG1, ALOX15, ATP6V1H, DRD2, GDF7, GSK3B, LIMK1, MCM2, MCM3, MDM4, MGMT5, MYLK, OR2T1, SUFU
Negative_6191	ACSL3, ACYP2, ADCY8, BPNT1, CNTN2, CTBS, CXCL10, CYBB, CYP2A6, DUSP9, ENPP2, FGF2, GRIN1, GSTM2, IKBKB, IL15RA, IMPDH2, ITPK1, KLRC2, LTC4S, MAT2B, MGAT3, MYD88, NKD1, OR13C8, OR1D5, OR2H1, OR8D1, PITX2, PNP1, POLR2D, PRKY, PTDSS2, SOD1, TBL1X, TOMM40, UCKL1, VTI1A, ATP6V0A1
Negative_6192	AK3, MSN, PGP, ACADM, AGRP, ALDH3B1, APH1A, ARHGAP5, ATP6V1F, CD99, CLTC, CX3CR1, CXCL10, EXTL2, FARP2, GADD45G, GALNT13, GLI3, HSD3B1, LTC4S, MAOA, MAOB, MGAT4B, NOTCH3, OR51D1, OR8U1, PGAP1, PLCB4, POLR1E, POLR2K, PRKAR1A, PRKY, PTPN6, RBX1, SLC27A5, SLC2A4, SSH1, ST3GAL5, TRAF2, TSNARE1, TUBA3C, PAFAH1B2
Negative_6193	ALDH4A1, ALPL, FGF19, FMO4, HHEX, NFYC, ATP6V1B1
Negative_6194	SYK, ACSL1, ACSS2, ACTA2, ADAM10, ADRA1A, AGPAT2, ALDH1A1, ATP2A1, ATP5C1, CCNB1, CHRM1, CYP3A5, DMGDH, DOCK1, DRD2, E2F5, F13B, FZD9, G6PC, G6PC2, GAD1, GALNT6, GOSR2, GPT2, HIP1, HPSE, NKX3-1, OR52N2, PIK3C2A, RAP1A, RDH8, TAS2R13, TIAM2, TJP3, TXNDC12, USE1, ATP6V1G1, SERPINB5
Negative_6195	APP, AGXT, ALG5, ATP4A, ATP5D, ATP5J2, BMPR2, CCL17, CD72, DDX55, FARP2, FGF11, FLT3LG, G6PD, HSD17B8, HYAL2, IARS2, IFNK, JAG2, MAP2K4, MAP3K4, MAPK11, MYH15, NRCAM, OR10G4, OR11L1, OR1B1, OR2AG1, OR2L3, OR2Z1, OR4X2, PAFAH2, PLA2G5, RAP1A, SEMA3F, SENP2, SMARCA5, SOX17, TYROBP

Negative_6196	FH, MET, MPZ, PAH, TNR, ACAA2, ACADL, ACSS2, ALOX15B, ARG1, ATP5G1, CA CNA1H, CBLB, CD28, COASY, DARS2, DOLPP1, E2F4, EI24, ERBB2, FCER1G, G ALNT7, GAMT, GCAT, GRM5, GSTZ1, GUCY2F, HYAL1, IRAK1, JUND, LEF1, MAN 1C1, MGAT5, MMP7, MTFMT, OR10X1, OR4D6, PDXK, PIGT, PIK3R1, PRKG2, RB X1, ROCK2, SEMA3D, SORD, STK36, STX2, TAS2R8, YWHAH
Negative_6197	EBP, SFN, ACP6, BST1, CCL4, CCR5, CD247, CDC45L, CPT2, CREB3L3, CTNNA 1, CTPS2, DFFA, DHCR24, EHMT1, EIF4E2, EPHA3, ERBB4, GART, GLI2, IFNA 13, IL21R, INSR, IPPK, MDM2, MTHFS, NT5C1A, OR2T4, OR4D1, OR4D11, OR 51D1, OR6Q1, PAK1, PIAS2, PRSS2, SDHA, SLC27A1, CSGALNACT2
Negative_6198	CAD, F2, FYN, LPO, LTB, MPI, PLG, A4GALT, ACOX3, ALPI, CCL17, CCL25, CO L6A2, CRY2, FABP3, FGD3, FGF8, GPLD1, GSTM2, HHIP, IFNW1, IL10, IL23A , ITGB3, KIR2DS5, MAD1L1, MAN1B1, MCM5, MMP7, MOV10L1, MYLK2, NFASC, OR1G1, OR1J2, OR2AT4, OR2B6, OR2F2, OR4K17, OR5B17, POLE2, SMPD3, SP HK2, SRGAP2, SYNJ2, TACR1, TAS1R2, XYLT2, ZIC2, PLA2G12B
Negative_6199	CBL, F2, ABLIM1, ALDH3B2, CACNA1C, DHRS9, FASN, GLS2, ICAM2, LALBA, M TFM, NFYA, NNMT, OR4A16, OR4C12, OR6K2, PERP, PLAU, PTTG1, SC5DL, SE MA4F, TAS2R40, TKTL1
Negative_6200	HY1, AADAC, AGXT2, APAF1, CHRM1, CLDN17, CYFIP2, CYP4F3, FOXA2, GCLC , GRM1, IL2RG, LIMK1, NANS, OR4Q3, OR5AC2, PDCD1, PISD, SDC2, SNW1, TA P2, TLR9, TYK2, XCR1
Negative_6201	MIF, AKR1C1, ARSB, DAPK2, EXTL3, GALT, HYAL2, IFIH1, IFNA13, IL29, KC NQ1, OR8B12, PAK2, PI4KB, PLA2G2A, PPM1B, TIAM2, TNFRSF9
Negative_6202	LCT, ATP5G2, GRM1, MOV10L1, PCCA
Negative_6203	C2, HAL, HK1, PLN, ABCC8, CACNG3, DPAGT1, DTX2, DUSP8, EPHB4, H6PD, IF NA10, IL1R1, KCNQ1, MECP, NUMB, OR5H6, P2RX1, PI4KA, PLA2G5, PNMT, PP AP2A, PPP3CB, PRKG1, PSEN2, SEMA7A, SENP2, TCF7L2, UAP1, ATP6VOD1, G ABARAPL2
Negative_6204	IDS, TH, ACP2, AFMID, ALG9, AMPD2, ASAH1, CCDC6, COL11A1, CTSG, CXCL5 , CXCL6, DNMT3B, DPYD, ENPP2, EPHB2, FGF14, GPAM, H6PD, HAP1, HPSE2, I L23A, IL24, JAG1, LDHA, MYH14, MYH4, MYL5, MYLK, MYLK2, NADK, NFYB, NO S1, OLAH, OR11H1, RPS6KB1, RPS6KB2, SNAI2, TNFSF9, VEGFB
Negative_6205	C2, DDC, GP6, ALG8, BUB1B, CDC45L, CPT1B, CREB1, FRAT2, GRB2, HHIP, IF NW1, INPP4A, LAMC1, MYH2, NME2, OCRL, OR4A16, OR4C15, OR5P2, OR6T1, P ARVG, PGAM2, PIK3CD, PTGER3, RHEB, SC4MOL, SLC27A4, SMAD6, TAS2R3, T CF7L1, THBD, TNFSF9
Negative_6206	DDO, MIF, ACAT2, ACSL3, B3GNT2, CLDN3, CTNNA1, CXCL2, DGKA, DUSP3, DU SP5, GALNT10, GCLM, GNAL, GRIN2B, IDI2, IRAK4, KRAS, KYNU, MAPK13, MY H1, OR13C4, OR4D5, PPAP2C, PPP2R1B, PPP2R2C, PRKCZ, PTTG1, RAC2, STK 3, STX18, UGT2B28, VANGL2, WASF1, ZIC2
Negative_6207	C8B, HK2, SPN, ACYP2, ADRB3, AREG, BDH2, CDS2, DHDH, DPYS, DTX3L, EDN1 , ENPP3, FGF17, FGF8, FLOT1, FRAP1, HEXA, IL11, IRAK4, IRS1, KYNU, NAD K, NCR3, OR2A25, OR5D18, OR6C75, PCCA, PDK1, PLCE1, PLTP, POLR3A, POL R3B, PPP2R5D, RXRA, SEMA4C, SLC27A4, TAS2R5, TAS2R50, TCF7L1, TNFSF 11, WNT1, CSNK1A1L
Negative_6208	CCR6, GAS1, GGCX, IFNA16, MGAT5, NFASC, SMAD2
Negative_6209	AR, F7, BHMT, CACNB3, CCL22, CDIPT, DVL2, EVI1, EXTL1, FGFR4, HLA- DOB, MTMR1, OR6K6, PNPO, PRIM2, UGCG, UGT2B28, VAMP4, WARS, YWHAB, ZN RD1
Negative_6210	CMPK1, PIM2, PLCB1, TIRAP
Negative_6211	AK1, MPZ, SRC, TXK, ACADL, ACYP1, ALAS1, ALG1, ALOX12, ATP6VOC, CCKBR , CCL15, CYP2E1, DEGS2, DLAT, FASN, GGT6, GYS2, HSD3B2, IL18RAP, ITGA 5, LIPG, MGLL, MOV10L1, MYH4, MYH7B, NTN1, ODC1, OR10G7, OR10X1, OR2T 29, PER3, PKLR, PLA2G3, POLR1E, PRKY, PTPRJ, RAF1, SEMA4B, SOCS1, SUC LA2, TGDS, TGFBR1, HLA-DPA1, MAPK8IP3

Negative_6212	SRM, ADH1A, ADORA2B, ASCC3, ATP5L, CACNB1, CAV1, CDC25C, CX3CL1, DPM1, HRH1, HSD17B2, LAMB3, NARS, NLGN2, OR2G2, OR7D2, PLOG1, PPP1R3B, PRKAB1, PTGER1, PTPN1, SPRY4, SULT1A2, TIAM2, WNT5B, CACNA2D1
Negative_6213	ARPC5, CTBS, CTSS, DGKZ, FIGF, GMPS, INSR, IRAK1, ITPK1, NCSTN, OR1S2, OR4D5, PIK3CG, RASSF1, SEMA7A, TOLLIP, TPM3
Negative_6214	BTC, DHH, OGT, SFN, ADORA2B, CACNG5, CARS2, CCL7, CDC42, CSNK1G1, CTLA4, FGFR2, FSHR, GALK2, GLG1, GMPR2, GRLF1, HSP90B1, IFNA4, MGAT4B, MINPP1, MMP1, OR1D5, OR4F5, OR4P4, OR52L1, OR7A10, OR8I2, POLD2, PPP3CB, RBL1, RFNG, TRAF5
Negative_6215	CFH, GK, RFK, TNF, AGPAT2, ALCAM, ALG11, ANPEP, APBB1, ARAF, AVPR1A, GNPDA1, HEMK1, IDUA, IFNA2, IL12B, ITGA5, ITPKB, NCKAP1, OR2T4, OR8B8, RRM2B, SESN1, SLC9A1, SUCLG1
Negative_6216	AK2, ME2, NPL, TFG, AACs, ADSS, ALG12, ATP6AP1, CACNA1G, CACNG7, CDH3, CLDN10, CXCL5, DDB2, F2RL1, GFAP, HARS, HNF4G, MAN2A1, MAP2K1, MCAT, NCKAP1, OR2AG1, OR52A5, OR52B6, OR52W1, PHPT1, PIP5K1C, PRKACG, RRM2B, SEMA3D, SOCS7, SPTLC2, TPMT, TYMP, WEE1, PHOSPHO1, ST6GALNAC6
Negative_6217	GH2, PXN, A4GALT, ADH1A, ALOX12B, BPNT1, C3orf10, CAMK2A, CLDN15, COL1A2, COQ7, DPM3, FDF1, GAS1, GGT1, IFNK, ITGA2, NCF4, NFYB, NOS3, NRG4, OR1D2, OR2H1, OR6N1, PDE4B, PDGFC, PIK3C2B, PMAIP1, POLA2, POLR1E, POLR3K, PPAT, PRPS1, SH3BP2, ST8SIA5, STK36, TCF7L1, TUBA1B, VAMP3
Negative_6218	HGD, LSS, ACAA2, CCND1, CDH1, CDKN1A, CYP1A1, DTX1, FGF9, FSHR, IL4R, OR4C15, OR4Q3, OR6T1, PPAR, PSME2, SLC27A5
Negative_6219	DDO, MIF, ACPP, ADCY5, ADORA2B, AMPD2, CCKAR, CTBP1, ENPP2, GSTA2, HSD3B7, IDH2, ISYNA1, MTMR2, OR6X1, PFKM, PRLR, RPS6KB1, STAM, ULK3
Negative_6220	CGN, ACY1, AGXT2, ARPC5, ATP6V1D, CACNB3, CCNH, CD74, EFNB2, ENO1, HIF1A, IFNA21, IL29, INPP4B, LDHB, MMP7, NT5C, ONECUT1, OPLAH, OR1G1, OR52L1, PRKACB, PRKCD, PYGM, RND1, SDC1, SEMA3C, SLC2A4, TRPM5, PLA2G12A
Negative_6221	ALG10, AQP7, COL4A2, CXCR4, CYBB, FGF6, FUT7, GLS2, LYPLA2, MARS, OR51F2, PGK1, PLA2G2E, PPP1R1A, PPP2R2C, PRKAR1B, SHC2, TAS1R1, UGT2B10
Negative_6222	TK1, AKT3, ANAPC1, BAIAP2, CANT1, CCR7, CD38, CLTCL1, COL4A6, CREB5, CTNND1, DGKB, ENPP2, FLOT1, GNAL, GNG13, GSTA4, GSTM5, GZMB, ICAM2, INHBB, ITGA6, LDHC, LIPA, LYPLA1, MOV10L1, NSD1, OGDH, OR10Z1, OR2G6, OR51B5, OR52N1, PON2, PPP2R2B, PTGES2, RPS6, RPS6KB2, SEMA3G, ATP6VOD1, MAPK8IP3
Negative_6223	CP, EDA, ABAT, ABLIM3, AKR1C1, ALDOB, ARHGEF4, ARPC2, CDC42, CDC6, DGKQ, GUSB, HRH1, IGFBP3, ITGA4, KIR2DL1, NMNAT1, NOTCH3, OR51V1, OR5K1, POMC, PSEN1, RALA, SESN3, TSC2, VDAC2, ST6GALNAC4
Negative_6224	ADCY4, ADRA1B, ASNS, B3GALT1, B4GALT1, CACNA1S, CDC26, CDC27, CLDN16, CLTC, CYP2A13, CYP2U1, EI24, EPB41L3, F11R, F2RL1, FADD, GALNTL1, GSTP1, IFNA8, IL13, IMPDH2, INHBB, ITGB6, KLRK1, MPZL1, MTHFS, NCF1, NEFL, NFKBIB, NODAL, OR4F17, OR51B4, OR5D18, PARVG, PDE4A, PFN2, PLK1, PPP1R3B, RALBP1, RPS6KA3, SCP2, SMAD9, ST8SIA1, STX12, UNC5B, PAFAH1B1
Negative_6225	ATF2, CNTFR, DUSP9, G6PC, MYL2, WNT2B
Negative_6226	C5AR1, CACNA1F, NSDHL, OR3A3, OR5H2, RPS6KA2, TOLLIP, TRAF5, XCR1, XYLT2, SERPINE1
Negative_6227	FER, SYK, TK2, ALDH1A3, ALDOB, ALG6, ALS2, ARRB1, CACNG6, CCL23, CCL27, CHSY1, CSNK1D, CX3CL1, EFNA4, ENTPD7, EPB41, GDF6, GGT5, GNG12, GNHRH1, HSD3B1, IRS1, NLGN3, NUMBL, OR2T8, OR4F6, OR6C3, PAK2, PDHA2, PIK3CA, PLAUR, PLXNC1, POLR1A, PPP2R5C, PRKG2, RARS2, RDH5, SETMAR, SMAD7, SMURF2, TBL1XR1, UGT1A10, VNN1, ALDH18A1, ATP6VOD2, GABARAPL1

Negative_6228	CDKN2D, CER1, EFNA2, HTR5A, ITPA, OR5AN1, RHOA, SARS, ATP6V1E2, SERPINA1
Negative_6229	BLVRA, CALML5, ESAM, JAM3
Negative_6230	CCL27, CSF2RA, HEXB, IL17RB, NTF4, TNFRSF10D
Negative_6231	CLDN15, DDX19A, FSHB, IL2RG, IMPA2, LYPLA2, OR10H1, SH2D1A, ST3GAL5, HLA-DPA1
Negative_6232	ILK, ARPC3, BMPR1A, FGF2, OR5AS1, OR8G1, OXTR, PLXNA1
Negative_6233	F3, PTS, ACVR1C, B3GNT5, CSNK1A1, GFPT2, GRB2, OR13C9, OR1M1, OR2D2, OR4K15, OR4S2, OR56A3, OR9G1, POLR1A, RASGRP3, RPS6KA3, SETD7, WNT9B
Negative_6234	AUH, F7, GNS, IL4, AGPAT4, AKT3, ATP5G3, ATP5J2, CDKN2C, CHEK1, CLCF1, CLDN16, CTSB, ENTPD3, FGF19, FGF2, FLT3LG, GCNT4, HCLS1, HDAC2, IDH3A, INADL, ITGA6, LAMB2, MINPP1, OR12D3, OR4A5, OR52D1, OR6A2, OR7G1, OR8H2, OR8J3, PGAM1, POMC, PORCN, RAPGEF4, SMAD2, STT3B, SULT1E1, TSHB, VAMP3, PHOSPHO1, TNFRSF13B
Negative_6235	ARPC1B, ASPA, CXCL3, F2RL2, IL11RA, LAMC3, MAN1A1, MMP9, OR1A1, OR52D1, ORC1L, PPP3CA, WNT7B, SERPINC1
Negative_6236	CRK, AKR1C4, ATP6V0B, BTRC, CASP6, CASP8, DFFA, DGKZ, EPB41L2, FGD3, GARS, GLI3, GNPDA2, GRLF1, HSD17B4, IDH1, IFNA4, IL1R2, MAD2L1, MDH2, NFKBIA, OR1E2, OR6C1, PRIM2, SMAD1, SRGAP3, ULK3, MAPKAPK2, PPARGC1A
Negative_6237	FAH, ALG1, CCL20, CDC25A, CYP26B1, GLO1, GSTA1, GSTA4, HLA-DMA, KYNU, LAMB2, MEF2C, NTSR1, OR4F17, PIGN, RDH8, STX4, UBA1
Negative_6238	AMT, CFH, GCK, NGF, ABAT, ABL1, ADRA1D, ARRB1, C1QA, CBR1, CD28, CSDA, CXCL3, EXOC7, FCER1G, GUCY2D, IFNA6, IFNAR1, IRS4, LAMA3, MAP3K5, OR2L13, PAX4, PCCA, PIGA, PIGB, PLTP, RPE65, SLC25A4, TBL1X, TSNARE1, ULK2
Negative_6239	LTB, AGXT2, AMD1, APAF1, ARNTL, CASP10, CDK6, CHST11, CHST13, DGAT2, DGKI, DUSP6, ENTPD8, ETS1, FGF3, FUT8, FUT9, GALNT1, GALNT3, GLDC, GRIN2A, HGSNAT, HSPA1B, IRS1, ITPKB, MAP2K2, MAP3K4, MDH2, MS4A2, NKX2-2, NOTCH2, OR2L2, OR51B5, PFN1, PHGDH, PI4KA, PRIM2, PRODH2, PSAT1, PSME3, PYCR1, SGPP2, TNFSF4, ATP6V1B1, TNFRSF18, TNFRSF6B
Negative_6240	GSN, ITK, TYR, ACMSD, ADSL, AMD1, ARD1A, ASRGL1, BBC3, BMP4, CADM1, CCNG1, CDKN1C, CSNK2B, CTNBN1, DIAPH2, E2F3, ENTPD8, EPB41L2, GPD2, GRAP2, GRIA1, IL1B, IL6ST, ITGB7, LIPF, MAP4K1, MAPK3, MPZL1, NFKB2, NOS1, OR10G7, OR12D3, OR13D1, OR51T1, OR7A17, OR8S1, PGK1, PNPO, POLE2, PPBP, PTPRF, TAS2R16, UGT8, UROS, ATP6V1C2, CACNA2D1, PHOSPHO1
Negative_6241	F12, ABLIM2, ADRA1D, ATP5A1, AXIN1, B3GNT3, BBOX1, BMPR2, BUB3, CACNB1, CACNG3, CDC14B, CDKN2B, CLCA2, CLDN8, CTBP1, CTBP2, CTSL1, CYBB, CYP8B1, DLAT, EVI1, FMO2, FTH1, FUT8, GLI2, HSD3B1, IL2RG, LIMK1, MAP2K2, MAT1A, METTL6, MYD88, MYH7, OR2K2, PLAT, RALGDS, RBPJ, RPS6KB1, SAT1, SESN2, SMAD7, TLN2, ULK2
Negative_6242	IL2, ABAT, AGPAT3, ATIC, CCL28, CDC45L, CSAD, CYP19A1, CYP2A6, ENO3, FPGT, GALE, HIF1A, HSPA1B, IFNG, KITLG, NCR1, OR2A2, OR51E1, OR6F1, OR6Q1, OR8S1, PIK3CA, POLR2G, RAC3, RERE, SHC2, TAS2R9, TBXA2R, TUBB, TUBB6, UGCGL1, VNN1, WASF3
Negative_6243	HK3, JUN, AACS, ACAA2, ACSM2A, ADH1A, B3GAT2, CTF1, DHCR24, HEMK1, ITGA10, LTA4H, MYD88, MYL5, NMNAT2, NOS3, OR11H4, OR5P2, PGAM4, SFRP5, SLC27A4, TCF7, WBSCR17, TNFRSF10C
Negative_6244	CRK, F12, FAH, HY1, IL6, PGD, ABI2, ACVR1B, ASMT, CERK, DUSP5, FUT2, GDF6, GNA14, GNAI2, GOT1, GPD1L, GPX5, HMBS, MCEE, MYH10, NFYB, NT5C3, OR13C5, OR1N1, PER2, PLXNC1, PTGIS, RPS6KA6, SMAD1, SMC1A, SQLE, STX4, TGFB1, TPH2, TSHR, UNC5D, PHOSPHO1

Negative_6245	RPE, ALS2, C3AR1, CDIPT, CSNK2A1, DDX51, DUSP3, ENTPD7, FM05, GLUL, I COS, IRF7, JAM3, MAP3K8, MYH13, NEU4, OR51I2, OR52M1, P2RX3, PPID, SE MA3B, SORBS1
Negative_6246	MOS, STS, TXK, AANAT, ACAD9, ACSM2A, APC2, CACNG2, CCL26, FCGR3B, FGF 10, GABARAP, GNMT, IL1RAP, MAPK9, MYH15, NADK, NCKAP1L, OR51T1, OR52 B4, PDE5A, PIK3CA, PPP1R3A, RPS6KA4, SHC1, SLC27A5, WNT2B
Negative_6247	CDKN2C, GSTM5, PTCH1, TXNDC12, UGT2B7, SERPINB5
Negative_6248	LHB, ALDH3A2, CLDN16, COL6A1, CRKL, IFNA2, MTHFR, NAT1, OR1I1, OR2M2 , ORC3L, P2RX1, PRKAG3, RARS, ROBO3, SHISA5, SOCS3, SERPIND1
Negative_6249	ADORA2A, CCNB2, CXCL3, EPHA6, GADD45B, GMPR, GNAI3, HNF1A, KDSR, LCM T1, MGAT3, OR5B12, PTPRR, UCK2, CSGALNACT2, SUV420H2
Negative_6250	F2, ID4, APOA1, CCND1, CHIT1, CMPK1, COL6A1, DLL3, DPM2, F2RL1, GAMT, GRIA3, KIR2DL1, LAMC3, LRP5, MARS2, MPST, OR2A2, PANK1, PIGB, RARS2, SH3BP2, TGFBR1
Negative_6251	CBL, DUT, F5, FER, GLA, LPO, NLK, ABLIM1, ACP2, ALG10, ALOX5, CD72, CFL 2, DGKH, DUSP16, EFNA1, ESAM, FGF5, GALNT7, GPLD1, IMPDH2, KIR2DL1, N EU1, NME6, OR2T33, PCYT1B, PYCR2, SHC1, SMAD6, ST3GAL5, ST3GAL6, SYN J2, TOLLIP, TUBB4, VANGL2, VTI1A, WNT5A, YWHAB
Negative_6252	GLA, LPL, TEC, ACSM2A, ACTG2, ACVR1C, AMPD1, ANGPTL4, CACNG2, COASY, COL4A6, CXCR5, DHDH, DLAT, FCGR3B, GALNT7, GALNT8, GCH1, GFPT1, HIBC H, HSP90B1, IFNAR2, IL20RB, ITGAL, LTBR, MAFA, MCM2, MGAT2, NEFH, NUD T2, OR10Z1, OR11H1, OR13G1, OR2A14, OR4K5, OR9Q1, P2RX1, PDE4C, PIGH , PLCB2, PON1, PPCS, RFWD2, SCP2, SOX17, STT3B, TCF7L2, TPM3, YWHAE
Negative_6253	IVD, MIF, ARNT, GUCY1A3, HYAL2, NFATC3, NRXN1, PHKG1, SFRP1, SRGAP3
Negative_6254	F9, BAAT, DPYS, GOT1, MLLT4, NSD1, NT5C, OR4F15, PTPRC
Negative_6255	IL6, ILK, BDKRB1, BET1, CAMKK2, CFL1, CNGA3, DGKH, EFNB2, IFIH1, IFNA 10, ITGAX, KAT2A, NAGLU, NT5M, OR10C1, OR10R2, OR2T2, OR5AC2, POLA2, PTCH1, PTK2, SFRP2, TAS2R5, TSLP, YARS
Negative_6256	ACHE, ACTG1, ATP5E, DDX56, DPM3, GPD1, HEXB, HSD11B2, HSD17B2, KIR3D L3, OR6F1, OR7C1, OR7G3, OR8J1, PDE9A, PDK1, POLR2A, PPM1D, TSHR
Negative_6257	C8B, ACYP2, APOA2, CACNG5, CASP9, CAV3, CCNB3, CD40LG, CLTA, CNTF, CR KL, CSNK1A1, DAD1, DRD2, GANAB, GART, GCNT3, HAO1, HLA-DOB, HLA- DRA, HMGCL, HMOX2, IKBKB, ITGA3, OR51F2, OR51M1, OR5AS1, OR5K2, OR6X 1, OR8G1, OR8H3, PCYT1A, PIP4K2A, POLR2J, PPP3R2, RBPJ, RERE, TRADD, VEGFC, WEE1, WNT9A
Negative_6258	CD55, DGKG, GANAB, IFNA16, OR5L2, SV2B, KIR2DL5A
Negative_6259	CFI, GHR, HGD, TEC, ACY1, ADRB1, ATP5J2, CASP3, CES7, CLOCK, CRLS1, CY BA, EXOC7, F13A1, HSD17B3, IQGAP3, ITGB2, NADK, OR13D1, OR2A25, OR5H 6, PI4KA, PPAT, RAC2, RND1, RPIA, SHC2, TAS2R14, VAMP4, WIF1, WNT6, ST 6GALNAC1
Negative_6260	F3, ACSM4, AKR1A1, ALDH3B1, ARRB1, CD80, CHSY1, DEGS2, DPM1, EFNA4, F ARP2, FZD8, GUCA1B, GZMB, KDSR, MAML1, NUDT9, OR13C9, OR3A2, OR51B4, P4HA1, PIGC, PIP4K2B, POLR1A, PRKAR1A, RASGRP4, STX10, TAS2R42, UCK 2, UGCGL2, WNT2
Negative_6261	GLA, AKR1C3, ATP6AP1, CACNA1B, GALK2, HYAL2, OR10AD1, PIGB, RASGRP3 , RFXANK, SLC12A2
Negative_6262	ACHE, AGRN, ALDH6A1, ALOX12, B4GALT7, DOCK1, E2F1, GRIA3, GUCA1C, NR 5A2, OR11H6, OR2A4, OR5P3, POLR3H, STAT4, STAT6, THBD
Negative_6263	F2, TXK, ACACB, ALDH1B1, APRT, ARHGEF6, ASRGL1, ATP5L, B3GNT4, CD19, CDC42, CRB3, CYP2C8, CYP2U1, GALNT7, GALNTL1, GSTA5, IFNAR2, ITPA, O R10G7, OR3A2, OR5B17, PFN3, PPM1A, PPP3CB, RPIA, SGMS1, TUBB3, ATP6V 1E1, TNFRSF11B
Negative_6264	DDO, ARPC1A, CCL24, CD274, CPT1B, EPHB6, GPX5, HTR5A, NFATC1, OR52W1 , PIAS4

Negative_6265	AK2, CBL, HSD17B4, MGAM, SEMA4C
Negative_6266	FUK, GHR, ACSM2A, ADRA1B, BCKDHA, CAMK4, CLDN7, CREB3L2, CYP2A6, EP300, F2RL2, FGF11, FMO1, GNB3, GNRH2, IL2RA, ITPA, KIR3DL1, LDHAL6A, MICA, MLLT4, NEU2, NEUROD1, OR10K1, OR10S1, OR2T11, OR2Z1, OR52N2, PLA2G2A, RAF1, SC4MOL, SFRP2, SGMS2, STX1B, TICAM2, ZIC2
Negative_6267	CD2, CGN, PRL, ALDH4A1, ALDH5A1, ALOX15B, ATP50, ATP6V1D, CCL25, CER1, COQ3, CYP2E1, FADS2, GAD1, HTR5A, IRF5, MAPK11, MAPK3, MMP7, MPDZ, OR2T29, OR6C2, OR8B4, OR8D4, PAK2, PLXNB2, PRSS2, RDH11, ROCK2, SMPD3, ST3GAL1, ST8SIA1
Negative_6268	F11, IL4, LIF, MVK, PDC, ADCY3, APC2, CCL28, CPT2, DDOST, DDX51, EXTL3, FGF12, GAD1, GDF5, HIBCH, HMOX1, IL20RB, KCNQ1, KLRC2, LAMA4, MDH1, NT5C, NT5C2, OR14C36, OR2D3, OR5R1, PDE7B, PER2, PFKFB4, PPP2R5C, PRKCD, QARS, SAT1, SRD5A1, TAS1R3, TGFB1, VDAC3, WNT8B
Negative_6269	C9, FAH, GK, SMO, XDH, ACAT2, APOC3, CD27, CFL1, CHRM2, CHSY3, CSF2, DCN1, DDX18, FGF10, FLT4, FOXO1, GALNT5, GGT5, IDI1, IFNB1, IL2RA, IL6R, LIMK1, LRP5, LRRC4C, MAP2K1, MPDZ, NT5C1A, OR14A16, OR14J1, PCK1, PPP2R2D, PRKAR2A, SEMA4C, SEPHS1, TNFRSF8, UBE2K, UGCG, UGT2B17, ZAP70, ZFYVE9, CSNK1A1L, PNLIPRP1, TNFRSF18
Negative_6270	CD2, ACTC1, BDKRB1, CLCA4, DDX4, DGKB, DNMT1, EDNRA, MAOB, NOTCH1, PFN4, SEMA7A, SOCS4
Negative_6271	CPT1A, GADD45A, NADK, NAMPT, NT5C1A, OR13A1, PLCD3, QARS, RBL1, SEMA3D, TAS2R50, YARS2, HSP90AA1
Negative_6272	F2R, F8, AADAT, ADCY6, ADCY7, AGPAT3, ALOX5, AMPD1, ASRGL1, B3GALT4, BACE2, CACNA1B, CACNB4, CIITA, CLDN8, CNGA3, DBF4, GALNT9, GRIN2C, GSTT1, IRAK4, IRF5, MTHFD1L, OR10G8, OR13C5, OR2K2, OR51G2, OR5M8, PARVA, PDE9A, PITX2, PPP3CB, PRKACG, SEMA4D, SETD1B, SETMAR, SUCLA2, SULT2A1, SV2B, TALDO1, TAS2R42, ATP6V1G2, CACNA2D4, ST6GALNAC4
Negative_6273	CAT, FST, TH, AADAC, ACMSD, AOC3, BIRC2, CDS1, COASY, COQ5, FGF9, FTCD, GALNT13, GANC, GFAP, HSD11B2, IDH1, LAMB2, LIPT1, MKNK1, NAT1, NLGN2, OR13F1, OR2T4, OR5F1, OR6B3, OR8B12, PPP2R2B, PRKG1, PTGFR, SAT2, SDC2, TAS2R40, WNT5B
Negative_6274	AK5, TFG, TNF, ACOX1, ACOX3, ACTC1, ACYP2, CACNA1A, CCL25, CERK, CLTB, DAPK2, DTX2, DUSP8, EPHB3, FOXO3, FUT3, G6PD, GABARAP, GPD1, GSTA5, IL13RA1, ITGA2, ITGAD, MYLK, NLGN1, OR10G3, OR14I1, OR2AT4, OR2C3, OR2L13, OR5K2, PDE3B, PNMT, POLR1D, POMC, RETSAT, SEMA3F, SLC12A2, SLC2A2, ST3GAL4, STX6, TAS2R1, TRIP10, UGT2A1, VNN1, WBSCR17, SERPINA1, TNFRSF12A
Negative_6275	CKB, FGA, TEC, ABLIM3, ACADVL, ALG2, ATP13A2, CCL21, CD99, CDKN1B, CEBPB, CSF2, CYP1B1, CYP4F3, DDX19A, FRAT1, FSHR, G6PC2, GALNTL2, GPD1L, GYS2, H6PD, HSD11B2, ICOSLG, IL1R2, IL6ST, KAT2B, LILRB3, MAP2K1, MAP2K2, MGLL, NLGN1, OR1M1, OR2D3, OR4C13, OR6Q1, PCK1, PDE8B, PFN3, PRKCB, PYCRL, SCLY, STMN1, TAS2R10, TNFSF8, TOMM40, VAMP4
Negative_6276	CEL, CTH, F11, MUT, AGMAT, AKT3, ASAH1, CD59, DUSP8, EPB41L1, EXTL3, FGF10, GPX5, IFNA6, IL11RA, IL1B, IL21, INPP1, ITGB4, MARS2, NKD1, NME2, NRXN2, ONECUT1, OR10G2, OR1J4, OR4C15, PAK2, PFKP, RARS, SHC2, EIF4EBP1, TNFRSF11A
Negative_6277	CD6, MTR, ACPP, AGXT, CACNA1F, CALML5, CLDN5, CNTF, CSF2RB, FLT3LG, FUT7, GLDC, GOT1, GUCY2F, HAGH, HBEGF, IL24, ITGAX, LIPA, NAGA, NTF4, OR10A6, OR10G2, OR13C8, OR2B2, OR52I2, OR5D18, OR5T2, PLA1A, PLCZ1, PPP2R2A, ROBO3, SEMA3G, SPRY3, STK4, VAV3, WNT8B, HLA-DPB1, PAFAH1B2
Negative_6278	CFD, CKB, UBB, ATP5B, C4BPB, CD86, CTSG, DVL1, FGF5, GNRHR, HADH, HTRA2, IL22RA2, IL8RB, MINPP1, MYL7, NLGN3, OR52L1, OR5B17, OXCT2, PIM1, PLXNB1, PRKACA, ROCK2, SEMA4A, CACNA2D1



Negative_6279	DUT, MPI, SYK, AARS2, ABAT, AKR1C3, ALOX15, BMPR1A, CACNB2, CCR9, CTB P2, DARS, EXOC7, FOXA2, GALNS, GCDH, ITGAV, KCNQ1, KIR2DL1, LTB4R2, M APK14, MCCC2, MYLK3, NADSYN1, NOS3, NUDT2, OR5D18, OR5L2, OR6C70, OR 6X1, PDE10A, PLTP, RASA1, RASGRP3, SEMA3C, SESN3, SETD8, SH2D1A, STA T5A, CSNK1A1L, HSP90AB1, SERPINC1
Negative_6280	HK2, CCL1, CTNND1, IL24, LIFR, OR1L3, OR4F5, OR5AS1, PIGB, PIGQ, STAT 4, SUV39H2, UBE2K
Negative_6281	TK2, CCNH, CHKA, ENO3, FOXO3, HSPB1, IFNA10, KARS, KIR2DL1, MCM7, OR1 A1, OR51A7, PAK3, PSME2, SEMA3F
Negative_6282	CDA, MAG, ME1, ARAF, CXCL6, DUSP2, DUSP7, GALK1, IAPP, ICAM3, MAOB, MY L9, OR14J1, OR2T3, OR4N4, OR5AP2, OR6C74, PAICS, PAPSS1, PDHB, PLOD3 , PPP1R3A, PTDSS2, SLC9A1, UGT2B7, TNFRSF6B
Negative_6283	PML, AGMAT, CD46, CXCR3, DDOST, DOT1L, FGFR1, FZD2, HIF1A, IL10RA, IL 2RG, LLGL2, MAD2L1, MAML1, NFYA, NQO1, OR14I1, OR6C1, PFKFB4, PRKCB, RPS6KB1, SNAP23, STX6, TCF7L1, TIAM2
Negative_6284	LTB, PLG, UBB, ALDH1A3, BMPR1B, OR2C3, PDHA1, PPP2CA, CACNA2D1
Negative_6285	F8, GLS, ACTN2, AGRP, AOC3, C1QA, CCNA2, COL2A1, CX3CR1, DEGS1, GSTA2 , GSTM1, LTA4H, LYZL1, NUDT8, OR4K14, OR6C3, OR8K1, PCK1, PDHA2, PIP5 K3, SAT2, SETDB1, ST8SIA5, TUBB2C, VAV3, YWHAH, CACNA2D3, PPP1R12A, TNFRSF10B
Negative_6286	CD4, PGP, TNF, ACVR1C, AKT2, ALDH1L1, ALPP, ASCC3, ASRGL1, CCNE1, CLD N8, CREB3L3, CXCL13, GSTM4, HAAO, HADH, HIP1, HLA- DOA, LIPG, MNX1, NKX3- 1, NR4A1, OR4N4, PDE6D, PFKL, PHKG2, POLR2B, PPP3CC, PTCRA, PTPRM, RR AS2, TAS2R41, TCF7L1, TRAF1, VAMP4, PPP1R12A
Negative_6287	ARHGEF4, ATP12A, BAIAP2, CERK, CLDN8, DGKI, EVI1, GARS, HARS, IL18R1 , JAM3, NADK, OR13F1, OR1L6, OR52A5, OR52L1, P2RX5, POLA1, CACNA2D3
Negative_6288	ARPC4, ATG7, ATP5G1, CTNNA3, CYP11B2, EDAR, FCGR2B, HIP1, KAT2B, LIL RB3, MAP3K4, MGAM, NCOR2, OR51F2, PIK3R3, PNMT, POLR3A, POLR3K, RASS F1, SLC12A2, TNFSF14, TRPM5, TUBA3C, UCK1, WASF3
Negative_6289	ID3, ARPC5, B3GALT5, BCKDHB, CCR9, CDC14A, CLDN19, CRY2, CSNK2A2, CX CL10, DCXR, DDB2, DGKI, DKK4, FLT3LG, GALNT6, GDF5, GPX7, IL7R, LDHB, MIOX, NAMPT, OR2T29, OR51B4, PLA2G2F, PLCD3, PNPO, POLR2I, PRKACG, U PP1, WNT6, SERPINE1
Negative_6290	ABO, ACAD8, ACO1, ALDOB, AMDHD2, AVPR1B, C4BPB, CCND3, CCR10, CSF2RA , DMGDH, EPHA8, FCER1G, FLT1, GALNT13, GUCY1A2, GUCY2C, IFNA4, IL20R B, IRAK1, KIR3DL3, LMO7, LRP5, MKNK1, MMP7, NTRK1, ODC1, OR11H6, OR2T 11, OR4D1, OR4D2, OR52E4, OR5K1, OR9A4, ORC2L, PDIA4, PLA2G5, PRKG2, PVRL2, PVRL3, RHOA, STMN1, UNC5D, WBSCR22, ATP6VOA1
Negative_6291	ACAA1, ACP5, ALG10, CHST12, DUSP16, ENPP1, GGT7, GRB2, IFNA13, ITGB2 , JAM3, LAMC2, LTBR, MTHFR, MYH2, NEFL, NPR2, NRG1, OR10V1, OR2F2, OR9 G1, PLA2G2A, PNLIP, POLR2B, PTGER1, RFWD2, SESN3, STAT3, TAS1R1, TRA F6, TUBB4Q, VDAC1, YES1, SUV420H2
Negative_6292	ADCY8, AGMAT, BPNT1, CCL3, CCNB1, CD74, CHRM1, DHDH, GAD2, GFPT1, GST O1, NFATC1, RPS6KA1, ATP6V1E2, SERPINA5
Negative_6293	ADC, GH2, LHB, TKT, ACO2, AGRN, ARRB2, CACNA1F, CHIT1, CLDN9, COL4A4, E2F5, EDNRA, FGF7, FSHB, GADD45B, GSTA3, GSTP1, GUCA1B, HMBS, HMGCS2 , HRAS, HRH2, HSPA8, HSPB1, IL6R, ITCH, KIR3DL1, MAP3K5, MAPK7, NEFL, OR1G1, OR2W1, OR4C12, OR56A3, OR8H3, PDHA1, PDIA4, PERP, PHKB, PNPT1 , PSME2, PTPRC, RBL1, RPS6KA2, SNAI1, UROD, B3GALNT1, ST6GALNAC6
Negative_6294	OAT, AASS, ACP5, ALG10B, ATP5G3, CAMK2D, CTNNA2, EARS2, FGF5, GPAM, G STP1, HSD11B1, MDM4, PDE3B, PGM2, PHKA1, PRKCA, PTPN11, SSH2, THBS1, UMPS, VAV1

Negative_6295	ID2, ACSL3, CAMK2D, CAMK4, CTSG, DBF4, FASLG, HLA-DRA, ICOSLG, IRS1, LCP2, LEF1, OR13G1, OR2G6, RASA2, RBL1, SPRED2, TAS2R1, THBS4, WNT3, MAPK8IP3
Negative_6296	NPY, CAPN2, GALNTL1, GSTM2, KARS
Negative_6297	ATP2A3, CLDN9, COL1A2, IL8RB, NCOR2, OR7A17
Negative_6298	CFD, FER, GP6, LSS, PTS, XDH, AOX1, BNIP1, CACNG6, CARS, CDH15, CDKN2D, CHST11, CLDN6, CRY2, CX3CL1, DDB2, DDOST, DEGS1, EIF4E2, EPB41L3, EPRS, EXTL3, FGF6, FZD7, GRB2, HTR4, ITGB2, LDHB, NCF1, NOTCH3, OR10H4, OR10Z1, OXTR, PIP5K1A, PPP3CC, PSPH, RAC3, RALB, SDC4, STX3, TGFB2, TNFSF4, TRADD, ATP6VOD2, SERPING1
Negative_6299	ENO1, GNPAT1, HIF1A, TNFRSF13B
Negative_6300	BMP7, HA01, IL17B, IL25, PRKAA1, PSME1, TAS2R50
Negative_6301	ANAPC1, BMPR1B, CDC16, DPM2, FGF18, G6PC2, GAL3ST1, GARS, GSTO2, IL28RA, NR1D1, OCRL, OR2B11, OR2L8, OR2T11, OR52L1, OR6S1, PLAU, PPP1R3D, TUBB3, ULBP1, HLA-DRB5
Negative_6302	FER, ACAD9, ADIPOR1, BMP8A, CASP7, CD38, CD47, CHST12, CLDN11, CYP2E1, DIAPH3, ESAM, FABP4, FGF18, FGF4, FLT4, GDE1, INHBE, KITLG, LCMT2, LLGL1, MGAT1, NAMPT, NARS, OR4F17, OR5R1, OR7A5, PER3, PRNP, ROCK1, RPSA, SCP2, STX6, SULT1A2, YKT6, HLA-DQB1, HSD17B12, PAFAH1B3
Negative_6303	PC, PTS, ABCC8, ANAPC1, B3GNT4, BACE1, BMPR2, CCL28, CDIPT, CES2, CHIA, COL11A1, CRHR1, DAPK1, DAPK3, DGKZ, DOT1L, DVL3, FSHR, GNA11, GYS2, HSD3B1, IAPP, IARS2, IMPDH2, MYH14, NT5M, OR1K1, PDE4B, PLCE1, PLXNA2, PTDSS2, RALGDS, RASA1, RBL1, SDHB, SENP2, SIPA1, SQLE, SRGAP2, STAT4, UGT2B11, WNT8A
Negative_6304	HPD, AMPD1, ANAPC5, APOE, DGKZ, GNRH2, GSTA5, HRH1, LDHAL6A, MARS2, PRKCD, SEMA3E, SFRP2, TYRP1
Negative_6305	BAX, CFH, EDA, GPI, KMO, LCT, ARPC2, CDC27, CPS1, CSF1, CSNK1G2, CYCS, DIAPH2, EPHB3, FGF23, GALNT12, ICAM2, IL17A, ITGAD, LCP2, MMP1, NLGN2, OLR1, OR2T5, OR52A5, OR6K2, OR7G2, PERP, PLCG2, PTK2, SCIN, SEMA3E, TAS2R40, TNXB, YES1, EIF4EBP1, SERPIND1
Negative_6306	DOLPP1, F11R, HLA-G, ITGA2B, LYPLA2, OR5A2, PGAM2, PLOD1, STX16, XYLB
Negative_6307	FUK, GSS, CMBL, IQGAP3, MYLK, PLA2G2D, PPCS, TUBB3
Negative_6308	C2, ALOX15B, APAF1, ARSD, ARSE, CASP9, CHIT1, CLCA2, CSF1, CSNK1G2, GNA15, GUCA1B, HES1, HSPA2, ITGA2B, ITGA4, NAMPT, NAT2, NLGN3, NMNAT1, NPR1, OR1L4, OR2G2, OR2M3, OR4D1, OR4N4, OR9Q2, OXTR, PHPT1, PPAP2C, RAPGEF1, RDH16, SGPP1, SKP1, SMAD1, TACR2, TAS1R1, UBE2L6, ATP6V1C2
Negative_6309	AR, GLA, MUT, TK1, VCL, CLDN11, CLDN2, CREB3, DHRS9, DHX58, FASLG, FDP S, FGF2, GALNT3, GNG12, GRIN2A, GUCY2C, IL28B, MAPK7, MAT2B, MINPP1, MPDZ, MTHFD1L, MYH7B, NPAS2, NPR1, NUDT5, OR111, OR1K1, OR9A4, PARD3, PHKG2, PNMT, PPM1D, PTGS1, SEMA3B, STAT2, TAS2R5, UGCG, UROC1, XIAP, YWHAQ, ARHGEF12
Negative_6310	CD4, GP9, TEC, AARS2, ACMSD, ALDH3B2, CARD11, CD70, CD80, CDC45L, COL6A1, CPT1A, CREB3, DEGS2, DOLPP1, DPM3, DRD5, DTX3, DUSP1, EPHX1, GSTM4, GYS1, KITLG, MAN2A1, NFASC, NMNAT3, OLR1, OPLAH, OR2L3, OR2L8, OR51M1, OR5I1, OR5P3, PARVA, PGLS, PIGW, PLAU, PSME3, PTK2, PTK2B, RAF1, SLC25A5, VDAC2
Negative_6311	ACACA, B3GALT2, CDKN2A, COL5A3, CPOX, CSDA, EP300, GDF5, MGST1, OR2H1, PRKCG, B3GALNT1, PRICKLE2
Negative_6312	ANAPC1, ARPC5, ENPP3, OR5AR1, ATP6VOA2
Negative_6313	CCR8, EHHADH, EPHA5, FM05, ICOS, IL1R2, OR8K3

Negative_6314	F7, ACTB, ALDOB, ALOX12B, ASPA, B3GALT2, CACNG3, CD38, CYP3A43, CYP8B1, EPHA4, FABP4, GNB1, GSK3B, GSTO2, HIBADH, ICAM1, MAP3K12, MAPK7, NCK2, OR9G4, PARVA, PDE7B, PFKFB1, PFKM, PPP2R2B, PVRL1, RHOA, SDC2, SESN3, SULT1A4, TJP1, ULBP3, TNFRSF11A
Negative_6315	ADRA1D, EPHA8, GGT6, LEPR, MYLK2, NCR3, NFASC, OR4C12, PARVB, PGM1, PIK3R3, PTPRB, TYK2, UGT2B11, ULK3, VDAC1, YARS2
Negative_6316	RET, CD46, DCTD
Negative_6317	ADCY8, CHRM2, FRAT1, NME7, OR8G1, PDE7B, PRODH2, SMARCA2, UROD
Negative_6318	PXN, DTX3L, IRAK1, KNG1, MCCC2, OR9K2, PDX1, RRM2B
Negative_6319	C8G, ADORA2B, AGRP, ALDOC, APPL1, B4GALT2, CYP17A1, DUSP16, GNAT3, I NHBC, LIPG, MAPK9, MYH1, NOD1, OR10A5, OR13C4, OR2W1, OR4D1, OR4F5, OR52N5, OR5AN1, OR9A2, PPCS, PVRL1, SMAD4, SPRY1, STX2, TAS2R48, TNFSF14, TP53, VAMP3, VARS
Negative_6320	CD4, MVK, ACO2, ACTG2, B3GALT2, CTF1, CXCR4, CYFIP2, DDIT4, DHRS9, IL10RB, KIR3DL1, MMP2, MYH3, NTRK2, OR2T11, OR2Y1, OR6M1, PDGFC, PPARD, PPP2R5E, PTPN5, PTPRJ, TAS2R1, TPMT, TRAF5, WASF3, TNFRSF14
Negative_6321	BTK, GP6, ACSL5, ADORA2B, ALAD, CACNA1A, CALML6, CD38, CD79A, CDH1, CDK5, CDKN2A, COL1A1, CRLS1, DGAT1, FGF8, GADD45B, GNA14, HAGHL, HBEGF, IFIH1, ITGB1, KDSR, MAPK10, MBL2, MICA, MTMR6, NCR2, OR10G8, OR5B12, OR6X1, PFKFB2, PHKB, PHKG1, PIGT, PIK3CD, PIM2, PKMYT1, POLR2I, RP S6KA5, SLC27A5, STK11, TAS2R49, THY1
Negative_6322	EZR, AMDHD2, ARPC1A, ASAH1, B3GALT1, CACNA1C, CDH5, CHAT, DDX47, DGUOK, ENO3, FGF9, FIGF, ICOS, IMPDH2, LDHAL6A, MYH4, MYLK3, OR11G2, OR1N1, OR4D9, ORC2L, PDK1, RND1, TAP2, ZFYVE9, CACNA2D2
Negative_6323	IL7, MAG, MIF, ACOT12, ADRA1B, ANPEP, APOE, ARHGEF2, ATP5G3, BAI1, C3orf10, CCL1, CSNK1D, DUSP5, HMGCS2, HSD17B4, IKBKG, IQGAP1, JAM3, LIPE, MPP5, NFATC4, NME6, OR10G8, OR11A1, OR4F6, TBL1X, TM7SF2, TUBA1B, ATP6V1B1, MAP3K7IP1
Negative_6324	EBP, GPT, ACO2, ACSM4, CMPK2, CTPS2, CXCL9, DHCR7, DIAPH3, GBA3, HMOX1, MCM2, NFKB1, NKD1, NPR2, NUMB, OR1K1, OR5K2, OR8K5, PDE1B, SNAI1
Negative_6325	AASDH, CMBL, EDA2R, GALK1, GPLD1, IL2RG, PLCB1, SEMA4F, SLC25A5, UCG
Negative_6326	FGG, RB1, ABLIM3, CDC26, CDS2, EPHX1, EXTL2, GUCA1A, HCLS1, IKBKG, KLRC1, MAGI2, MYH7, NMNAT2, NUDT8, OR7G1, PIM2, PLA2G10, PPCDC, PTK2, STEAP3, UGT2B28
Negative_6327	GP9, IL4, LAT, PDC, UBB, ALG8, ASNS, CCNE2, CDK6, CTPS, CYP26A1, FARSA, GUCA1B, HMOX1, HSPA2, HYAL2, IL12RB2, NEU1, NFATC1, NLGN3, NRP1, OR51A2, OR8U1, PIP4K2C, PLCB2, PLCG1, PNPO, POLR2F, SPAM1, MAP3K7IP1, ST6GALNAC1
Negative_6328	F2, GAA, ABLIM1, ACADL, ACADS, ADIPOR2, C1QC, C7orf16, CACNA1G, CASK, CD244, CSNK1E, CYBA, DFFA, FRAP1, GAMT, GFPT2, GIT1, GLI2, GNPDA1, HAAO, HAGH, HSD17B1, IFT57, INSRR, MITF, OR10A7, OR1S1, OR5D16, OXCT2, PDK1, POLE2, POLR2E, PPP3CA, PRKG1, PRKG2, PRPH, RASGRF2, SH2D1B, SNAP25, SPRY1, STX10, TBL1X, ATP6V1B2, CSGALNACT2, TNFRSF13B
Negative_6329	PLN, SCD, ACSL3, ARPC3, CCL13, CDH3, EPHX1, LRP5, PNLIP, THBS1, TUBB2B
Negative_6330	CTH, DHH, GP6, ILK, LTB, MPL, ACVR2A, AMDHD1, ARPC3, CASP9, CD34, CEBP A, CHAT, COMT, FGF5, FZD8, GCDH, GCH1, GSTO2, HIBCH, HLA-DMA, IL22, ITCH, MAP2K3, NCOR1, OLAH, OR10S1, OR52L1, OR5D13, OR5F1, OR6Y1, PCNA, PDGFC, PKM2, POLA1, PRKAG3, PRSS2, PTGS1, RBL2, SHC4, STAM2, WASF2, ZAP70, ZFYVE9
Negative_6331	VTN, CFLAR, EPB41L1, FZR1, PDE8A
Negative_6332	ADRB1, BCL2L1, CCR6, CD247, CD40, DDX56, GNRH1, HCCS, HSP90B1, IL29, KARS, MLYCD, PDGFA, PEMT, RBX1, SC4MOL, STAT5A

Negative_6333	DDX4, EPB41L2, GLI2, GUCY2C, OR5P2, RDH12, UPRT
Negative_6334	ADIPOR2, BBC3, CDC6, CLDN3, HTR4, ICOSLG, MLLT4, MYH2, OR11L1, OR4N4, OR8B4, PI4KA, PPARG, PTPN7, WHSC1L1
Negative_6335	FGA, MSN, AKR1C1, CCL19, CCNA1, CD44, CDC42, CSH1, CYP2C18, DFFB, DPY S, ERBB3, GNPDA2, IDH3A, IDH3G, IFNA10, IFNAR2, KCNQ1, MKNK1, NODAL, OR11A1, OR2F2, OR4D1, OR52E4, P4HA3, PDE4D, PDE7B, PKMYT1, POMC, PPP1R3A, PPP2CA, PRKAB1, PTGDS, PYCRL, RAB5A, RAPGEF4, ROCK2, SEMA3B, SLC27A5, STX3, UCP1, MAP3K7IP1
Negative_6336	F12, ABLIM3, ATG12, B3GNT4, CADM1, EPB41L2, GLUD2, GNAI3, IL6ST, OR2T2, OR7C1, OR8I2, PFKFB2, PFN3, PIP4K2B, SMAD4, SNAP23, SRD5A2, SSH1, TNFSF10, ULBP1, YARS, CTNBP1, MAPK8IP1
Negative_6337	EZR, AHCYL2, B3GNT3, BCMO1, DPM1, NT5C1A, PAX6, PRKCH, HLA-DPA1
Negative_6338	FGD1, GRIN2D, PRDX6, SIGLEC1
Negative_6339	CFI, COX15, DUSP16, PANK2
Negative_6340	GH1, ACADM, ATG12, ATP6V1H, B3GNT2, DCTD, DGKE, ENO3, FRAT1, GBE1, GNHR, GYS2, HTR6, IFNA16, IL7R, MAP4K4, NEUROG3, NMNAT1, NR5A2, OR2K2, OR5AS1, OR7D4, PHGDH, POLR2H, PRKAB1, PTPMT1, RXRG, SPAM1, SPRY3, UGT2B7, VANGL2, HLA-DQA2
Negative_6341	CCNG2, CISH, CNTN1, CYP11B2, IL22RA2, IL2RA, INSRR, NANP, OR10AG1, OR1E2, OR6K3, PCK2, PHKA2, PIK3C2G, PIP5K1A, PTPMT1, ROCK2, SFRP2, SP1, TAS2R42, UPP2, SUV420H1
Negative_6342	APP, CD6, CDA, ADH1B, BUB1, CDC27, CTF1, CYP21A2, DDX4, DKK4, GCLC, GO T2, INADL, IRF9, LTBP1, MICA, NARS2, OR1M1, OR2B11, OR2H1, PDE6H, PFN2, RAP1B, SCIN, SDC1, SEPHS1, SOCS2, TAS2R42, UNC5B
Negative_6343	AGL, FST, KMO, LHB, TNR, AKR1C2, AOC2, APRT, CD48, CD79A, CDC16, CDC7, CIITA, CYP2C9, HMOX2, HNF4G, IL1R1, IL21, MAML2, MAP3K13, MCM7, MYLK2, NAGA, NT5M, NUDT5, OR10G3, OR4N2, PAK1, PFKFB3, PLA2G3, PLA2G5, PLCG2, PTPRM, PYCRL, RPRM, RPS6KA6, SGPP2, STAT3, THBS3, TRHR, UBE2L6, ULK1, UROC1, VEGFB, YARS, B4GALNT1, GABARAPL1, TNFRSF11B, TNFSF13B
Negative_6344	F10, ID4, ME3, AGPAT6, ARG2, ATP2A2, CD58, CYP2C18, DAAM2, EFNB3, FRA P1, HTR2B, MGST1, NAGA, NEFH, OR2B11, OR2D3, OR2L8, OR4N2, OR56A3, PLXNA1, PMVK, PROS1, RFNG, RPS6KA4, TIAM1, PPP1R12A
Negative_6345	CEL, ADAM10, ADRA1B, CHKA, ESPL1, FUT5, HADH, ITPKB, NCF4, NFYB, NRXN1, OR52A1, OR5K2, OR5T2, PDE6G, PKM2, PLA1A, PRSS1, PVRL2, RAF1, RPS6KA3, SETMAR, SMAD9, ST8SIA1, SV2B, WNT7B
Negative_6346	ALDH1B1, NFKBIE, PIK3C2A, PKM2, PTK2
Negative_6347	CAT, ITK, SYK, AGPAT3, ARNTL, ATP2A2, BMP8A, BNIP1, CAMKK2, CCNG2, DAPK1, GLDC, GNAT3, ITGAX, ITPKA, MTMR2, OR10G7, OR14A16, OR1E2, OR51A7, OR8B12, PANK4, PDE11A, PDXK, PIAS2, SPRED1, SULT2A1, TPH2, HLA-DQB1
Negative_6348	GSN, LHB, ARPC4, BCL10, CLTC, CYP8B1, FTH1, FUT5, HDAC2, ITGB6, NR5A2, OR5AK2, SHC3
Negative_6349	KDR, ATP6V1H, BMP5, CD58, CSNK1A1, CYBA, FTMT, GTSE1, IAPP, IL4R, MAPK9, MCAT, MCM6, NCR1, OR1N1, OR4A16, OR5AK2, OR5C1, OR6B2, OR6F1, PCTY1A, PDE3B, PDK1, PIGF, PIK3CD, PIM1, POLD4, PRKAA2, PRKAG3, ST3GAL4, ST3GAL5, UGCGL2, VAMP4, TNFRSF10B
Negative_6350	HPD, IL8, ACSM5, ADCY8, ALG6, ARPC5L, CD86, CHSY3, CYP2A13, CYP2A7, FCGR3B, FZD9, GP1BB, GSK3B, IFNA4, NGEF, OR4D5, PAFAH2, PARD3, PER1, PNP0, PPP2R5D, PRKCZ, ROBO1, SARS2, SLC25A6, SORD, UNC5A
Negative_6351	CAT, EGF, GNE, ME1, SI, ADH5, ALPI, AVPR1B, CACNG2, CCL13, CDC25B, CXCR4, CYSLTR2, DAG1, EARS2, EP300, EPB41, FASN, GDF5, HAGHL, HHEX, ITGA5, ITGAE, ITGB2, ITGB6, JAK1, LTC4S, NCKAP1L, OR13G1, OR51V1, OR5AR1, OR7C1, OR9K2, PARD3, PGAM2, PPAP2C, PSME1, PTCRA, RPN1, SFRP4, ST8SIA1, STK11, TUBA1C, UCK1, WNT4, XCR1, YKT6

Negative_6352	AK7, F5, MVK, ALDH1B1, ATP2A1, ATP5J, ATP6V1H, CBLB, CD27, CDC45L, CER1, CHPT1, CLCA4, CMPK2, CYP4F2, EIF4E, FGF10, GNA13, IFNAR1, IGSF5, ITGA4, LARS2, OR13C8, OR4A5, OR56A4, OR5J2, OR5R1, OR6C75, PLXNB1, P RPS2, PTPRR, RUVBL1, SDHD, STX1A, TNFSF18, UBE2K, VARS, YWHAG, B4GAL NT1, HSD17B10
Negative_6353	ACPP, APOE, ATP6V1A, BACE1, COL2A1, FGF7, GALNT7, GSTO1, IL2RG, IL9R , OR2F1, OR4D2, OR8J3, PAK4, PFKFB4, PYCR1, SEMA3C, SHC4, SUV39H2, TI CAM2, TPI1, VDAC3, XCL1
Negative_6354	UBB, AFMID, APOE, ARG2, ATP6V1A, B3GALT6, C9orf95, CALML3, CASK, CCL 8, CLDN2, CRLS1, DDX4, DNMT3B, ENTPD8, FABP4, FGF3, GLI3, GSTM4, LAMC 2, LYPLA2, MEF2C, NRG2, OR10H5, PARS2, PIK3R2, PNPLA4, POLR2J, PPP2C B, RPIA, RPS6, SMAD2, TIAM2, WIF1
Negative_6355	ABO, HDC, LTB, ACADSB, ACTN2, AKR1C2, AOX1, APH1A, ATP5E, ATP6VOB, B3 GAT3, BCL2, CACNA1G, CCL22, CDC25A, COL1A1, COL5A2, CPT2, CREBBP, DE GS2, ESPL1, EXTL2, F2RL1, G6PC, GPD1, GSTA4, GSTP1, GUCY2F, GYS2, IFN GR1, KLRC1, MAOA, MBL2, NOTCH2, OR2B2, OR4D9, OR9Q2, ORC4L, PLA2G4A, RAD51, RASGRF2, SELE, SESN2, SKIV2L2, SMC1A, TAS2R42, UPP1, YKT6, PN LI PRP2
Negative_6356	AGK, DLD, HK1, MVK, ALDOA, ALG13, CD48, CPS1, DRD2, DVL1, FADD, GALNT1 , GCNT2, GDF6, GNAT3, GUCY1B3, HCLS1, HMOX1, IL22RA2, MCM2, MGAT5B, M THFD2, NRP1, NUDT9, OR52N1, OR52R1, OR5B3, OR5T1, PDE10A, PIAS2, PLA 2G1B, PLD1, PLD2, POLR2B, RIPK1, SH3BP2, SLC25A5, XIAP, ZBTB16
Negative_6357	DDC, SRF, TK1, ACY1, BDH1, BDKRB2, BMP2, CCNE1, CYP2A7, DUSP7, EHMT1, FUT9, HSPA2, IL6R, INPP4A, LAMA4, MAP3K13, MKNK1, OR2T6, PDHA2, PLD2 , PNPT1, PORCN, PRKG2, SORD, THY1, ATP6V1G3
Negative_6358	ACAD9, ARPC3, CLDN2, DDX4, FGF22, GALM, HTR6, MGST1, OR5AP2, PCYT1A, PGK2, SSH2, TLR4, TNFSF14, TSLP
Negative_6359	CREB3L2, ERO1L, HSPA8, IL17RB, NFATC1, NFX1, OR1Q1, OR2M5, PPM1D, PR OC, PRSS3, PTCH2, WASF2
Negative_6360	FGG, GK2, LPO, MAX, PGD, PGF, AKR1C3, ALPP, AMY2A, ARNTL, ARSA, ATP6V1 D, CCKBR, CCL4, CDH1, CHRM5, CYP4F3, DAG1, EPB41L3, GLDC, GRIN1, HSD3 B2, HYAL2, IDH1, IL1RAP, IRS1, ITGA10, ITGA9, MAFA, MYH8, NCOA4, NFAS C, NFKBIB, NSDHL, OR13C5, OR2D2, OR4N4, OR52E6, PIK3CG, PSPH, RASGRF 1, RBL2, SGMS1, UGT2A3, VTI1B, WEE1, WWP2, PAFAH1B1
Negative_6361	BCR, ACADL, ACOX2, ADAM10, BAAT, CD226, CLDN7, COL4A4, CPT1B, CTNNA3 , CYP3A7, DHX58, E2F5, ETNK1, FMO5, FUT3, GJA1, GMPR2, GRIN2A, GSK3B, HMOX2, HSPB1, IL12RB1, MAML1, MKNK1, NFATC2, NRG4, OR11H1, OR14A16, OR1E1, OR1I1, OR2D3, OR56A4, OR7C2, PLXNA2, PNPO, PPP2R2D, PRSS2, SP TLC2, STX10, STX18, TUBB4, ULK1, WNT10A, WNT2, YWHAQ
Negative_6362	CBS, ID2, MAG, ACTG1, ACTN2, AHCYL2, ALOX5, ATG3, CLTB, CTNNA1, DTX3, GRIN2A, HSD17B4, IGFBP3, IKBKB, IL1R1, ITGB8, MPZL1, NRCAM, OR5D13, OR5J2, OR5K2, PAX8, PER3, PPA1, PPP1R1A, PPP1R3D, PTPN7, RELB, RHEB, RPIA, SESN3, ARHGEF12, PAFAH1B1, TNFRSF18
Negative_6363	C1S, IL8, ACP5, ACSS1, CAMK2B, CAMKK1, CCKAR, CHKA, CLDN20, CYP3A43, DTX4, DUSP3, FGF6, GOT2, GRPR, GSTO1, HGSNAT, HSPA2, IARS, IL2RG, ITG A2, ITGA3, JAM3, LTBR, MAPT, MGAT2, NFASC, OR2M5, PAX6, PGLS, PPP5C, P RKACA, PRKAG3, SFRP4, TCF7L1, TP73, YWHAB, MAP3K7IP2, TNFRSF11A
Negative_6364	ACSL6, ACY3, APPL1, BBC3, CAMK4, CSNK2A1, DDX41, DPM3, FGF10, IL2RG, ITGA1, ITGB1, JUND, MAP3K12, NCAM2, NLGN2, OR52K1, SDC1, VAMP4, ZFYV E9, HSP90AB1
Negative_6365	ALDH1B1, ATG3, COL3A1, CXCL11, CXCL3, DUSP9, EXTL1, GNPDA1, HAO1, HE MK1, KIR2DL3, MAP3K11, MTHFD2, OR2B2, OR56A4, PANK4, PIK3R3, PLCG2, POLE4, POLR3D, PPCDC, TJP1, TRMT11, UGT2B17, UPB1, UROC1, VCAM1, YWH AG

Negative_6366	ACSL1, ADRBK2, CD19, CSF2RB, GSTO1, ITGA10, LTBP1
Negative_6367	GP9, ME1, PGF, C7orf16, CLDN10, CLDN20, FRAT2, GALK1, IAPP, ITPA, KCN J11, MINPP1, MLLT4, MMP9, MYLK3, NUDT5, OR10H4, OR4A15, OR51G2, PLCB1, PPCDC, PRKAG3, RPS6KA6, TNXB
Negative_6368	ABAT, AMY2B, ARG1, B3GAT1, CD72, CDC16, CYP19A1, DHRS4, FLOT2, GALC, GAMT, GUCA1A, LHCGR, METTL2B, NFKB1, OR52K2, OR6K6, PDX1, PLIN, PPID, SMURF1, TCIRG1, YARS2
Negative_6369	ABO, AK7, IL4, LPO, AACs, ALG11, CACNG5, CASK, CCL13, CHKB, CYP1A2, CYP2S1, DAPK2, DHRS3, EPHA1, FZD8, GLB1, HRH1, IFNA17, IFNA7, IL3RA, IRF5, KAT2B, KLK3, MAP3K13, MGST3, MYH8, NFYC, NKD2, NMNAT1, NTF3, OR2AG1, OR2B6, OR2F1, OR52N1, OR5AK2, OR5B3, OR5D14, ORC2L, PDE6G, PLA2G5, PMM1, PRKCG, PSEN2, PTPRB, RELB, RRM1, TFDP1
Negative_6370	TK1, CACNA1E, CLOCK, CMAS, CRKL, DTX4, EREG, FGF1, GNG12, HCLS1, HRH2, IL23R, LAMC2, LCMT1, MLYCD, MRAS, OR8S1, SHC3, SSH2, STAM2
Negative_6371	C2, F2R, LEP, ACP5, ARRB1, CACNG6, CLTA, DIAPH3, GZMA, HAAO, HTR6, MAT2B, MYL9, OR6B2, PTPRJ, PVRL4, SH2D1B, THBS2, UGCGL1, UPP1, B4GALNT1
Negative_6372	CKM, ACSM1, AKT2, BCAT2, CD79B, COL11A1, CYP2B6, DEGS2, EP300, FPGS, GSTM1, HLA-C, MAT2B, NAMPT, OR10A6, OR1K1, PLEKHA8, POLR1B, PPP2R2C, STX1A, TACR1, TAS2R38, TAS2R7, ULK1, TNFSF13B
Negative_6373	GNE, ACSS2, ADRA1A, ALAS2, BPNT1, CALML3, CLTCL1, CSDA, CSNK1G3, CXC L2, CXCR5, DVL1, ENO1, ERBB3, ERO1L, GAD2, GNA13, IDH3G, ISYNA1, JAM2, MAP3K1, MAP4K2, NAGS, NAT1, OPLAH, P2RX1, PIGO, PMM2, SCLY, SEMA4D, UCK1, VDAC2, XCL1
Negative_6374	TNN, AKR1C3, ALDH6A1, ALOX12B, APRT, ATP50, CCL2, CLDN9, CYP1B1, ETS1, FZD9, GGCX, GMPPB, HLCS, ITGB2, JAK1, MARS2, NUDT2, OR1K1, OR2T1, OR4K2, P2RX3, PDE1B, PDE3B, PRKAA1, PRKCB, PRKCI, PSME1, PVRL3, RPN1, RPS6, SARS, SFRP2, SOS1, SSH3, UNC5D, YWHAZ, TNFRSF10B
Negative_6375	IL9, ACYP2, DGKQ, EDNRA, NMNAT2, OR10V1, OR4B1, OR51L1
Negative_6376	C5, GP9, TK1, ACPT, ATP13A2, B4GALT3, BAAT, BMP6, CACNG3, CACNG8, CD22, CDH2, CRKL, CSDA, CSNK1G2, CYP17A1, CYSLTR2, E2F4, GLUL, HCCS, HLA-DRA, IL6R, KITLG, LAMC1, LCMT1, MAGI1, MAP2K4, MPDZ, NCF2, NODAL, OR2AG1, OR51I1, OR5B3, OR8D2, PIGP, PLA2G10, PSME1, RALA, RFX5, SETD8, SMARCA2, STX6, TAS2R14, VEGFC
Negative_6377	ASL, ACAD9, AK3L1, AKR1B10, CACNB3, GGT6, GNPDA1, HADH, HAGHL, IL22, IRS2, ITGB1, MYLK, NEUROG3, NPR2, OR7C1, PFKFB2, PIK3C2A, PNPT1, PTA FR, PTPMT1, SHMT1, TNFRSF4, TNFRSF10D
Negative_6378	DLD, F10, IL5, MPZ, MVD, TEC, AKT2, B3GAT1, BDKRB2, CCNB3, CLDN14, CLDN5, DEGS1, DGKD, FGFR3, FPGT, GNA14, GNPDA1, HDAC2, HES1, IL1RAP, IRAK3, MAP3K8, MKNK1, NAGK, NRXN2, OR1A1, OR1L1, OR2T8, OR51F1, OR6N2, PDXP, PER2, PIK3R4, PIPOX, PLCB1, PPP2R5D, PRKCD, SH2D1A, SMAD4, TAP1, TOMM40L, TUBB2C, TUBB6, UCK2, VKORC1, YWHAQ, ATP6V1B1, EIF4EBP1
Negative_6379	HDC, HK2, CACNG6, CCL16, CCR8, CDC14A, CKS1B, CLDN8, CPS1, DFFB, ESAM, FDFT1, G6PD, GRIA1, GUCY1B3, HBEGF, LDHC, NADK, OXSM, RFXANK, XYLT2, ZFYVE9
Negative_6380	SRF, CALML5, CFL1, DFFB, GART, MAPK10, OR10S1, OR51Q1, OR8A1, PRSS1, SSH1
Negative_6381	CSK, DBI, DCN, HGD, ACYP1, AKR1C2, ALAS2, ARHGEF7, B4GALT2, CSDA, CYP2C19, DBF4, DGAT2L4, EDN1, GMPR2, GNAS, GNAT3, GPD1, GSTM1, IL1R1, ITGAE, MYH1, NEU4, NRXN3, OR4F17, PARD3, PCYT1A, PLCZ1, PLOD2, POLE3, PPAP2A, PRKCZ, PYCRL, RASGRP3, RHOQ, RRAS2, SEMA4C, SMPD4, STX12, VKORC1, VTI1A, WNT5B, ZAP70

Negative_6382	C2, F9, IL2, LCK, SFN, SRF, TNF, UBC, ARG1, ATP2A1, C1GALT1, CD79A, CDH15, DNMT1, FUT1, GALNT14, GGBT1, GLYCTK, GNA14, KIR3DL2, MTMR1, OR2B11, OR2T33, OR4A15, OR4K17, OR5B3, ORC1L, PFAS, PFKFB1, POLR2H, POLR3D, PPP1CA, RAP1A, RELA, SPHK2, SRD5A2, TGFBR2, TIAM2, TNFSF18, USE1, ATP6V1G2, MAP3K7IP1, MAPK8IP1
Negative_6383	CKM, ALDH1L1, ARPC5, BPNT1, CAMK2G, CANT1, CLDN6, CYP11A1, DHRS4L2, GANC, GPD1, GUCY1A3, HLA-DMA, INHBC, INPP4B, ITGA2B, KIR2DS5, MAT1A, NCAM1, OR10J5, PANK2, PIAS3, PORCN, TACR1, TRAF6, VNN1, ARHGEF12, ATP6VOE1, MAPKAPK2
Negative_6384	AR, CSK, ACP6, ARSD, ATP5L, CDKN2B, DHCR7, EPHB6, HSD17B4, IFNGR2, JAK2, MPDZ, MYL5, NTRK1, OR2T1, PRDX6, PTK2, TIAM1, TICAM2
Negative_6385	LLGL2, RHOD, ARHGEF12
Negative_6386	DDO, ADSSL1, AGPAT1, AGPAT2, ATP5D, ATP6V0C, BUB3, CCNE1, CCR5, CDIPT, CREB5, DAPK2, DHDH, ENTPD5, FGFR2, GATM, ICAM3, IL22, IL28A, ITGA3, LALBA, LAMB3, LCAT, LIPA, LMO7, MAFA, MYLK2, OR10G9, OR2B11, OR6C6, OR9Q2, PARD3, PDE7A, PDE8B, PIP5K3, PLA2G2D, PPP3CA, PPT1, RUVBL1, SMAD4, SMARCA2, SMPD4, TRAF2
Negative_6387	DHH, ACOT11, ALOX15B, ARRB2, B3GALT5, C4BPA, CD19, CDS1, CHAD, CNTN2, COL6A1, DHODH, FUT1, GNAI2, GNAT3, HLA-C, IL20, MAD2L1, MTMR1, NNMT, OR10H2, OR56B4, OXCT1, OXCT2, PHKB, PIP5K1C, RDH16, ROCK2, RPS6KA6, TUBA3E, TNFRSF18
Negative_6388	C6, CD2, TK2, ACTB, ACTN4, ADCY10, AOX1, CER1, CLCF1, COX10, CPT1A, CTF1, CYFIP2, DGAT1, DLL1, E2F4, EPB41L1, FADD, FGF5, FGFR2, GNAO1, HLA-DMA, IL20RB, ITGAD, MAP2K6, MYH8, MYLK, NKX2-2, OR1N2, OR2A14, OR2G6, OR51G2, OR6N1, PARVA, PDE7B, PON3, PRKACG, PTPN5, SC4MOL, SDHB, SIGLEC1, STX5, TAP1, TGFB3, VAV1, VDAC3, WNT6, YWHAQ
Negative_6389	LRRC4C, NGEF, NT5C3, OR14J1, PIP5K1C, SFRP4, STK11
Negative_6390	F8, LCK, ARHGEF6, ATF4, B4GALT1, C4BPA, CXXC4, DHCR7, FDPS, FLT1, GBGT1, HRH1, IL11RA, ITGA9, ITGB6, LEFTY2, LYPLA1, MAP3K12, MCCC1, OR1N1, OR56B4, OR8D2, PANK4, PDK1, PIP4K2A, PLCB4, PPP1R3D, SFRP1, SGMS1, SKP2, ST3GAL5, VARS, MAPK8IP2
Negative_6391	TXK, ASS1, ATP5G2, CAV1, CHPT1, CYP2A13, DCTN1, ENTPD6, FGF19, GAB1, GCNT3, GRPR, MAD1L1, MTAP, NFX1, OR2A25, PLOD2, SDC4, SHMT1, TAS2R8, TGFBR2, ST6GALNAC1
Negative_6392	CRH, ALG12, ELK1, GOT1, NAT6, OR8S1, ORC1L, ORC3L, PDE9A, PYGB, SQLE, UGT2B17, VANGL1, VNN1, ATP6V1G1
Negative_6393	OSM, ARSD, CD59, CPT2, CYP11B1, DDX55, DHRS4, DIAPH1, EARS2, EFNA1, EGLN3, EPHB6, FLAD1, FRAP1, FTH1, GANAB, GCDH, GNRHR, HAAO, MITF, NLGN3, OR1E2, OR4A15, OR4C11, OR5D13, PLK1, PLTP, PPA1, PRKCE, SLIT1, TIRAP, TNFSF11, TPM3, PLA2G12A
Negative_6394	ADC, BCR, C2, CD6, CDA, ACSL3, ALDH5A1, CADM1, CCL23, CLDN3, CLDN8, CYP2D6, DDX18, DUSP3, DUSP5, FGFR2, GCNT4, INADL, INPP5A, KIR2DS5, NOTCH1, NT5C1B, NTRK2, OR10H4, OR2T2, OR4B1, OR5B12, PAK2, PLOD2, PNPLA3, POLR1B, POLR2A, POLR2J, PPP2R5E, PRPH, RASSF5, SSH3, TAS2R1, TLR9, TP73, TYK2, UGCG, VNN1, WARS
Negative_6395	CES7, DDX41, LDHB, LRDD, MAPK14, NKD1, OR13C5, OR2A4, OR2L2, OR8S1, PHKG2, SFRP4, UCP1, MAPKAPK2
Negative_6396	CAT, CFD, IL2, INS, VTN, XDH, AADAT, ADH1A, C1QA, CD46, CDC25B, CDC6, CSF3, CXCL9, EPHA7, EPRS, HSPB1, KLKB1, LLGL2, MAGI1, MGAT5B, PDE2A, PLA2G6, PRKAG2, PTGS2, RPE65, YWHAZ
Negative_6397	BTK, IL6, TPO, ACP6, B3GALT4, C4BPB, CCNG1, CD40, CDO1, CHST12, COL4A2, CREB1, DHCR7, EI24, GUCA1A, IQGAP3, IRAK4, ONECUT1, OR13D1, OR4N2, PIP5K1B, RALB, SETDB1, EIF4EBP1, PPP1R12A

Negative_6398	NPY, PLG, WAS, APBB1, ARSE, B3GALT1, BRAF, C1QA, CAV1, CBLB, CCNB1, CHD8, CHIT1, CNGA4, COL4A4, CXCL16, DARS, DFFB, EFNA5, ENO2, ENPP2, ENTPD6, ENTPD7, FGFR2, GCNT2, GLYCTK, IDH2, ITGB4, ITPA, KNG1, LCAT, NEFL, NOD1, OLAH, OR11A1, OR11G2, OR1E2, OR51G1, PAX6, PLK1, POMC, SOAT2, TAS1R2, TUBA8, UBA1, VASP, PRICKLE2, TNFRSF14
Negative_6399	ANAPC11, DFFA, FGF20, GUCY2F, KIR3DL2, OR52B6, SEMA4C, SLC25A5, TICAM2, ATP6V0D2
Negative_6400	ACSL4, ACSM5, ADH6, CCKAR, CCL16, CFL1, DGAT2, EHMT1, ELK4, EXTL2, GNG13, GOT1, GSTA3, GUSB, GYS2, IFNK, IL20RB, ITGA5, MAPK8, MCM6, NFYC, OR4D6, OR5K1, PDE4D, PIK3C2A, PMAIP1, PRKAR1B, PYCRL, RELA, RFWD2, RPSA, RXRB, SKIV2L2, SPHK2, TGFBR1, TRHR, TUBB3, TUBB4, WBSR22, TNFRSF13B
Negative_6401	ADO, FAH, SFN, ACAD9, ALCAM, ATP2A2, CDC27, CDC7, CYP2S1, DHFR, E2F1, GALNTL4, GNA11, ICAM2, INMT, MCCC1, OR14I1, OR5D13, OR8I2, PLA2G5, PLCB3, PPP2R2D, PVRL2, RAC1, SCP2, TAS2R41, UNC5C, YWHAZ
Negative_6402	ABL2, ACP2, DUSP14, HMOX1, LAMC2, NCR2, OR4A15, OR4C6, PIGN, ATP6V1B2, TNFSF13B
Negative_6403	MIF, DOLPP1, OR10J1, OSMR, PRSS1
Negative_6404	CKM, ACAA1, ACTN4, ALG12, APC2, ARPC3, BCMO1, CCL26, COL4A2, COL4A4, COX10, CREB3, CRLS1, EFNA1, G6PC2, GALNT1, GCNT4, GDE1, HIBCH, HNF1B, IL19, INPP5B, NFAT5, OR10A7, OR4F5, OR6F1, OR9I1, PERP, PIGP, PIM1, PON2, PPP2R5C, PRKAG3, PROC, PTGS1, RHOQ, ROB01, SEMA3C, SETD8, ULK3
Negative_6405	GSS, HAL, NOG, TNF, ADCY9, AHCYL2, AMD1, BMP2, CACNA1S, CD28, CHRM3, COASY, CREB3L4, DPM2, ENPP2, ERO1L, GCLM, GGT1, GPAA1, GUCY1A3, HADHB, ICOS, ITGAX, MAP2K3, MYLK2, NOS3, NPR1, NRG1, OR2D2, OR2M7, OR2T11, OR4D1, PPOX, PPP3CB, PTGIS, SEMA4D, STAM2, SV2A, TBXAS1, UPP1, ATP6V1C1, B4GALNT1, CSGALNACT1
Negative_6406	ALDOC, ATP5E, CASK, CCR4, COL4A1, E2F3, GPD2, POLR3A, PTPN7, RFWD2, TGDS, UNC5C, YWHAZ, HSP90AB1
Negative_6407	GK, CLDN16, CSNK2A2, HARS2, ITGB4, OR1E1, OR51S1, PDCD1, PDE5A, PPP1CC, PROS1, RPN1, SEMA3D, PRICKLE2
Negative_6408	GNS, LEP, MOS, TH, ADCY9, ALDH2, ARHGEF1, CACNA1D, CACNA1I, CACNG4, CD36, CD8B, CLDN2, CLDN20, CRLS1, CYP2A6, ENAH, FASLG, GP1BA, GPLD1, HEX, MAT2B, OCLN, OR10J5, OR5R1, OR8J3, PLAU, POLR3B, PPP1CC, PVRL2, SMPD2, UPP1, VAMP3, TNFRSF18
Negative_6409	GDA, AADAC, AANAT, ABAT, ACLY, ACO2, AXIN2, CDC7, CDKN1A, CNTF, CRB3, CYFIP1, DGKQ, DTX3, EPHX2, FOXO3, FUT3, GOT2, GPX5, IDUA, IL9R, MAP3K3, MTHFD1L, MYH14, NCR1, OR11G2, OR4C16, OR51F2, OR51S1, OR52M1, PDE11A, PLA2G2A, PRKCA, PTPN6, SC4MOL, SETDB1, SLC27A1, SMPD2, SPTAN1, STK36, STX18, TRMT11, ULBP1, ULK3, VTI1B, WHSC1, ATP6V1G1
Negative_6410	DAO, ACTN2, AKT3, ALOX12, CAMKK1, CDK4, CYP3A5, DAPK2, DDX18, DHRS3, FGF3, FSHB, GNAI1, ITGB3, JAG1, KIR2DL3, LHCGR, OR4K14, OR6C1, P4HA2, PAFAH2, PIK3C2A, PTK2B, SNAP23, STX16, UGT2B4, ATP6V1G3
Negative_6411	BDH1, CREBBP, CYP4A22, DGAT1, EDAR, EGLN1, ELK1, MYH2, NTSR1, OR51Q1, POLD2, RERE, RGS3, SULT1E1, SERPINE1
Negative_6412	RB1, BUB1B, C1QB, C3AR1, CAMK4, CCND2, CD44, DNMT3A, EIF4E, EPHX1, GALC, GPD2, MDH2, MTMR1, NT5M, OGDHL, OR10X1, OR2T34, PLEKHA8, PRPS1, TAS2R10, TLR9
Negative_6413	NLK, PLN, SRM, AGPAT2, AGPAT4, BCL2, CACNB4, CFTR, DDX50, DFFA, EXT1, GRLF1, HLA-DOA, IKBKB, NR4A1, OR1L4, OR2B2, PI4KB, PLOD1, SETD1B, TGFB2



Negative_6414	FER, IVD, PC, RDX, ACO2, AGMAT, CAMK2A, CCL28, CD36, CHPF, CTSL1, DTX4, ENTPD7, GAB1, GNG3, GPLD1, HIP1, HLA- DRA, IL13, ITGAX, NRG1, NTN1, OR5M3, OR6Q1, PTTG1, PVRL1, RBPJ, RRAS2, SAT1, SMAD3, ST3GAL5, STAT3, TAS2R48, TAS2R5, TUBA3E, UGT2B17, VKORC1, WNT1, ZAP70, TNFRSF17, TNFRSF6B
Negative_6415	PML, TPR, TXK, ALDOC, CADM3, CD8A, CHST11, CSNK1G2, CTPS, E2F2, FMO1, GFPT2, GNPDA1, GZMB, HSD3B7, KCNQ1, NFYB, OR5B21, PPP3CA, SETDB1, WNT7A, MAPK8IP1
Negative_6416	BLVRB, FARP2, GRM5, HSD11B1, HTR6, NEFL, NFATC2, OR13H1, PDGFA, PIK3R5, PTPRB, ROCK2, STK11, UNC5C, CSGALNACT2
Negative_6417	GRM5, NOTCH1, OR10P1, OR2T3, PAK7, PIK3R4, SDHA, TCIRG1, ATP6V1G1
Negative_6418	CD4, FN1, IL8, ACOX1, FASN, IQGAP1, NCOR2, PDE4A, PLXNA2, PRPH, SUV39H1, TNFRSF9, HLA-DQB1
Negative_6419	AUH, CREB3L2, IMPDH1, OR9I1, RBKS
Negative_6420	AGL, OR6N1, SEMA4D
Negative_6421	FYN, ATG7, CCL11, CDC26, CXCL5, GRIN2C, MAT2B, MGLL, MYH3, OR1A1, PDCD1, PPM1B, PTAFR, SKP1, SOX17, TUBB4, WNT2, WNT5B
Negative_6422	ADRA1A, COASY, DKK1, G6PC2, GNRHR, GOT1, HLA-DMA, IDI2, IL1R2, MAP3K3, MECR, PPP1CC, PRKCA, PYCRL, TUBB2A, ULBP1, VAMP1
Negative_6423	GP5, ITK, OTC, TNN, ACOX3, ADCY2, ATF2, ATP50, BDH1, CCNA1, CDC27, CDKN2D, CLCF1, CXCL16, GOT2, IGF1, IL12A, INADL, NPR2, NT5C1B, OCRL, OR13A1, OR5D14, OR8H1, OR8J1, PPP2R5E, PROC, PTDSS1, SGMS2, SIGLEC1, SMAD5, SMURF1, STK3, STK4, TCIRG1, TKTL1, TMLHE, TUBA1B, XCL2, ATP6VOE1, CSNK1A1L, PAFAH1B3
Negative_6424	ARPC3, CKMT2, DGKE, DPM1, EPHA8, FGD1, HYAL1, IL28A, IL28RA, NAE1, OR51A7, RASGRF2, SPRY2, TNFSF11, ARHGEF12, GABARAPL1, TNFRSF17
Negative_6425	FCGR3A, IFNGR1, INHBC, NFKB1B
Negative_6426	JUN, ME3, ANAPC10, CASP8, CYP26A1, DAPK1, GANC, IMPDH2, LAMB2, NCOA4, OR10Z1, PDPK1, PTDSS2, SETD2, SLC25A4, TNFRSF10D
Negative_6427	A2M, AARS2, ADCY3, ALDH1A2, ALDH7A1, ANAPC11, ATF4, B4GALT6, BIRC2, CACNB2, CDH5, CLDN9, CX3CR1, CXCL1, GCNT3, GNAQ, GRIN2C, HTR2A, IL22, ITPK1, NEFH, NRG4, OR10Z1, OR11H6, OR5A1, OR5T3, PAK6, PLXNC1, PMVK, PTCH2, SULT1E1, TAS2R13, TLN1, UBE2K, WARS, WNT10A, WNT4
Negative_6428	ANAPC7, ATG7, DHCR7, HRH1, SULT1A4
Negative_6429	ABCC8, ADCY2, ATP2A1, AXIN2, BDH1, BMP2, CACNA1D, CDC23, CFL2, CLDN19, CREB5, CXCL11, EARS2, EIF4E2, FGF3, FGFR3, FTH1, GALNTL1, GALNTL2, GMPS, HAP1, HLA-G, HSD17B3, IL2RG, LAMA3, MAPK8, NUDT9, OR4F6, OR52I1, OR5R1, PDGFC, PRKAG2, RASA2, RRAS, RRM1, SARS, SMPD1, SMPD4, TNXB, TUBAL3, TUBB2C, WNT11, YWHAE
Negative_6430	AMH, XDH, ADRA1D, ALDH1B1, ARPC2, CPS1, EARS2, EPHA6, FARP2, FTMT, GG T6, HYAL2, OR1N2, OR2A5, OR2H2, OR2V2, POLR1E, SMC1B, VAMP1, YWHAG
Negative_6431	DDO, FES, MPZ, ABP1, ACVR2B, ADCY9, AGRN, AK3L1, ATP13A2, CD40, CD82, CYP1A1, DLL3, DUSP1, FGD3, FGF14, GARS, GNA14, GNPDA1, IL29, INPP5A, ITGA9, NLGN1, NTRK1, OR10A2, OR2F2, OR5AK2, OR8K1, PDHA2, PRKAR2B, PRODH, PTCH1, ROBO3, SEMA3B, STX7, SYNJ1, TGFB3, UBE2L6, HLA-DQB1
Negative_6432	AGL, GK, AKR1D1, BMP4, CD226, FUT7, ITGA8, KLRC1, OR51F2, PSAT1, SMURF1
Negative_6433	RB1, ALAS1, CAPN2, CDKN2D, CLTA, CXCR5, CYCS, DGAT1, EDA2R, EPB41L1, GSTZ1, IRF9, LIAS, MEF2C, NFKBIE, OR51E1, OR8D2, PLA2G5, TCIRG1, TUBA1C, CSGALNACT2, TNFRSF12A

Negative_6434	A2M, C8G, CFD, AASDH, ACO2, ALG11, ALOX12, AQP7, C9orf95, CD22, CDC14A, CDC6, CD01, CDS2, CTPS, CTSB, DUSP6, GNAI3, GSTA2, GSTM3, HCCS, IL28A, JAM2, KIR2DL1, LGLL2, MARS, NCK2, NFE2L2, NTRK1, OR10C1, OR1L8, OR4C13, OR4S1, OR7D2, OR8D2, OR8K3, PANK4, PLA1A, POLE, POLR1B, PPP2CA, PRKAB1, SEMA3B, STX6, TAS2R4, TCF7, WASF1, PLA2G12A
Negative_6435	CSK, DHH, FAH, JUN, MAG, C1GALT1, CACNG5, CALML5, CLDN22, CSNK1G1, CTN, CXCL5, DOLPP1, ECHS1, ECSIT, ENTPD3, FBXW11, FZD2, HRAS, HSD3B2, ICAM3, IL17RA, IL18R1, ITPK1, MCCC1, MCEE, MGAT1, MTAP, NCF2, NFATC2, NPR1, OR4X1, PIGP, PRKCB, PRKCD, PTPRJ, PYCRL, RALGDS, RPRM, SDC3, SEMA7A, TAS2R60, TRAF4, UROC1, VAV1, WNT10A, WNT8B
Negative_6436	CKB, CSK, AACS, AGPAT6, ALG9, B4GALT5, CHPT1, CMPK1, COL4A6, DKK2, EI24, FGF5, HADHA, HBEGF, MAGI1, MAN1C1, MYH6, OR4K5, PAK6, PAX6, RPS6KA3, RUNX1T1, SOCS5, SRGAP3, SV2C, TNFSF10, WWP2
Negative_6437	AK3, C2, C9, ME1, ATP6V1H, BTRC, CD74, CSF2RB, DHRS3, EDNRA, ETNK2, FGF20, GNPDA1, HCCS, HPSE, HYAL2, IL23A, INHBE, IRF7, LIPF, MAPK10, MTMR2, NTF4, OR10H1, OR1J4, OR2F2, OR2G6, OR51G2, OR52E8, OR8I2, OR9G1, PARS2, PARVG, PIK3R2, PLA2G6, POLE3, PPP3CC, PRKCH, RASA2, SOCS2, TLR4, TNFSF4, TRDMT1, WNT3, XCL1, SUV420H2
Negative_6438	TPR, ACHE, CD46, CHSY1, COL2A1, CTNNA1, DHCR7, ENO1, FM01, GALNT3, GLI3, GSTP1, HMGCR, IARS, IDH3A, IFNW1, IL21R, LGMN, MAN1A1, OR2A25, OR2L2, OR2M7, OR2V2, OR5T1, PARS2, PRIM2, PRKAA2, PRLR, PROC, PTPRR, SEMA3D, SLC33A1, SORD, ST3GAL5, SUCLA2, SUCLG1
Negative_6439	FAH, MAG, DHFR, ETNK2
Negative_6440	CEL, TEC, AMDHD1, BACE2, BET1, CHSY3, CREB3L1, CRLF2, CRLS1, CYP1A2, ECSIT, ELK4, FGF23, FGF4, FZD5, GALNTL4, GLDC, GRM5, LILRB3, MAP4K2, NOS3, OR13C4, P2RX1, PARD6A, PHKG1, SIPA1, SLIT2, TAS2R5, UGDH, WBSCR17, PNLIPRP2
Negative_6441	AK7, BCR, FOS, MTR, ALAS1, ARHGEF1, ATP5G3, BMP8A, BMPR1B, CD55, CLDN19, COL1A1, COL5A1, CYP2J2, DGKD, DIAPH3, DUSP6, EFN1, ENTPD4, EP300, FGF11, FTCD, GCNT1, GPA1, HSD11B2, ITPA, MAN2A1, OR1I1, OR6C75, PAK3, PIP4K2B, POLD2, PTAFR, RBPJ, TIAM2, PPP1R12A
Negative_6442	TXK, ACOT12, ACSM2A, BMP5, CCR2, CLDN4, CYCS, CYP2E1, DAD1, DHRS3, HMGCS1, IL2RG, KARS, OLR1, OR52K2, OR5M9, OR8A1, PFN4, PMM2, PVRL3, SH2D1B, SMURF1, TJP2, UGT2A1, WNT1
Negative_6443	DBH, HPD, IHH, VCL, ACTG1, ATP5E, B3GALT2, CES2, CNTNAP2, CREB3L3, CYP4F2, DDOST, EPHA2, FOXO1, GAD2, GALNT1, GMPS, HADH, HRH1, INPP5E, ITGA3, LDHB, MAOA, MGAM, NT5M, OR1L1, OR2B11, OR4A5, OR4X2, OR51A2, OR8A1, PFAS, PGM3, PLCB1, PON1, PRSS1, PTAFR, PTGER1, PTPN7, PVRL1, SCP2, SEMA3F, SIPA1, SOAT1, STAM, STMN1, TGFBR1, TOLLIP, ATP6V0D2
Negative_6444	CGN, F9, MPI, ATP5C1, AVPR1A, CALML3, CCL1, CTNND1, DERA, FLOT2, FUT9, ICAM1, IL29, LIPC, MAP2K5, MPST, MYH14, NAT2, NCKAP1, NRCAM, OR1J1, OR2T3, OR3A1, OR4K1, OR6B3, PI4KB, PLA2G4A, ST3GAL2, TBXA2R, TOMM40, TOMM40L, AASDHPPT
Negative_6445	CGA, SDS, ACSL5, ACSL6, ACTG1, B3GALT4, BRAF, CHRM1, EPHA5, ERBB3, FCER1G, FZD1, GPT2, GSK3B, IL1B, MAT2B, NFKB1, OR4C13, OR51B6, OXCT1, PLD1, ROCK2, SMPD1, VAMP2, VDAC1, WBSCR22, XYLB
Negative_6446	VTN, ZYX, ACSM3, ADCY9, AGPAT2, ALDH9A1, B3GAT3, CHRM1, GFPT2, HAAO, IL18R1, KIR2DL2, OR4C15, OR5AC2, OR5K2, OR5T1, RALGDS, SOAT1, TUBA1A, WNT6, YWHAZ, ST6GALNAC3
Negative_6447	DBI, FST, IL2, IL6, ME2, ABL1, CACNB2, COL1A2, CSAD, DDX51, DTX2, FCER1G, FGF10, FLT4, INPP5A, L1CAM, LAMB2, LDHAL6B, MAD1L1, MAP2K4, MAP3K4, MAPK1, NT5E, OR2T4, OR4K1, OR5F1, OR7C2, PEMT, PFN1, POLD1, PPAP2B, PPAT, PRKG1, RARA, RBL2, SHC4, SMAD7, SOD1, ST3GAL5, SULT2B1, TDO2, TRADD, UAP1, UNC5C, ZNRD1, PAFAH1B1, SUV420H1

Negative_6448	BAX, MOS, PGF, PLN, AGRN, ARNTL, CCL11, CDKN1A, GRIN2D, GSTA5, HMOX2, HPSE, KARS, LAMC3, MTFMT, MYL7, NCK2, NKD2, OR10A4, OR4C13, QPRT, SAR DH, SEMA7A, SPCS3, SPTLC2, SUCLG1, TRAF6, WNT1, TNFRSF1A
Negative_6449	ADK, ALCAM, B4GALT1, BLNK, CACNG7, CKMT2, CSNK2A2, DHDH, FMO4, FZR1, GCH1, GRB2, HHEX, IL13RA1, LAP3, LILRB3, LLGL2, MPZL1, OR2L2, OR7A5, PER1, PFAS, PFKFB2, PGS1, PIK3C2B, PRPH2, RERE, RPS6, SHC1, SLC27A1, SMAD6, SPHK2, ST8SIA1, SUV39H1, EIF4EBP1, MAPKAPK3, TNFRSF10B
Negative_6450	DDC, HGF, ADCY9, ADORA2A, AFMID, ALS2, ASNS, B3GALT6, B3GAT1, BUB1B, CLCA4, CYP11A1, CYP17A1, FARS2, GLYCTK, HTR6, LAMC3, MADCAM1, MAP2K 6, OR5H6, PIP5K1A, PLOD3, PTCRA, PTGDS, RALB, TP53I3, WEE1
Negative_6451	GBA, IL8, ACSS3, ATG12, B4GALT7, BMPR1B, CCL27, CCNH, CLTCL1, CTSB, D DOST, DEGS2, G6PD, GMPPA, IL13RA2, ITGAL, MTMR2, OR2A2, OR51I2, OR52 B4, OR8B4, PDGFRB, PIGQ, TAS2R16, XCL1
Negative_6452	AMH, NF1, SRF, TFG, UBB, AMY2B, CDC23, COL4A2, DNMT3L, DRD2, GOSR2, IC AM1, IL3RA, LDHAL6B, MCEE, MYLK, NODAL, OR10A2, OR2T33, OR2T5, OR4F5 , OR4M1, PAK6, PDE6H, PIK3CG, PPID, PTK2, PTPRR, TRPM5, ZFYVE9, HLA- DRB3
Negative_6453	F2R, AADAT, ALDH5A1, C9orf95, COMP, CSNK2B, CYP2A13, CYP3A7, DGKZ, D USP14, EFNA4, EREG, GUCA1C, IDH3G, IL17RB, INPP5B, IPMK, LIMK2, MAP3 K1, MECR, NEFH, NEU1, NEUROD1, OR51G1, PIP4K2B, PPP1R3A, PPP2R1B, PT CRA, RAD51, RASGRP1, SOAT2, STX2, SULT2B1, TRIP10, ULK3, VAMP4
Negative_6454	BCR, DLD, SP1, ACTG1, ACYP2, ALDOC, ATG7, CCL13, CLTA, CNTN1, CPT1B, E PHA2, EXOC7, FOXA2, GALE, GUCA1B, GUK1, HCLS1, HMGCL, HSD3B1, HSP90B 1, IL19, KIR3DL3, MAP2K2, NKX2- 2, OR10A3, OR10G7, OR13C2, OR2F2, OR51E1, OR6C3, OR8J3, PDE1C, POLD1 , PRKAA2, PRPH2, RAC2, RFWD2, RHOD, RPSA, RRM1, TUBA1C, TUBB4Q, WASF3
Negative_6455	FN1, MVD, ABP1, ACACB, APPL1, BACE1, BDH2, CDC26, DGKB, EDAR, FUT4, GA LNT13, GRIA2, HDAC1, IL21, IRAK1, LHCGR, LRAT, NKD1, NKX3- 1, NRG1, NSD1, NUDT5, OR4C6, OR4P4, OR52B4, OR8B12, PAFAH2, PIK3R3, P PCDC, SARDH, SEMA4D, TIRAP, ULBP3, CACNA2D4
Negative_6456	AUH, CD2, LHB, LIF, UBB, ALDH1A2, ATP5G1, ATP5J2, B3GALT2, B3GNT5, CA DM1, CAMK2G, CDC14A, COL4A1, EXT1, GFAP, GIT1, GPAA1, GPD2, GRAP2, HI BCH, IFNA8, IL23R, LDHD, MEF2C, ODC1, OR5AR1, PHKB, PPP5C, PRKAB2, PS ME3, RBPJL, RFX5, SOCS5, SRGAP3, SUFU, TAS2R14, YARS
Negative_6457	ACAA1, ADH4, CDH15, CLDN19, DDX18, FECH, GALNT12, GNA14, IGF1, IRF3, NAT5, NCAM2, NPR1, OR2T3, OR2T33, OR4K14, PAPSS1, POLR2H, RAP1B, SOA T1, UPP1
Negative_6458	CKB, FES, ME3, NOG, ADORA2B, ALDH1A2, APAF1, ATG12, B3GAT1, CCR4, CSN K2B, CYP4F3, CYP8B1, DFFA, DHRS4, FGD1, FRAT1, GABARAP, GALT, GNA15, GRM1, HPRT1, ICOS, IFNAR1, INPP5E, KIR2DL2, LTBP1, MAPK14, MYH3, NAD SYN1, NAT1, NAT6, NCAM1, NRG2, OR10H1, OR2A42, OR51B6, PAPSS2, PARS2 , PIP5K3, PITX2, PRKCD, PVRL1, TAS2R14, THBS3, TYK2, TNFRSF10C
Negative_6459	C9, FH, IVD, OTC, SPN, WAS, ABI2, ATP4B, C3AR1, CCL20, CD19, CLDN2, CPT 1C, CYP26B1, DGKD, DUSP4, GLYCTK, GSTZ1, HEXA, IBSF, IRAK4, IRF9, LIP T1, NFYB, OR10A5, OR13C8, OR2B2, OR2T4, OR5B17, OR5D14, ORC6L, PDE10 A, PDE3A, PEMT, PIAS3, PIK3C2A, PLA1A, PRDX6, RAPGEF2, ROBO2, SMAD5, TRMT11, VEGFA, ATP6VOA4, CACNA2D4, KIR2DL5A
Negative_6460	C1S, CFD, F10, OGT, TFG, ABL1, ACAA1, ACOX2, ATG12, BDNF, BET1, CCKAR, CDKN1A, COL5A3, CXCL1, EI24, GLI2, GNA11, GNRH2, GSTM4, GYS2, HARS, H TR2B, INHBA, IQGAP1, MGAT3, MTAP, OR2A5, OR52N5, OR7D2, OR8H2, PIK3C A, PPA1, PPOX, PPP2CA, TUBB2A
Negative_6461	NF1, TK2, CASP10, CLDN17, CNTF, CSF3R, GNA01

Negative_6462	GGH, ABLIM2, APAF1, ATP5D, B4GALT3, BET1, BIRC2, C1QC, CAMK2B, COL1A1, CXCL16, GNA14, GNB3, GNRH1, MAP2K2, OCLN, OR2Y1, PTCH1, ST3GAL1, SUV39H2, TNFSF9
Negative_6463	ATM, HPD, PTS, AADAC, ACTN1, ADRB1, AKT2, ANAPC1, BDKRB2, CDH1, CLCA4, CTPS2, CXCR6, DERL1, EPHA7, ESPL1, GLDC, GPAA1, GPX5, HIBCH, IRAK1, ITPKB, JUND, MAD2L2, MRAS, MYH4, NCOA4, NEFM, NEU1, NFKBIA, NKD1, OR1OV1, OR14I1, OR2A25, OR5AC2, OXTR, PAK2, PPP1R3A, PRPH2, RFNG, SEMA4F, STMN1, STX5, TBK1, ULK1
Negative_6464	MYC, NOG, ATN1, BAI1, BMPR1B, CD8A, CEBPA, CNGA3, CPT2, CYP27A1, DVL1, EDA2R, ENTPD4, ESAM, FBP1, GTSE1, GUCY1A3, GZMA, IL25, LAMC3, MAGI1, MAPK3, NME4, OR2H1, OR4A15, OR5T1, OR8B4, ORC1L, ORC5L, PIK3CA, POLR3A, RBL2, SPTLC2, TRAF3, B3GALNT1
Negative_6465	AK1, AGXT, ALG12, CCL15, CXCL1, GJA1, GSTM5, ITGA9, NFATC1, OR4D6, PRKAA2, SLIT2, TGFA, TRMT11, TUBA4A, ULBP2
Negative_6466	ADO, ALDOC, ANAPC11, ARHGEF1, BMP5, CCL20, CDKN1C, CHST11, CMPK2, CYP2A7, EDNRB, GAPDH, HBEGF, IL6R, ITGB8, MCM2, NR5A2, OR10G7, OR51B4, OR6C6, PDE1A, PDE2A, PRPH, PSME1, SHMT2, TFDP1, TPH2, USE1, VTI1A
Negative_6467	F2R, CLDN8, OR3A3, PER3, PPP2R1A, RPS6KA6, SDC2, STX6, HLA-DRB5
Negative_6468	BCAR1, BCL10, CHRM5, GALNT12, GNRH2, OR10G7, TIAM1
Negative_6469	FGB, AANAT, ACOT12, CCL28, CYP2A7, ENPP2, ITGAM, NRG1, OR10K1, OR4P4, PLCE1, PPP2R1A
Negative_6470	AK2, GK, LPO, MUT, TPR, VCL, ABI2, ACY3, ATP5J2, ATP5O, BCL2, BUB1, CACNA1F, CANT1, CBLB, CBR1, CD19, DDX23, DHRS3, DOT1L, FLT4, GLI1, GNMT, HES1, HMGS1, HTR2C, IDH1, IPMK, JAK3, JAM2, KNG1, NEFM, NEU3, NFATC2, OR1K1, OR2T1, OR5M3, OR5M9, PDE10A, PIGM, PLXNA2, SFRP5, TJP3, TOLLIP, TUBB2A, VEGFA
Negative_6471	AVPR1B, CASK, IL12RB2, NANP, OR1S1, POLR2G, POLR3D, PPP3CA
Negative_6472	BAD, GAA, ANAPC10, CCR1, CFTR, CPS1, DAPK2, DCTN1, DIAPH3, FABP3, GZMA, IDH3B, IL8RA, KIR3DL1, LDHAL6A, MCM5, NADSYN1, NCSTN, NT5C2, OR2T11, OR4C12, OR51E2, P2RX6, PIGQ, PPP1R3D, PRKAA1, PRLR, PTPN11, QPRT, SEMA3A, SPRED2, TKTL1, TYRP1, WNT9A, ST6GALNAC5, TNFRSF11A
Negative_6473	ADAM17, FGF17, GUCY2D, OR10A5, PPP1CB, RAB5A, TAS2R13
Negative_6474	BTC, DBH, PXN, AKR1C2, ALDH1A3, ALDH3A2, CD27, CD36, COMP, CYP2A13, CYP2C9, DNMT1, GALNT7, INPP4A, IRF5, IRS2, MAP3K11, MTHFR, MTHFS, MYH14, OR2AG1, OR4F17, OR51S1, OR5AR1, PAK4, PIK3C3, PLCD3, PLK1, PPM1B, PTPRF, SH3BP2, SMAD6, SMC1A, PAFAH1B3, SERPIND1
Negative_6475	C5, GCK, GHR, TK1, ALAD, ANAPC5, CACNA1H, CXCL16, CYP2E1, FRAT1, GNAI1, GRIA3, HHIP, ITGB3, NRG1, OR2AG2, OR4B1, OR6B3, OR6M1, PDE2A, PROS1, PRPS2, PTPMT1, RBPJ, SELE, TAS2R48, TCF7L1, ATP6V0A1, TNFRSF13B
Negative_6476	PML, ACP2, ADSS, ALAS1, CD247, CYP2D6, CYP3A7, DUSP3, GRB2, IDH3A, IDUA, ITGB5, OR11H6, OR13C2, OR14I1, OR5M3, OR8H1, PDGFRB, PER1, POLA2, PRKCA, PRKCD, RPSA, SRD5A1, TJP3, UBE2L6
Negative_6477	GCK, ADCY5, CAV1, CD19, DGKG, GNA13, GNAT3, IL13RA2, KAT2B, PSPH
Negative_6478	BTD, GHR, ID1, SFN, CTTN, CYFIP1, DPM3, GSTM4, HTR2C, OR2L13, SPRED1, TNXB, TYRP1, WNT2B, SLC25A31
Negative_6479	CFH, ACTA2, BET1, CARS2, CLDN8, CPS1, DHX58, FGF13, KIR2DL2, OR13C3, PARVG, POLR3A, SEMA4F, SMPD1, TJP3, TUBA8
Negative_6480	DLD, LSS, ALDH2, APH1A, CHD8, CLDN14, CYP2A7, CYP2U1, INPP5E, IPPK, LRAT, OR2B2, OR2T2, OR2Z1, OR4D11, OR51E2, OR5R1, PLCD4, PLD2, PNPLA3, TGFB1, TLN1, TPMT, YOD1, ATP6V0A1
Negative_6481	AK2, C4B, TNR, ADCY5, AKR1C1, ALG13, APC2, BIRC5, CASP10, CAV1, CD82, CMAS, COL5A2, DPYD, DUSP9, EPHA2, GCDH, HEMK1, KITLG, LPAR1, NLGN1, NUDT5, OR10Z1, OR7A10, PI4KB, PIK3R5, PPP1CA, PRDX6, RALB, SH2D1A, THBS2, TLR5, UBE2K, UNC5A, ATP6V1C1

Negative_6482	C3, F2R, RPE, UBB, ATP4B, CACNB4, CALML5, CDK6, DEGS2, ETNK1, GCNT4, HADHB, HEXA, IL20RA, IL4R, LTBR, NTRK2, OLR1, OR8U1, OSMR, PIGP, PNPT1, RETSAT, SEMA4A, SESN1, SPRED1, TNFRSF11B
Negative_6483	GCK, PGD, BACE2, CFL1, CHAD, CLDN2, COL6A2, CREB3, FGF5, FGFR4, GALNT13, HSD17B2, LDHAL6B, LDHC, MAP3K1, MYLK3, NANS, OR52E8, OR5B17, OR5B21, PARD6B, PIAS4, POLR2J, PPP2CA, PPP5C, RFW2, STX12, TSC2, VANGL1
Negative_6484	PLN, TK2, AGPAT4, AKR1C1, ALDH3A1, ALG10, ALG10B, ARNT2, B4GALT6, CCL4, CCL8, CTPS, CYFIP2, DAD1, DAXX, DHRS4L2, EFN1, FGF22, FMO4, FSHB, GANAB, GLB1, GPLD1, HAAO, ITGA10, MAPK12, MOV10L1, OR2A4, OR51B6, OR8K3, PDHA1, PISD, POLA2, PPP3R2, PRKACA, PRKAG3, PRKAR2B, RAPGEF1, RBX1, SARS2, SETD2, SKP2, SPTLC2, STK3, TAS2R38, TRPM5, HSD17B10
Negative_6485	CR2, ID3, ANAPC1, ASMT, CCR7, CDC25B, EDN1, EI24, GALNT12, GGT5, GNA11, GNG12, GPX5, GZMB, IFNA21, IL13RA2, ITGA1, OR8H3, PANK4, PIAS3, RPS6KB2, SPHK2, ATP6V1E1, MAP3K7IP2
Negative_6486	RFK, ACSL1, ACTB, ARG1, CADM3, CBR1, CD82, COL3A1, DKK1, DLL4, DTX4, IFNA10, ITGB2, OR2G2, PIGF, PIP5K1A, PRKAR1B, PRLR, PVRL4, TAS2R16, TRIP10, UGT2B10, MAPK8IP1
Negative_6487	AK2, CGA, DBI, MIF, ADH5, APOA2, CAMK2B, CAMK2G, CCL23, CISH, CLCA4, COASY, CSDA, CYP21A2, DGKE, DMGDH, FUT5, G6PC2, HAAO, HMGCL, IL15, INS, ITGA7, JAK3, KLRC3, MCM5, NR4A1, OR10A6, PIGV, POLR2F, PPP3CA, RPS6, TGFB2, TRMT11, VDAC1, WBSCR22, WWP2, ST6GALNAC6
Negative_6488	ABO, AMT, C3, CFH, ADCY8, ARPC1B, CDC6, DLL1, HSD17B3, IFNA7, IFNAR2, KCNQ1, OR10AG1, OR2T8, OR4K13, OR51T1, OR6C2, PIP5K1A, PRKY, RASGRF2, RASSF1, SGMS2, SKP2, STX2, TAS2R49, MAP3K7IP2
Negative_6489	F3, OGT, SRM, ALDH1A2, BDH2, CACNB1, CHPF, CYP26B1, DHODH, DKK2, ENO2, FCER1G, FGF14, FMO3, GBA3, GCDH, GYS2, H6PD, IFNA2, NRG3, OR2W1, P2RX7, PPP3R1, PTGFR, RPS6KB2, TBXA2R, TGFB1, TLR9, MAP3K7IP2, PRICKLE2
Negative_6490	AR, CSNK1A1, CYP3A43, DUSP5, GYS2, HAGHL, IFNA21, INPPL1, MYL5, OR2A42, OR2T34, PHOSPHO1
Negative_6491	CDC25A, COL4A6, CRHR1, EFN1, EPRS, LTBR, MCM2, PAK2, PER2, VAMP2
Negative_6492	MPZ, ADCY10, ADCY7, ALG12, ATP5J2, B3GALT2, CASP10, COL1A2, CXCL12, CYP26C1, CYP3A5, CYSLTR1, DDX52, DNMT1, DUSP1, EDAR, EXTL3, FCER1G, FGFR3, GFPT2, GSTO1, MAGI1, MCAT, NAGLU, NQO1, OR1L4, OR2M2, OR3A2, OR56A4, PAICS, PCCB, PPP1CA, PRKAR2A, PTPN1, SNAI1, TIAM2, TPH2, ULBP3
Negative_6493	IL2, KIT, WAS, ADORA2B, CDK2, CHST12, CNTF, CXCL16, CYCS, CYP3A4, DTX1, HMGCS2, MDM2, MYH15, NR4A1, NT5E, OR52R1, PMM2, PROC, PSENN1, SETDB1, VKORC1, KIR2DL5A
Negative_6494	ADO, EGF, TH, AADAT, AMDHD1, ATF4, CHIT1, EPB41L1, GCH1, HLA-DOA, ITGA3, JAK1, LEPR, MYH11, NME2, OR10V1, OR51L1, OR6Y1, PDE6H, PDK1, PIGL, PIGN, PLXNB1, PPARA, RPN1, SHC1
Negative_6495	ACSM2A, MAP2K3, NRCAM, OR2AE1
Negative_6496	GP9, HAL, MET, MVK, ABI2, ACYP2, APBB1, ARHGAP5, ATP6VOB, CACNG7, DAG1, DDX55, DUSP5, ERBB4, FDPS, FPGT, GALNT7, GGT5, GNPDA1, HPSE2, IL11RA, KIR2DL3, NAGK, NAT2, NMNAT3, OR10A6, OR2D3, OR4C15, OR51Q1, PHKB, POLE3, POLR2K, RAD51, RALA, SEMA4F, SESN3, SETDB1, TD02, TRHR, ULK2, UNC5C, PLA2G12A
Negative_6497	AMH, HGD, ALG10B, CDC2, OR52B6, PRKCD, TOMM40, TPH2, PHOSPHO1, ST6GALNAC5
Negative_6498	SHH, AGXT, GPX7, MADCAM1, MGLL, NSDHL, OR56A4, OR5H2, OR8D2, ORC6L, PLA2G5, PNPLA3, PPP3CB, PTK2
Negative_6499	CSNK2B, HSD17B2, IL25, POLR2B

Negative_6500	AR, CD4, CGA, F2R, HK1, SI, TPO, ALG11, ALG3, AQP7, ARHGEF4, ARPC3, ATP5H, B3GAT3, BDH1, C5AR1, COASY, GNPAT, GSTA4, HIP1, ITGA2, ITGAL, JAK2, JUND, NAGLU, NAT5, NSDHL, NUMB, OR4D6, OR52E8, OR52N4, PDHA1, PGAM1, PLCD4, PLXNB2, RELA, SDC1, SEMA4G, SPRED2, TRPC1, VAV2, WBSCR17, WNT1, XCR1, ATP6V1C2
Negative_6501	ILK, AGPAT1, ALDOA, ATP2A2, CANT1, CBLC, CCL24, CDKN1B, CNTFR, CRHR1, CXCL3, CYP3A7, CYP4F3, DVL3, ENO1, FTCD, FUT5, FZD1, GALM, GYS2, HPS E2, KLKB1, MAGI3, NFE2L2, NOD1, NSDHL, NTSR1, OR51A2, OR5L2, OR8K1, PHKA2, PMAIP1, PPAP2B, PPP2R5D, PTPMT1, ROBO2, SAT2, SETDB2, SIGLEC1, SOCS3, TIAM1, UROD, PAFAH1B1, SERPIND1
Negative_6502	AK1, ASL, C4B, HYI, IL9, BMP6, CCL13, CCL17, CDC14B, CER1, CHKB, CREB3L4, CRLS1, CTNND1, DAAM1, EDAR, G6PC2, GALNT14, JAK2, OR10A3, OR10X1, OR2K2, OR2T34, OR51A7, OR51B5, OR5AC2, OR5M3, PHKA1, PNMT, PPP2R2D, RENBP, SEMA3F, SPRED1, SRD5A2, TAS2R10, VAV1, WNT7B
Negative_6503	F7, ACOX3, IRF7, ITGA2, NUMBL, OR2B6, OR8H3, RDH12, STEAP3, TGFB1, UGT2B28
Negative_6504	IVD, ACYP2, CCL16, IL18RAP, PLA2G2A, SHMT2
Negative_6505	AACS, ACPT, DOT1L, DUSP14, EGFR, GLB1, GSTO2, IL28B, OR2C3, OR5B17, PFAH2, PCK1, PTGFR, RAPGEF4, SPRY2, TKTL2, TOMM40, XYLT1, ST6GALNAC5
Negative_6506	SI, ALPP, CXCL1, CYP8B1, DDX50, NRG1, PDIA4
Negative_6507	ID2, CALML6, CCNE2, CHEK2, CHKA, CLDN1, CREB3, CTNNA2, CXCL2, DGKG, DUSP4, FGF3, FLT1, GMPR2, GPD1L, GPD2, GSTA5, GUCA1A, HLA-C, HSPB1, IKBKE, IL28A, INPP4A, OR10G4, OR13C5, OR1J2, OR1L1, OR2T34, OR52E2, OR7A10, RFX5, SARS, SAT1, SOCS4, SOS1, TAS1R2, TAS2R13, TLR3, TP53, TUBB6, TXNDC12, ATP6V0A1, TNFRSF12A
Negative_6508	NGF, SRC, ACSS2, AKR1C1, CCL3, CD79B, DAXX, DPYD, EDAR, GSTA2, HCCS, HIF1A, MYH8, OR2A25, OR2H2, OR4K1, PAICS, SAT1, SEMA3E, SMPD2, SOCS2, SOS2, SV2B
Negative_6509	HK1, PRL, ACSM1, ARSE, CACNA1G, CD40, CHAD, CHAT, COX10, CPOX, CTSB, DX56, DUSP16, FUT9, GSTM2, GSTM5, HMBS, IL20RA, KIR3DL1, LDHAL6B, MAP4K4, OR13J1, OR2A14, OR52I2, PMVK, PPARD, PRKAR1A, SORBS1, THBD, TIAM1, TUBB2B, ULBP1, ULBP3, PNLIPRP1
Negative_6510	AASDH, BUB3, CYP2C9, IL21, ITGB4, MS4A2, OR10K1
Negative_6511	MOS, CACNG1, CCL13, CHST11, CREB3L2, CSAD, CYP1A2, FGF18, GBGT1, LAMC1, MAP3K13, MYH13, NME4, OR14J1, OR51A7, OR7A10, PER2, PIGX, PTGER1, SAT2, SPCS1, SLC25A31, SUV420H1
Negative_6512	CD244, DUSP6, OR4K13
Negative_6513	CDA, ID2, AGRP, ALG12, C7orf16, CCNB1, CSNK1E, DAAM1, EFNB2, F13A1, FGF14, FGF22, GNPAT, GRHRP, GSTA4, HCLS1, HSD17B1, IRS4, KIR3DL3, KLR C4, KLRK1, MAP2K6, MAT2B, NOTCH2, NOX1, OR4N2, OR52N1, OR56A1, PAK7, PANK1, PCK2, PCYT1A, PFN3, PITX2, POMC, PTGS1, RIPK1, SUFU, TBL1Y, TM LHE, WNT10A, YKT6, TNFRSF11B, TNFRSF6B
Negative_6514	F2R, ACAD8, ALAS1, MAP3K14, MYH15, NANS, NCR1, OR3A3, OR6S1, PRKACB, SPP1, TCF7L2, TRPM5, YARS2
Negative_6515	GP6, ACVR1C, AMPD2, EDA2R, GLI2, GSTA1, MAP3K12, METTL2B, NEU4, OR11H1, PDE5A, SHMT1, TRPC1, VEGFA
Negative_6516	GH2, GK, GLS, RPE, TK2, ACVR2B, AKR1B10, AKT2, CASP3, CD40, CD46, CD82, CHIA, CHKA, COL1A1, CTNNA2, DHCR24, ENTPD8, ETNK2, FLT4, GALM, GRIN2A, IL20RA, IL28RA, KLRC4, MAN1C1, MDH2, NMNAT3, OR1J4, OR2M4, OR5AR1, OR8B4, PCK1, PFKFB3, PLCD1, PRKG1, STK36, TALDO1, TM7SF2, TYROBP, VASP, WASL, MAP3K7IP1

Negative_6517	C6, C1QA, CACNB1, CLCA4, CRLF2, CTNNB1, DHDH, DPM3, EARS2, FGF18, GGT7, IARS2, LFNG, MRAS, NR5A2, OCLN, OR2T1, OR4C12, OR4D2, OR4F17, OXCT1, PDGFD, PDHA1, PIGN, PLAT, POLR1A, POLR2F, PPP2R1A, PTGES, RASA2, RPN1, SEMA3G, TGFB1, THBS2, THBS4, VARS, YARS2
Negative_6518	CS, FH, AACCS, ACADVL, ACPP, ADCY6, AGPAT4, AKR1C1, BAAT, CCL17, CD40, CD47, CDH1, CDS1, COMP, GNA15, HIBCH, LARS, LIMK1, LPAR1, MAP2K3, NLGN2, OR10C1, OR5M9, POLA1, POLR3H, RDH5, RGS3, ST3GAL2, TNFRSF8, TYMS, UBA1, YWHAB, ST6GALNAC5
Negative_6519	ACADSB, ACVR1, CREB3L4, DGKB, EPHA5, LAMA3, PRKAR1B, PTK2B, PTPN11, WASF3
Negative_6520	CD4, DCN, ACTA2, BCL2, CDC20, CHRNA7, CYP1A2, FCGR3A, IFT57, IL25, IRF7, MECR, NLGN2, OR4E2, ULBP2
Negative_6521	UBC, DGKH, HDAC2, HLA-DOA, IL7R, KIR2DL2, MGST2, MMP14, PTPN1, SLC2A4, TAS2R13, PNLIPRP1
Negative_6522	AHCYL1, ALAS1, APOA2, ATP6VOC, CAV2, CCNE2, CFL1, CHUK, CLCA2, CPOX, CYP4F2, CYP8B1, DDX19A, EDAR, ETNK2, FGF8, FUT1, GNA12, GNAS, ICOS, ITGA4, LAMB3, MMP9, MYH9, NLGN1, NT5C3, OR13C2, OR2A14, OR2M7, OR6B2, OR9G4, PGM2, PRODH2, PTK2B, SCP2, SORBS1, TAS2R42, TAS2R5, VTI1B, YOD1, PRICKLE2, TNFRSF18
Negative_6523	ABO, AMT, MAG, TPR, ADORA2B, ADRA1D, ALDH4A1, ATP6V1D, CCR8, CLDN2, CDMT, CTBP2, DKK2, ECHS1, F11R, FADD, GAMT, GRIN2B, HMOX1, IL8RA, JAG1, LAMC2, LLGL2, NFE2L2, NTNG1, OCLN, OR5D18, OR6B2, OR9I1, PLA2G2F, PLCD3, POLR3G, PPP2R2C, RASGRP2, WNT2, ATP6V1E2, PAFAH1B1, SERPING1
Negative_6524	C2, IL4, LCT, RB1, ADCY2, CD34, CTPS2, CXCL13, CYP7A1, DUSP14, ICAM1, IRAK1, JUND, LCAT, LTBR, MAP3K4, MS4A2, OR2A4, PDE1A, PLA2G2F, PLXNA3, THBS3, UGT1A10, VAMP3, VDAC2, ATP6V1E2
Negative_6525	GLA, IL7, ACP1, ADAM17, AKT2, ALOX15B, APPL1, ARRB2, AVPR1B, BCAT2, CARSA2, CD14, CD34, CHIT1, CKS1B, CXCL2, FMO4, GNPAT, HLA-DOB, HMOX2, MYLK3, OR5R1, OR8S1, PARD3, PIAS2, PPP1R3B, PPP2R5C, PRKCG, RAF1, SOCS4, STX1B, UCK1, UGT1A10, UNC5A, VNN1
Negative_6526	EZR, CCNB2, CD226, CLDN16, CXCL13, EXT1, FOXO3, FZD7, GALNT13, KIR2DL2, LCP2, MDH2, NEU2, OR14A16, OR1M1, OR2A2, PDE4B, RRAS, SIPA1, TBXAS1, PDCD1LG2, PHOSPHO1, SUV420H1, TNFRSF6B
Negative_6527	BAX, C9, GSR, GSS, IVD, ME3, ALDH1A1, AMY2A, ATF4, CCNH, CDC42, CHIT1, CSF3, CYBA, DTX4, EPHA2, FGF4, FMO5, GNAZ, GSTA4, GSTM5, HLCS, HNMT, MAD2L2, NOD1, OR52E4, OR8D1, PER2, PFN3, PPP2R5A, PRKCQ, PRPH2, PTPN5, RFWD2, ROCK1, SENP2, SH2D2A, SLC27A4, SRD5A1, TRHR, WNT16
Negative_6528	ACY3, AREG, B4GALT7, BDH1, CDH2, CLCF1, COL2A1, CXCL12, DCTN1, FASLG, FASN, FGF18, GNPDA1, HMOX2, HSD3B7, IGSF5, MAP3K12, MYH7, NEU1, NODAL, OR51V1, P2RX1, PIM1, PLEKHA8, PLXNB3, PPP2R5B, RASA1, SFRP1, SHC4, STAT6, STX4, ULK3, UNC5A, UNC5B, YOD1, SUV420H1
Negative_6529	CGA, ACSM1, ALDH1A1, ALG9, CCNB2, CCND2, CDH4, CDK2, DRD1, IDH3B, MAML3, NEGR1, NR1D1, NTF3, OR2A42, RALBP1, TOMM40L
Negative_6530	BTC, ABLIM1, ACSL6, ATP5D, BDH2, C1QB, CD274, CYP11B2, GNRH1, KAT2B, MKNK1, MTMR6, OR4F15, OR5F1, PDE7B, PFN1, PHKA1, PLCG1, PTGES2, STEAP3, TBL1X, VTI1A, WNT10B, WNT11
Negative_6531	GNE, ME2, TKT, ACTC1, CDC2, COL1A2, EHMT1, FZD6, HLA-F, HLCS, HSPB1, ICOS, MAP2K4, NCKAP1L, OR51G2, PDE1B, PGLS, PLD1, SPRY2, ST8SIA1, TKTL1, WHSC1L1, MAPKAPK5
Negative_6532	DCN, IL6, ALG2, ARSD, ATP2A1, CCL20, CDC45L, CIITA, DHRS4, FGF12, FIGF, GSK3B, HSD17B8, HSPA1B, INPP5B, IRF9, LAMA3, MAPK13, MTMR2, NAE1, NFYB, NMNAT1, OR1A2, OR4K1, OR8G1, PIK3C2G, POLR2I, PRKG1, RALA, RARS2, RPS6KA3, SC4MOL, WASF2, MAPKAPK2
Negative_6533	ME1, B3GALT4, EFNB3, OR2T6, PIGL

Negative_6534	AKR1A1, AKT2, C1QA, CYP2B6, DHODH, DHRS4L2, DPAGT1, DRD1, DVL3, ETNK1, GALNT11, GNB1, IMPA1, OR51E1, OR52B6, OR5AP2, OR9G4, PIM2, PIP5K3, PTGS1, TUBA1C, TUBB, TNFRSF10D
Negative_6535	RET, SCD, TFG, AADAT, ALDH3A1, ALG2, ARHGEF7, ATP2A3, ATP6V1F, B3GALT6, CACNA1I, CAMKK1, CASK, CDK6, CHKB, CISH, CNTF, COL4A1, CSNK2A2, CYCS, GANAB, GP1BB, IL22, INHBA, JAM2, MAP3K8, MYL7, NFE2L2, OR10G7, OR13C5, OR14I1, OR3A1, OR4D5, OR52E6, OR6N2, OR6Y1, POLR1E, PPM1A, PRKCE, PRKX, PSME2, RDH16, TAP2, TAS2R4, TP73, UROC1, XIAP, ATP6V1E2
Negative_6536	SPN, ALG10B, CDC25A, CHEK2, IMPDH1, MPZL1, OR51A7, OR52I2, PIK3R5, PAPP2A, ATP6V1E1
Negative_6537	IL8, ABAT, CYP4A11, ENAH, GNA13, NRXN1, OR2AT4, OR52D1, OR9K2, TNFSF13B
Negative_6538	GH2, HDC, ACAA2, ACTN2, ALDH3B1, CLDN19, CSH1, CYP3A43, DHFR, FGFR4, GRM1, GUCY2C, HLA-DOB, MAD1L1, MAGI2, MITF, NFYC, OR10G7, OR13A1, OR2Y1, PGAM2, RBPJ, SCLY, SIPA1, THTPA, UNC5A, WNT8B, ZFYVE9, ATP6V1E2, B3GALNT1, TNFRSF10C
Negative_6539	GNS, HK1, IL4, MTR, OAT, ACO1, ADIPOR2, AKT3, ALOX15B, ALPI, AOC3, ARNT, ARPC1A, ATP2A2, BBOX1, BIRC2, BPNT1, C1GALT1, CCKAR, CLOCK, ENAH, FUT4, GNG3, GUK1, JAK1, MAPK8, MYL7, NANS, OR11H4, OR51G1, OR6C74, PGK2, PGM2, PHKA2, PIK3R3, PLCZ1, PLXNA2, PRPH2, PTDSS1, SLC2A2, SLIT2, TLN2, TSLP, VAMP1
Negative_6540	FES, HK2, MAX, ACOT12, ACSM4, AKR1D1, ARSE, CACNA1A, CBLC, CCNG1, CDH3, CDKN2D, COL5A3, COX15, CTLA4, DNMT3B, DRD1, ENTPD5, GNA11, GPAM, HSPB1, LEF1, MAPK7, OR10A7, OR51Q1, PDE7A, PLA2G2E, PLXNA2, PLXNA3, PPIR3A, PYGL, RPS6KA3, SEMA3E, SMURF1, SORBS1, STK3, STX7, TBXAS1, TNLN1, TNFRSF9, TRPC1, VAV1, WNT10A, CSGALNACT1
Negative_6541	JUN, PAH, RFK, TEC, VCL, ACTC1, ADSS, ARD1A, BACE1, BMP8B, C1QC, CDC25A, COL2A1, COL3A1, CYP3A43, FMO2, HMGCL, HSD11B2, HSD17B1, ITPA, KLRD1, LRAT, MAML1, MTHFD1L, NCF1, OR11H1, OR2F2, OR2M2, OR56B4, OR5B3, OR5T3, PDE1A, PERP, POLR2A, POLR3B, PRKCE, RDH5, SESN2, STAM2, TAS2R42, TPH2, ULK2, PAFAH1B1, TNFRSF10A
Negative_6542	DCK, NGF, PDC, ALDH3A1, CALML3, CHRDL, CNTNAP1, DIAPH3, ERBB3, FOXO3, GSTM5, HBEGF, IARS2, MADCAM1, MARS2, NCAM2, NFKBIB, OR2A12, OR4L1, OR51B5, OR8J1, PTCH1, RARS, STAT5B, TGFB2
Negative_6543	F7, ADH4, ARPC2, CAMK4, CD247, CD27, DFFA, DUSP4, FMO3, FMO5, FOXO3, GADD45B, GPT2, GRIA1, GUK1, GZMB, HIBADH, IL24, JAK3, LARS, LTBR, MAP2K6, MYLK2, NLGN2, OR1J4, OR1L3, OR2A4, OR2F2, OR4S2, OR52N5, OR9G4, ORC4L, PCK2, PDE6H, PIGC, PIGH, PIK3C2B, POMC, PTGDS, PTGS2, SPRY2, TYRP1, YES1, C1GALT1C1, CSGALNACT1, SERPINE1
Negative_6544	PGD, CAMK2D, CSF1, GSK3B, HMBS
Negative_6545	MPZ, WAS, ABL1, ADCY10, ADRBK2, ALDOA, ARNTL, AXIN1, BACE2, C1QC, CACNG1, CARD11, CCL11, CD19, CKMT2, COL4A4, CSF2, CYP2C9, CYP2U1, DUSP1, EI24, ENO2, FSHR, GLG1, IDH3A, ITGA3, LCMT1, MAPT, NEUROD1, NPAS2, OR5R1, PDK1, PDPK1, POLR1D, POLR2K, PPP2R2B, PRKY, SDHD, SEMA7A, SFRP1, SLC33A1, STX1B, SUCLA2, TAS1R1, TFPI, TGDS, TPM3, UNC5A, UNC5B
Negative_6546	TFG, ACHE, CCNB2, CYP1A1, DRD1, DTX3, GALM, GSTK1, IKBKB, INHBB, ITGA11, JAK1, SETD1B, TACR1, TIRAP, TLR2, VEGFA, PPP1R12A
Negative_6547	SRM, ECSIT, MGAT4A, OR2A25, RAP1B, YKT6
Negative_6548	ALG8, CACNA1A, CHD8, COL6A1, DFFA, DUSP4, FDFT1, MGST1, MYH9, NRCAM, OR2C3, OR2L8, PDGFRB, PPP2R5E, SH2D2A, SPTAN1, SRD5A1, TM7SF2, TYMS, UGT8, B4GALNT1



Negative_6549	C6, ITK, NF1, ADIPOQ, AKR1C2, BBC3, CCL25, CDC20, CDKN2D, CDS1, EIF4E2, EPB41, HMBS, IAPP, IFNGR1, NFASC, NKX3-1, OR6T1, OR9A4, PLAUR, ATP6V1C2, ATP6V1G1, TNFRSF13B
Negative_6550	CISH, LCMT2, ONECUT1, OR10AG1, OR5B21, UGT2B28
Negative_6551	GHR, NGF, FGF4, GALNT12, IFNA21, LDHD, OR52I1, OR7C1, P4HA3, PAK1, PARS2, PCYT1B, PDHA2, PIGH, PKMYT1, PLA2G2D, PTGIS, SHC4, HLA-DRB3, TNFRSF13B
Negative_6552	ADIPOQ, EGFR, FGF5, GALNT9, LIPT1, MYL2, NME2, OR1F1, OR1L6, OR2M5, PIK3C2A, PPARA, PROC, STX7, TPI1, VANGL1
Negative_6553	CTH, IL8, ADRA1A, CCL22, CTSB, CXCL13, DAAM2, HLA-DMA, OR2G6, PFKFB2, PKLR, PLA2G3, PLCG1, PLIN, STAT3, SULT1E1, TMLHE, TYK2
Negative_6554	CXCL6, LAMB2, TP53, WBCR22
Negative_6555	KDR, CSNK1D, CTBP2, DNMT3L, FGF4, GLUL, IARS2, KCNB1, MCAT, NUDT2, OR2H1, OXCT2, POLD3, PSENNEN, RPS6KA5, SMAD4, TNXB
Negative_6556	CBL, RDX, SDS, ABLIM3, ADRB3, ANAPC4, ATG7, ATP5A1, CCR10, CD14, CD27, CSF2RA, EFNA3, HSPA8, IPMK, KAT2B, NCAM2, OR9G4, PAICS, PDE5A, PIK3R1, PRKY, PTK2, PVRL1, RASSF5, SMURF2, WNT6
Negative_6557	ATP5F1, BIRC2, CACNA1A, CDKN2A, CYP3A43, HCLS1, HEMK1, IARS2, ITGB2, MPST, MYL5, NT5C, OR13F1, OR4K2, OR52B4, OR6K3, OR6T1, PAK1, PAX8, PIGM, PLD2, PRKX, RXRG, SELPLG, SMAD4, SPRY2, YWHAQ, GABARAPL2, TNFRSF1A
Negative_6558	KIT, ACVR1, ADRA1A, ADSS, ALDH3A2, ARNT2, ATP6AP1, CD3E, CHST13, CTBP2, CXCR6, GALE, ITGA6, OPLAH, OR6B3, PCCB, PIP4K2C, PRKCG, RPN2, WBCR22
Negative_6559	ATP6V1H, FARSA, OR4K1
Negative_6560	CTSB, CYP2C8, DKK1, ITGA6, NKD1, OR5H2, THTPA
Negative_6561	LRDD, OR52I1, PERP, SPRY4, STX18, TPI1, TYK2, AASDHPPT, MAPKAPK5
Negative_6562	FUK, GBA, NGF, ALG11, APOA2, CCL23, CFL1, CKMT2, CLDN7, CREB3L3, CYP2C19, EPHA6, FUT1, GP1BB, HTR7, JAM3, OGDH, OR1L4, OR6K3, PIK3R1, PNPO, PPAP2C, SH2D2A, SULT2B1, SYNJ1, TAS2R3, TOMM40L, TUBAL3, PAFAH1B2, TNFRSF13C
Negative_6563	CBS, MUT, PC, PGP, SCD, SHH, ACAD9, ACVR2B, ADCY7, AKR1A1, CCR1, CHRM5, CLDN11, CREB3L2, CYP4A11, FTH1, GLI3, MAN2A1, MAP3K14, ORC5L, P2RX4, PAPSS1, PPP2R5E, SDHA, SOS1, UBE2L3, ATP6VOE1, PAFAH1B2
Negative_6564	GPT, B3GNT4, BCL2L1, CASP6, CCR6, EDNRB, FZD8, GNA15, GSTM1, ITPKA, MCCR, OR9I1, SOS2, SV2C
Negative_6565	ABO, F7, ACOX3, AKR1A1, APBB1, BCAT2, BCMO1, CACNA1B, CASP3, CDC14A, FMO2, GNAL, HNF4A, IFNA13, IL4R, INHBC, LAMB1, LEPR, MGAT2, MMP2, NT5C1A, OGDH, OR10H1, OR10J3, OR1L6, OR2S2, OR51I2, OR8I2, PANK2, PDE7A, PIGF, RXRA, SEMA4G, STK36, TOMM40, VDAC1, YWHAQ, HLA-DPA1, PHOSPHO1, TNFRSF10A
Negative_6566	AK2, ATM, GH1, MOS, MPZ, SI, ABCC8, ADIPOQ, ALDH1A2, ANAPC4, C1GALT1, CCDC6, CCKBR, CDS2, DHX58, GABARAP, MITF, OR2A42, OR2T29, OR5D18, OR7G2, OR8S1, PLTP, POLR1B, ROBO3, SMARCA5, SOCS7, SPRY2, HLA-DPA1
Negative_6567	DBI, F7, TH, ADCY7, BMPR1B, IL2RB, KLRC4, MCM3, MPZL1, NFKBIB, OR51S1, OR6N2, PSME2
Negative_6568	CDA, GH1, UBB, ADCY8, BCAT1, CDC16, CDK4, CDKN2B, CISH, DHRS4L2, ENPP2, EPHB2, EPHB4, FABP4, FUT8, GGT6, GNAI1, HSD11B1, IL12A, INPPL1, INSR, LAMB4, MYH13, NANP, NOX1, NTNG1, NUMBL, OR1L3, PARD3, PDGFRA, PIGC, PKMYT1, PLA2G1B, PLD2, PLTP, PLXNA1, PRIM2, PSAT1, SARS, SETD1B, SV2B, TCF7L1, ULK2, WHSC1L1, MAPKAPK3, SERPINA1

Negative_6569	BTK, DAO, NLK, PLG, SDS, ALDH1L1, C1QC, CCKAR, CDKN2D, DDX4, DERA, DHD DS, FGF9, FGFR1, GCAT, GPD2, HSD17B1, ICOSLG, LARS, LCMT1, NAT6, OR1Q1, OR4K1, OR5AK2, PIK3R4, PLOD3, PTCRA, RAPGEF1, SLIT2, SMARCA2, TUBB1, TYMP
Negative_6570	AGK, ALDH3B1, ATG12, ATP2A3, EPHA7, GSTO1, SDHB
Negative_6571	CFH, XDH, ACVRL1, ALDH3A2, APOA2, CDC7, DGKB, EXTL1, GDE1, GUCY2F, HA DHB, HES1, HSD3B2, IL29, MAML1, OGDH, OR6N1, PFN1, PTPN1, RENBP, SESN1, SFRP4, SUV39H1, TRAF6
Negative_6572	ADK, AK3, C1S, ME3, RFK, ACLY, ACSL5, ACTA1, ACTA2, ACYP1, AHCYL1, ALD H3A2, AMPD2, AOX1, B3GAT3, C3AR1, CAV1, CCNA1, CD244, CDH2, DHFR, EDN RB, ENPP6, FCGR2B, FGF7, GBA3, HYAL1, IL13, IL18R1, MCCC2, MYH1, NCR3, NFE2L2, OR10X1, OR51E2, OR5K1, OR7C2, OR9I1, PDE4A, PDK1, PER3, SAT1, SMPD1, SNAP23, SSH2, STT3B, SYNJ2, CSGALNACT1, EIF4EBP1
Negative_6573	ADRB1, APPL1, ARPC4, COL5A2, FASN, G6PD, HLA-DMA, MAPK13, PPP2R2B, THY1, VARS
Negative_6574	DLL1, DUSP8, ITPA
Negative_6575	DCT, APOA2, B3GNT4, DLAT, HMGCR, HTR6, MICA, MTAP, OR10J1, OR4K1, PAR D3, PIP5K1C, POLR1D, POLR2C, UGT2A1, UROS, TNFRSF13C
Negative_6576	CGN, F3, FN1, LPL, OGT, AADAT, ACSL4, ACSM4, ADRB3, ALDOB, B4GALT5, CC R4, CLTC, DGUOK, DPYSL2, FECH, FGD3, GBE1, GNG3, GPAA1, HPSE, KLRK1, N FATC3, NPR1, OR4K14, PDXK, RALGDS, SRD5A2, STK4, ULBP2, WNT8B, YWHAG, AASDHPPT, ATP6V0A1, HLA-DQA2
Negative_6577	APP, CGN, GK2, LEP, ACOX3, ALG2, APAF1, ARNTL, CLDN15, DARS2, E2F5, FG F8, GNAO1, GNB1, HEMK1, HSD17B3, IL13RA2, IL17A, INHBE, ITGAV, OCLR, OR10G4, OR10S1, OR13F1, OR4C12, OXCT2, PGM1, PIAS2, POLD3, PPM1D, PP P3CC, PRKAR2B, PYGM, RXRB, SELE, SEMA3C, SQLE, ST8SIA5, STX1A, TAS2R1, TAS2R16, TAS2R4, TRHR, TUBB, UMPS, ST6GALNAC6
Negative_6578	HAL, ACYP2, B4GALT7, CD19, CDC6, DRD5, ENTPD1, HTR6, HTRA2, IL23R, LI AS, NFATC2, OR11I1, PAICS, PIGN, POLR1B, POLR1C, SMPD1, TRHR, UPP1, UX S1
Negative_6579	C1GALT1, CD19, CD44, INPP1, NTN1, PIAS2, PMM2, PPAT, PRKACB, RCHY1, S ETD1B, SORBS1, SOS1, SULT2B1
Negative_6580	CAD, CBL, GGH, TNR, ALPPL2, ANAPC11, BDH2, CACNA1G, CTSL1, DDX47, FGF 22, FGF23, FGF5, GABARAP, GANAB, GGT1, GLYCTK, INPP1, MAP3K5, NEUROG 3, NFKB1, OR4P4, PHKA2, PIK3R1, PLTP, PPCS, RBKS, SETMAR, STAM2, STX2, TAS2R38, TUBB4Q, WBSCR17, PNLIPRP1
Negative_6581	LYN, ATP5C1, CCL13, CYP26C1, DOT1L, DTX4, EFN1, ENAH, GALNT10, NOTC H3, NUDT9, OR4X2, OR51A2, OR7A17, RUNX1T1, SMAD1, TYK2
Negative_6582	FYN, ACADVL, ACOX3, ARPC5, ATP5J, ATP50, B4GALT7, CD28, CHR1, CRHR1, DAAM1, DDX56, DPYD, FADD, FARSA, GLUL, GNRH2, HEXB, HTR7, ITGB4, MAGI 2, MMP2, NKD1, NOTCH1, OR10A5, OR1L8, PIK3CB, POLA2, POLR2F, SREBF1, SUV39H2, TAS2R10, TUBB2B, WWP1, HSP90AA1
Negative_6583	TNF, VCL, ADCY4, CADM1, CKMT2, CTBP2, FASLG, GLUL, IMPDH1, MECR, OR51 A2, PAX8, PCYT1A, RALA, SETMAR, SV2B
Negative_6584	EBP, ITK, LPL, PC, ACVR1, ALDH7A1, ARPC1B, CHRM2, CNTF, ENPP7, FLAD1, GALNT8, GDE1, GSTM1, HADH, IL12B, IL28B, LRP5, MAGI2, MAP2K2, MFNG, N FKB1, OR10K2, OR4K2, OR52L1, OR6C70, OR6Y1, OR8B12, P4HA2, PHKG2, PI GX, POLR3K, PPAP2C, PPP3CA, PSME3, PTGIS, RBPJ, SEMA4B, STAM2, ULBP3, VEGFA, WBSCR17

Negative_6585	BAD, PRL, ACP5, ALDH3B2, APOC3, AQP7, BST1, C4BPB, CARD11, CDC25C, CD C45L, CDH1, COQ7, CPS1, CUL1, CYP2U1, E2F3, EHMT1, GNAT3, ICOS, ITGAX , JAK1, JAM2, LRP6, MMP7, NFYC, NKX2-2, OR2B2, OR4K5, OR51F2, OR5D18, PER1, PLXNC1, PORCN, PPP2R2D, PPT1, PTPN7, RAF1, RAPGEF1, RASA2, SAT2, ST6GAL1, TP53I3, TRAF6, WNT11, YW HAZ, ZBTB16, B3GALNT1
Negative_6586	KHK, MYC, OSM, AACS, ACYP2, ATG3, ATP5H, BMP6, CRB3, CSNK2A2, CYP2A7, HNMT, IL11, MARS, MAT1A, MFNG, NCR1, NOD1, NUDT9, OR13C3, PKM2, POLR3 G, PVRL1, SORBS1, TGDS, TJP3, TRHR, UBA7, UGT2A1, YWHAB, YWHAG
Negative_6587	AHCYL2, CHIA, CXCL2, ENO3, HBEGF, IPPK, OR13J1, PRKACA, STX12, TPMT
Negative_6588	FOS, NLK, SYK, AKR1C2, B3GALT2, CACNA1E, CD14, CD59, CHIA, CLDN7, DNM T3A, EIF4E, EREG, FRAP1, GMPR, GNAQ, HSD17B1, OR2T10, PFN2, RPS6KA4, SLC27A4, ST8SIA1, TNFRSF9, YWHAB, ATP6V0A1, ST6GALNAC4
Negative_6589	TPR, ACADL, CCL11, DGAT2, DHDH, FGF22, GSTM3, OR8K5, OXTR, RRAS, WNT7 B
Negative_6590	DCC, OR2T3, PLOD1, UROS, CSGALNACT1
Negative_6591	ACSS1, CACNA1B, CCR6, CD40LG, CD44, CPT1C, EDA2R, EFNA5, EPHA5, GUCA 1A, HPSE2, ICAM2, ICAM3, IL12B, IL21R, IRF5, ITGB8, L1CAM, LIPT1, MAP K11, NEU4, OR10A6, OR10H1, OR51A2, OR6N1, OR9A2, P2RX2, PDGFC, PLA2G 10, PTAFR, SDC2, SLC25A5, STX2, TAS1R3, TAS2R7, TNFRSF8, WNT9A
Negative_6592	EGF, F2R, SCD, ACACA, ACAT2, CPT1B, DDX47, EGLN1, FGF10, G6PD, GNP NAT 1, HPRT1, HTR6, IBSP, ITGAV, LYPLA2, MAPK14, NAT2, NRG3, NRXN1, OR10A 6, OR10H5, OR52N1, OR5L2, OR7G3, ORC4L, PDE4A, PDXP, PITX2, POLR1C, Q PRT, RAD51, SARS, SH3BP2, TFPI, UPB1, PPARGC1A
Negative_6593	AGPAT3, CCL3, HHEX, PIK3C3, PPP1R3D, HLA-DRB4
Negative_6594	AUH, ADCY8, ALAS1, APBB1, ATP6V0C, BCKDHB, C9orf95, CASP9, CCL7, CD8 6, DLST, F2RL3, HRAS, ICOS, IL17RA, IL23R, LAMB1, NTRK2, OR10G8, OR51 A7, OR5AN1, OR6S1, RHOD, SLC12A2, TKTL2, TUBB6
Negative_6595	GPT, CPT1B, CSF2RB, CYP2C18, DAXX, DHRS4L2, IDUA, OR2F2, RHOA, TUBA8
Negative_6596	DBH, DDC, ACYP1, APAF1, AREG, ATIC, ATP5E, B4GALT3, BDKRB2, BMP7, C1Q B, CADM3, CES1, CLDN11, CMPK1, CPT1A, FSHB, GALC, GALNT8, HSD17B7, IL 2RG, ITGA2B, LAP3, MAT1A, MTHFS, NTNG1, OR10A7, OR2D2, OR2M5, OR4D6, OR4S1, OR6X1, OR9A2, PDGFRA, PLCB2, PLCD3, PPP1CC, PPP1R3B, PRKCG, S LC2A1, STAT5B, TACR2, ULK1, WBSCR22, MAPK8IP1
Negative_6597	JUP, CFL1, CTSB, GNA12, ITGAE, MAPK13, NADSYN1, OR51S1, PLXNC1, PPP1 CA, SETD7, SLC9A1, TALD01, VNN1
Negative_6598	CBS, NGF, ABP1, HSD11B1, PDE3A, PI4KA, PLA1A, PLD2, POLR1A, POLR3A, S TAT1, TOLLIP, ULBP3
Negative_6599	C4B, ME2, SCD, ACVR2B, ADRA1D, ALDH1B1, ALDH1L1, ARHGEF4, AVPR1A, CC L26, CDH1, CDK2, CDKN2C, CREBBP, G6PD, GUK1, IQGAP2, ITGA1, MYH7B, NF ATC4, NTF4, OR10H2, OR52D1, OR5L2, PDE1A, PMM1, PNPO, PPP2R5B, PSME2 , RARS2, SIPA1, SKP2, STAT5A, TAS1R1, UROC1, WNT3, WNT5B, ZNRD1
Negative_6600	GPT, ARSD, CCL24, CD8B, COQ5, FARP2, GYS2, H6PD, MTAP, NCR3, NEU1, NLG N2, NUMB, PGAM1, PPP2R5C, PSPH, PYGM, SEMA3C, TFPI, TRPM5, HSP90AA1
Negative_6601	CFI, GAA, MVD, BLVRA, CACNG2, CCNH, CD44, CIITA, CREB3L4, CSF3, CUL1, CYP8B1, DHFR, DPYD, EIF4B, GALT, GSTZ1, HSD11B2, IFNA7, IFNK, IGSF5, IL23A, LIAS, MCEE, NEU4, OR52E2, OR52N2, OR6K3, P2RX1, PIK3C2G, PRKG 2, RAB5A, RCHY1, SC5DL, SFRP4, TAS2R13, TUBB4, WBSCR22
Negative_6602	IVD, MOS, ACPP, ALPPL2, ATP6AP1, CDS2, COASY, EHMT2, FABP4, H6PD, MYD 88, OR2S2, OR7C1, PLA2G3, SDHA, ST8SIA5

Negative_6603	GDA, ACSM1, ALPPL2, ANAPC7, C1QC, CASP9, CCL25, CSF3R, DKK4, DRD1, FA BP1, FLT3, GMPS, GNAQ, GRIA1, GSTZ1, HNMT, IFNA21, MAP3K3, MTMR1, NFY B, OR13D1, OR6S1, OXSM, P2RX3, PCCB, PER1, PIP5K1A, POLR2E, PRIM1, PR KAR1B, PRPS1, RAPGEF1, SESN1, TAS2R5, TBXAS1, TSLP, VDAC3, YOD1, GAB ARAPL1, TNFRSF13C
Negative_6604	CBS, ACVR1, ALG12, BCKDHB, CD22, CLTCL1, GDF6, HTR2B, ITGA5, LIPT1, M YLK2, NSDHL, OR10G3, OR4C46, OR5L2, SFRP5, SKIV2L2
Negative_6605	B4GALT1, EPHB6, FGF22, GNA12, LDHB, PLD2, SETDB1, TAS2R60, ULK2, MAP KAPK2
Negative_6606	BTD, CGA, KMO, ADAM17, ARPC3, B3GAT2, CAMK4, CXCL12, EIF4B, FMO2, GNP DA1, HSP90B1, IL11, IL28A, ITGA7, LRP5, MAP3K6, MARS, NAMPT, NLGN2, N OS1, OPLAH, OR1N1, OR2T3, OR4F15, OR52B4, OR6K2, PARS2, PDE11A, PDGF RB, PMM2, PPAP2B, PPP2R1A, PSENE1, PSPH, RPS6KA3, SPTLC1, TAS2R14, T HTPA, TSC2, TUBB6, UXS1, CSGALNACT2, HSD17B12
Negative_6607	GP5, ABI2, ACAA2, AKR1C3, AMPD2, ARPC5L, ARSE, ASIP, ATP5I, CCNE1, CH IA, CTNNA1, CTSG, CYP2J2, DGKG, DIAPH2, EPAS1, EPHA8, FGF20, FMO2, HE XA, HIP1, IL17A, MGAT5B, NAGS, NFATC1, NUDT2, OR10G4, OR10H1, OR13F1 , OR2F2, OR52A1, ORC6L, PI4KA, RDH5, RRM1, SETD1A, SKP1, SPTLC1, SSH3 , TAS2R16, TUBB3
Negative_6608	KMO, ME1, TNF, AGMAT, BMP8B, C3AR1, CD48, COL4A4, CPT1C, CTF1, EPHA4, FECH, FGF1, FGF4, FZD6, HCLS1, HLA- DRA, HSD3B7, HSPA8, ICOSLG, IL10RA, MYH11, NCOR1, NUDT8, OCRL, OGDHL , OR1J1, OR2T10, OR51E1, OR5F1, PDE1A, PIK3C3, POLE3, SNAP25, TUBA1B , WWP2, CSGALNACT2
Negative_6609	CKB, CRK, F2, RPE, SRC, AANAT, ADCY8, ALDH3A1, ASMT, BDKRB2, CACNA1D, CASP7, CCR2, CHEK2, CLDN2, DAAM1, DGAT1, E2F3, EPOR, GALNT6, GDF6, ID H3B, IDUA, INPPL1, MAN1C1, NEFM, NFYA, OR1L4, OR4K13, OR4N2, OR4Q3, O R51I1, OR51I2, OR5K2, PCCB, PHKA2, PHKB, PKMYT1, POLR3B, PPP2CA, PSM E2, PYGM, SEMA7A, SHC4, SMAD1, SULT1E1, TAS2R42, TYROBP, ATP6V1B1
Negative_6610	AR, ADH1A, AKR1C4, ALG3, ANAPC5, ARPC5L, BRAF, CCNA1, CD79B, EFNA1, E NPP3, FGFR1, GMPPB, IL22RA2, IMPDH1, ITGA9, LYPLA1, MAD2L1, MAPK1, M GAT5B, NTRK2, OR10G7, OR10H1, OR2AT4, OR52J3, PAX4, PCNA, PIGB, PPP1 CB, PRIM2, PRNP, RPS6, RRM2B, SDC4, SETD1B, SLC9A1, TUBB2B, TYMP, WNT 9A, XCL2, CACNA2D3
Negative_6611	GSS, ABCC8, ADH4, AGPAT4, ASNS, ATP5C1, CHR1, CKMT2, CLCF1, CLDN2, CX CL5, DDX23, DFFA, EP300, EPHA1, FUT9, IL17RA, KIR2DL2, LARS2, LIPE, L IPF, MAN1C1, MGAM, NCF4, NME6, NRCAM, OR1J4, OR2AG2, OR4A15, OR4F4, O R52W1, OR5AK2, PDGFC, PGAM1, PIK3R2, PLOD2, PTCH1, PYCR1, TGFB1, TI AM1, TJP2, TRIP10, UMPS, TNFRSF10D
Negative_6612	AR, MAX, ACAT2, ADRB3, ASS1, BET1L, CACNG7, COL4A2, CRHR1, CRY1, FUT2 , GJD2, GNA12, MDH1, MYL9, NEUROD1, OR1G1, POLR2B, PPP2R2C, PPP3CA, S V2B, UGT2A1, UPP1, WIF1, TNFRSF10C
Negative_6613	ALDOB, BMP5, BMP8B, CD55, CSF2, CYP2C18, F13A1, GPX7, GTSE1, OR2A42, OR52J3, OR52L1, OR5T1, PLA1A, PPCS, PPP2CA, PTPN5, RBL1, TSHB, PLA2G 12A, SUV420H2, TNFRSF11A
Negative_6614	BTD, ABCC8, AHCYL1, CNTF, CREB1, CXCL13, G6PD, GSTA2, HSD3B1, IGSF5, LTB4R2, LYPLA1, MYL5, NTF4, OR2T8, OR4C46, PGLS, PHKG2, PTPRF, SUCLG 2, TFDP1, TMLHE, TNFRSF17
Negative_6615	BTD, ADH1B, AMDHD1, AQP7, CDKN1B, CLTC, CNTN2, CXCL12, DARS2, DOLPP1 , DUSP8, EPHA5, FUT5, GANAB, GYS2, HPRT1, HSD3B7, HTR2B, IFNGR1, IL13 RA2, IL15RA, IL1RAP, ITGA4, KIR3DL3, MCM5, MGLL, NKD1, NRG1, OLR1, OR 11A1, OR13D1, OR6M1, OR8H2, PDE6H, PIAS2, PIM1, PLA2G2A, POLR2B, PRK ACA, RDH10, SCD5, STX5, TAS1R3, THTPA, TYROBP, WARS2, WIF1, WNT9B, YA RS

Negative_6616	EPO, FUK, BBOX1, CCND2, DAPK3, FZD1, GGT1, GP1BA, LAMB1, OR51B2, PMM1, PRKCI, PTPN5, SPCS1, PDCD1LG2
Negative_6617	GH1, GSN, PRL, TK2, ACO2, ALG5, ARSB, BCKDHB, CCND2, CD82, CDH4, CER1, CLCF1, CLDN10, COL5A2, CYP27A1, DERL1, DGKI, DHDDS, EFNA4, ENTPD2, EREG, GARS, HTR2C, IFT57, IMPDH1, LDHC, MAP3K1, NOS3, NUDT12, OR10C1, OR2AG1, OR4S1, POLR2G, PTSS2, PTPMT1, RDH12, RND1, RPN1, SAT2, SHISA5, TAS2R10, HSP90AA1, MAPK8IP1
Negative_6618	MOS, AGTR1, CPT1A, DUSP5, EPHA7, LDHAL6A, OR4K17, OR52K1, PANK4, PIK3R4, PTPN7, RPS6KA5, TPH2
Negative_6619	AMT, IL8, NOG, TEC, AADAC, ABL1, ACP5, AGRP, AKT1, ALDH3B2, B3GAT1, C1QA, CCL11, CLDN22, DIAPH1, EPHX2, FPGS, GLI2, GNA14, GNG3, GPX7, GSTM4, HES1, IKBKG, MAPK10, NFAT5, NRCAM, OR13C2, OR7G3, PIGX, POLR3B, PRKAG1, PTPN11, SELP, TPK1, HLA-DQB1, MAP3K7IP2, SERPIND1
Negative_6620	ADH1B, AMY2A, ASS1, ATP6V1D, CCL2, CD70, IRAK4, MAP4K3, MGST2, PPA1, PRKAR1A, PRKCQ, SUFU, YARS2, ST6GALNAC3
Negative_6621	ADK, AK2, AADAC, AGTR1, ASRGL1, CD34, DDX50, EHMT2, FM05, GSTA4, IDUA, IFNA17, IL13, IL29, LAMA4, LHCGR, OR1E1, OR2T3, OR4X1, OR52N1, OR7D4, PNPO, POLR2K, PSME1, PYGL, SFRP2, UGCGL2, VANGL1, ZIC2, HLA-DRB3
Negative_6622	C7, TNN, ABLIM2, AGTR1, AK3L1, ALDH7A1, C1QC, CD59, CSF3, CYP2A6, FCGR3B, FLT3, ICOS, IL13RA2, NRXN1, OR2T1, OR4K14, OR6K2, PCK1, PIGS, PRKAA1, RALGDS, TRPC1, TUBA3E, TUBA4A, VEGFA, YARS2, SERPINB5
Negative_6623	KDR, AARS2, ADCY3, ADH1B, B3GNT4, B4GALT7, DHRS4, EPHX2, GALNT7, ICA M3, IL7R, INHBA, KAT2B, NPR2, OR9G4, PARVB, PDE6D, PPP1R1A, RARA, SFRP1, HLA-DPA1, KIR2DL5A, TNFRSF10C
Negative_6624	GGH, NPY, CBR1, CYP7A1, HSD17B4, MAP2K5, OR5T2, PDE4A, RAC2
Negative_6625	C1S, ID3, AMPD3, BCL2L1, CACNA1D, CADM3, CCND2, COQ3, COX15, CREB3L1, CTPS2, CYP1A2, CYP2A7, DKK1, EFN2, EIF4B, FABP1, FM04, FTMT, HSD17B4, IL2RG, NFKBIB, NFX1, NFYB, OR4E2, PDHB, PER2, PFKFB2, PIP5K1A, PLA2G10, POLE, PPCS, SHC3, SLC27A4, STX8, TAS2R49, UNC5A, HLA-DQA2, ST6GALNAC5
Negative_6626	DBH, OR4F5, RPS6KB2
Negative_6627	LCT, CDC45L, COX10, KIR2DS4, LCMT1, MAP3K14, OR14J1, TXNDC12
Negative_6628	ADC, ACPT, ACVRL1, ALG9, BCAT2, BMPR1B, CACNA1G, CHSY1, DDIT4, EIF4E, ELK4, FLT4, FUT7, GAD2, GUCY1A3, IL15, IL22RA1, KARS, KIR3DL1, LIPT1, MYLK2, NEGR1, NFX1, OR52I1, OR52J3, OR5A1, OR6T1, PDE1B, PECAM1, PI4KA, PIGP, PKM2, PTPMT1, RENBP, RFX5, RRM2B, SETMAR, SLIT2, ST8SIA5, TCIRG1, UBE2L6, VEGFC, MAPK8IP2, PAFAH1B2, SERPINA5
Negative_6629	GSR, CX3CR1, FARS2, LDHA, MMP2, OR2F2, PPP1CB, RFXAP, TSHB
Negative_6630	HYI, TAT, CD48, IFT57, MGAT5, OR13H1, OR51B4, OR8K5, PAK1, PNPLA3, PP A1, SNAI2, SRGAP3, TYROBP, AASDHPPT
Negative_6631	C7, DLD, F11, F12, ACSM2A, ACY3, AKR1C3, ATP6V1D, B4GALT1, BBC3, CCL16, CCL23, CSH1, CYP17A1, F2RL1, G6PD, GNPDA2, HSD17B1, IL11RA, IMPDH2, INADL, LDHA, MYH8, NARS, NEUROG3, NRXN1, NTF4, OR2F2, OR5J2, RARA, STX2
Negative_6632	ADC, GPT, CD19, DDX4, IKBKB, MPDZ, PARVA, SCD5
Negative_6633	POLR2L, SGPP1, TBXA2R, WNT9A
Negative_6634	ACADVL, ARHGEF1, CACNB1, CARS2, CYP1A2, DDX18, GAL3ST1, GALNTL1, MAPK8, OR4D2, OR52L1, SYNJ1, TLR9
Negative_6635	GBA, MAX, NLK, ADH1B, AGPAT1, ALPI, APBB1, B4GALT2, CLDN3, COL1A1, CTNNB1, CTSB, CYP1B1, DAG1, DUSP2, G6PD, HTR4, ITGB6, MAGI3, MCM3, MYL5, NFASC, OR10H2, OR14A16, OR2A2, OR2M2, OR4B1, OR5F1, OR6B3, P2RX7, PAK1, PAK7, PIP4K2B, PPP3CA, PRKCG, RENBP, RETSAT, RPS6, SESN3, SH2D2A, SHC4, WNT7A, ATP6VOD1, MAPKAPK2

Negative_6636	CTH, GLS, IVD, CSF3, IL15RA, INPP5A, OR14I1, OR56A3, PIK3R5, PON1, RXRG, TPI1
Negative_6637	GK2, MIF, ADCY5, ADRA1D, ALG1, ATN1, ATP6V1A, CCL21, CD99, CDC25C, CLDN18, CXCL9, CYP2B6, DDX55, EHHADH, FGF3, GADD45A, GSGT1, LAMB3, NOX1, NRAS, OR4S2, OR6Q1, PDE11A, PFKFB4, PGK1, PLCD4, PLD2, PTPRF, RAD51, SMPD4, SOAT2, ST3GAL1, SV2B, SYNJ1, TAS2R13, TUBA3C, TUBB3, UGT2B7, ATP6V1B2, SUV420H1, TNFRSF1B
Negative_6638	GP6, GPI, MVK, APAF1, ATP2A1, ATP5L, BCAT1, BST1, C4BPA, CDC7, CDH15, DGAT1, EPHA4, FPGT, IARS, IQGAP1, MAP3K12, METTL6, MGST2, MYH1, MYH14, NCOR1, OR4F4, OR52A5, OR6M1, OR9Q2, OXCT2, PI4KB, POLR3B, PPP2CB, PSPH, RGS3, SSH1, TAP2, THBS3, TLR9, TOLLIP, TYMP, UBA1, SERPINF2
Negative_6639	AK1, CTH, MIF, XDH, ACO1, ACSL3, ADAM17, ALDH1A2, CCL3, CCR5, CREB3L2, DEGS2, DOCK1, DPM2, GGCX, GGT1, GNG13, GNPDA2, JAM2, MAP2K4, MAP2K5, MTFMT, OR1C1, OR1N2, OR2K2, OR6K6, PARVB, PDXP, PMAIP1, PPAP2A, SFRP4, SMURF2, SPRED1, TCF7, TNFSF18, TNFSF4, UCK1, WBSCR17
Negative_6640	MAX, CACNG2, GOSR2, IDH3G, IL9R, MGST3, SAT1, TAS1R3
Negative_6641	ABCC8, AGPAT2, BIRC5, CYP11A1, ENO1, FLT3, GALNT5, INPP5A, LDHD, LEFTY2, OR10K2, OR4C12, OR6A2, OR7G2, PDE1C, PLA2G2E, PPP1R3B, SUCLG2, WNT3A
Negative_6642	APOA1, CACNA1D, CACNB4, CERK, CRB3, ESAM, F2RL1, MYH1, NFKBIB, OR2T33, PANK1, PARS2, TRPM5
Negative_6643	HK3, JUP, ME3, SP1, ACTN2, BNIP1, CANT1, CCL8, CHSY1, CLDN5, CYP26B1, FABP1, G6PC, GALNTL2, GLG1, GNA15, GP1BB, HTRA2, IDUA, KARS, LAMA3, LAMC3, MAP3K11, NAT1, NCF1, NMNAT2, NPR2, OR2C1, OR2T2, OR4K13, OR6C74, PIK3C2A, PIPOX, POLR2D, RASGRP2, SGMS1, SIGLEC1, SNAP25, SOAT2, STAT5A, TUBA3E, UNC5C
Negative_6644	B4GALT2, DVL1, EXTL1, NEU3, RASSF1, SETD7, HLA-DPA1, TNFRSF10B
Negative_6645	F2R, HDC, CCR6, CD36, CDK6, CYP4A11, EPHX2, FGF23, FTMT, GABARAP, GUCY1B3, IDI1, IFIH1, KAT2B, MAP3K11, MCM6, MYH14, NFKBIB, OR4X1, OR5AS1, OR8G1, PPARG, PPP1CA, PRIM1, PSME3, STX6, SUOX, TALD01, TRAF6, UGDH, SERPINA5, TNFRSF13B
Negative_6646	ACO2, ARPC3, IPPK, OR5H6, OR8G1, PYGM, VTI1B, SERPINA5
Negative_6647	ALDH1A2, GCLM, INHBA, OR10J3, PIGH, PRKACB, RAPGEF1, RFWD2, SHC1
Negative_6648	FYN, HYI, ADH7, AKR1B1, CACNA1C, COL4A1, CXCL2, CXCL9, LALBA, LFNG, NAT1, OR4K1, OR51F1, OR5A1, PNPLA3, POLD1, POLE4, RAB5A, UGCG2, UXS1
Negative_6649	MAX, ADRB3, AOX1, ATP5D, BDKRB2, CD79A, CDC14B, CNGB1, CTSL1, CYP26A1, DAG1, DDX23, DDX54, DGKH, EIF4E, FGD3, GAL3ST1, GMPS, GNAT3, GPT2, JAM2, LFNG, MLLT4, MYH13, NCR1, NOD1, NT5C3, OR10G8, OR5A2, POLE3, RAB5A, ROCK2, SULT1A1, TCF7L2, TKTL1, TSHR, TUBB3, UGT1A10, VASP, VAV2, WASF3
Negative_6650	AKT2, ASRGL1, ATN1, ATP5C1, CACNG7, DCTD, DKK2, F13B, GPD1L, IL1RAP, ITGB2, JAK1, MRAS, NAE1, NEFM, OR10J3, OR1G1, PIGL, PIP5K1C, PTGS1, RPE65, TIRAP
Negative_6651	C9orf95, CD27, DDX47, HSD17B7
Negative_6652	AK3, ZYX, ACAA1, CCL25, CCNH, CES1, COL6A2, CXCL16, CYP11B1, CYP1B1, DTX2, HSD3B2, IL28B, KLK3, PDE8B, SGPP2, TGFB1, ST6GALNAC1
Negative_6653	MDM2, OR2A12, OR5AS1, P2RX5, PLXNA2, SLC25A4, SPRED1
Negative_6654	C8B, CGN, DCC, FER, STS, ACYP2, DLL3, DUSP16, E2F4, ESAM, FARP2, FMO2, FRAP1, GALE, GLI1, GPAA1, HNF4A, LAMC2, MAPK12, NSD1, OR10A5, OR14J1, OR2G6, OR51I1, OR52I2, OR52M1, PDE1C, PDGFB, PFAS, PIGQ, PIGX, PLEKHA8, POLR2D, PPP2R5B, SETD1B, SPTAN1, STX18, TAS2R8, TBL1X, TFPI, ULBP1, ATP6VOA4
Negative_6655	GAA, PC, CDK7, COL4A2, ITGAM, LAMC1, LRRC4C, OR4S1, OR51B4, PIAS3, POLR3G, SHC2

Negative_6656	FYN, RDX, UBC, ACPT, ALG10B, CCL17, CCNB1, DGAT2L4, DUSP6, GNG12, KRAS, NTNG1, OR13F1, PORCN, RBL1, VARS, SUV420H2, TNFRSF18
Negative_6657	ASL, CACNG6, FGF7, GUCA1B, NFATC1, NOTCH3, OR10K2, OR13C2, OR4A5, OR4D11, PRKCH, PRKCZ, PPP1R12A
Negative_6658	C8G, F5, IL8, ZYX, ACADS, AKR1A1, ALDH3A2, AMPD1, AOC2, APLP1, B3GAT1, BLNK, CCND2, CHEK1, CHSY1, COL3A1, CXCR3, DOCK1, DUSP2, EPRS, GALNT13, GNG12, HRH2, IMPDH2, ITGA11, METTL6, MYLK3, NRP1, NUDT9, ORC3L, PARAD3, PDE6G, PMVK, PON3, PPID, PTPN6, RENBP, SPRED2, SUCLG2, TRAF6, VAMP4, SERPING1, ST6GALNAC4, TNFRSF1B
Negative_6659	AK5, CACNG8, CCR9, COL6A2, DPYS, FARSB, GALT, GARS, ITGA9, LTBP1, OR51E1, PLCD4, PNMT, SELP, ALDH18A1
Negative_6660	ASCC3, KCNJ11, PIGU, PRIM2
Negative_6661	NLK, ACADS, ACSM5, AGTR1, APPL1, CLDN3, COL5A1, DNMT1, EPHB6, HSPA8, MDH1, MYH9, NADK, OR2T34, OR4X1, OR5A2, PAX8, PIGV, PRKAA1, PRKAR1A, PRKCA, PYGB, SETD7, SH2D1A, SH2D1B, WBSCR17, SERPIND1
Negative_6662	BTD, ILK, LIF, RDX, TPO, ACOX3, ANAPC7, ATP5G3, BCAT2, BMP2, BUB3, CACNB1, CCNB3, CD38, CDKN2B, DDX18, DVL2, FM05, GALNTL5, GNRHR, GSTP1, HRAS, IL1A, MEF2C, MGAT3, NME2, OR6C3, OR7G2, PAX4, PDE6G, PIK3R5, PNM1, POLR2A, POLR3G, PPBP, PRKAB2, RBPJ, RPSA, SULT2A1, TRAF4, WNT10B
Negative_6663	ZYX, CDKN2B, CNTN1, ENO1, GMPR2, HCCS, HSD3B2, IL18RAP, IRAK2, OR4D9, OR51G1, OR9I1, PGM1, PIK3CD, PRKAG1, RALA, SOCS3, SOCS4, SPCS3, ULK2, UNC5A, WWP2, XCR1
Negative_6664	CYP4A22, E2F3, PIK3R3, WBSCR22
Negative_6665	HGD, ME3, ARG1, BMP8A, DIAPH2, GUCA1C, HADHB, HSD17B8, KLRD1, MAP3K12, MCM7, MNX1, OR14J1, OR51F2, POLR3G, RPRM, SMURF1, TAS2R48, TRAF3, TSC1
Negative_6666	MIF, MYC, ALG1, CAMKK1, CFLAR, CHR1, DHRS3, DPM3, GALM, RAP1B, RRAS, SSH1, TSC2, VAMP4
Negative_6667	AADAT, ACSL3, ADH7, BCAT2, BLVRB, CFL1, CHRM2, CLDN6, CLTC, COMP, CSF1, EPHA5, EXTL3, GATM, IL23R, IL3RA, KIR3DL1, NLGN1, OR2T34, PFKFB2, PPP3R1, SETMAR, SUFU, TACR2, TNFSF4
Negative_6668	A2M, ITK, RB1, XDH, ACSL3, AGPAT6, ALAS1, ALDH6A1, CACNA1S, CAV1, CDC14A, CRY2, CYBB, FLOT1, FM05, FPGT, GALK1, HTR2B, IL20, ITGB5, KLRC1, MCEE, NGEF, OR13F1, OR2T11, OR2T8, OR5A1, P2RX3, PNMT, POLD1, POLR2I, ROBO2, SCLY, SELE, SRD5A2, TAS2R49, TUBB, UBA7, WNT3A, ZAP70, AASDH, PPT, ATP6V1C2, PAFAH1B3, TNFRSF1A
Negative_6669	C3, CBS, DDC, GK2, LHB, ADSL, ALPP, APH1A, ATP6VOC, CACNG7, CHRM3, CTSL1, DDOST, DLL1, DUSP14, FBP2, FRAT2, FZD6, GALNT3, GAS1, GRB2, KIR2DS5, MAP3K13, MYH10, MYH9, NAE1, OR10S1, OR51V1, OR9G4, PIAS4, PIGA, PKLR, PRPH, PTGDS, SFRP4, SOD1, TIAM1, TSHB, TUBA1B, TUBA3C, TUBA3E, TUBB2B, XYLT2, ZMAT3, SERPING1
Negative_6670	BIRC3, E2F4, FGF18, FLAD1, FRAP1, GRIA3, HHEX, INHBB, NAT5, OR2L8, OR5P2, P4HA3, PDHB, PIK3CB, PRKAR1A, PRKAR2B, PTCRA, RBPJ, RDH16, RPS6KB1, SEMA3G, SEPHS1, ST8SIA1, TDO2, TIAM2, CACNA2D3, SERPINA1, TNFRSF10A
Negative_6671	AMT, F8, GNS, IL2, MAG, PC, PLN, APH1A, APOA5, CCL19, CD74, CLCA2, GNPD, GPT2, HCST, ICAM3, INPP5E, MAP2K2, MAP3K5, MTHFD1L, OR13H1, OR2S2, OR4E2, OR5AU1, ORC1L, OXCT2, PCK1, PDIA4, PON3, PPP2R2A, RARS2, RHOO, RRAS, SPRY4, TOMM40, TRAF6, UGCG, ULK3, TNFRSF10A
Negative_6672	ID3, ACSM1, CCL25, CREB3L3, CXCR3, DCTN1, GALK2, GBGT1, GOSR2, IARS2, ICAM2, IL15, INPP1, INPP5A, ITGB5, NODAL, OR1J4, OR52W1, OR5B17, OR6C1, OR6N2, OR8D4, PGM2, PHKA2, PNLIP, PTGER3, RAF1, RASGRP3, SRGAP1, ST3GAL6, SULT2A1, UMPS

Negative_6673	AASS, ACSS3, ADH5, ANAPC7, BPGM, CACNG8, GLI1, GNA13, IGF1R, IL1A, IL29, IRF3, MAPK9, MKNK1, MLYCD, MTHFR, OLAH, OR14C36, OR4X2, OR5T3, OR8I2, ORC6L, PDCD1, PIGL, PLXNB3, POLR1E, RAB23, WASL, YARS2, TNFRSF10D
Negative_6674	EGF, CALML3, CDH1, CFLAR, CLDN16, CXCL11, FMO2, FSHB, GCH1, GMPPB, MC3, NCF4, OR51B4, OR51V1, ORC2L, PVRL2, SENP2, SULT1A1
Negative_6675	C4B, DDC, F3, HK2, ACVRL1, AKR1A1, B3GALT6, BCAT1, CACNA1A, CLCA2, CLDN15, CLDN19, CLTB, COX10, CSF2RB, CYP26B1, ECSIT, FPGT, G6PD, GALNT2, GCLC, GJD2, GSK3B, GUCY2F, HTR2B, IRF3, ITGAL, NCF1, OR10S1, OR4A5, P2RX2, PARS2, PFN3, PSAT1, SCP2, SETDB1, SFRP2, SMAD1, TNFSF10, TRMT11, TUBB1, HSD17B10, PLA2G12A
Negative_6676	BTK, FES, ADCY8, ALDH1A1, BCKDHB, CCL22, CHDH, CMPK2, COMT, CSNK1E, EHMT1, ENPP1, GGT5, GOSR2, GUCY1B3, IRF7, LARS, LRP5, MCM3, NT5C3, OR2A4, OR2K2, OR51B6, PIP5K3, POLD3, PRDX6, PRKAR1B, PSENEN, PTCRA, TSTA3, TNFRSF14, TNFRSF1A
Negative_6677	HTRA2, MITF, SOCS7
Negative_6678	GDA, NGF, ABLIM1, ACVR1B, ADSL, APOA5, BCAR1, CLDN16, COL1A1, COL4A6, DGKA, GNA01, GUCY1A3, HADH, IFNA21, IL22RA1, INMT, IQGAP1, MAP3K8, MYH4, NCF2, NKX2-2, NOTCH3, NT5C2, OR11H1, OR13F1, OR2A42, OR4D5, OR6C76, PIGB, PLCB1, POLR1E, PRKCQ, PRKG1, PTGS1, RELA, SPTLC1, SULT1A1, TBL1Y, TD02, TNFSF10, TSNARE1
Negative_6679	BTD, F11, ME1, ACSL3, ACYP2, AFMID, AGPAT4, B4GALT6, BCL2, CAMK2B, CAMK4, CCNH, CCR3, CCR7, CD47, DARS, ENPP2, ETS1, FOXO3, FRAT1, GGCX, IL12RB1, INHBA, JAG1, KLKB1, MAFA, MTAP, NUMB, OR2F1, OR4N4, OR51A4, OR8K5, P2RX3, PDE9A, PFKFB1, PFKFB2, PFKM, PIAS3, PIGM, PSME2, RXRG, SLC2A4, ST3GAL1, TSC2, TUBA3C
Negative_6680	F8, ATP2A1, BCMO1, CD27, IRF9, MMP2, OR4D11, PARVA, STX5, TNFRSF11B, TNFRSF14
Negative_6681	LCK, MIF, MPL, TNC, AADAT, ACAA2, ALG5, ATF4, BCAT2, CACNA1I, CBR3, CCL5, CCND3, CD40LG, CD59, CDK2, CRB3, CSNK1D, CYP7A1, FGF13, FGF20, GALNT13, INPPL1, IPMK, MAGI3, MYH3, NRXN2, OR4D5, OR51G2, OR56B4, OR6K2, PLXNA2, POLR2C, PTSS2, PYGB, RFXANK, SEMA4F, SETD7, SFRP1, SMURF2, SOCS5, SUCLG1, TLR4, UAP1, UPP2
Negative_6682	KMO, BDKRB1, CDK2, CYP1A2, FLAD1, GFPT1, HLA-DMA, HMOX1, IDI2, IL17B, L1CAM, MDH2, OR1Q1, ORC3L, SULT1A4, TOMM40
Negative_6683	ACADSB, AGMAT, ALG10B, BCKDHB, BLNK, CHUK, EHMT1, ENAH, GNPAT1, GUCY1A2, HTR5A, IL1R1, ITGB3, JAK3, MAOA, MECR, MYH7, NCAM2, OR2L2, OR52N2, PGAP1, SIPA1, SNAP23, SPRY2, SQLE, XCL2, GABARAPL1, MAPK8IP1, TNFRSF1B
Negative_6684	LCK, CACNG5, DHX58, GANAB, GNRHR, IL3RA, OR2T5, OR4N5, OR5M9, OR6C74, PDE2A, PERP, SMARCA2, TAS2R5, HSD17B10, PNLIPRP1, TNFRSF12A
Negative_6685	ADA, C8G, F5, GH1, PC, ALDH6A1, ARSB, CASP9, CCR1, CDH2, CYP26B1, CYP3A7, DHRS4, DUSP3, ECSIT, EFNB1, EXT2, F11R, FGF9, GSTK1, GSTO2, HSD17B1, HSPB1, ICAM2, MAG11, MAPK13, NAGLU, NAT1, NAT6, NFKBIE, NRXN1, OR10C1, OR13C9, OR2B6, OR6K2, OR7G1, PLK1, PPP5C, PRSS3, PTPRB, RENBP, SLC27A5, SNAP23, TCF7, ATP6V1B2, HLA-DPA1, PPP1R12A, ST6GALNAC3
Negative_6686	CRK, PDC, AKR1A1, APC2, APOA1, ATP5E, BHMT, CANT1, CCR8, CDC16, CTF1, CYP2D6, DMGDH, DOT1L, HYAL2, INHBB, ITGB4, ITGB6, JAK1, MAN1C1, MAPK8, NEU4, ODC1, OR5C1, OR5D18, OR6C3, PDGFC, PRKAG2, SIPA1, SLC25A5, SOS1, SUCLG1, TAS2R60, TP53, WASL



Negative_6687	FGG, AGTR1, ALG2, ALS2, ATP5D, CD40, CDC16, CDK2, CLDN20, CMPK1, COX10, CTPS, DIAPH2, DUSP1, E2F5, EIF4E2, ESPL1, EXTL3, FABP4, FTCD, GCNT2, GJD2, HSPA1B, ISYNA1, KLRC3, KYNU, LILRB3, NEU2, NUDT2, OR10H4, OR7A10, PFKFB2, PGAP1, PLXNA2, PRKG2, RPS6KB2, SETD2, STEAP3, TCF7L2, TNFSF11, TYK2, UGCGL1, ULK1, XCL2, ATP6V1C1, ATP6V1G2
Negative_6688	GPT, ITK, ALS2, CCL22, CYP4F3, MKNK2, NEU1, OR14A16, OR2T10, ORC1L, PTGER3, SPRY2, ATP6VOA4
Negative_6689	LYN, PXN, SHH, AHCY, ALS2, ATF4, ATP4B, B4GALT5, BAAT, BCKDHB, C7orf16, CADM1, CCR4, CLDN15, CTNNA3, CYP11A1, CYP2S1, DGKQ, DHRS4, EIF4B, FABP3, HIBADH, IFNA6, ITGA9, MGST1, OR10T2, OR1J4, OR2B11, OR51B5, OR5M3, PAFAH2, PDE2A, PDGFC, PPP2R1B, ROBO2, SEMA4F, THTPA, TNFRSF8, TUBA8, ST6GALNAC5
Negative_6690	CFH, B3GAT2, CAMK2G, CISH, DEGS2, FUT9, GALNTL5, GYS1, IRAK3, ITGB7, MAP3K3, MGLL, ORC6L, RAB23, STK11
Negative_6691	DCK, PXN, ACTN2, ADCY6, APAF1, CDIPT, CTBP1, CXCL11, DGKB, DHDH, DLL1, ENTPD6, FGFR2, FOSL1, GAL3ST1, GALT, HSD11B1, IARS, IL12RB1, LTA4H, MGAT5B, NME6, NRG4, NUDT12, OR1S1, OR52R1, OR6T1, OR8U1, PECAM1, PRIM1, STX12, TGFB3, TNFRSF4, TNXB, TOMM40, TUBB2B
Negative_6692	HK1, NF1, ALG3, BLVRA, CALML6, CYSLTR1, DUSP6, EI24, EPB41L1, EPHX2, GLI2, HAGH, ISYNA1, KLRC3, KLRK1, LLGL1, MYLK2, OR1L3, OR52M1, OR6K2, OR7C1, PDXK, PPP1R3B, PTPRZ1, RASGRP1, RPS6KA2, SETDB1, SORD, SPP1, STT3B, TLR5, ATP6V0D2
Negative_6693	PML, CHKB, CHSY3, CTPS, CTPS2, ECSIT, GCLM, GNAQ, GPD1, GSTM1, IL13RA2, ITGA1, LAMC3, LIMK1, MCM7, MYH14, SELE, SMAD3, TNFSF10, UGT2B17
Negative_6694	AK5, ATM, CD2, GNE, GNS, MPL, AARS, ATG12, BIRC2, C1GALT1, CLDN18, EGLN1, EVI1, FGFR1, FM02, FTH1, IL9R, KAT2A, LIPG, MAGI1, MASP1, MCM7, NEU1, NFYA, OLAH, OR2AE1, OR2T1, OR51M1, PITX2, PNMT, PRPH, PTPN7, RDH16, SULT1A1, TAP1, TLR3, WBSCR17, CACNA2D2, HLA-DPB1, SUV420H2
Negative_6695	C3, NF1, SDS, AQP7, ATP12A, ATP6AP1, B3GNT2, BST1, CDS2, CTLA4, CXCR6, ENO2, FM03, ITGA5, LDHD, MYH4, OR13C9, OR1I1, PLCE1, PRKCA, SMPD1
Negative_6696	ID4, TK2, TPO, ATG12, CACNA1C, CERK, CLCA4, DGKI, DPYS, FRAT1, FZD7, GCNT1, GRHPR, IRAK1, ITGA1, LEFTY2, LLGL2, LRP6, MGLL, OR2S2, OR2T4, OR5B17, OR5T3, PDGFRB, PLK1, POLR1B, RARS2, RFXAP, SEMA4G, SMAD6, SMURF1, SSH1, TACR1, VASP, SERPINE1, TNFRSF10C
Negative_6697	CKB, F7, ID3, IL7, LHB, AGPAT2, ASRGL1, CACNB3, CD3E, CNTNAP1, CSH1, CTLA4, DUSP5, EFNA1, EGLN3, ETNK2, GATM, GPD1L, HLA-C, HTR2B, HTR6, IL1R1, INSR, LAMC2, MAGI2, MTHFD2, NLGN2, NSDHL, OCR, OR2C1, OR5C1, OR6B3, OR6K3, OR7A17, OR9G4, OXSM, PAK3, PCCA, PRPH, RDH16, SNAP25, STK4, TAS2R42, TPMT, TSHB
Negative_6698	AK5, CBL, IDS, ME3, OSM, ACOX3, ACTG1, ADCY10, ADRB3, ALDOB, CD19, CHKA, COMT, CXCL11, DGKG, EHMT1, ENPP6, FCER1G, FUT4, GANAB, GBE1, GRIA3, KIR2DL2, MIOX, OR1A2, OR2M4, OR2T4, OR4N5, PDGFRB, PFN3, PRKCI, PRPH2, PTTG1, RAPGEF3, RASA1, TPMT, TSNARE1, ULBP2, UPP1, WNT2B, PDCD1LG2
Negative_6699	PLG, ACO2, ACTN4, AGPAT1, ATP4B, ATP5G3, C4BPA, CD40LG, CLTC, DAPK1, DMGDH, E2F5, ECHS1, EPAS1, EPHB2, EPHB4, FGF7, FUT9, HIBCH, HTRA2, ICAM2, IGF1R, KYNU, NAGS, NEU4, OR10A4, OR2A14, OR2A42, OR4C12, OR51A7, OR5C1, OR7A5, OR9I1, P2RX1, PARVG, PER2, PIGB, PIGS, PRKACG, PTPRB, RAPGEF1, SNW1, STAT5A, ATP6V1E1, HSP90AB1
Negative_6700	FYN, IHH, ADCY5, APC2, ARPC5, BET1L, CACNA1F, CCL1, CDKN1B, CLDN9, COL1A1, CYP2S1, DDX52, DIAPH3, DKK4, DLST, EXT2, GANAB, GLDC, GLI1, HDA, C2, HPSE, IGF1R, IRS4, LCP2, MCM7, OLR1, OR2F1, OR4D1, ORC6L, PER3, PLA2G3, PPP3CA, PRKCB, PRKG2, PTGES2, PTGS2, SOCS1, ST3GAL6, TUBB6, WNT10A, HLA-DQA2, TNFRSF13B

Negative_6701	GGH, IL7, KMO, ACP1, ADCY10, ARD1A, BCAR1, C7orf16, CCL8, CDH3, CLTB, CYP19A1, EXTL2, FGFR1, FIGF, GLDC, GNRH1, GSTK1, HEMK1, IL19, IL20, KIR2DL3, MARS2, MITF, MTAP, MYLK, OR11G2, OR1B1, OR2B2, OR51A7, OR56B4, OR8J3, PISD, SETD7, HSP90AA1, MAPKAPK3, TNFRSF10D
Negative_6702	DDO, SRC, TAT, TEC, ACSL3, ACYP1, ALDH3B2, AOC3, ATP12A, C1QB, CLDN15, CLDN4, DGKA, DPAGT1, EFNA1, GALNT5, GLUD1, GNAQ, GUCY2D, IDI1, IGF1R, IGSF5, KCNB1, LIAS, MASP1, METTL2B, NT5C1A, OR2D2, OR2H1, OR2T11, OR9A2, PFAS, PIP4K2B, PKLR, PLIN, PPP2CB, PVRL2, RBL1, STX2, TLR3, TYROBP, TYRP1, VAMP4, VAV1, WNT8B, CSNK1A1L, HLA-DRB3, PDCD1LG2
Negative_6703	CFI, F8, IHH, SRC, UBC, ATP4B, CACNA1F, CCNG2, CDH1, CLDN10, CYP7A1, DX41, DHRS3, FUT2, HSD17B1, IL11RA, IL28RA, ITGAX, MCM4, MYH2, NOTCH2, OR14I1, OR8D2, PSME2, SPRED1, SPRY3
Negative_6704	GHR, AADAT, ARG2, ATP6V0C, CCR2, CDKN2B, CSH1, CXCL1, FM02, FOXO1, FUT6, GARS, HTR4, IL22, INHBA, INHBE, JAG2, NFKBIA, NRG1, OR1A2, OR2F2, OR4N5, OR51A2, OR5AN1, P2RX3, P2RX7, PITX2, POLD4, POLR3K, PTEN, PYCR1, ROBO3, SETD1B, STX1A, TNFSF8, UGT2A1, WARS, AASDHPPT, CACNA2D3
Negative_6705	RFK, SFN, ACTA1, ADCY7, AKR1C2, ALAS1, ANAPC11, BMP2, CACNA1I, CHKB, COL2A1, CYP2C9, DDX4, EPHA1, GALNTL4, GNPAT1, GPAM, HTR6, IARS2, IL20RA, LAMB4, MAP2K1, NME4, OR10J5, OR2AG1, OR52R1, OR5M8, PHKB, PIGP, PLA2G5, PLK1, POLR1E, RELA, RELB, RPS6KA1, SLC9A1, SOX17, STAT5B, UNC5C, PAFAH1B1, SERPINA5
Negative_6706	ALG11, B3GAT2, BPNT1, CCL17, CHKB, CHRM1, CTPS, CYP2E1, DDX18, GDE1, NRG4, OR10A5, OR2AE1, OR2T2, OR5B17, PDE5A, SPI1, STAM2
Negative_6707	AK2, GSS, NPY, PAH, ACOX2, AKR1B1, ALG3, ATP6V0B, C5AR1, C9orf95, CCL17, CCNA2, CSF2RB, CXCL12, CYP11B1, CYP4F3, DCTD, ECSIT, FGF12, FGF9, G6PC, GNRHR, IL1A, LAMC2, MAN1A1, MYLK, NARS, NCKAP1, NEFH, NT5C2, NUDT12, OR10A2, OR10H3, OR10Q1, PAK3, PPA1, RCHY1, SIAH1, SMAD3, SRGAP3, STAT5A, SYNJ2, TAS2R41, TYRP1, UNC5D, WHSC1L1, WNT6
Negative_6708	GK2, IL8, ALDH6A1, ALOX12, ALPI, BCL2, BLVRA, CDC25A, CDIPT, CLDN7, CYP2F1, DLAT, DUSP5, EPOR, GNAS, GNRHR, HMGCS1, HSPA8, IL17B, IL17RB, IMPA2, ISYNA1, LIMK1, NAE1, OR52B4, PGK1, PIK3CA, PTPRC, SDC1, SPRY1, ST6GAL1, STAT1, SULT1E1, WNT9A, SUV420H2
Negative_6709	LPL, ALOX12B, GNG3, ICAM3, IMPA2, KLRC1, TOLLIP
Negative_6710	CNGB1, GALNS, HSP90B1, NCAM1, STAT5B, TAS2R4, ST6GALNAC5
Negative_6711	MPL, LIPF, PGLS, PPP2R2D, QARS, TSC2
Negative_6712	FGG, MPL, MPZ, ACOT11, ADH1B, B3GNT4, BMP5, CHIT1, COMT, CYBB, DDOST, FGFR1, INMT, KLK3, MAP2K2, MKNK2, MNX1, NCF2, NUDT5, OR11G2, OR1K1, PANK1, PDXP, PIP4K2C, PPP2CB, PTGFR, SMURF2, ST8SIA1, STX16, STX1A
Negative_6713	CTH, F5, SDS, AGXT, AKR1C4, ANGPTL4, CAMK2G, CD14, CLTB, DDX23, DGKZ, FGFR3, FOXA3, HSPB1, IARS, IFNA2, IL19, IL22, IL23A, IL6R, ITPKA, MYH7B, NCSTN, NFATC3, NUDT12, OR2S2, OR2T5, OR4P4, OR4Q3, OR6X1, OR7D4, PIGA, POLR2D, PSME1, SDHB, SLC25A6, SPTLC1, TLR3, TUBB4Q, ULBP1, ULBP3
Negative_6714	AK5, ABLIM1, ACAT2, ACSS1, ALAS1, AOC2, BLVRB, CCL8, CHEK1, CRHR1, CSH1, CYP2S1, DAG1, DTX4, EFNB3, GGT7, GPX5, GZMA, HLA-G, HMOX2, IFNA17, IL1B, KIR3DL2, NT5C, NTF4, ONECUT1, OR2M4, OR2Z1, OR4C12, OR4L1, OR52E4, OR5P3, PCK2, SETMAR, SRD5A1, WNT6, HLA-DQA2, SERPINA5
Negative_6715	NPL, CACNA1E, CACNG7, COL3A1, CTSL1, EP300, IL13RA2, KLRC3, LIMK1, NPAS2, OR6B2, PRKCZ, RALA, SOCS1, TOMM40L
Negative_6716	DCN, EDA, IL9, ACP5, ADH1A, ATP5G2, BIRC2, CDS2, CHKB, CX3CR1, FECH, HMGCL, IL18, ITGA2B, LYZL1, MAP3K13, OR2G3, OR3A2, OR51A4, OR56A1, OR5L2, OR7A5, OR9K2, OXSM, PERP, PLCG1, PRKAB2, PRKCE, RPRM, STAT1, STMN1, TICAM2, TLR5, HSD17B12

Negative_6717	B3GNT2, CDIPT, GRIN2A, HSD17B3
Negative_6718	HGD, NPY, OAT, ACTN1, ADCY4, ALDH3A1, B3GALT4, BCAT1, BMP5, CDC20, CTNNA2, CYP1A2, DUSP14, GLI3, GNB1, GSTO2, HNMT, INPP5A, MAGI3, MYH2, MYH6, NMNAT3, NTF3, OR10P1, OR13C3, OR1C1, OR2M2, OR2T33, OR5A1, OR5AR1, P2RX3, PDHA2, PHKB, PIGS, PPP2R2D, PRKAR2A, PTDSS2, PTPRR, RENBP, STAT5A, STAT6, TAS2R10, TAS2R7, TGFB2, WIF1, WNT1, TNFRSF10D
Negative_6719	FER, GNS, HK1, ID3, LTB, NPL, ARSD, CCND2, CCR2, CD59, CYP2A6, DGKB, DGKQ, DHFR, EHHADH, ETNK1, GCLC, GOSR2, HADH, IFNAR2, INSRR, ITGAL, KAT2B, MAML3, NMNAT1, NTRK1, OR10K2, OR2A42, OR7G1, OR8H3, PDCD1, PDGFR A, PLXNB1, PNLIP, PRKCA, ROBO1, SHC2, STX1A, TICAM1, TNFRSF17
Negative_6720	ADCY2, AHCYL2, ATP6V1F, B4GALT3, CACNA1G, CRKL, HYAL1, KRAS, MAP4K3, MGAT5B, MPZL1, OR2A25, OR2A42, OR51G1, OR51S1, RRAS, RUVBL1, TAS2R4, UXS1, WNT7A
Negative_6721	ANAPC4, AVPR1A, ENPP2, INPP5E, OR2T2, PLCG1
Negative_6722	DHH, GLS, ENTPD4, EXTL2, FLOT2, FTMT, HPRT1, KIR2DS5, OR2Z1, PDHB, POLD2, PRKG1, RALB, ATP6VOA1
Negative_6723	F2, ME2, PXN, AKR1C1, ATP5A1, ATP50, BCAR1, BLVRA, BMP2, CACNA1F, CACNA1H, ENTPD1, EPHA1, FABP1, GTSE1, HIF1A, IFNA17, INPP5E, NANP, OR10H1, OR11L1, OR2K2, OR4C11, OR6A2, PTPMT1, RERE, RHOA, SETD1A, SSH1, TAS2R10, TNFSF10, ULBP3, VARS, SERPINA5
Negative_6724	GHR, MTR, OAT, AKT2, ALG3, CAV2, CCL27, CCR6, CLDN17, COL3A1, EVI1, FTMT, FUT6, GPX5, GSTA1, GUSB, LAMA4, MAP3K7, MCM6, MDM2, MGAT4B, OR10AG1, OR7G1, P2RX1, PAFAH2, PDE1B, PTPRM, STK36
Negative_6725	AADAC, CCR10, CTNND1, CYP7A1, HMGCL, LRDD, MAP2K6, OR13C4, OR5K1, OR9A4, PDPK1, PDX1, PLIN, POLR2E, RRAS, TMLHE
Negative_6726	C7, IVD, ADRA1D, BDKRB1, CIITA, FGF20, MAP2K7, MCAT, OR4N2, OR5C1, OR9G4, OSMR, RAPGEF4, STK36, MAP3K7IP1, ST6GALNAC3
Negative_6727	MGAT5B, OR13A1, OR4D11, OR7G3, PGS1
Negative_6728	AMH, AR, CRK, IL4, PML, AARS, ACTN1, ADRA1A, ALAS2, BMP4, CACNG1, CBLC, CXCL2, CXCL9, DGKG, DHRS3, DUSP5, GGT7, IL29, IRF9, LPAR1, MAN1C1, MYH7, NCAM1, NCK2, NPR2, OR1A2, OR4K17, OR5D14, OR8B12, OR8K3, PEMT, PFKP, PNLIP, PPARG, PPP2R1B, PRKAA2, RAPGEF1, RASGRF1, THBS4, UNC5B, ATP6VOD2, CACNA2D3, ST6GALNAC4
Negative_6729	DHH, ACADL, ADH1B, CERK, DAPK3, DUSP8, ITGAL, NAGLU, OR13C8, OR13C9, OR4A15, PRKCZ, RERE, RHEB, SULT1A4
Negative_6730	PAH, ACVRL1, ADH6, CXCL11, FGF4, FLOT1, OR1D2, PIGF, PORCN, RFNG, SEMA4F, TAS1R1, HSD17B12
Negative_6731	MAG, RPE, ACPT, ANAPC2, CREB5, DLAT, ERO1L, FGFR1, GLI1, HRAS, OR1Q1, OR51G1, OR52N1
Negative_6732	BAD, ADCY10, ALG9, COL1A2, CSNK1D, FGF1, FZR1, GSTM2, LEFTY2, MAP3K3, NME6, OR1E1, OR2A42, PPP2R5D, SEMA4B, ST8SIA5, ULBP2, UNC5D, VCAM1, CSGALNACT2, ST6GALNAC6
Negative_6733	FGB, LIF, ARG2, CARS, DAXX, HRH1, IRF3, OR4C16, PLD1, PPP2R2A, WNT9A, MAPKAPK3
Negative_6734	F8, FER, MAX, AADAT, ADAM10, ADH1A, ADIPOR1, ADORA2A, CCL22, CCL25, CD55, CD70, CHPF, CNTNAP1, CYP2B6, DDB2, DHRS4, DHRS4L2, DPAGT1, ENTPD7, FARP2, FGFR1, GALNT1, GRIN1, ICAM1, IL12B, KIR2DS4, NRXN2, OR10H5, OR1L8, OR2F1, OR4K14, OR51F2, OR9G4, PECAM1, PFAS, PLCD1, POLR2B, PROC, RFXAP, SMAD3, SOX17, TGFB3, TLR9, TPH2, TSHB, UGT2A1, XCL2
Negative_6735	DAO, F5, PC, CCNA2, CD72, CDH1, CFTR, CLDN7, COQ5, CYP26B1, DHODH, DPYS, ENAH, FGF22, GRIN2C, GRPR, IL6ST, KIR2DL2, MAP3K12, NLGN1, OR1C1, OR4S2, PDHA1, PIAS1, PPARD, PPP1R3A, PPP2R5C, RBL2, TNFSF12, UCP1

Negative_6736	GGH, GP6, HK3, IL9, NLK, VCL, ACAA2, ADH5, ADRB3, ALG2, AOC3, APOA5, ARRB1, B4GALT6, BIRC5, CACNB1, CNGB1, COMT, CSNK1G2, FGF22, FIGF, HTR5A, ITGA4, LIFR, NEFH, NEUROD1, NT5C, OR10A3, OR52N4, OR5AC2, OR6X1, OR8B8, OR8D4, OR9Q2, PFKFB3, PIAS1, PPP1R1A, PRKAR2B, TCF7, TGFB2, CACNA2D3, HSP90AA1, SERPING1
Negative_6737	ACACB, ADCY5, CDK2, CLDN14, EDNRA, INHBB, NUMB, OXTR, PRKCH, RPS6KB2, STAT1, TM7SF2, TOMM40L, TRPM5, VEGFB, HLA-DPA1, PHOSPHO1
Negative_6738	GADD45G, HADH, POLR2H
Negative_6739	ILK, MPL, B3GAT2, BAAT, CARS, CCR3, GGT5, GLI1, GYS1, HPSE2, HSP90B1, IGSF5, IL12RB1, LCMT2, NOTCH3, OR2D2, OR6X1, PNPLA4, PRKCB, RRAS, TGFA, TLN1, TRIP10, TYK2, ATP6V1G3
Negative_6740	CBS, CFI, PRL, CD36, CD8B, CNDP1, CRY2, GALNT10, HNF4G, HTR7, ICAM3, PISD, POLA1, PPA1, PRKX, SCP2, SDHB, SESN1, STX8, TAS2R7, THY1, ST6GALNAC5
Negative_6741	INS, CDK7, FZD1, HEXA, NRXN3, NT5C1B, SRD5A2
Negative_6742	ADA, ADCY4, ADIPOR1, ALG8, AMY2A, BCMO1, CD244, CDC45L, COL11A1, CTSG, CYCS, EI24, GLO1, HSP90B1, IFNA21, IGF1, IKBKG, JAK2, MAD2L2, OR1D2, OR2T12, OR51E2, OR6B3, POLD2, PPCS, SLC27A4, SPRY4, TCIRG1, VANGL1, ST6GALNAC3
Negative_6743	A2M, GH2, GK2, INS, SMS, ACSS3, BIRC2, CACNG7, CD40, CSF1, DDX54, DNMT3A, E2F5, ENTPD3, EPHB3, ETNK2, FOXO1, GMPR2, ITGA2, LDHD, MAP4K3, NEFL, NRCAM, OR1E1, OR2H2, OR2M3, OR52E2, OR52I2, OR52N1, OR6C70, OR7D4, ORC3L, PDGFD, POLD4, RAPGEF3, SNAI2, TAS2R42, VANGL1
Negative_6744	AGL, DCC, LCT, ACADVL, ARHGEF6, AXIN1, B3GNT3, B4GALT1, CAMK2G, CARS2, CD99, CYP2S1, FMO4, IFNA4, IRAK4, LTA4H, NCR1, NFKB2, NRG2, OCLN, OR1G1, OR4C12, OR52B6, PLXNB3, PPM1A, PRKAG3, RPIA, SEMA4D, SIPA1, UCPI1, WASF1, WIF1, WNT11
Negative_6745	ADSL, CD01, CNGA4, COQ5, CREB5, FRAT2, GADD45B, GUK1, HA01, KRAS, PDK1, PERP, PRODH2, PLA2G12A, TNFRSF10A
Negative_6746	KMO, TK1, ABLIM3, ADRA1A, AKR1A1, ATF2, BMP8A, C1QC, CALML5, CASP8, CCL23, CCR4, CHUK, DPM2, ENTPD6, EPHA5, GNA14, GRIA2, INSR, LRP5, NCF1, OR10A7, OR2A4, OR4D1, OR8K3, PLAT, PRPH, RASGRF2, TLR5, UROD, ATP6V1C2, KIR2DL5A
Negative_6747	AMT, C9, IL5, INS, LAT, MPL, ABL2, ARNT, CCDC6, CCNG2, CD8A, CNGB1, DDB2, ENTPD2, ENTPD6, EPHX2, EXTL3, GALK2, GPAA1, GRIN2B, HSD11B2, IDH3A, IL1R1, IL23R, ITGA9, LRP6, MAPK8, MYH10, OR10A7, OR1D2, OR52B4, OR8K1, PI4KA, PSME1, RAP1B, RRAS2, SETD2, SHMT2, WBSCR22, XIAP, PHOSPHO1
Negative_6748	DCT, DHH, APLP1, ASPA, B4GALT2, CCR3, CD40LG, CES1, CSF3, CTBS, CTSL1, CYP2J2, DDX47, DGAT2, ENPP2, ERBB2, FGF14, FZD1, GALNT2, GFAP, GIT1, GRPR, GSTZ1, HMGCS1, HSPA8, LLGL2, LRP5, LRP6, NEU3, OR5H2, PDHB, PIGN, PIP4K2A, PPAP2A, PPP2R1B, PRSS2, RBKS, RFNG, SDC3, SMC1A, SRGAP3, ST3GAL5, TRIP10, VTI1A, WNT5B
Negative_6749	F7, ACADL, ADSSL1, ASMT, COQ5, FUT3, MAPK3, OR4E2, OR5AN1, PDE1B, PI4KA, PTEN, PTPN1, RPS6KA4, WNT10B, YWHAH
Negative_6750	BCR, IL5, AKT3, CPT2, IFNGR2, INPP4A, LICAM, NKD1, OR2T2, POLR3A, PPP2R1B, PRKAG2, RAB5A, RFNG, RPRM, STAT2, TLR9
Negative_6751	C1S, CARD11, CHST11, CLDN7, EPHA4, OR51B5, TPH1
Negative_6752	C8A, DCT, ILK, JUN, SI, APBB1, ARHGEF1, ATP5H, CAMK2B, CARS, CBR1, CCNB1, CD82, CDC7, CXCL11, DPM2, FGF9, GIT1, IMPDH1, NOX1, OR14J1, OR2S2, PIK3R4, PNPO, PRODH2, SCD5, SHMT1, THTPA, TNFSF18, TOMM40L, UCKL1, WARS2, MAPK8IP1
Negative_6753	AKR1D1, CDK6, PRKAG3, STAM

Negative_6754	ADO, AK1, AK2, C4B, ACSL5, BCAT2, BHMT, HSD17B7, ITGA8, KLRC1, NCR2, N FASC, OR1B1, OR1E1, OR1S2, OR2C1, OR51A4, OR52L1, OR5B12, OR5T3, PDC D1, PDE4A, PMM1, PNPLA3, POLE4, PTCH2, RERE, SDHC, SEMA3F, SUCLA2, UC P1, UGCG, SERPINE1, TNFRSF11B
Negative_6755	ID2, ALPL, ATP4A, CD40, CLDN8, CPT1A, DKK4, DLST, DUSP6, EHMT1, EPHB4 , ETNK1, GAB1, GUCY1A3, IRS4, NEU4, OR10AG1, OR1K1, OR1L6, PDE4A, SPT LC2, TBL1Y
Negative_6756	CD2, IL3, ADCY10, ANAPC7, ARHGEF7, B4GALT2, CSNK2A2, DEGS1, DUSP6, G GT7, HSD3B7, MAP4K3, MTHFR, OR2T12, OR6A2, PDE3B, PDIA4, PPM1D, PTTG 1, SCLY, SEMA4A, SMPD3, SPTLC2, TAS2R10, WWP1, TNFRSF13B
Negative_6757	IL7, ACSL1, CAV1, CD74, CSNK1G1, DDIT3, EGLN3, EXTL3, GSTA5, GSTT1, H DAC2, LILRB3, NAT6, OR4F17, OR8B12, OXTR, P2RX2, PIGN, PIK3CG, PRKY, RAC2, RETSAT, RPS6KB1, SDC1, TNFSF4
Negative_6758	PRL, ACPP, ACSS3, ACTB, ADCY1, ARPC4, BCAT2, BMP8B, BPNT1, CCR3, CCR4 , CLDN6, CYP26A1, EDNRB, EFNB1, GLUD2, GNAO1, KLK3, LHCGR, MCM5, NFAT C2, NODAL, NTRK1, OR10J3, OR2B11, OR2M2, OR51B4, OR51F2, OR52E4, OR5 D16, OR5T2, PIK3CA, POLR2F, PRKACG, PTPRJ, RAPGEF3, SDHB, SKP2, SLC2 A4, TRAF2, UCP1, WNT8A, YWHAZ, ALDH18A1, PPP1R12A, TNFRSF11B
Negative_6759	TNC, TPO, AKR1C3, AMPD1, CBR3, CCKAR, CNGB1, CSDA, EFNA2, ERBB4, ETS1 , F13B, FGF9, GYS1, HRH2, HTR2B, IPPK, KRAS, MAP4K4, MYLK3, NOTCH1, OR 8D1, PDE7A, PFKFB3, PIP5K3, PRKCQ, QARS, RPS6KA1, TFPI, UBE2L3, UGT2 B4, VANGL2, XCR1
Negative_6760	IL5, SP1, TH, ABCC8, ASAH1, B3GNT3, CDC23, CHST13, CRY1, CTTN, DPM3, G NA13, GNAI2, GTSE1, HAGH, ICAM1, KIR3DL3, MAP2K6, MCCC2, OR10A7, OR1 0J5, OR4D9, OR4N5, OR5H6, PAK4, PDE3B, PIGC, PLAT, POLE, RAB5A, RPRM, SEMA4D, THTPA, UNC5B, ATP6VOD1
Negative_6761	OR52M1, PPP1R3A, TUBB4Q
Negative_6762	F7, TPO, ACSM3, AGRN, AMPD1, BMP8B, CAPN2, CLCA4, CLDN1, CSF3, DDIT4, DDX54, FARP2, FRAT2, GNB3, GPT2, HNF4A, INPP4B, LDHC, NKD1, OR10T2, O R2G2, OR2H2, OR4B1, OR51G1, OR5B17, OR5D14, OR9G4, PAK7, PARVB, PER1 , PTPN5, RRM2B, SORD, SPHK1, ST3GAL1, STX10, THTPA, TSC1, YKT6
Negative_6763	CRH, F7, PAH, ABLIM2, ALOX15B, AMDHD1, AOX1, CASP10, CPS1, CYP2C19, D USP16, F13B, FARP2, IL23R, IRF7, NCKAP1L, NFE2L2, NT5C2, OR4F4, P2RX 2, PARVA, PTPN6, RPN1, SDC4, STAM2, TM7SF2, KIR2DL5A, SERPINF2
Negative_6764	LYN, BRAF, DUSP10, FCGR3B, JAK3, MGAT4A, OR52D1, OR6C74, PHKG1, PLXN B2, POLD1, PRKCA, SAT2, SOCS7, STAM, TNFRSF1A
Negative_6765	CAT, FYN, NNT, PML, AADAT, ACTB, AKT2, ANAPC10, ATF2, BTRC, CALML6, DT YMK, EHMT2, ENPP6, FGF7, FUT7, GJA1, GNA14, H6PD, HPSE, HSPA8, IL29, I L7R, LDHA, MCM7, MTMR1, OR10A4, OR13C8, PFKFB4, POLR1B, PPM1B, PRPH2 , RBL2, RPS6KA6, SH2D1A, TPH1, UMPS, VAV1
Negative_6766	APP, CKM, IL7, TH, ATP6V1H, BET1, C1GALT1, CCL23, CYP2C9, EHHADH, FUT 7, FZD3, FZD4, GSTO2, HCCS, HSD11B1, HSD17B8, HSP90B1, IL4R, LAMC1, L EFTY2, LTBR, MAP3K12, NCR1, OR4K14, OR5B17, OR6C74, PTSS2, SGMS1, S PI1, TAS2R60, TRAF6, ULBP3, VNN1, CSGALNACT2
Negative_6767	IHH, KIT, OTC, ACP1, ARD1A, ATF2, ATP2A3, ATP5H, CAMK2B, CLDN1, CLDN6 , COL5A1, CTPS, CXCL1, CYP3A4, DGKZ, EFNA5, ENTPD5, GRIA2, HRAS, IL15 RA, MAML1, NCK2, NT5C3, OR1N1, OR2D3, OR3A2, OR4C46, PHKG2, POLR2D, R PN2, RXRA, SARS, SDHD, SEMA4A, SLC12A2, SUV39H1, WASL, YES1
Negative_6768	C7, TK1, PNPLA4, USE1
Negative_6769	ASPA, CKS1B, DNMT3B, IKBKKG, OR13A1, TALD01, TRMT11, TYMS
Negative_6770	BNIP1, CTNNA1, FGF8, IFNA13, MDM4, MIOX, RDH5, RGS3, SCD5, SKP2, XYLT 1

Negative_6771	C4B, FAH, ID3, ACAA2, C7orf16, CAV1, DAD1, DHX58, DOLPP1, DVL3, ENTPD1, GALNT14, IFNAR2, IRS1, MAP3K7, MGST3, OR1J2, OR2A14, OR2G3, PIK3R4, PRKAR2A, SV2B, TRPM5, ZIC2
Negative_6772	ALDH3A2, BCKDHB, CACNA1I, CCNB3, CDC16, CXCL16, GADD45G, GUK1, MTHFS, PIM2, PLCB2, POLR3K, RAF1, UGT2B11
Negative_6773	FH, SRF, ADCY5, DDX19A, EXTL2, FGF17, GNAZ, ITGB5, JAG2, KIR2DL2, LEFTY2, MCM7, OR1A2, OR2Z1, OR6C70, PDE10A, POLR2F, PTDSS2, SMURF2, TRDMT1, ZMAT3, PLA2G12A
Negative_6774	A2M, CDA, HGF, TNN, ACOX1, ACSS3, ACTN1, CAMK2G, CFTR, COL4A6, CTSG, DCXR, DGUOK, EPHA7, FBXW11, ITGB8, MYH11, OR5L2, OR8H2, P2RX5, PNPO, PROCC, RHOD, TP53, PLA2G12A, TNFRSF14
Negative_6775	F11, ID1, ATP5E, B3GALT5, CACNA1D, CLDN15, CLDN18, CMPK1, CYP2A13, DKK2, FABP3, FGFR2, FOXO3, HBEGF, HRAS, IL10RB, LGMN, MGLL, NCOR2, NEFL, NUDT5, OR13C4, OR1S1, OR6K2, PARD6B, PFKFB4, POLR3H, PPOX, PTPN5, PTTG1, RAPGEF3, RFX5, RPS6KB1, SETD7, SLC12A2, SLC27A5, SMARCA2, SOCS7, TUBB, VAV3, WNT2, WNT5A, PFAH1B3, PDCD1LG2
Negative_6776	CBS, ACVR2B, ADH7, AHCY, ASAH1, BST1, CDC45L, CNGB1, DPYS, DRD5, EPB41L2, GRIA3, ICOS, MAPK9, OR14J1, OR2A25, OR2T2, OR4S1, OR8B8, PCCB, PFKFB4, PMM1, RASA2, SRD5A1, TPI1
Negative_6777	SI, AKR1D1, ALPI, CSNK1D, CTSL1, NMNAT2, P4HA1, PRPH2, SPCS3, SREBF1, TOMM40
Negative_6778	F5, AANAT, ACTA2, ARHGEF4, ATP5E, B3GNT3, CNTN2, COL11A1, CSDA, CYP8B1, DUSP8, FUT5, GMPPA, GRHPR, ITGB6, LCAT, LTBP1, MPST, NKX3-1, OR10A6, OR11H4, OR2M5, OR2T1, OR8S1, PARD6A, PER1, RDH11, SELE, SPRY2, STAM2, STX7, TAS2R40, TFDP1, UROC1, ATP6V0D2
Negative_6779	ADC, IL8, AKR1B10, ARPC1B, B3GNT5, CACNA1G, CHRM3, COQ6, DAXX, DTX1, EPHA8, HEXB, IL1R1, IL22RA2, IL28B, IRS2, MAML1, MAP3K1, MTHFD1L, MYLK2, NAE1, NAGA, OR4K15, OR4M2, OR51A2, OR52W1, OR5A1, OR8H1, ORC5L, PLD1, PPP1R3A, SMARCA2, SULT1A1, TBXA2R, TICAM1, ULK1
Negative_6780	GK2, KDR, AARS2, ACADVL, AGXT2, ALG6, ALPPL2, ATP4A, ATP5J2, AVPR1B, CBR1, CDC25A, CHST12, CSF1, DGAT2L4, DIAPH1, DKK4, FASLG, GADD45G, GALE, GIT1, GMPPA, GZMA, HMGCS1, LDHD, LIAS, MGAT4B, NEFH, NOX1, OR1D5, OR1G1, OR2G3, OR52N1, OR5B17, OR5M3, OR5T1, PLA1A, POLR3K, PPP2CB, PPP3CB, PRDX6, PTDSS2, PTPRB, PTTG1, XYLT2, TNFRSF14
Negative_6781	C7, CFI, DBH, GP6, CACNG3, CCNE1, DIAPH3, GALNT2, GALNTL1, GBE1, GNB1, GRIN2A, HADH, HLA-F, IARS2, IL1RAP, KIR3DL1, MAP3K14, MCCC1, NCF4, NME4, OR10Z1, OR1D5, OR1J1, OR1J4, OR6C76, PRKY, SRGAP3, SULT2B1, UGP2, ULK3, UPRT, WNT3A, YOD1
Negative_6782	CSK, ILK, LTB, ALDH1L1, ASPA, EFN2, EPHA1, GALNT8, NCOR2, NOX3, OR5D18
Negative_6783	HK3, LAT, ADORA2A, BMPR1A, CASP3, CNTFR, CSDA, CTF1, DGKB, DHRS9, FZD8, GNB1, HEXB, IAPP, NT5C, OR6C4, OR6C6, PANK2, PAPSS1, PIGK, PRKAB1, SYNJ2, TM7SF2, TP73
Negative_6784	C8G, AOC2, BAIAP2, CAMKK1, CDC16, EPAS1, ESAM, GNAZ, JUND, MGST1, OR1OZ1, OR2A5, OR3A3, OR51G2, SDHD, SKP2, SMAD2, TMLHE, UNC5D
Negative_6785	DCC, FER, ACSS3, CBLB, CCR5, CLDN18, DLL1, FGF8, GALNT2, GALT, GMPPA, IFNB1, LARS, NAGLU, NME6, OLR1, OR5H2, PANK1, PIGC, PLXNA1, PON2, PRKCZ, RFX5, RXRG, SPCS1, SULT1A4, TICAM2, TOMM40L
Negative_6786	OAT, OTC, ACACB, ACVR2B, ALDOC, BDNF, CHRDL, CLDN11, CNGA3, CYP2A6, FUT7, GALNTL2, GUCA1A, IDH3B, IFNK, IL9R, MAPK12, NCSTN, NEGR1, OR2F1, OR52B6, PAPSS1, PDGFA, RXRG, TPH2, UBE2K, UBE2L3, VAMP1, XCR1, YWHAG, ATP6V1C2, HLA-DRB3

Negative_6787	APP, C8B, CGN, CKM, DCT, PGP, TPO, CASP8, DAG1, DGKG, ETS1, FM01, HAGHL, LIAS, LRRC4C, MCM4, MYL9, NAGLU, NCK1, NCK2, NNMT, NRCAM, OR4C15, OR4D9, OR7G3, OXTR, PHKA1, PLXNC1, POLR2I, PPP2R5E, PTGER3, STEAP3, STX16, TACR3, TCF7L2, THBS1, ULK1, UPB1, VAV1, WNT10B, TNFRSF14
Negative_6788	DAO, PDC, ARHGAP5, ATG3, BMPR1B, CBR3, CCL1, CDC2, CREBBP, CXCR3, DIA, PH3, ENPP1, FGFR4, GRIA3, IL17A, INPP5E, ITPKB, KIR3DL2, KLRC3, MAD1L1, NGEF, NNMT, NUDT5, OR10G2, OR10T2, OR5AU1, PAX8, PCCA, PIGN, RAPGEF1, SDC1, SPRY2, STK3, TAS2R10, ATP6V1E2, TNFRSF10A, TNFRSF13C
Negative_6789	AVPR1B, CTNNB1, CTSG, DGAT1, GSTA1, KCNQ1, LMO7, PDGFB, PIGL, PMVK, PRKAA1
Negative_6790	ADK, AK7, IL3, PGD, ACSL6, AGPAT2, B3GALT2, BACE2, CD79A, CDC27, CDKN2B, CDO1, CLTC, COASY, CRY1, CYP1A1, EHMT2, EPB41L1, FLT3LG, ICAM2, KLBK1, LIPF, MAML3, NAT6, OR10R2, OR1Q1, OR51A2, OR51B5, OR52N1, OR6F1, PDE9A, PFKFB3, PFN3, PIGK, PIGN, PLCZ1, PLXNC1, PRPS1, PSEN1, RELB, SARS2, SHC2, SLC25A5, SORD, TAS2R48, TUBA3C, UCKL1, UGT2A1, ULBP3
Negative_6791	AGTR1, ANPEP, ARPC2, BRAF, CYP2D6, DPM3, H6PD, MAGI2, NFKB2, NT5C1A, OR10X1, OR1J1, OR56A3, OR6C4, PLA2G4A, PPOX, RASSF1
Negative_6792	ACADL, ACOT11, ACSL6, ADRB1, AGMAT, ALDH4A1, AMPD1, ARHGEF2, ARPC2, CCL22, CD74, CFL2, COL11A1, COL5A3, CSDA, CYP7A1, DKK1, EPHA4, GCNT4, GUSB, HDAC1, HTR2A, ICAM1, IKBKE, ITCH, LARS, NCKAP1, OR10G3, OR10X1, OR2T11, OR4C11, OR52L1, OR6B3, PPM1B, RASSF5, SETD8, SHC4, SNW1, SPHK1, STX18, SYNJ1, TAS2R50, TP53, TXNDC12, UGT2B11, XCL2, AASDHPPT, CACNA2D1
Negative_6793	CKM, AMPD1, CARD11, CREB3, CTBS, OR1E2, OR2T4, TIAM1, TPI1
Negative_6794	F8, GPT, HK1, ABL2, ACSL1, ARRB1, ATP6V0C, AXIN2, C7orf16, CACNB3, CMBL, CYP1A1, FLT4, IL7R, KIR2DS4, MGAT5, MYH11, OR10H1, OR1D5, OR5M9, OR9G4, PDE2A, PDGFRA, PLA2G6, PLXNB2, PRKAR2A, PRKX, SOCS3, TYROBP, UGT2B7, WNT7B
Negative_6795	HK3, ACTN1, AGXT2, CALML5, COQ6, CXCR6, DNMT3B, GMPPA, GSTM3, PPP2R2D, SKP1, VAMP1
Negative_6796	PTS, ACMSD, ALDH3A1, ALG1, ALOX12B, ALPL, ATP13A2, B3GALT1, BMP8A, CCL11, CD44, CD8A, CDIPT, COL4A2, COQ7, DHRS4L2, DHRS9, FBXW11, HRH2, IFNA4, LEF1, MCCC1, OR1N1, OR2A2, OR7A17, PHKA2, PLCB4, POLE3, POLE4, PRKCB, RFXAP, SHC3, TNXB, VKORC1, YARS
Negative_6797	LAT, GCH1, GNA12, HMOX1, IL1B, NKD1, PRKY, TNFRSF4
Negative_6798	ABO, BCR, MUT, ACSM5, AKR1C1, ATP13A2, CDC26, CDO1, CLDN6, COMT, CSNK1G3, DGKB, FCGR3B, GALNT10, GRHPR, HLA-G, IGSF5, IL11, IL13RA1, IL17RA, L1CAM, LYPLA2, MTHFS, NME2, NUDT2, OR10G8, OR2A25, OR2M5, OR4C6, OR4M1, OR51D1, OR52E4, OR5F1, POLR1A, POLR1E, PRKAB1, PRKACG, PYCRL, RDH5, RUNX1T1, SMPD3, SULT1A2, TAS2R1, TNFRSF9, TRAF1, HLA-DRB5
Negative_6799	C3, IL8, MOS, CCL16, CDO1, CHKA, DPM3, GALNTL4, HNF1A, IL6ST, MAP4K4, NCKAP1L, OR5L2, PLCB2, SLC2A1
Negative_6800	DLD, DUT, PML, ACSL1, CARD11, CYP1A2, CYP4F3, DPYD, F2RL3, FZD4, GNAQ, GNAZ, JAK3, NT5C2, OR1M1, OR2D2, OR2M3, OR6Q1, OR6T1, PIK3R2, PLA2G6, PRKAG3, RBL1, RFXAP, UROD, WASF1, PAFAH1B2, PNLIPRP1, ST6GALNAC5
Negative_6801	ACACA, APAF1, ASMT, FUT1, OR11G2, SESN1, PPP1R12A
Negative_6802	VCL, VTN, ACSM4, AGRP, AHCY, ARHGEF1, BAIAP2, CDKN1C, CHD8, CTSS, CYP2F1, DCXR, DHRS4L2, GNA12, HSD17B7, IL28A, INPP1, IRF3, LAMB3, MAP3K3, MFNG, MYLK2, OR14I1, OR4K5, OR52K2, OR8K3, OR8U1, PAK2, PDE9A, PHK1, SDHA, SMPD4, UGCGL2, WHSC1, WNT4

Negative_6803	AUH, CBS, LPO, SP1, ACSM2A, ADSL, ANAPC10, C1GALT1, C5AR1, CBR3, CDC20, CDKN1B, CTTN, DIAPH2, FGF10, GALE, GNAS, GNG3, HLA-DRA, IL19, IL5RA, ITGB2, LAMB2, LILRB3, OR13C4, OR1J4, OR2C3, OR2S2, OR6C2, OR8J1, PCCB, PGK2, PIGA, PIGU, PON1, SETMAR, STAT3, THY1, TPMT, TUBB3, UCK1, TNFRSF11B
Negative_6804	AHCY, ARG2, CIITA, GRIN2A, HAGHL, RALGDS, RENBP, SNW1
Negative_6805	EDA, GH1, IVD, LCT, RB1, ABAT, ALDH1B1, ALG11, CCL15, CLDN16, CYP2C19, CYP4F3, EXOC7, FMO4, FZD4, GALNS, GALNTL2, GNB3, HEXB, HTRA2, KIR3DL3, LIPC, MAP3K13, MGAT2, NFYC, NR1H3, OR1J1, OR8K5, P2RX6, PHGDH, PLCB3, POLA2, PPARG, PRKACB, PTCRA, RRAS2, SLC2A1, TAP2, UPP2, PDCD1LG2
Negative_6806	IVD, DNMT3L, FLOT2, GALNTL1, GTSE1, MAP2K3, OR52B4, PCYT1A, PGAP1, PRKG1, SCD5
Negative_6807	ESPL1, GCNT2, OR5A2, UMPS
Negative_6808	ID4, MTR, PTS, ALG8, CLDN4, CLOCK, CYP2C18, DHRS4, E2F4, GAD1, GP1BA, GPAA1, GRIN2C, GSTA3, HAO2, HMGCS1, IFNA2, IL13RA1, ITGA9, MAD2L1, MTFMT, MYLK3, NAT6, NOTCH2, PARD6A, PIAS4, PPP2R5A, PRKG1, PTPMT1, SHC3, STX4, SUCLG1, TAS2R4
Negative_6809	AK3, CAD, F2R, GCK, VCL, ACSM5, AGPAT1, CACNA1D, CSNK2B, FUT3, GNG3, HSPA2, IL17RA, MLYCD, NCF1, OR2C3, OR6C4, OXCT2, PIGS, RAPGEF2, SMAD4, TYK2, UGT2B11
Negative_6810	ATM, EPO, GH1, SPN, ACP2, C3orf10, CCNA2, CDKN2C, COL1A2, CSNK2A1, CXCL3, DGKZ, EARS2, ECHS1, F2RL1, FGF19, GSK3B, IFNA13, ITGAD, MAPK12, NFE2L2, NRG4, NRXN1, NTN1, OCRL, OR10J5, OR4K5, OR52H1, PIGA, POLR2F, RALGDS, TOLLIP, UBE2L3, ARHGEF12, ATP6V1E1
Negative_6811	FGF6, HIBCH, HNF1A, IL11, OR52I2, SKP1, SMAD9, TAS2R50, USE1
Negative_6812	GH1, ID1, ILK, NOG, ALDH3A2, ASPA, ASRGL1, ATP5L, B3GALT2, BDNF, CDIPT, CHST12, CXCL11, CYP3A4, DHODH, DOT1L, DPYSL2, DVL2, EPHA5, GART, GSTO2, GUCY1B3, IL8RB, ITGAX, ITPKA, NCK2, NT5C1B, OR10K1, OR1J1, P2RX1, PLXNA3, POLD2, PON2, RALGDS, SHISA5, SOCS2, SRGAP1, STK11, STX3, TPK1, UGT2B4, VTI1B, YKT6, ATP6VOD2
Negative_6813	C7, HGF, MPZ, AHCYL2, AXIN2, CASP10, CDC14B, CDC25C, CLTB, COL4A6, CYP3A4, DAAM1, DKK2, FGF22, FGF4, GANC, GNAO1, GNAS, HMGCR, IARS, IFNK, IL13RA2, IL17RB, IL21, IRS2, ISYNA1, KCNJ11, KLRC1, LDHC, MAP2K6, MAP3K11, MAPK9, OR13A1, OR1S1, OR4C11, OR4S1, OR5H6, OR5P2, PAPSS2, PIK3C2A, POLR3K, PPAP2A, PPAP2B, PTAFR, PTGFR, VKORC1, ATP6V1C2
Negative_6814	AK3, SYK, TNC, ACMSD, ARPC3, ATP6VOB, CHPF, CREB3L1, CTTN, DPYS, G6PC2, GCNT4, GJD2, HHEX, ITGA1, LMO7, MAP2K1, MYL2, OR14A16, OR1E1, OR2AT4, OR51I1, P2RX3, ROBO2, RPS6KA6, SARS, SELL, SLC2A2, SV2A, B3GALNT1, PAFAH1B1
Negative_6815	ATM, FER, TPR, ACACA, BCAT2, CPT1B, CTSG, DAAM2, DNMT1, EIF4B, EXT1, FGF6, FGFR2, GOT1, HCLS1, IARS2, ICOS, IL4R, ITGAE, LAMC1, NCR2, NFE2L2, NGEF, NRG4, NTRK2, OR4N2, PER2, PPP2CA, PRKAR2B, PTSS2, SSH2, ST3GAL2, ST3GAL6, STEAP3, SV2B, TCF7, TYROBP, ATP6V1E1, TNFRSF13B, TNFRSF13C, TNFRSF1B
Negative_6816	ANAPC2, BUB1B, CISH, CYP2U1, ENTPD5, FTCD, HARS2, HTR5A, IL13RA1, ITGB1, MTMR6, ODC1, OR4C15, P2RX5, PIK3C2B, PLA2G2F, PPP3CB, RAB5A, RBPJL, RFWD2, SEMA3D, SMPD1, TRAF5, TRDMT1, UGT2A3
Negative_6817	ACYP1, ATP5L, DPAGT1, FRAP1, IL13, IMPDH1, MAP3K14, NCSTN, SSX2IP, SULT1A2, WNT4
Negative_6818	CHUK, COL4A1, DARS, DPYD, GLB1, GNAL, GNAS, GRM5, INPP4B, JAK3, NEU1, PER3, PI4KA, POLR2L, PPP2R5B, PVRL4, SFRP1, STX16, YWHAB



Negative_6819	TPR, A4GALT, ACHE, ACY3, ADAM17, AGTR1, ALDH3B2, AREG, ARSB, ATG3, C5AR1, CDH15, CFL1, CMBL, DUSP9, ECHS1, ENAH, EXT2, FARP2, FGF18, FGF4, GLS2, MAP3K4, MINPP1, OR11G2, OR2Z1, PCNA, PDE4C, PDE6H, PIGN, PITX2, PRKAA1, PRKG2, PSEN2, RAPGEF2, RDH16, STK3, TRAF1, WNT7A, WNT8B, WNT9A, HLA-DRB4, TNFRSF11A
Negative_6820	CRK, OGT, ANGPTL4, ASS1, ATP5J2, CHD8, FGF8, IARS2, MYL7, MYL9, OR10A6, OR10G8, OR7G3, TSTA3, UPB1, TNFRSF12A
Negative_6821	PGD, ARPC4, CACNA1G, CAPN2, COL6A1, CRHR1, CTSG, DGKB, EXTL3, FZD6, GAMT, HPRT1, ITGA4, OR2A12, OR2G3, OR2T12, OR4N2, ORC3L, PRIM2, RAD51, SEMA4C, SMAD9, STX12, TUBB, WASL
Negative_6822	LPO, AGPAT1, AGPAT2, AOC2, CACNG5, CYP3A4, DLL1, ENO1, ERO1L, GGT1, HARS2, OR6K6, PLA2G3, POLR2B, SOD1, SUOX
Negative_6823	DCN, ID4, LCT, NGF, ABLIM1, B4GALT7, BIRC2, CCR4, CTTN, CYFIP1, CYP3A7, DOLPP1, GALNTL4, GNA11, LYPLA2, MDM4, NOTCH2, OR11L1, OR1N1, OR2L2, OR7A10, PLCB1, PON3, PPP3R2, PSAT1, PTK2, RAF1, SEMA4B, VANGL1, WBSCR22
Negative_6824	C2, EZR, TAT, ALDH2, ALDH9A1, ATN1, BDKRB2, CAV1, CCL22, CCL4, CD8A, CDH2, CLDN4, CLDN5, CYCS, DGAT1, DPM2, DUSP7, ENAH, F2RL1, FADS2, FLT3, FMO5, GDE1, ITGAE, MAP2K6, MASP2, NTRK1, OR2T6, OR4D5, OR51L1, OR52D1, P2RX6, POLR1A, PRKACB, PRKY, RUVBL1, ST8SIA5, TJP2
Negative_6825	FST, ID1, ATP6V1F, BMP7, CES1, CTSP2, FMO2, GALNT6, GRHPR, IGSF5, MAOA, MECR, NRG4, NT5C, OR11H4, OR52J3, OR52W1, PDE9A, PFN3, PLAT, POLR1B, POLR2F, PPAP2C, PRSS1, RPS6KA5, STAM, XYLB, B3GALNT1, HLA-DPA1
Negative_6826	ANAPC1, ARPC5, ATP4A, BMP7, CXCL16, CYP4A22, IL2RG, MTHFD2, OCLN, OR2L2, OR4D6, OR4K15, SV2A, WWP1
Negative_6827	FER, MVD, ARPC1A, B3GAT3, BMPR2, CCL20, CD01, DDHD1, DLAT, DPM2, EIF4B, FZD5, GNAZ, IDI2, IL1RAP, IRF7, MAOA, MAP4K3, NMNAT3, OGDHL, OR1C1, OR2AT4, OR51G2, ORC5L, OSMR, PARD3, PDGFRA, PDK1, PER2, PGAM1, PON3, RALA, SEMA3G, SSX2IP, STMN1, SULT1E1, SULT2B1, TOMM40L, PDCD1LG2, SERPINF2
Negative_6828	CREB1, EREG, OR6C75, OR8H1, PPP3R2, RPS6
Negative_6829	DHH, F12, FYN, TFG, TPO, ACSM5, AHCY, ALPP, BLNK, BMP8A, CCNE2, CHSY1, CKS1B, CLDN10, CNDP1, CTNNA3, CYP21A2, ENTPD6, FGF21, GNA14, HADH, HAGH, HPSE2, MPZL1, NFKBIB, NOTCH2, OR4P4, OR8H3, OR8U1, PDHA2, PIM1, PLA2G10, PPM1D, PSEN1, PVRL3, RBKS, RCHY1, RXRG, SEMA7A, SNW1, TBXA2R, TJP1, VCAM1, GABARAPL1
Negative_6830	F5, IVD, ACADS, ATP5J, B3GNT2, C1QB, CADM3, CASP3, CCNG2, CHRNA7, DIAPH1, DPAGT1, E2F4, FGF19, GADD45G, GALNT9, GARS, GIT1, GMPPB, HADHB, IL11, IL17RB, KLRC3, MAD2L1, MCM6, MTAP, OR4A16, PFKFB1, PIAS4, PIK3R3, POLR3K, PSME1, PTSS1, SPTLC1, STX1B, TNFSF18, UMPS, XYLT2, CACNA2D3, HLA-DRB3, TNFRSF17
Negative_6831	AASDH, CD99, DLAT, GUCA1A, IKBKE, OR13H1, PARD6G, PDHA1, PRKAR2A, PTN1, PTPRR, RASGRP3
Negative_6832	INS, TK1, AASDH, CARS, GALNTL5, GALT, GSTM5, OR4D9, PIK3CB, PORCN, RFD2, RGS3, CTNBP1
Negative_6833	ADH1B, ALS2, DDX52, ENTPD3, INHBC, OR2B11, PKM2, UCK2
Negative_6834	C2, JUP, CCL8, CHDH, CX3CR1, GRIN2B, IRF3, MAN1A1, NAMPT, OR10AD1, PMM1, SESN3, TLN1, TUBB2A, YWHAZ, ZIC2
Negative_6835	AMT, IHH, PAH, AGXT2, BPGM, CNGA4, COL5A3, DDIT3, FGF6, GGCX, L1CAM, OR56A3, PRPH, RASGRP2, RETSAT, ST3GAL5, TAS1R1, YWHAZ
Negative_6836	AXIN1, BNIP1, CXCR3, EPHA8, GUSB, IL15RA, IL9R, INHBC, PPAP2A, TBK1, TJP3

Negative_6837	ACTC1, ADRB1, ALG11, ATP6AP1, B4GALT5, BUB1, CES2, CHEK2, CHSY3, CNTN1, COL1A1, CXCL1, CYP11B1, ERBB2, FLT3, GLG1, MYH11, MYL7, OR8J1, PAK6, PGLS, PHKA2, PLA2G10, PSME2, RAP1A, RCHY1, STX3, TCF7L1
Negative_6838	ADAM17, BMP5, CALML5, CCKAR, CMBL, CNTNAP1, DCTD, DLAT, DUSP9, ECSIT, GMD5, IL17B, IL1R1, IQGAP2, LRP6, MAPT, MBL2, NTSR1, OR2B6, OR51E1, OR8B4, OXSM, PIGP, PRDX6, TYRP1, UNC5D, WNT7A, YWHAE, ARHGEF12
Negative_6839	FGB, ABL1, ACTN2, ALPP, ARPC1A, ATP5F1, B3GALT6, CX3CR1, FGF2, GP1BB, IL10, MAP2K6, NT5M, OR5B17, STK3, TGFA, UNC5B, ATP6VOA1, PRICKLE2
Negative_6840	C4B, ME2, AGPAT3, APOE, ATP6V0B, B4GALT1, CCNG1, CKS1B, CSH1, CTLA4, DDIT3, E2F2, FZD8, GANAB, GNA15, LYPLA2, MCM6, OR10G8, OR14C36, OR7G1, RAPGEF4, RBX1, SCLY, SREBF1, SRGAP2, TUBA1A, UGT2B4, YWHAE, HLA-DRB5, TNFRSF1B
Negative_6841	ACAA1, CTNNB1, OR14J1, PRODH, RASSF1
Negative_6842	BTK, F11, GNE, ME2, ACAA2, ALCAM, ALOX5, ANPEP, APOA1, ATN1, B3GAT3, B3GNT5, CDC7, CDH2, CRKL, GSTP1, HLA-F, HMGCR, IL1RAP, ITGA7, KAT2A, LIPA, LRP6, LTA4H, MAPT, NRG2, NSDHL, OR2AG2, OR4S1, OR51A4, OR7A10, OR7A17, PARD6B, POMC, PRKCQ, RFXANK, SLIT2, SORD, STAT5B, THBD, UGP2, ALDH18A1
Negative_6843	BTC, BTD, C1S, IL3, IL7, LPL, APOC3, ARRB1, CCL24, CHEK1, CHSY3, COL5A1, EREG, FDPS, FGF5, GNPDA2, GPAM, GRAP2, GRIA2, HEXA, IDH3G, IL1R2, ITGAL, MAML2, MAN2A1, MGAM, MGAT2, NFYA, OR4D11, PIP4K2C, POLD4, PPAP2C, PPP2R1A, RASA1, SETD7, SKP2, SQLE, TYRP1, ZIC2, ATP6V1B2
Negative_6844	AOX1, CD40LG, CDC27, CKMT2, DLAT, GALNT11, HEMK1, INHBE, KNG1, NOTCH1, PFKFB3, PRODH, SYNJ2, TAS2R40, WNT1
Negative_6845	FST, TNN, A4GALT, ALDH1A1, APAF1, ATP6V1A, B4GALT4, CCKBR, CD99, CKS1B, CYP1A1, CYP26B1, DDB2, DGAT2L4, DUSP3, EFNA4, GALNT5, GNAZ, GNMT, HSPB1, IFNA8, IL24, METTL6, MFNG, NFKB1, OR2C1, OR2L2, OR4A16, OR4N2, OR51M1, OR52B4, OR52I1, OR5J2, OR5R1, PAK2, PDE6G, PDGFRA, PIGS, PIP5K1B, PLD1, PTPN6, RASGRP3, SARS2, SETD8, SGPP2, SRGAP3, ATP6VOE1
Negative_6846	CGA, ACSS3, ANPEP, APOA2, ARG2, CAMK2A, CLCF1, CNTN2, DDHD1, DDX19A, FGFR3, FOXO3, IGFBP3, MAP2K1, MAP4K3, MCEE, OR10H2, OR2F2, PERP, PRKAR1A, PRODH, TRAF6, TSNARE1, WNT11
Negative_6847	A4GALT, ADH1A, ADRB3, ATP12A, ATP13A2, ATP6V1D, BCAT2, BMP5, CREB3L2, CXCL13, CYP2C19, DDX4, ECHS1, FGF9, GMPS, HYAL2, IFNGR1, IL8RA, KIR3DL1, LAMB1, LTB4R2, LYZL1, MASP2, MYH4, NTRK1, OR10A4, OR10P1, OR2H2, OR2T34, PFAS, PIGH, PNPLA3, PNPO, POLR2A, PRKAR2A, PROS1, PTDSS2, PTGER3, PTK2, SC4MOL, SDHD, TNFSF4, TUBB2C
Negative_6848	LIF, ABCC8, ACSS2, ADH7, CHST12, CMPK1, COQ5, CPOX, CSF2RB, CTPS2, CYBB, CYP21A2, DDX52, DGKG, E2F5, FZD4, GNAO1, IKBKB, JAM2, NEU3, NFKB1A, NKD2, TSNARE1, TUBA1A, HLA-DPA1, PLA2G12A, TNFRSF10A
Negative_6849	ACSL6, ACSM3, ATG3, B3GALT2, CCL27, CD80, COL6A1, EFN1, EREG, PDX1, PFKFB4, PLCD4, PRIM2, RASSF1, SARS, TUBB4Q, UPRT, ATP6V1G2, HLA-DRB4
Negative_6850	DCN, IL8, ACTC1, ADH6, ATP5F1, CREB5, GRIN2D, IARS, ITPK1, NKX3-1, PIGQ, PIK3CG, PRPS1, RARS, SCLY, SDHC, SFRP2, SMPD4, TGFBR2
Negative_6851	FGG, CD99, CSDA, CYP11B1, EP300, FLT3LG, HADH, HEXA, ICAM1, NCKAP1, OR4D5, OR5L1, OR7A10, PFKFB3, PLCB1, PYGM, TCIRG1, WHSC1
Negative_6852	OSM, ARSA, ASIP, CCL8, CDKN2A, CYP7A1, DARS, DGAT2, E2F2, ESPL1, FGF18, GLUL, GRIN2D, HPRT1, IFNGR2, INMT, IQGAP2, ITGAD, MAP2K1, NFATC2, OR10A3, OR52D1, OR5M3, PFKP, PLOD2, PPM1A, PRKAB2, PRKG2, PROS1, PRPS2, SMAD7, STX4, TAS2R9, TGFBR2, TOMM40L, TP73, WNT3, YWHAE, PLA2G12B, PNLIPRP2

Negative_6853	IDS, ACLY, ALDH1A2, ANGPTL4, CDC25C, CDS2, CTF1, CTLA4, G6PC, G6GT1, GRM5, GSTM4, HDAC2, HMBS, MCCC1, NME2, NME4, OR2L8, OR2Z1, PLCG2, PTA FR, QPRT, RASA1, SGPP2, SH2D1B, SHC2, TAS1R1, TAS2R60, TCIRG1, TDO2, TKTL2, UGT1A10, WNT4, ARHGEF12
Negative_6854	BID, FGG, GK, MSN, ADCY10, ADSS, ARSB, ASMT, ASNS, B3GAT2, BUB1, CSNK1 G1, CTPS2, CXCL11, DUSP3, GPLD1, GUCY2C, GUCY2F, INHBE, ISYNA1, MYL2 , OR10G8, OR1L8, OR2M2, OR52E2, OR52E8, OR7D4, PHKG1, PIPOX, RDH12, R DH16, SLIT2, SOAT1, SYNJ1, TUBA4A, TUBB3, PNLIPRP1, SERPINE1, TNFRS F11B
Negative_6855	MET, ACSL3, ACYP2, APAF1, B3GNT3, CD58, CHAD, DDX18, FZD4, GCNT2, GST A3, HHIP, HTR2C, IL6ST, ITGAD, LAMB4, MAOB, MYL9, NUDT5, OR6M1, PDXK, PSPH, SAT1, TICAM2, UBE2L3, VCAM1
Negative_6856	BCR, DCN, ACTA2, ADCY3, AOC3, C4BPA, CCNB1, CHUK, CYP2E1, DCTN1, DDOS T, DIAPH3, EFNB3, EPHA6, FABP3, FOXO1, FUT1, GANC, GSTO2, HLA- C, KIR3DL3, KLK3, MAN2A1, MCM7, MTFMT, MYL5, NOX3, OR1D5, OR2D2, OR51 Q1, PAK1, PDE1B, PDGFD, PLA2G2A, PLEKHA8, POLR1D, PRKAA1, PTGDS, PTG S1, PTTG1, STK36, TLN1, ULBP3, ATP6VOA4, MAPK8IP3
Negative_6857	KMO, FLAD1, HMBS, MAPK7, NGEF, NKX2- 2, PDE4D, PFKFB2, PIP5K1C, PLXNA2, PRKY, RASA2, SHC4, ULK1, CTNNBIP1
Negative_6858	DCT, RFK, ACAD9, CREBBP, CTNNA1, CXCL6, F2RL3, G6GT1, HNF4G, IL20, LG MN, OR2A5, PFKM, SLC2A4, SOCS5, ULK3
Negative_6859	CD6, PGF, SRF, AMDHD2, BAI1, BMPR2, BRAF, CACNG3, CNTN1, CPT1B, CXCR4 , CYP4A11, DPYS, ERBB2, F2RL2, FBXW11, FPGS, FTCD, GOSR2, GYS2, H6PD, IDI2, INMT, IRAK4, ITGA3, LCMT1, LGMN, NKD1, NPAS2, OR2AG1, OR4D11, O R4K2, OR5A51, PFKFB4, PIP4K2B, PKM2, PLA2G10, POLE, RXRG, SARS, SEMA 3C, SMPD1, TRHR, TRMT11, TSHR, VASP, WASL, WNT3A, HSP90AB1
Negative_6860	C7, CDA, F9, ACVR2B, AHCYL1, ALG3, ALG6, ATF2, ATP5C1, CD99, CDC45L, D DX19A, DGKD, DUSP10, FLOT1, GABARAP, GLI3, GOSR2, IKBKG, IL18, INPP4 B, ITGAX, NCAM2, NRCAM, OR10Q1, OR2L13, OR4D6, OR5C1, OR6N1, OR9Q2, P DGFC, PDHB, PIP5K1B, PLA1A, PPCDC, PPID, PPP1R3C, PPP3R1, PYGL, RAC1 , RBL2, SNAP23, ST3GAL2, TACR3, TAS2R42, TNFRSF4, UNC5C, ATP6V1B1
Negative_6861	C7, JUN, ABAT, APPL1, CKS1B, CSF3R, CYP4F3, DKK4, DPM1, EPHB3, FASN, F GD3, GAS1, GGT1, GRHPR, HLA- F, HSPA1B, HTR4, IL1B, IRAK1, ITGB7, LALBA, LDHC, LTB4R2, MAP4K2, MAP K1, MMP7, MYH13, OR4C16, PDXP, PLK1, RAC3, RASSF5, RHOQ, SOCS5, STX2, UGT8, UMPS, CACNA2D2
Negative_6862	C4B, ID2, ANAPC4, CACNA1B, CDKN2B, CLDN15, CLDN18, CNGB1, CSF2, CXCR 6, DHODH, DKK4, EPHB1, FGF8, GOT1, GRM5, HIF1A, JAM2, LAMC3, MAGI3, MT HFS, MYH2, NFAT5, NLGN2, OR1Q1, PAICS, PDE5A, RHOQ, SGMS1, SMARCA5, S PRY3, THBS2, TSNARE1, HLA-DQA2, TNFRSF12A
Negative_6863	IHH, NF1, ATP5C1, ENTPD4, GLI3, LTC4S, NOS3, SMURF1
Negative_6864	CRH, ARHGEF4, ATF2, AVPR1A, CACNA1H, CACNG5, CCL4, COL1A2, COL4A6, C YP2U1, DHRS3, E2F4, FRAT1, FUT1, G6PC, GARS, GGT1, GMPR, ITGAX, LTBR, MAP3K11, MYH2, NCF1, NEU1, OR10G4, OR10H4, OR10J1, OR10Q1, OR13C3, O R13C5, OR7D4, PDK1, PLTP, SEMA3B, SIPA1, STAT2, THY1, TOLLIP, TRAF6, KIR2DL5A
Negative_6865	TK2, TNF, C7orf16, CCNB1, CDIPT, DDHD1, DPAGT1, EHHADH, FGF17, GALC, GALNT9, HADH, HEXB, IFNG, KIR3DL1, MAP3K7, NNMT, NRG4, OR10Z1, OR4K5 , OR51G2, OR6C75, OR6S1, PDE10A, PGS1, PIK3C2A, PIP4K2C, PRKCD, PRKC H, PTPRB, PTPRJ, PVRL2, SHC2, TLR4, UGT2B11, ULK3, ARHGEF12, ST6GALN AC4
Negative_6866	ATG7, CYP11A1, ENTPD6, FZR1, GALT, IFNA7, MYL5, NCF4, NCSTN, OR13C2, OXCT1, PLA2G4A, SEMA3E, WNT10B

Negative_6867	AMT, KMO, SFN, SYK, ALDOA, CHR1, CYP3A7, DTX3, DUSP8, EP300, FGF12, GALNT11, GGT5, GMPBB, GRHRP, HMOX2, IFNAR1, IFT57, IL8RA, ITGA4, MGAT3, NTN1, OR10A3, PAK2, PHKG2, PIAS4, PIK3R3, POLR2D, PPID, RHOD, SEMA4D, YARS2, ATP6V0E1
Negative_6868	EDA, ALAS2, ARSB, BMP6, C1QB, CCNG2, CD58, CLDN10, FZR1, OR51B5, PON1, RBL2, SMC1A, THBS4
Negative_6869	ALDH1A2, CCKBR, CCNB3, CHKB, CYP2C8, E2F2, ENO1, GRM1, MTFMT, OR4N4, OR5AS1, PARD6G, PPAT, SPAM1, SLC25A31
Negative_6870	ACAT1, ADCY1, CCL3, CD226, FLOT1, OR11L1, PPP1R1A, PVRL4
Negative_6871	AK2, APLP1, CHST12, DPYSL2, FUT2, GALE, GFPT2, GNAI2, MAP3K7, OR10X1, OR4C16, OR4X1, OR52D1, PHKA2, SEMA3B, STK3, SUOX, WNT10B, YWHAZ
Negative_6872	ACTG1, CCR8, HLCS
Negative_6873	GNS, WAS, ANAPC7, BRAF, CTNNA3, CYP11B2, DAAM2, DBF4, EFNA3, EPRS, FCGR3A, FLT3LG, GNRH2, H6PD, INSR, ITGA3, OR10C1, OR2AE1, OR4K14, OR51M1, OR5B3, OR8D1, PIGS, PLXNB2, POLR3A, PRSS3, RND1, SAT1, SMAD4, TAS2R1, TFPI, TLR3, ULK1, WBSR22, MAPK8IP2
Negative_6874	GK2, IVD, OSM, ACYP2, ATP5C1, BACE2, CHIT1, CTSL1, CXCL12, CYP1B1, CYP2B6, ETNK1, FCGR3A, GLI1, IDUA, IL28B, IMPDH2, MDH1, OR52B6, OR5AR1, PDHB, RARS2, SLC25A6, SMURF1, STX12, SUOX, TAP2, TAS2R41, TIRAP, TM7SF2, TP53, VEGFC, WNT6, WNT8A, MAP3K7IP2
Negative_6875	CCL26, CNTFR, DUSP7, GRAP2, IL10RB, NFASC, NT5E, OGDHL, OR4D5, OR52N5, OR56A3, TSC2
Negative_6876	ABLIM2, ACAA1, ACSL4, AKR1B10, ALDH1A3, BCKDHB, BMPR1A, BMPR1B, BUB1B, CACNB4, CARS2, CCL23, CCNB3, CDC25C, CDC45L, CREB3, CTPS, CYP7A1, CYP8B1, DAXX, EPHA8, FCGR3A, HADHA, ITGA9, JAM3, MCM2, MGAT5, MYH14, NMNAT3, OR10R2, OR10V1, OR1C1, OR2G6, OR5T1, OR6C74, OR8J1, P4HA2, PAFAH2, PDE7A, POLR2I, PPP2R2B, PRKAR1A, PTGER3, SH2D2A
Negative_6877	F8, CCNG1, CLTCL1, CTSB, CYBB, ENTPD6, NAE1, NANS, OR2G2, PYGL
Negative_6878	GAA, ACTN4, ADAM17, CACNB1, CAMK2D, CASP6, CDC23, CDKN2B, CNTN2, CSDA, EP300, EPHA7, FBP2, GPAA1, GSK3B, HMGCL, HSD17B7, HSD17B8, IFNGR1, IL6R, INPP5A, LMO7, MAOA, MAPK9, MCEE, MPP5, MYH3, MYH6, NCAM2, NOX3, OR1A1, OR4N5, OR6C75, OXCT1, PFN2, PLD2, RAD51, SPAM1, THBD, VTI1B, SERPINB5
Negative_6879	EIF4B, GALNT2, TUBA3C
Negative_6880	AR, ADAM17, APH1A, ATP12A, ATP5H, BET1, BIRC5, CDH4, CHST11, CNDP1, CTPS, DDX19A, DHFR, EPRS, GP1BB, IDH1, IFT57, IL12B, MS4A2, OR13F1, OR2A14, OR4C6, OR4P4, OR51G1, PANK4, PAPSS1, PDE9A, SETD1B, SLC25A6, SPP1, STAM2, SUV39H2, TIRAP
Negative_6881	PLN, ATP5B, ATP5E, BCAT2, DARS2, EGLN1, FGF23, FZD3, IL1R2, OPLAH, OR4D11, OR51S1, PRNP, RPS6KB1, SH2D2A, TAP2
Negative_6882	GP6, ADIPOR1, ARPC5L, CD46, EGLN3, FCGR2B, NEFM, NFE2L2, NKX6-1, OR8H1, PRKAR2B, PTGS2, SC4MOL, SMC1B, SUV39H2, WASF2, YWHAQ
Negative_6883	CACNG3, CYBA, DNMT1, FGF6, GALNTL5, GNB3, MAFA, OLAH, OR2L8, PKLR, PLKHA8, PRKY, RPN2, TAS1R1
Negative_6884	MPI, ARNT, DUSP7, GNAI1, GNAI3, IL8RA, LRRC4C, MGAM, NCKAP1L, OR1B1, OR56A1, RBX1, RFWD2
Negative_6885	CTH, GAA, ACSS2, AMY2A, APAF1, CAMK4, CASP10, DDX52, EPAS1, FGF1, GFP1, HAAO, IDI2, IFNA17, ITGA5, JUND, L1CAM, LAP3, LIMK1, LTBR, MICA, MYH10, NCAM2, OR10G9, OR1J4, OR1L4, OR2T12, OR4S2, PCYT1A, PIK3C2B, PNPAL3, PPP2R1B, PRKY, RAC2, TJP1, TRAF6, TRHR, TUBAL3, WWP1

Negative_6886	CP, SP1, AASDH, ABLIM2, ACAT2, ACYP1, ADSSL1, ARPC1A, ATIC, ATN1, CLD N20, COL6A1, DPYSL2, ELK4, FARSA, FRAP1, GALNTL4, GNA12, GRHR, GSTO 2, HNF4A, ICOS, ITGAX, MYH10, NMNAT1, OR10G3, OR10P1, OR4C12, OR4F17 , OR51L1, PDHA2, PIGV, POLD3, RBL2, RPN1, SETD2, SHC3, SORBS1, ST3GAL 2, STAT5A
Negative_6887	ADCY8, ADIPOQ, APLP1, CCL5, CTNNA3, EFNB2, FGF2, FGFR3, HMBS, IDH3A, MAP3K11, OR1D2, OXSM, ROB01, SLC27A5, SORBS1, STX8, TPH1, UGCGL2, WH SC1L1, YWHAH
Negative_6888	GGH, LCK, ACACB, ALDH1A1, CACNA1H, CAMK2B, DLL1, DNMT3B, EPHA1, EPHB 1, FBP2, FMO2, GNRH2, IDH3A, IL13RA2, IL2RB, KAT2B, KDSR, MGST1, NFX1 , PDHB, PLCB1, PMM2, POLR2A, PRPH, SAT2, SPHK2, TBXA2R, TRAF5, TRPM5, TUBA3E, VAMP4, VANGL1
Negative_6889	ACADM, CAMK2A, CLDN4, DDX19A, MEF2C, NAGS, PIGA, PPOX, RAD51, TRADD, ATP6V1C2
Negative_6890	GLA, ARD1A, CASP9, CBR3, CHST11, CYP4A11, DAAM2, DCTD, DOT1L, EDAR, E HMT1, EPHB6, F13A1, FGF6, FGFR2, GNA12, HPSE2, IRAK3, JAK2, MAP2K7, M BL2, MTHFD1L, MYH7B, NRG4, OR10P1, OR2K2, OR4K13, PGK2, PIGP, PIK3C2 G, PLOD2, POLR1E, PPP2R2B, PSEN2, PTPRM, SCD5, SIPA1, SLC27A4, STK4, SULT1A1, TRADD, TSHR, TUBA1A, VANGL1, KIR2DL5A, PAFAH1B1
Negative_6891	ADA, SI, AMY2A, ANPEP, BCKDHA, CCR4, CD40LG, CDKN2A, CNGB1, CTBP2, FZ D9, GUCY2F, INPPL1, MGST1, OR4B1, OR52L1, OR6C74, OR8B4, PER3, POLE2 , UGP2
Negative_6892	EPO, PLG, SRC, ARRB1, CCR8, CTSL1, CUL1, CYP19A1, EDN1, EPHB2, EXTL1, FLT3LG, IL1A, IL8RA, KLRC4, MAP3K5, MAPK10, MGST3, NANS, OR10AD1, OR 51B5, OR5A1, OR5AU1, OXTR, PDE5A, PIK3R1, PLA2G6, PPP1R1A, SRGAP2, S ULT1A4, TJP3, ZFYVE9, HLA-DRB4, MAP3K7IP2
Negative_6893	CRK, GPT, JUN, RDX, ACADL, ADH1B, ATP5G1, CACNG4, CCNB3, CMPK1, CTBP2 , CYP27A1, DAAM1, DGKI, FARSB, FMO3, GADD45A, GALK2, GSTK1, LCMT1, MA P2K6, MGST2, NAGLU, NMNAT2, NPR2, OR10H5, OR51B6, OR5M3, PDE6H, PIK3 CG, PLA2G2A, PLXNA1, POLR3A, PRKAR1B, PTPN7, SCLY, SH2D2A, TSC1, XCR 1
Negative_6894	ACAD8, ATP2A2, BBOX1, C1QA, CALML6, CCL14, FABP1, ITCH, ITGA4, ITGB4 , MALT1, OR5B21, PAK6, PPM1A, PRPS1
Negative_6895	HGD, AKT1, ANPEP, CDK4, CXCR3, DAAM2, DBF4, EHMT1, GADD45B, GMDS, GPD 2, HSD17B3, IL22, NT5C1A, OR5AC2, OR5K2, P4HA2, PAICS, PDE1C, PRIM1, PSAT1, RAB23, RPS6KA3, SRGAP3, ST8SIA5, TNFRSF1A
Negative_6896	NAT5, RBPJL, SETD1A
Negative_6897	AACS, ADH4, ALDH3A1, CNTNAP2, CXCL10, CYP8B1, DNMT3L, FECH, FGD3, HN F4A, IKBKB, ITGA3, KIR2DL1, MTMR2, NR4A1, OR11H4, OR2T29, OR4C12, OR 4C15, OR5D13, PARS2, PLXNB2, TJP1, VNN1, WNT11
Negative_6898	F7, AHCY, CASP10, DBF4, EFNA1, EPHX1, FGF22, GLO1, GZMB, HARS, LIPT1, OR4S2, PDE4D, PLA2G4A, PPAR, RAP1B, SEMA3C, SPRY2, TAS2R16, ULK2, S T6GALNAC3
Negative_6899	EPO, FST, GCK, TNC, TNN, ANAPC4, BCL10, CD99, CNGA3, DAPK3, DDX23, FZR 1, GAPDH, GOT2, GSTM3, GUCY1A2, KARS, KDSR, MAP3K5, NME7, OR1B1, OR4N 5, OR52M1, OR7D4, P2RX5, PHPT1, PIP5K1A, RETSAT, SOCS1, SRD5A2, TDO2 , UGP2, WASF3, B4GALNT1
Negative_6900	IL5, LYN, UBC, ACTN4, ARSD, BDH1, BMP2, CSAD, CTBS, EDN1, GARS, GRIA3, HIBADH, IGFBP3, IL15, ITGA3, NRG4, NT5C, OR2G2, OR5T2, RHOA, RIPK1, R PS6KA1, SCLY, ZAP70, HLA-DPB1, MAP3K7IP1

Negative_6901	C2, PTS, SP1, ADCY1, ALDH7A1, ANAPC5, CACNG3, CLDN10, CYP1B1, CYP2C8, EGFR, EPHA3, FECH, GANAB, GSTA5, GUCA1B, IL15RA, MAP3K5, MPP5, MTHFD1, NAT1, NCF2, OLR1, OR1L1, OR2B2, OR6C76, OR7D4, PCK1, PITX2, PPP1C A, RAB5A, RDH10, SCP2, SOS2, STK11, STK4, TLR2, TUBB2C, TYMS, UBA1, VE GFA, XIAP, GABARAPL2, PAFAH1B1, TNFRSF13C
Negative_6902	ATP5B, GALNT8, MTFMT, NCOR2, NFE2L2, PKLR, PLCG2, ZFYVE9
Negative_6903	ACACA, OR1C1, PON1
Negative_6904	IL7, IL8, ACOX1, ARNTL, CAMKK2, CD46, CD79B, CDC25A, CREB3L1, CTSS, D HDH, EXTL1, FOXA3, FZD3, GALM, GALNT7, GNPAT1, GUK1, IL12RB1, IL15R A, MYH3, NRXN1, OR13D1, OR1I1, PIGW, PLXNA3, SPP1, TNFRSF10B
Negative_6905	BAD, GPI, HYI, SDS, TK1, ADCY1, CD8A, FGFR1, FGFR2, GUCA1B, HSD3B2, IL 15, JAG2, LIPC, MCAT, NUDT8, OR2M7, OR52B6, OR5T1, P4HA3, PCNA, PFN2, PRKCB, PSAT1, SEMA7A, SUFU, TBK1, TGFBR2, TUBA1A, UGT2A1
Negative_6906	AK3, DCT, GHR, ID4, ACSM4, C3AR1, CBLC, CHPT1, CTNNB1, ESAM, FOXA3, GS TA2, IL3RA, ITCH, MAP4K2, MTHFD1L, OR10R2, OR13H1, OR6C75, PIGK, POL R2G, PSEN1, RDH5, TAS2R38, TNFSF10, HSD17B12
Negative_6907	AMT, CGN, MYC, ATP6V1F, BAI1, BCL10, CCNB1, COX15, CSNK1A1, DTX3, EFN B1, FGFR1, G6PD, GNPDA1, GOSR2, HA01, HAP1, IL22RA2, KLRC2, LARS, LEF 1, MAP3K2, MARS, MGAT5B, MYH10, NARS, NOX3, OR10H1, OR1J2, OR2Z1, OR5 T2, OR8U1, OR9A4, PGK2, PIK3C2A, PLAUR, ROCK1, RPRM, RPS6KA6, SETDB1, SPRY1, TAS2R1, TICAM1, VDAC2, YKT6, ATP6V1C1, PAFAH1B1, SERPING1
Negative_6908	PML, ARSA, CD47, CLDN15, CLDN8, COQ3, CYP2J2, DDX41, EPB41, EREG, GMD S, GNRHR, GPD1, GSTM5, HA01, IRF3, ITGA6, LAMB1, MAML3, MAP4K3, MTHFD 2, NRG2, OR10K2, POLD1, PRODH, THBS3, UCKL1, WNT9A, YWHAG
Negative_6909	GHR, ACTA2, AGPAT2, CCNB1, CHPT1, E2F3, FZD4, IFNG, IL11, PFKFB3, SNW 1, SOS1, TNFSF4, TRAF3, B3GALNT1
Negative_6910	DDC, ACTC1, ATG3, CCR9, COMP, ECHS1, FOXA3, FUT1, GALNT14, GNPAT1, I L13RA2, KIR2DL2, MAP3K14, MAT2B, MGAT5B, NUDT5, OR14I1, OR51Q1, PAF AH2, PIK3CB, PPM1B, PPP3R2, RASSF5, RPE65, SMURF2, PLA2G12A
Negative_6911	BTC, ME1, MET, AACS, C7orf16, C9orf95, DLAT, GSTM2, GUCY2C, IL1B, KLR C4, NTNG1, OR5AP2, PRKCE, TAS2R16, THY1
Negative_6912	F2, F2R, GSR, LPO, MPL, TPO, ATP6VOC, CASP6, CNGA3, CNTF, CSF2, CTSG, D DX51, DOLPP1, ENO3, FM01, FSHR, GANAB, GLO1, GP1BA, GRIN2D, LIMK1, MA N1C1, NFKB2, NT5E, NUDT5, OR1L1, PFKL, PKMYT1, POLR3K, PPP1R3B, PPP5 C, PRSS2, RAC1, RAF1, RCHY1, RPS6KA3, SARS2, STAT2, TNFSF14, TUBB6, X YLB, AASDHPPT, ATP6VOA4
Negative_6913	EBP, EPO, AGPAT3, ALG10, ARPC1B, CACNG7, CCNB2, CD40, CES2, CKS1B, CS NK1A1, DERL1, DUSP6, EGLN3, FUT7, GCDH, HRH1, ITGB3, MMP1, NMNAT2, NT 5C, OR1I1, OR2L3, PANK3, PDE11A, PLA2G2D, PPP2R2B, PROS1, PRPS1, PSE N2, PTPN11, RAP1B, RPS6KB1, SDC1, TAS2R49, XCL1, TNFRSF10A
Negative_6914	PAH, ABLIM3, ANAPC1, B3GALT2, BDKRB2, BET1, CD38, CDH5, CREB1, CSNK1 E, CXCL3, EI24, EPHA6, FGF1, FGF23, FUT1, GADD45G, GALNT14, GNA15, GS TM4, GUCY2F, IL10RB, IL20, IL20RB, INSRR, NT5C1B, NTN1, OR4F17, OR6K 2, OR6S1, P4HA1, PHKB, PLOD3, PNPT1, POLR2L, PPP2R2A, SETDB2, SNAI1, SRGAP3, TPK1, ATP6VOD1, HLA-DPB1, ST6GALNAC6, TNFSF13B
Negative_6915	ADK, FYN, TYR, ABCC8, ADCY9, AGPAT4, APLP1, ARPC4, CAPN2, CD70, CHST1 3, CRB3, CYBB, DFFB, ENTPD4, GMPS, GNA01, GNAZ, INPP5E, IRAK2, ITGA6, MCM7, PFKFB2, PIK3CB, POLD3, PPP2R5C, PPT1, RDH11, SCLY, SEMA3D, SHI SA5, SKP1, SSH2, STEAP3, TAS2R38, TUBA1C, PLA2G12A
Negative_6916	BTK, JUP, LSS, MYC, RFK, AANAT, ABLIM3, ANAPC5, BMP5, C4BPB, CHAD, CLC F1, CLTC, CNTFR, CYP1A1, DUSP2, EFNA5, FECH, FRAT2, FTCD, FUT1, FUT7, GCLM, GIT1, GRIA3, GZMA, LIMK1, MAOB, NCR3, NR5A2, OR10T2, PDE11A, PE R2, PIK3C3, PKLR, PPT1, WNT11, ZFYVE16, TNFRSF10A
Negative_6917	GNE, LYN, CYP2F1, GGT6, HSD11B2, ITGA8, OR2C3, RASA1, WHSC1

Negative_6918	ABO, AUH, CTH, HK3, ME3, ACSL3, ADCY6, AGPAT6, ATG7, ATP5G2, BAIAP2, C D247, CLDN4, COMT, DDX18, DVL1, EFNA4, EPHX2, F2RL3, GALNT1, GALNT13 , GLI2, HAA0, HNF4G, HPSE, LIPA, NCR1, NEFH, NOX3, NUDT12, NUMBL, OR10 G2, OR2T33, OR7C1, PDE4D, PGAM2, PLOD2, PLOD3, PVRL4, RDH8, RRM1, SUV 39H2, TAS1R1, ATP6V1G3, TNFRSF1B
Negative_6919	ABCC8, ALOX12, APOE, CD46, DDX19A, IMPDH2, IRF9, ITGB7, NT5M, PAX8, P LCD1, PLOD1, SLC27A1, TCF7, TOMM40
Negative_6920	AR, ACAT2, ADCY9, ALDH3A2, ARHGAP5, AXIN1, BET1L, CASP6, CD244, ELK4 , GALNS, LAMC3, OR2T12, OR52A5, TSNARE1, TUBAL3, TUBB4Q, TNFRSF17
Negative_6921	AARS, BMP4, IL18R1, NEFL, NR1D1, OR1C1, PIK3R3
Negative_6922	ID3, INS, PRL, ACAA1, ACMSD, ACY3, ATP5A1, B3GALT4, B3GNT3, BAAT, CAC NA1H, CCND2, CHKB, COL2A1, CYP26B1, CYP2A7, DGUOK, DLL1, FGFR3, GGBT 1, GNPDA2, HLA- F, ISYNA1, LEFTY2, MAFA, MCCC1, MLYCD, NOTCH3, OR2L3, OR56A4, OR5H6, OR6K2, PCCA, PIGC, RALBP1, RXRG, SMAD1, TGFB2
Negative_6923	IL2, KHK, RB1, B3GALT4, BDNF, BNIP1, CARD11, CDC27, EPHA4, GANAB, GNP NAT1, GSTA2, HMOX2, IBSP, ICAM2, IDH3G, IL1RAP, INHBE, KIR2DS5, KNG1 , MAPK10, NFYC, NUDT5, OR7A17, PAICS, PER1, PIP5K3, PRKCQ, RARS2, STA M2, WNT4, CSGALNACT2
Negative_6924	CFD, AANAT, ATP6V1D, GLYCTK, HLA-DOB, UGCGL2, ULK3
Negative_6925	FES, ID1, JUP, ACSL1, APOA5, ARNT, BET1L, CAV1, CDC6, CFL1, CHST13, CM PK2, COL4A4, CXCL10, DHCR24, DHRS3, DLL1, DLL4, DOCK1, DUSP1, DUSP14 , EPB41L3, EVI1, FCGR2B, FZR1, HAO2, IL29, LCAT, MCM7, MYH13, OR13F1, OR4D11, OR4F6, OR51B5, OR8B4, POLR2A, PRKCZ, PSEN2, PTPN7, RETSAT, S OCS7, SSH1, ST3GAL4, TAS2R10, TCIRG1, TUBB2C, UGP2
Negative_6926	AGPAT3, ALDOB, CACNB3, CD58, CDH5, FDFT1, GNAI1, GOT1, HPSE2, INHBC, ITGA1, MAP3K2, MYH11, OR4A16, OR6M1, OR8B8, OR9G1, OXCT2, PAPSS2, PL A2G2A, POLR2H, PPP1CA, RBL2, TLR5
Negative_6927	ADSL, AFMID, APOA2, CLTC, CYP4A22, DTX1, EPHA4, GALM, GGT7, GLUD2, IA RS, MAN2A1, OR13J1, OR2G3, OR3A1, OR4K5, OR5V1, OR9I1, PDE4A, PGK2, P HPT1, PPP1CB, RAC1, SETD7, STX10, SULT1A2, WASF1, WNT2B, PRICKLE1
Negative_6928	F3, C4BPB, CD55, DDHD1, DHDDS, GALNT9, GUK1, HSD3B2, IMPDH2, IRS1, NC STN, OR2T2, OR9G1, P4HA3, PARVB, PPAP2B, TUBA3C
Negative_6929	C1S, ACHE, AKR1A1, ATP5I, CSNK2B, DGAT1, DUSP16, ECSIT, EDN1, FGF6, G ALM, ITCH, LRAT, MKNK2, MYH9, OR4E2, OR5AC2, SMPD4, TAS1R3, WNT10B, W NT7B
Negative_6930	AK7, DDC, ACADL, AFMID, AMPD2, CCL27, CLDN9, CYP2B6, DIAPH2, EPHB3, E PHX1, FGFR1, FLAD1, GNG13, GSTO2, GUCY1A2, IL13, IL20RA, MAN1A1, MCM 7, MRAS, NAT2, NSD1, OR13D1, OR51M1, OR51Q1, P2RX3, PAK3, PDE1C, PIGS , PIK3C2A, PLCB3, PMVK, POLR3A, PRIM1, PRLR, PTPN1, RBL1, SESN2, SGPP 2, SHC3, SULT1A1, SULT1A2, THBD, UBA1, YARS, CACNA2D2, PHOSPHO1
Negative_6931	CKB, ME1, MTR, ACP2, ADAM10, ARPC1A, CCR9, CD99, CDC14A, CHKB, CLDN14 , COL5A1, CYP2A13, DHDH, FABP3, GFPT1, GGPS1, ICAM1, ITGA3, LCAT, MGA T3, MTMR6, NT5C1A, OR10H4, OR4F4, P2RX6, PAPSS1, PDXK, PTPRZ1, RPN2, SLC27A1, SV2A, TNFSF14, UGT8, PNLIPRP1
Negative_6932	SPN, TK2, BUB1, CCKAR, COL5A2, EXOC7, GCNT3, GZMB, OR6C1, PAK4, PDE2A , PPP1R1A, PSEN2, SEMA4D, SPTAN1, TAS2R13
Negative_6933	ATM, A4GALT, CES1, F13B, OGDHL, OR4A15, OR52N5, PLA2G2D, HLA-DRB3
Negative_6934	IVD, A4GALT, ADSL, ANAPC4, BLVRA, CD19, CTNNA1, CYP1A1, EHMT1, FZD4, KRAS, MAPK13, NFKBIA, OGDHL, OR11L1, OR1J4, OR4X1, OR6M1, PDE6H, PDE 9A, PLD2, PNPLA3, SGPP2, TCF7L1, TIAM2, UGCGL2
Negative_6935	CACNB1, CLCA2, GAB1, IFNA13, PLK1, PPP1CB

Negative_6936	DCK, ARHGAP5, CAV1, CLTB, CTSG, DGKE, ENO3, FARS2, GALNT13, GJD2, INP PL1, NAT5, NSDHL, OR2A12, OR2A5, OR2L8, OR52L1, OR5AN1, OR8B12, PARD 6B, PPP2R2D, RALBP1, SMARCA2
Negative_6937	ALOX12, AREG, DGKE, GSTO1, MAML1, MCM2, OR4K17, PRKCA, ST6GALNAC1
Negative_6938	C5, F2, IL6, JUN, PGD, TXK, ADSSL1, ALG10B, BNIP1, CNDP1, COQ3, DCTN1, DGAT2, ENTPD2, GNAS, IL13RA1, ITGB3, MKNK2, OR10A3, OR10J3, OR4D1, P ANK4, PHKG2, PLCG1, PPP1R3A, PPT1, PTEN, PVRL4, PYGM, SHC3, STX18, SU CLA2, TUBB2C
Negative_6939	SMO, SP1, ACTA1, AGXT2, BAIAP2, BCL10, BLNK, CCL4, CCNH, CDH5, CDIPT, CER1, CNTF, CREB3L2, CREB3L3, DGKI, DHX58, FMO1, FPGT, ICAM3, IL1RAP , IL2RG, IL7R, INMT, IQGAP2, ITGAV, LAMB3, MIOX, MYLK2, OR5A1, PDE7A, PIGP, PNPO, POLD2, PSEN2, SMURF2, TAS2R41, TPI1, TPK1, TRADD, TRDMT1 , UGT2B17, ULBP1
Negative_6940	HGD, AKR1B1, C3orf10, CACNB4, CD80, CREB3L4, CXCL12, CYP2J2, DTX3L, EPHX1, GGCX, HA02, IFNA13, JAG2, OR5I1, OR8B8, ORC1L, PCYT2, PIGQ, PV RL3, RRAS2, SGMS2, STAT4, TACR1, TYMP, ULBP2, WNT16
Negative_6941	IL2, ADIPOR1, BCKDHB, CCL1, CXCL12, CYP2C18, DPM1, FARS2, FGF2, FRAT 1, LAMC3, MAN1B1, MGST1, NTRK2, OR1E2, OR2A2, OR4N2, OR5AN1, OR7C1, P ARD3, PHKA2, PLA2G2D, PLCB3, PPP5C, RBX1, SETD8, ATP6V1E2
Negative_6942	ADA, ALDOC, CCL24, CREB3L2, DGKH, ENPP6, FUT8, FZD1, HSD3B1, HSPA2, I FNA7, MAP2K4, MAP3K2, MYH4, MYLK, OR51S1, PIP5K1A, PPCS, SEMA3F, SLC 27A4, WASF1
Negative_6943	ACAD8, ARPC4, CD244, EPHX2, FABP4, FCGR3A, GCDH, GUCY2F, MGAT5, OR4C 12, PER1, PLCG1, PON2, PPP2R1A, RFXAP, SAT2, TUBB2A, VAMP1, TNFRSF10 D
Negative_6944	JUP, ACOT11, BMP8B, CTPS2, FGF19, FGF23, G6PC, ITGB4, NTF4, OR1L4, OR 6B3, PPM1A, RBL2
Negative_6945	CAMK2B, IL5RA, IL8RA, LLGL1, MYH14, MYLK2, NME7, NR4A1, OR13C2, PDGF B, PTAFR, SMPD1
Negative_6946	GCLM, GNA14, NEU4, ST3GAL1
Negative_6947	DCC, GGH, ALG3, ATG12, BIRC5, CSF2, DFFA, DIAPH2, DNMT1, FUT9, HSD17B 7, IL12B, MYL9, PAX6, PDE4A, PTGS1, SOCS3, WNT9B
Negative_6948	CSF1, LGMN, MAP4K1, PRKX, SORD
Negative_6949	C2, C4B, DBI, FUK, IL9, LIF, RET, AARS2, ACPT, AGRN, ALG13, ARPC1B, COL 1A2, COL4A2, COQ3, CPT1A, DGKD, DGKE, GALE, GALNT2, GLDC, HA01, IDI2, IRF3, ITGAE, KIR3DL1, MAOA, MKNK1, MYH8, NFASC, NRXN2, OR2L2, OR51A7 , OR52E8, OR5AU1, OR6F1, OR6K2, OR7A5, PANK4, PIP5K1A, PSME2, RASSF1 , RBPJ, TUBB2C, VKORC1
Negative_6950	GSS, AASS, ACSL1, ACSL4, ACVR1, ADH5, ANAPC7, BLNK, CAV1, CCR3, CD244 , DPM3, DUSP7, ENTPD6, FABP3, FDFT1, FGF12, GCH1, GPD2, GRM1, HMGCS2, HRH1, MGST2, NGEF, NMNAT2, OR2M4, OR5A2, P2RX1, PFAS, POLR3H, PRKAR2 A, PSEN1, PSME3, PTPRM, RAC3, RGS3, SOCS7, SPTLC1, TOMM40, UGT2B17, Y WHAE
Negative_6951	FBP1, FGF18, IGSF5, SHMT2
Negative_6952	C2, C6, DHH, LEP, AGTR1, ALDH5A1, ALOX12, ARPC2, ARSB, ATP12A, AXIN1, BDH1, C1QA, CDC26, CDC42, CUL1, CYCS, CYP27A1, CYP8B1, DAPK2, EPHA7, GCLM, IRAK4, LAMA4, LAP3, LIPA, MAP3K12, NAMPT, NME4, OR11H6, OR1S1, OR4P4, OR5D16, PCYT1A, PIP4K2B, PRKACB, RELB, RPE65, RPN2, SETD1A, S HISA5, SRD5A1, TGDS, UAP1, UNC5D, VAMP2, ZBTB16
Negative_6953	GH1, ID2, IL4, SCD, AASS, ACAD9, ACLY, ADIPOR2, AMPD3, ARPC5, BCL10, C LTC, DAPK1, DUSP2, ENPP6, FGD1, GALNT5, GRIA1, HLA- DMA, MASP1, MGST1, MYLK2, NOS3, NUDT12, OR52H1, OR56A3, OR5F1, OR6S1 , OR9G4, PLD2, PPAR, PPCDC, PRPH2, PRPS1, PTK2, RAC3, SSX2IP, STAT2, STEAP3, TAP1, TCF7, UNC5C, ZFYVE9, SLC25A31



Negative_6954	F2, FST, KMO, MIF, ADCY5, ASNS, ATP6AP1, CCR5, CMBL, COASY, CREB5, CSF2RA, EPB41L3, FLT1, GNRH2, GSTM1, HAP1, IKBKG, LAMC1, LIPA, MAGI2, MAP3K1, MYH13, OR10G4, OR1E2, OR51A7, ORC3L, PARD3, PSEN2, RAPGEF4, STX2, STX6, THTPA, TNFSF9
Negative_6955	PRL, ATN1, BAI1, COL2A1, FGF19, GRIA1, IL12A, NUDT8, OR52E2, PIK3CA, PLA2G2E, STK36, ATP6V0A1
Negative_6956	MPI, ADCY8, AGXT2, CCDC6, CLDN11, HNMT, IFNGR2, ITPK1, JAM3, MAP3K4, NR4A1, OR1B1, OR1J4, OR6N2, OR6Q1, OXCT1, PIGM, PRKAR1B, PYGM, SHMT1, SORBS1, TGFA, TUBB1, TUBB3, ULK1
Negative_6957	F11, AKT1, MYH7B
Negative_6958	F3, GK2, GNS, IL4, AMHR2, ANAPC7, BHMT, CCKAR, CCNA1, CDC45L, CERK, CIITA, CXCL9, CYP17A1, CYP4F2, DDIT3, DDX19A, FADS2, FGFR4, FUT2, GSK3B, HLA-F, HMGC, HYAL2, IL12A, ITGB6, KLKB1, OR13J1, OR1S2, OR2F1, OR2T33, OR52K1, OR6Q1, OR7G2, PDE7A, PTPRF, PTPRJ, RUNX1T1, SAT2, SULT2A1, TASS2R60, THBD, TPH1, TUBA1B, WASF1, XYLB, SERPINA1
Negative_6959	ADRB2, ALOX12, CACNB3, CCR10, CHIT1, CRHR1, CXCL3, CYP2C9, DHFR, FMO5, FOXO1, GLYCTK, ICAM1, IL18RAP, IRF3, IRF9, KIR2DS4, KLRD1, LAP3, LCAT, MAN1A1, MAP2K6, MCM5, NUDT12, OR10Z1, OR1B1, OR51B6, OR5L1, ORC5L, PFKM, PIGK, POMC, PTGDS, RBPJL, TLR2, UGT2B11
Negative_6960	AK5, CAD, TNN, AASDH, C4BPB, CACNG2, CAV3, CCNH, CD244, CD36, CLDN16, CREB3L3, CTPS2, DDX19A, FGF7, GSTZ1, HBEGF, IL17RB, NT5C2, ONECUT1, OR10J5, OR2A14, P2RX6, PANK1, PFN3, PLCD4, PTDSS2, QARS, SDHD, SMAD7, STX16, TKTL1, VAV1, ATP6V0D1
Negative_6961	NOG, TPO, ALDH2, BET1L, CISH, CNGA3, DHRS3, ESPL1, ITGA10, LDHD, MAPK14, OR5A1, OR6Q1, OR7A5, PDIA4, PIPOX, POLE, SRD5A1, ARHGEF12
Negative_6962	ASL, DDC, GLA, PVR, SDS, TPR, ADSL, CASK, CCKBR, CCL17, CCL7, CCR3, CCR9, CD72, CDC23, CDC7, CLDN19, CNGA4, DIAPH2, GMPPB, HSPB1, IDH3B, IFIH1, INPP4A, IQGAP3, NEFH, NPR1, OR6C3, OR8J3, PIK3CB, PRODH2, SETD7, SHC2, THBS2, TRAF5
Negative_6963	AGK, F8, GCK, RPE, AGRN, ALPL, CCL7, CDK7, CDKN2C, CYP17A1, CYP2A6, CYP2E1, DERA, DUSP4, EDA2R, FASN, FBP1, FGF19, FZD9, IL25, INPP5E, KIR3DL1, MAGI2, MYH11, NARS2, NPR1, OR2AG2, OR2AT4, OR2T8, OR4N2, ORC4L, PDHA1, PHKA1, POLR3K, PRPS2, PTPRZ1, RAB5A, RFXANK, SEMA4A, SMPD3, SPCS2, SYNJ2, TNFSF11, TYMP, UGCG, VANGL1, VKORC1
Negative_6964	AASS, ACAT2, ALDH3A1, ANAPC7, ATP6AP1, ATP6VOB, BET1, CHAT, DDX51, DGKZ, DHX58, ELK4, GCNT3, GDF7, GRIA1, GRM5, HLA-G, HYAL1, L1CAM, MAPT, MYH2, OR51I1, PDE4A, PTPN11, RASGRP2, ST3GAL2, STAT1, TNFSF14, WNT9B, MAPKAPK2, TNFRSF10A, TNFRSF1A
Negative_6965	GGH, AASDH, ABAT, ADRBK2, ALOX5, ATP6V1F, BAAT, CHPF, CSNK1G1, CYP3A43, DFFB, GGCX, GYS1, HBEGF, HMGCS2, HRH2, ITGAX, NFATC3, OR51I1, OR7A10, PIGN, POLE2, SIGLEC1, UGP2, YWHAB, CACNA2D2, TNFRSF10C
Negative_6966	ADC, C8B, TEC, ABL2, ACTA1, ALG2, CD58, CDC45L, CDH2, CLTB, CREB3L1, CTNNA1, CYP3A43, DDIT3, DUSP3, ENTPD1, FGF23, GCDH, HDAC1, HTR4, INADL, MAP3K11, MGST2, MICA, MYLK3, NAGK, OR10A7, OR1L6, OR2F1, OR7D4, PAFAH2, SMAD3, TAS1R1, TAS2R40, TYMS
Negative_6967	ADC, NNT, ADORA2B, C3AR1, CASP8, CES2, DGKH, E2F1, GALNT13, ICAM1, KIR3DL1, NR5A2, OR12D3, OR4F4, PAX4, PLA2G10, PMAIP1, PNPT1, VEGFA, ATP6V1B2, SERPINE1
Negative_6968	CR2, DCC, PDC, ALPL, ARPC5L, ATP5C1, CYP26A1, CYP7A1, DDX47, HCST, IL22RA1, JAK3, KARS, MGLL, MKNK2, MLLT4, MTHFD1L, OR5M3, PIGH, PRKCE, RAC2, RFXANK, WNT16, CSGALNACT1, SERPINF2

Negative_6969	CAT, CBL, HK2, MPI, ACP6, ADRB2, ALG11, CACNA1F, CD44, COL11A1, CSNK2B, DDX54, ERBB3, GAMT, GNA15, GNG3, GSTK1, HYAL2, NAGLU, NANS, NR1D1, NT5C2, OR51D1, OR52D1, PER3, PHKA1, PIP5K1B, TIRAP, TRIP10, TSHB, UGT2A1, SLC25A31, TNFRSF11A
Negative_6970	ALAS2, B4GALT5, CAMK2A, CCL16, DHRS4L2, FMO5, MCCC1, PTPRR
Negative_6971	CD4, EGF, IL2, STS, XDH, ABI2, ACAT1, ACSM3, AKR1C2, C5AR1, CBLB, CCL16, CCR4, CHD8, CX3CL1, DIAPH2, DOCK1, EPAS1, FMO3, FZD3, GBA3, HLA-F, ICOSLG, ITGAD, NAMPT, NFKB2, NKX6-1, OR10AD1, OR10J3, OR1C1, OR2W1, OR4F6, OR52A5, OR52I1, PLA2G4A, PNLIP, PPT1, RAPGEF2, RDH5, TRAF3, UBE2L6
Negative_6972	CR2, DDO, NLK, VTN, ACAD8, ACADL, ADCY7, AOX1, APPL1, BACE2, CASP10, CCL7, CLDN18, CTBS, FMO5, MGLL, MKNK1, NFYA, OR4K2, OR51I2, PDE8B, PFN3, POLR2J, PRKG1, SETD7, SNAI2, UBE2K, UGT2B4, ZAP70, HSD17B12
Negative_6973	AXIN2, CAMK2B, CDC23, FOXA3, GLUD1, LLGL1, MCAT, NAT5, OR1B1, PPM1A, SLC33A1, PRICKLE2
Negative_6974	F5, GBA, ID1, PXN, TEC, AADAC, ADH7, ALDH5A1, BCMO1, BDH1, CACNB1, CDH1, DLAT, ENTPD1, GGT7, HAGH, KIR2DS5, LCMT1, LHCGR, MAPK14, NUDT5, OLR1, OR14C36, OR2A4, OR51E2, OR52E6, OR52E8, OR52H1, P2RX1, PANK2, PFKFB3, PIGU, POLR2H, PORCN, PPCS, PTTG1, RELB, SMARCA2, TAS2R50, TNFRSF9, TYK2, ATP6VOD1, SERPINA5
Negative_6975	NGF, TPR, ALAS2, ALDH4A1, ATP2A3, AXIN2, CLDN9, CNGA4, CYP2U1, DTX3, GAB1, GALK2, GCNT2, GGT7, GLUD2, GOT1, GSTA5, HARS, IRS1, ITGA2B, LILRB3, MASP2, MNX1, OR10P1, OR1A2, OR5AS1, OR5K2, PLA2G4A, PMAIP1, PNPQ, SDC2, SHC1, THTPA, TPMT, UGT2B17, PNLIPRP2
Negative_6976	ARHGEF1, BLVRA, CCL5, GRPR, LEF1, MAP3K6, MYH8, OCRL, OR2T6, RPN1, TAS2R8, TLR4, TSHR, UPRT, CACNA2D2
Negative_6977	CEL, GLS, IHH, ACAD8, ADRA1B, ASPA, B3GALT4, BACE2, BMPR2, CCL4, CDC25A, FRAT2, GALNT7, GUCA1B, HNF1A, HSD17B2, IFNA10, IKBKB, IL28A, KAT2B, LDHD, MYH14, NCKAP1, NTF4, OR1L4, OR6B3, OR9I1, PAPSS2, PFKFB3, PIK3CD, PTPRB, PVRL2, RPE65, TLR5, TSHR, WNT11, WNT7B, MAPK8IP3
Negative_6978	CTH, ACHE, CARS2, CASP10, CXCL1, DPYD, FZD10, FZD6, G6PD, GAPDH, GNRH1, GRIN2A, IDH3G, IL25, INHBE, INPP4A, IRAK4, ITGA5, KYNU, MTHFS, NKX6-1, OR13C3, OR13F1, OR4C11, OR52A5, ORC4L, PGS1, PLAU, PLXNB2, PPCDC, PRKCD, SETMAR, SMARCA5, SMC1A, SMC1B, TAS2R38, TLN2, WASF1, WASF3, TNFRSF17
Negative_6979	DBH, CXCL2, GLS2, MTMR6, OR11H1, OR13C8, PFAS, PIGU, PLA2G3, SRGAP2
Negative_6980	ADK, CAT, TK1, ACAT2, ACSL1, AKR1A1, ALDH1A3, B4GALT5, CCL8, CCR7, CHEK2, CKMT2, CSF3, DDX55, E2F5, EDNRB, FGF12, FGF2, GCDH, HSD17B8, IL29, IMPA1, ITGA7, ITGAX, LLGL1, LTB4R2, LYPLA2, NR5A2, OR1A1, OR56A1, OR7A5, OR7G1, PRODH, RPSA, SKIV2L2, SLIT1, SOCS5, TOLLIP, TPI1, TUBB6, UCKL1, UROD, WWP2, ATP6V0A1
Negative_6981	F8, ABP1, ANAPC1, ARPC5L, B4GALT3, BBOX1, COL4A6, DAPK2, DHRS9, ERBB3, IRF9, LHCGR, OR10A2, OR4B1, OR5D16, PLCB3, PTEN, RDH12, SMPD4, TRIP10, YWHAB
Negative_6982	CTH, F3, FYN, IL3, TYR, ABLIM2, ACVR1C, ACVR2B, ARRB1, CD22, CHPF, COASY, CXCL6, CYP3A43, DERL1, GCLC, GNAI1, GNAI3, GNAZ, GPD2, GPLD1, IGF1R, IMPDH1, IRAK1, ITGA4, ITGB8, LTC4S, MAPK9, MYH6, NCR2, OR10J3, OR2A42, OR52N2, OR52N5, OR5K2, PAICS, PANK4, PFKFB2, PIP4K2A, PLA2G6, POLR3K, PON1, PVRL4, SLC2A4, TGFB1, UGCG1, PNLIPRP1, SERPINB5, SUV420H1
Negative_6983	AFMID, B4GALT2, BMPR1B, BUB1, CBLB, F13A1, FGF17, MAGI3, MOV10L1, NME2, NOTCH3, NUMBL, OR10T2, TAS2R9, TRPM5, ALDH18A1, PDCD1LG2

Negative_6984	NF1, ACAD8, BMPR1B, CALML5, CDKN1A, FGF18, IL18R1, MAP4K3, MGAM, NR1H3, OR2AG2, OR52I2, PANK3, PPCS, PPP2R5C, RAB23, SKIV2L2, STX3, TSTA3, MAP3K7IP1
Negative_6985	ADA, FGA, ID1, ME3, MET, ALCAM, ALS2, ANAPC11, ARHGEF7, ARSD, BAAT, CAMK2D, CDC14B, CDC16, CDC45L, CYSLTR2, EI24, HNF4G, IARS2, IL12B, INADL, IRF7, ITGA7, LDHA, MAP3K3, MAPK10, NFKBIE, OGDHL, OR10G2, OR10S1, OR1E2, OR1S2, OR2T11, OR4S2, OR4X2, OR52I1, PDGFRB, PLCG2, PPP2CB, PPP3CA, RPS6KA4, SHC4, SLIT1, SORD, SPRY4, THTPA, UGT2B11, WNT7B
Negative_6986	DBH, F9, TNF, ACOT11, B4GALT2, BDH1, CDKN2B, CNTFR, CSNK1A1, CYP2A6, FMO3, IL17A, IRAK3, LIPF, MDH1, MTMR2, MYH4, NCR1, NEFH, NOX1, OR13G1, OR1B1, OR52I1, OR6C1, PDE6G, PIP5K3, PPA2, PPP2R5C, PRKAA1, PRKAA2, RBX1, SCLY, SETDB1, SHMT1, SPRY4, TUBA3C, UGT8, VEGFA, XYLB, ST6GALNAC4
Negative_6987	AK3, CBL, GP5, ALS2, B3GALT1, CCL7, CDK5, CREB3L1, CTSG, CX3CR1, DAD1, DPAGT1, DUSP2, EDNRB, FGF10, GOT2, HSD17B2, HSP90B1, IL12A, IL7R, MAD2L2, MARS, MLYCD, OR10P1, OR51B6, OR52H1, PLA2G2A, POLE, POLR1A, PRODH2, SARS2, SULT1A4, TBL1Y, UGCGL1, PLA2G12B, TNFRSF10B
Negative_6988	GCK, TYR, CACNB3, CNTF, CYP11A1, FGF13, IL10RA, KLRC1, LTBP1, MMP2, OR52K2, STK36, YKT6
Negative_6989	ACTN2, ALG10B, ANAPC2, CDS1, CLDN1, FGF22, GART, IL22RA2, MBL2, MMP2, MPST, NADSYN1, OR10H1, OR6M1, OR7D2, OR8D4, POLR3B, RALBP1, RASGRF1, SULT2A1, TMLHE, VCAM1, ZNRD1
Negative_6990	MVD, PGD, ACSS2, APLP1, ATP6V1H, CCL26, COX15, ESPL1, GSTM3, GYS1, HAR, ITGB4, MAP3K11, OR10G8, OR4C13, OR51G2, PPA2, PRDX6, RRM2B, SEMA3G, SMPD3, TAS2R41, TGDS, TJP1, UBA7, WNT5B, MAP3K7IP1
Negative_6991	AK5, CFI, AKR1C3, CACNG2, CD8B, COQ3, CYP27A1, EPB41L3, FOXA3, GNPDA1, GSTA5, HCST, ITGA7, KIR2DL3, LTA4H, MS4A2, OR1L8, OR4F6, OR5AN1, PER2, PNPLA3, RHOQ, SOCS3, THBS1, TNFRSF10A
Negative_6992	LPL, BUB1, CCL16, CCL2, CLDN10, CLDN15, DDIT4, ENTPD3, IMPDH1, ITGA4, KCNQ1, MGAT5, PHKA1, TAS2R3, TNFSF4
Negative_6993	SYK, CPT2, OR1J1, PPARA, ATP6VOE1
Negative_6994	DBH, EGF, SDS, ACADSB, ACVR2B, ADSL, APBB1, ARHGEF4, ARPC3, ARRB2, CASP6, CDK7, CHAT, CREBBP, CYP1B1, CYP2B6, DDX4, EFN3, ENPP2, F2RL2, GJA1, GLO1, HNF4G, ICAM2, KLRC4, MTHFD1L, NME7, NR1D1, OR13C2, OR4C12, OR51A4, OR5B17, OR6F1, PCYT1B, PDE9A, PGAM1, PLXNA3, POLR2E, SFRP5, ST3GAL6, STX10, SULT1A4, VNN1, MAPK8IP1
Negative_6995	DAO, LPO, VCL, ACTN4, ADCY2, APH1A, ARRB2, C4BPA, CCNG1, DOT1L, DVL3, F11R, FOXA3, GALNT8, HSD17B2, OR52B4, OR52D1, PDHA1, PPP2R2A, SSH2, TBL1Y
Negative_6996	ACTN4, CACNA1G, COQ7, F13A1, HAAO, IRF7, KLRC4, MAPK12, OR1A2, OR2T5, OR4D9, OR51I2, OR5P3, PNMT, PON1, RPS6, TAS1R1, TPM3, TXNDC12, UPP1, XCL1
Negative_6997	CFH, CKM, GSR, OTC, ACP1, ACVRL1, BNIP1, CDC20, CRY2, CSF2RA, CTSG, GAD1, HNMT, IDH3B, IL7R, ITCH, OR10H4, OR1A1, POLR3A, PPP3R2, STX3, TSNARE1, VCAM1, WNT2B
Negative_6998	AK7, LPO, TNF, ADCY6, APRT, ASIP, CYP3A5, IL10RB, LAMB1, OR51B4, OR52N2, P4HA1, PCCA, WASF2, WBSCR17
Negative_6999	FGA, BIRC2, CCR4, CDC42, CTLA4, DCTN1, DPAGT1, FUT7, GNG12, GSTM2, MGST2, NEFH, OR10A3, OR10T2, OR1E1, OR51A2, PLA2G4A, PLK1, PNLIP, POLR3A, PTGS2, ROCK1, SEMA4F, SPTLC2, TGFB3, TRAF4, UGT1A10, YES1
Negative_7000	ALDH4A1, FGF12, FGF21, LHCGR, PCCB, RBKS, SEMA4C, UCKL1
Negative_7001	CLDN9, IKBKB, TBK1, UBE2L3, WNT5B

Negative_7002	ASL, ALDH2, ANAPC5, ASIP, BDKRB1, CACNB2, CCL28, DUSP3, EI24, ENTPD8, EPHA1, INHBE, ITGB4, LIPF, NFATC4, NLGN2, NR4A1, OR10G3, OR10H3, OR10H5, OR13C9, OR4E2, OR4N5, OR5AU1, OR5D18, PGM3, PTEN, RDH5, ROBO2, SGPP1, SMURF2, TGFB1, TRAF5, VDACC2, WBSR22, WHSC1L1, WNT2B, XCL1, ATP6V1G3, HLA-DPB1
Negative_7003	HK1, ATG12, B3GNT3, CADM3, CLDN11, IKBKB, IRAK3, LAMA4, MDH2, MGAT3, NFAT5, OR4C12, PRKCB, RAP1B, SMPD2, YARS
Negative_7004	C8A, ACSL4, ADIPOR2, BDNF, CACNG5, CDH3, CFL1, CLDN2, CYP2S1, DGUOK, DLL4, EFNA5, FMO2, GART, GCNT1, HRH1, HSPA1B, IRAK2, ITGB6, NFKBIA, NODAL, OR1J1, OR2C1, OR2F2, OR2H1, OR2L2, OR51F1, OR51G1, OXTR, PKM2, PLXNA3, PROC, RARS2, RDH12, RPE65, SMURF1, SPHK1, TAS2R50, TUBA3C, UPP1, WNT2, WNT4, PDCD1LG2, ST6GALNAC6
Negative_7005	GH1, AKR1D1, ALOX15B, FGF21, IGF1R, OR4B1, PDGFRA, PTPN7
Negative_7006	CD2, CRH, ACSL6, AMHR2, ATG3, DDX51, HPSE, HPSE2, HSPB1, HYAL2, IL22RA1, NKD2, OR6A2, PGAP1, SNAI1, TUBB4, VAMP4, VAV3
Negative_7007	EGF, FYN, GGH, HK1, ACO1, AKR1A1, AKT2, ALDOC, CASP8, CCL28, F2RL2, G6PC2, HPSE, HRH2, IKBKE, IMPA1, OR1M1, OR2AT4, OR56A1, PDE8B, PIK3C2G, PSEN1, SGMS2, SMAD4, TAP1, UROD, ATP6V0E1, HSD17B10, PLA2G12B, TNFRSF6B
Negative_7008	CKB, DHH, MPZ, A4GALT, AGXT, ALDH1A1, ALDOC, ARSE, BACE1, C4BPA, CACNB3, CACNG1, CAMK2B, DAPK2, DGKI, ENTPD8, FABP3, FCGR3A, FDFT1, FLOT2, GANC, GNAI1, GNMT, IL18R1, MAP2K6, MAPK8, MGST2, NARS, NEU3, OR2A42, OR2G6, OR2T10, OR51F2, PTPN6, RELB, SFRP5, SORBS1, TCF7L2, VAMP1, WNT10A
Negative_7009	ATM, ATG12, B3GALT1, CLDN15, CYP3A5, EGFR, EPB41, GPX7, HMGCS1, LIPC, MAT2B, MMP1, NRG4, OR11H1, OR5M9, OR6C6, PFN3, PHKA1, PI4KB, PRKAB2, SOD1, TNFRSF11A
Negative_7010	AK3, LAT, TNC, AKR1B1, ALDH1B1, ALDH6A1, BMP5, CCND3, CDC25C, CHST12, CNGA4, FCGR3A, FLOT2, FZD5, GCNT2, GUCY2D, IFNA10, IL4R, KLKB1, LIMK1, MAP2K2, MIOX, MPDZ, NAT2, NOTCH3, NRG1, NTF3, NTF4, OR1D2, OR2D2, OR4C6, OR4M2, OR8A1, PAK6, PDE1C, PDE4C, PIGX, POLR3A, RARS2, SEMA4A, STK3, TAS2R9, TNFRSF9, TSC1, UGT2B28, VTI1A, PNLIPRP2, SERPINE1
Negative_7011	EBP, TPR, ATP5D, COL3A1, DAPK2, DKK2, EPHB3, ICOS, OR4K17, PDGFRB, PSME2, SPRY2, TIAM1
Negative_7012	FRAP1, MAP3K5, OR5H2, OR8B8, OR8I2, PAFAH2, ST3GAL3, TCF7
Negative_7013	MVD, ACADL, ALOX5, ASAH1, BUB1, CCL23, CCR5, CD79A, CHRM2, COL5A3, CPRT2, DAAM2, DPM2, EXOC7, FMO2, FZD2, GCNT1, GTSE1, HLA-G, HSD17B1, INPP4A, IQGAP3, MTAP, NFKB1, NT5C1A, OR1J1, OR9Q1, PPARG, PPP5C, PRODH, PTPRZ1, RASGRF2, RERE, SEMA4D, TGFB2, TNFSF11, WASF1, ATP6V1B2, ATP6V1G3, SERPINA5
Negative_7014	GPI, IDS, PGF, ALG10, ATG3, ATP6V1H, BET1L, CADM1, CCND1, CHKA, DCTD, ENTPD4, ERBB3, GNG13, GRM1, IL19, IMPA2, ITGA6, ITGAL, NEUROD1, NLGN2, OR2T3, OR52L1, OR7A5, PNLIP, POLR2H, RAD51, RBKS, SELE, STAT1, SUFU, TAS2R50, TLR2, TP53, VTI1B, GABARAPL2, SERPINA5
Negative_7015	MAP2K6, OXTR, SESN1, SETMAR, SFRP4
Negative_7016	AMT, ASL, C9, CP, PGD, ACACB, AGRP, ALOX15, ARNT, BMPR2, C7orf16, CARS2, CASP10, CHD8, CNTN1, DRD1, FCGR2B, FGFR3, GSTA1, GSTK1, IL10RA, JAK2, MLLT4, MYH6, NPAS2, NQO1, OR4D9, OR8B8, PCCB, PDPK1, PFKFB2, PIGM, PIGS, POLR3B, PPP5C, PTGS1, RDH16, SEMA3C, SUV39H1, TIRAP, TPK1, TRAF6, VANGL1, WNT7B
Negative_7017	ARAF, BMP5, CACNG6, CLDN2, GNAI2, MGST3, OR2AG1, OR4K14, OR51L1, OR52J3, PFKFB1, PGAM4, PGS1, PLOD3, PLTP, PPCS, SOS2, ULK3, WNT9B

Negative_7018	ABLIM2, ACVR2B, ADCY7, ADORA2A, AKT3, BIRC3, CACNA1C, CD34, CD58, CDK7, CLDN4, COL6A1, COMT, CXCL1, CXCL11, CYP21A2, CYP2E1, E2F1, EPHA2, HEMK1, HRH1, IDH2, IL28A, INPP4B, MAGI1, OR10A6, OR13F1, OR8S1, PAR6A, PIK3CG, PRKAG2, RRM2B, STAM, TAS2R49, TPI1, UCK2
Negative_7019	COQ5, CXCL2, DBF4, OR14I1, OR2L3, PDE4C, PLCB4, RALB, SHMT2
Negative_7020	ARHGAP5, CACNA1A, CD36, CFL1, COL5A1, CPT1A, DAXX, DUSP5, EDA2R, FGF14, GNPDA2, GP1BA, IL17B, LAMB3, NNMT, OR11G2, OR1D2, OR2L13, OR51B2, OR51M1, OR6X1, OR8K3, OXTR, PAFAH2, PGLS, POLR2B, PPP2CA, SAT2, SMA2, TGFB1, ST6GALNAC4
Negative_7021	EBP, FAS, LIF, LTB, SYK, ACAD9, ALDH1L1, ALDH5A1, ALDH9A1, CCL15, CD46, CDC25A, CDC45L, CTBP1, CXCL11, DVL3, EVI1, F2RL3, FLOT1, FZD7, GSTO2, ICOS, MAPK14, OR2AG1, PFKFB4, PLCG1, PPP2R5A, PVRL1, RAC3, RFNG, SEMA3A, SGMS2, SHC2, SPHK2, TBK1, ATP6V0A2
Negative_7022	FN1, HAL, ACSL4, ACY3, ASMT, CAMK4, CASK, COMT, CTF1, CTSB, DHCR7, E2F5, ENPP1, FGF18, GBG1, GRIN2A, HYAL1, IL28B, IQGAP3, ITGAV, MAP4K2, OR1L4, P2RX3, PLCD1, PLCZ1, PSEN1, RAB23, SDC4, SETD2
Negative_7023	BET1, CCNG1, HSD11B1, HSD3B7, LIPF, NKD1, NUDT9, OR2V2, PANK1, PTPRZ1, SEMA3B, SMPD1, TNFRSF10A
Negative_7024	ACACB, APAF1, CACNG4, CARS2, CHDH, DHODH, ETNK2, FUT6, GLB1, HNMT, IPK, KIR2DL4, NCOR2, OR10G9, OR14I1, OR52H1, PRPH2, TGFB1, WNT9A, TNFRSF17
Negative_7025	CAPN2, CD274, CD40LG, DDB2, DDX51, ENTPD1, EPHA5, GMPS, IL28RA, IL7R, ITGA10, MAP2K7, MKNK2, NEFL, OR1L8, OR2T6, OR51G1, OR8J1, OXCT2, PCNA, RASGRF1, TM7SF2, TRADD, TSHB, WWP2, YWHAQ
Negative_7026	CRH, ID2, IL3, LYN, ACAD9, ALPL, BET1, CSF3, EPHA5, EXT1, EXTL3, GLI1, ICAM2, IFNGR1, JAM3, JUND, MAN1C1, MAN2A1, MTMR2, MYH8, NEFL, OR51I1, POLR2I, RFXAP, SPP1, TNFRSF8, WNT4, CSNK1A1L
Negative_7027	CKB, F10, F2, IL7, ACSM4, ACSM5, ADRB2, APOA5, B3GAT2, CARS2, CASP10, CD38, CSDA, CXCL5, DKK4, EPHB3, ERBB4, FUT8, HADH, IKBKG, LALBA, MAGI2, MAPK13, NFKB2, OGDH, OR13C8, OR51A4, OR52D1, OR5A2, OR5D16, PIAS2, PLA2G2A, PLAU, PLCB4, PRKACB, SAT1, SDC1, SHMT1, SLC25A6, TLR5, TRPC1, VDAC2, YWHAQ
Negative_7028	VTN, ACTA2, CACNG6, CLDN2, CNDP1, DPYD, DUSP14, DUSP9, GALK2, GDE1, HPSE, HTRA2, LDHAL6B, OR2V2, OR4X2, OR51A4, OR52N1, OR6K2, PDE3B, PGA1, PORCN, PPARG, RALBP1, RASGRF1
Negative_7029	ATP2A1, BRAF, CDC6, CFTR, CXCL9, DDX56, FARP2, GNPDA2, GPD1, OR1D5, PGM1, PIGF, PIGP, PNMT, SELL, SEMA3C
Negative_7030	DAO, FAS, ILK, PGF, PLG, AADAC, ACADL, ADIPOR2, ALDH1A2, ARNT2, B4GALT5, BMPR1A, BUB3, CCNA2, CCNG2, CPT1B, CYP3A5, DAXX, GPX5, ITPKA, LYP1A1, MAPK1, NT5C1A, OR4L1, OR4N4, OR5B17, OR6C1, OR9I1, PDX1, PKLR, PLA2G6, PPP2R2D, PTPMT1, PTTG1, ROCK2, TKTL1, VEGFB, ZFYVE16
Negative_7031	ADORA2B, BMP4, FUT1, GSTA1, IFNA5, LAMA3, MAPK10, OR8J3, SDHD, SESN1, SMPD3, UGT2B28
Negative_7032	ME1, OGT, AKT1, ALDH3A2, ATG12, CCKAR, CCL3, CD247, EPHB3, GCNT1, IKBKE, IL1R1, LLGL2, MARS2, MMP7, OR10T2, OR1A1, ORC1L, PDE6H, PIGM, RALBP1, SC4MOL, SDC1, SELP, TYMS, ULK2, UROS, PNLIPRP1, TNFRSF10A
Negative_7033	AMT, IL6, ACHE, AFMID, BMPR1B, CACNG5, CDS1, CHSY1, CMBL, COL4A2, CTF1, CYP2F1, DTX2, ESAM, FABP1, FGF1, FOXA3, GALNT2, GNAL, GRB2, GRIN2D, GSTO2, GUCY2C, GUSB, HLCS, HSD17B2, IL9R, IRF7, NPR2, OR10S1, OR2L2, OXTR, P4HA1, PDE4A, PDE6H, PDE7B, PIAS4, PTPRF, SETD7, SGMS1, SLC2A2, ST3GAL5, TKTL1, TRHR, TRPC1, TUBAL3, WNT2B, HLA-DQA2

Negative_7034	ME3, PTS, ACSM3, AGTR1, ANPEP, ATP5J2, BET1L, BMPR1A, BMPR2, CACNA1B, CD244, COL4A6, COQ7, COX15, FTH1, GALM, GNG3, HCLS1, HTR2A, JAM3, MA PK14, MDH1, METTL2B, NKX2-2, NT5C, OR2A12, OR2D3, OR52A5, OR52K2, OR5AR1, OR8B4, OR8D4, ORC3L, PLK1, PLXNB2, POLR2F, PRNP, RETSAT, SDC2, SELE, SEMA3A, SLC27A1, THT PA, TUBB2C, UPB1, VEGFA, XCL2, YWHAZ
Negative_7035	ADA, CD4, MPL, ACMSD, ACTC1, ANAPC7, CHRM1, DHRS9, FABP3, GSTM4, IL12 RB1, LCMT1, NME2, OLR1, OR10G3, PFKP, PIGH, RASGRF1, ST3GAL1, SYNJ2
Negative_7036	AK1, RPE, ZYX, AHCY, ALDH3A1, APBB1, APH1A, APOA2, CALML3, CD44, CDC2 5A, CHSY3, DDX41, DPM3, ENPP6, IL8RB, ITGB7, LIFR, MAPK7, NOX1, NR1D1, NUDT9, OR4N4, P2RX1, PFKM, PON1, RETSAT, SMAD6, SYNJ2, UMPS
Negative_7037	IL5, SRM, ADH7, ALDH1A2, ANAPC7, ATG12, C1QC, CAMK2G, CSNK2B, CXCL2, EFNA3, GALNT14, GNA15, HSD17B1, IL24, INHBA, NARS2, NTN1, RFNG, SQLE, STAT4, TLR4, TLR9, TNFRSF8, VANGL2
Negative_7038	GCK, ID3, MPZ, ABCC8, CASK, CBLC, CCR3, CDC25A, CDC45L, CREB3L4, CRLS 1, CYSLTR1, DHDDS, DMGDH, EPOR, FRAT2, GSTM5, HNMT, HSD3B2, IFNGR2, I L1A, IL2RB, ITGA1, ITGAD, METTL6, NCF2, NFATC4, NOX3, OR4F4, OR4F6, O R4N4, OR51F1, OR5J2, OXCT2, PCCB, PIK3C3, POLR2A, POLR2J, RBPJ, RDH1 0, RGS3, RPS6KB1, SFRP5, SMAD2, SPHK2, STEAP3, VASP, ATP6VOA2, HLA- DRB5
Negative_7039	FN1, LIF, CHEK2, IFT57, OR5M3, PFN4, PPAP2A, RAPGEF1, SDC2
Negative_7040	BAX, GK, HK1, ALDH3A1, APOE, B3GAT2, BLNK, C3AR1, CADM3, CCL27, CDC27, CFL1, CSAD, CXCL10, DAAM2, FGF4, IFNA2, IFNA21, LAMA3, LPAR1, LTC4S, MDH2, MYH3, NEFH, NME4, OR10P1, OR4K15, OR7D4, OR8J1, PFKFB4, PPCDC, PPID, PRKAA2, RRM1, SMPD4, SREBF1, SYNJ1, TBL1Y, TPI1, UBA1, ATP6V1 B1, ATP6V1E1, MAPKAPK5, SERPIND1
Negative_7041	AASS, ACTB, B4GALT4, BAI1, CD19, GPT2, IFNAR1, MARS, OR5R1, ORC2L, PC YT2, RUNX1T1
Negative_7042	DCK, MIF, BST1, CXCR6, ENTPD5, HA01, INPP1, ITGB3, OR10G3, OR4C46, OR 5C1, UGP2
Negative_7043	F2R, ACAA1, ACVR1C, ASPA, BCKDHA, CAMK2G, CD244, CLTC, CMPK1, CSDA, C SNK2A1, CYP2D6, EPB41L2, ESPL1, FZD9, GMDS, GPAA1, GSTT1, HHEX, KIR2 DS5, LALBA, LIPA, MASP2, NFE2L2, NME4, NRG3, OR5T3, PNPLA3, PPP1R3A, PTGER1, RBL2, RXRA, SKP1, SLC12A2, TP53I3, TUBB1, ATP6V0D2
Negative_7044	NPY, OGT, PAH, AASDH, CD247, CSF2RA, DHCR7, DUSP6, FSHB, FZD9, HCST, H TR2C, IFNA8, LCAT, LEF1, NODAL, NSDHL, OR4C16, OR52N1, OR5M9, OXCT1, PFN4, PPP2R1A, SPRY4, WNT9A
Negative_7045	PDC, TKT, ARSD, ATP2A3, B4GALT7, CCL22, CCL27, CCNA2, CCNH, CD79B, CL TCL1, CPS1, DAAM1, DEGS1, DUSP16, EXOC7, FABP4, FCER1G, FGF4, GALK1, GNAT3, HES1, HMGCL, LILRB3, LMO7, LRP5, MGST2, MTHFD2, NAMPT, NME2, N Q01, ODC1, OR2L13, OR51F1, PAK2, PGM3, PTGES, PTPRF, RASSF5, RERE, RP E65, SETD1A, SKP1, SOCS3, TAS2R3, TSC1, TSTA3, HSP90AA1, PPARGC1A
Negative_7046	ACHE, AC02, ACP2, ACTN2, ANAPC5, ARRB1, B3GAT2, CDK4, IL18, MAPK3, MC M7, MGST3, OR10K1, OR2W1, P4HA3, PHKA1, PLA2G6, POLR2G, PRSS2, PYGB, SOX17, ST3GAL1, UNC5A, SERPINB5
Negative_7047	TNF, ABI2, ADCY8, ADIPOR1, AGPAT3, AGRP, ALG5, ALS2, ATP2A3, BDKRB1, C5AR1, CD01, CHAD, CLTA, CNTNAP1, DGKD, DGKE, DUSP4, EFNA4, FLT4, HAD HA, HEXB, HIP1, HRAS, LRP5, LTA4H, MAP3K8, OR2A4, OR4C46, OR4K17, OR6 C75, PCYT1B, PDX1, PIGP, PRLR, PSENEN, RFNG, SHC3, SMARCA5, STX4, TAC R1, TDO2, TGFB3, YKT6, SERPINA5

Negative_7048	FGG, HGD, OSM, UBB, ACADS, AGXT, B3GALT2, CALML6, CCKBR, CD80, CLDN17, CMPK1, COMT, CTSG, CXCL12, DHRS4, F13A1, GNAI2, IDH1, ITGB1, NAGK, NFAT5, NLGN1, OR4F15, OR51A2, OR6B3, P2RX6, PFN4, PHKA2, PLA2G1B, PLA2G2F, PLCB2, PRKG1, RASGRP2, SESN1, SH2D1A, SOAT2, TAP2, TCF7L1, TNFSF4, ARHGEF12, ATP6V1G1, GABARAPL2, TNFRSF12A
Negative_7049	AMH, GK2, IL9, MIF, XDH, ACSM1, ACSM2A, CCNH, CD36, CD3E, CLTCL1, CSNK2A2, DPM1, DPYS, FUT2, LDHAL6A, MAP3K7, MAPK12, NPR2, NT5C3, NTF3, OR1L6, OR52M1, PPAP2A, PRKAB1, PRPH, RPN2, SDC2, SLC27A4, SOCS4, TBL1Y, TSC1, UAP1, VAMP4
Negative_7050	JUN, TK1, ACAT1, CDK7, CHDH, CLOCK, COL4A6, CYP2B6, DPYSL2, ELK1, ERB3, FGF19, GNA13, HARS2, HIP1, IL1B, LTB4R2, MAD2L1, MCM6, MNX1, MTMR6, NFYC, OR10J3, OR13C9, OR6N2, ORC2L, PHKG1, PLA2G4A, POLR2F, PRKAG2, SOAT1, ST3GAL2, SUCLG1, SV2B, TICAM2, UAP1, MAPKAPK2
Negative_7051	CTH, DDC, B3GNT3, COQ6, IL23A, OR13A1
Negative_7052	LPL, MVK, NOG, ACVRL1, ACYP2, ADSL, AGTR1, ALPI, AOC3, BMPR2, CHEK1, CHKA, CSF2RA, DAPK2, DHCR24, EDN1, EHMT1, EPHX1, FZD2, GNA15, GRB2, GRIN2B, HTR4, IL21R, IQGAP3, ITPKB, MCAT, MYLK3, NPR1, NR4A1, OR4Q3, OR6C75, PDGFRB, PDK1, PIP4K2A, PLOD3, PRKAR1A, PRSS3, RASSF1, RFNG, RPSA, SELE, TAS2R16, TXNDC12, ULK2, WASL
Negative_7053	BTK, CBL, LPL, OAT, TEC, AANAT, ACVR2B, ADRBK2, ALG10B, CACNA1E, CHST12, COL1A1, CYFIP2, DDX23, DGKD, FGF13, GRIN1, IFNG, KITLG, OR11G2, OR13C9, OR4X2, OR51S1, OR5M3, RAB23, RAF1, TLN2, TNFRSF13B
Negative_7054	RB1, VCL, ADH6, ARHGEF4, BPNT1, CACNB4, CASP10, CDC20, DGKB, DNMT3B, EXT1, FARS2, GNRH1, HRH1, HSP90B1, ITGAM, MAPK13, MIOX, MYD88, NPR1, OCLN, PAK2, PLA2G2A, POLR2E, SFRP5, SMAD1, SMARCA5, SSH2, STX18, TAS2R7, TOMM40, TUBB2B, YWHAH
Negative_7055	CD4, ID1, MOS, ACP5, ANAPC7, ARPC5L, ARRB1, BAIAP2, BCAR1, CD82, CHPF, CTF1, CXXC4, CYP26A1, EDNRB, F2RL2, FTH1, FZD2, GOSR2, HARS2, ITPA, KIR2DL4, MCM5, MTHFS, MYH14, OR10G3, OR51B2, OR56A1, P2RX5, PIK3C3, PLA2G2A, POLR2F, PPP2CA, PRPH2, RAPGEF3, RASGRP4, RDH11, RHOA, SLIT1, SMURF1, SSH2, TAS2R13, TIAM1, TJP1, TJP3, UGCGL1, VAV2
Negative_7056	LAT, OSM, ADRA1B, ASMT, COX15, CREB3L3, CREB5, CYP4F3, DTX1, EFN2B, HSD17B4, MKNK1, OR4K13, PPM1B, PTEN, RXRA, UBE2L3, UGT2B28, WNT10B
Negative_7057	CFI, DBI, DHH, PLG, TKT, ADSL, AMHR2, BLVRA, CD22, CLDN22, CMAS, ENPP3, FZD5, FZR1, GBGT1, GNAL, GNAS, GNB3, IRAK3, MYH7, NUDT5, OR14C36, OR1D2, OR1E1, PDGFD, PLAU, PNPLA3, PPA2, PPP3CB, PVRL3, RUNX1, SFRP4, SUOX, TAS2R1, TGFB2, TJP1, UGCG, XYLB, XYLT1
Negative_7058	AGL, BAX, F12, LEP, ACAD9, ACTG2, ADRA1B, ADRA1D, CYP17A1, CYP2E1, CYP2F1, FGFR4, GCNT2, IL17RA, MAP4K3, NEFH, OR1L6, PDE7A, RASGRP1, RRM2, SGPP1, PLA2G12A, PRICKLE2
Negative_7059	TNR, ATN1, EXT2, LDHC, PDCD1, RFWD2, SDHD, SMAD1, TMLHE, PLA2G12B
Negative_7060	CBL, APAF1, APOA1, CYFIP1, FLT3LG, GADD45B, HCLS1, INHBA, KLRK1, OR10G4, OR2F2, PAK2, POLE2, TRPC1, TUBA3C, WBSR22
Negative_7061	HYI, ABLIM1, ACSL3, ADORA2B, AKR1B1, BCKDHA, CBL, CD40, CYP2J2, GNG3, GUCY1A2, NOTCH3, RBX1, RRM2B, SH2D1A, TMLHE
Negative_7062	A2M, C2, LTB, AADAT, ACSM2A, ACSS2, AMY2B, CACNG1, CCL15, CCL3, CD40LG, DBF4, DGKH, GGT6, GRIA3, HADHA, HTR2A, IFNA10, IL22, NFASC, NT5M, OCLN, OR11G2, OR4F17, P2RX4, PARD6G, PDE7B, PPCS, RBX1, SRD5A1, TCIRG1, TP53I3, UCK2, YWHAZ, SERPINC1
Negative_7063	EPHA2, NAT5, SFRP4
Negative_7064	SRF, ALOX12B, APPL1, BMP5, CACNA1S, CDH5, CTSS, EXT1, FCGR2B, FLAD1, IL17B, IL24, MAN2A1, MGAT5, NFKBIB, OR2B6, OR2G6, OR52I2, PI4KB, PLCD4, PTPRB, PVRL2, TGFB3, TPI1, UPP1, MAP3K7IP2, TNFRSF12A

Negative_7065	C5, FN1, HK1, RET, SCD, ACADVL, ADAM10, AMHR2, CAMK4, CHST12, COASY, CTTN, CYP2C19, DIAPH1, DTX4, GRIN2B, HHIP, MAT2B, MECR, MMP14, MTMR2, NNMT, NT5C1A, NTF3, NUDT8, OR14A16, OR1N1, OR4D9, OR52K2, PDE4C, PIA S2, PLA2G10, PLXNA2, POLR1B, PTK2B, PYGL, PYGM, QARS, RPN1, RPS6KA2, RUVBL1, SEMA3F, UBE2L3, UBE2L6, VTI1A, WASL, ARHGEF12, HLA-DP B1, TNFRSF10B
Negative_7066	CFI, GPT, MAX, ACY3, ARAF, BCAT1, BDKRB2, BMP5, DDHD1, EXTL3, FCER1G, HMOX2, IL1R2, LPAR1, OR10A4, OR11H1, P4HA3, PIM2, PNPLA4, POLR2G, RND1, TAS2R10, TAS2R4, TPH1
Negative_7067	HGD, ID1, PGD, ADH7, AFMID, ALOX15B, ALPP, ATP5B, CACNG5, CD3E, DGAT2 L4, DPYS, FDFT1, FUT5, FZD5, GLUD2, HSPA2, IGSF5, IL20, KCNJ11, LRP5, MGST1, NLGN1, OR10J5, OR13C4, OR4D9, OR51G2, OR52I2, POLR1A, PPP1CC, PRKCD, RPS6KA4, RUVBL1, SGMS1, SLC25A4, STT3B, SULT2A1, VNN1, MAPKAPK5, PHOSPHO1
Negative_7068	ADO, ME2, ADH7, ALAS2, ALDH3B1, C4BPA, CCR6, CREBBP, DEGS1, EXT2, FZD8, GLDC, IFNG, IFNK, JAM3, MAP3K3, MCM5, OR1N2, OR3A1, OR4D1, OR51F2, OR5T2, OR7D2, OR7G3, OR8G1, OR9Q2, PANK1, PITX2, PPA1, RAB5A, RAPGEF1, RARS, RASGRF2, SEMA3A, SESN3, SOD1, ST3GAL6, STMN1, STX12, SULT1A2, TAS2R13, TGFB2, TSHR, KIR2DL5A, TNFRSF12A
Negative_7069	C9, PGD, ACPP, APPL1, CLDN3, CTSG, CYP2E1, FABP4, GNA12, MAD2L1, MDH1, NAGLU, OR2G2, OR2K2, OR6B3, PARVG, PFKL, PGK2, PRIM1, PRPS1, PTPRZ1, SCIN, SLC27A4, THTPA, TRADD, VAV1, XIAP
Negative_7070	ADO, HK3, PML, PVR, TAT, ACSM2A, AMPD2, ATP5I, CCL16, CD55, CES7, CLDN10, CYP27A1, DGKB, FUT9, FZD8, HTR2C, IL21R, MAML1, OR2V2, OR52I2, OR5AS1, P4HA1, PIGX, RAP1A, RFX5, ROBO3, SEMA4B, SH3BP2, SMARCA5, STX6, ZIC2, ATP6V1C1, B3GALNT1
Negative_7071	F9, CRLF2, GOT2, GRM1, GZMB, IRF9, OR2T1, OR5D18, PEMT, PGAM2, RAPGEF2, SRD5A2, TBXAS1, ST6GALNAC3
Negative_7072	DDC, AHCYL2, ANAPC2, ARD1A, ARPC1A, B3GAT3, BCKDHB, BIRC5, CFTR, COASY, CTLA4, DDX52, EHHADH, F2RL2, HCST, IDI2, IL21, INPP4B, IRAK4, KAR S, KIR3DL1, L1CAM, LRRC4C, LYPLA2, MAP3K13, MDH2, NEU4, NFATC1, NRXN3, OR2M2, OR2Y1, OR51V1, OR5AP2, P4HA2, PAK7, PFKFB3, PGS1, PIGS, PLCB4, PRKCQ, PROC, PYGL, STMN1, SUCLG1, SUV39H1, WWP1
Negative_7073	CD46, HTR7, LYZL1, OR5T2, PDE6H, SGPP2
Negative_7074	LSS, ACP6, AKR1C3, ALDH1B1, ATP5E, B3GALT5, CD28, COL3A1, EP300, FZD4, GCNT2, GNAS, GNG13, HBEGF, LEPR, MYH11, NADSYN1, NCOA4, NFYA, NTN1, OR11L1, OR1G1, OR5AU1, OSMR, PIP4K2A, POLR3B, RASSF5, RPS6KB1, RPS6KB2, TUBB6, UGT2B17, HLA-DQA2, SERPINB5
Negative_7075	B3GALT4, CYP2A7, GUCA1A, MPDZ, NCF2, OR10T2, POLR1A, PRPH2, SH2D1A
Negative_7076	ASCC3, CD82, COL4A4, FGF19, TAS2R49
Negative_7077	FST, OTC, ABLIM2, ACAD8, AGPAT6, ALG12, BAAT, CCNA1, CD40, CDC25B, CTSL1, CYFIP2, ENPP2, ENTPD1, FZD1, GALM, GBE1, GMPPA, GRM5, HSD17B1, IDH1, IL21, IPMK, NANP, OR1J4, OR2AG1, OR4N2, OR51F1, OR52N5, OR9Q2, P2RX6, PLAUR, PLCD3, POLD2, PRPH2, RBL1, SEMA3G, SGMS2, SPRY4, ULK2, VAV2, CACNA2D3
Negative_7078	FER, SRM, AQP7, ERO1L, GDF6, GRM1, GSTM2, IL9R, NEFM, NEU1, NOTCH1, OR2T5, OR6K6, OR9Q2, PNLIP, PNPO, PPP2CA, PTPRC, SSX2IP, STT3B, TUBA3C
Negative_7079	IL8, MVK, ACY3, APLP1, ASS1, CD226, CD8A, CES2, CHDH, CLTC, COMT, CRB3, DEGS2, ECHS1, GNAI3, MITF, MYH9, MYL2, NEUROG3, OCLN, OR51L1, OR5C1, OR7A10, PARVA, PIP5K1B, PLCG1, PPP3CC, PRKAB2, RASGRP1, SDHC, SLC12A2, SMAD2, SMPD2, SNAP23, UPRT



Negative_7080	AK1, AMH, GLS, KHK, ABL1, ACOX2, ALDH1B1, ARHGEF7, ASCC3, BCKDHA, BDH2, BHMT, BMP6, CCL2, CCR7, CXXC4, CYP26C1, DGKE, EDA2R, FGF17, FTCD, FZD10, GBE1, GPD2, HEXB, HIBADH, HLA-DRA, KIR2DL1, LTC4S, MCM5, NCF1, NUDT9, OR2M7, OR5AU1, PANK1, PFKL, P PP2R5C, RAPGEF4, SHISA5, SYNJ1, TAS2R41, TSHR, TYROBP, ZNRD1
Negative_7081	CGN, ADH5, AGPAT2, ARG2, BMP5, CPT1B, GOT1, IL18RAP, MTFMT, OR51A2, P LA2G2A, SMPD4, SULT2B1, TCF7L1, TNXB, SERPINB5, ST6GALNAC3
Negative_7082	AGL, DAO, EBP, FER, IL4, ACAD9, CLCA4, CRKL, FASLG, GDE1, HNF1A, IFNB1, KNG1, MCCC2, MDH2, OR10K2, OR1A1, PHKG2, POLD2, PRKACB, PRKCA, SMAD1, UBA7, ATP6V1B1
Negative_7083	CBS, ID2, ACADM, ALDH1L1, ALDOC, ATF4, CCL26, CD22, CFTR, CYSLTR2, FECH, GDE1, GPD1L, GYS1, INPP4A, KIR3DL3, NRG4, OR10A5, OR5F1, OR7G3, PAK1, PFKFB3, POLR2J, POLR3D, PRKACB, PROS1, QPRT, SLIT1, SPRY4, SSH1, TSHR, SUV420H2, TNFRSF13C
Negative_7084	GRHPR, HMGCS1, OR4D2, PPP2R5C, PPP3R2, TRAF1, TUBB2C
Negative_7085	DUT, PGP, SFN, ADIPOR1, CACNA1H, CACNG7, CAMK4, ESAM, EXOC7, GUCY1A3, IL28B, ITCH, OR6M1, PHKG2, TAS2R5, WNT2B, WNT3A
Negative_7086	NNT, PLG, ACADSB, AKR1C2, ALDH7A1, APC2, BNIP1, CD40, COL4A2, CYP21A2, EDNRA, IARS, IL9R, LYZL1, MAN1A2, MAP3K8, NANS, NKD2, NLGN2, OR10J5, OR2A12, OR7D4, OR9Q1, PARVA, PPOX, PPP2R5B, PRKAB2, RAP1A, SETDB2, SHC4, SNW1, ST3GAL5, TCIRG1, PRICKLE1, TNFRSF12A
Negative_7087	STS, AARS, ANAPC11, ARRB1, B4GALT2, EPB41, GPT2, NLGN3, OR7D4, PNPT1, PPP2CA, PRKAR1A, PRPS1, PTDSS1, PTPMT1, TUBA4A
Negative_7088	AK3, BCR, ACOX2, ADRB3, ARG1, ASPA, CD36, COL5A3, CSF3R, GNAS, HEMK1, IKBKE, IL22, INPP5A, MAN1B1, MAP2K6, MDM4, OR2AG1, OR6K6, PANK4, PGM3, PISD, PLCB2, PLXNB2, PMM2, PPAR, PPP2R5A, PRLR, RAPGEF2, RASSF1, RBX1, RGS3, TAS2R14, VAMP3, YWHAQ, ARHGEF12, SERPINA5
Negative_7089	GH2, AARS2, ACTN4, ACVR1B, ACYP2, ALG10, CD58, CDC6, CDKN1B, CD01, CHRM5, CNGB1, COL5A2, CYP2C19, CYP2E1, DAAM1, DGKQ, EARS2, FGF4, FPGT, GALNT7, GL01, GMPS, HEMK1, HRH1, IFIH1, IL2RA, ITGB2, MCM4, OCRL, OR14J1, OR2T4, OR4C15, OR8J3, PGS1, PMAIP1, PPAT, RUVBL1, SNAP23, SRGAP3, STEAP3, TYMP, UGT2A3, UGT2B28, UGT2B7
Negative_7090	BTK, ILK, PTS, ABLIM1, AGPAT6, ARNTL, ATP5A1, CCL26, CCR3, CD19, CD3E, CSNK1G3, CYP11A1, E2F1, ELK4, EPHB1, EXOC7, F13B, FOXA2, FPGS, HIF1A, IRAK4, ITGA6, MTHFD2, MYH6, NQO1, OR1L6, OR1N1, OR4C12, OR4K14, OR7A5, PAK1, PDE5A, POLR2L, PRKCA, PTCH2, RAP1B, RERE, RHOA, RPIA, SDHC, SGPP1, SLC33A1, SPP1, SSH3, STX10, TKTL2, XYLT2, ST6GALNAC4
Negative_7091	MPI, ARNTL, CBLB, IL4R, LCAT, NKX6-1, NPR2, PARVA, PLCG1, PPP3CC, STX1A, TNFSF8, UGCG
Negative_7092	FER, AKT2, CALML3, CDH4, CDKN1A, CPS1, CSNK1G1, CUL1, EDAR, ENTPD7, HADH, MAPK8, OR13C4, OR5H2, OR8D1
Negative_7093	MIF, ACSL5, CARS, ESAM, H6PD, IRS1, KIR2DS4, OR2D2, PFKP
Negative_7094	ABAT, ACVR1, AKT3, ALDH3A1, CCL13, CD48, CER1, EI24, GALNT9, GSTM5, IFNB1, IFNGR2, IL12RB2, OR10X1, OR5A2, OR6C75, PIK3C2G, PLIN, RPN1, TLR9, TNFSF14, UPP2, VAMP3
Negative_7095	AK1, C5, ADIPOR1, APC2, ATP4A, ATP5G1, AXIN2, CACNB3, CCL19, CCND2, CD40, CDC23, CDKN2C, CXCL16, DPYS, EPHA3, FLT3, FRAP1, FUT4, GADD45A, HEXB, IDI2, ITGAX, MBL2, NCAM1, NEGR1, OR10S1, OR1N1, OR4L1, OR9G4, PDHA1, POLR2A, PRKAB1, PTPN11, ROCK1, SARS, ST8SIA5, STAT5B, SULT1A2, TAS2R7, TSTA3, PAFAH1B1
Negative_7096	AADAC, ACSL1, ALS2, C1QA, CCL11, CLDN1, CSNK1E, E2F5, EHMT1, HBEGF, IL11RA, MCM5, MTMR1, NANS, OLAH, PGS1, PISD, PPID, PTPRC, RASA2, RASGRF2, RRAS, ST3GAL4, SUV39H2, TNFSF9, UCKL1

Negative_7097	DUT, F9, GPT, IL2, ACAA1, ATF4, CCL23, CHRM5, DPM2, FGF12, FRAT2, GRIA1, HRAS, IL17RB, LILRB3, LTB4R2, MDH2, NARS, NRCAM, OR2A4, OR2F1, OR5A1, OR6C2, PIAS3, PPP3CB, STAT1, TAS1R3, UGCGL2
Negative_7098	C8A, ACSL4, ALDH1A3, CACNA1F, CACNB2, CDC25C, CDC45L, DNMT3L, DPM3, FGFR1, GNB3, HIP1, HLA-DOA, IL3RA, NCOA4, NRAS, OR2T12, PAK2, PDE1A, PRKAA2, SDHD, SESN2, STX4, TALDO1, UBE2K
Negative_7099	A2M, CR2, IL6, ACSL4, APOE, ARPC5, B4GALT6, BCL10, CACNG6, CHPF, CLDN6, CLTB, CMPK1, CYP11A1, CYP2A13, DDX56, DERL1, ENTPD8, FM02, GAMT, GSTM3, IRF5, LGMN, MAOB, MKNK1, OGDHL, OR56A1, OR7G3, P4HA2, PLXNB1, PAPP2A, PTPRF, SDHA, UPRT, WASL, WNT2, XCL1
Negative_7100	FER, AVPR1B, B3GAT1, BCAR1, DHCR24, FTCD, GMPS, HNMT, HRH2, LEFTY2, PAK6, PARD6G, PLAU, SMC1B, SPCS1, TUBB4
Negative_7101	IDS, KHK, XDH, ACOX1, ASRGL1, CBLB, CCL4, CDKN2B, COQ3, CTF1, DGUOK, DTX2, EPHX1, INPP5E, KDSR, MIOX, MYH11, NR1H3, OR2T2, OR4F15, OR4X1, OR51A7, P2RX2, PDE8B, PLD1, PVRL1, SMURF1, SPTLC1, TNFSF11, VDAC1
Negative_7102	C8A, HAL, RB1, SRF, AHCYL1, AMDHD2, AMHR2, ARNTL, CD247, CD274, CES2, COL11A1, COL4A4, CSNK1G2, CYP2C8, FARS2, GNB1, HDAC2, HEXB, HLA-DRA, HSPB1, IARS2, IL13RA1, IL17A, IL17RB, IRF5, LCMT1, LYPLA2, MAGI2, MAP3K8, MARS2, MGST2, MTHFD2, OR2T33, OR4N4, OR6K2, P4HA1, PDE8B, PPP3CB, RASA2, RBL1, SDHC, SHISA5, SMARCA5, TRMT11, ULBP3, UNC5B, CACNA2D3, SERPING1
Negative_7103	BTC, RB1, VTN, ABCC8, ACSL5, ACTB, CANT1, CCR8, CDC42, CDKN1A, CNDP1, CPT1B, CYP2A7, DKK2, EPHB4, FDFT1, FZD6, GALNS, GSTZ1, IKBKB, IL12B, IL20RB, ITPKB, MAD2L1, MAML2, MAPK1, OR1M1, OR2L2, OR56A4, OR5H6, OR6C4, OR6C74, PDE9A, PIK3CA, POLR1E, POLR3D, PPP2CA, PTPRJ, RASGRF2, RPN1, UGCG, XCR1, ATP6V1B1, CSGALNACT2
Negative_7104	IL4, ADRA1D, ADSL, ALDH3A1, ASIP, ATP6V0C, B4GALT4, CAMKK2, CD27, CDKN2A, CNTNAP1, CXCL10, DDX51, DNMT3L, EI24, ERO1L, GLI1, GLI3, IARS2, IL28B, IL29, IL5RA, INSR, IRS2, NKD2, NRG3, NUDT8, OR1L1, OR2M3, OR4D11, OR52D1, PARD3, PDE1B, PER3, PFKM, POLD1, PTK2B, PYGB, RDH5, SPRED1, SRGAP2, TGFBR1, THBS3, TRMT11, TUBA4A, WNT2
Negative_7105	AKR1B10, ATP2A3, BTRC, IL17A, NRG1, PAK2, PTPN1, SPHK2, PPP1R12A
Negative_7106	ASL, C2, FAH, FGG, MVD, PLN, ACVR2A, AGTR1, BLVRA, BMPR2, DGKG, DHDDS, DTX3, EPOR, GAPDH, GDF5, GLO1, GNPAT1, GPD2, GUCA1B, IFNAR1, IFT57, IL20RB, LAMA4, OR10G9, OR10T2, OR2A2, OR4P4, OR51V1, OR5D14, OR6C2, OR8B8, P4HA1, PAICS, PDE3A, PFAS, PLAU, PPP2CA, PPP2R2D, PSPH, PTK2B, RASA1, RFNG, SSX2IP, TACR3, ULBP3, VEGFB
Negative_7107	CBL, CD40LG, EPHX2, GNG3, LRDD, OR5K2, PIK3C2A, ATP6V0A4
Negative_7108	DAO, ACVR1B, AGPAT2, ANGPTL4, CASP3, CLDN4, COQ6, CXCR4, ENO3, ENTPD8, FOXA3, GUCY2D, HTR7, IL17B, IL17RA, NKD2, NUDT9, OR13A1, OR1E1, OR1L4, OR52J3, OR6T1, OR9I1, PIGP, PON1, PSPH, PYGM, QPRT, SLC27A4, SMA5, TLR9, TPK1, UCP1, UGCG, WNT10B, ATP6V1C2, B3GALNT1
Negative_7109	AK1, DHH, GH1, ACSL3, ADH1A, C3orf10, CACNG1, CD80, CNTNAP1, EHMT1, EPHA3, FARS2, FGF12, ISYNA1, ITPKB, MAP2K4, MYH2, MYH3, OR1A1, OR1S1, OR2T34, PHKA1, PLCD4, PRKCZ, PTPN7, SC5DL, TAS2R3, TBXAS1, TIAM1, TYROBP, VAMP2
Negative_7110	DDO, NGF, OGT, ACOX1, ADH4, ADORA2A, AKT2, B3GAT3, CYP11B1, DRD5, HTR4, IARS, NCKAP1L, OR2A25, OR4K1, OR5L1, OR8J3, PGM3, PLD2, PTGES, RAPGEF2, SDHA, SOX17, SULT1A4, TJP1, TLR9, TNFSF11, HLA-DPA1
Negative_7111	MOS, MAPK8, PTGER3, PTTG1, TAS2R8, TCIRG1
Negative_7112	LPL, AGMAT, AMPD3, CD82, CHUK, CSNK2B, ENAH, FCGR3A, GALNT11, HSD11B1, LGMN, MGAT4B, NFYB, OR10G7, PDE7B, SEMA4F, SMPD3, SOCS4, ATP6V1B1, CSNK1A1L, TNFRSF1B

Negative_7113	GP9, AARS2, ACADVL, AHCYL2, ATP6AP1, C1QA, CD74, COL5A3, CYP4A11, ENPP1, FMO2, GLYCTK, IMPDH2, LAMB4, NCR1, NRG3, OR1L8, OR4K5, OR6N1, P2RX6, PHKB, PLAUR, POLA2, PVRL1, SOAT2, TAP2, TICAM2, TP73, TSLP, PLA2G12A, PLA2G12B, ST6GALNAC4
Negative_7114	CD4, ACSM2A, ACTN4, ALDH7A1, ARSB, ATP4B, ATP6V0C, BIRC2, BTRC, CCR5, CDK5, CHPT1, GNMT, ICAM3, IMPDH2, INPP4B, MTMR2, NCF2, NCK2, OR1E2, OR51L1, OR56A3, OR8U1, ORC1L, ORC6L, PNMT, POLR3B, RALBP1, RASSF5, RCHY1, RRM1, SHC4, SHMT1, SUFU, TAS2R16, TUBB2A, UGT2A3, UPB1, VAMP4, WASF3, ZBTB16, ATP6V1G1, HLA-DQB1
Negative_7115	PTS, CDK4, CTF1, GGT1, PHOSPHO1
Negative_7116	MVK, NGF, PTS, ACSL4, ADAM17, ADSL, ANAPC10, BDKRB1, BDNF, BRAF, CCND1, CDC14A, CYP2C18, DUSP2, FCER1G, GBE1, GNRH1, HHEX, HMBS, IFNA2, IL6R, MYH11, NNMT, OR2Y1, ORC4L, PAPSS1, PARD6B, RAPGEF2, SDC1, SELE, STX5, TIAM1, TRPC1, TSC2, TUBB1, MAP3K7IP2, MAPK8IP1
Negative_7117	GK2, IVD, UBB, ABL2, AKT2, ALDH5A1, APOE, AQP7, ARHGEF7, ARSA, BLVRB, C4BPA, CDC42, CHPF, DGKA, DGUOK, DHRS9, DPM1, EXOC7, FGF10, FUT5, GALNT10, GGT7, GP1BA, GRIA1, HPSE2, IL20RA, ITGA6, ITGAM, LEF1, OR5R1, ORC2L, PAPSS2, PARD6A, PDE1C, POLR3G, PRPS1, PVRL3, RHOQ, SETDB1, SMA D2, TAS2R38, TAS2R42, UGDH, WNT2B, WNT3, CACNA2D1, TNFRSF1B
Negative_7118	ACSL5, ARRB1, ATP4B, CCL2, CYP19A1, CYP1A1, HARS, IL10, IL21, IL8RA, OCLN, OR6C1, RARA, UCP1, WNT4, ATP6VOA4, TNFRSF14
Negative_7119	AC01, ACSL5, BBC3, BCL10, CAMK2A, GBGT1, GNA15, IL5RA, ITGB6, LYZL1, OR51S1, PGK1, PI4KB, PTGES, PTPN1, RFX5, SH3BP2, TBL1Y
Negative_7120	C1S, NGF, AKR1B1, B3GNT2, BLNK, CALML6, CD79B, CHPT1, CKMT2, CTSB, CT TN, CXCR4, CYP1A1, DMGDH, DPM3, ENTPD5, EP300, EXTL3, FECH, GLB1, HCS T, HSD11B2, IFNW1, ITCH, ITPKA, LIMK2, MCM2, METTL6, MYL7, NANS, OR14A16, PAK4, PDE3A, PDXK, PIGK, PLCB4, PNPLA3, POLR1C, PPP2R1A, SOCS4, STX8, UGT2B4, ULBP3, PPP1R12A
Negative_7121	APLP1, G6PC, HSD17B4, OR2AE1, OR52N1, SIAH1, SMPD2
Negative_7122	DHH, KIT, ADCY7, B4GALT1, CACNA1E, CCL20, CLTB, CPS1, CSH1, CYP26C1, DFFA, DPYSL2, DUSP16, EPHA2, FGF6, GGT5, GOT1, HLA-DOB, IL2RG, KLRC4, LALBA, MAT1A, MCCC2, NAMPT, NCKAP1, NT5C2, OR4F4, P2RX4, PPP1R3B, RPS6KA4, SEMA3D, SYNJ2, TAS1R1, TPH1
Negative_7123	AK1, CRH, ADAM10, ADH6, ALAD, BCAR1, CCL8, CDKN2D, CER1, CFL1, CHPF, CHPT1, CHRNA7, CTNNA3, CYP26C1, CYP2C19, ERBB3, FUT1, GNPDA2, HIBADH, IDI1, LDHAL6B, MYLK3, OR1S1, OR2Y1, OR9K2, ORC4L, PARD6G, PIK3R3, PPP1CC, PPP2CA, PPP2R5C, PRKX, ROBO2, RRAS2, SETD7, SYNJ1, TAS2R10, ULBP1, WBSCR22, ST6GALNAC1
Negative_7124	C9, HK1, TNC, ACTG1, B3GAT3, BCAT1, CADM1, CCR5, CD59, CSF2RB, CSNK1G2, DLL4, ENO1, HTR4, IKBKE, MYH15, NCOR2, OR4K14, OR5B17, OR5D14, OR5V1, PDX1, PIK3C2G, SETD2, SPRY3, ST3GAL2, TAS2R3, TGDS, TP53, TRADD, PHOSPHO1, ST6GALNAC6
Negative_7125	IL6, MTR, ACVR1, ADRB3, ALDH1A2, ALDH4A1, ANPEP, ATP5B, CYP2B6, DLAT, DUSP3, IL5RA, IMPDH1, INADL, MCM2, NCOR2, NRP1, OR14J1, OR51D1, PIAS1, SNAI2, VARS, VEGFA
Negative_7126	ALAD, AOC2, APC2, ATG3, BCKDHA, CACNA1E, CD79B, CD80, COL5A1, CSNK2B, CTPS2, DDOST, DDX50, FGF3, FLOT2, FUT5, GALNT3, GNPDA2, IFNB1, IL1RAP, INPP5A, MCM7, MKNK2, MYLK2, NCOR2, OCRL, OR1Q1, OR2A5, OR4D5, OR4K13, OR52E6, OR56A3, OR9Q2, PTPRZ1, PVRL4, RASA2, RASGRP1, RGS3, SNAP25, TAS1R3, TGDS, TGFBI, THBS2, VEGFB, TNFRSF10A
Negative_7127	PPP2R5D, RAB23, HLA-DRB4

Negative_7128	ACACA, CD36, CD82, CKS1B, CTNND1, DRD2, DVL3, EFNA5, FTMT, GABARAP, G LBI1, ICOSLG, IFNGR1, IL8RA, ITGAL, ITGB3, KAT2B, LAMC2, MYH7B, MYLK, NFKB2, NR1H3, OR1N2, OR2M5, OR8K5, PARD6G, PLXNA1, POLD4, POLR2J, PP T1, RHOA, RXRB, SIPA1, STX1B, TJP1, TNFSF14, TNXB, WNT3, CACNA2D3, MA PK8IP3, MAPKAPK2, TNFRSF11A
Negative_7129	AMT, FGA, ACP1, ACTA2, ATP5F1, BCL10, CACNG6, CCL7, CDH2, CKMT2, COMP , CYP3A5, DHCR24, EFN3, ETS1, EVI1, FGF23, FUT9, GANC, GJD2, GNAZ, GR M5, HTR6, IL2RB, ITGA3, NCOR2, NRP1, NT5C3, OR10C1, OR5AK2, OR5M3, OR 8K1, PDE11A, PLCD3, PPP2R5B, PTGS1, RAC2, RASA2, RASSF1, SPCS3, STK3 , SUFU, TCIRG1, TNFSF18, AASDHPPT
Negative_7130	C8A, GH2, GLA, ASIP, ATF4, CLDN11, CTNND1, DTX3, FGFR3, GALNT14, GMPR , GNA15, IL11RA, IL12RB1, INPP5B, IRS1, LALBA, MAT1A, MIOX, NEU1, OR2 F1, OR4C16, OR5AS1, OR5H6, OXCT2, PGS1, PIGA, POLE2, PRDX6, PRODH2, S LC27A4, SMAD3, SMAD5, SNW1, UBE2L6, ATP6V1C2, CTNNBIP1, PAFAH1B2
Negative_7131	DHH, F12, ADCY1, AOC2, B3GALT1, BUB1, CNTFR, CSNK1D, DDX54, FLT4, GAL NT12, GALNTL4, HRAS, NRAS, NRG2, OR10J5, OR8I2, P2RX5, PIGS, PLXNB1, PRKAA1, SCP2, SREBF1, YWHAZ
Negative_7132	BTK, HK3, ID2, SI, ANAPC10, AQP7, CMPK2, DKK2, DUSP3, GNAI1, H6PD, ITP K1, MAP3K7, MAP3K8, MAP4K2, NCF2, NFKB1, OR2A42, OR5AU1, PLCD1, SC4M OL, SLIT2, TNFRSF8, TNFSF4
Negative_7133	ADH1B, AOC3, APRT, BCAR1, CD59, CHRM5, COMT, CTNNA1, FGF22, GMPPA, IR F5, KIR2DS5, OR5B21, OR5D16, PDE6D, SEMA4D, SMAD7, TAS1R1, TBL1X, TG FA, TNFRSF9, UBE2L3, UGCG, UROS, ATP6V1G1, ATP6V1G3, PLA2G12A
Negative_7134	ID2, BUB1B, CBLB, CCL25, CDC14B, CHKB, CLTA, FGF17, GANC, GNRHR, GUCY 2D, MAPK1, MYH10, OR10G8, OR14A16, OR2T1, OR2T29, OR52N4, OR6F1, PIK 3C3, PRKAA1, RBKS, TAS2R50, TUBA1C, XYLB, ALDH18A1
Negative_7135	AK3, BAD, BID, CTH, KDR, MTR, AASDH, ADAM17, AKR1C1, AKT2, APOA2, ARPC 4, ATP6AP1, C9orf95, CCND2, COL11A1, CYP2F1, DDX56, DGAT2, GNAO1, GR IA3, ITGA5, LCP2, MAPK7, NCKAP1, NFASC, NGEF, OR2D2, PDE6H, PIK3CA, P KM2, PPP2R5A, SUFU, PDCD1LG2
Negative_7136	LSS, ALG8, ATP5L, BMP4, BTRC, CPT1C, CRLF2, CSDA, CTNNA1, CTNND1, DGK A, EARS2, GOT1, GSTO2, HLA- DMA, LCAT, MGAM, MYH7, OR2T11, PRKAR1A, PSEN2, PVRL4, STX8, TDO2, HLA -DPB1
Negative_7137	ADO, FN1, IL8, VTN, XDH, ACSL4, ADSSL1, ALOX15, ANGPTL4, ASCC3, CACNA 1D, CFL1, CSNK1D, CTF1, DDX56, DPYD, ERBB4, FDPS, GARS, IMPDH1, NADK, NEU4, NFATC2, NSDHL, OR1M1, OR51B6, OR6A2, PKM2, SH2D1A, SHMT2, SUV3 9H2, TNFRSF17
Negative_7138	CYP7A1, FUT8, FZD10, IL3RA, OR10J5, OR4C15, OR5B3, P2RX2, RPS6KA3, S ELPLG, SHC4, SLC27A4, TAS2R41, UPB1
Negative_7139	B3GALT5, EHMT2, OR8J3
Negative_7140	ALAD, ALDOC, APOC3, ATP4A, CCL16, CNTN2, CNTNAP1, COMT, ENTPD2, GSTT 1, IRS2, LEFTY1, LPAR1, NOD1, OR51L1, PCCA, ZNRD1
Negative_7141	DGKB, YWHAB, MAPKAPK2
Negative_7142	C8B, PML, ACMSD, ADIPOR1, ALOX15, ANAPC4, CCL17, CD28, CDS2, CHRM1, C OL4A6, CXCL1, CYFIP2, DDX18, DGKQ, DHCR24, FGF3, FSHR, FUT1, HAGH, LY PLA2, METTL6, MRAS, NTRK1, OR10AD1, OR1E2, OR2T1, OR2T12, OR51L1, OR 52A1, PDE8B, PIK3CA, PLAUR, PLXNA3, PPM1B, RASGRP3, STX12, TGFA, UGT 2B7
Negative_7143	CKM, PTS, ACSM1, ACVR2B, ADSSL1, CACNG3, CISH, COL6A2, CYP27A1, DIAP H2, DPYS, EPB41, G6PD, GSTA3, IL17RA, IL6R, KIR2DS4, MGAT5, NCAM2, NC K2, NRXN3, OR14A16, OR2G6, OR6B3, PIK3CG, PIP4K2C, POLR2I, PRPS1, RA C1, SLC27A1, SOCS3, TALD01, PAFAH1B1, TNFRSF10B

Negative_7144	TFG, XDH, AGTR1, ALOX15, B3GALT1, BDKRB1, CHR1, EPHX2, GRM1, MAPK14, MCCC2, MYH7, NCK1, NOS3, OR13A1, OR1N1, OR5J2, PARVG, PDE4D, PIAS1, PIK3R5, PTCRA, PYGM, RPS6KA3, SC4MOL, SORD, TNFRSF4, TUBB3, UNC5D, YARS2
Negative_7145	AK2, CFI, DDC, MYC, ALG2, BCL2, CACNG3, CCL19, CCNE1, CHRM1, CHRNA7, CHUK, CLDN7, CSDA, CXCL9, DIAPH1, ENTPD8, FGF4, FLOT1, GALK1, GALNTL1, GGPS1, GPD1L, HSPA1B, HTR4, INPP4A, ITGB7, MAN2A1, MAP2K4, NAE1, NEU4, OGDH, OR2F1, OR2L13, OR52A1, PCYT2, PFKM, PFN2, PGAM4, PIK3R4, PLXNC1, POLR2B, TNFSF10, ATP6V0D2, TNFRSF10C
Negative_7146	CAT, DHH, FST, AOC3, BIRC3, CDH5, CDKN2D, CMBL, CXCL1, DDHD1, DDX50, DRD5, DUSP1, ECHS1, FMO4, HAGH, HTR2B, IRF3, NKX6-1, NOD1, OR2B11, OR52E8, OR5H6, OR5R1, PIGT, PLA2G5, PLAU, SDC3, TBL1XR1, TPMT
Negative_7147	TH, TNN, ADCY1, CD244, CD79B, GNAI3, GUCY2F, HEXA, IKBKG, IL15, JAK1, OR4F4, PLCZ1, PPP2R2B, PRKAB1, RHOA, ZBTB16
Negative_7148	OR10G4, PCNA, PGS1, PIAS3, PTGER1, STX4, HSP90AB1
Negative_7149	CDA, PGF, CLDN8, CYP2C9, FLT3LG, IL20, IL20RB, INPP1, NFYB, OR56A3, RAC1, RBL2, SERPING1
Negative_7150	CAT, CP, KMO, TH, ADSSL1, ALDH3A1, BCMO1, BLVRA, BPNT1, CARS2, CCND2, CDC23, CDIPT, CNDP1, CYP1B1, DUSP3, EFNA1, EVI1, FGF20, FZD6, GDF6, GMPPB, GNAO1, GNAZ, HMGS2, IL8RA, LRDD, NADSYN1, NKX2-2, OR2H1, OR4K2, PLCZ1, PRKCZ, RBKS, SARS, SPCS1, STAT5A, UAP1, UBE2L3, UCK2, HLA-DRB3, SUV420H1
Negative_7151	CFD, IL4, NGF, ALG1, B3GAT2, CACNG7, CNTN2, DIAPH2, DUSP1, DUSP4, EPA S1, FECH, HNMT, ITGAE, MAML1, MTHFD1L, NEFL, NMNAT2, NUMB, PIM2, RPSA, TNFSF8, YWHAH, MAPK8IP2, PAFAH1B2
Negative_7152	BAIAP2, CTSL1, FCER1G, KNG1, VTI1A
Negative_7153	IL3, PVR, ALDH1A3, ALDOC, ANAPC11, ATP50, ATP6VOB, B3GAT2, BIRC2, BIRC3, BMP6, CCL5, CYP26C1, DPYS, DTYMK, EIF4B, EPHA1, EPHA4, FGD3, FGF R3, FOXO3, GALNTL4, GCNT4, GRM1, INPP5B, IQGAP1, LILRB3, MKNK1, MYL9, NFATC4, OR10A4, OR4N2, OR7D4, PIGK, PLXNB1, POLR2A, PRSS3, TDO2, UROC1, UXS1, HLA-DQA2, HLA-DQB1, PAFAH1B1
Negative_7154	C6, LCK, AGPAT4, ALDH3B1, ARPC1B, ASCC3, BBOX1, BMP5, CACNA1S, CD74, CISH, CLDN3, CTBP2, CTSG, F2RL2, FCER1G, FGF7, GALE, GALK1, GRHRP, GUCA1C, HLA-G, IFNB1, IGSF5, IL13RA1, INPP5A, KCNB1, NEGR1, NUDT9, OR4C6, OR4S2, OR5B17, ORC4L, PCYT2, PDE7A, PYCR1, RXRA, SORBS1, STAT4, TLR3, UGCGL2, GABARAPL2
Negative_7155	PER3, PLCD4, POLD4, SFRP2, PPP1R12A
Negative_7156	B3GALT4, DCXR, ENPP2, OR2W1, OR5A2
Negative_7157	ADH6, CFLAR, EPHA8, FCGR3B, GRIN2C, HEXB, MAD2L2
Negative_7158	EPAS1, HPRT1, OR5I1, P2RX4, WNT11
Negative_7159	HDC, SRC, BCAT1, EDA2R, ENTPD2, ENTPD7, FZD5, IL12RB1, KLK3, PDE8B, PI4KA, PIGU, PTPRJ, RPS6KA4, SPRY3, TRDMT1, CTNBP1
Negative_7160	F2, FGA, HPD, NOG, ATP5B, CD01, CLDN17, CRHR1, CTPS, ERBB2, GRM5, GSTZ1, MAD1L1, MDM4, OR10K1, POLR1C, PORCN, PPP2R1A, PPT1, SPAM1, TOMM40, UGT2B28, CACNA2D3
Negative_7161	LPL, ATP5G1, B4GALT2, B4GALT6, CAMKK1, CCNA2, CXCL9, E2F3, E2F5, EPHB2, ETS1, EXT2, FECH, GALNT3, GSTA4, KIR3DL1, MYH10, NT5C1B, OR10G3, OR1Q1, OR51I2, PARVG, RPN1, SOS2, UCKL1, UGT1A10, UGT2B7, VEGFC, WASF1, WHSC1, YWHAZ, PPARGC1A

Negative_7162	OAT, RET, AGPAT3, BAAT, BET1L, CACNB1, CALML3, CDKN1B, CHRM5, CMPK1, CSF1, CTNNA3, DGKD, DTX1, EPB41L1, FDFT1, FGF5, FGFR1, FGFR2, FLOT2, GADD45B, GAL3ST1, GNAS, GRIN2C, HARS, IL1R1, MAP2K1, OR6C74, OR6X1, PIK3CG, PPAR, PRIM2, RBL2, RPN1, ST8SIA5, UCP1, UROC1, HSD17B10, SERPINE1
Negative_7163	CCR9, GNA14, MGAT5, MYH2, RASGRF2, TM7SF2, ULK1
Negative_7164	F2R, GP6, TNF, ACACB, ALS2, ANAPC7, BUB1B, CCNB3, CFL1, DCTN1, EFNA5, ENTPD5, GNG13, HDAC2, HTR6, LAMC2, LIPG, MCM4, MPST, OR4P4, OR51F2, OR51V1, OR5M3, PERP, PIK3R3, POLD1, POLR2G, PPAP2C, PPP1R3D, PRKAG1, PRKCZ, PRKG2, RGS3, SDC3, SFRP1, SOCS5, SULT1A4, THBS4, TRMT11, TSTA3, WNT4, YWHAG, HLA-DRB3, MAPK8IP1
Negative_7165	FST, GRIN2A, HTR4, IFNA14, NFYA, NRXN3, OR4C15, OR8H3, SESN3, SPP1, ZIC2
Negative_7166	SI, ACVR1, AKR1C2, APLP1, AREG, CACNA1H, CDS2, CHSY1, CHUK, CLDN20, DVL3, G6PC, GFPT1, HSD17B1, ITCH, ITGA3, MAD1L1, OR1J2, OR2A4, OR2L2, OR4N5, OR52N2, PTPN7, RAPGEF4, RPS6, TAS2R38, UBE2K, WNT7A
Negative_7167	DUT, ALDOB, ATF2, CLDN17, CPT1C, DGAT2L4, DUSP1, EPHB6, GMPR, MECR, NKX3-1, NT5C3, OR1Q1, OR2M7, OR5M3, OR8B12, PGK2, RHOD, SHC3, TRIP10, ATP6VOA2
Negative_7168	APP, MVD, AASS, ACVR1B, APOA1, AQP7, ARSE, ATP6V1A, AXIN1, CASP6, CD86, DGKH, DTX3L, E2F3, EPHA6, FOXA3, GLI2, GNA12, IL13RA1, INPPL1, LIFR, MTFMT, OR10A5, OR10A6, OR4M2, OR5P2, PCYT1A, PLA2G2E, PNLIP, PPCS, RERE, RXRA, SMURF1, STAT4, TGFB2, HSP90AA1, SERPING1
Negative_7169	CFH, F8, ACTC1, ADAM10, ATP5E, CD48, CDS2, CLCA2, CLOCK, DFFA, FDPS, INPPL1, MAPK9, ODC1, OR1E1, OR2T5, ST3GAL3, STAT3, TFDP1, YWHAH
Negative_7170	CGA, PAH, ACVR2B, ADCY9, ALG13, ARSD, ATP5G2, CACNA1H, CASP8, CCL13, DGAT1, DGKE, FLT3, GATM, HNF1A, HTRA2, IRF9, ITGA7, ITGAL, MMP7, MYL7, OR6C74, PCCB, PKM2, PLCD3, POLR1E, POLR2F, RCHY1, SESN3, THBS2, TOMM40, TPMT, TSNARE1, ZIC2, HLA-DPB1, PDCD1LG2
Negative_7171	HK1, ACTA2, ACVR1C, BUB1B, CCR2, CD40LG, DPM1, ETNK1, GPD1, HADHA, IFNA17, IL17RA, IL29, IRAK1, MYH9, NFATC2, OR2M7, OR5T2, PCYT2, PHKG1, PLA2G10, PTPN5, SETD2, SRD5A2, ST3GAL2, TAS2R1, TRAF4, VEGFB, WNT2, SERPIND1
Negative_7172	CRK, DUT, FAS, PRL, ADORA2A, ALG8, ANAPC11, B4GALT4, BIRC5, CACNA1C, CDKN1C, CEBPA, CLDN6, CTSL1, EFNA2, ENTPD1, GALNT1, GNAZ, IL22RA2, LAMB4, LLGL1, OR13C5, OR4A16, OR4K14, OR51S1, OR52N5, OR56B4, OR5AU1, OXSM, P4HA3, POLR2K, PPP1R3D, QPRT, RASA1, SLC33A1, SUOX, TD02, TLR9, TP53, TRPM5
Negative_7173	SMO, IL24, NUDT5, OR4P4, OR9Q1, PHPT1, POLD4, PRKACB, RDH16, TMLHE, VARS, ZNRD1, TNFRSF13B
Negative_7174	C8G, AMPD1, CCR2, CD3E, CLDN19, COL4A2, DUSP16, ELK1, GMPR, GYS1, HTR2B, LRAT, MGAT1, NOTCH1, OR13C8, OR4D6, OR56B4, OR5T2, P2RX2, PCNA, PRNP, RDH12, SIPA1, SOCS2, SOS1, STK36, TGFB1, UBA1, UMPS
Negative_7175	ABO, LTB, SCD, SHH, UBB, AKR1C3, ASRGL1, CAMK4, CHUK, CYP26B1, CYP2A13, EDNRA, GMDS, GPAA1, IFIH1, IFNA21, IL1B, LIMK1, MAPK3, NAGK, NFASC, NKX3-1, NMNAT1, NRG3, NTRK2, OR11A1, PDE1A, PLXNA2, SEMA3B, STT3B, UPP2, TNFRSF1A
Negative_7176	DDO, F11, TFG, ADRA1B, ADRBK2, AGTR1, AHCYL2, ALOX15B, ATP6V0C, CACNB4, CAMKK1, CFLAR, CRY1, CSNK2B, CYP27A1, DKK1, DUSP16, EPHB6, GNA15, GSTA4, HIF1A, HSD17B4, IDH3G, LCMT1, OR10Z1, OR2T8, OR5D14, OR6C76, PAK4, PANK3, PGM1, PLOD1, PMM1, PPP3CA, SETD1A, SGMS2, SPRED1, STK4, TAS2R10, TAS2R48, TRAF6, TSLP, ULK3, YARS2, YWHAH

Negative_7177	C8A, F2R, ACLY, ACVR2B, ADSSL1, BLVRA, CYP3A4, DDIT4, KLRD1, LEFTY2, MAD2L2, OR13D1, OR5K1, PIK3R1, PISD, PLCE1, PRKACA, PSENE1, ROBO1
Negative_7178	CACNG7, CASP8, CSF1R, DAXX, LAMC2, MTHFD2, OR6K6, PAPS1, TUBA3C
Negative_7179	APP, C6, PRL, AHCYL2, ALG13, ATP2A3, CCL28, CD274, CDC42, CDH15, CXCL5, DHODH, EFNA4, FGFR3, GLI3, IL2RG, ITGA5, OR4K1, P2RX1, RCHY1, RPS6, SMURF1, TGFB3, CACNA2D2
Negative_7180	F7, TEC, ACAA2, ADSS, ATP13A2, BMP7, BPNT1, CACNG2, CCL23, CD48, CDKN1C, FMO4, FUT7, GALM, GARS, GCNT2, H6PD, HSD11B2, ICAM2, IL13RA1, IL17RA, IL1RAP, MAPT, MIOX, NADSYN1, OR10H2, OR2B2, OR2F2, OR4C46, OR4N5, OR6C70, PDHB, PDPK1, PIGN, PNPO, PORCN, RHOA, SARS2, SELP, SFRP5, UGT2B10, ATP6V1E2
Negative_7181	GALNTL2, MBL2, MGST3, OR8H2, PARD6B, PDE11A, RARA, SPRED1, ATP6V1E2, CSGALNACT1
Negative_7182	BTD, NNT, RET, CCL2, CFL2, CYP1B1, CYSLTR1, DPYD, MYH11, NLGN1, OR10G2, OR51D1, OR9I1, PRKCB, YWHAZ, ST6GALNAC3, TNFRSF11A
Negative_7183	F7, IL2, MIF, ACAT2, AKR1C3, APH1A, CASP3, CASP7, CDC20, COL5A1, CSF1R, CSF3, ENPP1, FUT3, GFPT1, GMPS, GNAO1, GRIA2, HCCS, HSD17B1, IL17RB, IL28RA, ITGB7, LIMK1, NLGN1, NR1H3, OR10V1, OR2K2, OR4F4, OR4N4, OR6C76, OR6K3, OR7D4, OR9G1, PAX6, PDE5A, PDE8A, PPP3CA, PTAFR, PTPRB, RAPGEF2, TYMS, PAFAH1B1
Negative_7184	FH, HGD, NLK, AACS, ACADSB, ALDOC, ALPPL2, CD47, CD48, CRLF2, CXCL11, DDX52, DGKB, FLT1, FUT7, FZD4, G6PC2, GADD45B, IFNAR2, IRF3, ITGA4, LILRB3, LRRC4C, MCM4, MINPP1, NAT5, NFX1, OR13C3, P4HA1, PAX6, PLAT, PLIN, PRKACB, SYNJ2, TBL1Y, WNT5A, ATP6VOE1, B3GALNT1, CSGALNACT2
Negative_7185	AK7, ZYX, ENO1, FLOT1, GCNT3, GLG1, HRAS, HSPA8, MGLL, RRAS, SUCLG2, TRADD, PNLIPRP1
Negative_7186	BCR, F8, GSN, ACVR1, C1QA, C7orf16, EPHB4, GNAL, GTSE1, GYS2, LAMA3, LAMB2, NME2, NSDHL, OR10G3, OR13C9, OR2G3, OR5A1, OR6N2, PDE4A, PDGFD, PIGH, PRKX, RPS6KB2, SNW1, TUBB2A, UCP1, PRICKLE1
Negative_7187	LYN, AASDH, ACOX2, AKR1B1, ATP2A1, CCR5, CDKN1B, CXCL2, GZMA, IFNA8, MMP1, MTMR2, NANP, NFX1, OR13C9, PHKA2, POLE, POLE2, PRDX6, SUFU
Negative_7188	GALNT11, OR8B12, PTGER3
Negative_7189	B4GALT3, DGKD, GANAB, GNB1, GRIA1, GYS1, MADCAM1, OR2F1, OR6C6, OR8H3, P4HA1, WNT3A
Negative_7190	LSS, PRL, ALDH6A1, ALS2, ARD1A, BAIAP2, BLVRB, CDKN2A, CES1, CNTNAP1, COQ6, CSH1, DGUOK, DKK1, EDNRB, ENTPD7, FLT4, GAMT, GJD2, GRAP2, HSD17B4, IQGAP1, MAP3K4, NCR3, OR51B4, OR51F1, OR6C74, PFAS, SEMA3D, SETD2, TACR2, UGCG, ATP6V1G2
Negative_7191	ADA, INS, ACAD9, ADCY3, AOC3, ATP5C1, ATP5G3, CACNG5, CACNG8, CNTNAP2, CPT1A, CX3CR1, FGF9, GNPAT1, ICAM3, IFNK, IL20, IL6R, LEPR, LIPE, MDH2, NCF1, OR10R2, OR13G1, OR51T1, OR6N1, OR7G1, PDE4C, PKM2, PPP2R5B, PYCR1, SMAD3, STAT6, TIRAP, TLR5, TP53I3, UGT1A10
Negative_7192	SCD, CMAS, EPHB6
Negative_7193	AGL, ALOX5, ANPEP, APPL1, AVPR1B, CLDN4, CREB3L2, CXCL13, F2RL1, FPGT, FUT2, IFIH1, IRAK2, LCMT2, NCOR2, NT5C3, OR10H3, PDE3B, PDE8B, PTGES, ROBO1, SEMA3B, SFRP5, SLC2A1, STX1A, TPH1, PHOSPHO1
Negative_7194	ADSSL1, BMP8A, CD44, CTBP1, DGAT1, HTR4, MAP2K5, MAP3K4, OR2H1, PLA2G2E, ST6GALNAC4
Negative_7195	CDA, CKB, ACP6, ASNS, CAPN2, CASP10, CBR3, CDKN2D, CLTC, DHFR, GNMT, ICOSLG, IL12RB2, LIPE, MCM7, NEFM, OR6C3, PECAM1, PIAS1, PLA2G4A, PTPMT1, RASSF5, SETD1B, TRADD, WIF1, HSP90AA1
Negative_7196	MSN, BIRC5, FABP4, TLR4
Negative_7197	HK1, ACSM2A, ACTG1, CSNK2A2, DNMT3L, FMO4, GBA3, HTR2C, IFNA14, IL19, INPP5A, OR2T2, OR4C11, PLXNA2, POLR3G, PPP1CA, RDH5

Negative_7198	AR, BID, CD2, DCN, ACAD9, ADH1A, AVPR1A, B3GALT2, B4GALT2, CACNA1S, CACNG5, CAMKK2, CBR3, CCL5, CCR10, CD74, CDKN2B, CHIT1, CSNK1A1, CXCL11, DIAPH3, GDE1, HDAC1, HSD17B3, IFNA8, IL8RB, IRAK2, NFKBIE, NT5M, OR10H3, OR4K2, OR9K2, PDPK1, RAC2, SEMA3A, SPAM1, STMN1, TGFB2, WNT6, XCL2, MAPK8IP2
Negative_7199	AMT, PDC, ACSL5, ALOX5, ATP2A1, ATP5G1, BCAR1, CACNA1H, CACNA1S, CAR S2, CLDN8, COL4A1, CSH1, CXCR3, DHRS4L2, DKK4, DLL4, DNMT1, FBXW11, FCGR3B, FGF21, GADD45G, GNAS, GNB1, HSD3B1, IDUA, KIR2DS4, LYPLA2, MASP1, NCAM2, NSD1, OR10A6, PPAR, SEMA3G, SLC25A6, STX3, TSHR, CACNA2D3, GABARAPL1
Negative_7200	ADCY2, CBLC, EXOC7, FSHR, NAGK, OR10A3, OR1D5, OR51S1, PGLS, SEMA4A, SLC9A1, TAS2R38
Negative_7201	DCC, NPY, PML, APOA2, ATP5H, CCL2, CCR7, CDC23, DLL1, ER01L, GCNT2, GUSB, IL1R2, ITGA8, MAP3K3, NCF2, NSDHL, OR51A2, PIGK, PLA1A, PYGB, UCKL1
Negative_7202	LYN, NNT, PXN, ABLIM1, AMPD1, APOA2, BBC3, BMP8B, C4BPB, CD19, CDKN1B, CLDN7, CRY2, CSF3R, DDX52, DUSP8, FABP1, GAD2, GATM, GNAO1, GNPAT1, NMNAT1, PDE4B, PDXK, PROC, PVRL2, RASGRF1, SLC12A2, SPCS3, SPTLC1, UGT2B10
Negative_7203	ACHE, AGRN, ARPC5L, BMPR1B, CCDC6, CD55, CD82, CDIPT, CLDN10, CLDN5, CTNND1, DNMT3L, DUSP7, EPHX1, GPD2, HLCS, HSD17B7, IFNAR2, JAM2, KYN U, L1CAM, LCP2, PDE6H, PLOD2, PNPLA3, QARS, RPS6KA1, SETD2, SMAD9, TBL1XR1, TOMM40L, UGCGL2, ULBP2, VAV1, YWHAH, YWHAQ
Negative_7204	C1S, C8A, GDA, LHB, SMO, ADSS, ALG6, ALOX12B, APBB1, CBLC, CD86, CDH3, CRLS1, CSNK2B, ENTPD3, F11R, GCNT2, GRIN2B, HLA-F, HMGCR, LRAT, LRRC4C, MAFA, NT5C1B, NUDT12, OR2M5, OR5C1, OR5M3, OR6T1, OR7C2, PARD6G, PCYT2, PFKFB2, POLE, PPP1R3C, RPS6KA4, SCD5, TRAF6, UGDH, WNT3, YWHAG, CSGALNACT2, HLA-DQB1, SERPINF2
Negative_7205	ADCY7, CHRM5, EP300, GALNT10, IL17A, OR13C5, OR13D1, OR2M4, PLCB1, UROS, USE1, MAPK8IP1
Negative_7206	C8A, F2R, PGF, ADRB3, AKR1C3, BLVRA, CALML3, CCL21, FZD3, HSD3B7, ITGA3, MAGI1, MAN1A1, MAP2K6, MMP1, NLGN3, OR13F1, OR4F6, OR5C1, OR5F1, PIP5K1B, PLD2, SRGAP1, STX10, STX12, UBA1, TNFRSF13C
Negative_7207	CGN, CTH, GBA, TNF, BST1, CCKAR, CCL28, CD40, COL1A1, CXCL6, DDOST, DFFA, EXT2, FGF21, GNPAT, GNPAT1, IDI2, ITGA8, KIR2DS5, MCCC1, MCM2, NCR1, NMNAT2, NTSR1, OR2T6, OR51D1, PDE8B, PIGF, PPP3R1, PTPRF, RASGRP4, SELL, SEMA3G, SHMT1, TAP2, TP53I3, VTI1B, XYLT1, CTNNBIP1, HLA-DPB1, SERPIND1
Negative_7208	DUT, CPT1C, DDX54, EDNRA, NRP1, PDGFA, PLOD1, SELP, SUV420H2
Negative_7209	DCC, ACSS1, ACTN1, ASRGL1, CASP8, CBLB, CLDN4, DHFR, DTX3L, ENPP2, ENPP3, EPB41L3, FMO3, GALNT9, GCNT1, GRM1, GYS2, HMGCS2, IDH3B, IL12B, IL13, ITPK1, LAMB2, MAOB, NPR1, OR4M2, OR52K1, OR5D18, OR7A17, PDGFRB, PDIA4, PHGDH, PIK3CB, PPAP2A, RALB, SCD5, SH2D1A, SPCS3, THTPA, ULBP2, WEE1, HLA-DQA2
Negative_7210	AR, NOG, ARPC3, ARPC5L, CACNA1I, CACNB3, CSH1, CTTN, CXCL3, CYP2C18, FGF13, FUT5, GNG3, GUCA1A, IL11RA, IRF7, ITGB5, KDSR, MAP3K12, MTHFS, MYH6, NSDHL, NT5M, OR51M1, OR52K1, OR52K2, P2RX7, P4HA3, PRKCI, RPS6KA3, SDC1, SPRY2, SSH1, SUV39H2, UPRT
Negative_7211	C4B, ADCY10, AGPAT4, APOA1, ATP2A3, ATP5E, ATP5I, B4GALT7, BBOX1, CCKAR, CCR8, CLDN17, CNTN1, GLYCTK, MAPK14, MASP2, NPR1, OR52E4, OR9Q1, PDGFA, PIGP, PLA2G4A, PLXNC1, RAC2, SUFU, SUOX, TBXA2R, UGT2B10, TNFRSF11B
Negative_7212	LTB, ATP4A, CSNK1A1, CYP3A7, DGKB, FUT6, GYS1, LAMB1, NRG2, OR10AD1, PGAM4, PIGN, PLCB2, PYCRL, SMC1A, STAT4, SV2A, THBS1, TNFSF11



Negative_7213	STS, ACP6, ATP5G2, ATP5J2, B4GALT2, CDC25B, COL6A1, CREBBP, CXCR6, CYP2E1, DUSP10, ENPP7, EPHA7, F13B, FLAD1, FOSL1, GRIN2B, INHBE, INPP1, LDHAL6A, MCM5, MYL7, OCLN, OR2F2, OR4M1, OR6A2, OR9A4, PLIN, POLR2C, PPAP2B, PTPN1, PVRL2, RAC3, RERE, RFXAP, SNAI1, ZAP70, PNLIPRP1
Negative_7214	B3GAT1, GAD2, MAD2L1, POLR2L
Negative_7215	C9, ADRB1, AGMAT, AMD1, ATN1, ATP6V1F, BCL2, C1QC, CISH, DTX3, F2RL1, F2RL3, FGF19, FGF3, GANC, GNAT3, GSTO1, GUCA1B, IKBKB, IKBKE, IL13RA2, IL21, LCP2, LDHAL6A, LIPE, NARS, OR1J4, OR4D2, OR52N1, OR8D4, OR8H3, P2RX1, P4HA1, PLCG2, PRKCG, PVRL2, PVRL3, SEMA3G, SNAI1, SPRY3, STX16, STX2, TNFRSF8, UROS
Negative_7216	ADAM10, ALG11, ASCC3, DGKQ, HMGCL, ITGA2B, OR13C2, STAM, TLN2, TNFSF13B
Negative_7217	F11, GSR, IL2, SMS, CACNB4, DFFA, FGF12, GDE1, GSTZ1, HPSE, IL20RB, MYH7B, MYLK, OR11H6, OR4C13, PANK3, PDE2A, POLR2G, PPAT, PRKY, RBL2, TAS2R14
Negative_7218	EBP, TEC, DCXR, DRD5, DUSP8, GALNT11, GALNT6, KYNU, OR10AG1, PDE2A, PLAUR, SOS2, SPAM1, TAS2R49, ATP6VOE1
Negative_7219	CD2, APH1A, B3GNT5, CAPN2, DNMT3L, EPHB1, GALE, HMGCS1, IL5RA, NEGR1, NLGN2, NT5C1A, OR10Q1, OR10S1, OR2A4, PIP5K1B, PISD, RARS, RRAS2, SEMA4C, SHC4, TM7SF2, TYK2, UGT2B17, WWP1, XCL1
Negative_7220	ACVR1C, AMY2A, ASIP, ATP5A1, ATP5J2, B3GAT1, BAIAP2, BET1L, BUB1B, CACNA1D, CAMKK1, CSF2RB, CSNK2A2, CYP27A1, DUSP10, HIBADH, IFNK, IL13RA1, MAML2, QARS, SFRP4, SULT1A4, TGFBR2, VAV1
Negative_7221	BST1, CASP9, COL11A1, COQ3, DAPK2, DRD1, GCDH, GSTK1, IL22, LAMB1, LAMB4, OR10G3, OR10G4, OR8K1, PLCB3, POLR2J, PRODH, PTPN1, RBPJL, STX3, TKTL1, TNFSF18, UBA7, TNFRSF10B, TNFRSF11A
Negative_7222	CGA, GSR, LCT, SI, AHCY, CFL1, DNMT3B, EPHA6, FCGR2B, HSD17B2, MTHFS, NEFM, OR2D2, PARD6B, TIAM2, TJP2, CACNA2D1, MAP3K7IP1
Negative_7223	TFG, ACP5, BDNF, CD19, DUSP2, IGF1, KIR2DS4, NCKAP1, NT5C3, OR10K2, OR3A2, OR5V1, OR6C1, PDE3B, PLA2G2A, VAMP2, PRICKLE1
Negative_7224	GP5, DUSP9, DVL1, ITGAL, OR2B6, OR8J3, PTGFR
Negative_7225	MSN, ATP5J, BPNT1, CCL1, CDC14A, CXCL6, IL13, LAMA3, OR2V2, OR4D5, OR4X1, RAC2, UGT2B28
Negative_7226	DLD, EBP, ID4, ANAPC10, DKK2, PLA2G4A, SELL, SMC1B, ZIC2
Negative_7227	DUT, OTC, RFK, ABP1, ADH5, ADH6, ALS2, ANGPTL4, ASMT, B3GALT5, CACNB1, CCNG1, CNGA4, CXXC4, CYP2A7, CYP2B6, DGKI, DHRS4L2, DLST, ELK1, FGF21, G6PC2, GSTM1, IL12A, IRS2, LDHB, NEUROD1, NFKBIA, NQO1, OR13D1, OR4N5, OR5A1, OR9G1, PLXNB3, PRKACB, PSME2, RARA, RPS6KA3, SPHK2, SRGAP2, STK4, TPI1, WNT16, WNT7A, YWHAZ, HLA-DQA2
Negative_7228	AMH, APP, ADCY10, ALG2, B3GALT2, BAAT, CDH4, CDH5, COMT, FBXW11, GFPT1, GNA12, HARS, IFNGR1, IRAK2, ITGA6, ITGB8, LILRB3, LIPC, LTA4H, MAD2L2, MAGI2, MTHFS, NCR2, NT5E, OGDHL, OR2W1, OR4E2, OR51T1, OR5AC2, OR8I2, OR8K5, PNPO, PRPS1, RDH10, RXRA, SOCS3, TNFSF4, UNC5A, WNT10B, ATP6VOE1, HLA-DPA1
Negative_7229	DFFA, DUSP5, HDAC2, IRF5, LEFTY1, OR10A6, RPS6KA3
Negative_7230	CEL, EPO, ID3, NOG, TNF, VCL, ADRB3, AMHR2, ANAPC11, ATP5G1, ATP6V1D, BCL10, BDNF, CDC14A, CMPK1, CNGA3, CTBS, DVL1, ERBB3, FGF18, GAPDH, GAT, GGT7, GSTO1, HCCS, HSPB1, IL22RA1, LIPC, MAPK11, MYL5, NFX1, OR10C1, OR4S2, OR8B8, OR9I1, PIGP, PLK1, PPP3CB, PTCH2, PTPN5, RALB, SDHB, SMAD5, TAS2R7, TICAM1, UGT2B7, WEE1, SERPINF2, TNFRSF18
Negative_7231	F3, GSN, AGPAT4, CAMK2G, CD3E, CDC20, CLCA4, CYP2J2, CYP3A43, F2RL2, GART, MPDZ, OR10R2, OR2T4, PLXNA2, PPA1, PPCS

Negative_7232	AUH, LHB, MPI, ACAD9, ALOX12B, BBC3, CACNB4, CCND2, CD22, CDC14A, CKS1B, CMPK2, ECSIT, GLS2, HHIP, IL17RA, LHCGR, MPST, NEU4, NFATC2, NODAL, OR14I1, OR1A1, OR51B2, OR51M1, OR5D18, OR8G1, PIGB, PTSS1, PTPRF, PTPRZ1, RFNG, SEMA3A, SFRP2, STAM2, STK11, VEGFA, YWHAB, ATP6V1E1
Negative_7233	HK2, AASDH, ASRGL1, CDC25C, CDK6, COL4A6, CYP3A43, DAPK3, DUSP7, FOXO3, GALNT8, IL25, MAOA, MAP2K7, MLYCD, ODC1, OR10A2, OR5H6, RXRG, SHC2, STX4, TIRAP, WNT4
Negative_7234	CTH, DDO, FGA, OSM, UBB, ADORA2A, ALG10B, ALG5, ALOX15B, CD99, DVL3, FZD2, GCH1, GJA1, HAGHL, IBSP, IQGAP2, KIR2DS4, KLK3, MAP3K3, NANP, NEFM, NEU2, OR10K1, OR11G2, OR56B4, OR5M3, OR8D4, P2RX3, PISD, RND1, PAFAH1B2
Negative_7235	CKB, ATP6V1F, BPGM, NMNAT2, TAS2R13
Negative_7236	AGXT2, CCND1, CMPK1, CSNK1D, CYP26C1, DPM2, FTCD, GMPS, HSD17B2, IL1A, IL22RA2, NFKBIA, NUMB, OR14J1, OR4X1, OR8H1, PDE3B, SLC27A4, TKTL1, TYK2
Negative_7237	C5, F7, PLG, ACAD9, ALG9, AXIN2, CBLB, CDK5, CFL1, CHPT1, CHSY3, COASY, CRY2, DMGDH, FCGR2B, GNA15, GP1BA, GSK3B, HARS2, HIBADH, HMOX2, HSD17B8, HSD3B1, INPPL1, MAPK12, OR11H1, OR8J3, P4HA1, PAK2, PDE4C, PGA P1, PHKB, PLCE1, RAPGEF1, SKP2, SREBF1, ST3GAL3, TCF7L2, TUBA3E, HSP90AB1, PDCD1LG2
Negative_7238	C5, ME3, ADH4, CANT1, CCL16, CD19, CLDN19, CTTN, CYP2S1, DGAT1, EFNB3, FDFT1, FGF8, GCH1, GGCX, GRIA2, IL1A, LIFR, LLGL1, MAPK14, NCOR1, NOX1, NUDT9, OR1G1, OR51G1, PAPSS2, PRPS2, PTCH1, SCIN, SMAD5, TNFSF14, CACNA2D3
Negative_7239	F11, AASDH, BCMO1, CD38, DRD2, MAT1A, OR2V2, ORC2L, PCYT1B, PDGFB, PLCG1, PSME3, SKIV2L2, SMPD4, SMURF2, STX18, VCAM1
Negative_7240	MVK, RDX, ACP1, ACTN2, CDC45L, DPM3, GPX5, IARS, ITGA4, KIR2DS4, LLGL2, OR4D1, OR5L1, PRKCD, TGFB3, UPB1
Negative_7241	AMH, ACAT2, ACTA2, AGPAT3, AXIN2, CD274, CHRM5, DGKD, EPHA1, FZD4, GALD2, GALNT12, GAS1, GFAP, HTR2B, KAT2B, MAT1A, NAE1, NCKAP1L, OR2H2, OR6C3, PDE11A, PPP3R1, PRKAB1, PRKCB, PTPRR, RASSF1, RFNG, RPIA, TIAM2, TUBA1B
Negative_7242	C2, DHH, F11, ABLIM1, AQP7, ATP5C1, CBR1, CRLF2, DDX4, FGFR2, GNPAT, HEXA, INADL, ITGA4, ITGB4, LGMN, MAP3K5, MAPK9, MLYCD, NAT5, NTRK1, OR52E6, OR8B4, PFN1, PLOD2, POLR3K, PSME1, PSME3, TAP2, TPK1, USE1, VANGL2, VAV2, YWHAQ
Negative_7243	ME2, CLCF1, FZD3, GABARAP, GNA11, IRF9, MCM7, NRAS, PFKFB3, RRM2B, SEMA3A, SREBF1, STX4, TYROBP, VDAC1
Negative_7244	CGA, FES, PGD, ACY3, ADCY3, ALG10, CACNB3, CCL17, CLDN15, CPT1A, CXCL6, DUSP6, ETS1, FGF19, ITGAD, LARS2, MAN1A2, MMP9, MYD88, MYL7, OR10A2, OR2A25, OR5T2, POLR2E, PRKAG2, PYGM, RPS6KA6, SEMA3F, SHC4, SOCS2, TAS2R16, TICAM1
Negative_7245	ALDH1A1, ALG10B, ALG8, C4BPA, CACNG3, COL1A2, CXCL16, DERL1, GLI2, HADHB, IL21, INADL, KCNJ11, MAP2K7, NEU4, NFATC2, OR10G8, OR10R2, OR2A25, OR5T2, OR6N1, OR8B4, POLD3, RASGRF2, SMPD2, STAT6, TRADD, TUBB2C, XCL1, MAP3K7IP2, MAPK8IP2
Negative_7246	CEL, IL5, RFK, ACSL3, ACSM3, ALDH6A1, ALOX12, AOX1, APH1A, ARNT2, ASCC3, ATP6V1D, CCKAR, CCL13, CD22, CDK7, COL5A1, COX15, DUSP1, EDNRB, GAPDH, GYS1, INADL, IRAK4, IRS2, LRAT, MAP3K8, MASP2, MDM2, METTL2B, NRAS, NTF3, OR4C13, PARS2, PCK2, PHPT1, PIGW, PMM2, PRPH, PYGM, SOCS2, ST6GAL1, TAS2R40, TNFSF9, UBA7, SERPINF2
Negative_7247	LIF, B3GAT2, CLDN11, CRB3, DAAM1, GAL3ST1, KCNQ1, LCP2, NT5C1B, OR10AD1, OR2C3, PFKFB1, PIP5K1C, PLXNB2, PRKAA2, TAS2R38, UGT2B28

Negative_7248	FER, ME2, UBB, AASS, ADH7, ANAPC1, ARPC5L, ASCC3, ASS1, ATP4B, BCL2L1, CCL1, CCL21, CCL27, CCND1, CFTR, CHRNA7, CPT2, DHDH, GUSB, HRH2, HSD11B2, ICOS, IRF5, ITGAL, ITGB7, MAP3K7, MYL7, NT5C1A, OR2A42, OR4C11, PIK3R4, POLR2J, PRKCD, PSEN1, PTPRJ, PTTG1, RFXAP, SMURF2, SOCS2, SPRY1, TJP2
Negative_7249	FER, FOS, SYK, ABLIM1, ACOT11, ACSL5, ADCY2, AREG, CBLC, CCNG2, DHCR24, DHDH, ETNK1, PARVG, PDGFB, PTGS1, ROBO1, SDC3, SHISA5, TNFRSF4
Negative_7250	DDC, ADCY4, ADH1A, ADSSL1, C4BPB, CD47, CDKN2D, EPHA6, FGF9, GRIA2, MNAT2, OR7A5, P2RX7, PLXNB2, POLR2B, PTGS1, SEMA3C, TAS2R16
Negative_7251	FER, MVK, PML, SMS, TKT, ACADS, AVPR1B, BMP8B, BMPR1A, CCNA1, CDKN1C, CNTNAP2, FGF11, GALNT10, GMDS, GMPS, GNAQ, GPD1L, GRIN2C, GUCY1B3, INPP1, JAM2, KIR3DL3, LCP2, MAP4K1, MMP14, MTHFD1L, NFKBIE, OR1S1, PDK1, PIK3C2B, POLA1, PRSS2, RASSF1, SH3BP2, SLC27A5, SMAD2, SMARCA2, TRAF2, ULK3, VDAC1, YES1, PHOSPHO1
Negative_7252	EBP, F8, ABP1, AKR1A1, ALDH1A3, CDC7, CLDN16, CYP2S1, DPM1, EPHX1, EXTL1, GALNT8, OR4K13, OR4N2, OR51D1, OR51I2, OR52E6, OR6C75, ROBO3, SUCCLA2, THBS3
Negative_7253	MAX, ADCY8, AGRP, AKR1A1, ASIP, CCR3, CLDN19, CYP2A13, EPHB1, ERO1L, ETNK1, FARSB, GBE1, GCLC, GRLF1, GRM5, HA02, IFNA14, IL17A, INPP5E, KNG1, NME2, NRG4, OR2A25, OR4F15, OR4M2, OR5K1, OR6X1, PARD6G, PDGFA, PIGV, PPP1CB, PPP1R3C, RDH5, RUNX1T1, SPP1, TBL1XR1, UGT2B4, VARS, WWP1, PPP1R12A, SUV420H1
Negative_7254	FST, ME2, PC, ACADSB, AMDHD2, ARRB2, ATP5C1, ATP6VOC, CHEK2, CYP2C18, DBF4, DHDH, FBXW11, FZD4, GATM, GLUD1, KCNB1, KLRD1, OR2G6, OR5AU1, OR5T3, OXCT2, PIM1, QARS, ST3GAL3, TLR9, TPH2, UGT2B11
Negative_7255	ASMT, CCND3, CMAS, CYP4F3, DEGS1, DGKG, GUCY2F, IL23A, ITGAM, MASP2, MYLK2, NAE1, PTDSS1, TLN2, TSC2, TNFRSF10A
Negative_7256	ACSS3, B3GALT4, CACNA1G, CDC14B, CYP26A1, DTX2, ITGAD, LARS, MGST2, MITF, NFX1, NMNAT1, NTSR1, PANK4, PIK3C3, PLCG2, TUBB4, UROC1
Negative_7257	EPO, FGG, MPL, NNT, SMS, ACOX2, ALPI, BCMO1, BMP4, BMP5, CASP3, CDC45L, CYP4A22, DFFB, DHODH, DUSP1, ENTPD1, FSHR, FTMT, FZD1, GUCA1C, IDH3G, MTFMT, NOS3, OR10P1, OR1A1, OR2G2, OR4E2, OR8H1, ORC4L, PANK2, PDHA1, PPCDC, PPP2CB, RAF1, SMAD6, SPTLC2, TACR1, TBL1XR1, TCIRG1, TP53I3, TUBA1C, UGCG, VASP
Negative_7258	ALG10, LYPLA2, PTCH1, UAP1
Negative_7259	A2M, HGD, ABP1, ACAD9, ADRB1, ARHGEF6, ATP13A2, ATP5G1, CDC7, CNTN2, CRY2, DAG1, DEGS2, DHRS4L2, DHX58, DUSP6, EPB41L3, EPHA7, EPHB2, FGF2, GNAI1, GPAM, HSD11B2, LIPE, MMP1, OR1G1, OR5D18, OR5M8, OR8I2, PDE8B, PGM1, PLA2G4A, PLCD1, POLR2F, POLR3H, PORCN, PRIM1, PTPRZ1, SMPD3, UGCGL2, UMPS, WNT8A, AASDHPPT, CTNNBIP1, HSP90AB1
Negative_7260	CRK, DCK, CYP2B6, EPHB2, GPX5, KLRC1, MAML1, OR6B2, TSTA3
Negative_7261	ASL, GK, GSS, IL5, AQP7, ASCC3, ATP12A, CCL23, CCNE1, CCR1, CDH5, CHRDL, CSNK2B, CYP11B1, CYP2D6, CYP3A5, CYSLTR1, EHMT2, FLT1, GMPPA, GRIN2C, IL23A, ITGA10, KIR2DL1, LAMA3, LIFR, LIMK1, MAOA, NUDT8, OR10V1, OR1N2, OR7D2, PFN1, PGLS, PSME2, PTGES2, PTPRB, RPS6KA2, SHC1, UGCGL1, YES1
Negative_7262	FER, IL3, ABCC8, ABLIM1, ADRA1A, ATP2A2, AVPR1B, B3GALT4, CDH15, CKS1B, CLDN1, CMPK2, CYBA, DCXR, DOCK1, EIF4E, FGF12, FGF13, FLOT2, GALNTL4, GAS1, GNA11, IDH3B, ITPKA, KIR2DS4, LAMC3, MTHFD2, NODAL, OCLN, OR10A4, OR12D3, OR1A1, OR4S2, OR6K6, OR8S1, PDE4C, PGS1, PHKA1, PPARA, PPAT, PPP1R3C, RASSF5, RRM1, SMAD6, SOAT2, TAS1R1, WNT8B, ATP6V1E1, PAFAH1B2
Negative_7263	MYH9, PKLR, PPP3R1, SH3BP2, TICAM2

Negative_7264	GP5, ACY3, ARG2, BCAT1, CKS1B, CLDN3, CYP4F3, FGFR2, GDE1, HLA-DRA, HPSE, IL12RB2, MMP7, NCK2, NRXN2, OR52K2, OR56A1, OR5AC2, PGM3, POLA2, RPSA, SCP2, SMAD7, TRADD, TRAF3, TSHR, TNFRSF10A
Negative_7265	CR1, CRH, PRL, ADIPOR2, CASP3, CBR1, CCNB3, CDC6, CLCA4, E2F4, ERBB4, EXOC7, FGF20, GFPT2, GNG3, GSTA3, GUK1, IFNA5, IL23A, IRAK3, MAPK13, NMNAT2, NQO1, NTNG1, ONECUT1, OR10H5, OR51E1, OR52I2, OR6C2, PCCB, PIGL, PIK3C2B, PLOD2, PPP2R2B, PTK2, SMPD2, STMN1, TCF7L2, VEGFA, YARS2
Negative_7266	DDO, ALAD, CDC14B, CER1, FBP2, GALNT11, GYS1, IFNA8, MMP1, TNFRSF1B
Negative_7267	DHH, ME2, NLK, TK1, ADH7, AOC3, ARNT2, CAMKK2, CD99, CHST11, CTBS, CYP2J2, DERA, DGKG, DUSP3, EFNA1, ITGA7, LIAS, MPDZ, NAGA, NMNAT2, OR10H5, OR2G6, OR52I1, OR6C4, OR8H1, P2RX4, PFKP, PSME1, PSME2, PTGS2, RELB, RPS6KA6, SORBS1, TAS2R41, TLR2, TUBB1, YKT6, ATP6VOE1, ATP6V1B1, HSP90AA1
Negative_7268	CSF1, CTSS, CYP2A6, DLL3, GBE1, IL2ORA, ITGA4, OR52D1, PFKFB2, PIGB, PPARA, RBL1
Negative_7269	ACACA, ATP5H, CANT1, CAV2, CD55, DIAPH1, FZD6, GNB3, IGF1, ITGAM, MAML3, NT5C1B, OR6X1, RASGRF2, SOS2, TFDP1, YES1
Negative_7270	CKB, INS, ACAD9, ATP6VOB, C4BPA, CASP6, CCNH, CNTN2, CTNNA1, ENO3, FGF6, FOXA2, GCNT2, HCLS1, IL18R1, INHBC, KIR2DS4, LIPC, MAP4K4, MGST3, NAT1, OR10H1, OR3A1, OR5D18, ORC4L, P2RX7, PER1, PIGV, PTGER3, PTPRZ1, SHC2, SV2C, TPH2, WNT3, TNFRSF14
Negative_7271	ME1, SHH, ACAA1, ACOX2, AKR1C3, ALDH1A1, AQP7, ASCC3, CCL8, CNTN1, CRLS1, CTSS, CYP1A1, DDX56, FDFT1, FZD6, GALC, GALNT14, HADH, HSD17B2, IFIH1, IFNB1, MAFA, MAP3K2, MAPK8, MASP2, MYL5, OR10G8, OR13C8, OR1A1, OR2AG2, OR52H1, PDXK, PIP5K1C, PYGM, SEMA7A, SRGAP3, STK3, TPH2, UCKL1, WNT10A, YWHAE, ARHGEF12, PRICKLE1
Negative_7272	CD4, DDC, HGF, ACSL1, ACSL6, ACTA2, ALCAM, ARG1, ATP5J, BCKDHB, CACNG3, CDC25B, CDC6, CSDA, DDX47, EPB41, EPHA3, GNAL, LAP3, MPZL1, MTMR6, MYD88, NADK, NARS2, OR10G3, OR10G4, OR1S1, OR4K2, OR56A3, OR5AP2, OR8H3, PLAU, RAD51, RBKS, RPS6KB2, ST8SIA1, WASF3, YWHAG
Negative_7273	GRIN1, OCRL, RBL1
Negative_7274	CD6, ATP6V1F, CASP10, CBR3, CCKAR, FADS2, FARSB, GSTA5, HMGCS2, NMNAT1, PLK1, RDH11, TSHR, UROC1
Negative_7275	CAD, EBP, TFG, TPO, ADH5, AGPAT4, AHCYL2, B3GALT5, CADM1, CAMK2B, CBLC, CCL17, EPHA2, FGF18, FM01, LRDD, OR2Y1, OR5P3, OR8B8, OR8K3, PARVA, PGS1, PIGW, PLOD2, PNLIP, PPP1CB, PPP2R5C, PRKACG, PYGL, RARS2, SETD8, SGPP2, STX8, TACR3, TNFRSF4, TRAF4, VAV3
Negative_7276	AGRN, CACNA1D, CD86, CDC27, CHRM5, CLCA2, CLOCK, CTTN, DAPK3, DIAPH3, DLAT, FRAT2, G6PC2, GUCY1B3, HIF1A, HSPA2, INHBA, ITPKB, MGST3, NARS2, NKD1, NOS1, NUMB, OR4Q3, PER3, PTGES, SPCS1, ST3GAL3, THBS4, TRAF3, SERPINA1, SERPING1
Negative_7277	SHH, VTN, AGRP, ARG2, ATP4A, AVPR1A, BLVRB, CACNA1D, CASP8, CD48, CREB3L4, DUSP4, DUSP9, FPGS, GMPBB, GRIA2, HCST, HMGCS2, IL17RB, IL6ST, KARS, KIR3DL2, MYH15, OR10A2, OR2C3, OR2M5, OR4D5, OR5D16, OR6A2, PAK4, PCCB, PDE1C, PDE4A, PGK1, PIGH, PLA2G4A, PLCD3, PLCD4, POLR2C, RDH8, SH2D1A, SKP2, ST8SIA5, SUCLG2, TFPI, VANGL2, WNT11, WNT7B, WNT9A
Negative_7278	NPY, AVPR1B, CCNG2, MAN2A1, NFASC, NFKB2, RCHY1, SESN3
Negative_7279	F2, ALG12, BCAR1, CCL25, CD86, CDH15, CHRNA7, CTPS2, CTSL1, CXCR3, DMGDH, EDN1, ENPP6, ENPP7, EPOR, FGFR4, FM01, GAMT, GJA1, HEXA, HSD11B2, ICOSLG, INHBC, IQGAP1, MAD2L1, MAP3K2, MAPK1, MAPK11, NCOA4, NRG1, OR10G7, OR2T5, OR4F5, P2RX2, PIGT, PLA2G2E, PLA2G6, SV2A, TGFB3, TPI1, TPK1, TRAF4, TUBA3C, UGT2A3, ATP6VOA2, B3GALNT1, HLA-DRB5, SUV420H2

Negative_7280	AANAT, ALOX5, DDX56, DUSP10, ICAM3, IFNW1, LAMA4, NCAM1, NUMB, OR4N2, PARD6B, PDXK, PIGF, SARS2, THBD
Negative_7281	ACAD9, ANAPC7, CDH1, DNMT3L, EI24, FPGT, HEXB, IFNA7, MFNG, MYH15, NRG1, PEMT, PPARG, PRKAR2A, RRAS, TUBA1C, UPP2
Negative_7282	EPO, LAT, ADCY5, ALG2, APOA2, CACNG4, CAMKK2, CNGB1, CTBS, CYP2C19, DAXX, DLL4, EPHA3, FADD, FLT1, GALNT10, GALNT13, GGPS1, HEMK1, HYAL2, IDI2, INHBA, LEFTY1, MYH7, OR2G6, OR2T2, OR51V1, OR52D1, OR52N5, OR6C2, PIK3C2G, PIK3CB, PLA2G2E, POLE, PVRL4, RPS6KA5, RRM2, SSH2, STK4, SUFU, TRIP10, UBE2L6, UGCG, UGP2, HSP90AB1
Negative_7283	PC, ACP6, ADAM17, AHCY, AKR1C4, ATP5I, BAI1, BPGM, BTRC, CACNB2, CCL25, COL4A4, CSH1, CYCS, DDHD1, DUSP16, FGF23, FUT3, GDF7, GRIA2, H6PD, HARS2, IFIH1, IPMK, KCNJ11, LIMK1, MAP2K5, OR13G1, OR1D2, OR2A5, OR4C46, OR4K17, PCCB, POLD2, PRKAR1B, PTCH1, PTGDS, SETD7, SRGAP3, TACR2, TAS2R1, TAS2R40, WNT6
Negative_7284	PRL, CD82, CDS2, CREB3L2, CYP2A7, DDX55, FZD6, IL23A, KAT2A, LTA4H, NAT2, OR10J3, OR10S1, PNPLA3, TNFRSF9, ZNRD1
Negative_7285	ABL1, ACVR1, DDIT4, HRAS, IGFBP3, PDE4C, SKIV2L2
Negative_7286	APP, BAD, CKB, DDO, OAT, AGPAT3, ASMT, ATP5L, BDH1, C4BPA, CCL3, CLDN16, COMP, COX10, CYP26B1, DFFA, FZD1, GBE1, GNAL, GNAQ, GRIN2A, GUCA1A, IL2RA, IRAK1, LAMC1, MGAT2, MTFMT, NCK1, OLAH, PANK2, PFN1, PIGO, PTARR, SFRP5, SMAD3, SMAD5, SULT1A4, TSTA3, UGT8, UNC5B, YARS, HLA-DQB1, PAFAH1B2
Negative_7287	BID, EGF, NGF, SP1, ALDH1L1, ARHGEF1, ARHGEF2, ATP5G3, CCNA2, CD247, CMPK2, CNDP1, CNTN1, CPS1, CYP3A4, CYP4A11, DHX58, DPYS, GIT1, GJA1, GOSR2, GRM1, GRPR, HA01, HPRT1, IL11RA, IL18R1, ITGB3, LYPLA1, NCKAP1L, NFKBIE, NLGN2, NSD1, OR10Z1, OR1A2, OR5I1, RCHY1, RFWD2, RIPK1, SAT2, SLC12A2, TNFRSF4, ULK2, XCL2, ATP6V0A1
Negative_7288	IL8, ALG13, ARSE, ATP6VOC, B4GALT2, CFL2, COL5A2, CSNK2B, DIAPH1, FASLG, FUT6, GSK3B, HA02, IL11RA, IL7R, MAGI3, NCKAP1, OR1L3, OR1Q1, OR2AE1, OR2G6, OR4L1, PIGP, PIK3CA, POLA2, RIPK1, SMAD4, TAS2R42, TUBA3C, TUBB3, VANGL1, YWHAQ
Negative_7289	DBI, AARS2, ABP1, ADSL, APRT, ATP5I, C1QC, CLDN19, COL4A1, COL5A3, CPS1, CSNK1G2, CYP4F2, E2F4, FSHR, G6PD, GADD45A, GANC, GNAQ, IL8RB, ITGA10, ITGA11, ITGB4, OR10P1, OR2L3, OR52K1, OR52N1, OR6B2, PANK3, PAX6, PDE5A, PER1, PITX2, POLR1D, PPAP2A, PPP2R2C, PPP2R2D, PSPH, SCP2, SEMA3F, SORD, TAS2R8, TFPI, TNFRSF12A
Negative_7290	BCR, F9, ALG9, ANPEP, ATG12, B4GALT7, BMP8A, CAMKK2, CASP8, CBLB, CREB3, CSNK2B, DAG1, DFFA, DHCR7, FABP1, FGF3, GSTK1, GZMB, HLA-C, HPSE2, IDH2, IFNAR1, IL12RB2, IL15RA, KAT2B, KLK3, LAMC1, MGAT4B, NAGA, NRXN1, OR7A17, ORC3L, PDCD1, PDE10A, PPP2CA, PRKACG, PRPS1, PTPN11, RXRA, SELPLG, STAM2, STX18, TCIRG1, THTPA, UGT2B7, WNT8B, SERPINA5
Negative_7291	GPI, ALDH3B2, BIRC5, BPNT1, CHPF, CYP4F3, DDX54, FRAT2, GSTP1, IFNA7, OR2AG1, OR2M5, PDXK, PIPOX, PLXNB2, POLE4, PTGER1, RPRM, SIAH1, TGFBI, TICAM1, YWHAE
Negative_7292	C8B, CD4, INS, ACP1, ATP6AP1, CAV3, CLDN3, COL6A2, LTC4S, MAPK1, MYH3, MYLK, NANP, OR14I1, OR56A1, PIK3R1, POLR2E, PYCR1, TAS2R14, TSTA3, WASF1
Negative_7293	AK5, CTH, DHH, CCL16, COL2A1, COQ5, NCKAP1L, WNT5B
Negative_7294	SFN, ARSE, BCAT1, CREB3L1, CYBB, DDX56, DUSP7, EPHA7, IMPDH1, LIPG, MTMR1, NCOR1, NEUROD1, OR13A1, PIK3CD, RDH5, TICAM2, TPI1, WNT16
Negative_7295	GK, IL8, ADCY6, ADIPOR2, ATP5I, CALML3, CAMK2A, CES7, EGFR, GMPR2, HESX, HLA-DOB, HSPA8, MNX1, NCSTN, NRAS, PDHB, PIPOX, SCP2, SGMS2, ULBP2

Negative_7296	BTC, FOS, GH2, CACNA1S, CLDN14, GAS1, METTL2B, PDCD1, PDIA4, PIK3R5, TNFSF11, SERPINB5
Negative_7297	PLN, COL2A1, FUT2, ITPKB, LTC4S, POLR2H, PTEN, STX16
Negative_7298	CD6, F3, MUT, MYC, ALG2, C3orf10, CBLC, CHAT, CYP26C1, DDX18, DNMT3B, ICAM3, IMPDH1, KIR2DL3, MGST1, MYH1, MYLK, NAE1, NEUROD1, NPR1, OR10P1, OR1I1, OR2A4, OR52B4, OR56A4, OR8D1, OR8H2, OXCT2, PISD, PLOD3, PTEN, ROCK1, SLIT1, TAS1R3
Negative_7299	C4B, FYN, GPT, HK2, APLP1, BBC3, CACNB1, CCKAR, CDK5, CD01, CES1, CLDN22, CXCL10, CYBA, EPB41L3, FOXA2, FRAP1, GAB1, GALC, GSTA5, GTSE1, HYAL2, ITGA5, ITGB2, NEFM, OR10A3, PDE9A, SIGLEC1, SORBS1, TGFA, TNFSF18, ATP6V1C1, CSNK1A1L
Negative_7300	LIF, ADIPOQ, ATP6V1A, BMP6, CCL26, CHST13, CLCA2, FUT6, GSK3B, GSTA4, IL18, IL22, INSR, ITGB8, KAT2B, LEFTY1, MGST3, MLYCD, OR2AT4, OR2C1, OR2K2, OR2L2, PCK1, PIGM, PIGO, PLIN, PRKX, SLC25A6, STX3
Negative_7301	AMT, CRK, HGD, HK1, ITK, JUP, ADRA1D, AOC2, ARSE, ATG7, ATP5C1, BLVRB, CADM3, CAMKK1, CASP10, CCL4, CCR1, CD55, CX3CR1, DPYS, FGF5, FPGS, GDF6, HNF1B, HSD11B2, IFNAR1, IL12B, IL18, KAT2A, KIR3DL2, MAP4K4, MAT1A, MGAT4A, MTHFD2, MYH9, NRCAM, OR2L2, PIK3CB, PPAR, PPP2R1A, RENBP, SFRP5, SOCS2, ST8SIA5, TP73, WNT11, ATP6V1E1, MAPKAPK3
Negative_7302	SFN, ACYP1, ARHGEF6, ARSB, CCL5, CHPF, DEGS1, DHDH, ENTPD1, FGD3, FGF2, HDAC2, IL29, IL2RA, ITGB6, KYNU, LALBA, LAMC1, MRAS, NAGS, NRG1, OR1L1, OR51A7, OR51B6, OR52I2, OR6C76, PCYT1A, RIPK1, TKTL1, TNXB
Negative_7303	CBS, FGA, FGB, GP9, ACP5, ACVR1C, BACE1, BLVRA, CD44, CIITA, COL4A6, CTRB, CTSB, DFFB, ETS1, FBP1, FGF20, GALNTL4, GALT, GSTA5, INPP5A, IRF5, ITGA1, MAML2, MAN1C1, MBL2, MIOX, MYH4, OR2T8, OR3A3, OR4C13, OR51A2, OR52R1, ORC5L, PPP2R2D, RAD51, RFX5, RHOD, SCIN, SGPP2, SMC1B, TLR4, VEGFB, SERPINC1, TNFRSF10D
Negative_7304	C9, CD4, DUT, PRL, SDS, ACSM3, ARPC3, CCNG1, CD47, CD8A, CNTFR, COL2A1, CYP1A1, CYP2C8, DDX41, DNMT3L, EPHX1, EVI1, FCGR2B, FM03, FUT3, FZD2, GDF6, HNF4G, IKBKG, IL12RB1, IRAK4, MAGI1, MDM4, NFYB, NT5E, OR14J1, PANK3, PIGA, PNPT1, PRKAR2A, PTPRR, RPS6KA1, STAM2, STX16, TCF7, UGT2B28, VTI1B, HSP90AA1
Negative_7305	CAD, SRM, ACVR1, ARNTL, DGKE, FCGR2B, GAB1, HNF1A, KLRC3, OR52B6, PDE1A, POLE3, SMAD5, TMLHE
Negative_7306	KIT, ACVR2B, ARHGEF1, CPT1A, CYP11B2, MTFMT, OR13G1, OR5H2, QPRT, SMARCA2, SUV420H2
Negative_7307	PGP, ALDH1A2, B4GALT2, CD226, CD34, CX3CL1, EPHA6, HGSNAT, IL8RB, KIR2DL1, LDHB, MAP4K1, MNX1, MYH8, OR11G2, PRKG2, SETD1A, STX12, WARS, PDCD1LG2
Negative_7308	AMH, C4B, LPL, ACO1, ACO2, ACY3, ALCAM, ALG8, ALOX12B, CCR9, CD99, ENPP1, EVI1, GALT, GJA1, GNPDA1, GRAP2, IL29, MAP3K2, OR2Z1, OR4D5, PCK2, PLCD4, PLTP, POLR2I, PPP1R3C, RAC3, RFXAP, RPRM, SIGLEC1, SKP2, SPHK1, SULT2A1, THBS4, TLN1, TLR3
Negative_7309	GSN, INS, ACADM, ACOT11, AVPR1A, BACE2, CD226, CDC45L, CYP7A1, IDH3G, IGFBP3, INSR, PDCD1, PFKFB2, PIGO, PRIM1, PRKG1, SDHA, SGPP2, TBL1X, THBS1, UBA7, TNFRSF1A
Negative_7310	INS, ACOT12, CCNB2, CCND3, GNAT3, GP1BA, IL21, MKNK1, MTHFD2, PAK1, PIK3CB, SELL
Negative_7311	C9, DBH, ME2, APOA2, ATP13A2, BAIAP2, BCAT2, C1QA, C3orf10, CASP9, COQ7, CXCR3, CYP2A7, CYP3A5, DKK1, DUSP14, ENO1, GANAB, GUCY2D, HEMK1, IDI1, IMPDH2, MASP1, NT5C1B, OR13F1, OR2A4, OR2T1, OR2T34, OR7A5, ORC3L, PGS1, PIP5K1B, PPBP, PSME2, RAB23, RASSF1, RPSA, SESN2, SETMAR, STEAP3, TAS2R3, TGDS

Negative_7312	UBB, CD40, CYSLTR1, GNAI1, HLA- DOB, MOV10L1, OR2T33, PPAT, PPP2R5D, QPRT, ST3GAL4, SERPINC1
Negative_7313	ID2, UBC, FZD4, NCOA4, PPT1, ST8SIA1, TUBA1A, HLA-DQB1
Negative_7314	E2F1, GMPPA, PLCD4, RPS6KB1, SMAD7
Negative_7315	AGK, ACTC1, ACYP2, ADH5, ARSD, GFPT2, GPLD1, GRIA1, IL23R, MGAM, OR1S 1, PTPN5, RUNX1, TNFSF18, TOMM40, UNC5C, ATP6V0A1, TNFRSF13B
Negative_7316	ME1, ACP1, ALAD, OR10X1, OR4D2
Negative_7317	ALDH1A2, ALG9, BCAT2, CYP3A4, FM01, GPD1L, GPLD1, GRIA2, IL12RB2, IN ADL, ITGA2, MLYCD, NODAL, OR10Q1, OR4A5, OR7G2, PARD3, PNPLA4, PORCN , PPA2, RDH12, STX1A, TP53, TRAF2
Negative_7318	CYP2U1, GRB2, ZBTB16, SERPINC1
Negative_7319	ALDH3A1, GAS1, GCDH, GUCY1A2, HAGH, INPPL1, INSR, MYH11, NKX2- 2, PLAT, PLIN, TP73, TNFRSF6B
Negative_7320	AGK, HAL, LAT, ACTG1, ATG7, CDH4, CHRM5, CTBS, DDOST, DGKB, GALNT8, GN PDA1, HNF1B, ITPA, LPAR1, MAP3K8, MGST2, OR1E2, OR2AG2, OR52L1, OR6C 3, OR9Q1, PDCD1, PDGFB, PDK1, PER2, PPP2R5E, PRKAR2B, SORD, TAS2R14, UPP2, XCL2, TNFRSF11B
Negative_7321	CAD, ACY3, AGPAT2, BMP8B, CACNA1G, CACNG8, CAPN2, CRKL, DKK2, FGF3, G DF7, GMPPB, GNPAT1, GSK3B, GSTO1, IFNAR1, IFNGR2, IL11, IL8RA, MALT 1, MAP4K3, NOTCH3, OR10H5, OR6C75, PDE6G, PDPK1, PFKM, PHPT1, PTPN5, RPN1, SDHA, SEMA4C, SFRP1, TAS2R48, UGT8, WARS2, ZFYVE16, ATP6V1B2, ATP6V1C2
Negative_7322	ALG9, CDC16, DTYMK, IFNK, ITGA7, METTL2B, MTMR1, OR3A2, OR4N2, OR8K3 , PAK3, SV2A, TNFRSF9
Negative_7323	FAS, ACSS3, ADRB2, AOC3, CACNG8, CUL1, DNMT1, IL1R2, LAP3, OR8G1, PIK 3R1, SEMA4G, SIGLEC1
Negative_7324	CAT, MPI, PC, ACVR2B, AGRN, ATP6VOB, CACNB3, CCND1, CDC27, CHKA, CSNK 1D, CYP19A1, DEGS1, DUSP16, GCDH, GFAP, GMPPB, GP1BA, IL21R, MAPK9, N ME6, OR2A14, OR52L1, OR6X1, OR8H2, PDE4C, PIP5K1C, PLAU, POLR3A, PTG ER3, SFRP1, SMAD6, TLR2
Negative_7325	APP, DHH, GSS, MPL, MVK, SDS, ADAM10, ATP6V1A, B3GALT4, BUB1, C9orf95 , CAPN2, CCNE2, CD99, CERK, CFL2, CMBL, CSF1, CYP2E1, DIAPH3, DTX3L, E NTPD4, FIGF, IFNA13, IL8RA, INSR, IRF5, LARS2, MDM4, MYH2, OR51E2, OR C2L, PCK1, PIGH, POLR1B, PPA1, PTDSS2, PTGER3, SAT1, SOCS1, STAT3, SU V39H2, SV2B, TP73, TUBA1A, TYK2, VTI1A
Negative_7326	B3GALT4, GALK2, HIBADH, ST6GALNAC3
Negative_7327	GLA, MET, ACOX1, ACSL6, ACVR1C, ALAD, AMY2B, BAI1, BCL10, CCNE2, CDC6 , CHD8, COL6A2, DGAT1, DUSP10, ESAM, FIGF, FPGT, GALK1, GALNT1, GPD2, HLA- DRA, HPSE2, JAM2, KIR3DL1, MAN2A1, MCM6, MGAT1, MINPP1, MLYCD, NLGN1 , OR1K1, OR4C16, OR51T1, OR52W1, OR6C4, PCYT2, PLD2, PRIM2, PRKAR2A, PRPH2, PTGS1, RPS6KA4, SNAP23, SSH1, TGFBR2, CSNK1A1L, EIF4EBP1
Negative_7328	GH2, IL3, RB1, SCD, SRF, XDH, CCL14, CLCF1, CLDN9, COL6A1, CREBBP, HAA O, POLR2G, PROC, PTK2, RHOQ, SC4MOL
Negative_7329	CBL, CFH, MPL, AKR1C4, AMPD3, CAMK2G, FABP1, IFNA10, IL28RA, ITGA3, K YNU, MYH4, OR1C1, OR2A12, OR5T1, PDX1, PIGA, PLXNB2, PTPRF, PTPRJ, SM AD1, SV2C, TGDS, TKTL1, TUBA1C, UCP1, VDAC2, MAP3K7IP1
Negative_7330	DMGDH, HARS2, HEMK1, HNF4G, IFNA2, IL2RG, ITGB1, LCMT1, MINPP1, NLGN 3, PER1, SOS1, UCKL1, ATP6V1G2
Negative_7331	AMT, GK2, ATP5D, B4GALT7, BAI1, BCAT1, CAMK2G, CDKN1C, CYP11A1, CYP4 F2, DAAM1, DFFB, EFNA5, EPHA6, FGF4, GADD45A, GALNT12, GBGT1, GCDH, I MPA2, INPP5A, IQGAP2, ISYNA1, KIR2DL4, KITLG, KLKB1, LLGL1, MYH7B, N SDHL, OR14A16, OR56A1, OR6N2, PDE10A, PDE4A, PIGA, PPA1, PPP1CC, PTG ER3, SEMA7A, SMC1A, TUBA1B

Negative_7332	GP9, RET, ZYX, AMPD3, ATP2A2, CASK, CD274, CLDN20, CLDN4, CSNK1E, CTLA4, CYP1B1, DAD1, DFFB, DHX58, FUT5, GNA13, GSK3B, HNF1A, IL1RAP, MAS P2, MLYCD, NAMPT, NRP1, OR1A1, PFN1, POLR1E, PPP2R2D, RAF1, SGMS2, UP RT
Negative_7333	ACVR2A, CAPN2, DPM2, IL1B, LCP2, OR10H2, OR10Z1, PPP1R1A
Negative_7334	AK5, CFI, F8, ACYP2, C4BPA, CAMK2A, CCL26, EHMT1, EREG, GRIN2A, HLA-DRA, HSD17B2, HSPA1B, IFNA6, LAP3, MAP3K8, MARS, MLYCD, NAGA, NAGLU, NME2, PIGV, PRPS2, PTEN, PYCR1, SETDB1, SHC1, SLC2A1, SORBS1, SRD5A2, TRDMT1, TSC1
Negative_7335	AASS, ACADSB, ADCY10, AKR1A1, CACNA1E, CACNA1H, CBR1, CCNA1, CD38, CNTNAP1, CYP8B1, DHRS4, EFNA4, ENAH, FGF12, HDAC2, HIBADH, IFNW1, IGF1R, ITGAD, KYNU, MARS, MYL2, NFATC4, NR1H3, OR10G9, OR14J1, OR2AT4, OR3A3, OR4F6, OR4K15, OR51B4, OR5F1, PIGB, PIGN, POMC, PRKAA2, SDHC, SEMA4F, SETD1B, SETD8, SLC27A4, UROC1, VAMP4, ATP6V1C2, PLA2G12A
Negative_7336	CCL21, CCR8, CD72, CREB3L3, CXCL16, ETS1, F13A1, FRAT1, GUCY2C, ICAM2, IFNA8, KLRC1, OR52N5, ORC6L, PLXNA1, POLR1B, PRKAG3, RASGRF1, SORBS1, STX7, TYMP, HSP90AB1
Negative_7337	C4B, C8B, FUK, VCL, ABCC8, ALG2, C1QC, CAMK2G, CLDN20, COL6A1, CREB3L1, CXCL12, CYP2C9, DLL4, DNMT3B, GMDS, IFNGR2, LAMB1, NARS, OR10H1, OR1L3, OR4S2, OR51G2, OR52M1, PDE6D, PDHA2, PITX2, PLAUR, PLXNB1, PRKG2, PTPN1, SPI1, SPRY2, TNFSF18, TUBA4A, PNLIPRP1
Negative_7338	CD36, CFL2, GUCY1B3
Negative_7339	ACOX3, APBB1, GMPR, PDE6H, ROBO3
Negative_7340	CBS, CS, MSN, ADCY6, ADH5, AMPD2, ATF4, BDH1, BDH2, CCR10, CD55, CER1, CLDN14, CSNK1G1, DDX55, DTX3, EDN1, ENTPD7, GNB1, ITGA9, ITPKA, MAGI3, MALT1, MDM2, NCK2, NEU3, OR1E2, OR2G6, OR2T33, OR51M1, OR5A1, OR6Q1, OR6Y1, OR8H3, OR8K1, ORC1L, PIGQ, PIK3C2B, POLR1B, PPP2R5A, PRKAG2, PVRL1, SH2D1B, TICAM1, TRPM5, WHSC1
Negative_7341	AGL, CGA, ALG3, C4BPA, CHAD, CHDH, DRD5, FUT9, GRAP2, GRPR, IBSP, IL9R, IQGAP2, JAG1, MS4A2, NCOR1, OR4N2, OR52R1, OR6C2, PAK1, PARD6G, POL E4, PRKCB, SDC1, SNW1, ST3GAL2, ST3GAL3, TBXAS1, VARS
Negative_7342	HDC, NPY, ACADSB, ACSS1, ALG1, ANAPC10, CCL23, CCNG1, CCR3, CDC45L, CEBPA, CNGA3, CTLA4, CYP1A2, DDX56, DGAT2L4, E2F2, EHMT1, FGF4, FMO1, FRAT2, GALNT14, GDF6, IL13, MPZL1, NEFH, OR10A5, OR10A7, OR2L3, OR51L1, PMVK, POLD2, SMAD1, STAT3, SUCLA2, TAS2R7, ST6GALNAC6
Negative_7343	IL3, MPI, PGP, UBB, ACTN2, ALG10B, B3GALT2, B4GALT5, CAV2, CCR3, CSNK1G3, CTPS, DPM2, GSTO1, HSD17B2, IL13, MITF, MYL9, MYLK3, NFKB2, OR4A15, PGAM2, PIAS3, PRKCZ, PTK2B, RAPGEF2, SLC25A4, SMAD1, TRADD
Negative_7344	ACAT2, ACVR1C, AFMID, ATP13A2, CACNA1S, CCNG1, CD36, CHRM5, CYP26A1, CYP2F1, EXTL1, FBXW11, FGD3, GSTM1, HLA-G, IL12B, IL1R2, MAOA, MGST1, OR14J1, OR2Y1, OR4D5, OR4F17, OR5D13, PDE8A, SFRP1, TSHB, TUBB6, UGT2A1, ATP6V0A4, EIF4EBP1
Negative_7345	CDA, DDO, AARS2, ABL2, CCL8, GNAL, KYNU, NARS2, NEUROD1, TSC2, WASL, PLA2G12A
Negative_7346	B4GALT2, CDKN2D, CXCL9, CYP2J2, HADHB, LAMA3, PTAFR
Negative_7347	VTN, AMPD3, ARHGEF4, ATP5J, CYP26C1, EXT1, ITGB4, NCR1, OR1D5, OR1L1, OR2F1, PAICS, PLA2G3, PMVK, PRKAA2, SDC1, SEMA4C, ATP6V0A4
Negative_7348	ADO, AANAT, APOA1, CD27, DUSP1, IDH2
Negative_7349	AASDH, NTF3, OR2M3, RAPGEF1, TCF7L1
Negative_7350	EDA, JUN, ARHGEF4, CCNB2, CYP2C18, CYP4F3, DDX4, OR13C3, SYNJ1, TACR2
Negative_7351	ABL1, ADCY4, BLVRB, DPM3, OR1S2, OR8B12, PLXNB2, TNFSF14, WASF2, B4GALNT1, TNFRSF11B



Negative_7352	GK, IL7, LIF, AKR1B10, ALAS2, ALPP, ATP2A1, C1QC, CACNG3, CCL7, CD36, CDKN2C, CHKB, CSF1R, DGKQ, FCGR3A, GALNT8, GNA11, LHCGR, LIPC, LIPF, MYH7B, OR7D2, OR7G1, RASGRP3, SNW1, TAS2R14, THBD, TLN1, CACNA2D4
Negative_7353	SI, CYP2E1, FCGR3A, GAB1, GALK2, GAPDH, IDH1, MAT1A, MINPP1, NOTCH2, TAP2, TYMP, WNT2, YWHAE
Negative_7354	ABO, INS, ADIPOQ, AGPAT4, AQP7, ARD1A, ARPC1A, ARPC5, CCNA2, CD244, CXCL6, DTYMK, FGF4, FSHB, GALNT3, HADH, HHIP, HLA-DMA, ITGB1, KAT2B, KYNU, LIMK2, MAP3K1, MAP3K3, MMP9, MTMR6, NGEF, OR10A7, OR13C4, OR2Z1, OR3A3, OR5B3, OR6C1, PDE5A, PIAS3, PLOD3, POLR2D, PPP5C, PSEN1, RAPGEF3, RASGRP3, RPN1, SELP, TGFB2, TLR4, TUBB4, PHOSPHO1, TNFRSF14
Negative_7355	ID4, DIAPH3, HAGHL, PARD6A, PFAS, PON1, PRKAB1, PTPN6, RXRG, SHMT1, WNT9B
Negative_7356	A2M, CD4, CDA, HK3, MPI, ALDH4A1, ANAPC4, APOA1, APOA5, AVPR1B, BMP8B, CACNA1I, CCL3, DPYS, GANAB, HAGHL, HIP1, IMPA1, MAPK13, MLLT4, MRAS, NUDT5, OR2A4, OR8G1, PAPSS1, PAPSS2, PDHA1, PIGU, TAS2R5, THBD, UNC5D, CACNA2D2, HSP90AA1, SERPINB5
Negative_7357	ATP5J, HAAO, JAG1, MMP2
Negative_7358	HCLS1, IRF9, POLD2, PPP1CC
Negative_7359	DCN, DCT, AASS, ALPL, ASIP, ATP6VOC, BTRC, CCL11, CD244, CDC14A, CYP26B1, CYP2A7, HLA-G, HMGCS1, IFNA17, IL1B, LIAS, MTHFS, NFYB, OR10Q1, OR4F6, OR4S2, OR52B4, OR5K1, OR7G1, PIP5K1B, PLXNB2, RPN1, TBL1Y, TBXAS1, WIF1, MAPK8IP1
Negative_7360	AHCYL2, ALDH1B1, CD3E, MYH14, MYL7, OR4K2, SNAI1, PRICKLE1
Negative_7361	CR2, GCK, IL9, PXN, RDX, ANPEP, ARSE, BCAR1, CD58, CDC23, FGF23, GCLC, GPAM, GUK1, IDH3G, ITGA2, ITGB3, MGAT2, OR2B2, OR2B6, OR2Y1, OR52K2, OR56A3, OR5D13, OR5P3, P2RX1, PIGV, POLR2J, PSPH, PTGS1, RPS6KA2, SKP2, SLC25A6, ULK1, UMPS
Negative_7362	GSN, CARS, CD72, CDC27, CDK4, CFL1, CXCL5, FM04, GMPR, IRF5, MAP4K4, NEU1, PDCD1, POLE4, SDHC, SPTAN1, STX18, TAS1R1
Negative_7363	F2, RET, ACAT2, AQP7, ATP5A1, CACNG2, CSAD, DTYMK, FTMT, IL11, IL6ST, MGAT4B, NCK1, OR6C6, PDE5A, PIGM, POMC, RND1, SQLE, B4GALNT1
Negative_7364	LPL, ABLIM2, ARPC1A, ASNS, GALNT6, GRPR, ITGA9, MAPK8, MKNK2, NCSTN, OR10J5, OR2AE1, PIK3C2G, SDHC, SOS2, WNT8A, YWHAG, SUV420H1
Negative_7365	C8A, CGA, SMS, ACSL3, ADH4, ASCC3, ATP6AP1, CASP8, CDH5, CXCL12, FASLG, HLCS, JAM2, MRAS, NQO1, OR10J3, OR4C46, PIK3R1, PPP1CB, UGT2B4
Negative_7366	GSN, IL5, LSS, STS, VCL, ALDOB, ARG1, ATF2, B3GALT1, BST1, C1QA, CCNG2, CYP2F1, FGF1, GSTA3, IL2RG, ITGA1, MASP2, MGST3, MPST, OR4E2, OR51A7, OR51F2, PIGV, PIP4K2B, PLCB2, PRNP, TAP1, SERPINA5
Negative_7367	PLN, RPE, ACADM, ADSS, CD47, CNTNAP1, FZD2, GARS, GLB1, GNG12, GUCY1A3, HAGHL, IFNA2, ITGB3, MMP2, OR2C1, OR2H2, OR4S1, OR51E1, OR9A2, PAR6G, PERP, PISD, QPRT, SMARCA2, SMURF2, STAT1, SUV39H1, TCF7L1
Negative_7368	IL2, ACP6, ADAM17, FTCD, HEXB, MDM2, MDM4, MRAS, OR52E2, PDE6G, TICAM2, WNT10A
Negative_7369	BAX, BID, CFH, GDA, GLS, NLK, ALG13, CD274, CYP11A1, CYP4A11, DBF4, DIAPH2, DKK2, DLAT, FGF19, GALT, GCNT4, INPP1, MAGI2, MAP4K1, MYH11, MYH9, NOX3, NT5M, OLR1, OR2M3, OR5J2, P2RX2, P2RX7, PPP2R1A, PVRL4, RAPGEF4, RASSF5, SETD8, SHC2, TACR3, TAS2R1, TNFSF9, UGT2B17, VAV2, VNN1

Negative_7370	CFI, ATP6V1F, CAMKK2, CDH4, CES1, CHST13, CLDN9, CSF2RB, CSNK2A2, CYP21A2, CYP3A5, DGAT2, DGKQ, DHCR7, G6PC, IL10RA, IL20, IL28A, IRAK2, ITPA, LDHAL6A, MAML3, MTHFD2, NCF4, NEU1, OR2F1, OR2T34, OR4F15, OR51F2, OR7C1, OXSM, P2RX5, PNPT1, PPP3R2, PRKAR1A, PRKY, PTPMT1, SEMA3E, SOCS4, SPCS1, STX12, TAP1, THY1, VAMP1, VDACC3, WWP2, YKT6, MAPKAPK5, SERPINA5
Negative_7371	FH, CACNA1D, CLDN14, EXOC7, GLI3, IL19, LAMC1, OR2K2, POLR3H, SETD2, SLC27A1, SOCS5, SULT1E1
Negative_7372	DHH, ADSS, ATP6AP1, CACNA1I, CERK, COL4A6, COL6A2, CRKL, CXCL6, CYFIP1, GJD2, GPX5, GSTO2, HLA-DRA, IL17RB, IL6R, INSR, MRAS, MYH6, NFKB2, OR2A42, OR4C11, P2RX5, PAX4, PHKA1, PIK3C2G, PLCB3, PLD2, RAP1B, SMAD2, STAM2, TAS2R1, TNFSF4
Negative_7373	ADK, CKM, ID1, RFK, ACACA, ACADVL, ALCY, AK3L1, ASCC3, CCL22, CYP2A7, E2F1, EIF4B, EPHA5, FDF1, GALM, GRM1, ICAM2, IFNA13, IL13RA2, ITGA2, ITGAM, JAK3, KIR3DL3, MAPT, MYD88, MYLK3, NSD1, ODC1, OR10H3, OR1D2, OR2D2, OR2T10, OR2T4, OR8K5, PER3, PIP5K1A, PPM1A, PPP5C, PTGFR, RUXN1T1, SDC4, SHC4, SOX17, TRPC1, UGT2B17, WNT9A
Negative_7374	DBT, ADRA1A, ATP2A2, ATP5D, CD44, CRY1, DAAM1, EFNA1, EGFR, ENTPD1, ENTDP3, FRAT2, FUT4, FZR1, G6PC, IDH1, LAMC2, LEF1, MTMR1, NOS1, NOX1, NPAS2, OR2C3, OR52L1, PCCB, PGAM4, PLCG2, PTPRB, SOS1, SRD5A1, TNFRSF4, TUBB2B, VCAM1, XIAP, C1GALT1C1, ST6GALNAC1, TNFRSF10D
Negative_7375	C2, IHH, PML, RPE, ACAA2, ADORA2B, ADRB3, AMHR2, B4GALT6, COL11A1, CYP3A7, DAPK2, FGFR3, FIGF, GMPR, GP1BA, GUCA1B, IL22RA1, IL28RA, IQGAP3, JAK3, LTBR, MEF2C, NCOA4, NFKBIA, OGDH, OR13C4, OR2S2, OR2T6, OR4D1, POLR2L, PRKAR1A, PRKG2, PSME3, RAPGEF4, SEMA3G, SHMT1, STX4, TRAF6, TSHB, UBA7, UNC5B
Negative_7376	CS, AFMID, ALDH3A1, AMPD3, ATIC, CDH1, DMGDH, EIF4E, GMDS, GNPDA1, HEXA, MDH2, MTHFD1L, NCOR2, OR13G1, OR4C6, PERP, ST8SIA5
Negative_7377	APOA2, ATP2A2, C1QC, CD59, FGF4, HIBADH, PIGU, RDH12, TUBA1A, UGT8
Negative_7378	AK3, AGMAT, AGPAT6, APOC3, CCR1, CHPT1, CYP26A1, GALNTL1, GCDH, GNAI1, GRM5, HSPB1, IAPP, IFNA4, IGFBP3, KLK3, LRRC4C, MCCC1, MTHFR, OR4K13, OR52E8, ORC6L, PNMT, PTPMT1, PTPRZ1, SPI1, TPM3, B4GALNT1
Negative_7379	C2, CFH, ACSM1, ATP6VOB, BCL2L1, BDNF, C5AR1, CHPT1, CHRM1, CRB3, CSF1R, DAG1, DGKB, DPYSL2, FABP4, GALNT6, GNA13, IRAK1, KLRC4, NFYB, OR2D3, OR3A1, PAPSS1, PDE1B, PDE4B, POLR1D, RBX1, ROBO3, SKIV2L2, TPM3, VAMP3, WNT6, YWHAZ, ZNRD1, CACNA2D1
Negative_7380	DCK, LCK, LPO, ACADVL, ALDH3B1, APLP1, CD58, CNGB1, CYP3A5, DAAM2, EDAR, ENPP3, FUT5, FZD2, FZD4, GCH1, GRAP2, HEMK1, HSD17B8, IFNA7, KITLG, LALBA, MAPK14, MAPK8, NADK, NOD1, OR10H1, OR10H3, OR1A2, OR52N5, ORC2L, OXCT2, PLCB1, PPP2CA, SDHC, SESN1, SH3BP2, TGFA, TNFSF8, TNFSF9, UNC5B, HSP90AB1
Negative_7381	F10, FST, GNE, HAL, MYC, AKR1D1, B3GALT1, BMPR2, CACNG7, CCL20, CES1, CTSG, CYBA, CYP8B1, DUSP9, ENAH, F13B, FGF6, FLAD1, GAD2, GALC, GSTM5, HTR6, HTR7, IPPK, ITGB2, LAMB4, MBL2, MMP2, MYL9, NANS, NFKB2, NUMBL, ONECUT1, OR13C3, OR2AG1, OR5H2, OR5I1, OR6B2, P2RX4, PHKA1, PIP5K3, PLCZ1, PLXNB2, POLE, PRKCI, PSPH, RDH10, SOCS5
Negative_7382	ADCY5, ANAPC1, COL1A2, CYP21A2, GRIN1, IFNA8, MAP3K14, OR9G1, POLR3D, STX8
Negative_7383	ATP2A2, FUT3, OR5V1, OR6C70, OR6T1
Negative_7384	ABCC8, AKR1B10, ALDH1A2, CACNB2, CARS, DEGS1, DKK1, EPHX2, FGF3, NOX3, OR51Q1, OR56A3, OR5T3, PAX6, PIGB, PMM1, SEMA3B, SEMA3F, TJP2, SERPINF2

Negative_7385	F2R, FGB, GPI, SMO, TEC, TKT, ACOT11, ADRB1, APOA5, ASMT, BHMT, CCL22, CKMT2, CLDN17, CLTB, CSNK2A2, DARS, DDB2, DFFA, EXT1, F13B, GGPS1, GI T1, GNRH2, GUCY1B3, HAO2, HRH1, IFNA10, IL17RB, MAP4K1, MYL2, OR12D3, OR3A1, OR56B4, OR8D4, PDGFC, PLAU, POLE, PRKY, RAB23, SPTLC2, SV2C, SYNJ2, TCIRG1, TMLHE, TNFSF12, UNC5A, ZAP70, ZNRD1
Negative_7386	CLDN5, CLOCK, CSDA, EPRS, GSTA1, GSTA2, HDAC2, HRAS, IL23A, MLYCD, MM P14, NPR2, OR5D16, OR5K1, PAX6, PIK3R2, PLXNB2, PPP2R5E, PRIM2, SELP, UGT2B4, UNC5D
Negative_7387	AK1, HGD, TK2, ACVR1C, ADRBK2, ALG11, BUB3, CDH15, DBF4, DIAPH3, EDAR, FRAT1, GAL3ST1, GYS1, IL9R, IRS2, LDHAL6A, LLGL2, LM07, NFAT5, OR10 G3, OR1S2, OR5AR1, OR5D16, OR5H6, OR6Q1, PDE5A, PIK3R3, PISD, PLOD3, PRKCI, TRAF5, UCKL1, ULBP1
Negative_7388	TPR, AADAC, ADRB1, AQP7, ARPC2, ARPC5L, BET1, CAPN2, CREB1, GNMT, HSD 17B1, LRP6, MDH2, MDM4, MYLK3, NLGN2, NR5A2, OR10H1, OR4Q3, OR7A10, P IGF, PLXNB3, PPP2CB, PPP3R2, PRKCA, RASSF5, STT3B, TAS1R1
Negative_7389	GNE, LHB, RFK, SRC, AGMAT, AGRP, B4GALT5, CFTR, CHST13, CLDN6, CYP1A2, FUT3, GRIA1, GSTP1, IL10RA, IL22RA1, ITGAV, LTBP1, MAP2K2, OR2V2, O XTR, PDGFB, PEMT, SETDB2, TNFRSF10C
Negative_7390	AKT2, BBC3, CNGA3, DHDH, MAML3, MAP2K3, MAP3K7, OR51A7, OR8K1, PCYT1 A, PDX1, SORD, HLA-DRB3
Negative_7391	RDX, TNC, ADCY1, AKR1C3, ARRB2, ATP5G1, BLVRA, BPGM, CDC7, CXCR6, CYP 27A1, DGKG, DUSP8, EPHA7, GARS, GMPS, GNAI2, ITPK1, ITPKB, NCF2, NTF3, NTRK1, PLXNC1, POLR2K, SMPD4, THBS3, ST6GALNAC4
Negative_7392	AGL, ADH7, AKT1, ALCAM, AMDHD1, APC2, ARRB2, CCL11, CCND3, CHDH, CX3C R1, CYP2C9, ESPL1, FOSL1, GALM, GMPR2, GP1BA, GPX5, HPRT1, KIR2DL3, L EFTY2, MAN1B1, NEGR1, NKX6-1, NTF4, NTRK2, OR10J1, OR2M3, OR2M5, OR51I1, OR6B3, OR8H2, PDE1B, PD E7B, PDK1, PGK2, PIK3CA, PPAT, PTPN6, PYCRL, SGMS2, SLC27A4, SPTLC1, STAT4, SUV39H2, UGT1A10, VAV2, TNFRSF11A
Negative_7393	GNE, ZYX, A4GALT, ATP2A3, ATP6V0C, CD70, CDH2, CLDN10, DARS2, DGAT2L 4, DHDDS, E2F1, GJA1, GNA11, GNA15, GNAL, GNMT, HARS2, IFNA21, IL17A, ITGB8, MAP4K3, MDM4, OR10H1, OR5F1, PCK1, PIPOX, PLA2G10, PLAUR, PPA RD, PPP2R1B, PRKAG2, RCHY1, RXRA, SMPD2
Negative_7394	BTK, GNE, PGP, ALDH3B1, ALPP, AMPD2, ATF2, CACNA1D, CACNG4, CASK, CD8 0, CHRNA7, COL6A2, ENTPD3, EPB41, FARSB, HMGCR, IL23R, LEF1, MAML3, M DM2, MKNK2, MMP1, MS4A2, NANS, NEUROG3, NFATC3, NKX3-1, NLGN2, NMNAT2, NTF4, OR51E2, OR6N2, OR8D2, PIAS1, PIAS2, PIK3CA, P IK3R3, PIP4K2C, PLXNB2, POLR3A, PPM1D, RAF1, STX1A, TUBA8, VDAC2, YW HAQ, ZIC2, ATP6V0E1
Negative_7395	IL5, KMO, PC, VTN, ANAPC2, APPL1, CD74, CHDH, CYP2S1, DMGDH, DPM2, EDA 2R, ENAH, GSTA1, HSD17B2, JAM2, LIMK1, PAK3, PDCD1, POLR1E, RRM2, SAR S2, SRGAP1, STAT1
Negative_7396	ATM, PML, TKT, ADCY7, B3GALT5, CCNB1, CD22, CDKN1A, CFTR, CRB3, CSNK2 B, CXCL2, DHRS4L2, EPHX2, FTCD, GLG1, GNRH2, HLA-DRA, IFNB1, IL24, KAT2A, OR10G2, OR2A25, OR4B1, OR51D1, OR6S1, PIK3C B, PIP4K2A, SOAT2, SPHK2, SPP1, STAT4, SUCLG2, TPK1, TSHR, TUBB2C, ST 6GALNAC3
Negative_7397	ADCY6, CDK6, CLDN6, CXCR3, CYP4F3, FTMT, IDI1, MMP2, MPZL1, NFE2L2, O R2M2, OR8U1, SAT2, TBL1X, TUBA1C, HSD17B12
Negative_7398	CEL, ACY1, COL4A4, MYH2, MYH7B, OR2T5, SMAD9, SPRED2, TPK1, TUBB4, SU V420H1
Negative_7399	HK2, ACOT11, ACSL5, ATP5D, CCL19, EARS2, ERBB3, FGF19, IFNA6, JAK3, K IR2DL1, OR10V1, OR2T29, POLA2, PPP1CA, PRKAR2A, PVRL2, SMURF2, STX1 A, TICAM2, TYK2, WNT5B

Negative_7400	ID3, LPO, ME1, MPL, AADAC, ADIPOR2, AGRP, AKR1C4, B3GALT2, BCAR1, BDNF, BUB3, CACNA1H, CCL13, CLDN20, CXCL2, DAD1, FASN, FGF2, FGF6, GNAQ, HADHA, HA01, HDAC2, IFNA14, IL22RA1, MAP2K6, MAPK14, NARS2, NEU2, NRAS, OR10G3, PON3, PPP2R2A, PRKAG3, PRPH, PTK2B, PTPN5, PVRL1, RAF1, ROCK1, RUNX1, SDHC, SOCS2, TNFRSF14, TNFRSF6B
Negative_7401	ALOX15B, CSF1R, IFNA17, OR2M4, PIGF, SDC3
Negative_7402	ACOT11, ATP4A, CCL11, CCL5, CLDN5, CYP8B1, DARS, DDX41, DGKQ, GADD45G, GUCY2C, HNF4A, IKBKG, LAMA4, LEF1, LTB4R2, NAGA, NRP1, NTF4, OR10G7, OR1N1, OR2L2, OR6K2, OR8A1, OR8K1, P2RX6, PDGFD, PDHA2, PIK3R1, PRLR, PTPRB, QARS, ROBO3, RPS6KA3, SEPHS1, SPHK2, SRGAP3, ST6GAL1, STX1B, SUOX, TAS2R4, TM7SF2, TRHR, TUBB, UGCG, UGT2B17, UGT2B28, ATP6V1C1
Negative_7403	EDA, F11, HK3, ALPL, AMY2B, B3GALT1, CACNA1E, CCNB3, CSNK1E, CYP2F1, DGKA, EARS2, EPHX1, GUSB, HLCS, IDH1, IGF1, IRS2, KDSR, LAMC1, METTL6, MGAT5B, NAGA, NANS, NOX1, OGDHL, OR4F15, OR5D13, OR5P2, OR6B3, OR6K6, PDE1B, PLA2G2F, PLCD3, POLR2B, PPAP2C, SOS2, SPCS1, TCF7L1, TNXB, UGT2B7, ATP6V1E1, TNFRSF18
Negative_7404	ALDOA, ATP5E, BET1, CALML6, CDC20, CDC45L, CERK, CLDN6, CYP11B1, CYP2B6, DUSP8, ENPP2, FGF21, FZD6, GALK1, GALNT11, GATM, HIBADH, MMP2, MMP9, NT5M, OR2L3, OR4P4, OR51E2, OR5AS1, OR6K2, PDGFA, PLEKHA8, POLR2F, POLR3G, PRKCQ, PRPH, PSME1, RDH10, RPS6KA1, SELE, SMARCA5, SOCS2, TAS2R7, TICAM2, TNFRSF10C
Negative_7405	C1S, TXK, ARG2, CBR3, EDNRA, GRM1, IL22RA2, OR4C13, OR7G2, PIGV, PRKA R2B, SAT2, SELP, TUBA1A, UNC5C
Negative_7406	FGG, KDR, LCK, A4GALT, ADORA2B, BACE2, BBC3, CAMK4, COL5A1, CYP3A43, EPHA1, GNAZ, HAAO, HMGS1, IDUA, ITGB5, LRP5, MAT1A, MCM4, MGST3, MRA S, NCF2, NCOR1, NKX3-1, OR1M1, OR51B6, OR52M1, PON2, PPOX, PTDSS2, ROBO3, SESN1, SH2D2A, TAS2R8, TAS2R9, TLR5, VAV1, XIAP, ATP6VOA2, CACNA2D3
Negative_7407	ATM, CRH, ACSL3, AGPAT6, ALDH1A1, ALPPL2, ARHGAP5, C5AR1, CASP9, CHEK1, CRY1, EXT2, FCGR2B, FGF13, FUT9, GALNTL2, GSTM4, IL6ST, LDHAL6B, MCM7, MTMR6, OR1L4, OR5D18, OR6B2, OR9K2, PDCD1, PHGDH, PIK3R3, PLA2G2F, PPP2R1B, PRKCG, PYCR2, PYCRL, RBPJL, SESN1, SH2D2A, STAM, TJP2, ATP6VOA1, TNFRSF13B
Negative_7408	GBA, SDS, ACSS2, ADCY5, ADH1B, AREG, CCNB1, CYP26C1, DAPK1, FGF7, GSTM2, GSTO1, HSPA8, IMPA2, INPP4A, MMP1, OR51T1, PLA2G2A, PTTG1, RHOA, SGPP2, SMURF1, SYNJ1, UGCG, WWP1
Negative_7409	GH2, MPL, SYK, ADRB1, B3GALT4, BMPR1B, CASP6, CDH15, ENTPD7, EP300, FCGR2B, FRAP1, GGCX, IFNA8, MALT1, OR13C2, OR2AG1, P2RX4, P4HA2, PDE4D, PMVK, PSPH, SHC2, STAT4, UBE2L6, WWP2
Negative_7410	F2, FAH, SRF, AGTR1, ALDH3A1, ATP5E, BUB1, C3orf10, C4BPB, CCL19, E2F4, ECHS1, FGF12, GALNT6, GIT1, GSTA4, HMBS, IL15RA, MTHFD1, NAT2, OR14J1, OR1E2, OR1F1, OR5A2, OR8I2, POLR2J, PON3, PPP2R2B, RHEB, SEMA3D, TACR1, TLN2, TUBAL3, ULBP2, UNC5A, UPP1, WASF1, WASL, ATP6VOD2
Negative_7411	F2, TK2, ABAT, ACP1, ADCY5, CCL2, CSF2, CSNK1G3, CYP2E1, CYP2F1, DAAM1, DLL3, GUCY2D, HSPA2, IL12A, ITGA4, LAMC3, LPAR1, OR10A2, OR4A5, OR4C13, OR4K14, PCYT1A, PPBP, ROCK1, STX6, TCF7L2, WNT3A, HLA-DPA1
Negative_7412	PGD, TH, ABLIM2, ACTN1, ANAPC11, ASIP, CACNB2, CCL24, CDH2, CHRNA7, C OQ7, CREB3L4, CSNK1G1, DDHD1, DDX56, DGUOK, EPHA6, GRM5, IFNA16, ISYNA1, MPP5, MYL2, OR2H1, OR4A16, OR6Q1, ORC4L, PLCB2, PRPH2, SARS, WNT9B
Negative_7413	MVD, SP1, ACSL4, AGPAT6, CYP2A13, DTYMK, EXTL2, GLYCTK, KIR2DS5, NCF4, OR52A1, OR52I2, PHPT1, RPN2
Negative_7414	ACYP1, AGXT, CSNK2A2, CTBS, IRAK4, KDSR, ZFYVE9, ATP6V1G1

Negative_7415	GSTT1, NANP, SMAD3
Negative_7416	MUT, CMPK2, COX15, ENTPD7, OR1D5, PDE3A, RPN2, RPS6KA5, SIAH1
Negative_7417	F9, NGF, ACAD8, ALS2, ANAPC7, AREG, BDH1, CDC14B, CYP4A11, EIF4E2, EPHX1, FGF19, GNPAT1, GRIA2, HIP1, HTR7, IL13RA2, INSR, NCK1, NEGR1, NFAT5, NLGN1, NRP1, OR1L4, OR2G2, OR2T11, OR4K1, OR4S2, OR52A5, PLA2G2F, SELPLG, SESN2, SMURF1, SPCS3, ST3GAL4, TAS2R13, THTPA, XCL2, CS GALNACT2
Negative_7418	ADK, ATP6V0B, BMP8B, CDH2, CDK2, CLDN10, CLDN2, FGF13, MCM2, NAT6, NFAT5, NT5C, OR5M3, PTPRJ, RAC3, TNFRSF18
Negative_7419	ADA, C8G, KMO, SHH, VTN, ADAM10, ALCAM, ALDH9A1, ALOX15, APC2, ATP6V1H, BHMT, CHST11, CNTN1, CSNK1G2, DRD2, GNPAT1, GPX7, KLRC4, LCAT, LIFR, MAPT, MDM4, MYH2, NARS2, OR4D1, OR4D11, OR52N1, OR56B4, OR8D2, P2RX2, PDE2A, PLCG2, PSENEN, ROCK1, SKIV2L2, SMAD3, SORBS1, SPTAN1, STK4, YWHAB, KIR2DL5A, PPARGC1A, PRICKLE2, ST6GALNAC5
Negative_7420	HDC, IL2, SI, TFG, ACOX3, COMT, DEGS1, ELK4, EPHA6, EXT1, GALK1, GCLM, KLRC3, LAMB3, MAPK9, NAGA, NMNAT1, OR2T6, OR8J3, PTPRC, RUNX1, UBE2K, VAMP3, PDCD1LG2
Negative_7421	KIT, PLG, AACS, ADSS, AGMAT, AGPAT1, ARNT, C9orf95, CCL17, CDC2, CDH1, COL2A1, CSNK1G2, EPB41L2, EPHB3, FZD8, GNG13, GSTT1, IFNA16, ITGA1, LAP3, NAGLU, NME2, OR10K1, OR14I1, OR1E2, PDHA2, PIAS4, PNPLA4, PPP2R2B, PTGFR, PTPRJ, SAT1, SCP2, ST8SIA5, STX8, TAS2R14
Negative_7422	IL9, ALPI, ATP6V1A, CACNA1I, CHEK1, CLDN5, COL6A2, DAXX, DPM3, FOXO1, FZD2, GALNT2, GALNT8, GGCX, GNRH2, INSR, KAT2A, MAP3K13, MPST, MYL9, NCSTN, OR1L1, OR7G3, PANK1, PIP4K2A, PRKCZ, PVRL3, PYCR2, RAB23, ROCK1, SFRP1, SLC25A4, SMPD2, SV2C, TAS2R9, YKT6, CACNA2D4
Negative_7423	DBH, ALG2, CCL20, COL5A1, CUL1, EPHA7, EVI1, GNA14, GRPR, HLA-DRA, IFNA7, ITGA1, LRAT, MNX1, NOTCH3, OXSM, PANK3, PDE3A, PSME2, PTPRM, RBL1, SLC2A1, SMURF1, SUV39H1, TBL1X, UGT2A3, UMPS, UROS
Negative_7424	ABO, DCC, EDA, F12, IL5, ATP6V1F, CSF2RA, DVL3, FOXA3, GPD2, HDAC1, IFNAR1, INPP5B, ITGAV, KCNQ1, MCM2, NEFH, NLGN2, OR4X2, PARD3, PFN1, POLR2K, PVRL3, SPHK2, TOMM40, TXNDC12, WWP2
Negative_7425	CP, TK2, ACAA2, ATP5J2, B4GALT4, BUB1, CCR1, FDFT1, FZD10, GNG12, IFIH1, IRF9, MBL2, NEUROD1, OR10A5, OR10H5, OR1N1, OR7D2, PARD6A, PDE1C, PIGT, PLA2G2A, POLR3A, PPP1R3A, SETMAR, SIGLEC1, SMARCA2, MAPKAPK2
Negative_7426	TNC, ALOX15B, ATP6AP1, BCKDHA, CRHR1, EARS2, GALC, GMPPB, GPD2, HAGH, INPP4A, LAMC2, MAP2K2, NCR2, NT5C1B, PHKA2, PSAT1, PTPRZ1, ULK3, WFSF3
Negative_7427	ASL, ADIPOR2, ALPPL2, AMDHD2, ARPC4, ATP6V0B, BDH1, C4BPB, COX10, CYP2B6, DDX18, ICOS, IL24, LAMC3, MAP3K8, MAP4K2, MNX1, NCKAP1L, NEU2, NFATC4, NFKBIB, NTRK2, OR2F1, OR2Z1, OR52B4, PLCB4, POLR2A, POLR2H, PTCH1, PTGS2, RAPGEF2, RBL1, RBPJL, RDH5, RPN2, SDC1, TNFSF9, UROS, VAMP2, VDAC1, WNT2B, EIF4EBP1, SERPINC1
Negative_7428	CAT, FAH, GP6, MOS, NNT, BAIAP2, CCL24, HRH1, NRXN1, OR4N2, OR51B6, OSMR, PDE6G, PIK3CA, PRKACG, SDHA, SEMA3F, TYMP
Negative_7429	APRT, CD86, CDC6, CPT1A, CSNK2A1, DEGS1, HLA-DMA, HSP90B1, IL3RA, OR56A4, PLAUR, PTDSS1, RPS6KB1, SIAH1, ST3GAL1, STX6, ST6GALNAC6
Negative_7430	AK1, MTR, AMDHD1, ARNTL, EPHX1, GALNT11, GUCY1B3, IL1B, LAMC2, MAD2L1, NFKB2, NOTCH1, OR2L2, OR4C15, OR52E2, PIK3R3, PRKACA, PRKCD, RPRM, STX12, TPMT, TNFRSF11B

Negative_7431	ABO, AUH, DDC, SRF, SRM, ACSL5, ACTG2, ADCY4, ALG1, ATF4, ATP5D, CARS2, CAV3, CCR3, CLCA2, CYP19A1, DFFA, DGKA, DTX2, FGF5, GUCY1B3, IL12RB2, MPDZ, NME2, NNMT, OR2M7, OR2W1, PDGFB, PEMT, PLD1, PLK1, POLR2K, PP2A, PPP1CC, RXRA, SMAD3, SULT1A1, TCIRG1, UGT2B4, UNC5B, WNT6
Negative_7432	GNS, BTRC, FZD7, HGSNAT, INPP4A, MAP3K1, MYH15, OR13C2, SH2D1A, SLC2A1, UGP2, WARS, PNLIPRP2, TNFRSF13C
Negative_7433	CRH, CSK, IL5, PLG, AADAC, AANAT, ACTN1, ALAD, ALAS1, ALG5, ARPC1A, CCR4, CNGA4, CXCL10, ERBB2, GDF7, GJA1, HSD17B1, MAP3K14, MYH8, NAT2, NCR1, OR51A2, OR6C1, OR7D4, OR8J1, PAK1, PDE6H, PDE7B, PGAM4, PPM1D, PPP1R3B, RAP1A, SFRP1, TRADD, WNT7B, ZIC2
Negative_7434	ACSL1, B4GALT4, BIRC3, C4BPB, CYP3A4, GNG13, IDI1, MAML3, MGAT4A, PI4K2C, ZNRD1
Negative_7435	C8B, CRH, F2, FER, ME1, ADORA2A, BACE1, CACNG5, CD82, CREB3L2, CTSB, CYP2C9, DTX3L, FLOT1, GGT1, GMPPB, INPP4B, IPPK, KCNJ11, MAGI1, NARS2, OR52E4, PARD6B, PDE3B, POLR2C, PRKAB1, PTPN7, RERE, STX6
Negative_7436	BTC, C4B, F7, PML, TK1, ACMSD, AKR1A1, AKT3, BCL10, BDNF, CBR3, CD79B, CLDN3, DGUOK, GRLF1, HLA-DRA, HPRT1, ITCH, LIPF, OR1B1, OR2G3, OR4F4, OR52J3, OR5P2, OR8H1, OR8I2, PDE2A, PLA2G2A, PPOX, PPP2R5B, PPP2R5E, PPP3R1, PVRL2, SMAD7, TDO2, TUBB2A, UBA1
Negative_7437	ALG3, ASCC3, COQ5, CXCL1, HSD17B2, ITGA11, LIPG, MAPK1, NQO1, NUDT12, OR52L1, PIK3C2G, PLIN, PTPRC, PVRL1
Negative_7438	PTS, B3GALT1, CACNB4, CREB3L4, CYP11B1, HTR7, INPPL1, SCP2, SDHD
Negative_7439	CAD, CSK, DDO, DLD, SMS, ACTA1, AK3L1, AKR1C3, ALPPL2, CTPS, CYP2D6, DARS, DDX23, DOT1L, DPYS, FTCD, FUT3, GNA12, GSTM3, ICAM1, IFNW1, IGF1R, INPP5E, MAP4K2, MAPK13, NEFH, OGDHL, OR2AG2, OR2M5, OR2T5, OR4F6, OR4S1, OR9I1, PCK1, PDE6G, PGM1, PIAS1, PIK3CB, POLD3, PTPRC, RPN2, SD3, SFRP1, SNAP23, TNFSF4, XYLT1
Negative_7440	SDS, BAIAP2, CCL21, CLDN14, COQ7, GPD2, ITPA, MNX1, NOX3, OR52N4, P2RX5, POLA1, UGT2B11
Negative_7441	OTC, ACTA2, ACTN1, CACNB2, CCR3, GALK1, GNAI3, HMGCS2, IL29, LAMB3, OR9I1, SELE, TFDP1, HLA-DQB1
Negative_7442	ARNTL, CSF1R, FZD5, IFNA14, MTMR1, OR11H4, PAPSS1, PRKCQ, STK3, B3GALNT1
Negative_7443	ACPP, ACTN2, ALDH4A1, CACNA1B, CADM1, CLDN5, CSNK1G2, CYP19A1, CYP2C18, ENTPD8, FGFR3, GALNT8, GUCA1B, HRH1, IL20RA, IL21, LHCGR, MAD2L2, MAPK14, NADK, NEFL, NRG4, OR10X1, OR2B2, OR3A3, OR8J1, POLE2, PPP5C, SFRP4, SMAD2, SRGAP2, STAM, STAT3, UGT2A1
Negative_7444	ADCY9, CCKBR, CNGB1, FGF8, GBA3, ITGA10, NOTCH3, OR2B11, OR52W1
Negative_7445	GDA, MTR, ABAT, ARNT, BCAT2, CDH3, CLCF1, COL4A2, DGKI, DTX3L, GALNTL5, HLA-G, IDH3B, INPPL1, MAPK14, MCM4, OR8H3, PHGDH, PRKCH, ATP6V1E2
Negative_7446	CRH, VTN, ADRA1D, ALDH3B1, CLDN4, CREB3L1, CRKL, CXCL5, DHFR, DKK4, DUSP3, ESAM, EXOC7, FZD5, GNA14, HAP1, HSD3B1, LDHC, LLGL1, NT5C1B, OR13C4, OR5T3, PIK3CG, PON1, PRNP, RAC2, SFRP1, SMPD2, YWHAZ, PAFAH1B1
Negative_7447	ME2, ACSM5, ADSS, CSDA, DAXX, DVL1, FASN, GALNTL1, ICAM2, IL21, IRF7, KLRK1, NME4, NOS3, OR2G6, OR8D1, OR8J1, OR9Q1, PAX6, PAX8, RUNX1T1, SFRP2, SSH2, TAS2R9, SUV420H1
Negative_7448	AMPD1, DUSP3, IL22RA1, MYH6, PAX4, PSEN1, RRM2B, TUBA8, WNT2B, GABARAPL2
Negative_7449	ACO2, CACNA1F, CYBA, DGAT2, ECHS1, EFNB3, IRS4, ITCH, JAK1, LAP3, MDH1, OR2F1, OR5I1, OR8H3, STX6, TAS2R13, TAS2R42, TAS2R48, TGFB3, UAP1
Negative_7450	MAX, XDH, CDC42, LAMC2, OR4B1, OR5P3, TNXB, WASL

Negative_7451	ABO, C8B, CAT, PRL, ACO1, ACVRL1, AMDHD2, APOE, B3GALT6, BCKDHB, CCL27, CCL4, CD247, CSAD, CYP27A1, CYP2S1, CYP8B1, DGKI, F13A1, F2RL3, FABP3, GRPR, GSTZ1, HAO1, HAO2, IFNA6, IL17A, LHCGR, MBL2, MMP14, MYL5, NFYB, NPR2, OR11A1, OR13G1, PDE7A, PMM1, POLR3B, PPARG, PTGFR, SEMA3A, SUCLG2, TAS1R3, TLR2, WASF1, WNT5A, SERPIND1
Negative_7452	F2, FN1, LEP, MSN, SFN, AARS, ACTG2, BCKDHB, BMP8B, CBLB, CCL8, CCND2, CCND3, CCR5, CD55, CDC25C, CDKN2A, CLCF1, DCTN1, DDX19A, DGUOK, DKK1, EGLN3, ENO2, FGF1, FZD4, GALNT8, GNMT, GNPAT, GNPAT1, GZMB, HIBADH, IFT57, LAMB4, MAOA, MAP2K2, MAPK14, OR2K2, OR4D11, OR6C1, PHKB, POLR3G, RARS2, RDH12, SPTAN1, STAT2, TACR2, TRAF2, VAMP3
Negative_7453	FAS, ACTG2, CD40LG, CNTFR, FDPS, GOT1, IL25, ITGAX, OR10V1, PDE10A, P EMT, PLXNB1, PPP2R5D, SEMA4C, TGFBR1, TRADD, TYROBP, UPP1
Negative_7454	CS, ADRB2, CLCF1, CSF1, CSNK1G2, CXCR4, DUSP1, FDPS, FZD7, IL5RA, OR1OJ1, OR7A5, OR7G3, PDE8A, PDGFRA, PER1, PPP2R5D, SDHA, SMPD2, SUCLG2, TGFBR2, THBS4, TSLP, UGDH, YWHAE, HLA-DPB1, ST6GALNAC3
Negative_7455	ACADM, F2RL3, FGF8, PRKG2, MAP3K7IP1
Negative_7456	F2, GGH, ID1, ADIPOQ, AKT1, ALDH1A3, ARHGAP5, CARS, CDKN2A, CSAD, CXC L6, DTX1, ELK4, GLS2, GSTA2, GSTA3, IFNA14, IL12RB2, IL20RB, OLR1, OR10G3, OR11G2, OR14A16, OR2A4, OR51I2, OR7G3, PFKFB1, PNPLA3, PTPRF, SEMA4D, SH2D1B, SSH2, SV2B, TNFSF9, TSHB, WNT5B, XCL1, SERPINA5, TNF RSF10B, TNFRSF17
Negative_7457	TXK, CYP11A1, FGFR3, HLA-F, OR5A2, STX16
Negative_7458	ACVR1, AGTR1, CACNG8, CBLB, CCR4, CDK2, CLDN10, CLDN8, COL4A6, CPT1B, CTF1, CYFIP2, F2RL2, FARSB, FZD1, GALNT14, GMPS, GNRH1, GTSE1, IL15 RA, IL17A, ITGB2, MAOB, OR2T4, OR52E2, OR7A5, PLXNA2, POLR2L, PPP2CA, PPP2R5B, SEMA3D, SMPD4, SPRY2, SPTLC1, SSH3, TAS2R1, TNFSF4, WASF3, XCL1
Negative_7459	EZR, IL3, LAT, NF1, ACOT11, ATP13A2, BCAR1, BET1, CCL7, CKS1B, IKBKB, LIPC, NCAM1, NSDHL, OR10H2, OR9A4, OR9Q2, PERP, PIGQ, PLA2G1B, POLR3 B, PRKACB, PRSS1, RAPGEF3, RETSAT, RPE65, SEMA4B, TAS2R48, TPH2, TUB B
Negative_7460	DDO, GSS, CACNA1G, CBLC, CYP2C8, GCLM, MCM6, MGLL, MTFMT, NT5M, OR6C1, PIK3CB, PLCZ1, PPP2R5D, PSEN1, RASGRP1, TRHR, TSC2, HLA-DPA1, PNLIPRP1, SERPINF2
Negative_7461	DBH, KIT, MPL, AGPAT2, ALAD, ALPPL2, APLP1, C5AR1, CRY2, DAPK1, E2F5, GRB2, GSK3B, HMGCL, ICAM1, INADL, JAM2, MBL2, MRAS, OR13F1, OR1L4, OR5AU1, OR5L1, PDE9A, PGAP1, RBPJ, RFXAP, RPE65, SMAD3, SOCS1, ST3GAL6, UGT2B28, YARS, ALDH18A1, ATP6V1G2, HSD17B12
Negative_7462	ACTN1, AGRN, BHMT, CCL7, INSR, JUND, MDH1, NT5C1B, NUDT12, OR52I2, ORC2L, PCK1, POLR2K, RIPK1, ROBO2, SLC25A5, SOS1, TACR2, UPRT
Negative_7463	ATP5C1, BAIAP2, BLNK, CDH5, CXCL2, CYP2A6, DAG1, DIAPH2, E2F3, EPOR, HADHB, IRAK4, NAE1, NFYC, OGDHL, OR5AC2, PGAM1, PIAS3, PRKX, PRPH, RPE65, TAS2R3, TNFRSF8, TSHR, PLA2G12B
Negative_7464	CLDN14, CXCL2, CXCL9, HAAO, OR8J3, POLA2, WNT10B, XCR1
Negative_7465	C8B, GP6, LEP, NPL, RET, TNN, ADH4, ALG10, AXIN1, C5AR1, CD59, CHKA, CX3CL1, EFNA1, MCEE, MPZL1, NKX2-2, OR4B1, OR4K14, OR5D16, OR7G2, PANK4, PDE4C, PHPT1, RBL2, RFXANK, S HMT2, SMC1B
Negative_7466	FER, KMO, MIF, ACVR2B, ATP5D, BAAT, CACNG4, CCL23, COL4A4, CPT1C, CSN K2A2, DERA, DHCR24, EPB41L3, F13A1, FZD3, GSTA5, GYS1, HMBS, IL2RB, I NSR, IRF5, ITGAV, MAP3K6, NPR1, NRG1, OR6C76, PDK1, PECAM1, PFN1, PPP 2R1B, PRKAA1, RDH11, SMAD5, TAS2R8, TUBA1C
Negative_7467	B3GAT3, CDC2, CES2, CTNNB1, CXCL12, DGKH, EPHA4, FARSB, GBA3, NCOA4, OR52B4, OR52I2, OR52K1, PLEKHA8, STAM2, WNT2B, MAPKAPK3

Negative_7468	FH, ID2, CCL28, EDA2R, FADD, FUT2, LARS2, NFYA, OR6K2, OR7D2, PIAS1, P PP2R5E, PPP3CB, RAP1A, RASA1, SEMA4B, SLC9A1, SULT1A2, PLA2G12A
Negative_7469	AMY2B, CYP26A1, DDX52, DKK2, ELK1, GBE1, GMPPB, HMGCL, IARS2, MCAT, P DE1B, ST6GALNAC4
Negative_7470	HDC, UBB, ALDH7A1, ANAPC11, CCND3, CNTNAP2, CYFIP2, FGF7, FUT4, GNMT , GRIN2C, IDH1, IDH3B, NODAL, OR3A1, OR9K2, PAK7, PRKCD, PTAFR, PVRL2 , RND1, SMAD1, SOCS2, SPCS1, SV2B, TKTL1, VAV1
Negative_7471	C2, SPN, TPO, ALG1, BMP4, CACNG6, CYP4A11, EDNRA, EPHA8, IKBKB, NCR2, PDE8A, PHKG2, PTGES2, SCLY
Negative_7472	KIT, APOA1, ATP5G3, CALML5, CYP26C1, CYSLTR1, DPM1, DUSP5, GNAO1, GS TK1, HSP90B1, LARS2, LRDD, LYPLA1, MAP4K4, MCM4, MDH2, MPDZ, NFKBIE, PAK6, PLXNB3, PRKCQ, RALGDS, TUBB2C, TYMS
Negative_7473	CLDN19, EPHA8, FMO1, KCNB1, MTMR6, PTAFR, RENBP, TRAF2
Negative_7474	CBL, ALDOC, ARSE, BCL2L1, CDC26, CLDN1, FGD3, GLYCTK, HADHB, HLA- C, IFNGR2, INHBB, LAMC3, NCF1, NKD2, OR12D3, OR2A42, OR4C11, POLR1D, PTPN6, SYNJ2, TOMM40L, UAP1, UGT2B7, ZIC2
Negative_7475	MAG, ADSSL1, ATP2A1, B3GALT2, CALML6, CCL13, CNTFR, CRKL, CXCR5, DTX 2, EPHA1, GLDC, GRIA2, HLA- C, KLRC4, MAP2K1, NEUROG3, NRAS, OR10V1, OR2A2, OR52K2, PARD6G, PIGC , PIGX, PIK3CG, PLOD2, TYMS, WNT5B, ZFYVE9, CSGALNACT1, PDCD1LG2, SE RPIND1, TNFRSF13B
Negative_7476	ADCY8, ADORA2A, BCAT1, CCL11, CCL19, CCL20, CCNB3, CREB3L1, CTNNA3, EFNA5, GCNT1, ITGB4, ITPK1, LDHB, MCCC2, OR2H2, OR6M1, OR6N2, PAPSS2 , PFKFB2, PNPO, PPP2R1A, RAB5A, SIAH1, TPH1
Negative_7477	SDS, CCR1, CDS2, CHST12, ENTPD8, FABP4, FGF2, NCOR1, OR8B8, PPP1CC, R ASA1, TGFBR2, TLN1, ULK1, UPB1, PPP1R12A
Negative_7478	CASP8, DGKZ, IFNGR1, MCM6, PPP1CB, RUNX1, SELP, UGT2A3
Negative_7479	BAD, B4GALT7, BDNF, COL3A1, COL5A2, EPHA2, GAS1, KLRC2, KLRC4, NCKAP 1, OR11A1, PLA2G1B, PPP2R5B, SULT2B1
Negative_7480	IL8, ABL1, AGMAT, ALG10B, ANAPC2, BCKDHB, CDC25A, DRD1, FUT1, GABARA P, IFNGR2, IL1RAP, OR1A1, OR1A2, OR2G3, PIAS1, PRKAR2A, SHC1, SLIT2, STK3, TRAF2
Negative_7481	CFI, DLD, FGA, HPD, SRM, ACO2, ARPC1A, CACNA1H, CCL8, CCNH, CTPS2, DGK B, GSK3B, GSTT1, HARS2, MAP3K7, MMP9, MYL9, OR1G1, OR2M4, OR4D5, OR5A N1, PDE5A, SEMA3F, ULK3, SLC25A31
Negative_7482	APP, DUT, FST, ZYX, AMD1, ATP13A2, CACNB4, CADM3, CSNK1G2, DAPK2, FCG R2B, HRH2, IFT57, IRF5, MAP3K2, METTL2B, MTAP, NARS, NTRK1, OCRL, OLA H, PHPT1, PPP1R3A, PRKAG2, STAM2, SULT1E1, TAS2R5, TBL1Y, UGT2B4, WN T4
Negative_7483	ACP2, AKR1A1, CCL16, CD99, CDC7, CTNNA1, CTTN, DUSP16, ESPL1, HMOX1, ISYNA1, LIMK2, MAGI3, MNX1, NAT5, OR1N1, OR4K2, PCYT1A, PIGH, PLAT, R OCK1, UGCG1
Negative_7484	APP, BTB, CP, PGP, ADRB3, ARPC5L, CAMK2A, CTPS2, DRD1, FSHB, FZD8, GCL C, GNB1, IL18, KDSR, KIR2DL2, MALT1, NLGN1, NME6, NOS3, OR2T33, OR4C1 3, OSMR, P2RX2, PCYT2, PDK1, PGM3, PIPOX, POLD2, PRKCA, PTPN1, RBPJ, R PN1, SKIV2L2, SMAD4, SV2C, C1GALT1C1, KIR2DL5A
Negative_7485	EBP, INS, ME2, AASDH, ACO1, ADORA2B, ANAPC5, ARHGEF7, B3GAT2, DDX56, FABP1, FBXW11, FMO1, ICOS, IL13RA2, IMPA1, LAP3, LTB4R2, MASP1, NAT2 , NEGR1, NFYA, NOX1, OR4A16, OR4D6, OR51L1, OR8D2, PDE1A, PDE6D, PFKL , PGK2, PIGA, PLOD2, PPP2CB, RAPGEF3, RDH16, ROCK2, TAP2, TLN2, TNFRS F8, TRAF1, WNT11, WNT9A, YWHAE, EIF4EBP1



Negative_7486	AK5, GK2, LCT, MPI, SMS, A4GALT, ACHE, ARHGEF4, BMP6, CAPN2, CCR2, CDC14B, CDH15, CNTNAP2, DAG1, FGD1, GLDC, GNRH1, GP1BB, IL22RA1, IRAK3, IRAK4, ITGB7, NTN1, OR1N2, OR2H1, OR51I1, OR8I2, OR9I1, PAK1, PCYT2, PDX1, RETSAT, RUNX1T1, SEMA3G, SKIV2L2, TAS2R41, TCF7L1, TUBB6, VAMP3, WASL, ZMAT3
Negative_7487	ACP5, CDS2, CHRM5, GSTM1, IL11RA, OR5P2, OR8I2, ROCK1, THY1
Negative_7488	BTK, ID4, LCK, ACSL6, ADIPOR1, ADRBK2, FGF14, GSTO2, ITGA2, MAPK9, NFYA, OR10J5, OR1N2, OR2C1, OR5M9, PDE6H, PIGN, PIGS, PMAIP1, PTTG1, RHOO, SIPA1, STX6, TRHR, TSHB, UBE2L6, WNT6
Negative_7489	GP6, LTB, PVR, RDX, SRC, ABL1, CCND3, CD34, CPOX, DCXR, DIAPH2, ELK4, ENPP7, FBP2, GNB1, IFNA17, IL20RA, IL2RA, MCM3, MMP2, MYH15, OR13C3, OR1C1, OR52I2, OR52N2, OR5AC2, ORC6L, PARS2, PIK3R2, POLR2K, PPP2R2C, PTGIS, RALGDS, SPHK2, ST8SIA1
Negative_7490	C5, FH, HYI, MPI, ACAT2, ACPP, ADRB2, ANPEP, CBR1, CHUK, COL2A1, CPT2, CSF2, CYP2B6, CYP3A7, EPOR, FGF12, GUCA1C, GUCY1A2, IL28RA, IL2RB, ITGA2B, LIPG, MAN1A2, MAP3K8, MARS2, NFKB1, OR2AE1, OR2D3, OR51A4, OR52J3, PIK3C2A, PLCB3, RRM2B, SARDH, SDHB, SEMA3C, SMAD9, SMPD4, STX12, PNLIIPR2, SLC25A31
Negative_7491	FN1, GPI, INS, MET, ALOX5, ASNS, BNIP1, CHST13, DDX41, DFFA, FGFR2, FLOT1, GALNT3, GALNT6, GNA12, ITGAM, ITGB2, MAD2L2, MYLK3, NCKAP1, NUDT2, OR10P1, OR4M2, OR8B12, PRKX, PRPH2, ULK1, CACNA2D4, HSD17B10
Negative_7492	OR2A4, OR2T3, OR51F2, UBA1
Negative_7493	ADIPOR1, AGXT, AKR1D1, AKT3, ALG10, CIITA, FGF4, GOT1, HES1, IRS1, NUDT12, OR1J1, OR2T34, OR52B6, OR8S1, PDGFRB, PIGH, PPP1R1A, TAS2R16, TSC2
Negative_7494	CAT, LSS, C1QB, CHUK, CYP1B1, F2RL2, GNMT, HLA-C, ITGA10, PPOX
Negative_7495	PXN, ABCC8, ALG12, CYP17A1, ELK4, PNMT, SEMA4F, SPTAN1, TAS2R13
Negative_7496	SRF, ADH1B, CCL4, CCR3, DARS, DGKE, FTCD, GP1BA, HLA-DMA, IARS, ITGAX, MPZL1, NFATC1, OR10AG1, OR1M1, OR5T2, PAK1, PCYT1A, PNPLA4, PSEN2, SETMAR, STT3B, MAPK8IP3
Negative_7497	IHH, INS, KMO, LHB, CCL15, CLDN5, DGKB, DKK2, FOXO3, GBA3, GCNT2, GPX7, HEXA, IL17RA, KIR2DL1, NTNG1, NUDT9, OR1F1, OR52E6, OR6C76, OR6M1, PCYT1A, PDGFD, PPP1CA, SDHA, TNFSF14, TYK2
Negative_7498	DCT, FST, GHR, HPD, ARNT2, BCKDHB, BMPR1B, C5AR1, CACNB4, CACNG8, CAN T1, CCNA1, CLTC, CYP2A7, DAAM1, DOT1L, DPAGT1, DVL2, GALNT6, GGPS1, GNAI2, HLA-F, HNF4A, HRAS, ITGA11, LFNG, MAGI2, MGAT2, MTMR2, NQO1, NTRK2, OR1L1, OR4C12, PFKFB3, PRDX6, PRKAR2A, PTCH1, PTDSS2, RPN2, RPS6KA6, SEMA7A, TAS2R50, TJP1, USE1, MAP3K7IP2
Negative_7499	AK5, ACTN2, ANAPC2, ASRGL1, BET1L, BMPR1A, CNGA4, DGAT1, DOCK1, EPAS1, FGD3, KIR2DL1, MTHFD2, OR9A2, PTGS1, ROCK1, SLC25A5, SREBF1, TGFB3, TSC1, UGT2B28, TNFRSF13B
Negative_7500	C1S, LPO, RFK, AKT3, CHKA, CRY1, CSNK1G1, GNRH2, HPRT1, ITGA9, NCAM1, NFYC, NRG4, PDPK1, PPM1D, RARA, RGS3, SC4MOL, SUV39H2, TNFSF4, UAP1
Negative_7501	DBI, SCD, TAT, ACSM5, ADH1A, ARHGEF6, ARNT, ASIP, BCAT1, CBR1, GLYCTK, HSD3B7, INPP1, IQGAP2, NCAM1, QPRT, TAS1R3, WNT5A, YWHAE
Negative_7502	C1S, KMO, MAX, NGF, UBB, AARS2, ADRB2, ALS2, AMHR2, AMY2A, AOX1, ATP5A1, B3GNT3, CCR8, CD36, CDC25A, CLDN14, DHRS4L2, DPAGT1, F2RL1, FUT2, GRIA2, HAAO, IFNA14, IL23A, KLRC4, LDHA, MCM7, NARS, NOX3, OR11G2, OR2F1, OR51Q1, OR52K1, OR5M3, PAK3, PIP4K2C, PROS1, PTPN7, RDH11, RPSA, SHISA5, ST8SIA5, SULT1A1, TLR9, TM7SF2, TNFSF14, TRMT11, HLA-DRB4

Negative_7503	CAD, GP5, MAX, PGP, TXK, CACNG7, CDC6, CHRNA7, CLDN4, DDX56, EGLN3, ERBB2, FGF8, FGFR4, GNAI3, GNRH2, GRM5, HSD17B3, IFNA10, MAD1L1, MAP3K7, MGAT5, MS4A2, NMNAT2, OR4D1, POMC, PPP1CB, PRKG1, PTAFR, RDH10, RELA, SARDH, SEMA3B, SEMA4D, SLC2A4, TAS2R16, TYRP1, VCAM1, YARS
Negative_7504	GP6, GSR, IVD, PXN, SRC, ACPP, AKR1B1, ALG1, AREG, ATP5H, BCMO1, CACNA1G, CASP7, CCL24, CTSS, CXCR6, EIF4B, FARSA, FLT3, FOSL1, FSHR, GBGT1, ICAM2, IL1A, ITGA7, ITPA, METTL6, MTFMT, OR10AD1, OR1N2, OR2M5, POMC, PPP3CA, PRKACG, PRKAR1B, PTPRR, SPCS3, SPTLC1, ULBP1, ST6GALNAC4, SUV420H1, TNFRSF1B
Negative_7505	IL2, ATG7, CYP11B2, IARS2, OR10A3, PAX4, PLTP, PYCRL
Negative_7506	C6, LPL, ACPP, ALDH5A1, ALOX12, AMPD1, ASCC3, ATG12, ATP5I, CAMK2D, CAV1, CHKB, DUSP3, FLT1, GLI1, GNG12, GNPAT1, GOT1, GPD2, GUCA1C, MAPK14, NCK2, OR10H1, OR14A16, OR5L2, OR7D2, PNPO, RASGRF1, SC4MOL, SEL1, SEMA7A, SLC27A4, SMAD1, TJP2, TNFRSF8, TUBA1C, PLA2G12B, SUV420H1
Negative_7507	AK7, DCN, MET, SRM, ABLIM2, ACACA, AGRN, ARHGEF6, ATP13A2, B3GALT1, CACNG5, CAMKK2, CDC14B, CDK2, CES1, CXCR5, DLL4, DNMT3A, EPHA4, GNAS, GSTP1, HIF1A, HNMT, HSPA2, ICAM3, IDH3A, IL17RB, IL20, ITGA3, LIPA, LRP5, MAT2B, MYLK, NEFM, OGDH, OR4N4, OR5AP2, PANK3, PDE9A, PLTP, PYGM, STAT6, TBXA2R, TRPM5, TSC1, TUBB6, WHSC1, SERPIND1
Negative_7508	AANAT, ACSM2A, AKR1C3, ALG10, APAF1, CACNG8, CDKN2A, CHAT, CNTFR, CSF1R, DHRS4, DRD1, ERBB4, GRIN1, GSTZ1, ITGAL, ITGB4, OR2C3, OR4K14, OR52I1, OR5D13, RBPJL, TAS2R60, VARS, CSGALNACT1, CTNNBIP1
Negative_7509	CKM, GHR, ID4, MOS, AARS, ABCC8, ARNTL, ARSB, ATP5B, CDK6, CLDN2, CRLS1, DARS2, EXTL2, FBP2, FCGR3B, FGF6, FUT1, GNA11, HSD17B8, IKBKG, MCM4, NCK2, NT5E, OR2F2, OR2T4, OR4K2, OR52D1, PNMT, POLR1B, POLR2K, SHC4, SPHK2, VANGL1, WARS2
Negative_7510	CR1, GPI, SMO, ACAA2, ADH4, AGPAT1, AKR1C3, ALG8, BCKDHA, COQ5, CYP17A1, CYSLTR2, ENTPD1, EPB41L3, EREG, GBE1, GPAM, GRAP2, HSD17B3, HSPA2, HSPB1, INPP4A, LAMB2, MAD1L1, MAPK14, NANP, NTRK1, OR4L1, OR56A4, PLCD1, PPP3CC, RASGRP1, RPS6KA1, SRD5A1, SSH1, TGFBR1, VEGFB
Negative_7511	BCR, CDA, DCC, GGH, ADCY5, APOC3, ARHGAP5, BPNT1, CD27, CMAS, COQ5, CRKL, DAPK2, DHODH, HMOX2, HNF1B, HSPB1, IL17A, MFNG, NKX3-1, NTN1, OCRL, OR1S1, OR2L3, PAPSS2, PDXK, PFN4, PIGL, PON2, PRKAG2, SARS, SHC3, SSH1, TIAM1, TOMM40L, XIAP, TNFRSF10C
Negative_7512	SRC, AGRN, APLP1, ARSB, AXIN1, BUB1B, CSF1, CYP1A1, DFFA, GAD2, HLA-DMA, HRH1, HTR7, ITGA10, MAD2L1, MECR, NFASC, OR10H5, OR2D2, OR5D18, PGAM2, PIK3C2B, PPP1CB, PRKAB1, PTGFR, RASGRP3, VAMP4, WASF2, ATP6V1B1
Negative_7513	FST, VCL, CALML6, CASP8, CCR2, CLDN1, COL1A1, DHRS4L2, DRD1, DRD5, E2F1, GCLM, MAML3, MIOX, NAGLU, NRG2, OR2Z1, OR4N2, OR5A1, OR8D4, OXCT2, P2RX3, PAK4, PIP5K3, PISD, PLXNB3, PRKCA, RPS6KA1, SARS, STX1B, TSLP, TNFRSF11B
Negative_7514	GSS, HGD, TXK, AACS, ACAT2, ACOX2, ALDOC, APH1A, ARPC1A, CARS2, CCL25, GNA11, IAPP, INMT, JUND, NMNAT3, OR10G9, OR13C5, OR13J1, OR4A16, PIGF, PIK3R1, PIPOX, PLOD1, PRKCH, PRKCZ, ROBO3, RPS6KA5, SLC9A1, SPHK2, UNC5D, ATP6V1C2
Negative_7515	F5, TAT, ACOX1, ALDH3A2, APOA2, CBLB, CDIPT, CYP17A1, DDX18, DDX4, ENO2, GUSB, IRS4, KLRD1, LLGL2, LYZL1, NFYB, OR2H1, OR52H1, P2RX6, PIK3R5, PLXNC1, PTGS2, RHOQ, PLA2G12B
Negative_7516	C9, TXK, ACSM1, ADORA2A, COL4A1, OR1M1, TPH1
Negative_7517	MUT, CACNG7, CASK, CCL28, CCL8, CCNB3, CD44, CES2, CSAD, CSF3, HTR6, I NHBA, NKX2-2, PIAS4, POLR1D, RHOD, ULK2, HSD17B10

Negative_7518	CSK, ALOX15B, ANAPC11, ARPC3, DLST, ENTPD5, GBGT1, GNG13, MAML3, MPZ L1, NFKB2, NOTCH3, OR1F1, OR2L2, PAPSS1, PLD1, PPP1R1A, SC5DL, SETMAR, SLC27A5, ST3GAL2, TNFRSF9, TNFSF10, ZBTB16, TNFRSF12A
Negative_7519	DDC, IL2, ILK, ATP5H, CAV3, EPAS1, FBP2, GGT1, GNPAT1, OR8B4, PARD6B, PDE11A, PPP2R2D, PRODH2, SPRY4
Negative_7520	ME2, ALOX12, ENPP7, FECH, GARS, GJD2, GRIN2C, HAGHL, IRAK2, ORC1L, PDE2A, PHKA1, PLCB1, PLCE1, PPARA, PPP2R5E, PTGES2, SEMA3C, TRAF5, VEGFB
Negative_7521	AGL, SMS, ACOX3, ADRA1D, AKR1C1, AOC2, ASCC3, CD247, CLDN10, CREBBP, DOT1L, ENPP1, ENTPD8, ERO1L, FGF7, FMO4, GAS1, GBA3, HRAS, HSPA1B, IFNA6, IL17RB, JUND, MAP3K11, MBL2, NKD1, OR4D2, OR7C2, ORC4L, PLOD1, PPP1R3A, PRKACB, PVRL4, RGS3, RRM2, SDHB, SGMS1, STX5, YWHAB, CTNNBIP1
Negative_7522	GGH, AMY2B, ANPEP, APBB1, ARAF, CLDN5, COL5A1, DGKH, EHMT2, ENPP6, EPB41L1, FABP3, FGF20, GALNT10, GNB3, HTR2A, IFNA21, MAPT, NEFH, OLR1, OR52I2, OR5K2, OR6K6, OR9Q2, PDCD1, PDGFRA, PPARD, PRKCG, RASGRF2, RDH11, RELA, RND1, SRGAP1, STAT5B, STX1A, TACR1, TBL1X, TNFRSF11B
Negative_7523	EPO, PLG, SHH, TNN, ANAPC1, ATP4B, CCL27, CHIA, CNTN1, DHDH, DPYD, EFN A4, FBXW11, GYS2, IFNGR1, MAD2L1, MAPK14, MYL2, NAT2, NEU2, OR13F1, OR2Z1, OR4C16, PIGT, PIK3C3, PRKAR2B, PRKCE, PRPH, PRSS1, SULT1A2, SULT1A4, TUBA1C, PNLIPRP2
Negative_7524	APP, C7, AASS, ACHE, ALDOA, ATP5H, CCDC6, CERK, CRY1, DOT1L, IFNA10, IFNAR2, IL1R1, JAG2, MYH8, OGDH, OR11H6, OR14I1, OR4N4, OR8H3, PARS2, PIM1, POLR2E, PPARA, PRNP, RDH8, STAT4, TNFSF8, TUBB4Q
Negative_7525	LYN, ASAH1, ATP5C1, CACNA1C, CAV2, CD79B, CTSB, CYP1B1, CYP2C18, DDI T4, DDX23, DGKA, DOLPP1, EGFR, ENO3, GNG13, GNPAT, GSTM2, LDHA, MDH1, MGAT3, MMP14, MYLK3, NFASC, OR1D5, PIGK, PIM1, PPP2CB, PSME2, RHOQ, SSH3, SULT1A2, TAP1, USE1, ZFYVE9, PLA2G12A
Negative_7526	FAS, LEP, ACSL6, ACSM2A, ADCY1, ARPC4, CCL21, CDH4, DFFA, DGKD, DOT1L, ERBB4, GNAI1, GPD2, HES1, HMGCS2, JUND, LIPA, MYH13, MYH6, NFATC2, OR11A1, OR1K1, OR2T10, OR6T1, OR8K5, PGK1, PGM3, PRKAG3, PTCH1, PTPRJ, SMAD9, SOCS4, TALDO1, TAS1R3, TNFSF11, UMPS, CACNA2D2, PNLIPRP2
Negative_7527	SPN, ALG11, DTX3, GSTP1, ITGAL, LDHA, MYH3, PRPH, SOS2, TAS2R40, TNXB, UGCGL2
Negative_7528	TNC, UBB, APOC3, B3GNT5, BMP4, CD226, CTSG, CYP19A1, DPYS, GUCY2F, HSD17B3, IPPK, MARS2, MBL2, NAGLU, OR4D5, OR5AP2, OR8H2, OR8J1, PIGA, PPP3R2, PSPH, RASGRF1, TGFB1
Negative_7529	ACADSB, ACSM4, BCL10, CACNA1B, DARS2, EDAR, EXOC7, FARSA, IFNA10, IL22RA2, LIPC, MITF, OR1J1, OR2Z1, PIK3CG, PNMT, PRKAR2A, PRKCD, PRNP, SKIV2L2, SPCS1, TBL1XR1, TNFRSF13B
Negative_7530	ADO, GAA, NF1, PGD, SRC, AGPAT3, ALDH4A1, APRT, BET1L, BST1, CACNA1S, CD44, CHD8, CTNNA3, CXCL11, CXCL12, DIAPH3, GMPS, GNRH1, GP1BB, HLA-C, KLRC1, LIFR, MAP4K2, NCSTN, NMNAT1, NMNAT2, NODAL, NOX1, NSDHL, NTNG1, PAK1, PAK4, PDE2A, POLR2E, PRPS2, PTK2, RAB5A, RASGRP2, RBKS, SD C3, SLIT1, SMAD7, ST8SIA1, TJP2, TPH2, YES1, ATP6VOA2
Negative_7531	C3, ALDH9A1, ANAPC5, APH1A, CD22, CLCA4, COL5A2, CYP2S1, DARS2, DDX56, EP300, FADS2, FDPS, FLT4, HTR5A, METTL2B, MPZL1, NLGN3, OR2V2, OR52E6, OR6C76, OR7G1, P4HA2, PDGFD, PIK3C3, PLCG1, POLR2J, PPP3R2, PTGER1, PVRL1, RELB, RFXAP, RRM2B, STX7, TUBB, WHSC1
Negative_7532	TXK, ADAM10, DGKI, EPAS1, FGF19, FSHB, FTMT, GMPR2, MGAM, PRKCE, ROBO1

Negative_7533	ABO, C3, CR1, GSN, SHH, ACPP, ALG3, ARHGEF1, ASNS, CCL7, CD247, CDH3, C FTR, CMBL, COX10, CPT1A, DTX3, EXTL3, FOXO3, GALNT14, GDF6, GNPAT, GP D1, HRH2, HSD17B8, ITGA1, MDH2, OR1S2, OR2D2, OR5P3, OR8D1, OR9G1, OR C4L, PAK3, PAK4, PAX8, PDE6G, PI4KA, PIK3CA, PRKCE, RFW2, SDC2, ST3G AL6, STEAP3, STX10, TAS2R13, TSNARE1, TNFRSF12A
Negative_7534	BAD, BTD, IL3, INS, MSN, SYK, ACSL1, ACSM5, ADIPOR2, ATP4B, BMP6, CDC1 4B, CHSY1, CNGA3, EHMT1, GSTA3, GUCA1B, GZMA, IL4R, IL9R, IRF7, MITF, NARS, NAT2, NCF2, NCKAP1, OR1S2, OR6B2, P2RX5, PDE8B, PI4KA, RAC2, RA PGEF2, SLC27A5, STX16, STX8, TIAM2, WBSCR17, B4GALNT1, PNLIPRP1, TN FRSF10A
Negative_7535	CACNA1F, CHSY3, CRHR1, DTYMK, FASN, GALNT8
Negative_7536	BID, C9, ID4, APH1A, CCL22, CFLAR, ECHS1, EXT2, FGF18, FTH1, FTMT, GCA T, HMGCS1, HTR2B, IL17B, IL7R, KIR3DL2, MAD1L1, MAML2, MAP4K2, OR2G3 , OR4D1, OR56A3, OR7A5, OXCT2, P2RX1, PIAS2, PPP2R2D, SCIN, STK36, ST X10, TACR1, TUBA3C, VAMP2, TNFRSF17
Negative_7537	CD4, EBP, GHR, GSR, ADIPOR2, ATG12, B3GALT5, BHMT, CCR3, CD46, CLDN15 , CLTC, CYP21A2, DUSP10, EPRS, FECH, FLT3LG, FUT2, FZD7, GLUL, GNRH2, IFNA13, IFNA6, IL10, ITGA4, KIR3DL3, LALBA, NCOA4, NRG1, OR4D5, OR52 J3, OR9Q2, PLA2G1B, PLA2G2D, PRKACB, PRKCZ, PYGM, SARS, SHMT1, SMPD1 , SNAP23, ST3GAL6, STX6, TAS2R5, WBSCR17
Negative_7538	HK1, SCD, AKR1B10, ARRB2, CALML6, CCR6, DHDDS, DUSP7, EPHA4, FRAT2, G ALNTL4, GALNTL5, GRIN2C, ITGA6, JUND, LEPR, OR2T1, OR6C1, PLIN, POLR 2K, RASSF1, RPRM, RRM2, SEMA4A, SERPINB5
Negative_7539	MPZ, DDX52, DHX58, IFNA14, OR10T2, SETD2, SSH1, STAT1, STX1B
Negative_7540	ADO, BTC, GSN, HK3, AK3L1, ALG5, BBOX1, BRAF, COL5A1, CYP2C9, EDNRB, E NTPD3, GADD45A, GLI2, HARS, MAN1A1, NFATC2, NMNAT1, PANK3, PDXK, PER 2, PLCD1, PLXNA3, PRKAA1, RARA, RASGRP4, RBL1, SRGAP2, STEAP3, WWP1, YWHAE, YWHAZ
Negative_7541	BCL2L1, CCND1, CXCR4, EFNA2, PPP3CB, SDC1, TLR9, WIF1
Negative_7542	ACYP2, ALPI, ATIC, BCL2L1, BLVRB, C3AR1, CBLB, CCR9, CDC25A, CHAT, CN DP1, COL4A1, FSHB, IL18, OR1N1, OR3A2, OR6N2, SV2A, TAS1R2, ZAP70
Negative_7543	CGA, AHCYL2, CACNA1G, DGKQ, IFNA6, IFNB1, IL6ST, IRAK3, LIPA, MARS2, MMP14, NTNG1, OGDH, OR51A4, OR8B4, PRKAA1, PTGER1, TP73
Negative_7544	AGK, CTH, AASS, ACSS3, AKR1C1, ARRB1, ATP4A, BMPR1A, CARS, DIAPH3, DN MT3A, ENPP1, G6PC, HADHB, KDSR, MAP4K1, NMNAT2, NODAL, OR1E2, PANK4, PDE4A, PIGX, PLCG2, PPCDC, RBPJL, SHC3, ST3GAL3, TBK1, TP53, VAMP4, P PARGC1A
Negative_7545	ADO, C7, ID2, ACLY, ALS2, ATP6V1F, CAMKK2, CDH15, CYP2U1, DERA, EGLN1 , EPB41, EPHB3, ESPL1, FBP2, FGF8, GTSE1, MAPK7, NEGR1, NT5C, OR2T1, O R56A4, PPP2R5E, RFX5, SENP2, SH2D1A, SLC2A2, SOCS5, TAP2, TAS1R3, TS C1, UNC5C, YOD1, GABARAPL2
Negative_7546	COQ3, CRLF2, CRLS1, GALNT9, GRLF1, IFNGR2, ITGA10, MAP2K3, NKX6- 1, PRSS1, VAMP3, ARHGEF12, TNFRSF10C
Negative_7547	CEL, F2R, ADH6, ADRA1A, APRT, ARPC5L, B3GALT6, CNGA3, CSNK1G2, E2F3, F13B, GALC, IFT57, MAPK8, OR3A2, OR5T2, PARD3, PGS1, PIGW, PLA2G5, PR KAG2, RPS6KA2, SDC1, SMPD2, SOAT2, STX2, TAS2R50, ATP6V0A2
Negative_7548	ADA, F12, SMS, TEC, ABLIM3, ARPC3, BMP2, CHEK2, COASY, CRY1, DAD1, ETS 1, EXOC7, GALNTL1, GGT5, GPT2, HHIP, HPSE, IFNA14, LGMN, MAP4K4, MGST 2, MTMR1, NAT2, NCOR2, NSD1, NUDT9, OR10T2, OR1K1, OR51B5, OR51V1, PA K6, PDE2A, POLR2D, PPP1R3A, PRKAA2, RARS, RDH16, SKIV2L2, SNAP23, TC IRG1, UGT2B4, VANGL1, VDACC2, WASL, TNFRSF1A
Negative_7549	CR2, EDA, ZYX, AKR1C3, AMPD1, BMP2, CALML3, CCL13, CXCL10, DDIT3, DKK 2, DRD1, ENTPD5, FZD3, GMPS, NADSYN1, NT5C1A, OR4F4, PDGFRA, PPP1R1A , RDH10, RPRM, ST3GAL5, TRPM5

Negative_7550	C3, CTSL1, PTPRM
Negative_7551	MPL, ALOX5, LGMN, LIMK2
Negative_7552	ARD1A, ATP6AP1, BTRC, C1QA, CDK6, DUSP7, E2F2, E2F4, GALNT14, HLA-DOB, HTR5A, ICOS, ITGB3, MAD2L2, MAP3K1, MGST2, MMP1, MYH8, OPLAH, OR2Z1, OR4N2, OR9A4, POLR1C, RASGRP2, SCP2, TNFRSF1B
Negative_7553	SRC, ARPC5L, ARSD, ATP6V1D, CD40LG, CTLA4, CYP2S1, EARS2, IL12B, MAP3K5, MAP4K2, MCM2, OR10H3, OR2T8, OR4C13, PI4KB, RHEB, TLR2, ULBP3, WBSR17, ZAP70
Negative_7554	ADSSL1, ALG1, ALPI, ATP6V0C, CCL16, ENPP6, IFNA17, OR4S2, PDE6D, PIGT, PLA2G2F, PPP2R1A, TMLHE, TRADD, UMPS
Negative_7555	IHH, KHK, XDH, ARHGEF4, BDNF, CD40LG, CHEK1, CXCL13, CXXC4, CYP27A1, CYP2A13, CYP7A1, DLST, DPYD, EPHB6, FDFT1, FZD9, GNPAT1, HIP1, HTR2C, IL11, IL11RA, INPPL1, IRF5, KIR2DS4, KYNU, MARS, NAGA, NAGS, NEU3, ORC6L, PNPT1, PPP1R1A, PPP2CA, PTPMT1, RRM1, SESN3, SKIV2L2, SKP1, SMAD1, SUCLG1, TPH2, TPMT, UGDH, ATP6V1E2, SERPINF2
Negative_7556	ALG9, ASS1, BET1L, CBLB, CBR3, CCL24, CDS2, CHRM5, CSF2RB, CXCL1, CYP4F2, E2F1, EPB41L1, FSHR, FUT8, GALNT6, GTSE1, HMOX1, ICAM2, MAPK12, MTHFD1, NR1D1, OR13A1, OR1J4, OR4B1, OR4Q3, P2RX3, PDE8B, PGM2, PIGW, PLA1A, PLCB4, SC5DL, SNAI1, SOS1, TNFSF14, TSC2, TUBAL3, UBE2L6
Negative_7557	EGF, CNTN1, DTYMK, ECSIT, FGF9, IMPDH1, MADCAM1, OR10A5, PDE8B, POLD3, POLD4, PTCH1, PYCRL, RASA2, STK4, TFPI, VAMP2, CSGALNACT2
Negative_7558	ACVR1C, ADCY4, ADH4, AGRP, ALCAM, ALG2, ANAPC2, B3GNT5, CCL19, CCL2, CCR8, CNTNAP2, COL5A1, CYP26A1, DGKE, DOT1L, DTX4, EDNRA, ERBB2, FOXO3, IFNA4, IL4R, INHBB, ITCH, KCNJ11, KIR2DL1, MINPP1, MPST, NAGLU, NANP, OPLAH, OR1D2, OR2F1, OR51A4, PLXNA1, PPID, PRKAR2A, PTCH1, SEMA4D, SMAD6, TKTL2, TP53, TRHR, TSC2
Negative_7559	A2M, ACOX1, AKR1B1, ATN1, BAAT, CRY1, DAPK3, HHIP, HRH2, IARS, IFNB1, NOS1, OR10G2, OR10P1, OR2A2, OR6K6, SFRP4, TNFSF9, GABARAPL2
Negative_7560	ACAD8, ACTA1, ADCY3, ADSS, B4GALT1, CAMK2D, GALNTL5, GNAT3, HSD17B3, IRAK2, JAM2, MPST, NAE1, OR13C8, P4HA1, PGM3, PIGB, PRIM2, PTPMT1, RBL2, SARDH, SAT1, SIGLEC1, SLIT2, SMPD1, TAS2R14, TSLP, WNT11
Negative_7561	F3, GCK, GDA, KMO, PAH, ACSM2A, AKR1B1, ALDH3B2, ALG11, ATP6V1F, BMP7, CAMK4, CD8B, CHPT1, CLDN10, CYP3A4, DDHD1, DFFB, DHRS4, GRIN2C, GRIIN2D, HNF1A, ITGA1, KCNQ1, LAMC3, MGAM, MYL2, OR1L3, OR2A42, OR7C1, OR7G1, OR8H2, PDE3A, PECAM1, PFN4, PLCD4, PLXNB2, PNPO, PPP3CB, PPT1, SEMA3F, STX8, TMLHE
Negative_7562	AKT1, ATP5L, CACNA1H, FZD7, IDI1, ITGA10, NFYA, OR2B11, OR4F15, OR4K14, OR6X1, OR9Q1, SULT1E1, TSHR
Negative_7563	DAPK1, DDX50, DEGS1, FARS2, FGD1, FZD7, IFNB1, KIR2DL1, MAP3K8, TFDP1
Negative_7564	CD2, IHH, PDC, RPE, SMS, AARS2, ALDH3A2, ALDH9A1, ANGPL4, ARPC5L, BDH2, HARS2, HTR6, HYAL2, IDH3G, LGMN, MCEE, MGAT4B, MGST1, MOV10L1, MS4A2, NCAM2, NCF2, OR13C3, OR1D2, OR56B4, OR5AR1, PPA1, PTGES2, PYGM, RHOQ, SMARCA5, SPRY2, TAS1R1, TRAF1, TRMT11, UGT2A3, VAV1, ZBTB16, ATP6V1C2
Negative_7565	AGK, BAX, BTC, F3, ME1, TKT, BIRC3, CLDN8, COL4A1, EFNA3, EHHADH, GALNT1, HMOX2, KLRC3, OR4N5, OR5B12, OR5B21, OR8K3, OR9A2, P2RX3, PCK2, PFKM, PRKAR1A, SLC25A6, SMURF1, SUCLA2, TACR3, TP53, ULK3, ATP6V1B1, ATP6V1G3, HSP90AA1, PAFAH1B3
Negative_7566	ANAPC2, CHEK2, CSNK1A1, LDHAL6B, NT5C1A, POLR2G, PPM1B, SLC2A2, ATP6V0D1
Negative_7567	AKRIC3, CACNB2, CCL4, DCTD, EXT1, HHEX, IL23R, OR4D6, OR51B2, RBKS, TUBB1

Negative_7568	ALG10B, CALML3, CD58, CD74, CHSY3, DTX4, EXOC7, GSTA4, OR51B2, PDE4D, PIGO, PPA2, STAT5B, PLA2G12B
Negative_7569	FN1, ID2, IL7, PLG, SMO, ACSS2, APOC3, CD40LG, CYP3A5, DBF4, DDB2, DGK G, GCLC, HAGHL, HES1, INADL, LAMC3, LIMK2, MAP2K5, MAP3K3, NADK, NFKB2, OR10G9, OR10H3, OR13D1, OR4F5, OR52E6, OR52K2, OR8J3, PLA2G2D, PLCE1, SDHB, SPI1, TNFSF8, TP53, WNT8A, ATP6V0A4
Negative_7570	BCR, C1S, CR2, EZR, HGF, IL9, JUN, PC, AKT3, ATP2A2, BDNF, CASK, CCL21, CCNG1, CCR8, CDC27, CLDN2, CSNK1D, CSNK1G1, DDIT3, EP300, EPHB1, GAL K1, HMGS2, IKBKE, IL24, INPP4A, ITGA6, ITPKA, KLRC1, MAD1L1, MAD2L2, MCCC1, NARS2, NFE2L2, OR13F1, OR2T11, OR8H2, OR8J1, PLCB2, RBX1, SPRED1, TAS2R5, TBXA2R, TNFSF9, WASF3, GABARAPL1
Negative_7571	CGA, ID3, SRC, ACVR1C, ANAPC11, BIRC2, CDH5, CHRM3, COL1A1, CXCL3, CYP4A22, DTX3, GOSR2, GPD1L, HRAS, MAPK9, MGAT2, NCF4, NME4, OR4A16, OR8B4, OR9A2, PIGB, PSAT1, RAP1A, RPS6KB1, SETD7, SRGAP2, TALD01, TNFSF11, TSNARE1, TUBB, TUBB2A, ULBP3, VANGL1, VNN1, PNLIPRP1, PPP1R12A, ST6GALNAC3
Negative_7572	B3GALT4, CACNA1D, CHKA, CMBL, CXCL5, CYP3A43, EGFR, HEXB, IL15RA, IRF3, MBL2, NCAM1, OR52M1, OR8H2, P2RX2, VNN1
Negative_7573	HGF, LIF, MTR, ALAS2, ALOX15B, ANAPC2, ASRGL1, CACNA1A, CARS, CD48, DTX1, DUSP8, GALNT8, GPT2, GSK3B, ITCH, KLRD1, MAP3K11, MAPK9, NAGA, NFKBIA, NQO1, OR2H2, OR51I1, OR8D2, OR9G1, PLA1A, PLOD1, RPS6KA4, SESN3, SOCS4, TRHR, UGT2B17, UROS, CACNA2D4
Negative_7574	F2, AMDHD1, ASRGL1, AXIN1, CACNA1E, CDC25B, CYFIP1, DDX52, GRAP2, IL1A, INPP4A, NCK1, NUDT5, OR10AG1, OR52A1, PAFAH2, PIK3C2B, PLXNB3, SC4MOL, ST8SIA1, STX10, TRPC1, VAMP1
Negative_7575	SCD, ALPP, ALPPL2, ATP5J2, C3AR1, CCL5, EPB41L3, GCNT2, GRIA2, IL25, KCNJ11, OR4C11, OR4S2, OR51A4, PPA2, TRIP10, UROD, B4GALNT1, ST6GALNAC4
Negative_7576	DBI, AMY2A, APC2, APOA5, ARPC1A, CASP3, CCKBR, CYSLTR2, GALNT9, GP1BB, HGSNAT, LARS, MAOB, OR10H5, OR1N2, OR52I1, OR5AC2, OR8D1, PGM2, PIGA, POLR2I, PRKAA2, SETDB1, STX8, WNT9B
Negative_7577	CD4, FGB, ACVR2A, B3GALT6, BAIAP2, CASP3, CBR1, CCL20, CCND3, CD274, CDC25C, CLTB, DLL4, EPHB6, GZMA, HTRA2, IL18R1, IL18RAP, LDHC, LTC4S, MGAM, NOTCH1, OR2C3, OR52D1, OR52N1, OR6N1, PAX6, PDGFB, PFAS, PHGDH, PIGQ, PLIN, SHC2
Negative_7578	CCL8, EPB41L1, GNA15, IDI1
Negative_7579	TKT, ADSSL1, AMPD1, APOA5, ARPC1B, OR8K1, PLAU, SSH3, TBXA2R, UMPS, ATP6V0E1, TNFRSF6B
Negative_7580	AMT, DLD, MAX, ACPP, AKR1A1, AKR1B10, B4GALT4, BBOX1, CCL1, CHRM1, COL5A1, CYP21A2, EPHA1, GLYCTK, GNRHR, GPT2, GRIA1, GUCY1B3, HRH1, ICOS, LIPA, MEF2C, MS4A2, NTNG1, OR4F15, OR51E1, OR7G1, OR9A4, PIGV, PLCB4, PNMT, PON2, PPP2R2D, PRODH2, PTPN5, RDH12, SETMAR, SHC2, VDACC2, WNT5B, YWHAE, CSGALNACT1, PLA2G12A
Negative_7581	C4B, GLS, ME1, SCD, BMP5, CAMK2G, CD79B, CDC45L, CXCL1, DBF4, GBA3, GP1BB, HGSNAT, MASP1, NFE2L2, OR1A1, OR51D1, OR51E1, OR5AR1, OR8I2, PECAM1, PGM3, POLR2L, POLR3B, SFRP4, SGPP1, SMAD2, TXNDC12, UROD, HLA-DQA2
Negative_7582	GPI, ME1, ALG6, ALPPL2, ATP6V1H, CCL16, CD79B, CRB3, CYP2J2, DUSP8, ENTDP6, FASLG, GALNT1, GNAI3, GNAS, ITGA4, NANS, OR1A2, OR1E2, OR1J2, OR4F15, OR7G2, POLR2D, SDC4, TAS1R3, WEE1, SERPINF2
Negative_7583	C7, ACP5, AGXT2, ASCC3, ATP6AP1, CD79A, COL5A1, CXCR3, DOLPP1, FUT5, GMPR2, INPP5B, INSR, NTF4, OR2L2, OR51E1, OR6C3, PKM2, PLCB4, PRKAG1, RUVBL1, TLR9, TPI1

Negative_7584	TYR, CDC7, CHPT1, EI24, EXTL1, HMGCR, MCCC2, MKNK1, OR2M3, PIK3R3, PS EN2, STK11, THY1, TRPM5, WIF1, YOD1
Negative_7585	CD2, ME1, MET, PLN, AGRN, C3orf10, CCL5, CD47, CDH3, EPOR, FARS2, FZD4, HDAC2, IDH1, IL15, INPP4A, ITGB3, LDHD, NCOA4, NEFH, NT5E, OR10J5, OR2T12, OR4M1, OR51F1, OR52R1, OR5M3, PDE3B, PERP, PNMT, POLE, PTCH2, RPS6KB2, SIAH1, TRIP10, ATP6V0E1, HLA-DQB1
Negative_7586	CFD, HYI, ME2, AK3L1, B4GALT3, BDH2, C1QB, CER1, CLDN16, COQ5, CPT2, CREB3L4, CXCL9, CYP27A1, DDX54, DGKQ, ENAH, EPB41L3, EPHX1, FADS2, FBXW11, FUT9, G6PC2, GAD1, GCAT, GP1BB, GPX7, HSD3B7, IL1B, MAML2, NRCAM, OR2T34, OR52H1, OR6N2, PDE3A, PPT1, PTK2, PYCR1, RPN2, SOCS3, SYNJ2, TUBA8, UGT2B11, YWHAB
Negative_7587	ACOX1, ACSL6, ARHGEF7, B4GALT6, CHPT1, CREB5, DDIT3, GLI3, HSD3B1, IFT57, IL10RB, MAP2K4, OR1K1, OR4A16, OR4K2, OR5T1, P2RX1, PLCB4, PPA2C, PPP3R1, PRPH, RBPJL, RIPK1, TLR3, UGT2A1, UPP1, WNT11
Negative_7588	TYR, C1GALT1, CDK2, CLDN6, DAAM2, DLL3, EREG, KLRK1, NRAS, OR51L1, PIGP, POLD2
Negative_7589	DDC, FGA, ABL2, ACTN1, CACNG8, CCND1, CD8A, CDK6, CES1, CHDH, CXXC4, CYP26B1, CYP2U1, DDIT4, FGFR2, GFAP, HCLS1, ITGA8, NARS, NTRK2, OR10A2, OR14C36, OR4D1, OR51G2, OR5T1, PIK3R3, PLK1, RPS6KA4, SC5DL, SEMA4G, SHMT1, SLC2A2, STK36, TAS2R14, TAS2R48, TAS2R50, ULBP2, VNN1, CACNA2D4
Negative_7590	CPT1B, DHCR24, JAG2, PDE4A
Negative_7591	GNPDA1, IDI2, LTBR, OR2G6, OR51G2, RPN2
Negative_7592	CFI, FGB, ACADM, AKR1C1, APOE, GSTA1, JAK3, OR10G7, PIAS2, PIP5K1C, PPP3R1, UCK1
Negative_7593	CFD, HGF, ALG10B, CCL7, CCR7, CYP26B1, CYP2C19, ECSIT, GSTT1, IL10RB, ROCK1, SEMA3G
Negative_7594	AK7, F5, SMS, ACSM5, BIRC3, C4BPA, CD244, CHDH, CLDN15, CYP3A5, G6PC2, GAD2, GUCY2D, HLA-DMA, HSD17B7, IL17A, ITGA1, MADCAM1, NCAM2, OR10AG1, OR13C4, OR2L8, OR4N2, PDK1, PNLIP, PTGS1, SPTLC1, TCF7, TPMT, VDAC3
Negative_7595	ADC, C7, ACP6, ARHGEF1, CRLS1, DGKI, DGKZ, FRAT1, GDF6, GUCA1A, IL28B, KIR3DL3, KLRC2, MAPK14, MFNG, MGAT4B, NARS2, NRXN1, OR2AG2, OR6C74, OR6Q1, OR8B4, OR8H2, PDE8B, PLCG2, SDHD, SH3BP2, SOD1, TRAF5, PRICKLE1
Negative_7596	NF1, SDS, APLP1, BHMT, EPB41L2, FGF1, GCDH, HMGCR, ITPKA, LIPT1, MAPK11, NCF4, NEU4, OR10G3, OR1L3, OR6S1, TNFRSF13B
Negative_7597	AACS, AGPAT4, ASS1, B3GALT6, CAV3, CDH5, COL4A1, DVL2, EPHX2, ESAM, ETNK2, GNG13, GUCY2D, IL20, KCNJ11, LEFTY1, MMP14, MYH4, OPLAH, OR1D2, OR2A12, OR2C1, PDE4D, PIGO, PIK3C2G, PNLIP, PNPLA4, PPCDC, PRKACG, PYGB, RXRA, STAT4, STX8, SV2B, TUBAL3, TUBB2A, VEGFB, WARS, WBSCR22, YWHAQ, HSD17B10
Negative_7598	C4B, FGB, PC, PLG, PLN, ABAT, CACNA1H, CD72, GAS1, GUCY2D, KAT2A, MAP2K1, MPP5, NEFL, NTSR1, OR13J1, OR4K15, OR52A1, PIP5K1A, POLR2I, PPP3R2, TP73
Negative_7599	APRT, ARRB1, B4GALT5, CACNA1G, DAAM1, GCNT4, GFPT2, KIR2DL2, LAP3, LRAT, MARS, MCM4, MTHFD2, OR1L8, PPM1D, PPP2R2B, RAP1B, SFRP1, SH2D1B, TAS1R3, VAMP3
Negative_7600	FYN, NPL, SYK, AMD1, CD46, CD79B, CREB3, GRAP2, MAP4K4, MCM6, MGST1, MYL7, OR10A6, OR2D3, OR2T3, OR52L1, OR6C76, PAK2, PARVB, PGAM4, PLOD1, PPP1R3C, PRKAB1, RRM1, SPCS1, ST8SIA5, SUFU, TIRAP

Negative_7601	GBA, GLA, PLG, ADIPOQ, ADORA2B, ALCAM, ALDH1B1, AOX1, ARHGEF6, BET1L, CCR7, COQ6, CREB3L3, CYP2A13, ENTPD8, FMO4, FOXO1, GADD45B, HSD17B4, ICAM3, IFIH1, IFT57, NFX1, OR10A3, OR4D6, OR4M2, OR51A7, PANK3, PPAP2C, PPP5C, PSPH, PTAFR, SDHC, SETD7, SGMS2, SMAD7, TAS2R14, THBS4, TJP1, VAMP1, WASF1, ARHGEF12, HSP90AA1, SERPING1
Negative_7602	TYR, ATP6VOC, BCL2L1, CAMKK1, CD8A, CYP2C8, EP300, KARS, MAOA, MMP1, OR13H1, PNMT, PPM1B, PRKCZ, RETSAT, RGS3, SEMA3G, SLC2A4, SQLE, UGCG
Negative_7603	CKM, JUN, NGF, PTS, ACAT1, ADH1A, AGXT2, ARG2, ATP5G3, BCAR1, DNMT3L, FTMT, GBA3, HES1, HIP1, LAMB4, LIPF, MPST, OR10C1, OR4D5, PHKB, PNPLA4, POLD2, POMC, PPP5C, PSME1, RASGRF1, RBL2, SMAD1, SNAP23, SSH1, TAS2R48, UNC5A
Negative_7604	ATP5A1, PLAT, RARA
Negative_7605	ACSL4, BNIP1, FZD10
Negative_7606	MPZ, ACACA, AKR1C1, AKR1C3, AMPD1, APC2, ATP4A, CCL19, CDC2, CREB3L3, CTNNB1, DDX55, FGF18, GJA1, GP1BB, GRIA2, GUCY2C, IDH3B, IL20RB, INHBA, KARS, MAPT, NCR1, NFKBIE, NT5C1A, NT5C2, NT5M, OR4C16, OR4F4, OR7A17, OR8B4, OR8K3, ORC2L, PIK3C3, PLAUR, PON3, PPP1CB, RAC1, RDH16, RRM2B, SAT2, SEPHS1, XCL1, AASDHPPT, SERPINB5
Negative_7607	CGA, IL2, C4BPA, CCL13, CD44, CYP2C9, DAAM2, DPYD, GALNTL2, GCNT1, HTR7, LAMB1, NCSTN, OR14J1, OR6B2, OXCT2, PDHB, PHKG1, RASGRP3, TAP1, TICAM2
Negative_7608	SMO, CDH5, CLDN19, DHX58, LAMA3, MAOA, SLC12A2, SNAI1, ST3GAL6, THY1
Negative_7609	BAD, DLD, SMS, ACADS, AKR1B10, AOC2, ARHGEF1, ATG12, AXIN2, BMP6, CFT R, CLDN19, CXCL1, DARS2, DKK4, FARP2, GUCY1A2, HEXA, IFNA8, IKBKG, IQGAP2, KIR2DL1, LRP5, NCOR1, OR11H6, OR1D2, OR51A4, OR51A7, PPAT, PPI D, PRKCG, PROS1, RFX5, SEMA4C, SHC1, SHMT1, SLC25A4, SLC25A6, SLC27A5, STX1B, TAS2R5, TJP2, TMLHE, TRAF4, WARS2, YES1, MAPK8IP3
Negative_7610	MPZ, ACAD9, ALDH3A1, ALDOA, AMY2B, CDKN2D, CTBP2, DDX47, EHMT2, GUCA1A, HNF1A, PFN4, SCIN, VAMP1
Negative_7611	CSF2, GADD45G, OGDH, PAPSS1, TBK1, TNFSF4
Negative_7612	GHR, AADAC, ADH1B, GALNTL2, INPP5E, MAP2K5, MPZL1, MYL9, OR6C75, POLA1, PRKCQ, UBE2K
Negative_7613	DUT, FAH, AARS2, ASNS, CAV3, CCR2, CD22, CLTC, COL4A1, COL5A3, CTBS, D EGS1, FBXW11, FLT3, FMO3, MGAT4A, MYD88, MYH11, NME2, NOD1, NRXN3, OR10H3, OR2M4, OR2T34, OR5D16, OR5I1, OR5T1, PDHB, PLA2G1B, PPP3CC, PT PRC, RBL1, RPS6KA1, SC4MOL, SLC27A1, STX6, STX8, TICAM2, TNFSF18, TYK2, VKORC1
Negative_7614	C4B, GP9, ADCY2, ARAF, CLDN10, CSNK1A1, CXCL2, DHCR24, ECSIT, GLI1, I L1RAP, LEPR, MTHFS, NRXN3, OR2A5, OR2G6, OR2L8, OR3A3, OR8H1, PDGFD, PLA2G4A, POLR2J, PPP2R5C, RPS6, RRAS, SELL, SOAT2, TAS2R50
Negative_7615	KIT, ADIPOQ, ARSE, BIRC2, CNTN1, CYP2A13, CYP2S1, DTX4, FGF13, GBA3, GNAI2, HMGCS1, HTR7, METTL6, NME2, NRCAM, OR2L13, OR4D11, RAC1, SETD8, UPP1, VAV3, XYLT2, MAPK8IP1
Negative_7616	AK1, C7, C8B, DBI, MVK, ACSM5, ALOX15, ATP6AP1, CCL20, CCNG1, CNTNAP2, COMP, CXCR5, CYP2S1, DHX58, EDA2R, HSP90B1, IFNA8, IRAK4, LFNG, MKNK2, NEU3, NOTCH3, OR1A1, OR1S2, OR4D6, PRKAR2A, PRKG2, PSENEN, SNAI1, SRGAP1, SRGAP2, WNT8A, YKT6, PAFAH1B3
Negative_7617	ID2, UBB, ACYP1, ALG9, BBOX1, CCND1, CSNK1D, CSNK2A1, DIAPH1, EPB41L1, EPRS, OR1D5, SEMA4C, TGFB3, PAFAH1B3
Negative_7618	ADAM17, CARS2, DLAT, DLL4, GDF5, MCCC2, NFATC4, NT5C1A, OR2A25, OR2D3, PDE8B, SEMA4C, SLIT2, TGFB3



Negative_7619	AK3, DHH, TFG, ADCY9, ALDH1B1, ATP5I, ATP6V0B, BMP2, CCL26, CXCL16, DARS2, DGKH, ENO1, ETNK2, FMO5, HEMK1, LAMB4, LAP3, LTC4S, MGAT4B, NFKBIE, NFYB, NKD1, OR10G2, OR10H5, OR10T2, OR13J1, OR2Y1, OR5AP2, OR5AR1, OR8K3, PDE4C, PDE9A, PLCD3, PLXNB1, POLE4, POLR2A, POLR2H, PRKAB2, PTCRA, SESN1, SHISA5, SOCS3, THBS3, TKTL1, ATP6V1G2, HLA-DRB3
Negative_7620	AKR1C3, CYP2U1, DFFB, DKK2, EPB41L3, FGF9, GNAI2, GSTO1, HIBADH, HMGCR, HMGCS2, IDI2, NADSYN1, OR2W1, PEMT, PPP2R5B, RCHY1, TLR9, TSTA3
Negative_7621	IL4, ME2, ACSM1, B3GAT3, CCL15, FECH, LEPR, MNX1, OR56B4, OR6K3, PPA2, PRKCA, PRKG1, QARS, STAT3, WASL
Negative_7622	GBA, ACTN2, ADCY4, B3GAT3, CNTNAP2, GNAI2, KLRC2, MGAT4A, MYH11, NRCAM, OR2Z1, OR4F15, RFXANK, SH2D1A, UPP2
Negative_7623	DDO, TNC, ADRB2, AGMAT, CASP8, CDC45L, CHRM5, CSF1R, DGAT2L4, DTX4, FGF7, GSTM4, GUK1, ITGA10, LILRB3, LTBP1, MAN1A2, MGST2, NRXN2, OR10R2, OR5H6, PDHB, POLA1, PROC, PTAFR, PTGDS, RBPJL, SDHD, SPTAN1, WNT2, SUV420H1
Negative_7624	C4B, LAT, AKR1C3, AKR1C4, ATP4A, ATP6V1F, CACNA1I, CCR2, CES2, CFLAR, CYP3A5, DUSP10, DUSP7, FZD10, HES1, IL28RA, IL6ST, MAP3K14, MASP2, MMP2, NRP1, OR6A2, OR7G2, OXCT1, PDE6H, PI4KA, PIGB, PLA2G10, PRKCI, RFX5, RUNX1T1, XYLT2, ZIC2, TNFRSF10A
Negative_7625	SPN, ACY1, CYP1B1, GMPR2, ITGA3, OR2B11, OR6Y1, PNLIPRP2, TNFRSF10A
Negative_7626	ATM, PVR, TKT, ABI2, ADIPOR1, ALDH3A1, AOX1, ATP5F1, CADM3, CARS, CSDA, CX3CR1, FDFT1, FGD3, FTCD, INMT, ITGA2B, NCK2, NME7, NUMB, OR2A42, PHKA2, PLOD2, PPP2R5D, SCLY, SDC1, SLC27A4, SOAT2, TYROBP, ATP6VOD2
Negative_7627	EPHB3, HTR5A, PDE4D, PECAM1
Negative_7628	CACNG3, DTX1, ERO1L, HAGH, IAPP, OR52K1, OR6Y1, PRKCQ, UGT1A10, SERPING1
Negative_7629	CYFIP2, DLST, FTH1, GPT2, NFKBIE, NME6, PCK2, PFN2, PIK3R5, SMAD5
Negative_7630	CBS, GHR, SRF, AGPAT1, AGXT2, AKR1D1, ARG1, C1QB, CCL26, CHEK1, CHRM3, CYP4F2, DVL1, ERBB2, ESAM, FGF17, GADD45B, ITPKB, LALBA, LIFR, MAML1, MAN1A2, MDM4, MGAT2, MGST1, OGDHL, OR10R2, OR51D1, OR6M1, PTGS2, PTK2B, RALBP1, RFXANK, SV2C, UNC5B, CSNK1A1L, KIR2DL5A
Negative_7631	IL6, ACTN4, APOA1, CD14, CD19, CDC26, CRLF2, CYSLTR1, FCER1G, GNPDA1, MMP9, NSDHL, OR2M3, PDE8A, PDXP, PGS1, RBX1, YARS2
Negative_7632	GP5, ACACA, ACP1, ADIPOQ, ANAPC10, BCL10, CALML5, CCR9, CSAD, DIAPH1, FZD6, FZR1, GNRH2, ITGA3, LFNG, MCM3, NAT1, NAT5, NRCAM, OR2A4, OR2T8, OR7C1, P2RX2, POLR2K, PON2, PTPRF, PTPRM, RGS3, RRM2, SORBS1, TUBA8, WASF3
Negative_7633	SRM, STS, ACOX1, ANPEP, ASNS, BMP8A, CFLAR, CLDN20, FASLG, GP1BA, MAN1B1, MAP2K2, MAP2K3, NLGN1, NNMT, NT5C, OR1C1, PAX4, PCYT2, PGS1, TAS2R50, SERPINB5
Negative_7634	GSR, IRF9, OR4F15
Negative_7635	DDC, GGH, AKR1C1, CCNG1, DDB2, GCLC, ITGA2, KLRC2, NUDT12, PPAP2A, ROCK2, TOLLIP, WNT10A
Negative_7636	GP9, SMS, ATP5G1, BCKDHB, CAMK2D, CASK, CHRNA7, CTBP2, CXCR6, DNMT1, ENO2, ENPP1, IL20, KLK3, NAGS, NAT1, NFYA, NKX6-1, OR2T8, OR6N2, PDXK, PHKG1, PLXNA1, PTPN1, SUV420H1
Negative_7637	TAT, ADORA2A, ARHGEF7, ATF2, CASP9, CNTF, CREB3L3, CYCS, CYP3A5, FAR2, FZD5, GALNT7, GMPR, GNPAT, HNF4G, LTBP1, MDM4, MTMR6, OR2T8, OR51I1, PFKM, PIK3C2G, PLA2G4A, SESN2, SLC27A1, SMPD3, SPRY4, ST3GAL5, TAS2R8, TUBA1C, PRICKLE1
Negative_7638	DHH, MAX, ALOX12, APLP1, CACNG1, CD28, CTSS, DHDH, DPYS, ECHS1, FMO3, GCNT1, GGPS1, HIBCH, MCEE, MDH1, MGAT1, NEU3, NEUROG3, OR10AG1, OR4K14, OR7G2, P4HA2, RAP1A, SLC27A4, TYRP1

Negative_7639	DBI, LEP, CD274, CYP17A1, GSTK1, IMPA2, ITPA, MAD1L1, NT5C, OR4M1, PIGO, PIGU, POLD3, POLE, PSAT1, PTSS2, RDH10, TJP3
Negative_7640	C3, INS, LEP, ABI2, ACSL1, ACSS3, ADRA1D, ALOX15, ATP6V1H, BST1, BUB3, CACNG4, CARD11, CD27, CD99, CYP2J2, DDX41, GSTZ1, IFNA10, IFNK, JAM2, MAP3K12, MAPK10, MAPK9, NEGR1, NRG1, OR52B6, ORC2L, P2RX3, PEMT, PP2R2A, PPP3R2, PSME3, PTPN6, RFNG, SETD7, ST8SIA1, STX10, TNFRSF8, TSC2, UBE2L6, ZMAT3, KIR2DL5A, SUV420H2
Negative_7641	AMT, HGF, LCT, PGD, SMO, SMS, AKR1B10, ALDOA, ALOX12, AREG, ATG12, CACNA1F, COL3A1, DUSP1, GALC, GALNT13, GSTA4, IDH2, NOD1, NOTCH3, NR1D1, OR10A2, OR13C9, OR2D3, OR52L1, OR5AN1, P2RX1, PDCD1, PDHA1, PIPOX, PLA2G5, PLCB4, PPM1A, RALB, RPS6, SELE, SEMA3A, SH2D2A, TACR2, TCF7L1, TUBA1A, TUBB2A, VAMP1, MAPKAPK3, PAFAH1B2
Negative_7642	ALG8, APOA1, CTPS, FMO4, HIF1A, IFNW1, MFNG, POLR3A, SPTAN1, TAS2R7, ZIC2
Negative_7643	CAD, LCK, ASNS, CD70, HCCS, MARS
Negative_7644	KHK, ACSL3, ADAM10, AGPAT4, ALG13, ANAPC2, ARPC3, BCAT1, CALML6, CCNH, CDC14A, COL6A1, CSNK1G2, CYP1A2, DHCR24, DUSP7, FLT3LG, GAPDH, GCNT2, HLA-F, IFT57, INPP4B, ITPKB, LRDD, MAP3K1, OR10A6, OR1B1, OR1F1, OR2M2, PDE4B, PLCG1, POLA1, POLD3, PRKAG1, PSAT1, PVRL4, TPK1
Negative_7645	F11, LCT, ADCY1, B3GALT1, CCNB1, EDAR, FARSB, GAD2, HIBCH, HMOX2, INPPL1, KCNQ1, KIR2DL4, NCR2, PDE4D, SELP, SEMA3F, SSX2IP, UCK2
Negative_7646	ADC, ITK, PGP, APH1A, B4GALT4, BAI1, C4BPB, CDC27, CNTN2, CXCL2, DIAPH2, ERO1L, GNB1, HLCS, IL20RB, ITGB6, LARS2, OR4D9, PAX4, PGAM1, PLXNB1, POLR3A, PRKG2, RERE, SOCS5, ULBP3, C1GALT1C1, PNLIPRP1
Negative_7647	CGN, APBB1, ATP5L, FPGS, HSD11B2, NUDT2, OR51G2, OR51Q1, SHMT1, SMC1B, TYMS
Negative_7648	ITGA11, OR51M1, SKIV2L2
Negative_7649	APP, GP6, ACP6, B3GNT2, BUB3, DHDDS, ECSIT, F13A1, FGFR1, FMO3, FOSL1, GUCY2D, HRH2, IL2RA, KLKB1, MYH15, MYH4, MYLK3, OR11A1, OR13C8, OR13J1, OR1L3, OR4S2, OR51E2, OR52K2, OR5A1, OR5K2, PCK2, PHKA1, PIAS3, PLD2, POLR2L, PRKAB2, PRSS3, PTGES2, RXRB, SCIN, SMAD5, SPRED1, SULT1A2, SYNJ1, VAMP2, VASP
Negative_7650	AGL, IL8, CACNA1C, GSTM4, HIBADH, HSD17B3, IARS2, NFATC4, NGEF, OR2Z1, OR8I2, PAK1, PDE1A, PDE3B, RPN2, SDC3, TAS1R3, TOMM40, TYRP1, VEGFC, WWP1
Negative_7651	CGN, MIF, AGRP, APLP1, APRT, CACNG6, CHIT1, CYP2A7, FM01, HTR5A, MAT1A, OR10S1, SMAD7, TIAM2
Negative_7652	EBP, IVD, ARRB1, CLTCL1, EPHA4, FLT4, SESN1, SLIT1, SUV39H1, TNFRSF6B
Negative_7653	C4B, F3, GLA, IL7, ATG3, C7orf16, CACNG1, CASK, CCL2, CLDN16, DTX3, EXT2, FGF3, GLYCK, GNAT3, GRHPR, MTHFS, MTMR2, NME2, NODAL, NSD1, OR10H3, OR13C4, OR1J1, OR5B12, OR5V1, OR8A1, PARD6B, PDE8B, PLA2G5, POLR2C, PON1, RAP1A, TBL1XR1, VEGFB, HSD17B10
Negative_7654	CBS, CHRM2, ENTPD4, ESAM, FCGR3B, GLDC, MBL2, MKNK2, OR11G2, OR2Y1, PNPLA3, TJP3, VDAC2, ATP6V1C2
Negative_7655	NNT, OTC, HYAL2, KLRK1, PARVB, PFKM, PHKA2, STX5, TGFA, VTI1A, ATP6V0A1
Negative_7656	CR1, GBA, HK3, MVK, OSM, AKR1C1, APOE, AREG, ARPC3, ATP6V1D, CCR10, CD55, CD74, CYP3A5, DKK1, DUSP2, ENTPD4, FGD1, GALNT5, IFNA10, IGF1R, IGF2, IGF3, IL17RB, MAFA, MGAM, MGAT3, MKNK1, MMP14, NODAL, OR4N5, OR56A3, PANK4, PDE3A, PPAP2C, PPP1R1A, PPP2R5D, PTPN7, RAPGEF2, RRAS, SMARCA2, TGFA, THBS4, TSHR, TUBB2C, ZBTB16

Negative_7657	BTD, IL3, LTB, SFN, ALOX15B, ATP2A3, ATP6V0B, CD40LG, CNGB1, DDOST, D USP6, FZD1, GARS, GLDC, HNF4G, KIR2DL3, KLRC1, MCM5, MICA, MRAS, MTHF D1L, NCKAP1, OR56A3, PDIA4, PPP2R5C, PTPN1, SEMA3G, SPTAN1, STX2, TL R4, VDAC1, XIAP
Negative_7658	GLA, ASMT, CER1, CYP3A4, CYSLTR2, ENO3, EPB41L1, ITGAV, MGLL, SV2B, V KORC1
Negative_7659	FES, TNN, ACADL, AXIN2, CADM3, CDH4, COQ7, CSNK1G2, DAPK3, DTX4, DVL3 , FRAP1, FZD5, HSPB1, IL12A, ITGA3, MGAT1, MTFMT, NCF2, NQO1, NT5M, OR 10A2, OR14I1, OR1D2, OR4D6, OR51B2, OR51L1, OR5AR1, PDE10A, PHKA2, P LA2G2D, POLR2C, RAPGEF4, SEMA7A, TAS1R1, TSTA3, UNC5D
Negative_7660	AK1, GCK, ILK, ME1, NPL, SMS, ALDH7A1, ARNT, B4GALT4, BAAT, CACNB2, CC R1, CD3E, CD59, COL3A1, CPT2, CYP21A2, DGKB, GGT7, HSPB1, IL12RB1, LT C4S, NGEF, NOTCH1, NT5C1A, OR1N2, OR2V2, OR51A2, PPCDC, PRKAR1B, PTG ES, PVRL4, TJP3, TRIP10, TSC2, YWHAB, ATP6V1E2
Negative_7661	CKM, MOS, OSM, AGPAT1, ATN1, B3GNT4, B4GALT3, CADM3, CSF3, DAAM2, EDN RA, FABP3, FBP1, GGPS1, GJD2, GNRHR, IL8RA, ITGA2B, MAN1A2, OR10G2, O R51A2, OR5I1, OR6B2, OR6K2, OR8D1, OR8H1, OR9K2, PANK4, PFKFB3, PGM3 , PRKAB2, PTGDS, SESN2, SFRP5, SMAD7, SOX17, SSX2IP, TXNDC12, UBA1, A RHGEF12
Negative_7662	GLA, GLS, LCK, ACVR1C, ADCY2, ADSS, AKR1B10, ATP5B, BAIAP2, CD47, CDK 4, CXCR5, CYP26B1, DDIT4, DDOST, DTX2, FGF13, GSTT1, IFNGR1, IL29, IL 6R, ITGA5, ITGA8, LEFTY1, MMP1, MTFMT, NANS, NEU1, NTNG1, ODC1, OR12D 3, OR51T1, OR5P2, PARD3, PIGM, PROC, RBL2, RIPK1, SOD1, STX12, TDO2, T NFSF4
Negative_7663	DHH, ACY3, ADRA1B, AGRN, AMY2B, APLP1, ATG7, CCKAR, CCR5, CPT1A, CXXC 4, CYP2F1, DLL1, DUSP3, E2F2, FUT2, GALNT10, GSTM3, HNF1B, IL13RA1, I L22RA1, IL2RA, OGDHL, OR13C2, OR1J2, OR4A16, OR4K5, OR52E2, PIP4K2A , PIP5K1A, PIP5K1B, PLXNC1, PPM1D, PRNP, RAC3, RFNG, SDHA, SEMA4A, SK P1
Negative_7664	TNN, BMPR2, CYP2B6, DOT1L, EVI1, FZD5, GALNS, IDI2, LAMB1, MAPT, MTMR 6, NAT1, OR4F4, PDGFA, SLC2A4, TCF7L1
Negative_7665	AR, F7, IVD, MET, ACVR1B, ACVRL1, AOC2, APOA1, ATP50, B3GAT1, B3GAT2, CACNG3, CD27, CEBPA, CSF3R, DPAGT1, EREG, FGD3, FGF8, GALNTL1, GATM, GBA3, GCNT4, HLA- DOA, HTR7, ITGA5, JAK1, MS4A2, NUDT5, OR2M2, OR8B8, OR8K3, PAK6, PIGV , PIGW, PLXNB2, PMVK, POLR3D, RPN2, SETD1B, TACR2, TBXA2R, TDO2, TFDP 1, TGFB1, TIAM2, TNFSF10, TOMM40L
Negative_7666	CRH, ADIPOQ, ADRB1, CCL8, DTYMK, EFNA1, FCGR3B, FGF10, FOXA2, HAP1, H IBCH, HMOX2, HRAS, MAT1A, NCKAP1L, OCRL, OR2Z1, OR5AP2, PFN1, PFN4, P IP5K1B, PLOD1, POLR2I, PPM1D, PSEN1, PSEN2, RASGRP1, RND1, SDHA, SES N1, SHMT2, SPCS1, WNT16
Negative_7667	GPI, MVD, NLK, NPL, ADIPOR2, AGPAT4, ALDOA, C1QA, CDC14A, CHEK2, CSNK 1E, EFN2, GALNT1, HSD3B2, IL13, ITGA11, MGST2, NTF3, OR13D1, OR9A2, PISD, PPCS, PRKY, PTPRZ1, RAP1A, SPP1, TCF7L1, TYMP, UGCGL2, ATP6VOA 4, HLA-DPB1
Negative_7668	C1S, JUP, MSN, AADAC, ARPC2, CCL21, CLDN14, CXCL6, DARS, DTX3L, EFNA2 , ENTPD6, FARS2, FECH, GNAI1, GRIA2, HARS2, IL17A, IMPDH2, INADL, MAG I2, MAN1A1, MAPK10, MTHFS, NANP, NRG4, OR10C1, OR2L8, P2RX4, PARVB, P ER1, PHKA2, PPAP2B, PPP2R2D, RDH16, RERE, RHEB, SLC2A1, SOCS1, TNFSF 14, TPM3, UNC5B, ST6GALNAC4, TNFRSF6B
Negative_7669	TXK, TYR, ADIPOR2, CREB3L1, CX3CR1, CYP27A1, EFN1, HNF4A, KIR2DS4, MGST1, OR2F2, PANK3, PDGFD, PLCD4, PLCZ1, PLOD1, PPP1R1A, RFX5, SLC2 A2, SV2B, UAP1, UGT2B11, HLA-DRB3

Negative_7670	C4B, DBI, GSS, MVD, OSM, PML, ACOX3, ALDH3A2, ANPEP, APH1A, BAIAP2, BLNK, BLVRA, CX3CR1, DDX55, DGKH, F11R, FGF18, FZD3, HSD3B1, IFNA17, ITGB7, MAP3K13, MEF2C, MYH7, NRG1, OR51G1, OR9Q1, PLD1, PLXNB3, POLR1C, POLR3G, PPA2, PPAP2C, PTGS1, SEMA4D, SETD8, SMAD3, TPM3, WNT8B, YES1, ZBTB16
Negative_7671	STS, ACYP1, AKR1C1, CTNND1, MAP2K3, MCCC1, NME7, OR5AU1, PDE7A, POMC, RIPK1, RPS6KA1, WEE1
Negative_7672	FES, LPO, ADH1B, ALDH5A1, ATG7, CCL3, CD34, CD59, CNTNAP2, CYCS, IFNA4, NRXN3, NUMBL, OR2C3, OR6K3, OR9Q1, P4HA2, PAK2, PDGFB, PGK2, PHPT1, PON3, SSX2IP, ST3GAL5, TLR2, VARS, VEGFC, WHSC1
Negative_7673	ID3, ID4, ALDH3A2, ARHGEF4, CDC20, CHST13, CTF1, CTNNA1, DCXR, DKK2, GLO1, HNF4G, IFNA17, MAP4K4, MYD88, NAE1, OR5AR1, PAX4, PECAM1, PLXNC1, PMM1, PRODH2, PTGDS, PTGES2, SEMA4G, SMC1A, SOAT2, TM7SF2, TRMT1, WHSC1, MAP3K7IP1
Negative_7674	DCC, GBA, KHK, TH, ACSM1, ALDH3B2, AMY2B, B3GALT4, BTRC, C3AR1, CD86, CDH3, CLDN19, CLDN6, DPM2, EGLN3, FGD3, FLAD1, GLI3, GYS1, HSD17B1, IFNAR2, ISYNA1, LMO7, MAPK9, NCF1, OR1M1, OR4L1, OR51A7, OR5K1, OR5K2, PARD6G, PPP1R3B, PRKAG1, PRKX, PSENN, PTPN1, RENBP, SEPHS1, SORD, TAS2R49, TBL1XR1, TGFB3, ULK3, CACNA2D1
Negative_7675	AK3, DUT, TNN, ABCC8, ALOX12B, ARHGEF2, ATP6V1F, CADM3, CD55, CFL2, CFTR, CSNK1G3, EPHA7, FABP1, FZD8, GNG13, GSTA5, GSTO1, GZMB, HLA-DRA, HMOX2, ITGB5, KLK3, KLRC1, MAP3K6, METTL6, OR13H1, OR51E2, OR5I1, OR6C70, PISD, PLA2G5, PLXNB1, POLR3H, PRKCE, SDHB, SOX17, SSH1, STAM, TAS2R7, TAS2R8, TLR9, SERPIND1, SERPINE1
Negative_7676	CKM, IL7, MAG, ACP, ACVR1B, AGMAT, AKR1C2, B4GALT1, BCL10, BET1, CDC2, CNDP1, CXCL11, DDX19A, EGLN3, EPRS, GBE1, GYS1, IFNGR1, IMPA2, KDSR, LLGL1, MYH1, NFX1, NPR1, NTRK2, OR10H1, OR52K1, PIGL, PIK3R5, POLR1D, PRKAA2, RALGDS, SEMA3D, SMAD2, SOAT1, SSH3, TCF7, TIRAP, ATP6VOD2
Negative_7677	CBS, BMP7, INPP5E, LIPG, OR10A4, PI4KB
Negative_7678	BTK, SRM, ACPT, ADIPOR2, AKR1C3, ALDH1A1, ALDH1L1, ALG13, ARSE, CACNG7, EFNA1, ENTPD7, FGF9, GALK1, GALNT3, GCNT3, GLDC, MGST1, MTHFD2, MYH8, NCAM2, NOD1, OR2H2, OR2T4, OR51B4, OR9A4, PAPSS2, PARD6A, PDCD1, PIGK, POLR1E, RFXAP, SGPP1, SULT1A2, TSNARE1, TSTA3, WWP2
Negative_7679	RDX, BMP8B, CCL24, CCL7, CXCR3, EPHA2, FTH1, GGT5, IL17RB, NMNAT2, OR4C16, PHKG2, PHPT1, STT3B, UCK1, ATP6V1B1
Negative_7680	GHR, HGF, APOA1, BTRC, CRB3, EPHA1, FGF3, MDM2, NAGLU, NEUROD1, PLCE1, PNPLA3, SESN3, SLC27A5, TFPI, TOMM40, TP73, WARS, ST6GALNAC5
Negative_7681	CAD, KIT, CASP10, CHST12, CHST13, CRLS1, CYP3A4, G6PC, GSTA5, HPSE2, LEPR, MYH11, NCSTN, OR52R1, P2RX2, PLA2G4A, QPRT, SEMA4G, SESN3, SLIT1, SPRED1, UXS1, VDAC2, WASF3, HLA-DPB1, TNFRSF1B
Negative_7682	MIF, OAT, ADCY4, ADORA2A, AHCY, ARPC5, B3GALT5, C4BPB, CACNA1I, CMBL, CPT1A, CTNNA2, ENPP2, FGFR4, GLYCK, GPX7, GRPR, IL20RA, IMPA2, INADL, ITGB4, LTBR, MARS, NME4, NME6, PDGFD, PRKAB2, PRKX, PTPRF, RAD51, RFWD2, RIPK1, STX18, VAV3, YWHAG, ATP6V1E1, CACNA2D2
Negative_7683	ARHGAP5, CHAT, FZD5, HSD17B3
Negative_7684	ABLIM2, ACMSD, CDC2, CPT1A, CSNK1G1, CSNK2A1, CXCL10, EFNA4, EPHA7, FZD5, GALNT7, GCNT4, GLS2, GOSR2, GPT2, GUCA1C, MAP3K14, NKX6-1, NRXN1, PCCB, PLXNA1, PRKG2, RDH8, RPS6, SLC33A1, SOS2, TPMT, TRAF3, UGCGL1, UGT1A10, ULBP2, UMPS, WNT5A, SERPING1
Negative_7685	MYC, SRM, ABL1, ARSD, FLAD1, GANC, IL23R, MGAT3, OR51A2, PRKCE, RBKS, ST6GALNAC1, TNFRSF1A
Negative_7686	CBLB, GART, GGT5, GRPR, IRAK1, LDHA, NAT2, OR10P1, PPP2R5C, PTPN5, TGFBI, TSTA3, PAFAH1B3

Negative_7687	CAD, OTC, ACVR2A, ADAM10, ALG5, CACNA1H, CCNB2, CDC25B, CDKN1A, CLDN4, CYP11A1, CYP2C18, DFFB, GSTZ1, GUCA1B, LLGL2, LYZL1, NFATC2, NMNAT3, NPAS2, NTRK1, OR10X1, OR13C8, OR2F2, OR2T11, OR51Q1, PIGT, PLCE1, PPAP2A, PPP2R2D, SEMA4A, SOCS7, UCKL1
Negative_7688	MOS, ACP2, CDKN2B, FGF6, SHMT2
Negative_7689	FGF7, OR2AG2, OR51Q1
Negative_7690	APP, C8B, FAH, ID2, PML, SRC, ABLIM1, AGPAT3, ALDH6A1, ASNS, CDH2, COQ5, CYCS, DCTD, DFFA, DNMT1, DVL2, EIF4B, EPRS, GGCX, GNAZ, GNMT, IRS2, LCM2, NEUROD1, NFATC2, OCRL, OR2T12, OR51G2, OR7G3, OR9Q2, PAX4, PI3K, PLA2G2F, PLCB2, PRKG2, PTPRZ1, SFRP2, SLC2A1, STK3, TLN1, TNXB, WNT2B
Negative_7691	CP, AADAC, ARPC1B, CASK, CCL17, EGLN3, ENTPD2, GADD45B, HLA-F, IL20RB, MMP9, NKD1, OR6C4, PIGT, RPN1, SELP, TGDS, TSC1
Negative_7692	DBI, ILK, JUP, AHCYL2, ATP5G3, CACNA1E, CHEK1, DBF4, DDX47, ENPP3, ERBB3, GALNT7, GRIA2, GYS1, INSR, MAML3, MPZL1, MTMR6, NRXN1, NTF4, OR5B17, OR6S1, PIGW, PRKAR1B, RUNX1, SLC27A5, TRPC1, VDAC3, WNT8B, ZFYVE16
Negative_7693	JUN, PTS, SMO, TAT, ACAD9, ALCY, CDC16, COL4A6, FADS2, GALC, GAMT, GNM1, IL11, INPP5E, ITGB7, LTB4R2, NT5C3, OR10Z1, OR4F17, PAPSS1, PDE11A, PIGN, PIGP, PLOD3, PRKACB, PRSS1, TNFRSF6B
Negative_7694	APC2, BET1, CCR8, DGKE, FGF19, MYH10, NFKB2, POLR2D, SDHA, SEMA3E
Negative_7695	ADH4, ARHGEF2, ARSE, ATP5D, BIRC2, CAMKK1, CD226, FUT3, GNPAT, HHEX, ITGB8, KIR2DL4, LRAT, LRDD, MYD88, NCOR1, OR1E1, OR5M9, OR7C1, OXCT2, PDE6D, PIK3C2G, PPP2R5B, SC5DL, SEMA3A, SLC9A1, STX18, TNFSF10, USE1
Negative_7696	ADC, BTC, SPN, ADSSL1, APOE, ARPC5, CASP10, CBL, CCR2, CNTNAP1, CRB3, DAXX, DHDDS, ECSIT, EFN1, EIF4B, ENTPD5, EPOR, FARS2, FBP1, GNPAT, GRIN2C, HAGH, IDH2, IL21, IRAK4, KIR2DS5, MCAT, MCCC2, OR1L3, OR2A42, OR2M5, OR4A5, OR51Q1, OR5P3, OR5T1, P2RX4, PDGFRB, PNPLA4, RFNG, SEL1, SMARCA2, ST3GAL4, TUBA1A, VEGFA, TNFRSF12A
Negative_7697	APPL1, ATP5J, COX15, GZMB, NT5C1B, OR56A1, PRKCI, TACR3, TUBB2B
Negative_7698	BCR, RPE, ACSS1, ACVRL1, CACNA1A, CACNA1G, CEBPA, CFLAR, CLDN17, CSNK2A1, CXCL5, CYP11B2, CYP2C8, EPB41, FGF18, GALT, HCCS, HIP1, IGF1R, IL12RB1, IL15RA, MAPK1, MLYCD, NCKAP1L, OR7C1, OR8G1, PPA2, RBX1, SEDD1, SLC25A4, SMARCA5, SOAT1, SRGAP2, TAS2R4, TIAM1, TNFRSF8, TPK1, CSGALNACT2, PAFAH1B2, PDCD1LG2
Negative_7699	EBP, ACSM2A, APAF1, DLL4, IFNAR2, ITPA, MGAT4A, PDE7A, SORBS1, MAPK8IP3
Negative_7700	SHH, ADCY4, AKR1A1, CCL19, OR5AU1
Negative_7701	C3AR1, CACNA1G, DHX58, GLO1, HNF1B, OR5D14, ROBO1
Negative_7702	APP, AACS, CBR3, GARS, HTR4, IL15RA, IMPA1, ITPKB, KLRK1, LIPG, MAFA, MCEE, OR51F2, RBX1, SEMA4D, SUCLA2, SV2A
Negative_7703	BUB3, CDK2, CYBB, FGF23, GSTM2, JUND, LAMC3, NMNAT1, PTCH2, RHOQ, SGPAP2, SMC1B, SERPINC1
Negative_7704	EPO, LCT, UBC, AKT2, B3GNT5, CLDN20, GRHR, INPP4B, JAM2, MAFA, MAP2K5, MAP2K6, NTF4, NUDT12, OR2L13, PLOD2, QARS, RARS2, VDAC3, PLA2G12A
Negative_7705	F8, IL3, TK2, AARS, AGRN, ALOX12B, ATP5D, CD55, CD79B, CDKN2D, DUSP14, EPHA1, GADD45B, IGSF5, KDSR, LCP2, LHCGR, MYH10, NCR3, NLGN1, OR1B1, OR1L8, OR2AG2, PCK2, PPP2R2D, PRKACG, PTGS1, SMAD5, THTPA, WNT5A, WNT5B, PRICKLE1
Negative_7706	FGF17, HAGHL, OR2B6, OR2T6, YWHAQ
Negative_7707	BTC, ME2, MPL, SCD, ADCY8, CACNA1G, CACNA1S, CHAD, CYP2S1, DCTN1, DPYS, EXT2, FZD3, GDE1, GPPT2, HTR2A, KITLG, LDHB, OR2M3, OR6Y1, PARD6G, STAT4, THBS2, TUBB3, WEE1, WNT7B, YWHAH, ST6GALNAC4

Negative_7708	GSR, MUT, AASDH, APH1A, B4GALT4, BDKRB1, BHMT, CALML3, CAMK4, CASP7, CHST11, COL1A1, DRD1, DRD5, ESPL1, EXTL2, GNRH1, GSTO1, IDUA, IQGAP1, ITGAV, LAMC3, LGMN, LIFR, NAMPT, NRP1, OR13C8, OR2H2, OR4D1, OR52I2, ORC3L, PAX6, PDGFRB, PSPH, PTK2, RDH5, SEMA4G, SKP2, SLC2A2, SMAD2, ST6GAL1, TOLLIP
Negative_7709	BIRC3, CD99, CLTCL1, DDOST, DFFA, DGKI, E2F3, EDNRB, ENPP3, GGPS1, HDAC2, IL11, IL28B, INHBC, IQGAP3, ITGA3, PHPT1, PLXNA3, POLR3A, SEMA4B, TUBB3, TYMS, TNFRSF13C
Negative_7710	ACP5, ATP50, C5AR1, CD74, CDKN2B, CHRNA7, CXCL10, OR2A2, OR5H2, PIP4K2C, PLIN, PNPT1, SOX17
Negative_7711	CCR5, HAP1, ITGB8, OXCT2, PAX6
Negative_7712	ACAA1, ACACA, ANAPC4, APOE, ATF2, BACE2, CYP2F1, ELK1, GCAT, HLA-DOB, ITGB5, LAP3, MAGI1, MITF, NCR3, OR52W1, POLR1B, PVRL4, STK4, THY1, TNXB, TSNARE1, WASL, HLA-DQB1
Negative_7713	C7, CD4, GK, ATN1, CD28, CFL2, ETNK1, FCGR3B, GTSE1, IGF1, LEFTY2, NARS, OR4C11, OR5L2, PIP4K2A, PLAT, PPAP2A, PTK2, TNFSF18, VDAC3, YWHAH
Negative_7714	ME2, DNMT3L, ITGA3, NPR1, PRKCG
Negative_7715	DCC, FYN, GPT, PXN, SYK, ATP2A2, CARS, CCR4, CTNNA3, DGUOK, DKK4, E2F3, EFNA1, GGCX, HSD17B4, HTR7, IL17RB, MLYCD, NEU3, OR10J3, OR4D1, OR4K15, PDE9A, PDXK, PFKFB3, PGAM2, PIAS4, PIGQ, PIK3CA, PLA2G2F, PPP3C, RPS6KA1, SETD7, STK4, TKTL2, TUBB2C, WASF3, WNT3, ZFYVE9
Negative_7716	ACVR1C, CDC26, CLDN22, CYP2A6, GNA12, GNB1, HAO2, IL22, INMT, KDSR, NSD1, P2RX7, RBL2, SARS, SOCS5, TAS2R13, WWP2, XYLT2
Negative_7717	DBH, F12, FOS, ACP1, AKR1C2, ATG3, ATP6V1D, BCAR1, CAMKK2, DRD1, FLOT1, GALT, GSTA3, ICOS, IMPDH1, INHBB, OR6C3, OXCT2, PARD6G, PDE11A, PIK3C2B, PLD2, PPP2CA, PPP2R5B, PRDX6, RPS6KA3, RUNX1, SGMS1, TMLHE, VASP, VDAC3, PDCD1LG2
Negative_7718	PGP, ASCC3, C1QA, CYBB, FSHR, LYPLA2, POLR2D, SIGLEC1
Negative_7719	AXIN2, CMPK2, PLCB1
Negative_7720	EDA, ACACA, ACADVL, ALDH5A1, ANGPTL4, ATG3, ATP6VOC, B3GNT5, CACNG2, COX10, CREB3L4, CSH1, DGAT2, EPHX2, FGF10, IL23A, MAPK11, MPST, NAGK, NEU4, NPAS2, OR10A5, OR10G9, OR4D1, OR56A4, ORC1L, PDCD1, PFKM, PIGV, PRKCH, RBPJ, RPRM, SHC3, SOAT2, SSH2, TACR3, TAS2R13, THBS1, TUBB2A, UCKL1, VEGFC, WEE1, ZAP70, GABARAPL1
Negative_7721	C7, SCD, ADCY10, ALG10B, AMPD1, ARSA, ARSE, BPGM, BUB1, CADM1, CALML3, CDKN1A, CES1, COL5A1, CSF3R, CTNNA2, DHRS9, ENTPD7, FUT2, GAB1, GAMT, GPX7, HPRT1, KIR3DL3, LIPG, MCAT, MDH2, MTAP, NEUROD1, NFATC4, OR1IG2, OR13C8, OR1L3, OR5B3, OR6C70, PIGK, PRKAB2, PRKCE, PTGES2, SGPP1, TICAM2, TLN1, TLN2, WASF2, PAFAH1B2, PLA2G12A
Negative_7722	BAX, CD6, HPD, B3GNT5, BIRC3, CAV1, DVL1, MAD2L1, PLA2G1B, PRPS2, THBS1, UCK2
Negative_7723	C3, ACSL5, AHCY, ATP5A1, CACNG4, CAMKK1, CCL8, CD244, CHUK, CSF2RA, CTSB, DCTD, E2F3, FOXA3, HADHB, HAGH, IL21R, IQGAP1, MAP4K2, MYH8, OR2A25, OR7A17, PDE10A, PLCD3, POLE2, PYGL, RRAS, RRAS2, SLC33A1, ATP6V1C1, HLA-DQA2, MAPKAPK5, ST6GALNAC3
Negative_7724	AK3, AGXT, ATP2A1, COASY, E2F5, ESPL1, FZD1, GNRH1, GRM1, HHIP, IQGAP1, ITGB4, MAFA, MAOA, MMP1, NEFH, NRCAM, OR1D5, OR2AG1, OR2W1, OR56A3, OR8A1, PAPSS2, PDHB, PLCB1, TAS2R42, ATP6V1E2
Negative_7725	AK3, FAS, PRL, ACP1, ACSS1, ADCY5, ADRB2, AOC2, ATP6VOC, C4BPB, CER1, CHST12, CHSY1, CLDN1, CLDN18, CRKL, CYP19A1, CYP1A1, FZD10, GALNT3, GCNT2, HSPA2, IFNG, IL17RA, ITPKB, LTC4S, NCOR2, NPR1, OCLN, PDGFD, PGK1, PLA2G2F, PPA2, PRNP, PRODH2, PTGER1, PTPMT1, SETD1A, SPRY2, ST3GAL6, SUV39H2, TGFBR2, TLN1, TNXB, TUBB4Q, UBE2K, B4GALNT1, PLA2G12B, SLC25A31

Negative_7726	IL9, NPL, PRL, VTN, ADRB2, ALOX12B, BMP7, CDKN2A, DEGS1, OR10G7, OR1J4, PFN1, PLA1A
Negative_7727	DUT, ACADM, ACPT, ANAPC5, ASPA, BACE2, BCKDHB, C7orf16, CAMK2G, CARS, CXCL13, EDNRB, FASLG, FGF3, GP1BB, IFNA4, IL22RA1, NEU2, PDE1B, PGAM1, PGK1, PPAP2C, SV2A, USE1, PHOSPHO1, TNFRSF1A
Negative_7728	KDR, NPY, BET1L, CACNG8, CD8A, CRLS1, CSAD, ELK1, EPHA5, EPOR, FGF22, GALNT14, GCAT, HHIP, ITGB7, MAML1, NANS, NARS2, OR14C36, OR2H1, OR2L2, OR2M2, OR2M7, OR2T12, OR4D1, OR5T1, OR6T1, OXTR, PCK2, PDE4D, PLXNC1, PTPRZ1, QPRT, SAT1, SMARCA2, SMC1A, SOCS2, SRGAP2, HLA-DQA2, HSP90AA1
Negative_7729	A2M, ATF4, ATP6VOC, CXXC4, CYBB, FUT4, GCNT1, GUCA1C, HSD11B2, ITGB6, LYZL1, OR5K2, OR8H2, PIK3C2G, PLA1A, PLCG2, PPP1R3B, PTGIS, ROBO3, SEMA3B, TRAF4
Negative_7730	F12, F2, F2R, IL2, AARS2, ACADSB, AMDHD1, B3GALT4, BCL10, BLVRA, CCL3, CD14, CD59, CHRM1, ENO2, EPHB2, EPHB6, GNB3, ICAM1, KDSR, KIR2DL1, MMP7, MTAP, OCRL, OR10K1, PDE10A, PGAM2, PIK3C3, PNPLA3, PVRL2, RFXAP, ROBO3, RPN1, SEMA7A, STAM2, TJP2, WNT10B, ATP6VOA4
Negative_7731	LCT, ACADM, ACPI, ADIPOR2, ALDH1A2, BPNT1, C7orf16, CACNB1, CCNB1, CDH3, DIAPH3, FGFR1, FTMT, G6PD, GGT5, H6PD, HNMT, HRAS, IL28B, INPP5E, MAOA, MPDZ, NCF1, OR10J5, OR10T2, OR1I1, OR4C6, OR4D11, OR5AU1, POLA1, POLR2E, PTGFR, PYGM, RARS2, STX5, TKTL1, VDAC1
Negative_7732	ADO, RDX, BIRC5, C3orf10, CAV3, CHRM5, CYP2A7, CYP2E1, DAG1, GCDH, GNPD1, GUCY2D, HNMT, IFNA17, LAMC2, LEFTY1, MCCC2, MMP14, MTFMT, NRG1, OR51Q1, OR56B4, PDE1B, PDE6G, PIPOX, PPP2CB, SKIV2L2, SRD5A1, WWP2, ATP6V1G3, SERPINB5
Negative_7733	GGH, OGT, SFN, ADCY3, ARSD, CTSL1, GRIA1, HBEGF, IDH3A, MAML3, MYH7B, NAE1, NOX1, OR4N5, OR52E2, PIK3C2G, PIP4K2A, PRNP, TNFSF14, CSGALNACT2
Negative_7734	B4GALT6, CDKN1C, DDX54, OR2F2
Negative_7735	CAD, ACADSB, ACSL6, ACTG2, AGPAT1, AVPR1A, CLCA4, CREB3L2, CYP2A6, GSTA1, GSTT1, IFNA4, IQGAP2, MYD88, NCR3, OR2K2, OR6S1, ORC5L, PARVG, PIGQ, SEMA3D, SHC4, TCF7, TLR3, UBA1, SUV420H1
Negative_7736	OAT, PAH, ACADSB, ADH6, AGPAT1, AGRN, ARNT, CACNB4, GALT, GPD2, HTR6, OR10A2, RRAS2, SDHD, TNFRSF10A
Negative_7737	AK1, C7, PTS, BACE1, CLDN2, CSNK1D, CX3CL1, DHODH, ENO3, FADD, GCNT4, GNB1, KAT2B, LAMC2, OR4K5, OR51D1, PCYT1B, PPA1, RPIA, SHC3, ZIC2
Negative_7738	ACTN2, ALOX15B, ATP5I, DLL1, EPHB4, FRAP1, HMOX2, IDH1, IL2RA, ITGA10, LDHAL6B, LHCGR, LRP5, MAP4K1, OR10K1, OR1G1, OR2C1, OR4C11, PGAM2, PRKAG2, RAP1A, SOCS5, TGFA
Negative_7739	ABAT, ACSS3, ADSSL1, ARPC5, B4GALT5, BMP8A, BMP8B, CCL16, CYP19A1, DNMT3A, ENO3, F13B, FGF10, FMO1, IKBKG, LIPA, NT5C3, OR2A25, OR5J2, OR6C4, OR9A4, PARS2, PPID, PRKCE, RPSA, SEMA4F, SOCS1, SUFU, TAS2R16, TDO2, VASP, YWHAB, SLC25A31
Negative_7740	ALG8, ATP6VOB, B3GNT4, CREB3, CYP11A1, DHX58, DUSP16, GALNT6, GAS1, GDF6, INPP5B, MAPK1, NKD2, OR10H3, OR5P2, OR6C3, PLTP, ST8SIA5, MAPK8IP2
Negative_7741	DCN, IL7, LSS, PXN, ACAD8, ADCY2, ALDH5A1, ALDH7A1, BCAR1, CDH5, CER1, CLDN2, EGLN3, FGF4, GNA11, GSTA2, GSTO2, ISYNA1, ITGB3, MALT1, MGAT1, MGAT4A, MPZL1, NARS, NCAM1, NPAS2, NT5C1A, OCLN, OR52L1, OR5A1, OR5L1, OR8B4, ORC5L, PGK2, PGM3, PIGW, PNPLA3, POLR2F, POLR2G, SLIT2, SPRY1, TAS2R7, TUBB, B3GALNT1, MAPKAPK2, PNLIPRP1

Negative_7742	IL6, MTR, ADAM10, ADORA2B, AMHR2, CACNA1A, CACNA1H, CCR10, CCR8, CDS2, CTSS, DHDH, GDF7, GJA1, HDAC2, ITGAV, MAPK11, NCKAP1, OR10H1, OR10P1, OR10R2, OR2L8, OR3A1, OR51S1, PDK1, PFN1, PIGF, PIPOX, PLA2G2E, PLA2G6, PON1, SETD1B, SHMT2, SNAI2, ST3GAL4, SUV39H1, WWP1, YWHAQ, PP1R12A
Negative_7743	MAG, ATP12A, ATP5D, CXCL6, DRD1, EDAR, GALNT9, GYS1, HEXB, HHIP, IGF1, IL4R, LARS, LDHC, MAP3K2, MAT2B, NFAT5, NUDT9, OGDHL, OR1G1, OR6K2, PORCN, PPP3CA, PRSS3, PTPRJ, SMAD7, UAP1, UPP1, ALDH18A1
Negative_7744	AR, BTC, CGA, CRH, JUN, NF1, PLG, TKT, ARNT, COL5A1, CYP2B6, DDX52, DHDH, FRAP1, GGT1, GUCY1A3, ITPA, LDHD, MAP3K13, MAP3K6, NAT5, OR10A2, OR1A2, OR52H1, OR52J3, OR7G1, OXSM, PFKFB4, PIGO, PIP5K1A, PLCZ1, POLR1B, PRKCZ, PTGS1, RALGDS, RDH10, SDC4, TAP2, TRPM5, WNT10B, CTNNA1
Negative_7745	CAT, DLD, NNT, OAT, ABCC8, ANAPC7, AOC2, ARPC1B, ARPC5L, ATP4A, B4GALT5, CALML3, CASP8, CD55, CHSY3, CTSG, FZD6, GALNS, GOSR2, HNF4A, IFNB1, IL12A, IL2RG, IMPA1, IRAK4, LPAR1, MGAT2, OR10P1, OR6K3, PDGFC, PECAM1, PRKG2, PYGL, RASSF5, RPRM, SDC2, SETD2, SMPD4, SPAM1, TIRAP, TUBA8, UXS1, WARS2
Negative_7746	CKB, DLD, F3, APOA2, DUSP9, FMO2, MAPK14, PLAT, PTPRJ, RPS6KB2, TNFRSF13B
Negative_7747	ACO1, CDS1, CXCL10, DGKE, FLT3LG, IL22, PIGA, TGFBR2, TNFSF18, C1GALT1C1
Negative_7748	KIT, RPE, ACSL4, ACSM5, ATP5D, BACE1, BAI1, CHSY1, CSF2RB, DPYD, F2RL1, GLUD2, GSTP1, HLCS, IKBKB, MAD2L2, MAP4K3, MAT1A, OR2F2, OR4M1, OR51V1, PDGFC, PTPN1, RXRB, SELP, SEMA4A, ULK1, WBSR17, ST6GALNAC4, TNFRSF1A
Negative_7749	RDX, AKT3, CCNB2, CMAS, CRB3, CTNNA1, DGKB, E2F2, FGFR2, HMGCS1, IFNB1, IGF1R, IGSF5, OR10K2, P2RX6, PAPSS1, PDE1B, TRPM5, UGT2B11
Negative_7750	CLOCK, GSTT1, HES1, NT5M, OR8H1, PSENEN, SMAD2
Negative_7751	ACOT12, ADCY10, CLDN8, CYP2E1, ETNK2, MAP3K5, OR52R1, PLCB1
Negative_7752	LIF, LPL, MPI, PGF, TYR, ACPT, AGPAT6, APLP1, B4GALT6, CDC26, EREG, F2RL3, FGFR2, GNAQ, GRM5, HLA-F, IMPDH1, ITGA4, OLAH, PAX6, PDGFA, POLD2, RDH5, SH2D1A, TNFSF12, TNFR1, WNT3
Negative_7753	GSR, CHAT, CHSY3, CYP2A6, CYP2C19, DDX51, DERA, NUDT9, PAK6, PDE1A, PRKCE
Negative_7754	GP6, MAX, ADCY3, ADH7, AGPAT3, ANAPC11, ARPC1B, ATIC, CD58, CDC23, CX3CR1, CYCS, DGKH, EIF4B, FPGT, FRAT2, GGT7, GMPBB, GNAQ, IL17A, ITPA, MASP2, NAT5, NLGN2, OR6N2, OR8H2, PARVA, PIK3CG, PPT1, PVRL3, SH3BP2, SMC1A, STX1A, STX4, B4GALNT1
Negative_7755	AGK, BCR, ALDH3A2, CBLB, CCR7, CHIT1, OR8B4, POLR3H
Negative_7756	ADC, CRH, ADH6, AGPAT6, AKT2, ARPC5L, CCL3, CER1, CFL2, E2F5, FGF11, GNPAT1, HARS, IFNG, IRS2, ITGAE, NCAM1, NME4, OR1M1, OR2AG2, OR4S1, PGM1, PIGV, POLR2K, PPP2CB, PTPN1, PTPN5, RDH5, RELA, SPP1, UGT2B11, WNT7B, PLA2G12B
Negative_7757	EDA, IL3, MET, UBC, ACSL6, BCAR1, BDNF, BUB3, CFL1, COL5A1, CPS1, CSF3, CTBP1, DUSP7, EPHA6, FMO3, GCLM, GLI2, GNRHR, GRIN2B, GZMB, HIBCH, IFNAR1, ISYNA1, ITGB4, LAMB4, LIPF, MGAM, MYD88, NAGS, OR13C3, OR1F1, OR2T4, OR4K5, OR52L1, OR5AP2, OR6M1, PDE1A, PLXNA3, SLC27A1, SPRED2, UGT2B4, VDACC2, ATP6V1E2
Negative_7758	IHH, TNF, ACSL6, ADCY4, CLTC, CYP2C8, E2F2, ENPP1, GANC, GNA15, GRIN2C, ITGB6, LCAT, LYPLA1, NOTCH1, PIP5K1B, POLD2, PVRL3, ULBP2, EIF4EBP1
Negative_7759	AGPAT2, CD48, HSPA1B, IDH2, OR2M7, OR4M2, OR6C1, TKTL2, WNT8B



Negative_7760	AK7, KDR, ACAD9, ACY3, AMDHD2, ATF4, CD14, CD274, CD48, CDK4, CFLAR, C LDN18, CPS1, DUSP5, ETNK1, FARSB, GALNT10, GALNTL4, GMPR2, GNAQ, IL1 R1, ITGB2, MGAT2, NCF1, OR2A5, PIGM, PKLR, POLR1C, POLR3K, PPP1R3C, S KP1, SSX2IP, STX12, TNFSF14, UGCGL2, WNT2, MAPKAPK3
Negative_7761	NOG, ABLIM3, ATP5D, CCL16, CSNK2A2, CX3CL1, ENTPD2, GAD2, GALE, GNG1 3, IL10, MECR, OR1N2, OR51I1, OR51L1, PDXP, PYCR2, SMAD9, CSGALNACT2
Negative_7762	DCN, ACO1, ACVR1B, AMY2B, ARD1A, CACNA1G, CACNA1I, CAMK2A, CD28, CLD N6, CLTC, CYP11A1, CYP26B1, DGAT2, DKK1, EGFR, EP300, ETS1, FMO1, GNR HR, GSTA4, GUCA1B, IARS, IKBKG, ITGB8, MAP2K7, NADK, NAGA, NRG3, NRXN 3, OR10A3, OR4Q3, OR6C76, PLD2, ROCK2, SV2A, TLR3, ATP6V1B2, SERPINB 5
Negative_7763	PTS, ADAM17, BPNT1, CCL20, CES7, CSF3, DGAT2, DPYSL2, DTYMK, ENTPD1, GARS, GSTT1, HPSE, HSD17B7, IL11RA, INHBE, KDSR, MASP2, MYH15, NCSTN , NT5C1A, OLR1, OR11L1, OR2L3, OR6C76, OR6Y1, P2RX1, PNPLA4, POLR3H, PRIM1, RPS6KA6, TAS1R3, TAS2R3, TOMM40, UGT8, ZAP70, EIF4EBP1, TNFR SF12A
Negative_7764	ACVR1, BCL2, CXCR4, OR8J1, TRIP10, MAPKAPK3
Negative_7765	CGN, ADCY7, ALDOB, BMP7, CFLAR, EPB41, F13B, GUCA1A, IL2RB, MTMR2, NU DT9, OR2T12, OR9I1, SMURF1, VANGL2, ATP6V1B2, SERPINA5
Negative_7766	GLA, GSR, TNF, CACNB2, CNDP1, FZD7, NEGR1, OR10G7, PTCRA
Negative_7767	ATG3, ATP2A1, B3GNT3, CD27, GALNT9, HTRA2, OR5T3, SMARCA2
Negative_7768	OTC, ACAD8, ACSL1, ANAPC4, ARHGEF2, ARNTL, ASIP, CCL28, CCL3, CREB3L 3, CTNNA2, CTSL1, EPHA1, FLOT1, GSTA4, GSTA5, HPSE2, IL17A, IL21R, IM PA2, MYL9, NKX3- 1, NRXN2, OR10H2, OR2A14, OR2C3, OR3A3, OR4A16, OR9A2, PDE8A, PRKCE, RPS6KA1, SEMA3D, SLC27A1, SOCS2, VEGFA, HLA-DRB3
Negative_7769	HGF, NNT, ABLIM2, CCL20, CDC14A, CNTNAP1, COL4A1, CSF2RA, CSNK1G2, C YP21A2, ENAH, ENTPD5, FTH1, HLCS, HNMT, HSD17B4, HTR2B, IL13RA1, LTB P1, MAP4K4, MTHFD1L, OGDHL, OR10C1, OR10G3, OR2A2, OR2M2, OR4M2, OR4 N4, OR5L1, OR6T1, OR8J1, ORC6L, PFKM, PHKA2, PIPOX, PLCD3, PRKAG3, PR KAR2B, PRKCH, RHOA, SEMA3D, SETD2, SOAT2, TJP1, SERPINB5, TNFRSF18
Negative_7770	C8B, SPN, ABAT, ATP2A2, CCR7, CHKB, CYP2U1, DOCK1, FGFR4, GUCY1A3, MG ST2, NCR2, PECAM1, PRNP, SEMA3C, SGPP1, SPRED1, STX6, UNC5C, TNFRSF1 0A
Negative_7771	B3GAT1, BBC3, C1QC, CCL4, DVL2, GALNT11, GPD2, GUCY2D, IFNGR2, LDHAL 6B, OR2D3, OR7G1, OXCT1, POLD1, PRKCA, RHOQ, RPS6KB2, SGMS1, TAP2, TN FSF4, TUBB6, VDAC2, GABARAPL2
Negative_7772	FUK, ME3, VTN, ALDH7A1, ARHGEF4, BCAR1, BUB1B, CCL17, CCR4, CD46, CHR M3, DNMT3L, DUSP7, ENPP6, GALC, IFNA16, IRAK2, LMO7, MAP4K3, OR10G4, OR10G8, OR8S1, PFKFB2, PIK3CA, PLA2G5, RARS2, RGS3, SFRP1, TRIP10, W NT9A, YWHAZ
Negative_7773	AMPD2, FASLG, HADHA, HSD3B2, INSRR, MAD2L2, OR13C9, OR51I2
Negative_7774	A2M, KHK, LCK, PRL, TNN, ALDH7A1, ALOX15B, ANAPC1, CCNB1, CLCA4, CYP2 C19, DGAT2L4, DHDDS, FUT5, GDF7, HNF4G, IFNA5, LIPA, OR1S1, OR52A1, O R5T2, PANK4, POLR2C, PPP2R5D, PRLR, RASGRF1, RBL2, SARDH, SGPP1, SLC 33A1, THBS4, SERPINE1, SUV420H1
Negative_7775	TNF, ACYP1, ATG7, CASP10, CLOCK, CNGB1, COQ5, COQ7, CREB1, CSH1, CTF1 , CYBA, EIF4E, EPAS1, HCCS, IL22RA2, MTMR2, OR11L1, OR2T3, OR4K1, OR8 K1, OXSM, PDHA1, PLCG1, RHOA, SDHB, SLC9A1, STX18, TJP3, TUBA3E, TNFR SF1B
Negative_7776	C1QC, CAV2, CDK4, CYP4F2, ITGA10, KLRC4, NTNG1, OR2T3
Negative_7777	BCKDHA, CFL2, CHRNA7, IMPA1, MALT1, NPR1, OR1D5, OR1K1, OR5D16, OR9A 4, SPP1, TBK1

Negative_7778	CS, CDK2, CHRM2, CYP8B1, CYSLTR1, DHRS9, DTX2, F13B, FCGR3B, FZD7, GALM, GPD1L, GRLF1, GSTA3, ITGB3, KLKB1, LIPC, MAML3, MAP3K14, MAP4K3, MAPT, MCCC1, NCSTN, NUDT5, OR2T6, OR52W1, OR5A2, OR6A2, PCYT2, PDGFC, PI4KB, PRPS2, RAPGEF2, RDH12, RHEB, RHOA, SETDB1, TUBA4A, UCK2, ZBTB16, TNFSF13B
Negative_7779	ANPEP, CMBL, CYP7A1, ENTPD2, FTH1, GCNT2, HSD17B7, KYNU, NRCAM, OR1L1, OR4K15, OR56A1, PLD1, PRKAG2, PVRL3, STX4, SUV39H1, TRADD, MAPK8IP2
Negative_7780	BCR, GSR, PDC, RDX, CXCL9, DDOST, DGUOK, DHFR, DHX58, GALNTL4, HSD17B3, IL12RB2, IL22RA2, IRAK3, LYPLA2, MYH2, NEU4, OR5P2, PDE1C, PLXNC1, PROC, PTPRB, RPS6KB2, SETD8, TLR3, ATP6V1C1
Negative_7781	GAA, LHB, MOS, PC, TNN, ASIP, BCL2, C5AR1, CAV3, CCNE1, CD86, CLDN9, EHMT2, GSTK1, ITGAD, KIR2DL1, LDHAL6B, LLGL1, MMP7, OR2K2, OR6X1, OR8J3, P2RX4, PIGQ, RAB23, SARS, SEMA3E, SLC25A6, SNAI2, ST8SIA1, TAS2R41, THBS1, TOLLIP, VDAC3, WEE1, HLA-DPB1, SERPINF2
Negative_7782	AMHR2, ANGPTL4, CADM3, CCR8, GALNT10, JAK3, MAP4K3, OR4D9, P2RX7, PDGFRA
Negative_7783	GDA, HK3, JUN, STS, CCR1, CDK6, COL5A1, ESAM, GCNT4, HMGR, KLKB1, KLRK4, LDHA, MAP3K2, OR2A4, OR4A15, OR4F6, OR5D18, PIK3C3, PLA2G2A, SHC3, SHC4, SMAD4, TAS2R5, TBXA2R, TLR3, UGT8, VARS, WNT8A, YOD1, ATP6V1C2, MAPK8IP3
Negative_7784	F8, PVR, ABLIM3, ALDOA, ANAPC1, AOC3, BCL10, CACNA1B, CCL23, DHRS9, EI24, FCER1G, FLT4, FZD5, GALNT9, GNG13, GRB2, HLA-DRA, IPMK, LCP2, PCK1, PLA2G4A, PLXNB3, RPIA, SMURF2, SPRY2, TAS2R7, UMPS
Negative_7785	CFH, CFI, FGB, TK2, ALOX15, ARSB, DGUOK, EXTL2, HCLS1, INSR, ITGB6, LHCGR, NFKB2, NRG2, OR52I1, OR52J3, POLR2A, PVRL4, SPRED1, UGT2B7
Negative_7786	C3, CEL, EPO, GGH, ID1, LPL, ACP1, ALDH9A1, AVPR1A, BLNK, CALML5, CHPF, CHRM5, CSNK1D, CYP26A1, EFNA3, EPB41L1, EPOR, EPRS, FGF17, GRIA3, GUCY1B3, HSD11B2, OR4F5, OR4M2, PARVB, PDX1, PIK3R4, POLR1D, POLR2F, PPID, PRSS2, RAB23, RBKS, RELA, SLC2A4, SPHK2, TP73, UGT2B28, VAMP4, WNT5B, ST6GALNAC1
Negative_7787	GHR, TK2, TXK, XDH, ACYP1, ADRBK2, ALG3, ALPI, APOE, ARNT, CDKN1A, DPYSL2, EDAR, FUT3, GDF5, GNPAT, GOT2, GYS1, HLA-G, IDH1, IPPK, KARS, NGEF, NSDHL, OR2T1, OR6C6, OR6Q1, PDE4D, PFKFB3, PIK3R3, PLXNB1, PRIM1, PRKAR1A, PRPH2, PYCR1, RALBP1, RASA1, SMPD2, TAS2R4, TAS2R48, TAS2R50, THY1, TRHR, WNT10A, WWP2, HSD17B12, MAPK8IP1, PAFAH1B2
Negative_7788	RFK, ABI2, ADCY3, ALDH3B1, ARNT, ATP6V1F, B3GALT4, CASK, CCNB1, CD38, CD40LG, CXCR4, EIF4E2, FLT1, FLT4, MAN1A1, MCM6, MYLK2, NAGK, NR1H3, OR2AG1, OR2M7, OR51F2, OR7A10, P2RX2, PITX2, POLR1D, PPA2, PRKACG, PTPRJ, RAB23, RAB5A, SMARCA2, STAM, STX8, SUFU, SULT1A1, SUV39H1, TAP1, TAS2R48, TGFA, VEGFA, WASF2, WIF1, KIR2DL5A
Negative_7789	BCR, ABI2, APH1A, APOA2, B3GNT4, BACE2, C4BPA, CPT1B, CXCL11, CYP2B6, DHCR24, EFNB3, G6PD, GMDS, GSTO1, IL23A, IMPDH2, ITGA7, MYL2, NT5C2, OR4A15, OR6C76, OR9G1, PLCZ1, POLE4, PRKAB2, PTGER3, QARS, RAC1, RAPGEF3, RHEB, SELP, STX8, TPH2, TXNDC12, UGT2B4
Negative_7790	GLA, UBC, ALPPL2, CACNA1H, CHST13, CTPS, DDX19A, DUSP3, EIF4B, FCGR2B, FOXA2, GCH1, GLDC, GNRH2, GNRHR, HNF4A, IL15RA, IL1RAP, INPP5B, KLRC3, LCMT2, LEPR, MAP3K3, MAPK12, PDX1, PER1, PTGS1, PTK2B, PTPN7, RASGRF1, RHOA, SMPD1, SPHK1, SSH2, TAS2R38, TGFBR2, TLR3, WNT9A, TNFRSF10D
Negative_7791	IHH, DDX50, FOXO1, OR5I1

Negative_7792	CDA, CRH, GCK, LSS, RDX, ACP1, CHDH, CTF1, DDX56, GDF5, HADH, MGAT5, OR4X1, OR8H3, PDGFA, PDGFC, PGM1, PI4KB, SLC33A1, SPTAN1, YWHAG, ATP6V1C2
Negative_7793	LCT, EPRS, GALNTL2, MGAT5B, OR5P3, PLXNB3
Negative_7794	AUH, CDA, F2R, GCK, ATG7, B3GALT4, CACNG3, CBLB, CD59, CYP2U1, DDOST, DKK1, ENO3, FUT9, GALNT11, GRIA2, HDAC2, HSPA2, IL22, IMPA1, IQGAP3, JAK3, LCMT1, MAP2K7, MYL2, NME6, NRG1, OR10H5, OR1N1, PANK3, PAX6, PD E7B, PHKG1, PIP5K3, PSME2, PTCRA, RASGRF1, RUNX1, SDC4, SEMA3B, SETD1A, SNAI1, ST6GAL1, TLR3, TP73, PDCD1LG2, PLA2G12A
Negative_7795	EGF, IL7, ACADVL, AKT2, CACNG7, CD244, CD36, CDKN2C, CES1, CLDN19, DE RL1, ENPP6, EPHA3, FMO1, GABARAP, GLI3, HSPA8, IFNA17, IL20RB, IRS2, KLKB1, OR13H1, OR2D3, OR2L3, OR2T2, OR4D5, OR5A1, OR5C1, OR8I2, ORC1 L, PIK3R3, POLR2C, PON3, PPP1R3C, PPP2R2D, PTPRM, RGS3, SEMA3E, TBXA S1, TM7SF2
Negative_7796	IHH, ABP1, ALG11, CLDN16, EPHA2, FRAP1, MAP3K5, NGEF, NUDT12, OR10G3 , OR7A5, TUBAL3, VDAC2
Negative_7797	CBL, NNT, NPL, PLN, ACAA2, ATP4B, ATP6V1D, CD74, CDS2, COL4A4, CYP11A 1, DDX18, DHDDS, FGF14, GP1BB, MFNG, OR11L1, OR5AS1, PLAU, POLR2K, PP ARD, PROC, PTPN6, RUNX1T1, SEMA4C, SLC25A5, SLC9A1, SULT1E1, TGFBR1 , TPI1, UNC5A, ZFYVE16, MAPKAPK2, PRICKLE1
Negative_7798	ASNS, CACNA1B, CACNG8, CD80, CXCL10, IL28A, MAP2K4, MTMR1, OR13F1, O R52W1, PRPS2, RAC3, STX2, UBE2L3, YWHAG, ATP6V1G3, C1GALT1C1, HLA- DRB4
Negative_7799	DBT, TPR, CAMK4, CHDH, DHRS3, DPM2, DTX4, ITGB1, ITGB8, LDHC, MLLT4, O R6A2, PARS2, POLA2, RPS6KA4, SLC2A4, TP53, ZNRD1
Negative_7800	GNE, GPI, PLG, ACSL4, ACTA1, ADCY10, ADCY7, ADIPOR1, AKR1B1, AKR1C4, AREG, B3GNT2, BET1, CFL1, DRD2, ENTPD3, EXTL1, GNAT3, HSPA8, IAPP, IR S1, ITGB7, OR10A4, OR4K13, OR52I1, OR5AS1, PPP2R2B, RELB, RUNX1T1, S EMA3F, SLIT2, STAM, STAM2, TAS2R4, TGFBR1, TRPC1
Negative_7801	LCT, MTR, FRAT2, GGCX, GP1BB, GRIA2, IFNW1, IL20, MYH8, OR1J1, OR56B4 , OR5T1, PFKFB2, PIGO, PPP2R1A, PSEN1, PTGS1, SGMS1, SH2D2A, SSX2IP, ATP6V1G2, C1GALT1C1
Negative_7802	GK2, IDS, OGT, ACOT12, ACSS1, ACTB, ADSS, APOA1, ARPC1A, CACNB4, COL1 A2, CXCL3, CYP2A6, CYP2C9, CYP4F3, DGKE, ENPP6, FCER1G, FOXA3, GMPR2 , ITCH, MCCC1, MTMR6, NR4A1, OCRL, OR10AD1, OR1E2, OR1G1, OR5D16, OR7 G1, OR8B12, PANK1, PCCB, PFAS, POLD3, PPA1, SCD5, SEPHS1, SFRP4, SUCL A2, TAS2R42, TJP3, TRHR, TUBA1B, UGT2B10
Negative_7803	ID4, IL8, ACTA1, ADRA1A, BDH1, CD22, CYP26C1, HAAO, IL3RA, ITGA9, LAM B3, MAD2L2, MGAT5B, OR51B2, PARD6G, PDE1C, PRKAA1, SPCS3
Negative_7804	AK5, MOS, TFG, ATF2, CPT1C, EI24, MITF, OR6C74, SULT1E1, MAPKAPK5, PA FAH1B3
Negative_7805	AK7, IDS, B3GALT5, CREB3L3, CXCL10, EDA2R, GALNT10, GNAS, GNAT3, GNR HR, GSTA4, INPP5A, JUND, MCM5, MOV10L1, OR3A3, OR4D11, PLA2G5, POLD1 , RBKS, SKP1, ATP6V1G2, TNFRSF10B
Negative_7806	FGG, HK2, MTR, ADH1A, ADSS, ARSB, BRAF, CSF3, FLT3, FOXO1, GSTM2, GSTM 4, HMGCS2, HTR2A, LDHAL6B, MAP3K6, OR1L4, OR51B4, OR52B4, OR5D16, RD H16, SEMA3A, SUCLA2, TAS1R1, VTI1A, WNT10A, XCL1
Negative_7807	AR, HK3, MTR, SCD, SP1, ANAPC11, APH1A, ARHGEF6, CACNB4, CCNG1, CD47, CD48, F2RL2, GUCA1A, HLA- DOB, HTR2C, INPP1, ITPK1, MITF, OR2L3, OR4N4, OR51S1, OR8H1, PDGFA, P ECAM1, PIK3R3, PLA2G4A, PLA2G6, PPP1CC, RASA2, SSH3, STAT4, TAS2R7, TPH2, UGT1A10, WNT3, TNFRSF10C
Negative_7808	ADSL, CYP26C1, HMGCS1, LTB4R2, MCAT, NME7, OR7C2, PAFAH2, RETSAT, TR AF1

Negative_7809	ABO, ACOT11, BMPR1B, BTRC, CES7, CYP26B1, EP300, GNPDA2, HADHB, IMPA1, KIR2DS4, OR7A5, PDE3B, PGAM2, RALB, SCLY, TSHB
Negative_7810	ATP5D, BMP8B, CPT2, GALNT12, GMPS, GNG3, MYH10, NMNAT3, OR2AT4, OR4A15, PPP3R2, TUBAL3, UBE2L3, C1GALT1C1
Negative_7811	CSK, DCC, F10, GK, ACOX3, ADCY7, APOC3, CMAS, CRKL, CYP2C19, DGAT2L4, FIGF, FOSL1, LCMT1, NAT2, NCF4, OR10S1, OR1L3, OR51B6, OR52W1, OR6T1, PFAS, PLA2G5, PPT1, PRLR, PRPS2, PSEN2, SENP2, SKP2, SERPINB5
Negative_7812	C4B, MUT, AKR1D1, ARG1, CD99, CLTA, GFPT1, GUCA1B, HSD3B7, IL22, LPAR1, NEFM, OR4A16, OR5AS1, OR5D16, PARVB, PDE4A, PRSS1, RAP1A, RAPGEF4, TAS2R13, TRPM5, GABARAPL1, HLA-DPA1, TNFRSF6B
Negative_7813	CGN, F9, HPD, VTN, ACSM1, ADCY10, ADH5, ALPI, B4GALT1, BCL10, BIRC3, CDC45L, CDKN2A, CHIT1, CLDN10, CLDN20, DDX4, DUSP3, FADD, FUT9, GLG1, GSTP1, HEXA, HRH1, HSPA1B, ICAM1, IRF5, IRS1, ITPKA, LCP2, MGAT4B, OR10H5, OR12D3, OR2A5, OR2Y1, OR51B6, OR5AK2, OR8H1, PRKACB, PRKAG1, RALBP1, SEPHS1, SHMT2, ST3GAL1, TAS2R49, TUBA3C
Negative_7814	ASPA, CCNB2, EPHB3, EXTL3, OR4A5, OR5M9, OR6C4, PARS2, HLA-DRB3
Negative_7815	AGK, AK2, IL7, AMDHD1, CCL16, CD48, CXCL10, CYP26A1, FM05, FUT7, HMGCR, IFIH1, MAML2, MS4A2, MYH7B, OR14C36, OR1S1, OR51D1, PLA2G4A, POLA1, RFX5, RFXANK, RPS6KA3, SFRP4, SOCS3
Negative_7816	BIRC5, BMPR1A, CCND2, DDB2, ERBB2, EXT2, FGF2, HMGCR, ITGA2B, MTHFS, OR10C1, OR10K2, OR2G3, OR4A5, PPP2R5C, PTCH1, RDH10, ST8SIA1, STX1B, TGFB2, TNFSF4, TNFSF9, ST6GALNAC1
Negative_7817	DCK, ACAT1, ACHE, ANAPC2, ARSA, ATP5H, BPGM, C3AR1, CACNG7, CCL22, CCNH, CD14, CD44, CHDH, CKMT2, COL5A3, CSF2RA, CYBA, EPOR, FGF13, GNAO1, IL5RA, ITGB8, MAP2K4, MAPK3, MYH1, OLR1, OR10H1, OR5P3, OR8K3, PDXK, PIAS1, PLD1, POLR2I, PPM1B, PPP2R5E, PRIM1, RPSA, SLC2A2, SPTLC1, ST3GAL1, VAV3, WNT7B
Negative_7818	ACVR2A, CHAD, IDUA, RRM2, TPM3, TRPC1, TUBA1A, WNT2, ZNRD1
Negative_7819	A2M, PGF, PVR, ALG10B, CYP1B1, DDX4, LRP5, MYH11, POLR2K, PTDSS2, RXRG, TKTL2, TSLP, WASF2
Negative_7820	FER, FST, GBA, IL4, ALDH1A2, ANAPC10, ARSA, BTRC, CAMKK2, CHRNA7, CMA5, CREB3L4, CTNNB1, CXCL6, GAPDH, GOT1, ITGA9, LIAS, OR13H1, OR2L3, OR2T29, OR52I2, OR52N2, OR56B4, PAX4, PRODH2, PYCRL, RPS6KA5, SELE, SELP, SPRED1, VTI1B, XIAP, XYLT2, ARHGEF12, ATP6V1G1
Negative_7821	GNE, ACACB, ADORA2B, CDC16, CDC25C, CDKN2B, CPT2, CXCL5, GAB1, GALNT9, GSTA1, ITPK1, MAOB, MYH3, NCF4, OR13C9, OR51B4, OR51L1, OR6T1, PDE11A, PFN2, PGK2, PIP4K2C, RFWD2, ZIC2
Negative_7822	CTH, LCK, NPY, CYSLTR2, ELK1, LDHAL6B, OR52E8, OR5H2, PIK3R1, POLE4
Negative_7823	MTR, TXK, ALCAM, CACNA1D, CACNA1G, CHKB, CHSY1, FECH, FGFR2, FSHB, GALNT13, HNF4A, HTR7, ITGB5, ITPKA, KAT2A, KAT2B, LARS, MAD1L1, MAP3K2, MYH7B, NEUROG3, NOS1, NUDT12, OR1N1, OR51D1, OR56B4, OR7C1, PIPOX, PLXNB2, PRKY, PTEN, SMPD2, SOCS3, SUV39H2, TAP1, TICAM2, UBE2L3, VNN1, CACNA2D4, SERPINF2
Negative_7824	CNTNAP1, GALNT11, GGPS1, KIR2DL3, MMP14, PMAIP1, RAPGEF4, STAT6, TACR2
Negative_7825	GP6, ID3, PML, AGRN, APOC3, BTRC, ESAM, HLA-DOB, ODC1, OR52N4, OR7G1, PIGU, PIK3R2, PLXNA2, PTPRC, TYK2, UBA1, EIF4EBP1, TNFRSF11B
Negative_7826	ABO, CR2, ALAD, ALDH3B1, ATP5J2, GMPR, GP1BB, GSTP1, HHEX, INPPL1, MAP2K3, MCEE, MYH4, NAGLU, NFYB, NOTCH3, NQO1, OR10H3, OR5AU1, OR8B4, PARVA, PCNA, PFKFB1, PMM1, STAM2

Negative_7827	CBL, FH, FYN, IHH, OTC, UBB, ALDOA, B3GAT1, CCKBR, CCL1, CDC27, CERK, C TSL1, CYBB, CYP4A22, DCXR, DPYS, GANAB, GDF7, GNA12, GRM5, HRH2, HSP9 OB1, IL13RA2, KCNB1, NEU1, NOD1, NOS3, NRG2, OR2V2, OR4C16, OR4D11, O SMR, PIK3CB, PLTP, PPT1, PRKAA1, PSME3, SDC3, SEMA3B, SEMA4G, UGT2B7 , CSGALNACT2
Negative_7828	APLP1, ATP2A2, AVPR1B, E2F3, GALK2, HIBCH, RAPGEF1, TYRP1, YWHAZ
Negative_7829	ACYP1, ALPI, ATP5C1, BACE1, BCL10, BCMO1, CD14, CDC6, COQ3, CREB3L4, CSNK2A1, CSNK2A2, DDX4, DNMT1, FCGR2B, GCNT1, HMGCR, IFNK, IL28B, IL 5RA, LILRB3, MAP2K1, NR5A2, OGDH, OR11G2, OR4K17, OR9K2, ORC2L, PARD 3, PIGU, PLA2G1B, PLA2G6, PLK1, RAD51, RIPK1, SOAT1, SOAT2, ST3GAL5, STMN1, UGP2, UNC5A, XIAP, YWHAZ, HSP90AB1, SUV420H2
Negative_7830	TPO, AKR1C1, APPL1, ATP4A, BDKRB1, BPGM, CCKBR, CDC6, CHST12, CRLS1, DVL1, ECHS1, EPHA2, FBP1, FPGS, GALT, GFPT1, GMPPB, GP1BB, GSTM3, HAP 1, MAD1L1, MAML1, MCM5, MYLK3, OR1A2, OR4P4, OR51F1, OR51S1, OR5AC2, OR5T1, OR7C2, P4HA2, PFN4, POLE, POLR3D, PTGER3, SMAD4, SOCS5, TAS1R 3, UBE2K, VAMP3, WASF1, WNT9A, YWHAH, HLA- DQB1, HSP90AB1, ST6GALNAC4
Negative_7831	EGF, C5AR1, PARD3, PRODH
Negative_7832	TAT, CXCL6, ICAM3, IQGAP3, MYH4, SUCLG2, TAS2R42, WNT7A, SERPINA1
Negative_7833	CAT, FOS, TPR, ACSS2, ALDH1A1, AMPD3, ATP5A1, BMP2, CCNB3, CLDN20, CS NK1E, CYP2C18, DGKB, EPHX2, ESAM, FBP1, FIGF, GART, IL11, INADL, MAPK 12, MYL7, NMNAT1, NOTCH1, OR14I1, OR4X1, OR7A17, PCK2, PFKFB4, PIK3R 2, PON1, RHOD, RRAS, SEMA3F, SPRY3, SULT1A1, ARHGEF12, PPARGC1A
Negative_7834	AGK, F8, HK3, SRM, ACOT11, ACY3, AGPAT2, ALDH7A1, CCR1, CD79A, CRB3, D NMT3A, DUSP16, GUCY2D, IFNA10, IL15RA, OR2T4, OR4F6, OR51E1, OR52N2 , OR5B17, PRKACB, PTPMT1, RRAS, SLC25A4, SNAI1, UGT2B17, UXS1
Negative_7835	SMO, DGKB, DPAGT1, DTX3L, EIF4B, FIGF, FUT4, IL10RB, IL23A, IL25, MYL 5, OR4F4, OR5L2, POLR2A, THTPA
Negative_7836	DCT, EBP, SPN, ABL2, ACSS3, APLP1, DDX47, FARP2, GRPR, IRS1, MICA, NRP 1, OR8H1, OR8J3, PITX2, PNMT, SMAD2, SPTAN1, SSH1, STX12, TKTL2
Negative_7837	EZR, ACTN4, ALDOC, MAML1, MAT1A, NCK1, NRP1, OR1J2, P2RX4, PPID, PYCR 2, RIPK1, SDHC, SSH2
Negative_7838	KMO, ARPC1B, CACNA1A, CAMK2D, CSNK2B, DDX55, DPM2, E2F3, GABARAP, GO T2, LEPR, MPST, MTHFD2, NEU2, OR4M1, PDGFRA, PLA1A, PRKCI, TOLLIP, TN FRSF10B
Negative_7839	ACADS, ACOT11, CDC14B, COL6A2, CRB3, CYP3A4, F2RL1, FM03, LTA4H, SEM A3F, SHC4
Negative_7840	ID3, OGT, RET, ABLIM3, ACADS, ACTG2, ACVR1B, AGPAT1, ALG1, B3GAT1, BC L2L1, BDKRB1, BIRC2, BMP4, CARD11, CD247, COL4A6, DLL3, EHMT2, EPOR, GNA12, HARS2, HIBADH, IRF3, LAMA4, MAP2K5, OR13A1, OR1B1, OR51G2, OR 6Y1, PARD6B, PARVG, PIGS, PPP2R2D, RFX5, SGMS1, SLC2A2, SMPD4, TACR1 , TAS2R8
Negative_7841	FES, MET, MPL, A4GALT, ADCY6, ADRB2, ALDH3B1, CD22, CD244, DKK1, EHMT 1, F11R, G6PC2, GBE1, GCAT, GMPR, GPX5, IL22RA2, MAN1A2, MAN1B1, MYD8 8, OR2T33, PARD6B, PIGV, SEMA3B, SLC9A1, SOCS3, ST3GAL5, TSLP, VDACC 2, WNT10B
Negative_7842	COMP, CTPS, PIM1, PTPRC, TP73
Negative_7843	CS, F11, AFMID, ALAS2, CALML3, CLOCK, COX15, CREB3L1, CSF3R, CYP2S1, DAPK1, DEGS1, DGKE, DRD2, ENTPD8, FGFR3, GDF7, GOSR2, HAGHL, HEXB, IC OS, OR2T2, OR51B4, PTGES, SETD1B, WARS2, WASF3
Negative_7844	C4B, ACSL3, APH1A, ATP6V1F, BCL2, CCL3, CNTN1, CYBA, DDX47, DDX55, FR AT2, GOT2, GZMA, IGF1, ITGA11, KRAS, MAP3K12, MAP4K1, NCK1, OR5AN1, O R6B3, PLA2G10, PPP1R3A, RPRM, SENP2, SLC27A5, TICAM1, TRPC1, UCK2, H SD17B12, ST6GALNAC6

Negative_7845	ABL1, CUL1, MRAS
Negative_7846	EPO, NLK, TNF, ASIP, ATP5E, B3GALT6, BAI1, CNGA4, CREB5, DLL4, EPHB1, GALNTL2, GBGT1, IFNA4, IGF1, IL18RAP, IL2RA, IRS1, ISYNA1, ITGA8, KA T2B, KLRC1, LAMC2, NEU2, OR11A1, OR5AU1, OR5H2, OXTR, PARD6B, PIGK, P LCB4, PLXNB3, PPID, PRKCZ, PRPH, PTGS1, RAC3, SDC3, SLC27A5, SMPD2, S OCS2, SRGAP2, ST3GAL6, STAT6, WNT7A, XCR1, ATP6V1E1, TNFRSF14
Negative_7847	CFI, PML, AASDH, AHCYL1, ANGPTL4, APOA2, ATP5H, B3GNT2, BMP7, BMPR1A , CASP10, CD48, CREB3L3, DVL2, FUT3, GALNT5, GMDS, ICAM2, IL18R1, IL6 R, IRS4, LCMT2, MAPK12, MAPK9, MPDZ, NEUROD1, NR1H3, OGDHL, OR10K1, O R2T2, OR51V1, OR5M3, PARD6G, PDX1, PGLS, PTGER1, RPRM, RRM2B, SNAP25 , TACR2, TAP2, TRPC1, TYROBP, UBE2L3, WWP2, MAP3K7IP1, MAPK8IP3
Negative_7848	AR, HK1, AKT3, ALDH6A1, ATP6AP1, B3GNT2, B4GALT7, BCL2L1, CACNB1, CA PN2, CCL16, CCR9, CMAS, COX15, CYP3A5, DPYS, DRD5, DUSP1, EDA2R, GP1B B, GYS2, IL21R, IL28A, LALBA, MAOB, MYH6, NTN1, OR10S1, OR13C9, OR2D2 , OR2T11, OR3A3, OR51F2, OR9Q2, PARVA, PDE5A, PIP5K3, PNPLA3, PPBP, P RKAA2, RPS6KA1, SEMA4D, SFRP1, STAT6, STEAP3, VNN1, WNT1, B3GALNT1, ST6GALNAC1
Negative_7849	C7, HPD, OTC, ACY3, ADH1A, ASMT, CD38, CD8A, CNTF, CUL1, DDX18, DTX3L, EPRS, FM01, GCLM, HDAC2, IFNK, IGSF5, IKBKE, LEFTY2, MAP3K2, MTFMT, N CAM1, OR2T8, OR4C46, OR4F6, OR5T3, OR6C2, PARVG, POLA1, PTPN11, RARA , TAS1R1, TCF7L1, THTPA, UGT2A3, WARS, WNT9A, MAPK8IP3, TNFRSF10B
Negative_7850	DCK, ARSE, ATF2, C1GALT1, DNMT1, OR12D3, SEMA3D, XYLT2
Negative_7851	CCNE2, DUSP1, FTMT, KRAS, MYH10, NEFM, WARS2, CSGALNACT1, TNFRSF17
Negative_7852	MAG, ACVR1B, CNTNAP1, DDX55, E2F3, EHMT2, JAK2, MAT1A, SDHA, TAP2, TP H2, XYLB, MAPKAPK5
Negative_7853	AGK, F8, MVD, TNR, ADORA2A, BMP2, BTRC, CCL16, CD48, CXCR6, DGUOK, FAR SB, HMCCR, IFNAR2, IL10, ITGA2B, JAM3, LCMT1, MAP4K1, OR1L3, OR5AR1, OR5L1, OR6M1, OR6T1, OR8B4, PFN4, PON2, PPBP, SV2A, TAS2R42, TFDP1, T YROBP, VANGL1
Negative_7854	FN1, AGXT2, BET1, CYP3A5, ETS1, GALNTL4, HSD3B7, LYZL1, MTFMT, OR4F5 , OR52N5, OR8K3, PGK1, PGM1, TAS2R14, UMPS, WNT10A
Negative_7855	NOG, ALDOA, ARHGAP5, BLVRA, CHIA, CLTA, CYP2U1, DEGS1, DHX58, FZR1, M GAT5B, NARS, NPAS2, OR2G6, PIGF, PLCD3, STX8, TACR1, TP73, TRAF3
Negative_7856	HYI, CD38, LAMB3, MYL9, NFYC, OR51V1, PGLS, POLR3A, SNAI2
Negative_7857	CS, F11, ITK, ALDH1A2, B3GALT2, BCL10, BMPR1B, CD36, CDKN2D, CHST13, CLDN22, CSF2RB, CTPS, CXCL16, CXCR3, DAPK2, EPHX1, F2RL3, GNPAT1, G UCA1B, HA02, IL24, ITGA2, ITPK1, MGAT3, MGAT5B, OR2L2, PAPSS1, PLA2G 6, PRKAG1, PTGS2, PYGM, TAS2R48, TIAM1
Negative_7858	C9, ME1, ACVR1, ALDOC, ALG10B, APOA5, B3GNT4, CACNA1E, CDKN2D, DCXR, ECHS1, GADD45A, GALK1, GARS, GGCX, GLYCTK, GUCY2C, IFNGR1, IL22RA2, INPP4A, JAK1, LIMK1, LIPC, LMO7, MAML3, MAP3K4, MAPK1, OCLN, OR2A12, OR6K6, PLCD4, PPP3R1, TFDP1
Negative_7859	OAT, ARNTL, B4GALT4, CHR1, ERBB2, GRB2, GRIN1, KCNB1, MYH4, NGEF, OR1 4C36, PAX6, PPP1R1A, SGMS1, STK4
Negative_7860	FAH, MVK, ACMSD, ACSL4, ACTA1, BMPR1A, CCKAR, CCL4, CDC2, CDC27, CDKN 1A, CHPF, CMPK1, DUSP6, DUSP8, ENO1, ENTPD3, EPHA8, FZD2, GGCX, HSD11 B1, LIPT1, NCR2, OR51V1, OR56A4, PAICS, PTCH2, RBL1, RXRB, ST3GAL6, S T8SIA1, ST8SIA5, STEAP3, TNFRSF11A
Negative_7861	CFH, F7, SRF, TK2, ADIPOR1, ALDH6A1, BUB1B, CCNA1, CD79A, CSH1, DCXR, DGKH, DHRS9, ELK4, FGF2, FZD7, GDF6, GRIN2A, IL22RA1, IL5RA, LIPF, MA PK1, MGAT5B, MRAS, MTFMT, OR10R2, OR4S1, PLAU, PLCD1, RPE65, SNAP23, SPTLC1, STT3B, TACR2, TBL1XR1, TUBB, TNFRSF11B
Negative_7862	CFH, F5, GSR, TK2, CD27, CRKL, DIAPH3, FGF1, KIR2DL4, MAP3K7, OR5D18, PLXNA2, POLR2F, RAD51, SDC1, SQLE, TSC1, UBE2L3

Negative_7863	DHH, ACPP, ACTN2, ANAPC11, CRHR1, E2F3, ECSIT, GNG3, GSTK1, HTR2C, MA P2K1, NRG2, NRG4, OR1B1, OR2T12, OR3A1, OR7G3, OR8B12, OR9Q1, ORC2L, PDXK, RAB5A, RAC3, SETD1A, ST3GAL3, TGFA, WBSCR22, GABARAPL1
Negative_7864	C8B, GNE, ADRBK2, ALG6, APH1A, ATG7, BCL2, BMP6, CAV2, CD28, CDC14B, C ES2, COL4A1, CTBP1, CYP2C8, DTX4, E2F2, ER01L, FGF9, FM04, GANAB, GNB 3, IFNB1, ITGA9, MAPK9, NRXN2, OR10A3, OR10V1, OR13H1, OR1J4, OR1L6, OR2L2, OR5C1, OR6B3, PARD6B, PCCA, POLR1A, SMAD1, TDO2, THBS4, UBA1, VANGL2, VAV3, ATP6V1G2
Negative_7865	C7, FAH, GGH, LEP, LPO, SMO, ALPPL2, ATP4B, CANT1, CCNB2, CCNG2, CDC14 A, CMAS, COQ5, CYFIP1, CYP27A1, CYP3A5, DEGS1, DGKQ, DHODH, DRD2, DTX 1, E2F1, EP300, F13B, FTCD, GANAB, GNMT, IRAK2, MAD2L2, MAPK13, MYH3, NFATC3, NKD2, NT5C3, OR1S1, OR2T1, OR8K3, PDE7A, PDXP, STX5, TAS2R49 , TAS2R60, TAS2R7, TOMM40, TRAF1, TRAF3, TRHR
Negative_7866	C2, HPD, PXN, AADAC, ADSS, ATP2A3, CCL27, CCNA1, CDKN1B, DHRS4L2, EXT L3, F2RL3, GRIN2D, IL12A, ITGA7, OR1L6, PORCN, PPARD, SNAP23, STX2, C SNK1A1L
Negative_7867	ACO2, APOA1, B3GALT5, B3GNT5, BCAT2, CACNB1, CCL13, CDIPT, CLDN15, C SF1, CSNK2A2, DNMT1, DTYMK, DUSP5, EFNA2, FLT3, FRAT2, G6PD, GUCY1A3 , ICOSLG, IL29, IPMK, MCCC1, MDM4, NRG1, OCRL, OR52K1, OR8J1, OR8U1, P OMC, PPP2CB, PPP3CA, PRDX6, PRIM1, PROS1, RAD51, SELPLG, SGMS1, SHIS A5, SNAI1, VKORC1, WBSCR17, ATP6V1B1, CACNA2D4
Negative_7868	NNT, VTN, ACVR1B, B3GNT2, BMP7, CCL21, CXCL2, CXCR4, CYSLTR1, GBA3, G NB3, HPRT1, IQGAP2, MAP3K3, NCK1, OR10J1, OR14I1, OR4K17, OR4M1, OR5 2K2, PDPK1, PNPO, PRKAA2, PSME3, PYGM, SARDH, SETMAR, STX8, TAS2R38, TGFBI, WNT3, SERPIND1
Negative_7869	ADA, CRH, ACPP, ADH4, AGPAT2, ALG1, ATP6AP1, AXIN2, B3GALT6, B3GNT4, BCKDHA, CISH, CLDN14, CLDN4, CREB1, CRLS1, DHRS4L2, DPYD, FCER1G, GN B1, HES1, HLA- DMA, HMBS, IL21R, IL29, ITGAD, KIR2DS5, LDHC, LIMK1, OR2T8, OR5B17, O R9A2, PITX2, PLA2G4A, PNPLA4, POLD2, POLR2I, PSAT1, ROBO2, RPS6KA2, RPS6KB2, SEMA3E, SEMA3F, SQLE, SULT1A4, PRICKLE1
Negative_7870	CSK, ARPC5L, ATG3, CADM1, ENTPD3, HTRA2, IFNG, IQGAP3, ISYNA1, MALT1 , MAOA, MYH8, NFATC2, NKX6- 1, OR13C4, POLR3H, PTGIS, SMAD9, SNW1, STK11, TAS1R1, TAS2R41, KIR2D L5A
Negative_7871	FAS, GP5, SRM, STS, ACADS, ACOX1, ACOX3, ALAS2, CCL4, CD86, CDC27, CDH 15, CDK4, CHRM2, DHDH, F2RL1, FOXA2, GMPS, IL20RB, IQGAP2, LIMK2, MAP 3K1, MAP3K13, MAPK12, NCAM2, NTSR1, OR10H4, OR14I1, OR51F2, OR51T1, OR52E8, OR6K2, PAPSS2, POLR3A, POLR3G, PTCH1, PVRL1, RAC2, RBL2, RRM 2, SH3BP2, SPTLC2, STMN1, TLR9, TOMM40L, ATP6V1B2, PRICKLE2
Negative_7872	KMO, NGF, ALG3, B3GAT3, FZD1, HYAL2, INPP4B, IRS1, OR10A5, OR4F6, PLC D4
Negative_7873	LAT, MUT, AASS, CASP3, CCL1, CD3E, CREB3L1, GBA3, GUCA1C, LAMB2, NODA L, NPR2, OR4D9, OR5H2, PPP1CB, PROS1, RASA2, STAT2, TAS2R4
Negative_7874	GLS, TAT, ABI2, ALDH6A1, ALS2, CD01, CRLS1, CUL1, DDX52, DEGS1, EDN1, ERBB3, FABP4, FBXW11, FTMT, FZD8, GNAT3, GPX5, HPSE2, HSPB1, JAG1, LC AT, METTL2B, NCOA4, NCR3, OR11H1, OR14A16, OR4N2, OR52K2, OR9A2, PIK 3C3, PMM1, RBL2, SEMA3B, SIAH1, TAS2R8, TBL1Y, TGFA, TIAM2, TJP2, TLR 2, TUBB1, UAP1, WNT9B, HLA-DQB1
Negative_7875	ADO, C2, GSN, LSS, TNF, TYR, VCL, AKT2, ALDH1A1, BMP8B, CACNB1, CLCF1, EXT2, FADD, GMPPB, GZMB, IFNA16, IL22, IRS1, MYLK, NEFH, OR10J3, OR10 P1, OR2M2, OR51G1, OR5K2, OR8J3, PDGFC, PRKCB, PSAT1, RASSF5, SDC1, S H2D1A, SMAD3, SNW1, TAS2R9, TBL1Y, TCF7L2, TICAM1, TUBB3, HLA-DRB5

Negative_7876	AMT, ATM, CBS, FAS, GSN, PC, AARS2, ALS2, ASMT, ATP6V0B, CD27, CD70, CD C45L, CHD8, CHKB, DDX55, FGF8, GAPDH, GBGT1, GUCY2D, IFNAR2, IL13RA2, ITGB7, LIPF, MAP3K3, MAPK7, MCM5, NOS3, NOTCH1, OR10G4, OR10J1, OR5 K1, PAX6, PI4KA, PIGT, PLCD1, PLCZ1, SH2D2A, SORBS1, SPRED1, TNFSF4, TRAF2, TSNARE1, VKORC1, WNT6
Negative_7877	A2M, GPT, MUT, SYK, VCL, AASS, ALDH1B1, ATP4A, CACNA1C, CNGB1, CYP27A 1, CYP2B6, CYP2F1, DLL1, ELK1, FCER1G, GLUD1, HMGCS1, ICOS, KLRD1, MA P3K2, MCM7, MGAM, NUDT12, OR2B2, OR52E6, PDE10A, POLR2A, PON2, TAS2R 1, UAP1, UBE2L6, ZIC2, ATP6V1B2
Negative_7878	AMT, CRK, GAA, MUT, PRL, TFG, UBB, ACYP1, ADCY1, ADIPOR1, ADRB2, APOA2, BACE1, CASP7, COQ3, DARS, DNMT1, ELK1, ENPP2, GSTA3, GSTO2, IL29, JA G2, LICAM, LRRC4C, NT5C, OR10C1, OR11H6, OR2B11, OR2L2, OR2Y1, OR4C6, OR52D1, PAX6, PI4KA, PIK3R4, PLAUR, PPAT, SEMA4C, TNFSF14, YARS, AR HGEF12, PRICKLE2
Negative_7879	F2R, NPY, SRM, ALDH3A2, ALDH4A1, ARAF, ARHGAP5, ARPC2, ATP5D, CD79B, CDH3, CFL2, CXCR5, EGLN1, FLOT2, FRAT2, GUCA1A, HES1, ITGAM, KLRC3, L EFTY1, LEFTY2, MAD2L1, MAP2K6, NRXN1, OR1G1, OR1S2, OR2A2, OR2B11, O R51T1, OR52H1, OR5A2, PIGC, PIGH, PITX2, PLEKHA8, ROBO2, SETDB2, SHC 1, STK36, TYROBP, UCK1, WNT2B, HLA-DPA1
Negative_7880	CALML5, DPM1, NAGLU, OR2A14, PDCD1, PLXNA1, RALGDS, ATP6V0D1
Negative_7881	BID, MAX, ABAT, ARD1A, CACNG6, CREB5, DNMT1, GAL3ST1, GNA13, HLA-G, NAT5, NUDT5, OR51E2, OR5T3, OR6N2, PRNP, PTK2, ROBO3, RRM1
Negative_7882	CP, ID3, ABL2, ACY3, ADH1A, ARRB1, B4GALT2, CES7, EFNA2, EPB41L3, ETN K1, FPGS, FSHB, GLI2, HIP1, HTR5A, KLRC1, LIPG, PDE3A, PER1, PSME1, RA PGEF3, SCIN, SPRY3, SPTLC2, UGT2A1, UPP1, VAV1, HLA-DPB1
Negative_7883	AK5, FAH, GK, GNE, AACS, ACSL1, ADORA2B, ATP6V0B, B3GNT4, BCL2, CCNB1, CCR9, CDC7, CMPK2, CNDP1, CTTN, EDAR, F13A1, FARSB, FOXO1, FUT8, HTR 7, IL22, IRAK2, MAOA, NPAS2, NRXN3, OR2T3, OR5H6, OR5T3, OR6C6, PDE8A, PDGFRB, PDHB, PHKA1, PPP1R3D, PPP2R2D, RASA1, RFNG, SLC2A1, SMAD1, ATP6V1E2, SLC25A31
Negative_7884	CD4, CP, AGPAT1, AQP7, ARPC5L, CACNA1I, CCR1, CD247, CDC20, CXCL11, D USP10, E2F1, ENO2, GNA14, GSTM2, IFNB1, IL1B, IL29, IRAK2, ITGA10, IT GAV, LIPT1, LYZL1, MAP3K3, MTHFS, NKX6-1, OR4P4, OR51G1, OR5P3, OR6K3, PAPSS2, PIAS3, POLR3K, PTPRB, RDH8, T AS2R3, TBXA2R, TUBA3E, VAMP2, EIF4EBP1, MAPK8IP2, MAPK8IP3, TNFRSF 10D
Negative_7885	AR, RB1, ALG12, CAMK2A, CASK, CD244, CD27, CD28, CD40LG, CRHR1, DRD2, ENO2, EPHA6, EPHB4, FDPS, KIR2DL4, NFATC3, OR1S2, OR2L2, OR2T33, OR5 2N4, OR5D16, OR5F1, OR6K2, OR8A1, OR8S1, ORC1L, PAK1, PDE3A, PIP4K2C, POLE4, PSAT1, PSEN2, RFXANK, SSX2IP, TRMT11, B3GALNT1
Negative_7886	CTSS, DHFR, GNG13, LAMB3, OR1L3, OR4E2, PLCB1, SETD8, UGP2
Negative_7887	GP6, KHK, NLK, PGP, B4GALT1, B4GALT2, BIRC3, CKMT2, CPOX, CYP11B2, HT RA2, IGSF5, IKBKB, INPPL1, LIPE, MYH2, NEFM, NGEF, OR11H1, OR1F1, PDH B, PFKFB2, PGM3, POLR1C, PRKAG2, PTGDS, PYGM, RALBP1, RELB, SAT2, SET D8, SKIV2L2, TUBB4Q
Negative_7888	F2R, IL7, LAT, AARS2, ACACA, ACP2, ADCY5, ALDH4A1, ALDH7A1, ALPI, CAC NG8, CD44, CD74, CES2, CLCA2, COX15, CYP2A13, CYP2C18, DDHD1, DDX18, FABP1, GALE, GALNTL1, GCLC, GNA11, GNA12, HADHB, HARS2, HIF1A, HNF1B, METTL2B, METTL6, MYH7B, MYLK2, NKD1, NUMB, OR12D3, OR4D6, PARD6B, P PP2R1A, PRKAG3, PRLR, RALA, SCP2, SFRP1, THBS3, UROD, YWHAH, PRICKLE 2
Negative_7889	GSR, SRC, TH, CD46, CLCF1, CLDN4, COL4A1, GNG3, HARS, HCCS, IMPDH1, IT GA7, NCR1, OR5L1, PFKFB3, PPP3CA, PYCR1, RARA, RASA1, SDC4, SETMAR, S MARCA5, SMURF1, THBS2, WNT8A, GABARAPL2



Negative_7890	PGD, ABAT, ALG10, AOC2, ARHGEF6, ARPC4, ASCC3, B3GNT2, CCL1, CCND2, CD19, CD46, CDC27, CEBPA, CER1, CLDN5, CPS1, DTX3L, GADD45A, GAS1, GIT1, H6PD, HLA-DRA, HSPA1B, IL28A, INHBB, LIMK2, MMP7, OR10T2, OR13C8, OR2D2, OR6C74, P2RX1, POMC, PRKAR2A, PSEN2, RAC3, RND1, ROBO3, RPS6KA6, SLC27A5, SLIT2, TIRAP, TNFSF18, TUBB1, ALDH18A1
Negative_7891	STS, TXK, ABLIM1, ACAA1, APOA2, CCL16, CLDN16, CLDN6, DHODH, ELK1, EPHB2, GALNT12, GCNT2, GLG1, GRIN2B, HSD3B2, LAMB2, LARS, MGST1, MIOX, NFATC3, NQO1, OLR1, OR2A14, OR4F15, OR5F1, P4HA1, PANK4, PFN4, PTPRF, SLC2A4, SMARCA2, TGFB3, THBS2, UNC5B
Negative_7892	GDA, SP1, B3GAT2, BET1, CBR1, COL4A2, DARS2, DNMT3B, E2F4, EFN3, EPHB1, FADS2, GALE, GALNT12, GNAO1, HTR5A, MAP3K4, NAGS, NEFL, NTNG1, OR4K2, OR5H2, OR7A5, OXCT1, PLA2G6, PLCZ1, PYGB, RBKS, RHEB, SLC2A1, STAT5B, STX12, TJP3, TNFRSF9, CACNA2D2, PDCD1LG2
Negative_7893	ATP6VOC, CACNA1H, COL1A1, CYP26A1, DGKG, FUT7, GOT1, IPMK, ITGB7, NCF2, NTN1, NUDT9, OR14C36, OR4D5, OR4M1, ORC4L, PDE6G, PHGDH, PRODH, RAPGEF3, SH2D1B, SNW1, SPCS3, MAPK8IP3, SUV420H1
Negative_7894	CFI, FN1, TPR, ALAD, ALPI, ARHGEF4, B4GALT6, C1QC, CCL20, CD40LG, CDIPT, COQ7, DHCR24, EDNRB, F2RL1, GMPS, GNA13, GSTO2, IGSF5, LAMB3, LCM T1, MAGI1, MAP3K8, MYH7, NANS, NKX3-1, NOS3, NPR2, NQO1, OR14J1, OR2M7, OR7G2, PFKFB3, POLR2J, PTPRZ1, SD C3, SIPA1, TPH1, TSHB
Negative_7895	CAD, FGG, MPL, ACAD9, AGTR1, APOE, ARPC5L, CLDN15, FLT4, GCLC, OR2F1, PFN3, PIGC, PIK3R2, RHEB, STAT5A, TUBA8, WASF2, XYLB, MAP3K7IP2
Negative_7896	CSK, DCT, MOS, OAT, WAS, ACOX3, ACTG1, ARHGEF1, CFL2, CSAD, DUSP2, FGF R3, GPLD1, HLA-DOB, MAN1B1, MAP4K2, OCLN, OGDH, OR2D2, OR52W1, PON3, PPP2R5B, RPN2, SMC1A, TICAM2, UXS1, MAPKAPK2
Negative_7897	AMH, CSK, INS, OAT, AXIN1, CCL25, COL1A1, CSNK1A1, DTX3L, EHMT2, GCNT2, GMPBP, GRIN2B, HHIP, HRH1, IL20, ITGB4, KLK3, NEUROD1, NMNAT2, NOTCH1, OR10G7, OR1L1, OR52E2, OR5A2, OR5H2, OXCT1, PLCB3, PRKCE, PSEN1, PTDSS2, QARS, SKP2, SOCS4, TNFSF8
Negative_7898	CRH, OAT, PC, ADRBK2, AGRN, APOE, ARHGEF1, ARSD, ASMT, ATP6AP1, BUB1, CCL16, CDK6, CFTR, CHSY3, EHMT2, EIF4E, FMO2, GRIN2C, HARS2, HMBS, IL15, IL19, ITGB3, LTBP1, MAFA, MCCC2, NADSYN1, NAT5, NPR1, NRAS, OR10P1, OR4F6, OR8K3, OXCT1, PMM2, POLR1C, PPP1CA, PPP2R5B, PPP3R1, PYCR2, RFWD2, SMPD1, TAS2R3, TGFB2, MAPK8IP2
Negative_7899	CSK, IL3, TNF, ACAT1, ATN1, CBLB, CCKBR, CDKN2D, CXCL16, CYP2C8, CYP2J2, DDOST, FGF2, GUCY1B3, HEXA, IFIH1, MDH1, NFATC1, NR4A1, OR56A1, OR5D14, PDE1C, PPP2R5C, PRKAG3, SENP2, SNW1, WWP2, TNFRSF10D
Negative_7900	AGRN, ALOX12B, ARNT, BACE2, BMP8A, EIF4E2, GGT5, GPX5, LDHAL6B, MAP4K3, PLCB3, RHEB, SH3BP2, SLIT1, SQLE, SRD5A2, WWP2, ATP6VOD2, ST6GAL NAC5
Negative_7901	CFH, AKR1C1, ALDOB, CCL24, CSAD, CYP1A2, CYP27A1, EI24, FMO2, FMO3, GALM, GNAI1, IL23R, NR1D1, PDGFA, POMC, PPP1R3B, PTGER1
Negative_7902	ADCY2, CD79B, LRAT, OR2F1, PCK1, PDHA2, PYCR2
Negative_7903	FGF7, KARS, NSDHL, POLD2, SEMA3D
Negative_7904	ID4, IL8, RET, ACVR1C, ALDOC, ARPC1A, ARPC2, AXIN1, BET1, CADM3, CCR3, CHPF, CLDN7, CYP2A7, CYP2C9, DDX19A, DOCK1, DRD1, ENO2, FTMT, FUT4, GALNT7, GCNT1, HHIP, IAPP, IRF5, ITGAE, MAOA, MCM5, MDH1, MDM4, MNX1, MOV10L1, NQO1, OR10G7, OR11L1, OR13F1, OR1J1, OR4L1, OR8K1, PPBP, PP CDC, PTGES2, PTGS2, SDC4, STK11, VAMP2, ZBTB16, TNFRSF12A
Negative_7905	CKB, IL7, UBC, COL6A1, CYP2S1, GPD1, KIR3DL2, MAN1C1, NFE2L2, OR4F15, OR4N5, SOAT2, WHSC1L1

Negative_7906	AK1, C8B, F8, GH1, GLA, IL5, IL6, ADCY6, AXIN1, B3GNT5, CAPN2, CCNB2, CNE1, CD22, CDKN2B, CHRM5, CLTB, CSDA, CX3CL1, DGAT1, GNAI3, GPLD1, GRIA2, HAP1, HSD11B2, HTR7, ITGB4, KCNQ1, LRAT, NCKAP1, NMNAT2, ONECUT1, OR52B6, OR6A2, PAX6, PGAM1, PPP1R3B, PTGFR, PTK2, RAD51, RASGRP2, SARDH, SESN3, SPTLC1, SQLE, SUCLG1, ZMAT3, ATP6VOD1
Negative_7907	BTD, FOS, FST, PAH, RB1, TXK, ADCY9, ADH4, ADSS, AKR1B10, ALDH6A1, APC2, ARD1A, ATP13A2, ATP5D, B4GALT2, BACE2, CTNND1, DFFB, DLAT, EGFR, FGF4, GNG12, GRPR, IGFBP3, IL5RA, INPP5B, KIR3DL3, MCM2, MGAT1, NME6, NT5C1B, NUDT9, OR1A1, PDE8A, PDK1, PIM1, PLA1A, POLR2G, PTPRZ1, PYCR1, RPS6KA1, RXRG, SKP1, SLC2A1, SRD5A2, TNFSF14, TUBB3, TYRP1
Negative_7908	OAT, TEC, ACVR1, AMHR2, ARSA, ATP5I, ATP6V1A, CCL1, CHPF, CHRM2, CHST12, CHSY1, COL4A6, CSF2, CTSB, DAG1, EXOC7, FGF14, FZD1, GMPS, GRB2, GRIA3, MAPT, OR2A4, OR2F2, OR2T6, OR52I1, PAX4, PFAS, PI4KB, PIK3R1, PIP4K2C, POLR3D, POLR3K, RUVBL1, SEMA3G, SMAD1, SPCS1, SRGAP3, TGFB2, TRAF5
Negative_7909	BMP2, FOXO3, MAP3K13, NTF4, SETD8, SV2C, TUBA8, ULBP1
Negative_7910	GH2, NNT, UBB, BCAT2, CCL22, CD79B, CDK7, CPT1B, CSF3, CYP1A2, DRD2, EFNA1, FOXO1, IL8RA, LAP3, MMP14, MYH3, NEUROD1, OR10G8, OR14C36, OR51B6, OR56A1, PORCN, RASGRF1, SEMA4G, SH2D1B, SPRY4, STK36, TNFSF4, TUBA3C, TNFRSF18
Negative_7911	CHRD, CLDN5, HARS, KLK3, OR1S1, RAD51, SPTLC1, VAMP1
Negative_7912	SP1, AASS, ALDH1A1, ALOX15, ANGPTL4, CDKN2B, CNDP1, CNTFR, EFNB3, ERBB3, F2RL3, GSTM2, HMOX1, LIPT1, MAPK7, OR6C70, PDGFB, PFN4, PIP4K2A, PRKACB, SLC27A5, STX18, TCIRG1
Negative_7913	ADC, AGK, ALDH1A1, B3GNT5, CCL22, CCNB1, CLDN10, COL6A2, CSNK1E, DERL1, GSTA1, NRXN3, OGDHL, OR4C11, OR6C75, PDE1A, PIGC, PRKAG2, RDH12, SLC25A5, WNT10A, TNFRSF12A
Negative_7914	B3GALT6, FUT5, NSD1, THBS2
Negative_7915	DLD, FOS, NGF, TFG, AADAC, ALDH3A2, ALG12, AMPD3, AREG, ATP2A3, CACNB2, CCL8, CCNA1, CCND3, CMBL, COQ6, DAAM1, DHODH, EI24, FGFR3, GMPR2, IL12RB1, LCAT, MAPK14, NCF2, NT5M, OR14I1, OR4X2, OR8A1, P2RX6, PAFAH2, PANK2, PLA1A, POLA2, POLD1, PRPH, PTPN1, RPS6KA3, SRD5A1, TRIP10, ULK1, VTI1B, ARHGEF12, ST6GALNAC4
Negative_7916	CD2, OGT, TFG, ABLIM2, ACADVL, ARHGEF2, ATP50, C7orf16, CACNG5, CCNB1, CDKN1A, CES1, COL4A2, CYP2J2, DHODH, FGF20, GALC, GGCX, GLO1, GLS2, GMPR2, GRIA1, GSTA5, GTSE1, HIBADH, IL12A, IL5RA, ITGAE, KIR2DS5, KLB1, LIPF, MAP4K4, NEFH, OR4N4, OR52N4, OR6C76, OR7A5, OR7D2, PLAUR, POLR1B, PROS1, PTAFR, SDHD, SETD8, TACR1, TGFB2, UNC5C
Negative_7917	BTK, ID3, ADCY9, B3GALT5, BCAT2, CTSL1, CYP2J2, DDX23, DHCR24, DHRS4, FZD1, GPD1, HEXA, HSD3B2, ICOS, IL12RB1, OR10A5, OR2B2, OR4K14, OR52H1, OR6X1, OR9Q1, POLE, POLR1D, POLR3D, PORCN, PVRL2, RPN2, STX1B, STX4, TM7SF2, TSC1, TYMS, UBE2K
Negative_7918	IL3, IL4, ATP6AP1, CDC27, EDA2R, GATM, MAPK12, MAT2B, MCM4, MYH15, NEUROD1, NRG4, NT5C, OR4F17, OR51B5, OR52E6, PNPLA3, TFDP1, TLR4, MAPKAPK5
Negative_7919	OSM, PTS, SMO, ALG1, ATG3, ATP5B, B3GAT1, CACNG7, CADM1, CYP21A2, CYP3A43, DGKZ, DGUOK, EXT2, F2RL2, FLOT2, GALK1, GALNT3, GALNT6, GJA1, IL28B, INADL, INPP4A, MTHFD2, NAMPT, NAT1, OR52B6, OR5AR1, OR6N2, PIGF, SIPA1, SOX17, SRGAP3, TGFB1, TUBB1
Negative_7920	MYC, ATP6V1D, B4GALT5, DHRS9, FGF11, FGF22, FOXA2, GSTM2, MAP2K5, MAPK13, OLAH, OR2V2, OR4D1, PIK3R1, SMPD3, SPHK2, STMN1, TKTL1
Negative_7921	MAX, ACAT1, BCKDHA, CCL21, CHIA, COX15, DHCR24, FCGR3A, GNPAT, IL12A, MAPK9, OR10AG1, P2RX5, PDGFC, PRKAR1B, RAP1A, RARA, SMARCA5, ST3GAL4

Negative_7922	PLN, AGTR1, ATP5I, CCL4, CLDN22, GLI2, HIF1A, IL1R2, LFNG, LIMK2, MAM L1, MAP2K1, NOTCH2, OR5AC2, OR6B3, PIAS2, SEMA4A, ST8SIA5, TACR2, TA S2R41, TRAF6, ULBP1, WNT3, YOD1, ST6GALNAC4
Negative_7923	ALCAM, ALOX5, CACNG4, CAMK2B, CAMKK1, CDC23, CDKN2C, CLOCK, COMP, HC CS, IL17B, ITCH, MAML2, MTAP, MYH7, NFASC, NFE2L2, OR1J2, OR2T2, OR5B 21, PAPSS1, PIK3C2B, PLAU, PSME3, PTGES, RFXANK, SARS, SV2B, TAS2R42 , TM7SF2, ZMAT3
Negative_7924	AMHR2, BDH1, BUB1B, CACNG1, CHRM2, COX10, CREB3L3, EDN1, FASLG, FGF2 1, FGF9, FM05, GALNT5, GARS, GSTP1, HRAS, ITGAV, LFNG, MASP2, MGAT5, N ADK, OR2V2, OR4C12, OR51I2, OR5I1, OR8K3, PDE10A, PDE1C, PTPMT1, SIP A1, SREBF1, SUV39H2, TMLHE, TPM3, TRMT11, TUBB2C, TUBB4, USE1
Negative_7925	MSN, XDH, COL5A3, CSNK2A1, EHHADH, ETNK2, KIR2DL4, KIR3DL1, NR5A2, O R13C9, OR5P2, PPARA, SIAH1, UROS, ST6GALNAC3
Negative_7926	ADRB3, ATP5L, CDS1, CNTN1, CYP3A4, GBGT1, GJD2, ITGA2B, MDM4, OR5AK2 , STX1B, UCP1, VAMP2
Negative_7927	ACACA, CSNK1A1, HAP1, MAN2A1, NFASC, OR10G3, PAK6, PIK3C2A, RBKS, TK TL2, TOMM40, TPMT
Negative_7928	HGD, CALML5, ERO1L, GADD45A, GSTA2, MAPT, OR4C16, OR56A3, PORCN, RPN 1
Negative_7929	IL7, ACP5, ACSS1, ACY1, AGPAT4, CAMK2D, CDKN2D, COL5A1, CYP27A1, E2F 4, FASLG, GRHPR, GRIN2A, HCST, JAM3, LRAT, MAN1B1, MAP2K7, MGAM, MYH3 , NOTCH1, NRAS, NTSR1, OR7A5, PLOD2, POLR3B, PPP1R3B, PRKAR1B, PTDSS 1, PTEN, RAPGEF2, RRAS2, TFPI, TLR3, UGCGL2, VAMP1, WNT10B, YARS
Negative_7930	FER, ADIPOR1, ATP2A2, ATP5J, CAMK2G, DGKI, EPHA3, GALK1, GCNT2, LTBP 1, OR2K2, POLE3, RUNX1T1, TNFSF9
Negative_7931	CKB, FYN, AARS2, ABLIM1, ABLIM3, ADRBK2, ALCAM, ARPC5L, BIRC2, CCL15 , CDK7, CLTC, CPT1B, CPT1C, CYP2C8, DAAM1, DHRS3, DPAGT1, EXTL2, FCGR 3B, GCH1, GLYCTK, GNPAT1, GPX7, HLA- DOA, IFNA5, IL8RA, KIR2DS5, LCMT2, LEPR, MAP2K5, MGAT3, MMP2, NADK, O R2L3, PERP, POLE2, POLE4, PRLR, PTGER1, UGT2B11, GABARAPL1
Negative_7932	C8G, F7, HDC, IVD, ATP5I, CLTC, DAAM2, FGF20, GCLC, HRH1, LAMC3, LCP2, ODC1, OR1B1, OR1L6, OR6F1, PTGES, TPH2
Negative_7933	DIAPH1, OR2T11, PTGFR
Negative_7934	C9, F10, ITK, PAH, ALG1, AQP7, ASS1, BDKRB2, CACNG2, CCL17, CHRD, CIIT A, CYP11B1, DGKB, EDA2R, FPGT, FZD2, GALNT1, GSTA3, GUCA1C, HADHA, ID I1, MAP3K13, MAP3K7, MAP4K2, MPDZ, NAGA, OR4N4, OR51I2, OR52B4, OR52 B6, OR52K2, OR5M3, PFN1, PGM3, PIP5K1B, PLD2, PVRL4, RBX1, SEMA3G, SH 3BP2, TICAM2, TUBB1
Negative_7935	FUK, ACSL5, ACVR2B, AGRN, ASRGL1, ATP6AP1, BMP2, CD38, CES1, CLDN18, ENTPD2, FGF21, GFPT2, GTSE1, IRF9, ITGAD, KLRC4, MARS, MCM3, MTMR2, M YL2, NAT5, NPR2, OR52E4, OR5AK2, OXCT1, PFN3, PLA1A, PPP1CB, RBKS, SP RY4, TAS1R2, TAS2R3, TRPC1, VAMP3, ALDH18A1
Negative_7936	EBP, MAX, ACOX1, ADRA1D, ARHGEF6, ARPC2, BDNF, C1QC, CACNB2, CDC25B, CDK4, CDKN2B, CLDN1, EGLN3, EPHB1, GP1BB, HAGH, HMBS, HSD3B2, KIR2DL 4, LCMT1, MAPK8, NANP, NCR2, OR11L1, OR4C46, OR51B6, OR51D1, OR5D13, OR5F1, PCK2, PHKB, PIK3C3, PIK3CA, PLXNB1, PPP2R2C, PTDSS2, PTTG1, Q ARS, RRM2, SETD1B, SOAT2, ST3GAL4, TICAM1, TSNARE1, GABARAPL1
Negative_7937	IL8, ACSM4, ACYP1, ADRB2, BIRC3, CALML3, CASP10, FM02, GALE, GSTO2, L IPE, MGAT5B, NFKBIA, OR2A2, OR5T1, OR8K1, ORC5L, PAX8, PFN1, PKLR, PL OD3, SLC25A6, SV2C, TJP1, CSGALNACT1
Negative_7938	GHR, TPR, ACTA1, ATP13A2, CACNB4, CD8A, CISH, CLDN3, CMAS, CYP3A43, C YP8B1, DAAM1, E2F3, E2F4, ERBB4, GRIA2, HTRA2, IL22RA1, ITGA4, KYNU, LARS, LTBP1, MAP2K6, NFAT5, NOD1, OR9I1, PTGES, RDH16, RPS6KA5, SCD5 , SV2A, TBL1Y, TPK1, WASF3, WHSC1, WNT3, YES1, MAPK8IP1

Negative_7939	MUT, ALDH1A2, AXIN2, BMPR1B, C1QC, CDS2, ETNK2, FABP1, FMO3, HLA-DRA, IDH3A, NARS, P4HA2, THY1, WNT2B
Negative_7940	GP6, ATG3, BDKRB2, BLNK, CYP2S1, EIF4E, ENPP2, HTR2C, IDI2, IFNAR1, MAP2K5, OR4L1, OR8I2, PAK6, PRPS2, PSAT1, SLC27A1, STX7, ATP6V0D1
Negative_7941	INHBE, OR52N4, PPT1, TGFB1, TNFSF11
Negative_7942	GLA, ME1, SMS, ACSM3, ADH5, ADIPOR1, ADSS, AKT2, AMD1, ARPC5, CCL17, CCL27, CMAS, CRKL, CSNK1D, CYFIP2, DDHD1, GJA1, GLUD1, HTR2B, NANP, NCAM2, NFATC4, OR1C1, OR2S2, OR51T1, OR52A5, OR9G1, PIK3CA, POLR2H, POLR3D, PRSS1, RPSA, SEMA3D, SEMA3F, SEMA4C, SETD7, SH2D1A, SPRED2, SUCLG1, TNFRSF8, TUBAL3, UGCGL1, WASF3, ATP6V1E2, PNLIPRP2, TNFRSF11B
Negative_7943	CD4, IL6, ITK, OTC, BCKDHB, CADM1, CARS, CCNE2, CCR5, CLDN5, CSF2RB, CSNK1G1, CXCL13, ETS1, GPX7, GRIN1, ICAM3, MAP4K1, MYH13, PIGQ, PIK3C2A, POLR3G, PPARG, PPP2R1A, SETD1B, HLA-DRB4
Negative_7944	CGA, BMPR1B, BTRC, CASP8, CSF3R, DHRS4L2, FOXO3, IQGAP2, MAP3K6, NAMPT, NOX1, OR5K1, OR8K3, POLR2E, PPP2R5E, RELB, SESN3, SOS1
Negative_7945	NGF, ACY3, HADHB, HIBCH, HMOX2, ITPA, LAMB4, POLE3
Negative_7946	ACSL3, APOA1, B3GAT3, CD86, CHPT1, CPT1B, DGKG, FGF19, GALNT7, GNB3, ITGA5, KIR2DL3, MAP2K3, MTHFD2, NAE1, OR4S1, OR51I2, OR52I2, OR52N5, OR6K3, OR9A4, P2RX1, PIAS2, PPP3R1, RERE, STAT5B, TRAF4, TYMP, WIF1, SLC25A31
Negative_7947	IDS, LEP, NF1, SHH, TYR, ALAD, CDH5, COL4A1, CRHR1, DDX18, DDX56, DHCR7, ECHS1, EPHA6, EPHB6, F2RL2, FADD, FZR1, GNAZ, GP1BA, HHIP, IFNA21, IL13RA2, INHBB, IPMK, LCAT, MAP2K5, MRAS, OR13C9, OR51L1, OR52D1, OR8K3, PMVK, POLD2, PTGER1, RAB23, SULT1E1, SV2B, TAP2, TM7SF2, TP53, TYMS, VAMP3, WNT16, ZIC2
Negative_7948	FGG, ARHGEF6, CCR3, CDC2, CDKN2D, CLDN19, EGLN3, EPHX2, FGF7, GATM, HTR5A, INSR, MAP3K5, MAP4K3, MGAT3, MYH7, NPAS2, OR2T3, OR4D1, OR4L1, OR51Q1, OR52R1, PIK3CA, PIK3R5, PMVK, POLR2K, PPP2R1A, PPP2R5C, PTGIS, SETD1A, SMARCA2, STAT5B, TAS1R2, TGFB1
Negative_7949	C2, F12, APPL1, CES2, COX10, CYP3A7, CYP8B1, GAL3ST1, GAS1, GCNT3, IDH1, ITGA7, MAN1C1, MMP2, MTAP, OR13C2, PRKAG1, RGS3, RXRA, SOS1, SPI1, TUBB2B, XYLT2, YES1
Negative_7950	ID3, STS, ABAT, ACSM1, CAMK2A, CPS1, FZD7, IGSF5, ITPA, KLKB1, PIP5K3, POLR2C, PPA1, RHEB, STX6, TUBA4A
Negative_7951	EPO, FGA, FUK, PTS, SFN, ABL2, ACTA2, APAF1, APOA1, BIRC5, CD46, CD80, CDH4, CHPF, CLDN2, CSNK2B, CXCL9, E2F2, EPHB1, FSHR, FTH1, HTR5A, IDH1, IFNA4, IGF1R, ITGAD, LAMB2, MAPK7, METTL6, MGST1, MYH14, NCR2, NEU2, OR2A42, OR2L8, OR2M4, OR56A3, OR5B12, PDXP, PFKFB2, PPP2R2D, RFW2, SPTLC2, SSH2, TAS2R14, TAS2R8, AASDHPPT
Negative_7952	GGH, LAT, SRM, ACSL6, ACTG2, ALG2, B3GALT6, BBOX1, CCL8, CNGB1, CSF3, CTBS, GNAZ, ICOS, IL13RA2, ITPA, KCNQ1, LAMA3, LCP2, MGLL, NEU1, NODAL, NOS3, NRCAM, OR4K1, OR51I1, PAK4, PIGW, PLOD2, PPARG, PTPRB, STAT2, ULBP1, SERPING1
Negative_7953	ALPPL2, CDKN1A, CKS1B, CYP17A1, ENTPD2, GALNT7, GNAI1, GSTP1, IMPDH2, MAP3K11, NEU1, OR8S1, POLR2J, PRKG2, PVRL3, TAS2R3, TUBA8, SLC25A31
Negative_7954	ADCY1, ARSE, BRAF, CCR7, CNTN2, DDHD1, DDX23, DRD2, ESAM, FGF1, GALE, GCNT2, GGCX, HCLS1, HSD17B8, IMPA1, LCMT1, MAP3K5, NCF1, OR2T3, PPAT, PPOX, PTGIS, RPS6KA5, SELP, SLIT2, SMAD7, TPI1
Negative_7955	CFD, ABAT, B3GALT5, BAAT, BUB1, CAMK2D, CAV3, CCL11, CDS1, CNDP1, EXT1, KIR2DL3, LCMT1, LCMT2, LEFTY1, LGMN, MAP3K1, NOX1, OR11H4, OR2D3, OR2T11, OR6N2, OR8G1, P4HA2, PIPOX, PPP1R3B, PTCH2, SHC4, SPHK1, STAT1, TNFSF12, ZMAT3

Negative_7956	CKM, CHAT, EARS2, ENPP3, EPB41L3, FM03, GUCA1C, IL4R, ITGA9, OR2S2, OR4K13, OR5AP2, OR6K6, PLXNB2, RPSA, SGPP2, TAS2R9, TUBA1A, PNLIPRP1
Negative_7957	F9, MUT, ACAA2, AHCYL2, ALS2, BACE1, CHSY3, DDB2, DKK4, DPM1, DTX4, EGFR, EPHA2, FRAP1, GCAT, GJD2, GPX7, HTRA2, MAD2L1, MAPK1, MGST3, NEUROG3, OR11H1, OR2A42, OR2F1, OR51A2, OR5K1, PDE7A, POLE2, POLR2K, PRKAA1, PSPH, RAC2, SSH3, SUCLG1, TGFB2, TUBAL3, UCK1
Negative_7958	PVR, RB1, AANAT, AARS2, ARAF, BDKRB2, C1QA, CLDN20, COASY, COMP, CYP2C19, DCXR, GCNT1, GSK3B, HIBADH, IL10, ITGAD, NEU1, OR5AR1, PLA2G2D, PTK2B, SDC4, STAT6, TP53I3, TUBB2B, UBE2L6, VNN1, ALDH18A1, HSP90AB1
Negative_7959	PLN, AOC2, APOE, ATP5F1, COQ6, GRIN1, H6PD, ITGAD, LEPR, NEU1, OR4N2, PNLIP, PRPH, PTCH2, SENP2, UCP1, WHSC1, AASDHPPT
Negative_7960	BAX, AASDH, ALG10B, CDK6, KARS, KNG1, LIPE, LLGL1, MTMR1, NARS, PER1, PIK3C2B, POLE, PPM1B, PPP1R3B, PTPRJ, RAPGEF2, SRD5A1
Negative_7961	BTC, C3, PLN, ALG8, APOA5, B3GALT4, CACNA1H, CCKBR, CCNE1, CD3E, CTNNA1, CYP26C1, DMGDH, DUSP16, ENAH, FARS2, GDF5, GNA13, HAAO, HSD11B2, IGF1, IL12A, IL13, LIPA, MAOA, MKNK1, NME4, OR4D6, OR51A2, OR6C3, OR6K6, P2RX5, PANK4, PDE11A, PRKACA, PRKCD, PRKCQ, RAPGEF2, RASA2, SHC3, STK11, TLR4, HLA-DQB1, PRICKLE1
Negative_7962	ATM, SRC, ACADM, ACVRL1, ALG10B, B3GALT5, BPGM, CACNA1B, CMPK2, CXCL5, CYP11B1, CYP26B1, CYP4A11, DCXR, DPM1, DTX3, FABP3, FM05, GUCA1A, HCST, HES1, HEXA, HSD3B2, IFNA5, MAPK14, MKNK2, MTAP, NEU3, OR2A14, OR52E4, OR52I1, OR6C76, PHPT1, PIGH, PLXNA2, PNPLA3, PPP3CC, PRKCZ, PRKY, PRLR, PTPRF, PVRL2, SELL, SLC25A6, SPCS3, TJP2, YKT6
Negative_7963	ADH6, ALDH3A2, B3GALT5, CDC23, CHIA, CLDN5, DUSP7, FGF8, GLUD2, GMPR2, GNA13, GP1BB, HCLS1, HLA-DOA, HMBS, HMGR, HTR2C, IDH3A, IL2RG, ITGAL, LPAR1, MYH14, NMNAT3, OR1L1, PANK1, PDE4B, PFKL, PNPLA4, PPM1D, PRKAA1, PROS1, SLC33A1, ST8SIA5, SUV39H2, VANGL1, ZNRD1, C1GALT1C1, MAPK8IP2, PLA2G12B, ST6GALNAC4
Negative_7964	ACAT1, CHRDL, ECSIT, EIF4E, ERBB4, GNRH2, GSTT1, NRAS, OR5P2, OR6K2, PARD6G, PDGFC, PDHB, RPIA, SH2D1B, TSNARE1, WASF3, WNT2, CACNA2D3
Negative_7965	DHH, MSN, RDX, RET, TH, ALG12, CDKN2A, CYFIP2, E2F2, ER01L, FBP1, FZD7, GADD45B, GART, GGCX, GRM5, GRPR, HCCS, HMGCL, HMGCS1, HTR2A, INADL, LARS, MGST1, MKNK2, MYH1, NCAM1, NMNAT1, OR6S1, PHKG1, PLXNC1, POMC, RENBP, ROCK1, SESN2, SIPA1, SMAD5, TGFB1, TLR9, TSC1, WNT11, WWP1, YARS, HLA-DPA1, ST6GALNAC1
Negative_7966	HK2, TNN, ARRB1, ATP5J, BAAT, CACNG1, CARS, CBR3, CD74, CPT1A, FGFR1, GMPS, HMOX2, IL6ST, ITGB6, MAGI1, NFASC, OR1K1, OR6C4, OR8J1, ORC2L, P2RX3, PDE9A, PIK3R2, SEMA4G, SMAD2, SSH1, STX5, STX8, TAP1, TCIRG1, VKORC1, MAPK8IP2, PHOSPHO1, SERPINC1, SLC25A31, TNFRSF14
Negative_7967	CKM, MET, ADIPOR1, AGMAT, AREG, ASIP, ATP5G2, ATP6V1D, CCL7, CD40, CTNNA3, DMGDH, ENO2, FGF4, FLOT1, GGT6, GNRH1, GP1BB, HPSE, IL10RB, IRAK1, MGST3, MIOX, MYH6, NARS2, NEUROD1, NFX1, NOTCH2, OR10R2, OR2A4, OR2A5, OR2T12, OR3A3, OR5C1, OR5M3, OR9Q2, P2RX1, POLR2G, SDHA, TOLLIP, WNT9B
Negative_7968	GNMT, JAM2, OR10G4, OR5B21, TJP3
Negative_7969	ACAD8, GADD45A, IDH3G, MAP3K2, MYH13, OR13C2, OR1D5, OR5P3, OR6K3, PAK3, SDC1, TJP3, ATP6VOE1
Negative_7970	PML, TEC, ALDH1A1, BMP2, CDKN2A, CTNNA3, EDN1, FIGF, GGT6, GLO1, NR4A1, NRP1, OR1L6, OR2T4, PARS2, PLK1, PPP1CA, PYGL, TAS2R3, THTPA, TIAM2, TNFSF14, ULK3, TNFRSF1A
Negative_7971	ID2, ADRBK2, EXTL3, HSD11B1, PIK3CD, PPP2R5E

Negative_7972	DLD, PLG, TPR, ACOT12, ACVR2A, ARPC3, B3GAT1, B4GALT5, CCR5, CD247, CDK4, CDK5, CHRM1, CYP17A1, DNMT3L, GAD2, GALE, GALNT2, GPX5, GRIN1, GUCY1A2, IFNA17, IFNA7, INSR, ITCH, ITGAL, MAML2, MCM5, MTMR1, NFKB1B, NOX1, NT5M, OR10A1, OR1L8, PLCB3, PLTP, POLR1D, PPP1CB, PRKCZ, PTK2, RASGRF1, SARDH, SDC2, SLC27A4, STT3B, TKTL2, ALDH18A1, CSNK1A1L
Negative_7973	EPO, GSN, ACY1, ADRB3, ATF2, BAAT, C4BPA, CLTCL1, CSNK2A2, CXCL2, DEGS2, DGUOK, ENTPD1, ENTPD5, FGD1, FLAD1, FUT1, GFAP, HA01, HLCS, HTR4, IL15, INPP5A, KLRC3, MAPK11, MAPK9, NLGN2, OR13C5, OR8I2, RPN1, TGFB1, TUBB, SLC25A31
Negative_7974	CTH, DCK, FH, IL7, MPZ, CBR1, CCND2, CCNE2, CCR2, CHD8, CHIA, DHX58, DIAPH1, DVL1, EFNA3, ERBB2, GSTA1, HAGH, ITGAD, LYPLA2, MAGI2, MAP4K3, NCAM1, OR8K3, PHKB, POLR2D, PRPS2, PTCH1, PTPN7, SEMA3C, ZBTB16
Negative_7975	ADA, DCT, LTB, TAT, ADCY8, ADCY9, AGMAT, AOX1, BLNK, BPNT1, CAMK2G, CAMKK1, CCL13, CD99, CDC25B, CSNK1D, CYP2J2, CYP7A1, DNMT3B, EPHB1, FGF2, FOXO3, GALNT2, GALNTL5, HARS, HHEX, IDI2, IFNA6, LCMT2, LIPA, MAPK10, MYH8, NARS, NAT2, OR2T1, OR4C16, PARVG, PCCB, PKMYT1, PPP3R2, SELE, SPTAN1, STX18, SV2B, UXS1, YWHAB, B3GALNT1, CACNA2D4, TNFRSF18
Negative_7976	DAO, FAH, ME2, ACTA1, BMP5, CCL22, CCNG1, CHEK1, CRY1, CSNK1A1, DLL1, FASN, FUT8, GNAI2, GUCY2F, HHEX, IL18RAP, KLRD1, LDHC, LTA4H, MYL5, OR2G6, OR2S2, OR4E2, OR51I1, PIGB, PMAIP1, SELE, SPRY4, STX7, TAS2R8, TCF7L2, WNT1, C1GALT1C1, HLA-DQA2
Negative_7977	CACNB1, CDC14A, CDH3, DVL3, ELK4, FZD5, GSTK1, HTR6, MTHFD1, PIGB, PPAT, PPP1R3C, SHMT1, TAS2R7, TM7SF2, TRAF4
Negative_7978	MPZ, NNT, ACADVL, ALDH9A1, AVPR1A, BACE2, CHEK2, CYP2A6, CYP2U1, DAG1, DDX23, FZD4, G6PD, GALK2, GATM, GNAL, GNPAT1, GSTA1, IDI2, JAK1, MAPK3, MGAT5, NPAS2, NUDT12, OR5AK2, PAPSS2, PARD6G, PCCA, PFN2, PIM2, PPOX, PPP2CB, RARS2, SCD5, STX12, WHSC1L1
Negative_7979	DHH, MTR, ADCY10, ADCY5, ATP50, CFL2, CHKA, CLDN8, COL3A1, CXCL1, CYP19A1, E2F2, GDF7, IL17B, MAML1, MAP3K1, MTMR6, OR2B11, OR52E8, OR8B8, PDHA2, PFKL, PLXNC1, PMVK, POLR2D, PTGS2, RPN2, SETMAR, SPAM1, TAS2R3, UROS, HLA-DPA1
Negative_7980	CRH, NLK, OR51B6, OR8A1, TAS2R14
Negative_7981	ASIP, CYBB, OR8S1, PAK4, RASGRF2, SSH1, TGFB3
Negative_7982	C5, MYC, SRM, AREG, CACNA1A, CD47, CDKN2B, DGKE, FGF12, FZD5, GALNT2, GUCY2C, GUK1, HTR2A, IKBKG, IL20, L1CAM, LIPC, MAOA, MAP2K2, MITF, NAMPT, OR2D2, OR5F1, OR8B8, PIGN, PPP2R5D, RPS6KA3, SEMA3A, TAP1, TGFB3, TUBB2A, UBE2L3, UGT2B4
Negative_7983	NPL, SFN, B3GNT4, CTF1, CYP2B6, DPYD, ERBB3, GPLD1, IFNA7, IL2RB, MMP2, OR2AG2, PDE5A, PIP5K1B, PPP2R5A, SLIT1, TAS2R5
Negative_7984	IL9, JUN, ATP5G3, B3GALT5, CCL21, CDC7, CES1, CHIA, HDAC1, HSD17B1, PAICS, PRKACB, RPS6KA2, STMN1, TNFSF18, SERPINC1
Negative_7985	BTD, BCL10, CDH1, CDKN1C, COQ5, DLL3, EPHX2, GALNT5, OR2T1, OR52N2, RDH8, SGMS1, TRAF2, VEGFA
Negative_7986	CD6, DBI, AGPAT4, CACNB2, FOXO3, FRAT1, HSD17B8, MTFMT, OR7D2, RDH8, TIAM2
Negative_7987	GUCY2D, IPMK, LIMK2, MECP, MYD88
Negative_7988	F11, ACLY, ALG1, ARNTL, CCL20, CDC26, CHST13, CHSY1, COL6A2, E2F5, EGN3, FGF19, FZD3, G6PC2, GALNT2, GMPPA, GSTM2, IL2RB, IRS1, ITPKA, OR11H6, PPT1, PTEN, TNXB, UNC5C, UROD, WASF3
Negative_7989	BTD, CP, AKR1D1, AMY2A, CCNG2, CCR7, COL4A2, COX10, CYP3A5, GAL3ST1, GALNT6, HMGR, IGF1, MAP3K12, OR10A6, OR10K2, OR4K2, PDGFB, POLE4, PAP2B, PPP3CB, PRKAA1, SLC2A2, SMAD4, STEAP3, TCF7L1, GABARAPL1

Negative_7990	ALDOC, C4BPA, CCR10, CTBP2, CYP4F2, DDX18, DEGS2, DLL3, DNMT1, DPM3, ELK1, EPHA7, IRAK1, KLKB1, LRAT, MGAT3, NCF2, NFATC1, NSD1, OR2W1, OR5C1, OR5R1, OR9A2, OXSM, PDE3A, POLR3D, RARS2, SLC25A6, SXX2IP, SV2B, WHSC1, WNT7A, ATP6V1G3
Negative_7991	CKM, DBI, FAH, SYK, ACAD9, ACSL6, CCR9, COL5A2, DERL1, DHDDS, ECSIT, EPHX2, FASN, GALE, GUCY1B3, HRH1, ICAM2, INPP4B, MECR, NCR2, OR52A5, OR5C1, OR8D1, PAK3, PDHB, PIK3C3, PNPT1, PTPRB, RBX1, UGCGL2, TNFRSF18
Negative_7992	ABO, DTYMK, ENTPD3, KIR2DL2, LDHB
Negative_7993	UBC, CLDN11, CYP2D6, GFPT1, MTMR2, OXCT1, PDE1A, PLXNA2, PPP2R5A, PRKY, RALBP1, TPH2, TNFRSF1B
Negative_7994	AGK, F2, GP5, MAG, ACTB, ACTG2, ADORA2B, AFMID, APAF1, APRT, ARPC2, ATP5I, ATP6V0C, B3GALT2, B4GALT1, BCMO1, CDH15, CXCL2, EFN1, EPHA3, FARS2, FM03, GRAP2, IFNA8, IRS2, LCMT2, MAN2A1, OR2T4, OR2W1, OR6N1, OR9Q1, ORC6L, PIK3R3, PPA2, PRKAA2, PRKACB, PRSS3, PSME3, PYGL, RPS6KA2, SRGAP2, TCF7L2, TDO2, TIAM2, CACNA2D3
Negative_7995	ASL, CFD, F10, ADRA1A, ALDH5A1, CACNA1A, FGF8, GNG12, IL11RA, IQGAP1, MARS, OR1S1, RARA, SMPD4, TPH1
Negative_7996	AVPR1B, GNPAT1, OR6N2, PLXNC1, VNN1
Negative_7997	F12, VCL, ATP2A2, BMP7, C4BPA, CACNB3, CDC6, CMBL, CPS1, CREB3, CRHR1, CXCL5, ENPP3, ENTPD4, FGF19, FZD1, GIT1, GNPAT, GNPAT1, HLA-DMA, HSD3B2, IFNAR2, IL22RA2, INHBB, ITPK1, JAM3, KCNQ1, LAMB2, LIMK2, LRAT, MGAT5B, MMP9, MYH6, NFAT5, NOD1, NPR2, ONECUT1, OR4K2, OR5V1, OR6A2, PDHA2, SKIV2L2, SMAD4, STX12, THBS1, TNXB
Negative_7998	IDS, TPR, ACTN1, ACVRL1, ANAPC1, APBB1, ARRB2, ATP5L, BDKRB2, BUB1B, CADM3, CARS2, CBR3, CDO1, CLDN11, CNDP1, CREB3L3, CTSS, DARS2, DGKQ, DPM3, DPYD, ENPP2, ENTPD6, EPHB2, FLT3LG, GUCA1A, GUCY1A2, HYAL2, IL20RA, ITGA2B, KLK3, MGAT4A, MTMR6, ODC1, OR51E1, OR52N5, OXCT1, PKM2, TAS2R41, TBK1, TLN2, TRHR, PPP1R12A
Negative_7999	C5, CR1, CRH, SYK, AARS2, ADH4, ADH5, ALCAM, ALG11, ARPC5L, ASMT, B3GNT2, BCL2, BDKRB1, CCL16, CLCA4, COL6A1, CYP2C9, CYP2F1, DPYS, DTX2, EPHA3, GLG1, HADH, HAGHL, HLA-DOA, IDH1, IL18R1, IL22, INPP5A, IRF7, JAM3, NFYB, OR13C8, OR2A2, OR9A4, PANK3, PGK2, PI4KA, PLA1A, PNMT, PPP3CB, TDO2, TLR3, ULK3, SERPINC1
Negative_8000	AR, C8B, AMHR2, ANAPC2, BLVRB, CACNA1C, CCL27, CHEK2, CLTC, CXCL3, CYP2C18, DAAM1, DDX52, DHRS4L2, EXT2, FLAD1, G6PC2, G6PD, GUCY2F, KLKB1, OR10H3, OR1J4, OR52J3, OR5L1, PARD6A, PDIA4, PNMT, PPP3R2, PRKAR2B, PRKX, RHOQ, RXRA, SYNJ2, UCK1, ST6GALNAC3
Negative_8001	AK2, ADIPOQ, FGFR3, HLA-DRA, HRH1, IFNB1, LTB4R2, NKD1, OR4K13, PIP4K2B, POLR2F, RALBP1, WASF1
Negative_8002	IVD, ADRBK2, ALOX15, ATP5L, CIITA, CLDN10, CXCR3, DPM3, FGF21, IFNA14, MAT2B, MINPP1, NLGN3, NRXN3, NT5C1B, OR2A2, OR2F2, OR6A2, POLR3D, TBL1XR1, UCK2, YWHAB
Negative_8003	AK3, CD6, GNE, NF1, NGF, SI, TKT, ALDH1L1, ATP5F1, CCL16, CD34, CDK2, CYP2D6, DDX50, EDN1, FRAT2, HHIP, IDH1, KLRC3, MAP3K14, MCM5, MGAT2, MGAT4A, OR1S2, OR4F4, OR5AN1, OR7D2, PDE10A, PDXK, PDXP, PLTP, POLE, PPP2R5C, TOMM40, WNT6, ATP6V0D1
Negative_8004	C3, EGF, HK1, ATF4, ATIC, CADM3, CCNH, CYP2B6, DVL2, GNMT, GNPAT1, GZMB, HSD3B1, IL22, LCMT2, LEF1, MARS2, OR13C2, OR1J2, OR1S2, OR4C16, OR51A2, OR6C70, P2RX7, PFKFB3, PGK2, PTSS2, ST3GAL5, UGDH, WNT3, XCR1, SERPINE1, TNFRSF1A
Negative_8005	SMS, CDC20, GDF7, GMPR2, PHKG2, PIP5K3, VANGL1, WNT1, WNT10B, WNT7B

Negative_8006	C9, CD6, CRH, PGF, APAF1, ATP6V1F, CCL2, CD48, CLCA4, CNTNAP1, CPT1C, CSF1, CTBP1, CXCL2, CYP2E1, DHRS9, DIAPH2, EFNB2, EPHA2, FZD1, GALNT10, GTSE1, HMGCS1, HNF1B, HSD11B1, HTR2A, IL10, KLKB1, LCMT1, NCR1, NFX1, NR5A2, OR1J1, OR4D2, OR4S1, OR51E1, OR8S1, PGK2, PIGX, PLCB4, POLD1, PPP2R5E, PSAT1, SDC3, TALDO1, TPI1, XYLB, YKT6, ZBTB16
Negative_8007	EBP, BMP2, EPHA2, MFNG, OR4D11
Negative_8008	ACTN4, CAMKK2, CDC20, FGF2, IDH3B, NCAM1, NFATC1, OR12D3, OR4C6, OR5B12, OR7C1, PIK3CG, SPRED1, TSC2, XCL2, XYLT2
Negative_8009	OR51Q1, UPB1, YES1, TNFRSF17
Negative_8010	F3, GK2, AOC2, APRT, BACE1, CDC45L, CDKN1C, CLDN11, DARS2, DVL2, EFNA5, GNPAT, GYS2, HES1, INHBA, MAGI3, NARS2, NAT2, NFYA, OR52H1, PDHB, PIK3C2A, PITX2, PPP2R5C, PTK2, PTPRR, RCHY1, SHC3, SUV39H2, WNT10A, TNFSF13B
Negative_8011	C4B, C6, FAS, FH, HGF, IL2, TAT, ALDH4A1, CACNA1H, CCKBR, CD244, CDC26, CD01, CYP3A5, DARS, DCXR, FGF2, GALNT8, GNAT3, IFNA10, IKBKB, IL11RA, IL17RB, IL23A, ITGAD, KYNU, MAT1A, MECR, MYH2, NPAS2, NRG1, OR13C8, OR1L3, OR52E6, OR5AK2, OR5B3, PDX1, PIP5K3, PLD2, PNPT1, SMARCA2, UBE2L3, VASP, YWHAB, C1GALT1C1, GABARAPL1, HLA-DQA2, SUV420H1
Negative_8012	DCK, ADH7, ATP5C1, CLDN16, FRAT1, HTR2C, OR13C5, OR2L8, OR5M8, OR8D4, PCCA, PPA1, PTPRB, RASA2, TNFRSF9, TSHR
Negative_8013	PTS, WAS, CDC20, CD01, COL5A2, CYCS, DNMT3A, ITGAX, NKX6-1, TAS2R1, ST6GALNAC1
Negative_8014	C9, MIF, NLK, BDH2, COL3A1, DUSP5, EXT1, F2RL2, GUSB, HA02, HLA-G, IL20RB, NRXN2, NT5C1A, OR1J4, OR4K14, PIK3C2B, PIP5K1B, PLCB4, PP1R3A, PRKG2, PYCR1, UAP1, VANGL1, ATP6V1E2
Negative_8015	CD80, GALNT6, IL13, RXRA, SH2D1A, SMPD4, VAV2
Negative_8016	BTK, F8, OTC, TPR, ACLY, ACPP, ALDH9A1, ALG1, ATP5C1, CDC14B, CDC26, CHAT, CLTC, CRB3, CXCL9, DDX51, FGF11, GALNT3, GDF5, GSTA4, HGSNAT, HTR4, INHBC, ITGA11, KDSR, NCOR1, NME7, OCRL, OR13C4, OR3A3, OR51B5, OR56A3, OR8B4, PDGFRB, PIK3CD, PLOD2, POLR2I, RAD51, RHOD, SHC4, SPI1, SUCLG1, UGCG, WASL, SERPING1
Negative_8017	RDX, ADRB1, ALDH9A1, ALOX15B, ARHGAP5, CCL26, CHKA, CLCF1, CLDN22, CQQ6, DGUOK, FARP2, FARS2, G6PD, GDF6, GUCY2C, ICOS, ITGB6, LCP2, MARS2, NME2, OR10G7, OR10H5, P2RX4, PDE4D, PLCG1, PNPLA3, PPP2R2C, PSAT1, SC5DL, SEMA3E, SEMA3G, SIAH1, SMAD3, STEAP3, SYNJ2, UNC5B, ATP6V1B1, KIR2DL5A, SERPINC1
Negative_8018	GP6, TNC, CLDN3, DGKA, GALNT5, GLI2, HLA-DOB, HNF4G, IFNK, ITGA7, ITGAE, JUND, KDSR, LMO7, LRP5, MYH14, OR10G8, OR11G2, OR6C75, PAX6, PRKAG1, PSME1, SORD, SOS1, TSC1, TUBA8, MAP3K7IP2
Negative_8019	CFH, IL6, LCK, ALOX15B, APH1A, ARHGEF1, CACNA1S, CDK4, DDX47, DUSP7, ENTPD7, GNAI2, GNRH1, GSTK1, HCLS1, IFNA8, JAG2, MAP2K4, NT5C3, OR10J3, OR4X1, PFKP, PIGT, PLA2G4A, PNPT1, PSME1, RALBP1, RHEB, ROCK1, SD C2, SFRP1, SORD, TGFB1, VARS, PPP1R12A, SUV420H1
Negative_8020	AK7, DAO, EGF, ZYX, ACAT1, ALDH2, ALOX12B, ATP13A2, BUB1, CLDN14, ENP P1, ENPP6, GGCX, GNG12, GSTK1, GSTM2, HAGHL, IL1R2, MAP4K1, NEU1, NUM B, OLAH, OR1G1, OR3A1, OR4K17, OR51G2, OR6B2, OR8U1, P4HA1, PARVB, PHGDH, PIK3CB, PLA2G4A, POLA1, PON1, PRKACA, PTK2, RAF1, RAPGEF4, SRD5A1, SSH3, SUFU, MAP3K7IP2, PRICKLE1
Negative_8021	APBB1, ATP5G2, BAI1, CCL5, DUSP10, F13B, FBP2, GCH1, GDF7, GP1BA, IDH2, IL1A, MAOA, NKD1, NT5C2, OR11G2, OR1L8, OR2T10, OR6T1, PAK3, PDE1C, PLCB1, SOAT2, SORBS1, SUCLG1, WNT7A



Negative_8022	C4B, FGA, FGB, NNT, TPR, A4GALT, BCKDHB, CD58, DHRS4, DRD5, E2F2, ESAM, F13B, FGF6, FPGS, FRAP1, FUT4, GALNT14, GRIN2C, IDI2, IGF1, IL2RB, MBL2, MTMR1, OR10H4, OR2AG1, OR4C11, OR8A1, OR9I1, PDHB, PIP4K2B, POLR2B, RFXAP, SGPP1, SPRY2, STAT3, TLN1, VDAC2
Negative_8023	ACSL6, AKR1B1, CLDN5, COL4A2, COL6A2, CSAD, CYBA, FZD9, GADD45A, IDH1, LAMB1, LDHC, MAP3K11, MAP3K4, OR4N2, OXSM, PTK2, RAF1, VAMP4, CACNA2D1
Negative_8024	ADRA1B, AGPAT4, ATF2, BUB3, CASK, CCR5, COL4A2, DHRS4L2, DLST, EXT2, FGD3, FUT9, GRIN2D, GSK3B, HCCS, HLA-C, HSPA2, IGSF5, ITGB5, MAP4K3, MAPK3, MRAS, MYD88, NTRK2, OR13C3, OR13D1, OR2M4, OR51B2, OR56A3, OR8K3, PDE6G, PDX1, PGAM4, PLCB2, PMM1, RDH12, SCIN, UCK1, VTI1A
Negative_8025	LPO, PGP, PVR, TYR, ABL2, ACOT11, ADCY4, ALG2, AMDHD1, AOC3, ARPC5, BMP6, CCNA1, CDKN1C, CHDH, CHRM3, EXT1, FABP3, FCGR3B, FGF7, GCNT2, GUCY1B3, HCST, HLA-G, HLCS, IKBKG, IL18RAP, KLRC3, LAMA4, MYH8, NFYA, OR1K1, OR4E2, OR4F5, OR4K15, OR52N1, PFKFB3, PIK3CB, SEMA3E, TJP1, TLR5, VAMP2, WNT6, ZBTB16, CACNA2D1
Negative_8026	ADCY6, ADH1A, ARRB1, B4GALT4, CACNA1D, CCR4, FZD6, MYH10, NOS1, OR2T6, OR5T1, OR6M1, PRKACB, PTPRM, SGPP1, YWHAE
Negative_8027	ADC, AK3, GSS, HDC, ABL2, AMD1, APOA2, B3GAT1, BCKDHB, BMPR1A, CCL5, COL4A6, CSF2RA, CYP26B1, CYP2J2, DDX19A, DDX41, DEGS1, DPYS, FRAP1, GALNT8, GCDH, GLI2, GSTO2, GUCY2F, IFNA17, IL2RA, KAT2A, KIR3DL2, NCO R1, NGEF, OR10G8, OR2H1, OR51M1, OR52N1, OR5B17, PDE7B, PRKCE, PTK2B, PTPN6, RAD51, RAP1B, ST3GAL6, TSLP, UGT2A1, PNLIPRP1, ST6GALNAC4, ST6GALNAC5, TNFRSF13B
Negative_8028	FN1, ABL2, ACAD9, ACMSD, ACSL3, ARSB, C4BPB, CMPK1, COL11A1, CTSG, CYP2A13, EPHX1, IAPP, JAM3, MAP3K6, MGST2, NMNAT1, PITX2, POLR1D, SMAD4, THBS2, TJP3, WNT9B, CACNA2D1, PHOSPHO1, TNFRSF1B
Negative_8029	C3, CFI, TYR, ALG9, ATP2A3, BAI1, BCAT1, C1QC, CCL26, CDC27, CRLS1, CSF3R, DCTD, F13B, FGF10, GBGT1, GRB2, IDH2, ITGAE, MAP4K4, MTFMT, NRXN3, OR1B1, OR2AE1, OR2M3, PAPSS1, PITX2, PPAP2A, PRKAG2, RALB, RPS6KA2, SIGLEC1, SMURF1, SNAP23, SULT2A1, TRMT11, TYMS, UGT1A10, VAMP3, WASL, ATP6V1E1, B3GALNT1, PNLIPRP2
Negative_8030	ACSM5, CDC16, CFLAR, GNG12, MFNG, MGST1, MMP9
Negative_8031	DCC, ID4, ADAM17, AQP7, ASMT, CHRM5, CNTNAP1, CSF1R, CYP2S1, DGKZ, DUSP2, EP300, IFNG, LAMA3, LTA4H, MAN2A1, MAP2K7, NAT2, NCF2, NMNAT3, OR5K2, OR9G1, PLA2G2F, PLXNB1, PRKG2, RPS6KA3, UAP1, UBA1, UBE2L3, VAV3, WASF1, WNT5A, KIR2DL5A
Negative_8032	CDC23, FCGR2B, GLG1, HNMT, LIPC, MAN1B1, MAN2A1, MYL2, PLCD3, RND1
Negative_8033	BACE1, CCL2, CD79A, GDF5, HTR2B, ITGB7, OR3A2, PLA2G6, TLN1, TLR2
Negative_8034	MUT, ACSL3, AKR1C4, ARAF, BMPR1A, CDC14B, CDKN1B, CNTN1, CRB3, DAPK2, DGUOK, ECHS1, FGF7, FZD1, GNAI3, GNG13, GSTM3, HSPA1B, IL2RB, KLRC2, LIPT1, NPR1, OR10P1, OR13J1, OR2T29, OSMR, PARVB, PAX6, PIAS2, RALGDS, RARS2, SC4MOL, TNFRSF9, TPK1, TUBA3C
Negative_8035	GLA, SYK, ANAPC5, APBB1, BET1L, C3orf10, CCL11, CDC42, CLDN11, CMPK2, CXCL13, IRAK3, NMNAT2, OR2B11, OR4X2, OR9G4, PLCD3, PRKACB, PRKAR2A, PYGM, SCP2, SH2D1A, SOCS4, TAS2R14, TP53, TRAF3
Negative_8036	HGD, ACSM1, ACVR1B, ALDH1B1, ARSB, CCL25, CLDN6, CYP8B1, FGF11, GALNT10, HAO1, IFIH1, IFNA8, IL1B, ITGB7, NPAS2, OR5D18, PIK3C2G, SOAT1, WNT10B

Negative_8037	BAX, C5, C6, CBL, GGH, ACVR2A, AKT1, ALDH1B1, ATP5G1, BCKDHA, CAV3, CC L5, CDC25B, DKK1, DPM3, DUSP5, FGF17, G6PC2, GALNT12, GSTT1, ITGA9, K DSR, OR10C1, OR13J1, OR5M9, OR8K1, P4HA1, PIGF, PLOD1, PPAT, PSEN1, S EMA3B, SMAD2, SNAI1, SPTLC1, ST6GAL1, TBL1X, TP53, TPI1, YARS, HLA- DRB4, PRICKLE2
Negative_8038	ALG12, CCNB3, CDKN1C, CHKB, DTX3L, DTX4, GAS1, LAP3, MYH15, OR10K1, O R2M7, OR51B5, PDGFRA, PLXNA1, POLR2F, POLR3D, PPP2R5E, PRLR, PTGFR, RASGRF1, RDH11, SSH2
Negative_8039	DHH, EBP, UBC, ACADM, ARG1, ATP13A2, ATP6V1D, CDC14A, CES2, CLTC, COL 5A2, CTSB, DPM1, DVL3, EFNB3, GGT7, GSTP1, OR10A3, PCK1, PLA2G2E, PLK 1, PPA2, RAB5A, SELP, TOMM40L, TPMT, HLA-DPA1
Negative_8040	ID2, PAH, ALDH7A1, ASNS, BIRC2, CCR8, ENAH, NEFM, PARS2, PCNA, POLR2L , PPP1R3B, PPP2R5A, VAV3
Negative_8041	TNN, ACSM5, ARAF, ARHGEF6, C3AR1, CACNG4, CD226, CDC25C, CTSG, CYBA, DDX47, DLST, EPHA8, FABP4, FGF22, GALNT1, GANAB, GNB3, HMGCR, IL18RA P, IL20, IQGAP2, ITCH, LRAT, MAN1A2, MIOX, NQO1, OR2B11, OR52N4, OR5A R1, OR5I1, PARD3, PLAU, PMVK, POLR1E, PTGER1, PTPN5, RAB5A, RAPGEF2, SMC1B, TAS2R38, UGT2A1, WBSR22, WHSC1, SERPINC1
Negative_8042	CHUK, ITGAM, KYNU
Negative_8043	IDS, ADH4, CCNE1, CD74, CYP2A6, EFNA2, F2RL1, FGF7, FUT4, GRPR, IDH2, IFT57, IL15RA, LGL2, MTMR2, NEU2, OR2G6, OR51L1, OR52M1, OR7D4, PDC D1, PKMYT1, PLTP, PNPLA3, PPARD, PTPRB, RPE65, SETMAR, SMPD4, SORBS1 , TAS2R3, THBS4, WNT10B
Negative_8044	EZR, ACTG2, ADIPOR2, ALOX5, AMD1, ATP6V0B, B3GAT1, CDC27, CDC42, CRB 3, CYP1A2, DDX19A, F2RL1, GALNT14, GALNT8, GFAP, MTMR1, NCSTN, NEFL, OR2T6, OR4A15, OR8H3, OXSM, P2RX6, PAPSS2, PDE1A, PDE2A, PDIA4, PFN2 , PLCB2, PLOD3, PMVK, PON1, PPM1A, PPP2R5A, PRKACA, PRKCB, PTGDS, RAS SF5, RBPJL, SLC27A4, SPTLC1, SYNJ1, TSHR, UGT2A3, SUV420H2
Negative_8045	ACP2, ADH4, ARPC2, ATP13A2, B4GALT3, BAIAP2, BMP8B, BMPR1B, CCL1, CC R7, CLDN9, ECHS1, ENTPD8, FMO2, GUCA1B, IFNA10, IL11, IL1R1, IRS4, ML LT4, NFX1, OR4A15, OR4K14, OR5D14, OR8D4, PGM1, PLOD1, PPAP2B, PPARA , ROCK1, SPRY2, TJP2, UBE2L3
Negative_8046	CD6, ANPEP, ARD1A, BDKRB1, CCL24, CCR8, CHPF, CHSY3, CLDN2, DIAPH1, E XT1, IL10RA, MCCC2, MOV10L1, NAT5, NUDT5, NUDT8, OR10K1, OR1A1, OR2T 10, OR56A3, OR56B4, P2RX4, PIGM, PKMYT1, PLA2G3, POLR3B, PPAP2A, PPB P, PRDX6, PRODH, PTCH2, TOLLIP, TRAF4, TYK2, CACNA2D1, HLA-DRB4
Negative_8047	CTPS2, FGF19, FUT7, OR1L1, OR1N1, OR2T6, OR52N2, VARS
Negative_8048	ILK, ADCY4, ADSL, ATP5G2, BUB3, C1QB, CDH3, CHPF, CNGB1, COL4A6, COL5 A3, CSF3R, DAPK3, DDX56, DERL1, DOCK1, DUSP7, EFNA1, FASLG, FCGR3B, G ABARAP, GGPS1, GLUL, HPRT1, ICAM2, IDH3A, OR6C4, OXTR, P2RX3, PDE5A, PLK1, PLXNB2, PPAT, RAC3, RPS6KA4, RPS6KA6, SDHB, SMARCA2, TJP3, VCA M1, WNT4, XYLB, YWHAZ, ZBTB16, GABARAPL2, SERPINB5
Negative_8049	CR1, GNS, ACVRL1, AKT1, BIRC2, CACNG8, CTSL1, DCXR, DGKB, EPAS1, EPHA 2, EPRS, FMO3, GNB3, GNRH2, NTSR1, OLR1, OR6S1, OR9A2, PHKB, PPP1CC, P RKACG, PRSS1, RXRB, TYMS, ATP6VOA2
Negative_8050	AUH, OSM, ALG6, ATP5D, CHPT1, CNTF, DDX52, EDNRA, FGF1, GSTM3, HSPB1, KIR2DL4, MCM2, NRG2, POLD3, PRKCZ, QPRT, SULT1A1, PNLIPRP2
Negative_8051	GDA, KIT, ACSL1, ADCY3, ADCY4, AGRN, CADM3, CD72, CDKN2D, CRY1, DUSP8 , GNAQ, IL18, IRF5, MCM3, NSDHL, OR4M1, PGM3, POLR1D, RDH8, SMARCA2, S ORD, THBS1, TIRAP, TNFRSF14
Negative_8052	LAT, SI, ALG3, CCNE2, CDIPT, CXCR4, DTX3, E2F2, IFNA16, KIR2DL3, LARS , MCM4, NCK2, OR2L13, OR2S2, OR56A1, OR6K3, OR8A1, PER1, PPP3CA, SRD5 A2, TAS1R1, TP73, UGT2A1, CACNA2D3

Negative_8053	GCK, AADAT, AGPAT3, AMHR2, ATP6AP1, CD72, CLCA2, CTNNA1, JAG2, MYH15, POLD3, PON3, PSME3, SLC12A2, SMURF1, TAS1R1
Negative_8054	ACADM, ALDH1A3, ALDH2, ALG2, AMPD2, ANAPC11, BCL10, CCL19, CCL2, CYP21A2, E2F5, EHMT2, F2RL3, GFPT1, HEMK1, HMGCR, MAN1B1, MMP14, NCOR1, NFASC, NGEF, NKX6-1, OLAH, OR2AE1, OR2M7, OR52L1, OR6X1, P2RX4, PFN2, PIP4K2B, PPARD, PRLR, PTGDS, SESN2, SRGAP1, STX1B, SV2C, TAS2R48, UCP1, UGT2A3, WNT5A, WNT9B
Negative_8055	ALPP, AMDHD1, CACNA1A, CLDN15, CLDN17, CYP2F1, FBP2, IL10, OR51T1, OR6B3, OR6K2, ORC2L, PDGFD, PFKL, PROC, RDH12, SETD8, UNC5A, SERPINB5
Negative_8056	ITK, ZYX, ACP1, COL3A1, FBP2, GLDC, GLO1, GUCY2D, IDH1, LIAS, MAP3K14, NT5C, OR2T4, OR6C75, OXTR, POLR1C, PSME2, PTPN5, SFRP2, SNAP25, ST3GAL1, TICAM2, TRAF5, WEE1, SERPING1
Negative_8057	ACAA2, AGRN, ATP5I, CCL16, CHKA, FMO4, FOXA2, GNB3, HYAL2, IARS, MAGI2, MGAT1, NARS, OR4X1, PI4KB, POLR2L, RAD51, SPRY2, TAS2R9, THBS3
Negative_8058	HGF, ITK, ADORA2A, AKR1C3, ALDH1B1, ARPC4, B3GAT3, BMP7, CD38, CD47, CHIA, CHPT1, CLCA2, CREB1, CSDA, CTTN, DUSP7, FGD3, GLUD2, GNPDA2, GSTM2, INADL, INHBB, MGAT5B, OR5AR1, OR6N2, PARVB, PDE1B, PIGB, POLA2, PPAP2C, PRIM1, PRKAG1, SPHK2, SULT2B1, TCF7, TUBB1, TNFRSF10B
Negative_8059	C9, CD59, DARS2, GALK1, GRIN2B, HNF1A, IL13, OR1D2, OR2Y1, OR5AR1, OR8H2, STEAP3, TNFRSF4, YWHAH, GABARAPL2, HSP90AB1, TNFRSF17
Negative_8060	ME3, STS, ADIPOR1, AGXT, ALG9, CAV3, CD34, CD72, CES2, CHAD, CLOCK, DEGS1, DGKD, DGKZ, DUSP6, ENPP3, EPHA6, HIBADH, IARS2, ITGB2, JAM2, KNG1, LIMK1, MGAM, MMP1, NAGK, NGEF, NTF4, OR10A3, OR10AD1, OR11H6, OR2V2, PDE7A, PON3, PPP2R5B, PSEN2, RDH5, SPTLC1, SPTLC2, SSH1, TP73, BAGALNT1, MAPK8IP2, SERPING1, TNFRSF18
Negative_8061	ALG13, DNMT3A, FGFR4, HTR2B, MYL9, NFASC, NPAS2, OR10A5, OR2L2, OR2T11, OR4D2, OR5AK2, RPRM, TNFRSF1B
Negative_8062	CS, TEC, TK2, TPR, ATP6V1F, BUB1, CACNA1G, CMPK2, COQ6, CSAD, CSNK2A2, E2F5, FASLG, HA01, HIF1A, IFNA16, LGMN, MFNG, NT5C1A, ODC1, OR13F1, PIP5K1B, PNPT1, PTDSS1, RASGRP4, RBX1, SEMA4C, SOCS3, SPTLC1, ST8SIA5, TGFBR1, WASF1, ARHGEF12
Negative_8063	ACSL5, ADRA1A, CDK6, CHRNA7, CSNK2A1, CYP2B6, DUSP8, EXOC7, FASN, GALNT1, HPRT1, HSPB1, HTR2C, KDSR, LDHAL6B, LIPA, MYH11, OR10J3, OR14J1, OR4C46, OR4F6, OR5K2, OR6K3, OR7G2, P4HA2, PARD6A, PDGFA, PDGFRA, PLCD3, POLR2J, RAD51, SLC25A4, SPRY4, SRGAP3, STX18, SUV39H2, TDO2, TRAF3, WNT16
Negative_8064	TH, ACHE, ACY1, ADCY5, ATF4, ATP5B, CLDN6, CYP21A2, EFNA1, EXOC7, F2RL3, FASLG, MMP1, OR6K6, OR8D1, OR9A4, PDE2A, SPTAN1, TAS2R5, THBD, HSD17B12, SERPINA1
Negative_8065	HGD, HYI, MOS, TPR, ABL2, ALG10, CLDN7, CNTNAP1, COL3A1, CSNK1E, CYP2B6, DCTN1, GMPPB, GUK1, IL20, IL22, MAN2A1, MPZL1, NTSR1, OR52E2, OR52H1, OR5M3, PDE3B, PGK2, POLD3, PPP5C, PRKAA1, PTPMT1, RFX5, TUBA3C, WNT11, ATP6V1B1, HSD17B12, PAFAH1B3
Negative_8066	ABO, CGN, ACVR1C, CACNA1D, GSTA5, IPPK, OR10H4, OR4P4, OR8B4, PIP5K1C
Negative_8067	FGG, MIF, ACTN1, ATP6V1H, CLDN18, CPS1, CSF2, CYP2C19, DDX19A, E2F1, ENO3, GSK3B, IFNB1, IL28RA, KLRC4, NANS, NCSTN, NFYC, OR11H4, OR1D2, OR52D1, PIK3R2, PIK3R5, PLA2G2E, PPA1, PPP1R3C, PSME1, SEMA4G, SPAM1, TMLHE, TP53I3, TUBA3C, UPP1, USE1, CSGALNACT1
Negative_8068	AK7, GSS, SDS, ACP5, AGPAT3, BDKRB2, BMP8B, CTNNA2, CTNNB1, DHODH, DUSP16, FOXA2, GGCX, GSK3B, ICAM1, IL15RA, IL4R, IMPA2, MAT2B, NCF1, NME7, OR2B2, OR56B4, ORC4L, PLCE1, PRSS1, PTCH2, PTGER1, RPS6KA2, RPS6KA3, RXRG, TACR3, TRAF5, TUBA4A, TUBB4Q, UBA7

Negative_8069	ATP5B, NTRK2, RAC2, RAC3
Negative_8070	AK5, OTC, ACOT12, ACTG1, ACVRL1, ARSE, ASCC3, B4GALT4, C1QA, CACNA1F, CHRNA7, CLDN20, CLDN7, CPS1, CYP11B1, CYP2U1, DBF4, DLL1, EI24, EIF4E, FLOT2, GJA1, KAT2B, MDM4, NAT1, NCR3, NR5A2, OR10G3, OR1N2, OR2T8, OR5D18, OR6T1, OR8B4, PAK2, PDE2A, PGAM4, PPP3CA, PROS1, PSEN1, RPS6KA5, SEMA4D, SHISA5, SLC2A2, STMN1, THTPA, TLR2, TOMM40, TYROBP, ST6GALNAC4
Negative_8071	C9, FGG, HYI, IHH, UBC, WAS, ACSM4, ADAM17, ADCY5, ADRB3, ALCAM, AXIN2, C9orf95, CACNA1G, CD36, CD79B, CHD8, CHRM5, CXCR3, CYP26A1, CYP26B1, EPB41L3, FARSA, FGF13, FZR1, GALK1, GALNT12, HSD3B7, HSPA8, IL28RA, IQGAP3, LIFR, NR4A1, OR10AG1, OR14J1, OR1A1, OR51G1, ORC6L, PAX6, PER3, PIGK, PIP4K2B, RXRB, SCIN, SEMA3F, SYNJ1, THBS3, TSC1, PRICKLE2
Negative_8072	VCL, AKT3, CHIA, DDX52, DGKD, ENPP2, FGF17, FZD7, GALNT5, LAMA4, MAP2K5, NEFH, OCLN, OR8U1, PPAP2A, SH2D1B, SOCS3, SOCS7, HSP90AA1
Negative_8073	ABO, ADC, CP, DCK, MPZ, ADRA1D, B3GALT6, B4GALT1, BMP8B, C1GALT1, CCD6, CCND3, CD34, CDKN2B, CTNNA3, CX3CL1, CXCR3, DERA, DGKQ, FGF8, FZD8, GLUL, GNPDA2, GPAM, HDAC1, IDH3A, IPMK, ITGAE, LIMK2, MAGI2, NANP, NTN1, OR10Z1, OR1S2, OR52N2, PARD3, PAX6, POLR3H, PTPN5, PVRL1, SEMA3G, TGFA, UNC5C, XCR1
Negative_8074	BAX, TEC, ACADS, ACP2, ALDH9A1, BUB1B, CACNG8, CISH, COL4A4, CREB3, DPM3, DPYS, EFNB3, GALNTL2, GANAB, GFAP, GGCX, GUCA1C, HARS2, HCLS1, HIBCH, IDH2, IFNA5, KRAS, LHCGR, MYH10, NFKB1, OR10A7, OR10K2, OR52K1, PGM2, PIGF, PIM1, PPP2R1B, PRKG1, PTTG1, QPRT, RBX1, ST6GAL1, STAM2, SULT1A1, SULT2B1, TRPM5, WNT8A, TNFRSF10B
Negative_8075	CFI, MAX, AKT2, ALDH3A2, ANAPC10, CACNG2, CHSY1, CLDN11, CREB5, CTBP1, CXCL9, CYP11A1, CYP2A6, EPHB4, GADD45G, GALNT10, GBE1, GJA1, HSD17B3, HTR5A, IL13RA1, IL8RB, INPP4A, LLGL2, MARS, MTHFD2, NCF4, NCOR1, NEFM, OR1A1, OR2A12, OR4X2, OR52A5, OR6F1, OR7A10, OR8U1, ORC4L, PAX4, PRKAR2B, PSME3, PTCH2, RASGRF2, SLC2A2, STEAP3, STX1B, TAP1, TNFSF4, TRAF1
Negative_8076	LPO, MVK, ADRA1B, AKR1C2, CLDN16, CPT1C, CX3CL1, ENTPD8, F2RL3, FGF8, FGFR3, IL20, IL22RA2, ITPKA, MLLT4, OR4F15, OR56A3, OR5P3, OR8D1, P2RX6, PIK3C3, PPAT, PPP1R3D, PRKAB2, PRKACG, PSME3, ROBO2, SELP, SMA5D5, TBL1Y, UBE2L6, WNT4, YOD1, ZFYVE9, ALDH18A1
Negative_8077	C2, GHR, GP5, ME3, ABAT, APOA1, CAMK4, CCL13, CD80, CLTB, COL4A4, CYP2E1, DAAM1, DDIT4, DGKH, ECHS1, GADD45B, HEMK1, HSD17B7, INSR, ITGA6, JAK3, LAP3, NKX3-1, OR8D1, PAK1, PAK2, PLCB1, PPM1D, PRKCZ, PVRL2, RAC3, SLC25A4, SRGAP1, TBL1Y, VAMP3, WASF1, YARS2, PDCD1LG2
Negative_8078	CDA, CR1, EPO, MPZ, SCD, TNR, ACVR1, AMPD3, CACNB3, CSNK2A1, DGKA, ENTDP1, GBGT1, GUCA1C, IL13, IL15RA, MAP3K12, MECR, NANP, NCOR2, ONECUT1, OR52B6, PAX4, PRODH, RPS6, SMAD5, STK4, TAS2R10, ULK1, MAPKAPK5, PNLIPRP2
Negative_8079	STS, ALOX12, COL5A1, FCGR3B, FGF3, FZD2, IRAK3, MYH6, RAP1A, RBL1, SLC27A5, THBS4, TRAF6
Negative_8080	AMD1, ARSB, BCL2, EPB41L2, ERBB4, FGF1, HSPB1, HTR4, ITPKB, MAOB, NKX2-2, OR13A1, OR6N1, SMPD2, ZFYVE16
Negative_8081	CFI, ALG10, BMP8B, CACNA1D, CERK, DDX18, G6PC2, GALNT5, HSPA8, LAMB4, OR2T33, OR4F5, OR52W1, OR5B21, RBKS, SPRY2, SPTLC2, TUBA1C

Negative_8082	CBL, DUT, RFK, RPE, ZYX, AASDH, B3GALT4, BIRC3, BMP6, CASP9, CAV3, CCL2, CCL4, CDC25C, CHAT, CYP2C19, DHCR7, ENPP6, FGF20, FZD5, GALT, GFAP, GSTZ1, HLA-DRA, IL13, MAP3K6, MAPK9, OR13A1, OR2A42, OR2L13, OR51A2, PAX8, PDGFR, PIGB, PIGL, PLOD2, PMM2, POLR2F, PPP2R5A, PRSS2, ROCK2, SETD1B, SLIT2, SPRY4, STAM, TRHR, XIAP, ATP6VOD2, PNLIPRP1
Negative_8083	ABLIM2, ACLY, ATF2, B3GALT5, CD44, CSNK1G3, DHX58, DOCK1, ENTPD2, EPHA7, FLT3LG, GBE1, GPD2, GSTM3, HSD3B2, IL12RB1, IMPA2, IRF5, ITGA2, ITGB4, LMO7, MAP4K4, MPZL1, NEFH, OGDH, PISD, PLEKHA8, PTGDS, RELB
Negative_8084	CHKB, CREB3L1, GNAI3, GNB1, MTHFR, PRKAR1B, PRODH, RDH5, SORBS1, HLA-DRB3
Negative_8085	PVR, TFG, AKR1A1, ASIP, CASP3, CDC26, CLDN5, COMT, CYP27A1, GUCA1C, MMP9, OR4F6, OR5F1, OR5R1, OR8J3, PAK4, PLA2G3, ST8SIA1, STAM, TFPI
Negative_8086	EDA, LCT, RET, ALDH1A1, CACNA1B, CASP7, CHDH, CLDN19, COL5A2, DTX3L, ETNK2, GALNT6, GUCY2C, IL22RA2, LAMB3, NCR1, NR4A1, NRXN2, OR4C12, P, GAP1, PIGQ, PITX2, PLOD1, QPRT, SAT1, SPTLC1, TRAF2, UGP2, YARS, MAP3K7IP2
Negative_8087	ADC, DCC, MSN, PGP, ACY1, AK3L1, BAIAP2, CACNG7, CCL19, CCNE2, CLCF1, CLDN11, COMT, DUSP14, ECSIT, EFN1, FASLG, FRAT2, GAPDH, HMGCL, HMGCS2, KLRC4, MAP3K8, NCK2, NMNAT2, NR5A2, NTF3, OR1G1, OR1L6, OR2A2, OR2B6, OR2C1, OR4C13, OR5P2, OR7C1, PDE1A, PLXNC1, RAF1, RETSAT, SHC1, TAS2R4, THBS1, TYMS, WNT10A, WWP1
Negative_8088	F2R, ATP6V1D, B4GALT5, BHMT, C1QC, CHST12, COL2A1, COMT, CYP3A4, E2F3, GALK2, GALT, GBGT1, GLI2, GPD2, GYS1, HSP90B1, JAK3, OR4A15, OR52A1, OR52B4, OR5P2, PIGH, POLR2G, RASSF1, RXRA, SENP2, SULT1E1, SV2C, VARS
Negative_8089	ALG10, ALOX12, ESPL1, G6PC2, GNAI3, IFNA6, NUDT12, PLTP, PYGM, SPAM1, UGCGL2
Negative_8090	ATM, GP9, AOC2, ATG12, ATP5G1, B3GALT5, B3GALT6, B3GAT2, CASP9, CCL5, CCNB3, CDC2, CSNK1G3, CXCL1, DNMT3A, FGF3, FZD7, GLUD1, GPT2, HNF4A, HTR6, LIPA, MGST1, NCK1, NME6, NT5E, OR2M2, OR5M8, OXCT1, PHKG2, PLCB3, PLXNA1, PTGFR, SH2D1B, STAT2, TPMT, TRAF1, TYROBP, ULBP2, WNT2B, ZMAT3, HLA-DQB1
Negative_8091	C8G, F11, F8, CASP3, CD8B, CDK4, CHUK, CRLS1, CSF3R, CYP4F2, EDAR, GALNT11, IL22, INSRR, LARS2, OR2AT4, OR4B1, OR4N4, OR6X1, OXCT2, PLXNA1, PMVK, RBPJL, RFX5, SDHC, SEMA4D, TYMS
Negative_8092	ADA, CBS, ACP5, ACP6, ACPP, ACSL3, ACTC1, ADCY4, CCL22, CCNG2, CTBP2, DARS, F13B, GSTM1, HPSE2, IAPP, IL29, MCCC1, NTRK2, OR1D5, OR2AG2, OR51G2, OR52I1, P2RX5, PIGU, PIK3C2B, PLEKHA8, PLIN, PNLIP, PNPLA3, PT, CRA, PTPRM, PVRL2, SGMS2, TALDO1, VANGL1, HLA-DPB1, PAFAH1B3
Negative_8093	AGK, ACTG1, ADORA2B, AMD1, ARG2, AVPR1B, BCAT1, CDKN1C, CISH, CLDN8, CNTNAP2, COL4A1, CRHR1, DGKB, DHODH, FM05, FZD3, GRPR, GZMB, HLA-DOB, LIFR, MKNK1, NEFL, OR10G2, OR13H1, OR4K15, OR5AU1, OR6C6, ORC5L, PDGFC, PLCB3, PMM2, PYCRL, TKTL2, TRPM5, WNT9A, ATP6VOD2, HSD17B10
Negative_8094	IVD, LAT, ATP5G1, BHMT, CDKN2C, CREB3L3, CXCL2, EIF4B, ENTPD2, FUT3, FUT5, GALNTL2, GCDH, GNRHR, HYAL1, IDH3A, IL11RA, INPP5B, IRF9, ITPKA, KLRK1, MGAM, NCAM2, OR10X1, OR2M4, OR2M5, OR4B1, OR4N2, OR5AR1, OR9A4, PLOD3, POLD4, POLR2E, PON2, RBL2, SELPLG, SEMA4B, SHISA5, TLR5
Negative_8095	ACAA2, DDB2, PGAM2, POLE2
Negative_8096	MIF, PGF, ABP1, ALDH6A1, ATIC, ATP6V0B, BUB1B, CACNG2, CCR5, CD99, CLCF1, CSNK1E, DAPK2, DHX58, DUSP16, IL22, KYNU, MEF2C, OR1N1, OR2S2, OR7C1, PECAM1, PFKP, PLA2G5, PNPLA4, SHMT2, TBL1X, TOMM40L, TUBB2A, KIR2DL5A, MAP3K7IP1

Negative_8097	CAD, CLTCL1, E2F5, GGT7, HLA-F, INPP5A, LAMB1, NT5M, PAPSS2, PIP4K2A, PLK1, RBKS, SIGLEC1, SLC12A2, TACR1, TRPM5, VDAC2, HLA-DPB1, PDCD1LG2
Negative_8098	FST, ABI2, ADH7, AKR1C1, ALG3, ARNT, BCAT2, CCL7, DAG1, DPYD, E2F3, ITGB2, JAM3, KCNJ11, KDSR, KLKB1, LDHC, MAD2L2, METTL2B, NOTCH1, OR13C5, OR1N2, OR5A2, OR5AC2, PFN3, PTK2, SLC33A1, SPRED1, TNFRSF8, ZFYVE9, CSNK1A1L, HLA-DPB1
Negative_8099	AK7, BTC, ACO1, ACTA1, ADAM17, ALAS1, ALDH3A1, ATP5F1, CBLB, CCL21, CRRH1, EFNA1, FCGR3A, GNRH1, GSTM5, ICOS, ITGAE, MALT1, MAPK12, NRG1, OR10A5, OR8H3, PYGL, RDH10, RFXAP, SLC2A4, VEGFC, WWP2
Negative_8100	GLA, CALML5, CDH4, CTLA4, FLT4, ATP6V1B2
Negative_8101	BID, FST, ACACA, ANAPC4, APOA1, BBOX1, CCNA2, CD19, CNGA3, EFNA5, FUT4, GALNT13, IDI2, LAMB4, LIPT1, MGAT4B, NEUROG3, NME6, NMNAT1, OR10A5, OR10AG1, OR2F1, OR2M7, OR4F15, OR9G1, PDHB, PFN3, PRODH, RASGRP1, RRM1, SDHD, SETD2, SOCS7, TFDP1, HSP90AA1
Negative_8102	C8G, ALDH1A3, APOC3, B3GALT4, B3GALT6, B3GNT2, CADM3, CCND2, CDH4, CYP11B2, DHCR24, DPM3, EPOR, FGF22, ICOSLG, MAOB, NOS3, OR2F1, OR52M1, OR5T3, PIK3C2A, POLE3, PRKACA, SAT2, SH2D1B, STAM, TAS2R7, UGCGL1, VNN1, ZFYVE9
Negative_8103	AUH, MPZ, TNR, ACAT2, AKR1B10, ANGPTL4, ARHGEF1, B4GALT5, CD82, CDC2, CSF1, DLAT, FECH, FZD6, NCKAP1, NRG3, OR2L2, OR2Z1, PLCB4, PPP2R5C, RAF1, SESN1, SHISA5
Negative_8104	F7, PLG, AADAT, ARHGEF4, BUB1, CHEK2, CHIA, CHRM2, CIITA, CTSS, FGF3, GBE1, GLG1, GSTM4, GUCY1A2, IFNGR1, IFT57, IL12A, ITGB4, NCF2, NR1H3, PDHA2, PGAM1, PIM2, PRPS1, RFWD2, RRAS, SMARCA2, VTI1A, ATP6V1B2
Negative_8105	ATP5A1, OR2B11, RUNX1T1, STT3B, HLA-DRB5
Negative_8106	IL9, MIF, TPR, AADAC, ADH7, ATP50, AXIN1, BCL10, CCL22, CCR3, CCR8, COQ7, CYP2C8, EGLN1, ENO2, FCGR3B, FGF10, GRM5, GSTM5, GUCY2C, H6PD, HAHL, IL28RA, ITGAE, KLRC1, LDHA, MAGI2, MCM3, NFYA, NOTCH2, NUDT2, OR1A1, OR2V2, OR4D1, OR4K13, OR51E2, OR5A1, OR6K6, PCK1, PDE4B, PLA2G3, SDHD, SFRP2, SHC2, SLC2A2, TUBA3E, TUBB4, UGT2B7, GABARAPL2
Negative_8107	ACOX3, ADRA1D, CCND3, FARP2, NAGK, PDE10A, PPARG, PTPRZ1
Negative_8108	NLK, PLG, SYK, AASDH, ABLIM1, ACADS, ADAM17, AKR1C2, ATP6V1D, AVPR1B, C1QB, CACNG1, CACNG3, CAMK2B, CCL23, CCND2, CDKN1C, CDS1, CRY2, CYP4A11, DAPK3, DHDDS, GNAO1, GRIA3, GSK3B, HCLS1, HES1, HIBADH, IFNA2, IMPDH2, JAM2, NAT2, NFYA, NNMT, OR1G1, OR4X2, OR51A4, OR51A7, PLEKHA8, RHOA, SETD2, SOCS5, VARS, VKORC1, MAP3K7IP1
Negative_8109	FER, GDA, VTN, ACAA1, ACADM, ADRBK2, AFMID, AGPAT6, BCMO1, CASP3, CCL26, CCL28, CDK6, COMT, EGFR, FUT4, GARS, HSPA8, IDI2, IL22RA2, IMPA2, INPP1, ITGA1, KLRC3, KNG1, MAP4K4, MARS2, MCCC2, NCK2, NUDT8, OCRL, OR10C1, OR2M5, OR4A16, OR4C16, OR4K2, OR52K1, OR7D2, ORC5L, PTCH2, RASGRP4, RFXAP, TAS2R8, TPMT, TYK2
Negative_8110	MPZ, SFN, ALDH3B2, CAMKK1, CDKN1A, CTPS, DLAT, ENTPD8, GUK1, HLA-DRA, NME2, OR2A4, OR5F1, SSX2IP, PAFAH1B2, ST6GALNAC5
Negative_8111	FES, FGA, CHEK2, DUSP9, FGD1, FGF10, GLUD1, IBSP, IDI1, OR6X1, TAS2R8, WNT1
Negative_8112	DBI, BCKDHA, GUCA1C, OR2H2, OR56A3, PARD6B, RPRM
Negative_8113	CDH4, DAG1, GART, GOT2, HIBADH, HTR6, NPR1, OR1G1, OR6C1, PDE11A, RAC3, SREBF1, SULT2B1, ATP6VOD2, ATP6V1G2
Negative_8114	SMS, SPN, CDC14B, CER1, GFPT1, GNMT, HEXA, LEFTY1, MGST1, OR10G4, OR2T34, OR4N5, OR4S2, SERPINA5, ST6GALNAC4
Negative_8115	AMH, GNS, FGFR3, GANAB, GPAA1, MAPK7, MCM2, NEFH, PANK1, PDE5A, TUBA8, WEE1, KIR2DL5A, SLC25A31
Negative_8116	GYS1, HMOX2, LDHAL6B, PSEN2, SEMA4G

Negative_8117	ADCY3, ALAS2, BACE1, BCKDHA, CACNB4, CD47, CD79B, CDS1, CHPT1, EPHA3, FTCD, GALNT1, HYAL2, ITGAM, OGDHL, OR10H4, ORC2L, P2RX6, PLD2, PPP2R2C, PPP2R5A, PTAFR, PTPN7, SDC2, SDHD, SLC27A1, SPP1, THY1
Negative_8118	HK2, ACP6, ADCY1, AKR1A1, AMHR2, AMY2B, APBB1, B3GNT5, BET1L, CCR2, CR7, CLDN18, CLDN2, CNTNAP2, CYP2C18, DDX41, EGLN3, FOXO3, GALE, HNF4A, IL23A, MAP2K1, MKNK1, NTNG1, OR51G2, OR52J3, OR6C1, OXSM, PDGFA, PDGFC, RAP1B, RASGRP1, RUVBL1, SNAI1, STAT6, SUV39H1, WNT7A, ZMAT3, ATP6VOA1
Negative_8119	AK1, C1S, GPI, TH, ALG2, APOA5, CYP2C8, DGKD, DKK4, FM05, GALNT14, HHIP, LTB4R2, NFKBIA, NME2, NPAS2, OR2S2, ORC2L, PDGFA, SNAP25, TOMM40
Negative_8120	PML, PVR, SHH, ADH6, AKR1C3, ALAS1, ALOX12B, CBLB, CHST12, CLDN10, CP11C, CTNNB1, CX3CR1, EDN1, FRAP1, GPD1L, HMGCR, HSD17B2, IL12B, IMPDH1, INHBA, IPPK, IRF7, IRS4, MGST3, NFX1, NFYA, NLGN2, NTN1, OR7C1, OR9K2, PFN3, PFN4, PNMT, PRKAG1, PSME1, PTK2B, SEMA4D, SHMT1, STAT5B, TNFRSF8, TSNARE1, UNC5C, WNT11, YWHAQ, HSD17B10, PPARGC1A
Negative_8121	CKB, LTB, ACLY, AKT1, ATF2, CD59, CDK6, CDS2, CHRNA7, COL4A4, CXXC4, CYP26C1, DHRS3, E2F2, ENPP3, EPHA4, FGF3, GAD2, GMPR, IFNA21, IRS4, ITGB7, LCAT, MAP3K14, MARS2, MCM7, OR1J4, OR2W1, OR52A5, OR52E8, OR7G2, PLCE1, PNLIP, PRKCZ, PTGFR, RAPGEF3, TLR2, HLA-DPB1, TNFRSF17
Negative_8122	LIF, AMY2A, ANPEP, BDNF, CADM1, COL5A3, COQ6, EGLN3, ENO1, FBXW11, GRIN2A, IL20RA, NEUROG3, NFKBIE, NRG2, NT5C1A, OR2C1, OR52E6, PFN1, PGAM4, PIGH, PIK3C2G, PPAP2A, PPAT, PRKAR1A, RARS2, RFNG, SMAD1, TRIP10, WNT10B, ALDH18A1, ATP6VOD1, CTNNBIP1, TNFRSF17
Negative_8123	CXXC4, FM02, MGLL, PRKACA, RGS3, SAT2, TAS2R5, TSHR
Negative_8124	CBS, CR1, EGF, IVD, NNT, ACACB, ADH1B, ALDH1L1, APPL1, B4GALT6, CCL22, CDKN2A, FGF4, FGF9, FIGF, FZD8, GCNT2, GPT2, HADHB, HSP90B1, IARS2, IBSP, KLKB1, KLRK1, MCCC2, MTMR6, MYH3, NAT6, NKX3-1, OR2F1, PAPSS1, PIK3C2B, PTGES, SEMA3B, SEMA4B, SKIV2L2, SQLE, STX4, TLN2, ZMAT3, ATP6V1G2
Negative_8125	ME1, NOG, VCL, ALG1, CACNG4, CDK2, CLDN1, CLDN3, CYP2U1, FGF5, GALNT3, GLUD2, HARS, HMGCS2, IRF7, LRP6, NME4, OR14A16, OR2V2, OR4X2, UCKL1
Negative_8126	HAL, RDX, ACVR1B, ALG3, APOA5, ARD1A, B4GALT3, CACNG6, CCL27, CDC2, CHRM2, CMPK2, COASY, CXCL9, CYP4F3, DDIT4, ENPP1, FCGR2B, GFAP, GJD2, ICAM1, IL1R2, IQGAP3, MAPK13, MTMR2, MYLK, NEUROG3, OR1L3, OR51B4, OR52E4, OR52R1, OR5M3, PDE9A, PDGFRB, PGAM4, PLTP, PRKAG1, PVRL1, RRS2, SGPP1, SLC2A1, SSX2IP, TSHB, TUBA4A, VAV3
Negative_8127	AKR1B1, ALPL, CLDN14, CLDN9, IL6ST, NLGN3, OR10V1, OR4K13
Negative_8128	PLN, ACADSB, CHSY1, CX3CL1, CYP3A5, DDX4, DHCR24, DUSP16, ENTPD3, EXT1, GNAT3, GSK3B, HSPA1B, HYAL1, MAD1L1, MADCAM1, MAN1C1, MYH2, OR6X1, OR7D2, PARD6A, PIK3C2A, PTGDS, SEMA3E, SPRED1, TAS2R9, TNFSF14, TNXB, TSNARE1
Negative_8129	DUT, F2R, GPI, HAL, RFK, ACAA1, ALDH9A1, ATP6V0C, B3GNT5, BET1L, CSNK1G2, EFNA2, FTMT, GNAI3, GUCY1B3, ITPKA, JAG2, KCNQ1, OR13D1, OR2H1, OR5A1, OXTR, PDK1, PIGP, PRKAG1, PRKCE, PTPRB, RAB5A, SDHD, SSX2IP, TGFB3, UPP1, CSGALNACT2, HLA-DQB1, TNFRSF1B
Negative_8130	FES, IVD, ACADSB, ACAT2, ARHGAP5, CAV1, CDH4, CMAS, CYP2C8, DGKA, EPHB3, FGFR2, FOSL1, FZD10, IDH3G, IL20RA, MYL5, OR5V1, OR8I2, PPP2R5C, SEMA3B, SIGLEC1, SLIT2, SUFU
Negative_8131	ACTN1, ATP2A3, C4BPA, CDC7, DTX2, GPAA1, IFIH1, INPP5E, LAMB3, OR1I1, OR51F2, OR51I2, PRKX, SPTLC1

Negative_8132	C4B, FES, GLS, ACTB, AGRN, ALDOB, ARHGEF2, ATP5H, ATP6V0C, CAV3, CCL2 6, CD58, CHAD, CLCF1, CXCL2, CXCL5, DPM2, DPYS, DUSP9, ENO3, EPHX1, FG F11, FTMT, GPAA1, INPP1, MAP2K1, MAP3K12, MCEE, NKX3-1, NPR2, OR10H2, OR2T3, OR4N5, OR5T3, PER2, PIK3C2A, PPP2R5E, SPHK2, SQLE, SUV39H1, UCKL1, VEGFA, WWP2, XIAP, XYLT1, PRICKLE1
Negative_8133	EZR, ME1, XDH, AKR1B1, AMPD1, CALML5, COL5A3, CTNNA2, ENO3, FGFR2, FU T6, HLA-DOB, IAPP, IL13RA1, IL17A, MAP2K1, MYH14, NAGA, NLGN1, OR10G3, OR14I 1, OR14J1, OR4K2, ORC4L, PCNA, PDE2A, PIM1, PIP4K2B, PPA2, PPAP2B, PP M1A, PRNP, SDC2, TAS2R48, UROD, VEGFA, WASF2, WHSC1, HLA-DQA2, PNLIPRP1, PPP1R12A, PRICKLE2
Negative_8134	AR, FGB, GK, ATP5L, BRAF, CCL22, CNTFR, CTNND1, DCXR, EGLN1, EIF4E, GA LNT14, HIBADH, IL17RB, INPP5A, ITGAL, MAP2K1, MMP14, NANP, NEFM, NTF 4, OR10G9, OR12D3, OR13C9, OR13F1, OR14I1, OR1N1, OR4B1, OR6N1, OR9K 2, ORC6L, PARD3, PDCD1, PIAS3, PNPLA4, RGS3, RHOQ, SLC33A1, SUV39H1, UGCGL1, UGT2A1, PHOSPHO1
Negative_8135	PVR, TPR, ACOX1, ALAS1, APPL1, CLCA2, DPM1, DRD5, DUSP3, FLT3, GALNT1 2, GPAM, GUCY2D, HAP1, IL29, IRF7, LAMC1, MYH7, NKD1, OR8J3, PCCB, PIG U, RDH8, SAT2, SRGAP1, TAS2R1, HLA-DRB5
Negative_8136	FYN, KDR, SPN, CD58, CDKN1B, CD01, CNTNAP1, DHRS4, EFNA5, ENTPD2, FGF R2, FZR1, HHEX, IMPDH1, ITGB8, NEU1, OR10X1, OR1C1, OR5P3, PAPSS2, PI GB, POLR3D, PTPN11, ROBO3, SNAP25, STX4, TSLP, WNT6, PPP1R12A, ST6GA LNAC1
Negative_8137	A2M, CGA, FGA, PLG, ACAA2, ACADS, ASMT, B3GNT2, CCL15, CCND2, CKS1B, C SNK1G1, CYP3A5, DGAT2L4, ENTPD7, FADD, GALE, IL11RA, KAT2B, KLK3, MA N1A2, MAP4K1, MCCC2, OR1A1, OR1N1, OR51Q1, OR51T1, OR5F1, PCK2, PIM2 , POLE3, PPAR, RALGDS, RIPK1, SC5DL, SDC3, TOMM40, XCR1, MAP3K7IP1
Negative_8138	ADK, C5, ID2, LCK, TAT, UBC, ACVR1, ADH7, ALDH1A3, CREB3L2, CYP21A2, E FNA4, GALM, HSP90B1, IFNA6, INPP1, IRS4, LTBP1, MAP2K3, MYL5, NLGN2, NRG3, OR10A4, OR2S2, OR52N5, OR5K2, OR7G3, PGAP1, PIK3R4, PLEKHA8, P OLR3H, RFXANK, SENP2, SYNJ1, TLR2, TUBA3E, TUBAL3, MAPK8IP3
Negative_8139	TFG, AASS, ABCC8, ACOT12, ACTC1, AKR1C3, ATP6AP1, BHMT, CDK5, CMPK2, COL5A3, GMPR2, GYS2, IFNA13, IL1A, ITGAE, LYPLA1, MAP4K1, MYL5, OR10 K1, OR4K2, OR8K5, ORC1L, PIGA, POLR2K, PTGDS, PYGL, SARS, SLC2A2, SPT LC1, ATP6V1E2, SUV420H2
Negative_8140	C9, ALG2, CHRM2, DOLPP1, FLT3LG, FUT2, FZD8, HGSNAT, ICOSLG, IDH3A, I TGA6, KARS, KLRC1, LCP2, LGMN, LTBP1, LTBR, MAP2K2, MYH10, MYH11, NEU ROG3, OR10S1, OR10V1, OR6C6, P2RX5, PIAS1, PNPLA4, PPP1R1A, ROBO3, R PS6KA6, SRD5A1, TBK1, TSHB
Negative_8141	TXK, ALPL, AMPD2, CKMT2, DGAT1, DIAPH3, IRS2, JAG1, MAP2K6, NARS2, OR 13C9, PYGB, SLC27A4, SRGAP1, YWHAZ, PAFAH1B1
Negative_8142	C7, FGA, PVR, TKT, TPR, ADCY6, BMPR2, CD48, CDC27, CPT1A, CX3CL1, CYP2 S1, CYP3A5, DAD1, DPYSL2, DRD2, DUSP3, EDNRA, EIF4E2, EPB41, EPHB6, F ADS2, FGF23, GALK2, GNA11, HLA-DOA, HTR6, IL10RA, IL15, IL28B, ITGB6, MAP3K14, NEU1, NMNAT1, OR2C1, OR5H6, PGAM2, PIAS3, PIGN, SAT1, SETD1A, SMAD2, SPRY4, TUBA1A, TUBA1 B, UROS, CACNA2D3, HLA-DRB4
Negative_8143	MVD, ACOT12, ADRA1B, ALG9, CCL28, CD80, CDH3, CSF2, CXCL3, DTX2, E2F4 , EFNA4, ENTPD5, FGF10, GALNT14, GCNT1, GNA13, GNA15, GSTA2, MAN1A1, MAP2K7, MGST3, NCK1, NEFL, NR4A1, NRP1, OR11L1, OR2A25, OR4K13, OR5A K2, PARVG, PGAM2, PHKA2, PIGT, PIP5K1C, PNMT, POLE4, PPM1A, PRPS1, RB X1, TUBB2A, UGCGL1, YWHA, ATP6V1G1, SERPINC1
Negative_8144	CPT1A, CRHR1, DHCR24, EGLN3, ENO1, LALBA, OR52D1, PDHA2, RPS6KB1, SM PD1, SERPINF2



Negative_8145	AGK, C4B, ATP5E, FUT5, JUND, OR5B12, OR5H2, SNW1, UGT2A1
Negative_8146	BCR, CR1, VTN, ADIPOR1, AOC2, ARNTL, BUB1, CACNB3, CFLAR, CHRM2, CSF2RB, CXCR4, DDX50, DNMT3B, EXTL3, FGF3, FGFR1, HAAO, HSD17B7, IFNA14, IKBKKG, IL21, MAT1A, NARS, NFASC, OR10J3, OR14A16, OR4D1, OR4M2, OR5T3, PDE9A, PITX2, POLR2H, PRKCE, PRLR, RAP1A, SELPLG, SMAD9, SULT2A1, THBS3, TP53I3, UBE2L6, CACNA2D3
Negative_8147	GHR, GLS, MIF, MVD, TNN, AACS, ACSL1, ACSM1, ACTB, ALAS2, AOC3, CACNA1F, CDKN1B, CHIA, ECHS1, GALE, GALNT9, GMPR, GNRH2, HEXB, IDI1, IL20RA, INADL, ITPKB, KLRD1, MPST, MYH10, NFASC, OR10G3, OR10G8, OR11H4, OR4A16, OR4S2, OR56A1, OR5L2, PIGA, RGS3, RPSA, SLC33A1, SMAD9, STX1B, SUOX, TFPI, UMPS, WASL, GABARAPL2, MAP3K7IP1
Negative_8148	AK5, GP5, LEP, ACVR2B, ADCY3, AKT2, ALG9, CNGA3, CREB5, CRLF2, DDX51, ENTPD8, FBP1, FCGR3A, FGF20, FOXA2, FUT3, GATM, HLA-DMA, IFNA13, IL23A, ITGAX, MDH1, MDM2, NCAM2, OR11H1, OR4E2, OR8J1, OXSM, PDE8B, PTPMT1, PYGB, SDHD, SMAD9, SMARCA2, TSTA3, ATP6V1C1, PPARGC1A
Negative_8149	AR, AGPAT2, AGPAT4, CACNA1G, CD38, EVI1, EXTL2, FZD6, FZR1, GALNT5, GBA3, GLI1, GRIN2A, GRIN2D, JAK1, MCCC1, NOD1, OR9Q2, PIK3C2G, PLAT, PPP1R3B, PPP2R5C, SMURF2, ST8SIA1, STAT5B, SULT1A2, SULT1E1, TYMS, WNT10A, YWHAB, YWHAG, SERPINC1
Negative_8150	C7, HYI, LPL, TH, ACOT11, ACP2, ADAM17, AGPAT2, APOE, ARSD, CDK5, ERBB3, FGF23, FGFR3, FZD3, GNAI1, GRIN2B, IL1A, ITGA3, ITGAX, LAMB2, MTAP, OR10A5, OR10C1, OR1E1, OR4A15, OR4K13, OR5D16, OR6B3, OR6C76, OR6M1, PLIN, PPT1, RASGRF1, RDH10, TACR1, XYLT2, PDCD1LG2, SERPINB5, SERPING1
Negative_8151	GNS, OGT, PLN, ARHGEF2, ARNT, ASMT, BCMO1, CD47, CHSY3, CYP7A1, DDOST, DHRS4L2, EPHB2, FCGR2B, FRAT1, GSTA2, ICOS, INHBC, MAPT, OR4K15, OR6C4, RAPGEF3, RFNG, SIAH1, TICAM1, TJP2
Negative_8152	IL4, AGRP, ASCC3, CAMKK1, CHST12, F11R, GNB3, INPP5B, MGLL, NFKB1, OR11H6, PPAR, RPS6KA3, TMLHE, TUBB2B, YARS, TNFRSF10C
Negative_8153	AK3, C5, DBI, F7, FAS, FOS, ACSS2, ADCY3, CCR10, CCR8, CD274, DDX51, DRD1, FGFR2, GUCY1A2, HAAO, IL3RA, KIR3DL1, LDHAL6B, MADCAM1, NCKAP1, NEU4, OR4N5, OXCT1, PITX2, PMM2, PMVK, POLR2I, PPP1CC, ROBO2, SH3BP2, SPTAN1, STK4, WNT10B, HSD17B10, PDCD1LG2
Negative_8154	ACSS1, ATP4A, BCAR1, CYP2A6, FGF9, FLT3, GDF7, GLI1, GSTO1, HARS, IFNG, LGMN, MDM2, NME2, PAX8, PGS1, PHKG1, PLAU, PLCG2, RARS, SAT1, SHMT1, TRPC1, MAP3K7IP2
Negative_8155	TPR, CRY1, IL1RAP, KYNU, MPP5, POLR1E
Negative_8156	VTN, FDPS, GUCA1A, HSD17B7, INSR, NFKBIE, PLAU, RDH10
Negative_8157	SDS, CAMKK2, FOSL1, GADD45A, GNA13, GUCY2D, IFNA13, OR5B3, PLOD1, PPP2R2A, RALA, STX18, TLR9
Negative_8158	ACYP2, ARPC1A, ARSB, ATP5F1, BBC3, CD28, CD55, CDKN1C, CES2, CHD8, CHST13, CREB3L1, CXCR6, CYP26B1, EDAR, FGF17, GLDC, GSK3B, HEMK1, HNF4G, HTRA2, IL15RA, JAK2, JUND, KIR2DS4, LDHD, NT5C1B, OR10R2, OR2G6, OR4D5, OR56A3, OR5D18, OR5K1, OR6C6, OR7G1, OR9I1, PDE2A, PLAU, RHOD, SMAD7, SPP1, STAT6, TBL1XR1, TNFSF12, TUBA8, WASF3
Negative_8159	KHK, AQP7, CALML6, CMPK1, CSF2RA, CXXC4, DDX56, GCNT4, HAP1, HSD17B1, ITGA8, LAMC3, OR13A1, OR14J1, POLA1, PRKCQ, PTPRB, RASSF1, SIAH1, TOMM40L, WIF1, PDCD1LG2
Negative_8160	HK2, IL5, NNT, AADAT, ACTN4, B3GNT2, CD40, DOLPP1, EDA2R, FABP1, GNRHR, HNMT, IFNA7, IRF3, LIMK1, MAP2K4, NUMBL, OR10V1, OR52E2, OR5AP2, ORC5L, SLIT2, TACR2, UGDH
Negative_8161	RDX, C1QB, CACNB4, CFTR, FADS2, MAP2K4, MAT2B, OR2F1, OR52A1, POLR1E, PPP2CB, RAPGEF2, SHISA5, TNFRSF8, TSTA3, WNT6

Negative_8162	COL5A3, DNMT3L, EDNRA, GJA1, GSTZ1, GUCY2F, PERP, TAS2R5, TAS2R7, XIAP, SERPINC1, TNFRSF10D
Negative_8163	ME1, NPY, AMPD3, BHMT, CACNA1I, CASP10, CMBL, CTBP2, CYP2D6, DGKE, INMT, MYH7, OR5K2, PFN3, POLE4, PYCR2, ROCK1, SHISA5, SOAT1, ST8SIA5, SUGT, UCLG2
Negative_8164	FER, FUK, ACO2, ALDH3A1, CCL7, CCL8, CEBPA, E2F1, EPHA7, EPHA8, FTMT, FZD9, G6PC, GUSB, HARS, HSD3B1, ICAM1, IL28RA, IL7R, ITGA3, OR52B6, PDE1A, PDE1B, PDE4C, PDGFRB, PIP5K3, PLOD1, PNPT1, RENBP, SHC4, SMAD1, STX10, TNFSF12, TSC1, UNC5A
Negative_8165	CCR9, CLDN18, CLDN6, HNF1A, OR6X1, SMAD7
Negative_8166	ATM, FES, UBC, AGPAT2, AKR1B10, B4GALT6, CCL3, GALNT3, OR10K1, OR1E2, OR1K1, OR2T29, OR4X2, RDH12, RFX5, RUNX1, SESN3, SSH1
Negative_8167	ACSM4, BLVRB, CCL5, CD44, CD82, COQ5, DVL2, EPB41L1, FMO3, INSR, MTAP, NEGR1, PIGC, VAV1
Negative_8168	CFI, ID3, LSS, ALOX12, CLCA4, PGK1
Negative_8169	FH, MET, NOG, VCL, ACADVL, ALOX5, ATIC, CACNA1B, CCL17, CD247, CES2, COX15, DLL3, ELK1, GALNT12, GDF5, GSTK1, HCST, HNF1B, HTR4, HYAL2, LAMB4, LYPLA2, MAPK11, MARS2, NEFL, NUDT2, OR4X1, OR52N4, OR5AK2, OR5J2, PARD3, PDE8B, PKM2, PLCZ1, RDH12, RFXANK, RXRA, SMPD2, TAS2R7, THBS1, UBA7, VTI1B, ATP6V1E1, TNFRSF17
Negative_8170	JUP, LIF, MUT, AKR1B1, ALG8, ANAPC10, ATF4, CDKN1B, CES2, CRKL, CTTN, CYP8B1, DPM2, GNG13, HDAC2, INMT, ITGA1, LMO7, MALT1, OR2T5, OR4D9, OR5D16, OR6C1, PARVA, PDE6D, PROC, PVRL3, SHC4, SULT1A1, TCF7L1, TRAF3
Negative_8171	C9, DHH, GPI, ACP6, AGPAT3, AKT2, ANAPC2, BAIAP2, BCMO1, CCL26, CCR3, CD44, CLDN3, CTF1, DUSP1, F13A1, FABP1, GDF6, HIBCH, IL11, IL21R, IL4R, LPAR1, NADSYN1, NFATC4, NKX6-1, OR1G1, OR51A7, OR5B17, OR5D14, PAPSS2, PDE4D, PIK3C2A, PLA2G3, POLR1D, RAPGEF1, RPIA, STX1B, SULT1E1, TAS2R13
Negative_8172	FUK, ME1, UBB, AREG, CLDN14, DHDDS, GLUD2, HSD11B1, LIPT1, MLYCD, MYD88, NLGN3, OR2M7, OR51A7, OR52N4, PDGFB, PIGS, PRNP, PTGS2, SEMA4B, TIRAP, WBSCR17, YARS, ZIC2
Negative_8173	DCK, ADIPOR1, ASMT, COL5A3, ECHS1, GABARAP, HSPB1, ICAM3, NFKB2, OR1A1, OR4P4, OR5D18, P2RX1, PIM1, PPARA, PRDX6, TRMT11, PNLIPRP2
Negative_8174	CACNB1, CALML5, FUT9, GGT1, HHEX, IL1R2, OR8K1
Negative_8175	GGH, ARSB, BCMO1, CDKN2A, CXCL3, CYP2A6, FCGR3B, ITGB1, JAK1, MAP4K4, MAPK10, OR6C70, OR7C1, PDE6H, POLE4, PROC, PTGER3, RCHY1, ST3GAL1, ST8SIA1, TBXAS1, UBA1, UGCG2
Negative_8176	CD2, CRK, IDS, PTS, ABL1, ACADSB, ADORA2B, ALAD, ALG6, ATP5I, BET1L, CD244, CD40, CFL1, CXXC4, CYP3A4, EDNRB, ESPL1, EXTL3, FIGF, G6PC, GALT, IFNW1, INPP1, LDHA, MAPK13, NAGK, NSDHL, ORC1L, PANK2, PGS1, POLE2, PTGFR, PTPRC, RPIA, TAS2R40, TYK2
Negative_8177	CTH, NPY, MAD2L2, OLAH, PDE1B, RRM2B, SMARCA2
Negative_8178	STS, ANAPC10, COL3A1, GABARAP, GLYCK, LTBR, OR14J1, PDE4B, RPS6, RPS6KA6, TPI1, HSD17B10
Negative_8179	CBS, F2, ACHE, ANAPC10, CHKA, DOLPP1, EPHX2, OR1A2, STK11
Negative_8180	AR, CBS, ATP5E, CCR5, CDC42, CTTN, ETNK1, GSTM5, H6PD, HA01, ITGAX, MAP3K12, MYH7, NARS, POLR2D, PRKAR1A, PRKG2, SEMA3G, TAS2R49, PPP1R12A
Negative_8181	ANPEP, APBB1, ATG7, BACE2, BMPR2, CPT2, CTNNA1, DPM3, EPOR, ERBB3, GANAB, GNG12, INPP5A, IQGAP3, MAD1L1, MAP3K14, NAGA, NCF4, OR2L8, OR3A2, OR4M1, OR5K1, OR8B12, PIGP, POLE3, PON2, PON3, PPP1R1A, PRKCI, RCHY1, SELP, SQLE, TAS2R50, TJP3, TSNARE1, UCK1, VANGL2, WASF2, WNT7B
Negative_8182	ADRA1D, EDNRA, IFNA21, OR51M1, SELL, ST3GAL3

Negative_8183	F12, AMDHD2, DEGS1, FGF12, IL18, MTMR1, OR4F5, SDC1
Negative_8184	AK7, BCR, GK2, ID4, IL5, SI, TK1, AGXT2, ALDH4A1, ARSB, ATP5E, CCL24, COL4A4, CX3CR1, DDX50, ENPP1, GALNT7, GIT1, GOSR2, HTR5A, IL1R2, IL20, INSR, ITGB7, KIR2DL3, MAPK1, NEU1, NMNAT2, NT5M, OR10J1, OR52A1, OR52R1, OR5K2, OR7D2, P2RX2, PIK3C3, PLCD1, PLXNA2, PNPLA4, PPBP, PRDX6, PRPH, PTAFR, PTGS1, PYCR2, SGMS2, SPCS1, TFDP1, TRDMT1
Negative_8185	GGH, GPT, MPZ, ADCY6, AKT1, APPL1, CALML6, CHIT1, CSF2RA, DCXR, DGAT2L4, EPRS, ETNK2, EVI1, FGF2, FGFR1, GALNTL2, GPAM, HAGHL, LDHB, MAD2L2, NOTCH2, OR51G1, PER3, PIK3R4, PRKCD, PSENNEN, RPS6KB2, SNW1, SPCS3, THTPA, ZIC2, ATP6V1B1, ATP6V1B2, CACNA2D2
Negative_8186	DCT, FYN, HGF, ALDH3B2, ASCC3, ASIP, ATP5G3, AXIN2, CDKN2B, CHST11, CXCL12, CXCR5, DDX19A, ETNK2, EXT2, GNG13, GOSR2, GRB2, HSD3B1, ICAM1, IFNA10, IGSF5, IL10RA, IL8RB, KIR2DL2, KYNU, MMP9, NFATC1, NFKBIA, NODAL, OR4F4, OR4K1, OR8K1, PCCA, PGAM4, PI4KB, PNPO, POLR2F, PRKCA, ULBP2
Negative_8187	DCT, EZR, AACS, ACTG1, ADCY7, ARSE, B3GALT5, CASP3, CASP7, CLCA2, CRHR1, CYP4A11, DDX55, EHMT1, ERBB3, FGF10, FRAT2, GALK2, GDF5, GNA11, IGF1R, IKBKE, LDHB, NKD2, OR2T1, ORC4L, PIGS, RHOD, RPRM, SEMA3B, MAPK8IP1
Negative_8188	ACVR1C, ADRA1A, ARHGEF2, CD28, CHEK2, COL6A2, COQ7, DAXX, DERA, GPAM, GRHPR, IL6ST, ITGA2B, ITGB5, LHCGR, MAGI2, MAPK3, OR51S1, PAK1, POLE2, SOCS2, SPP1
Negative_8189	CRK, HK2, IL9, KDR, NLK, AMY2A, ARPC1B, B3GALT4, CBLC, CCL8, CCNE1, CDK6, CFTR, CLCF1, CLTC, DERL1, DGKD, EDA2R, FABP1, FUT6, GLYCTK, GNA15, GOT2, IL21R, IMPDH1, LAMB4, MBL2, MCEE, MTHFD2, MYL5, NT5M, OR10K2, OR1J4, OR52I2, PNPT1
Negative_8190	AADAC, CASP6, CDC14B, CYP2J2, DDIT3, FOXO1, FZD8, HPRT1, KLRC2, MCCC2, OR4F17, OR52N1, OR5L1, PAK2, POLE2, POLE3, TNFSF11, UMPS
Negative_8191	SYK, AHCY, AMPD3, CAMK4, CLDN17, CSF1, DGKE, DLAT, GALNT1, LALBA, NME4, PER2, RENBP, STX7
Negative_8192	AK7, ACP6, ASIP, BDH1, GPAA1, KCNB1, KIR3DL1, NCF1, OR2M3, OR8D4, SMA4, TLR2, HSD17B10
Negative_8193	BTC, ID4, MAX, ADAM17, ATP5J, DTX2, EPAS1, EPHX2, ESPL1, GALNT7, GCLC, GLYCTK, LEFTY1, NR5A2, OR2A4, OR3A3, PARVA, ROBO2, SLC27A4, SOCS7, SSX2IP, WNT5B
Negative_8194	ACVR1C, NUMBL, ULBP2
Negative_8195	BTD, DBI, LCT, PGP, TFG, ADORA2B, CD46, CSAD, EIF4E, FRAT2, GMPS, IDUA, IFNA21, IL10RA, MAD2L2, NFAT5, OCLN, ONECUT1, OR10G7, OR2T12, OR2T33, OR4C15, P2RX5, PDK1, PLA2G3, POLR2L, PPP2R1A, SOX17, ST3GAL1, ST3GAL5, TAS1R1, TAS1R2, TJP3, TUBA1C, TUBA3C, YKT6, ATP6V1E1, PPARGC1A
Negative_8196	DBT, PML, SYK, NRAS, HLA-DPB1
Negative_8197	CADM3, CASP6, OR2H2, OR4K14, OR51B2
Negative_8198	CSK, GP9, AKR1D1, BLVRA, CACNA1I, CCL16, CCNG2, CD40LG, CDC45L, COL4A6, CPOX, CXCL3, DDOST, F11R, F13B, FZD6, GRIN2B, GSTT1, HRAS, HSP90B1, ITGB8, KDSR, MAGI2, OR2T11, OR6F1, PFN4, PGAM1, PIGO, PLCD3, PRKAB1, PRKAB2, PYGB, RENBP, STT3B, TNFSF10, UGCGL2, UNC5C, UPB1, PAFAH1B1
Negative_8199	DAXX, MAD1L1, OR2T33
Negative_8200	ADSS, ATP2A1, ATP5A1, CACNA1E, COL5A1, CYCS, DDOST, G6PD, GMPPB, IFNA10, IFNGR1, KAT2B, MAP2K7, MCM5, OR10S1, OR2K2, PAX8, POLR3H, RDH8, SAT1, SEMA3B, TM7SF2, VAMP4, WASF1

Negative_8201	ADRB1, ALG8, BLNK, CYP2A6, DAD1, FLOT2, GADD45G, GZMB, HYAL1, MAGI1, MKNK1, NTN1, OR2G2, OR4F4, PARVG, PLXNA1, PRKAB1, RAC3, RFXAP, TICAM2, TPH2, YWHAE, PHOSPHO1
Negative_8202	SRF, CPT2, CTBS, FLT3, G6PD, H6PD, IFNA14, ITPA, KIR3DL3, MECR, NRCAM, OR11L1, OR1A2, OR1S2, OR9Q2, PCK2, SNAI1, XYLB, SERPINB5
Negative_8203	CFH, ZYX, ATP5G3, ATP6V1D, DUSP1, FTH1, IL5RA, IMPA1, PLCB2, SULT2A1, TGDS, ATP6VOD1
Negative_8204	ACAA2, ALG10B, CPT1C, GRIN2A, HDAC1, PAFAH2, PHPT1, PIGK, RDH11, RFW D2, STAT6, TNFSF10, XYLT1, TNFRSF10B
Negative_8205	CRH, ERBB2, NCAM2, UPRT
Negative_8206	F9, ARSB, ATP6V1A, BCAT1, BIRC2, CLDN2, DBF4, DFFA, DRD1, FGF6, GALT, GUCY1A3, HTR2A, IQGAP3, MAML3, MAP3K3, MAP3K4, NCF1, NRXN1, OR2AG1, OR2H2, OR4A16, OR51T1, OR7C2, PYGB, RFX5, RRM1, SMURF1, ST8SIA1, STX16, TSNARE1, VTI1B, WIF1, MAPKAPK3
Negative_8207	FYN, ID3, MVK, NLK, PML, ACSL6, ADCY1, ALPL, BLVRA, BMP8A, CACNB2, CD34, CDH15, CLDN7, DFFA, DRD1, DTX2, ENTPD6, FGF2, FLT4, FM02, GALNTL4, GSTM3, HSD17B1, IDH2, INADL, IRAK1, KLRC3, MITF, MYL7, OR13D1, OXCT2, PLTP, PRKAR1B, SMPD3, SPRY4, SRD5A2, SRGAP2, VAMP4, ATP6VOD1
Negative_8208	AK3, DCC, MPZ, PC, RET, CCDC6, CCL5, CD34, CTBP1, CYP1A1, DERL1, DGAT2L4, DGKB, GBGT1, IL3RA, IL9R, ITGA1, KLRK1, NEFM, NMNAT2, OR2H2, OR2T33, OR4F6, OR51B2, OR52E4, OR6C2, OXSM, PAK7, PIAS2, PIAS3, PLCB3, PSME3, SMAD5, STK11, TDO2, TICAM2
Negative_8209	PLG, PLN, RFK, ACP1, ALDH3B1, CD47, DGKD, DKK4, DVL3, EPHA7, GALNTL5, GBGT1, GNA14, HMGCS2, IL1R2, IL6R, MASP2, NRXN2, NT5C, OR8J1, POLR2B, PPP1R3C, PTPN7, TAS1R3, TYMS, WNT2B, PPP1R12A, TNFRSF10A
Negative_8210	AKR1D1, CACNA1A, CDK7, CLCA4, COL6A1, GNRHR, MICA, OR1F1, OR2G2, PLCD3, UPB1, WNT7A
Negative_8211	ADO, HGD, LTB, MPI, AMPD2, CCDC6, CCR5, CDC25B, CHIT1, CYP4A22, DHDH, ENAH, FGF11, GALNS, GGT7, GLO1, GNA11, GRHPR, GSTA4, GSTM4, GUK1, HAAO, MTHFR, NCF2, NMNAT3, OR10G9, OR10J5, OR4K1, OR4L1, PLA2G10, POLD4, PRKCH, RFXANK, SDHB, SLC27A4, SNAI1, SRGAP1, SUCLA2, YWHAB, ATP6V1E2, GABARAPL1
Negative_8212	ACMSD, ALG8, APOA1, ARNTL, ARSE, ATP5A1, ATP6V0B, CACNB4, CASP9, CCL17, CDC25A, GNA14, HDAC2, IKBKG, IRS4, JAG2, OR10H5, OR10K2, OR1K1, OR2AT4, OR5D13, OR5K1, OR6C70, OR7A5, PNPLA4, POLR3B, RHOA, SULT1E1, TAS2R48, UGT2A3, UPP1, WNT11
Negative_8213	MVK, NNT, B3GALT5, CBLB, HSD17B3, HSD17B8, MAFA, NEFH, NFKBIB, OR2D3, SPCS3, SPRY3
Negative_8214	ADC, APP, ACPP, ATP12A, BMPR2, CHRM1, CNTFR, COX10, CYP19A1, CYP2J2, DVL2, FADS2, FDFT1, FM02, GRIA1, IL28B, INPPL1, NAE1, OR1L8, OR2D3, OR2T34, OR52E4, OR52J3, P2RX4, PDHA1, PYCRL, RPS6KA4, SPRY4, SULT1A4
Negative_8215	C5, LEP, AOX1, ATP5G2, CD28, CD38, EARS2, FGF12, FGF18, FM05, GALNT7, GNPDA2, IRF5, MGAT3, OR51F2, POLE4, PTPRF, SETD7, SLC2A1, TLR4, TNFRSF9, HLA-DRB4
Negative_8216	ADORA2A, ADORA2B, ATP6V0C, CES7, CHST11, CNTF, CPS1, CXCL5, CXXC4, FOXA2, HPSE, IFNAR2, IFT57, KCNQ1, KRAS, LDHB, LIAS, MAOB, MGAT5, NR4A1, OR13C8, PIGL, PLD2, POLR2J, PTGS2, QARS, RASGRP4, SEMA4D, TACR1, TAS1R1, TGFB1
Negative_8217	CCR3, CD244, LEF1, MCM2, OR2T1, TCF7L2
Negative_8218	EFNA1, GP1BB, IL12B, IL23A, ROBO2
Negative_8219	PLN, ACAD8, ACP5, CCNG1, CYP17A1, DLL1, ENTPD7, FABP1, IFIH1, IL21, IL24, NARS, NKX3-1, NRG2, OR3A2, OR4K15, QPRT, SEMA3C, WHSC1

Negative_8220	ACTN4, AKR1C4, ATP2A1, BCL10, CACNA1F, CACNG3, CAMKK2, CCL19, CCNA2, CDC25B, CDK2, CLDN10, CYP3A4, DCTD, DCXR, DVL1, EFN3, ENTPD1, GGCX, HYAL2, ICOS, IL22RA1, IL23A, ITGA4, MAT2B, MKNK2, NRG2, NUDT5, OR2A G1, OR4A5, OR4D9, OR4F5, OR52N4, ORC6L, PDGFRB, PLOD3, POMC, ROCK1, TUBB3, UGT2B28, VAMP3, XYLB, AASDHPPT
Negative_8221	AGPAT1, ATP5G1, ATP5G3, BBOX1, CD36, CDS1, DFFA, ELK4, FGF22, HSPA8, KLRC2, OR4D2, PIK3CA, PLA2G3, PNPLA3, STT3B, UNC5A
Negative_8222	FGG, TK1, UBB, ARSA, CACNA1S, CYP4F3, FABP4, GALNT2, HIBCH, MAP2K6, MAP3K8, MAPK12, NUMBL, OR10G2, OR2H1, OR5K1, OR7A10, PDGFD, PIGU, PPP2CB, RBKS, RRM2, TJP2, TSLP, UGT2B17
Negative_8223	FN1, HK1, ANAPC2, CACNG1, CLDN16, CYP3A43, DDX4, DLL4, ECHS1, ENTPD6, FGD1, FM01, FUT5, GMPS, GNAI1, HADHB, KLRD1, MAGI1, OR13C4, OR1M1, OR2M3, OR2T10, PHGDH, PLXNB2, POLR2G, PRKAB1, SLC27A5, SLC9A1, TRAF1
Negative_8224	IL4, ATP6VOC, C9orf95, CD34, CDS1, CLDN11, CLDN3, COL2A1, ENPP2, EXT L3, FGF7, IDH3A, IMPA2, INHBE, MYH4, NCKAP1, NMNAT2, OR2L8, OR4D1, OR5H6, PDE1B, PDGFRA, PIK3CD, PNPT1, POLR2I, RFXAP, SLC2A2, SMC1A, TP53, VNN1, HLA-DQB1
Negative_8225	DDIT4, OR6C76, PTK2, TNFRSF11B
Negative_8226	ADO, GNS, ALPP, APH1A, CD99, CYP11B2, EPB41L1, FBP1, FTMT, GSTM2, IL25, ITGA11, KIR2DS4, OR10G7, OR5A1, PARD6B, PHKG2, PIK3R3, SEMA4F, SUV420H1, TNFRSF11A
Negative_8227	ALS2, ANAPC4, BDKRB2, CRKL, ENO3, ENTPD1, GALNT9, HPSE, HSD17B8, IRF3, LIMK2, NCKAP1, PDXP, PIK3CD, SMAD4
Negative_8228	FGG, SP1, TKT, AGPAT6, ATP6V1H, B4GALT1, C1QA, CDC20, CSF1, DHDH, FZD7, GGT7, GRIN1, GUCA1A, HSPA8, IFNA8, IGF1R, LAMC1, MAGI1, MDH1, NFKBIA, OR2C3, OR56A4, PGK1, PLD1, PPP1CC, RPSA, SYNJ1, UBE2K, YARS2
Negative_8229	ACADS, CAV2, FGF21, GNMT, IARS, ICOS, ITGB7, MGLL, OR1E2, OR1I1, PDE4D, PLA2G2E, RXRA, SMARCA5, ALDH18A1
Negative_8230	AGPAT3, ELK1, GADD45G, NOTCH3, UMPS
Negative_8231	ABO, BTK, F12, MPL, NGF, TK2, AANAT, ACOT11, ADH1B, ALDH6A1, ARHGEF4, BCKDHB, BUB1B, CACNG4, CFTR, CLCA4, CYP2D6, G6PC2, GNRH1, GUCY2D, IRAK2, IRAK3, LDHAL6A, LDHD, MAP4K4, MAPK3, MYH14, NCSTN, NKX3-1, OR2A14, OR51A7, PIGH, ROCK2, SORBS1, SPRED1, TPH1, WNT3, ATP6V1E2, ST6GALNAC3
Negative_8232	DCK, F8, FES, ACOX3, ACSL1, AGPAT6, ALG6, AMPD3, BBOX1, BNIP1, CACNA1G, CASP9, CCR9, CDH3, CYBA, DHODH, DHRS4, DUSP2, EDNRB, FGF21, INHBB, LAMC2, MAT1A, MGST2, NKX3-1, OR10J1, OR2D3, OR4X1, OR51I1, OR5B12, OR6B2, PRKAR2A, PRKCZ, PTPRC, SDC1, SELE, SEMA4B, SOCS7, TRAF5, XYLT1, PAFAH1B3
Negative_8233	ABO, CAT, ABL2, ACPP, AMY2B, BMPR2, CLDN15, CLDN5, DTX3, EPHA7, GSK3B, NAGK, OR2AG2, OR2V2, OR51I1, P2RX1, PARD6B, PARS2, PDE11A, PDHB, PP1R3A, TRAF3, TSHR
Negative_8234	BTK, EZR, SHH, ACYP2, AKR1B1, AKR1C1, ALDH3A2, ALDOB, AMDHD2, CAV2, CR3, CES7, CXCL12, CXCR6, GCNT1, GSTA4, IFNGR2, IRS2, KDSR, MAPK7, MTAP, NEU3, NRG2, OR13F1, OR4M2, OR52D1, ORC2L, PDE9A, PDHA1, PLCE1, PMM1, PNLIP, PRKCI, RBPJ, SEMA3A, SLC25A6, SPRY4, TCF7L1, TYROBP, PRICKLE2
Negative_8235	DCK, F5, GNS, ME2, PGF, ACTN4, ADRA1B, B3GAT1, B4GALT3, BBOX1, C3orf10, CCR4, CDS2, CTNND1, DPM1, ENAH, ENTPD4, GABARAP, GALNT7, GNRH2, GO SR2, LCMT1, MADCAM1, MGAM, OR10A7, OR1A2, OR2A14, OR4N2, OR56A4, OR56B4, PIM1, POLE3, PRKAG3, PRSS1, RALB, SC5DL, SLC2A1, SPRY1, TAS2R50, TLR2, TUBB, ULBP2
Negative_8236	ADORA2A, ALDH5A1, HAAO, KNG1, MAP4K3, MGLL, NEU1, OR51B4, OR51E2, OR6M1, PFN2, RARS

Negative_8237	F8, HPD, LCK, ACSL3, ACSL5, AKR1B1, AKR1C2, ASPA, CCL17, CCNA1, CDC2, CDC6, CYSLTR2, DVL1, G6PD, GAPDH, GCLM, HPRT1, HTR7, IL12RB1, ITGB8, LDHB, MAPK10, MTAP, NCAM2, NOTCH1, OR51A2, OR5B12, OR5M8, OR9K2, OR9Q2, PDIA4, PHKB, PIK3R2, RARS, RASGRF1, RASGRP3, STX18, THBS3, TNFSF4, WNT6, XCL2
Negative_8238	B4GALT5, CAV1, CHKA, CHRM1, CXCL9, GPD1L, IFNW1, MAP2K6, MTHFS, NCR1, OR52N1, OR5J2, OR5K1, PRPH2, PTEN, ROB02, SLC2A4, STX2, TBL1Y, ATP6VOA1, PAFAH1B3, TNFRSF11B
Negative_8239	BCR, C3, ACAD9, ACTA1, AKR1D1, ALCAM, ASRGL1, CACNG8, CD244, CD28, CD47, CDC25B, CSF2, CXCL3, CYFIP2, DDIT4, DHX58, ELK1, ENPP7, FUT4, GFAP, HSD17B4, ITGB1, NFATC3, NLGN3, NOX3, OGDHL, OR11H6, OR2AG2, OR5R1, OR8I2, OXTR, PLCD4, PLEKHA8, PRKAG2, RASA2, RBL1, RELA, RELB, SEMA7A, SETD1A, ST3GAL1, TSLP, TUBB1, TYRP1, XYLT2, GABARAPL2, MAP3K7IP1, MAPK8IP3
Negative_8240	GLA, MPL, MPZ, RB1, APOA2, ATP6V1H, CES2, CIITA, COL1A2, CTSS, CXCR4, DRD5, DUSP6, FTH1, GAPDH, GCNT3, HARS, HNMT, IL22, ITGAD, KITLG, NSD1, NTNG1, OR2K2, OR2S2, OR52J3, PIK3CA, PLXNB3, PPOX, PTPMT1, RPRM, RUNX1, SCLY, SEMA3A, SULT1A1, TAS2R38, TP53, WNT9B, YWHAG, MAPK8IP1
Negative_8241	C1S, F2R, ACOX3, AMHR2, ARD1A, ASRGL1, EPB41L1, HTR5A, IL23R, LARS, MAPK13, OR1Q1, OR1S2, OR2K2, OR9A2, OXCT2, PPP2R5D, PYCRL, SETDB1, SMC1B, TLR2, YES1, ZIC2, PLA2G12A, ST6GALNAC6
Negative_8242	FUT6, GRIN2D, MGLL, OR6F1, PDE6H, PIAS4, PMM2, PPM1A, PPP2R2C, PRKAB2, PRKACG, TPI1
Negative_8243	CR2, F8, MOS, ZYX, ADCY6, ADRB3, CACNA1G, CD74, CERK, CRY2, CTBP2, CXCL9, CYCS, DOT1L, DUSP5, ECHS1, FGF5, GALNT9, GLUD1, HAGH, HSD3B2, IFNA16, INMT, IQGAP3, MAP3K6, NTN1, NUMBL, OR10G9, OR13H1, OR2V2, OR4K13, OR8K5, OR9G4, PDGFRB, PHKA1, PLCG2, PVRL1, RPS6KA3, SMC1B, SPRED2, STAT5B, STX16, VAV3, HLA-DPB1, MAPKAPK3
Negative_8244	NNT, NPL, RDX, SRC, ACACB, ATP5J, CHAD, CXCL16, DAD1, DAPK3, DDIT3, DEGS1, DMGDH, ENTPD1, ENTPD8, GCNT3, GMPR, GNRH1, GOT1, HSD11B2, KCNJ11, MAOB, NT5C2, OR2Y1, OR51Q1, OR5D16, OR6K2, ORC1L, PARVB, PPP2R2A, PYCR2, SETDB1, SMAD7, SRGAP3, ST3GAL2, TP53I3, UGT2B11
Negative_8245	AASS, ACSM2A, ARRB2, CCR10, CLDN9, CYSLTR2, DDX55, DPM1, DUSP8, EXTL2, FABP4, FLT4, GMPA, GNG3, IFNA6, INPP5A, ITGA4, NCOR2, NGEF, NLGN1, OR10S1, OR4M2, OR51Q1, PDIA4, POLR1C, PPP2CB, PRKCG, RRM1, SHMT1, STAT3, TCF7, UCKL1
Negative_8246	DAO, INS, KIT, AASDH, AKR1B10, ASRGL1, ATP5E, CCR6, CD47, CD59, CPS1, CTLA4, CXCL6, DGAT1, DUSP6, EIF4E2, ENTPD2, EPB41L1, ETNK1, HTR2C, IFNAR2, OR1E2, OR2T5, OR4L1, OR52N2, OR5T2, OR6K3, OR8K5, PCNA, PGAM1, PGM3, PISD, PRKAR2A, PTPRM, RDH16, RPS6KA3, SGMS1, ST3GAL3, TGFBR2, TSHR, TUBAL3, TUBB, USE1, WNT1, CACNA2D2, HLA-DRB4
Negative_8247	ADC, GCK, ABP1, ACACA, BIRC2, CD40, CPS1, DAXX, DIAPH1, EPB41L2, GUCY2F, ICOS, KLRC4, LDHC, MGAM, NCAM1, NFATC3, NKX3-1, NOS1, NRXN1, OR10A5, OR10G8, OR2A2, OR2G6, OR4B1, OR4N5, PIK3C2G, PLA2G4A, POLR3G, PRKAB1, PVRL4, RAP1B, RPRM, ST3GAL6, STX12, TGFA, TKTLL1, AASDHPPT
Negative_8248	AR, ACVRL1, BCAT1, CNTNAP1, CTSL1, DVL1, ENO2, GLUD2, HSPB1, INHBB, NKX2-2, NRP1, OR2AG2, OR52L1, PLCE1, POLR2B, RAP1B
Negative_8249	ARHGAP5, B3GAT1, CCR5, CD40LG, CDK5, CYP2S1, DDX56, FGFR1, FRAT1, OR6B3, PGAP1, SLC33A1
Negative_8250	CHRNA7, CPT1B, CSNK1E, FTCD, GSK3B, OR1J1, SMURF1, STK4, TPH2, TUBB, MAPK8IP3
Negative_8251	ALOX12, ANAPC7, CRY1, FBP1, GOT1, GRIN2B, GSTA5, IL1B, LCMT2, OR13F1, OR51B6, OR5C1, PPAP2B, RETSAT, TACR1, TGFBR1, TMLHE, YWHAQ

Negative_8252	AK5, ME2, CACNA1B, CACNG3, CX3CR1, DNMT1, DTX3, ERBB4, FOXO3, IFT57, PFKM, SNAP25, SORD, UGDH, ZAP70
Negative_8253	BTC, C2, C8G, FST, LHB, OAT, UBC, ACSL3, ALDH1A1, ALDH3B1, ALOX15, BACE1, C5AR1, CD28, CDKN2D, CTPS, CXCL12, HTR6, IDH3B, IKBKB, IRS2, ITGAM, MAP4K4, MARS, NFAT5, NTRK2, OR4C46, OR51B6, OR5M8, OR6X1, PPAP2B, RDH5, RXRG, SLC2A1, SMURF2, TBK1, MAPK8IP2, MAPK8IP3, PRICKLE2
Negative_8254	ADA, IL5, MPL, PAH, ANAPC5, BCL10, CCNA1, CHKB, CTNNA3, DVL3, GALC, GPAM, IL8RB, LLGL1, MAT1A, MECR, MPP5, NOTCH1, OR4A5, P2RX5, PARVB, PDE5A, PIAS1, SFRP5, SHMT1, STAT1, STX4, TJP3
Negative_8255	C6, IL5, ACMSD, ACYP2, AHCY, ALDOA, APOE, ARPC3, ARSB, CSAD, CXCL3, DFB, EHMT2, ENPP3, FLOT2, GNAO1, GSTP1, GUCY1A2, IFNA5, IGF1, INMT, ITGA10, LARS, MYLK, NCKAP1, NLGN3, NME6, NOTCH1, OR10P1, OR1C1, OR1J2, OR2F2, OR4E2, OR5AK2, OR8B4, OR8K5, PAPSS2, PPID, PTK2B, SEMA3C, SGP1, SPRY2, TJP3, ATP6V0D1, PRICKLE2
Negative_8256	C1S, ABCC8, ATP6V1A, BIRC3, EPHA5, GART, IL2RB, PDE8A, PIM1, PLA2G4A, TRAF2, PAFAH1B3
Negative_8257	EDA, GHR, TAT, TNF, ALDH1A1, ANGPTL4, CXCR5, DARS2, DDX41, FM05, GAS1, GNPAT1, HLA-DOA, HTR2C, ICAM2, IFNA2, IL17RA, INHBB, INPP5E, IRAK4, MAP4K4, NFAT5, NKX6-1, NUMBL, OR10K1, OR2T4, OR7G3, SLC9A1, SMPD3, SOCS3, SULT2A1, XIAP
Negative_8258	FGA, NNT, ARHGEF6, BBOX1, GCLC, HTR5A, IL15, NOX3, OR2A5, OR51A7, SELL, VCAM1
Negative_8259	CSK, ACSL3, AMHR2, ASIP, ASNS, B3GAT3, BET1, CACNG6, CAMK2A, CCNG2, CNDP1, DGKQ, GALNT1, GPD1, GRM5, GSTM5, HLA-F, HMOX2, ITGA5, LM07, MECR, MTHFD1L, NCOR1, NFAT5, OR10A3, OR2L3, OR4S1, OR52B4, P4HA2, PFKM, PPP1R3A, PTEN, PTPRB, RRAS, SAT1, SDC4, SFRP4, SHC4, SHISA5, SPCS3, SRD5A1, TBK1, TSNARE1, TUBAL3, TUBB2A, VASP
Negative_8260	INS, LCK, A4GALT, AACS, ALDOA, CD226, CHST11, DEGS2, DPYD, FASN, FGFR2, GMPPB, GNPAT1, GPLD1, GRM1, GZMA, HTR5A, IFNGR1, ITGAM, MYL2, NCF4, NCR2, NUDT2, OR10G3, OR1A2, OR2L3, OR2T8, OR4K17, OR52J3, OR6F1, P4HA1, PLA2G3, PPP2R1B, PTGS1, RPS6KA2, STEAP3, TYROBP, UGCGL1, ATP6V1C2
Negative_8261	FES, OGT, AMD1, B4GALT1, CACNB2, COX15, F2RL2, GCLC, GGT6, GNB3, ITGB7, MAN1C1, MGAT4B, PVRL3, RETSAT, SMARCA2, VEGFA, MAPK8IP3
Negative_8262	AK5, CGN, DDC, EZR, LCK, ABAT, ARG2, CACNG3, CASP7, CHRM1, CNTN2, CXCL1, CYBA, FOSL1, GALNT7, GCH1, GIT1, IL18R1, IQGAP1, ITGB1, LDHB, LTBR, MAFA, NCF2, OR6C74, OR6X1, PARVA, PHKA1, PLCB1, PPP1R3D, PRKAR1A, PRKAR2A, PTCRA, PTEN, RAPGEF4, RETSAT, TNXB, XYLT1
Negative_8263	ITK, SRF, TKT, ALOX5, BCAR1, CTBP2, CTLA4, DDX51, DGKE, DHRS4, DUSP1, EFNA2, EPB41L1, FARSB, FIGF, GALNT12, GPD2, GSTM1, HYAL1, IFNAR2, IL20RA, IL24, LAP3, LPAR1, MAP3K3, MYH9, NAGA, NAT5, NFKBIB, NKX2-2, OR2H2, OR4C12, OR4D2, PGM3, PISD, PLCD4, PRPH2, PTPRJ, RAC2, RASGRF1, SUV39H1, TRPC1, UGT2B7
Negative_8264	XDH, DKK4, FMO1, GLO1, GRIN2C, HLA-DOB, IARS, ITGA3, KLKB1, MAP2K4, MYLK3, OR1L8, OR2AG2, OR4D9, OR4S1, OR5AC2, PFN3, PHKB, SSH3, STT3B, ATP6V1G1
Negative_8265	NLK, AASDH, ACP, ARPC2, B4GALT7, BRAF, C4BPB, CXCL1, CYP2F1, FGFR2, GPD1L, GZMB, HSD17B2, HSD17B3, IDUA, IRAK3, ITGAX, LAMA3, PDE6H, PIGM, PNPT1, PPP3R1, RPN1, SGPP2, SSH2, TAS2R50, TGFB2, TLR9, UGP2, WNT2
Negative_8266	GPT, ID3, CTSB, E2F1, GMDS, HLA-DOA, MYD88, OR11A1, OR6C2, PFAS, PLD1, PRODH2

Negative_8267	EZR, GDA, ALG1, ALOX12B, ATP5J2, CHEK1, DHCR24, DLL4, EFNA3, FIGF, IL3RA, MAML1, MAP4K4, NKD2, OR8J1, POLD3, PPP2R2D, PRKCG, PSAT1, SHMT1, SMARCA2, SNW1, STT3B, ATP6V1C1, KIR2DL5A
Negative_8268	EDA, FES, LPL, PLN, B3GALT4, CNTFR, CRLS1, CYP11B1, DOCK1, ENAH, GALN TL4, JAM2, NME2, NRP1, OR2AT4, OR2K2, OR2M3, PAFAH2, PAK3, PPA1, PRKC D, RAPGEF2, SMAD3, SNAI2, PPP1R12A, TNFRSF13C
Negative_8269	LSS, CHKB, CYBA, MCCC2, MCM7, NSD1, PNPT1, RAPGEF2, RXRB, YWHAB
Negative_8270	GP9, ANAPC11, ARHGAP5, CNDP1, COQ7, GRB2, GUCA1B, IGSF5, MAP2K6, OR1 OV1, OR52E8, PHKA1, PIK3CB, PSEN2, PTPN11, ROBO2, TAS2R49, TSHB, WNT 2B
Negative_8271	AMY2A, NANP, PARD6G, SPAM1
Negative_8272	F10, TNF, ALOX5, BACE2, BUB1B, CCL26, CDC2, CTNND1, CXCL10, DDX56, DU SP5, ETNK2, FZD2, GGT7, GNRH2, GPD1L, HSD11B2, IGSF5, INHBB, MYLK3, O R2A2, OR2B11, OR8B4, ORC2L, PDHA1, PRKAR1A, PTPN5, SDHB, SEMA3E, SLC 25A4, TLN1, WNT3, YWHAQ
Negative_8273	CTBP2, PRKAB1, TIRAP, VDAC2
Negative_8274	AK7, ILK, ABLIM2, ACADM, ACAT2, ADH7, ADIPOR1, AHCY, ALCAM, ALG2, BLN K, CACNG1, CCR5, CHEK2, CNGA4, CRKL, CTNNA2, CYP3A4, DAPK3, DPM2, EDA 2R, GALM, GALNT9, GNPAT1, HCLS1, IMPA2, MAD1L1, NEU4, NNMT, OR10A2, OR1A1, OR2A14, OR2T10, OR4D1, OR51I1, OR7D2, PGM1, POLE, RAP1B, RASA 1, RBX1, ROBO1, SOCS7, VAMP2, ARHGEF12, C1GALT1C1, HLA- DQA2, SUV420H1
Negative_8275	DBH, HDC, OSM, BIRC3, COL3A1, FLT1, IL1R2, JAK1, LAMA4, NQO1, OR11H4, OR2Z1, PAK6, PGM1, PLA2G3, RAP1B, TSC2, UGT2B28
Negative_8276	DKK2, GADD45B, GNPDA1, INPP1, NEU2, OR51V1, PPID
Negative_8277	EGF, JUN, MPL, TFG, ACTB, ANGPTL4, CHKB, CXCL9, EPB41L3, EPHA4, FGF3, FTMT, GRB2, HEXA, ICAM1, ITGB5, KAT2A, LAP3, NEUROD1, OR10X1, OR1B1, OR4C15, PDGFB, PIAS1, POLR2E, PTEN, RDH12, SSH2, ST6GAL1, TNFSF12, U GCGL2
Negative_8278	CFI, IL7, ALAS1, B3GAT1, CDC14B, EIF4B, GYS1, HCST, NOS1, PPOX, SEMA4 D, TAS2R48, TUBA1C, WNT7B, ATP6V1B2, PLA2G12A, TNFRSF12A
Negative_8279	FGB, ACTN2, AHCYL2, ALDH3A2, ANAPC1, BRAF, CCR4, CD274, CDC25C, CHEK 2, CXCL16, CYBA, CYP27A1, DGKG, GGCX, GSTM3, IL1RAP, IRS1, MAN1B1, MC AT, NUDT9, OR52E6, OR7C1, OR8K5, P2RX1, PLOD3, PON2, PTEN, SEMA4F, SL C27A5, SMC1B, SNAP25, TAS2R8, TBL1XR1, TCF7L1, ST6GALNAC3
Negative_8280	BID, DCT, FGB, GSS, NNT, SPN, AGRN, ALDH9A1, ALPI, ANAPC7, ARNT, BMPR2 , C3AR1, CASP6, CD70, CDC6, CLDN17, COL1A1, CTPS2, CYP19A1, DIAPH2, D KK2, FABP3, HDAC2, LDHAL6A, NAMPT, OR12D3, OR1S2, OR2H1, OR4F15, OR5 2N4, OR5M8, OR6Y1, PFN4, PIK3C2A, PIK3R3, PMM2, PMVK, PPP1R3A, PPP2R 2C, PSAT1, PTGES, QPRT, SKP2, SMPD2, TLR2, UNC5A, HSD17B10
Negative_8281	ADK, RET, FGF20, OR5D18, PMVK, SARS2, SEMA4G, TRAF4
Negative_8282	DCN, FER, FGB, AARS2, ABP1, ACAD9, ALG13, ARG2, BMPR1A, CD46, CDIPT, C HRM3, CRLS1, CSDA, DDX18, EGLN3, EIF4B, FGF13, FGF17, HEXB, INPP5E, L CP2, MGST3, NAT5, NEU2, NKX3- 1, NOTCH2, NOTCH3, NPAS2, OR13C3, OR1M1, OR2T2, OR56A4, OR6A2, PDXP, PGM1, PHKB, PHKG2, PLXNA1, POLR1A, SEMA4G, SLIT1, SMAD4, STK36, TAS2 R4, TGFB1, KIR2DL5A
Negative_8283	F5, TNC, TNF, ACSS3, ADCY1, ARHGAP5, BNIP1, CDC7, CDIPT, CSNK1E, IAPP , IGF1R, INPP1, ITGB1, MAGI2, MAP2K7, NRXN1, OR2T12, OR4X2, OR8H3, PI K3CB, POLR1B, POLR1C, POLR2D, PON2, SC5DL, SETDB2, SOCS7, STAM2, STA T1, UGT2B4, UXS1, VEGFB
Negative_8284	PGD, ATF2, CASP8, CTBP2, DCTN1, EI24, FLT3LG, FUT5, FUT7, MAP2K2, NCR 2, OR52E2, OR7G3, PRKCB, PTPN11, SMPD4, TLR9
Negative_8285	COX15, GALNT9, OR1A2, OR4M2, OR51T1, P2RX3, PAX8, PTPRF



Negative_8286	EZR, ABLIM1, APPL1, BET1L, CCL8, CD72, CSF1, CTSB, CXCL16, CYP19A1, FCER1G, GALNT11, IKBKE, IRAK3, NRG1, OR13C4, OR1L1, OR3A3, OR5AP2, OR6C3, OR6C6, P4HA1, PEMT, PLCB1, PPP3R2, ROCK1, SOAT2, EIF4EBP1
Negative_8287	EGF, GNE, PLN, ABLIM1, ADAM17, AGPAT1, ASCC3, ATP5I, ATP6V1D, CCNG2, CCR10, CD34, CDKN2D, CLDN19, CREB3L1, GLDC, GMDS, GSTM5, IL5RA, IMPDH1, LIAS, LIPA, MAGI1, NOX3, NT5C, OR4D6, P2RX3, P4HA1, PANK4, PKLR, PLOD1, PRKAG1, RAB5A, RAPGEF2, RHOA, SEMA4B, SEMA4D, SOCS7, TAP1, TP53I3, UAP1, USE1
Negative_8288	C7, LCT, OGT, PAH, PVR, ACOX3, ALDH4A1, AOC3, B3GAT2, C7orf16, CCNG2, COQ3, CRB3, DIAPH2, DTX2, FGF23, GBA3, IL17RB, INPP5E, KLKB1, LCP2, NAE1, NAGS, OR10S1, OR2T33, OR52N1, OR5B17, OR6T1, OR7G3, PDE9A, PIGO, PIK3CB, PLA2G4A, PNPO, PON1, PPARA, PPM1D, PRKAR2A, PTGES2, PYGB, SOS2, SQLE, ST3GAL2, VAMP4
Negative_8289	NF1, ACADL, ACSL4, ANGPTL4, ARRB2, ASAH1, ATN1, ATP5A1, ATP6V1F, ATP6V1H, CASP7, CAV2, CDC42, CHRDL, CISH, COL2A1, COL5A2, COX15, DAPK1, DUSP5, EDAR, GFPT1, GLI2, GLI3, GMPBB, GMPR, GNRH1, HGSNAT, IL2RA, ITGA3, MYLK3, NFYC, NT5M, OR4K17, PLCG1, RAPGEF2, SEMA3C, SEMA3E, SGMS1, SYNJ1, TGDS, TNFRSF4, WNT7A, ATP6VOA2
Negative_8290	CFD, EHHADH, KIR2DL1, PHKA1, TBXA2R
Negative_8291	AR, PAH, ADIPOR1, APOA5, CBLC, DEGS1, EIF4B, EPHA5, EXTL3, FGF1, GNAI2, GNPAT, HNF4G, LCMT2, NOS1, NR1H3, OPLAH, OR10T2, OR4K1, PER2, PITX2, POLE, PPP2CA, PPP3CB, PRKCQ, PROS1, QARS, SGMS1, ST6GAL1, SYNJ2, TUBB2B, WNT2
Negative_8292	DAO, GAA, GNE, HK1, LAT, OGT, AANAT, ACSL3, ACVR2B, ADORA2A, C1QB, C9orf95, CCR3, CDK7, CDKN2D, CSNK2A1, ENPP7, FGF22, FRAP1, GALNT10, GCNT2, GNA15, GRIN1, IGSF5, IL28RA, INMT, KAT2B, KCNQ1, LAMB3, LEFTY1, MASP2, MS4A2, NARS, NLGN1, OR4F4, OR6N2, OR9Q2, PARVA, PIK3C2B, SELE, SEMA4F, SHC4, TAS2R49, TFPI, TUBB4, VTI1A, VTI1B, WNT5A
Negative_8293	ASNS, CARS, CRB3, CREB3L3, FMO1, GAD1, GLUL, GPAM, IL3RA, IRS1, MADCAM1, MARS, METTL6, MGAM, NRAS, OR10H1, OR2L13, OR51B2, OR5J2, OR7G2, OR8K5, PDGFD, PIGA, PLA2G4A, POLR2A, PRKACB, PTPN1, PVRL1, SULT1A1, ULBP1, VDAC1, WWP2, ZAP70
Negative_8294	FYN, ACPP, ALAS2, BCL2, BNIP1, CDC25C, IFNA4, IL5RA, MKNK2, NUMB, RAPGEF4, TNFRSF6B
Negative_8295	GP6, NPL, ARPC1A, CMPK1, CRY2, HARS, IL18, PRKX, PYGM, RBX1, SYNJ1, TGF3, TUBB2A
Negative_8296	FGB, GP6, MYC, TEC, ACSL5, ADAM10, ATP5H, BMP6, CD82, CRLS1, CXCR5, EPB41L3, FBXW11, GAMT, HAGHL, HHIP, HNF1A, IKBKB, ITGAM, KIR2DS4, KRAS, MYL2, OR2W1, OR5P2, OR6C1, PIGO, PLA2G2A, SQLE, ATP6V1G1
Negative_8297	CGA, FGB, ARPC1A, CAMK2G, FZD5, ISYNA1, KIR2DS4, NRCAM, OR10C1, OR52K1, OR5A2, PCK2, PLD1, PPP2R1B, TNFSF8, TUBB
Negative_8298	CD6, FGG, JUP, SRC, ACACB, ADRB3, AKR1C3, ARPC1B, ATP13A2, COL1A1, CXCL6, GALNT6, GNA15, GNAT3, GSTA1, HNMT, IL1R1, LEFTY2, NFKBIA, NME6, NR4A1, OR1L3, ORC5L, ORC6L, PDXP, POLR3B, PRDX6, RARS, TACR2, TYROBP, TNFRSF10C
Negative_8299	ADO, CCNB3, COQ6, HLA-DRA, OR1E2, P4HA2, PAK1, RAPGEF2, SRD5A2, VAMP3
Negative_8300	ADCY1, ADH4, ALG12, ALPI, ATP5E, CACNA1I, CHPF, DAD1, EIF4B, ENPP6, GALNT8, HSD3B2, IKBKE, MAT1A, NSDHL, NUDT12, OR3A1, OR5A1, OR5B17, OR6M1, PANK2, PCYT2, PERP, PIPOX, PLCD1, PPP3R1, RFXANK, STX1B, VNN1, PFAH1B1, SERPINA1
Negative_8301	FH, ABAT, AKR1C1, EPHA2, ERBB3, MICA, OR4L1, OR8J1, PAX8, PRKAR2B, SULCLA2

Negative_8302	ABL1, BCAT2, CDH15, DGKH, FARS2, FLT1, IL20RB, MYH14, OR5AN1, OR5D18, PFKFB4, PIGA, SUCLA2
Negative_8303	F5, FGA, ACADS, ACSL5, ADCY6, ADSL, ARAF, ARSB, ATP5G2, C1QB, C3AR1, CNE2, CLTB, CXCR5, CYP2F1, DGKA, DHCR7, FGF18, FUT7, HARS, IFNA10, IL12B, IL1RAP, IRAK3, JAK3, KARS, LAMC2, LCAT, LTC4S, MAPK14, MGST3, NFKBIE, OR1C1, OR1F1, OR1L6, OR6T1, PDE1C, PDPK1, PRIM1, PRKAR1A, SMC1A, SNAI2, SPRED1, TNFSF4, UBA7, UPB1, XYLT1, ATP6VOE1
Negative_8304	MAX, MPZ, OAT, SYK, ADIPOR1, NLGN1, OR9Q2, P4HA3, PIK3R1, SMARCA5, TLR2, ZMAT3
Negative_8305	ADO, IL5, TFG, B3GNT4, BAAT, C4BPA, CCL14, CD79A, CD8A, CYP3A5, DDIT3, DGKQ, DUSP6, ENPP2, F13A1, FCGR3B, FLT1, GCAT, GLUD2, HAAO, HAO2, ITGB1, MAD2L1, MGAT3, OR10G2, OR13C8, OR13H1, OR1D5, OR2AT4, OR2T10, OR51I1, PAK6, PGAM1, PIP4K2C, PLCZ1, PPP3CC, RAD51, ROCK1, SRD5A1, SUFU, TAS2R48, TIAM2, TM7SF2, TPMT, TUBAL3, UNC5B, WNT10B, HLA-DQA2
Negative_8306	GK2, TK2, CCNE2
Negative_8307	CRH, F8, LEP, NPY, ATP5G2, C1QA, CCL13, CD14, CD38, FIGF, LRDD, NCKAP1L, NUDT8, OR1E2, PTPMT1, RBPJ, SC5DL, ST3GAL5, TIRAP, TLR3, TUBA8, UBA1
Negative_8308	GLI3, PDGFD, WNT16
Negative_8309	DDC, AGPAT3, CADM3, CHRM5, CSNK1E, ENPP6, FGF8, GLG1, HTR2A, IRAK2, NFAT5, NTN1, OR1C1, PAX4, PDE6D, PLAT, POLR3B, PPM1B, SPRY2, TACR3, TJP3, EIF4EBP1
Negative_8310	FAH, ID3, PDC, SP1, AMY2A, ARNT, ATP6VOB, AXIN2, BCAT1, CACNG7, CD226, CD79A, CFL2, DAAM2, DDX23, EIF4E2, F13A1, GADD45G, ICOS, IFNA13, LDHC, LIPG, MYLK3, NPAS2, NRXN3, OR10J5, OR10P1, OR1D5, OR1I1, OR2T1, OR2W1, OR8A1, OR8H1, PCYT1B, PLXNA2, PNPLA3, PTCRA, PTPRM, RBX1, RPSA, SETMAR, SSH3, STX5, TCIRG1, TUBB4Q, ULK3, C1GALT1C1, PNLIPRP2
Negative_8311	HAGH, OR2L8, PHKG2, SETMAR, TAS2R1
Negative_8312	BLVRA, CCR2, COL6A2, CXCR6, DNMT3B, HNF1B, NEUROG3, PDCD1, PGK1, ST6GALNAC5
Negative_8313	C6, C7, IL6, PTS, SHH, TK2, AGMAT, ALDH4A1, ARSA, BCL10, CCL16, CD19, CDHD, COQ3, CRY1, CSDA, DLL3, DVL1, EGLN3, EPHA1, GALNT6, GCNT1, GP1BA, HLA-DOB, IFNA10, INHBC, LARS, MGLL, NNMT, NRXN3, NTN1, OR2A25, OR2F1, OR8K5, PDE6G, PIGW, PLA2G1B, POLR2A, POLR2G, PPID, SMAD6, STAM2, TOMM40, TRHR, TYMP, VARS, VDAC2, VNN1
Negative_8314	GSR, ABLIM2, AFMID, CYP11A1, FUT7, GNB3, METTL6, MYH14, OR52A5, POLD2, SHMT1, TLR9
Negative_8315	ARSA, CDS2, CLDN6, CLDN9, TRMT11
Negative_8316	AUH, GBA, SCD, ATN1, ATP13A2, CACNB1, CLDN7, ENO2, EXTL2, FGF18, FGF3, FOSL1, GOT2, GPAA1, GSTA2, HADHA, HIF1A, HMGCS1, IDH3B, IL18R1, IL2ORB, IL8RB, IL9R, ITGA7, LHCGR, MALT1, MCCC1, NME6, OR10A6, OR10AG1, OR2D3, OR4C15, OR6A2, OSMR, PDE6D, PFN4, PPARG, PTPRM, SLC27A5, SPAM1, SPHK2, TAS2R40, TRAF2, VTI1B, PRICKLE2, ST6GALNAC3
Negative_8317	CKB, CTH, F8, HK1, ID3, KHK, LYN, MET, ACADVL, ADSS, ARPC1A, ATP6VOC, B4GALT2, BCKDHB, BDNF, BLNK, CASP9, CCL14, CD274, CEBPA, CHAD, CTBP2, DGKD, DHX58, EPHB2, EPHB6, FZD6, GALT, GNPAT, HBEGF, LDHAL6A, OR1G1, OR1S2, OR4F17, OR4F6, OR51B4, OR5B21, ORC1L, PLIN, PLXNA3, PPP2R2D, SESN1, SLC2A2, SMAD2, CACNA2D4
Negative_8318	CDH2, EPB41L3, OR52E4, TRADD
Negative_8319	GSS, PRL, ACTC1, ANAPC5, ARHGAP5, ATP13A2, AVPR1A, CCL17, CCL4, CD82, CYP4F2, ETS1, FGF21, GALM, HBEGF, LARS2, MCM4, MGLL, OR4A15, OR4S2, PAK2, PDE7A, PGLS, PLCD1, PLD1, PPP2R1A, PRKAB2, PRKCQ, SEMA4F, STAT1, STAT5A, STK3, SULT2B1, TGDS, VEGFC, TNFRSF10D

Negative_8320	F9, GNS, SFN, CASP8, CLDN19, COMT, CPT2, CXCL10, CXCL6, CYFIP1, CYP2A7, G6PC2, GAB1, GALNT11, GDE1, GNAO1, HHEX, OR13C3, OR2M7, OR2Z1, OR8B8, OXTR, PDGFD, PECAM1, PERP, PLAUR, PRKCD, PRKCG, RFNG, SEMA4D, SETD1A, SLC2A4, SV2B, TAS2R10, TICAM1, UGT2B10
Negative_8321	GSS, PGP, AARS2, ACSS3, CDKN2B, CSNK2B, DGKB, EFNA4, EGFR, FGF9, FIGF, GNRHR, ITGAM, LIPG, OR10A2, PDXP, PON3, SARDH, SELP, SFRP1, THY1, TOMM40, ATP6V0A4
Negative_8322	C3, INS, CACNG7, CALML6, DNMT3A, FGF22, G6PC, MAP3K5, OR5P2, OR6K3, PDX1, PIK3C2B, PLCG2, PLD1, RXRB, SKIV2L2, SUOX, TRADD, UNC5C, MAPKAPK2
Negative_8323	FAH, A4GALT, AGPAT3, CACNA1A, CASP8, CD40, CYFIP1, ENTPD2, FMO4, GATM, GSTO2, GUCY2D, INPP5B, LTB4R2, MADCAM1, MAML1, MAP3K5, MOV10L1, NCR3, NOTCH2, OR51L1, PCYT1A, PDE8A, PDGFA, PERP, PIK3C2G, POLE, RPS6KB1, CACNA2D1
Negative_8324	ADC, FES, ALDH2, ATF4, B4GALT3, CCL7, CDKN1A, CYFIP1, CYFIP2, CYSLTR1, DCXR, ECSIT, EPAS1, FABP3, GGT1, HSP90B1, IDI2, IL18R1, JAG2, MAP3K6, MAP4K2, NT5E, NUDT5, OR11H1, OR1J1, OR2AG2, OR8K5, OR9K2, PAICS, PCYT1A, PCYT1B, PGK1, PPP1CC, PRKAG3, PRKCZ, PRKY, SREBF1, SSH3, TLR3, TNFSF10, UGDH, WNT10B, C1GALT1C1
Negative_8325	FST, ADRA1A, B3GALT2, BMP2, CAMK4, CASP10, CHRM3, CTBP1, CYP2B6, GGCX, GNRH1, ITCH, KLRC4, LARS, MAPK3, MFNG, NLGN3, NUDT8, OR10A7, OR4F6, OR8H2, PLAU, POMC, RPN2, SAT2, SETDB2, SQLE, VAV1, WHSC1, YES1
Negative_8326	CBL, MUT, OTC, CALML6, CAMKK1, CHRNA7, DAPK2, GAMT, GCNT4, IARS, KNG1, MAP3K8, OR1D5, OR1L4, OR2AG2, OR2M3, OR52I2, OXSM, PGM2, PHKB, POLR2E, POLR2J, PPAT, SESN3, ST3GAL4, STAT4, TIAM2, TRAF6, WNT1
Negative_8327	BTC, AKR1C1, ALPPL2, CLTCL1, FOXO1, HDAC2, IGFBP3, MGLL, OR10A7, OR4E2, OR9G4, PTGS2, RAPGEF1, RPN2, SHC3, TNFRSF8, WNT16, TNFRSF6B
Negative_8328	ACAD8, ANPEP, ASMT, ENTPD3, FGD1, FUT5, GALNT5, GALNT8, GGT5, GNAQ, HIP1, IL9R, MMP9, MYH11, MYL2, NNMT, OR10H1, OR2AG1, OR4F17, OR6F1, PIK3C2B, POLR3D, PTPRF, SEMA4C, SNW1, TCF7, UROD, WNT16, ZAP70, B3GALNT1
Negative_8329	CD2, NNT, ACOX1, ACP5, ACVR1B, AMPD3, ASMT, ATP5F1, ATP6V1A, BST1, CDC25A, COL2A1, COQ3, CREB3L1, CREBBP, DARS2, DHODH, DRD2, DUSP16, GGT5, GRM1, HLA-DOA, HRH2, ICAM1, IMPDH1, ITGB3, MAP2K2, MITF, MYH7B, NFE2L2, NME2, OR14J1, OR2A4, OR4A15, OR51S1, OR5H2, OR6C2, OR6Q1, PIM1, PPP1CA, SDHC, SEPHS1, TP53, TRAF4, ATP6V0D1, SERPINB5, TNFRSF10D
Negative_8330	INS, JUN, NGF, PDC, AGXT, ALG6, ALPL, ASAH1, CBLB, CD34, CD48, CFLAR, CLDN18, CREBBP, DAG1, EHHADH, EXOC7, FECH, FUT8, FZD1, GALNT1, GALNT14, GNAZ, GYS2, IBSP, IL29, LDHB, LRRC4C, MAP2K6, MYL7, OR52N2, OR5B17, OR9G1, PIK3C3, POLR1D, POLR2J, RASA1, SIPA1, SLC2A4, STX3, TAS2R14, TGFB1, TRAF6, UCK2, XYLT1, HSP90AA1
Negative_8331	MET, ADCY4, CYP27A1, CYP2B6, CYP3A7, DGUOK, DUSP3, EIF4E, ENTPD4, ENTPD8, FMO5, GALNTL2, GDF5, GMPPA, GNPDA2, IL12A, IL28RA, IL2RB, IRS1, MGAT1, NTRK2, OR10K1, OR2T12, OR4K13, OR4S2, OR9G1, PDGFC, PEMT, PER1, PRKAB2, PRNP, RAPGEF2, RASSF1, RPIA, RPS6KA4, SV2B, VANGL2, WWP1, YWHAH, ZAP70, PAFAH1B2
Negative_8332	CLCF1, FGF14, IQGAP3, NR1D1, SEMA3A, ATP6V0D2, TNFRSF6B
Negative_8333	DCT, DDC, F11, F3, A4GALT, ADRB1, ALOX12B, APPL1, ATG7, CTNNB1, CXCL1, DDX52, FGF17, FMO1, GART, GBE1, GNAT3, GP1BA, IL21, MAP3K5, MCEE, NOS1, OR11L1, OR1L1, PAK6, PCYT1A, PIK3C2B, PLA2G2A, POLR3G, PRPS1, QPRT, RAB23, RPS6KA6, SARDH, SDHB, SNAP23, STAT3, SULT1A1, TACR3, TAS1R3, UGCG

Negative_8334	GBA, BDKRB1, CCL3, CLDN17, DAG1, DKK2, HSP90B1, IFNA7, OR4P4, PLXNB3, SMAD4, TRIP10, VNN1
Negative_8335	HAL, NPL, ACAT2, BIRC3, C5AR1, CCL20, CD79A, CLDN7, DARS, E2F1, EIF4B, EXOC7, FGF20, FPGS, GAMT, GNA12, GNB1, GPD1L, GUCY1A2, HHIP, HSD17B3, IBSP, NAMPT, NLGN3, OR10A5, OR2AG2, OR5A1, OR6C76, OR8D4, OXCT2, P IAS4, PLXNB3, PRKAR2A, PRSS1, PTGFR, RAPGEF4, RDH8, SEMA3G, STK36, T AS1R2, TUBA1B, VDAC2, WNT1, WNT10B
Negative_8336	AGK, BAX, ACOX3, B3GALT4, CD47, GNAI2, LIPG, OR1S1, PLCB1, RPS6KB2
Negative_8337	ADCY1, DGKD, GAD1, GGT6, IL25, MYH10, OR2A14, PIGU, SDHC, STX1B, TM7S F2, EIF4EBP1
Negative_8338	C4B, CD2, MET, OTC, SRC, ADIPOR2, ADSL, ALDH4A1, B4GALT7, CACNA1C, CA CNB1, CAPN2, CASP7, CES1, CNDP1, CPT1B, DGAT2L4, EDN1, GALNT9, GRAP2, HLA- DOA, HMBS, IFNAR1, IFT57, LEFTY1, LIPF, MYLK2, NAGK, NCK2, NUDT5, OR1 OA2, OR10S1, OR3A2, OR5AU1, OR7G2, PDE9A, PIK3C2B, PRIM2, PRKCB, SEM A3C, SLC2A4, THBS3, UPP1, ATP6V1B2
Negative_8339	B3GALT6, FSHB, GPD1L, IL15RA, PHKG1
Negative_8340	ARHGAP5, CACNG1, EPHB1, GNAL, UBE2K
Negative_8341	ASL, C5, ASAH1, BDKRB2, CDKN2B, DFFA, EDAR, GFPT2, GGPS1, GSTZ1, ITGB 1, MKNK2, OR4K14, PIP4K2B, PSME2, PTGIS, RDH5, RENBP, SYNJ1
Negative_8342	FER, TEC, FOXL1, G6PC2, GNPDA2, NSDHL, OSMR, UGCGL2, SERPINC1
Negative_8343	ZYX, ACOT11, ATP2A1, ATP5G2, CLDN1, CRB3, CSDA, DIAPH2, DUSP6, EXOC7, EXTL2, EXTL3, FASLG, GABARAP, GALC, HCST, HDAC2, IL22RA1, LAMB2, MG ST3, MYH3, NARS2, NCOR1, NEFL, NUMB, OGDH, OR1Q1, OR2Z1, OR52J3, OR6C 75, OR7A17, PAX6, PDGFRA, PIGQ, PIK3R1, PMVK, POLR2B, PRKAG3, RAP1B, SEMA3B, SEMA4C, TNFSF14, ULK1, UROS
Negative_8344	CACNG2, CCNE2, CYP2A13, EXTL1, GALE, MAP3K13, MCCC1, OR2F1, OR3A2, O R5D13, OR8U1, POLR3K, PRKACA, PTPN7, TNFSF9, TRPM5, UGCGL1
Negative_8345	C8G, FUK, ADCY10, ADH7, ALCAM, CCR2, CD38, E2F5, FZD5, GALNT2, GMPR, G NA12, GSTM5, IFNW1, NPAS2, OR10J5, PAK2, PLOD3, POLR2F, PRODH2, PTPR M, RASGRF1, SESN2, TCF7L2, TJP3, TSC1, CACNA2D4
Negative_8346	CBL, IL3, AMDHD1, BMP8A, CACNB1, CCL8, COL3A1, CTSL1, ENTPD3, FGD1, G RIN2D, HLA- DMA, ICOSLG, ITGAX, KLRK1, MCCC1, NCF2, OR4C13, OR5P3, PIAS2, PLA2G2 D, POLR2C, PRKX, PTPRR, RALB, TAS2R3, TIRAP
Negative_8347	B4GALT2, IL8RA, ITCH, LTA4H, NCAM2, PTGS1
Negative_8348	CD4, CS, DBT, ID3, KMO, MSN, ACSM2A, ARHGAP5, BNIP1, C7orf16, CLOCK, D EGS1, FGD3, GABARAP, GATM, GGT5, GTSE1, HSPB1, IFNA6, IL1RAP, KARS, K LRC4, MS4A2, MYH9, NT5C2, OR2T33, OR2Z1, OR4Q3, OR5B12, OR5H2, PAPSS 2, PCNA, PDE3B, PDE8B, PI4KB, PPOX, PRKAB2, RASGRP2, SLC2A2, ST3GAL4, STX3, TBXA2R, TSTA3, TUBB3, TXNDC12, UNC5C, ZAP70
Negative_8349	CD6, PRL, ALG2, B4GALT2, CDH1, CLDN15, CLDN20, CTLA4, FGF1, FPGS, G6P D, GATM, GJA1, GNAI1, HEXA, IFNA13, IKBKE, IL11RA, IL4R, L1CAM, MCM3, NANP, PHKB, POLR3B, RPS6KB1, SLC27A1, TNFSF10, UCK1, ULK2, UPP2
Negative_8350	ACYP1, CDC25A, COQ6, CXCR6, CXXC4, DARS, FMO4, FTMT, HTR2A, MRAS, OR2 C3, OR52B4, PRKCD, PRKCZ
Negative_8351	ACSS3, CYP19A1, EIF4E, FABP4, GSTP1, HADHB, HLA- F, ITGAV, LYPLA2, NEFL, NR4A1, OR6C75, PGM3, PLXNA3, PPP2R2C, PRKAB2, PRKCE, PTDSS1, RAPGEF1, RENBP, ROCK2, SMAD6, ST3GAL3, ST8SIA5, TNF SF9
Negative_8352	MYC, SYK, ATG7, B3GALT5, CCL13, CDC27, CLDN10, IL15RA, LCMT2, MAD2L2, OR1E2, OR2H1, OR4K13, OR4X2, PAK7, PPP3CC, PRKX, PTEN, RAPGEF4, ROB O3, TAS2R3, ULBP3

Negative_8353	FAS, ACTA2, AGPAT6, CCL7, CD226, CLCA4, FADS2, GFPT1, GRM1, GSTK1, MAP2K7, MYH8, NEFL, OR2H1, OR2L8, PLAT, PSME2, RAB5A, SORD, VARS
Negative_8354	ARG1, CCR3, CD80, CSF2, CYFIP1, JUND, KRAS, OR5B3, PRKACG, PSME2, SCLY
Negative_8355	MYC, NPL, ADAM10, ARPC1A, ARPC5L, ASAH1, ATP5H, BCL2, C5AR1, CADM3, CCL13, CCL24, CCL27, CD86, EXTL1, GNAI1, IL20RA, KARS, LDHD, LIPF, MAP3K5, MAPK12, NFX1, NPAS2, OR2K2, OR2L13, OR52I2, OR52J3, PAPSS1, PIK3R1, PKLR, RHEB, SPTLC1, THBS2, TSHR, UGT2B28, WNT11, PNLIPRP1, TNFRSF14
Negative_8356	BID, F11, FH, GNS, ACP5, ALPP, ATG3, CYBB, GALNT8, GOSR2, IFNA21, MLLT4, OR13C9, OR52A1, PYCR1, RBKS, RPN1, SLC2A2, ST8SIA1, STAT6, SERPINA5
Negative_8357	A2M, IL2, ADCY1, CAMK2D, CASP9, CNGA3, CNGA4, COASY, DGKG, GALE, HLA-C, IL12A, MAN1A2, NKD1, OR1A1, OR51B4, OR51T1, OR8U1, PCCB, PDGFB, PIGT, PRKAB2, SERPINE1
Negative_8358	ALAD, ARNTL, ELK1, INPP1, MASP2, NAGLU, OR2F1, SH3BP2, SSH1, UBE2L3, PAFAH1B2
Negative_8359	NF1, ALCAM, APOA1, BAIAP2, BMP8B, BPGM, CAV2, CCR4, CLDN1, GNAI1, GOSR2, IDI2, JAG2, LDHB, LRDD, PIK3C2A, PSME1, SH2D1A, SHC3, TNFSF12, VANGL1
Negative_8360	C9, CP, ADCY6, ANAPC5, ATP4B, BNIP1, C4BPA, CACNB1, CD14, CNTN2, CREB5, CXCL11, FTMT, GUK1, HYAL2, IFNA10, NEFH, NFATC3, NMNAT3, OGDHL, OR2H1, OR2M3, OR51Q1, OR8J3, P2RX2, PFN1, PMM1, PPCDC, PPP3R2, RPS6KA2, SEMA4C, SESN3, ST3GAL3, SUFU, SULT1E1, TP53, UROS, VEGFB, WNT3, TNFRSF10A
Negative_8361	INS, ACSL1, ATP5H, COL2A1, HNMT, NFAT5
Negative_8362	ACOX3, CDC25B, EIF4E2, MAN1A2, MAPK1, NRXN1, OR2A5, PLAUR, PLOD1, POLR2K, SIPA1, WEE1, WNT10A
Negative_8363	CEL, F12, AADAC, ALDH1L1, ATG12, CACNG5, CD38, CLDN2, COL5A2, CSF1, CSNK1E, CXCL5, CYP1A2, CYP2E1, DUSP1, EARS2, GNG13, HTR2B, ICOSLG, IFNG, IL1RAP, OPLAH, OR10A2, OR4P4, PKLR, POLE2, PON2, PPP1CA, PTPN7, RAC1, RALGDS, RPS6KA3, SEMA4A, SH2D2A, THY1, TRHR, WNT2B, WNT5B, ZFYVE16, TNFRSF11A
Negative_8364	CD2, EBP, FH, JUP, KDR, TK1, TYR, ACP2, C1QB, CCND2, CXCR3, DLL1, GNAI1, HTR4, MAGI3, MAPK10, MLYCD, MPDZ, MTMR6, MYLK3, OR7A17, PDE6H, PDE7B, PRPS1, PYGB, STX2, SUCLG2, TCIRG1, TICAM2, VASP, HSP90AA1, TNFSF13B
Negative_8365	CD4, ACYP2, ALDH2, CCL3, CHRM3, CNTN1, CNTNAP1, COL5A3, GNAI1, GNB1, GRPR, IRAK1, MTHFD1L, MTHFS, MYH11, OR10Q1, OR13H1, OR5AC2, PGAP1, PP2R2A, PPP2R5A, PRKACA, RXRG, SLC2A4, SULT1A4, TFPI, TUBA1B, WNT16, TNFRSF14
Negative_8366	AARS, ALG8, CAMK2D, FARSB, GALNT8, IMPA2, MLYCD, NOTCH1, OR10G8, OR51A2, PRODH, ST3GAL4, TKTL1, HLA-DRB3
Negative_8367	C8A, CP, OGT, B3GALT5, CAV1, CD226, CSF2, CXCL9, DGKQ, FGD1, MEF2C, MRAS, OR4S1, OR52N1, PDGFA, PIGK, PIP5K1C, PPP1CA, PTGIS, RDH12, RPN2, SDHA, STK3, SULT1A2, SUOX, XCR1
Negative_8368	CD6, DUT, GLS, GP9, ALG10, ATIC, B4GALT5, CCDC6, CD34, CSF2, CYP4F3, ESAM, FARS2, FOSL1, GANC, GPX5, HADHA, HLA-G, IL18R1, IL22RA2, ITGB8, LDHA, OR5AU1, OR8G1, ORC2L, P2RX5, PGAP1, PLA2G2D, PRKCI, RDH5, ST3GAL4, STAT6, TAS2R41, TPK1, TUBA3E, WASF1
Negative_8369	GHR, ACSS1, APLP1, B3GALT4, BCL2L1, BIRC2, CLDN3, CNTNAP2, CTNNA1, FADD, FOXA2, GCLC, HSD11B1, IL23A, IL4R, MLYCD, OR13C8, OR6B2, OR8K1, PLA2G2F, POLR2B, PON2, RAPGEF2, TCF7L1, WNT4

Negative_8370	BTK, ALDH1A2, ALG10B, BET1, CCND2, CDC27, CFTR, CHRNA7, CSH1, CYP7A1, ENO3, EPRS, GPAM, GSTT1, KRAS, MAML3, MYL7, OR1Q1, OR2A42, OR2T34, OR51E1, OR7C2, PLCB3, POLR3B, PRKAB1, PRLR, PTTG1, RBL1, MAP3K7IP2
Negative_8371	GHR, AVPR1A, CHEK2, CYP3A43, IL2RG, ITGAL, ITGB4, MADCAM1, NKX3-1, PRKCZ, SIPA1
Negative_8372	ATM, PVR, RDX, ADRA1B, CCL22, CCL5, DGKA, DMGDH, DPAGT1, FCGR3A, GAL3ST1, GALNT7, GNPAT1, HDAC1, MTMR6, MYL2, OR7D2, OR9K2, POLE2, PRKAG3, STX4, TD02, TNFRSF4, TRAF3, TUBA1C, VDAC1, B4GALNT1
Negative_8373	FH, CLCA2, FABP3, ITGB7, MAD2L2, NFYB, NRG4, OR10A2, OR6Y1, OR8J3, PRSS1, SC4MOL, UGT2B10
Negative_8374	AMH, CSK, SRF, BDH1, BRAF, CAV3, CERK, COL6A1, DKK1, EPAS1, FOXO1, HSD17B7, NCAM1, OR4B1, OR52E2, PDE11A, PFAS, PGAP1, RFNG, SFRP1, SLC2A2, SMPD1
Negative_8375	HGF, ME2, MUT, ALPI, B4GALT6, BAIAP2, CER1, DKK4, FGF22, FLT3, HMOX1, IFNAR2, IL2RA, OR10K1, OR2L3, PDE4A, PRPH, STX1A, THBS2, UMPS
Negative_8376	DCT, ABI2, ALDH6A1, ALG3, ARSB, ASCC3, BMP4, CYP2D6, GZMB, MARS2, MITF, OR14I1, OR5D14, OR5K1, OR6C2, STT3B, SULT2B1, HLA-DQB1, TNFRSF17
Negative_8377	ADA, ACADSB, ACP2, AREG, ARPC3, CD226, EFNA5, JAK2, KAT2B, NT5C1A, OGDHL, OR1L3, OR51Q1, PRKCA
Negative_8378	ILK, TNN, ADH5, ALDH3B2, BMPR1B, CARD11, CPT2, CSF2RB, CTLA4, CTNNA2, CX3CL1, CYP2A7, DEGS1, DLL1, DPM3, FGF20, GNRH2, HMGCS2, LEPR, MTHFD2, NKD2, NKX6-1, OR10A7, OR10G2, OR8D4, OR9A4, PDPK1, PFN2, PSEN1, SGPP1, STAT3, TPST1, UGDH, ATP6V1B1, KIR2DL5A, ST6GALNAC5
Negative_8379	DDC, HK1, ACVR1, AGPAT6, ARHGEF4, ARPC1B, ATP6V0C, ATP6V1D, CACNA1F, CDC7, CXCL1, DGUOK, DRD2, GANC, GNPAT, GNPDA2, GRM1, HNF1B, HSD3B2, IDH1, IRAK3, NCSTN, NT5C3, OR5M9, OR8D4, PAPSS1, PKMYT1, PPARA, SHC3, SKIV2L2, TAS2R14, TRPC1, WNT10A, ATP6VOA1, PNLIPRP1
Negative_8380	DDO, GGH, MTR, NLK, RET, ACLY, BMP8A, C1QC, CACNB1, CARS2, CCNB1, CYP2E1, DAXX, ETNK1, FGD1, GCNT1, GLO1, GNA01, GP1BA, IL1B, IL22RA1, IPMK, IRS4, JAK2, MAN1C1, MRAS, MYH1, MYL7, NRG2, OLAH, OR5AS1, OR5M8, OR7A17, OR8B4, ORC4L, PDXK, PIP5K3, PLA2G5, PMVK, POLA2, PTEN, SFRP2, SOCS2, SREBF1, STX10, WASF1, WNT10A, PPARGC1A
Negative_8381	APP, CBS, OSM, ALOX12B, ALS2, APPL1, CASP10, CPT1C, CXCL12, DGKB, EPHX1, FUT9, IRS1, ITGB5, MAP3K12, MAP3K13, MCM5, MGST3, MITF, MPST, NME2, OR10S1, OR10X1, OR2L8, OR5M9, OR9G4, PDK1, POLR3D, PPT1, PTTG1, RAD51, SEMA3C, SETDB2, SH2D2A, SKIV2L2, TOMM40
Negative_8382	ME2, ACAA1, AKR1C3, BMP4, CCL13, CHDH, F2RL1, F2RL2, GMPPB, MAP3K1, MCM2, MGAT4B, NAT1, OR4K17, OR5B17, OR8B8, ORC2L, PANK1, PLTP, POMC, RPS6KA5, SHC4, SLC9A1, SNAI2, TRDMT1, ULK2, ATP6VOA1
Negative_8383	MUT, OSM, GNB3, HRAS, OR52L1
Negative_8384	ITK, ALDH1A1, ALG1, ATP5E, BET1, CACNA1E, CCR3, CD36, CLCA2, CXCL11, DHFR, EPHA2, ETNK1, EXOC7, FGF23, GALNT3, GALNT9, GNAZ, GNRH2, HSD3B1, HSPB1, IL4R, KIR2DS5, KLRC3, LHCGR, NOX1, NRG1, NTSR1, OR10AG1, OR2L2, OR2M2, OR5AS1, OR5C1, OR5D14, OR5M3, OR6N1, RCHY1, SAT2, STX5, TNFSF14, ZFYVE9, HLA-DRB3, TNFSF13B
Negative_8385	IL5, TEC, CCL28, CSAD, HAGHL, HSD3B1, MITF, OR10T2, OR2A14, PAPSS1, PLCB3, RAC3, SOAT2, STMN1, SUOX, TCIRG1
Negative_8386	ATP5A1, CCND2, CDIPT, CLDN6, IL24, OR13C9, OR13H1, OR2B2, OR2G6, OR56A4, OR7D4, PPP1R3A, PPP1R3D, PTK2, PYCRL, SLC2A2, WNT4

Negative_8387	CR2, JUP, MAX, SCD, TYR, XDH, ACADVL, ACTN4, AHCY, AKT1, B4GALT3, B4GALT6, C4BPB, CACNG4, CD27, CLTC, DHRS3, FUT7, GLUL, HLA-C, ICOS, IGF1R, IL23A, IL28B, LAMB4, LDHB, LILRB3, LRP5, MKNK2, NCOA4, NFX1, NR1H3, OR10Q1, OR2T10, PITX2, POLD1, RCHY1, RHOQ, RXRG, STX18, TOMM40, TUBB2C
Negative_8388	AASDH, ACAA1, ADRA1B, ALDH9A1, ALOX12B, ANAPC7, AOC2, ARNTL, ATP5L, CCKBR, CCND1, CCR9, CDC25A, CHAD, EGFR, ENAH, EPHA8, GALNT14, GARS, GFPT1, GLI3, GRLF1, HSP90B1, HTR2C, IFNA17, IL20RA, ITGA10, ITGA7, MAML2, NUDT5, OR10AG1, OR12D3, OR1J4, OR2B6, OR51D1, OR8J3, PIK3CG, PITX2, POLR2E, PPP5C, PTAFR, RASSF1, RPS6KA4, RRM2B, TAS1R2, TAS2R4, TDO2
Negative_8389	XDH, CHAT, FTH1, KAT2B, LLGL2, ODC1, OR10A4, OR5L2, PIK3R1, PIK3R2, PLEKHA8, PORCN, STMN1, THTPA, TICAM1, UNC5D
Negative_8390	DBT, CACNG3, CLOCK, HLA-DRA, IL3RA, MAD1L1, OR4D2, PGS1, PLOD3, PPARA, PPP1R1A, SPRED2
Negative_8391	ITK, ME2, ACY3, AKR1C3, ALG9, ARPC4, B3GAT3, CARS, CPT1B, CRB3, DDX54, GCNT1, GDE1, GLI2, GNPDA2, GUCY1B3, HNF1A, HSPA8, INMT, IRS4, LEF1, LEPR, MTFMT, NEFL, OR10R2, OR1G1, OR1J4, OR4N4, PTPRJ, RASA1, UGT1A10, XYLB, TNFRSF11B
Negative_8392	A2M, CFH, GPI, HYI, KHK, ACAT1, ALG10, AOX1, ARPC1B, ATP2A3, BMP7, C7orf16, CCL5, CLDN22, CLDN4, CTNNA3, CXCL3, DHDDS, EFNA5, ETNK2, GNA11, GNAZ, HHIP, KIR3DL2, MAPK13, NME4, NRCAM, OR14J1, OR52D1, OR8A1, PAFH2, PDCD1, PFKM, PIGO, PLXNA2, PTGIS, PTPRB, RRM2, SPCS3, SQLE, USE1, MAPK8IP2
Negative_8393	CFH, SCD, SI, TKT, AADAT, ARNTL, ARPC1A, ATP6AP1, CACNA1B, COL4A4, DUSP16, DUSP2, ERBB3, EXT1, EXTL2, HNF4G, IFT57, IQGAP3, MAOB, MASP2, MCM3, NTRK2, OR10G3, OR4P4, OR6X1, POLR2B, POLR2I, SEMA3B, SETD1B, SLC33A1, SRGAP3, TAP1, TUBA8, UCKL1
Negative_8394	MUT, ALAS2, ATP6V0B, CBLC, CDC16, CDC2, CFTR, CHSY1, CREB3, FUT3, GLG1, GP1BA, GZMA, ICOS, IL13, MAP2K2, MCM4, MGAM, MMP14, MTMR2, NEU4, OR1A2, OR1J1, OR2AT4, OR51M1, PDE6H, PDPK1, PFKFB4, PLAUR, ZNRD1, CACNA2D1, HLA-DPB1
Negative_8395	ALDH6A1, CYP4F2, GDE1, GRIN2C, NKX3-1, OR13G1, OR2T3, PIGB, PIK3CA, SRD5A1
Negative_8396	MAG, MPL, PLG, RB1, SMO, ACLY, ALCAM, AREG, BBOX1, CLDN9, CPT1A, CYP27A1, FUT3, GPLD1, HCLS1, INHBE, OR13H1, ORC2L, PAK6, PAX8, PDXP, PHKG1, PLCB2, PPP1CA, PPP2R2B, SHC4
Negative_8397	JUP, ALG11, ALG5, ATP5G2, BDH1, CCNG1, DTYMK, HLA-DRA, HSD17B3, HSD3B1, HSPA8, LIMK1, NOTCH3, NT5C2, OR10G2, OR4K15, OR51A4, OR6C70, PARD6G, PARS2, PIGP, PRPS2, SPHK2, TOLLIP, VCAM1
Negative_8398	TXK, CCL17, CD274, CDH3, CHUK, CTLA4, DERL1, DNMT1, GNAZ, HSD17B8, IL9R, KIR3DL3, LAMA3, MAT1A, MGST3, OR1L6, OR51B2, OR5C1, RRM2, SNAP25, TNFSF8
Negative_8399	HDC, JUP, ACLY, C1QB, CAMK2D, CCNB3, CDH15, CSF3, DIAPH1, EGLN3, GRIN2B, HSPA1B, HYAL1, ITGA3, LRP6, ODC1, OR4A15, OR52I1, PIK3CB, PITX2, PLA2G2F, POLE, PTDSS2, SETDB2, SUV39H1, TAS2R5
Negative_8400	DCK, HK1, PXN, ACSS1, ACYP1, ARNT2, C1QC, CAMK2A, CDC25B, COASY, CYP19A1, DKK2, GAS1, GNPAT1, GNRH1, HIBCH, IL21R, LAMB3, MAGI1, MGLL, NFKB1, OR10K1, OR11L1, OR1D5, OR2T34, OR52K2, OR6X1, PDGFRA, PHGDH, PIP5K1A, PPP2R5C, PYGM, RBL2, ROBO3, SETMAR, ST8SIA1, TLR5, UGT1A10, WHSC1, ZNRD1, ST6GALNAC3

Negative_8401	BCR, MAG, MYC, ALDOC, ASRGL1, BCAT1, CLDN19, CSNK2B, DIAPH2, DUSP5, E DN1, EFNB1, F2RL2, FTMT, FZD6, HAP1, HTR4, HTRA2, IFNA6, NCSTN, OR10K 2, OR2AE1, OR7A10, OXTR, PDE10A, PLXNA3, RPS6KA3, SLC12A2, SREBF1, T OMM40, WNT11, WNT5B
Negative_8402	ALG2, ASCC3, CASP6, CES7, CHEK1, CHRM5, GOT2, IFNA6, IFNGR2, NFKBIA, OR1L4, OR4K14, OR51I2, OR52E4, PARD6B, PDCD1, PIM2, POLR2I, PYCR2, R PS6KB1, SAT2, SESN1, TGFB2, TP53, WARS2, KIR2DL5A, PNLIPRP1
Negative_8403	C1S, C8G, ACSM2A, ALDH9A1, ATP5F1, C1GALT1, CNTNAP2, FGF14, FSHB, GN A12, ISYNA1, PAX6, PFKFB1, PIK3C2B, PPA1, QARS, SPCS1, STT3B, SERPIN A1
Negative_8404	C6, ALDH3B2, EHMT2, GSTO2, MAML3, MAP3K6, MYH6, ODC1, OR52N1, PYGM, S MURF1, SV2B, TD02
Negative_8405	ACPI1, BDKRB2, FRAP1
Negative_8406	ACP2, BMP5, CTNNA1, CYP4F2, GNPDA2, MAP2K7, OR4D1, RASGRP3, TRAF4
Negative_8407	B3GNT3, CALML3, CLTC, GALNTL4, GLG1, GMPS, HES1, HSD17B1, MCCC2, MDM 2, OLAH, OR4L1, PAX4, PLA2G2A, TLN1, TRAF5
Negative_8408	ID2, MAX, CCR6, DKK1, EPAS1, EPB41L2, GRLF1, LIPE, MCCC2, MTFMT, MYH1 3, OR2B2, OR2T29, OR4K2, OR5AU1, OR5C1, OR5M9, RALGDS, TUBB4
Negative_8409	ACOT12, CDIPT, CYP3A43, FGD3, GCLM, GTSE1, HSPA2, OR1L4, OR5C1, PYCR 1, SENP2, SMC1B, SOCS7, STX16, TGFB1, ARHGEF12
Negative_8410	CFI, EPO, GP6, MVD, ACTB, ADAM17, ALDH1A3, ARSE, ATP5D, CACNA1H, CARS , CASP3, CCR8, CDH15, CFTR, CTBS, DKK1, GALNT1, GCLM, GNAI2, GSTA5, IL 13, IL1R1, ITGAD, MAN1B1, MCM2, NT5C1B, OR11L1, OR1C1, OR2AE1, OR4C1 1, OR52I1, OR5M8, P4HA3, PFKL, PPAP2C, PPP3CB, PRSS3, RAB5A, STEAP3, TAS2R8, TNXB, UGT2B7, VDAC1, AASDHPPT, HSP90AB1, PRICKLE2, ST6GALN AC4, TNFRSF14
Negative_8411	C3, CFI, CKB, HK2, HPD, AKR1B10, ALS2, AXIN1, BBC3, COL4A6, CSNK1A1, D NMT3B, DOLPP1, DUSP5, ENO3, GOT1, GRIN1, GTSE1, GUCY2D, HCCS, IL20RA , INMT, NCK1, OGDHL, ONECUT1, OR10V1, OR56B4, OR6Y1, OR9K2, PFN3, PMM 1, PON3, PPAP2A, PTCH2, SMAD3, SOCS7, STAT6, SULT1A4, TAS1R3, THY1, U BE2K, UBE2L3, YWHAZ, PNLIPRP2, TNFRSF10A
Negative_8412	ALPPL2, ATP5I, CD58, CDKN1C, CNGA3, ECSIT, ENTPD4, EPHB2, FMO3, FUT6 , GNAT3, HSP90B1, ITGA6, LAMB4, MAPK3, OR11A1, PANK4, PCCB, PDGFRA, P LA2G3, POLE4, POLR2I, PPP3R2, PPP5C, SENP2, SH2D2A, STMN1
Negative_8413	MSN, ACAA2, ALDH3B2, ALPI, B3GALT6, B4GALT3, C4BPB, CTLA4, CXCL6, CY P2J2, FARP2, FTMT, FUT5, GRIA1, IRAK1, LCMT1, LILRB3, MAPK11, NUDT5, OR1J4, OR2T11, OR51L1, PAK4, PARVB, PFKFB4, POLR3D, PON3, PPP2R2A, P PP3CA, SMARCA2, TIAM2, TYK2
Negative_8414	ADRBK2, ARPC5L, ASAH1, CD244, CLDN11, CREB3L2, DGKE, FABP3, FADS2, I L22RA1, IL6R, LTA4H, OR1L1, OR2T2, PDE4A, PLXNB3, PNPT1, PRKAB1, PTP N7, SV2A
Negative_8415	ACACB, ADH7, ALDOB, BACE2, CACNA1C, CCNB3, CHAT, CLTB, GCLM, GGCX, GN AL, HLA-DMA, KARS, PLOD3, PRKCQ, RARS, SMARCA5, SYNJ1
Negative_8416	FH, CACNA1D, CYBA, GLUD1, MNX1, PDGFD
Negative_8417	GCK, ACVR1, ARG2, ATG12, CLCF1, CSNK1G2, ENTPD4, GALNT10, GALNT12, G ALNT9, H6PD, KLRC3, LAP3, OR52H1, OR6K2, OR8B4, OR8K1, PDE3B, PIAS1, PMM2, STK11, TLR9, TYMS
Negative_8418	ACSL3, AGPAT6, C3AR1, CCR6, CTBS, FGF6, GALNTL5, GNAZ, LGMN, MGLL, MY H10, PDGFRA, PHKA2, PIGU, PIK3CG, PLCB4, POLR2G, RARS2, SEPHS1, TNFR SF8, UBE2L3
Negative_8419	ACY3, ARPC1B, CACNG3, CYP17A1, ERBB4, ETNK2, ITGA9, MASP1, MNX1, OR5 AP2, PGAM2, PPP1R3A, PRNP, ST3GAL2, WNT7A



Negative_8420	CFD, PRL, ABCC8, ADRB3, AGPAT2, ARHGEF2, ATP5I, ATP5J2, CCL4, CCND3, CDS2, CLOCK, CTBS, CYP4A22, GALK1, GNAT3, IL22RA2, ITGA7, LRP5, MDH2, MTHFD2, OR8K3, PIGC, PSEN1, PYGM, RPS6KA3, SDHC, SEMA4B, TKTL2, ST6 GALNAC5
Negative_8421	ELK4, HLA-G, MAD1L1, MYH7, OR2F2, SPTAN1, WNT10B, HSP90AB1
Negative_8422	F3, HGF, ARPC1B, B3GALT5, BDKRB2, EFNA3, ENTPD3, EPHX2, HNF4G, LCMT2, OR2H1, OR6C76, PAPSS1, PLA2G1B, PRPH2, SPRY4, SREBF1, HLA-DPA1, SUV420H1
Negative_8423	MYC, CHSY3, COL3A1, CPT1B, CREB3L2, EVI1, FGF17, HDAC1, IL13, IL5RA, OR51V1, PKM2, PLA2G2E, PTSS1, RAPGEF1, SEMA7A, SENP2, SLC25A5, STK3, UPP1, SERPINC1
Negative_8424	CDA, CEL, DLD, ILK, AASS, ANAPC5, ATP5J2, AVPR1A, CCNA2, CLDN17, CYP2A6, EPB41L1, FGF18, FZD2, GNAI1, HCST, IL21, INADL, ISYNA1, ITPA, KAT2B, LGMN, MTMR1, NFAT5, NRG3, OGDH, OR13C5, OR1A1, OR51E2, OR52E6, OR5AS1, OR6B2, P4HA3, PARD6G, PDE3B, PGK1, PIGF, PLA1A, PMM2, PRODH, PT PN1, STX5, STX7, SYNJ1, TUBA3E, UGP2, YWHAE, HSD17B12, SLC25A31
Negative_8425	BAX, ID3, LCK, ACMSD, ACOX2, CCNH, CDIPT, DGUOK, DHX58, EHMT2, EIF4E2, EXTL2, GDF7, HAGH, HIF1A, IDUA, IL3RA, IMPA2, INHBB, ITCH, ITGAE, KL RK1, LIMK2, MAP2K4, MASP2, MGST3, OR1G1, OR51M1, OR52K1, OR8B4, PHKA2, PIGH, PLA2G2A, PRLR, RAB23, RPN2, SDC1, SULT2A1, TBXA2R, TRAF5, TSHR, YWHAQ, ZFYVE9, GABARAPL2, PAFAH1B3, TNFRSF13C
Negative_8426	ILK, ACTN4, ARPC1B, CACNA1E, CYP17A1, DDX4, EPHA1, IL13RA2, NKX2-2, PDCD1, RALA, RERE, SRGAP2, ATP6VOD2, HSD17B12
Negative_8427	PML, SRC, TAT, TKT, ADSSL1, ATP6VOC, BAAT, CAMK2A, CASK, CCL25, CCR10, CHST11, CKS1B, DDX23, EDAR, FCGR3B, FGF13, FTCD, GRM1, IDUA, IL12RB2, LIAS, MOV10L1, NFKBIA, NFYA, NSDHL, OR2A25, OR5AK2, OR5D14, OR8G1, PDE4D, PDHA1, PLOD1, POLR2I, RASGRF1, SGMS2, SH3BP2, SLC25A4, SMPD2, TSHR, TUBB3, ULK1, VAV2, WNT11, TNFRSF12A, TNFRSF13B
Negative_8428	DAO, DCN, FER, HAL, ASCC3, ATP5G2, C1QC, C9orf95, CALML5, CDS1, COL6A2, CXCL10, DGKQ, ENAH, FGF21, GNAS, GRIN2B, GSTM5, HADHB, HNF4G, ICOS, IL17RB, IL18, ITGAM, KCNB1, LCMT1, MAP3K11, MKNK1, MRAS, NARS2, NLGN3, NMNAT3, OR14J1, OR1E1, OR1J4, OR51T1, OR5J2, PLK1, PNMT, PPAP2B, PSPH, PTEN, RPSA, SEMA3E, STX3, TSHR, PLA2G12A, SERPINA5
Negative_8429	FGB, TK1, ABCC8, ACVR1C, CD58, CHST12, CYP11B1, DGAT2, DLL1, FASLG, HNF4G, IFNA7, LCMT1, OR10AD1, OR10C1, OR4A16, OR4C46, PLCZ1, PTGS2, RAPGEF4, RENBP, SEMA3A, SMAD2, TCF7L2, UCK1, VANGL1
Negative_8430	ABO, JUN, PC, A4GALT, ACP1, ACVR1C, ANAPC2, AOC2, CD274, CHRNA7, CYP1A2, DDIT3, EDNRA, FUT5, FZD4, G6PD, GNPDA1, GPLD1, GSTO1, HNMT, ITPA, MYH2, NAT2, OR10G7, OR4A15, OR51G2, OR5L1, OR8B4, PDE1B, PHKA1, PKM2, PLCG2, PLXNA1, PON2, RPE65, TDO2, TNFSF9, TPMT, VEGFC, WEE1, WNT6, WNT8A, TNFRSF10D
Negative_8431	ADCY2, CCL19, CD8A, HLA-DRA, INPP5E, NFATC2, PGAM2, SETD2
Negative_8432	GSS, ADH6, ATP4A, BUB3, CD80, CDH4, CER1, CLDN18, CLOCK, CXCL5, DDX19A, DDX55, DRD2, DUSP14, DUSP3, ENO3, EPHX1, ETS1, FBP2, FGF23, FGFR3, GAL3ST1, GCAT, HNF4A, ITCH, KLRD1, NFE2L2, NTSR1, NUMB, OR1L1, OR2K2, OR2T2, OR8G1, PDE8A, PGAM4, PLOD1, QPRT, RASGRF2, RHOD, RRM2, TRIP10, TUBB4Q, VEGFB, YOD1, ZAP70, SLC25A31, SUV420H1
Negative_8433	EGF, CACNG1, CHSY1, CYP27A1, DERL1, EXTL2, FCER1G, G6PD, GALNTL4, GDF6, GNG13, GUCA1A, HCCS, INPP5B, IQGAP2, ITGA3, LCMT1, MALT1, MAP2K7, MGAT4A, NCK1, NOS3, NRXN2, OR2K2, OR51D1, PER1, PIK3R2, PIP5K3, PRKAG1, SEMA3D, SPRY2, SPTLC2, ST3GAL2, ST3GAL4, STK11, TACR1, TAS2R4

Negative_8434	DHH, IL3, IL8, NLK, BCAT1, CDH2, CLDN11, CLDN17, COL6A1, CYP2C18, CYP3A7, GCDH, IL1R1, NCF2, NFAT5, NKX6-1, NPR2, OR2AG2, OR52E8, OR9K2, PPP2R5E, PYCRL, RAC3, RALBP1, RRM2, SPAM1, SUV39H2, TAS2R3, WEE1
Negative_8435	FUK, GDA, ADRA1D, CYSLTR2, DEGS1, EXTL1, IL7R, ITGAL, MAP3K2, MYLK3, NME4, NRCAM, OR51B6, OR5M9, PPP2R1B, RPRM, SCLY, SLC27A5, THY1
Negative_8436	LSS, B3GALT5, CACNA1G, GDE1, GNA15, LAMB1, NRG1, NSD1, OR2D3, OR4A5, OR4D5, PDE4D, POLR2G, PRKAR2B, SELP, SLC2A2, ARHGEF12
Negative_8437	GDA, ALDH2, ALG3, ALG6, APAF1, ATG7, C3orf10, CD38, CSF2, CSF2RA, DGKG, EPB41L2, FGFR1, FOXO1, FZD9, GARS, GCNT1, ITGB3, KIR2DL3, LIMK1, LYPLA2, MAN1A2, NR1H3, OR52E8, PIAS3, PIK3CA, PIP4K2A, PLAUR, PNMT, PPAT, PRKCG, SULT2A1, TUBA4A
Negative_8438	FST, ABAT, C4BPB, CCR9, CTBP1, CXCL11, DUSP4, ENPP7, FADS2, FASN, FMO5, FPGT, IDH3B, IL28A, INPP5A, JAG2, LDHB, MAD2L1, MAP3K1, NADSYN1, OR10G2, OR2D3, OR2Z1, OR5K1, OR6N2, PARD3, PDE3B, PER2, PFKFB1, PLCG1, SRD5A2, STAT4
Negative_8439	CBL, F5, MOS, RPE, ALPP, C4BPB, CDK4, CDKN1B, CLTB, CYP19A1, FUT3, ICAM2, ITGA6, ITGAE, NAGLU, ONECUT1, OR51F1, PIGL, POLR2K, PPP2R2B, RASGRF2, RASGRP1, RDH11, SHC2, SMPD3, UBA7, UROS, CSGALNACT2, PLA2G12A, PPARGC1A, SERPINF2, TNFRSF1B
Negative_8440	DDC, GP5, ABI2, BMP5, BRAF, CACNG1, CHRNA7, COL5A1, COMP, DDIT4, DHCR7, ECSIT, ENTPD4, EPHA3, GAB1, HLA-DRA, HSPA8, NAGA, OCLN, OR2D2, PDE8A, PGM2, POLR1C, PON1, PPP2R2B, PRKCQ, PSEN2, PTGER3, RASA1, STX8
Negative_8441	SI, TK1, AADAT, ACYP2, ADIPOQ, AMHR2, ARSE, BPNT1, CACNG4, CLDN15, DD4, DPYSL2, EDNRA, FBP1, GNAT3, GSTM4, HA01, HMOX2, HTR5A, IFNW1, IL9R, LRP5, MGAM, MMP14, NCR1, OGDHL, OR13D1, OR3A1, OR4F15, PDE6H, PFN4, PIGH, PLA2G2D, PLCD4, PSME3, PYCR2, RRAS2, SDC1, SEMA3C, SGMS2, SH2D1A, SLC2A1, SUCLA2, TRDMT1, TSC2, TUBA1C
Negative_8442	GSS, SRF, ACSM3, ADRB2, AKT1, CCL14, CCNB3, CYP11B1, EPB41L2, GALNT12, IL13RA2, NR1D1, OR5J2, OR6K3, PDE4D, POLR2D, PTGS2
Negative_8443	C1S, DAO, F10, FN1, PAH, RET, AARS2, ACADL, ADIPOQ, ARHGEF7, CLDN17, CXCR4, CYP8B1, DDX52, FSHB, GNB1, GOSR2, HTRA2, IL20RB, INHBB, ITGA3, ITGB8, JAM3, MKNK1, MYH1, OR56A4, OR5B21, OR5P3, OR6T1, OXTR, PGAM1, PIK3C2A, PPM1D, PRKCQ, PRKX, QARS, RAP1A, RAPGEF2, RPE65, SELPLG, SED1A, TGFB3, TIRAP, TOMM40, UGCG, USE1, WHSC1L1, YARS, HSD17B10
Negative_8444	ASIP, CTPS, SEMA4D, SPAM1, UROD
Negative_8445	AK7, GPT, KDR, OTC, TK1, ACVR2B, ACVRL1, C1QB, CARD11, CAV3, CCR5, CCR9, CHEK1, CXCL9, CYP1A2, CYP4A22, DDX51, DGKZ, ENTPD3, ETNK2, FARS2, FOXO3, GOT1, GZMA, HHEX, HMBS, IGF1R, MAN2A1, MAP2K4, MYH15, MYLK, OR2H1, OR2M2, OR2T10, OR2T5, OR7D4, PERP, PIM2, PRIM1, PSEN1, RASGRF2, SAT1, SV2C, TAS2R40, UNC5A, VAMP3, ALDH18A1
Negative_8446	C5, DLD, PAH, ACSL4, AMD1, BCMO1, BPGM, CD22, CES1, CHSY3, CLDN7, DDX51, EHMT1, EIF4E2, ERBB4, F2RL2, FLT3, FOXO1, GRB2, HSD17B1, IRS4, LILRB3, LRP6, LYPLA1, MCCC2, NAT1, NGEF, OR2Z1, OR8B8, PDE3A, PIGC, PIGP, PIP5K1A, PRKAR2A, RBL1, RDH8, RPS6KA6, SDHD, SEMA3D, SRGAP2, ULK3, WNT4
Negative_8447	DUT, HK3, PAH, ADCY2, ADRA1B, ADRB2, BET1L, BIRC5, CLTCL1, CSDA, CSNK2B, CTNBN1, CYP1A1, E2F3, FECH, GLI2, GNG13, IGF1, ITGAE, OR13H1, OR52H1, OR9K2, PPT1, PRLR, ST8SIA1, TAS1R3, UCKL1, ULBP3, HSP90AB1
Negative_8448	AHCY, CCNG1, GART, GSTO2, ICAM2, IFIH1, IFNA2, IL22RA1, IRF5, ITGA3, NME4, NTF4, OR4K1, POLR2C, PTGDS, RASSF5, TJP2, UCK1, PPARGC1A

Negative_8449	BAD, FUK, IL5, AGPAT1, ALDH3B1, B3GALT6, CD55, DAAM2, DERL1, DUSP5, E XOC7, HTR7, HTRA2, INHBB, ITPA, NTN1, OR1C1, OR2F1, OR5M3, OR8D4, PLX NB2, RASGRF1, SENP2
Negative_8450	AGK, DBI, ACSM3, ALPL, ATG3, ATP5G2, CAMKK1, CCNB2, CXXC4, CYSLTR2, D HX58, DUSP8, EGLN1, ESPL1, FGF14, HNF4G, ICOSLG, IL1B, IL20RA, IMPDH 1, INPP1, IQGAP1, IRF7, JAK2, LEFTY2, LIPC, MITF, MTAP, MYH7, NSD1, NU MB, OR2W1, OR7G3, OR8S1, PIGB, PIGT, PLA1A, PLOD1, PON2, PRDX6, PTK2, RPS6KB1, TAS2R16, THBS1, UGT2B17, PAFAH1B3
Negative_8451	C6, ACACB, ALAD, ALDH1A2, ARPC4, ATP50, CAMK2A, CAMKK1, CCL17, CDC7, CHIA, CYP2S1, CYP7A1, DDX47, DDX51, DHRS4L2, EVI1, FTMT, GP1BA, IDH2 , IL22RA2, INHBB, INHBE, ITGB4, LDHC, MAP3K4, MTHFD2, MYH7B, NAGA, NC KAP1L, NRG4, OR10G3, OR2L2, OR2L3, OR52B4, PAX4, PPP1R3A, RXRG, SARS 2, SETD1A, TAS2R38, TAS2R41, TBK1, PLA2G12B
Negative_8452	CGN, F7, GH2, GSN, IL4, ACOT12, ACSL4, ADH1A, ANAPC10, COL6A1, DDOST, DIAPH3, ENO2, EXTL3, GRB2, GUCA1B, GYS1, HSD17B7, IL6R, IMPDH1, L1CA M, NMNAT1, OR13C4, OR1F1, OR51B5, PIGM, PLOD1, POLD4, PRKAR2B, RXRG, TACR3, ULK2, ATP6V1G1
Negative_8453	CD6, HAL, HK1, ME2, ACP5, ALG6, ANAPC1, ARD1A, ATP5E, C1GALT1, CCR5, C CR9, CDH1, CHSY3, CYP11B1, CYP26B1, DCXR, DDX19A, DHDDS, ENPP6, FLAD 1, GGCX, HNF1A, IMPDH1, ITGA4, JAK3, LAP3, MCCC2, NT5C3, OR1B1, OR4D1 1, OR4K5, OR5D18, OR8B12, PANK1, PARS2, PLAT, PPP1CC, TIAM2, TUBB6, U CK2, UGCG
Negative_8454	AKT3, CNTN2, CTNNA1, DTX1, GALNT1, GPX5, STX18
Negative_8455	AGL, ITK, ACOT12, ALDH3A1, ALG8, ALPI, ARSB, CCL4, CHRNA7, CNTFR, CTN NA3, DDX50, GAPDH, GNPDA2, ICAM3, ITGB8, MBL2, OR1G1, OR2M4, OR5H2, P DCD1, PIGP, PPARG, PSENE1, SHMT2, STX4, SYNJ1, UCP1, UGT2B17, YKT6
Negative_8456	ADRB2, LYPLA1, PLCB2, PRKAG2
Negative_8457	FES, HYI, MVD, MYC, ZYX, AADAT, AKR1C1, AKT2, ALDH1A2, ALPL, ARHGEF1, ASPA, ATP5B, CXCL5, E2F4, ELK1, GGT1, GZMB, IL28RA, IMPA1, IMPDH2, IN PP4B, KNG1, LRP5, MMP1, MYH3, OR2AG2, OR4S1, OR5AU1, PIGH, PLA2G4A, P PP2R5D, PRDX6, PRKAB1, SSH3, TCF7L2, THBS1, UGT2A3, VAMP4
Negative_8458	HK1, AKR1C2, ARHGEF7, ATP5J, CACNA1I, CCL11, CTNNA2, DPYSL2, FADS2, FOXA3, GGPS1, HCST, IDI1, IL1R2, NAGLU, OCRL, OR1L3, OR2AT4, OR8J3, P OLD1, PRKACB, PTPRB, RARS2, SEMA3F, SMURF1, ST3GAL5, SUCLA2, TSC2, W HSC1L1, WNT1
Negative_8459	GH1, TPR, ALDH3A1, ATP6V1H, COQ5, CRHR1, CXCL6, EIF4E2, ENPP6, HPSE, IL13RA2, INPP5B, OR2T10, OR8J1, RHEB, SARDH, TGFB2, TICAM1, TNXB
Negative_8460	HAL, CCL23, CSNK2A1, EFN2, NFKBIA, PLXNB3, PPP5C, TSNARE1
Negative_8461	BID, C1S, KDR, ABCC8, ACY1, ADSS, ALDOA, CAMK2A, CD22, CYP2J2, CYP3A5 , EFN2, FGF4, FLOT2, GCNT4, GUCY2F, HSD17B3, IL20RB, IRAK3, IRS1, MG ST2, MGST3, NUDT2, OR10A4, OR2A5, OR2V2, P2RX7, PHKA1, PIP4K2B, PPA2 , PPP2R2C, PTGES2, SHMT2, SMPD3, SOAT2, SQLE, TNFSF18, WBSR17, WNT3 , WNT8B
Negative_8462	HGD, HK1, ALDH1L1, ASMT, BMP7, CDC27, CLDN15, CREB1, CTSS, GADD45G, O R10J3, OR1J4, PMM2, POLR2J, PPP2R2C, PTPRB, SLC27A4, SMAD7, TPH1, CS GALNACT1
Negative_8463	CBS, ACOT12, ALPI, CCL27, EFNA2, EIF4B, FGF13, FZD10, GALE, GLB1, GNA O1, GSTK1, IFNA5, IL8RA, INHBE, INPP4A, ITGA6, MYH7, MYL2, OR1A1, PDE 10A, PON2, PPAT, PYCRL, SHC1, SLC2A2, SYNJ1, TAS2R16, TSTA3, CSNK1A1 L, PDCD1LG2, TNFRSF13C
Negative_8464	HK3, CHAT, GP1BB, IRF9, MYH9, OR13J1, OR6A2, OR7G1, POLR2E, SESN3, SR GAP3

Negative_8465	MVK, SDS, SMO, ACAT1, ACMSD, BCKDHB, BUB3, CANT1, CRKL, DGKG, DUSP7, EPHA8, EPHX1, FMO3, FZD1, GARS, GMPR, HMGCR, L1CAM, MALT1, MAP2K4, MYH6, OR4S1, ORC5L, OSMR, OXSM, PDE7B, RAP1A, RASGRP4, RRAS, THY1
Negative_8466	BID, RDX, ACAT2, AKR1C4, AMY2A, AVPR1B, CCKAR, CCR6, CD99, CFLAR, CMPK2, CRHR1, CTSL1, EIF4B, G6PC, GGT7, GRIA3, HSPB1, IDI1, IMPA1, LILRB3, LTBR, MAP3K13, NARS2, OR2F1, OR52E6, OR6B2, ORC3L, PIGL, PPCDC, PRKG1, PSME3, PTGFR, RBKS, ROCK2, SHC1, SMAD5, TUBAL3, TUBB4, WNT3
Negative_8467	ACSM1, ADCY2, ALG2, AMD1, CASP7, CCL4, CLCF1, CYP11B2, DHRS4, FGF2, FSHR, HADH, HIBCH, HLA-G, MAP3K1, NT5M, OR2A14, OR2A42, OR52I1, PER2, PRKAB2, PRKACB, SAT1, MAPK8IP3
Negative_8468	DCT, F12, INS, ANAPC5, ATP6V1D, BMP6, CACNG2, CCND3, CHRM1, COMP, CREB1, CYFIP1, CYP1B1, DGUOK, DUSP7, DVL3, FDFT1, GNA15, HMGCR, HSD17B2, HYAL2, IARS, IFIH1, IL1B, IL6R, NCSTN, OR8I2, PMM2, POLR2H, PPP1R3D, PRODH, SDC3, SETD1A, SH2D1B, SREBF1, ZMAT3, TNFRSF11B
Negative_8469	F10, GH1, GSS, HAL, ALG2, C1GALT1, CAMK2A, CDC2, CLDN5, CLOCK, DHRS3, ENAH, ENTPD5, FZD2, GCLM, GLO1, GPD1, GSTM2, LAMA4, LCAT, MAN1B1, MPP5, OR5AK2, OR5B17, PRKG2, RASSF1, SELL, STMN1, TSC1, TSHR, WNT11
Negative_8470	ID2, SFN, TK1, WAS, ALG13, APOC3, C4BPA, CBLC, CBR1, COL4A1, CRLS1, CSH1, CYP2C8, DUSP7, E2F4, GALK1, GALM, GAMT, HAAO, IGFBP3, IL17RB, IL1A, INPP4B, MAP3K7, NTF4, NTNG1, NUDT2, OR2AG2, OR2C1, OR52A1, OR52J3, OR5D18, OR5V1, PDGFB, PGLS, PLAU, POLA2, PPA2, PRKACB, RBKS, SEMA4F, SLC33A1, SPP1, TNXB, TRADD, TUBB6, ATP6VOA1
Negative_8471	F7, OAT, ACVR1C, AGRP, AKR1D1, ALDOA, C1QB, CD58, CDC42, CHKA, CSNK2A1, DCTD, DPYSL2, ENO3, FGF22, FOXA3, GRM1, IL12A, KLRC4, MASP2, OR2A4, OR5AC2, OR5AR1, PER1, PLA1A, PLA2G2A, PLCB4, POLR3B, PRKAR2B, PTPRZ1, RDH16, SDC2, SPCS1, ST6GAL1, STX6, TNFRSF13B, TNFRSF1B
Negative_8472	BTC, C3, CRK, HK3, ALOX15, ARSA, CACNG4, CD40LG, HEMK1, MGAT4A, OR4D5, OR51I1, OR6F1, PIM1, PIP4K2A, SULT1A2, TNFSF14, TRMT11, UBE2L6, UGDH
Negative_8473	EGF, ITK, ZYX, ACADL, BAAT, CD99, CDC45L, CHEK1, CXCL6, DEGS1, E2F4, FGFR2, GMPR2, GP1BA, KLRK1, LTA4H, MTHFD1L, OR10Z1, OR3A3, PON2, PPAP2B, PPP1CA, SETD8, SHMT2, SMAD4, STX8, SV2A
Negative_8474	AKR1B1, B3GAT3, CACNA1S, CD59, CDC26, CYP2A6, FCER1G, FIGF, ITGA5, OR6C4, OR9Q2, OSMR, PFKM, PNPO, POMC, SEMA4F
Negative_8475	IL6, CAMK2B, CBLB, CLOCK, CTPS, EFNA1, FRAP1, GDF7, INHBB, ITGA2B, MAP2K2, NOX1, OLR1, OR14J1, OR1A2, OR5K1, PLA2G2D, PLAT, RDH10, RELB, SESN2, USE1, VNN1, HSP90AA1
Negative_8476	C8A, ME3, OGT, ATN1, BCL2L1, CD40, CDH1, CHST12, FUT2, GRIA3, HCCS, IQGAP2, LARS, LDHAL6A, OR14A16, OR4K5, OR4X1, P2RX2, PIAS1, PPP1R1A, PSAT1, SESN3, TNFRSF18
Negative_8477	BAX, CCKAR, CCL23, DTX1, EPB41L3, OR52N2, OR7C2, PDHA1, SPHK1, TGFBR1, CACNA2D1, PPARGC1A
Negative_8478	ADK, GP9, NF1, CHST13, CSF2RB, CSNK1D, DLST, EREG, FGF14, FTCD, GRIN2A, GSTK1, IARS2, IFNA8, OR10R2, OR13G1, OR1N2, OR8D1, PER1, PLOD1, PLTP, PPP2R1A, SEMA4G, SETDB1, SRD5A2, SSX2IP, TSHR, TUBB1
Negative_8479	AKR1C2, BMP8B, CD19, CRHR1, JAK3, LTB4R2, PFKFB4, PPP1CC, TBK1, TLN1, SERPINF2
Negative_8480	AK5, C3, GCK, ACAA1, AMDHD2, BUB1, CYP21A2, ENO1, FPGT, GALNT14, GNA13, JAM2, KLK3, MAD2L1, MPST, OR13C3, OR5D13, OR8A1, OR8H2, PDE1C, PIGS, PIP4K2B, PRKACA, PRKG1, RASGRF1, STX1B, PNLIPRP2

Negative_8481	IL7, ACO1, ACTG1, ADCY1, ALDH1A3, ALDH2, ARAF, ASIP, ATIC, ATP6V0B, CACNA1F, CES1, CHEK1, CLDN7, CREB3L1, CSF2RA, CYP2A7, DOLPP1, E2F2, ELK1, ENPP7, EPB41L3, FBP2, FLOT2, IL10RA, ITCH, ITGB1, KIR2DL4, MAP3K12, MGAT3, MRAS, NAT2, OR1A2, OR8A1, PFAS, PGAM1, PGK2, PPOX, PVRL1, RAP1A, RPS6KA2, SDC3, SLIT2, SPRY2, ST6GAL1, SULT1A1, VAMP1
Negative_8482	C9, CRH, EDA, IL4, ACP5, ACSM2A, ADRA1A, AVPR1B, BET1, BMPR1A, CCL27, CDC6, CES1, CX3CL1, DHCR7, DLST, EPAS1, FTCD, IL13RA1, INPP5E, IRAK3, IRS4, ITGAX, MAFA, MTHFD1, MYH8, NT5C2, NTN1, OR11H1, OR1E2, OR1J4, OR5C1, PDE3B, PGAM1, POLA2, PRKY, PTAFR, RPIA, RXRB, SEMA7A, TAS1R3, TKTL2, HSD17B12
Negative_8483	C1S, LCT, ACAT1, B3GALT2, BUB3, CHAT, F11R, GALNT8, IL13, IL1RAP, IRAK2, LCP2, MGAT4A, NME7, NT5C, OR14J1, OR6C4, OR8D4, PER2, PIGA, PPBP, PRPS2, TAS2R38, YARS
Negative_8484	CSK, ADRA1B, CTBP2, FLT4, GRB2, MAN2A1, MAPT, OR2S2, SMARCA2
Negative_8485	AK3, BCR, CGA, FYN, BAIAP2, CD99, CLTC, CPT1B, CYP3A4, DDIT3, DHRS4L2, EXTL3, GJA1, LDHB, MAP2K2, MAP2K4, MCM7, MYL5, NLGN3, OR5B21, OR6A2, OR6X1, PPP5C
Negative_8486	ADC, BTD, GLS, SMO, AOC3, CACNA1H, CALML5, CHRNA7, CSNK2B, CXCR6, CYFIP1, DAD1, DHCR24, EI24, ELK1, FARSB, FUT1, FUT9, GNAI2, IFNAR1, IKBKB, IL18, IMPDH2, LYZL1, MAOB, NFKB2, OR10G2, OR10J3, OR5B3, OR5P3, OR7A10, P2RX5, PAK2, PDE8A, PIP4K2C, POLD4, PPA2, PPP3R1, PRKACA, PTGFR, RFXANK, RND1, SHISA5, TICAM2, TSLP, TUBB3, VCAM1, TNFRSF11A
Negative_8487	PXN, ACVRL1, ADCY1, CCL21, CLOCK, CPT1C, CREB3L2, EHHADH, FTCD, HTR6, IL23A, LMO7, MMP7, NFKB1, OR7D2, PIGO, PSME2, WNT7A
Negative_8488	LTB, MSN, PLN, ACAA1, ANAPC10, AXIN1, CAV2, CXCL5, DDX23, DNMT3L, FGF22, FMO3, GALNTL4, GBE1, GCNT4, GJA1, GOT1, GSTZ1, HLA-G, HSPB1, ICAM1, IL23A, IRAK3, ITGB2, KDSR, LAMB4, MASP1, NCOR2, NEU3, OR2M2, PDE4C, PFN3, PHPT1, PIP5K3, PLOD1, PPP3CB, PRKAA2, SCP2, SPRY3, STAM, TOLLIP, TUBA1B, TUBB2A, WASL, WNT8B, YOD1
Negative_8489	AK1, C8B, LHB, PVR, TYR, BDH1, CBLB, CCR9, CDK7, CLDN9, COQ6, CREB3L4, CRKL, CTPS2, CXCL5, DMGDH, EFNA2, EPHA4, GALNT1, GSTO1, HIF1A, IFNGR1, JAK2, OR52I1, OR52K2, OR6C3, PIK3C3, PNLIP, PPID, PPP1R1A, PSME1, RASA1, RPS6KA3, SIGLEC1, SQLE, TICAM2, TRADD, TYROBP, ATP6V1B1, HSD17B10, TNFRSF10D
Negative_8490	SFN, AKR1C4, ALS2, ARSD, ATP5E, BLVRB, CD38, EPHB1, GPD1L, HHIP, HTR7, ITGA1, NAT2, NAT6, NRP1, OR13D1, OR4X1, OR8B4, OR8G1, OR9Q1, PDIA4, PSEN1, TBL1X
Negative_8491	PML, CAMK2G, DEGS2, F13B, LAP3, LEPR, NTSR1, OR52K1, PDE4C, RBPJL, ALDH18A1
Negative_8492	PDC, SI, CD47, CD80, DHRS4, FBP1, NCK2, NEU4, OR4D6, PIGH, SGMS2, B4GALNT1
Negative_8493	F7, MAX, B3GALT4, CREB5, GALNT8, GRIA2, HMOX1, OR13C8, POLE2, RELA
Negative_8494	ABO, ABAT, AGMAT, ASMT, BMP5, CACNA1S, CTBP2, CXCL2, CYP4A11, EDN1, FBP2, GALNT14, GP1BA, GRB2, IDH2, IL15, IL8RA, IRF5, KAT2A, LYPLA1, MTRMR2, NCR3, NT5C3, NTSR1, OR10X1, OR1A1, PLA2G6, PPP1CC, PTGES, SMAD9, SOCS4, VTI1B, WNT2, WNT2B, YWHAQ, CACNA2D2, PNLIPRP1, SERPING1
Negative_8495	DUT, INS, KIT, SFN, ACSS2, APH1A, ARAF, ARHGEF2, ARHGEF4, BDH1, BDNF, CACNA1C, CCR3, CD86, CDK6, COQ7, CTNNB1, DLL1, EREG, FUT6, HTRA2, IFT57, LIMK2, MDH1, OR5B21, OR8H3, P2RX6, PARVB, PPP2CB, PRKCH, PYGL, RAF1, RASGRP4, ST3GAL2, VDAC1, WWP1, YWHAQ, B4GALNT1
Negative_8496	F5, LYN, ARSE, B3GAT2, BCMO1, CCR7, COL1A2, DDX56, FTH1, INPP1, LIPF, NCR3, OR10H5, OR2T2, OR6M1, PTCRA, RHOQ, SEMA3B, TCF7

Negative_8497	GCK, ACAA1, ACAD9, ACTC1, ACVR1, ALDOB, CCL20, CCL8, CCNA2, CD34, CDK N1A, CNTFR, CYP2A6, DHODH, ECSIT, ENO2, ERBB3, G6PC2, GALNT7, GATM, G NAS, GSTA3, HEXB, HTR4, HTR7, IAPP, MAP3K5, OR10G4, OR13C3, OR14I1, O R1D5, OR6C4, PAK1, PIGL, PIGS, PTPRZ1, RASGRP1, RRAS, SMAD3, SQLE, SV 2B, TGFB1, TUBA1C, UBE2L6, VANGL1
Negative_8498	CR2, BDH1, CAV1, CCL24, CYP4A22, DOLPP1, DRD1, HYAL2, ITGAD, OR10J1, OR1D2, OR2AG1, PPP2R5C, PTPN6, TRAF1, TUBB4, ARHGEF12
Negative_8499	ADH1B, ADSSL1, CD70, CDKN1A, IAPP, KLRC2, OR51G1, SHC4
Negative_8500	A2M, AK3L1, DDX52, ECHS1, FGF14, FGFR3, GCLM, GRM1, IAPP, IMPDH1, KIR 2DL1, LAMA3, OR10T2, OR2C1, OR4K1, PTPRC, SUV420H2
Negative_8501	F2, KHK, ALAS1, ALDH2, ALDH3B1, APH1A, C1QB, CAPN2, CCR6, CCR9, CD55, CDH2, COL3A1, CTSG, CYP2E1, FGF17, FUT1, HDAC2, IL23R, INHBB, ITGA7, MCM7, OR10A3, OR52M1, OR6M1, OR6N2, PLOD2, ROBO3, SHC1, SRGAP2, SULT 1A4, TNFRSF4
Negative_8502	CGA, GBA, IL6, ABP1, ADH1A, ADRA1B, ADSSL1, ALDOA, ATP5E, ATP5J2, B3G ALT5, BCAR1, CBLB, CD46, CDC14B, CSDA, CYP2S1, EARS2, ECHS1, GARS, GC DH, GGT6, GMPPA, GNRH1, GYS1, IQGAP1, ITGA1, LFNG, MAN1B1, MAN1C1, OR 1A2, OR52N2, ORC4L, PIAS2, POLD3, PPP2R5D, PTPRR, RDH16, SKIV2L2, SO S1, WNT9A, ZMAT3, ATP6V1C2, PRICKLE1
Negative_8503	ALPP, APH1A, CDK4, GCLM, HIBCH, IL18R1, ITCH, ITGB5, MAN1A1, MTHFR, N AGLU, NR5A2, OR6T1, PIGK, POLR2A, STAT2, ZFYVE9, TNFSF13B
Negative_8504	HK3, ME2, AKT2, APPL1, BMPR1A, CD247, CYP2D6, CYP3A5, DAPK1, DPYSL2, EVI1, GCLC, HDAC1, IFNA16, IKBKB, IL13RA2, INPP4A, ITGB7, LAP3, MAOB , MAP4K2, MECR, NCAM2, NCOA4, NLGN3, OR52D1, OR7D2, P2RX2, PFKFB1, PO LR3K, SETMAR, TALD01, TRIP10, VTI1B
Negative_8505	F10, ADORA2B, ANAPC5, ARG1, ARSD, C7orf16, CACNA1F, CCR5, CFLAR, CLD N8, CSDA, CSNK2B, CYP1B1, DDX19A, DNMT1, DTX2, GALNT8, GDF5, HMBS, IF IH1, IGSF5, MAFA, MPST, NR4A1, OR13C9, OR1N2, OR2G2, OR2M4, OR4F17, O R5AN1, OXTR, PDGFC, PIAS4, PRKG2, PTEN, PTPN6, STAT3, UGT8
Negative_8506	CAMK2G, FRAT1, IMPDH1, ITGA1, OR2AE1, OR4M1, OR8I2, TOMM40, PLA2G12 A
Negative_8507	ACOT11, ACTN2, AFMID, ATP12A, B4GALT3, BMPR2, CARS2, DGAT2, DKK1, GG T6, GMPPA, IL17A, ITGA10, MAP4K2, OR4C46, OR5F1, OR8B12, PLA2G3, PTD SS2, QARS, RARS, SMAD4, SUCLG1, TNFRSF8
Negative_8508	FGG, GNS, ARD1A, ATP13A2, B3GNT2, CACNG5, FZD10, GALNT7, IMPDH1, KLR D1, OR10G4, OR10H5, OR13C9, PSPH, RDH12, RPE65, SELE, SETD1B, SGMS2
Negative_8509	C2, F7, ADCY9, AFMID, BIRC2, C5AR1, CACNA1E, GALNT9, INPP5B, LHCGR, M GAT3, NQO1, OGDH, OLAH, OR10H5, OR8B12, PDGFC, PLCD4, PPID, PTGER3, X YLB, MAPK8IP3, PAFAH1B2
Negative_8510	CLDN18, CLDN22, IDH1, IFNAR1, IL15, OR1L1, PDGFRB, SARDH, ST6GALNAC 1, TNFRSF10B
Negative_8511	DCK, ACAT1, ADIPOR2, CCND3, CDKN1A, CNTN1, COMT, GGT1, OR1L3, OR52B6 , OR5V1, PIGN, RPN1, SARDH, SULT2B1, SUV39H1, TUBB1
Negative_8512	TPO, ABLIM2, ACAT2, AGPAT1, APPL1, B3GAT3, BCL2, CD27, COL4A2, CXCL1 6, GCH1, IKBKE, IL18RAP, LYPLA2, MYD88, OR4K17, PDGFRB, POLD2, PPP1C A, PTGES2, PTPN7, RAPGEF3, SNAP25, STMN1, TAS1R2, VDAC2, WBSR17
Negative_8513	ASMT, NEUROD1, OR2M7
Negative_8514	AANAT, NUDT9, OR13C8, RRM2
Negative_8515	CAT, CSK, HGF, IL8, MPZ, SRF, ACOX1, ADCY6, ADRA1D, ALCAM, CCL11, CD86 , CDS2, COX10, DCTD, E2F3, GATM, GRM5, LIPF, MAD2L2, OR10P1, PDE7A, SE MA4A, SHMT1, TNFSF9, ATP6V1E2

Negative_8516	IL7, SDS, SHH, ACADS, ALAS1, ASIP, AVPR1B, B4GALT6, BCM01, CCR8, CCR9, CLDN17, CLDN19, CLDN3, CNTNAP1, CREB3L4, CYP2S1, DCTD, DHRS4L2, DV L2, FMO1, IFNA2, IL1R1, INADL, LTBP1, MALT1, NKX3-1, NQO1, ODC1, OR1E1, OR4N5, OR8A1, OR8J1, PFKFB3, PIK3C2A, PIK3C2G, PISD, POLR1C, PRKACA, RASGRP1, SPHK1, TAP1, TUBB, ULBP1, VAV3, ATP6V0E1, ST6GALNAC4
Negative_8517	NGF, AMPD3, CHSY3, DDOST, DGKB, DPYSL2, FUT9, GADD45B, GSTM3, GUCY2C, IL17B, IL8RA, INHBB, ITPA, MGAT3, OR4F15, OR6B3, OR6K3, P4HA3, PHPT1, PIGM, PIK3CA, RPS6KA2, SAT2, TAS2R48
Negative_8518	CR1, SMO, ARNT2, FTMT, NCF1, OR13C8, PLD2, RPS6KA4
Negative_8519	AGL, GNS, IL8, ACTA2, ALDH6A1, AMDHD1, ARRB2, BMP7, CASP8, CDC14B, CSNK2A2, CYP26A1, CYP2A7, DAAM1, FGF1, GARS, GFAP, GPD1L, HYAL1, INHBC, INPP1, IRF3, ITGB2, KIR2DL4, MAP3K8, NANP, NCOR2, OR5F1, OR8H2, PI4KA, PLAT, PNPT1, POMC, PTK2, PVRL3, RARA, SESN2, TKTL1, TPK1, TRMT11, TUBA1C, TNFRSF13B, TNFRSF18
Negative_8520	COL4A2, ITGAE, KCNQ1, NANP, NCAM1, OR3A2, SOCS3, STX7
Negative_8521	LTB, AGPAT1, AKT2, ALDH2, AMDHD2, ARNT, ASS1, B4GALT6, BCL2, CACNB3, CD38, CD80, CDH3, CDK2, CDK7, CHEK1, CHRM3, CYP17A1, FTCD, FZD10, HAR S2, IFNA14, IRS4, MYH14, OR10R2, OR3A3, OR51A7, OR51S1, OR52B4, ORC4L, PAPSS1, PAX8, PIAS4, PIGX, SH2D2A, SLC12A2, UGT1A10, UGT2B17, UGT2B7
Negative_8522	ATP2A1, ATP4B, C9orf95, CD86, CLDN9, CYP4A22, GALNTL1, ITGA5, ITGAV, ITGB8, LALBA, OR11H4, OR2T6, OR4D6, OR6Y1, PIGQ, PLA2G2F, RELA, SIGLEC1, SLC2A1, SMC1A, SOCS2, TALDO1, TFPI, YWHAH, TNFRSF10B
Negative_8523	ADK, DCC, AGRN, APOA5, ATG3, ATP6V1F, B3GNT5, CDH3, CLDN14, GALNS, GRM5, IARS, INMT, LHCGR, SEMA4F, TCF7L1, YWHAH, ST6GALNAC1, TNFRSF11A
Negative_8524	CDA, GPT, SMS, ADCY7, CASP9, CDKN1C, CHAT, CHIA, CHRM5, DAPK1, FMO1, GUSB, GYS1, HEXB, IKBKE, NFATC1, OR10A4, OR4C6, OR6C76, PLA2G2F, PLOD1, PRDX6, SELPLG, UGT2A1, WIF1, YWHAH, CACNA2D3, ST6GALNAC1
Negative_8525	CAT, CBS, GHR, GSS, LHB, CD34, GNA14, H6PD, IQGAP3, OCLN, OR4K1, OR6F1, OR6K2, PDE7A, PDPK1, SULT1A2, TAS2R8, ATP6V0A1
Negative_8526	A2M, ADH1A, ADORA2B, ALDH1A1, ALG11, ARNTL, C1QC, DPM3, DUSP1, DUSP6, EARS2, EDN1, GALK1, GGPS1, HEXA, HSD17B7, IDH1, LEF1, MAP2K4, MCM5, NTRK1, OR14A16, OR1M1, OR2F1, OR4F6, OR6C3, PCYT1B, PLOD3, PPAT, PVR L1, RARA, TSTA3, TUBA1B, UGDH, VAV1, YES1, ATP6V1G1
Negative_8527	F8, TXK, ACADS, ACOX3, ACP2, AKR1C1, BIRC3, BPNT1, CHKA, CREB1, CXCL12, CYBA, CYP11B2, CYP2S1, EPHA6, GLG1, IL2RB, KLKB1, LIMK2, MS4A2, NUB, OR1M1, OR1S2, OR2AG2, OR2T4, OR6C1, OR7D2, OR8B12, PAICS, PIAS1, PIPOX, SC5DL, VAMP3, VCAM1, ATP6V0A2, ATP6V1G2, PPARGC1A
Negative_8528	JUP, ADRB3, ATIC, BIRC3, CCR9, CDC14A, DDX55, FOXO1, GNAI3, GRHPR, IL24, MYH3, OR5A1, PFKM, POLR1C, PTGFR, SESN3, TPH2, WNT9B
Negative_8529	CD6, CXCL2, CXCR6, HAO1, HGSNAT, POLR1B, KIR2DL5A
Negative_8530	DDO, ACADM, ACP6, BCL2L1, CACNG7, DARS2, DHRS3, ENPP6, GABARAP, GNMT, GSTK1, HRH1, KITLG, LAMB3, LDHD, MAT2B, MINPP1, NCF1, NLGN1, OR6F1, OR7A10, OR7G1, PMAIP1, RASSF5, RDH11, ST3GAL6, TSLP
Negative_8531	ANAPC1, CCKAR, CSNK1A1, EPHB2, GCNT2, GSTM2, HAAO, KAT2B, KIR2DL1, LTA4H, ORC2L, PIM1, PIPOX, PLCB1, POLE4, PRKCH, RPIA, SARDH, SEMA4A
Negative_8532	CAT, BMP2, CDC20, DDIT3, EXTL1, GCNT4, IGF1, INPP4A, ITCH, LCMT2, MCA T, NFAT5, OR10G4, OR7A17, PLCD1, SOCS7, THY1, TICAM1, TICAM2, WNT8B
Negative_8533	ADA, CRK, IL5, TNC, ADCY6, CD22, CLDN6, CNTN1, CTF1, GNPAT, ITGB2, OR1OZ1, PFKFB3, PRKG1, SMC1B, SSH1, SULT1A1, TRAF2, WHSC1, HSP90AA1
Negative_8534	FH, GSR, ACVRL1, ALDH1L1, GGCX, ITGA5, MYL5, NMNAT2, OR10H1, OR11A1, OR51F1, OR52H1, PIK3CG, PPARG, PTPMT1, RPS6KA4, TYROBP

Negative_8535	ANAPC2, APOE, DLAT, FARSA, FZD3, IL18, ITGA1, KIR3DL2, MAP2K4, OR1B1, OR4K13, PLXNC1, POLE, PPP3R1, PRPS1, RPS6KA4
Negative_8536	LCK, PDC, TNR, ADCY4, ALG9, ATP5A1, CDC25B, LDHB, OR10AD1, PIGL, PTDS2, SSH2, UGT2B17, ALDH18A1, PRICKLE1
Negative_8537	GCK, ATP5I, FRAT2, IBSP, IGF1R, LIMK2, MAPT, OR10G2, OR4K15, SLC12A2, TICAM1, VAMP3, CTNBP1
Negative_8538	EZR, TNF, VTN, ATP5G2, BMP7, C9orf95, CACNA1B, CACNB2, CCKBR, CCNA2, CDC16, CDC27, CDK5, DRD2, DUSP9, GGT5, GRLF1, IGF1R, MYH8, NCK1, OR2V2, OR9Q2, PANK3, PIGN, PRLR, PSENE1, SEMA4G, SNAI2, TOMM40, WARS
Negative_8539	ACSS2, CACNG5, MRAS, NT5C1A, OR7G3, PSPH, SLC33A1, TAS2R8, TAS2R9, TPH2, UCKL1, WBSR17
Negative_8540	AGL, EGF, F5, FUK, LIF, MET, ADRBK2, AKR1D1, ALOX15, ATF2, CACNG1, CAMK2B, CASP7, CASP8, CCL26, CER1, DTX2, FABP4, FRAT2, FUT2, GCNT1, GNPA1, GRIN1, HNF1A, HPSE2, IAPP, IL13RA1, LTB4R2, MCCC1, MYLK, NEFM, OR1N2, OR2C3, OR51E1, OR7D2, OR8H1, ORC6L, PDGFRA, PGAP1, PLA2G2D, PRDX6, RRM2B, SLC25A4, SORBS1, SSH2, TAP1
Negative_8541	ARAF, C3orf10, HTR4, SLC27A5, SLC9A1
Negative_8542	XDH, AARS2, ATP5A1, BMP6, CCR1, CD59, CDIPT, CHEK1, CHKA, CLDN17, CTBP1, CYP2E1, DAPK1, DDX52, GRHR, GRIN2A, GSTA4, IL21R, IL22, ITGA7, MKNK1, NFYB, NOTCH1, NOTCH2, NT5C1A, OLAH, OR6C76, OR6N2, OR8D4, OXSM, PLXNA3, PON1, PPARG, PYCRL, SAT2, SDHA, ST3GAL2, TUBA1A, YOD1, ATP6VOE1, ATP6V1G2, MAPKAPK5
Negative_8543	ADC, LPO, ACAA1, ACSS2, ACTN4, ALG5, ASNS, ATP2A2, B3GALT2, BMP8A, BST1, CAV3, CCL21, CCND1, CD14, CHEK1, CHUK, CXCR5, EPHX1, FCGR3A, FLT1, FZD7, GUCA1B, HMGCR, HPRT1, ITGA7, OLR1, OR2A42, OR2D2, OR51F1, OR52N1, OR56A4, P2RX3, PIGF, PSPH, SELP, SIAH1, ST8SIA1, TAS2R4, HLA-DPB1, MAP3K7IP1
Negative_8544	GSS, KDR, NNT, NPL, TNN, ACADM, ADRB2, ATG7, CHKA, CLCA2, CLDN7, CPS1, CXCL2, CXCR3, CYP17A1, CYP4F3, DARS2, E2F2, E2F3, EPHB2, EPHX2, FADS2, FMO1, GUK1, IL2RG, ITCH, MAP2K3, NCSTN, OR2A5, OR2D3, OR2M3, OR51B2, OR6Q1, OR7C1, PDE9A, PIGX, PLXNB1, PPARG, PSPH, PTAFR, SEMA3G, SH2D1A, SLC27A1, TALDO1, TNXB, TRPC1, TXNDC12, VEGFC
Negative_8545	TAT, CEBPA, DHDH, GNAO1, OR6C70, PRKAA2, ST6GAL1, TGFB1
Negative_8546	FST, GPI, IHH, ALG12, ARNTL, ATP5C1, COL2A1, GALE, GALNT9, GBA3, GCNT1, GSTO1, KIR3DL3, OR1L8, OR8D4, PANK3, PLEKHA8, PYCR2, SDC2, SGPP2, SULT1E1, TBXAS1, TNFRSF9, TNFRSF13C
Negative_8547	AR, GPI, LCK, LCT, TFG, ACO1, AHCYL2, ASCC3, B3GALT6, B4GALT6, BMP4, BPGM, CALML3, CREB3, CRY2, CXCL3, DOT1L, DPM2, DTX3, DUSP5, DVL1, GFPT1, GLUD1, GOT1, GRIA1, GSTM5, INPP5A, ITGB3, LRAT, MAT2B, MMP9, OR9G4, POLR1D, POLR2A, PRPS1, SFRP4, ST3GAL6, SUCLG1, TRAF6, TRDMT1, UCKL1, WNT1, WWP2, ALDH18A1, ATP6V1G3
Negative_8548	GCDH, IFNA5, MYH6, PNPT1, PON3
Negative_8549	ABO, AK7, DLD, FGA, LPO, SYK, WAS, ACHE, ADCY6, ADSS, AHCYL1, B4GALT6, BCKDHB, CASK, CCKAR, CD59, CMBL, CSNK2B, DDX55, ENO1, FARSA, FOXO3, GZMB, IL28B, KIR2DL3, LTB4R2, MAP3K8, NLGN1, OR10A3, OR13H1, OR2D3, OR4X1, OR7G2, PANK4, PARVA, PIAS4, PIK3C2A, POLE4, PTPRZ1, RASSF1, RBL2, SLIT2, TAS1R1, THTPA, TKTL1, TPM3, TUBA3E, VANGL2, ATP6V1C1
Negative_8550	CD6, HGF, IL7, SPN, AKR1A1, ALAD, BET1L, BMP6, CACNA1C, CCDC6, CHRM5, CLDN17, DPYSL2, FMO4, GNG12, GSTT1, LILRB3, MAD2L1, MIOX, MTHFS, MYH6, OR1L1, OR4L1, PKMYT1, PNMT, PSENE1, PTGES2, SPRY4, STT3B, TPK1, TUBB1, TYROBP, VAV2, MAPKAPK3



Negative_8551	SCD, AOC3, B4GALT6, CACNA1A, CLDN5, CYP2C19, CYP3A5, EFNA5, EFN1, FUT4, GALNT7, HMGCL, IL9R, MAGI1, MAN1A1, MAPK10, MGAT4B, MYLK, NAGLU, NEUROD1, OR10A3, OR11L1, OR2G3, POLR1B, PSPH, TUBB1, TYROBP, ZMAT3, EIF4EBP1
Negative_8552	CP, DAO, ALDH1A2, AMY2B, CCL22, CHAD, DDB2, HIBADH, IL18R1, INPP5E, LAMB2, NME6, OR1N1, OR2AG2, OR51A2, PIP5K1C, PLCB2, QPRT, RPE65, SETDB1, SLC25A6, UNC5D, VAMP1, CSNK1A1L
Negative_8553	C2, FUK, MET, ACYP1, ARHGEF7, ATP5J, BLVRB, CACNB1, CCDC6, CCNB2, CHEK1, CHSY1, CLDN16, CSNK1G1, EGLN3, FGF7, FUT8, GART, GMPPB, HTR2C, INPP5A, KLRK1, LTC4S, MBL2, METTL6, NR1D1, OR4S1, OR6Y1, PDIA4, PRNP, PRPH2, PVRL4, PYCRL, PYGB, SHMT1, STAM, STK4, TAS2R4, THY1, TPMT, VASP, ZAP70, PNLIPRP2, TNFRSF1A
Negative_8554	CSK, MUT, PGD, ADRB2, AKR1A1, AMY2A, ARHGEF1, ASS1, CHPT1, CSF1, EPHA5, EPOR, FARP2, GRHPR, GZMB, IGF1, ITGA11, KDSR, LIMK2, MAGI1, MAP4K2, OR2Z1, OR51T1, OR56A1, PDGFD, PFKL, PIGH, PLXNB1, POLR1A, POLR2E, PRKCA, RDH11, RPS6KA4, SC4MOL, STX7, TNFSF9, TUBA3E
Negative_8555	CBL, ACPP, ALDH1L1, AXIN1, CANT1, CTNNA2, DDIT3, EPHB2, ETNK2, FBP2, GALC, GRHPR, GUCA1A, HPSE, IDH3G, IL13, IL1R1, JAG1, LCMT2, MAP2K4, MAPK8, MYLK3, NCK1, OR1E1, PDXK, PIAS4, PIK3R1, PIP4K2B, PLA1A, PLOD1, RRM2B, SPHK2, STAT4, UPP2, WNT1
Negative_8556	MPL, MPZ, SRM, ACSL3, ASCC3, ATP12A, ATP6V0B, C1GALT1, CERK, CXCL12, DDOST, EDNRB, EPHA6, GADD45B, GNAQ, GSTA5, GUCY1B3, INPP4B, KIR2DS5, KITLG, LGMN, NFATC3, NT5C1B, OR14J1, OR51G1, OR52N4, OXCT2, PRDX6, PRKACG, PRODH2, PSAT1, PTPN7, RAPGEF3, SESN2, SKP2, SLIT2, SYNJ1, TGF3, TIAM1, GABARAPL1, PNLIPRP1
Negative_8557	CHKB, EI24, FGF20, IGF1, PDE4C, PRPH, SOCS7, TACR1, MAPKAPK5
Negative_8558	ID2, ME3, ACVR1, ALOX12B, ASPA, BCAR1, C1QC, CCL26, CD80, CSNK1G2, CXCR6, CYP2U1, MAOA, MYH2, NCR3, NT5M, OR10J3, OR5D14, PIP4K2C, PRKACG, PRKCA, RCHY1, STT3B, TAS2R13, TBL1Y
Negative_8559	ADA, GH1, STS, B3GALT5, CD48, CYBA, GALT, GLI3, HHEX, IFNG, MITF, OR51A2, RDH10, THTPA, TPK1
Negative_8560	COMP, GALNT1, HDAC2, IFNA8, ITGB7, TACR2
Negative_8561	ADCY8, B4GALT2, DBF4, GNA11, GRPR, IL1B, MAN2A1, MAP3K8, METTL2B, MGST3, NUDT5, OR13C3, OR7D4, OR9Q1, OR9Q2, PKLR, RASGRP1, SETDB2, SPTAN1, STX4, ST6GALNAC4
Negative_8562	IDS, ALAD, CCR10, HSD3B2, IGF1, MCCC1, MYH6, NR5A2, PTCH2
Negative_8563	ACO1, ACSM1, C4BPA, CTBP2, DDX18
Negative_8564	F8, IDS, MVK, ACP5, BCAT1, CACNA1B, CBR3, CCNA2, CD14, COL4A4, CXCL16, DDX41, ENPP1, EXT1, GUCY2F, IL6R, INHBA, IRF5, LAMA4, MAML2, MGAT2, OR2T8, OR4M2, PAICS, PIK3R5, POLD1, POLR2H, PPP2R2D, PTPRZ1, RETSAT, RPS6, SHMT2, ULBP2, YARS2, MAPKAPK5, TNFRSF14
Negative_8565	CHSY1, CLCA4, RPS6, MAPKAPK3
Negative_8566	NPL, PGP, CHRM5, DGAT2L4, OR4C12, PDE11A, RDH12, RRAS, SFRP1, SLC25A5, SLIT2, ATP6V1G1, MAPKAPK2, SUV420H2
Negative_8567	IL2, AARS, ALG5, B4GALT6, CACNB2, CLDN8, GABARAP, GNPAT, H6PD, HSPB1, IARS, MAGI1, NPR2, NUMB, OR10Q1, OR2A5, OR51A7, PLAUR, POLR3A, PPP3CA, PRKAG2, PTGFR, PTPRM, WHSC1L1, XYLB
Negative_8568	AK1, TNN, AGRP, ALDH1L1, ALG2, ATP13A2, CACNA1F, CLDN11, COL1A2, ENO2, EXTL1, FLAD1, FUT5, GSTA3, GZMA, HIF1A, IMPDH2, LRAT, NAGLU, OR2M2, OR52I1, OR7C1, PDE1C, PDE9A, PFN4, PLCB3, POLA2, PPP1R3B, SPCS1, TJP3, XCL2

Negative_8569	BID, ADIPOQ, ATP5I, CCND3, CDC25C, CDK2, CHKB, CMPK2, CREBBP, CYP2A13, DCXR, DGKZ, DUSP14, EPB41L1, EPB41L3, FGF4, HIF1A, IDI2, IMPA1, MAP3K12, MASP1, MYH9, NKX2-2, OR2A4, OR4D11, PRODH2, PVRL4, SELP, SLIT1, SRD5A2, TUBA4A, TNFRSF13C
Negative_8570	GK2, GLA, AGPAT2, ALOX15, COMT, FABP1, FPGT, GNA12, GSTA1, IRAK1, KCNB1, MEF2C, PFKP, PRKCH, RAPGEF4, STK4, TBL1Y, THBS4, UAP1, ULK2, YARS, YWHAG
Negative_8571	LCK, ZYX, ARPC4, ATP5C1, CCL11, CLTC, DGKE, HSD17B7, IL23A, MYLK3, NAGS, OR2D3, OR51M1, OR52E4, OR6N2, PDE3B, PGM2, PIGH, PPAT, SEMA7A
Negative_8572	DBH, IL5, ACTA1, CACNB2, CAMK2A, CAMKK1, CCR6, CDC16, CDK7, CHSY3, CLOCK, CRY2, CYP2S1, CYSLTR2, EVI1, F13B, FOXO3, FZD3, GALNT1, GNG13, HEXA, HMGCR, ITGAV, KNG1, LIAS, MYH14, NCKAP1, OR5P2, P2RX6, PDHA2, PLA2G5, PLAT, PPP2R2D, PSENE1, RASA1, RBL2, SDC1, SMPD1, SNAP25, THTPA, TKTL2, TNFSF14, TRAF6, PRICKLE2, TNFRSF1B
Negative_8573	DLD, KDR, ABAT, ALDH6A1, ARHGAP5, CDC16, CDC23, CDC26, CEBPA, CHPF, CHST11, ENAH, GALNT1, GSTO2, GUCY2F, IL19, IL8RB, LEF1, MAPK9, NCK2, OR11L1, OR2M4, OR51G1, OR51I1, PIK3R2, PLCD3, PPP2CA, PRKAG1, PSME3, PTPRB, PTPRF, RELA, SETD2, SPRED2, SV2C, TAS2R42, TKTL2, TLR2, TLR5, TYRP1, WNT1, ST6GALNAC1
Negative_8574	A4GALT, ABI2, BACE1, DPM2, ITGA11, L1CAM, OR1J2, OR6A2, TCF7
Negative_8575	IHH, ADSL, ALDH3B2, CCL19, CCL24, CCL7, CCNB1, CD59, CD72, DERA, DKK2, EIF4E2, GJD2, HNF4A, HNF4G, IL21, INSR, KIR2DL4, MGST2, NT5M, OR13G1, OR4F4, PLCB2, PLXNA3, PNPLA3, SHC3, SUFU, TBL1Y, TUBAL3, UGCG, UGT2A3, UPB1, VARS, WNT8A, YWHAH
Negative_8576	CEL, CTH, NLK, SPN, ACY1, ATP5G3, CACNB3, CYP2A7, GAS1, MMP1, OR8H1, PIGM, PIK3CD, PLCB4, PLOD1, STAM, TACR2
Negative_8577	LHB, UBC, ANAPC2, COL5A2, GUCY1A2, HAAO, HAGHL, IKBKB, MAGI2, OR9Q1, OSMR, PGM3, RPS6KA3, SMAD3, SPRY4, UGT2B7, WHSC1L1, PPARGC1A
Negative_8578	CD6, ID3, ALG12, C1QB, GUCY2D, IFNGR2, IL6R, IRF7, OR2B6, PIGW, PIK3C3, STX4, ATP6VOA1, CSNK1A1L, PAFAH1B1, TNFSF13B
Negative_8579	ITK, BMP5, CCL16, CPT1A, EPB41L1, GSTA5, HRAS, OR13F1, OR2D3, OR4X2, PCK2, PFKM, PGM2, SNW1, SOCS4, PPP1R12A
Negative_8580	HBEGF, PARD3, PSAT1, TAS2R50
Negative_8581	F5, HGF, CAV3, CCR5, CDC14A, CNGA4, FMO2, HAGHL, IL1RAP, IL21R, KIR2DL3, KIR2DL4, LARS2, MAP3K5, MAP4K4, OR2G2, PRKAB1, PRODH2, PTGES, WBSCR17, YWHAH, MAPK8IP2
Negative_8582	CFH, PC, ALG9, ATP5B, CD72, DUSP7, EPHA4, FBP2, FGD3, FGF8, FZD6, GNAI1, GSTO1, GUK1, HTR7, IDH3A, IL10RA, KCNQ1, NEFH, NFKB1, NRG1, OR2AT4, OR2F2, OR2T34, OR52K2, OR5F1, ORC1L, PDE4C, PKM2, PLA2G3, PPARA, PPP3R1, PRKAR1A, RAPGEF4, RBKS, SDHA, SLIT2, SOD1, ST3GAL5, TCIRG1, UNC5C, ATP6V1E1, HLA-DPB1
Negative_8583	NGF, NNT, CCNB2, MGAT2, OR2M2, OR2T2, PGK2, PIGV, PRKAG2, PRPS1, SULT1E1, CSNK1A1L
Negative_8584	CD6, CP, EDA, AARS, ACLY, ACVRL1, AGPAT4, AKT1, ANAPC1, ANAPC10, BIRC3, CACNA1S, CADM3, CD19, CD274, CDC14B, CSF2RA, DLST, EPHA4, FGF14, GRAP2, IFNA21, IFNB1, IFNK, IL22RA1, ITGAL, MAP3K14, OR2G2, OR52B6, OR5K1, PFKL, RUNX1T1, ST6GAL1, STX12, SULT1A4, TGFA, XYLB, PLA2G12B
Negative_8585	LCT, ACTG1, ACYP1, AOX1, B3GNT3, CAMKK2, CCNB2, CDC25C, CYP2S1, ENTPD1, EXOC7, F2RL1, GNPDA2, GOSR2, ITPK1, MAML1, NRCAM, OR52N4, PCYT1B, PLXNA2, PYCR2, RDH10, RPSA, SOAT2, STK36, HSD17B12, PDCD1LG2

Negative_8586	DCN, KHK, MIF, MVD, NF1, ABLIM1, ATG12, B3GALT6, CD70, CLCA4, CYP1B1, CYP2C8, DHX58, DIAPH3, EPHB4, EPHX2, GRHR, GSTK1, GSTT1, IL13RA2, ITGAL, JAM2, MGAT1, MYH14, NAT6, OR10A2, OR1E2, PFKP, POLA2, POLR2C, POLR2L, PPT1, PRKCD, PSAT1, PYCR2, RALB, RASA1, SMAD5, SRGAP3, STK11, STX1A, TAS2R42, TAS2R5, UGT8, ULBP1, CACNA2D3, ST6GALNAC4
Negative_8587	HYI, ACOX1, AGXT, AKT1, ALDH1A1, ALDH6A1, ATP5J2, CDK2, CNGB1, CREB1, CRHR1, CXCL10, CYP26A1, DOLPP1, FOSL1, GALNT12, HGSNAT, HLA-DMA, HSD17B8, ITPA, MAOA, NFATC4, NFKB1, NUDT9, OR10A2, OR5P3, OR6B3, OR7A5, PGLS, PI4KA, PRKACB, PRKCE, PRNP, RARS, SHC1, SREBF1, STAT4, STAT6, TLN2, TUBB4Q, WNT3, XCL1
Negative_8588	AASS, GNRH1, MGAM, SNW1
Negative_8589	GNA15, GNG12, NFX1
Negative_8590	FABP4, OR4D9, OR5L1, STT3B, STX10
Negative_8591	DCT, GPI, KDR, PLN, ABAT, ATP5B, ATP6VOC, ATP6V1F, BCMO1, CD47, COL1A1, DEGS2, G6PD, GNRHR, HARS, IL22, IRAK2, ITGA2B, MYH14, NTF4, OR10H2, OR13J1, OR4M1, OR6F1, VANGL2, CACNA2D2
Negative_8592	F11, ID4, ALPPL2, ATP50, CDH1, ITPK1, KLRC4, LDHC, MMP2, NCK2, OR51G2, OR5M9, OR5T3, PDGFA, POLD2, PPP2R5C, PPP3CC, ATP6VOD2
Negative_8593	AK3, LYN, NOG, SDS, ACO2, ACSL6, ACTG2, ACY1, ALCAM, ALDH1A3, ATP4B, C5AR1, CD40, CLDN3, CNTFR, DMGDH, DNMT3B, DUSP10, ENPP2, ETNK2, HADHA, LDHB, LTA4H, MDM2, MECR, MITF, NCAM2, OR10G2, OR13C4, OR13G1, OXCT1, PMM1, TNFRSF9, WNT3A
Negative_8594	MPI, CFTR, CMBL, CNDP1, CYP1B1, DHODH, DUSP3, ENAH, GNRHR, HHEX, IQGAP3, KNG1, LALBA, LAMA3, LDHAL6A, MAGI3, OR13G1, OR1A1, OR2G6, OR5K2, PDCD1, PTDSS2, RPS6KA2, SGPP1, TIRAP, TSHR, MAPKAPK2
Negative_8595	DUT, GLA, IVD, PRL, ACY3, ADRB2, ATP6V0B, CANT1, CCR9, CDC25A, CHAD, CLCA4, CLDN8, CXCL9, CYP3A7, E2F4, EPHB2, FADS2, FUT8, GCAT, GMPR, GSTZ1, IL20, LIFR, MCM3, NFAT5, NRP1, OR1N1, OR5A2, P2RX7, PAK2, PFKP, PGS1, PLAT, PPP2R1B, PRKCD, PTGIS, RPN1, SDC1, SGMS1, SHISA5, SHMT2, SOCS4, STMN1, TFDP1, TRHR, UNC5A, YWHAG
Negative_8596	NLK, PGF, ACADSB, ADRB3, ALAS1, ALOX15B, CCR4, IL22RA2, ITGB6, LHCGR, OR5M9, PARD6B
Negative_8597	BIRC3, CSF3R, PPP1R3D, SELL
Negative_8598	SRM, ANGPTL4, CERK, GSTA2, MCM3, MMP7, NGEF, OR4K15, OR4X1, PLTP, RASGRP2, THY1, TSHB
Negative_8599	SMS, ACP6, AGXT2, ATF4, BMP8B, CARS2, CNTFR, GUCA1A, MCM6, MYH7B, NRCAM, OR8B12, PAK4, PIGT, STAT3, UROC1
Negative_8600	ACTB, CACNA1G, DHDH, FUT8, NCR1, NRG4, OR10Q1, OR3A3, OR5T3, RHOQ, ROBO2, STX10, UCK1, ARHGEF12, B4GALNT1
Negative_8601	MAX, TXK, ACVRL1, AGRN, COQ3, CYP17A1, CYP2D6, CYP3A43, ECHS1, FARSA, FGF18, GALNTL2, GMDS, IL2RB, ITPKA, NKD1, OR2AT4, OR2T4, OR6C3, PHKB, POLD3, PRKCD, SLIT1, SPTLC1, ST3GAL3, TLR3, VDAC3, WNT3A, CACNA2D3, KIR2DL5A
Negative_8602	DCC, MSN, ACAA2, ACAT1, ACSM1, ACSS1, ADCY1, ADCY7, ALG12, BET1, BLVRB, BUB1, CADM1, CCND1, CCNH, CDC14A, CDC16, CDH1, CISH, CYP7A1, FGFR1, FZD9, GALNTL5, GNAO1, GSTA4, HPRT1, INPP5B, INSRR, LCAT, MALT1, MAP3K5, MCM3, OR13J1, OR14I1, OR1F1, OR2A42, OR4F6, OR4N5, OR6A2, PIK3C2A, PIK3CD, POLR3K, SHC3, SV2C, UROD, VANGL1, VEGFA, VEGFC, PRICKLE2
Negative_8603	ALDH9A1, ENPP3, NUDT8
Negative_8604	DBI, IL5, CD274, CDC25C, COL5A3, EPRS, FARSA, FGF14, GFPT1, OR7C1, ORC5L, PAPSS2, PFKFB1, PPA2, TXNDC12, UMPS, UPP2, WWP2, ATP6V1G1

Negative_8605	GK, IVD, ADCY3, ADRBK2, AHCY, ALDH1A1, CAMK2G, CAV1, CD01, CHRM5, EDN RB, EFNB3, ESPL1, FLOT1, GALNT13, GALNT14, GALNT5, GBA3, GRIN2A, HMO X2, IL1A, ITGA10, NADK, NOS3, OR52A5, OR8A1, PAX6, PIK3C2A, PRKG2, RA B5A, RASSF5, UGDH, WHSC1L1, PDCD1LG2
Negative_8606	RET, ACOT12, CIITA, CMPK1, EPHA5, FZD8, MDM2, NQO1, OR2M7, STX10, TML HE
Negative_8607	TPO, ACP1, ADIPOR2, ADRA1A, ATP4A, BMPR1B, CACNA1I, CADM1, CCL11, CD H5, CFLAR, CLDN17, CSNK2A1, FARS2, FGF23, FM01, GALK2, GNAI2, HMOX1, HSD17B2, MAP3K2, MCCC2, MS4A2, NFKBIA, NFYB, OR2D2, OR5T3, P2RX3, PH PT1, PLA2G4A, PNPT1, PRKCZ, PTCH1, RAB23, RDH11, ROBO3, SMPD3, UNC5A , VASP, TNFRSF1B
Negative_8608	F7, ADCY6, CCR1, CDC25B, EFNB2, FSHB, FUT9, GGT6, GUCY1A3, IFNA13, IR F9, LAMC1, LRAT, MAOB, OR13C5, OR2A42, PDE3A, PGS1, PRKY, SELL, SMURF 2, SPRY3, C1GALT1C1, TNFRSF10C
Negative_8609	AGL, IVD, NGF, PXN, ATG3, ATP5A1, CACNA1B, CAV1, CCL1, CLCA2, DGKI, DU SP1, HAP1, HIBADH, IQGAP1, LCMT1, NCOR1, NCOR2, NFATC3, NR1D1, NR5A2 , NTF3, OR11A1, OR11H1, OR11H6, OR2T10, OR2T4, OR6C6, ORC1L, PCYT1B, PIAS3, PIGX, PRKAR1B, RAC2, SPRED1, STK4, UROS, KIR2DL5A, TNFRSF11B , TNFRSF1A
Negative_8610	BCR, BLVRB, CACNG1, CAMKK2, CCNE1, CLCA2, DPAGT1, NAGS, OR4F4, PLOD2 , POLA2, POLR2G, POLR2H, PTGES, STAT4, PPP1R12A
Negative_8611	ACOX3, ADCY8, ARRB2, CBLB, CCKAR, DPAGT1, DTX4, IGSF5, OR52B6, PIGV, SFRP4, TNFSF9, CACNA2D4
Negative_8612	IVD, ACAD9, ALPP, AREG, BMP8B, CALML3, CAPN2, CCNB2, CDKN1C, CYP26B1 , DARS, DHRS9, DUSP10, DUSP4, EPAS1, FLT1, GALT, HYAL2, IFNW1, IL1B, K LRD1, MMP2, NRG1, OR2AE1, OR2T29, OR5B12, OR8K3, OR9K2, ORC3L, PFKFB 1, PPP1R3C, RELA, RERE, RFXANK, SEMA3A, SEMA3B, STAM, HLA- DRB3, SERPINE1, ST6GALNAC3
Negative_8613	SMO, VTN, ABCC8, CASP3, CYBB, DDX52, DPM3, DTX3, FBXW11, FGF6, G6PC2, GADD45A, HTR2C, IFNA4, IFNAR2, ITGA4, LAMA4, MMP1, OR13D1, OR2M3, OR 5C1, PHGDH, PIK3C2A, RASGRP1, SEMA3B, STAM2
Negative_8614	AARS, ADSSL1, AGPAT3, ALG3, AOC3, BTRC, COASY, CYP2A7, EGLN1, FZD4, G ABARAP, GALNT2, GUCY2F, HLA- DOA, MAP3K6, NOX3, OR14J1, OR4N4, OR5AN1, OR7C1, PDE6G, PLA2G2F, PPP 2R5B, PPP3CC, PRKCI, PTCRA, SEMA3E
Negative_8615	AGL, CTH, GCK, LPO, ADAM10, ALCAM, ALG6, ARPC2, ATP6V1F, B3GAT3, BHMT , CADM1, CCDC6, CCNH, COL5A1, DPM1, FUT8, GDF6, GUCY1A3, IDH3G, IGSF5 , KLKB1, KLRC4, KRAS, MAD1L1, MGAT5B, MTHFD2, MYH7B, NCKAP1, NFYB, NP R1, OR2B6, OR4C46, OR52A1, OR6X1, OR8D2, PCNA, PIK3C2A, PIK3CB, PIK3 R2, POLR2J, RFX5, SDHA, SH3BP2, SKIV2L2, TLR3
Negative_8616	ASL, TAT, CTBP2, EHMT2, NAMPT, PGK2, PTGFR, RFX5
Negative_8617	IHH, TK2, ABL2, ACSM5, ACTG2, ADORA2B, B3GAT3, CACNA1E, CDC25A, CYP2 J2, DHX58, ECHS1, ENO3, GSTM3, HNF4A, IL1A, ITGB7, LAMA4, LFNG, NANS, OR10H4, OR2D2, OR2H1, PIK3R2, POLE, PTEN, SARS, VANGL2
Negative_8618	TNC, ADCY8, ADSS, C3orf10, FGFR3, FUT2, HAO2, HSD17B8, ITGA5, KAT2B, MAP3K14, MAP3K7, MGAT5B, NFATC3, NOTCH3, NT5E, OR10H3, OR2AG1, OR5B 21, OR5V1, PCNA, PHGDH, PIGA, PLXNA1, PNPT1, POLR2B, PPP2R5A, RHEB, S H2D1A, TACR2, TAS2R4, TNFSF10
Negative_8619	DCT, FADS2, PVRL1, RELA, SOCS5
Negative_8620	MPL, BDKRB1, CD82, CDC20, CDKN2A, CHRM5, GRIN2C, KIR2DS4, MAP3K5, MY L7, NR5A2, OR52N4, OR5B17, OR5L2, PCK1, PLCZ1, SORBS1, SSH2, YWHAB, P HOSPHO1

Negative_8621	GP6, PLG, ATN1, CD14, CD247, CLDN9, DPM3, E2F3, HMGCL, HTR2B, KIR3DL1, LEF1, MCAT, NLGN3, OR10G2, OR51G2, OR52N5, OR56A4, OR6B3, OR8U1, OR9A2, PIP4K2A, PIP5K1A, PRSS3, SDC1, SETDB2, TNXB
Negative_8622	LPO, MIF, ABAT, AGRN, ALDH4A1, CTPS2, DGAT1, DHDH, DOCK1, EFNA4, FZD9, GNAZ, GRIN1, GSTM5, IL6ST, JUND, MYH10, NOTCH2, NTF3, OR1S1, OR7G1, PCK1, PECAM1, STK36, TIAM1
Negative_8623	C4B, F3, ID1, AACS, DGKQ, FBXW11, GLI1, GRIA2, GUCY1B3, ITGA7, MAP3K3, NLGN1, OR51B6, POLR2L, PPBP, SEMA3E, ZIC2
Negative_8624	ADCY9, ALG8, ASS1, BAAT, CCNG1, CYP17A1, GNAI1, HTR5A, KIR2DS4, RERE, SSH3
Negative_8625	F3, ADCY9, CRB3, CRLS1, CX3CR1, DDX55, DERA, GNG12, MPST, NCR2, NOS1, PDK1, PSME2, SMURF2, SOAT2, STAT5B, TSHR, TNFRSF6B
Negative_8626	AFMID, ALG1, CD34, DERL1, EPHX1, IL12RB1, IPMK, NKX3-1, OR13C8, PPARG, SMAD9
Negative_8627	GH1, CASP6, COL6A2, DDHD1, DDIT4, DHRS9, DUSP2, ENTPD2, FABP4, GPLD1, HNF1B, IL15, INSR, NCF2, OR5A1, PDGFRA, PLA2G3, SELL, SETD1A, WASL, ATP6VOA1, ATP6V1G2
Negative_8628	CP, HDC, KHK, TNF, TPO, ADCY8, CCL16, CD01, COL5A3, DIAPH2, EFNB2, ENP6, GALE, GALNT4, GDF5, GGPS1, GSTP1, ICOS, IL13, IL5RA, KIR3DL3, KLKB1, MAP3K3, MTMR2, NADSYN1, NEFL, OR11A1, OR3A2, OR4K15, PDE8A, PLCD4, PPP1R1A, STAT4, SUCLG1, PNLIPRP2, ST6GALNAC3
Negative_8629	GLS, IL8, BDKRB2, CHPF, EPHA8, FADD, GALNT12, GPAM, IRF7, OR51A2, OR8B4, UGCGL2
Negative_8630	PTS, ACSM5, BLNK, CASP7, CD274, CHRM3, COL6A1, CXCL13, CYSLTR1, EI24, ERBB3, FGF10, FOSL1, FOXO1, HSD11B1, INHBB, ITPKB, OR4C13, OR5B17, PDE6G, PERP, POLR2G, PTPN6, RDH5, SELL, SEMA3B, SEPHS1, TGFB1, UAP1, ULBP1, WEE1, WNT2B, ATP6VOA4, HLA-DRB5, PRICKLE2, TNFRSF14
Negative_8631	DCK, MPL, NOG, AARS, ACOT11, ADSL, ALOX15B, ARG1, CACNG7, CALML6, CASP3, CCNB1, CD44, CMBL, CRHR1, CTPS, CYP11A1, CYP3A7, DGKA, FGFR2, GAD45A, GPD1L, GUK1, GUSB, IFNA13, IL13RA2, IRF9, KIR2DL4, MADCAM1, MAGE11, MAPK3, MCCC2, MGAM, MGAT3, MKNK2, NR4A1, P2RX2, PAICS, PIGK, PLA2G6, SULT2A1, TAS2R10, TRAF6, TSNARE1, TUBB1, UGT1A10, ULK1, ULK3, TNFRSF13B
Negative_8632	ALG6, CD99, COL5A1, CREB3L2, E2F3, GRIN2B, GRPR, IFNAR1, IKBKE, IL17RA, KIR2DL1, LCP2, NANS, OGDHL, OR1N1, OR4L1, PHKA1, PTPRM, TLR4, VTI1A, WNT3, ZAP70
Negative_8633	TEC, ABP1, ALDH3B1, CYP4A11, DAD1, DPYSL2, EPHA6, GDF7, LRRC4C, MAN1A1, OR1B1, OR6Q1, PPP2R2B, RDH5, SLC12A2, SMC1A, TYRP1, WNT4, SERPINF2
Negative_8634	TYR, ADCY6, CXCL16, MAN2A1, MCM7, NCAM2, NR5A2, OR10A3, OR51Q1
Negative_8635	ADC, AR, FAS, FH, GLA, KIT, SI, AASDH, ANGPTL4, B4GALT6, CAV1, CDKN2D, CHD8, CMBL, CSF2, CTBS, CXCR4, DGAT1, DUSP6, ECHS1, EPHA8, GALNT7, GCNT4, GNRH2, IRF5, LTC4S, MYLK3, NUDT9, OR2T5, OR8D2, PARVA, PMVK, PRKAG2, PRKCH, PRPS2, PTPRR, RENBP, SCLY, SORBS1, SQLE, STEAP3, TRDMT1, WNT5A, PAFAH1B1
Negative_8636	ACADS, CHEK1, COL2A1, EFNA4, ITGB8, NFKBIA, NMNAT3, NRCAM, OR10P1, OR6C4, WBSR17
Negative_8637	GP5, SFN, ABLIM1, ADH7, AFMID, ALAD, BBC3, CTBP2, DGKE, ENPP7, FARP2, LDHAL6B, LRDD, MAP2K1, MLYCD, NFATC3, OR13C5, P4HA3, POLR2C, WNT3A, WNT6
Negative_8638	ADK, ASL, TH, ACTA2, ADCY7, ADRB3, AHCYL2, ASPA, ATP5I, CCL4, CD19, CD27, CDC16, CPOX, CREB3, EFNB1, EXT2, ICAM2, MYD88, MYLK2, OR4F6, PIGB, PSAT1, RARS, TACR2, KIR2DL5A

Negative_8639	KIT, LEP, CAMK2A, GPAM, HEMK1, IGSF5, LTBP1, MTMR2, NTN1, OR2M5, PSME3, XCR1, PHOSPHO1
Negative_8640	ABI2, CCL5, CLDN7, CRY1, OXTR
Negative_8641	DCC, B4GALT3, BIRC5, FGF17, JAK3, MBL2, OR4N5, OR51D1, OR5AU1, PLD1, POLE4, POLR3K, ZIC2
Negative_8642	ALDH3A2, AMPD1, CD19, CREB3L2, DIAPH1, ELK1, FZD2, IL28A, MAOA, MYH1, NKD1, NOS3, OR10Z1, OR1M1, ORC2L, PRPH2, SHC1, SHC4, TALDO1, TUBA1B, VAMP2, CACNA2D4
Negative_8643	C9, FGB, SFN, ADRBK2, ATP4B, BIRC5, BMP7, CRY1, FADD, FCGR3A, HRH1, IPMK, IQGAP2, METTL2B, NR1D1, OR10H2, OR51A4, PDE4D, PIK3R3, RARS2, SD C1, SEMA3B, TNFRSF18
Negative_8644	FGG, HGD, ABAT, APOA1, BMP7, CLDN6, CXCL16, CXCR5, CYFIP1, CYP2C8, DD X41, FARS2, GALK1, MPST, NEGR1, OR10AG1, OR1C1, ORC6L, PDE6D, PER3, PIK3R3, PPAT, PPP2R5D, TBL1X, TNFRSF9, TNFRSF1B
Negative_8645	MVD, MVK, RET, TK1, ACADS, ACTN1, ATP5J2, BACE2, CNTFR, COQ3, CTBP1, CTPS, CX3CR1, CYP2C18, DARS, FGF5, FM05, GAS1, IFNA21, IKBKE, KAT2B, KCNQ1, LCMT1, NEU4, NFYC, OR1J1, PARD3, RBX1, RXRB, VDAC1, MAP3K7IP1
Negative_8646	DDC, IVD, AGRN, CALML6, CCL23, CD8A, CHAD, CLTCL1, EPOR, FARS2, GPD1, ISYNA1, JAK2, LAMA4, NEFH, OR14A16, OR4A15, OR4D11, OR5F1, OXCT1, PGM1, PIGL, PIP5K3, PTPRR, PYCRL, QARS, SRGAP1, STK3, STX16, TALDO1, TC F7L2, VAV2
Negative_8647	ADH1B, B4GALT5, CLDN7, CPT1C, CYP1A1, DKK4, EPHX2, FZD4, GDF6, HLA-DRA, LEFTY1, MAP4K1, NT5M, OR4D11, P2RX7, PANK1, PIGN, PIGO, POLR2K, PPARD, RASGRP4, RBPJ, TNFRSF13C
Negative_8648	OSM, SMO, BST1, CAV1, CLCF1, CMPK2, CNGA3, CYP17A1, CYP2F1, DGKQ, DNM T1, HADHB, IFIH1, KIR2DL3, MAP3K5, MAPT, MTMR1, NCSTN, NEUROD1, NLGN 1, NOTCH3, NTSR1, OR2AG2, OR2T1, OR5B12, P2RX7, PDE6H, PDGFD, PFKFB1, PLAU, POLD2, POLR2F, PPAP2A, PRKCH, PTDSS2, RAP1B, TAS2R38, TUBA3C, UGT2B7, UGT8, ULK1, XCL2
Negative_8649	AR, FOS, GGH, ITK, ABL1, ALG2, BET1, BIRC3, CD46, CD70, CDKN2D, CLTCL1, CNDP1, DUSP8, EPHB6, GABARAP, GPT2, HSPA2, IL15, ITGA7, KCNQ1, KLKB 1, LIPT1, MMP9, NEU2, OR10C1, OR52A1, OR8J3, ORC4L, PDE4C, PLTP, PNMT, PTTG1, RAP1B, RDH16, SHISA5, SPRED2, TLN1, TOMM40L, TUBB3, UNC5D, A TP6V1B1, CSGALNACT2
Negative_8650	ABAT, ALG6, BLNK, CDH2, JAK1, METTL6
Negative_8651	IL13RA1, IL29, MAML2, NNMT, OR13C2, OR1J1, PAICS, PLAU, TRAF4
Negative_8652	EXT2, MAP4K2, ORC5L
Negative_8653	ALDH1B1, C9orf95, CX3CR1, FPGS, GBGT1, INPP4B, LRP5, OR4C12, PFKL, PIP4K2C, RDH11, TRAF1
Negative_8654	ALCAM, ALG5, APOC3, BAIAP2, DCXR, GSK3B, LIFR, NT5M, OR8B8, PLD2, POL R3G, PPP2R1B, PTGFR, RERE, SMPD3, TUBB2A
Negative_8655	ADRA1D, ALDOA, CCNB1, CLDN17, DHX58, DNMT1, DPM3, EVI1, FTH1, GNAZ, I FNAR2, INPPL1, MARS, NCR2, OR4N2, OR4X2, OR51G1, OR52E4, PAK6, PAX4, PIGM, POLE4, POLR1C, PPP1R3D, PRSS3, TPMT, ALDH18A1, CACNA2D1, TNFR SF1B
Negative_8656	GBA, ACOX2, DERA, HSD17B3, NCOR2, OR8J1, SOCS3
Negative_8657	MIF, RPE, ALPP, BCKDHB, CACNB4, CCND3, CKMT2, CTBS, FGF13, GALNT14, H LA-DMA, IARS, IL19, NME2, NUDT9, OR3A1, OR52K2, OR5B12, OR9A2, PCYT1A, P GM3, PIGA, RAC3, SFRP4, SNAP23, STAM2, UGT2B7, ULK2, UNC5B, SERPINE1
Negative_8658	DHFR, DVL2, GMPPA, NAMPT, PAPSS2, POLA2, RAPGEF3, SEMA3D, SPAM1, UGT 2B11

Negative_8659	VTN, ADORA2B, ANGPL4, BMP2, CARS2, CLDN16, CRLS1, CXCL12, CYCS, FPG S, FTH1, HCST, HSD17B4, KCN11, KIR3DL2, KITLG, LAP3, MAN1A1, NFKBIA, NNMT, NOX1, OR1E2, OR2Z1, OR4F4, ORC5L, P2RX3, P2RX4, PIK3R4, PIP4K2C, PRPS2, PRSS3, RAPGEF4, RCHY1, TAS1R3, TJP1, TYMP, TNFRSF6B
Negative_8660	KMO, TK1, ACVR2A, AGXT2, ALOX12, ANAPC10, ATIC, CSNK1E, EDNRB, FZD9, GUCY1B3, HADH, ITGB2, MTHFS, NR1H3, OR10AG1, OR1L1, OR2AG1, OR4P4, OR5P3, OR6C76, OR7G3, PAK3, PDE7A, PDE9A, PDHB, PDIA4, PIK3R5, PMM2, R XRG, SIAH1, SUV39H1, CSGALNACT1
Negative_8661	ABL2, ALDH2, CCNE2, CPT1B, DRD1, ENTPD6, FGF3, GLUL, GPAM, IPMK, KIR2 DS5, NFYA, NLGN2, OR52B4, PIGN, PIK3C3, PIK3R3, PTPRJ, RPE65, RPS6KB1, SDC1, TAS2R13, TP73, TRADD, TSC1
Negative_8662	FN1, BCL10, CHD8, CNTN2, FUT9, LAMC2, MMP9, NFKB1, SOS1, SERPINB5
Negative_8663	TH, B3GALT4, BMP6, CACNB2, DDX50, EIF4E2, ERBB2, EXOC7, F11R, GALK1, IFNG, IPPK, ITGA5, MAPK13, OLR1, OR4K5, PPP1CB, PPP3CB, PPP3CC, PRKC E, SRGAP1, TGFB1, TSC2, UNC5B
Negative_8664	AMH, CRH, DAO, AARS2, ACMSD, ACVR2A, ANAPC10, ARRB1, BMPR1B, CBR1, CCL15, CHST13, CPT1A, EXT2, FZR1, GRIN2B, HMGCS2, IL12B, NCSTN, NFATC2, NME4, OR2T10, OR51I1, OR51L1, PDE3B, RALB, SEMA4B, SUCLG1, VEGFA, G ABARAPL2, HSD17B10, ST6GALNAC1
Negative_8665	ACOX2, AGXT, ARNT2, CAMK2B, CDH3, IFT57, OR5B17, OR5K1, SHC4
Negative_8666	AHCYL2, ARNTL, CLTB, CRLS1, KAT2A, MAP2K2, OR10H3, OR13H1, OR2T2, TB L1X, TNFRSF1A
Negative_8667	NLK, ALPI, ARNT, CACNA1I, CAPN2, CYP26A1, E2F2, GSTM4, GYS1, MCM5, PI AS2, PSEN2, SORBS1, TGFB2, TNXB, XIAP
Negative_8668	GH1, IL8, IL9, LTB, MIF, SRC, ALDH3B1, AOC3, B3GAT2, CCL26, CEBPA, CLD N17, CNGA4, COL2A1, ENPP3, FGF9, G6PC2, GALNT7, HAGHL, HES1, IL17B, M AOA, MAOB, MAPK8, OR13C2, OR1Q1, OR2M7, OR6F1, OR8D4, PARS2, PDHA1, P VRL1, RFNG, SHC4, SPCS3, SUCLG1, TP73, VAMP3, TNFRSF13C
Negative_8669	PDE8B, PPARG, RPS6KA4, SDHB, SOS1
Negative_8670	MAX, ALDH6A1, BACE2, BDH2, CDC25A, CTNNA1, CXCL12, CYP2C19, DDX23, E CHS1, FOXA2, GADD45A, GGT5, HSD17B4, IFNA16, IL2RA, KIR2DL3, LPAR1, MDH1, OR2G2, OR5T1, PAK2, PIP5K3, PTTG1, RIPK1, TPM3, TUBB2A, PNLIPR P1, SERPINC1
Negative_8671	IFNA4, IL20, TAP1, TYRP1
Negative_8672	OR7A5, PIP5K1B, TUBA4A
Negative_8673	ALG12, BCAT1, BNIP1, CAMKK2, CCL27, CHIA, CTBP1, CUL1, EGFR, FGF18, G AD2, GAPDH, GCLC, GLS2, GNB3, IL20RB, KIR3DL2, NCOR2, NT5C1A, OR4F5, OR6B3, PIGS, PLCB3, POLR3H, PYCR1, RFWD2, RUNX1, SEMA4G, ST8SIA5, ST K3, TSC1, UGT2B4, VNN1, WHSC1L1, YARS2, TNFRSF1B
Negative_8674	AGPAT1, AHCY, CYP2U1, CYP4A11, HSD3B1, IDUA, OR13C9, PARD6G, PIK3C2 A, PRKAR1A, TAS1R3, UXS1, VAV2
Negative_8675	EBP, SP1, ADCY8, CES2, CFL1, CLDN3, CNDP1, DLAT, DRD2, EPHA2, HIP1, HL A- C, HNF4G, KCN11, MAN1B1, MAPK10, MAT2B, OR51D1, OR51Q1, PDX1, PLXNB 1, POLR1E, PTK2, RRM2B, SPRED1, ST3GAL1, TGFB2, TRHR, TUBA1A, UPB1, UPRT, YWHAH, ZNRD1, HLA-DQA2, HSP90AA1
Negative_8676	IVD, TYR, ALOX15, ATG7, BBC3, BPNT1, CCR5, CHRNA7, CNTN2, ENTPD3, EPH A5, FTCD, GADD45G, ICAM3, INHBB, INPP1, IRAK2, KLRC1, LHCGR, MAP3K12, NEGR1, NFAT5, OR4S2, OR56A4, OR9A2, PTGFR, TPMT, YARS2
Negative_8677	GPT, NF1, NNT, B4GALT7, BCL2L1, CDC42, CREB3L4, CYP2A6, DGKZ, DHCR24, DPYS, EPHB3, EPHX2, GATM, GLYCK, GNB3, HHEX, HSPA8, INPP4A, LDHAL6 B, MTHFD1L, MTMR1, MYLK2, OR13J1, OR5AU1, OR7G1, OR9G1, PIAS1, PIK3C 2G, PLCD3, PTGS2, RPS6KB2, RRM1, SARS, SELE, SETD7, TPH2, VARS

Negative_8678	CD47, CNGA3, CYP26C1, DUSP7, ENTPD8, FLT1, FLT3, FSHR, GSTK1, NAT2, N EU3, OR3A1, PCYT1A, PKLR, SPRY4, THTPA, ATP6V1C2, SERPINE1
Negative_8679	LCT, FDPS, NADK, NKD1, OR52E2, OR6Q1, RIPK1, RPS6KA3, TLR2, PCD1LG2
Negative_8680	GSN, TK2, ALG5, ARD1A, ATP6V0C, CARS, CASK, CCNE2, CD72, CHRNA7, CRHR 1, EP300, ETS1, FMO3, GGT5, GNRH1, GRB2, ITGAM, KIR2DL2, NCKAP1L, NPA S2, NR5A2, OR51B6, PER3, PTCRA, PTPRZ1, PVRL4, RALBP1, SORD, ST8SIA5 , STX8, TBXAS1, TNFRSF9, TOMM40L, VAV2, WARS, YWHAB, YWHAG, YWHAZ, CA CNA2D4, PNLIPRP2
Negative_8681	F10, MOS, TXK, ACAA1, ALAD, ALOX12, ARPC3, ATF2, ATG3, BPNT1, CCL11, C OL4A4, DGAT2L4, ENTPD7, EXTL1, FGF19, FUT7, GAD1, GDF7, GFPT2, GMSD, GNA15, IDH3A, IFNAR2, IL29, ITGAM, KLK3, LALBA, LAMB4, LCP2, MAP2K5, NCF2, NFATC1, NME7, OR2C3, OR52D1, OR52K2, OR5L2, P2RX3, PDE3B, PFAS , POLR3H, PPP1CA, RFXANK, TUBAL3, UPP1, WNT11, CACNA2D2, PRICKLE2
Negative_8682	AK1, GGH, TXK, ACLY, ACSS3, ATP5J, CD27, CDC2, CDC7, CYP17A1, CYP3A43 , DDX52, DHCR24, DUSP9, FGF3, GLS2, GMPR2, GNB3, GSTM5, IL10RB, IL21R , ITGAD, KIR2DS4, KLK3, NCF4, OR2D2, OR2T5, OR4X2, OR51B2, PANK4, PCY T2, PVRL3, SC4MOL, SMAD7, TGFB1, ULBP1, WNT2, ZIC2
Negative_8683	TYR, ABLIM3, ANPEP, ATP6V1A, B3GNT3, CCL23, CCR9, CLDN4, CNTN2, CRY2 , DFFA, DTX1, GMPR, IPMK, MMP14, MRAS, OR4C13, OR52N1, OXSM, PDE4B, PN PLA4, POLR2L, PRKAA2, PTGER3, PYCR2, SUFU, TGDS, TNFRSF14
Negative_8684	ANAPC11, AOX1, CCL2, CTNNA2, EARS2, EHMT2, EPHA2, GGT7, GZMA, HAO2, H CST, INPPL1, KIR2DS5, NLGN1, NTRK2, NUDT2, OR9Q2, PLAU, PLCB2, PLXNA 2, PMM1, PSPH, PTPRF, PYGL, RASGRP1, RDH16, RENBP, RPS6KA5, SETDB1, S HC2, UGT2B17, UROC1, WNT2B, YKT6, ATP6V0A4, HLA-DPA1
Negative_8685	IL3, TNC, ATP6V0C, CSF2RB, EPB41L3, HTR4, IKBKE, IL8RB, INPP5A, MAP4 K3, NT5C, PIP4K2C, SETD1A
Negative_8686	CCL4, GRIA1, RFNG, SDC2
Negative_8687	BID, CR1, CS, DCN, PLG, ASPA, ATP5G1, ATP5J2, CCL20, CDC42, CDKN1C, CH AT, DAPK1, DUSP10, E2F1, FGD3, GALNT3, HAAO, HEXB, IRF9, NANS, NRG2, N RXN2, OR10S1, OR4F17, OR52B6, OR6C70, OR9I1, PARVG, PDE4A, RFX5, RPS 6KA3, SGMS2, SMAD4, SORD, SOX17, TCIRG1, CACNA2D3, TNFRSF6B
Negative_8688	ACOT12, DMGDH, NEFH, OR2M7, SMAD2, UAP1
Negative_8689	CDA, CRH, DAO, TEC, TNC, ACAA2, ACPT, AGPAT1, ALOX15B, ARHGEF7, BIRC5 , C1QC, CCL20, CCNE2, CLDN19, CXCR5, CYBB, E2F5, FUT8, GSTA4, HIF1A, H SPA2, IQGAP3, MAN1C1, MAPK1, MCM3, NRCAM, OR13H1, OR52R1, OR5T3, OR7 C1, OR8B8, PKM2, PLAUR, PTCH1, SCLY, SEMA7A, SFRP1, TUBA3C, UAP1, ATP 6V1C2, SERPINB5, SERPINE1
Negative_8690	AMT, APP, BID, C6, CAD, FST, IL7, ADH5, ANPEP, BPNT1, CD226, CFL1, COL4 A2, CSF1, CYP2C18, EPHA7, GNAS, HCLS1, HLA- F, HSD3B7, ITGB5, MAP2K5, MAP3K12, MARS, MCM5, MPDZ, OR2AE1, OR4N2, O R51B4, OR56A4, OR8B8, OSMR, P2RX7, PAX4, PGLS, PGM2, PIP5K1A, PLXNA1 , PPAP2C, PRKAA2, SESN1, TOMM40L, UAP1, VAMP4, WNT10A, ZMAT3
Negative_8691	TNR, ACTG2, ALPPL2, CDC26, FGF3, GSTA3, MAPK13, PCCB, TAS2R14, TPK1
Negative_8692	OTC, ALDH6A1, ANAPC11, ATP5H, CAMKK1, DKK2, EI24, FM01, GLS2, GUCA1C , IL9R, IRS1, ITGB8, KIR3DL2, KLRC4, OR2H1, OR5L1, PDGFC, PIP5K1C, PL CB3, PNMT, PTGES2, SOCS5, STX4, SULT2B1, TGFB3, TICAM1, TNFRSF4, TRD MT1, TUBB1, UAP1
Negative_8693	ASL, ID2, IL3, ACACA, ACOT11, ALG2, APLP1, ARAF, ATP5D, CNTNAP2, DARS 2, DDB2, ENTPD1, FABP1, FOXO1, FPGS, GCNT3, HNF4G, HTR5A, KRAS, LGMN, LTC4S, MYH13, NAT2, NRAS, NTRK1, OR5R1, PGM1, PHPT1, PIK3R2, PPP3CB, QPRT, RRM2, SMAD9, STX3, TOMM40, ULBP3, VEGFC, ZIC2
Negative_8694	MYC, CDC23, DIAPH2, EPRS
Negative_8695	ACOX1, ACVR1, CCL26, IGF1R, IL13RA1, KLKB1, LHCGR, MAPK10, MCM6, NEF H, OR7C1, PAK1, PIM1, PRKX, PYGM, SPP1, ULK1, GABARAPL2, MAPK8IP2



Negative_8696	NPL, ACTA1, ACTB, AKT3, ARNT, ATP5G2, CAV2, CBR3, CHR1, COL4A4, CTLA4, DDX54, EPHA6, FUT1, GADD45B, GDF5, GNAT3, IDH2, IQGAP2, ITGA9, MGAT3, OGDHL, OR10G3, PLA2G6, RUNX1T1, STAT5A, ULBP1, VTI1A
Negative_8697	AK2, ACTA2, ALOX15, ATP5J, B3GALT1, CAMKK1, CDH4, CHST13, DNMT3B, EPHX2, FGF10, FUT1, GALNT3, GPX5, GRAP2, HLA-DOA, IL4R, MAFA, MAN1C1, OR13C4, OR1G1, OR56B4, OXCT2, PLXNB2, PORCN, PPP3CA, PTTG1, SEMA4B, STAT1, TLN2, TUBB3, VAMP2, XYLT2
Negative_8698	F9, PTS, ACADS, ANAPC10, AREG, BLVRA, BMP7, CALML3, CCDC6, CCNE2, CLDN15, CRHR1, CXCL2, CYBA, GSTM1, HLA-DOA, IDH2, ITGB6, MCM5, OR4Q3, OR51B5, OR5M3, PIGF, PLA2G2A, PLXNA3, PNLIP, RBPJ, RHOQ, TNFSF12, TPI1, TUBB2C, UGP2, PRICKLE2
Negative_8699	EHHADH, IL18R1, IL22, NFATC4
Negative_8700	GH2, GSR, MOS, TKT, ACADM, ACOX3, ACSM2A, ACY3, AKR1C1, ALAS2, B3GAT2, C1GALT1, CCL25, CD38, CDC14A, CHD8, CHSY1, CYP2S1, DDIT3, DHRS3, DPM2, EPHA8, GAL3ST1, HYAL2, LTBP1, MAN1A2, MICA, MOV10L1, NCAM1, NRG1, OR10H2, OR7D2, PGAM4, POLR2I, SEMA3C, SHISA5, SIGLEC1, SULT1A1, TRHR, UGCG1, WNT2, C1GALT1C1, PRICKLE1, TNFRSF13C
Negative_8701	AR, PGP, SRM, TXK, ABP1, ACACB, ACTG2, ADRBK2, ANGPTL4, APH1A, ARG2, ARPC5L, B4GALT7, CASP9, CAV3, CCL3, COL5A3, CSNK1G3, CYP2A6, DAPK1, DIAPH3, DTX1, ECSIT, EPHA4, FADD, FZD5, HBEGF, ITGA2B, KITLG, LRP6, NFATC1, NME4, NPR2, NQO1, NUDT2, PLA2G1B, RAP1A, RASA2, RBPJL, RDH12, RENBP, SEMA3C, SMARCA2, STX5, TUBA3C, UBE2L3, ULK1
Negative_8702	ADSSL1, ALDOC, ATP5C1, ATP6V1D, CD58, CLDN9, GALNTL4, GNAI1, GRB2, GSTK1, GTSE1, HMGCL, LYPLA2, MITF, OR1L8, OR2B6, OR2M5, OR4M2, PIK3CA, PRPH, SNAP23
Negative_8703	ARHGEF7, CACNA1S, CD19, GRAP2, IFNA16, IRF3, NEFL, PFAS, WNT10B
Negative_8704	C3, AKT1, ATF2, CTSL1, FBXW11, HPSE2, IL13RA2, LMO7, MAD2L2, MAP3K6, MAPK13, MECR, MYLK3, NAGA, NCK1, NSD1, OR1D2, OR2A2, OR6X1, OR6Y1, PIP4K2C, QARS, RAPGEF2, RRM1, STEAP3, TRIP10
Negative_8705	DDO, PVR, CACNB3, CCNB1, CHRM5, ENTPD8, IRF7, MYH4, OR1C1, OR52W1, PTDSS1, RDH5, RELA, SLC12A2, TGFB2, CACNA2D3
Negative_8706	AR, FUK, GHR, SMS, ZYX, ADAM10, ARNTL, CAMK2A, CES1, CPS1, CTNNA3, DARS, DDX56, GPLD1, ICAM2, KLRC4, OR12D3, OR4N5, OR52L1, OR5R1, OXCT2, PARD6B, PLA2G4A, POLE2, PRKAR1A, QPRT, SETD2, SLC27A5, SPRY1, ST8SIA5, STAT2, TUBB2B, HSP90AA1, PNLIPRP2
Negative_8707	CAD, CAT, CKM, IVD, MSN, MVK, ACTG1, ADIPOQ, BMP6, CREB3L3, CSNK2A2, DCTD, DNMT3L, GNAO1, GPD2, IFNA21, IL4R, KIR3DL2, KLRC4, MECR, NAE1, NFATC2, OR1D2, POLE, PPA1, PYCR1, RDH11, TNFSF9
Negative_8708	LEP, SRM, AKT1, ASNS, BMP6, CDH4, CTNND1, ENPP2, FABP1, FADS2, FASN, FLOT1, GATM, GP1BA, GPD2, GSTO1, IFNA5, MGAT4B, MYLK2, OR2A14, PLA2G4A, SETD8, SUFU, TAS2R42, TSHR, VCAM1, PAFAH1B3
Negative_8709	APP, CD2, ATP5D, B3GNT3, BAI1, C5AR1, CDC25C, CDKN2A, CES2, CHRM2, CHST13, DDX41, DPM1, ELK1, EXTL1, FLOT1, HIBADH, HSD17B1, LIPT1, MCM7, NTSR1, OR10Q1, OR5A2, OR5I1, OR5K1, PDE1C, PIK3R4, POLR2H, PPA1, SETMAR, SMURF2, UROD, YWHAH, TNFRSF10B
Negative_8710	CRH, ACOX3, CCL28, CD80, DUSP3, FGF11, GYS2, IAPP, IMPDH1, INPP1, LAMB3, MAN2A1, NKX6-1, OR4K5, SAT1, SPRY4, TAS2R7
Negative_8711	BCAR1, BET1, E2F4, FBXW11, IKBKB, LRP6, MDM4, MMP9, NCF1, NPAS2, OR5M3, PCYT2, PMM2, TGFB1, THBS1, TSC1, ULBP3
Negative_8712	MIF, ARSE, B4GALT2, DNMT3A, FUT6, GPD1, IL11RA, OR4N2, OR8K3, RPIA

Negative_8713	FGG, ADH4, ADIPOR1, ALG10B, ATP4B, BIRC5, BPGM, CACNA1F, CCND3, CLTA, CNGB1, COL5A1, CREB3L4, CYFIP1, DDIT4, DTX2, FGF1, GNA13, GRHRP, IFNA7, KCNQ1, MAPK9, MPZL1, MYH15, OR1K1, OR2D3, OR4C16, OR4D11, OR5T2, P2RX5, PARVA, PTDSS1, RASSF1, RPN2, SESN1, STMN1, TACR1, TAS2R1, TAS2R3, MAPK8IP1, MAPKAPK5, PLA2G12A
Negative_8714	C8A, GP9, GSN, ARHGEF1, ARHGEF2, CACNA1E, CAPN2, CNDP1, COL4A1, CTNNA1, DGAT2L4, EPB41L2, EVI1, GAL3ST1, GDF7, GNA12, GPAA1, GPAM, HEXA, IL15, LEFTY2, NR1D1, OR10H3, OR52R1, OSMR, OXCT2, PLD2, PTGS1, RGS3, STT3B, TAS1R2, TAS2R49, TAS2R50, TGFB2, UAP1, XCL1, PAFAH1B2, PNLIPRP1, TNFRSF11A
Negative_8715	ADO, FH, ARHGAP5, ATP5E, NRXN2, OR3A2, OR6C4, PDCD1, PGK2, RXRA, SRGA, P3, ST3GAL4, TAP1
Negative_8716	DHH, FGA, HGF, IL9, AGPAT1, AGPAT3, ANAPC7, APOA1, CDK2, CHIA, COL4A2, CTLA4, DFFA, DGKG, FGF5, FMO3, FZD9, GALNTL2, GAPDH, GNMT, GUK1, IL12RB1, ITGAM, ITGB6, MYH2, NADSYN1, NOS1, NOX3, OR11A1, OR1A1, OR2B2, OR2D2, OR2L2, OR2L3, OR4D5, OR51S1, OR5V1, PDE1B, POLE3, PPAP2A, PPM1D, PTAFR, RPS6KB1, STX8, SULT1A1, VKORC1, WWP1, PAFAH1B3, ST6GALNA3
Negative_8717	CRK, GNS, ACP5, ACTG1, ASPA, BIRC5, CCNG1, CSF3R, CYP2A7, DAD1, DGAT1, DHRS3, DPYS, DVL3, EPHA8, FABP4, GALNT5, GNA14, GNAS, LTBP1, NQO1, NUNBL, OR10J5, OR10Z1, OR2L2, OR51M1, OR5B3, OR5P2, OR7D2, PDE4A, PDI4, POLR2L, PTGER3, PTPN6, RAC3, RARA, RASSF1, RPIA, SUFU, UROD, ATP6V1G3, MAPK8IP3, TNFRSF13B
Negative_8718	MOS, AVPR1A, DCTN1, NME4, OR2M4, PTTG1
Negative_8719	PDC, CXCL11, FZD5, GRIA2, GRIN2C, GSTM1, GUCY1A2, ISYNA1, ITGB4, MALT1, MAN1B1, MASP1, OR2B6, PGK1, PISD, PLXNB1, PRNP, PTGIS, WARS, TNFRSF10C
Negative_8720	FAH, ACTG1, ANAPC2, ATP5J2, CD72, CD99, CHAD, CYP1A1, EXTL1, GALT, GL01, GNAT3, GNPDA1, HIBADH, INMT, MAP2K3, MYH14, OR4E2, OR5D14, PGAP1, RASGRP1, RPS6KA1, TAP2
Negative_8721	LYN, MVK, ACSM1, B3GALT2, B4GALT5, CACNG6, CD19, CDH1, CHKB, CISH, COL4A6, CYP2C8, ENAH, G6PC2, GGCX, HSP90B1, IL10RA, IL12A, MASP1, MGAT4B, NFATC4, NMNAT1, NOX1, OCRL, OR2AE1, OR56A1, P2RX4, PDE1B, PLA2G2F, PTK2B, RXRA, RXRB, SFRP2, SPHK2, SSH2, STAT1, UGT2B17, WASL, WBSR22, XYLT2, YWHAQ, HLA-DPB1
Negative_8722	RB1, ADRB1, CDC23, EREG, FRAT1, GSK3B, GSTM2, IL12RB1, NAE1, OR4N4, OR5T2, PHKB, PRKCE, ST3GAL5, SULT1A4, HLA-DPA1
Negative_8723	ACVR2B, ALG1, ATP50, BCAR1, CHSY1, GJA1, GRIA2, IFNA6, KLRC2, LTBR, MCEE, NADK, NFKBIB, TCIRG1, UBE2L6
Negative_8724	ADAM17, ASPA, CCR5, GSTO1, UGT2B4
Negative_8725	CFD, ADIPOR1, GPAA1, ITGB5, LEPR, OR11H6, PRICKLE1
Negative_8726	LCK, NNT, NOG, TEC, TXK, ADCY4, AMY2B, B4GALT1, CCR7, COMT, CSNK2A1, CYP2A13, DAPK1, EIF4E, FGF3, IRF7, NFATC4, OR10S1, OR1L1, OR2T33, OR51M1, OR5B3, OSMR, P4HA2, PAK3, POLR3D, PTDSS1, PTGES, SGMS1, STX16, SV2A, WASF2, ZBTB16
Negative_8727	CAT, OSM, ACADVL, AKT3, ALOX5, ARPC5, AVPR1B, CACNA1A, CD74, CHKB, CHST13, CYBB, DUSP14, E2F1, EFN1, EGLN3, FGF10, FMO3, GRHRP, GSTO1, HARS2, HLA-DOB, HLA-DRA, HSPB1, ITGB2, KAT2A, LTBP1, MALT1, MAP3K4, MTHFS, NCF1, NMNAT2, NOTCH2, OR10G4, OR2G3, OR4F6, RFNG, SPTLC2, TPMT, ULBP1, ATP6V1B1
Negative_8728	ALG6, ARG1, CDKN1B, COQ7, GMPR2, GPD1L, HEMK1, IDI1, IFNA17, IL20RA, MAP4K4, MAPK1, OR2T3, OR52D1, PNPO, PRPS2, RPS6KA4, SEPHS1, SETD7, TLR2, TUBA1C, UCP1, MAPKAPK5

Negative_8729	JUP, LSS, ACSL3, ACSS3, AK3L1, ATP5H, B4GALT3, C1QA, CDC14A, CHRNA7, CHST13, CHUK, COL4A1, CSF1, CYFIP1, DIAPH1, DTX3L, DUSP14, EFNA2, EP HA1, EPHA2, GSTO2, IL29, INHBE, ITCH, LDHAL6A, LIMK1, MAN1A1, MAPK12, NANP, NUDT5, OR2F2, PCYT2, PDE10A, PGAP1, PGM3, PIGS, PIGU, PLCD1, PLK1, PRKAR2A, RARS2, SNAI1, SPP1, SSH3, TM7SF2, CACNA2D2, HSD17B10
Negative_8730	CAD, HGF, ARSE, CAV2, CLTA, LRAT, OR2A4, OR8K1, PDGFC, RARS2
Negative_8731	IHH, MYC, ADCY9, ADRA1B, ARPC5, CDKN1C, DDHD1, DNMT1, EDAR, F11R, HBE GF, HSD17B7, MAGI2, MAT2B, MYH15, MYLK3, OR11A1, OR2B11, P2RX4, PFKFB3, PLXNA3, PRKY, SHISA5, SMAD4, STAT2, SULT2B1, TLN1, UPB1, TNFRSF11A
Negative_8732	F3, GNS, ACTA2, ADRA1D, ARRB1, ATP5H, B3GALT2, CTSG, DGKG, EARS2, ENT PD6, ERBB2, FCGR3A, FPGT, GGCX, GJD2, GNPDA2, GPD1, GUK1, HSP90B1, HSPB1, KLKB1, LDHC, LRP5, MAN1C1, OR1J1, OR2T5, OR4X1, PIGF, POLE2, POLR2G, PRKAA2, SMARCA2, TAS2R8, TDO2, TKTL1, TNFRSF4, TNFSF8, TUBB, UGCG, XYLB, EIF4EBP1, SLC25A31, TNFRSF18
Negative_8733	AGTR1, ALDH1L1, B3GAT2, CALML5, CASP6, EGFR, GSTM4, GUCA1C, NANS, NUDT5, PEMT, RAD51, ST8SIA1
Negative_8734	ACO2, BLNK, CD79A, FOXO1, MARS, MNX1, PDE1B, SYNJ1, TNFRSF10A
Negative_8735	F2, ZYX, AHCYL1, ALPI, ARHGEF7, C1QC, CACNB1, CYP3A4, F13B, GNMT, HSD17B2, ICOSLG, IL3RA, MKNK1, NEU4, OR5K1, PPARD, PTPN5, RAP1B, RAPGEF3, RHEB, SLC2A4, WNT11, SUV420H1
Negative_8736	EZR, ACSS1, ACSS2, ACVR2A, BDH1, CD36, CDK2, CLDN15, CTSL1, DDX19A, DERL1, IL4R, IRF3, ITGB7, MAPK8, OR1E1, OR52M1, PEMT, PFN2, PLAUR, PLXNC1, PTGER1, PTGES2, SLC12A2, SERPINF2
Negative_8737	CD55, CHRNA7, CMPK2, COL4A6, CREB1, CYP3A43, CYP8B1, DDX50, DLST, EFNA2, G6PC2, GNAS, IL18RAP, NAGS, NRAS, NUDT5, OR52L1, OR9G1, PLA2G3, PPP2R2D, SMAD2, STX6, TUBA8, TYROBP, HSP90AB1
Negative_8738	CFH, KDR, NPY, ALDH4A1, ARHGEF4, BACE1, COMP, DDX51, IFNA6, IFNGR2, MYH7B, NODAL, OR51E2, OR52A1, OR5F1, PDGFD, PGLS, PPOX, PTPRJ, RFWD2, RHOD, THBD, TMLHE, TRHR, TUBA1A, TUBB2B, UPB1, ATP6V1G3, PLA2G12B, SERPINF2
Negative_8739	GP6, SRC, ALOX12B, ANAPC11, ARPC5, ATP5E, CD247, CD36, CHPT1, CLDN6, DERL1, EFNA2, FMO3, FUT8, GPAM, GUK1, HIBCH, HLA-DMA, ICAM1, IQGAP3, LALBA, LTBP1, MDH1, NARS, NUMB, OR11G2, OR4P4, OR51G2, OR5P3, OR8K5, PANK2, PDE1B, PHPT1, POLE2, PPT1, PRKAR1B, PRKAR2A, SLC25A4, THBS4, ATP6V1E2, ST6GALNAC4
Negative_8740	F10, HK2, BHMT, CCNG1, CLDN7, COASY, CREB5, DDX54, E2F4, GDE1, LAMA3, MEF2C, NOTCH1, NRXN1, OR13G1, OR2M2, OR8I2, PGAM4, PIGB, POLR2C, POLR2G, SYNJ2, UAP1, XIAP
Negative_8741	ACP6, AFMID, AKR1D1, ALOX12B, ARSA, C7orf16, NUMBL, OR10H2, OR4S1, OR56A4, SC5DL, SSX2IP, STX4, WEE1, HLA-DPB1, HSP90AA1
Negative_8742	ADRB3, ATP5C1, CXCR3, CYP19A1, EPRS, GSTO2, OXSM, PPP3CA, PRKCH, SUCLG1, TJP3, WWP2, XYLB
Negative_8743	C8B, PVR, C5AR1, CACNA1G, CACNG4, CAMKK1, CD70, CSF1, DARS2, E2F1, EPHA2, GAMT, GATM, GLYCTK, GNPAT, IFNA14, IL1R1, IL20, IL22RA1, IRS1, KLRC3, KLRD1, MYLK3, NCOA4, NTSR1, OR1A2, OR1F1, OR1L4, OR5C1, OR6C4, ORC1L, P2RX2, PIGV, POLR3G, PPAT, PRKCA, PRKCH, PYCR1, RARS2, RDH5, SDCA4, SELPLG, SEMA4D, SLC2A1, SPRY4, UAP1, VAMP2, VANGL2, ATP6VOD2
Negative_8744	OR5R1, OR8H1, PNPLA3, PPCS, VAV1
Negative_8745	ME2, ALAS2, CHRD, FABP3, GALNT12, PHPT1
Negative_8746	CSH1, CYP2U1, DGAT1, EPHX1, FARSB, FGF17, MMP9, OR10T2, OR6M1, PHKG1, PLCG1, SOAT1, TM7SF2

Negative_8747	ACYP2, ANAPC7, BMP8A, CBR1, CTNNB1, GADD45B, HRH1, IFNAR1, LAMB2, ME TTL2B, MYL9, NOX3, OR2AG2, OR4K14, PGK1, PPOX, PPP1CA, PTPRR, C1GALT 1C1, SERPING1
Negative_8748	BTK, ITK, ACAA2, ACVR1C, ADCY10, ALS2, CACNG4, DTX3, FM01, HCST, INPP L1, JAK3, LDHA, NOTCH3, NT5C1B, OR10G9, PAFAH2, PHKG2, PNPT1, PPP2R2 B, PPP2R5B, PTPN1, RAPGEF4, TLR2, TNFSF4, UAP1, PPARGC1A
Negative_8749	AMPD1, CCR8, CYP7A1, DCTD, EVI1, HCLS1, HSPA2, KRAS, MAPT, MMP2, ODC1 , OR52D1, PIP4K2C, POLE2, PTGDS, SETD7, THBS3, GABARAPL2, PPP1R12A
Negative_8750	HGD, HK2, STS, AADAC, ADCY3, AHCY, ARSE, CD72, CD8B, CDC25B, CDC42, CD K4, COL2A1, CREB3L4, CYP3A43, DHRS3, ENTPD3, FPGT, GAD2, GALNT7, GNA I2, HHIP, HMGCS1, IL10RA, IL15, JAK1, LDHAL6A, MYL9, OR5F1, OR9G4, PI K3R1, PNPT1, PTDSS2, PVRL3, RALA, RELA, STAM, TBL1Y, THY1, UBE2K, UCK L1, UGT2B4, UGT2B7, ATP6V0A1
Negative_8751	ADC, C7, FST, GK2, AADAC, ADAM10, ADORA2B, ALDH9A1, ALG5, CCND1, CLDN 17, COL5A1, DUSP3, ENTPD7, ERBB4, FZD3, ITGB1, LAMB4, MAPK14, MS4A2, NFAT5, OR2F2, OR4N2, OR51A7, RAB23, RPE65, SC5DL, SMC1A, SPCS1, STX2 , SV2C, VAMP1
Negative_8752	ABL2, BPGM, CACNG3, CD247, CD72, CHR1, CLTC, FGF3, IL23R, LPAR1, NADK , OR4A16, OR4F17, POLR2I, RAB23, RPSA, SHC4, SLC25A5, TNFSF4, VEGFC, WARS, MAP3K7IP1, SERPIND1
Negative_8753	FYN, HYI, TFG, ACACA, FGFR4, GCNT4, GRIN2C, LFNG, LRP5, LTC4S, MAPK1, MCEE, MMP9, NT5C3, OR10Q1, OR11H6, OR13H1, OR2B2, OR2H1, OR4C11, OR4 S2, PCCB, RAB5A, SGMS2, TAS2R42, TGFBR2, TPM3, TRAF6, TUBA3E, VAMP4, XCL1, ZMAT3, CACNA2D3
Negative_8754	ATP5D, CACNA1B, CCR7, NT5M, OR6F1, PGAM1
Negative_8755	HK2, ARPC3, NFYB, OR1E1, RPN1
Negative_8756	CS, EDA, SI, AKR1B1, ALDH1A2, CHST13, CNTNAP1, CYP2E1, DGKG, FUT1, FU T8, GALNT1, GALT, GLYCTK, GSTP1, HSPA8, HTR4, IFNAR2, IL11RA, ITGAV, MTMR2, MYLK2, OR4S2, OR52K1, PFKFB2, PIP4K2A, RPS6, SOAT2, YOD1, ATP 6V0A1, ATP6V1C1, HSP90AB1
Negative_8757	ACO2, ADRA1D, APRT, BMP6, CSF2RB, CTNNA3, DDX50, FABP4, GPLD1, HSD3B 2, IL19, IL23R, MTMR2, NT5C1A, OR1L4, OR8K3, PAK6, PLA2G2D, PRKAR2A, SDHC, SEMA4A, ATP6V1C2, SLC25A31, TNFRSF6B
Negative_8758	CAT, AACS, ACSM3, APOA2, CNDP1, CRHR1, CSNK2B, CXCR6, DCXR, GPX5, HMB S, HPSE2, IL13RA2, KAT2A, LIPC, NGEF, NT5C1A, OR13D1, OR6C2, PLA2G2A , POLR1C, PRPS1, PSME3, PYGM, RALBP1, RIPK1, STAT4, TNFSF8, CACNA2D2
Negative_8759	CFD, HK1, AFMID, AGPAT2, ATN1, CCND2, CD14, CYP2F1, FRAP1, GUCY2C, HS PA8, IPPK, ITGAX, MAGI1, MAGI3, MCAT, NOTCH3, OR10AG1, OR1K1, OR6T1, OR9Q2, PDE4C, PIGM, PLK1, POLR2D, PPP1CC, RDH10, SC4MOL, SENP2, SPHK 1, STX2, TAS2R7, SUV420H2
Negative_8760	CS, CDC26, CTBS, DAAM1, GART, IFNG, IGF1R, MAP3K14, OR2L3, OR2T29, OR 52N1, PDHB, PNPLA3, SETD1B, TAS2R50, UGT2A1, WNT3A
Negative_8761	AR, EPO, AASS, AXIN1, CES7, CPOX, CYBA, DDX51, DOT1L, F2RL3, FTH1, FZD 3, IL10RB, IL6ST, KIR2DL2, MGAT4B, NTNG1, ODC1, OR3A1, OR4D11, OR51B 2, OR6C4, PLCB3, PLIN, PPP3CC, SEMA3G, SOD1, SRGAP1, SYNJ1, TALDO1, U GT1A10, WNT5B
Negative_8762	AK7, GNS, HGD, ALG3, ALPP, APOE, ATN1, CCL23, COL5A3, CXCL9, DFFA, DTX 2, FM04, FZD9, GP1BA, GPT2, HRH2, IL2RA, INPP4B, ITPKA, NEGR1, NEU1, N FX1, NRG1, OCRL, OR5H2, OR5R1, PDK1, POLR2D, PORCN, PTPRZ1, PTTG1, RA SGRP2, SOCS3, STX7, VDAC3, WASF2, ZFYVE16, ZNRD1, HLA- DRB5, TNFRSF10B
Negative_8763	COQ7, FM03, GOT2, PRKAB1

Negative_8764	GHR, HPD, MSN, ALDH3B2, AMDHD1, BCAR1, CD74, CHPT1, CYP2S1, ENTPD8, FASN, FGF10, GOT1, GUCY1A2, HEXA, IGFBP3, IL13RA1, IL20RB, IL6R, ITPA, LIPE, MCM3, NOX3, NPAS2, OR10H5, OR2S2, PARVA, PIP5K3, PISD, PLCE1, PLD2, PPAT, RPS6KA5, SOAT1, TPI1, TRMT11, TSLP, ULBP2, UROD, WNT7A
Negative_8765	IL5, ACACB, ALG9, ATP6V1D, AVPR1B, BUB3, CCR2, CLTB, CSF1, CYP19A1, DHRS3, F2RL2, FLT1, FLT3, GOT1, HCST, HNF1A, HSD17B3, HSPA2, IFNA13, IFNAR2, IL1RAP, IQGAP2, KIR3DL2, MAP3K5, MCM5, MGST3, MKNK2, NFE2L2, OR10A4, OR1D5, OR51E1, OR51I1, PAPSS1, PDK1, PLA2G2E, PRKAG1, SARDH, SDHA, SKP1, SSH3, TAS2R50, TLN2, ULK1, UPP2, WASF2, MAPK8IP2
Negative_8766	AMY2A, CCNB1, GALC, GSTA1, NFAT5, PGS1, PIAS3, PTGES, SLC9A1, TAS2R5, TPH2, VAV1
Negative_8767	AMT, FYN, HDC, ACSL1, ADCY8, CACNA1I, CACNG1, CBR3, CDH5, COL5A1, CXCL10, FGF7, FZD8, IKBKG, IL20, IL24, KCNB1, LLGL2, NCR1, OR52N2, OR8H1, P2RX3, POLE, PRKAG1, PPARGC1A
Negative_8768	HAL, ACVRI, DGKQ, ITGAV, OR10H3
Negative_8769	C8A, CTH, EGF, EZR, F9, MUT, NF1, OGT, OTC, AKT1, ASAH1, ATP5J2, CCND2, CLOCK, E2F5, FRAT1, GALNT1, GCNT1, GPAM, GRIA2, GRIN2D, HLA-DMA, HSP90B1, IL11RA, ISYNA1, LDHB, MAT1A, MGAT4A, NLGN1, NNMT, NRP1, OR10K1, OR1J1, OR2B6, PAICS, PDE6D, POLR1D, RPRM, SETD2, SPRED1, ST6GALNAC3
Negative_8770	CD4, SDHB, TNFSF4
Negative_8771	AADAC, GLG1, NANS, NEU4, NPAS2, OR13F1, OR56A3, RBPJ, ST3GAL3
Negative_8772	GLS, VCL, ABL1, CACNG8, CD8A, CDK4, CXCR5, DUSP16, FCGR3A, FGF11, IMPDH1, ITGAL, NCR1, OR10H4, OR4B1, PER1, POLR3H, PRIM2, PTCH1, SHC4, SMAD5, SMURF1, UGCGL2
Negative_8773	LEP, AACs, ASNS, B3GALT4, CACNA1C, COASY, CXCL2, DGKG, DGKZ, E2F5, FGF2, GJA1, GJD2, GLI1, GUSB, H6PD, HTR2B, IPPK, KLKB1, LTA4H, LTB4R2, MAPK10, OR4M2, OR51L1, OR52A1, OR5AK2, OR5B12, OR8S1, OXCT2, PFKL, PLXNA3, POLD3, POLE2, PRSS1, RARS2, RHOQ, RPRM, SDC3, SRGAP3, TP53, TYMS, WNT6, ATP6V0E1, CSGALNACT1, PHOSPHO1
Negative_8774	FES, UBB, ACP2, APPL1, ENTPD8, GRIA3, IL12B, IRF3, KLKB1, NFX1, OGDH, OR5B21, PDGFB, PIP4K2B, SPCS3, ST8SIA1, STAM, TP53, TSC2
Negative_8775	ITK, LIF, RB1, ABI2, ACP2, ADRB1, APAF1, ARPC1B, ATP2A2, CCL28, CDK5, CSF1, DNMT3A, DNMT3L, DVL2, EFNA3, FRAP1, GALNT14, GNPAT1, HTR6, LAMA3, MAML3, MAP3K11, MAPT, MYD88, OR4C13, OR51G2, OR52E2, OR52M1, OR5H6, OR9Q2, PIAS2, PIK3R5, PLCB3, PPM1A, PRKACA, PROC, PSME3, PTK2, RRM2B, SELPLG, STAT2, SV2A, SYNJ1, TFDP1, TUBA8, ATP6V1C2, SERPINE1
Negative_8776	BTC, GUCA1B, NFYB, OR6C76
Negative_8777	CHAT, HLA-DMA, IL20, ITGAX, MMP9, NUDT12, OR4B1, PTGFR, SORD, STX3, STX4, ST6GALNAC5
Negative_8778	FGA, MPI, SP1, ACAT2, ACSL5, ADIPOQ, AGTR1, ARHGEF2, CAV1, CD59, COL2A1, COL5A1, DARS, GADD45G, GALNT2, GRIN2C, IGF1, INHBA, OR51G1, PDE4A, PFN1, PIK3R4, PPAP2C, PVRL2, QARS, SAT2, ST6GAL1, STX8, TGDS, UBA7
Negative_8779	AK2, HDC, ID3, ADCY8, APRT, BMP2, BMP4, CADM3, CXCL3, CYP26A1, GYS1, GZMB, HHIP, IL1R2, NME4, OR4C6, OR8J1, OR8S1, PARD3, PIP5K1A, PNPLA3, PNPO, SEMA3F, SPHK2, ST3GAL2, UGT2B28, PNLIPRP2
Negative_8780	BIRC2, CACNA1D, OR13D1
Negative_8781	CSK, F2R, JUN, NNT, TNN, AGPAT2, AMPD2, APOA2, ARNT, ATP5L, BMPR2, CDH15, CDH4, CLDN10, CSNK1A1, DKK2, EGLN3, EPHA5, GRIN2B, GSTO2, KIR3DL2, MGAT4B, MINPP1, MYLK2, NAT5, NPAS2, OR10A6, OR10AD1, OR2T5, OR4F15, OR4X2, OR8B8, OR8D1, PDE5A, PDE8A, POLR3H, SDC4, SH2D2A, SNAP23, SPRY3, SRGAP3, ST3GAL6, SYNJ1, TYMS

Negative_8782	CYP26A1, GANAB, GRLF1, LIFR, PKLR, PTPN1, RAB5A, UMPS, VEGFC, WWP2, A TP6V1B1
Negative_8783	ACTB, ACTN4, AKR1C2, BCL2, GDF7, IFNA8, IL21R, TAS1R3, ZFYVE16
Negative_8784	AK3, FGG, GHR, PTS, TFG, ACTN1, CACNG1, CAMKK1, CHD8, CHST12, CLDN11, CSDA, CXCR5, CYP4F3, DAPK3, DEGS2, FCGR3B, FMO2, G6PC2, GAD2, GNA14, GTSE1, GZMB, HRH1, HSD11B2, IL21R, IRF9, KIR2DL1, MAN1B1, MAP3K13, M CM3, MTHFD1L, MYH4, NARS, OR10A7, OR4A15, PIK3R4, PPAP2C, RASGRP4, R PS6KA3, SEMA3G, SLC33A1, STAT3, TAS2R16, TBXAS1, THBD, TUBA4A
Negative_8785	ARD1A, ATP5G3, BLVRA, SETMAR, UMPS
Negative_8786	KMO, LCK, LYN, XDH, ADRB2, ADRB3, AHCYL1, ALAS1, ARNT, CDK2, CYP4A22, DAPK3, DCTD, FDFT1, FGF22, FTH1, HADH, HMOX1, HMOX2, HPSE, HSD11B1, H SPA2, IFNG, IL2RB, INADL, OR4F15, OR4L1, PDE1B, PLA2G10, PON1, QPRT, RFNG, RRAS, SPP1, SRGAP2
Negative_8787	CKM, PGF, CCR6, CPOX, DCTN1, EPHB2, EXTL2, FGF20, NEGR1, PYCR1, TP53I 3, TPM3, ULK3, UNC5D
Negative_8788	FGF17, HSD11B2, OR10G2, SH2D1A, THY1, VANGL1
Negative_8789	AK3, DBI, GCK, ACADS, ACO1, ACTN2, AMD1, ANPEP, ATN1, CCL27, CDC20, CL TA, CSNK1A1, CXCL10, DDOST, DIAPH1, EFNB2, FZD6, GGT6, GSTZ1, HSD17B 2, HSD3B2, IDH3G, IL4R, IRAK1, ITGAL, KIR2DL1, MTMR1, OR10K2, OR11A1 , OR2AT4, OR2M2, OR51B6, P4HA2, PAICS, PDE6H, PIK3C2G, PLCG1, PTGFR, RPSA, SCLY, SDC1, UGT8, UPP2, WASF3, WHSC1, WNT8B
Negative_8790	ADH6, CCL21, CTPS, CXCR5, GABARAP, GMPS, HSPA8, MAOB, MGST1, PPP2R1B , PRIM2, RHOA, SUCLG1, TP73, UCK1, XCR1
Negative_8791	AMH, BAX, KIT, TPO, ACADL, ADH6, BST1, CACNG5, CD80, COASY, CUL1, DDX5 4, DNMT3A, EHHADH, EPAS1, EVI1, FGF19, HMOX2, IBSP, IL20, LDHB, LIPE, MAP4K3, MCAT, MECR, NFKBIE, NUDT2, OR10J1, OR1S2, OR2D2, OR4F4, OR4P 4, OR4S2, PCCA, PDHB, PLA2G2E, PLXNB1, PRKG2, SOX17, SPCS1, HLA- DRB5, MAP3K7IP1
Negative_8792	CBS, HGD, ACADVL, CD58, CSNK2A2, ITGA4, TAS2R10
Negative_8793	BTC, CD4, CRK, TNF, AADAC, CARS, CD38, CDKN2B, CTNND1, DHRS9, FCGR2B, FDPS, HIP1, HRH2, IL23A, ITGAV, KLRK1, LARS, NKX3- 1, OR4D11, OR51G1, RDH5, SETD7, TAS1R2, UAP1, YARS, CTNNBIP1, TNFRSF 11A
Negative_8794	ACTC1, ACYP2, AMY2B, ASS1, AXIN1, CAMK2D, CD44, CD55, CDC25B, CHRM3, CLTCL1, CREB3L4, CSNK2A2, CYP1A2, CYP21A2, DGUOK, DTX1, E2F4, EPHA4 , FCGR3B, FGF7, GALNT11, GALNT8, IPMK, MAN1B1, MDM4, MGAT1, NR4A1, OR 1L4, OR5A2, PGAM1, PTAFR, PTGER3, SELPLG, ST3GAL1, STAT5A, SUFU, SV2 B, TAS2R48, TCIRG1, ATP6V0A4
Negative_8795	CBL, CS, F9, ACVR1B, ALDH3A2, CCR6, CDKN1B, CFLAR, CTSB, CXCL5, FARSB , FTH1, GALNTL5, GLO1, GPLD1, GRM5, GSTZ1, HTR6, IFNG, JAK2, LIMK1, LR P6, NCR2, OR13C8, OR4C12, OR51A2, PPM1A, PTPRM, SETDB1, SORBS1, ST8S IA5, WARS, WNT10A, XYL B
Negative_8796	HPD, ACVRL1, ADAM17, AGPAT4, AMD1, AMHR2, ARHGEF6, BAI1, CCL25, CHAD , CHST13, CMPK2, CTSS, DERA, DHCR7, EPB41L1, FTCD, GALNT2, GALNTL2, I QGAP2, ITPK1, LAMC2, MMP9, NFATC2, NKX6- 1, NPR2, NT5C1A, OR51D1, OR52I1, OR7G2, OR8B8, POLD4, PRKAR1B, PRKX, PTGFR, RDH5, SORBS1, SQLE, ULK2, VAV3, WNT5A, YOD1, ZFYVE9
Negative_8797	AK2, ASL, C9, GH1, HGD, LCT, SCD, ACSL4, ADIPOR1, ALDH1A2, CARS2, CCR7 , CDC2, CYP17A1, DHDDS, EPB41L2, FOSL1, FZD2, GALNT11, GAMT, GUCA1B, GUCY1A3, IL15, ITGA2B, JAG2, LALBA, LIMK1, LTA4H, MTMR2, OR2T10, OR5 T3, PIK3C2A, SH2D1A, SLC25A6, UGCGL1
Negative_8798	DDC, ACTG1, ACTN2, AXIN1, CCNA1, CCND3, CLCA4, CMAS, HMOX1, OR4D1, OR 52B4, PRPS2, SOCS1, ST8SIA5, TUBA1C

Negative_8799	GGH, NLK, ACACA, ACPT, ADRBK2, ATP5G2, CCNB3, COL3A1, CYFIP1, DHX58, F13A1, FBP1, GALNT3, GRIN2B, GUCA1C, HAGHL, HSD11B2, IL29, INHBC, ITGA8, ITPA, MAFA, MGAT1, NRXN3, NT5C2, OR52A5, P2RX3, PAK6, PDE1C, POLD3, RAPGEF1, TNFSF10, TUBA4A
Negative_8800	CTH, AARS, BMP2, C5AR1, CNTNAP2, CXCL10, DUSP6, EPB41L1, FZR1, GPLD1, ICOSLG, IL15RA, ITGA1, LARS2, MECR, OR1S2, OR2T33, OR5C1, ORC6L, PIGC, PPP3CC, RASSF1, SPRY1, STMN1, UCK2, TNFRSF10A
Negative_8801	FES, GLS, AGTR1, ARSD, B4GALT7, CCL5, CCR2, CD44, CFTR, CLDN3, CLTB, CNTNAP2, COL1A1, CSF2, DLL1, ENTPD4, EPAS1, EPHB6, GMPR, GRIN1, HYAL2, IDI1, INPP4A, ITGB6, ITPA, LPAR1, LYPLA1, MAML3, OR1G1, OR51E1, OR8K5, OR9G4, PDE4D, PGAP1, PIP5K1B, PPP2R1B, PPP2R2A, RPS6KA3, SRD5A1, STX10, TKTL2, TUBB4, TUBB6, VANGL1, HLA-DRB5
Negative_8802	ACVR1, ARPC4, BACE2, DDIT4, GIT1, HHIP, IRAK1, LAMA4, LDHA, NCAM1, NFYC, TPM3, PPP1R12A
Negative_8803	GP6, TK2, ZYX, C5AR1, COL3A1, COX10, GUCA1A, ITPKA, OR8B8, THTPA, TPK1, MAPK8IP3
Negative_8804	ACY3, FOXA3, FZD7, GALNT13, GNRH2, HCST, ITGAE, NPR2, OR5AU1, TACR2, TBXA2R, UGDH
Negative_8805	NPY, SRF, TK2, ADCY4, BDKRB2, CHUK, CYP2C8, DAPK1, DNMT3A, ENO1, EPHA4, FZD5, GLUD1, IL10RA, IL17RA, IL21, MKNK1, PIK3R5, PIP4K2B, PPARG, PRPS2, RPE65, SETD1B, TGFBR1, THBS3, TSLP, TNFRSF18
Negative_8806	ID4, MAG, AHCYL1, APH1A, CCNB1, CD226, DKK1, MLYCD, OR13F1, OR2T5, PFKFB1, PLA2G4A, TSTA3, ATP6VOD2
Negative_8807	IL8, ACSM2A, ANAPC7, BHMT, C1GALT1, CAPN2, CCR4, CEBPA, CSNK1G2, DAA M1, EDN1, EPHA6, EPHB2, EPHB4, GUCY1B3, IL11RA, L1CAM, MAFA, MAN1A2, MAPK8, MCCC1, MCM5, MDM4, MTAP, NANP, NODAL, OR10A3, OR11G2, OR52K2, OR5AK2, PGM1, PLAU, PLD1, POLD4, POLR2F, PPP1R1A, PTK2B, PYCR1, PYCRL, RASGRP4, SCD5, SPRED2, SV2A, TNFRSF11B
Negative_8808	ATP2A2, DUSP3, FOXA3, IL17RA, SUCLA2
Negative_8809	DHH, FER, ATG3, CYP2C8, LAMB4, MAPT, OR11G2, ORC5L, PDXP, PLA2G2F, ATP6V1G3
Negative_8810	ID1, CACNA1C, CASK, CD274, COQ7, CSF3, CTTN, CYCS, CYP3A43, DAAM2, DL L3, FGF17, FMO3, GNAI2, HMOX2, OLAH, OR51A4, SRGAP3, UGP2, VTI1B
Negative_8811	ACTB, ARNT, CCL2, CRKL, CYBA, ECHS1, EXTL2, GNAI1, GRB2, MYH4, OR13C2, OR13C8, OR51L1, OR52K1, PLXNC1, PRKAA1, RBPJL, RRM2
Negative_8812	ACADVL, ACLY, ADIPOR1, CASP7, CCDC6, CHRDL, COQ3, CSNK2B, CYP2A13, CYP3A5, DHRS3, DLST, HSD17B2, IL1R1, KLRC1, MDM2, MTHFD1, NFATC4, NT5C2, OR10K2, OR9K2, PTDSS1, RPN2, SOCS2, THTPA, XYLT1, ATP6V0A4
Negative_8813	C2, CCR5, DGAT2L4, DHODH, GZMA, KIR2DL3, MAP3K14, OR2V2, OR51B4, POLR2I, TPH2
Negative_8814	CD8B, DGKB, GNG3, GP1BA, GPD1L, HADH, HTRA2, ITPA, LRAT, MAOB, NAMPT, NKD1, OR51B4, OR52E8, OR52J3, PYGM, SDC3, TPI1, VAMP4, PPARGC1A
Negative_8815	DCK, EBP, ADCY6, AMHR2, ARSE, C1GALT1, CALML6, CASP9, CD36, CREB5, CYCS, ENO2, FGF8, GGT6, GLI1, MCCC1, MYH1, OR52D1, OR51I1, PAPSS2, PCCB, PRKAB1, PRKACA, PSME2, RBPJ, SLC27A5, SNAP23, UBE2L3, VKORC1, SERPINA1
Negative_8816	F7, PVR, ACP6, ADRA1D, APRT, ARPC5L, CNTNAP2, CREB3L3, CSH1, CYP3A7, DVL1, EHMT1, ENO3, EVI1, EXTL3, FGF13, FZD3, HEMK1, IL17B, LEPR, MDM2, MGAT3, MTMR2, OR2G6, POLR2F, PTCRA, TAS1R1, WNT9A
Negative_8817	CD55, CDS1, HMOX1, POLR2L, PAFAH1B2
Negative_8818	ME2, AARS, AGRP, AKR1C1, CHPT1, COL4A2, COQ6, EIF4B, GALNT2, GRM1, IDH3G, MCM3, OR10H5, OR5D13, OR51I1, OR7G2, POLD2, PPP3R1, PRKCH, PYGM, RAPGEF3, SMURF1

Negative_8819	ID4, CHIT1, CYP17A1, DGKZ, FSHB, FSHR, GJA1, ITGB5, MAP3K11, MLLT4, OR5M3, PAX8, POLE4, PRKAB2, PTPRF, RAC3, SGMS2, SLC33A1, SNAP25, ST3GAL2, ST8SIA5, SUCLG1, SYNJ2, TNFRSF11A
Negative_8820	AMH, GK, ADCY2, ADRA1B, AGRN, BCAR1, CAMKK1, CDH5, CISH, CYP11B1, DUSP16, FABP1, GALE, MAPK1, MAPT, NAT5, NCK2, NCKAP1, NUDT9, OR51I2, OR52M1, OR9A2, PLXNC1, RFXAP, SOX17, ST3GAL1
Negative_8821	F2R, RFK, TNC, ACOX3, ADAM17, CHST12, DHFR, FASN, FECH, FUT3, GGT7, GNCG3, IFNK, IL29, JAK3, MAPK14, MCM4, OR52E4, OR5H2, OR9G4, PHKB, POLR1C, RARA, RBKS, SV2C, TAS1R3, TAS2R8, WARS, XCL1, ZFYVE9
Negative_8822	CEL, F8, AKR1C4, AMY2A, CLCA2, CYP2B6, MCCC2, PARVA, PNMT, SLC12A2
Negative_8823	ALG9, ALOX12B, FABP4, MPP5, STX1A, UGT2A1, XYLT2
Negative_8824	GSS, IHH, AFMID, ATP6AP1, CCKBR, CDC26, CREB3L2, CSNK1G2, DARS, ECST, EFNA4, ENPP2, EXT2, FBP2, FLOT2, FZD8, GMDS, GNMT, GPD1L, GRM5, GSTA2, GSTK1, HLA-DMA, IL7R, LRRC4C, MAML2, MAOB, MYD88, OR10K2, OR2M3, OR2V2, OR6T1, PPP1R1A, PPP2R1A, PPP3CC, PTTG1, SMARCA5, STAT5B, TRPC1, TUBA1C, WNT1, ZFYVE9, SERPIND1
Negative_8825	B3GNT5, IL2RA, OR6C6
Negative_8826	CSK, NLK, ARNT, ARPC2, ATG7, B4GALT4, BCAR1, CHSY3, EIF4B, EPHX1, ESSL1, FUT4, GNAI3, IRF3, ISYNA1, MCEE, MYD88, NSD1, NTNG1, OR4K5, OXTR, P4HA3, PFN3, PKMYT1, POLR1A, PPP3CB, PSME1, RRM2, SMAD9, TRAF3, WNT1, TNFRSF6B
Negative_8827	DDC, MPL, PDC, AASS, ADAM17, AGMAT, ALDH3B1, C4BPB, CCL8, CDH5, CYP2A7, EFN3, ENPP3, FDFT1, HMGCS2, IL12RB1, IL7R, KDSR, LCMT1, NEFH, OR2D2, OR52E8, OR5L2, RHOA, SESN3, SFRP1, SIAH1, TJP1, WNT9B, MAP3K7IP1
Negative_8828	C8B, OGT, ACP1, ALG6, ASRGL1, ATP6V1A, C1QC, CCND3, CNTNAP2, CREB3L3, CYP11A1, DARS, EPHA2, EXTL2, GSTO1, HAGH, HSD3B2, HSPA1B, IKBKB, IL1RAP, IL8RB, LRP6, MAP3K1, NEFM, OGDH, OR10X1, PGM1, PLCG1, PRKCI, TAS2R5, WNT10B, WNT8B
Negative_8829	ALDH1A3, ALG8, AOX1, CNTF, DDX4, DHCR7, GFPT1, IFNB1, MDM4, OR10AG1, PPAP2B, RALB, TAS2R50
Negative_8830	KDR, SDS, ACP1, ATP2A3, CCL23, CDC25B, CYP2C19, DPYSL2, GDE1, HIBADH, MAPK11, NFASC, NRXN2, OR2AG1, OR2AT4, OR5T3, PRKCD, RDH12, RPN2, SOCS4, STX3, TAS2R38, TLN1
Negative_8831	AKR1A1, C3AR1, CCL24, CXCL6, EDN1, FASN, HHEX, ITGB5, KIR2DL2, LDHAL6A, MAP2K3, OR10J5, OR1A1, OR4K2, PAK3, PIK3C2G, PPP2R2D, SLC12A2, SLC33A1, SULT2A1, TAS2R13
Negative_8832	ACADL, ACADVL, ACSS3, ALG13, APOA1, ATP5F1, C3orf10, CCNE1, COL5A3, CSF2, ERO1L, F2RL1, FMO3, GTSE1, HMGCL, KAT2B, MAP4K4, MFNG, NCF4, NCOR1, OLAH, OR1F1, OR1L1, OR2A42, OR4L1, OR4M2, OR5F1, OR8B12, OR9A4, OXCT2, PDE1A, PIGX, PLA2G3, PTPRB, RAF1, RBL1, SLC27A1, SOS2, TAS2R38, THBD
Negative_8833	ACSM2A, APOA2, CPS1, DHDDS, DPAGT1, GJA1, GRIN2A, HTR7, IL20RA, MTAP, MYH15, NOX1, OR13A1, OR2D2, OR6C2, PNPO, PPP3CA, RBL2, SDC2, SELL, SEMA3G, SFRP1, UGP2
Negative_8834	DDC, CBR1, SPRY3, STX3, TUBA1C, UROC1
Negative_8835	F8, RFK, AACS, ADRB2, CCNG1, CDH2, CHST12, CHUK, DDX50, DUSP9, ENPP3, ETNK1, FARS2, FTCD, GSTM4, MAP2K1, MAP2K4, MCCC1, MYD88, NRCAM, NTSR1, OPLAH, OR4N2, OR52N2, OR56A1, OR8D1, PAX8, PTGER1, RELA, RPRM, ST8SIA1, VAMP2, WNT9A
Negative_8836	ALDOA, BMP2, GALNT11, IQGAP3, LDHD, LTBP1, NANS, NOS1, OR10V1, OR5D14, OR6A2, PARVG, PDXP, PTPRJ, SDHB, SHMT1, STX10, TAS2R16, TNFSF14
Negative_8837	MVD, ITGB8, LLGL2, NME2, OR2D3, OR52B6, WNT8B



Negative_8838	TYR, BIRC3, C4BPB, CDK2, CNGB1, CYP2A13, DIAPH3, HMOX1, HRAS, NCR2, OR1J2, OR6Q1, PLA2G2D, PTEN, TAP2, UPP1
Negative_8839	AGL, APP, DHH, ACOX3, ACTG2, ADCY6, ALDH4A1, ALG9, CAPN2, CASK, CASP7, ENPP3, ENTPD7, EPB41L2, FLT3, GALNT12, GNG13, IFNA14, IL7R, KIR3DL1, MALT1, MAP4K1, MDH1, MYL2, NOTCH2, OR11H4, OR2A14, OR2T3, OXCT2, P, CYT2, PFKFB4, PIP5K1A, PLCB3, PLOD1, PPP2R1B, PSPH, SETD1A, TAP2, TAS2R1, TAS2R40, XIAP, YWHAB, ATP6V1G3, TNFRSF6B
Negative_8840	FAH, IL4, ABLIM2, ACSS2, APAF1, B4GALT2, CAMK2G, CBLC, CHIT1, COL4A6, CXCL11, DGKB, EPHB6, FGF13, FRAP1, IFNB1, IL21R, KCNQ1, LAMB1, LDHC, MDM2, NAE1, NARS2, OR13C9, PIK3CD, PLA2G4A, PLA2G5, PLOD3, POLR2C, PORCN, PRLR, PRODH, SFRP1, STX3, TP53, UBE2L6, WARS, ZMAT3, MAPK8IP2, SERPINB5, SERPINC1
Negative_8841	C3, LHB, MVK, NLK, TNF, ACSM5, ALDH5A1, ALPL, CAMK2G, CD70, CNTNAP1, CREB3, DBF4, DGAT1, EDN1, ENPP1, GPD2, HMGCR, IFNG, ITGB8, KLRC2, MASP2, METTL6, MYH3, NME2, OR10A6, OR1K1, OR2T10, OR4A15, OR51I1, OR9G1, PDK1, PECAM1, PPA2, TACR2, TPH1, UGT1A10, UGT8, WNT6, ATP6V0E1, HSP90AB1
Negative_8842	C2, CR1, CYP2D6, DHDH, FASLG, GLUD2, GNPDA1, IFNA13, MAP2K7, MAP3K3, NOX3, NSD1, OR2B11, OR51D1, OR51S1, OR52A5, PANK1, PDE5A, POLR2E, SLC2A1, SNAI2, VAV2, C1GALT1C1
Negative_8843	B3GALT1, CPT1A, CRY1, CXCR4, FECH, FLOT2, FTCD, HMOX1, KIR3DL1, LAP3, PRKG1, TALD01, VEGFC, PDCD1LG2
Negative_8844	IL4, NPY, AKR1B1, APBB1, BHMT, CACNG2, CAMK2G, CDKN2C, CNDP1, CTTN, CXCL10, CYBB, CYP3A5, DDX55, DLL3, FZD1, GALT, GIT1, HAP1, INMT, LAMA3, LAMA4, LIPA, LYZL1, MAP3K13, METTL6, NEU2, NFATC2, NODAL, OR2A2, OR2B11, OR4K13, OR9G4, PGAP1, PLXNB2, PNPLA4, PRKCG, PYCRL, SARS, SEMA7A, SH2D1B, SLC27A1, SMPD4, TGFB2, VANGL2, HLA-DRB5
Negative_8845	GPT, IL5, IVD, MET, PXN, AADAC, ADCY10, AKR1A1, BCL2L1, CARS, CCL3, CCL5, CLDN1, CSF2RA, CTF1, EPB41L1, FGF14, FLAD1, G6PD, IFNA4, IL13RA1, IL2RG, LAMC1, MAN2A1, MNX1, NFKBIA, OR2A4, POLR2E, POLR2L, PON1, RAPP1B, RGS3, SPRY4, TAS2R49, CACNA2D2
Negative_8846	OGT, AGTR1, GRIN2A, PDCD1
Negative_8847	MIF, PML, AANAT, ABL1, ALG5, ATP2A2, C1QA, CD19, CLCF1, CLDN4, CNTN2, COL4A6, COL5A1, CTTN, FASLG, GLG1, HLA-G, IL12RB2, IRS1, JAK3, MLLT4, MOV10L1, NRXN2, NT5C2, OR10K2, OR1S2, PIGF, PPP1CA, PRSS2, PTPN1, PYCR1, RHEB, RRAS2, SLC27A4, SUCLG1, UCGGL1, VAMP3, WIF1, HLA-DQA2, PDCD1LG2, TNFRSF18
Negative_8848	ACVR1B, ECSIT, GSTA1, GSTA3, JAM3, KIR2DL4, OR10H5, SETDB1, ULK1, ARHGEF12
Negative_8849	DAO, IL3, LAT, TAT, ACTN1, ATP50, BCKDHB, CCL15, CCR10, CCR9, COQ5, CXCL12, CYBB, CYP17A1, DDIT3, DDX18, DTX4, EIF4E, EPHA3, FARS2, FECH, FGF13, FGF4, GSTP1, HEXB, IBSP, IFNA4, IRS4, MAP3K2, MTHFD1, MYH8, NFKB2, OR10K2, OR1F1, OR2T6, OR4Q3, OR5L1, OR7A17, POLR1D, PRKCB, SMAD1, ST3GAL3, STK3, SYNJ1, TGFB1, TM7SF2, UNC5D
Negative_8850	FZR1, OR3A2, OR52N4, OR5A2, OR5J2, PANK1, PTGER1, SREBF1, TNFRSF10A
Negative_8851	CDA, DKK2, MDM4, OR1B1, PMM1, PSME3, RAC2, SLC27A4, SMAD2, TAS2R4, TNFSF10
Negative_8852	HAL, PGD, CMBL, GNA13, GUCA1A, HMGCS2, ITGA7, OR51B6, PARVA, PIK3CA, RXRA, ZBTB16
Negative_8853	JUP, NPL, SRF, ACVRL1, ATP13A2, CTBP1, CYP1A2, CYP2D6, CYP2S1, DAAM2, DNMT3B, DRD1, GNMT, GSTT1, GUCY2D, HSD11B1, INPP1, ITGA7, KITLG, MAML1, MAP3K13, MTHFD1L, NANP, NCR1, NTF3, NTSR1, OR2C1, OR4M2, ORC6L, PARD6G, PDE2A, PFKFB4, PIGO, PLA2G2F, PTDSS2, PTGES, SCIN, SRGAP2, ST3GAL1, STK36, UCK1, SERPINA1, SUV420H2

Negative_8854	AGL, GH2, GNE, SYK, ABLIM1, ACADSB, ARD1A, CCL11, CLDN4, CYBB, DOT1L, EXTL2, GIT1, IFNB1, ITGB3, MAN1C1, MGAT3, MMP2, MTMR2, NEGR1, OR2B2, OR4K13, OR52N4, PAX4, PDGFD, PKLR, PPP3R1, PRKAA2, PTGS1, SHMT1, SOX17, HLA-DRB5
Negative_8855	CS, EGF, FER, ADCY3, ALG1, ALG12, ARSB, BCAT2, BNIP1, CACNB1, CDC42, CDK2, CLDN15, CLTC, CYP2U1, DCXR, DVL3, EHMT2, F2RL1, FDPS, FLOT2, HCS T, IL21R, ITGA4, ITGB2, KIR2DL1, MNX1, NAE1, NAGS, NMNAT3, NPAS2, OR2L2, OR4B1, OR4L1, OR5T3, P2RX1, PHGDH, POLR1A, PPP2R5C, PTPMT1, RUNX1, SPRED2, SULT1A4, TJP1, UBE2L3, XIAP, ATP6V1G2, PAFAH1B1, PNLIPRP2
Negative_8856	EZR, RFK, ASAH1, ATP5A1, B3GALT5, CHRM5, COQ7, GANC, GOSR2, HEMK1, HSP90B1, IL13RA1, ITGAX, MAP3K13, MAPK1, MCM5, MYH2, MYH4, MYH9, PIP4K2C, PPP1R3A, SDC2, SIGLEC1, TAS1R2, TGFB1, TUBB6
Negative_8857	AGK, CFH, DHH, MOS, STS, ADCY6, ADORA2A, ALAS2, ANAPC7, B3GNT5, CDC26, CRY2, ECHS1, EPB41L2, FGF1, FUT6, FZD8, GGPS1, GNB3, GRIN1, HCST, KITLG, LDHAL6B, MFNG, MYLK, OR1G1, OR4A5, OR51E2, OR5B3, OR5T1, OR6F1, OR8D4, PANK3, PDK1, PLA2G6, PLCD3, POLR3K, PPP3CC, SCIN, UGDH, VEGFA, MAPKAPK3
Negative_8858	NPL, ACTB, ACVR1, ARSD, CCNB3, CCR7, CD226, CDK6, CHPF, CLDN18, COQ6, CTBP2, CYP1A2, EFNA3, EXT2, F2RL3, FGF9, FZD2, GPX7, GSTT1, GUCA1A, HEXA, IFNG, IL13RA2, IL24, OR2H2, OR2T2, OR6C1, PDIA4, POLD1, PPAT, RPSA, SFRP2, SH3BP2, SMPD3, TAS2R38, TYMP, UGT2B17, WNT6, ATP6V1G2, TNFRSF6B
Negative_8859	MAG, CACNG8, CEBPA, FABP3, FMO1, GLG1, GNAO1, GSTA3, HSPA2, LLGL1, MKNK1, NAMPT, NT5C1A, NTN1, OR1L4, OR52R1, OR8J1, POLR2J, STX12, SULT1E1, TRDMT1, XYLT1, YES1
Negative_8860	HK2, ITK, LIF, ADRBK2, ATP5H, BDH1, CBLB, CDH3, DDX51, DLL4, FECH, FMO5, HTR4, IRF3, LARS, MGAT4B, MMP14, MYH13, NEUROD1, RALGDS, RARS, RND1, ROBO1, RPN1, STAT4, STK4, SUCLG2, TLN1, TYRP1, WNT9B, CSGALNACT2
Negative_8861	RDX, AARS, Bmpr2, DCXR, DDX51, GNAI3, GPX5, INPP4B, MDH2, MICA, ONECUT1, OR4B1, OR7D4, POLR1A, RETSAT, SEMA4B
Negative_8862	C6, F7, ALG10, CLDN2, DDX4, INPP5A
Negative_8863	GAA, ATP5I, ATP6V0B, CD8A, CSF3R, CYP26C1, DDIT4, DKK4, FMO1, HLA-DOB, MAD1L1, PPAP2C, PPP3CC, SC4MOL
Negative_8864	ID3, DDX23, ENTPD7
Negative_8865	GGH, ACADL, ATP5H, CDC25A, EPHB1, GALNT14, GPT2, IPMK, OR14A16, OR4D6, OR56B4, OXCT1, PANK2, PDE8A, PDGFRA, PIP5K1C, PNLIP, RAC1, TIRAP
Negative_8866	SCD, ARPC5L, ENO3, GALNT2, GALNTL1, GFPT1, GMPPA, OR2M5, P4HA3, PIK3C3, RAP1B, SC4MOL
Negative_8867	MPI, ACYP2, AGMAT, CCL11, CYP3A7, FGF9, IL22, LMO7, NCOR2, OR6Q1, PIK3R5, PKLR, PTPRB, RARA, SUCLG1
Negative_8868	CRK, BCKDHB, CREB3L4, GPLD1, GUCY1A3, HSP90B1, MAPK9, NEU4, NRAS, WWP1
Negative_8869	ID3, SPN, AADAT, ADRB1, ANAPC1, APH1A, AXIN2, B3GALT1, BPGM, CANT1, CD01, CHEK1, CLDN9, CNTF, CSDA, CXCL12, DERL1, DGKI, FGFR1, GAD1, HEMK1, IFNA7, IFNA8, IL10RA, IL5RA, INHBC, JUND, LDHA, LTA4H, MAP2K6, MAP3K3, MCCC1, MIOX, NFATC1, NOX3, NT5C1B, OR1D5, OR2T3, OR8D2, PDGFC, PIK3R5, PLA2G10, PRKAR1A, SMAD7, SNW1, THBD, WNT3A, TNFRSF10C
Negative_8870	GH2, IL2, TNN, ACP2, ALDH2, ALDH3B2, ANAPC11, APPL1, ATF2, BCAR1, BET1L, BNIP1, CACNB1, CCL17, CDKN1C, CISH, CNTN2, CTPS, DARS2, ENAH, EVI1, FCGR3A, HIBCH, KCNQ1, KLRD1, LPAR1, NFX1, NTRK2, OR13F1, OR1A2, OR51Q1, OR6B3, PCCB, PDHA1, PDPK1, PRKCD, PVRL1, QPRT, SORD, SULT1A1, VDAC1

Negative_8871	DCT, GDA, ME2, ACOT11, ALPI, AMPD2, ARHGEF7, ARRB2, CCL23, CLDN4, CNGA4, DLST, F11R, FOXO3, FPGT, FZD8, GNAT3, GSTM3, HTR5A, IL3RA, KARS, M CAT, OR13D1, OR4S1, OR51S1, OR5AN1, OR5M9, OR5T3, OXCT1, PLXNB2, POL R1E, PPP2R1B, PRKG2, PVRL3, SARS, SLC25A5, SNAI2, UGT2B11, C1GALT1C 1
Negative_8872	DDC, MVD, PML, ALG9, CCL2, CCND3, CNTNAP2, CSNK1E, EXT2, FASN, FGF20, IRS1, ITGAE, MIOX, NFKBIA, NPR2, OR10T2, OR13C4, OR14J1, OR1K1, OR51 G2, PAPSS2, PCCB, PI4KB, PLA2G3, PRIM1, PTPRB, RND1, STX1B, TSTA3, WN T2B, ATP6V1E1
Negative_8873	DEGS1, IFNA8, SKP2
Negative_8874	FGB, BLVRB, CXCL5, CYBA, CYP2C9, HGSNAT, MYLK2, NME4, NPAS2, OR5H6, P OLR3H, PRKACA, SMAD1, SUFU, THBD, TPH1, UGP2, TNFRSF10A
Negative_8875	DCK, LSS, ACACB, CCND3, CDC25C, CYP2A13, DARS2, DCXR, DDX55, ETNK1, G ARS, LIAS, LYPLA1, MINPP1, NRAS, OR10A7, OR5V1, P2RX2, PLIN, PYCRL, S MAD4, SOCS1, WBSR17
Negative_8876	AK1, MVK, PVR, ACOT11, ALAS2, APOC3, ARHGEF4, ARRB2, ARSD, AXIN1, CCN A1, CHRM3, CSF2RB, DKK4, ENO1, FOSL1, GGPS1, HMBS, HRH2, IL28RA, IQGA P2, LRP5, LTBP1, MAOB, MTFMT, NFAT5, NFKB2, OR1L3, OR4A5, OR4K14, PAK 3, PDE7B, PIP5K1A, PORCN, PSEN2, PSME1, PTGS1, ST3GAL6, TMLHE, UPRT, VAV2, ZIC2, HLA-DRB4, MAPK8IP2, SERPINF2
Negative_8877	ZYX, CARS, LAP3, OR1A2, PDXP, PLA2G1B, WNT16, ATP6V1E1, TNFRSF12A
Negative_8878	C4B, LIF, ATP5E, CD247, IFNA13, MAD2L2, NUDT9, RAPGEF1, SEMA4B, HLA- DRB3
Negative_8879	BAD, RFK, ASAH1, ATP50, DKK1, DUSP7, ENPP7, FGF13, GLB1, IL25, LDHA, M GST2, NRG1, OR12D3, PTGER1, PTPN1, TGDS, TUBB2C, TNFRSF14
Negative_8880	PGF, ASAH1, DAPK3, IGSF5, PYGM, TRHR
Negative_8881	C2, ILK, A4GALT, BCL10, C1QC, CD22, CLDN15, CRKL, CXCR4, DGKI, E2F1, E PAS1, FADS2, GNPDA2, ICAM3, MYH8, OR13A1, OR4B1, OR4N4, OR8G1, OR8I2 , P2RX5, PLXNA3, POLR2E, PPBP, RAP1B, RFXANK, RPIA, SOX17, TAS2R40, U AP1, UROS
Negative_8882	ME1, UBC, ACTN4, ASMT, BCKDHB, BCL2L1, COL2A1, COMT, CYP2C9, FUT5, HC ST, HRH1, IL10, MAOA, MAP2K7, NCKAP1, OR10K1, OR1J4, OR2T34, OR51A2, OR5D16, OR6N1, PLCG2, POLR1B, RBPJL, SLC27A5, SMURF1, TAS1R2, B3GAL NT1, ST6GALNAC3
Negative_8883	EGF, FAS, GP5, LCT, SRF, ALG10, ALOX12B, ATG12, CACNA1I, CD19, CD274, CDC6, CYSLTR1, DDX41, ERBB3, ERBB4, GAPDH, GRIN2B, HCST, HMOX1, HPSE 2, IDH3B, IFT57, IRAK1, ITGB1, KLRK1, MDM4, MS4A2, NME6, OR1N1, OR5V1 , ORC5L, PCYT1A, PDE3A, PDE4A, PIK3C2G, PIK3R3, PLAUR, POLR2J, PRIM1 , PRODH, RBPJL, SGMS1, SMPD2, TLN1, TPI1, TPK1, WASL
Negative_8884	FH, ARPC1B, CCND1, DNMT3B, FGF14, FUT4, GADD45G, HAO2, LIMK2, NADK, N KX3-1, OR13C9, PNPT1, PTGES2, SELL, SV2B, TYMP, SERPINA1
Negative_8885	ALDH1A2, BLNK, EFNA3, EPB41, GALNT2, WNT4, YWHAB, ZNRD1, TNFRSF10B
Negative_8886	SMS, CDH1, FMO4, FOSL1, GAD2, MAP4K3, NAT1, NT5C2, OR1K1, OR51I1, PAR D6A, PRDX6, PTDSS1, PTGS2, RPS6KA4, SEMA3E, SNAI1, TYMS, UGT2B10, UR OD, YWHAG
Negative_8887	JUP, AARS2, ACP2, ALDH6A1, BCKDHB, BMP6, CDC27, DERA, FECH, NAMPT, NO TCH3, NT5C2, OR13C2, OR6N1, OR8D1, PDCD1, PDHB, PIGA, PTCH2, RFX5, RP S6KB1, TMLHE, UROS, ZFYVE9, PPP1R12A
Negative_8888	ACAA1, CCR9, CDKN2A, CHST12, FGFR1, IFNA14, IRAK4, KIR2DS4, NADK, NE U2, OR4D11, OR6C76, PFKFB3, PFKL, POLA1, PRKACA, RDH8, SELE, STX7, TA S2R49, TPM3, TRPC1, UBE2K, UPRT
Negative_8889	CISH, EFN3, FGF4, FMO4, GFPT2, GRIN1, GSTT1, IL13, IL20RA, IL23R, IT GAM, MAP3K3, OR1E2, SARS, TNFSF12, WBSR22

Negative_8890	C8B, GGH, LEP, ADCY4, ALAS2, AMY2A, ANAPC11, CD59, CD8A, CDC27, CLDN10, EHMT1, FADD, IDH3B, IL10RB, IL28A, IL5RA, NLGN3, NNMT, OR10A2, OR2A5, OR4C16, OR4D11, OR6Y1, OR7D4, PAPSS2, PFKFB3, RALBP1, SGMS1, SLC33A1, UCK2, UPP1
Negative_8891	CTH, ACVR2A, ALG5, B4GALT1, CARS2, FUT8, MTHFD1, MYLK2, SETDB1, SLC25A4, STX18
Negative_8892	DDO, SRF, VTN, ACP6, ACPP, APOE, ARNT, CACNA1H, CHIA, CSNK2A2, DKK1, EPHA3, FECH, GLUD2, MAP3K1, MDM4, PRKCE, PRPS2, PYCR1, SELE, TGFA, TXNDC12, WNT7B
Negative_8893	ADH6, DHFR, IDH1, IL15, MAFA, OR13C2, OR2L8, OR51T1, PHKA1, RAC2
Negative_8894	CTH, DCT, ALOX12, CASP10, CLDN6, DDIT4, GUSB, LDHAL6B, LIPF, NPAS2, OR14A16, OR1E1, OR56A4, OR6N2, RASA2, RDH11, SFRP5, SUV39H1, TRAF4, UBE2L3, SERPINC1
Negative_8895	AMH, CKB, FH, NPY, STS, ABAT, ACY1, ADH1B, ANPEP, CLDN1, CYP8B1, NANP, NRP1, OR10G8, OR2A2, OR5B12, PAPSS1, PDE8B, PIGV, SYNJ2, TACR2, TUBB1, WNT4, TNFRSF13C
Negative_8896	EBP, KDR, SRM, ABL2, AKT1, BCL10, CCL16, CCL28, CCNA2, CHIT1, CLTB, CREB3L2, CSDA, E2F4, FLT3, GPD1L, HEXA, MGST1, OR10T2, PIGM, RASGRP2, ROBO2, TICAM1, VANGL2, PLA2G12A
Negative_8897	ACADS, CD3E, CREB3L2, DKK4, HYAL1, OR4C16, PDHB, TPK1, UGT2B11, CSNK1A1L
Negative_8898	FES, ADSSL1, AMDHD2, ANAPC1, AOC3, AQP7, ATP5L, BLNK, BST1, CASP8, CCR10, CD8A, CDS2, CPS1, CYP3A7, DGKQ, EFNA1, EFNB2, HSP90B1, INPP1, ITGB2, KRAS, LRP5, MDM2, NCK1, NLGN2, NPR1, NUDT8, OR1L4, OR5J2, ORC4L, PFKFB3, PFKL, POLR3B, PRKCA, PTPN7, SOD1, SUFU, TAP1, TAS1R1, TAS2R1, WEE1, WNT11, B3GALNT1
Negative_8899	MIF, PML, ALAS2, ALDH1A3, ASS1, BDH1, BMPR1B, C1GALT1, CD99, CYSLTR2, DEGS2, EFNA2, GCH1, GRM5, GSTM1, ITGB5, LCP2, MAGI2, MAOA, MAP2K3, MLLT4, MTMR1, OR10G4, OR2G2, OR4C11, OR7A17, OR9A4, P2RX3, PRKACG, PRKCI, RUVBL1, SDC1, SEMA3G, SETD2, STAT4, SUV39H2, TAS2R38, TLN2, TUBB4, VARS
Negative_8900	ACMSD, AGRP, AMPD2, ATP5J2, BST1, CCL26, CNDP1, GALNT11, HLCS, IFNA4, IFNA6, IL12A, OR52L1, OR9G4, OXCT2, PKLR, PRKCZ, PRLR, TGFB1, TGFB3, CSNK1A1L, TNFRSF10C
Negative_8901	ARG2, CBR1, CCNB1, ENTPD8, HTR7, IFNA4, IL18RAP, MTHFS, NAGA, NRXN2, OR1D2, OR4C13, OR8G1, PCCB, PDE3B, PPP2R5C, TDO2, UGDH, SERPINE1
Negative_8902	AUH, HK3, KIT, RB1, APRT, CD244, CD44, CLDN20, COQ6, CYP1B1, CYP2U1, GUCA1A, LAMC1, LIPE, MAP2K5, OR52D1, OR7G1, PRKAG3, TICAM1
Negative_8903	BTK, CAT, STS, AKR1C2, ALPL, ATP5D, BDH1, CACNA1A, CD8A, CHSY1, CSNK1A1, DDX51, F2RL3, FGD3, FLT1, GNPDA2, GRIA1, IL12B, IL22RA2, JAM2, LILRB3, MAPK7, NRG4, NT5E, NTF3, OR10C1, OR13C8, OR1S2, OR56B4, PARD3, PDE6H, PLCG1, PLIN, PPP1CB, ROBO3, SAT1, SLC25A4, TSHB, TUBB3, ULBP3, CACNA2D2, GABARAPL1
Negative_8904	GH1, PVR, RET, ADH1A, AMPD2, ATP5G1, CCL5, CCNA1, CCR5, CDC16, COQ7, CSF2RB, DGKQ, FGF1, GALNS, GALNTL4, GCNT3, GNPAT, GSTM1, MAPK3, MASP1, OR1J1, OR2T34, OR51V1, OR6M1, OR8B4, PFKM, RPS6KB2, TLN2, TLR3, UGT2B10, HLA-DQB1
Negative_8905	C2, DLD, FAH, ABLIM1, ACAT1, ARHGEF2, CTSL1, CYP4A11, DDX4, EPHX1, FLT4, GBT1, HCLS1, IL23R, IL2RG, INHBA, JAK1, MAP2K2, MAP3K8, NEUROG3, OR2F1, OR2M5, OR51S1, PIK3C2G, PLTP, POLR2G, PPP2CB, PRKAG2, PTK2, SSH1, WNT2B
Negative_8906	AMH, GAA, GDA, AACS, ACSM3, ARRB2, COL11A1, CX3CL1, CYP4A22, FPGT, ICAM3, KARS, MAP3K6, MAT1A, OR13A1, PARS2, PLCB2, SCP2, SIPA1, UGCGL2, WWP1, ATP6V0D1

Negative_8907	ACADL, AKR1C2, AMDHD1, C3orf10, CACNA1E, CBR3, HADHB, HNF4A, HTR7, JAG1, LARS2, MASP1, OR10G3, OR4F17, PAK7, PIGP, PIGU, PIK3R5, PPID, PVRL4, SEMA4G, TAS2R48, WARS2, WNT1, SERPINC1
Negative_8908	SRM, SYK, AACS, ACVR1, ACY3, ADSS, ALDH1A1, B4GALT6, BST1, CDC23, CHKA, CLDN8, CREB3, CREB3L4, CTSL1, DPM1, ENTPD8, EPOR, ETNK2, GSTO1, HDAC2, ITGA2B, LCP2, MAD2L1, MECR, NAE1, NEGR1, NKX6-1, NR1H3, NUDT8, OR13C8, OR1F1, OR51E2, OR5H6, OR8J3, OXTR, P2RX6, PLD2, RALBP1, RPS6KB2, SV2B, TUBA1A, UGT2B28, MAPK8IP2, SLC25A31
Negative_8909	C3, ILK, MSN, SRF, ACTN2, BHMT, BUB1, C5AR1, COX15, CXCL10, CXCL9, EDNRB, G6PC, GABARAP, GALNT3, GNAI3, IFNGR1, KIR3DL1, LIMK2, NRP1, NSD1, PDX1, POLR3G, PON1, PRPS1, RAF1, RPS6KB1, SLC2A2, SOAT2, TAS2R38, TKT2, UROD, HLA-DRB4, MAPK8IP3
Negative_8910	HGD, MPL, TXK, AANAT, AOX1, ARSD, ATF4, C4BPA, CCNE2, CHDH, CYP2C8, DDX19A, DKK2, E2F2, EXTL2, FGF20, GAD1, GGT7, GOSR2, ITGB7, NFATC4, NTSR1, OR14C36, OR2H2, OR2T5, OR4Q3, OR52E4, PDGFRB, PRKAA1, RASGRF1, RFXAP, SEMA4A, SPCS1, TAS2R49, TPH2, TRAF2, XCL1
Negative_8911	GCK, ACAT2, ADIPOQ, CD01, CLDN16, CNTFR, DAAM2, DPM1, EIF4E, EPHA5, FGD3, FOXO1, GLUD1, GNAI3, HTRA2, LHCGR, NMNAT2, OR51V1, OR52I2, OR5A1, OR6K6, OR7G3, PDE11A, PHKA1, SLC27A4, TNFRSF11B
Negative_8912	CS, FOS, CDKN1B, CMPK1, GALNT10, HPSE, ISYNA1, MGAM, MMP9, OR14C36, OR2B6, OR4K15, OR5AK2, PAPS2, PCNA, PRKCG, RHOA, RXRG, ATP6V0A2
Negative_8913	NNT, ACSL3, BAAT, C1QC, CD8A, COQ6, COX15, CSNK2B, CXCL13, CYP19A1, DKK2, ENTPD8, FGF6, GSTT1, IL10RB, ITGB3, MLLT4, MPP5, NANS, NCKAP1L, NOTCH2, PCK2, PDCD1, PSPH, SEMA3C, TRAF4
Negative_8914	A2M, ADA, CFH, F9, SP1, ACADM, ACSS2, ADRA1D, B4GALT3, BMP5, BMP6, BMPR1A, CASP9, CCR4, CCR5, CFL2, CHD8, CRHR1, DNMT3A, FADS2, FCGR2B, FIGF, FLT1, FLT3LG, GSTK1, IDH1, IL13RA2, IMPA1, LLGL1, MYH6, OR4F17, OR51V1, OR6X1, OR8H3, OR8U1, PHKG1, PVRL1, PYCR2, RALB, RPS6KA1, RPSA, SMAD4, STMN1, TICAM2, TYK2
Negative_8915	ABO, BAX, CFH, FGB, ME1, MPI, ADH1B, C4BPA, CCNE2, CD38, CISH, CLTCL1, EPHA5, EVI1, EXOC7, GALNT3, HCST, HGSNAT, KRAS, MDM4, MITF, MYL7, NAMP1, NANS, NKX2-2, OGDHL, OR5AN1, OR7C1, P2RX2, PANK1, PDE4A, PER2, PGAM4, PIAS4, PITX2, RARS2, SMURF1, SPHK1, SPI1, TSNARE1, TUBB3, UCK2, WASF2
Negative_8916	NPL, PML, ACOX2, ACSM3, AOC2, CCR2, FM01, GNPAT1, GUK1, IDH3G, IL2RA, ISYNA1, OR2Z1, OR4K2, PDE4A, PDE6D, PPP2R5A, PTGES2, PTGS2, PYCR2, RRAS, SGPP1, SHC4, SUOX, TAS2R42, VAMP2
Negative_8917	GGH, CXCL12, FM02, GFAP, HSD17B8, NCF4, NOTCH1, OR11H4, OR2AG2, OR4D6, OR5L2, PLA2G6, PLCB2, SULT2B1
Negative_8918	ACY1, CHPF, CTF1, ITGA6, NT5C1A, TNFSF11
Negative_8919	BID, C8G, ACLY, AQP7, CDK2, CSNK2A1, CXCL12, DHX58, FGF7, HHIP, KLK3, OR51T1, RUVBL1, SULT1E1
Negative_8920	AGL, ATM, FAH, KHK, LCT, A4GALT, ADSL, AKT3, CCL3, CTSG, CXCR5, CYFIP1, CYP26B1, DHRS4L2, HIF1A, KRAS, LTBP1, MTHFD2, OR4D9, OR51V1, PAK6, PGAM2, PPAP2B, PRKAA1, TICAM2
Negative_8921	ACVR2B, AKT1, ARPC3, BMP8B, CACNA1S, CD47, CPT1B, EFNA2, FIGF, GNB1, IDH2, LDHAL6B, NFKB1B, OR2T12, OR4K1, PSEN1, ZAP70
Negative_8922	RET, SRF, ACAD9, ATP2A3, BAI1, CD46, DUSP9, EPHA3, FABP1, HTR4, LDHC, NME7, OR6C76, PGAM2, SULT1A2, UCP1
Negative_8923	ADH5, PLCD4, TRAF2
Negative_8924	OSM, SPN, AANAT, ACMSD, BMPR1A, BUB1B, CAMKK1, CHIA, DARS2, ENTPD2, FCGR3B, FRAT1, HAGH, HIBADH, IKBKE, LAMA3, MAP3K13, NFATC3, NKX2-2, OR10A6, OR2C3, PCYT1A, PPP2R2B, PTGIS, SMARCA5, SPHK1, TNFRSF4, TUBA8, VDAC1, VNN1, PAFAH1B1, SERPINA5

Negative_8925	CBS, LPO, AADAC, ACOX1, ACSS3, ADCY1, ASAH1, ASMT, CADM3, CDC2, CLTCL1, ENTPD4, FGD3, FGF8, FZD7, GNRH2, HIBCH, ITPK1, KYNU, MLYCD, MYL5, OR2Y1, OR2Z1, OR5AR1, OR8I2, PARD6A, PGAM1, PIK3CB, PLCB4, POLR2D, SDHC, ST3GAL2, STEAP3, MAPKAPK2
Negative_8926	ANPEP, BACE1, EARS2, HTR2B, OR51A2, PLCD4, PRKAB1, TGFB2, PHOSPHO1
Negative_8927	ACSM5, ALPPL2, G6PD, OR10A6, OR2Z1
Negative_8928	C7, CBL, DCT, MPZ, ABAT, ABL2, ALDH1A1, ALOX12, ARD1A, CSNK1G3, CXCR4, ENPP1, IDI2, LRP5, NMNAT1, OR1Q1, OR4C12, OR4F4, OR5AC2, OR8H2, PCK1, RND1, SDC4, SMPD1, SPCS3, STK3, ATP6V0D1, ST6GALNAC1
Negative_8929	GCK, ACTN1, ADRBK2, AKR1C1, ALDH9A1, ARHGEF2, CDC14B, CHPT1, COX15, CRB3, CTBP2, CXCL9, ENTPD3, FABP4, FECH, FGF10, FZD10, GALNTL1, GPA1, GZMA, IRF7, KIR2DL3, MGST2, NLGN2, OR10G2, OR52I2, OR52K2, OR9Q1, PGAM2, PIP5K1C, PLAUR, PLCB2, PNLIP, POLR3B, POLR3K, PPAP2A, PPM1A, PPM1D, RALGDS, RFX5, SC4MOL, SEMA3D, SOCS3, ULBP1, CTNNBIP1
Negative_8930	ADC, CBL, CSK, GSS, ARHGEF2, ATG12, ATP5L, B3GALT1, BDH1, BLNK, CACNG5, CASP10, CCKBR, CD55, CHKB, CHRM5, COQ3, DDX19A, DGKA, DKK4, DUSP1, FGF8, GALNTL2, IL21, KIR2DS4, MAN1A1, MEF2C, MYH13, MYH8, NME7, NOD1, NUDT5, OR10J3, OR2F2, OR51B6, OR5B17, OR5B21, P4HA3, PLA2G1B, PLD2, PON2, RHOQ, SUFU, TFPI, TNFRSF4, TUBA1A, UGT2B28, MAPKAPK5
Negative_8931	FES, PGP, ACLY, ALAD, CACNA1G, GCAT, NFE2L2, OLR1, OR4K15, OR4M1, P2RX5, PANK1, PIK3R2, RXRA
Negative_8932	AR, ASL, DBI, DCC, F9, AASS, ACVR1C, ARHGEF7, ARSD, ASAH1, ATP6V1F, B4GALT3, BACE1, BMP5, CLDN9, CYP26A1, CYP2A6, DDX55, DTX1, ENPP1, FCGR2B, GLI1, HA01, IL11RA, IL20RB, IMPDH2, KIR2DL2, KIR3DL1, LDHAL6B, LILRB3, MAP3K11, NOS1, OR1S1, OR2D3, OR52A1, OR52E2, OR7G3, ORC6L, PER3, POLR1A, PRPS2, RUVBL1, SETD7, TXNDC12, PPARGC1A
Negative_8933	ASL, SRC, AASS, ABL1, ACTA1, ACVRL1, ALG12, AMDHD2, BPGM, BST1, CLDN14, DGKD, DGKH, EPHX1, FABP1, FBP2, GLG1, IDH1, KAT2A, OR2T29, OR51I1, OR5K2, OR5L2, OR5V1, OR9A2, PFKM, STAT1, TFD1, TOMM40L, TRAF6, TUBA1C, TYRP1, VANGL2, ARHGEF12, ATP6V1C2
Negative_8934	AGXT2, ALDH1L1, ARPC2, ARPC5L, ATP5G3, CD58, CHKA, CSNK2A2, DDX4, FUT6, GNA11, HMGCS2, IFNG, ITGA1, MAP3K8, NCF2, NMNAT3, NT5C1B, OLR1, OR11H4, OR51B2, OR7A5, PLA2G2A, POLR2C, PRKCZ, PRPH, SESN1, SOS1, STAT5A, UCK2, PRICKLE2
Negative_8935	ADRB3, ALDH3B2, ALG2, ALPP, ATP2A2, ATP5J2, B3GAT2, CANT1, CHKA, CHRNA7, CRY1, EPOR, GNPDA1, GSTM5, HEMK1, HSD17B7, IL17B, IL18RAP, IRAK4, LDHAL6A, LYPLA2, MCCC1, MYLK3, OR4F5, OR4K1, OR51B6, OR52I1, OR6A2, PIGA, PMM1, PNLIP, PSENE1, SC4MOL, SMAD2, TPMT, UCK2, WNT10A
Negative_8936	GNE, AACS, ACSL4, ACTN4, MAPT, NFKB1B, NNMT, NT5C2, OR2L8, OR51G2, PP3R1, RPN2, SPRY4, TSC2, YKT6, YWHAH, GABARAPL1
Negative_8937	B4GALT3, BIRC5, CCR2, CHRM5, DUSP6, GNG3, GRLF1, OR1N2, OR4S2, PAK2, POLR1C, SCIN, UBA7
Negative_8938	FGB, FN1, PLN, AASDH, CHPT1, CMBL, CNDP1, CTNNA3, CYP2S1, ECHS1, FZD3, HCST, HMGCL, IGF1, INPP1, LAMB1, MCAT, MYH7, OR2G2, OR5M9, OR7G3, PCYT1A, PDE8A, PGM2, POLR2B, RAPGEF2, SPTLC1, TM7SF2, UGT2A1, USE1
Negative_8939	GNE, HAL, RB1, SRM, ACVRL1, ADCY6, ADH1A, ASNS, CACNA1S, CYP2C8, DAPK3, EPHB4, EXTL1, GLI3, LEF1, MAP4K3, MGAT5B, MYL9, NCR2, OR51A2, OR9K2, PANK1, PCYT2, PHKG2, PIK3R4, PIK3R5, PPP2R2C, RPS6KA4, TAS2R16, TLR2, VDAC3, CTNNBIP1
Negative_8940	C9, ILK, ATP13A2, CSH1, DGKE, DHRS4, LIPE, MAPK12, OR1J4, OR6A2, PARD6B, TCF7

Negative_8941	AK7, GLS, GSN, SRF, ACTC1, ADCY1, ADRB1, ASNS, ATG3, B3GALT4, BUB1B, CDK6, CPS1, CREB3, CTLA4, CYP2C18, F11R, FSHR, GARS, GCLM, GLUD1, MTAP, NKD1, OR2AG2, OR2C1, OR51B6, OR51E2, OR5B21, OR6A2, PNMT, POLR1A, SARS, SETD7, SHC2, TLR5, WBSCR17, HLA-DRB4, MAPK8IP2, ST6GALNAC5
Negative_8942	AR, FES, TPR, ALOX15B, BCL2L1, CCR6, CDH5, CTPS2, CYP2J2, DLAT, EPAS1, ESAM, FGFR2, ISYNA1, LAMC3, LEPR, MAGI2, MYH13, OR10G7, OR2T5, OR4D11, OR51B4, OR9I1, PAICS, PIK3C2B, PLIN, PTGS2, RHOA, SETD7, SULT1A4, TCF7, TJP1, ST6GALNAC5
Negative_8943	SP1, CD8A, CRHR1, RALA, SLC27A1, HLA-DRB4
Negative_8944	AFMID, ALDH2, C7orf16, CCNB3, CD22, EFNA1, FOXO1, G6PC, GALE, GAS1, GLUD1, GRLF1, HHEX, MGAT5B, OR10G9, OR13J1, OR8J3, PIK3R1, PISD, POLR3G, PPP2R2B, SELL, TGFBR2
Negative_8945	AR, F7, GLS, LAT, MAG, PAH, ACACB, AMY2A, AOC3, CRY2, DPM2, GSTM2, MMP14, OR2A5, OR4C16, OR7A5, PDE4B, PMVK, POLR3A, RRAS2, SMAD9, SPCS1, SRGAP2, TLN1, UMPS, YES1
Negative_8946	GLA, HPD, TEC, VCL, ABI2, AKR1C1, AMDHD1, C5AR1, CACNG2, CSF2RB, FPGT, GCH1, IKBKE, IRAK4, MGLL, OR2G3, OR2H2, OR4P4, OR51B4, OR5AU1, OR7D4, PCK2, PDGFRB, PFKFB2, PGM2, PIGV, POLR3A, PPOX, RAP1A, RDH5, ROBO1, RXRA, SDHD, SGPP1, SH2D1B, SYNJ1, TAS1R1, TJP1, YARS2, YWHAH, TNFRSF6B
Negative_8947	GH1, MVD, CACNG3, F2RL3, IRS2, OR2Z1, ORC1L, PANK1, SRGAP1
Negative_8948	AGK, ADRBK2, CD40, CDS1, CLDN16, CSF1R, CSF2RA, CSH1, DEGS2, DIAPH3, EPB41L2, GNAI2, GSTK1, HADHA, HNF1A, LAMA4, MCM6, MGAT5, NSD1, NT5C1B, OR1G1, OR4D1, OR51I1, OR8D4, PIGQ, PLA2G3, PPOX, PRODH, PTPN5, PTPN7, PYGL, SMAD7, SMPD1, SUV39H2, TCF7L1, UBA1, UROC1, VNN1, WNT8B, HSD17B10
Negative_8949	F2, CDKN1A, CNGA4, CXCL2, DHCR24, DHODH, GNRHR, IL15RA, P2RX6, PLOD3, PMM2, RALB, ST3GAL2, CACNA2D2
Negative_8950	SHH, NPR1, OR2T11
Negative_8951	APAF1, APBB1, ASRGL1, B3GNT5, B4GALT1, BIRC5, C7orf16, CD14, CD79A, CHRM3, COL5A2, CSNK1A1, DPYS, DRD2, HRAS, IAPP, IL17RA, LAP3, LRAT, MAP2K6, NODAL, OR2F1, OR2M3, OR4E2, OR52B4, OR5K1, OR5T1, OXSM, PAK2, PARD6B, PIGH, PLA2G3, SIGLEC1, STX1B, TPH2, TSC2, VDAC3, YARS
Negative_8952	DDC, GH1, GSR, ADORA2A, ALOX12, CDS2, CNTN1, CX3CR1, CYP11B2, HLA-C, LDHC, NFATC4, OR4K14, PFN1, PI4KB, PLD1, PPP2R5A, SELPLG, SETDB1, TACR3, WNT3
Negative_8953	C2, PGD, ABL2, ALG1, AMY2B, ARSE, BLVRA, CCL8, CCNB2, CSNK2B, CTLA4, CTNNA1, CYP2B6, DERA, EPHA6, HYAL2, IDI1, MASP1, NAGA, NKX2-2, OLAH, OR10A4, OR5L2, POLD1, RXRB, SDC4, SGPP2, TPH1
Negative_8954	ABO, ACVR2A, ALDH6A1, APOA2, CACNA1C, CALML3, CTSB, DPAGT1, EGFR, EPB41L2, FGF13, FOXO3, GNRH2, GPD1L, MAPK10, MCM3, MYL5, NCKAP1L, NRXN3, OR3A2, OR51E2, OR5B17, PIGK, PRKAB1, PRKAG2, SDC1, SSX2IP, TACR3, TICAM1, TP53, WNT10B, WWP2, SERPINA1
Negative_8955	LPL, MUT, ABL2, ACVR2B, ACYP2, ATP2A3, CACNG8, CBR3, CLDN5, COL5A3, CYP2C18, EGFR, ENPP3, F2RL1, GNA13, GSTZ1, IDH3A, IFT57, IGF1, IKBKG, IRAK2, IRF3, KYNU, LIPT1, MARS2, NAT5, NCAM1, NFATC2, NOX1, OR10AD1, OR13G1, OR5B21, OR7A5, OR8I2, PFKFB2, PGK1, PLA2G2E, PPM1D, RARS, RUNX1T1, SFRP2, SGMS2, SGPP2, SMURF1, SNAI1, UBE2L6, YWHAG
Negative_8956	C5, EBP, F5, LTB, RET, ALOX5, ALS2, APOE, B4GALT7, BMPR2, CALML5, CASP8, CCL5, CRHR1, CXCL10, DAAM2, DPM2, E2F2, ERBB3, FRAP1, FSHR, G6PC2, GGCX, GJA1, GLI3, HLA-F, ITGA6, ITGAE, MGLL, MOV10L1, NAT2, NEUROG3, NKX6-1, NMNAT3, OR10R2, OR14I1, OR2K2, OR9K2, PFKFB1, PHPT1, PLCD1, PPOX, PPP3CA, RPE65, UAP1, ZAP70, HSD17B12, PPARGC1A, SERPINA1

Negative_8957	DBI, HGF, ALOX15B, APC2, CREB3, FZD2, FZD7, GLB1, INPPL1, MAPK7, OR1L8, PAR6B, PTCH2, SMPD2, WNT2, YKT6
Negative_8958	GCK, TNF, ACSL5, AGTR1, ARPC2, CHRNA7, FTCD, GALNTL1, GCLM, ICOSLG, LRP6, NAT5, NOTCH2, OR2A2, OR2C1, OR4K2, OR5T2, PAK1, PDGFRB, PNPT1, POLA2, PTPN6, RALA, RETSAT, SDHA, SETD7, SETMAR, SLC12A2, TYMP, WARS
Negative_8959	F12, ITGA11, KLRD1, MASP1, MTMR1, OR4F17, OR6T1, OR8D4, SULT2B1, TRMT11, VAMP4, ATP6V1C2
Negative_8960	AR, ATM, BAD, C1S, CD6, CKB, CR2, ID2, AARS, ABLIM3, AHCYL1, ATP6V1D, BMP7, CTNNA2, E2F5, EHMT2, EPB41L1, FGF11, FLT3LG, G6PD, GALNT1, HNF1B, HRH1, IL17RA, INMT, LEPR, MAPK7, MYH6, NEUROD1, NRG2, OR10J5, OR4K14, P2RX3, PAX6, PI4KB, PPP2R5B, PTPRJ, SIPA1, SLC27A5, SPP1, TRAF3, TYMP, WIF1, ZBTB16, ATP6V1G2, PAFAH1B2, PAFAH1B3, TNFRSF6B
Negative_8961	ADO, DBH, FN1, NLK, PRL, STS, ACACA, ANPEP, B3GNT5, CACNB4, CD58, CDC14B, CDK6, CDKN2B, CX3CR1, CYP2A7, DGKQ, DVL3, EPB41, FTH1, GAD2, GALNTL4, IL28A, MAGI3, MALT1, MAPK1, NFKB1, OR51T1, OR6T1, PFKFB4, PPAP2A, PPP3CB, RXRA, TP53I3, YWHAQ
Negative_8962	CKB, DBT, DCN, GNE, GSS, B4GALT2, CACNG5, CTSB, ENAH, FGF6, HSD17B1, NAGS, NEU3, OR13H1, PGS1, POLD3, RUVBL1, SHISA5, TNFSF18, UGT2B11, PLA2G12A
Negative_8963	FRAT2, ITGA3, MAPK7, MTMR2, OR2T3, TCIRG1, YKT6
Negative_8964	ATM, DCN, OSM, ADRA1D, BCKDHA, CACNA1F, CFL1, CYCS, FGF13, GDE1, GDF5, IL18, IL23R, IL28RA, IL9R, MAD2L2, MAN1A2, MAP4K1, MDH2, NPAS2, OR10A4, OR13C3, PDE4B, PFKFB2, RAPGEF1, SUFU
Negative_8965	LCT, ACPP, HRH1, IFNA8, KLRC4, LIPA, NCR2, NUDT9, OR10G8, OR6K2, PIP5K1A, PYCR2, RASA2, SLIT1, SSH2, TNFRSF10B
Negative_8966	CR2, F7, LYN, PGD, TNR, BLVRB, CCNB1, CNTFR, CSDA, DARS2, DGKZ, DHCR24, DLAT, FTH1, GALE, GANAB, HTR2B, IL28B, LAMC1, OR13C5, OR52N4, OR5T1, PIGH, PIK3CD, PIM1, PPP2R2B, PSME2, PTK2B, RASGRP2, TUBB2A
Negative_8967	ACAA1, ADRB3, CLDN2, DHRS4, FGF3, FZR1, G6PC2, GALE, GCNT3, GSTM1, HPSE2, IL5RA, ITGA9, ITGAM, LRAT, MAP3K11, NNMT, NR1H3, OR4S2, OR5T1, OR9K2, PFKM, PLEKHA8, POLR3B, RASGRP4, SPP1, TNFRSF11A
Negative_8968	CCL28, DNMT3B, EPHA5, GALNT13, MAPK3, NAMPT, OR13C3, OR51F1, OR5V1, RELB, SOCS2, TPI1, UCK2, YOD1
Negative_8969	ANAPC5, ETNK2, LCMT2, OR9G4
Negative_8970	CACNB1, GSTA3, HLA-G, NEUROD1, NTRK1, PDCD1, PNPO, RALGDS, WNT7A
Negative_8971	C5, F7, AC02, ACSS2, ADH7, AGTR1, AOX1, APRT, ATP5G2, BCL10, CCL20, CD7, CLDN11, CNGB1, CYCS, CYP26A1, CYP2S1, FGF1, GNA11, GSTA3, GUK1, IL3RA, ITGB8, LIPE, MRAS, MYD88, NODAL, OR13H1, OR2T6, OR4D11, OR6N1, OR7D2, PFKL, PLXNB1, POLR2G, PPP3CC, PRLR, RBL2, ROCK1, RPS6KA3, SPRED2, STAT3, TGDS, TNFSF18, WIF1, YWHAQ
Negative_8972	ME3, ACOT12, EPHB2, GSTA1
Negative_8973	AK5, ACY3, APPL1, B3GALT1, B3GAT2, CACNG4, CD8A, CDC14A, COL4A1, DGKH, EDNRB, EFNA2, EXTL1, FCGR2B, GSTM1, IFNA14, IFNGR1, IKBKE, IL24, MAP2K3, NOTCH1, OR51F1, OR7A10, RCHY1, SDHB, STT3B, TAS2R49, TRHR, WNT4, WNT5A, XYLT2, ATP6VOA4, CACNA2D1
Negative_8974	AARS2, ACSL4, BUB3, CAV3, DFFA, DHDDS, GCNT1, GJA1, GLUD2, GNA13, LAMA3, MAN2A1, MAP2K4, MTHFR, NOTCH3, PSAT1, RAC3, SAT2, STK4, TGFB1, UGT2B10, SERPIND1, ST6GALNAC6
Negative_8975	ASL, AUH, F7, ID1, MAG, TH, AARS, ADCY7, AGXT2, ALDH1B1, AQP7, ARHGAP6, ATP2A2, CACNA1A, CDKN2B, CSNK2A1, DVL2, EDNRB, EFNA2, EFNB2, FBP2, GALNT8, HSD17B8, INPP5E, INPPL1, LCAT, LTC4S, MAD1L1, MAGI1, MGAT3, MTHFS, OR1D2, OR1L3, OR4C16, OR4F17, OR4M2, OR7A10, OR8B8, PDE8A, PKM2, PTGS1, RUNX1, STAT5A, TAS2R50, YARS, EIF4EBP1, SERPINC1



Negative_8976	APBB1, ARPC4, BST1, CACNA1H, CD48, CDC45L, DDX52, EIF4E, EPB41L3, GC LM, HCST, IFNA2, ITGAX, L1CAM, LDHAL6B, MNX1, NOD1, OR2AG1, OR2L2, OR4F5, OR52A1, OR5AN1, OR5I1, OR5V1, OR6K6, OR6Y1, OR8B12, PDE7B, PIK3R3, PLD1, PNPT1, PPM1D, PPP3R1, PRKCE, RDH12, RELB, SMURF1, TCF7L2, TNFSF10, TPM3, TRADD, TRAF5, TRPM5, UPRT, WNT5B
Negative_8977	AK1, ACAT2, ADCY10, AGPAT1, COQ6, FBP1, FLAD1, HSD11B2, INHBE, MGAT5B, NODAL, OR1N2, OR8A1, PFKL, PGK1, SH2D1A, SH2D2A, SLC2A2, TALDO1, TUBA8, VAMP2, WARS2
Negative_8978	ACYP1, CYP8B1, DDX55, GNAI1, HSD17B8, ITGA7, PHKG1, PRKCD, PSME2, TAS2R4, ATP6V1G2
Negative_8979	C8B, F3, AGPAT4, FGF11, HSPA2, NAGS, NFAT5, OR10Z1, OR2A5, OR5T2, PTPRZ1, TAS2R10, TAS2R40, TBXA2R, TCIRG1, ZIC2, SERPINA1
Negative_8980	FH, NOG, ADIPOR1, ANAPC5, ENTPD7, EXTL1, FSHB, IL24, KIR3DL2, OR2A2, OR52E4, OR5K1, OR5T2, OR6Y1, PAK3, PLAUR, PLXNB3, POLD3, PPP1CC
Negative_8981	CR2, DDC, EDA, GH2, SDS, SHH, ACO2, AKR1C3, ALDH3A1, ARNTL, ATP2A2, CBLB, CCDC6, CSNK2A1, CYP2A6, DVL2, ENTPD6, EPAS1, EPHA5, GALNT3, IARS2, IFNA2, IL17A, KCNJ11, MAML1, MAT1A, OR10C1, OR10J5, OR1L6, OR5B3, PDE9A, PDGFRB, POLR2D, RASGRF1, RRAS2, SORD, STAT1, STMN1, UGT2A1
Negative_8982	MVD, A4GALT, BDKRB2, DHDH, DHRS3, ENPP2, EPHA7, MTMR6, OR2F1, OR2L8, OR51S1, OR52N2, OR6C76, PRKCQ, RAB5A, SMAD7, TGFB3, SERPINB5, TNFRSF1B
Negative_8983	AUH, ADCY2, ALDH4A1, CHEK2, CRB3, EPRS, FOXL1, IL22, PON3, SGPP1, SRGAP1
Negative_8984	F2RL2, SOAT2, TNFRSF10C
Negative_8985	HYI, LPO, AOC3, ATP6V1F, B3GALT1, B3GALT2, CACNB1, CACNB2, CPOX, CSNK1A1, CYP4A11, DOT1L, DVL3, EDA2R, FOXA2, FZD10, GJD2, GLO1, GLUD1, GRM5, GSTK1, HNMT, IDH3A, ITGA7, ITGA9, MDH1, MYLK3, OR1L4, OR2T3, OR2T34, OR4M1, OR52I2, PDE11A, PPP1R3A, PRKAG1, PRKG1, PTDSS2, RELA, SHC2, SHC3, SOCS7, TAS2R4, TNFSF11, TOMM40L, TPM3, UGCG, WASL, EIF4EBP1, TNFRSF6B
Negative_8986	ACADM, ALDH4A1, CREB3L4, GSTM1, HTR5A, ICAM3, OR52L1, PPM1B, RARS2, TPH1
Negative_8987	AGK, CD4, FST, PC, VCL, ACSL3, ALG9, APPL1, ATP6VOB, CCR4, CUL1, CX3CL1, CXCR4, CYP11B1, DGKB, GCAT, IL18RAP, ITGB1, KLRD1, MIOX, NCK2, NEUROD1, NUDT9, OR1S2, OR4M2, OR5L1, PAX8, PHPT1, PPAT, PRKCA, PRKCD, PYGB, SEMA3D, TUBB2C, VAMP1, CSGALNACT2, PNLIPRP1, SERPINC1
Negative_8988	ILK, OSM, ACSM1, ACVR1C, ADRB3, ALDH7A1, APBB1, ATF4, CDC14A, CER1, CHDH, CTBS, CTPS2, ECSIT, EPHA8, FADD, FGF22, FGF4, G6PC, GALNT13, GALNT5, GART, GIT1, HADHB, IL22RA2, MDH2, NANS, NFYA, OR2C1, OR52H1, OR5B21, PRKAR1A, PSEN1, RELB, RFWD2, STAT4, TRPM5
Negative_8989	A2M, HGF, MTR, ADIPOQ, ALAS1, ALAS2, ALOX5, ARNT, CACNA1I, CHPT1, CLDN6, CMPK1, CPT1C, DGKB, EGFR, GLUD2, HARS, ICAM2, IDH3A, IL9R, KCNJ11, KITLG, LALBA, LCMT2, LIPE, MYH6, NME2, NOTCH2, OR2A5, OR2V2, OR8S1, P4HA2, PDE5A, PGK1, PIK3C2B, PPP2R1B, PRKCE, PVRL2, RASGRP1, RASGRP4, TJP3, ULK2
Negative_8990	C3, ALDH3A1, APLP1, ATP5A1, BMP8B, CDH4, CRY2, CYP17A1, DPM2, DRD2, G6PC, GAB1, GALNT10, IFNA16, IL19, IL8RB, MAP3K4, MAPK10, NFATC1, OR1A2, OR1L1, OR52E8, PFKL, PHKA1, PIGL, PLCD3, PLD1, PTPRM, RFXAP, TRAF3, TSTA3, HLA-DQA2, TNFSF13B
Negative_8991	FER, NPY, RPE, TYR, AADAT, AASDH, ACSS2, AKR1A1, BUB1B, CASK, CCR9, CNTRF, CYP2C8, GANC, GOSR2, GZMB, HSD17B1, IFNA7, JAK1, LAMA4, MAGI1, NME6, OR1D2, OR2AG1, OR2F1, OR2G6, OR2M4, OR8H2, PIAS3, PLD1, PPP2R5D, PTK2, RASGRP4, RGS3, RPS6KA5, SEMA3F, SEMA4D, SMAD3, SMAD6, TSTA3, TUBB4Q

Negative_8992	AGK, ME1, APAF1, CD19, DTX3L, GLG1, GNPAT1, KITLG, NME2, OR5H6, RAC2, SPRED1, UGDH, ZIC2
Negative_8993	BID, DCN, GP6, SCD, AARS2, AKT1, ANPEP, BDKRB1, BTRC, CD19, CNDP1, CRKL, DDX51, DHDDS, ENO3, FSHB, GFPT2, GRPR, ITGB8, MAGI2, MYD88, NT5C, OR10K2, OR9A4, PFKFB1, PTPMT1, RFWD2, SC4MOL, SKIV2L2, SOX17, SPHK1, SPRED2, STK4, TAS2R9, TSNARE1, TUBA3C, WNT2, CACNA2D2
Negative_8994	APP, CAD, PDC, ZYX, CACNA1B, CSF2RB, CXCL5, DHRS3, FABP1, GLS2, LMO7, NPR1, OLAH, OR10T2, OR11G2, OR52B6, OR5K2, PAPSS2, PCCA, PPAR, PRKCB, SELE, SPCS3, STX1B, TGFB3, TGFB1, TRAF6, UGT2B10, VAMP3, HLA-DQB1
Negative_8995	FST, RPE, AARS2, AGPAT4, ATP6AP1, B3GNT3, BIRC3, CD27, CD36, CHPT1, CKMT2, CNGA3, CNGA4, CSNK2A1, CTLA4, CYP1A1, CYP2D6, DKK1, DNMT3A, GALNT14, GPD1, GRIN1, HGSNAT, KIR2DL4, LALBA, MAN1A2, MAP3K14, MTMR6, NMNAT3, NSDHL, OR10J5, OR52I1, PITX2, POLR2J, SELL, SNAP23, SPRY1, STAM, TCIRG1, THTPA, UGT8, VEGFB
Negative_8996	DDO, ABLIM2, ALOX15B, CD58, DERL1, ETS1, PLCB1, PTAFR, SERPINB5
Negative_8997	CFI, STS, DHDH, FGF6, OR1D2, PIK3CD, SLC25A4, YWHAZ
Negative_8998	EDA, ALOX12, ASRGL1, CACNB4, CCND2, CMBL, CYP2C19, F11R, GANC, GCLC, GSTP1, IL25, MAP3K5, NFAT5, PLCD1, SAT1, SEMA3C, SNAP25, TPH1, PHOSPHO1
Negative_8999	CKM, AXIN1, GSTA5, PRSS3, PSEN2
Negative_9000	GLS, ABI2, ACACB, ATP2A2, GPD1, IL17RA, OR2B2, OR5T1, POLR2H, TP53I3, TRAF2
Negative_9001	GNAZ, INPP1, OR52R1
Negative_9002	TKT, BRAF, CD48, EFNA4, GPD2, NR1D1, RDH8, RFXAP, SMPD4, HSD17B12, MAP3K7IP2
Negative_9003	DUT, FER, FST, GAA, ACSM4, ARHGEF7, CDH4, CHRM3, COL5A1, CTPS2, CYP3A4, DGKQ, DNMT3A, F13A1, GALNTL5, GNA14, MGST2, MYLK3, NANP, NCK2, NFX1, ONECUT1, OR1E2, PAK4, PPARG, PPCS, PPP5C, RERE, SETD1B, SH3BP2, TASS2R4, TIAM2, TNFSF10
Negative_9004	LTB, ALOX12, DDX41, ESPL1, GNG3, NMNAT2, ORC3L, PNPO, SOX17, HSP90AA1
Negative_9005	CADM1, CCL8, CDC25A, CLDN6, CSNK2A1, CYP3A4, DRD2, ECSIT, GADD45B, GRIN2B, HLA-DOA, HSD17B1, HSD17B2, MTHFR, NUDT2, PIGQ, PTPN1, SGPP1, SLC25A4
Negative_9006	DCN, CSNK2B, CTSS, DDX19A, EFNA1, EVI1, FGF23, FOXO3, GALNTL5, INHBB, MPST, PLXNA2, PPP1R3B, RPS6, STX10, WNT2, CSGALNACT1, PAFAH1B2, TNFRSF10D
Negative_9007	DHH, ME3, ACAA2, ADRB2, ALDH1A3, CAV2, CCR10, CLTA, DHCR24, DTX3, FGF19, GALNT10, GLI2, HARS2, HIF1A, IL15, MYL5, NNMT, OR10H2, OR2G3, OR4L1, OR5L2, PIK3C3, PLCZ1, PPP3CB, RRM2B, STAT4, STX1A, TBL1XR1, WNT3, WNT8B, B4GALNT1, HLA-DRB5
Negative_9008	C7, EGF, GPI, AOC2, CCL26, CDH4, CXCL11, DHRS9, DNMT3A, EDNRA, MAN1A1, NADSYN1, OR13J1, PGAM1, PTPRB, RALBP1, SGMS2, TJP1
Negative_9009	C8A, ALDH6A1, CACNG3, CCND3, CYFIP1, CYP1A1, FASN, FGF11, FZD9, OR2T11, RND1, ATP6V1G3
Negative_9010	FAS, BUB3, CAV3, CD40, CLDN1, CSF2RB, CXCL10, EDA2R, EFNB2, ENPP7, IBSP, IL12B, IRF5, MAML3, MTHFD1, NMNAT1, OR10C1, OR2A14, P2RX4, PNPLA3, PPM1B, SDHB, TAS2R60
Negative_9011	CTH, GK2, ACTG2, ANGPTL4, COL4A2, CSDA, FGF11, GRHPR, IL20RA, LTBP1, MYLK, OR2L8, PLA2G6, SDHD, SNAP25, SPHK2, YWHAZ
Negative_9012	LSS, ACSL4, AKR1C2, ARHGEF4, CD8B, CYBB, FGF11, KAT2B, KIR2DL1, MAGI3, PGAM2, PLD2, RFNG, SLC25A4

Negative_9013	ADA, B4GALT2, BCKDHB, CCL17, CCL27, CPT1A, GLUD2, GSTM2, MCM2, NODAL, PFKP, PLA2G2E
Negative_9014	CEL, ENTPD6, TAS2R42
Negative_9015	DCN, ATP6AP1, BIRC3, BUB3, CCR7, CDC25A, GGT5, GSTA5, ITGA5, LAMC3, M INPP1, MTAP, OR5B17, PIK3C2B, PIK3C3, SEMA4G, SETD1B, SMC1A, ST3GAL 1, TLR9, TYROBP, PAFAH1B1
Negative_9016	CR1, LAT, ACTB, BCAT2, CD40, CHAD, CTTN, CYP11A1, HTR4, MICA, OR6K2, P PCS, PPP2R2D, TP53I3, TYMP, VAV3, WEE1
Negative_9017	AKR1B1, GMPPB, IFNK, NCR1, RHEB, SDHB, SNAI2, TFPI
Negative_9018	FN1, LSS, AKR1C2, FGF19, HTR7, NANP, PPP2R1B, PVRL3, SARS, SOCS3, SPT AN1
Negative_9019	BTK, ADCY10, ANPEP, APOE, ARSD, BDKRB1, CADM3, CNDP1, DDX55, DUSP9, E NTPD3, EPB41, FLT3, GRPR, GSTM2, IL18R1, MAFA, MAP2K3, MCM6, MGST1, O CLN, OR10H2, OR11G2, OR2AG1, OR4C6, OR51V1, OR52D1, PIGS, POLR2D, TA S2R7, TPH2, WASL
Negative_9020	BET1, OR52B4, STAT2
Negative_9021	B3GNT4, CD34, F13B, GNAI2, INADL, NUDT12, POLD1, TAS2R5, UBE2L3
Negative_9022	HGF, KMO, ACSM5, ADH1B, ARPC5, CAMK4, CBR1, CCKAR, CCR7, CD79B, CREBB P, CRY1, E2F2, FADD, GNAQ, IGF1R, ITGAV, LIPG, MAGI1, MGAT4A, NR1H3, N TSR1, OR11H6, OR1G1, OR51D1, OR51E1, OR9K2, SETD7, XYL, GABARAPL1, PNLIPRP1, TNFRSF13C
Negative_9023	ADC, HGF, ALPP, APOA1, AREG, BLVRA, CCR2, CNTF, COL4A1, DUSP8, FOXA3, GBE1, GGT6, GLS2, GLUD1, GNG3, HTRA2, IFNA5, IL12RB1, IL8RB, ITGA6, M APK8, NR1H3, OR1D5, OR4D2, PFKM, PLXNB3, POLR3G, PPAP2A, PPP1R3D, PT GES, SESN2, SETD7, SPRED2, SUCLA2, SULT1A2, TAS2R48, UNC5B, SERPINE 1, TNFRSF17
Negative_9024	MUT, ADH4, AK3L1, CAPN2, CD99, CDC23, COQ7, CYP3A5, GABARAP, GCLC, GN RH1, GSTA4, HEXA, INHBB, MADCAM1, MCEE, MTHFD2, NANP, NR1D1, OR51S1, OR8D4, ORC5L, SLIT1, TAS2R48, TYROBP, WEE1, MAPKAPK5
Negative_9025	ACSL3, B3GAT1, BMP8A, CACNB1, CCR1, CD48, CDS2, DCXR, FRAT1, GSTM3, I L12RB1, IL12RB2, NFKB1, NOTCH3, OR2A2, P2RX2, PEMT, PIP5K3, PKM2, PP P2R5C, SFRP4, SHC3, SNAI2, TICAM1
Negative_9026	RFK, ADRB1, ALOX15B, ASNS, B3GNT5, BMP7, CCL8, CCNA2, CDC20, CES1, CL DN5, CTNNA2, CXCL11, CXCL16, CYP3A4, DNMT1, EPHA4, FGF12, FTH1, FZD1 , GUCA1A, GUCY1B3, HTR2C, LEFTY2, MAGI1, MAP3K6, MAPK1, MITF, MYLK2, NT5C3, NUDT5, OR2T11, OR51B4, OR52L1, OR6T1, PDIA4, PHKG2, PIGC, PPO X, PTGFR, PYGL, SLIT1, STX6, TJP2, TRIP10, UGT8
Negative_9027	ILK, ACACB, GLUD2, LIMK2, OR14J1, SRD5A2, SULT1A4, TBXAS1, MAP3K7IP 2
Negative_9028	CFH, MVK, NPL, PC, TNF, ACO2, ACSM4, ADH1A, ALDOC, B3GNT3, CBR1, CD55, CREB5, CYP3A7, CYP4F3, DDX23, DTX4, EPHA7, ERBB3, HAAO, HMGCR, IL8RB , JAK3, JUND, NEGR1, NFKB2, OR13C4, OR14I1, OR4N4, OR5AN1, PAK6, PIGA , PIK3CD, PPT1, PRKG2, RASSF5, SMPD2, SOS1, SPTAN1, STMN1, UGDH
Negative_9029	CBL, CD4, CR1, IL3, RFK, RPE, SPN, ALPPL2, BCL10, C5AR1, CDKN1B, DUSP7 , EPHX1, GADD45A, ICAM1, IL2RG, IL7R, INPP4B, MYL9, NANP, OR5AC2, OR6 C75, OR9K2, PDE11A, PIK3C2B, POLR3B, RBL1, RPS6KA5, SEMA3C, TM7SF2, TUBB6, VARS
Negative_9030	AK3, INS, AHCYL1, ATP6VOC, B4GALT1, CLDN9, DGKZ, FZD9, PDE6G
Negative_9031	ADO, AMT, C8B, FGG, MPZ, AASS, ACAT1, ACSL6, ALCAM, ALDOB, ALG11, ALG3 , CHST12, CYBB, CYP2E1, DAAM2, DEGS1, EPHA7, ERBB3, FGF21, GYS1, IFNA R1, IL17RA, IL1R2, LEF1, MGAT3, MYH2, NANS, NFX1, ONECUT1, OR8J1, OR8 J3, PCNA, PPP2R2D, SARS, SFRP2, STAT1, STX2, ULBP3, YWHAZ

Negative_9032	CR2, SCD, ACACB, ACVR2A, ALPPL2, BAAT, CD19, COL4A2, CSNK2A1, CYP2J2, DGKA, FUT2, FUT7, GALNT9, HSD17B1, IL2RA, KLRC1, LIPT1, LRRC4C, LTC4S, MAGI3, MAN1B1, MAP2K3, MAP3K6, OR13C2, OR1B1, OR4K14, OR4S2, P2RX1, PAK1, PDGFD, PGK2, PHKB, PIGB, PLA1A, PLCG2, POLR3A, PYGB, RPE65, SEMA3D, SEMA4B, SSH1, STX18, VASP, WARS2, HSD17B12, SLC25A31
Negative_9033	APLP1, BMPR2, CISH, IFNA21, MAN1A2, OR2H2, OR2L2, OR52M1, PHKB, PPP2R5B, RASGRP2, RPS6KA4, SKP1, ULBP3
Negative_9034	CGN, CSK, ME3, ANAPC5, ARD1A, B4GALT1, CRHR1, EDA2R, FLOT2, IARS, IL19, LCMT1, MAP4K2, OR2G3, OR51E2, OR51L1, OR52N4, PFN4, PIK3C3, PLA2G4A, QPRT, RAF1, RND1, SERPINE1
Negative_9035	B3GALT6, CYP26B1, DDX19A, FGF21, GLB1, IL10RA, IL18, LIPE, MAD2L1, OR1E1, PDE1A, PDE7A, PIK3CG, PLA2G2D, PPP1CC, RPS6KA2, SRGAP1, TAS2R49, TYMS, ULK3, YWHAG, PAFAH1B2
Negative_9036	MVK, SMO, ACP1, ADIPOR2, ATP2A1, ATP5E, ATP5G1, ATP5J2, BMP8B, BRAF, CAV3, CBR3, CDC20, CDC25C, GAL3ST1, GBA3, HTRA2, IL12A, IL23A, MAP3K6, OR1A2, OR1L3, OR2T29, OR3A1, OR56A1, OR6N2, PIGH, PKLR, PLA2G1B, POLD4, PPP2R5C, PYGM, RHOA, RUVBL1, SIAH1, SPRY2, SRGAP3, VASP, VEGFB, ST6GALNAC3
Negative_9037	GGH, SYK, ACY3, AMPD1, ARPC3, CSDA, FGF6, GCH1, LDHAL6B, MAP3K3, OR8D2, ORC1L, P4HA3, PEMT, RPS6KA3
Negative_9038	HAL, LIMK1, RASA2, UPB1
Negative_9039	MET, TNN, CKMT2, COL5A1, DERA, GP1BB, HPSE2, INPP5E, MTHFS, OR7G1, PFKFB1, PHOSPHO1
Negative_9040	F8, KMO, SCD, SRF, AACs, AKT2, ALPP, ANAPC2, ASPA, BUB1, CCL1, CCND1, CR5, CLDN4, CXCR3, DDX52, DVL1, EFNA5, ETS1, FOXO3, FUT3, FUT5, GCH1, GIT1, GNPDA1, GRIN2D, HCCS, HIBADH, KDSR, LAMB3, MYH7, NADK, OR13C3, OR13G1, OR52E6, OR7G3, PIP5K1C, PRKAB1, RBKS, STAT4, TAS2R49, TAS2R9, TCF7, TICAM2, TNFRSF8, VTI1A, ATP6V1G1
Negative_9041	FAS, CCNH, CES7, CLTC, CPT1A, DKK4, ENPP7, EPHA5, GALE, GLS2, IKBKB, IL17A, JUND, NME4, OR13C9, OR1L3, ORC2L, PER2, PMAIP1, PRSS2, SKP1, SUV39H1, UGT8, WHSC1, WNT5A
Negative_9042	F12, ALG10B, BMP7, CCL17, CNTNAP1, CTSB, CYP26A1, EREG, IBSP, MAPK1, PPAP2B, PRKCH, PTPRR
Negative_9043	GSN, SPN, AKT1, CCNG1, CLDN2, DDHD1, EPHB1, GLI1, GNG13, HAGH, IGFBP3, IL18, IRS1, ITGA3, MAP3K4, MAT1A, NAGLU, NOTCH2, OR4Q3, OR7A5, ORC6L, PGM3, PHKB, PPP1CA, PTGS2, SEMA4C, SETMAR, SFRP1, SRGAP3, TGDS, TRAF3, YKT6, PNLIPRP1
Negative_9044	HPD, ABL2, APH1A, ARNTL, B4GALT1, CAMK2A, CAV3, CDC7, CHDH, CLDN20, CYFIP1, DDX19A, DVL1, EXTL3, FZD9, GALNT7, GGT6, GMPR, MAPT, MMP9, NFASC, NKX2-2, OR2M4, OR6N1, OR6X1, PARD6A, PTCRA, PTPRJ, RBL1, SDHA, TCF7L1, UGDH, UNC5D, YWHAZ
Negative_9045	ABO, GCK, LSS, BLVRB, CCND3, CXCR3, DLL1, DUSP2, GALNS, GALNT10, LIMK1, OR2M7, OR2T33, RPS6KA1
Negative_9046	IVD, SI, ACAA1, ACO1, ACY1, ADH1A, ADH5, AGMAT, AKR1A1, ALG1, ARNT, BDNF, CCL2, CD19, CDC23, CER1, CLDN17, CLTB, CREB5, EIF4B, F13B, FGF6, FLT4, GGT5, IDH3A, IL1R1, JAG1, KLK3, MADCAM1, METTL6, NKX2-2, OR1E1, PIK3C3, PIP4K2B, PKM2, PPP2R1A, PRPS1, PSEN2, PTPN1, RPRM, SEMA3E, SH2D1A, SLIT2, SMAD4, SUCLG2, TPK1, TRIP10, ULK2, VCAM1
Negative_9047	NRXN3, OLR1, SH2D2A, TUBA1C
Negative_9048	CD99, PVRL1, SLIT2, TAS2R48, TUBB4
Negative_9049	IARS, MAP2K4, SESN2, SULT1E1, TRAF3

Negative_9050	GCK, NGF, NPY, ABL2, ACADM, ACSL5, ACVR2B, ADRA1D, ASIP, ATP5J, CARD11, CCR1, CDC2, CHKB, CSNK2A2, CTNNB1, CTPS, CYP1A1, GAMT, GGT5, GNMT, HAO2, INPP5E, LTBP1, MKNK2, OR10AD1, OR11L1, OR14J1, OR2T1, OXSM, P4HA3, PIAS3, POLR2H, PPP3CC, PTGFR, RELB, RFNG, SOS1, SPP1, SPTLC1, TAS2R16, UBA7, UCK1, WNT4, ALDH18A1, GABARAPL2
Negative_9051	A2M, ALDH1A3, ALDH3A2, APL1A, B3GAT2, CTNNA1, DAD1, EPHA8, FUT5, FUT9, GNB3, HBEGF, HHEX, HNF4A, IFNA13, INMT, LDHAL6B, MCAT, MNX1, NAGA, NKX6-1, NRG2, OR8B8, PDGFC, PLXNB3, PPAP2A, PPP2R2C, PRPH2, PTGFR, PTPN7, SH2D2A, SNAP25, SOCS7, SOS2, SULT1A4, TAS1R2, TNFRSF4, TRAF3, UCK1, WBSCR17
Negative_9052	LIF, NLK, ACADVL, ADAM10, APBB1, ARRB1, ATP4B, CASP9, CLDN10, FUT5, GRIN2C, GSTM4, IARS2, ITPA, KIR2DL4, LILRB3, MAPK14, NCR1, OR10AG1, OR51E2, OR6C74, OR8K5, PDE1C, PDE3B, PIK3CB, POLR2D, POLR2F, PSEN1, PTPRB, RPS6KA1, SDC2, SEMA4A, SPP1, TCIRG1
Negative_9053	GK2, KIT, SDS, TNF, ACAA1, ALDH5A1, ALG10B, ALOX12, APC2, ARHGEF7, ATG3, BAIAP2, CFL2, CLTA, DDHD1, DIAPH2, DPM1, ENPP7, FPGT, IGFBP3, IL22, JAK3, MCM3, MGAT3, NEU1, OR10A4, OR6F1, PANK2, PER2, PHPT1, PIK3C3, PLCD1, PNMT, POLE4, POLR2K, PPP2R2A, PRKACA, SHC1, TSTA3, UGCGL1, VDAC2, B4GALNT1
Negative_9054	CGN, ACHE, ALDH9A1, AMD1, CCNB1, CD86, CSF3, CYP2A7, DCTN1, DERL1, EGN3, HMOX1, JAK1, KCNQ1, KIR3DL2, MYH6, MYLK, NAMPT, NCAM1, OR2B2, OR5A2, OR8I2, PAK1, PCCA, PITX2, PTGDS, RDH16, SEMA3F, ST8SIA5, TIRAP, YARS, ALDH18A1, HLA-DRB5
Negative_9055	AMH, CTH, TNC, TXK, ACTB, AGPAT3, CACNA1F, CASP10, CCL16, CD14, CHDH, COQ5, CTNND1, CYP3A5, EI24, ENTPD8, EXTL3, FZD9, GGT5, GLYCK, GNAI1, GNAO1, GSTT1, GUSB, ITPK1, NFATC4, NODAL, NQO1, OR1A2, OR2A12, OR2W1, OR52D1, OR6N2, OR6X1, OR9Q2, PARD6G, PDK1, PNPLA3, POLR3D, PRKCA, PVRL1, PVRL3, RASGRP3, SEMA7A, TJP1, ATP6V0A4, B4GALNT1
Negative_9056	INS, ANAPC10, CAV2, GALNT13, GNB3, MECR, PGS1, SORBS1
Negative_9057	GCK, KHK, CD8B, CLDN15, CNGB1, DGKE, DLAT, IFNGR1, LRAT, OR8K3, PER1, PPP2R1A, PYGL, ZFYVE9, TNFRSF1A
Negative_9058	GH1, ANGPTL4, ASRGL1, ATIC, CDKN1A, CLDN7, CRY1, DKK2, FLT3, GALNTL4, GRIN2D, GSTO1, MAPK11, NANS, OR10J3, OR1L6, OR2C1, PPBP, RASGRP3, RPSA, ZMAT3, HSP90AB1, PRICKLE2
Negative_9059	GSR, ACVR2B, ACYP1, AGTR1, ALDOC, AMHR2, CCR8, CLDN8, COL11A1, CSNK2A2, CYCS, CYP21A2, CYP2J2, DARS, DNMT3B, DUSP14, ECSIT, FRAT2, GMPR, IFNA5, LDHD, LHCGR, MAOB, MAP3K11, MINPP1, MPP5, OR4K2, OR51G2, PFKFB1, PGM1, POLR2G, PPAR, PTPRF, RAPGEF3, WNT1
Negative_9060	PC, UBB, AGPAT3, APOA1, B4GALT4, B4GALT6, CD28, CD74, CDH3, CNTNAP1, CTPS, CYP19A1, CYP26A1, DDB2, DPM1, ERBB4, FCER1G, GALNT1, GCLM, GDE1, GGT6, GNG12, GSTA2, IL20, MCCC2, MCM5, NEFH, NPAS2, OR8B12, PDX1, PSME2, PTPRM, RHOD, RUNX1, TAS2R4, TLR4, VAMP1, YWHA, ALDH18A1
Negative_9061	EBP, GAA, IL5, ACP6, ARHGEF1, ARHGEF6, ATP5D, BIRC2, BTRC, CDC2, CLDN9, CMPK2, CSNK1D, DAPK1, DVL2, EPOR, FDFT1, FZD1, GANC, HMGCL, IMPA1, MDM4, NR5A2, NRP1, NTSR1, OR10X1, OR4K17, OR5L1, OR9I1, PIGU, PPAT, PTGS1, RRAS2, SDC1, SHC1, SLC27A4, TACR1, TYK2, VARS
Negative_9062	BID, F10, MUT, ABL1, ACTC1, ATP13A2, ATP6V1D, B4GALT6, BMP8A, CACNB2, CACNB3, CD82, CDC23, CDC25C, CIITA, CRLF2, CXCL6, DARS, DHRS4L2, GNA12, LMO7, OR2M3, OR2S2, OR6C76, PPP3R2, PRKAA2, PTTG1, SCD5, SDHD, SFRP1, SLC27A1, SPRY1, SRGAP1, SRGAP2, TAS2R9, WNT1, TNFRSF10A
Negative_9063	AMH, CFD, CSF2RB, HAGHL, NUDT9

Negative_9064	ADCY7, ADIPOR2, CD226, CD3E, CYP21A2, IRF9, ITGB4, LEPR, MCEE, OR2M5, P2RX1, PDE5A, PFKFB1, PI4KA, PIM1, PPARG, PPP2R5D, RHEB, SELL, SETD B2, SMPD2, SOCS2, SORD, SOS2, TAS2R8, TPM3, UNC5D
Negative_9065	ACSS3, DAPK1, PRKX, TUBA1B, TUBB2C
Negative_9066	C2, FAH, IL7, TFG, ACADS, AGPAT3, BCAT2, BCL2L1, BIRC3, BUB3, CMBL, CO L4A6, CREB3L1, CTSL1, DCXR, DHFR, DKK1, FDFT1, FGF7, FOSL1, HSD17B8, IL23R, KAT2B, KITLG, MAP3K8, MARS, MDM4, OR10G7, OR10K1, OR5I1, PDE6 D, PGK2, PLA2G2D, PPARG, PRKACB, RALA, SOAT1, SPHK2, TAS2R38, WARS2, KIR2DL5A
Negative_9067	DBI, F9, AARS2, AKR1C4, ALG13, ASAH1, CACNA1B, CASP9, CD46, CES7, CLD N2, CLTA, CTBS, CYP2D6, CYP2E1, DPYS, E2F4, FMO1, GRIA2, HTR7, IDH3A, IMPA1, ITGA8, KIR2DL4, LALBA, LCMT1, MAPK9, NEU3, NTF3, OSMR, P4HA3, PIGF, PITX2, PLD1, PPOX, PPP2R5C, PRKACB, RCHY1, RDH12, RELB, RENBP, SESN3, SMAD7, TAS2R1, TSC1, UROC1, UROD, ZAP70
Negative_9068	APP, HK3, TNF, ACADSB, CCL17, EDNRB, LDHC, ZMAT3
Negative_9069	BTC, GNE, ABAT, ACTN2, ADAM17, ALDH3A2, ALDH7A1, CCR9, CHST11, DDX54, DUSP7, FLOT2, FLT3LG, GGT7, KIR2DL2, NCOR1, NEUROG3, NOS3, OR10AD1, OR2L8, OR8J3, OR9A4, PAICS, PANK3, PON2, PORCN, PTPN5, RALBP1, SMC1 A, TAS2R3, TICAM1, TRADD, WNT3A, WNT9B, YOD1, MAPK8IP1, SERPINC1
Negative_9070	AK2, CSK, ACADVL, APOC3, BST1, GMPS, LDHC, LPAR1, NFB, PDE9A, RASGRP 4, RPIA, TNFSF11, ZMAT3
Negative_9071	OAT, CSNK2A2, GLS2, GSTO2, LDHAL6B, OR10V1, HLA-DQB1, PLA2G12B
Negative_9072	BTK, TYR, ACMSD, AHCYL1, ALOX5, ATP5J2, CREB3L3, CYP1B1, DEGS2, DGAT 1, DNMT3A, DPM3, EXTL1, FOXA3, GALNTL1, HSD11B1, HSPB1, HTR2B, LIPG, MMP9, OR10S1, OR1J4, PIGS, POLR2E, PPP3R2, PRKG1, PSAT1, RHEB, SEMA3 A, TAS2R9, TUBA8, TNFRSF10C
Negative_9073	OR5AK2, TUBA1B, GABARAPL2
Negative_9074	AK3, DUSP2, HLA-DMA, LIMK1, NFAT5, OR2Z1, OR5A2, OR5T1, P2RX3, PDE11A, PYCRL, SH3BP2
Negative_9075	PRL, AASDH, ADH7, CCL3, CDC25C, COQ3, GCH1, IRAK1, OR10H2, OR4F17, TH BS1
Negative_9076	PGD, TKT, CDKN2D, MMP14, OR13C5, OR2H1
Negative_9077	C6, F8, GPI, MPL, ADIPOR1, ALG12, ARPC5, BCL2L1, CDIPT, FBP2, FOXA2, G P1BB, IDH2, IL22RA2, KIR2DL4, NCSTN, NFASC, OR1S2, OR2H1, OR2T4, PAK 4, PLXNB1, POLR3G, PPP3R1, PVRL3, SLC25A6, TUBB4Q, ATP6VOE1, ATP6V1 C2, SERPINE1
Negative_9078	CR2, DCK, F7, ATG7, ATN1, CBL, DGAT1, DOCK1, DUSP7, EHMT2, FMO1, GOSR 2, GPD1L, IFNAR2, MYL7, NAT6, OR52R1, OR6Y1, OR8B8, ORC5L, PDE9A, PEM T, PIGW, POLE3, PPP2R5D, PTGS1, SKP2, SPHK2, STX16
Negative_9079	CD6, ACSM4, CDS1, DGKD, GDF5, GUCA1C, IL1R1, ITGA4, JAK2, LEPR, PNLIP, SORD, STX4
Negative_9080	TK2, ALPL, ARPC3, B3GNT5, CFTR, CHSY1, CNTFR, DHDDS, DPM2, EPHA5, EPH B1, FLOT2, GALT, GGT1, GNAI3, GPT2, GUSB, HSD17B7, IFNGR2, IL29, ITGA V, MAML2, NEU2, NTSR1, OR2D2, OR51G1, OR5AS1, OR8J1, PDPK1, PFN3, PIK 3C2A, PIK3CA, PIK3R2, PITX2, PPARG, PRKAB1, PRKG1, RDH10, SEMA3G, TA CR1, TRADD, UGT2B17, WIF1, CACNA2D4, HSD17B10, TNFRSF10C
Negative_9081	FGB, GPT, HGD, RB1, SMS, ACAD9, ATP5L, BET1L, CAPN2, CHAT, CMBL, CNTF, CYP2S1, F13A1, GALNT13, HMBS, IAPP, IGFBP3, IL18RAP, MGST2, MPDZ, MY H9, OR13H1, OR1A2, OR51F1, PDE1B, PIP5K3, PNPO, PPARA, PPCDC, SMC1A, UGT2B4, VASP, VTI1B, ATP6V1C1, HSD17B12
Negative_9082	HK2, AMDHD1, CACNG8, EPHB6, FGF9, GAB1, GGT6, GLYCTK, IMPDH1, ITGA7, LIPG, OR2G6, OR5H6, PDHB, RDH8, RPRM, RRM1, SETD1A, SH2D2A, SPRED1

Negative_9083	UBB, UBC, ADCY8, ADCY9, ADRB1, ATP5G2, BCAR1, CDC6, DPM1, EXT2, FGFR1, FUT1, FZD8, GCAT, GRM5, JAM2, LRRC4C, NT5C3, P2RX6, PDE8B, RCHY1, RPK1, SULT2B1, TAS2R4, VAV1, HSD17B12, HSP90AA1
Negative_9084	ATIC, F13B, GOT1, GPD1, ICAM1
Negative_9085	ALDH1L1, DAG1, KLRC1, MAP3K5
Negative_9086	INS, LIF, ARNT2, ATP6VOC, BLVRB, CBLC, CD99, ENPP3, FGF1, MAOA, NLGN2, OR8B4, PGM3, PLAUR, POLR2C, PRKCI, PTPN11, PVRL2, UNC5D, ZMAT3
Negative_9087	EBP, HK1, IHH, APBB1, ARNT2, CLDN8, DHCR7, DPAGT1, ENTPD2, GNAT3, HSD17B4, IL6ST, MAML1, MYH10, PIGB, PLCE1, PSME3, THBD, WHSC1L1, TNFRSF11B
Negative_9088	LPL, ALDH1L1, ALOX15, CDC26, CDKN2D, DHRS4L2, FARSB, INPP1, LDHAL6B, MTHFS, MYLK, NFKBIB, NGEF, OR5B17, OR8G1, OR9A4, PFN2, PRKAB1, RASGRP3, RPS6, SC4MOL, SCD5, SCIN, SSH3, UGCGL2, WNT1, ATP6V1G2, TNFRSF10D
Negative_9089	DCC, GPI, HGF, AKR1A1, ALOX15, CHST13, CLDN10, CRY2, CXCL10, DRD5, EPOR, GRPR, LCAT, OR4F4, OR6C4, OR6S1, PIGQ, PLD1, PON1, PVRL4, SETD1B, SPP1, TNFSF12
Negative_9090	CAD, F11, HPD, ILK, LEP, ACVR2B, AGXT, ATP6V0B, BACE1, BNIP1, CCL1, CD14, CLDN19, CPT1A, CX3CL1, CYP3A7, DARS2, DHRS9, DUSP4, FGF2, GLS2, GTSE1, HHIP, HMGCS1, KAT2A, MGAT5, NTRK1, OR10S1, PDE1A, PIK3C2A, PLXNA1, PON3, PPP2R5D, PRKAR1B, PRKCA, RBPJL, SESN2, SMARCA5, TUBB1, UGT2A3, UNC5C, WIF1, XYLT2
Negative_9091	IL5, ABLIM2, ACVR1C, ARSE, BCMO1, BPGM, CES2, CFL1, COMT, CXCL13, CYP2F1, EFNA2, FZD10, GSTA2, GSTK1, HSD17B4, IFNA5, IFNAR2, IRS2, LRP6, MAPK13, MCM6, MFNG, MPDZ, NFYB, NTNG1, OR1E2, OSMR, PON1, PORCN, PRKE, PTCH2, PTGER1, PTGS2, SAT1, SDHC
Negative_9092	GNE, KIT, ZYX, ACVR1, ASIP, BAI1, C7orf16, CCL1, CCL13, CCL21, CYSLTR2, GSTA4, PDE1A, PDGFC, POLE4, PON2, SHC3, ST3GAL2, SULT1A1, UPP1
Negative_9093	FES, HGF, LCK, LTB, TH, AASS, ABLIM2, ACO1, ACP, ACSM5, ADRB3, AOC2, ATP6V1F, CD58, GOT1, HTR2C, IDH3A, IFNA10, IL11, LYZL1, MBL2, NOX1, NTF3, OGDH, OR10H3, OR6B2, PANK1, PHKA2, PMM1, PRKAG2, SETD1A, SUCLA2, TNFRSF8, TUBB4, CACNA2D3, PLA2G12A
Negative_9094	ALG10B, ARSD, BDH1, BUB3, CACNB2, CCL13, CNDP1, E2F5, EPHA2, FGF8, GNAO1, HTR2A, HTR6, NCOR2, PRNP, RPS6KA6, TNFSF4
Negative_9095	CNTFR, HIBCH, NR1H3, SMAD3
Negative_9096	CARS, GNA14, GRIN2B, LIPA, OR8G1, PRKAR2A
Negative_9097	COL4A6, CRY1, OR1D2, SLC27A1, STAT6
Negative_9098	ACSM3, AKR1C1, ARG1, ATP5L, CACNG3, CDH1, CSF2, CTNNA2, DFFA, EFNA4, F2RL3, GFPT1, HTRA2, IFNG, IKBKE, JUND, MYH6, NEGR1, NKD1, NT5C2, OR10S1, OR1C1, OR1Q1, OR2L3, OR56A4, OR5B17, OR8U1, ORC4L, P2RX4, PVRL2, RPS6KA2, ST6GAL1, TPH2, WNT10A, PLA2G12A
Negative_9099	FH, ILK, ADRA1D, AKT2, ARHGEF7, ATP2A1, ATP5G3, CD14, CHRM5, COL4A2, CYP3A4, CYP3A7, DGAT2, ELK1, ENO1, EPAS1, FGF17, GFAP, GNAI2, IL24, IRAK4, MAT2B, OR13D1, OR3A2, OR8K3, PIP5K1C, PLOD2, RHOQ, SETMAR, TBXA2R, TNFRSF4, TNFSF14, ATP6V0A2
Negative_9100	ADIPOR1, AGRP, ATF2, B3GNT4, B4GALT2, DHRS4, EIF4E, ENPP6, FASLG, GMP, HSD17B7, LAMB1, NFKBIE, NOS3, OR52A5, OR52E4, OR5D14, PLIN, PPP3R1, PSEN1, STAT4, TMLHE, MAPKAPK5
Negative_9101	RDX, ACSM1, AGRN, ANAPC10, ARPC3, ARSA, ATP5G1, ATP6VOC, BCKDHA, BCL2, C3orf10, CCL20, CCR9, CD40LG, DOT1L, FCGR2B, FUT1, GJD2, GLYCK, GUCY2D, IL1B, IRS1, LIFR, MPP5, NCSTN, NR1H3, NRG1, OR10H3, OR13A1, OR1L6, OR4S1, OR51L1, PAK2, PGAM1, PHKA2, PON2, PRSS1, PTGIS, RRAS2, SELP, SETD8, SETMAR, SHISA5, SMC1A, SREBF1, SV2A, MAP3K7IP1, PRICKLE1
Negative_9102	JUP, ALDH1A1, CACNA1H, CASP3, GADD45G, NCF4, PAK4

Negative_9103	ERBB4, IKBKB, OR10A6, TAS2R50
Negative_9104	FGA, CYP2F1, HSD17B3, IL3RA, OR5T3, OR8H1, POLE4
Negative_9105	KMO, MSN, CALML3, CPT2, CYP2C9, EPHB1, ERBB3, IFNGR2, IMPDH2, LLGL2, MAPK7, MTMR6, ONECUT1, OR8A1, PON2, PPP1CB, PRKCA, RASGRP2, SYNJ2, MAPK8IP2
Negative_9106	ARSD, FZD7, MAGI2, NOS1
Negative_9107	GGH, IL8, MPI, SDS, SRM, ABLIM3, ALDH1A3, BCL2, CACNG5, CCNB2, CNTNAP2, CYP2A7, DCXR, EDNRB, EPOR, FARSB, FBP2, FGF7, HRAS, IL15RA, INHBB, KLRD1, KYNU, LIMK1, LIPG, MAP2K2, NAMPT, NEUROD1, OR13A1, OR2G6, OR2T3, OR51A2, OR5AP2, OR6C4, OR6K3, ORC1L, PARVG, PDE4C, PDE8A, POLR3D, PRKAG1, PTGFR, SUFU, TNFSF10, VEGFB, WASF3
Negative_9108	F3, AGPAT1, APOE, CCNB1, COQ5, CPT1A, CSF2, DDOST, EFNA1, EIF4E2, FUT4, MPST, MYL5, NCOA4, OR11H6, OR11I1, OR5J2, PAK4, PIGK, PRKCE, PTPN7, TYK2
Negative_9109	ALDH7A1, ALG9, ARSE, BACE1, BUB1, CASP10, CCND3, CD48, CD70, CDC2, CHRD, CYP2F1, EPHX2, GIT1, HDAC1, IFNA6, IL11, ITCH, ITGB3, JAG2, LEF1, NCK1, NCK2, PHKA1, PIK3C3, PLA2G2F, PVRL3, PYCR2, RAP1B, RASGRP3, SOS2, ST3GAL1, SUCLA2, TAS2R40, UGT8, WNT3A, PAFAH1B3
Negative_9110	BID, C3, LAT, APOA2, BCAT2, CACNG4, CCL15, CD34, CD8A, COL2A1, COL5A1, COL6A2, CYP1A2, DAD1, DUSP9, EPHA4, FGD3, FZD1, GANAB, GUCA1B, HSD3B2, IFNA10, IQGAP2, KIR2DS4, LDHA, LTBR, MAP3K8, OR52R1, OR5B3, OR7G3, PLA1A, PLD1, PLOD3, PPP1R3B, RAB23, SDHA
Negative_9111	CRK, EZR, KMO, PLN, RB1, ACADL, AHCYL1, CCL3, CLCF1, CNTFR, CSDA, ECSIT, G6PC, GRIN2D, GUCA1B, HLA-F, HNF1B, HSD11B1, ICAM1, MCEE, OR10AD1, OR2G3, OR2W1, OR51V1, PDK1, PFKL, PPM1D, PPP1CC, PPP2R1B, PRKAR2A, PTPRF, RAPGEF1, RHOD, SPHK1, STAT4, SUCLG1, TRPC1, TYROBP, ATP6VOE1
Negative_9112	ACOX3, CD86, RASGRF2
Negative_9113	C2, FGB, IHH, ME2, ACSL5, ADAM17, ADORA2A, AOC3, ATP5I, AXIN2, BTRC, C1GALT1, CDC25C, DDX51, DHDDS, G6PD, GLI1, IL15RA, IL9R, ITGAD, LALBA, MAP3K13, NAT6, NFYB, OR13F1, OR11I1, OR1N1, OR2B2, OR4D6, OR52E4, P4HA2, PAX4, PDGFRB, PGK1, PPP3R1, PRKCQ, PYCRL, RXRA, SEMA3C, SH3BP2, WNT8B, SLC25A31, TNFRSF11B
Negative_9114	ADC, KDR, SCD, ACVR2B, ADCY4, ALAD, ARHGEF6, BMP2, C4BPA, CCL16, CLDN3, CTSG, CXCR6, DHCR24, FARS2, FARSB, FM05, GALNTL5, GCDH, HSD17B4, ICAM1, IMPDH1, KIR3DL3, LTC4S, MGAT4B, MMP1, MPZL1, MYH7B, NEU3, NKX3-1, NR4A1, NUDT12, OR10K1, OR4K17, P2RX3, PAPSS1, PFKFB1, PLAT, PON1, PPP3R2, RDH10, RELB, SUCLA2, TPI1, TRAF2, TRMT11, UGCG, XYLT2
Negative_9115	BTC, DBH, GCK, ADCY7, AGMAT, ATIC, BCL2L1, BIRC2, C1QA, CDK6, CLTCL1, CMAS, CXCR3, DLAT, DNMT3L, EDNRA, EFNA4, ETS1, FOXO3, GALC, GGPS1, GNAI2, GNMT, HMOX1, HTR2C, HTR4, IL12B, IMPA1, ITGAX, LDHD, MADCAM1, MMP14, MYLK2, NRG1, OR10R2, OR13F1, OR1D2, OR1M1, OR52E8, OR6C74, OR6K2, P2RX7, P4HA1, PRKAR2B, PTK2B, RAP1B, SEMA3C, WBSR22, PLA2G12A
Negative_9116	CD4, DCC, TAT, ACAD8, ATP6V0B, ATP6V0C, ATP6V1A, BNIP1, CDH2, CDK7, CTBP1, DFFB, ENPP2, ENTPD8, ESPL1, GNPDA1, GSK3B, GSTM5, HMGCR, IL10, IL18RAP, KLRK1, MAT2B, MITF, PIGT, PNPO, PTGES2, PTTG1, RAP1B, SEMA3D, SMURF2, SOCS4, STX2, TAS2R3, TAS2R50, THBD, UGCGL1, VAMP4, WARS2, XYLB, CTNNBIP1
Negative_9117	MPL, VCL, AASDH, ABCC8, ACOX2, ADORA2B, ALDH2, CALML3, CDS1, CLDN1, DHCR7, EHMT1, ENTPD5, FM05, FUT8, FZD2, GART, GFPT1, GJA1, HEXA, IDH3B, IFNAR1, IFT57, IL12RB1, JAK2, KITLG, MTAP, NKD1, NOS3, NUDT5, OR2G2, OR4A16, ORC2L, PDE7A, PIAS1, PLXNC1, RUNX1T1, ST3GAL5, TPK1, UGT8



Negative_9118	ACVR1, BCAT2, IFNA13, IRAK3, MCM3, OR2M5, OR4P4, P2RX4, PLD2, PPP2R5B, SLC27A4, TSTA3
Negative_9119	ACSM5, ARNT, ARNTL, ARSE, BMP6, CACNA1E, CACNG4, CDH3, CDK5, CTPS2, CXCL1, DHFR, FMO1, GCLC, GDF6, GRIN1, IFNA10, IL5RA, KIR2DL3, MAP2K1, NFE2L2, NFX1, NSD1, OR14C36, OR1D5, OR2F1, OR6Q1, OXCT2, PGK2, PMM1, PPP2R2A, PRKCZ, SHMT1, STX18, TBL1XR1, TRAF2, VANGL1, WNT7A
Negative_9120	ALG6, CES1, COQ6, EPHA6, FMO3, GALE, GNAL, IL15RA, ITGA1, ITGA2, LDHC, LTA4H, NARS
Negative_9121	CD6, PXN, ALG12, ATP5J, B4GALT4, C1GALT1, CARS2, CD38, CDC23, CREB3L2, EGFR, ELK1, EPHA3, FABP1, IFNB1, NPR1, OR1K1, OR4D6, OR4M1, OR5T1, OR8U1, ORC5L, POLE2, SC4MOL, TBXA2R
Negative_9122	DBH, FGG, ALG9, BAAT, BIRC2, CCL16, CCR5, CDC45L, CSF1R, DGUOK, ENO2, FLT1, GNPDA2, GSTA4, HTR5A, IFNGR2, LCAT, LYPLA1, MAML2, OR13C2, OR6K6, PLAT, RELA, SEMA3F
Negative_9123	ATP6VOC, CCR6, CD48, CYP2A6, DTYMK, FGF4, GGT6, PDCD1, PIGN, PON1, RBPJL, TAP2
Negative_9124	SPN, ACP2, AMY2B, B3GALT5, CD80, CYFIP2, FUT2, IL28RA, OR52L1, PANK4, PLOD1, RAC2, UGDH, XYLT2
Negative_9125	FST, RET, APPL1, GALM, OR6B3, PPP2R5A
Negative_9126	AGK, APP, BTK, F3, ADCY10, AKR1C1, ALAD, BAIAP2, CNTF, DCTD, ENTPD8, FGF17, GALNT12, GNA15, HCLS1, IFNA14, IL15RA, IL18R1, NARS2, OR2C3, OR2L3, P2RX1, PDE1C, PLA2G1B, PLAUR, PNPO, POLR1C, PYCR2, RAC2, RBL1, RFWD2, SUCLG2, YWHAH, PLA2G12B
Negative_9127	GSS, MIF, AGPAT1, AGRN, ALDH6A1, AMDHD1, B4GALT4, BCMO1, CACNG6, COL1A2, ENPP6, GARS, GYS2, HTR4, MRAS, NANS, OR11H4, OR51A2, OR51D1, PDE9A, PIGM, PLCB2, PON1, SCLY, ST6GAL1
Negative_9128	ACOX1, ALG12, AMPD1, BIRC5, CLDN6, COQ3, COQ5, CRLS1, MAPK1, MECR, MGAT5B, NLGN2, NQO1, OLAH, PLA2G2D, PLCB3, PRKAG3, RPS6KA4
Negative_9129	AR, MOS, ACOX3, ACSM3, ADCY8, ARHGEF4, BBC3, CADM1, CDC16, CDH2, DDX4, DGKQ, DOT1L, FGFR1, GADD45A, GRIA3, GUCY2D, HSD11B1, IFNA16, IL1R1, KARS, KLK3, MAP3K12, MLYCD, MYH2, MYL5, NT5C1A, NT5C3, OR52N1, OR52N2, OR5A1, OR6C2, PDGFRA, SIPA1, STX16, KIR2DL5A, ST6GALNAC1
Negative_9130	ALDH1A1, APOA5, ARPC1B, ATF2, BPNT1, C1GALT1, CACNB3, CLDN14, CXXC4, CYP2A7, DDX41, FLT3, GALM, IFNA21, ITGAD, MGST2, NFKBIE, NPR1, OR10G4, OR10J3, OR1K1, OR2H1, PDE7A, PIGN, PPA1, TUBA1C, WEE1, PAFAH1B1
Negative_9131	CD6, AKR1A1, ASNS, BBC3, CNTN2, CSF1R, DGAT2, DTX2, DTYMK, GPLD1, HADHA, HSPA1B, ITGA8, LIPT1, MYL9, NFATC2, OR52B4, ORC3L, PDPK1, SETDB1, SIAH1, ST3GAL2, MAPK8IP2
Negative_9132	GNS, LHB, CLDN14, FOXO1, GSTA1, HAO2, NRAS, OR1G1, PDE11A, PTPMT1, SFRP4, SLC25A6, TP53I3, UGT2A3
Negative_9133	IL4, ACOX2, ACSM4, ALCAM, CCL15, CCL23, CDC14A, CDS2, CLDN1, CREB1, CTBS, CX3CR1, FTMT, FZD9, GCLM, HEXB, IMPDH1, OR2S2, OR4C12, OR52W1, PDE11A, PIGP, PPT1, PTPN6, SRGAP3, TIRAP, TUBB, VNN1, WIF1, WNT11, CSNK1A1L, PLA2G12A
Negative_9134	ADCY5, B4GALT4, CDS2, CTNND1, EIF4B, HTR5A, INMT, MINPP1, MYLK, OR51G1, SEPHS1, WASF1
Negative_9135	TNR, AKR1C4, CEBPA, CPT1A, EDN1, ENPP7, GALNTL2, IL5RA, MCM5, NCAM2, NNMT, OR2G2, PHKG2, PIGC, PPP2R5E, RPN1, SEMA4A, TAS2R42, TCF7L2
Negative_9136	DBT, ACAA2, APOE, B4GALT3, CD82, CES1, CLTB, CYP4F2, DNMT1, GALNT5, GFPT2, GGT1, GRM1, HMOX1, IL11RA, LIPC, MAML2, MYLK, NLGN3, OR2L13, OR51B4, OR5B17, OR5F1, RFXANK, ST3GAL1, STAM, TAS2R8, UGT2B4, VAMP4, ST6GALNAC3

Negative_9137	AK3, CD6, PML, AARS, ACADL, ACO1, AKR1D1, ATP6AP1, AXIN1, CDC27, CNTF, CYP4F2, DBF4, DHRS3, FZD5, GAD2, GALNT14, KRAS, MAPK8, NCAM1, OR4C6, OR52H1, OR6Y1, PFAS, PIGK, PIK3CD, PTCRA, SEMA7A, SMAD2, SNAI2, TALDO1, TAS2R38, TYROBP, ZFYVE9
Negative_9138	PTS, AXIN2, CBL, CCL3, CDKN2A, CHEK1, CPT1A, CYP3A7, FCGR2B, GCNT3, GRIA3, GSTO2, HDAC1, HLA-C, MAN1C1, MAP3K5, MMP9, OR2A12, OR6C4, OR6K6, PPP2R5B, PVRL4, SLC27A4, ST8SIA1, ATP6V0A4
Negative_9139	LCT, AHCYL2, AMHR2, ASCC3, CCR3, CLDN7, COL5A2, GCNT2, IMPA1, LCMT1, OR4D1, OR4K14, PCNA, POLE3, PPOX, TOMM40L, WEE1, YARS
Negative_9140	ADIPOR1, INHBC, MYH6, OR1L4, SPRY4, STAT5A, SERPINC1
Negative_9141	CD6, CKB, DAO, FYN, GK2, PGF, TEC, ACAT2, ADCY1, ADORA2A, ATP6V0B, AVPR1A, CACNA1B, CHIA, E2F5, ENTPD8, EPB41L2, FM03, GALNT7, GALNT8, GNA11, HNF1A, MAP2K7, MGAT2, NCF1, NEU2, NFATC4, OR5D14, OXCT2, PFKL, PGAM2, PIGL, PIK3CB, PLXNA1, POLD3, RCHY1, ROCK2, SHC4, SMAD9, TAP2, THBS1, THBS2
Negative_9142	DCN, HPD, NGF, ACSL4, ADRA1A, ATF4, C1QB, CCR9, CXCL5, CXCL6, CYP3A43, DDX18, GYS2, HHIP, HIP1, MYH2, NARS2, NCR2, OR13C5, OR2M7, OR4K13, OR56B4, PARD3, PLXNA3, POLE, PPP1CC, PPP3CC, PRSS1, PSME3, SHMT2, SKIV2L2, SNW1, TGFB1, UMPS, VAMP2, VANGL1, KIR2DL5A
Negative_9143	AR, ARHGEF4, CIITA, CNDP1, CTNNA2, CTPS, CYP3A43, DTX3L, FASN, GTSE1, HSD17B8, JAK1, MAN1B1, MEF2C, MTHFD1, MYD88, NUDT2, OR2M3, OR8J3, PDE7B, PIGX, PPP1CC, PTK2, RPS6KA1, SCD5, SEMA4F, SMC1B, SMPD4, CSGALNACT2
Negative_9144	ILK, MPI, SCD, ACACA, ACSM4, AKR1B1, C3orf10, CDH3, CTBP1, DHX58, DLS1, EFNA1, FGFR3, FOXO3, GALNTL5, GCLM, HSD3B2, HSPA2, IL10RA, LAMB3, LDHAL6B, LDHC, LEF1, MAFA, MGAT4B, MITF, MMP2, NARS2, NR5A2, OR10H5, OR1C1, P2RX4, PAICS, PLK1, POLE3, POLR3G, PON3, SETD1B, SFRP2, STX16, TUBAL3, TNFRSF12A
Negative_9145	MTR, RB1, ADCY8, CAPN2, CDIPT, CHD8, COX10, CYP2A7, CYP7A1, EIF4B, FLAD1, GAB1, GLB1, GOT2, MGAM, OR5AR1, PDE1C, PDGFRB, PIGS, SELE, SPP1, ST3GAL5, SUV39H1, SERPINC1
Negative_9146	AGPAT6, APBB1, AREG, CDK4, CER1, CHST13, CREB3L1, CTSS, DMGDH, FGF13, GDF5, GGPS1, GRPR, GUCY2F, HSD17B2, ITPA, MS4A2, NME6, NMNAT2, OR4C11, PANK1, PDX1, RBPJL, STAM2, TGFB2, TNFRSF9
Negative_9147	CPT1A, HAAO, HCCS, PKLR, SARDH, SLC25A4, SV2C, MAPK8IP1
Negative_9148	C1S, ID3, NF1, PGD, ACVR2B, ALDH1L1, ALG13, APOA2, ASNS, CCL13, CDC16, CHRNA7, CLDN4, COX10, CYP1A2, DDOST, DUSP5, EFN2, FARS2, FZD2, GNAO1, GOT2, HNF1B, IKBKB, IL1R1, ITGAE, KCNB1, MAOB, MGAT1, MKNK2, NAT2, OR1J1, OR2AT4, OR2L13, OR52D1, OR52M1, PDE3B, PIGF, PIGM, PIK3R4, PPP1R3D, PRKAG1, QARS, RETSAT, SDHB, SLIT1, SPRY3, WWP2, TNFRSF10B
Negative_9149	BMP4, BNIP1, COL1A1, DDX18, GANAB, HSPA8, ICAM3, IRF9, PCK2, PDE10A, PIPOX, TACR2, TICAM1, UGCGL2, WNT5B
Negative_9150	PDX1, SOCS1, STX18, PRICKLE1
Negative_9151	CEL, DBH, GLA, ME2, PGP, ACTB, ADRB2, ASIP, ATP5L, ATP6V0C, BMPR1A, CCNH, CD8A, CEBPA, CLDN22, CMPK1, CSF1R, CSNK1G2, CSNK2A1, CYP2U1, DEGS1, FZD10, GRM1, HES1, IL4R, IPPK, LYZL1, MAP4K3, OR1C1, OR1E1, OR2F1, OR51B4, OR6C75, OR8J3, PAK7, POLR3H, PPA2, PPP2R5B, PRPH2, PRSS3, RPS6KA4, RRAS2, SGMS2, SMAD3, STX16, TM7SF2, TRPM5, SERPING1, SUV420H1
Negative_9152	DUT, GLA, ID3, ANAPC2, ATP5I, CLDN1, EDAR, FSHB, ITGA5, OCRL, OR56A1, OR8S1, PRPS2, RASGRP3, RPN2, RPS6KB1, SRGAP3, HLA-DRB3
Negative_9153	AK2, CDA, AGPAT3, EARS2, GRPR, JAK2, NCSTN, NTF3, OR1C1, OR4L1, OR9K2, P4HA1, PIP5K1B, TGDS

Negative_9154	ATM, CKB, F8, ACSM1, AREG, CHST13, CLTCL1, DAD1, DDX56, FGFR1, GOSR2, GRIA1, IGF1R, ITGB4, JAK3, OR1S2, PLCG2, RAP1A
Negative_9155	AMH, ME2, ALOX15, ATP4B, ATP5J, CACNA1B, CACNA1H, CD47, CD59, CD79A, COL4A1, CSF2, CX3CR1, CYP19A1, CYP2C9, DDX4, F11R, GAD2, GALNS, GALN TL4, GNAQ, LHCGR, MGST2, MYH6, NPR2, NRP1, OR2A5, OR2G6, OR4C6, OR56A 3, OR6M1, OR9I1, PCNA, PPT1, ST3GAL6, STEAP3, TAS1R3, WNT6, XYLB
Negative_9156	GSS, ARHGEF6, BCL10, DDX19A, DLL3, FLT3, GOT2, HSP90B1, IGFBP3, INSR R, IRS2, LAMB4, LIPA, MLLT4, NKX3- 1, NRG3, ONECUT1, OR4D1, OR4Q3, OR51B4, OR8A1, PPP2R1B, PRKCD, SHISA 5, TSLP
Negative_9157	F10, GLA, ABP1, ACOX1, ATP4A, CCL20, CD226, CHAD, CLTCL1, FPGS, GPAA1 , GUCY1A2, HCLS1, HHIP, IDH1, IL2RA, IQGAP1, MAGI1, MAP3K6, MAP3K7, N ME6, OR10A7, OR10R2, OR51A7, OR51G2, OR5A2, PAX8, PPA2, PPP5C, STEAP 3, TAS2R16, TAS2R41, TSTA3, PAFAH1B2
Negative_9158	UBB, ACPP, ADAM17, ARPC5L, ASNS, BMP5, CARD11, CCR9, CDH3, CHPT1, DRD 1, GLI1, IFNA5, INSRR, IRS4, ITPKA, MYH3, NCF1, NEUROD1, ODC1, OGDH, O R56A3, OR5K2, SMPD1
Negative_9159	F3, ACACA, CAPN2, CDH5, CDS1, CKS1B, CLDN20, CLDN5, CYP4A22, DUSP7, E RBB4, GSTM5, HTR4, MAD1L1, OR13C8, OR1N1, OR4C6, OR5AS1, OR6K2, PRKA G1, RASSF5, TGDS, UMPS, WNT10B, YWHAE, ZFYVE16, KIR2DL5A
Negative_9160	CBS, LTB, ADH4, ADORA2B, APH1A, ATP5G1, CDH5, CRY1, CTBP2, CYP2A6, CY P2S1, EFN1, GLG1, IKBKG, KCNB1, LAMC2, LCP2, LDHA, MTHFD1L, NCF1, NC K1, NFE2L2, NFKB2, OR4A16, OR56B4, P4HA2, PI4KB, PLOD1, POLR3A, PTPN 1, RDH8, STMN1, TAS2R9, UCK2, ULBP3, VEGFB
Negative_9161	B3GNT4, CASP8, PPP2R1A, QPRT, SEMA7A, ST8SIA5, PHOSPHO1
Negative_9162	TPR, VCL, ACAA1, ACY3, AFMID, ALCAM, AMPD3, ARG2, CACNA1F, CD82, CHRM 5, COASY, COL4A1, CSNK1D, EDA2R, ENAH, FMO1, FUT5, GABARAP, GMDS, ICO SLG, IDH3G, IFNA17, MYH9, NEFL, NT5E, OR4K17, OR4K2, OR56A4, PLA2G6, PNPLA3, PRKAB2, RND1, XIAP
Negative_9163	ADK, BTD, F8, LYN, ALAD, ANAPC5, ARHGEF2, CSNK1D, DEGS1, GGT5, LFNG, M APK8, OR51E2, OR8H1, P4HA2, RPN1, RPS6KA1, SULT1A1, TLN2, GABARAPL1
Negative_9164	C2, F12, LCK, AKR1B10, ATP5B, ATP5G2, CAMK2D, CCNG2, CDH4, CHSY3, COL 6A2, COQ5, CRKL, CYP2F1, DOCK1, ENO1, FGF4, FGF7, GANC, GNAT3, IL6R, L TC4S, OR10H1, OR11G2, OR2B11, OR4C46, OR4Q3, PARS2, PDE1C, PGAM1, PI K3C3, PLCD4, PLOD3, POLR2G, PRDX6, RPS6KA3, SEMA3D, SEMA4B, SNAP25, TACR2, TJP3, TYMP, UGT2B28
Negative_9165	INS, MET, RPE, TK1, ABLIM1, ADCY7, AKR1C4, ALG11, APBB1, ASS1, B3GNT4 , B4GALT5, BAIAP2, BPGM, EDNRA, ESPL1, FLT4, FRAP1, G6PC2, GNAS, HAAO , HCLS1, HLCS, IL18R1, IL2RG, ITGA2, MAN1A2, MTFMT, MTHFD1, NFYC, NUM B, OR2T4, OR51G1, OR52J3, OR8H3, PDE4C, POLR2B, SCP2, SETDB2, SLC27A 5, TAS2R48, WEE1, ATP6VOD1, ATP6V1G2
Negative_9166	IL6ST, OR14I1, OR5A1, PANK4, PDE1B
Negative_9167	TH, ACAD9, ACY1, ANGPL4, ATP5C1, B3GALT2, B4GALT1, CD27, CFL2, CLDN 11, CLDN17, CTBP1, DVL3, EARS2, ERBB2, EXTL3, FGF23, FUT6, GCNT4, HAG H, IL18, IQGAP1, IRAK3, LCMT2, LDHC, NLGN1, OPLAH, OR2L8, OR4A5, OR5A P2, PARD3, PFN1, PPAT, PSME2, PTK2B, RALBP1, SARDH, SETDB1, SFRP4, SL IT1, SMPD1, SNW1, STEAP3, UPB1, VANGL1, VARS, SERPINB5
Negative_9168	C9, DCN, ACVR2B, ALOX12B, ARRB2, BAIAP2, CACNA1C, CCL7, CHDH, DTX1, E NAH, FZD9, GALNTL4, GNA12, GNB1, GUCY2C, IRF7, ITGA7, ITGB6, NRG1, OR 2M5, OR7C1, PIK3C3, PRKAG2, ST3GAL6, TNFRSF9, WNT8A, MAPK8IP1

Negative_9169	PRL, RDX, ACTC1, ACTN1, ADCY4, ADIPOQ, ATG7, B3GALT4, BMPR1B, CCNG1, CD44, CDS1, CHPF, CNGB1, COMP, CYP19A1, DIAPH3, DVL3, EARS2, ENPP3, E NTPD3, GCDH, GNAZ, HHIP, IL1B, IL28B, IL8RB, MASP2, OPLAH, OR1Q1, OR5 6A4, OR5L1, PIGL, PIGU, PIK3CG, PIP4K2A, PON2, PTPRJ, RAB23, RDH12, R RM2, SMAD5, TPMT, TRPM5, UGCGL2, VDAC2, WHSC1L1, XYLT2, ST6GALNAC4
Negative_9170	ALDH3B1, DRD2, MCCC2, OR7D2, SEMA7A
Negative_9171	DCN, NLK, PGD, CFTR, KITLG, LIMK2, OR2A4, PHGDH, PLA2G1B, SMAD5, SOCS 3, TICAM2, WNT7B, HLA-DPB1
Negative_9172	C7, AVPR1A, BACE2, FGF2, IL21R, MGAT4A, NMNAT1, NTN1, OR51B2, P4HA2, PDE10A, PDE7B, RERE
Negative_9173	EIF4E, IFNAR2, NRG2, PHKA2, PRPH2
Negative_9174	BTK, F2, ALDH7A1, ATP12A, ATP6V1F, CASP9, CD38, CHPT1, CHST12, CSNK1 E, DCXR, FGF11, GUCY1B3, HLA- DOA, HSD17B4, HSPA2, IFNAR2, IKBKG, IL1A, KIR2DL3, MBL2, MIOX, NODAL , NSDHL, OR13H1, OR2G3, OR4C15, OR5I1, OR5J2, OR7A10, OR8I2, PIP5K1B , PLA2G2F, PSENE1, PSME3, RHOA, ST3GAL4, ST6GAL1, SUCLA2, SULT1E1, T AS2R49, UBE2L3, HLA-DRB5
Negative_9175	SPN, ACSM3, ADH4, ALDH4A1, ALPL, CCND1, CFL1, CFLAR, CLDN17, CTLA4, C YP2F1, DPM2, ENAH, ENO3, GAPDH, GCLC, GLUD1, GMPPA, HLA- C, IL24, MAP3K8, MAPK14, NCAM2, NUDT9, OR10V1, OR13C8, OR2T2, OR4N2, OR56A4, OR9G4, OR9Q1, PRSS2, RDH5, SELL, UPP2, ZFYVE16
Negative_9176	TYR, CAMK2B, CEBPA, GYS2, P2RX2
Negative_9177	NPY, FGF12, GADD45B, GLUL, LDHD, OR4M1, PIGA, VARS, TNFRSF17
Negative_9178	LCT, ADH7, CCL15, CCL5, CCNA1, DCXR, DUSP2, EIF4B, FZD2, GNRH1, GPA1 , MTHFS, NLGN2, NOTCH3, OR51M1, OR5K1, OR7A5, PDE6G, PDK1, PPCDC, SHC 3, TRAF1
Negative_9179	XDH, EREG, FGF8, NR4A1, OR1L8, PRDX6, RASA2, SOCS7, WWP1, PAFAH1B3
Negative_9180	CRH, GLS, GP9, ACVR2A, CSNK1E, CXCL13, CYP11B1, DAPK1, ETNK2, FGFR3, FLT4, IDI1, IQGAP3, MAN2A1, MAPK9, MTHFD2, NMNAT3, NQO1, NRG4, OR1F1 , OR6C70, PGAP1, PLCB3, PRODH, PRPH2, RPS6KA3, SOAT2, THBD, TSC2, TST A3, UGT2B11, WARS, HSP90AA1
Negative_9181	C1S, OAT, ACLY, ARSA, C3AR1, CD70, CDK5, CERK, CHD8, CNTN2, CYP1B1, CY P8B1, DGKB, DUSP3, GCNT2, GSTM1, HSD11B2, IFNA21, IL25, KLRC1, LYPLA 2, MAN1B1, MFNG, OR13C5, OR2A5, OR2D2, OR51B4, OR5F1, OR7D4, P2RX5, P AK3, PIP4K2B, SPCS1, TUBB3, VANGL1, WWP1
Negative_9182	FGG, FYN, PC, ALDH1L1, ALDH5A1, APC2, ARSB, BMP6, DAXX, DDX54, FOXA2, FUT2, GMPR2, IDI2, LARS2, OLR1, OR1A2, OR2T33, OR52B6, OR52R1, PIP5K 1C, SPHK2, ST8SIA5, TKTL1, TNXB, YARS
Negative_9183	ID4, ME3, ADH5, ALG10B, AREG, ARHGEF1, B3GALT2, COL6A2, CTTN, CYP4F2 , ENAH, FZD8, GABARAP, GALNT11, GLI1, GNG13, GRPR, GZMB, HTR2C, JAK3, LAMC2, MAPK3, MDM4, MYL9, NEUROG3, NOS3, NRP1, OR51A7, OR5D13, PAK3, PMVK, PNLIP, SLC2A4, TKTL2, UGT2B10, VKORC1, TNFRSF11A
Negative_9184	GHR, LYN, MAG, ME1, ACP5, ALDH5A1, C4BPA, CLTCL1, COMT, COX10, CYP3A7 , DLL1, FUT4, GLO1, GNA14, GPAM, GPD1, GSK3B, GSTZ1, HA02, IFNA4, IL8R A, INSR, ITGB1, LEF1, METTL6, NFKB1B, NKX3- 1, OR10T2, OR2T33, OR51F2, OR52K1, OR52N1, OR56A1, PARVG, PPA1, PPP3 CC, PVRL3, STX1B, TUBB6, UNC5D, SERPINF2
Negative_9185	ACACA, DDX19A, EREG, F2RL2, HADHB, INPP1, LALBA, LAMB2, PLXNA2, SC5D L, SPHK2, UNC5C, WNT7B
Negative_9186	F12, ID1, AC02, ACTN2, ACVRL1, C1QA, CACNA1S, CD46, CDC45L, CDH3, COL 5A1, CYP1B1, DDX52, DIAPH2, EIF4B, FARS2, FDPS, GSTZ1, GUCY2C, HDAC2 , HNF4G, INPP4A, LAMB2, LAMC1, LAMC2, LDHC, MAD2L1, MAGI1, MMP14, MYH 4, NEUROD1, OR2T29, OR3A3, OR51D1, OR52A1, OR7A17, PAK7, PNPO, PPM1B , PRKCQ, PYGL, RBPJ, RDH8, SOCS4, HLA-DQB1

Negative_9187	BID, KHK, ADAM17, AKR1C1, APOA1, ATF4, ATP5E, CAMK4, CPT1C, CRLF2, DD X47, DHRS4, FGF9, GGT7, GRIN2A, GSTM1, HNF4A, ICOSLG, IL9R, INHBB, IT GAM, JUND, LGMN, MADCAM1, MAPK13, MYH7B, NR5A2, OR1N1, OR2M2, OR2M7, OR2T10, OR4M2, PER1, PPP1R3B, RASGRP4, RPS6KA4, TAS2R42, THBD, TLN1, TSTA3, WASF1, ZFYVE9
Negative_9188	PGF, NAGS, NTN1, PON3
Negative_9189	AK2, ID3, LIF, NNT, PVR, ALG1, APC2, C3orf10, CCL11, CMPK2, COQ7, DAG1, DGKQ, EFN3, ENTPD1, G6PC2, GGT5, GLO1, GNRH2, IL10RB, KIR2DL4, LAM A4, MOV10L1, NARS, NEU1, NME6, NPR1, NT5M, OR13C9, OR13D1, OR2T12, OR 4D6, OR51B5, OR52L1, OR5D18, P4HA1, PIK3R5, PLCB1, PLOD3, PNPLA4, PO LE3, PRKAG1, PSME1, PSME2, QARS, SMAD7, SSH1, STX16, UROD
Negative_9190	C6, ALG1, CD48, CLDN11, CNGB1, CSNK1G3, DCTN1, EI24, GGT5, GUCA1A, GU SB, IFNB1, OR1E2, OR2Z1, OR5M9, PANK3, PARVG, PFN1, PHKB, PIK3C2G, PP A1, PPP2R2A, SHC4, SLC33A1
Negative_9191	AOX1, CDK4, GPAM, ITGB8, OR51T1, PFN4, RBPJL
Negative_9192	GRAP2, GRM1, HPSE
Negative_9193	TH, ACTA2, AKR1B1, ANAPC2, ASCC3, B3GAT1, CCL16, CDC20, CSNK2B, CYP1 1B2, DIAPH2, GNAS, GUK1, ICOS, IMPDH1, LAMB3, OR10H4, OR2B11, OR2M7, OXCT2, PIK3R4, PLXNC1, PTGIS, RAB23, SCD5, SFRP5, SH3BP2, SMURF1, ST X8, HSD17B10, ST6GALNAC6
Negative_9194	AASDH, CAMK2A, CCL16, CDKN1B, DGKQ, ENTPD6, FARP2, FUT1, HCLS1, HSPA 8, IDH2, LARS, OR14I1, OR2C1, OR2D2, OR4K2, OR8B4, PDE10A, PIM2, PVRL 4, SENP2, SETD8
Negative_9195	AK3, SI, AADAT, ALPPL2, ARPC2, CCL15, CHST13, CPT2, ETS1, FMO1, GSTA4, HSPA8, ITGA1, KLRC3, MAP3K3, MAPK1, MYD88, MYL9, NFKBIA, NUDT8, OR1 3J1, OR1J4, OR5B17, PIGQ, PKMYT1, STX3, TAS2R42, WNT5A
Negative_9196	LCT, ATG3, BDH1, CBLB, CREB3L2, FUT1, MYLK3, NPR1, OR4N4, OR6C6, PFKF B2, PPBP, PPP3CA, PRKCD, PRKCE, SH3BP2, ST3GAL2, STK4, VTI1B, B4GALN T1, GABARAPL2, HSD17B12
Negative_9197	IL8, MET, TAT, ACTN4, ASRGL1, CCND1, CCND2, CNTN2, CTPS, DUSP3, ENO1, GUCA1A, HSD17B4, LTB4R2, MAML2, NOTCH1, OR10J1, OR1D5, OR2A14, OR4C 13, OR4D2, OXCT1, PPP1R1A, PRKG2, SMURF2, TBK1, YWHAG, HLA- DQA2, TNFSF13B
Negative_9198	GH2, KMO, TPO, ADCY8, ALDH1A1, CYP2C9, F2RL2, FZD3, KLK3, PLD1, POLR2 J, PPP1R3A, SLC2A2, SMAD9
Negative_9199	NUDT9, PDE11A, PIGP
Negative_9200	IL6, RFK, ACSS2, ATP6V1D, BIRC2, CACNA1H, CASP8, CHEK2, CREB3L2, CXC L12, CXCL13, EPHB6, FUT2, GALNTL1, NEFL, NFX1, OR2V2, OR4M2, OR51B4, OR56A1, OR5A2, PLD1, PPT1, SARS2, SHC3, ULK3, UNC5C, WNT2B, WNT3, HSP 90AB1, PRICKLE1
Negative_9201	HPD, A4GALT, ADH4, ADIPOQ, APOA5, ARSA, ASAH1, ATP12A, ATP2A2, CACNA 1F, CCDC6, CDS2, CLDN19, DHX58, EFN3, EPHB1, F2RL1, FARSA, FASN, GAL NT8, GGT7, IFNA8, IL22RA1, IL29, INPP5A, MMP14, NEFH, NEU3, NOS1, NT5 M, OR10A6, OR10G2, OR10P1, OR12D3, OR1L1, OR2M4, OR2Z1, OR4C11, OR52 I1, OR5B3, PDE3B, PI4KB, PPP2CA, PPP5C, SUCLG2, TUBB2C, SLC25A31, ST 6GALNAC3, TNFRSF1B
Negative_9202	F2, FH, XDH, ACAT2, AKR1A1, CCNA2, CCND1, CDK5, COL3A1, CPT1A, CYP11A 1, CYP4A22, EFNA2, FECH, GLUD2, GSTM1, IDH3A, IFNA5, IL8RB, KIR2DL4, NAT6, OR10S1, OR2A5, OR52I1, OR6F1, OR7D4, PIGP, PLCD4, RXRB, SMPD4, TKTL1, TUBA1C, YWHAH, B3GALNT1
Negative_9203	TK2, ACAA1, ACSL6, ACVR1, ALDH1A1, B4GALT1, CYP21A2, EPHA4, FLT4, GP D1, IRF5, MAOB, MCM6, NTRK2, OR51G2, OR51S1, OR5D13, OR6X1, PDGFC, PO LE3, PRKCB, PTCRA, RHOQ, RRAS, SEMA4A, SLC25A4, SLC2A2, ST3GAL6, TRA F1, XCL1

Negative_9204	C7, SPN, ACADL, ADSL, ALDH1B1, ALG10, ALOX12, ATP6V1A, BLVRA, CASP7, CLCF1, COQ7, CXXC4, EGLN1, ENTPD1, FOXO3, GNPAT, GNRH1, HDAC2, ICAM3, IKBKG, IL21R, IL2RA, LARS2, MAN1B1, MAPK13, NEU4, OR1B1, OR1J2, OR2AE1, OR52N1, OR5D13, OR8H2, PAX4, PDE9A, POLE4, POLR2F, RIPK1, SELPLG, SHC2, TUBB6, XIAP, ZFYVE16
Negative_9205	F8, GALNTL5, SEMA3A
Negative_9206	CD4, ACSM3, ACVR2A, ALG12, ATP6V1F, C3orf10, CD47, CDC42, DEGS2, FGF2, FGF8, GALNS, KDSR, OR10C1, OR2L2, OR5T2, PDE5A, SARDH, SPRY1
Negative_9207	HGF, NGF, NOG, OGT, SMS, ACVR1, ALDH1A2, ASPA, CALML6, CCR2, CDS1, COASY, CYP11A1, DGAT2, DUSP5, GALNTL2, INHBE, ITGA7, KAT2A, MAP4K2, MMP2, NEU2, NPAS2, NRCAM, NUDT5, OR2T6, OR51L1, PI4KB, PIK3R1, PLCE1, PMM1, RFX5, SELPLG, TAS1R1, TAS2R50, TFPI, WNT4, XYLT2, PAFAH1B2
Negative_9208	LPL, PGP, SYK, ACOX3, APC2, CLDN20, CRB3, DKK2, ENTPD4, GALNT8, GATM, GCNT2, GSTM1, IL13RA1, IL2RB, MAPK3, MGST3, NANS, NFATC4, NTNG1, OPLAH, OR52I1, OR52K2, ORC5L, PDXP, PFN1, PTPRZ1, RAP1B, TAS2R5, TNFSF10, TYMP, UGT1A10, ATP6VOA2, B3GALNT1, HSP90AA1
Negative_9209	ARPC1B, CCL16, CCL22, CLDN4, CXCR4, EPB41L2, HMGCR, MMP9, MYH3, NEU2, PPCDC, PTGES, RASGRP1, STX12, TBXAS1, CSNK1A1L
Negative_9210	ABO, MOS, MVD, XDH, ALDH9A1, ATIC, CHST11, COL4A2, CSF2, GRIA3, GSTT1, HRH2, ISYNA1, NTRK2, OR2T33, OR4F15, OR6C1, OR6Q1, PAK6, PIGU, PIP5K3, PPP1CA, PSENNEN, RALB, SPRY2, STX2, TBL1XR1, TBXA2R, TP53I3, TRAF4, TUBA3C, UCK2, ATP6V1B1
Negative_9211	DLAT, GUCY1A3, MGLL, OR4N2, PMM1, PRNP, PSME3
Negative_9212	RET, ASCC3, ATG12, AVPR1A, CACNG5, CALML3, CEBPA, CLDN8, CNGA3, COL5A3, COX10, CPS1, CXCR3, CYP7A1, DHDDS, DIAPH1, FARP2, GSTO2, INHBA, IRAK2, ITGB7, MINPP1, MLYCD, MOV10L1, NME6, NTF3, OR10A5, OR10G8, OR1OH4, OR1A2, OR1D2, OR4B1, OR4D6, OR51A7, OR52E2, OR6M1, PARD3, POLR3D, PPA1, PPP1CB, PSENNEN, RPS6KA5, RUNX1T1, STX12, TAS2R3, TAS2R41, TNFSF10, VKORC1
Negative_9213	MSN, PXN, SCD, AK3L1, ALDH1A1, ALG2, ALS2, BCAT2, CCL4, CHRDL, CLDN18, CYP4F3, EHMT1, FCER1G, GPX5, INPP4A, ITPKA, LAMB4, LDHC, NTSR1, OR2A12, OR4N4, OR5D13, OR6N1, PDX1, PHKG1, PIGU, PISD, PPP2R2D, PPP2R5E, SPHK2, SPRY3, WNT9A, XYLT1, CSGALNACT1, HLA-DPA1, MAPK8IP1, ST6GALNAC3
Negative_9214	IL2, JUP, PVR, AMPD3, BBC3, C7orf16, CDKN1B, CNTNAP1, CYSLTR2, EDN1, EGFR, FGF10, GALM, HSD17B4, INPPL1, LDHAL6A, OR2A25, OR2L2, OR2T6, OR51V1, OR52E6, OR52M1, PANK3, PNPLA4, POLR1C, PPP1CB, PPP1CC, RPN1, MAPK8IP1
Negative_9215	HK3, ACTN1, ADCY3, AGPAT4, ARPC1B, BMP4, CAMK2B, CCL15, CCNE2, CCNG2, EPHA5, FM04, GCAT, GDE1, GLO1, HDAC1, HDAC2, ITCH, LTB4R2, MAP2K2, MYH6, OR2M5, OR52I1, OR5L1, PAK3, PDE5A, PDE7A, PIP5K1A, PPAP2B, SEMA4C, STX8, TNFSF8
Negative_9216	NOG, ACAD9, ALG11, BCAT1, DUSP3, EFN2, FABP4, GOSR2, IL1R1, POLR2I, SDC2, STAM, UGT2A1
Negative_9217	ATIC, CRY2, DAXX, IL8RA, ITPA, LAMA3, MYH10, NLGN3, OR4F15, OR6A2, PLA2G12B
Negative_9218	B4GALT7, CAMK2B, CSNK1G1, DARS2, ERBB4, HMOX1, MYH7, PIK3C2A, PLOD3, SPRY1, TUBA3C
Negative_9219	CP, F5, TAT, AOC3, B3GAT1, CNTN2, EDA2R, ESAM, FGF6, FGF7, GBGT1, GGT6, GNA15, HLA-F, HSD17B8, IDH2, IL12A, IMPA1, LRAT, LTA4H, MAP2K4, NAT5, NUDT8, OR1OG9, OR14A16, OR1D5, OR2AE1, OR4D1, OR52J3, P2RX1, PGK2, PIK3CD, PLA2G2A, PPID, PPOX, PRKACB, PRPS1, SELE, SEMA4B, SHC4, SUCLA2, SYNJ2, ATP6V1G3, MAPKAPK5

Negative_9220	ASL, SRC, ACY1, ADCY6, ADRA1D, B3GALT5, BCKDHA, CD244, CD40, CHSY3, D HFR, FGD1, FGF12, FGF13, FUT1, FUT8, IDUA, ITGA10, ITPKB, LAMA4, LGMN , MTFMT, MYH11, NR4A1, OR4D6, OR4F17, OR4K13, OR51A7, OR51E2, OR6Q1, PDE3A, PIM1, PIPOX, PNLIP, PNPLA3, RPS6KB1, SLC25A5, SLIT2, SPHK1, S PTLC2, SV2B, TGFBR2, THBS2, UCP1, UGT2B11, WNT8B, ATP6V1C1, MAPKAPK 2, TNFRSF10D
Negative_9221	NPL, SYK, TFG, CDK6, HIF1A, LTBR, PIGU, SAT1
Negative_9222	ADO, AMDHD2, CAPN2, CCL7, CES1, CMAS, CMPK1, CSF1, GGCX, IDH2, MAP2K7 , MTHFD1, MTMR1, PLA2G1B, PNMT, PRKCE, TAS2R48, TGFBR1, TPM3, WHSC1
Negative_9223	IDS, ALDH3B1, CARD11, CRKL, CYP2U1, DAAM2, FGF19, FGF2, GMPR, INPP4A , ITGA5, MAP3K5, MGAT5, NEUROG3, NGEF, OR14I1, PDGFD, PTGDS, PTGFR, R RM2, TUBA8, VAMP3, HLA-DPB1
Negative_9224	CS, GBA, AADAT, ALAD, CACNG3, CADM3, CANT1, CD72, CXCL10, CYP2C9, DRD 5, DUSP4, EGFR, FCER1G, GAB1, IFNA6, IL18RAP, IL28RA, ITGA3, NRG3, OR 11A1, OR14A16, OR2F2, OR2T29, OR8D1, POLD4, POLR2E, PTPMT1, RARS2, R PSA, SEMA3B, SLC9A1, THBD, TLN2, ULK3, MAPK8IP3
Negative_9225	FUK, TNF, APBB1, ATG7, BMP8A, CCNA1, CER1, CES7, CLCF1, CXCL3, FMO3, F RAP1, GUCA1B, IL15RA, IL20RB, LAMB2, MGAT3, NODAL, PLK1, PLXNB2, SIP A1, SLC12A2, SLC25A4, SMPD2, SUV39H1, TMLHE, UNC5D
Negative_9226	F2R, GLS, ID2, SHH, SPN, TXK, ACOT12, AVPR1A, B3GAT2, BST1, CANT1, CAS P3, CCL22, CCNB1, CHKA, CREB3L4, CX3CL1, CYP2E1, CYP3A43, DGKB, EPRS , ERBB3, FUT6, IBSP, INPP4B, KLKB1, LIPG, MAOB, MITF, NME4, NOTCH1, OR 2D2, OR2T5, OR51G2, OR5M9, PPOX, PTPN5, RASGRP2, RHEB, RPS6KA6, SEMA 4B, SLC33A1, SPRY1, TALD01, TRDMT1, XIAP, GABARAPL1, PPP1R12A, SERP INA1
Negative_9227	ADK, FH, GPI, ME2, ACADSB, ACSM1, ACVR1B, ACYP1, CCL19, CD8B, CHPF, CL DN10, CLTB, CSNK2A1, CYP1B1, CYP3A7, CYP4A11, EPOR, FZD9, GAMT, GLI1 , ICAM3, IL21, IL29, IRS2, MGST2, MYL5, NT5M, OR10G9, OR11L1, OR4E2, O R6C4, PDE3A, PEMT, PRPS2, RFXANK, TAS2R38, TRPM5, YWHAZ, CSGALNACT1 , GABARAPL2, MAPK8IP2
Negative_9228	EDA, HK2, LEP, ACTA1, ALPPL2, ATP6V1H, CASP10, CCL24, FZD6, IL13RA2, ITGAX, KIR3DL3, OR4F17, PRKAA2, RPRM, SELE, SGMS2, SH3BP2, TAS2R3, T NFRSF4, TNFSF8, UCK2, UPP1, VEGFB, HSD17B12
Negative_9229	GK, MOS, MPI, PVR, ALCAM, ALDH1A1, ATP5C1, ATP5G2, CD19, CDH4, CLDN2, CREB3L2, GART, GJA1, GJD2, GUCY1B3, HYAL1, IQGAP1, LEFTY2, MAP3K13, MYL7, NOTCH3, OR4F4, OR4L1, OR51M1, OR51S1, P2RX7, PDGFRB, PGAM4, PI K3R3, PKM2, PLA2G2D, PRSS3, RASGRF1, SELPLG, SIAH1, ST8SIA1, STAM2
Negative_9230	BAD, ID2, ARSB, CSF1, DDX47, EPB41L2, FCGR3B, FGFR3, IL11RA, INSRR, I TGAL, ITGB4, LDHA, NTSR1, OR2T33, PIM2, PLCD1, PROC, PYGM, RASGRP3, R BX1, SYNJ2, TIAM2
Negative_9231	AK1, ACACB, ALDH1L1, ALG13, APBB1, BACE2, BMP4, BMPR1B, CD55, CDC27, CIITA, CLOCK, COL4A1, CSF2, CYSLTR1, DDOST, DDX18, EPHA7, EPHX1, FUT 1, GRM5, HIBADH, IFNA8, KLKB1, MAP4K4, NR5A2, OR13J1, OR14J1, PFKM, P LA2G2F, POLR3A, PPP1R3D, PTGIS, RALGDS, ST3GAL5, STX7, TGFB3
Negative_9232	C1S, IL9, MYC, PDC, ACP2, ACTN1, ADH1A, ALOX12B, APC2, CACNA1G, CD19, CKS1B, CTSS, CX3CR1, CXCL12, CYP17A1, DPYSL2, DTX4, ENPP2, GUCA1A, H MGCS1, IFNA17, JAM2, MAP3K14, MCM2, MYH15, NRXN2, OR1S1, OR52N4, PCC B, PDE1B, PROS1, STAT4, STX10, TNFSF9, WASL
Negative_9233	BID, CDA, DBI, GLS, ABAT, ACSL1, ADCY4, ANAPC5, AOC3, APC2, BLVRA, CAN T1, DGKE, DUSP10, DUSP3, GALNT10, GOT1, GRLF1, IAPP, IDH3A, INPP4B, K IR2DL2, MYH7, NEU4, NFYB, OR10A7, OR10G8, OR11H4, OR12D3, OR13G1, OR 2T8, OR4E2, OR51G2, OR52N4, OR5AC2, OR6B2, OR6X1, P2RX3, PKM2, POLR2 A, SLC27A4, SUV39H2, TAS2R16, HLA-DRB5

Negative_9234	DBT, ME3, VTN, ADH7, AKR1C1, ALDH3A1, CCL28, CCL3, CLDN19, CTTN, DPM2, DTX1, DVL2, EDA2R, F11R, FGF20, FOXO1, GALC, GOSR2, GRIN2B, ICOS, IL2RB, IQGAP1, MAPK9, MGAT4B, MKNK2, MPP5, NANP, OR10G2, OR1A2, OR1Q1, OR52I2, OR52R1, ORC2L, POLR1A, POLR3A, PTCRA, PTGS1, RALBP1, SELP, TKT1, VANGL1, XYLB, SERPINC1
Negative_9235	CP, PC, AKR1D1, CHKB, CHST11, CSNK1A1, CTSS, DPM1, FGF14, GAD1, GALC, GAPDH, GMPPA, GRIA3, JAK1, KIR2DS5, MALT1, NANS, NFKBIB, NPR1, OR14C36, OR51T1, OR52N2, OR8H2, PHKA2, PPP2R5C, PTCRA, SDC4, SSH1, TNXB, A TP6V1G1, GABARAPL2
Negative_9236	ATG3, BCMO1, BDH1, BPGM, CCND3, CES2, DPYSL2, EPHB6, INHBB, KIR2DL2, MIOX, OR4K5, OR51L1, P2RX1, PAX4, PDE6D, POLR1D, POLR2K, PTPN11, RDH11, SDHC, TAS2R9, YWHAZ
Negative_9237	C6, CFD, KDR, SCD, ADCY3, AKR1C1, ALOX5, AMDHD2, BIRC2, BLVRA, CACNA1S, CNTNAP1, DMGDH, EDNRB, EFNA5, FDPS, FGF10, FRAT1, GALNT14, GALNTL4, GP1BB, HES1, MARS2, NT5E, OR2B6, OR2W1, OR51T1, P4HA2, PCYT1A, PECAM1, PGLS, PLA2G2F, POMC, PPBP, PPP2CA, PPP3R2, SIGLEC1, TPK1, UPRT, MAPKAPK5
Negative_9238	EDA, F9, GSR, RET, ACMSD, ALDH2, ATP6V1D, C1QA, CD27, CDK6, COL6A1, CRHR1, CX3CL1, CYP1A1, CYP2S1, EPOR, ETS1, F13B, GCLM, GSTA3, HES1, HTR5A, IL10RB, IRAK3, MCCC2, NRG1, ONECUT1, OR2C3, OR2T3, OR5AU1, PAFAH2, PHGDH, PHKA2, PIGT, PLCD3, POLE3, POLR1C, PPP3R1, PVRL4, SEMA4A, SLIT1, STAM2, TMLHE
Negative_9239	BCR, HAL, IHH, AADAC, AADAT, ACVR1, ADCY1, AKR1C1, ALCAM, C1QB, CERK, EDAR, EDNRB, FUT8, GCLC, GNAL, HMGCL, ICOS, MCM4, MTMR1, NOTCH3, OR4D1, PPP5C, PRPS2, SDC2, SIAH1, TAS2R3, TBL1Y, WHSC1L1, WNT7A
Negative_9240	BAX, OAT, ABLIM3, B4GALT5, CREB3, CYP2D6, ESPL1, GLUD2, GSTA4, GZMA, HTR5A, IL12A, MMP9, NCOA4, NUDT12, OR3A3, OR5B3, OR6N1, OR8B4, OR9A4, PFKFB3, PIAS4, PLA2G5, SMAD7, TACR2, TMLHE, TSHR, TUBA3C, TUBA3E, XCL1
Negative_9241	DCN, B4GALT7, CFL2, EPHA2, MAPK12, NR1H3, PDHA1, PRKACG, TPI1, UNC5B, UROD, WBSR22, YKT6
Negative_9242	NGF, PC, SHH, ANPEP, BLVRB, CCL1, CCL27, CD247, CHKA, CHKB, CNGB1, CSDA, CYP2D6, DDX51, DERL1, ETS1, GNG12, GOT2, HAP1, IL9R, JAG1, LIMK1, MPST, OR2A12, OR52K2, PAFAH2, PAPSS1, PPP3R2, PPT1, PRKG2, PVRL3, QPRT, RALGDS, RRM2, SEPHS1, SORD, SOX17, TUBA3E, VTI1B, C1GALT1C1
Negative_9243	C3, C4B, C8G, PC, PDC, ADH6, AGPAT1, BCKDHA, CPT1C, CXCR3, EGLN1, GUCY1A3, GZMB, HEXA, HTR2B, ICOS, IL22RA2, ITGA10, LLGL2, MAP3K3, MAP3K5, MAP4K3, MCAT, MDH2, NEFH, NT5M, OR1N1, OR1Q1, OR2M2, OR3A3, OR8K3, OXCT2, PARD6G, PDE2A, PERP, PPOX, RASGRP3, SOAT2, STK36, TNFRSF8, TUBB1, ST6GALNAC3, TNFRSF1A
Negative_9244	EBP, IL2, ALOX12B, BAIAP2, CCL2, CCR3, COL11A1, CRB3, DUSP2, EDA2R, ENTDP8, EPHA7, FASN, GJD2, HA01, IDI1, IGF1R, ITGA3, ITGB1, METTL2B, MP14, MMP9, NFKB2, OR10A6, OXTR, PAPSS2, PDE2A, PLA2G2A, PLK1, PTCRA, PYGL, RFXANK, RRM2, TACR2, TNFSF8, TUBB2B
Negative_9245	LHB, B3GALT1, CD55, CXCL13, GFAP, NT5M, OR4K2, POLR2A, PPOX, SHC3
Negative_9246	CRK, JAK2, OR5AK2, OR5R1, PCK2
Negative_9247	C2, CAT, DBI, DCN, FES, ACTC1, B4GALT1, CARS2, CASK, CBLB, CDC14A, DGUOK, DTX1, FGFR3, GALNT8, GUCA1C, HSPA2, IL22, LAMA4, LYPLA2, MAGI2, MAN2A1, MAPK7, OR10G2, OR10G9, OR6K3, PDGFA, PFN2, PIGC, PLCG1, POLR1B, POLR3D, PRKCH, PRSS2, PYGM, SH3BP2, SYNJ2, TAS2R14, TPK1, UMPS, VDAC3, WBSR22, C1GALT1C1, SERPINB5



Negative_9248	AGK, F9, PTS, SMS, ACPP, ACSL4, AGRN, ARPC3, C1QA, CACNA1F, CPOX, CXCL9, DGKQ, ENPP2, FARS2, FUT1, GNAO1, IL12B, IQGAP3, JAK3, LAMB4, MTMR2, MYL7, OR10C1, OR1A2, OR1J2, OR6K3, PIAS4, PIGB, PIK3CD, PIP5K1B, PON3, PYGL, RBPJL, SEMA4C, SPRED2, SV2C, TAS2R16, THBS2, TSHR, VASP, WASF2, HLA-DQA2, TNFRSF10B
Negative_9249	BAX, NPL, ADCY2, CPOX, DHCR24, FGF18, GALNT13, GSTA2, GSTM1, IRS2, ITGA8, OR10J1, OR10X1, OR2Y1, OR5H6, SCP2, STK11, STT3B, TAS2R14, UBA1, TNFRSF18
Negative_9250	HDC, ID4, AADAC, ACSM3, BNIP1, CMAS, COQ5, CSNK1G2, CTPS2, GALNT13, IBSP, IL13, LLGL2, MADCAM1, OR4N4, OR51A7, OR7D4, PDE2A, PPM1D, TAS2R42, XYLT2, SERPINB5
Negative_9251	ABLIM2, ACP1, ATP5A1, CPT2, EPHA4, GFPT1, GYS1, HLA-DOA, IL15RA, INSR, MAFA, OR10S1, OR13C9, POLR1C, POLR2I, PRODH2, RAC2, RPS6KA2, ST8SIA1, USE1, MAP3K7IP2
Negative_9252	CS, ADAM17, ADH7, BAAT, CACNG2, CYP4A22, CYSLTR1, DDX41, DRD1, EPHB6, FBP1, FGF11, INMT, ITPK1, MGST2, OR5T3, PIAS1, POLR3D, PRKAR2B, RPSA, SDHA, SSX2IP, UBA7, WNT5B, HLA-DQB1
Negative_9253	AK3, CBL, F3, HK2, ACSM3, AMPD3, B3GALT4, CALML6, CCND1, CCNE1, CYP3A43, DDX23, FOXO3, GPD2, IDH3B, MCM2, OR10P1, OR1J1, OR1Q1, OR8K1, RAC2, TFDPI, UGT2B7, TNFRSF12A
Negative_9254	AK2, GAB1, GANAB
Negative_9255	IDS, OAT, ABLIM2, AKT3, ALG6, AREG, ASS1, CAV2, CCND3, CD3E, CD58, CLOCK, CREB3, CREB5, CTF1, CXXC4, DFFB, DGKZ, FUT5, GAD1, GADD45B, GRM1, GUCY2F, IFNG, IQGAP1, MAN1A2, MCAT, MDM4, OR13C2, OR4F5, OXSM, PLD1, PPP2R1B, PTGS1, PTPRR, RAC3, SORD, SPTLC1, TAS2R10, TLN2, TUBAL3, UGT2B7, ATP6V1C2, PNLIPRP2, SUV420H2
Negative_9256	F9, DHODH, GSTO2, MAP3K4, SGPP1, STMN1, TICAM2, UGT2B10, VAMP2, HLA-DQA2
Negative_9257	F11, FGA, FGG, AARS2, ACYP1, ADCY2, B3GNT4, CCR10, CDKN2B, COL1A2, CSF2, DDX51, DUSP1, HAGH, HDAC2, HMOX1, INHBC, INMT, L1CAM, MAP2K5, MGA T2, MMP1, MYH8, OR10K1, OR1L4, OR2M3, OR51B2, OXTR, PGAM1, POLR1A, POLR3B, PON1, PRPS2, PSPH, SDC2, SHC3, STAM2, TAS2R38, TSLP
Negative_9258	ALDH7A1, CDH15, OR52A1, PLCB4, RALA, RETSAT, RRM1, ST6GALNAC6
Negative_9259	BAD, ADRB1, ARSE, ATP5F1, ATP5L, CCL3, CD40LG, CYP2U1, DHCR7, DOLPP1, EPHA4, FGFR2, GRIA1, HBEGF, HRH1, IFNA5, IL20RA, INPP5B, MAP2K7, MAPK12, NFATC3, NFE2L2, NR1D1, OR5D13, PIK3CA, PPP1CC, SRGAP3, SULT1E1, SV2C, VAMP3, HSD17B12
Negative_9260	GLS, SPN, CALML6, CD55, CDKN1C, CISH, CRLS1, CYFIP2, CYP4A22, EXOC7, EXTL3, GALNTL4, IRS1, MAT1A, NFYC, OR10K2, OR2L13, OR51G2, OR7C2, OR7G2, PLA2G2F, PLA2G3, PLA2G5, PPP3CC, SNW1, SPP1, THBS1, TNFSF14, ST6GALNAC5
Negative_9261	ACACA, CTPS2, GALNT1, GGPS1, GYS2, IDI2, OR10J3, OR5J2
Negative_9262	AASS, ACACB, ACADSB, ACVR2A, ALG12, BMP5, CCR3, CNTF, CXCL10, DDX51, DGKD, DGKQ, DHDH, DKK2, EHHADH, ENO3, ESPL1, GART, GCLM, IRS1, ITGA2, ITPKA, MCCC2, MGAT5, NRG4, OR10G4, OR2D2, OR6C1, P4HA1, PI4KB, POLA2, SARS, SEMA3F, SLC2A1, STX2, STX5, WNT4, WWP1, PAFAH1B1
Negative_9263	GLS, ACADS, BCKDHA, DBF4, DVL2, F11R, GALNT2, GNAS, HSD3B7, LIPA, LPAR1, MAML3, MAN2A1, MYH6, NCKAP1, OR10A7, OR6A2, PIGP, PLCE1, POLA2, SFRP1, TAS2R3, ATP6V1B2, TNFRSF13C
Negative_9264	RB1, ACTG2, ADORA2B, ALDH2, CD8A, CDC25B, CDC26, CYP4F3, DAPK1, GBA3, GFAP, IGSF5, IL22, INPP5B, ITPK1, MITF, MYH8, NT5C1B, OR5T3, PPP1CB, PPP2R2B, PRPS1, SAT2, SEMA3B, STAM2, TAS2R4, WIF1, ATP6VOA1

Negative_9265	HAL, PAH, ACADM, ATP6V1A, CBLB, CREB3L1, CSNK1G2, EPHA8, GALNT7, GALNTL5, KAT2B, LTC4S, NUMBL, OR14J1, PGM2, PLA2G2D, PPP2R2D, PYCR2, RUX1T1, TAS2R4, UPRT
Negative_9266	AGL, AK2, ARNTL, ATP5H, AXIN1, CCR5, CHDH, CLDN19, DAAM1, EPHA8, FSHB, GALNTL4, GSTP1, INHBB, MAP2K7, MAPK13, MINPP1, MYH13, OR10C1, OR2C1, OR2K2, OR2T2, OR4K15, PARD6B, PDE11A, PFN3, PPARA, PRKACA, SOS1, THBS3, UGDH, PNLIPRP1
Negative_9267	AGK, BTD, C2, CR1, CSK, F8, INS, PC, ACHE, ACY3, AKT3, ALDH1A1, ALDH7A1, C1GALT1, CCL20, CDKN2B, CUL1, CXCR5, CYP4A11, HTR5A, IDI2, IL18, KDSR, LYZL1, MAML1, OR2B11, OR51V1, PLCD3, PPAP2A, PPCS, PRIM1, PRIM2, RPS6KA5, SHC3, SMAD2, TMLHE, UGT2B10, MAPK8IP2
Negative_9268	MYC, ABLIM3, ACTN4, ALG10B, AMPD3, ARPC4, CCNG1, CDC23, CSNK1D, CYP26B1, DAAM1, DHCR24, EHMT1, FOXO3, GABARAP, GPAA1, HAGHL, HNMT, IL1B, IL9R, MAP3K13, NT5C, OR10A3, OR14J1, OR1D5, OR2H2, OR4N2, PGM3, PIK3R2, POLE2, RAPGEF2, SH2D1B, STAT5B, TAS2R48, VKORC1, WARS2, PNLIPRP2
Negative_9269	DUT, SFN, ACADSB, ACLY, ACSM4, ADCY10, AGXT, ARG2, ATP50, B3GAT1, CACNG1, CD19, CLCF1, COL6A2, E2F4, FCGR3A, FGD1, GMPS, GUSB, HSP90B1, IL5RA, ITPKA, KAT2B, MAP2K2, MRAS, NOX1, OR1L4, OR4M1, OR56B4, PCYT1B, PFN1, PIGH, POLA1, RHOD, SDC3, SSX2IP, STX10, SUFU, WNT16
Negative_9270	ALG1, ANAPC4, CD40, CTSG, GNG13, IMPDH2, NOTCH3, P2RX2, PDE1B, C1GALT1C1
Negative_9271	KITLG, NFKBIE, RBPJL
Negative_9272	FUK, ATN1, CES7, IFNA13, IL22, LILRB3, OR2T11, OR52A1, PHKG1, PIGB, TPI1, UGCGL1, UNC5C
Negative_9273	C8B, DCK, KDR, ACOX3, ACTN1, ADH7, BHMT, CACNA1B, CAPN2, CCND3, CES7, CHKB, DCTN1, ENO1, EPHA4, GALNTL1, HARS2, HSD17B3, IL17A, KIR2DS4, MAP4K4, METTL2B, NRG1, NTRK2, NUDT5, OR10G8, OR2A42, OR51A4, OR5A2, PCYT1B, PIK3C2G, PLAUP, PROC, RRAS2, SEMA4F, SLIT1, SPTAN1, TKTL2, TSNARE1, WNT4, CACNA2D1
Negative_9274	AK5, EBP, FH, LPL, VCL, ADH4, ALDH5A1, B3GNT5, BAAT, BDNF, CHPF, DHDDS, DNMT3B, DUSP1, EXT1, GAB1, GALNTL4, GLG1, GLUL, GPD2, HARS2, MTHFD1, MTHFD2, NCOA4, NR4A1, OR2T10, OR5M8, ORC1L, P2RX2, PDE3B, PIGT, PLA2G4A, POLA1, POLR2E, PPP2R5C, PRPS2, RALB, SPTLC1, VTI1A, WNT1, HLA-DQA2, PNLIPRP2, PPARGC1A
Negative_9275	ADORA2B, BMP8A, OR11I1, PIP5K1C
Negative_9276	DBT, GLA, GSS, AKR1B10, AKT3, ALG13, ALPL, CASP8, CCR1, CD3E, CFL2, CHPT1, CLTA, DLST, DVL1, EP300, FADS2, FTCD, GGT5, HAO2, HLCS, IL11, INSRR, IRF5, LAMC1, LYPLA1, MAP3K11, NAGLU, NFKB1, NT5M, OR13C4, OR2C1, OR4Q3, OR6M1, PFAS, PGAM2, PIP4K2A, PLEKHA8, PPP2CA, PTPN1, PTPN6, SESN3, SH3BP2, SLC25A6, SPRED2, STX8, TAS2R38, TAS2R5
Negative_9277	INS, SRC, AARS, ACAT1, ALG9, ATP2A1, CLTC, CNGB1, COQ3, DGAT2, DGKZ, DRD5, ENO3, FZD2, GDF7, GRIN1, IFNA21, KNG1, KYNU, MKNK1, NLGN1, OR13C4, OR8D1, OR9G1, P2RX2, PDE3B, PIP4K2C, POLR2L, PTEN, RHOA, ATP6VOA1, HSP90AA1, PNLIPRP2, PPARGC1A
Negative_9278	C2, TAT, BRAF, CTNNA2, FUT5, IRF5, OR4F5, OR51I1, PIP4K2A, PLA2G4A, SESN1, XCL2
Negative_9279	AMT, GLS, ACHE, ACSL6, ARSA, BDNF, CD79B, CLTA, CXCL6, ENTPD7, GAL3ST1, GGT5, GNA15, GP1BB, GPAA1, HIBCH, IFNAR2, IKKB, IL1R2, ITPA, LLGL2, MAP2K2, MCEE, NAGK, OPLAH, OR10G7, OR2T8, OR52I2, PDXK, PERP, PFKFB1, PGK1, PRKAG1, PRKCB, PSPH, RAD51, RENBP, SFRP2, STAT5B, STAT6, TAS2R5, THBS2, THTPA, ST6GALNAC5

Negative_9280	DCK, F9, IVD, NGF, ADCY7, ALDH1L1, ALDH4A1, ALDOB, APPL1, ATP5H, CD244, CDC14B, COL5A3, CREB1, CSNK2A1, CTLA4, FUT1, GALNTL4, GLI3, GNPDA2, GRM5, GSTK1, LHCGR, MAP2K5, MAP3K12, MTHFD2, NOX1, OR10H4, OR1M1, OR2AE1, OR4N2, OR51B6, OR52K2, OR52W1, OR5B17, OR6C1, PSAT1, RRAS, STX16, TCF7L2, TUBA3E, TNFSF13B
Negative_9281	ABO, AK7, FST, ID1, ME3, ACYP2, ADCY5, AKR1C4, ALS2, APPL1, ARPC1A, CCND3, CRLS1, DDX50, GLUD1, GRB2, IFNB1, IL13RA2, LRAT, NRG3, OR10G8, OR4C15, OR9Q2, PIK3CD, PIK3R4, PROC, RAPGEF2, RBL2, SDC2, STX6, YWHAH
Negative_9282	NF1, ACTG1, ANGPTL4, CEBPA, CXCR3, CYP1B1, HSD17B1, OR10A4, OR1L1, PAK7, PLXNB3, TAS2R38
Negative_9283	ACP1, ANAPC5, ATP13A2, CHR1, CRY1, DFFB, FZD7, GZMA, IFNA5, IFNA8, LAMB1, MAP2K7, OR6N1, PGAM4, PIAS4, PIGS, PIM2, PLD2, PNPLA3, PRPS1, RDH5, SMURF2, SPRED2, TAP1, UBE2L3, UPP2, XCR1, ALDH18A1
Negative_9284	BCAR1, CXCL6, HAGH, OR10A4, OR6M1, PRKY, SUCLG2, SERPING1
Negative_9285	CFD, LHB, PGP, ACSL1, ACVRL1, ADH7, ANAPC5, BMP7, CLDN20, ENTPD2, FLT4, HSD11B2, HSD17B1, IL8RA, ITGAL, MYH4, MYH7B, OR10H1, OR1K1, OR4K1, OR6M1, PDE1C, PPAT, PPCDC, SDHA, SH2D1A, STAT5A, ATP6V1C2
Negative_9286	ADC, CFI, F12, HDC, LTB, PXN, SDS, ACSS2, ADCY2, ATP6VOC, CCND3, CCR10, COL11A1, CYP26C1, CYP2J2, DPYS, DRD5, EPB41, FARSA, FLT1, GNAO1, MASP3K1, MASP2, MBL2, MYH15, NUDT12, OR13F1, OR2AG2, OR51L1, OR8J1, P2RX1, PLA2G3, PPP2R2B, PRDX6, PTCH1, RPS6, SH2D1B, STAT2, STX16, TLN1, TUBB4, YWHAH
Negative_9287	ACP1, ADSL, ALG5, APPL1, C9orf95, CCR7, CD01, CHEK1, CLDN14, CXCL12, DIAPH3, DUSP14, DUSP9, EP300, GRIN2C, GUCY2F, HHIP, IFNA17, INMT, ITGAV, LARS2, LIPC, NCSTN, OCRL, OR10Z1, OR1A2, OR1I1, OR52H1, OR5AK2, PDE1C, PIK3CB, RUVBL1, SH3BP2, SPI1, SPRY3, SULT1E1, TBXA2R, TNFRSF9, VANGL2, B3GALNT1, TNFRSF13C
Negative_9288	MAX, MPZ, ACTB, ATP12A, ATP5E, B4GALT2, CACNA1H, CCL25, CCL5, CLDN16, COL11A1, CYP17A1, CYP3A4, DHRS3, FGFR4, GNG12, LIPA, LTB4R2, MCM5, MGAT4B, MPZL1, OPLAH, OR4D9, PCNA, PGM1, PIAS1, PIK3C3, PNLIP, POLD2, PRSS3, RPIA, SHC3, TAS2R7, TNFSF8, UMPS, VCAM1, ATP6V1E1
Negative_9289	CGA, F5, FOS, ADCY9, B4GALT4, C1GALT1, C9orf95, CACNB1, CACNG4, CCL13, CDC6, CLDN4, CSF2RB, CSNK1G3, CTLA4, FZD10, G6PC2, IPPK, KYNU, MAML1, NEU1, OR10AD1, OR4C11, PAK7, PDE4B, PFN2, POLD2, RELA, SOD1, TGFA, ATP6V1C2
Negative_9290	GCK, ABP1, ALDOC, ANAPC5, ATP2A1, AXIN2, B3GAT1, CLOCK, CPT2, CYCS, CYP2C9, ENPP3, EPHB3, GALNT2, GGCX, NADK, NKD1, OR10J5, OR1G1, P2RX6, PIAS1, PRKCD, PSME1, PSME3, THY1, UPRT, WNT8B, ATP6V1E2, TNFRSF10C
Negative_9291	TYR, AKR1D1, APC2, CXCL5, DKK1, F13B, FARSA, FZD8, MMP9, PARD6A
Negative_9292	ACSM1, ANAPC11, AOC3, ARSB, AXIN2, CAMKK1, CD99, CLDN18, COL4A4, DTX2, FZD8, GALNT14, GGT1, GPLD1, HTR2A, IFNA7, INSR, IRF7, KYNU, MGST2, MYH7B, NCR1, NCR2, NKX3-1, OR2L8, OR51I2, OR6C75, PARD6A, PIGU, SELL, SMARCA2, SRD5A2, TAS2R5, TSLP, ZBTB16, HSD17B12
Negative_9293	CD6, ADAM10, ADIPOR1, CLDN10, CNTNAP1, CRB3, CYP2F1, FZD7, ICAM3, IL20RB, MAOA, OR2G2, STAT5B, STX18, VCAM1
Negative_9294	FYN, INS, ACADL, ACTN1, ATG12, BMP6, BMP8A, CHKB, COQ5, ENTPD3, F2RL3, FSHB, GUCY2D, KARS, MNX1, PCK1, PIGH, PIK3CB, POLR2B, RND1, ST8SIA5, TRDMT1
Negative_9295	IL4, ACAT2, ADIPOQ, CCL4, CCL7, COQ7, CSF2RB, CYP11A1, CYP2E1, DDX19A, FGF13, FGF21, GALE, GALNTL4, GLUD1, GMPR, GNAI2, GPLD1, GSTM2, IL8RB, INPP5E, ITGA10, LIAS, LRDD, MICA, NCAM1, NEU1, OR51L1, OR5C1, OR5D16, OR5T2, OXSM, PDE3B, PTGIS, TCF7L2, WHSC1

Negative_9296	UBC, ADAM17, ALG3, APH1A, CHEK2, IL4R, MTHFR, MYH1, OPLAH, OR2B6, OR2M2, PANK2, SETD7, SORD, SPRED2, TACR3, TBXA2R
Negative_9297	FGB, FST, GSN, HK2, IDS, LPL, TPR, ABL1, ACADL, ADH5, ARPC5, B3GALT4, BIRC2, CACNG4, CCL26, CHRNA7, CLDN2, CSNK1G2, CSNK2A2, CTBP2, CXCL5, DDHD1, DRD2, EFNA3, FCER1G, FUT1, GADD45A, GAL3ST1, GALNT1, HSD3B2, IL15RA, MAP3K4, NOS3, NTN1, OR10H1, OR1N1, OR2H2, OR51B4, OR52N1, OR5H6, ROCK1, RPN2, SETD7, SGMS1, SH2D1A, STAT5A, SV2B, UGT2B11, HLA-DQA2
Negative_9298	ADK, DUT, TXK, AGPAT4, ALDH2, BET1, CAV3, CCNA1, CD72, CFL2, CYP1A1, FGF6, FSHR, FUT1, GART, GAS1, GFPT2, GSTM4, GZMA, IRF7, LRP6, MADCAM1, MYH9, NCR3, NR5A2, OR13C2, OR13C9, OR2S2, OR2T1, OR2T10, OR4M1, OR4N5, OR8D2, PLXNB1, PRKAA1, PRKACG, RAF1, RND1, SESN3, TLR2, VKORC1, HLA-DQA2
Negative_9299	HY1, ITK, VCL, ABL2, AGPAT4, ALDH1B1, ALOX15, APH1A, APOA1, AREG, ASN1, B3GALT4, BMPR2, C1QC, CD48, CDC14A, CDC25B, CDK5, CHRM1, COL4A1, DPM2, ENPP1, FGF20, G6PD, GAMT, ITGB1, KNG1, LFNG, MASP1, MGAT4A, OR10Q1, OR13H1, OR1M1, OR52W1, OR5K2, OR6Y1, OR8H2, PHKG1, PIAS3, PLXNC1, STAT3, TAS2R50, THY1, TKTL1, TOMM40L, TUBB6, TNFRSF10D
Negative_9300	TYR, AMD1, CD48, CKMT2, DHDDS, NFE2L2, OR52H1, OR7G2, PDGFB, PDGFC, RHOA, RUNX1T1, TNFSF11, XYLB, CACNA2D3
Negative_9301	CGN, COQ5, HTR5A, IFNW1, MARS2, NLGN3, NR4A1, OR2L2, OR2L8, PLA2G10, PPP1R1A, TLR3
Negative_9302	EPO, ADORA2A, ALDH2, AMPD2, BST1, CLTC, DVL1, ENTPD2, GRM1, KCNJ11, NCF2, NEU2, NPAS2, OR1I1, SEMA3E, STT3B, TUBA3C
Negative_9303	BTC, GGH, INS, AKR1C1, AKR1C2, B4GALT7, CD40LG, EPHA1, FMO2, GALNT12, GP1BB, GSTA3, GSTO2, IRF3, LDHAL6A, MYL5, NSD1, OR10AD1, OR1A1, OR1G1, OR1J4, OR4F5, OR51A2, PI4KB, PKMYT1, PLCB4, POLR3H, PRKACB, RENBP, SETMAR, SLIT1, TRAF2, UGT2B11, ULBP3, VAV1, YARS2, CACNA2D4
Negative_9304	FER, OAT, SI, AGRP, AMDHD2, AOC2, APC2, APOE, ASCC3, ATP5G2, AXIN1, CACNA1G, CNGA3, DDX56, DUSP16, FRAP1, GPD1L, GUCY1B3, GUCY2D, HBEGF, IARS2, IL12RB2, IL22, KIR2DL4, LIPG, MTHFD1L, MYL7, OR2T2, OR4B1, PRKCD, RPS6KA5, STAT1, TUBAL3, TYMS, UGCGL2, ULBP2, ATP6V1G2, CACNA2D2, TNFRSF14, TNFRSF6B
Negative_9305	CFH, SI, AANAT, ACSM2A, ADIPOR2, AKR1D1, BDNF, CCNA2, CD47, CSNK2A2, DDOST, GFPT1, GPT2, GRIA3, GRIN2D, HRH1, HSD3B2, MYLK2, NFAT5, OR2T6, OR6K2, OR7A10, OR9Q1, OSMR, PAK4, POLR2L, PTAFR, PTPRC, RDH10, SEMA4C, SLIT1, ST3GAL5, SUOX, TPK1, VEGFA, SERPIND1
Negative_9306	F2R, SRF, ACSL5, ARRB2, CD44, CHST12, CMBL, CTNND1, CYP27A1, DAPK2, DMGDH, DTX3, DUSP10, FABP3, HIBADH, IL1R1, MYH7B, OR2L2, OR2L8, OR2V2, PLA1A, PPP3CB, PTPN1, PTPRZ1, RASA1
Negative_9307	LTB, AGRN, ALDH3A2, ATG3, CCR4, CNGA4, CNTNAP2, COL4A4, FARP2, LDHA, LIPG, LTBR, MAPT, MGST2, OR56B4, P2RX4, PIP4K2B, PLXNA1, POMC, PTGES, ST3GAL4
Negative_9308	PGD, TPO, AASS, ARNT, BCMO1, FLAD1, HAO2, NCAM2, OR14C36, PAK6, PAX4, PLCB1, PLCD1, PPAP2C, PYCR2, RENBP, TSHB, PLA2G12B, SUV420H1
Negative_9309	ADK, BTD, CR1, ME2, ACP1, ALOX15B, APPL1, ASNS, CCL1, CCL5, CD22, CD82, CERK, CHIT1, COL2A1, CUL1, ETS1, GALNS, GLI3, GNB3, GP1BA, IL12RB1, IL13RA2, IL2RG, JAG1, KAT2B, LYPLA1, LYPLA2, NAMPT, NAT1, OR1L3, OR4K15, PDE6G, PIGO, PLD1, TP53, TYMP, UBA1, UGT2B11, VASP, WNT11, XCL1
Negative_9310	OTC, PGP, ABI2, ARD1A, ARPC2, BUB1, CCR7, CHRM1, CMBL, DARS2, EPHB4, ETKN1, HADH, HNF1B, KIR2DL4, LFNG, MAP3K14, NFX1, NPR1, OR10G7, OR10J5, OR6B2, POLR3H, PRKAA1, PTGS1, RRAS2, SEMA3D, SMAD4, SOCS7, TAS1R2, TAS2R8, UGT2B4

Negative_9311	AADAC, ATP2A2, ATP5J, BUB3, CD8B, ITGAL, MAPK1, NCK2, NEFL, NFAT5, OR2T3, PDX1, PGM2, PISD, SCD5, SULT2A1, TNFRSF14
Negative_9312	MSN, A4GALT, ABLIM3, ACACB, ADH6, ADRB3, B3GAT2, CACNB2, CADM3, CMAS, CSNK1G2, CYP4F3, DBF4, EDA2R, HLA-G, IL18, ITGAX, LRDD, NOTCH2, OR10A6, OR52I2, OR6C75, RAP1B, RRAS, ST8SIA1, XCR1
Negative_9313	F3, GP9, PXN, TPR, ZYX, ABL2, ADRBK2, AMPD2, B3GNT3, BCL2, CCR8, CDK4, CLDN19, CPT1B, DLAT, ELK4, EXTL1, FGF10, GPD2, IL21R, OR10V1, OR13C9, PDGFC, PIK3C2G, POLR3G, PPCDC, SEPHS1, SULT1A1, ULK3, TNFRSF17
Negative_9314	ACTG2, ATP2A1, CCL1, DTX3, EPHA2, FADD, FARP2, GMDS, GPX5, GRLF1, HLA-G, ITGB3, NCF4, NOD1, NOX1, OR5T3, PDGFC, PLA2G4A, PRKAA1, PRKAG3, PRKAR2B, SMARCA2
Negative_9315	AK5, F8, FGA, ALCY, AGRN, AHCY, ALOX12B, APRT, B3GNT2, CSNK2B, DARS2, ENPP7, ENTPD6, FZD8, GRAP2, GSTM5, HTR2B, IL18, MAD2L2, MAP2K5, NR1D1, OR5M8, PDK1, PTCH2, SEMA7A, SRD5A2, TUBA3E, WNT5A
Negative_9316	AMT, C2, ME1, TPR, AARS, AGPAT2, ALAS2, ATP5E, BCAT2, CCR7, CD01, CREB3L1, CSAD, CXCL12, CYSLTR2, F2RL1, FDFT1, GALNTL4, GDF6, GMPR2, GNAO1, GRIA3, GRM5, HTR2A, INPPL1, ITGA10, LYPLA1, OR2A12, OR2A14, OR2T3, OR51A7, OR6C6, OR8J3, PARS2, PDGFD, PDK1, PGK2, PMAIP1, PPP2R5A, PRKCG, PTGS2, RPS6KA5, SDHB, SULT1A4, TAS2R48, TSHB, TSNARE1, UGDH, ZFYVE9
Negative_9317	FAS, ABLIM2, ATP6V1F, CDC20, CHAT, CNTNAP2, CTBS, E2F4, ELK1, GADD45B, GLI2, IDUA, IL23A, INPP5B, IRF3, IRS1, ITGA10, OR10T2, PLOD2, PPAP2A, RPS6KA2, SULT1A2, VDAC1, ST6GALNAC6
Negative_9318	BTK, PXN, TK1, XDH, ANGPTL4, BNIP1, CHRNA7, CLDN14, COMP, CTSG, DTX2, GALNT5, GCLM, GIT1, GSTO1, HMBS, HNF1B, IDI1, IFIH1, KRAS, KYNU, LMO7, LRAT, NCOA4, NFATC3, NFKB2, OR52N1, OR6B3, OR7C1, OR9Q2, PPP2R2D, PTPRJ, SKP1, SMPD4, SPP1, STX5, TAP1, TGDS, TUBB2B
Negative_9319	DLD, TK1, APH1A, C1GALT1, CAMK2G, COL1A2, CXCL13, FABP4, GAS1, GSTM4, HRAS, IL4R, L1CAM, OR2G6, OR4M1, OR9G4, SETD8, SLC25A4, SSH1, UGT2B4, ATP6VOD1
Negative_9320	PAH, ADH6, AXIN2, BCL10, EPHB6, FGF18, FM05, GSK3B, GSTM5, HEMK1, HTR4, IL24, NRXN1, OR3A3, OR5L2, PCNA, PEMT, PIP5K1C, PLCB4, PLXNB1, PNP1A3, PTPRM, PTPRZ1, RAB23, SH2D1B, ST8SIA5, HLA-DRB4, MAPK8IP2, MAPKAPK5, SERPINA5
Negative_9321	CD4, FYN, OAT, AKR1B1, AKR1B10, AKT2, ALG2, ATP4B, C1QC, CDC23, DNMT1, EARS2, EREG, GALNT5, GDF5, GLI3, GUCA1A, IDH3G, IKBKB, IRS2, ITCH, NAT5, OLR1, OR10H1, OR2W1, OR56A1, OR5P3, PANK2, PIGB, PLD1, PRODH2, QPRT, SOAT2, SUOX, TAS1R3, THBS1, TRMT11, TUBB6, ARHGEF12, ATP6V1C2
Negative_9322	ADC, LYN, NNT, ABL1, AHCYL1, ALCAM, B3GNT2, BUB3, CD46, CSF1, EPHX1, FGF9, FUT9, GARS, GPAA1, GUCY2C, HIBADH, IL17RB, ITGAV, LARS, LRP5, MC6M, NAGLU, NEU2, NTSR1, OR4K1, OR51B5, OR8K1, OXCT2, PIGX, PLAU, PLCG2, PRKCA, SEMA3D, TAS2R60, TGFBR1, TNFSF13B
Negative_9323	C8G, IL9, KHK, ACP2, AKR1C2, ATP6VOC, CDKN1B, CLDN6, COL5A2, CXCL2, CYP1A2, GADD45B, GALT, IL17RB, ITGA8, ITGB2, MAP3K3, MDM4, MGAT5B, MYH13, NAT2, OR11H6, OR4N2, OR4X2, OR52B4, OR9Q1, PHKG2, PIGN, PIGS, PRKG2, PYGM, RAF1, SLC9A1, TLN2, ULK2, WWP2, PLA2G12B
Negative_9324	APP, DCC, GSR, ALDH1A1, CCR1, CREB1, CYP2F1, FBXW11, GNAL, GRIN1, IFNA7, MAP3K12, MYH13, NFYB, OSMR, XIAP
Negative_9325	ADCY3, ADSSL1, APOA1, ARPC5, BMP7, CDKN2B, CHPT1, CHSY3, DRD5, FTMT, GCNT1, GLUD2, GSTM4, HA01, HEXA, INPP1, LAMC3, LARS, LDHD, MYH11, NARS2, NFATC3, NOTCH3, OR5D14, OR6Y1, OR7G1, PIP5K1B, PLA2G4A, PPA1, PPARG, QARS, RASGRF1, SFRP1, SMAD9, STX12, TAS2R4

Negative_9326	HYI, CCL2, EHMT1, FSHR, GNB3, OR1L3
Negative_9327	BTC, FGA, ATP5G2, BMPR1A, CAMK2D, CAV3, CD3E, CDKN1C, CHSY3, CREB3, DGKA, EARS2, EPB41L1, GTSE1, IGF1R, IL3RA, IPPK, LDHB, MYH7B, NAMPT, NMNAT1, ODC1, OR2B2, OR4F15, OR9Q1, PAX6, PDE6H, PGM1, PIK3CD, POLR2B, PRODH, RGS3, SEMA4D, SMAD5, SOCS3, STK36, TCF7L1, TLR3, PRICKLE2
Negative_9328	CFH, FH, ACACA, BIRC3, CD34, DHDDS, EPHA3, ITGA11, OR52E4, PLAT, POLR1D, POMC, TACR1, TAS2R10, TYRP1, UPP2
Negative_9329	ITK, CYP4F3, NUDT2, RHOQ, SMARCA2, TGFA
Negative_9330	FER, CHIA, CHST12, CRLF2, CSNK1A1, GNPAT1, HARS, ITGB6, MAP4K1, NOS1, OR2Z1, OR5B3, OR6C70, PLA2G10, POLR2B, SGPP1, SHC3, SOCS3, SULT1A1, ULBP3, WNT11
Negative_9331	AK7, F5, FGA, ID3, ACOX1, ACSS2, AKT2, ALDH1B1, AMPD3, AOC2, ATG7, ATP5B, BCAR1, BDNF, CACNA1S, CCL15, CCNA1, CLTA, CLTCL1, COL4A1, COL5A3, CPOX, CREB3, CXCL6, CYP3A7, CYP4F3, DLST, DUSP14, DUSP8, E2F5, G6PC, GLB1, GSTA1, HAO1, IFNA5, IGSF5, IL5RA, MAGI1, OR13G1, OR2M3, OR2T10, PAK1, PDGFC, PIK3CB, VTI1B
Negative_9332	ACSL5, AGPAT2, BST1, COL5A3, GPLD1, HLCS, IDUA, IFNA14, ITGA1, MTFMT, OR1L3, OR6B2, OR6X1, PNLIP, SKIV2L2, YARS
Negative_9333	C7, ACSM1, CHST13, CPT1B, FCGR2B, FLAD1, OR52M1, OR8J3, PDE3B, SOCS3, STK36, SYNJ1, TUBB3
Negative_9334	AMT, RFK, VTN, ADRA1B, COL2A1, CTPS2, GGCX, MGAT5B, PPP1CA, PSEN1, SFRP5, SNAP25, UBA7, VANGL1, WHSC1
Negative_9335	ALDH3B2, CDH2, COL11A1, CREB3L2, CXCL1, FGD3, GALK2, GOSR2, HAO2, HARS, HDAC1, MTHFD2, NPR1, OR10C1, OR10Z1, OSMR, UROD, YWHAG
Negative_9336	ABO, FH, HDC, PGD, AGRP, ARHGAP5, ASS1, BPGM, CASP10, CD47, CDH15, CEP350, CPT2, CRHR1, DGUOK, EFNA1, FM02, FOXO1, FUT2, FZR1, IL12RB1, IQGAP1, MYH8, NEU4, NTF3, OR4C13, OR4F17, OR52A5, PCCB, PDE5A, PDE8A, POMC, PPP3CB, PRKCZ, PTDSS1, SARS, SKP2, STAT2, SUV39H1, TNFSF4, UGT2B4
Negative_9337	ADA, BTK, F12, F9, GHR, SMO, AADAC, AASDH, ACLY, ADCY7, AMY2A, B4GALT6, BCKDHA, C1GALT1, CLDN2, CSNK1G2, DERA, ENO2, ETS1, FGD3, FGF6, GCNT3, GSTM5, IL13, LHCGR, LTA4H, NARS2, NT5M, OR4K2, OR51A7, OR51B4, OR5B12, OR9Q1, PGAM4, PLA2G4A, PLTP, PPCS, PTGES2, PYCR2, SEMA4F, SETD8, SHC1, SMAD5, STX18, TAS1R3, TNFRSF18
Negative_9338	HK1, MAG, MUT, RPE, ACLY, ADH7, AXIN1, CAMK2B, CCR6, CD82, CFL1, CREB3, EXT1, FARP2, FECH, FGF11, FGF23, GALNT13, GAPDH, GOT2, ITGAD, LDHD, MGAT4A, NRG4, OR11A1, OR6C2, OR7C2, PANK2, PDK1, PIP4K2B, PPCDC, PPP2R2D, PRKAG2, SELL, SMAD5, STX1B, TJP2, TPH2, TUBA4A, AASDHPPT, HLA-DRB4
Negative_9339	ADC, SRF, VTN, AGMAT, APH1A, CACNA1H, MAD1L1, MDM4, OR7C1, OR9G1, PIAS2, PIM2, PROS1, SAT2, SGPP2, SOCS2, TFPI, PNLIPRP2, TNFRSF17
Negative_9340	CAMK2B, DHRS9, EFNA3, FLOT1, KIR2DS5, OR4D9, OR5P2, PLA2G1B, WNT8A
Negative_9341	AOC2, CD34, CSF3R, CXCL11, JUND, ORC1L, PPARA, RFXAP
Negative_9342	FER, GLS, ACADL, CCKAR, CD44, CTNND1, DHDDS, EFNA2, FZD7, GALNTL5, GGTT1, GSTA4, INHBB, IQGAP3, KLRC3, LPAR1, NCK2, NFB, NTSR1, OR10H4, OR14C36, OR4N5, OR5AR1, OR5T3, PANK1, RCHY1, RIPK1, RPSA, SH2D1A, STAT5B, TAS2R60, THBS1, TSTA3, TYK2, ATP6V0D1, ST6GALNAC3
Negative_9343	C8B, CD6, CFD, RDX, ACP1, ARHGEF4, C4BPA, CACNA1H, CASP8, CD82, CLDN10, CTF1, CYP11B1, DUSP3, FCGR3A, FGF2, FGF22, GCLC, GZMB, HIBADH, IL12A, KIR3DL3, LIPC, MAP3K4, MTAP, MTMR1, MYL9, MYLK3, NEGR1, OR51L1, PLA2G2D, PPP2R5B, PTPRR, PVRL2, RFXANK, RPS6KA4, SHISA5, SLC25A5, SMAD2, TAS2R7, UNC5C

Negative_9344	GPT, ALDH1A2, ALPL, BMPR2, CCNE2, CRLS1, CTSB, CXXC4, CYP2U1, DLST, F2RL2, FGF5, FLT4, GJD2, IL17B, LTBP1, MALT1, MAPK13, MASP2, NOX1, OR11G2, OR52B4, OR5D18, OR5V1, PFKFB4, PFKP, PFN1, PLA1A, PRKG1, SAT2, SCD5, TUBAL3, UNC5A
Negative_9345	BTD, KMO, NGF, ACLY, AMY2B, BST1, CCDC6, CDKN2C, COL2A1, DAAM2, EXT2, FGF22, GAD2, GAMT, GNA14, GNAZ, GUSB, HGSNAT, IL25, ITCH, MAP3K8, MOV10L1, NUDT12, OR13C3, OR51B5, OR5L1, P2RX7, PDK1, PHKG1, PIK3CD, PLA2G2F, PLXNA1, PSME1, RPSA, SELL, SH2D1B, STAT3, VAV3, VEGFB, CACNA2D2
Negative_9346	GNE, ACVR1B, BBC3, BMP4, BMPR2, CAMKK1, CHUK, CLDN3, CTNNA3, EFNA2, FSHR, GNAT3, IL1B, IL22, NR5A2, NRG1, OR10H4, PFKFB4, PIK3CB, PLXNA3, PNPLA3, PPBP, PPP5C, PRKAB1, SMPD1, TAS2R13, TNFSF14, TNFRSF18
Negative_9347	BAD, OAT, RB1, ACP6, ATP2A3, CACNG6, CCL13, CD247, CFL1, CYP1A1, DRD1, DVL1, GARS, GDF5, GFPT1, GPD1, HMGCS1, IL12B, IL8RA, LAMB3, NAGLU, NFATC3, NKX3-1, OR1K1, OR2AG2, OR52E4, OR5L1, PDE8A, PFKFB3, PGAP1, PHKA2, PLOD3, PLXNA2, PPBP, PRLR, PTGS1, SEMA3A, SESN3, SIPA1, SMAD9, SV2B, TAS2R48, VAV1, VEGFA, HSD17B10, TNFRSF1A
Negative_9348	CAV3, FADD, NRP1, OR1Q1, PAK6, HSD17B12
Negative_9349	DLD, AKT2, ALG10, APRT, B3GNT3, CHST11, CLDN7, CMPK1, GALNS, GGT1, GNAO1, GYS2, HSD17B3, IL10RA, MAP2K7, OR10G3, OR4K1, OR9G1, PGAM4, PIK3R2, PLD1, PROC, RELA, RFXAP, RHOD, RUVBL1, SFRP4, SLC2A1, TLR3, UROD, YARS2, MAPKAPK5
Negative_9350	CKB, KHK, ACTC1, ALG10B, AXIN2, CXCL5, CYP3A43, IDH1, ITGB4, LMO7, NAT6, NOS1, NR1H3, NSD1, OR10A5, OR51A4, OR5A2, PDPK1, PPM1A, PTPRB, RFXNG, RRM2B, SYNJ2, TLR4, UPB1, VTI1B
Negative_9351	LCT, OTC, TKT, TPO, ABLIM3, ACACA, ACYP2, AGPAT1, ALDOA, ANAPC2, ATP6V1D, BTRC, CCL5, CCNG1, CD34, CDC20, CES7, CHUK, CTTN, FABP3, FGF9, HMGCS2, IGFBP3, ITGA11, LRP6, OR1J1, OR51T1, POLE, POLR3G, RASA1, XYLB, TNFRSF10A
Negative_9352	CLDN22, OR10G8, SPHK1
Negative_9353	BTD, C4B, FES, INS, ME1, MVD, OAT, ADCY9, ADIPOR1, AGXT2, CLDN11, CLDN16, CXCL9, DKK4, DUSP6, EHHADH, ERBB3, FGF12, FGF21, FGF4, GALNT14, GPD1L, IFNAR2, IL22, MS4A2, NEU4, OR1L6, OR2M2, OR5P2, OR9A2, PDE5A, PFKFB2, POLE, PPP1R3D, PPP3R1, SOD1, TAS2R50, WARS2
Negative_9354	BID, LIMK1, NARS, NT5C3, PNPT1, SESN2, SMAD7
Negative_9355	ACAA2, ADSSL1, ARG1, CHPF, CHRNA7, COL4A1, F2RL2, FGF20, HCCS, IL22RA2, KIR2DL3, MAD1L1, MYL9, NOX3, OR10A6, ORC3L, PIP4K2C, PLXNB3, PTPRF, RAD51, SETDB1, TRMT11
Negative_9356	AGK, FGB, ID4, TEC, AANAT, ALDH9A1, B3GALT1, CASP6, CCL11, CD46, CDC23, CDH3, CLDN7, COL3A1, CXCR3, FLOT1, FUT8, IL2RG, IL6R, MAOA, MAPT, MARS, OR10J1, OR1A1, OR2A2, OR5K1, PDE6D, PGAM1, PIGX, POLD4, PPP2R1A, RIPK1, SMAD9, SOX17, TNFRSF8, TYK2, ULBP3, UPB1, ATP6V1B1, HLA-DPA1
Negative_9357	IL6, NNT, ACYP2, ADH1A, ADH5, ALDH9A1, CACNG4, CCL24, CLDN9, CXCR3, DUSP5, EDN1, EFNA1, FGF20, GCNT4, GSTM5, OR13C4, OR4C6, OR4K2, OR4M2, OR5I1, OR5L1, OR5V1, OR9G4, PCK2, PLAUR, PLCG2, PNMT, STX5, TLN2, TNFSF11, TRAF3, VKORC1, MAPKAPK3, PPARGC1A
Negative_9358	IL3, IL5, PLN, PVR, RPE, ZYX, ADIPOR2, AGMAT, ALDH4A1, ARG2, ASPA, ATP6V1F, BCL10, BDKRB2, CDC27, CDK2, CREBBP, CTSS, CYP2A7, DAAM2, DDX23, DEGS2, DTX1, FGF6, GNRH1, HLA-F, IL19, NT5C3, NTRK1, NUDT2, OR10Q1, OR2T33, OR8B12, OSMR, PIGP, PLCB4, POLA2, PPID, PRNP, PRPH, RDH5, RPS6KA6, SFRP1, UGDH, ATP6VOD2, PL A2G12B, TNFRSF10A

Negative_9359	CDA, LCT, MUT, ACADM, ATP6V0B, CD38, CYP3A43, DDX52, DGAT2, EPHA2, EP HB6, F13A1, GSTA4, IFNG, MAP3K14, MCM7, NTSR1, OR7A5, PTGER3, SSH1, S SX2IP, UROD, WNT2
Negative_9360	PRL, TNC, ALOX15, ANAPC5, ANAPC7, ARPC4, BLVRB, BPGM, CACNG5, CAMK2D , CCNB2, CD48, CFLAR, CHRM1, CKMT2, DPYS, ENPP3, GNA11, GNA14, GSTT1, IL1R2, ITGAX, KIR2DS4, LAMC3, MYH10, OR5C1, PAK1, PLA2G2A, PLCZ1, PL XNB3, POLR2C, PPID, PRKAB2, PTPRC, RRAS, SGPP1, SHC4, SMAD4, TSHR, ZA P70, GABARAPL2, PPP1R12A
Negative_9361	ASNS, ATP2A1, ATP5I, CAV3, CCKAR, CDKN1B, CREB3L3, DDX4, ENPP2, EPB4 1L1, FOXA2, GADD45A, GCH1, GSTM5, HAGHL, ICOSLG, LIAS, MAP4K3, PANK3 , PHKA1, PLAUR, PRKAR1B, SUV39H1, TALD01, TAS2R60, TFPI, TLR4, WNT10 A
Negative_9362	IL5, ACP1, CCR8, CDC45L, CES2, COX10, CUL1, DPYS, EARS2, FIGF, GNRH2, GRIN2A, HCST, HNF1A, HSPA8, IL1A, INHBE, KIR2DL2, MAP2K7, MTFMT, OLA H, OPLAH, OR4K2, OR5AR1, PDE1C, PI4KA, PIGL, POMC, PTPRR, ULBP3, WHSC 1, ST6GALNAC1
Negative_9363	ADCY4, ADORA2B, BPNT1, COL4A1, EXOC7, GAB1, GALNTL2, GSTP1, ITGAD, O R5B17, PFN1, PIGW, PPP2R1A
Negative_9364	NPL, ACP1, AKR1A1, AKR1C1, ALG11, ANAPC4, B3GAT2, CALML6, CCL19, CLD N7, GLB1, GYS2, HAGHL, HIF1A, IFIH1, IL20RB, OR11G2, OR4A5, OR51B5, P ARVG, PDE4A, PDE5A, PLA2G5, PPP2R5B, PPP2R5E, PPT1, RASGRP3, RIPK1, RPS6KB1, RPSA, SMURF2, SOAT2, SULT1A2, TSC1, PDCD1LG2
Negative_9365	C1S, CSK, DDO, EDA, NPY, SFN, TPR, AGPAT1, ANAPC2, ARSE, CACNA1C, CCNB 3, CDH1, CES7, CLTB, CSNK1G3, CYP11A1, DDIT4, DMGDH, EREG, GADD45B, G P1BA, GSTM2, HSPA2, INPP5E, ITGB4, JUND, KLRC3, LDHC, MAPK1, MASP2, M MP1, ODC1, OR10T2, OR11L1, OR52D1, OR52W1, OR5AR1, ORC3L, PER2, POLE 3, PYGL, SDHB, SGMS2, SGPP2, TAS2R1, TUBB6, B3GALNT1
Negative_9366	CR2, NPL, ACACB, ACP1, ACPT, B4GALT1, BAAT, CCL11, DCTD, DPYD, DUSP1, DUSP4, FGF17, GRIA3, ITGA5, LAMC3, MTMR2, MYLK2, NFX1, OR13C2, OR2L3 , OR2M2, OR5AR1, OR7C1, PARVA, PIP4K2B, PLCB3, PPAP2A, RAP1B, TKTL2, UBE2K, VEGFA
Negative_9367	EZR, UBC, ARD1A, CDC6, GALNT1, GNAO1, IRS4, LIPC, MYLK3, OR2F2, OR5P3 , PIP5K3, SHMT1
Negative_9368	APP, FES, IL3, MSN, WAS, ATP50, B3GNT4, BCAR1, BET1L, BST1, CACNA1S, C D226, CISH, CNTF, CREB5, DGKI, ENTPD3, EPOR, F13A1, GBE1, GSK3B, HLA- F, IFNAR1, IL29, IL9R, IQGAP2, NUDT12, OR14J1, OR2L8, OR5B12, OR7G1, PLAU, PLCB3, PPA1, RASGRF2, SARDH, SH3BP2, SHMT1, ST3GAL6, SUCLG2, T AS2R49, TAS2R9, TNFRSF13C
Negative_9369	ADCY6, AKR1D1, EPHA8, OR2T4, PIGO, RHOD, SUCLG1, UGT2B28
Negative_9370	ID3, ME1, PGP, PVR, PXN, ACVR2B, ARD1A, BUB1B, CACNB3, DPM1, FGD3, FRA T2, GAD1, GALNTL1, GMDS, OR1D5, OR2T10, SENP2
Negative_9371	ID4, MVK, PVR, XDH, AOC2, ATF2, CBLC, CCNA1, CDC16, CDK7, CDS2, CLDN22 , CLTC, DGKA, EGLN1, EPHA6, FGF13, GSTM5, GUCA1A, IDUA, IFNK, IL12B, I L18, INPP5A, KCNQ1, LCMT1, MYL2, NFE2L2, NFKBIA, OR10J1, OR13C3, OR1 3H1, OR52K1, OR52R1, PAX4, PIK3CA, PLA2G2E, PLXNB1, PRKX, RDH16, SPA M1, STAM, SUV39H1, TPMT, TRPC1, UROD, TNFRSF10A
Negative_9372	MVD, CHST13, NKD1, OR4P4, PNPO, PPP2R5C, TAS2R42, TFPI
Negative_9373	CP, CD70, CFL2, EPHB1, INHBC, JAK3, PDIA4, PIGU, PKMYT1, PLAT, SMPD2, STT3B, TRAF5, TSLP, TNFRSF12A, TNFRSF1B
Negative_9374	CBS, F7, NPL, AASDH, ARHGAP5, CXCR3, GSTO2, IFNGR1, ITGA5, JAG2, LRDD , MAGI1, MAN1A2, MAPT, MYH7B, NANP, NUDT8, OR1C1, OR2V2, OR51I1, OR6K 2, PIAS3, PRKCH, RUNX1, SETD1A, SETMAR, SLC27A4, SMAD9, TPK1, XYLT1, PNLIPRP2, TNFRSF10B



Negative_9375	GK, ADH4, C4BPA, CACNG5, CPT1C, CRY1, DVL2, EHMT1, FABP3, GCDH, GMDS, GNPAT, GUCY1A2, HLA-F, IL3RA, LCP2, LDHC, NRXN3, OR10G8, OR10R2, OR2G2, OR52A1, P2RX3, PNPO, PRIM2, PRKCE, PRKCQ, PTEN, SEMA3D, SEMA4D, TCF7L2, UROD
Negative_9376	GP6, NF1, ACTC1, ALDOB, AXIN1, BIRC5, CLTCL1, CPT2, CSNK1G1, CYP19A1, DAPK3, DERA, DLL3, EPHB2, GALK2, GALNT13, HYAL1, NT5C, OR10R2, OSMR, RAC1, SETD7, TGFB2, WASF2, WHSC1L1, SERPINE1, ST6GALNAC1
Negative_9377	DCT, ILK, ACSL3, ADCY5, ADRB1, ARHGEF7, ATP5H, BACE1, CCL20, CDK5, CDKN1A, DAPK3, DDX56, EPHA8, EPRS, GDF7, GNB3, GNG13, ITGB6, MAGI3, MAP3K12, MDM2, OR11A1, OR2M2, OR4F6, OR52E6, PIGT, PITX2, PRSS3, SEMA4C, SETD7, UGCGL1
Negative_9378	ALDH1A2, ALOX15, CHDH, CXCL2, ENTPD6, GALNT1, GALT, PDE8B, RPS6KA5, TAS2R1
Negative_9379	BAX, TK2, ADAM10, CDC7, CXCL9, GLI3, GSTA5, IGF1, IL13RA1, NLGN2, NMNAT3, OR2T4, OR5V1, OR6N1, PFKFB1, PIK3R5, PPARA, PTGS1, RAPGEF2, SEMA4B, SLIT2, STX8, TGFB1, TUBA3E, UGP2, UGT1A10, XYLT2, KIR2DL5A
Negative_9380	SRM, BMP8A, CHEK1, CHIT1, CLCA4, COASY, CREBBP, CYP11A1, DPYD, EXTL3, FPGS, HRH2, ITGAX, LTBP1, NCKAP1L, OR51S1, PTDSS2, SREBF1, STX16, TJP2, TRADD, UGCGL2, ST6GALNAC5
Negative_9381	TKT, UBB, VCL, ALDH1A1, ATP4A, B3GALT5, DLL1, FMO3, HHEX, HSP90B1, HTR2C, KIR2DS4, MARS2, NCR1, NRG1, OR6C6, PGS1, PLXNB2, PPM1B, RIPK1, TP73, WEE1
Negative_9382	ABL2, ALPP, ATP5G2, BCAR1, CADM3, CD48, CNTN2, CSF2RA, CXCL2, CXCL9, DAAM1, FCER1G, GGPS1, GPD2, IFNA7, IFNAR2, INMT, IRAK2, IRF9, JAK3, LAMB2, LAMC1, MYL2, NME4, OR10H3, OR10Q1, OR14J1, OR3A1, OR52B6, OR52E8, ORC6L, POLD1, POLD4, PRKCB, RELB, RPS6KA6, SETD1A, SFRP4, SHMT2, SMPD4, STX3, TPH2, CACNA2D2, SUV420H1
Negative_9383	CP, FOS, JUN, MSN, AARS, ABL1, ABLIM1, ACY3, BBC3, CAV1, CCL23, CYP1A1, DBF4, DCXR, DDX18, DHRS3, EFNA4, ENTPD8, FGFR3, IARS, IL11, IL20RA, ITPA, KITLG, KRAS, MAN1B1, MGAT4B, MIOX, NCF2, NMNAT3, NOS3, OR51A4, OR52N2, OR5K2, PARD6B, PAX6, PHGDH, PIAS3, PIPOX, PTPRF, SHC3, SOCS2, TCF7, ULK2, VDAC2, VDAC3, WASL, ATP6VOE1
Negative_9384	A2M, MPL, ACP2, ALDH9A1, BCKDHA, BMPR1B, C7orf16, CACNG1, CCL24, CCR5, CDKN2D, CFTR, CISH, COQ5, CXCR4, DGKB, EDN1, ENTPD6, GGPS1, GNAS, GNPAT, GSTK1, HCLS1, IRAK2, LFNG, MS4A2, NEFM, NKX6-1, OPLAH, OR4D2, OR51Q1, PLCB2, PLOD2, RRM2, SPTLC2, SUCLG1, TRPC1, WNT10B, WNT2B, YES1, ZAP70
Negative_9385	FER, ILK, ACOX3, ACTA2, ALOX15B, AMPD3, BCAT2, CBR1, CCL19, CCR6, CD27, CD8B, CER1, CYP3A7, DARS, GCNT2, GNB1, GRLF1, HLCS, HRH2, KCNQ1, MAFA, NCSTN, OR2L3, OR4X1, PFN2, POLR2C, PON3, PRLR, STAM, WNT3, CSGALNACT1
Negative_9386	C9, CD2, EZR, IDS, NPL, PXN, UBC, APOC3, ARHGEF7, BCL2L1, CCL23, CCR5, CLDN5, CTBS, CXCL6, DPM2, DUSP9, ENTPD5, FGFR2, FMO4, FZD6, HTR2B, IDI2, IL22, MAN2A1, MAP4K2, MCM5, MFNG, MS4A2, MYL9, OR13A1, OR1E1, OR2AE1, OR4K5, OR9K2, PAICS, PHKG1, POLA1, POLD1, PRODH, TGFB1, TUBA1A, WNT7B, MAPK8IP3, SUV420H2
Negative_9387	GP6, LSS, NPY, ACTC1, APOA5, AVPR1A, B3GNT2, BAIAP2, BUB1, CADM3, CASP10, CASP9, CDC27, DVL3, EPB41L2, EPHA3, FTCD, FZD10, GLI1, GRIN1, GRIN2B, GUCY2F, HSD3B2, IL1R2, IL28A, IMPA2, ITGAE, LAMC3, MBL2, MCM4, NAGA, NUDT2, OR4D11, OR5K1, PDHA1, POLA1, PRKCA, PTGFR, SLC9A1, SUV39H2, YARS, ATP6VOA4

Negative_9388	A2M, MVK, SPN, TH, AKT2, ALDOC, CACNA1F, CAV1, CHST13, DDX18, DOLPP1, DUSP1, DUSP4, DVL3, EHMT1, EIF4E2, FECH, FGD1, G6PC2, HMGCS1, IL1RAP, ITGA2, ITGAV, KIR2DS4, NADK, NCF4, ODC1, OR10AD1, OR2T3, OR51A7, OR5T2, OR8U1, PIGO, PLCE1, SOCS1, SPRY2, B3GALNT1, GABARAPL2
Negative_9389	NNT, TNC, CHSY1, FBP2, FBXW11, GATM, OLR1, P2RX2, PDE5A, PIGQ, PIK3C2G, PTCH1, RASGRP3, SMC1B, TRAF6
Negative_9390	FGB, RB1, ACOT11, BIRC5, CYSLTR1, HMOX2, HSD11B1, LAMB1, OR1J4, OR4F5, OR6C3, SPTLC1, UCKL1, SERPINA5
Negative_9391	BAD, C4B, F2R, HPD, MTR, ACACB, ACMSD, ACSS1, ATP5I, BCM01, CAV2, CCL20, CDC25B, CNTFR, CTLA4, DAPK3, DDX18, DLL1, DRD1, DRD5, FTCD, ICOSLG, IL19, JUND, KIR2DL3, MAP3K14, MCM6, MDH1, NMNAT3, NOX1, OR2AG2, OR4B1, OR4L1, OR4N4, OR5C1, OR7C2, POLR2J, POLR3K, PPBP, PPP1CA, PTPRJ, RXRB, STK4, TAS2R13, TRMT11, ATP6VOA1, TNFRSF6B
Negative_9392	AMH, C4B, SFN, ACSM4, AKT3, BBOX1, CD80, CD82, CD8A, CDC27, COL6A2, DAPK2, DDB2, DDX47, DUSP2, FOXO3, GAS1, GBA3, GNG12, GUCY2C, HTR2C, LIPF, MASP2, MMP2, NCK1, NCOR2, NT5C, OR1B1, OR4K14, OR5B17, OR6A2, OR6Q1, RASA2, SHISA5, ST3GAL3, MAPKAPK3
Negative_9393	TH, ATP6V1A, BCKDHB, C1GALT1, CDIPT, CNTF, DHODH, OR10A5, OR3A3, OR51G1, PAK7, PLOD1, SLC2A1, SUCLG1, SULT1E1, TUBA8, B4GALNT1
Negative_9394	ZYX, ACAA1, ACAT1, ACP5, CACNA1G, CACNA1H, COL5A3, CRKL, CSNK1G2, CSNK1G3, DGAT2L4, DRD5, FGF19, FGF4, GNAI1, GNAT3, H6PD, INHBE, OCRL, OR11G2, OR4Q3, PDCD1, PDE3B, PIAS3, PIK3R2, PRKCE, PRODH, PRPH, PTPN1, SEMA4G, SLC25A4, TBL1X, CSNK1A1L, HLA-DQA2, PAFAH1B1
Negative_9395	DAO, ASIP, ATP5J2, CACNG8, CNDP1, CYP19A1, CYSLTR1, EREG, ETNK2, FGF10, GAB1, GNAI3, GPAA1, IL20RB, LAMA3, MAP3K6, MAPK12, MPST, NTNG1, OR10S1, OR2AT4, OR2C3, OR2K2, OR4D6, OR52H1, PIGL, PIK3C2G, PRKX, PSENI1, QARS, RBL1, SC4MOL, SEMA4G, SRD5A2, TACR3, TBXAS1, UCP1, WIF1
Negative_9396	MPZ, ARPC4, ATP4B, CCR5, DHRS4L2, FBP1, ROCK1, EIF4EBP1
Negative_9397	FAH, GLA, A4GALT, ACSM1, ACTN4, ALDH1L1, AMY2A, CACNB3, CBR1, CCL1, CDC23, CER1, COL4A1, CXCR3, DLL3, DPYSL2, ENTPD6, G6PC, GALNT6, GSTM5, HSPA2, IFNA21, IL9R, IRAK2, LDHB, NR5A2, OR1K1, OR51I2, PIM2, POLR1C, PPP1R3B, PPP2CB, RETSAT, SELL, SMARCA5, TAS2R14, TPK1, TYRP1, ATP6VOA1, CSNK1A1L, HLA-DRB4
Negative_9398	ABO, ADO, F11, ADRA1D, ARG1, GLI3, HBEGF, HLA-DMA, HSD17B1, IFNG, LALBA, RASA1, SMAD3, UGT2A3, CACNA2D2, GABARAPL1
Negative_9399	MUT, ACSL5, BIRC5, DDX54, HAAO, OR3A1, PIK3CD, PLTP, RXRB
Negative_9400	LHB, MIF, RFK, ALDH3A1, BAI1, BCL10, BIRC5, CCL21, CDC42, CDH5, CLDN16, CSNK2A1, CXCL1, CYP11B2, DDB2, GMPPA, GNAO1, GSTM2, HAP1, HEXB, IL28A, INPP5A, INPP5B, ITPKB, KAT2B, MAD1L1, NRCAM, OR5I1, OR7C2, PDE5A, PFKFB1, PGLS, PIGQ, PIK3CB, POLD1, PPP1R1A, PPP2R5C, PRKX, PTCRA, PTEN, PYCRL, RASSF1, RND1, RPS6KA2, SFRP2, STAT6, WBSR22, XCL1, TNFRSF14
Negative_9401	ADA, CAT, HYI, IL7, NF1, PDC, ABLIM1, ATP5I, BCKDHA, BDH2, CDH1, CHUK, CYP19A1, CYP3A43, DFFA, FDPS, GALNS, HNMT, IMPA1, INPPL1, IRS1, KLRK1, LIPE, MGAT3, NCOA4, OR1B1, PDE6D, PIP4K2B, PPP2R2B, PVRL2, RARS, RBKS, SDC4, SESN3, SNAP23, XYLT2
Negative_9402	ACAA1, ADRB3, ALDOA, ARNTL, CD226, CD01, CHUK, CKMT2, COL1A1, CYP2C18, CYP4F2, DTX3, EFNA1, ENAH, ENO1, ERBB4, GALNT3, HSD17B2, IL20RB, IRAK2, ITGB6, MDH2, NMNAT1, NOTCH1, NPR1, OR10A4, OR2C1, OR2L8, OR4F4, PIGO, PRKAR2A, PRPS1, PTPN6, SNAP23, SV2B, TAS2R9, TFDP1, YWHAQ, HLA-DRB5

Negative_9403	DHH, GP6, ABLIM2, ATP5G2, AVPR1A, CD14, CD8A, CFL1, CHRM1, EFNA3, FTM T, HBEGF, IDH1, IFNA6, ITGAE, MCM6, NCAM2, NFATC1, OR10Z1, OR1J1, OR4 D6, PGLS, PLCG1, RPIA, SDC2, SPTAN1, TLR5, TSNARE1, VDAC1, ATP6V1B2, MAP3K7IP1
Negative_9404	CCNE1, HIBADH, NR1H3, PIAS4, PPA1
Negative_9405	AK2, CS, DCK, PLN, VCL, ADIPOR1, ARSE, B4GALT5, BACE2, CACNG2, CLDN5, CLDN9, CREB3L4, DDX56, DVL2, EFNA3, F13B, GALC, GALNT12, GRB2, HPSE, HSD17B8, IFNAR2, IRF9, ITGAV, ITPA, KIR2DS4, KITLG, LDHAL6A, MAPK11, MAPK9, NFATC1, NFYC, NT5C, OCRL, OGDHL, OR52A1, PDE2A, PGM1, PGS1, P HKG2, PIAS3, PLCG2, POLR2K, PRKACA, PTPRZ1, ROCK1, STX1A, TBL1X
Negative_9406	NNT, TH, AARS2, ACTA2, ASMT, CCL1, CCNB3, CD82, CLDN3, CYP17A1, DDX41, GNB3, IARS, IL17A, LYPLA2, MAPK1, MGLL, NME4, NMNAT3, NUDT9, OR1B1, OR4K5, OR5C1, PIK3R1, PYCR1, RAPGEF4, RASSF1, SEMA4A, SETDB1, STAT3
Negative_9407	C3, CDA, EDA, LPL, MUT, ACO1, ACYP1, ADRB2, APOC3, BLNK, BST1, CACNA1D, CD44, CDH2, CNTNAP1, COL5A3, FOXO1, FZD3, GABARAP, GLS2, GOT1, GP1B B, HBEGF, HEXB, ICAM3, IL6ST, MCM5, MYLK3, NCOR2, NCR2, OR4S1, OR6C75, PAX6, PDGFRA, PGM1, PIGW, PIK3C3, PNPO, POLD1, PTGER1, PTTG1, SREBF 1, STAM, STX3, XCL2, ALDH18A1, GABARAPL1, TNFRSF10C
Negative_9408	ADRB2, AGMAT, BST1, CDC7, COMT, DUSP16, EGLN3, F13B, F2RL1, FGF9, LIA S, NAE1, OR52H1, P2RX3, PIGN, SETMAR, TACR2, TBK1, WARS2, WNT10A, MAP KAPK5
Negative_9409	CFD, ABLIM1, ADCY1, ADCY9, AGXT2, ALDH3A2, AMPD2, ARHGEF1, BPNT1, CL TCL1, FSHB, GALK2, GUCY2F, GYS1, HRH1, IL17RB, LAMC1, LIMK2, MYL7, NF YA, NTRK1, OR11G2, OR52M1, OR5B21, PFKFB3, PPP2R2B, PRKACA, PTCRA, P YGB, SLC25A5, SPI1, TAS2R40, TAS2R9, TNXB, TRPC1, TYROBP, ULBP2, WNT 10B, ST6GALNAC6
Negative_9410	MPZ, OTC, ADCY9, ARHGEF1, ARHGEF7, B3GALT2, CBLB, CD244, COL2A1, DHR S9, E2F1, EREG, FOXA3, GALNT3, GDF5, GNA15, GNRHR, IL10, MGAM, MTHFD1 L, MYLK2, OR10H2, OR13F1, OR13J1, OR1N2, OR2F2, OR4F17, OR5B3, OR5I1, PHKG1, PIGF, QPRT, RCHY1, SEMA3G, SUFU, SULT2B1, SV2C, TAS2R49, TJP 2, TNFSF4, WASF3, WNT4, ATP6VOD1, B4GALNT1
Negative_9411	ABL1, AGPAT1, C4BPA, EPHX2, GABARAP, ITGA4, MCM3, OR4D2, TP53
Negative_9412	CEL, GLA, LPL, CLTCL1, CMBL, DIAPH2, DLL3, GFAP, GLUL, IL20RB, TNFSF8
Negative_9413	CSK, ALDH5A1, CAV2, CD70, CXCR4, HSD17B1, ITGA3, LIPE, NAT1, NEFL, PI M2, SHMT1, TAS2R16, TJP2
Negative_9414	CBL, CTH, FES, GLA, TFG, ACOX3, ADCY5, ADSSL1, AGPAT3, AKR1C1, ALPP, B BOX1, CD58, CXCL10, DTX2, FGFR3, GCLC, GNAL, GZMA, HARS, IFNA16, ITGB 5, KARS, KITLG, L1CAM, MAFA, MAP3K3, MAP3K6, MDH1, MGAM, MOV10L1, MTM R2, OR14A16, OR7G1, OR9G4, PECAM1, PIK3C3, PIK3R4, PMM2, PON2, PTCH1, PTDSS1, RPS6KA2, SLC27A5, ST3GAL2, THBD, ZNRD1, HSD17B12
Negative_9415	ACO1, CD55, CHKA, CKS1B, COL1A1, CREB3L3, CXCL2, EARS2, ECSIT, ENPP6, FLAD1, FOXA3, FTCD, GCNT2, GNPDA1, HPRT1, HSPA1B, HTR6, INMT, MYL7, NMNAT1, NR5A2, OR11G2, PLA2G1B, PLCD1, PLOD1, RAPGEF1, SOCS3, TAS2R 3, TSTA3, UNC5B, WBSCR22, XCL1, ATP6V0A2
Negative_9416	F3, NPY, AFMID, CPT1A, GRIA1, HMBS, HSPA1B, NPR2, OR11H4, OR5M9, PPP3 CA, RGS3, THBS3, TSNARE1
Negative_9417	CS, FYN, GDA, GK2, SFN, ACAT1, ACSM5, ANAPC11, ASCC3, B3GNT3, BET1L, C CND2, CDK5, CTPS, DHRS9, EFNB2, FGF20, GRLF1, GSTA1, GUCY2C, HPSE, HT R4, IFNA16, IFNGR2, IKBKG, IL22RA1, ITGAL, ITGAX, MAP2K5, NLGN3, OR1 0A4, OR13J1, PAK7, PDCD1, PHKB, PIK3CD, PIP5K1B, POLR2E, PRKCZ, PRKG 2, PTPRB, PVRL4, RARS, RHEB, SMARCA2, TBL1X, UBE2L6

Negative_9418	ABO, FUK, NOG, AARS, AKT2, ALDH9A1, B3GAT3, CACNB2, CDC27, COL4A6, CSNK2A2, CTPS, CXXC4, CYP3A5, FGD1, GALNT12, GALNT2, GL01, GNPDA1, IL17B, ITPA, JAM2, MFNG, MTMR6, NCKAP1, NCOR1, NEFL, OR10G4, OR10K1, OR2L3, OR2T10, OR2T12, OR3A2, OR51B5, OR51F1, OR52I2, OR5K2, OR7G3, PDGFRA, PIK3C3, PPP1R3C, PRKAR1A, PTGS1, SEMA3C, SIGLEC1, WARS2, TNFRSF14
Negative_9419	IL7, ACTN4, ADIPOR2, CD38, CDKN1A, CDKN2C, DCTD, GNPAT1, MGAT4A, MOV10L1, NRXN2, NT5C2, OR1J4, PHKA1, PIK3C2A, PISD, PPAP2A, PPP2R5B, SLC25A5, TGFB1, TNFSF9, SUV420H1
Negative_9420	LAT, AOX1, CBR3, CCL26, DAD1, ENTPD8, EPRS, GADD45B, IDI2, IFIH1, IL12B, MAD1L1, NRCAM, OR4S1, OR5V1, OR6C1, PNMT, POLR1A, PPA2, PRKX, SGP1, UGT2B7, B4GALNT1
Negative_9421	AFMID, AGPAT6, ALPPL2, ARAF, CACNG5, CARS, CXCL11, DGAT2L4, ENTPD4, GATM, GUCY1B3, OR2M5, OR51Q1, POLR1B, RAB5A, STAM2, STAT6
Negative_9422	GK, ANAPC7, DOCK1, MAPK1, RAP1B, RDH16
Negative_9423	AGK, CTH, GPT, HK2, B4GALT6, CAMK2A, DLL3, ENPP1, ENPP3, FECH, FGF2, FGFR1, FLOT1, GLDC, GSTM4, HLA-C, MAP2K2, MARS2, MGAT5, MLYCD, OR10A7, OR1Q1, POLR2B, RHEB, SETD1A, SPRED1, TAS1R2, TAS1R3, TNFSF14
Negative_9424	CD6, GK, NPY, ADH4, AOC3, CD55, CDKN1A, GPLD1, OR13C2, OR7C2, PIPOX, RFAF1, SMPD3, WBSR22, XYL B
Negative_9425	CGA, IHH, PRL, ABAT, ACHE, ADCY5, ALDOC, ASAH1, ASNS, CARS2, CCR3, CDC7, CLDN22, CTNND1, CYP26B1, EPRS, FECH, FGFR4, FIGF, GALNTL4, GFAP, HADHA, ICAM1, IFNA6, ITGA8, MAP4K2, ORC2L, PRKG2, SOS2, TOMM40, MAP3K7IP2
Negative_9426	CKM, ADIPOQ, B3GNT5, CDH2, DGUOK, FUT3, GAS1, HA01, ICOSLG, IMPA2, NKD1, PAK7, PDIA4, STX10, TPH2, TRAF2, YARS2
Negative_9427	GAA, LPL, ACVR1, AKT1, ANAPC7, B4GALT5, C7orf16, CACNG7, CCNH, CD44, DHX58, GALNT5, GNRH1, GSTO2, GUCY2F, HLA-G, HTR6, KARS, LDHAL6B, MMP7, NFYC, NTN1, OR1C1, OR1G1, OR4C6, OR4F15, OR6F1, POLR1B, POLR2E, PRKCA, PRKX, PTPN1, PTPRM, SORBS1, STEAP3, TALDO1, TP73, TRAF6, WNT6, ATP6VOA1
Negative_9428	SP1, BIRC5, CD72, CHSY3, CNTF, CYP21A2, DBF4, DDOST, ENPP7, HARS, IFT57, INADL, KNG1, ORC1L, PORCN, SMAD2, SRGAP1, STX7
Negative_9429	GP9, PC, ATP5J2, B3GALT5, COX10, CRLF2, CYP26B1, DDX41, FARS2, FGD3, GFPT1, GRPR, IL10RA, LHCGR, OR10G4, OR4F5, PCYT2, PPP2R2A, SMPD2, STAT4, TICAM1, TNFRSF8, ZFYVE16
Negative_9430	CGA, FOS, GPT, AFMID, AKT2, B3GNT3, CCR2, CKMT2, COL4A6, FGF19, GSTK1, GUCY2C, HNF1A, HRH2, HSPA1B, HSPA2, IFNGR2, IGF1, KYNU, LMO7, NAMPT, OLR1, OR1D5, OR1K1, OR2T33, RHEB, SEMA3D
Negative_9431	C8G, MET, ADCY2, ASMT, ATP12A, BDNF, CDC25C, CIITA, CLTCL1, DNMT3A, DPAGT1, FARSA, FGF10, FGFR4, FOSL1, GGT1, GNG3, GNMT, HIBCH, IL1RAP, I NSRR, KIR2DS5, LCMT1, LEF1, NEUROD1, NFASC, OR2C1, OR4L1, OR51B5, PKMYT1, POLD1, PYCRL, RAF1, SMAD6, SOCS5, STX3, TGFA, TIAM2, TUBB3, TYMP, ATP6VOA2, MAP3K7IP2
Negative_9432	AUH, GBA, HDC, TKT, ACACB, ACSM5, ALPPL2, ASRGL1, CDH1, CFLAR, CXCL1, DUSP9, HARS, HSD17B3, MGAT5B, OR2T2, OR8J3, PARD6B, PON3, TACR2, TLN1, TNFRSF4, UGT2A1
Negative_9433	NPY, BUB1B, CCR8, CPOX, FGF23, FPGS, GAL3ST1, GANAB, GRIA3, ITGAX, LILRB3, MYH2, NEU1, NTF3, OR10G7, OR6F1, PLCG1, PMM1, PSME2, RFXANK, SHMT1, SRGAP1

Negative_9434	ID3, MOS, ACP6, ARSE, B3GAT3, CCNE2, CD86, CHR1, CYP2A13, DDX52, DDX56, DUSP14, DUSP6, DVL3, FGF4, GUCY2C, HMGCS2, KDSR, KLKB1, LAMC1, MAPK9, MMP2, NANS, OR4A5, OR4K5, OR52E8, OR5L1, OR9Q1, PGS1, PLCB3, PPP2R5A, PPT1, PTPRC, SOD1, STX6, TJP3, TLN2, ZFYVE9, SERPIND1, SLC25A31
Negative_9435	CD244, CXCL12, E2F2, ISYNA1, NRXN1, OR5AP2, PEMT, TRAF2
Negative_9436	C8B, HY1, ALG2, DNMT1, EFN1, EGFR, GFPT2, IFNA13, IL28A, MTFMT, MYL5, OCLN, OR3A2, OR6N1, OXSM, PANK2, PPP2R5C, PRKCZ, RAP1A, RND1, ROBO3, SHC2, SLC27A1, TICAM2, UXS1
Negative_9437	C5, HK2, MPI, PC, ABI2, ACOX3, ACTN1, AGRP, B3GNT3, BUB3, CACNG7, CAPN2, CHIT1, COL4A6, CREB3L1, CYP2F1, DDX19A, GALNTL2, GDF7, GLI1, HYAL1, ITGAM, LDHD, LGMN, NANP, NCK1, NFKB1, NR4A1, OR2D2, OR5K2, PDE10A, POLR2E, PTTG1, SLC9A1, SMAD5, STAT1, YKT6
Negative_9438	DLD, HDC, PGP, SI, ALOX12, ATP6V1A, CDIPT, CMPK1, DCTD, DDX23, FGF13, HDAC1, IL1R1, IL2RA, LFNG, LRAT, LTC4S, MGAM, MINPP1, NCK1, NRXN3, OR6B2, P2RX1, PORCN, PSME1, SOCS2, SPP1, TSTA3, VTI1A
Negative_9439	AK5, CAD, AK3L1, BMPR2, CACNG2, CCKBR, CCL1, CDH15, CDK6, CHPT1, CRKL, CYP2C18, E2F5, ENTPD2, FBP2, GANC, HPSE, IFNA17, ITGB6, JAM3, KLRC1, LDHD, MAP3K2, MLLT4, NGEF, NR1D1, OLAH, OR13C2, OR51E1, OR5B21, OR6C76, PGK1, PLA2G2A, PPP2R2B, PRPS1, RALBP1, RHOD, RRM1, SCIN, SESN1, SRGAP2, SUV39H2, TAS1R1, TAS2R38, TUBB2A, TUBB4
Negative_9440	ARAF, B3GALT2, CDH3, CHKB, CHRM5, CIITA, CLDN1, COL4A1, CYFIP1, GNAO1, HDAC2, HSPA8, ICAM3, IL18R1, ITGA4, ITGAD, MYH2, OR7A10, PPP3CA, PTEN, PVRL1, RELB, TAS2R16, MAPKAPK3
Negative_9441	AKR1D1, GALNT14, MAP2K4, PDE4D, SEMA4B, TYRP1
Negative_9442	CAD, ARG1, B4GALT5, CCR4, DCTD, ENTPD4, EPOR, FZD8, G6PC, GNAO1, INPP5E, NAGLU, NCKAP1, NTF4, OCRL, OR10G9, RASGRF1, SIAH1, TSC1, UNC5A
Negative_9443	TNR, AMY2B, DFFB, DNMT3L, DPYSL2, EHMT1, EPB41, MYH2, OXCT2, PAPSS2, PLXNB2, SGPP1, SLC25A4, WNT2
Negative_9444	ACPT, CSNK2A1, OR51E1, POLR1E, RAB5A, TNFSF9
Negative_9445	TNN, AANAT, ACSS2, ADRB1, CADM3, CCL1, CCL8, CCR1, CYP11A1, DLST, FZD8, GGT5, GRM1, IDH3B, ITGB6, ITPA, KNG1, NOS3, OR11H1, OR2G3, OR51T1, OR5B12, OR5P3, ORC6L, PCNA, PDE1C, PHGDH, PIAS4, PIP5K1A, PRKAR2A, PTGIS, RAB23, RAF1, SCLY, ST3GAL6, STX12, TAS2R42, HLA-DPB1
Negative_9446	IL6, ACTG1, ASS1, C1QA, CACNA1D, CAMKK1, CHST12, COL11A1, CSNK2A2, DOST, FUT1, GADD45G, LGMN, MAN2A1, MTHFD2, NEUROD1, OR1S2, OR5A1, PDE1C, PIGQ, PTPRC, WHSC1, PAFAH1B1
Negative_9447	C5, ADIPOQ, ASIP, BMP4, CDC25C, CDK2, CLDN15, DDX23, IL8RA, NCOR1, OR1J1, OR2A14, OR2T10, PAICS, SULT1A2
Negative_9448	AKR1C3, BLVRB, CCR4, CHDH, DIAPH1, FZD9, HRH1, IL17RB, LHCGR, OR10A5, OR4Q3, PIGF, PPM1B, PYCRL, SMAD4, SOAT2, TLN2, CACNA2D4
Negative_9449	AGL, C1S, PTS, UBB, ADRBK2, ALG2, CCL27, CCNG2, CD59, CNTNAP2, CYP27A1, DDX54, DHRS9, EPB41L1, FGF10, FZD10, G6PC2, GNA11, GSTM2, GUCA1B, HSD17B7, IARS2, INPP1, JAM2, LAMA3, LDHC, MAP2K3, MMP7, MYH10, NFATC4, OR4C11, OR51I2, OR5P2, PARVG, PLXNA3, PPP1R3D, PRKCI, PTPN1, RBL1, TJP2, ZIC2
Negative_9450	CP, GSR, SFN, ACSM3, ACTN2, ACVR1C, B3GNT5, B4GALT7, CSF2, F11R, GOT2, HYAL2, IL1A, LIPE, MAGI1, MCCC2, NSD1, OR11H6, OR4K15, OR5T2, PKM2, PRKAR1B, RALB, SMURF2, ST3GAL2, TAS1R1, WNT6, XYLT1, YWHAE
Negative_9451	ATM, IL8, TNN, ACSL6, ACTN4, ACY3, ASAH1, ATP5G3, B4GALT7, BET1L, COQ5, CSDA, FLOT1, FZD8, GABARAP, GNAQ, GNRHR, GSTT1, HEXA, ICAM3, IGF1R, IL25, ITGB4, LLGL2, MGAT4A, MYL7, NLGN1, ONECUT1, OR1L8, OR4X2, OR52E8, OR8I2, ORC1L, PIGP, ROBO2, SCD5, SMARCA5, SYNJ2, TBL1Y, TNFSF8, WARS, YWHAZ, SLC25A31

Negative_9452	GP6, GPT, BCL2, CHIT1, CTSB, GDF5, GUCY2F, HLA-DOA, ITGA6, KLRC2, LIPT1, LYPLA1, MAFA, OR2T29, PHKG2, TLR4, VTI1A, X YLB, TNFRSF10A
Negative_9453	ATP50, CD70, CTPS2, CYP11B1, LIPT1, LRP6, OR1C1, OR8B12, SQLE, TUBB6, HLA-DRB4
Negative_9454	ADCY4, CAMK2D, CNTFR, DGKH, FCGR3A, FGD3, GNA14, HHEX, OR10A7, OR52N5, ORC6L, PHKA2, PIAS4, SLC27A1, VAMP3, YWHAB, YWHAE, HLA-DQA2
Negative_9455	ADIPOQ, ATP6V1F, CASP7, CBR1, CRB3, GNRHR, NTNG1, ORC1L, PCYT1B, PPP2R5C, PRKAA2, UGT1A10, MAPK8IP3
Negative_9456	ABLIM3, ARG1, CBLC, FLAD1, GRIN2A, GSTM1, ITGA9, ITPA, POLR3K, RDH5, SDHC, TSC1, UNC5A
Negative_9457	ABL1, ACAT2, ACSL1, ACTB, AKT2, ASMT, CACNA1G, CCL20, COL5A1, CPT2, CX3CR1, CXCL11, ENTPD7, FCGR2B, IBSP, IFNA7, IL10RB, IPMK, ITGB8, MPP5, NARS2, NUDT2, OLR1, OR10H2, OR4F17, OR4K17, OR51B6, PARVB, PON2, PP2CB, RAPGEF4, RBPJ, RPN1, TLR4, WEE1, ATP6V1B2
Negative_9458	IL7, LYN, ADRA1D, AHCYL2, AKT3, ATP2A3, ATP5L, BIRC3, BPNT1, CAMK2A, CFLAR, DCTD, DKK2, EFNA3, FTCD, GCNT3, GMPPA, GNAT3, HSPA1B, KARS, MA N1A1, MAP3K3, MAP4K3, MMP2, OR4D5, OR4P4, OR5B12, POLR3K, PPARG, PPP3CA, PRKX, RPRM, SMURF2, SNAI1, SOAT1, THBD, YWHAG, HLA-DRB3, TNFRSF1A
Negative_9459	ABO, ADIPOR1, ARPC3, CD55, DAD1, FGF13, GSTA4, HHIP, IFNK, ITGAX, OGDHL, OR14A16, OR52D1, PHKG2, PIK3R5, PRKACA, PTGIS, SGPP1
Negative_9460	NOG, ALDH6A1, B3GALT4, BBOX1, CCL2, CDK2, CHKA, CNTN1, CRY1, ITGB5, OR13C3, PIP5K1B, PNPLA4
Negative_9461	COL6A2, CPT2, GSTM3, GSTO2, IDH3A, LIPF, MAP2K4, NMNAT2, OR7C2, PCK1, PGAM2, PIP5K1C, PRKAG1, RAP1B, UGT8, XCL1
Negative_9462	BIRC5, CTBP2, DAXX, GGPS1, GSTA4, IL20RA, IL2RG, MGST2, PPP2R2B, B4GALNT1
Negative_9463	ABCC8, APLP1, BACE2, DGUOK, DHRS4, GLDC, HPSE2, IMPDH2, MAP4K2, NT5C1B
Negative_9464	MPI, TK1, CACNA1A, CCL7, CDC14B, CTNNA2, CYP7A1, EDN1, EDNRB, GGPS1, GNMT, GRIN2A, HHEX, HIF1A, IAPP, IMPA2, KCNQ1, LRRC4C, MAPK12, NOS3, OGDHL, OR2T12, OR52N4, OR5M3, OXTR, PPP1R1A, PPP5C, PYGL, RXRG, SMURF1, XYLT1
Negative_9465	ATP6V1H, CLDN10, FZR1, GUK1, HLCS, IL28B, JUND, OR6F1, PIK3R4, SESN2
Negative_9466	AK5, KIT, RPE, ACP6, ACYP1, ADCY5, B3GALT1, B3GNT2, CACNG8, CD27, COL6A1, DAAM1, DGKD, FGF6, GCNT4, IFNA6, INADL, IRS2, ITCH, MAP3K1, NAGA, NRG1, OR14C36, OR2T12, OXCT2, PFAS, PHKB, POLR2B, PTGS1, TAS1R1, CSNK1A1L, SLC25A31, TNFRSF1A
Negative_9467	CKM, DBT, IVD, VCL, ABL1, ACAD9, ALDOC, ALG5, BCAT1, BPGM, CDH4, CDKN1B, CDS2, CHEK2, CYBB, CYP2C8, DHRS4L2, FGF23, GZMA, IFNG, IRAK3, KIR2DS5, LLGL2, MAOA, MMP7, MYH7, OR1C1, OR5B12, PANK4, PCCA, PDGFD, PLCE1, POLR2K, PPA1, PPP2CA, PVRL3, PVRL4, RBKS, RDH5, RND1, SLC12A2, TRDMT1, WASL, WHSC1L1, YWHAB, HSD17B12, MAPKAPK2, ST6GALNAC1, ST6GALNAC6
Negative_9468	LPO, ANAPC5, ATG3, ATP4B, ATP5G1, CDS1, COASY, CXCL12, FGF22, GDF5, IGF1R, KAT2B, LDHA, NME2, NOX1, OR4D5, OR56A4, OR8I2, PDGFRB, PNPO, POLR2L, RRM1, SETD1B, SULT2B1, TAP2, VANGL2, WNT3
Negative_9469	IDS, JUP, LHB, ACTG2, ADRA1D, BMPR2, CD36, CDC25A, COL4A2, CYFIP1, FDPS, HYAL1, IFNA14, IL17B, IMPDH1, NFKBIE, NFYA, OR10AG1, OR2D2, OR2D3, OR4K1, OR4M2, OR5A1, RBKS, SELP, WNT7B, PLA2G12A, ST6GALNAC1, SUV420H1

Negative_9470	GLS, JUN, RDX, VCL, ACO2, ACVR2A, ADAM17, ARPC4, CCL23, COQ3, CPT1B, CSF2RA, EFNB2, FECH, FGF20, GP1BB, HSD17B1, LEF1, MAP4K4, MOV10L1, OR2T34, PMVK, POLR2F, PPARA, RPIA, SMPD3, SPRY3, TNFSF18, TSLP, TUBB2B, UPRT, WNT11
Negative_9471	BMPR2, COX15, CPT1B, DGKA, GSTT1, OR4C46, PPP1R3B, TNFRSF1A
Negative_9472	AADAT, AK3L1, BMPR1B, CES7, COQ3, CRLF2, CYP3A5, DUSP9, GALE, GALNT10, GSTA1, IL18, NAT2, NME6, OR4K13, OR52A5, ORC2L, PARVB, PNPLA3, PRKAA1, RDH16, RUVBL1, TBL1X, TP53, WARS2, WNT5B
Negative_9473	DCT, PGD, PXN, ABI2, ACOT12, ADCY5, ADH1A, ADH6, ALDH1B1, ALG8, ARSD, ATP2A3, AXIN2, CACNB2, CCL11, CHRM2, CKMT2, DARS, DHDDS, HHIP, IDI1, IFNA21, IPPK, LAMB4, LTA4H, MALT1, MCM4, OR1L1, OR5H6, PDCD1, PDE9A, PFKL, PGK1, PIK3C2A, PITX2, PLA2G3, PLCB1, PLCZ1, PPP3R2, PRKAR2B, PSME2, PTGES2, SV2A, TGFB1, TRAF4, TSTA3, WNT9B
Negative_9474	C1S, CD2, FAS, HGD, MAG, ACMSD, CD247, CDKN2D, CKS1B, COL4A2, CSNK2A1, DAG1, DERA, DUSP7, FCGR2B, GALNT6, GANAB, GDF6, GYS1, HEXA, HTR2B, IL23A, IL6R, MAP3K1, MAP3K11, MAP3K8, MDH2, MPP5, OR10AD1, OR2AE1, OR2AT4, PAK1, PON1, PROC, PTPRJ, RASA1, RPS6KB2, SFRP1, SHC4, SLIT2, SNAI2, SOAT1, SV2A, TPH1, TRAF5, ULBP2, HSD17B12, KIR2DL5A
Negative_9475	CFH, ASAH1, ATP6AP1, BMP6, CAMKK2, CLDN10, CSF2, EPHX1, FGD1, FGD3, GALNT7, GNRHR, HMGCS1, IRAK4, MGAT4B, MTFMT, NADSYN1, OR10J1, OR1S2, OR4K15, PARVG, PDE9A, PDGFRB, PIGN, PLAU, POLD3, PRPH, PYCRL, RASGRP1, SEMA4F, SMPD3, SULT1A1, ZFYVE16, PAFAH1B1
Negative_9476	AGTR1, GALM, THBS4
Negative_9477	ADC, ALDH9A1, ALS2, AMPD3, CUL1, CXCR6, HCCS, MAPT, MTAP, NFE2L2, OR52K2, TOLLIP
Negative_9478	ATM, LAT, NPL, ATP6V1A, BPGM, CRHR1, EPHA3, ETNK2, FSHR, GUSB, IL12RB2, IL13RA1, PCCA, PDHB, PIK3R4, PLXNA2, PPT1, PRKG2, PTPRZ1, RPS6KA5, SDC1, SKIV2L2, SMPD2, STAT5B, TAS2R16, TLR2
Negative_9479	ATM, NNT, ABL1, ACP5, ALAS1, CCL21, CCND3, CREB3L3, CYP2C8, CYP4A11, DHFR, DLL3, EDAR, ENTPD6, GAB1, GBA3, HARS, IDI1, LYPLA2, MAN2A1, MAP3K8, MGAT5B, MKNK1, NMNAT1, NTN1, OGDHL, OR1A2, OR2T6, OR2Z1, OR52B4, OR52E6, OR52E8, OR52J3, PCK1, PFN2, PHKA2, PLCE1, PNPLA3, PRKAA2, PTPMT1, PTPN7, RELA, RRAS2, RXRA, TAS2R48, TD02, VTI1B, WWP1, TNFRSF6B
Negative_9480	ACMSD, AMDHD2, DKK4, OR1J4, SEMA3D, SOAT1, YWHAG
Negative_9481	F2, CCR7, F13A1, ITGA11, MASP1, MS4A2, SLC25A5, WNT5A
Negative_9482	C3AR1, C7orf16, CCL25, CDC45L, CDKN1C, CYP3A7, DKK2, EVI1, FUT3, FZR1, GNPDA2, GSTP1, GUSB, KLRD1, OR2G3, PDIA4, PPA2, PTPRZ1, RPS6KA5, RPS6KB1, SMARCA5, SPHK1, SULT1E1, VEGFA, CACNA2D4
Negative_9483	ADC, CD47, CDC20, GMPR, GUCY2C, IL13RA2, LCMT2, MYH4, NCK2, OR51M1, PDE4B, RALA, RAP1B, SCLY, UROC1
Negative_9484	ATP13A2, JAG2, MMP9, NAMPT, NCKAP1L
Negative_9485	ACVR2A, ATP4B, COL4A2, CYP2A6, DPM2, DUSP6, DUSP7, EIF4E2, FMO2, IL12B, LILRB3, MALT1, NLGN1, NRG1, OR14J1, RARS, STAT5B, STEAP3, UPB1
Negative_9486	BAX, CS, FAH, ARPC3, B3GNT2, BMP4, CSNK2B, DVL2, EDNRB, EPHA8, ETNK1, GBE1, IL18R1, INPP1, ITGAL, MTHFD2, OR1D5, OR52N2, ORC2L, OSMR, PGK2, PYCR2, ST8SIA1, STX5, TOMM40L
Negative_9487	ACSL4, CAMK4, OR5AC2, OR5H6, PIGB, PPA2, SPRY1
Negative_9488	BCR, C8G, IL3, PC, ACVR2A, ADH6, AGPAT3, ARRB2, BRAF, CD247, CDC25A, DAPK1, DARS, DDHD1, DEGS2, DUSP10, GAS1, GGT1, IL18, KAT2A, KAT2B, KLK3, LAMB2, LDHAL6B, NT5C1B, OR2G6, OR4K2, OR5T2, OR8K3, P2RX1, P2RX3, PIK3R1, PLCD1, POLR2E, PRPH2, RCHY1, RDH8, RPIA, SFRP1, TAP2, UGT2B17, ST6GALNAC3

Negative_9489	CBS, CD2, GPI, ID3, IL6, NOG, PDC, AGMAT, AHCYL1, CAV2, DHRS4, DOCK1, E FNB2, EXT1, GABARAP, GNG12, IFT57, IL21R, MAN1C1, NME7, OGDHL, OR2T3 4, OR8H1, PGAM2, SETD7, SOAT1, TDO2
Negative_9490	C4B, ACVR2B, ADIPOR1, COL4A2, CYP2C9, DDX55, GGT5, IL29, OR51I2, PIP 5K3, STK4, VAV3
Negative_9491	ACTB, ALDH3A2, DDX55, E2F3, EHMT2, FGF19, FSHB, MALT1, PERP, PRKY, SD C4, THTPA, TRAF5, TUBB, ZFYVE9
Negative_9492	BUB3, OR4C46, PTDSS2
Negative_9493	GSTT1, PTPRC, TAS2R7, TYROBP
Negative_9494	CKM, F9, HAL, IL6, TH, ABL2, ADRB1, AKR1C2, ASIP, ATP5J2, BNIP1, CHAT, DBF4, DDX54, DERA, DHRS3, FABP3, FASLG, FGF2, FGF20, FPGT, GCNT2, IGF 1, IL1R2, ITGA11, KDSR, LAMB3, MAP4K1, MYLK3, OGDH, OR10T2, OR2A12, O R4K17, OR51F2, P2RX4, PFKM, SCP2, SHMT2, TIAM1, TRAF1, CSGALNACT1, T NFRSF10A
Negative_9495	ACOT12, ADCY5, ADSSL1, B3GAT1, CLDN2, EIF4E2, F13A1, FDPS, FRAT1, GN AZ, GSTA3, GSTM5, HNF1A, KIR2DS4, MGAT4B, NR5A2, OR1L6, OR2C3, OR51D 1, OR52M1, OR52R1, OR9Q1, PANK3, PAPSS2, PARVA, PCCA, PER2, PFAS, PIK 3C2G, PRKAB2, RARS, SDHB, SEMA4G, SETD7, SYNJ1, TAS2R48, TRAF5, TSC1 , WNT10A, SERPIND1
Negative_9496	IDS, MPZ, VTN, ACADM, ACTC1, ADAM10, ALG10B, AMHR2, AOX1, B3GALT1, CC R6, CD80, ELK4, ENO2, GPAA1, HMGCR, HYAL2, IL12B, IL3RA, NUDT5, NUMBL , OR10AG1, OR2AT4, OR4B1, OR5R1, OR5T2, OR8S1, PDCD1, PDE8B, PIGS, RD H10
Negative_9497	AREG, BMPR1A, C5AR1, CASP6, CYP7A1, DPM1, IFNW1, NFYC, PRNP, STX3, TH BS2
Negative_9498	FES, ACVR2A, ADIPOQ, ANPEP, ARSA, CYP2C8, FM01, FOXA2, GNAI1, GRM5, H NF1B, HSD17B4, IFNA8, JAG2, MCEE, MYH11, OR1C1, OR8J1, PLXNC1, PRKY, PRSS1, RAB23, TAS2R42
Negative_9499	IL5, JUN, TNR, AGTR1, ATP5G2, B4GALT1, BIRC3, C3orf10, CCL25, CCR1, C MBL, CTPS, CXCR3, DAPK3, DTX3, EIF4E2, FGD1, FGF2, GBA3, GPD2, IL20RA , LIAS, MTFMT, NR5A2, OR1A1, PPT1, PRIM1, PRIM2, PSPH, PTCRA, PTGIS, P TPN1, SSH2, SUCLA2, TSLP, TUBB4Q, ULBP2, VANGL1, YWHAQ, ATP6V1E1
Negative_9500	CS, LCT, CREBBP, DHX58, EPB41, FUT3, KIR3DL2, OR12D3, OR13C2, PFKFB1 , TNFSF14, VKORC1
Negative_9501	IL4, ACADS, ACP2, ADORA2A, AKT1, ALDOA, CAMK2D, CD19, CLDN8, CNGA3, C OL4A1, COL4A6, COX10, DHFR, DLST, F11R, FIGF, GNA11, GNPAT, GRM5, HES 1, IFNB1, IL19, IL1R2, MAP4K2, NLGN1, OR10P1, OR51A4, OR5L2, OR6S1, O R9Q2, OXTR, PAICS, PTCH2, SPAM1, SUCLA2, TUBB1, WIF1, MAPKAPK2, TNFR SF10D
Negative_9502	ILK, ATG12, AVPR1A, AXIN2, B3GALT6, CASP6, CD8A, CDKN2C, CHEK2, CHRM 3, CRLF2, DHCR24, DLL1, EFNB3, GLO1, JAK1, MAPK14, NFATC4, OR51A2, OR 5B21, PDPK1, PIK3CG, PLEKHA8, PPAR, PRKX, PRPH2, PSPH, PTPN7, ST3GA L6, TAS2R7, UGT8, YOD1, ZIC2, TNFRSF11A
Negative_9503	SCD, ACOX3, ACY1, ALDH2, ATP5F1, BLVRB, C3orf10, CADM3, CHPF, CLDN5, CLTCL1, CTNNA2, CXCR6, CYP11B2, DERL1, DHFR, DVL2, EGLN1, ENTPD3, ER O1L, GCNT4, HADHA, HNF1B, HSD17B1, HSD17B8, IRS1, ITGAV, KLRK1, MIOX , MPST, NAGS, NEUROG3, NFATC1, OR10A2, OR11A1, OR13C9, OR2T29, P2RX1 , PCYT1B, PDE4C, PDHB, PLCB3, SOX17, TGFA, TRAF4, WNT10A, MAPK8IP3, S ERPIND1
Negative_9504	F11, UBB, ADCY2, AHCYL1, CACNA1I, CADM1, CD59, CYP2A13, F11R, FABP3, GSTO1, HTR6, IL3RA, L1CAM, NEU1, NOX1, OR4B1, SLC27A1, SSH2, YOD1, SE RPINC1
Negative_9505	ASL, CCR7, CD79A, CHD8, CLDN2, DDX41, GDF7, MAPT, RASSF1, SPCS1



Negative_9506	C8A, IL3, SP1, AMD1, AMDHD2, ATG7, CAMK2B, EGFR, HAO2, IFIH1, LEF1, LIPA, MAOB, MPDZ, NKD2, OR11A1, OR6C75, P4HA1, PTCH2, SFRP2, TAS1R2, TP M3, TRDMT1, WHSC1
Negative_9507	RB1, AADAC, ACADM, B3GNT3, CACNB2, CYFIP2, DUSP1, HLA-DMA, HSPB1, IMPA2, MGST2, MYH3, NEUROG3, NTF3, OR12D3, OR14C36, OR2A G1, OR5L1, OR6B3, PDE7B, PLCB1, PRKCI, RBL1, RPS6KA6, SULT2B1, HSP90 AB1
Negative_9508	PRL, BDKRB2, CDC7, CRLS1, CTNNA2, CTNND1, DAD1, GADD45B, GAL3ST1, LI PT1, NADSYN1, OR10P1, OR5D14, SUCLA2, TBL1XR1
Negative_9509	CS, MOS, ADAM17, BCMO1, CD79A, CHPT1, DGKI, FOXO3, G6PD, GZMB, HCLS1, MAPK14, NAT1, OR10J5, OR4N2, OR5B21, OR5T2, OR7G3, PGM1, SHC4, SMPD4
Negative_9510	CEL, AMY2B, ANAPC2, CRKL, E2F5, EPB41L2, FZD3, GADD45A, GALM, GSTM5, HAAO, HSD3B1, IFNA21, LEPR, NAE1, PAK6, PIGM, PIP4K2A, POLR2A, PPAT, PTPN1, PTTG1, RBPJ, RELB, SNAI1, TAS2R14, TUBB4
Negative_9511	APP, BTC, GSN, IL8, AGPAT4, APRT, B3GALT2, BCAT2, C4BPB, CD01, CTF1, C XCR5, DAG1, DUSP1, DUSP14, FABP4, FTMT, GFPT1, GPD1, IDH1, NR5A2, NT5 E, OR13H1, OR56A3, OR5AC2, OR5AR1, OR5M8, OR8G1, PIK3R2, PPAP2B, PTC H1, RASSF5, SYNJ1, TNFSF14, UGT2B10, ULBP2
Negative_9512	F12, RPE, TK1, ANPEP, CBLC, CCL27, COMP, DRD2, ENTPD8, IL7R, ITGA4, LC AT, NCKAP1, NCR1, OR10A2, OR10K2, OR52N5, OR5R1, TBL1XR1, TLR9
Negative_9513	GSN, APOE, CLDN20, GALNT12, GNAT3, ITGB7, LDHAL6B, LLGL1, MAN2A1, MD H1, OR10A3, PTGS1, STX18, TGFB2
Negative_9514	GDA, NLK, RDX, RET, ARHGAP5, CALML3, CD3E, CDC14B, CDK2, CX3CL1, DAPK 1, DGKQ, E2F3, FARS2, GAB1, GPD2, GTSE1, IDUA, ITGA8, JAG1, OR10G9, OR 10H3, OR2B6, ORC6L, PGK1, POLR2E, PTGDS, RPS6KA4, SOCS2
Negative_9515	LPO, OAT, ASMT, CYP17A1, GGCX, GRIA1, GSTA4, GSTM1, GZMA, IFNA16, IL1 5RA, LFNG, MAP3K14, PAK4, PDE6H, PTGES2, QARS, SMPD4, SPP1, WBSCR22, PLA2G12B
Negative_9516	LCT, ADCY4, ARNTL, CXCL12, CYP2C9, G6PC, HDAC2, IFNA16, IFNG, MAML3, MAP2K1, MGAM, ODC1, OR2T12, OR51T1, OR9G4, PDXK, PIGF, PROC, RAF1, SE MA3G, SGMS1, THBS3, ULK2, USE1, YWHAQ, SLC25A31
Negative_9517	DFFB, GPX5, LAMC3, OR2A5, OR51B2, PCNA, PTGDS, ULK1
Negative_9518	FN1, CDC16, COL5A3, FTH1, GALNT1, GPD2, GSTA1, IDH2, ITGA6, KLK3, MAD CAM1, OR3A2, PANK3, PCYT1B, SSH2, VAV2
Negative_9519	UBB, ATP6VOB, B4GALT7, CD8B, DDX51, DUSP3, E2F4, EXTL2, GAL3ST1, GAN C, GLI3, GNB3, JAM2, LIPE, MAFA, MCCC2, MGST2, MYH10, OR10AD1, OR2T2, OR6C1, OR6N2, SPP1, TAS2R7
Negative_9520	FN1, BUB1, CHST13, CSF1R, CSF2RB, CTLA4, EGLN1, GALNTL1, GJA1, HTRA2 , IRAK2, MAN2A1, OR10A7, PDE1A, PDE6G, TACR2, TBL1X, TCF7L1, TJP1, UM PS
Negative_9521	FGA, ASPA, ATIC, BTRC, C4BPB, CDKN1B, COL6A2, GADD45B, GALNT8, GMDS, GMPPB, GSTM1, IL6ST, MAP3K4, METTL6, OR5AC2, RENBP, SEMA4G, STAT4
Negative_9522	C8B, FGA, PAH, TEC, UBC, ABAT, ACP6, ACTB, ALAS2, ATP5H, CCR7, CDS1, CH RM3, DGAT1, DVL1, FMO5, GALK1, HSD17B4, IL23R, LARS, MYH2, NFATC1, NL GN3, OR13C8, OR1G1, OR5P3, PAK7, PDGFRA, PFKL, PHGDH, PLA2G2D, RAC1, RFXAP, SMPD3, SRGAP1, ULK3, VEGFB, WIF1
Negative_9523	AK7, F9, ILK, LPL, ARHGEF1, CCL27, CDC16, CHUK, CIITA, CXCL9, EDA2R, E FNA1, ENO2, FGF9, MAPK14, NEU1, NRXN2, OR10H5, OR2B11, OR4X2, OR56A4 , OR5K1, P2RX1, PRPS1, PTCRA, PTPN5, TNFSF4, TUBA3C, WNT16, MAPK8IP3 , PLA2G12A
Negative_9524	C8A, AMD1, AXIN1, CCNE2, CDIPT, CD01, CLTC, EPRS, GBA3, GPT2, GSTM3, I PMK, NCOA4, OR2AT4, PFKL, PGK1, PLOD3, PON2, PTPRZ1, SPRY4, TPH2, WEE 1, SERPINF2

Negative_9525	CP, GH1, ACOX1, AGTR1, CCL17, CTF1, DGKQ, EIF4B, ICOS, KIR3DL3, LRDD, LTC4S, MYH8, OR2D3, OR4X1, OR6K3, PIP5K1B, PRPS1, RUNX1T1, SLC12A2, SLIT1, STT3B, TLR5, TRAF4, SERPINB5, SUV420H2
Negative_9526	RPE, TAT, ACADS, AKR1B1, APC2, CACNA1S, CCNA2, CDC2, CHRM2, CRLF2, CTSS, DTX4, DUSP2, F2RL3, FABP3, FABP4, GPD2, HEXA, HSD17B3, IGSF5, IMPA2, IPPK, ITPKB, MYL7, OGDH, OR5T1, PARD6B, PCCB, PFKP, PIK3CD, PRKCH, PRKG1, SESN2, SESN3, TAS2R48, TPH2, UCK2, UCP1, UNC5D, WNT1, CACNA2D2, SERPINA1
Negative_9527	GNE, CACNA1E, CCL17, CLDN11, DAD1, DDIT3, GNPDA1, GSTA2, MYH15, NCF4, NCKAP1, PECAM1, SPRY3, TAS2R50, PLA2G12B
Negative_9528	HK3, LCT, AGXT, ARNT, ARSD, CACNB4, CD8A, COL5A2, CRY1, DGUOK, EHMT2, EI24, EP300, GADD45B, GNA13, GNG13, IKBKE, IL1R2, IL23A, ITGAL, KLRC2, MAGI1, MCM4, MTHFR, MYL7, NFKB1, NRAS, OR1D2, P4HA3, PDE5A, PIK3CD, PNPLA4, POLE, PPAP2B, PPARA, PYCR1, SLC33A1, SLC9A1, SPRY2, SV2B, UGT2A1, GABARAPL1, HLA-DRB4, MAPKAPK3
Negative_9529	C8A, BCL10, CASP10, CCL17, CD58, CLDN6, CXCR4, EGLN3, GALNT11, IRAK2, MAP4K1, MAPK9, MYH1, NFATC3, NKD1, NODAL, OR1L3, OR2F1, OR4A15, OR5A1, PAX8, PLA2G4A, PPP1R3A, PRKCI, RASSF1, SMAD3, STAM2, STX2, WNT5A, ATP6V1G3
Negative_9530	BID, EDA, SMO, AANAT, ACADVL, APC2, BUB1B, CAMK2G, CCL25, CLCA4, CLDN17, EDN1, GDF6, HAAO, HARS, IDH1, ITGAE, MTMR2, MYH6, NFATC4, OR51Q1, OR6C70, OR6K2, PAX8, PDE1B, PDE6D, PER1, PFKM, PIPOX, PPP2R2B, PPP2R5D, PTDSS2, RBL2, RPS6KB2, CTNNBIP1
Negative_9531	ADC, AK3, BID, DBH, F9, GSR, MSN, TK2, UBB, ACP1, AMPD2, ASNS, ASS1, CASP7, CD8B, CES7, CLDN9, COL1A2, CPT2, CREB3, CREB3L3, CYP27A1, DPM3, FGF23, GALM, GNA12, GRIN2B, GRPR, HMGCS2, IL28B, IL5RA, MCM7, NEU3, NME7, OR52A1, OR9K2, PNPO, POLR3D, PRKAG3, RFXAP, SFRP5, TD02, TNFSF18, WARS2, CACNA2D1, PPARGC1A
Negative_9532	B3GAT1, CADM3, CAPN2, CYP7A1, EPHA5, ERBB4, MGST3, PERP, STX12
Negative_9533	NPY, TPR, ACSM3, ADCY2, ANGPTL4, ARHGEF1, ARHGEF4, ATP5D, BAIAP2, CACNG3, CCL23, COQ3, CSF1R, CYP2A7, DUSP5, EDA2R, FLT1, FUT8, GAD1, GDF5, GUCA1C, HAGH, HSP90B1, IGFBP3, MAP3K3, MYH10, OR1L8, OR1N1, OR4F15, OR51A4, ORC2L, PDE2A, PDE5A, PDGFA, PLA2G2D, PTDSS2, PTGER1, RPS6KA5, SH2D1B, STMN1
Negative_9534	AK7, AMT, IL7, SHH, BET1L, CNTFR, FCGR3B, FGFR1, FRAP1, HADHA, HDAC1, HLA-DOB, IL17RA, MYH10, NCR1, OR10K2, OR5K1, PDE6D, PTDSS2, PVRL3, RAD51, TD02, ATP6V0A1
Negative_9535	AMH, F9, HK2, IL2, MAG, RPE, AGPAT4, BDH1, CCR7, CDC7, CDKN2D, CHKA, CRKL, DGAT2, DPYS, EP300, FCGR3A, FDFT1, IDI1, IFNA16, NAGK, NFAT5, NKD1, NUDT9, OR13C9, OR4E2, OR4N5, OR56A3, OR9Q2, PAK3, PDGFA, PFN1, PGAM4, PPP1CC, RAC3, RERE, RXRA, SFRP4, SOX17
Negative_9536	AK1, DCT, GPT, IL9, LPO, MPI, RDX, AGPAT1, ARAF, BMPR1A, CCL22, CD8A, CFLAR, CHD8, CLDN6, COL11A1, CYP3A43, DGKB, IL18R1, IL1RAP, ITGA7, ITGB6, MAPK10, MDM4, OR2D3, OR2G2, P4HA1, PPP5C, RALB, SHC1, SORBS1, TICAM2, UGT2B28, PDCD1LG2
Negative_9537	ACSS3, ADRBK2, ATP6V0B, ATP6V1D, BAAT, BET1, BIRC5, BLVRB, BRAF, C3A R1, CCKAR, CLOCK, CSF2RA, FTH1, GLDC, GMPPB, GRIA1, GUCA1B, IDI2, ITGB4, JAG2, LCP2, MAP3K2, OR14I1, OR2M3, OR2Y1, PCCB, PPAT, PRKAA2, PTPN1, THTPA, UBE2L6, WNT5B, XCL1, GABARAPL2

Negative_9538	C1S, DCN, F2, OAT, PLG, ACTN4, AKR1D1, CACNA1D, CCL5, CES2, CHKA, CNDP1, CRLS1, DDX18, DDX56, DOCK1, ENTPD2, FRAP1, GNAI2, GUCY1A3, H6PD, HADH, HDAC2, HSD17B1, IARS, IL5RA, KLK3, MAP3K12, MMP7, MYH2, MYL2, NAGK, NCR1, NRAS, OR1G1, P2RX1, PGM1, POLD2, PON1, PRKAR2B, SEMA4A, ST8SIA1, SUV39H2, TAP2, TAS2R14, THBS1, UGT2B28, SERPINA5
Negative_9539	ADA, CBL, EZR, F8, FGG, IL8, LIF, ACOX3, ADCY4, ARRB2, CALML5, CCNG1, CR7, CISH, CTBP2, CYP26A1, DRD1, GSTM2, IFNA2, IL11RA, MAP3K1, OR4F4, OR52D1, OR8K5, PPP2R2B, PRKCB, RALGDS, RAP1A, ST6GAL1, TIAM2, UBA1, ALDH18A1, MAPK8IP1
Negative_9540	ACSM5, ALDOA, APRT, ARNT, CANT1, CASP3, CCL24, CDH4, CLTA, FLAD1, FUT4, GALE, KIR2DS4, MAP3K8, NFX1, OR10K1, OR4C11, OR52A1, PAX6, PDCD1, PDE3A, PFN2, PIP4K2B, PLEKHA8, POLR2H, RPS6KA5, SAT1, SDHA, SNW1, STMN1, TYMS, VAMP3
Negative_9541	TFG, ANAPC2, ATP5B, CNTF, COL4A1, CYP2C8, CYP4A22, DAPK2, DGAT1, EGLN1, FGF7, FZD3, GBE1, IL2RA, MDM2, MTHFR, NARS2, NFYC, OR2T29, OR52N5, PDE8A, PGK2, PPP2R5A, PRPS1, PTPRM, RCHY1, SEMA4F, TAS2R5, TRAF6, TRPC1, VEGFA, WARS, TNFRSF1A
Negative_9542	CP, FES, NLK, SYK, ADRA1D, ARNT, BDH1, CCR6, DCTD, EDA2R, FCGR3A, FGF19, GALNT13, GALNT2, GNPAT1, GPD2, GRPR, HCCS, HYAL1, IRAK3, ITGAE, MAP3K3, NT5C2, PANK1, PPAR, PPP2R1B, PTPN11, RENBP, SESN1, SMURF2, KTL1, TXNDC12, TNFRSF13B
Negative_9543	AR, LPL, SMS, ADRB2, ATP5F1, BLVRA, C3AR1, CARD11, CCL17, CER1, CYCS, CYP11B1, CYSLTR1, EPHA8, GLO1, GMDS, GRM1, NAT5, NCF2, OR10G4, OR2T10, OR4B1, OR56A3, PIGN, PTPRR, STAT5A
Negative_9544	GK, KDR, A4GALT, C9orf95, CD86, CHUK, HTRA2, ST3GAL1, SYNJ1, TP53I3, YOD1
Negative_9545	DAO, HK2, KDR, SMS, ACVR1, ALPPL2, AMDHD1, BCKDHA, C7orf16, CCNB1, CLDN3, DDIT3, DKK4, EIF4E2, ENPP3, ERBB2, GSTO2, HAGHL, IDUA, IFNAR1, ITGA10, LARS, MAPK1, NCR1, NLGN2, NOTCH1, OR4X1, OR51S1, OR52L1, OR5H2, OR6B3, OR9G4, PDGFD, PIGN, PNMT, PNPLA4, PPP2R5A, PRPS1, SARS2, SLC2A1, TGFBR1, TNFSF12, ULBP3, WNT4, WWP1, PAFAH1B2
Negative_9546	CFD, CACNA1D, COL5A3, GPAM, ITGB7, MADCAM1, MAN1C1, OR2K2, OR4D2, PIK3C2G, PLA2G2D
Negative_9547	GP5, ID1, APC2, APOA1, ATP6V1A, CREB3L2, DKK2, DLST, G6PC, HEXB, ICAM3, IKBK, LIPC, LIPE, LTB4R2, OR10S1, OR1L4, OXSM, PCNA, STX16, TYRP1, UNC5D
Negative_9548	AK5, IL4, MPZ, AANAT, ADRB1, ARPC5, ATP2A1, ATP6AP1, CACNA1A, CAMK2G, CD244, CHD8, CPT1C, EPHA8, FRAT2, GCNT4, GSTO2, GTSE1, HMBS, IQGAP3, ITGB4, JAK1, LAP3, METTL6, MPZL1, OR1S1, OR2T29, OR2T6, OR4D6, OR6S1, OR7G2, PAPSS1, PAPSS2, PIPOX, PLTP, POLD1, PPP1R3B, PRDX6, RBX1, SH2D1A, ST3GAL1, TAP2, UCK1, UPB1, WNT11, TNFSF13B
Negative_9549	AK7, ACTA1, ADRBK2, ASNS, BIRC3, CARS, CCL5, DVL1, EHMT2, HLA-DOB, HMGCL, HSPA1B, LEFTY1, LIPT1, MAPK1, MAPK10, OR10T2, OR2A42, OR4D2, P4HA1, PDGFB, PSEN2, RFXANK, SSH3, TRIP10, UBE2L3, YWHAE, HSP90AA1
Negative_9550	C9, ADCY1, CHRM3, CLTC, ELK4, EPHA6, FZD5, GAMT, OR10A7, OR6N1, UGT2A3
Negative_9551	BMP5, DGKD, DHCR24, FGF10, FZD7, GALNT1, GNMT, HSD11B1, IFNA8, IRAK3, LIPA, PVRL2
Negative_9552	ABLIM3, ATP5I, CDKN1C, DUSP14, GATM, GNB3, IL12RB1, IQGAP3, ITGAL, KIR2DL4, LIPG, OR10T2, OR2F2, OR51F2, PPP3R2, RASA1, RASGRF1, WARS, MAPK8IP2, SUV420H2

Negative_9553	CAD, HDC, ABP1, ACO1, ASRGL1, CCL16, CD79A, CDH5, EHHADH, GAD2, GDF5, GMPA, GOT1, INSR, KCNB1, LCAT, NRG2, OR5T3, PAPSS2, PLA1A, PLXNC1, PRKCB, PTRZ1, STAM2, UGT2B7, UNC5D, PRICKLE1
Negative_9554	CFD, GK, PGF, ABL2, ACP1, BAI1, CCL5, CREBBP, EPB41, F2RL2, FMO1, GALNT13, GRIN1, GSTM1, GTSE1, IL13RA2, IL18RAP, LEFTY2, MCM3, METTL6, MNPP1, NANP, OR10P1, OR2M4, OR56A4, OR5P3, OR7G1, PCYT1A, PEMT, PFKFB4, PKMYT1, PPOX, PRKY, PTCH2, ROBO3, SDC1, SOCS7, SOX17, SRGAP1, SSX2IP, TAS2R3, TMLHE, VDAC3, SERPING1
Negative_9555	DCK, TAT, ADCY7, AKR1C1, AVPR1B, DNMT3A, EXT2, GAMT, HSD17B4, IRS2, ITGB2, LAP3, MGST3, NAGK, OR10A5, PMAIP1, PSPH, PTSS2, RPN1, RPS6, SOCS3, TACR1, TPI1, CSGALNACT1
Negative_9556	IFNA5, UGP2, YWHAG
Negative_9557	ME1, AREG, BACE1, BMP8B, CER1, CHSY1, CLTCL1, DGAT2L4, DRD1, FABP1, FGFR1, FOXA2, FUT7, GCLM, IL13RA2, IL15, ITGA2B, LIFR, LRDD, MPZL1, MRAS, NRXN2, OR10K1, OR9G4, PAK4, SLC2A2, SULT2A1, TBL1X, TSC2, WARS, CACNA2D4, HLA-DPA1
Negative_9558	BID, C8G, DDO, PLN, TAT, VTN, XDH, ALDH2, ALDOC, AMPD2, ATP5D, CANT1, CBR1, COL1A2, CREB1, CXCL1, DUSP14, DUSP16, EIF4E, FUT5, GALNT1, HEXA, HNF4G, IRF7, LDHAL6A, NCAM2, OR4B1, OR4K5, OR5AP2, PFKFB1, PTGES, RUNX1T1, SOS1, STAT6, TNFRSF8, TRADD, TRMT11
Negative_9559	ALDH6A1, BAIAP2, CACNB3, CCNA1, CD3E, CDH15, COQ6, CPT1C, CYP2C8, DAM2, GALNS, GALNT5, GDF6, GNPDA1, GOT2, IAPP, ITCH, JAK2, LCP2, MAD2L1, MIOX, MITF, MTMR2, NUDT8, OR2H1, OR2L3, OR52R1, OR5B3, OR7D4, OR8K5, PTAFR, SEMA3C, SGMS1, TGFBR1, TUBB2B, USE1, WASF1
Negative_9560	AGK, CKMT2, CLDN17, DIAPH3, FGF23, FLOT1, HNF1A, INPP5E, NKD1, PLA2G4A, POMC, PRKCH, TLR9, TRHR, MAPKAPK2
Negative_9561	ADA, MPI, PAH, SMS, ADCY3, APH1A, ARHGEF6, ASS1, CD55, CNGB1, CSF3, DAG1, DDX18, DEGS1, FGF23, HEXB, HSD11B2, IL10, IL17RB, IL1B, INPP5A, INPP5B, MAPK12, MAPK13, NEGR1, OR10G4, OR2S2, OR52N1, OXTR, PGS1, PLOD3, SETMAR, SRGAP3, STAT1, TGFBR1, TKTL1, TLR3, TOMM40L, TUBB, ZMAT3
Negative_9562	CRH, FER, HAL, ADH1B, ADORA2A, ASIP, BPGM, BTRC, CALML3, CCL14, CCNB3, CHUK, CSNK2A2, CTBP2, DDIT4, DIAPH3, DPAGT1, EPB41, EXT2, FUT1, GCNT2, GMPR2, HIF1A, IL12RB2, INPP4B, JAK1, LDHC, MCM5, MYH1, MYL5, OR52H1, OR5A1, PDGFB, PLA2G1B, PMM2, PTGFR, RAB23, RARS2, ROCK2, RPS6, RUNX1, SDHD, TP73, TUBB, UGT2B7
Negative_9563	C8G, ABL1, AHCYL2, ALDH1L1, ARAF, ATP5G3, BPNT1, CD70, CDC16, CDC26, CTLA4, CYP2B6, DDX18, DIAPH2, FCGR3B, FGF22, GALNTL5, GNG12, GUSB, MAPK9, NEFM, OR2A2, OR51I2, OR5AN1, OR6F1, PHKG2, PIGN, POLR2A, SH2D1B, SPTAN1, STAT3, TACR1, UCP1, ULBP1, YKT6, SERPINB5, TNFRSF11B
Negative_9564	ADO, C8B, GNAI2, ITGB7, PLCB3, RASGRF1, SULT1E1
Negative_9565	AGK, GSR, ALDH3A1, BDH2, CD8A, CDH5, CHRM5, CLDN18, COL6A1, EXTL2, GALNT2, GLI1, IFNK, IL18R1, IL6ST, NCKAP1, OR4D11, SOCS1, SRGAP1, TAS2R60
Negative_9566	CP, ACTG2, ACVR2B, AGRP, BACE1, BCAR1, CLDN22, CSAD, CXCL13, EHMT1, FBP1, FGFR3, GALNT11, GGT7, GNAI3, HMOX2, INADL, NANS, NR5A2, NTRK1, OR2AG1, OR51T1, OR52E2, PIK3R2, POLR1C, POMC, PPAP2A, PSAT1, PVRL3, RASGRF1, RDH10, RPS6KB1, RRM2B, SLIT1, SMAD4, SUCLG1, SV2B, TYK2, UGT2B7, UPP2
Negative_9567	ABO, C2, EPO, F3, PRL, ACOX2, AGMAT, ALG6, ATP5A1, CD72, CHPT1, CPT1C, EXOC7, FGF12, FTCD, GADD45A, GART, GMPA, GMPR2, IGFBP3, IL1R2, LIMK1, MMP9, OR10G8, OR10X1, OR51E2, OR8I2, P4HA3, PDE4B, RARA, RPIA, SKP2, SOX17, TPK1, ZFYVE16
Negative_9568	ADCY8, ASNS, AVPR1B, CACNB3, COL3A1, DAAM2, FUT4, MTAP, OR10A2, OR2L13, OR52I2, PYGB, TRHR, WASF3, ATP6V1G3

Negative_9569	FGF4, IL13, ITCH, MDM4, OR52E6, ORC5L, RASGRP2
Negative_9570	AK3, F5, MYC, OGT, PC, BMP2, CACNA1D, CACNA1E, CD48, CDC20, CTSG, CUL1, CYP2D6, DCXR, GNMT, ICOS, IDH3B, IL11RA, KLRC2, NAT2, NFKB1, NFKB1E, NME4, OR10A4, OR2A4, OR51B6, OR6X1, PDE7B, PI4KB, PRDX6, PRSS2, RUVBL1, RXRB, SLC25A5, SLC2A1, SUFU, TFDP1, WASF1, PRICKLE1
Negative_9571	PRL, ATP5H, BCKDHA, CHR1, COQ5, DGKB, DOT1L, DPM3, DUSP6, FARS2, FLAD1, GPD1L, IMPDH1, KLRK1, MAOB, NCAM1, OR13F1, OR2W1, OR3A1, PLOD3, PLXNB3, PRPS2, TAS1R2, UGCGL2, UROD, YWHAB, TNFSF13B
Negative_9572	CCR10, OR8B8, TPH1
Negative_9573	BAX, FGFR1, HIP1, MAP3K2, YARS
Negative_9574	PC, ADCY3, ADH6, C3AR1, CAMK2A, CXCL9, CYP1B1, HNMT, IFNB1, IL4R, ITGA4, LLGL1, MAP4K3, OR51G1, PLIN, SELPLG, SEMA7A, SETD8, SLIT2, TGFB2, SERPINE1
Negative_9575	OGT, ZYX, FRAP1, OR10A6, OR52B4, RENBP, SEMA7A
Negative_9576	ANAPC10, CDC26, CREB3L2, LLGL2, MTHFD2, OR1A2, OR51E2, RRM2B, SPTLC1, TBL1XR1
Negative_9577	CEL, CRH, EPO, PC, ABLIM2, ACACA, ACLY, ACVR1C, ARPC5, CASK, CD47, CDC14A, CHIA, CREB5, CXCR4, CYP2A6, DUSP14, ECHS1, EDNRB, FGF18, FPGT, GALNT12, GDE1, GLUD2, GRIA3, GSTA5, IFNB1, JAK2, MAP2K6, MAP3K6, NFASC, NMNAT3, OR10A6, OR4F6, OR4X1, OR52E2, PIM1, PLCE1, RENBP, RXRA, RXRG, SELL, ST3GAL4, TGFB3, THY1, TXNDC12, EIF4EBP1, PRICKLE1
Negative_9578	PTS, AGXT, CAMKK1, CCNE1, COL5A3, CSF3, FGF6, HSPA2, HTR2B, ICAM1, IL21R, KLRD1, MGAT4A, OR1C1, OR5V1, ORC3L, RAPGEF2, RASGRP2, SUOX, UNC5B, PDCD1LG2
Negative_9579	MPZ, AKR1C1, ATP5E, B4GALT4, BUB3, C1QA, CCL27, CDC7, COQ5, DDX54, DGAT1, EPHA6, FGF9, FLOT2, FZD9, GALNT1, GLUD1, HCST, HSPA1B, KLRC2, LEPR, MADCAM1, MLLT4, MLYCD, MYH11, MYH14, NAMPT, NRXN2, NTRK1, OR10H2, OR51A2, PIGW, PIK3C3, POLR1C, POLR2H, PPA2, PTGIS, RDH16, ROBO1, SESN1, SMURF2, SULT1E1, TGDS, ATP6V1B1, HLA-DPA1, TNFRSF12A
Negative_9580	ADA, SMO, ARHGEF2, ATP5L, C1QB, CDC25C, DDX50, DPYS, E2F1, FGF12, FGF13, IFNA5, IL17B, IL28A, ITGAE, MGST3, NT5C, OR1A1, OR1Q1, OR2A4, PFA5, PGAM1, PLAT, PNLIP, POLR2D, PPP2R5D, SOCS4, SSH1, STX16, TALDO1, TSLP, WNT2
Negative_9581	FOS, PGD, AADAC, AHCYL2, ALDOC, ATP2A3, C1GALT1, CCL17, CD28, CD79A, CYP3A4, CYP3A7, GALNT1, GGT5, GGT6, GNA15, GUCY1A3, HCST, HSD3B7, IL11RA, IL1A, KIR2DS5, MGST3, OR10AD1, OR1Q1, OR4D9, OR51B4, OR5AC2, PDXK, PIGU, PPAP2A, PTAFR, RBX1, RFWD2, RRM2B, TAS2R49, TKTL2, TRMT11, UNC5B, VNN1, YWHAE, HLA-DPB1, SERPINC1
Negative_9582	BAD, FOS, GNS, TEC, AADAT, ARHGEF1, CACNA1F, CSF2RA, CXCL13, CYP26B1, DDX55, DERL1, ENTPD2, FUT9, GOSR2, HCCS, KARS, LCMT2, MAOA, MGAM, NSD1, OR10A4, OR5D16, P4HA3, PDE3B, PIAS4, PTPRZ1, SEMA4A, SORBS1, TAS2R4, TNFSF12, TOMM40, TYRP1
Negative_9583	CRK, DCT, IL8, CCNB3, EGLN3, F13A1, GAD1, GPD1, GRIN1, GRM1, GUCA1B, IFNA10, INHBA, ITGA7, KDSR, LCAT, OR51B5, PIP5K1B, PRKCD, SUV39H2, TLN2
Negative_9584	JUP, OGT, ACADSB, AKT2, BHMT, CCL2, CDC45L, CHEK1, COMT, CYP3A4, GDE1, HAGHL, NOD1, OR10H4, OR2A25, OR6B2, OR9A4, POLA2, PPCDC, SLC9A1, TNXB
Negative_9585	CCND1, CXCL5, CXCR6, DGKE, IL11, OR13C4, TRAF6, VAMP3, WWP1
Negative_9586	DUT, GHR, MIF, AGXT, APOC3, BUB1B, C1QA, C5AR1, CCL23, CCL28, CCNE1, CCNE2, CD48, CHPT1, CSH1, DHRS4L2, DVL1, GGCX, GGT7, GMPR2, HCLS1, HNF1A, HYAL1, ITGB3, JUND, KDSR, LEF1, MAP3K6, NAE1, NARS, OR10A2, OR10K2, PLCG1, PVRL4, RARA, SPAM1, SPRY3, TACR3, TAS2R42, THBS3, UGDH, WSCR17, XYLT1

Negative_9587	IL5, ACVR1, CDC7, CRLS1, CTTN, DRD5, INPP5E, JAM3, NCAM2, OR51B2, OR7G2, OR9I1, PIGH, PTK2, SH2D1B, ZAP70
Negative_9588	FGB, HDC, HK2, HK3, OAT, TPO, ACOX2, ALAD, CACNB1, CCNG1, CSNK1G3, CYP11B2, DHDDS, EFNA1, FABP3, FADS2, FZD5, GNA13, IL6ST, IL8RA, ITGB4, KIR2DL4, LRP6, MGST1, NFATC1, NOTCH1, NOTCH3, NTNG1, OR51L1, OR52L1, OR8J3, P2RX5, PARS2, PLCB3, PSENE1, VANGL1, XCR1
Negative_9589	AK1, DCT, TK1, AASS, ACTA1, AMD1, ATP5I, CACNB2, CNGB1, CRLF2, DLST, EP300, ESAM, FGF19, FGF9, GSTK1, HNF1A, HSD17B4, IFNG, IL2RG, ISYNA1, ITGB7, LCAT, LCMT2, MAPT, MTHFD1, NCF2, NCK1, NCR3, NFKB1B, NTN1, OR4B1, OR4D9, OR5J2, PIAS1, PLXNB2, POLR2D, PPP2R1A, ROCK1, RRAS2, SH3BP2, SNAI2, STMN1, TRMT11, TUBAL3, UCKL1, WNT3A, WNT9B
Negative_9590	ADH1B, CCND2, DKK2, E2F5, GALC, GBA3, LCAT, OR51V1, PTPRC, RAP1B, SETD2, TNFSF12, CACNA2D3
Negative_9591	F7, HAL, HGD, NOG, PDC, ACOT11, ACSM4, ACSS3, ADCY6, ALOX15, ARPC3, ATP6V1A, C5AR1, CACNB1, CCL8, CHRM1, CSNK1E, ECSIT, EPHA1, FGF7, GALNT2, GSTM1, HEXB, IL21, KYNU, MMP7, MYH9, NAT2, OR2A4, OR4C16, OR6Y1, OR9A2, PAX6, PGM1, PLOD3, PPP1R1A, PPP2R5E, PRKX, RARS, RASGRF2, SSH2, TNFSF12, UCP1, ATP6V1C1, ATP6V1E1
Negative_9592	C8B, ME3, MOS, RPE, ACSL5, ALDH1A3, ALG8, ALPPL2, AMY2B, APOA5, BRAF, CCKAR, CCL5, CDK5, COL6A2, COQ3, CPT1C, CXCL13, DUSP10, ENTPD5, FOXA3, GLB1, GSTM2, GSTT1, GUSB, HYAL2, IFNB1, IL12B, IL9R, INADL, ITGA2B, LIPC, LMO7, MCM3, MGST2, NADK, NMNAT2, OCRL, OR4L1, OR5T1, OXTR, PGM3, PHKA1, PIGW, PON3, TCF7L1, TUBA4A, VAMP1
Negative_9593	AGRP, AQP7, CCL24, CYP2A13, CYP4F2, DTX3L, GDE1, INSR, OR5A1, OR8I2, ORC2L, TGFB1
Negative_9594	DHH, GBA, ID4, OSM, SP1, ACMSD, AMPD1, CRB3, CYP11B1, DDHD1, FCGR3A, GLI3, GNAT3, HCCS, IL2RG, LIMK1, MAN1A1, MGAT4B, OR10A7, OR2H2, OR2V2, PIGF, PIP4K2A, PLOD2, POLR2K, PPARG, PPP2CB, RPS6KA1, SEMA4D, SPAM1, TUBB1, VEGFC, WHSC1L1, GABARAPL1
Negative_9595	BBOX1, BMP7, CCL24, CD40LG, CHAT, DPM3, GDF7, GJD2, GLO1, GNRH1, IMPA1, JAK1, OR6X1, OR7G2, OR8D1, ORC6L, PRKCD, PRKG2, PRNP, PYCR1, SARS, TAS1R3, TRAF3, TUBB4, UGT1A10, VAMP4, WNT3
Negative_9596	F12, IL9, ABLIM3, ACTC1, AXIN1, CASP10, CHST13, CISH, COQ6, CRY1, EPHA7, ETNK1, FGF19, FTMT, GALNS, HAGH, HARS2, HIBADH, IFNA17, IFNGR1, IL8RB, IMPDH2, IRS4, MGLL, NOS1, OR1J4, OR51B5, OR7G3, ORC6L, PIGQ, RALGDS, SHISA5, SLC25A6, SMAD5, TSC2, TNFRSF13B
Negative_9597	CRK, ALG11, DERA, MGAM, PGAM2, STT3B, SYNJ1
Negative_9598	CLDN19, FZD2, NTF4
Negative_9599	COX15, CXCL16, GNAS, IL28RA, LCP2, OR2M5
Negative_9600	F3, ITK, PAH, CDKN2D, GNA14, GNMT, MAG11, OR51F1, OR8H2, CACNA2D4
Negative_9601	AR, AUH, NF1, OTC, ACAA1, ADSSL1, ALG11, ASPA, CBR1, CCR2, CD01, CYP2D6, DAXX, EHMT2, ELK1, F13A1, GJA1, IFNA21, ITGB6, LIPF, NCKAP1, NCOR2, NSD1, OR51B5, OR51F1, OR6B3, P4HA1, PPOX, PRPS1, RASGRP1, RDH12, RAS2, SLC33A1, SOS2, SPHK2, STK36, ZIC2
Negative_9602	BTC, CDA, F3, ME2, ACOT11, AXIN2, BST1, CACNA1G, CLDN16, CRLF2, CYP11A1, ENTPD3, EPRS, GAD2, GJA1, GRM1, GSTM1, HTR7, INPP5E, MGAT2, NFKB1, NRP1, OR6K3, OR8A1, ORC3L, PCYT1B, PIAS3, PITX2, PPARD, PPOX, RAPGEF3, RASGRP2, SMURF2, SSH3, TAS2R5, TBXAS1, ATP6V1E1, PNLIPRP2
Negative_9603	MAX, MVD, SCD, ARPC1A, AXIN2, FARSA, FOXO3, HEMK1, IFNAR2, ITCH, MAML2, MKNK2, MYH8, NR1D1, PER1, POLR2F, RFNG, SPP1, SPRY1, TLR2
Negative_9604	ADA, GLA, HK1, SP1, ADRA1D, ASPA, CDC16, CES7, COL11A1, COL4A4, CYP3A43, FZD1, GALE, GNA11, GRIA2, IL28B, KAT2B, NOTCH3, OR52H1, OR5T2, OR7C1, PDE8A, PPP1R3A, RUNX1, SLC27A1, TJP2, ATP6V1B1, TNFRSF6B

Negative_9605	PTS, AXIN1, CHPF, CSF2RB, CYBB, DIAPH1, HCCS, OSMR, SDHC, SIPA1, SMARCA2, TNFSF9, WNT10A, PPP1R12A
Negative_9606	ABO, CBR3, DUSP2, FUT1, HMGCR, IFNA13, OR7A17, PAX4, PIGP, PYGB, RAB5A, TP53I3, YWHAB
Negative_9607	ACSL6, ALAD, ALG2, BCL2L1, BDKRB1, C1QB, CCR3, CD70, COL6A2, EFNA4, ELK1, EXTL3, FCER1G, FSHR, GLO1, GMPR, GUCA1C, HTR2C, IFNA17, IL22RA1, LAMA4, MDM2, MTHFS, NCOR1, NOS1, NRG4, ODC1, OR10G3, OR2A4, PANK4, PDE4D, PER3, PTCH1, RASGRF2, STX2, TAS2R13, TRAF3, ZFYVE9
Negative_9608	BID, F3, ZYX, AGPAT3, CCL4, F13A1, FGD1, FM03, GCH1, MAGI3, OR10H5, POLR2H, SLC2A4, SPI1, WNT1
Negative_9609	ITK, PRL, CAMK2A, CDH1, CLDN9, CXCL13, DDX56, FABP4, GNG13, GPAA1, IDH3B, LIFR, LMO7, MAP2K4, MAPK1, MOV10L1, OR2G3, PLIN, TCF7L1, UGT2B4, VAV1, HSP90AA1
Negative_9610	FES, MVD, ACOX2, CCR4, DBF4, DFFA, EDA2R, ENPP1, ENPP3, FGF3, GGT1, GJD2, MAD1L1, MAP2K1, MAPK7, MMP9, NFYB, NGEF, OR13D1, PGS1, PRSS2, PTPRR, RPIA, SELL, SEMA3A, TLN2, ULBP1, UMPS, WNT2B
Negative_9611	ENO1, OR4A15, RETSAT
Negative_9612	BAX, DCK, DUT, F11, PML, TPR, AMHR2, ATG7, CALML3, CISH, CLDN4, CTNNA2, CYP1A2, DAD1, DDX41, DHFR, DNMT1, EREG, FRAT1, FZD2, GNAL, HSD3B7, IRAK1, IRAK3, KLRC3, LAMA3, LDHC, LEF1, MAP3K13, NARS2, OR10R2, OR2F1, OR2S2, PDGFA, PNPLA3, POLR2C, PRKAG1, RELA, SEMA3F, UPP2, PAFAH1B3
Negative_9613	AK2, FUK, GK, ABLIM1, ACPT, AGPAT2, AKR1B10, ALG9, ASPA, ATP6V1F, B3GALT4, BBOX1, CASK, CCL1, CCR10, CDK2, CHEK1, CTBS, DBF4, DHODH, ESPL1, FSHB, FZD4, G6PD, GNPDA2, GSTO1, LARS2, LTBR, MCM5, MYH7, NRCAM, OR4B1, OR4F5, OR52L1, OR56A3, PAK7, PCCA, PFKM, PIM1, PPP2R2B, PRIM2, PTCH2, RPS6KA2, RUVBL1, SPTAN1, SUOX, SV2C, TAS1R1, TUBA1C
Negative_9614	FH, IL9, ACTG1, ACVR1, AK3L1, AMPD2, APOA5, ARHGEF6, ATP6VOC, BDH1, CLDN16, CTSB, FZD5, GSTM3, LCMT1, NFYB, NT5C1A, OR10G9, OR52A1, PDE7B, PRKCE, PTCH1
Negative_9615	FN1, GSR, RB1, UBC, ADCY4, ADCY5, BMP4, CAV3, CCR10, FM05, GRIN2B, IL2ORA, IL28RA, LAMB3, NUDT5, OR10A6, OR56A4, OR8B8, ORC6L, PPM1A, PRKCE, PTPRZ1, SKIV2L2, TAS2R10, TNFSF14, UCKL1, UGT2A1, UGT2A3, VASP
Negative_9616	GK2, SRF, AACS, APH1A, CBR1, CCL28, FZD5, GALNT3, GALNT5, HADHA, INSR, OR10J3, OR4A5, OR5V1, OR9Q1, PARD6A, RELB, THY1, AASDHPPT, ATP6VOD1, MAPK8IP2
Negative_9617	MAX, TK1, ALG6, ALPL, ANAPC4, ANAPC7, ASPA, BHMT, CCDC6, CSNK1D, DARS2, FGF11, FGF3, FSHR, GANAB, IARS, IL20, LARS, NARS, NPR1, OR1B1, OR1C1, PAK1, PDXP, PIGN, PLXNA2, SEMA3F, SLC2A4, STAT5A, SULT1A1, TUBB2A, ATP6V1B2
Negative_9618	ABO, CKM, GGH, CACNA1D, CCL25, CDC7, CPT1B, ENTPD4, FCER1G, GALNT10, GUCA1B, GUCY1B3, HEXB, ITPK1, MAPK12, MTMR2, NFX1, NNMT, OR52W1, OR6C76, PAX8, POLR2I, PPP1R3B, SRGAP3, UPB1, VTI1B, AASDHPPT
Negative_9619	BTD, EPO, FOS, ACY1, ALDH3A1, APOA5, CD3E, CDC20, CER1, CPT1A, CPT1C, EFN3, FOXA2, GALC, GALNT12, IMPDH2, ITGB8, MAP3K2, MGAT5B, MGLL, MRAS, NAGA, OR10G4, OR2L3, OR4C6, OR5C1, PCCB, PEMT, PLA2G3, POLR3B, PSME2, RGS3, RPN2, SSH1, TGFB1, UGT8, VDAC3, SERPINB5
Negative_9620	DDX50, FGD1, HSPA1B, JAM2, MYH4, NCOA4, NRXN3, OR10P1, OR5J2, POLD3, PSME1, TNFRSF13C
Negative_9621	F10, B3GALT6, CACNG3, CDIPT, CPS1, ENPP2, EXT2, FARSB, FLT3LG, FZD6, GALNT12, HSPA8, LEF1, MAGI3, MAP4K4, MYH7B, NKD1, OR52D1, PAX6, PLOD2, PRKCG, PYCR2, SH2D2A, SOCS4, SPHK2, STEAP3, TKTL2, TNFRSF8
Negative_9622	ATP6V1A, CCL19, CCL8, DPM3, FGF20, GNPDA1, HCCS, KARS, KAT2B, LEF1, MAT1A, OR5F1, PAX8, PLXNA1, RXRA, ST3GAL1, MAPKAPK5

Negative_9623	PGP, ADH7, AGTR1, ATP6V0B, CACNA1E, CAMK2B, CD99, MGST1, OR4C15, PAK3, SUOX, YWHAQ, HLA-DQB1, HLA-DRB4
Negative_9624	DDO, BCKDHB, CSF1, CYP17A1, DTYMK, IFNA6, IL13RA1, ISYNA1, OR4C11, PLXNA2, RPE65, SHMT1, TNFRSF8, TUBAL3
Negative_9625	TYR, ACVR1, CACNA1I, CALML5, CCL28, CCR3, CHRNA7, CHUK, CMPK1, COL11A1, DDIT4, DIAPH2, E2F5, EPB41L2, FECH, FOSL1, FPGS, GCLM, GLI2, IKKB, IMPA1, ITGAX, LAMC2, LARS2, MAP3K13, MGLL, NOX3, OR1L1, OR2S2, OR4E2, OR52E2, OR56B4, PDCD1, PDE5A, PDGFRB, PFAS, PPAP2C, RBX1, SENP2, SOCS2, SSX2IP, TRHR, UGT2B28, XYLB, CSGALNACT2, HLA-DPA1
Negative_9626	KDR, ESAM, IFNW1, OR2L2, RPS6KA2, SHC4, TAS2R7
Negative_9627	ASL, DHH, ACSM4, CHIA, CHRM1, ENO1, GNAZ, LPAR1, MCM7, MPST, OR6C70, PIGL, PTPRR, RRAS, STEAP3, TM7SF2, TUBA3C, WNT2B
Negative_9628	ADO, RFK, TKT, AKR1B10, ATP5G2, CBL, CCL11, CCND3, CYP4F2, DEGS2, EIF4E2, EP300, GRHR, IMPDH2, LIAS, MGLL, NAGK, OR10G9, OR5H6, PIGH, PRKAA1, PRKAR1B, PSAT1, RFX5, SHC3, SLC2A1, SMPD4, THTPA, TNFSF18, UBE2K
Negative_9629	IL3, ABLIM2, AMDHD2, ANAPC2, ANGPTL4, B4GALT1, BDNF, CCNH, CDC23, CYBB, EREG, FRAT1, HSD17B1, ICOSLG, ITGB2, MKNK1, MYLK2, OR4D6, OR51E1, OR51I1, OR52N2, OR8H3, PDE1A, PECAM1, PFKL, ROCK2, RRM2, TNFSF14, UROD, VAV1
Negative_9630	GH2, TNC, AKR1B10, AMD1, APAF1, BHMT, CCL21, CD8B, CDS1, CREB1, FZD4, GADD45B, IL1R1, MYH8, NCOR1, NUDT9, PFN1, PISD, PLCE1, SMPD1, SRGAP2, TKTL1
Negative_9631	DCTN1, ERBB4, PIGU, PRSS1, PVRL1, TALDO1, USE1
Negative_9632	C9, F12, KIT, ACOX1, ACTG1, AMPD2, APLP1, ATIC, B3GNT3, BCAT2, BUB1B, CYP2C8, FASN, GABARAP, HEXB, HMBS, ITGB6, MASP1, OR13D1, OR2L8, PAK4, PCYT2, PLA2G4A, PPP1R3B, RGS3, STAT3, STX7, TFDP1, THBD, VAV1, VTI1B
Negative_9633	CCR9, DDX41, HMGCS2, MARS2, PDE6H, PDE7A, TNFSF9, TRMT11, GABARAPL1
Negative_9634	GP6, PTS, ALDH1A2, APPL1, ARSD, B3GALT2, B3GALT6, CAMK2A, EFNA4, EFNB2, FRAP1, FRAT1, GALNT8, GRIN2D, GSK3B, GSTM4, HYAL2, IFNW1, LYPLA1, MPDZ, NAMPT, NRG4, OR7A10, PDE11A, PIGB, PIK3C2A, QPRT, TJP2, TLR9, TRAF1, TRMT11, WASF3
Negative_9635	RET, ANAPC1, B4GALT2, C3orf10, CALML3, CCND3, CDC14A, CLDN11, CYP4F2, DGAT2, DGKZ, ENPP1, FGF1, GNAZ, IL10RB, IL2RB, IL8RA, ITGAL, MCM4, MGAT5B, NPR2, OR5T2, OR8J1, PDE4A, PIK3CD, PNPO, PRKCB, PTCRA, SAT1, STX8, TICAM2, WNT7B
Negative_9636	IDS, AACS, ACVR2B, ALG1, BAAT, BDKRB1, BLVRB, CDH1, CPT1C, CYP2A6, EIF4E, FTCD, GLS2, GMPS, GSTA4, H6PD, HMGCL, IFNA17, ITGA8, NCF1, NLGN2, NRXN2, OR2AG2, OR2H2, OR52A5, OR52N2, OR56A4, PRKAR2A, PTGES, RRM2B, SDC4, SEMA3D, SORBS1, TAS2R41, TFDP1, TUBB2A, TYROBP, UBE2K, UCP1, ZBTB16, SERPINB5
Negative_9637	CEL, GLS, GSR, TH, AADAT, ALDH2, ALG10, ATP5G2, BCKDHB, CACNA1H, CASP7, CCDC6, CXCR6, CYP2U1, DDOST, DRD1, EPHA8, FUT4, GALNT13, GALNTL4, GMPPA, IL17B, KLKB1, LAMA4, MAP2K5, OR11H6, OR2A12, OR2M5, OR51A7, OR8B4, PANK2, PECAM1, PLCG2, PPP5C, PRKACG, SNAP25, SORBS1, TCF7, TLR4, TRPC1, ULK1, VCAM1
Negative_9638	BTK, SHH, AGTR1, GALM, GSK3B, ITGA9, OR1L8, P4HA2, PCCB, PLA2G6, PPP3CC, RRM2, TYMS, VDAC1, WEE1, HSP90AB1
Negative_9639	CBL, FES, GPT, HK2, TNC, ADCY6, ALOX12, CARD11, CARS, CCR10, CDKN2A, CES1, CHIA, COQ6, CTSG, DHCR7, F2RL1, FARSA, FTCD, IFNB1, IL2RG, INPP5A, NFASC, OR13C2, OR1C1, OR1I1, OR2T29, OR4D1, OR4X2, OR52E8, OR52N1, OR7G1, PGAM2, PIGA, PPP2R5E, PPP3CA, RASA2, SC5DL, SMAD5, TLR5, TSHR, UNC5A, UPB1, YES1, YWHAZ, CACNA2D3



Negative_9640	ATM, FYN, ID3, TNC, BDKRB2, CALML3, CD274, CD40LG, CD8A, CREB5, DKK1, FDPS, FGF5, GALNTL5, GLUL, HCLS1, ICAM2, IL20, IL28B, IL5RA, IQGAP2, MAPT, MBL2, NKD1, OR13A1, OR6C1, OR6S1, OR7A5, PLAU, PLEKHA8, PRIM2, PSME3, SMPD3, SREBF1, TJP2, TLN2, AASDHPPT, HLA-DQA2, TNFRSF11B
Negative_9641	AOC3, BBOX1, CCR8, DDIT3, DGKE, IAPP, LPAR1, NCAM2, OR11A1, OR2Y1, OR8S1, PDGFRB, SHMT1, STX8, UGT2A3, SUV420H1
Negative_9642	CFI, DLD, ME1, SRC, ACSL5, ADH7, AKR1B10, ALDH1B1, ALDOC, CD55, EI24, GSTP1, H6PD, IL1RAP, ITGAM, MARS2, NADK, OR2T1, OR51A2, OR7G1, PANK3, PCCB, PCNA, PDE6D, PFKM, PLCD1, PRKAG1, PTPRZ1, RHEB, SELL, TBL1X, SERPING1
Negative_9643	ASL, CSK, CTH, GBA, CACNB1, CDS1, DHDDS, DVL1, ECHS1, EFNA5, EFN2, GNHR2, GRPR, HRH2, NAMPT, NANS, OR2AT4, OR5D18, PAFAH2, PRKCI, RERE, SARDH, TAS2R8, TSC2, TYMS, VEGFA
Negative_9644	BTD, KMO, AASS, ALDH3A1, ARNT, BMP7, CADM3, CNTN1, DDX55, FGF14, GATM, GPT2, GUCY1A3, HAO1, HGSNAT, ICOS, IDI2, IKBKE, MAP4K4, NCKAP1L, NCR2, OR10H1, PDX1, PPM1B, SOCS2, SV2B, TGFB2, TRPM5, VDACC2
Negative_9645	A2M, ADO, CAD, SDS, AC01, CACNB1, CCL3, CD99, CDKN2A, CHDH, CLDN19, CSNK1D, CYP1A1, CYP26C1, DHDH, EPHB4, LDHD, MYLK3, OR2T1, OR51A2, OR7A10, OR9G4, PERP, PGM1, PLXNB3, PPBP, SEMA4G, UGCGL1, VDACC1, WNT5B
Negative_9646	CR2, DLD, FAS, FOS, TFG, AGMAT, ALPP, APAF1, BNIP1, CACNB2, CDK6, CISH, CYFIP1, CYP2F1, EGFR, G6PC, HLAG, IFNA10, IL3RA, NQO1, OR5R1, P4HA1, PDGFA, PGAM2, PI4KB, PIGN, PLA2G2E, POLD2, SELP, SUCLG1, SULT1A2, TIAM2, TUBB6, VEGFC, KIR2DL5A
Negative_9647	SP1, WAS, ABP1, ALG10, ALPI, APC2, ATP6AP1, CACNA1S, CACNG4, CCND1, CSF2RB, FGF22, GLI2, GRIN2A, GSTM2, KNG1, OR10K1, OR10R2, OR2D3, OR4P4, OR52L1, PDE9A, PGLS, PPOX, PPP2R1B, PRKCQ, RPS6KA4, TUBB1
Negative_9648	ABCC8, ADORA2A, AMY2B, CTBS, CTSG, GOSR2, HCLS1, KLKB1, LAMB4, OR52D1, PKLR, POLD4, STAT3
Negative_9649	CARD11, CCNB1, CLDN14, DRD5, GNA01, GNG3, HSPA2, MAP2K2, MAP3K7, MTHFS, NT5M, OR2B2, OR51Q1, OR6M1, OR8J3, PIAS1, PLA2G2F, PRPS1, RHOQ, TAS2R7, UGCGL1
Negative_9650	TFG, ACTN1, ALDOB, ARHGAP5, BTRC, CD40, CD58, DDOST, ENO3, EPHX1, FZD1, IGF1R, IL15, IL1A, ITGA1, ITGAE, JAK1, MAT1A, MRAS, OR10S1, OR5L2, PIGU, POLE4, POLR2I, PPP3CC, STK36, TLR2
Negative_9651	GCLM, OR4N2, STX2
Negative_9652	ENAH, NRXN3, OLAH, OR4A15, PLCG2, VEGFC, MAPKAPK5
Negative_9653	SRM, ALG5, ANPEP, B3GNT3, CAMKK1, CD46, CHKA, DLL4, FMO4, GNRHR, HSD17B8, NAGLU, OR2T8, OR52N5, OR5I1, PIK3R3, PKM2, PLCG2, PROS1, RIPK1, SHMT1, XCL2
Negative_9654	C7, DCK, ACHE, ARPC1A, ATP5E, B3GALT4, CCL27, CXCL2, DGKH, DKK2, DLL3, DUSP6, ENTPD3, GAS1, GRB2, IL22RA1, MAP2K3, MGAT5, NEUROD1, NME2, OR11H1, OR13C2, OR2G3, OR2T4, OR4K2, OR52E4, OR7G3, PDGFB, PDHA1, RFW2, SENP2, SIPA1, UCK2, ZFYVE16, MAPKAPK3
Negative_9655	GCK, ID2, AK3L1, ASMT, CCL15, CCNB2, CDKN1A, DPM2, HEXA, HLAG, HMGCR, HSD3B1, IL1R1, IPPK, ITGA1, MAP2K5, MAPT, MYH4, MYH9, NFE2L2, NFX1, OR10Z1, OR11G2, OR1J2, OR56A1, PAK1, PDE7A, PDX1, PIAS1, PIGO, PMVK, POLR3B, SEMA4F, SSH2, STEAP3, STX18, SULT1A4, SUV39H1, TPM3, WBSR22, YWHAZ, ALDH18A1, TNFRSF10B
Negative_9656	AGL, CRH, F7, JUP, ACTN4, ALPP, ATP2A2, CBLB, CD34, CPT1B, DUSP14, GALNT5, GNA01, GNPAT, GUCA1A, MAN1A1, NRCAM, OR3A3, P4HA3, PDE5A, PGM3, PPT1, ROBO1, SULT1A2, THBS3, TLN2, TNFRSF8, XYLT2, YARS2, PAFAH1B1, TNFRSF1B
Negative_9657	COL4A2, ERBB3, TUBB

Negative_9658	FES, MVD, PVR, ADCY6, ADIPOQ, AKT1, ALDH1A3, BAI1, BDH2, CARS2, CDC42, EPHA8, EXTL3, FGF22, GDF7, HHIP, ICAM3, IDUA, IGF1R, IL11RA, IL12B, ITGA11, MAP3K12, MYL5, MYLK3, NOD1, OR10H4, OR1L3, OR2C3, OR2T11, OR51M1, PDX1, PGS1, RDH10, RDH12, SIAH1, SLC25A6, SOAT2, STAT1, STX10, VASP, WNT9B, ZMAT3, ATP6V1E1
Negative_9659	ADAM10, CYFIP1, IFNA13, RRAS2, SMURF2
Negative_9660	C4B, ALDH1A1, ALDH3A2, ANAPC4, CYP3A43, DGKE, DUSP10, DUSP4, EFNA5, ENTPD8, FCGR3B, FLT3, GALNT10, GCDH, GNRH2, GRIA1, GSTP1, IFNA2, KCNQ1, MAPK13, MYH11, NEFL, OR14A16, OR52B6, OR9G4, OSMR, OXCT1, PDHA2, PHKG1, PIK3R4, POLR2B, PPAP2B, PTPRM, PTPRR, RELA, ROBO3, SPRY3, TICAM1, WARS, WNT1, TNFSF13B
Negative_9661	TK2, XDH, ABAT, ACADVL, DGAT1, DIAPH1, GCNT1, HAO2, HLA-DOB, IL18, MYH2, NCK1, NEU2, OR6N2, P2RX3, PLA2G10, PYCRL, RDH12, RFW D2, TNFSF11, ZNRD1
Negative_9662	ANAPC1, CD01, DLL4, HLA-G, OR4D5, P2RX5, SPTLC1
Negative_9663	ABLIM3, ADAM10, AKR1C2, ARPC5L, CACNA1E, CAMKK2, CD38, CXCL9, CYP11B2, FGF1, GLUD2, GSTK1, IL19, IL1R1, LCAT, MYLK3, NFATC3, NKX6-1, NRXN3, OR10P1, OR8I2, P4HA2, PPM1B, PPP2R5B, SPI1, UGDH, MAP3K7IP2
Negative_9664	F7, CASP6, F13A1, ITGA3, MAP3K1, OR5AK2, PYGL, UGT2A3
Negative_9665	A2M, CBL, GBA, IL4, NF1, PML, SYK, TNF, ADH5, AGMAT, ALDH1A2, ARHGEF1, ARNT, ATP5D, ATP5G3, B4GALT2, CES7, CLDN22, CMPK1, COL6A1, CYP2E1, DUSP10, ERBB4, FECH, FGF20, HMGCS1, NAT2, NCAM2, NGEF, NOS1, NRG1, OR5D16, OXSM, PANK1, PERP, PIK3R3, POLD4, PRKG2, RALB, RELA, SDHA, ST3GAL5, TAS2R48, TRIP10, WARS, TNFRSF10A, TNFRSF13B
Negative_9666	ATP6V1D, BHMT, CLCF1, GALNT13, LCMT2, SMAD5
Negative_9667	BMP4, DPM3, LAMA4, OR13C2, TUBA1A
Negative_9668	TH, AMHR2, ATP6V1F, CYP4A11, DGKD, MAP2K3, SEMA3F, TAS2R16
Negative_9669	IVD, CCL25, FPGT, GSK3B, HCLS1, HIP1, IAPP, IMPA1, NFATC3, OR51M1, SDHB
Negative_9670	C5, ABL1, ADCY6, ALDH9A1, APBB1, ATG12, C4BPA, CD79B, CYP2A6, DLL1, F13A1, FSHR, G6PD, GBE1, GMPS, GNA12, GNPAT1, IKBKB, INHBB, LCMT1, MRAS, OR2C1, OR4B1, PAK7, PPID, PPP2R2B, PRKG1, PTGES, RERE, SAT1, SKP1, SLC27A1, SNAI2, SULT2B1, GABARAPL2
Negative_9671	AK2, IL8, MUT, NOG, ACO1, CASP3, CAV3, CD47, CDH5, GLYCTK, GPT2, IDI1, MPP5, MYL9, NEU3, NUDT2, OR2C1, PCYT2, PDE6H, PHKB, PLA2G2D, PYCR2, SETD1B, SFRP1, SOS1, SSH1, TCF7L1, TNFSF10, WASL
Negative_9672	CSK, EDA, JUN, CCNG1, CLDN20, COX15, CRLS1, CSF2RB, CYP21A2, CYP26A1, HAGHL, MAP4K2, MGAT2, MYLK2, NEU4, OR51D1, OR7D2, PDE10A, PDXP, PMAIP1, POLR3H, PRKAR2B, RHOQ, UGCGL1, UGCGL2, UGT2A1, UGT2B11
Negative_9673	ACSS2, ALG9, ANAPC2, ATP5G2, B4GALT7, CDKN1C, CXCL6, CYP17A1, DFFA, DMGDH, DTX2, FGFR3, HMGCL, LTBR, MYH7B, NARS, NLGN2, NTF4, NTN1, PCCA, PDE6D, PDGFB, PFKFB4, PFN4, PTTG1, RAC1, RALBP1, RASSF5, RPS6KA6, RAS2, SEMA4C, SMAD1, SSH3, STAM2, STK3, THBS1, ATP6VOD1, B4GALNT1, CSNK1A1L, TNFRSF13B
Negative_9674	GHR, ABLIM3, ACHE, ADCY9, AHCYL2, ALDOA, ALOX12, ATP6VOC, BCAT2, CAMK2A, CARS, CCL22, CD19, CTLA4, DKK4, ENPP2, EVI1, F2RL2, FGF17, LEF1, LMO7, MYH10, MYH7, NCK2, NRG3, OR1N2, OR5K2, P4HA2, PARD6G, PIGS, POLR2J, PPP2R2A, RHEB, SFRP4, SKIV2L2, HSD17B10, SUV420H2, TNFRSF1A
Negative_9675	MPL, MVK, SMS, XDH, ACP5, ACSL5, ACSS2, ACYP2, ADH1A, ALG2, APPL1, CACNG4, CCL19, CCR4, CD27, CDH1, CLTC, CXCL1, DNMT3L, ELK1, FPGS, GMPS, HMGCS2, IL18R1, INPP1, ITGA10, ITGB2, KARS, LIFR, MAPK3, MTHFR, OR11H4, OR2T29, OR6M1, PAX6, PFN3, PRODH2, RAPGEF1, SPHK1, STX4, STX6, TP53, UXS1, SUV420H2

Negative_9676	DLD, FST, LCK, ALDH1B1, APH1A, BACE1, CCNA2, CD99, CES7, COQ7, CSF2, C TSS, CXCL9, DFFB, DGKB, EFNA2, ESAM, HTR4, MAML3, NRXN1, NT5C1A, OR4K 15, OXTR, P4HA2, PAK4, PFAS, PIK3R3, PLA2G4A, PON3, RUNX1T1, SARS, ST AT4, TAS1R1, TUBAL3
Negative_9677	ABI2, ACTB, CASK, CBLB, CDKN1A, CHEK2, CREB1, CRLF2, CTNNA1, CYP2C18 , DUSP8, FGF17, GALNT1, GLDC, GLYCTK, INPP1, LAMB2, LTBR, MAP2K5, MAP K12, MGAT5, MYH1, MYH10, OR1F1, OR1L8, OR2B6, P2RX1, PPP3R1, PRKAA2, PTPRC, RBX1, SLC25A4, SQLE, XYLT1, TNFRSF11B
Negative_9678	CBS, MTR, TNC, ADRB1, AOX1, B3GNT5, DHCR24, DUSP10, EFNA1, HSD17B4, M AML2, MGAT4B, MYL7, OR10H3, PAK2, PIGH, PPP3R1, RND1, SOCS1, TYROBP, TNFRSF6B
Negative_9679	DBH, CACNA1C, IRF7
Negative_9680	GH1, DUSP2, OR4E2, TJP2
Negative_9681	C4B, F9, GBA, MPL, B3GAT3, BCM01, CCR8, CHST11, COL6A1, CREB1, CYP4F2 , DUSP8, ETS1, EXT1, GADD45G, GNA13, HMGCS1, IRAK4, LRDD, MAP3K11, NA DSYN1, NAGK, OR14C36, OR2L13, OR2M3, OR8J1, OXCT2, PIP5K1C, PPP3CC, PTGS2, ST3GAL5, STK4, TAS2R4, TNFRSF4
Negative_9682	AK7, BTK, CRH, HPD, ID1, ABLIM2, AGRP, ARPC1A, ATP13A2, CASP3, CD28, C DKN2D, CPT1B, CXCL9, CYP27A1, DDX50, DHRS4, ENO3, FGFR4, FZD2, GCNT1 , GSTM3, HAP1, KDSR, LAMA3, LCP2, MADCAM1, MAN1B1, MAP2K1, MCM5, MITF , NCOR2, OR13C4, OR4N4, OR8H3, PDGFD, PHKA1, SELL, SETDB2, SMPD3, SUL T1A4, TUBB, UAP1, YARS2, YWHAB, HSD17B12
Negative_9683	ACAT2, ACP2, ALDH3A2, ARPC1B, ATN1, C3orf10, CACNA1A, CDH15, CLDN5, CNTF, COL5A1, COQ5, COX15, E2F4, ELK4, ENPP3, EPHB1, FECH, FZD2, GALC , GNPDA2, HHEX, HLA- DOB, KLRK1, LGMN, MYH9, NAT5, NCK2, NEU1, NFAT5, NNMT, NSD1, OR2F1, OR 51F2, OR8G1, PDE8A, PFN2, POLR2D, PPCS, PPP5C, PROC, PTPRC, RASA2, SD HD, SEMA4G, TFDP1, TNXB
Negative_9684	LEP, LHB, LPL, ACOX2, ALAS2, BCKDHB, CASP8, CD82, CDH15, CD01, CNTFR, DPM3, ENTPD3, ENTPD7, EPHX2, GANAB, GJA1, HCCS, HSPA1B, ICOS, ITGA7, ITGAX, LAMC2, LAP3, NPAS2, NTF3, OR51F2, PDGFB, PGLS, PLA2G2E, PPAP2 A, PRKAR2A, PTPRC, SEPHS1, SLC25A4, SLC2A2, ST3GAL6, TIAM1, TNFSF9, TUBB3, PAFAH1B2, ST6GALNAC5
Negative_9685	F9, FES, MPL, RPE, AVPR1A, CAV1, DUSP10, LEF1, MDH2, MTFMT, MYH2, OR5B 3, PRKCH, PSME3, RBKS, SRD5A1, ST3GAL2, TPI1, UROC1
Negative_9686	AKR1A1, ALG12, ATP6VOC, BCAR1, CACNA1A, CLDN6, COASY, DKK1, HSPA8, K AT2B, LARS, NEFL, NFATC4, OR10H1, OR13A1, OR1M1, OR2B2, OR4A16, OR4Q 3, OR51D1, OR52N4, OR6M1, POLR3D, POLR3K, PPP2R5B, PRSS3, VAMP3, ZMA T3
Negative_9687	A2M, ADH1B, ALDH2, AMY2B, ASMT, CCR8, CD74, CHD8, CHPF, CHRM1, COL5A3 , CUL1, DHRS4, DTX1, EFNB1, FOXA2, FTMT, GNA14, GNPDA2, GRB2, GSTO2, I DI2, IFIH1, IL17RA, IL25, KLRC1, LCMT2, LFNG, MALT1, MAP3K14, MAPK10 , MAPK9, NUDT2, OPLAH, OR13C2, OR1A2, OR2M3, OR51A2, OR8S1, PDHA1, PO LR3B, PPA2, PTGIS, STX8, PHOSPHO1, TNFRSF1B
Negative_9688	ALPI, CLDN4, DDX19A, EXTL1, MAN1A1, OR6C6, PDE4D, PDGFC, RALA, TAS2R 16
Negative_9689	VTN, ACACA, ACAD9, ADH6, ARNTL, ARSD, ATP2A2, C1QB, CDS2, EFNA5, GMPR , HPSE, MGAT5, OR52R1, PNLIP, PTCH2, RASGRP2, RFXANK, SCP2, SFRP1, SH MT2, PPP1R12A
Negative_9690	BCM01, OR56A4, RUNX1

Negative_9691	CBS, CD4, FGA, ME3, MYC, AGMAT, ALDH1B1, ALOX12, ARHGAP5, CACNG1, CCL17, CEBPA, COASY, CPOX, DDX56, DOCK1, EPB41, FGF18, GALE, GCH1, GGT7, GUCA1B, HARS, IL4R, IRF5, NCAM1, NRG3, OR10H1, OR2B6, OR51A2, OR56A4, PANK4, PDE10A, PRKCA, RDH16, RRAS, SLIT1, SPTAN1, TKTL1, TSLP, VARS, WNT1, XYLB, ATP6V0A2, SLC25A31
Negative_9692	GCK, C1QA, IL17RB, MAN1A2, VASP, YOD1
Negative_9693	DAO, GSS, TKT, ARPC3, BCAT2, BMP4, CDS1, CES7, GBE1, NUMBL, OR4K1, OR52R1, P2RX4, PNMT, POLR2C, POMC, PRKAR1B, ZAP70, MAPKAPK3
Negative_9694	XDH, ABP1, APLP1, BBOX1, CCL17, CLDN22, FGF8, FZD3, IDH2, ITGAX, PDGFRB, PLEKHA8, RAB5A, SFRP5, UGT8, SERPIND1
Negative_9695	FGB, OSM, ADH1A, AOX1, BIRC2, CASP7, CBR1, CDC27, CHRM2, CLDN16, CLTB, CNDP1, DGAT2, EXT1, GNAQ, INMT, IPMK, ITGB7, ITGB8, ITPKB, L1CAM, MAP3K11, MGAT4A, NOTCH2, OR11H4, OR6K6, PCCA, PDIA4, PLCB3, PSME3, PTCRA, RBPJ, RELA, SHC3, SOCS2, SRD5A2, ST6GALNAC5
Negative_9696	IHH, ACAT2, ACTN2, ALDOA, ALPL, ARHGEF7, ATP5E, C5AR1, CCNB1, CDC6, CDKN1A, CSH1, DEGS1, EI24, FTMT, HTR4, IFT57, IL17RB, IL1A, KARS, LFNG, MAN2A1, MGLL, OR10H3, OR2A4, OR2AE1, OR4K13, OR4N5, OR52B4, PDE3B, PDE6H, POLR2J, PTTG1, RASGRP2, RRAS2, RUNX1, SOD1, SSH3, STX5, THBS3, TUBA1A, UBE2K, VDAC1
Negative_9697	CACNG3, FGF9, GLI3, NFKBIE, OR52E4, PDE3A, POLR1D, SNAI2
Negative_9698	ADK, F10, F12, ANAPC2, ASCC3, BCL2L1, C3AR1, CACNA1I, CCL3, CDC6, DLL3, ETS1, FGF13, GDF6, IRAK1, JAK3, MCM2, NEU2, NEU3, NFX1, NRG2, OR1N1, OR2H2, OR4K1, OR52K1, OR7A17, OR8K3, PFN1, PTCH1, SMARCA2, SOS2, TAP1, EIF4EBP1
Negative_9699	ATP2A2, CACNG2, CTBS, OR10J5, OR5M3, SPRY3, SSH3
Negative_9700	AGPAT2, DGKI, DRD5, ENTPD8, GP1BA, NRXN1, PHKB, RARA, TGFB2, TOMM40L, UROC1
Negative_9701	IL4, ALPL, CACNA1H, G6PC, SELL, SV2A
Negative_9702	LYN, ACTA1, APPL1, CCL11, CYP3A43, GALNT11, GALNT6, ITGA11, NTN1, OR1J4, OR4L1, PPAP2A, PPP1R3C, PRIM2, SOCS7
Negative_9703	BTK, KMO, XDH, ATP2A3, DERL1, DLL1, DUSP10, E2F1, GANAB, HYAL1, IFNA13, ITGAV, NFX1, NME4, NT5C3, OLAH, OR13C9, OR4K17, OR8K1, PDE8A, PIGX, SLC25A6, SORD, TRAF5, WEE1, WNT1
Negative_9704	GDA, AADAT, ALG3, ARHGEF2, CCKBR, CD82, CDC25C, CNTN2, COX15, CREB5, CYP11B1, DPM2, E2F4, EPB41L1, GALNT12, GCH1, GGT5, GSTP1, HSD11B2, LDHB, LRP5, NTSR1, OR10A7, OR10J5, OR1K1, OR5B12, OR5B21, OR5P2, OR6N2, OR8K5, PAFAH2, PAK2, PPP2CB, PPP2R5E, PRODH2, SELPLG, SGMS2, STX16, STX4, TAS2R4, TBL1X, VTI1B
Negative_9705	LCK, ALDH1L1, B3GALT1, CCKBR, CCL2, CCNH, CD47, DDIT4, FGF5, GALNT7, GCNT4, GSTM1, IFT57, ITPKA, LYPLA2, OR10A6, OR2B11, PANK1, PLAT, PYGB, RPS6, UPP1, TNFRSF13B
Negative_9706	GPT, ATP5F1, B3GNT2, CDK7, CHRM2, CLTC, CYP3A5, DAPK3, DNMT3A, EFNB1, F2RL3, GALNT12, GCDH, GOSR2, IL18R1, IL20RA, IMPDH1, ITGAD, MAN2A1, MAOA, MAP2K4, MAP3K8, MAPK1, MAPK3, MDH2, NEFH, NFYC, OR1S1, PFKM, PIK3CA, PLA2G5, PPP3R2, PROC, PRPH2, PYCR2, RAB5A, RASSF1, TNFRSF4, TUBB1, VAMP4, VCAM1
Negative_9707	DBI, GNE, MAG, MVK, ACAA1, ACVR1B, ADSSL1, ATF2, AXIN2, CLDN11, CSNK2A1, CYP26B1, FZD7, GADD45A, IL17A, JAK2, MASP1, MLLT4, OR10AD1, OR1E2, OR2L2, OR52N2, OR52N5, ORC3L, PAK3, PLIN, RASGRF1, RUNX1T1, SEMA3B, SMURF1, STAT5B, UGT8, VASP
Negative_9708	CTH, ACTG2, ADIPOQ, BIRC3, CCL21, CCL4, CD34, CD58, CDH1, ENPP2, GADD45A, GSK3B, HMOX2, HTR5A, HTR7, IL22RA1, NUDT2, OR1S1, OR2T1, OR2T4, PTCH1, SOCS4, SPRY2, SRD5A1, STK3, SV2B, TACR1, TAS2R4, TOMM40, VDAC1, WASF2, ST6GALNAC4

Negative_9709	BCR, BDNF, CSNK1G1, CTSB, GIT1, HMGCR, KLRC2, MCM2, MICA, NAT2, NT5C, OR2A14, PTPRB, UGT2B4, UGT8, VTI1B
Negative_9710	ME3, AVPR1A, CCND2, CDKN2D, CHRDL, CYP19A1, DTYMK, ENPP1, FTH1, GPX7, GRIN1, GUCA1B, HNMT, HPRT1, ITGAL, LIPE, LYZL1, MAD2L2, MAN1A2, MCAT, NCKAP1, OR1G1, OR1N2, OR5A2, OR5L1, OR6K6, PRKG2, PSAT1, SESN3, TCF7L1, TDO2, TIAM1, VANGL2, HSP90AA1, PPP1R12A
Negative_9711	ABLIM1, ALAS1, C9orf95, CDKN2A, FARSB, GGPS1, GNAZ, GNG12, HAGHL, MGAT4A, NT5C, OR13C2, OR1L4, PDE1B, PIGF, PLXNB2, RDH10, RRM2B, SMC1B, TAP1, TAS2R4, TGFB3, UGT2B28, UPB1, VAMP2, YWHAQ, CACNA2D2, TNFRSF10B
Negative_9712	ITK, ACO1, BUB1, CAPN2, CCL20, CD226, CPT1A, CYBB, ENTPD2, FADS2, FCE R1G, GUCY1B3, IFNA14, ITGA5, NCKAP1, OR1L1, OR2F1, RDH5, ST3GAL5
Negative_9713	C8B, EPO, PRL, ATP5D, B3GAT3, B4GALT5, CCL20, CHSY3, FZD9, GCLC, GSTM3, NCAM1, NUDT5, OR10AD1, OR10C1, OR2M5, PIK3CA, PLCG1, SETD8, TACR1, TSNARE1, UCP1, VAMP3, ZIC2, ATP6VOE1, ST6GALNAC5
Negative_9714	ATP6VOC, CCR8, CFLAR, IL12B, KIR2DS5, OR2A2, PIP5K3, PLOD3, POLR3D, RDH11, RPS6KA2, SC5DL
Negative_9715	CAD, F2R, FST, IL5, KDR, PGD, ACSL3, ARRB2, CCNB3, CD247, CYP2A7, DUSP14, GSTA1, GSTK1, KLRC1, OPLAH, OR10G9, OR10Z1, OR1D5, OR5B17, OR5M3, PAPSS1, PDCD1, PGLS, PIGB, PPP1CB, PPP2R2B, RASA2, SETD1A, SPRY1, HLA-DPB1
Negative_9716	CFI, CS, FOS, GH2, HK1, AGRP, ALAD, ALDH9A1, APRT, ATP5B, BCAT1, BDH1, BIRC3, CCL16, CCL23, CCL7, CD27, CLDN22, CTLA4, CYP3A7, DGAT2L4, DHC R7, DHX58, FARP2, GDF5, GRIN2C, HMGCS1, HPSE, IFNA8, IKBKB, IL24, ITGB6, KCNJ11, LDHAL6B, MAP3K6, MNX1, OCLN, OR10H1, OR51E2, OR5D18, PIGM, SORD, THY1, TMLHE, TNFSF8, UGT2B28, WNT6, XYLT1, ZNRD1
Negative_9717	FGG, GDA, MVD, ALDOB, CLCA4, EPHX1, ITPKA, LIFR, MINPP1, OR4D5, OR5C1, PIK3CG, RASGRF1, SRGAP2, TAS2R49
Negative_9718	F5, AXIN2, CHIT1, FZD1, GSTT1, GUCA1C, HLA-F, IGSF5, IL17B, LAMB4, NFE2L2, OR4K15, OR51B2, OR5AN1, PDE4C, PER3, PLA2G4A, PRKACG, RBL1, B4GALNT1
Negative_9719	CAD, ACOX1, BET1L, CYP4A22, IL12B, KDSR, NOX1, OR2Y1, OR4F17, OR5M8, TGFB1
Negative_9720	DUT, GSN, RB1, ALDOB, BLVRB, CRLS1, DARS, DDIT3, ENPP6, EXOC7, FARSA, FBP1, FGF2, FGF9, GUCA1A, GYS1, HLA-DMA, IGFBP3, IL9R, IRAK1, MAPK3, NFATC1, NPAS2, NRXN2, OR2AT4, OR4X1, OR5B3, PKLR, PLXNA1, POLE, PPP2R2A, PPP2R2D, PTGES2, RALB, TKTL1, TLR2, CACNA2D3
Negative_9721	CEL, OGT, ACAT1, ACTB, ATP5C1, ATP5G3, BAAT, BMP8B, C4BPB, CNTFR, CNTNAP1, CRLS1, CTBS, CYP11A1, DBF4, ENTPD1, GSTO1, HBEGF, IDH3B, IL22RA2, IRAK2, ITGA5, KLKB1, LCMT1, MAP4K3, MKNK2, MTAP, NCF4, NLGN1, OR1A2, OR5R1, PFKFB1, PHKG2, PIGU, POLR2G, PRDX6, PTGS2, SEMA4C, SMAD9, SOS2, SPRED2, TAS2R13, TUBB3
Negative_9722	MVD, ACADSB, ADCY5, ALDH2, ATP5C1, CBLC, CCL22, CSNK2A2, ESPL1, FGF2, GALNT3, OR10V1, OR11H1, PDE3B, PDGFA, PFKP, PLA2G3, PPM1D, PPP3R2, SEMA3G, SENP2, SH2D2A, TAS1R3, WHSC1L1, TNFRSF14
Negative_9723	ADC, FUK, ADSS, ALDH5A1, ATP5F1, CD40LG, CLDN16, CYP11B2, CYP2J2, DGKD, FGF12, GNPDA1, IARS, OR10J1, PIM1, PLCB2, UNC5A, WASF3
Negative_9724	ADSS, BACE2, CACNA1D, CCNG2, CD3E, CHEK1, FGF9, HNF1A, ITGA2B, OR52M1, PAK2, PFN1, PLA2G2D, RARS, SOCS5, TALD01, TAS2R40, UAP1
Negative_9725	ACSL1, AXIN1, BCKDHA, CADM3, CAMK2B, GAB1, GMPPB, HLCS, MCCC2, NFATC4, OR1N2, OR2A42, OR5B21, PAX8, PLA2G1B, PLA2G3, RFXANK, SEMA3C, SEMA3F, SEMA4C, SOCS1, TJP2, HSD17B10

Negative_9726	F11, GK2, KMO, MTR, ABP1, ADH7, AGRN, AMD1, ATF2, CASP3, CD27, CD48, DH CR7, FGF6, GALNT10, GLB1, GMDS, HIBADH, HSD3B2, ITGB7, LIPA, MAP3K4, MAPK9, MCM4, MYL5, NR1D1, OR10A4, OR10G8, OR4C11, OR56A1, PAK2, PAK6 , PIP4K2C, PLA2G2A, PNPLA4, PPP3CB, PTGS2, RPN1, SHC2, SLC2A2, ST3GA L5, TP73, UCK2, UNC5D, VDAC2, YWHAZ, ZNRD1, PRICKLE2
Negative_9727	EPO, RDX, ADRA1D, ALG10B, ATP4B, CCR7, CDK7, CDKN2B, COL4A2, CTNND1, CX3CL1, CYCS, CYP2B6, CYP2J2, DKK2, EIF4B, ENPP2, GLDC, GSTK1, HSD17 B4, JAK3, LEFTY2, MAP2K3, MMP7, MYD88, OLR1, OR51I1, OR6F1, PCNA, PER 2, PFN4, PIGB, PRDX6, RAD51, RDH12, SRD5A2, TAP2, TAS2R50, TNFSF8, TN FRSF1B
Negative_9728	AK7, GH2, GSR, SCD, CCL28, HCCS, MAN1A1, NFATC3, SCP2, TAS2R16
Negative_9729	DCT, LEP, AKR1C3, AQP7, BMP8A, CES2, COL11A1, CYP2B6, FABP1, HCST, HE XB, IL22RA2, ITGB2, OR2L2, P2RX6, PANK3, PPP2R5A, PTPN7, RXRA, SETD1 A, SLC25A5, SLC2A2, TSC1, TSNARE1, XYLT2, YARS
Negative_9730	AUH, ABLIM1, ADCY5, AGPAT4, AGRP, ARG2, BBC3, CACNA1C, CARS2, CASP8, CCL5, CDK7, CDKN2A, CLDN16, COQ5, CREB3, CXCL6, CYP2A7, CYSLTR1, EP3 00, EPHA6, F11R, GUCY2C, IARS, IL23R, ITGA9, MAD2L1, NME4, OLAH, OR1D 2, OR2L13, OR6N1, OR8B8, PARD6A, PFKFB1, PLA2G4A, RND1, SH2D2A, TAS2 R16, TBK1, THBS1, VASP
Negative_9731	BCR, GGH, RDX, SCD, ACTA2, ACTG2, ADCY6, ADH1B, ALDH7A1, APOE, ARPC1B , BNIP1, C3orf10, CACNG5, CCL17, CDKN2D, CFTR, CXCR5, DDX54, E2F4, FA BP4, FUT7, GCNT3, GMPR2, GNA13, GSTZ1, IL17B, IL19, LAMB1, MYLK, OR1S 1, OR4C13, OR5AC2, P2RX6, PARD3, PLCZ1, POLR3K, PPCDC, PRKACG, RBX1, SOCS1, TNXB, TUBA1A, UNC5D, UROC1, MAPKAPK3
Negative_9732	AK7, AANAT, ATF4, ATP5G2, CACNA1H, COL1A2, CSF1R, FADS2, FGF6, GNA13 , GUCY1A2, IDI1, IGF1, IKBKG, IL1R2, IL6R, IMPA2, ITGB5, MAN2A1, NKX2 2, NPR2, NUMBL, OR12D3, OR4C15, STX12, STX3, VAMP1, WNT5A, YWHAB, TNF SF13B
Negative_9733	CSK, F10, F5, MAG, ACOT11, ARPC5, C3AR1, FDFT1, FGFR2, GCAT, GNRH1, HE XB, HLA- DOA, IL5RA, INPP4B, ITGB7, KAT2B, KIR2DL3, LDHAL6B, LILRB3, MTMR2, M YLK, NME4, OR2A12, OR2T11, OR6C4, PGM2, POLR2B, PPAR, PRKAG2, PTPN7 , ROCK1, RPS6KB1, RRM2B, SEMA3G, SESN2, SOD1, UCKL1, WASF2, WNT2B, WW P2, YWHAQ
Negative_9734	ACSM3, CACNG1, CCL17, CCL4, CHKA, CLDN19, CYP2E1, DHDH, DPM3, EVI1, G ANC, LILRB3, MGST1, NEU4, NFYA, OR8H3, PAK1, PDE11A, PDE2A, PDGFC, PR KACA, RASGRP4, RDH10, TGFBR2, TMLHE
Negative_9735	CGA, CRK, GH2, IVD, B3GALT2, B3GALT5, BNIP1, CD8B, CDC23, CHUK, CLTA, CSNK1G1, CTBP1, DCXR, FABP1, FGF17, FLOT1, GOT1, GSTM4, HNMT, HSD3B2 , IKBKE, IL1R1, LAMC2, MAN1A2, MCCC2, MECR, OGDH, OR5H2, OR6K3, OR7G3 , P2RX3, PFKFB3, PIP4K2C, PLA2G6, PNLIP, PPP2CB, SFRP4, TUBB3, PAFAH 1B2, TNFRSF14
Negative_9736	DCC, ACAD8, ALAD, ALAS1, AOC2, ARPC3, ARSD, CDKN1C, CHEK1, DFFB, EPHB 1, FASN, FZR1, IARS2, MAML2, MCM5, NCR3, ODC1, OR14J1, PHKA2, PRKCE, P RPS2, PYGM, ROBO1, SLC25A5, SPRED1, STMN1, TUBA1C, XCL1
Negative_9737	BID, DBI, AMY2A, CNTNAP1, COMP, CX3CR1, CYP2B6, DGKE, GSTP1, HEXA, HP SE2, MAPK13, OR2A12, OR9K2, PCK1, PDGFC, PIP5K1B, PLOD1, PSPH, RFNG, ROBO2, SUFU, TAS1R3
Negative_9738	DBT, SCD, ACAD9, ADORA2B, ARNT2, B3GAT1, BIRC2, CCL14, CDH15, CDK6, E XTL1, FM05, FTH1, GNMT, HCST, HIBCH, HRAS, IFNA14, IL12A, MAOA, NEURO D1, OR2A4, OR6C6, PAK2, PDE3A, PPP1R3B, PPT1, PRKAB1, TSHR, ULBP2
Negative_9739	AKR1D1, ALPP, ATP2A1, E2F2, EDNRB, GMPR, TRAF4, VEGFC
Negative_9740	CACNA1D, GRIA3, SLC33A1, SOCS4, TCIRG1, VAV3

Negative_9741	ATP6AP1, NUDT2, SRD5A1
Negative_9742	DBI, F9, FOS, ACADS, ACSM3, ARRB2, CACNG1, COQ5, EXTL2, IL20RB, JAG2, MAD2L2, MAPK7, PCK1, PRKAG1, PRKCA, PTPN6, SMAD6, ST8SIA5
Negative_9743	RPE, UBC, ACOX3, AGRP, ALDH9A1, ATN1, CASP9, CAV3, CD82, CREB3L4, F13A1, ITGAM, JAK3, KIR2DL3, MAFA, MAP2K4, MITF, NCK2, NFKB1, OR5V1, OR6A2, PDE4B, PFKFB2, SHC1, TJP2, TUBA1C, TUBB6, UAP1, UPP2, WWP2, HSD17B10, PNLIPRP2
Negative_9744	GCAT, NADK, SLIT1, SMURF1, TAS2R1, TCF7L1
Negative_9745	MAX, OAT, ACP1, ACPT, ANPEP, BMPR1A, CACNA1E, CSNK2A1, DIAPH3, DPM2, FLT3, FSHB, GRHRP, IARS, NOD1, OR10H4, OR10J1, OR2H2, OR6C1, PFN3, PLIN, TNFRSF8, SLC25A31, TNFRSF10A
Negative_9746	ILK, ALDH6A1, ALG6, ATP6V1A, CLDN8, LTBP1, NAGA, PCYT1A, POLR2J, VAMP4
Negative_9747	FER, ASIP, CASP8, GDF5, GP1BA, LEFTY2, OR2Y1, PRKACB
Negative_9748	C7, APAF1, CHUK, IBSP, IFNA4, PFN3, SOS1
Negative_9749	PGF, ACPT, CD59, CLDN7, GUCY2F, OR5AC2, OR6K3, PDE1B, PDE4A, RASA2, RDH16, RPS6KB2, SGM2, SQLE, STAT3, C1GALT1C1, CACNA2D2, MAPKAPK2
Negative_9750	GP6, ACP2, AGXT2, ATP5F1, ATP5H, C7orf16, CAPN2, CCL8, CCND3, CD40, CD79A, CDH3, CNDP1, CSF2RB, CYP17A1, CYP26C1, DNMT3L, FABP3, FCER1G, GRIN2B, HNF4A, HSD17B7, ITGB3, MCM3, NCSTN, NUMB, OR10G3, OR2D3, OR9A4, OR9Q1, P2RX2, PDE7B, PTTG1, RXRB, UGT2B10, PAFAH1B3
Negative_9751	SDS, TKT, APC2, ATP4B, BCKDHA, CTSL1, CXCL10, IFNA5, LRRC4C, OR10G3, OR10G4, PTPN6
Negative_9752	DUT, EFN1, GNAZ, NCR3, P2RX6, SEMA3D, TSHB
Negative_9753	RB1, ACP2, ADCY6, ALAS1, ARNTL, B4GALT6, BMP7, CDH4, CHAT, CSF3R, FLT3, GABARAP, GUCA1B, IQGAP3, MGAT2, OR11G2, OR2T34, OR4A16, OR4C6, OR52I1, OR6X1, PTPN7, TAS2R60, UGT2B4
Negative_9754	AADAT, ACTG2, ARG1, ASMT, GLUL, INHBE, PFKFB3, PIK3C2B, PLA2G2E, PRKACG, PSEN1, SMARCA5, TICAM1, TUBAL3
Negative_9755	ABLIM2, ALAD, ALOX15B, COMT, CXCL11, CYP27A1, EI24, IL12A, OCRL, OR51Q1, POLD3, RASSF5, SPRY4
Negative_9756	CBL, CKM, CRK, RB1, A4GALT, ABCC8, ABL1, ADCY7, AFMID, AOX1, ARHGEF6, CAMK2G, CARS2, CD36, DKK4, EPHA3, EPHB1, F13A1, FMO3, GCNT1, GGT1, LAMC1, LCMT1, MITF, NLGN1, NT5C1A, NT5C1B, PDX1, PKM2, PRKAG2, PRKY, PSENEN, RRM2, SEMA4F, SPCS1, STAT4, WNT16
Negative_9757	CAT, CBL, PXN, RFK, AMPD2, ARD1A, ATG3, B3GALT6, BDH2, CSF2, CTBS, DBF4, EPRS, FGD1, FLOT2, GALNT8, GRM1, HSD17B7, HTR7, IL6ST, KDSR, MAPK3, MYD88, NFAT5, NFYC, NRXN3, OR2M3, OR8D2, OR9G1, OR9I1, PARVB, PDHA1, PIGL, PISD, PLOD3, POLE4, PPCS, PVRL2, RALGDS, SENP2, SETD7, SSH1, TASP2, THBS4, UROC1, UROD, ZFYVE16, MAP3K7IP2
Negative_9758	DBT, OTC, PGD, ALCAM, APOE, B4GALT7, BCL2L1, CASP10, CBR3, CCL13, CCNB2, CIITA, CLDN14, COL2A1, CTNNA1, CYBB, CYP26A1, DDIT4, DPYS, EIF4E, EPB41L2, FGD3, G6PD, GALNT9, HIBCH, INPP4B, ITGAM, MTHFD1, NFATC1, OR51F1, OR6C74, OR7A10, OR7D4, PAK2, PAK3, PFKL, PIGQ, PIK3C3, PRKAR1B, PTPMT1, SAT2, SH2D1B, SLC25A5, UBE2L6
Negative_9759	AMDHD2, GNRHR, POLR3A, SPHK1, UGT2B17
Negative_9760	ACPT, APBB1, ATF4, B3GNT5, CAMK2B, COL5A3, ERO1L, KLRC1, OR4D1, PDCD1, PSME2, SHC2, TP53, WWP2, YKT6, TNFRSF13B
Negative_9761	ACTN2, CD86, CXCL1, GALK1, ITGA8, KRAS, MAPK13, PLA2G2F, ULBP3, HLA-DPA1
Negative_9762	GLA, HAO2, IL18R1, NFE2L2, OR1D2

Negative_9763	ADA, CGN, FGG, LHB, PGF, ALDH1A3, ALG13, APOA2, B3GALT1, BST1, CACNA1H, CCNG1, CDC14A, CNTNAP1, DUSP2, ENO3, EPHB1, GALK1, GLUL, HLA-G, IL7R, ITGAX, ITGB3, MAOA, NFASC, OR1J4, OR2H1, OR2M2, OR52H1, OR5A1, PGLS, PHPT1, PPP1R1A, PRKACG, PYGM, SDHB, SEMA4B, SMARCA2, SOD1, TNFRSF4, TNFSF11, UCK2, UMPS, WNT7B, CTNNBIP1
Negative_9764	ARNT2, BACE1, CD244, CD40LG, CDKN2A, CPS1, CREBBP, CXCL11, EP300, FUT3, GALNTL2, HCLS1, HYAL2, IFNA4, LRP6, MCM4, NOD1, NTNG1, OR2M3, OR5B21, OR5D14, OR6C76, OR8G1, OR8K3, PCCA, PDCD1, PIGW, PPP2R5D, PSEN1, SMARCA5, UMPS, WASF2
Negative_9765	ADO, FER, ACADSB, ADAM17, ALG12, ARG1, CFLAR, DHRS3, ECSIT, FBP1, GSTP1, GUCY1A3, ITPA, MAOB, NADK, OR10R2, OR10S1, OR7G2, POLD4, RPSA, SUOX, YOD1, EIF4EBP1
Negative_9766	ILK, MPL, PGP, COL4A6, LCMT2, LTB4R2, MIOX, PDHB, POLR2G, PPP5C, PRKAR2B, SUCLA2
Negative_9767	A2M, AK3, BCR, CSK, EZR, ID3, AARS2, BDH1, CACNG8, CASK, CLCA2, CNGB1, CSF2RA, CYP11B1, CYP8B1, CYSLTR2, E2F4, EIF4E2, FMO1, FPGT, G6PC, GNHRH, GSK3B, IL5RA, IL6R, ITGAL, LCP2, MAOA, MAP3K8, MLLT4, OR1I1, OR2T12, OR6F1, OR9G1, PRKCA, RPSA, SH2D2A, SYNJ1, UBE2L6, VCAM1, YWHAB, CACNA2D4, MAP3K7IP2
Negative_9768	FGB, GBA, ILK, ARHGEF4, B3GALT4, BCL2L1, CHAT, CTBP2, CXCL13, CXXC4, DDIT4, EPB41L1, F13B, GSTM5, GUCY2F, MTFMT, OR2K2, OR2M5, OR4C11, PP2R1A, SAT2, SHMT2, TAS2R48, TGFB2, TNFSF12, YWHAZ
Negative_9769	C4B, C8A, AGTR1, AKT1, ALG3, CDC7, CDKN2D, DAPK3, DGKQ, ECSIT, FGFR2, FSHR, FUT3, GOSR2, OR2AT4, PDE2A, PDE6H, PDE8A, PGK2, PHKA1, PRKG1, RDH16, RUNX1, SDC1, SMAD9, SOCS4, TCF7L1, WASF2, WNT9B, HSD17B10, PDCD1LG2, TNFRSF17
Negative_9770	APOC3, CACNB1, CD46, COL3A1, HTR2C, MYH7B, NFASC, NFX1, OR51V1, PARD6B, POLD4, TNFSF18
Negative_9771	BCR, CRH, MUT, NPY, SI, ACAA2, ACADVL, AGXT2, AKT2, ANAPC10, ASCC3, B4GALT5, CCNH, CD55, CDS2, CLDN14, DEGS1, DHRS3, DUSP9, FLOT2, GALNT2, IL2ORA, IRF5, NFX1, OR2T8, OR5AS1, PHGDH, PKMYT1, PLXNC1, PRNP, SHC3, TAS1R3, TOMM40, TSC1, UCK1, PAFAH1B2
Negative_9772	ADO, C6, EBP, RFK, ACY3, ADCY5, AK3L1, ALOX12, BACE1, BMP2, DBF4, DGAT2L4, EHMT2, FOXO1, GRM1, HEXB, HPRT1, HSPA8, ICAM3, IL22, ITGB8, LIPF, MCM2, NTF4, OR14A16, OR1I1, PGAM2, PGM2, PIK3R2, PLA2G2F, PMM2, POLR2K, PPM1B, PPP2R2B, RELB, RPS6KA1, SC5DL, SEPHS1, SKP2, SPCS3, SPP1, THBS1, TYMS, VAMP1, WNT11
Negative_9773	DRD1, GPD2, IARS
Negative_9774	ANAPC10, CXCL1, GALNT12, HEXA, GABARAPL2, TNFRSF10B
Negative_9775	RDX, XDH, AHCYL2, AXIN2, CCL28, CD28, DHODH, ENAH, GRLF1, HDAC2, HRH1, HTRA2, OR10AD1, OR11L1, OR13C3, OR52B4, OR56A1, OR5T3, OR7A17, OSMR, PANK3, RXRB, SMAD1, TICAM2, MAPKAPK3
Negative_9776	ACPP, ACSM4, ACY3, CBR1, CCL15, CD19, CHRM3, CREB3L4, CSNK1E, CXCL11, DAPK3, DLL4, E2F4, FGF6, FTH1, GADD45B, GALNTL4, GCLM, IL18RAP, IL21, IL6ST, IRF5, LHCGR, LRP6, OR5M9, PAX4, PDPK1, POLR3H, PPOX, PPP1CB, QARS, RALBP1, RDH11, SELPLG, SESN1, TGDS, UNC5C, VDAC1
Negative_9777	AHCYL1, DPM2, ENTPD1, HNF1B, LYPLA2, MAP2K3, P2RX1, PAPSS2, PPP2R1B, TBXAS1
Negative_9778	C1S, ADORA2A, F2RL3, FSHR, OR1E1, OR5M9, VAMP1
Negative_9779	MVD, ABL1, B4GALT3, BCAT2, BCL2L1, CCL7, CREB3, CYP4F2, FTCD, HLA-DMA, IDH3B, IFNGR2, IMPA1, NUDT2, OR4M2, PDCD1, RPS6KB1, SESN1, SHC1
Negative_9780	EZR, ALG8, CNGA3, UPB1



Negative_9781	SDS, ALAD, ATF4, BCL2, CACNA1B, CDKN1A, CHRNA7, CSNK1D, CTNND1, CXCL2, DAG1, DDX23, DLST, DPYSL2, DTX1, FZD6, GAL3ST1, HDAC2, ITGAV, LHCG R, LTBR, MAPK11, NKX2-2, OR10A6, OR4P4, OR7D2, P2RX7, PAK7, PARD3, PDHA1, PIGL, PIK3C2G, PIK3R4, PLD2, PLIN, POLR2J, ROBO3, SMPD4, SPCS1, TUBB3, UGP2, VDAC2, PNLI PRP1
Negative_9782	ADH1B, CCL5, CMAS, CYP26C1, DDHD1, IL12RB1, NOD1, SIGLEC1, UAP1
Negative_9783	GGT5, GRB2, PDE2A, RAF1, STK36, SULT2A1
Negative_9784	FAS, MET, BDKRB2, BPNT1, CACNG7, CCL5, CCR8, CYP2B6, CYP3A5, CYP8B1, FABP1, FGF4, GNRH1, GZMA, HMGCL, LYPLA2, MCM7, NODAL, OR10AG1, OR1L4, OR2AG2, PFN3, PIK3R1, RASGRP1, SELPLG, SNW1, SOX17, STK11, WASF3
Negative_9785	PDC, TPR, EPRS, IDH1, IL20, OLR1, OR4K17, P2RX2, PIGS, PLXNA2, RDH11, TRPM5, UCK1, UPRT
Negative_9786	C1S, ASIP, CCL28, CCR8, CD40LG, CDH4, CLCA4, COX15, CTTN, DUSP7, FLT3LG, FUT7, GALNT11, GCAT, HNF1A, HPSE2, HSPA8, HTR2A, IL21R, IMPDH1, ITPKA, KDSR, OCRL, OR10A3, OXTR, PFN3, PLCD3, PLIN, POLR2E, PYGM, SGPP1, SPTLC1, SSH3, ST3GAL5, TAS2R3, WNT10B
Negative_9787	CGN, PVR, ALDH1A3, ASMT, CDC26, DGAT1, IL13, INPP5A, OR2M3, PPP1CC, PPP3CC, SRGAP2, STAT4, TCF7L2, TYROBP, WNT8A
Negative_9788	ACAD9, BLVRA, BMP8A, CACNG5, CALML5, CCL4, CDC26, CTTN, CYP3A7, DAPK3, EPHB3, EXT2, FABP1, GALNT6, GRIN2D, IRF7, IRS2, KNG1, LIPT1, MAT2B, METTL2B, MYH2, NAE1, OLR1, OR10AG1, OR1S1, OR2B11, OR2B2, OR4K2, OR5K1, PGS1, PHPT1, PPP2R2B, PRKX, PTPRZ1, RBKS, SEMA3E, SEMA4D, SFRP2, TAS2R4, TNFSF4, TRPC1, USE1
Negative_9789	ACP2, CCR6, CDK2, COL6A1, GALNT3, HDAC1, PAK2, PAPSS1
Negative_9790	DCN, PXN, ACTN4, B3GALT1, BPGM, BRAF, CTBP1, DAPK1, EXTL2, FGF13, GFT2, GGCX, GSK3B, HAO1, HMGCS2, IFNA13, MAP4K1, NCF2, NCOA4, NT5C2, OR2M5, OR4D11, OR4S1, P2RX3, PER2, PER3, PISD, PRKAR1A, RRM1, SEMA4F, S TX12, TAS2R49, TLR9, HSD17B12, TNFRSF17
Negative_9791	COQ6, CYP1B1, CYP4F2, DUSP6, ENO1, IAPP, IL2RA, IL2RB, MMP2, NAGK, NF X1, OR12D3, OR2H2, OR4F4, OR51V1, PARVG, PIGT, PPP2R5B, PTPRR, SMAD1, SRD5A1, UGT2B10, VEGFC, EIF4EBP1
Negative_9792	GDA, GLA, ACTG1, BDKRB1, CHKB, DGAT2, EHMT2, FGF17, GMDS, GRIA1, GRIN1, GSTK1, HEXA, HMGCS2, IL4R, NEU2, NLGN1, OR11G2, OR2B11, OR52N4, OR5I1, OR5K1, OR8G1, OR8S1, OSMR, PIGT, PLA2G4A, POLR1A, PRKACB, RAPGE F3, RFX5, RUVBL1, ST3GAL1, STAT1, TNFSF4, TUBB2C, VDAC2, WNT10A, C1G ALT1C1
Negative_9793	ARNT, LAMC1, OR4D11, OR56A3, PHPT1, PIP5K1B, PLCD4, SPRY3, SYNJ1, UG T2B7, ULBP1, ZFYVE16
Negative_9794	IHH, TNC, AARS2, ACMSD, ACP2, ALDH1B1, ALG9, ALOX5, BDH2, CNGA4, CREB 3L2, CXCR3, CYP3A7, EPHB6, EVI1, GGT6, GNAT3, GRM5, IL1A, IL21, IL5RA, NME6, OR10H3, OR2A4, OR51I2, OR6K3, OR8D2, PFKL, PKLR, PLIN, PLXNA1, POLD4, PTCH2, ROCK1, RPS6KA6, SDHB, SETDB2, STK36, TBXA2R, ULK2, YO D1
Negative_9795	CRK, F3, PRL, AKR1C2, AKT1, ALDH1A2, CDK7, DRD5, ENPP6, HTRA2, IL2RG, MCM2, OR2Z1, OR6C70, PAX6, PORCN, PRPS1, PTPMT1, RDH5, ATP6V0D1
Negative_9796	RET, C5AR1, EDNRB, FABP4, PSENEN, STK36
Negative_9797	DARS, IL23R, KLRC2, PNMT, RDH8, SELPLG, ST3GAL6
Negative_9798	ALDOC, CD8A, CDC42, CDH5, COL1A1, DDX50, DUSP8, FCGR3B, FGF8, GALC, G NPDA1, PERP, PLA2G2A, SEMA4B, STAT4, THY1, HLA-DRB3
Negative_9799	BTD, ABLIM3, ADCY9, ADRA1D, CLDN2, CLTCL1, CXXC4, DDB2, ECHS1, ENPP6, ENTPD4, FGF6, FZD4, GUCA1A, IFNA17, IL22, IL6ST, LDHAL6B, NCR1, NCS TN, NKD1, OR1F1, OR5K2, PDE6H, PI4KA, PIGL, PLAT, PLXNB2, PPOX, PPP3C C, PRIM1, PRKCB, SC5DL, SETMAR, STAT5B, SUV420H1

Negative_9800	CDK5, CHRM2, EGLN3, EIF4B, EPHA6, FASLG, IL11, JAG1, MAP3K5, MBL2, NAGK, OR5P3, OR6C1, OR6T1, OR8H1, P2RX5, PIP4K2C, PPP2R5D, PTPRR, WNT3, PRICKLE2
Negative_9801	C5, DUT, GAA, TK2, ACO1, APOA5, B3GAT3, COX15, CTBS, FLT1, FUT7, GALC, HAP1, HMOX2, MGST1, OR2A25, OR4D5, OR5H2, OR6F1, PDHB, SRD5A1, TUBB2A, MAPKAPK3
Negative_9802	CAD, FH, SRM, ACAA1, CAMKK2, CASP7, CLCA4, CYP1A1, DUSP14, EXTL2, HTR2B, ITGA2B, MNX1, NARS, NFX1, OR1Q1, OR2T2, OR51F2, OR5A1, OR5L1, PDI A4, PLOD3, POLE4, PTGER3, RBX1, RDH12, RPN2, TRPM5, VDAC2, WASF3
Negative_9803	C9, CACNA1E, CACNG5, CD44, CDC14A, CLDN2, COQ5, DHRS4, DOLPP1, FABP3, GCLC, IL22RA2, IRF3, MNX1, MTFMT, OXCT2, PLA2G1B, PNMT, PRKACA, RHEB, RIPK1, SETD8, SLC25A5, SOS2, TNFRSF9, TPK1, VTI1B, WNT2, PPP1R12A
Negative_9804	DAO, DCN, ABLIM2, ABP1, ACAT1, ACSL1, AHCYL1, ALAS2, ATP5I, B4GALT7, CD48, CER1, CES1, CSF1, E2F2, EPHB2, FCGR3A, H6PD, ICAM2, LTB4R2, NCA M2, OR2Z1, OR4D9, OR4K15, OR51V1, PCYT1A, PGK1, PIGU, PIK3CD, PIP4K2C, PLXNB1, PPM1D, SDHC, STK11, TAS2R60, TRMT11, TUBB2C, UPP1, SERPIN A5, TNFRSF13B
Negative_9805	CFH, ADCY3, AGPAT2, B3GNT5, BCKDHB, C3AR1, CCDC6, CCL21, CFL1, CFLAR, CHD8, CSH1, CYBA, DCTN1, ENPP6, ENTPD6, FGF7, FRAT1, GDF7, HSD17B3, HSPA2, IL2RG, KRAS, MGAT3, MYH15, NCR1, NFATC2, NKX3-1, NTF4, OR6N2, PARVA, PDE1B, PDE8B, PIGP, PLOD2, PRKCQ, RAPGEF3, RBKS, SFRP2, SSH2, STAM, SUV39H2, TACR2, TCF7L2, TXNDC12, CACNA2D1
Negative_9806	CDA, MAG, ARSB, ARSD, ATN1, EPHA2, FOXA2, MAGI2, NT5C1A, OR51V1, PTAFR, ATP6VOA1
Negative_9807	ACLY, AHCY, CDK6, DHRS4L2, FDPS, ITGB2, MAP2K1, NAT6, OXCT1, PTGER1, SFRP5, STK4, TCF7L2, TUBB4Q
Negative_9808	GP5, ACSL3, ADCY1, ALDH1A2, AXIN2, CCNH, GALNTL5, GGT1, IGF1, MAPK1, OR8H3, PLOD3, PSAT1, UGT2A1
Negative_9809	ABLIM1, ATP2A2, FGFR1, GPD1, OR51B4, OR52D1, PCCA, POLR1E, ROBO1, SDHB
Negative_9810	AGRN, BRAF, CER1, CYP11B2, DAD1, DDX51, ENPP2, GMPS, IKBKB, IL21, KIR3DL3, KLRC3, MYH3, NT5C1A, OR10A5, OR2G2, OR4C12, OR4F4, OR5L1, OR5M3, OR6C1, OR8I2, PCCA, PDHB, PIK3CG, PIK3R2, PNPLA3, RPS6KA2, SELL, SHC2, ST6GAL1, TAS1R3, TJP1
Negative_9811	C8G, GALM, PLCB4
Negative_9812	IL3, OGT, PC, ALDH1A3, ALDH6A1, ATP5L, BDNF, C3AR1, CD99, CDH1, CRLF2, CSF2, CSNK1G3, CYP4F2, DCTD, EARS2, ENAH, ENPP2, FARSA, GOT2, IFNA17, OR1S1, PRKAB1, PRSS2, PTAFR, RBPJ, SFRP2, SMAD2, SOD1, SRGAP3, TAS2R7, TCF7L2, TICAM1, WASF1, HLA-DPB1, PRICKLE1
Negative_9813	GRM1, LIMK2, P4HA3, PIAS3
Negative_9814	DCC, GCK, GNS, HPD, KDR, SYK, AACS, ALAS2, ATP6AP1, CACNA1H, CACNB3, CBLB, CCND1, CLOCK, COQ3, CSNK1G3, CYBA, CYP11A1, CYP11B1, DGKZ, DHX58, DTX3L, ENO2, GLDC, HMOX1, HPSE, MAOB, MAP2K5, MAP3K12, MS4A2, NCOR1, NFKB1, NNMT, OR1J2, OR6T1, OR8H1, PGLS, POLD3, PPP3CB, SSH1, STX10, STX7, YWHAE, CSNK1A1L
Negative_9815	ACACB, ALOX5, B3GALT6, CCL8, CD40, CDKN1C, CNTFR, CRY2, DKK1, DLL1, DPM3, DPYSL2, EFN1, FM02, GALNT8, GSTA2, KLRD1, PPP1R3B, RPE65, TYROBP, WNT9B
Negative_9816	CD4, LIF, AADAC, AQP7, ARNT, BTRC, C4BPA, CACNA1E, CACNB2, CHSY1, CSNK2A1, CTNNA2, DUSP5, EFNA5, ENO3, ENPP7, GALNTL5, GCNT3, GLI3, HSD3B1, KLRK1, L1CAM, LIPG, LLLG2, MYH3, NRXN3, NUDT2, OR13C9, OR2V2, OR51B2, OR8D4, PFKP, PIP4K2A, PLA2G4A, PRNP, ROCK2, SLC27A1, SPI1, STAT6, SYNJ1, TAS2R38, TKTL2, WNT6, TNFRSF13B

Negative_9817	JUP, ARSA, B3GNT5, CHSY3, CXCL10, EHHADH, GGT6, HDAC2, IMPDH1, OR5B12, PFN1, PIP5K3
Negative_9818	APBB1, MAP3K2, OR7D4, SSH1, TAP1, TUBB4
Negative_9819	ACOX2, AHCYL1, ARHGEF6, B4GALT5, CCND3, CD59, CLDN10, CNTNAP1, COQ3, CREB3L1, EIF4E2, FM03, FUT7, GYS1, HLA-DRA, IL12RB1, ITGA11, MAOA, OR2T33, OR6C6, PARD6B, PAX6, PDE2A, PRPS2, RRAS2, SARS2, SELE, SETD1A, SPCS3, SSX2IP, STX1B, TLN1, WNT9B, TNFRSF12A
Negative_9820	AK2, EBP, ALPPL2, ATP6V0C, C7orf16, CCL28, CSF2, FGF17, GCNT1, GSTM4, HA02, IFNA21, LCAT, MS4A2, OR10R2, OR2D2, OR2H1, RASGRF1, RPS6KA2, SESN1
Negative_9821	BCR, CD6, CKM, XDH, ABL1, ADRA1B, ALOX12, BMP5, CTBS, CTS1, ETNK1, GADD45A, GNAI2, LMO7, LRDD, MICA, NRCAM, OGDH, OR1L4, OR52R1, PIK3R1, PON2, PPP2CA, PRKG2, RASGRF1, SEMA3B, SEMA3G, TBXA2R, TRADD, ZBTB16, B3GALNT1, SERPING1
Negative_9822	CGA, LCT, CACNA1H, CD14, CHST12, CRB3, CYP2C18, DUSP1, HADHA, IL6R, MCM3, OR6N1, PRLR, RALB, RIPK1, SESN3, SNAP25, STAT5A, TICAM2, TNFSF10, TYMP
Negative_9823	CR1, LHB, ASNS, CD70, CNTFR, COL5A1, COQ3, CREB3L3, CSF3R, CYCS, CYP2D6, DHCR24, DHDH, FUT6, FZD1, GALM, GATM, GMPR, GNPAT, GNPDA2, IFNA16, IKBKG, INHBA, MYH8, NKD2, NMNAT2, NQO1, NT5C, OR4C15, OR51S1, OR52I2, OR8B12, PDE10A, PLCD1, POLD4, PPP2R2D, PRKAG1, PRKCZ, PRKY, PRSS2, SH2D2A, TACR3, TUBA1A, YWHAQ, ZFYVE16, ATP6VOA2, ST6GALNAC3
Negative_9824	F2R, ACAD9, ACADM, ACTG1, ADH5, ARD1A, ARSD, ATP5G3, BCAT1, CAMK2A, CYP11B2, DDX55, FLT3, GGT7, HSP90B1, KRAS, NOX1, OR1L6, OR56B4, OR5D14, OR5T3, PAPSS1, PARD6G, PDHA2, PGAP1, PIGQ, PIK3R4, PVRL1, RAD51, SYNJ1, THBS1, XCL1, TNFRSF18
Negative_9825	CD40, CD8A, CLDN2, COL1A1, COQ5, F2RL2, HLA-DMA, IFNA17, IL1RAP, IL2RG, KCNB1, KDSR, LEPR, LILRB3, MAP2K3, OGDH, OR51B2, RALBP1, RCHY1, SMARCA2, TM7SF2, MAP3K7IP2, TNFRSF1B
Negative_9826	VCL, ALG6, AOX1, ARHGEF7, ARSD, BCL10, CACNB2, CLTB, COL1A2, ESAM, FGF22, HNF1B, HSD17B8, IL28B, INSR, ITPK1, KIR3DL2, KYNU, LDHB, MADCAM1, MTHFS, NCKAP1, NRCAM, NT5C3, OLR1, OR2M7, PAFAH2, PGM3, PNPT1, RDH8, SETD7, SLC27A1, TBK1, TPMT, TXNDC12, WNT10B, YOD1, YWHAG, ATP6V1B2
Negative_9827	FGG, HPD, MAX, ACP2, ALDH1B1, ANAPC10, ARPC1A, ATP5D, B4GALT3, BMP5, CASP7, CD22, CD8A, CREB3L1, DAPK3, DTX2, ESPL1, GLUD2, GNPAT1, HLA-DOB, INADL, IQGAP2, IRAK3, LTBP1, LYPLA1, MAPK10, NME7, OGDH, OR1L1, OR2B2, OR2H1, OR51Q1, OR52E6, PARVB, PDHA1, PPAP2C, PRSS3, PTPN5, PYGB, SARS2, SEMA4D, SPRY2, TGFB3, THBD, CTNBP1
Negative_9828	CAMK2D, CCR1, CES2, CSNK1G1, FGF3, IRF7, MAP2K5, MYH13, OR7C1, PLOD1, SMAD2, WNT6
Negative_9829	ALDH3A1, C1QB, CAMK4, CD27, CD47, CD72, CDH1, CPT1A, CSDA, CXCL11, CYFIP1, ENO2, IL7R, LIPG, MAP2K2, MYLK, NFYB, NRXN1, OR10T2, OR2AT4, OR4K15, OR51A4, OR5D16, OR6C1, PDE9A, PER2, PHPT1, RAPGEF4, TAS2R48, TICAM2, YKT6, ATP6V1E2, MAPKAPK2, SUV420H2
Negative_9830	ADA, DLD, EDA, LPO, APPL1, BAI1, CCNA1, CHRM2, CHST11, EDN1, GFPT1, GUSB, LDHC, MECR, OR10J1, PDXK, PPOX, RALA, RDH11
Negative_9831	CFI, EZR, IL6, ADCY8, AGRP, AKR1D1, AKT1, ATP5D, BUB1, CACNA1G, CDC25A, CISH, CLDN2, CX3CL1, DKK4, EARS2, G6PC2, GLUD2, GMPR2, GMPS, HAGHL, HIP1, IFNK, IKBKB, IL11, IL6R, LEF1, MAP2K7, MYD88, OGDHL, OR2C1, OR2M4, OR4A15, OR4E2, OR4L1, OR7G1, POLR3B, PRKACG, PRKY, PTPMT1, PYCR2, RAC2, SLC27A4, WNT10B, PHOSPHO1, SERPIND1

Negative_9832	PXN, SCD, SYK, ARNTL, BDKRB1, CAMK2D, CDC16, CDH5, CDKN2A, CREBBP, DDHD1, DERL1, DFFA, EPHA5, GPD2, HNMT, IRAK3, NOTCH3, OR2M4, OR5M3, PAR6G, PLAU, PNLIP, PRKAR1A, RAB23, SH2D1B, VAMP3, YOD1
Negative_9833	EGF, AGPAT4, CD86, CNDP1, FASN, FGF19, GNRHR, IL28A, MYH9, OR2T12, OR8I2, PAX4, POLR2I, POLR2K, PTGFR, RPE65, SNAP23, TAP2, WHSC1L1
Negative_9834	SMS, ADSL, BCMO1, BIRC3, BMP5, CACNG1, CCNA2, CERK, CHDH, DHODH, DUSP2, DVL1, FARS2, FGF18, FGFR3, GLYCTK, GZMB, HIP1, IBSP, IDH3B, IFNG, MYL5, NUMBL, OR7D2, P4HA1, PCYT1A, PCYT2, PIGO, PRKACB, PTGIS, SMARCA5, SMC1A, SORD, STK3, TAS1R2, UGCGL1, WNT8B, HSD17B10
Negative_9835	ATP6V1D, CCR1, CHD8, OR10K1, PIK3C3, RARS2, SYNJ2, ARHGEF12
Negative_9836	ACSL6, CXCL5, CYP3A43, FGD1, FMO4, HBEGF, LAMB3, MAPK13, OR10H1, OR8I2, PERP, PFN3, SSH3, STAT3
Negative_9837	BTK, INS, MAG, MIF, ACP1, ACP6, AFMID, AK3L1, ALG1, ATP12A, BMPR1A, CACNB4, CAV3, CCL22, CRLF2, DDX56, EIF4B, FGF18, FIGF, GCNT2, GNPDA1, IL15RA, IL28A, ITGA7, OR10K2, OR13G1, OR2L13, OR9A4, PARD6G, PIP5K1B, RAC2, SLC12A2
Negative_9838	HK3, RET, SHH, AHCY, ALAS1, ANAPC11, ASPA, CAMKK2, CASP8, CBR1, CDK7, CHUK, COX10, CRB3, DGUOK, DTX4, FZD1, GALT, GBA3, GUSB, HAGH, IFNA5, IL2RB, IPMK, ISYNA1, MAD2L2, MGAT4B, MKNK1, OR10AG1, OR2B11, OR2L13, OR2M2, OR51E2, OR8H3, OXCT2, PAX4, PIK3C2B, PIK3C2G, PSME2, PTPRJ, SETD1B, SGPP2, STX7, TLN1, TLR9, UNC5C, YWHAB, PRICKLE2
Negative_9839	ARG1, CACNG4, DDOST, DUSP6, EPHB3, GALNT1, GCLM, HNF1A, LAMC3, MAP3K13, OR10A3, PDE6H, PLA2G1B, RBKS, ST3GAL4, SERPINB5, TNFRSF1A
Negative_9840	ATM, C1S, C3, ACPT, ATP6V1A, BMP4, CDC20, CXXC4, CYFIP1, DLL4, ELK4, EPHA3, GSTP1, HMBS, IDH3B, IFNGR2, INSR, ITGA5, MOV10L1, NLGN2, OR10G7, OR51A7, OR51I1, PDE1C, PLTP, PON2, PPP2R1B, PRDX6, PRKAR1B, PTGFR, PTPRB, SMAD1, SRGAP2, TFDP1, TP73, WHSC1L1, ZBTB16, ATP6V1G2
Negative_9841	ADO, EGF, F8, LPO, SMS, TPR, ADRB2, ALS2, ARAF, BMP2, C7orf16, CACNG6, CAMKK2, CCNG1, CHD8, CLDN9, CNDP1, EGLN3, FECH, FGD3, GABARAP, GRB2, GRIA1, GSTA2, ITGB2, LILRB3, LLGL1, MDM4, MYL5, NRXN3, OR10J1, OR10V1, OR4F4, OR51B6, OR52E2, OR5AK2, OR6X1, OR7C1, OXSM, PIGA, POMC, SMC1A, STAT5A, TACR3, TLR2, TSC2, XYLB
Negative_9842	TFG, ACOX3, ARSB, CD247, CD38, COX10, CSF3R, CXCL3, DAPK2, HNF1A, IRS1, JAM3, LHCGR, LIFR, LLGL1, NCK2, OR4C46, PARD6B, PRIM2, PSME2, PVRL2, RASGRP1, RPRM, SEMA3F, SHC3, ST3GAL2, TNFSF18, UBE2L3, UGT2B7, MAP3K7IP1
Negative_9843	AK2, SPN, ACP1, ACVR2A, ALDOB, ALOX5, APOA2, CACNA1G, CNTN2, CXCL11, CYP11A1, DDX41, EXT2, FPGS, GALNT7, GGT5, GSTA5, JUND, LTBP1, MYLK, NRP1, OR2L2, OR2T5, OR4K13, OR6C74, OR7A10, OR8D2, PARD6A, PDGFB, PDGFRA, PIK3R2, PNMT, PTDSS1, PYCRL, RDH8, RELB, SPRED1, SRGAP2, ST6GAL1, TLR5, TSTA3, VNN1, VTI1B, ATP6VOA2
Negative_9844	DDO, ZYX, ABI2, ALAS1, ALDH2, BLVRB, CACNA1S, CDK7, CKMT2, COL3A1, CP5S1, DDX18, DDX52, DTX3, DUSP14, EPHX2, GALNT1, GSTA4, GUSB, IL13RA1, LAMC2, LFNG, MAN1A1, MCM4, MYH15, OR11G2, OR2H2, OR5P2, OR6X1, OR8J1, PAK3, PDCD1, PPP2R2B, PRKAB1, PTPRJ, PTPRZ1, TAS2R1, TUBA1B, UGT2A3, UPRT, WWP2, ZFYVE9, ATP6V1E2
Negative_9845	BMP4, CADM1, MMP7, NKD1, OR2AG2, OR8B8, POLD1, PPP1R3A, PRKAA2, TNFRSF8, VTI1B
Negative_9846	ILK, ADSSL1, ATG3, CSDA, GRLF1, LDHD, MAN1B1, MASP2, OR2T5, OR6N1, PITSD, PITX2, PPP2R2A, RPE65, WNT1, CACNA2D3

Negative_9847	ADO, ACP2, ACSS1, ACTN4, BTRC, CDKN1B, CYP21A2, ENTPD6, GALNT11, GALNT3, GDF6, GFAP, GNB3, GRAP2, IKBKG, IL28RA, IQGAP3, KIR2DL3, LIPA, MAP3K2, MYH10, MYH7B, NCAM1, NCK1, NFKBIE, NRCAM, OR56A1, OXSM, PFAS, PIGL, PRNP, RBKS, SH2D1B, SH3BP2, STAT4, SULT2A1, SV2C, TYROBP, WNT7B, YKT6
Negative_9848	EDA, ARRB1, EDNRA, ESPL1, OR5AC2, PGAM2, STX1A, WBSR22, WHSC1, MAPK8IP1
Negative_9849	CKM, FAH, FER, ABL2, ADRB2, ANGPL4, ATP13A2, BLNK, CACNG2, CD72, CHIT1, CTPS2, DAD1, FGFR3, FUT6, GNA14, GNAI2, GNG12, GNMT, GPD1L, HSD3B7, INPP5A, LAMB4, LTB4R2, MCEE, MOV10L1, MTHFD2, MYL5, NFKBIA, OR10A7, OR10P1, OR2AT4, OR4A16, OR4C11, OR4C16, OR51D1, OR52E6, OR8J1, PIGM, PIGN, PITX2, SEMA3C, SETDB2, TAS2R1, TUBAL3, UGT2A1, UGT2B4, WNT2, HLA-DRB3
Negative_9850	GHR, MIF, ABLIM2, ADCY6, ALPPL2, ATP5C1, AVPR1A, BPNT1, CASP7, CDC25C, CDIPT, CPT1A, CSF1R, CSNK1G1, DCTN1, DUSP16, EFNA2, FARS2, FGF20, FZD5, GL01, GMDS, GNA13, HHEX, HHIP, HIP1, HSD17B7, INHBC, NCR2, NT5E, OR10V1, OR4C11, OR5I1, PAK1, PCCB, PFKFB4, PPBP, PROC, PTPRR, SEMA3C, SIGLEC1, TFDP1, TUBB6, WARS2, YKT6
Negative_9851	AMPD2, CLCA4, CYCS, NCF4, OR10Q1
Negative_9852	ASL, BTC, C7, DDO, IL6, MVK, ADORA2B, ALG5, ATG3, AVPR1B, C7orf16, CDKN1C, CES2, CLDN11, CPT1C, CXCL6, CYP4F3, GCLC, GNB3, HAGH, HTR7, IDI2, IL1A, INPP5E, LDHB, MAD2L2, NRXN3, OR10H1, OR2V2, OR52E4, PHKA1, PHKG2, PIP5K1C, PYGM, RAC3, RDH16, SETDB1, SHISA5, SKP2, SLC25A6, ST3GAL2, YKT6, ALDH18A1, HSP90AA1
Negative_9853	LPO, ACAA2, AGPAT6, AMDHD1, ARRB2, BCL2L1, CCL21, CDC20, CDC45L, FUT6, GSTM3, GUCY1A2, IL7R, ITPK1, MYLK2, NCF4, TAS2R13, TYRP1
Negative_9854	NNT, AKR1C3, ALG10, ANAPC7, C5AR1, CD86, CLCA2, OR1J4, OR1K1, PARVG, PDE11A, PIPOX, PPP1CC, PRDX6, TAS1R3, VCAM1, WNT8A
Negative_9855	LEP, SMO, AARS2, AKR1C2, AKT3, ALG12, ALPP, ANAPC1, APBB1, ARHGEF2, ATP5G3, CADM3, CCL1, CCL15, CCNB2, CD40LG, CLDN5, CXCL10, DPM2, DUSP14, EPHX1, FIGF, GSTP1, IFNK, INMT, ITGA5, LIPC, LYZL1, MCCC1, NOTCH3, OR13C5, OR1I1, OR56A1, PFKP, PIGN, POLR3D, PRPS2, PSENN, PTGER3, SSH3, SULT1A1, VAMP2
Negative_9856	C8A, UBB, AGPAT1, B4GALT5, BMPR1B, CACNG8, CBR3, CYP21A2, DEGS2, EPHB2, FCGR3A, FGF19, GNA12, GP1BB, GRPR, IARS2, IFNW1, IL20, KARS, MAP3K3, MYH6, NUDT2, OR2G3, OR3A3, OR4S2, OR51F1, OR7G1, PER1, PLA2G2D, PLCD3, PPARA, PPP1CB, PRKACB, SPI1, TAS2R48, UGT2B4, XCR1, XIAP
Negative_9857	ACAT1, ATP5H, BBOX1, COL4A1, EHMT1, FMO4, HPSE2, IL20, IMPA1, ITGAD, JAK2, KLRC4, LAMC2, NEU1, NOS1, OR1M1, OR2AT4, OR2V2, OR5AK2, PDE7A, PFKFB2, PIK3R5, RELB, SCP2, TRHR, ULBP1
Negative_9858	AK5, CGN, ME3, ACACB, ACSS1, AGPAT2, ALOX5, ASIP, B4GALT1, BCMO1, CFL2, CHST13, CISH, CLCA2, CLDN22, CLDN6, COL6A1, CXXC4, FZD4, GMPR2, GPAM, HPSE, IFNAR2, IFT57, IMPDH1, ISYNA1, JAM2, MAP3K11, MAPK10, MCM3, MGAT1, MITF, OR2T11, PDE4D, PIK3C3, PLA2G5, PNPLA4, PPA2, PPP2CB, RARS, SOAT1, SUV39H2, TKTL1, TRAF5, UGCG2, UGT2B28, WNT9B, HSD17B12
Negative_9859	CAD, MAG, PAH, RDX, AADAC, ANAPC7, AQP7, ARAF, ARHGEF7, CCL4, CREB3L2, CREBBP, DAG1, DARS, DERL1, DGUOK, FABP4, GADD45B, GDF5, GLG1, GLI2, GPLD1, HSPB1, NCAM1, NOTCH1, OR52A1, OR5H2, PIK3C2G, PTPN7, RAC2, SEMA4D, SPHK1, SRGAP1, STX10, TRAF1, TXNDC12, VNN1, WNT10B, XIAP, MAPK8IP2
Negative_9860	ADA, CD4, ACSS3, CACNA1D, CACNG8, CTTN, DRD5, DUSP7, EHHADH, HAP1, INPP1, LYPLA2, MAD1L1, NOTCH3, NT5E, OR2T1, OR4F4, PAFAH2, PDHB, PRKACA, RASGRP2, RPS6KA2, TLR3, UBA7, ALDH18A1, GABARAPL2

Negative_9861	FES, TNR, ACACA, AGPAT1, AKR1B10, ALOX15B, ARHGEF7, CARS, CCL3, CRLS1, CXCL3, DDIT4, ENTPD7, ETNK2, GALM, HAGHL, ICOSLG, IL3RA, IMPA1, IRF3, LGMN, LLGL2, MAP3K1, OR13C4, OR14A16, OR2W1, OR2Y1, OR5AK2, OR6B3, OR6C74, PDPK1, PIK3CA, PLAUR, PTK2, RAPGEF2, RPS6KB1, TAS2R3, WNT1, SERPINA5
Negative_9862	GP9, MPI, PGD, PXN, ACSM1, ALDH3A1, CCKBR, CDS2, CYP3A43, DNMT3B, ERB2, EVI1, FASLG, GCDH, GMPPA, HSPA2, IFNA17, IQGAP2, LLGL2, MS4A2, MTHFS, NARS, NCSTN, OR2G6, OR8K3, OXCT1, PAX8, PFN2, PHPT1, PIGM, PLXNB1, POLA1, SARS2, SLC25A4, UGT2B7, ULBP2, WNT10A, WNT2B, ATP6V1E2
Negative_9863	FH, GBA, B4GALT1, CFLAR, CYP2C8, GALNT3, GSTA4, MAN1A2, OR4N4, OR7C2, PARVB, PPAP2C, TJP1, XYLB
Negative_9864	BTD, LPL, ME2, MVK, AKR1C1, AMPD3, CDC6, CLDN6, DERL1, DHX58, EI24, FM05, IL17RB, NEFH, NT5E, OR2H1, OR2M7, PLA2G4A, POLR2F, PPM1D, PPP3CB, PSME1, PYGM, RPS6KA1, TFDP1, TNFSF4, TP73, TRPC1, TYK2, GABARAPL1
Negative_9865	AKT1, CD247, NTRK1, PAPSS1, PIPOX, TPM3
Negative_9866	ADK, CBS, DAO, AADAC, AGXT2, BAIAP2, CCR3, CDC7, CES7, CNGA4, FGF2, FM02, GALT, GSTM3, HLCS, IFNGR2, IL1R2, IL22RA2, INMT, ITGB7, LARS2, LRP6, MAN2A1, MAT1A, MEF2C, NCKAP1L, OR13A1, OR2H2, OR2T6, OR52E2, OR5AN1, OR6F1, PPCDC, PPP1R3D, SEMA4C, SRD5A1, SRGAP3, ST3GAL5, TRPM5, WNT9A
Negative_9867	CD4, B3GALT4, CAMK2D, CCL20, CCL26, CCND2, CTSG, EP300, EPHB3, FOXA3, LIFR, LTBP1, MAD1L1, NAT6, NCAM2, NFATC4, NOTCH2, OR10K1, OR2V2, SD C3, SEPHS1, SH2D2A, SLC2A2, WASF3, WNT11
Negative_9868	PGP, ASRGL1, CACNG8, CMBL, CREB3L1, FGF19, FGFR4, IL28RA, MYH2, NAT1, OR51A2, ORC3L, SORBS1, TPI1, ULBP3
Negative_9869	B4GALT7, CASP10, ENPP1, GFPT2, IBSP, INPP4A, LGMN, MYL7, PIP5K1B, PRKG2, XIAP
Negative_9870	C4B, ATP5G3, KIR3DL1, OR7C1, PCCB, PDE6H, RASA2, UROC1, ATP6V1C1
Negative_9871	F12, KDR, ABP1, AKT1, ALG10, ARNT2, CCL23, CES1, COL3A1, DDB2, DGUOK, DMGDH, EFNA5, FOSL1, GMPPB, HIBCH, HYAL2, IKBKG, IL12RB1, IL25, ITGA9, ITGAM, KCNB1, NCR3, NEFL, OR52A5, OR5R1, OR6B3, RAB23, RASGRF2, RF X5, SMC1A, SUV39H2, UGT2B10, VAMP1, WARS2, TNFRSF11A
Negative_9872	ALG5, ASPA, BAI1, CALML3, CCL23, CNTNAP2, CYP2C8, DDX50, EARS2, EDNR A, EIF4E2, FARP2, FBXW11, GCNT3, GLYCTK, GNG12, GTSE1, HARS, IPMK, LA MC3, LTBR, MAN1C1, MICA, OR2AG1, OR4K2, PDE3A, PLXNA1, PPM1A, PPP1R3 B, PRKCI, PRODH2, PRSS2, SOAT2, TKTL2, WNT6
Negative_9873	LYN, MAX, AARS2, ACSS1, ADCY6, ALG11, ALG3, ALOX12, BCAT1, CACNB3, CCNA1, CDK5, CDS1, CSDA, CXCL16, DGAT2, GNA12, GPD1L, GSTA1, HTR4, JAK1, LCMT1, LDHB, LIPE, MAP3K2, MBL2, MGST1, NAT5, NCR1, NFASC, NRXN1, OR1D5, OR6B3, PEMT, RRM1, SETMAR, TIRAP, XIAP, ARHGEF12
Negative_9874	F8, ACY1, APC2, BAAT, C1QB, CCNG2, DUSP10, GAPDH, GNB1, HEMK1, IL6R, INMT, ITPA, MBL2, MCM6, NCOR1, OR52N2, OR52N4, PPARA, PRKAB1, SEMA3B, SRGAP1, SUV39H2, WEE1, CACNA2D2, HSP90AA1
Negative_9875	CCR5, CYSLTR1, GFAP, MAPK1, P2RX4, SC4MOL
Negative_9876	DBH, APC2, ARD1A, CCNB3, DAAM2, EPHB4, EREG, NEU4, PLD1, TNFSF9
Negative_9877	ARPC5, CACNA1B, ETNK2, LYPLA2, PAK2, POLR2D, SCP2, TUBAL3
Negative_9878	BID, FUK, ACP2, AKR1B10, ARG1, CACNB4, ENO1, FCGR2B, FGF18, GNB3, GP1BB, GPAA1, HLA-C, INHBC, ITGAL, OR10A4, OR13C8, OR4N2, OR6C75, PLA2G2F, SFRP4, SLC12A2, ST3GAL3, TAS2R48, TPI1, WNT8A

Negative_9879	ADA, AK5, BID, LCK, ADRA1A, ALDH3B1, ATP6V0C, B4GALT5, BLNK, C3AR1, CACNA1A, CCL13, CD79B, CDC27, CLTCL1, CSNK1G3, DRD2, DVL2, FMO2, IGF1R, MOV10L1, NRG3, OR10G3, OR2A5, OR2T34, OR2Y1, OR4D5, OR4F15, OR4K14, PIP5K3, PLXNB3, POLA2, POLE4, PON3, PORCN, SDHC, STAT1, STX6, TOLLIP, UGCGL2, YWHAZ, ST6GALNAC3, TNFRSF13B
Negative_9880	DAO, F10, ACADSB, ADH4, DHDH, DUSP6, GSGT1, GUCA1B, IFIH1, IL12A, LIPA, OR13C5, OR52R1, PLXNB1, PROC, RAB23, ST8SIA5, TFPI
Negative_9881	CCND2, ESPL1, MAFA, OR52M1, PRPH, TBXAS1, TNFRSF13B
Negative_9882	ID2, ALDH2, CHRM5, OR2M2
Negative_9883	C8G, SRM, ACVR2B, ATG3, B3GNT3, CACNG6, CCNA2, CLTC, IDH3B, IL12RB2, NANS, OR5H6, OR5K2, PIGQ
Negative_9884	CBL, CP, DDC, MOS, TXK, ABLIM3, ALDH1L1, AXIN1, BCL10, CHDH, COQ5, CREB3L4, CSF2RA, CSNK2A2, CYP19A1, DDB2, EGFR, GCNT4, IKBKB, LMO7, MDM4, NQO1, OR2T6, PLA2G2A, PLXNA2, SAT2, SETD8, SETDB1, STAT2, STX8, TACR1, TBL1XR1, TUBA1B, PNLIPRP1
Negative_9885	BTD, MAX, ALG10, ANAPC5, CDC20, CSNK1G3, CYP2A6, DAAM1, GPLD1, HIBCH, PDE4D, PI4KA, SOAT1, STAM2, SERPINA1, SUV420H1
Negative_9886	CD6, TNN, ACSL6, ATIC, ATP5D, C3AR1, COL2A1, COL4A4, CREB5, CYP2C19, ENPP2, EPHA5, FGFR2, GRIA2, LTC4S, MAP3K2, MAPK7, OR10A7, OR14C36, OR2A4, PDE5A, PIP4K2C, PPP3CA, PYGB, SRGAP1, STX7
Negative_9887	AMH, TNC, ADORA2A, BBC3, DIAPH2, GRIA2, HLCS, IL1A, IL7R, LDHC, OR2T1, PIM2, SLC27A4, SYNJ2, UCP1
Negative_9888	DAPK2, GANC, GSTM2, MAP2K4, TAS2R4
Negative_9889	DBI, RET, ENPP2, ENTPD8, GALK2, GRIN1, GRIN2C, HHEX, HIBADH, ICOS, JAG2, LRDD, MAP4K1, OR1J4, OR6C76, PDE4C, PLA2G3, SMAD3, SRD5A1, TPMT, VAMP2
Negative_9890	ID4, DGAT1, GAS1, LTC4S, MYH10, PARVG, TUBB2C, HSD17B12
Negative_9891	SRM, ARSE, BAIAP2, CACNG6, CACNG7, CYP2F1, DOT1L, EARS2, GSTO1, IARS, IQGAP2, MARS, MGAT4B, OR2T6, OR7C1, PDE10A, PER3, PIGK, ROBO1, RRAS, SGMS1, SHC1, STAT5A, STX6, TUBA1C, WNT16
Negative_9892	AR, F3, GK2, HGF, IL2, PC, ABLIM2, ACAA1, AGPAT3, AHCY, AMDHD2, ARRB2, BACE2, CACNB4, CBLB, CBR3, CCNA1, CCND3, CCR3, CCR8, CD244, CDC25A, CFL1, CNTF, CRY1, CTNND1, CXCL1, DTX1, EGLN3, IL28A, KIR3DL2, NME4, NRXN2, OR14J1, OR4P4, OR5M8, OR6F1, PDE4A, POLA1, POLR1D, PRKACA, PTPRB, SGPP2, SLC27A4, SPTLC2, TLR5, WNT1, WNT10B, TNFRSF6B
Negative_9893	DHH, GSR, PRL, ACP2, AGPAT4, ALPP, ARD1A, ATP4B, BRAF, CCL11, CD46, DLAT, FUT1, GADD45A, GALE, GPD1L, GRIN1, GSTM2, GUK1, KARS, KAT2B, MAPK7, MMP14, MMP9, OR4F17, P4HA1, PAK2, PLCD4, PPP3CB, PPP3CC, PRKAR1B, TLR3, TMLHE, UROD
Negative_9894	ME1, MPI, ACACB, ACMSD, ANAPC11, CACNG5, CADM3, CLOCK, CYP26B1, CYSLTR1, DRD1, F13A1, FARS2, HMGCR, ITGA2B, ITGB4, KIR3DL1, NCKAP1, OR13C3, OR1N2, OR52E6, OR9K2, PIP5K1B, PLCB2, PRKACB, PVRL2, RASA1, RBPJL, WHSC1, WHSC1L1, C1GALT1C1, CSGALNACT2
Negative_9895	C2, FH, GK2, GP6, ACTB, ALDH4A1, AOX1, APAF1, B3GAT1, CD244, CHRDL, GOSR2, H6PD, HMGCR, IRF9, LAMA3, LIPF, OR1E2, OR4F6, OR51L1, OR52E2, PDHA1, PIGN, PIGV, PIM2, PLA2G5, PTAFR, SDC1, SDC2, SH2D2A, TBL1Y, WNT5A, HSD17B12
Negative_9896	IL6, AKR1C4, ALG9, ARHGEF4, CCDC6, FBP2, FGF19, GOT2, HHEX, IPPK, MAN1A2, MGAT5, NARS2, PDHB, PLA2G3, PPAT, PTEN, RIPK1, RPE65, SELE, SPAM1, SYNJ2, TLN2, TYMP, YWHAB, YWHAH
Negative_9897	LCT, ACSL3, OR4D6, OR6C3
Negative_9898	CSNK1E, EPB41L1, FASN, MYH10, MYH8, NFKB1, OR52K1, PPP2R5A, RPS6KA3, SETD2, ST3GAL3, TAS2R9

Negative_9899	CKB, ACAA2, AQP7, ASCC3, ATP5G2, CEBPA, FABP4, GALNT14, GALNT7, GUCY2D, HDAC2, HLA- DRA, ITCH, LTC4S, MAD2L1, MAP3K4, MAP4K4, MDM2, NTRK2, OR10A5, OR2G6, OR2H2, OR51E2, OR5T3, PDE1B, PISD, POLE3, PPP2R1A, PYGM, SKIV2L2, SLC27A1, SOCS2, TNFSF12, TUBA1A, ULK2, VAMP4, XYLT2, PHOSPHO1
Negative_9900	FER, HGD, PGP, TXK, ACOT12, ADCY4, ANAPC11, BCKDHA, CACNA1F, CDC7, CHRD, CHRM2, CTBP2, ERBB2, F11R, FLT1, GGPS1, GSTZ1, HPSE2, HRH2, IL15RA, ITGAX, LDHD, LIAS, OR1L4, OR2M5, OR6A2, PCYT2, PDE4A, PIAS1, PIK3R4, POLR3A, PTPRR, RALBP1, SETDB1, SFRP1, STK11, STX8, USE1, VAV1, ST6GALNAC5, TNFRSF6B
Negative_9901	BTK, LCT, ACVR1C, AGPAT3, AKR1C2, ALDH6A1, ANAPC7, ATIC, ATP2A3, BCL10, CCR6, CKS1B, CYP19A1, DARS, DRD1, EPB41L3, F11R, FM03, GOT1, IFIH1, IFNK, IL2RA, IQGAP1, ITGB6, LRAT, NPAS2, NT5C3, OR2T34, OR52E2, OR52M1, OXTR, PDXK, PFKL, PLA2G1B, PPOX, PPP3R1, PSME2, RPS6KB1, SETDB1, SFRP5, SLC27A1, SQLE, UBA7, YWHAE, TNFRSF17
Negative_9902	A2M, CEL, CTH, ACVR1, ALDH3A2, BDH2, BST1, CD38, CERK, CLTA, CNGB1, COL1A2, CPT1C, CSF2RB, CYFIP2, CYP3A43, DCTD, DDX18, DHRS9, DPM1, EGLN3, FLT3, FOXA3, FTMT, GALC, GNAI2, HLA- F, IDH1, IL11, INPP4A, KNG1, LAMC2, MAML2, NSDHL, OR4D2, OR4K1, OR51E1, PHKG1, PIAS3, PLXNA3, PPCDC, RELB, SCLY, SLC33A1, SV2A, UGCGL2, UROS, ZNRD1
Negative_9903	AK7, ASL, C9, CD4, FAH, MPI, PRL, ACP1, ALG10B, AMDHD2, ANAPC5, ARAF, CACNG3, CACNG8, CAV3, CCL24, EDN1, FUT4, GALNT14, GNA11, GNAI1, GRHPR, HNF1B, IFNA4, IL29, ITGA2B, ITGB6, KNG1, MDM4, OR10H2, OR11H1, OR1A2, OR2F1, OR5I1, OR8A1, PDGFD, PIK3C2G, PLXNC1, RPS6KB1, SLC25A4, SOAT2, TACR3, TBL1X, TCF7L2, TPI1, UCKL1, UGT2B7, WARS, ATP6V0A1
Negative_9904	DHH, LYN, ACSL3, ACTG1, ANGPTL4, CES1, CHST12, CNGA4, COL4A4, CYCS, DHDH, DNMT1, DPYS, E2F3, EFN1, FGF11, GMPS, GSK3B, GUCY1A2, MAPK12, MITF, MLYCD, OR10H5, OR4F17, OR4P4, OR7A17, ORC2L, PIGP, PLA2G2E, PLCG1, PLCG2, PLXNA2, POLR1E, PTGES2, RDH11, SEPHS1, SNAI2, UBA1
Negative_9905	ACTN1, COMP, NRG3, OLR1, OR2L8, OR2M4, PAX6, PTPRZ1, RHOQ, TLR3, TNFRSF14
Negative_9906	ACY1, ARHGEF7, CMBL, FABP4, L1CAM, NFKBIA, OR10R2, PDE8A, PVRL3, RETSAT, SUCLG1
Negative_9907	CFD, RFK, TH, ATP5A1, B3GALT4, B4GALT5, CALML3, CDS1, CSNK2A1, DUSP4, EXTL2, FGFR1, FTCD, HAO2, HGSNAT, HRH2, HSD17B8, KLKB1, LHCGR, MAGI3, MAN1B1, MAOB, NCR1, OR2T8, PAK4, PDE3B, PIGO, PIGP, PRKCZ, PSAT1, PSENEN, PTGS2, STX2, SUCLA2, SULT2A1, TLR5, AASDHPPT, ST6GALNAC5, TNFRSF14
Negative_9908	CFI, GP6, LTB, OTC, PDC, ACOX3, ALDH4A1, ATP13A2, CCL20, CD244, CD47, COL1A2, CXCR3, FIGF, GALNT1, GCH1, GGT6, GMPR, GNPDA2, GUCY1A2, IARS, IDUA, MLLT4, NSD1, OR10J3, OR1L3, OR5P2, OR6Y1, OR9G4, PLA2G4A, PPCS, PSPH, PTGIS, SOCS7, SQLE, ST3GAL4, STX8, UGCGL1, ULBP3, VAV2, ATP6V1B2
Negative_9909	GPT, NLK, AARS2, CALML5, CYP26B1, GANAB, GGCX, GPAA1, ITGA10, LHCGR, MTMR2, NEU2, POLE3, POLR2I, PTK2, PTPRC, SELPLG, SSH2
Negative_9910	F2, PC, ACSS3, ALDH3A2, CHIA, GALNT13, GP1BA, GSTA5, IL21R, LCAT, NME7, NMNAT1, OR10H1, OR1F1, OR4S2, OR6T1, P4HA2, PGLS, PNMT, POLR3H, PTGS1, RFXAP, SLC12A2, SLC9A1, SPI1, SPP1, ST8SIA1, UCK2
Negative_9911	CXCL16, FGF22, FGFR1, H6PD, IFNGR1, ITPKA, NRG2, NRXN1, OR4C13, OR4K1, PFKM, PLCG1, POLR1C, POLR1D, PTPRM, RETSAT, ST3GAL1, ZAP70, ATP6V1B1
Negative_9912	BMP2, GSTP1, INPP5A, JAM2, MTMR6, NAMPT, OR5M8
Negative_9913	NNT, TK2, CLDN6, CTTN, ERBB2, GP1BA, NCF2, NR1D1, ORC2L, PPP1CA



Negative_9914	C2, FGB, FN1, LAT, ACOT12, ANAPC5, B4GALT6, BCAT1, BLVRA, CD38, CDC25B, CXCL13, CYP1A2, CYP2U1, EFNB2, GALNT14, GGT7, GPX5, GSTO1, HLA-C, HNF1B, HSD17B7, ITGB1, L1CAM, METTL2B, MMP14, OR13C4, OR1L6, OR4A16, OR51I1, OR6T1, PGM1, PIK3CA, PPP2R5C, PRKAG2, PRKCQ, ROCK1, SHC3, SRGAP3, STX12, TJP3, TMLHE, TPI1, TRAF3, UPP1, VAV1, CACNA2D1
Negative_9915	ERBB3, GCDH, MICA, PAX6
Negative_9916	LEP, AASS, ADSSL1, AKR1C3, ALDH3B2, CPOX, CYP26C1, E2F3, ENPP2, GLUD2, HSD3B1, IFNB1, ITGB5, MAPK11, NEUROD1, NFX1, PCCA, PSENE1, SLC2A4, STX16, STX18, UPP1
Negative_9917	AKR1D1, ARHGEF2, CARS2, CCL16, CTNND1, FTMT, IL21, NANP, NCAM1, NMNAT2, NRXN2, OR2T2, PFKFB3, PLAU, PPCS, PRSS1, SRD5A2, PAFAH1B3
Negative_9918	CARD11, CCNB3, CDC42, CDIPT, CHAT, CNGA4, CYSLTR1, DAPK1, FLT4, HDAC1, HTR6, IL12A, IL29, NFKB2, NFYC, NT5M, NUDT8, OR10A3, OR10X1, OR2M2, OR2T2, SLC27A4, SPRED1, TOLLIP, ULBP2
Negative_9919	GNS, ADAM10, ARSB, B3GAT1, CAV1, CCL24, CHD8, CHIT1, EGFR, GAB1, GAS1, GNA13, IFNGR2, IMPDH2, LIPA, NME2, OR5AU1, PAX4, PPAP2C, PTCRA, PVR L3, RASGRP2, TSHB, TUBA1B, UBA1, UROS, VASP
Negative_9920	ADRB1, HSD11B2, ITGA3, OR10V1, OR51F2, SMAD7, XCL2, XYLT2, ZNRD1, HLA-DRB4
Negative_9921	AMT, GCK, GLS, PRL, AGXT2, AKT1, ALAD, ANAPC4, CACNB3, CACNB4, CCND1, CHD8, CLTCL1, CYSLTR1, DHDH, FASLG, GCNT4, GNMT, HBEGF, HSD17B3, HTR2A, IFNW1, IL20, KIR2DL3, MAD2L2, MCCC1, MYH3, NANP, NFATC2, NTRK2, OR5R1, OR9I1, PDE5A, PGS1, PI4KA, PIK3R4, PNPO, PPP2R2A, PRKCQ, SEPHS1, SLC25A5, SLC27A4, STK4, TAS2R5, TCF7, UBE2K, WNT7B
Negative_9922	CDA, F5, FES, ACSL3, ADH1A, ATP5H, B3GNT5, BCAT2, CIITA, CRLS1, ENTPD3, EPB41L1, GOSR2, GRIN2D, IKBKE, ITGA10, LLGL1, MAP4K2, MGAT3, MYL5, OR10G4, OR8H2, ORC5L, PDX1, PER1, PHPT1, PMM2, RFX5, SDHA, STX8, CACNA2D3, PAFAH1B1, TNFRSF1B
Negative_9923	CLDN7, DDX4, MCEE, OR5AN1, RHOQ, SEMA4C, TCIRG1
Negative_9924	CGA, GPT, B3GNT4, CDC23, COQ3, CRKL, CTBP1, CTTN, CXCL6, CYP2J2, DPYS, FBP1, FGF6, GSTM3, GSTO1, GSTO2, H6PD, HSD17B7, INPP5E, MYH13, NFATC4, OR1S1, OR52W1, PAK3, PDE3B, POMC, PROC, RARS, SDC3, TACR3, TUBA3E, TNFRSF17
Negative_9925	HAL, ITK, MTR, AMY2A, CCNG1, CYP4F3, DAG1, EHMT1, FRAT2, GAB1, GALNT7, GATM, GSTA5, IL18RAP, MAP3K1, OR2AG2, OR7A10, PPP2R2A, PPP2R5C, PTGFR, RARA, TUBA1A, UROS, WNT1, HSD17B12, PAFAH1B1
Negative_9926	CKB, F10, LCT, LIF, TAT, ADORA2B, ALDH7A1, BACE2, BCMO1, BIRC5, CCL20, EPHB1, EXTL2, FRAT1, FZD8, GALNTL1, GPD1, GRIA3, IL4R, IPPK, ITGA6, KCNQ1, MKNK2, NFKBIE, NRG2, NTNG1, OR1L4, OR52B6, OR6C4, OR8B8, PIGF, PIGU, PIK3C2G, PRKAG3, PRODH, PTAFR, RBL1, RCHY1, ST8SIA5, STAT5A, TKTL1, TNFSF9, UGT2B11, UNC5B, VEGFA, WNT4, ZMAT3, CACNA2D4, PDCD1LG2
Negative_9927	CDA, HAL, TH, ADH6, AKT3, ATP5G3, B3GALT6, BMPR1B, CACNA1E, DHODH, FBP1, GALK2, GAMT, GLDC, HEMK1, HLA-DOA, HNF4G, IFNA8, IRF3, ITCH, ITGA4, LRRC4C, NCR1, NKD2, NLGN1, ODC1, OR12D3, OR2T2, ORC3L, P4HA1, PDPK1, PPP1R1A, SGPP1, STAT4, TACR2, TAS2R10, TAS2R7, TBXA2R, PAFAH1B1
Negative_9928	C7, CKB, HAL, LHB, ALOX5, BCL10, BMP2, CCKBR, CCL23, CCNG2, CD244, CD274, COX10, DUSP3, HTR2C, IL18R1, LTBR, OR10J3, OR1S1, PDE1B, PISD, RAC2, RELA, TAS2R10, UPRT

Negative_9929	IL8, LYN, NNT, TPO, AASS, ARAF, BET1L, BMP7, C7orf16, CACNA1H, CCNA1, CLCA4, CLDN10, CXCL12, DDIT3, DUSP8, DVL1, GAL3ST1, GDE1, GNAI2, GZMA, IFNA6, LIPG, NRG4, NT5C2, OR10H2, OR1K1, OR4K17, OR52W1, OR6C4, OR7A10, OSMR, PAX8, PFN3, PLXNA1, PPAP2A, PPID, PRDX6, PROC, SEMA4D, SOAT2, ST3GAL4, ST3GAL5, STK36, THBS4, TNFSF4, UMPS, WASL
Negative_9930	ATP6V1D, GAD1, HLA-DOB, OR2AE1, UPRT
Negative_9931	C9, GK, ACY3, ADCY10, ADCY9, ARD1A, BMP8B, CREB3L3, FLOT1, FSHR, GFPT1, GSTM5, HLA-DMA, HSP90B1, HTR5A, ICOS, NFKB1, NGEF, NPR1, OR2T34, OR2T4, PLAU, POLD2, PRKAG1, RXRA, SDHD, SEPHS1, TNFSF12, PRICKLE2
Negative_9932	B3GALT1, CCL8, CDS2, GSTA4, HNF4G, OR2C3, ST8SIA1
Negative_9933	ZYX, CTSL1, DIAPH2, FARS2, GNPAT1, WEE1
Negative_9934	C8A, TK2, ACTG1, ALAS2, ALG1, ANAPC10, ATP2A1, BET1, CREB3L1, DKK1, DNMT3B, EP300, F11R, FDPS, GYS2, HAGH, IL20, IL5RA, IRS1, ITGAD, LAMC2, LDHB, MCAT, MTMR2, NKX3-1, NPAS2, OR1A1, OR4L1, PLCE1, POLE4, TGFA, WEE1, XYLT1, TNFRSF11B
Negative_9935	ME3, AKR1D1, ALDOC, ARNT2, ATP13A2, BDKRB2, CAMK4, CDC25A, CHRDL, CTBP2, CYP17A1, CYP2D6, CYP4A22, DKK4, GALNTL5, GNAI2, MTFMT, MTHFS, NADK, NOTCH2, OR10A7, OR13C3, OR1A2, OR2AE1, OR2T11, OR5D13, PARS2, PRKCG, PRKX, PTDSS2, RAPGEF4, RPS6KA3, SKIV2L2, SLC27A5, SMAD7, SPRY1, SSH2, ST3GAL1, STAT4, SYNJ2, TAS2R7, TUBA1A, XCL2, ATP6V0E1, HSP90AA1
Negative_9936	C8A, IL2, TNN, ALDH3B1, ALOX12B, ARSB, CD28, COL4A6, CYP4A11, DHHD, E2F3, FGF19, GALK1, GLI3, HADHB, HRH2, IL6R, ITGA4, KAT2A, MAD2L2, MECR, METTL2B, MTMR2, NCR1, NEFL, NR4A1, OR6C70, OR6T1, PHGDH, POLD1, PPI1R1A, PROC, RCHY1, RXRB, SOCS3, SUCLA2, UGT2B4, UROD, VDACL1, PAFAH1B3
Negative_9937	AGK, BCAT1, E2F5, GALNT11, GNAI2, MAP2K2, OR56A3, OR7G1, OR9Q1, PDIA4, PI4KB, SESN3, SMAD7, SQLE
Negative_9938	ACVRL1, AGPAT4, CDKN2B, CLTCL1, CNDP1, COL1A1, DKK2, DOT1L, EGFR, ENO2, ERBB2, GSGT1, GCNT2, GLI1, GNPAT, GPX5, HSP90B1, IL20RA, MAP4K1, OR10Z1, POLR3B, RBX1, RPS6KA4, SH2D1B, SNAI2, STMN1, TIAM2
Negative_9939	CKB, GPI, ACLY, ACPP, ATP5D, CACNA1S, CD8A, CREB1, FBP1, FTMT, GADD45A, GNAI5, IL2RA, IRF5, MYH6, OR4P4, OR51A2, PARVG, PIK3C3, PIK3R4, PTN11, SH2D1A, SHC2, STK11, WHSC1, ATP6V0A4
Negative_9940	GGH, MVK, PVR, TK2, ACOT11, ACOX1, AMDHD2, ANPEP, CCL19, CCL5, CD48, CDC45L, CLOCK, EGFR, GAD1, GBE1, GCDH, GGT6, GRM5, GUCY2D, IKBKB, INPP5E, IRF3, LCP2, OR10H2, OR2T3, OR52I1, OR5R1, OR6B3, OR7C1, P4HA2, PANK2, PARD3, PDE4B, PEMT, PTCH1, RPN1, SMAD5, UXS1, WNT8B
Negative_9941	BLNK, CANT1, CTSB, DLL3, OR10K1, OR51E1, TBL1X, TIRAP, WARS2, YARS2, MAPK8IP3
Negative_9942	C4B, DLD, F7, HGF, ID3, SPN, ACTG2, ALOX5, ANPEP, AREG, ATIC, CCR6, GSTM4, HSD11B2, IMPA2, NCR3, OR13D1, ORC6L, RRAS2, UBE2L6, WNT6
Negative_9943	ADO, GAA, BNIP1, CACNA1H, CDK7, CLOCK, DAAM1, OR2F2, PMVK, PVRL3, SDHA, SELPLG, SENP2
Negative_9944	IDS, INS, SYK, ACO1, ADH4, BCL2, CADM3, CCL3, CTBP2, CYP21A2, ELK4, EPHB1, F13A1, FRAP1, ITGB6, LRDD, OR10G8, OR1G1, OR2A4, OR2T4, OR5J2, PIGL, PISD, RASGRP1, RHOD, SHC3, TAS2R3, TCF7, UBE2K, YWHAB
Negative_9945	GK2, PAH, PLG, TK2, ADH4, ADH7, ALAD, CAMKK2, CCR8, CKMT2, CSF3, CXCL9, DDX54, DGKH, FBP2, FRAT1, GFPT1, GSTA5, GZMA, HTR2B, IFNGR2, IL21R, IL22, KIR2DS4, LEFTY2, MAPK9, MDM2, MGAT2, NNMT, NRG4, OR2S2, OR51I2, OR5B12, P2RX1, PDXP, PI4KA, PIGS, PNLIP, PPP3R1, RPS6KB2, SH2D1B, TRAF4, TSLP, ULBP3, VASP, ZMAT3

Negative_9946	AMT, C5, CBS, RDX, ACSM3, ACSM4, ALDOC, CYP2C18, DNMT1, ENPP2, ETNK2, EXOC7, FARSB, FECH, FGF12, GNA12, GNAI2, HAO1, IFNA13, IFNAR2, IL19, IL20RB, IL21, LIPF, LYPLA2, MAN1B1, MTFMT, OR10Z1, OR1L6, OR1N2, OR51D1, OR8S1, PFKM, PIK3R1, PSEN1, PSME2, PTGFR, SDC1, SPRED2, SV2C, TNFSF10, UBA1, WEE1, CSGALNACT1
Negative_9947	KIT, CTBP2, CXCL12, DUSP6, IL15RA, PDE7A, PECAM1, PGM2, PNLIP, POLR3H, SRD5A1
Negative_9948	OAT, GLDC, HLA-C, OR2T3, TNFSF14, UGCG
Negative_9949	SFN, ACACB, APOA5, APOC3, CBLC, CSF2RA, DOCK1, FGFR3, LALBA, LIPF, PLA1A, PRIM2, UCKL1, WHSC1L1, TNFRSF1B
Negative_9950	CD4, PARD6G, RRAS2
Negative_9951	EGF, MPL, APOA5, B3GALT4, CCKAR, CCL14, CD8A, CYP11B1, DLL4, DOCK1, EPHA2, EREG, GNAZ, MAGI3, MGAM, MTHFD2, NOX3, OR10J5, OR1A1, OR4A15, OR4K5, OR51E1, OR5K2, PLIN, PPCS, PRKCB, SAT2, SCP2, SPAM1, SRD5A1, TD02, UNC5C, WNT5A, AASDHPPT, CACNA2D4, HLA-DPB1
Negative_9952	CTH, PML, RDX, BLVRA, CACNA1E, CARS, DTX1, ENO1, GNMT, IL1R1, OR10H5, PCNA, RPRM, TGFBR2, TLR2, TNFSF4
Negative_9953	CKB, GK2, JUP, CCR5, CD3E, CDS1, COL4A6, CREB5, EXTL1, F11R, GALNT8, GCLC, GGCX, GJA1, GNPAT, GUCY2F, IFNAR1, IL20, MAML1, MAPK3, MGAT4B, MPDZ, MPP5, OR2AE1, OR4C11, OR4S1, OR9G4, PARVB, PAX4, PDE11A, PIGX, PPI1CC, PRKAG1, SEPHS1, STAT3, SULT2B1, TRAF4, WNT10B, ATP6V1C1, TNFRSF10B
Negative_9954	GNS, HDC, PXN, ADCY9, ADH4, ALDH1A2, ATP2A1, CALML3, CCNB2, CD27, COL4A2, CSNK1G3, DLAT, DRD2, DTX1, G6PC2, GLUD1, GNAI1, GUSB, HLA-DRA, HRH1, HSD17B3, IL10RA, IL18R1, IL6ST, MINPP1, NFX1, NOX1, NUDT9, OR13H1, OR2L2, OR4C16, ORC4L, OXCT1, PGM1, PIK3C2B, POLR2A, POLR2B, PPAP2A, PPARA, PTCH1, RETSAT, SLC2A4, TAP1, TYROBP, VEGFC, WNT5B
Negative_9955	AASS, ALDH1B1, ARPC3, CACNG3, CCL19, CD58, CDC25A, CLOCK, CRLF2, CSF3, CYSLTR1, E2F2, EFNA1, HNMT, IRS4, ITGA1, MITF, NEU4, NKD1, NKX3-1, NLGN3, OR6Y1, OR8D1, OR9Q1, PDE5A, PDGFRB, PMAIP1, POLA1, RALGDS, RHEB, SEMA3E, SMAD7, TAS2R16, TM7SF2, UGCGL2, VAMP1, HLA-DPA1, SERPINA5, SUV420H2
Negative_9956	ACP1, ACPP, APOA5, ATP5G3, CCND1, CDK5, CTBP1, CYP26C1, ELK1, EPHX2, ESPL1, EXTL1, GLDC, GNRH1, IGFBP3, IL21, LYZL1, NOTCH3, OR10H4, OR2C1, OXCT2, PARVA, PI4KB, PRKAR2A, SEMA3G, SULT2B1, SUV39H2, TAS2R1, TP73, TXNDC12, TYK2, UNC5A, TNFRSF13C
Negative_9957	C4B, EPO, HK2, TKT, ADRB1, ATG12, ATG3, BUB1B, CACNA1D, CACNB1, CTSL1, DAD1, EPHA1, FGF5, FLT1, GMPS, HLA-DOB, HLA-G, IDH3G, IRAK3, ITGA9, ITGB4, JAK3, LDHA, MKNK1, MYH3, NAE1, OR4A16, PIK3R4, PRIM2, PRKG1, SARS, UCP1, VKORC1, SERPINA5, ST6GALNAC4
Negative_9958	RPE, SRF, ACAD9, ACLY, ACOX3, AGRP, ALDH3B2, ALDH7A1, ALG8, AMHR2, C4BPB, CACNA1A, CCL11, CHKA, CNTNAP1, CREB3, CYP4F2, DDIT4, ELK4, FARSB, FGF19, FGF4, GCLM, HHEX, HMOX2, KIR2DL2, LAMC1, LEFTY2, LMO7, MCCC1, MICA, MYL9, OR10V1, OR4B1, OR5M9, P2RX1, P4HA2, PTGES, PYGM, RAB23, RAC3, SMURF2, TALDO1, UPB1
Negative_9959	ILK, TNC, TPO, ACADL, AHCY, BIRC3, CTSS, DGKQ, DMGDH, FUT9, GALNT7, HNF1B, HSD17B8, IL23R, LRRC4C, LYZL1, MAP2K1, MGAT1, NCR1, OR2D3, OR2V2, OXCT2, PHKA2, PIAS4, PIP4K2B, PISD, PPP1R3B, PTGS2, PYCRL, RAC1, RPN2, TAS2R38, TAS2R48, TBL1Y, TD02, TGFB3, THBS2, TLR5, XYLT2, SLC25A31
Negative_9960	AMH, CEL, ACLY, CREB1, DOLPP1, GBE1, OR4D1, OR52H1, PIGT, PPBP, ROCK1, ST3GAL4, TNFSF11, SUV420H1

Negative_9961	GP9, TEC, XDH, ACVRL1, ALS2, ARHGEF4, ARNT2, ATP6V1A, CAMK2B, CARD11, CD19, CDC16, CYP3A5, FGF3, FLOT2, FSHR, FZD9, GALNTL2, GIT1, GNG12, GNRHR, KIR3DL1, L1CAM, LCAT, MAN1A2, MAP2K1, NKD1, OR10G3, OR1C1, OR2F1, OR5T3, OR6C1, PARVB, PDE1B, PFKFB1, PRKACA, PRKACB, RFNG, SEMA3F, SMAD7, TAS2R7, TCF7L2, TNFSF9, TUBB3, WASF2, WNT10A, WNT6
Negative_9962	SCD, TNR, ACSM3, AMD1, ANAPC1, CCL19, CCND2, CD70, CLDN20, COMP, CYBB, DLL3, EHHADH, EPHB3, ESAM, FGF11, GALNT3, IDH3G, LTBR, MAOB, MYH10, OR10G7, OR10Z1, OR13D1, OR1J4, OR2T3, OR5D18, PDHA1, PIGB, PIK3R2, PLA2G3, POLE3, PPP1CB, PPP2R5A, PPP2R5E, PPP3CC, PTK2B, RBPJ, RDH12, SCIN, SDC3, STX2, TOLLIP, TUBB, TYRP1, UBE2K, XYLB, ATP6V0A2
Negative_9963	DLD, NEU4, PDE6D, PDE6H, PLA2G2A, RDH11, STAT3, STX5, HLA-DRB4
Negative_9964	ZYX, AMDHD1, B3GALT2, COL6A1, CXCL3, DDX19A, DGKB, DUSP5, GNAZ, GP1B A, HMGCS2, HSD17B3, ICAM3, IL23A, IRF5, KLKB1, MCCC2, MFNG, NCF4, ODC1, OR4C15, OR4F17, P2RX6, P4HA3, PIGF, PTGER3, RAPGEF2, SLC27A1, SMA D9, TKTL1, TNXB, TRADD, TUBA3E, VAV1, TNFRSF13B, TNFRSF6B
Negative_9965	BTC, ID4, MET, ACY1, ALDH4A1, BBOX1, C7orf16, CDK4, CLDN20, CSNK1G2, CX3CR1, CYP11A1, DGKH, EPHB3, EPRS, FLT1, GAL3ST1, HMBS, NRCAM, OR10 P1, OR13A1, OR4C16, OR52B6, PGK2, PLXNA2, POLR3D, TOMM40L, TPM3, XYL T1, C1GALT1C1, CACNA2D1, HLA-DPA1
Negative_9966	EPO, NPY, AACS, CACNG2, CD72, CLCA2, FCGR3A, GALT, INHBA, P2RX5, P4HA 2, PDE1A, PDE7B, PLOD3, RASSF5, TBL1Y, TBXA2R, UGDH, WBSCR22
Negative_9967	TXK, ADCY8, ADSSL1, ALG6, ALPL, APOC3, CCR2, CERK, EXT1, GALNT10, GBE 1, HEXA, IL2RG, IL8RA, IMPDH1, ITGAE, ITGAV, OR5V1, PLOD1, PLXNB2, PP ARA, PPM1A, PTGES, SELL, SESN2, SETD1B, WARS2
Negative_9968	DAO, AKR1B1, CD58, CTNNA2, DHCR7, DUSP6, GFPT2, HES1, IL17B, MYH15, N CKAP1L, OR51B5, ORC1L, PCK2, RASGRF2, RRM1, VDAC3, XIAP, SERPINA1
Negative_9969	LAT, TNC, ALDH2, ANAPC11, APPL1, B4GALT3, CMPK1, COL6A2, CSH1, CXCL1 2, DHCR24, DHFR, EPRS, ETNK2, G6PD, HSD3B7, IMPDH1, KCNQ1, MGAM, MYH1 1, OR2AT4, OR52R1, OR5J2, ORC1L, ORC2L, PGAM2, PITX2, SESN1, SHISA5, SORD, TSC1
Negative_9970	KDR, NF1, AXIN2, CCL25, CLDN17, DDX50, DPAGT1, GRM5, ITGB8, KIR3DL2, MAP3K6, MAPK9, MPZL1, NFKBIB, NKD1, RXRG, SMAD2, TCF7, VAV1, WARS, WA SL
Negative_9971	ALG2, ARPC5L, CADM3, CCR4, CISH, CNTN1, CYP3A5, DPYSL2, DUSP3, FGF1, FGF13, GLB1, LIPG, MCM5, PIGS, RAF1, STAT5B, STX5, TPMT
Negative_9972	AK1, AR, DCT, LTB, TK1, AACS, ALG9, ALOX12B, ARPC5L, B3GAT3, BPGM, CHR M5, CHST12, CISH, CNTN1, CXCL6, DPYSL2, EDNRA, FGF8, FGFR2, G6PC, GDF 6, GRB2, GSTO2, GUCY1B3, HES1, HNMT, INPP5A, JAK1, MECR, MGAM, MYH6, N UMBL, OR1F1, OR2B6, OR4M2, OR51M1, PFAS, PLA2G4A, POLA1, PPP1R3C, RA PGEF2, SLC12A2, SPCS1, TAS2R40, TGFBR1, SERPING1
Negative_9973	F2, SCD, ACP2, ACTA2, DIAPH1, EGLN1, ETNK1, FGF14, FGF21, GDE1, GGT7, GPD1L, GYS1, HIBADH, HSD17B2, IL23R, ITGAV, MYH11, NFYA, OR1N2, OR2T 5, OR9G1, P2RX2, PDE3A, PGS1, PMAIP1, PVRL3, SLC27A1, SNAP25, SOAT1, STX3, TNFSF11, WBSCR17
Negative_9974	AR, BUB3, CCL16, CHRM5, CYP1A1, CYP2A7, DRD5, FSHR, GMPPB, GNAI1, GST T1, IL10RB, NUMB, OR10H3, PAK7, SDC3, STX7
Negative_9975	DBT, NF1, DOT1L, ITGA3, METTL2B, OR5B21, RXRA, TNFSF4
Negative_9976	AK3, ACSL4, ANAPC2, CACNA1C, CALML6, CCNB1, CDK7, FADS2, GNB1, GSTK1, HTR2C, KAT2B, LAMC3, NME6, NMNAT1, OR1N2, OR2AG2, OR51E1, OR52B6, O R52N2, ORC4L, PLA2G4A, PPP2R2C, PPP2R5B, PRKAA2, PRKG2, SOCS2, SUFU, THBD, VDAC1, ATP6V1E2, HLA-DRB4, SERPINA5
Negative_9977	SMO, CCDC6, CD22, CER1, CYP2C8, MAP3K2, PGS1, PIK3CD, RXRG, STX1B, AT P6V1C1, ST6GALNAC5

Negative_9978	BID, HK1, AGPAT4, ANAPC1, ARHGEF2, BACE1, BST1, BTRC, CCND3, CLDN16, CSF2RB, CSNK1A1, CTNND1, CXCR3, DARS, DCTN1, DERA, DUSP7, FDPS, FGF23, FGF9, ISYNA1, ITGAD, ITPKA, LLGL1, MTHFD1, NCKAP1L, NCR1, OCLN, OR2T34, OR7G3, PER3, PIGH, POLA1, POLD3, POLR1B, PPBP, PTPRM, RAB23, RAB5A, SELP, SGMS1, WNT4, CSGALNACT1
Negative_9979	IL6, B4GALT1, DNMT3B, GPD1L, LIPA, MGAT3, OR52B6, OR6C4, PPP2CB, TRAF1
Negative_9980	ADC, BAX, PAH, ACTG1, ADH5, APPL1, AREG, ATIC, CAMK2D, CARD11, CD36, CD40, CD8A, CLDN6, DOT1L, EI24, EXTL1, FGF1, FOSL1, GBGT1, GUCA1A, HSD3B2, IFNA16, KIR2DL4, LPAR1, MAP2K7, MECR, NFATC3, NFKB1, OR10H4, OR1D5, OR1N1, OR51D1, OR6C6, PAK6, PCYT2, PECAM1, PLCD3, PPP1R3A, PRSS2, PTPRC, RPS6KB1, RPS6KB2, TICAM2, ULBP2, UXS1, VKORC1, ZNRD1, MAP3K7IP2
Negative_9981	SDS, ALCAM, ALDOC, C4BPB, CAMK4, CCL2, DDB2, DUSP16, GNAI3, INPPL1, ITGAE, MYL7, NMNAT1, OR4C6, OR5T1, PDHB, PRKACG, RALB, SOD1, TPI1, ULBP1, TNFRSF6B
Negative_9982	GSN, PAH, SRF, TAT, TXK, AACS, AADAC, ACAT1, ACVRL1, BCAT1, BST1, CD244, COL4A1, CRKL, CTSB, GADD45A, GJD2, GRB2, GRHPR, GSTA1, IL29, KAT2B, KNG1, LIPC, MGAT4B, OR4C15, OR52A5, OR5AR1, OR5B21, PCYT1B, POLE4, POLR1B, PTTG1, RHOA, RPS6KA4, STX7, SYNJ2, WIF1, XYLT2, YWHAG, CACNA2D4, SERPINA1, ST6GALNAC5, TNFRSF14
Negative_9983	CR1, DDC, ALG3, AMPD3, APOC3, ARNT, CCND1, CCND3, CD58, CNDP1, CRY2, DX50, DUSP14, EPHB3, GLDC, GLS2, GUCY2F, HADHA, HTR7, HYAL2, IGF1R, IL5RA, IMPA2, INADL, ISYNA1, KLRC4, LTA4H, MTHFD2, MTHFS, MYL7, NAT5, NUDT9, OR2F2, OR9G1, PFKFB3, PI4KB, PRPH2, PTDSS1, PTGES2, SEMA3E, SHMT1, TBXA2R, THTPA, TOMM40, TUBA3C, UGCG
Negative_9984	DCT, GGH, HAL, CALML3, CCL24, CCNA1, CREB1, CYP2A6, DLST, DTX1, FRAP1, HLA-DRA, HNF1A, IFNA13, ITCH, KAT2B, LAMC3, LIPF, MAT1A, MCEE, MGST3, MYL7, OR4K1, PAX8, PPP3R1, PSME3, SDC2, SEMA3B, SOCS2, SULT2B1, TPK1, WARS2, WWP2, ZFYVE16, B3GALNT1, HLA-DRB5, TNFRSF17
Negative_9985	SMS, ADCY10, CALML3, COL11A1, DCTD, ERBB3, EXTL1, GLUL, GRM1, GYS1, IRF3, ITGA2, ITPA, MAP3K6, MTHFR, NOTCH3, OR1D5, PAX6, PFKFB4, POMC, TAS2R7
Negative_9986	AKR1C2, DHRS4, GDF5, OR5A2, OR6C4
Negative_9987	C3orf10, DIAPH2, EFNB3, FLT4, HAAO, MCM3, NODAL, PDIA4, PTCH2, SELE, STAT2, TCF7, THBS3
Negative_9988	LCT, SI, TEC, TH, AARS2, ARSB, ATG3, CASP8, CD01, CLTA, CLTB, DLAT, DUSP14, ECHS1, GLUD1, HSD3B2, NCKAP1L, NCR2, OR2M5, OR52E6, OR52N5, OR5B12, PIPOX, POLR3G, PROS1, PTPRB, RPN1, SARS2, SRGAP3, SYNJ1, UGT2B11, HLA-DQB1
Negative_9989	IL8, SRF, ACTC1, ACTN2, ACVRL1, CACNA1C, CACNG7, CAMK2G, CCL2, CD79B, CSDA, CSF1R, CXCL16, CYP26B1, CYP2F1, DGUOK, DIAPH2, DUSP8, EPHA8, EPHB4, GALNT1, GALNT2, GALNT6, GAMT, GFPT2, GLUD2, HAP1, MCM7, MTAP, NAT1, NAT2, NEUROG3, OR1J2, OR3A2, OR51B2, OR8B8, PLOD3, POLR2H, PRKCI, PSAT1, PTCH1, PTGS2, SHC1, SULT2A1, TRAF6, UNC5A, WHSC1, CTNNBIP1
Negative_9990	CFH, F2R, AACS, ACP5, AKT3, BMP7, C1GALT1, CYP2E1, DVL2, EXT2, FGF21, GDF7, GGT5, L1CAM, MAP3K4, NME6, OR2A4, OR2V2, OR4C11, OR4F17, OR5B17, OR9A4, POLR2I, RPS6, THBS1, TNFRSF8, TYK2, VNN1
Negative_9991	PLG, ATF2, CCR1, CDC16, CYP19A1, FOXA3, GZMA, HYAL1, IARS2, OR1F1, P2RX3, PPARG, TGFA, TSHR, CACNA2D1

Negative_9992	PML, AACs, AGRN, APC2, CCL1, CDS2, CKMT2, CXCR6, DGAT2, DUSP4, FLT4, GANC, IL22, KLRC4, MTHFD2, MYL7, OR1L1, OR4A15, PERP, PGAM4, PKMYT1, PTGER3, PVRL1, RIPK1, RRM1, SARDH, SLC27A5, SMAD5, TNFRSF10C
Negative_9993	IL12RB1, LIMK1, MYH11
Negative_9994	FOS, ID2, A4GALT, ADCY10, AMDHD2, APAF1, CACNG1, CALML3, CSF3, CXCR3, CXCR4, CYP2A7, DOLPP1, EARS2, F13A1, GARS, GLO1, GRIN2A, GRIN2C, HLCS, IAPP, IL23A, ITGA2B, LAMA3, MAP3K14, MCM3, NCAM2, OR2C1, OR52H1, PLXNB1, POLR3H, PRLR, RBL1, RPS6KA3, RUNX1, RUNX1T1, SELPLG, SFRP2, SSH3, TNFRSF18
Negative_9995	AR, TNF, ALDH1L1, AMPD2, ARRB1, CCL27, ENPP1, EXTL2, FMO3, G6PC, GNMT, GRIA1, HADHA, HLA-G, IL8RA, LRDD, MAFA, MYH7B, OR10A4, OR2T3, OR4Q3, OR52E6, OR6N2, PIM1, PIP5K1C, PLXNA3, POLR2J, SEMA3C, SEMA3D, SEMA3G, TAS2R40, TCF7, TOLLIP, TRDMT1, UNC5A, YWHAE
Negative_9996	AK3, CAD, TNF, ATP5L, C4BPB, COL2A1, DAPK1, DPAGT1, HNF4G, MAGI3, OR1E1, PARD6B, PDE1A, RDH10, UBE2K
Negative_9997	C4B, NPL, ABLIM1, AGPAT6, ATG12, CHIT1, CREB3L2, CYP2F1, FGD3, IL12RB2, LYZL1, MAP3K7, MTMR1, OR5P2, OR7G1, OR8J1, PARS2, PKLR, PNMT, POLR3D, PPP1R3D, WNT7A
Negative_9998	AHCYL2, ANAPC10, ARHGEF6, ATG7, B4GALT3, BCL2, BMPR1A, CACNA1E, CAMK4, CDK4, CES2, CHSY1, CREB5, CXCL10, CYP2E1, DTX2, GAB1, GPD1, HPSE2, IFIH1, IFNGR2, IKBKB, IL17B, IL1R2, MAP3K13, MAT2B, NCOR1, NR4A1, NRAS, OR13J1, OR4D1, OR51B6, OR5C1, OR6X1, OR7A17, PFN2, PLOD2, PPP3R2, PTCH2, RALGDS, RFWD2, ROBO2, SPI1, TPI1, UBE2L3, VAMP4, TNFRSF6B
Negative_9999	AGK, DCK, HPD, PGD, ACTN1, ALDH1A2, ATP50, BACE2, CNTN2, COL5A2, DUSP10, FMO2, GRLF1, HHIP, HLA-DOA, KCN11, LTB4R2, ODC1, OR10J1, PAK2, PFKM, PNPT1, PRPH2, SCP2, SDHC, SPCS1, STX5, TAS2R50, TBXAS1, TFDP1, UMPS, ATP6V1G1
Negative_10000	EDA, PLN, SP1, TKT, AADAT, ALCY, ADCY8, ALDH3A1, ARPC1B, B3GNT2, C4BPB, CCR7, CDKN2A, CYP2E1, CYP3A7, DGKE, DOT1L, ENPP6, GNPAT, ITGAM, NR10X1, OR13C8, OR4D1, OR56A3, OR5J2, OR8H2, PANK4, PDE6H, PDHA2, PON2, PTK2, RPS6KA4, SFRP1, SLC27A5, SMC1A, SOCS5, UBE2K, WEE1, CSALNACT1, PDCD1LG2, PPARGC1A
Negative_10001	AK5, C9, CR2, TXK, ACP2, AMY2B, ANAPC2, C3AR1, CCNE1, CFTR, CTNND1, DGKE, DTX1, ERBB3, FBXW11, GCNT4, GGT6, GNB1, GUCY2C, HNF4G, IFNB1, IPMK, IQGAP2, ITGAE, KIR3DL1, LEPR, MAP2K2, MAP3K5, NUDT5, OR10A6, OR2M7, OR4A16, OR4D11, OR7D2, PIK3C3, PRKACA, RARS2, RPIA, SCP2, SEMA3D, SLC2A4, STX7, SULT1A2, TRAF3, TRAF4, TRDMT1, TXNDC12, ZFYVE16, TNFRSF6B
Negative_10002	APP, C8A, EDA, ACSS1, ALOX15, APOA1, APOE, B3GNT4, BACE2, BPGM, CACNG6, CCL5, CCNB1, CD28, CD86, ETS1, FABP1, FABP4, GCLM, GSTA4, IDH2, IFNA16, IL10, LAMA3, MTHFD1L, NMNAT2, NNMT, OR1N2, OR8G1, PKMYT1, PLK1, PLXNB2, PPBP, PPP1CB, PRKAR2A, PRKCZ, PRKG2, PRNP, RASA2, RERE, RHOA, SCIN, SCLY, TLR9, WBSCR22, PRICKLE2, TNFRSF10C, TNFRSF10D
Negative_10003	ADA, DCN, FAH, FYN, RDX, ACOX2, B3GNT3, CBLB, CCL21, CTPS2, IL1RAP, MFNG, MMP2, NTSR1, OR10K2, OR5AK2, OR6C4, OSMR, P2RX4, PDE4B, PPARA, UGT2B7, VKORC1
Negative_10004	BTD, C7, CBL, F3, ACAT2, ADORA2B, BMP8A, CACNG8, CD79A, CDK5, CHRDL, CYP2E1, DEGS1, DGKD, EFNA1, EFNB3, ENTPD2, EPHA3, GBGT1, GCNT3, GLI2, IKBKB, IL24, IL25, IMPA1, KLRC2, KRAS, LEF1, NFKBIE, PDXK, PFKFB1, PGM3, PON2, PYGL, SOCS5, SRD5A2, TAP2, UNC5C, UROS, MAPKAPK2, TNFRSF14
Negative_10005	ACSM5, CYP26A1, GALNTL1, GRLF1, ITGA9, JAM2, LYZL1, POLR3A, PPOX
Negative_10006	AUH, IL6, MSN, AKT3, BST1, CYP4A22, DAAM2, DARS, DAXX, MTMR2, OR9Q2, PLD2, SGMS2

Negative_10007	TXK, ACYP2, ADCY4, CRB3, DGUOK, DHCR7, DHODH, E2F3, EPB41L2, GLI1, HLCS, IL2RB, LIPF, MAGI2, MAP3K1, OR1E1, OR4F15, OR52N2, OXCT1, PHKG2, PLXNA2, PVRL1, QARS, SAT1, TYROBP, ATP6V1G3
Negative_10008	DCC, DCK, GDA, GLA, GLS, GSR, GSS, IL6, KHK, MPI, PLG, AGPAT1, CCNA1, CCNG2, CHPT1, CPT1A, DGKH, ENTPD1, GPLD1, IDH3G, IFNA10, LAMB2, MAN2A1, MAT2B, MDM4, OR10X1, OR2S2, OR51S1, OR52E2, OR8D1, PCK1, PIK3C2G, PIK3CB, PPAT, PRKAG2, RBKS, SIPA1, TAS2R41, UBE2K, VEGFA, WBSCR17, WWP1, YES1, PNLIPRP1, ST6GALNAC1, TNFSF13B
Negative_10009	ATM, CRH, OGT, ARSB, CCL17, CCNE1, CSAD, CTNNA3, DHRS4, GALNT14, GPD1, GSTA3, HSD3B7, HTR5A, LHCGR, NAT1, OR2V2, PIPOX, SLC33A1, WASF3
Negative_10010	GSTM1, NFATC2, OR2T1, TNFSF8, SERPIND1
Negative_10011	AMT, AUH, FH, TNF, ABL1, ADCY8, ATG12, B3GALT4, BHMT, CCL26, CMPK1, CXCR4, DDX56, DUSP3, EPHA2, FECH, FGF3, GCNT3, GDF5, GMPS, HARS2, IGSF5, IRF7, MYH1, NCR1, OR10S1, OR4K2, OR6C70, OR8K3, P2RX5, PLA2G2E, PPARA, PPP3R2, PRSS3, PTCRA, RIPK1, SC4MOL, SPTAN1, TCF7, TLR9, CACNA2D2
Negative_10012	ABLIM2, AC02, ADIPOR1, BCM01, BUB1, CACNA1E, CD47, CDH5, CNGA4, DMGDH, FGF13, FGFR2, GLI2, LYPLA1, NFKB1B, OR51G1, PMVK, PNPLA3, RFNG, RPRM, SCD5, SREBF1, TLR2, TNFRSF9
Negative_10013	FAH, GK2, AANAT, ACAA1, ADCY9, BPNT1, C1QA, CAMKK2, CCR1, CDC25A, CLTC, COX10, CYP4F2, DCXR, DEGS1, DEGS2, DHRS3, EPB41, EXTL3, FCER1G, FGF5, GFAP, GNA14, GSTM3, HGSNAT, HSP90B1, INHBB, IPPK, LARS, MTHFD2, MYH2, OR4D1, PIGP, PKLR, PLA2G6, PLXNA2, POLR3H, VTI1B, YARS, TNFRSF13C
Negative_10014	AK2, FER, OGT, ACMSD, AMPD2, ATF2, B3GALT1, CHRM5, CLCA2, COX15, GJA1, HTR4, IL18RAP, IPPK, MYLK3, NMNAT3, NUMBL, OR10G3, OR10H1, OR1A1, OR9Q2, PDE8A, POLR3G, RFNG, SMAD2, TBXAS1, TUBB1, TYMP, ULK3, WNT3
Negative_10015	EZR, JUP, ABLIM3, ACSS2, ANAPC4, ARNTL, ASRGL1, B3GAT3, CACNG7, CAV3, CLCA4, CLOCK, DEGS2, DTX3, DUSP14, FABP4, GCLM, GLUD2, GMPPB, GMPS, HSPB1, IKBKE, LRP5, MAP3K11, MCM6, NCAM1, NKD2, OR2W1, OR5L1, P2RX7, PDE1B, PIK3C2B, PNPLA4, POLR2K, PPAP2A, PPP3CB, PRIM2, RBKS, SESN3, SUCLG2, TP73, TPH1, TSC1, WNT5A, XCL1, XCR1, CTNNBIP1, PHOSPHO1
Negative_10016	ASL, JUN, WAS, ADCY10, ANAPC1, CAMK2G, CDC25B, CDC45L, FGF7, GALNT3, GPAA1, IGF1, MCAT, NKD2, OR1F1, OR2B11, PAFAH2, PHPT1, PLCB3, PTGDS, RHOQ, RXRG, UBE2K, YWHAG
Negative_10017	BTD, ID1, IL8, PGF, TK1, AGPAT6, ALPL, BMP8B, CADM1, CAMK2B, CCL17, CFLAR, CFTR, CLDN10, CLTB, COL5A1, CSNK2A1, CXCR3, DEGS1, DUSP7, EARS2, FBP1, FGFR1, HIF1A, HYAL2, IGF1, IL18RAP, ITPKB, MARS2, MYLK, NARS2, NCKAP1L, NEFH, NOX3, OR1L3, OR8J1, OR9A4, PPP3CC, PRKCG, ST3GAL3, STX1B, VEGFB, GABARAPL1, MAPKAPK5, SERPING1
Negative_10018	DBT, FGB, ASIP, CACNG3, CAMKK2, CCNE2, CSF3R, DRD5, EFN2, FMO3, FOXO3, GLI2, GSTT1, GUCA1A, ICAM1, ITPKB, KIR2DL2, NCK1, NKD2, NTNG1, OR2A25, OR6A2, OR7A5, PAK4, PON3, PPP1CC, PPP1R3D, ROBO3, STK36, TLR5, UBE2L6, YARS2, ZNRD1, MAPK8IP2
Negative_10019	FCGR2B, MPZL1, NEU4, OR4D5, OR5D16, OR6T1, OR7C1, PAK6, PAX4, PECAM1, PIK3R1, PLA1A, POLR3K, PTGIS, SLC2A4, SOCS3
Negative_10020	BTK, RB1, SFN, ABP1, ACP1, ACTN4, APOA2, CACNA1D, CCL7, CDKN2B, CLTC, COMP, COQ5, DGUOK, ESPL1, GNAT3, GUCY1A3, LIPT1, MGAT4B, NCF1, NODAL, NPR2, NR1D1, OR4C12, OR8J3, OR9K2, PDE1C, PFKP, PIK3CG, PPP2CB, PPP2R2C, PTEN, RAB23, SLC33A1, SMAD2, TRHR, TSTA3, WHSC1L1, WWP1, YWHAE, MAP3K7IP2, TNFRSF1A

Negative_10021	GBA, A4GALT, ACVR2A, ADCY2, ASMT, ATP4B, BUB3, CCR9, CD72, CSNK1G2, G ALNT1, GIT1, GLUD1, IFNGR1, IL12RB2, OR10K1, OR11H6, OR11L1, OR4K13 , OR4Q3, OR51F1, OR6C6, PCYT1A, PRKAR2B, SOD1, ST8S1A5, SUCLG1, TBL1 X, TKTL1, ATP6V1G2, ST6GALNAC6
Negative_10022	IVD, DPM3, DTX4, FGF20, GNB1, GUSB, IMPA2, ITGA10, MAP2K7, MAT1A, OR4 C16, OR5B17, OR9Q1, P4HA2, PCNA, PDE4B, PFAS, PPP2R2C, RASGRF2, RETS AT, SIGLEC1, STX4, TP53, WNT3A
Negative_10023	KHK, LPL, PGP, CAMKK2, CDC45L, CDC7, CES7, CLTB, CYFIP1, CYP11A1, DAG 1, DGKD, ENPP1, GNAZ, HLA- F, HSPA2, IDH3G, IFNA16, KLRC2, NEFL, NTSR1, OR1G1, OR1J4, OR4B1, OR4 C15, OR5AN1, RPE65, UNC5A, WNT4
Negative_10024	GLA, ADCY7, ALDH7A1, CER1, CYFIP1, FOXA2, GPT2, GRIN2D, HARS, IL20, L HCGR, OR10X1, OR13C5, OR2T8, OR52L1, OR6C76, ORC1L, PAK4, PIP4K2B, P LAU, PPAP2A
Negative_10025	B4GALT4, FZD8, MAPK3, PER3, SOCS5, TBXA2R
Negative_10026	NLK, SYK, ACSS3, ACVR1B, ALAS1, ALAS2, ALDH1B1, C1QC, CD80, CDKN2A, C SAD, CYP1B1, CYSLTR1, DDX55, DNMT1, GAL3ST1, GLUL, GNRH1, HADHA, IFN GR2, LAP3, MGAT2, NEUROD1, OR10G4, OR5V1, PARVA, PFKP, RAF1, RFNG, SE MA4A, SEMA4F, SPHK2, STK36, TNFSF8, VARS, WBSCR22, PLA2G12B
Negative_10027	B4GALT4, BMPR1A, CD28, CLDN3, IBSP, IFNA4, MAPK1, MCM6, MYH14, NCF1, OR52N4, OR7C2, SYNJ2, XYLT1
Negative_10028	CKB, IL7, SRM, ATP50, B3GAT2, BET1, CCNG1, CD3E, CDIPT, CREB5, CXCL3, CYP27A1, DAXX, DGAT2, DGKQ, EDN1, EGLN3, ENPP3, ENTPD3, FGF13, GAL3S T1, GIT1, GRIN2A, ITGB5, KDSR, MTMR6, OR1F1, OR1Q1, OR4N4, OR56A1, OR 56A3, PFN4, PIGH, PIP4K2C, PNPO, POLR2C, PRKCQ, RARS, SOCS3, VEGFC, B 3GALNT1
Negative_10029	MTR, RPE, ADRB1, CNTFR, CYP2C19, DTX3L, ENO3, ESPL1, FLT1, GALC, HMGC S1, IL15, MGAT4A, OR2C1, OR2H2, OR5AR1, PFN4, PRLR, PYGM, RPS6KB1, WN T4
Negative_10030	ADCY10, CMAS, CSNK1G2, CYP4F2, EHHADH, FGD3, GSTM3, HEXB, IFNAR1, MA P3K13, MASP1, OR2AE1, OR8S1, PDGFA, PIK3CA, PIM1, TNFRSF4, TYK2, YWH AE, B4GALNT1, MAP3K7IP1
Negative_10031	CGN, CD28, CYBA, EFNA4, MADCAM1, OR1L1, PNPT1, PPP1R3B, PRPH2, SORBS 1, TNFRSF8, TNFRSF12A
Negative_10032	C1S, EPO, HDC, ACY1, AHCYL1, ATG3, BAIAP2, CAMKK1, CNTFR, CTSB, CXCL5 , DGAT2, DIAPH1, DNMT3L, EPHB3, FGF13, FUT3, GGT7, GNG13, HDAC2, IL13 RA1, IL15RA, ITCH, MAP3K6, MYH2, NCOR1, NCSTN, OR13C9, OR3A3, OR5M3, OR7C2, PGLS, PTTG1, RBPJL, SCP2, SV2A, TUBA4A, VAMP4, HSP90AA1, MAPK APK2
Negative_10033	SYK, ACVR1C, ALG9, ALOX15, ANAPC5, ARSE, B3GALT5, BAIAP2, BBOX1, CCR 9, CFL1, COMT, CTSG, DARS2, ERBB2, HMGS1, IDI2, IMPA2, ITGAX, MYH1, O R2A14, OR2W1, OR4S1, OR5M9, OR7A17, P2RX1, PAK4, PFKFB1, PIK3CA, PLX NA1, PPM1A, PRKCE, PRKCI, RARS, SETMAR, SMARCA2, SPRY4, TAP1, TICAM1 , TYROBP, MAPKAPK5, TNFRSF17
Negative_10034	CD2, ACOT11, ADCY4, APOE, C1GALT1, CCR4, CD36, CHEK2, CREB3L1, DHODH , GALNT6, GNAL, GNAO1, IDI1, NEU2, NFYB, NRXN3, PAFAH2, PIP4K2A, PLCG 1, PLOD3, PTPMT1, SPRY4, TAS2R5, TNFSF11, UGT2B17, WNT4, ATP6VOD2, P FAH1B1, TNFRSF10D
Negative_10035	APP, HYI, ITK, MOS, AMDHD1, APBB1, ATP6V1F, BMPR1B, C1QB, CNTNAP2, CS H1, CSNK1G2, CTTN, DDX54, FUT8, GATM, IDH3A, IQGAP1, LYPLA2, MAP2K3, MMP1, NTNG1, OR2Y1, OR4C6, ORC2L, ORC4L, PCNA, PDE5A, PDGFD, POLD2, P ON2, PPP2R5E, RASGRF2, RRM2B, SEMA3B, SHC1, SOCS3, TJP3, TKTL1, TUBA 1C, UGCGL2, HSD17B12, PAFAH1B2, TNFRSF10C, TNFRSF1A



Negative_10036	GRM5, HADHA, IL12RB2, MASP2, OR2B2, OR52E8, OR52J3, OR5P3, PIGQ, PIK3R4, PRSS3, SESN1, TJP3
Negative_10037	CAD, AKR1C1, ALG11, AMDHD2, ARHGEF7, ASS1, BMP7, BMP8B, CACNG4, CAMK2G, CLDN20, DTX1, FGF9, GABARAP, GBGT1, GMPR2, MCM2, NT5C, OR10A7, OR10G4, OR10G7, OR13C9, OR2L3, OR5AK2, OR5V1, PDE3B, PIK3R1, PRLR, PTPMT1, RASSF5, STX3, TAS2R49, TLR5, TUBAL3, UBA7, UGT2B17, YES1, ATP6V1G1, B4GALNT1, ST6GALNAC6
Negative_10038	BAD, HGD, IL9, SP1, ABLIM1, ACTN1, ACVR2B, AKT3, AMPD3, ARPC1A, ARSA, CANT1, CCR5, CDK2, CDKN1A, CFTR, COL4A6, CREBBP, CRHR1, CTPS, DCTN1, DHDH, DLL1, EFNB3, EPHX2, EXOC7, FUT8, GNG12, GRB2, GSTT1, GUCY1A2, IL2RA, JAK1, MALT1, NEGR1, NFATC4, OR10R2, OR5B12, OR5P2, OR8G1, POLR2I, RALB, RXRA, SCIN, SH2D1B, B4GALNT1
Negative_10039	EGF, LIF, ACHE, ACTB, AHCYL1, AKR1A1, AKT2, ALG2, CCL4, CCR5, CDK5, CHRM2, CLDN6, COL5A2, CYP1A2, DMGDH, FPGT, GALNT8, HCST, IMPDH2, INPP4A, KLRC3, MAT1A, NT5C1A, OR10G2, OR52A1, OR52E6, OR5D14, OR6Q1, OR9G1, OR9Q2, PDE1C, PLCD1, PPID, PPP2R5A, PRKG1, PRKX, PTDSS2, PVRL2, PYGM, SHC4, SPAM1, SREBF1, TMLHE, HLA-DRB5, PAFAH1B3
Negative_10040	AK5, ADCY10, APPL1, ARSE, ATP5J2, CACNA1C, CES1, CHSY1, CYP4A11, EXT2, NGEF, OR10J1, STX1B, TUBB1, TNFRSF14
Negative_10041	UBB, ACVR2B, ALOX15, ATP5H, CCR9, CD80, CHKA, CHRM2, COL1A1, COX10, DHCR7, DUSP5, ECHS1, EHMT2, EPHA7, EPHB1, EXTL2, FUT2, FUT7, GNG13, GYS2, IL15RA, INPP4A, LIMK2, MADCAM1, MAML1, MAP3K7, NPAS2, NPR1, NUMBL, OR5AC2, PARVA, PDE6H, POLR2H, PPP2R5E, PPP5C, PTGER3, RPN1, SNAP23, SOCS4, TAS1R3, TGFB1, UCKL1, GABARAPL1, SERPIND1
Negative_10042	CEL, LCT, TXK, ACTB, ADH5, AGTR1, ALDH3A2, AVPR1B, B4GALT3, CASP10, CASP8, CCR8, GALNT1, GBGT1, GNRHR, GPX7, HARS2, HSD11B2, IL13, KIR2DL3, LIFR, MMP2, MTHFD1L, OR2W1, OR6T1, OXCT1, P2RX7, PRKAR1B, PTPRC, SLC27A1, SLC27A4, STAT5A, SV2C, UBA7, C1GALT1C1
Negative_10043	GBA, MET, ACO1, CALML6, CCL25, CDKN2D, DDX56, ENTPD8, EPHA8, FZD7, GALNT10, GMDS, GNPAT1, HSP90B1, HYAL1, IL1RAP, IMPDH2, ITGA9, ITGB4, LGMN, LIPC, OR2T2, OR4M1, OR5B12, OR9K2, PFN3, PLAUR, PRKAG1, PSPH, PYCRL, SMAD6, SPCS3, SPRED2, TNFRSF9, WHSC1L1
Negative_10044	OAT, BIRC5, DARS2, ENPP1, FUT1, FZD10, GRIN1, KLRC4, LTC4S, NKX6-1, OR1E1, OR6C2, OR6S1, PLA2G6, PON2, RALGDS, WNT9A
Negative_10045	CRH, F5, A4GALT, ADCY1, ALG10B, ALPP, ATP5G3, CCL1, CDC6, CHUK, CRLS1, CSNK1A1, CTNNA1, CTNNA2, DRD2, ENTPD4, G6PC2, GLI2, HMGCS1, HYAL2, ICOSLG, ISYNA1, MCM2, MPP5, NRG2, NTN1, OR12D3, OR6B3, OR6X1, OR8H2, OR8K3, PPP2R2D, PYGL, RPS6KA1, SLC2A4, SUCLA2
Negative_10046	ADO, CFI, EZR, TNF, ACSL3, ADH7, AKT2, ANAPC7, B4GALT6, CAMK2G, CBR1, CCL19, CCNB1, CCNE1, CTNNA2, CXCL3, EFNA2, EI24, FUT8, GALNTL2, GNPA T, HEXA, HMOX2, INSRR, LILRB3, METTL6, MGAT5B, MYLK3, NOS1, NUDT2, OR1L3, OR2M4, OR2W1, PIK3R3, PLA2G2E, PPCDC, PRODH2, SMAD2, SOS2, STK3, TFDP1, TRMT11, TYROBP, WNT9B, TNFRSF13B
Negative_10047	CR1, F7, GH1, AGMAT, ALDH3A1, CCL15, CCL19, CHST11, CPS1, CSF3, CYP2F1, ENTPD1, FGD1, FGFR3, FUT2, FZD10, INHBB, MAD2L2, MASP2, MYH7B, NANP, NFATC3, NTF4, NUDT8, OR14I1, OR1M1, OR2L3, OR2W1, OR3A3, OR5L1, OR6T1, PDXP, PFN2, PLA2G10, PPM1D, PRKAG3, PTPN7, PYGL, SC4MOL, SDHB, SEMA3D, SETD2, SLC27A4, SMC1A, SMPD3, TAS2R40, UNC5C, WNT2
Negative_10048	RPE, TPR, ACAD9, ACTC1, ADCY10, APPL1, ATP6V0B, BST1, BTRC, CHPF, CISH, CYP11B2, DHRS9, EPHA3, FUT9, G6PC, GATM, GNG12, IMPDH2, MAPK8, MGA T4B, MLLT4, MTMR2, NCSTN, NFKB2, NUDT2, OCRL, OR10A6, OR6K2, PECAM1, PIK3CB, PLCB1, PLCB4, PLD1, PLXNA2, PRLR, PTCRA, SFRP4, TFPI, TKTL1, ULK1, WNT3, ZMAT3

Negative_10049	DHH, ABAT, ADH1B, ALS2, AMY2B, CACNA1H, CACNG2, CHKA, CYP3A5, DCXR, EDA2R, FZD2, OR1L1, OR51F2, OR52A5, ORC1L, PPP2R5B, SDC1, TFDP1, TRIP10, YWHAQ, MAPK8IP1, SERPINA1
Negative_10050	AKR1B1, B4GALT1, CNTN1, COL1A2, DOCK1, FTMT, GSTA4, HMOX1, IFNW1, LHCGR, MLYCD, MPZL1, NAGLU, NLGN1, OR10H3, OR1I1, OR51B6, OR6C74, OR8S1, POLR2A, PPP1CA, PPP3R2, RAPGEF3, STAT2, TD02, YWHAG, CACNA2D1, CACNA2D4
Negative_10051	AGXT2, ALAS2, C1QC, CDC25B, DTX3L, DVL2, GLI2, OR14J1, OR51T1, PRSS1, SH2D1B
Negative_10052	ACOX3, ESPL1, FADD, FARSB, WASF2
Negative_10053	ABCC8, DNMT3A, HTR5A, IDH2, MTFMT, OR5L2
Negative_10054	EBP, CACNG6, COQ6, DNMT1, DNMT3A, GSTT1, IL15, KDSR, MDM4, METTL2B, OR1N2, PDK1, PPP3R2, RAPGEF2, RASGRP1, VEGFC, PAFAH1B2
Negative_10055	ACP1, ATG12, CCNE1, CHST13, CREB3L4, CRHR1, CXCL9, CYP2D6, CYP4F3, DX55, DIAPH3, FGF20, FGF8, GAS1, GRIN2A, HSPA1B, IARS2, IMPA1, IPPK, IRAK3, ITGA2B, ITGB8, NT5M, OR12D3, OR4M2, PLXNC1, PPCDC, PTPN1, RALA, RDH16, RRM2B, SEPHS1, SGPP2, SPHK2, SULT1A4, YES1
Negative_10056	MAG, SRC, LIMK2, LLGL1, MAP2K2, TAP1
Negative_10057	CCL11, CPT1C, CRKL, GALNT13, HAO2, IGSF5, NAGA, PGLS, PLA2G4A, TYROBP
Negative_10058	ANPEP, CCL14, EDAR, OR4F6, PLEKHA8, POLR2A, XCR1, KIR2DL5A
Negative_10059	C4B, FGA, CACNG7, CREB1, CREBBP, CTBS, CTNNA1, CXCR3, GGT7, HNF4A, ITGB3, NPR2, NSDHL, OR11H6, OR2A14, OR2H1, OR4F5, OR8J1, PAK6, SMPD1, SMPD3, STX12, SUV39H1, SV2B, TAS2R16, TCF7, THBS4, TLN2, UNC5B, VDACC2, WASF2, YWHAH, MAPKAPK3
Negative_10060	FYN, CACNG2, CDK6, CLDN20, DEGS2, DPM3, GABARAP, HCLS1, LIPC, MYL7, NTRK2, PDE6H, PFKFB3, POLR3B, PPP1R3C, RXRB, STAT5B, TCF7L2, TRAF1, UBE2K, SERPINB5
Negative_10061	ACO1, CD46, ERO1L, LEFTY1, METTL2B, OR2A2, OR9I1, TMLHE, TSHR
Negative_10062	F8, ADH7, AKR1D1, ARPC1A, ARPC1B, ATP6VOC, BCMO1, CAV1, CD22, ESPL1, HNMT, IL18RAP, MAN2A1, NFATC1, OR2A5, OR2F1, OR5K1, ORC6L, PKM2, POLA1, PTGES, RERE, VDACC3
Negative_10063	AMH, RFK, ABAT, AHCYL1, AMDHD1, CDKN2C, GALNT5, GANAB, GMPPB, MAPK7, MGAT4B, NARS, OR1J2, PLIN, PLXNC1, PPP2CA, TAS2R7
Negative_10064	ACACB, ADCY8, APOA2, ATP5G3, CFLAR, CREB3, DGKZ, FOXA3, GRIA2, HARS2, HLA-DMA, HTRA2, INHBA, JAG2, KLRD1, MAP2K5, NADSYN1, NLGN2, OR10G8, OR1D2, OR4D1, OR4D2, OR51D1, PGM3, PIGV, PKMYT1, PMAIP1, RDH11, SFRP2, ULK1, HSD17B10
Negative_10065	DDC, ACAA2, AMHR2, CCL1, CD274, CSF3R, CSH1, CTNNA3, CYCS, HYAL1, NLGN3, OR10AG1, OR10G4, OR9I1, PGAM4, PIGS, PIK3R2, PPP2R5B, PTPN11, SDCC2, SDHC, SPRY3, STX10, STX1A, STX1B, SUV39H2, YES1
Negative_10066	ADCY4, ARPC5L, ATP5E, CYP26B1, DGKI, GALNT2, H6PD, JUND, NODAL, OR11G2, OR1L6, RIPK1, TP53I3, VDACC2, YWHAH
Negative_10067	ADH5, CDC6, CTSG, FARSB, HCLS1, LAMC2, MCM3, NPR2, NT5C1A, PDPK1, PLXNB2, PTPRJ, TBXA2R, TUBB2C
Negative_10068	HGF, LALBA, PEMT
Negative_10069	IL4, MVD, UBB, CCR1, CSF2, CSF3, CXCR5, ETNK2, FBP2, FGF1, FMO4, HLA-DOA, IL23R, LAMB3, MMP1, NOTCH3, PRKCD, SMAD1, SMPD2, TACR3, TSTA3, UGT2B4, XYLT2, YWHAH, MAP3K7IP2
Negative_10070	PGD, ABLIM1, ACVR1B, ADCY7, ALDH1A1, ANAPC5, ATP5I, ATP5J, BST1, BUB1, CDC25A, CXXC4, E2F2, FUT7, GRB2, HMBS, IRF7, MOV10L1, MYH4, NFKBIA, NPR1, NT5E, PNPLA3, PON2, PSPH, PTPRJ, TBL1XR1, VANGL2, ZBTB16, CACNA2D2, HSP90AA1

Negative_10071	ACSM2A, ACVRL1, ADH6, ADRB1, ATP5H, BDNF, CD70, COMP, CPT1B, FRAT1, G CAT, IL25, ITGB5, LCP2, MCM5, MGAT5, MGST3, MYH7, NR5A2, OR1D5, OR1L4 , OR4A15, OR56A1, PIM1, PIP5K1C, PKLR, PRKAR2B, STAT5B, SUCLG1, YWHA H
Negative_10072	BAD, HGF, ACADVL, APC2, ATP2A2, BCAT1, CCL14, DGKI, FADD, FOXO3, FZD1 , GLI1, GRLF1, HTR2C, IFNGR1, ITGA5, MAT1A, MNX1, NFATC4, OR1S1, OR5H 6, P2RX5, PRKAB1, PRKAR2A, RRM2, SHC1, SMAD2, WNT2, SERPINB5
Negative_10073	HAL, AASS, ACHE, AKR1C3, ATP5A1, BPNT1, CACNA1D, CCR8, CDS2, CLCA2, C NTN2, CTBP2, CXCL1, CYP2B6, DRD5, FCGR3B, GSTM4, IL23A, JUND, KIR2DL 2, LRAT, MALT1, MAPK8, MFNG, NRP1, OR13C9, OR13F1, PDHA2, PFKP, POLR2 L, PPARD, SPTLC1, TBK1, TNFSF4, TUBA8, YES1, ATP6V1G1, PNLIPRP2, SER PINB5
Negative_10074	DLD, FER, ALDH3A1, AXIN1, CAMKK2, CCKAR, CD79B, CKMT2, CLDN1, CNGB1, CSF1, CYP2A7, EPOR, GARS, GRIN1, HLA- DRA, IFNA7, IL15, IL1A, IL1R1, INPP5B, ITGB3, MAPK13, MDH1, PDXK, PHK A2, PPOX, TAS1R1, UGT8, WWP1
Negative_10075	A2M, IVD, ACSS3, ALDH3A2, ALOX15B, ATN1, ATP2A3, CLCA4, CREB5, DCTD, DDX54, DRD2, FUT1, GRB2, GRIN1, IFNA2, INHBA, KIR3DL3, LCP2, MAN1A1, NAT2, OR1L1, OR2AG1, OR4K2, OR51L1, P2RX3, PARVA, PGS1, PMM1, PTDSS1 , SARS, SCIN, TACR1, TGFA, WASF2, XYLT2, ST6GALNAC3
Negative_10076	C1S, EZR, AHCY, ANAPC4, BET1L, CCR1, CDIPT, CYP26B1, FGFR1, GATM, GUC Y2D, IBSP, ITGA2B, NSDHL, OR1B1, OR52M1, POLR1A, SKIV2L2, SORD, TAS2 R38, TRDMT1, WNT16, CACNA2D1
Negative_10077	CCNH, CD28, CDS2, CPT1B, EPHX2, GP1BA, GRIA2, MAD1L1, PFKP, PLA2G6, P NPLA4, SHISA5, TAP1, YWHAZ
Negative_10078	AGK, C6, DBI, GSR, PDC, ACTG2, APOA5, ARD1A, BDH1, CLDN11, CRLF2, CYFI P1, DDIT3, DEGS1, DRD1, EDAR, FUT3, GPX7, GSTM4, HCLS1, HSD3B1, HYAL1 , ITGAM, KAT2B, LGMN, OR10H4, OR10P1, OR10Z1, OR2T12, OR4B1, OR52E4, PLCD4, PRSS1, PTK2, RFNG, SCD5, UGT2B7, TNFRSF10D
Negative_10079	GAS1, MCEE, NAGA, NT5C1A
Negative_10080	C6, SP1, B3GNT4, BHMT, BPNT1, C9orf95, DRD5, EFN2, FABP1, FTCD, FZD5 , GAS1, GNG3, GUCY1A3, IL8RB, LCMT2, MPP5, MYD88, OR2V2, OR51Q1, RDH1 6, SMAD9, TNFSF11
Negative_10081	CCR3, MAP3K6, NAT6, NCF1, OR2D3
Negative_10082	PML, ACSM1, ATP5C1, ATP6V1D, AXIN1, CCNB3, CSNK1E, FTH1, FZD2, GABAR AP, GGT5, HA01, INPPL1, LEF1, OR3A1, OR51L1, OR52W1, OR6K6, ORSU1, OR 9Q2, PLCD3, POLE2, POLR1C, PRKACB, RALB, SFRP2, SPAM1, TICAM1, TKTL2 , ZMAT3, TNFRSF18
Negative_10083	BAX, CD6, PAH, ACTG1, ADCY3, AGXT, ATG7, B3GNT5, BMP5, CCR10, CD3E, CD 79B, CD82, CXCR3, DDX4, GNA14, HLA- DOA, IL6R, INPP5A, NAGS, OR4D1, PDE1C, PDE3B, PIK3CG, PTDSS2, SEMA4G , TFPI, TNFSF18, TUBAL3, VDAC3, ALDH18A1
Negative_10084	ARPC3, CYSLTR1, NRAS, PCYT2, RPS6KA2, XYLT1
Negative_10085	AMH, ID4, ABP1, ADCY1, ADRBK2, AGPAT6, AK3L1, AKR1B1, B3GNT3, C1GALT 1, CCR9, CLDN9, CPT1A, CTBS, CTNNA3, CTTN, DCTD, DLL4, GCDH, GLB1, GRA P2, GSTM1, GSTM3, HADHA, IBSP, IL21R, KIR2DL4, LAMC1, LEFTY2, NT5C1A , OR13C8, OR4N2, OR51F1, OR51S1, OR7C2, PRKAG3, RASGRF1, SENP2, SOX1 7, SUOX, TBK1, UGCG, VASP, SERPINA1, TNFRSF1A
Negative_10086	ID4, IL6, ACVRL1, ALDOC, B3GAT3, BDH2, CTNNA1, CYP2B6, DLL3, DTX4, EF NA3, FLOT1, INPP5E, IRF7, MAP3K13, MYH11, MYL5, NOTCH2, NR1H3, OR1OZ 1, OR56B4, OR5AP2, OR6C2, OR9I1, PIP5K1A, PLCZ1, PPP2R5E, PPP3R1, PR KAB1, RALBP1, RASGRP3, RFWD2, SHISA5, SLC25A6, STAT4, WNT4, YKT6, EI F4EBP1

Negative_10087	ANAPC1, BLNK, CASP8, CDC14B, DGKZ, FARP2, FZD10, HARS, INSRR, LDHA, NOD1, NPR1, NRG4, OR10G8, OR52I1, OR5M9, ORC2L, P2RX2, PARS2, PIPOX, PRKCB, PTPRB, RCHY1, SUCLA2, TGDS, TLN2, TPI1, VAV3, WNT5B, PAFAH1B1
Negative_10088	C4B, ATP5A1, GUK1, ITGB7, MGST1, PDE6G, PRIM1
Negative_10089	AK3, CSK, DAO, AHCY, CD274, CHKA, CNTNAP2, CRHR1, CSF3R, CYP19A1, CYP8B1, DIAPH3, GALNT5, GFPT1, GGT6, GNA15, HYAL2, IL18, INHBE, ITGA1, ITGA10, NEUROG3, NFKB1A, NOS1, OR6M1, OR8S1, PFN2, PIP4K2B, PLCG2, PNP1, PRIM1, RUVBL1, SV2B, TAS2R7, TRAF4, SUV420H2, TNFSF13B
Negative_10090	ARHGEF2, DNMT1, MEF2C, NPAS2, OR4X1, OR9Q1, PIGT, POLR2G, RPIA, UGDH, TNFSF13B
Negative_10091	APP, CBL, EZR, F2R, GH1, ACP5, ANAPC5, BAAT, CBLB, CHPF, CSNK1A1, CTF1, DCTD, DHODH, FLOT1, FSHB, HNF1A, IL7R, KLRD1, LAMB2, LIPG, MCAT, MPZL1, OR10A5, OR3A2, OR7G1, PIAS3, PIGP, PNMT, PPCS, RPS6KA4, SFRP4, SMC1A, TUBB, WHSC1, MAPK8IP3, SERPING1
Negative_10092	C1S, MPZ, MVD, AARS2, ALDH6A1, CAMK2G, CCL28, CDKN1B, COQ6, CTNNA2, F2RL2, FRAP1, GALNT12, GLO1, GNAI1, HARS, HES1, IL17RA, L1CAM, MADCAM1, MAP3K2, MAPK14, MGAT4A, MKNK2, NFASC, NKX6-1, NPR1, NTF3, NUDT8, OR4F17, OR8S1, P2RX7, PAK6, PGAM1, PTPN11, RARS2, SEMA3G, SKP1, ST3GAL5, STAM2, TRAF1, TSHB, ULBP1, VEGFB, MAPKAPK3, SLC25A31, TNFRSF10C
Negative_10093	ADRB1, ALG2, ATP5F1, CCL25, CCNA2, DHRS4, EDNRA, FUT7, GGT5, GNAZ, KN1G, MAP3K6, MCM7, MEF2C, MTHFD2, NARS2, NTRK1, OR4D9, OR6C4, PCYT1A, PRNP, SMAD4, SOCS3, STAM, STX16
Negative_10094	BAX, EGF, GAA, STS, ACO1, AKR1A1, AKR1B1, AMY2A, APH1A, ARHGEF2, ATF2, ATP4A, ATP5F1, B3GAT3, B4GALT5, CACNA1I, CD55, CLTB, EPB41L1, GALNT2, HLA-G, INHBB, KIR3DL1, LIPC, NEU1, OR8I2, PIGA, POLR2G, PRSS3, PTGS2, PYCR1, SRD5A2, ST3GAL5, STT3B, TAS2R14, TNFSF10, TUBA1A, WEE1, MAPK8IP3, SERPINC1
Negative_10095	FAS, GALNT14, IL22, OR13H1, PIGF
Negative_10096	A2M, GLA, ACVR1, ADIPOR2, CLDN11, CLDN9, CNDP1, CSF1, CX3CR1, CXCR5, EXTL1, FBXW11, GSTP1, IFNA13, IRAK4, ITGAX, LYPLA2, MAP3K6, OR10G8, OR2B6, PDPK1, PIK3R2, PKLR, PYGB, RASA2, SMAD1, ALDH18A1
Negative_10097	INPP4B, OR4D11, P2RX2, PLAT, SLC12A2, STAT3, TM7SF2, SLC25A31
Negative_10098	LPO, MSN, ACACA, AQP7, ASMT, CCR6, CER1, CHIA, CYP1B1, FGF4, GGCX, IL17RB, IL20RA, ITGAL, MAP3K6, OR5C1, OR5H2, PRSS2, RASA1, SEMA3D, SEMA4F, SLC27A4
Negative_10099	FST, MET, BDNF, CCNE2, CDKN1B, COL4A1, COL4A4, CUL1, CXCL3, EPHB6, GALNT10, GNAS, MAP2K7, MAP3K4, MDH1, MYH13, MYL7, OR2A42, PIGM, POLE2, POMC, PRKCZ, PTPRM, RPSA, SETD1A, SHMT2, SRD5A1, SSH2, SULT1A4, TSNA RE1
Negative_10100	MS4A2, OR4M2, OR8I2, OR9Q1
Negative_10101	GLS, BIRC3, C7orf16, CD247, DPYD, EFNA2, EPHX1, FASN, GALK2, IL6ST, MAP3K11, MCM5, NANP, NT5M, OR6Q1, PDE5A, PDE6D, POLD1, SARDH, SHC2, SUXO, TOLLIP
Negative_10102	ACTN2, ALDH7A1, AMY2B, ARHGEF6, CCND1, CYSLTR1, DPM2, GALNT6, IL6ST, POLR1A, PPP1CC, TP53
Negative_10103	EBP, ME2, RB1, ALS2, CD80, CES1, ESPL1, FARS2, GDF5, GPT2, GRAP2, IGF1R, IL1R1, IL8RA, KDSR, KIR2DL2, MAD1L1, NFASC, NR4A1, OR1A1, OR2AT4, OR52I1, OR52N5, OR7D2, PAK3, PDE5A, PHKA1, PHKG2, PPP2R5B, PSME3, PYCR1, SLIT2, SPTLC2, VTI1A, TNFRSF18
Negative_10104	CP, ABL1, ATF4, GOT1, IFNA2, IGF1
Negative_10105	ATG3, CADM3, DNMT3A, EPHA7, FASN, FOXA2, HMOX1, IL11, MDM2, OR1J2, STX12, UGT2B4, HLA-DPA1, HLA-DRB3

Negative_10106	TNF, ADCY4, ADH6, AQP7, BMP6, CAMK2A, CDH2, CXCL5, DHRS9, DUSP6, EARS2, EDA2R, HEXB, IL19, KDSR, OR10J1, OR2F1, OR2H2, OXCT1, PLA2G2F, PPP2R5D, PTPRB, RAC3, SEMA4G, ST6GAL1, VARS, MAPKAPK3
Negative_10107	F11, TNC, A4GALT, ACAT2, ACTN2, ADSS, AGMAT, AGPAT4, CASP9, CNTN2, COL1A2, CXCL13, CYCS, CYP2A7, CYP3A43, DAPK3, FGF3, IFNAR1, ITGA3, LAMC2, LIPF, MAP2K4, MGLL, MYH14, MYL5, NFATC3, NLGN1, NLGN3, NPAS2, OR51F2, OR5AS1, OR5B3, OR6F1, PHKA1, PIP5K3, PLA1A, POLR1D, POLR2D, PTPN5, PVRL1, ROBO2, ROCK2, RPSA, SRGAP1, ST8SIA1, TAS2R49, TNXB
Negative_10108	GK, ACADSB, ACTB, ALS2, ANPEP, APRT, ATP5D, BIRC3, BMP8A, CD244, CDKN1C, CES1, CHSY1, CLTA, CTSB, CYP17A1, DVL3, F11R, GABARAP, GLI2, GRLF1, GUCA1B, HSD3B7, ICAM1, IFNA5, IL10RB, IL20, IL6ST, KIR2DL4, LRDD, MAPK13, MGAT2, NCAM1, NFYC, OR5AK2, PARD6B, PCCB, PEMT, PER1, PPM1D, PROC, RPS6KA1, SEMA4A, SLC12A2, SNAI1
Negative_10109	CSK, IL2, KDR, LEP, TNF, UBB, ACADSB, ACY3, ALG10, ANAPC5, ARHGEF1, CAMK2B, DGKA, DGKE, DPM1, DUSP1, FADD, FGF3, INADL, INHBE, IRAK4, IRF7, ITPKB, LEPR, LIPA, LIPT1, MAPK1, NFKBIA, NGEF, NRXN2, OR52A5, OXSM, PDE5A, PDE6G, RAF1, WNT7B
Negative_10110	F9, WAS, ACTC1, AMY2B, B3GALT6, CHD8, CREB3L4, DPYSL2, EIF4E, GNAI2, HTR5A, IGF1, KIR2DL1, KIR2DS4, OGDHL, OR4F15, OR4K17, OR51Q1, OR8J3, OR9G1, PDE8A, PDXP, PIGO, PLA2G10, PLA2G3, PPP2R5A, PRKAR1B, PTPRC, SELP, TNXB, VTI1B, SERPINA5
Negative_10111	AK7, DBT, ME2, ME3, PLG, ALDH1A3, AMY2A, ARPC3, BDH2, BMP6, CACNA1B, CAMK2B, CCNB1, CCNE2, CD226, CFLAR, CXCL12, CYP2S1, CYP4F3, DGKG, ECSIT, GCDH, HTR5A, IDI2, IFNGR1, LARS2, LYPLA2, MBL2, MCM2, MRAS, OR14I1, OR1K1, OR2T6, OR56B4, OR5M9, OR5T3, PDE2A, PDGFC, PERP, PRKCG, RALGDS, RASGRF2, SIPA1, TAS2R1, TBL1X, TGFBR2, ULK1, YARS2, TNFRSF17
Negative_10112	CBL, EGF, JUP, ASCC3, BET1L, CHIA, CYP4F3, EPHA2, FCGR3A, MAN2A1, NRXN3, NT5M, OR6N2, OR8U1, PCCB, PCK2, PIGV, PLCE1, PPP3CA, STX4, TUBA8, WNT3, TNFRSF10A
Negative_10113	AMH, IL5, ALG11, ARHGEF7, ATG7, CLDN18, CREB1, CREB3L3, DAXX, DHRS4L2, FLAD1, GALK2, GART, GGT7, GRIN1, GUCY2D, HADHA, IFNA8, ITGB7, MAN1A1, MAP4K2, MNX1, NARS, NME2, ONECUT1, OR13C4, OR2M4, OR4C12, PERP, PIK3C2A, POLR1E, PPP3CB, SOCS7, STAT4, TAS2R8, WIF1, CACNA2D4, PNLIPRP2
Negative_10114	CBS, DCC, ALG12, BMP8A, E2F1, EIF4E2, GSTO1, HTR7, IMPDH2, LRP5, NGEF, OR7D4, PARD6G, PDE3B, PIGW, PPP1CA, RELA
Negative_10115	ACOX3, GATM, GCNT4, GNA13, IRAK1, XCL1, CSNK1A1L
Negative_10116	GLS, BMP4, GSTT1, LAMB4, MGST3, OR10P1, PIGV, SYNJ2, THBS1
Negative_10117	BTD, CD6, GH2, LTB, RFK, ATG3, ATP5H, ATP5J, BRAF, CFLAR, CNDP1, COL11A1, CTSS, DDX51, DTX1, EDNRB, GALNT3, HMBS, INHBE, MCM3, MCM7, MKNK1, MYH15, OGDH, OR10H1, OR4C15, OR4F4, PECAM1, PIGL, PLAUR, POLR2J, PRO C, RFXAP, SKP1, ST3GAL3, UBE2L3, UGT2B4, MAPK8IP3, TNFRSF6B
Negative_10118	LTB, ACO1, ALDOC, AOC3, C3AR1, CDS2, DEGS2, GANC, IFNAR1, IL6ST, ITGA4, LIMK2, NAGK, NFATC3, NSD1, OPLAH, OR10A6, OR10Q1, PCK1, PMM2, PRIM1, PTK2B, SETD1A, TPH2, WNT2
Negative_10119	ADA, CFI, HDC, LYN, TNC, CAV2, CCL24, CCL26, CCND2, CCR10, FZD2, HMBS, IL29, ITPKB, LEF1, MAP2K2, MYL7, OR13C5, OR2M4, OR5I1, OR8K5, PIK3C3, PMM2, POLR2D, PRDX6, STX12, TAS2R8, UPB1, WEE1, YWHAE, PLA2G12A
Negative_10120	C5, FGG, JUP, LSS, AACCS, ACOX2, AMDHD1, APAF1, ATP13A2, BIRC3, CERK, CLDN9, CYP11B2, DFFB, EFNA4, GAD2, GNAI2, GNRH2, GSTK1, IL17RA, IRAK3, OR10A6, OR10H3, OR2T33, OR6C3, ORC3L, P2RX5, PAK6, PIGL, TPM3, UBA7, YWHAE

Negative_10121	BTC, FUK, NOG, NPY, RDX, SCD, ACOT12, AKR1D1, ALPL, ANAPC11, CACNB2, C LDN6, CNTF, CYP7A1, GALNT13, GLI3, GUCY2F, HTR7, IBSP, LYZL1, MLLT4, OR2T3, OR52J3, OR5AP2, OR5V1, PER1, PHKA1, PIAS2, PLA2G5, PRKAA2, PS ME1, PYCRL, SMPD4, TAS2R48, TGFB2, TLR2, TP53I3, TYRP1, WNT7A, XCL2, PAFAH1B3, PPARGC1A
Negative_10122	BAD, BCR, MAX, SDS, AADAT, ACADM, ANAPC4, ARPC5, ATP5E, B4GALT1, BMP6 , CDKN2B, CYP1A2, DHRS4L2, DUSP16, FMO3, FUT5, GZMA, HSD3B1, HTR7, IG F1, IL10, ITGA2B, MAN2A1, MAP3K2, MAT2B, MTMR6, NADSYN1, NLGN1, NLGN 3, OR10G7, OR2C1, OR4D1, OR4F17, OR5J2, OR5L2, OR6K2, PAK1, PCYT1A, P IP5K1B, PTGER1, PVRL3, SENP2, SLC33A1, SNW1, WASF3, GABARAPL1
Negative_10123	GNS, ACSM2A, ACTN2, B4GALT7, CACNG3, CD19, CEBPA, CMPK1, CTPS, DGKG, DGKZ, DUSP10, EARS2, ERBB3, FTH1, GSTA1, ITGA1, KLRK1, MMP14, NTSR1, OR10Q1, OR4A15, OR51I2, PKMYT1, PSAT1, TAS2R60, THTPA, WNT1, B3GALN T1
Negative_10124	GH2, ABI2, ABL1, AKR1C4, ARPC5, B3GNT4, BACE2, BMP6, CDH2, CDKN1A, CL CA2, CSDA, CSF1R, DDOST, DUSP8, FGD1, GLUD2, GMPR, GRAP2, HGSNAT, IFN A21, LAMB1, NFE2L2, NOTCH1, NOTCH2, NT5C, OR4B1, PARVA, PFKL, PIP5K1 C, PLK1, PPA2, PRKY, PTEN, RALB, SC4MOL, SDHB, SULT1A1, TGDS, WHSC1L1 , TNFRSF10B
Negative_10125	CDKN2C, FOXO3, FUT6, GARS, MAP3K8, TRAF1
Negative_10126	ESPL1, GALC, IDH1, LHCGR, MAN1A2
Negative_10127	ADH1B, AREG, ARHGEF4, B4GALT2, CAMK2D, CDKN2A, CES7, DAAM1, NEU2, OR 11H4, OR1K1, OR52N4, PDE4A, POLR1E, SMAD9, VTI1A
Negative_10128	DCT, ALDH6A1, ATP5D, CDH1, COQ3, GLYCTK, IL2RA, MAPK7, OR13A1, OR4D2 , P2RX5, PGS1, PKMYT1, PSME1, SDC1, SOX17, TCF7, TNXB
Negative_10129	ARSE, GALNTL5, IFNA21, NAE1, PFKFB2, SNAI2
Negative_10130	CDH5, DKK2, EPB41L3, GPT2, KDSR, NCOR1, NEU3, SRGAP2, PNLIPRP2
Negative_10131	FES, GDA, GHR, MVK, AARS, ACY1, ADIPOQ, ADRB1, BCKDHB, BDKRB1, CCNB3, COL3A1, FDFT1, GGT5, GPX5, GSTA2, HES1, HYAL1, NADK, OR13A1, P2RX1, P ARVA, PDE4D, PLA2G1B, PTGER3, PTPN11, TAS2R40, TUBA8, UNC5C, YWHAB, ATP6V1B1, MAPK8IP3
Negative_10132	CRH, RPE, ACSM2A, ADH4, BIRC3, CCNG2, CHEK1, COL4A6, CTNNA3, CXCR5, D DX19A, DDX52, DGKQ, DHRS9, EHMT1, FGF13, FGF18, GRM5, IFNA21, MALT1, NFAT5, NQO1, NSD1, NTF4, OR10J1, OR2T4, OR4K15, OR4X1, OR51B6, P4HA1 , PDE6G, POLR2F, PPP1R3D, PTTG1, RXRG, SAT2, TP73, HLA- DRB3, PPP1R12A
Negative_10133	ACSM4, CHRM1, FSHR, KIR2DL2, MTMR1, NCOA4, NR1D1, OR5I1, OR5V1, PLA2 G6, POLE4, POLR3A, PSAT1, PSME3, SUFU, WNT10A
Negative_10134	C7, ACSL6, ADH1B, ALG5, APRT, ARRB1, C9orf95, CAV1, CCL1, CXCL16, EFN B3, EPAS1, EPHA5, GALNT10, GLYCTK, HAP1, IL18RAP, KIR2DS5, MAP4K2, M DH2, OR10H3, OR2C3, OR4P4, OR52A1, PERP, POLR3K, PPP1R3B, PRKAB2, PT PRC, ST3GAL2, SV2C, TNFSF8, UGDH, UGT2B28
Negative_10135	KMO, ADCY1, ALOX12, AMY2B, APOA1, CCNH, GNAZ, LIPF, NLGN2, OR1J1, OR1 L4, OR51D1, POMC, PPARG, TAS2R48, ZFYVE9, B4GALNT1
Negative_10136	CDC25C, CNGB1, GLYCTK, OR10A3, OR5P2, PEMT, PRKCB, PVRL1, PVRL2
Negative_10137	IHH, PDC, CSNK1A1, IQGAP1, ITGA5, LDHAL6B, MFNG, MS4A2, OR4M1, PGK1, POLR2J
Negative_10138	ABCC8, ADSSL1, ALOX12, ATP5J, BHMT, CACNA1E, CCL23, CCR10, CDC25B, C HRM3, CHUK, CSNK2A2, CYP4A11, ENTPD6, FCGR3B, FLAD1, FPGS, GLG1, IFN B1, LDHA, LILRB3, MITF, NARS2, NT5C, NUDT8, OR51B4, OR5H2, OR7A10, PD E1C, PDE8B, PIK3C2B, PNMT, POLA2, PRKAR1B, PTPN11, SOCS2, SSH3, STAM 2, TAS2R10, TBXA2R, UGCG2, UGDH, UXS1, TNFRSF12A
Negative_10139	ADCY7, INMT, SEMA3C

Negative_10140	GPI, ALOX12B, ANAPC7, CCL21, CTSL1, CXCL9, DUSP4, FZD10, GALK2, HADH, HSD3B2, INPP4B, NOTCH1, NT5C3, OR51L1, PFN3, ROCK1, SDC1, UBE2L3
Negative_10141	C5, F5, GH2, ACOT11, ACTN2, ACY3, CLTB, CYP1B1, EPHA4, EPHB4, FUT9, HS D17B3, HYAL2, IL2ORB, IMPA1, ITPK1, KLRC4, OR2A42, OR4X1, PGM2, PLA2 G3, PTCH1, PYGB, SMAD6, SPHK1, STK36, STX1B, TCF7L2, UPP1, VKORC1, AT P6VOE1, HLA-DRB4, PNLIPRP2
Negative_10142	ACVR1C, ACY3, ARSA, CHST11, CXCL11, DPM1, GBE1, GDF7, GNA12, JAK3, LA P3, LRP5, NMNAT1, OR1F1, OR1K1, OR2M4, PGK2, PIP5K1B, PLXNB1, POLR2F, PRKACB, PTPRJ, QARS, RAP1A, RASGRP4, ROB03, SGPP1, SHC3, SKP1, STAM, TGFB1, TRPM5, TUBB6, UGT2B11, UROS, ATP6VOD1, PHOSPHO1
Negative_10143	AMH, F10, FOS, SI, ACTN2, ALS2, ARAF, AREG, B3GAT3, BPGM, CXCR4, CYFIP 2, DLST, GALNT8, GFPT1, GUCA1C, IFNAR2, IL18R1, IL28A, IL28RA, IPPK, ITGA6, MAN1A2, MAP3K11, NCK2, NEFM, OR10A7, OR10H1, OR2F1, OR4D2, OR 4X1, OR8K1, PANK2, PANK3, PDHB, PIGT, PLXNA3, POLR2I, PRKACB, PRKACG, PSAT1, PTGIS, SEMA3B, SEMA3E, STAT6, SV2A, TBXAS1, UCK2, WARS2
Negative_10144	ACAD8, ACMSD, FUT1, NOS1
Negative_10145	CKB, F10, GGH, GSS, TNF, AASDH, ABL1, ABL2, ADCY10, ALDH1B1, APLP1, AT P6V1H, BHMT, CHST11, CLCA2, CLDN16, CLDN5, CREBBP, DEGS1, DUSP7, DUS P9, FGF1, GLYCTK, HMGCS2, IL8RB, KCNB1, KYNU, LILRB3, MAP3K14, MGAT1, NAE1, NAGK, NR4A1, OR2B6, OR5D16, OR5L2, PAPSS2, POLA2, PPID, PPP2R 1A, PTPRR, SLC25A5, SORBS1, SORD, STK36, UXS1, SERPINA5
Negative_10146	LPL, APRT, CACNG7, COL1A1, CYP3A7, DEGS2, DHRS3, ENTPD5, EPHB4, GALN T12, HTR6, IDI2, IL29, LIFR, MAGI2, NTRK1, PDGFA, PFN1, PISD, PPID, RA SGRP3, TJP1, UCK2, UNC5C, HLA-DRB4
Negative_10147	GP9, ADSL, AGPAT4, ALG1, ALPL, ARD1A, ASPA, BCKDHB, BDKRB1, BMPR1B, C ACNB4, CBLC, CDKN2D, CHSY1, CRLS1, CYFIP2, FARS2, HAP1, IL19, IRAK3, ITGB4, ITGB6, JAM2, LIPT1, MTHFD1L, OR10Q1, OR4K17, OR4S1, PGS1, PRK ACG, RARS, RDH12, RPSA, SHISA5, UBE2L3, WASF3
Negative_10148	MYH10, TAS1R3, YWHAB, MAPK8IP1
Negative_10149	DBT, ACACB, ARHGEF2, B3GALT5, CCNA1, CCNE1, DDX18, DTX1, DVL1, E2F3, EGLN1, HCST, HPSE, IDH1, IL10, IRAK3, KLKB1, MAP4K4, MTHFD1L, MTRM1, MYL7, NCKAP1, NEUROG3, NME7, OR10AD1, OR2A25, OR2T10, OR2T6, OR52E8, OR56A4, OR5B3, PCNA, PLCD3, PPCDC, PPOX, PSENE1, PYCR1, RAB5A, RENB P, RFXAP, SLC2A4, SREBF1, SULT1A2, THBD, TKTL2
Negative_10150	CRK, ACOX1, AGPAT4, ANAPC7, ARPC3, BRAF, CACNG3, CHIT1, CLDN19, CTNN A1, CYP2A7, DPM2, EFNA5, EIF4E2, FCGR2B, FGF10, HRH1, IFNA7, IL12B, I L19, KCNB1, KITLG, MALT1, MAN1C1, MCCC1, MRAS, MTHFR, NPR1, OR1S1, OR 2B6, OR4C46, OR4K5, OR51Q1, OR5I1, PCYT1A, PDE3B, POLR2D, PPAP2C, PP P2R2A, PTGIS, RHOA, RPS6KA1, SDHA, SHC1, SLC2A1, SMAD2, SNAP25, SOX1 7, PRICKLE2
Negative_10151	EBP, GAA, IL7, MVK, TNC, ABCC8, ACPT, ADRA1A, ATP5G2, CCR10, CD226, CE S1, CHIT1, CMAS, COL2A1, DDX55, FBP2, GAB1, GNAQ, IDH2, IL28RA, MYLK, NCR3, NOX3, NUMB, OR2AT4, OR52A1, ORC3L, PDE4A, PIK3R2, PMVK, PORCN, PRKCG, PYGM, RAPGEF2, RPIA
Negative_10152	CD6, ACPT, COMP, DLL4, FZD2, GGT6, GNRH2, IFT57, ITGAM, JAK2, MARS, OR 13H1, PANK3, PHGDH
Negative_10153	AGK, DAO, DHH, EBP, GK, HK1, IL6, NF1, RPE, ADORA2B, AKR1B10, ARHGEF1, ATP5G3, BUB3, CACNA1G, CAV1, CYBA, HIBADH, IDH3B, IDUA, IGSF5, IL17R A, IL29, INPP4B, NME6, OR13C5, OR6C75, PKMYT1, POLR1D, PORCN, PRKCD, PRPS1, VAV1, WASF3, CACNA2D3
Negative_10154	ACAD9, ADH4, ADH5, ADRA1A, AMPD2, APAF1, CCL23, CCL3, CNTN2, F13A1, F UT7, GMDS, GRLF1, GZMA, IFNA13, IMPDH1, KIR3DL3, LMO7, MAPK13, NFE2L 2, NMNAT2, OR11H1, OR52B6, OR8D1, PLCB4, PNPO, PSPH, SMPD4, SOCS3, SO S1, TLR5, UBE2K, WARS, WARS2, ZBTB16

Negative_10155	BCR, DDC, F10, GPI, PGP, RB1, ACAD9, ACADVL, APAF1, CCL28, CD79B, CDH4, CHEK1, DUSP8, ENPP7, ENTPD3, EPHB4, ETNK2, FLOT1, FM05, GGT7, IL21R, INADL, MAN1A2, NCK2, NNMT, NT5C3, OR111, OR52A5, OR52B4, PDHA1, PRM2, PRKACA, PRKAR1B, PSEN1, PTDSS1, PTPRB, SETMAR, SRD5A2, ST3GAL5, TBXA2R, TGFBR2
Negative_10156	ID2, PDC, TNC, AADAC, ABLIM3, AKR1B10, ALOX15B, CD72, COMT, CPS1, CTS L1, DUSP3, EPHB6, GALK2, GUCY1A3, HIBCH, IL20RB, IL2RG, INHBA, LCAT, LIPF, LRRC4C, LYZL1, MAN1A2, MAP4K2, MAPK8, NR1D1, NTF4, NTSR1, OR2L3, OR4K1, ORC2L, PAK4, PCCB, PFN3, PIAS4, PIK3C3, PIM1, PRKAB2, PTPN7, RAPGEF1, TAS2R14, ULK1, VAMP1, XYLB, ATP6V1B2, TNFRSF14
Negative_10157	ADA, C8B, AASDH, ALDH1A2, BTRC, C5AR1, CACNA1H, CARD11, CCR6, CD247, CYP2S1, DFFB, DHODH, DTX3L, FGF17, GUCY1A3, HAGHL, JAG2, MGAT5B, MYH2, NUDT9, OR10H2, OR6Q1, PANK3, PDXP, POLR3K, PPARG, PPP1R3B, PRKAR1B, PRKG1, PTCRA, SOS1, TAS2R60, TJP1, WNT7B, WNT9B
Negative_10158	SFN, SPN, ACADS, ADH6, ALDH2, APOA1, BMP4, CCL13, CD38, CDC16, CHSY1, CPT1C, CYP27A1, CYP2C9, CYP2E1, DCTN1, DOCK1, GGT5, IL1A, IRS4, JAG2, KITLG, LTA4H, LTB4R2, MDM2, OR5AP2, PIGQ, PIP4K2B, PRDX6, PRKCQ, RE TSAT, SMARCA2, STK36, THY1, TPH2, WASL, WHSC1L1, MAPKAPK5
Negative_10159	A2M, C7, FUK, IL5, IL7, SCD, ACSS1, ACVR1B, ADIPOQ, ADORA2B, ALDH2, AP OE, CASK, CD38, CRB3, CYP4A11, ENO1, GALNT7, GALNT9, GCDH, HMOX1, IL1 ORA, IL17B, ITGAD, KLRK1, MAD2L2, MMP2, NARS, NAT1, NOD1, OR51G2, OR7 A5, OR8B12, PAFAH2, PLXNC1, RARA, RARS2, RHOQ, SETDB1, SLC33A1, TCF7 L2, THBD, TP53, UMPS
Negative_10160	ADK, BTD, FAH, JUP, ACVR2A, AGRP, AMD1, BDKRB1, CBLC, CCL26, CCNB3, CD 99, CHRM3, DHFR, GNA11, GRIN2D, GYS1, HNF1A, MDH1, POLD2, RFXAP, SEMA 7A, TSLP, TYRP1, PPARGC1A
Negative_10161	EPO, PGP, PLN, SI, ACTA1, ANAPC2, CLCA2, CTBS, DHRS4, ELK1, GOSR2, GPA A1, IL4R, MMP1, RXRB, STX16, STX1B, YWHAQ
Negative_10162	PLN, ARSA, CD36, CES7, DHODH, FM05, GALNT3, GJD2, GOSR2, GSTA3, GYS1, IL20RB, LRAT, OR9G1, PLD2, PPARD, RAPGEF3, SDHC, TUBA3C, TUBB, ZIC2, ATP6V1B1, C1GALT1C1, GABARAPL2, TNFRSF18
Negative_10163	CD2, ARHGAP5, CARS, CCNE1, CPT1C, CYP2F1, DHDDS, DUSP16, FGF22, FZD9, GALNT9, GBA3, GLO1, OR10A2, OR52E6, OR52L1, PLA2G2F, PPP2R1A, PPP2 R2A, SMC1A, TNFSF4
Negative_10164	CLDN8, CXCR5, E2F1, EPHX1, GALNT10, MAN1C1, NEFL, OLR1, OR4M1, OR7D2, PFKFB1, TRPC1, YWHAQ, SLC25A31
Negative_10165	AGK, RPE, AGPAT4, ATP2A2, JAK1, LAMC2, MARS2, MITF, MKNK2, MTFMT, OR4 K17, OR56A3, OR5D14, PAK7, PDXK, PER3, PRDX6, PRKG2, TNFSF8, UBE2L3, VAV3, GABARAPL2
Negative_10166	CTH, AGTR1, ASAH1, DRD1, IFNA2, MAPK1, OR2M4, OR3A2, OR4X1, OR7C1, OR 7D2, OR8J3, PAICS, PSAT1, SUCLA2, VEGFC, XYLB, CSGALNACT1
Negative_10167	OR4K1, OR5L2, PTPRR
Negative_10168	CRH, ADRB3, AKR1C2, AVPR1B, CACNA1G, CD55, CD79A, CTLA4, DGKQ, ENPP2, FARSB, FGF7, GJD2, HEMK1, HNF1A, ITGB6, MAPK8, NOTCH3, OR2H1, OR2T3 3, OR51B6, PAFAH2, PANK3, POLR2C, RRM2B, SGPP1, ST8SIA1, TAS2R7, TLR 9, ZFYVE16, ATP6V1E1
Negative_10169	CAD, GLA, ADSS, ARD1A, CD34, COL1A1, ETNK1, LIPA, NEUROG3, P4HA1, PAN K2, PECAM1, PIP4K2A, POLE, PRKACB, SESN1, TRAF4
Negative_10170	GSN, AADAT, ACACA, ACADVL, ACOT11, AKT1, B3GALT1, BIRC3, CCR8, CREB5, CXCL2, CYCS, DHFR, DLAT, DMGDH, GZMA, HA01, MYLK2, NCF4, NR4A1, OR52 N1, ORC5L, PDHA2, PI4KA, PTPRM, PYGM, TUBA3E, XYLT1, YWHAG, HLA-DQB1



Negative_10171	DCK, GSR, ADCY6, ARPC5L, ATP5G1, CHIA, DDIT3, DGKH, DUSP5, FGFR3, G6PD, GPX7, GUCY2D, HSD17B2, IL6R, KLRC1, KNG1, LIPG, NADK, NRG2, OR2A42, OR2M4, OR6M1, ORC5L, PRDX6, PSEN1, RUNX1, SHC4, SKP2, SMPD3, SOCS7, SPHK1, TAS2R8, TLR2, ULK3
Negative_10172	LIF, SFN, BTRC, CACNG2, CCDC6, CD8A, DGKQ, DHDH, DLAT, E2F2, EHMT2, ENPP3, ETNK2, FASLG, FDFT1, GCH1, HYAL2, IRAK4, IRF3, OR10Q1, OR1D2, OR52N5, PER3, PLCE1, PNPT1, PRKCA, RARS2, RDH11, RELA, SDC1, SOCS2, SREBF1, VAMP2, CSNK1A1L
Negative_10173	FST, BCL10, BIRC3, COL4A1, CSDA, DAPK2, DPM2, ENPP2, GALNT2, GSTM4, LMO7, OR51E2, OR51M1, OR52E2, OR5L1, PAK7, PIP4K2B, PLA2G2A, RARA, RFX5, RHOD, SOAT1, SUOX, TCF7L2, UGCGL1, TNFRSF10A
Negative_10174	F10, JUP, ACOX2, ADCY6, ASAH1, ATP13A2, CYP19A1, DAPK2, DPAGT1, FGFR4, GALNT8, GALNTL4, GJA1, MASP2, MGAT5, OR10X1, OR1B1, OR1N2, OR2L8, OR2T11, OR4C6, OR4M1, OR51Q1, PER1, POLR2H, PRSS1, SMAD7, TNFSF9, VAMP1, ATP6V1C2
Negative_10175	BTC, CFH, FOS, LPL, OGT, SCD, XDH, ARD1A, B4GALT5, BCL10, BTRC, CASP7, CES1, CLDN2, CLTC, FLAD1, FOXO3, GUCA1A, IFNA2, NAT5, NRAS, OR11H1, OR2C1, OR2T1, OR5M3, PARD3, PRODH, RALGDS, RRM2, SMAD2, SPHK1, SRD5A2, STX1B, TALDO1, TGFBR1, TJP1, WNT9A, HSD17B12, TNFRSF14
Negative_10176	FAS, FER, LTB, ALDOC, BDH2, CYP3A7, CYP8B1, DGAT2, DUSP1, EFNA3, FOXA3, FRAP1, FUT1, GNA11, HSD3B1, HSPA2, IL28B, IQGAP3, NFKB2, OR10A3, OR10H3, OR2B6, OR51A7, OR51E1, OR52N1, OR5AN1, PDGFRB, PIAS2, PPP2R1A, PRKCQ, PTCRA, PTPRZ1, RRAS, SMARCA2, VEGFB, PNLIPRP2
Negative_10177	EPO, LTB, PGP, ADH1B, AGPAT6, CCL2, CD80, CDC26, CLDN7, GALNS, GANC, GLUD1, HDAC1, HMOX2, IFNB1, MYH13, OR10AG1, OR1J1, OR2AG1, OR2B6, OR6C3, PDE5A, PLCD3, PPBP, PRODH, PTCRA, SEMA3G, SEMA4A, ZMAT3, ATP6VOD1
Negative_10178	EPO, PDC, AKR1C2, B3GALT5, CCNB1, COMT, CYP8B1, DGKA, FLOT2, FTMT, GLI2, INADL, ITGB7, ITGB8, MAD1L1, MAP3K5, NAGLU, NCKAP1L, NOTCH3, NT5C1A, OR10AG1, OR10G3, OR2A2, OR3A1, OR51I1, OR6K6, P2RX5, PKMYT1, PPAP2A, PPP3R1, PVRL3, SHC3, SLC27A5, THBS2, VTI1A, CSGALNACT2
Negative_10179	ACSL4, ADRA1B, AGRP, CACNA1S, CDC14B, CDH5, GALM, GMPPB, GSTA2, MARS, NCKAP1, OR52I2, OR52N5, POLR3K, TAS2R10
Negative_10180	DCC, FAH, ACVR2B, BAIAP2, DDX52, DGKZ, EHMT2, ENPP1, FLT3LG, HLA-DOB, HRAS, IDH1, INHBC, LARS2, LRP5, NKX2-2, OR10A2, OR6C1, PAICS, PDE10A, PDGFRA, PIPOX, PRODH, RBL2, RRM2B, SCD5, SETDB1, VAMP1, WBCSR17
Negative_10181	AR, ANAPC7, ATP2A3, CCL16, DDIT4, IMPDH1, ITGB1, MAP4K3, OR2S2, OR5J2, PDE9A, TUBA1C, YARS
Negative_10182	C8G, TNC, ACTB, CCR8, CRY1, PLOD2, RENBP, SETD7, SORBS1, PPARGC1A
Negative_10183	MIF, ACADS, ALDH1A3, ANAPC5, AREG, ATF2, B3GALT2, BET1, BPNT1, CACNA1A, CD44, CDKN2B, CPOX, DKK4, DPYSL2, ENTPD1, G6PC, GATM, GRIA2, HMGC1, JUND, MCAT, NCF1, OR13C2, OR13C5, OR13C9, OR4F4, OXCT1, PDE1B, PDE8B, PLXNC1, PPP1R3C, ST8SIA5, STX3, VEGFC, YWHAB, YWHAG, KIR2DL5A
Negative_10184	AGK, ADH1B, ATF2, BCL10, CCNE1, CD27, CDIPT, CNGA4, CSNK1G3, EHHADH, HAAO, HTR2A, NNMT, OR4C15, OR52N4, OR6K2, PGK1, PLCG1, PPA2, PPP2R2B, PTTG1, SDC3, TALDO1, TBL1Y, VTI1B, YWHAZ
Negative_10185	HK1, ALDH3A2, ARG2, CACNG4, CCND1, CES1, CRLS1, CTNNA1, DUSP4, IARS2, IL2RA, KLRC3, LHCGR, NLGN2, NT5C1B, OR6N2, OR9A2, PDE9A, PTPN7, RPN2, RXRA, SEMA4C, STAT2, STX3, TSLP, TUBA1A
Negative_10186	AGTR1, DLL3, IGSF5, MDH1, NFASC, UGT2A1, VDAC1, SERPINA1

Negative_10187	DBH, GGH, MET, AKR1C1, ALOX12B, ALOX15, AQP7, CBR3, CD244, CHRM3, CXC L13, CYP2C19, DDX41, DHCR24, ENTPD3, FECH, FZD6, GAS1, GFPT1, GNG13, GTSE1, HADHA, HLA- DOA, IFNA2, ITGAE, KIR3DL1, MAML3, MYD88, MYH11, OR2T12, OR2W1, OR4K17, OR5B3, PGAP1, PIGA, PIK3R3, POMC, PPP2R5E, RND1, ROBO3, SARDH, SE TD2, SLC2A2, SLIT2, SPHK2, SPRY3, STX7, TM7SF2, ZNRD1
Negative_10188	CBL, SMS, SP1, ARPC2, ARRB2, BAIAP2, CACNG8, CYP11B2, CYP4F3, DKK1, E DNRA, FABP3, GCNT1, GNAO1, IL12RB1, IQGAP2, IQGAP3, MAP3K2, OR14A16 , POLR1C, PPA2, SMC1B, SULT1A4, TIAM1, TUBB2A, WNT4, ATP6V1G1, TNFRS F11A
Negative_10189	ACSM5, ACVR1C, ADH5, BET1, C9orf95, CDC14B, CLDN5, COX15, DGKH, DLL1 , DTX1, GAD1, GPX7, GRIN2C, HSP90B1, IL2RB, LIFR, MADCAM1, MAP4K4, MP ST, OLAH, OR10P1, OR2T5, PDXP, PIGP, PLA2G2F, PLCD4, POLD4, POLR1D, P RKG1, PSEN1, SMPD4, SPAM1, SPHK1, ST8SIA1, TAS2R38, TCIRG1, TRADD, T RAF5, WNT8B, WNT9B, ZFYVE9, SERPINB5
Negative_10190	ATM, AVPR1B, CFL2, CHAT, EDAR, FGF20, MMP7, POLR2J, TBXA2R, VDAC1
Negative_10191	BAX, ACO2, ADSSL1, AGPAT6, APAF1, ASRGL1, CHRM5, CISH, CPT2, CSAD, CT PS, DAPK2, DCTD, DGKZ, EARS2, EPHB3, FDPS, FLT3LG, FTCD, HHEX, HIP1, I QGAP2, IRAK3, ITGB1, KLK3, LEF1, MAP3K7, MTMR6, NFAT5, NR5A2, OR13D1 , OR5D18, OR6C74, PDE4A, PLAT, POLR2E, PPP1CB, PRPH, PYGB, RELB, RENB P, SARS2, SDHB, SPTAN1, STAT5B, TIRAP, TPM3
Negative_10192	MAG, DLL3, FGF12, NRXN2, OR2C3, PTPRJ
Negative_10193	HK1, ASIP, CD46, CES1, CNGA3, COX15, DRD1, ENPP7, GALNT12, GNPAT1, G RIA2, IFIH1, IL12RB2, IL19, LDHAL6B, LIPA, LLGL2, LRDD, MAN1A2, MAPK 10, MYH1, MYLK2, NEGR1, OR5AR1, PRKACB, PTPRB, PYGL, SPRY4, STAT1, TA S2R16, TGFB3, WBSR22
Negative_10194	C4B, C7, C8B, DCK, ID3, MAX, ACSL5, ACSS1, ADH5, ARNTL, ATP6V1D, CACNB 2, CD46, CD59, CD82, CNGB1, EPB41L2, GNAI3, GSTZ1, HAO2, ITPK1, LCAT, LDHD, METTL6, MKNK1, MLYCD, NCK1, NSDHL, OR10R2, OR2S2, OR6C6, PDE4B , PDE7B, PHPT1, PNPO, PRKAG3, RPS6KA4, RRM2B, SESN1, SREBF1, SRGAP2, TAS2R41, TAS2R5, TBXA2R, TGFB2, THTPA, TOLLIP, XCR1
Negative_10195	CANT1, DDIT4, DGKI, GABARAP, GNRH1, GPAM, GRLF1, GRM5, HSD17B4, IPMK , NFASC, NQO1, PDE1C, PTCRA, RFX5, SC5DL, ST3GAL1, TAS2R60, TUBB4Q, U GCGL2, ATP6V1B1
Negative_10196	HK1, NPY, ALDH4A1, ATG12, BCAT2, CD8A, DLL3, ETNK1, HLA- F, IDUA, MCAT, MCM3, OR13G1, OR4C46, SNW1, TNFSF9, ZIC2
Negative_10197	GNE, LCT, AGXT, ALPP, AMD1, AOC3, B4GALT6, BHMT, BMPR1A, CCR7, CDO1, C OL4A2, CSNK1E, CXCR3, CYP1B1, EHHADH, FCGR2B, GP1BA, HLA- C, IFNA13, ITGA10, MAP3K3, MAPK1, NEU2, NOS3, NR5A2, OR13C8, OR5B3, O R5T2, OR6C6, PAX6, PMAIP1, PPP2R2A, PRODH2, PROS1, SNAI2, SUOX, TFDP 1, ULBP3
Negative_10198	DCTN1, MYH13, OCLN, OR10H4, PPARD, THBD, MAPKAPK2
Negative_10199	BTD, CFH, CR2, DCN, GP6, KDR, SI, ALG2, APOC3, ARSA, ATP4B, BDKRB2, CD3 4, CLDN11, CREB5, CSNK2A1, CTPS2, CYP1A1, DHODH, FGF17, FGF18, GANAB , GFAP, GMPR2, IFNA16, IFNK, LCMT2, MAPK3, NFATC4, NOS1, OR4X1, OR6B3 , ORC2L, OXSM, PIGX, PLA2G5, PPP1R3B, PPP2R5D, SGMS1, STAM2
Negative_10200	AMDHD2, COMP, EVI1, GANC, IL6R, MAN1C1, SSH1
Negative_10201	ACOX3, CCL2, EPHB3, GALM, IKBKB, IL4R, OR10P1, OR2L3, PAX6, PDE7A, PP M1D, QARS, RCHY1, SHMT2, STX8, TNFSF14, UBE2K, WEE1
Negative_10202	ACVR2A, ADAM17, ALS2, AOX1, B3GNT4, CCKBR, CHSY3, CLDN1, CXCR3, DHDD S, FGF1, GCLM, HMOX1, IKBKB, IL17RB, MAP4K4, OR10G4, OR10S1, OR11L1, OR2T4, OR51E1, OR5B21, PON2, PPAP2B, PTPRC, RHEB, SMPD2, STEAP3, STX 7, UBA7, VAMP1, PLA2G12A, SERPINE1

Negative_10203	CTH, GAA, GH1, SI, ADH7, ARPC5L, B3GALT4, CCL26, EI24, ELK4, GFPT2, HLA- DOA, IARS, IL18RAP, IPMK, IRF5, NUDT2, OR52B4, OR52B6, OR8D4, OR8I2, OR9G1, PHKA2, PIK3C3, PPA1, PSPH, RPSA, RUNX1, STAT1, SULT1A4, TAS2R48, TP73, UGCGL2, UNC5C, HSD17B10
Negative_10204	CTH, LPL, NNT, RET, SPN, ACADS, APRT, CDC25C, CSNK1G1, FADS2, FGFR2, GALNT9, GYS1, HTR2A, IL22, IMPA2, ITGA3, ITGAV, MAP2K3, NFKB1, OR10H3, OR14A16, OR1E2, OR2B11, OR2G6, OR4C46, PCYT2, PDGFA, PRKCD, PRKCE, PYCRL, RARA, RFX5, SPRY1, TUBB2A, B3GALNT1
Negative_10205	ANAPC7, B4GALT5, C1QB, CAMK2B, CDC25B, CLDN20, GUCY2C, HSD11B2, IL22RA2, KLRC4, PLA2G2D, PLA2G2E, PPA2, RAC2, RASGRF1, TACR3, TKTL1, TNFSF4, UGCGL1, UPP2, MAPKAPK3
Negative_10206	CCL24, CLTA, CRKL, GZMA, IL23A, PARD6B, PLCD4, UPP1, PLA2G12A
Negative_10207	BID, DHH, MPZ, ACTA1, ADH5, ARPC5L, BCKDHB, CACNA1B, CASP9, CDS1, CFL1, CFLAR, CKMT2, COASY, CSNK1G1, CTNNA3, DGKZ, DPM1, FRAT2, GJA1, GSTM4, HDAC1, IDH1, IFNA10, MAP3K14, MTHFD2, NOX3, OR14I1, OR2H1, OR5AU1, OR6C1, PDE8B, PIGN, PLIN, POLD3, PPP2R2D, PRKAR2A, RFWD2, SEMA4B, SEMA4G, ST3GAL1, STX4, TAS1R2, TJP3, TRAF4, TRDMT1, YWHAQ
Negative_10208	C8G, F3, FGA, PLG, SMO, STS, ABCC8, ACTN4, AKR1B1, B3GAT1, CACNG6, CFTBR, CKS1B, CLDN10, ENTPD8, FLT3LG, FUT2, GALM, GSTA2, IDH2, IRAK1, LALBA, LIAS, LIPG, MAP4K3, NAE1, OR2T1, OR4Q3, OR52A5, PIGL, POLR2K, PRKCH, PTDSS2, RALGDS, RIPK1, RRM2B, SDHA, SNAI2, SNAP25, TAS2R16, TBXAS1, WBSCR17, XYLB, YWHAZ, ST6GALNAC1
Negative_10209	ATM, C8G, ATP5F1, CARS2, CDC23, CLOCK, COQ6, CPT1A, DHFR, FBP1, GALM, IFNB1, IFT57, IQGAP1, IRF7, MAP4K4, MPP5, MYL5, NR4A1, OLAH, OR10C1, OR10Q1, OR13J1, OR2G6, OR2M3, OR6C75, PDGFC, PGM1, PIK3R1, PLCD3, PRKY, RAB23, STAM2, SULT2B1, TAP2, UCP1, WHSC1L1, XYLT1, TNFRSF17
Negative_10210	IL3, ARG1, ARSD, ATP6VOC, B4GALT6, C1QB, DGKE, DGKZ, DUSP8, ERBB4, ETNK1, GADD45G, HPSE2, IL20RA, IL6ST, INHBE, IRS2, MINPP1, NAGS, NFAT5, OR1I1, OR1J2, PARD6B, PLCB3, POLD2, POLR2G, RARS2, SKIV2L2, SPRY1, TAS2R41, UNC5D, ARHGEF12, ATP6VOA1, PNLIPRP1, TNFRSF13B
Negative_10211	ACVR1, APOE, C4BPB, CACNG5, CER1, CHAD, CYP2C9, DBF4, DDX4, EDAR, FADD, HAO1, IGSF5, IL13RA2, IL9R, ITGB8, LM07, MAPK9, OR11G2, OR4X2, OR51A4, PCYT1B, PIK3R1, PITX2, PPP3R1, PSPH, RAF1, SOCS3, STEAP3, TAS2R10, TKTL1, TYRP1, AASDHPPT, C1GALT1C1
Negative_10212	F2R, GP9, SHH, ACSS2, APOA1, CACNA1E, CCR6, CDH15, CRHR1, CXCL6, ECHS1, EFNB1, FOXO3, IFNA10, IL5RA, IMPA2, INHBA, IRS1, ITPKB, LARS2, MMP7, NAT2, NCR1, OR52A5, OR52N2, OR8D1, PIP5K3, PNLIP, PON3, PPA1, PRKAB1, PTPRM, RHOQ, YARS2, AASDHPPT, HSP90AB1
Negative_10213	CS, DDC, F9, RET, ACADSB, ADCY7, ANAPC11, APPL1, ARSB, ATP6VOC, CD14, CYBB, CYP26C1, CYP4F3, DAPK3, DARS2, FABP4, GDE1, GLS2, GMDS, GPLD1, GSTT1, GSTZ1, GZMB, HNF4G, ICAM2, KCNQ1, KIR2DS5, MAP2K3, MAP3K13, MCCC1, MCCC2, MYH7B, NADK, NFX1, OR10H1, OR11A1, OR51A2, OR6C6, OR7D4, OR7G2, PAPSS1, PAX6, PGK1, SFRP1, SLC2A4, TNFSF14, TRMT11
Negative_10214	ABAT, ADCY9, AOC2, CCL13, CCL3, CHRM1, CLOCK, FARP2, FZR1, GSTT1, HLA- F, HSD11B1, HSD17B1, IL20, LIPC, MASP1, OR5AP2, PAFAH2, PDE7B, PDHA1, PDK1, PER1, RAPGEF2, SDHD, SMAD7, SOCS5, TSTA3, AASDHPPT
Negative_10215	DCN, APOE, CADM1, DDX4, MDM4, PLCB2, SOCS7, SPTLC2, TSTA3, UROC1
Negative_10216	AK2, MSN, RPE, TNR, ACTA2, AGPAT3, ALG6, ARSB, BAAT, BCAT1, CACNA1A, CALML5, CBLB, CCL8, CDO1, CYP3A43, DERA, DGUOK, DLAT, DPM3, EPB41L3, FBP2, FUT4, GAS1, GRIN2A, HADH, HSD17B3, IPPK, KAT2B, LAMC1, OR13D1, OR2T8, OR5AC2, OR8J1, PLCB1, PLXNA1, PTDSS2, SDC1, SPI1, ST3GAL3, TUBA1C, TXNDC12, UCKL1, VKORC1, C1GALT1C1

Negative_10217	AMH, C1S, F10, FGA, MAG, ACTN4, ACVRL1, APOA5, ARD1A, AXIN1, CACNA1D, CACNA1I, CD19, CHPF, CYP8B1, DDOST, DNMT3B, DRD1, EDAR, EFNA3, EPHA4, GDF6, HSD3B1, IL29, IL4R, IPPK, IRAK4, LCAT, LLGL1, NCK2, NFKBIA, OR10J3, OR13C9, OR4F15, OR7A17, OR9G1, ORC3L, PIK3R5, PPAT, SPRY3, VAV3, EIF4EBP1
Negative_10218	EZR, F3, GPI, GPT, HGD, LPL, OTC, PGP, CD27, CHAT, CHUK, CYP11B1, CYP2A7, DGKZ, DPYD, GALNTL4, GLS2, HAGHL, HNF4A, HSD17B4, INPP4B, INPPL1, MMP14, NUDT8, OR9Q2, PDE11A, PDGFC, PIGV, PKMYT1, PRLR, RPIA, RXRG, SETDB1, ST8SIA5, TCIRG1, TUBB4Q, UGDH
Negative_10219	ABL1, CACNG3, DHRS4L2, GALNT9, HMGCL, OR2K2, OR4C11, PGLS, SQLE
Negative_10220	ACSL4, BCKDHB, CDC25A, CLDN1, COL5A3, CXCL5, MAD1L1, MAN1A1, NAGK, PIK3R3, SETDB2, VNN1, YOD1, ZMAT3, ST6GALNAC4
Negative_10221	IL7, LIF, TEC, ADCY9, AHCYL2, ASIP, DDX56, FSHB, IPMK, OR1G1, OR5K2, PDLR3D, POMC, PPA1, SHC4, TOMM40, YOD1, TNFRSF11B
Negative_10222	CMPK2, HLCS, KIR2DL3, NCAM2, PRKCB
Negative_10223	AGL, IL9, ME2, CD19, CDKN1B, CNTF, COQ3, CSF1, CSF1R, CYP2E1, FGF8, FSHB, GALNT14, GAPDH, GNG12, GSTA2, HMOX2, IL17A, IQGAP2, LAP3, LTBR, OR2AT4, PER2, PON2, PROS1, SCP2, SOX17, SUCLG2, TLR4, TNFRSF10A
Negative_10224	IL5, RPE, ADRA1A, BIRC2, BUB1B, CCL15, CD247, CD79B, CLDN15, CLDN5, DEGS2, DOLPP1, EXT1, MCM3, OXCT1, PFKL, PIGN, PPP2R5D, RRM1, UBA7, WARS2
Negative_10225	DCT, LTB, MIF, PTS, ATP6V0B, B4GALT5, CAV1, CD247, CLDN8, DUSP9, FGF10, FGFR4, IDH3B, MAP3K4, MDM2, NEU3, NFKB1, NME2, OR2M3, PARD6G, PFN3, PPP1R1A, PRKAR2B, RAPGEF1, SELPLG, TLR5, UGT8, WHSC1
Negative_10226	MET, ACACB, AKR1C2, C1GALT1, CCL22, CER1, CFL1, CNGA4, CREB3L4, CSF2RA, CSNK2A1, CXCR6, CYP2E1, DDX50, DUSP9, EIF4B, ENO1, ENPP1, ENPP2, FGF13, FMO4, HMOX2, IL12RB1, IL21, IMPA2, INADL, LALBA, LIPF, MYH14, NRG2, OR1J2, OR2T11, OR5D18, PTPRF, PTPRZ1, RAPGEF1, RASSF5, SARS, SH2D2A, SLC25A5, SMAD9, ST3GAL1, STAT2, TAS2R1, TUBB6, VDAC3, WASF2, YWHAG, HSD17B12
Negative_10227	BTD, GSN, APPL1, BAI1, CDH1, CHRM2, CNTNAP2, CYP1A2, DDX54, DDX56, DVL2, E2F1, EFNA5, ENTPD5, FCER1G, FCGR2B, GALNT8, GALNTL5, GGT5, GRIA3, GRIN2A, HEMK1, HRH2, HSPA2, IL13, NCF4, OR10H3, OR56A4, OR5B21, PDXK, PFKFB1, PIGQ, PLXNA3, POLR1A, PPAP2B, PPP2R2B, PRKAG3, PVRL4, RALBP1, RBPJ, TGFB2, TRAF4, VAV1, WWP2
Negative_10228	ID3, PGF, APC2, ATP2A1, B3GALT5, B4GALT1, CCR2, CPS1, CRLF2, DDB2, EHM2, EIF4B, GLI1, GNRH2, IFNW1, ITGA7, LAP3, MICA, NFAT5, NOS3, NUDT9, OR11H6, OR1K1, OR2M2, OR5AN1, OR5K1, PCYT1A, PDHA1, PER3, PFKFB2, PARG, PTDSS1, PTPN7, RARS, SLC25A4, SRGAP1, TGFB1, TRAF4, WWP2
Negative_10229	ADCY6, CPS1, OR7D2
Negative_10230	DAO, GSN, HPD, SHH, ACP6, ADRBK2, AQP7, BCL10, CBR3, CCNA1, CCNB1, CCND3, CCR3, CLDN7, CXCL9, DLL3, EFNA5, GALC, HAGH, IL28B, JAM2, MAP4K1, MDM4, MPDZ, OR13C8, OR13G1, OR2B11, OR4M1, OR4S2, OR52N1, P4HA1, PGAP1, PON2, PPP3CB, PRKCQ, PTDSS2, RPIA, RPS6KB1, SDC2, SHC3, SMARCA5, TLR9, PPARGC1A
Negative_10231	EPO, KIT, MUT, ACTN4, ATP12A, CACNG8, CYP2C19, DDHD1, DUSP14, E2F5, GCNT1, GNG13, HTR5A, IFNA14, IFNA4, NCKAP1L, OR6B3, PDE4A, PFKFB2, PFN3, PLAT, POLD2, PPP1R3A, PRKX, PTPRF, RFXANK, SMAD5, YOD1
Negative_10232	TNC, AARS, ACTA2, ADCY2, CASK, CCL2, CCNG2, CDK7, CLDN7, CLTB, CNGA4, CSNK2A2, CYP2U1, EXTL2, FZD1, GLB1, GLYCTK, GSK3B, IL1RAP, IL25, INHBC, LIMK1, MAP3K6, MAP4K4, MCEE, NTNG1, OR10H5, OR13A1, OR52B4, OR9G4, PGAM4, PHKG1, PLCB1, PLXNC1, POLD3, POLR1C, PPM1B, RRM2B, SETDB1, SPCS3, SUV39H1, TLN2, TP53, TRAF6, TUBA3C, XYLT1, PLA2G12B

Negative_10233	APP, C8A, IL9, TH, AARS2, ACPT, AMY2A, APBB1, ATF4, C4BPA, CNGA4, CSDA, CYP2A7, CYP2J2, FGF9, FLOT2, FLT3LG, HRAS, IL18, IRF7, LAMA3, LDHAL6A, MTHFR, OR2A4, OR2L13, OR4Q3, OR51E1, PRKG1, PRKY, RDH12, ROCK1, S TAT5B, UGT2B7, WARS2, WBSR22, WWP1, YWHAB, MAPK8IP2
Negative_10234	ADO, MIF, APAF1, ATG7, C3AR1, CACNA1D, CACNB3, CDC27, CDKN1B, CDKN2A, CLDN5, COL1A2, ENPP1, FLOT1, GAD2, GUCA1A, IARS, IL17B, IL22RA1, KC NJ11, LAMB3, LIPE, LLGL1, NCF2, NKX2-2, NR1H3, NRAS, OR2B6, OR51A2, OR9A2, P4HA1, PFKFB1, POLR1A, PTGDS, S ARS, SEMA3D, SGPP1, SLIT1, SRD5A1, SERPINA5
Negative_10235	MPZ, ACTG2, DUSP7, FGF9, GALNT1, OR4C46, CACNA2D2
Negative_10236	DBT, DLD, AMDHD1, BMPR2, DARS, DPYS, DVL1, GPD1L, GSTM3, INHBE, ITGB1, LRP5, MYLK, NCK1, NRG2, NRP1, OR10AD1, OR5AR1, OR6C6, RUNX1, SKP2, Y OD1
Negative_10237	GNS, IVD, MYC, OTC, ADIPOR1, ADRB2, AGRP, ANPEP, ARG1, CACNG8, CDH1, C HPF, COQ5, CSNK1E, CYP2A13, CYP4F3, EFNA1, FMO4, GBT1, IL12A, IL15R A, IL17B, IL1R1, IL3RA, INPP4B, LGMN, LYPLA2, NAGLU, NTF4, NUDT8, OR1 4A16, OR2G2, OR56A1, PDGFA, PKM2, PLEKHA8, PNPLA4, PPP1R3A, PTGS1, R DH8, SPTAN1, SULT1A4, ULBP1, VANGL1, WNT3A, WNT7A
Negative_10238	HAL, LIF, MPI, OSM, AADAC, ADH1B, ARRB2, ASS1, B4GALT4, BAI1, BCL2L1, BMP7, CACNA1H, CCND2, CDC25A, CTNNA1, ENTPD6, EPHA7, FGF14, FGF4, GA L3ST1, GCNT1, GJD2, GRIN2B, HTR6, ITGB4, MDH1, MGAT5, MYL2, NR1H3, NT F4, OR14J1, PANK1, PCYT1B, PFKFB4, PGK2, PLA2G2D, PLCZ1, PLXNA3, PNL IP, PPM1B, RPS6KA5, SOCS2, SREBF1
Negative_10239	FUK, GLS, NLK, AGPAT6, CCNE2, COL2A1, DDIT3, DOLPP1, EDNRA, EPHA3, EP HA7, FGF10, FZD2, GCNT2, GNAZ, HEMK1, HSD17B2, IMPA2, LARS, NEU1, OR1 OZ1, OR1K1, OR4D1, OR51A2, OR5D16, OR6C70, PCYT1A, PDE8B, PDE9A, POL R1B, POLR2D, PTGER1, RAC2, RALBP1, SMAD1, SULT1A2, TAS2R60, TP53, YK T6, YWHAH
Negative_10240	ILK, CDH1, CMPK1, GSTT1, HARS, IFNAR1, IKBKB, OR1N1, OR51A7, PLXNB2, PRKACB, RASGRP3, SETD1B, TSHB, VANGL1
Negative_10241	ADCY5, ANAPC10, ANAPC2, ATP6V1H, BLNK, BUB1, CES2, CSH1, CYP2C18, FG F20, FGFR1, FUT7, GUCY2D, HGSNAT, IFNA21, LIPC, OR52R1, OR6K3, OR9Q1, PIGA, PIGB, PPM1A, SMAD3, SOCS4, UAP1, ATP6V1E2, TNFRSF11B, TNFRSF 14
Negative_10242	ADO, SYK, ADCY1, AK3L1, ALDH1L1, ALG10B, APRT, ARPC1B, ASPA, ATP5E, B 3GALT6, B4GALT1, CAMKK2, CCL4, CFL2, CLTB, CYP1A1, DIAPH3, ENO2, EPB 41L2, FCGR3B, GAD2, HLA-DOA, HNF4A, IFNA17, IRAK3, LIPT1, MDM4, NMNAT3, OR10H1, OR1E1, OR4C1 1, OR6N2, OR8D4, PER1, PIK3CA, PLCD3, PLXNB3, PYCRL, RHOQ, SPHK1, SUV 39H1, TAS2R14, THBD, TPH1, UGP2, CACNA2D3, MAPKAPK5
Negative_10243	FST, IFNA13, IFNA17, P4HA3
Negative_10244	AK2, ACOX2, CCL11, CDKN2C, CIITA, FUT5, G6PC, HPSE2, OR10C1, OR1S1, S PRY4, ST6GALNAC6
Negative_10245	CAD, CD4, F3, KMO, ACAD8, ADRA1B, AKR1C4, B3GALT2, CD40, CES1, DUSP1, EPHB1, FGFR4, FLT4, FUT4, GATM, GCDH, GGCX, GGPS1, GSTM4, GUCA1B, HCL S1, HMGS2, ICAM2, IGSF5, MAP2K6, MGAT5, MYL9, NOTCH1, NPR1, OR56A4, PER1, PFKM, PIGM, PLAUR, PSENE1, PSME2, RASA2, RBPJL, SDC4, SETD2, SM AD5, SOS2, TRAF2, XIAP, CACNA2D1
Negative_10246	B3GNT2, CDK4, CLDN7, DMGDH, MASP1, PARD3, PRNP, SEMA3C, SETDB1, CACN A2D4, ST6GALNAC1
Negative_10247	BMP4, CDC25C, CYP2C8, CYP4A11, FGF18, FZD6, GDE1, GDF6, ITPKB, MAP2K 1, MMP7, MYH8, NTRK2, OR2S2, OR4E2, OR52A1, PAPSS2, PDE10A, PDE1A, TU BB2A

Negative_10248	AGK, CBS, F10, GCK, PGP, RPE, ACSS3, ADIPOQ, AMPD1, AOC3, ATP5G2, B3GA LT2, BDKRB2, CLCA2, FDFT1, GDF5, GNRH2, GRIN2B, IFNA4, INSRR, ITGA7, MTHFS, MYL7, NOS1, OR11H6, OR1L1, OR2A5, OR4A15, OR5R1, OR8K1, PFN3, PRKAR1A, RASGRF2, SELPLG, TAS2R14, TFDP1, TP73, TRAF2, WNT10B, WWP2 , MAPKAPK3, TNFSF13B
Negative_10249	CGN, F3, GP6, ACTN1, ACVR2A, ACVR2B, ADRB1, ALS2, ANGPTL4, ASMT, ATP5 B, ATP6V0B, AVPR1A, CCL14, CHAT, CYP2B6, DGKH, DVL1, EPB41L1, EXTL3, GFAP, IDUA, IL15RA, IL22RA2, ITGA10, JUND, KIR2DS4, LDHA, LRP6, MYL5 , NSD1, NUDT9, OR13A1, OR2T1, OR2T10, PROC, PTDSS2, RFXAP, SOX17, SSH 2, STX6, TALDO1, TOMM40L, VAMP3, TNFRSF1A, TNFRSF6B
Negative_10250	IL2, NF1, RET, VTN, ADH5, AGTR1, CCL11, CD19, CFL2, COX15, CYP3A43, DC XR, DDIT4, DRD5, EFN1, ENPP1, FGF10, HARS2, HLCS, IGF1BP3, IL17RA, IL 1A, INPP5E, LIMK2, MYD88, NRG2, OCRL, OPLAH, OR10S1, OR1L8, OR2V2, PA RD6G, PIGT, PIK3C3, POLA2, PYGL, RARA, RPS6KA1, SARS, SEMA3D, SPCS1, TALDO1, TICAM1, TSHB, ULBP1, VEGFC, WNT7A, YWHAH
Negative_10251	HPD, ACSM3, ASRGL1, ATP12A, CASK, CLDN11, DAXX, DIAPH2, ESPL1, FECH, FUT5, GALK2, HADH, IL28B, INSR, MGAT5B, MYH7B, NEGR1, OR1J1, OR2H2, O R2T10, PDHA1, PI4KA, PIGC, POLE, POLR2A, PPARG, PRKCG, RAB23, SARS2, SC5DL, SNW1, TAS2R3, TICAM2
Negative_10252	F8, BAAT, C1QC, CCL27, FDFT1, GRIN1, PLAT, WNT3, ATP6V0D1
Negative_10253	UBB, AGPAT1, EGLN1, ITGB1, KIR2DL1, OR4D2, PDGFB, PGK2, RASA1, SRD5A 2
Negative_10254	CD4, FH, GH2, HK3, ID4, IL2, INS, KDR, MOS, ASCC3, AVPR1B, BUB1, C9orf9 5, CACNB4, CAMK2B, CCL2, CLTCL1, COX15, CSH1, CTNNA3, CYP11A1, DDX52 , DFFA, DRD1, IL17B, KLRD1, MECR, OR1E1, OR1L4, OR4F4, OR51F2, OR5F1, OR6K2, PDE6D, POLR2J, PPP2R1B, PTTG1, RASGRP4, SOD1, SUCLG2, SULT2B 1, THBS4, TOMM40, TPM3, VAMP4
Negative_10255	MSN, ATP6V0B, CD99, DHDH, EPB41, GALNT3, NSDHL, OR1A2, OR5H2, OR6T1, PARD6G, PFKFB2, STAM2, TAS1R3, TUBB4Q, UNC5C
Negative_10256	FST, RET, ACPP, AGPAT3, AGTR1, ARNT2, B4GALT7, BCAT2, CD44, CYP26A1, CYP26C1, DUSP9, EPB41L1, FOSL1, HADHA, HSD17B8, IDUA, MGAT3, MIOX, M KNK1, NKD1, NODAL, OR6K6, PGM3, PIGL, RASGRP1, RDH8, ROCK2, RRAS, SPR Y1, STAT3, STX18, TP53I3, TPH2, VAV2, HLA-DRB4
Negative_10257	BTD, GH1, ID1, ACSL5, AGPAT1, ANAPC1, CDC45L, COL4A1, COMT, CUL1, CYC S, CYP7A1, DAXX, FADS2, GADD45A, GNG13, GPAA1, GUCA1A, H6PD, HNF4A, H SD17B3, IGF1R, IMPDH2, IRS1, ITGA1, MAML2, NRCAM, NTN1, OR10G3, OR10 P1, OR2T2, OR4D11, OR52I2, OR5AP2, OR6C2, PFKL, PLAUR, RAD51, RPS6KA 2, SAT1, SEMA3D, ST3GAL4, TAS1R1, TAS2R60, UNC5B, ARHGEF12, TNFRSF1 8
Negative_10258	CDA, CR1, F10, FES, LCK, ZYX, ANAPC4, ASPA, CALML3, CCL13, CD72, CLDN2 0, CNTFR, CYP2A13, DNMT1, ENTPD1, F13B, HAGH, HPSE2, IFNAR2, KLRC4, M GAT4A, NADK, NLGN2, NSDHL, OR13C5, OR4E2, PIGM, PPAP2B, PRPH2, RASGR F1, TCF7L1, TPK1, WNT5A
Negative_10259	FAS, ID1, PDC, AKR1C2, ARNTL, ATP13A2, ATP5G2, DGKA, IL1R1, LAMB1, LI PF, OR51F2, POLR2I, PTGS1, ROBO1, SEMA3E, TRADD, TRAF5, UGT2B7, UROD
Negative_10260	GPI, ARAF, CNDP1, CSF2RB, HPSE, INHBB, MINPP1, OR52N5, OR7C2, PTGER1 , SMAD1, UCP1
Negative_10261	MPL, ACTA1, ACTC1, AMY2B, BDKRB2, BIRC3, BMPR1B, CSDA, EP300, EPHB3, HES1, IFNA10, IPPK, ITGA7, KARS, LAP3, OR13F1, OR2M5, OR4N4, OR52N5, PDE1B, PIK3C3, PRDX6, SFRP1, SGMS2, SHMT1, SIPA1, THBS2, THTPA, TM7S F2, TSHR, TSNARE1, TUBA8, YWHAZ, ZMAT3, SUV420H1

Negative_10262	C8G, CTH, DDC, CACNA1C, CFLAR, CLDN1, CMBL, CYP3A7, EPHB6, ETNK2, FGF R2, GRIN2A, GSTK1, HTR6, INSR, ITGA2, MAPK1, NUMBL, OR2A5, OR2G3, OR5 1B6, PLCD3, POLR2L, PRKAA1, RAP1A, SAT1, SESN2, SLC27A4, TAS2R3, TIC AM1, TNFSF4, TSTA3, WBSR17, CACNA2D2, PNLIPRP2
Negative_10263	ADO, ADCY4, ALDH1A2, ANAPC10, CADM3, CBLB, CDH5, COL5A1, HA01, IL1R2 , IL1RAP, LIFR, MFNG, MTHFR, NMNAT1, OR2T29, OR4F4, OR5J2, PDE6H, PPP 2R5B, PTPRF, RALGDS, STX12, ZNRD1, SERPINA5
Negative_10264	FUK, ID4, PTS, CDH5, EPAS1, EPHA2, GUCY2F, MAP3K12, NCAM2, NEFM, NOTC H1, OR8B8, PFKFB3
Negative_10265	GSR, ME3, NF1, ALAS2, CCL11, CCL23, CD70, CDK7, CNGA4, COL1A2, DGKZ, E PHX2, FMO3, ITGA1, KLRC4, LDHAL6B, LTA4H, MPP5, NRCAM, OR11L1, OR2AT 4, OR5H6, OR8B12, PLCD4, PORCN, PPP2R2A, PRODH, PSPH, PYCR2, SEMA4A, TSHR, TSNARE1
Negative_10266	GCK, ACAT2, ADAM10, ADCY1, AFMID, BLVRA, CACNG2, CCND2, CDK6, CLOCK, DHODH, FOXO1, HES1, IL1A, KLRC4, MGAT5B, OR10H5, OR51B4, ROBO3, SDC1 , SFRP5, SLC27A5, SOAT1, TALDO1, TGFBR1, WARS, CACNA2D2, CACNA2D4
Negative_10267	ACTN4, APRT, ASS1, CDC14B, GALNT10, HADHB, HTR7, MAP3K4, MMP1, OR8H1 , SDC2, STMN1, TPK1, YWHAG, PLA2G12A
Negative_10268	MUT, ADH7, ARNT, ATP5J, CACNB1, CALML3, CALML6, CCND1, CLCF1, CYP2F1 , DOLPP1, FGFR1, GLUD2, HA01, HTR7, MCM3, NAGLU, OR6Q1, RPS6KA6, SC4M OL, SDHD, SLC33A1, SOAT2, SPCS3, SREBF1, TP73, WASF1, MAP3K7IP1
Negative_10269	FGF11, GCNT4, HMBS, IL13RA2, MAPK3, MLYCD, MMP7, NOS1, OR52E4, PIK3R 4, SOS2, TLN1
Negative_10270	ACAD9, ASIP, FZR1
Negative_10271	AK5, ACOX2, ASMT, BPNT1, CCL25, FUT9, GALC, GART, LRDD, MDH1, NCSTN, N FATC3, OR10A7, OR10AG1, OR13A1, OR52E6, OR5AC2, OR5P2, PDE1C, PFKL, PFKM, PTK2B, PTPMT1, RALB, TNFRSF4, ULK3, UROS, VAMP1, XYLT2, GABARA PL2
Negative_10272	ANGPTL4, C1QB, CYP2C19, H6PD, HSPA2, NCR2, OR11H1, OR7G3, PI4KB, PIG M, SERPINE1
Negative_10273	ASL, FES, NPL, ADH4, BNIP1, CDKN2A, CYP3A5, DTX4, FASLG, GDF5, GLDC, H SPB1, IL20, NCKAP1L, OR1F1, OR1L4, OR2A12, OR51B5, OR52H1, PDCD1, PI K3CD, PTGER3, TGFB3, UROS, ATP6V1G2, HSP90AA1, TNFRSF11B
Negative_10274	AADAC, ALDH9A1, ATP50, BCAR1, CHAD, CLDN16, ENTPD8, FGD1, FUT8, GAD1 , HEMK1, HTR2B, MMP9, NKX6- 1, NRXN3, OR1L6, OR2T11, OR9G4, PDE9A, PIAS2, PNPLA4, PRKCQ, PTK2, SC P2, SELL, UCK2, UPB1, VTI1B
Negative_10275	F7, GSR, COL4A2, CTPS, CXCL2, DVL3, FASLG, FZD9, IL21, INHBE, KIR2DL4 , MCAT, NUDT2, NUDT5, OR10G8, OR4C13, OR6C1, PKM2, PLCB4, PRKAB1, RDH 8, SAT2, SPRED2, TP53I3, HLA-DPA1, TNFRSF10C
Negative_10276	F2, ASMT, BCL10, CD28, COL4A4, CYP2C8, DDB2, GPAA1, GRIA2, GRIN2D, HA GH, IRF3, MIOX, NAGK, NEU3, ODC1, OR6K2, PECAM1, RPE65, SARS, UPP2, VD AC1
Negative_10277	CKB, FAH, GH2, IDS, IL3, UBC, ADRA1D, ALDH3B1, ALDH5A1, ARNT, ATP13A2 , ATP4B, ATP6V1F, BMP2, CAV3, CCR4, CD8B, CLDN7, COL1A2, DDX54, DHRS9 , ENTPD5, FGF9, FRAP1, GANC, GCNT3, IL28A, KLRC1, LRP5, NFATC2, NTN1, OR10G3, OR11L1, OR52N4, OR6F1, ORC3L, ORC5L, PERP, PLXNB2, PSEN2, SM AD2, SMPD3, STX1B, TAS2R40, TJP3, UGT2B17, ULBP1
Negative_10278	DHH, ID4, IL4, PC, PML, ACTN4, ATF2, ATG7, ATP4A, ATP5A1, CDH1, CYP2F1 , EIF4E2, EPB41L1, FUT4, FZR1, GALNT1, GALNTL1, GNRH1, GNRHR, HCST, H IP1, HSPA8, IARS, MAP4K4, NAGA, OR4D5, OR4F4, OR5P3, PARD6G, PIAS4, P NLIP, PRKCZ, RASSF5, TUBB2B, UGT2B7, WHSC1L1, WNT2B, HLA- DQA2, TNFRSF10A
Negative_10279	F5, NOG, ENO2, ITPKB, MAP3K7, OR2T5, PIGX, PPP2R2B, SOD1

Negative_10280	ACTN1, KARS, SYNJ2
Negative_10281	BTC, CD86, CXCL13, DAAM1, DKK2, GDF6, GSTA4, HTR2A, IDH3B, PPA2, UPRT, YWHAG
Negative_10282	C8B, F12, LYN, AK3L1, ALG2, ARHGEF2, CASP9, CDH15, COL4A6, EPHB2, FRA T2, GNPDA1, GRB2, HLA- C, IL9R, MARS, NCF1, NFKBIA, NR4A1, OR1J1, ORC4L, PAFAH2, PARVG, PGAP 1, PGM3, PLIN, PPP2R5B, SH2D2A, STX4, TUBB2B, WBSCR17, WNT3A, ATP6V0 A1, B3GALNT1
Negative_10283	ADRBK2, ALDH2, APOE, BST1, CLCA2, GNPAT1, MASP2, RELA, SHC2, TLR3, V ANGL2
Negative_10284	ACAT1, ALPPL2, CCR2, CD86, CLDN8, CNTNAP1, CPOX, CYP2A7, DAPK2, EFNA 2, F13A1, FGF19, GNAL, OR52L1, OR56A1, P2RX4, PDE10A, PRKAG1, RAF1, S T3GAL5, STAT1, SYNJ1, TAS1R1, THBS3, WNT7A
Negative_10285	ANAPC2, CALML6, CCL8, CD244, ENPP6, GRIA2, IGF1R, NODAL, OR51B4, PEM T, PRPH, SESN1, THBS3, TNFRSF6B
Negative_10286	SPN, ADAM17, ALOX15, ATP2A1, ATP5J, B3GNT4, EFN2, FGF11, FGF9, FLT3, GRPR, GSTA1, LLGL1, MDH2, OR1G1, POLR1D, PRKCB, RPS6KB2, TBL1XR1, S ERPINF2
Negative_10287	ABLIM3, AMDHD2, ATG3, CD274, COQ3, DUSP14, EPHA1, ETS1, FARS2, LEFTY 2, LRP6, MBL2, MTFMT, OR12D3, OR4F6, PAK6, PFKL, SEMA3D
Negative_10288	FES, UBC, ACAA1, ACYP2, ALDH1L1, ALDH3A1, ARD1A, CER1, CREB5, DGAT2L 4, EPRS, FCGR3B, FGF11, FM01, LPAR1, MARS, NTRK2, OR2L8, OR52L1, PDE9 A, PFKM, SETD2, SLIT2, XCL1
Negative_10289	ACOX1, CLDN15, CYP4A22, MAP3K1, OR6F1, PIP5K1C, STAT1
Negative_10290	BAX, NOG, ACADSB, ACSL6, ACSM3, AGPAT3, AKR1D1, AKT3, ANAPC5, BCL2L1, CHST13, DAAM1, EPHA4, FTH1, FUT7, GLI3, GSTZ1, HAO2, HLA- DOA, IKBKB, IRAK3, ITGA8, ITPK1, JAK2, MAGI2, MAP2K3, MCAT, MCM7, MDM 4, METTL2B, MOV10L1, MYH7, MYH9, NNMT, OR4X1, OR6M1, PGAM4, PGS1, PIS D, POLD1, PPP1R3B, SNAP23, TUBA1B, TUBB6, VANGL1, WASL, PLA2G12A
Negative_10291	ADCY7, CLDN20, GAPDH, GJA1, HPRT1, OR2H2, PARVA, PIK3R3, SDC2, SERPI ND1
Negative_10292	CAD, DBH, TAT, FUT7, IDH3A, PIK3C2B, PLCG1, PON1, SOCS2
Negative_10293	BCR, F9, GK2, CDC27, CYP17A1, DDOST, FLOT2, FOXO1, GALNTL1, GPD1, HIP 1, HLA- C, IL28A, IL28RA, LALBA, MAOB, NARS, NEUROD1, OR52L1, P2RX6, PDX1, PL XNB1, STEAP3, ZBTB16
Negative_10294	ABO, AGL, GP6, TNC, ALDH3A2, BST1, BUB3, CAMK2B, CDH15, COX10, DDX51, DHRS3, EDA2R, FBP1, FGF2, FSHB, GALNT9, GLDC, GRIN2D, IL11RA, LALBA, LCP2, LIPA, MAP2K2, OR2A2, OR52K1, OR5D13, OR5H6, OR5L1, P4HA3, PIGV, PLCB2, PON1, PRPS2, SDC3, SEMA4B, SOS2, STX8, TBL1Y
Negative_10295	ACTG2, ALCAM, ASS1, CASP7, GALNT3, GLB1, GLYCTK, HAGH, MAN1A2, MPZL1, NTNG1, OR5AS1, PECAM1, PRKCE, RERE, SHC2, SHC4, TFDP1, CSGALNACT1, ST6GALNAC6
Negative_10296	C7, FH, ATP5J2, CASP6, GDF5, NOTCH2, OR51I2, PLXNA2, PRDX6, PRIM1
Negative_10297	F8, ACPP, ACY1, AGMAT, AGXT2, ATF2, BMP4, BUB3, CCNE2, CCNG2, CHST11, CLDN2, CYP27A1, DAAM1, DHX58, EPHA7, FTCD, FUT4, GAD2, GDE1, GUK1, ID UA, MAP2K3, MAP4K3, MCM2, MCM3, NAT5, NNMT, NT5C3, OR5D13, POLR1D, TJ P1, UCP1, WNT9A
Negative_10298	GP6, ACADSB, ACOX2, ACP5, AHCYL1, C1QC, CCL27, CCL5, CHIT1, COQ6, DRD 2, EDNRB, FASLG, FCGR3B, FIGF, FM04, GLUD2, GNPDA1, GRHPR, IL1B, LYZL 1, MCEE, NADK, OR11H1, OR5AS1, OR6C6, PHPT1, POLR2E, PPID, PPP1CC, PP P2CA, PRKAR2A, PRKG2, SEMA4B, TPI1, TRAF4, YARS2, PHOSPHO1
Negative_10299	GK, COL1A2, ENPP2, OR2D3, OR2L8, OR4N4, OR5AU1, OR6S1, PPP1R3B, PTAFF R



Negative_10300	GSS, PLN, ALCAM, EPHX2, GNAQ, OR4S1, OR5AP2, PPARA, XYLT1
Negative_10301	C6, CBS, KHK, LAT, ATF2, CHRD, CLTC, CYP3A5, DHFR, FGD3, GLUD2, GNG13, ITGA2, ITGA9, MCM5, OR10A2, OR11G2, OR8K3, POLR2I, PRSS1, TSHB
Negative_10302	AK1, AK2, AR, C8B, CAT, CRH, FES, NPY, ACHE, ACVR2B, AGPAT2, ATP6AP1, CARS2, CYP26B1, DUSP14, DUSP4, ENPP2, ERBB4, G6PD, GALK1, GSTM2, IDH3B, IMPA2, INPP1, NEU4, NSD1, OR10A3, OR10H3, OR13C4, OR1D5, OR4F6, OR4X1, PIK3CA, PLXNA3, PRODH, SMAD6, TFPI, TLR4, UGCGL1, ATP6V1G2
Negative_10303	ACAA1, APBB1, CSF2RA, CTSG, DGKG, DOLPP1, FLT3LG, GPD2, HADHB, KAT2A, OR1J4, PIAS1, PRKACB, PAFAH1B1
Negative_10304	CKB, DUT, LIF, ACTN4, ATP5J, COL1A1, GALM, GUSB, IL18RAP, INPPL1, KDSR, NADK, NUDT8, OR10A3, OR1D5, OR4D11, PLA2G10, PPP1CB, XIAP, YWHAZ
Negative_10305	GP6, ADCY10, AKR1C4, BACE2, BLVRA, CCL25, CCR2, CDK6, CHRM3, CTSP2, EPHA7, GATM, IL18RAP, IL20RA, LAMB3, MAML2, NCAM2, NME6, NUDT5, OR10C1, OR10H5, OR1L4, OR4D1, OR4N4, ORC1L, PECAM1, PIGA, POLR2H, RARS, RBPJ, SPHK1, STAT4, TAS2R40, TNFSF18
Negative_10306	C6, F2R, AHCYL1, ALDH1A1, ALOX15, ALS2, C9orf95, CBR3, CCL14, CDC25B, CEBPA, CMPK1, F13A1, FASLG, GADD45G, GARS, GRM1, ITGA4, ITGAE, LYPLA1, MAN1A1, MYLK2, NAE1, OR6N1, OR9Q2, RASGRP3, RDH8, SQLE, SUCLA2
Negative_10307	ADA, FOS, ALDH3A2, ATP5J2, BCL2, CCNE1, CD86, CDK2, CHEK1, CPS1, DGKB, FARP2, FOSL1, GNAT3, IFNAR1, IL18, INADL, LAMC1, LYZL1, MCM6, NANS, NKX2-2, NOX1, OR4F5, OR51A2, OR7C1, PCNA, POLR2A, PRKACB, RBL2, RFXANK, SOS2, SV2C, TGFB1, UGT2B10, ULK3, WNT3A, WNT7A, MAPKAPK5, ST6GALNAC3, TNFRSF1A
Negative_10308	ATP5J, CACNB4, COQ7, DKK2, DTX1, F13A1, GARS, GCNT4, GUCY1A3, GUCY2C, PCK1, POLR3D, ROCK1, UGDH, EIF4EBP1
Negative_10309	CCNE2, EGFR, GNRH2, PMM1, VCAM1
Negative_10310	BUB3, CD27, CDH4, FDF1, GALNT9, GNPAT1, HSD17B1, HSD17B2, MAPK8, PIP4K2A, STX12, SUCLA2
Negative_10311	CGN, ME2, ALDH6A1, ARAF, B3GAT3, CD74, CDC42, CX3CL1, DFFB, GGT6, GNA14, GYS1, HSD17B7, IFNA8, MCM4, OR13C2, ORC2L, P4HA3, PIAS4, PNPLA3, SPP1, STX16, TBL1XR1, TUBB1, WBSCR17, WNT2, HLA-DRB3
Negative_10312	F7, AK3L1, B4GALT4, CDK7, CX3CR1, DAPK3, ETS1, GALNTL2, IFNA8, IL28B, OR4K13, OR56B4, SEMA4A, ST3GAL5, THBD, UROC1
Negative_10313	AK5, C5, ADRB2, ALG1, ANAPC1, CDC45L, CSNK2B, CYP8B1, ECHS1, EPHB3, FGD1, FLT3, FTCD, G6PC, GZMB, HEMK1, IDH2, IFNA5, LAMB3, MAOA, MGST3, NEFL, OCRL, OR14I1, OR5F1, OR5K1, OXCT1, P2RX5, PDXP, PHKA1, PLIN, PLXNB2, RAPGEF1, SC5DL, SIGLEC1, SMARCA2, TAP2, TLR4, TNXB, TRAF5, VAMP1, WASF2, WNT2
Negative_10314	IVD, ACOX1, CCL16, CCL22, GGCX, HEMK1, IFNA14, MAML3, MAP4K2, MGAT3, OR8I2, PGK1, POLR3H, PRPS2, SULT2B1, WNT16
Negative_10315	ATM, PGD, ACAA2, CHD8, CSNK1G1, FZD3, GALT, GGT7, HAO2, IL17RA, IL20RA, NSD1, OR13H1, OR2A2, PAK1, PFKFB2, SFRP5, ST3GAL1, TNFSF4, UGP2, HSP90AB1
Negative_10316	FGG, GH1, LAT, NLK, OSM, ACSL3, ATP2A2, B3GAT3, B4GALT1, BCKDHA, CCL3, CHD8, DUSP8, ITGA2B, KLRC2, OR1B1, OR2T33, OR52E2, OR6Q1, OR9Q1, PCYT1A, PDGFRB, RBPJ, SPHK2, STAM2, SUV39H1
Negative_10317	AADAT, B3GNT3, BMPR1A, CCL21, CCNG1, CTF1, GNA15, GNAI2, KNG1, LALBA, MYH15, OR10AD1, OR11L1, POLE, RDH16, TNFRSF10D
Negative_10318	GPI, HGD, ADRA1A, CD46, CDKN1A, IL20, NFYA, NPR2, OR51S1, PGK1, PLIN, PTPN6, TAS2R60, UGT2A1, WASF3

Negative_10319	AGK, HAL, LTB, PGF, AASS, ADIPOQ, ALG1, ALPP, B3GALT6, CDK5, CHRM1, CSNK1D, DNMT1, DUSP3, EPHA6, G6PC2, GBGT1, GNAO1, GNPAT, IDUA, IFNA5, IL22, MAP3K13, MBL2, MYH3, MYH6, NAE1, NRXN2, OR1L8, OR56B4, PARVB, PDE2A, PGM3, PITX2, POLR2G, PPP2R1A, PPP2R2B, RPS6KA1, SDHC, SFRP5, SKP2, SPRED2, SPTLC1, TCF7L1, TRADD, TRAF2, WIF1, TNFRSF13B
Negative_10320	GGH, MSN, RPE, TXK, ARPC4, BCL2, CSDA, DDX18, EXT2, GPAA1, GRHRP, IL17B, MAN1A1, MCCC2, MCM2, MYLK2, NCF1, OR10G4, OR4S2, PGK2, PLOD2, RXRG, SHC4, TRPM5, WNT2, MAPKAPK5, SERPINE1, SLC25A31, SUV420H1
Negative_10321	C7, CGA, F3, ABL2, ACSL5, ACSM5, ADCY1, ARNTL, B3GALT5, CCNA1, CDH4, CLTCL1, COASY, CRLF2, DPM1, ENTPD6, FLOT1, GADD45A, GPX5, HEXA, MAGI3, MAP3K12, MAP3K2, METTL6, MYLK3, NAT2, NPR2, NUDT12, OR13C2, OR4K5, OR52N1, OR52R1, PER1, PLA2G2E, PLOD1, RDH8, SNAI2, SPRY3, STAM2, STX1A, STX6, TUBB, UGT2B4, B3GALNT1, GABARAPL2
Negative_10322	CCL19, DOLPP1, E2F5, FUT3, IRF5, ITGB1, LCAT, NLGN1, SPI1, VEGFA
Negative_10323	ACTN1, ASS1, BDH2, DHODH, EXT2, FZD2, GOT2, NPR1, OR5T3, SOCS2, TRPC1, WNT4
Negative_10324	FAH, GGH, MUT, AKR1C2, ASAH1, CD70, CLDN15, CRY2, CSF3R, CYBA, DNMT1, FABP4, FGFR1, FRAT1, LTA4H, MARS, NRG1, PSME3, PVRL4, RASGRF1, ROBO2, SHC2, STX3, XCR1, YWHAE, MAPK8IP1
Negative_10325	ID2, B4GALT7, CFL2, ELK4, OR11H4, PDE6D, PIP5K3, TSNARE1, XCR1
Negative_10326	ARD1A, ATP5L, CD14, CLDN16, DHCR24, DHODH, FGF6, FLT4, GALNS, HAGH, HMGCS2, HSPA1B, IL25, MAT1A, NAGS, NRXN3, ONECUT1, OR11L1, OR1L6, OR4Q3, OR52W1, OR5B17, PRKX, PTEN, ROBO1, ROCK2, RPN1, STK11, TBXAS1, UNC5C, SERPINC1
Negative_10327	CAD, CDA, F12, IDS, ABLIM1, ACAA2, ACADSB, ACMSD, APOA1, ARD1A, CACNA1G, CACNG6, CD36, DOT1L, DPM3, DUSP10, GALNT3, GLG1, GSTA4, HMOX2, IL10, IL1B, IRS4, ITGA6, MIOX, NCAM1, NME4, NRXN3, NTRK1, OR2T8, OR5B12, OR6Q1, PANK1, PDE11A, PIGL, PIGW, PNPT1, PPCS, PROS1, PTGDS, SGMS2, SSH3, TIRAP, WNT9A, YWHAE, B4GALNT1, CACNA2D4, SLC25A31
Negative_10328	FYN, RET, TEC, APOE, ARPC4, ARSD, ATF4, ATP6V1D, C4BPB, CACNA1G, CBLC, CD22, CTBP2, CTF1, DGKQ, FUT5, GGT5, GPD1L, IFIH1, IL18, IL3RA, ITGB1, MASP2, NFKB1, OR10H1, OR1E1, OR2B2, OR4C6, OR4D6, OR52R1, OR5T3, PDGFRA, PRPH2, PTPRF, RRAS, SESN1, SIGLEC1, TNFRSF13C
Negative_10329	OGT, FDFT1, KIR2DL1, OR52K2, OR5P2, PDE1A, PI4KA, PTPN1, SDC4, WARS2, YWHAG
Negative_10330	ARG2, CARS2, CDC25A, COL6A1, DUSP16, IFIH1, IL28RA, LPAR1, PORCN, PSAT1, PTPN1, PTPRM, SELL, SUV39H2, SV2A, TUBA1A, VAV2
Negative_10331	AK7, ATM, ATF2, CSNK1G3, CYP27A1, DAD1, FGF19, FZD2, GALNS, GBE1, HARIS, MAP3K11, NPR2, OR14A16, PDXK, PHKB, PLCZ1, PTPRB, UGT8, UNC5D
Negative_10332	APP, CRK, APLP1, ATP6AP1, CD46, IL22RA2, MGAM, OR5T3, PROS1, RPS6KA1, SV2B, XYLT2
Negative_10333	ACOX1, PRKAB1, TNFRSF12A
Negative_10334	C7, ATP13A2, CDH4, CTSL1, CYP7A1, DERA, ENAH, EPB41L1, EXTL1, FZD7, GPD2, HSP90B1, KIR2DL2, MAP2K5, NME4, NRCAM, OR2K2, OR51V1, OR5T3, PFKFB3, PRKAG2, PSEN2, RRM2, TLN1, WNT6
Negative_10335	ATN1, GLYCTK, MAT2B, SELPLG
Negative_10336	TH, CPT2, TNFRSF13B
Negative_10337	CD6, F7, ATG12, CACNG1, CALML6, CNGB1, COL6A2, COQ3, DCXR, DDIT3, DHC R7, EIF4B, ESPL1, FMO1, GRIN2B, HSD17B1, KIR2DL4, LCMT1, LIPT1, MITF, MYLK2, NFKB1, NOX3, ODC1, OR2A2, OR7G1, PI4KB, PIGA, PLXNB3, POLD1, POLR3B, RAC3, RARS, RASGRP1, RPS6KA6, SV2A, TGFB3, UCP1, UGT1A10
Negative_10338	HBEGF, METTL6, PFN4, UGT2B28, VANGL1

Negative_10339	AMH, GCK, HGD, TK1, TNC, ABAT, ACVR1, ALDH6A1, ATP6VOB, CCR10, CDKN2B, EFNA4, EXT2, FOXO1, GADD45B, GP1BA, GUCY1A3, IGF1R, IL1B, IL24, IRS1, KIR3DL1, MYH9, MYL9, NCKAP1, NFATC2, ONECUT1, OR2W1, OR7G3, PPP1R3B, PPP2CA, RAC1, RASGRP3, SEMA3D, SLC9A1, SRGAP1, ST3GAL6, UNC5C, WBSR22, WNT3
Negative_10340	HGD, MAG, SRF, ACSM1, ACSM2A, ALDOA, APAF1, CCL13, CCNB3, DNMT3A, DTX1, ECSIT, ENAH, GGCX, IL17A, MAGI3, MAP3K3, NEFL, NKD2, OR13H1, OR52K2, P4HA2, PDE11A, PDE5A, PIPOX, PTPRB, ROB01, SIPA1, SLC25A4, WEE1
Negative_10341	CYP11B1, CYP2A6, DDX56, FM02, GNPAT, PANK1, SARDH, SIGLEC1, SLC2A2, SMPD3, UGT2B4
Negative_10342	C9, GPI, RPE, ABLIM2, B3GALT4, CHD8, CHEK1, CYP4A22, DCTD, DGKA, FGF2, IFNA2, IL21, OR52K1, PCCA, PER1, POLR2I, PRDX6, SRGAP3, TAS2R16, WARS
Negative_10343	GHR, WAS, ACPP, ATP2A3, BLNK, CD40LG, CDH15, CRKL, CYP1B1, DCTD, E2F2, FADS2, FASLG, FPGT, FUT8, GGT5, HGSNAT, IFNAR2, IL13RA1, IL19, IL7R, KLRC1, MAPK7, MYH8, NOX3, OR10P1, OR5AR1, PPP2R5D, SETD7, SLC27A1, SMAD6, ATP6V1G1, TNFRSF1B
Negative_10344	APP, F3, PML, ACVRL1, CACNG7, CD59, CHRNA7, CPT2, CSNK2A2, DARS, DGUOK, DVL2, FGF13, FOXO1, GDF5, GNA12, GPAA1, HHEX, MAD1L1, OR10G4, PNLI, RPS6KA4, SKP1, SLIT2, SRD5A2, SYNJ1, TOMM40L, UCK1, ULK2, ATP6VOA2, PDCD1LG2
Negative_10345	ADK, AGK, FAS, IL7, PRL, SI, TK2, ACTC1, AGPAT1, AHCYL1, ALG1, AOC2, CACNG4, CCL19, CCL20, CCL21, CHSY3, CTNND1, DLST, DPYSL2, ENO2, FGD3, FGFR4, FUT5, GAD1, GNAL, HMGCS2, IFNAR2, IFNB1, IL1R2, IL6ST, MYH4, NTN1, PDE3B, PLOD3, POLR3H, PPM1A, PPP2R1B, RDH8, SPRY4, SUCLG2, TPM3, TRDMT1, SERPINC1
Negative_10346	ADK, AMT, FGG, ACMSD, ADCY7, APAF1, CCL7, CSAD, DTYMK, GALK1, IFNA5, IFT57, MAP3K7, NMNAT2, NOS1, NRG3, NTRK2, OR13C2, OR14A16, PAX4, PPP3CA, PPP3R2, PTPRB, SAT2, SHC4, TUBA1A, XCL2, XYLB, XYLT2, HSP90AB1
Negative_10347	CD2, MUT, ALDH7A1, ALPPL2, ASIP, ATG12, ATG7, CCNG1, CNTN1, CYP2C19, DRD1, EDA2R, F13A1, FGFR2, GALC, GALNT1, GJA1, GUCY1A2, IL4R, IL7R, ITGB7, MAPK13, METTL6, MYH15, ODC1, OGDH, OR2D2, OR5A1, OR8K5, P2RX6, PIGC, PIP4K2A, PPBP, PPP2R5A, RDH11, RDH8, SEMA4B, STX10, TAS2R41, THBS2, TLN2, TNFRSF4, TSC1, KIR2DL5A, ST6GALNAC5, TNFRSF1A
Negative_10348	GLS, ABL1, ABL2, AGTR1, ALG13, B3GALT5, GAD2, GNA15, LIMK2, MAPK13, MARS2, PAK3, PCYT1B, RHOD
Negative_10349	ADA, GSS, OSM, ACSL1, ANPEP, ATG7, ATP5G3, ATP5L, CCL3, CLDN18, DDX18, DIAPH1, DVL1, ENPP6, EPOR, FGFR3, FRAT2, HSD3B2, HYAL1, INPP4B, KDSR, LCAT, LIAS, MAP3K11, MAP3K5, NARS2, NR4A1, NTRK1, NUDT9, OR4S1, OR8G1, PAK7, PAX4, PLCB4, PPP2R2A, PRKCZ, PRNP, PROS1, PTGIS, SLC12A2, TBL1Y, TRAF5, WNT11, ZAP70, TNFRSF6B
Negative_10350	FGB, FGG, TNF, ACTG1, ADCY1, AGPAT3, BET1, C4BPA, CCL16, CYP4A22, EPB41L2, FGF18, FUT4, GGCX, GPD1, GRM5, IFNA2, ITGA2, JAM2, OR4B1, PAPSS1, PDE5A, PFN2, PI4KB, PIAS4, PIGH, PIP4K2C, PLOD2, PRKG2, PROS1, SETDB2, SNW1, TRDMT1, TUBB3, UCKL1, YKT6, PLA2G12B
Negative_10351	PXN, ARPC4, ATIC, AXIN2, C3AR1, CLDN1, COL6A1, COQ3, CSF2RA, ERBB4, FARS, FGF11, GGCX, IL2RG, IL6R, ITGA9, KIR2DS5, MAGI1, OR10A4, OR14J1, OR2T5, PARD3, PAX6, PNMT, PPAP2B, PRKCG, PRPS2, SFRP1, VAMP3, WARS, MAPKAPK3
Negative_10352	ATP6V1A, CEBPA, CSNK2A1, FLT3LG, GMPPA, GNAS, IL21, OR2M2, OR4C13, OR4S2, PFKFB1, SULT2B1, TBL1X, TNFRSF10D
Negative_10353	DDO, LCK, ACSL4, ACYP1, CALML3, CCNH, CHRM1, COL4A1, DUSP2, FPGS, OR10J5, OR2T2, PAK7, PHGDH, RPS6, SETDB1, SGMS2, SPRY4, SRGAP1, UGT8, UMPS, ZIC2, SERPINA1, ST6GALNAC4

Negative_10354	CD6, IL5, KDR, ARNT2, B4GALT3, BMP5, DDOST, DDX50, FCGR3A, FDPS, FGF13, GATM, GNRHR, IFNA14, KLRC3, MAFA, MYL9, NAGLU, NFKBIE, NKX3-1, OR5AK2, OR6K3, PIGL, PIK3CB, PKMYT1, PRIM1, RDH12, SC4MOL, SV2A, UGT1A10, YWHAH, PDCD1LG2
Negative_10355	NF1, OAT, ACVR1, ALDH1B1, ALDOB, BST1, CACNB2, CACNG7, CDC14A, CDIPT, CHIA, CYP2B6, CYP4A22, CYP4F3, DKK2, DPM2, DUSP16, FBXW11, FZD10, GALNTL4, GMPPB, IFNGR2, NT5C1A, NTNG1, OR51I2, OR5B12, PARD6G, PLA2G3, PNPLA4, PPAT, PRKCB, PRKG2, PTDSS1, PYCR1, RETSAT, ROCK1, RPN2, SESN1, SRGAP3, TAS2R42, THBS1, TMLHE, VAV3
Negative_10356	AADAC, OR11I1, PLA2G2F
Negative_10357	CBS, CGA, DAO, ADCY8, AGPAT1, AMY2A, AOC2, ARNT, B4GALT4, CCND2, CFL2, EPHB1, FGFR1, G6PD, HSD17B3, JAG2, JUND, KIR2DL4, LIFR, MAP3K13, MYH2, OR11G2, OR1J4, OR4F15, P2RX6, P4HA1, PDX1, POLR2A, RAB23, RAPGEF2, RRAS2, SHC3, SMAD5, SULT1A4, WASF2, WNT2B, WNT5B, B3GALNT1
Negative_10358	IL3, ACAT1, ACP2, ALDH3B2, AMDHD1, ARHGEF7, BDKRB2, CHRNA7, DAAM1, DIT4, DDX55, FBP1, GLI3, GPLD1, HADHB, HHEX, JAK1, MAP2K5, NAT2, NTF4, OR10P1, OR51S1, OR56A3, OR5H2, OR5K2, OR8B4, OR8J3, OR9G4, PIM2, PLKHA8, POLR2E, PPP1CB, PRKAR1A, PTTG1, RALB, RAPGEF1, RASSF5, RELB, RHEB, RPS6KA4, SARS2, SESN1, SETD8, SUV39H1, TIRAP, VNN1, WIF1
Negative_10359	HK2, CCNA2, DAAM1, HEMK1, HHEX, LDHAL6B, MYH11, MYH13, OR4S2, PFN3, PIGB, SARS, STAT6, VAV3, MAPKAPK2
Negative_10360	CRI1, CSNK1E, CXCL11, ITGA1, OR4F5, PHKG1, PIGF, PLCB4, PPP2R2C
Negative_10361	C7, PVR, GLI1, HSD17B7, IL1R2, OGDH, OR11I1
Negative_10362	CRK, RET, TK2, ACSL1, BMPR2, CCNE1, CD244, CD247, CKS1B, DNMT3A, GGT1, GLG1, GNA01, GPD1, GPT2, GRIN2B, HA02, HMOX1, IL6ST, IL9R, INPP4A, KIR2DL3, MAP2K7, MGAT1, MYH6, NFKB1, OR10AD1, OR14I1, OR1D5, OR2T3, OR52E2, OR8A1, OR8I2, ORC6L, PDE7A, PHKG2, PIGH, PPA2, PTPRM, PVRL1, SMAD2, SMPD3, SMURF1, TYMS, UGT2B11, ARHGEF12, ATP6V1B1, SERPINA5
Negative_10363	EPO, NPY, ALDH1L1, ATP5D, CLTA, EPHB3, LTA4H, OR1A1, OR52E4, SCP2, SORD, VTI1A
Negative_10364	ACP5, ALOX12, APLP1, BIRC5, BMPR2, C4BPA, CD274, COX15, EDA2R, FMO2, GFPT1, HSPB1, IL22RA1, MINPP1, MYLK2, NCOA4, OR2G6, OR2H2, OR2M3, OR52E2, OR5AS1, OR6Y1, OR7C1, OR8A1, RUVBL1, ULBP2, PLA2G12B, SUV420H2
Negative_10365	DDO, ALG10, ARHGAP5, ARHGEF6, BLVRA, CHRDR, CLDN1, CYP21A2, CYP2A7, DFFB, FMO2, GRIN2A, GSTA2, HTR5A, IL23R, INPPL1, NFKB2, OR10H4, OR10P1, OR51G1, OR7G3, OR9Q1, PDHA2, PPARG, PROC, PTPRF, SLC2A4, SPCS3, CACNA2D1, CACNA2D3, SLC25A31
Negative_10366	C8A, DCK, ALG13, CCKBR, CNTN1, CSF2, CXXC4, DPM1, FGF19, HGSNAT, IAPP, IFNAR1, LDHAL6A, LRP6, MAP4K2, MGST3, MYH10, NLGN2, OR14C36, OR2B11, PFKFB1, RGS3, TAS2R16, TGFA, ATP6V1C1
Negative_10367	C9, F8, ATP6V1A, CALML5, CCR2, CHIA, CNTN2, CREB3L1, ERO1L, GALNT11, GLUD1, GRIN1, GRM5, IL15RA, KITLG, NEGR1, OR1L1, OR5AS1, PEMT, PER2, PLA1A, PPM1B, PRNP, PSEN1, ROCK2, RPRM, SMAD4, ST6GAL1, TNFSF12, VNN1, WNT3A, WNT9A
Negative_10368	AKT2, ASNS, BTRC, CCR9, CDC6, CLDN3, CREBBP, CYP26B1, EIF4E2, GRIN2D, HEXA, MAP2K4, MYL9, NOS3, OR1F1, PIK3CD, PPP1R1A, CACNA2D4
Negative_10369	AARS, ACPP, AOC2, BMP7, CCL14, CHKA, COX10, CXCL13, CXCL2, DEGS1, FADS2, FIGF, GAB1, GIT1, GJD2, GLB1, GLI1, HMOX2, ITGA6, JAG2, KLK3, LDHC, MAP3K2, NCK1, NCOR2, NRG3, OR4K1, OR51B4, OR5D16, PHKB, PI4KB, PLA2G2E, PPAP2B, PPCDC, PPM1B, PPM1D, PPP3R1, PYCR1, RBX1, RRAS, SETMAR, TIRAP, TNFRSF9, TYMP, WNT2, YES1, YWHAH, ATP6V1G3

Negative_10370	BTD, TXK, ADIPOR1, CCL17, CCNB2, CKMT2, CLDN8, COL4A2, CYP26B1, CYP3A4, DAPK1, FCGR3A, GRM1, HRAS, HSD17B4, IFIH1, IL2RG, MTMR1, OR14A16, OR4C46, OR4K5, OR51B5, OR51D1, ORC2L, PARS2, PHKA2, PIGN, PLCD4, PP2R1B, PRKAG3, RHEB, SLC27A5, STAT6, TAS2R4, TGDS, TNFSF10
Negative_10371	CCL14, CFL2, CHEK2, CKMT2, CTBS, CTPS2, EPHB2, HADH, ITGAM, ITPKA, LRP6, OR13C9, POLR1A, PRKAR1A, PRKCB, ST3GAL1, VEGFB
Negative_10372	ADC, GNS, ABL1, ACSM5, ALG10B, ALG6, ARNTL, ATIC, ATP5E, BLVRB, CACNA1H, CDKN1B, CNTF, COL6A2, CTSG, DGKQ, ENTPD5, FECH, FGF2, GAB1, GGCX, GRPR, GSTK1, GZMA, HHIP, IL20RA, IL2RB, IL3RA, LAMC3, MYH15, NEFH, NP R2, NT5C1A, OR10H2, OR4C46, OR6B2, PAK7, PANK4, PIM1, POLD3, PTGER3, SCLY, TUBB2B, VANGL1
Negative_10373	DLD, ACAD8, ACSM1, ATP5L, BRAF, CPT1B, IDI1, IL8RB, ITGA2B, KIR2DL3, LRP5, MADCAM1, OR1G1, POLE, PHOSPHO1
Negative_10374	ADIPOR1, ALAS1, ALG11, ALG13, BUB3, CD74, COASY, DCTN1, EPHA8, GPX5, HPSE2, ITPA, LAMA4, LTC4S, MGAT4B, NMNAT3, OR13C3, OR1S1, OR2A5, P2RX1, PARD6B, PER1, PLAU, PPP2R1B, PTPMT1, PTPRR, STK4, ARHGEF12, HLA-DPB1
Negative_10375	TFG, ATP5B, CNGB1, GRAP2, KLRC4, PDGFA, PIP4K2B, SLC9A1, TAS2R7, VDAC1
Negative_10376	AK2, ID3, MPI, AMD1, ATP6V1H, CACNB3, CFTR, COX15, CTSB, CTSL1, CXCL6, DKK2, DPAGT1, FGD3, FSHB, GATM, GNAQ, HLA-G, HPRT1, IL17RA, IL7R, IMPA2, JAG1, JAK3, MAP3K12, MOV10L1, MYH8, NCF4, NOS3, OR2T3, OR4C46, OR4L1, OR7G3, PECAM1, PLCD4, PLCE1, POLD2, PRKAB2, PTPN6, SLC2A1, SOCS4, SORD, SPP1, TBXAS1, CACNA2D3, HSP90AB1
Negative_10377	DUSP2, GABARAP, GALNT7, LEPR, MNX1
Negative_10378	STS, ARPC2, ASAH1, BIRC5, CLTA, COL5A3, FGFR3, GNPDA1, NCR2, NT5C2, QARS, SMARCA2, SPCS1, TNFRSF13B
Negative_10379	LSS, ALG3, BMP6, CACNG3, CD72, CHRM1, CHRM2, FGFR4, HMGCL, IFNW1, IL11RA, NAT1, NODAL, NOX1, OR10C1, OR2M3, OR5H6, PFAS, PIGB, PPP3CB, RAB23, RBL2, SETD1A, SETDB2, SOAT1, TAS2R16, TUBB4, ULK1, WNT3A, EIF4EBP1
Negative_10380	AOC2, AVPR1A, BMP4, ETNK1, SOCS5
Negative_10381	CD2, ACMSD, ARPC1B, ATG12, BNIP1, BUB3, CACNG2, CCL17, CCND2, CDS1, CDS2, CYP2A13, FGF13, GALNT9, HNF4A, IL17RB, IL8RA, IRAK3, ITGAM, MTHFD2, NCF1, NR1H3, OR11H6, OR4K13, OR4S1, PDCD1, PDE11A, POLR1E, POLR2C, RCHY1, SH2D2A, SLC25A4, SPRY4, SRD5A1, ULBP3, VAV1
Negative_10382	F7, GHR, ACAT2, ACO1, APPL1, ARSE, CD46, CHRD, GNRH2, GP1BA, HTR2A, IFNA2, IFNAR1, IL11, IPMK, NEFH, OR10G7, OR13F1, OR4C15, PLCB2, POLE3, SARS2, SC4MOL, SPHK2, TSC2, UBE2K, VASP, XCL2
Negative_10383	BMPRI1A, CDK2, NEUROG3, OR5J2, PANK3, SEMA3A, SPTAN1, SULT1A1
Negative_10384	ADA, ADK, PLG, SHH, ACAA1, BCAT2, CDKN1B, FABP3, FLOT1, GALNT6, GMPR, IL12A, IL13RA1, NCF2, NFAT5, NFATC2, OR10A2, OR10A3, OR1D2, OR52K2, OR7C1, PER3, PFKFB3, PGAM1, PRDX6, WNT4, PLA2G12A, TNFRSF12A
Negative_10385	HGD, ADORA2A, BCL2L1, GSTM1, MAP3K7, NTF3, OGDHL, OR8G1, PDGFA, PPP2R5B, PTGFR, RASGRP4, SIAH1, VASP
Negative_10386	APAF1, DUSP9, GALNT10, GNA12, MAP4K2, OR1S2
Negative_10387	CAT, AHCYL1, AMPD2, DAAM1, GUCA1C, HLA-DRA, MYLK, NAGA, PIGO, RBL1, SH2D1B, YARS2
Negative_10388	DLD, F2R, SDS, TNF, APLP1, BIRC2, CCR8, CDH4, CSF3, CYP2C18, FGF10, FIGF, GALK1, GYS1, IMPDH1, KIR2DS5, MAN2A1, MAP3K4, MAT2B, MLLT4, NEFH, OR10S1, OR2B11, OR2T29, OR2T3, OR4S2, OR4X2, OR52K1, OR7C1, ORC1L, PDE1A, PDE6H, PTGFR, RBPJL, SETMAR, SORBS1, TFPI, THBD, TNFSF14, UBA7, YWHAQ, ZMAT3, MAP3K7IP2, MAPK8IP1

Negative_10389	EDA, RFK, BET1, C3AR1, CCL15, CCL2, CD28, CD40LG, COX15, DBF4, DPYSL2, DUSP6, DUSP7, ENTPD2, FLOT1, FZD4, GCH1, GLI1, HMBS, MDH1, NT5C1B, OR13C5, OR1S2, OR3A2, OR5AN1, OR5C1, OR6T1, ORC4L, P2RX6, PARD6B, PCK2, PIM1, PIPOX, PKLR, PRODH2, PTCH2, PTPRB, SNAI2, SOCS3, SSH3, TFP1, ZNRD1, PNLIPRP2, TNFRSF1A
Negative_10390	ABO, WAS, CCNE2, ENTPD1, KIR3DL1, MYH7, OR1I1, PGAM1, PSEN1, PSME2, S H2D1B, VAMP3
Negative_10391	OTC, ACYP2, AMDHD1, CDKN2A, CSF2, FGD3, LRRC4C, MYH8, OR4C12, OR6Y1, OSMR, PDXP, PECAM1, PIGQ, RHOA, SEPHS1, SFRP5, SGPP2, SOCS4, STX1B, S T6GALNAC6
Negative_10392	ASCC3, IL8RA, KLRC2, NARS, NMNAT2, OR13C8, HLA-DPB1, PLA2G12A
Negative_10393	C8B, PTS, AHCY, APBB1, B3GALT5, CD226, CES7, DOLPP1, EIF4E, ELK4, GPX5, IKBKG, IL13, IL1R2, INHBA, ITPKB, KIR2DS4, MGAT1, NAT5, NCKAP1L, OCLN, OR10R2, OR1I1, OR1S2, OR5T1, PARVA, PAX6, PIGC, PPP2CB, PPP3CC, THBD, THBS4, WASL, WHSC1L1, ZFYVE16, MAPK8IP3, SERPINC1
Negative_10394	HPD, BBC3, FLOT1, FRAT2, GALNT3, NPR1, OR8J3, PLCB3, PTGER1, TNFRSF6B
Negative_10395	F2R, TXK, ACTB, ADAM17, ALOX12, NT5C, RAC2, XCL2
Negative_10396	ALG10, CYFIP1, IARS2, ATP6V1C1
Negative_10397	GBA, AGPAT3, FGF14, ITGAL, OR52E8, PKM2, VDAC3
Negative_10398	F9, B4GALT3, BDH2, CCNB1, ETS1, FBP2, GALNT12, HEXB, NT5E, OR1L3, OR5T2, SV2B, TM7SF2, UGT2B10
Negative_10399	ADK, AK5, INS, MAG, ABAT, ACADL, ACSM2A, ACSS2, ACTN1, ALDH1B1, B3GNT5, CBR3, CD247, CD40LG, CDK2, CLDN1, CNGA4, CSNK1D, CTSB, CXCL10, EFN A5, FDPS, GLG1, GOSR2, GPT2, GYS2, HADH, KRAS, NKD2, OR10A6, OR6Q1, PD E5A, PDGFRA, PECAM1, POLD2, PRKACA, RUNX1, SLIT2, SOCS2, TAS2R49, HLA-DQB1, HLA-DRB4, MAPKAPK2
Negative_10400	MET, ACVR1C, ADRBK2, ATP5C1, CLDN3, CX3CL1, DAD1, DDX23, DGKA, FUT5, G6PD, GMPPB, GNAO1, GUCA1C, GUCY1A2, HMGCL, ITGA2, LLGL2, MAP3K5, NR XN2, OR10H1, OR5T2, OR9Q2, POLE4, SPHK1, TAS2R49, TCIRG1, TFDP1, TPM3, CSNK1A1L
Negative_10401	AMY2A, CHPT1, CYCS, FOSL1, NFASC, NOTCH3, NUDT12, OR1S2, OR2T12, PAX6, POLR1D, POLR3K, RETSAT
Negative_10402	C5, DBI, ACYP1, ADH1B, AKT2, CACNB2, CCR3, CMBL, COMP, CTPS, CX3CL1, CXCL6, EREG, FUT8, GAD2, GGT1, HEXB, HSPA8, MGLL, NFYB, OR10H3, OR1A1, OR1A2, OR2H2, OR5J2, ORC6L, PGM2, PIK3C2A, PIK3R3, PLCB2, PON1, PPP2R5D, RDH16, RPIA, SEMA4F, SESN1, SULT1A2, TRPC1, UGT2A1, UMPS, WNT2, ZIC2
Negative_10403	ACTN4, AKR1B1, APOC3, GALNT14, PISD, PRSS1
Negative_10404	SRF, AMPD1, ARPC1B, ARSE, ASPA, CHRNA7, CYCS, DGKZ, DHDDS, ENTPD5, HLC S, IDUA, NAGK, PDE3A, PISD, PRKACA
Negative_10405	AK3, FST, GK, NOG, AGPAT3, B4GALT6, CAMK2G, CCNB3, CHAT, CHIT1, COASY, CTNNB1, CYBA, DDX47, FGF6, GALNT5, GCAT, GRIN2D, IL22RA2, INHBB, ITCH, KLK3, KYNU, LIPA, MAML2, MBL2, MYH6, NCK1, OR10AG1, OR1M1, OR4M1, OR51G2, OR5C1, OR6Q1, OR8I2, PGAP1, PIK3C3, PPP2R5B, PTPN11, QPRT, S EMA3A, SEMA7A, WNT16, PAFAH1B2
Negative_10406	ITK, MYC, ACADVL, APOA2, ARPC1A, ATP5J, BLVRA, CCL14, COX10, CYP4A11, DERL1, ETNK2, FGF18, FTMT, GALNT11, GLB1, GZMA, IL15RA, IL29, IRAK2, KLRC3, MAP2K3, MDH2, METTL2B, MGST1, MYL9, OR5M8, OR6B2, P4HA2, PAI CS, PIGA, PON2, PPP1CB, PTPRF, PTPRR, SDC4, SKP2, STAT2, STX1B, TBL1Y, TRADD, TRAF4, TRHR, WNT3, ATP6VOA2

Negative_10407	AMT, C2, EDA, IL9, PTS, SMO, B3GALT4, BUB1, CASP9, CLDN2, CNTNAP2, CYP26C1, DAAM1, DDB2, DDX56, EPHB3, EPRS, GSTA4, HRH1, IL21R, ITGAM, KNG1, MAOB, MAP3K7, MDM4, NCOR1, NCR1, NME7, NOS1, OR10Q1, OR52B4, OR5L1, PIP5K1B, PPM1A, PRSS2, SELE, SH3BP2, SIPA1, TP53, UGCG, VEGFB, WWP1
Negative_10408	ACTN4, B3GALT6, CCL14, CCL15, CCNG2, CD8A, CDK4, CDKN1C, CTSS, DPYD, G6PC, IL8RB, IRF5, LPAR1, MAN1A1, MASP1, NFKB1, NUMBL, OR13F1, OR1M1, OR4B1, OR5P3, PANK3, PON2, ROCK2, RPN1, SMC1A, SPP1, SPTAN1, UBE2L3, YARS, MAP3K7IP1
Negative_10409	DCN, EBP, TK1, B3GALT2, C1QC, CADM3, CTTN, CYP17A1, DGKH, DTYMK, GALK2, GNPDA2, HLA-F, IRS1, LTB4R2, MAPK11, MICA, OR10T2, OR2AE1, OR2H1, OR4E2, OR5B12, OR5D18, PDE6G, PFKM, PLD2, PPP1CC, PRKAR1B, PRKCE, RASSF1, STK36, TIAM1, TLN1, TP53, TRAF4, UGCG1, UROC1, WNT9A, ST6GALNAC5
Negative_10410	BTD, FUK, IDS, SPN, ACPP, ADCY9, ADRA1B, ALPI, ASRGL1, BNIP1, CAV2, CD2, COMT, EXTL3, GCNT2, GLUL, GMS, HAO2, IGF1R, INHBA, ITGA10, MAP4K3, MEF2C, MYH4, NADK, OR10A2, OR1A2, OR7C1, PAK3, PARD3, PDE4B, PER2, PNPLA3, PTGER3, PTPRM, RDH5, SARS2, SLC9A1, SYNJ2, TNFSF10, VDCA1, WBSR22, PLA2G12B, ST6GALNAC4
Negative_10411	DDO, STS, ABAT, ACOT11, ADCY3, BUB3, CDC16, CHDH, CNGA3, DUSP7, MGAT5B, NTRK1, OR10A6, OR1G1, OR2T11, OR8K5, OSMR, PPCDC, PTCH1, RERE, ROCK2, SMARCA5, TALD01, THY1, ZFYVE16, ATP6V1B1
Negative_10412	ALG8, HDAC1, PDGFC, PRPS1, RHOQ
Negative_10413	CBS, CP, IL5, PTS, SI, ADH1A, ADRA1B, ALOX15, APOC3, ASCC3, CASP3, DUSP5, EGLN1, FGFR4, GALNT10, GALNT14, GDF6, GLUL, GNPDA2, HLA-DOB, HLA-G, HRH1, IGSF5, IL18R1, ITPA, MADCAM1, MAML3, MKNK2, NT5E, OCRL, OR5H2, OR5L1, PHKG2, PLA2G5, PLAUR, PMM1, PPP2R2B, RARS2, RRM2B, STX1A, SV2C, TLN2, TUBA1B, UGCG2, WNT5B
Negative_10414	PLG, ADCY6, ATP6V1A, CES7, CPS1, E2F5, FGF23, GALK1, IL4R, LYPLA1, MAD2L1, MAP2K4, NCK2, NMNAT1, OR10A3, OR10J3, OR1A1, OR6N1, SLC27A1, SNW1, STK11, STK3
Negative_10415	ITK, PGF, EPHA6, NEU1, OR5AS1, QPRT, WNT6
Negative_10416	FYN, KMO, PXN, AASDH, ACSS2, ALCAM, ALG5, CADM1, CD247, CDC27, CPT1C, DGAT1, DPYSL2, EFNA4, EREG, GOT2, HSPA1B, HTR6, IFNA14, IFNG, IGSF5, IL8RA, KNG1, LFNG, MCEE, NOS1, NRXN1, OR13G1, OR4F17, OR51V1, P4HA2, PDE1A, PDE1C, PDE3B, PIP4K2B, PLOD1, PRKCB, RASGRP4, RERE, RRAS2, TACR1, TAS2R10, TAS2R9, TCF7L1, TP53I3, TRIP10, PAFAH1B2, PNLIPRP1
Negative_10417	CAD, DDO, F2R, FLAD1, HPRT1, HTR2B, IL18R1, IL4R, NT5C3, OR1F1, OR1Q1, PANK3, PGM1, PLXNA2, SH3BP2, SHC4, TLR3, TNFSF9, USE1, WNT8B, YWHAZ, TNFRSF13C
Negative_10418	GLA, GPT, PRL, TPR, ADH4, ANAPC11, APAF1, ARD1A, ARHGEF1, CCR7, CEBPA, EPHA8, FOXA3, GARS, GJA1, GNPDA1, GRIN2A, IFNA7, IL23R, INHBE, IRAK3, ITGAL, MAP4K3, MOV10L1, NT5C2, OR2T33, OR51Q1, OR6C1, PROC, SUL2B1, TAS2R49
Negative_10419	IL1B, PNLIP, PYCRL
Negative_10420	CKB, F10, AMY2A, ARG1, B4GALT5, BACE1, CHPT1, CNTNAP2, COQ3, CSNK2B, CUL1, CYBA, DHRS3, EFNB1, EFNB2, HIP1, IL11, IL6R, MAML1, MAP3K2, OR1S2, OR2AE1, OR8K1, PDE2A, PLAUR
Negative_10421	PXN, CAMK4, CREB1, DAD1, ENTPD1, EPB41L2, EPHX2, GLG1, IRAK1, MAT1A, MTMR2, OR52J3, OR5B12, TAS2R49, WARS2
Negative_10422	EI24, OR6C76, SEMA4A, SLC2A2, TYMP

Negative_10423	ACAD8, ADSSL1, AOX1, APC2, ATP5H, CACNA1F, CD22, FUT6, GFPT1, GYS2, H PRT1, HRAS, HSPA8, IDH3B, LDHC, MYH6, NOX1, OR11L1, OR52I2, OR52L1, O R56A4, PIGH, PLA2G2D, PRKCH, PYGB, RIPK1, SMAD4, SMAD6, SPI1, STX8, T UBB2A, UGT2A3, VKORC1
Negative_10424	CACNA1H, CACNB4, FDF1, FZD9, GSTA1, GSTA4, ITGA5, NAMPT, NAT5, NR1H 3, OR2D2, P2RX7, PARD6A, PIGU, PRIM2, RXRA, TAS2R9, TNFSF18, ULK2
Negative_10425	PTS, TXK, ACACA, ACP5, ANAPC7, CES7, COMP, CSF2RB, ENPP2, ESPL1, EXOC 7, GADD45B, GFAP, GNAI1, GUCA1A, HAAO, IL2RG, NAT2, OR2H2, OR51T1, OR 5J2, OR6K3, P2RX3, PDE6D, PDE8B, PIGA, PLXNB2, PPP1CB, PRIM1, PTPRZ1 , UGT2B4, AASDHPPT, SERPINE1
Negative_10426	AUH, ALG6, FGF7, GOT2, GUCY1A3, IRS4, OCLN, OR10G8, OR2D2, OR5K2, PKM 2, WASL
Negative_10427	C8A, CSK, EDA, IVD, VTN, APAF1, APOA1, CLTCL1, CYSLTR2, DUSP3, EPHB1, GALNT14, GALT, GUCA1A, LRRC4C, MARS, OR2M2, OR51F2, PAX4, PGM2, PSME 3, PTPN11, PYCR1, RASGRP4, SESN1, SETD1B, TYMS, TYRP1, ARHGEF12
Negative_10428	HK1, MOS, OGT, PLN, SFN, ARHGAP5, ATP5J, BTRC, CASP7, CKS1B, CPT1B, DU SP2, EI24, ENTPD6, FMO1, GALT, GNAI1, IL2RA, LAP3, MGAT2, MYH10, NAGA , OR13C8, OR2W1, OR4C46, OR6N2, OR8H1, PDGFC, PIAS4, PIK3CD, PLOD1, P NLIP, POLR2B, PTCH1, SESN3, SIGLEC1, SOS2, SPP1, STAT3, TACR3, TAS2R 48, TRMT11, TSHR, TUBAL3, ULK3, UPRT, YWHAG
Negative_10429	ADCY10, ALG10, ATG3, CASP6, CD27, EHHADH, HADH, LRDD, PARS2, PIK3C2B , SPCS3, SRGAP1, STK36, TNXB, ST6GALNAC5
Negative_10430	ATP5E, CD34, CD48, CDC14A, CD01, NKD1, OGDHL, PLOD3, SDC1, SMARCA2, T PK1
Negative_10431	INS, IVD, ACP1, BIRC3, CDS2, CLTC, DGKI, EPHB4, F2RL2, GNA12, GRIN2D, LCMT2, MAP4K4, OR2S2, PLCG2, ST3GAL1, STX3, TAS2R49, THBS4, AASDHPPT, SERPINA5
Negative_10432	AMH, AKR1C4, ALDH3B1, ATP6V1D, CLTCL1, CREB3L2, CTNND1, DHFR, DUSP1 4, DVL3, GSTM4, IL21R, IL23A, KIR2DL1, MAGI2, MAP3K6, NLGN1, NRAS, OP LAH, OR2M4, PIGH, PLCD4, PMM1, PRSS3, PTAFR, TRHR, VAMP4
Negative_10433	MAP3K8, OR5AN1, PFKP
Negative_10434	PGD, ACTA2, ALDH1L1, CACNA1B, CCKBR, CDC20, DPYSL2, F2RL3, FUT5, GST M4, HHEX, HTRA2, IFNA6, IFNG, IL28RA, NLGN1, PCYT1B, PIP5K3, PLA2G10 , PLA2G2F, PTTG1, RBPJ, RRM2B, SLC2A4, ZIC2, ATP6VOE1, MAP3K7IP1
Negative_10435	ADIPOR1, AGXT2, B3GALT5, BAAT, CTF1, DIAPH2, ELK4, EXT2, GAMT, GSTA3 , HNF4G, IL29, ITGB1, KLK3, MAGI2, MAP2K5, MYLK3, NLGN3, OR2M7, OR51M 1, OR5P3, OXSM, PIGV, PPP1R3C, PRKCB, PRPS1, RAP1A, SLIT1, SRGAP3, ST X2, TNFRSF9, TUBAL3, SERPINF2
Negative_10436	AMDHD2, CCL4, CDKN2D, COQ6, EPHA7, GMPR2, HTR2A, ITGA2B, LARS, MLLT4 , MYH7, NME7, OR10G3, OR5H6, SAT2, SFRP2, STK3, TAS1R3, UGT2A1
Negative_10437	CTH, EGF, ID3, ATN1, ATP6V1H, CCDC6, CD74, CDH1, CHRM3, CLTC, CSF1R, C TBP2, CYP3A7, DGKZ, DUSP8, DVL2, EGLN3, FCGR3B, FUT6, FZD4, JAM3, KAT 2B, MAP3K5, MOV10L1, PLA2G10, POLR2H, RFX5, SH3BP2, SMPD3, SNAI1, SO AT1, TALD01, TLN2, VAV1, MAPK8IP1
Negative_10438	ANAPC5, CCNB1, CDS1, IDH1, MLLT4, PDGFB, RHOD, SFRP1, SPRED2, TAS2R4
Negative_10439	ABL1, ACADVL, CCL24, CD8B, DCTN1, GSTM1, ICOSLG, IFNA7, OR4D5, OR4K1 7, OR5B3, PARD3, PAX8, PFKP, PIGL, PMAIP1, SETD2, TRPM5, ATP6VOD1, SE RPINB5
Negative_10440	DHH, CCNB1, CSF1R, IDH2, IFNA10, IL28RA, KIR2DL1, OR10A5, OR2C3, OR5 2B4, PAK2, PIK3CB, PLA2G5, PPOX, SEMA4D, ST3GAL1, TUBAL3, VDAC3, GAB ARAPL1



Negative_10441	AMH, CSK, F8, ACP6, ADCY6, AMY2B, ANAPC4, ATP6AP1, C7orf16, CCL3, CMP K1, EPAS1, FGF19, GALK1, HSD3B7, IL4R, IL7R, IPPK, LDHAL6B, NFATC2, NR1D1, OR10H1, PIGN, PPP2CB, PPP2R2D, PPP2R5A, PPT1, PRDX6, PTPRM, SEMA4F, TAS2R13, TIAM1, TLR4
Negative_10442	ITK, LCT, ADCY3, AGRN, APOA2, ARHGEF4, ATG12, ATP6V1F, CFLAR, CLDN7, CSF2, CSNK1A1, EHMT2, FGF10, G6PC2, HRH1, HSPB1, INHBE, MAD2L1, MAP2 K2, NCAM2, NCOA4, OR4A15, OR4F17, OR51Q1, OR5R1, OR8U1, PDE2A, PLCD3, PLCG1, PRPS1, PVRL3, RPS6KA6, ST3GAL3, TLR2, TUBB3, UGT2A1, UNC5C, ATP6VOA1, CTNNBIP1
Negative_10443	GSN, AARS2, BBC3, CTBS, GALNT2, IL13RA1, MMP7, NRCAM, PFKP, PIGN, PLC D4, SLC2A1, TSC1, ST6GALNAC6
Negative_10444	FH, FYN, APLP1, CDK5, CLCA4, CSF2, GNAQ, HLA-DOA, OR4N5, POLE4, QARS, SOCS5, B4GALNT1, HLA-DQA2, TNFRSF12A
Negative_10445	IL5, ADSL, ATP2A2, B3GALT6, C9orf95, COL4A2, CPT1A, CSAD, CXXC4, GAB ARAP, IDH3G, IL1A, OR2AG1, OR51B5, OR8H1, PFKL, POLA2, PTCRA, RHEB, S LC12A2, SLIT2, TKTL1, CACNA2D2, ST6GALNAC6, TNFRSF6B
Negative_10446	ADH5, CARS, ENPP3, GCNT2, PARS2, SAT1
Negative_10447	DCT, MOS, ALS2, ANAPC1, APH1A, CAMK2G, CD79A, EPHA3, HMGCL, LAMB3, MAP3K1, NCK2, OR12D3, OR2A2, OR2B2, OR4C15, OR4C6, OR51T1, OR8B12, RPS 6KB1, SMPD3, ST3GAL4, TM7SF2, TPK1, HLA-DQA2, ST6GALNAC6
Negative_10448	CD4, CFH, GP9, PXN, APRT, CALML6, CDH2, DARS, DLL4, FARS2, HLA-DOA, IDH2, IL7R, IRS1, ITGB5, NKD2, NUDT12, OR10P1, OR52K2, OR6C75, OR9Q2, P2RX3, PDE2A, PDGFRA, PLCB1, PRLR, RCHY1, ROCK2, ST3GAL6, XCL1, GABARAPL2, HLA-DPA1, SUV420H2
Negative_10449	AK5, FES, ZYX, A4GALT, ALCAM, APBB1, ASAH1, ATF4, ATN1, CFL2, CXCR3, DPYSL2, ENPP7, ENTPD7, EPHB1, ETS1, FUT1, FUT3, GPT2, GRHR, GSTA3, GZ MB, HAGH, IL19, IL1A, LAMB4, LTA4H, MAOB, MAP4K2, MTFMT, OR2L13, OR52 K1, OR8H2, PPT1, SIGLEC1, SUCLG1, TAS2R5, UCK2
Negative_10450	DDO, GK2, ALDH5A1, B3GAT3, CCKAR, CHIA, DVL3, ENAH, FLT1, GMPPA, IFNA 16, KIR2DS4, MICA, MYH1, NCKAP1L, NFATC2, OR10A6, OR1G1, OR1N2, OR3A 2, OR8J1, PIGU, PIK3R2, PIP4K2B, PLA2G5, POLD4, PTDSS2, TUBAL3, ATP6 V1G1, CTNNBIP1, TNFSF13B
Negative_10451	HYI, FCGR3A, OR4K2, PCCB, PDGFD
Negative_10452	BAD, BID, EGF, IL6, ME3, ACHE, ACSL4, ALOX12B, ARNT, BDNF, BUB3, CREB3 L2, CSNK1G2, CTLA4, DHRS4L2, FOXA2, GFPT1, GNRHR, IL12A, IRS1, LAMC1, LCAT, LTBR, NPR1, OR11G2, OR13C4, OR2T34, OR52E4, OR6K2, OR8A1, PAK 3, PARD6G, PAX4, PLA2G2A, PLK1, POMC, PRSS1, PYGM, RRM2B, SEMA4B, SV2 B, VAV1, XCR1, XYLT2
Negative_10453	ADC, FST, ABAT, ACADL, ARRB2, C4BPB, CCNE1, CDH15, CYP17A1, FLT3, IL2 3R, IRAK1, NARS, OR6N2, PAK7, POLA1, SAT1, SKP1, SMC1A, TNFSF10, TPH1
Negative_10454	FUK, PAH, WAS, ACSL3, ADAM10, APOA1, CD36, CLDN2, CPT1C, CTPS2, CYP19 A1, EXTL3, FUT9, GALNT13, GMPPB, GNPDA2, IARS2, IFIH1, IKBKG, LAMB2, LILRB3, MINPP1, MMP14, MMP9, OR2A5, OR2T3, OR6T1, OR7G1, OR8K3, OR9I 1, PFN2, PLCZ1, POLR2E, PRKG2, PSME2, PSPH, RASGRP2, RDH12, SHMT1, SN AP25, SPRY3, SRGAP2, TLR2, TLR3, TMLHE, ATP6V1B2, TNFRSF11B, TNFRSF 1A
Negative_10455	CD4, LAT, ALDH2, ALG10, ARHGEF1, B3GALT2, DHRS3, DUSP5, IL13RA1, LEP R, MYH6, NANS, NCF1, NFKBIB, NFX1, NUMB, RARS, SDHD, TAS2R10, WNT7A
Negative_10456	APP, F11, LEP, ACP2, ALDOB, CACNA1G, CD27, DTX4, GALNTL2, GNG13, IL5R A, NGEF, NODAL, OR2A2, OR4C12, OR51S1, OR8B12, PLOD1, PRKCB, ST3GAL1, TNFSF8
Negative_10457	APP, DDO, FAH, ACVR2A, ATP2A2, C3AR1, CD40, CHRNA7, EPHB4, GADD45G, GALNT7, GRIA2, LIPF, OR52M1, OR52R1, OR6C2, PAX8, PIAS4, PLXNB2, QPRT, SEMA3D, TAS2R14, TIAM1, ZMAT3, MAP3K7IP1

Negative_10458	C8A, APAF1, CACNB3, FGFR1, GPAA1, GRIN2B, IFNA2, OR13C8, OR2B11, OR2K2, SMARCA2, SPRED2
Negative_10459	HAL, PDC, ACOX3, ALG1, BDH2, CACNB1, CDC25A, DHRS3, EI24, GADD45B, IL6R, MAML2, NPAS2, OR1J4, OR8B12, PER3, PLA2G6, SIPA1, VDAC2, SUV420H2
Negative_10460	CFH, FOS, ACSS3, BDNF, C9orf95, CACNB2, CASP10, CHRM3, COL5A1, CSF1, CYP2C19, ELK4, EPHA4, FOXO3, GALNT6, IL10RA, IL10RB, INPP5A, MAP2K6, NCOA4, NEGR1, NLGN2, NUDT12, OR2H2, OR8D1, OR8H2, PIGW, PNMT, POLA2, POLR2D, PPP2R5A, PRPH2, RASGRP4, SHISA5, SOCS7, SUCLG2, TOLLIP, UGT2A3, WNT1, ATP6V1G2, ATP6V1G3
Negative_10461	ATP6V1D, GADD45B, MYH6, OR10C1, OR7G3, STK3, TAS2R1, TGFB2, TNFRSF10D
Negative_10462	VTN, ALAD, APRT, CDKN2C, CYP4A22, DEGS1, DGKE, EPHA4, EPHX1, FCGR3A, GNA12, GSTA4, GSTO1, HIF1A, IFNA8, LRP6, LTA4H, MEF2C, OR10G8, OR10P1, OR1G1, OR1L3, OR2A12, OR2M2, OR52L1, OR5AP2, PGLS, PLA2G3, PTGES, SDC4, ST3GAL6, SUCLG2, WNT10A, WNT10B, ZFYVE16, CSGALNACT1
Negative_10463	B4GALT2, CDKN2B, DHX58, GUCY1A3, HPRT1, NEUROG3, NPR2, OR6B3, OR6F1, PDPK1, PLA2G2F, TUBB2A
Negative_10464	CD4, HDC, ID2, ADRA1A, CDKN1A, CLDN4, DOLPP1, ENTPD7, FGFR4, HMGCR, IDH3A, IRF7, MYH6, OR14I1, OR2W1, P4HA3, PHKB, PIPOX, PLD1, SEMA7A, SLC2A4, STAM2, HSD17B10, PDCD1LG2
Negative_10465	ACOX1, ACYP2, ADRA1B, ALPL, ARSB, ATP5L, CCL1, CCR7, CHPF, CLTCL1, COL3A1, COL6A1, CYP1A1, DARS2, DDB2, DGKA, DPYSL2, ELK4, FGF23, HAAO, ITGA11, LRAT, LYPLA1, MAP3K2, MAP3K6, MCCC2, MECR, OR11L1, OR4D5, OR5P3, PIAS1, POLR2I, POMC, PPP2R5B, PTPN5, SEMA7A, SLC25A4, TFPI, UGT2B10, UGT2B28
Negative_10466	ITK, SHH, AOC3, ARPC1B, CLDN5, CSNK1A1, EGLN1, GARS, GPD1L, HAO2, ITGA1, LEFTY1, MAFA, MCAT, NRG2, OR2A12, PER1, PIK3CA, POLR3G, PTPMT1, RDH5, RPSA, SH3BP2, SLC27A1, SMARCA2, ST6GAL1, WARS2
Negative_10467	ACACA, CADM3, CD22, COASY, CYP2U1, DDIT4, GRM1, NFKB2, OR10G8, OR4M2, OR56A4, OR5AC2, OR5AK2, PHGDH, PHKG2, PVRL2, SORD, TAS2R50, PPP1R12A
Negative_10468	PLG, C1QB, GALNT8, PGAM4, STX10, SUV39H1, WHSC1L1
Negative_10469	FAH, FUK, MAG, ACVR1C, ADSL, ARG2, CD226, CDC20, CDKN1B, CHDH, CYFIP1, DKK2, DLL4, DMGDH, DUSP5, FGF1, GAL3ST1, HMGCL, ITGA6, KYNU, MAP3K7, MAT1A, MGAT3, MPP5, NOX3, NPR2, OR2T8, OR52J3, OR52N4, OR52W1, OR5AR1, PDE9A, PDPK1, PLAT, PPAR, PPP2CB, PRSS1, RAP1A, RAPGEF3, RRM2B, SLIT1, SMAD7, TFDP1, TKTL2, UGCG, KIR2DL5A
Negative_10470	CD2, MPL, ACSM1, ACSM3, ALDH1A3, ALDOC, B3GALT6, BMP2, BPGM, CD14, CD55, CNDP1, COL4A6, CRB3, DARS, F2RL1, GARS, GDE1, HYL2, IFNGR1, IL17RB, IL21R, MAP4K4, MKNK1, NEU4, NFAT5, OR14A16, OR2A2, OR2T11, PPARA, PPP1R3C, PRSS1, PTDSS1, PTPRZ1, RELB, SHMT1, TAS1R1, TAS2R7, THTPA, TLR2, VCAM1
Negative_10471	CAD, GP6, ACSL4, ACTB, AKR1D1, ARPC1A, CACNA1I, CCL20, CDC6, CDKN2C, CLDN17, CXCR3, CYP26A1, FGF4, FGFR2, GNAS, HADH, HLA-DRA, IBSP, KIR2DL4, MAP3K2, MAPK1, MASP2, MFNG, NEFH, NRXN3, OR2L8, OR4Q3, PIP5K1A, PLXNB1, PON1, PTPRC, SHC1, SLC25A4, SOAT2, VTI1A, WNT1, ATP6V1G1, TNFRSF6B
Negative_10472	ITK, SMS, AASS, ALDH7A1, ALDH9A1, ARPC3, CCND2, CD3E, CLDN8, CXCL3, EPHB1, EXT1, FADS2, GCAT, GSTM1, HDAC2, HHIP, IAPP, IFNGR1, ITGB7, LCM T1, LIPA, MAPK13, MDM4, MECR, MTMR6, NEU1, NFYC, OR10A2, OR1N2, OR2AG2, OR4K13, OR6N1, PCYT1A, PDK1, PLA2G10, PRKAG3, QARS, RPRM, SC5DL, SEMA3A, STK3, TNFSF11, TUBB2C

Negative_10473	CR1, NF1, ACTB, ADCY1, ALDH6A1, ALG6, AOX1, ATP12A, BACE1, BMP8B, CASP8, CDKN2B, COL1A1, CTNNB1, DNMT3B, EIF4E2, FDFT1, GNPAT, HLA-DRA, HRAS, HSD3B2, ITGB6, ITGB8, KLRC1, MADCAM1, MAML3, MCM2, MYH15, NT5C1B, OCRL, OR10Z1, OR4D6, OR5K2, OR7D2, OR8U1, PDE1A, PEMT, PFAS, PFN4, PIP4K2C, POLA2, PRKAR2A, PYCR1, RALBP1, SENP2, SIGLEC1, SPTLC1, TRMT11, TNFRSF1A
Negative_10474	BID, TNN, TPR, ABAT, AGPAT3, ASRGL1, BRAF, COX10, CRB3, EDA2R, ENO1, GALNT11, HSD3B2, LARS, LCMT1, LFNG, NCOR1, NCOR2, OR1M1, OR2AT4, OR52J3, OR52N2, OR5D16, PDE6H, POMC, RRM2B, TMLHE, TUBB3, WNT9A
Negative_10475	FER, ACSS1, ADH6, ALPPL2, CACNG4, CD247, CIITA, COL11A1, FLAD1, FRAT2, GAD1, GADD45G, HHIP, IL17A, JAM2, MAP4K3, MAPK13, MDM2, NAMPT, NCF2, NCF4, OR13D1, OR1D5, OR1I1, OR2T11, OR4B1, OR4D5, PIGV, PLCD3, PLOD2, PTGER3, PYGM, RAC2, SRD5A2, TNFSF11, TNFSF8, SLC25A31
Negative_10476	ATM, FST, ACAT1, CACNG1, CD99, CLDN18, DGKH, ITGB1, MTMR2, NADSYN1, OR4P4, PPP1R12A
Negative_10477	DCT, MET, AASS, ACOX1, ADH4, ALDH1L1, APOA1, ARNT2, ATIC, ATP5G1, CALML6, CD99, CDC42, CHUK, CSNK1A1, DERA, DUSP14, EDNRA, ERBB4, FUT4, GFPT2, HDAC2, HES1, KIR3DL3, LDHAL6B, NEGR1, NFKBIE, NOX3, NTF3, OR2T8, P2RX4, PAFAH2, PAK2, PON2, PPP2R5C, PTGS2, PYGM, RALB, ST8SIA1
Negative_10478	ALOX15, BBC3, CD34, CD46, DARS, HLA-DOB, KCNQ1, MAGI3, OR1N1, PDE6G, PIGS, PRKCE, RPE65, STX10, SUCLG1, UCP1, WARS2
Negative_10479	ACSS2, AHCYL1, CMAS, FARSA, GRIN1, GUCY2D, OR2B2, PIGF
Negative_10480	XDH, ACTA2, APH1A, BBOX1, CLDN16, FOSL1, NOX3, NUDT2, OR11G2, OR52B4, OR52K2, SETDB1, VANGL1
Negative_10481	BAAT, CARS2, CHST12, FASLG, IL20RB, MYH3
Negative_10482	GLA, PGP, ACP1, AHCY, ARPC5L, B4GALT6, BAIAP2, BET1, CD72, CDK5, CDO1, CYP2E1, FLT4, IFIH1, IL20RA, INMT, IQGAP2, MYH7, OR10A7, OR11L1, OR4C13, OR52H1, OR5I1, POLR2C, QPRT, RAF1, SEMA4F, ULK1, WNT3, PNLIPRP2, TNFRSF1B
Negative_10483	GSR, ACTC1, ADH4, ADH7, ALG8, APBB1, CXCL9, CYSLTR2, DIAPH1, ERO1L, EXT1, HAAO, IL13RA1, IMPDH1, IQGAP2, MAP2K7, NT5E, OR1L6, OR8J3, P2RX2, PIGF, PLCB2, PPP3CA, RETSAT, TKTL1, VAMP2, WASF2, WNT5B, ATP6V0E1, HLA-DRB4
Negative_10484	ILK, LHB, NPL, ACADL, ACVR1C, ALAS1, B3GAT3, CDK7, CLTA, CSF2RA, CSH1, DLST, FABP1, FGF17, FRAT1, GAS1, GJD2, GLI1, HNMT, IDI2, NCKAP1L, OR1K1, OR2T11, OR6K6, OR6N1, OR6T1, OR7G3, PFN3, PIK3R4, RFXANK, SH3BP2, ST8SIA5, TCF7L1, TGFB2, UROD
Negative_10485	EI24, GANC, GART, IFNA21, MASP1, NFYC, OR1F1, PRKG1, TAS1R3, TLR5, ATP6VOD1
Negative_10486	ARSA, BLNK, CD74, CDH5, CES1, CNGA3, COL5A3, CYP2U1, DLL4, DNMT3L, GCLM, GLI3, GPAA1, HLA-DRA, LRP6, MAP3K6, MDM2, OR13C2, PIGT, PIK3R1, PPP2R5D, PTGES2, SEMA4A, STAT5B, TLN2, TNFRSF9, PLA2G12B, SERPIND1
Negative_10487	F9, FUK, AANAT, ADRB2, ANPEP, CEBPA, CRHR1, DVL1, EFN1, ENO1, EPHA6, FBP1, FGF8, GANAB, GLYCTK, IFNB1, ITPKA, MAN2A1, MAP2K2, OR10G9, PAR6B, PDE3B, PPCDC, SEMA4B, SFRP2, SHC4, SMAD4, SPAM1, SSH3, STX8, VDAC3, WASL, WNT8A, MAPK8IP3
Negative_10488	C8G, GK, ACACB, ACO1, ALDH1A3, ALOX12, ARAF, ATP2A3, BMP6, CAPN2, COX10, CYP2S1, DDX47, DNMT1, GRIN2D, HTR2A, IL17RB, KYNU, MCAT, MTMR6, NFATC1, NOD1, NPAS2, OR10H2, OR5D13, OR6C75, PARS2, PIK3C2A, PLAUR, RETSAT, SEMA4A, SEMA4B, SLC12A2, ULBP3, YES1, ATP6VOD2, PNLIPRP2, PPARGC1A, TNFRSF17

Negative_10489	AGRN, AMY2A, ANAPC5, ARPC4, ATP5J2, CCR6, CHSY3, CLTCL1, CNTN2, FMO5, GADD45A, GLI3, GMPR2, GNPDA1, HAO1, IMPDH1, MTHFR, NFATC4, NME4, NRXN2, NT5C2, OR1S1, OR2D2, PLK1, PPCDC, PRKG1, TBK1, TUBA8, UAP1, ULK3, WBCR22, WNT3A, YARS2
Negative_10490	ID3, KIT, PC, ALG10B, ARG2, ARPC5L, CCNA1, CD28, CTF1, CYP4F3, DKK2, DLL3, GSTA3, HTR2A, INMT, ITGA4, KCNB1, MYLK2, NADK, NEU1, NOD1, OR13C2, OR14C36, OR2B6, OR52E2, OR5AR1, OR8A1, PDE11A, POLD4, PRPS2, PTGIS, PYCRL, ST6GAL1, VEGFA, WNT11, ATP6VOD1, CSGALNACT2
Negative_10491	GSR, LSS, ACTG1, ALG12, ARRB2, CACNA1C, CSNK2A2, CYP4A22, DDX51, DPYSL2, ERO1L, HTR6, IRAK1, MBL2, MECR, NARS2, NT5M, OR10G8, OR13A1, OR2A25, OR4K1, ORC2L, P2RX6, PIP4K2A, PLAU, STAM, TACR3, TGFB3, UGT2B4, UROC1, ATP6V1B1
Negative_10492	SMS, ASIP, GLI2, IL2RB, LEFTY2, TAS2R7, TNFSF14
Negative_10493	CAD, GBA, AANAT, ALG8, ANAPC5, APOC3, ASCC3, CHD8, GSK3B, ITGA8, LCMT2, LIPE, MPDZ, MYLK2, OR51V1, OR52J3, OR5B17, OR8K1, OR8K5, ORC1L, PLAU, PON3, PRKCQ, RALB, RARA, RUNX1, SOX17, STX7, TAS2R14, UGT2B10, TNFRSF10C
Negative_10494	ARHGEF4, CADM1, DUSP1, EPOR, MAP3K1, NEFL, RDH16, TLN1, WNT7A, MAPKAPK2
Negative_10495	CP, ALDOC, B4GALT7, BACE1, CADM1, CDC25C, EXOC7, HBEGF, ICOSLG, IL18, IL1R1, NME7, OPLAH, OR13C3, OR2M7, OR2T11, OR2V2, OR4C16, PIAS3, PIP4K2C, PNMT, PNPT1, PPP2R5C, SH2D1A, SLC2A2, SOCS2, PNLIPRP2
Negative_10496	AGL, FH, GNS, SRC, SYK, ABI2, ACTN4, ALAS2, ALPP, AMD1, ATP2A3, CACNG1, CCL19, CCL4, CDH1, COL5A3, CSNK1G1, CYP3A5, EVI1, GAD2, GNAZ, GSTA5, HSPA8, KITLG, MCM4, NUDT5, OR10P1, OR2T10, OR5B3, OR5T3, OR8A1, PANK2, POLD4, STX18, TBL1XR1, UBE2L6, UNC5C
Negative_10497	C9, CHD8, ECSIT, FPGS, HSPB1, ORC1L, POLD4, POLR1C, POLR2G, TP53I3
Negative_10498	DAO, LHB, MAX, ACTA1, BET1L, C7orf16, CCL21, CDC14B, COL5A2, CPT1A, DAAM2, FADD, GOT2, GUCA1B, HAAO, HSD17B2, IFNA8, L1CAM, LIPA, MDH1, NAGLU, NT5C3, OR13C2, OR2A25, OR4C12, P2RX4, PCCB, PCYT1A, PDE8B, PI4KA, PIGN, PIP5K3, PLCB1, PLD1, RALB, RCHY1, TRADD, TUBA3E, WNT4, SERPINA1, SERPINF2
Negative_10499	DUT, GLA, MPZ, ALDH3A2, ALOX15B, DUSP9, EPHB4, ERBB2, HLCS, IFNA5, IL24, LTC4S, MYH8, NARS2, OR4K5, OR5B3, RDH11, SETD2, TACR2, THBS4, TMLHE
Negative_10500	NF1, ALDH1A3, BMP5, CAMKK2, CHD8, CISH, CLDN15, COQ7, DHFR, EPB41L3, FABP4, FZD1, GNA12, HMOX2, NFKBIB, OR1K1, OR2AE1, OR52W1, OR5A1, PGM1, PPARG, PPP1CB, PRKAB1, PRODH, QPRT, SESN3, VAMP1, VDAC2, C1GALT1C1, HLA-DQA2
Negative_10501	CS, EGF, SYK, ACP2, ACTG2, ADH5, AKT3, AMY2B, BHMT, BTRC, CAV3, CCL28, CES1, CYP8B1, DGKD, DPM2, EFNB2, ERBB3, IAPP, IPPK, JAG2, NPAS2, OR51F1, OR6M1, OR9I1, PPP2R1A, PRKAB1, PTCH2, RRAS2, SKIV2L2, SMC1B, UAP1, YARS2, MAPKAPK5
Negative_10502	TAT, ADSL, CLDN20, CTBS, CX3CR1, CYP11B2, CYP19A1, DGKD, DHX58, EGLN3, GNA13, GTSE1, GYS2, ITGA6, KRAS, LAMB1, MPDZ, NUDT9, OR4K1, OR5C1, OXCT2, PPAP2C, PTGDS, PYGL, RPS6KA5, SDHA, SENP2, ST3GAL3, TNFSF9, ZIC2
Negative_10503	SRC, ABCC8, ALDH1A1, ANGPTL4, ARHGEF1, ARHGEF6, BMPR2, BST1, CACNB4, CNGB1, EPB41L2, FGF11, FGFR1, HSD17B7, HSD3B1, HTR7, IL17RB, IL3RA, ISYNA1, LAMB4, LRP6, MAGI3, MAPK10, NADSYN1, NCKAP1L, OR6N2, OR8H3, OR8K1, POLR2E, PPP1R3B, PRKAB2, PRKCG, PRLR, RASA2, RIPK1, RPS6, SCIN, SLC25A4, SV2A, TLN1, TNFRSF1B
Negative_10504	ATM, FUK, PXN, CACNG1, CDS2, CSNK1D, CYP27A1, FLT1, GALT, GAPDH, GNPNAT1, HMOX2, MPDZ, NAMPT, NPR2, OR51Q1, SQLE, TAS2R7, TLR4

Negative_10505	GAA, IL9, INS, JUP, AGPAT2, ARNT2, ATP5A1, CCL26, CDK5, CXCL9, CYP27A1, FASN, FGF12, FZD1, GMPR, GUSB, HSD17B8, IL8RA, INSR, ITGA3, LEFTY2, LRDD, LTC4S, MAGI1, MCEE, NARS, NCAM2, OR10G3, OR2M3, OR4D2, OR4K15, OR51E1, OR52E2, PDGFRA, PERP, PGK2, PLCG2, PPP2R5A, PRKCZ, PSME3, PTPN7, RBKS, SMARCA5, SNAI1, SPRY1, TRADD, VTI1A, ATP6V0A2, TNFRSF12A
Negative_10506	ATM, CGA, F3, ALOX12B, AVPR1A, B3GAT2, CASP8, CDC7, CFL2, CHST11, CSF2RA, CYP26A1, DPM3, DPYSL2, ECHS1, GPD1, GPT2, HIF1A, HMGR, INPP5E, KIR3DL3, MAP2K7, MLLT4, NME4, NUDT9, OR10H2, OR2A14, OR2T11, OR4C46, OR6T1, PHKA2, PLA2G4A, PPP2CB, PRKCZ, RALBP1, SDHC, SPTLC1, STX4, TAS2R49, PNLIPRP1
Negative_10507	DAO, AANAT, ACACA, ALDOC, ALS2, APBB1, CASP7, CASP9, CCL19, CMBL, CSNK1A1, CTBP2, DGKI, EDN1, GALK1, GNB3, IFNA16, IL19, JAK1, KLRC3, MAPK12, NUDT2, OR10A3, OR10J5, OR13C5, OR1Q1, OR2T34, OR2Y1, OR52J3, OR7C1, PGS1, PHKA1, PIP5K1C, PLD1, PPP1R1A, PPP2CA, PPP3R1, PRKAR2A, PRKCD, ROCK2, SMAD4, TBL1Y, TGFB1, UGCG, UNC5C, WASL, WNT6
Negative_10508	ACO1, AHCYL1, ALDOB, APOA1, CHEK2, CLDN20, CPT1B, CYP21A2, DHX58, E2F4, EPHA2, FGF3, GALNT12, GGT7, IFNGR1, MASP1, NFATC3, NRAS, OR11H4, OR13G1, OR14I1, OR8S1, P2RX5, PFKFB2, PPAP2B, PRKAB1, SEPHS1, ST8SIA1, STK11, TRHR, UPP1, USE1, PRICKLE1
Negative_10509	ASL, ACSS2, CADM3, DUSP6, ENTPD2, FLT3, HAGHL, IMPA1, LDHA, MAPK14, NRP1, OR1D2, OR2A4, OR2AG1, OR5AN1, PPP3R1, PRPS1, PTPMT1, SDC1, SFRP4, TRAF3, YWHAB
Negative_10510	DLL3, MAP3K13, MGST1, OR10AG1, OR14C36, PPAP2C, PPP1CA, PTPN5
Negative_10511	AK3, C8B, BCL10, CCND2, CDIPT, CTNNB1, EXTL3, FOXO1, ISYNA1, MAML1, MCM6, OR10T2, OR52N2, PDE3B, PER2, PLA2G2D, PRLR, PTPRB, RAPGEF3, SEMA3B, SEMA4A, TAS2R8, UROD, WNT8A, CTNNBIP1
Negative_10512	MSN, ACSM5, ACTA1, AGRN, FGF1, GALNTL5, KCNQ1, MAD1L1, MFNG, PIAS4, UROC1, ATP6V1E2
Negative_10513	GPT, MTR, NPY, ACAD9, ACHE, ARHGAP5, CASP3, CAV1, CCR10, CD38, ENTPD1, GJD2, GMPR2, GUCY2D, HSD3B1, IL17B, MCCC1, NAE1, OR2M4, PAICS, PGLS, PIGV, PPP2R1A, PSEN1, RPS6KA3, SOAT1, SPRY1, YOD1
Negative_10514	GDA, GGH, GHR, GP9, MYC, VTN, ADSL, AKR1B1, ALG12, ARNTL, B3GALT2, BIRC2, BIRC5, BMP6, C7orf16, CCR4, CCR8, CNTFR, CSNK2A1, DDX56, DUSP14, ENTPD2, ENTPD4, EPHA5, FGF9, GALNT2, HCLS1, ITGA9, MAGI2, MCM3, MPDZ, MYH2, OR2T10, OR4A16, OR4K2, PCK2, PIGW, PLIN, TGFB2, TNFSF11, UBA7, PNLIPRP1, PPP1R12A
Negative_10515	ACTA1, ATP5D, ATP6V1H, CLDN1, CXCR6, DDX41, DDX50, FBP2, GFAP, GNAO1, GNB3, MNX1, NMNAT2, OR2A25, OR3A2, OR7G3, PRKAG3, RASGRP3, TAS2R3, TGFB1
Negative_10516	HDC, TNF, AMY2B, CHSY3, DARS, GART, HSD3B7, KIR2DL3, NMNAT3, NOTCH3, PANK2, PIGT, STAT6, MAPK8IP3
Negative_10517	LTB, GALNT13, GUSB, HIBCH, ITGB4, LAMB2, MAPK11, OR8J1, PSENEN
Negative_10518	AK3, OAT, ACAD9, B4GALT1, CHPT1, CXCR4, ENTPD7, FGF13, GNAZ, GSK3B, GUCY2C, IL17A, LIMK1, MAP3K1, OR10A3, OR2H1, OR5M3, PDHA1, POLR3B, SGMS2, TNFSF4, TPI1, UXS1
Negative_10519	BTC, GHR, ARHGEF7, AXIN1, CCL7, DGKB, ENO1, PDE4C, PPAP2B, UGT1A10, VARS, VDAC3
Negative_10520	ADRA1B, ALG9, GBA3, GGT5, MAP3K2, MLYCD, MYH1, NOTCH2, OR1C1, PIGK, SHC4, SLC27A1, UGT2B11

Negative_10521	C5, FUK, ITK, PXN, ACTA2, ACTN2, ALG12, B3GNT2, B4GALT6, BMPR1A, COL4A6, CRLF2, CTSG, CYP3A5, CYP3A7, DDX52, DUSP6, FGF23, FZD8, GCNT1, GL01, GRAP2, MAD2L1, MAGI2, MCM5, OR1N1, OR4E2, OR4Q3, OR5AU1, OR8S1, PANK4, PIM1, PPAP2A, PPAP2C, PRKCB, STX1A, TAS2R16, TOMM40L, ULBP3, USE1, XCL2, YARS2, TNFRSF13B
Negative_10522	FST, DDX23, HBEGF, P4HA3, SLC27A1
Negative_10523	RDX, SI, SYK, ARD1A, B3GNT2, CLDN15, CNTF, CYP26B1, CYP2A13, EXT1, ITGB2, MPP5, OR4C6, OR51A2, PFAS, PLA2G2E, POLR2E, PPP2R2D, PTPN6, RHOQ, SGMS1, SMPD1, CSNK1A1L
Negative_10524	IHH, ALG5, CACNG4, LCP2, OR2A2
Negative_10525	CFD, CP, PXN, ACP6, ARNT, ARNTL, CCL7, CD38, CDKN1A, CLDN14, COL2A1, COMP, DPM3, GUCY1A2, IL21, ITGA9, MAP3K13, MASP2, MCM5, NCKAP1, NR1H3, OR2AG1, OR4N5, OR8B4, PI4KB, PIPOX, PLA2G4A, PLXNA1, PPP2R1B, RRM2B, STK36, TKTL2, B3GALNT1
Negative_10526	C1S, LAT, LYN, OSM, ADRB1, BMPR1A, DDX19A, DGKZ, DHRS9, E2F2, EHHADH, ERBB2, FGF9, FZD7, GBE1, GNAI3, GNPDA1, GRIA1, GSTA5, HIBCH, IAPP, IL15, LTBP1, NAMPT, NLGN3, NOTCH2, NR5A2, OR10G2, OR1I1, OR52E8, OR5B17, PER2, PIK3R2, PIK3R4, PLEKHA8, PTGIS, SCIN, SSX2IP, ST3GAL2, TNFRSF8, TP53, WNT9A, CTNNBIP1, HLA-DPA1, PLA2G12A
Negative_10527	CR1, LEP, AARS2, ACVR1C, CALML5, CCL3, CDKN2A, CYP21A2, DBF4, DGKE, EPB41L2, EPHA8, FGFR1, GP1BA, GRIN2B, HTRA2, IFT57, KLRK1, MAOB, MIOX, MNX1, OR10J5, OR10K2, OR5AK2, OR6C74, PGAM1, PLA1A, PLCD3, PNLIP, SH2D2A, TAS2R48, TAS2R7, TNFSF4, TPM3, TUBB4, YARS2, ZFYVE9, ALDH18A1, ATP6V1B2, SERPINC1, TNFRSF13B
Negative_10528	AK7, CFD, OSM, TXK, ADH5, ALG2, ALG9, APLP1, BDKRB2, BET1, CDKN1A, CFLAR, CHRM1, CSNK2A1, DDIT3, FGF8, GCNT3, GPD1L, GUCY2D, MAGI2, MAPK3, NODAL, POLR2H, RRAS, SETD7, SLC2A2, VAMP4
Negative_10529	FGB, KHK, PTS, TYR, ADH6, AK3L1, ATN1, CACNB4, CACNG8, CEBPA, CHKA, CSNK2A2, CTNNA2, DDX47, F2RL3, FGF1, FOXA2, GFAP, GRAP2, HADHA, HNF4G, HSD17B2, HYAL1, IL12B, IL22RA1, IRAK4, MAN2A1, MAP4K1, MASP2, MGST3, NKX2-2, OR2M7, OR4L1, OR51F2, OR7G3, PAK1, PAK4, PDE2A, PPP2R5C, PRKAA2, SPPP2, TCF7, TGFB2, TUBA1B, UGCGL2, ZBTB16, ATP6V1E1
Negative_10530	FOS, ALDH1A2, ARSA, ARSD, CASK, CHPT1, CLDN8, DUSP5, EXT1, GLS2, GMPS, GSTM1, HLA-DOA, HSPA1B, IL11, IL9R, ITGB1, ITGB4, MAP3K7, MPST, NCKAP1L, NCOR2, OR10A2, OR10C1, OR1N1, OR5AR1, SNW1, SULT1A1, VNN1, ATP6V1B1
Negative_10531	ALDH1A1, ARPC3, CLOCK, HNF4G, KLRK1, PDE4A, SOCS2, TAS2R14, TFDP1
Negative_10532	CGA, CRK, FES, NPY, AADAT, ACADS, ACPT, ADRB2, ANGPTL4, B3GALT4, CXCL12, DDHD1, DUSP3, EGLN1, EPOR, ERBB2, IL12RB2, IL24, LAMB2, LHCGR, MAP4K1, MAP4K4, NCK2, OR2L13, OR8I2, OXCT1, OXTR, PDE6G, PIK3R3, PIK3R4, PLCB4, PRKAG3, PTPRM, RHOA, RPS6KA4, TJP3, VAV1, YWHAZ, ATP6V1G1, SERPINA5
Negative_10533	FN1, LEP, SYK, ADRB3, ATP5J2, CCL11, CD247, CD86, CLTB, CMBL, CYBB, DD X52, FCGR3B, HIBCH, HNF1A, HSD3B2, IL1R1, IL21R, NRP1, OR4K14, OR51E2, PIK3R2, PIK3R3, PKM2, SORBS1, THTPA, WNT1, MAPK8IP1, PNLIPRP1
Negative_10534	UBC, IL28B, OR10A3, TCF7L2
Negative_10535	EPHA6, EPHA8, KYNU, MAML3, OR1L3, PAK7, PVRL4
Negative_10536	C5AR1, GALNT10, GUCA1C, OPLAH, PEMT, RRM1
Negative_10537	AK1, MSN, ABLIM1, ACP1, ACVR1B, AKRIC2, BDH2, BPNT1, CD244, CSNK1A1, DDIT3, DDX41, DLL4, FZD5, GALNTL2, GMPR, GNAS, GRIN2B, GUCY1A2, HMGC L, IAPP, IDI2, INMT, KAT2B, LARS, LEF1, NEFH, NFKBIB, NRAS, NT5C3, OR10G3, OR2AG2, PLK1, PON3, PRSS1, PTDSS1, PTGES2, RFX5, SOX17, SRGAP3, THBS2, UPP2, WNT10A, HLA-DRB4, TNFRSF11B

Negative_10538	B3GALT2, C1GALT1, CALML3, CANT1, CCL28, CHEK1, CTBS, CXCL11, DDX54, EPHB3, FABP3, FGF22, GNB1, GZMA, HEXA, HPSE, IL2RA, KLRD1, MCM3, MOV10L1, MRAS, MYH15, NCSTN, NOX3, OR2A5, ORC5L, PAX8, PLCD3, PMAIP1, PPP2CA, PTPRF, RDH8, UCK2, WNT5B, PAFAH1B2, TNFRSF13B
Negative_10539	MPZ, AARS, CCNB2, CLDN16, DFFA, MNX1, OR11G2, RGS3, RPS6KB1
Negative_10540	IL4, AKR1B1, CTBS, DAPK1, LTB4R2, LTBR, MICA, OR10G7, TRADD, SERPINB5
Negative_10541	C1S, AASDH, CLDN18, CTSG, CYP7A1, DRD2, FUT5, GLI3, GSTK1, GUCY2F, HLA-A, MAML1, MGAM, MYH15, MYH8, NFYA, OR2G3, OR5AN1, PDE8B, PIAS1, PPP2CA, PVRL1, RASSF5, RPE65, SUFU, TUBAL3
Negative_10542	ATM, PDC, B3GNT5, CAMKK1, CHPF, CYP17A1, DGKZ, ERBB2, FLOT2, FUT4, GALNT1, GALNT6, GMDS, GSTM3, GTSE1, KARS, MALT1, OR10H2, PAX4, PDHB, PIGL, TJP1, TSHB
Negative_10543	MSN, GNAL, HLA-F, HTRA2, NFE2L2, OR4F4, SPTLC1
Negative_10544	CSK, GNS, ALG5, ATP5A1, B3GNT4, CSF1, FSHB, FZD1, IDH1, NKX3-1, OR1B1, OR1J2, OR1N1, OR4X1, PDE3B, PRKAR2A, ARHGEF12, ATP6V0A4, HLA-DRB5
Negative_10545	GNE, ADSS, ARHGAP5, ATP5C1, BET1, C7orf16, CHDH, CREB3L1, CYBB, DLL3, DTX3, ERO1L, GNG3, GPAM, GSK3B, HTR2B, IL17B, ITGA6, MYH10, NEU1, OR52K1, OR5J2, OR9G1, PARVB, PISD, PLOD3, PRDX6, PRKCA, PSEN1, PTCRA, RASSF1, RPS6KA2, SGMS2, SPP1, TLR2, PPARGC1A
Negative_10546	ACHE, ARNT2, CD27, CD80, CDK7, IDUA, MS4A2, OR5P2, PTPN6, PTPRZ1, SRGAP1, MAPKAPK2
Negative_10547	DUT, CSH1, DUSP4, ELK4, HSD3B1, INSR, POLE, PPP1CA, PPP2R5A, TGDS, TRAF4, UGT2B11, WBSR17, PPARGC1A
Negative_10548	BAD, EBP, TFG, ACO2, ACOT12, ADCY9, ASCC3, BTRC, CCL26, CD46, CDC25C, CHIA, COX10, DGAT2L4, DHRS4L2, DUSP4, FARSA, FGFR4, FLT4, KYNU, LRAT, MPP5, NUDT2, OR6B3, OR7D2, PANK4, PFKM, PGM2, PKMYT1, PPP1CB, PPP2R1A, PTPRR, RASGRP3, RASSF5, SOCS2, TJP2, TNFSF4, ST6GALNAC4
Negative_10549	CDK6, FRAT1, IKBKE, IQGAP2, NFKB1, NUMB, PLXNA1, PPP1R12A, TNFRSF1B
Negative_10550	IL7, ADH7, ALDH3B1, ALG12, ALOX12, ASS1, ATP4B, CACNG4, CASP6, CCL19, CCNH, CCR7, CDH15, DGKZ, GALE, GOT1, GSK3B, GSTT1, IFNA2, ITGA4, MKNK2, NCR2, OR10H5, OR1S2, OR2T29, OR4X1, OR6N1, OR8K5, PANK4, PDE1A, PDLR2L, PPP2R2C, RGS3, RPS6KA4, RXRB, SGMS2, STMN1, WNT3A
Negative_10551	AMT, C4B, ALDH5A1, CASP7, CDS2, COQ6, EPHA3, GRIN1, KIR2DL2, MGLL, OR1S1, OR4B1, OR56B4, PANK1, SDHA, SPAM1, TNFRSF11A
Negative_10552	ATP5B, CAV2, HEMK1, MYH7B, OR2M3, OR8I2, OR8U1, PGAP1, PPP2R2D, SHMT2, TJP3
Negative_10553	HK1, IL7, UBC, ADH4, ADRA1B, ALG8, ATF4, CD8B, CLDN2, CREB3, CTTN, CYP2C19, CYP2E1, DERA, EFN2, GJD2, GLUD1, GMPR2, HNF1A, IGFBP3, IL10RB, KIR2DL3, MAP3K8, NCR3, OR10T2, OR1L6, OR4K5, OR52E6, OR5D14, OR6C74, P2RX5, PAX6, PDGFRB, PDK1, PLA2G2F, PLCB2, PSEN2, PTPRB, SLIT1, SMPD3, ST3GAL4, TBK1, THTPA, TLR5, UGT2B28, WNT3, MAPKAPK2
Negative_10554	CEL, CDC23, CLDN22, FPGT, OR4K1
Negative_10555	F9, ACADSB, ALDH1A1, ALG10B, ANPEP, ARRB1, B4GALT4, CHIT1, COL4A6, COL5A3, CSAD, CTSS, CYBB, CYP4F3, DMGDH, DTX4, EPHA8, GRM5, GUCA1C, IL1RAP, IL2RG, IQGAP1, IRF7, JAK3, LDHC, LEFTY1, MAN1A1, NEUROD1, NFE2L2, OR10H2, OR1M1, OR4D11, OR4X1, OR5P3, PARS2, PIP5K3, PLXNA3, POLR1A, PPOX, QARS, SMAD5, SV2C, TUBB1, USE1, VAV2, WNT5B
Negative_10556	GLA, HK2, SRF, ANAPC4, BBC3, CACNG3, CACNG8, CHD8, COQ6, FARP2, FUT1, G6PD, GALNTL4, HAGH, IMPDH2, MDH1, ONECUT1, OR2B2, OR2H2, OR6C3, OR6C70, PAK1, PFN4, PIAS4, POLR3D, PPA1, PRKAG2, PTGES2, SOCS1, TGFBRI, UBE2L3, UGCG1

Negative_10557	LIF, ME3, PLG, ADORA2A, ANAPC10, BET1, CCND2, CD55, CHRM5, DKK1, GMPPA, GRB2, GUCA1A, INPP5E, LCMT2, LIPG, MGAT2, NUDT9, OR14A16, OR2A42, OR2L8, OR2T12, OR4A15, OR8H3, PAK6, PLTP, RASGRP3, STX12, STX2, TAS2R10, TAS2R5, TMLHE, UGP2
Negative_10558	CRH, ACSM2A, ADCY4, APOA2, COL5A2, FTMT, GGT7, GPT2, TJP1, TNFSF9, TUBA1B
Negative_10559	CKB, VTN, ADCY1, ALDH1A1, ALDH7A1, ALOX15B, B3GNT5, BMP4, CASP6, CCL2, CCR3, CYP4F2, DCXR, DDX19A, DDX50, DTX1, GLI2, GRM5, ITGA11, ITGA2, KIR3DL3, NEFH, NUDT5, OR10Q1, OR1L8, OR2T1, OR51F1, OR6Q1, OR7C2, P, CYT1B, PHKA1, PPP2CB, RXRB, SOAT1, STX4, TCF7L2, TJP1, TLR9, TRAF3, TUBB2A, UBA7, UCKL1, YKT6, YWHAZ, CTNNBIP1, HLA-DRB5, TNFRSF11A
Negative_10560	DBH, CXCL16, CYBB, CYP11B1, DAPK3, DDX52, OR52B6, ORC6L, PHKA1, POMC, SIAH1, SPHK1
Negative_10561	ADA, LAT, A4GALT, AMY2B, CD99, CLDN15, CRY2, DDOST, GNG13, NADK, NAE1, OR10A6, OR2G2, OR4A15, PIK3C3, ST8SIA5, STAT5A, TSHB, VDAC1
Negative_10562	A2M, BTC, C1S, CFD, ALDH4A1, BDH2, CAMKK1, CDC25A, CDC26, CDH2, CHPT1, COASY, CPT2, CYP2C19, DEGS1, EDA2R, EIF4E2, IQGAP3, LPAR1, MAP3K4, MYH13, MYL2, OR10G7, OR2T34, OR52D1, PIK3CB, PPAP2A, PTGIS, RASGRP1, UBE2L6, UGCGL2, YES1, HSP90AB1, PNLIPRP2
Negative_10563	ID1, ME3, ACSM1, ADH4, AKT3, ALG8, ATP5L, CCL26, CES1, CTNNA1, EFNA4, GGT1, IL10RA, IL29, IRS4, MGAT5, MICA, NFX1, OR11H6, OR2B6, OR52D1, PIK3R3, PPP1R3A, PRKAG3, PRPS1, RPS6KA1, THTPA
Negative_10564	C9, GP6, RB1, AASDH, ASCC3, CACNA1A, CACNG6, CLDN7, CRLF2, CSF2, CTBP1, ENO2, GALNT5, GNAQ, HSD17B1, IL2RG, MAN2A1, MAPK9, MEF2C, OR10A6, OR4D2, PDCD1, PFKL, PIM1, PLXNB3, PRNP, RAPGEF1, RPS6KB1, SOCS3, STX18, TPMT, WNT3, TNFRSF10D
Negative_10565	MPI, OGT, SP1, ACVR2A, ALG10, ARHGEF2, BUB1B, CCL20, CFL1, CLDN11, CLDN9, CLTB, CX3CR1, FRAT2, GALNT10, GALNT11, GJA1, ITGB4, LDHAL6A, MAN1C1, MAP3K11, METTL2B, NFATC2, NLGN3, NTF4, OR4K1, OR52R1, PHKA2, PTPRZ1, RHOQ, STMN1, TAS2R41, B4GALNT1, TNFRSF10D
Negative_10566	C2, ACADVL, BCAT2, CACNA1D, CASP7, CCR4, CREB3L4, CSNK1D, CYP11B1, DCTN1, DGAT1, DVL1, FZD2, GPAA1, GSTM3, HCLS1, IBSP, IL15, IL1R1, IPMK, NKD2, NME6, NT5C2, NUDT8, PLAU, PLTP, PPP5C, RRM2, SDHA, SOCS2, TAP2, TNFSF8
Negative_10567	EPO, ABLIM2, ACSM2A, BCAT2, CDK5, CFL1, EPRS, LHCGR, NCK1, NFATC1, OR5H2, TJP1
Negative_10568	FUK, ACTA1, APPL1, ARRB2, BACE1, CCNB3, CDIPT, CREB3L2, CYP4A22, DPYS, DVL1, E2F3, FECH, FZD6, GSK3B, IL22RA2, ITPA, LAMA3, LMO7, MCM6, NCKAP1L, NEU2, OR2A14, OR4N5, OR6C2, PARVB, PGK1, PIAS3, PLA1A, PLCB3, PPA2, PTGFR, SELPLG, STX16, STX7
Negative_10569	BAD, CAT, DCN, ATP2A3, CREBBP, DDX47, GALT, HMGCS1, HNF4A, HSD17B8, IKBKG, IL3RA, IRF3, MAP3K13, MYL9, OR52H1, PRKG2, RPN2, SARS2, SEMA3E, SLC2A1, STX2, WARS2, GABARAPL1, HSD17B12
Negative_10570	GP6, ACSL6, ATP50, CNDP1, CYP11B2, DAPK1, DGKA, EPHX1, FDFT1, GSTP1, HARS, HSD17B1, IRF5, KIR3DL1, MPST, NAE1, NTN1, OR5H2, OR6C3, PRKAB1, PTPMT1, PVRL3, SEMA4B, STEAP3, TLR5, WARS2, CACNA2D3, TNFRSF17
Negative_10571	PRL, ACP2, ALDH1A2, ARHGAP5, BCAT2, CARS, CD44, CD99, CYP2C18, EFNA5, EGLN1, GLI2, IL1A, ITPKB, NME4, PERP, PGS1, PLCD1, PPCS, RDH16, SGMS1, SLC33A1, ST3GAL4, TAS1R1
Negative_10572	ALOX15B, CCR1, EPAS1, FBP1, HYAL2, MAP2K7, OR52E2
Negative_10573	C9, DHFR, FCGR3A, FGFR4, FZD8, MAN1A2, PDE1C, PGAM4, PSAT1, RAPGEF3, SOD1



Negative_10574	ACPI, ACPT, AGRN, AKT1, ALG1, ATP4B, AXIN2, BNIP1, CDS2, CSAD, CTNNB1, CTNND1, CTSG, DDB2, DFFA, DHCR7, DHRS3, ENTPD4, FARS2, FSHB, GALM, G RHPR, GSTO2, IRAK4, NCR2, NEU2, OR10H2, OR51B4, OR51E1, PIK3CB, PTPR R, RBX1, TIRAP, TRAF5, TUBA8
Negative_10575	CP, EPO, IHH, ME3, ACO1, ACTB, AKR1C1, AOC3, B3GALT2, CKMT2, CMAS, EPH A1, EPHB4, HMGCS1, IDI2, INHBE, IPPK, ITGA3, NTSR1, OR2B11, OR4X2, PP OX, PTEN, PVRL1, SPTAN1, TAS2R5, TGFB2
Negative_10576	DBT, OAT, ADH1B, ANAPC7, ATG12, B4GALT7, BBC3, CCL3, CLDN8, CRHR1, CS F2RA, DUSP14, EPHA7, FBP1, GFPT2, GRM5, INSRR, MYH3, NARS, NOTCH3, NU DT9, OR2G2, OR6B3, OR8K1, P4HA2, PGM2, PIGT, PLOD3, RALGDS, RCHY1, RF NG, SKP2, SREBF1, SUFU, TCF7, UBA7, VAMP2, VASP, VAV1, SERPINA1
Negative_10577	F10, GP5, ACMSD, ALDH1A3, ANAPC7, ANPEP, C4BPB, CASP10, CASP3, CD72, CHAT, EARS2, FLT1, FMO2, FOXA2, GNAQ, GNG13, GNG3, NAE1, NT5C, OR4Q3, OR6C74, P2RX5, PLK1, RALA, SDC3, SKP2, UGT2A1
Negative_10578	AOX1, CD247, PANK4, PARD6G, PDE10A, MAPK8IP2
Negative_10579	VCL, CD99, CTNNB1, OR11H4
Negative_10580	ACSL4, DHODH, FADD, POLE4, PRODH2, UGT2A1
Negative_10581	ADA, CTLA4, E2F3, HLA-DMA, IL29, MYH11, OR6K3, STAT5B, B4GALNT1
Negative_10582	OSM, ARNT, B4GALT1, CYP2C9, DHDDS, ENPP2, EPHA2, GALNT7, GCLM, GLDC, GYS2, IL15, NRG3, PEMT, PIK3R1, PPP2R2A, PRKAR2A, PSENEN, PTPRF, SH2 D1A, VAMP4, ST6GALNAC1
Negative_10583	GH1, ACYP2, ADRA1D, ARNT, B3GALT4, BET1, CDH2, CHKA, CLDN4, CNTNAP1, CTSL1, DTX2, ENO3, EXT2, FMO3, GNAI2, IL10RA, IL1RAP, LALBA, NFKB2, N LGN3, NMNAT1, OR5M3, PIGP, PLEKHA8, PSEN1, THBS1, WNT9B, WWP2
Negative_10584	C2, FH, LTB, RDX, SP1, TH, AKR1C1, AMY2B, ARHGEF1, B3GAT1, BUB1, C1QC, CSF2, CYP26C1, DNMT1, EFNA5, EPHA1, GAMT, GLI2, GSTP1, IL28RA, KIR2D L4, LAMB1, MCAT, MTHFD1, MYLK2, NFATC3, NLGN2, NR5A2, NTSR1, OR1M1, O R4C46, PAPSS1, PECAM1, PFKM, PIAS2, PNPLA3, PON2, PRDX6, PRKCE, PRKG 1, PRODH, SOD1, SRD5A2, TAS2R9, TNFRSF8
Negative_10585	BID, AANAT, GBGT1, LDHAL6B, OR6Q1, PLXNB3, SREBF1, STAT6, TRDMT1
Negative_10586	GH1, ID1, LTB, ADCY2, BUB1B, CD226, CYP2A6, DAPK3, GNAS, IFIH1, IL19, IL22RA1, INHBB, JUND, NFKB1, NKX3- 1, NR4A1, OR11I1, OR2B11, OR2M4, OSMR, PIGH, PIK3CD, PPP2R1B, QARS, SE MA4D
Negative_10587	CGN, AGMAT, ALDH3B2, CDH15, CLDN17, CLDN8, GUCY1B3, ITGB2, MAN2A1, M BL2, OR51A2, PCCA, RAF1
Negative_10588	DCK, LTB, BCAT1, CACNA1H, COL4A1, CSF2, GUK1, IL13RA1, JAK3, NME6, OR 4E2, OR51D1, PANK2, POLR2A, PPID, PRKACA, SULT1A2, WASL, WNT16
Negative_10589	ENPP2, HSPB1, KLRD1, OR1L6, TNFRSF13B
Negative_10590	ALDH1L1, CCNA2, CPS1, CREB3L3, CYP7A1, IKBKE, INPP5B, INSR, KLKB1, K LRK1, OR1Q1, OR2M2, OR5B3, OR8D4, PLCG1, PPA2, TAS1R2, VDAC1
Negative_10591	CP, HAL, ACO1, ASPA, BMP8B, CCNG1, DAPK1, DCTD, DPAGT1, GTSE1, IFNW1, MITF, NR5A2, OR14J1, OR1D2, OR2A5, OR5H2, OR5T1, PDE11A, PDE4C, PTGS 1, RELA, SNAI2, WNT6, ZBTB16
Negative_10592	C4B, HDC, LEP, AADAT, ADRB2, ALPI, ARHGEF1, COASY, CYP11B1, DCXR, DHO DH, EPAS1, FZD1, GNPDA1, GRLF1, HARS, HMOX2, HSD17B3, HYAL1, KLRC1, M GST1, NCOA4, NEU4, OR10S1, OR51B5, POLR2D, PTPN1, TAS2R8, UGT2B10, W NT8B, B4GALNT1, CACNA2D3, PDCD1LG2, SUV420H2, TNFRSF6B
Negative_10593	BAX, HK1, ID4, IL8, ADCY5, BLNK, CASP8, CES2, CYP4A22, DDX56, DTX2, FG F6, GMDS, MAP2K7, MAP3K14, MKNK1, MKNK2, NQO1, OR4E2, OR5AK2, OR6N1, PLA2G3, PLOD3, POLR1C, PON3, PPARA, SDHB, SUOX
Negative_10594	ARHGAP5, CCL4, CD55, E2F3, FZD1, GNG12, HPRT1, ITCH, MGAT5, OR8K5, PN PLA4, PPM1D, STX2, WNT9B

Negative_10595	ASL, OTC, APPL1, CHKB, COL11A1, CXCR4, DDX23, DIAPH1, DVL1, EFNA5, FBXW11, FZD5, MAN1A2, SMC1B, TDO2, TICAM2, WNT8A, WNT8B
Negative_10596	DCT, DHH, MPZ, TYR, AGPAT2, AOC2, APLP1, BCAR1, BDNF, CCNG1, CDC16, CTNNA1, DLL3, EPHX2, FMO3, GGT1, GLYCK, HA01, IGF1, LCMT1, LRAT, NTRK2, OR10G4, OR1D5, OR6N1, ORC2L, PERP, PFKM, PLAT, PRKAG1, RGS3, SCP2, SFRP4, SMURF1, STK4, SUCLG1, UCP1, VAMP4, YWHAQ, MAPK8IP2, PHOSPHO1, TNFRSF13B
Negative_10597	AMT, HDC, ASAH1, CAMK2A, CDK6, DDIT4, E2F5, GPAM, GRIA3, IL2RG, LTB4R2, MAPK10, OR2L2, OR56A1, PDXP, RHOQ, ROBO3, STK36, TP53
Negative_10598	RET, ALAD, CAMK2B, GJA1, GRIN2B, HMOX2, IFNA13, OR5D18, PAK2, PDE7B, SEMA4C, TBL1Y, CACNA2D4
Negative_10599	GAA, ADAM17, ALG11, B4GALT6, CDC26, CLDN14, DIAPH1, DPM2, DTX1, EDNRB, GAMT, LRAT, NCOR2, RHOD, SETDB1, SPRY3
Negative_10600	GHR, SHH, ADORA2A, AGPAT2, CAV3, CES7, CLDN15, CNDP1, CYP1A2, CYP2E1, CYP3A5, DDX55, GSK3B, HLA-DRA, IL25, INPP5A, LIPG, MAOA, MAP2K7, MAPT, MYH2, MYLK2, NFKB1, OR4B1, ORC3L, PDHA2, PER1, POMC, PRKACG, PRLR, PTGFR, SH2D1B, SOCS3, TAS1R1, TPH1, TUBB, HLA-DRB5
Negative_10601	HGD, ARD1A, CAMK4, CCR6, CDKN1C, DVL2, GLUD2, ITGA1, PRNP
Negative_10602	NPY, ACSL5, AGPAT1, ALDH2, ATP5J2, AVPR1A, BST1, FGF19, FOSL1, HSD17B4, IDH1, IFNA14, IL10, KLRD1, LIFR, LMO7, MAP2K7, MAP4K2, OR2M7, OR5T3, OR8U1, OXCT1, PAPSS2, PI4KA, PPP2R5E, SNAP25, SPAM1, STX16, TAS1R2, TAS2R60, TLN1, TLR9, TNFRSF4, TNFSF8, UAP1, HLA-DQA2
Negative_10603	F5, GPT, LCK, ATP5J, CARS2, CMPK1, DERA, GAMT, GNAI3, GOT1, IGSF5, IL17B, LLGL2, OR6N1, PKMYT1, PPAR, RHEB, ROCK2, SUCLG2
Negative_10604	DBI, GAA, IL3, ENPP3, LYZL1, MAGI1, MAP3K1, MYL7, OR51E2, PPP2R5D, SULT2A1, XYLT2
Negative_10605	DBT, LPL, BACE1, CCL8, CHRM3, CMAS, EFNB2, EPHB2, FPGT, FSHR, GGT7, HEMK1, HMGCL, IL12A, IL28RA, IL2RA, MAPK11, MCM4, MCM5, MITF, NFKB2, NFKBIE, OR2W1, OR52W1, OR6M1, OR7D2, PMM2, RBPJL, RDH8, RRM2, SEMA4F, SH2, STX18, TSHB
Negative_10606	C7, OGT, RFK, TPR, ALAS1, ANGPL4, AOX1, CHEK1, CLDN2, COX15, CYP3A5, DLL3, FZD9, GADD45B, GALNTL4, GPX5, HSPB1, KARS, LIPC, MMP2, NFAT5, OR2A14, OR52B4, OR5D14, OR8G1, PDHA2, POLR2B, SEMA3E, SESN2, SMAD5, SH2, STX4, TBK1, TPH2, TUBB4Q, UROS, WNT16, WNT6
Negative_10607	CCL22, IL17B, SPTLC2
Negative_10608	ADC, DCN, ADAM10, ARPC5L, ARSB, ATG7, C5AR1, CAMK2G, CDC25C, CFTR, CLDN20, CPS1, CREB1, CREBBP, FCGR2B, FGF6, FLT3, GTSE1, IL12A, ITPKB, JAK1, JAM2, MAD1L1, MAP3K1, MAP3K2, MGLL, MYH7, MYL9, NME2, NOTCH1, NPAS2, OR13A1, OR13C2, OR2K2, OR2L2, OR52H1, OR52J3, PDGFRA, PGS1, PHGDH, PSEN1, PTGIS, PYGM, SHC1, SOCS5, STAM2, VANGL2
Negative_10609	ATM, BAIAP2, DHX58, FCGR2B, GLI3, GNPDA1, OR5T3, OR6K3, PPP2R5C, PPP3CA, ST3GAL5
Negative_10610	CACNB1, DOT1L, GANAB, GIT1, IL17B, LDHB, NEFM, NLGN2, NME4, OR2F2, OR6C2, ORC6L, PGK1, PHGDH, PLIN, PNPLA4, PPP2R5D, PTGDS, RRM2B, SCIN, SETD1A, SLC27A5, TFPI, TGFA
Negative_10611	DCN, FST, BUB3, CD19, CD247, FDPS, FZD5, ITGA6, OR10A4, OR10X1, SLC27A5, TMLHE
Negative_10612	MIF, ACTN1, ADCY8, BPNT1, CCND1, CNGA3, DEGS2, NEFM, OR10G7, OR52I1, PLOD2, SMAD1, THBS1, TUBB4, YWHAG
Negative_10613	GAA, ATG12, BBC3, CRKL, CYP26C1, DHRS3, DUSP10, FGF7, FPGS, HMGCR, HSD11B1, IGF1R, LIPA, NEUROD1, NTNG1, OR5R1, OR6C74, PAK4, PARD6B, RBX1, SETD1B, UNC5B, UNC5C, YWHAZ
Negative_10614	ID1, CKMT2, CYP2D6, FLOT1, IL2RG, MAP3K2, PDIA4, RPRM, SEMA4B, WNT9B

Negative_10615	ITK, APOA5, CYP2D6, OR10T2, QARS, SLC2A4
Negative_10616	ASL, CFH, PXN, ABAT, ACY3, AKR1C4, ALDH3B2, ANAPC11, B3GALT2, CSNK1G1, CTSL1, CXCR5, CYP26B1, CYP2F1, CYP2S1, DDX18, FGF6, FGF7, GALE, GALNTL5, GSTP1, HAAO, IFNA14, IFT57, IRAK4, OR10R2, OR13C3, OR13J1, OR4L1, OR4M1, OR8A1, OR8B8, PGLS, PHGDH, POLR1E, PYCR2, SDHC, TBL1Y, TC F7L1, TRPC1, TYMS, UPP2, HLA-DQB1
Negative_10617	F10, RB1, CACNA1G, CBR1, CCNB2, CHRM3, COL6A1, CYP8B1, DGKE, DHRS4L2, DUSP3, EFNA2, ERO1L, GCLC, GLS2, GNAL, GUCA1B, OR2B6, OR2K2, OR5AN1, OR6C75, PAK4, PLA2G4A, RALGDS, SEMA4D, SV2C, TNFSF14, TOMM40, TRDM T1, TSC2, UGCG, VAV3, YES1, TNFRSF11A
Negative_10618	CD2, IDS, SHH, ADCY2, B3GNT2, CACNB3, CANT1, CSNK1G1, CXCR5, EDA2R, FSHR, G6PC2, GNAT3, HEMK1, HLA-C, HYAL1, INPP5A, INSR, JUND, KLRC1, LRP6, MAPK14, MTAP, NAE1, NRP1, OR11H6, OR2H2, OR2M3, OR5D18, OR7C1, OR8D1, ORC4L, PARVA, PDE1B, PDE4D, PDE7B, PDHB, PFKFB4, PSME3, PSPH, PYCRL, SHC3, TAS2R40, TLR5, VANGL1, YWHAH, ZFYVE16, CACNA2D4, SERPINA5
Negative_10619	CAT, BDKRB2, CCL24, CHRM1, ENTPD8, HAGHL, OR4K17, OR5AN1, STK11, PAF AH1B3
Negative_10620	FGB, GP5, OSM, PML, ALDH6A1, APOA5, ATP5I, AXIN2, BTRC, C9orf95, CD34, CD74, CDC42, CIITA, CYP11B2, CYP2E1, DDOST, DERL1, ENO2, EPHX2, GBE1, GNAI2, GRIN2D, GSTM4, HRH2, HSD17B4, HTR2B, IFNA14, IFT57, MAT1A, MTHFD2, NRG2, NUDT2, OR10AD1, OR2G6, OR52N5, OR5D14, OR7G1, PIGK, PLXNB2, RBPJ, SCLY, SETD1A, TIAM1, WHSC1, ZAP70
Negative_10621	ACO2, ACTB, ADH6, CHRM1, CTSL1, EDNRB, FTCD, NME7, NOTCH2, NPAS2, OR5C1, RPS6KA2, TSC1, TXNDC12
Negative_10622	DBI, GHR, GSN, ABCC8, ACAT2, ALG10, ARSA, CACNA1S, CHRDL, CRKL, FUT7, GLUD2, IDUA, IKBKG, LDHAL6B, MAPK8, NANP, NCR1, OR10A2, OR10J3, OR1S2, OR6T1, PHKG1, PI4KA, PIK3R5, PIP5K1B, PLCD1, POLR2B, PRKAG2, PRPS1, PYCR1, RALB, RASA1, RHOD, RPE65, SLC27A5, SUOX, SV2C, TGFA, ATP6VOD2, TNFRSF10D
Negative_10623	CAD, JUN, ADORA2B, ARPC5, CLDN10, FZD9, GUCY2F, IFNA14, ITGA5, MOV10L1, PVRL4, TUBB4Q, UGCG1, VDACL1, WWP1, SERPINA1, TNFRSF13C
Negative_10624	CYP4A22, GYS1, MAGI1, NOD1, POLR1A, RPS6, RXRB, SFRP1, VANGL1, PDCD1LG2
Negative_10625	F5, STS, ALOX5, ATG12, B3GNT5, CRHR1, CTBS, CYP2D6, CYP2J2, FCER1G, F TCD, GLO1, GRIN1, ITGB8, LAMB3, NARS, OR1N1, OR5H6, OR7G3, PLA2G10, P OLE4, PPP1CB, PPP2CA, PPP2R2C, PTPRM, RELA, ROBO2, RPS6KB2, SEMA4D, SMAD6, STAT3, SUCLG1, UGCG1
Negative_10626	ACSS2, ALG6, ATG7, CDC25A, CERK, CLTC, EXTL1, F2RL2, GUK1, HSD17B3, I L11, IL13RA2, ITGB8, MCM5, OR10A6, PNPO, PTDS2, RASGRP1, SLC27A5, T OMM40L, TYROBP
Negative_10627	AMT, EZR, AMHR2, AOC2, ARSD, ATP5G1, ATP6V1D, B4GALT1, CCNB3, COL5A1, CRY1, DHRS3, DTX1, EPHA8, FZD9, G6PD, GATM, HAO2, MYLK, NCAM2, OR52N2, OR56A4, OR5J2, STEAP3
Negative_10628	CCNG1, CD99, CYP11B2, DCTN1, GARS, INSR, KLKB1, MAPT, NAE1, OR4F4, OR7C2, PER3, SETD7, TSTA3
Negative_10629	GH1, AARS2, ACSL4, ADSL, AKR1B10, BMP2, CARS, CMPK2, CYP11B2, E2F1, F GF14, LAMA3, LTB4R2, OR2B11, P2RX4, PLTP, PMAIP1, PPP2R5E, PTPMT1, P YGL, RASSF5, SEMA4G, SETD7, SFRP4, SLC27A4, SREBF1, STX5, TAS2R5, TS C1, YWHAZ, SERPINF2
Negative_10630	CNGB1, CXCR5, NLGN3, NR5A2, PMM2, PYGM, RARS
Negative_10631	ARPC5L, BDH2, C1QC, KRAS, OCLN, OR14C36, PRKAA1, SAT2, SUV39H1, WNT4

Negative_10632	FER, GAA, LIF, TNC, TNF, ADCY7, ALG3, BMP7, CD58, CLDN14, CYFIP2, DFFA, GALK1, ITPA, MGAT3, OR10G4, OR4K13, OR4K15, OR52E2, OR5M3, PDE8B, PDHB, PDX1, PHGDH, PRIM1, RALBP1, RFX5, SETD1B, SPTAN1, THBS3, TIAM2, CACNA2D2
Negative_10633	FN1, IL3, IL4, NGF, ACMSD, ACSL4, ALAS2, ALDH6A1, ALDOC, ARHGAP5, BBC3, CD8B, COL5A1, CSNK1E, CTSL1, CYP19A1, CYP1A1, EPHA5, FLT4, INPP1, MAFA, MAP3K2, MDH1, MDM2, MTMR1, NANS, NEFH, NUDT9, OR4M2, OR5A1, OR9A2, PDCD1, PLK1, PNLIP, PPA2, PPP1R3D, PTK2B, PTPRB, RPS6, SV2B, TAS2R42, TLR9, WIF1, ATP6V1G2, GABARAPL1
Negative_10634	CKB, DUT, EDA, FN1, GH1, ID2, LSS, PTS, AOC2, ARHGEF6, ATN1, ATP6VOC, CCL14, CCR3, CHRM1, CRLS1, CXCL13, CYP26C1, CYP2C19, DDX41, GALNT13, GNAI3, GPX7, IKBKE, IL8RB, KITLG, MAD1L1, MAPK14, MCCC2, NCKAP1L, NFEB2L2, NFKB2, NLGN2, NOX3, OR11H1, OR13C3, OR7C2, POLR2F, SULT1E1, SV2A, SV2B, TAS2R48, TBL1XR1, TJP1, TMLHE, TUBAL3, YWHAB, ATP6V0A1
Negative_10635	AK1, NPL, WAS, ACP5, ACY1, ADAM10, CACNG3, CARS, CAV3, CHRM1, CLDN11, FLOT1, FUT8, GDF7, GLI2, IL20, MAP2K1, NCOR1, NR5A2, NRG3, NUDT9, OR2A4, PANK2, PDCD1, PLXNA3, RBL1, RHOD, HLA-DPA1, SERPINA5
Negative_10636	DBT, MAG, ACSL6, ADAM17, ADCY4, APOE, ATN1, BMP8B, CACNG6, CCL28, CD38, CSNK1G1, CTSL1, CXCR6, ENAH, ETNK2, F2RL1, HPRT1, HSD17B1, IPMK, KDSR, LDHAL6A, NCR3, NOTCH2, OR10G2, OR11A1, OR11G2, OR13C4, OR4E2, OR5A1, OR5AN1, OR5K1, PDE10A, PDHA1, PGAM2, PKM2, PLCZ1, SCD5, SLC25A5, THBS2, TICAM1, TOMM40, TRADD, VEGFC, C1GALT1C1, SERPIND1
Negative_10637	BTD, IL2, INS, KDR, ME3, ACSL6, ADRB2, ALDH3A1, CACNA1I, CACNG8, CCL28, CD36, CLDN8, ENO1, IL4R, JAG2, NAMPT, NFKBIB, NSD1, NUDT12, OR2C3, OR51B6, PFKFB4, PFN3, RASGRP1, SDC3, SH2D1B, SHC1, UGDH, XYLB, CACNA2D1, HLA-DQB1
Negative_10638	MPZ, MVD, VCL, CSNK1E, DTX3L, FABP3, GYS1, IL3RA, INHBC, ITGAM, LIMK2, MGAT1, OR1D2, OR2AG1, OR9Q1, POLR2H, RXRA, SIAH1, STAM, YES1
Negative_10639	ACSL1, ADCY8, ATP4A, CSNK2A2, MAP3K1, OR6K6, PIK3C2A, PIP5K1B, PTPRJ, TRIP10, UGCGL1, ZMAT3
Negative_10640	ME3, MOS, ADCY2, ASS1, BUB1, CD274, DUSP9, GUCY2F, HES1, IL28B, INPP1, OR10K2, OR12D3, OR5D14, PARVG, PPA1, PPARA, SIPA1, WNT2B, HSD17B12, MAP3K7IP1, TNFRSF13C
Negative_10641	DCN, GHR, GLS, HK3, ID3, ADH4, ADRBK2, AFMID, AOX1, ATP5A1, BMP4, CAMK1, CHEK1, CHRNA7, CLTA, CSF2RA, CYP2B6, F13A1, FUT5, GMPS, GNA13, KLRC2, LTA4H, NKD2, NODAL, OR2B11, OR2F1, OR2M4, OR5T2, OR9I1, ORC2L, PIK3R1, PYCR2, SAT1, SUCLG1, TAS2R40, TPM3
Negative_10642	BPNT1, CBLC, CDK2, CFL1, GAB1, HLA-DOA, IKBKB, LAMA3, NFKBIE, OR2C1, PLCB2, STX8, SUV39H1, ULBP2
Negative_10643	ILK, SI, ALDH3A1, ARPC1A, CACNG7, CCL28, CHUK, CLDN19, FECH, IARS, IRAK3, IRF7, MAP3K5, OR4F17, RELA, RPN1, SDHB, SOCS2, UGT2B10, UGT8
Negative_10644	DHH, LPL, MOS, UBB, ACSL3, AVPR1B, BPGM, CACNA1A, CACNA1I, CAMKK2, CD86, GUCA1B, HARS2, HTR2B, IL4R, INMT, ITGA8, ITGA9, LEPR, LGMN, LIPC, OR10G3, OR10V1, OR1C1, OR1J4, PARD6B, POLR3B, PRODH, SDC2, SESN1, SHC1, SOCS2, SPCS3, SRGAP3, TNFSF9, TYMP, UBE2L3, UGT2B7, VAV1, VEGFB, ZFYVE9
Negative_10645	ITK, ALDH1A3, DCTD, MTMR6, OR56A1, SFRP2, STK11
Negative_10646	GSR, ACACA, ALAS1, BCL10, C4BPA, CACNA1C, CCR4, CHDH, CYP8B1, DDX41, GGT6, HPSE2, IFNA21, ITGB6, NTF4, PLXNC1, PTPN5, SKP2, STX10, SUCLG2, TSHB, B3GALNT1
Negative_10647	APP, NOG, ALOX15B, CCL19, HPSE, KLRC1, MYH3, OR52N5, PDXK, RAP1B, RASA2, SPRY2

Negative_10648	GSS, ALDH2, ARSD, C7orf16, CACNB1, FOXA3, GALC, GALE, HLA-DOB, HSD11B2, IL12RB1, IL13, IL28A, ITGB4, MAN2A1, MBL2, MGAT5B, NKD2, OCRL, OR10A6, OR13C8, OR4K14, OR52I1, OR8S1, P2RX6, PDGFD, PIGP, PRNP, SKIV2L2, TGFBR1, WNT5A
Negative_10649	F12, AGMAT, AMD1, APOA5, ARNT2, ATG12, CDKN1C, CDKN2C, CNGB1, CSNK1G2, CYP3A4, DHDH, FADS2, HADHA, IL9R, JUND, MAD1L1, NAGA, NRXN3, OR5B12, PDE11A, PDE8B, PHKG1, POLR3B, SCP2, SKP2, SUOX, TAS2R4, TAS2R40, VTI1A, ATP6VOD1, ATP6V1E1
Negative_10650	MVD, C1GALT1, EARS2, GRM1, HA01, IFNAR2, MAP3K3, NME2, OR1J4, OR5D18, P2RX2, PGS1, PTPMT1, SARDH, SAT2, SEMA3F, SH2D1A, SMAD7, SPRED2, SUCLA2, TGFA, THBS4, TMLHE, TXNDC12, UROD, WNT9A, PHOSPHO1
Negative_10651	ACP2, ARPC1B, ARSE, BDH2, BIRC3, CACNA1C, CDC2, CDH3, CSNK2A1, CTBP2, DDB2, DDX23, DTX4, EFNB3, ENTPD8, GPX5, IFNGR1, ITGB8, LAMB3, OR51M1, OR52E4, OR5AN1, PDE1A, SEMA3F, SSH3, SUCLG2, TUBA3C
Negative_10652	LTB, ACADVL, AKT1, ATN1, B3GNT3, B4GALT7, CCL4, CD55, CDC7, CDKN2A, C11TA, CSF1R, DDX47, EHHADH, FGF3, FGFR4, FZD6, GDF7, HAGH, IAPP, IL28A, MAP2K6, NUMB, OR1N2, OR6C1, OR8B8, PDGFC, PFKFB4, RRM1, SRGAP2, STX12, SULT1A4, TNFRSF9, TPMT, ATP6V1B2
Negative_10653	F2, GNS, LSS, AKR1D1, ALDH1L1, BBC3, CACNG6, CCR9, CNTF, COL11A1, COQ3, CREB3L2, DCXR, ENTPD6, EPHA2, FARS2, GGT6, GGT7, HDAC1, HMGCS1, IARS2, IL9R, ITGAV, MAP3K12, NAGS, NFKBIA, OR10A5, OR4K14, OR52K1, ROB01, SMC1B, TNFRSF9, TNFSF8, TP53, ZNRD1
Negative_10654	ALAD, ELK4, PDXK, PMM1, PSENE1, YARS
Negative_10655	ADA, C8A, CD2, IL5, ATP6V0B, ATP6V1F, ATP6V1H, BDNF, CACNA1D, CDC25A, CLDN17, ERBB4, FMO3, FZD1, GNRH1, GSTP1, HSD17B3, IL1R2, IPMK, ITPKB, LIFR, LPAR1, NCF2, NLGN3, NOTCH1, NR1D1, OR1Q1, OR2F2, OR2L8, OR52N1, OR5K2, ORC3L, PANK4, POLR2A, RALA, RAP1B, RUNX1, RXRA, SKP2, SOD1, SRD5A2, STK36, TAS2R42, TICAM2, UAP1, AASDHPPT
Negative_10656	MSN, PRL, ACSM1, ATP6V1D, C1QC, CD01, FCER1G, FUT5, GPD1L, NCK2, OR10G7, OR12D3, OR6C6, OR8S1, PTAFR, PTK2, RAB23, SKP1, SMPD1, SPTLC1, ST3GAL2, STAT1, TGFB2, VTI1B
Negative_10657	BAD, ID1, ACVR2B, DLL3, EPHA4, F2RL3, GCNT1, GGPS1, GUCY2C, HEXB, LRR C4C, MAPK14, MGST1, OR10A4, OR2B2, OR6N2, PTPRZ1, SETDB1, SULT1A2, SV2B, TUBA1C, SERPINA1
Negative_10658	C7, EDA, IL5, ABP1, ACADL, ACTN1, ALDH2, AMY2B, CDKN2C, CMAS, CSF2RA, CXCL11, DDX18, F13A1, FGF13, FLAD1, FOXO1, FPGT, FUT4, GALNT14, GNPA T, HTR2A, LHCGR, MAP3K14, MICA, MYH2, NAGS, OR14J1, OR1L4, OR51B4, PAX6, PNPLA3, PRKY, SMAD2, SUV39H1, TAS1R2, TUBB, WNT8B, KIR2DL5A
Negative_10659	DHRS4, GALNTL5, OR7G2, RARA, SFRP1, TPMT
Negative_10660	ID1, B3GNT4, CAPN2, CLDN11, CTSS, GCNT1, HIBADH, IFT57, KAT2B, OR10J5, OR51S1, OR8H3, OR8K1, PITX2, PRKX, PROC, PRODH, PTEN, PTPN5, RASGRP4, SMC1A, TP53I3
Negative_10661	F11, HDC, ACSL3, ACSL4, AGMAT, APOE, AREG, BIRC2, BLVRA, BPNT1, CD48, CD79A, CDC2, CSNK2A2, DGAT2L4, ENTPD4, FASLG, MASP2, OR2B2, OR4A5, OR52I2, PRPS1, PSEN2, SESN2, TBL1X, WIF1, AASDHPPT, ATP6V1G1, MAP3K7IP2
Negative_10662	SI, ADRA1D, CCL11, CER1, CHST13, CLDN1, DDX50, EFNA4, EHMT2, ENTPD8, EPHA6, ESAM, FMO3, GGT1, HMGCL, LEF1, NRAS, OR4K5, OR51I2, PLCD4, PPP2R2C, RALGDS, RPS6, SEMA3F
Negative_10663	ACAT2, ALG8, AOX1, CCKBR, CHSY1, GALNTL5, PAX6, PIGV, PLXNA1, PTPRC, SMPD1
Negative_10664	ADRA1D, CDS1, CHPT1, CNTNAP1, CSF2RA, DUSP9, FGF18, MAN2A1, MKNK1, NR1H3, OR2A2, OR4C46, OR52I2, PARD6B, PHKA1, RAPGEF1, SLIT2, SULT1A2, ATP6V0A1, CACNA2D3

Negative_10665	BCR, AMPD2, OR51F1, OR52A1, OR6K2, PFKM, POLR2L, PTPN11
Negative_10666	ENTPD1, EP300, INHBC, OR5AU1, PRODH2, SMURF1, SPHK2
Negative_10667	ATP5G3, BTRC, DAPK1, DDX50, IL22RA1, NTN1, ONECUT1, STMN1, THTPA, WAF1
Negative_10668	BID, FN1, TYR, AC02, ACSS1, ALG1, CCL26, CD59, CDK5, EPHA1, GUSB, IQGA P2, KIR2DL4, MCCC1, MLLT4, MMP2, NCR2, NUDT5, OR2B2, PPOX, PPP1R3D, P PP2R5A, PRKAB2, SELL, SRD5A1, TP73, ST6GALNAC1
Negative_10669	AK3, TNF, A4GALT, ALDH3B2, AMY2B, ASMT, CAMK2G, CCL15, CCR4, CD99, CD C7, CLDN15, CSDA, CSNK2A2, CTNNA1, EI24, FUT4, FZD8, GLUD2, IL1RAP, O R1D5, OR2B2, OR2G2, OR5C1, PFAS, PLA2G2A, RUNX1, STT3B, UGP2, UPRT, S T6GALNAC5
Negative_10670	NGF, ABLIM1, ACADS, ADCY5, AGMAT, AGPAT3, APOC3, AVPR1A, B3GALT4, CA CNG8, CASP7, CRLF2, CSF3, CTLA4, CTSL1, CYP26B1, DAPK1, DUSP9, EPHA3 , FADD, FARSA, FLAD1, GDF7, GNB1, IARS2, IMPDH2, KITLG, LRAT, MAP3K13 , MAPK13, OR10G7, OR1N1, PAX6, PIK3C2G, PLXNA3, PLXNB3, SMARCA5, SMC 1B, SPTAN1, ATP6V1G3, PAFAH1B2
Negative_10671	BMP7, CADM3, CAPN2, CCNG2, CRY2, CXCL2, DIAPH2, DPYD, HIP1, IDH3A, LA RS2, MMP2, MYL2, OR2AG2, OR2G2, OR2M2, OR4K15, PDPK1, PPARA, PPP3CA, PRODH2, RHEB, RPN2, SLC25A4, SRD5A1, STT3B, TAS1R2, TLN2, TXNDC12, S T6GALNAC4
Negative_10672	ABO, CFD, CKB, INS, ACSM2A, ALDH3A2, ALDOB, ANGPTL4, ARHGEF7, B4GALT 3, CACNB1, CNTN1, CREB3L2, CSNK1E, CYP3A4, GPLD1, LIPF, MAPK14, MLLT 4, MMP2, OR11H1, OR14A16, OR52K2, OR6B3, PCK1, PIGS, PON1, RALB, SOCS 2, SPCS1, TAS2R3, TRPM5
Negative_10673	PGP, ABI2, ALG12, ATP4A, ATP6V0C, CACNG6, CD28, CHEK2, CKS1B, CYP26A 1, EVI1, FADD, GNG12, LCAT, MAP4K2, MASP2, MYLK, OR4A5, OR8D1, PDX1, R AF1, SC4MOL, SRD5A1, TLR5, TPK1, ATP6VOE1, TNFRSF1A
Negative_10674	ARHGEF1, DRD5, EPHA5, FTCD, GRIA1, HMGCS1, IFNA10, NOTCH2, PLAUR, TA P2, UGT2B28, WASL, YARS2, ZFYVE9
Negative_10675	GP6, HPD, ID3, ACAA2, ACSL1, ALDH1A3, AMPD2, AXIN2, CCL17, CD59, DPYS L2, FABP1, FMO4, GJD2, GNAZ, GPLD1, ICAM2, IFNGR2, IL21, JUND, KLK3, L TA4H, NOTCH1, NPR2, NRAS, NUMBL, OR10H1, OR13C8, OR1J1, OR4D6, OR6C6 , OR7G2, PDX1, PIGQ, PLAT, PRODH, PYCR2, SPHK1, TAS2R4, TNFSF11, TOMM 40, TUBA3E, GABARAPL1, MAPK8IP2
Negative_10676	ASL, GH2, LAT, ADAM10, ADORA2A, ALG8, ANAPC4, BPGM, CACNG3, CALML3, C D74, CLDN19, CNTN2, COQ7, CSNK2B, DIAPH1, EPHB3, GABARAP, GALNTL5, G UCY2F, GZMB, HMOX1, IFNA17, IL17A, KIR2DS4, LEPR, OR10X1, OR5T2, PIA S2, PIP5K1C, PRKAR1B, PSPH, PTPMT1, SARS, SHC3, STAT5B, TAS2R1, USE1 , WNT5B, B3GALNT1, HSD17B10
Negative_10677	ID2, LAT, TPO, ALDH5A1, ANAPC11, ARHGEF6, ASPA, B4GALT4, BIRC2, CACN G8, CARS, CCND1, CD80, CHAT, CHRM2, COX10, CSF3, CXCR3, FGD1, FGF14, F GF2, GAD2, GGPS1, HARS, HLA- F, ITGA5, KIR3DL1, NCAM1, NFASC, OR10H4, OR51T1, OR6B3, OR9G1, PIAS4 , PIGU, PLCB3, PRIM2, RPN2, STX1A, SUFU, TBXAS1, TPK1
Negative_10678	ABL1, NKX3- 1, OR4D1, OR4M2, OR5AR1, RPS6KA2, SMPD4, SSX2IP, SULT1A4, UGCGL1, PL A2G12B
Negative_10679	AK1, FYN, MTR, ACSM3, ADH5, ADRA1A, C1QC, CLDN19, CNTN2, CSF2RB, DERL 1, DPYS, DUSP2, EXTL1, FMO5, GALNTL4, GLUD1, GRIA2, GUCA1A, GUCY1B3, HHIP, HLA- DRA, IARS2, IL4R, ITCH, LAMB3, NOTCH1, NT5C1B, OR2S2, OR2T10, OR6B2, PDHA2, PIGX, PPAP2C, PPP1CC, PPP2R2B, PPP3CA, PSME1, PTPRC, PTPRZ1, RAC2, RASSF1, RRAS, TSNARE1, WNT8A, CSGALNACT1, KIR2DL5A

Negative_10680	FAS, FST, LEP, ADCY3, AHCYL2, CACNG8, CCL14, CDH1, CLDN16, CNTN2, CXC L2, EPHA7, EXT1, GGT1, GLUD1, HMBS, HSD3B1, IGFBP3, IRS4, ITGB5, LIPG , MOV10L1, NOTCH3, NT5C1B, NTRK2, NTSR1, OR10A4, OR13C9, OR2H1, OR51 A2, OR51A7, OR51L1, OR6F1, PARD6A, PARVA, STAT1, TACR3, WBSCR22, WEE 1, WNT5A, WNT6, ATP6V1G2, TNFRSF11A
Negative_10681	F8, CD44, CDKN2A, CTLA4, DAD1, LYPLA2, OR10A5, OR5AP2, OR6K2, PAFAH2 , PHKA1, TPH1
Negative_10682	HGF, ACADVL, OR10H2, PPP3CA, RALGDS, SETMAR, SMURF2
Negative_10683	AK1, TNN, ACSM1, ACSS3, ADCY7, AGTR1, ALG1, ALG13, ARNTL, CACNG5, CAN T1, CD99, CEBPA, COMP, CSF2RA, CTNND1, DGKH, DTX3, FZD5, FZD6, GALT, G BGT1, GRPR, GUSB, HPSE, HSD17B8, IL10RA, ITGAL, KLRC2, MAD2L1, NCF4, NTN1, OR5AR1, OR5B17, OR7G2, PIGN, PLA1A, PRKAG3, PTPRJ, RAC3, RGS3, RHEB, SEMA4A, THBS3, TRMT11, UPP1, ATP6V1E1, SERPINB5
Negative_10684	C4B, GSN, ME2, TKT, AKR1C2, ANAPC11, APH1A, BHMT, CADM1, CAMK2G, CCNB 2, CD3E, CDC23, CHIA, CLDN11, CLTA, COMT, CXCL6, CYP2S1, DAPK3, DGKH, GMDS, GUCA1A, HEXA, HTR7, ICAM3, IL18R1, LIPC, NEFL, NR1D1, OR14J1, O R1E2, OR2L2, PDGFD, PIGQ, PPBP, PPCDC, RAP1B, RDH16, ROB03, SETD1A, T BL1XR1, WASL, WNT11, WNT2, WNT6, CSGALNACT2
Negative_10685	AMH, F2R, IL4, ACTA2, ALG1, B3GAT1, CAMK2D, CD74, CDKN2B, CRHR1, CSNK 1A1, DDX47, DDX51, DDX55, DHX58, DUSP10, FGFR4, FSHB, FTH1, GRIN1, IC OSLG, IDH3A, IL6R, JAG2, MMP9, MYH6, NCOR1, OR1B1, OR1M1, OR4F4, OR8G 1, PDE7B, PFKM, PIGV, RAPGEF4, RUNX1T1, RXRG, SDC1, SLC2A1, TBL1XR1, THY1, TRAF3, ULBP3, ZIC2, ATP6V1B1
Negative_10686	CCL19, EPHA4, EXOC7, FARSB, FGF11, GNMT, INHBB, MTMR2, MYH1, MYLK3, N AT5, RASGRF1, TAS2R9, TBL1XR1, TICAM2, TRAF4, VAV1, WWP1
Negative_10687	CARS, DUSP10, IL15, ITGA11, LEPR, PEMT, PRKAA1, RARS2, SMPD4, UGCGL1 , UXS1, VAMP2
Negative_10688	SMS, LGMN, OR2H2
Negative_10689	AMH, IHH, ABL1, ACADVL, ACVR1C, ALDH1L1, CD58, CD82, CDH4, DOCK1, DPY SL2, EXOC7, FUT9, G6PC, NKX6- 1, NRG1, NTF4, OPLAH, OR1Q1, PYGL, RASGRP3, RCHY1, SMAD2, SV2B, TALDO 1, UPP2, C1GALT1C1
Negative_10690	LYN, ACPT, AMHR2, CAMKK1, CCL1, CYP21A2, CYP2C18, CYP3A7, DGKI, DTYM K, FOXO3, GFPT1, GNAZ, NCF2, NOX3, NRXN3, OR10J1, OR51B5, OR7D4, OR8B 12, PLCB2, POLR3G, POMC, RND1, SPI1, ST3GAL5, ULBP2, ARHGEF12
Negative_10691	CSF2, NTRK1, PPA2, TSC1
Negative_10692	HK3, ABLIM3, ACSM5, ADIPOR2, CHEK2, CLDN11, CTNNB1, CXCL2, DHRS4L2, EPHB4, FGF2, IMPDH2, MCAT, MTHFS, NEFL, NFE2L2, OR8D1, PDHB, PIGH, PO N3, RELB, SEMA3B, SGPP2, SLC2A2, ST3GAL1, STAT1, TAS1R1, TIRAP, VAMP 4, SERPING1
Negative_10693	PAH, ARAF, ARPC2, B3GALT1, BMP2, CD46, CHRNA7, GALNTL4, GLI2, GMPR, I FIH1, IGSF5, ITGA11, KLRC3, MCAT, MIOX, NGEF, OR2B6, ORC1L, PFKP, PKM YT1, SEMA3G, STAT4, TLR2, UCP1, UROS, ST6GALNAC3
Negative_10694	PGP, CD74, CNTNAP2, CSF2RA, CTTN, DAXX, DRD2, FZD9, ITPKB, NT5M, OR51 D1, PTPRZ1, SC5DL, TAS2R38, UBE2K, UNC5D, WARS2
Negative_10695	CAT, ATIC, B4GALT2, BCKDHA, CCL5, CHDH, CYBB, DGAT2L4, EFNA4, FRAT2, GLUL, GSTA4, HARS, IL20, IL22, KLRC1, MADCAM1, MAP3K14, MPST, NCF2, N COR2, OR13H1, OR2AT4, OR4C6, OXSM, PARVG, PDE9A, PGM1, PGM3, PIM1, PO N2, PROC, ROCK1, SHC4, SOD1, SREBF1, ST3GAL6, STX16, TUBA8, UGCGL1, Z FYVE9, B4GALNT1
Negative_10696	ACPI, FCER1G, MAP3K3, NUMBL, TIRAP
Negative_10697	IDS, PGD, ACAD9, CANT1, CD22, CD99, FABP3, FGF3, GRLF1, IFNGR1, MCEE, NCR3, NQO1, OR13H1, OR1L3, PECAM1, PI4KB, PLCB1, POLR2C, POLR3A, RAP 1A, SDHC, SKP2, SMARCA5, SOD1, TGFB3, UGT2A1, UPB1, TNFRSF14

Negative_10698	CP, DHH, GH2, IDS, ILK, SCD, TNC, ALDH6A1, ASRGL1, CCR10, CCR8, CD59, C RB3, EDAR, ERBB3, F2RL2, GDE1, GUCA1B, IL17B, IRF7, LAMB2, NUDT2, OR5 2E6, OR7G1, PCK2, PLK1, PNPLA4, POLR1D, POLR3A, PPP2CA, SETDB1, UBA7
Negative_10699	CXCL5, EPHB4, PAPSS2, YWHAG
Negative_10700	GCK, ADCY6, CKS1B, CPT2, CTNNA3, DUSP8, ELK1, ENPP3, GALNT1, GPD1L, I L20RB, IL4R, LIAS, MAML3, POLR3D, PPAP2B, PPP1R3D, PYCR1, RUVBL1, SE MA3C, SFRP2, SPCS3, ST8SIA1, TGFB2, TNFRSF17
Negative_10701	FOS, CACNG4, CXCL5, FM05, PNMT, SUV39H2, TUBA1A, TNFRSF11A
Negative_10702	CTH, ACAA2, ARG2, GZMB, OR5M8, P4HA1, PGM2, PTTG1, SCD5, SESN2
Negative_10703	C8B, CBS, ADH1B, ADRB2, ADRBK2, ALG8, CALML6, CBLC, CCKBR, CDKN2B, EN TPD3, GGT7, GNRH1, HGSNAT, IDH1, INHBA, LIPE, MDM4, MGAM, MTHFD2, MYL K2, NCK2, OR10K1, OR11H1, OR51S1, OR52E4, PLOD1, PON1, RGS3, SELE, SE TDB2, SNAP25, SPAM1, STAT4, STX2, TNFRSF4, YWHAE, ATP6V0E1
Negative_10704	FAS, MVD, ACAT1, CCL28, CREB3L3, CSNK1G1, CYP11B1, FM02, HNF1B, KITL G, NEFL, NKX3-1, OGDHL, OR4L1, OR7G2, PDGFC, PFKL, PHKG2, PON1, PPAP2B, PSME3, PTPM T1, RAP1B, RASSF5, SELL, SOAT2, STK11, TAP2, PLA2G12B
Negative_10705	CAD, LEP, PC, AGXT2, BCM01, CCL27, CSF1R, DGKE, DHCR7, GNRHR, GP1BA, H 6PD, HNMT, IFNGR1, KIR3DL1, KLRC1, MBL2, MGST2, NEGR1, OR10X1, OR2Y1 , OR52M1, OR5T3, P2RX4, PDGFB, PRKCG, PSME1, SEMA4G, SKP2, SNAI2, STX 18, TFPI, WNT7A, WNT7B
Negative_10706	AGL, DCC, ILK, ACLY, ACTN1, ADRB2, ALOX12, ALOX15B, BPNT1, CD86, CLTC L1, COQ3, CSNK2A1, FGD3, GCAT, GYS2, HTR2B, IARS, MIOX, NFKBIB, NT5C3 , PIAS3, PTPRM, RFNG, STX12, STX1B, C1GALT1C1
Negative_10707	BID, ANAPC7, CCL20, CDKN2A, CHAT, GOT2, LIPT1, MAPK12, MDM4, NFYC, NL GN3, NR1D1, NSD1, PIK3C3, PMM2, THBD
Negative_10708	WAS, CHD8, CHKB, CRHR1, DDOST, EPB41, FABP3, GADD45G, GALNS, IL8RA, M AT2B, NR1H3, PSME3
Negative_10709	AASS, CCL13, NME6, SDHD, UNC5A
Negative_10710	GLS, EFNA4, GPAM, IFIH1, OR1L8, OR4C12, OXSM, PGAP1, RPIA
Negative_10711	ID4, LEP, ABL2, ACTB, AGPAT6, ATP5J2, CCL20, DCXR, DDOST, FTMT, HCST, HRH1, MARS2, NUDT8, OR10J3, OR14J1, OR6X1, OR8J1, PMM2, POLE2, POLR2 C, RBL2, SKIV2L2, SLC2A4, SLC9A1, SMAD3, TAS1R3
Negative_10712	F10, ACYP1, ALDH3B2, ALG9, BLNK, CDIPT, CHAD, CSNK1G2, CYP8B1, DUSP6 , FZD1, GGT7, HADH, IL2RG, IQGAP1, ITGB1, OR4C15, OR4K17, OR8I2, OR9Q 2, PLAUR, PRKX, SETDB1, SMPD3, TCF7L2, TFPI, TNFRSF9, TNFSF10
Negative_10713	DLD, HK1, PTS, TNC, AKR1B1, ALDH1B1, ALPL, APAF1, BNIP1, CCNA1, CPOX, GALNT6, GLG1, GNAI2, IL20RB, JAG1, KAT2B, NFATC4, OR10H3, OR6C6, OR8 A1, PPP1CA, PPP2R2D, PSAT1, RXRG, SRD5A2, UPP2, ZNRD1, TNFRSF10A
Negative_10714	A2M, DHH, EGF, GBA, ID4, ABI2, ACOX1, ALOX5, AMY2A, ATP5B, ATP5G3, BLV RB, CCL7, CXCR3, DGAT2, DHDH, DKK2, DOCK1, FGF13, GAS1, GCLC, GJA1, HH EX, IFNA6, IL22, JAK3, MAP3K7, MPST, OR13C4, OR4M2, OR5B17, OR6C1, PI GB, PIK3CB, PLCE1, POLR3G, PPP2R5E, RPSA, TAS1R3, THY1, TNFRSF8, UCK L1, WNT2B
Negative_10715	E2F3, GADD45G, IL17B, INADL, NOS1, TSTA3, TUBA3E, UCK1
Negative_10716	IL2, LPL, SYK, TNF, AMY2A, ATP5E, BACE2, CALML5, CDH2, DEGS2, DTX3, DT X4, FARSB, FLT1, GSTP1, ICAM3, IFIH1, ITPKA, JAK3, MAP4K4, MAPK8, MYH 11, OR2T8, OR5T3, OR6Y1, OR7A17, ORC3L, PANK1, PCK1, PNLIP, PRKCQ, PR KCZ, PTPRM, RPS6KB2, SCLY, SH2D2A, SMAD3, TPM3, TRAF1, VDAC3, ATP6V0 A2
Negative_10717	ACSL3, ACTB, CCR2, GUCY1A2, IL17RB, OR6M1, PDE4A, UROC1, WARS, HSD17 B12



Negative_10718	C4B, CBS, ALDH7A1, CALML3, CALML5, DTX3L, ENAH, FARSA, FZD9, INPP5B, KITLG, KLKB1, MTMR1, MTMR2, NFKBIE, NLGN2, OR3A1, OR51A2, OR5D14, OR5T3, PCYT1B, PDE1C, PDHA2, PPID, PRKAG1, PRPS1, SAT1, STX4
Negative_10719	GH1, LIF, TK1, ZYX, ADCY9, BTRC, CACNA1I, CCDC6, CD58, CHRM1, COL5A1, CXCL5, DLL4, FCER1G, GALNT6, GNAT3, GUCY1A3, GZMB, HEXA, HIBCH, HTR2A, IL1R1, INPP5A, MYH4, NEFL, NEUROD1, NMNAT2, OR10V1, OR1L8, OR2B6, OR5T1, OR6C75, OR6S1, PIK3CG, POLD4, RAPGEF4, RRM2B, SELP, STK3, TBL1Y, TNFSF11, USE1
Negative_10720	DUT, MPZ, CREB3L2, DHRS4L2, ETNK2, HLA-DOA, INPP5A, OR13D1, OR5B3, PIK3R5, PRKAR1B, PRODH, PRODH2, PYGB, RBL2, RDH8, RELA, SESN3, SOX17, UGT2B4, WNT11, SERPINB5
Negative_10721	GSS, IL7, SI, SMS, ALDH5A1, ALG10B, CCL25, COX10, CREB3, DGKA, DOLPP1, DTX4, ENPP2, GALNT14, HLA-DOA, INHBA, P2RX1, PDE6D, RAB5A, RASGRP2, UPRT, ARHGEF12, PPARGC1A
Negative_10722	IHH, ACADSB, ALOX15B, ATG3, CARS2, CCL1, COMP, DAPK1, DDX55, DGKD, DGUOK, FGF4, FMO1, ICAM3, NFATC3, OR4K5, OR9A2, PAICS, PDE4A, ATP6V1B2
Negative_10723	GP6, GSN, ID3, MPZ, ACSM5, ACVR2B, ADIPOQ, B3GALT1, C7orf16, CD36, CYSLTR1, DDX4, EFNB3, ENAH, FGF11, FIGF, FLT3LG, GUCY1B3, IL15RA, LCAT, LRP6, MAPK12, MTFMT, NEGR1, NOD1, NPR1, OR51M1, OR6C76, PIGB, PNLIP, PRKCH, RELB, SC5DL, SESN1, SMAD1, SV2B, SYNJ1, TAS2R50, TGFB3, TRAF1, TSLP, UGCG, UGT2A1, WASL, WNT2B, ATP6V1G3, SERPINA1
Negative_10724	EGF, SHH, AHCYL2, CASK, CD72, CDC20, CTNNA3, DARS2, FBP2, GALNTL2, GMPPA, HPSE2, JAM3, MAP2K6, NCF1, OR2T1, OR4N4, OR7G1, OR8B8, PPP2R2C, SLC25A6, SOCS1, TRDMT1, YWHAE
Negative_10725	C8A, AKT3, APRT, AREG, ATP50, B4GALT4, CDIPT, COL3A1, FM04, GNAL, GNPDA1, HSD17B2, IL22RA1, IL24, KLKB1, LRP5, NT5C2, NTRK2, OR10Z1, OR51D1, PAK4, PIP5K1C, PPP2R5A, RBPJL, RPIA, RUNX1T1, ATP6V1E1, TNFRSF6B
Negative_10726	DUSP7, EPHA8, F2RL3, IL29, MCCC1, OR5B3, TRPC1, SERPINA1
Negative_10727	ABO, ABLIM1, ACOX1, AGPAT1, ALDOB, ANAPC11, CACNA1D, CD40, CDC23, DRD2, HAO1, IDI1, MAN1B1, MASP2, MCEE, MINPP1, MYL2, NME6, OR10V1, OR13C5, OR6C70, RASA2, SPP1, ST3GAL1, TOMM40, TRADD, TUBB4, XYLB
Negative_10728	CKB, OSM, ACSM2A, ACTB, ATP5G2, CACNA1B, CCNB3, CDH1, CHD8, CNTN1, CSNK2A2, DDX4, DFFA, GSTK1, HTRA2, ITGB1, LCP2, LTBR, NFKB1, OR5J2, OR6B2, PYCRL, SARDH, SPRY2, ST3GAL1, TAS2R49, TAS2R50, TNFRSF9, VEGFC, CSNK1A1L
Negative_10729	FST, HK1, IDS, TNF, BTRC, CACNA1F, CCL21, CES1, EFNA4, EPHA8, GNAI2, HLCs, HSPA2, IPMK, KLRC3, MAP3K12, MAP3K14, OR11H4, OR1B1, OR1D2, OR4C11, OR51S1, OR6N1, PAICS, PDK1, PIGM, RHEB, RUVBL1, SMAD1, TPH1, WASF2
Negative_10730	C5, CSK, GH1, GLA, AKT2, CAMK4, CDC25A, COX10, CSDA, FLAD1, GLI3, GNRH2, GUCY2D, GYS1, HLA-C, HLA-DMA, ICAM1, IL17RA, MMP2, NR1D1, OR13C2, OR1Q1, OR2A12, OR3A3, OR4K15, OR52I2, OR6K2, PAICS, PAK2, PAPSS1, PDE3A, PDXP, PIGT, RGS3, SOCS4, ST3GAL2, STX7, SUCLA2, WNT9A, YWHAQ, C1GALT1C1, SERPINB5
Negative_10731	ADA, AVPR1B, BTRC, CD44, CPT1A, DVL1, GSTA4, INPP5A, OR5M3, PIGK, PKM2, PRODH2, STK36, TUBB3, UMPS, ATP6VOD1
Negative_10732	C9, FH, ABL2, ACYP2, ADCY9, ALDH3A2, C9orf95, CCNB1, CDKN2C, DGKG, FGF19, GRIA3, ITGB8, MASP2, MGAT4A, OR10G3, OR2A12, OR5AP2, PFKFB1, POLR1B, RPS6KA6, TGFA, TGFB1
Negative_10733	ALPI, ARHGEF4, COL2A1, CTSL1, ERO1L, ETNK1, FDFT1, GSTO1, HMOX2, MCM7, NMNAT3, NOTCH3, OR52I1, PLXNC1, SH2D1A, STAT2, THBS1, ULBP2, CACNA2D3, ST6GALNAC6
Negative_10734	CPT1C, EPB41L1, EPB41L2

Negative_10735	ADH7, ASIP, CX3CR1, EXOC7, PYCRL, RASGRP4, WHSC1
Negative_10736	ADCY5, BET1L, CYP4F3, FABP3, FLOT2, ITGAX, MBL2, OR4D5, SHC2, TIRAP, VAMP3
Negative_10737	AUH, C6, IVD, ARAF, CD247, CHKB, COMT, CSNK2B, CYP2E1, DVL1, ECSIT, ERBB2, FGF4, FZD2, GALNT2, GNAL, HAGHL, HMGCR, IDI2, IGF1R, IL10RA, INADL, LDHD, MYH15, NEFM, OGDH, OR4F15, OR4S2, OR52N1, OR5C1, OR7G1, P2RX2, PAICS, PIM2, PRODH2, PYGB, SLC2A1, TAS2R42, TCF7L2, TGFA, XYLT1, YWHAE, ZAP70, HLA-DRB4
Negative_10738	F10, ATP6V0B, CACNA1F, CLTA, FGF13, FPGT, GSTA4, IL10RB, LARS, MAP3K14, PIM2, PNPLA3, POLR2L, PRIM2, SLC33A1, SMPD3, TAS2R5, VEGFA
Negative_10739	AMY2A, CALML3, CASP6, CD70, CRLF2, CTBP2, FGF20, FM05, GLYCTK, ICOSLG, IRF7, LAMC1, NCKAP1L, OR14A16, OR1Q1, OR2A12, OR52B6, OR6C76, SETD1B, SLC12A2, TRAF4, XYLT1
Negative_10740	DCN, EDA, GFPT1, IFNA17, MTMR2, NEUROG3, NLGN3, PANK3, PIM1, PLXNA1, PPP2R2B, PRIM2, RAB23
Negative_10741	ABAT, BMP7, CCL11, CDC42, CHRDL, CLCF1, CYP11B1, GNA12, HMGCS2, HSPA8, IL6ST, ITGAE, OR10H5, OR1K1, OR52E8, PNPLA3, RELA, RHEB, SLC2A1, VCAM1, ATP6V0A4
Negative_10742	GSS, ADIPOR2, AKR1C4, ATP2A1, CALML5, CD247, CDH4, CHPF, FARP2, GNAI1, MCM2, OR1C1, OR1I1, OR52E2, PDE1B, PRKAR2A, PSEN1, SPTLC2
Negative_10743	AR, C8G, ALDH7A1, ATP2A1, CD59, CD72, DDX19A, GALNT8, ITPA, MGST2, NFASC, NR5A2, OSMR, PKLR, PPAP2B, PPARG, RASA2, PAFAH1B3
Negative_10744	GLA, MSN, ACP5, AGXT, ALDH1A1, CLDN15, CREB3L3, FGF17, FM04, GALNT11, GCNT3, GNAO1, GPD2, GUCA1C, KLRC4, MAN1A2, MAP4K4, MTHFR, NFYA, OR10H3, OR4F5, OR52B6, OR6Y1, OR7C2, ORC2L, SSX2IP, TNXB, PPARGC1A
Negative_10745	DBI, FGB, HDC, IHH, LCK, LSS, TPO, ABL2, ACVR2A, AMDHD1, AOX1, APOA1, ARSE, CLDN20, CYP26C1, CYP2C19, FBP1, FCGR3B, FUT3, GRM1, HTR2C, IFNA2, IL10RA, IL19, INHBC, ITGB3, KIR3DL2, LAP3, NT5E, OR10A7, OR2A14, OR4C13, OR9K2, PRKAB1, PRKAR2B, RASA1, RPS6KA5, SC4MOL, SETDB1, SKP2, STK11, SULT1A1, TDO2, TRHR, WNT7A
Negative_10746	AMH, ARAF, CSF2, CTBP1, ELK4, EREG, SMAD5, TAS2R5, TLR5, VAV1, YWHAZ
Negative_10747	AK5, C3, C5, KIT, LCK, ZYX, ACOX2, ADH6, AHCYL2, ALDH1A2, ALDH1B1, ANAPC4, B3GNT2, CARD11, CDH5, CES2, CISH, CLDN15, CTBP2, CTPS, CYP27A1, CYP2C9, DDX55, DHRS4, FABP4, FASN, FRAT2, FTH1, GNAT3, GNB1, GPLD1, HSD17B4, ITCH, ITGA2B, LAMC3, LDHA, LIFR, MDH1, MOV10L1, OR52N4, PIP4K2B, PLXNA1, POLE2, PPP2R5B, PTGDS, PTGS2, TAS2R10, ATP6V0A2, ATP6V0D1
Negative_10748	GGH, ACP6, ACSS1, ATP5A1, CDC45L, CDK4, CYP11B1, CYP2E1, DNMT1, FGFR1, FSHR, FUT2, GRB2, HSD17B4, IL17RB, ITGA10, MAP3K13, NR4A1, NSDHL, OR11A1, OR2D2, OR4Q3, OR9A2, PIM1, RDH5, SESN2, UBE2K, ULBP3, PAFAH1B1, ST6GALNAC5
Negative_10749	TAT, ACAT1, B3GAT3, BMPR1A, CDC23, CFL2, CLDN8, CSNK2A2, CYFIP2, DCTN1, DOCK1, DRD2, EP300, GLUD1, GSK3B, HSPA8, IL15RA, ITCH, LAP3, LIMK2, MAGI3, MAN1A2, NODAL, NR1H3, NRXN1, OR13C3, OR1L3, OR4C6, OR5B3, PAK4, PDE6G, PIGS, PIK3R4, PPP1CC, PPP3CB, PSPH, RUVBL1, SETD7, SOCS4, TNFSF14, TPM3, UGT2A3, VEGFC
Negative_10750	CD4, GK, TPO, ABLIM2, ACSS1, ARPC1B, CACNA1E, CCL14, CLOCK, CSF1R, EPOR, FGFR2, GMPPB, GOT1, HSD17B4, IL2RB, IRS1, ITGAX, NAMPT, NANS, NFKBIE, NT5C1A, NTNG1, NUDT5, OR2AG1, OR2D3, OR5P2, PDE2A, PRKAB1, PSEN2, SELE, SPTLC2, TAP1, TOMM40, TNFRSF14

Negative_10751	C2, DLD, TXK, ACVR1B, AGXT2, ATP5I, CD34, COL5A1, GAMT, GRIN2C, GUCA1C, HSD11B1, INPP4A, KIR2DS4, LAMC3, LDHD, MYH15, NADK, NRAS, OR10H2, OR14C36, OR1Q1, OR2B6, OR2C3, OR2M2, OR4B1, OR51B6, OR51I2, OR5T1, ORC5L, PIAS1, PIGK, POLR3A, PPP1CC, PYCR1, SEMA4A, TUBA8, VCAM1, YKT6, TNFRSF11B
Negative_10752	C8A, CRH, ABL2, ADH1B, ANPEP, BHMT, CCL17, CX3CR1, CYP2C8, CYP3A43, D PYSL2, EIF4E, ERBB3, FUT7, GMSD, GRIN2D, IL17RA, INHBB, LTBR, MBL2, NTSR1, OR4X2, OXSM, RFXAP, SARDH, SEMA4D, TACR1, TBK1
Negative_10753	IL6, IL7, TAT, ALG13, ALPPL2, B4GALT4, BMP7, CXXC4, CYP2A7, E2F1, EPHB4, FGF19, GCLC, GMPS, GNA15, LAMB1, LYPLA2, MAP3K14, MAPK8, MMP14, NCF2, OR13C3, OR1M1, PLCB1, PPAP2B, PRKACG, PRPH, TCF7L2, TNFSF10
Negative_10754	PVR, ADH7, ANAPC2, ATP6V1A, CSF3, CSNK2A1, DMGDH, FGF3, HNF1B, IGSF5, IL12A, INPP4A, MAPK13, METTL6, MYL7, OR8U1, POLR2B, POLR2G, PPP3R2, PRKAG1, RAP1B, SETD8, SHC4, STAT5B, STK36, TAS2R9, WARS2, WNT5B
Negative_10755	C9, JUN, NPL, ABLIM3, AGPAT6, AKR1B10, ALG3, AMPD3, ARPC5, C4BPB, CCKBR, CCL26, CXCL16, CYP2B6, DHCR24, DPAGT1, DUSP9, EIF4E, GGT5, GRLF1, GUCY1A2, HMGCL, OR10Z1, OR1L1, OR51F2, OR5A1, PAK3, PCK2, PLA2G10, POLD1, RPIA, RXRB, TBL1X
Negative_10756	ARG2, MYH3, OR7G1
Negative_10757	HAL, ATN1, DLL3, DUSP7, EXTL2, FSHR, GZMA, MASP1, NCF2, ONECUT1, OR1L6, OR51B6, OR5P2, POLR2E, PTK2B, ROCK1, SPRY2, TPK1, MAPKAPK2
Negative_10758	BTK, GSR, ME1, ADH5, CACNG1, FMO5, LCMT1, NOTCH3, PCK1, PTGER3
Negative_10759	AR, CD27, CD38, CDS1, ENTPD6, FGF1, GGT5, LAMC2, MPDZ, NANP, OR10H3, OR10K1, OR1B1, OR52N5, P2RX6, PDIA4, PFN1, PPP1CB, TKTL1, VDAC2, WARS, WHSC1L1, AASDHPPT, MAPK8IP1, SERPINE1
Negative_10760	GH2, A4GALT, ATP13A2, ATP5H, CTLA4, DEGS2, FUT7, HARS2, HHIP, MAP4K2, MGAT1, NEU1, OR51T1, PLA2G2A, POLD4, PTK2B, PTPRJ, PYGM, ROBO3, WBS CR22
Negative_10761	INHBC, OR51A2, VCAM1
Negative_10762	AKT2, ALG9, ATP5L, CLOCK, DERL1, DPM2, GLI3, GMPPB, HSD3B2, KAT2A, LI PC, LRRC4C, LTC4S, MAN1A2, NAT2, NEFL, NSDHL, OR52M1, P4HA1, PHGDH, PIGS, PITX2, POLE, PORCN, PPP3CA, ROBO3, SPCS1, TACR1, TLR3, UCK2, WNT7B, TNFRSF10C
Negative_10763	GNS, HK1, BLNK, DLL1, OR2S2, OR2Y1, OR4C11, OR4N5, OR52A5
Negative_10764	F7, GAA, GNE, PAH, RPE, CAPN2, CCL17, COQ5, CYBB, GMPPB, GNPAT1, GRLF1, IL22RA1, IMPA2, IPPK, ITGA10, JAK1, KIR2DL3, MAP2K7, MAP3K3, MGAT4B, MTHFD2, OR2L3, OR51E2, OR8B4, P4HA2, PAICS, PIGC, PIK3R2, PLCE1, PPAT, PRPS1, RRM2, SHC3, SLC27A5, STEAP3, TCF7L1, UGT2B17, VAV1, VEGFA
Negative_10765	JUN, BMP8A, IDH3G, PDIA4, XCR1
Negative_10766	ALDH7A1, DUSP6, EDN1, GATM, PON2, SEMA4C, SRGAP3, XYLT2
Negative_10767	ME2, DDX50, FGF9, POLA1, YARS2
Negative_10768	ADC, FGA, HK2, JUP, SHH, SPN, UBC, APOA5, BMP5, CACNG5, CARS, CDC25C, CDH1, DDX54, DRD5, E2F4, EFNA3, EPRS, ER01L, FLT4, GGT1, HDAC2, HPRT1, IDI1, IFIH1, IFNA16, KIR3DL3, LAMC1, MCM2, NEFL, OR13D1, OR14I1, OR2H1, OR6C76, PCK2, PIAS3, PIGN, PIGW, POLD2, POLR1D, POLR2C, SELL, SMARCA5, SOCS5, SYNJ1, TGDS, VAV3
Negative_10769	CAT, ID3, SRF, ADCY10, APM1A, B3GALT1, BBC3, CNTNAP2, CREB5, IL18R1, IMPDH1, LAMB4, LTA4H, MAOA, NEUROD1, NOTCH2, OR10C1, OR1E2, OR2AT4, OR2T11, PDGFC, PFKFB2, PPARD, RPS6KB1, SHMT1, SPTLC2, WNT11, PLA2G12A, PPP1R12A
Negative_10770	CSK, F12, LIF, TFG, VTN, ARHGEF2, CACNG6, CHRM1, CXXC4, DIAPH3, LDHA, PAK7, POLR2J, PRPS2, ST3GAL4, WASF2, YWHAB

Negative_10771	IL5, IL9, MPL, ADCY1, BIRC5, CCL4, CNGA3, CRKL, DARS, DCTD, GUCY2D, HT R4, LPAR1, MKNK1, NFATC4, OR2M5, OR5D14, PRKCH, SMAD3, TAS2R10
Negative_10772	C8G, TKT, BRAF, CASP8, CLDN1, CLDN11, COL5A1, CYCS, DCTN1, DUSP9, GAL NT13, GALNT14, HRAS, IFNA13, ITGB6, MAD1L1, MAPK7, MYH6, NADSYN1, OR 56B4, OR6Y1, OR8U1, P2RX5, PKLR, PLA1A, PMVK, PRKACA, PSAT1, PTDSS1, SC5DL, SH2D1B, ULBP2
Negative_10773	CFH, NLK, ATG12, B3GAT1, BMP4, CACNA1D, CHRM3, CMBL, CYP2U1, DAXX, GM PPB, LCP2, MAP3K7, MARS, NAE1, NKD2, OLAH, OR10T2, OR2K2, OR5AR1, PAK 2, PIM2, POLR2A, PPARA, PPBP, PPP3CA, RBPJ, SEMA4B, SLC25A5, SPRED2, UNC5A, WNT9B, SUV420H2
Negative_10774	ACY3, ALPL, B3GNT4, CCL26, CCNE1, CD59, CIITA, CNTN1, HIP1, NAT5, OR1 0J3, PGM2, PIAS4, PIGF, SARS, TGDS
Negative_10775	IL7, STS, ADAM17, CD58, CDC2, CYP3A5, FSHR, FZD3, GMPS, GNPAT, INPP5E , IRAK3, ITGA6, MGAT4B, OR51Q1, OR5M8, OR9Q2, PEMT, PFKP, PIP5K1B, RA PGEF3, SULT1A1, TOLLIP, UGCGL2
Negative_10776	GH2, ACSS3, ALOX15B, B3GALT5, CDKN1C, DDHD1, FTMT, FZD6, GMPPB, GNA1 1, GNPDA2, HADHB, IFNW1, IL28A, MCM3, NFAT5, OR11A1, OR51F2, OR52J3, PAK7, PEMT, PIPOX, PLAUR, PPP5C, PRKAG1, PRPH2, PSME3, SRD5A2, TJP1, ATP6VOD2
Negative_10777	CD2, JUN, LAT, BAAT, CCNG2, CD247, CDC20, DTX4, DUSP14, ELK1, GCNT2, H 6PD, HARS, IFNA10, NRG4, PLD2, PPP1R3D, TNFSF9, ATP6V1B2
Negative_10778	CNGA4, EDAR, GNPDA2, MGLL, OR10AD1, OR5AU1, OR5M3, PAK7, PRIM1
Negative_10779	GDA, ALPP, MAPK11
Negative_10780	CACNA1H, GBGT1, GGT5, GSTO2, NFYC, NTF3, OR13D1, OR8J3, RPS6KA5, TAL DO1, ZNRD1, ST6GALNAC3
Negative_10781	JUP, ACPP, ACTG2, ACVR2B, BET1L, BUB1B, C7orf16, CD19, CPS1, ICOSLG, IMPA2, NAT1, NTN1, OR1E1, OR2F1, PLAT, PPP2R1B, PRKACA, RAF1, SDC1, S OAT2, TAS2R3, TOMM40
Negative_10782	GPI, ABL1, ALDH7A1, ALG10B, ALOX5, B3GNT5, C1QC, CACNG1, CES7, CLDN2 , CLDN20, CNTNAP2, E2F3, FUT5, GALNT2, GRIA2, GUCY1A2, IQGAP3, MAOA, MGAT3, NADSYN1, NFATC2, OR10A2, PFKFB3, PLAT, PRKAA1, PSEN2, PYGM, R AD51, RXRB, SRD5A2, STX12, UCK2, VAMP4, ATP6V1G1, TNFRSF11A
Negative_10783	ID4, ALG12, BCL2, HRAS, LCAT, UROD
Negative_10784	CBS, ADIPOR2, BUB1B, CCNG1, COL4A4, DERL1, DVL3, EFNA2, FCGR3A, FMO2 , GSTA4, GSTM3, HNF4A, IL10, KIR2DL3, LILRB3, MAML1, MAP3K11, OR13D1 , OR1E1, OR2G6, OR51B5, PLCB4, POLR3B, PPAP2B, PPP2R2D, PYCRL, ST3GA L2, TAS2R42, TNFSF14, TRIP10, CSGALNACT2
Negative_10785	DLD, IHH, MVD, ADH7, AKT2, ALDH1A1, BAI1, CCL3, CLDN2, CSDA, CYP3A7, D MGDH, DUSP2, DUSP5, FTCD, GCAT, HIBCH, HLA- C, IFNAR1, INPP1, KIR3DL3, OLAH, OR1L6, OR2F1, OR51Q1, PARS2, PIAS1, PRKACB, PRKACG, PTCRA, RAP1A, SDHB, SMAD2, SRGAP1, ST3GAL5, STK36, T GFBR2, UGT2B10
Negative_10786	CFI, GK, ACAD9, ACADL, ADH4, AMHR2, APOA2, ASIP, ATP6V1F, B3GAT1, BAC E2, BHMT, C7orf16, CARS2, DLST, EIF4E, ENTPD1, GRIA1, IL2RG, ITGA7, M BL2, NR1H3, OR1G1, OR1L8, OR2AT4, OR2M4, OR4F15, OR52K2, OR5D16, PIM 2, PLA2G6, PLAUR, PPID, PRKACA, RAB5A, RXRB, TIAM1, TMLHE, TNFSF11, U GT2A1, YWHAE
Negative_10787	DBI, F12, GDA, GH2, IL3, ITK, ACAD8, ALCAM, ATP6V1D, BDNF, CEBPA, CYP4 F3, EDNRB, GNAO1, IFNGR1, IGF1R, IL12A, ITGB8, NTF3, OR2AE1, OR6C6, O R6S1, POLR2D, PRODH, PVRL3, ROCK1, RPS6KA2, SUCLG2, SULT2B1, TDO2, U CP1
Negative_10788	ANGPTL4, FGF9, ICAM1, OGDHL, MAP3K7IP1

Negative_10789	AK7, KIT, RB1, AGPAT6, B3GALT1, B3GALT6, BCM01, C1GALT1, CACNG3, CASP3, CSF3, FARP2, FZD8, GADD45A, GALNT8, GRIN2D, ITGAL, LIPC, MYH7, NAT1, NMNAT1, NUMB, OR10AD1, OR10G3, OR10J5, OR13C4, OR2B11, OR2M7, OR51D1, PIAS1, PLCG2, POLR1B, PPAP2A, PTPRM, RARA, SLC25A4, SMAD7, SOX17, STK3, TIRAP, TNFSF12, TRPM5, TSNARE1, UROS, SERPIND1, TNFSF13B
Negative_10790	CD2, KDR, VCL, AK3L1, ALDOA, ARRB2, ATG7, BIRC5, C1QC, CACNG7, CCL16, CCL26, CLDN10, CLDN6, COASY, CSF1, CTNNA1, CYP2F1, DEGS2, ECHS1, F11R, GALNT1, GSTM2, LGL1, OR14J1, OR4C13, OR51G1, OR6K2, SLC25A4, STAT5A, THBD, TNFRSF4, WARS
Negative_10791	AK3, CERK, GNA11, INPP1, ITCH, OR5F1, PLCG2, PPP2R1A, PRKX, STK36, TRAF5, WNT10A
Negative_10792	BCR, ITK, NGF, TYR, ALPP, ANAPC7, ATP6V1D, CARD11, CCNE1, CTF1, CUL1, CYP2B6, DDX47, DHRS4L2, DIAPH1, DUSP4, ECSIT, EGLN3, ENO3, EXTL2, GALM, GFAP, HTR7, IL22RA2, MYH7B, OR2L2, OR2T34, OR4K5, OR5V1, PIK3CG, SARDH, SFRP4, STX12, TAS2R49, WARS, TNFRSF10A
Negative_10793	DCC, AGTR1, ATP50, AVPR1B, GTSE1, OR4K15
Negative_10794	C2, DUT, KDR, NPY, PLG, ACADL, ALCAM, CD34, CD80, CNDP1, CREB3L2, CYP2A13, DDX23, DGKD, ENTPD1, EPB41, FTCD, HSP90B1, IL28A, ITGAL, LEPR, MGST1, NCF2, NEFH, NFKB1B, OR2M5, OR3A3, OR4K2, OR4K5, OR8A1, PDE9A, P OLR3G, PPP3CB, RDH8, SGMS1, SMAD2, SV2B, TLR9, TSC2, TUBAL3, ULK3, YWHA E, ATP6V0D1, GABARAPL2, HLA-DQA2, TNFRSF13B
Negative_10795	RPE, ADORA2A, AGPAT3, APOA1, ARPC5, ATP4B, B3GNT4, CANT1, CASP9, CDO1, CXCL5, CYP11B1, DARS2, EFNA2, EPHX2, EVI1, F11R, FARSA, IAPP, JAG1, LDHD, MAML1, NCSTN, NEFH, NTRK1, OR2D2, OR4F6, OR4X2, OR52M1, OR5L1, PCNA, PIGK, PIP5K3, PPP3R2, PTCRA, RAPGEF4, RPS6KA3, UPB1, XYLT1
Negative_10796	GBA, GH1, ME3, SI, AGPAT4, ALPP, ARPC1B, BUB1, CCNB1, CDH1, CLDN5, F13A1, FBP1, GNG12, GPD1L, GPD2, HIP1, HPRT1, HRAS, IL12B, IL18R1, IL22RA1, IRAK4, MGAT5, MYLK, NT5C2, OR1M1, OR2A14, OR4Q3, PDE4C, PDE5A, PFKFB1, POLR1B, POLR2J, PSENEN, RAP1B, RPS6KA6, SEMA3A, SETD1A, ST6GAL1, TUBB2B, ATP6V0D2, SERPINA1
Negative_10797	BAX, CFD, KMO, SYK, BCAT2, C4BPA, CCL20, CHAT, CLTCL1, CREB3L3, DGKZ, DTX3, DUSP6, EGLN3, FARSB, FECH, FMO3, FZD6, GALNT5, GCH1, GNA14, HSD11B1, HSPB1, MAOA, MDH2, MGST1, MYH10, NCK1, NME4, NMNAT2, NRXN3, OR2A4, OR2Y1, OR4A5, OR4K13, OR52A5, OR6T1, PER3, RELA, SCP2, SMURF2, ST3GAL4, TCF7L1, TGFBRI, TUBA3E, MAPKAPK3
Negative_10798	ALDH1A2, LIPC, LRP6, PLCG1, PPID
Negative_10799	CRH, JUP, BMP8A, CCND2, GNPDA1, HSP90B1, IFNA16, IL6R, IPMK, NAT6, NEU4, OGDHL, OR1E1, PIP4K2C, PLAT, PLCG1, PPP2R5D, STK4
Negative_10800	TK2, ACOX1, ACSM1, ALG12, B3GALT2, CACNB1, CD34, FOXO1, FUT1, GNMT, NRG4, OGDH, OR2F2, P2RX5, STX4, YES1
Negative_10801	ILK, IVD, ACSS1, AKR1C3, AKT2, ASRGL1, CLDN18, CNTNAP2, CTNND1, CXCL16, DDOST, DHRS9, DPM1, DRD5, EGLN1, F2RL1, GALNS, GRIN2D, HLA-F, HSD17B7, HSP90B1, IL21, KIR2DL3, LAMB1, MTAP, NPAS2, OR13C9, OR1Q1, OR2L2, OR4D5, OR4M2, OR5D18, OR8B4, PANK1, PLXNB1, POLR2G, PRDX6, PTGIS, PVRL1, PYCR1, SESN1, SFRP2, TPH1, PAFAH1B2, TNFRSF11A
Negative_10802	CACNG6, COL1A2, DDX56, DPYS, ENTPD6, LTC4S, MAOA, OR3A2, PFKL, SMARCA2, TPK1
Negative_10803	FH, ADRB2, ALDH2, CHEK2, CHIA, COX10, CSNK1G2, CXCL12, CXCL9, DKK1, GNPAT1, GP1BA, ITGB5, MASP1, MCAT, MICA, ODC1, OR10A5, PAX6, PLAUR, PP1CC, PRKX, RHEB, RPS6KB2, SDC2
Negative_10804	GH2, GK2, GPI, HK2, SRC, C4BPB, CDC25A, CDK6, CTBP1, DGAT2L4, FGF23, GJD2, GSTM1, HSD17B1, IPPK, IRF9, ITGAL, MAP3K12, MAPK8, NNMT, OR10G2, OR10G4, OR10Q1, OR1K1, OR2F1, OR5B3, OR5J2, PDE1A, PIK3R3, POLA1, PPM1B, PPP3CA, PRPS1, PVRL4, RASGRP4, SEMA3A, STAT1, TRHR, WASF3

Negative_10805	B4GALT3, HTR6, IL5RA, KCNB1, MYH13, NAGA, OR4K5, RDH10
Negative_10806	CR2, LSS, ACTG2, ADCY6, ARPC4, BAI1, BDH1, CCL24, CNGA3, CXCL5, CYP2C8, EIF4B, GALNTL4, GCDH, GNRH2, GRM5, IFNA8, INHBB, KITLG, NCAM1, OR10S1, OR51I2, PLXNB1, SOD1, STX10, VKORC1, TNFRSF1B
Negative_10807	CAD, HYI, IL9, JUN, PGD, RFK, AARS, ADSS, ALG8, CACNG4, CCDC6, CHUK, CI SH, DUSP10, E2F3, FBXW11, GAB1, GALNS, GFAP, GNG12, IDI1, IL1B, ITGA2B, KCNB1, MAP3K14, OLAH, OR11H4, OR2L13, OR2M3, OR4L1, OR51G2, PMM1, PPP1CC, PRLR, PTAFR, RAB23, SAT1, SEMA4D, SMPD3, STT3B, SULT1A2, TICAM1, TUBA1C, TYRP1, UBA1, ULK2, WNT5A, TNFRSF1B
Negative_10808	JUN, LIF, AHCYL2, ALG1, ALG10, AMY2A, ARPC4, ASNS, BIRC3, C9orf95, CCL11, CCL14, CCNB2, CDC20, CDS1, CNGA3, CPT2, CTF1, EPHA8, FBP2, FSHB, GALNTL1, IL8RB, KLRC2, MAP4K3, MS4A2, MTHFR, OR11G2, OR13C3, OR4F5, OR52I1, OR7A17, OR8B12, OR8D1, PERP, PIGL, PIGO, PPP2R2D, SARS2, SEMA3A, SESN1, SLC27A1, STX16, TACR3, TLR2, TNFSF4, TUBA3E, VAV1
Negative_10809	GSS, OR6M1, PIM1, TSNARE1
Negative_10810	HMOX2, MAOB, NT5C2
Negative_10811	AKT2, CD226, CXCL10, FGFR4, GAMT, GCNT4, OR2Z1, OR4C46, PLD1, QARS, SDC4, SYNJ1, TBK1
Negative_10812	GHR, ALDH2, BMP8B, GALNT12, LIPF, NCF1, PDE9A, PPID, SUCLA2
Negative_10813	CARD11, LRP5, NEGR1, PLCD1, XYL B
Negative_10814	ABO, AUH, DCC, FAH, ID1, TNF, ACSM2A, ALG10, APOE, BMPR2, CACNB4, CDKN1C, CHPT1, DNMT3A, DUSP6, EPHA5, FZD3, GAB1, GCLM, GPLD1, HCCS, INMT, INSR, ITCH, ITGB7, MFNG, MMP14, MRAS, NAGK, OR4F4, OR5L1, OR8S1, OR9G4, PDE1C, PDE4D, PLXNC1, PRKAB2, PRKY, SC5DL, SEMA4A, STX16, SULT1A2, TAS2R14, ZIC2, MAP3K7IP2
Negative_10815	PLG, ABI2, ANAPC7, BCKDHA, C3orf10, CDH3, CDKN2D, CHD8, FABP4, FGF13, FPGT, HSD3B7, IBSP, IFNGR2, INPP1, MTHFS, NCSTN, NLGN2, OR1J4, OR7G1, PIP5K1B, THBS1, TPMT, UGT2B17, ULK2
Negative_10816	ASS1, BAI1, FGF8, FUT9, GLUD1, MGAT5, PDE6D, PDX1, SEMA3F, SLC25A5
Negative_10817	ABP1, ACTN2, ACTN4, ARHGEF1, ARSA, ARSB, CCL8, CDC14B, CD01, CHIA, DGKZ, DUSP10, GNAT3, HCST, ITGA10, ITGA2B, MPP5, OR2T1, OR2V2, OR5T2, OR6A2, OR6N2, PFKFB2
Negative_10818	GARS, GMPPB, PCK1, PIP5K3, PRKCG, SGPP1, WASF3, TNFRSF14
Negative_10819	AGK, C5, RPE, ACOT12, ARSB, ATP6VOC, CACNG5, CACNG6, CDC25B, CHSY3, CNTN2, ECSIT, EXTL1, GABARAP, GBGT1, GSTK1, GSTO1, KIR3DL3, MGAT3, NAT1, NTNG1, OR12D3, OR2A4, OR2C3, OR2L3, OR8D4, PIP4K2C, PPP1R1A, PRKX, PTTG1, RASGRP2, RDH8, SELE, SKP2, TICAM1, UNC5D
Negative_10820	C4B, FAS, ACSM3, ADRB1, ARHGEF6, CXCL16, DDX56, DOT1L, DUSP14, GSTO2, HLA-DRA, KIR2DL2, KIR2DS5, LCMT2, OR14C36, OR4K14, PAK4, PCCB, PDGFRB, PPID, PTGDS, TBL1X, TNFRSF10C
Negative_10821	CGN, KMO, ADCY2, ALPL, ANPEP, ATP2A2, ATP6V1H, CD80, CDKN1A, CKS1B, CTPS, CXCL3, CYP2D6, CYP7A1, DDX54, DLL3, DUSP3, IFNA2, IFNA4, ITGB2, KAT2B, MYL2, OR1N1, OR51G2, OR5D16, OR5H2, OXCT2, P2RX6, PDE5A, PIGN, PKLR, PRKX, SOD1, TBK1
Negative_10822	PGF, SRC, ATP5E, CCR3, CKMT2, CYP3A7, CYP4F3, DGKQ, GDE1, HYAL2, IGFBP3, LRP5, OR2H1, OR9G1, PI4KA, PIK3R5, PPP2R5A, PRKY, TIAM1, ATP6V1C2
Negative_10823	AANAT, CLDN5, FUT2, HMOX2, IL28RA, OR2C3, PFN4, SMAD5, MAP3K7IP1
Negative_10824	IDS, IL2, ACSM1, ACVR2B, AKR1B10, AKT2, AKT3, ANAPC4, ARNT2, BPNT1, CDS1, CMPK1, CTSG, DTYMK, FABP4, FUT9, FZD9, GAL3ST1, GNAI3, LDHB, MGA T5, NQO1, OR10Z1, OR1C1, OR2AT4, OR51B5, OR51G1, OR56A1, OR5D14, ORC2L, PFN3, PIGM, POLR1E, PPP1CB, PRKAB1, PRKCI, RRAS, SENP2, SMAD3, VAMP1

Negative_10825	DLD, CXCL9, CYP2A6, FZD10, HNF4G, HSD3B2, IFNA7, MGAT1, NCF4, OR10P1, OR2B11, OR2T5, OR52A5, PHKA2, QPRT, STAM, TNFSF8, TUBA3E, ULK3, PDCD1LG2
Negative_10826	DAO, DUT, HGF, AGPAT1, ALDH1A3, ANAPC4, CASP9, CHKA, CPS1, CXCR5, CYCS, CYFIP1, CYP11B1, DLST, ENPP2, F11R, F13A1, FGF13, GFPT2, GRPR, IL17A, IL3RA, INADL, IPMK, IRF3, KIR2DL4, LEPR, LRP6, NCOR2, OR2Z1, OR51E2, OR51Q1, OR9G4, PFN1, POLR3H, PPP1R3C, PPP2R1A, RASGRP3, RPS6KA3, TAP2, TGFB3, TJP1, VTI1B, YWHAZ, ATP6V0A1
Negative_10827	ADK, BAI1, CACNA1F, CD47, CTLA4, EIF4E2, ETS1, IGSF5, ITPKB, NTNG1, OR4C6, OR4F15, P4HA3, PAFAH2, PPP2R2B, RASA1, SESN1, SPCS1, TICAM2, TSHB, WNT16
Negative_10828	CGA, CKB, DDO, GK2, LYN, MPL, TFG, WAS, AGMAT, AGXT2, ALDH9A1, APBB1, APLP1, ARPC5L, CARS2, CLDN19, DDX51, DGKI, DNMT1, ENO2, EPB41L2, EXOC7, FGF7, GNAQ, GRIA3, HLA-DOB, HNMT, IL1A, INHBE, ITGAX, LAMC3, LIPG, MAP2K1, MMP1, MTHFS, OR1I1, OR1S2, OR52J3, PAK1, PLA2G2D, PLCB4, PPP2R2A, RAPGEF2, RASGRP1, RRM2, TAS2R1, MAPKAPK3, TNFSF13B
Negative_10829	BID, RB1, ACSM5, BIRC2, C4BPA, CCKAR, CDH1, DOT1L, FGF1, IL18R1, LARS2, LDHB, MAP4K2, MCEE, MPDZ, NRXN3, OR1A1, OR2S2, OR6C1, P4HA2, RBL1, RRAS2, SCLY, SPP1, STAT2, ATP6V1C1
Negative_10830	ARHGEF1, ATP5F1, CACNA1B, CD44, EPB41L2, FABP3, FBXW11, FLAD1, GCNT4, HLA-F, IDH3B, NCAM2, NODAL, OR6C1, OR8K5, PIAS3, PIK3CD, RASGRF1, TLR5, TUBB, UGT2A1, ZIC2, TNFRSF10C
Negative_10831	CP, CS, ACAD9, ALPL, AVPR1B, CCL21, CREB3, CXCR4, DERL1, FOXO1, GFPT2, GSTK1, HCCS, HTR4, IRF5, LAMB1, NAT6, NEU3, NFATC2, NNMT, OR3A2, PAR6A, PFN4, PRKCA, RAPGEF2, RERE, SMURF2, UGCGL2
Negative_10832	NRG1, OR2G3, SETMAR, UGT1A10
Negative_10833	ACAD9, ADAM10, APOE, AREG, CBLC, EPB41L3, IL9R, LCAT, MAP4K2, NLGN2, ORC6L, PIP5K1A, PPAP2B, SPRY1, TM7SF2
Negative_10834	TAT, ASMT, CLDN18, EFNA2, NARS2, OR5B21, OR8K5, OR9Q2, PCYT2, PGAM2, PKMYT1, PNPT1, PORCN
Negative_10835	AR, AMD1, ATIC, CXCL6, E2F1, HBEGF, MAP3K14
Negative_10836	DHH, UBC, ACADS, CES1, CHAT, CREB3, DHCR7, ENO3, IGSF5, NFKB1, OR6M1, P4HA3, PTPN6, SEMA3F, SLC33A1, UGT2A1, VTI1B
Negative_10837	AR, PML, ADCY3, CPT1C, CYP2A7, CYP4A22, CYP4F2, FUT2, FZD6, HES1, IL2RA, JAK1, LAMA4, NR1H3, OR52K1, OR6X1, PCCA, PGM3, PI4KA, PIK3C3, RALGDS, PRICKLE2
Negative_10838	LSS, MIF, MSN, ATG7, CAMK4, CHEK1, DUSP6, FGF18, IL17RB, ITGA7, ITGB6, LMO7, NCAM1, NFX1, OR10J5, OR2M5, OR6F1, PDCD1, PYCRL, SETD2, SULT1A1, SUV39H1, TP73, TNFRSF10B, TNFRSF18
Negative_10839	F9, GGH, IL7, ME2, ABLIM3, ADCY4, ARAF, CAPN2, CCL28, CD3E, CDH5, CYP7A1, DPM3, DTX2, ENTPD7, EPB41L1, EPHA5, GARS, GRLF1, MAN1A2, MRAS, NFAT5, OR13G1, PLAUR, PPID, PPP5C, PSME2, PSPH, PTPRJ, RASGRP1, RENBP, RPN2, SPP1, TICAM2, TSC2, TYMS, UPB1, WBSR17, HLA-DRB5
Negative_10840	BID, CAT, CFH, IDS, UBC, ABAT, ABL1, APC2, ARPC4, ATG3, ATP13A2, B3GAT2, B3GNT2, B4GALT6, BMPR1A, CREB3L4, CSF2RA, CSF3R, CYBA, DGUOK, DUSP2, EHMT2, FGF21, FGF7, FMO3, FMO4, GDE1, HRH2, HSPA2, IAPP, IL1A, INHBB, MCM2, OR4X2, PNPLA4, RAPGEF2, RARS2, RDH10, SARDH, SHC2, SUCLA2, TLR9, TNFRSF4, WNT16, PHOSPHO1
Negative_10841	DDO, HPD, STS, ACYP2, ATP6V1H, B3GNT3, B3GNT4, CACNA1B, CACNB3, CCL3, CDK5, CHST11, CSNK1G1, CTSS, CYP4F3, FCGR3A, GNRH1, GOSR2, IL24, INHBB, LTBR, MYL9, NCOR2, NTSR1, OR10AD1, OR10S1, OR10X1, OR2G6, OR4M2, OR52N2, PGS1, PIGS, PIP4K2B, PIP4K2C, TLN1, TNFRSF13C, TNFSF13B

Negative_10842	NOG, ATP6V1F, CACNA1D, CCR7, CNGA4, CPT2, CSDA, CYBB, DBF4, DGKQ, FGF9, ITGAV, MAGI3, NCR2, OR2H1, OR52B6, POLR2D, POLR2I, PPAT, PTPMT1, STAT1, STX10, TPH2, TRDMT1, VANGL2, WARS, B4GALNT1, GABARAPL1
Negative_10843	MIF, PRL, BLVRB, DUSP16, DUSP5, PPP2R1B, SEMA4A
Negative_10844	SRM, AACs, ACAA1, ACTA2, ALDH1A3, ANAPC11, B3GALT5, CAMK2G, CYP21A2, CYP2C8, CYP4F2, DNMT1, ENO1, EPHA4, FLOT2, FZD9, GALNT8, GNRHR, GSTA3, HMOX1, HNF1A, IFNA5, IL19, ITGA4, MAGI3, MAML3, MAP3K6, NRG2, OR13C9, OR2T29, PAK4, PANK4, PCNA, PDE10A, PFAS, PPP1CC, PRKCD, RASSF1, SLC33A1, TAS2R10, TNFRSF4, TOMM40L, TPM3, UGT2B11, SUV420H2
Negative_10845	GNE, TNF, ADH1A, ANPEP, BAAT, CACNA1C, CLDN5, CYP2C9, DDX52, FGF12, GAB1, GLG1, GNAO1, GNPDA1, LMO7, MAPK7, NUMBL, OR52D1, OR6B3, PDX1, PRKAB2, PRKCB, SPTLC2, TAS2R14, TRAF6, WASF2, XYLB
Negative_10846	EPO, GPT, HGF, ACP1, ARHGEF1, CFL1, CHUK, CNTFR, COQ6, CSF2, CSF3R, DKK2, ENTPD3, EPHB1, FGF1, FRAT2, FTMT, GGT6, GGT7, GJD2, GNG12, HARS, IL13RA1, IL20RA, IRF3, IRF5, KCNB1, NOTCH2, OLAH, OR14C36, OR1B1, OR4K5, OR52N4, OR7G1, ORC2L, ORC3L, PAK6, PLA2G2A, PLCB2, PLXNB3, PYCR2, SC4MOL, TAS2R42, TPI1, TUBB4
Negative_10847	FUK, PC, AGRP, ASAH1, CAV2, CHRM5, CNDP1, DGAT1, DUSP6, EHMT2, FUT7, GDF6, GLUD1, GNRHR, GRIN2B, HSD17B1, IFNA5, IL12B, IL21, ITGAX, LIMK2, MAN1A1, MAP2K7, MAP3K1, MAP3K6, MAPK10, OR10J5, OR1C1, OR1D5, OR2T8, PLCB4, PTGER3, PTPRB, SELE, SEMA4A, ST3GAL5, TRPC1, ULK1, WNT10A, PAFAH1B3, PPARGC1A
Negative_10848	SRM, AADAC, APOA1, CCR10, CSNK1E, DLAT, GNA11, GNPDA1, GTSE1, MDM2, OR4F4, PTPRJ, SESN1, STX1A, TRPM5, ULBP3, ARHGEF12, ATP6V0A4
Negative_10849	ATP6VOC, CPT1B, DRD1, GOT2, GSTA5, HPSE, IL1R2, KLRC2, NCKAP1, NOS3, NR1D1, OR10A2, PAICS, PARD6G, PDXK, SNW1, TAS2R16, TUBB2A, TUBB2B, WNT2
Negative_10850	F10, PGD, RFK, TH, AHCY, ATP50, ATP6V0B, ATP6VOC, BCL2L1, CACNA1E, CNTNAP1, CXCL9, DOT1L, GCAT, IL12RB2, IRAK3, OR1C1, OR2T10, OR2V2, OR5D16, PNMT, PRKCQ, STX6, TLR3, PAFAH1B3
Negative_10851	HK2, AADAC, CCR3, IL12B, IL21R, MAP3K12, OR10J5, OR8S1, SRD5A1, YOD1
Negative_10852	CD244, CFL2, GPLD1, ITGA10
Negative_10853	MAG, ALOX12, ASMT, ASPA, ATP12A, CACNA1C, CCND3, CD44, CDKN2B, CIITA, COQ7, CSH1, DGKI, FGF21, FIGF, GBT1, GZMB, IL7R, KLRC2, KLRK1, MMP9, MYD88, MYH13, NKD2, OR10AD1, OR52R1, OR5T1, OR6X1, PON3, PPARG, PPP3CC, PRKACB, STX8, YWHAQ, ST6GALNAC3
Negative_10854	ACTG2, AKT1, AOC3, ATF4, ATP5G1, ATP6AP1, CHRM1, CISH, CXCL3, DLL4, ENTDPD1, EPHB4, GAB1, GALC, GALNTL1, IL15RA, KIR2DL2, LDHA, LLGL1, MITF, MYH2, NEU1, NFASC, NME4, OR10V1, OR51B6, OR51G1, OR7A10, PAK4, PPP3CB, PRSS1, PVRL4, RALGDS, RPSA, SELPLG, SNW1, TNXB, UGT2B10
Negative_10855	ADC, AMT, HPD, ACTB, ADRB3, ALG1, BCMO1, CCNG1, CD70, CHRNA7, CSF2RA, CSNK1G1, DARS2, DNMT3L, EGLN3, FSHB, FUT6, FZD4, KIR2DL3, NOS3, OR10A5, OR1L1, OR2V2, OR4F6, PAPSS2, PDGFRA, PDIA4, PIK3R4, PPM1A, RASSF1, RHEB, ST8SIA5, SUFU, WNT9B, KIR2DL5A
Negative_10856	C2, DCK, STS, ACADL, ADAM10, ADH1A, ASRGL1, ATP5I, B3GAT1, CACNA1C, CD22, CHDH, CHPF, CRB3, CYP2E1, CYP4A11, DKK1, EDN1, ENTPD7, FGF18, FGF9, FMO1, HMOX2, IL19, KLRC3, LIPF, MTMR6, NR4A1, NRG1, OR11L1, OR1B1, OR2L13, OR4X2, OR9A4, PDE7A, PIGS, PLXNB2, SCD5, SHC1, SLC25A6, YES1, PLA2G12B, TNFRSF1A
Negative_10857	EBP, FABP1, HSPA2, IL28A, OR52K1, PFN1
Negative_10858	AK3, DCT, TAT, ACY3, ALG10B, ATP6AP1, CFL2, CSF2, CSF2RA, ITGAM, LARS, OR1L6, RBL2, SRD5A2, TGFA



Negative_10859	CD4, OTC, AADAT, ATP6V1F, CCL7, CDS2, CSF2, FARSB, GALNTL2, GLUD1, HA01, MGAT5B, MKNK2, NFASC, OR2AT4, OR52B6, P2RX3, POLD1, POMC, PSME2, RHOA, SCP2, SH2D1B, SULT2A1, TRHR, VKORC1, ATP6VOA1, ATP6VOD2, CSNK1A1L
Negative_10860	SHH, ACOX2, ADRB2, AHCYL2, ANAPC2, CXCR3, DUSP2, FBP1, GAPDH, GCNT2, GNRH2, GSTT1, HSPA2, IL20RB, ITGB2, MCM7, OR7D4, OR8B8, OR9A2, PGK1, RELB, SPCS3, STX7, TAS2R8, TNFSF11, TUBB2B, TUBB4, ATP6V1B2, ATP6V1G2, TNFRSF11B
Negative_10861	C3, TH, ACADL, ACOX3, ADCY3, ANAPC11, BAI1, CXCL10, CYP7A1, DEGS1, DOLPP1, E2F2, FARP2, FGF18, FLT1, GCLC, GDE1, IARS, IL18, ITGA11, LRDD, MAGI2, MAP2K6, NMNAT3, OR10AD1, OR10H5, OR2A14, OR2A5, OR2H2, OR2M7, PCCA, PLXNA3, RAC2, RALB, RHEB, RPS6KA1, STX12, STX18, SUOX, TALDO1, TRIP10, UGCGL2, VAMP2
Negative_10862	ALDOA, CAPN2, ENPP7, GCLC, IFIH1, NLGN1, OR2T12, OR2T33, P2RX1, POLD1, PRIM2, RAPGEF4, SDC3, STT3B
Negative_10863	ID1, PLN, TNC, APAF1, AVPR1B, BMP4, CES7, CTLA4, CYP3A4, DDX56, GALNT3, GGPS1, GUCY1B3, IMPA2, INHBA, KAT2B, LTBR42, MAML1, MPZL1, NOS1, ODC1, OR12D3, OR56A3, PLTP, POLR3K, SLC27A4, TRADD, VAMP4, ATP6VOA2, ATP6V1B2, CTNNBIP1
Negative_10864	CAD, ACLY, AMHR2, CD55, CDC16, CHAT, FGF21, GALK2, GCNT1, GUCA1A, ITGA1, ITGA2, MARS, NCSTN, NFKB2, OGDH, OR1M1, OR4C6, OR51I2, OR5B17, OR5K1, PDE6D, PIGA, POLR3D, SETD7, SFRP2, SIAH1, SPRY3, STEAP3, TAS2R14, TBXA2R, ST6GALNAC5, ST6GALNAC6
Negative_10865	BAX, ARHGEF4, CCR5, CNTFR, CYBB, DFFA, EXTL1, GSTK1, GUCY1A2, IL6ST, MMP7, MYL5, NRG2, OR4A5, PAPSS1, PDE5A, RALBP1, SFRP4, SMC1B
Negative_10866	ACTB, APRT, ATP5B, CDKN1B, DAPK2, MAML1, MAN1A2, MNX1, XYLT1, CSGALNACT2
Negative_10867	MMP7, ST6GAL1, HLA-DRB5
Negative_10868	EPO, GSN, GSR, NPY, ACHE, ALDH7A1, ATIC, BAIAP2, CCR5, CD72, CD8B, CLDN4, CYP3A7, DFFA, DPM1, DUSP3, DUSP5, ENTPD8, EPHA8, HAAO, HSD17B4, IFNGR1, IRAK3, IRF5, LRDD, OR2T3, OR52N4, OR6T1, P4HA1, PAX6, PPBP, RXRA, SLC25A4, SLIT1, TGFBR1, TNFSF18, TNFSF9, UPP2, VEGFA, WASL, WNT11, XCL1, ZIC2, ZNRD1, MAPKAPK2, PLA2G12A, TNFRSF13B
Negative_10869	CFI, CTH, EBP, HK1, PC, AGTR1, ALS2, ATP6V1H, BACE2, CACNA1C, CCNG2, CDC7, CNTNAP2, CPOX, CTNNB1, CYP2F1, CYP4A11, DHRS4L2, DUSP16, FBP2, FGF21, GSTA3, INMT, ITGA6, ITGAX, MAPK1, NPR1, OR4F17, OR51I2, OR51T1, OR8A1, PLAU, PLCB2, PLXNB3, POLE, PTPN1, RARS, SLC27A4, TRAF6, TUBB, UGT2B4
Negative_10870	CSNK1D, OR1J2, PSPH
Negative_10871	GP9, SPN, AMPD2, CACNA1I, CYBB, ENO2, GALNT1, HLA-DOA, IL10, IMPA2, KAT2A, MYH15, NCF2, NEGR1, OR2A14, OR4C46, OR51Q1, PIGU, PPP3CB, RELA, TLN2, CSGALNACT1, TNFRSF11B
Negative_10872	IL8, CD274, CNGA4, ITGA11, OR8K5, SHC4, WHSC1
Negative_10873	FAS, LCT, NOG, ACTG2, BPGM, CD244, IFNB1, MAP3K1, MCEE, NT5C, OR1C1, OR1E2, OR4Q3, OR7C1, POLR1A, SHC3
Negative_10874	B3GAT1, CREBBP, DAPK2, DCXR, GPX5, HNF1A, MYH8, ONECUT1
Negative_10875	AK7, ACTG2, AMY2B, APOC3, CACNG5, CDK5, CTNNB1, DGKA, E2F4, FZD4, ITGA10, JUND, MMP9, MTMR2, MYH2, MYL7, NCK2, OR52N4, OR5M8, PFN4, PGS1, PLCD1, PPP1R3D, PTCRA, PVRL1, TBXAS1, VAMP2
Negative_10876	KMO, AARS, ACSS2, ANAPC11, B3GNT4, BCKDHB, CACNG2, CCR8, CHKB, CYP11A1, GALM, GCAT, GRHPR, IL28RA, MGST3, MYH15, NCR1, OR2A2, OR56B4, OXC T2, OXSM, POLR2J, POLR3H, PPCS, PPP5C, PRSS2, PTGDS, RIPK1, RXRG, SDHC, SEMA4B, SMPD2, SREBF1, ST3GAL5, STX1B, TJP1, TNFRSF10D, TNFRSF1A

Negative_10877	FYN, NF1, AASS, ACP2, ACSL1, ACTA2, ALDOC, ALOX12B, CD99, CYP2C9, CYP4F3, DAPK1, DNMT3L, HLA-DOB, HRAS, IRS4, NCR3, OR1L4, OR4Q3, OR6N2, OR7C2, PIP4K2C, PRKCD, SFRP2, TAS2R10, THBD, TRHR, UCK1, PAFAH1B3
Negative_10878	PDC, ADCY9, ADRB3, CADM3, DOLPP1, DUSP16, EDNRB, EPB41, G6PC, G6PC2, IGF1R, IL10RB, MAP3K2, MLYCD, NARS2, OR2M4, OR8S1, PECAM1, PHKG1, PLA2G2A, PRKAB2, PRKAR2B, RARS, RPS6KB1, RRAS, SMAD3, TXNDC12, WARS2, ZIC2, KIR2DL5A, SERPIND1
Negative_10879	NF1, ANAPC4, CD99, ENPP2, GPAA1, HLA-DOB, MYH4, OR2T12, P2RX7, PANK4, PPP2R2A, TAP2, THBS2, TPMT
Negative_10880	ACTN1, ALDH1A2, CD3E, CPOX, FTMT, GLUD2, HRH2, MAP3K12, OR2S2, PDHA2, PPAP2C, PRKACB, SPRY1, TUBB2B
Negative_10881	CXCL13, OR10Q1, OR2G2
Negative_10882	AK1, GLA, MAX, TPR, AGTR1, AQP7, ATP6AP1, CCL3, CMAS, CPOX, CYP2A13, DPYS, DUSP6, FADS2, FGF8, FGFR3, FUT4, GNA11, LTA4H, MAP3K13, MASP1, NEU4, NFASC, NFAT5, OR10J1, OR2AG2, OR6C2, OR8J3, POLD1, POLR2D, POLR2E, PRKAG3, PTGES, RRM1, RXRG, SKIV2L2, SKP1, SRGAP3, STK4, STX6, THBS2, TIRAP, TMLHE, ATP6VOD1, PPARGC1A
Negative_10883	BLVRB, BNIP1, CCND2, CDH2, DUSP2, ENTPD7, IDI2, NCR2, PHKA2, PIM2, POLD2, TALD01
Negative_10884	AGK, CRH, F8, WAS, ALOX12, CHST13, CX3CR1, FARS2, GALNT13, GALT, GCNT2, GRM1, GRM5, HSD3B7, IL21R, IPPK, MAN1B1, MNX1, NAT1, NLGN2, NUDT12, OR2D3, OR2M2, OR2T34, OR51A7, PAK7, PDGFD, PIP4K2A, PISD, QARS, RHOQ, RRAS, SDC1, SDC4, SEMA3C, SMAD6, SMURF1, SOCS5, TUBB2C, PRICKLE1
Negative_10885	DBT, ACSL3, ADH1A, AKR1B1, AMPD2, APOA1, C4BPB, CASP7, CCL16, CDKN2B, CYP3A5, DGKI, ENTPD4, EPHA7, GALNT13, GAPDH, GNPAT, GRIN2D, GSTO2, HES1, KCNQ1, LEFTY2, LIMK1, MCCC1, MYH11, NFX1, OR1A2, OR2T12, OR2T6, OR4F15, OR4F6, OR51B5, OR5AC2, OR8J1, PAK6, PDE6G, PFKM, PGLS, PLEKHA8, PORCN, PTPN5, SAT2, SOCS3, TDO2, ULBP3, USE1, VEGFB
Negative_10886	AGL, CFD, ADCY1, ALPI, ATP2A1, B4GALT6, BCAT2, CBLC, CCL21, CCNB2, CES1, COQ7, COX10, CSF2RA, CTSB, CYP26B1, DUSP16, EDNRB, EFNA3, FUT4, GAPDH, GCNT1, GPD1L, GZMA, IL8RB, INADL, ITGB6, MAD2L2, MAP4K3, MCM5, NADSYN1, NCF2, NOTCH1, OR4K17, OR51A7, OR52E8, OR52N1, OR51I1, PDGFB, PIAS2, PIP4K2A, PPP2R2C, PRSS2, SEMA7A, SPTLC1, TFPI, ULK1
Negative_10887	APP, CFH, DHH, MUT, ACACA, ACTB, ADIPOQ, ALDOB, AVPR1A, GALC, GUCA1B, HMGCS2, IL15RA, IL18, IL3RA, IL5RA, LLGL1, MCCC1, OR10S1, OR5V1, PAFAH2, PGK2, PIK3CD, PIP4K2A, PPAP2A, PRIM1, SKP1, UAP1, XIAP
Negative_10888	ATP5E, EPHB3, GAMT, GSTM2, IL23R, LEF1, OR52K2, OR8B4
Negative_10889	AGL, CR2, EZR, FN1, RDX, SCD, AARS2, ACAA2, ACY1, ALDH4A1, CARS2, DCXR, DIAPH3, DNMT3A, DOT1L, ENTPD2, ENTPD5, ERBB2, FSHR, G6PD, GALT, HIBADH, NEUROG3, NOTCH1, NPR1, NT5M, OR10Z1, OR2T3, OR3A3, OR51I1, PDCD1, PDE4A, POLD4, RAD51, SDC1, SMPD3, ST3GAL2, STK3, STX12, STX1A, THY1, TLN2, HSD17B12
Negative_10890	AK2, AMT, NPL, OSM, SP1, VCL, ACSL1, ALDH4A1, ATP12A, AVPR1B, CACNG8, CLDN1, DMGDH, FBXW11, FM05, GALNT11, GCNT1, GPAA1, GSTM3, GUSB, INSR, LAMB4, LLGL1, NFAT5, OR5A2, OR8D2, P2RX7, PAK2, PHKG1, PIPOX, PMAIP1, PNLIP, PPP1R3D, RAP1A, RASSF1, ROBO2, RPSA, SGPP2, SLC27A5, ST3GAL4, UGT2B28
Negative_10891	ALOX12B, ATP5A1, C7orf16
Negative_10892	ID3, MVK, BHMT, BST1, DHRS4L2, DUSP16, ENO3, EPHA3, GLDC, GRIA1, INHBC, ITGA5, ITPK1, JAG2, MYH10, NQO1, OR10J5, OR2V2, OR5AP2, PRNP, RASGRP3, RUVBL1, SETD7, SLC25A4, TGFB1, ULBP2, PAFAH1B3, PLA2G12B, SUV420H2
Negative_10893	SYK, ASIP, WIF1, YOD1

Negative_10894	APP, PTS, SMO, ALPL, ALS2, ATP4B, CD8B, CDH1, CFLAR, COL3A1, DDX54, DGKZ, DUSP6, EFNA2, EXT2, GRIN2C, HEMK1, IL1A, NAGK, NCKAP1L, OR10G9, OR10J1, OR11H1, OR5P3, OR5T2, PNPLA3, POLR3G, PRKCD, RARS2, RASGRF2, TBL1X, ARHGEF12
Negative_10895	CLDN10, GNAS, GRPR, ATP6V1G1
Negative_10896	ALS2, ARSD, BLVRB, CHRM5, CLOCK, ENO3, EPB41L3, FGF18, FGF20, GALNT9, GRB2, GSTM5, H6PD, HSD17B8, IL2RG, INADL, ITGB7, MYL9, NCK2, NCR3, NEU1, NFYC, NUMB, ODC1, OR11G2, PIP4K2B, POLR2C, PPP3CB, PRIM1, PRKG1, SELPLG, SLC25A5, SMAD2, SRGAP3, ST3GAL5, SUV39H2, TYK2, UGDH, VEGFC, ZIC2, ARHGEF12, SERPINE1, TNFRSF10D
Negative_10897	C8A, BCAT2, CXCL16, CXCL2, GARS, GNG12, NR1D1, OR1A2, OR1D5, OR5M8, SEMA4B, SOCS3, TPMT
Negative_10898	EPO, IVD, NGF, ADAM17, AGPAT6, ALPPL2, CADM3, CALML5, COL1A2, CREBBP, CTNNA3, CTNND1, CTSL1, CXCL5, CXCR6, CYP2C19, ERBB3, HCCS, HMOX2, ICAM2, ITGAV, LDHA, MYH7B, NADK, NNMT, OR10V1, OR1B1, OR2A5, OR8K3, PGAM2, PIP4K2B, RASGRF1, RPE65, SARS, SEMA3F, ST6GAL1
Negative_10899	DCC, EZR, GLA, NPL, ACPT, ACYP1, ALDH3B1, AMDHD2, ATP6V0C, BDNF, BMP8A, CHST13, CTNNA3, CYP17A1, ECSIT, EDN1, ENPP1, FSHB, GADD45G, GNPNT1, GRAP2, GUCY2C, IGSF5, KIR2DL2, LDHAL6A, LTBR, MBL2, NFASC, ONECUT1, OR10G8, OR10T2, OR2H2, OR5D14, PDE7A, PIAS2, PORCN, PPM1A, PPT1, PRKAG2, RRAS2, RUNX1T1, SOX17, SPAM1, UBE2K, UGP2, ULBP2
Negative_10900	AUH, C6, ADCY2, ALPL, BUB1B, CD86, CDC25B, CYP4F3, DERL1, DGKE, DHCR24, GUCY2C, IL19, ITGA10, JAK1, NCF1, NR5A2, OR11L1, OR1N2, OR2S2, OR4D9, PDE5A, PMAIP1, POLR1C, PTGER1, PTK2
Negative_10901	C9, ME1, PLG, CXCL3, CYBA, DARS2, DNMT3A, ENTPD6, F13B, FADD, FZD2, GTS1, HTR6, KLRC2, LILRB3, LIPC, MAOA, MAT2B, MGST2, OR4D2, OR4L1, OR4Q3, SUCLG1, TUBB6, VAMP1, VASP, WBSR22, TNFRSF1A
Negative_10902	ALOX15, OR5A1, PIAS2, RPS6KA6
Negative_10903	DFFB, DKK1, DTX3L, ELK1, OGDHL, PRKG2, TNFRSF10B
Negative_10904	DBT, BAAT, CACNG2, CISH, EXT1, FGF7, FLT3, FTMT, GLS2, GMPPB, GNAI3, GNAQ, GP1BA, GRB2, IRS4, KYNU, LIFR, MGAT4B, NEUROD1, OR8S1, PPP1R3A, PTTG1, SELPLG, SGMS2, SUCLG1, TAS2R1
Negative_10905	MPZ, AKT3, ARNT, ARNT2, CACNG6, COQ6, CYP26B1, CYP2A13, DUSP3, HCCS, HLA-DOB, HSD17B7, IDH3B, LAMC2, LCP2, MYH11, NLGN3, NTRK2, OR2A42, PAPSS2, POLR1A, PPA2, RBL1, RHOA, SMURF1, SNAP25, SPTLC2, TRAF5, UNC5C
Negative_10906	AMH, F2R, CLDN10, DKK1, LAMB2, OR5T1
Negative_10907	DCK, ADH1A, AGMAT, ALG9, APOE, AVPR1B, BLVRB, CACNA1G, CFLAR, CHEK1, CNGB1, CPT1A, CUL1, CYP4A11, DAD1, DLL3, DTX4, EPHB2, EXOC7, GALNT5, GOT2, GSTA1, GUCY2F, HARS2, KARS, KLRC3, NFYA, OR4K2, PGAM1, PRODH2, RHOD, SMURF1, STX3, ZMAT3
Negative_10908	ME1, SMS, AOC3, BAAT, CACNG8, CLDN20, CNTFR, CYP17A1, DUSP14, EIF4B, FGFR3, FPGT, FRAT1, GRIN1, IL13, ITGA2B, ITPKA, KIR2DS5, LAMA4, LIAS, MAPK11, MCAT, MMP2, MPST, MYH3, MYLK2, NKX2-2, OR2F2, OR2G3, OR6Y1, PIGX, PLA2G10, PLCB2, PRPS1, SELP, SLC2A2, STX2, TSNARE1, ULK1, YWHAE, ST6GALNAC5
Negative_10909	F11, F2, ACSS2, ALG8, BDH2, C7orf16, CACNA1E, CCL24, CD226, CREB3L2, EPHA4, FGF6, FRAT1, GCLM, IL10RB, KIR2DL4, LYPLA1, MYH14, NFKBIE, NLGN1, NOS1, NOX3, NR1D1, OR13C3, OR2D3, OR7C1, P2RX2, PDE1C, PLAU, PLXNB2, PRKCZ, PSEN2, RAC3, RRAS, SHC4, SMPD3, STX12, SUCLA2, TAS2R50, TGFB2, ATP6V1G2
Negative_10910	CGN, NPL, AACS, CCKBR, CCL19, ERBB4, ITGA6, KAT2B, KIR2DS5, LAMA4, NARS2, OR13F1, PANK1, PPP3CC, SQLE, WNT5A, YOD1, EIF4EBP1

Negative_10911	CD2, ABLIM2, CAMK2B, CDH2, CDKN2B, CLDN17, CNTF, CNTFR, CRHR1, DGAT2, DPYSL2, EFN1, EXOC7, FMO4, GABARAP, GTSE1, HHEX, IFNB1, ITGA2, LIP E, OR111, OR2M4, OR5L2, OR8H2, PCYT2, PDE4B, PDE6G, PFKP, PGLS, PIGH, PLA1A, PLXNA1, PLXNB2, POLD1, PPOX, PRKCB, RAPGEF1, RPSA, SULT2A1, T RIP10, VDAC1, WASF3, WNT11, ZFYVE9, CSGALNACT1, MAPK8IP2, PAFAH1B2
Negative_10912	CLDN4, DDX18, NT5C, ODC1
Negative_10913	DDC, LPL, TK2, ACPT, AKT2, ALG3, BLVRB, CDH5, CTBP2, DPYD, ENPP1, GGT5, GUCY2F, HDAC2, IKBKE, LEFTY2, MAN1B1, MASP2, MLLT4, OR4K2, PCK1, PI AS4, PNPLA4, RPE65, ST3GAL1, UNC5B, WNT4, TNFRSF17
Negative_10914	ATM, F2R, IL3, MYC, ACTN2, CDC25B, CDS1, CFTR, CYP2D6, DUSP4, FABP1, G NAL, GUSB, IDUA, IFNA2, IL10RB, IMPDH2, IRF9, ITGA1, LDHAL6A, LMO7, M OV10L1, NARS2, NEFM, NFAT5, OR10P1, OR51I2, OR51Q1, OR56A4, PARD3, P ARD6A, PSPH, PTPMT1, PTPRM, RBL2, RPS6KA5, SARDH, SESN1, SGMS2, SPI1, STX7, TCIRG1, TRIP10, VEGFC, WNT6, YKT6, TNFRSF10A, TNFRSF1B
Negative_10915	ADC, MUT, C5AR1, CCL27, CDH1, CKMT2, CMPK2, G6PC, GALNT11, GPD1, GUCY 2D, LCP2, LDHAL6B, MAPT, NEU1, OR5K1, OR7A17, PAFAH2, PAK6, PPP1CA, P TGER3, SARS
Negative_10916	DHH, FER, SFN, ACADM, ADRA1B, ADRA1D, ADSS, ALDH7A1, CACNG3, CASP8, C DKN1B, CFL2, CLCA2, COL5A3, CSNK2A2, CYP27A1, DDX55, DERA, DUSP3, DU SP8, DVL1, EDAR, ENPP3, FUT5, GNA14, HSD17B3, IFNA5, IMPDH2, ITGA1, M APK10, NCF1, NRP1, OR10R2, OR2S2, OR4N5, PFN3, PIAS4, PIGL, PLCD3, PO LR1B, SMAD7, SREBF1, ST3GAL3, TAS2R16, VASP, YES1, TNFRSF18
Negative_10917	DDO, AADAT, ACP6, ADH5, BPNT1, CD40, CDH4, CREB3, CYP2A6, DTX3, DUSP7, FGD1, FGF6, GALNT8, GTSE1, HSP90B1, IL12B, IRAK3, ITGB2, NOS3, OR10 C1, OR52E8, OR56A4, OR6K6, PIK3C2G, PIK3R4, POLR1E, PPA1, PRKACG, RP RM, SDC4, TAS1R1, UGT2A1, UNC5A, WNT8A
Negative_10918	EBP, AADAT, ACTN2, ADRB2, APOA2, ATP50, BET1, CCNG1, CISH, CNTF, CRHR 1, CRY1, DGKI, DPYSL2, DUSP9, ENTPD7, FGF21, FZD4, G6PD, GADD45A, GFP T2, GUCY2D, ICOS, IL9R, IRF7, ITGA6, KIR3DL3, LIPF, MNX1, MTMR2, NOS1, OR10G9, OR2F1, OR6S1, PFKL, PI4KA, PLA2G6, POLR2I, RDH8, SCIN, SEMA 4B, SETD1B, SSH1, TSHB, WNT8B, ST6GALNAC1
Negative_10919	IL5, IL8, PDC, ACADS, ACVR1B, ATP6V1A, AVPR1A, BCL2L1, CCL26, CDC42, CTBS, CTNNB1, CXCR5, CYBB, DEGS2, EREG, GDF7, HADHA, HEXB, IL3RA, IPP K, NAT1, NRXN2, ONCUT1, OR14C36, OR2M2, OR2T11, OR4K5, OR6C74, P2RX 4, PIGW, PPP2R1B, RARS2, RBL2, SNW1, SOAT1, SOD1, TALD01, TOMM40L, TP M3, UBE2L3, VKORC1, ZBTB16, MAPK8IP1, TNFRSF10D
Negative_10920	GH2, LAT, ACADVL, ADCY8, ADH1A, ALDH7A1, BCKDHB, CARS, CCL8, CDH2, CH RD, CXCL13, DRD5, EPHA8, F13B, GABARAP, GZMA, HSD11B2, HSD17B4, IPPK, MAN1A1, NEFH, OLAH, OR10G8, OR1Q1, OR2T3, OR5AU1, PHKA2, PPM1D, RAS GRP1, SUCLG2, TAS1R1, VARS, WNT1, WNT9A, TNFRSF10B
Negative_10921	AGK, HDC, KMO, LSS, ACOX2, ACY1, ADAM17, AGRP, ARG1, BACE1, BIRC2, CAC NG4, CERK, CLDN11, CXCL11, DAAM1, DDX51, FGD1, FGF14, FLT3, GAL3ST1, GCLM, GLI2, HTR2B, MDM4, OR2G6, PGS1, SHC1, TUBA1A, WASF2
Negative_10922	AMPD1, ANAPC11, CAMK4, CNTFR, HIF1A, MPDZ, NME4, NTF4, PNPLA3, SUV39 H1
Negative_10923	F7, GH2, VCL, ZYX, ACTA2, ARHGEF2, BAIAP2, CCL25, CCNE2, CCR7, CLCA4, COL6A1, CSF3, ENAH, F13A1, GBE1, GCNT2, GP1BA, HADHB, MITF, MYL7, NMN AT1, NRG1, NTNG1, OR7A5, OR8I2, ORC1L, OXTR, P4HA2, PIK3CG, PLOD1, PO LD3, PRKCA, PTGES, PTK2B, RDH16, SKP2, TOMM40, UGT2A3, VANGL2, VEGFB, WARS
Negative_10924	IL8, ITK, PXN, ACP1, AGRN, ATP5G1, ATP6V1H, CBR1, CCL25, CHST12, DTYM K, EFN1, EGFR, HMGCL, ICOSLG, MCM7, MITF, MYH11, NT5E, OR52B4, PAFAH 2, PRKAA2, PYGM, RPN1, SETD1B, SNAP23, SPRED2, THBS2, TLR2, TRAF3, WN T3, PHOSPHO1, ST6GALNAC6

Negative_10925	HAL, SMO, ACOX3, ACVR1C, ADH1B, CCR3, CLDN10, CSF3R, CXXC4, GALNT6, G LI2, GMPA, GP1BA, GRIN2A, GSTK1, INPP5E, ITGAM, MAOB, MCM4, NKD2, P2 RX1, RASSF1, RETSAT, SETD7, SHMT2, SRGAP2, TCIRG1, VEGFA
Negative_10926	ZYX, AARS, ADCY7, ALOX12B, ATIC, ATP2A3, C4BPA, CMBL, CRHR1, CYFIP2, DVL2, FARSB, FCER1G, GALNT3, GSTA1, HMGS2, IARS, IFNA10, IFNA6, INP P5E, ITGB1, ITGB5, JAG2, KLRC1, MAPK8, MIOX, MYH13, OR2Z1, OR51F1, PI K3R3, PRKAA1, PRKACG, RIPK1, RRAS2, SDC3, SOCS2, SUCLG1, TAS2R10, TL N1, UNC5B, VAMP4, WNT16, KIR2DL5A
Negative_10927	LPL, ATP4B, DERA, FSHB, GLUL, OR1L3, OR5L1, PLA2G2D, STX1B, TUBA1B, T UBA3E
Negative_10928	ASL, ARHGEF2, CACNA1F, CDC2, CSF2RB, DGKH, DHRS4L2, ENTPD4, FADS2, F RAT1, GALNT12, GNAI1, GZMA, IL18R1, IL1RAP, IL20, INHBC, NKX2- 2, NUMBL, OR56A3, OR6K2, PDE11A, PIGQ, PPID, SIPA1, SPCS3, SULT1E1, T GDS, UBE2K, UGCG
Negative_10929	AGL, DCN, HDC, MSN, ADCY1, ARSA, CCL28, CCR10, CDC25B, COL4A4, DGKE, D PYS, E2F3, FABP3, GGT5, GMDS, GRM5, HLA- DMA, ICOS, IL12A, IL21, ITGA10, MAP2K3, MYH15, NFATC2, OR10G4, OR1E2 , OR51B2, OR51I1, OR52K2, OR9K2, PDE1C, PMVK, PPAP2C, PPP5C, PRKAR1B , PRKG1, PRPH, RENBP, SLC12A2, SNAI2, SPTAN1, UCKL1, UGT2B10, UROD
Negative_10930	ALG3, DUSP4, MYL2, OR2T8, OR4M1, PANK3, PVRL2
Negative_10931	KHK, MOS, PDC, ATP6V1A, CAMK4, CCR1, CDH2, CHRM2, ELK1, EXTL2, FLT1, F TCD, KLRC2, MAP3K14, MAP4K2, MCM4, MYD88, MYH11, OR1M1, POLR1E, PPP1 CB, PSEN2, RPS6KA2, SLC27A5, TAS2R40, XIAP, CACNA2D1
Negative_10932	F7, FGA, MTR, RB1, ACTB, ADCY6, AGRP, AKR1A1, AMHR2, BAAT, CCL25, CCL4 , CD40, CDKN1A, CLOCK, CXCR6, DGAT2, DNMT3B, EHMT1, EPB41L2, F2RL1, G NB1, GUCY1A3, LAMB3, MAPT, MGAT4B, MYL9, OR51A2, OR52I2, OR6K6, PDE1 1A, PGAP1, RASGRP2, RHOQ, RPS6KA3, TNFSF8, CSGALNACT2
Negative_10933	RFK, ABL2, AMHR2, CASP8, FRAT2, IL2RG, MAD1L1, MCM7, MMP7, NUDT2, OR5 1E2, PAFAH2, PIPOX, PKLR, PPP2R5D, PRKAA1, PSME3, SDHC, SRGAP2, TUBA L3, TUBB4Q, SERPINE1
Negative_10934	FES, IL9, AMHR2, ARRB1, ATP5E, C1QA, C4BPB, CD01, CLDN1, CLDN11, CLDN 5, CSNK1E, CXCR5, CYP11B1, DERA, FABP4, GAD1, GZMA, IL1R2, IMPDH1, LM 07, MAP2K5, MCM6, MGAT2, NKX3- 1, OR5A2, OR5V1, OR6F1, OR6K6, PANK1, PARD3, PAX8, PIK3C3, RBX1, RPS6 KB2, SELL, SOAT2, TAS2R38, THBS2, TLR4, TLR9, TP53, TPK1, MAP3K7IP1, PNLIPRP2
Negative_10935	C4B, AKR1A1, AOX1, BMPR1A, CCL14, CD72, CKMT2, CYBA, CYP17A1, DPYSL2 , DUSP9, EIF4E, FZD8, GRIA3, IDH3B, INPP4A, KDSR, MAP3K6, MAP4K4, OR2 AG1, OR52E6, PANK2, PRKY, PTPN7, SOAT1, STX3, TUBA8
Negative_10936	ACOX2, ADCY10, AGPAT3, ALDH1B1, BPGM, BRAF, CAMKK1, CCL24, CD22, CDH 15, DTX4, DUSP5, DUSP9, EHMT1, EPB41L2, FDFT1, FUT2, GALT, GOSR2, H6P D, HIBADH, HSPA1B, ITGB5, LDHAL6B, LPAR1, LRRC4C, MAOB, MGLL, OR1C1, OR4C16, OR52E8, OR8H1, PANK2, PLCB1, POLR3D, PPP2R5C, PTPN11, SIGLE C1, SLC25A4, SMAD3, SMAD6, TRDMT1, UGT1A10, VAV3
Negative_10937	APLP1, FECH, GSTT1, NT5C1B, PKLR
Negative_10938	C7, FER, GH1, HK3, LCT, ABAT, ACP1, ADRB1, AOX1, BLVRB, CCR10, CD55, CH RM5, CLCF1, CNTNAP1, COQ7, DDX4, DGAT2L4, DHCR24, FUT5, GALNT2, GRIA 3, IFNA16, IPPK, ITGAL, MAOB, MMP1, MYLK3, NCF2, OR13D1, OR2A2, OR2L3 , PAK3, PRPH, RAP1B, SDHA, SFRP2, SPRY4, STX4, TAS2R42, TNFRSF4, WASL , WNT8B

Negative_10939	NPL, SRF, AKR1A1, ALOX5, ASPA, BTRC, BUB1B, CCL22, CCNG2, CD46, CHRM5, CLCA2, CXCL2, DDIT4, DKK1, DVL2, FCGR2B, FGF20, FUT2, HTR2A, HTRA2, IL12RB1, IL21, IL2RB, KARS, MAP2K2, NAMPT, NEU1, OR5B12, OR9G1, PGLS, PIGA, PLK1, POLE3, POLR3D, PPM1B, PRKACB, PRKCD, PTCH2, RDH16, RPS6KA2, SEMA3C, SEMA4G, TAS2R9, UGT2B4, WNT5A
Negative_10940	MIF, ATG7, CXCR6, DDIT4, G6PC, IFNA2, INHBC, OR2G2, OR51D1, PRKCB, SD C1, TRAF2, PPARGC1A
Negative_10941	EZR, GNS, IVD, NPL, ALCAM, BAIAP2, CES2, DIAPH3, GSTK1, HLA-DRA, LAMB2, LDHAL6B, MYL2, NRXN1, OR10S1, OR2K2, OR52A1, OR52H1, PAPS1, PDE8A, PFKL, PPAT, RASGRP3, RDH12, SEMA4A, SULT1E1, TNFRSF10B
Negative_10942	CR2, GNS, MTR, SCD, ALDH7A1, B3GNT5, BDKRB2, CCR8, COX10, CSNK1G1, CTBS, DAD1, DCTD, EPB41L2, FGF23, GAD1, GPD1L, ISYNA1, KAT2A, MAP3K1, NOS3, NOX3, NRG3, OR10G7, OR10H3, OR11G2, OR1Q1, OR51B4, OR5D16, OR9I1, PIM1, PTTG1, QARS, RALBP1, SPRY2, TCF7, TGFB2, TNFSF10, TSHR, UGT2A1, ARHGEF12, PLA2G12A, SERPING1
Negative_10943	CFD, IDS, ZYX, A4GALT, AGPAT4, ALDH7A1, ARD1A, BACE2, BCL10, CACNA1E, CARS, CD34, CHRM3, CLCA4, CLTB, CTNNA2, DDOST, DHCR24, DUSP5, ELK4, GAB1, GALC, GDF6, HSD3B7, HSPA1B, KLRD1, NADSYN1, NAGK, NFATC2, OR2C3, OR8J3, PCCB, PIGN, PRIM1, SLIT2, SULT1E1, SUV39H1, THBS3, TIAM2, TSNARE1, TSTA3, TUBB2B, ATP6VOA2
Negative_10944	MPL, ABL1, ACAA1, ACADVL, ACOX3, ALPP, ALPPL2, BUB1B, CHR1, DGKB, FUT1, HLA-DMA, LIAS, MADCAM1, MCM2, NOTCH2, NTNG1, OR2T4, OR4N5, OR7G3, OR8J3, PANK2, PIAS3, PIK3C2G, PON2, PRKACA, PTAFR, PVRL4, RDH8, RFXAP, SEMA3C, SMAD2, STAT1, TBK1, TNXB, TYMS, YWHAZ, HLA-DQB1
Negative_10945	BET1, PPP1CB, THTPA, TLN2
Negative_10946	SFN, TH, ALAD, APOA5, CD70, CNDP1, CYP3A7, DUSP3, E2F1, FLT1, GALNT10, GALNT7, HPSE2, IFNA5, IL20RA, MCEE, NAT5, OR10V1, OR2A14, PFAS, PIP5K1B, PPAP2B, PPP2CB, PROS1, RFNG, SC5DL, SETMAR, SLC25A6, SV2B, USE1, YARS2, ZFYVE9, ZMAT3, CTNNBIP1, SERPIND1
Negative_10947	ALG8, CFTR, CNTNAP1, DERA, DRD1, FCGR3A, FGF8, GAMT, GNAZ, HMOX2, IL17RB, LIPA, MAD2L1, OR1N2, OR1S2, OR2B11, OR4C15, PRKAA1, RDH11, STK11
Negative_10948	ALG5, AMPD2, AOC3, ATP2A3, ATP6V1D, CD3E, CRKL, CTNNB1, CXCR3, CXCR4, DDIT4, DVL2, EPHB4, GNB1, HBEGF, ICOSLG, KARS, MAGI2, MGLL, MGST2, NT5C2, OR10X1, OR5V1, OR7A10, OR8A1, ORC5L, ORC6L, P2RX2, PDCD1, PFKFB1, PSEN2, TBK1, VANGL2
Negative_10949	MOS, AADAC, ATG7, ATP4A, CCL16, CDKN2D, ENPP2, FARP2, GSTK1, IL24, IMPA1, LFNG, NLGN3, OR6B2, PNLIP, POLR3K, ROCK1, SHC1, UGCGL1, ULBP3, HSD17B10, ST6GALNAC4
Negative_10950	GK2, TEC, ADH1B, ANAPC11, CLDN4, CRKL, DAAM1, DAXX, DDX51, EARS2, FGD3, GNAS, ITGAL, ITGAX, L1CAM, NFATC1, OR13C5, OR4Q3, PCK2, PER3, PIGL, PLCB3, PRKY, SPHK1, THBS1, TNFRSF10C, TNFRSF13C
Negative_10951	FGG, IL12RB1, NR4A1, OR11A1, OR13C5, PRKAA2, TACR2
Negative_10952	C6, DUT, GP9, ID4, RB1, SFN, TYR, ALG5, B3GAT2, BMP8B, CACNA1D, CACNB2, CD79B, CHEK1, CLDN10, DAD1, DPYSL2, GDE1, GJD2, GSTZ1, IL18R1, LAMA3, LFNG, MLYCD, OR2G2, OR2G6, OR51I1, OR52N1, OR8I2, OR8J1, PIGQ, PRKAB1, RASGRP2, RGS3, RPRM, SLC33A1, TBK1, TLR5
Negative_10953	C2, CYP1B1, DLAT, DTX4, FGFR2, HAP1, IFIH1, NFATC4, OR5J2, OR6C75, ORC3L, ST3GAL1
Negative_10954	C8G, ACSM3, ALDH3B1, CAMK2B, CDC6, CD8B, CISH, COASY, COL6A2, CXCL5, CYP2B6, DDX18, EFN1, FCGR3A, FLOT2, HNF1B, HTR4, IDH3B, IL12RB1, INPP5B, KDSR, KRAS, MAD2L1, MCM6, NCR2, P2RX3, PDHA1, PLAT, POLR1E, POLR2D, PPP1CB, SETDB1, STAM2, SUCLG1, USE1, TNFRSF13B

Negative_10955	GP5, FGF14, HTR5A, MYLK2, SHISA5
Negative_10956	FGB, C9orf95, CCL21, CIITA, CLDN2, EPHA1, GALK1, ICOS, IRF5, KIR3DL1, LDHA, OR11G2, OR56A3, PFKFB3, POLA1, PROS1, SHMT2, SNAP23, TUBB4
Negative_10957	C2, IDS, PLG, ANAPC2, BUB3, COMT, CPOX, CTSB, CYP2U1, EPHB6, GLB1, GNA11, GNPDA2, IL20RB, KAT2A, MAML2, NT5C1B, OR1B1, OR4N5, OR52A1, OR6C74, OR8D4, PERP, PIK3CG, PLA1A, POLR2C, SEMA3D, SMAD9, TKTL1
Negative_10958	CD40LG, CD01, CTTN, CYP4A11, HLA-DRA, MAP3K12, OR1G1, OR1L3, PLCG2, SPHK2, TNFSF9
Negative_10959	AK2, AMT, C6, CRK, FYN, HK2, ID3, PGD, CCL22, CD38, CLDN2, CNGA4, CRLF2, CYBB, DGKG, ENPP3, FUT6, FUT7, GGT6, GRIA2, GUCA1A, HSPA1B, IAPP, IFNW1, INPPL1, ITGAE, MDM2, ODC1, OR2T8, OR4C46, OR4D6, PAX8, PCK1, PECAM1, PFKFB2, PLA2G2D, PPA2, PRKCI, PRPS2, PTPRC, RND1, SEMA3D, TLN1, WNT8B, ALDH18A1
Negative_10960	ZYX, ADRA1B, APBB1, ARNTL, BUB1, CACNG3, CES2, CSDA, DHRS4, GAS1, HADHA, HDAC1, HGSNAT, IL10RB, IRF3, KAT2B, KLK3, OR52W1, PCCB, PPP1R3D, PRODH2, PTPRF, PYGM, SPRED2, HLA-DRB3
Negative_10961	UBC, APOA5, ERBB4, LIMK2, PLD2, SEMA3G
Negative_10962	FN1, IHH, ALDH9A1, CHRM3, CHSY3, COL3A1, CSF2RB, CXCL12, ENO2, KCNQ1, LLGL2, MCCC2, OR2A14, OR6F1, P2RX5, PISD, PYCR2, SETD7, SFRP1, TUBA3C, WNT16, WNT5A, AASDHPPT
Negative_10963	BID, ME3, PGD, ALG9, CHSY1, CPT2, CXCL2, CYP2C9, EHMT1, FECH, FPGT, GART, GLUD2, HBEGF, IL22RA1, INPP5E, IRS4, ITPK1, KLRC1, NCR2, NPAS2, PCYT1B, PDE9A, PNMT, POLR2K, RALB, STAT4, TALDO1, ZAP70
Negative_10964	NOG, ALDH1B1, AREG, ARG1, ATP5G2, CAMK2G, CLDN10, DAAM1, ENPP2, EPAS1, GCNT4, HAGH, IGSF5, INADL, LDHA, MAML2, MAPK12, OR1L3, OR2A2, OR2A4, OR2G2, OR4M1, OR4X1, OR51F2, OR52A1, P2RX5, PMVK, QARS, SEPHS1, SETD7, TBXAS1, TNXB, TOMM40L, UGT8, VANGL1, HLA-DQB1
Negative_10965	GAA, CCR9, CTNNA1, CXCL10, GSTM3, TBK1
Negative_10966	BCR, JUN, SI, VCL, AMPD1, CAMK2B, CAMK2D, CCNG1, CCR5, CHAT, CLDN14, COX10, CYP2E1, CYP2J2, DCTD, DIAPH3, DNMT3B, FARSA, FGFR4, GALC, GPAA1, GSTM4, HADH, HHIP, HSD17B7, ICAM1, IFNA10, ITPK1, MLLT4, MPP5, NMNAT3, NOD1, NRG4, OR1J1, OR2AG2, OR2T10, PARVG, PIGN, POLR1E, POLR2A, POLR2C, POLR3G, TGDS, THBS1, WARS2, TNFRSF10B
Negative_10967	FH, GLS, IHH, LSS, AHCY, ALG10B, ARPC4, C3AR1, CANT1, CSNK1G3, ENPP2, ENTPD2, GALNT14, GSK3B, HSPB1, IL19, IL1R2, LDHA, MBL2, MICA, NAT6, OR10A2, OR1C1, OR2A25, OR2AT4, OR51F2, OR52N1, PTK2B, SPP1, VANGL1, VDAC3, ST6GALNAC5
Negative_10968	ACSS1, ADRB3, AMPD1, CCKBR, CHKB, CYBA, EPHB4, OR2M3, P2RX3, PDE1C, PDGFB, SH3BP2, SMAD7, STAT3
Negative_10969	SI, ATP5J2, BMP8A, CD55, CDC25A, CDC7, CTBS, GNAQ, GUCY1A2, HADH, OR11G2, OR1L1, OR6N2, PHKA1, YWHAB, ATP6VOD1, HLA-DQB1
Negative_10970	GK, VTN, BAAT, CD48, CPT2, DGKG, DLAT, FCGR2B, FTCD, GCLC, GRIN2B, L1CAM, LEF1, LEFTY2, NARS, NOS3, NOTCH1, OR7G2, OR8K3, PDE11A, PIGQ, PIGX, PMM2, PTEN, RHOD, SAT2, SH2D1A, STX5, ULK3, WASL
Negative_10971	CTH, FES, SRC, ADH4, ATP12A, B3GNT4, BACE1, CCKAR, CCND1, CCNE1, CDH3, COX10, CPS1, CYSLTR1, DGKI, DTX2, EPHA4, FUT4, GMDS, ITGA11, ITGA7, OR10G9, OR2C3, OR2T12, OR5AS1, OR5B3, OR5C1, PAK7, PAX6, TACR3, TGFB1, THBD, TNFRSF8, TYROBP, UGCGL1, UGCGL2, ST6GALNAC3, TNFRSF14
Negative_10972	ALDH1A3, ARHGAP5, ARPC1B, CCR10, CRY1, CYBB, DLL1, EDNRA, GALNS, GFP-T1, GUK1, ITGA11, JAK2, MAP4K2, NT5C3, OR52N5, PRKACG, PTGER1, TBL1XR1, TIRAP, UNC5C, VEGFB, GABARAPL2

Negative_10973	F9, FER, ID1, ACP2, ANAPC7, ATG12, ATP5G3, CACNA1B, CHIT1, CNTNAP2, CRY2, DARS, EDN1, EFN2, EXOC7, FGF6, INHBE, INPP1, INSRR, MAD2L2, MGA1, MS4A2, NCOR2, NCR2, NUDT5, OR11I1, OR2A25, OR51G1, OR5F1, OR7G2, OR8H1, PKM2, POLA2, PPP3CC, RGS3, SGMS1, SQLE, VTI1B
Negative_10974	TH, DDIT3, DIAPH2, DPM2, GDE1, GMPFB, ISYNA1, ITGA2B, NNMT, NR1D1, NUDT5, OR51E1, PARD6B, PFN3, POLR3K, TP73, WNT7B
Negative_10975	AGK, IHH, IL2, MET, ARHGAP5, ATP13A2, CACNG7, CD226, CD274, CD47, CDS2, CLDN14, CNGA4, CNTNAP2, CREB1, CSNK2B, CYP1B1, CYP26B1, CYP2D6, EFNA2, ENPP3, FLOT1, GALNT9, GFAP, GPD1, GZMA, IFNA4, IL22RA1, KIR2DL2, NCSTN, NEU2, NOS3, OR1G1, OR2T10, PANK4, PDE8A, PIGW, PSAT1, RPN2, RXRG, SCD5, UGT2A1, VCAM1, WNT10B
Negative_10976	SPN, ACAA2, ANAPC11, C1QB, CACNB2, CCL28, CCND1, CXCR4, DDOST, EDNRA, ENO2, ENPP7, GALK1, IFIH1, IFNA17, MAP3K12, MAP3K4, OR2M2, OR2T12, OR2T4, OR9G4, PAICS, PGM2, PPP1CA, PPP2R1B, PRKCB, RDH16, RXRB, SNW1, SPRED2, SRGAP2, TDO2, TUBB2C, VDAC1, TNFRSF10C
Negative_10977	DHRS3, MAPK1, PIGQ
Negative_10978	AK5, C5, IL2, JUP, MIF, ACTG1, C7orf16, CACNA1D, CACNG4, CACNG8, CDC14A, CSNK2B, CXCL13, DDX51, DDX55, DGKG, FARS2, FRAP1, GNAI1, HLA-DMA, HLA-F, IL18R1, INPP5A, KDSR, MAP2K2, MOV10L1, OR11H4, OR52E8, PIK3R1, PP1R1A, RDH12, SMAD9, ATP6V0A1
Negative_10979	AHCYL1, ALDH1B1, ARSD, CASP9, CCL21, CLDN3, COL4A2, FM03, ITGA3, NCA1, NCOA4, OR2G6, OR4D2, PCK2, PDX1, PIAS2, PIGL, PIK3C2A, PLOD2, PPM1D, PRKAA2, RDH11, RHOD, SPCS1, HSD17B12
Negative_10980	PGD, AADAC, ADH1B, AGTR1, ASRGL1, ATG7, CLDN10, CMPK2, CXXC4, DLL3, ENTDP1, FCGR3B, GMPS, GPAA1, GRIN2C, HLA-G, HNF1B, IDH3G, IGF1, ITGB1, ITPK1, MAP2K6, MTHFD1, NEUROG3, NFATC4, NKD2, OR1A2, OR2A12, OR2AT4, OR8B4, OR8D4, PGS1, POLE3, PRKCA, SPAM1, TIRAP, TPH1, WNT4
Negative_10981	CR2, SI, ACSL1, ADH1B, ALOX15, APOA5, ARHGEF7, CD27, CXCL5, FGF17, GALNTL5, GP1BA, GPT2, GRIA2, IRF7, ITGA6, ITGB6, ITPK1, LYPLA2, NCK2, NCSTN, NT5C1B, OPLAH, OR52B6, OR56A4, PER3, PIGM, PIGX, PLCB2, SESN2, SNAI1, SV2A, WASF1
Negative_10982	CGN, APBB1, DDX41, KLRC1, OR2AG2, POLR3B, PRKACB, TRADD
Negative_10983	APOA2, CD244, DHCR24, EXTL2, HARS, HSPA2, IL23A, KLRC1, NCKAP1, OR6C74, ORC2L, PLXNA3
Negative_10984	EBP, HDC, XDH, ACOX1, AGPAT3, ASNS, CDKN2C, CES2, CSNK1G1, EVI1, GUCY2C, HMOX2, IL5RA, IRAK2, MAPK11, MIOX, MYLK, NCR1, NCR2, OR4L1, OR5F1, OR7A5, PPID, PPP1R3B, RRM2B, SOCS5, TICAM2, UNC5B, UXS1, ATP6V1B2, MAPK8IP3, ST6GALNAC3
Negative_10985	MTR, ABAT, ACAA2, AKR1D1, ASRGL1, ATG7, CCR9, CD40, COQ6, EPHB3, HSD3B7, IFNA2, METTL2B, OR2F1, OR5M8, OR7A10, POLR1B, SC4MOL, SELE, SPRY2, TAS1R1
Negative_10986	BTK, ACADVL, AK3L1, CACNB4, CCL4, CLDN14, CLTB, CXCL10, DHODH, GLB1, GUCY1A2, HSD11B2, IFNA5, IKBKE, KLRK1, LAMB1, LAMC3, OR1J4, OR2T11, PHKA1, SELL
Negative_10987	ITK, ACSL4, CCNA2, CHST13, DEGS2, GNAZ, HAAO, IL22, NEU2, OR51B2, OR52K1, SOS1, TLN2, TRADD, GABARAPL1
Negative_10988	CS, RFK, TNC, AMPD3, ARNT, CASP8, DAAM1, DBF4, EFNA5, EFN3, FSHR, FZD7, FZD8, GLDC, JUND, OR2W1, OR51L1, OR5AR1, OR6X1, PGK2, PGM3, PPM1D, QPRT, RND1, SETDB1, SLC27A5, TAS2R10, TLR5, UGT2B28, WEE1
Negative_10989	GPI, ANAPC7, ASAH1, CDK5, CDKN1C, CLDN10, CREB3L2, CSNK1G2, DPAGT1, E2F4, GALNTL5, GOT1, IRAK4, KIR3DL1, MAP4K2, MYH13, NFATC2, NOTCH1, OR4Q3, PAK3, PPP1R3D, RPS6KB1, SOS2, TBXA2R, GABARAPL1



Negative_10990	PLN, CLDN9, FARS2, GSTA3, IL18R1, KCNQ1, TPH1
Negative_10991	PXN, TK1, AARS2, ATP50, CCL26, DAD1, GJD2, GOT1, IL18R1, INPP5A, LEF1, LRP5, NANP, NFYC, OR51B4, PANK1, PLIN, PTGDS, PTGFR, PTK2, SIGLEC1, SSX2IP, TLR4, TYK2, VAV1
Negative_10992	ATM, F9, ALDH2, ATN1, CDKN1A, CRLF2, CYP2C8, HSP90B1, IQGAP3, MAOB, OR51B2, OR5L2, PIK3C3, PIPOX, PKMYT1, PNLIP, PVRL2, SENP2, SLC27A1, TNXB, TSC1, UNC5D, VDAC1, TNFRSF12A
Negative_10993	HK1, ALDH6A1, AMD1, ANAPC10, ARRB2, BAAT, CD274, CDC26, CYP2C8, CYP3A7, DGAT1, DKK1, DOLPP1, FGF17, GALNTL1, GMPPB, GYS1, IL21R, ITGA9, ITGAL, MAP4K4, MGAT2, MTMR2, MYL9, NFKB2, NTRK1, NUDT2, OR10A4, OR1J2, OR2M5, OR52A1, OR52E4, OR5B12, PDE1A, PI4KA, PIPOX, PNPT1, POLR3B, PRLR, RALGDS, SSH2, TAS2R14, WARS
Negative_10994	BAD, DBI, GCK, ADCY6, ARG1, ASCC3, ATP5G1, ATP5G2, C7orf16, CDC7, CSF1, ENO3, FCGR3B, FUT2, GNAZ, GSK3B, IL21R, INPP5A, INPP5B, IRF3, LALBA, LTA4H, MAN2A1, MCEE, MDM2, NAGA, NANS, NARS2, OR5K2, OR8S1, PGLS, PHKB, PHPT1, POLR3B, PPP3R1, RAD51, SPRED1, STK11, SV2A, TIAM1, WARS2
Negative_10995	BTC, ID1, TK2, TXK, ALDOB, CD247, CD40, CD74, CLTCL1, COX15, CYP17A1, DKK2, ENTPD4, FARP2, GNB3, HBEGF, HEXB, IL15, ITGAE, LRDD, MGLL, NKX6-1, OR10X1, OR2F1, OR4D2, OR4K13, OR7D4, PCNA, PIGW, PRKCD, PTPMT1, RDH5, RUVBL1, SETDB2, SFRP1, SH2D1A, SLC27A4, SLIT1, SPRED2, SPTLC1, STT3B, TAP2, TNFSF18, TRAF4, TSC1, WASF1, YKT6, ATP6V1B1, CSNK1A1L
Negative_10996	CAD, PGP, ACOX2, ACSM4, ALDOC, BPGM, CACNG6, CCNH, CSNK1G3, DIAPH1, DTX1, FECH, GNAL, HDAC1, IFNAR2, IKBKE, JAK2, KLRC4, LLGL2, MRAS, NAT2, NOS3, OR14C36, OR4B1, OR4F15, OR4K1, OR4M2, PGLS, PLA2G10, POMC, RBL1, RPS6, RRM2, SEMA4B, SLIT2, TCF7, TNXB, TUBB3, YOD1
Negative_10997	ATM, CP, FAS, ATP4A, CDK6, CHUK, DEGS2, GAD1, GSTO1, HARS, LIAS, MAN1B1, MAPT, NCF1, OR1E2, PPP1CA, PRKAR2B, TLR5, WNT11
Negative_10998	AKT1, NTF4, OR11H4, KIR2DL5A
Negative_10999	CBL, ACSL6, ARD1A, CASP10, CD36, GOSR2, GSTA1, INPP5E, MAP2K5, OR1Q1, SAT2, TNFSF4
Negative_11000	FST, APC2, CRLF2, DGKQ, KIR2DS4, LTC4S, MYH6, OR6A2, RARA, RPN2, SRD5A1, VTI1B
Negative_11001	BCKDHA, IL22RA2, NEUROG3, OR2W1, OR4C16, PDE6D
Negative_11002	SDS, ACSL3, AKR1D1, BLVRB, COX15, DIAPH3, E2F3, FGF6, FOXA3, FZR1, HLC5, HYAL2, IKBKG, ITGAE, OR10A5, OR2M4, OR5AK2, OR6N2, PDE3B, PER3, PFKFB4, PIP5K1B, POLR1E, PPP2R1A, PRKCG, SARS2, SEMA4A, SH3BP2, SSH1, TACR3, TGFB3, TSLP, ZIC2
Negative_11003	AK2, CAT, HK1, LSS, AOX1, ARHGEF2, CACNG5, CREBBP, GALNS, HAAO, HSD17B3, OR4X1, OR9A4, SGMS2, SMAD4, THTPA, WNT6, SERPINE1
Negative_11004	TK1, ADCY3, ALAS2, CCL5, CD19, CDIPT, CREB3L4, DIAPH1, DUSP9, EXTL2, F13A1, GDF7, NME6, OR10AG1, OR5T1, PIP5K1A, PKLR, RAD51, RUNX1T1, SEMA4B, TAS2R38, TAS2R8, TICAM2, ATP6V1E1
Negative_11005	CRH, DBH, PGD, ADORA2B, ALOX12, ALS2, ATP6V1H, BIRC5, CAMK2B, CCL19, CD19, CDIPT, COQ7, CREB3L2, CX3CL1, DAG1, DHCR7, EDA2R, FUT6, GNAS, GPD2, GRIA1, GSTA4, HRH2, IL17RA, INHBC, LAMA3, NAGS, NCK2, OR2L2, OR5B21, OR5L2, PFKFB3, PIP4K2C, PLOD1, PTPRM, STMN1, STX10, TRAF6, HLA-DQB1
Negative_11006	PLG, ALDOC, CLDN17, COL11A1, CYSLTR2, DLL4, ENO3, GNPAT, HSPA8, INPP5B, INPP5E, ITGA10, MAN1B1, MASP2, NCOA4, OR10A7, OR1A1, OR2T4, OR51T1, OR5AN1, PDE1B, PEMT, PIK3C3, PSPH, PVRL3, STX18, TRHR, TNFRSF12A
Negative_11007	NF1, ADIPOR1, CNGA4, GCH1, ITPA, KLKB1, OR14A16, PDE2A, RASGRP2, SGM5, STEAP3

Negative_11008	C6, MSN, ACAA2, ACOT11, CACNA1I, CACNB3, CCR2, CDC25A, CDC6, CHIA, CI ITA, COL4A6, COL5A1, DDX47, DLAT, ENPP6, FRAP1, GAPDH, GPX5, HAGHL, H PRT1, IL28B, ITCH, KLK3, MAPK3, MYH11, OGDHL, OR10G2, OR4K17, OR51B5 , OR52D1, OR6C2, PARVB, PDE3B, POLR1C, PRKCD, PRSS2, PTGER1, RETSAT, RPE65, TLR3, YARS, ZMAT3, HLA-DRB4
Negative_11009	EZR, MVK, PGP, VTN, ACP1, ALG10, ALG9, APH1A, B3GNT2, BMP6, CD44, CNGA 3, COMT, CTS1, DDHD1, GPT2, HNMT, HRH2, HSD17B3, HSPA8, IL22RA2, INP P5A, MAFA, MALT1, MNX1, NAT5, NFX1, OR2T11, OR4K13, OR4K17, PDE5A, PL A2G2D, RDH12, SMAD5, SNAI2, SOD1, TRADD, TUBB3, TYK2, YWHAB, ATP6V1C 2, PNLIPRP2
Negative_11010	IL3, OSM, ACP6, ACTG1, B3GALT4, C5AR1, CD40, EPOR, GLO1, HHEX, IL10, I TGB7, ITPK1, MMP9, NPAS2, OR10H5, OR2A14, OR2T5, OR5T1, PLCB1, PPP2R 2A, RFXAP, SPRY1, TOMM40L, TUBA4A
Negative_11011	FAH, LCK, NF1, SMS, CHEK1, DDX19A, EXTL2, GALNT12, GATM, HNMT, OR2S2, OR4K14, PRKCB, PTDSS1, RARS2, RASSF1, MAPK8IP3
Negative_11012	EZR, GH1, PGF, ACTN1, ATP2A1, CCL1, CDH4, CLDN16, CTPS2, CYP1A2, DUSP 1, EPHA1, FBP2, HNF1A, IL10, LDHD, MMP14, NCAM1, NCOA4, OR4D6, OR52N4 , PLA2G4A, PPP2R5D, PPP3CC, PRPH, RELA, SSH3, TAS2R40
Negative_11013	ACVR1, ALG3, CCNH, ENPP7, FLT3, GALT, HTR6, LMO7, NTF4, OR11H6, P2RX6 , PNPO, PPCS, PPP1R3C, PRKAG3, SARS2, TRPC1, VDAC1, WNT4, MAPKAPK5, S ERPIND1
Negative_11014	ASL, TEC, AKR1D1, AKT2, ALG1, ALG13, ALG8, B3GNT3, BET1L, CBLB, CCNB3 , COX10, CSNK2A1, CTNNA1, EFNB3, FUT2, GALNT6, GGPS1, GNPAT1, HSD17 B4, IL17B, LAMB1, LDHC, MAP4K1, NCF1, NFKB2, NRAS, NRXN2, ORC4L, PECA M1, PLXNA3, PYGB, QARS, SNAI1, THY1, TJP1, TNFRSF9, ATP6V0D1, HSP90A B1
Negative_11015	AK2, CS, FGB, IL2, LCT, PTS, APPL1, CACNA1C, CAMK2D, CDC7, CDH1, CDK2, CDK7, CSF1, FGF20, FTH1, GART, GCLM, GNB3, GNPAT, IARS, IFNGR1, IL10R B, IL28A, ITGA7, ITGAV, MAP3K11, MTMR1, NTN1, OCLN, OR13C8, OR4D9, OR 4X1, OR52A1, POLR2J, RASGRF1, SH2D1B, SKP1, SOX17, ST8SIA1, STAT5B, TUBA1B, UGT1A10, UNC5A, VEGFB
Negative_11016	FUT7, GJD2, HHEX, HSD17B7, MAFA, MAP3K4, MMP14, NFKBIA, NLGN2, OR5D1 6, PARD6B, PLA2G5, RRM2B, SARDH, XCL2
Negative_11017	AK7, HAL, ACACB, ADIPOQ, APOA2, APRT, B4GALT7, BAAT, CARD11, CHRNA7, CLTA, CXCL9, CYP2A7, EDN1, GNB3, GPD1L, HAGH, HGSNAT, HSPA2, JAG1, JA M2, NKX2- 2, OR10H5, OR9I1, PITX2, POLR2F, PPARG, PRKCG, PTPN6, RND1, SUOX, TCI RG1, TOMM40L, YWHAZ
Negative_11018	KMO, MPI, TK1, ADCY10, ALG9, B3GNT4, CSF2, GFPT2, HYAL2, MYH7B, OR11G 2, OR2F1, PCCB, PRKAR1A, SEMA4G
Negative_11019	KDR, ACAD8, B4GALT3, IL15RA, NRP1, OR2T8, OR7C2, OR9K2, PDE4C, PIGP, TGFA, TLN1
Negative_11020	IL6, AGTR1, ALDH5A1, CD27, CFL1, CSAD, CYP2F1, HTR4, MAT1A, MICA, NAR S, NFATC1, OR56A1, OR5V1, OR7A17, PAK3, PDE10A, PPM1A, SFRP2
Negative_11021	APP, CP, CRK, EPO, PC, ACAA2, ADAM10, ADRB3, ALS2, BMP4, C4BPA, CACNG1 , CCNA1, CCNH, DGAT2L4, DHCR24, DPM2, FIGF, FLT3LG, FTMT, FZD9, GOT1, HTR7, IL22, ITPKB, KLRD1, LFNG, MAPK8, MLYCD, NADSYN1, NFATC1, NRG2, OR2F1, OR2T5, OR4S1, OR4X2, OR5K1, OR7A5, ORC2L, PARVB, PLA2G6, POLR 2D, PSAT1, RAP1A, RGS3, SARS2, SGPP1, SMARCA2, STX7, SUCLA2, TAS2R14 , TUBB3, UGT8, USE1, VAMP3, YWHAB, C1GALT1C1

Negative_11022	AK1, AMT, DBI, ID1, KIT, RET, TPO, VTN, ZYX, A4GALT, AGPAT6, AREG, ASS1, ATP5A1, AXIN2, B4GALT4, BCL2L1, BPGM, CBR1, CD34, CD36, CDK7, CERK, CHIT1, CLTA, CYP3A5, CYP4A11, DARS, E2F3, EHMT2, EIF4B, ENO3, FDPS, FOXO1, FRAT1, FTH1, FZD1, GALNT6, GALNTL2, GGT7, GNG12, GRHR, GSTT1, HADHB, HBEGF, HEMK1, HLA-DOA, IFNA6, IFNAR1, KIR2DL3, MAP3K14, MLYCD, MYLK3, NAT1, NKX2-2, NT5E, NTF4, NTRK1, OLAH, OR11G2, OR13C3, OR1B1, OR2M5, OR2T34, ORC3L, PDGFD, PIGT, PIP5K3, PLK1, PLXNB1, PMAIP1, POLR1B, PPP1R3D, PRODH, PRPH2, RALB, RETSAT, RPIA, RPS6KA3, SH2D1B, SPTLC2, STAT6, STK4, STT3B, STX8, TKTL1, TUBA3C, UGCG, WASL, YWHAH, HLA-DPB1, PHOSPHO1, SERPINC1
Negative_11023	F11, LIF, SCD, ACSS1, AFMID, AGPAT6, ALDH3A1, ALDOA, AMD1, ATG3, ATP12A, B4GALT5, BMP4, CASP8, CCL15, CCNG2, CCR3, CD79A, CLDN17, CPT2, CSNK2B, CTF1, CXCL5, DGKA, DTX1, EFNA3, EPHA8, FGF1, FMO1, FMO5, FRAP1, GMPR, GNMT, HIP1, IMPDH2, INPP5E, IPPK, ITGA1, KARS, KDSR, LRDD, NEFL, NFKBIA, OPLAH, OR2Y1, OR5AN1, PCYT2, PDE4A, PIGC, PIGK, PLA2G2F, PLCB3, POLA2, POLR2H, SDHD, SEMA3A, SOS1, TUBB2A, UBE2L3, UBE2L6, WASF3, WEE1, HLA-DRB4, MAP3K7IP2
Negative_11024	ASL, CFD, CRH, FOS, ADH4, ALG12, ARNT2, ARSB, BDNF, BMPR1B, CACNA1F, CDC6, CLCF1, CSNK1E, CTNNA2, CYFIP2, DHRS3, ENTPD8, FGF18, GALNT12, GALNT3, GNAI2, GRHR, HAGH, IDH2, IL17A, IL4R, INADL, ITGA7, KARS, LIAS, MADCAM1, MAP3K14, MYH13, NKD2, NLGN1, NLGN2, OR1J1, OR2V2, OR51B2, OR51M1, ORC6L, PPP1CA, PRKAR2B, PTGES, PTPRR, RAPGEF2, SPRY2, SRGAP3, TRADD, VEGFA, ATP6V1G3
Negative_11025	CSK, F8, IL4, KIT, NGF, OGT, ACTG1, AMDHD1, BMP2, CAV3, CCL3, CD59, CLOCK, CXCL6, CXCR4, CYP2J2, DDX51, DRD2, ENPP6, FGF18, GADD45G, GGT5, GPAM, HSD17B2, IFNAR1, IGF1R, IL1B, IL22RA2, IMPA1, LARS, MAD2L1, MAD2L2, OR10C1, OR10S1, OR13F1, OR14I1, PDE6D, PIGO, POLD3, PON1, PTGFR, RALB, RDH11, RPS6KA1, SDC4, ST8SIA1, STX18, STX3, SUV39H1, TLR3, TRAF5, TUBB1, TYRP1, VEGFA, WNT7A, CACNA2D4, HLA-DQA2
Negative_11026	BTC, C2, FGB, GNS, HYI, IL5, OTC, RPE, ACSS3, ACTN4, ACVR2B, ADH6, ALDH6A1, ALOX15B, ALPL, ATP2A3, ATP5G2, BUB3, CACNA1H, CCKAR, CLTA, CLTCL1, CNGA3, COL1A2, CREB1, CSNK2A1, CYSLTR2, DAG1, DDX50, DGAT1, DKK2, F13B, FLOT2, FOXO3, GALNTL1, GCNT3, GFPT2, GNA12, GUCA1C, GYS1, IFNA14, IMPDH1, INHBE, IPPK, ITGA2, ITGA8, ITGB7, KARS, KAT2B, LAMA4, LPAR1, MAP3K8, MLLT4, MTMR1, NAMPT, NEU2, NLGN1, NUDT2, OR11H6, OR2T11, OR4C6, OR4D11, OR52N4, OR5AK2, OR6N1, P2RX1, PIGM, PIGV, PIP4K2C, PIP5K1B, PKMYT1, PNPLA4, PNPT1, PON2, PRLR, PRODH2, PYGM, RAPGEF4, RELA, SEMA4G, SGPP2, SREBF1, ST3GAL6, STX1B, SULT2B1, TGFA, TJP2, TUBB6, WASF3, WNT1, WNT5B, ATP6VOD2, SERPING1, TNFRSF14
Negative_11027	AR, BAD, DDC, IL2, JUP, KMO, TNC, TNF, ACADSB, AKR1C1, ALAD, ATF4, B3GAT3, B3GNT3, C5AR1, CACNB3, CAV2, CD34, CD01, CYBA, CYFIP2, ECSIT, ENTPD4, FZD10, GJA1, GJD2, GNA14, HEMK1, HIF1A, IL20RA, INSR, ITGA7, ITGB8, KLRC2, LEF1, LIPE, MAPK7, NFKB2, OR1L3, OR2A4, OR4D11, OR4F6, OR4K5, OR4P4, OR52E6, OR5B12, OR5H2, OR9Q1, PDGFRB, PDIA4, PER2, PFN4, PGK2, PIK3CB, PLD1, PLOD1, PMVK, POLR2F, PORCN, PRKAA2, PRKCD, PYGM, RAP1B, RASGRP2, RPSA, SETDB2, SH2D2A, STX1A, STX4, STX7, TAP1, TAS2R41, TAS2R5, UPB1, ATP6V1C1
Negative_11028	BAX, BTC, C1S, C9, CR2, SMO, ACVR1C, AGPAT6, ATN1, BIRC2, CACNA1G, CCND3, CDC45L, CDK6, CTNNA2, CYP2U1, DKK1, DKK2, ECSIT, EIF4B, ENPP7, IL11, IL15RA, IL2RG, JUND, LLGL1, LYZL1, MAN2A1, NCR1, NKD2, NOTCH1, NPAS2, ONECUT1, OR2A4, OR4K14, OR52I2, OR52J3, OR5B21, PDE1C, PIK3R1, PNPLA3, PRKCG, RASGRP2, SPAM1, TACR3, TGFB2, VCAM1, WASF2, WWP1, ZBTB16, ATP6V0A2

Negative_11029	AK5, KDR, NGF, PGD, AACs, ABLIM1, ACADS, ACP5, ADORA2A, ADORA2B, ALDH3A2, ATP5G2, BLVRB, BMP6, BTRC, C3orf10, CACNA1H, CSNK2A2, CYP2C8, CYP8B1, DCXR, DEGS2, DUSP6, EIF4B, FGF23, GAL3ST1, GRIN2C, IGSF5, IL17A, ITGA8, KLKB1, KLRK1, LAMB4, MAGI1, MCCC1, MCM7, OR6N1, OR7D2, OR8G1, ORC1L, PDE8B, PECAM1, PIGK, PLCG1, PLCG2, PSME2, PTDSS1, RAD51, ROCK2, SMPD4, THY1, TNFSF14, TSC2, TUBA1A, UPB1, UPRT, VASP, XYLB, ZFYVE9
Negative_11030	FAH, FGB, GK2, HGD, IHH, PGF, RB1, SRF, TPR, ACPP, ACSL5, ADH5, AHCYL1, AKT1, ALG6, ALPI, ARSA, ATP5H, ATP6V1A, AXIN1, B3GAT2, BPGM, C9orf95, CD226, CHKA, CLDN18, CTSS, CYP2J2, DGAT2, EPHX1, EXT1, F11R, FGFR4, FOXA2, FZD4, GALNT8, GNA11, GNB1, GSTA2, GTSE1, GZMB, HAP1, HHIP, HLA - DRA, HMGCS1, IL13, IL17A, INHBE, IRF7, KLRK1, LDHD, MAP4K3, MAPK1, MAP2, NCAM1, NEU4, NKD1, NOTCH1, NTF4, OR1D2, OR1L1, OR2A14, OR2A5, OR2B11, OR2G3, OR2K2, OR3A3, OR52A5, OR5T2, OR6B2, OR6Y1, PCK1, PDE7A, PDPK1, PGAM4, PKLR, PLCG2, POLR1A, PPAP2A, PRKCA, PTCH2, PTDSS2, PTGS1, PYGB, RARS, RDH10, SEMA4F, SMAD4, SPRY4, STT3B, THBS1, TIRAP, VDAC2, VKORC1, WWP1, AASDHPPT, ATP6V1E1, TNFRSF13C
Negative_11031	CBS, DDO, EDA, MVD, SI, XDH, ACAD8, ARPC4, CACNA1F, CAMKK1, CDK5, CDKN2D, CLDN16, COASY, CSF2RA, CXCL16, CYP1A1, DKK2, DUSP16, F2RL3, FASLG, FDF1, FGF14, GSK3B, GUCY1B3, GYS1, IFNG, IGF1R, INPP1, ITGA5, ITGAX, LCAT, LILRB3, MINPP1, NFATC3, NOTCH3, NRXN2, OR13F1, OR2T11, OR2T33, OR2Z1, OR51I1, OR56A3, OR7D2, OR8D2, ORC1L, ORC6L, PDXP, PPP2R2A, RASA2, RPIA, SMAD6, SULT1A4, THBD, WNT6, WNT8A, CACNA2D4, SERPIND1
Negative_11032	A2M, DDO, EPO, FGA, HGF, IHH, IL3, LPO, NPY, SPN, TNC, ACADSB, ACTA1, AGPAT3, AHCYL1, ARHGEF2, ARHGEF4, ATP2A3, BCAT2, CACNG5, CDH5, CDKN1C, CES2, COASY, COL4A6, COL5A3, CSF2RB, CSH1, CXCL11, CXCR5, CYP26A1, CYP2J2, DGAT2L4, DHRS3, E2F4, ENO3, ENTPD3, EPHB1, EPHB3, FUT4, GSTA3, GYS1, IDH3A, IFNA14, IFT57, IL10RA, IL13RA1, IL18, IL1RAP, IL4R, IRS1, ITGB1, ITGB5, JAK1, LAP3, LDHD, LIPA, MAP3K13, MGAT4B, NAE1, NAT1, NRG2, OLAH, OR1L6, OR2A25, OR2C1, OR3A1, OR4B1, OR4S2, OR52M1, OR5H6, ORC6L, PANK3, PIGX, PLCB3, PLXNA3, POLR1A, PRPH2, PSME3, PTGS1, PTPN6, SDHC, SLIT2, SMAD2, SORBS1, TNFSF8, TPK1, TUBA1C, UGCG, VAMP2, EIF4EBP1, MAPK8IP1, PDCD1LG2
Negative_11033	CBL, CGN, F9, FGB, GSR, LYN, ACTA2, ADORA2A, ALOX12B, BAIAP2, BCAT1, BLNK, C4BPA, CCL15, CMPK2, CTF1, DARS, DTX4, DUSP2, DUSP6, E2F3, EPAS1, FTH1, GALNT5, GGCX, GGPS1, GNG3, GPAM, GSTM5, HAAO, HADHB, HDAC1, IAPP, IL12A, IL1R1, ITGB4, MAN1C1, MCAT, MYH7, NAT5, NEU4, NPR2, OR10AG1, OR10G3, OR10J5, OR10Z1, OR11G2, OR2T11, OR4C46, OR52E4, OR52J3, OR6C74, OR6S1, PAK2, PDGFC, PIGS, PLA2G2E, PLD1, POLR1B, PPP2R5D, PRKAG2, QARS, RFWD2, SETD1A, SOD1, SOS2, SPRED2, SPRY1, SPRY4, STAT5B, STX2, SV2C, THBS3, THTPA, UCKL1, ATP6V0A4, KIR2DL5A, TNFRSF10B
Negative_11034	C1S, HAL, HYI, IL3, MTR, SCD, ACAD9, ACTC1, ADCY8, ADH1A, AFMID, ALDH1A3, ATP5G2, BMPR1A, CCL14, CD28, CD40, CDK5, CREB3, CXCL1, CXCL5, CYP1B1, DGKI, DPM3, DTX2, DUSP7, E2F3, ENPP6, ENTPD2, FDPS, GAB1, GALNT7, GNRHR, GRIA1, HHEX, HSPA2, ICAM1, ICOS, IFNA14, IL10RA, IL20, IRS4, ITGA6, ITGB1, KRAS, MAP3K11, MAT1A, MGAT4B, MLYCD, MTHFR, NFYA, NRG1, NTF4, OR11H4, OR1J1, OR2A4, OR2AG2, OR2T34, OR8U1, ORC6L, PDE9A, PDHX, PHKA2, PIGO, PIK3R2, PLCB4, PLTP, PON1, PPA1, PTGER3, PTPN11, RFXAP, SLC9A1, SOAT1, SPRY4, STAT5B, UNC5B, VARS, WNT3, ZNRD1, PDCD1LG2

Negative_11035	ADA, DBH, IL9, RDX, SP1, ADH1A, ALG8, APC2, ARPC1B, BCAT1, BMPR1A, CACNA1S, CARS2, CAV2, CBR3, CCL28, CCNB2, CCR7, CDC25A, CDIPT, CTF1, CYP19A1, CYP2C8, DDB2, DEGS1, ENPP6, EREG, EXT2, FTMT, FZD2, GCNT4, GSTM5, HEXA, IFNA14, IGSF5, IMPA2, IRS1, JAK3, KAT2B, KCNJ11, KIR2DL2, LCM1, MADCAM1, MYD88, MYH1, NCAM1, NEFL, NFYC, NOD1, NOX1, NT5C3, OR2M3, OR51Q1, OR8D1, OR8S1, PIGU, PIK3CA, POLR2G, PRKACG, PTPRC, ROBO1, SFRP4, SHC1, SHC4, SMAD3, SMAD4, TLN2, TSHR, ATP6VOE1, MAPK8IP2, PAFAH1B1
Negative_11036	AK2, F11, FES, GNS, KDR, MPZ, PGP, PML, SCD, ABCC8, ABI2, ACADS, AGMAT, ALDH7A1, ALG5, ARRB1, ATP5G3, ATP5O, ATP6V1H, BACE2, BET1, CAMK4, CDKN2B, CDKN2D, CHD8, CYP4A22, DDX23, DERA, EDNRB, ENO3, FCGR3A, GALNT3, GLDC, GNAI3, GNAL, GUCA1A, GUCY2D, HADH, HHIP, IDI1, IFNK, IL8RA, IRAK1, ITPA, KLRC3, LLGL1, MAGI2, MAP3K4, NMNAT1, NRXN3, OR10A3, OR1L6, OR1S1, OR2AG1, OR2T29, OR4C16, OR52I2, PAICS, PAX4, PDE1B, PI4KB, PIGV, PIP5K1C, PLXNA1, POLE4, POLR2D, POLR3D, POMC, PON2, PORCN, PPP3R1, PRKCZ, PTPN7, RAPGEF1, SELPLG, SEMA3B, SEMA3D, SETD1B, SOCS2, SPHK1, SRD5A2, STAT3, TAS2R10, TFDPI, TUBA3E, TUBB, HSP90AA1
Negative_11037	AMH, C8A, EZR, FH, IL2, IVD, KIT, PDC, SDS, ACPP, ATP13A2, ATP5F1, C3AR1, CCR3, CD55, CLDN15, CNTNAP1, CYP2J2, EGLN3, FZD4, GYS1, HAAO, IL6ST, IMPA2, IRS2, ITGB7, KDSR, LIPE, LIPT1, OR1J2, OR4B1, OR5R1, OR6N1, PLA2G5, PLCD4, PLCE1, POLE4, PRKAG2, PRKCE, PTPN7, RPS6KB2, RXRA, SPI1, STT3B, STX16, TACR2, UGT2B28, YARS2, ATP6V0A2, CSGALNACT2, MAPKAPK5
Negative_11038	GK, MPL, NOG, AARS2, ACSL5, ACY1, ADRA1B, AKR1C4, AQP7, ARPC4, ASNS, ASS1, ATN1, CAMK2G, CCL14, CCNA2, CCND2, CD47, CSNK1G2, CTBP1, CTNNA3, CYP3A4, CYP4F2, DGKG, DRD2, EPOR, FGFR3, FUT1, GDF6, GGCX, GSK3B, GSTP1, GUCA1A, GUCY1A3, IL22RA1, IQGAP2, ITPKB, KLRC2, MAP2K2, MAPK8, MTMR2, NCF2, NCF4, NFATC1, NRCAM, OLAH, OR10H1, OR2A14, OR51A2, OR51B4, OR5D13, OR7G1, PCK1, PFKFB1, PFKP, PHGDH, PHKG2, PIGF, PLD2, PMVK, POLR1B, PRKCB, RERE, SELE, SEMA3G, SOCS4, SRD5A2, ST3GAL1, TBL1XR1, TOMM40, TRAF6, ULK3, WBSR17, WBSR22, YWHAG, ATP6VOE1, MAPK8IP1
Negative_11039	ADO, AK7, CAD, CBS, F7, GSR, PML, ACOX2, ACTG1, ADAM17, ADH4, AGPAT6, AHCYL1, APC2, ARSA, ARSD, ATP12A, ATP6VOC, BCL2, BRAF, C1QB, CALML3, CCL13, CCL19, CCNG2, CDK4, CHRM1, CLDN14, COL6A2, CRHR1, CRLS1, DAD1, DHRS4, EHMT2, ESPL1, FTCD, G6PC, GNA14, GNG13, GPAM, GSK3B, IL10, IL7R, ITPKA, LDHA, MAP2K2, MAP2K4, MAP3K3, MTAP, MYH9, NFKB1, NME2, NR4A1, OR10H4, OR1F1, OR1G1, PDGFD, PIGF, PIGL, PLAU, PON3, PPCS, PPP2R5A, PVRL1, RAPGEF4, RDH12, RIPK1, SCLY, SFRP1, SPTLC1, STX16, SV2A, TFPI, TGFB2, WHSC1L1, WNT8A, ATP6V1B1, ATP6V1E2, KIR2DL5A, SLC25A31
Negative_11040	CKB, CSK, LPO, SP1, ARPC4, CADM3, CCR1, CSNK2A2, DAPK1, EDNRB, ENTPD6, EPOR, GUCY1A2, HMGCL, IAPP, IFNAR1, IFNB1, IKKBG, KIR3DL2, LDHB, MAP4K1, NCF4, NRXN1, NUDT12, OR10H5, OR1A2, OR2C3, OR2T8, OR4D9, OR6B2, P2RX3, PIAS3, PIGU, PLCG1, PSME3, RASA1, RASGRP1, RAS2, SEMA3B, SESN2, SETD8, SLC25A6, SMAD5, SRGAP2, ST8SIA1, STAT4, TAS2R16, TBL1Y, UCP1, WBSR22, WWP2, C1GALT1C1, TNFRSF11A

Negative_11041	C9, CRK, CTH, JUP, OAT, SYK, ACADVL, ADAM17, AMDHD2, AOC3, ATP5G1, ATP5G3, ATP6V1F, BCKDHB, BLVRB, CACNB1, CACNG3, CD80, CDC45L, CIITA, COL4A2, COQ3, CYP2C19, DERA, DGKI, DLST, DUSP8, ENO3, ERBB2, FCER1G, FCGR2B, FPGS, FZD4, GALNT10, GNA13, GNAQ, GUSB, HAP1, HSD11B1, HSD17B3, HSPA2, HTRA2, IBSP, IFNGR2, IL13RA2, IL21R, KIR3DL1, LYPLA2, MAD1L1, MAP2K4, MAP4K3, MCM5, MYH2, MYL9, NPR2, NUDT2, OR13C4, OR2A14, OR52B6, OR52L1, OR56A3, OR5F1, OR5L1, OR8H1, PARVB, PDE4B, PIGA, PIGV, PP1R3B, PRLR, PTDSS2, RASSF5, RND1, SEMA3A, SEMA4D, SESN1, SGMS1, STAT1, TACR3, TGFBR2, THBS3, TRADD, TRAF1, TSHB, ULK2, UPP2, XCL1, XYLT2, MAPKAPK2
Negative_11042	CD2, CP, KHK, NGF, TNF, AADAC, ACAT2, ACTB, ADRB1, AKR1C2, ALDOB, APAF1, ATP2A1, BCKDHB, C1QB, CCND3, CCR8, CD72, CDIPT, CRHR1, CYP26C1, CYP3A4, DCTN1, ETNK1, FGF8, FUT7, GAMT, HADH, HSD11B1, IPMK, ITGAE, MAD2L1, MAP3K4, MDH1, NEGR1, NUDT5, OR13F1, OR1L6, OR2A14, OR3A1, PAK2, PCYT1B, PDXK, PFKFB3, PI4KB, PIM1, PIM2, PMM2, POLR2K, POLR3G, PPP1R3C, PRPH2, PTPRJ, RALBP1, RFNG, RFX5, RPS6KA1, SELPLG, SEMA3D, SNAP23, SOD1, SPRY2, SSX2IP, ST8SIA1, TAS2R38, TAS2R5, TBL1X, TKTL2, TLR5, WNT5A, ZFYVE9, ALDH18A1, PPP1R12A, SERPINF2
Negative_11043	GNS, LEP, LTB, OGT, RB1, ACY3, AHCYL2, AKT3, ALDH1A3, ALOX12, APBB1, ATG3, ATG7, B3GALT4, BCAR1, BCKDHB, BMP6, CACNA1B, CCNG2, CFTR, COL1A2, CSAD, DRD5, EPB41L2, EPHB6, FECH, FGD3, FTMT, FUT4, GCH1, GJA1, GRI2C, GSTM5, GSTZ1, HTR5A, IFNA13, IL17RA, IMPDH1, INHBE, ITPKA, KARS, KIR3DL2, LAMB1, LHCGR, LIPE, MAML1, MMP14, MYH1, MYH10, NAGK, NLGN3, NRG4, NUDT2, OR11A1, OR4A5, OR51B2, OR51B4, OR51Q1, OR5AR1, OR5AU1, OR6N2, OR7C1, PANK4, PARVB, PCCA, PIK3R3, PIPOX, PNPO, POLD2, PPAT, PRPS1, PRSS1, RAC1, RPS6KA1, SH2D1B, SHISA5, SHMT1, STAT5B, TAS1R2, THBS2, TNFSF12, TUBA8, TUBB2A, UCP1, UGT2B7, ULBP3, ULK1, VDAC2, WHS1, CACNA2D4
Negative_11044	BTD, RET, ACO1, ALG5, ARSD, B3GAT3, BACE2, BPNT1, BRAF, CACNG5, CBR3, CCNG2, CREB3L3, CXCL16, CYP26A1, CYP4F2, DDX19A, DUSP1, EXTL3, GARS, GMPR, GRAP2, HNF1B, IFNA6, KCNB1, MDH2, NEFL, OR2B6, OR2L13, OR2Y1, OR4K1, OR4K5, OR52B6, OR5K1, OR5R1, OR6T1, OR8A1, OR8K5, PARD6A, PIAS3, PIP4K2A, PLA2G10, PLAUR, PPP3CB, PTDSS2, RELB, SEMA4B, SHC2, SLC2A4, SMPD2, TIRAP, TNXB
Negative_11045	AK1, CFI, GBA, JUN, MSN, TNN, ACSL4, ACSS1, ADCY8, ALS2, ARNT, ARPC4, ATP12A, BBOX1, BDH1, CACNB2, CAMK2B, CAMK2D, CERK, CLDN20, CYP2B6, DAPK3, DEGS1, DOT1L, DTX2, DUSP16, E2F3, EDNRB, EFNA3, EHMT1, EPHA1, FABP1, GRAP2, GSTM4, HEMK1, HHEX, HMGCS1, HSD11B1, IFNA8, IKBKE, IL12B, JAK2, LEFTY1, MAP3K14, METTL2B, MYH14, NCAM2, NFKBIE, NFX1, NFYA, NRXN2, NT5C1A, OR2H2, OR2T10, OR4A15, OR4D2, OR4K5, OR56A3, OR6C70, OR6K6, OR7G3, OR8B12, PAK6, PIK3R2, PIP4K2C, PLCG2, PLOD3, PNPLA4, POLE, PRKAA2, PRPS1, QPRT, RAC3, SEMA4A, SEMA4B, SEMA4D, SPRY1, STAT5B, TACR3, TUBB2B, UGT2B17, UMPS, VAMP2, WNT5A, XCR1, EIF4EBP1, TNFRSF10C
Negative_11046	BTK, DBH, GSR, LYN, TH, ADH6, AGRN, AGRP, ALCAM, ALG5, ANAPC7, BCKDHA, BLVRB, BTRC, CARS2, CCL28, CCNG1, CD34, CDC23, CHUK, COQ6, CSF3, CSNK2A2, CTF1, CYP2C18, DHCR7, E2F4, ENO1, EPHB6, F13A1, FADD, FBP1, FGF6, FLOT1, FM05, FOSL1, FOXA3, GALT, GPD1, HSD17B4, HTR7, HYAL1, ITGA10, ITGAX, ITGB4, JUND, KCNJ11, MAN1B1, MAP3K11, MAP3K8, MAP4K4, MDM2, MYD88, NAE1, OR10AD1, OR10Q1, OR14C36, OR1L4, OR4D6, OR52A5, OR5B21, ORC5L, P2RX3, PDIA4, PIM1, PPBP, PPP2R1A, PPP3R1, PSAT1, PTPN5, RAS A1, RDH10, RPS6KA3, SESN3, SLC25A4, TDO2, TIAM2, TRPM5, UGT2B7, VAMP2, VAV2, EIF4EBP1, GABARAPL2, PRICKLE1, TNFRSF13C

Negative_11047	AR, C2, F3, KIT, LTB, ABLIM1, ADH6, ADSS, ALG10B, APOA1, BPNT1, CD80, CD82, CDKN1C, CHD8, CLDN7, CRB3, CTNNA2, CTNNA3, CXCL10, CYP26C1, CYSLTR2, DDX47, DGUOK, DOLPP1, ENPP2, FBP1, FGF13, GALNT6, GBE1, GNA13, HSPB1, IL17A, MAP3K1, MMP7, NADK, OR1F1, OR1L3, OR2H1, OR51G1, OR5R1, OR6Y1, PAX4, PDE8A, PDGFD, PIGN, PIK3C2A, PNPLA4, PPCS, PRKG2, PRNP, PROS1, RPS6KB1, SARS2, SNAP25, SOD1, SPCS1, SULT2B1, UPP1, ATP6V1B2, CACNA2D2
Negative_11048	AGL, C2, GHR, GSS, SI, ZYX, ACP5, ALDH1B1, ATIC, ATP12A, ATP6V1H, BACE2, CAMK2D, CCL14, CCL20, CHD8, CRB3, CRLF2, CSNK2A1, CXCL11, CYP8B1, EI24, EPHB1, EXOC7, FADS2, G6PD, GGT1, GNAS, GPD1, GSTM3, HEXB, IFNB1, IL10, IL12A, IL12RB2, IL1A, IMPA1, KCNQ1, LDHAL6A, MAN1B1, MCM4, MEF2C, MTFMT, MYL9, NCAM1, NR1H3, OR52K1, OR5P3, PARD6B, PCNA, PDE3B, P OLR2B, PPAT, PPP2R5C, PTGER3, PVRL1, RAB23, RASGRP3, RBPJ, SC5DL, SELE, SEMA3E, SPRY1, TAP2, TAS2R16, THTPA, VTI1B, WNT9A, XCR1, YWHAG, HLA-DQB1, HSD17B10
Negative_11049	APP, FOS, HYI, MIF, MOS, NNT, TPO, ACHE, ACYP2, ALG6, ARSD, ATP5J2, BAA T, BCKDHB, BMP4, CALML3, CAMKK1, CARS2, CCL17, CCL23, CHAD, COASY, DL L3, DUSP2, ECSIT, ENTPD5, ERBB4, FOXA3, GCNT4, GLO1, GNA14, GNAL, HLC S, HSD11B2, IGF1R, IL10RB, INPP5B, KRAS, LAMB3, LDHB, MAGI2, MAP2K1, MAP3K8, MCM7, MDH2, MLLT4, MPDZ, NAGK, NPAS2, NRP1, OR11H1, OR1A1, OR3A1, OR4K13, OR51Q1, OR6K2, OR7G2, OR8K1, PAPSS1, PDE1C, PLA2G10, P OLR2C, PROC, PTPRZ1, SETDB1, SMURF2, SNAI1, ST8SIA1, STX1A, TNFSF8, TSHB, TUBB, ATP6V1B2, B4GALNT1, SERPINA5, TNFRSF14, TNFRSF17
Negative_11050	ABO, AUH, F2R, FYN, GGH, IHH, ME3, PTS, ACVR1B, ADCY7, ADH1B, AHCY, ARH GAP5, AXIN2, BET1L, CACNA1S, CAV3, CBLB, CCL26, CCNE1, CD8A, CDC14A, CDKN2A, CLDN17, CRY2, CTBP2, CTSS, DEGS2, DIAPH3, EFNB3, EPHA1, EPHA4, EXTL3, GAD2, GADD45B, GALNT11, GRB2, HSD17B3, HSPA1B, HTR5A, IDH3 B, IFNA10, IGF1R, IL19, IL1R1, IL6R, MAPK9, MCAT, MEF2C, MYH7B, MYLK, NCOR1, NEUROG3, NOD1, NTSR1, OPLAH, OR10G4, OR2AE1, OR2AG2, OR4K13, OR4S2, OR51Q1, OR5P3, OR6K2, OR8J3, PDE3B, PIGB, PKM2, PPBP, PRKCD, P RKY, PVRL3, PVRL4, ROBO2, RRM2B, SCP2, SHMT2, STAT4, SUV39H2, TAS1R3, TAS2R5, TUBB6, VTI1B, WNT8A, TNFRSF17
Negative_11051	CDA, CGA, KDR, AADAC, ACTN4, AGTR1, APOC3, B3GAT3, CNTN2, CTNND1, DAD1, DAPK3, DDX56, DTX4, EHHADH, F2RL3, FDFT1, GBGT1, GIT1, GLG1, GUCA1 C, GUCY1A3, HCST, HSD17B3, HSD3B1, HTR7, IMPDH1, INHBE, ITGAL, JAK1, LAMC2, MAPK12, MCCC1, MYLK2, OR51F1, PRKCH, PRKX, RHOD, RUNX1, SCP2, SDHA, SEMA3E, SLC25A6, SYNJ1, TALDO1, TAS2R40, TAS2R8, TCF7L2, TLR3, TSC2, ULK3, WASF1, CSGALNACT2
Negative_11052	BAX, C5, ID2, KDR, LYN, ABLIM1, ACSM5, ACYP1, ADCY9, ADRA1D, ANAPC2, A TP2A1, ATP5C1, ATP6VOC, BDH2, CCL27, CD22, CD34, CKS1B, COQ5, COQ6, C RHR1, CYP3A43, CYP4A11, DAAM1, DAXX, FPGT, GALNS, GCAT, GLI1, GRM1, G UCA1A, HMBS, ITGB3, JAK1, MYH10, OR10Q1, OR13A1, OR52N5, ORC3L, PDHB, PHKA2, PIGW, PKMYT1, PLCE1, PNPLA3, POLA2, POLD2, PRODH, SCP2, STX6, TAS2R9, TYROBP, UGT2B10, ULK2, USE1, VTI1A, VTI1B, WEE1, XCL1, CSNK1A1L, PPARGC1A, TNFSF13B
Negative_11053	FAS, FN1, ITK, LEP, PGF, PVR, AACS, ALCAM, AMY2B, ANAPC1, BMP4, BMP5, C AMK2G, CCL1, CCR9, CD244, CD46, CHRNA7, CMAS, CNTN2, CYP3A7, CYP4F2, DHRS3, EXTL2, GALNT9, GALNTL1, GNA13, GNB1, HAO2, HHEX, HTR2C, IFNA8, IKBKB, IL17RB, IL21, IL21R, IL25, IL8RA, ITGA6, ITGA8, KITLG, MAP2K7, MAP3K4, NANP, NEFL, NEU1, NOS1, NUDT8, OR10A2, OR2H2, OR4K17, PAK6, PCYT1A, PDXP, PIAS4, PIGF, PNPO, POLD2, POLE4, PRIM1, PRKAB1, PRKAG1, PTPN11, PVRL1, RPS6KB1, SARDH, SESN1, SHC1, STAM2, SUOX, TAS2R60, TBL1Y, TIAM1, TRAF2, TYMS, UGP2, UROS, VANGL1, WIF1, WNT3, MAP3K7IP2, ST6GALNAC4

Negative_11054	AGK, ATM, DAO, HDC, ACO2, ACSM5, ACVRL1, ANAPC4, ARHGEF1, ARPC2, B4GAL T1, BPNT1, C4BPA, CD34, CDC42, CLDN18, CMBL, CNDP1, COL5A3, CPT1B, C RLS1, CSNK1D, CSNK2A1, CTBS, CYFIP2, CYP2J2, CYP2U1, DGAT1, DUSP5, E ARS2, EPB41, FADS2, GALC, GCDH, HLCS, ITGA1, ITGA7, ITGAD, KLRC2, LDH D, LTA4H, LTBP1, MDH1, MYH11, MYH3, NFATC4, NLGN3, OR10C1, OR13J1, OR 1G1, OR2A5, OR2T5, OR4F4, OR4F5, OR51F1, OR6C2, PARS2, PI4KA, PIP5K1 A, PLA2G4A, PLCZ1, POLD2, PSME2, PTGES, RAP1B, RHOQ, RPE65, SDHC, SMA D6, TAS2R4, TBK1, TKTL1, TLR5, TRAF3, UPP2, CACNA2D2, MAPK8IP3, PAFA H1B3, ST6GALNAC6
Negative_11055	ABO, F11, SCD, SFN, ACVR2A, ADH1B, ADH6, ALDH1A1, ALG1, ALG10, APOA5, ARPC3, ATP6AP1, CASP10, CCL2, CNTN1, CREB3L3, CXCL13, CYP2A7, EVI1, EXT1, FABP1, FARSA, FCGR3B, GBE1, GNRH1, GOT2, GP1BB, HBEGF, ICOSLG, IL17RA, IL24, ITGB3, KLRD1, LDHB, MAP2K3, MAP2K5, MCM4, MPST, NCOA4, NKX3-1, NMNAT2, NMNAT3, NR1D1, ODC1, OR10J5, OR1E1, OR2AG1, OR2AT4, OR2B6 , OR2M7, OR2S2, OR5V1, ORC1L, PDE6G, PDPK1, PGS1, PPID, PPP2R2A, PSAT 1, RASA2, RBX1, RGS3, SDC1, TP53, UGT8, UROC1, WASF3, TNFRSF1B
Negative_11056	CGN, NLK, ADCY6, ADRBK2, AGPAT3, AKT2, ALG5, CCL19, CCL28, CD40, CD55 , COX15, CTSG, CYSLTR1, DDX23, F11R, FGFR4, FZD7, GCNT2, HEMK1, IARS2 , IL2RA, LHCGR, MAP3K12, MAPT, MOV10L1, MTHFR, NEFM, OR10G4, OR2AG2, OR2S2, OR4D11, OR5A1, PDE6G, PDGFC, PLCB4, PPP1CB, PRNP, PRSS2, PTPR M, RASA1, RASGRP1, RPS6KA3, SMAD1, ST3GAL5, TAS2R10, TIRAP, WHSC1, C SGALNACT2, MAPKAPK2, SLC25A31, TNFRSF11B
Negative_11057	CEL, HPD, ID3, LSS, MET, ACSS2, ACTG2, ADCY2, ADIPOR1, APOE, BIRC2, BM P7, BMP8A, CACNB2, CACNB4, CCL24, CCL26, CD74, CEBPA, CLDN16, CSH1, E PHA5, FGF11, FGF21, FGF3, FSHR, FUT4, GADD45A, GALNT9, GBGT1, GDF5, G DF7, GNG13, GNG3, GUCY1A3, HADHA, HIP1, HPSE2, HSD11B1, IFT57, IL21R , IL24, IL3RA, INPP5A, KCNJ11, MAN1B1, MAN1C1, MFNG, MGAT2, MGAT5, MY D88, MYH14, NOD1, NOTCH3, NQO1, NTRK2, OR10X1, OR1L4, OR52I1, OR5L1, PAICS, PIK3CD, PLD1, PNMT, POLD4, PPCS, PPP2CB, PRKCI, PRKG2, PTPN1, SEMA4G, SIAH1, SNAI1, SPRY2, ST3GAL5, STAT6, TAS2R3, TAS2R9, TGFB3, TPK1, TRPC1, TSC2, TUBA1A, TUBB2C, TUBB4, UGT2A1, VCAM1, XCL1, ATP6V 1G2, MAPK8IP3
Negative_11058	AUH, CAT, CD4, CKM, DBI, GNE, IL5, MPZ, MSN, PAH, ACPP, AGRP, ARHGEF1, A SCC3, B3GALT6, CACNA1I, CCKAR, CD47, CDIPT, CHEK2, CNGA4, COL1A1, CO X10, CREB1, CSNK1E, DDX56, DIAPH3, ENO3, ENTPD7, FASN, FGF9, G6PD, GO T1, GP1BA, HMGCS2, HSD17B4, IFT57, IL22RA2, ITGA2, ITGA5, KNG1, LILR B3, MADCAM1, MAP3K11, MGAT5, MITF, MPP5, NCOR1, OR10G9, OR2C1, OR4K1 , OR51L1, OR52B6, OR52W1, PARVB, PDE1A, PEMT, PLD1, PNPO, PPP3R1, PTD SS1, PTGS1, PYGM, RARA, RASGRP1, RBL2, RGS3, RXRA, RXRG, SETD8, SH2D1 B, TIRAP, TLR5, TUBA3C, TUBA3E, VAMP2, VDAC3, WNT5B, EIF4EBP1, HSP90 AB1
Negative_11059	AK1, C3, CKB, GLS, GNS, ID4, ME1, NLK, PTS, ACAD8, AGPAT3, AMY2B, ARHGE F4, ARPC2, ARPC4, ASS1, B3GALT6, BMP8A, CASK, CASP7, CCL7, CDC27, CHK B, CHUK, CLDN11, COL1A2, COMT, CSDA, CXCL6, CXCR3, CXCR5, DAG1, DCTD, DGKD, DHDH, DPYD, DTX4, ENTPD2, ENTPD5, FCER1G, FGF17, FOXO3, GALK1, GNAO1, GTSE1, GUSB, IL17RB, IL20RA, IL22RA2, INHBA, IPPK, ITGB5, KAT 2B, KCNJ11, LDHD, MCM6, MTHFD2, NFKB1A, OR1A2, OR1J1, OR1J2, OR2C3, O R5D13, OR5P3, PAK4, PCYT2, PDGFD, PFKP, PLA2G6, POLR1A, POLR2F, PPP3 R1, PRIM1, PRKAG3, PRKCD, RAPGEF3, RDH5, RELA, RERE, SMPD2, SOS1, SPR Y4, STK3, TAP2, TAS2R16, TYMS, UNC5B, UROC1, VASP, WNT11, WNT8B, HSP9 OAB1, MAPKAPK3



Negative_11060	<p>CDA, ITK, PGF, STS, TAT, TH, ACVR2B, ACY3, ADCY9, AGXT2, ALDH5A1, ANAP C2, ARRB1, CCL13, CCL19, CCL27, CCL7, CCL8, CCR7, CD22, CD82, CDKN2B, CHIA, CMAS, COL4A2, COQ3, COX10, CSNK1G1, CTF1, CUL1, CYP4F3, DDOST, DLL4, DUSP4, EGFR, EHHADH, ETS1, FGD1, FGFR2, GALNTL1, GLUD1, GSTZ1, GUCY1B3, GUCY2F, H6PD, HLA-</p> <p>G, HPSE2, HRH1, INHBC, KDSR, KNG1, LAMA3, LHCGR, LYPLA2, MALT1, MAP3K12, MAP4K1, MAPK8, MYH4, NAGS, NRAS, OR10H4, OR10H5, OR13A1, OR13J1, OR2AG2, OR2C3, OR2M2, OR52I1, OR8H1, OXSM, P2RX3, PFKM, PIGL, PIM1, PIP5K3, PLCD3, POLR3K, PPOX, PPP2R1B, PRKACB, RENBP, SIGLEC1, SOS1, SPI1, THBS2, TLR5, TRAF1, UGT2A3, VANGL2, VEGFC, WARS, WASF3, WNT4, YWHAZ, ATP6VOE1, SUV420H2, TNFRSF10B</p>
Negative_11061	<p>C2, FYN, MAX, MYC, AANAT, AMDHD2, ATP5G3, CCNB1, CDC42, CHRNA7, CXCL2, DDHD1, DHRS9, DPYD, EFNA4, EPB41L1, EREG, FABP4, FLT3, FUT6, GARS, GDF7, GGT5, GNRH2, HYAL2, IL8RB, INPP5B, ITGB2, LAMB4, LIPG, MPZL1, MYL7, NCF1, OR10V1, OR4Q3, OR52N4, OR5D16, OR5L2, OR6K3, PARD6B, PARVG, PDE4B, PPM1A, PRKCZ, RDH10, SDC1, TACR3, WNT1, WNT9B, XYLB, YWHAQ, ALDH18A1</p>
Negative_11062	<p>CFI, F2, F7, FGA, GCK, GH2, GHR, GLA, HDC, IL6, WAS, ACAD8, ACTB, ADH7, ADRA1A, ALPPL2, ARAF, ARSA, ATIC, BPGM, CALML6, CD79A, CDC7, CES7, CHIT1, CPT1A, CUL1, CYFIP1, CYP2U1, CYP4A11, DHDDS, DIAPH2, DKK2, DLL3, DOLPP1, DRD5, DUSP5, ENTPD5, EPRS, FGF22, FGF7, FSHR, FZD5, GRHR, GSTA1, GSTM3, GUSB, HLA-</p> <p>F, IFT57, ITGA2B, ITGB6, JAG1, JAK1, LDHC, MAD2L1, MAP3K12, MMP1, MTFMT, NCOR2, NME6, NT5C1A, OR1E1, OR51Q1, OR5T3, OR6K3, OR6X1, OR8H1, PDE4B, PHKG1, PIGH, PTCH2, PTGER1, PTGFR, RASGRP1, RASSF1, RBPJ, SMC1A, SNAI2, SORBS1, SSH3, STX1B, TACR2, TALD01, TSHB, UGP2, UPP2, VEGFB, WEE1, YWHAQ, AASDHPPT, CACNA2D4, CSGALNACT1, HLA-DQA2</p>
Negative_11063	<p>IL9, JUP, KHK, PLG, TYR, ACAT2, ACTA1, AGPAT2, ARG2, CACNA1I, CAPN2, CD3E, CDC14A, CMPK1, CTBP2, CX3CL1, DARS2, DGKE, ENAH, FCGR3B, FGFR4, FZD1, GCLM, GLI1, GUK1, HLA-</p> <p>DMA, HSD17B1, IFNA7, KIR2DL2, NT5C1B, OR1A1, OR1L1, OR2L8, OR2T6, OR4K17, OR4N4, OR4X1, OR56B4, OR6F1, PIAS1, PIGC, PITX2, PMM2, PRKAR2B, PRKCB, PRSS2, PTPRM, RPS6KA5, SPCS3, SPRY2, ST6GAL1, TAS1R2, TAS2R48, TNFSF11, TUBB6</p>
Negative_11064	<p>LCT, LYN, RET, SRC, ABAT, ACAA1, ACADM, ATP5I, BMP7, BRAF, CARS2, CCL27, CDC14B, CDC42, CDKN2A, CSH1, CYP2B6, CYP2C8, DGAT2, DIAPH2, GLYCTK, GOT2, GSTZ1, HARS, HCCS, IGSF5, IKBKE, IPPK, ITPK1, KDSR, KIR3DL1, LAMA3, LTC4S, MDM4, MYH1, NFKBIB, NMNAT2, NR1H3, NUDT5, OR2B11, OR52B4, OR5AS1, OR7A17, OR9Q2, PAX6, PDGFRB, PFKP, PLA2G2E, POLE2, POLR2J, POLR3D, PTGDS, PTGIS, RAP1B, RPS6KA6, SLC25A5, SMAD2, TAP2, TRPM5, UROD, VAV3, VDAC3, WBSR17, ATP6VOA4, TNFRSF17</p>
Negative_11065	<p>GSS, IL8, LSS, ACSL5, ACVR1B, ALDH4A1, ALDH6A1, ATP12A, B3GAT3, CBLB, CCND2, CDH2, CLCA2, CLDN1, CNTNAP1, CTBP1, CXCR4, CYP2A6, CYP4A11, DAXX, DGKG, DKK4, DLST, EPB41L2, EVI1, FGF22, FLT3LG, FUT9, GALNTL5, GGT6, HTR2A, IFNA8, IL17RA, IL22RA1, IL2RB, ITGA2B, ITPK1, JUND, KLRD1, MAP4K1, MCM2, MCM5, MYH11, NADK, NCKAP1, NEFH, NGEF, NME2, OR10H2, OR1M1, OR1N2, OR2T1, OR4A16, OR4K17, OR51I2, OR5M8, OR6T1, PDE4C, PFKM, PFKP, PLK1, PLXNB1, PRKACA, RASGRP1, RBKS, RGS3, STX3, TUBA1C, ULBP2, AASDHPPT, HSP90AB1, TNFRSF10D</p>

Negative_11066	CDA, F10, FAS, FH, GBA, LEP, MOS, NLK, SRC, TNN, AARS2, ACAD8, ADCY4, AKT1, ALDH6A1, ALG11, B3GALT2, CACNG8, CARD11, CCKBR, CD38, CDC2, CREB3L4, CTF1, DFFA, DNMT3B, E2F3, EPB41L1, FECH, FGF23, G6PD, GDE1, HIBADH, HLA-DOA, HPSE, HSD17B7, HSPA1B, ITCH, JAG2, LCMT2, LIMK2, MAD2L1, MAOA, NADK, OR13F1, OR2C1, OR2M2, OR2W1, OR4S1, PCYT1B, PDE4A, PFKFB1, PHGDH, PIGH, PLCB2, POLA2, POLR2J, PPAP2B, PPARG, PPP1CC, SHMT2, SLC27A4, SMURF1, STK11, STX4, TAS2R4, THBS3, THBS4, TYK2, WARS, WNT9A, HLA-DPA1, ST6GALNAC1
Negative_11067	BCR, C8G, CBS, MSN, ALPP, BMPR1B, C1QB, CCNE2, CYP3A43, DGAT2, DKK4, DPYSL2, DUSP8, ENO2, ESPL1, FGD1, FLOT2, FZD5, GAB1, GGT1, GNG12, GPD2, H6PD, HSD11B1, IARS2, IFNA6, IFNGR2, IL28B, IMPDH1, ITPKB, KLRC2, MYL9, NTF4, OR1A2, OR1N2, OR52L1, OR6K2, OR9Q2, PFKM, PIP4K2A, POLR2K, PRIM2, PTGES2, PVRL2, RARS, RASGRF2, STMN1, TLR9, TSHR, UCK1, ULBP2, YARS, CSGALNACT2, HLA-DPA1, PPARGC1A
Negative_11068	A2M, PXN, ACAT2, ACSS2, ADCY8, ADRA1D, ALDH6A1, AMDHD2, ARNT, B3GALT2, BUB1, CACNB2, CCR6, CD226, CD44, CD72, CDC26, CXCL6, CYBA, CYP2F1, DGAT2L4, DLL4, DPYSL2, ENPP7, EPHB6, FASLG, FDPS, FSHR, GALNTL2, GPAM, GPX5, GSTM2, HLA-C, HLCS, HPSE2, IDH2, IL22RA1, INSR, ITGA7, KDSR, LAMB1, LEF1, LMO7, MAFA, MCM3, MPST, MYH15, NME7, NOS3, NTNG1, OR10A4, OR10G4, OR1E2, OR2C3, OR2H1, OR4Q3, OR51I2, OR52B4, OR52K2, OR5A2, OR7C1, OR8K5, OR9Q2, PDE6H, PIK3C3, PIK3R3, POLD2, POLD3, POLR1B, PRSS2, RASA1, RFX2, RRM2, SMAD3, SNW1, SOCS3, SPTLC1, SSH1, ST3GAL2, SV2A, TAS2R13, TAS2R5, TUBB3, ATP6V0A4, ATP6V1G2, CACNA2D4, CSGALNACT2, SERPINA5
Negative_11069	DCT, GSR, HAL, MAX, MPZ, TK2, ABL1, ACVRL1, ADIPOQ, ALDH9A1, ANPEP, ARHGAP1, ARHGAP4, BPNT1, CACNB2, CALML6, CARS2, CDK4, COL6A1, CPT1B, CREB1, CREB5, CXCL11, DCTD, DHDDS, DTX2, F2RL1, GATM, ICOSLG, IFNA2, IL28A, IL28B, INPP5A, LTB4R2, MAD2L1, MARS, NOX3, NPR2, NTF3, OR13G1, OR2L8, OR2M3, OR4D2, OR4K17, OR5H2, P2RX1, P2RX3, P2RX4, P4HA1, PARD6G, PDE1B, PIK3R3, PIP5K1A, PIP5K1C, PLCB3, PLCZ1, PLK1, POLR2J, PRKAA1, PTPN1, RXRA, SARDH, SCD5, SCP2, SEMA4A, SHC3, SMARCA2, SMPD1, SNAP25, SPHK2, TAS2R10, TICAM2, TRDMT1, TYMP, UCK1, UGP2, UPP1, UPRT, WNT3, XIAP, AASDHPPT, ALDH18A1, ATP6V1E1, CACNA2D1, CSNK1A1L, ST6GALNAC1
Negative_11070	FAH, FAS, FGB, HAL, ID4, LCT, MTR, ACSL6, ANAPC11, AOC3, AQP7, ARNTL, ATP4A, BDKRB2, CANT1, CCDC6, CCND3, CCNG2, CLDN7, CYBB, CYP2C19, DFFA, DLL3, EXTL1, FARP2, FBP2, FCER1G, FM05, GADD45A, GSTA3, ICOSLG, IDUA, ITCH, JAK3, LDHC, MDH2, MLLT4, MLYCD, NCAM2, NCOR1, NFKBIA, NPAS2, NPR2, NRG4, OR10H3, OR11A1, OR2B2, OR2M7, OR4C11, OR52M1, PDHB, PFKP, PLA2G1B, PLXNC1, PTPRM, RAPGEF2, RARS, RDH16, RPSA, RRAS2, SHC2, SLC2A1, SMAD7, SOCS2, SPTAN1, SRD5A2, STX8, TAS2R48, TGFBR1, TNFSF4, TOLLIP, TOMM40L, TP53I3, TPH1, TUBB2B, ATP6V1G1, B3GALNT1, C1GALT1C1, EIF4EBP1
Negative_11071	HGD, JUN, LCT, MPL, ACACA, ACAD9, ADCY7, B3GALT5, CBR1, CD72, CDC42, CDS2, CLDN18, CXXC4, DAPK3, DOLPP1, GANAB, GSTM2, HSD17B1, HSPB1, IDH3B, IFT57, IRS1, ITGAM, MYH4, MYLK3, NCOR2, NFX1, NOX3, OLAH, OR10X1, OR11G2, OR2T6, OR3A1, OR4B1, OR5A2, OR8S1, ORC3L, PAK7, PDE3B, PGAM2, PLA2G2D, PSAT1, PTPN7, RBL1, SELL, SNW1, SOCS4, TAS2R16, THBS1, UMP S

Negative_11072	C5, DBH, GPI, NGF, SCD, TK2, TNC, ACAD9, ACOX1, ACSL1, AHCYL1, AKR1A1, AKT1, ASPA, ATP6VOC, ATP6V1A, CCNG2, CD22, CDC25B, CLTB, COL3A1, CSF2RB, CYP26B1, CYP8B1, DERA, DHDH, FGF10, FGF2, FGF23, GALE, GALNTL2, GFPT1, GLDC, HCCS, HCST, HIF1A, ICAM1, IRS2, ITGA6, JAK2, JAM3, LEF1, LIPG, LRAT, MAOB, NCKAP1, NRP1, NRXN1, OCLN, OR10A5, OR1M1, OR2M2, OR4C46, OR51I2, OR56A1, OR5AN1, OR6K2, PAK2, PCK1, PIK3C2A, PKMYT1, PLAU, PLCZ1, PMAIP1, POLD4, POLR2A, POLR2K, RAPGEF1, RHOA, RPS6KA4, RRAS, SEMA3E, SESN3, SHISA5, SMAD1, ST3GAL5, STAM2, SULT2A1, TAS2R16, TBL1Y, ULBP1, UPB1, WNT1, XYLT1, PHOSPHO1, TNFRSF10B
Negative_11073	ADK, AK3, AK5, CGN, CRK, DCK, FES, GDA, HAL, MTR, OGT, PGP, PVR, AADAC, ACOX3, ACP1, ASAH1, ATP5D, ATP5I, CACNG8, CAMK2G, CDC16, CHST13, CLDN17, CYP4A22, CYP7A1, DAPK2, ERBB2, ETS1, FABP4, FBP2, FGF12, GRIN1, HSD11B1, HSD17B8, IFNA8, IFNGR1, IFNW1, IFT57, IL6R, ITGAD, MASP2, NEFM, NNMT, NOS3, OR13A1, OR1A2, OR2B11, OR2G6, OR2M4, OR51A7, OR51E2, OR56A1, OR5T1, OR9A4, P2RX7, PAICS, PDX1, PIK3R1, PITX2, PKLR, PLOD2, PSME1, PTK2B, PTPRB, RASA2, ROBO3, RPN1, RXRG, SHC4, SNW1, SPHK2, TAS2R3, TJP1, TJP2, TNXB, VDAC3, ST6GALNAC5, TNFRSF17
Negative_11074	C4B, ABL2, ACPT, ACY3, ACYP1, AFMID, AGRP, AHCY, ALDH1B1, ALDH1L1, APH1A, APPL1, ATP2A1, ATP5H, B3GNT4, BCKDHA, CANT1, CAV1, CCL4, CCNG2, CDIPT, CDKN1C, CFL2, CLDN14, CLTB, CNTN1, COQ7, CSNK1E, CYP26C1, CYSLTR2, DAAM2, DNMT3L, DRD5, DUSP2, EDAR, EGLN3, EPB41L3, EPHX2, GADD45B, GALNT6, GNAL, GRIN2D, ISYNA1, LAMB3, LTBR, MCEE, METTL2B, NEGR1, NR5A2, NTSR1, OR10H3, OR11L1, OR13A1, OR13C5, OR4K14, OR52A1, OR52N4, OR52W1, OR6N1, OR8G1, PAPSS2, PCCB, PDE10A, SEMA3F, SKP1, SLC27A4, SNAI1, SOCS1, SPI1, SPRY3, ST6GAL1, STX10, STX18, SULT1E1, TACR1, TCF7L2, UBE2K, XCL1, YWHAE, ATP6V0A2, ATP6V1B1, TNFRSF12A
Negative_11075	C8B, CR1, SHH, ACACA, ALG10, ALG5, AREG, ARG2, ATP6V1F, AXIN2, BAIAP2, C4BPA, CCL22, CDC16, CHIT1, CLDN7, CLDN8, CNDP1, COQ7, CYP4F2, DGAT2L4, DHDH, DUSP14, ENPP1, EPHA5, FMO3, GAD1, GALNT13, GMDS, GRLF1, GSTM4, HEXB, INPPL1, IQGAP1, ITCH, ITGAL, JAK1, JAK2, JUND, LAMB4, LIFR, MAD2L2, MGST3, MPDZ, NOX1, NT5C3, NUDT5, OR10C1, OR10H3, OR1D5, OR2AG2, OR2G2, OR2T4, OR4F17, OR56B4, OR7G2, OR9Q1, P2RX1, PDE1B, PFN4, PGAM4, PIGF, PIK3C2G, PLCB4, PLXNB3, PPP2R5A, RRM1, SELPLG, SEMA4D, SESN3, SMPD1, SNAP23, TAS2R50, TLR4, TNFRSF8, TNFSF18, TOMM40L, TUBB4, UBE2K, UGT2B4, ULK2, USE1, VAMP1, WNT1, WNT10B
Negative_11076	DBH, FH, IVD, LAT, TK1, UBC, ACACB, ACMSD, ACOX2, ACSM5, AHCY, ATG7, ATP5G2, B3GAT2, B3GNT5, CACNA1F, CALML6, CARS2, CBR3, CD244, CD86, CDC25A, CDC7, CLDN20, CLTB, COL3A1, COL4A2, CUL1, CYP3A43, DGAT2, DTX3, EFN3, EVI1, F13B, GALE, GAS1, GLDC, HADHA, IL10RA, IL22, IL9R, ITGAE, KCNB1, KIR2DS5, LCMT2, LIFR, MAP3K11, MLLT4, MTHFD1, MTMR6, NFKB1E, NT5C2, ODC1, OR10J1, OR10J3, OR10V1, OR11H4, OR1E1, OR1S1, OR4K13, OR51B5, OR52H1, OR5AN1, OR5T2, PDE7B, PIGF, PIGN, PIP4K2B, PLA2G5, PNPT1, PTCH1, PTEN, RAPGEF2, SCP2, SESN2, SMAD2, SMAD4, SNAP25, ST3GAL2, STEAP3, STX5, TAS2R14, TCF7L1, TLR5, TPH2, UBE2K, UGCG2, USE1, XIAP, ATP6V0A1, CSGALNACT1, TNFRSF13B
Negative_11077	CDA, FST, IL5, IL8, LYN, SP1, VTN, ALDH1A2, ALG10, ALG8, ANAPC4, ARHGEF1, ARHGEF7, ARSD, ATP5L, CACNB2, CASK, CD47, CDC25C, CDKN2B, CES1, CLDN17, CRKL, CTF1, CYP2C9, DAAM2, DDX54, DHRS4L2, ENTPD5, ENTPD7, ESAM, FADS2, FTH1, FUT4, GALK2, GCLC, GP1BB, GPLD1, GRB2, HLA-G, HTR4, IMPDH1, INMT, IRF3, MAPK1, NEUROD1, NOD1, NRXN1, OR11G2, OR13C8, OR2S2, OR2T1, OR4K14, OR51L1, OR52I1, OR5M3, P2RX2, P2RX3, PAK4, PAX8, PDE11A, PHKA1, PIGO, PIK3CG, PLCZ1, PNMT, POLR3H, PPARG, PPID, PTPN5, RAPGEF1, RAPGEF4, RASSF5, RENBP, SMC1B, SMPD3, ST3GAL2, TJP2, TLR4, UGT2A1, WIF1, ATP6V0D1, ATP6V1E2, CACNA2D1

Negative_11078	<p>BTC, CRK, GCK, IL3, KIT, LSS, TAT, TH, TPO, ACP5, ADIPOR2, ADRA1D, ARHG EF6, ARSD, B4GALT5, CLDN11, CSNK1D, EDAR, EPHA8, EPHB2, EXTL3, FARP2 , GBE1, GGT7, HLA-</p> <p>G, IL19, INHBC, INPP4B, IQGAP3, JAM2, MAPK11, MAPT, MCM2, MLYCD, MYL2 , NFYB, NME6, NUDT5, OR2AE1, OR3A2, OR6B2, OR8H3, PAX6, PDCD1, PRPS1, PVRL2, RFX5, RRAS2, SARS, SARS2, SEMA3A, SLC27A5, SOX17, SUV39H1, UB E2K, VAMP2</p>
Negative_11079	<p>C6, DDO, IHH, ABCC8, ALDOC, ALPP, ARRB2, CCL3, DBF4, FARP2, FZD8, GABA RAP, GCLC, GSTA5, HLA-</p> <p>DOA, HPSE2, ITPKB, LCMT2, LPAR1, LTC4S, LYPLA2, MAD2L2, MAP3K12, MAP K8, MYH7B, NOTCH3, OR10Q1, OR1J1, OR1L4, OR2L8, OR4N2, OR52E4, OR52E 8, OR56A3, OR8S1, P2RX7, PDE4B, PDE7B, PGS1, PIK3R3, POLR3H, PPP2R2D , PRPH2, SDC3, SEMA7A, SFRP2, SRGAP1, STX3, UGT2B7, WBSCR17, YES1, SE RPINB5</p>
Negative_11080	<p>ADO, AGK, DCT, F9, IL4, MVD, ACTA1, ACTA2, ACY1, ADORA2A, AKR1C1, ALG1 0, ALPP, ARRB2, ATP50, B3GALT4, BCL10, BUB1, CAMK2A, CAV1, CCKBR, CCN B2, CD79A, CHSY1, CLDN10, CNTNAP2, COL6A2, CPT1B, CREB3L1, CSF3, CYP 2U1, CYP8B1, DDIT3, DDX18, DUSP3, FBP2, FRAT1, FUT9, GADD45B, GART, G ATM, GIT1, GMPR2, GNG3, GPX7, GRIA1, GRIA3, GSTK1, GTSE1, HSP90B1, IF NA17, INMT, JAG1, KIR3DL2, LDHAL6B, LTBR, MAFA, MCM4, MECR, MTHFS, NC OA4, NKX3-</p> <p>1, NOS3, OR11H4, OR13C3, OR14A16, OR1A2, OR1K1, OR1N1, OR1Q1, OR4N5, OR5L2, OR5T2, OR6C3, OR7C2, PI4KB, PIGN, PIGO, PMM2, POLD3, PON2, PPM 1D, PPP2R2A, RAB5A, RAF1, RAPGEF1, RHOD, RRAS, SPAM1, SPTLC2, TBL1X, TLR5, UBE2K, WNT9A, HLA-DPA1, TNFRSF10B</p>
Negative_11081	<p>DBH, GDA, PVR, AANAT, ABCC8, ABI2, ACSL4, ACSS2, ACVR1, ALDH4A1, ARHG EF1, ATP6V1D, ATP6V1F, CASK, CD44, CDIPT, CFTR, CYP17A1, CYP4A11, DA G1, DUSP6, EPB41L1, FBXW11, FDFT1, FGF8, FLT3, GUCA1B, HADH, HEXA, HS D11B1, HSD3B1, HSPA8, HYAL2, IFNB1, IGSF5, IL13, ITGA2B, LARS, MGAT3 , MITF, MYH13, NCKAP1L, NOD1, OR14C36, OR2H1, PARD3, PDE6H, PDXP, PGK 1, PGM3, PIAS2, PIGP, PLOD3, PPP2R5E, PTTG1, RAB23, RHOA, SELL, SHISA 5, SIAH1, TAS1R2, TIAM2, TNFRSF8, WNT16, CSNK1A1L, CTNNBIP1, TNFRSF 12A, TNFRSF18, TNFRSF1A</p>
Negative_11082	<p>AK3, EPO, GAA, HK2, MVK, PGF, RPE, AASDH, ACSL6, ATP5G1, B3GAT1, B4GAL T5, CAMKK1, CARD11, CDS2, CHEK2, CHRM2, COL6A2, CREB3L4, EDNRB, EI24 , ENPP2, GALNT14, GALNTL5, GLUL, GP1BA, GP1BB, GPD1, GYS2, ITGB2, LIP G, MTMR1, MTMR6, NANP, NOX1, NRXN2, ONECUT1, OR4K14, OR6C6, OXSM, PDG FB, PIAS1, PIP5K1C, PKM2, PLCB1, PLOD2, POLR3D, PPARG, PRKAR1B, PRKY , PRSS1, RELA, RPIA, SDHA, SKP1, ST8SIA5, TAS1R3, TAS2R42, TGFB2, TGF BR1, TUBA1C, UNC5B, WHSC1, YWHAQ</p>
Negative_11083	<p>F12, HGD, INS, MPL, RDX, VTN, ABLIM2, ACTB, ADSS, AGPAT6, ASNS, B3GAT3 , B4GALT5, BMP5, BST1, CAMK2A, CD79A, CHST11, CREB3L3, CRLF2, CTPS, C YP2A6, CYP4F3, DARS2, DHODH, DKK4, EPHB2, ERBB2, FRAP1, GALNT2, GALN T3, GBE1, GBGT1, GUCA1B, GUCY2C, GYS2, HES1, HHEX, ICOS, ICOSLG, IFNB 1, IL1RAP, IL25, INPP5A, JUND, LRAT, LTB4R2, MGAT4A, MINPP1, MMP2, MP ZL1, NCK2, NKX6-</p> <p>1, NMNAT3, NT5C2, NUDT2, OR13C9, OR2B11, OR51Q1, OR5F1, OR5T3, OR6C2 , OR7G3, OR8K1, OR8S1, PDE10A, PFKFB2, PHKG2, PIP5K1B, PKLR, PRKACG, PSEN2, PYGB, RALBP1, RAPGEF1, ROBO1, RPS6KB2, SARS, SGPP1, SLC27A1, STX6, SULT2A1, SUV39H2, TGFB1, TIAM2, TICAM1, TUBB1, TYMS, ULK1, VEG FA, WNT2, MAP3K7IP2, TNFRSF6B</p>

Negative_11084	AK7, DDO, F5, GP6, IL3, A4GALT, ABCC8, ACY3, ALG10B, ALG12, AOX1, APRT, ATP5J, BAIAP2, BMP4, CCKBR, CD40, CD58, CDC16, CIITA, CLDN5, CNGA4, COL4A1, CRLF2, CTBP1, CYBA, CYP3A5, DDIT3, ETNK1, FGF3, FOSL1, GALNT9, GIT1, GNPDA2, HGSNAT, HSD3B2, HTRA2, ICOSLG, IL17A, LEFTY1, LGMN, LIPC, LLGL2, MAP2K3, MTMR2, NADK, NCOR1, NEGR1, NFYA, NLGN2, NME4, NNMT, NOTCH1, OR11I1, OR2Y1, OR51Q1, OR5K2, OR5T1, OR5T2, PFN4, PKLR, PPARG, PRKAR1A, ROBO2, SPRY1, STAM2, TGFB1, TRAF1, TUBB3, UGT2A3, ATP6V1E1, PAFAH1B2
Negative_11085	A2M, AK7, ATM, C4B, LTB, PLN, TNF, ACSM2A, ACTA2, ADSSL1, AHCYL2, ANAPC1, ARPC1A, ATP2A3, BDH2, BIRC5, BPNT1, CACNB3, CASK, CBLB, CD36, CD48, CDKN1C, CHST13, CMPK2, CNDP1, CYCS, CYP11A1, CYP26B1, CYP2A13, DNMT1, EDNRA, EFNA1, ELK1, GAL3ST1, GALE, GBGT1, GFAP, GLUD2, GYS2, HAR S, HMOX1, IL28RA, IL2RB, IL6ST, ITGB6, MAML1, MAP3K1, MAPK12, NCOA4, NFKB2, OR11H6, OR3A1, OR4C12, OR4K15, OR5I1, OR5R1, OR6K6, PCNA, PCYT1A, PIGW, PIP4K2C, PLOD2, PON3, PPARG, PTGFR, RALBP1, RBPJL, RPSA, SEMA3F, SNAP23, SOS2, STX1A, TKTL1, TPH1, TRAF2, TXNDC12, TYRP1, VANG L1, ZMAT3, CACNA2D1
Negative_11086	C8G, F9, KIT, PGF, STS, AKT2, ALAD, ASNS, ATP4B, BCL10, CASK, CCL3, CCR4, CD38, CLDN18, CRY1, CSH1, DARS, DDIT3, DGAT2, DKK2, DPM1, DPM3, EFN A2, ELK4, EPHX2, EXT1, FBP2, FGF6, GAS1, HA01, HCCS, HLA-C, IDI2, IFNA13, IFNA14, IRAK2, KLK3, LIFR, LTA4H, MASP2, MAT2B, METT L2B, MGAT4A, MGST3, MYLK2, NEUROD1, NR1H3, NTF4, OR2G3, OR2T12, OR2V2, OR4K5, OR4M1, OR51E1, OR52A1, OR5AU1, OR5M9, OR5T3, OR7G1, OR8B4, PDPK1, PFKFB2, PGM3, PON1, PPP1CA, PPP2R5A, PPP3CA, PSEN1, PTCH2, RBKS, RHEB, SLIT2, SMAD9, SOS2, STAT5A, TACR1, TAS2R10, TNXB, TSHB, TYROBP, UROS, CACNA2D3, PAFAH1B1, PAFAH1B2
Negative_11087	HDC, TH, ACSL1, ADCY9, AHCY, ANAPC10, ATN1, BIRC5, BMP7, CACNA1E, CACNG8, CASK, CCKBR, CD44, CHR1, CLDN1, CMAS, CSNK1D, DAPK2, EDNRB, ENPP1, ENTPD8, EPHB4, FADS2, FUT4, GADD45A, GALNT14, GNA15, GRM1, GUCA1C, HLA-F, HSD17B7, HTR2A, IDH3G, IFNA13, IKBKG, IL18RAP, IL28A, IL2RG, IMPDH1, IRAK3, ITGB3, JAM3, KRAS, LALBA, LIPG, LIPT1, MAN1A1, MAP3K6, MCM6, MICA, MTFMT, NPR2, OR14J1, OR2A12, OR5AP2, OR6K2, OR8I2, ORC2L, ORC5L, P2RX2, PDE4C, PDE5A, PDX1, PFKFB2, PGAM4, PIAS1, PIGL, PIGP, POL E3, POLR3A, PRPH2, RAF1, RASGRF1, RBL1, RPS6KB1, RXRA, SARDH, SC5DL, SFRP4, SOCS4, SPI1, ST3GAL1, STX5, SULT1A4, TAS2R14, TBK1, TCF7L2, THBS2, TRADD, WWP2, ALDH18A1
Negative_11088	AGK, CFH, HGF, LYN, MVD, UBB, ZYX, ACOX2, ADRB1, ALDH3B2, ALG1, ALG9, ALPP, ANAPC7, APOA2, ATG3, B3GNT5, BMPR2, C4BPA, CCNG1, CD55, CES7, CLTA, COASY, COL5A3, CSF2RB, CTSL1, CYP2A6, CYP3A43, CYSLTR2, DEGS1, DNMT1, DNMT3A, EIF4E, EPHA5, FABP4, FGF12, FOXA2, FTH1, GALC, GALNT3, GMPR2, GNA12, GRPR, GSTA3, GTSE1, HMGCL, HTR7, IFNK, IGF1, IL23A, IL3RA, INHBE, INPP5B, LIAS, LIPG, MAML1, MAP4K4, MGAT3, MRAS, MTAP, MYH4, NAGA, NCF2, NRG1, NT5C3, OR10A2, OR10G9, OR10J5, OR1F1, OR1L6, OR6C74, PARVB, PARVG, PDK1, PFAS, PGM1, PHPT1, PMM1, PON3, PPOX, PPP3CA, RALGDS, RDH12, SLC12A2, SOAT2, SOCS1, SPTAN1, ST3GAL4, TAS2R1, TLR2, TPK1, UGT2B11, VANGL2, ZMAT3, GABARAPL2

Negative_11089	CDA, FGB, HK1, IVD, ME3, MIF, OAT, TYR, UBB, ABAT, ACADM, ADIPOQ, ALAS1, ALPL, APPL1, B3GALT4, C9orf95, CACNA1F, CACNB1, CAV2, CHST12, CLCA2, CLDN14, COL5A3, CSF2, CSF3R, CSH1, CSNK2B, CTNNB1, CTSL1, CXCL9, CXCR5, DDX52, DIAPH3, DTYMK, F13B, F2RL2, FASN, FLAD1, GNAT3, GSTA2, IDH2, IFNA7, IFT57, IL10, IL19, IRAK1, JAG1, MPP5, NME4, OR10H2, OR14A16, OR1A1, OR2T5, OR2Z1, OR52E8, OR7C2, OR8B12, OR8D4, OR9G1, PKM2, PLXNB2, POLR2K, POLR3B, PPA2, PRKCA, PSEN1, PTPN5, RALGDS, RCHY1, RELA, RFXAP, RPN2, SETD7, SLC12A2, SLC25A6, SORBS1, SPTLC1, STAT1, STX16, STX4, SULT1A2, TAS2R16, TAS2R38, TXNDC12, UGCG, UNC5B, WNT3, WWP1, CSGALNACT1, GABARAPL2, SERPINA5, SERPINB5
Negative_11090	BTC, PGD, UBC, ACSL1, ACSM5, ACVR1, ACVR1C, ADCY6, ADSSL1, ALDOA, ASCC3, ATP5G3, ATP6V1A, BACE1, CD82, CER1, CHKA, CHSY1, CREB1, CYP11B2, CYP1A2, CYP1B1, DDX56, EDNRA, EFN1, ELK1, ENTPD1, ENTPD8, FARSA, GALNT5, GRIN2A, HHIP, HIF1A, HPSE, ICOS, IDH2, IL15, IL22RA1, INPP5E, LEFTY2, LIFR, LIPA, MARS2, MPZL1, OR10K2, OR10T2, OR13C3, OR1B1, OR2M7, OR52K2, OR9A2, PANK3, PARD6B, PDE6G, PGM3, PI4KA, PIK3C2B, PIK3C2G, PIK3CA, POLR1C, POLR2H, PON1, PPP2R5A, PTGS2, PTPN5, PTPRR, SC5DL, SEMA3A, SESN1, SETD8, SETDB2, SLC25A5, SOCS3, TAS2R5, THBS1, UAP1, ULK2, ATP6V1C2, MAP3K7IP1
Negative_11091	ADK, BID, C2, PTS, ACP2, ACYP1, ADCY5, AKR1D1, ATP5F1, BACE2, BBOX1, CACNA1E, CAMK2B, CD80, CDC7, COL3A1, CREBBP, CSF1, CXCL12, CYP2C19, CYP4A11, CYP8B1, DBF4, DLL3, E2F1, ENPP6, FBP2, GADD45B, GALNT14, GNA12, GNG13, GRM5, GRPR, GSTM4, GSTT1, GUSB, HAAO, IFT57, INHBC, IRS4, ITGA2, KLRC2, LCMT1, MAD2L2, MGLL, NFATC2, NKX6-1, NRXN2, OCLN, OR10H2, OR2L3, OR2T10, OR4F15, OR51G1, OR52E4, OR6B3, PCK2, PIGN, PIP5K1A, POLE, POLE4, POLR3B, PPP1CB, PTPRM, SAT1, SEMA7A, SMPD2, SUCLG1, SULT2A1, TAS2R9, TFPI, TNFRSF8, WNT9A
Negative_11092	F8, FST, GSN, IL4, TK1, ACADSB, ACLY, ACTG2, ADCY2, ALDH3A1, ALG10B, AMPD1, ATG3, B3GAT3, CALML5, CD274, CHRM1, CKMT2, CLDN9, CYP4A11, CYP7A1, DCTN1, DNMT3A, EGFR, ENTPD2, FASN, FGF9, FOSL1, HA01, HSD11B1, IFNK, IL1R2, IPPK, IRAK4, ITGA2, ITGA4, KARS, KAT2B, LHCGR, LIMK2, MAN1A1, MCM2, MICA, NME7, OR2T8, OR5B21, OR6C3, PGM3, PIK3CA, POLR2J, PP2R1B, PRDX6, PTPRB, RXRA, SDC4, SGPP1, SOAT2, ST3GAL1, YARS2
Negative_11093	AK2, AMH, CAT, CDA, FGB, IHH, KHK, MAX, ACSM1, ADSSL1, ARPC4, BMP5, CALML6, CASP8, CCL23, CD27, CMPK2, CYP26C1, DDX19A, DKK2, DRD1, E2F5, EFNA3, ERBB4, EXTL3, F13B, FARP2, FBP2, FCER1G, GALNT8, HADH, HADHA, ITGAD, OR2L8, OR4K15, OR4L1, OR5R1, OR7A17, OR9A4, OR9K2, ORC3L, POLR2E, PPM1B, PRKY, PTPRZ1, RAB5A, ROBO3, RPS6KA5, SETD1B, SFRP2, SFRP4, SLC2A1, UBE2L3, UCK2, WARS, TNFSF13B
Negative_11094	CP, GBA, GGH, GSN, HAL, IL6, MTR, ACSL3, ALAD, ALDH1A3, APAF1, APH1A, BIRC2, BTRC, C1QB, CACNB1, CAMK4, CCKAR, CCL4, CDC27, CDC6, CEBPA, COL4A6, CXXC4, CYP4A11, DARS, DDX47, EDN1, EFN2, EPHX1, EXT2, FBXW11, FGFR3, FUT3, GLUL, GSTM3, HRH1, ITGA9, JUND, KIR2DL2, KLK3, LLGL1, LRD, LRRC4C, MAOA, MAP3K4, MCM4, NAT1, OR10J3, OR10T2, OR4C46, OR51D1, OR6C75, OR6N1, PER1, PIK3C2G, PITX2, PLAUR, PLD1, POLR3D, PPA1, PPM1B, PPP2R1A, PRPS2, PSME1, PTPRR, RBPJ, RPS6KA3, SEMA3D, SFRP2, SLC25A5, SPRED2, ST3GAL2, STK36, STT3B, TIAM2, TRDMT1, TRPM5, VAMP2, WASF2, YWHAE, AASDHPPT, ATP6V1B1, ST6GALNAC1, ST6GALNAC3

Negative_11095	APP, LSS, NLK, ACADSB, ACAT2, ADIPOQ, ASRGL1, ATP6V1A, B3GALT2, BAAT, BCKDHA, CACNA1S, CALML6, CCL8, CCR4, CD22, CDC45L, CDH4, CDKN1A, CD S2, CLDN22, CNGA3, CNGB1, COL4A1, CSNK1G3, DRD1, DUSP3, EDA2R, FGF17, FGF4, FGFR4, FMO4, GALNT2, GANAB, GBE1, GDF6, GRIA1, HIBADH, HLA-F, ITGA6, LIPA, LTBP1, MCM7, MMP7, MTMR6, NFATC2, NTF3, OR10H4, OR2T1, OR2T4, OR4M1, OR6T1, OR8I2, PFKM, PIGP, PIK3C2G, PIK3R2, PIM2, PKM2, POLE, PRKAA1, PRKCG, PTEN, PTPRR, ROCK2, SEMA4F, SMPD2, SPHK2, SRGA P1, ST8SIA1, TAS1R3, TLN2, WWP1, HSD17B10, PDCD1LG2, TNFRSF1A
Negative_11096	ADK, AK1, AMH, MSN, ACAT1, ACP1, ACSM2A, ALOX12B, ALOX15, AOX1, C5AR1, CCNG2, CD86, COL1A1, COL3A1, COL4A1, CSNK1E, CXCL10, CXCL13, DUSP10, DUSP5, EPHA2, FASN, FIGF, FLOT2, FSHB, GALM, GNA15, INHBA, KIR3DL2, LALBA, LGMN, LIPC, LYPLA1, MAFA, MNX1, NAMPT, NFATC2, OR13C2, OR6C76, OR6N2, OXCT2, PIGV, PIK3C2G, POLR3G, PRKCA, PRLR, PRODH2, PTPN5, R ELA, RENBP, SKP1, TAS2R1, TCF7, TFPI, TPK1, YES1, HLA-DPA1, SERPINF2, ST6GALNAC3
Negative_11097	IL9, MOS, RET, ABLIM1, ACP2, ACTA2, ALDH1B1, AMDHD2, ATP12A, CACNA1G, CACNA1H, CARS2, CD274, CDH4, CHRM5, CLDN17, COQ5, CRB3, CXCL5, CYP2C8, CYP3A5, CYP4F2, DGKI, EIF4B, ERBB2, ERBB3, EXOC7, FGD1, GNG13, GUK1, HBEGF, HTRA2, HYAL1, ICAM1, ICAM2, IL25, IL29, INSR, IRS2, LDHAL6B, LFNG, LIFR, LLGL2, MMP14, MYH14, NCK2, NFASC, NOS1, OR10J3, OR10P1, OR1J4, OR2T10, OR4A5, OXTR, PAK6, PDE2A, PDE6G, PDE9A, PIGM, PIGW, PPP1R3C, PPP3CB, PPP5C, PRIM1, PRKAA1, PRKCH, PYGM, QARS, RALBP1, SH2D1A, SH2D1B, SHC4, SPRY2, STAT5A, STK11, STX5, SULT2A1, TBXA2R, TGF B2, TUBB4, TUBB4Q, UCP1, VAMP4, WNT7A, ZFYVE16, ZMAT3, ZNRD1, ST6GALNAC1, TNFRSF13C, TNFSF13B
Negative_11098	CAT, HAL, HK1, IL2, SMO, ACSM4, ADCY9, AKR1C4, ALAS2, ALDH7A1, AMDHD2, ANAPC5, B4GALT5, BBC3, BBOX1, BCAT2, CACNA1S, CACNG7, CCL14, CREB3L2, CRKL, CXXC4, CYP11B2, CYP26B1, DDX4, DTX3, ELK4, FGD3, FOSL1, FPGT, FUT8, GNAT3, GUCY1A2, IARS, IARS2, ITGA4, ITPK1, KNG1, LDHAL6B, MTHFD2, MYH3, NAT2, NFATC2, OR10H4, OR2F2, OR3A1, OR4C12, OR56A4, OR6C3, P2RX3, P2RX4, PI4KA, PMAIP1, PRKAG2, PRLR, PRPH2, PTCH1, RASSF5, RPS6KB2, SESN3, SETMAR, SFRP2, SLC25A4, SPAM1, TGFB2, TKTL2, TPH2, TP I1, TYK2, UBA7, UGP2, UGT2A1, ULK1, UPRT, YES1, HLA-DRB5, MAP3K7IP2, PRICKLE1, PRICKLE2, SERPINE1, TNFRSF10A, TNFRSF12A
Negative_11099	DAO, DHH, LPL, OTC, TK1, ACTG1, ALDH1B1, BLVRA, CAMKK2, CCL3, CCND1, CDC45L, CKMT2, CLDN19, CLDN2, CREB3, CRHR1, CX3CR1, E2F3, EPB41L2, EP RS, FGFR4, FMO5, FOXA3, FUT5, GALM, GAPDH, HLA-G, IL5RA, INPP5A, ITCH, ITGB4, KIR2DS5, LEF1, LEFTY1, LRAT, MAP3K7, NAGLU, NFYA, OR10J5, OR13J1, OR2A42, OR3A3, PDE11A, PIGK, PRSS2, SOCS1, SOS2, TIRAP, WBSCR17
Negative_11100	DBH, F10, GSR, HK1, MVK, PC, A4GALT, ACAD8, ACAT2, ALDH1A2, ALG13, ARG1, ARSA, ATP5G1, BMPR2, BPNT1, BST1, CACNA1C, CACNG7, CD38, CFLAR, CLDN16, COL6A1, CTNND1, CTSG, DDX23, DTX3L, EDNRB, EHMT1, ELK4, EPOR, ETK1, FLT3LG, FMO4, GALK2, GMPR, GRM5, IDH2, IDUA, IFNAR1, IL9R, IQGA P3, LAMA4, LAMC2, MDM2, MYL5, MYLK3, NFYA, NRXN1, OGDHL, OR10A3, OR10P1, OR13C2, OR13C8, OR13F1, OR1L6, OR2T12, OR51G2, OR5H2, OR6C3, OR9Q2, PAFAH2, PDXP, PGAM4, PHKA1, PIGS, PLAUR, PLXNB3, PPA2, PPP2R2C, PSM3, PVRL3, SCLY, SDC2, SMAD1, SMARCA2, SOCS5, SOCS7, STK36, TAS1R3, TBL1X, TGDS, TICAM1, TJP3, TMLHE, TRDMT1, TRHR, UGT2A1, VKORC1, VTI1B, B3GALNT1, GABARAPL2, HSD17B12, SERPINB5, ST6GALNAC5

Negative_11101	CS, GNE, PRL, TNN, ACADSB, ACSS3, ADRA1A, AGXT2, AKR1C4, AKR1D1, ALOX12, ASAH1, ASCC3, ASMT, BMP8B, CACNG3, CD247, CES2, CLOCK, CNGA3, CTNNA2, DFFA, DGKH, DPM2, ESPL1, FARSA, GCNT1, GJD2, GRIN2A, HIP1, IL12RB2, IL22, INPPL1, ITGA6, NRP1, OR4P4, PHGDH, POLR2E, PPM1A, PPP2R1A, PTDSS1, PYCRL, RAB5A, SEMA4D, SEMA4G, SMAD4, STX1A, TUBB4, WNT4, YWHA, EIF4EBP1, PPP1R12A, SERPINC1, SERPINE1, TNFSF13B
Negative_11102	ATM, DHH, F11, GNS, HAL, HYI, NLK, OAT, VTN, ACVR1B, ADORA2B, AK3L1, ATP6V0B, BHMT, CACNB1, CASP7, CCL5, CCR9, CDH3, CDIPT, CDK2, CHAD, CLDN5, CRKL, DDX4, DKK2, DPM2, DTX3, EFN2, EPAS1, F2RL3, GNG13, GRHRP, GSTA1, GSTA4, IFNGR2, IMPDH2, INPP4A, KAT2B, LAMB4, LIMK1, MOV10L1, MYH8, NEFM, NEGR1, NLGN3, NT5C, OR10Z1, OR1A1, OR1S1, OR2H2, OR2Z1, OR56A1, P2RX4, PDGFRB, PFN1, PIM2, PLCB3, POLD2, POLD3, POLR2I, PPID, PPM1D, PPP2R5C, PRKAG2, QPRT, RBKS, RBL2, REL, RELB, RPIA, SC4MOL, SCD5, SENP2, SMPD4, STMN1, THBD, TPH2, UBE2L3, UGT2B10, VANGL2, WWP1, XCR1, YES1, YWHAG, YWHAQ, HLA-DQA2, HSP90AA1
Negative_11103	CAD, ACOT11, ACSM3, ADORA2B, AGPAT6, ALG10B, AMPD3, ANPEP, APPL1, ARNTL, ATF2, BAIAP2, BIRC2, CCL4, CD244, CD38, CD47, CDKN2B, CEBPA, CLOCK, COL11A1, CSNK1G1, CTBP2, DNMT1, ENTPD2, EPB41L3, FABP4, FBXW11, FGF19, GALNT6, GCAT, GNA13, HLA-F, IL1B, LIMK1, MCM3, MIOX, NCR3, NMNAT1, OR12D3, OR1J2, OR4A15, OR4F15, OR6K6, PGK1, PIGP, PLD1, RFXAP, SKP1, SLC9A1, SRGAP1, SRGAP3, STSIA1, TOMM40, UGT2B10, TNFRSF6B
Negative_11104	F8, GP9, ACAT2, ADRA1D, ARPC2, BMP8A, C1QC, CCL25, CCL26, CD3E, CD74, CHRNA7, CMPK2, CPT1A, CRKL, DDIT4, DUSP6, EPB41L2, FABP3, FZD3, GALNT6, GLI1, GNAI1, GYS1, IFNA2, IPMK, KIR2DL1, MAML3, MAP4K3, NCK2, NFYA, NRXN2, OR13C5, OR13C9, OR52B4, OR7G1, OXCT2, PDGFD, PDK1, PYCR2, REL, RFXAP, RPS6KB1, SDC1, SMC1B, SMPD4, SOS2, SUFU, THBS4, TOMM40L, UGT1A10, WNT3A, GABARAPL2, MAPKAPK5
Negative_11105	CGN, CP, GGH, GP9, HYI, LAT, MVD, PLG, ALDH4A1, ALOX15B, ATP5L, BMPR2, CCL11, CLDN19, CLDN22, COASY, COL1A2, CPOX, CXCR6, DGKZ, DHRS4L2, DVL2, ENPP3, ESPL1, FRAT1, FSHB, FZR1, GGCX, GJA1, GUCA1A, GUCY1A3, GUCY2C, IL1A, IL21, JUND, KCNB1, MTMR2, MTMR6, NT5E, OLR1, OR10J3, OR2A2, OR4C46, OR51L1, OR6T1, OR8G1, PIGO, RASGRP4, RXRG, SELP, SEMA3A, SED8, SH3BP2, SKP2, ST3GAL6, TRPC1, TUBAL3, UROD, VEGFC, WASF1, ATP6V0D2, PDCD1LG2
Negative_11106	AK3, CFD, IL9, RDX, ABI2, ALAD, APOE, ATP5B, ATP5F1, ATP6V0C, ATP6V1A, BCAT2, C1GALT1, CAMKK2, CCL4, CD226, CD28, CD47, CDH3, COL5A2, CPT2, CTNNA1, DDX50, DIAPH1, DLST, DRD5, EP300, FGF3, FZD4, GALK1, GATM, HA02, HIP1, ICAM1, IFNGR2, IL13RA1, IL7R, ITGB5, MAPK12, MAPT, MCM7, MDH2, MGAT5B, MMP7, MYH3, MYL2, NAGLU, NCKAP1, NEFL, OR10A7, OR1A1, OR51B2, OR51B5, OR5A2, OR6C75, OR7A17, PDGFD, PIGL, PIK3C2G, PKLR, PSM E3, PTCH2, PYGM, SKP1, SPAM1, SPI1, STX10, STX18, STX3, UCK1, WNT6, ATP6V1B2, SERPINA1, SERPINC1
Negative_11107	ACVR2A, ADORA2B, AHCY, AKR1C4, APAF1, AQP7, ARHGAP5, B3GAT2, CBL, CD46, CDIPT, CDKN1C, CDKN2A, CES2, CHPF, CHRM2, CLCA2, DERA, DGKD, DMGDH, EPHA7, FLT1, FMO5, FZD1, GCNT4, GNG12, GUCY1B3, HIF1A, HSPA8, INPPL1, ITGAE, JAK1, JAK3, LRAT, MAPT, MYH8, NADK, NANP, NAT6, NCKAP1L, OR13G1, OR1Q1, OR5D16, OR5F1, OXSM, PLA2G5, PLCB1, PTGER3, RBPJ, RPN1, RUVBL1, SNAP23, TACR2, TM7SF2, TRAF5, WASL, TNFRSF10A



Negative_11108	F8, HK2, LSS, AMDHD1, AMPD2, CACNA1I, CCL16, CCL20, CLCA4, CRLF2, CSF2RB, CTSG, CTSS, DHRS4, EPHA2, FUT1, GCH1, GNAS, GPX5, GRAP2, GYS1, HLA- DRA, HSD3B1, ICAM2, IDH2, IGF1R, IL17A, LEFTY2, LIPG, LRP6, MAPK8, MCM3, MCM7, MTAP, NNMT, OGDHL, OR10H5, OR2AE1, OR4K2, OR4X2, OR6S1, OR6Y1, PAK3, PGAM2, PI4KA, PIGW, PIK3C3, PLA2G2E, POLD4, POLR3G, PPAP2C, RFX5, SMAD6, SNW1, TAS1R2, TICAM1, TOMM40L, UNC5B, VDAC1, SERPINE1
Negative_11109	CKB, CTH, FER, LSS, ACVR1B, ACVR1C, ADCY3, ADIPOQ, AFMID, AKR1D1, AMPD2, ANAPC10, BAIAP2, CACNA1D, CAMKK2, CASK, CCL19, CCNH, CCR3, CERK, CHAD, CREB1, CRLS1, CTNNA2, CXCR4, CYP21A2, CYP7A1, FGFR1, FGFR2, FPGT, FRAT2, FTCD, GLUD2, GNG13, GOSR2, GRIN2C, GTSE1, GUCY2C, HEXA, HLA- DRA, HTR2A, IFIH1, IGF1, IL12RB1, IL17A, IL22, INPP5B, ITGAV, KIR2DL2, LTC4S, NCF1, NCF2, NCK2, NEU4, NRG2, NTRK2, OR52A5, OR5D13, OR5M3, OR5T2, OR5T3, OR9G1, PARS2, PARVA, PAX6, PIP4K2C, PKMYT1, PLCB4, PNP1, PPP3CC, PRKAB2, PRKCD, PTEN, RAC2, RAPGEF1, RGS3, SENP2, SETD7, SH2D2A, SLC2A1, SMAD2, SMARCA2, ST3GAL5, STAT5B, TACR2, VAV3, WNT2, HSP90AB1, MAPKAPK2, PNLIPRP2, PRICKLE1
Negative_11110	ADO, FGA, GBA, HGD, MPL, SMO, ACAT1, AGPAT3, ARPC5L, ARSA, BMPR2, CACNB1, CALML3, CAMK2B, CCL13, CDH5, CHAT, CREB3L2, EFNA3, FADS2, GCDH, GRB2, GRIA2, GUCY1A3, ITPK1, LIFR, MAP2K5, MMP9, NCKAP1L, NMNAT1, NMNAT2, NPR2, OR13C3, OR1K1, OR2T33, OR3A3, OR4C12, OR4K17, OR4M1, OR4N4, OR5AR1, OR6C76, PIK3C2G, PIPOX, POLR2D, PRKCD, PRKY, ROCK2, RPS6KB1, TP73, VEGFC, GABARAPL2
Negative_11111	GPT, HGF, MUT, ACTN4, AOX1, ARHGEF4, ATP6V1F, BMP7, BST1, CACNB2, CASP8, CCR2, CD27, CLCA4, COL6A1, CXXC4, CYP4A22, DHX58, FGFR1, FLAD1, FZD10, GABARAP, GFPT2, HBEGF, HTR7, ICAM1, IL1R2, KLKB1, LPAR1, MCCC1, MYH6, NKD2, OR10A2, OR1Q1, OR2B11, OR6C2, PANK2, PLA2G6, PLD2, PMM2, PMVK, POLD3, PTGES2, RPS6KB2, SKIV2L2, THBS2, TRAF1, UMPS, XYLT2, ATP6V1C2, MAP3K7IP2, MAPKAPK2, SERPINA5, SLC25A31, TNFRSF10B, TNFRSF10C, TNFRSF18
Negative_11112	ASL, CD6, GNE, ID2, LCT, MVD, ACVR2B, ADCY7, ADH1A, AKR1B1, AKR1B10, AKT3, AMD1, AOC2, APOC3, ARSB, ATG3, ATP5D, B4GALT2, C4BPA, CES1, CLDN11, COL1A2, COL6A2, CRHR1, CSNK1G1, DGKA, DHCR24, DLL1, ELK1, ESAM, FGF23, FLT4, GBE1, GGT6, GRAP2, HMOX2, HSD3B2, HSPA2, HTR4, IDH3A, IFNGR1, IL1RAP, IL9R, IMPA1, LARS, MAP3K7, MGST1, MIOX, MTAP, NFATC3, NOTCH3, OGDH, OR10AG1, OR1C1, OR2A12, OR2F2, OR56A4, OR6B3, PDPK1, PIGA, PIP5K3, PKMYT1, PLOD1, POLD1, POLR2K, PSENEN, RBKS, SAT2, SNW1, SUCLA2, TNFRSF4, TNFSF14, UBE2L3, UGT2B17, WNT3, B4GALNT1
Negative_11113	C2, CGA, CGN, DCT, NPY, OAT, SCD, SPN, APOC3, ARSD, BMP8A, CCL5, CHEK1, CIITA, CNGA3, CNTNAP2, CSNK1A1, CYP4A22, DFFB, DGKZ, EFN3, ENPP6, ENTDP4, ERO1L, FGF5, FOXO1, FTH1, FUT2, GLI2, GUCA1A, HLCS, IL12RB1, IL23R, INPPL1, LAMB1, LAMC3, MGST3, MTAP, MTHFD1, MYH1, NKX3- 1, NME2, ODC1, OR2A25, OR2F2, OR5A2, OR8H1, PCYT1A, PGAP1, PIP4K2B, PLA2G2F, POLR2J, PPP1CA, PPP1R3A, PRPH2, RASSF5, RPS6KA1, RRM2, SDC1, SLIT2, SPTAN1, SRGAP1, SUCLG2, TBXAS1, TP73, TRAF1, TSLP, TUBA3C, TUBB3, UNC5D, WASL, WNT9A, ATP6V0E1, ATP6V1G2, ST6GALNAC4
Negative_11114	CD2, CFD, CKB, F8, FYN, ACVR1C, ALDH1A2, AMPD1, B4GALT7, BAI1, BMP8B, BMPR1B, C1QC, CCL4, CLDN9, CNTNAP1, CRB3, CREB3L2, CYP2C9, DGKE, EFN3, ENTDP7, FDFT1, FGFR2, GBE1, GLUL, GNAO1, HSD3B1, HSD3B2, KLK3, LLGL1, MGAT4B, MPP5, NME4, OR10AD1, OR10G4, OR10H4, OR13C9, OR1L4, OR2D2, OR51A4, OR51B4, OR51B5, OR51Q1, OR52E2, OR5AU1, OR8S1, PDE1A, POLR2C, PPP1R3D, PRKAR1A, RDH10, SIGLEC1, SLC2A4, SMURF2, SOS2, SPRY3, SSX2IP, STX7, SULT1E1, TUBA8, WARS2, WNT8B, ATP6V1C1, EIF4EBP1

Negative_11115	DAO, FN1, INS, KMO, ABP1, ACSS3, ACYP1, AGTR1, AKT1, ANAPC2, APOA1, B3 GAT1, BMP2, CAMK2G, CBLB, CCL24, CD14, CDC14A, CDH3, CHKA, CREB5, CYP 11A1, DDX23, DIAPH1, DNMT3L, DUSP6, EFN1, ENTPD4, EPB41, EPHA2, ERB B2, ESPL1, ETNK1, FPGT, FUT1, FUT6, GGT5, GMDS, GNAL, GOSR2, HTRA2, IF NA8, IL20RA, IRAK1, JUND, KIR2DL4, LIPT1, LTBP1, MDM4, NFE2L2, OR12D 3, OR13C3, OR2A42, OR4F17, OR4X1, OR6Y1, OR8K1, OR9A2, OXCT1, OXTR, P AFAH2, PLA2G5, POLD3, POLE, PPP1CB, PPP2R1A, PPP2R2B, PRKCA, PRKY, P RNP, PSME3, ROBO2, RPS6KA3, SDC3, SESN2, SETDB2, SFRP4, SH3BP2, SLC2 5A5, SPHK1, SUCLA2, SUOX, TAS2R60, TAS2R9, TBK1, TBXA2R, TIRAP, YWHA Q, ATP6V1C2, GABARAPL1
Negative_11116	C3, C9, FES, GP9, RDX, ACP5, ACSL3, ADIPOQ, ADRBK2, ALG6, AMD1, AMDHD1 , APBB1, ARPC1B, ASPA, BCAR1, BMP4, C4BPA, CACNG3, CDKN2D, CLDN1, CNT FR, CSAD, CXCR3, DHDDS, DHODH, FARP2, FGF2, FGF22, FUT3, GALNT2, GANA B, GCNT1, GNRH1, GRLF1, GYS1, HLA- DMA, HMGCS1, HNF4A, IFNG, IL18R1, IL21R, IL28RA, INMT, LAMC2, LAMC3, LARS, LCMT1, LIPA, LTC4S, MAML3, NFYA, NT5C1B, OR10H1, OR10H3, OR10K 1, OR2T34, OR2T8, OR2Z1, OR51B2, OR51E2, OR52E6, OR52N5, OR6C6, OXCT 1, PLAT, PLCB2, POLR3A, PPARG, PPCS, PRKACG, PRKCZ, PTPN6, RPS6KB2, S EMA4C, SFRP2, SKIV2L2, SLIT2, SREBF1, STK36, TAP1, TP73, TUBA1A, WNT 2B, ATP6V1B1, CSNK1A1L, PHOSPHO1
Negative_11117	BAX, FYN, GSR, IL5, IL7, PLG, RPE, SI, WAS, AKR1C1, ANAPC1, ARPC1B, BAA T, BMPR1B, BRAF, CADM3, CCL19, CCL23, CHPT1, CHSY3, CPT1C, CSNK1E, CY CS, CYP26A1, EHMT1, ENTPD5, EPOR, EXTL3, FUT5, GAL3ST1, GSTM2, HMGCS 1, HNF1B, HTRA2, HYAL2, IBSP, MAML3, MKNK1, MLLT4, MTMR2, NKX3- 1, OR10K1, OR4Q3, OR9A2, PARVB, PIP5K1A, PLA1A, POLR1D, PPAT, PPP2R5 D, PRNP, PRSS2, SARS2, SELPLG, SPI1, TYROBP, HLA- DPA1, MAPK8IP2, TNFRSF10B, TNFRSF10D
Negative_11118	ADO, GGH, GH2, SRF, TXK, ACVR2B, AGPAT4, ALDH7A1, ARHGEF4, BHMT, BPGM , BRAF, C9orf95, CCNE2, CDKN1A, COX10, CYFIP1, DOT1L, EARS2, EFN3, E IF4B, EPB41L1, ERBB3, ERBB4, FGF8, GJD2, GNAO1, GUK1, HCLS1, HLA- C, ISYNA1, LFNG, LRRC4C, MDM2, MGST2, MYD88, OR10A6, OR10H5, OR10J5, OR13J1, OR1A2, OR2B6, OR4C12, OR7G3, ORC1L, PFKFB2, PFN4, POLD4, POL R1A, POLR1B, POLR2B, PPP1R3D, PPP2CA, PPP3R2, RDH8, ROCK1, SAT2, SEM A3B, SKP2, SRD5A2, STAT6, STX10, SUV39H1, TICAM1, TNFSF18, TP73, TSC 1, UNC5A, GABARAPL1, MAP3K7IP2, MAPKAPK3
Negative_11119	CGA, LTB, TPR, ABP1, ACTN4, AGTR1, ALPI, ATG12, BDH2, CACNA1G, CACNA1 H, CAMK2D, CAMKK2, CBR1, CCL11, CCR3, CD59, CER1, CHRNA7, CREB3, CTBS , DTYMK, EHMT1, G6PD, GAL3ST1, GALNT13, GLB1, GLYCTK, GSTM5, HNF4G, H TR2B, IL12RB1, IL17RA, IL2RB, INHBA, MAOB, MAP3K4, MRAS, NAGK, NFATC 1, NRG3, ODC1, OR2K2, OR51D1, OXTR, P2RX3, PDHA1, PGAM1, PIK3CD, PPP3 CC, RHOD, ROBO2, SGPP1, SNAP25, SOAT1, SOCS5, TAS2R13, TNFRSF9, TNXB , TUBB2B, UPB1, PPARGC1A
Negative_11120	AK5, EGF, GP9, ID1, KMO, LSS, ABLIM1, ABLIM2, ALDH1L1, ALDOC, ANGPTL4 , ARHGAP5, ARNTL, ATP5G2, BST1, BUB1B, CAMKK1, CCL11, CCL26, CCL7, CC ND3, CD19, CDK6, CDKN1C, CLDN4, COL11A1, CSNK1A1, CTLA4, DDX55, DGKB , DNMT3A, ENTPD4, ENTPD6, EPB41L2, F2RL3, FABP1, FADS2, FARSB, FGF14 , FUT3, GALK2, GALNTL4, GBE1, GDE1, GMDS, GRIN2C, GRPR, GUCY1B3, HLA- DOB, IKBKB, IL2RG, KARS, LAMB1, LGMN, LLGL1, MGAT1, MYH8, NADSYN1, NE FL, NSDHL, OR10H1, OR1E2, OR1L1, OR2AT4, OR2M4, OR2T34, OR4X2, OR51B 4, OR52N2, OR8K5, PARVA, PDE4A, PIGL, PIP4K2B, POLR3G, PRKAG3, SFRP1 , SKIV2L2, SMPD3, ST3GAL5, STEAP3, THTPA, TRAF6, UCKL1, ULBP1, ULK1, WIF1, WNT8A, TNFRSF1B

Negative_11121	CFD, DCK, JUP, SRF, TNF, TPR, AASS, ABI2, ABL2, ACOX3, ACSM2A, ACTG1, ALDH7A1, ALDOB, ARSB, B3GAT3, B4GALT7, BBC3, CD59, CHPF, CHST11, CNTNAP2, COMT, COX15, CYP11B1, CYP2A7, CYP3A5, DAPK2, DPYSL2, EGLN1, FADD, FGF12, FGF20, FLT1, GALNT3, GALNTL1, GNPDA1, GNRH2, HCLS1, IARS2, IDI2, IFNA17, IL12A, IL17RB, IL23R, INPP4B, IRF7, KAT2B, MAD2L2, MAGI3, MASP2, MYH7B, NFKBIE, OR10G3, OR13J1, OR2K2, OR8D4, OR8H3, PCNA, PDE1A, PDE7B, PDXK, PIAS2, PIGX, PIP5K3, PLCG2, PLEKHA8, PMVK, PRKAB2, RALGDS, RPS6KA2, SDC2, SMAD7, SNAI2, SPRY3, STT3B, TAS2R10, TJP2, TRAF2, UPB1, VASP, VEGFA, WBSCR17, WHSC1L1, ZNRD1, ATP6V0E1, CSGALNACT2, HLA-DRB3, SERPING1, ST6GALNAC3
Negative_11122	GLS, NPL, UBC, ACAD9, ADSL, ALDH2, ANAPC11, ARPC5, ARSE, ATP5G1, CD22, CD82, CHEK2, CPT1A, CSNK1G1, DARS2, DCXR, DTX2, DUSP4, ENTPD6, FSHB, FUT2, FUT8, FZD4, FZD6, GAD1, HTR5A, KLRD1, MDH2, MDM4, OR10Z1, OR4C46, OR8B8, OR9I1, PHKG2, PLA2G10, PLA2G1B, PPP1CC, PTPMT1, RAB23, RPS6KB2, SEMA3D, SMAD9, ST3GAL5, STK3, TAS2R13, TAS2R38, THBS4, TPMT, YES1, PLA2G12A
Negative_11123	EZR, GP6, SMS, ADH1B, AMHR2, APH1A, ATP6V0B, CDK2, CHST13, CLCA4, CLDN2, CNTN1, COL4A2, CRY2, CXCR6, CYP2E1, DCTD, DDX18, ENPP1, FGF14, GGCX, GLO1, GRIN1, HARS2, HLA-F, HMGCS2, IFNA4, IL13, IL17RB, IL6ST, IQGAP2, ITGA3, KIR3DL1, KRAS, MADCAM1, MAP3K11, MGAT5, OR13A1, OR13C8, OR2A4, OR2B11, OR2C3, OR4K17, PDE4A, PDGFA, PLCD1, PLXNB3, PPARD, PRKCI, PTGES2, SLC27A4, STX16, TAS2R7, TNFSF14, UCP1, UGT2B7, UROC1, HLA-DQA2, MAPKAPK3
Negative_11124	ADA, BID, BTBD, CP, ALOX12B, BCL2, CAMKK1, CD8A, CHST13, CLCA2, CRLS1, CYFIP1, DTX2, FIGF, FUT9, GART, GBE1, GNAZ, GRIN2D, HEXA, IFNW1, ITPK1, KAT2A, LILRB3, LIPA, MYH4, NMNAT1, NOD1, NTSR1, OR1L3, OR1S2, OR2A25, OR4C16, OR4F4, OR52I1, OR8S1, OR9G1, PNPT1, RAPGEF3, RPS6KB1, SELPLG, SFRP2, SSH2, TAS2R49, TBK1, THBS4, TIRAP, TPM3, WNT2, ATP6V1E1, ST6GALNAC1
Negative_11125	C4B, EPO, F5, GSN, ILK, NF1, AADAT, ABI2, ACAD8, ACSM5, ACTC1, AKR1D1, ALAS1, ALG10B, ALPPL2, B3GALT1, CACNA1D, CACNA1H, CBR3, CD58, CDC25A, CKS1B, CNGB1, CNTF, COQ7, CTBP1, CTPS2, CYP11B1, CYP1B1, CYP2E1, DLL3, DPYSL2, DTX3, DUSP3, ELK4, ENTPD4, ESPL1, FARP2, FGFR3, FZD10, GALNT8, GANAB, GGT5, GNA15, GSTM4, GUCA1C, GUK1, HAAO, HA02, HLA-C, HMGCL, HPSE, HTR5A, HTR6, IGF1, INPP1, JAK3, L1CAM, LDHAL6B, LIPC, LYPLA1, MDH1, MGAT2, MICA, NCOR2, OR12D3, OR13C5, OR1J2, OR2L13, OR4N5, OR51G1, OR51G2, OR5I1, PARD6G, PFKFB3, PIGV, PIGW, PIM1, PLOD2, PNPLA3, POLR3G, PPP1R3C, PRKAA2, PRKCG, PTAFR, PYGM, RAB23, RAPGEF4, RBPJL, SDC2, SKIV2L2, SLC2A1, TFDP1, TICAM2, TUBB1, WNT7B, XCL1, MAPKAPK3, SERPINA1
Negative_11126	CFI, CS, DAO, LCT, ACAD8, ACADVL, ACSL1, ACVR1B, ADH1B, AK3L1, ALG8, APOC3, ATP13A2, ATP5E, ATP5F1, B4GALT4, BCL2L1, BLNK, C1QA, CES2, COL1A1, CPT2, CREB3L2, CSNK1G3, CTF1, DHDDS, DLL3, E2F1, EDN1, EIF4B, FPGS, GABARAP, GALM, GNAI1, GNRH1, GPX7, HCST, HTR4, IFNK, IL12RB1, IL15RA, IL1R2, ITGA11, KCNQ1, LCMT1, LHCGR, MBL2, MDH2, MITF, MTAP, MYH6, NCF1, OR10H1, OR1L6, OR2W1, OR4K13, OR52N5, OR5AK2, OR5B3, OR6S1, OR8K5, PANK3, PFN1, PIAS3, PLEKHA8, POLR2G, PRSS2, RFW2, SDC4, SFRP5, SNW1, SPRED2, TAS2R49, TGFB3, TUBB6, UCP1, ATP6VOA2, PNLIPRP1, TNFRSF10C

Negative_11127	ADK, CR2, EZR, GAA, ID4, LTB, MAG, MUT, ABL2, ACOX3, ACSL3, AHCYL2, ALD H5A1, ALDOA, ALG2, AMDHD1, AMY2A, ANAPC10, ATP6AP1, BCMO1, BDH2, CBR 3, CD48, CDC26, CES1, CES7, CHD8, CSNK1G1, CXCL12, DHCR24, EPHB1, FOX 01, FSHB, GP1BA, GPD2, HLA-C, HLA-G, KIR2DL3, KLRC4, MCM2, MGAT3, MYH14, NARS2, OLAH, OR10H3, OR10H5, O R13J1, OR2AE1, OR2T2, OR4F5, OR5AK2, OR7A5, OR7D2, ORC2L, P4HA3, PDE 6G, PDPK1, PIK3CA, PIP5K1C, POLR3G, PPM1A, PRPS2, PTCH2, PTK2B, RALG DS, RBL1, RPS6KA6, RUVBL1, SEMA4G, SH2D2A, SMARCA2, SMURF1, SOCS1, S PI1, SRD5A1, TAP1, TAS1R3, TNXB, TPH1, TRAF4, TUBAL3, UBE2L3, UNC5D, WNT2B, WNT5A, WNT6, WNT7B, WNT8A, ZFYVE9, HSD17B10
Negative_11128	EDA, GH1, ID4, INS, PTS, SYK, AADAC, ACSM3, ADH6, ADRB2, ALDH2, ALG13, ALS2, ATP5A1, BCAT2, BMPR1B, CACNG1, CASP6, CCKAR, CCL8, CFL2, CTBS, CYBA, CYP26C1, DDX19A, DHODH, DPYS, DTX2, EHHADH, G6PC, GALNTL4, GOT 1, GSTK1, IDH3G, IL19, IL3RA, ITGA11, ITPKB, KLRK1, LIAS, MGST3, MYL7 , NRG4, OR10G7, OR14A16, OR51D1, OR52E2, OR8B8, PDE2A, PI4KA, PIGB, P IK3C2G, PIK3CG, PIP5K1A, PLTP, PPCS, PPP2R2C, PPT1, PRPS2, PRSS1, PT CH2, RPS6KA2, RPS6KB1, RRM2B, SETDB2, SNAI2, SRD5A2, STAM2, TCF7, TK TL2, UGT2A3, UGT2B4, UMPS, UPB1, MAPK8IP2
Negative_11129	AUH, GLA, ME3, TKT, ABAT, ACAD8, ACADL, AGPAT1, AKR1C2, ALDOA, AMPD1, BBC3, BET1, CARS, CCNE2, CDIPT, CHIA, CHKB, CHST12, CLDN17, CSNK1G2, CYP1B1, CYP2A7, DAPK1, DARS2, DDX23, DHCR24, DHFR, DOT1L, DPM2, DTX3 , DUSP5, FARS2, FASLG, FGF18, FGF19, FGF2, FM05, FZD3, GNB1, GOT2, GST M1, GSTM4, GUCY1A3, GUCY2C, ICAM1, IFNA7, ITGA1, ITPKA, KLRC3, LCMT2 , LIPT1, MAP3K8, MAT1A, MYH7, NAT2, NEU3, NEUROD1, NRG3, NSDHL, NTNG1 , OR10C1, OR13F1, OR14C36, OR51B6, OR5D14, OR7C2, OR7D2, OXTR, P2RX3 , PAK4, PDE7A, PER2, PIAS1, PIK3CB, PLAUR, PLCE1, PLCG2, PLXNA3, POLR 2B, POLR2J, PPP2R1A, PSEN2, RALB, ROCK2, SGMS2, SRGAP2, STAM, SUV39H 2, TAS1R3, TCIRG1, TPH2, TRAF2, TRHR, TUBB2C, ULBP3, WNT5B, MAPKAPK3
Negative_11130	ATM, C2, CBS, GLA, ITK, ACSL5, ACSS2, ADCY8, ADH4, ADRB2, ALDH4A1, ANA PC7, ARSE, ATP2A2, BCKDHB, BCL2L1, C5AR1, CACNG3, CASK, CAV1, CD34, C ERK, CYP17A1, DGAT1, DRD5, DUSP10, EFN1, EIF4B, FGF4, GALK2, GRIA1, GRIN1, GRIN2D, HSD11B1, HSD3B7, IL12RB1, MAP2K2, MCCC2, NARS, NRG4, OR14J1, OR2B6, OR4F17, OR52K2, OR52N1, OR56A1, PGM2, PIGF, PRPH2, PT AFR, RAD51, RARS2, RASGRF2, SLC25A4, SMAD7, SMPD2, SOCS1, SRGAP2, ST X18, STX3, TAS2R8, TLR5, TXNDC12, UCK2, WNT4, ZMAT3, HSP90AB1, MAPK8 IP3, PAFAH1B3
Negative_11131	GNE, GPI, HK2, MSN, SDS, APOA1, BCL10, CAPN2, CCL2, CCL27, CDC27, CISH , CNTN1, CSF2RA, CSNK1A1, CYP1A2, CYP4F3, DARS, DIAPH2, EPHA4, GUCY1 B3, H6PD, HCST, HDAC1, HRH1, IBSP, IL3RA, IMPA1, IRAK3, ITGAM, LEPR, L TB4R2, MASP1, METTL2B, NFE2L2, OCLN, OR2W1, OR4A15, OR4C6, OR52E8, O R52N4, OR6Q1, OR8J3, P2RX4, PAK1, PHKA1, PHKB, PIGC, PRKAR1A, PRPH2, PTCRA, RFXAP, RHEB, RPIA, SGPP1, SOX17, STX1B, TALDO1, TBL1X, VEGFB, ARHGEF12
Negative_11132	FOS, RB1, AADAT, ADORA2A, AHCYL1, ALG10, ALG2, AMD1, ARSD, CCL15, CCL 17, CCL25, CCND3, CCR10, CD244, CD274, CER1, CNDP1, COL11A1, CRKL, CS NK1G3, DAPK1, DDB2, DEGS2, DUSP7, EFN2, FABP3, FOXA3, FZD4, G6PD, GA LNTL2, GAS1, GNA13, GRIN2A, HLA-C, HSD3B2, IARS, IL28A, INHBE, IPMK, IRAK3, ITGA4, ITGB5, ITGB6, LRP5 , MAP4K4, MDH2, MYH15, NCK1, NCOR1, OR10H4, OR1E2, OR1S2, OR2F2, OR3A 1, OR4M2, OR52K2, OR9A4, PANK2, PER3, PFKP, PIGF, PLXNB3, POMC, PPOX, PRIM1, PRLR, PSME3, PTEN, RAPGEF2, SELPLG, SEMA3F, SESN3, SPRY1, TP5 3I3, TRADD, ULK3, TNFRSF10A, TNFRSF13C

Negative_11133	F12, FES, XDH, ACY3, ADCY8, ALDH4A1, ATG7, B3GALT1, BCL2, BMP7, BTRC, CACNG7, CCND1, CEBPA, CXCR4, CYP11A1, DDOST, DDX18, DFFA, DGKB, DOT1L, DUSP6, FLT1, FMO5, FUT3, GALNT2, GALNT9, GAPDH, GNA14, GUCA1C, HAO1, HSD17B3, HSD3B2, HTR2A, IL12A, IL12B, IL15, IL23A, INHBE, INPP5E, ITGAM, ITPK1, KIR2DL2, KIR2DL4, LCMT2, LHCGR, NCAM2, NEFL, NOS3, NRXN2, OR11H1, OR3A1, OR4A16, OR4F6, OR8B4, PAK2, PAX4, PCK2, PCYT1A, PDE5A, PDGFRB, PER3, PHPT1, PIP5K3, PLCG1, PLXNB3, PPP2R5C, PRKAB1, PRKAG1, PROC, RIPK1, RXRA, SEMA3E, SMURF1, SPCS1, ST6GAL1, TAS2R3, TUBB, TUBB4Q, VAMP3, WARS2, WIF1, WNT2B, WNT5A, XYLT1, ST6GALNAC3
Negative_11134	AMT, BAD, GNE, KIT, PGD, ABCC8, ACADVL, ACP5, ACSM1, AKR1C4, AKT2, ALDH5A1, ALG11, ALG8, APLP1, ARHGEF2, BPGM, CACNB1, CACNG6, CCL14, CDKN2A, CERK, CTNNA1, CTTN, DGKE, DGKZ, DUSP6, ECSIT, ESPL1, EXTL2, FGF22, FOXO3, GSTK1, H6PD, HTR2B, IFNA16, IFNA5, IL11, IL1R1, IL20, LIMK2, MAP4K3, MICA, MMP1, MMP2, NAGA, NEU1, NFKB1, NOD1, NT5C, OR10J3, OR11H6, OR13C3, OR4K14, OR5B21, OR7D2, OXCT1, PAX4, PFN3, PIGX, PIK3CA, PIP4K2C, PLOD1, PPT1, PRKCQ, PTK2, QPRT, RASGRP3, RXRA, SARS, SDHC, SLC25A4, SLC2A1, SMAD3, SNAI2, SOCS4, SPCS3, TP53, TUBB4, UBE2L6, ULK1, WNT4, ZNRD1
Negative_11135	ACSL6, ACSM2A, ADORA2A, ALDH4A1, ANPEP, ARHGEF2, ARNT, ARNT2, ATP5G1, B4GALT4, CCL5, CCR8, CD70, CDKN2D, CKMT2, CYBB, CYP2F1, CYP3A43, EFN2, FIGF, FUT2, FZD3, GALNT12, GCNT1, GRIN2C, GSTZ1, HMGCR, HSPA8, IFNGR1, ITGAV, ITGB6, KIR2DS5, KIR3DL1, LEPR, LIPE, MAD1L1, MDM2, NEUROG3, NPR2, OR10J1, OR13C9, OR1E2, OR1J4, OR8G1, ORC3L, PARD3, PDE8B, PIGN, PPAP2A, PPID, PPP1R3B, PRDX6, PSAT1, PTCRA, RASGRP1, RBKS, RIPK1, SC4MOL, SLC33A1, SNAP23, SOCS4, ST3GAL2, TACR1, TJP1, TUBB4, UAP1, WNT9B, HLA-DPA1, PPARGC1A, SERPING1
Negative_11136	CKM, INS, NF1, SRC, ACVR1C, ADORA2A, AKR1C2, ALG10B, ARHGEF2, ATP2A3, ATP5A1, BBOX1, BDH2, BDNF, CLTC, DAAM1, DARS2, DFFB, DNMT1, DTX3L, EPB41, FADS2, FSHB, GLB1, GSTA4, GSTM4, HIBADH, HLA-DRA, HTR2C, IL17B, MAGI3, MGAT5B, MICA, MTFMT, MYH7, NFKBIE, NKX3-1, NRXN2, OR10X1, OR1S2, OR2T11, OR52H1, OR52N4, PLA1A, PLIN, PLOD1, PRDX6, RAPGEF1, RHOQ, SOCS3, SPCS1, THBS2, THBS4, TLR3, UNC5D, VDAC3, WASF2, WNT9A, ATP6V1G1, HLA-DPA1, TNFRSF14
Negative_11137	ABO, NPL, PDC, ACVR1B, ALDH3B2, ALDH6A1, ATG7, ATP13A2, CAV3, CCL4, CNB2, CFTR, CHKA, CHRM2, CLDN18, CSNK1E, CYP26B1, DCTN1, DDX54, DKK4, FGF2, FGF20, FRAT1, FTMT, FUT3, GPD2, HNMT, HTR5A, IFNA14, IL17A, ITGA6, MAP3K6, MGAT3, OR10AD1, OR1L3, OR4A5, OR4D5, OR4K17, OR51L1, ORC2L, P4HA3, PER3, PFKFB3, PIP5K1C, PLA2G5, PLXNA3, PLXNB1, POLR1B, PRKAG3, PRKCI, RFXAP, RPRM, STK3, STX1A, SV2B, TRAF5, VAV1, WNT2, ST6GALNAC6
Negative_11138	GNS, MIF, NOG, AACS, ACVRL1, ALDH1A1, ALG11, ALOX15B, AMD1, ATG7, B4GALT7, BCAR1, CACNA1F, CES1, CKMT2, CKS1B, COL5A2, COL6A1, CYP1A1, DGKA, DOT1L, ENTPD2, EPHA8, EPHB6, FLT3, GMPPA, GRIN2C, HAAO, HIF1A, HTR7, IBSF, IFNA4, ITGAE, LEPR, LRAT, NTRK1, OR1S2, OR2G3, OR2G6, OR4C46, PFKL, PFN4, PHGDH, PHKG1, PIAS3, PIGF, PIK3C2G, PIP4K2B, PIP4K2C, PPP1CA, PROS1, RCHY1, ROB1, RPN2, SEMA3B, SH2D1B, SKP2, SLC27A1, SLC2A4, SNAI1, SORD, SSH2, SUCLG2, THTPA, TNFRSF9, TSC1, TSHB, TYMP, UMPS, AASDHPPT, HLA-DPB1

Negative_11139	LPO, NGF, AASS, ACP2, ACSL4, BCAT1, BDH1, CHPF, CLDN6, CLDN9, COL6A1, CSF2RA, CSNK2B, CYP26C1, DTX3, EFNA3, ENTPD8, EXT1, FGD1, GAD2, GALT, GLUL, GMDS, GNG13, GNRH1, HADHA, HMGCL, HRH2, IFIH1, IFNA8, IRAK2, LAMC3, LDHD, MTHFD2, MTMR6, NAT2, NPR2, OCRL, OR10J3, OR3A2, OR4D2, OR4S2, OR52E2, OR52L1, OR6B3, P2RX3, PDE4D, PDGFC, PDHB, POLA1, PPAP2A, PPP1R3B, PPP2R2D, PPP3CB, PSAT1, RAC2, RIPK1, SDHA, SETD1A, SGPP1, SH2D1A, SPHK2, TNFSF9, TOMM40, TRAF1, TUBB, UCKL1, UGT2B17, VAV1, VDAC3, VEGFA, VTI1A, ZIC2, CSGALNACT2, HLA-DRB3, HSD17B12
Negative_11140	C1S, IL5, TNC, AGPAT2, ANAPC11, APC2, B3GALT5, BCKDHA, BCMO1, BET1, CACNB3, CARS2, CCL19, CCR7, CEBPA, CREBBP, CXXC4, DUSP16, EHMT2, EPHA2, EXTL1, FADD, FGF2, FGF8, FMO4, FUT3, FZD7, GCAT, GSTA2, GUCA1B, HADH, HMGCL, IL1RAP, ITGA9, KCNQ1, LIFR, MCCC2, MFNG, MGAM, MGAT5, NNMT, OR11A1, OR2A42, OR2M5, OR7G3, OR8G1, OR9Q1, OSMR, PDE7B, PLA1A, PLXNA3, POLR2D, POLR3D, SREBF1, STAT5A, TIAM1, TLR5, TNFSF11, TPH1, UBA7, ULK1, PNLIPRP1
Negative_11141	FGG, GHR, ID4, OSM, RPE, ZYX, ABL2, ADH5, ALDH1B1, ASPA, ATP5G2, BCAR1, BCL2, CACNG1, CCL2, CCNG2, CLDN6, COL4A1, COQ3, CXCR3, CYP2U1, DARS, DHCR7, EHMT1, EPAS1, ESAM, FZD3, FZD6, GABARAP, GNPDA1, GNPDA2, GUCY2D, GYS1, HLA-DOA, IFNA13, IGF1, ITGA2B, ITGAD, KITLG, L1CAM, LAMC2, LIAS, MAP2K5, OR2H2, OR2M7, OR4A15, OR4D6, OR52E6, OR5AK2, OR5D14, OR6C76, OR6F1, OR8B8, PANK3, PGM2, PGS1, PIGF, PIGU, PMM2, POLD4, POLE4, PON2, PPA2, PPP1CA, PPP1CC, PPP1R3A, PRKACA, PRKCB, PRKCE, PRSS1, PTDSS1, PTGER3, RPN2, SARS2, SC4MOL, SC5DL, SEMA4A, SKIV2L2, SOCS4, SPHK1, ST6GAL1, TAS2R40, TSHR, ULK1, AASDHPPT, ATP6V0A1, ATP6V1G3, HLA-DQB1, KIR2DL5A, PAFAH1B1, PLA2G12B, SERPINC1, ST6GALNAC5, TNFSF13B
Negative_11142	APP, CFH, JUN, ZYX, ABAT, ACSL3, ACVRL1, ATP5J2, ATP5O, C1QB, CACNA1B, CASP6, CD274, CDC6, CHST13, DAPK2, DHODH, DUSP14, E2F5, EPAS1, FIGF, FLT1, FOXL1, FOXA3, FRAT1, FZD7, GALNTL5, HHEX, HSD17B8, IL18RAP, INSRR, IRF7, ITGAE, L1CAM, LIPG, LTB4R2, MAP2K4, MAP3K12, MAPK1, MTMR2, MYH8, NAT5, NEU4, NOS1, NSDHL, OR1E2, OR1I1, OR4M1, OR4P4, OR4Q3, OR56A3, PDE4D, PDX1, PFN2, PIK3CB, POLE, PPP1CB, PSAT1, PTCH2, PTK2, ROCK1, SELE, SUCLG2, SULT1A1, TACR3, TAS2R9, TUBAL3, ATP6V0A4, GABARAPL2, PPARGC1A
Negative_11143	BAX, CFI, EGF, IL5, KHK, LCK, PC, TH, ADH6, AHCY, APPL1, ATP5C1, BIRC3, CARD11, CCL11, CCL15, CCR1, CCR6, CISH, COASY, CTSS, DTX1, EPHX2, EXT2, GDF6, GGT6, GUCA1C, GZMB, HSD3B7, HTR2C, IFNAR1, ISYNA1, KLRC2, LYZL1, MDM2, MTHFD1, NCK1, NCKAP1, NLGN2, OPLAH, OR14A16, OR4N2, OR52N5, PDE10A, PDE1A, PDE3B, PDHB, PER1, PTPN11, RFNG, STAT6, TJP1, TUBB2A, UGT2B11
Negative_11144	DLD, EPO, GDA, HK1, HK2, IL5, ME1, MPZ, SMO, ACTG2, ADCY1, ADCY6, AKR1C3, ALAS1, ARPC1B, ASNS, B3GALT2, B3GALT6, CARS, CASP6, CD72, CDS1, CES2, CHEK1, CLOCK, COL5A1, CYP27A1, ECSIT, EFNA4, ENO3, EPHA6, FGF17, FLT4, FTCD, GALNT11, GALNT7, GLI2, GMPR, GMPR2, GNA14, GRAP2, GRIA3, HLA-F, HSPA2, INPP5E, KYNU, LLGL1, MADCAM1, MAFA, MTAP, MTHFS, NRXN2, NT5M, OR10G2, OR10J5, OR11G2, OR11H4, OR13D1, OR1A1, OR1F1, OR1J4, OR2A42, OR2T29, OR2T5, OR4K14, OR52E8, PAK1, PDE1C, PIK3C3, PIP4K2C, PPA1, PPP2R1B, PROC, PRPS2, PTK2, PYCR2, QARS, RBPJ, RFWD2, RHOD, ROBO2, SEMA3D, SMAD9, SNW1, SPCS1, TAS2R40, TCF7L2, TPK1, TSC1, TUBB4, UBA1, UNC5C, YWHAB, ARHGEF12, ATP6VOD2, SERPINE1, TNFRSF11B

Negative_11145	EBP, F11, PC, ACAT1, ACPP, ACTG2, ADCY5, ALOX12B, ARSB, ARSE, ATF2, B3 GALT4, BAAT, BMPR2, CACNG6, CD274, COL11A1, CRKL, CYP4F2, DHDH, DIAP H3, DNMT3L, F2RL2, FUT7, GFAP, GPX7, HHIP, IDH3B, JAK2, KNG1, MAN2A1, MCM6, MMP14, NAGA, NOTCH1, OR13H1, OR1E1, OR2G3, OR5AU1, PAK7, PDGFD , PHKB, PIK3C2A, PIPOX, PLA2G2E, PLCG1, PNLIP, RDH10, SDC4, SEMA3F, S EMA7A, SETD1A, SPRED1, TAP2, TPK1, TRAF5, TUBA1B
Negative_11146	AGL, AK3, DBI, MET, SRF, ACAT1, ADCY9, ADH4, AK3L1, AKR1A1, APRT, ARHG AP5, ATP5A1, C5AR1, CACNA1G, CCL8, CDC20, CHST11, CLCA4, CLDN1, COL1 A2, CTSB, CXCL12, DAG1, DDHD1, DDX4, ECSIT, EPHX2, FGF4, FGFR4, FTCD, GALNTL2, GBA3, GGCX, GNAI1, GTSE1, HIF1A, HTR2B, IPPK, IRAK1, ITGA6, KCNQ1, LARS2, LEF1, MAN1B1, MTMR2, MTMR6, NAE1, NCKAP1L, NR1D1, OPLA H, OR10K2, OR2G3, OR2K2, OR2M7, OR2T6, OR4A15, OR51E2, OR52M1, OR5AN 1, OR5L1, OR8D2, OR8K5, PAPSS2, PIP4K2A, POLD2, POLR3A, PPP2CB, PRKA B2, PRKACG, SLC2A1, TAP2, TAS2R5, TUBA3E, TUBB2A, UGT2B4, WASL, HLA- DRB3, SUV420H2
Negative_11147	C4B, GBA, IL5, TH, ADIPOQ, ALDOA, ALOX15B, ANGPTL4, ATG12, ATG7, B4GA LT2, BMP2, CD244, CEBPA, CFL2, CLDN11, COL4A6, COL6A2, EDA2R, ENPP6, G6PD, GADD45G, GALNT12, GNAI3, GNAS, GRIA3, GUK1, HEXB, HNF1A, IL28R A, IMPA2, L1CAM, MAPK3, MCCC2, MCM2, NAMPT, NFATC2, NOTCH2, NPAS2, NU DT2, ODC1, OLR1, OR10A3, OR13C4, OR2A12, OR2AT4, OR3A1, OR52E6, OR52 N1, OR5D18, PAPSS2, PARS2, PER2, PIAS4, PIGV, PRKCZ, PRPS1, PVRL1, RF NG, SRD5A2, SV2C, TBXA2R, TLR3, TUBA1B, UBA1, UGT2B7, WNT16, WNT6, WN T9A, ZMAT3, ZNRD1, MAPKAPK5
Negative_11148	CKM, GLS, HDC, ACTN1, ACVR1, ACVR1B, ADIPOR1, ADORA2B, ADSL, AGXT, AK R1C2, ALDH1B1, ALDOA, ARAF, ASPA, AXIN1, B3GNT5, C1QB, CADM3, CARD11 , CCL1, CCL22, CCL7, CDC16, CD01, CISH, CLDN17, CLTB, COL6A2, COX15, C REB3L4, CSF2RA, CTNNB1, DDX50, DOT1L, FDFT1, FLT3LG, FUT5, G6PC2, GM DS, GYS1, HPSE2, IDH1, IL8RB, IMPA1, IQGAP1, ITGAX, KIR2DL2, KIR2DS5 , LAMB3, MAML2, MAPK1, MBL2, MMP1, MYL9, NQO1, NT5C2, NTSR1, NUDT8, OR 12D3, OR2L2, OR52N1, OR8D4, PCYT1A, PDGFRA, PDHA2, PGAM1, PHKA1, PHK B, PNLIP, PRKAG3, PTGDS, PVRL1, RALGDS, RBPJL, RPS6KA6, SHISA5, SLC2 7A4, SMAD9, SMC1B, SMURF1, SOCS4, STMN1, TAS2R40, TGFB1, UPP2, VARS, XYLT1, PLA2G12B, PNLIPRP2
Negative_11149	AK5, C1S, GH1, ITK, LTB, TNC, ACSM4, ADSS, ALPPL2, AMPD1, APOA2, ASMT, ATF4, ATP6VOC, C1QA, C5AR1, CACNA1B, CDKN1B, CER1, CHSY1, CISH, CNTN AP1, CXCL11, CYP8B1, DNMT3L, DRD1, EPB41L1, ETNK2, FLT3, FSHR, GJA1, GNAT3, GNB3, GOSR2, GUCY2D, HLA- F, IDH3B, IL1R2, IRAK2, KNG1, LILRB3, MGAT3, MGAT5, MICA, MLYCD, MPP5 , MYH2, MYH8, NCF1, NT5C1A, OR10P1, OR11H1, OR2W1, OR4K2, OR51A4, OR5 2L1, OR7G1, OR8D4, PCK2, PFN4, PIGO, PIGU, PIK3R3, PLXNB3, PROC, QPRT , RASSF5, RUVBL1, SETD7, SLC2A1, SLIT1, SOS2, SQLE, SSH2, STX1A, TAS2 R7, TGFB2, THBD, TICAM2, TNFSF12, TSTA3, TUBB3, WNT9B, YARS, ATP6V1E 1
Negative_11150	CDA, CR1, DLD, GBA, TNN, ADCY10, AGRP, ALDH3B1, AMHR2, AREG, ATP5A1, A TP6VOC, B4GALT3, BDH2, CCNB2, CFL1, CHIT1, CHST11, CLCF1, CSF2RB, CT SS, DDX19A, DGAT2L4, EGLN3, ENO2, FASLG, FGF13, FMO1, FTH1, FUT2, GCL C, GCNT1, GNRH2, ICAM3, IFNA16, INPP4A, JUND, LCMT2, LYPLA1, NCKAP1, NLGN2, NT5C3, NTNG1, OR2D3, OR2H2, OR4D1, OR52N5, PANK2, PARS2, PARV B, PCCB, PDE1C, PLXNB1, POLR3H, PRKAA1, PSENEN, RDH8, SMAD2, SMAD9, S RD5A2, STAM2, TCIRG1, TNFSF12, VAMP1, XCR1, ZBTB16, KIR2DL5A, TNFRS F13C

Negative_11151	DCN, FGA, FST, GPI, PVR, SHH, ABLIM2, ACTB, ALDH9A1, ATP5J, BCKDHA, BMP8B, BMPR1B, CD247, CDC27, CKMT2, CMBL, COMP, CRLS1, CSNK2B, CTSL1, CYP26B1, CYP3A5, DAG1, DGKH, EFNA1, FADS2, FGF10, FGF17, FMO5, GLUL, GRIA3, GSTM2, HEMK1, ICAM1, IL17B, INHBB, ITPA, MAN1C1, NCKAP1L, NLGN2, OR11A1, OR2AT4, OR4F4, OR51S1, OR6C75, PAX6, PDE6G, PIAS3, POLD4, PTK2, RAB5A, SEMA3A, STX1A, TJP2, UGT2B17, WNT9B, WWP2, ZBTB16, ATP6VOA4, HLA-DQA2
Negative_11152	ACOT11, APH1A, ASAH1, CADM1, CAV1, CD14, CER1, CLCA2, DBF4, DPYSL2, EGLN1, EPHA4, F13A1, FGF8, GALM, GBE1, GZMB, IFNAR1, IL22RA1, IRS4, ITPK1, MAP3K11, MAP3K2, NAMPT, NEFL, NME4, NUDT12, OR10P1, OR14J1, OR1G1, OR51B5, OR52A5, OR52M1, OR5D16, OR7G1, PARS2, PDE11A, PDGFC, PGAM1, PIGU, PIP5K1B, PISD, PLCD4, POLR2D, RPS6KA1, SORD, SPRED2, TACR1, UCK1, WNT1, ZMAT3, KIR2DL5A, SERPINF2, SERPING1, TNFRSF13C
Negative_11153	CDA, F5, RET, ACSL5, ALDH7A1, AMY2A, ANAPC5, ARHGEF1, BMP2, C7orf16, CCL14, CDH1, CLTA, COL4A1, CPT1B, CPT2, CYP4A11, DARS2, DKK2, DOCK1, DPM1, EPHB3, FADS2, FRAT1, FZD4, GALT, GLG1, GMPR2, GUCA1C, HSD3B2, IBSP, IFNA21, KLRC4, LDHAL6B, LGMN, LIFR, LTB4R2, MAML2, MAP3K12, MAP3K13, MAPK3, MGAT4B, MINPP1, MLLT4, MTFMT, NFATC1, NLGN3, NME4, NPR1, NR1H3, NR4A1, OR14A16, OR2W1, OR3A2, OR4B1, OR51A7, OR52B6, OR5D14, OR5M8, OR5M9, OR6Q1, OR7D2, P2RX3, P2RX4, PDHB, PLA2G2F, PLOD2, PLD4, PPP1CA, PTDSS1, PVRL3, RAD51, SARS, SEMA3B, SEPHS1, SHC1, SLC9A1, SMAD4, TAS2R1, TUBA1B, TUBB6, UBE2L6, UCK1, UXS1, VARS
Negative_11154	CFH, IL6, NF1, OSM, ACAA2, ACVR1, ADRA1B, AGXT2, ANAPC2, APAF1, AREG, CACNA1I, CCL4, CCNG2, CDC14B, CDS1, CHKA, COX10, CTBP1, CYP17A1, DERA, DNMT3A, DUSP2, EXT1, FGF23, GANAB, GGT6, GSK3B, GSTM2, HLA-F, LAMC3, LARS2, MDH2, MEF2C, NPR2, OR10K2, OR13D1, OR4D1, OR5A2, OR8B8, PAK2, PAPSS2, PCYT1B, PDE3A, PDE8B, PFAS, PTDSS1, RALA, RASA1, RBL2, RFNG, SEMA4A, SETDB2, STAT3, SULT2B1, SYNJ1
Negative_11155	GK2, IL4, IL7, LSS, MVD, ADIPOQ, ADSSL1, AKR1C3, ALDH6A1, CCL16, CCL22, CFL1, CHRNA7, CMPK2, CYP2B6, DAPK1, EXOC7, FDPS, GALK1, GALNT9, GDF7, GOT1, GRB2, HDAC2, IFNA4, IMPDH2, MYL2, MYL5, OR2B2, OR2L2, OR2T4, OR5AK2, OR6A2, OR6N1, OR8B8, PARD6A, PDX1, PER2, PFKL, PNMT, POLE4, PPAP2A, PPCDC, PYGB, SEMA3E, SGMS1, SLC27A5, SPCS3, STMN1, SYNJ2, PLA2G12B
Negative_11156	DBI, AARS, ADCY2, ADCY7, AGRN, ANAPC2, ANAPC4, B3GALT6, C1QA, CAMK2A, CD27, CD58, CFLAR, CFTR, CHR1, CKS1B, CTLA4, CYP2S1, DDOST, DFFB, E2F1, EFN2, EPB41, EPHB6, FCER1G, FDFT1, FGF20, GCDH, GGT6, GSTT1, GUCY1A2, HA01, JAM2, LAMB3, LRDD, MAD2L1, NLGN2, NTRK1, OR13G1, OR4B1, OR5B12, OR6C6, PIAS1, PLCD1, PPM1A, PPP2R5B, PRKAR2A, RFX5, RPE65, SUV39H2, TAS2R3, TBL1Y, TKTL1, TLR4, TOMM40, TUBA1B, UPB1, SERPINF2
Negative_11157	C3, NF1, OTC, ACY1, ADCY6, ALDH2, ALG12, ATP12A, AVPR1A, BET1, C1QC, CACNG4, CCL25, CCNA2, CDK7, CLDN6, CNGA4, DLL3, EP300, EPHA6, FGF17, FGF5, FUT4, GCAT, GGT6, GMDS, GNA13, GPLD1, IFIH1, IFNAR2, IL22RA1, INMT, INPP4A, ITGB6, LDHC, LYPLA1, MAP3K1, MASP2, MCM4, MMP9, MYH2, NAT1, NCSTN, NUDT9, OR13D1, OR1J1, OR2AE1, OR2B2, OR2B6, OR2T29, OR4X1, OR5T2, OR6B3, ORC2L, P2RX1, P4HA2, PCK1, PGM2, PLAUR, PLD1, POLR2D, PPAR, PPP2R5A, PRKAG2, PRKAG3, PRKCD, PRKCQ, RAF1, RPS6KA1, RRM2B, SARS, SAT1, SC4MOL, SDC1, SETMAR, SMAD9, SMARCA5, SOAT2, STT3B, TAS2R41, TAS2R49, TCF7, TGFA, TRADD, TRAF6, TUBA1A, TUBA1C, UGP2, UMPS, WASF1, ATP6V1G3, C1GALT1C1, KIR2DL5A, MAPK8IP2, ST6GALNAC5



Negative_11158	CGN, DAO, ID2, TK1, WAS, ACADM, ACHE, ALDH7A1, ALOX5, ANAPC5, ARRB2, ATG12, ATG7, ATP5D, B3GAT2, BMPR1A, BTRC, CACNA1C, CBR3, CCR8, CDKN1A, CDKN1C, CDKN2A, CHRM3, CIITA, CLDN14, CLDN8, CLTCL1, CREB3, CREB3L3, CTSL1, CXCR5, DHRS3, DUSP8, E2F4, ELK1, EPHA6, ERO1L, FPGT, GALE, GALM, GART, GGPS1, GLG1, HADH, HEXB, HTR4, IDI1, IGSF5, IL18, IL28A, ITGA10, LDHA, LIFR, MAFA, MPZL1, NCR1, NME7, NUDT5, OR1J4, OR2B2, OR2B6, OR2F1, OR2G3, OR2M5, OR4M1, OR5T1, OR8H1, OR8I2, OR8J1, OR9G1, PDGFRB, PDHA1, PIGB, PMVK, PRKCH, PRSS1, PTAFR, PTGIS, SDC2, SNAI1, SSH1, SUCLG2, TAS2R14, TCF7L1, UGP2, WNT8A, XCL1, ATP6V1C1, SERPINA1
Negative_11159	AR, BTC, GSR, LPO, ACOT11, ACSL1, BIRC2, CACNB3, CAMK2B, CCL4, CHST12, CISH, CLDN11, COMT, CREB3, CRY1, CYP2A13, CYP2A7, DPM3, DTX3L, EFNB1, EFN2, ENO1, EPHA8, FABP4, FGF6, GALM, GMPS, GNG3, GOT1, GPD2, HAGH, HDAC2, HPRT1, HSD11B1, HTR4, IFIH1, ITPKB, KLRC3, LYPLA2, MAP3K1, MBOAT1, NFYB, NFYC, ODC1, OLAH, OR13C8, OR2H1, OR2L3, OR4S2, OR51B2, OR52E4, OR8H1, OR9A2, OR9I1, OSMR, PAK4, PIGP, PLA2G2F, POLR3A, POLR3H, POCN, PRKAG3, PRODH, RFX5, RHEB, SFRP4, SLC25A5, SLC9A1, SMAD9, SOCS3, ST3GAL1, STAT1, STMN1, SULT2A1, TCF7, TP73, TYK2, ULBP1, VKORC1, WNT9B, CACNA2D4
Negative_11160	ADO, DBI, KHK, ME3, ACP5, ACSS1, ADCY3, ALDH1L1, ARRB1, B3GALT1, CCNA1, CCR6, CISH, COQ6, CSNK1A1, DAXX, DDX51, DGKH, E2F5, EPAS1, FGFR2, FUT4, GPT2, ITGAD, LIAS, MAOB, MAP4K2, MASP1, NCF4, NEU4, OR2S2, OR5P2, PDHB, PIK3R4, PPA1, PRPH2, PYCRL, RHOQ, SEMA3D, SIPA1, SKP1, SMAD5, SPRED2, SSH3, SULT2A1, SULT2B1, TSHB, TSHR, WNT7A, YWHAG, YWHAZ, C1GALT1C1
Negative_11161	IL3, IL8, ACOX2, ADRA1B, ALPI, ANAPC4, APC2, ASCC3, B3GNT5, BMPR2, CCNB1, CD19, CD36, CD46, CD8B, CLTCL1, CREBBP, CSF2RA, CXCL3, DCTN1, DGKZ, DHDDS, FBXW11, GNA12, HAGHL, IAPP, IFNGR1, KIR3DL2, KLRD1, LAMC2, LEFTY2, LLGL2, MAP3K12, MECP2, MKNK1, NAGLU, NEFH, OR13C9, OR2F1, OR2G2, OR2M3, OR4D5, OR51A2, OR52E8, OR8D1, PDE7A, PDGFD, PGAM4, PIK3C2B, POLR2A, POLR2G, PRKCH, RASSF5, RHOA, RHOQ, SHC3, TAS2R48, TLR3, TLR5, TNFRSF9, TOMM40L, TP73, TRAF2, TSNARE1, VASP, ATP6V1B2, HLA-DRB3
Negative_11162	BTC, GPT, KHK, LCK, MPI, ABLIM1, ABP1, ACAD8, ACADSB, ALG6, ALG9, APOA5, ARHGEF6, ATP6V1D, B3GNT4, CACNB3, CACNG7, CHKB, CHPF, CREB1, CSF2, DGUOK, GALNT8, GPAM, GPLD1, HMGCS1, HTR6, IFNA4, IL15, INPPL1, ITGA10, MAP3K3, MAPK1, MYL7, NEUROG3, NPR1, OR1C1, OR2L8, OR4N4, OR5F1, PIGX, POLR2B, PPAR, PYGL, SHC3, SLIT1, SUCLG2, TAS2R3, TAS2R4, TAS2R40, TMLHE, TNFSF14, UCK1, VNN1, WWP1, YOD1, ATP6V1E1, HLA-DRB3, TNFRSF10B, TNFRSF17
Negative_11163	GSS, ID4, TNN, AMDHD1, ASAH1, BDH2, BTRC, CAV2, CCKBR, CCL17, CCL7, CD55, CD74, CNTF, CYP17A1, DGKD, DKK2, DOLPP1, DUSP10, ENTPD1, GRB2, GRM5, GSK3B, HADHB, HIBADH, HLA-DOA, HLA-DQA1, HLA-DQB1, HMB, HMBS, HTRA2, IDI1, IFNA14, IL13RA2, IL8RA, IQGAP1, IRAK3, LRDD, LRPP, LTC4S, MAN1B1, MGAT4A, MYLK, MYLK2, NARS2, NCR1, NFKB2, NMNAT1, OCRL, OLR1, ONECUT1, OR10A7, OR2B6, OR52K1, OR5A1, PDHA1, PIAS3, PIAS4, PIGB, PNLIP, POLR3B, PPAP2A, PPAR, PPP1R1A, PRKG2, PTPN7, RAP1B, SCAMOL, SETD7, SKIV2L2, STK4, STX1B, TGFB1, TJP3, TUBB4Q, UGCGL2, UGT2B7, WNT6, WNT7B, YWHAQ, PNLIPRP2, ST6GALNAC3

Negative_11164	AK2, CP, DBT, F3, F7, FGG, MSN, TK1, TYR, ACVRL1, AMD1, AOC3, APBB1, ARP C5, ATP5C1, B4GALT6, BACE1, C4BPB, CASP7, CCL26, CCR8, CD247, CES7, C HRM2, DAAM1, DTX3, ELK4, ENPP3, FGF18, FGF19, GAB1, GCNT3, GLDC, GMPR , GUCA1C, HADH, ICAM2, ICAM3, IFNA17, IL10, IL1RAP, INPPL1, ITPA, ITP KA, JUND, LAMB1, LCMT1, METTL6, MGST1, MINPP1, MOV10L1, NCR3, NOX1, N T5C2, OLAH, OR10T2, OR14J1, OR2A4, OR2V2, OR4C16, OR51F2, OR51Q1, OR 52B4, OR52E8, OR5B3, OR5L1, OXCT2, PAICS, PCK2, PDE8A, PER1, PIAS4, P IGL, PLCB1, POLR1B, POLR2D, PPCDC, PRKAB2, PRKACA, RASSF5, RDH12, RO B03, RPN1, SHC2, SOCS2, TLR3, TOMM40, TUBA1A, TYK2, WNT11, SERPINA5, SERPIND1
Negative_11165	EZR, MPL, ABL1, ACO2, ACP1, ADH4, AFMID, AGPAT1, ANAPC10, ARHGEF4, AS S1, CACNG5, CAMK2G, CCL26, CCL28, CCR9, CDC26, CMBL, CREB3L3, CRHR1, CYBA, CYFIP2, CYP21A2, DGAT1, DGKH, DGKZ, EFNB3, ENAH, EPHX1, EXOC7, F2RL1, FGF18, FZD7, GLUD2, GNB1, GNPAT, GP1BA, GSTM5, HARS, HBEGF, HL A- G, HNF4A, IFNGR1, IFNGR2, IL1R2, IRAK2, LALBA, LPAR1, MAPK9, MCM2, MY H7, NFKB1, NOS3, NOX3, NPR1, NRG4, OR1K1, OR4F4, OR51I2, OR5M8, OR6M1 , OR6S1, OR9G1, OXTR, PAX6, PCK1, PCNA, PFN3, PPM1A, PRDX6, PTAFR, PTP RR, PVRL1, RFWD2, RHOQ, ROBO2, RPS6, SEMA4F, SENP2, STAM, STX5, SUFU, TIAM1, TUBB4, TYROBP, UAP1, HSP90AA1
Negative_11166	F5, F8, ACTG2, ACVR1C, AKR1D1, ALAD, ALDOB, APC2, ARHGEF7, BDH1, CCL1 1, CD8A, CHEK1, CHUK, CRY1, CSNK1G3, CYP2C8, ERBB4, FGD3, FGF4, FOXA3 , GCLC, GMPPB, GNG13, GSTO1, HLA- F, ICAM3, KLRC3, LCAT, LDHAL6B, MAP4K3, MAPK11, MYD88, MYL5, NEU3, NM E2, OR10A3, OR1J1, OR2A25, OR5K1, OR6K3, OR6N1, OR7A5, ORC2L, PANK1, PHKA1, PIP5K3, PLA2G2A, PLOD3, PPARG, PPP1R3B, PPP2R5A, PRKCE, PRKC I, PTPMT1, SC5DL, SDC1, SELE, SH2D2A, SULT1E1, TNXB, TP73, TSTA3, UGT 2B28, VANGL2, ATP6VOA2, CSGALNACT1, ST6GALNAC4, TNFRSF10C, TNFRSF 13B
Negative_11167	ADA, FGB, GK, KIT, ACAD8, ACTN2, ADH5, AGPAT6, ALG5, ALPPL2, CACNA1B, CACNG4, CACNG7, CCR3, CFL1, CHEK1, CSNK1A1, CTPS2, CYP2U1, DDOST, DF FA, DHRS3, DRD5, EFNA5, EPHA5, EPHX1, FGF9, FOXA3, FOXO1, FZD1, GDF5, GLYCTK, GSTM3, GUCY1A2, HLA- F, HTR2B, IFNA4, IL28A, INPP5B, INPP5E, IRF5, KIR3DL2, MAP4K4, MASP2 , OR1J1, OR1S2, OR4C6, OR5P3, OR6K6, P4HA2, PDGFC, PDGFD, PDHA2, PDIA 4, POLR2I, PPA1, PPM1A, PSEN2, PSPH, PTPN5, PVRL3, RAD51, RBPJ, RPS6K A1, RPS6KA5, RXRG, SPRY4, STAT5B, TBXA2R, TLN1, TLR5, TUBAL3, TUBB1, UGP2, WASF1, YWHAE, SERPINC1, ST6GALNAC1
Negative_11168	DCN, F5, F9, FYN, IDS, IL4, NNT, RPE, SHH, TK1, TYR, AKR1B1, AKR1D1, ALD H2, ALDH3A1, ALG3, ALOX15B, AOX1, APLP1, ASCC3, B4GALT4, BCL10, C1QB , C9orf95, CADM1, CAMK2G, CD82, CDC14A, CDKN2A, CHPT1, CNTFR, CTBP2, CYCS, EFNB3, ELK1, EPOR, FGF13, FGF8, FMO3, GAL3ST1, GNRHR, GRIN2D, G UCY1B3, HMGR, ICAM3, IL12RB2, IL13, IL20RA, IMPA1, ITGB2, ITGB6, JA G2, MAPK9, NEU1, NFE2L2, NUDT9, OR13C4, OR13C8, OR14A16, OR1M1, OR5C 1, OR5D13, OR5V1, OR8H3, ORC3L, P2RX7, PDE10A, PDE8B, PDGFRB, PDIA4, PERP, PIGV, PIK3C3, PLA1A, PLXNA2, PNPLA4, POLR2L, PON3, PSAT1, PTPR R, RASGRP3, RUNX1, SMARCA5, SOCS4, SRGAP2, TALDO1, TNFRSF8, TSC2, TU BA4A, UGT2A1, WASF3, MAP3K7IP2, PAFAH1B3, ST6GALNAC5
Negative_11169	GNS, SRF, TNN, ABLIM3, AGTR1, APC2, BIRC2, C3orf10, CACNA1E, CCL20, C DH1, CIITA, CLDN3, DARS2, DRD5, EHMT2, EVI1, GGT6, GPD1, HPSE2, IL1B, IRS1, ITGB7, KCNB1, MARS2, MTHFD2, NCAM1, ONECUT1, OR13C9, OR13G1, O R3A3, OR51F1, OR52D1, OR6C76, PAPSS2, PCYT1A, PIK3R2, POLD3, PRKAR2 B, RFXAP, SDC4, SEMA3A, SEMA3F, SETD1B, SMPD2, SOAT1, SSH2, ST3GAL6, TAS2R50, TIRAP, TPK1, WNT11, ATP6V1G3, CACNA2D4

Negative_11170	ASL, C4B, FAS, GK2, KDR, MIF, VCL, AASS, ADIPOR2, ALDH1A2, ALDH3B2, AP OA1, ARHGEF6, B3GALT2, CARS, CCL14, CD99, CHKA, COASY, CTBP1, CYP11A 1, DAG1, DUSP1, EHHADH, FARSA, FGF12, FGF14, FGF22, FGF7, GAPDH, GSK3 B, GTSE1, HLA- DOA, IL17B, IL20, IL2RA, JAG1, LTBR, MAP2K4, MCEE, MDM2, MYH10, NEFM, NFAT5, NKD2, NRCAM, NRP1, NTRK1, OR1D2, OR51B4, OR51B5, OR5H2, OR6N2 , P2RX1, PCYT1A, PDE10A, PDE7B, PDGFD, PIAS3, PIGL, PIGU, PLCD4, PPAR G, PRPH, PTTG1, RASA1, SMAD4, SMAD7, SOS2, ST6GAL1, STX12, SV2A, TNFR SF8, TUBA1C, UPP1, XCR1, ZMAT3, PHOSPHO1, TNFRSF10A, TNFRSF17
Negative_11171	NPY, ACSS3, ACVR2A, ADIPOR2, AGPAT6, AKR1C3, AKR1D1, ALCAM, ALDOB, A RNT, ATP5C1, ATP5D, ATP5J2, AVPR1A, B4GALT7, BAI1, CACNA1S, CACNG2, CACNG4, CANT1, CCR5, CD244, CD79B, CNGA3, CRY1, FGF19, FM04, G6PC2, G APDH, GDF6, GGT6, GRIA3, GSTZ1, IFNA17, IFNA5, IFT57, IL4R, INHBC, IT GA5, LAMB3, LTA4H, LYZL1, MAP3K13, MAP4K3, NEU2, NME4, NRCAM, NRXN3, NUDT9, OR10H5, OR11H6, OR2A25, OR2D3, OR8D1, PDE6H, PGAM4, PLA2G2D, PLCG1, PRKACA, PRKAG3, PYGB, RAPGEF3, RASA2, RBL1, RBPJ, SDHD, SELP, SEMA4C, SLC25A4, SPCS1, SULT1E1, YWHAQ, ATP6V1B1
Negative_11172	FES, ABI2, ABL1, ACOX1, ACSM2A, ACTG1, AMY2B, APRT, ASS1, ATP5E, BCL2 L1, BDNF, CACNB4, CASP8, CCNA2, CCNG2, CD244, CDIPT, CLDN11, CLDN17, CMAS, CMPK2, CSDA, CYP8B1, DUSP6, ENTPD3, ERBB2, FSHB, GLS2, GZMA, HB EGF, IFNA17, IL11, IL20RB, IL4R, ITCH, ITGAE, LRP6, LYZL1, MAPK9, MCC C2, MYH3, OR10AD1, OR10H4, OR11A1, OR2D3, OR2G6, OR51F1, OR5AN1, P2R X4, PARVA, PFKL, PHGDH, PIGH, PIP4K2C, PKMYT1, PLA2G5, PLXNB3, POLR2 A, POLR2G, PRKCB, PRPS2, PTPN6, ROCK2, RPSA, SGMS2, SKP1, SMPD2, STAT 4, SV2B, TBL1XR1, THPA, TUBB4Q, TYRP1, UGCGL2, VANGL2, WNT10B, XYLT 2, ATP6VOE1, ATP6V1G1, HLA-DQB1, SERPINA5, SUV420H1, TNFRSF6B
Negative_11173	AGK, C7, CFD, CGA, GCK, LIF, MVK, TAT, TNC, VTN, AARS2, ACAT2, ACTG1, AG PAT2, AHCYL1, ANAPC1, ASS1, BCAT1, CACNA1A, CACNA1F, CD40, CDC2, CMB L, COL4A2, CXCL12, CXCR3, DGAT1, ETNK2, FASLG, FGF5, FUT6, G6PC, GGT5 , GPD2, GPT2, GRAP2, HLA- DOA, HMOX2, HPSE, HRH1, IFT57, IL18, IL2RG, ITGA5, KIR3DL2, KLK3, LCM T1, MAP4K2, NFX1, NQO1, NT5E, OR10AD1, OR10AG1, OR10X1, OR11L1, OR1G 1, OR1K1, OR2G3, OR2H2, OR4A15, OR4D2, OR4S1, OR8D2, OR8K1, ORC2L, PD E1A, PDHA1, PDHA2, PER2, PIP5K1C, PIP5K3, PPM1D, PRIM1, PRKCH, PSENE N, PSPH, PTCH1, PTPRM, RAF1, RASA2, RASGRP2, RPS6KA3, SCD5, SMURF2, S PHK1, STMN1, STX1A, TRDMT1, UCK2, WBSR22, WWP1, ST6GALNAC4
Negative_11174	CTH, EBP, GGH, MTR, SRM, AOC2, APBB1, APOE, ATP5J, AVPR1B, B3GNT5, BCL 2, BMP8A, BNIP1, CARS2, CCL22, CD38, CDKN2D, CNGB1, CSF2RB, CXCL1, CY P3A5, DLL4, DNMT3A, EFNA2, EPHA5, F13B, FUT7, GCH1, GGPS1, GLG1, GLI3 , GNG12, GPX7, GSTT1, GUCY2F, HA01, HMGCL, HSD17B1, HSD17B8, HSD3B2, IDH2, IFNW1, INPP5E, IQGAP3, ITGA3, KCNQ1, KIR3DL1, LHCGR, MAN1A2, M GAM, MGAT3, NEGR1, NFYB, NME6, NOX3, OR11H1, OR13F1, OR2A4, OR2F1, OR 3A2, OR51I1, OR5D13, OR9G1, PER1, PIGX, POMC, PTPN6, RALGDS, RASA1, S CIN, SMC1A, SPRED2, TFPI, TJP2, TUBB2C, VDACC2, WARS, WNT10B, WNT16, W NT8A, MAP3K7IP1, PAFAH1B3, PNLIPRP2, TNFRSF12A
Negative_11175	HK2, ME2, SRF, AASDH, ADSL, ALPL, AMPD3, ARG2, ARSA, ATP5J, B3GALT5, B ACE2, CASP8, CASP9, CCL11, CCL27, CCL4, CD55, CDC20, CHSY1, CRLS1, CT NNA1, CXCR5, CYP2C18, EFNA2, EPHX2, FGF21, FZD4, GALNT9, GCDH, HADHA , HIF1A, ICAM2, IFIH1, IFNGR1, IFNGR2, IL28A, IL3RA, KLRC1, LCAT, MAL T1, MBL2, MDM4, MYH7B, NEU1, OR10G7, OR10H2, OR2V2, OR6B3, OR6C74, OR 8B4, OR9Q1, PGM3, PIK3C2A, PYCR1, RASA1, RDH10, RDH16, RPS6, SENP2, S GMS2, STX1B, TBXA2R, TUBAL3, UMPS, WARS, WNT7A, WWP1, SERPINC1, TNFR SF18

Negative_11176	IHH, IL9, LPL, MUT, ACAT1, ACSS2, ADCY4, ALG6, ATP5L, BDNF, CACNA1I, CACNG2, CCL14, CCL3, CCL8, CDH4, CLDN8, CRLF2, CTLA4, CTPS2, CXCL1, CXCL5, DGAT1, DPAGT1, ENPP1, EREG, ETNK1, F13A1, GLUD2, GLUL, HIBADH, HMGCS1, HSD11B1, IDH2, IFNA14, IFNK, IL28RA, ITGA5, KLRC3, LDHB, LIMK1, MDH2, NEU2, NGEF, NOTCH2, OR13C8, OR4K5, OR52W1, OR6C2, PDE10A, PIM1, PLCB4, POLD1, PPM1D, PPP2R1B, PRKG1, PTCH2, PTGS1, RAPGEF2, SMURF1, SPP1, SPRY3, YWHAE, ZMAT3, CACNA2D4, PAFAH1B2, SERPINE1
Negative_11177	C6, DAO, DCK, F7, GK2, IL4, IL8, LCT, LIF, AARS2, ACSL1, ACSL3, ADCY10, ADH5, AGPAT4, AMHR2, ASRGL1, ATIC, ATP2A2, ATP50, B3GALT2, BMP8B, C1QB, CACNA1A, CACNA1D, CD14, CD99, CDC25A, CIITA, CPT1A, CREB3, CYP2A6, CYP4A11, DDX54, DEGS1, DPM3, ENPP2, ENPP6, FECH, FGF1, FUT4, GADD45B, GCNT2, GLUL, GPD1, GYS1, HLA-DOB, IDI2, IFNA21, IL8RA, IRAK1, ITGA3, JAK2, KCNB1, LRP5, MCCC1, MKNK1, MYH15, NOD1, NRG1, OR2A14, OR2G3, OR3A1, OR52A1, OR5M3, OXCT1, P4HA1, PKMYT1, POLA2, POLR2K, PPID, PPP3CB, PRSS3, PTGFR, PVRL2, ROBO1, RUVBL1, SDC2, SEMA3A, SESN1, SLC25A6, SMAD9, SMARCA5, SREBF1, SSSX2IP, SULT2A1, TAS2R14, TAS2R3, TBL1X, TPMT, UGCGL1, UNC5C, UPP2, ATP6VOA2, MAPK8IP3
Negative_11178	HAL, AADAT, ACLY, ACSL1, ACTN1, ADRA1A, ADRB1, APOA1, AQP7, ARSD, AXIN1, B3GNT3, BMPR1A, CACNA1S, CCNA2, CD14, CES1, CHAT, CHIA, CHUK, CLDN18, COL4A2, CPS1, CXCL13, CYP3A7, DAAM1, DOCK1, EARS2, ELK4, ENO3, EPHB6, ESPL1, EVI1, FARSA, FBP1, FZD7, GNAI2, GUCY1A3, HCST, HNF1B, IL29, ISYNA1, KLRD1, MAP3K5, MAP4K3, MCCC1, METTL6, MMP1, MYH2, NCAM1, NCF2, NKX3-1, OR13D1, OR14C36, OR1E1, OR2L3, OR4B1, OR4K17, OR4K2, OR51F2, OR51V1, OR5K2, OR6C6, OR9G4, ORC6L, P2RX7, PFKFB1, PFKFB3, PIK3R1, PKMYT1, PNMT, PPBP, PPP1R1A, PTPN1, PVRL3, RASA1, SDHD, SEPHS1, SHC4, SNW1, ST3GAL2, SUV39H1, TLR2, TOMM40L, UPRT, VAMP3, VEGFC, WNT8B, CACNA2D3, CACNA2D4, SUV420H2, TNFRSF10C
Negative_11179	AK3, GH1, NLK, RFK, SMS, ACHE, ALDH1A2, ATP6V1A, BDNF, CASP3, CD247, CHST13, CRY2, FPGS, FTMT, GALNT10, GNRHR, GSTA3, GSTA4, GSTO1, GZMB, HADHB, IFNA2, IGSF5, IL28A, IL5RA, JUND, LEFTY1, MAOA, MAP3K8, NSD1, OR10H5, OR10J5, OR2A4, OR5D18, OR5J2, OXCT2, PANK4, PDHA1, PFN3, PGM3, PPM1B, PPP2R2D, PRKAA1, PRLR, PTPN1, RASGRF2, RDH16, RPE65, TGFB1, TRAF4, TUBA3E, MAPKAPK5, PNLIPR1, SERPINE1
Negative_11180	A2M, F8, GH1, HGD, ID2, MVD, PRL, ABCC8, AKR1B10, ALAD, ALOX12, BIRC2, BPNT1, CAMK2D, CARS2, CCL2, CD14, CDC42, CDH5, CDKN2C, CHRM3, DHX58, DPAGT1, F13A1, FCGR2B, FGFR1, GALNT8, GNG12, HHIP, HSPB1, ICAM1, IL3RA, LDHB, LIPE, LLGL1, MAD1L1, MTAP, MTHFD1, NT5C1B, OR2AT4, OR2C1, OR4D5, OR4K15, OR51E2, OR5L2, OR8B8, OR9G1, OXCT1, P2RX3, P2RX6, PANK2, PCYT1B, PHKG1, PIP4K2A, PLXNA2, PPP3R2, PRSS1, RDH5, SLC25A4, SNA P23, TBL1XR1, TCF7L1, TGFA, TNFSF14, TSHB, TUBB2A, VAMP4, VDAC2, PNLIPR1
Negative_11181	BAD, ID4, LIF, XDH, ACTG2, ALDH1B1, ALG9, ARPC1A, ARPC5L, ATP5D, B3GALT1, BCAR1, BET1L, CCNB1, CDC16, CNTFR, CNTNAP2, CTNNA3, CYBB, DDX56, DHFR, FADS2, FCGR3B, FGF14, FGFR1, FLAD1, FLT4, GALNT12, GNB3, GP1BA, GPD1, HSD11B1, IL19, ISYNA1, ITGAE, LCAT, LIMK1, LPAR1, MAGI2, MAML1, MAN1A1, MAP3K8, MTMR6, NMNAT3, NRCAM, OR10H2, OR1A2, OR2T10, OR2T5, OR2T6, OR4D5, OR52K2, OR56A4, PGAM4, PGLS, PIGU, POLR2I, POLR2J, PPOX, PRKACG, PRKG1, PTPRB, RERE, RHOA, RPS6KA6, SEMA3D, SEMA4F, SOS1, STK36, TAS2R3, TBL1Y, TOMM40L, WNT7A, XIAP

Negative_11182	BTC, C5, CAD, CEL, FAS, ID4, TNC, ABLIM3, ACAA2, ACTA2, AGPAT1, ALCAM, ARHGAP5, B3GAT3, B4GALT3, CCL25, COL4A4, CRY2, CTNNA1, DDX51, ENTPD3, GPAM, HNMT, HTR4, ITGA1, ITGB8, LGL2, NFKBIE, NME7, NOTCH3, OR1L1, OR52E6, OR8K5, PAK7, PDGFB, PFN4, PLA2G4A, PRKACB, PRKX, PYGB, RGS3, RHOD, RPIA, RPRM, SMC1A, SPRY4, THTPA, TPH2, TRHR, YWHAH, ZNRD1, CACNA2D2, TNFRSF13B
Negative_11183	F7, IHH, SPN, ABCC8, ACADM, ACSL6, ADIPOQ, ALDH1A2, ALDH1B1, B3GAT1, CCND2, CD40, CREB3L4, EPB41L2, FADD, GALNT2, GALNTL4, GBGT1, GNAS, GZMB, IL2RB, INSRR, IPMK, ITGB1, LDHB, LEFTY2, MEF2C, MYD88, NAT6, NFKBIE, OR2F1, OR2L3, OR2V2, OR52H1, OR52M1, OR6C3, OR6K3, OR9G4, PFKL, PHKB, PIAS1, PPID, PRKCB, PTPN6, PTPN7, RASA2, SCD5, SNAI1, ST8SIA1, STAT5B, SUFU, TBXA2R, TM7SF2, VAMP1, VKORC1, WASF3, ATP6V0E1, TNFRSF11B
Negative_11184	CFI, DHH, F5, GGH, HK1, IL7, NGF, PVR, TKT, AASS, ABL2, ACRYL, ACSL3, ADIPOQ, AGXT, ALG6, ARPC5L, ATG7, B3GALT2, CHST13, COQ7, DDX47, DEGS2, DRD1, ESAM, F2RL2, FARP2, FUT5, FZD8, FZD9, GLB1, GSTK1, IDH1, IFNA14, IRF3, KLRD1, MAN1B1, MAP3K12, MYH15, OGDH, OR1D5, OR2D2, OR5J2, OR5M9, ORC6L, PIGB, PITX2, PMM2, PNPT1, PRPS1, PTDSS2, RALB, RDH11, SGMS1, STAT5B, TAS1R3, TIAM2, UCP1, UGT2B4, VEGFB, WEE1, YARS2, ZNRD1, AASDHPPT, B4GALNT1
Negative_11185	C6, CAD, CDA, GCK, IHH, MPI, MTR, OGT, TAT, ACTG2, ALG11, ARSB, BDH1, BLVRB, BMP8B, CDH2, CDK2, CNTF, CNTN1, CPS1, CSF3, DAPK2, DDX23, DUSP7, EHHADH, EPHA7, FARSA, FGFR3, FOSL1, GGT1, GGT6, GRM5, HBEGF, IFNA16, ITGAX, KIR2DL2, MAN1A1, MAPK13, MGST3, MNX1, MTMR1, MYH9, OR10G7, OR12D3, OR1B1, OR1D2, OR4F15, OR5B17, OR9A2, PARD6G, PDE6G, PHKA1, PKLR, PLXNB2, PPARA, PTCH1, RAPGEF4, RASGRP3, RFXAP, SARS2, SCLY, SDC3, SEMA3B, SLIT1, SMAD4, SOAT1, SORBS1, TUBA1A, TUBA1B, TYROBP, UGCG, UGT2A3, ATP6V1G1, PNLIPRP1
Negative_11186	F10, MAG, OAT, OTC, TKT, TXK, AANAT, AGPAT4, AKR1B1, APRT, ARD1A, ARPC2, ATP12A, BCMO1, CACNA1F, CACNA1G, CCL5, CCNB1, CCNG2, CLDN11, CLDN16, CLDN8, COL4A6, CTNNA3, CTSG, CXCR6, DLST, EDN1, ESAM, FADS2, FTCD, FZD7, GNRH2, GSTO1, HTR2C, IL13RA1, JAG1, LAMB2, MAP3K4, METTL2B, MFNG, NKD1, NRP1, NUDT9, OCRL, ODC1, OR2AT4, OR2T33, OR51V1, OR5B3, P2RX5, PAX6, PAX8, PDGFA, PIAS1, PIK3CA, PLCB1, PPM1A, PVRL3, RBPJ, RBX1, RENBP, SARDH, SDHC, SEMA4D, SESN2, TACR3, TAP2, TAS2R8, UGP2, UGT2B10, UROC1, WNT5A, XYL, ATP6VOA2, SERPINA1, SUV420H2, TNFRSF10D
Negative_11187	CAD, CD2, F12, FGB, XDH, ADIPOR2, AHCY, AKR1A1, ALPI, ATP6AP1, BPNT1, CALML6, CASP10, CBLC, CCR3, CD44, CDH1, CDKN1C, CHD8, CX3CL1, DDIT3, DKK1, DPAGT1, DTX3L, EFN1, EPB41, FGF5, GCAT, GNG3, GAA1, HIBADH, HRH2, IFNA7, INHBA, ITPK1, L1CAM, LDHC, LIMK2, MAOA, MOV10L1, NCK2, NUDT12, OR10A2, OR2A14, OR8K1, PAK4, PDIA4, PER2, PFKFB2, PGM2, PITX2, PLA2G1B, PLOD3, PON1, PRKACG, PRKCH, PRKCQ, PRPH, PTPRJ, SGPP1, SMARCA5, SRD5A2, STK11, TAP2, TAS2R8, TAS2R9, TCF7L1, TICAM2, TRAF5, TUBB1, WNT7B, SERPINF2, TNFRSF11A, TNFRSF12A
Negative_11188	EPO, ID3, IL3, IL6, MSN, OAT, PGF, ACSS3, ADAM17, APOA1, ARNTL, ARPC4, B3GALT6, BCL10, BCMO1, CASK, CCL3, CCR2, CDH2, CDH3, CES7, CLCF1, CNTN2, DHFR, DUSP7, DVL2, EGLN1, ENPP3, FARP2, FLT3LG, FOXA2, FUT7, GAD1, GALK2, GALT, GYS2, HTR2B, IAPP, IFNGR1, IL21, IRF9, LAMC3, MAGI2, MAPK10, METTL6, MYH1, NADK, NTSR1, OLR1, OR10K1, OR1G1, OR4C16, OR4C6, OR5A2, OR5B3, OR5D18, OR6C74, OR7D4, PKLR, PNLIP, POLR2J, POLR3H, PPARG, PRKAR1A, PRNP, PTGES, PVRL2, RASA2, RBKS, RERE, RXRG, SDHC, SEMA3A, SETD8, SLC2A1, SNAI2, SOCS4, STX12, STX16, SUCLG1, TBL1Y, THTPA, TP53, ULK3, UNC5D, VDAC1, XCL1, EIF4EBP1, PPARGC1A

Negative_11189	AK2, BTK, CR2, DDC, GPT, GSS, IDS, LEP, OGT, ADRA1D, AGPAT3, ALDH3A1, A SIP, BMPR1B, CACNA1F, CARS2, CCND1, CCNG2, CD274, CDKN2C, CKS1B, CND P1, CNTNAP2, COMP, CSF1, CSNK1E, CYP3A4, DARS, DGKD, DGKI, DHODH, DVL 3, ENPP6, ENTPD3, ENTPD5, FBP1, FUT1, FZD10, GCNT3, GLI3, GNAQ, GNB3, HLA- DMA, HTR6, IARS, IDH3A, KIR2DL4, KLRC1, LCP2, LDHC, LPAR1, MAP3K2, MG AT5, NAT2, NFKB1, NR5A2, NUMB, OR10X1, OR2K2, OR4D2, OR4E2, OR51L1, O R5M8, OR7G3, PANK4, PIGL, PLA2G2E, POLR2J, PPAP2C, RPSA, SGMS1, SNAP 23, SNAP25, STX10, STX6, SUOX, TBXA2R, TRAF3, TRMT11, YKT6, ARHGEF12 , ATP6V1G3, HLA-DRB4, PLA2G12A
Negative_11190	CD6, IL3, ITK, KHK, KMO, ACSM4, AGPAT4, ALG10B, AMHR2, BRAF, CCL20, CD 72, CHR1, CHST11, CLDN20, CSF2RB, CSNK1G1, CYP3A7, DHODH, DUSP7, EXT L3, F13A1, FGF14, FIGF, FPGT, GALT, GCLC, GP1BA, HDAC1, HRH2, HSD17B8 , IL1RAP, ITGA9, JAM3, KNG1, MINPP1, MYH9, NOD1, NRCAM, NUDT8, OCLN, O R1L4, OR6Y1, OR7A17, P2RX4, PHKG1, PIGL, PIK3C2G, PLCG2, PRKACB, PRK CG, PVRL1, RAC2, RBX1, RDH16, RRM2, SDC1, SLC12A2, SUOX, TSHR, UGDH, U GT2B10
Negative_11191	BTK, C8B, CAD, DLD, FGA, MTR, PGD, TNF, ACLY, ACP2, ADCY6, ALPI, ANAPC5 , ARPC5, B4GALT3, BDKRB1, CCND3, CDC2, CFL1, COMP, CSF2RB, CSNK1E, DD B2, ENO1, ERBB2, GLUD1, GPAM, GUK1, H6PD, HLA- DOA, HMGL, IFNGR2, IL1A, IRS2, KLRC3, MYH13, MYLK, NOS1, NRAS, OR2T5 , OR52B4, OR5K2, OR7D2, OR9G4, PFKM, PLA2G10, PLXNA3, POLR3B, PRKCB, PTPMT1, RDH8, RPS6KA4, SARS2, SLIT1, STX5, SULT1E1, TAP2, TAS1R1, TG FBR1, UGT2B11, TNFRSF10D
Negative_11192	DBT, GCK, LAT, LTB, MAG, PRL, TYR, ACADVL, ADH4, AKT3, ANAPC11, APAF1, B3GAT3, BET1, CCNB1, CLDN4, CLDN5, CSNK1G3, CTNNA2, CXCR3, CYP27A1, DUSP7, EDNRA, EPHA2, EPHB2, ERO1L, FTH1, GLG1, GLI2, GMPPB, IL4R, IL6 R, ITGAV, KCNQ1, LGMN, LPAR1, MAFA, MAPK3, MYH3, NT5C1B, OR2A5, OR3A3 , OR4F17, OR51I2, OR5L1, OR7G1, OR8H1, OR8J3, PARD6B, PAX4, PDE6D, PE CAM1, PIGS, PPT1, PRKAB1, PRODH, SGPP2, SHC2, SMAD6, SNAI1, SNAP23, S SX2IP, TLR5, TUBA8, UGT2A1, VDAC2, XYLB, ZAP70, C1GALT1C1
Negative_11193	ADC, BTC, C1S, C8G, TAT, AACS, ACSL5, ADCY9, ADIPOR2, ATP4A, B3GAT2, B RAF, CASP9, CCL3, CCR5, CD70, CDC6, CHKB, CISH, CLDN15, CREB3L2, CTSS , CYP2J2, CYP3A43, DHDDS, DKK1, DPYSL2, EDN1, EPHA1, EREG, EXT1, F13B , FECH, FGF5, FGFR2, FMO3, GALNT8, GGT1, GPLD1, GRIA3, HTR5A, IL1B, IL 22RA2, IL7R, LCMT1, LIPF, LTB4R2, MAP2K4, MFNG, MTR1, MYLK, NEFM, NO S3, NOX3, OR10A6, OR2M4, OR51A2, OR52I2, OR6K6, OR8D2, PIK3R2, PIK3R 3, PMAIP1, PRKAB1, PTPN6, RDH12, SCD5, SDC4, SETD1B, SKP1, SPHK2, SRD 5A1, STAT6, TAS2R13, TAS2R14, TGFB1, THBS1, TKTL2, TPH2, TUBA4A, UX S1, WARS, WARS2, WNT8A, WWP1, MAPK8IP2, TNFRSF11A
Negative_11194	GPI, KMO, MPL, PGD, SRM, TYR, ACSM5, ACVR2B, ADRA1B, AKR1C1, ATP2A1, B AIAP2, BDH1, CARD11, CCNH, CD59, CLCA4, CYP26A1, DDX47, DTX1, DUSP1, EDA2R, ELK1, ENPP6, ENTPD3, EPHA1, FABP4, FARSA, FGF2, FPGT, G6PD, GL I1, GNA11, GNA14, GNPAT, GRIA2, GZMB, HCCS, HLA- DOB, IL10RA, IPPK, IQGAP2, IRAK4, ITGAD, LAMB4, LDHAL6A, LIPA, LTB4R 2, LYZL1, MITF, MTHFD1L, MYH13, NFKB1B, NT5M, ONECUT1, OR10A2, OR1B1 , OR1Q1, OR2T29, OR4C13, OR4K15, OR4M2, OR4P4, OR52I2, PARVG, PDE5A, PISD, PLXNA2, PORCN, PPP1R1A, PPP2R1B, PPP3CC, PVRL4, RASA2, RDH10, SC5DL, SEMA4G, SETMAR, SFRP2, SLC2A2, SLIT1, SORBS1, SPHK2, TLN2, TL R5, TNFSF12, TPH1, TSHR, VCAM1, VDAC2, XCL1, YARS2, ZBTB16, PHOSPHO1

Negative_11195	GSR, MYC, AADAT, ADCY9, ALDH1A2, ALDH7A1, AMDHD1, AMY2B, ANGPL4, AT P13A2, B3GAT1, CACNB2, CASP9, CDK5, CER1, CMBL, CRLF2, CTBP1, DKK2, D USP2, EFNA4, ENAH, EPHA1, EPHA3, ERBB4, GADD45G, GDE1, GJD2, GNB1, GN G13, GNMT, GRPR, HLA- F, HSD17B1, IL11RA, IRF5, ITGA3, KAT2A, KNG1, LCAT, LCMT2, LFNG, LIMK 1, LMO7, LTBR, MAPK9, MAT1A, MDM2, NCAM1, NR1D1, OR4P4, OR5D16, OR8B8 , PANK4, PIM2, PIP5K3, PLD2, PRKCB, PSEN2, PYCR1, RALB, RFX5, SMC1B, S RGAP2, SSH3, SULT1A2, TAS2R1, TAS2R40, TLR9, TYK2, UROS, PDCD1LG2
Negative_11196	ADK, C2, DBI, MPI, TPR, ABCC8, ALDH1A3, ALDH6A1, APOA5, APRT, ARPC1A, ASRGL1, ATP6VOC, B3GALT6, BACE2, BDNF, BPGM, BTRC, CACNA1A, CASK, CA SP9, CCR2, CD19, CDH15, CLDN15, CLTB, CREBBP, CXCR6, DPYS, DTX1, DVL2 , EPHA1, EPRS, EXTL1, GALNT7, GUCY1B3, IFNA8, IFNB1, IL8RA, LAP3, MAP 2K4, MTHFD1, MYH7, OR2A25, OR2H1, OR2L8, OR2V2, OR5B21, OR5L2, OR7A5 , OR8J3, OR8K3, OR9A2, OR9G1, OR9K2, PGAM1, PHPT1, PITX2, PPP1R3B, PP P2R1A, PRODH2, PRSS1, PSME1, PTPRF, RDH12, SAT1, SENP2, SPAM1, SPTLC 2, STT3B, SULT1A4, SULT2A1, TAS2R41, TOMM40, TRAF2, TUBA1C, TUBB4, W NT3A, WNT6, ATP6V0A1, ATP6V1E2, MAPK8IP3, SERPIND1
Negative_11197	GPI, LPL, SP1, ACSL4, ADIPOR1, ADSSL1, BMP5, CCND2, CD19, CD40, CDC45 L, CDK7, CFL2, CLDN8, CRLS1, CTNNA1, CXCR3, CYP2B6, DDHD1, DGAT2, DHC R24, DUSP1, E2F1, EFNA1, EIF4E2, ENPP3, EPHB2, ERBB4, FZD1, GALNS, GN A12, HTR4, ICAM2, IDH3A, IFNB1, IL18, IL7R, L1CAM, LILRB3, LMO7, MAD2 L1, MAGI2, MMP7, NFKBIA, NFYA, NQO1, NUDT9, OR10H5, OR10K1, OR14J1, O R2F2, OR2G6, OR4A16, OR4D11, OR4P4, OR56A4, OR5D13, OR6N2, OR7G3, OR 9Q1, OXSM, PDE1A, PFAS, PGS1, PLA2G6, PLAU, PLOD1, PMVK, POLA2, PSEN2 , PTDSS1, RAP1B, RBL2, RELB, ROBO1, ROCK1, SCP2, SELE, SEMA4C, SEMA4D , SLIT1, SOS1, STAT6, TAS2R60, TNFSF4, TUBA4A, VASP, VDAC3, WNT2, WNT 9B, YOD1, ZAP70, ALDH18A1, HSP90AB1
Negative_11198	APP, C8G, EGF, FES, GP6, GP9, GSS, LPL, MIF, SMS, SRC, ACADL, ACSL5, ACT G2, ACTN1, AKR1C2, ALDH5A1, ALG5, ANAPC10, APPL1, ARSD, ATP6V1A, CAC NA1S, CARS2, CBR3, CCNG2, CD40LG, CD55, CHKB, CHRM1, CNGA4, COASY, CR EB1, CSF3R, CTSB, CXCR3, DPAGT1, DUSP5, ENAH, EPHA6, FCGR3B, FGF19, F GF22, FZD2, GALNT6, GIT1, GNG12, GUCA1B, HES1, HMGCS1, IARS2, IGF1R, IL7R, LDHAL6B, LTBR, MAD2L1, NOX3, OR11A1, OR14C36, OR1S1, OR51G2, O R5AK2, OR6C2, PARD6A, PDE1B, PEMT, PER3, PFKFB3, PIK3R4, PLXNB1, PLX NB3, PPA1, PPP1CB, PPP1R3A, PRKCD, PSPH, PTAFR, ROBO3, RPS6KA4, SC4M OL, SEPHS1, SOCS3, SOX17, SPTAN1, TAS2R1, TBK1, TRIP10, VDAC3, WNT1, WNT9A, TNFRSF11B, TNFRSF1B
Negative_11199	MSN, OAT, ACSL4, ACTG2, ADCY2, AK3L1, ALDOC, ARNT2, B3GAT2, BRAF, CAC NA1D, CD79B, CDC6, CMBL, CPT1A, CSF1R, CXCL16, CYP2A6, CYP2C19, DDX1 8, DUSP10, ENTPD3, EPHB3, FZD4, GALNT11, GARS, GGT5, GLO1, GSTO2, HEM K1, ICOS, IRS2, ITPKB, JAG1, LIPT1, MAP3K2, MCCC1, MPST, NCAM2, NFASC , NRG2, OLAH, OR10K1, OR13J1, OR2A25, OR2M4, OR2T34, OR4C11, OR4C13, OR52I1, OR7A17, OR8H2, P2RX7, P4HA3, PCK1, PGM3, PIM2, PIP4K2B, PIP5 K1A, PIPOX, PKLR, PPP2CB, PRKAR1B, PRKY, RAC2, RAC3, RFNG, RFXAP, SET MAR, SMAD6, SPRED2, STX2, STX5, SYNJ2, TAS1R2, TGFA, TJP3, TNFSF14, T YMS, UGCGL1, VAV1, VAV2, WARS2, WASF2, WHSC1L1, XCR1, HSD17B10, TNFR SF12A
Negative_11200	APP, GNE, IL8, ACSS2, ADRA1A, ALDOC, ALG8, AMPD1, AREG, ARPC2, ATP6V1 F, BCL2, CASP6, CDH4, CHEK2, CNGA4, CREBBP, CYFIP1, CYP2B6, DDX19A, D HDDS, E2F4, ECSIT, ENTPD8, FGF12, FGFR1, GMPR2, GSTO2, GUCY1A3, HAO2 , HDAC1, HEXB, HHIP, LTBP1, MYL9, NOX1, NR1D1, OR10A6, OR10G9, OR2AT4 , OR2T4, OR4K17, OR51B4, OR52E2, PDHA1, PFAS, PIGK, PLA2G2A, PNMT, PP ARG, PRKCG, PTAFR, RAF1, RDH12, ROCK1, SETD1A, SIPA1, SOCS4, SSH2, TF DP1, TM7SF2, TRMT11, YWHAQ, ZNRD1, ATP6VOD2, TNFRSF10D, TNFRSF13B

Negative_11201	ABO, AK7, BID, GK, GSN, HK2, AADAT, AANAT, ABCC8, ACSS3, ADSS, ALG13, A RPC5, ATP5E, CARS, CD40LG, CD8A, CTF1, DDX41, DPM1, DTX1, EPRS, EXTL3 , FGF12, FZD7, GBGT1, IDH2, IGFBP3, L1CAM, MAP2K2, MAP3K7, MARS, MGAT 4B, MMP2, MYH4, OR2T3, OR4K13, OR51V1, OR52J3, OR5L1, OR8B8, PANK3, P DE2A, PDHA2, PFN1, PIPOX, PLXNC1, PTCRA, RPIA, SARDH, SPAM1, STAT3, S ULT2B1, TAS1R1, TAS2R42, TSHB, TSNARE1, ATP6V0A4, SERPINF2
Negative_11202	ABO, DCK, GHR, SPN, ACTG2, ACTN2, AGTR1, ALDOA, ALPL, ATG3, AXIN1, B3G AT1, B4GALT2, BMP6, CALML6, CCR10, CD58, CDC45L, CFL2, COQ6, CRY1, CR Y2, CSF3, CSNK1D, CTBP1, CXCL16, DARS, DVL2, ENTPD2, EPHB6, FGF14, FT H1, FTMT, GLI3, GOT1, GRLF1, GRM5, GUCY1B3, HSP90B1, ICOSLG, IFNA13, IKBKB, IL3RA, IRF5, LAMC2, LARS, LDHA, MAN1B1, MAP3K3, MAPK7, MAPT, M AT2B, MTHFS, MYH11, NFKBIA, OR10G7, OR2T12, OR5F1, OR8B8, OR8H2, OR8 J1, OXSM, PFKFB1, PIGX, PLCE1, PLIN, PLOD3, POLR3D, PRKCD, PTGDS, RAC 3, ROCK1, SEMA3C, SHMT1, SPHK1, STX6, TAS2R14, TP73, TUBA4A, TUBB3, U BE2K, XCL1, ATP6V1C1, CSGALNACT1, PRICKLE1, ST6GALNAC1, TNFRSF10D
Negative_11203	ID4, LPO, PGF, PGP, SP1, ABLIM1, ACADL, ACP5, ACSM3, ACVRL1, ADH5, ADH 7, ALDH3A2, APOA1, BDH2, CCR2, CCR7, CD38, CFLAR, CLDN6, CMPK1, CXCL6 , DCXR, DLL3, EFNB2, FGF3, GALNT11, GCNT3, GUCY1B3, HAAO, HBEGF, HMBS , KIR2DL1, MAP2K3, MGAM, NFKBIE, NME2, OR14J1, OR1S1, OR2T6, OR4A15, OR52E8, OR5AP2, OR5H2, OR5L1, OR5M9, OR6C75, OR6M1, OR7D4, OR8G1, PF KFB1, PFKFB4, PHGDH, PHKG2, PIAS2, PIGH, PIGP, PLA2G6, PMAIP1, POLE3 , PPARA, PPP2R2D, PTDSS1, PVRL1, RASGRP1, RHOA, RIPK1, STX7, TOLLIP, UBE2L3, UCP1, UGT2B7, VANGL1, VEGFC, WNT9A, ATP6VOE1, ATP6V1B1, MAP K8IP3
Negative_11204	AGL, GP9, LPO, NPL, ABLIM2, ACTC1, ALG5, ARRB2, C3AR1, CACNA1I, CADM1 , CCKAR, CCL22, ERBB2, GADD45G, GLI1, GSTM1, GUCY2D, HCCS, HLA- DOA, IL22, IL2RA, IL3RA, IL7R, IRF5, ITGAD, LFNG, LGMN, MAPK11, MTAP, OR10G7, OR11H6, OR2T4, OR4K15, OR4M2, PCYT1B, PDE2A, PIK3R5, PLA2G2 A, POLR2E, PRKCG, PRKG2, PRNP, PTPN11, RALBP1, SCD5, SHMT1, SLC2A1, S LC33A1, TAS2R5, TLR4, TSNARE1, UGP2, VEGFB, WARS, CSGALNACT2, HLA- DPB1, SUV420H1
Negative_11205	IHH, ACTA2, ADRB2, ALDH5A1, B3GAT3, B3GNT5, BIRC5, CCNA1, CCR1, CCR7 , CDC14B, CER1, CLDN17, CSF3, CUL1, EFNB3, ENTPD1, FGF11, FGF18, FGF9 , FTCD, FUT7, GMPPA, GMPR2, GNG13, HNF1B, IL5RA, ITGA8, ITGAM, KIR2DL 1, LIMK2, MAML3, MAP2K2, MTMR2, MTMR6, NAT1, NCF2, NEGR1, NMNAT2, OR1 L4, OR2B6, OR51B6, OR51V1, OR56B4, OR5K1, OXCT2, P4HA1, PIK3R5, PLA1 A, RASA1, RASA2, SETMAR, SKIV2L2, SMURF1, SULT2A1, TM7SF2, TOLLIP, U CK2, VTI1A, WHSC1, CACNA2D1, PLA2G12B
Negative_11206	BTK, C5, DAO, PC, APBB1, BACE2, BDH1, BET1L, CACNB3, CD34, CD82, CLCA2 , CSDA, CYP17A1, DGAT2L4, DHDDS, DHODH, DKK2, ENTPD6, GALK2, GALT, GS TO2, HSD11B1, HSD17B8, IL11, IL18RAP, INPP5B, LAMA4, MAP3K13, OR1B1 , OR2T6, OR52B6, PDE6G, PDX1, PER1, PFAS, PIGC, PNPLA4, PPAT, PPP2R2C , PPP2R5D, PRKCE, PTGDS, SARS, SEMA3G, SETDB1, SSX2IP, STX1B, TBXAS1 , UCK1, VDAC3, SERPINA5
Negative_11207	DCK, DCN, F9, FGA, PGF, RPE, SCD, SDS, UBB, ACADS, ACSM5, ADH5, ATP6AP1 , ATP6V1D, ATP6V1F, B4GALT5, BCKDHB, BIRC2, CACNA1H, CAV1, CCL4, CD4 0LG, CLDN2, COL2A1, CPT1C, CSF1, CTF1, DGKH, DGKI, DPM3, ENTPD7, FMO2 , FSHB, FZD3, GADD45A, GALNT5, GNRHR, GPLD1, GRAP2, HMGCR, HRAS, IL13 , IL22, IL28B, IMPDH1, IRS2, LDHA, LTC4S, MAP4K1, MAPK13, MCM6, MYH4, NEUROD1, NOX1, NRCAM, NRP1, OR10A3, OR10H1, OR2B11, OR3A2, OR5AU1, O R5K2, OR9K2, PLEKHA8, PLXNB1, PPP2R5E, PTPRB, RASA1, RBX1, SKP2, SRE BF1, STAT3, SUV39H2, TAS2R5, TFDP1, TRMT11, TYMS, VTI1A, B4GALNT1, P DCD1LG2



Negative_11208	ADO, AK5, CAT, CKM, DBI, GLS, MSN, ABI2, ABL2, ACYP2, AGPAT1, AHCY, ARS E, B3GNT2, C1QB, CDH2, CDKN2C, CLDN17, CTSL1, CYP2A6, DDX4, DLL1, FAD S2, FGF11, GPD1L, GRIA1, HDAC2, ITPKB, MAT1A, NANS, NAT2, NCSTN, NRAS , OR1M1, OR2K2, OR5AK2, OR6S1, P2RX4, PFKFB4, PIAS3, PIK3CD, POLD2, P PAP2C, PRDX6, RBL2, RDH5, SGMS1, STAT6, TNFSF18, XIAP, ATP6VOA1, TNF RSF1A
Negative_11209	BID, C8B, FGB, GP6, PLN, RPE, ACTG1, ADAM17, CD47, CDC25A, COX10, CREB 3L1, CREBBP, CYP11B2, DDX41, DOT1L, EI24, EIF4E, EPB41L2, ESPL1, F2R L3, GAB1, GALNT5, GCLM, GNA12, GNAL, GSTM1, GYS2, HNF1B, HSPA2, HYAL1 , IKKBG, IL20RA, LDHD, MAP2K2, MAPK13, METTL6, MTAP, MYL9, NEUROG3, N GEF, NKX6- 1, OR10A5, OR4C16, OR52N2, OR5M8, PAX8, PCYT2, PLD2, PTGES, RHOA, TLR 3, UBA1, UBE2L3, MAPKAPK2, PPARGC1A
Negative_11210	AK3, ASL, CD4, DBH, FOS, GP6, LHB, MYC, NOG, TFG, ACTA1, ACVR1B, ADRA1B , ADRBK2, ALG8, ALOX15B, APBB1, ARNT2, BCKDHB, CCNB1, CD40LG, CMAS, C NTF, CNTNAP2, COL4A1, CPT1B, CSF3R, CXCL16, CXCR4, DFFB, DLL1, DLL4, DMGDH, GALNT14, GCNT3, GNAS, HCCS, HCST, HSD17B8, IGFBP3, IL13, IL19 , IL1R1, IL2RA, IL8RB, LAMC1, LFNG, MAP4K1, MCM4, MDM4, MGAT5B, MYH14 , NANP, NAT6, NT5E, OR13C3, OR2T29, OR3A2, OR3A3, OR4C16, OR5AK2, OR5 H2, OR6C3, OR8G1, OR8S1, OR9Q1, OXSM, P4HA2, PAPSS2, PAX8, PER1, PIGO , PLA2G4A, POLR2H, PPBP, PPP2R2D, PPP2R5B, RBX1, RFWD2, SOCS4, ST3GA L6, ST6GAL1, STAT3, STK3, STX12, STX2, TBL1X, TGFB1, TJP2, TNFSF12, T UBAL3, YES1, ZFYVE16, TNFRSF10A, TNFRSF10C
Negative_11211	BAD, DBH, DCK, ILK, KIT, LPO, SMO, ACHE, AHCYL2, ALDOC, ALPI, AMY2A, AP C2, BAAT, BTRC, C1QA, CACNG4, CALML5, CASP10, CAV2, CD38, CD46, CD47, CD99, CDK7, CES7, COL4A2, CSF1, CSH1, CSNK1G1, DCXR, DGAT1, DVL1, E2F 2, ENTPD2, EP300, FGF6, FGF9, FMO2, FRAP1, FUT1, FUT9, GIT1, GNRH2, GR HPR, GRIA2, GUCY2F, HPSE2, HSD3B7, IL17A, LDHD, LEFTY1, MCM7, MTAP, N AT5, NCF2, NFKBIE, NME2, NSD1, NT5C, OR1D2, OR2C3, OR4F15, OR51S1, OR 5AN1, OR7D4, OR8H1, PDE3B, PDHA1, PFKP, PIGM, PLEKHA8, PLXNB2, POLE, PPARA, PPCDC, PTGFR, PTGS2, RASGRP1, RGS3, RHEB, SETDB2, SLC25A4, SO D1, SORBS1, SPCS1, SPRY3, STAT5A, STX2, TBXAS1, TYRP1, UXS1, VASP, VA V3, WBSCR22, YWHAG, ATP6VOA2, PRICKLE2
Negative_11212	EZR, GNS, NPL, ACAA1, ACACA, ADSL, AKR1D1, ATP4A, ATP6VOC, BCAT1, BUB 3, CACNG1, CLDN8, CLOCK, CSNK1E, CSNK1G3, CTNNA3, DDOST, EIF4E, EPB4 1L3, EXTL2, FCGR3A, GNAI3, GSTM1, HLA- DOA, HNF1B, ICAM1, IL20RB, IL2RB, IL6ST, ITGA3, LIPA, MAP2K7, MAP3K3 , MAP3K4, MBL2, METTL2B, NARS, NME2, OR2T5, OR52K1, OR56A3, OR6C6, OR 7A5, PIGV, PIGX, PPP5C, PRDX6, PRKAG2, PRODH2, RAB23, RFNG, SHC4, STX 8, SULT1A1, TLR5, TNFRSF9, TUBA1B, TUBB4, CACNA2D3, HLA- DQA2, PAFAH1B1, TNFRSF11A, TNFRSF11B
Negative_11213	CFH, DBH, KHK, NF1, TFG, VTN, ABI2, ABL2, ACAD8, ACHE, ACTN1, ADORA2B, ADRA1A, ALG10, BCMO1, CCL1, CCND1, CD38, CDK7, CHPF, CLDN22, CLDN5, C SNK1A1, CYP26A1, DDIT3, DDX50, DPYD, DRD1, E2F1, ERO1L, EXTL1, FDFT1 , FMO1, FRAP1, FRAT2, GALNTL4, GNA13, HDAC1, HNF4A, IL11RA, IRF7, ITG B3, KIR2DL4, LAMA3, LARS2, METTL2B, MGAT4B, MINPP1, MYH14, NAGK, NCS TN, NTRK1, OCLN, ODC1, OR10A7, OR10S1, OR13C9, OR1K1, OR1N1, OR4S1, O R52N4, OR6C70, OR8G1, PDPK1, PLA2G6, PLCG2, PMM2, PNLIP, POLR2I, PPP 2CA, PPP5C, PRODH2, PRPS1, PTAFR, PTGER1, RAPGEF1, RRM1, SELE, SEMA7 A, ST3GAL5, STAT4, THBS3, TLR2, TUBA3E, TUBB2B, ULBP2, VDAC3, XCR1, X YLT2, CTNBNBIP1

Negative_11214	C8B, C9, FH, LHB, MAG, A4GALT, AANAT, ABL1, ADCY10, ADCY5, ADIPOR2, ALPL, APBB1, CALML3, CDIPT, CHEK1, CHRM2, CNTF, CPT1C, CRKL, CSF3, CYP11B2, CYP2C9, DARS2, EFNA3, FGF9, FLOT1, GNAS, GP1BA, GZMB, IDH3A, IL11RA, IMPA2, ITGA9, MGST2, MTHFS, MTMR6, NCOR2, NUMB, OR10H2, OR1M1, OR2H1, OR4N4, OR51I2, OR52N1, OR7C2, PDE1A, PDE1C, PDIA4, PIK3C2G, PNLIP, PPP5C, PVRL3, RALGDS, SETD1A, SRD5A1, ST3GAL2, STAT5B, UCKL1, A TP6VOD1, SERPINC1
Negative_11215	CS, EZR, GH1, ABI2, ACAA2, ACLY, ALG12, ALPPL2, AMHR2, APOC3, BMP6, CALML5, CD28, CDH2, CDS2, CES1, CLDN4, COX10, CX3CL1, CYSLTR2, DAD1, DD X56, DPYD, DVL3, EFNA5, EPHA2, EPHB1, GADD45G, GALT, GIT1, GOSR2, GP1BB, GSTZ1, HNMT, IL15RA, IL21, IL23A, IRS1, ITGA3, KDSR, LHCGR, LTC4S, MAML1, MCCC1, MKNK2, MRAS, NCOA4, OR10A7, OR13H1, OR1F1, OR1S1, OR2AG2, OR2AT4, OR2T1, OR4D5, OR51B6, OR52I1, OR56A1, PIK3CB, PPBP, PPP2R5C, PRKCI, PRNP, PTGFR, PTPRR, PVRL2, RASGRP2, RENBP, SEMA3A, SORD, TAS2R42, TAS2R50, TLR4, TUBA3C, UMPS, UNC5D, VEGFC, WNT3A, ATP6V1C2, MAPK8IP3
Negative_11216	ADC, AR, FGB, GP6, IL3, INS, LAT, LHB, PXN, SDS, ACYP1, ALOX5, ANAPC4, ARPC5, CACNA1H, CAV2, CDS1, CLDN20, CREB1, DDX52, DEGS1, EPHA5, F2RL2, GALE, GGPS1, GNAZ, GRB2, GSTA1, GUCA1A, GUK1, IL7R, IRF3, KLK3, LPAR1, MCCC2, MGAM, NME2, NOS1, NQO1, NTSR1, OR1L6, OR2B6, OR2D2, OR6B2, OR7A10, PARVA, PFKL, PFN4, PHGDH, PIK3CB, PIP4K2B, POLE, PTPRZ1, RASA1, RBKS, RBPJ, ROBO3, SLC27A4, SOS1, THY1, UCK1, VARS, TNFRSF10B
Negative_11217	C8B, CAD, ID4, KHK, MIF, NGF, ACADL, AGPAT6, AKR1C2, AMPD1, AMY2B, ATN1, ATP12A, ATP4A, BDKRB2, BMPR2, BPNT1, CACNA1F, CACNG4, CASP6, CD79A, CDKN1A, CDKN2A, CES2, CHIA, COL4A1, COQ7, CXCL10, CYBA, CYP2C9, CYP2J2, CYP3A43, DHRS4L2, DTYMK, DUSP7, EPHB4, FGF3, FUT4, GARS, GLS2, HHIP, HTR5A, IL8RB, ITGB3, ITGB7, JAG2, LAMB4, LCAT, LIPF, LRAT, NEFL, NRXN3, OGDH, OR10G7, OR1G1, OR2AT4, OR2C3, OR4K17, OR4K2, OR51G1, OR6C3, OR7G2, OR7G3, PARD6A, PARS2, PFKFB4, PIGV, POLR3B, PPP1CC, PPP2R5C, PRIM1, PRKAR2A, PRSS1, RFNG, RPRM, RUNX1, SDHB, SFRP5, STX3, STX4, SULT2A1, TIAM1, TPK1, TUBB2A, UGDH, VTI1A, WNT3, ZAP70, CACNA2D2, PAFAH1B1
Negative_11218	BAD, GHR, ACSL1, ACVR1B, ADSL, ALG3, AMD1, ATG3, BCAT1, CBLB, CCKBR, CL17, CD28, CLDN4, CLTB, COL2A1, CRHR1, CRY2, CTSG, DERA, ENTPD6, FBP2, FRAT2, GALNTL4, GALT, GYS1, HPSE2, INADL, KAT2A, MBL2, MCAT, MITF, MLLT4, MYH6, NCOA4, NTN1, OCRL, OR2T29, OR5M8, OR8A1, PPOX, PPP1CB, PPP3CB, PRKAG2, PSPH, RPS6KA2, SFRP2, SOS2, SULT1A4, SUV39H2, TAS1R1, TAS2R14, TIAM2, TLR9, TNFSF12, TNFSF8, TRPM5, WNT7A, ATP6V1C2, ATP6V1G2, TNFRSF11A
Negative_11219	CFD, JUP, LSS, ACTG2, ALDH1A1, AMHR2, BCL2L1, C4BPB, CCL28, CCNB2, CLDN11, COL1A1, CTSG, DLAT, DUSP3, ESAM, ETS1, EXT1, F13B, FGF2, FZD8, GLDC, GUCY1B3, HA02, IPMK, IRAK3, JAM3, KCNQ1, MAD2L1, MDH2, MLLT4, NEU3, NR4A1, OR10P1, OR6K6, OR8I2, OR9I1, PKMYT1, PLAU, PLCB1, PLCE1, PLEKHA8, POLR2J, PSENEN, PTEN, PTGES2, PTGIS, RCHY1, SLC2A1, SSH3, TBXAS1, TRAF4, UGT2A3, VDAC1, XYLT2, SERPINC1
Negative_11220	AGK, AK2, DCC, ACSL5, ADCY8, ADCY9, AMDHD1, APLP1, ARG1, ATP5F1, BCL2L1, C7orf16, CHDH, COL2A1, CPT1A, CRY1, CRY2, CYP2A13, CYP2C18, CYP2C8, DRD5, EIF4E2, ENTPD5, EPHA6, EPHB4, FGFR2, FMO3, GNA14, GPAM, GRM5, GYS1, HARS, IBSP, ICOSLG, IRF5, ITGB4, ITGB8, KNG1, MAP3K12, MITF, NAT5, NODAL, OR12D3, OR1A1, OR2T12, OR8K5, P4HA1, PAPSS2, PDE7B, PIGS, PLCB2, PORCN, PPAP2C, RALB, RGS3, RHOA, SEPHS1, SETD2, ST8SIA1, STAT5B, SULT1A4, TACR2, TLR3, TUBA1C, UBA7, UGT2B10, WHSC1, XCL2, MAPK8IP3, TNFRSF12A

Negative_11221	TNF, ACP5, ACVR1, ALOX15B, ASNS, BACE1, BDKRB1, CALML6, CCL7, CD72, C DC26, CDH1, CLDN5, CYP2D6, DGKI, DOT1L, EPHB6, EPHX1, FOXA2, FRAT1, G ALNTL1, GAMT, GMPPB, GSTM4, GZMB, ICAM2, IFNA6, IFNW1, IL10, LIPT1, M AN1C1, MAP2K6, NARS2, OR13C8, OR1F1, OR2AG1, OR4D11, OR4P4, OR51I1, OR6A2, OR6N2, OR7A17, OR7C2, PAK3, PDE5A, PDGFB, PIGK, PIK3R2, PISD, PLXNC1, POLR3K, PPOX, PPP3CC, PROS1, PTPN11, SGPP2, STX16, SYNJ2, TU BA1C, UNC5D, MAP3K7IP2, PPARGC1A
Negative_11222	AGK, AK7, DBH, GP9, KHK, LAT, ABL2, AGMAT, ALDH1A2, ANAPC7, AOC2, ARRB 1, ARSE, ASIP, BBOX1, CASP3, CCL25, CCNA2, CCND2, CDC16, CDH1, CHIA, C OMP, CYP2C8, DDIT3, DLL3, DOLPP1, EGFR, ENTPD2, F13B, FARSB, FGF14, F GF20, FZD10, GMPS, GPLD1, GSTA4, IDH3A, ISYNA1, LICAM, MAPK13, NPR2, OLAH, OR1J2, OR2M5, OR2T29, OR4X2, POLR2B, POLR3G, PPBP, PTAFR, RENB P, RETSAT, TNFRSF8, WWP2, HLA-DRB5, TNFRSF1B
Negative_11223	ATM, CD4, CR2, GCK, ADH1B, AGTR1, ANAPC11, CARS2, CAV2, CREB3, CYFIP2 , DAPK3, DAXX, EPHA6, FGFR3, FMO2, GGT7, GYS1, HRH2, IL17A, ITGAE, JAM 3, KARS, LAMB1, NQO1, NTF3, OR4F4, OR4M1, OR8H2, PAX8, PIGN, PIGX, PIK 3R2, PKM2, PLEKHA8, PLXNA2, POLR2I, PPP2CA, PPP2R5E, RASSF5, RDH12, RGS3, RPRM, RPS6KA6, SC4MOL, SMURF1, SNAP25, STAT3, STX1A, TICAM2, T RADD, TUBB4Q, UBA7, UBE2L6, UROC1, VASP, VEGFA, YWHAQ, PLA2G12B
Negative_11224	C4B, C5, CKM, FYN, TPR, ACSS2, ADCY9, AGPAT3, AMY2B, AXIN1, B3GALT6, B 3GAT2, CHRD, CHUK, CREB3L4, CSNK1A1, DPYSL2, DRD2, F11R, FDFT1, FLAD 1, FTH1, GNAI3, GOSR2, GUCY1B3, HLA- DMA, HSPA8, IDI1, IL13RA1, LIPG, MAP3K3, NCF1, NCF4, NCK1, OR1G1, OR1 N2, OR2A14, OR52N5, PI4KA, PIK3CB, PISD, PKMYT1, PTGIS, SMAD3, SOCS3 , STMN1, SULT1A2, TAS2R49, TUBA4A, TUBB2C, TNFRSF13C
Negative_11225	ADO, BTK, F9, GK, LSS, ADRA1D, AHCYL2, ARSE, ATP5L, BACE2, CAMKK1, CCL 20, CCR2, CD19, CDH2, CLDN1, CLDN22, COL4A4, CSNK2B, CYP2C19, CYSLTR 2, ERBB2, EXOC7, FARS2, FCGR3A, FGF13, FZD3, FZR1, GSTA4, HAP1, IGF1, IL22RA1, IL28RA, IRAK4, ITGAD, JAK3, LEFTY2, MRAS, NME4, NOX3, OLAH, OR10AG1, OR1D2, OR4A16, OR6C75, OR7A17, PDXK, PHKB, PIGL, PKMYT1, PL OD3, POLR3G, PPAP2B, PPP1R3A, PRKAR1A, PRKG2, SLC27A4, SOCS2, SPCS3 , TAS1R2, TAS2R50, UPRT, WNT4, ATP6V1B2
Negative_11226	C6, CAT, DBT, FOS, FST, GH1, ME1, PML, ABLIM3, ACSS3, ADAM17, ADCY9, AK R1C2, ALDH3A2, ALDH5A1, ALPPL2, ARD1A, BBC3, BMPR1A, CACNA1S, CACNG 4, CCKBR, CCL14, CCL27, CCL7, CCNB1, CDH1, CLDN22, CNTNAP2, COX10, DD IT4, DFFA, DGKG, DKK4, DLL3, DVL3, EGLN3, ENAH, FGF19, FPGS, GALNT11, GGT5, GLG1, GLI2, GNAI3, GNMT, HADHB, HRAS, IFNW1, IRF3, NEUROD1, OR1 G1, OR4D1, OR4F17, OR4F6, OR4N5, OR4Q3, OR52M1, OR5L1, OR6C74, OR6K3 , OR7A10, PARS2, PIGA, PIGM, PIGX, PKM2, PLOD2, PLXNB3, POLD4, POLR3G , PTPMT1, RELB, ROBO2, RRAS2, SHC1, SMPD3, SPRY1, STX2, SUCLG1, SUCLG 2, TAP2, TRDMT1, TSHB, WASF1, ZIC2
Negative_11227	ADO, AMT, BTB, C4B, F3, IL8, NNT, SP1, TPR, ABAT, ALPP, APOA1, ATP2A3, A TP50, BMP4, BUB3, CASP10, CD44, CDC23, CHRNA7, COQ7, CREB3L4, CSNK2A 2, CYP2F1, DDX19A, E2F1, EDN1, EPHX2, ERBB3, ERBB4, FARS2, FGF12, FRA P1, FSHB, G6PC, GDF6, GPLD1, GRIA2, GSTA4, GSTA5, GUK1, HAGH, HSD3B2, ICAM2, IFNA10, IFNGR1, IGSF5, IL13RA1, INHBE, ITPK1, KCNB1, LEPR, LL GL1, MCEE, MOV10L1, MPDZ, MYH11, ODC1, OR10S1, OR1S1, OR2Z1, OR4B1, O R4D6, OR4K1, OR4M1, OR51F2, OR8B4, OR8H2, PCYT1B, PDE5A, PIK3CD, PIK 3R1, PLCE1, PNPLA3, PPP1R3D, PRKX, PTGES, RAPGEF1, RPIA, RPN1, SDHB, SUOX, TAP1, TNFSF8, TP53, TUBAL3, TYMP, UGCGL1, UGT2B7, B3GALNT1, CA CNA2D1

Negative_11228	AGK, CRH, FGA, FST, JUN, KDR, NNT, ACADSB, ADH1B, AGRN, AHCYL2, ATP6AP1, BCL2, BCMO1, BUB1B, C1QB, CASK, CCR5, CCR6, CD244, CD34, CD46, CD86, CDIPT, CFTR, CLDN20, CLTB, COX15, CXCL3, DDX4, DGKQ, DNMT3A, DUSP3, EDNRA, EHHADH, FASLG, FZD10, GLB1, GMDS, GNAZ, GUSB, HHEX, HTR5A, IFN A8, IFNAR1, INPPL1, MAP2K7, MEF2C, MTMR2, NGEF, NME4, OCLN, OR10A7, OR1F1, OR4F4, OR51G1, OR6C6, OR6Q1, OR8J3, PDE9A, PIM2, POLE, POLR2F, POLR2H, PRKAB2, PTPN7, RBL1, RHOA, RPRM, STX2, TAS2R3, TAS2R48, TLR9, TPM3, TUBB6, ULK1, ZFYVE9, ATP6V1B1, TNFRSF17
Negative_11229	APP, C8B, CP, FN1, GCK, MYC, ACAA2, ACPT, ADSL, ALAD, ALG6, AQP7, ATP12A, ATP6V0C, ATP6V1A, BLVRB, CADM3, CAV2, CBR3, CCNE2, CDS2, CHDH, CHR D, CLDN10, COL11A1, CTBS, CTF1, CYBA, CYCS, CYP2S1, DDOST, DGKE, DRD2, E2F4, E2F5, ECHS1, ENO2, ENPP2, ENTPD2, FGF10, FZD5, GBGT1, GNB3, GP AM, HNF4G, ICOS, IDI2, IDUA, IFNA10, IGF1, IL18RAP, IL19, IL1R2, KIR2 DS4, LAMB4, LAMC2, LDHAL6A, MAML3, MAPK7, MPP5, NFATC3, NME6, OR10H1, OR52B4, OR52J3, OR5R1, PDGFRB, PERP, PIGF, PISD, PLA2G4A, PLA2G5, P LCB4, PPM1A, PPM1D, RAF1, RRM2B, RXRA, SELL, SEMA3G, SGMS1, SSH2, ST3 GAL3, TAS1R3, TAS2R1, TICAM2, TIRAP, VANGL2, VDAC1, WARS2, YWHAG, AT P6V0D1, HLA-DRB4, PNLIPRP1, TNFRSF12A, TNFRSF13C
Negative_11230	CKB, GNE, GNS, HGF, MAG, ME1, NGF, SRF, AGPAT3, ALDH1B1, ATP50, ATP6V1 H, BCAT2, BMP8A, C4BPA, C7orf16, CACNA1G, CASP3, CDC25B, CDKN1C, CHS T13, CLDN17, CNTF, CREB3L4, CSNK1D, CYP26C1, DAAM1, DAXX, DHFR, EFNA 4, ENO1, ENTPD4, ETS1, FGF1, FOXO3, GCAT, GIT1, GSTO2, GUCY2D, HSD17B 2, IKBKB, IL10RA, IL12B, IL22RA1, IL5RA, INPP5E, IRF5, ITGA7, KAT2B, KDSR, KIR2DS5, LTBP1, MAP2K2, MCCC1, MGAT5, NAGK, OR10Q1, OR10T2, OR 13J1, OR3A3, OR6B2, OR6C4, OR6K2, OR6T1, PDE4C, PDE5A, PHKG1, PLA2G2 F, PLCD4, PLCG2, PLK1, PNMT, PPM1D, PRODH, PSAT1, PTEN, PTGS1, PYCRL, RASGRF1, RETSAT, SEMA3F, SLC12A2, SOCS5, SORD, SPRY3, TGFB3, TICAM2, TUBB, UGDH, VAV3, PAFAH1B3, TNFRSF17
Negative_11231	C7, DCK, MUT, NPY, TNN, ACSM4, ACTG2, AKR1C1, AKR1C4, AOX1, APOA1, ATP 5G2, ATP5J, B4GALT1, BDKRB1, C9orf95, CACNA1A, CACNG8, CCKBR, CCND3, CLDN20, CRLF2, CTLA4, CYP2C9, CYP2U1, CYSLTR2, DUSP7, DUSP8, ENPP1, ETNK1, FARSA, FGF1, FGF4, FGFR1, FTH1, GMPPB, GPLD1, GSTM2, HHIP, HM BS, IFNA17, IL6ST, ITGAD, ITGB4, ITPK1, ITPKB, LCMT1, MAP3K12, MASP2, MFNG, MINPP1, NEFM, NT5C3, OR10A6, OR10K1, OR1E2, OR4D6, OR4K5, OR5 6B4, OR6B3, OR9I1, OXTR, P4HA1, PAX8, PDE1C, PDE8B, PDE9A, PFKFB3, PL A2G2F, POLR2C, PPP1R3A, PRKAG1, PROC, PTPN6, PTPRZ1, RARS2, RASGRF1, RBPJL, RETSAT, RFWD2, SEPHS1, SLC2A2, SPRY3, SPTLC1, STK3, TCF7L2, TNFSF8, TPM3, TRDMT1, TUBA1A, UGP2, ULBP3, HLA-DPB1, HLA-DQA2
Negative_11232	CEL, PML, SCD, ACAT2, ADCY4, AGRP, ALDH1B1, APOA2, ATP12A, B3GALT4, B MP2, CCL17, CDC16, CHRM3, CRLF2, CSF2, CSNK1G1, CTLA4, FGF11, FGF2, G NAS, GOSR2, HMBS, IGSF5, IL22RA1, MAML2, MCM5, MYH7B, MYL2, NFATC4, N RG3, OR10G7, OR10H2, OR1I1, OR2Z1, OR4N2, OR52I1, OR6C74, OR8H1, PAX 6, PHKB, PMM2, POLR2D, PRKAR2B, RETSAT, RPS6KA5, TICAM2, TOMM40L, TS C1, UBE2L6, VEGFB, WNT8B, ZFYVE16, PLA2G12B
Negative_11233	AK7, BTD, CKM, KMO, OAT, RFK, ABAT, ABLIM2, ABLIM3, ACAD9, ACADM, ADCY 10, ADIPOR1, AMPD3, CACNG6, CCL27, CCND1, CD274, CDC7, CDH5, CHST11, CSNK1G1, CXCL5, DERA, DUSP6, ENPP3, EPHA4, FABP3, GNA12, GPD1, HSD17 B8, HYAL1, IL13, LAMA4, MTHFR, MTMR6, NRG1, OR10V1, OR1K1, OR2C1, OR2 Z1, PARVG, PDGFRA, PHKG2, PIAS1, PSME1, PTDSS1, PVRL2, RAP1B, RASGRP 4, RRM1, SFRP4, SHC1, SLC25A6, SOCS1, STK4, STX3, SUCLA2, TM7SF2, TUB B2C, TYRP1, UGT2B28, ULBP1, UPRT, ZMAT3, GABARAPL2

Negative_11234	ASL, C8B, DDO, F3, HK1, IL7, JUN, OTC, TNF, ACADS, ADAM10, AKR1C4, ALG11, BCMO1, CAMK4, CCL3, CDKN2A, CHRM2, COL4A1, CSNK2A2, CTNNA1, DARS, DHRS4, DPYD, DRD5, EP300, EXTL1, F11R, F2RL1, FCGR3B, FMO4, GALNT1, I FNAR2, LIPF, MAP2K1, NSDHL, NTNG1, OR10G2, OR1M1, OR2T3, OR4F15, OR4 F6, OR51B4, OR6Q1, OR8S1, PAK2, PDE5A, PIP5K1C, PLOD1, PTDSS2, RAB5A , RPE65, SFRP4, STAM2, TCF7L1, TIRAP, UROD, YKT6, ATP6V0A2, ATP6V1G2 , SUV420H1
Negative_11235	GK, SPN, SRM, TYR, ACSM4, ADCY2, ADCY7, ALG9, ARNT, ARRB1, BCAR1, BIRC 5, CCL7, CFL2, CLDN11, DPAGT1, DTX4, DUSP5, ENTPD1, F2RL3, FGF4, GALE , GALNT11, GNA14, GPX7, GZMA, IFNA21, IL1R1, INPPL1, LIPC, LMO7, MAN1 A2, MAPT, MCM7, MMP2, MOV10L1, MRAS, MYL2, NAGA, NOS3, NRXN1, NRXN3, O R111, OR2G3, OR2T8, OR4D2, OR51I2, OR56A4, OR5K1, OR7G3, PARD6A, PAR D6G, PCCA, PFKFB4, PFN2, PGAM2, PIP5K1B, PLA1A, PLEKHA8, PMVK, RASGR P1, RPS6, RXRG, SEMA3C, SEMA4B, SGMS2, SLC25A4, STAT5B, TAS2R9, TOMM 40L, TP73, TRADD, TRAF2, TSTA3, UBE2K, UGT2B4, VDAC3, VEGFA, WASF3
Negative_11236	AK5, IL8, ACAA2, ATF2, ATP2A2, ATP5G2, ATP5J2, AVPR1B, BCAT2, BMP8B, CACNG8, CDH3, COMT, CYP1A1, CYP2C8, DDIT4, DGAT2, DUSP3, DUSP4, EFNB 1, EHMT1, FABP3, FMO2, GAD2, GFPT2, HEMK1, ICAM2, IL28A, ITGA10, MEF2 C, NCOR2, NKX3- 1, NRG2, OR10AG1, OR2T2, OR5M3, OR7A17, OR8B4, PIGT, PIGW, PIK3CD, PM M2, POLR2F, PPP2R5D, PRPH2, PSEN2, PTPN1, SELPLG, SPRY4, UPP1, EIF4E BP1, MAPKAPK3
Negative_11237	ACMSD, ADCY7, AKR1C3, ALDH4A1, ALPI, ARNTL, BCMO1, BRAF, C3orf10, C4 BPA, CCL11, CHIT1, CLDN11, CLDN15, CPT1A, CXCL10, CYFIP2, DTX4, DTYM K, EIF4E2, FGF18, FTCD, GCNT3, GLO1, GRPR, GSTM4, HYAL1, IL29, IL8RA, INHBC, KCNJ11, LAMB2, LIPE, LMO7, LRAT, LRP6, MAPK8, MARS2, MICA, NCK AP1, NEFL, NR1D1, NUMB, OR10S1, OR1K1, OR2T4, OR4C16, OR51F2, OR51M1 , OR51T1, OR8D1, OR9A2, PNMT, PPBP, PRKCG, RAD51, RBPJL, ROCK2, SAT1, SDHD, SENP2, SHMT2, SMAD5, SORD, SOX17, SPHK2, SSH3, TICAM2, TUBB2B, ULBP2, WNT7B, WNT8A, WNT8B, CSNK1A1L, HLA-DQB1, MAPKAPK5
Negative_11238	ADO, CFI, CSK, DLD, OSM, WAS, ABLIM3, ACTG2, AGPAT2, ALDH2, ALDH9A1, A LG11, ANAPC1, ANAPC2, ARNT2, ARPC1A, ATP50, BDH2, CACNB4, CCL15, CCR 10, CSF2, CYP1B1, CYP4A11, CYP8B1, DDX19A, DERL1, ENPP3, GALNT7, GLU D1, GNRH1, GSTA4, HAO2, HIF1A, IL18R1, IQGAP3, IRAK2, IRS2, ITGA11, I TGAM, KDSR, KIR3DL1, KYNU, MAP4K1, MYH8, MYH9, NCF4, NEUROD1, NRCAM, NTNG1, OR10K2, OR1C1, OR1D2, OR2T1, OR5R1, OR6C3, OR6M1, OR9G4, ORC3 L, PARD6B, PDE4D, PECAM1, PER2, PGS1, PHKG2, PIK3CD, PLCE1, PLXNA2, P LXNA3, PNPLA4, POLR2E, PRKCB, PRODH, PYGM, RAF1, ROBO1, SEMA4D, SPRY 1, STAT5B, SUFU, SUV39H2, TAS2R40, TRDMT1, UROS, ATP6VOD1, HLA- DPA1, PHOSPHO1, SERPING1, ST6GALNAC6, TNFRSF14, TNFRSF18
Negative_11239	C7, CBS, DLD, F7, HPD, MUT, ABLIM3, ACVR2B, AGXT, B4GALT2, B4GALT5, BM P8B, C7orf16, CDC14B, CDC26, CTSS, CYP2B6, DUSP14, FGF21, FUT1, GLI1 , GMPPB, GNAZ, GOT2, GRAP2, IFNA5, IL17RA, ITGA5, KIR2DS4, KLK3, MAN2 A1, MGAT4A, MLYCD, MPZL1, MTHFD1, MYH10, MYH14, NAT5, NAT6, NFAT5, NO TCH2, NPAS2, OR10K2, OR1L3, OR6Y1, PLAUR, PPM1A, RBX1, SIGLEC1, SPRY 2, TAS2R10, TP53I3, TPI1, TUBA1B, UBE2L6, UGT1A10, VAMP4, YWHAE, ZMA T3

Negative_11240	C5, CFD, DDO, GLS, LHB, ABAT, ACAD9, AGPAT3, ALOX12B, ARPC2, B3GALT6, C3AR1, CACNG7, CAMK2D, CCND1, CD34, CD44, CES7, CHRM5, CSNK1G3, CXXC4, CYFIP2, CYP3A4, CYP3A7, EXTL1, GALNT14, GAS1, GLO1, GMPR2, GNA15, GRIN2C, H6PD, HAO2, IPPK, ITGA7, LDHB, MKNK2, MNX1, NRG2, NSDHL, NT5C1, OR13C8, OR2AT4, OR2C3, OR4A15, OR4C46, OR4E2, OR4K5, OR51E2, OR56A1, OR6C3, OR6C76, PDE5A, PDGFC, PGAM1, PIGH, PLAU, POLE4, PPBP, PRKAA1, PRKCD, RASA2, RASSF1, RDH12, SETDB1, SOCS3, SPRY2, SRD5A2, TUBA1C, UBE2L6, VDAC1, SERPINA5
Negative_11241	CFH, F2R, GLS, PGF, PLG, RDX, TK2, AGXT, AHCYL2, AKT1, APC2, ARNT2, BMP8A, CAMKK2, CCDC6, CCND1, CD274, CDC25A, CDS2, CKMT2, CXCR6, DGKB, DPYS, DTX3, DUSP3, DUSP5, EPOR, EREG, FDPS, GOSR2, GSTA2, GUCA1B, HCST, HSP90B1, IGF1R, IMPA1, IMPDH2, ISYNA1, KIR2DL3, KLRD1, LEF1, MAP2K5, MEF2C, MMP2, NCOA4, NOS1, NSD1, OR10A4, OR10K2, OR13C3, OR14C36, OR1L3, OR2T29, OR3A2, OR6C1, OXCT2, PCK1, PDE4C, PDGFC, PGM3, PLCB2, PPM1B, PPP1CA, PSME2, PYCR2, RAC1, RENBP, RHOA, SEMA4B, SMAD7, THBS1, TUBA1A, TUBA1C, TXNDC12, VNN1, YWHAB, ZAP70, TNFRSF10C
Negative_11242	ADC, AGK, AMH, DCK, KMO, OAT, SHH, ACMSD, AMDHD1, ANAPC1, ARPC5, BCL10, BMP5, CCL19, CCL25, CCL7, CD48, CLDN17, CNDP1, COQ3, DFFA, DLL4, DPYS, E2F4, EARS2, EIF4E, ENTPD8, EPHA2, ETS1, FBP2, FGF8, FMO3, FOXA2, FRAP1, GALNT9, GALNTL2, GMPR2, GNAI2, GPD2, GRIN2A, GRLF1, GSTT1, HAO1, HMBS, HSD17B7, IL1R2, MAP2K5, MAPK12, MASP1, MINPP1, MLLT4, MYL7, MYLK, NAE1, NAT1, NEFH, NKX6-1, NTNG1, NTRK1, OPLAH, OR13D1, OR2A42, OR2T1, ORC2L, PIGX, PIK3R2, PIP5K1A, PPP1R3C, PPP2R1A, PPP2R2C, PPP3R1, PPP3R2, PRKAR2B, PRPH, PPS1, PTCH1, SC5DL, SDHA, SHMT2, SRGAP3, TAS1R1, TAS2R10, TAS2R16, TBK1, TLN2, TRPM5, TSHR, TUBA8, VANGL1, WNT7A, CSNK1A1L, MAPKAPK2
Negative_11243	CKB, EPO, F9, IL6, TH, TK1, TK2, ACADVL, ACSL4, ACVRL1, ADCY9, ALDH1A2, ALDOB, ALG1, ANAPC5, ATP13A2, B3GNT4, BAIAP2, BMP5, CACNG1, CBLC, CCND1, CDC23, CLDN16, COQ5, CRY2, CSF3R, CTNND1, ERO1L, FECH, GDF7, GRIN2C, IFNA10, IL12RB2, IL1R2, ITGAX, ITGB8, JAK2, KLRC1, MAP3K7, MAPT, NME2, NT5C1A, OR10AG1, OR11H4, OR14I1, OR1C1, OR2B2, OR52B6, OR6C2, OR6K2, PDE10A, PDE4B, PFKFB4, PGLS, PHKB, PIGP, PLAU, PNMT, POLR1B, PRKACA, PTPRF, RARS2, RRM2B, SEMA3B, SH2D2A, SLC25A6, SLC27A5, SPCS1, ST3GAL4, STX2, SULT1A4, SULT1E1, TBXA2R, TNFSF9, UGP2, UXS1, VAV3, ST6GALNAC4
Negative_11244	DBI, GDA, MSN, SRC, SRM, TK1, ALDH3A2, ASIP, ASNS, ATG12, ATP6V1A, BDKRB1, CACNG6, CASK, CCKBR, CD274, CDC25C, CDH5, CDKN1A, COQ7, COX15, CPT1B, CTNNA1, CXCL11, CXCR5, CYP2B6, CYP2J2, DDB2, EFNA3, EGFR, F2RL1, FECH, FGFR4, FOXA3, GALT, GALNT12, GAPDH, GNAQ, GNAS, GOT1, GUCA1C, HAGH, HIBCH, HNF4G, IGFBP3, ITGA5, LALBA, MYH2, OR10R2, OR10X1, OR1C1, OR2L8, OR4F5, OR4K1, OR5AU1, OR5M8, OR7G3, PDE4A, PECAM1, PER3, PIGQ, PIGV, PPA2, PPP1CB, PRKCD, RBL2, RELB, SELPLG, SMAD3, SOCS4, TLR9, TSHR, UROD, VDAC2, WASF2, ATP6VOA1, EIF4EBP1, MAP3K7IP2, MAPKAPK5
Negative_11245	AGK, MVK, AARS, ABCC8, ABLIM2, ACP2, AKR1C4, AOX1, APAF1, AXIN2, CAMK2B, CD86, CMAS, CTSB, CTSL1, CXCL11, CYP2D6, CYP3A43, DFFB, DLAT, EPB41L1, EPHA1, FGF12, GGT6, GNAI3, GOSR2, HTR6, IFNA21, ITGAV, JAG2, KCNQ1, LDHAL6A, LGMN, MAPK11, MYH8, MYLK3, NCF1, NEFH, NT5C2, OR1B1, OR2A4, OR2B6, OR3A1, OR52L1, OR5B21, OR6K3, P2RX6, PDE3B, PFAS, PGS1, PIPOX, PLA2G5, POLE3, PRKCE, PYCR2, RBL2, RFWD2, SETD7, SMARCA5, SMPD4, SPTAN1, SV2A, THBS4, TRDMT1, TRIP10, UGDH, UNC5D, UXS1, VAMP2, VANGL1, WEE1, YKT6, EIF4EBP1, MAPKAPK3, PAFAH1B3, PLA2G12A, PRICKLE1, SUV420H1, TNFRSF12A, TNFRSF13B

Negative_11246	AMH, CGA, TNC, ACACB, ADSSL1, AKR1C3, AMPD1, ARG2, ARRB1, ARSA, ASCC3, ATG3, ATP12A, ATP50, BLVRA, BMP5, C1QB, CASP6, CCL2, CCNH, CDO1, CMPK1, CNDP1, CRY2, CXCL1, DPM1, DUSP2, DUSP3, ENTPD1, FABP4, GALNT2, GAPDH, GCNT3, GNAS, GNRH1, HMGCS2, HRH2, ICAM3, IL15RA, IL6R, INHBA, JUND, MAGI3, MAP3K2, MAPK10, MCAT, MEF2C, MPDZ, MTHFD2, MYD88, MYH13, MYH8, NEUROG3, NFAT5, NODAL, NPAS2, NRG1, NTF3, OR10H2, OR13J1, OR1I1, OR2AG2, OR2B6, OR4X1, OR51Q1, OR52D1, OR52H1, OR6C74, P4HA1, PANK3, PDE6D, PDGFA, PGAM1, PIGF, PIK3C2A, PLAUR, PLCG1, POLR2L, PRKCB, PRKCI, PTCRA, PTGES2, RPN1, SMARCA2, SPTAN1, SULT1A4, TALDO1, TBL1XR1, TJP2, UGP2, UGT2B28, UROS, VAV1, PLA2G12B, PNLIPRP2
Negative_11247	C4B, CR2, FGG, HK2, HPD, LSS, ACTA1, ACVR2B, ADCY7, ALG11, CHEK1, CLCA2, CTBP2, CYFIP1, CYP2U1, EIF4B, ENTPD8, ERO1L, F11R, GMPR, GUK1, HMGCL, IFNA16, IGFBP3, IL15RA, IL23A, INPPL1, JUND, MGST1, NAGA, NCR3, NTSR1, ONECUT1, PFAS, PFN2, PIAS3, PLCB1, PTGIS, RPS6KA5, SEMA3E, SENP2, SMC1B, SPAM1, SUCLA2, TUBAL3, TUBB4, ULBP2, VEGFB, WNT1, ATP6VOA4, ATP6VOD1
Negative_11248	AGK, CR1, FGG, IHH, OSM, SDS, TPO, ALAS2, ALDH1A2, ALG11, ALG3, ANAPC10, B3GALT2, CCL5, CD59, CLCF1, CNTN1, CSNK2A2, DGAT2, DGKG, DLST, DPM1, DPM3, DPYS, EFN3, EPHB1, ERBB4, F11R, FUT5, GABARAP, GGT1, GMPR2, GSTK1, GTSE1, HMGCR, ITGA1, KIR2DL1, MAD2L2, MAOA, MAP4K3, NNMT, NUDT5, OPLAH, OR2H2, OR51B5, P2RX3, PAK4, PARVA, PDGFA, PFKP, PGAP1, PIGB, PIK3R2, PIK3R5, PLCD3, PORCN, PPCS, PYGL, RASGRP1, RDH16, SEMA3D, SKP1, SSH3, STX1B, SUFU, TGFB3, TLR2, TP53I3, TUBB4, TYK2, UGT2B10, WNT3A
Negative_11249	CGN, CSK, DCC, EPO, GPT, HK3, ITK, PDC, PLG, ACSL4, ACTN1, ACVR1, AKR1B1, AKR1D1, ALOX12B, ARPC1A, ARPC2, ATP2A1, BIRC2, C1QC, CACNG5, CCL16, CD3E, CKMT2, CLDN3, CYP1A1, CYP8B1, DDX47, DGAT2, FGF8, FMO3, FZD10, GABARAP, GRM5, GSTO2, GZMA, GZMB, HAO2, HES1, HMOX1, HTRA2, INPP5A, IRAK2, ITGAM, ITGB6, LAMB1, LGMN, LIPE, LIPF, LTB4R2, MAML2, MIOX, MLYCD, NLGN2, NPR1, NRG4, NUDT2, OR10A4, OR10K1, OR10K2, OR2L3, OR51G1, OR51T1, OR56B4, OR5M8, PDGFRB, PEMT, PLAU, PPM1D, PRKCD, PRSS1, PYGM, RXRB, SGPP2, SIAH1, SMAD9, SMURF1, SNW1, SOCS2, SOCS5, SQLE, TLR3, TMLHE, UCK1, VEGFA, B4GALNT1, MAPKAPK2, TNFRSF13B
Negative_11250	ABO, BAX, EBP, GNS, HK2, IL3, ILK, AADAC, ACSL5, ALDH7A1, ALOX12B, AMY2B, ASMT, B3GNT5, B4GALT2, CACNA1C, CALML3, CARD11, CCL8, CDC27, CLTC, COL4A6, CTNNA1, CYP2B6, DDX54, DHRS4, DIAPH1, E2F3, ENTPD6, FBP1, GAD2, GCDH, GDF6, GFPT1, GLS2, GNMT, GRIN2A, HLA-F, ICAM3, ICOS, IL18R1, IRAK2, JAK2, LIPA, MAML2, MCEE, MGAT1, MTHFS, MYH1, NLGN3, OR2A25, OR4K1, OR4M2, OR51D1, OR51I2, OR5B12, OR5J2, OR7A17, OR9Q2, ORC1L, P4HA3, PAK7, PDE4D, PFKFB4, PFKP, PIGT, PIP4K2C, PKMYT1, PLEKHA8, POLA2, POLR3D, PPARD, PRKAA2, PRKCB, PTGER3, RENBP, RFXANK, SETD1A, SLC25A4, SMURF1, STAT4, TAS2R14, TBL1XR1, TOLLIP, TPM3, UGCG, ULBP2, VAMP2, YWHAQ, ATP6V1E2, ATP6V1G2, HLA-DQB1, SERPINE1, ST6GALNAC3
Negative_11251	AK3, CDA, CFH, FGG, HPD, IL8, LPL, RFK, TNF, UBB, AACS, ABAT, ACAA2, ACSL4, ACSM1, AGPAT3, AKR1D1, ALOX15, BBOX1, BDKRB2, BLVRA, CCL20, CCL27, CCR2, CD44, CD48, CHRM5, CHRNA7, CTNNA2, CYP11B2, CYP1A2, DHRS3, DLAT, DTX3, EDNRA, EHMT1, ENPP6, EXTL1, FGF6, GNB3, GNRHR, GRIA3, GRIN2C, HDAC2, HNF4G, HSPA1B, IFNGR1, IL18RAP, IL19, IMPA2, INPP5A, IRS1, ITGA11, ITGB8, LDHB, LDHC, LDHD, LILRB3, MYH7, NQO1, NRG4, NRP1, OR10G7, OR10Q1, OR10R2, OR3A2, OR4K15, OR51B4, OR5A2, OR5L1, OR5T2, OR6C3, PDIA4, PFN1, PIGH, PIK3R4, PPAP2A, PPCDC, PPP2R5E, PPP3R2, PRKCD, PYCRI, SESN1, SMPD1, SRGAP1, STX2, TSHR, TUBB1, WBSR17, TNFRSF6B

Negative_11252	ADK, GK, MUT, ADH1B, ADIPOR1, ADRA1A, AHCY, AOC3, APOA5, ASAH1, ATP13A2, AVPR1A, BMP8B, CACNA1C, CAPN2, CCL1, CCNB3, CD14, CD80, CDC27, CDK2, CFL1, CFTR, CLDN18, CLDN20, CNGA4, COL4A2, CRLS1, CXCR5, CYP4F3, CYSLTR1, DCTD, DHDH, DHFR, EPRS, ETNK2, FMO1, GALK1, GALNT1, GANAB, G LUL, GZMB, HADHB, IL2RB, IQGAP1, KLK3, KLRC4, LFNG, LPAR1, LTBR, MAPK10, MAPK14, MAT2B, MYH13, NKD1, OR10AD1, OR10G2, OR13J1, OR14C36, OR4S1, OR52I2, OR52W1, OR56B4, OR5AS1, OR5H6, OR6Q1, OR8H1, PIGU, PLA2G2A, POLR2I, PPP2R5A, PPP3R2, PROC, PRSS2, PTCH1, RASGRF1, RDH12, RP N2, RPRM, SEMA7A, SLC27A1, SUCLG2, TGFB1, TLN1, TLR3, TYK2, UGT2B17, ULBP3, VAV2, SERPINE1
Negative_11253	FGB, FH, GPT, ME1, ZYX, ALDH2, APH1A, BMP4, CAPN2, CDH15, CLDN11, COL4A4, COX10, CPS1, CSH1, CTNND1, CXCR4, DBF4, DDX55, DHRS4, DUSP16, ENO1, EPB41L3, EPHA5, F2RL1, FGF10, FOSL1, FTMT, GAS1, ITGAV, MYH4, NCOR1, NODAL, NPAS2, OR10K2, OR1S2, OR2M5, OR2S2, OR3A3, OR4C15, OR4D5, OR51B6, OR5B21, OR5P2, OR6M1, OR8A1, OR9Q1, PHKB, PIGP, PIGS, PRKCG, P SPH, SARS2, SELL, SEMA3G, SLC25A4, SPTLC2, SSH3, TAS2R48, TJP2, TNFSF9, TUBB2C, YARS
Negative_11254	AMT, GP9, MVD, ACSS3, ACVR2B, AKR1C4, ALDH3A1, APAF1, ATIC, B4GALT4, BAIAP2, BCL10, C3orf10, CCL3, CCR7, CD46, CLDN4, CNTF, DPAGT1, DPM1, DUSP1, GSTM1, HDAC1, HYAL2, ITGAV, KDSR, LDHC, LEPR, LRP6, MAGI1, MAGI3, MASP2, MCM7, MDM4, NCAM2, NFKBIE, NKD1, NT5C2, NTN1, OGDHL, OR10T2, OR2A14, OR4S1, OR5M9, OR6C75, OR8D4, PANK1, PERP, PNPO, PPA1, PRKCA, PRKCZ, PRODH, RAPGEF1, RBKS, SEMA4F, SH2D1A, SPRY4, STX12, SUFU, PARGC1A, SERPINC1, TNFRSF10B
Negative_11255	C8G, F10, IVD, RFK, ACVR1B, ALDH3A2, ATP6V1F, B3GAT2, BACE1, BCKDHB, BDNF, CACNA1G, CCL13, CCL16, CCL21, CCL24, CD74, CHRM5, CXCL3, DDIT4, ERBB2, GARS, GLG1, GPD1, HGSNAT, HLA-DOB, HNMT, IGF1, IL22RA2, IL2RB, IRAK3, KYNU, LAMB3, LRP6, MAP2K2, MASP1, NARS2, NCR1, NFATC1, NOD1, OR4K14, OR51F1, OR6K3, OR6Q1, OR8K3, OR9G1, PI4KB, PIAS1, PIK3R3, PLCG2, PLTP, POLR2A, POLR3D, PPCDC, PSM E2, PTCH2, PTEN, RASGRP2, SEMA3B, SEMA4A, SETD1A, SFRP2, TAS2R41, THBD, TJP1, VAMP1, WHSC1, C1GALT1C1
Negative_11256	DCT, F7, FAH, PC, RPE, TEC, AADAC, AKR1C4, ALDH1B1, BLVRA, CASK, CHRM1, CLDN16, CLDN19, CXCL11, CXCL12, DDX4, DHODH, DLAT, DUSP14, ENTPD6, ENTPD7, EPRS, G6PD, GCLM, GLDC, GRAP2, HSD3B1, IFNA13, ITGA11, ITGA8, ITGB4, MAML2, MMP1, MTAP, NADSYN1, NFATC1, NME6, NRG1, NRXN2, OR51S1, PAK7, PARVB, PDE4B, PDE7B, PDXK, POLR1C, PRKCH, PTGES, SEPHS1, SIGLEC1, SMAD3, SRD5A2, STX4, TBK1, SERPING1
Negative_11257	ME2, TAT, TNN, ABI2, AGTR1, AOC3, B3GALT4, BLVRA, BMP7, CACNA1S, CAMK4, CANT1, CBLB, CCNB3, CD247, CD82, CHRM2, CLCA2, CSF2RB, CXCL10, CYP2U1, DDX19A, DDX47, DUSP16, ECSIT, ENTPD2, FGF22, GADD45A, GNAI1, GRM1, GSTA5, HA01, IARS2, IKBKB, IL8RA, INPP5E, INSRR, LAMB4, LAMC2, LTBR, MGAT4A, MTHFD1L, MYLK, NR1H3, OR10V1, OR4S2, PDGFB, PFKM, PIGH, PIGP, POLR3G, PPP2R2B, PRKAA1, PYGM, RAC3, RAD51, RIPK1, RPSA, SAT1, SMPD4, STX5, TGDS, VEGFC, VTI1B, WNT7B, PRICKLE1
Negative_11258	CR2, CSK, ID4, LAT, NNT, PAH, ACVR1C, ADCY1, AFMID, ALG6, ALOX15B, AMY2A, APLP1, ASRGL1, ATG12, ATP6V1A, BAIAP2, C4BPA, CACNA1E, CACNB4, CCL23, CD59, COL4A1, CREB3L1, CSF2RB, DERL1, DUSP16, DUSP4, EFNA4, ENO1, ENTPD6, ERBB4, F11R, FOSL1, GNAI1, GOSR2, GRM5, IFNA5, IFNGR1, IL10RA, IL13, IL1A, IL1R1, IL2RA, IL6R, IRS2, ITPA, LTB4R2, MAML1, MAP3K2, MYH11, NCF4, NCKAP1, NEU1, NFKB2, NR5A2, OR11A1, OR2T5, OR4D9, OR51T1, OR6K3, PDGFA, PIAS1, PLA2G4A, PPP1R3D, PRDX6, PRKAB1, PRKAG2, PRLR, PRPH2, RPS6KA3, SDHA, SENP2, SEPHS1, SFRP4, SRGAP1, TNFRSF8, TPMT, VNN1, WNT10B, CTNBP1, TNFRSF10B



Negative_11259	BCR, BTD, C2, INS, LEP, ARHGEF7, ATP5J, BBOX1, BCAT2, CASP10, CD44, CDK7, CIITA, CLDN20, CSF1R, ENPP2, FCGR2B, FECH, FUT4, GAD1, GAD2, GADD45B, GCH1, GCLC, GNB1, GRB2, HCCS, IL17RA, IL7R, INMT, ITGA2, LEPR, LIFR, MAPK9, MGST1, NLGN1, NMNAT2, NR1D1, NT5C3, OR10A2, OR10H4, OR1E1, OR2AE1, OR3A3, OR52H1, OR52I2, OR52W1, OR5V1, OR6N2, OR6Y1, PAX6, PDE7B, PDGFD, PIAS1, PIAS3, PIGV, PLA2G2F, PRIM1, PRKCA, RBPJL, RND1, RPS6KB2, SDHA, SELE, SMAD5, ST3GAL2, SUV39H2, TNFSF14, TUBB2C, UGT2B11, UPP2, YES1, GABARAPL1, MAP3K7IP1
Negative_11260	AMT, CFI, FAH, FOS, KDR, ACTG1, AKR1C1, ANGPTL4, AREG, ATF2, B3GAT2, BAAT, BACE2, BCAR1, BCL2, BMP2, C1GALT1, CACNA1F, CASP3, CASP8, CD244, CD46, CD70, CD80, CD86, CDC25A, CHKB, CISH, CLDN18, CLDN2, CNDP1, CP11C, CRHR1, CSNK2A1, CYP3A4, CYP4A11, DCXR, DHCR24, DHRS4, DOT1L, EFNA3, EFN2, ERBB4, GADD45G, GALNT3, GALNT8, GALNTL2, GGT7, HA01, HARS, HEMK1, IRS2, KIR2DL3, LDHA, LHCGR, LIPC, LYZL1, MAP2K4, MAPK11, MYH6, NEU4, NFKB2, NLGN3, OLAH, OR13F1, OR14C36, OR2B6, OR2V2, OR2Z1, OR4C6, OR4K17, OR6C75, PANK4, PAX4, PCYT1B, PLCB2, PPID, PPP5C, RPS6KA6, SCP2, SEMA3C, SOCS2, SPAM1, SPCS3, SPRY3, SREBF1, SSH2, TAS2R1, TCF7, TIRAP, TPH1, ULK2, XYL1, YARS2, HSP90AB1
Negative_11261	AK2, AR, C6, C8A, C8G, EDA, FST, NNT, NPY, TNF, ACADS, AKR1D1, ALDH1A3, ATP5G2, CASP9, CCL13, CCNG2, CCR10, CDC20, CDH1, CDK5, CHST11, CRB3, CXCR6, DRD2, EFNA2, FGF11, G6PC, GNAI3, GRM5, GSTA2, HTR2C, ITGAM, LR6, MAGI2, MAPK1, MAT1A, MGAT1, NAE1, NAGLU, NCF4, NEFM, OR10Q1, OR11L1, OR2L8, OR8D1, ORC5L, PAFAH2, PDE6H, PHGDH, PIGW, PIP5K1C, PLCB2, PLCE1, POLR2C, PON2, PPA2, SAT1, SEMA4F, SETD1B, SMPD3, SYNJ2, TFDP1, WNT5B, HLA-DPA1, ST6GALNAC5
Negative_11262	AR, IL8, LHB, MOS, SFN, TNN, VCL, ABLIM1, ABLIM2, ACOX2, ADORA2A, AGPAT1, ALDH1A2, ARPC5L, ASAH1, ATP5L, BCAT1, BDH1, CACNA1F, CCL20, CHRM1, CLDN16, CMPK1, COL4A4, COMT, COX10, CTNNA1, CTPS2, CYP27A1, CYP3A4, DHFR, FGFR1, GALT, GAMT, GARS, GCH1, GSTA5, INPP4B, IRF3, KLRC1, MAFA, MMP7, MTAP, MYL2, NAGLU, NOS3, OR10G3, OR12D3, OR2L13, OR4E2, OR51B5, OR52E8, OR6Y1, P4HA3, PANK1, PCK2, PDGFA, PFKFB3, PIAS1, PIM1, POLE, PRKCE, PROC, PTGES2, RDH10, SDC2, SMAD1, TACR3, THBS1, TRAF2, TUBA1B, UGDH, WASF3, WBSR22, CSGALNACT1, TNFRSF1B
Negative_11263	ADO, APP, CR1, LIF, MYC, SP1, ACVR2A, ANGPTL4, APH1A, ATP4B, BUB1B, CACNA1G, CBLC, CCL16, CCL21, CCL4, CDKN2B, CFL2, CHRM3, CLDN19, CLDN2, CNTNAP1, CTLA4, CTNNA1, CX3CL1, CYCS, CYP2C8, CYP3A5, DAPK1, DDX18, EPHB3, F13B, FARS2, FDPS, FGF10, FGF17, FGF20, FGF21, FGFR4, FOXA3, GALNT14, GANAB, GANC, GLUL, GRIA2, GSTM5, GUK1, HIP1, HSD3B7, IL1R1, IRS1, LEFTY2, MAGI1, MAML1, MAPK7, MEF2C, MGST3, MTMR6, MYLK, NT5C, NTF4, NUMBL, OR13C8, OR13H1, OR1C1, OR52B4, OR52E4, OR5B17, OR5M9, PAR6A, PIK3C2A, PIK3CG, PMAIP1, PMVK, POLR3D, POMC, PRKCH, PRKX, QPRT, RETSAT, RFX5, RPS6KA4, SEMA4F, SETDB1, SH2D1B, SRD5A1, ST6GAL1, TJP1, UNC5B, YOD1, ALDH18A1, EIF4EBP1, TNFRSF11B
Negative_11264	C2, F11, GPI, ITK, NPY, ACHE, ACOX2, ALPL, AOC3, ASAH1, BCL2, BET1L, CANT1, CLDN2, CLTC, CNTNAP1, CREBBP, DLL1, DNMT3B, DTX2, EPHX2, FGF11, GADD45G, GTSE1, HEXA, HIP1, IL6R, IRAK2, ITGAE, MAML2, MAPK3, MYH3, NMNAT3, NOD1, NOTCH2, OR2A25, OR4S1, OR5AC2, PDE4D, PDE5A, PFN1, PIM2, PLXNA2, PMM1, PON3, PPP1CB, PPP2R5E, PRKCA, RIPK1, RPRM, SEMA4G, SFRP2, SFRP4, SOCS4, SUCLA2, TAS2R5, THBS4, TLR3, TUBB6, WEE1, ATP6VOE1, PAFAH1B3

Negative_11265	A2M, C4B, RET, AASDH, ACSM3, ACVR1B, AGMAT, ALG10, B3GALT2, B4GALT3, BDH1, CARD11, CCL20, CCND2, CD40, CLDN18, CSDA, CYP26A1, DRD1, DUSP6, ENAH, ENO1, EPB41, ERBB3, FGF7, FMO1, FOSL1, GFAP, GGPS1, GRIN2C, GSTM4, GZMA, HNF1A, HSPA1B, IFNW1, IRS2, ITGB8, MAP4K2, MGAT5B, MGST3, NADSYN1, NRCAM, OR10G3, OR2A14, OR2C1, OR2H2, OR2M7, OR4C6, OR51D1, OR5K2, OR6Q1, OR7G3, PAICS, PIK3R1, PIM2, PNMT, PPP2R5B, PPP3CA, PPP3R2, PRKCA, PRKY, PRPH, PTGS2, SOS1, STAT6, STX1A, TAS1R2, TAS1R3, UGCGL1, YWHAE
Negative_11266	APP, ID2, IL7, NF1, NLK, ACACA, ACSL1, ACTN1, AGPAT3, AGPAT6, AKT2, ALG5, ALOX12B, ARHGEF6, C1GALT1, CACNA1I, CACNG5, CCL13, CDK6, CFLAR, CHD8, CISH, CMAS, COL1A2, CSNK1G3, CYP2C9, DCXR, DGAT1, DHRS4, DNMT3A, EPHA8, FBP1, FMO4, GYS2, HADHB, IFNA10, IKBKB, IL21, IL3RA, IRF7, ITGB1, LIPC, MAN1C1, MYL7, NOTCH3, OR10G8, OR10X1, OR11H6, OR13D1, OR2D2, OR2T1, OR51T1, OR5AU1, PARVG, PECAM1, PER3, PLCD1, PPP3CB, PRKG1, PSAT1, RARA, RBX1, RND1, RPS6, SELE, SMC1B, SORD, SPI1, TBL1X, THBS3, TICAM2, TNFSF14, UPP2, UROD, WASL, WNT6, YWHAE, ZAP70, ZIC2, HLA-DQB1, SUV420H1
Negative_11267	ACACA, ACTA1, ADCY10, ADRB3, ALG10B, ATP6V1A, B3GALT6, BCAT1, BDKRB2, CCL4, CCNG1, CD40, CD46, CDC14A, CHSY1, CYP2S1, DAPK2, DPYS, EHMT2, EPHB1, GFPT2, GNRH1, HIBADH, IDH3A, IL10, INHBE, IQGAP3, LARS, LRP5, MYH6, MYL5, NR1H3, NT5E, OR1L8, OR4C13, OR4N5, OR8I2, ORC5L, PAK7, PDE3B, PFN1, PGLS, PHKB, PHKG1, POLR2G, PPP2R2C, PRIM1, PTGDS, RAP1B, SKIV2L2, SLC2A4, SMAD7, SOCS1, ST3GAL3, STX1B, TOLLIP, TUBB2B, TYRP1, UGT8, UPP2, VAMP4, WBSCR22
Negative_11268	BCR, INS, AARS2, ACAD8, ACSM1, ACYP2, ALPI, APLP1, ARSD, ATP4A, ATP6V1D, BCAR1, BDH1, C4BPB, CACNG6, CALML6, CDS1, CHEK1, COQ6, CREB3L4, CSNK1D, CSNK2A2, DDOST, DDX55, FBP1, FGF3, FPGS, G6PD, GALNT6, GCLC, GT1, GOT1, GSTO1, GSTT1, HSD17B2, IL15RA, IL28A, IRAK3, KIR2DL3, LAMA4, LYPLA2, MBL2, MFNG, MTAP, NAT6, NFX1, NOX3, OR1L4, OR1N1, OR5P3, OR6N1, OXTR, PDE4B, PKLR, PLAUR, PPCDC, PSEN1, PSEN2, PTPN5, RHOQ, SEMA3A, SLC25A5, SOX17, SPTLC2, STAT5A, TICAM2, TKTL1, UGT8, VCAM1, VEGFB, WNT9A, KIR2DL5A, ST6GALNAC4, TNFRSF13C
Negative_11269	AK3, AK5, CR2, FGG, HK2, SRM, ABL2, ACAA1, ACTN1, APOA5, BIRC2, CD70, CDS2, CLDN14, CRY1, CSF2, CYCS, E2F2, EARS2, EPOR, FCGR2B, FMO2, FPGT, FZD1, FZD10, GNA13, GOSR2, GRIA2, GRM5, HLA-DMA, HLCS, HSD3B7, IKBKG, IL18R1, IL25, IL5RA, INPP5B, IRF5, ITGB5, KIR2DL4, LALBA, LIPE, NANP, NANS, NCF2, NFATC1, NMNAT3, NUDT12, OR2C1, OR52E8, OR52N5, OR8D4, P4HA1, PDHA1, PFKFB1, POLR1C, POLR2B, PTPRC, RRM1, SMAD5, SOX17, SPTLC1, STEAP3, TBL1Y, TP53, TPH2, TSNARE1, UPR1, VANGL2, VASP, YOD1, ATP6V1E1, GABARAPL2, HLA-DRB5, MAP3K7IP2
Negative_11270	FOS, IVD, NGF, ABLIM3, ACADSB, ACSM1, ACSS3, ACVR2A, ALDH5A1, ALG2, ANAPC1, AOC2, ARHGEF4, ARPC1A, BMP6, CALML5, CAMKK1, CD44, CD72, CDKN1A, CYP2A7, DARS2, DCTD, EPHB2, F13B, FCER1G, FGF1, FOXA2, GDE1, GRLF1, HIP1, IL18RAP, IL20, IL8RB, ITGA2, KIR2DS4, LAMC1, LLGL1, LYPLA1, MAP2K4, MYL7, NFKBIA, NKX2-2, NRCAM, NUMBL, OR10T2, OR11L1, OR1J2, OR51B2, PFKFB4, PIGQ, PNPLA4, PPARA, PPM1D, PPP1R3D, PRKACB, PTPRZ1, RAF1, RASGRP2, SDHD, SGMS1, SIAH1, SIGLEC1, SNAP25, SOCS4, STX10, STX16, SULT2A1, TAS2R10, TNFRSF4, UCP1, ULBP1, WNT3A, WNT9B, XCR1, SERPINB5

Negative_11271	ADA, BTB, C8G, C9, MSN, OTC, ACACA, ACOX1, ADCY10, AGPAT6, ANPEP, APOC3, ATP6AP1, BDKRB2, BMPR1B, BPNT1, CCL15, CCL17, CCND2, CD8A, CHIA, CHPF, CHPT1, CHRM2, CIITA, CMBL, CPT2, DDIT4, DGKE, DIAPH1, DNMT3L, EPB41, FCGR3A, FGF13, FGF4, GIT1, GMPPB, GNG13, GSTO1, GUCA1B, IL10RB, IL12RB2, LRP5, MAGI1, MAP3K14, MAP3K8, MGST3, NCF2, NEU3, NT5C1A, OR10A4, OR13C4, OR2A12, OR52I1, OR9K2, PANK4, PFKFB3, PIK3R3, PLCB2, P OLR3G, PTGS1, RAB23, RAC1, RDH11, SDHB, SDHC, SETD7, SMPD4, TALDO1, T AS2R3, TSHB, UGCGL1, XCL1, YOD1, ATP6VOD2, HLA-DPB1, PNLIPRP2, SUV420H1
Negative_11272	IL4, ILK, IVD, ACADVL, ACSL3, ADIPOQ, ARPC4, ASIP, ATP5H, B3GALT1, BB C3, CAMKK1, CDKN2A, CHKA, CHST13, COL1A2, COQ5, COX10, COX15, DKK2, D PM1, E2F1, ELK1, EPB41L3, F2RL3, FTH1, GNA12, ICOSLG, IL15, KLRC2, LA LBA, MAFA, MAGI3, NADSYN1, NAGK, NFYA, NT5C1B, OR1J2, OR2AT4, OR4D6, OR6C2, OR6F1, PAK7, PFKFB3, PHKG1, PI4KB, PLK1, PLOD2, POLE2, POLR3D , PPP1R3A, PTGES2, RAB23, SEMA3G, SEMA4B, SIAH1, ST6GAL1, TLR3, TNXB , WNT9A, YWHAE
Negative_11273	BID, C6, GCK, GK2, INS, MVD, MYC, ACAT2, ALDH3B1, ALG9, ALPPL2, ANAPC1 0, ANPEP, ARPC1B, BMP4, CACNB3, CACNG4, CASP7, CCR3, CD244, CD3E, CDK 5, CDKN1A, CKMT2, COQ6, CTNNA1, CUL1, CYP1B1, EVI1, FGF19, FMO3, FZD7 , GALNT10, GAS1, GLI2, GNRH1, GUCY2F, HLCS, HSD3B1, IL22RA1, IL2RB, I NSR, LCMT2, LGMN, LIFR, LIPF, MAGI2, MAPK9, MGAT1, MYH9, MYLK2, NANP, NEU2, NME2, NMNAT2, NMNAT3, OR2A25, OR2D3, OR4F15, OR52B4, OR5K2, OR 8K5, PANK4, PDGFB, PER1, PFAS, PIAS3, PLA2G10, PLA2G1B, PLCD1, POLD3 , POLD4, POLR1D, POLR2L, PRKAB1, PRKCD, PROS1, PRPS1, PTK2, RAB23, RD H8, SDC2, SIGLEC1, SPTLC1, ST3GAL4, STX7, WIF1, WNT2B, XCL1, ATP6V1E 2, HLA-DRB4, KIR2DL5A, MAP3K7IP2
Negative_11274	AK5, AUH, CKM, F2R, JUN, MPL, PXN, TH, TNN, ACAT2, BBC3, BMP4, CCKAR, CC L22, CD38, CDC45L, CHIT1, CNTNAP1, COASY, COQ6, CYP8B1, DDIT3, EPHA7 , ETNK2, FUT5, G6PD, GNA13, HA02, HIF1A, IDI2, IDUA, IFT57, IRF7, KARS , MAP4K2, NCAM1, OR2T4, OR4K1, OR4K17, OR51A2, OR5H6, ORC2L, PARD6A, PLA2G4A, RAD51, RPS6KA4, SEMA4C, SOCS4, SORBS1, SPHK2, SSH3, TYRP1, VAMP4
Negative_11275	AK7, C4B, C7, C8A, DHH, LSS, NNT, OGT, XDH, ABCC8, ABLIM2, ACTN1, ADRB2 , ALDH1A2, AMD1, ANAPC5, AOC3, APBB1, ARG2, AVPR1B, BMP5, C7orf16, CA NT1, CCR8, CD59, CHPT1, CIITA, CLDN15, CREB3L1, CREB3L3, CX3CL1, CYP 26A1, CYP2E1, DEGS1, DERA, EIF4E, ENTPD1, ENTPD6, ETNK1, ETS1, FGF8, GALT, GAMT, GNAZ, GPD2, HLA-DOB, IAPP, ITCH, ITGB5, KITLG, MAOB, MAP3K12, MAP3K13, MAPT, NOTCH1, OR13F1, OR4D6, OR51Q1, OR5A2, OR5D13, OR6K2, OR6N2, ORC4L, PARD6G, P DE1A, PDXP, PIAS1, PIAS4, PIGB, PIGP, PPARA, PPCDC, PPP2R5E, PPP5C, R FXANK, RPS6KA1, RRM2, RUNX1, SETDB2, SLC2A2, SMAD1, TBL1XR1, TNFSF1 1, TRPM5, UGDH, WNT1, ZMAT3, ST6GALNAC4, SUV420H2, TNFSF13B
Negative_11276	ADA, BTB, DBI, GHR, PGP, PTS, ACACB, ACADS, ACOX2, ACSM1, ACSM4, ADORA 2A, ADSSL1, AHCYL2, ATP5J, B3GALT5, BDH1, BLVRA, BMP8B, CALML5, CASP 10, CCL5, CCL8, CCND1, CD3E, CDH5, CDS2, COX15, DUSP1, EPHX2, GAMT, GN AI1, GUCY1A2, HLA-DMA, IDH3B, IL18RAP, INHBC, IQGAP2, IRS4, ITGB8, KDSR, LAMB2, MAPK10 , NAE1, NANP, NCSTN, NKX2-2, OR1L1, OR4C16, OR5AR1, OR5K2, OR6C2, OR8J1, PANK4, PFN3, PGK1, PIG O, PIGU, PLCG2, PRSS1, PTK2B, RALBP1, RBPJL, SEMA7A, SHMT1, SIAH1, SN AI2, SOX17, SPTLC2, ST3GAL3, TLR9, TRADD, TUBA1B, TUBB2B, UGT2B17, U GT2B7, VCAM1, AASDHPPT

Negative_11277	F12, ID1, ME3, NLK, PTS, RPE, TYR, ABCC8, ADORA2A, ALPL, AMD1, ANAPC2, APOC3, ATN1, ATP6V1A, B3GNT4, CACNA1F, CACNG5, CD38, CTNNA1, CYP2C9, DLL1, ENPP6, EPHA7, ETS1, FMO1, FUT8, GLUD2, GPLD1, GRPR, GSTP1, GUSB, HLCS, HSD3B2, ICOSLG, IDH3A, IFNA5, IL13RA2, KLRK1, MAOA, MMP1, NCAM1, NFKB2, NT5C1A, OR2G2, OR2T29, OR3A1, OR4D1, OR4D2, OR4K17, OR4N5, OR4X1, OXSM, PANK2, PARD6G, PFN1, PGLS, PIGP, POLE4, POLR2K, PRDX6, PRKAR1A, PRKAR1B, PRKCG, PRKCI, RAPGEF2, RPE65, SEMA3A, SGMS1, SMA D9, STEAP3, STX8, TAS2R1, TAS2R4, TBL1X, TGFBR1, TIAM2, TRADD, TUBB2C, SERPINC1
Negative_11278	AK2, CAT, EPO, ID2, ABAT, ACACA, ACSM1, ADCY2, AOX1, ASCC3, AXIN1, CAV1, CCL17, CCL21, CD244, CD79A, CDKN2D, CLOCK, CNGA4, CYP2F1, DAXX, DFB, DGKG, DNMT3L, DPM3, DVL3, EIF4B, EPAS1, EPHB1, FGF9, FMO1, FZD8, GNG13, GRB2, HMGCS1, HYAL2, IL11, ITGA4, MARS2, NEFH, NR5A2, NSD1, OGDHL, OR2T10, OR5J2, OR6F1, OR6K3, PHGDH, PLCD4, PTPN1, RAC2, RASGRP1, RHOQ, SHC3, SMC1A, SOCS5, STAT1, TACR2, TAS2R13, WNT6, ZMAT3
Negative_11279	AK3, AK7, F12, FGA, ACTN2, AHCY, ALCAM, ALPP, AMPD3, ATP2A3, BCAT2, CCL7, CCND1, CCR7, CD27, CD72, CDC14B, CLDN18, CLDN5, CYP4A22, DHRS4L2, DNMT3B, DPYD, EHMT2, ENO2, EPHX2, FABP3, FZD4, GAL3ST1, GALNTL4, GB A3, GYS2, HNF1B, IDI2, IDUA, IFNG, IGSF5, MAP4K1, MCCC2, MTMR6, NAGA, NFX1, NLGN1, OR1F1, OR2Z1, OR4A16, OR4S1, OR52W1, ORC6L, PAFAH2, PARVA, PEMT, PGM3, PHKA2, PIAS3, PLA2G10, PLCB1, PLOD2, POLD4, POLR2C, POLR2J, PON2, PPM1B, PRKX, PTGER3, RALA, SDHC, SMURF1, TNFSF14, UNC5B, VDAC2, WNT2, WNT8B, ALDH18A1, MAPKAPK5
Negative_11280	F5, FGG, IL2, TAT, ANAPC11, AOC2, CCL2, CCR2, CD99, CTNNA2, CXCR5, CYP2C8, CYP3A5, DDB2, DOT1L, DPYS, DTX2, DUSP1, DUSP4, FTMT, FZD6, GALNT13, GALNT7, GAS1, GSTP1, HBEGF, HLA-DOB, HSPA1B, IL23A, IMPDH1, INMT, KLK3, LTA4H, MAP3K8, MTHFD1L, NPAS2, OR10AD1, OR2A14, OR2A25, OR4E2, OR4K1, OR51I2, PHKG2, PIGX, PIP4K2A, PITX2, PMVK, PRKAA2, PRKCI, PRPH2, RHOA, SEMA4D, SPAM1, STAT6, STK11, STX7, TSNARE1, TUBB2B, WHSC1, YARS, HSP90AB1, TNFRSF6B
Negative_11281	ADO, CFD, IDS, MPL, SFN, SYK, AANAT, AARS, ACSS2, ACTN4, ADH5, ADSSL1, AGXT, ALDH4A1, ALG3, ALG8, AOC2, APRT, ATP2A1, BAAT, CALML6, CCL23, CCR9, CD99, CLCA2, CLDN20, CRLS1, CSNK1E, CTBP2, DUSP14, ENPP3, FRAP1, GALNS, GDE1, GUSB, HHEX, HSPB1, IL6R, ITGA8, ITPKB, KCNB1, LALBA, LIAS, LLGL1, MAPK8, NAGS, NCKAP1, OR10G8, OR10J1, OR6F1, OR8D4, OR9Q1, PCYT2, PDE4C, PLA2G1B, PRKAA2, SCD5, SEMA3E, SRGAP1, ST8SIA5, STX5, TAS2R3, TLR2, TLR4, UCK1, VEGFC, XYLT2, ZBTB16, ARHGEF12, ATP6V1B2, TNFSF13B
Negative_11282	CTH, F7, GGH, LCK, LCT, MAX, PAH, PLG, ACPT, ACTN2, ADCY8, ADH1B, ALDH3A1, ALPPL2, APAF1, APC2, AREG, CASP3, CD14, COX15, CYFIP2, CYP1B1, CYP2A7, DAG1, DIAPH3, DUSP2, DUSP6, DVL2, EARS2, FARP2, FBP2, FGF8, FOSL1, GUCA1C, HGSNAT, IBSP, IL12A, IL4R, IQGAP1, IRS1, ISYNA1, ITGAD, JAG1, JAM2, LAMB2, LDHA, LFNG, LRDD, MAP2K7, MGAT5, NODAL, OR10Q1, OR13F1, OR52E8, OR5F1, OR5T2, PDE1C, PDE4A, PDHA1, PIK3CA, PLA2G1B, PLAT, PNPLA4, POLR3H, PPP2CB, PRKCZ, PTGS2, SDHA, SHC2, TBL1X, UGT2B4, UNC5C, EIF4EBP1

Negative_11283	CBL, GLA, HGD, MAG, PML, RET, ACO2, ACTG2, ACVR1B, ADAM10, ALPPL2, AMH R2, ARHGEF4, ARPC2, ATP2A2, ATP5D, BAAT, BCL2L1, CCL27, CCL4, CCNB2, CCNB3, CD36, CDKN1C, CNTN2, COL2A1, CYP1A2, EHMT1, EHMT2, EI24, EPHA 4, EPHB4, FOXO3, FZR1, GAS1, GGT1, GSTA1, GZMB, HSD17B4, IARS2, IL25, IL5RA, IL6R, INPPL1, KDSR, KITLG, LDHC, MAP2K4, MAP3K14, MGST2, NARS 2, NCR3, NOX1, NRG2, ODC1, OR10H3, OR2Y1, OR4K5, OR51I2, OR52N1, OR52 R1, OR56A1, OR6K2, OR6Q1, OR7A5, OR8J3, PARVB, PDK1, PHKA1, PHKG1, PP P1CA, PPP2R5E, PTK2, PVRL2, RALB, RAPGEF3, RPS6KA2, SELE, SGPP1, SHC 4, SMAD1, ST3GAL1, THY1, UBE2K, UGT2B17, USE1, VKORC1, PLA2G12A
Negative_11284	ADK, EDA, F5, GDA, RPE, ACP5, ACTC1, ACYP1, ADIPOQ, APBB1, ATP5J2, ATP 6AP1, BMP7, CACNB3, CARS2, CBR1, CD80, CDC23, CDC6, COL5A2, EFNA4, EP HB6, F13B, FADD, FGF17, FSHB, G6PC, GART, GGT1, GPD1L, HLA- DMA, HSD11B1, IL21, KLKB1, KRAS, MAPK3, NAGS, NKX2- 2, NLGN1, OCRL, ODC1, OR10A3, OR10AG1, OR10C1, OR1C1, OR1E1, OR4C11, OR4C16, OR4D2, OR6C74, OR7A17, OR8K1, PAK6, PANK1, PDE3A, PDE6G, PER 2, PPID, PRKCE, PRKCZ, PTPRF, PYCR2, RBPJ, RPRM, RPS6KB1, SDC4, SH2D2 A, SORBS1, SORD, SSH3, ST3GAL4, TAS1R2, WNT3, ST6GALNAC1
Negative_11285	ADA, CP, CTH, FAH, ID1, IL7, KIT, ACVRL1, ADRBK2, ALDH1A1, CDH4, CHIT1 , CIITA, CYP11B1, DGKB, DLL4, EGLN3, ENTPD6, EPHA8, FGF10, FZD5, GCLC , GNA15, GOT2, GSTA4, HAAO, HAGHL, KAT2B, KCNB1, KLK3, KLKB1, LTBP1, M AP4K1, MYLK3, NCOA4, OR10H2, OR1F1, OR1J2, OR2AG1, OR2T12, OR4C16, O R51I2, OR5B17, OR8B8, OR9K2, PDHB, PER1, PHKB, PSME2, RALA, RDH11, RE LA, SLIT1, SMAD4, STX7, TNFSF9, MAP3K7IP2, SERPINC1, SERPINE1
Negative_11286	AMH, DHH, GSS, NF1, AASS, ADRA1A, ALG6, ARPC3, ATF4, ATP5C1, ATP5D, AT P5G2, ATP6V1A, BCMO1, CACNA1E, CAMK2B, CAMK4, CCL5, CCNE2, CFTR, COA SY, CREB1, CTSS, CUL1, CXCR4, CYSLTR2, DCXR, DDX47, DEGS1, DGUOK, DIA PH2, DKK4, DPM2, EGFR, ENPP7, ETS1, FZD10, GALNT1, GPAA1, GRIA2, GRM1 , HEMK1, HSPA1B, IFNA16, INSRR, KCNB1, MAP3K6, MAP3K8, MCM2, MGST1, M OV10L1, NAE1, NAT5, NCKAP1, NFYB, NUDT5, OR10P1, OR1E2, OR51A7, OR51 S1, OR5F1, OR7A10, OR7G1, OR8J3, PANK1, PDE3A, PDXP, PI4KB, PIGK, PPP 2R1B, PPP2R2D, PPP5C, PRKCA, PRKCD, PRKG1, PRODH2, PYCR1, RFWD2, RPS 6KA3, SEMA3A, SETD7, SH2D2A, SIPA1, SMAD1, SUCLA2, SUV39H2, TACR1, T DO2, THTPA, UGT2B17, WNT10B, WNT5A, YWHAH
Negative_11287	DDC, HK2, AACS, ACADSB, AGXT2, ALG8, AMPD1, ASIP, CACNG4, CDC14B, CLD N17, CXCL10, CYP2D6, DDX52, DEGS1, DGKE, DPYSL2, ENO1, EPHB1, FGF10, FGF7, FUT9, GALNT14, HIF1A, HNF4A, IARS, INPP5E, IRAK1, ITGAL, MAP3K 6, MTHFD1L, NKX6- 1, NRG4, NTF4, OR13H1, OR1E2, PANK3, PERP, PLXNC1, PTPRM, RASGRP2, SI GLEC1, SMPD4, SMURF1, TAS1R3, UNC5B, ATP6VOD1, CACNA2D3, MAPK8IP2, TNFRSF10A
Negative_11288	ADO, ID4, LEP, MAG, PAH, ACY1, AK3L1, AKT1, ALOX5, ASMT, C1QB, CCR1, CD H1, CRY1, CXCR5, DDX52, DERL1, EHHADH, EPHX2, FGF8, FZD7, GARS, GFAP, GGT6, IDI2, IFNA2, IGF1R, IPMK, KIR2DS4, LFNG, MAN1A1, NCOR1, NFKBIA , NT5C1B, OR10A4, OR10G7, OR4A15, OR4D6, OR4K15, OR4N5, OR51I2, OR5A N1, OR9Q2, P2RX3, PFKL, PHGDH, PISD, PLOD1, PPARA, PRSS2, PTGFR, RBPJ L, RXRA, SFRP1, SHC1, TAS2R41, TD02, TLN2, TRPC1, UGT2A1, VAV1, WNT8B , CTNNBIP1, MAPKAPK5

Negative_11289	ADC, AK5, DUT, FAS, FN1, MPL, PLN, AASDH, ABL1, ACHE, ADCY2, ADH6, ADSS, AKR1B1, ALDH2, ARG1, ATP5B, BDH1, CACNA1G, CAV3, CCKBR, CCL7, CLTCL1, COL4A6, CSNK1E, DDX4, DDX54, DDX55, DHRS3, DNMT3B, DRD2, EPHA1, F11R, FARS2, FBP2, FGF11, FGF7, FIGF, FUT1, GNPDA2, GP1BA, GPX5, GRAP2, GZMB, HEXA, HMGCL, HTRA2, IFNAR1, IGF1, IL10RA, IL1R2, IL28RA, IRS4, ITCH, KIR3DL3, MAP2K2, MAP2K6, MYH13, MYL9, NEUROG3, NUMBL, OPLAH, OR11H6, OR11L1, OR1N1, OR2B2, OR2M7, OR5AP2, OR5B17, OR5H2, P2RX6, PARD6A, PARD6B, PCK2, PDE7B, PLA2G2F, PON1, PPM1B, PRKCB, PTEN, RRAS2, SDHA, SGPP1, SHC3, SLC2A2, SOAT1, SOS2, STX4, SUV39H1, SYNJ1, TNFSF18, TPI1, VAV2, B3GALNT1, ST6GALNAC4
Negative_11290	AK3, CDA, FUK, SFN, TAT, WAS, ACOX3, ALAS1, ALDH3A1, AMHR2, ARHGEF2, ATN1, AVPR1B, BMP5, CACNA1G, CASP7, CD244, CD47, CD99, CHST12, CKS1B, CNTFR, CPOX, CSNK1E, CXCR3, CYP1A2, DBF4, DGKE, EFNA2, EGLN1, FGF3, GATM, GGT6, GNAI3, GNMT, GRIA3, GSTO2, H6PD, HA01, HSD17B2, IL12B, IL15RA, IL24, ITGA8, LDHC, LLGL2, MAGI1, MALT1, MASP2, MCEE, MDH1, MS4A2, MYH10, MYH6, NAGA, NEFL, NEU4, NFASC, NRG1, OR10P1, OR1J2, OR1S1, OR2AG2, OR4C15, OR56A3, OR5AU1, OR8U1, OR9K2, PDGFD, PGS1, PIK3R4, PITX2, PLA2G1B, PLCG1, POLD2, PRIM1, PRSS2, PTCRA, RASGRP1, RGS3, SHC1, SMAD5, STAT6, STK36, SV2A, TAS2R13, TAS2R16, TAS2R41, TAS2R50, TSTA3, WNT5B, WNT9B, XCL1, YKT6, CSGALNACT2, HLA-DPA1, SERPING1
Negative_11291	GNS, GSS, WAS, ABL2, AKT3, ALPP, ANAPC10, C9orf95, CACNA1I, CCL5, CCR3, CHDH, CLDN10, CLDN20, CRKL, CXCR6, DAG1, FGF3, FZD6, FZD8, GAD2, GALNS, GDF5, GNRH1, IL18R1, IRF9, ITGB4, LTB4R2, MYH7, NADSYN1, NAGA, NAMPT, OR10A2, PARD6B, PDE1B, PIK3R4, PIM1, PLCD4, PRSS1, PSME3, PSPH, PTPRC, RPIA, SELPLG, SHC4, SULT2B1, TGDS, TUBA4A, UCK1, VAMP1, WNT11, ATP6V1G2
Negative_11292	AK5, F10, IL6, ITK, ACP1, ADH1B, AFMID, AGTR1, ALS2, ATP5A1, CACNA1B, CACNA1S, CAV1, CD38, CD3E, CD82, CDC14A, CDC45L, CSNK1G1, DAPK1, DGKB, DNMT3L, DRD2, DUSP8, ECHS1, FGD3, GSTO2, HCCS, HMOX1, IFT57, IL28A, IRS4, LAMB3, LEF1, MAFA, MAPK13, MDH1, MGAT4A, MYLK3, NCF4, NFKB1, NRCAM, OR10H5, OR1OS1, OR13C2, OR13C4, OR2M4, OR4F4, OR52B4, OR52I1, PCCA, PGM1, PLXNB1, POLR2C, PPP1R3A, PPP2R5B, PTCH1, RBL1, RDH5, RXRA, SDHC, SEMA3F, TAS2R60, TNFRSF8, TNFSF14, TOLLIP, TPI1, UBE2L6, CACNA2D1, PRICKLE2
Negative_11293	F8, GBA, IL8, AKR1A1, CD226, CD58, CDKN1C, CDKN2D, CNTN1, CRKL, CSF3, CSNK1G3, DGKQ, EDA2R, EIF4E, EPHX2, FM04, FRAT1, FZD5, FZD9, HHIP, IL11RA, IL12B, IL23A, KIR2DL4, LLGL1, LM07, MAP2K3, NEFM, NEGR1, OR10K1, OR11L1, OR1S2, OR2A2, OR5AP2, OR5AS1, OR9I1, OR9Q2, OXCT2, P4HA1, PANK1, PCK1, PFKFB3, PHGDH, PHKG1, PLA2G3, PLXNC1, PRIM1, PRKAA2, RRAS, SLIT1, SMAD7, SMPD4, SPHK1, ST3GAL2, TAS2R1, TAS2R41, TGFB2, TM7SF2, TPM3, WNT3A, GABARAPL2, MAPKAPK5
Negative_11294	FH, GBA, GK, GP5, GPI, LHB, RET, VTN, AREG, ARHGEF4, ARSB, ATP2A3, ATP4A, BIRC2, C1QB, C4BPB, CD14, CD44, CLDN11, CLDN19, CMPK2, CNTN2, COQ6, CREB3L2, CREB3L4, CYP2S1, CYP3A43, DKK1, E2F1, EARS2, FM01, GALNT1, GNAT3, GPD1, GTSE1, GUCY2D, HLA-DOB, HTR2A, IMPA1, INPPL1, KIR3DL1, MPST, NADK, NCR1, NFKB1, NFKBIB, NLGN3, NOTCH3, OR1E1, OR4C11, OR4C13, OR4C16, OR4E2, OR4X2, OR5AP2, OR5L1, OR8K1, PDXP, PLCD3, POLR2D, PPP1CB, PPP2R1B, PRKAB2, PTPN11, RASGRP3, RBL1, RXRG, SEMA4G, SH3BP2, SMPD3, THBS2, TNXB, TOMM40, TRDMT1, TUBB3, VDAC3, ATP6V1C2, TNFRSF10A

Negative_11295	DBI, HAL, ID3, KMO, OTC, TNC, ACSL3, ACTG2, ALDH9A1, ALG13, ALG5, ATP5H, B3GAT2, C9orf95, CACNA1D, CCKAR, CCR3, CDC14A, CDH5, CES2, CHRM3, CHRM5, CRY1, CYP2C18, CYP4F3, DDX52, EPB41, EPB41L3, EPHB1, ERBB4, EVI1, FOXA2, GALNT14, GALNT5, GSTO2, HLA-G, IDUA, IFT57, IKBKG, IL10RA, IL10RB, LLGL1, MYL7, NFKB1, OR13F1, OR2M3, OR2T1, OR5K2, OR8B4, OR8K1, PARD3, PLCB1, PLCB3, POLR2A, PPP2R5B, PTPN6, SC4MOL, SHC4, TAS2R41, TPM3, UNC5C, MAPK8IP1
Negative_11296	CFI, ITK, ABLIM2, ACAA1, ACP6, ARHGEF7, ASAH1, B3GAT1, CD48, CDK5, CE BPA, CXCL1, EGLN3, EPHB6, EXTL2, F2RL1, FDFT1, FGFR3, FLOT1, FUT3, FUT9, GAMT, GFPT2, GNPDA1, GUCY2D, IL19, INPP4B, MCM4, MGAT2, MGAT5B, M INPP1, MYH1, NOX1, OR10H4, OR13G1, OR1A1, OR2G6, OR2L2, OR52H1, OR5J2, OR6C3, OR6T1, OR8A1, PARVA, PDK1, PFKFB1, PPP1CB, PTPRM, RBPJL, RPS6KA4, SARS2, SDC2, STAT4, SV2B, TPH1, TPI1, WARS, C1GALT1C1, CACNA2D4, HLA-DPA1, HLA-DPB1
Negative_11297	MAG, ACTC1, ADCY3, AKR1C2, APOA2, BCAT1, BMP8A, CACNA1A, CNGA4, CRLF2, DAPK2, DHRS4L2, ETNK1, FGF23, FUT4, FZD2, GPAM, GSK3B, GSTA4, GSTA5, HCCS, HSD17B7, HSP90B1, IGF1, ITGA2B, KCNQ1, LCMT2, MAP4K3, NLGN1, OR10A7, OR2A12, OR4N4, OR51L1, OR5K1, OR8H3, ORC6L, P2RX1, PIGP, PPKCDC, PTK2, RALB, RERE, RPS6KA1, SDC3, SEMA3E, SPRED1, STK3, TUBA1C, WNT8B, CTNNBIP1
Negative_11298	BAD, BID, CBL, CKM, F10, IL5, IL7, TH, UBB, ALS2, ATP4B, CCNE2, CTNNA1, DNMT3A, DTX3, EFNA2, FGF21, FMO3, GALNT1, GRIN2B, HIBADH, HSD17B2, IFT57, IL12B, KLRD1, KRAS, MS4A2, MTRM6, NCAM1, NMNAT3, OR11H6, OR1B1, OR1D5, OR1F1, OR2M2, OR2T33, OR51F2, P2RX3, PAK1, PDE8B, PGAM1, PIAS1, PLCB3, PNMT, POLR1C, PORCN, PPP2R5A, PTK2, SCP2, SETDB1, SLC27A4, SNW1, STK3, STX8, TAS2R38, TAS2R7, TAS2R9, TJP3, TNFRSF9, VAMP4, WASSL, ATP6V1C1
Negative_11299	C9, FH, GSR, HYI, LCT, RFK, ALG13, ASPA, ATP6V1A, BDH2, BMP7, CACNB1, CAMK2A, CAMK2B, CASP8, CCND2, CHRNA7, CPS1, CSNK1G3, CXCL13, CXCR3, DUSP2, EFNA1, FRAT1, FZD2, GGT1, GSTO1, HAGH, ITGA11, LDHC, NANS, NKD1, ODC1, OR1K1, OR2G3, OR2Z1, OR4S1, OR51A7, OR52E2, OR52E4, OR5B3, PDE4B, PFKM, PIGH, PLIN, RASA2, SHISA5, SRGAP1, TGFBR1, UGP2, ULK3, PNLIPRP1
Negative_11300	C3, DCN, F12, HK1, MET, MPL, ACMSD, ADH6, ADH7, ADORA2A, ALDH1A1, ALDH3A1, ALDH3B2, ANAPC5, AOX1, APAF1, ARHGEF6, ARSE, AXIN1, BBOX1, BST1, CACNB1, CAMK2D, CCNA1, CCR3, CD27, CD34, CD40, CDC16, CMAS, CMPK1, CREB3, CSF1, CYP2B6, CYP4F3, DBF4, DVL3, F11R, F2RL1, ITGA8, KIR3DL1, LLGL2, MAGI3, MCM5, NAGA, NFATC4, NRXN2, NT5C1B, OR1A1, OR1B1, OR2A12, OR2B2, OR2G3, OR4E2, OR51A2, OR52H1, OR5B17, PFAS, PIPOX, PPP2CB, PPP2R1A, PTGER1, RASA1, RASGRP2, RBPJ, ROBO1, TNFSF14, TSC2, UGP2, UGT2A1, VNN1, PLA2G12A, SERPINE1
Negative_11301	AK7, KHK, SYK, TYR, ABI2, ACPP, ADCY4, ALDH4A1, ATP12A, ATP5D, B3GALT6, CADM3, CASP7, CAV2, CBLC, CDH3, CDK6, CFTR, CISH, CLDN9, CNDP1, COL11A1, CXCL6, CXCL9, CYP3A4, DHDH, DUSP10, E2F5, EGFR, ENPP6, ENTPD3, FLT1, GANC, GLUL, GNAS, GOT2, GPX5, GRM5, GSK3B, GSTM5, HIBADH, HMOX2, IL1B, LDHD, MAPK10, MGAT5, OR10A4, OR10Z1, OR2T10, OR51A7, OR52N4, OR6Q1, OR7D2, PDE4D, PDPK1, PIM2, PIP4K2C, PLXNC1, POLD1, POLR2I, RFDWD2, SH2D1A, SMAD1, SMARCA5, SOCS7, SV2C, TAS2R16, TNFSF12, TSHR, TYROBP, ULBP1, SUV420H2

Negative_11302	CFI, DBH, ALDH3A1, ALG2, ALOX12, AMPD1, ARNT, ATP2A2, CACNG6, CASP7, CD82, COQ6, CREBBP, CYP1A2, DDX41, DGAT1, DHCR24, FABP1, GGT6, GJD2, GNAO1, GNG13, HLA-G, IL10RA, IL7R, INMT, LARS, LARS2, MGAT4B, NEUROG3, NLGN3, OLAH, OR4E2, OR4P4, OR5T3, OR7G3, PANK2, PDCD1, PDE4B, PLEKHA8, PPM1A, PRKCG, RAC1, SEMA4A, SGPP1, TKTL2, TNFSF8, TOLLIP, TPK1, TYMS, UPP1, WASL, CSGALNACT1, SERPIND1
Negative_11303	BCR, BTD, GDA, GP6, ID2, MSN, RB1, SMO, TNN, ABLIM1, ADCY2, APBB1, APOA2, ASCC3, ATP6V0B, B3GAT3, BLNK, BMP6, CCNG2, CCR9, CDC25A, CES1, CHR3, CLDN10, CSNK1G1, CSNK2A1, CTBP2, CXCL6, CYSLTR2, DHX58, DOCK1, FGF4, FGF5, FLOT1, GNAL, GNB1, GPAA1, GRIN1, GSTK1, HMOX2, HNF4G, HSD11B2, IDI2, IL1A, IL23A, KLKB1, LAMC3, MAML3, MAN1B1, MAP3K14, MASP1, MDM2, METTL6, MGAT4B, MYH1, NKD2, NTNG1, NUDT5, OR10G7, OR10H3, OR2A5, OR2G6, OR4D1, OR52I1, OR5B3, OR8I2, OR9A4, PDE2A, PDGFB, PFN3, PHKG1, PLCD4, POLR2C, POLR2D, PPARD, PPM1B, PRPH2, PTEN, RALBP1, RXRA, SC5DL, SEMA3F, SLC2A2, SMAD7, SNAP25, SOCS4, SREBF1, ST3GAL5, TALDO1, TCF7L1, TGFB1, TNFSF4, TRDMT1, TSHB, TUBA8, TYRP1, HSD17B10, HSP90AA1, TNFRSF10A
Negative_11304	ACADSB, ACOT11, ADCY3, AKR1C2, ALG6, ARHGEF1, ARSE, CLDN11, CNTNAP1, CRHR1, CYP3A7, DAXX, EHHADH, ENTPD4, EPHB1, EREG, ESPL1, G6PC2, GALNT7, GFPT2, HADHB, HES1, HIBADH, HMOX1, IDH3G, IL20, LARS2, MYH3, NKD2, NLGN3, NOTCH2, NTRK2, OCLN, OR2T4, OR51E2, OR52A5, PDGFD, PGK1, PIGA, POLR2F, PTK2B, RASGRP3, SAT1, SEMA3B, SEMA4A, SIAH1, SPRY4, STAT5B, VASP, WNT2B, ATP6V1G2, HLA-DQA2, ST6GALNAC6
Negative_11305	CEL, RFK, AARS, ACTA1, ARPC2, ARPC3, ATP6V0B, B3GALT6, C9orf95, CASP7, CAV3, CCL13, CCL25, CCL26, CCR1, CDC14A, CDC16, CDC25C, CLCF1, COL1A2, CTBP2, CYP11A1, CYP1A2, EDN1, ESAM, EXTL3, FBP2, FMO5, GALNT10, GANC, GARS, GART, GMPR2, HNF1B, HPRT1, HSPA1B, ICAM2, IFNA16, IL25, IMPA2, JAK3, KIR2DL3, LMO7, MAGI1, MAP3K5, MGAT2, MYH1, MYH2, NCAM1, NLGN3, NOS1, NUDT2, OR10G4, OR2F2, OR2L3, OR2T5, OR4A5, OR52M1, OR5M9, OR5V1, OR9Q2, ORC5L, PDE3B, PI4KA, PLEKHA8, PLXNC1, POLE, PPM1D, PRKCB, PRKCE, PRKG1, PRKY, PSME3, PTEN, PYGM, RAPGEF4, RPN1, RRM2B, SDC1, SLC2A1, SLC2A2, TYMP, UROD, WNT10A, ZAP70, ATP6V0D2, ATP6V1E2, TNFRSF10A
Negative_11306	ADA, AK3, CBS, DBI, EDA, LHB, RDX, ACADL, ACADVL, ADCY6, ANAPC10, ANAPC2, ARPC1A, BAIAP2, BMPR1A, BUB1B, CCND3, CD47, CLDN15, COQ5, CPT1B, CYP2J2, CYP4A11, DAG1, DDX41, DFFA, DGKI, DPAGT1, EHHADH, EPB41L2, EPHA5, ETNK2, ETS1, GRIN2D, GSTA4, HLA-DRA, IL17RA, IL1B, IRAK3, KIR2DL2, MAGI2, MAP2K5, MAP4K3, MAPK7, MYH4, NEGR1, NR1D1, NRG4, NRXN3, OR12D3, OR2A42, OR4F4, OR4P4, OR51T1, OR5B17, OR6B2, OR6N2, OR6S1, PARD6G, PDE1C, PDE3B, PGK2, PIK3CD, PIP5K1A, PPP2R2B, PPP5C, RARS, RPIA, RUVBL1, SEMA4C, SETD8, SMURF1, SULT1A2, TUBA4A, UGCGL2, ULBP3, VAMP3, VAV1, WNT5B, TNFRSF6B
Negative_11307	AK1, F9, TK1, TNF, UBB, AARS, ACVR1C, ALG11, ALOX15B, ARHGEF1, ATF4, BPNT1, CCNG2, CHEK2, CHRD, CLTB, CSNK1D, CTNND1, CYP3A4, DHDDS, DOCK1, EFN1, ERBB3, FARS2, FGF1, FMO1, FTH1, G6PD, GALNT14, GNAL, GSTM4, IINHBE, ITGA7, ITGA9, KYNU, MGAT1, MGAT2, MGST1, MYH1, MYH6, NCKAP1L, OR11A1, OR14J1, OR2A14, OR2M4, OR4B1, OR4C11, OR51L1, OR51V1, OR6N1, OR8B12, OR9G4, OR9Q1, PAX6, PDXK, PDXP, PIP4K2A, PIPOX, PITX2, PLA2G4A, PLAU, PLOD2, POLE4, PPID, PPM1D, PRPS1, PTGER3, RELB, ROBO2, SARS2, SLC2A2, SMPD2, SPCS1, SULT1E1, TP53, VAMP2, YWHAQ, CSGALNACT1



Negative_11308	ABO, CKB, GSN, GSS, ITK, LSS, ABLIM1, ACVR2A, AKR1A1, AMHR2, APOA2, ARSD, ATP13A2, ATP5B, BCL2, BMP5, CACNB1, CCL21, CCNB3, CD74, CHDH, CHIT1, CHST13, CLDN17, COX15, CSNK2A2, CUL1, DAAM1, E2F3, EHMT1, EIF4E2, ENTPD5, F13A1, FARP2, FGF13, FUT5, GPLD1, GSTA2, GSTM5, GUCA1C, IQGAP1, IRAK1, JAG1, MAD2L2, MAP3K7, MAPK11, NEU3, NPR2, NT5C3, NT5M, OR51B5, OR5AR1, OR6C74, OR8S1, PAK4, PARS2, PCYT1A, PIM1, PIM2, PLXNA2, POLD1, POLR2D, PPP1CC, PRKCQ, PTGS1, PTPN6, RASGRP2, RBKS, SGMS2, SGPP2, SLC2A4, SMAD5, SORD, ST3GAL6, STAT5A, TACR1, TAS1R3, TBK1, TCF7L1, TOMM40, TPM3, TUBA3E, UBA7, VAMP1, VANGL2, WNT16, WWP2, XIAP, CTNNBIP1, HLA-DPA1, SERPINA1
Negative_11309	ADA, DBT, ID1, KDR, ACADVL, ACSL4, ACSL6, ADH7, ADRB3, AHCYL1, ATP5H, BNIP1, C9orf95, CACNA1B, CACNG1, CACNG8, CASP8, CCL11, CCL15, CD8A, CHAD, CHRM5, CYP1B1, DEGS2, DLL4, DUSP4, F13B, FARSB, FGD1, GAMT, GDF6, GUSB, HMOX1, INHBC, IRAK1, IRS4, KLRC3, LAMA3, LDHA, MMP7, MPZL1, MTAP, MTHFD1L, MYH14, MYLK2, NCR3, OR10Q1, OR1E2, OR1J1, OR51I1, OR56A3, OR6A2, OR7A17, OR7A5, PDE10A, PIK3R3, PIM2, PPARG, PSPH, PTPRJ, PYCR2, RDH16, SETD1A, SOS1, SOX17, STX6, TNFSF4, TRADD, TUBA1A, TYK2, ULK1, VDAC2, ATP6V1G1
Negative_11310	CS, GNE, HDC, IHH, IL8, PGF, TH, AGRP, ATP5J2, BCAR1, BCL10, BIRC3, CNTN2, COL5A3, CXCL9, CYP4F3, DDX41, DGAT2L4, EIF4E2, EPB41L1, FGF2, FGFFR1, FMO1, FZD3, G6PD, GALNT13, GALT, GNPDA1, GRIA3, GRIN1, GTSE1, HCCS, HNMT, HSD11B1, HYAL1, IL19, KLRC1, MAPT, MCM4, MGAT4B, MTFMT, NEUROG3, NOX1, NR4A1, NUDT2, OR9K2, OR9Q2, PDE11A, PDE4B, PDE6H, PPP3CC, RBX1, RFXANK, SEMA3B, SLC25A6, SV2C, THTPA, WHSC1L1, HSP90AA1, SUV420H2
Negative_11311	C5, C7, IDS, RB1, SDS, AC01, AC02, ACSM3, ACVR1B, ACVR2A, AFMID, AHCYL2, ANPEP, ASIP, ATP4A, BPNT1, CACNG6, CCDC6, CD79B, CFLAR, CHSY1, CLCA4, CLDN14, CLDN4, CNTF, CREB3L2, CTNNA1, CXCL10, DAG1, DDX18, DGKI, DIAPH1, EPHB4, FZD10, GALNT1, GPX5, GRIN1, GRLF1, HPRT1, IKBKE, IL17RB, IL8RA, IQGAP3, JAK3, JUND, KCNJ11, KIR3DL3, LEPR, LIPG, MAP2K7, MGAT1, MGAT5B, MPST, MS4A2, MTFMT, NUMBL, OR14I1, OR1L6, OR2AE1, OR2K2, OR4C15, OR4C16, OR4D6, OR4X1, OR5R1, PARVG, PCNA, PER1, PIAS1, PLA2G2A, PLCG2, POLE2, POLE3, POLR3B, PYCR2, RAPGEF1, RASA2, RDH12, RND1, RPS6KA5, SELP, SOCS2, SRGAP3, SULT2A1, SUV39H2, TAS1R1, TAS2R38, TICAM2, TJP3, TRADD, TSHB, TUBA3C, TYMP, YWHAE, ATP6V1B2, SERPINC1, TNFRSF10C, TNFRSF6B
Negative_11312	AK7, ATM, BAD, C1S, CBS, DBT, FH, PVR, TH, A4GALT, AGPAT2, AKR1A1, AKR1C3, ALOX12, ARPC3, ATP5C1, CACNA1B, CASP10, CCL26, CCR3, CHKA, CLDN3, CLTB, CYP2C19, DUSP7, ENTPD7, EREG, F11R, FCGR3B, FZD6, GABARAP, HMGCS1, HSD17B2, IFT57, IL23A, IL8RA, LIPT1, MAFA, MIOX, MYL9, NODAL, NOS1, OR10G7, OR10J5, OR10S1, OR13G1, OR51B2, OR5J2, OR5V1, OR8B12, P2RX3, PIAS3, PIGQ, RASA1, RPRM, SPCS1, STK3, SUV39H2, TAS2R16, TJP1, TNFSF9, TUBB3, UPP1, PRICKLE2, SERPING1
Negative_11313	CDA, DCK, EGF, KHK, RPE, UBB, ACSM1, ADSL, AK3L1, APC2, ARSA, ARSB, ATP5G3, ATP5L, B3GALT5, B3GAT1, BDH1, BMP6, CALML6, CDS2, CLDN15, CNTF, COMP, CREB1, CXCL2, CYP2A13, DBF4, DDX56, DGAT1, DGKQ, DKK4, DTX3, E2F1, EI24, EPHA5, FADS2, FCGR3A, FECH, FGF18, FOXO1, FZD4, GDF5, GGT7, GPT2, ICAM1, IFNA17, IFNK, IL19, ITGB4, ITPK1, JAM3, KIR2DS4, LARS2, LIPF, MAP3K13, MCM5, MKNK1, MYLK3, NCF2, NCKAP1L, NRAS, NSDHL, NTRK2, OR10Z1, OR11A1, OR13D1, OR13F1, OR13G1, OR1K1, OR2H1, OR2L2, OR4D5, OR5P3, OR8K1, ORC1L, PAK6, PGS1, PIAS3, PIP4K2B, PISD, PLOD3, PNLIP, POLR3G, PPCS, PRPS2, QPRT, RDH12, RETSAT, ROCK1, RPE65, SEMA3C, SEMA4B, SOS2, TALDO1, TAS2R60, TUBA8, CACNA2D3

Negative_11314	BTD, C1S, GH1, ILK, PC, AANAT, ACAT2, ACSM4, ACTN2, AKR1B10, ALDH3B2, AMD1, ARPC1A, B4GALT7, BCL2, BDNF, BST1, CACNA1I, CAMK2A, CAMK2G, CCL7, CD55, CDC25A, CFL2, DHFR, DHRS3, DOT1L, DRD2, DUSP14, EFN1, EPHA5, FCER1G, FGF9, FLT3LG, FTH1, FZD2, FZD3, GALNTL5, GPD1, GZMA, GZMB, HMOX2, HNF1A, HSPA8, INHBC, ITGAD, LARS2, MAOB, MAPT, MBL2, MCM7, MDM4, NAT5, NCF2, NCSTN, NR5A2, OGDH, OR14J1, OR11I1, OR1J1, OR1L3, OR1N1, OR2K2, OR4D2, OR52A1, PIGB, PLAT, PLXNA3, POLD2, POLE, POLR2C, PPOX, PPP1CB, PPP2CA, PPP2R2A, PPP2R5B, RAD51, RETSAT, RRAS2, RUNX1, SCLY, SEMA4C, SNAP25, SPRED2, STMN1, SV2A, TALD01, TSTA3, TUBB1, UCK2, WASF1, WNT8B, WNT9B
Negative_11315	CKM, DCN, DDC, F2, FUK, GHR, HK3, JUP, LYN, TPO, ACAA2, ACP5, ADORA2A, ALG1, ARAF, ATP6VOC, BTRC, CAMKK1, CCKAR, CCL17, CD22, CD274, CDH1, CDH2, CES1, CHD8, CLTCL1, CMBL, COL6A2, CRLS1, CTF1, CYP26B1, DCXR, DKK2, DLL4, ENTPD7, EPHB3, FLT3LG, FMO3, GAD2, GALC, GBE1, GCNT1, GNAI1, GOT1, HCST, HLA-F, HRH1, HSPA8, ICOS, IFNA7, IL23R, IL29, IRS4, KARS, LAMB1, LARS, MAPK7, MAPT, MCCC2, MGAT4B, NCF1, NNMT, NTRK2, NUMBL, OR13F1, OR4A16, OR4C11, OR4D9, OR4K14, OR51G1, OR51L1, OR52K2, OR6C6, PDE10A, PGK2, PIK3C2B, PISD, POLR2E, POMC, PTGDS, PYGB, PYGL, RBL1, RERE, RXRG, SMAD5, SUFU, SV2C, TALD01, TAS1R2, TRMT11, TYMS, UGCGL2, UNC5C, WWP1, YWHA G, MAP3K7IP2
Negative_11316	DLD, MTR, NGF, PLN, SI, TYR, ABL1, ACADL, ACSL3, ACSM3, AGRP, AMHR2, ARSB, ATP50, ATP6V1F, B3GAT2, CACNA1E, CALML3, CAMKK2, CAV1, CCL24, CD40, CD47, CLDN11, CLTCL1, COL4A4, CRLS1, CYP11B2, CYP27A1, DDB2, DHR S9, DVL2, EI24, F11R, G6PC, GAMT, GGT6, GRPR, HADH, HCCS, HEXA, HLA-G, HMGR, HRAS, IL13RA2, IL4R, ITGAX, ITPK1, LAP3, LIAS, LIPE, MAP3K4, MAP4K1, MAPK9, MLYCD, MYLK, NCK2, NCR3, NEFM, NRXN3, OR10H5, OR10T2, OR1E1, OR1J4, OR4K5, OR4N5, OR4P4, OR6B3, OXTR, PDHA2, PISD, PLA2G2A, PLCB2, PMM2, PNPO, PON2, PPM1B, PRKX, RASA1, RASSF1, SOCS3, SRD5A1, SULT1A2, SV2B, TPI1, WNT9B, XIAP, ATP6V0A1, TNFRSF10B
Negative_11317	CD4, FER, FYN, HYI, IL7, AKR1C1, ARHGAP5, ASAH1, ASRGL1, B3GNT5, BMP4, CACNG7, CANT1, CCL7, CD58, CDC14B, CHPF, CLDN15, CPT1B, CSF2RA, CXC L16, DHDH, FGD3, GDE1, GFPT1, GOT2, GUCA1A, IFNA5, IL18R1, KLRK1, KYN U, MAGI1, MASP2, MGAT3, MMP2, MYH4, NAMPT, NCAM2, NFASC, NOS1, NOTCH1, NRG1, OLR1, OR10H4, OR10P1, OR4D1, OR4K5, OR51E1, OR51F2, OR51G2, O R51I1, OR52I1, OR5T1, PARD6B, PDE4D, PFKFB4, PFN1, PFN4, PHKG2, PIK3 C3, PNLIP, POLR2J, PRKACG, PROS1, PTGER1, PTPN5, PYCR1, RGS3, SARS2, SHISA5, SNAI2, SOCS1, SPCS1, SSX2IP, SV2C, TP73, ULK1, UNC5D, WEE1, W WP1, ZNRD1, PLA2G12A
Negative_11318	AK3, IL4, IL6, ITK, ME1, PVR, ACTA2, AGXT2, ALDH3A1, ALDH4A1, AMDHD1, APOA2, ARHGEF7, B3GAT3, BMP5, CACNA1D, CACNB3, CDC27, CDKN1B, CHAD, CHRM1, CLTCL1, CMAS, CNGB1, COQ5, CRLF2, CSNK1G2, CXCL10, CYP1A2, CY P2F1, DDX56, DHRS4L2, ENPP3, FGF14, FGF17, FGF7, GLO1, GPD1, GSTM4, G TSE1, GUCA1B, HAO2, HDAC1, HTR5A, IL3RA, IL7R, INADL, IPPK, ITPKB, KR AS, LAMB3, LDHB, MAP3K11, MAP4K2, MAPK1, MGAT2, MGAT4B, MYL2, NANS, N COR2, NUDT12, OR10V1, OR1L3, OR1N2, OR4Q3, OR51F2, OR52E2, OR7G2, OR 9Q2, PDE6G, PERP, PHKG1, PIAS3, PNPLA3, POLE4, PPAP2A, PPP2R5D, PPT1, PRIM2, PRKCI, RAC3, RASA1, SDC3, SMAD4, SOCS1, SOCS5, SRD5A2, STX1B, SV2A, TRPM5, TUBA1C, TUBB2C, UROD, WBSCR17, YWHAH, YWHAZ, MAPK8IP1

Negative_11319	FOS, GGH, GNE, LPL, SMS, SPN, ACAT2, AKT2, AMD1, CD44, CYP2D6, CYP3A7, DPM3, ESPL1, FARSA, HNF1B, HSD3B2, IL13, KCNB1, KIR2DL4, LDHAL6B, LTBR, MARS, NAGK, OR4D2, OR51S1, OR56A4, OR5P2, OR6C1, OR9G4, PDGFC, PDHA2, PIGQ, PLD1, PLK1, POLR1D, ROBO1, SLC2A2, SPTLC1, ST3GAL1, SULT1E1, TICAM2, TP53I3, VEGFA, WNT7A, ATP6V1G2, HLA-DRB3, SLC25A31, TNFRSF10C, TNFRSF11B
Negative_11320	CFI, LTB, TH, VTN, ABI2, ACMSD, ACSL6, ADIPOR1, AGXT2, ALG8, BAIAP2, CD46, CD55, CDH15, CDH3, CDS1, CFLAR, CLCF1, CYP1B1, CYP3A43, FSHR, FUT8, GMDS, GOSR2, GSTA1, HPRT1, HSD17B1, IFNAR1, IL1RAP, IRF5, ITPA, KIR3DL3, KLRC4, LIPG, LRP6, MAP2K5, MGST2, MMP14, MPST, NAMPT, NFX1, OLAH, OR10A7, OR10H2, OR14A16, OR6C70, OR6S1, OR8K1, P2RX3, PAK3, PCK2, PFKFB1, PLXNC1, RPS6KA6, SCLY, SOX17, SUCLG2, TAS2R10, TAS2R16, TGFBR1, TP73, UPP1, WARS, ZIC2, KIR2DL5A, MAPKAPK5, PRICKLE2
Negative_11321	ADO, DAO, GNE, LAT, PVR, WAS, AADAC, ACSL5, AKT2, ALAS1, ALDH3B1, ARSD, CARS, CASP10, CCL22, CCND1, CCR5, CDC25C, CSF3, CX3CR1, CYP1B1, CYP26B1, DAAM2, DGUOK, DIAPH2, E2F1, EDN1, ENTPD1, FBXW11, FGF13, FGF21, GNAI1, IFNG, IL18, MAP2K4, MDM2, MGAT3, MGAT5B, NCR2, OR2A4, OR2T12, OR4P4, OR5D18, OR5K2, OR6C74, OR6M1, OR9I1, OR9K2, P2RX3, PDE1C, PDE5A, PHKG2, PIGB, PLOD3, POLE3, PSME1, PTGES2, PYGB, RPN1, RPS6KA6, SEMA4B, SKP1, SPRED1, TAP1, TNFRSF8, TNFSF12, TUBB1, UBE2K, VAMP1, VARS, ATP6V0D1, SERPINA5, SERPING1, TNFRSF11B, TNFRSF13C
Negative_11322	FAH, HK3, OAT, RB1, SI, SRF, TNF, AASDH, ACSL3, ACVR1, ARHGAP5, ARHGEF6, ARRB2, ATP2A1, ATP6AP1, BAI1, BCMO1, CACNA1I, CAV3, CCL26, CD226, CDC25B, CLTCL1, CRLF2, CSNK1E, CYBA, CYP11A1, CYP2U1, DAPK1, DAPK3, DDX50, FUT7, FZD10, GALNTL1, HPRT1, IL17RA, IL28B, IQGAP2, ITGA2B, LDHC, MAGI3, MALT1, MAOB, MAP4K1, METTL6, MMP7, MPDZ, MPZL1, OR10G8, OR14J1, OR51F2, OR51I2, OR6K6, PCYT2, PDE1A, PDXK, PER1, PNPLA4, PON2, PPP1R3D, PPP2R1A, PRKX, PYGB, RASA1, RHOD, RND1, SEMA4D, TALDO1, TLN2, TOLLIP, UNC5C, WNT6, ATP6V1E1, TNFRSF10D
Negative_11323	CAD, DBH, GH1, OAT, SCD, ACTN1, ALDH1L1, CACNB4, CACNG7, CARD11, CD38, CDK7, CES7, CHIA, CLDN4, CLDN9, COL4A1, DDX18, DPYS, DTX3, DUSP8, EGLN1, EHMT1, FGFR2, FOXA3, G6PC, GAD1, GCNT2, GIT1, GYS1, HMGCR, IFNA6, IRAK4, LAMC3, MAP3K12, MTHFD1L, NFKBIA, OR6N2, PLCD3, PLXNA3, POLR1B, PPA1, PPM1A, PTGS2, RAPGEF1, RCHY1, RENBP, SLC9A1, ST3GAL6, STAT5B, STX4, TALDO1, TAP2, TJP3, TNFRSF9, TPH2, TRAF6, TSNARE1, WARS2, WIF1, WNT8B, ZFYVE9
Negative_11324	BTC, HGD, OGT, TXK, AARS2, ACSL3, AGXT, AKR1C2, ALDH1B1, C4BPA, CACNA1E, CACNG3, CCL5, CHEK1, CTBP1, DARS2, DCTD, DGKQ, ENTPD7, FTMT, GAL3ST1, GALNTL2, GIT1, GLUL, GPX5, GZMA, HA02, HSD3B7, ICOSLG, IL25, INPP4B, ITGA7, JAM2, KIR2DL3, LAMA4, LCMT2, LDHA, MAP4K3, MCM7, NFX1, NME7, NRG4, OCLN, OR10A2, OR10AD1, OR2D3, OR2T10, OR5B17, PAPSS2, PDE6G, PFKP, PFN1, PGM3, PIK3CD, PKM2, PLA2G2F, PPP3CB, PRKG1, PRLR, PTAFR, PTPRM, RDH16, RRM2, SDC2, SKIV2L2, STX2, SUCLG2, SULT2B1, TAS2R9, TP53I3, UBA7, WWP2
Negative_11325	AUH, BID, F5, FGG, MET, NLK, ACLY, ACOT12, ACOX2, AGTR1, APLP1, ATP13A2, CACNG4, CACNG7, CDK4, CISH, COQ6, CYP3A4, EPHA3, FGF21, FMO4, FUT9, GPX5, GUK1, HSPA1B, HSPB1, IL15, IMPDH2, MGAT2, MMP9, OR10K2, OR10S1, OR13G1, OR1Q1, OR6K3, OR7G1, OR8J3, PCYT1A, PCYT1B, PDGFA, PGM1, PIGV, POLD3, POMC, PPBP, PPP3R1, RXRA, SH3BP2, SMURF2, SPTAN1, TAS1R1, UGT2B17, ZFYVE16, ATP6V1G3, EIF4EBP1

Negative_11326	CAT, F3, FER, FH, LCK, OGT, PC, TAT, AADAT, ACSL6, ADCY6, ADRA1A, ALDH1A2, ALDH9A1, ANGPTL4, APPL1, AREG, ARG2, ARPC3, ASNS, B4GALT7, BLVRA, BPGM, CACNG7, CAV3, CDC20, CDK5, CMPK1, COL1A2, COQ5, DPAGT1, DTX2, DUSP1, EDAR, EPHA3, EPRS, FGFR2, FLT3, GAL3ST1, GLG1, GPX7, HCST, HPS E, IL13RA2, IL25, IL28A, INPP1, ITGA6, ITGAL, ITGB6, KLK3, LAMB4, LDH A, LRAT, MAN1B1, MAP2K7, MAPK14, MLYCD, MRAS, NAT1, NCF2, NCKAP1, NCKAP1L, NFATC2, OR14A16, OR2F1, OR4K5, OR52A1, PAX6, PEMT, PER3, PHKA1, PIGB, PIK3R1, PIK3R3, PRKAG3, PRSS2, PTGFR, PTPRZ1, RAC3, RRM2, SGP P2, SKP1, SLC27A5, SMAD2, SMARCA5, SNAI1, STEAP3, TAP2, TAS2R49, TBL1X, TRIP10, TSLP, XCL2, ATP6V1C2, CTNNBIP1, MAP3K7IP1, PDCD1LG2, PRICKLE1
Negative_11327	AUH, GDA, HYI, VCL, ACTC1, ACVR1B, ACVR2A, ADIPOQ, AFMID, ATG7, BDNF, BMPR1A, CALML3, CD72, CHKA, CHST12, CIITA, DDX51, DOLPP1, DPM2, ECSIT, EDA2R, GGT6, GNG12, HTR2B, IKBKB, IL20, IL2RB, IRS4, ITGA5, ITGA6, LRP6, MMP7, MPDZ, NFAT5, OPLAH, OR51I1, PFKFB2, PIK3C3, POLR2J, PPAR D, PPP2R5E, PRPH2, PTGFR, PTPN1, RASGRP2, RELA, RPS6KB2, RUVBL1, SETDB1, SMAD5, SPI1, SPRY1, TNFSF11, TUBB, UGP2, WIF1, YWHAQ
Negative_11328	CTH, EBP, MPZ, SPN, SRM, ACSL4, ADCY3, AGPAT2, ALDH1B1, AMY2B, ARHGEF6, BACE1, BAIAP2, BDNF, BLVRA, CACNB3, CCL20, CCL8, CD36, CD70, CDC23, CDIPT, CDK4, CDKN1A, CHAT, CHRM5, CLDN14, CMPK2, CTSS, CYP26A1, CYSLTR2, DAAM1, DARS, DERL1, DPM1, EGLN1, ESAM, FCGR3A, FGF1, FGF14, FGF R3, FUT4, GCLC, GNAO1, GRIA3, GSTA1, GUCY1A3, HRAS, HSD3B2, IL22RA2, INPP4A, IRS2, ITGAV, LAMA4, MAGI1, NAMPT, NARS2, NCF1, NCKAP1L, NTNG1, NUDT8, OR1B1, OR4C11, OR4F15, OR51I2, OR5P3, OR6M1, OR8B4, PARD6B, PARD6G, PDE1B, PDE3B, PGAM2, PIK3CA, PIM1, POLD1, PRKCI, PSPH, RAF1, RAP1B, RDH12, RFXAP, RPN2, RPS6KB1, SEMA4D, SETD2, SETMAR, SMAD2, SMAD9, STK4, TAS1R1, TAS2R49, TFPI, VAV1, WNT7B, WWP2, ATP6V1G2
Negative_11329	ADO, DHH, FGB, GH1, GP6, MSN, PAH, AARS2, ACSM5, ALG6, APC2, ARPC3, CD14, CD244, CLDN11, CNTN1, CPT1A, CTPS2, CYP3A5, DTX4, EFNA2, FGFR1, G6PD, GNG3, HMGCL, LAMB3, LEF1, LGMN, MAN1B1, MAP3K14, MYH6, MYH8, NFX1, NRCAM, NT5C2, OR10H5, OR2T33, OR2T6, OR56B4, OXCT2, PIGF, PISD, PLCG2, PLOD2, PRKCQ, PSENE1, SPTLC2, TAP2, TJP1, UNC5C, VEGFC, XCL1, YWHAZ, B3GALNT1
Negative_11330	ABO, CGN, IDS, ME3, OTC, VCL, AASS, AGPAT6, AMY2A, ARSA, ATP6V1H, CAV1, CBR3, CDKN2A, CHKA, CNTNAP1, CSDA, CYP17A1, CYP2A13, CYSLTR2, DHRS4, DNMT3A, E2F2, FASLG, GALNT11, GCH1, GFPT2, GPAA1, GRIA1, HSP90B1, HTR7, INPPL1, ITGA11, ITGAV, ITGB1, ITGB3, JAK1, LAMC2, MCM3, MFNG, MYH11, NCKAP1L, NOX3, NRG1, ONECUT1, OR11H1, OR1D2, OR1Q1, OR2C3, OR5V1, OR8D1, OXTR, PDE6G, PIGV, PKM2, PLA2G10, PLEKHA8, PORCN, PRSS3, PSEN1, RAC1, RASGRF1, RBKS, RXRA, SFRP1, SFRP4, SLIT2, TGDS, TGFB1, TLR2, TOLLIP, TUBB2B, ATP6V0D2, GABARAPL1
Negative_11331	ADA, ADO, AGL, AK1, AUH, FGA, HDC, IL2, OAT, TPO, ADCY3, ADIPOR1, AGTR1, AKR1C2, ALDOB, ARRB1, ATP5F1, BDNF, BST1, CANT1, CCL7, CDC25A, CDC25B, CLDN16, CLDN18, CTBS, CYP26C1, CYP2A6, CYP2C19, DCXR, DDX18, DDX47, EPHA2, EXOC7, FGF13, GARS, GGT7, GMPS, HLA-F, HSPA1B, IDI1, IDUA, IFNAR1, IFNGR1, LDHB, MAFA, NFKBIE, NLGN2, NRG4, NUDT12, OR10C1, OR11H1, OR1Q1, OR2C1, OR2T8, OR52N2, OR52W1, OR6K2, PHGDH, PIGH, PMAIP1, POLA1, PPP3R2, PRPH2, PRSS2, PTPRR, RBL1, RFXANK, SMC1A, SRGAP3, SSX2IP, TCIRG1, THBS1, TLN2, TOMM40, UGDH, UGP2, ULK1, VTI1B, WASF1, ATP6V1E1, ATP6V1E2

Negative_11332	DBI, EDA, FOS, SRM, A4GALT, ACVR1, ARPC1B, B3GALT6, CACNG7, CALML3, C AMK2B, CD34, CDC14B, CDC25B, CDKN2D, CKMT2, CLDN7, CMBL, CTBP1, CYP1 1B1, CYP4A22, DIAPH2, ENO1, FASN, FGF23, FGF3, FMO4, FUT1, G6PD, GALK 1, GPAA1, HIP1, IDI2, IL12RB1, IL15, IL18RAP, IL2RG, INHBB, IQGAP3, I TGA8, ITGB5, KIR3DL1, LDHAL6A, LRAT, MAPK1, METTL6, MLLT4, MMP1, NGE F, NME7, OR12D3, OR13F1, OR1L6, OR1M1, OR2G6, OR2L8, OR52I1, OR8B4, O RC6L, PANK1, PANK4, PDE8A, PDE8B, PDXK, PIK3C2A, PLA2G10, PLA2G2A, P RKACB, PRNP, PTPN1, PTPRJ, RBL1, RDH8, ROCK1, SFRP2, SH2D1B, SH3BP2, SPP1, SSH2, STEAP3, TDO2, TIRAP, TKTL2, TNFRSF9, TNFSF10, TNXB, UGT8 , UNC5C, WASF1, WIF1, WNT16, ATP6V1E2, CSGALNACT2, MAPK8IP1, ST6GAL NAC1
Negative_11333	C8G, CD2, GNE, IL8, PC, ACSM2A, ANAPC10, ANAPC7, APAF1, ATG12, B3GNT4 , CAMK2D, CCR5, CCR6, CD58, CD79B, CER1, CNTN1, DDOST, DVL1, ENTPD6, E PHA6, FARSA, FARSB, FGF20, GMPS, GNAI1, HSD17B1, HSD17B4, ICAM3, IGF 1, IL20RA, LIPT1, MAPK7, MMP2, MNX1, MYH7B, OR4N4, OR51B5, OR52A1, OR 52A5, OR52B6, OR6C2, OR6C75, OR7A5, OR7D2, ORC2L, PCYT2, PDE3A, PDX1 , PHKG2, PIK3C2B, PIK3C2G, POLD4, PPP5C, PTGFR, PTPRB, RAPGEF4, RBPJ L, ROBO1, RPS6, SDHA, SEMA3E, SEMA4B, SFRP4, SLC27A5, SQLE, TJP2, TRA DD, TSHB, UCK2, UPRT, WARS, WNT16, HLA-DRB3, SERPINF2
Negative_11334	ATM, C5, HK3, PGD, PGF, ABL2, ACP2, ADCY7, ADRA1B, AKR1D1, ALOX5, ALS2 , AVPR1A, B3GALT6, BDKRB1, BST1, CACNG1, CARD11, CCND2, CD58, CDC27, CDH3, CDKN2D, CD01, CFL2, COL1A2, CTBP1, CXCL11, CXCL9, CYP2C19, CYP 3A43, CYSLTR1, DAAM2, EDNRA, ERBB3, ERBB4, ESPL1, EXOC7, FABP3, FCGR 3B, FDFT1, GPD1, GPD1L, HES1, HPRT1, HTR2C, IARS, IDH3B, MAP3K11, MAP 3K3, MGAT3, NADK, NAGA, NAGK, NEU4, NOTCH2, NPAS2, OR2M4, OR2M7, OR52 N1, OR6C3, OR9G1, OR9G4, PAICS, PAK7, PDCD1, PIGX, PKLR, POLD1, PORCN , PPP2R2B, PPP2R5C, PRKAR1B, PTCH2, PTGES2, PTGIS, RFWD2, RPS6KB1, R XRG, SEPHS1, SFRP2, SUOX, TAS2R49, TAS2R7, TFPI, THBS3, TNFSF12, TOL LIP, TRAF6, TUBB2A, VANGL2, VARS, WNT2, ZMAT3, MAP3K7IP2
Negative_11335	BTC, CAD, IL5, ACTC1, AGRP, ANAPC7, ARPC1A, ARPC4, ATP6V1A, ATP6V1H, BCAT1, BDKRB1, CACNA1S, CACNG4, CCR10, CDC20, CLDN2, CSF2, DKK4, DPM 2, DTX4, EP300, FGFR1, GPX7, GSTA3, GUCY2C, HTR2B, IKBKB, IL1R2, IL20 RA, IL2RB, IQGAP1, IRF3, ITGA4, ITGAD, ITGB2, LFNG, MASP1, NCOR1, NFA SC, NLGN3, NRXN2, OR10P1, OR1A2, OR51L1, OR52B4, OR5AC2, OXSM, PCK2, PIK3R5, PNMT, POLR3B, PPP1R3C, PPT1, PRKAR1B, PRKCH, RAPGEF4, RERE, RUNX1, SDHA, SIPA1, SLC27A1, SOAT2, ST8SIA5, STK36, STX8, TAS2R5, TD O2, TGFA, TLR5, TLR9, TRAF1, TSNARE1, TUBA1A, UGCGL2, WEE1, XYLB, ATP 6V0A2
Negative_11336	AR, CR1, F7, SMS, SRC, TFG, TNF, ABLIM2, ADCY5, ADIPOR1, AGXT, ARSD, B3 GNT3, BCL2, C4BPB, CACNA1B, CCL11, CCNA1, CNDP1, CNTFR, CRY2, CSNK2A 2, CX3CL1, CYP1A1, DVL1, E2F3, FGF9, FLT1, FMO4, G6PD, GAD2, GALNT3, G NA12, GNAS, GNPDA1, GNRH1, GRIN2A, GUCY2C, HADHA, HAGH, HMGCR, HMOX2 , IFNA5, IL12RB1, IL3RA, IQGAP1, ITGA9, LEF1, LEPR, MAP3K11, MAP3K14 , MINPP1, MYH8, NANP, NRP1, OR10G4, OR10R2, OR10S1, OR13C5, OR4F4, OR 51B2, OR51G1, OR52M1, OR6C70, OR8H1, ORC6L, OXCT2, PANK2, PANK3, PFK L, PHKA1, PIK3R2, POLR3B, PRKAR2B, PRODH2, PTGES, PTGS1, PTK2B, RARA , RASSF5, SARDH, SFRP2, SNAI1, SOD1, SPRY4, STK3, STX1B, TJP1, TRADD, TUBA1B, WASF3, WNT10A, WNT5B, WNT7A

Negative_11337	DDC, KDR, ME2, MUT, PTS, RPE, SFN, AARS2, ACAT2, ADSS, ANAPC1, APPL1, A RSE, AXIN1, BCKDHB, BMP2, BMP4, CARD11, CARS, CCL24, CCL25, CCL3, CCR 5, CHEK1, CREB3L1, DERA, DPAGT1, E2F2, EFNA3, EFNA5, EIF4E, EPOR, ERO 1L, FGF18, FUT9, GNRH1, GP1BB, GSTP1, HHIP, IL19, IPPK, IRAK1, IRAK3, ITGA2B, JAG1, KIR3DL3, KLKB1, LAMA3, LCMT2, LIPC, LTA4H, MAML1, MAML 3, MYH11, NEU2, NUDT9, OR10H1, OR1J2, OR2C3, OR2K2, OR51M1, OR51T1, O R52N1, PAK3, PAK4, PCCB, PDE1C, PDGFC, PDX1, PIPOX, PLOD3, PRKACA, PR KCG, PRKCQ, PTPMT1, PVRL2, RFXAP, RPIA, SOCS2, SPI1, ST6GAL1, TCIRG1 , THBS2, THBS4, TPH1, TRPM5, TUBA3E, UNC5B, WNT4, GABARAPL2
Negative_11338	AK5, BTK, C8A, DUT, GBA, IHH, TNN, AARS, AARS2, ACSM5, ACTN1, ACTN2, AG TR1, AMD1, ATP5G3, AXIN2, B3GNT3, BIRC3, BIRC5, CACNA1D, CACNA1H, CA LML6, CARS, CASP10, CD72, CLCF1, CNGA3, CSF3, CYP7A1, DAAM2, DGKB, DK K1, DNMT3L, DUSP16, FOSL1, FUT1, GCLC, GGT1, GLO1, GMPR2, GP1BA, HAO2 , HTR2C, IFNA21, IFNAR1, IL15RA, IL8RA, ITGAX, KIR2DL1, KLRC3, LAMC2 , LIPG, LYPLA2, MAP2K5, MGST3, MTFMT, NAGLU, NRCAM, NT5C, NT5C2, OGDH L, OR1A1, OR1S1, OR2M5, OR51G2, OR52R1, OR56A1, OR6B2, OR7G2, P4HA1, PDHB, PFN1, PGM3, PIP4K2C, PLCZ1, PLOD3, POLR2C, PPP2R5A, PRIM2, PRK AB1, PRKG1, PROS1, PTPN11, RPN1, SGMS1, SMAD7, SNAP25, TAS2R9, THBS4 , TUBA3E, UGT2B11, ZAP70, ATP6VOD2, PAFAH1B1, SERPINC1
Negative_11339	EGF, EZR, GGH, JUP, ADRA1A, ARSA, B4GALT4, BLNK, BUB3, CBR1, CCR8, CDK N2C, CHAT, CHKA, CHKB, CLDN1, CNGA4, CNGB1, COL3A1, CYP2C9, CYP3A5, D AG1, DERA, DUSP16, E2F5, ENPP7, FGF7, GALNT3, GFPT2, GLI3, GSTM5, HLA - DMA, HNF4G, IFNK, IRF3, ITGAE, LIFR, MAD2L2, MASP1, MMP1, MYH2, NFYC, NME2, NMNAT2, NRG2, OR10A4, OR1D2, OR1M1, OR2F2, OR2T29, OR4N5, OR51 G1, OR8G1, PDGFB, PIK3CB, POLD4, RASSF1, RFNG, SOS2, SUV39H1, SUV39H 2, TNFSF9, TSHR
Negative_11340	AK1, DCT, ID3, KHK, PRL, ACP1, ACSM4, ADH6, AKR1A1, AMPD1, BAIAP2, CAC NB3, CAMK4, CASP7, CDH15, CDK4, CDKN2A, CDS1, CES1, CLCA2, CTSB, CX3C R1, DERA, DGKZ, DUSP14, ETNK2, GAL3ST1, GSTZ1, HLA- DMA, HRH2, IFNAR1, IKBK, INPP4B, ITGA6, LCMT1, LIPT1, LTA4H, MAP3K8 , NFKB1B, NKD1, OR2A12, OR4F4, OR4L1, ORC4L, PDXK, PHPT1, PIK3R1, PLA 2G2D, PLCB1, POLD1, PON3, RENBP, SEMA3B, ST3GAL6, SUCLA2, TUBA3E, UC KL1, MAPKAPK2, TNFRSF17
Negative_11341	AMH, CD6, CKB, CR1, F2, SPN, TK1, ABI2, ABLIM2, ACSL6, ALPL, ALPP, ATP5 G2, BCL2, CACNA1H, CACNG2, CCR1, CDC23, CDIPT, CREB3L1, CRLS1, CSNK2 A2, CYP26B1, DDX50, DOCK1, E2F4, ENPP3, FBP2, FGF10, GALNT1, GDF5, GG T7, GRIN2D, HCST, HIBCH, IFNG, IRS1, ITGAE, JAK2, KIR3DL3, LGMN, LIPG , MAP2K7, MAP3K5, NTF3, OR11H6, OR13F1, OR2Y1, OR4C11, OR4D11, OR51G 2, OR51Q1, OR8A1, OR8H1, OR8U1, OR9A4, OXCT1, P2RX1, P4HA1, PAPSS2, P CNA, PER2, PIP4K2A, PLA1A, PLA2G2D, PLCD1, PLTP, PON2, PPT1, PRKCB, P RSS3, PTCH1, RASA2, ROB1, RPN1, STAT5A, SV2B, TACR3, TOLLIP, TRAF6, WARS, YWHAZ, ZFYVE16, CSGALNACT2, MAPKAPK5, SUV420H2
Negative_11342	CFH, DDC, MIF, ALOX5, APPL1, B3GAT3, BCAT1, CACNA1H, CACNG4, CD27, CM PK1, CPOX, CYFIP1, CYP26A1, DHCR24, ENPP2, ETNK1, EXTL3, FDFT1, GOT2 , GRIA3, GRIN2C, GRPR, GSTA5, IFT57, IL18, INPP5E, MARS, MGAM, NADK, N ARS2, NFKB2, NME7, NOS3, NRCAM, NUDT2, OR13J1, OR14I1, OR1G1, OR2T12 , OR8H2, OR9A2, OXCT2, P2RX2, P2RX3, PLXNA1, POMC, PPA1, PTPRJ, PVRL3 , SIAH1, ST3GAL4, SUFU, SV2A, THBS3, TNFSF12, TPH2, TRPM5, TSNARE1, V EGF, WBSCR17, WWP2, PLA2G12B

Negative_11343	C6, DCC, F12, A4GALT, AGPAT2, AKR1B10, AKT1, ALPI, APOA1, ARHGAP5, BE T1L, BMP7, CD01, CHST13, CTPS, CYP4F3, DEGS1, EIF4E2, EVI1, FGF9, GBG T1, GLS2, GNA13, GSTO1, IDI1, IFNAR2, IKBKG, IL1R1, INPP5E, MITF, NEU 4, NOX1, OR10G2, OR2M5, OR51B6, OR7C1, PAK7, PAX8, PIGU, PNPLA4, PRPS 1, RALGDS, SHC1, SMAD7, SORD, SYNJ2, TJP2, TNFRSF4, UXS1, CTNNBIP1, M AP3K7IP1, PHOSPHO1
Negative_11344	C6, CFD, CSK, F7, GP9, KMO, A4GALT, ACP6, ADCY8, ALDH1L1, AMY2B, ATP2A 3, ATP6VOB, BHMT, BUB3, CARS2, CLDN15, CYP4A22, DPM1, E2F1, EPHB4, FM 05, FZD8, GCNT3, GJA1, GOT1, GRIN2A, GUK1, HIF1A, IL11, IL1RAP, KYNU, MAP3K13, MGAT3, MTMR2, MYH8, OR1S2, OR2A12, OR2B11, OR2V2, OR4P4, OR 52J3, OR56A1, OR7D2, PGAM4, PLD2, PLXNA1, PLXNB2, PPA2, PPP2CB, PPP2 R5E, PRKAA1, RPS6KA5, SHC1, TLR4, UNC5B, PAFAH1B2, PLA2G12A
Negative_11345	GP5, IL9, NGF, SFN, TAT, ZYX, ACSM5, B3GALT6, B4GALT3, BST1, CXCL11, C XCL5, DUSP14, DUSP7, EFN1, EIF4B, FLOT1, FZR1, GALNT11, GALT, GRM5, HDAC2, HLCS, HSD11B2, IARS, IGFBP3, IL20, IMPDH1, ITGA2, ITPK1, LIPC , LRP5, MAP2K4, MAP4K4, MAPT, MMP1, MTHFD2, NCSTN, NFATC3, NR5A2, OR1 0G4, OR10P1, OR51B5, OR6C2, PAPSS2, PARD6A, PI4KB, PLA2G2F, PPARA, P PP2R5C, PSME1, SELP, SELPLG, TCF7, TGFBR1, TKTL1, TLN1, TSC2, UBA1, V EGFB, WEE1, YWHAB, HLA-DQA2
Negative_11346	C1S, JUN, LCK, NPL, TNN, ABLIM3, ACOX2, AGMAT, ALDH9A1, ALDOC, ARHGEF 4, BDKRB2, C7orf16, CLDN3, CLTA, CMAS, CNGA4, CREBBP, CRLF2, CTPS, CX CR5, CYP2A6, DDX50, DHRS3, EHHADH, EPHB3, GALNT11, GALNTL2, GNA14, G NRH1, GSTM5, GUCY1A2, HARS2, HSD3B1, IFNW1, IL10RB, IRS4, ITGB5, LCA T, LYZL1, MCEE, MYD88, OR2C1, OR2T5, OR4D1, OR4D9, OR4N2, OR51T1, OR5 2E2, OR5P2, PI4KB, PIK3CA, PLA2G2A, PLD2, PLXNA3, POLE3, PPOX, PPP1C A, RENBP, RETSAT, RPS6, SSX2IP, STX2, TNFRSF8, ULK2, VEGFC, WBSR17, WHSC1, ZMAT3, TNFRSF14
Negative_11347	ADA, DBI, OGT, TPR, AARS2, ADAM10, AK3L1, ALG10, AMY2A, ARSA, BMPR1A, CAMKK2, CCR6, CDK2, CLDN4, COASY, CSNK1A1, CYP2E1, DEGS1, DUSP1, FIG F, FMO4, GALNTL4, GNAQ, GSTA3, HEXB, IDH3G, IFNGR2, IL12RB1, IL1B, IL 8RA, ITGB4, MAPK1, MGLL, MITF, MTHFD1L, NOTCH2, NTNG1, OR10T2, OR1M1 , OR2L8, OR2T34, OR4C11, OR51E2, OR6F1, OR8D1, PHGDH, PLCG1, PLXNA1, PRKCI, PSME3, RBPJ, RUVBL1, SETD8, SMAD4, SMURF2, TFPI, TICAM1, TNFR SF8, TUBA1B, ULBP3, WNT3A, WNT9A
Negative_11348	AGL, CP, CR1, FH, GLS, JUP, MAG, PAH, RET, SPN, ABI2, ACAD9, ACLY, ADSS, ALDOC, ALG10, ALG6, ARHGEF1, ARHGEF2, ARSA, ATP5H, B3GAT1, B3GNT5, B ACE2, BCAT1, BDKRB2, CCL4, CDKN1C, CHKA, CHRNA7, COL4A6, CSF1R, DNMT 3A, EP300, ERBB2, FARSB, FGF8, FGFR3, GABARAP, GAL3ST1, GBE1, GCH1, G CNT1, GMPPA, GNB1, HNMT, HTR7, IL12A, IL15, KLRC1, KRAS, LCP2, MAP2K2 , MAP3K7, MAPK10, MCCC1, METTL6, NFKBIA, NKD2, NRCAM, NTNG1, OGDHL, O R2AG2, OR2M3, OR2T10, OR4D1, OR51B2, OR51D1, OR51G2, OR52I1, ORC6L, PCCA, PDE4D, PIGW, PMAIP1, PPP3CB, PTGES2, PTPN1, ROB03, SFRP1, SMUR F1, SRD5A2, SSX2IP, ST3GAL1, TAS2R16, TBL1XR1, THBS3, TIRAP, TLR4, T UBA1A, TUBA3E, UROC1, VASP, YWHAH, ATP6VOE1, MAPK8IP1
Negative_11349	AR, C6, CP, EDA, FAS, GP9, RPE, TNC, AARS, ACP2, ACSL6, ACSS2, ADSL, CAL ML3, CAMK2D, CCL5, CD86, CDC7, CHST13, CHSY3, CNGA4, CREBBP, CSNK1A1 , CTF1, CXCL5, CYP19A1, CYP2A6, DDX55, DGUOK, DMGDH, DRD1, DUSP7, DVL 2, EPOR, FGFR1, G6PD, GALNTL5, GNAI2, GSTM1, HLA- DMA, HMOX1, HRH2, HSD17B7, IL21R, IMPA2, ITGB4, JAM2, KLRD1, LRAT, MA P3K2, MAP3K4, MICA, MRAS, NOD1, NODAL, NTSR1, OR10A2, OR4F15, PGAM1, PGM2, PIK3R4, PKM2, POLR1E, POLR2G, POLR3G, PPP1CB, PRKAG2, PRKCZ, P RODH, PTGER1, RFX5, RPN2, RRM2B, SARS, SDHC, SHMT1, SPRY3, STX16, TAS 2R8, TNFSF12, TP73, TSC1, TUBA3C, ULK1, VKORC1, ATP6V1E2, PLA2G12A

Negative_11350	F11, FUK, OSM, AARS, ACAA2, ACOX3, ACVR2B, AGTR1, ALDH6A1, ALG10B, AL OX5, ARPC2, AXIN1, BDNF, CAMK2A, CBR3, CCNB3, CCR1, CIITA, CLDN11, CN TN1, COQ3, CYP1A1, DDX56, DHCR7, DMGDH, DOLPP1, DVL2, EDA2R, ENTPD4, EPB41L1, EXT1, EXTL3, FLT3LG, FOXO3, FSHR, FZD1, G6PC, GCNT4, GLS2, G MDS, GNAO1, GNMT, H6PD, IDH3B, ITGA3, KCNJ11, LDHB, MAML3, MAPK3, MAR S2, MCEE, MTHFD2, MTHFS, MYH14, MYLK2, NCK1, NRG2, OR10H1, OR10H5, OR 10Q1, OR11L1, OR1J2, OR4A16, OR4D5, OR6C2, OR6C3, PAK4, PECAM1, PFAS , PIP4K2A, PLXNB3, POLR1C, POLR3B, PRODH, RELB, RETSAT, SARDH, SDC1, SSH2, SUV39H2, TALDO1, TAS2R41, TAS2R50, TKTL1, TNFSF4, TRAF4, TUBB , UGT2B28, UMPS, UPP1, YWHAG, YWHAQ, SERPINA5
Negative_11351	CGA, IL5, ILK, ACSL6, AGRN, BUB1B, C4BPB, CCL15, COX10, CREBBP, DDX56 , DUSP4, ECHS1, EGLN1, ETNK2, FGF17, GLDC, GNRH2, GP1BA, GPX5, GUSB, H SD11B1, IL18RAP, IL3RA, INHBE, IRS1, KCNB1, LAMB4, LHCGR, MAP3K7, MD H1, NCOA4, NEFL, NR4A1, NR5A2, OR13C3, OR4F17, OR51D1, OR52M1, OR5D1 3, OR6C70, OR6C76, OR8H1, OR8J1, PAK1, PHKA1, PIAS2, PLCZ1, PMM2, POL R3K, PSENE1, SEMA4B, SLIT2, SMAD2, SOCS3, SRGAP1, STAT2, STX10, TIRA P, TUBA1B, ATP6V0D2
Negative_11352	AK3, FN1, GCK, IL9, JUN, OGT, PLG, ACADM, ADCY2, ARHGEF1, ARSA, AXIN1, BMP6, CAMKK2, CCR6, CD44, CHAD, CREB3L1, CREB3L2, CTF1, CXCL12, CXCR 3, CYBB, CYP26A1, CYP3A5, DIAPH2, EGFR, EP300, EPB41L1, FGF22, GALC, GALNT10, GMPR, HNF1B, HTR4, IFNAR1, IGFBP3, IL28B, IL28RA, KRAS, LIL RB3, LIPE, MGAT5, MYL5, NCF2, NCK1, NEFM, NPAS2, NRXN1, OR10Z1, OR1J4 , OR2F1, OR2T34, OR51B2, OR5AR1, OXCT1, PDGFRA, PHKG2, PIK3CA, PIK3R 1, PLCB4, PRKACB, PRKACG, PTGES2, RAC1, RDH11, RHOA, SMURF1, SOCS1, S T8SIA1, STAT1, STK11, STK36, TUBB, TUBB6, WNT5A, ATP6V1E1, ATP6V1G3 , HLA-DQA2, ST6GALNAC1
Negative_11353	C7, SMO, ACOX3, ACSL5, ADCY8, ADH4, ALG12, AOX1, ARPC1B, ARPC5, ASNS, ATF2, ATP6V1H, CD40, CD46, CD58, CDC16, CEBPA, CHD8, CISH, COASY, COL 6A1, CREB3L1, CTBP1, CYBB, CYSLTR1, DKK4, DLL3, DVL2, ENPP1, FCER1G, FGF13, FGF5, FRAT1, FUT3, GJD2, GSTA1, HAGHL, IL11, IL28B, ITGA7, ITG A8, LCP2, MPP5, NT5C1B, ODC1, OLR1, OR10S1, OR2G3, OR2L8, OR51I2, OR5 2B4, OR5D16, OR6C75, P4HA3, PCCA, PDE4D, PIK3C2A, PIK3CA, PPARG, PRK ACB, PTPMT1, PYCR1, RBX1, RUVBL1, SARS, SETDB1, SKIV2L2, SLIT1, SPRY 2, SUOX, UAP1, UBA1, VAV2, VKORC1, WNT2, YWHAZ, ATP6V1B2, SERPINB5, T NFRSF10A
Negative_11354	GAA, GNE, MAG, AARS, ALAD, ATF4, ATP50, B3GALT4, B3GAT2, CCL4, CCNE1, CD01, CYBA, CYP2C8, DAPK3, DARS, DARS2, EXT2, FARSA, FUT1, GAD1, GNAQ , GPX7, GSTA3, IL18, IL22, IL22RA2, ITGA10, ITGA11, KIR3DL3, KLRC3, L AMB2, LDHD, LYPLA2, MAML3, MAP3K13, MMP14, NRXN3, OR10K2, OR13H1, OR 1E2, OR2F2, OR4F15, OR4Q3, P4HA1, PDGFRA, PDX1, PIGM, SRD5A1, TAS1R2 , TAS2R41, TRAF5, UBE2K, UGT2A1, UGT2B10, YARS, ARHGEF12
Negative_11355	APP, PTS, ACOT12, ACP2, ACP6, ACTN1, ADORA2A, ADRA1B, ALG3, ANAPC5, A POA5, ATG12, BCAT1, C5AR1, CAPN2, CLOCK, DCTD, DGUOK, DLST, DUSP6, E2 F5, ERBB2, GNMT, GNRH2, IFNA16, IL13RA2, IL20, IMPDH2, JAG1, LAMC1, N ARS, NME7, NOS3, OR7G3, PDE3B, PDE8A, PFKFB3, POLD2, POLR3H, PPAP2A, PPP2R5C, PRNP, RASGRP2, RBX1, RCHY1, SHMT1, SPCS3, SPRY3, ST8SIA1, S TK4, STX3, TALDO1, TCF7, TNFSF9, UAP1, UGT2B7, VKORC1, WNT16, WNT7B, YARS, YKT6, B3GALNT1, TNFRSF10D



Negative_11356	ASL, CKM, GHR, IL7, MTR, MYC, WAS, ACADS, ACYP2, ADCY5, AGPAT3, ALG8, A RPC5, ATF2, ATP6V1D, BAIAP2, BMP5, CCNA2, CCR4, CD40, CFLAR, CHD8, CN TFR, CSF2RB, CSF3R, CYFIP2, DGAT2L4, DGKQ, DOLPP1, EDNRA, EPB41L3, E PHA6, FGF4, FLT4, FOXA2, FZD8, GADD45G, GCNT4, GFPT2, GGPS1, GRIA2, G UCY2D, GZMA, HAP1, HCLS1, HMOX1, HNF4A, IARS2, ICAM3, IFNW1, IL22, IL 2RA, INHBB, ITGA6, ITGB1, LYZL1, MKNK2, MLLT4, MTFMT, MYL2, NAGS, NAN P, NKD1, NKX6-1, NOX3, OR10T2, OR2D2, OR7C1, ORC3L, P4HA1, PDCD1, PDGFB, PGM2, PLA2 G10, POLR2C, PRKG1, ROB01, RPS6, SESN1, SMAD4, STAT4, TPH1, TSHR, UNC 5B, UNC5D, USE1, UXS1, ZMAT3, PAFAH1B3, PNLIPRP1
Negative_11357	GBA, TPO, ACPT, ACVR1C, ARD1A, ARNT2, ARPC1B, ASS1, ATG3, ATP5I, ATP6 AP1, BCKDHA, BMP2, BNIP1, C1QC, C4BPB, CD247, CHST12, CLDN6, DDIT3, D DX19A, DTX3, EDNRB, ENPP7, EPHB3, EPOR, F2RL3, G6PC2, GFAP, GNMT, GNP AT, GPX7, HARS, HLA-DOB, HNF4A, HYAL2, ICAM3, IGF1, IL19, ITGA1, LAMB2, MAP3K6, MAP3K7, M MP1, NADK, NMNAT1, OR10V1, OR2M5, OR4A5, OR4L1, OR52H1, OR52N5, OR6C 75, OR6Q1, OR8J1, PRKCI, PRPH, RAPGEF3, RBPJL, SDHA, SMAD2, STX8, SV2 C, TAP2, TAS2R38, ULK1, WARS2, WBSR22, WNT7B, HLA-DRB5
Negative_11358	AUH, C9, CBL, FYN, GK2, HAL, PLG, RET, ACSL4, AKT1, AKT2, B4GALT3, BAI1 , CANT1, CD22, CD274, CD46, CD70, CDC25C, COL1A1, COQ5, CRY1, CSNK2A2 , CTLA4, CXCR5, CYP2C9, CYP4A22, DHX58, DPYD, DUSP16, FARSA, FTH1, FU T1, FZD5, GLYCTK, GNPDA2, GOSR2, GRIN2A, HSPA2, HYAL1, IFNA16, IL12R B2, IMPA1, KIR3DL2, KNG1, LAP3, LDHD, LTBP1, MAOA, MAP2K1, MAP3K11, M CEE, MDM2, NAGLU, NEU4, NFKBIB, NKD2, OR10J3, OR1E1, OR1N1, OR2A4, OR 4D6, OR4M1, OR52R1, OR56A4, ORC2L, PAICS, PGAM4, PIK3R5, PLA2G2D, PL A2G5, PNLIP, POLD3, PRKCD, RALBP1, RASGRP1, RBX1, ROB02, ROCK1, SHMT 1, SLC25A6, SOD1, ST3GAL6, SUCLG2, TAS2R40, TAS2R42, TD02, THBS4, TS C1, TYROBP, XYLB, ATP6V0A1, KIR2DL5A
Negative_11359	DAO, DBT, XDH, ACAT1, AK3L1, AMY2B, ARG2, ASAH1, ASPA, ATP6V0B, B3GNT 5, CACNA1G, CCL21, CXCL12, CXCL6, CXCR3, CYP1A2, CYP1B1, DLST, EP300 , FGF1, FLT4, GAL3ST1, GCNT3, GNA13, GRAP2, HADH, INMT, LALBA, LIMK2, MGAT4B, NAGA, NAGS, NCOR1, NEFM, NLGN2, NMNAT1, NOX3, OR11L1, OR1L6, OR4X1, OR6C70, PGK1, PI4KA, PIK3R1, PRKCA, RAP1B, SC4MOL, SELL, SHMT 2, SLC12A2, SOCS4, SULT1E1, TAS2R9, TUBB3, TUBB4Q, ULK1
Negative_11360	DUT, FST, GDA, HK1, SI, ACAT1, ADCY8, AKT1, ALPL, ARHGEF4, BCAT1, CACN A1S, CAMK2A, CCL23, CHKB, CLDN2, COL1A1, CTSB, DEGS1, DERA, DGAT1, DT X4, DVL1, EPHA6, FUT2, GALE, GLI2, GNAI1, GPD2, GRIN2A, GSTA5, GZMA, H HIP, HMGCR, HNF1B, HTR7, IGSF5, ITGA2B, KLRD1, LAMA3, MAGI2, MAPK10, MMP7, MPDZ, MS4A2, NOTCH3, OR13C9, OR4B1, OR8A1, OR8D2, ORC2L, PAK1, PCCB, PDE7B, PIM2, PKLR, PLCG2, POLD1, POLE, POLR2C, PRSS3, PTGIS, PT GS1, RARS2, SH2D1A, SLC27A5, SSX2IP, STX5, TJP1, UBA7, UNC5D, WNT4
Negative_11361	AK3, ASL, EPO, FAS, AASDH, ACAA2, ADCY4, ADH4, ALDH1A3, ALG8, ANAPC2, ATP5F1, CAMK2A, CDC7, CDS1, CFL2, CHST13, CLCF1, CLDN11, CLDN5, DPAG T1, EPHA5, EPHB3, FIGF, FTCD, GAS1, HEXB, IGF1, IL12RB1, ISYNA1, ITGA 7, ITGB2, L1CAM, MAP3K6, MCM3, MLYCD, MYH6, NFX1, NRG2, OR51L1, OR52A 1, OR52J3, OR5D13, PDE10A, PDXP, PEMT, PIGC, PIGK, POLA1, RAP1A, RBL1 , SAT1, SDC2, STX7, TAS2R5, TPM3, TYROBP, UNC5D, HLA-DPA1, TNFRSF10A, TNFRSF11B

Negative_11362	F7, FGG, GP5, HGD, LTB, ME3, MPZ, TXK, ADCY9, AFMID, ALG2, AMY2A, ARD1A, ATN1, ATP6V1A, B3GALT6, CCL3, CCL5, CDC20, CDC25C, CHKB, CHPF, CLTA, COL6A1, CSF2RB, CSH1, CTNNA1, CYP2B6, DDX55, DHRS9, DPM2, EPHA5, EVI1, EXTL3, FGF14, FLT4, FM05, FPGS, FTH1, GLDC, GUCY2F, HPSE2, HTR7, IDH3G, IFNGR2, JAG2, LCP2, LM07, LYPLA2, MAP3K2, MPZL1, MYL5, NAMPT, NARS, NUDT2, NUDT8, OR4D2, OR51F2, OR52B6, OR5B3, PARVB, PARVG, PLIN, POLE, POLR1D, POLR2E, PTPRZ1, SCIN, SCP2, SMURF1, SOCS7, SORBS1, SPI1, SUV39H2, TAS2R13, TRADD, UPP1, VCAM1, WNT3, XIAP, MAPKAPK3
Negative_11363	AR, CAD, SPN, TNR, ALDH3B1, AMHR2, ASAH1, ATP12A, ATP5D, CACNA1A, CFL1, CSF2, CTNNA1, CXCL1, DARS2, DTX3, ENPP6, FGD3, GBE1, GNRHR, GSTM5, IPPK, LRP6, MAP2K2, MIOX, NCOR2, NRG2, OR10AD1, OR11G2, OR1N2, OR2T12, OR4C13, OR4E2, OR8H1, OR8U1, OSMR, P2RX4, PHKG2, PLCG2, POLR2D, PRPH, PSME3, PTCH2, RDH5, RRM2B, SIAH1, SMC1B, SMPD1, STK11, TLR3, TP73, ULBP1, VAMP4, WBSR22, B3GALNT1, TNFRSF10D, TNFRSF13C
Negative_11364	CR2, HK1, LEP, MYC, OTC, PML, SMO, WAS, A4GALT, ACVR1C, ACVR2B, ADAM10, ADRB1, AHCY, ALDH3B1, ARG1, ARHGEF7, BMP8A, CACNA1F, CACNB3, CAMKK2, CCL8, CDC16, CD01, CFLAR, CSNK2A2, CYP2E1, DCTD, DFFA, DHRS4L2, DUSP6, EXT2, FOXA3, GNPDA2, GSTA5, GUSB, HCLS1, HMBS, HSD3B1, IL8RB, INPP5E, ITCH, ITPK1, LALBA, LDHA, MAD2L2, MAP3K12, NAT2, NEUROG3, NKX2-2, NOTCH2, NSD1, OR10A2, OR10T2, OR10V1, OR11I1, OR1K1, OR2AT4, OR2T6, OR2T8, OR51I1, OR52K2, OR6X1, PDE4C, PDHA1, PIAS2, PIGU, PLAUR, POLA1, POLR2H, PPOX, PRKCQ, PTGS1, RAPGEF4, ROBO1, SCP2, SESN2, SFRP1, SIGLEC1, SPHK1, SPTAN1, ST3GAL5, STX6, TAS2R16, TICAM1, TRAF1, TRPC1, TUBB6, UCKL1, VDAC3, WNT3A, HLA-DQA2, SERPINF2
Negative_11365	ADC, BID, BTK, C8B, F12, GLA, PGP, PLN, SRC, UBB, ACHE, ACSL3, ACTA2, ACVR1, ALDOB, AOX1, ATP4B, CAMK2G, CCNE2, CD22, CD226, CD8B, CDK5, CFTR, CHST11, CNGA4, CREBBP, CRY1, CSF3R, CTNNA2, CYP4A11, DDX56, EHMT2, EPHA6, EPHB2, EVI1, FDFT1, FZR1, GALNTL2, GAMT, GLO1, GNPAT1, GSTA1, GUCY1A2, HAAO, HNMT, HSPA2, IKBKG, IL12B, ITGB3, KCNQ1, LRDD, MCEE, MGAT2, MGAT4A, MOV10L1, NOTCH2, NRP1, NRXN3, OR13H1, OR1L6, OR2H2, OR4C12, OR5H6, OR6K2, OR6X1, P4HA1, PARS2, PFKFB2, POLR2D, POLR3A, PTGES, PTGIS, PTGS1, RAPGEF2, RARS2, RBKS, RPS6, RRAS, SLIT1, ST3GAL2, STX4, TAS2R50, THTPA, UXS1, XYLT1, ZIC2, HLA-DQA2, SUV420H1
Negative_11366	CEL, CGN, FGB, GLS, ID4, ME1, ACSM1, ACTC1, ACY3, ADAM10, ADCY7, ADRA1D, AGPAT1, ALDOB, AMPD2, ANAPC4, ARSD, B4GALT1, BMP8A, BRAF, CACNA1E, CACNB1, CALML6, CCL13, CCL16, CD14, CD247, CD58, CDC25B, CDC27, CDS1, CHAT, CHPF, CTLA4, CXCL10, CXCL11, CYCS, CYSLTR2, EPB41L2, EPHA2, EPHB2, EPHX2, FGF17, FPGT, GNA11, GNAT3, GNRH1, GRIN2A, GRPR, GSTA1, HSD3B7, HTR5A, ICAM1, IFNA7, IFNK, IL10RA, IRAK1, ITGA6, MAML2, MDM2, MGST1, MINPP1, MMP9, NARS, NRCAM, NTNG1, OR1D5, OR51I2, OR8U1, P4HA3, PDE6D, PDE6H, PGAP1, PGS1, PIP5K1C, POLR2A, POLR2E, PRPS1, PTGER3, PVRL4, RBPJL, SHISA5, TAS2R5, TAS2R60, TBK1, THTPA, TPM3, TRHR, TRMT11, TUBB2C, UBE2L3, UBE2L6, UXS1, WNT5A, WWP1, YOD1, YWHAQ, MAPKAPK5, ST6GALNAC3
Negative_11367	AK2, CFD, CRH, GSR, HYI, PC, TPR, TXK, ACVR1C, ADAM10, ALG11, ATP5D, B4GALT5, B4GALT7, BCKDHB, BUB3, C7orf16, CBLB, CCL16, CCL17, CCL23, COL5A1, CRHR1, DAPK1, DEGS1, DHRS4L2, DUSP14, E2F2, ENPP6, EPHA2, EPHA6, GADD45A, GBGT1, GDF5, GLUL, GMDS, GP1BB, GPAA1, HEXB, LGMN, MAN1A2, MGAT5, NCK2, NCKAP1, OGDHL, OR10P1, OR13J1, OR2M4, OR2M7, OR56B4, OR6Y1, P2RX5, PGAM4, PLXNA1, PNPLA4, POLD3, POLE3, PRKAA2, PTCH1, SDC2, SLC25A4, SOAT1, TUBA4A, TXNDC12, WIF1, XCL1, SERPINC1, TNFRSF1A

Negative_11368	C8B, EPO, GPT, SRM, ACACA, ACAD8, ACVR1, ACYP1, ADCY7, ADRA1D, AGPAT4, AGXT2, AMDHD2, ASCC3, ASRGL1, AVPR1A, AVPR1B, CCNE2, CDKN2D, CTLA4, DAPK1, DHCR7, DLL1, GARS, GPLD1, GRB2, IDH1, IRAK4, LEFTY2, MAP2K7, MCAT, NADSYN1, NAGA, NFASC, NUDT9, OR10P1, OR1C1, OR1S1, OR2S2, OR51L1, OR6T1, PDE6G, PDE7A, PIK3R3, PNLIP, PVRL3, RRM2B, SEMA4C, SMARCA2, SPRY3, UBE2L3, VAV2, WHSC1L1, HLA-DRB3
Negative_11369	CAD, DDC, ABLIM3, ACACB, ACADM, AMY2B, ANAPC1, ARPC2, ASRGL1, AXIN2, BCAT2, BDH1, CACNB3, CARD11, CD27, CDC26, CHKA, CISH, CSNK2B, CTNNA3, CYP2C9, CYP7A1, DDIT4, DOT1L, DRD5, DUSP5, EGFR, EPHB2, FTH1, FZD7, GCNT1, GDF6, GSTM3, HLA-G, HTR6, IFNA17, IL18R1, INSR, IRAK4, ITGB2, LRRC4C, MAOB, MAP2K5, MLYCD, MYH15, MYL2, NEU4, OR13D1, OR2G3, OR2M3, OR2T11, OR51D1, OR52I1, OR6M1, PDGFD, PGK1, PLCD3, PSPH, PTPN1, RAPGEF2, SLC33A1, TAP2, TAS2R60, TLR2, TSLP, VEGFA, VEGFB, WNT2B, WNT9A, XYLB, YWHAB, PDCD1LG2, PRICKLE2, TNFRSF14
Negative_11370	C8G, CS, ID1, TYR, ACTC1, ACVR1B, ACY1, ALDH3A2, ARHGEF1, ATP2A2, BIRC3, CACNA1E, CD244, CD47, CD79A, CD80, CD99, CHR1, CLDN22, CLDN5, CYP4F3, DAAM2, DKK4, ELK4, FGF14, FOXA2, GBE1, GCH1, GRIN2A, GUCY1A3, HDAC2, HSD17B4, HSD3B2, IL28B, ITGA5, KIR3DL2, KLK3, KLRK1, LAMC2, MAML1, MAP2K7, MYL5, NARS, NCOA4, NKX6-1, NRXN1, ODC1, OR1A2, OR1G1, OR4K15, OR51B2, OR52E4, OR6C1, OR6N2, OR7C1, PDE1A, PDHA2, PDX1, PFKFB2, PHPT1, PIGM, PIGN, POLE, POLE2, PPA1, RARA, RELA, STX10, SULT1A1, TCIRG1, TSC1, TUBB1, TYRP1, UGT1A10, WARS2, ATP6V1B1, CSGALNACT2, PDCD1LG2, PPARGC1A
Negative_11371	ASL, CSK, DUT, F2R, FUK, IL2, PDC, ACSM2A, ACVR1C, ADCY4, ADSSL1, ALAS1, ALAS2, ALDH2, ALDOB, ALOX12, ALPL, AMPD1, APRT, ARG1, BLNK, C4BPB, C7orf16, CALML5, CAV2, CCL7, CD244, CD34, CDC7, CDIPT, CFL1, CKS1B, CLDN8, CSF3R, CTNNA3, CYP19A1, CYP2A6, DHRS4, FGF2, FGF7, FZD5, GALNT1, GALNT9, GAPDH, GCAT, GPAM, GSTT1, IFNA16, IL9R, MAPK3, METTL6, MITF, NAT5, OR13G1, OR2G2, OR2L2, OR52E4, OR52N4, PANK1, PANK2, PDCD1, PNF3, PIAS1, PIK3C2A, PLA2G6, PPM1B, PSAT1, PTPRJ, PTPRM, RPS6KA1, SELL, SFRP5, SLC27A5, SOAT1, SOAT2, SQLE, SUFU, TAS2R13, TGFB1, TP53I3, TYMP, UGT2B28, VAMP3, WNT5B, YWHAE, C1GALT1C1, ST6GALNAC4, TNFRSF13B
Negative_11372	AK3, CEL, GLS, ME1, NGF, ACTB, AKR1A1, ALCAM, ALPPL2, B3GAT2, BCL2L1, BLVRA, BMPR1A, CASP3, CES7, CKMT2, CLDN15, COL1A1, COQ7, COX15, CSDA, CSF2, CTBP1, CYP2C18, CYP4A11, DDX19A, DGKI, DMGDH, EGLN3, ENTPD3, FASN, FLT3LG, GCNT3, GCNT4, GNAL, GRM5, HA01, IAPP, IFNA6, IFNB1, IL17RB, IL18, IRF5, ITGA1, ITGA3, JAG1, KIR2DL3, KLK3, LCMT1, LMO7, MAGI1, NEUROG3, NTRK2, ODC1, OGDH, OR10K2, OR11H4, OR1L3, OR1M1, OR4P4, OR5T2, OR8H2, OR8S1, PMM1, POLD4, PPP3CB, RAB5A, RARA, ROBO1, SH2D1B, SRGAP1, TAS2R8, TBL1X, TGFB1, TNFSF4, TUBB4, UBA7
Negative_11373	C8G, DCN, F11, KIT, TAT, ACAA2, ACACA, ADH1A, APOA2, ASRGL1, CCL26, CD274, CDKN2C, CSNK1G3, CTF1, CYP1A2, CYP2A7, CYP4F2, CYP8B1, DUSP2, EPB41L2, GSTA3, GSTM4, HTR4, IL20RB, IMPDH2, INPP5A, IQGAP1, LCAT, LRRC4C, MINPP1, MTAP, NADK, NCK2, NOX1, OR13J1, OR2D2, OR5D13, OR6C1, OR6Y1, PGS1, PHGDH, PIGQ, PIP4K2A, PMM2, POLD1, PRKAB1, PTPN11, RPS6KA4, STX8, TNFRSF8, TP53I3, TRIP10, TXNDC12, WASL, HLA-DPA1

Negative_11374	ASL, F8, IDS, PTS, SCD, SMO, SRF, ABP1, ACAT1, ACSM1, ACTA1, AKR1B1, ATP5E, BCL10, CAV1, CCR6, CHST13, CSAD, CSDA, CSNK2A2, CXCR3, CYP19A1, CYP21A2, CYP3A7, DDX19A, DDX4, DGKA, DHFR, DLL3, DPYSL2, EDAR, EHMT2, EI24, ENTPD2, EPHA2, EPHB2, ERBB3, FMO4, FTMT, FUT9, GALNT5, HIBADH, HRH1, IFIH1, IFNA14, IL11RA, INHBE, IRS1, MAPK14, MFNG, MKNK1, MTHFD1L, NTSR1, OR10X1, OR11L1, OR1A2, OR1N1, OR1Q1, OR2L13, OR2Z1, OR4D5, OR5K1, OR8H2, OR8J3, ORC2L, PIP4K2A, PMVK, PRKACB, PRKAR2B, PYCRL, RAB23, RXRA, SDHD, SETDB1, SETDB2, SLC9A1, SOX17, SRD5A1, SV2A, TACR3, TUBA1B, TUBB2B, TYMP, CACNA2D1, HLA-DRB5, SERPIND1
Negative_11375	CR1, NPY, OTC, SRF, ACSL6, ACTN4, ADCY7, ADH1A, ADORA2B, ADRB1, ALAS1, ALG2, APLP1, ARHGEF6, B3GNT4, CACNB3, CCDC6, CCL17, CHD8, CLOCK, CP11C, CSNK1G3, CYP2A13, DERL1, DOCK1, E2F1, E2F3, ETS1, F2RL2, G6PC, GCH1, GNAL, GNRH2, GP1BA, GPAA1, GSTA5, GSTZ1, IL17RA, JAM2, LIMK2, MAN1A1, NKX6-1, NOTCH1, NR4A1, NUDT8, OLAH, OR2Y1, OR4L1, OR51D1, ORC2L, P2RX4, PDHA1, PDXP, PFN1, PHKG2, PIP5K3, PLA2G2E, PLXNB1, POLR3K, PPAT, PPP2R2B, PRSS3, PVRL2, PYCR1, RARS2, RDH12, SELE, SEMA3G, SIPA1, SKP1, STAM2, STX3, TSHB, TUBB3, VAMP3, VARS, CACNA2D4, GABARAPL2, HLA-DRB5, MAPKAPK5, SERPINC1, TNFRSF12A
Negative_11376	BTC, CDA, CFH, IL5, ILK, LAT, MOS, PAH, PLN, PVR, TFG, TYR, AMY2B, ARPC3, B3GALT2, B3GNT4, B4GALT6, BLNK, BLVRA, C3orf10, CCL11, CCL21, CD244, CKMT2, CLDN16, CSF1, CTNND1, DEGS1, DRD1, DUSP4, EFNA2, ENTPD8, ERBB2, FGF2, FGF22, FSHB, FUT1, FZD1, FZD8, GALK1, GNAO1, GSTA2, GSTA4, IL2RA, IQGAP3, ITC1, ITGA9, MAN1A2, MAP3K14, MYH10, NEU3, OR10J3, OR5K1, OR6F1, OXCT2, P2RX5, PAFAH2, PANK3, PARD3, PDE7A, PECAM1, PHKB, PI4KA, PIK3R1, PLOD3, PPM1A, PPP3R2, PRLR, PTAFR, PTGIS, SEMA7A, SOCS5, SRGAP1, STAT6, STX12, TNFSF14, UGT2B7, WNT8A, XIAP, YWHAG, ATP6V1E1, HLA-DRB4
Negative_11377	AK7, OGT, RET, TPO, ARPC4, ASS1, ATP13A2, CAMKK2, CBLC, CLDN1, CMAS, CSF2RA, CSF2RB, CXCL11, CYP2C9, DPYSL2, EHHADH, FLT4, FRAT1, FUT6, GCNT2, GNAI3, HLA-DMA, HLA-DOA, HNF4G, IDH3B, IL1B, LDHC, LDHD, LIPA, MASP1, MBL2, MTFMT, NTRK2, OR13C8, OR52B6, PANK3, PDE7B, PIGA, PIGL, PIGQ, PLEKHA8, PTPN1, PYGL, RDH8, SC4MOL, SKIV2L2, ST3GAL6, STAT1, STEAP3, STK36, TAS2R5, TGFA, TP53I3, TPH2, TRAF2, TRAF6, TUBB3, WASF1, WNT5A
Negative_11378	ADK, C8G, CFI, FER, FST, GHR, ME3, ABLIM3, ACTA1, ACVR2A, ADCY7, ADH5, AGPAT1, ALOX12, ATP6V1H, CACNB3, CD99, CERK, CKS1B, CLDN11, DGKG, DUSP1, EPOR, FBP2, FCGR2B, FPGT, FRAP1, FZD10, GALNT10, GALNTL2, GNB3, GUK1, GZMA, HAGHL, HLCS, HTR2C, ITGA7, JAM2, LAMC2, LIMK2, MAN1A1, MAP3K11, MCM2, MLLT4, MMP1, NRAS, NRCAM, OR10P1, OR10V1, OR12D3, OR13G1, OR4K17, OR5J2, OXSM, PARD6A, PDE4B, PFKM, PITX2, PLCB1, POLA1, POLA2, POLR2E, PPBP, PPCDC, PRKCH, PSAT1, PTCRA, PTDSS1, PTGFR, PTPN7, RAC2, RALA, RELA, RENBP, RFNG, RHOA, SEMA4G, STK11, TICAM1, TSHR, TSNA RE1, UGT8, XCL2, YWHAG, CACNA2D4, HLA-DQA2, TNFRSF10D
Negative_11379	ABO, F5, MPZ, VTN, ACAD8, AGPAT4, ARRB1, B3GAT1, BET1, CDK2, CHRM5, CNGA4, COL11A1, CSDA, CTNNA2, CTNNB1, CXCL12, DDIT4, DHFR, EPHX2, EVI1, FARSA, FLT1, FOXA3, G6PD, GAL3ST1, GALNS, GCDH, GNAL, GSTM3, HAGHL, IL13, IL17A, IL17RA, IL22, IL2RB, IPMK, IRS4, ITGA3, LIPF, MAP3K3, NEFH, NSD1, NT5M, OR10A5, OR10AD1, OR10Q1, OR11H6, OR4C46, OR4K15, OR4N5, OR51T1, OR52E8, OR5B12, OR8A1, PDE1C, PIGS, PIGW, PLA2G1B, POLD3, PPA2, PPM1D, RPS6KA2, SCLY, SCP2, SDHD, SEMA3A, SIPA1, SMAD4, STX16, SULT1E1, TAS2R3, TUBB2A, TYMP, UCK1, UROC1, UXS1, ATP6VOA4, MAPK8IP3

Negative_11380	APP, BTD, ACSM1, ALDH5A1, ALOX12B, ALPPL2, APOA1, APOA2, ARNT2, ATP5 F1, ATP5G2, C4BPB, CD36, CD58, CDK2, CLDN19, COL5A1, CREB3L1, CREBBP , CTPS2, DAAM2, DUSP2, EXTL3, FGFR2, GALNT2, GAMT, GANAB, GANC, GMPPB , GNPDA2, GSTA4, GSTO2, HCLS1, HCST, HSD17B8, HTRA2, ICAM3, IDH3G, IK BKG, IL13RA1, IRF3, ITGA9, ITPK1, JAG1, KCNJ11, LARS, LIPT1, NANS, NC F2, NFX1, NPR2, NQO1, NR1D1, NUDT12, OR10H1, OR13C8, OR1C1, OR1L4, OR 1L8, OR2T10, OR51A2, OR52K1, OR5D14, PFN2, PHKA2, PIGX, PLA2G2F, POL D1, PPAT, ROB03, RPS6KA3, SEMA3A, SKP2, SLC27A4, TBL1XR1, UCKL1, WWP 1, ZNRD1, TNFRSF10A
Negative_11381	C2, C8G, CR1, DCT, HK1, ME3, SPN, AKR1B10, ALAD, ALDH9A1, ALG10B, ANAP C7, APAF1, ATG7, AVPR1A, BAI1, BCAT2, BUB1B, CACNA1G, CACNB2, CAMKK1 , CCL21, CDC14A, CDKN2D, CLDN20, CLTA, CMAS, CNGA4, CNTNAP2, COASY, C PT1A, CSH1, CSNK2A2, DCTD, DDX47, DDX52, EARS2, EIF4B, FCER1G, FGF17 , FPGT, GANC, GOT1, HTR2A, IGSF5, IRS1, JAK1, LAMC1, LYZL1, MALT1, MAP 3K8, MAPK11, MTHFS, NEU3, NFATC3, NOTCH1, NR1H3, OR10G4, OR10J1, OR3 A3, OR4K17, OR52B4, OR5R1, OR5T2, OR6C74, PDCD1, PDE9A, PLCB1, POLA2 , POLR2H, POMC, PPP2CA, PPP3CB, PRKAG2, SDHA, SHC1, SHC2, SIAH1, SPAM 1, TAS2R13, TNFSF18, TYMP, VAV2, VKORC1, WARS2, WIF1, WNT7B, HLA- DP1A, SERPINA1, TNFRSF10D
Negative_11382	C8B, CD2, EDA, F2R, OGT, ACTN1, ADAM10, ADCY6, AFMID, ARPC5L, ATP5F1, CAMKK1, CD74, CHPF, CLDN22, CSNK1E, CYP26A1, DDX47, DGKB, DTYMK, ENP P6, EPHA7, ERBB3, FGD1, FLOT1, FZD5, GPAA1, HRH1, HYAL1, IDH3A, IFNK, IL10RB, IL11RA, ITGAL, ITGAX, NFKB1, NFKBIA, NRXN2, OR11A1, OR2S2, O R4D1, OR5A2, OR6C1, OR8D4, PDE7A, PIK3C3, POLR1A, PPP2R1B, PRKAG1, P TCRA, QARS, RALGDS, RAPGEF3, RHOQ, RUNX1T1, SELE, SELP, SGMS1, STX6, SYNJ2, TAS2R13, UGT2B10, UGT2B4, WNT10B
Negative_11383	NPY, PGF, ACSL4, ACSS3, ACYP1, ADSS, ALDH3A2, AMY2B, AOC3, ARSD, ATIC , BCMO1, C3AR1, CCL25, CD226, CHKB, CHR1, CLDN6, CMPK2, COQ6, CYP2C9, CYP2J2, DGKA, DGKZ, DHDDS, EPB41, EXT1, FGF12, FGF13, FGF22, FLT3LG, GLUL, GNA12, GNG3, GOSR2, GPD2, HTR4, IFNAR2, IFNGR1, IL17B, KAT2A, L DHA, LIMK2, MAPK13, MDH2, NCK1, NRG1, OR10Z1, OR13C4, OR1D5, OR1E2, O R1L6, OR4M2, OR51G2, OR51I2, OR52N4, OR56A4, OR5M3, PCCA, PDCD1, PFK FB4, PIK3R1, PLA2G2E, POLA2, PRKAG2, PRKCB, PTPRF, RAPGEF1, RASSF5, RENBP, RHOA, SEMA7A, SLIT2, SMAD9, SPRY2, ST3GAL3, STX16, STX6, SULT 1E1, TAS2R13, TBXAS1, TPH2, UPB1, UPRT, VAV2, WNT10B, SERPINA5, TNFR SF10A
Negative_11384	C1S, C5, IL9, JUN, OGT, OTC, AASS, ACOX1, ACP6, ACSL6, ACTN1, ADSSL1, A HCYL2, ALPI, ARSA, ATG7, ATP5L, BBOX1, BMP8B, BUB1, CD226, CEST7, CHST 12, CLDN6, CTNNA2, CXCL10, CYBB, CYP2B6, DDX56, DNMT3B, EFNA3, ENTPD 7, EVI1, GALNT7, GCNT2, ITGA6, ITGB2, ITPK1, LAP3, LTBR, MCAT, MKNK1, MYH10, MYLK3, NLGN1, OR13G1, OR1M1, OR2G6, OR51B2, OR52N5, OR6S1, OR 8H3, OR8I2, PARD3, PDGFA, PIGS, PPP2CA, PRKCH, PSEN1, PTGER1, RALA, R ASA2, ROCK1, SELL, SMARCA2, SOS1, SPTLC2, ST3GAL4, STAT5B, TGDS, TIC AM2, TP53, TRAF1, TUBB2B, MAP3K7IP1
Negative_11385	AK2, BAD, FH, GH1, LSS, SRC, ACPP, ACSM2A, ALG2, ALPP, ALPPL2, ARPC1A, B3GNT4, BNIP1, BUB1, CCND2, CCNE2, CD01, CER1, CLCF1, CLDN22, CLDN6, CNTNAP1, COL2A1, CYP26A1, CYP2A7, DAAM2, DAD1, DDX54, DEGS1, DUSP14 , EPB41L3, EPHA3, EREG, FABP3, FCER1G, GAD2, GALNT10, GP1BB, GPAA1, G STP1, GUCA1B, HTR2B, HYAL2, IL17A, IL1RAP, KLRC3, LLGL2, LTA4H, MAP3 K6, MGAT2, MTFMT, MYLK3, NR4A1, OR10H1, OR13C9, OR2T10, OR2T29, OR2T 34, OR4D11, OR51G2, OR52N1, OR5AP2, OR5AU1, OR8H1, OR8K5, PAPSS2, PD GFA, PIGB, PLCD3, POLR3B, PTK2, PTPRM, RIPK1, SARS2, SEMA3E, SFRP4, S PCS1, SPRY1, SV2B, TAS1R3, TRAF2, TUBB2B, WHSC1L1, ZFYVE16, ATP6V1B 2, CSNK1A1L, PAFAH1B1, PPP1R12A, TNFRSF12A

Negative_11386	RB1, TNF, ACP1, ADH5, CACNB2, CAMK2D, CD79A, CNTNAP1, EFNA4, EPB41L2, EREG, F2RL3, FRAT1, GALNTL5, GSTA2, GUCA1B, GYS1, HAGH, HSPA2, IL10RB, IL24, IQGAP1, MCEE, NADK, NKX3-1, OLAH, OR13F1, OR3A1, OR5AR1, OR8H2, OR9Q2, PIGV, PRKY, RALBP1, RETSAT, RND1, SELE, SEMA4B, SIAH1, SIPA1, SLC33A1, SPHK1, SRGAP3, SUCLG1, TACR2, TAS2R7, TKTL2, TUBB1, UNC5D, XCR1, ST6GALNAC6, TNFRSF14
Negative_11387	AGL, EDA, FAH, FAS, FYN, ILK, LSS, PAH, ABI2, ACAA1, ACP6, ADH1B, ALDH7A1, ATP6AP1, BBC3, BIRC3, CANT1, CASP6, CCR1, CD244, CDH1, CES2, CMAS, CYP7A1, DDB2, DGAT2L4, DPM2, DRD2, ENPP1, EPAS1, EPHB3, ETS1, F11R, FABP4, FBP2, FBXW11, FOXO1, FSHR, GALNS, GALNT12, GMPR2, GPD1, GSTP1, HARS2, IL13RA1, IL1A, IMPDH1, IMPDH2, ITGA8, ITGB6, KAT2B, MAN1C1, MAOA, MAP3K2, MAP3K8, MCM4, MCM7, NCOR1, NFATC1, NME2, NUDT8, OR10Z1, OR2AG2, OR2T33, OR4N2, OR51B5, OR51B6, OR52N5, OR5H2, OR6C2, OR6Y1, OR8J1, ORC4L, PFKL, PFKM, PFKP, PIK3CB, PLCD1, PLXNB2, PMM2, PPAT, PRKAR1A, RAB5A, RENBP, SEMA3B, SLC25A6, SMAD1, SPCS3, STAM, SULT1A2, TAS2R40, TNXB, TUBA3E, UNC5A, WNT7B, CACNA2D3, TNFRSF13C, TNFRSF6B
Negative_11388	AK2, CBS, CGA, CKB, CKM, CSK, LEP, OSM, PGD, RPE, SRC, ABLIM2, ACOT12, ADCY7, BLVRB, CACNA1A, CBR1, CDC14B, CLDN7, CLDN8, COL1A1, CTF1, CTNNA3, CTSG, CXCL1, CYP2B6, CYP2C18, CYP2F1, CYP3A4, CYP3A7, DOT1L, DTX2, EHHADH, FARSB, FASLG, GAPDH, GNG3, GRHPR, GRIA3, GSK3B, GSTO1, HAGHL, HYAL2, ICAM3, IL28B, IL5RA, INHBA, IRS1, ITGB4, ITGB8, ITPK1, KCN B1, LAMC2, LAP3, LIPA, LRAT, MAP4K4, MAPK13, MAPK7, MCEE, MCM3, NAT6, NFATC3, NGEF, OR10C1, OR10J1, OR10P1, OR3A1, OR4D11, OR52J3, ORC4L, PDE5A, PDE6H, PERP, PFN3, PHKA1, PIP4K2B, POLR3H, PON3, PPP1R3C, PPP2R1B, RASGRP2, SEMA3D, SEMA4F, SMAD2, SMAD3, SNAI1, STAT6, TGFA, TSC2, TYROBP, TYRPI, VAMP2, VAV3, VEGFC, YWHAZ, ATP6VOE1
Negative_11389	GK2, IL2, LPO, TFG, TNN, AGPAT2, AHCYL1, ALAS2, ALG11, AMD1, APOA5, APOE, ARPC1B, ATP5D, BET1L, BMP6, CAMK2G, CD14, CD8B, CDC2, CHAD, CMAS, CNTNAP2, CSNK1E, DDX55, DEGS2, DGKQ, DIAPH3, DTX3L, DVL2, EPB41L1, EPHB2, EXTL1, FGF14, FGF17, GANC, GNB3, GNPAT, GOT1, HADHB, HEXB, IDH2, IFIH1, IFNA16, IL10RB, IL29, INPPL1, IRS2, JAG1, LFNG, LIPG, MAML3, MTHFS, MYL9, MYLK2, NFX1, NKX6-1, NUDT5, NUMB, OR10J5, OR1G1, OR2AE1, OR2C1, OR2L8, OR52N1, OR6B3, OR8U1, OR9Q2, OXCT2, P2RX5, PCYT1B, PER2, PFKFB1, PFKFB3, PLIN, POLA1, POLE2, PRSS2, PTK2B, PTPRC, PTPRJ, RAC3, RFNG, SEMA3D, SEPHS1, SLIT2, SMARCA5, SORBS1, SREBF1, TLR9, TP53, UNC5A, VEGFA, WNT10A, ATP6VOE1, ATP6V1B2
Negative_11390	DCT, GP6, IL2, IL3, VTN, AASDH, AASS, ABAT, ACAT2, ADRA1A, AGRP, AGXT, AVPR1A, BCL10, BMP8A, CCL23, CDK2, CDKN2A, CES1, CHIA, CLTCL1, CNGA4, CSF1R, CXCL6, CYP19A1, CYP3A4, DDIT3, DIAPH2, ECSIT, ENTPD2, F2RL3, FARSA, FECH, FGF22, GLS2, GNAQ, GNPDA1, GYS2, GZMA, IGFBP3, IL1R2, IL6ST, IMPA1, LHCGR, LPAR1, MAN1A1, MDM4, MPP5, MYH7B, NEU3, NRXN3, OR10J5, OR10Q1, OR13F1, OR2A14, OR2M2, OR6K2, OR8D2, OR8S1, OXTR, PARD6A, PDE1B, PGK1, PIGA, PLAU, PLCE1, PLOD1, POLR3A, PORCN, PRKCA, PTCH1, RALA, RAPGEF2, RDH5, SFRP4, SMAD7, SMARCA2, SSH1, ST3GAL6, TIAM1, TPK1, TSNARE1, ZFYVE9, HLA-DPB1
Negative_11391	DCK, EZR, F7, MAX, PGD, SRF, ACSS2, ACTA1, ALG5, APOA2, BAI1, BIRC2, CD46, CTNNA2, CYP11B2, CYP2J2, CYP4F2, DDX4, DDX47, DIAPH1, DPYD, EFN3, EPB41L1, EPHB1, EPHB4, GOT2, GPAA1, GRIN2B, HDAC2, IDI1, IL1B, KLKB1, LAMC3, LIPE, LTBR, MAP2K7, MKNK1, MOV10L1, NCF4, NFATC3, NFYA, OR10A2, OR10J5, OR10R2, OR4D9, OR5M3, OR9A2, PFKFB1, PGAM2, PI4KA, PIGN, PIGU, PMAIP1, RALA, RDH11, SEMA3A, SLC2A2, SNAI1, SOS1, SRGAP3, STAT3, TGDS, ULK1, WNT6, XYLT1, ATP6V1B2, CACNA2D2, SERPINB5

Negative_11392	ADC, CTH, GCK, NPY, TK2, TNN, ABI2, AFMID, APRT, ARPC3, ATP2A2, BHMT, CACNG1, CYP26A1, EPHA4, FGF17, FOXA3, GALNT3, GMPPA, GNAI1, GNRH2, GOSR2, GPX7, GRIA1, GUCY2F, IDH1, IFNA10, IFNA8, IL15, IL15RA, IL24, IMPA1, JAG1, LARS2, MAGI2, MGST1, MPST, OR10A5, OR10AD1, PFKL, PFKM, PFN2, PIK3R2, PPAP2C, PPP1CC, PPP3CA, RXRG, SARS2, SEMA4D, STK36, STX16, TAS2R60, TLR3, TRAF6, TUBB1, TYMP, TYROBP, UNC5A, UNC5B, VASP, VEGFB, VKORC1, WBSR17, YARS, HLA-DRB4, PDCD1LG2
Negative_11393	DBT, DDO, FER, GLS, GP9, IVD, ME3, PTS, SFN, ABLIM2, ACSS3, ADCY8, ADCY9, ALDH5A1, ALOX12, ANAPC7, AREG, ARG1, ATP6V1A, BDKRB1, BLVRB, CACNA1H, CACNB2, CARD11, CCND3, CHRM3, CLDN14, CLDN22, COQ3, CPT1B, CXCL2, CYP26A1, CYP2J2, DGUOK, DHRS4L2, EDN1, EIF4B, F11R, GALNS, GYS1, HEX, IARS2, IDI2, IGF1, JAG2, KLRC4, LAMC1, LDHC, NAGS, NFYC, OR10G2, OR10R2, OR13C8, OR1A1, OR4C11, OR4C15, OR52A1, OR52H1, OR5C1, OR8K1, P2RX1, PCK1, PFKM, PLA2G1B, PLA2G5, PRKACG, PTK2, RAP1A, RDH10, RELA, RGS3, RPN2, SEMA3C, SEMA4B, SESN3, SHC2, SLC25A6, SOAT2, SOS2, SPRY4, SPTLC2, STAT4, STX12, TALDO1, TBXA2R, TLR3, TPH1, UROC1, PAFAH1B3, PRICKLE1, TNFRSF6B
Negative_11394	C8A, C8G, F11, ACHE, ACSL1, ADCY7, ADRB2, AKR1C1, ALG10, ALPI, AOX1, B3GNT2, BAIAP2, BDH2, CDKN1B, CDS2, CHAT, CKMT2, CLDN2, CNTNAP2, CRLF2, CYP11B2, DAD1, DNMT1, FASN, FUT4, GNB1, GSTA4, GUCY2C, HMGCS2, HNF1A, HTR2A, IKBKG, IL12RB2, JAM3, KNG1, LHCGR, MAD2L2, MAP2K3, MAP2K6, MGAT5, MKNK2, NCAM1, NCAM2, NOTCH2, NUDT2, OR13C5, OR4K2, OR4L1, OR4N4, OR51G2, OR51I2, ORC5L, PEMT, PGAM1, PHKA2, PIGB, PIM2, PPP1R3A, PPP3CA, PSEN2, RAC1, RASSF5, RBL2, RDH8, RELA, RELB, RFXAP, SESN3, SMAD3, STX12, SUFU, SULT1A4, TAP2, TOMM40, TPK1, WNT4, ZBTB16, ATP6V1G1, CACNA2D1, CSGALNACT2, KIR2DL5A
Negative_11395	GNE, ID4, LAT, LHB, OGT, ACAD8, ACOT12, ACSL4, ACVR1, ADH4, ADIPOQ, ALDH1A1, ALG6, ARG2, ASS1, ATP5G3, B3GALT4, B3GAT2, B3GNT5, CACNG5, CBLB, CCL15, CCL27, CDC14B, CDC25A, ELK4, EPHA8, EPHB6, F13A1, GDF7, HMGC, ITGA2, ITGA6, ITGAE, MAD1L1, MAP2K2, MECR, METTL2B, MYL5, NME7, OR2B6, PAK2, PDE5A, PFKFB1, PFN4, PIP5K1C, PMAIP1, POLR2A, PPP2R2A, PPP2R5B, PPP3R1, RHEB, SC5DL, SENP2, SETD8, STX12, UNC5A, VARS, MAPK8IP1
Negative_11396	ABO, CFI, F7, ID4, RFK, TFG, UBB, AARS2, ABLIM3, ACAT1, ACO1, AGRN, ARG1, BMP8A, CACNG4, CHAT, CLDN3, DGKE, ENTPD5, ERO1L, FCER1G, FLOT2, FZR1, G6PC, GADD45B, GCLC, GLO1, GRIN2B, HYAL1, IDH2, IL18R1, IL2RA, IMPDH2, INMT, KLRD1, LAMB2, LDHAL6B, LEPR, LTC4S, NCR1, NKX2-2, NRXN3, NT5E, OPLAH, OR10T2, OR10Z1, OR2V2, OR4E2, OR4X2, OR5D13, OR6C76, PAK7, PIP5K1B, PLXNB3, POLR1A, POLR1B, PRKAR2A, PRKCB, PTPRJ, ROBO3, SFRP1, SLC12A2, SMAD9, SMPD3, ST3GAL2, STAT1, TAS2R8, TOMM40L, WASF3, YKT6, YWHAB, SERPINB5
Negative_11397	C3, DAO, GPI, IL5, ILK, LAT, PDC, RET, TH, ACOT11, ADCY3, ADIPOR1, ALAS1, ALDOA, ARAF, ARHGAP5, ASPA, C1QB, CAMK2D, CBLB, CCL24, CCL25, CCNE2, CD19, CDC6, COL5A2, COMP, COQ6, CYFIP2, DGKD, DUSP7, EPOR, ETNK2, ETS1, F2RL1, FBXW11, FGF2, FZD6, GCNT1, GCNT3, GGPS1, GLDC, GLG1, GPAA1, HARS2, HEXA, HHIP, HIBADH, HMGCS2, HNF4A, HTR6, HTR7, IFNA10, IL13RA2, IRF5, LAMC1, MAP4K3, MGAT5B, MYLK, NFAT5, NFATC2, NMNAT1, OLR1, OR10A6, OR10X1, OR1D5, OR2C3, OR2T2, OR4F4, OR51B4, OR6T1, PDE2A, PDHA1, PERP, PGK1, PGS1, PHGDH, PHKB, PLCB3, PLCD3, PON1, PPA1, RASA2, ROB2, RPS6KB1, RPS6KB2, SEMA7A, SPRY1, STAT2, STX18, TLR9, UGT2B10, ATP6VOA2, GABARAPL2, PHOSPHO1, TNFRSF13C

Negative_11398	APP, BAX, F8, PLG, TNC, AADAC, ADH5, ADH6, AMHR2, APOC3, ATP6V1H, B4GA LT2, BCKDHA, C9orf95, CACNA1D, CCNG2, CREB5, CSNK1G2, DLL1, DPM2, DP M3, EFNA5, EPHA5, FZD7, GALNT7, GDF5, GMPS, GNAL, GNPAT, IDH3A, IL13R A2, ITPK1, KIR2DL3, KIR2DS5, L1CAM, LALBA, LDHAL6B, LILRB3, MAML1, M AN2A1, MCM5, NAT1, NOTCH1, NOX1, NT5C, NT5C3, OR13C8, OR1A2, OR2T5, O R51G1, OR56B4, OR5D13, OR5T3, OR6F1, OR8S1, PDE4A, PIGF, PPP1CB, PPP 2R5D, SEMA4B, SPCS3, SULT1E1, THBS4, TM7SF2, UMPS, VEGFC, CACNA2D2, MAPKAPK2, PHOSPHO1, TNFRSF12A
Negative_11399	C2, CKB, GAA, LPL, LPO, MAG, ALG12, ALPI, ARSA, C1QB, CACNG1, CASP3, CD 58, CHUK, CLDN22, CREB3L2, CSNK1G3, CXCR3, CYP2A6, DIAPH2, EDA2R, EN TPD1, ETNK2, FADS2, FGF13, FZD5, GADD45B, GFPT1, GRIN2B, HYAL2, IL5R A, ITGA3, ITGA8, JAK3, KARS, KIR2DL3, KIR2DS4, KIR3DL2, LAMB4, MADCA M1, MAPK10, OLAH, OR2B2, OR2T11, OR2T5, OR51G1, OR51V1, OR52N4, OR52 W1, OR5D16, OR7A5, P2RX3, PER2, PFN1, PIGQ, PIGS, PLCZ1, PLD2, POLR2K , PPP2R1A, PRKG1, PRSS3, PTGS2, RFXAP, RHOQ, ROBO1, RPS6, RXRA, SOCS5 , STK11, STX5, TFDPI, TIRAP, TRIP10, TUBB4Q, VEGFC, ZIC2, EIF4EBP1
Negative_11400	AK1, F2R, LYN, ACTB, ADRB2, AKT2, BET1, CACNA1E, CARS2, CCL22, CD44, C D80, CLOCK, CLTB, COL4A6, CTNNA2, CXCR3, DDX4, DUSP6, EPB41L2, GCNT1 , GLS2, GOT1, ITPA, KLK3, LIFR, MAPK12, MITF, MYH4, MYL5, OR2AE1, OR2G 2, OR4F4, OR5F1, OR5K1, OR8G1, OR9G4, PFN1, PFN2, PIGO, PLD1, PLEKHA8 , POLR2A, PPBP, PPOX, PTPRC, ROCK1, SELE, SOCS3, SSH2, TACR3, TUBB2A, TYMS, WNT9B, XYLB, ATP6V1G3, MAPKAPK5
Negative_11401	FER, FST, IL2, ILK, LSS, SI, SMO, ACTN4, ALDH7A1, ALDH9A1, ALOX12B, AM DHD2, AOC2, APLP1, APRT, AQP7, ATP4B, ATP5I, B3GAT1, BCAR1, C5AR1, CA CNA1E, CACNG8, CAV2, CDH15, CDIPT, CDS2, COL1A2, COL5A2, CSNK2B, CTB P2, CXXC4, CYP11A1, CYP2C8, DCTN1, EPB41L1, FBP1, FGF9, FZD5, FZD6, G ALNT14, GCAT, GTSE1, H6PD, HRAS, INMT, KLRC4, LAMB2, MAGI2, MAP4K1, M ARS, MICA, MTHFR, NCOR1, NCR3, NEUROD1, NFATC2, NKD1, NNMT, NR4A1, NT N1, OR10A5, OR1E2, OR2A12, OR4X1, OR52E2, OR5D16, PDGFC, PIAS2, PIK3 C2A, PPA2, PPAR, PRKCZ, PRNP, PYGB, RASA1, RERE, SELP, TGFB3, TJP3, T OMM40, TRADD, TRAF1, UGCG1, VTI1A, WARS2, WNT3
Negative_11402	BTC, C7, CD6, DCC, MTR, ABL2, ADAM10, AMHR2, ANAPC1, ATP2A3, BCKDHA, C ACNA1A, CCDC6, CCL17, CCNB2, CCNG1, CCR4, CD38, CDH4, CFL1, CHD8, COL 5A3, CYP11A1, CYP26B1, DBF4, DRD1, EPHB4, FZR1, GAD1, GALNT2, GCH1, G GT5, GJA1, GNA15, GNB3, HEXA, HNF1A, HRH2, IKBKG, IL10RA, IL11, IL25, IL6R, ITGAV, KAT2A, LRDD, MAML1, MAN2A1, MMP2, NAT6, NFATC1, NTNG1, N UMBL, OCLN, OR2M4, OR2T5, OR4Q3, OR5T2, OSMR, OXCT2, PDGFRA, PDHA2, P IK3C3, PPAP2B, PPP3CB, PRKCI, RGS3, SAT2, SGPP2, SMARCA5, SRD5A2, TG FB1, TJP2, TNFRSF8, WNT11, WNT2, WNT2B, XYLB, YES1
Negative_11403	BAD, DBH, FST, GNS, ID1, LCT, RPE, SRF, TK1, ACADS, ACOT12, ADCY6, AHCY L1, ALCAM, ALDH1A1, ALDH5A1, ARNT2, C5AR1, CACNG7, CASP6, CASP9, CD4 8, CD82, CDC2, CHAT, CSF2, CTNNA2, CXXC4, DDX54, DGAT1, DUSP1, EPHB3, FBP1, FCGR2B, FGF10, FZD7, GALNT11, GL01, GNPAT, GSTM2, GSTM4, HGSNA T, HLA- DOA, HSD17B1, IFNA7, IL19, IL23A, IL2RG, KITLG, KLRC3, MAP3K3, MCM6, MYH1, MYH7, NCSTN, NFE2L2, NFYA, NRP1, OGDHL, OR10G3, OR14A16, OR5AP 2, OR6B2, P4HA3, PIGA, PIK3R1, PISD, PLAU, POLR3A, PRKAR1B, PSPH, PTE N, RAPGEF1, SDHA, SOAT2, STEAP3, TAS2R5, TD02, TIRAP, TP53, TUBA8, UL K2, WNT10B, WNT5A, ATP6VOD1, CTNNBIP1, ST6GALNAC1



Negative_11404	ADC, GP5, PAH, PDC, SI, ZYX, ACOX2, ACSM3, ACYP2, AKT1, ALOX12, AMDHD1, AMPD3, ARRB1, ARRB2, ASNS, ATP2A2, ATP2A3, ATP5G1, B3GNT3, B4GALT1, B4GALT5, BCAR1, BMP8A, CCL27, CCNG1, CD80, CD8B, CDC14B, CDKN2C, CKS1B, CLDN1, CLDN20, CYP2A13, DHRS9, DVL2, EPHB1, ESAM, EXTL3, FRAT2, GALNT3, GGT7, GLI1, HMBS, HSD17B4, IFNA10, IL15, IMPA1, IMPDH1, IRS2, ITGAM, KLRK1, LTC4S, MCCC1, MGAT4B, MTHFD2, MTHFS, MTMR6, NANS, NRG4, NUDT9, OR10G4, OR13C4, OR13G1, OR1D2, OR1I1, OR2T29, OR4D5, OR8D1, OR8H2, PAICS, PANK3, PCCA, PFKFB1, PFN4, PLCB4, PLCZ1, PPM1A, PTDSS2, PTPRJ, PTPRZ1, RASSF5, SARS2, SRD5A1, ST3GAL5, SUFU, TAS1R3, TOMM40, TPMT, TRAF1, UNC5D, UROS, XCL2, ATP6V1E1, ATP6V1G2
Negative_11405	DDC, EPO, GP9, ANAPC1, ARHGAP5, ASCC3, ATP5F1, BCAT2, BCL10, BMP4, C4BPA, CACNA1A, CD36, CDK7, CER1, CHPF, CHST12, CHSY1, CHUK, CLDN6, CLTCL1, COL4A1, COL4A6, COL6A2, CYP2B6, CYP4A11, DGKA, DGKB, DPYS, E2F3, E2F5, ENTPD5, F11R, FADS2, GSTM2, GSTO2, GZMA, HYAL1, ICAM1, IFNAR1, IGFBP3, IKBK, IL28RA, IL3RA, KRAS, LAMB3, LEFTY2, LHCGR, MALT1, NLGN1, NMNAT3, OR4S2, OR51B2, OR51L1, OR5AU1, OR8B4, OR9Q2, PCYT1A, PGM3, PHKB, PIGP, PLAUR, POLR2C, PRKY, QARS, RUVBL1, SELP, SPRED1, TP53, TSHB, TUBB2B, WNT3A, XCL1, HLA-DQA2, PNLIPRP1, PRICKLE1
Negative_11406	C6, CFI, GH1, KHK, NPL, ACTN4, ADCY7, AHCYL1, AKR1B1, ALOX15B, AMY2B, APRT, ARPC2, ARRB2, ATG3, B3GALT1, BDKRB1, CBLC, CCL15, CDC26, CLDN1, CSF2RA, CXCL10, CXCL3, CYP7A1, CYP8B1, DAAM2, DAD1, DFFA, DTX4, EDAR, ENTPD3, EPHB3, FGD3, GALNT7, GNPAT, GRAP2, HMOX2, IL2RA, KIR2DS4, LCP2, LIPA, LIPG, MAN1C1, MAPT, MCAT, MGAT4A, MYL7, OR10G2, OR11A1, OR1L8, OR2T2, PCK2, PDE1C, PDGFRA, PDHA1, PIM1, PITX2, PLA2G5, PLXNB1, POLE2, PON3, PPM1B, PRKACB, PVRL3, RDH10, SDC4, SMAD7, ST3GAL4, ST3GAL5, TAP1, TAS1R1, TAS1R3, TMLHE, TUBAL3, TUBB, UGT2B10, UNC5D, WASL, XYLT2
Negative_11407	F3, GGH, SCD, SRF, ABI2, ACAD9, ACP5, AGPAT2, DDX4, DHFR, DTX1, EIF4E2, FPGT, FZD1, GAD1, GGCX, GRPR, GUCY2D, HLA-DMA, HTR2B, IFNA2, KLRC2, LARS, LTBR, MECR, MGAT5B, NFATC2, NOTCH2, NT5C3, OR1C1, OR4C11, OR56A4, P4HA2, PAX8, PKM2, PLAU, POLD2, PPAP2C, PSENEN, PTGIS, RPS6KB2, SHC4, SKP1, SLC27A5, SNAP23, SULT2B1, TAS2R50, TJP3, TNFSF18, TOMM40L, UROD, ATP6V1C2, SUV420H2
Negative_11408	CKM, DDC, GSS, KMO, MVD, AANAT, ABCC8, ACAD9, ACSL6, APH1A, APOA1, ARNT, ATP5H, BPNT1, CACNA1S, CALML3, CAPN2, CD44, CDC20, CHST13, CNTNAP1, CTSP2, CYBB, CYP11A1, CYP2D6, CYP2J2, DAAM2, DDX18, DRD5, DUSP6, EDAR, FBP1, GCNT2, GNAT3, GNPDA2, GRIN2D, GZMA, IL10RA, ITGA5, LIPT1, MAP2K5, MCM7, MGAM, MGAT2, MICA, MYL9, NEUROD1, NUDT8, OR11G2, OR14I1, OR1A1, OR1N1, OR2B11, OR2G3, OR4F15, OR4P4, OR51S1, OR5H6, OR5I1, OR7D2, ORC1L, PFKFB3, PGS1, PLCG2, PPID, PPP2R1A, RPSA, SDC1, SELE, SETD1B, SHISA5, STX16, STX1A, TGFB2, TLR2, TNXB, TYROBP, UBE2L3, VDAC3, WNT2B, YWHAE, YWHAZ, ATP6V0D1, ATP6V1C1
Negative_11409	AR, CGA, FER, GSR, IVD, ME2, SMS, XDH, ACSL3, ACSL6, ACTG1, APC2, CACNG6, CCL24, CCNG1, CCR3, CD72, CDS1, CLCF1, CYP1A1, DCTN1, ETNK2, HLA-G, HRH1, IFNK, IL18, KIR3DL2, LPAR1, MAML3, MAP4K4, MTMR6, MYH2, MYH3, NCAM2, OR4K14, OR52I1, OR5AU1, OR5H6, OR6B3, OR7G1, OR9Q1, PLCB4, PLTP, PPP3R2, RASA1, RPS6KA4, SMPD1, SMURF2, STX2, TAS1R1, TICAM2, UROS, TNFRSF6B
Negative_11410	CGN, F11, MTR, AASS, ALDH6A1, APPL1, AREG, ARPC1A, ATP5G1, B3GALT4, CCL8, CCND1, CES1, CHIA, CNDP1, CNTF, CREB5, CX3CL1, CYP26A1, DDX41, EPHA4, ESAM, ETNK1, FGF8, FOXO1, GANC, GCLC, GPAA1, GSTA2, IFNA2, IL10RB, IL20, IL8RA, ITGB4, MDH1, NAGLU, OR1L6, OR2T34, OR4D6, OR51E2, P2RX4, PAK3, PDE4D, PLA2G6, PPA2, PSENEN, RASGRP2, SEMA3A, SETDB2, SOS2, SREBF1, STAT5A, STX5, TNFSF12, UNC5D, VEGFB, HSD17B12

Negative_11411	AGL, GK2, MOS, OTC, PGF, RB1, ADORA2B, ALDH7A1, ASPA, CCDC6, CREB3L1, CSNK1E, CYP27A1, DAXX, DNMT3B, FGD3, GAD2, GLI1, GRIN2D, HLA-C, HTR2C, IFNK, IL13RA1, INHBB, INHBC, INPP5A, ITGB7, LAMB3, LYPLA1, MAPK10, MAPK7, MAPT, MARS2, MGAT4B, MYH14, NEFL, NEUROG3, NOS3, NRCA M, NRXN3, OR1L6, OR2K2, OR2T11, OR3A2, OR4M2, OR5H6, OR6C1, PDE6D, PH KB, PIAS4, PON2, PPARG, PPM1A, PPP1CC, PRPH, RASGRF1, SEMA4G, SGPP2, SHMT1, ST3GAL5, STAM2, STX4, TMLHE, TRAF3, VNN1, XYLT2, ATP6V1C1, TNFRSF13B
Negative_11412	CSK, CTH, HDC, LYN, MOS, MUT, PC, SP1, ACTA1, ADH4, AKT3, ALDH3A2, ALG1 2, ALG2, AMD1, ARSB, ATP4B, BCAT2, C3orf10, CACNA1D, CASP3, CD19, CDC 7, CDH4, CDIPT, CDS1, CIITA, CXCR3, CYSLTR2, DAPK1, DHCR24, DTX1, EDN RA, EFN3, EXOC7, FGF21, FUT9, GLI1, GSTO1, HLA-DMA, HTR5A, IDH3G, IFNA10, IFNA14, IL7R, INPPL1, ITGA9, ITGAM, MAPK1 , MAT1A, MCM3, MCM5, NCOR1, NSD1, NTF3, OCRL, OR10A4, OR2T5, OR4D5, OR 4K13, OR5AP2, OR5R1, OR6B3, OR6T1, OR7G1, OR7G2, OXCT2, P2RX1, PDE2A , PGM2, PLCE1, PNPO, POLD2, POLE4, POLR2K, RASGRF2, RASSF1, RRAS, SDH A, SGPP1, SH2D2A, SLC25A6, SPI1, STAT6, SULT1A1, TFPI, THBS1, TUBB6, TYK2, WNT2B, PAFAH1B1, SERPINB5
Negative_11413	C2, HGD, HK1, LTB, MVD, SHH, TNF, VCL, ACADM, ACOX3, ADORA2B, AKR1C2, A LG13, ARPC5, CARS, CCR7, CDKN2B, CHR1, CHUK, CLTCL1, CNGB1, COQ3, CYC S, CYP1A1, CYP21A2, DAPK2, EFNA1, EFNA4, EPHA1, FCGR2B, FM05, FTCD, H LA-DOA, HMOX2, IFNA14, ITGAL, JAK3, JUND, KAT2B, LAMC1, LHCGR, LYZL1, ME TTL6, MLYCD, MYH1, MYH4, MYLK2, NCOR1, NR5A2, NRAS, NTSR1, OR10G7, OR 2T12, OR4D11, OR4F5, OR51B2, OR8B4, OR8K5, OR9G1, P2RX3, PDGFC, PIGT , PIK3C2A, PLA2G6, PNPLA3, PPBP, PPP1R1A, PRKACB, PRKY, RRAS2, SEMA4 C, SETD7, SQLE, SSH2, STAM, SUCLA2, TBXAS1, TGFB3, TPH1, ULBP2, WNT16 , ATP6V1B1, ATP6V1E1
Negative_11414	CD2, F10, FN1, HGF, KHK, MPI, SMO, TFG, TK1, TK2, XDH, ALDH2, AMY2B, ARG 1, ARHGEF4, BAAT, CCL28, CCR1, CD14, CD70, CD99, CHRM5, CLDN20, COL1A 2, CPT1B, CTPS2, CXXC4, CYP3A4, CYP8B1, DGAT1, DUSP7, DVL1, EFN1, EN PP1, EPHB4, FUT8, GAB1, GGT6, GLYCTK, GPAM, GRM5, GSTO1, HTR2A, INPP5 B, JAK1, KAT2B, KNG1, LEF1, MAPK10, MAPK11, MAPK9, MMP14, MTMR2, NAT6 , NCK1, NR4A1, OR10H4, OR1F1, OR2T10, OR4E2, OR5P2, OR6C6, OR6N1, OR6 T1, PDGFC, PI4KA, PIGV, PIK3CB, PLOD3, POLA2, POLR3A, PTPN11, SDC2, S DC4, SETD1A, SLC27A4, SLC2A2, STT3B, TAP2, UNC5B
Negative_11415	AGK, CKB, CRK, DUT, GH1, ADCY5, ALCAM, ALG12, ALOX12B, AMPD1, AREG, AR G1, ARSD, ASS1, ATP5I, B3GAT2, CCNG2, CD99, CDK5, CDK6, CHPF, CHRM5, C MAS, COX15, CYSLTR2, DGKE, DPYD, DRD1, ELK4, EPHA7, ETS1, EXT2, EXTL2 , FGF11, G6PD, GALNTL5, GDF6, GSTO1, HPSE2, HSPA1B, IL3RA, IPMK, IRAK 1, KCNQ1, LDHAL6A, MEF2C, MPST, MTHFS, NADSYN1, NFYC, OR1M1, OR4K17, OR51G2, OR5I1, PARD6G, PDE10A, PKLR, PPCS, PPP1R3C, RPE65, SDC4, SEM A4B, SLC2A2, SNW1, SOCS7, SORD, STK36, TACR3, TNFSF8, TRAF2, TUBAL3, UGCG1, WARS, WNT3A, XCL2, YARS, YWHAZ, TNFRSF12A
Negative_11416	AK2, AK3, BID, CAD, DDC, FOS, IL9, LTB, LYN, MAG, MSN, SCD, AARS, AASS, A CSL5, ACTB, ACTC1, ALDH1B1, ANAPC10, ATP6V0C, ATP6V1F, B3GALT4, CAS P9, CCNE2, CDC14A, CDC27, CRKL, CYP27A1, CYP2D6, DHCR24, DLST, EPHA8 , FGF17, FOXO3, GNAI2, IQGAP2, NAGLU, NCOR2, NFE2L2, NRXN3, OR51B4, O R51G2, OR52E6, OR5K1, OR8K5, ORC3L, ORC5L, PAFAH2, PDGFD, PLA2G2F, P MAIP1, PRKAB1, PTPN6, RASGRP2, RETSAT, SEMA3C, SESN2, SGMS1, SMARCA 2, STAT5A, TAS2R38, TUBA3E, ATP6V0A1, GABARAP1

Negative_11417	DBT, GK, GSR, ME3, MOS, SDS, ACPT, ACVR2A, ACVR2B, ACY1, ACY3, ADIPOQ, ADRBK2, ALG9, ALPI, ARRB1, ASIP, CACNG5, CALML5, CCL17, CCL8, CCNB3, CEBPA, CIITA, CLCF1, CTF1, CYP2C8, CYP4A22, DEGS1, DHDDS, DOCK1, FAS LG, FZD1, GALM, GALNT3, GALNT7, GCNT4, GNA12, GPAM, GRIA2, HTR6, IL11 RA, IL13, IL17RB, IL1A, IL20, IL29, IPPK, JAK3, LAMC2, MAP2K4, MAP4K2 , MYH8, NLGN1, NRG2, NRXN2, NT5C2, OR10J5, OR1K1, OR2A25, OR2M2, OR3A 2, OR51B4, OR5D14, OR5D16, OR5P2, OR5T2, OR6C70, OR7C2, PDE7A, PFN4, PGS1, PPP1R3D, PPP3CC, PSPH, QARS, RPS6KA6, SMAD6, SSH3, STK11, STK4 , TAS2R50, THBS1, THBS2, TUBB1, TXNDC12, UNC5B, AASDHPPT
Negative_11418	CTH, DBH, F8, FES, GP5, HK1, ITK, TK1, TNF, ZYX, ACTA2, ACTN1, AGRP, AKT 2, ATP5G1, B3GNT5, C1QB, CCL1, CCL19, CDC25C, CHST13, COL1A2, COQ5, E FNA4, ENPP1, EPHA7, FGF22, FGF9, GALNT8, GLI3, GPD1, GSTM4, GUCY1B3, HPSE2, HSD11B1, IL12RB1, IL22, IL7R, LAMB3, MCM6, MGAT4B, MNX1, MTAP , MYLK2, MYLK3, NFKB1, NT5E, OR10A3, OR1K1, OR2T10, OR4D5, OR6K3, PAR S2, PECAM1, PER1, PLAU, PLCB3, PNPT1, POLA1, PPARA, PPP2CA, PPP3R2, R BL2, RDH12, RELA, RRAS, SMAD5, SOCS4, SRD5A1, TACR2, TGFBR1, TJP1, TP H2, TRIP10, YOD1, ATP6VOE1, SERPINA5, SERPINC1, ST6GALNAC3, TNFRSF 1B
Negative_11419	A2M, AMH, DUT, F11, F8, NOG, AARS, ACSL4, ADAM17, AMDHD2, BAAT, BCAR1, C3AR1, CACNA1D, CDC16, CDC6, CDH4, CLDN15, CNTN1, CREB3L1, CTLA4, DH RS4L2, DPM2, DUSP14, E2F3, EFNA4, ENTPD3, FADD, GALNT6, GJD2, GSTZ1, HIBCH, IFNK, IPPK, LDHD, NCR3, NFASC, NME4, NRG2, OR1F1, OR4C15, OR6S 1, OR6Y1, ORC1L, PAX6, PLTP, POLR2H, PPAP2B, PPP2R2B, RBX1, SFRP4, SM C1B, SNAP23, TJP2, TSLP, UBE2K, MAPKAPK3
Negative_11420	C2, CEL, DD0, HK2, IL2, KDR, MET, OGT, AADAT, ACSL5, AHCYL1, ALOX12, AR PC5, B4GALT3, BLVRA, BMPR2, BUB3, CACNG7, CASK, CBLC, CCL27, CCNB1, C D19, COQ5, CRLS1, CTSG, CYP26A1, CYP3A5, DPM3, EPHA1, ESAM, FGF13, FG F19, FTCD, FUT8, GALNTL1, HADHA, HIBCH, HPRT1, HSD3B1, HTR6, IL20RB, IL24, KAT2A, KIR2DL1, KNG1, LALBA, LAMC2, MALT1, MAP2K3, MAPT, MCM5, MYH9, NKX3- 1, NOTCH2, NOTCH3, NT5C1B, OR13C8, OR1A1, OR1J2, OR2A12, OR51I2, OR7 G1, P2RX4, PARS2, PDE2A, PDE7B, PLCB1, PMVK, POLR2L, PPP1R3C, PSME1, PTPN7, RGS3, RPS6KB1, SAT1, SDC3, SH2D1B, TAS2R14, TNFSF8, TSHB, TUB A3E, UGDH, ZBTB16, CACNA2D3, SERPIND1
Negative_11421	C8G, CFH, CRH, EGF, GPI, ADCY6, ADH6, ADORA2B, ALAS2, ALS2, ARNT2, ARS D, ASRGL1, B4GALT6, BPGM, CACNA1S, CCNA1, CD226, CSF3, CSH1, DDIT4, D USP1, DUSP2, ENTPD3, ERBB2, FDFT1, FGD1, GLI2, GMPR, GNB1, GNB3, GUK1 , HRAS, HSPA8, IDH3G, IFNA21, IFNAR1, IFNG, IMPA2, KIR3DL3, LCP2, MAP 3K6, MAP3K7, NFKBIB, NOS3, NTRK2, OGDH, OR10G2, OR1B1, OR2AE1, OR2L1 3, OR3A2, OR4D11, OR4F4, OR52A1, OR5B12, OR5B3, OR6C4, OR8H1, PIGB, P IP4K2A, PLOD3, PRPH2, PTGER1, PTPRZ1, PVRL2, RAPGEF1, RRM2B, SLC2A4 , SNAP23, SNW1, SPRY4, TP53I3, TRIP10, UGT2B4, SERPIND1
Negative_11422	BTD, BTK, F10, GHR, LYN, PTS, SHH, A4GALT, ACTN1, ADH1B, AKR1B10, ALDH 4A1, ALOX15, AMPD3, ARD1A, ATP5B, ATP6AP1, B3GAT1, BBC3, CCL23, CD74 , CHST13, CNTF, CSF3R, CXCR5, CYP4F3, DLL3, ENTPD2, ERBB3, GCLM, GLS2 , GMDS, GNAT3, GZMB, HEXB, IL22RA2, IL8RA, INHBE, ITGA7, ITGAL, LRRC4 C, LTA4H, MIOX, MYH14, NCK2, NFKB1, OR10G3, OR51A7, OR51L1, OR51V1, O R5M3, OR5P2, OR5T2, OXSM, PAICS, PAX6, PEMT, PER3, PIGW, PISD, PLOD1, PLXNA2, POLR3K, PPAP2B, PSME1, PTDSS1, PTPMT1, PTPRR, RFXAP, SEMA3C , SESN2, SLC27A4, SMAD5, SQLE, STK3, STX8, TFPI, TLR4, TUBB4Q, TXNDC1 2, VAV2, WNT7B, AASDHPPT, CACNA2D1, PNLIPRP2, ST6GALNAC1, TNFRSF10 A

Negative_11423	LPL, MAG, AKR1B10, ANAPC7, ARHGEF7, ATP5G1, BCAT2, CACNA1G, CSF2RA, DGKE, DUSP16, DUSP7, EXTL1, FGFR1, FLOT2, GALNT8, GAPDH, GGT5, GNAS, GPLD1, GRIN2D, GSTZ1, GTSE1, IARS, IL17RB, ITGAE, JUND, KLRD1, LALBA, LAMB4, LDHAL6B, MDM4, MGST2, MKNK1, MMP9, NCK2, NUMB, OR1C1, OR1L4, OR2T1, OR4D9, OR4N2, OR56A3, PAK2, PANK2, PCYT2, PDGFD, PLXNC1, POLA2, PRSS1, RAP1A, RPN2, RXRG, SGPP1, SMAD2, SNAI2, SOCS1, SPTLC1, SUCLA2, THTPA, TLR5, HSP90AA1, MAPKAPK2
Negative_11424	C6, LAT, NGF, TNF, AASS, ABAT, ACADSB, ACP2, ACPT, ACTG1, ALDH3A2, ATP5G1, BMP4, C9orf95, CACNA1I, CALML3, CER1, CES2, CFL2, CHD8, CMPK1, CYP11A1, DGKI, DKK4, DRD1, DUSP10, DUSP5, ECHS1, FADD, FGF21, GOT1, GUCY1A2, HMGCR, HMGCS1, HRH2, IDUA, IL18RAP, INPP4B, MCM4, OR2S2, OR4D1, P2RX5, PDE1C, PHPT1, PIGO, PKLR, PLCG2, PLD1, POLD3, PSME1, RFNG, RRM1, SETD2, SKP1, SOCS7, STX8, TBXAS1, TNFSF8, TSC1, TUBA3C, VEGFA, WBSR22, WEE1, XYLT2, YKT6, ZFYVE9, ATP6V1G2, SERPING1
Negative_11425	AR, DCK, GAA, GH1, HPD, IL7, LYN, OAT, ABP1, ATG12, CDC26, CHRM3, CTNND1, EXOC7, FBP2, FGFR3, FLT1, FOXO1, FZD10, GCNT4, GLS2, GRM5, HMGCS1, IKBKG, ITGA6, ITGB2, KAT2A, MCM6, NCOA4, NCR1, NRCAM, OR13C2, OR13C8, OR2G3, OR51D1, OR5L2, OR9Q1, PPCS, PTK2, PTPRJ, PYGM, SHC2, STK4, TAS2R50, TAS2R9, TFPI, TNXB, VEGFB, YES1, ST6GALNAC3
Negative_11426	CR1, DAO, FN1, FYN, KDR, LAT, LPO, TNC, ABI2, ACADL, ACADVL, ACSL3, AKR1C2, ALDH1A3, ARHGEF4, ATP5C1, ATP5F1, BIRC3, C1QB, CACNA1F, CACNA1I, CAMK2B, CASP8, CCL26, CCR7, CD34, CD46, CDH3, CREBBP, CRY2, CSNK2B, CYP2A13, DGKA, DGKB, DGUOK, DHFR, DPAGT1, DRD1, EGFR, EPB41L3, EPHB6, ERBB3, FARSA, FCGR2B, FTMT, FZD2, GNB1, GNG3, GYS1, HMOX1, ITGA7, LAP3, LYPLA1, MAN1A1, MPZL1, NAGK, NCF2, NCR1, NFKBIA, NFKBIE, NME2, OLAH, OR10G4, OR3A2, OR4F15, OR52K2, OR52N5, OR6M1, OXSM, PLXNB1, PNMT, POLE2, RPN1, SIAH1, SLC2A4, ST3GAL6, STK11, SUCLG1, SULT2B1, THBS4, TLR3, TOMM40, UBE2L6, VDAC2, WNT5B, WWP2
Negative_11427	ME1, PXN, SP1, ZYX, ACTA2, ALAS1, ARHGEF7, ARPC3, ATN1, ATP4A, ATP5J2, B3GNT4, BCAT1, BCAT2, CBR1, CD38, CDC23, CDK5, CMPK1, CXCL13, CXCR4, DAPK2, F11R, FECH, FGFR1, GALNS, GALNTL4, GALT, GDF7, GRIA3, HCLS1, HLA-F, IFNA13, IFNAR1, IL19, INSR, LDHC, LRP5, NADSYN1, NCF1, NCF2, OR14I1, OR1L8, OR2Z1, OR51G1, OR51Q1, OR7D2, OR7G1, OR8G1, OR8H3, PAK4, PDHA2, PER2, PGK1, PIK3CG, PLCG1, PLCG2, POLR2L, PPAT, PRKAB2, PRKCI, RAD51, RBKS, RELA, RND1, ROBO2, ROBO3, SDC2, SDHC, SFRP2, SQLE, SULT1A4, TAS1R2, TBXA2R, TDO2, THBS4, TIAM2, TNFRSF4, TPH1, TSTA3, ULBP3, VDAC1, WNT16, WNT5B, ATP6V1G2, B4GALNT1
Negative_11428	CRH, CSK, EGF, FGG, HAL, HGF, ID3, IL4, LSS, LYN, SHH, AARS2, ACY3, ADRA1D, AGRN, ALG11, ALPPL2, APAF1, ARPC2, ATP5H, BCAT2, BCKDHB, BDKRB2, CACNA1I, CD247, CD01, CHRM3, CSF3, CYP2A13, CYP2B6, DCTD, ENTPD5, EPAS1, ETNK2, FGF11, FUT2, GART, GNAQ, GRHPR, GRIA3, GUCY1A3, IARS, IFNA6, ITGAD, KCNJ11, KIR3DL2, LCP2, MAD2L1, MAD2L2, MAGI2, MCM2, MLYCD, MOV10L1, MPZL1, MYH10, NAMPT, NEFM, NEU4, NEUROG3, NTSR1, OCRL, OR10A2, OR10H3, OR10K1, OR13C3, OR1C1, OR2A12, OR2AT4, OR2D2, OR4E2, OR4X1, OR51A2, OR52N2, OR5AS1, PDGFD, PHPT1, PLXNA3, PNMT, POLR2H, PPP2R2B, PRDX6, PRKAA1, PTK2, RDH16, RGS3, RPS6KB2, SCLY, SETMAR, SMAD9, STAM2, TCF7, TLN1, TP53I3, UROD, B4GALNT1, MAP3K7IP2, PNLIPRP2, TNFRSF10B, TNFRSF13B

Negative_11429	DCC, DCN, NLK, AGXT, BAIAP2, CD79B, CHST11, CLDN14, CLDN22, CMPK1, CSF2RB, DTX3L, ENPP2, ENPP7, FGF12, GAD2, GFAP, GJD2, GNG13, GSTZ1, HEMK1, INSR, IRAK3, LIFR, MAGI2, MAP3K8, MAPK8, NCK1, NME2, OLAH, OR10V1, OR1A2, OR2T4, OR8J3, PIK3C2G, PLCG2, POLR2L, PTCH2, PTPN5, RAC3, RAPGEF3, SARDH, SDC3, SDHC, ST3GAL3, STAT2, TM7SF2, TNFSF12, WARS2, YOD1, ATP6V1G2, SERPINF2
Negative_11430	BTK, HYI, TKT, TNN, TNR, ADCY6, ADSSL1, ALDH1A2, ALG2, B3GALT5, CAPN2, CCR9, CD40LG, CD82, CES1, COASY, COL4A6, CTPS, CXXC4, CYP11B1, FGFR1, FOXO3, FZD5, G6PC, GSTM5, GUK1, HNF1B, IDI2, IFNA8, IGF1R, IGSF5, IL17B, IRS1, ITGA4, MAPT, NCKAP1L, NME7, NOTCH2, NPR1, NR4A1, NUDT5, OR13J1, OR2G3, OR2M5, PCCA, PFN2, PIK3CB, PLTP, PRIM1, PRPH, PTGER3, PTGIS, RBPJ, RXRB, SNAI1, SQLE, TACR3, ZBTB16, CSGALNACT1
Negative_11431	GNE, IL9, ABLIM2, ABLIM3, ARD1A, ARPC4, CAV2, CNGB1, DDX50, DDX56, DGKE, DPYS, EDAR, ELK1, EPOR, EREG, FTMT, FZD9, GAB1, HSD17B3, IFT57, IPK, ITGB7, LDHAL6B, LIPE, MYH13, MYL5, NFASC, OR10J3, OR13G1, OR14A1, OR1C1, OR2B6, OR2T11, OR4F4, OR52B4, OR7C1, OR9A2, OR9Q1, PGAM1, PIK3CD, PIPOX, PLA1A, POLA2, POLR1E, PVRL4, RALA, RFXANK, SMPD3, SOS1, TAS2R14, TBXA2R, TYK2, ULK1, ULK2, WNT5A
Negative_11432	DLD, GK, GP6, IVD, TYR, ACTN1, AGMAT, ALDH1A1, ARD1A, CBLB, CCR7, CFL2, CLDN22, COX10, CREB3L3, ETNK2, FGF4, FPGS, FZD4, GP1BB, GRPR, HPSE2, HYAL2, IL28A, INHBA, INHBB, INPP1, ITPKB, KRAS, LCP2, LDHB, MAP3K12, MCM3, MCM5, MYH8, OR10G9, OR12D3, OR13C8, OR14I1, OR1L6, OR2M2, OR2T3, OR4A5, OR4C11, OR4C13, OR4K13, OR5AU1, OR5C1, OR5D16, ORC1L, P2RX4, P2RX5, PFKFB3, PGAM1, PIGP, POLR1D, POLR3B, PTGER1, PTGS1, QARS, RAB5A, RASGRF1, RHOA, SIGLEC1, ST3GAL2, SULT1A2, TNFSF12, TRHR, TSNARE1, TUBB, VKORC1, ZNRD1, TNFRSF10C
Negative_11433	KIT, MPI, PC, ACSL5, ACSM4, ACTN1, ADORA2A, ADRB3, ARD1A, ATG7, ATP5L, BAI1, CACNA1G, CCNB3, CD72, CDKN1A, CDS1, CLDN15, COL4A6, CYP27A1, DVL2, ENPP1, EPHA8, EPHB6, FASLG, FRAT1, GCNT3, GNMT, IFNA7, IFNK, IL18, IL23R, LALBA, MAP3K8, MEF2C, NAE1, NR4A1, NRG2, OR10AG1, OR5AN1, OR5V1, OR8B8, OR8S1, PAK3, PGAP1, PLEKHA8, PPID, PPP2R5C, PTPN6, SEPHS1, SGPP1, SLC9A1, SNAI2, STAT5A, STK3, STT3B, STX12, THBD, TNFSF12, TNFSF8, TYMP, UCP1, VARS, ARHGEF12, CTNNBIP1, MAPK8IP2, SLC25A31
Negative_11434	ADO, DLD, LCT, LHB, NOG, PGD, PXN, SCD, SHH, TNR, UBB, ACP1, ACSM2A, ACVR2B, AGXT2, ANAPC4, APOA1, ARSE, BIRC2, CD244, CD74, CDH1, CHEK2, CLCA2, CLDN3, CMAS, CTNNA3, CXCL12, CXCL2, CYFIP1, CYP11B1, DGAT1, DLL1, DRD1, DUSP14, EPHA4, FARSA, FBXW11, FGF14, FMO2, GADD45B, GALNTL1, GART, GPX5, GRB2, HARS, HEXB, IQGAP1, IQGAP2, JAG1, JAK3, JAM3, LEFTY2, MARS, NR4A1, OR10G9, OR1J4, OR2M4, OR2T12, OR3A2, OR4K1, PHKB, PHKG2, PIGP, PIP4K2C, PPA1, PPAP2C, PPCDC, PPP1CC, PRKAR2B, PTPN1, RASGRP4, RXRB, SKIV2L2, SLC27A4, SREBF1, TRAF1, VAV3, PAFAH1B2, PNLIPRP2, SUV420H2
Negative_11435	DDO, HAL, MAG, OTC, PLN, WAS, AVPR1A, BDH2, BPGM, BTRC, CACNA1S, CAMK2G, CAPN2, CCL13, CCL7, CCL8, CCNG2, CDIPT, CES1, CFLAR, CPOX, CSH1, CXCL11, CYP2J2, CYP4A22, CYSLTR1, DVL1, E2F4, ENTPD1, EPRS, FLT3LG, FMO2, FOXA2, GFAP, GGT5, GNAO1, GSTA4, HLCS, IDH3G, IFNA17, IFNA8, IL12RB2, MAGI3, MMP2, NADK, NAGK, NARS2, NCF2, NFKB1, OR10G7, OR1L8, OR2G2, OR4F4, OR5R1, OR6M1, PDE3A, PON3, PPA1, PPP1CC, PPP3R2, PRKAR2A, PSME1, PTEN, PTGER3, PTGS2, PTPMT1, RFX5, SETD1B, SLC27A1, SMARCA5, STSIA1, STK36, SUCLG2, TRAF5, TSC2, WNT16, WWP2, ZFYVE9, PAFAH1B3, ST6GALNAC5

Negative_11436	C7, IHH, ILK, KIT, NPL, ALG5, CD8B, CDK2, CDK7, CHKA, CHPT1, CHR1, CRY1, CXCL9, DHFR, EPB41, FARP2, FGF2, FLT1, HLA-F, HMOX1, HNF1A, HTR2B, IAPP, IDH3B, IGSF5, IL18, IL1R2, INHBA, MAP2K3, MARS, MCCC1, MMP2, NFASC, OR10H2, OR2H2, OR2L8, OR2M7, OR2T4, OR2T5, OR4D1, OR4F5, OR8D2, PDE4D, PFKM, PIGV, PMM1, PTGES2, RASSF5, RFXANK, ROCK2, RPIA, SH3BP2, SIPA1, SSH1, ST3GAL3, STK11, TUBB, UNC5C, ATP6V1C1, KIR2DL5A, PDCD1LG2
Negative_11437	BAX, DCC, F10, MIF, VTN, ACTB, ACVR1C, ACVRL1, ATG7, ATP5I, B3GALT2, BAIAP2, BLNK, BUB1, CAMK2B, CARS, CCR6, CCR8, CD38, CDH3, CHPT1, CLDN20, CLDN5, CSNK1G3, CYP11B1, DGAT2, DPYSL2, FGF7, FOXA2, GALNT1, GALNT14, GBE1, GCH1, GNPDA1, GNPAT1, GPAA1, HARS2, HSPA2, ICAM3, IFNA2, IL12B, IL5RA, ITGAM, KAT2A, LIPA, LYZL1, MCM2, NAT1, NCSTN, NNMT, NOTCH2, OR13G1, OR1L3, OR4K2, OR5M8, OR6B3, OR6C2, OR8D4, PER2, PIGM, PIGS, PIK3C2G, PROC, PRSS1, RAD51, RFXAP, ROBO1, ROBO2, RPSA, SDHD, SEMA3B, SOX17, SPRY3, STK4, TGFA, THBD, UROS, VARS, WNT9B, PAFAH1B2
Negative_11438	AK3, ATM, IL5, NGF, WAS, ALG12, ATP6VOB, BCAT2, CACNG5, CCL4, CD72, CYP11B1, CYP2E1, DGKE, DUSP8, FSHR, GAS1, GNAI1, GUK1, HDAC1, HIP1, HMGCL, IDUA, LARS2, MAP3K7, MAT1A, MCAT, MMP7, NEU1, NKX6-1, OR10J1, OR2T8, OR51B2, OR56A1, OR6C74, OR6X1, OR7C1, OR8H2, PFKL, PIGV, PPP1R3B, PTGES2, RAPGEF2, RARS2, RFX5, SV2B, TFPI, TRAF2, UBE2L6, PLA2G12B, SERPIND1
Negative_11439	AGL, AK5, AR, CFH, CKM, KIT, MOS, NOG, TNC, AASDH, ACADL, ACADM, ADH7, AHCYL1, ALG5, ATP5L, B3GAT1, CCL19, CCR3, CD226, CDKN1B, CSNK1A1, CTS5, CXCR6, CYFIP2, DGKQ, DHRS3, DNMT3L, DUSP8, FARSA, FGF10, GALNTL5, GDF5, GNAL, GNG3, GRIN2B, GSK3B, GSTM4, IGF1R, IL15RA, INPP4A, IRAK4, JUND, LAP3, MAP2K4, MAP2K5, MAP3K14, MYH13, NCR3, OR2AG1, OR4K1, OR5D18, OR6C2, OR6F1, OR6Q1, OR8D2, ORC4L, PAFAH2, PDXP, PHKB, PIK3C2G, PPP3CC, PRLR, PTDSS1, RUNX1T1, SOS1, TCF7L2, UPP2, VANGL1, WNT8A, ACNA2D2, TNFRSF1B
Negative_11440	KHK, LCT, NPY, OAT, ACTN2, AKR1B10, APH1A, APOC3, ASCC3, ATP5G3, BST1, CASK, CCL19, CCND3, CCNG2, CD79A, CDK7, COL6A2, CYP11A1, CYP4A22, DVL1, FCGR3B, GMPR, GPD2, GRIN2C, GSTT1, HCLS1, HSD11B1, ICAM2, IFNW1, IKBK, IL7R, IPMK, IRF7, JAK1, KIR2DL3, KNG1, KYNU, MKNK2, NCAM1, NKAP1L, NLGN2, NOTCH2, OR10J1, OR1E2, OXCT2, PAX6, PFKFB2, PFKP, PIGT, PIP4K2B, PLCE1, PLD1, POLA1, POLD1, POLE3, POLR2A, PPP2R5B, PTEN, PTK2B, PVRL3, SETD1B, SETD2, SH2D2A, SNAI2, SOCS4, SPCS3, SPHK1, SQLE, STT3B, SUCLG1, TLR9, TNFRSF4, VTI1A, WEE1, YWHAQ, ARHGEF12, PLA2G12A, SERPIND1, TNFRSF10D
Negative_11441	ATM, EGF, GDA, GHR, OAT, RFK, ACSL4, AFMID, AGRP, APC2, ASMT, CACNG8, CALML6, CLDN16, DDOST, DOLPP1, DUSP3, DUSP4, EPHA4, F2RL1, FARP2, FOXA3, GALNT5, GRLF1, GSTP1, IL24, MAP3K12, NME4, NT5C3, NUDT8, OR10R2, OR13A1, OR13C8, OR14A16, OR2T8, OR4A15, OR51D1, OR52A1, OR5B21, PIGX, PPARG, PPP1CB, PPP2R5C, PTPMT1, RPIA, SCP2, SMAD3, SSH3, TICAM1, TUBB2B, UBE2L6, UGT2B7, ULK3, VAMP4, WNT11, ATP6VOA1, B3GALNT1, CACNA2D4, SUV420H2
Negative_11442	ADK, AMH, BCR, BTK, DCK, ACY1, ADCY7, ASCC3, ASMT, BDKRB1, CARD11, CASP6, CDO1, CFTR, CHD8, CHIT1, CHRM3, CHUK, COL4A4, CRY2, CSNK2B, CTF1, CYSLTR1, DIAPH1, DLL1, ENPP2, FARSA, FECH, FGF2, FLT4, GAPDH, GDF7, GGT7, GSTM1, GUCY2C, HADH, HARS, IARS2, KLKB1, KLRC4, LIMK2, LRDD, MCM5, METTL6, NAGLU, NCF4, NFKBIA, NME6, OR10G3, OR10G7, OR1B1, OR2A14, OR4C6, OR5T3, OR6S1, OR9G1, ORC3L, P4HA3, PDE9A, PERP, PMM2, PPT1, PRKAB1, RASGRF1, RPN1, SESN2, SOCS1, STAT5A, STK11, STX16, SV2A, TRMT11, TUBAL3, ULK2, XIAP, PAFAH1B1

Negative_11443	F2, RDX, TPO, WAS, ACPP, ACSS3, ATP2A1, ATP5J, BIRC3, CACNG2, CD40, CD86, CES1, CHKB, CHPT1, CHR1, CLTC, COL5A1, COQ5, CYP21A2, EPHA7, FABP4, FGF18, FGFR2, FLOT2, GALK1, GALM, GAPDH, GCDH, GCNT1, GMPR, GUK1, HADHA, HLA-DRA, HMBS, HMOX2, HSPA1B, IGFBP3, IL19, IPMK, IRAK3, IRF9, ITGA7, ITGB4, LEF1, LRRC4C, MYH11, NEFM, NFKB1, NMNAT3, OLR1, OR10AG1, OR10H3, OR1S1, OR2H2, OR4C15, OR4C16, OR4C46, OR5D14, OR5V1, OR8G1, PDE1C, PDX1, PHPT1, PLXNA2, PORCN, PRKAR1B, PTK2B, PTPN11, RASGRP1, RFWD2, ROBO1, RUVBL1, SEMA7A, SRD5A1, SSH2, TAS2R50, TNFSF12, TUBB1, UCKL1, UGT2A3, UGT2B17, VANGL2, WASF2, PPARGC1A
Negative_11444	AMH, MVD, NLK, NPY, ACAD8, ACSL5, ADAM10, ADRA1D, ARSA, ATP5J, BACE2, BMP7, BMP8A, CARS2, CCND1, CPOX, CREB5, EFNA3, EGLN1, ENPP3, FCGR3B, FGF7, FOXA3, GAL3ST1, GALNT11, GNAO1, HSPA8, HTR7, IPMK, MALT1, MDM2, MYLK2, NTF3, NUDT9, OR4B1, OR52N2, OR6Q1, OXSM, PCCA, PMM2, PNPO, POLR3K, PRKCB, PTGS1, RBPJL, RPS6KA4, SETD1A, SETDB2, WARS, TNFRSF10A
Negative_11445	EBP, F2R, FH, HK2, ID4, SMO, TFG, TKT, UBC, XDH, ADH1A, ALDH1A2, AMDHD2, CCNB1, CD19, CLDN18, CX3CL1, DGAT2L4, DHDDS, FCGR2B, FECH, FRAT1, FZD3, FZD4, FZD8, GALNT5, GJD2, GNAQ, HDAC2, IFIH1, IFNA8, IL1A, IL8RA, IMPDH1, INMT, IRF7, JAM2, LEFTY1, MAN1A2, MGLL, NOX1, OR1J2, OR2T11, OR5AP2, OR5V1, PFN3, PGAM1, PIK3C2B, PIP5K3, PTEN, PTGER1, PTPN1, SEMA3F, STAT5B, TPH2, VASP, WHSC1L1, YWHAB, SERPINC1
Negative_11446	C8B, CFD, F8, GBA, ACADVL, ACVR2A, AOC3, APOC3, ATP5G3, ATP50, ATP6V1H, BRAF, CACNG5, CAV3, CD79B, CDC20, CLDN1, CMBL, CTBS, CX3CR1, CYP26A1, CYP2U1, CYSLTR1, DUSP9, EFNA5, EI24, ENTPD8, EPB41, EPHA2, EPHX1, FADS2, FARP2, FBXW11, FMO1, FSHB, GRIA1, GSK3B, H6PD, HMGCR, IFNA14, IL15, IL24, ITPA, KIR3DL3, LTB4R2, MAP3K7, MKNK1, MOV10L1, MYH15, NFATC3, NOX3, NTN1, OR1I1, OR2T5, OR4C13, OR4D11, OR4S2, OR52N2, OR8D1, P4HA2, PDE2A, PIK3R5, PPP2CB, PPP2R5E, PRKCA, PTGES2, RALBP1, RAGEF4, SC4MOL, SCD5, SCP2, SLIT1, SOAT2, SOCS7, ST3GAL2, STX10, TAP2, TAS2R38, TFPI, TUBB2B, UBA1, UBE2K, UGT2B17, ATP6V1E1, HLA-DRB5
Negative_11447	ASL, KIT, MVD, PXN, ACSS2, ACVR1, ALDH1A1, ATP2A3, BUB1, C7orf16, CACNG5, CHKB, CLDN22, CYP3A7, DGKZ, EDN1, ELK1, ENPP7, FGF17, FMO5, GADD45G, HLA-G, HPRT1, HTR2C, HTR5A, IL17RB, IL22RA2, LRDD, MAPK7, MGST2, MYLK, NANS, NFYB, OR10A7, OR12D3, OR2T1, OR4C11, OR4L1, OR4N4, PDE6G, PDE7B, POLR3D, PPCS, PPP1R3A, PRPH, PTCRA, PTDSS2, PTTG1, RFXANK, SHC4, SLIT2, SNAP25, SPRED2, STAT2, TGFA, UBE2L6, XCL1, ZIC2, B4GALNT1, GABARAPL1, HSD17B12, SERPINB5
Negative_11448	CGN, CR1, PRL, RPE, AHCYL2, ALDH1A3, APLP1, ATG12, ATG3, ATIC, AVPR1A, BET1, BUB1B, C5AR1, CARS, CAV2, CD226, CD44, CDC14B, CLTB, CSNK2A2, CXCL9, CYP2F1, DCTN1, EGFR, EPHA7, FBP2, FCER1G, FGF18, FTMT, FUT7, GALNT10, GLI3, GLS2, ITGA2, ITGB5, ITPA, MASP2, OR10H1, OR13C3, OR4M2, OR52W1, OR5AC2, OR5AU1, OR5C1, OR5F1, OR8D4, PCYT1B, PDGFA, PIGO, PIK3R3, PPP1CB, PRKAR2B, PRPS1, RPS6KA3, SEMA4C, SMAD4, SPI1, SRD5A2, SSH1, STAT5B, STX12, TOLLIP, TUBB6, TYMS, UAP1, UGT2B11, WNT2B, B4GALNT1, PAFAH1B3
Negative_11449	FES, HGD, KMO, MVK, NOG, ACSL1, ALDH1L1, ALPL, ALPP, ARD1A, ARG1, ARHGAP1, ATP13A2, AXIN2, BDH2, BIRC2, C1QA, CCL14, CD226, CD79A, CERK, CSF3R, CYP19A1, CYP2A6, DAXX, DUSP16, E2F3, EDN1, EFNA2, FBP2, G6PC, GALE, GCNT3, GNPAT, GSTT1, HLA-DOB, IARS2, IL17B, KAT2A, MTFMT, NAGLU, NCK1, NEUROG3, NFAT5, OR1D5, OR1J2, OR5T1, OR8B12, PDHA2, PER3, PGS1, PHKA2, POLR1B, PPP2R5C, PRKCH, SDC3, SELPLG, SEMA3G, SEMA4D, SLC27A5, TACR2, TAS2R16, TNFSF9, UGT2B17, XIAP, CACNA2D3, PRICKLE1, SERPINA1

Negative_11450	HGF, PDC, TK1, ADRA1D, ALDH3A2, ALG12, APC2, ARAF, B3GAT3, CLCA2, CNTN2, DAG1, FLOT2, GAB1, GADD45A, GALNT1, GCH1, GLG1, GRM1, HADHB, IFNAR2, IGFBP3, IL18RAP, IL8RB, INPP4B, INSR, MASP1, MDH2, MMP14, MYH14, OR10K1, OR1N1, OR2G2, PIAS4, PIK3R1, PIPOX, PLCB4, PLOD2, PLXNA2, POLR1E, POLR3B, PPAP2A, PRKCD, RHEB, RPS6, RUNX1T1, SEMA3B, SNAI1, TICAM2, TXNDC12, TYROBP, HLA-DRB5
Negative_11451	AR, C2, CKB, HGF, OTC, SI, ARG2, B3GALT4, CAMK2B, CASP3, CD247, CDC20, CFLAR, CPT1B, CXCL13, CYP2C18, DUSP1, FOXO3, FUT6, GADD45A, GALK2, GDE1, GUSB, HARS, HEXB, HSD17B1, HSD3B7, HTR6, IDI1, IL12RB1, IL20, ITGA6, ITGAM, KARS, MAPK11, MCM4, MMP14, MTMR6, OGDHL, OR2AE1, OR2G2, OR2T5, OR2T8, OR51E2, OR51V1, OR56A4, OR5J2, OR6C70, OR9G1, PAX4, PIK3R1, PIP4K2C, PPBP, PPT1, RPRM, SDC4, SHC1, SOCS4, SRGAP2, ST3GAL3, STK11, TACR3, TGFA, TIAM1, TUBB4, UGCGL1, CSGALNACT2, PAFAH1B3, ST6GALNAC1
Negative_11452	HK3, MVD, OTC, ZYX, ACAD8, ACSL4, ADIPOR2, ADORA2B, AKT1, AKT3, ALDH1A2, ALG13, ATP5G2, ATP5G3, BCL2, BET1, C1QA, CACNB4, CCL26, CD40LG, CKMT2, CLDN18, CLDN4, CPT2, CSNK1G3, CYP11A1, DIAPH2, DUSP3, EFNA5, ELK4, ENO2, F2RL3, GALE, GALNT6, GALNT9, GDF6, HAP1, HES1, HTR2C, IFNK, IGF1, IL5RA, KLRC2, OR10A4, OR10G2, OR10H5, OR10R2, OR51B5, OR52A5, OR6F1, OR6N1, OR9I1, OXCT2, P4HA2, PLCG2, PPP2R2A, PPP2R5D, PRKAR2B, RDH10, RXRG, SARDH, SC5DL, SFRP2, STAT6, STX10, STX4, SV2C, TAS1R1, TGDS, TGFBR2, TUBA4A, TUBB6, TYROBP, WNT16, YARS2, CACNA2D1, HLA-DQB1, MAPKAPK2
Negative_11453	AK2, IL5, LAT, ACP2, ACSM3, ACTN4, ADCY1, ALDOB, ALG5, ARSD, ATP5L, ATP6V1A, B3GNT4, CD48, CREB3L2, DGKZ, DTX3L, FGF3, GGT7, GMPA, HMBS, HSD17B2, IDH2, IDI2, ITGA2, MAN1A1, MAPK13, MPZL1, NCK1, NEGR1, NKD2, NMNAT2, OGDH, OR13C8, OR1J4, OR4D9, OR6C76, OR6K6, OR7G3, PAK7, PDE1B, PERP, PIK3C2G, PLXNA1, PSEN2, RASSF5, RBX1, RFNG, RFXANK, RHOA, SFRP2, SFRP5, SPRED1, SUOX, TAS2R40, TBK1, TGFBR1, TSC2, TUBB4, VDAC2, WNT1, CTNBP1, PLA2G12B
Negative_11454	CD4, CS, DDO, EDA, F2R, ACVR1, ADCY5, APPL1, ARG2, ASAH1, BAI1, BST1, CALML5, CAMK4, CARS, CCNG1, COL5A2, CREB1, DUSP9, FGF1, FGF18, FGF7, HCCS, HNF4A, INHBA, INSR, IRS4, ITGA10, ITGB8, KLKB1, NEU4, OR10A2, OR10J1, OR10V1, OR4N5, OR51I2, OR6C70, OR8K1, OXSM, PARVG, PAX4, PCK2, PIGL, PIGV, PLXNA1, PPT1, RAD51, SETD1B, SPRED2, SPTLC1, SPTLC2, TAS2R40, THBS2, TP53I3, VASP, WNT11, B3GALNT1, EIF4EBP1, PAFAH1B3, PHOSPHO1
Negative_11455	GPT, JUN, ALOX15B, ATP5B, BET1, BUB1B, CASP6, CD40, CXCL3, CYP26B1, CYSLTR2, DGKG, DPAGT1, EDNRA, EHHADH, EIF4B, ERBB3, ERBB4, GNG3, IL10RA, IL17B, IL4R, IL8RA, IMPDH2, KAT2A, KDSR, KLRC4, LEFTY1, MAP3K4, MKNK2, MMP9, NCAM1, NFYC, OR13C9, OR4D9, OR4F17, OR5AC2, OR5B3, OR5P2, PFN4, PLCB2, PPP2R5C, PRKAB2, RFXANK, SARS2, SDC1, SETD2, SFRP1, SLC9A1, ST3GAL6, TAS2R4, TIRAP, TJP3, TLR3, UPRT, UXS1, ATP6V1C1
Negative_11456	AGK, AUH, HYI, OSM, PAH, SRC, ALDH2, ALDOB, ALG10, AMDHD2, ARSB, ATG3, ATP5E, CALML3, CCL16, CCNA2, CD3E, CDH2, CLDN11, CLDN8, COL4A6, DGKB, FGF2, FMO4, FOXA3, FPGS, FZD8, GNAO1, GNRH2, GPD1L, GRIA1, GTSE1, HES1, HSD17B2, IL18, LAMA4, MGST1, MMP14, MYL7, NCF2, NRCAM, OR10H2, OR10H3, OR1A2, OR1J2, OR2D2, OR2F2, OR51Q1, OR5D16, OR5H6, OR5M9, OR6C75, OR8K5, PAK6, PANK3, PIK3CD, POLA2, POLE, PPP3CC, PVRL4, PYGM, RAPGEF2, SENP2, SETDB2, SOAT1, SPTLC1, TCIRG1, TGFB1, TGFBR1, TLN1, TRHR, UGT2B4, ULBP1, UROD, UROS, WASF2, ATP6V1B1



Negative_11457	C4B, IL3, ME1, OAT, RB1, SHH, TNC, ACAA1, ACVR2B, AGPAT6, ALOX12B, ALP, ANAPC10, ASCC3, ASMT, ATP2A2, B4GALT3, CACNB3, CCNG1, CD80, CDC7, CLDN1, CSNK1G3, CTNNA1, CTTN, CXCR4, CYP2A6, DDX55, DPM3, F2RL2, FBP1, GALT, GLUD2, HEXA, HNF4A, INPP5E, IRAK4, KIR2DS5, KIR3DL3, LAP3, LARS, LEFTY1, LIFR, MAP3K14, MGAT3, MYH4, NAGA, NAT2, NOS1, OR10H5, OR11A1, OR1M1, OR2AE1, OR2B2, OR2G3, OR4C11, OR5D13, OR6N2, OR8D1, OR8K3, OXTR, PDE11A, PDE3A, PDGFC, PFKFB4, PIGN, PIM1, PIPOX, PLCZ1, PRKG1, PSME2, PYCR1, RUNX1, SDC2, SELE, SEMA3C, SHISA5, SLC27A1, SLC33A1, SLIT1, SPAM1, ST3GAL5, STEAP3, TAS1R2, TAS2R10, TAS2R42, TUBB2A, UGT2B4, VEGFA
Negative_11458	BAX, EPO, FN1, GNS, ACACA, ACADM, ACADS, ACPP, AGXT, ALG10, BIRC5, CACNA1D, CACNG8, CASK, CAV2, CCNH, CISH, CLDN9, CYP2C19, CYP2U1, DDOST, DDX23, DDX4, DGAT1, EARS2, ENPP6, ENTPD3, ENTPD4, FUT5, GLI3, GOT1, GPT2, GRPR, IAPP, IFNA17, IFNA5, IL17A, INHBE, ITGB3, KIR2DS5, KRAS, MAPK3, MPZL1, MTHFR, NEUROG3, OR14J1, OR1E1, OR1N1, OR2A12, OR2D2, OR2G3, OR4C13, OR4D5, OR51F2, OR5K1, PARVG, PCCB, PGS1, PIPOX, PLOD3, PAPP2B, PPP2R2C, PPP2R5A, PPP3CB, PRKAR1A, PRKCQ, PTTG1, RASGRP1, RASSF1, SDC1, SDHB, SLC25A4, SLC2A1, SMARCA2, SOS2, STAT3, SYNJ2, TBK1, TNFSF14, TRAF1, TSLP, WNT7A, WNT8B, YARS2, ATP6V1B2, HLA-DRB5, TNFRSF10B, TNFRSF1A
Negative_11459	CR2, F3, GNE, GSN, IL6, LTB, MAX, ME1, MSN, NF1, NPL, SRC, AASS, ACSM3, ADCY6, ADSL, AGXT, ALDH1A2, ATP5C1, ATP5J2, ATP6V1H, BMP4, C1GALT1, CD46, CLDN6, CPT1B, CREB1, CTNNA3, CYP11B2, DGAT1, DPYS, EFNB1, EFNB2, EIF4E, ENTPD1, EPOR, ETNK1, FARSA, FCER1G, FUT9, GALE, GATM, GNAO1, GNMT, GPAM, GSTM1, GUCY2C, HAP1, INSR, IQGAP2, JAK1, KYNU, MAP3K8, MITF, MYLK3, NCF1, NCKAP1, NEU1, NLGN2, NRAS, OR10G2, OR10Z1, OR1N1, OR2B6, OR2L3, OR2S2, OR6C1, PARD3, PDE7A, PDX1, PFN4, PIAS4, PIK3C2A, PIK3CA, PIK3R5, PYGL, RBX1, RDH8, SEMA4D, SLC27A1, SMURF1, STAM2, STT3B, TCF7L2, TD02, TKTL2, TRAF4, TRPM5, UPP2, UROS, VNN1, WARS, WNT2B, WNT3, WNT4, WNT8B, ARHGEF12, ATP6V1G3, HSP90AA1
Negative_11460	BID, C8G, FGG, ILK, KHK, LCK, MUT, NGF, TH, ACACB, ACP1, ACSS2, ACTN2, ADCY3, ADCY2, ALDH1A3, ALOX12, APAF1, ARPC4, ATP5C1, CACNG2, CAMK2D, CKAR, CCL24, CD14, CDC25C, CDH4, CHAD, CREB3L2, CSF3, CYP1A1, CYP4A11, DAPK1, DCTN1, DDX50, EDNRA, EHMT2, ESPL1, FGF23, GADD45B, GADD45G, GNAI1, IDH1, IL12A, IL21, ITGA8, MAP2K2, MAPK1, MASP1, MTHFD1, MTMR6, NCOA4, OR10K1, OR13H1, OR2T10, OR4F15, OR4X2, OR51F1, OR52B6, OR6Y1, OR8J3, P2RX6, PDGFA, PLXNA1, POLD3, POLD4, RPS6KA3, SEMA3C, SEMA3D, SLC25A5, SMAD3, SPCS3, UCP1, UGCGL2, UGT2A1, VANGL2, HLA-DQA2
Negative_11461	CBS, ITK, KIT, MPL, NF1, OAT, ADH4, ADH5, ALG12, ATN1, ATP2A3, B3GAT3, B4GALT5, BACE1, BMP8B, CACNG5, CADM3, CAMK2G, CASP10, CCNB2, CCNE2, CDC25C, CEBPA, COL6A1, CRHR1, CTF1, CTPS2, CYFIP2, CYP19A1, CYP2A7, CYP2B6, DERA, DRD1, DUSP1, DVL1, FGF10, FGFR1, FMO5, GAS1, GCLC, GMPR2, GRM1, HAGHL, HAP1, IAPP, IDH3A, IFNA8, IGFBP3, INPP5B, IRF5, IRF9, ITGAX, ITPKB, KIR2DL3, KIR3DL2, MAGI1, MAP2K2, MAP2K4, MARS, MCM3, MGAT3, OCRL, OR10G2, OR13C5, OR2A4, OR52K2, OR52L1, OR56A3, OR6C1, PCK2, PGM1, PKM2, PMVK, POLR3G, PON2, PRKCA, PTPRF, PYGL, QPRT, ROCK2, SFRP2, SFRP5, SH2D1B, SMAD3, TCIRG1, TGFB1, TRAF3, UPB1, UROC1, VDACL1, WNT2B, ZIC2, ZNRD1

Negative_11462	CFH, CR1, EZR, F5, IVD, LEP, LTB, TAT, ADORA2A, AFMID, AKR1C2, ALDH3B2, ARNT2, ATP5L, ATP6V1D, B4GALT4, CCL21, CCNA2, CD44, CDC23, CDK7, CHAD, CHSY3, CNGB1, COL1A2, COL4A2, CPT2, CRKL, CTNNB1, CXCL6, CYP2C19, DLL3, EFN1, ENPP2, EXOC7, FCGR3B, GRIA2, HSD11B1, HSD17B7, IL2ORA, LAMB2, LDHD, LIPA, MAN1B1, MCAT, MMP14, NCF1, NFASC, NKX2-2, NT5C2, OR1S1, OR2AG1, OR2H1, OR2T5, OR5J2, OR6Q1, OR7C2, PDCD1, PFN4, PIGS, PIK3R4, PISD, PLCD4, PMM1, PRKAB1, PRKCD, PSAT1, RAPGEF3, RDH8, RENBP, SEMA3B, SETD8, SH2D2A, SMAD2, SNAI2, ST3GAL4, STEAP3, STMN1, STX10, STX6, SULT2B1, TCF7L2, TRAF3, USE1, WNT5A, YWHAE, ZMAT3, CTNNBIP1
Negative_11463	C6, DCC, ILK, TK1, ABLIM3, ACOX3, ACVR2A, ADCY1, ADIPOQ, ADRA1A, AKT2, AMDHD2, B4GALT4, BIRC3, CD27, CER1, CLDN9, COL4A6, CREB3L4, DDHD1, DGAT1, EDA2R, EFNA5, ERBB2, FGF5, GNB3, GNPDA2, GSTZ1, HAGHL, HTR5A, IL13RA2, INHBE, KARS, LYZL1, MCCC1, MFNG, MYH14, MYH7B, NKX6-1, OR10G4, OR10J1, OR13J1, OR14C36, OR2Z1, OR4K15, OR5P3, OR8K5, OR9Q2, PDXP, PHKB, PIK3R5, PLAUR, POLE4, POLR3A, PPAT, PPP1R3C, PPP2R2A, PPP2R2B, RASGRP4, ROBO2, RPN1, SLC33A1, SPTAN1, ST8SIA1, SULT1A4, TAS1R2, TNFRSF4, TUBA1C, TUBB, UGDH, WASF3, YARS, ATP6V1C1, TNFRSF10D
Negative_11464	FH, IL8, JUP, MVK, VCL, AARS, ACADL, ADRB1, ADRBK2, ALDH3A2, AMHR2, BUB3, CCNB1, CDC14B, CHPF, CNTN1, COL5A2, CRHR1, CX3CR1, CYP2C9, DAPK1, EPB41L3, FABP4, FGF8, FUT3, FUT4, GABARAP, GPD1L, GSTA5, HLA-DOB, HSPA8, IFNW1, IMPDH2, IRS1, ITGB1, LAMB3, LCP2, MAP4K2, NQO1, OR1E1, OR1Q1, OR51A4, OR52I2, OR6S1, P2RX7, PDE4D, PHKA1, PIGW, RAPGEF2, SDC1, SDC2, SETD8, SMURF2, SRGAP2, TACR2, UGDH, ULK3, WNT5A, ATP6V0A2
Negative_11465	AMH, CP, PGF, ACOX3, ADSSL1, ALG1, ALOX15, ALOX5, ANAPC7, ARHGEF2, B3GNT2, BDNF, BMP8A, CACNG7, CCL24, CCNB1, CCNE2, CHAT, CHST13, CLDN8, CLTB, COMP, CSF1, CSNK1G3, CTNND1, CYFIP2, DGKI, DUSP5, EGFR, FGF23, FGF4, FLOT2, FOXO1, GALNT12, GNB3, GZMB, HADHA, HAGH, IL15, IL28A, ITGA9, ITGB1, KIR3DL3, KNG1, MAD1L1, MAP2K6, MAT2B, MCM5, MGST1, MLLT4, MTHFD2, NAT2, NAT5, NCR2, NRXN2, OR10S1, OR11I1, OR1J1, OR1L1, OR56B4, OR6A2, P4HA1, PCYT1B, PDE10A, PDE8A, PDX1, PIAS2, PIGB, PIK3C2B, PLA2G2F, PLEKHA8, PLXNA1, POLR2K, PON2, PPP2R2C, PRKACB, PYCRL, RASGRF1, RCHY1, ROBO1, RRM1, SH2D2A, SHMT1, SMPD1, ST3GAL5, ST8SIA1, STX1B, TAS2R7, THBD, TLR2, TNFSF10, TRADD, TRPC1, TRPM5, SERPINA1
Negative_11466	CR2, IL4, IVD, KIT, PTS, AADAC, ACADL, ADRA1A, AKT3, ALDH3A1, ALDOA, ALG11, ATP5G1, B4GALT7, BAAT, BDNF, C4BPB, CCL19, CCL25, CLDN22, CLDN9, CNGA4, CNTF, CYP2C9, CYP4F3, DUSP9, EGLN1, ELK1, EXT2, FGF7, FGF9, GLUD1, GNAI1, GNAI2, GUCY1A3, HEMK1, HIP1, IGSF5, IL8RA, ITGB6, JAM2, NAGK, NAT2, NCOA4, NEFL, NFYB, NT5C1B, NUDT9, OR13C4, OR1C1, OR2L3, OR2M7, OR2T11, OR4C15, OR52D1, OR5P3, OR6K3, PGM2, PHKA2, PITX2, PLAU, PPA1, PRPH2, PTGS1, PTPRC, PYCR2, RPS6KA4, RRAS2, SMPD2, SOX17, STX10, SUV39H1, TLR5, UCK2, UGT2B10, UPP1, UROC1, VEGFA
Negative_11467	F7, ABCC8, AGPAT3, AGRN, AGRP, AHCY, ARPC1A, AXIN1, B4GALT2, CDC45L, CES7, COL5A1, COQ5, CYBB, CYP2C8, CYP2U1, DGUOK, DOLPP1, DUSP7, ECSIT, EIF4E2, FGF21, FLT3, FOXO1, FZD1, GAB1, GPD2, GRIA1, GRPR, GSTA1, HIP, INMT, INSR, KLRD1, LAMA4, LGMN, LIMK1, LIPE, MAPK14, NEU3, NEU4, NOTCH2, OR10C1, OR2M3, OR2T11, OR4S2, OR4X1, OR51I1, OR5D16, OR5L2, OR6K6, OR8D2, PARVG, PDXK, PGM1, PLOD2, POLR2A, PPP1CC, PRKAB2, PTAFR, PTK2B, PTPRR, RAPGEF1, RETSAT, ROBO3, RXRA, SH3BP2, SOCS1, SSH2, THBS1, TKTL1, TUBA4A, TYK2, VANGL1, WASF1, WNT10A, YARS, YWHAH, ATP6V0A4

Negative_11468	F11, F3, IDS, PGP, TYR, ALAD, APH1A, ARHGEF6, BACE2, CACNA1D, CACNG4, CCL2, CDH15, CDKN2D, CHEK2, CHSY3, CLDN10, CLDN7, COASY, CSF2, CSH1, DUSP14, EDA2R, ENTPD6, FGD3, FGFR1, FUT3, GPAA1, GUCA1C, GUCY2C, GUK1, HNF4A, HSD17B1, HSD3B7, IFNAR1, IL15RA, ITGB6, KCNJ11, KLK3, LAMB2, LHCGR, MAML1, MAP3K12, MAPK10, MCEE, MDM4, NSDHL, OR1F1, OR2G3, OR2T1, OR4D11, OR4K14, OR51F2, OR56A3, PIK3R1, PNPLA4, PPP2R1B, PRKG2, RAPGEF1, RAPGEF4, RARS, RFNG, RPS6KA2, RUNX1, SDHA, SNAI1, SULT2A1, TBXA2R, TIAM2, VANGL1, YARS, CACNA2D1
Negative_11469	CD2, F12, F2, GSR, ID3, OSM, TK2, ACYP2, AGMAT, AKR1C3, AMY2B, ANAPC7, APAF1, APOA2, ARG2, ARNT, ARPC4, ATIC, AVPR1B, BCAT1, BMP4, CASP6, CCL5, CCR7, CD44, CHRM2, CLOCK, CYP2A13, DAD1, DARS, DTYMK, DUSP9, EDA2R, EIF4E, ENTPD5, EPHA4, EPRS, F13A1, FGF11, FUT7, G6PD, GALNTL1, GALNTL4, GNPAT, GRIA3, HES1, HHEX, IFNA7, IL12RB2, IL22, JAK3, LEFTY1, LYZL1, MCM6, MMP9, MYH13, MYH2, MYL7, NRXN3, OR10G8, OR13C3, OR13C8, OR1F1, OR2Y1, OR4C16, OR4F4, OR5D18, OR6C76, OR8B4, PFKP, PIGS, PIK3C2A, PIK3C2B, PLA2G2D, PLCB2, POMC, PSME3, PTCH1, PTGER1, RGS3, RPS6KA6, RPSA, SARDH, SH2D1A, SPTAN1, ST8SIA5, TAS2R50, TBL1X, TNFSF14, UNC5B, UXS1, VAMP4, YARS2, YWHAG, ATP6V0D1, GABARAPL2, HSD17B12, SERPINB5
Negative_11470	F8, HK3, LCT, MPZ, PLG, ACMSD, ACSM4, ACTC1, ADAM10, ADCY10, ARNT2, C1QC, CACNG3, CCNG1, COL4A2, COQ5, CPT1A, CXCR3, DRD2, DTX3, DUSP5, FGF8, FSHB, GALNT10, GNAI2, GNG3, HMGCR, IKBKB, ITGAL, LIAS, MMP9, MYL5, NCF4, OPLAH, OR10G4, OR11A1, OR5F1, OR8K3, PAK3, PDE5A, PIGH, PNPT1, RAB23, RAD51, RXRG, SEMA4A, SLC25A5, SLC2A4, SNAP25, ST6GAL1, STAT3, TJP2, TLR3, TPI1, ULK2, ATP6V0A2
Negative_11471	AK5, GHR, GPT, LPO, ATP2A3, ATP5A1, B4GALT2, CAMK2B, CASP10, CCL28, CCR1, CD34, CDC7, CERK, CLDN3, CSNK1G2, CYP26C1, CYP2D6, DDX4, DRD5, EXOC7, FUT5, FZD9, GALNTL4, GCNT3, GMPPA, GNA14, HGSNAT, HLA-DMA, HMGCL, INPP5B, MAN2A1, NAGS, NEFL, NR1H3, NTNG1, OR13C4, OR4N4, PAICS, PCK1, PIK3C2G, PLOD2, POLD3, PRKCI, PTPN7, PTPRJ, RFXANK, SDC3, SELE, SOAT1, SPTLC2, STX18, TAP1, TAS2R10, TLR3, UGCGL2, UNC5D, HLA-DRB4, MAPKAPK5
Negative_11472	AK3, BAX, C4B, C7, CSK, EBP, F8, GK2, PRL, ACADSB, ADAM17, ADSS, ALDH1A1, AMY2A, ASMT, CACNB1, CTNNA3, CYP1B1, CYP26C1, EDA2R, EFNA5, ENO2, FARSA, FGF13, FOSL1, GNPDA2, GOSR2, GSTA1, GSTM4, GSTO1, HDAC1, HMGS2, HYAL2, IL23R, IL24, INHBE, JAM3, KLKB1, LDHC, LIPF, MDH1, METTL6, MGAT3, MTMR1, NCSTN, OR14J1, OR2AG1, OR2T3, OR4A15, OR4F15, OR4N5, OR51D1, OR6C74, OR6K6, OR9Q2, PAX4, PDE4D, PFKM, PGK2, PIGS, PLCG2, PLOD2, PNLIP, PPP2R5A, PRSS1, RDH5, RHEB, SLC25A4, SLC27A4, STK11, SUV39H2, TAS2R10, ULBP1, VAV2, HSD17B12, PRICKLE1, ST6GALNAC1
Negative_11473	CS, FAH, ITK, LTB, ACP6, AFMID, ALDH1A2, ALDH4A1, ANPEP, ARG1, ATP5C1, ATP5G3, BIRC5, CACNB3, CKS1B, CPOX, CTSB, CXCL9, CYFIP1, CYP2U1, DIAPH1, EPHX2, FABP4, FLOT2, GALNT5, GUSB, HLA-DOB, INHBA, IRF9, ITGAL, KIR2DL3, KIR3DL3, KITLG, KLRC4, LIFR, LTA4H, MAD2L2, MCM4, MTFMT, NCKAP1, NOX3, OR10A7, OR14C36, OR2D2, OR2T34, OR4D2, OR4D5, OR51A2, OR51G2, OR51I2, OR52E4, OR52H1, OR52M1, OR52W1, PGM3, PIGV, PLCE1, PTPRC, RALGDS, RBL1, RDH5, ROBO1, SC4MOL, SLC12A2, SOCS5, SORBS1, SQLE, ST3GAL3, TLR4, ZAP70, ATP6V0E1, ATP6V1G3
Negative_11474	CEL, GNE, ABL1, ACAD9, ACSM2A, ACSS3, APC2, APPL1, CASP6, CER1, CYP2J2, DGAT2, EFNB3, EPOR, FCGR2B, FUT9, G6PC, GNPDA2, GRIN2D, H6PD, HLA-DMA, HTRA2, IFNA7, IL2RA, INHBC, INPP5B, LEPR, LIPG, MS4A2, MYLK2, NSDHL, ONECUT1, OR11G2, OR13C5, OR1K1, OR2F1, OR3A2, OR4K13, OR51A2, OR5AR1, OR5L2, OR5M3, OR8I2, PDXK, PDXP, PIGN, PMAIP1, PPP1CB, PRKAG1, PRKCQ, PROC, RRM1, SSH1, ST3GAL5, SULT2A1, ATP6V1E2

Negative_11475	HK2, ME1, PLN, ACAA1, ACSL5, ADH6, AKR1B1, ALG10, ARG1, ATP6V1F, BIRC5, CACNG1, CD48, CHDH, CHST12, CLDN7, CREBBP, CTBP2, CYP2A6, CYP2B6, CYP4F2, DDX19A, DTX3L, DUSP14, FABP4, FBP2, FUT3, GPAA1, HSPA8, LRP6, LTA4H, MKNK1, OR4F6, PAK6, PDE6D, PIAS3, POLR2I, POLR3B, PON3, PPP1R3C, PTGDS, RENBP, RPS6KA4, RUNX1T1, SHC3, SOX17, SSX2IP, TACR3, TJP3, TNFSF9, TYRP1, UBA7, UGCGL1, WWP1, ZNRD1, HSP90AB1
Negative_11476	ADK, ATM, CR1, EPO, OSM, PTS, TXK, ADCY9, ADSS, ALDH3A2, ALG8, ALOX12B, ARHGFE2, CACNG2, CACNG4, CAV2, CCNA2, CCNB1, CD8B, CDH3, CHDH, CHSY1, CPT1C, DGKZ, DUSP10, EARS2, ENAH, FUT2, GARS, HRH2, HSD17B2, IBSPL, IL23R, INPP5B, IRAK2, LDHD, MAD1L1, MARS, MYL5, MYLK3, NTRK1, OR14J1, OR2H1, OR52A1, OR5D18, OR6C2, OR6C75, OR6Q1, PAX8, PLA2G6, PLOD3, PMVK, PPOX, PTGS1, PTPN7, RAD51, RASSF5, SOAT1, SSX2IP, TAS2R48, TBL1X, TFDP1, THBS1, UXS1, WNT10A
Negative_11477	C1S, CFD, CKM, CS, CSK, HGD, TK2, ACADM, ACAT1, ACSL3, ARNTL, ARPC2, ASIP, ATF4, BPGM, CACNG7, CASP3, CAV3, CCL2, CDC14A, CDC26, CNTN1, COL6A1, CPOX, CPT1C, CSDA, CXCR3, CYP26B1, DDIT4, DGKZ, EDA2R, ENTPD8, EPHB4, FMO5, FRAT2, FZD2, FZD4, GALC, GFPT2, GJA1, HADHA, HSPA2, IDH3B, IL18, IL7R, JAK2, JAM3, KLRC2, LAMC2, LIPC, LIPF, MAPK9, MGLL, MTAP, NCKAP1, NEFM, OR10S1, OR13C9, OR4C13, OR4M1, OR8B4, PCNA, PDXP, PFN4, PGAP1, PISD, POLE, PPP1R3B, RPIA, RUVBL1, SCP2, SHC1, SHC4, SMAD4, SP TLC1, STAT4, TACR2, TAS2R16, TLR4, TNFSF9, TUBA3E, TYMS, UGP2, VAMP1, WNT11, YWHAH
Negative_11478	ADO, CFI, CRK, DUT, EBP, ACAT1, ACSM2A, ACVRL1, ADH1B, ADRA1A, AFMID, B4GALT3, CALML3, CCL16, CCL8, CD46, CYP3A4, DHDH, DUSP6, EPHA3, FUT5, HDAC2, IFNA13, IL8RA, IQGAP2, KIR2DL2, KIR2DS4, KYNU, MAP4K2, MAPK10, MARS2, MGAT5, MICA, NKX6-1, NOTCH2, NR4A1, OR10A7, OR10G3, OR10K1, OR1E2, OR2T10, OR4A5, OR52J3, OR5L2, PARD6G, PIAS3, PIGS, PIPOX, POLR1D, PRNP, PROS1, PTK2, PTPN6, PTTG1, PVRL3, PYGB, RPS6KA3, SOCS3, SPRED2, TAS2R48, TCF7, TRPC1, VARS, WNT9A, ZBTB16, MAPKAPK3
Negative_11479	DBI, F12, FH, SHH, SMO, ABAT, ACAD9, ACMSD, ACTC1, AGPAT6, AHCYL1, AMDHD2, ATP5E, ATP5J2, CCNA2, CD28, CD55, CD8B, CDH1, CFLAR, CNTNAP2, COL6A1, CYP11A1, CYP1B1, CYP2C9, DFFA, DGUOK, DKK2, EPB41L2, FADD, FOXO1, FUT6, FZD9, GALNT1, GANAB, GMPR2, GNAI2, GRB2, HDAC2, HNF4G, IL10RA, IL15RA, JAM3, MFNG, NFE2L2, NFYC, NME6, NOS1, NT5C3, OR10H3, ORIM1, OR4N5, OR4P4, OR6C4, OXCT1, P2RX5, PARVA, PFKFB4, PLA2G2A, PLCB3, PLCE1, PPP1R1A, PRKCH, PRSS2, PTPN7, RAC3, RDH10, RPRM, RXRB, SHC1, ST3GAL6, STAT5B, SUOX, TAS2R49, TFPI, TGFB1, THBS1, THY1, TP73, UPP1, XYLB, ATP6VOD1, HLA-DPA1, KIR2DL5A, MAPK8IP2
Negative_11480	ADA, DDO, F8, LCT, MPI, RET, ACSM4, ACVR1C, ADAM10, ADCY10, ALDH6A1, ARRB2, CAMKK2, CARD11, CBR1, CCR9, CD48, CD70, CDKN2D, CHPF, DHCR7, DHRS4, E2F2, EDA2R, FGD1, FZD1, GALNT2, GALNT7, GART, GGT1, GP1BB, GUCY2C, IL17B, IRF5, IRF9, KIR3DL3, LRP5, METTL2B, MGST3, MYLK3, NODAL, OR1K1, PDE6H, PER1, PFKP, PHGDH, PIK3CD, PNPLA3, PRKACG, RAPGEF4, TRAF6, UMPS, CACNA2D4, CSNK1A1L
Negative_11481	ME2, ACTN4, ADCY9, ALDH3B1, ARPC1A, ATP6V1F, BCKDHA, BIRC5, CCNB1, CD82, CES7, CHDH, CLDN7, CSNK1G2, CTNBN1, CXCL1, CYP4A22, DGAT2, DKK4, DLAT, ENAH, FGF10, FTH1, GALNTL1, GBA3, GCNT1, GOT2, GRB2, GUK1, INPP4B, INSR, ITGAM, LCAT, LDHB, LIPT1, MAFA, MALT1, MMP1, NAGS, NOD1, NR4A1, OR10G9, OR10Q1, OR11H6, OR8J3, PFKL, PHKG1, PIGO, PLA2G1B, SEMA3A, SGMS1, SLIT2, SRGAP3, STAT3, STAT4, TIRAP, TJP3, TSHR, TUBA1C, WNT7B, TNFRSF10A

Negative_11482	AK2, CFI, EGF, F11, HAL, ZYX, ACAA2, ACADVL, AGTR1, ALG6, ARHGEF1, B3GAT2, BCKDHB, BCL10, CACNG5, CCNB1, CLDN9, COL1A2, CTNNA1, DUSP3, EIF4E2, ELK4, ENO3, FDPS, FMO3, FUT4, G6PC, GALC, HAP1, HSD17B3, IDI1, IL18, IL23A, ITGAE, LCAT, LDHAL6B, LIFR, MAPK11, MAT1A, MPDZ, NAT2, NRG1, NTSR1, OLR1, OR4K1, OR4K17, OR5M9, OR7C1, PGM1, PIP4K2C, PLA1A, POLR2K, PTPRB, RAB23, SOCS5, SULT1E1, TAS2R60, TRIP10, TSC2, TUBA8, UBE2K, UGT2B28, ZNRD1, ATP6VOD1, MAPKAPK2, SERPINB5
Negative_11483	CFI, EBP, IVD, SMS, ACACB, ACYP1, ADCY6, ALDH3A1, ALPI, APOC3, APOE, ATP13A2, AXIN2, B3GNT4, BUB3, CACNG1, CCL21, CD59, CDC14B, CHEK2, CHR3, CKMT2, CLDN16, DCTN1, DHDH, EPB41, FMO1, GNA12, GSTK1, GYS1, HADH, HADHA, HBEGF, HCLS1, HMOX2, HPSE2, HRH2, HSPB1, IL20RB, ITGAE, JAK3, KIR2DL4, KIR3DL3, KNG1, LAMB1, LLGL1, MAD2L2, MALT1, MAN1A2, MGST2, NCOR1, NCSTN, NFATC2, NFYA, OR2G6, OR4C15, OR4P4, OR51I2, OR52J3, OR5A1, OR5C1, OR6B2, OR6Y1, OR7G3, PCYT1A, PHKA2, PHKG1, PI4KB, PIK3CG, PIP4K2A, PLCD4, POLR2C, POLR2L, PON3, PPP1R3A, PRKCH, PTGFR, PTPRM, RALBP1, RETSAT, ROBO2, RPE65, SCP2, SH2D2A, SORD, SOS2, SREBF1, STX10, STX8, SULT1A1, TAS1R2, TAS2R48, TAS2R8, TGFB1, TP53I3, WARS, ATP6V1G2, PNLIPRP1, TNFRSF10D
Negative_11484	BTD, CD6, PLG, ABP1, ACTA1, ACVR1, ALDOB, ALG12, ALOX15, AOX1, B4GALT5, CD44, CDKN2A, COASY, COL5A3, CTLA4, CXCR6, DAAM2, DDX55, DGAT2L4, DHDDS, E2F4, FZD6, GJA1, GSTM2, HSD17B8, IFNA5, IKBKG, IL9R, ITPK1, KCNJ11, LLGL1, MYH10, NFKB2, OR11H1, OR2F1, OR2T8, OR4K1, OR51I2, OR5D13, OR8B8, OR8D2, PDK1, PGLS, PIK3R1, PLIN, PPP1CB, PPP2R2D, PRNP, RAPGEF4, RBPJL, RIPK1, ROBO3, RRM2B, SEMA4C, SMAD4, SMAD9, ST3GAL3, TJP3, TUBB2B, UNC5C, WNT1, YWHAE, MAPK8IP2, TNFRSF10C
Negative_11485	CBS, DBT, MTR, MVK, MYC, RDX, AANAT, AASS, ABLIM3, ALCAM, ATP6V1H, B3GALT2, B3GALT4, BCAR1, BHMT, BTRC, C3orf10, CACNG3, CASP9, CDKN2B, CFLAR, CHUK, CNTN1, CPOX, CSF3, CSNK1E, CTBP2, CYP4A22, DHRS3, DTX3, DUSP16, FASLG, FIGF, FMO4, GADD45G, GDF5, GNMT, GUCY2F, HARS, HES1, HRH1, HSD11B2, HSD17B2, HSD17B8, ICAM1, IL18RAP, IL20RA, IRS4, ITGA2B, ITGAX, JAG1, KIR3DL3, KYNU, LAMB1, LTA4H, MAPK7, MASP2, MGAT3, NCAM1, NME7, NRCAM, NRG2, OR10G4, OR1M1, OR2B11, OR2F1, OR2H2, OR2T29, OR51V1, OR5K1, OR9I1, ORC2L, ORC4L, PAICS, POLR2F, POLR3K, PRKACA, PRLR, PRODH2, PTPRB, RASGRP4, RFXANK, ROCK2, RPS6KA4, RRM2, SCD5, SEMA7A, SMURF2, STAM, TBL1X, TLR5, UNC5D, VARS, VDAC3, YKT6, B4GALNT1, PAFAH1B3, TNFRSF6B
Negative_11486	CAD, EDA, GPT, ME2, MSN, TNC, ACLY, ADCY10, AKT3, AQP7, ATP2A3, BET1L, CACNA1S, CACNG4, CCL15, CD3E, CDC45L, CHRM2, CLDN4, CNTN1, CSF2RA, CYBB, CYCS, CYP2A13, EDNRB, EFN1, EXT1, FGF12, GNPDA2, GPD1L, GPX7, GSTP1, HADHB, HAP1, IDH3B, IFNA21, IL18, IL20, IL23R, IPPK, IQGAP3, ITGA2B, ITGAV, JAK3, LIPT1, MAGI2, MAPT, MAT1A, MDH2, MLYCD, NCK1, OR10G4, OR10J5, OR13C3, OR51F1, OR5AN1, OR8G1, P2RX5, PCK2, PDE11A, PER2, PGLS, PIGM, PLA2G1B, PPP2CA, PPP3CC, PPP5C, PTPRZ1, RASA2, RDH12, SC4MOL, SPTLC2, STX6, TLR2, TLR5, VTI1B, HLA-DRB5, TNFRSF10D
Negative_11487	MUT, PGF, TKT, ACADVL, ACSM4, ADCY2, ALDH6A1, ALG12, ARRB1, B4GALT5, CACNA1S, CD86, CHST13, CLDN5, CNTFR, COQ3, CSDA, CXCR6, DLL1, EDAR, ENTDP5, EPHX1, ETNK2, FMO1, GCNT4, GFPT2, GJA1, GMPR2, GNAI1, GRIA2, HCLS1, HMGCS1, HMGCS2, KIR2DL4, LCMT2, LDHD, LMO7, MAP3K8, MAPK14, MCEE, MYH11, MYL5, NCSTN, NKX3-1, NMNAT2, NOX1, NTRK1, OR10G9, OR1N1, OR51I1, OR6C76, OR7A5, PDE1B, PLA2G1B, PLAUR, PLCD1, PVRL3, RARS2, RPIA, SDC4, STX2, TACR2, TAS2R8, UPRT, CACNA2D2, ST6GALNAC3

Negative_11488	DHH, HK1, ID1, KMO, PDC, SHH, AADAC, ACADVL, ALDH1A2, ALDH4A1, ATG3, BIRC3, C1QA, CACNB3, CACNG7, CCNA2, CD40LG, CD47, CDC14A, CDC14B, CDH2, CNTF, CREB3, CYBA, DUSP3, ENTPD5, HMGCS2, HNF1A, IL22RA1, ITGA2B, MTHFS, MYH14, NCKAP1L, NME6, NR1H3, OR13H1, OR1G1, OR2A42, OR2W1, OR51D1, OR52H1, OR6B2, ORC2L, PHKA1, PLAU, PTPN11, RBL1, SFRP4, SULT1A4, SULT2B1, SUV39H1, TICAM2, UBE2L3, UGT1A10, VDAC3, WNT11, ATP6VOA2
Negative_11489	AMT, CGA, CKB, FGA, MIF, ABI2, ACTB, ANAPC7, ARHGEF7, BDKRB1, BMPR1B, CARS, CCR10, CD79B, CHST11, CHUK, CLTCL1, CXCR4, CXCR5, DDX23, DGKQ, DLAT, DPYD, DUSP14, EARS2, FUT2, GALNT8, HCLS1, HDAC1, HLA-DOB, IL2RB, LCMT1, LRP5, MAD2L1, MAP4K4, MPDZ, MTHFD2, NEU4, NPAS2, OR1G1, OR1N1, OR2M5, OR52W1, OR56B4, OR8B12, PDGFB, PEMT, PERP, PGAP1, PIAS4, RASSF5, RFXAP, RPN1, RUVBL1, SLC2A4, SOAT1, UCK2, UGT2B4, ATP6VOA1, ATP6V1G3, GABARAPL1, HLA-DRB3
Negative_11490	CS, JUN, OTC, TNC, ACACA, ACADVL, ADORA2A, AK3L1, AMD1, AREG, B3GAT3, BPNT1, CCKBR, CCL14, CD14, CDC6, DAAM2, DEGS2, DGKZ, DHODH, DTX3L, EXOC7, FBXW11, FLT1, GJA1, GRIA1, IFNGR1, IL1R1, MASP2, MYH7B, NMNAT3, OR10K1, OR6M1, PIGM, PIP4K2C, PLXNB3, POLR2F, POLR2I, PPP2R5D, PRKG2, PRODH, PSME2, RERE, RETSAT, RXRA, RXRG, SULT2A1, TAS2R13, TAS2R7, TSHR, ATP6VOA2, ATP6V1G1
Negative_11491	FYN, GP6, JUN, VTN, ACADL, ALAS1, ARHGEF4, C3AR1, CAV3, CCR10, CTNNA3, DNMT3L, DPAGT1, DPM1, EFNA3, FMO4, FRAT1, FZD1, GALNTL5, GRPR, IL13, IL20, IL2RA, MAN2A1, MAP3K14, MDH2, METTL6, MGAT4B, MOV10L1, OR10G7, OR10V1, OR51F1, OR52E4, OR52E6, OR6C3, OR9Q2, PFN1, PNPO, POLR3D, PPP3CC, PRKAR2A, PRKG1, PRODH2, PYCRL, RAB5A, RAP1B, RDH8, SETD8, SMPD1, SMURF2, SYNJ1, TSLP, TXNDC12, WNT10B, ATP6VOA4, HLA-DRB5, HSP90AB1, TNFRSF11A
Negative_11492	GH2, LPO, PRL, TAT, TFG, ACADSB, ACOX3, ACP6, AGXT2, ARRB1, ATF4, B3GALT1, B3GAT2, BDKRB2, BUB3, C1QB, CACNA1C, CCL1, CD3E, CDKN2B, CDS2, CHRNA7, CLDN20, COL11A1, DCXR, EHHADH, FMO4, GRIN2D, IARS2, IFNGR1, IL20, IMPA1, INHBC, ITGA5, L1CAM, LIPE, MAGI3, MDH1, MPZL1, NKD2, NLGN1, NRCAM, OR10A3, OR1B1, OR1M1, OR2T29, OR4L1, OR5AK2, OR5AN1, PDE3A, PHGDH, PIAS3, PLXNB1, POLR1D, PTCRA, PTPRB, RPRM, SPI1, TJP1, ULBP1, VDAC2, WASF2, ATP6V1B1, ATP6V1E1, CSNK1A1L, TNFRSF10C
Negative_11493	AK3, BCR, CD4, ID4, ME3, AACS, AKR1D1, ASNS, CHPF, COQ3, CREB1, CSNK1A1, CSNK1G2, CXCL11, FZD10, GZMB, HES1, HSP90B1, IDH3A, IRS4, ITGAX, KLRC2, LAMB3, LDHD, LLGL1, MTMR6, NCAM1, NKD1, NR1D1, OR10G7, OR13C9, OR2T6, OR4C16, OR5D16, OR8I2, PCK1, PIK3C2B, PORCN, PPP1R3D, RASGRP2, RENBP, SMURF1, ST3GAL6, ST8SIA5, TAS2R38, TAS2R41, TUBB6, UPP1, YWHAQ, PHOSPHO1, PPARGC1A
Negative_11494	GLA, RB1, AADAT, ABI2, ACADM, ACVR1, ATP5G3, BAI1, CASP8, CCKAR, CD44, CES7, COL5A2, CSDA, CXCL3, EHMT2, GPX5, GSTA1, HLA-DRA, ITGB7, MAPK3, NCAM1, OR13D1, OR1B1, OR4A16, OR52I2, OR8K5, P4HA2, PDE7A, PECAM1, PLA2G3, PLK1, POLR2B, PPP3R1, PPT1, PSPH, PVRL2, QARS, RBPJL, RRM2, SDC1, SFRP1, SIGLEC1, TAS2R38, TYRP1, UPP2, WARS, WASL, WEE1, ATP6V1B2, HSD17B10, SERPINA1
Negative_11495	AK1, DBH, GAA, MAX, ME2, MOS, NGF, PAH, XDH, ADORA2B, ANGPTL4, AREG, ASAH1, C4BPA, C9orf95, CACNG3, CANT1, CCL24, CCNB3, CDH4, CDK6, CMBL, CREB5, CSNK1G1, CSNK2A1, CTBP1, CXCR4, CYCS, CYP1A2, DERA, DNMT3L, EHMT1, EPHA6, EXT1, FCGR3B, FGF20, FLT3LG, GALNT3, GOT2, GPX5, IDH3G, IMPA1, ITGB1, LTBP1, MCM2, NEU4, NTRK1, OGDH, OR2F1, OR8K1, OR9K2, PDGFB, PIK3CA, PIM2, PIP4K2B, PLXNB3, PMM2, POLR2J, PPM1D, PRKAR1B, PTPMT1, RPS6KB1, SEMA3D, SOAT2, STAT4, SULT1E1, TJP2, TRAF5, UBE2K, UGP2, ULK3, ZFYVE9, CACNA2D4, SERPINA5

Negative_11496	ADA, AK7, DCT, F3, HPD, ACP6, ACTN1, ACVR2A, ADCY8, AGPAT3, ATP5G1, ATP5G2, BAAT, BDH2, CASK, CASP9, CAV3, COL1A1, COL6A2, CYP3A7, DBF4, DGKD, DKK1, DTX4, EIF4B, F2RL3, FLOT1, GALNTL2, IL11RA, INHBC, KCNB1, KIR2DL3, LEF1, LLGL2, MCCC1, MCM3, NEU1, NEUROD1, NME6, NOD1, NQO1, OR10C1, OR10G9, OR11A1, OR1A1, OR1D5, OR51B6, OR51G1, OR51S1, OR51T1, OR51V1, PDE3A, PFN2, PGM2, PHKA1, PHKB, PIK3C2B, PLXNB2, PNPT1, POLR2E, PRKCZ, PRKY, PTEN, PTGDS, PTPRR, PYCR1, RARA, RASGRF1, ROBO3, SEMA4A, SPRY4, SQLE, TRAF5, TUBB, UNC5A, UROS, ATP6V1G2
Negative_11497	CFH, GP9, IL3, ACP5, ACSS1, ADIPOR2, ALCAM, ALG2, ASMT, ATG12, C7orf16, CACNB1, CADM1, CCL19, CD244, CD8A, CLOCK, CNGA4, COL4A4, CTNNA3, DOST, DTX1, F11R, GALM, GALNT1, GLYCTK, GNPAT, GUCY1B3, HSD17B3, HTR2A, HYAL1, IDH2, IFNA6, IL15, JAG2, KIR2DS4, MYH13, NAE1, NEFH, NEUROD1, NFATC3, NSD1, NTRK2, NUDT2, OR10G3, OR2A14, OR2AG1, OR2AG2, OR4A5, OR4C16, OR4S1, OR52E6, OR8J3, P2RX4, P2RX6, PAPSS2, PARD3, PLA2G2A, PLA2G5, PPP2R1A, PRSS3, RRAS2, SDHD, SNAI2, SPTAN1, TBL1X, TCF7L2, TLR4, VCAM1, WASF1, WNT10A, WNT16, YWHAH, CSNK1A1L, HSD17B10, TNFRSF10D
Negative_11498	AMT, CR1, GPT, LPO, SFN, UBC, WAS, AGMAT, AGPAT6, ALG8, AMD1, ATP5C1, BUB1, CAPN2, CCND2, CCR5, CCR6, CDKN2C, CKMT2, CNTF, COL5A3, CREBBP, CXCL6, CYFIP2, DHX58, DPAGT1, DPYS, DTX3L, EDN1, ENPP2, EPB41, EXTL1, FUT3, FZD7, GALM, GALNT12, GGT5, GLUD2, GMPPA, GSTM5, HNF1A, IL19, IL1R2, IL24, INPPL1, ITGA3, JAM2, LEPR, LIMK1, LIPG, LIPT1, MCM4, MYLK2, NGEF, NRCAM, OR1L8, OR2F2, OR2K2, OR4F4, OR52J3, OR5L1, OR6Q1, OR8D1, OXTR, P2RX6, PAX8, PDE7A, PERP, PFN4, PGM1, PIK3C2B, PLA1A, POLD3, POLE3, POLR2G, POLR3K, PORCN, PPP2R2A, PPP2R5D, RASA1, RPN2, SDHC, SETD1A, SGMS1, SGMS2, SKP1, SLC27A1, ST8SIA5, STAT4, SUOX, TAS2R3, TLN1, TPMT, UGP2, WNT2, WNT2B, ATP6V1G2
Negative_11499	ADA, ADK, BID, DAO, F10, FGG, HGF, HK3, ID2, IL8, ACSL5, ACVR2B, ADORA2B, ALAD, ALDH4A1, ALG3, AMY2B, BACE2, BMP8A, BPNT1, C1GALT1, CACNA1S, CACNG7, CADM1, CCKAR, CD244, CDH3, CHRDL, CSF1R, DDX19A, EDA2R, EDAR, EFNA1, EFNB3, EXTL3, FMO3, FZD3, GALNT3, GJA1, GNA13, GNMT, GNPAT1, GNRHR, HIF1A, HMGCS1, HMOX1, HPSE, HSD3B1, IGF1, IL23R, JAM2, KARS, MAOA, MAP2K3, MAPK10, MAPK9, MCM7, MYH15, NOX3, OR2T10, OR4F15, OR52A1, OR8A1, PDGFC, PIK3CG, PIK3R1, PKM2, PLOD1, POLD1, PRKAG1, PRKCA, RIPK1, RPS6KA3, RPS6KB1, SDC4, SIGLEC1, SMAD7, SMARCA5, SMPD4, SNAP25, SOD1, SOS2, STAT6, TAS1R1, TAS2R50, THBS3, TMLHE, TNFRSF8, TNFSF12, TRAF1, TRPM5, TUBA1B, TYMP, WASF1, WNT4, XIAP, HLA-DPA1
Negative_11500	CEL, DBH, IL4, ACTG2, ADCY1, AKT2, ALDH4A1, ATP2A2, BCL2L1, CALML3, CD226, CDC14A, CXCR5, DGKB, DIAPH2, EFNB1, EHMT2, FABP3, GALNT11, GANAB, GGPS1, HAO2, HEXB, HMBS, HSPA2, IKBKB, IL13, IL18R1, KLRD1, MAOA, NEU4, OR10A7, OR1J4, OR3A1, OR4C46, OR52E6, OR52L1, PDE4B, PIAS3, PIAS4, PLA2G2F, POLA2, PPA2, PPP2CA, PPP2R1B, PTCH2, PTGFR, RPSA, SMC1A, SSH3, SUFU, TCIRG1, ATP6V1C1
Negative_11501	LCK, SPN, SYK, VTN, AMDHD2, CANT1, CCKBR, CCNB3, CD48, CHAT, CHIA, CLDN1, COL1A1, CTNND1, CXCL9, DNMT3B, DUSP4, DUSP8, EGFR, EI24, ERO1L, FADS2, FTMT, GALNT1, GSTA1, HIF1A, HMGCS2, IFNA17, IL1R2, IL22RA2, LIMK2, LIPG, LYPLA1, MARS2, MPDZ, NAT2, NFATC3, NGEF, OR10Z1, OR13A1, OR5P3, OR7A10, ORC3L, P4HA1, PLXNC1, PPP2R2C, PRKCG, SLC27A5, VEGFC, XCR1, ZAP70

Negative_11502	DDO, F9, KMO, MYC, TYR, ZYX, ACVR1, ADH7, ADIPOR2, AMDHD1, APPL1, ARNT L, ATP13A2, ATP6V0B, CCL20, CLDN14, EI24, ENPP1, FUT7, GALC, GALNT11 , GANAB, GDF6, GOSR2, GRLF1, HTR2B, JUND, KDSR, LIMK2, LIPG, LTBP1, MA P2K1, NR1H3, OR2T12, OR4A16, OR6B2, OR6K2, PARVA, PFKL, PHKA1, PIP5K 1A, PRKACB, PRPS1, TAS2R42, TPMT, TUBAL3, VAV2, WNT10A, CSGALNACT2, MAPKAPK5, PPARGC1A
Negative_11503	C1S, CGN, GK, HAL, HK3, NNT, OTC, ALDH1L1, AMHR2, AOC2, BLVRB, BUB3, C1 QA, CBLB, CDK6, CFL1, CHR1, CLDN5, COQ7, CSNK1G3, CYP2A6, ENPP7, ENTP D2, EPAS1, GAD1, GAD2, GBA3, GLDC, GLUD1, GRPR, HARS2, HDAC2, HIBCH, H MGCS1, HRH1, HSP90B1, IFIH1, IL10RA, LEF1, LIAS, MAML2, MGAT5, MYH2, OR11G2, OR4C15, OR51G2, OR52A1, OR5B17, OR5D18, OR5H2, OR5K2, OR7A1 0, OR8D2, PDE5A, PLA2G4A, PLCG1, PNPT1, PPM1B, PPP2R5A, PRDX6, PRSS1 , PTTG1, RETSAT, RFNG, RUNX1, SETD1B, SHC2, STAT1, STAT5B, SULT1A4, T AS2R4, TBL1Y, TCF7, TGFB2, TP53, TYMS, UCK2, UGDH, UNC5B, CACNA2D1, C ACNA2D3, HSP90AB1
Negative_11504	AGK, CRK, DBT, DCC, GAA, IL2, WAS, AASS, ADH4, ARSA, ATP12A, BIRC3, CAC NA1H, CACNG4, CAMK4, CCL11, CCR6, CD19, CD244, CLDN11, COL1A1, COQ6, CREB3L2, CREBBP, CXCL5, CYFIP1, DHRS9, DNMT3A, ENPP7, FARS2, FLOT1, FPGS, GAD1, GALM, GAS1, GCNT3, GLB1, GMPPA, GNA15, GYS1, HAO2, HPSE, I ARS2, ICAM2, IL8RB, ITGAX, LIMK1, MAPT, MYH14, NADSYN1, NCR1, NEU2, N KD2, NLGN2, NQO1, NT5E, NTRK2, OR2H1, OR2W1, OR5J2, OR5T2, P2RX2, PAR D3, PCYT1B, PDE9A, PFKFB4, PHKA1, PIGC, PPP1R1A, PPP2R5D, PRKAR1B, P VRL4, RAPGEF3, RPS6KA4, SLC9A1, SMAD9, SSH1, STEAP3, STX1B, SUOX, TB XAS1, TLR3, TNFSF11, TSTA3, UCK1, UROD, ATP6V0D2, ATP6V1B2, ATP6V1C 1, SUV420H1, TNFRSF6B
Negative_11505	CD2, EGF, F12, GP9, LTB, TFG, AARS, ACO1, ALDH1B1, AMY2B, ARD1A, ATP5I , BDNF, CCL24, CD72, CERK, CHPT1, COASY, COL4A6, CREB3L1, CXCL6, DDX5 1, DFFB, DLL4, EHHADH, EPB41L1, EPHA5, FLT1, FSHR, FZD10, GDE1, GLO1, GNAL, IL20RB, INMT, IRS1, LDHB, MAP4K1, MIOX, NAGA, NAGK, NKD2, NUDT1 2, OR1J1, OR4C12, OR51B4, OR5AP2, OR5J2, OR5R1, OR8A1, OR9G1, ORC5L, PANK1, PAPSS2, PDXP, PIAS3, PLAUR, PLCD1, PLIN, PPM1D, PPP1R3C, PRKA A2, PTGER3, PTPN5, RPS6KA6, RPS6KB2, SEMA4D, SH3BP2, SNW1, SPRY3, TA S2R14, TAS2R38, TUBA3C, UGT2A1, VEGFB, WBSR22, ATP6V0D1, HLA- DRB5, PNLIPRP1
Negative_11506	C5, GK, GSS, ID4, KMO, LPL, MPL, PLN, SYK, TPR, ABCC8, ACADVL, ADCY2, AK R1B10, ALDOB, ALG10B, AMD1, ASNS, B3GNT3, CAMK2D, CCR6, CDH3, CDK7, C HKA, CHRM3, COL3A1, COMP, CTBS, DGKE, DKK2, DLL3, ECHS1, ECSIT, FGF19 , GALE, GNAQ, GP1BB, GRAP2, GSTM2, HGSNAT, HLA- C, HSD3B7, HTRA2, IL23R, IRF9, ITGA2B, ITGAM, KYNU, LCAT, MAN1A1, MDH 1, NAE1, NCR2, OR10G4, OR10G7, OR1D2, OR2A25, OR4B1, OR56A3, OR6C3, O R8B12, PDK1, PLA2G5, PMM2, PPM1D, PRKAR1B, PRNP, PTGER3, QPRT, RALGD S, RFX5, SKIV2L2, SLC12A2, SOAT2, SOCS2, SPRED2, ST3GAL3, ST3GAL5, S UCLA2, TBL1Y, TUBA4A, XYLB, YWHAH, ATP6V1E2, CACNA2D4
Negative_11507	AMH, RPE, ACACB, ACSL3, ACSM3, ADH4, ADH6, ALDOA, ALOX12B, BACE1, BIR C5, BMP2, BMP6, BPGM, BUB1, C3AR1, CACNA1D, CAMK4, CCKAR, CD34, CD79B , CHPT1, CLCA4, CLDN3, COQ3, CRKL, CXCL3, CXCR3, DAPK3, DIAPH2, DPYS, EFNA5, EPB41L2, ERBB4, FGFR3, FLT4, FZD6, GALNTL2, GRM5, IL28RA, ITG A2B, LCMT2, LLGL2, LRRC4C, MAGI3, MCM7, MGAM, MRAS, NCR1, NFATC3, NTN G1, OR1A2, OR1E2, OR1S2, OR4F6, OR51M1, OR52I2, OR5B3, OR5D13, OR5D1 6, OR7G2, PARVG, PFN3, PIK3C2A, PLCB3, POLR2F, PON2, PPP1CB, PPP1CC, PPP1R3C, PPP2R5E, PRNP, PTTG1, PYGB, RRM2, RXRA, SGMS1, SULT1E1, TNF RSF9, TPMT, ULBP2, UNC5B, VAV3, ATP6V1G1, HLA- DQB1, SERPINA5, SERPIND1



Negative_11508	LEP, PLN, ACSM4, ADCY10, ANGPTL4, AOC2, APOA1, ATP5A1, BBC3, BCL2, CD274, CEBPA, CREB3L4, CSNK1G3, DLAT, DNMT3B, EPRS, FOXA2, FPGS, GALNT10, GCNT4, GRB2, GRHPR, GRIA3, GSTM1, HLA-F, HYAL2, IDH3B, IL25, IQGAP3, MAN1A1, MAP2K3, NEUROD1, NUDT12, OR10S1, OR5M9, OR7G1, OR9I1, PAFAH2, PDE4B, PDK1, PGAP1, PGS1, PIGL, PNPO, POLE4, PRPH, PTPN7, RXRG, SOCS5, ST6GAL1, TNFRSF4, TUBA8, UROS, WNT4, MAPKAPK3
Negative_11509	AMT, C8B, CGN, GPT, ITK, OAT, PRL, TKT, TPR, ACP2, ACSM3, AGPAT2, ALG3, B4GALT2, CASP6, CCL21, CCNB1, CCR6, CD40LG, CDC14A, CREB3L3, CRY2, DRD5, GAD2, GALNTL2, GANAB, GNAZ, GNB3, GNMT, GUCA1C, GUCY1B3, IDH1, IL2ORB, IL21R, IL22RA2, IMPA1, IMPDH1, LRRC4C, MAOB, MDM4, MGST3, MPZL1, NAGA, NAT6, NEU3, NRXN1, OR10G3, OR1B1, OR1G1, OR1Q1, OR2Z1, OR8K1, OR8K3, PISD, PPARA, PPBP, PPM1B, PPP2R5D, PTGES, PTPRF, RAD51, RFXD2, RFXANK, SFRP2, ST8SIA1, VAV3, WNT1, WWP2, ZIC2, EIF4EBP1, HLA-DRB3
Negative_11510	BCR, C8B, CAD, CFH, DBI, DCN, F2R, FN1, OSM, AASDH, ACTC1, ACYP1, ALDH3B2, APOC3, BCL2L1, BHMT, CADM1, CALML3, CARS2, CASP9, CCL11, CCL24, CCL28, CDC25B, CDC42, CDC7, CLDN20, CLDN7, COL2A1, CXCL16, CYFIP2, CYP26B1, DCXR, EXT2, EXTL2, FASLG, FGD3, FGF19, FGF23, FSHR, FZD8, GNA15, GRB2, GYS1, HIP1, HLA-DOA, HMOX1, HPSE, IDH3G, IL13RA1, KIR2DL1, KIR2DS4, MAPK7, MYH7B, MYLK3, NAGLU, NKX6-1, NME4, NSDHL, OR2G2, OR2T12, OR4D6, OR4M1, OR52J3, OR6C75, P4HA1, PCNA, PDE8A, PDGFA, PDIA4, PFKFB4, PIGT, PLAU, PNMT, POLR1E, PPP1R3B, PTEN, PTTG1, RASGRF2, RPS6KA6, RRM1, SLC33A1, SMARCA2, SPRY1, ST3GAL6, ST8SIA1, SYNJ2, TAS2R38, TUBB1, VAV3, YARS, CACNA2D1, HSP90AA1, PPP1R12A, SUV420H2, TNFRSF10A
Negative_11511	FUK, KMO, MPZ, SRC, ACTA1, ADH1A, ADSS, ALOX12B, APC2, AQP7, ARPC4, ASIP, BPGM, CARS2, CBLB, CD8A, CD99, CDC20, CDH5, CISH, CLTC, COL4A2, CSNK1E, CTNNA2, DTX3, DUSP9, E2F3, ECSIT, EFNA5, FECH, FOXA2, FUT9, G6PD, GMPPB, GP1BA, GUCY2D, HES1, HIBCH, HPSE2, ICOS, IL17RB, IL20RA, ITGAE, JUND, LCMT1, MGST1, MLLT4, NCK1, NCK2, NFX1, NKD2, NT5C1A, NUDT8, OR10G7, OR10J5, OR13C2, OR1J4, OR1L3, OR4L1, OR51E1, OR51G1, OR5AR1, OR5M9, OR6C76, OR8G1, PDE1C, PER3, PIK3C2B, PLA2G4A, PLOD3, POLD1, PTDSS1, PTK2, PTK2B, PTPRR, RAC1, RAC3, RENBP, RFXAP, RND1, RPS6KB2, RUNX1, SESN1, SPTAN1, ST3GAL2, STK3, TAS2R50, TRMT11, TSC2, UBE2L6, UGCGL1, UROS, VEGFB, WBSR22, WWP2, ATP6V1G2, GABARAPL2, TNFRSF14
Negative_11512	CBL, CD2, FN1, ACO2, ACSS3, ADH6, ADH7, AFMID, AGPAT6, AKR1C4, ALOX15B, ALPI, ANAPC10, APH1A, ATP5D, B3GALT4, BBC3, BCL2, CBR3, CD70, CES2, CHSY1, COL4A1, CUL1, CYP2J2, CYP3A4, DPM1, DUSP1, EIF4E2, ENPP1, FBP1, FZD9, GGT5, HPRT1, IDI1, IL2RG, JUND, LAMC2, LRP6, LYZL1, MAPK10, METTL2B, MLYCD, MTFMT, MYH11, NEU1, NOX3, OR10A7, OR51A7, OR5C1, OR8D2, OSMR, PCK1, PCK2, PGM1, PHGDH, PIK3R3, PLA2G1B, PPA1, PPARG, PRKX, PRODH2, PTGES2, PTK2, PTPN1, PVRL4, RAP1A, RPS6KB1, SNAI1, SOAT2, ST6GAL1, TAS1R3, THTPA, THY1, VANGL2, VEGFB, VNN1, WNT7A, ZIC2, ST6GALNAC3, ST6GALNAC4
Negative_11513	AK3, BAX, IL2, ILK, KIT, ADCY4, ADIPOR2, ASPA, ATP6V1A, CD86, CDH2, DHFR, DRD2, FUT5, FZD10, GBA3, GNAS, GUCY1B3, HDAC2, HMOX1, HRH1, IDH2, IL23A, INADL, ITGA4, KIR3DL3, MAML2, MAOA, MYH14, NARS, NTNG1, OR1L1, OR2A4, OR5L2, OR6Y1, OR7G1, ORC3L, PAK3, PECAM1, PERP, POLR2D, POLR2H, PPAP2B, PRKACA, PRKAG2, PRKAR1A, RFXAP, TNFRSF8, TPH2, PLA2G12B

Negative_11514	AGK, HDC, AKR1B1, ARNTL, AXIN2, CCNB3, CES1, CLDN18, CTPS, CYFIP1, DGKD, DHODH, DLL3, ELK4, FIGF, FUT4, FZD3, G6PC2, GALT, GBA3, GFAP, GNAO1, GNMT, HRAS, HTR2B, INPP5E, ITGB2, KLRD1, LAMB1, LILRB3, MAN1A1, MAP3K1, MECR, MTHFD1, NAE1, OR13C2, OR1F1, OR5AK2, OSMR, PAK4, PDGFB, PIK3C3, PLCE1, RASGRP4, RHEB, RPS6KB2, SELE, SMURF2, SOAT2, SUCLA2, SUGT, TYMP, WARS2, ATP6VOE1
Negative_11515	AMT, C6, MTR, PGP, ATP5J, B4GALT6, CDC23, CHKB, CLDN4, CYP11B2, CYP2C9, CYP2D6, CYP2E1, DHRS4L2, EHMT2, FGF12, GLDC, GPT2, HCLS1, HSD17B4, HTR4, IL8RB, IQGAP3, LFNG, LRRC4C, MGAT5, MLLT4, MYH11, MYL9, OCLN, OR2M2, OR5M8, OR8J1, PDE10A, PDGFC, PDHA2, PDHB, PEMT, PNLIP, PPP1R1A, PPP2R2D, PPP2R5E, PRPS1, RETSAT, ROBO2, RPSA, SRD5A1, SSH1, STAM2, TAS2R9, THBS3, TRMT11, TUBB2A, UPRT, VEGFA, ATP6V1E1, PAFAH1B1
Negative_11516	BTC, DCT, LHB, LIF, PC, PLN, TXK, ACAA1, ACACA, ACVR2A, ADCY9, AKR1B10, AKR1C4, AKR1D1, ALDH1A1, ATP2A1, CAV1, CCR4, CD79A, CD86, CDKN2D, COX6A1, CSAD, E2F4, EFNA2, EPAS1, FGFR2, FZD4, GSTK1, HSPA2, HSPB1, IDI1, IFNA17, KIR2DL3, KLRC1, LDHD, MAP2K2, MAP4K2, MGLL, MGST1, NLGN1, NTF4, NUMBL, OR10H2, OR1E2, OR2M7, OR2Z1, OR4C13, OR51T1, OR5D16, OR8A1, PDE6G, PIK3CB, PLCD4, PPP1R3B, PRKAA2, PRPS2, PTGS1, QPRT, RALGDS, RPS6, SEMA3F, SOCS1, SPTAN1, SULT1A4, SULT2B1, TNFRSF4, TPMT, TRPC1, ULBP3, ULK1, CSGALNACT2, HSD17B10, SERPING1
Negative_11517	CGN, F9, MET, MUT, MVD, AADAT, ACSM2A, ACSM5, ADCY6, ADCY9, ADORA2B, AGRP, ANGPTL4, ATP12A, ATP5G3, B3GALT6, BAAT, BUB3, CAMK2A, CARS2, CCL23, CD58, CDC25A, CNTNAP1, CPT2, CXCL2, CYFIP2, DGAT2, DUSP7, ETNK1, FLOT1, GCNT2, GMPR2, HRH1, HRH2, LARS2, MAOA, MAP4K4, MGAM, MTHFD1L, MYH15, NEUROD1, NKX2-2, NPR1, NRG1, NSDHL, OR10T2, OR2L2, OR2M5, OR4K14, OR51D1, OR5K1, OR6C1, OR6C6, OR8K3, OR9Q1, PCK2, PGM3, PLEKHA8, PLTP, PPP1CB, PPP2R5D, RALA, RPN2, SEMA3F, SMAD7, SOCS5, SOS2, TALDO1, TBXA2R, TPM3, VAMP1, WASF2, WNT4, XIAP, ATP6VOA4, SUV420H1
Negative_11518	DBI, EGF, HK3, ID4, TH, ACAT1, ACSM3, ACSS1, ACVR1C, ADORA2A, ADSL, ATG3, CCL21, CD82, CDC14A, CDC20, CDH15, CDKN2B, CLTA, CNGA4, CNTN1, CRHR1, CTLA4, CYP21A2, DARS2, DUSP10, EDNRB, ELK1, EPHB3, FLT1, GALNT13, GALNT8, GNA14, GNAT3, GSTO1, GYS1, HLA-C, HPSE, ICAM1, INPP5A, JAG1, KIR2DL3, LARS, LEF1, MAPK9, NLGN3, NTRK1, OR11H6, OR1C1, OR1L4, OR2T3, OR2T8, OR4F15, OR4M1, OR8H1, PI4KA, PIGK, PIK3CA, PLCB1, PNPT1, PTGDS, RERE, SMPD4, STX3, TAS2R5, TUBA3C, VDAC1, XYLB, TNFRSF12A
Negative_11519	C1S, CFH, CS, FYN, GH2, IL4, INS, PC, ACOT12, ADSS, AGPAT4, AGRP, B4GALT7, CACNG3, CACNG7, CACNG8, CAV3, CCL3, CD34, CDC14A, CDH5, CDKN1C, CHRM2, CLDN16, CPT1B, CRB3, CXCL9, CYBB, CYP4A11, CYP7A1, DHRS4L2, EDNRA, EHHADH, ELK4, ENPP3, EPHA5, FGF1, FGF23, GRPR, GSTO2, GUSB, HES1, HMBS, IDH3A, IFNA10, IKBKB, IL13, IL1B, IQGAP3, ISYNA1, ITGB8, KAT2B, LIAS, MAN1C1, MDM2, MTAP, MYL7, NCOR1, NLGN1, NODAL, NRG2, NT5C2, OR10G7, OR10K1, OR2A5, OR2M3, OR2T11, OR51D1, OR8B12, OR8H2, PAK7, PDE11A, PDE3A, PDE4D, PIAS3, PIGQ, PISD, PLCB3, PNLIP, PRDX6, PTPRB, PYGB, RAC3, RDH10, SETD1B, SH2D1B, SMARCA5, SMPD3, SPCS3, SPP1, SRD5A2, SYNJ2, TLR5, TYMS, UGT8, WHSC1, WNT8A, MAPK8IP3, TNFRSF18

Negative_11520	IL9, PXN, SP1, TXK, ACAT1, ADIPOQ, AMPD1, AQP7, ATP2A1, ATP5G3, B4GAL T6, BIRC2, C4BPA, CAV1, CCR2, CD74, CHAT, CIITA, CTSL1, CYP2C9, CYP2F 1, EPHA3, GLDC, GLI3, GNPDA1, GSTA2, HMGCR, ICOS, ITGA6, ITPKA, KIR2D L4, LCAT, LIAS, LTA4H, MIOX, MYL7, NGEF, NTRK2, OR10J3, OR2AG2, OR2T2 , OR2T33, OR4B1, OR4C15, OR5D14, OR5L2, OR9A4, PEMT, PIGT, PIP5K1B, P LXNA2, POLR1B, POLR2I, POLR3A, PPCDC, PPP2R5A, PRLR, PTGFR, PTPRB, S ARS2, SEMA7A, SPRY4, TNFRSF8, WNT7B, XYLB, HLA- DPA1, PNLIPRP1, SERPINF2, SUV420H1
Negative_11521	ADO, F7, IL5, IL7, TYR, UBB, ACAA2, ACOX3, ALDH6A1, ANAPC2, AOC2, ARSE , B4GALT6, BET1, C4BPB, CD226, CDC25A, CD01, CDS2, CLDN15, CNGA3, COL 5A1, DUSP1, DUSP8, EFNA3, ELK1, EVI1, FTH1, FZD2, GALM, GCH1, GLI3, GR IA2, GRIN2B, GRIN2C, HARS, HLA- DMA, HPSE, HSD11B2, ICAM1, ICAM3, IL11, IL12RB1, IQGAP1, IQGAP3, IRS 4, KLRC2, LDHA, MAP2K1, MDM2, MYH8, NFE2L2, NMNAT3, NRG3, OR10T2, OR1 3C5, OR2A12, OR2L8, OR2Y1, OR3A3, OR5R1, OR6C4, OR6C74, OR8A1, OR8D1 , P4HA1, PANK4, PARVB, PCCB, PDHA2, PGM1, PIAS1, PIGK, POLR3B, PPA1, P RKCZ, PTGDS, RELA, RFXAP, RRAS2, RRM2B, SDHC, SEMA3C, SETD7, SHC2, SO CS2, SOD1, SV2B, TALDO1, TOLLIP, TOMM40, TUBB3, WBCSCR22, WNT3A, WNT9 B, HLA-DQA2, SERPINC1
Negative_11522	AGL, CP, CR2, GNS, MAG, PGF, ADRBK2, ALG10, APOC3, ASRGL1, ATG3, BIRC3 , BMP8B, CCL17, CD79B, CLDN15, COQ5, CRKL, CYP1B1, DDX23, DERL1, DHRS 9, DVL1, EDNRA, EHMT1, ENTPD8, F13A1, GALNT10, GLB1, GNAZ, HARS2, HSD 17B3, IL2RG, LAMB4, LPAR1, MAD2L2, MCCC1, MCM4, MEF2C, MTMR1, NFYA, N TF4, NTN1, OR10G4, OR11G2, OR1Q1, OR2T33, OR52B4, OR5T2, OR7A5, PDE1 B, PFN4, POLR1A, PPP2CA, PPP3CC, PRKG1, PSME2, SEMA4A, SPCS3, SUOX, T NFSF10, TNFSF12, TNFSF8, TRHR, UCP1, ZFYVE9, ATP6V1G2
Negative_11523	PGF, RPE, ARSE, AVPR1A, AXIN2, BLVRB, CACNA1I, CACNB4, CASP9, CCL27, CCNA2, CD48, COL1A2, CSF1R, CXCL10, CXCL5, DDX41, DOLPP1, EPB41L1, F GF23, FRAT2, GAL3ST1, GLUL, GRM1, HAGH, IDH3G, IL10, IL8RB, KRAS, NCA M2, NEU3, NQO1, OR4F4, OR4K5, OR52E2, OR52L1, OR52M1, OR9Q1, P2RX7, P OLD2, POLR2A, PPOX, PRKCQ, PRSS2, PRSS3, PSAT1, PTPN1, PVRL4, RFNG, R RM2B, SEMA7A, SGMS2, SMAD5, TALDO1, TAS2R8, TBL1Y, TPH2, VDAC2, ATP6 VOA1, C1GALT1C1, SUV420H1
Negative_11524	ADO, IDS, IL5, TNC, ACADVL, ADRA1B, AKT2, ALDOC, ARPC1B, CCL25, CD40, CD01, COQ7, CREB3L2, CYP1A1, DEGS1, DEGS2, DERA, DKK4, DNMT3A, DNMT3 B, DUSP7, EIF4E2, GLI3, GRIA3, HLA- DOB, IKBKE, ITPK1, JAG1, KLRC3, MAP3K14, MBL2, NCF4, NRG3, NT5C2, NTR K1, OR1C1, OR2F2, OR51E2, OR51V1, OR56A1, OR5AP2, OR8H1, PDE8B, PGS1 , PIAS4, PLA2G6, PORCN, PPAT, SEMA3E, SEMA4B, SEMA7A, SETDB1, ULBP2, HSD17B10
Negative_11525	EGF, NLK, OGT, ABCC8, ABL2, ACSL3, ADRB1, ALOX5, ASMT, ATIC, ATP5A1, A XIN1, CBR1, CD244, CD247, CHKA, CYP7A1, DDIT3, DTYMK, EDN1, EVI1, FGF 5, GAS1, GBE1, GFAP, GMPR, GSTA5, GUCY1B3, GYS1, GYS2, HLA- DOA, HNF1A, HPRT1, HSD11B2, HTR2A, IFNA4, IMPA2, IRF5, ITPKA, LMO7, M GST3, NAGA, NAT6, NKX6- 1, NTN1, ONECUT1, OR2A5, OR2D2, OR2G2, OR2T33, OR7A5, OR8D4, OR9A2, P DE10A, PFKFB2, RAC1, RASGRF1, SCLY, SELP, SELPLG, SH2D2A, SPTLC2, ST 3GAL4, STMN1, TAS2R3, TSC2, UGP2, UGT2B17, YWHAB

Negative_11526	ADA, IHH, MVK, AARS, ACAD9, ACTN2, ARHGEF7, ASIP, B4GALT5, CACNA1G, C ASP6, CD59, CDH1, CREB3L1, CSNK1E, CSNK1G3, CTPS, CTSG, DPAGT1, DVL1 , EPB41L1, FTMT, HADH, IL10RA, INPPL1, IPPK, LILRB3, LIPC, MGAM, MTFM T, MTR6, MYH3, NCOR2, ONECUT1, OR2T33, OR4D2, OR4K14, OR4K15, OR51I 2, OR52E8, OR5AK2, OR5B12, OR5R1, ORC2L, P2RX1, PDE7B, PIK3R2, PLCD1 , PNPO, PRKACA, ROCK2, SCLY, SSX2IP, TBL1Y, TGFB2, THY1, WNT2B, YES1 , YWHAH, MAPKAPK2
Negative_11527	AK3, ASL, CD4, DCK, LPL, LYN, ME3, PML, TK2, ALDH5A1, ALOX5, APC2, ASS1 , ATP5J, BIRC3, CAMK2A, CAMK2B, CCL13, CCL25, CD40LG, CD99, CDC16, CL DN5, CYFIP1, CYP2B6, ECSIT, EDAR, EPHA8, EXTL1, FASLG, FTMT, FZD1, GC LM, GCNT2, GCNT4, GMDS, GNAT3, GP1BB, GPD1L, GPX5, HGSNAT, HMGCR, HTR 5A, HYAL2, IL11RA, IL28B, ITGB3, KLRD1, LAMC1, MAD2L2, MAP2K2, MAP4K 1, MGST3, MYH6, NCK2, NGEF, NNMT, NOS1, NR1H3, OPLAH, OR2T10, OR2T5, O R4F17, OR4F5, OR51B4, OR5AP2, OR5K1, OR7A10, P2RX3, PDHA2, PDX1, PER 2, PHPT1, PI4KB, QARS, RAP1A, RHOD, SGPP1, SKP2, SMAD2, SMPD3, THBS3, ULK2, UXS1, VASP, VKORC1, WHSC1, WNT7B, WWP1, MAPK8IP1
Negative_11528	AK5, DCT, GH1, ADAM17, AGXT, ALDH9A1, ALG3, ANAPC10, APBB1, ARSA, ATP 5E, ATP6V1A, CACNA1H, CD82, COL1A1, CSF3R, CYP2A6, DGKG, DHFR, DHRS3 , EPHA2, FIGF, FMO3, GALNTL2, GBE1, HIF1A, HLA- DRA, HRAS, HSD17B4, ICAM1, IFNA10, IL15, ITPA, LDHB, MAP2K6, MGAT3, M PST, OR10G4, OR4B1, OR5AC2, OR6K6, PANK3, PARVG, PDE10A, PRODH2, PSM E1, RUNX1T1, SLC12A2, SLC9A1, TNFSF8, TSNARE1, TUBB4, ATP6V1C1, CAC NA2D4
Negative_11529	BTC, JUN, OGT, ACY1, ADCY3, AHCYL2, ALG13, ANAPC7, B3GAT3, C3AR1, C3o rf10, CACNA1A, CASP8, CDC25A, CDKN2D, CNTNAP1, COL5A1, CSNK2A1, CTS G, CXCL2, CYP11A1, DAPK3, DCTD, DDX55, EGFR, FGFR2, FUT4, GJA1, GJD2, GNAI3, HDAC2, HLCS, IGSF5, INADL, INPP5A, ITGA7, LFNG, LMO7, LRDD, LT A4H, MAN1C1, MAP2K4, MPP5, NAGS, NCF1, NME2, NTRK2, OR4K1, OR56B4, OR 6F1, OR6N1, OR7A10, OR9A4, P4HA2, PARVB, PDHA1, PFKM, PIK3R2, PLA2G2 A, PLA2G4A, PLIN, PLXNB2, PSME1, PTPRR, RAPGEF3, RARS2, RENBP, RHEB, RHOA, RND1, SH2D1A, SHMT1, SRGAP3, ST3GAL6, STAT1, STX10, TAS2R5, TI RAP, TSLP, ULK3, UROC1, VAMP3, VAV1, WNT8B, YARS, YWHAG, ZFYVE9
Negative_11530	AK3, CAT, DHH, EBP, FN1, GK2, HK1, LIF, MUT, MVK, MYC, NPL, RDX, AASS, AC SM3, ADCY5, AGPAT1, ATF2, B4GALT2, C7orf16, CACNG2, CCL20, CCL3, CD8 A, CDKN1B, CPOX, CSAD, CTNNB1, CYP26C1, CYP4F3, DGKE, DHRS3, DNMT3A, EGLN1, FZD1, GANAB, GCH1, GNB3, GUCA1A, HAGHL, HMGCL, IFNA5, IL12RB1 , IL19, IL3RA, IQGAP3, KIR2DL1, KIR3DL2, KLRC1, MAPK7, METTL2B, MYH9 , NCF4, NEFH, NEGR1, NTF4, OR10G2, OR10G8, OR2A14, OR4N2, OR51E1, OR5 1V1, OR8I2, PDGFD, PI4KB, PIM2, PISD, PITX2, PLCG1, PLCG2, PPP2R2B, P PP2R2D, PPP2R5B, PSME1, PYGB, RPSA, RUNX1T1, SDHC, SLC33A1, SMURF2, SPCS3, TAS2R60, TJP1, TNFRSF9, UBE2L6, ULBP2, VCAM1, WEE1, WNT11, WN T4, WWP1, ALDH18A1, ATP6V0D1, KIR2DL5A, PNLIPRP1, TNFRSF6B
Negative_11531	F12, INS, LIF, ACSM2A, ACSS2, AGPAT2, AHCY, AMD1, ASCC3, B3GALT4, B4G ALT2, CDC7, CDK2, CFLAR, CHAD, CLDN22, COX10, CREB5, CTBP2, CXXC4, DH RS9, EDN1, EGLN1, ENTPD8, EPHB4, ERBB2, EREG, EXTL3, FARSB, GABARAP, GALNT13, GALNTL4, GLDC, GMDS, GMPR2, GPD1L, GSTA1, IFNAR1, LDHAL6B, LIPC, MAFA, MCCC2, MYL2, NUDT12, OR1I1, OR4C15, OR5B17, OR6B2, OR7C2 , OR8D2, OR8U1, OR9Q1, PER2, PHPT1, PKMYT1, PPOX, PRPH2, RAC3, SEMA4D , SESN1, SLC27A5, SRD5A1, STK11, TPMT, UGCG2, UPRT, TNFRSF12A

Negative_11532	C6, DCC, GCK, INS, LCK, SYK, TNC, ACACA, AC01, ACTG1, ACVR2B, ADH1A, ALDH3A2, APAF1, APOA2, APOE, ASAH1, ATP6V1A, CASP10, CD40, CD82, CHEK2, CSNK1E, DGKG, DRD1, ENPP3, FGD3, FGF17, FGF5, FZD10, GSTM4, ISYNA1, ITPA, JAK2, MAN1A1, MDM2, MMP9, MYH9, NCR2, NR5A2, OR10G8, OR1K1, OR4C15, OR4K17, OR4P4, OR51F1, OR6B3, OR6T1, OR9G1, PAICS, PDHB, PIK3C2B, PIK3C2G, PIP5K1B, PLA2G2F, PNPLA3, PRKCH, ROCK1, SC4MOL, SEMA3B, SHC2, SIPA1, SOD1, STX3, TAS2R49, TAS2R8, TLR2, TRAF6, MAPKAPK5, TNFRSF1A
Negative_11533	LYN, MPL, SRM, TPR, AADAC, ACAA1, ACACA, AC01, AMPD2, APOA1, APOA2, B3GNT2, CCL26, CD27, CLDN14, CNTN1, COL1A1, COL2A1, COQ5, COX10, CSNK1G1, CYP11B1, CYP1A2, DHDH, DLL1, DNMT3A, EPHX2, FCER1G, FGF10, FLT1, FMO1, FZD1, FZD8, GDF7, GMPPB, HARS, HPSE, ITGAX, LAMB2, LFNG, LIPA, MAN2A1, MAP3K4, MAPK12, MTHFD1, MTMR1, NCR1, NFYA, NTN1, ODC1, OR2F2, OR4N2, OR52E4, OR5A1, OR6B2, PAFAH2, PARD6B, PARVG, PDGFD, PDPK1, PEMT, PHPT1, PLCG1, PLCZ1, PNMT, PNPO, PPP1R3B, PROS1, RAC1, RARS, SFRP1, SHMT2, SPRY3, SPRY4, SUOX, TCF7L2, TJP2, TLN2, TNXB, UGT2B11, WNT2B, YWHAQ, ZMAT3
Negative_11534	AK7, CP, CR2, CS, IL7, KHK, UBB, AANAT, ACOT11, AGPAT1, AKT2, ALOX12B, AMY2A, APLP1, ARD1A, B4GALT6, BCL10, BDKRB1, CACNA1B, CCL26, CCNE2, CCNG1, CD40, CD72, DAAM2, DAD1, DLAT, DUSP2, EDA2R, FGF12, FGFR2, GALNT2, GNRH2, HDAC1, HEMK1, HSD17B7, IDH1, IFNA13, IL1A, IL22, IMPA1, INMT, ITGAD, LFNG, LIMK1, MGAT4A, MTHFD1L, MTHFR, MYH11, NLGN1, NME4, OR10H3, OR11H4, OR1E1, OR1L8, OR2B11, OR52A5, OR5B12, OR5C1, OR5V1, OR6C1, OR6C70, OR8K3, ORC4L, OXTR, P2RX3, PDE7B, PDGFC, PDGFRA, PIGC, PIK3R4, PLXNC1, POLA1, POLR1C, POLR3K, PPP2R5E, PRKAG2, PRKCQ, PTPN7, SETDB1, SFRP4, STAT1, STK3, SUCLG2, SYNJ1, WBSCR17, WNT3A, WNT5A, SERPINB5
Negative_11535	C6, CP, GCK, IL5, ME1, PDC, PVR, TNC, ACSS3, ACY3, ADCY10, ADIPOR2, AGPAT1, ARD1A, ARNTL, ARPC1A, ATP6AP1, B4GALT7, BLNK, BMPR1B, CAMK2B, CCL15, CDK6, CER1, CES7, CNGA3, CNTNAP1, COL5A2, CTNNA2, CXCL9, CXCR5, CYP1A2, CYP2F1, DAD1, DAPK1, DDX19A, DEGS1, DHODH, DNMT1, FARP2, FAR2, FDFT1, FLT4, GCAT, GNAI1, GPT2, HEXA, IDH3G, IGSF5, IL13, IL17B, IL7R, ITGAX, LEF1, LRP5, LYZL1, MECR, MTFMT, NME4, NRXN1, OCLN, OPLAH, OR2A12, OR2A14, OR2AG1, OR2T3, OR4A5, OR5D13, ORC3L, P2RX2, PDE1A, PGLS, PIGX, PLCD3, PLD1, PLK1, POLR2B, PRPS1, PTGER1, PVRL4, RPS6KB1, RUNX1, RUVBL1, RXRA, SLC25A5, SNAI2, SPCS3, TGDS, THBD, TICAM2, TKTLL1, TMLHE, WBSCR22, ATP6V1B2, MAPK8IP1, PHOSPHO1, SERPINA5, SERPING1
Negative_11536	AK7, DBI, DBT, DCC, GHR, KMO, PRL, RFK, TAT, ACTG1, ADRA1B, ARAF, CASP6, CCNG2, CD247, CD28, CD47, CDK6, CHST13, CLDN14, COL6A1, COL6A2, CSNK2A1, CXCL10, DTX4, ENTPD1, EPHB4, FARSB, FGF9, FLT4, FMO5, GGT6, GRI N2B, GUCY1B3, HADH, HSD17B7, HSPA1B, IDH3B, IL13RA1, IL15RA, IMPA1, KDSR, KYNU, LARS, LDHD, LEPR, LIMK1, MAGI3, MAML2, MAN2A1, MAOB, MAP3K4, MAP4K1, MAPK9, MCM5, NAT1, NCF1, NFATC4, NLGN1, NMNAT3, NNMT, NT5C, NT5E, ONECUT1, OR10A2, OR12D3, OR4D1, OR4D2, OR51A2, OR8D1, PARVG, PDE1B, PDE4B, PDGFB, PDHA2, PIGM, PLA2G2E, PLEKHA8, PLOD2, PPP3R2, PRDX6, PRKAA1, PYCR1, SEMA3F, SEMA4C, SIAH1, SMAD1, SMPD3, STAT1, STX18, TAS2R40, VAMP1, ATP6V1C2, HSP90AA1, SERPING1, SUV420H1

Negative_11537	C6, GPT, IVD, MOS, MSN, OTC, TNF, TNN, ACLY, ACOX3, ALOX12B, BIRC5, CACNA1S, CER1, COL1A2, CPS1, CSNK2A1, CYP1B1, DKK2, DMGDH, DPM2, F2RL2, FCGR2B, FGF23, FLAD1, G6PC, GALT, GNAI3, HCLS1, HLA-F, HNF1A, HNF4A, IL8RB, ITPKA, LAMB3, LDHAL6B, LPAR1, LRP6, MDM2, MEF2C, MYH9, NAT5, NEFH, NMNAT3, NPR1, NTF4, OR10H3, OR1E1, OR2F1, OR4N4, OR51B5, OR52A1, OR52J3, OR7C2, P4HA3, PDE4A, PIK3R3, PKLR, PLXNC1, POLR3K, PPP1R3D, PRKAR2B, PTDSS1, PTPN7, RAB5A, RASSF1, SCIN, TAS2R8, TNFSF10, TRPM5, VANGL2, ATP6V1G2
Negative_11538	AK7, C8A, CBL, CGN, F11, HK2, LCK, PAH, A4GALT, AACS, ACTN1, ADRA1A, AKT3, ALOX15B, BDH1, BDKRB2, BMP2, CD40, CD59, CPOX, CREB3L1, CSNK2B, CYBB, CYP2A7, DAAM1, DDX56, DVL2, F2RL2, FLT3LG, GGPS1, GUCA1B, GUK1, HADHB, HA01, IFNK, IFT57, KRAS, LLGL2, MAD1L1, MAP4K2, MGST2, NAGS, NEU1, NFYC, NMNAT3, NOS3, OR10A7, OR10J3, OR2AE1, OR4A15, OR56A1, OR8H1, PAK4, PHGDH, PIGF, PKLR, PLCB2, PLCE1, PLXNC1, POLR3H, PPA2, PTEN, RPS6, SDHC, SHISA5, STX2, TGDS, UBE2L3, WBSR17, ATP6V1B2, B3GALNT1, TNFRSF10B
Negative_11539	AK7, BCR, MET, PGF, SMO, TNC, XDH, ACADSB, ALCAM, ALG10, ARHGEF4, BACE2, BIRC5, CACNA1C, CCL13, CYP2F1, DGKH, DTYMK, EPHA1, ERBB4, ERO1L, FECH, GSTA3, GSTK1, HEXA, HSPB1, IFNGR2, IL13RA2, IL1R1, IPPK, IRAK3, ITGAV, KIR2DL2, KIR3DL2, MDM4, MGLL, MYH9, NFAT5, OR4F15, OR52K1, OR8H2, OR9A4, OR9G1, PCCB, PERP, PFN2, PRODH, RBKS, RPRM, SMARCA5, SNAP25, STX18, TOLLIP, WNT6, WNT9A, ZMAT3, C1GALT1C1
Negative_11540	ADO, AK3L1, ATP6VOB, ATP6V1A, CAMK2G, CCL23, CSNK1G3, CSNK2A1, CYBA, CYP2C18, DGKE, DGKQ, EHMT2, ENO2, ENPP1, FECH, FGF9, FOSL1, GJD2, GNRH1, GPX7, GSTM4, HTRA2, IL1A, IMPDH1, ITGAV, ITPA, MBL2, MLYCD, NPR2, NUMBL, OR11H4, OR14C36, OR1F1, OR2B11, OR2Z1, OR4A5, OR5AK2, OR6B3, OR6C6, OR7A10, OR7G1, OR8K1, P2RX5, PLAT, POLD3, PPAP2A, PTPRF, SKP2, SMPD2, TPK1, TYMP, TNFRSF11B
Negative_11541	AMH, DCT, FAS, MET, NOG, PAH, TNF, AGRP, AKR1B10, ALDH1L1, ALG13, ALG6, ALG9, ALPP, ALPPL2, ATP6AP1, AXIN1, BTRC, CAMK2A, CDK4, CDK5, CHRM3, CHST12, CLDN15, COL1A2, COQ5, COQ7, CRLF2, CYP2D6, DGAT2, DGAT2L4, DRD1, FGF5, FOXO3, FZD2, FZD5, G6PC2, GALNT10, GGT6, GNPAT, GSTO2, HRAS, IAPP, ICOSLG, IGFBP3, KIR3DL2, LAP3, LCAT, LDHC, MAOA, MAP3K13, MYLK3, NCKAP1L, NFKBIA, NOD1, NOS1, NT5C2, OR10J1, OR51D1, OR51E1, OR51V1, OR52E8, OR6C4, PDE1B, PLA2G4A, PLCB2, POLR3A, PPP1R1A, PRKAB2, RAB5A, RALBP1, SHC4, SIGLEC1, SOS2, SPRED2, SRGAP2, TACR2, TLN2, TUBAL3, CACNA2D3, MAP3K7IP1, TNFRSF10D
Negative_11542	MPI, ALDH9A1, AMDHD2, ARPC5, CCL26, CD01, CHST11, CNTN1, CRB3, DTX3, EFN3, EGLN3, EIF4E2, FCER1G, FIGF, GFPT1, GLB1, GOSR2, GSTM5, HSD17B4, HSD3B1, IFNA4, IFNGR1, IFNW1, IL15, IMPA1, IRF9, MARS2, MGST2, MMP9, MYH2, MYLK, NMNAT1, NPR1, NRXN2, ODC1, OR13C4, OR2M2, OR4A5, OR4C16, OR4K2, OR5J2, OR5T1, P2RX1, PCCB, PDGFRA, PIGC, RASSF1, RBL2, RUNX1T1, SRGAP1, SUCLG2, TGDS, TGFB2, TM7SF2, TMLHE, UCK1, WNT1
Negative_11543	C1S, HGD, LTB, OTC, TK2, ZYX, ACSM2A, ADCY3, APLP1, B4GALT1, BDH2, BPGM, CACNG5, CAMKK2, CCL15, CCL3, CCND1, CHPT1, CLDN20, CLDN4, CTBS, DHDDS, DKK4, DUSP3, EXTL2, FGD1, FGF10, FGF5, GPX7, HSD3B1, HSPA8, IL28A, MADCAM1, MAML3, MDM4, MRAS, NAGA, OCLN, OR10J5, OR14C36, OR1L4, OR4L1, OR51B4, OR51Q1, OR6C70, OR6C74, ORC3L, P2RX1, PER2, PNPLA4, POLR1E, PRKCH, PRKCZ, PRKY, PSME1, SEMA4D, SETD8, SRGAP1, TAS2R9, TRPC1, TUBAL3, TUBB2A, UPRT, ARHGEF12, ATP6VOA1, ATP6VOA4

Negative_11544	ADC, ASL, CD2, CP, CRK, GH2, ADAM10, AKR1D1, ARRB1, ATP2A2, ATP5H, CACNA1A, CACNA1S, CCL25, CD3E, CDKN1A, CHEK1, CHST13, CMAS, CNTFR, CPT1B, DKK4, DLL3, DUSP2, FGF8, GDF6, GLI1, GSTA5, GSTM2, HTR4, IFNA7, IL2RA, KLRD1, MYH11, NAGS, NSDHL, NTRK2, OLAH, OR1K1, OR4C16, OR6C4, OR8J1, PIAS4, PIK3R3, POLD4, PRPH2, RBL1, SOD1, TBXA2R, TSLP, UNC5B, UPR T, WNT2, WNT9B, YARS, YARS2, ARHGEF12, CACNA2D4, HLA-DRB3, KIR2DL5A, MAPKAPK5
Negative_11545	AK5, C7, CAT, DDO, F8, GGH, LPO, VCL, ABCC8, ACOX3, ACSM3, AKT3, ALDH7A1, ALG11, ARHGEF7, ARRB2, ATP5G2, ATP6V0B, B3GALT1, BCL2, BMP4, BUB1B, CACNG2, CBR1, CCL11, CCL21, CCL3, CCR7, CD55, CHPT1, CYP4A11, DDX19A, DDX50, DIAPH1, DUSP14, DUSP6, ENTPD1, EPB41L1, F2RL2, FGF20, FUT5, GALNT9, GAMT, GSTK1, GUK1, HCST, IFNW1, IKBKE, IL10, IL5RA, ITGA2B, ITGA4, LRDD, LRP6, MAPK14, MMP14, MTHFD2, NAMPT, NCK1, NRAS, NRXN2, OR10K2, OR1F1, OR2G3, OR51A2, OR51L1, OR51T1, OR52A5, OR52K2, OR5C1, OR5D18, PARVA, PDPK1, POLR1C, PPP3R2, PSPH, PTAFR, PTGS1, RRAS2, SELP, SEMA3B, SMAD6, SMPD2, SRGAP1, TAS2R10, TAS2R50, TBXAS1, TNFSF8, TUBB2B, UBA1, ULBP3, UNC5A, WEE1, ZNRD1, B4GALNT1, HLA-DPB1, PLA2G12A, TNFRSF10B
Negative_11546	AUH, DBI, GNE, INS, PML, PTS, SP1, TYR, AADAT, ACAT1, ACO2, ACSS2, ADH1A, ALDOB, ALPP, ATP50, CADM1, CAV2, CCL20, CCL28, CCND3, CD79B, CHIT1, CHSY3, CLDN18, CLDN3, CNGA3, CSNK2A2, CYP21A2, CYP26B1, CYP2C18, CYP3A5, DAXX, DDX47, DUSP5, EDN1, ERBB3, FADS2, FOXA2, GALNT7, GDF5, GT1, GNA14, GZMA, IL17RA, ITGB8, LTA4H, MYH9, MYLK3, NAMPT, NCKAP1, OR10A2, OR12D3, OR2T34, OR6K3, OR9A4, ORC6L, OXCT1, PI4KB, POMC, PPIID, PRODH, PTGER3, RPN1, RPRM, SARS, SDC1, SEMA3E, SNW1, ST6GAL1, STAT5A, STAT5B, STX2, TKTL2, TPK1, TUBB2B, TUBB4Q, WNT7B
Negative_11547	AGL, CEL, GH1, GNE, OTC, ADRBK2, ASPA, B3GNT5, CARS2, CBR1, CCL15, CCR7, CD3E, CNTNAP1, COMT, CPOX, CXCL3, CXCR6, CXXC4, DARS, ENTPD1, EPHA2, FABP1, FECH, GDE1, GNG13, GRIA2, GSTT1, GUCY1A2, GUK1, HIBADH, HSPB1, IL12RB1, IL24, IL4R, IL6ST, IPMK, JAG1, MADCAM1, MTHFD1, MYH3, NLGN1, OR10A3, OR10A4, OR52B4, OR5J2, OR5K1, OR7C1, OR8I2, PPM1D, RUVBL1, SLC2A2, SRD5A2, SUCLG2, SUV39H2, TRADD, GABARAPL2
Negative_11548	FGG, HK3, IHH, IVD, MIF, MSN, STS, UBB, ACSS3, ACTA1, ADORA2B, ADRBK2, AGMAT, AK3L1, ALDH6A1, CAMK2B, CAV1, CCR1, CDKN1C, CDKN2C, CFTR, CHEK2, CISH, CLDN10, COX10, DHDH, DNMT3B, E2F1, EHHADH, EPHA8, ERBB2, EXT2, FGF21, FLAD1, GPD2, GSTM3, GTSE1, HCLS1, HMGCR, IFNA14, IFNK, IL17RA, IL20, IQGAP3, ISYNA1, ITGA9, ITGAL, KIR2DS4, MAN2A1, MTHFR, MYL9, NAGA, NME2, NOD1, NOTCH2, NSD1, NT5C1B, OR10AD1, OR10H5, OR12D3, OR14A16, OR1L3, OR2T34, OR52H1, OR52I2, OR6B3, PLIN, POLR2D, PPAP2C, PPP2R5D, RBKS, RFXANK, SH3BP2, SKP1, SNAP25, SPRY3, ST6GAL1, STX3, SUFU, TAS1R2, TAS2R1, TAS2R7, TCIRG1, TGFA, TUBA1A, TUBB4, TUBB6, UGT1A10, ATP6V1C1, PNLIIPR2, TNFRSF17, TNFRSF1B
Negative_11549	BTC, CR2, DBH, FH, HPD, ILK, MTR, NPL, ABLIM2, ACAA1, ACPT, ADORA2A, ALG1, ALPI, AMPD2, APBB1, APOA5, ASIP, ATP13A2, BHMT, BNIP1, BTRC, C4BP A, CACNA1A, CCL27, CD01, CHKB, CTSB, CXCL2, CYP2U1, DPM2, EFNA4, ENO1, FLOT1, GADD45A, GALNT8, GBA3, GSTM2, GYS1, HARS2, HEXA, HHEX, HSPB1, IL3RA, INPP4B, KARS, KLRC2, LAMB4, LARS, LRAT, MYH7, NAT2, NCOR1, NCOR3, OR11L1, OR1J4, OR4D2, OR4D5, OR5AU1, OR5M3, OR5T3, OR6Q1, OR7G3, PDE2A, PDGFRA, PGAP1, PIGC, PLXNA3, POLR2B, POLR2L, PPP3R2, PSENEN, PSME3, PTGS1, SAT2, SFRP2, SHC1, SHC4, SLC33A1, SMC1B, SOCS3, STX18, SULT2A1, SUV39H2, TAP2, TAS2R38, TP53, TUBB4, UCK1, UPB1, YKT6, ATP6VOA4, TNFRSF18

Negative_11550	AMH, C3, CGA, MPL, ACTA2, ADSL, AGMAT, ASNS, ATP6VOC, BMPR2, BST1, CBLB, CCND1, CD8A, CDH1, CDS2, CFL2, CHSY1, CLTCL1, COL4A4, CTBP2, CYP3A5, DPM1, ERBB4, EXT2, FGF9, GADD45A, HIBADH, IL2RB, INPP5A, ITGB2, ITGB3, ITPK1, KDSR, LTA4H, MAFA, MAP2K4, MAP3K2, NCR1, NR5A2, OR10Z1, OR11H4, OR2A12, OR2AE1, OR2AG1, OR7G1, OR8U1, PAK7, PARS2, PCNA, PIGN, PIK3C2A, PIK3C3, PIP5K1B, PLA2G2F, PRKY, PVRL3, PYGM, QPRT, RALGDS, SEMA3B, SEMA4A, SH2D2A, SPAM1, ST3GAL1, STAT1, STAT5B, TAS2R16, TGF3, TOMM40, TPH1, UGP2, UROS, WWP2, ATP6V1C1
Negative_11551	ATM, C3, CD6, FGG, HGD, IVD, PGD, PML, ALG10B, ALG5, ALOX15B, AMPD1, AOC3, ARHGEF1, ARPC5L, ATP4B, CBR1, CD34, CD58, CLDN10, COL11A1, CTBP2, CXCL6, CYP27A1, CYP2D6, DNMT3L, DRD2, ENTPD3, EPHA1, FARS2, FARSB, FLAD1, FLOT2, GCDH, GNG12, GRM1, GTSE1, HTR6, IDH3A, IL2RG, ITCH, LYP LA1, NAGK, ODC1, OR10S1, OR13C4, OR2A5, OR4M2, OR51B4, OR51D1, OR52B4, OR5B17, OR6N1, OXSM, PDE11A, PGK1, PLD1, PPP5C, PTPRF, PTPRR, ROBO3, SDC4, SDHA, SESN3, SIGLEC1, SMURF1, TAP2, TFPI, TKTL2, TLN1, TSC2, UCKL1
Negative_11552	ADK, AGK, F12, GDA, KMO, TPR, ACADS, ACHE, ADCY1, ADCY10, AGXT2, ALG1, ATP4B, CACNA1D, CACNA1S, CCL16, CD34, CD44, CHRNA7, CLDN15, CLDN18, COL5A3, CPOX, CSF3, CSH1, CYP1A1, CYSLTR1, DDX4, DGAT1, DGAT2, ENTPD8, EPHB6, EXOC7, FGF18, FOXA3, FZD8, GGCX, GIT1, GLG1, GLYCTK, GNAI1, GNAI2, GRHRP, HEXA, HMGCL, HRH1, HTR6, IL22, IRAK4, IRF3, ITGAM, LEFTY1, MARS2, MBL2, MGAT1, NAGLU, OR13F1, OR2M2, OR2T3, OR4K15, OR52E2, PHKA1, PIK3CG, PIK3R4, POLR2E, PRPH, RASA1, RPN1, SKP1, SOS2, SRD5A1, SRGAP2, STAM2, TCF7L2, TGFBR2, TRMT11, TYRP1, WARS2, WNT7B, XIAP, ZFYVE16, ALDH18A1, TNFRSF14
Negative_11553	DDC, F5, F7, MOS, MVK, ACOX3, ADCY10, B3GALT5, BIRC5, BLNK, BMP8B, BMPR2, CACNA1D, CACNA1E, CACNG5, CCL15, CCL21, CCNB3, CHRM5, CNDP1, CSNK1G2, CXCL3, CYP1A1, DDX4, DDX47, DDX55, DHCR7, DUSP2, E2F5, EPHA5, ER01L, ETNK1, GALNT6, GALNT7, GANAB, GJD2, GNG12, GSTM2, HSD11B2, HSD17B4, HSPA8, HYAL1, IFNGR2, IL3RA, KCNJ11, LIPG, LPAR1, LYPLA1, MAGI2, MYH14, NAGLU, NGEF, NR1D1, NRP1, OR2S2, OR4N4, OR51A2, OR51D1, OR6C4, OR7A5, OR8K1, PLCD1, PMM2, POLR2K, POLR3G, PTCH2, RASA2, RBKS, RELA, RPN1, RRAS, SGMS1, SIGLEC1, TAS2R10, TCIRG1, UPP2, VASP, XYLB, ATP6V1E2
Negative_11554	GH2, ID2, LHB, PVR, TK1, ACOT11, ADH4, ADRA1B, AGPAT1, AKT2, ARPC3, ASMT, ATP4A, B4GALT3, CCL28, CD226, CD55, CD59, COL4A6, COX10, CSF2RB, CSF3, CYP2A13, CYP2A6, DDX52, DMGDH, DTX1, EDNRB, EFN1, FGF9, GALNTL1, GAMT, GNRHR, HNF4G, IFNA4, IFNW1, IL1B, ITPKB, JAK2, KIR3DL2, MGA T5B, MLYCD, MMP1, MYH7B, NCOR1, NOS1, NRG3, OR10A6, OR10R2, OR11A1, OR13H1, OR1A1, OR1L1, OR2A14, OR2T8, OR4B1, OR4D2, P2RX3, PAICS, PAK1, PI4KA, PIGK, PIP4K2C, PLCD4, POLA2, POLR1E, PRKAR2B, PSAT1, RDH16, RFX5, SCIN, TCF7L2, TUBB2C, VTI1B, YKT6, ATP6V1B1, C1GALT1C1, HSD17B10, TNFRSF14
Negative_11555	C5, HGD, MAG, PVR, UBB, ADIPOR1, AGPAT2, AGXT2, ALG13, ALG9, ASNS, AVPR1A, BLVRA, CDC27, CDKN1C, CHPT1, CISH, CYCS, CYP17A1, CYP1A2, CYP2J2, DTX3, ENO3, F13B, FADS2, FGF8, FLT3LG, FM02, GALNT13, GGT7, GNG12, GOSR2, HAP1, IFNA8, IL15, IL29, IPPK, ITGA4, ITGA8, LARS2, LDHC, LTA4H, MEF2C, NAGLU, NEU4, NOS1, NOTCH2, NRAS, NRXN1, OR10G4, OR10H1, OR10R2, OR13C2, OR1E2, OR2AT4, OR2T8, OR4C13, OR56A3, OR5H6, OR9I1, OR9Q1, OXCT1, PAPSS1, PFKFB3, PIGS, PIGX, POLR1C, PTCH1, PTPRB, SARS2, SPTAN1, ST8SIA5, STAT6, SULT2B1, TCF7, TRADD, VKORC1, WARS, WIF1, WNT9A, WWP1, XYLT1, GABARAPL2, PLA2G12B, SERPING1



Negative_11556	<p>ABO, DCC, OSM, ACO1, ADRB2, AMHR2, AMY2A, AOC3, ATP4A, ATP6AP1, BLVRA, C1QA, CACNB1, CAV1, CCL24, CCNE2, CDC45L, CHKB, CHPT1, COX10, CREB5, CTPS, DAD1, DNMT3L, E2F5, ENPP7, EPHA5, EPHB2, EXT2, EXTL2, FGF8, FLAD1, FZD6, G6PD, GALNS, GALNT7, GANC, GCAT, GJA1, GPX5, GUCA1C, GUCY1B3, GUCY2F, HIP1, HSD3B7, INHBC, IRAK4, ITGB2, LDHD, LIFR, LIMK1, MTMR6, MYH10, MYL7, NAT1, NCF4, NCR1, NLGN1, NUDT8, ODC1, OR11G2, OR2A5, OR2L13, OR51B2, OR5M3, OR9Q1, PAPSS2, PAX4, PDHA1, PDXK, PGAP1, PLXNA2, PRKCG, PRKG2, PSPH, PTPN7, SC4MOL, SHC4, SMPD3, ST3GAL3, ST3GAL4, TBL1X, WNT10A, WNT7B, XIAP, EIF4EBP1</p>
Negative_11557	<p>C2, C8A, CGA, F3, ME2, PC, STS, ACY3, ALDH3A2, AOC3, ARSD, BMP8A, C5AR1, CDH4, CKMT2, CKS1B, CLTC, COL4A1, DGAT2L4, ENPP2, FOXO1, FZD10, GDF6, GP1BB, IKBKB, IL2RB, IMPA1, IRAK3, ITPA, KAT2B, KIR2DS4, LTA4H, MAML1, MAP3K13, MTFMT, MYH2, NPR1, ONECUT1, OR10H4, OR2F2, OR4X1, OR51Q1, OR52D1, OR5A1, OR6C75, OR6S1, ORC6L, PIM2, PLA2G5, PLEKHA8, POLR3K, PPA2, PPBP, PPP2R5C, PRKAR1B, RASGRF2, RXRA, SFRP5, SMARCA2, SPCS3, STAT1, TRADD, TSTA3, TYROBP, VEGFB, XIAP, XYLT2, PAFAH1B2, SERPINA5, SERPING1</p>
Negative_11558	<p>AGL, FYN, GAA, GGH, ID3, TNF, ACSL1, AKR1C1, ALPP, ATG7, ATP4A, BPNT1, CACNG8, CCR8, CD80, CDIPT, CIITA, CLDN3, CTLA4, CYP4F3, DAAM1, DAPK1, EXT2, FGF22, FLT4, GALNT12, GJA1, GNAI2, GNB3, HRH2, HSD3B1, IFNA6, IFNW1, IL20, IL2RG, ITGAD, LAMA4, MAN1A2, MMP7, MYH4, NAMPT, NCAM2, NCK1, OR10C1, OR10G7, OR10J1, OR1B1, OR1J2, OR1L1, OR2D3, OR4A16, OR4C12, OR4C15, OR4K17, OR51T1, OR7C1, PANK3, PAX8, PCK2, PDE4B, PFKP, PGAP1, PLK1, PLXNB1, POLR1C, PPP2R2B, PRKAR2A, PRKCD, RASGRP1, RDH8, THBS1, THBS2, TLR5, TNFRSF9, TSNARE1, UGT2A1, WBSR17, ATP6V1E2, GABARAPL2, HLA-DRB5</p>
Negative_11559	<p>F8, GH1, ID3, NNT, RB1, TFG, TKT, TNF, A4GALT, ACPT, ACTB, ADH7, AGRN, AHCY, ALAS1, ARHGEF6, ARRB2, ATP12A, BCAT1, BDNF, C1QB, CADM3, CBR3, CHKA, CHRM2, CHSY1, CNTNAP1, COL5A2, COX15, CRY2, CSF2RB, CTLA4, DUSP6, DVL1, E2F5, ECSIT, FUT9, G6PD, GIT1, GLO1, GMPPA, GRAP2, GZMB, HDAC1, HTRA2, ICAM3, LEFTY2, LIPT1, MADCAM1, MAPK3, MCM4, MCM5, MGAT2, MMP9, MYH9, MYLK3, NAT5, NFAT5, NFATC4, NOD1, NOX1, OR10G9, OR13C4, OR1L4, OR2C1, OR2T12, OR2V2, OR3A2, OR6F1, OR6K3, P2RX3, PHKA1, PIP5K1C, PLXNA3, POLA1, POLE2, RASA1, ROBO2, SEPHS1, SMURF2, TAS2R10, TNFSF10, UGCGL2, UROD</p>
Negative_11560	<p>CR1, F10, ID4, LAT, RB1, ACPP, ADH4, ADRA1B, AGPAT6, AGRN, ARG2, CCL19, CLCF1, CRY2, CSNK1D, CXCL16, DAPK1, DIAPH3, DTX4, DUSP8, EIF4E, EPHB1, FCGR3A, FOXL1, GLDC, GLI3, GPAA1, ITGAD, KLRC1, L1CAM, LGMN, MAP3K1, MAP3K13, MKNK1, MTAP, NCOR1, NFKB2, NMNAT3, NTN1, OR10G2, OR2A12, OR4D9, OR4E2, OR51V1, PCK2, PDE1B, PDE4C, PGK2, PGM3, PIP5K3, PLA2G3, POLR3H, PPM1A, PRKAR2A, PRKG2, PTGIS, RASGRP3, RHOA, SDHC, SEMA3D, SEMA3G, SLC2A4, SOCS7, ST6GAL1, STX4, SUCLG2, TAS2R42, TCF7L2, TRAF2, TUBB2C, TYRP1, UROC1, YWHAB, ATP6VOD1, TNFRSF10A, TNFRSF10C, TNFRSF11B, TNFRSF13B</p>
Negative_11561	<p>AK5, AUH, CD2, GSR, IL2, LTB, VTN, ABCC8, ACSS2, ADORA2B, ALAD, ALPI, APLP1, AREG, ATP12A, ATP5J2, B4GALT1, BDKRB2, C1GALT1, CASP7, CCNG2, CD59, CDH2, CDK7, CFLAR, CHAD, COL1A2, COL4A6, COMP, CSNK1G2, CYP11B2, CYP2J2, CYP4F3, ENO3, FABP3, FCGR3B, FGF14, GPX7, HCST, IFNAR1, INHBB, IRS2, LAMB4, LDHAL6A, LDHAL6B, LRP5, MARS, NFATC1, NOS3, NUDT2, OLR1, OR10S1, OR2AG2, OR4K17, OR51E1, OR52N5, OR5A2, OR5D16, OR6C6, PARVG, PDE4D, PDGFD, PFKFB4, PFN3, PLAUR, PLEKHA8, PPCS, PPP5C, PRKG1, PTDSS2, PTK2B, RBPJL, SETD1B, SHC3, SV2B, TACR3, TAS2R1, TNFSF18, VAMP2, WNT7A, ATP6V1B2, TNFRSF10C</p>

Negative_11562	AMH, IL5, NLK, PGD, ADH4, ADORA2A, ARAF, ATIC, ATP5H, ATP6AP1, BRAF, CACNA1A, CBR3, CD274, CLCF1, CMBL, CMPK2, CTNNB1, ELK4, FARP2, FMO4, FMO5, G6PD, GCLC, GRM5, GSTZ1, GUCY1A3, HLA-F, HSD17B4, IL12RB1, IL25, INMT, INSR, MAP3K13, MYD88, NADSYN1, NSD1, NUDT2, PLA1A, PPA2, PTPN7, SELPLG, SETD8, SMAD1, SMAD6, SRGAP2, STAT4, TUBB4, UGT2A1, VAV1, WNT5B, ATP6V0A2, ATP6V1G1, TNFRSF13B
Negative_11563	CAD, DBT, DCT, EBP, EGF, HGF, MIF, MOS, AACS, ACTC1, AKT2, ALS2, ANAPC1, ATP5C1, BRAF, CANT1, CBR3, CCL25, CDC16, CEBPA, CHPT1, CLDN20, CSAD, DGUOK, DMGDH, DNMT1, DVL1, EARS2, EFNA4, EIF4B, ENPP7, EPB41L2, EPHA3, EPHX1, ERBB3, FCGR3A, FPGS, GATM, GGPS1, GPLD1, GRM1, GSTA3, HADHB, HARS, IL20RB, INPP4A, ITGA4, ITGA5, KRAS, MAP3K6, MGAT5B, MITF, NSD1, OR13H1, OR4C13, OR4K1, OR52I1, OR5AS1, OR5K1, OR6K6, P2RX4, P4HA1, PMM1, POLR1B, POLR2H, PPP1R1A, PRKAR2B, PTGS1, RALGDS, RASGRP2, RDH11, RPS6KA1, RXRG, SCP2, SEMA3C, SETDB2, SGPP2, STAM2, SV2C, TAP2, TYRP1, WNT4, XCR1, C1GALT1C1, CACNA2D3
Negative_11564	BCR, DCT, EGF, GK2, HDC, IL7, LYN, MYC, NPL, SI, ACAA1, ACVR2B, ADCY7, AGXT2, ALDH2, ALG10, APLP1, ARAF, ARHGAP5, ARSB, ATP5C1, B3GALT1, B4GALT6, BMPR1B, C3orf10, CACNG2, CCL19, CCR9, CD247, CDC14B, CDC45L, CESE7, CHRM2, CLDN17, CX3CR1, DHDH, DHODH, DHRS4L2, DLST, DUSP14, EI24, ENTPD4, EPB41L2, GALNT13, GGPS1, GLDC, GLUD1, GMPS, GOSR2, GP1BA, GYS1, HSD11B2, HTR5A, IFNGR2, IKBKB, IL13, INPP5A, IRS2, KDSR, KIR2DL3, LIFR, MAP3K11, MDM2, MTAP, MTHFD1L, MTMR2, MYH4, NEU2, NKD1, NKX3-1, OR10A6, OR2T2, OR51B4, OR52E4, OR6C2, OR7G1, ORC2L, PDE6H, PDE8A, PEMT, PFKM, PGM3, PLK1, POLD1, PYCR1, RAC1, ROBO3, SEMA4B, SEMA4D, SEMAD5, SRD5A2, SUCLA2, TGFB2, TYMP, TYROBP, VARS, YWHAQ, MAP3K7IP2
Negative_11565	DLD, GNE, GPT, NNT, ADRA1B, ANPEP, ASIP, ATP50, AVPR1B, B3GALT4, B4GALT1, B4GALT2, B4GALT6, BAAT, CAMK2D, CAMKK1, CCL1, CDH4, CFLAR, CHRM5, CLDN10, CNGA3, COQ7, CTBP2, CTPS, CYP27A1, EFNA1, EPHB4, FOXO1, FUT4, FUT8, HRH2, IL28RA, IRF9, LDHAL6A, LDHB, MAP2K7, MAPK3, MMP1, MYH15, MYH7B, OR3A2, OR52R1, PAFAH2, PDE3A, PGK1, PGM3, PIP4K2B, POLE3, PRKACG, PSEN1, PTAFR, RAP1A, RASSF5, RFWD2, ROCK2, RPS6, SOCS1, ST6GAL1, TKTL1, TRDMT1, MAPK8IP2
Negative_11566	AMT, BCR, CP, IVD, LIF, MSN, NOG, TNN, ADRA1B, ALDH4A1, ALDH6A1, ALOX15, AMPD1, ARPC5L, BDNF, BHMT, CD47, CFTR, CNTNAP2, COQ5, CYP1A1, FADD, FGF20, GALNT12, GDF7, GFPT1, GLYCK, GNAI1, GNG13, GNRHR, GRIN2A, IDI2, IL17RB, IL28A, IL3RA, JUND, KRAS, LTC4S, MAML3, MCM6, MPZL1, MYLK, MYLK3, NKX6-1, NMNAT2, NUDT5, OR2L13, OR4F4, OR52M1, PDE8A, PDGFB, PIAS1, PRKAR2A, PSME1, PTCH2, PTGER1, RUNX1, SEMA4F, SIGLEC1, SMPD3, SPAM1, TMLHE, TSC2, UCK1, UGT2B4, WBSR22, XCL1
Negative_11567	HK3, PGF, RDX, TKT, ACSS1, ADCY7, ALDH7A1, ALG5, ALG6, ARAF, ARD1A, CACNB2, CBR3, CCL16, CCR2, CDC25A, CDKN1C, CERK, CLDN14, CLDN15, CXCL16, CXCL2, DDX54, DGKZ, DGUOK, E2F2, EIF4E, EPHA5, FGF11, GART, GBA3, GCNT1, GPX7, GTSE1, GZMA, HDAC2, HMGCR, HNF4G, ICOS, IL10RB, IL12RB1, LDHAL6A, LILRB3, LIPA, MAP4K4, MCM7, MPDZ, MYH1, MYH4, NAGA, NEUROD1, NFX1, NKD1, NKX3-1, NRG3, OR13C5, OR1N1, OR2F2, OR4C16, OR6C76, OR8H1, PCYT1A, PDE1A, PDE3A, PIGN, PIK3R1, PLA2G10, POLR2I, PPAP2A, PPP3R1, PYGL, RBL1, RBPJ, RDH11, RDH12, RRM2B, SH3BP2, SMURF2, SPCS1, ST3GAL6, STX3, TAS1R1, TAS1R3, TAS2R41, TAS2R7, TFDP1, TKTL1, TOMM40, TSC2, ULK3, UNC5D, UPP2, WASF3, XYLB, XYLT1, ATP6VOD2, ATP6V1C2, MAPKAPK3, TNFRSF1A

Negative_11568	FER, GP6, SRM, ACAD9, ACADVL, ACSL1, ACTG2, ACVR2A, ANAPC10, BACE2, BCL2, BMP4, C1GALT1, CAMK4, CD70, CFL2, DHFR, DUSP5, EFNA5, FGFR3, FRAPI, GLYCTK, HIBADH, IL11RA, IL15RA, IL17B, IL2RG, IRAK3, KCNB1, KCNJ11, LEPR, LTBP1, MRAS, NADSYN1, NMNAT2, NTNG1, OR10A6, OR2A42, OR2L8, OR4L1, OR51G1, OR6S1, PAICS, PAK6, PDE6G, PIK3CA, PIK3R1, PLCD1, PLXNA3, PLXNC1, PNPO, POLR2J, PTGS2, QARS, RELA, RPS6KA2, SNAP23, SSH3, STK3, TIRAP, TNFSF9, TP53I3, TP73, TPM3, UBE2L3, YKT6, HLA-DRB5, TNFRSF1A
Negative_11569	AK1, PRL, ACVR2B, AGPAT1, ARHGEF6, ARNT2, CACNG1, CCR3, CD79B, CDKN2C, CLOCK, CMAS, COL5A1, CXCR4, DDX23, DPYS, EIF4E2, EXTL3, FIGF, FTMT, GLUL, GNA11, GRLF1, GSTM4, IL13RA1, INPPL1, IRAK2, LAMA3, LTBP1, NAT6, OR1N2, OR2G2, OR52A5, OR7D2, P2RX7, PCK2, PDE8A, PDE8B, PECAM1, PI4KB, POLD3, PPCS, PRKAR2A, PRKCI, RPS6, SCIN, SLC2A2, SMC1B, SNAI2, SOD1, TAS1R3, TNFRSF4, TRMT11, WASF3, HLA-DPB1, MAPK8IP3, SERPINC1
Negative_11570	AK7, CGN, DCK, DLD, FES, GCK, IL9, LPL, ME3, MSN, AGPAT6, AMPD2, ASPA, CACNA1B, CACNA1E, CACNB3, CANT1, CASP3, CAV3, CCL7, CES7, CLDN17, COL4A4, CSF2, CXCL5, DGKD, DUSP16, DUSP9, DVL3, EDN1, EDNRB, EPHB1, F13A1, FGF21, FSHB, FZD9, GALNT2, GLO1, GNRH2, GRIA3, GUCY1A3, HAGHL, HSD17B2, HTR2A, IARS, IL11RA, IL18R1, IL21R, IRF9, ITGB8, ITPA, LRRC4C, MIOX, MTAP, MYH1, MYH11, NKX3-1, NME6, NRCAM, OR1S1, OR2C3, OR52A5, OR52D1, OR52W1, OR5I1, OR5R1, ORC4L, ORC5L, PCCA, PCCB, PFN3, PLXNB2, PPP3CB, PRKCH, RHOA, RPN1, RPS6KA5, SDC3, SOCS4, SPTAN1, SSH3, STAT5B, THBD, TNFSF10, WBSR17, YARS2, YWHAQ, ZMAT3, ATP6V1C2
Negative_11571	AUH, FUK, HK3, TK2, TPR, VTN, ADCY9, AKR1A1, AKT2, ALG9, ASPA, BCAT1, CACNA1C, CASP9, CD74, CHR1, CTNNA1, CYP2S1, CYP4A11, CYP4A22, DIAPH1, DTYMK, EFNA3, EI24, ENTPD8, EPB41L1, ER01L, F2RL3, FGF22, FPGT, GMPR, GNAI3, GPD1L, GSTM2, GUCY1A2, HSD3B2, HTR4, IARS2, ICOSLG, KARS, MGA1, MTHFD2, NT5C, OR10A7, OR10AD1, OR13C9, OR1G1, OR2AT4, OR5T1, OR6B2, PCYT1A, PDX1, PECAM1, PIGC, PLCD4, PMM1, RHOA, RHOQ, SLC25A6, SSH2, SSH3, SUCLG2, SULT1A4, SULT1E1, TAS2R50, TBXAS1
Negative_11572	AGL, F12, F3, F8, HYI, OSM, TK2, ACAA1, ACOT11, ACSS2, ACSS3, ACVR1C, ADCY5, ALDH9A1, ATP6V1F, BPGM, BST1, C3AR1, CAMK2B, CASP7, CCNA1, CD36, CD59, CD82, CDC45L, CDH5, COQ5, CPT2, CTBP1, CXCL5, DDX52, DGKI, DKK2, EPHB6, EXTL3, FGF13, GANAB, GPLD1, GRIN2C, GRIN2D, GSTM5, HARS, HARS2, HLA-DOA, HMGCL, HMGCS2, HNF4A, HNF4G, IFNGR1, IL8RA, ITCH, ITGAV, ITGB8, MCCC2, MRAS, NCOA4, NFAT5, NRCAM, NUDT2, OR2A12, OR2G2, OR2M2, OR2T10, OR4L1, OR51A7, OR5K1, OR5M9, OR6C1, OR8B4, OR8K1, OR9Q2, ORC1L, PFKFB4, PFKL, PHKB, PIGW, PLOD2, PLXNA3, PMM2, PPP2R1A, PPP3CA, PSPH, RETSAT, SLIT1, SMURF1, SPTLC1, SRGAP3, TALDO1, TAS2R14, TBK1, TGFBR2, THBS3, TNFSF18, TUBB, UGT2A3, HSP90AA1, MAPKAPK3
Negative_11573	CAT, FAH, IL4, VTN, ALAS1, ALG2, ALPP, ARNT, ATP5L, BMP8B, CACNB4, CCR6, CD226, CD86, CDC6, CDIPT, CDK2, CHEK2, CSNK2A1, CXCL3, DHCR24, EGF, EIF4B, ENPP3, EPHX2, EXTL1, FOXA3, FZD3, GALNT13, HLA-C, HSD11B1, HTR4, ICOS, IDI2, IFNA10, IL24, IL8RA, INHBA, INSR, KIR3DL1, LARS2, MKNK2, NAT2, NFYA, OR10G4, OR10H1, OR13C5, OR51G1, OR52E2, OR8D1, PDE1C, PISD, PLXNA3, PNMT, PPP3R1, PSAT1, PSEN1, PSEN2, PTGES, PTGS2, RPS6KA1, RPS6KA3, RUNX1T1, RXRA, SDHA, SETDB1, SMAD2, ST3GAL4, STAT3, SUCLG2, TAS2R1, TAS2R7, TNFSF11, UBE2L3, UNC5A, UXS1, WNT10B, WNT7B, YWHAZ, TNFRSF10D

Negative_11574	APP, CRH, CRK, SHH, ACSL4, ALDH1A2, ALG12, ALG9, APOA2, ATP2A2, AVPR1 B, BLVRB, CDC25B, CXCR4, DDX51, DVL2, EXTL2, FARSA, FSHB, GAB1, GIT1, GLI3, GNAQ, GSK3B, HIF1A, HSD3B1, IL3RA, LRRC4C, MDH2, MGAT4A, MINPP 1, MPST, NOTCH2, NQO1, NR1H3, OR13C9, OR14A16, OR2S2, OR4D6, OR51G1, OR56A4, OR5T1, OR9K2, P2RX5, PAK4, PAK6, PIGO, PMAIP1, PORCN, PPAP2A, PRKAG1, PSME2, PTPRF, RARS2, RASSF5, RHOD, SIPA1, SPHK2, ST3GAL3, T LN1, TRPC1, UGCG, VAMP3, VAMP4, XCL2, ATP6V1G2, C1GALT1C1, CACNA2D3
Negative_11575	CD2, CDA, TKT, ACPT, ACVR2B, ADCY7, ALDH1L1, ATP2A3, ATP6V1F, BACE1, BACE2, CACNG3, CCL26, CCNB3, CLDN4, CX3CL1, CYP11B1, DUSP3, E2F5, FD PS, FGFR3, FLT4, FZD5, GNAQ, HSD17B3, IFIH1, IL5RA, KIR3DL1, LLGL2, M AP3K5, NARS2, NTF3, OR10J1, OR51A7, OR5T3, PDE4C, PER1, PHGDH, PKM2, PORCN, PPP1R3A, PSEN1, RARS, STX10, TAS2R10, TAS2R42, TGFB3, TJP1, V AMP3, WASF3, ST6GALNAC3
Negative_11576	BCR, C6, IL7, INS, LCK, ME1, MVD, MYC, PC, ADH1A, ALDH5A1, ALDH7A1, APH 1A, ARHGEF2, B3GALT4, BCL2, BCL2L1, C4BPB, C9orf95, CACNA1H, CALML6, CCKBR, CCL19, CCL20, CCNB2, CDC14A, CDH15, CLDN4, CREB3L3, CYBB, ES AM, ETNK1, EXOC7, FBP2, GCNT4, GMPR, GNAO1, GNAZ, IL18, ITGB6, KAT2A, KLKB1, LMO7, LRP6, MAD2L1, MASP2, MGAM, MYH10, NCAM1, NCOR1, NEUROG3, NOX3, OR13C3, OR2AG2, OR2F2, OR4F4, OR6C70, OR6C75, OR6N1, PARVB, P GAP1, PHGDH, PHPT1, PLA2G6, PLK1, PON1, PPAP2C, PSAT1, PTCH1, RASSF1, RBPJL, RHOQ, RPE65, SNW1, SSH2, STK4, WASF3, ATP6V1C2, ATP6V1G3, PNLIPRP1, ST6GALNAC5, ST6GALNAC6, TNFRSF12A
Negative_11577	GH2, GNS, IL2, IL6, MPI, SCD, ACSL6, ACVR1C, ACVR2B, ADIPOR1, AKR1C4, ALDH6A1, AQP7, ATP4B, BAIAP2, C5AR1, CASP10, CBR1, CDC27, CHEK2, CHR NA7, CKMT2, CTLA4, CYP1A2, CYP26B1, CYP4F3, DDX47, DIAPH1, DMGDH, EGN1, ENTPD4, ENTPD8, ETNK2, FTH1, FUT9, GALNTL1, GJA1, GSTT1, HA01, H BEGF, HIF1A, HSD11B1, HTR4, ICAM1, IFNK, IL1R2, MDM4, MGAT2, MGAT4B, MGAT5, MMP2, NCK2, NEFM, OGDH, OR10T2, OR14I1, OR2G3, OR2T1, OR5AU1, PHKB, PIP5K1A, PKM2, PLA2G4A, PLEKHA8, PLTP, PPARA, PRIM2, PTPRC, SLC25A5, SMAD7, SPRED1, STAM, STX1B, SUFU, TIAM2, TUBA1B, TYRP1, UGCG 2, UGT2A3, ULK3, VAMP3, WNT5A, WNT6, YWHAE, AASDHPPT, B3GALNT1, TNFR SF11B
Negative_11578	IDS, LAT, ME2, RPE, ACMSD, ACVR2B, ARSB, B3GALT4, CAV3, CDK5, CHIT1, C MAS, COL5A2, COL5A3, COX15, CRHR1, CRLS1, CYCS, CYP2A7, CYP8B1, DAD1, DDX52, DHDDS, DUSP10, FCER1G, FZD4, GALNT11, GCNT1, GDE1, GFPT1, GNA15, HES1, IFNG, IL15, IL22RA2, IRF9, ISYNA1, KIR3DL2, KLRD1, LDHAL6 B, LIPF, LMO7, MAD2L1, MAN1C1, MAP3K3, MCEE, MGAT4A, MITF, OR1C1, OR2 A4, OR4A5, OR51I2, P4HA2, PAPSS1, PIGL, PIGU, PIK3R4, POLE, POLR2F, P OLR2L, PPT1, PTGER1, PTPMT1, PTPRB, RBX1, SLC9A1, SRGAP1, SSH2, STAT 6, SULT2A1, SUV39H1, TYMP, UGT2A1, USE1, VAV2, CSGALNACT2, PLA2G12B, SLC25A31
Negative_11579	AGL, FES, FGG, GLS, HAL, HDC, HK2, ITK, JUP, ME3, ACAA2, ACACA, ACLY, AC PT, ALDOC, ARHGEF2, ASNS, ATP5F1, BCAT2, BMP5, C1QB, CCL7, CD14, CDC2 6, CDC7, CDKN1C, CHDH, CHEK1, CHIA, CHPF, CHSY3, CREBBP, CYP2A7, DNMT 3B, E2F1, EDA2R, EFNA2, EGLN3, FECH, FZD9, GMDS, GSTM1, GSTM2, GUSB, H NF1A, HTR2C, IFT57, JAK1, MYH6, NARS2, NR1H3, NRXN2, NT5C, OGDHL, OLA H, OR13C8, OR2A42, OR2T12, OR3A3, OR4D6, OR8K5, PAX4, PGM1, PGM3, PIK 3C2G, PLA1A, PLA2G10, POLE3, POLE4, POLR3D, PSAT1, RASA2, RCHY1, SET MAR, SMAD4, SMC1A, SMPD2, SPCS3, SQLE, STAT3, SULT1A4, TAS2R16, TGFB 2, TRPM5, TUBA3C, TUBB1, UGT2A1, UPP2, WASL, WNT10B, AASDHPPT, ATP6V 0E1, ATP6V1C1, ATP6V1E1, ATP6V1G3, HSD17B12, MAPKAPK3, PPARGC1A, T NFRSF10C

Negative_11580	F8, GP9, ACACA, ACSM5, ARD1A, B4GALT1, BCMO1, BMP2, BRAF, CADM1, CDC2 5A, CMPK1, CNTNAP1, COL5A1, CPS1, CTBP1, CTF1, ECHS1, F2RL2, FMO5, FR AT2, G6PD, GATM, GSTA1, GSTM2, GSTO2, HADH, HADHA, HBEGF, IBSP, IRF7, ITGAM, ITGB5, KCNJ11, LDHAL6B, LRP6, MAN1B1, MASP2, MCCC2, MTHFD1, N ADK, NANP, NLGN3, NRP1, OR1J2, OR2A42, OR2T33, OR5H6, P2RX2, PARD6A, PGS1, PMM1, PPARA, PPBP, RPS6KA4, SESN3, SIAH1, STK4, TICAM2, TSC1, T YRP1, ULBP2, YARS2, AASDHPPT, MAPKAPK3
Negative_11581	ADO, C9, GBA, ADCY1, ADSL, ALDOB, ARHGEF4, ATP5G2, ATP5J, C1QC, CACNG 5, CAMKK1, CCL13, CCL28, CD40LG, CD80, CDH3, CER1, COMT, CTNNA2, CTSL 1, CYP2A6, CYP2D6, CYP3A5, DDHD1, DDIT4, EXTL1, FDPS, FTMT, GNAI2, IG FBP3, IRAK3, KNG1, LAMB2, LDHA, LGMN, LIPA, MALT1, MAT2B, MLYCD, MYLK 2, NAT6, NEU4, NR5A2, NTSR1, NUDT5, OR10A3, OR10C1, OR10J5, OR1D2, OR 2A14, OR2Z1, OR4C16, OR51E1, OR52E6, OR52L1, OR8B12, PIGU, PLEKHA8, PLXNB2, POLR1C, POLR3G, PPP1R3B, PRKAA2, PTTG1, QARS, RAP1B, RASGRP 3, RBPJ, RERE, RPE65, SEMA3C, SETD2, SGPP1, SMAD9, STAT5B, SV2B, TM7S F2, TRAF3, TSC1, UBE2L6, UGCG, VARS, WNT1, WNT3, WNT6, XCL2, ZMAT3, AT P6VOE1, MAPK8IP1
Negative_11582	CEL, CFD, ABI2, ALDH7A1, ASIP, ATP5B, ATP50, C1QA, C4BPB, CCL23, CCNG 2, CHRM3, CLTC, CRKL, CTTN, CXXC4, DGKH, ENTPD7, FGF10, FGF21, GDF5, G GT7, IQGAP3, ISYNA1, ITGA2, LTBP1, MAP3K12, MGAT3, MYH11, NEU2, NFAT C3, NT5C1A, OR11H1, OR11L1, OR51B4, OR52A1, OR5B12, OR6K6, PORCN, PR KCE, PRODH, PTPMT1, PTTG1, SOCS1, SPRED1, SRGAP3, TAP1, TCF7L1, THTP A, UCK2, UGCG, ZAP70, ATP6V1G2, TNFRSF10A, TNFRSF1A
Negative_11583	C7, F7, FES, LTB, TNC, TNF, ACAT1, ALG9, ARHGAP5, ATP5E, BMP7, CACNA1D , CAV1, CBR1, CD14, CD58, CHR1, CTF1, CTNNA2, CYP11B1, DLL3, DOT1L, EH HADH, ETS1, GNAI3, GOT2, GPAA1, GPAM, GUCY2D, H6PD, HDAC2, HRAS, IFNK , IL17RB, IL19, IL29, MAD2L1, MAP3K7, NNMT, NT5C1B, NUDT8, OR10K2, OR 11G2, OR2M2, OR2M5, OR2T1, OR4D5, OR4K5, OR5T2, OR8B4, OR8D1, PDXP, P HKG2, PIGH, PIGM, PIGP, PPP3CC, RAC1, RAPGEF1, RHOQ, SDHC, SEMA3B, SH C3, SLC12A2, SLC25A4, TUBAL3, TUBB2A, TUBB2C, UBE2K, UGDH, WNT2B, WW P1, MAP3K7IP1, SERPINA5, TNFRSF12A
Negative_11584	C8B, PGD, PXN, ALG3, BMP6, CHEK2, CHR1, CREB3L2, CTPS, CYP2S1, CYP4A1 1, DRD5, EHHADH, GALNT3, GALNT8, GLUD1, GMPPA, GNB1, GPAA1, GPT2, GUC Y1B3, HPRT1, ICAM1, IL1A, JAG2, LIAS, MGLL, MGST3, MLYCD, MYH2, NFKB1 , NFKB1B, NLGN2, NRXN2, OR10C1, OR2W1, OR4N2, OR5A2, OR5AU1, P2RX4, P ARD6B, PGM3, PLK1, PROS1, PTPRJ, RAPGEF3, RARS2, SEPHS1, TAP1, TGDS, TNFRSF4, TP53, TUBA8, UPB1, VAV1, VAV2, WNT5A, YWHAH, PPARGC1A
Negative_11585	ABO, IL2, MPI, PML, SHH, XDH, ACP5, ADIPOR2, AGRN, AKR1B10, ALOX15, AM PD1, ASCC3, ATF4, BCL10, CDH5, CLDN14, CSF3R, CTF1, CTSB, CTTN, DDX51 , DGKB, DGKG, ECSIT, F13B, FABP1, GAPDH, GFAP, GNAI1, GPD1L, GSTM4, HL A- F, HMOX2, HTR6, ICOSLG, IFNA4, ITGA1, ITGB1, MCM5, OR1E1, OR4C16, OR4 P4, OR5D14, OR6S1, OR8A1, OXCT1, PCK2, PDGFC, PIP5K3, PNPLA3, POLE4, PRSS1, PTCH1, PTGFR, PTPRM, RAP1A, STK4, TUBA4A, UPP2, VEGFA, WWP1, S LC25A31, TNFRSF11A
Negative_11586	CAD, CTH, DAO, DDC, TNF, ACAA2, ALDOA, ALS2, ATP5D, ATP5I, ATP6VOC, BI RC5, BMP4, CCNE1, CD34, CES1, CLDN3, COL4A4, CSNK1G1, CSNK2B, CTNNA1 , CYFIP1, CYP2C18, CYP4F3, DDX41, ERBB4, FARS2, GARS, GGT1, HAGHL, HE XB, HLA- DRA, HRAS, ICAM1, IDH3A, IFNA7, IL22RA1, IQGAP1, MGAT5, NADK, NEUROD 1, OR10Z1, OR51F1, OR52H1, OR7A5, OXTR, PCCA, PIAS2, PIAS3, PIGP, PIK 3R2, PIP5K1C, PLD2, POLR2J, POLR3B, PPP2R5E, RAPGEF2, RASGRP2, RUNX 1T1, SHMT1, SNAI2, SPRY1, SRGAP1, SSSX2IP, STAT5B, STX1A, TLN1, TYMP, UCP1, UNC5C, VANGL1, WASF3, WNT7A, XCR1, PNLIPRP2, ST6GALNAC1

Negative_11587	DAO, FST, GBA, GH1, LYN, PGD, VTN, ACTA1, ALDH3A2, ALDH6A1, AQP7, ATP1 2A, CAMK2A, CD3E, CHIT1, CREB3L1, CYP26A1, CYP2C19, CYP3A4, DDOST, DRD2, DUSP7, EXT1, FMO3, GALNT7, HSD3B7, IFNA17, IL23A, IL24, KAT2A, KLRD1, LEFTY1, MMP1, MTFMT, NCF2, NRXN1, OR2A4, OR2T3, OR3A1, OR8D4, OR9I1, PIAS1, PIP4K2C, PPP1R3A, PRKAR1A, PVRL2, RUNX1T1, SDHD, SLC2A4, SMURF2, ST3GAL5, STAT6, TAS2R5, TCF7L2, TGFB1, TNFSF10, ULBP2, UROD, ATP6V1C1, HLA-DRB5, TNFRSF13B
Negative_11588	LCK, ACO1, ACOX2, ADH1B, AMDHD2, ARPC1B, CACNA1I, CD80, CHDH, CLDN3, CNTN1, CSNK2B, CTLA4, CXCL1, DKK1, DRD5, ENO2, FGF1, G6PC2, GARS, GGT7, GMDS, GPX7, H6PD, HADHA, IMPA1, INHBA, JAM3, LAMA3, LAMA4, LILRB3, LRAT, MASP1, MAT1A, MYL7, NAT2, NKX3-1, NPR2, OR13F1, OR1S1, OR2C3, OR2T1, OR2Z1, OR4D5, OR4F15, OR4N4, OR4P4, OR52R1, OR5AR1, OR9Q1, PAFAH2, PDE7A, PDIA4, PER1, PIGT, PIGX, PIPOX, PNPO, POLR3B, POLR3K, PRKAA2, PRODH, PTPRM, RASGRP4, RPN1, RPRM, RUVBL1, SCP2, SLC33A1, STX1B, VEGFA, WIF1, WNT9A, XYLT1, ATP6V1B2, GABARAPL1, SLC25A31, SUV420H1
Negative_11589	C8A, C8B, CFD, ACADM, ACTA2, AMY2B, ANAPC1, ARHGAP5, ATP5A1, ATP5F1, B3GNT5, B4GALT1, BET1, BUB1, CALML6, CAMK4, CASK, CASP8, CCDC6, CCND3, CDK7, CLDN16, CLDN20, CNTF, COQ5, CXCL1, CYFIP1, DDOST, DRD1, EVI1, FGF10, FGF8, FLT3, G6PD, GALNTL2, GANC, GLUL, GNPDA1, HTR2C, IFNA14, IL12RB1, IL17RB, IRAK2, IRF7, ITGA11, KDSR, LEPR, LRP5, MAPK13, MTHFS, NCK2, NEFH, NFKBIA, NME6, OR13C4, OR2B6, OR51V1, OR5C1, OR5R1, OR8G1, OR8J3, OR8U1, P2RX5, PDGFC, PITX2, POLR2C, POLR2D, PPARA, PPT1, PRKAB2, PRKCH, PSEN1, SLC25A6, SLIT1, SMARCA2, SRD5A2, SSS2IP, ST6GAL1, STX7, SULT1A1, SYNJ2, TMLHE, TNFSF9, WARS, WNT11, ATP6V0D2
Negative_11590	AK7, CSK, EPO, MIF, PC, VCL, ABL1, ADCY10, ADRA1A, AK3L1, ALDH3A1, ALDH9A1, APOC3, B4GALT1, CAV2, CBLC, CHRM3, CMBL, CNTN2, COL4A4, CYP26C1, CYP3A7, DDX23, DGKG, DHODH, EPHA3, FADS2, FOXA3, FZD7, GALM, GAPDH, GLS2, GOT2, GUCA1B, HLA-DOA, HSD3B7, HTR6, IDI2, IFNA13, IFNA16, IFNA6, LAMB4, MAPK8, MCCC2, MGAT1, MGAT2, NCR3, NLGN2, NOTCH3, OR10G3, OR12D3, OR1L1, OR2F2, OR2T1, OR51F2, OR52H1, OR5AR1, OR5AU1, OR8D2, PDE10A, PDGFA, PDGFRA, PGAM4, PGK2, PGM1, PIK3R1, PIK3R4, PLXNA1, PRKCA, PRKCB, PTPMT1, PTPRC, RAPGEF2, SFRP5, SKP2, SPRY2, STMN1, TAS2R48, TMLHE, TPI1, TPMT, TYK2, WNT5A, YWHAE, MAPKAPK5
Negative_11591	CRK, FER, GDA, GH1, KIT, LCT, MIF, PXN, ACACA, ACSL1, ACTG2, ADCY10, ADH1A, ADH5, AGTR1, AKR1B1, ALDH3B2, CALML6, CASP7, CBR3, CCL13, CDC25A, CDH2, CHSY1, CLDN10, CNTF, DLAT, DTX1, DUSP9, EPHX1, EREG, GALNT2, GNPDA2, GPAA1, GRM5, IFNGR2, IRAK3, JUND, KCNQ1, LLGL1, LTBR, MAN1B1, MAP3K14, MITF, MMP14, MYH3, MYH8, NCKAP1L, NFE2L2, NME6, NT5M, OR13C2, OR14I1, OR1L3, OR2M2, OR51L1, OR52B4, OR52N4, OR5B21, OR6K3, OR9A2, ORC4L, OSMR, P2RX6, PDE4A, PER2, PLA2G2A, PLCB4, PLXNC1, POLE3, PVRL4, RDH11, SRD5A1, SSS2IP, SUCLA2, TAS2R10, UGT1A10, VAMP3, YOD1, YWHAG
Negative_11592	CD4, GH1, ACMSD, ACTC1, AKR1B10, AOC3, B3GAT3, BHMT, BIRC5, BUB3, CACNG4, CCL19, CD19, CDC20, CHKA, COQ5, CSNK2A2, CXXC4, EPHA3, FCGR2B, FGF11, FGF7, GALNT5, GCDH, GJA1, HIBADH, IL21R, INPP5E, ITGA2B, ITGA8, ITGA9, KLRK1, LDHAL6B, LIAS, MAPK8, MGAT4B, MYH9, NR4A1, NSD1, NSDL, NT5C2, OR10G3, OR10X1, OR13F1, OR13G1, OR1L8, OR2T3, OR2Z1, OR4M1, OR51F1, OR6A2, OR6C1, OR8K3, PAPSS2, PDHB, PDPK1, PGAM4, PLCB2, PON3, PPP3CB, PPP5C, PRKAG2, PTPN1, RPN2, RRM2B, SEMA4G, SMC1A, SNAP23, STX10, TLR3, TNFSF11, TSC2, TUBB3, VTI1B, WASL, XYLT1, ZNRD1, PNLIPR1, SUV420H2

Negative_11593	AGL, CAT, CEL, EZR, INS, ME1, MIF, MPL, ABLIM1, ACOX2, ACSL1, ALAS2, ANGPTL4, AOC3, ARPC3, ATG3, ATP2A1, ATP5G2, B3GALT1, B4GALT2, BIRC5, CACNA1H, CCNA1, CD36, CDC6, CHSY3, CLDN3, CLOCK, CLTA, COL3A1, COL5A1, COL5A3, CYP19A1, CYP26A1, CYP2C18, CYP2J2, DTX4, FADS2, FLAD1, GALNT6, GNPDA1, GPD2, HAGH, HDAC2, IFNA16, IL15, IL17B, INPP1, ITGB5, MAP2K4, MCM6, MITF, MLLT4, MPST, NKX6-1, NLGN1, NOTCH2, OR1E2, OR4F5, OR4K2, OR4X1, OR5F1, OR5L1, OR5M3, OR6B2, OR6C70, OR8B12, OR8D4, PANK2, PAX4, PDE1C, PECAM1, PHKA1, PIGK, PIP5K1A, PLCD4, PLXNB1, POLR1E, RHOQ, SNAI2, SNAP23, SQLE, STAT6, SUFU, SYNJ1, TAS2R38, TGFB2, TRAF3, UCK1, VANGL2, XYLB, B4GALNT1
Negative_11594	DCN, DHH, GSR, IL4, XDH, ACADS, ACLY, ADRB3, ALG10, ARSD, CACNA1G, CCL25, CCNE1, CRLF2, CYP11B1, EHMT2, ENTPD5, FBXW11, FGF13, GALNT10, GIT1, GPD1L, HTR2C, IAPP, IL25, ITPA, KDSR, LIPC, LYZL1, MYH14, NEU2, NFKB1, OR2T12, OR2T33, OR4C13, OR52E2, PDIA4, PGM3, PLXNB2, PPP1R3C, PTK2B, RDH8, RXRB, SAT1, SEMA3E, SEMA4C, SFRP4, SUV39H2, TJP3, TLR9, ZAP70, ZFYVE9, ATP6VOA1, GABARAPL2, TNFRSF10C, TNFRSF17
Negative_11595	DCK, NPY, AGPAT1, ATP2A3, ATP6V0C, BAI1, BCAT1, CCL5, CD27, CD01, CER1, CFL2, CHIT1, COL1A1, CPT2, CSNK1D, CYP1B1, CYP2A13, CYP8B1, DGAT2, EPHB3, EPHX2, EXTL2, FCGR3A, FGF12, FGFR2, GGT7, GPD1, GPD1L, GSTA4, HADH, HGSNAT, IL20, ITGA4, LAMB1, LGL2, LRP5, MAGI3, MAPK14, METTL2B, NKX2-2, NKX6-1, NPR1, NR1H3, NRCAM, OR4E2, ORC2L, PAK7, PCYT1B, PDE1B, PDE4B, PFAS, PVRL1, SOAT2, TJP1, TYMP, UBA1, UCP1, XIAP, YES1, TNFRSF13B
Negative_11596	ADK, BTB, HK2, ACTN1, ACVR1B, AKT2, APOC3, ARHGAP5, ATP6V0C, B3GNT4, BET1, CACNA1A, CACNG3, CCL23, CD55, CDC25C, CDKN1A, CDKN1B, CES1, CHSY3, CSDA, DARS, DDX52, DKK4, E2F5, ENPP1, EPB41L3, EXT2, EXTL2, FASLG, FASN, FUT7, GAD2, GNA15, HNF1B, HPSE2, IL6ST, JAM2, KLRC2, LTC4S, MCEE, MYH7B, MYL9, NKD1, OR2A5, OR2G6, OR2T2, OR4C15, PER1, POLR2I, PPID, PPP1R3D, PTPMT1, PVRL3, RAPGEF1, RPE65, RPN1, SARS, SHMT1, SMAD1, SMAD6, WHSC1, TNFRSF13C
Negative_11597	ABLIM2, ACOX1, ACYP2, ADCY4, ALDH3A2, AOC2, ASIP, ATP5D, BAIAP2, CD55, CD99, CYSLTR2, DHCR7, DIAPH2, DKK1, DOCK1, ENO1, FASN, FDPS, FLAD1, FUT8, GADD45G, GAL3ST1, GLI2, GMPR2, GRIA2, GUCA1A, HAP1, HBEGF, HLA-DRA, HMGCL, HNF1A, HPRT1, IFNG, IRAK1, KCNJ11, LDHAL6A, LGMN, MAN1A1, MAPK3, NRXN3, NT5E, OR10H5, OR1L3, OR2M5, OR51B5, OR8K3, PDE8A, PGK2, PHKA1, PIGT, PLXNB1, POLD1, POLR3D, PPP2R1A, PPP2R5B, PSME1, PTK2B, SESN2, SFRP5, SLC27A4, SLC27A5, SUOX, TAS2R4, TBL1XR1, TFDP1, TNFSF11, UXS1, VAMP1, CSNK1A1L
Negative_11598	BID, HDC, RET, ACTA2, ADCY5, ADH5, ADH6, ADSSL1, AGPAT1, ALAD, ALDH1B1, ALDH3A2, ATG12, ATP5G2, AXIN1, B3GNT2, CACNA1B, CCNG2, CDC2, CDC42, CDC7, CLDN4, CSNK2A2, CTBS, CXCL16, CXCL9, CYP26B1, ENTPD2, FGD3, FRAT1, GALC, GALE, GMPA, GNAL, GNAO1, GNAZ, HLA-C, HTR2B, ICAM2, IDH3G, IFNG, IL9R, IMPDH2, ITGA2, JAM2, LTA4H, MAP3K1, NADK, NRXN1, NTF4, OR1N1, OR4C6, OR4F4, OR52I2, OR6C3, PAPSS1, PCYT1B, PDE10A, PDXP, PIGF, PIGH, PISD, PPAR, RAPGEF4, RBPJL, SAT2, SCLY, SH2D1B, SMAD7, SSH2, ST3GAL5, TRAF5, UGCG, UGCGL1, UGT2B10, WNT4, ATP6V1G1, HSD17B12, ST6GALNAC1

Negative_11599	AK1, CBL, EDA, ACP5, ACY3, ADCY4, ADRA1B, ANAPC2, ATF4, ATP5D, B3GALT2, BCAT2, CACNA1C, CCR4, CDC16, CDKN1A, CES2, CLDN3, CNTFR, CREB3L3, CREBBP, CYP26C1, CYP4F3, DDX19A, DIAPH1, DKK1, EFN2, EXT1, FGF1, FM05, FRAT2, FZD2, GCH1, GJA1, GRIA2, GRM1, HHEX, IDUA, IFNA10, IL18, IL6R, ITGB1, KDSR, KIR2DL2, MAPK14, MCM5, MGAT1, NADK, NCOR1, NCR2, OR10A3, OR10R2, OR10T2, OR2V2, OR4D1, OR51B2, OR5B3, OR6C70, OR8A1, OR9Q2, PAX6, PDHA2, PHKA2, PIAS1, PIAS2, PTGS1, PVRL1, RALA, SC5DL, SEMA3C, SGMS1, SGPP1, SMPD4, TALDO1, TAS2R38, TBXA2R, TKTL1, TRAF6, TRHR, UBA1, UGCGL1, VAV2, HSP90AA1, PNLIPRP1, SERPINA5, SERPIND1
Negative_11600	CAD, DDO, FST, HAL, ACP5, AOX1, ATP6VOC, BCAT1, CD79B, CDKN2A, COL4A6, CXCR4, DBF4, DPYS, DUSP10, E2F3, EPB41L2, ETNK1, F13A1, GCLM, GIT1, HAO2, HGSNAT, HLCS, HSD3B1, HSPA1B, IL17RA, IL2RB, INPP5A, ITGB3, ITGB7, MPP5, MYH2, NCK2, NEU4, NFATC2, NLGN3, NTRK2, OR10X1, OR3A2, OR4C16, OR4K5, OR5AC2, OR5D18, PLA2G4A, POLR1B, POLR2A, POLR2C, PRKACB, PRKCE, PRKX, PRPH2, RDH8, SEMA7A, SGMS2, TAS2R60, WNT3, ZAP70, PAFAH1B2, TNFRSF14
Negative_11601	C7, DBH, LSS, PXN, VTN, ACOT11, ACOX3, ACSL1, ACSL4, ADRA1A, AGTR1, ARPC1A, ARPC3, ASRGL1, C3orf10, CACNA1G, CAMK2B, CASP10, CCL11, CCL13, CCR6, CDKN1C, CHIT1, CKS1B, COL11A1, CPT1C, CSNK1D, CSNK1G1, CTNND1, CYP26B1, CYP2A6, CYP2C19, CYP3A5, DGKQ, DUSP2, ENO1, ENPP6, EPHA3, FADS2, FLT1, FTH1, FUT5, GAL3ST1, GALC, GMPR, GNG13, GNG3, GRIA1, HLA-A, IFNA13, IL13, IL18, ITPK1, KIR2DL2, KIR2DL3, KLRC2, KRAS, LDHD, MAP2K6, MCM4, MGAT4B, MINPP1, MTFMT, NAGS, NOTCH2, OR10A6, OR10X1, OR13J1, OR1A2, OR1D5, OR2M4, OR2T8, OR4D1, OR5B17, OR5D14, OR6A2, P2RX3, PAK2, PDE7B, PLA2G2F, POLR2G, PPCS, PTGER3, SDC1, SEMA3A, SEMA4A, SFRP4, SHC1, STX8, TAS2R16, TLN2, TRAF5, UAP1, VAMP3, WBSR17, YWHA B, ATP6V1C1, CSGALNACT2, HLA-DQA2
Negative_11602	MPI, ACMSD, ALDH1L1, ARNTL, ASPA, ATP6V1F, B4GALT6, BIRC2, CASP10, CCND3, CCNG1, CD19, CD28, CDC42, CLDN4, CMBL, CREB5, DTX3L, E2F4, FUT3, GNAQ, HADHA, IL17RB, IL5RA, ITGB2, LLGL1, MAP4K2, MARS, NFKBIA, NGEF, OR10A5, OR10J1, OR2T8, OR3A3, OR4L1, OR4N4, OR4S2, PIAS1, PIGO, PI3K, PLAT, PPT1, PTPMT1, RBPJL, RRM1, SEMA3D, SESN1, SFRP5, SUCLA2, TNFRSF8
Negative_11603	ADC, C6, CP, HGD, MVK, NPY, PC, TNN, ADH4, ALDH3A2, ALG1, ALG2, ALOX5, ANAPC11, ARSA, BET1L, BMP8A, BMPR2, CACNB2, CD27, CDH3, CDS2, CHAT, CNGB1, CTNNA3, CXCL16, CYP2F1, DRD2, E2F3, EDN1, ENO3, FGF22, FGF8, FLT1, FOXA3, FUT1, GALM, GDF5, HARS2, HYAL1, IDH3G, IRS2, ITGA9, ITGAD, ITGB3, ITGB4, JAG2, MAML3, MAPT, MCEE, MGAT2, NADK, NCK1, NEFL, NEFM, NFAT5, NUDT9, OR14C36, OR1F1, OR1L6, OR2AT4, OR2M7, OR3A3, OR4M2, OR52B6, OR5C1, OR5M8, OR6Y1, P2RX4, PLA1A, PLCD4, POLR2K, PPP1R3C, PPP2R5A, PRPS1, SEMA3D, SEMA4C, SMARCA2, SPRED1, ST3GAL4, STX2, TAP1, TAS1R2, TLN1, TMLHE, UGCGL2, VAV2, WIF1, AASDHPPT, ATP6V0A1, PDCD1LG2, PRICKLE2
Negative_11604	AR, C3, MTR, MVK, SMO, TNF, ACYP1, ADRB2, AGPAT4, ALG3, B3GALT6, C3AR1, CASP9, CCR8, CD244, COL11A1, CXCR6, DDX47, DDX52, DHFR, DVL2, EGFR, EGLN1, EHMT1, EPHA4, FGF1, FLT3LG, GCNT3, GDF5, GJA1, GNAI3, GUCY2D, GZMA, HLA-D, HTR2A, IL20, JAK1, KCNB1, KCNJ11, KIR2DL4, KYNU, LDHB, LILRB3, MAP3K2, MAP3K3, MASP2, MYH8, NCR1, NME7, NOTCH3, NPR1, OR10P1, OR10S1, OR2T6, OR56B4, PANK3, PGM2, PNPT1, PPARA, PRKAR1A, PRKCC, PTDSS2, RDH11, SARDH, SLC27A4, SNAP25, SOAT1, SRD5A2, TLR9, UBE2L3, ULK3, PAFAH1B2, PLA2G12B



Negative_11605	DCK, F2, FYN, GAA, HYI, IVD, RPE, ACP, ADCY1, ADRB2, AKT1, ATIC, ATP5B, ATP5E, BAIAP2, BCAT1, BCL2L1, BMP6, BMP7, BUB3, CARD11, CCL13, CCL15, CCL24, CCR7, CDH15, CHDH, CHKB, CHR, CHRM5, CSF1, CTPS, DDX18, ECSIT, EFN3, EPHX2, EXTL1, FMO4, GALNT3, GLDC, GLI2, GNA01, GNRH2, HLA-DMA, HLA-DRA, HNMT, IL1R1, IL8RB, IRF5, ITPKA, JAM3, KIR2DL3, KIR2DL4, KLRC3, LIPC, MAP2K2, MKNK1, MYH9, MYL2, NAT2, NLGN2, OR14A16, OR1B1, OR1N1, OR2A25, OR4F4, OR9G1, ORC5L, PARD6A, PFN4, PPP1CC, PPP2CA, PRKACB, RALA, RAP1A, RGS3, SELL, SETD2, SPRY4, STX2, SUCLG1, SUCLG2, SULT2A1, TAS2R4, TPM3, TSHR, TUBB1, WBSR17, AASDHPPT, ATP6V1B2, PDCD1LG2
Negative_11606	A2M, AGK, CKM, CRK, CSK, DLD, F2R, F8, GGH, LYN, MYC, NLK, PGF, TFG, TNF, TXK, AADAT, AASDH, ACOX1, ADH6, AGXT, AHCY, ALDH1B1, AMPD2, ARSA, ASCC3, C1QA, CAMK2A, CAV1, CCL3, CD8B, CDC25C, CDH4, CDK6, CHPT1, CNTNAP2, COL11A1, CYP4A22, DFFB, DGKD, DGKI, FASN, FDPS, FTMT, GALNT14, GFP T2, HADH, HES1, HHIP, IL15, IL17RA, ITGA5, KLRC4, LDHD, LFNG, LRRC4C, MAD2L1, MAP2K1, MAP3K2, MAP3K6, MAP4K3, MARS2, MASP2, MCM6, MS4A2, MTHFS, MYH8, MYL9, NARS, NPR1, OR13A1, OR2A25, OR2A4, OR2K2, PAFAH2, PAK1, PIGB, POLA1, POLR2B, PPAP2C, PPP2R2A, PRKCA, PTGDS, PTK2, PTPRM, RAC3, RDH8, SC5DL, SFRP4, STAM2, STX6, TNFSF14, TPI1, ULBP3, VAV3, C1GALT1C1, CSGALNACT1
Negative_11607	FGA, IL8, PAH, TAT, ACAA2, ACP2, ALDH3A2, BDKRB1, BMPR1A, CADM3, CAV3, CLTA, COL6A2, CSF1R, CTNNA3, CYP11B2, DGKA, DPYS, ENO3, FLT3LG, FRA T2, FTH1, FUT8, G6PD, GALM, HMGCS1, IGFBP3, IL1RAP, INPPL1, IPMK, ITGA4, METTL2B, NAT1, NEU2, NGEF, OR5B17, OR6T1, PAK1, PFN1, PHKG1, PRKC Q, PROS1, PTPRR, RASSF5, SEMA4G, SLC2A1, STX16, TLR3, VDAC2, WWP2
Negative_11608	C4B, CKM, GHR, GLA, GLS, GSR, LIF, MPL, UBB, ADRA1A, ALPP, ARPC2, BDH2, BMP8B, CACNA1E, CASP3, CDC42, COL6A1, CPT2, CREB3L2, DDHD1, DRD1, GLUL, GSTM3, HES1, HIBCH, HTR2C, KIR2DL1, LAMB3, MASP2, MYH6, NFASC, NNMT, OR10A7, OR10G2, OR10K1, OR2V2, OR4M2, OR4N4, OR6Q1, OR9K2, PARD3, PFKFB1, PIPOX, POLR1E, PPP2R5E, PRKCZ, PTCH1, RPRM, SGMS2, SOD1, ST3GAL2, TAS2R10, TGFBR1, TNFSF10, MAPKAPK3
Negative_11609	ASL, CFI, GH2, GK, IVD, PTS, ZYX, AASDH, ACAD9, ACSL6, ADCY5, ARPC1A, ARPC5, BCAR1, BCL10, CDKN2D, CFL2, CKMT2, COL5A2, CRLS1, CTNNA1, CYP2A6, DPYS, DTX1, EFN3, ENTPD8, FABP4, FGF13, FGF20, FOXA3, FZD6, G6PC, GALNT13, GARS, GNA15, GRAP2, GRLF1, HADH, HNMT, IFNA17, IL12A, IQGAP1, IRF5, ITGAL, KIR2DL2, MMP7, MYH9, NEU1, NOX3, OR10C1, OR11H6, OR2D2, OR2L13, OR3A3, OR4N2, OR51B2, OR5AN1, OR5P2, OR6C75, OR6N2, OR7A17, OR7G3, OR8H1, OR8I2, PAK1, PDE4C, PDGFRA, PER1, PIGS, PIPOX, PLCG1, PTGFR, PTPN5, PYGL, SETD2, SLIT2, SPRY2, STMN1, SYNJ1, TAS2R13, TAS2R5, TLR2, VAMP1, ATP6V1G2
Negative_11610	CFI, CP, ID2, TYR, A4GALT, ACTA1, ALOX15B, ATN1, BDH1, C1QA, CALML5, CAMK2B, CCR5, CHPT1, CHRM5, CLDN19, CRKL, DDX54, DNMT3B, DOLPP1, EDNR A, EIF4B, EPB41, EPHX1, FGF14, FLOT1, FOXO3, GNAI3, GRIN1, IMPA1, INPPL1, ITGB1, KRAS, LEF1, LIMK2, MICA, MKNK2, NAT5, NR1H3, OR10P1, OR1J4, OR1L6, OR1S1, OR4C6, OR4Q3, OR51Q1, OR51V1, OR52K1, OR6C74, OR6T1, OR7C2, PDE11A, PDXP, PI4KB, PIGT, PISD, PLCB2, POLR3K, PPARA, PRKG1, PTGER1, RARS2, SAT1, SC4MOL, SH2D1A, SMAD4, STX16, TXNDC12, WNT5B, WNT7A, WNT8A
Negative_11611	C6, EGF, IL8, ACSM4, ADORA2B, ALDOA, ALPI, APOE, ASAH1, B3GAT1, BIRC5, C1QB, CARS, CD70, CDC26, CHEK1, CHIT1, CREB1, CSNK2B, GALNT5, GDF7, GMPR, GNA12, GRIA2, IBSP, IDUA, IGF1, IL15, IMPA1, LIPE, MAP3K1, MDM4, MYH6, NARS2, NCAM2, NUDT12, OR1Q1, OR5I1, OR8G1, OR9Q1, PCK1, PHKG2, PIGP, POLR2K, PPP2R1B, PPP2R2A, PRKAG3, PTGDS, PTGES2, RAB23, RALB, RPS6KA5, SEMA4F, SPAM1, TCF7, THBS1, TRAF6, TYMP, WNT4, WNT8B, XIAP

Negative_11612	AK1, AR, CGA, IL8, ME1, MPZ, VCL, AACS, ACY1, ADSSL1, AHCYL2, ALDH4A1, AMD1, AMPD2, ANAPC1, APOE, ASRGL1, ATG12, ATIC, C1GALT1, CACNA1G, CAPN2, CDC16, CDH2, CDH3, CDH5, CFTR, CHAD, CIITA, CLTA, CX3CL1, DHX58, ENPP2, EPOR, FGF10, FGF6, FOXA3, FZD7, GRB2, GSTA3, HNF1B, HTR2C, IFNA14, IL1R2, IL22RA1, IL24, INHBC, ITGAM, KARS, MYD88, MYH9, NFKBIA, NME7, NOD1, NR1H3, NT5M, OR10A3, OR4A15, OR4M1, OR51I1, OR5AS1, PDGFR A, PDHA2, PGK1, PHKA2, PIGC, PIGL, PLOD1, POLR3G, PPCDC, PPP2CB, RASA1, RIPK1, SDC1, SEMA3F, SNAP23, SOS2, SPHK2, SRGAP2, STAT1, STEAP3, TMLHE, UGT2A1, VAV1, ARHGEF12, HSP90AB1, TNFRSF11B, TNFRSF13B
Negative_11613	FGG, HYI, IL2, PLG, SCD, TKT, XDH, ACSL3, ACSS2, ALDH3A2, ASS1, ATP2A1, B3GALT4, BCL2L1, CBLC, CCL7, CD46, CD74, CDKN1C, COL5A3, CRLF2, CTBP1, CTSG, CYP11B2, CYP19A1, CYP2C9, CYP2D6, CYP8B1, DNMT3B, EPHA1, FGF3, GALNT12, GDF5, GNAI3, GRAP2, GSTZ1, GUK1, HSD17B2, HSPA8, IARS2, ICAM1, IFNA5, IL21, IL2RG, INHBB, ITGB2, KNG1, LCMT2, LIPA, MAP2K3, MAPK3, NARS2, NEFM, NFE2L2, NFYB, OR10P1, OR13A1, OR13C9, OR1E1, OR4N2, OR5C1, OR5T1, OR9A4, PAICS, PDHB, PECAM1, PFKFB3, PIAS3, PIGT, PIGV, PISD, POLA2, POLE4, PPOX, PPP1CC, PRPH2, RASA1, RFWD2, SEMA4D, SH2D1B, SPTAN1, SRD5A2, STAT2, STX5, TAS2R1, TAS2R40, UMPS, UPP2, VTI1A, WASF3, ZAP70, EIF4EBP1, PLA2G12B, TNFRSF10D, TNFRSF14
Negative_11614	C8G, GDA, PLG, RB1, SMO, AASS, ABLIM3, AMPD1, AMPD3, ARHGEF7, B3GALT1, BACE2, BCAT1, BLVRA, CAPN2, CCKBR, CD226, CDKN1B, CDKN2C, CER1, CHEK1, COL3A1, CREB1, CTF1, CYP11B1, CYP4F3, DARS, DNMT3A, EARS2, EPHA7, ESPL1, ETS1, EXTL3, FBP2, GALNT13, GAPDH, GMPR2, GNPAT, HNMT, HSPB1, IFNA13, IL10RA, IL12A, IL28A, IL8RA, ITGAL, MGAT5B, MTHFD1L, NCSTN, NKX2-2, NT5C1A, NTNG1, OR14J1, OR51B6, OR52M1, OR6C4, OR6N2, OR6T1, OR6Y1, OR8B8, OR9I1, PDPK1, PGLS, PIGT, PIK3CG, PLCB4, PLXNA1, POLR2J, PRODH2, PYGB, SETD1B, SPHK2, STAT4, SV2B, TAS1R2, TAS2R5, TICAM2, TLR9, TNFSF10, TP73, TSHR, UBE2L3, UGT2B4, CACNA2D4
Negative_11615	ADA, GHR, OAT, PC, PDC, ACVR1, ACVR1B, ADSSL1, AKR1C1, ALDOC, ALPL2, ARNT2, BPGM, CACNA1H, CARS, CARS2, CHRNA7, CLDN20, COL1A2, CREB5, CTNNA3, DAAM1, DGKE, DKK2, E2F2, ENTPD8, ESAM, FECH, FGF1, GLB1, GMPS, HAP1, HTR2C, HTR5A, HTRA2, IFNA6, IL11RA, IL12A, IL23A, ITGAV, KARS, KIR3DL2, LIMK1, LYPLA2, MGAM, MKNK2, NAE1, NAGS, NARS2, NCAM2, NFATC3, NT5E, OR1D5, OR2T3, OR2T34, OR2T6, OR6K6, P2RX5, PGAM1, PIAS1, PIK3C2A, PIK3R1, PIPOX, PMVK, PPA2, PYGM, RDH10, RFXAP, ROB3, RXRB, SEMA4A, SLC12A2, SLC27A4, SLC9A1, SMARCA2, SMC1B, SOCS4, SPTAN1, STX18, UGCGL1, ULK1, UNC5D, SERPING1
Negative_11616	CSK, MPZ, SMO, ACSM1, AKR1C3, ALDH4A1, ALOX15, ANAPC1, B4GALT5, BPGM, CCL7, CCR7, CDKN2A, CYP26C1, DFFA, DUSP7, EDNRA, ELK1, ENTPD7, FBXW11, FDFT1, FMO4, FRAT2, FUT5, GAL3ST1, GDE1, GNG12, GP1BB, HIBCH, ICAM3, IL20RB, IL6R, KLRC2, LCMT1, MAPK14, MCM7, MIOX, MTHFR, MYH10, MYH4, NARS, NEGR1, NKX6-1, OR10G3, OR10K1, OR2B2, OR2T2, OR52N1, OR7A5, OXCT1, PCYT2, PDE6H, PDGFRA, PGK2, PIGK, PIP5K1B, PPM1D, PPP2R5D, PPT1, PSENE1, PTTG1, RASSF1, RHOD, RPS6, SGPP2, SHMT1, SMAD9, SORD, ST6GAL1, STK4, SULT1A2, TAP2, TRDMT1, TSHR, TUBB4Q, ULK2, VANGL2, WNT3, ATP6VOA1, CSGALNACT1, HLA-DQB1, HLA-DRB3

Negative_11617	C1S, F2R, F8, MTR, PAH, PLG, PRL, SPN, ACSL1, ADH1B, AMPD3, ARSD, B4GALT4, BCKDHA, COL11A1, CSNK1G1, CSNK1G3, DDX41, DDX51, DHRS4, DHX58, DNMT3B, DUSP9, EDAR, EPB41L1, FGF9, FZD4, GABARAP, GADD45B, GGT6, GPLD1, HARS2, HLA-DMA, HMGCS1, HSD3B2, HSPB1, HTRA2, IFNA4, IKBKE, IL18R1, LRAT, MAP2K4, MAPT, MGAT4B, NFATC3, ODC1, OR2Z1, OR52B6, OR52K2, OR5T3, OR7G2, OR8G1, ORC4L, PANK4, PDE4B, PDE4C, PIGB, PIGM, PIK3C2B, POLR2B, PPP3R2, PRKAR2A, PRKCH, PSEN2, RCHY1, RPS6KB1, RXRA, SDC4, SELP, SH2D1A, SLC25A6, SLC27A5, ST6GAL1, STX1A, TAS2R16, TAS2R8, TLR9, TSHB, TYMS, UGCG, VANGL1, ATP6V1B1, TNFRSF10B
Negative_11618	C9, CRK, ITK, PGD, ABLIM1, ACAD9, AMPD3, B3GALT5, CAMK2A, CCL13, CCL19, CHSY3, CISH, COQ7, CYP1A2, CYP3A43, DAAM2, DAXX, DCXR, DDX54, DNMT3B, DUSP1, EFNA3, EGLN3, FOXA2, GAD1, GCNT4, GDE1, GNAT3, GNPAT1, GRM5, GUCA1C, HCCS, HLA-DMA, HMGCL, IL12RB2, IMPDH1, INHBE, ITPKB, MAPK8, MTMR6, MYH8, MYL5, MYLK2, NCAM2, OR10C1, OR10G2, OR11G2, OR51F2, OR51Q1, OR5AU1, ORC1L, PER1, PHKG2, PIK3R4, POLD2, POLR3B, PPP1R1A, PPP2R2B, PRKAR1B, PRPH, PTDSS1, PTGIS, PTPRF, RAC2, RAPGEF2, RHOQ, RUVBL1, SEMA4C, SFRP4, SMURF1, TYK2, ULK2, VKORC1, WNT5A, ZFYVE9, ZNRD1
Negative_11619	F5, FGA, GAA, GSN, HGF, ME3, NGF, PVR, ACADM, ACOX3, ADRA1B, ALOX5, APLP1, ARNT, ASRGL1, ATP5I, BCAT2, C4BPA, CREB3L4, CYP1B1, DRD5, ENTPD6, GAD2, GADD45A, GCLM, GLDC, GNAZ, GNPDA1, HSD17B4, HTRA2, IBSP, INPP4A, ITPKA, KITLG, KLRC4, LRP6, MAP2K6, MAPK1, MCCC1, MDH1, NFKB1, NFKBIB, NPR1, NT5C1B, NTRK2, OR13D1, OR1L6, OR1L8, OR2L8, OR2T3, OR4K1, OR4K15, OR51B5, OR52N4, OR6T1, PAK4, PAK6, PDE4A, PECAM1, PI4KB, PIGC, PIM2, PLCZ1, PLD2, POLR1B, PPCDC, PPP1CC, PRKCZ, PTCRA, PTDSS1, PTGIS, PTPN6, RASGRP2, RPS6KA5, SETDB2, SMAD5, SMURF1, SPHK2, SSH1, ST6GAL1, STX6, SUCLG1, TALD01, TAP1, TFDP1, TGFB2, TUBA1A, TUBA8, TUBB4, UGT2B4, UNC5C, VDAC3, ATP6V0E1, CSGALNACT2, KIR2DL5A, ST6GALNAC1, ST6GALNAC5
Negative_11620	AK3, DBT, FER, ACAA2, ACADL, ACSM5, ACTA1, ADCY4, ADCY7, ALDH4A1, ALG10, C3AR1, C7orf16, CCL16, CDC25A, CDK6, CLDN16, CLDN4, CXCL1, DGAT2L4, DGKQ, DKK4, DPM1, EDNRA, EPHA6, ER01L, EXOC7, FOXO1, FUT1, GGPS1, GNG12, GP1BB, IFNA21, IKBKE, JAG2, LFNG, NFKB2, NLGN3, OCLN, OR1S2, OR2A12, OR51E1, OXCT2, PHKA2, PPAP2A, PPP2R5B, PRSS3, PTEN, RRM2, SDC2, SLIT1, SPHK2, SPI1, THBS3, VNN1, YWHAG, ZBTB16, ATP6V1B2, ST6GALNAC5, TNFRSF10D, TNFRSF14
Negative_11621	AK1, F2R, HDC, IL7, MET, MVD, PLG, ACYP1, ADCY9, ANPEP, APLP1, ATP5E, ATP6V1A, CACNA1A, CAV1, CCL26, CCR10, CD14, CD3E, CDIPT, CLDN1, CLDN19, CLDN9, CPT1A, CRKL, CYP3A7, DGKZ, DHX58, DMGDH, DRD5, EPHA7, EREG, FGF2, GIT1, GNRHR, GUCA1B, HADHB, HCST, HHIP, HSD3B2, IFNA4, IL17B, IL29, ITGAL, KCNJ11, LIPG, NAT1, NFYA, NOTCH2, OR11H6, OR2M3, OR51B5, OR6S1, PDE3B, PDIA4, PHKA1, PI4KA, PLCG1, PLXNC1, PNPLA4, POLE3, POLR2F, PPM1A, PRODH2, PTGS2, RASA1, RDH5, RUNX1, SAT2, SRD5A2, STAT5B, SUV39H1, TRIP10, TUBA3C, TUBA4A, UGT2B28, ULK1, VDAC1, WARS2, WASL, MAPKAPK2, ST6GALNAC4
Negative_11622	BTD, DCK, GGH, HDC, LCT, ACHE, ACO1, ACVR2B, ADH5, ADSS, APH1A, ATP5G2, B4GALT7, BCL2L1, CACNG5, CD82, CDKN2B, CNTN1, CXCL2, CXCL9, CYP4F2, DHCR24, EPHA1, EPHX1, FGF7, FOSL1, G6PC2, GALNTL5, GLI2, GNPDA1, GRIN2A, HNF1A, IMPA2, IRF3, MAP3K1, MPP5, OR10A7, OR1L8, OR1S1, OR2T5, OR4S1, OR6X1, P2RX6, PAFAH2, PAPSS1, POLR2L, RALA, ROBO1, SETD1B, SHC3, SPRED2, SV2A, TRAF3, TUBA8, ULBP1, VTI1A, ATP6VOA2, PDCD1LG2, TNFRSF10C

Negative_11623	C5, F8, GSR, RDX, TNR, ACAT2, ACVR1C, ACVRL1, ADH7, ANAPC7, ANGPTL4, AOC3, BMP7, CACNB2, CACNG3, CACNG7, CADM3, CCNH, CD27, CDC23, CDC25A, CDC26, CES2, CLDN11, COL4A6, CYP4A11, DAD1, DDIT3, DDX50, DDX52, DRD5, F11R, FGF5, FOXA3, FTH1, GLO1, GMPS, GNA15, GNB3, GPAA1, GSTA1, ICAM1, IMPA1, KLRC4, LEPR, MAML2, MYH14, MYH2, MYL2, NANS, NCAM1, NEU4, NFASC, NFATC2, NFKB1B, OR11H1, OR1L6, OR2T33, OR2T8, OR4C46, OR4X2, OR51B5, OR51B6, OR51L1, OR51M1, OR5B17, OR5B21, PAK1, PAPSS1, PDGFRB, PI4KA, PIP4K2A, POLD4, POLR2F, PRPH2, PTPN7, PTPRC, RASA1, RELA, RPK1, SAT2, SCIN, SESN2, SMPD4, SORD, STX18, TACR3, TAS2R1, TAS2R13, THBS1, TPK1, TRDMT1, USE1, WASF1, WNT8A, ALDH18A1, B3GALNT1
Negative_11624	GP9, KDR, NLK, NOG, TNN, UBC, ACSS1, ACTG2, ADRB3, ALDH1A2, ALG12, ALPP, ARSD, BLVRA, C4BPB, CAPN2, CASP7, CCL15, CEBPA, CLDN10, COMP, CSNK1A1, CTNBN1, DDX19A, DGAT1, DHDH, DUSP10, EFNA2, FARSA, G6PC2, GNRH1, GPT2, GYS1, IL10, IL22, IL28RA, KLRC4, MAP3K7, NARS, NME6, OR10G3, OR10J5, OR6K6, PANK2, PCYT2, PLAU, PLD1, POLE2, POLR2J, PON1, PRKACG, PTPRC, RAC3, SLC27A1, SPRY3, ST3GAL1, ST8SIA1, STMN1, TAS2R5, TGFB1, TGFB2, THY1, TIRAP, TPM3, WARS, YWHAG, ATP6V1B1, GABARAPL2, TNFRSF1A
Negative_11625	C8B, DBI, TNC, ACPP, AHCYL2, ALG13, APPL1, ARHGEF1, ARPC1A, BMP1A, C3orf10, CACNA1H, CARS2, CASK, CDKN2B, CTSS, CYCS, CYP11A1, DPAGT1, DPYD, ERBB3, FGF10, FPGS, GALK1, GLG1, HLA-DOB, HTR2B, IBSP, KLRC4, KLRK1, NCKAP1L, NKD2, NLGN2, NRXN1, OR10X1, OR1S2, OR2A5, PKM2, PLXNB1, POLR3G, PPP3R2, PTGES2, PYCR2, PYGL, RBX1, RXRA, SENP2, SHC2, STAM, SULT1A2, SV2A, TNFSF18, TRDMT1, UBE2K, UROS, VCAM1, VDAC1, WARS2, ATP6V1C2, HSP90AA1
Negative_11626	BTC, EZR, MIF, TNF, AASS, ADCY6, ANAPC2, ATP5A1, ATP5F1, AXIN1, BIRC3, C1GALT1, CADM3, CCL4, CCR6, COL4A2, CXCL13, CXCL5, CYP26B1, DDX19A, EFNA1, ENPP3, FTMT, FZD7, GLDC, GNB1, GRM1, GSK3B, GUK1, HARS2, HTR2A, IDI1, IFNAR1, IL23A, KDSR, LAMC2, MFNG, NME2, NUMBL, OR11A1, OR2M5, OR4E2, OR4S2, OR51B2, OR51D1, OR6C4, OR8G1, OR8K1, OR9K2, PDE3B, PI4KA, PLA2G2A, PLD1, PLXNB2, PMM2, POLR1D, PRPH, PTDSS1, PTPN11, PVRL1, RALBP1, RBX1, SETD7, SETDB2, SFRP2, SMAD5, SUV39H1, TLN1, TNFSF18, TUBA8, UNC5C, VAMP1, ZMAT3, HLA-DQA2
Negative_11627	CS, GP9, IL6, MAX, ME3, MPL, ACOX2, ACVR2A, ACVR2B, ADAM10, ADH1B, ALG2, ARPC1A, ARSE, ATG12, ATP13A2, B4GALT1, B4GALT6, CACNG4, CADM3, CARS2, CCL25, CCL4, CDK2, CHEK2, CLDN22, CLDN4, CMBL, CXCL13, CXCL5, CYP26A1, CYP4F2, DUSP10, E2F5, EPHA5, EXT2, FGF11, FLOT1, FMO1, FOSL1, GAL3ST1, GALK2, GALNT5, GCNT1, GRIN2C, HAP1, HHEX, IKKB, IL1A, INSR, ITCH, KAT2B, KLKB1, LALBA, MAP2K6, MMP7, MYH14, MYH7B, MYH8, NCKAP1L, NEU2, NFASC, NMNAT3, OR13H1, OR1N1, OR2M7, OR5A2, OR6K3, ORC2L, PAK2, PDE9A, PHKB, PIAS2, POLR2C, POLR2L, POLR3K, PON3, PTTG1, RAD51, RALGDS, RFX5, RHOQ, SFRP4, SLC25A4, SPRED2, TD02, TGFB3, TNFSF4, TNFSF9, TOMM40L, TRAF6, TRIP10, UCK2, MAPKAPK5, PLA2G12A
Negative_11628	AUH, C9, CDA, GH2, MAX, ME2, SPN, SYK, AASS, ACVR1B, ADCY4, ANAPC2, BDH1, BIRC3, BMP6, CCR2, CDC6, CNTFR, CRKL, CTLA4, CXCL2, CYBB, DDX56, DGKI, EHMT2, EI24, EXT2, F13B, FGF10, FIGF, GALNS, GLG1, GNG13, HMBS, HPSE, HSD17B3, ICAM1, INHBE, IQGAP3, LDHC, MAOB, MAPK12, MASP2, MDM2, METTL6, MGAT5, MTHFR, NOS3, NQO1, NTRK2, NUDT2, OCRL, OR11H4, OR11L1, OR2B2, OR2T5, OR4K5, OR51B6, OR52B6, OR52E4, OR52N4, OR6C4, OR7A17, OR8H3, OR8K5, OR9Q2, PDXP, PIM1, PLA2G1B, POLR3K, PPA1, PPARA, PPP2R5C, PRKCE, PRLR, RASSF1, RPS6KA2, SARDH, SETDB1, SFRP2, ST8SIA1, STAT5B, TXNDC12, VDAC2, WNT5B, WWP2, ATP6V1B1, HLA-DRB5, ST6GALNAC5, TNFRSF10C, TNFRSF13C

Negative_11629	AUH, CRH, EDA, EGF, F9, JUN, LCK, NLK, NPL, PDC, AGPAT1, AGPAT2, ARPC3, ASAH1, BMP2, BMP8A, BMP8B, C5AR1, C9orf95, CACNG7, CD8B, CHRM2, CMAS, COL4A1, DGAT2, DIAPH3, DLST, DTX1, E2F5, EDN1, EFNA3, EPHB1, EPHB2, EPHX2, GADD45A, GALK2, GALNTL4, GPX7, GSTA2, HLCS, HPSE2, HSD17B4, IARS2, ICOSLG, IFNK, LAMB4, LAMC1, LARS, LEF1, MOV10L1, NAMPT, NCR1, NKX3-1, NODAL, NUDT9, OR10G7, OR10R2, OR11H1, OR13C3, OR2M5, OR3A1, OR4C15, OR51G2, OR5L2, OR8B4, OR9A4, PDE2A, PDE8A, PLA2G10, PLXNA1, POLD3, POLR2G, PPP2R1A, PYGM, RPS6KA5, SELL, SHC3, SULT1A4, TAS2R10, TAS2R42, TLR3, TOMM40, TRAF1, TSC2, UGT2B7, ULBP3, ARHGEF12, ATP6VOA2, ATP6VOA4, PAFAH1B3
Negative_11630	CSK, HPD, IL3, ME2, MUT, OTC, UBC, ADCY8, ATP12A, AXIN2, B4GALT5, BMP6, CACNB4, CAMKK2, CAV3, CCL25, CCL5, CD34, CD40LG, CDC20, CFLAR, COX10, CTNND1, CYFIP1, CYFIP2, DAAM1, DRD1, FGF11, GABARAP, GDE1, GPX7, GUCY2C, H6PD, HBEGF, HLA-DOA, HLA-DOB, HMGCS1, HSP90B1, HYAL1, IKBKB, IL12B, IL17RB, IMPA1, INADL, ITC, JAG1, LGMN, MAP2K7, MTHFD2, NCK1, NLGN2, OR10G4, OR10H2, OR1L3, OR4C15, OR4E2, OR51M1, OR52N2, OR5AR1, OR6N2, PFKFB1, PGM2, PIK3R3, PIP4K2C, PPA1, PRKAG2, PRODH2, PTCRA, PYGM, QPRT, ROBO2, SFRP5, TBXAS1, TRAF4, TUBA4A, TYRP1, VAMP4, ATP6VOE1, ST6GALNAC5, TNFRSF10D
Negative_11631	C2, C8A, TNF, VCL, ZYX, ACADM, ACSL4, ACVR2B, ADCY5, ANAPC1, ARAF, ARPC4, BCAR1, CAMK2A, CANT1, CARS2, CD82, CREB3L3, CTNNA1, DHODH, FGF20, FPGT, FZD2, GADD45A, GART, GCDH, GSK3B, GUCY1B3, IFNA8, ITPKB, LIPG, MAGI3, MGAT2, NADSYN1, NQO1, NR5A2, NUDT9, OR11H1, OR13C5, OR2M3, OR51V1, PCYT1B, PGAM4, PHKG1, PHKG2, PIGQ, PIP5K1A, PLA2G2E, PON1, RASSF1, ROBO1, SLC2A4, SRGAP2, STAM2, STAT2, STEAP3, TAS2R3, TD02, TNFSF18, TPK1, TRIP10, YKT6, ATP6V1G1, SERPINA1
Negative_11632	ABO, DBI, F2, GNE, SMO, ACSS2, AHCYL1, AOC3, ATP4B, CES2, CHAD, CLDN6, CLDN8, CREB3, CREB3L2, CTBP1, CXCL12, DDOST, DDX23, DDX4, DDX51, DGA1, DVL1, EFNA2, ENTPD1, FLT3LG, GAPDH, H6PD, HIBADH, IDH3B, IRAK4, KIR2DL2, KIR2DS4, MRAS, NEGR1, NFYB, NUDT5, OR10A4, OR1G1, OR2T11, OR2T29, OR2V2, OR3A3, OR4B1, OR4K2, OR5A2, OR5AU1, OR6C3, OR9A2, PDE3B, PDGFB, PMM1, PRKAB1, PROS1, PSME3, RASGRP3, RBPJL, RPSA, SETD7, SNAI2, STX1A, STX1B, TFPI, UGT2A1, UGT2B7, UPB1
Negative_11633	DAO, F12, HPD, IL2, LTB, MTR, ACSL5, ACTA2, ADRA1D, AKR1C2, ALG3, APOC3, B3GALT4, BMPR1B, BTRC, CCL13, CD40LG, CTNNA3, CYBB, DDX54, DDX55, DHRS4, DTYMK, FASN, FGF12, GADD45A, GALNT10, GALNT14, GP1BA, HIBADH, HSD17B4, HSPB1, IL20RA, IL22, KARS, KAT2A, KAT2B, LARS2, LILRB3, MAP3K12, MAPT, MITF, MPST, NFKBIB, NKD2, NMNAT3, OR10J5, OR10X1, OR2A42, OR2B11, OR2L3, OR2Y1, OR4A15, OR4D11, OR51I2, OR5B12, OR5D16, OR6K3, OR6M1, PANK2, PI4KB, PLCD4, PRIM2, PRKCD, PTEN, PTPN1, PYGL, PYGM, RDH11, RND1, RPN2, STX4, TCF7L2, TGFB3, TMLHE, TOMM40, TP53I3, UBA1, UPB1, WBCSR17, XYLT1, PDCD1LG2, SERPIND1
Negative_11634	ADA, CSK, FAS, LCK, TNN, ADIPOR2, ALAD, APRT, ARNTL, ATF2, ATP5E, BPGM, C1QB, CAPN2, CASP9, CCKAR, CD40LG, CD82, CDC2, CFTR, CISH, CLDN10, CLDN19, CNGA3, COMT, CSNK2B, CTBP1, CTF1, CYP26B1, CYP2C8, DERA, EFNB3, EIF24, EIF4E, ENTPD6, ETNK2, FCER1G, FGF18, FGF4, GNAT3, GPAA1, GPLD1, HMOX1, IFNA17, IKBKE, IL18, INADL, LTC4S, MAP2K1, MAP2K3, MAP4K4, MGLL, MPST, NCR1, NOX3, NTNG1, OGDH, OR10A2, OR10H5, OR14C36, OR2A12, OR2AE1, OR52E8, OXCT2, PAX4, POLR2G, POLR2J, POLR3K, POMC, PPP2R2A, PRIM1, PRKG2, PRPH, PTPN7, RAB23, RAB5A, RDH5, RFXANK, SCP2, SESN1, SHMT2, SLC25A6, SLC27A1, SMAD2, SOCS1, SPRED2, SRD5A2, SRGAP1, SRGAP2, TAS2R8, TUBB2A, VDAC1, WWP1, YOD1, ATP6V1C1

Negative_11635	DDC, SMO, TKT, ABL2, ACAD9, ACSS3, AGPAT4, AK3L1, AKR1B1, ANAPC11, ARHGEF1, ASIP, ATG7, AXIN2, B3GAT2, BMP6, CHEK2, COMT, CTBP1, CXCL5, CYP2D6, DLL1, DUSP7, ENTPD6, EPHA1, EPHA4, FUT6, FUT8, GADD45B, GCNT4, GPT2, GSTA5, HCST, HMGCR, HPSE2, IFNK, INADL, JAM2, KAT2B, LAP3, MAP3K4, MFNG, MPDZ, NT5C2, OR3A3, OR4F15, OR51F1, OR52A5, OR52B6, OR52E6, OR5AK2, OR6C6, OR6K3, OR8H3, ORC5L, P2RX5, PANK1, PCCB, PDGFRA, PGK1, PHKB, PIGW, PIK3C2G, POLD1, PPBP, PRKCH, PTCH2, PTGFR, QARS, RASSF1, RPS6KA1, SGPP1, SHC3, SMAD5, SMAD9, SOCS4, SRGAP1, SSX2IP, STX3, TALDO1, TAS2R13, TAS2R14, TAS2R4, THBS4, TLR2, TPMT, WEE1, WIF1, ST6GALNAC1, TNFRSF6B
Negative_11636	CSK, EZR, FOS, MSN, RET, SYK, ACOX3, ADCY3, ALDH9A1, ALG12, ATIC, BLVRB, CD74, CTSB, CXCL12, DEGS1, DGKD, FABP1, FADS2, FCGR2B, FGFR3, FRAT2, GAS1, GGPS1, GNAS, HIBADH, ICAM1, IDH1, IDH3G, L1CAM, LTBP1, MAP3K5, MASP2, MNX1, NFATC4, NUDT12, OR1N2, OR2M7, OR2T34, OR4D6, OR51S1, OR5AK2, PGS1, PIM1, PLAUR, PPAP2C, PRKAR1B, SETDB2, SKP1, SLC27A5, SNAI2, SNAP25, SOCS3, ST3GAL5, STX1A, TGFA, THTPA, VKORC1, PAFAH1B3, TNFRSF10C
Negative_11637	AMT, CFH, CFI, IL7, MYC, NF1, RDX, SMO, AASS, ABP1, ACOX2, AMPD1, ARPC1B, ARPC5L, ATP2A1, B4GALT7, CAMKK2, CD36, CHEK1, CHIT1, CHKA, CLCF1, CNDP1, CYP11A1, CYP2C18, CYP2E1, CYP7A1, DAD1, DGKE, DHCR24, DOLPP1, ENPP2, ENTPD1, EVI1, FRAT2, GANAB, GJD2, GLO1, GP1BB, ICOSLG, IFNA6, IKBK, IL7R, INPP5A, ITGA1, ITGB1, LCMT2, MAPK11, MAT2B, MGST2, MTMR2, NAGK, NCKAP1L, NEGR1, NFATC1, NLGN3, OR1L6, OR5AR1, OR5B17, OR8D4, P2RX4, POLR2J, PPARD, RBPJL, RHOA, SEMA4F, SHMT2, SOCS3, SPAM1, SULT1A1, TAS2R14, THBS4, TKTL2, TLN2, TLR9, TRAF3, TSNARE1, UPRT, UROC1, WNT5A, MAPK8IP3
Negative_11638	DAO, FER, FOS, MET, MPZ, MSN, MYC, AANAT, AARS2, ACSS1, ACTC1, ACTN1, ADCY5, AGRP, ALG6, ALPPL2, ANPEP, ATP5L, B3GNT3, BCAR1, CACNG8, CAMK2B, CAMK2G, CARS, CCL2, CD3E, CD47, CDC20, CERK, CFL1, CLCA4, CLDN14, COX4A2, CREB1, CREBBP, DAXX, DPYD, EFNA4, ENTPD5, ESPL1, FGF23, GALNT2, GALNT3, GNPDA2, GNRHR, GRIN1, GSTP1, HBEGF, HLA-DOB, HLA-DG, HMGCL, HPSE, IGSF5, IL18, IL6ST, IRF9, ITGAM, LTB4R2, LYPLA1, MAFA, MAN1C1, MCCC2, METTL2B, NUMBL, OR11H6, OR1J2, OR2AE1, OR2C1, OR51G2, OR52I1, P2RX4, PHKA1, PHKG2, PIGF, PIGM, PLA2G2F, PLAT, PLCB4, PPARG, PPP2R2C, PRPH2, PTPRR, SHC1, SMARCA5, STX12, TJP1, ULBP3, ULK3, VKORC1, WBSR22, ZIC2, PPARGC1A
Negative_11639	A2M, C9, CBS, GSN, ID2, ITK, IVD, PTS, SP1, ACAD8, ACOX2, AFMID, ANPEP, AXIN1, CADM3, CBR3, CCKBR, CCNA2, CD59, CLDN3, CTNND1, CYP2A7, CYP8B1, DRD5, EFNA3, EPHA4, FADS2, FCGR3B, FZD2, IDI2, IL18R1, IL28A, IL2RG, IQGAP3, IRAK1, LAMC3, MPDZ, MRAS, NFX1, NTF3, OR2C1, OR3A3, OR4K5, OR4P4, OR51F2, OR5K2, OR7G3, P2RX6, PDXK, PIAS2, PIM2, PNMT, PRNP, SESN3, SETD2, SLC2A2, SRD5A2, STK3, TCIRG1, THBS3, TLR5, TRPC1, WEE1, WHSC1L1, YARS2, MAPK8IP1
Negative_11640	C8A, CEL, F5, GNS, GPI, HPD, MIF, UBC, ABI2, ADH7, ADSL, AHCY, ALDH3A2, ALOX15, ANAPC7, AVPR1B, BMP5, C4BPB, C5AR1, CACNA1G, CCL11, CCL7, CCND1, CDC45L, CDIPT, CLDN5, CLTB, CNGA4, CPT1A, CSNK2B, CYBB, DAPK3, DEGS2, DGKI, EPHB1, GLI2, HMBS, IDH2, IFNA8, IL4R, IRF5, KIR2DS4, MAN1C1, MAP3K4, MAPK14, MMP14, NAT2, NCK2, OR10A7, OR10R2, OR13J1, OR51A2, OR51M1, OR56A1, OR6C6, OR8H3, PARD3, PDE4B, PIAS1, PIGB, PLCZ1, PLXNA1, PNMT, PPARD, PRKCD, RBL1, SEPHS1, SFRP2, SMAD6, SSH1, ST3GAL5, STAT2, STK36, SUCLG1, TAS2R14, TUBB3, VDAC2, VTI1A, WNT1, YWHAB, MAPK8IP1

Negative_11641	ABO, F3, GNE, ACADVL, ACO2, ACTA2, ADCY1, ADCY6, ADH6, ALG5, ARHGEF2, ASPA, ATP4B, BCL2, BPGM, CACNA1S, CCL13, CD79A, CIITA, COX15, CSNK1G2, CYP26B1, DKK1, EGFR, FUT8, GMPR, IDI2, IRAK3, ITGA1, KDSR, LIMK2, M AGI3, MAP2K7, MAP3K1, MAP3K6, NRCAM, OCLN, OLR1, OR10A3, OR13C8, OR2 L13, OR4D5, OR52H1, OR52K1, OR52W1, OR5D13, OR6C74, OR6C75, PANK3, P ARD6A, PEMT, PGK1, PRKAA1, PRKX, PYCRL, RAD51, RBX1, RXRB, SCD5, SELL , SKIV2L2, SOAT2, ST3GAL5, ST6GAL1, ST8SIA5, SULT1A2, UNC5A, ATP6V1 G2, MAPK8IP3, TNFRSF10A
Negative_11642	GNS, HDC, TNC, ACSL3, ADCY4, AGMAT, AGXT, AMHR2, APH1A, ARHGAP5, ATP5 G2, C1QC, CCNE2, CD79A, CDC26, CFTR, CLDN10, CLDN14, CMPK1, COL6A1, D USP5, EHHADH, ENTPD8, GALNT11, GLS2, GNRHR, GRIA1, GRIN2A, INMT, LAM B4, LIPG, LRP5, MAN1A2, MAP3K3, MYH14, NCKAP1L, NFKB1, NMNAT1, NOS1, NOTCH1, NT5C1A, OR13D1, OR4D6, OR51G1, OR8U1, PFKL, PIGN, PIK3CB, PN PT1, PTGES2, PTGFR, SEMA3G, SLC25A4, SPHK1, ST8SIA1, TUBB4, WASF1, W ASF3, C1GALT1C1, CACNA2D2, PAFAH1B2, ST6GALNAC1, TNFRSF12A, TNFRS F17
Negative_11643	ATM, C1S, CRH, INS, OSM, RB1, UBC, AGPAT2, ALDOB, ATP5L, AVPR1B, B3GAL T6, B4GALT4, BMPR1B, CACNA1D, CANT1, CCKBR, CD38, CDC27, CHIA, CHRM3 , CHRNA7, CMAS, CNGA3, CSNK2A2, CX3CL1, CXCL3, CYP21A2, CYP2U1, EPHB 4, FARS2, FASN, FCGR2B, GCDH, GFPT1, GLS2, GNAQ, GTSE1, GZMA, HLCS, IF NAR1, IL1B, IL21, IL25, LAMC2, LHCGR, LIPA, MAD2L1, MAP4K1, MGST1, MM P14, MYH4, MYH7, NCF2, NFKBIE, OR2C3, OR2L8, OR5R1, OR6C76, OR8A1, PA NK1, PARVG, PDGFC, PHKA2, PIGC, PIGK, PPAT, PRKAB1, PRKCI, PSME1, PTD SS1, RALA, SELP, SEMA4G, SLC25A5, SLC25A6, SMPD3, THBS3, TYK2, WNT16 , WNT2B, ZIC2
Negative_11644	BTC, C5, CP, LSS, SFN, ZYX, ACOT12, ACSL5, ACSM2A, ACSS1, ACTA1, ADRA1 D, ADRB2, APAF1, APBB1, ATIC, CCNB2, CCR4, CCR6, CD44, CLCA4, CMAS, CO MT, CTBP2, CYP2C9, DGAT2, DHDDS, DNMT3L, DTX3, DUSP5, EREG, FASLG, FE CH, FGD3, GAB1, GLO1, HPSE2, HSD17B8, HSPA8, HSPB1, IFNA7, INSR, L1CA M, LCMT1, LYPLA2, MDM2, METTL6, MGAT4B, MGST2, MITF, NAT1, NFX1, NKD1 , NRG4, NT5C1B, OR10H1, OR11H6, OR1A1, OR2B2, OR4A15, OR4N2, OR5A2, O R8A1, PAFAH2, PDE6D, PDX1, PISD, PLTP, PNLIP, PPM1A, PPP1CC, PPP2R2A , PRKCE, PYGB, RARS, RASA2, SELL, SETD1B, SV2B, TACR2, TGFB1, TNFSF18 , TRAF3, UBA1, UGT2B17, VDAC1, XYLT2, HLA-DRB3, TNFRSF14
Negative_11645	AGK, AR, CKB, DLD, ANGPTL4, ATG12, B3GAT1, BCKDHB, BDH1, BLVRB, BMP4, BST1, CAMKK2, CAV2, CCL11, CCL19, CCL27, COX10, CREB5, CTF1, CYP2B6, DHCR24, EHMT2, ENO2, GFAP, GOT1, HAGHL, HGSNAT, IL25, INPP5E, ITGAX, LEFTY1, MCEE, MGLL, NCOR2, NFKB1, NFYA, OR10J1, OR11H6, OR12D3, OR13 C4, OR1L8, OR2M4, OR2T8, OR4A15, OR51M1, OR52N1, OR5K2, OR6M1, ORC5L , PAK1, PCK2, PDE1C, PDE9A, PGS1, PIK3CA, PLA2G3, PLOD1, PMM2, PPP2R5 C, PRKCD, RAC1, RDH10, SEMA3D, SMAD5, SMPD1, SOD1, SRD5A2, TAS2R40, T GFA, TNFSF12, UBA7, HSP90AA1, TNFRSF1B
Negative_11646	AK7, C8G, CGN, F8, FH, GLA, HAL, LEP, AARS2, ACAD8, ACOT11, ADRA1D, ALD H3A1, ALPP, AOX1, B3GALT4, BIRC3, BNIP1, CCR5, CD99, CISH, CLCA4, COL 11A1, CTBP2, CTS1, CXCR4, CYP21A2, CYP4F3, DTYMK, EFN3, FCGR2B, FG D3, FGFR3, FOXO3, GGT5, GNAQ, GNAZ, GNG3, GRB2, GRIA1, IARS2, IL29, IL 2RG, KNG1, LAMA3, LCMT1, LIPE, LIPG, LIPT1, MEF2C, MGAM, MINPP1, MYH7 B, NADSYN1, NCF1, NCF2, NFKB1, NT5C, NUMBL, OR10H4, OR13C4, OR1A2, OR 2AG1, OR4K15, OR5D14, OR5D16, OR5H2, OR6S1, OR7A5, ORC3L, PFKFB2, PI GM, PLA2G10, POLR2L, POLR3G, PPBP, PPOX, PPP1CB, PPP2R5E, PRKCZ, RAL B, SFRP4, STAT4, SUV39H1, TAS2R4, TP73, TPH2, UCKL1, VARS, VASP, WARS 2, YOD1, CACNA2D3, PLA2G12A, TNFRSF1A

Negative_11647	AMH, JUP, LYN, NGF, SCD, TXK, ACSL6, ADCY5, AGPAT2, AKR1B10, ALG2, AMD1, ATP4B, B3GNT4, BMP2, BMP8B, CBR1, CCKBR, CCL7, CSNK1G3, CYP11A1, CYP3A4, DDIT3, DGKE, DHRS9, DNMT3A, DUSP4, EFNA1, FGF3, FLOT1, FMO5, GAL3ST1, GALNT14, GGCX, GNAQ, GSTP1, H6PD, IARS, IL11RA, ITGAL, JAM2, MAP2K3, MAP3K5, MAPK7, MYL7, NAT1, NT5C, OR10AD1, OR2T34, OR2T4, OR2Y1, OR51D1, OR6C74, OR6Y1, OR9A2, PAX8, PDE7B, PDE9A, PER1, PERP, PLAT, PLCE1, PPP3R2, PRKCD, RDH10, RPIA, SARS2, SGPP1, SLIT1, SOAT1, SRGAP3, TPH1, TUBB4Q, UCK1, WASF1, YWHAG, PPP1R12A, SERPINA5, TNFRSF11A, TNFRSF13B
Negative_11648	GK, GLA, HGD, LEP, LYN, NPL, PXN, AASDH, ACACB, AKR1C3, AKT1, ASAH1, BTRC, CDC25C, CDC27, CLCF1, CLDN16, CLDN5, COL5A3, CXCR6, CYP2A7, DPYD, ETNK2, FOSL1, FRAP1, FUT8, GPX5, GRHR, GRIN2D, HRAS, HSD3B1, IFNB1, IFNW1, IKBKG, IL10RB, IL22, IQGAP3, JAG1, KAT2A, LCMT2, MGST3, MOV10L1, MYH10, NAGS, NANP, NCF1, OR10Z1, OR2AT4, OR2M5, OR2T11, OR4D2, OR56B4, OR6N2, OR8B12, OR8D4, PDE8A, PDGFD, PER1, PIK3R4, PIP4K2C, PKLR, PNLIP, PPBP, PPP3CB, PSME3, PTCH2, PTDSS1, PTPRZ1, RHOD, SARS2, SGM5, SOX17, SRGAP1, SSH1, STAT2, TAP1, TM7SF2, YOD1
Negative_11649	C4B, CKB, HGF, HPD, ACAT2, ACOX1, ADCY4, ATP5B, BMP7, BNIP1, CACNB2, CCL23, CCR3, CDKN2C, CLDN2, CX3CL1, CXCR4, CYP26B1, DBF4, E2F4, EFN2, FARP2, FBXW11, FGF19, FM01, FPGS, GALNT14, GALNT3, ICOS, IDI1, IL11, IL20RA, IL21R, JAK1, LPAR1, MAP2K5, MAP3K5, MMP9, NUMBL, OR10G9, OR4A15, OR4S1, OR7C1, OR7C2, PDGFC, PFN3, PIGT, POLD2, POLR2K, PON2, PPCDC, PPP3R2, PSENE1, PSME2, PTPRZ1, ROBO2, RPE65, SELL, SFRP4, SNAP25, STAT6, SUCLG1, TUBA3C, YWHAQ
Negative_11650	AK3, ID2, IL9, MAX, RB1, SCD, ABLIM2, ACTA2, AQP7, ARPC1B, AXIN2, CD19, CDH4, CLDN9, CLTB, CSF2RB, CTSS, CXCL12, CXCL6, CYP2A7, DHRS4L2, FDPS, GNAL, HIBCH, IL18R1, IL1A, ITGA5, MAP3K3, NAMPT, NEU4, NOTCH2, OR2B6, OR2F2, OR3A1, OR51I1, OR51L1, OR5T3, OR7G1, PDE1C, PDPK1, PLXNB1, PTPRZ1, SEMA4A, SFRP5, TAS2R5, THBS4, TJP2, TSC2, YWHAG, YWHAQ
Negative_11651	BTK, C3, CAD, NOG, NPL, ADCY2, ADIPOR1, ADIPOR2, ANPEP, BTRC, CACNG3, CBR1, CCND1, CCR1, CD226, CD46, CNGA4, CREB3L1, FDPS, FECH, GALNT5, GART, GGT6, GNB3, GOT1, GTSE1, GUK1, HGSNAT, HRH2, ICOSLG, IRF5, LARS, LIMK1, MAP3K3, MGST3, NAT5, NCAM1, OCRL, OR13A1, OR13C8, OR4X2, OR5I1, OR8I2, PDE3A, PIGM, PIPOX, PLA1A, PLCZ1, POLR2J, PRKAG2, PRKCH, RAPGEF1, RND1, SETD2, SHC2, STX18, SUCLG1, SULT1A1, TAS2R3, VAV2, ATP6VOA2
Negative_11652	CRH, IL6, LEP, NGF, OAT, PAH, RDX, A4GALT, ACAD8, ACO1, ADRB1, AGPAT1, AHCY, ALOX15, AMDHD1, APOA2, ATG12, ATIC, ATP5G1, BMP7, BPNT1, CCL13, CCL22, CDC45L, CDH5, CNDP1, CREB3L2, CXCL3, CYBA, CYFIP2, CYP17A1, CYP2C18, DCTD, DLL4, DNMT3L, ECHS1, ENO3, ENPP6, FBP2, FSHB, FUT2, FUT3, GAB1, GLDC, GNA12, GUK1, HNMT, IBSF, IL11RA, IL13RA2, IL15, IL19, IL22, IL5RA, INPP1, IRAK1, ITGAX, ITGB2, JAM2, MYH3, NCK2, NEUROG3, NFATC3, NMNAT3, OR10K1, OR1A1, OR4D6, OR51F2, OR5A2, OR5AS1, OR5B17, OR5J2, OR8B8, OXCT1, PDHA1, PDHA2, PFAS, PGK1, PHGDH, PPCDC, PPP3R2, RASA2, RUNX1T1, SAT2, SETD8, SLC27A1, SRGAP3, STAT2, SV2A, UGT2B28, UGT2B4, UROD, VARS, WNT5A, YES1, CACNA2D3, MAPKAPK5



Negative_11653	C4B, CGN, DBH, FES, GPI, HGF, IL7, NNT, TNN, ACOX1, ACTG2, ALDH1A2, ALD H7A1, ALPPL2, ATG3, BMPR1B, BUB1B, C1GALT1, CAMK2G, CANT1, CCL5, CDI PT, CHIA, CLDN10, CNGB1, CYFIP2, CYP26C1, CYP2B6, DUSP5, GCNT3, GLUD 2, GNPDA2, GPD1L, GRIA3, HTR6, IL10RB, IL12RB1, IL8RB, ITPKB, KCNQ1, LAMC3, LILRB3, LRP5, MNX1, MPDZ, OGDH, OR10G7, OR1D2, OR2F2, OR51G2, OR56A1, OR5A2, OR9K2, PAX4, PDE6D, PDE6H, PDX1, PFN4, PLXNB2, PMM2, P OLE3, POLE4, POLR2L, PRPS2, PTPN1, RGS3, RPS6KB1, SELE, SEMA3A, SEMA 3F, SGMS1, SLIT1, SOCS3, STX12, TSTA3, TYMP, VAV1, VEGFB, VTI1A, C1GA LT1C1, GABARAPL1, ST6GALNAC6, TNFRSF13C
Negative_11654	FST, GGH, ID1, NPY, TK2, TXK, ACADSB, ACOT11, ACSM2A, AGMAT, AGPAT1, A LOX12B, B3GNT3, BAI1, CACNB3, CCL8, CCND1, CDK7, CLCF1, CLDN14, CLOC K, CTPS, CTSL1, CXCL2, ECHS1, GALNT12, GALNT9, GATM, GOT2, GSTA1, GUC Y1B3, HIP1, HNF4A, HRAS, ICAM3, INSR, JAK1, MAP4K3, NMNAT2, OR10Z1, OR14C36, OR1C1, OR1Q1, OR2A14, OR2B2, OR2M4, OR4K5, ORC3L, PDGFB, PI 4KA, PIP4K2B, PLOD1, POLR1A, PON2, PRKG1, PTGES, PTGIS, RIPK1, SARDH , SLIT1, SPRY2, STX7, TAS2R5, THBS1, TNXB, ULBP3, ARHGEF12, HLA-DQA2
Negative_11655	GSR, HK3, NLK, OSM, PGP, ADORA2A, AGXT2, APBB1, ARG1, ATF4, BET1, BIRC 5, CAMKK1, CDC14B, CLDN3, COQ7, CPT1A, CTBS, CYP2U1, DARS2, EPHA3, EV I1, FBP2, FIGF, FMO4, FZD8, GCLM, GLO1, GYS1, HIBCH, IFNA5, IL6ST, KAT 2B, KCNB1, KCNJ11, LPAR1, MAPK10, MCAT, MKNK2, MYH9, MYLK, NNMT, OCLN , OR10G3, OR10G9, OR10J3, OR10X1, OR9A4, PDE4D, PERP, PFKP, PFN4, PHK G2, PIGM, PIK3R5, PIM2, PLCG1, POLR2L, PORCN, PPAP2C, PPP1R1A, PPP2C A, PPP2R2D, PRDX6, PTPRZ1, RASGRP3, ROBO1, RPS6KA4, RPSA, SARS2, SCL Y, SPAM1, SPTLC2, ST3GAL6, STEAP3, SUCLG1, SYNJ2, TGFBR1, TIAM2, TP7 3, TPI1, VCAM1, WASL, YES1, YWHAQ, SERPING1
Negative_11656	BAD, CFD, FER, ACP1, ACSM3, ALDH2, ALDH3A2, ALG5, ATG12, BACE1, CACNA 1G, CAMK2B, CD40, CSNK1G2, CXCL1, CYFIP2, CYP3A4, FOSL1, FRAT1, GMPP A, GNG13, GRM5, GSTA5, HRH1, HTR7, IL19, LLGL2, LTB4R2, MTHFR, OR4K17 , OR5T1, OR6C3, OR8J3, PAK4, PAK7, PDGFC, PIGT, POLR2A, POLR2G, PPAP2 C, PRKACG, PRKAG2, PTK2, PTPN11, PTPN5, SIPA1, SMPD2, SMPD3, SNAP23, TOMM40, TUBA4A, WNT10A, HLA-DQB1
Negative_11657	C7, FER, ID2, ACADVL, ACP, ACSS3, ALAS1, ARSE, BAIAP2, BMP6, CACNB4, CAMKK2, CLDN5, CREBBP, CTNNA1, DIAPH2, EPHA3, ETNK1, FDFT1, FGF8, FO XO3, GBA3, GLUD1, GNAO1, GNRH2, GUCY2D, HAO2, HHIP, HIBADH, HSD3B2, I DH3B, IFNA16, LLGL1, MAP3K12, MAP4K3, MAPK1, MAPK8, MGAT2, NAT5, NCK AP1L, NME7, OR13G1, OR2T11, OR4C16, OR4D2, OR4F5, OR51D1, OR51F1, OR 52N5, OR5T3, OR7G1, PANK4, PDE10A, PPAP2C, PSAT1, PTPMT1, RAC3, RALA , RBL2, RXRG, SHC2, SIPA1, SLIT1, STX1A, TJP2, TYROBP, YWHAZ, B3GALNT 1, ST6GALNAC6, TNFRSF11A
Negative_11658	GDA, MAG, MIF, RB1, SCD, ACSM5, AGPAT1, AMY2B, ATP5I, ATP6V1A, BCKDHB , BCL10, BHMT, BUB1, C5AR1, CCL14, CCL24, CCNE1, CD22, CER1, COL5A2, C REB1, CYP2B6, DARS2, DHRS4, DNMT3A, E2F1, EFNA5, ERO1L, FGD3, GALNTL 2, GARS, GMPPA, GUCA1C, HCCS, HLA- DRA, HPSE, HTR7, ITGA3, ITGB2, ITGB3, LAP3, LARS2, LEPR, MAML2, MAN1A 1, MGAT5, MGST2, MPZL1, MYH8, NAGLU, NPR1, NR4A1, NUDT5, OR10A7, OR1D 2, OR1L3, OR2AT4, OR2S2, OR51A7, OR52W1, OR8H2, OR9Q2, PDGFRA, PERP, PIGO, PITX2, PKMYT1, PLA2G2F, PLCB2, PPP3CA, PRSS3, PTEN, RAF1, RALB P1, RXRA, SEMA3B, SEMA3G, SFRP2, SUCLA2, SUFU, TBXAS1, TNFRSF8, TNFS F9, TUBB4, VTI1A, YOD1, ATP6V1E1, MAPKAPK3
Negative_11659	AGL, AUH, EDA, JUN, MYC, SCD, ACTG2, AGRN, ARPC5, CDH1, CHIA, CYP2D6, D TX1, EARS2, ELK1, EPHA5, EPHA7, EPHX2, EVI1, FLT3LG, FMO1, FUT8, GNAI 2, GSTZ1, HADHB, IL1R2, IL7R, JAG2, JAK1, KCNB1, MAML3, MCM4, MGAT1, M TMR6, NFASC, NR5A2, ODC1, OR51F2, OR51V1, PCYT1A, PLTP, PPP2R2D, PRI M2, ROCK2, SC5DL, SFRP2, SHMT1, UPP2, HLA-DQA2, HLA-DRB3, SERPINC1

Negative_11660	C5, CD2, DCK, LCK, AACS, ACACB, ACMSD, ALAD, ALG12, APH1A, ATP2A1, BCL2, BUB3, CASP9, CD34, CDC7, CDK5, CFL1, CSNK1G1, CXCL6, DOCK1, DUSP4, ENAH, ENO2, ENPP2, ENTPD7, ERO1L, FGF7, GJD2, GUCA1C, HSP90B1, IFNA8, IKBKE, IL13RA1, ITGA6, MAPK8, MAPK9, MGAT1, NEFM, OR51A4, OR52N4, OR5AR1, PAK4, PDCD1, PGAP1, PHKB, PIK3CG, PIP5K3, PIPOX, PLAU, PLXNC1, PORCN, PRSS1, PSENE1, PSME2, RAP1A, RRM2B, RXRG, SEMA3F, SEMA4D, SEMA4F, SPRY3, SV2C, UBA7, VAV3, WNT5B, YWHAG, MAPKAPK3, SERPINA1
Negative_11661	AK7, HK2, LCT, MVK, PRL, TEC, ACSM4, AHCYL1, ALPPL2, ARHGEF1, AVPR1B, CACNB1, CASP3, CDH4, CLDN7, CNGA3, CXCL1, CYP26B1, CYP2C9, DRD5, EFN B2, ENTPD2, EPB41L3, EXT1, EXTL1, FARP2, FBP2, FGF20, FGF22, GSTA3, HMGCS2, HNF4G, IL2ORA, IMPDH2, LIPF, METTL6, NPR2, NRP1, NUMB, ODC1, OR13A1, OR4C12, OR52W1, OR6C6, PARD6B, PDGFRB, PLOD1, POLR1D, POLR2F, POLR2K, PRKACG, PRKG1, PRPS1, PSENE1, RAD51, RAF1, RALBP1, SENP2, S GMS1, SOCS1, SUCLG2, TAS2R3, THY1, TNFRSF9, TRAF4, WNT4, ATP6VOE1, MAPKAPK2, ST6GALNAC5, TNFRSF18
Negative_11662	A2M, TAT, AGRN, AKR1C4, ALPPL2, ATG3, BACE2, CCND1, CCND2, CHRM2, CREB3L1, CREB5, CSNK2B, DCTD, EFNA5, EXT2, FCGR3A, FZD9, GZMA, HEXA, HMGCS1, ICAM1, ICAM3, IL4R, KIR2DL2, LAP3, LCMT1, NAMPT, NAT2, OR10G9, OR10K1, OR1L3, OR2A25, OR2AG2, OR2S2, PARVB, PNLIP, POMC, PPP1R3C, RAB23, RAC3, ROCK1, SNW1, SPRED2, SSH1, TAP2, TJP3, WNT5B, XIAP, ZFYVE16, MAPK8IP3
Negative_11663	C8A, CFH, GNS, GP9, LYN, NPL, SFN, AADAT, ALDH1L1, ALDH9A1, ARNT2, C1QA, CACNB2, CAMK2D, CCL27, CDC25A, CDK2, CHPT1, CHSY1, CTNND1, CYP2C18, CYP2E1, CYP4A22, DAPK3, EFNA5, ELK1, EP300, FGF12, FGF4, FGFR3, FUT9, GART, HLA-G, HSD17B2, HTR2C, IL23A, IL5RA, IL6R, IRF5, KIR2DL4, LAMB3, LEFTY1, MAGI3, MAP4K3, MAPK14, MAPT, MDM4, MYH4, MYL5, NR4A1, NUDT12, OR10G4, OR10K1, OR2D2, OR2T11, OR3A2, OR4A5, OR4N2, OR51B2, OR51I2, OR52E2, OR5D14, OR5I1, OR8B4, OR8K5, PDE9A, PDK1, PGAM1, PIK3R3, PIK3R4, PLTP, PLXNA2, PPAT, PPP1R3A, PPP3CB, ROBO1, SCP2, SEMA3B, SEPHS1, SHC2, SRGAP1, STX10, TAS2R10, TAS2R16, TCIRG1, TPI1, TRMT11, TYMP, ULK1, VAMP1, WNT5B, XYLT2, YKT6, MAPKAPK2
Negative_11664	ADC, AGL, ATM, C5, CKM, HDC, ID3, ILK, INS, ACAD9, ACMSD, ADAM10, AOX1, ARPC2, ATP5C1, ATP5J2, BUB1, CACNA1E, CCKBR, CCL3, CREB1, CSF2RB, CTSG, DFFA, DNMT3B, EDNRB, FBP2, FGF3, FGF9, FTCD, GLO1, GMPR2, GNAI2, GPAA1, GPX7, HNF4G, HSD11B2, IGSF5, IL17A, KLK3, MAP3K5, MS4A2, NANS, NT5E, NTF3, OR13J1, OR2M7, OR4F4, OR4F6, OR51G2, OR51S1, OR5D13, OR5I1, OR8K5, PANK2, PDE4D, PDE7A, PDXP, PLOD3, POLR2C, PPP2R2B, PPP2R5C, PYCR1, RASSF1, ROCK2, SLC12A2, TCF7L1, TFPI, TICAM2, TNFSF8, TNXB, TPMT, TRAF4, VTI1B, WASF3, ST6GALNAC6, TNFRSF1A
Negative_11665	BTC, MTR, PVR, RET, TH, ADAM10, ADCY2, ADRA1A, AGPAT3, ALG13, B3GNT2, CAPN2, CCNH, CD80, COL4A2, CRY1, CYP11A1, CYP2A13, DAAM1, DAPK3, DARS, DLAT, DPM2, DVL3, ECHS1, EFNA5, ENO2, ENPP6, FGFR1, G6PC, GRB2, GRIA3, GRIN2C, HADH, IL10, IL1R1, ITGAD, KIR2DL1, KITLG, MAPT, MECR, MYH7, MYH7B, NAT2, NFATC3, NFKBIE, NT5C3, NT5M, NUDT9, OLR1, OR10A3, OR13G1, OR1L6, OR2D3, OR2Z1, OR4N2, OR6N2, OR8A1, OR9A4, PDE10A, PIK3C2B, PIK3R1, PLAU, PLK1, PLOD3, PLXNA2, PRKAB1, PTPN11, SFRP2, SHISA5, ST3GAL1, STAT2, SULT1A2, SUV39H2, TGFB2, THBS3, TSNARE1, UROD, WEE1, ATP6VOA4, TNFRSF6B

Negative_11666	C8B, CS, GP9, HDC, MAG, ABLIM2, ABLIM3, ADCY2, AGXT, AOC3, ARPC1A, BCL10, BMP8A, BPGM, CACNA1C, CALML6, CCL5, CCNG2, CDC14A, CDK4, CFL1, CHUK, CKMT2, CREB3, CYP27A1, DDX18, DDX51, DEGS2, DERA, DLL1, EFNA1, EFNB2, EVI1, FZD4, FZR1, GALT, GDE1, GGT6, GLUL, GMPR2, GNPAT1, GNRH2, GP1BB, GRIN2C, GSTP1, GUCY2D, HNF4A, HSP90B1, IL2RG, INHBA, INSR, ITGA3, ITGA4, LAMB2, MYLK2, NAT5, NEU1, OLAH, OR10J5, OR13C9, OR11I1, OR2L3, OR2T29, OR4X1, OR5AR1, OR5T3, OR6C76, OR6F1, PAX4, PDE3A, PDE4B, PIGS, PLOD3, RAP1A, RAPGEF2, RDH5, RHEB, RPS6KA3, SAT1, STX1A, STX6, TBK1, TFDP1, UGT2B17, UPRT, VASP, WHSC1, CACNA2D2, TNFRSF11B, TNFRSF12A
Negative_11667	C8B, CD2, F3, F7, FER, GSN, TNR, AADAC, ACP6, ADCY10, AHCYL2, AKR1D1, ALG11, ATP5C1, BCKDHA, BMP6, BMP8A, CAMK2D, CCKBR, CDK4, CHIA, CLDN11, CLDN14, CLDN20, COQ7, CREB3, CSNK1A1, CYBB, CYCS, DDB2, DHCR7, EDNRB, EHMT2, EI24, ENTPD4, ENTPD5, EXTL2, FGFR4, GAMT, GCLC, GRB2, GSK3B, GUK1, HHEX, HIBCH, IDH3G, IFNK, INPP1, INPP5A, KIR3DL1, KLRC4, LCP2, LIFR, MAP4K3, MAPK10, MCM4, NSD1, NTF3, NTN1, OR10J1, OR10V1, OR1L3, OR2A2, OR4C11, OR51V1, OR52B4, OR52E6, OR52L1, OR5D14, OR8B4, OR9A4, PDGFA, PDXP, PGAM1, PGAP1, PGM1, PIGA, PIK3CG, PLA2G2D, POLE3, POLR2K, POMC, PON3, PROC, PSME2, RBKS, RHOQ, RPN1, RPS6KA4, SDHA, SFRP4, SSH3, ST3GAL6, TAS2R50, TNFSF4, TSHR, WHSC1, ATP6V1C1
Negative_11668	A2M, LCT, ACAA1, ACSM1, ALDOA, B3GAT3, BBOX1, CACNB3, CARD11, CCL1, CNB2, CD14, CHST11, CISH, COL11A1, CTLA4, FBP1, GALNT9, GCDH, GDF7, GSTT1, HYAL1, IL7R, INHBA, IRAK4, LIPT1, MAP3K2, OR1E1, OR4K1, OR51I1, OR52W1, OR5D13, OR8J1, PDE8B, PPP2R5E, PROS1, RFX5, RPS6KA1, RPS6KB1, SEPHS1, SETD1A, SETD7, SFRP4, SHMT1, SLC27A1, SOCS2, SOCS3, SPRED2, SPTLC2, SV2C, SYNJ2, TCF7L1, TGFBR1, UPP2, WNT3, ATP6V1G3
Negative_11669	BTC, CSK, DBI, HPD, ME1, SDS, ADCY8, ADRA1D, ALDH3B1, ARPC2, ATP6AP1, BPGM, CACNG1, CDC14A, CLCF1, CNDP1, CSNK1E, CX3CR1, DCXR, DIAPH1, ENPP7, EPHB3, GALNT11, GALNT2, GRPR, HLA-DRA, IL12B, IL1B, JAG2, KCNJ11, KIR3DL3, LEF1, MAD1L1, MGAM, MGST1, NEU3, NFYC, NKX2-2, OR52E2, OR6C76, OR8J3, PARVG, PDE2A, PDE5A, PLOD1, PSENN, RPN2, RAS, SEMA3F, SHMT2, SNW1, STX8, TAS1R3, TLN2, TNXB, TYMP, WNT10B, WNT5B, PRICKLE2, ST6GALNAC3
Negative_11670	HYI, IL5, KMO, PGP, TEC, ACLY, AGPAT3, AK3L1, AKR1A1, ANAPC11, ARPC4, ARRB1, B4GALT1, BACE1, BMPR1B, CACNA1E, CASP9, CCL7, CCNG2, CDKN2C, CLCA2, CMAS, CNDP1, CNGA4, CNTNAP2, CTSG, CYFIP1, CYP7A1, DMGDH, DUSP1, FABP1, GGT6, GLI1, GNAQ, GNG3, GPAA1, HSD3B2, ICAM2, IFNK, IGSF5, INSRR, IQGAP3, ITGAD, JAK1, JAK2, KNG1, LAMB1, LRP6, MAD1L1, MAT1A, MGST3, NRG1, NRG4, OR10H1, OR2F2, OR2H1, OR4C16, OR51A4, PAK7, PANK4, PCYT1A, PDE3B, PDE6D, PDE6G, PIK3C2B, PIK3CG, PIP4K2A, PLK1, PPA2, PPCDC, PRPH2, PTPN11, RAP1B, RAPGEF1, RPS6KA5, SARDH, SLIT1, SOCS4, ST3GAL6, TGFB2, THBS1, THPA, TRMT11, TRPC1, TSTA3, UGT2B28, WIF1, KIR2DL5A
Negative_11671	CD6, F7, ME1, PC, SI, ACYP2, ALG9, ARSE, CAMKK2, CCL27, CDKN2D, CLDN11, CLTB, CYP2F1, DCXR, DDOST, DHFR, DHRS3, DTX1, DUSP7, DVL3, EFNB3, FAR2, FGF19, FGF8, FUT5, FZD10, G6PC2, GANC, GRIN1, GYS1, HCCS, HTR2A, IL20RB, IL22RA2, ITGA10, ITGAM, ITGB7, ITPA, LALBA, LDHD, LPAR1, MAML3, NEFH, NFKB1, NODAL, NTRK1, OPLAH, OR11H1, OR2B6, OR51D1, OR52A5, OR52N4, OR52N5, OR6B3, OR7A5, PARVG, PLCE1, PLEKHA8, PPA2, PTGES2, RARS2, RERE, ROBO2, RUNX1, SPTLC1, ST6GAL1, STK4, STT3B, TAS2R9, TRAF5, UGDH, VAMP4, WNT2B, TNFRSF1B

Negative_11672	HGF, IHH, KHK, ZYX, AARS2, ABAT, ACAD9, AKT3, ALDH1A2, AMDHD2, ANAPC10, ANAPC4, APBB1, ATG3, ATP5G2, BDH2, BST1, BUB1, CD46, CDC20, CHEK2, COL4A4, CSF1R, CYP2C19, CYP2C9, DCXR, DOCK1, DPAGT1, EDN1, EHMT1, ENTPD2, EPHA7, ETNK2, FBP2, FGF18, FUT5, GLB1, GNA11, GPLD1, GPX5, GUCA1C, HAAO, HLA-DMA, HLCS, IL20RA, IL28A, ITGAL, ITGB4, ITPKB, LRDD, MAPK11, MMP2, MYL5, NAGA, NAT6, NCR3, NEFL, NFYC, NKX2-2, NRG3, NTF3, OR1L1, OR4X1, OR51A4, OR51I2, OR51V1, OR7A17, OR8D2, PCYT1A, PDE1A, PDXP, PHKB, PIGC, PIGQ, PIGV, PLA2G6, PPP1R3A, PRKAR1A, PRODH2, RDH5, ROBO2, RXRA, RXRG, SEMA4C, SETDB2, SH2D1B, SLC25A4, SPTLCL1, STX8, TAP2, TAS2R49, TRPM5, UGT2B28, USE1
Negative_11673	DCK, F8, GNS, WAS, ACACA, ACY3, AGXT, ATG12, ATP2A1, BLVRA, BLVRB, BMP5, BMP8B, BUB1B, C5AR1, CACNB1, CASP9, CD3E, CDC14A, CDKN2B, CES7, CHDH, CHST11, CRB3, CSH1, CTF1, CYBA, CYP1A1, DKK1, DOT1L, DUSP9, EFNA1, EGLN3, FBP1, FGF14, FGF22, FGF8, FZD5, GCLC, GSTA3, HMGCS2, IFNA7, IFNGR2, IL2RG, IMPDH2, IQGAP1, KYNU, LIFR, LIPC, MAP2K1, MAPK10, MOV10L1, NEFL, NRAS, OR12D3, OR1E1, OR4B1, OR4C16, OR51E2, OR52M1, OR52N5, OR5B12, OR5T3, ORC6L, PARD6B, PDE1A, PDHA2, PEMT, PLA2G10, POLA1, POLR3D, PPP3R2, PRKAG3, RAC1, SLC25A4, SLIT2, SNW1, SOCS1, SORBS1, SPP1, ST3GAL2, STX18, TCF7L1, TP53I3, UBA1, UGT2B7, VKORC1, MAPK8IP1
Negative_11674	FST, GSR, AARS2, ABP1, ACADL, ACADSB, ACP2, AKR1C3, APOA2, ATP5G3, ATP5L, CACNA1C, CACNA1S, CACNB3, CALML6, CAMK4, CCNE2, CCR9, CDC26, CSF2, ECSIT, EDN1, EI24, FUT9, G6PC, GALNS, GNA13, GNAI2, GPAA1, GPX5, GSTM5, HIF1A, HIP1, HNMT, IL10RB, IL18, INPP5E, LALBA, LDHC, LEPR, LYZL1, MARS, MCM2, METTL2B, NNMT, NR1D1, OR10A6, OR13C2, OR1N2, OR51B5, OR5B21, OR7G3, OR8B4, OR8K1, OXCT2, P2RX5, PDE1C, PIGW, PIPOX, PLA2G3, POLR2H, PON3, PPAP2C, PRKAB1, PRPS1, RASSF5, SEMA3A, SH2D1A, SLIT1, SMAD3, SOS2, UNC5D, VAMP3, WASF2, MAPKAPK3, TNFRSF10B
Negative_11675	CEL, FGB, LPL, MAG, MAX, OTC, AADAC, ACAA2, ACOX1, ADRB3, ARSA, ATP4A, BCL10, CACNA1S, CACNG4, CASP9, CD48, CD99, CDS2, CLDN14, CLTB, COL4A6, CTSL1, CXCL16, DHDH, DUSP10, EHMT1, ENPP3, ERBB3, FDPS, FUT6, GALNT11, GALNTL4, GDE1, GGT7, GLG1, GMPR, GMPR2, GNRH1, GTSE1, GUCA1B, HTR4, IKBKG, IQGAP2, IRAK4, ITGA7, JAG2, KLRK1, LAMA3, LCP2, MYH11, NCKAP1, NOS3, NOTCH2, NRP1, NT5C2, NTRK2, OR51B5, OR51Q1, OR5H6, OR6N2, OR8G1, OR8H3, PAK2, PAPSS1, PDE4A, PDXP, POLR2G, PPM1B, RAB23, RAPGEF1, RERE, SARDH, SDC3, SDC4, SETD8, SPCS1, SREBF1, SSX2IP, TGFBF1, TLR5, TP53, TSNARE1, TUBB4, UGT2B28, UPP1, VKORC1, WNT3A, HLA-DQB1, SUV420H2, TNFRSF10A
Negative_11676	F8, FYN, IL2, AKR1A1, CALML5, CCL19, CKMT2, CREB3L2, CYP2J2, DLL3, EDNRA, EXOC7, FABP3, GSTM2, HTR4, IFNA14, IL10RB, IL20, KLKB1, LILRB3, MAP3K12, MAP4K1, MAT2B, MCM2, MCM4, MMP7, NFAT5, NRCAM, OR1M1, OR2C1, OR51B4, OR5B3, OR6A2, OR8J3, OR9A4, OR9K2, P2RX5, PFKFB1, PHKB, PIGK, PLD2, PPP1CB, PPP2R1A, PRKCQ, PRPH2, RDH10, SRD5A2, TLR4, TNFSF9, TPH1, TUBA3C, ULBP3, WNT2, ZMAT3, HLA-DRB4
Negative_11677	CFI, DBH, FYN, GK2, GP6, HGD, ACSM5, ADAM17, AFMID, ALDOA, ANPEP, ASS1, AVPR1A, B3GAT2, BCL2L1, CCL25, CCNB1, CD80, CD86, CLDN5, COL4A1, CREBBP, CSNK1G3, E2F3, EFNA1, ENO3, F2RL2, FABP1, FGF1, FGF5, FMO3, FUT4, GCDH, GNA15, GRM1, HEXB, HMBS, HMOX2, HPRT1, HSPA8, IFNAR2, IL18RAP, ITGA5, JAM2, KLRK1, LAMC1, MAP2K3, MCM6, MGAT3, MGST2, MYH4, NFATC4, NFE2L2, ONECUT1, OR13C2, OR13J1, OR2A5, OR4C46, OR4K5, OR4Q3, OR52K1, OR52M1, OR6N1, OR9A2, OXSM, PIGL, PLA2G1B, PNLIP, POLR1C, PPCDC, RAPGEF1, RASSF1, SEMA7A, SHISA5, SHMT2, SLC25A6, SMAD7, SMPD2, SPRED2, STAT6, TALDO1, THBS1, TJP3, TUBA3C, UGT2A1, UGT2B28, WARS2, WASL, WNT11, WNT5A, WNT7A, YWHAQ, HLA-DRB3, HSD17B12

Negative_11678	APP, MPI, SMS, XDH, ACADS, ACO1, AMPD2, AMY2A, ATP5J2, BDH2, CASP3, CD3E, CDS2, CHAT, CLDN14, COL6A1, CRLS1, CSF3, CTTN, CYP1A1, DNMT3A, DP M3, DUSP2, GRPR, GUCY1A2, HCST, IL11, IL18RAP, IL4R, IRAK2, IRS1, ITG AX, KLK3, LRDD, MAP2K1, MAP3K13, MYL7, NAT5, NFATC1, NOTCH3, NT5C2, N TN1, OR1C1, OR2A42, OR4D6, OR4D9, OR4S1, OR52E2, OR52I1, OR7D4, ORC4 L, PFN3, PLAT, PLIN, PMAIP1, PON1, PVRL2, SARDH, SPRED2, STAT5B, TUBA 1A, TYMS, UCKL1, UPP2
Negative_11679	ASL, CKM, CS, EGF, LSS, MOS, NNT, OSM, SDS, SPN, SRM, AASS, ACAD8, ACAD9 , ACO1, ACSM1, ADAM17, ARPC4, ATF2, B3GALT2, BET1, C4BPB, CBLB, CCL27 , CCNB2, CD47, CHPT1, CLOCK, CREB3, CUL1, CX3CL1, DGAT2L4, DIAPH3, DL L4, DRD2, DTX3L, FGF20, FOSL1, GALNT2, IKBKE, IL8RB, ITGB4, LDHAL6A, LILRB3, LIPE, MAN1C1, MTMR2, MTMR6, NFKB2, NOX3, OR13C3, OR1S1, OR2C 3, OR4C16, OR51B5, OR5D13, OR8G1, PANK4, PFKFB2, PLA2G6, PNPO, POLR3 A, PPP2R5B, PRKCB, PSEN2, PSENE1, RASGRF1, RPSA, SDHB, SEMA3C, SPRY2 , SPRY4, STMN1, TBXAS1, UBE2L3, UGT2B17, UROC1
Negative_11680	LYN, PGF, SMS, ADH1B, ADIPOQ, AGPAT2, AK3L1, ARHGEF1, ARPC4, BLVRA, C CL1, CCL17, CCL19, CCL26, CCR9, CDC14B, CDC6, CHPT1, CNTFR, CSH1, DGA T2, DTX1, ECSIT, EDA2R, EPHB2, F2RL1, FDFT1, FGF7, FGF9, FTH1, FUT3, F ZD5, G6PC, GIT1, HLA- DMA, HSD17B7, HSD3B2, IFNA8, IL12RB2, IL28B, IQGAP3, ITGA10, ITGAD, KLK3, MAN1C1, MAP3K5, MAPT, MAT2B, NCK1, NFATC2, NFKBIA, NRG1, OR10G 3, OR10X1, OR1C1, OR1D5, OR1E2, OR1L1, OR1N2, OR2A12, OR4M1, OR4X1, O R7D4, OR9A2, OR9G1, OR9Q1, PARD3, PER3, PGS1, PIGW, PLXNA1, PRKCE, PT DSS1, PTPN6, RPS6KA2, RPS6KA6, STAT4, STX10, SUOX, TGFBR1, TIAM1, TI CAM2, TNFSF14, TUBA1A, VDAC2, VEGFB, HSD17B10
Negative_11681	GNS, GSR, MUT, MYC, SFN, ADAM10, ADCY5, ALDH3B2, ASPA, B4GALT3, BCKDH B, BRAF, CCR6, CLTA, CREB3L1, CXCL2, CYCS, DAPK1, DERL1, DGKG, DKK4, E I24, ENO2, F2RL2, FABP1, FZD2, FZR1, GAMT, GAS1, GCNT4, GLUD1, HAO2, I L1A, NCAM2, NOTCH2, NT5C1A, NTF3, OR2L13, OR2T1, OR4N5, OR6N2, PHKB, PLOD3, RDH10, RDH11, RHOD, SMPD1, STX18, STX5, SV2C, TAS2R1, TBL1Y, T RPC1, WNT7B, YWHAQ, B3GALNT1, PNLIPRP1
Negative_11682	AK5, BTD, C8G, C9, CR1, FES, GH1, ID3, ADRB1, ALOX5, ASAH1, BCKDHA, BUB 3, CACNA1B, CASP3, CBLC, CCNB1, CD34, CD72, CKMT2, CPT1B, CTF1, CUL1, CYP11B1, CYP26B1, GCAT, GLI3, GUCA1B, HMOX2, IDH1, IFNGR1, IL12RB1, ITGB5, LCP2, MAP4K3, NKD2, NODAL, NPR2, NRG4, OR10H1, OR13C2, OR1S1, OR2C1, OR51B2, OR52E6, OR52J3, OR9Q1, OXCT1, PPAR, SARDH, SETD8, SH MT2, SORD, SRGAP3, UGT2B11, UPB1, VAMP4, WNT2B, ATP6V1C2, GABARAPL1
Negative_11683	AK2, C1S, DDO, F9, GDA, GH1, HPD, ID3, ACTN1, ADH1B, ALOX5, ATP5J2, B3G ALT2, B4GALT4, BHMT, CAPN2, CCL1, CD79B, CDC26, CDH4, CHKB, CMPK2, CS NK1A1, CSNK1D, CYFIP2, CYP4A11, CYP8B1, DAD1, DIAPH2, DTX3L, ENO2, E PAS1, EXTL2, FGF18, FLT4, FZD1, GAD1, GCAT, GDF6, GGCX, GNA13, GPD2, H EMK1, HSP90B1, IL11, IL21R, IL23A, IRS2, KLKB1, KLRC2, LYZL1, MGAT4A , MKNK1, NANS, NEFH, OR10G2, OR13C5, OR1A2, OR4Q3, OR52J3, OR5F1, OR5 K1, OR8D4, PDHB, PFN4, PIP5K3, PKM2, PLOD1, PROC, QARS, ROBO2, RPN2, S CP2, SEMA3A, SH2D1A, SOD1, SPRY3, ST6GAL1, TRAF1, UGT2B11, VEGFC, WA SL, ZFYVE9, ALDH18A1

Negative_11684	ADO, AUH, BTC, F12, ILK, ME1, PLG, TK2, ACHE, ANAPC4, ARHGEF6, ATP2A2, B4GALT5, BET1, BMP7, CCNE1, CD55, CDKN2D, CLCF1, COMT, CSNK1G1, CTNN A3, CX3CR1, DHX58, FRAT1, FRAT2, FTCD, GALNT6, GALNTL1, GBA3, GCNT1, GLUD2, GMPR, GNG13, GRIA2, HMGCL, IAPP, IDH2, INMT, ITCH, ITGA4, ITGA 8, KIR2DS4, LEF1, LIPF, MAPK11, MCM2, MYH13, NLGN2, OR4A5, OR7G2, PDE 7A, POLR1C, POLR1D, POLR2L, PPARD, PPP2R5A, PRODH2, RFXAP, RPS6, SAR S2, SETD8, SIGLEC1, SLC9A1, SMC1A, SMURF1, SOCS2, SOCS4, SPTAN1, ST8 SIA1, TACR3, TICAM2, TNXB, TSTA3, TYK2, UGT8, ULBP3, UNC5D, VCAM1, WA SL, WBSCR17, YWHAB, PLA2G12A, SERPINB5
Negative_11685	CRK, EGF, GP9, GSR, LYN, PDC, SMS, ADRB2, AGPAT4, APC2, ATP6V1F, C5AR1 , CALML6, CCL1, CCL16, CCR6, CD48, CDKN1C, CDKN2D, COASY, COQ3, COQ7, DAXX, DDX50, DGKE, DTX3, ENPP3, EPB41L3, EPHA1, FGF5, FZD1, GADD45B, GALM, GALNT3, GALNTL2, GBE1, GNPDA2, IL8RB, INHBB, ITGA10, LARS, LCM T1, NKX3-1, NME6, NOX1, NRXN1, NT5C3, NTF3, OR2C1, OR2L2, OR4D2, OR51A7, OR51F 2, OR6C1, OR6N1, OR6Q1, OR8B8, P2RX6, PAK7, PIGN, PIK3C3, PRDX6, PRKC Z, PRPS2, PTCH1, PTPN11, RASGRP1, SEMA4B, SMPD4, SUOX, UCK2, UPP2, VA V2, VNN1, WBSCR22, WIF1, WNT5A, ALDH18A1, GABARAPL1, TNFRSF14
Negative_11686	BID, BTK, C2, DBH, DDO, F3, IL9, MVD, ADCY6, ADCY9, AGXT2, AKR1D1, ATP4 A, BCL2, BUB3, CCL26, CD99, CDH1, CLDN17, CMPK1, CYP7A1, DNMT3B, EGFR , EPB41L2, FGFR2, FOSL1, FRAT2, GALNTL4, GNAI3, GSTA5, HMGCS2, IL19, ITGB1, LALBA, LAMC1, LARS, LDHC, LEFTY2, LTB4R2, MNX1, MYL2, NEU2, OR 13H1, OR1L8, OR2G2, OR2T8, OR7A17, OR7G1, OR9G1, OXCT1, PGAM2, PKLR, PNPO, PRKAR1B, SEMA4C, SRGAP3, STT3B, TNFSF14, TUBAL3, TYROBP, UCK1 , VTI1B, WASF3, WHSC1L1, WWP1
Negative_11687	CDA, CFI, CKB, IL8, MAG, TKT, AADAT, ACSM2A, ADCY8, ADRA1B, ALAD, ALAS 2, ALDOC, ALG5, ALOX12, ATP5H, BIRC3, BIRC5, C5AR1, CD14, CHRNA7, CNT NAP2, COL1A1, CTBP1, CTBP2, CYP27A1, DIAPH2, ENTPD4, EVI1, FGF19, FL OT1, GBA3, GPD1, HCLS1, HMGCR, HMOX1, HSD17B4, IFNA10, IFNW1, IL1R1, IMPDH1, INPP1, IRAK2, LAMB2, MAP2K3, MAP3K5, MAP4K3, MYH6, NCR1, NKX 2-2, NME4, NOTCH3, NT5C1B, OR10A6, OR13F1, OR2G6, OR2M3, OR4A5, OR5D18 , OR6N1, OR7D2, PDHA2, PDIA4, PIM1, PIP4K2B, PLA2G3, PLCZ1, POLR3D, P PP1R3B, PRKCD, PYGL, SFRP2, SLIT2, SPI1, SUCLG2, SUFU, SULT2B1, TACR 3, TLR4, TNFRSF9, TPMT, TSTA3, UGT2B11, UMPS, VAMP1, ATP6VOD2, TNFRS F17
Negative_11688	C8G, FES, HDC, MAX, NGF, RET, WAS, AKR1D1, ALAS1, ALG3, ALPL, ASCC3, AT P5G1, ATP6V1F, BACE1, BCKDHB, CCL16, CDK7, CDKN2C, CLCF1, CMPK2, CXC L2, CYP2C9, CYP2E1, DDX52, DIAPH2, DTX2, DTX4, ENTPD3, ENTPD6, EPB41 , EPB41L1, F11R, FABP1, FGF22, FZD10, GADD45B, GALT, GGT6, GLI1, GNG3 , GTSE1, GYS2, HAO2, IDH2, IFNA17, IL13RA2, INHBA, ITPKA, KNG1, LCMT2 , MAP3K7, NCR1, NFKB1, NGEF, NLGN2, NODAL, NUDT9, OR10A4, OR10J5, OR2 A4, OR2AG2, OR2M4, OR51V1, OR52E2, OR56B4, OR5H6, OR6S1, P2RX6, PDE9 A, PER2, PLCD1, PNPT1, PPP3CA, PSME3, PYCRL, PYGL, RAP1A, RRAS, SDC2, SETD1B, SHC4, SKIV2L2, SLC27A1, SLIT2, ST8SIA1, STAT5A, TBL1Y, THBS 1, TJP3, TNFSF10, VAMP1, XCR1, YWHAB, AASDHPPT, PAFAH1B1, PAFAH1B3, TNFRSF17

Negative_11689	<p>ADC, CD2, DBT, IL2, LPO, OGT, SPN, ACAT1, ACPP, ACSL5, AGRN, ANAPC10, A RNT, ATG12, ATP2A2, BAIAP2, CCR6, CD8A, CDC27, CDKN2B, CEBPA, CHRM1, CHRNA7, CLDN4, CNTFR, COL1A2, CSNK2A2, CTSB, CXCL1, CXCL6, CYP2U1, D DX41, DERA, DKK2, EGFR, EPHB3, ERO1L, EXT1, GALNT1, GNAS, GNRH2, GPD1 L, HBEGF, HLA-</p> <p>DOA, HYAL2, IFT57, IL12B, IL22RA1, IL8RA, IQGAP1, IRAK1, LAMA4, LAMB 4, LDHC, MAP3K1, MAPK13, MCM2, MMP9, MS4A2, MYL5, NLGN1, NTRK1, OR10G 3, OR10Q1, OR2K2, OR2M7, OR4Q3, OR5V1, OR7C1, OR8B12, OR8K3, PAX8, PD E4C, PFKFB2, PHKA1, PLCE1, POLR2B, PSME1, RAC1, RAC3, RBX1, RPS6KA4, SETD1B, SH2D1A, SORBS1, SPRED1, SPRED2, STAT1, TAS2R4, THBD, TRPM5, TSLP, UCK1, UPP2, VEGFC, MAPK8IP2, MAPK8IP3, TNFRSF17</p>
Negative_11690	<p>AK3, DLD, SMO, ADCY4, ADH1A, AGPAT4, AGPAT6, ALG10, ANAPC11, ARPC5, A TP5F1, ATP5G1, ATP6V1D, CASP8, CCL19, CD48, CDKN1A, CLDN20, CSF1R, C YP2U1, CYP4A11, CYP4F2, DDIT3, DDX52, DEGS1, DGKB, DRD1, EPHA1, ERO1 L, GALNT12, GARS, GDE1, GL01, GMPR2, GNA13, GNAS, GSTM1, GUCA1A, HMGC L, HRH2, IFNGR1, IL17RB, IL20RB, IL23R, ITGA1, LCP2, LEFTY1, MCCC1, M YH1, NCSTN, NKX2-</p> <p>2, NSDHL, NT5C3, OR1J1, OR2F2, OR2H2, OR4K5, OR52B4, OR52N2, OR56B4, OR5D13, OR7A10, OSMR, PARD6B, PDE5A, PDE6H, PER3, PI4KA, PIK3C3, PIM 1, PLCG2, PLXNB3, PPARD, PPP2CB, PRKCA, PRKCD, SARS, SNAI1, SPRY1, SP RY3, ST3GAL1, ST8SIA1, TACR2, TAS2R4, THBS2, TRAF5, UCK2, VAMP4, VDA C1, VEGFC, WNT8A, YARS2, ZBTB16, ATP6V0A4, TNFRSF13C</p>
Negative_11691	<p>DCK, IL6, ME3, SDS, ACAD8, ACADSB, ACADVL, ACSS3, ADCY2, AGXT2, ALG11 , ARSB, ATF4, ATP5C1, ATP6V1H, B3GAT2, B4GALT2, C3orf10, CACNB4, CAS P7, CBR3, CD244, CD28, CREB3L3, CRKL, CXCL10, CXCR6, CYBA, DDX51, DDX 55, DGKI, DOCK1, EDNRB, FGF17, FGF6, GSTZ1, GTSE1, GUSB, HIF1A, HMGS C1, HMOX1, IL1RAP, IL28RA, IL8RA, IQGAP1, ITGB5, KDSR, MAML2, MAP3K4, MAP3K5, NAT5, NCF1, NEUROD1, NPAS2, OR10G8, OR10Z1, OR11L1, OR2G3, O R51B2, OR51V1, OR5D18, OR5T3, OR8H1, OR9A4, ORC6L, P4HA2, PAK4, PDE6 D, PGS1, PISD, PNPLA3, PORCN, SELPLG, SEMA3A, SMURF2, STX16, SUV39H1 , SV2C, TICAM2, VAMP2, WHSC1L1, WIF1, YWHAG, CACNA2D1, SERPINE1</p>
Negative_11692	<p>CKM, DCK, F10, FAH, FGA, LIF, ME3, SYK, TKT, AASS, AGPAT3, ALDH1L1, APP L1, B3GNT3, BET1, CACNA1H, CACNG4, CISH, CLDN15, COL4A6, COL5A2, CRH R1, CYP26C1, DAG1, DKK4, F2RL2, FCGR3B, FGF10, FGF5, FM03, G6PC2, GCL M, HBEGF, HCST, HGSNAT, IL10RB, IL28RA, INPP5E, IRF7, ITGA9, ITGAL, L IPG, NOD1, NRAS, NT5C2, OCLN, OCRL, ODC1, OPLAH, OR10Q1, OR11L1, OR2D 2, OR2D3, OR2K2, OR2L8, OR2T6, OR4F17, OR5F1, OR6B2, OR6N1, PDCD1, PD E4B, PHKA1, PLA2G4A, PLXNB3, PNPO, PNPT1, POLR2J, PPAT, PPOX, PPP5C, RASA1, RASGRP3, RBL2, RDH10, RPS6KA5, SC4MOL, SH2D1B, SLC2A1, SOCS1 , TAS2R48, TBXA2R, TIAM2, TRAF1, VKORC1, YWHAE, YWHAZ, ATP6V1B2, ST6 GALNAC6</p>
Negative_11693	<p>EPO, FER, GK, SMS, AACS, ADRA1A, ADRB1, AGRP, AGXT2, ATP5A1, BACE2, BI RC5, CAMKK1, CCL16, CDC2, CDC25B, CHKA, CHRM2, CHRNA7, CIITA, CNGA4, CTLA4, CXCR3, CYP2B6, DGKZ, EDN1, ENTPD5, GBA3, GNAL, GRM5, GYS2, HEX A, IDH3A, IL20RB, IMPDH1, LEFTY2, MDH1, NAT6, NTF4, OR10H5, OR2H1, OR 51F2, OR5L2, OR6A2, OR6C4, OR7C1, ORC5L, P2RX6, PAPSS1, PARS2, PIK3C G, PPP2R2D, PRKACG, RHOD, SAT2, SEMA4C, SLC25A4, STX6, SUCLA2, SYNJ1 , TACR2, TAS2R8, TCF7L1, TNFRSF4, TOMM40, ULBP2, VEGFB, VEGFC, VT11A , ZIC2</p>

Negative_11694	ATM, IDS, MPZ, PML, ACAA1, ATIC, ATP6AP1, B3GALT6, BCAT2, BCKDHB, BNI P1, CMPK1, DDX56, FIGF, FTH1, GALC, GNA15, GNAO1, GNAZ, GRIA3, GSTK1, GUCA1B, ICOSLG, IFNA14, IFNGR1, IFNGR2, ITGAV, ITGB8, KIR2DL4, MOV10L1, NCF4, OPLAH, OR2F2, OR6K2, OR8H3, PDE4B, PGK2, PLAU, PLCG1, PNPT1, POLR3G, PRSS1, RCHY1, SMAD9, SRGAP1, SSH2, SSH3, TAP2, TPMT, TRADD, TUBB3, UMPS, VNN1, WARS, WHSC1, WNT3A, SERPINC1
Negative_11695	CD2, CFI, HDC, IHH, PDC, PRL, PVR, ACOT11, ACTN2, ALDH6A1, ARHGEF7, ASS1, ATP13A2, ATP6V0B, BDH1, BIRC2, CCL2, CD28, CD82, CRLF2, CYP4A22, DDIT3, DGKH, DOCK1, DPYS, EPB41L3, EXOC7, EXTL1, FGFR1, GSTA2, HAAO, HCST, HPSE, IFNA2, IGF1R, IL13RA1, INHBB, MYL9, NME7, NT5C1A, OLR1, OR10Z1, OR2T6, OR51A4, OR7A10, OR8D4, OR8H2, PDE4D, PIGS, PIK3R4, PTPRR, SEMA4F, SNAP25, ST3GAL2, STX5, TUBB, UGT2B10, UPP1, VAMP3, HLA-DRB5, PPP1R12A, SUV420H2, TNFRSF6B
Negative_11696	C7, NNT, ACADL, ACHE, ANAPC11, ARPC4, B4GALT4, BLVRA, CACNA1H, CCR5, CCR6, CDC14A, CHRNA7, CLDN10, CLDN16, CLDN8, CLTA, CTBP2, CYBA, CYP3A4, DGAT1, DLAT, FGF1, FGFR1, FOXA3, FUT8, GAPDH, GCNT4, GNMT, GP1BB, IFNA10, IFNK, IL21, IPPK, LIAS, MAPK10, MGST2, MOV10L1, NPR2, OXSM, PIGL, PLA2G3, POLR2C, PRKACB, PRKAR2A, PRKCG, RGS3, RPIA, SDHB, SELL, SGPP2, SLIT2, SMPD3, SOS2, SPP1, STK4, TAS2R48, VAMP1, VNN1, WASL, YKT6, PAFAH1B3
Negative_11697	ADK, CFH, F2, GP5, TNF, TPR, ACYP1, ADH6, ALDH1L1, ALPP, AMPD2, ARHGEF4, B3GAT3, BCAR1, BET1, BIRC5, CACNG5, CALML5, CCL19, CCL25, CCNA1, CD70, CDH5, CREB3, DHRS3, EPB41, EPHX2, EXOC7, FASLG, FGF23, FGFR3, GN G13, GRIN2C, GUCY1A2, HCLS1, IL21, INSR, KCNQ1, MYH14, OR2G6, OR4C13, OR5B3, OR5H6, OR6B3, OR8D1, OR8S1, PAX8, PGK2, PHPT1, PIM1, PLA2G4A, PLAUR, POMC, PPP2R2B, PRPS2, PSEN1, SGPP1, SHMT1, SRD5A2, STK11, WNT11, YWHAZ, C1GALT1C1
Negative_11698	AGK, ATM, C8G, CAT, FER, FGA, TNF, ACSL4, ALG13, ALPPL2, AMY2A, ATP13A2, BAIAP2, BUB1, CACNA1E, CCL2, CCNH, CD226, CD8A, CIITA, CLDN11, COL1A2, COL4A1, CRY1, CSNK1E, CSNK1G2, CTPS, CXCR3, CYP17A1, DERA, EFNA1, ENTPD4, EPRS, GALM, GARS, GCH1, GCNT2, GNPDA2, GUCA1C, GYS1, GZMA, GZMB, IL17RA, IL2RB, INHBB, INPP1, MARS, MKNK2, NFYC, NNMT, OGDH, OR10G7, OR10Q1, OR10S1, OR13G1, OR1C1, OR2L8, OR2T34, OR51S1, OR6C1, OR6C75, OR6M1, ORC5L, PFKM, PGLS, POLE, PPP1R3A, PSAT1, PVRL1, RARA, RDH11, RRAS2, SETD1A, SLC2A1, SLC2A4, STX10, STX2, TICAM1, TRAF3, TRHR, TRPM5, ZFYVE16, ATP6V1G2, ATP6V1G3, TNFRSF10B
Negative_11699	CS, CTH, DCC, EZR, FES, ABL2, ACSM1, AGTR1, ALG12, ALOX12, ARNT2, ATP5G3, B4GALT4, BNIP1, CACNA1C, CACNA1E, CACNA1S, CACNG1, CCDC6, CD46, CHST12, CPT1A, CREBBP, CSNK1G3, CTBS, CTSL1, CYP2C19, CYP4A22, DCXR, DDB2, EGFR, ENPP7, EP300, EPB41L1, FOXA2, FUT3, FZD1, GAMT, GNAQ, GNB1, GSTM1, HLA-DOB, HLA-F, HLCS, HNF4A, ICOSLG, IGFBP3, IL13RA1, LIPF, MAML3, MECR, MKNK1, MPDZ, MPZL1, NAGS, NRG3, OR10AG1, OR10Q1, OR10R2, OR51D1, OR51I1, OR7C1, OR8G1, OXTR, PIK3CB, PLCD3, POLR1A, POMC, PPP2R5E, PRKCB, SLC25A6, SOD1, SRD5A1, ST6GAL1, SUFU, TUBA1A, UGDH, ULK3, UROC1, WASL, WNT1, CACNA2D4, CSNK1A1L, HLA-DRB5, PLA2G12A, TNFRSF11B



Negative_11700	C8B, FYN, JUN, NF1, PDC, SYK, TYR, AACs, AASDH, ACAT1, AGRN, ALG5, ARHG EF1, ASMT, AVPR1A, B3GNT4, CACNG5, CASP6, CBR1, CCL19, CCR1, CCR2, CE S7, CLDN20, CPT1C, CSNK1D, CTBP1, DAAM1, ENPP1, EPHX1, ERBB3, EVI1, F 2RL1, FCGR2B, FUT4, GALNT5, GALNTL4, GGCX, GLI3, GRIN2D, GSTM3, GTSE 1, HAAO, HA02, HTR4, IFNA7, ITGB6, ITPKB, KAT2A, KIR2DS5, LHCGR, LTC4 S, MDM4, MGAT4B, MGST1, NAMPT, NCKAP1L, NFX1, NME7, NSDHL, NT5C1A, NU DT12, OR11H4, OR2B6, OR4K13, OR52R1, OR56A1, OR8A1, PDE1B, PDE2A, PI GO, PLAU, POLR3A, PRKCG, PTPRR, RAC3, RAPGEF3, RASSF5, RDH12, RENBP, SH3BP2, SMAD9, SNAP25, SUCLG1, TBK1, TLR9, TNFSF9, TPK1, VDAC1, WNT4 , C1GALT1C1
Negative_11701	AUH, DHH, GDA, PGP, PLG, ACAA2, ALDH3A2, ANAPC4, ASMT, CCL25, CD40LG, CDH5, CHSY3, CHUK, CLOCK, CMPK2, CSNK2B, CYP2C19, DHFR, DVL1, FGF23, FLT1, G6PD, GNB3, GNPAT, HIF1A, IMPA1, INPPL1, IRS1, ITGB2, ITGB6, LC MT1, LDHAL6A, MMP7, NEU2, NFKBIB, NPR1, NT5C1A, OR13C9, OR1J4, OR4M1 , OR52E2, OR5AN1, ORC1L, OXCT2, PDE1B, PDE6H, PDHA1, PIK3CD, PIP5K3, PPA1, PPP2R5A, SARS2, SCLY, SHC4, ST3GAL4, STK36, TAS2R1, TAS2R38, T RHR, TUBA1A, VEGFC, WARS2, PAFAH1B1, PDCD1LG2
Negative_11702	AMH, CEL, CR1, CR2, DBI, GLS, LAT, PML, RB1, ACO1, ADORA2A, AK3L1, AKR1 D1, APBB1, APLP1, B3GALT1, B4GALT1, CCL13, CCL25, CCNE1, CD34, CD55, CDH15, CHUK, COQ3, CX3CR1, ESPL1, F2RL1, FDFT1, FGF19, FGF7, GAB1, GA LT, GBA3, GCDH, IL17B, IL19, IL21R, IL23R, ITGB1, LGL2, MAP4K3, NR5A 2, NUMB, OR11L1, OR2K2, OR4C46, OR4D9, OR5T2, PAK3, PAPSS1, PLA2G3, P LTP, PPCS, PPP2R2C, PRKCI, PSPH, RASGRF2, RASSF5, RRAS, SMARCA5, SPT LC1, SYNJ2, UBE2K, UCKL1, XYLT2, TNFRSF14
Negative_11703	FUK, IL7, OAT, ACTG2, ADCY7, ALDH3A2, ALDOB, ALG10, AMHR2, ARHGGEF6, C 1QC, CACNA1D, CACNA1E, CCL20, CCL22, CD8A, CHST12, CISH, CNTNAP2, CS NK1A1, CTNNA2, CXCR3, DHCR24, DHX58, DLST, DUSP3, DUSP9, E2F1, ENTPD 7, EPHA8, FMO3, FUT9, GADD45A, GJA1, GLB1, GLUL, GRPR, IL12B, IL24, IR S1, KIR2DS5, KNG1, LRDD, MAPK12, MYH15, MYH9, MYLK3, NCAM1, NT5C1B, O CRL, OR13C4, OR2B2, OR2Y1, OR52J3, OR5A2, OR5B12, OR6S1, PGAM4, PIAS 1, PORCN, PRKAA2, PRKCQ, RPN2, SHC1, SLC25A6, SMAD9, SOAT2, SPRY1, SR GAP3, TAS2R9, TCF7L1, TGFBR1, TJP1, TNFSF4, TRADD, UGT2B17, VKORC1, TNFRSF1A
Negative_11704	CFD, LEP, LHB, ACSL5, ALG13, ALOX15, ALOX15B, ALPPL2, ANAPC5, APOA2, BACE2, C4BPA, CCDC6, CCKAR, CCL25, CD28, CTNNB1, CYFIP2, DDX47, DRD2 , ENTPD4, F2RL2, FDPS, FGF11, FGF23, GSTT1, HDAC2, HGSNAT, IL4R, MAML 2, MAP4K1, MYL7, NEU3, NT5C1A, OR2C3, OR2T5, OR51B2, OR5P3, OR7A5, OR C1L, PAK7, PFKFB4, PIGV, PIGX, PPP1CC, SPRY1, STX1A, STX3, TBL1X, UCK 1, UGT2B28, ULBP3, VEGFB, WBSR17, SLC25A31
Negative_11705	ADA, ADK, AR, CGA, F2R, GNS, MAX, PC, RPE, TPO, ABL1, ACAD9, ACP1, ACSL3 , ACSS2, ACTN1, ACVRL1, AMDHD2, CACNG4, CASP10, CD47, CDH5, CHST13, C LDN11, CLDN4, CLTA, CNGA3, CTBP1, CTSS, CYCS, CYP17A1, DDX56, DHRS4, EP300, EPRS, EXT1, FLT3, GRM1, HIBADH, ICAM1, IDUA, IMPDH2, LIPF, MCM 4, NCK1, NOS1, NPAS2, NR1H3, OCLN, OR12D3, OR13F1, OR1L8, OR1Q1, OR5K 2, OR8K5, ORC4L, PAK7, PDE7A, PFKFB3, PIGO, PIP5K3, PKLR, PLXNB3, POM C, PPCS, PPP1R1A, PRKACG, PTDSS1, RALBP1, RUVBL1, SDHA, SETD8, SHC2, SIGLEC1, SPAM1, SPRY1, SSH3, TAS2R10, TBL1X, TBL1XR1, TBL1Y, THTPA, TLR5, TUBB4, UGT2B28, VARS, WIF1, WNT5B, TNFRSF1B

Negative_11706	CGA, CKM, CP, DAO, DBH, FGB, GLA, INS, TNF, TPR, ZYX, ADSSL1, AOC3, AREG, B3GNT5, BPNT1, CARD11, CASP3, CBR3, CCL3, CCNE2, CD3E, CD48, CDC27, CHKA, CHRNA7, COL4A4, COL5A1, CSF2, CX3CL1, CXCL12, CXCL6, DERL1, DGKQ, EFN1, EIF4B, EPHB2, FGD1, FGF10, FGF9, GALNT9, GGT6, GMDS, GSTA3, GUCY1A2, IFNA16, IL6R, INPP4A, INSR, KIR2DL3, LALBA, LAMA4, LDHAL6A, LTA4H, MAP4K1, MAP4K2, MCM6, MFNG, MINPP1, MTMR1, NAE1, NFAT5, NLGN1, OR1A2, OR1D2, OR2A25, OR2T11, OR4C15, OR4K17, OR5I1, OR8J3, ORC3L, PDX1, PIGH, PIK3CA, PIM2, PLEKHA8, PNLIP, POLR3K, RAPGEF2, RENBP, RHOA, SELPLG, SLC27A4, SMURF1, TAS2R60, TICAM1, TRAF5, TSLP, UGT2B10, UGT2B11, VNN1, ALDH18A1, ATP6V1G3, HLA-DPA1
Negative_11707	C5, CR1, GCK, GPI, TPR, UBC, ACACB, ACSL5, ACY1, ACYP2, AKR1A1, ALDH1B1, CACNG8, CAMK2A, CAMK4, CCL16, CDH4, CLDN14, CSF1R, CTNND1, CXCL10, CYP2J2, DDIT3, DFFB, DIAPH3, DPM1, DVL1, FBP1, FCGR3B, FGF9, GART, GCLM, GFPT1, GNRH1, GZMA, H6PD, HEMK1, HEXB, HSPA1B, IDH3G, IFNAR2, IL18R1, INPP5B, ITGB2, ITGB4, ITPKA, KIR2DL2, KYNU, LDHAL6B, LRAT, NAT1, NME7, NPR1, OR10H2, OR13H1, OR14J1, OR1L4, OR2L3, OR4B1, OR4F6, OR52E8, OR52J3, OR5K2, OR6N2, OR9G4, PIAS1, PIGP, PLAUR, PLCB3, POLD4, POLR2G, PPARA, PPP1R3A, PPP2R5D, PRKCG, PRNP, PTCRA, PTGES2, PYCRL, RHEB, RUNX1T1, SDHD, SOCS7, SUCLA2, TACR2, TGFA, TRAF3, UAP1, UBE2L3, VAV1, WHSC1L1, XCL2, ST6GALNAC4, TNFRSF11B, TNFRSF13C
Negative_11708	CBS, CS, EGF, FAH, NGF, ADH4, AKR1C4, ATF2, ATP5D, BCL10, BLNK, CCL20, CD34, CDH4, CER1, CISH, CLDN18, DDOST, DDX50, FABP1, FSHR, GAPDH, GLG1, GMPS, GSTA2, HLA-F, HNF4A, IL25, KLRC4, LAMB1, LIAS, MAP3K3, NRXN2, NSDHL, NUDT12, OR2A25, OR4K1, OR56B4, OR5A1, OR7G3, ORC4L, PDGFB, PIAS3, PIGF, PLOD3, PRLR, PRODH2, PTGES2, RASA2, RXRB, SFRP5, SOD1, ST3GAL3, STAT2, STX8, TAS2R10, TNFSF8, UXS1, WNT5B, XCL1, ZFYVE9, SERPINF2
Negative_11709	CD4, DAO, F8, F9, FES, FST, GK2, PXN, AADAC, ACLY, ACP6, ACSS1, ADRBK2, ATP5I, CAMK2D, CD19, CHST13, CLDN10, CPT1B, CSF2, CSF2RA, CTSG, CXCL5, CYP2J2, DDIT3, DUSP9, ELK1, EPHA7, ER01L, FGF8, FUT4, FZD3, GLUD2, GNG3, GNRH1, GOT2, IDH1, IL20RA, IL6R, KNG1, MAP2K4, MGAT1, MINPP1, NAT1, NR4A1, NUDT2, OR10S1, OR2H2, OR4C16, OR5J2, OR6C1, PDHA1, PDK1, PITX2, PLD1, PLIN, PPOX, PTGER3, PTTG1, RBPJ, RELB, ROB01, SEMA4D, SLC12A2, SOX17, SQLE, STX16, TAS1R2, TAS1R3, TAS2R4, TBL1X, TCIRG1, TJP1, TNFSF18, TUBA1B, ALDH18A1, HLA-DPB1, HLA-DQB1, PPP1R12A
Negative_11710	C4B, DCC, EDA, EGF, EPO, GNS, GP5, IL3, SMO, XDH, ACP6, ACSL3, ACTC1, AMHR2, BCKDHB, BDKRB2, C4BPA, CDK4, CHRM3, CHUK, CLDN5, CLDN8, CMBL, CNTNAP2, CREBBP, CYP4F3, DDB2, DGAT1, DHRS4L2, DOCK1, DTX2, EHHADH, FGF2, FUT4, FUT5, HADHA, IDUA, IFNA8, IFNB1, ITGA2B, LAMA3, MAGI3, METTL2B, NAGA, NCK1, NOS1, NTF4, OR2A5, OR2C3, OR2L13, OR4C16, OR4M2, OR5D16, OR6K3, OR9A2, ORC2L, PARVA, PDE3B, PDE6G, PIGN, PIGU, PLCB2, PPARD, PRKCH, RAPGEF2, SARS2, SEMA3C, SH2D2A, SHC3, SHMT2, SMARCA5, STX18, STX4, TNFSF11, TNFSF18, TOLLIP, UPP1, WEE1, WNT8B, YWHAG, ZBTB16
Negative_11711	DBH, LCT, ADCY4, AKR1B1, ALG10, ARHGEF7, ATP5G1, CARS2, CCL21, CCL25, CNDP1, COL3A1, COQ5, CTNNB1, CTNND1, DDHD1, EPHX1, FADD, FASLG, FPGS, GAAA1, GUCA1B, HAGHL, HARS2, HTR6, IDI1, IFNG, IL24, LDHC, LTC4S, NR5A2, OR2T4, OR5A1, OR5P2, OR8B12, OR8K5, PIGH, PIGK, PIGT, PIGV, PIK3C2G, PLA2G1B, POLR3K, PPAP2A, PTCRA, PTPRF, PVRL2, RASGRP3, SARDH, SDC2, SDHD, SMPD2, SPRED1, ST3GAL3, STX7, TNFSF9, UCK1, VDAC2, PAFAH1B2, SUV420H1

Negative_11712	C1S, C4B, HYI, ID3, ABLIM2, ACAD9, ACP2, AKR1C4, ALG6, ALPL, AMDHD1, B AAT, C3orf10, CAMK2A, CCDC6, CCL3, CCR2, CDKN2D, CHIA, CIITA, CLDN11 , COL11A1, CYP26C1, DLL1, EARS2, EIF4E2, ENPP1, ENTPD7, EPHA2, EPHA4 , EXTL3, FASN, FECH, FGF12, FGF2, FPGT, FUT3, HSD17B8, IL2RA, ITGA10, JAG1, JAG2, LARS, MAFA, MS4A2, MTHFR, MYH7, NADSYN1, NPAS2, NTF4, OR2 A4, OR51M1, OR5V1, OR6T1, PAX4, PAX8, PFAS, PNLIP, POLR1B, PPA2, PPAR A, PPP2R5C, PTDSS1, PTGS2, RUVBL1, RXRA, SCD5, SELL, SLC9A1, SMAD9, S MC1A, SMPD1, SPHK2, SPP1, SYNJ1, TAS2R3, TNFSF14, TYROBP, VTI1A, VTI 1B, XYLB, YWHAZ, ALDH18A1, SUV420H1, TNFRSF11B
Negative_11713	AMH, C6, CBS, CS, DCK, IL5, PRL, PVR, ACHE, ACSS2, ALPI, AOX1, APLP1, AP OA2, ATG7, ATP5G3, B3GAT1, B4GALT3, B4GALT7, BCKDHB, CCL13, CD247, C D274, CD36, CHRM2, CHUK, CIITA, CLCA4, CSF2RA, CYP1A1, CYP2C19, CYP2 C9, CYP4A11, DCTD, DHCR7, DHRS3, DHX58, DUSP2, EDN1, FGF12, GAB1, GNA 14, GNB1, GUCY2D, HSD11B1, IKBKB, IL18RAP, IL1A, IL4R, IPPK, ITGAL, K CNB1, KIR2DL1, LTC4S, LYPLA2, MCAT, MICA, MTHFD1L, MYH15, NADSYN1, N CAM1, NODAL, OR14J1, OR2AG1, OR4C6, OR7G1, OSMR, PHKA1, PIP5K1A, PPA RA, PPP1CB, PPP2R2A, RDH11, RETSAT, RXRA, SAT2, SDC2, SRGAP1, TBXA2R , UNC5A, UROC1, UXS1, VDAC2, WNT10B, WNT5B, MAPK8IP3
Negative_11714	ADK, CD4, DBH, LYN, RPE, ACO1, ATP13A2, ATP6V1H, CXCL13, CYP2A7, CYP3 A4, DGKQ, DPM2, DTX2, ENPP1, FARSB, FMO2, FTCD, GCLM, GNG13, GNPAT1, GPAM, IGF1R, IL15RA, IL8RB, IRAK1, ITGA2B, LAMB3, LDHC, LRP6, MKNK1, MYH6, NT5C3, OR11L1, OR2H1, OR4F4, OR52E2, OR8B4, PIK3CB, PIP5K3, PK LR, RASSF5, SNAP25, SPRY3, TRIP10, TUBB6, UGDH, UROS, PLA2G12A, SERP INA1, SUV420H2
Negative_11715	IL5, IL6, LAT, ME1, AASDH, ADH4, AK3L1, ALDH3B1, ALDH7A1, AMY2B, AQP7 , ARHGEF7, ATP2A3, B3GNT2, BCAR1, BTRC, CACNA1H, CACNB2, CASP8, CCL8 , CD38, CDK5, CFTR, CLDN1, CREB3L4, CTBP2, CYP3A43, DAD1, DCTN1, DDX5 1, DNMT1, EFNA2, EVI1, EXT2, FGFR1, FGFR4, FUT1, FZD8, GAPDH, GCAT, GM PR, GSTA3, HA01, HNF4G, HRH1, IL1B, JAM3, LAMB1, MGAT2, MITF, MLYCD, M MP7, MTAP, MYH1, NEFH, NEFM, NOTCH3, NRG1, NRXN1, NTF4, OR10AD1, OR1A 1, OR1D5, OR2A42, OR2A5, OR2K2, OR2T29, OR2Z1, OR4C13, OR4D5, OR4F6, OR4M1, OR8H1, P2RX7, PIP4K2B, POLR3D, PON3, PPM1B, PPP1R3C, PROC, PT GER3, RPN1, RPRM, RPS6KA2, SELE, SOAT1, TAS2R42, TAS2R5, TBL1X, TGFB 2, TOLLIP, TSNARE1, UGCG, UPB1, WNT10A, ATP6V1G1
Negative_11716	F11, F7, GP6, NPY, PML, SRC, ACOX2, ACTN1, AKR1B10, ALDH3A2, ALG13, AP OE, B3GNT4, BTRC, CCL3, CDC26, CHIT1, CMPK1, COL4A2, CXXC4, CYP2A6, D KK4, EPHB3, F2RL1, FADS2, GALNT11, GCDH, GCNT3, GMPS, GNG12, GPD1, HA GHL, HMGCS2, IL10RA, IL13, IL17B, IL9R, INPP4A, ITGA2, ITGB5, JAM3, L IFR, LTC4S, LYPLA1, MGAT2, MGST3, MMP9, NPR1, OR2T10, OR3A1, OR6C2, P 4HA2, PFAS, PIGP, PLOD2, POLE4, PPARA, PTPN6, RBPJL, RERE, ROBO3, RUN X1, SLC27A5, SPRED2, STX8, TKTL1, TUBA4A, VNN1, XYLT2
Negative_11717	C1S, FAH, LIF, PGD, SDS, ACO2, ACP1, ACSS3, ACVR1C, ARSA, C1QA, CACNA1 I, CCKAR, CD44, CDC7, COL2A1, COL5A1, CYP11A1, CYP4A22, DGUOK, DHCR2 4, DMGDH, DVL2, EGFR, FARS2, GLI1, GSK3B, HCST, HPRT1, IL22RA1, IL29, IL5RA, IL8RB, INMT, KAT2B, KIR2DS5, KITLG, MAD2L1, MAP3K7, NCAM2, NO DAL, NRXN2, OR1F1, OR8B4, PER3, PGLS, PIP5K1C, PLA2G1B, PPP1R1A, PRN P, TJP3, TNFSF18, XYLB, ARHGEF12, PNLIPRP1
Negative_11718	HK3, HYI, PC, SDS, SMS, ABL1, AKR1C3, AKR1C4, ALAD, ARG1, ARPC5L, BMPR 1B, C1QC, CACNA1E, CD48, CDKN2B, CERK, CNTF, CTTN, CYFIP1, CYSLTR1, E 2F1, FCGR3A, FLT4, GALNT2, GYS1, IFNA8, IGF1, MAML3, MAN1B1, MASP2, M AT2B, MTHFD1L, MYH6, NCAM1, NT5C2, OR1E1, OR2W1, OR5L1, PAK4, PDE11A , PFKFB3, PIGP, PLOD1, PLXNA2, PRKCH, PRKCI, PROC, RFX5, SDC3, SEPHS1 , SMPD3, TMLHE, TRDMT1, UPP1, VTI1A, WNT2, ATP6V1B2, HLA- DRB3, PHOSPHO1

Negative_11719	<p>ABO, BAX, CTH, DBI, DLD, GPI, HGF, IL3, MAG, PTS, ABL2, ACADSB, ALG5, AM D1, ANGPL4, ARAF, ATP4A, BIRC3, CASP9, CD274, CD80, CDC2, CDK4, CHRM 3, CKMT2, COQ3, CPT2, CSDA, CSNK1G3, CXCL12, CXCL3, DDX51, DLL4, DTX3 , E2F5, ECHS1, ENTPD1, EPHA6, FGF19, GLYCTK, GRPR, GUCY1A3, HCST, HLA -</p> <p>C, IL10RA, ITGAX, KAT2B, LAMC3, MAP3K2, MARS2, NRP1, OGDH, OR13C4, OR 2AG2, OR2F2, OR4Q3, OR51B6, OR52N2, OR5AC2, OR7A10, PDE10A, PLA2G10 , PLOD1, POLR2B, PSME2, SARDH, SARS, SDHA, SDHB, SEMA4C, SGPP1, SKIV2 L2, SMAD6, SPRY3, SRGAP3, SULT2B1, TAS2R40, TNFSF4, UNC5D, UXS1, VTI 1B, YKT6, ZBTB16, CSGALNACT2, HLA-DRB3, TNFRSF14</p>
Negative_11720	<p>BTD, GDA, MSN, MYC, ABLIM3, ACSL1, ACVR1C, ALDH9A1, AMD1, ARRB2, ASRG L1, B3GALT1, B3GNT3, BMP2, CACNA1S, CCR8, CD46, CHST12, CLDN11, CREB 3L2, CSDA, CXCL9, CYP3A7, F13B, FBP2, FCER1G, FGFR3, FPGT, FUT3, GALN TL2, GGCX, GUCY1A2, HDAC2, HES1, HLA-</p> <p>DRA, HRH1, IDH1, IL15RA, INPPL1, ITGA2B, ITGA4, KIR3DL3, LFNG, MAN1B 1, MAP3K14, MGAT1, MYH11, OR1J2, OR2AE1, OR52E8, PAPSS2, PCYT1B, PI4 KB, PIK3C3, PIK3R5, POLA2, PRKAA1, PRKAR2B, PTDSS2, PTGFR, PTK2B, RA RS, RPS6KA1, SOCS4, ST3GAL1, ST3GAL4, STX4, TAS2R7, TPH1, UBE2L3, WA RS, WNT4, XYLT1, ZNRD1</p>
Negative_11721	<p>BTD, C4B, DUT, GLA, IL8, LHB, ME3, SPN, AACs, AANAT, ACACA, ACADSB, ALD OB, ARNTL, CCR5, CD28, CDK6, CHRM3, CHST12, CLDN18, CLDN6, CRB3, CYP1 1A1, DVL1, E2F2, E2F3, ENTPD5, EPHB4, F2RL1, FASN, FUT5, FZD4, GJD2, G NA13, GNAS, GSTA4, HAAO, HARS2, HYAL1, HYAL2, IL29, IQGAP1, IQGAP2, L FNG, LIPC, MAPK3, MGAM, MTMR2, MYH1, MYH2, NCF4, NCR2, NFX1, NUDT12, O R10S1, OR2L3, OR2T11, OR4N5, OR4P4, OR5L2, OR6N1, OR8K1, OR8K5, P4HA 3, PIAS3, PIGV, PLIN, POLA2, POLD2, POLR2C, POLR2I, RPRM, ST8SIA5, SV 2C, TBL1XR1, THBD, TOLLIP, TPK1, TUBB3, UGT2B10, UROC1, WASF3, ALDH1 8A1, ATP6V1E2, PPP1R12A</p>
Negative_11722	<p>ADK, AUH, FN1, LPO, PLG, TPR, ABLIM3, ACY1, ADCY1, ADIPOR1, ALDH3A2, A LDH4A1, ALG12, ALS2, ARHGEF1, BMP4, C1QB, CACNA1I, CACNG8, CAMK2G, C CL28, CD8A, CD8B, CDC25C, CLDN7, CNTN1, COL6A1, DDX56, ENPP6, F13A1, FUT6, GNAQ, GNG12, GOSR2, GTSE1, HES1, HLA-</p> <p>DRA, IFNA10, IFNA16, IL21, IL22, IL28A, IL29, INHBC, KIR2DL4, LRDD, M THFR, NCKAP1, NT5C, OCRL, OR11L1, OR4A15, OR4F6, OR52A1, OR52I1, P2R X7, PANK1, PCK2, PDPK1, PECAM1, PMM1, PRKG1, PRKX, PSEN1, PTAFR, PTPR J, RAB5A, RDH8, RPIA, RPS6KA2, SFRP1, SGMS1, SGPP1, SHC3, SPCS1, ST3G AL5, TAS2R38, TJP1, TNFRSF4, TSHR, WNT7B, PDCD1LG2</p>
Negative_11723	<p>CBL, RFK, TK1, ACTN2, ALG1, ALG9, ARG1, BET1L, BMP6, CASP10, CBR1, CCL 2, CCNE1, CD80, CDK2, CHEK2, CHRNA7, CNTNAP2, CTSL1, DKK2, DNMT3L, DT X3, DTYMK, EPAS1, GAD2, GALNT5, GNPDA1, GRIN1, HCCS, IGFBP3, INHBC, I NHBE, INPP5E, ITGA11, ITGA9, ITGAE, ITGB4, KIR2DS4, KRAS, LALBA, MAP 3K11, MAPK3, METTL6, MMP9, MPP5, NLGN1, NOS3, NRG4, OR2D2, OR2F1, OR2 L2, OR51I2, P2RX1, PDE4A, PDIA4, PFAS, PHKB, PIAS1, PPP2R5C, PRKACA, PTGFR, PYGB, PYGM, RHOA, RPS6KA4, RRM2B, SCD5, SETD8, SH2D1A, SMAD4, SPRED1, TNFSF4, TUBB2A, WNT9A, ATP6VOA1, CSGALNACT1, PNLIPRP2, PRI CKLE1, SLC25A31</p>
Negative_11724	<p>CAT, CP, ID4, PRL, TKT, UBC, ACP1, ADCY1, BET1, BLNK, CD70, CD74, CDO1, CLDN14, COMT, CSDA, CXCL6, CXCR6, CYP21A2, CYP3A43, CYP3A5, DKK4, DN MT3A, DUSP7, EDNRB, GANC, GMDS, GPD1, GSTM1, HRH2, HSD11B1, IL10, IMP DH1, INHBC, INSRR, L1CAM, LEPR, MGST3, NARS2, NODAL, OR1G1, OR2B6, OR 2T34, OR4F5, OR9G1, PDE1C, PDE5A, PDE6H, PFN3, PIGP, PLXNB1, PORCN, P RKX, PTGER3, RASA2, SEMA4D, SEMA4G, SFRP1, SIPA1, SMPD3, SSH2, SUV39 H1, SYNJ1, TAS2R3, TGFB2, TPH1, ULK1, UROS, VTI1B, SERPINC1</p>

Negative_11725	DDO, OAT, RFK, SPN, TYR, AANAT, ALAD, AMY2A, ANAPC7, ARG2, B3GNT3, BCM01, CACNA1B, CALML5, CASK, CCKAR, CCL7, CD79B, CDC27, CDC7, CNTFR, CYP1A2, CYP2E1, DDX19A, DNMT3A, E2F1, E2F5, ENTPD3, EPHA1, GMPPA, GNAO1, GRIA2, GRIA3, HPSE, HSD3B1, IBSP, ICAM2, IL12RB2, IQGAP2, IRAK3, KIR2DS5, MAPT, MLLT4, ODC1, OR10G8, OR2A25, OR2G3, OR2K2, OR2Y1, OR4D6, OR4K1, OR51B5, OR52A1, OR9Q1, PARVB, PI4KB, PIK3C2B, PLK1, POLD4, POLR1A, PPAP2A, PPP1CA, PRKCG, PTGS2, RALA, RALBP1, RAPGEF2, RASGRP3, RPS6KA2, RRM2B, RXRB, SH3BP2, SMPD2, SPAM1, SSX2IP, STAM2, TAS2R3, TCF7L2, TGFB2, THBD, TNFSF12, TRPM5, UGT1A10, UNC5A, VASP, WARS, WNT7B, ATP6V0D1, C1GALT1C1, KIR2DL5A
Negative_11726	DCC, FGA, PGF, SMS, ATP5A1, C1GALT1, CACNB4, CBR1, CCKBR, CCNH, CD247, CD48, CDH15, COL4A2, DAAM2, DIAPH1, DNMT1, ENO1, FCGR3B, FGF9, FUT8, FUT9, G6PD, GADD45B, HLA-DRA, INPP4A, ITGAE, MAN1B1, MDM4, NFKB1, NUDT5, NUDT9, OR1Q1, OR2A5, OR2G6, OR2H2, PIK3R5, PLA2G5, POLR2E, PPP2R1A, PPP2R1B, SHC2, SMARCA5, SPRY4, SRGAP1, ST8SIA1, TCF7, TJP1, TSHB, TSTA3, WNT8B, PAFAH1B1
Negative_11727	DBT, F3, HDC, ID2, PGF, PML, TPO, UBC, ADH7, ALG1, B3GALT2, B4GALT6, CCL19, CCL2, CD58, CDH5, CLDN11, CLDN17, CLOCK, CLTC, CYP3A7, DNMT3B, DPM1, EGLN3, EHMT1, EPHB6, EPHX2, FGF13, FGF6, GMPPB, GNA12, GRAP2, GSTP1, HDAC2, HHIP, HIP1, HNMT, IL25, IL8RB, INHBA, IPPK, MAN1C1, MAP3K4, MDM2, MYD88, NADSYN1, NANP, NCR1, NEU4, NFATC2, OR10G4, OR2D3, OR4F17, OR4K2, OR5AS1, OR9G4, PCNA, PGS1, PIP4K2A, PLCB4, PLIN, POLR3K, PPAP2C, PRKCZ, RASSF5, SETD2, SLC27A4, SMAD4, SMAD9, SMC1B, SOCS2, STX4, TAS2R10, TRAF2, TRAF4, VDAC1, VTI1A, YOD1, ATP6V1B2
Negative_11728	EGF, IVD, ADIPOR2, AHCYL1, ALDH3B2, ANPEP, B3GAT3, BCAR1, CACNA1H, CACNG5, CHRM2, CKMT2, CTTN, CUL1, CXCR5, CYBB, CYSLTR2, DFFB, DNMT3B, ENPP3, FABP3, FGFR2, GMPR2, GNAI1, HAAO, HLA-DMA, IL2RA, LIMK1, LRDD, MAGI2, NAGA, NFYB, NR1H3, NTSR1, ONECUT1, OR4K14, OR5H2, PDGFC, PIGO, PRIM2, PRKAG2, PTPRR, RHOD, RPRM, STAM, STK4, TAS1R2, THBD, TPI1, TSHR, TNFRSF10B
Negative_11729	C6, CDA, F2R, LTB, MPL, NPY, OSM, ABL1, ACAD9, ACSS1, ACSS3, ACVR2B, ADCY6, ADIPOR1, ADORA2A, ADRB2, AOC2, AQP7, ARPC5, BHMT, BMP8A, BUB1B, CCL7, CD226, CHR1, CMBL, CNTF, CRY1, CTSG, CYP3A5, DARS, DDB2, DGKD, DUSP3, FADS2, FUT6, FZD4, GALK2, GRM5, GZMA, HIP1, IDI2, IFNA8, IGFBP3, IL6ST, ITGA1, KLRK1, LTB4R2, MAGI2, MAP2K5, MAP4K2, MASP1, MDM2, MGST2, MYLK3, NCK2, NFATC4, NKX3-1, NOS3, NT5C1B, NUDT8, OR13A1, OR4C6, OR52R1, OR7G1, PDE6H, PFKL, PIGQ, PPAP2B, PRKX, PSAT1, PTEN, PTK2, PYGB, SCIN, SIGLEC1, SPRED2, SPRY2, SPTLC2, SULT1A2, SYNJ2, TACR1, TAS2R13, TAS2R3, THBS2, TPI1, TSC1, TUBA1B, ATP6V1C2, MAP3K7IP1
Negative_11730	C7, ME1, RET, AADAT, ABAT, ACVR1B, ADCY6, ALG3, ALPI, AMPD3, ANAPC5, ATP5F1, C4BPB, CACNA1C, CACNG5, CAPN2, CCL20, CCL24, CCL25, CCR8, CD86, CSF1, DHRS9, DNMT3B, GNG13, GRPR, IL18, IRAK1, ITGA8, KLRD1, LDHB, LIPT1, LRRC4C, MGAT4B, MPZL1, MYH4, OR10Q1, OR51B2, OR7C1, OR7D4, PAX6, PORCN, PPP3R2, PTPRM, PTPRZ1, RAC1, RELA, RPS6KA4, SEMA7A, SPCS3, TRAF2, VANGL2, ZAP70

Negative_11731	EDA, JUN, PRL, STS, TAT, TNF, AADAT, ABL2, ACOX3, ADH1A, ADRA1A, ADRBK2, AGPAT3, ALG12, ALG3, ANAPC10, ATIC, BCL2L1, CCNB1, CCR5, CD22, CD3E, CRY1, CSDA, CYP2A6, CYP2J2, DCTN1, DDX23, DLST, DUSP1, ECHS1, EPHA2, GALNT12, GLI2, GNA11, GNA13, GOT1, GPX7, HLA-DRA, HMOX2, HSPA8, IFNB1, IFNGR1, IL21, INPP4A, MAN1B1, MGAT5, MRAS, MYH3, NADSYN1, NCF2, NFKBIA, NLGN2, NME2, NRAS, OR10A3, OR13C5, OR2T8, OR5T3, OR6K3, OR7A5, OR8D1, PARD3, PCCB, PDGFD, POLR2E, POLR2G, PRIM1, PRPS1, SCIN, SULT1E1, TAS2R41, TKTL2, TNFSF4, TRAF3, TSC1, UGDH, UGT2A3, WASF1, WNT5B, ATP6V0E1, ST6GALNAC1
Negative_11732	EPO, GSR, ILK, KHK, RDX, ABL2, ABLIM3, ACMSD, ALDOC, ANAPC10, ARPC1A, ATP5C1, B3GAT1, BMPR2, CCNA2, CES7, CHR1, CLDN16, CLTC, CLTCL1, COL1A1, CSNK1G3, CX3CR1, EPHA3, GCLM, GRAP2, GRIA3, HEXA, HLA-DOA, IL17RA, IL20RA, ITGB6, KIR2DL2, LDHC, LEPR, LLGL1, MEF2C, OR10S1, OR1B1, OR2A14, OR2W1, OR3A1, OR4X1, OR5K1, OR8J1, OR9Q1, PDE9A, PGK1, PLCE1, PNPLA3, PPM1B, PPP1CC, PPP3CB, PRPH, RAF1, SCP2, SLC2A1, SHK1, SRGAP3, STAM2, TAS1R3, TGFB3, TPH1, TRADD, TSHR, TSLP, TUBA8, TUBB6, ULK3, VARS, VTI1A, WNT3A, XCR1, ZAP70, ATP6V1G3, MAPK8IP1, SERPIND1, ST6GALNAC6
Negative_11733	AK1, AK5, CEL, DUT, GHR, ILK, LCT, MAG, NPL, PLN, TFG, ACAT1, ADRB3, ADSL1, ALAS1, ASNS, CASP10, CBLB, CDKN1A, CER1, CHAD, CHEK2, CLDN1, COL2A1, COL5A2, DGKB, DLST, DTX4, DUSP16, EFNA2, EFN1, EPHA3, FMO3, GALNTL1, GART, GAS1, GFPT2, GGT5, GNAZ, GSTM3, IAPP, IL20, IL20RB, IL24, INPP4A, INSR, JAK2, KIR2DL4, LAMC2, MAP2K3, MGAT4A, MMP7, MPP5, MRAS, NANP, NAT2, NCR1, NFYC, NGEF, NQO1, NRCAM, OR10J3, OR2H2, OR2K2, OR2M5, OR3A1, OR51A4, OR51T1, OR52N4, OR5D18, OR8J1, P4HA1, PIP4K2C, POLA2, PON2, PRODH2, PRPH2, PTSS1, PTTG1, PYCR1, RALA, RAP1B, SH3BP2, SHC2, SOAT1, SRGAP3, STX4, TAS2R13, TAS2R8, TLR5, UGT2B4, UPP1, WASF3, MAPK8IP2, MAPKAPK2, TNFRSF11B
Negative_11734	DBH, PAH, PVR, TNC, ACVR1C, ATG7, B4GALT3, C1QC, CASP3, CKS1B, CMPK1, COQ3, CRHR1, CRY1, CSF2RA, CTBP1, CUL1, CXCL3, DGKI, DIAPH2, DKK2, F2RL3, FBP2, FZD5, GAPDH, GDF7, GNG12, HAAO, IKBKE, IL1A, IL20RA, IQGAP3, IRAK4, IRS2, ITGA1, KLRC4, LIPA, MALT1, MAP4K2, MAPK10, MAPT, MGAT4A, NEFL, NPR1, NSDHL, OR2F1, OR2T8, OR51S1, OR52W1, OR5D16, OR8A1, OXCT1, PAK7, PIGH, PMM2, POLR3K, PORCN, PSEN2, PTPRR, RASSF5, RPN1, RRAS, SMAD3, SMPD1, SOCS3, SOS1, ST3GAL1, SUCLG1, TACR1, TUBB3, VAV3, ATP6V1E1, CACNA2D1
Negative_11735	AMT, C3, CP, CR2, EBP, FUK, HGD, ID4, IL6, LPL, MYC, SPN, AANAT, ACACB, ACAD9, ACSM1, ACVR2B, APBB1, APLP1, ATP5C1, ATP5G3, BCL2, C4BPA, CCL15, CCND3, CD38, CD8A, CFL2, CFTR, CLTCL1, CNTNAP1, COL5A1, CSF2RA, CYBB, CYP17A1, CYP2C18, DCTN1, DDX56, DHCR24, DLL1, DPM3, DUSP3, FGF12, FGFR4, FTCD, GALK2, GLI2, GLI3, GUK1, HRH2, IFNA16, IL8RA, ITGA10, ITGAE, LHCGR, LTBR, MADCAM1, MAP3K3, MGAT2, MGAT3, MYH7B, NFYA, NSDHL, OCLN, OR10G3, OR13C3, OR13H1, OR2B11, OR51D1, OR51I1, OR51L1, OR5T2, P2RX3, PDE5A, PIAS4, PIK3R4, PLCG1, PLXNB3, PMAIP1, PRPH, PRPS2, PRSS1, PTSS2, PTGES, PTPRC, PVRL4, PYCRL, RCHY1, RUVBL1, SDHC, SFRP1, SIAH1, SPRED1, SPTLC2, TAS1R1, TUBB4, WASF2, WHSC1, ZAP70

Negative_11736	CBL, PDC, TFG, ABI2, ACVR2B, ADRA1A, ADRA1D, ALDH1A2, ARD1A, ARPC2, A RSB, BIRC2, CACNA1S, CCND2, CDC2, CFLAR, CFTR, CHAD, CHPF, CLDN7, CLT CL1, CMBL, CNTN2, CSH1, CYFIP1, DDIT4, DERA, EDA2R, EHMT1, ENTPD8, F2 RL3, FUT4, GFAP, HHIP, HLA- DMA, HSD17B4, IDH3G, IL22RA1, IRAK2, KLRK1, L1CAM, MAN1A1, MGST1, MP DZ, NEGR1, NFYB, NPAS2, OR10AG1, OR11A1, OR11H1, OR1Q1, OR2T6, OR2Y1 , OR4C16, OR4N2, OR51S1, OR5H2, OR5M8, PAK2, PARVB, PDE6G, PER3, PIGA , PIK3C2A, PIM1, PLCD4, POLR1E, POLR3K, RUNX1T1, SMPD3, TAS2R1, TAS2 R13, UGT2B17, USE1, VEGFB, PPARGC1A
Negative_11737	AMT, EZR, F8, SMS, ACAA2, ACADL, ALDOA, B3GALT1, C9orf95, CCL11, CCL2 2, CCNA1, CDC25B, CDC45L, CSNK1G2, DGKE, DLL4, DPM1, EDA2R, ENTPD1, E REG, FABP3, FDPS, FGF13, FGF14, GAB1, GPD2, H6PD, HTR7, INHBC, ITPK1, L1CAM, LAP3, LDHB, LRP6, MAP3K7, MMP7, NFKBIA, NRG2, NRXN2, NUDT5, OR 1N1, OR2M2, OR3A2, OR5AU1, PDGFB, PER1, PER2, PGK1, PIM2, POLR2D, PRK AB2, RAC3, RASGRP3, RFNG, RFXAP, SC5DL, SOCS4, SULT2B1, TAS2R60, TCF 7, THBS3, TICAM2, TLR4, TUBA1B, VANGL2, VCAM1, VEGFC, WNT3A, YWHAG, A TP6V1B2
Negative_11738	AUH, DBH, GGH, HK3, HPD, KHK, SFN, TKT, TPO, ABLIM2, ADCY8, ATP6V1D, CS NK1G2, DDX52, DHRS4L2, EFNA5, ENPP6, EPHA5, FGF13, FLT4, GUCY2C, HSD 3B1, IDH3B, IFNA21, ITGB5, KARS, KIR3DL1, KLRK1, LEF1, MAML2, MAPK8, MLLT4, MTFMT, OR10J5, OR1D5, OR2AG1, OR2G3, OR2S2, OR4A16, OR4C16, O R52N5, OR6K2, PLCD1, POLR2F, PPP3R1, PTPRF, SC5DL, SKIV2L2, SREBF1, STAT6, TUBB2B, UGT8, VDAC1, VNN1, WBSR22, YWHAH, ZMAT3, SERPIND1
Negative_11739	EPO, GSR, MSN, AADAT, ARD1A, BBC3, BCAT1, BMP2, BMPR1B, CACNA1D, CASK , CCL20, CDC2, CDH1, CHUK, CMBL, CPT1C, CRKL, CXCL11, CYFIP2, DEGS1, D PYSL2, FADD, FIGF, FLT3LG, FZD1, GADD45G, GJA1, GNRH1, GRIA3, GSTM1, GUCY1A3, HAP1, IARS, ICAM3, IFNG, JAG1, LTBR, MECR, NCOR1, NT5C1B, OL R1, OR1E2, OR2A42, OR2L13, OR4C12, OR5AR1, OR5H6, OR5M8, OR6Q1, OR8H 2, OR8K5, PAX8, PLAUR, PLCB3, PNPT1, POLR2G, PRKACG, PTGES, PTGFR, PT GIS, RDH12, RPE65, SDC3, SEMA4C, TAS2R60, THBS3, TM7SF2, TRAF1, TRIP 10, TRPM5, TUBB6, WARS2, YWHAZ, CACNA2D2, MAPKAPK3
Negative_11740	CAT, CRK, LIF, MVK, A4GALT, ACO2, ACPT, ADCY7, AKR1B1, ALDH3A2, ATP6V 1A, BACE2, BBOX1, BMP5, CCR2, CD3E, CD79A, CDC26, CDKN1A, CHRM3, CHST 13, CLDN3, CREB5, CXCL5, CXCR5, DIAPH2, ENTPD5, FLT4, FPGS, GALNT14, GART, GATM, GCH1, GRHRP, GSTA3, HNMT, HRAS, HSD11B1, IBSP, ICAM2, IRS 4, LTBP1, MAP2K2, MGAT5B, MYL7, NFAT5, NFKB1, NFYC, NMNAT1, NPAS2, NT SR1, NUDT12, OGDHL, OR10Q1, OR13A1, OR14I1, OR14J1, OR2T11, OR4B1, O R4D6, OR7A10, PAICS, PCYT2, PGAM4, PGM2, PIAS2, PIGN, PIK3R1, PPARD, PPP1CA, PVRL4, SELP, SFRP4, SLIT1, SNAP23, ST6GAL1, SULT1A4, TLR4, T RIP10, UCKL1, ULK2, WNT8B, YES1
Negative_11741	F5, FER, FOS, GK, IL5, ITK, MUT, PGF, ACSM2A, ACVR1, AGXT, ALDH3A1, ALP PL2, APBB1, APOE, ARNT2, ARPC5, ASNS, ATG3, B4GALT2, BMPR1A, CACNA1F , CASK, CD79A, CDKN2A, CLDN6, CTBP1, CYP2J2, DDX23, EDAR, EPHA8, FRAT 2, GALNT8, GCAT, GP1BA, GSTM3, GYS1, HADHA, HIP1, HNF4A, HSD17B8, IL8 RA, LCP2, LDHC, MAGI1, MAP4K4, MS4A2, MYH4, NAT5, NCAM1, NCF2, NCK2, N EFH, NFASC, NFKBIE, NPAS2, OR13D1, OR14J1, OR1J1, OR1Q1, OR5AC2, OR7 D2, OR8A1, OR8B4, PIK3CG, PLA2G4A, PLCZ1, POLR1D, POLR2L, PPM1A, PPP 1R3A, PTK2B, PTPRC, RND1, SCLY, SDHD, SELPLG, SNAI2, SNAP23, SOS2, ST X2, STX4, SUCLG2, TAS2R14, TAS2R9, THBD, TLR5, TNXB, TRPC1, TSHR, WWP 2, XCR1, ZFYVE9, CSNK1A1L, TNFRSF17

Negative_11742	CGA, LAT, MET, MSN, SMS, AADAC, ADH5, ADIPOR2, AGRP, ALDH6A1, AMPD3, APH1A, ARSB, ASIP, B3GALT5, BPNT1, CAPN2, CCR1, CDH5, CDKN1B, CHKB, CLDN1, CMPK1, CNTN2, CYP19A1, DNMT3B, FADS2, GMPR2, GNPDA1, GPX7, ITGB6, KLRC2, LAMB4, NKX6-1, NOS3, OR10P1, OR51E2, OR5D18, OR6C70, PER3, PHKG2, PIM1, PRKAG2, RERE, SDC2, SELL, SEMA3F, SEMA4F, SETDB2, STAM, SUFU, TAS1R2, TCF7, TICAM1, UNC5A, UROC1, WNT5B, ZFYVE16
Negative_11743	AK1, GHR, IL7, MSN, MVK, RDX, SDS, A4GALT, ADH5, AGPAT3, AGXT2, AHCYL1, ALDH1A3, ALDH4A1, AMY2A, ATP2A3, CDC2, CDKN1B, CHST11, CKMT2, CLDN14, COQ5, CSDA, CXCL3, CYP11A1, DDHD1, DDX41, DGKQ, DVL3, EXTL1, FUT4, GARS, GPAM, GSTA2, GSTO1, GUCY2C, GUCY2D, HEXB, HLA-G, HMGCL, HNF1B, HSD17B2, HYAL1, INPP4B, ITGA10, LAMB1, MAPK14, MCCC1, MCM4, MEF2C, MGAT3, MGLL, MGST3, MYH4, NEFL, NFE2L2, NME2, NMNAT2, NMNAT3, NUDT9, OR10H2, OR2C3, OR4A5, OR4N4, OR51A2, OR51M1, OR52N4, OR6B3, OR8J3, OR9G4, PDE3A, PIGK, PLA2G3, POLR2E, PPP3CB, PRKG2, RARS, RASGRP1, SHMT2, SMC1A, SOAT1, SPRY3, SUCLG2, SV2C, TRADD, TYK2, ZIC2
Negative_11744	C1S, HYI, AARS, ACADS, ACP2, ADORA2A, ALCAM, ALDOA, AMDHD1, APLP1, APOA5, APRT, ATP4B, B3GALT4, B3GNT4, B4GALT4, BMPR1A, CCR6, CCR7, CD3E, CD48, CDC2, CFTR, CLDN3, CMAS, CMPK2, CSNK1G2, CTSB, CYP2U1, CYP4A11, DRD2, EPB41L1, ESAM, F11R, FBXW11, FUT6, GGPS1, GLG1, GNRH2, GPX5, GRIN2A, GSTZ1, HIP1, IAPP, IL11RA, ITCH, ITGA5, KIR2DL2, LAMC1, MAPK14, MAPT, METTL2B, MMP9, NAT1, NCOR2, NME7, NR4A1, OR2D2, OR4A15, OR52L1, OR6C4, OR6C6, OR6C70, OR6Y1, OR7G3, P2RX6, PARD3, PCYT1B, PDE4B, PDHA2, PDX1, PHKA1, PIGW, PLA2G2A, PLCB1, POLR2J, PRKAG1, PRKG1, PYCR2, QPRT, RAD51, RARS2, RASSF1, RBX1, RIPK1, RPIA, SFRP1, SFRP2, STAT4, TAS2R50, THBS2, WIF1, WNT5A, XCL2, B4GALNT1, CACNA2D4
Negative_11745	GLS, IL4, MIF, PTS, SFN, TNF, A4GALT, ACP1, ACTA1, ADCY1, ADSSL1, ALG9, ANAPC1, B3GNT3, CCL25, CDC25A, CLDN16, CLDN5, CNTFR, CREB3L2, CSDA, CYBA, DAPK3, DERA, ELK4, ENPP1, ENPP7, FADD, FLT4, FM05, FOXA3, FZD2, FZD6, GALT, GNG3, GSK3B, ICOSLG, IL20, INHBC, ITPKA, KARS, KLKB1, MAML3, MAPK3, MDM4, MTAP, MYH9, NOS1, OR10T2, OR10X1, OR1Q1, OR4L1, OR51A4, OR51E2, OR51G2, OR52E6, OR5AN1, OR5I1, OR6S1, PIAS2, PIAS4, PIK3C2A, PLA2G2D, PLCD1, PLCG2, POLR2G, PRPH, PRSS3, PTPN7, RAB23, RFNG, SMARCA5, SPRY4, STK36, UROC1, VAMP1, WNT4, WNT8B, ATP6V1E2, GABARA PL2
Negative_11746	AMT, AR, C5, CGA, KDR, LTB, MOS, RPE, A4GALT, ACACA, ADORA2B, ADRA1B, ALDH3B2, ANAPC1, ASIP, ATP12A, ATP6AP1, CCL15, CD3E, CDH2, CER1, CLTB, COQ3, CSF1, DDX52, DGAT2, DMGDH, DUSP14, DUSP9, EGFR, ENTPD4, EPB41L1, FZD9, G6PD, GSTO2, GUK1, HAO2, HIP1, IFNA2, IGF1R, IGFBP3, INPP5B, JAK1, KLRC4, KLRK1, MASP1, MTAP, NEFH, NR1D1, ODC1, OR10A4, OR1G1, OR2T33, OR2T4, OR4S1, OR51L1, OR52E6, OR52J3, OR5AP2, OR5C1, OR7A5, PAX8, PDE8A, PDHA2, PIK3C2B, PNPT1, PPAP2B, PPP2R5D, RAB5A, RAPGEF1, RFX5, RRM1, SLC2A2, SNAI1, SPHK1, SREBF1, STAT2, SYNJ2, VANGL2, YWHA E, MAPKAPK5
Negative_11747	KHK, NGF, SPN, ACOX2, ACTN2, ADSS, ALDH1A2, ARAF, ARHGEF6, BMP5, CACNG8, CCKAR, CCR4, CD44, COL2A1, CXCL5, CYSLTR2, DRD2, EIF4E, EPHB1, FABP3, FGF11, FLOT2, FLT3LG, FTMT, GALNT8, GANAB, GCNT3, GLO1, HAO2, HEXB, IAPP, ICAM2, INHBB, KLK3, LALBA, LAMC3, LLGL2, LRP5, MGAT5, MGLL, MINPP1, MMP7, MTMR1, MTMR2, MTMR6, MYH4, NOD1, NOTCH2, NOX3, NRG2, NR P1, NT5M, OR10G2, OR1L1, OR2AT4, OR2M3, PAPSS1, PCYT1A, PGM3, PIGF, PIPOX, POLR3G, PPP2R2A, RASGRP4, RBKS, RDH10, RFNG, RPS6KA4, RPS6KB1, SLC27A5, SPRY3, SSH3, STX16, TACR1, TACR3, TAS2R8, TRDMT1, TUBA1A, WNT8B, ZBTB16, SERPINA1



Negative_11748	AUH, CP, F2, TNN, ACADL, ACTG1, ALDH3B1, ALDOA, ALOX15, ATP5J, BUB1, CACNG2, CAMK2A, CCL16, CD86, CDS1, CHKB, CHR1, CLTCL1, CNTN2, COASY, CQO5, CPT2, CSH1, CXCL3, CXCR3, CYP1A1, CYP4A22, DDX47, DDX54, DUSP16, FARS2, FOXA2, FTMT, FZD4, GART, GFAP, GPAA1, GPLD1, GSTA5, GSTZ1, GTSE1, GUCY1B3, GUCY2F, HAGHL, HMGCS2, HRAS, ICOS, IL12RB2, IRAK2, JAG2, KIR2DS5, MAP4K1, MGAT5B, MKNK1, MYL2, NCOR1, NLGN1, NOTCH1, NTSR1, OR10G3, OR52B4, OR6N1, OR8B4, OR9A2, ORC3L, PAK7, PARD6B, PDE1A, PDXP, PGS1, PLCG2, PLD2, PON3, PPP1CA, PRKAR1A, PRKCA, PRNP, PRSS2, PTCRA, RASGRP1, RASSF5, RBX1, SARDH, SESN3, SMAD2, SOX17, SPHK2, TAS2R4, TRAF3, ATP6V0A4, CACNA2D2, PAFAH1B2, PPARGC1A, TNFSF13B
Negative_11749	CFH, DCK, GDA, ID1, INS, KMO, ZYX, ACP2, ACSL4, ACVR2A, AKR1A1, ALDOB, ALG8, AREG, BAAT, CAMKK1, CCL15, CES2, CLCF1, CSF2RA, CXCL13, DDX4, DGKB, FDPS, FMO2, FUT7, GLB1, HAGH, HLCS, IFNGR1, IKBKB, IL17RA, KLKB1, LDHD, LTC4S, MAML1, MAPK7, MCCC2, NADSYN1, NLGN3, NME6, NRG3, NTN1, OR10J3, OR1L8, OR4C6, OR5J2, OR8G1, PDE3B, PIGA, PLAUR, PPP3R1, PRKACA, PSAT1, PTGS1, RHOD, RPS6KA4, SOAT2, STAT3, TACR2, TALDO1, TAS2R60, TGDS, TRAF1, TUBAL3, UGDH, WNT8B, ATP6V0A2, ATP6V1C2, CTNBP1, HLA-DPA1, HSP90AA1, PLA2G12A
Negative_11750	BID, ID1, INS, MTR, PAH, SP1, SPN, AADAT, ACVR1C, ACYP1, ADH4, AHCY, AMPD1, ATP5L, B4GALT7, CAMKK1, CCND2, CDK6, CHRM2, CNTN2, CXCL1, DDB2, DHRS4L2, EDNRB, F11R, FGF10, GALK1, GALNT10, GNAI1, ICAM2, LCP2, MCEE, MCM3, MCM4, MPZL1, NCAM1, NFATC2, NTF4, OR4E2, OR5T2, OR8B4, PAK1, PAK7, PDXK, PPA2, PPP3R2, PRIM1, PRIM2, RDH5, RUNX1, SKP2, SMPD1, SOD1, TOMM40L, TUBA1A, ATP6V1B1
Negative_11751	BTK, C6, EZR, F11, HYI, SP1, TEC, ACADL, ADCY5, AGPAT1, AK3L1, ARD1A, ARHGEF1, ATP5G3, BLVRB, CARS, CDC14A, CER1, CHD8, CSF1R, CSF2RB, CXCL1, DRD2, ESAM, FRAT1, FSHR, GDF7, GIT1, GPAM, GRIA1, GRIN2B, GTSE1, IL20RA, IMPA2, INPP1, KIR2DS4, LILRB3, MADCAM1, MAP3K6, MPDZ, MPST, NCKAP1L, OR10J5, OR1L4, OR52D1, OR52E8, PDPK1, PERP, PFKM, PIAS4, PIK3C2G, PPP2R2A, PRKAG1, PRKG2, PSME2, RFW2, RHOQ, SDC4, SKIV2L2, TAS2R50, TRAF3, ULBP2, ULBP3, PLA2G12A
Negative_11752	F7, FST, PTS, SHH, VTN, ADRA1B, AHCYL2, ALDH3A2, ALDH9A1, ALPI, ANAPC11, ARPC5L, ARSB, ATP5G2, CACNA1B, CCKBR, CD59, CD8A, CLDN11, CLDN8, CNTF, CTNNA2, EGLN1, FCER1G, FGF20, FGF4, FTCD, GZMB, HA01, HGSNAT, HLA-F, HPSE2, HRH1, HSD17B3, HTR5A, IL23A, IL6ST, ITGA6, KAT2B, MAFA, MAP2K2, MMP7, NAT1, NRXN2, OR10H4, OR4K5, OR51D1, OR9Q2, PARD6A, PCK1, PHKG1, PHPT1, PLA2G5, PMM2, POLR3H, PON2, PRDX6, PTGDS, RETSAT, ST3GAL5, STX12, STX3, TNFSF14, TSLP, TUBB2B, UGT2B11, UPRT, VARS, XIAP, ZMAT3, HLA-DQB1, SERPINB5, TNFRSF10C
Negative_11753	CGN, EDA, FAH, IL4, INS, KHK, LHB, MSN, SHH, ACLY, ACOT12, ACSM1, AKR1D1, ALDH3A1, ALOX12B, ASS1, B4GALT6, BCL2, BPNT1, CACNA1G, CACNG2, CADM1, CDC42, CFTR, CHIA, CHR1, CHST12, CLDN9, COL6A2, CREB1, CSF2, CTNNA1, CXCR3, CYP4F3, DHDH, DKK2, DNMT1, DNMT3L, ELK1, ENTPD8, FCER1G, GAPDH, GRHR, HRH1, IL11, IL1A, IL5RA, IMPA1, IPMK, IRAK2, LAMB2, LAP3, LARS, LIFR, LRDD, MAML1, MBL2, MMP2, MPST, NCOR1, NFKBIE, NKD2, NODAL, OR10A3, OR10K1, OR1B1, OR1K1, OR1L6, OR4C13, OR51B2, OR6B2, OR6C76, OR7D2, OR7G3, ORC1L, ORC6L, PARVA, PFKFB3, POLR1B, POLR1E, PRKCB, PSEN1, PSENE1, RND1, SARDH, SDHD, SETMAR, SMAD1, SPRY4, TGFB2, THY1, UPRT, UXS1, WNT10A, WNT5B, ATP6V0A1, HLA-DPB1, MAPK8IP2

Negative_11754	A2M, ADC, EZR, NPY, ADRBK2, ALDH3B1, ANAPC10, APRT, ATP2A1, B3GNT5, BACE2, C3AR1, CACNG4, CAV2, CBR1, CCL20, CDH1, CFL2, CPT1A, CREB5, CTN NB1, DDHD1, DHRS3, DRD5, DUSP5, EFNA4, EGLN3, ENO3, GCNT2, GGT7, GNB3, GNPAT1, GRB2, GSTA1, ICAM3, IDH3A, IFNA7, IGFBP3, IL12RB1, IL13, MAD2L1, MAP3K13, MCM3, MEF2C, MTMR2, NME4, NOTCH2, NQO1, OR10R2, OR1A1, OR2D2, OR4K14, OR52L1, OR5T1, PER2, PIGH, POLR2J, PPAP2B, PPAT, PRKCB, PTTG1, RAB23, RAF1, RND1, RPS6KB1, RRM2B, SETDB1, SLC2A1, SLC33A1, ST3GAL2, TAS2R3, UMPS, ZNRD1, PAFAH1B2, PLA2G12B, ST6GALNAC4
Negative_11755	CEL, IL8, IL9, NF1, AASDH, ACP5, ASNS, ATN1, ATP50, B4GALT5, BACE2, BBOX1, CCR2, CCR9, CD59, CDC14B, CHIA, CLDN2, CREB1, CTPS2, CTSS, CXCR6, CYP11A1, DARS, DFFB, DPM3, EGFR, EIF4B, FARSB, FRAT1, GAD1, GALNT2, GANC, GDF7, GGPS1, GLYCTK, GRIA3, HADHA, HLA-DOA, IL17A, ITPK1, JUND, KIR2DS5, KNG1, LAMB2, LARS, LDHB, LIAS, MAP3K12, MAP3K4, MAPK13, MTHFS, MYH3, OR2C1, OR4F15, OR51F1, OR51S1, OR52M1, OR5T1, P2RX1, P4HA2, PDCD1, PDGFB, PFKFB2, PLA2G3, POLA1, POLD2, PROS1, PRSS1, PTPN1, PTPRF, RFNG, RPS6, RRM2B, SEMA4C, SGPP1, SHC2, SLC12A2, STK36, STX3, TBL1X, TKTL1, TRIP10, TUBB3, USE1, PAFAH1B2, TNFRSF1A
Negative_11756	C8A, FER, PXN, WAS, ACP2, ACSS1, AOC2, C4BPB, CACNB3, CTSG, CXCR5, DNM T3L, DPYD, EFNA4, EFNB1, ENAH, EPHA8, FSHB, GALNT12, GCNT4, GGPS1, GMPS, GNRH1, HCLS1, IDH1, IFNA7, IL21, ITGAE, KNG1, LTC4S, MAP2K5, MAPK1, MAT2B, MYH8, NEFM, NRG1, OR10G7, OR2Y1, OR56A3, OR6C75, OR8G1, PDE9A, PKMYT1, PPAT, PPM1A, PPOX, PROC, PTCRA, RRAS, UROD, VARS, CSGALNACT2, HLA-DPB1
Negative_11757	EDA, ACAA2, ATG12, ATP6V0C, BUB1B, CALML6, CAMK2A, CCNA2, CCNE1, CCNH, CDC45L, CDH15, CPT1C, DDIT4, DOLPP1, DUSP2, E2F1, GSTA3, GYS1, HSP90B1, IFNG, IL10, IL2RG, IRAK2, IRAK3, ITGAD, ITPK1, LAMB2, LRDD, MAD2L2, MNX1, NOX1, NUDT5, OR10V1, OR14A16, OR2T34, OR4F17, OR4S1, OR4S2, OR51A7, OR52N2, OR5D16, OR6C74, PAK6, PDE6H, PDE7A, PIM2, POLD4, P OLR2E, PRKAB1, PTDSS2, RUNX1, SDC4, STT3B, TAS2R3, TAS2R41, TAS2R5, TAS2R60, TCF7L2, TICAM1, TKTL1, TUBA1C, ULBP3
Negative_11758	C8A, IL5, C4BPA, CCL20, CCNB3, CES2, CREB1, CRKL, DAPK2, DHRS9, G6PD, GALNT2, GALNT8, GNB1, GNRH1, GPAM, HSD3B1, IDUA, IFNA17, IL8RB, IRF3, ITGA2, LIPT1, LYPLA1, MASP2, MCEE, MTAP, OR2A2, OR2M5, OR4K17, OR6S1, PDCD1, PER3, PGAP1, PIGP, PLA1A, POLD3, POLR2D, PPP1R3D, PRKCA, RDH8, ROCK2, SHC1, SLC9A1, SPRED2, UCK1, VDAC3, WEE1, XCL2, ATP6V1C1, HSP90AB1
Negative_11759	ATM, BAD, EBP, FOS, GGH, GLA, HDC, HYI, ITK, MVD, ACOX3, ACTN1, ADAM10, ADSSL1, AGRN, ALPPL2, APLP1, AQP7, B3GAT2, BIRC3, CBR3, CCNA1, CD47, CD72, CD8B, COL4A1, CREB5, CX3CL1, CYP21A2, DHFR, DHODH, DUSP1, EGLN3, FBP2, FGF9, FOXA3, FPGS, G6PC, GANC, GART, GLG1, GLI3, GLYCTK, GNG13, GSTA4, HCCS, IARS2, IDI1, IL18R1, IL5RA, INMT, IQGAP1, ITGAL, KLKB1, LCAT, LDHA, MAML2, MAP4K4, MDH2, METTL6, MPZL1, MTHFR, NARS, NRP1, OR1G1, OR1J4, OR2T10, OR4C16, OR51G2, OR51M1, OR52E4, OR5A1, OR5V1, P2RX3, PARVA, PIAS4, PLA2G2A, PNLIP, PNPLA4, POLR2E, POLR2F, PPP2R5A, PRKAB2, PRPS2, PTGS1, PYGL, RDH10, RELA, RRM1, SUOX, TACR2, TAS2R16, TICAM2, TIRAP, TKTL2, TNFSF11, C1GALT1C1, SUV420H1

Negative_11760	<p>AMT, DBT, SPN, SRF, ACAT1, ACTA1, ACTB, ACVR1B, ADRB3, AGRN, ARRB2, ATP4B, BCL10, C9orf95, CAMK2B, CCR8, CDC6, COQ7, CUL1, DHDDS, DOT1L, DPM2, DRD1, EPAS1, EPHA7, FARS2, FGF1, FOXA2, FUT8, FZD9, FZR1, GNAT3, HADHB, HLA-</p> <p>F, HTR6, IFNA4, IL17RA, IL21R, IL28B, ITGB7, LCAT, OR1J1, OR4C13, PAK3, PDE10A, PHKA1, PHKB, PKLR, PLA2G6, PLAUR, PLCG2, POLE, PPM1A, PRKCG, PTTG1, QARS, RAPGEF4, RBL1, RFWD2, RXRG, SDHB, SEMA4F, SPHK1, STEAP3, STK36, TAP2, TAS2R14, TAS2R41, TAS2R48, THBS1, TNFRSF8, TNFRSF9, UBA7, UCK2, UPRT, XYLT2, MAPK8IP1, SLC25A31, TNFRSF10D, TNFRSF11B</p>
Negative_11761	<p>FH, KMO, NLK, PGD, WAS, ACOX1, ALAS1, ALDH1A1, ALG5, ARHGEF7, BCAT1, C5AR1, CACNG8, CAMK2D, CKS1B, CRY1, CXCL1, CYP11B2, CYP1A1, DHODH, DRD2, EDN1, ENPP6, ERO1L, FABP1, FADD, FBP2, FBXW11, FOXA2, GAS1, GSTA4, GSTO1, HLA-</p> <p>F, HYAL1, IFNA8, ITGAE, JAM2, LEFTY1, MALT1, MAN1A1, MAP3K3, MCM6, MDM2, MECR, METTL2B, NCK1, NFASC, OR13C3, OR1F1, OR2V2, OR5AP2, OR5D14, OR6B2, ORC3L, P2RX7, PAFAH2, PFN2, PIK3R4, PPP2R5D, PTDSS1, PTPN11, RAB5A, RPS6KA1, RPS6KA5, SAT1, SC4MOL, SLC33A1, SMAD2, STAT1, TOLLIP, TOMM40, TUBA8, UGT2A3, UMPS, WARS2, WBSR22, WNT7A, CSGALNACT2, ST6GALNAC5</p>
Negative_11762	<p>DBI, DCT, EPO, FGG, GAA, IL4, ILK, MIF, PTS, ABLIM3, ADH7, ADIPOR1, ALPI, AMPD1, ATP13A2, ATP5F1, ATP5J2, C9orf95, CCR5, CD22, CDC6, CYP2C9, CYP2D6, DLL1, EPHA5, EPOR, FMO1, FUT8, GAD2, GALNT8, GAMT, GLG1, GLYCTK, GNA15, GRAP2, GUSB, GZMB, HTR4, HTRA2, IDH3A, IFNA10, IFNA8, KIR2DS5, KRAS, LLGL1, MCEE, MDH2, MYH9, NCAM1, NOX1, NR1D1, NRXN3, OR4N5, OR51E1, OR5AK2, PAFAH2, PAK3, PCYT1A, PDE1B, PGM2, PIK3C2G, PLAT, PLCD4, PRKY, PTPN7, RASGRF1, SDHC, SHMT1, THY1, TSC1, VAMP4, HLA-DRB3</p>
Negative_11763	<p>ADC, CD4, F2, FH, GGH, ID1, IVD, KMO, ME2, TYR, AADAT, ALDH3A2, ALG1, ALG2, AMDHD2, BAAT, CACNA1A, CASP3, CCDC6, CD27, CHRM2, CHST12, CTNNB1, CXCL9, CYP4F3, DHDDS, DHRS3, DIAPH2, EFNB2, ENTPD6, EPAS1, EREG, FABP3, FBXW11, GALNT13, GBTG1, GNAO1, GSTK1, GSTO1, HSD17B2, HSD17B4, IDI1, IL10RB, ITGA3, ITGB6, KLRC3, LAMB1, MAD1L1, NFE2L2, NODAL, NTN1, NTNG1, OR2A25, OR2G6, OR2T10, OR2T11, PDGFRB, PER1, PIGQ, PIK3CA, PLIN, PMM1, PPARA, PYCR1, PYCR2, RAB5A, RASGRP2, SC4MOL, SELL, SMARCA2, SMC1B, SRD5A1, SRD5A2, TNXB, UGCGL2, VAMP2, VEGFA, VTI1B, WNT9A, YKT6, ATP6V0A2, SERPIND1, SERPINE1, ST6GALNAC5, ST6GALNAC6</p>
Negative_11764	<p>DBH, EDA, PRL, AACS, ACADVL, ALDH3A2, ALPPL2, ARNTL, BMP8B, CACNB1, CL27, CD01, CLDN6, CMBL, CYP3A5, DDX56, DLL3, DNMT3L, DUSP16, DUSP4, EFNA3, EHMT1, FZR1, HADH, HADHB, HCLS1, HSD17B2, IL22RA2, IQGAP1, IRF3, ITPKB, LYPLA1, MAOA, MAP3K14, MIOX, MYH1, MYL2, OR10Z1, OR13C8, OR14A16, OR4B1, OR4D9, OR4X1, OR51F2, OR51Q1, OR52B6, OR9K2, PIAS3, PI5K1B, PMM1, PNPLA3, POLR2K, PTDSS1, PTEN, PVRL4, RASA1, RASGRP3, RND1, RPS6KB2, RRM2B, SELL, SFRP2, SLC27A4, UBE2K, UPRT, XCL1, YWHAG, ZMAT3, SERPINC1, ST6GALNAC1</p>
Negative_11765	<p>C7, GHR, GSS, PTS, ACADVL, ARPC5, ATP6V1D, C1GALT1, CACNA1I, CADM1, CASP8, CD38, CDKN1A, CES7, DAD1, DMGDH, DTYMK, G6PC2, GLYCTK, HNMT, IFNA13, IL21R, IMPA1, ITGAX, KAT2A, KIR2DL4, LMO7, MAP2K4, MTHFD1, MYL7, NAMPT, NCR3, OR2A12, PDE5A, PDIA4, PLCE1, PLOD3, POLD4, PPP2R2C, PPP2R2D, PRKACB, PRKAR2A, PRKCH, PRODH2, PVRL4, RBL2, SOD1, TKTL1, TLN1, TSHR, ULBP2, VAMP1, VTI1B, WNT2B</p>

Negative_11766	CAD, F2R, ACADS, ACOT11, AGPAT1, ALG9, ALOX5, CHRNA7, CNGB1, CSDA, CY P3A43, DBF4, DCTN1, DHODH, DKK2, DTX2, EIF4E, F2RL1, GNA15, GPLD1, GS K3B, HHIP, IAPP, MGLL, MGST3, NFKB1, NFYB, NR5A2, NUDT2, OR10Q1, OR13 C3, OR1B1, OR2A4, OR2Z1, OR4D11, OR4K2, OR52E2, PARVG, PAX6, PLK1, PL XNA2, PLXNA3, PLXNB2, POLR2F, PTGDS, RAC3, SESN2, SPTLC1, SSX2IP, ST AT1, STK36, SUCLG1, TUBA3C, TUBAL3, VNN1, WNT4, B4GALNT1, TNFRSF11A
Negative_11767	BTK, ILK, PRL, RET, ACOT11, ADIPOR1, AGPAT6, AKT1, ALDH1A1, ALDH3A1, AMY2B, ARG2, BCMO1, CACNA1G, CCNE1, CD44, CHPT1, CLDN9, CMAS, COL5A3 , DDOST, DGAT1, DNMT3L, ECSIT, EFN2, F11R, FARSFA, FGF19, FZD6, GZMA, IBSP, IDH1, IL22RA2, IL2RB, INSR, ITGB1, LILRB3, LIPF, MLYCD, NCF2, O R11A1, OR1Q1, OR3A3, OR52N5, OR5R1, OR8K5, PDE10A, PDE4D, PLTP, POLA 1, PTPN1, RPS6, RPS6KA1, SEMA3A, SHC4, TP53I3, TUBA4A, TYROBP, ULBP3 , UNC5A, UROD, PDCD1LG2
Negative_11768	GHR, MIF, PRL, UBB, ALG9, APBB1, ARG1, AXIN1, B3GNT2, C1QC, CAMK2D, CC L1, CCL5, CFTR, CLDN22, CMBL, CNGA3, CREB3L1, CSDA, CSF3, DBF4, ENO2, F13B, FGF23, GALE, GCLC, GDF6, IDH3B, IL23A, MCM5, MEF2C, NKX3- 1, OR10S1, OR11H6, OR2A5, OR2T1, OR4K5, OR51A2, OR7C1, OR8B8, P2RX5, PDE4C, PLD1, PLXNB1, PRKACG, SMAD2, SMAD6, SMAD9, TALDO1, TSNARE1, U NC5A, PLA2G12B
Negative_11769	DCT, ID3, LAT, ACSL5, AMD1, AMHR2, AOX1, B3GALT5, BCL2L1, BNIP1, CALM L3, CANT1, CAPN2, CCL22, CCR3, CCR8, CD79A, CLCA4, CTPS, DFFA, DIAPH1 , DUSP5, DUSP6, ENTPD6, FGF14, FLOT1, FRAP1, GALNT8, GALNTL4, GCLC, G CNT1, GLS2, GLUD2, GNAI1, GPT2, GSK3B, GSTM5, GUCY2F, HLCS, HMOX1, IF NA8, IL22RA2, KLRK1, LAMB2, MADCAM1, MMP7, MYH4, NADK, NCKAP1, OR2B1 1, OR2D2, OR2T2, OR4K2, OR4X2, OR51M1, OR52J3, OR5D16, OR5M3, PIGK, P LA2G10, PLA2G3, PLXNA2, POLR1A, PRDX6, PTK2B, PTPN7, RALGDS, SPCS1, SPTLC1, STK3, SULT1A1, SUOX, TM7SF2, TNXB, TOMM40L, UCP1, UGT2B28, V AMP4, VANGL1, WNT5B
Negative_11770	CFH, CFI, FUK, FYN, JUN, ACLY, ACP5, ACVR1C, AKT3, APC2, ARNTL, B4GALT 2, CDIPT, CHSY3, CXCL1, CYP1A1, CYP2F1, DDX50, DGAT2, DGKI, DLL1, DPM 1, E2F4, EGFR, EPHA7, FASLG, GALT, GLB1, GNRH1, GUCY1A3, GUCY2F, HNF4 A, HSD11B1, HTR5A, IL1RAP, IL25, IL9R, INHBE, INMT, KIR3DL3, MASP1, M PZL1, MYH4, NCAM2, NR4A1, NRG4, OR10AG1, OR10C1, OR1J1, OR2A12, OR2T 8, OR4K14, OR52N4, OR5L2, OR8H3, ORC2L, PANK4, PCYT2, PDE4B, PFN3, PH KA2, PLA2G5, POLR1D, PRKAR1B, PSENEN, PSME1, PTGS2, PTTG1, PYCRL, RB L1, RDH12, ROBO1, SMPD2, SMURF2, SQLE, TAS1R3, TIAM2, UPRT, SERPINE1
Negative_11771	CGA, FGA, FH, FN1, TEC, TK1, AANAT, AARS, ACSL1, ALDOC, ATG3, B3GALT5, CCL1, CDC25A, CDK5, CDKN1B, CSF2, CYBA, DNMT1, DPYSL2, DTX3, EHMT1, E IF4E2, EPB41, ETNK1, FGF4, FMO5, GLDC, GOT1, HAO2, HARS2, HHIP, HSD11 B1, HSD17B4, ICAM1, IFNA17, INPP5E, ITGA2B, KLK3, KLRC4, LAMA3, LIMK 1, LYPLA2, MAP3K7, MAP3K8, MAP4K4, MGLL, MGST2, MGST3, MITF, NADSYN1 , NARS, NAT1, OR1I1, OR2D2, OR2L13, OR51G2, OR9K2, PAX4, PDE1B, PIGW, PIP4K2B, POLE, POLR2K, POLR3D, PORCN, PPARA, PPP1R1A, PRLR, PRSS3, P SME3, PTSS2, RASA1, RPN1, RPS6KA3, RRM1, SC5DL, SETD1B, SOCS4, SPRY 4, SRGAP2, SSH1, ST8SIA5, STX2, TGDS, TRADD, VARS, ATP6V1B1, MAPK8IP 2, ST6GALNAC3

Negative_11772	FGA, GH2, GP6, HK1, OGT, TKT, ACADVL, ACSL3, ACTC1, ACVR1C, ADCY5, ADH7, ADRB3, AKT3, ALDH2, ALDOC, CCL21, CFLAR, CHR1, CLDN14, CLDN4, COQ5, CRKL, CTNNA2, CTNND1, CXCL9, CYP2D6, CYP4F3, DDIT3, DUSP10, EFN1, ENTPD2, EPHB1, ESAM, FCER1G, FGF13, FM01, FPGS, FZR1, GCNT4, GLUD2, GMD5, GNA15, GNG13, GPX7, H6PD, HLA-DOA, HSD17B3, IKBKG, IL8RA, IL9R, KITLG, MAP2K4, MASP1, MYH4, NADSYN1, NT5C1B, OR10A5, OR11H6, OR2T11, OR51D1, OR51I2, OR52A5, OR5AC2, OR5J2, OR5M3, OR5T1, OR6Y1, PAK3, PDIA4, PIGK, PLXNB1, PMAIP1, POLD3, PRKACA, PTCH1, PTK2, RPS6KA2, SFRP5, SHMT2, SIAH1, SLC25A4, SPHK2, ST3GAL5, SULT2B1, SUOX, TGFA, TIAM2, TUBA1A, TUBA3E, UBA7, UBE2L6, UBR1, WHSC1, WNT11, YWHAQ, HLA-DRB4, SLC25A31
Negative_11773	C8B, DCC, FAS, FN1, HAL, LYN, ABL1, ACSM4, ADRB2, AGRN, AMDHD2, ARSA, ATP5F1, ATP6V1A, B4GALT4, BLNK, C4BPB, CACNG2, CACNG6, CD55, CD8B, CLDN22, CSNK1E, CUL1, CX3CR1, CYP19A1, CYP27A1, DDX56, DGAT2, DKK4, DPAGT1, DPYS, ECHS1, F13A1, FCGR3A, FGF12, FUT9, FZD4, GLDC, GMD5, GRIN1, GSTK1, HAP1, HMGCS2, HTR6, IFNA10, IFNK, IL9R, INPP1, IRF9, KAT2A, KLRC3, LEPR, MAP4K4, MAPK12, MCM4, MDM4, MOV10L1, NUDT12, OR10C1, OR10Z1, OR2W1, OSMR, PAK2, PER3, PGAM2, PLOD1, PMVK, PPAP2B, PRKCH, PRODH, PRPH, PTDSS2, PTGER3, PTK2, QPRT, RAB23, RENBP, RERE, RPS6KA1, SAT1, SMAD7, SOCS4, STAT5B, TUBA3E, UGT2B4, UPB1, ATP6V1G2, HLA-DQA2, PAFAH1B2, PHOSPHO1, SERPINC1, ST6GALNAC4
Negative_11774	ID2, TPR, AKT1, ALDOC, ALG10, ARSD, ASAH1, CCL24, CCL3, CDH2, COQ5, CREBBP, DGAT2L4, DLAT, EFN1, ENO3, EXTL3, FCGR3B, FGF14, FGF3, GAD2, GPD1, GSTA1, GSTM2, HAO2, IDH2, IL24, KDSR, LRP6, LYPLA2, MAP2K1, MAP3K11, MGAT1, MGST1, NUDT5, OR2D2, OR52N1, OR52W1, OR9Q2, ORC1L, PAK3, PAX8, PGM3, PI4KA, PIP5K3, SEMA3C, SETD2, SMAD7, ST3GAL3, TGFB2, TRADD, TRHR, UGT2B10, UXS1
Negative_11775	CSK, KIT, PLN, TXK, ACOX3, ADCY10, ADH1B, ADORA2A, CACNA1F, CACNG3, CAMK4, CCL14, CNTFR, CUL1, DHRS9, F2RL1, FGF9, GMPR, GOT1, GRIA3, GUCY1A2, IL10RA, IL6ST, INPP4B, INSR, KARS, KIR2DL1, LIMK2, LLGL2, MARS2, MTHFD2, OR10H1, OR10Z1, OR13C5, OR5T2, OSMR, PAK6, PGAM1, PIAS4, PMAIP1, POLR2J, PTGER1, PYGB, RASA2, RETSAT, RFX5, RHOA, RPN1, RXRG, STAT1, STX8, SV2A, TAS1R1, UCKL1, VANGL2, WNT10B
Negative_11776	ITK, ME2, MOS, PAH, AAC1, ACAT2, ANAPC4, AOX1, ARSD, ATP5H, CCL25, CD79A, CD8A, CDC16, CHRM2, CNGA3, CREB3L2, CYP11B1, DHRS4, DNMT3B, ENPP1, FARS1, FCGR3A, GFPT2, GMPS, GSTO2, IDUA, IGF1BP3, ITPK1, ITPKB, LTB4R2, MCEE, NCK2, OR13C5, OR4X2, OR52A5, OR7G2, OR8G1, PDE10A, PDE3A, PDE6G, PDHA1, PIGO, POLE2, POLR2J, PPARA, PVRL1, ROBO3, SGPP1, SLC9A1, SSH3, STAT5B, TACR3, TP53I3, TRAF3, VEGFB, WNT3A
Negative_11777	ASL, FGB, LCT, LEP, TK1, ACTN4, ADIPOR2, ALDOA, B3GALT4, CAMK2A, CD27, CYP2D6, DAD1, DDOST, DLL1, EFNA1, ENO1, EPHB3, FBXW11, GSTZ1, IFNGR2, IKBKE, IL12B, IL22, IQGAP3, ISYNA1, KLK3, KLRC3, MAGI1, NAGK, NAT2, NEFH, NOTCH1, OGDHL, OR13C3, OR14I1, OR2G2, OR2M5, OR2S2, OR4C12, OR5D13, OR8U1, PIGN, PIK3R3, PMM2, PTEN, RPN1, SPAM1, UGT8, ULBP3, VARS, VASP, XCR1, YWHAG, ST6GALNAC1
Negative_11778	C9, CD6, CP, EPO, GLS, OSM, PGP, ACSL6, ADCY7, AKR1D1, ALG3, ARPC1A, ATP5J, B3GALT1, B3GALT4, BMP6, CACNA1A, CCNA2, CD40, CDKN2D, CLDN17, CNTN1, DAG1, DDX41, DDX55, DIAPH2, DUSP8, E2F3, ENPP6, EPHA1, FGF1, FIGT, FUT4, FZD8, G6PC, GALNT3, GALNTL2, GNG12, GSTA4, GUCY2C, IDH3B, IQGAP3, LTA4H, LTB4R2, MAPK7, MAPK9, MGAT4A, MOV10L1, NRAS, NTSR1, OR10A6, OR10H4, OR2K2, OR2M5, OR2M7, OR2T10, OR4C13, OR5AC2, OR5H2, ORC3L, PIAS3, PIK3R2, PIP5K3, PKM2, PLXNC1, PPP3R1, PTK2B, PYCRL, RAD51, RAF1, RPS6KA5, SPRY2, TFPI, TKTL2, TLR9, TOMM40L, VARS, WASF2, YES1, ATP6VOD2, HLA-DRB4

Negative_11779	AK1, BID, DCT, EGF, GK, TPO, ACACA, ADCY3, ADSL, AGRN, ALDH1A3, ALDH3B2, ALG5, ALOX15B, AREG, ATP4A, CACNG5, CCNE2, CCNG1, CD38, CHST11, CP T1C, CXCL10, DAAM1, DAPK3, EI24, EIF4E2, EP300, ERBB2, FUT6, GALNT3, GALNT5, GNMT, GNRH2, GYS2, IDI2, IGFBP3, IL13RA1, IL18RAP, INHBE, ITGAD, KCNB1, KIR3DL1, MAP3K14, MAPK8, MAT1A, METTL2B, NFATC1, NFKBIA, NFKBIE, NKX2-2, NME4, NR1D1, OR11H4, OR1C1, OR1D2, OR5K1, OR8B12, OXCT1, PAPSS1, P ER2, PHKB, PIGX, PIK3R4, PIK3R5, PMVK, PON1, PPCS, PPT1, PRKCE, SHC2, STAT6, TNFSF4, TUBA1A, UGT2A3, WNT5A, XCL1, ZBTB16
Negative_11780	C8B, CEL, CS, GSN, SHH, ADORA2A, ALAS1, ALDOB, AOX1, ARPC5L, ATP2A3, BCKDHB, CASP10, CNGA3, DDOST, EDNRB, ENTPD5, GADD45B, GOT2, GTSE1, HHIP, IFNAR1, IL12RB1, ITGB5, LAMA4, LDHB, LEF1, MAP3K11, NCAM2, NCR1, NFKBIB, NLGN2, OR10G9, OR11H4, OR1D5, OR51T1, OR52M1, PDE7A, PLXNB1, PRKCZ, PTPN5, PVRL3, QARS, RASSF1, SLC9A1, SSH2, SUFU, TAS2R16, TPK1, ZAP70, HSP90AB1
Negative_11781	CFD, F12, FN1, ID2, ILK, NPL, PXN, SP1, ALCAM, AOX1, ARAF, ARPC1B, ATP5A1, ATP5J2, B3GAT1, CD82, CDC7, CDK5, CLDN16, CTSB, CXCL9, DPM1, EFNB2, FGF10, FGFR1, FOXA2, FTCD, FZR1, GALK2, GNAI1, GPX5, GSTA3, HGSNAT, ICAM1, IL13, IQGAP2, KLRC4, LAMC3, MAN1A1, MAOA, MYH13, NCF1, NRCAM, NT5C1B, OCLN, OLR1, OR10A7, OR10R2, OR10T2, OR11H1, OR13C9, OR2T1, OR2T4, OR2Z1, OR4A5, OR51M1, OR5H6, OR5T1, P4HA2, PDGFB, PGM1, POLR1C, POLR3B, POLR3D, PRSS1, PYCRL, SFRP4, SIAH1, SPHK1, SRD5A1, TCF7, THBS4, TNXB, TUBA3E, YWHAH, ATP6VOD1, HSD17B10
Negative_11782	ASL, CRK, F10, GBA, HK1, NPL, ACPT, ACTB, ALG13, ALS2, AOC2, APC2, ASNS, ATF4, B4GALT6, BCKDHB, CACNG1, CASP3, CCR6, CD36, CDC20, CKMT2, CLDN5, COQ6, COQ7, CUL1, DGKH, DVL1, E2F1, EPOR, FMO1, FUT8, GBGT1, GMPR2, GRAP2, HA01, HLA-G, HLCS, HSD3B2, IL1B, INPP5B, IPMK, IRS2, KIR3DL1, LCMT1, LRRC4C, MGAT2, MGAT4A, NCK2, NRCAM, NRG4, NT5C, OR10A6, OR1Q1, OR2D3, OR2V2, OR4N4, OR52K2, OR7A10, PIK3CG, PPARA, PPP2R2D, PRKAA1, PRODH, PTCH2, PTK2B, RDH12, RPS6, RRM2, RUNX1, SHC3, SLC27A4, STX2, TACR2, TAS2R49, TNFSF14, TRAF3, TUBA1A, TYK2, UGP2, WNT6, ATP6V1C1, HLA-DPA1, TNFRSF10B, TNFRSF6B
Negative_11783	CSK, F7, LPO, MAX, ACYP2, APPL1, ARHGAP5, ASNS, CACNG4, CANT1, CCL23, CCNG1, CD22, CDC42, CDKN2C, CHPF, CLDN11, CMPK1, CYP3A7, DGKZ, EHMT1, GADD45G, GALNT11, GLYCTK, GPT2, GRIN1, GRPR, GSTA5, GSTT1, GZMB, HNT, IDI2, L1CAM, LDHD, LMO7, MAML3, MAPK7, MECR, MPP5, NFKBIB, OR14J1, OR1S1, OR4X2, OR51G2, OR7A17, ORC2L, OXCT1, PAK3, PAK6, PIK3R3, PLD2, POLD3, PPA2, PRKCE, RPSA, SEMA3A, SESN2, SORBS1, STEAP3, TNFRSF9, TNFSF9, UROC1, WASF1, ZAP70, C1GALT1C1
Negative_11784	ADA, C5, CKB, LAT, TAT, AASDH, ACMSD, ACTN2, ARPC5L, CBLC, CCL5, CCNH, CD58, COL5A3, CYP26A1, DUSP1, EFNB2, EPOR, FLT3LG, GPD1L, GSTK1, IFNA2, IL17B, INHBA, LRAT, NFATC4, OR2A12, OR2V2, OR51G2, OR52N4, OR6C7, PDE10A, PIK3CG, PLA2G2D, PLIN, PORCN, PPM1B, PTPN11, PYCRL, RPN2, RRM1, SAT2, SH2D1B, SHC1, SIAH1, SSH1, SYNJ2, TAS2R8, TBL1XR1, THBS4, WBSR22, XIAP, C1GALT1C1, MAP3K7IP1

Negative_11785	CTH, EPO, FST, GAA, SFN, SYK, AANAT, AARS, ACAD8, ACADS, ACYP2, ADCY2, ADRA1D, ALDH4A1, ALDH5A1, ANAPC1, ANAPC7, AQP7, AREG, ARPC1A, ARSD, ATP5E, CAMK4, CD86, CDH5, CHKB, CLDN10, CTTN, CXCL11, CYP19A1, DEGS1, DGAT2, DIAPH2, DUSP1, FARP2, FZD8, GADD45G, GLDC, GSTM4, HSD17B3, HTR2B, ITPA, MAGI1, MCEE, MPZL1, MYD88, MYH6, NARS, NOD1, OR1G1, OR5I1, OR7A10, OXCT1, PIK3R3, PLA2G1B, POLR2J, PRKAR2A, PSAT1, PSME2, PSM E3, PYCR2, RARS, RPN2, RPS6, SFRP2, SMC1B, SOCS2, SOCS5, SUCLG1, TAS2R10, TPMT, TUBB2A, WASF2, WNT3A, WNT7A, XIAP, YOD1, HLA-DQA2, MAPK8IP1, TNFRSF10D
Negative_11786	CR1, GDA, OAT, ADRB1, AGMAT, AK3L1, AMD1, ARHGAP5, CES7, CSNK2A1, CTLA4, CYCS, DAAM2, DAG1, DDX50, DERL1, EDAR, EPHA8, FARS2, FLT3LG, FUT1, GALNTL5, GMPS, GNPAT, GPAM, GPD2, GSTA1, GSTP1, GUCA1B, GUCY2F, HLA-DOB, IFNW1, IL2RG, IMPA1, ITGB4, MAP2K3, MGST1, NT5C3, OR2T5, OR4Q3, OR5A2, OR5AP2, OR8I2, OR8U1, PDCD1, PDGFRB, PFKFB3, PHKG1, PIGV, PIK3CB, PTPN7, RAB23, RARS, RPS6KA1, SH2D2A, SMURF1, SOCS2, SPTLC1, STX2, TAS1R1, TAS2R9, VNN1, CSNK1A1L, ST6GALNAC5
Negative_11787	C6, CR2, GHR, GK2, GPI, ME1, TNF, AANAT, ABL2, ACACB, ACP2, ACTN4, ADCY1, AGXT, ALG5, ARG2, BLVRA, CCND3, CCNG2, CFL1, CSNK2A1, CXCL5, CYFIP2, DAAM2, DARS, DBF4, DGKE, EGLN1, EPAS1, ESAM, FOXO1, FZD5, GNB1, GUC A1C, GUCY1B3, IDH3A, IFNA5, IFNK, IL11RA, IL15, IL1RAP, IL8RA, KLKB1, NKD1, NPAS2, NTF3, ODC1, OR10A7, OR10J1, OR10P1, OR13J1, OR14I1, OR2L3, OR2T33, OR5B12, OR8A1, PDHB, PGK1, PON2, PPT1, PRKACA, PRKCQ, RUXN1T1, SDC1, SH2D1A, SLC25A4, SNAI1, SPRED2, STAT6, TRAF1, TRPM5, UBA1, UGCGL2, UROS, YOD1, TNFRSF10D
Negative_11788	CD4, CKM, KDR, SFN, TPO, ABAT, ABLIM3, ACSL4, ADRB1, ALCAM, ALDH5A1, ALG10B, ALOX15B, B3GALT6, BCAR1, BNIP1, CCL28, CD19, CDC16, CLDN14, CLDN9, COL1A2, COL5A2, CRKL, CSNK2A2, CTNNA3, CYSLTR1, DHRS4L2, GAD2, GNPDA1, HAAO, HSD17B2, HSD3B7, HTR7, HYAL2, IFNGR2, IFT57, IL10RB, IL28A, IL3RA, INSRR, ITGA9, LIPE, LYPLA2, METTL2B, MS4A2, MYH2, MYL2, NFYB, NLGN2, OR10G2, OR1L8, OR1S2, OR2G3, OR2T29, OR4E2, OR4K17, OR51B4, OR8D1, POLE3, POMC, PPOX, PRPS2, PTEN, RDH10, ROB01, RXRB, SH2D2A, SKP2, SMPD3, SRGAP3, TAS2R1, TAS2R49, TD02, TNFSF18, TNXB, VANGL2, XCR1, MAPK8IP2, PRICKLE2
Negative_11789	C8B, IL2, MET, RET, TAT, ACPP, AHCYL2, ALS2, ANGPTL4, APOE, ATP5H, ATP5J, BHMT, BMP5, BMP8A, CACNA1E, CASP6, CASP9, CDH3, CHD8, CNTN2, CRY1, CXCL5, CYP2D6, CYP4A22, DTX1, DUSP9, ESAM, EXTL1, FGF22, GCNT1, GPD1, IFNAR2, IRF5, KIR3DL1, MAPK10, MAPK7, NCR3, NKX3-1, OR10G4, OR1E2, OR2C1, OR4K1, OR4L1, OR4M1, OR51G2, OR7G2, P2RX7, PDGFD, PIK3C2G, PRKAA2, RCHY1, SRD5A1, STK36, TICAM2, VAV3, ATP6VOA4, SUV420H1
Negative_11790	BTD, ADH4, APC2, APOC3, ARPC5, B3GAT2, B4GALT3, CADM3, CCL19, CCR10, CDC25A, CHSY3, CXCL9, CYP3A7, DIAPH3, ERBB4, FSHR, GDF5, HARS2, HLA-DMA, JAK2, KNG1, LDHAL6B, LIFR, LIMK1, MAN1A1, MAP3K1, MCM6, NQO1, NT5C, NUDT5, OR14I1, OR1F1, OR5P3, OR6A2, P2RX4, PFKL, PIGO, PIGW, PMM1, PPAP2A, PRKAG1, PRPH, PTGS2, PVRL4, PYCR1, RASGRP1, ROCK1, SDHA, SLC33A1, SPTLC2, TAS2R16, TAS2R40, TLR3, TNFSF8, UBE2L6, VDAC3, WBCSR17, YKT6, C1GALT1C1, CACNA2D3, ST6GALNAC4

Negative_11791	BAX, PGF, RPE, ACP2, ACTC1, ADH1B, ALDH9A1, APOA1, ATP6V1H, AVPR1B, C1QC, CALML5, CCL3, CCR2, CD79A, CDKN1B, COMT, CXCL1, CXCR4, DDX50, DGKD, DKK1, DUSP2, E2F1, FARP2, FLAD1, FMO3, GALNT5, GNA13, GUCY2D, IDI2, IFNGR2, IKBKG, IL12RB2, IL23R, IL7R, INHBB, IPPK, ITGB7, JAM2, KCN J11, LAMC2, MAD1L1, MAN1A1, NANS, NEGR1, NFATC3, NUDT9, OLAH, OR10G8, OR4K2, OR4M2, OR4X2, OR7G2, P2RX3, PIGK, PLCB3, POLR2H, RAPGEF2, SESN1, SETD2, SKIV2L2, SLC25A5, SMAD9, SUCLG1, UGP2, UGT2B11, YWHAZ, A TP6VOD2, CACNA2D4
Negative_11792	IHH, MPI, PLG, PML, AGPAT4, ANAPC11, APRT, ARHGEF4, ATP5G1, ATP50, BDH2, CAMK4, CCL23, CCR6, CD40, CD44, CHRM2, CLDN19, CNGA3, CNTN1, CXCR4, DAD1, DHX58, DKK1, ENAH, EPHB6, FSHR, FTH1, GCAT, GCDH, GDF5, HLA-C, HSD17B1, HTR7, IDUA, IL22, INPP4B, LAMB2, LHCGR, LTA4H, MAP4K4, MAPK7, MTMR2, MYH11, NARS2, NAT2, NAT5, NME4, NT5C1A, OR1A1, OR1D5, OR2A12, OR4F4, OR52B4, OR6B2, OR6N2, PCCB, PDE4B, PFKFB3, PIGS, PLK1, PON2, PPP1R3B, PRKAG1, PRKAG2, PTPN5, PYGM, SEMA3F, SGMS2, SLC33A1, SPCS3, SRD5A2, SRGAP2, STX6, TAS2R38, TGFBR2, TICAM1, TP53I3, WASF3, W BSCR22, WNT11, ZNRD1, HLA-DQA2, SERPINF2, TNFRSF1B
Negative_11793	C5, CR1, OAT, UBB, ACADS, ADCY6, AKR1C4, AKT1, ALG8, ANAPC10, BAAT, CD55, CDO1, CXCL13, DGKG, DHFR, EFNB2, EIF4B, ELK4, ESPL1, FGF11, FZD6, G6PD, GAD2, GNAL, HNF4G, IL20RB, ITGA10, ITGA4, KAT2B, MAP3K3, MYH10, MYL7, NCF1, NEU3, OR1S2, OR2B6, OR2H2, OR2M2, OR3A1, OR8D2, PARD3, PIK3C2G, PLCB4, PLXNB2, PRKAG1, SEMA4D, TAS2R13, WNT3A, HSD17B10, KIR2DL5A
Negative_11794	AMT, C1S, C4B, EGF, F8, HAL, HDC, HK3, NPY, STS, ACAA2, ACAD9, ACO1, ADIPOR1, AKR1C2, ATP13A2, B4GALT7, BCL2L1, C4BPA, CCND2, CCR5, CD55, CD C14A, CDC42, CDKN2C, CHRM3, CLDN6, COQ3, COX15, CRY2, CTSB, CYP4A22, DGKQ, ENO3, EPHA6, FASN, FOXO3, GNRH2, GRIA2, GRIN1, GYS2, HNF4A, HPR T1, HSD11B2, ICOSLG, IDH3B, IFNAR1, IL12RB2, INHBC, IRF5, ITGA4, ITG B4, KIR2DS5, MAN1A2, MCCC2, MCM4, NLGN2, NRAS, NSDHL, NT5C3, OR10A6, OR10G3, OR10H2, OR10Z1, OR2K2, OR4D9, OR5B3, OR6Y1, OR7D2, ORC6L, PA FAH2, PON1, PPARG, PRKAG2, ROBO2, RPS6KB2, SC4MOL, SCP2, SETD1B, SMA D1, SSH2, ST8SIA5, SV2C, TAS1R3, TGFA, TICAM2, TUBA8, TUBB6, UGT2A1, USE1, ZFYVE9, CACNA2D4, MAPKAPK3, PLA2G12B, SERPINA1
Negative_11795	GHR, JUP, ACVR2B, ADAM17, BAI1, BMP2, BMP4, C1QB, CACNA1B, CACNG4, CD C7, CLCA4, CPOX, CRKL, CTBP2, CTSG, CXCR3, DUSP9, EPHA3, FBXW11, FMO3, FRAP1, GALNT9, GGT7, GLDC, GNB1, GOT2, GPAA1, GSTO2, IDH2, IL21R, IR AK3, LAMA3, LAP3, LIPA, MGLL, MITF, MMP9, NME7, NTRK2, OCRL, OR10G8, O R10S1, OR10Z1, OR1A2, OR51V1, OR52B4, OR52J3, OR8B4, ORC3L, OSMR, PA RD3, PDGFA, PIP4K2A, POLR2B, PPAP2A, PPP2CB, PRPH2, PSPH, PTPRB, PVR L3, RBL2, RELA, SDHA, SEMA4F, SESN3, SFRP2, SKP2, SMC1A, STAT5B, SUCL G2, TUBA1B, ULK2, UNC5C, WASF3, WNT1, MAP3K7IP1
Negative_11796	AGL, MVK, SRM, ACO2, ALDH7A1, AOC3, B4GALT5, BHMT, C4BPB, CAPN2, CCDC 6, CCKAR, CCL15, CCR4, CD244, CHSY3, CLDN14, CLDN6, CSF2RA, CTSG, CX3 CL1, DDX51, DGKQ, DKK2, EFNB3, EPB41, EPOR, FBP1, GCAT, GLI1, GNB1, GT SE1, HARS2, HCST, HMBS, HSD17B7, IDH3A, IFNB1, IL15RA, INHBE, IQGAP3, LCMT2, LRRC4C, MASP1, MDM4, MPDZ, MTMR1, MYH10, NCAM1, ODC1, OR1L3, OR2L3, OR2T8, OR4K13, OR51T1, OR51V1, OR52J3, OR5D18, OR7G1, OR8J1, OR8K1, OR8U1, OR9Q2, PDGFD, PFKFB1, PGS1, PIGC, PIK3C3, PLCD4, POLD2, POLR3D, PPP2R1A, RASA1, RASGRP1, RBL1, RDH5, RELB, SEMA3B, SETDB2, SLC12A2, SMAD5, SOCS1, SSH3, TBK1, TRAF5, TSC1, TUBB6, UPP1, VAMP1, V EGFA, WEE1, WNT3A, PLA2G12A, PRICKLE2, TNFRSF12A, TNFRSF18



Negative_11797	BTK, C9, IL3, IL6, MPL, ACADS, ACP6, AKR1C3, ARNT2, BACE2, BAI1, BCKDH B, CACNB2, CALML3, CALML6, CDIPT, CPT1C, CREB3L4, CTLA4, CXXC4, CYP7 A1, DRD2, EARS2, ENO2, FGD3, FGF14, FTMT, GALC, GALNT2, GALNTL2, GP1B B, GPAA1, GRHPR, GRIN2B, GSTT1, GSTZ1, HDAC2, HMGCS1, HSD17B2, IL28A , IRAK1, JAM3, LDHA, NOS1, NTF4, NUDT2, OR10J5, OR11A1, OR12D3, OR4D1 , OR4D9, OR5L2, OR6B3, P2RX5, PDE3B, PFN1, PLA2G10, POLR2A, PPP2R2D, PRIM1, PTDSS1, RPIA, SEMA4A, SETD1A, SETDB2, SHC3, SMARCA2, SNAI2, T HTPA, TIAM1, UBE2K
Negative_11798	AMT, APP, GBA, GPI, IL4, ME2, ALDH1L1, ALG6, ANAPC11, ATP5H, ATP6V1H, B3GALT5, B4GALT6, BAIAP2, CACNA1G, CACNB2, CAV3, CCL14, CCND2, CD82 , CDC20, CPS1, CREB3L4, CSNK1G1, CYP2C9, CYSLTR1, DGKE, DHODH, DLL1, DUSP6, ECHS1, EFNA3, FGF8, FOXO3, FUT8, GALNT2, GNA15, GOT1, GRB2, GR LF1, GSTK1, IKBKG, IL22, IL2RB, IL2RG, ITCH, KRAS, LAMC2, LIAS, MAML2 , MYL9, NAGA, NAGLU, NCOR1, NCOR2, NGEF, NOTCH2, OR10G7, OR10G9, OR10 K1, OR11G2, OR11H1, OR2T34, OR52K1, OR6M1, PDCD1, PDE4C, PFKFB3, PRK X, PRKY, PTCRA, PTGDS, PTPRC, PTPRJ, SDC3, SDHB, SGPP1, SMAD7, SNAI1, STK36, TOLLIP, TSLP, UGCG1, UGP2, SERPINA1, SERPING1
Negative_11799	AGL, AMT, GP9, HPD, PGP, ACOT12, ACTN1, ACVR1, ADAM17, AOC2, ATP13A2, ATP5J, BCAT1, BCKDHA, BET1, CCNB2, CD19, CD8A, CDC25B, CDKN2A, CES7, CHRD, CLTCL1, CNTN1, CRB3, CTNNB1, CYP11B1, DCXR, DEGS2, EARS2, EXT1 , FCGR3B, FGF11, FZD3, FZR1, GADD45A, HMOX2, IFNAR1, IL11RA, IL19, IT GAX, KIR2DL1, KLRC1, MCM3, MLYCD, NANS, NCR2, NEFH, NEU2, NKX3- 1, NPR2, NR1D1, NTNG1, NUDT9, ODC1, OR2A14, OR2T5, OR4F17, OR51A2, OR 51B5, OR51V1, OR52J3, OR5B17, OR7A17, OR7D2, OR8K1, P2RX2, PGAM4, PI P4K2B, PLA2G3, PLXNA2, PPP3R2, PSENN, PTGIS, PTPN5, PTPRC, SDHB, SH 2D1A, SLC2A1, SPP1, STX10, TCIRG1, TRAF6, UROS, USE1, VANGL2, WNT3A, SERPINC1, TNFRSF10D
Negative_11800	ADC, FAS, GDA, HGD, MAX, ABL2, ACHE, ACTC1, ACYP1, AGTR1, ARG1, ARNTL, ARPC5, ARRB1, ASNS, B3GAT3, BTRC, CACNB4, CCND3, CD80, COL11A1, COL1 A1, COQ6, CRLF2, CSF2, CTSG, DGUOK, DHRS4L2, DNMT3L, DPYS, DTX3, EDAR , EPRS, EXT2, FCGR2B, FDPS, FGF12, FGF9, FRAT2, GALNT8, GPD2, GRIN1, H LA- F, HYAL1, IARS2, IFNA13, KLRD1, KNG1, LTC4S, MAFA, MAML1, MAOB, MCM5, MGAT5B, NCF2, NFYC, OR12D3, OR13F1, OR1S2, OR4D2, OR4Q3, OR51L1, OR6 C6, OXCT2, OXSM, PAPSS2, PDGFD, PGAM4, PIK3C2B, PIK3CG, PLA1A, PLA2G 1B, POLR1C, PPAP2A, PPP1CC, PRKAR1B, PRKY, PRPS2, PTPRR, RAB23, RASG RP2, RBKS, SETD1B, SFRP5, SORD, SRD5A2, STMN1, STT3B, TAS1R2, TFDP1, TRAF1, TSHR, UPP1, UROC1, WARS, PAFAH1B2, PRICKLE2, ST6GALNAC4
Negative_11801	AK7, CAD, CSK, FST, ABCC8, ACSS1, ADH7, ANAPC1, APH1A, AREG, ATP4B, AT P5C1, AXIN2, CACNA1G, CCNH, CHIT1, CHRM2, CRB3, CSDA, CYP11B2, CYP1A 2, DDHD1, DLL1, DUSP9, EARS2, HSD11B2, IFT57, LAMB2, LAMB3, LYPLA1, M APK7, MTHFD2, NCKAP1, NFASC, OR11H6, OR11L1, OR52I1, OR6C74, POLR2L , PPP2R5B, RPIA, SEMA4B, SETD1B, SLC12A2, SRGAP3, TAS2R9, THBS2, TKT L1, TNFRSF8, TRMT11, TUBA3C, TYROBP, WNT9A
Negative_11802	GAA, GLA, JUP, TYR, ABL2, ALOX12, ALOX12B, APH1A, BACE2, BMP8B, BUB1B , CAMK2A, CHD8, CREB3L1, CTSB, DERA, DHRS4L2, DPYD, EXTL2, FARS2, FUT 4, GAB1, GALNT5, IFNA16, IGF1, ITGAM, MDM2, METTL2B, NFKB1, NFKBIE, N FX1, NR1H3, NUDT9, OR1J2, OR2AT4, OR2M2, OR3A3, OR6N2, OR8K1, P2RX5, PCNA, PDK1, PIGO, PIK3C2B, PIP5K3, PPP2R5D, SOCS5, SOS1, SUV39H2, TC F7, TMLHE, TOMM40, UGT2B17, WARS, TNFRSF10C, TNFRSF11A

Negative_11803	ATM, GPI, LIF, RDX, A4GALT, AADAC, ACSM5, ADRB1, AGTR1, AKR1B10, ALDH9A1, ALG12, AMPD1, AMY2A, BCL2, BCL2L1, CCL20, CCL3, CCNE1, CCR2, CD27, CFLAR, COL1A2, CSF3R, CTBS, CXCR5, CYP2C9, DAXX, DDIT3, DGKZ, DNMT3A, DUSP14, DUSP5, EDNRB, EHMT1, ELK1, EPB41L3, FCGR3B, FGF11, FUT8, GOT1, GRB2, GUCY1A2, HLA- DRA, IFT57, IL15, IL2RA, INSRR, IRAK1, KIR3DL1, LAMB1, MAP3K14, MPDZ, MPST, NAT1, OR10G2, OR10G7, OR10T2, OR2A12, OR2M2, OR2T12, OR51T1, OR52R1, PCCA, PDGFRA, PHKA1, PHKA2, PIAS2, PIGT, PPP2R2B, PPP3CB, PP3R2, SEMA3A, SESN3, SGMS1, SGMS2, SKP2, SMAD1, SOCS4, STAM2, TAS2R42, TGFB1, TGFB3, TICAM2, TNFRSF4, TRIP10, TSHB, TUBB2A, UGT2A1, UGT2B17, AASDHPPT, B3GALNT1, HSD17B12
Negative_11804	C1S, ACOT12, ACOX3, ACTA2, B3GNT5, BDH1, CDC6, CHAD, COL1A2, CREB3L3, CRHR1, CRLF2, CTSG, CYCS, DLL4, DUSP9, EPHA4, ESAM, ETNK2, FABP1, FOXL1, FOXA3, FSHR, FZD6, FZD9, GALNT13, GCNT3, GDF7, ICAM3, IFNK, IKBKG, IL20RA, IL2RB, IL8RB, MAPK3, NANP, OR51Q1, OR5AU1, PAK1, PHKG2, PP2R2B, PSENE1, SSH3, STX16, STX3, SV2C, TYMP, ULK3, UPP2, VEGFA, XCR1
Negative_11805	C7, F8, LEP, OGT, PLG, RDX, ACP6, ACVR1C, ALG8, APAF1, APPL1, ATP6VOC, B3GNT2, BMP5, CAMK4, CD244, CHRM1, COL6A1, CSNK1G3, CXCL13, DHX58, ENO3, EPOR, FUT1, GALNTL2, GANC, GAS1, GLYCTK, GNAT3, GRIA1, GUCA1A, HLA- DRA, HLCS, IKBKE, KNG1, LCMT1, LDHC, LLGL2, MAT1A, MAT2B, MDH2, MTHFR, MYL2, NME7, NTN1, OR10H1, OR10V1, OR1D2, OR2C1, OR2T1, OR3A2, OR4F17, OR51B2, OR51G1, OR5A1, OR6C1, P2RX5, PDE4D, PECAM1, PLA1A, POLA2, PPCDC, PPP1R3D, PVRL4, RUVBL1, SMPD4, SMURF2, TAS2R4, WNT10A, CACNA2D4, HSD17B12
Negative_11806	DHH, F5, MPI, PTS, RPE, TXK, UBC, AARS, ACY3, ALDH2, ALG8, APPL1, BMP8B, BNIP1, CACNB4, CACNG2, CCKBR, CCR10, CTLA4, CYP2A7, DDX19A, DHDH, FASLG, FGFR4, GALT, GANAB, LRP6, LTA4H, MAML2, NLGN1, OR14I1, OR1F1, OR1J2, OR2T10, OR4D1, OR52J3, OR5D13, OR6C1, OR6C75, OR6S1, OXTR, PCYT2, PLA1A, PLXNC1, PMM1, PORCN, PTGER3, RAP1A, RHOQ, ROBO3, SNAP23, SQLE, SRGAP2, SYNJ2, TAS2R50, TNFSF14, TNFSF4, TOMM40, TRAF2, TUBA1B, UBE2L3, UGT8, ULBP2, UROD, WNT2, WNT3A, YWHAG, ZIC2, ATP6V1B2, HLA-DQB1, PLA2G12A, TNFRSF17
Negative_11807	CP, LTB, OGT, ADSS, AKT3, ALDH4A1, ALG8, ATP6V1F, CBLC, CD3E, CDC25B, CLDN20, CRKL, CTBP1, CXCL6, CYSLTR2, DHCR7, DHRS9, EDNRA, EPHA2, FUT9, GALNT12, GALNT14, GALNTL4, GGT5, GNAL, GNRH2, GPD1L, GSTM4, HSPB1, IFNA10, IL10RB, LIPT1, MYD88, NFKB1B, NNMT, OR4K15, PDX1, PHGDH, PKM2, PRPH, PVRL4, RAPGEF1, RPS6KA2, SDHB, SGPP2, SPHK2, STK11, THTPA, TICAM1, TIRAP, TNXB, UCK2, UXS1, VEGFB, VNN1, MAPK8IP2
Negative_11808	AK3, AMH, BID, C8B, CD6, CEL, EBP, FAS, AGXT2, ALG5, APH1A, ARPC1B, ARPC5L, B4GALT6, BDKRB1, CACNA1C, CBR1, CCL24, CCL7, CCNB1, CCNB2, CCR5, CDC14A, CHEK2, CHR1, CHST12, CHST13, CLDN7, CLDN9, CYP1A1, DNMT1, EFNA4, EHMT1, EHMT2, GADD45G, GMPPB, GNRHR, GUCY2D, HIP1, IDI1, IL10RA, INPP5B, ITGB8, LTBR, MASP2, MCM5, OR10C1, OR10P1, OR1N1, OR4A16, OR51B2, PAX8, PDE4D, PHKG2, PIGK, PRKAR2A, PTPN11, PTTG1, RAB5A, RAD51, RARA, SOAT1, SQLE, STEAP3, TGFB3, TNFSF9, UAP1, UCK1, UCP1, WARS2, YOD1, ATP6V1B2, HLA-DRB5, PLA2G12A

Negative_11809	DDO, EDA, EPO, ID4, NF1, PML, PVR, ABCC8, ACAA2, ALOX12, AOC2, ARD1A, A TG3, ATP5A1, BCL2L1, BUB1, C4BPA, CASP7, CCL24, CCL26, CD22, CD8B, CE S7, CHEK1, CLDN8, COL2A1, CX3CR1, DDX47, DIAPH3, DUSP14, EHMT2, ENTP D1, EPHA8, FASLG, FZD4, G6PD, GAD2, GADD45B, GANAB, GGT5, GNPAT, GSTM 4, GSTZ1, HLA- C, HSD11B1, HSPB1, IFNA13, IPMK, KDSR, LEFTY2, LEPR, MAPK10, MAT1A, M GAT5B, MMP14, MPZL1, NCOR1, NFE2L2, NRCAM, NTF4, OGDHL, OR14C36, OR2 M3, OR4F5, OR52D1, OR52K2, OR5F1, OR5L1, OR7G2, OR8A1, PCCB, PIGB, PI GQ, PLK1, PLXNB1, PPA1, PRIM1, PSENE1, RASGRP2, RDH10, RPN2, RRM2, SD C3, SMURF1, SOCS4, SPCS3, SUCLA2, TAP2, TAS2R60, TIAM2, TNFRSF9, TRH R, TUBA3C, TYK2, UBE2L6, UROD, GABARAPL2, SERPINA5, SERPIND1
Negative_11810	BTC, C6, IDS, PLN, ACSL3, ALG2, ASIP, CARS2, CD70, CD79B, CDKN1C, CHSY 3, CPT1B, CTNNA1, CTPS, CTSL1, CXCL12, EHMT2, ENO3, EP300, EPHA4, FRA T1, FUT6, IFNK, IL17A, IL5RA, IMPDH1, LDHAL6B, LEFTY2, LTB4R2, MINPP 1, NFATC4, NME6, NMNAT3, NRCAM, NRG1, OR13H1, OR3A1, OR5D14, OR5L1, O R5T3, OR6M1, OR9A2, PFKL, PLA2G4A, PLCD4, PPP1R3D, PRKG2, PTK2B, PTP N1, RASGRF1, RASGRP4, SDC3, SEMA7A, SH2D1B, SMAD3, SPCS1, STT3B, UBA 1, VDACC2, WNT11, ATP6VOD2, MAPK8IP1
Negative_11811	C9, EDA, TK1, VCL, ABLIM1, ADRA1D, AKR1C1, AMPD1, ATP12A, BMP8A, CACN A1I, CAV3, CCNA1, CD27, CD48, CDKN1B, CSNK2A2, DCXR, DHRS3, EFNA5, FZ D2, GALE, GAMT, GP1BB, GSTM2, HIP1, IDH3G, IFNA2, IFNAR2, IRS1, ITPKA , LRP5, MARS2, MBL2, MS4A2, MYLK3, NEFH, NFYC, NMNAT3, NOD1, OR10A3, O R13C9, OR4D9, OR4K2, OR6C3, PARVG, PAX4, PDE3B, PRPH, PTPRC, RALBP1, RPS6KA4, SARS, SOAT1, SPRED2, SSH3, TAS2R42, TGDS
Negative_11812	AUH, EGF, INS, RFK, TYR, ADCY9, AOX1, B3GALT2, BCMO1, C1QB, CCL28, CCN D3, CD8B, CDH1, CDK5, CFL2, CLDN6, CLOCK, COL3A1, CRY2, CYP2B6, CYP2D 6, CYP4F3, E2F1, ENAH, EPOR, FGF11, FGF8, FLAD1, GAL3ST1, GALNT3, GAL NT7, GNA14, GRM1, HRAS, IL18, IL28RA, IL6ST, IMPA1, INPP5E, IQGAP2, M AGI1, MAPK8, MAT1A, MYH6, NCAM2, OR2AT4, OR2T29, OR2Y1, OR51A2, OR5D 18, OR5J2, PCYT1B, PFN4, PGAP1, PLOD1, POLR2I, POLR3D, PPP2R5E, PRKC A, PRNP, QPRT, RND1, SH3BP2, SMAD3, STK3, STX16, TNXB, TUBB4, ATP6V1G 3
Negative_11813	GGH, GLS, ACAD8, ACSS2, ACTG2, ADCY8, AGPAT1, ALAS2, ARPC1B, ARPC2, C BR1, CDKN2D, CLDN22, COQ3, DDX56, DGKB, DTX3L, FCGR3A, FGD3, FLOT2, F ZD10, GCNT3, GLUD1, GRIA2, GRIN2B, HADHB, HAP1, HSD17B1, HSP90B1, IF NA14, IFNK, ITGA11, ITGAE, ITGB5, JAK1, KIR2DS5, LALBA, LAMC3, LRDD, LRP5, MALT1, MAPK8, MCM5, MKNK1, MMP2, NCF1, NCR2, NEU1, NFYB, NLGN1, NOD1, NRG2, NT5C, NT5C3, OR1S1, OR2B11, OR4C46, OR51D1, OR51F1, OR5B 3, PCNA, PHGDH, PHKA2, PIGK, PIK3CB, PLCG1, PLIN, POLR2A, PPP2CA, PPP 2R5D, PSAT1, RASGRP3, RBL1, RBL2, SDHC, SPHK1, STAT3, SULT1A1, SUV39 H1, TACR3, TBL1X, TOMM40L, UBE2L3, UGDH, UGT2B4, UGT8, ULBP2, WASF2, PRICKLE1
Negative_11814	DBH, GH2, PRL, ABAT, ACAA1, ADRB3, ASAH1, ASNS, ATF4, ATP5J, BCL2, BCL 2L1, CAPN2, CCR7, CD47, CDKN1B, CFL2, CLDN8, DUSP7, ENPP1, EPHA8, EPH B2, F2RL2, FGD1, FGF18, FGFR2, FZD1, GGCX, HMGCL, IFNAR1, IL17A, IL17 B, IL20, IL22RA2, IL2RA, ITGA8, LAP3, LIAS, MAD2L2, MAGI3, MCM3, MECR , MYH15, NR4A1, OR12D3, OR2A4, OR52M1, PAK2, PANK1, PDE2A, PDGFRB, PE CAM1, PIGQ, PIGX, PLCD4, PPP1CC, PTPN11, PYGM, RDH10, RPSA, SEMA3E, S PRED1, TAS2R5, TNFRSF9, TRAF4, UCK1, UGP2, UGT2B28, ULK1, WIF1, WNT1 0B, WNT5B, ATP6VOD1, MAPK8IP2

Negative_11815	BAX, C1S, EDA, FYN, IL4, JUN, NLK, OTC, PXN, SMO, ABP1, ACSM3, ACY1, ADH4, AKR1B10, ALG12, AVPR1B, BMP7, CD80, CD99, CHDH, CLDN16, CREB3L1, CSF1, CTPS2, CYFIP1, CYP26C1, CYP2C19, CYP2E1, CYP2U1, DDX19A, DERL1, EDAR, ELK1, EPHA1, FGF23, FUT7, FZD5, GADD45B, GMDS, GNAL, GSTA1, GUK1, IL15, IL23A, ITGA5, ITGAX, JAK2, KLRC2, LAMB2, LIPC, MDM4, MPZL1, MYL2, NCF2, NCK2, NFATC4, NFKBIB, NFYA, NFYB, NKD2, NKX2-2, NT5C2, OR1D2, OR2S2, OR2T10, OR51B4, OR51G2, OR5M3, OR5M9, ORC1L, P4HA1, PGS1, PIGU, PLXNA1, PNPLA4, POLA2, POLR3G, POLR3K, POMC, PRKCA, RASA1, RASGRP3, RBX1, RPS6KA6, SDC2, SEMA4A, SETD7, SETD8, SMPD3, SORBS1, STAT1, SULT2A1, SUV39H1, THTPA, YWHAG, ATP6V1G1, CACNA2D3, TNFRSF10C
Negative_11816	ADO, ASL, ME3, ADAM10, AKR1C4, AKT2, ARD1A, C5AR1, CACNA1H, CACNB1, CCND1, CCNG1, CCR7, CD14, CD79B, CHRM3, CSF3, DTX4, DUSP4, DUSP5, E2F5, ELK1, ENTPD5, EPHB4, FGF5, FSHB, GLUL, GNAI1, GNAO1, GRIN1, H6PD, HARS2, HLCS, IKBKB, IKBKG, INSR, ITGB3, LAMB4, LARS2, LLGL2, MCM5, MCM7, MKNK1, MTMR2, NANS, NCOA4, OR10J1, OR13D1, OR1F1, OR1K1, OR2T2, OR6C1, PANK1, PCK1, PDHA1, PDXP, PIP5K1A, POLE3, PPP3CB, PRKAA1, PTPN6, RBPJL, SELP, TD02, TPH1, TSHB, TUBAL3, UGCGL1, UGT2B28, UGT8, ATP6V0D2, PLA2G12A
Negative_11817	A2M, BTD, C5, CEL, GP9, NF1, SCD, AADAC, ACTC1, ADRA1A, ALG2, ALPPL2, APRT, ASPA, ATP6AP1, AVPR1B, B4GALT2, BNIP1, CASP10, CCL26, CCNB1, CDH15, CDKN2B, CMPK2, COMP, CSF1R, CYP2J2, DAPK1, EPHA7, GNAZ, GSTT1, HIBCH, IFNA17, INHBB, INPP1, IQGAP2, ITGA2B, LRP6, NEFL, NEU3, NMNAT3, OR10H4, OR1J2, OR2C3, OR2T3, OR4S1, OR52H1, OR52I2, OR5M3, OR7G1, OR8U1, PGM2, PIK3C2A, PNPLA3, PRKAR1B, PSENEN, PTGFR, RASGRP3, RASSF1, RERE, RHOQ, SCIN, SULT1A2, TUBA1C, ATP6V0A1, C1GALT1C1, HSP90AB1, SUV420H2
Negative_11818	CD4, CS, F7, ADIPOR2, ADSSL1, AKT3, ANAPC4, ARPC5, B3GALT4, BET1, BUB3, CASP3, CCNB3, CD80, CDC14B, CDC23, CHSY3, DAD1, F2RL1, FARS2, FGFR1, GLYCTK, GNPAT, GSTT1, HLA-G, HRAS, HTR2A, ICAM3, IFNA16, IFNB1, IKBKB, IL18, INHBE, INPP5A, LAMB4, MAP3K13, MCCC1, MCEE, MDH1, MGAT5B, NCR2, NPAS2, NRAS, NRG2, NT5E, OR2F2, OR2Z1, OR4D5, OR4K14, OR51D1, OR8H1, P2RX1, PANK1, PAX4, PCYT1A, PIGV, PLCG1, PLXNC1, PNPO, PNPT1, POLD2, POLR1E, POLR2E, POLR2F, PPAP2C, PPP2R5E, PRKAB2, PSEN2, RPN1, SNAP25, SOAT2, ST6GAL1, STX5, TAS2R4, THBS2, UROD, VAV2, WBSCR17, XCL2, ATP6V1G2, HLA-DRB3, HLA-DRB5, PAFAH1B2
Negative_11819	CFD, GPT, LTB, LYN, ABLIM3, ALCAM, ARSA, ARSD, ATP4A, AXIN2, B4GALT5, BDKRB1, CACNA1G, CACNA1I, CASP6, CCL23, CCL27, CD59, CD79B, CD8B, CD C25A, CDH15, CHEK2, CLDN22, CSF3R, DGKB, DUSP7, ENTPD5, EPHB1, FGD3, FGF20, GADD45A, GALNT7, GCLC, GFAP, GLYCTK, GNAI1, GPX5, GRIA1, HLA-G, HNF4G, JAM2, KIR2DS5, LRP6, MCM3, MDH2, NCOA4, OR10H5, OR1A1, OR1N1, OR1N2, OR2G6, OR4K13, OR7A17, PIK3CD, POLR2G, POLR2I, PPBP, RBX1, RDH16, SEMA7A, SETD1A, SETDB1, SNAI1, SUOX, TAS1R3, TAS2R4, TNFSF8, TYROBP, UGT1A10, UGT2B28, VTI1B, PAFAH1B1
Negative_11820	AK7, CR1, GDA, MVK, TFG, XDH, ACTN2, ARRB1, ATP5C1, BAAT, C1QB, C3AR1, CCKBR, CCL4, CSF3, CYP2S1, DDX19A, EARS2, EHHADH, ETNK1, GLI2, GUCY1A2, HYAL2, ITGB8, KIR3DL1, MALT1, MGAT1, MYH3, NAT1, NEU2, NODAL, NRAS, NT5C1B, NUDT8, OGDHL, OR12D3, OR13C2, OR14A16, OR4D2, OR7C1, PAK4, PLCB3, PLXNB2, POLR2F, PPP2R5C, PSEN1, RBX1, RRAS2, SEPHS1, SOD1, SULT1A2, TAS2R49, TNFRSF4, UPP1, UROD, WIF1, WNT9B, AASDHPPT, ATP6V1C1, MAP3K7IP1

Negative_11821	C3, DCK, DCN, DHH, SRC, ACSM5, ACTN1, ADAM17, ADRA1B, ANGPTL4, APC2, A PPL1, ARD1A, ARNT2, ARSA, ATIC, BDKRB2, BUB3, C3AR1, CCL19, CCNA1, CC R10, CD27, CDC42, CDH15, CHEK2, CHSY3, CLDN11, CLDN19, COQ7, CTBP2, C YSLTR2, DTX3, ENTPD2, ESAM, F2RL3, FGF2, FGFR1, FZD1, GFPT2, GMPR2, G NA14, HLA- DRA, HMOX1, HTR7, IL1B, IMPDH2, ITGAD, ITPA, KIR3DL2, KLRD1, MADCAM1 , MAGI3, NAGA, NAT1, NCF1, NRP1, NRXN3, NT5C, OR14C36, OR14I1, OR4A5, P4HA1, PANK4, PARVA, PAX4, PDX1, PLTP, PLXNB2, PMAIP1, PPCDC, PPP3R2 , PRKACB, PRPH, PSENE1, PTGES2, PTTG1, QPRT, RAP1B, RASSF5, RXRG, SPI 1, ST3GAL1, TAS2R9, TPK1, TRAF3, TUBB, UGDH, UGT8, WNT10A, XCL1, XCR1 , HLA-DQA2, PAFAH1B2, PHOSPHO1, SERPINA5, SUV420H2, TNFRSF18
Negative_11822	C3, F7, FER, GCK, ILK, LTB, PGD, STS, TNR, ACSL1, ACY3, ADCY1, ALG9, ASN S, BCKDHA, BMP5, BPNT1, CCL8, CCNG1, CCR10, CD27, CDC14A, CDC42, CLOC K, CRB3, CXCL1, DAPK3, DGAT2L4, DGKZ, EFNB2, ENO3, ENTPD8, EPHB2, EXT 2, FUT2, FUT9, GBTG1, GCNT2, GGCX, HARS2, IBSP, IL28RA, JAK3, KLRD1, L ILRB3, LRP5, MS4A2, NFATC1, NGEF, NRG2, OR2C3, OR4B1, OR56B4, PDE9A, PER3, PFKFB3, PIGL, PIGW, PTK2, RDH10, SAT1, SNAI2, SPRED1, SRD5A1, S T8SIA1, STX2, TAS2R42, THBS1, TMLHE, UGCG, VEGFC, VTI1A, WNT16, EIF4 EBP1
Negative_11823	DAO, DCC, GHR, ID3, PLN, SPN, VCL, ACADVL, ACOT11, ACOX2, ACTG1, ADAM1 7, AGPAT2, AHCY, AKR1C2, ALDH3B2, APOE, AQP7, ARPC4, CAMK2A, CCDC6, C CKAR, CCKBR, CCL11, CD47, CDC20, CTSP2, CYP2E1, DMGDH, DUSP5, E2F4, E FNA5, ENTPD2, EXTL2, FABP4, FGF10, FGF8, FPGS, FUT8, FZD10, FZR1, GAL NT5, GBA3, GCNT4, GRIN2A, HGSNAT, HTR6, IARS2, IFNA13, IQGAP3, LARS, LILRB3, MAP2K6, MCM3, MYH10, NFYB, NUDT2, OPLAH, OR10H4, OR10J3, OR1 4J1, OR1S2, OR51E2, OR51M1, OR52E2, OR5H2, OR5I1, OR5P2, OR8G1, P2RX 2, PHKA1, PHKB, PIAS4, PIGN, PIP5K1A, PLXNB3, PRKAG1, PRKX, PSEN1, PT CRA, RDH5, ROCK1, RRM2, SEMA7A, SOAT2, SPTLC2, SQLE, STK11, STT3B, SU CLG2, TBXA2R, TRAF6, UCK2, ULK2, WNT9A, YWHAE, ATP6V1G2
Negative_11824	GK, ILK, LPL, OTC, PAH, SPN, ABAT, ACSS1, ACSS2, APOA2, CCL26, CHAT, CH RD, CLDN11, COMT, DIAPH2, DTX4, DUSP3, DUSP4, EGLN3, EPB41L3, EPHA1, FGF9, FPGT, FRAT1, FUT1, FUT7, FZR1, GNMT, GRIA1, GRIN2D, GSTT1, HMGC S1, ICOSLG, IFNAR2, IKBKE, IL1R2, IL28RA, IL6R, INPP5A, ITCH, KIR2DS 5, LDHA, MAP2K4, NAE1, NCK2, NCSTN, NEU1, NLGN2, NTN1, NUDT8, OR10Q1, OR13C5, OR1I1, OR2T34, OR2V2, OR3A2, OR4E2, OR4X1, OR5B17, OR5D14, O R5P3, OR6M1, PEMT, PER2, PKLR, POLE2, POLR2J, PPP2R2C, PPP3CC, PRSS3 , PTDSS2, RELA, SKP1, SOS1, SPCS3, SPRED2, TKTL1, ULBP1, VEGFA, WASL, WHSC1L1, SERPIND1
Negative_11825	DBH, GSS, ACP6, ACSL5, ADCY5, ADORA2B, ALDOC, AMHR2, ANAPC11, APBB1, C4BPB, C5AR1, CACNA1C, CACNA1I, CD244, CES7, COL11A1, COL1A2, CTSS, CXCL5, CXCL9, CYP8B1, DARS2, DCXR, DIAPH1, DNMT3B, DUSP10, DUSP2, DU SP7, ETS1, FRAP1, GANAB, GNG3, GNRH1, GSTM3, GSTP1, GTSE1, GUCA1C, HE S1, HNF4G, HRH1, HSD17B3, IGF1R, IL1R2, IL1RAP, ITPKB, KLK3, LIFR, LI MK1, MAML2, MAN1A1, MAOA, MAP3K5, MBL2, MKNK1, MTMR2, MYH9, NTF4, NTR K1, ONECUT1, OR1I1, OR1S1, OR2AE1, OR4D2, OR52A1, OR8U1, ORC2L, PDE5 A, PDGFB, PIGS, PIP5K1B, POLR1A, PPID, PPP2R1A, PRKAR2A, PRPH, PYGL, RAPGEF2, RASSF5, SEMA3C, SEMA3E, SEMA4A, SIAH1, SMAD4, STAT6, TAS2R 4, THY1, TUBA3E, TUBB2A, UPB1, UPP2, WNT6

Negative_11826	AUH, GPI, HYI, LIF, SPN, TNN, AARS2, ACTC1, APOC3, BATAP2, BMP5, CAPN2, CCL22, CCL7, CD44, CNTN1, CSF3, CTPS2, CXCL5, CYP2C8, CYP7A1, DUSP1, ENO3, FZD4, GALNT8, GCLM, GDF7, GPAM, GRIN2B, GYS2, HADHA, HMGCS2, IFNA5, IFNAR2, LAMC1, MAP3K14, MDM2, NCF2, OR13C3, OR52B4, OR5R1, OR6B2, OR6C6, PCYT1B, PFKFB4, PNPLA3, POLD2, POLR3D, PPAT, PRKCA, RALB, SC5DL, SDHC, SHMT2, SLIT1, SUCLA2, TGFB2, WNT5A, ST6GALNAC4, ST6GALNAC5
Negative_11827	AK3, C8G, CGN, IL7, AARS, ACAA2, AKR1C2, AKR1D1, ALG11, ALG12, ALPI, A SAH1, B3GNT3, BDNF, CACNA1F, CCNB3, CD79B, CDIPT, COL4A4, CREB3L1, D EGS2, DFFA, DGAT1, DKK1, DUSP6, ERBB3, FARSB, FCER1G, FLT3, FZD1, GAL NT6, GLDC, GNRH2, GNRHR, HADHA, IARS, IARS2, IFNA5, IFNA8, ITGA4, ITG AX, ITGB4, KAT2A, KCNJ11, KLRK1, LEPR, MAML1, MAPK11, MAPK12, MGST2, MINPP1, MRAS, NEFL, NFYC, OR10G8, OR52N4, OR6C4, OR6N1, PDXP, PGAM4, PLA2G3, POLR3D, PORCN, PPAP2B, PPP2CB, PTDSS2, PYGB, RBL1, ROBO1, RU VBL1, SFRP5, SMURF1, SOCS3, SPP1, SSH1, STX16, STX8, TAS1R1, XCL2, EIF4EBP1
Negative_11828	ABO, AK7, C9, FUK, FYN, HDC, ACADVL, ACP6, ALDH9A1, ALG9, ALOX5, ARG2, ARRB2, CACNA1H, CD79B, CDC14A, CDS2, CLDN6, CNGA4, CNGB1, CNTF, COL4 A1, COL5A3, CTNNA2, CYP3A7, DAPK3, DHDH, DTX1, DVL1, EDA2R, EIF4B, EN TPD6, ETNK2, FCGR3A, FUT8, GAB1, GAD1, GMPPA, GPD2, GPT2, HDAC2, HLA-DMA, HMOX1, IL15RA, IL6R, NCAM2, NEUROG3, NFASC, NOD1, NRAS, NRXN1, O R10K2, OR10S1, OR12D3, OR14C36, OR4F5, OR4M2, OR4N2, OR51A4, OR51I1, PARVB, PIGA, PLA2G4A, PPBP, PRKAR2B, PRPH2, PTAFR, RGS3, RPIA, SETD 1B, THBS4, TLR3, TUBAL3, TUBB4, ZFYVE9, B3GALNT1
Negative_11829	GAA, MET, MIF, NPY, PGD, SCD, ADCY6, ADRB2, AKR1B10, ATP5G1, BACE1, BA IAP2, CD8B, CFLAR, COL5A1, COL5A3, CRLS1, CYP2C18, DDX19A, DGAT2, DP YD, DTX3L, EREG, F2RL3, FABP1, FCGR3B, FLOT2, GABARAP, GATM, GNAL, GP 1BA, HADHA, HLA-DMA, HLA-DRA, HLCS, IMPDH1, IRAK3, IRS1, ITGB8, JUND, KRAS, MAP4K3, MMP1, NADK, NT5C2, NTSR1, OR2C3, OR2G3, OR52M1, OR5AU1, PAK7, PANK2, PANK4, PIG B, PIGN, PIGX, PLXNA2, POLD3, PPID, PPP1R3C, PRKACA, PRSS2, PRSS3, RP S6KA3, SARDH, SAT1, SDC2, SETMAR, ST3GAL6, ST8SIA1, SULT2B1, TAS2R1 4, THBS1, ULBP1, VEGFC
Negative_11830	AUH, CKM, TH, ALPI, ANPEP, ATG12, B3GNT5, BLVRA, BMP4, BST1, C4BPB, CC L22, CCNB2, CCNE1, CDH1, CDK5, CRKL, CTBS, CXCL1, CYP3A5, DHRS9, DUSP 14, G6PC2, GALNTL2, GPLD1, GUCY1A2, GYS1, HADH, HMBS, IL18, ITGB3, LA MB3, MAPK12, MGLL, MTAP, MYH11, OR10A2, OR2F2, OR4M1, OR5AU1, OR8D1, P4HA2, PAPSS2, PERP, PIGQ, PPAP2A, PPP3CA, PRIM2, PRKAA2, PRKAB2, PR KCI, RALA, RUVBL1, SIPA1, SPRY1, TUBAL3, ULBP2, UPP2, VDAC2
Negative_11831	ABO, BTC, C4B, DDO, FH, JUP, LHB, OAT, SPN, ACACA, ADRB2, AGRN, ALDH3A2, ALG6, ATP5G2, BCAR1, BDNF, BPNT1, CACNG5, CFTR, CHD8, CLDN19, COMP, CXCR3, CYP27A1, CYP2F1, DGKA, DHRS9, DLAT, EFNA5, EVI1, FRAT1, FZD1, GLDC, GLI3, GRIN2B, HMBS, HSD17B2, HSD3B1, IARS, IDH3B, IL11, IL21, I L21R, LRDD, MPST, MYH11, NCK1, NCOR2, NRG4, OLR1, OR2T4, P4HA1, PIAS3, PIP4K2C, PLOD2, POLE4, PRKAR1A, PRSS3, PTGER3, RAD51, RPS6, SOS2, T UBA3E, ULK2, ATP6V0A2, PDCD1LG2, SERPINA1

Negative_11832	C8A, CKM, EZR, GK, KIT, PLN, SP1, SRF, TPO, ACADVL, ACLY, ADH6, ASS1, BMP4, CACNA1I, CCND1, CHRM2, CKS1B, CLDN1, CNTN1, COL11A1, CSAD, CSF2, CX3CR1, CXCL1, CYP2S1, DUSP7, EFN1B, ENTPD7, EPHA3, F13A1, FCER1G, FCGR2B, FDPS, FZD7, GLI3, GNAT3, GRB2, GSTM1, HNF1A, HNF4G, IFNAR1, IL1R2, INSR, KAT2B, LIAS, LTB4R2, MADCAM1, MALT1, MAP2K3, MAP3K1, MCAT, METTL2B, MLYCD, MMP2, MYLK2, NCR1, NMNAT2, NRCAM, NT5C3, NT5M, OR14I1, OR1J1, OR1J4, OR2H1, OR2M7, OR2T11, OR2T29, OR52I1, P2RX2, PDGFD, PLCD3, POLE2, PRKCE, PTGES2, PTPN6, QPRT, RAC2, RAPGEF1, RRAS, SC4MOL, SEMA4G, SFRP1, SHISA5, SLC12A2, TCIRG1, TPH2, VDAC1, XCR1, XIAP, HSD17B10, KIR2DL5A, TNFRSF13C
Negative_11833	FOS, HGF, ID2, MIF, STS, AADAC, AASDH, ACSM2A, ADRB1, AGPAT6, AREG, ARSB, BMP2, CCR2, CD38, CKMT2, CNTN1, CNTN2, CREB3, CYP17A1, DAPK3, DDX18, DLL3, DUSP14, F11R, GADD45G, GLI1, GNAS, GPD1, HCST, HSD3B1, ITGA8, MAN1A2, MAN1C1, NARS2, NUDT2, OR2A2, OR2T1, OR4C6, OR4D1, PI4KB, PLCD1, POLR2H, PON1, PRK CZ, PRKX, PTPN11, RFWD2, STX12, STX18, TAS2R38, TRMT11, WNT3A, ATP6V1C2
Negative_11834	DUT, RFK, ACAA1, ACLY, ADCY7, ADH1B, ALG12, BMP8B, C7orf16, CACNG6, CD72, CHIA, CLDN4, CLDN8, COQ7, CREB3, CSF3R, CTSS, CXCL5, CYP11A1, DGAT1, DPM3, DTX2, ENTPD5, EPHA6, EREG, ER01L, FCGR3A, FDFT1, GNAL, GSTA1, HAGH, HPSE, IL12RB1, IL17A, ISYNA1, KIR2DL2, KNG1, MAP3K4, MCM7, MDM4, MTHFD1L, MYH4, MYLK, NEFH, NFATC2, NT5M, OGDHL, OR2T1, OR3A1, OR4X2, OR5K1, OR8K5, ORC3L, PIPOX, PKMYT1, PLA2G2E, POLR3G, PON2, PRKAR1B, PRODH2, RHOD, SGMS2, SRD5A2, SSH1, ULBP2, PPP1R12A, SERPINA1, TNFRSF13B
Negative_11835	BAD, DBH, FH, ACADSB, ACP1, ADCY9, ADIPOQ, AREG, ATP5G1, BDKRB1, CACNA1H, CCL13, CCNA2, CD244, CPT1A, CSNK2A1, CXCL9, CYP11A1, CYP2U1, DAM2, DHFR, DUSP4, ENAH, EP300, EPHA8, ESAM, FGF19, FUT8, FUT9, FZD4, GALK1, GALNTL1, GFAP, GJA1, GNRHR, GSTA1, GZMB, HES1, HSD3B2, HSD3B7, IFNA5, IL29, IL2RG, INPP4B, INPPL1, INSR, KLRC3, LAMC1, LCP2, LDHA, MAN1B1, MYH8, NAGS, NFKB2, NFYC, NME4, NT5C2, OR10AD1, OR10K1, OR4D6, OR51B5, OR52A1, PARVA, PFKP, PIK3R3, PIP5K1A, PLA2G2E, PLCB2, PMM1, POMC, PPP1CC, PTPMT1, RFXAP, SEMA4F, SETD1A, SFRP1, ST8SIA1, STK36, TBXA2R, TLR3, TRPM5, VANGL2, ATP6V1G3, CACNA2D3, HLA-DRB3, ST6GALNAC3
Negative_11836	BTC, CEL, GLA, ILK, PLG, ADCY6, ASAH1, B3GNT4, BNIP1, CCR5, CD19, CD79A, CDKN2C, CHKB, CHRM2, CSF2RB, CSNK1D, CSNK2A1, CTSL1, CXCR4, CYFIP1, CYP1B1, DDOST, DERL1, DKK1, DNMT3B, ERBB3, ETS1, FZD9, GCNT2, GLS2, HNMT, IGF1R, IL6R, ITGA9, KIR2DS5, LEFTY2, MAP4K1, METTL2B, NAGLU, OR1E1, OR1L6, OR2A25, OR3A2, OR4K13, OR4K5, OR51F2, OR6B2, OR9K2, OXSM, PANK4, PDE1C, PDGFC, PDGFD, PGLS, PLCD4, POLR2D, PTGES, RPN1, SFRP4, SKP2, SLC2A2, SLC2A4, SLC9A1, SMC1B, STX4, SULT1A4, TRADD, TRPM5, TSHB, TUBA1C, UMPS, WNT9A, ZNRD1, ST6GALNAC1
Negative_11837	AK3, CFI, F7, GBA, PGF, SCD, SRC, TPR, TYR, ABP1, ACSL3, AKR1B10, ALDOC, ALS2, AMDHD1, AREG, ASIP, ATP13A2, BCAT1, CCL14, CCR3, CD47, CDC42, CHD8, CLDN15, CSF1R, CSF2, CXCL16, CYP2S1, DIAPH3, DVL3, ENPP3, G6PC2, GALNT7, GRIA1, GYS2, HAGHL, HSD17B3, IL10, IQGAP3, KIR2DL1, LDHB, LRP6, MPDZ, MRAS, MTAP, MYH7, NGEF, NMNAT2, NOS3, OR10A5, OR4A16, OR52E4, OR5K2, OXTR, PDE4B, PIK3C2A, PIK3CB, PKM2, PLCG2, PLXNB1, POLD3, PPP1R3D, PTPRM, RUNX1, SEMA4A, SEMA4F, SMARCA2, SPCS3, SPRY2, TGFB2, TYK2, WWP1, TNFRSF11B

Negative_11838	AK3, AR, C6, CR2, TEC, ACSM1, ACSM2A, ADCY2, ADH6, APOE, AREG, ATN1, CA SP7, CCL2, CCR7, CD38, CD48, CDC25C, CDK6, CTNNA2, CXCL16, CXCR6, CYP 2B6, DAG1, FGF14, FLT3LG, FMO1, FMO3, FRAT2, FUT4, FZR1, GSTO1, GSTO2 , HPSE, HSD17B2, IKBKG, IL17RA, IL18, INPP5B, IQGAP3, ITCH, ITGB3, IT PKA, LDHAL6B, LRDD, MAP3K13, NSD1, OR10J5, OR11G2, OR14I1, OR4A15, O R51I1, OR52K2, OR8H1, PGM1, PHKG1, PIP4K2C, PLA2G2D, PLXNA2, POLA1, POLA2, POLR1B, PPP2R2B, PRKG1, PRODH2, PRSS1, PTGS1, RARS2, RASA2, R ASGRP1, RBL2, RERE, RHOQ, SEPHS1, STT3B, TAS2R10, TUBA1B, TUBB4Q, ZA P70, ATP6V1C1, SUV420H2
Negative_11839	CDA, IL5, LTB, LYN, MAG, ABAT, ABCC8, ACTA1, ADAM10, AHCYL2, AKR1C2, A LDH1A1, ALG1, BACE1, BCL2L1, BMP6, CCL2, CCL25, CCR9, CFLAR, CLTCL1, CNTNAP1, CRY2, DDIT4, DTX1, DUSP10, EFNA4, ENPP6, ERO1L, FMO3, FOXO3 , GCAT, GLI2, GNAS, HBEGF, HPSE, IFNG, IL17RB, IQGAP3, ITGA1, LAMB3, L ARS, LDHD, MAP2K3, MAP3K12, MAP4K2, MAPK8, MS4A2, NRG3, NTRK2, OR1Q1 , OR2T10, OR2T6, OR51E2, OR5B17, OXSM, PDE1C, PDXP, PLA2G2A, PLCB2, P LD1, POLE2, POLR2H, PPAR, PPM1A, PPP2R5E, PRPS2, PTGER1, PTPN6, PVR L1, RASSF1, RBPJ, RETSAT, ROCK1, SCP2, SELPLG, SLC9A1, SOCS5, SOS1, S TX6, ULBP2, VAMP4, WASF2, WNT3A, WNT6, WWP1, MAP3K7IP1, SERPINA5, SU V420H2
Negative_11840	AK7, IL5, ABLIM1, ATP6V1D, BCAT1, CACNG1, CALML3, CAV3, CBR3, CFL2, C LTC, COL4A1, CREB3L2, CREB3L4, CRY2, CTF1, CYBB, DHCR7, DUSP5, EIF4B , FASN, FIGF, FLAD1, FOXA2, FSHB, FSHR, FZD3, GLI1, GUCA1A, HSD3B2, HS PB1, HYAL2, ICOS, IL18, IQGAP3, KLRC4, LCMT1, LIMK2, LIPF, MAML2, MAP K3, MINPP1, NAE1, NAMPT, NEU3, NFKB1B, NR4A1, OR11H4, OR1E2, OR2C3, O R4N4, OR4X2, OR52N1, OR56A4, OR6C6, OR6Y1, PIGB, PLA2G2A, PRKCZ, PRO C, PRSS3, PTGER1, PVRL3, RASSF5, ROCK1, SNAP25, STAT1, SYNJ2, TLR2, T PH1, TYK2, ALDH18A1, MAP3K7IP1, TNFRSF17
Negative_11841	C9, IL3, MPL, RFK, TKT, AANAT, ACAD9, ACYP1, ADRA1B, AKR1D1, APPL1, AR HGEF1, ATP4B, CACNA1S, CACNB2, CDC23, CLDN10, CLDN6, CRY2, CTNNA1, C XCR3, CYP26A1, DDX52, ETNK2, FGF14, FUT4, GANAB, GATM, GCNT4, GOT1, G P1BA, GSTK1, IRS4, KITLG, LYPLA1, MAGI1, MAGI3, MAP2K2, MAP3K8, MAP4 K4, MBL2, MCM2, MGAM, MGAT1, MGAT4A, NADSYN1, NARS2, OR1S1, OR3A1, OR 4D5, OR8J1, PCYT1A, PFN4, PIAS1, POLR2C, POLR3H, PPARA, PPM1B, PRODH , PTAFR, PYCR1, RELA, RFXAP, RPS6KB1, SH2D1A, SMC1A, SOD1, STK36, THB S1, TJP3, UPP1, XYLT1, YES1
Negative_11842	DCC, F2R, ID4, NOG, RB1, AARS, ACAD8, ADORA2A, AGRP, AMD1, AREG, ARRB1 , ATG3, ATP5A1, ATP5J, B3GALT6, BCL10, BDKRB1, CAMK2A, CCNB1, CD3E, C D79B, CLDN22, CXXC4, DIAPH1, DTX3L, ENPP1, FARSA, FBXW11, GAB1, GALK 1, GCLM, HEMK1, HLA- F, HSD11B2, HSD3B7, IL19, IL20RA, ITGB8, JAM3, KLRC1, LAMA4, MAN1B1, MITF, NFKB1, OR11H1, OR2G6, OR4K14, OR4K15, OR6F1, P2RX5, PDIA4, PNP LA3, PPP1R3C, PPP2CB, PPP2R2D, RAPGEF4, RBL2, RHOQ, ROBO2, RPRM, SEM A4G, SHC3, SLIT1, SPTLC1, ST3GAL6, ST8SIA1, TNFSF8, TUBB2B, TYMS, YW HAB, HSD17B12
Negative_11843	BTK, F9, GCK, HK3, NOG, TPO, ACAA2, ADAM17, AOX1, ARNT, B3GALT1, BIRC3 , BLNK, CCNE2, CCNG2, CD3E, CD70, COL4A4, COL5A2, COQ7, CREB3, CTTN, C XCL2, CYP7A1, DCTN1, DGKI, DHCR7, DLL1, DTX1, EFNA1, EFNB2, EGLN3, EN PP3, FABP3, GCNT4, GDF5, GNAI3, GNRHR, GRAP2, GUCY1B3, IBSP, IDH3G, I L11, IL1B, IL28RA, ITGA9, JAK2, KLRC4, LFNG, LIPG, MCAT, NEU4, NKX2- 2, OR10H3, OR2M5, OR4K15, OR51Q1, OR52I1, OR5AC2, OR5C1, OR5M8, OR5V 1, OR8S1, OR9I1, PAK3, PIGM, PIK3C2A, PLIN, POLR1B, PPA2, PPP1R3C, PP P1R3D, PPP2R2A, RENBP, RRM2, SETD7, SLC27A5, SMAD3, SPHK1, SPRED2, T JP1, TLN2, TSHB, UGT2A3, UPP2, XYLT2, ZMAT3, CSGALNACT1, CSNK1A1L, H SD17B12, MAPK8IP3, PDCD1LG2, PHOSPHO1, TNFRSF10D, TNFRSF18



Negative_11844	BTK, DBH, DBT, DCC, FYN, GPI, MIF, NLK, TYR, UBB, ACVRL1, ALDH1A1, ALG1, APC2, ARNT, BMP2, BPNT1, CASP3, CCL15, CCL2, CCL21, CD247, CDH1, CDH4, CHDH, CNTNAP1, COL1A1, CPS1, CX3CR1, CXCR6, DARS, DDHD1, DEGS2, DGAT2L4, DGKD, ESAM, EXT2, FECH, FGF14, FGFR4, FOSL1, FRAT2, GAL3ST1, GALNTL4, GALNTL5, GBE1, GGCX, HPSE2, HSD17B1, ITGB4, LIFR, MAP2K3, MCEE, MFNG, MGAT3, MLLT4, NEUROG3, NRG4, OR10H5, OR4C13, OR4D1, OR4X2, OR51E2, OR52D1, OR52N4, OR5A2, OR6F1, PARD3, PDCD1, PFKFB3, PGAM1, PMAIP1, PSEN2, RAC3, RERE, RPN2, RPS6KB1, RUNX1T1, SELPLG, SESN3, SNAI1, SPHK1, STK3, TGDS, TGFB2, TUBA3E, UGT1A10, WHSC1, WNT11, WNT8B, ARHGEF12, MAPK8IP2, SERPIND1, SERPINE1
Negative_11845	A4GALT, ACAA2, AKRIC4, ARD1A, ATP5H, BAI1, BST1, CASK, CASP6, CCKBR, CCR6, CHD8, CHRM1, CLDN17, CLDN5, COASY, CREB1, CXCL10, DEGS2, DHCR24, DOLPP1, DUSP4, FGFR2, GCLM, GCNT1, GTSE1, GUCA1B, GZMA, HES1, HSPB1, IFT57, IL24, IL9R, INHBE, ITGA10, ITGA9, LDHD, MAD1L1, MAD2L1, MAP3K5, MAPK1, MAPK13, MGAT2, MGAT5, MLLT4, MYH3, NAGK, NCOR2, NUDT5, OR2A12, OR3A3, OR4A15, OR52N1, P2RX7, PAPSS1, PDCD1, PDE6H, PFKFB1, PIGL, PIGU, PIP5K1B, PIP5K3, POLA2, POLR2C, PPOX, PPP1R3B, PRKCI, PRKX, SETD8, SMAD1, SMURF1, TAS2R49, TBXAS1, THTPA, TP53, TPH1, TSHR, UGT2B28, ATP6V1G2, SERPIND1
Negative_11846	F2R, ID1, ME3, SRF, TEC, UBB, ACTC1, ACVR1C, ADAM10, ALDH1B1, APOA2, ATP5J, BMP4, C7orf16, CACNA1B, CCL17, CCR5, CDIPT, CFL2, CHKB, CHRNA7, COL5A1, CREB5, CSNK2A1, CTSB, CYP27A1, DAPK3, DGKB, DGKH, DUSP4, ENTPD2, FABP4, FBP2, GALNT2, GALNT3, GALNTL4, GDF5, GGPS1, GNAZ, GRIA2, GSTA3, GSTM5, GSTO1, GZMA, HLA-DMA, IFNA14, IL2RA, IMPA1, IRF3, LAMC2, LEF1, MAGI2, MAP3K11, MAP3K3, MGAT5, MPP5, MTHFD1, NCOR2, OR11H6, OR13C5, OR4K17, OR4P4, OR51B6, OR51F1, OR52H1, OR52N5, OR6C76, OXCT2, P2RX4, PAK3, PANK4, PDE3A, PDE4A, PIK3R4, PLAT, POLE2, POLR2L, PPP3CA, PYGB, RDH8, SLIT1, SOCS3, SORBS1, SOS2, SPRY2, STAM2, TAS1R3, TNFSF12, TUBB2A, UGT2B4, ULBP2, VEGFB, ATP6V1C2, SERPINF2
Negative_11847	AUH, C1S, CAT, CGA, CKB, CP, F12, FAH, FER, FST, KIT, MUT, AASDH, ACSM4, ACTG2, ALG13, ALG5, AMDHD2, ASIP, ATP5B, B4GALT3, CANT1, CBLC, CCNH, CCR3, CHST12, COL4A2, CSNK2A2, DARS, DUSP6, E2F3, EFN1, F13B, F2RL3, FASN, FOSL1, GADD45A, GGT7, GNPDA2, GPAA1, GPT2, GUCY1A3, GYS2, HPS E, HSD11B2, IFNA14, IL12B, ITGA3, ITPKA, KARS, KITLG, MAP3K8, MAP4K4, MCM6, MEF2C, MYLK3, NCOR1, NLGN1, NME4, NOTCH2, OR13J1, OR1J1, OR1J4, OR2T10, OR2T5, OR51V1, OR52B4, OR52N1, OR5AR1, OR5T3, PAX4, PDGFD, PIK3C2B, PIM2, PLXNA3, POLR2K, POLR2L, PPP1CA, PPP3R2, PRKAA2, PRKAR2A, PTGDS, RAPGEF4, RETSAT, SC4MOL, SEMA4C, SIAH1, SIPA1, SNAP25, ST3GAL1, STX12, TAS2R1, TLR4, TNFSF10, TNFSF12, WASL, WNT11, HLA-DRB3
Negative_11848	DBI, FST, ID1, PML, PRL, PXN, TAT, TNN, AACS, AARS2, ACSM4, ACYP1, APOC3, ATP6V1A, AXIN2, BAI1, CCL23, CD19, CDC7, CDH1, CDK4, CFL1, CHPF, CLDN5, CNGA3, CPT1A, CTSS, DCXR, DGUOK, DUSP14, ENTPD2, EXTL3, FARP2, FASLG, FRAT1, GALNT9, GALNTL4, GCDH, GPLD1, HEXA, HRAS, IFNA7, IFNGR2, IGF1R, INHBB, INHBE, IRF5, MAP2K6, MLYCD, NAMPT, NQO1, NSDHL, NUDT8, OR10V1, OR1J2, OR1S1, OR2D2, OR2T2, OR4D5, OR5AP2, OR8D2, PCCB, PDE4C, PGAM2, PGK2, PLCB3, PNMT, PPCDC, PPP3R2, PRKAA1, PRKY, PSME3, PTGES, RAC1, RAD51, RARA, RDH5, RGS3, RRM1, SCLY, SDHA, SETDB2, SORD, SPRED1, SQLE, STAT1, STX4, SUCLG1, SUCLG2, TICAM1, TSHR, UPRT, UROD, USE1, VANGL2, PRICKLE1, SLC25A31

Negative_11849	C9, CS, LPL, LSS, MPL, NLK, UBB, WAS, ADCY7, ADH7, ALDH3A1, ALG10, ATP6V1A, BDKRB1, CLDN8, CX3CR1, CXCL9, EHMT1, EPHX2, FGF1, FGF19, GABARA P, GALNT7, GNAO1, GNB3, HAP1, HIBADH, IFNAR1, IL2ORA, INHBC, ITCH, ITGB1, JAG2, LHCGR, LTB4R2, MCCC1, MDM4, NCOR2, NGEF, NQO1, NT5C2, OR2L3, OR52E2, OR6N1, OXCT2, PGS1, PLA2G2D, PPP2CA, PTGFR, PTK2B, RARS2, SLC9A1, TCF7L1, TUBA1C, TUBB, XYLB, PAFAH1B3, SERPINC1, TNFRSF1A
Negative_11850	GK2, LCT, LEP, ALDH2, ALG9, ARPC5L, ATG7, ATP6VOC, BMP6, CACNA1G, CAR S, CDC14A, CDK7, CES2, CLDN15, CLDN6, CLDN9, CYP2S1, CYP3A43, DTYMK, EPHB2, GALNTL2, GDE1, GPX7, IARS, IL10RA, IL1B, IL21R, IL22RA1, INHBE, LAMA4, LAMB3, LTBP1, MAGI1, MAP3K4, MDM2, OR56A4, OR6C75, ORC5L, PARD6G, PCCA, PDE2A, PDHB, PFKFB2, PIM1, PIP4K2C, PON3, PYGM, RAP1B, RDH12, RPN2, SC5DL, SDC1, SGMS1, SHC2, SLC12A2, SMARCA2, SMARCA5, TAS2R14, TRMT11, TYRP1, UGCG, VDAC1, XYLB, ARHGEF12
Negative_11851	C6, GAA, IDS, MUT, ACTN2, ATP6V0B, AXIN1, BBOX1, CACNA1C, CDC42, CHEK1, COL6A1, CPT1A, CREB3L4, CTBP2, DBF4, DGKZ, EDA2R, EDAR, EIF4E, ESPL1, F2RL1, FCGR2B, FGF4, GLI2, GSTM2, GSTP1, HMGCL, IL13RA1, IL17RA, IL2RA, IMPDH1, INPP5E, KITLG, LARS2, LGMN, MAP3K13, MAP3K5, MMP7, MTR6, OR11A1, OR1F1, OR1M1, OR2T5, OR2T8, OR3A3, OR4C13, OR4E2, OR52I2, OR5D14, OR5L1, P2RX4, PARVA, PIGH, PIGN, PLA2G2D, POLR2K, PPAR, PPF5C, PRKAR1B, PRKCH, PTPRF, RBL1, RDH10, RDH12, SDHC, SOCS1, TAS2R1, TBXAS1, TRAF6, TUBA1A, UROS, WEE1, WNT5B, TNFRSF10B
Negative_11852	CAT, CSK, FYN, HAL, HK2, JUP, MOS, ADSSL1, AK3L1, AKR1C2, ALG2, APOA2, APOA5, ARNTL, ATP6AP1, BIRC2, BMP8A, C3orf10, CAMK2G, CD80, COL1A2, COL4A6, CXCL16, CXCR3, CYP26C1, CYP3A7, DAXX, DCTD, ENTPD3, EPHB3, EXOC7, FABP4, FGFR4, FM01, GDF6, GOT1, GSTA5, GYS1, HDAC2, HYAL2, IBSP, IFT57, IGF1R, IL4R, IL8RA, INPP5B, ITGA3, ITGAL, ITPA, LIPE, MAP2K6, MAP4K2, MGAT1, MPP5, MTHFD1L, MYD88, NFX1, NUDT9, OR10C1, OR10V1, OR51G1, OR51I1, OR5AC2, OR5AU1, OR6M1, OR6N2, OR7C1, OR9G1, PDCD1, PDE7B, PDGFA, PER1, PIGF, PIGW, PIM2, PNPLA3, PRPH2, PRPS2, PTGS2, PYGB, RXRB, SELPLG, SGPP1, SH2D1B, SUV39H2, TAS2R4, TGDS, TKTL1, TRAF2, UGCG1, UGT2B28, UGT8, VEGFB
Negative_11853	BAD, IDS, ADORA2B, AGTR1, ALDH7A1, APAF1, ARSD, ATP5D, ATP5E, ATP6V0B, ATP6VOC, B4GALT7, BLVRB, C1QC, CCL26, CDH15, CDH2, CER1, CHRM1, CLDN5, CMPK2, COL6A2, CREB3, CSNK2A1, CTSB, CYP2E1, DBF4, DERL1, DGKG, EREG, FZD10, GRIA1, HEXB, HMOX1, HSD3B1, HTR6, IDH1, IFNGR1, IL21, IRAK1, ITGA6, ITGAL, ITPK1, ITPKA, JAG1, JAG2, KIR2DL1, KIR2DL2, LAMB1, MAGI3, MAP3K2, NARS, NCF1, NCK1, NCOR2, NRG3, NRXN1, NTNG1, OR10H4, OR10Z1, OR2AG2, OR3A2, OR51B4, OR52L1, OR56A4, OR56B4, OR6C1, OR6C2, PARD6G, PER3, PIGC, PIK3CB, PIK3CD, PLAU, PNPT1, PSAT1, PSME1, RAB5A, SPRY1, SRGAP1, SUFU, SYNJ1, TBL1Y, TPH2, UPRT, UROC1, WIF1, WNT9B, CSNK1A1L, TNFRSF10D
Negative_11854	C1S, CD4, FGB, PC, ACADSB, ACTN2, AKT1, ALG6, ARSE, ATP5I, CACNA1E, CACNG5, CCL28, CD48, CLDN9, CNTN1, COL1A2, CPT1A, CYP11A1, DARS, DEGS1, DHRS4L2, EHMT2, ELK4, EXTL3, F2RL3, FUT5, GALNT9, GNAI3, HEMK1, HLAG, HTR6, IDI2, IFNW1, ITGA8, JAM3, MNX1, MYH6, NADSYN1, NCK1, NFX1, NOTCH2, OCLN, OR10G8, OR13C9, OR1A1, OR4F15, OR51E2, OR5B17, OR6B2, OR8D2, OR9G4, PCNA, PDE11A, PFKP, PGM2, PI4KA, PIGX, PIK3R5, POLR2L, PPP1R3B, PPP1R3D, PTCRA, PTPN6, PTPRC, RAP1A, RASA1, RHOD, RPS6KA2, RRAS, SKP2, SNAI2, STAT3, STMN1, SUV39H2, TUBA8, TUBB6, UGT2B10, UGT2B11, WNT7A, WWP1

Negative_11855	C8B, F5, HK1, IL2, SDS, ACADSB, ADCY2, ADIPOR1, AGXT2, ALDH3B2, APC2, ARHGEF1, ATP5G2, ATP6V0B, BBOX1, CACNG3, CCL11, CCND2, CCNE1, CD274, CD28, CD8A, CDC42, CDK4, CLTB, COX15, CRY2, CSNK1A1, CTBS, CXCR5, CYP11B1, DGUOK, DHCR24, DTX1, DUSP8, EHMT1, EVI1, EXOC7, FIGF, GALNT2, GALNTL5, GARS, GATM, GFPT1, GMPPA, GUCY2F, HBEGF, HSD3B2, HTR2B, IL1B, IRS2, LDHD, MALT1, MMP1, MRAS, MTHFS, NEFM, NUMB, OR10G7, OR1J4, OR1K1, OR2T10, OR5D18, OR8B4, PAFAH2, PARD3, PIM1, PPP1CC, PPP2CA, PSM E2, RASGRP1, RERE, SARS2, SETD8, SH3BP2, SLC27A4, STX1A, TAS2R5, TAS2R7, TPH1, TUBB4Q, UGCG, UNC5C, VDAC2, VTI1A, YWHAE
Negative_11856	ATM, C6, DHH, F9, IL9, MAX, AKR1C2, AKR1C3, ARHGEF1, BMP7, C5AR1, CDK5, CDK6, CDS2, CHRM2, CHSY1, CLDN17, CLDN5, CRHR1, CTBS, CXCR3, CYP2C8, CYP4A22, DARS, DNMT3A, DTX2, E2F2, EHHADH, EPB41L3, FASLG, FOSL1, GADD45G, GALNT5, GLUD2, GMPR2, GRIN2A, GSTM3, HLA-DOA, HLA-F, HNF4G, HSPB1, IDH3G, IFNAR1, IL18RAP, IQGAP3, IRAK4, ITCH, ITGAV, JAK1, LAMB4, LAMC1, LARS2, LEF1, MAML2, MAOA, MTMR2, NAT6, NEFH, NEUR OD1, NFKB1, NKD2, NRP1, OR1L6, OR2A14, OR4F4, OR4K2, OR4S2, OR51A7, OR52A1, OR5T1, PGAM2, PIAS2, PIK3R1, PNPLA3, PPA1, PPP1R3C, PRKCZ, PRKG1, PTCH1, PVRL3, RALBP1, ROBO1, RPN1, SELP, SNAI1, SNAI2, SOD1, SPRY1, TAS2R14, TAS2R41, TPH1, TYRP1, ZFYVE9, CSNK1A1L, SERPING1, SUV420H2, TNFRSF12A
Negative_11857	CD4, CGA, CTH, RB1, TNF, ACSM3, ACSS3, ACTN1, ARHGAP5, BMPR1B, CDH2, CHKA, CMBL, COX10, CXCL10, CXCL2, DMGDH, DNMT3A, EPB41, FABP1, FBXW11, FGF18, GALNT9, GGT1, GNPAT1, GRM5, H6PD, HYAL1, IL28A, INHBB, IRS1, LIAS, LTB4R2, MAFA, MAOA, METTL2B, MGST2, NANS, NLGN1, NOTCH1, NRG4, ONECUT1, OR10H3, OR11L1, OR2M4, OR3A1, OR4L1, OR52B6, OR5A51, OR6B2, OR6B3, PFAS, PLD2, POLR2C, PPARG, PPP2R2B, PPP2R5E, PRKAR2A, PRKCA, RASGRF1, RELA, RETSAT, RPIA, SC4MOL, SETMAR, SLC27A1, TIRAP, TNFRSF8, TOMM40, UXS1, VTI1A, XIAP, ZBTB16
Negative_11858	CRH, IL6, ACADVL, ACPT, ACTN2, ALOX15B, ARG1, ARG2, ARHGEF6, ATIC, ATP5B, ATP5I, CCR3, CDC7, CDKN2B, CHD8, CHIA, CMPK2, CXCL1, EDNRA, EPRS, ESAM, FBP2, IL3RA, IL6R, IRS2, ITGB4, MCCC2, NARS, NARS2, NFAT5, NMN AT3, NR5A2, OR1E2, OR2M4, OR2T11, ORC6L, PCCB, PFN4, PLCG1, PTPN6, RASGRP2, SEMA7A, SH2D2A, SIAH1, SIPA1, ST3GAL2, TALDO1, TSHR, ZFYVE9, ARHGEF12, EIF4EBP1, MAPK8IP2
Negative_11859	AK2, AK5, C7, F2R, SRC, ACAT1, AMHR2, ANGPTL4, APOA2, BCKDHA, CCL26, CR9, CD8A, CDC7, CLDN16, CPT1B, CTSS, CYP26C1, CYP2D6, CYP3A43, CYSLTR2, DDIT4, EFN2, EI24, FDPS, FLOT2, G6PC2, GALNT1, GBE1, GPD1L, GUCY2D, HIBADH, HNF4G, HSD17B3, HTR2A, IFNA14, IL10, IL15, IL6ST, ITGA4, ITPK1, LDHB, MYH9, MYLK3, NANP, NFKBIE, NLGN2, OR10A2, OR10A3, OR11G2, OR11H4, OR13H1, OR8H2, PARS2, PIGF, PLAT, PPP1R3A, PRKCI, PRODH2, PRPH2, PSPH, RALB, RDH10, SDC1, SDHC, SEMA3B, SETD2, SFRP4, SPRY1, TFDP1, TOMM40, TSC1, HSP90AA1, PRICKLE2, SERPINB5
Negative_11860	CFI, FAH, ID3, MAX, OGT, RPE, ACLY, ACY1, ADCY9, ADSSL1, APH1A, ARHGEF6, C1QC, CACNB4, CACNG7, CCL5, CD86, CDC14B, CER1, CHKB, CHRM5, CLDN2, CLOCK, COL4A1, COL5A2, CPT1C, CSF3R, CSNK1G1, CTBP1, DARS, DDX19A, DIAPH2, DTYMK, EARS2, EHHADH, ETS1, FGF12, FZD1, FZD8, FZD9, GALK1, GLO1, GUCY2D, GUCY2F, HADHA, IARS, IL11, MAPK9, MARS, MCM4, MFNG, MTFMT, NCR2, OR10A5, OR2K2, OR2L2, OR2V2, OR4D9, OR4K5, OR4N2, OR52I2, OR8H3, PIPOX, POLR1C, POLR1D, PPP1CA, PPP2R2B, PSPH, PVRL3, ROCK1, RPS6KA3, RRAS2, SDHC, SEMA3E, SEMA4F, SLC27A5, SLC33A1, SOX17, TGFB2, TM7SF2, WASL, TNFSF13B

Negative_11861	AK1, BCR, CFI, DAO, FYN, HK2, IL4, SHH, SYK, UBB, ABI2, AMPD2, ANAPC4, APOC3, ARG1, ATP5G1, ATP5H, CAMKK1, CCNH, CD48, CD70, CD80, CDC26, CHKA, CLDN22, CLDN4, CLTB, CLTCL1, CMPK1, CYP2U1, DAG1, DDX19A, DHX58, DUSP14, E2F3, ENPP6, FCGR3A, FGF18, FOXA2, GALC, GCNT4, GLUL, GNA11, GSTM5, GUCA1A, HCLS1, HEMK1, HMGCL, HRAS, ICOS, IDH2, IPPK, MAPK12, NAMPT, NCK2, NEFM, NFYC, NOTCH3, NPAS2, OR11H1, OR2G6, OR6N2, ORC4L, P2RX2, PAK7, PAX8, PIGN, PIGX, PON3, PPP1R3D, PRPH, PTGS1, PTPRB, PTTG1, RHEB, RIPK1, SHC4, ST3GAL4, TLN1, TPMT, TRAF4, UROC1, YARS2, ATP6V1C2, PPP1R12A, PRICKLE1
Negative_11862	AGK, ASL, CBL, CFH, F3, IL8, PXN, SCD, TAT, ACAD8, ACVR2B, AGPAT6, ALOX12, ARHGEF4, ATP5D, BCAT1, C3orf10, CACNB3, CCR9, CD70, CDC14A, CFTR, CXCL16, CYP11B2, DDX51, DOLPP1, DUSP7, FOSL1, FUT2, FUT5, GADD45G, GBA3, GRLF1, GSTA5, GUCY1A2, HDAC2, HLA-G, HSD11B2, ICAM2, IFNAR1, IL17RA, KRAS, LAMA4, LAMB4, MGAT4A, MPZL1, NCR1, NRG4, OR13C5, OR13C8, OR51G2, OR5AR1, OR6C75, OR8B12, PAICS, PAK4, PDPK1, PIGK, PLA2G5, PLA2G6, PLXNA3, PNMT, PNPLA3, POLD2, POLR1B, PON2, PRKACA, PRKAR1A, PRPS1, PTSS1, PYGM, RALBP1, RASGRP3, RHO, SARDH, SELL, SETDB2, SGMS1, SMAD4, SMC1A, SMPD3, SPRY3, STX1A, SUCLG1, TCF7, TOMM40, TSLP, TYRP1, UGT2B28, VAMP2, YWHAE, SERPINA1
Negative_11863	BCR, GP5, GPT, PML, ACSS1, ACTG1, ACVRL1, ADH7, ADRA1D, AKR1C4, APOA1, ATP5H, ATP6V1F, BCKDHB, BDH1, CAV1, CCL1, CCNB1, CCR2, CDK2, DAD1, DARS2, DHRS4, DOLPP1, DUSP4, EPHB3, FGD1, GGT6, GUK1, HRH2, HTR2B, IL29, LAMC2, LDHAL6A, MAD2L1, NRG1, NUMB, OR1E2, OR2B11, OR2T11, P2RX6, PFKFB2, PIP5K3, PLA2G1B, POLD2, PON2, PRSS3, PSENE1, RPRM, SEMA3G, SESN1, SH2D1B, SIAH1, SLC25A4, SNW1, SRGAP2, SSH3, STX10, SULT2B1, TAS2R49, THBS4, UAP1, VDAC1, WBSR17, ARHGEF12
Negative_11864	ABO, DCC, LYN, PGD, PLG, ZYX, ABAT, ACSM1, ACTA2, ADCY10, ALDH3A1, ALG9, ALPI, ANAPC5, ARHGEF2, ASPA, BNIP1, CASP9, CCL25, CCL7, CCND1, CCR10, CES1, CMAS, COMP, CRY1, CTLA4, CXCL2, DCXR, DGKZ, DPYS, EHMT2, ESN1, FABP3, FPGS, FUT9, G6PC, GALNT14, GALNT9, GFAP, GUCA1B, HMOX2, HSPB1, IL23A, IL2RA, LCAT, LTB4R2, MGST3, MTHFD1L, MYH15, NFKB1B, NRP1, NTRK1, OR11H1, OR13G1, OR2A12, OR2T34, OR4D9, OR4K2, OR4X1, OR5AN1, ORC3L, PAK2, PCK2, PDE10A, PFKFB1, PFN4, PIGS, PIP4K2C, PLA2G2F, PLCD1, POLR3D, PPA1, RASGRP2, ROCK2, RPIA, SARS2, SESN1, SPCS1, ST3GAL5, TFPI, TOMM40, TUBB, UPRT, VDAC2, WNT10A, WNT7A, XYL, YWHAQ, ARHGEF12, KIR2DL5A, ST6GALNAC5, ST6GALNAC6
Negative_11865	HAL, HDC, PDC, TK1, UBC, AADAT, ACSL3, ACSM4, ACTB, ACVR2B, ACVRL1, ALOX15B, ANAPC1, ARD1A, B4GALT7, BUB1B, C1QA, CBLC, CCNB1, CDK2, CDS2, CHAD, COL2A1, CTNNA2, CYP3A43, CYP8B1, CYSLTR1, DDX54, DGAT2L4, DUSP7, FASLG, FGF11, FTH1, GALNT1, GLI1, GNAI3, GRIA1, HA02, HCCS, IBSP, IGFBP3, IL22RA1, IRS4, KNG1, LAMC2, LIPG, MYH11, NLGN1, NLGN3, NRXN1, OR10X1, OR1D5, OR2K2, OR2L2, OR2L8, OR2M2, OR4A16, OR4C16, OR4N2, OR52E4, OR5AU1, OR5T2, OR6N1, OR6T1, PAK2, PANK1, PDGFRB, PIGX, PIK3R3, PPM1, PPID, PPM1A, PRKACB, PRKCH, PRKCI, PRKG2, PRKY, PRSS1, PVRL1, RASA1, RENBP, RFNG, RPS6KA4, SAT1, SDC1, SMAD9, SPI1, SPRED1, SRD5A1, ST3GAL5, TAS1R2, TAS2R14, THBS3, THBS4, TMLHE, TUBAL3, XYL1
Negative_11866	AK1, DBH, FAH, HPD, IVD, STS, ACSM1, ACY3, ADCY3, ADIPOQ, ALDH7A1, ALPI, B3GAT3, B3GNT3, B3GNT4, BBC3, CCL24, CCR9, CYP26C1, DOT1L, DUSP1, EXTL1, FUT1, GGT1, GLG1, HMBS, HMGCS1, IL19, IL1A, JAM3, MGAT5B, NARS2, NLGN3, NME4, NRXN3, OR10H2, OR10R2, OR1A1, OR1D5, OR4L1, OR4S2, OR56B4, OR5AC2, OR6K2, OR7A10, OR9Q1, ORC3L, PARS2, PARVA, PTK2, SEMA4F, SPHK1, SPTLC1, TGDS, WARS2, WNT3, HLA-DRB3

Negative_11867	DAO, HK3, ACTC1, ALDH9A1, ALG2, APRT, B3GNT2, CHSY3, CNGB1, COL4A6, CPT1C, ERBB4, FDF1, FGF5, FLAD1, FZD7, GAB1, GADD45B, GALM, GNPAT1, GSTZ1, HES1, IRS2, ITGA8, ITGAL, KCNQ1, LARS, MAML2, MAPK7, MGAM, MPZL1, MYH3, MYL5, NCSTN, NFATC3, NSD1, OCLN, OR10H2, OR2A42, OR4C15, OR4K14, OR6C70, OR6K6, OR7G2, PDE2A, PHGDH, PLCB1, PLCD4, PPP2R1A, PRSS1, RARS, RHOD, RND1, ROBO2, SESN1, SOS1, SV2C, ATP6V1B1
Negative_11868	ADA, CAT, ID4, RET, SDS, ACHE, AGXT2, ARAF, B4GALT2, CCR10, CDK6, CLCA4, CLDN19, CMAS, DDX56, DIAPH1, DKK1, DNMT3B, DTX4, FARSA, FGF20, FUT4, GALT, GNA15, GRPR, GTSE1, HBEGF, HPSE, IL19, ITGA5, LYZL1, MAPK14, MAT1A, MITF, MMP1, MYH3, NANS, NAT1, OR10H1, OR1K1, OR2Z1, PLOD2, PLTP, POLR2J, PPBP, PPP2R5C, PRKX, RAB5A, RAD51, RAPGEF2, RASGRP3, SDHC, SENP2, SLC2A1, SNAP25, ST3GAL2, STX1B, TNFSF4, TRAF3, VDAC1, WNT8B
Negative_11869	F10, HGF, IVD, LAT, LHB, SMS, VTN, ABLIM3, ACSM2A, ADSS, AGPAT3, ALOX15, ATP5B, BDH1, CARS, CCR3, CD70, CTSL1, CYP11B1, DARS2, DDB2, DDX19A, F13B, FSHB, GLDC, GYS1, HDAC1, HPRT1, IFNGR1, KIR2DL2, LGMN, MADCAM1, MALT1, MAP2K2, MDM2, MMP7, MPP5, MTMR2, MYH6, MYLK, NEUROD1, NEUROG3, OR13C5, OR51B4, OR52A5, OR52J3, OR56A1, OR6C75, OR6S1, PARD6G, PLCD1, POLR2K, POLR2L, PPARG, PRKG2, PTDSS2, PTPN11, PTPRF, RPS6KA2, SEMA3F, SMPD3, TACR2, TAS2R1, TAS2R13, TUBB2A, UCK1, UGT2A1, VANGL1, VEGFB, ZAP70, ATP6VOE1, ATP6V1B2, GABARAPL1, HLA-DRB3
Negative_11870	F7, IL6, MPZ, MTR, STS, ADIPOR2, AHCYL1, ALDH9A1, AMPD2, AOC3, ATP5B, B4GALT5, BCL2L1, CACNA1B, CCL16, CD8A, CNGA3, CNTN1, COL1A1, CSNK1A1, CSNK1G1, CXCL2, CYSLTR1, DHDH, EFN2, ENPP2, FGF23, FLAD1, FZD9, GJD2, GLB1, GLI3, GMPPA, GMPR, GPD1L, GRHR, GSTA2, HDAC1, HLA-C, IL5RA, ITGA9, LDHC, MGAT5, NCR3, NEFM, NEUROG3, NFATC2, NPR2, OR10Z1, OR2K2, OR2V2, OR4D1, OR4E2, OR4S2, OR51B6, OR56A3, P2RX4, P2RX6, PAPSS1, PCYT1B, PDE4A, PDE4D, PERP, PFKFB2, PI4KA, PIAS2, PIPOX, POLR2I, POLR2L, POLR3B, PRDX6, PRKAG2, PSAT1, RHOA, SEMA7A, SH2D2A, SOCS5, SUCLA2, SV2B, TRAF4, UGT2A1, UNC5D, WIF1, WNT1, YWHAB, ATP6V1C2
Negative_11871	ADK, CS, MVD, PGD, TNR, ADCY4, ADRBK2, ATP5D, B3GALT5, BCAT1, BDNF, BIRC5, CACNB2, CDH4, CRY1, CYP21A2, CYP2J2, CYP4F3, EPHB3, FCGR2B, FZD6, GAMT, GLUD1, GNAI2, GPT2, GSTO2, GSTT1, HRH1, IARS, IL2RB, INPPL1, IPMK, LPAR1, MAN1A2, MAP2K2, MCAT, NKX6-1, OR10G3, OR1A2, OR1S1, OR2B6, OR4C6, OR4E2, OR52N1, OR5J2, OR9Q1, P2RX3, PDE3B, PFN2, PIK3C2A, PIK3R2, PMAIP1, PPARG, PRKCE, PSEN1, SESN2, SGMS1, SHC1, SMAD1, SMC1B, TAS2R4, TBL1X, TGFB2, THY1, UGCG, USE1, VASP, VAV1, WHSC1, ATP6VOE1, ATP6V1E1, MAPK8IP2, PRICKLE1
Negative_11872	BTD, CD2, GHR, IL4, MET, A4GALT, ACADL, ADH1B, ADIPOQ, ALOX15B, AMPD3, ATG7, BLNK, CACNA1A, CACNG1, CCNB3, CCR5, CD82, CHST13, CSF2RB, DCTD, DGKA, DUSP1, EFNA5, EPAS1, EXOC7, FMO3, FOXA3, FUT7, FZD2, G6PD, GALNT5, GFAP, GNG3, GRIN2A, H6PD, HCLS1, HLA-DMA, HRAS, IFNA7, IFNGR2, IL18RAP, INPP5E, JAK1, KARS, LDHAL6A, LIMK1, MCEE, MDH1, MPDZ, MPP5, MPZL1, NR4A1, NTF4, OR1I1, OR2W1, OR4K15, OR51A4, OR7C1, OR8B12, OR8K5, P2RX5, PDE5A, PHKB, PIP4K2B, PLCG1, POLR2J, PPID, PSAT1, PSEN2, PTPN6, RASGRP1, RASGRP3, SDC3, SEMA4A, SENP2, SHC3, STK11, TBK1, UGDH, UPP2, ZFYVE16, CSGALNACT1
Negative_11873	AMT, CP, DAO, GSN, HAL, HK1, PGF, ACADL, ACP1, ADCY8, ADIPOR2, AXIN1, BAI1, BLVRB, BNIP1, CAMKK1, CD34, CD99, CYBA, CYP26B1, DDX51, DNMT3B, E2F5, FPGS, GLI1, HEXB, HSD3B2, IDH3G, JAK1, KLRD1, LLGL1, MAP3K11, MAP3K14, MARS2, MOV10L1, MYL5, NAGK, NFATC2, NOTCH3, NSD1, NUDT5, OR10C1, OR10T2, OR2T1, OR4C46, OR4F17, OR4M2, OR5L2, PARD6G, PGS1, PIGK, PIGW, PLA2G2A, PLA2G2D, PMVK, POLA2, POLR2C, POLR2K, PRKAA2, PRKCZ, RASGRP2, RPE65, RUNX1, SDC1, SPP1, STX6, TAS2R16, TGFB1, TRIP10, TUBA8, WNT4, WNT5B, XYLT1, ATP6VOE1, KIR2DL5A

Negative_11874	<p>DAO, DBH, FGA, KDR, KHK, STS, TFG, TK1, UBC, ABLIM1, ACVRL1, ADRB1, BDK RB1, CACNG4, CAMKK2, CCL7, CDKN1C, CLCF1, CMAS, COASY, COX15, CXCR4, EFNA4, EPB41L3, F11R, FARSA, FLT3LG, FSHB, GNA11, GRPR, HLA-DOA, HLA-DOB, HNF4A, MTAP, NEGR1, NEU1, NRXN1, OCRL, OR4D1, OR5D16, OR8B12, PA K2, PDK1, PFN4, PIGO, PPP3CA, PRKAG2, PTPRC, RAC3, RAPGEF3, RPSA, SEL L, SFRP1, ST6GAL1, TNFSF18, ATP6VOA2, ATP6V1B1, HLA-DRB4, MAPKAPK5, ST6GALNAC6</p>
Negative_11875	<p>AK3, FAS, RDX, ACTN1, AKR1B1, ANAPC5, APOA5, APOE, ARPC1A, ARPC5, ATP 2A1, BAIAP2, BCL10, BET1, CD34, CDKN1C, CER1, CHRM2, COQ3, CREB5, CRK L, CSF1, CYP11B2, DFFA, DFFB, DHX58, EDA2R, EPB41, EREG, FOXO3, G6PC2 , GDF7, GJD2, GLUD1, GNMT, GUCY1A3, GYS1, IDI1, IL12RB1, ITGA11, ITGA 3, KIR3DL1, KNG1, LEF1, MAP2K2, MECR, MYH9, NCF4, NME2, NRP1, NTN1, OC RL, OR12D3, OR1M1, OR2M2, OR4A15, OR4D9, OR52W1, PAX6, PDE3B, PDX1, P ER2, PIGL, POLR2L, PPAT, PPT1, PRKACA, RAPGEF4, SLC2A2, SPCS1, STAM, STX1B, TALDO1, TNFSF14, TRAF4, VAMP2, MAPKAPK3, TNFRSF1A</p>
Negative_11876	<p>F3, ID4, KHK, LEP, ACTA1, ADH1B, AGMAT, ANAPC1, ARHGEF6, ARPC1B, ATIC , AXIN1, CAMK2D, CAPN2, CD19, CD27, CD38, CDC16, CES7, COQ3, CPS1, CSN K1E, CTBP2, CTNNA3, CYP2J2, CYP3A4, DAXX, DGKA, DHFR, DKK4, DTX3L, DU SP14, ENTPD1, FABP4, GLUD2, GSTA5, GSTM5, HGSNAT, IFNAR1, IL15RA, IL 22RA1, INPP5B, KRAS, LTBP1, MAP2K3, MGST1, NAT6, NCF4, NGEF, OLAH, OR 4D1, OR4F4, OR4X2, OR51A7, OR51B6, OR51T1, OR52A5, OR5AP2, OR6C1, OR 6Y1, OR7C1, PARD3, PDE4B, PDPK1, PIGW, PIK3CG, PPAP2C, PPARA, PPCS, P RKCZ, PTPN5, PTPRR, RASGRF1, RASGRF2, RCHY1, RGS3, RHOD, RRM1, SENP2 , SETD1A, SETMAR, SHC1, SPP1, SPRY2, SRD5A1, STAT6, TACR2, TAS2R7, TO MM40L, UBE2L6, UGT2B11, WWP2, ATP6V1B1, CSGALNACT1, MAP3K7IP2, ST6 GALNAC4, ST6GALNAC5</p>
Negative_11877	<p>EPO, IL4, MPZ, PML, ABI2, ACSM3, ACY1, ADSL, AMDHD2, AMPD1, AMPD3, ARS D, ATP5B, ATP5F1, ATP5G2, CACNG1, CBR3, CCL2, CCL22, CD86, CDK7, CREB BP, CSNK2A1, CTLA4, DAAM2, DAG1, DNMT3L, DOLPP1, DRD5, ECHS1, EPHA3, GALT, GGT7, GNA13, GSK3B, GZMA, IFNA8, IGFBP3, IL12RB2, IRF3, ITGAE, L1CAM, MCAT, MCCC2, MTHFD2, MTMR1, MYH13, MYL7, NCR2, NFATC3, NFE2L2 , NFYA, NME4, NQO1, NRXN1, OR10A7, OR2F1, OR2H2, OR4X2, OR52M1, OR6S1 , PFKFB3, PGAM2, PIGU, PIP5K1B, PPP2R2C, PRKAA1, PTAFR, PTCH1, PTDSS 2, PTGES, RARA, RPS6KB2, SARS, SELPLG, SHMT2, SMAD9, STAT1, STAT5A, S TX1A, SUCLA2, TDO2, TMLHE, TNFRSF8, VDAC3, WWP1, ATP6VOD2, ATP6V1G1 , PAFAH1B3, TNFRSF10B</p>
Negative_11878	<p>APP, KIT, LAT, MIF, RPE, WAS, ADORA2B, AHCYL2, ALDH2, BMP8B, CAV1, CCL 19, CCR4, CD70, CHPT1, CLOCK, COX10, DHCR7, DUSP6, EDN1, FSHB, FZD3, G ALNT5, GGT5, GNAI1, HLA-DMA, HLA-G, IFNA10, ITGA6, JAG2, KLRC1, KLRC3, MAP3K3, MYH14, NFKBIB, NRP1, NU DT12, ODC1, OR10G4, OR2D3, OR2Z1, OR4B1, OR4K5, OR4S2, OR5M3, OR6Q1, PARVA, PGK1, PLA1A, PRSS2, PTPRM, SEMA4C, SLC2A1, SMARCA2, SOS1, SPT LC1, ST8SIA1, SV2B, SYNJ1, TGFB2, TJP3, TSHR, UPP1, ZIC2, ATP6VOD2, G ABARAPL1</p>
Negative_11879	<p>AGK, EZR, F12, INS, ME2, AADAT, ABLIM2, ACACB, APRT, ARPC3, BBOX1, BCA R1, BDH2, CCL25, CCND3, CD3E, CD55, CLOCK, CNTF, CTNNA1, EIF4B, EREG, FGF7, FLT1, GAL3ST1, GDF6, GNAQ, GNPAT, HADHB, HAO2, HNF4G, HSP90B1, HTR2A, IDH2, JAG1, KLKB1, MAGI1, MCCC1, MGAT5B, NOTCH3, OR14J1, OR1L 4, OR2B2, ORC4L, PDIA4, PIGV, PLIN, PSME1, RPN2, RPSA, RRM1, SOS2, SPC S1, STX10, STX1A, TBL1XR1, TXNDC12, UBE2L3, YWHAZ, ATP6VOD1, ATP6V1 C2, PAFAH1B3, TNFRSF12A</p>

Negative_11880	BID, BTC, IL3, LHB, MAG, SHH, STS, ACVR2A, ALG13, AMPD1, ARPC5, B4GALT4, CD226, CDKN1A, CSNK2B, DAG1, DARS, DHRS4, E2F1, F13B, FUT5, FZD5, G6PC2, GALNT9, GDF6, HSPA2, IDUA, IL21R, INMT, ITGB5, KRAS, MASP2, MYLK, NEFM, NEUROD1, OR10G7, OR11H6, OR14C36, OR2AG2, OR2D2, OR4C16, OR4F17, OR4M2, OR51S1, OR51V1, OR52A5, OR5AC2, OR7G3, OR8B12, PAX4, PDGFD, PFN3, PIGS, PIGU, PLA2G10, PNMT, POLE3, POLR2B, PPOX, PRKAR1A, RPS6KA3, SETD7, SETDB1, SMAD9, SOAT2, SOCS7, SOD1, SRD5A1, STAT1, STAT6, TAS1R3, TFPI, TGDS, TJP3, TPH2, TUBA8, UGT1A10, UPP1, VAMP4, ZBTB16, ARHGEF12, MAPK8IP3, SERPINF2
Negative_11881	AUH, PTS, TXK, AGTR1, AMDHD1, AQP7, CACNG8, CASP6, CCNE2, CCNG2, CD79B, CES7, CKS1B, COL3A1, CREB1, CSNK2B, CYP2C18, DHDDS, FLT3, FRAT2, GAMT, GLUL, HEXB, IL28A, IL28RA, IL2RB, MAGI1, MAML2, MBL2, MGAT4B, MYH3, MYLK3, NAT2, NFATC4, NUDT5, OR13C2, OR1E1, OR51M1, PCYT1B, PIM2, PLXNA1, PLXNA3, RAD51, RPN1, RPS6KA6, SETD8, SHC2, SRD5A2, STAM, TACR3, TAS2R3, TAS2R4, THBD, TJP3, TP53I3, ULK3, HLA-DPB1, SERPINC1, TNFRSF10C
Negative_11882	DBI, IL5, IL7, AADAT, ACSL1, ACSL5, ALG10, ALG13, B3GALT5, CACNA1S, CACNG5, CD46, CDKN2B, CHPF, DKK2, E2F3, EARS2, EFN1, EXT2, FUT7, GAPDH, GNA14, GUSB, HLA-DOA, HSPA8, HTR4, IFNA2, IFNK, IKBKG, IL17A, IL22RA2, INADL, IRF9, ITGA11, JAK2, KLK3, KLKB1, MAPK8, MMP14, MYH11, NCKAP1L, NFE2L2, NR4A1, NT5C1A, OCRL, OR10J5, OR13C3, OR2A5, OR2F1, OR4K5, OR4M1, OR6S1, OR7G1, ORC3L, PARVB, POLE3, POLR1A, PRIM1, PTGES, RASGRP3, RDH11, RDH5, RRM2B, SEMA4F, SETD8, TPK1, TYK2, TYMS, ALDH18A1, ARHGEF12, B3GALNT1, HLA-DQB1, PPARGC1A, TNFRSF17
Negative_11883	C3, FAH, GBA, IL3, NOG, PC, SMS, TH, ACADL, ALDH3B1, ATP5C1, ATP5G2, CDKN1B, CERK, CIITA, CLDN18, CLTA, CLTCL1, CYFIP1, CYP4F2, DFFA, DRD1, EHMT1, EPHA5, EPHB3, FMO1, FUT6, GALNT13, HSPA1B, ICAM2, LMO7, LTBR, NNMT, OGDH, OR2AE1, OR2T29, OR6C75, PANK2, PCYT2, PLA2G2F, PLCB2, PLXNB3, PPP2CA, PRKCB, PRSS1, PSME1, PTPN5, SKIV2L2, SPRY4, STX1B, SYNJ1, TUBB2C, WHSC1, ATP6V1E1, CSNK1A1L
Negative_11884	FGB, GLA, GP9, IHH, MAX, PAH, TYR, VTN, ADH7, ADRA1D, AGTR1, ALPI, AMY2B, ATP6V1D, CCNG1, CCR3, CCR9, CD8B, CDC26, CMAS, CXCL13, DARS, DCTD, EDA2R, ELK4, ENPP7, F11R, FGF20, FMO3, FPGS, GAMT, GCAT, GCNT1, GGT7, GSTO2, HEXA, IL11RA, IL7R, ITGB6, L1CAM, LCAT, MAP2K1, MASP1, MCAT, MPST, MYH6, NCF4, NRG1, NRG2, NRG4, OR10A4, OR2AE1, OR2L8, OR2T8, OR4N5, OR52K2, OR6M1, PDCD1, PDE4B, PDGFRA, PDGFRB, PDK1, PERP, PGS1, PLA2G3, PRKAA1, PRKACA, PRKAG1, PSEN1, RALA, RASGRP3, RGS3, RRM2B, SMPD3, STAT2, TKTL1, TLN2, TNFRSF8, WNT2B, HLA-DPB1
Negative_11885	ID1, NGF, ACTC1, ADSSL1, ATN1, ATP5B, B3GNT3, B4GALT2, BAI1, BMP6, CACNG6, CASP3, CDH1, CXCL2, CYP11B1, DKK2, DUSP8, EPB41, ETS1, GDE1, GNPAT1, GNRH2, GP1BB, GSTM1, HAGHL, IDI1, IDUA, IFNAR1, IPMK, ITGB8, KRAS, LAMC2, MAP3K1, NCF2, NFAT5, NLGN1, NOTCH3, OR1L3, OR4P4, OR9Q2, OXSM, PAK6, PDE2A, PER1, PLA2G5, PLCG1, PTTG1, RPS6KA6, SCLY, ST3GAL5, STK11, STX10, SULT1E1, SULT2B1, TOMM40L, TRAF4, TUBA8, UGCG, WNT10B, ATP6V0E1, CACNA2D1
Negative_11886	HK1, SDS, AADAT, ADRA1B, ALDH3A1, ALDOC, ALPL2, AXIN1, B3GNT3, BMP5, CAMK4, CHEK1, CNDP1, DGKG, DLST, EHMT1, F2RL2, FADS2, GABARAP, GALNT12, GART, GMDS, GNA15, GNG3, GSTA5, GUCY2C, IFNA4, IL18, ITGA11, ITGA4, ITGA9, MAFA, MAP3K11, MAP4K4, MMP9, MYH2, MYH7B, NCKAP1, OR11A1, OR2A42, OR2H2, OR4E2, OR51S1, OR52J3, OR52L1, OR52M1, OR5AS1, POLR3D, PPP2R1A, PPP5C, PRKAB1, PTEN, PTTG1, RALA, RASGRF2, RDH5, RPS6KA5, SGPP2, SORD, STX2, TALD01, TAS1R3, TRAF3, ZAP70, ATP6V0A4, HLA-DQA2, TNFRSF13C

Negative_11887	ADK, C6, C8B, CEL, IVD, LEP, MIF, SDS, SRM, ARD1A, AREG, ATP5E, ATP5J, BCKDHB, BMP5, CAMK2A, CAPN2, CCR8, CFLAR, CHSY1, CNDP1, CSF3R, CTBS, CXXC4, CYFIP1, DAD1, DDIT3, DEGS2, DGKZ, DLL3, EFN2, EPRS, GALNT7, GG T5, GPAM, GZMA, HCLS1, HGSNAT, HIBADH, IDH2, IFNA6, IFNA7, IGF1, IL10 RB, IL13, IL17A, IL28RA, JAK2, LIMK1, MAP2K5, MAP2K7, MCEE, MYH3, NOT CH3, OR10A5, OR4K1, OR8H1, PDIA4, PIGC, PIK3R2, POLR3H, PPAR, PSPH, RASGRP3, RCHY1, ROBO2, SELPLG, SEMA3G, ST3GAL5, STAT5A, STMN1, TGFB 1, TLR5, TPK1, TUBA1B, UBE2L6, UCKL1, ULK2, UPB1, WNT4, YARS2, ATP6V1 B2
Negative_11888	ADO, CAD, EGF, EPO, HK1, IL5, LCK, PC, RDX, TK2, TKT, ACTA2, ACY1, ADAM1 7, ADCY4, ALDOA, ALOX15B, BCAR1, BMP6, BNIP1, C3orf10, CACNA1I, CAMK 2B, CCNA1, CCR6, CHAT, COL4A6, CSF2RB, CYP21A2, CYP2J2, DFFB, DGAT2, DGKE, EIF4E2, ENTPD5, EPB41, EPB41L2, EPHA1, FDPS, FGD1, GADD45A, GC DH, GNA15, GSK3B, HADH, HEXB, HMGCS1, HSD17B7, IL12B, INHBB, IPPK, KL RC2, MLLT4, NEUROG3, NFASC, NFKB1, OR10AG1, OR1B1, OR1J1, OR1L1, OR3 A3, OR52N1, OR6B2, PAFAH2, PARVG, PDE4D, PDHA2, PGLS, PIAS3, PIK3CD, PLA2G1B, POLR1B, PPBP, PRPH, PSME3, PTEN, PTPN1, SDHC, SENP2, SLIT2, SOCS3, TAS2R49, TBXA2R, TNFRSF4, UNC5D, ZNRD1, C1GALT1C1, PAFAH1B2 , TNFRSF11B
Negative_11889	C2, CBL, F12, GH2, NPL, OGT, PRL, AARS, ACADSB, ADH4, ATP4B, AXIN2, BDH 1, BTRC, CALML5, CD40, CDC2, CDKN2C, COL6A1, COQ3, CRB3, CUL1, CYP2S1 , DDX54, DNMT1, ENTPD2, FGF2, GDF6, GLB1, GMPS, GNB3, HRAS, HSD17B7, H TR4, HTR7, IDH3B, IFIH1, IL10RA, IL18R1, IRAK3, JAG1, KARS, KRAS, LDH B, LIMK2, LRP6, MAD2L1, MTHFD2, MYLK3, NANP, NCSTN, NKD1, NKD2, NOX1, NRG2, OLR1, OR10H5, OR2A4, OR2D3, OR4F17, OR8K3, P2RX7, PCYT1A, PGK2 , PIAS1, PIGN, PIGS, PIGW, PLCD1, POLD1, PPAP2C, PRLR, PRSS2, PSPH, RA C2, RALA, RAPGEF3, RASA1, RELB, SEMA4F, SETD1A, SOCS2, SPHK2, TLN2, T RADD, TSHB, TUBA8, ULK2, UNC5A, UROS, VARS, VASP
Negative_11890	ABO, BTC, DDO, DLD, F7, SMO, SRC, B4GALT5, BHMT, CDK7, CLTA, COL6A1, CO MT, CTF1, CYP11A1, CYP26A1, DOLPP1, EDN1, F13A1, FPGS, GPD1, GRM5, GU CY2D, HDAC2, IDH3A, IL13RA2, IL25, ITPA, KIR2DL1, LDHAL6B, MAGI2, MA P3K13, MCM5, MDM4, MYL7, NKD1, NPAS2, NTSR1, OR10G4, OR2L8, OR4N5, OR 4Q3, OR5K2, OR5M9, OR8B4, PAFAH2, PDE8B, PER3, POLR1E, PRKAR2A, RRAS 2, RXRB, STK11, STX2, SUCLG2, TAS2R4, UCK2, UNC5D, VAMP4, ATP6V0A4, H LA-DRB3, TNFRSF1A
Negative_11891	DAO, MOS, MYC, SRF, TPO, ABL1, ACADVL, AGPAT1, ALDH2, ALG10, ALG9, ANA PC2, ARPC4, ATP12A, ATP5I, BCKDHB, C5AR1, CD3E, CD58, CLDN18, CLDN5, CLDN7, CPOX, CPS1, CPT1B, CXCL9, DAAM2, DCTN1, DGUOK, DNMT3A, ERBB3, ETNK1, EXT1, FMO4, GLUL, GPD1L, HPRT1, IDI2, IFNGR2, IGSF5, IL6R, IL8 RA, INPPL1, ITGA11, LYPLA2, MADCAM1, MAML2, MCEE, MECR, METTL6, MTHF D1L, NAMPT, NARS2, NEU2, NFYA, NOTCH1, NUDT2, OGDH, OR10R2, OR11H4, O R51B5, OR51B6, OR5T3, PARD6B, PDE1A, PDE3B, PDHA2, PFKM, POLD1, POLE 4, POLR1B, PPT1, PRKG2, PTPN1, RBL1, RELA, RHEB, SAT1, SCIN, SETMAR, S HC3, SPAM1, SPTLC1, STAT6, SUCLG1, SV2A, TAS2R3, TAS2R8, TBK1, TBXA2 R, TGFB2, TRAF2, VANGL1, WNT9A, ATP6V1C2, PAFAH1B1, SERPINA5, ST6GA LNAC3



Negative_11892	APP, ATM, DAO, FER, GPI, IDS, IVD, JUP, MIF, TAT, ACHE, ACSL5, AK3L1, AL S2, B3GNT2, B3GNT3, BCL2L1, C1GALT1, C1QB, CACNB4, CCDC6, CCR3, CLCA 2, CNGB1, CSNK1D, CTSL1, CYP1A1, CYP26C1, DUSP16, DVL2, EFNA3, EFNA4 , FGF9, FMO5, GADD45B, GALNT8, GCNT2, HSD3B7, ICAM1, IFNB1, IRAK3, KC NB1, LYPLA1, MAP3K1, MPST, MTHFD1, MYH2, NCKAP1, NEFM, NKX3- 1, NLGN1, NT5C3, OR10A3, OR10J5, OR13C2, OR1E2, OR2B2, OR2D2, OR3A1, OR4M1, OR52E4, OSMR, PANK4, PARVG, PKMYT1, PLCB3, POLR3K, PPAT, PPM1 B, PPP2R2B, RBX1, RFXAP, RHOD, RPS6KB1, SDC3, SEMA4F, SGMS2, SOS2, SS H2, STEAP3, SUCLG1, TACR2, TAS1R2, TGDS, TNFSF12, UNC5A, VANGL2, VAS P, VKORC1, WNT11, WNT8B, XYLT1, YKT6, ZFYVE16, HSP90AA1, MAPK8IP3, P NLIPRP1, ST6GALNAC1
Negative_11893	CFH, FGG, GDA, IL6, OAT, PLN, ACO2, ACSL4, ADAM17, AGPAT4, ANAPC10, AP OE, ARRB1, ATP6V1F, BCAR1, BDH1, CACNA1C, CCL23, CCL4, CDK6, CDKN1B, CDKN2A, CNDP1, COL5A3, CSF2, CSNK2B, DGKB, DMGDH, EFN2, EIF4E, EPHA 6, ERO1L, EXOC7, FCGR3A, FGFR2, FLAD1, FRAT1, GALNTL4, GLS2, GNAI3, G YS2, HDAC1, HMGCR, HSD17B2, IDI2, IFNA16, IL15, INADL, INPP1, MAOB, M CCC1, MGAT1, NAGLU, NKX2- 2, NOD1, OR10A4, OR1C1, OR56A3, OR6K2, OR7G1, OR8D4, OR8H3, PHKB, PIK 3R5, PPP2R2D, PPP3CB, PRKY, PTGES2, RAPGEF4, RDH8, SESN1, SFRP5, ST3 GAL6, SUCLG2, TJP3, YWHAB, YWHA, ZMAT3, PPARGC1A
Negative_11894	BAD, BAX, CTH, FUK, GK2, IHH, MAG, MVK, NF1, ACAD9, ACPT, ACY1, AKR1D1, AMPD1, ANAPC2, ARSE, B3GNT4, BCL10, BIRC2, CD3E, CD59, CDKN2B, CHEK1 , CNTF, CPT2, CRHR1, CXCL12, DCXR, DDHD1, DHRS4L2, EFN2, ESAM, F11R, FBP2, FCGR2B, FMO5, GP1BA, GRIN2C, GTSE1, HDAC1, IFNA2, IFNA6, IL21R , INPP4B, ITGB2, KLKB1, MAN2A1, MAP2K4, MAP3K6, MDM4, MPDZ, MYH1, NTN 1, OR10V1, OR13C3, OR13C5, OR2T29, OR4C13, OR51A2, OR5B21, PCYT2, PE RP, PIK3R3, PPP2R5C, PRKAA1, PRKACB, PSEN1, PTGER3, RENBP, RERE, ROB O2, SDC3, SESN3, SLIT1, SMPD2, SOCS2, SPP1, STX4, TMLHE, TNFSF18, TPH 2, UGCG, ZIC2, HLA-DRB3
Negative_11895	ABO, C5, C8G, CD6, CR1, LTB, PGF, AGPAT2, ALAS1, ALPI, ALPPL2, AMPD1, A OC3, ATP5G1, ATP5J, BCKDHB, BET1L, BMP7, BMP8A, CAMK2G, CAMKK2, CCR7 , CD55, CD79A, CLDN18, CYCS, CYP3A5, DFFB, DRD2, DUSP9, EDN1, EFNA1, F 2RL3, FDFT1, FGF21, GATM, GOSR2, GSTA4, GUCA1C, HDAC1, IFNA6, IKBKG, ITGA6, ITGB2, ITGB8, LEFTY2, LTBP1, MADCAM1, NFYC, OR2A42, OR2G3, OR 5D18, OR5T3, OR6C1, OR9I1, P2RX1, PARVG, PCK2, PDE2A, PDE7A, PDE8B, P GAM1, PGK2, PGLS, PPP1R1A, PTGS1, PTPN6, RALB, RETSAT, RND1, RPE65, S ELE, SNW1, SULT2B1, SYNJ2, TBL1XR1, TPMT, TUBA1A, XYLB, ATP6V1C1, HS P90AB1, PDCD1LG2
Negative_11896	DBH, EDA, HPD, IVD, NPL, PVR, ACHE, ACO1, ACOT11, ACP6, ACTA2, ADH1B, A MPD2, APAF1, ATF2, ATP13A2, AVPR1A, B4GALT7, BCAR1, CACNA1S, CARD11 , CAV3, CCL1, CD99, CSF2, CTBP1, CYP1A2, CYP3A7, DGAT1, DHRS9, DNMT3A , EIF4B, ELK1, EPHA2, FARP2, FGF8, FMO2, GGT6, GNA11, GSTM4, GUCY2C, H MOX2, HTR6, IL21, IL23R, IMPDH2, INSR, ITGB7, LTB4R2, MAN1B1, MDH2, N KX6- 1, NRXN2, NTF3, NTF4, OCRL, OR10J5, OR1G1, OR4A16, OR52D1, OR52L1, OR 6S1, OR7C2, OR9G4, PGS1, PLTP, POLR2B, PON2, PPP2R2A, PRKCA, PRSS3, P SEN1, RAD51, RARS2, ROB2, SKP2, SLC25A5, SOCS4, SPRED2, TAS2R7, TLR 2, TLR9, TYRP1, VARS, WHSC1L1, WWP2, CSGALNACT2, PNLIPRP1, ST6GALNA C4, TNFRSF17

Negative_11897	KIT, ME1, MIF, PAH, TNN, ACP6, ACSL5, ADCY1, ADCY7, ADCY9, APLP1, APOA1, B4GALT7, BBC3, BCL2, BMP8A, CCR4, COL5A3, COMT, CTF1, CXCL2, DVL3, ENPP3, ENTPD3, FBP2, FCGR2B, FGF21, GNG12, GOSR2, HSD3B7, HTR4, ITGB3, ITGB4, KIR3DL3, LDHA, LTBP1, MDH2, MEF2C, MPDZ, NCF4, OR2A5, OR2AG2, OR2M5, OR4F5, OR52I1, OR52N1, PDE9A, PDHA1, PITX2, PRPS2, PTPRC, RPS6KA6, SEMA4B, TAS2R13, WARS, XCL2, CSNK1A1L
Negative_11898	CP, IL9, ABLIM3, ACADS, ACLY, ACYP2, ALPPL2, AMY2B, ATP2A1, ATP5B, ATP5H, BMP5, C3orf10, CAMK2D, CCNE1, CCR10, CD80, CLDN8, CPT1A, CSF2RB, CTSL1, DUSP2, EGFR, EPRS, FUT8, GSTA5, HEXA, IL17A, IL18, IL1A, LIPE, MAOA, MAPK11, MARS, MASP2, MKNK2, MMP7, NAMPT, NKD2, NOTCH2, ODC1, OR10Z1, OR13C3, OR1E2, OR1L1, OR1L6, OR2L2, OR5AU1, OR5L2, PAK7, PDE4A, PFN3, PHKB, PIP4K2B, PLXNB1, PNPLA3, POLR3B, POLR3K, PRKAA1, PTCH2, PTK2B, RAB23, RAP1B, RAPGEF4, RPS6KB1, SGPP1, SNAP25, SOS1, SPHK2, STAT5B, STK4, TALDO1, TAS2R41, TIAM1, TRAF5, TUBB2C, UCK1, UNC5C, VNN1, ZIC2
Negative_11899	IL5, JUP, TNR, AKR1C4, ANAPC2, BCL2, BUB3, CCL5, CCNH, CD247, CDIPT, CDKN1B, CLDN17, CREB3L3, CYP3A4, DDHD1, EPHA6, GALE, GALNT9, GNAZ, HSPA8, IL12RB1, KAT2B, MAD2L1, MAPK1, MLYCD, MTHFD1L, NRCAM, NT5C3, OR11L1, OR13A1, OR13C4, OR4C6, OR4K2, PCK1, PGAM1, PGK1, PHKA2, PLA1A, PMM1, PPP2R5C, RBPJ, RETSAT, ROCK2, SETDB1, STX3, SULT1E1, TCIRG1, TUBB4Q, UROC1, WASF3, MAPKAPK2, TNFRSF14
Negative_11900	C4B, CBL, F7, GCK, NGF, SRM, AANAT, ACTN1, ACVR2B, ARPC5, ATF4, ATP6V1D, BRAF, C1QB, CCL11, CCL15, CCR6, CDH5, CDK4, CHST12, CTNNA1, CTSS, CXXC4, CYP26B1, DGUOK, DUSP6, ENPP2, EPHA6, FBP1, FZD1, GADD45B, GALE, GNA15, GPX7, GRIA2, GSTP1, GSTT1, HEMK1, HTRA2, IFNA7, IL12B, IL20RA, INPP5B, KIR3DL1, LAMB1, LARS2, LDHA, LEFTY1, LEPR, LTBR, MCAT, MCM6, MYH6, NNMT, NRXN2, NUDT12, OGDH, OR10C1, OR10G7, OR10T2, OR4C15, OR4M1, OR6C70, OR7D2, PISD, POLR3K, RAC2, RELA, RPS6, SPRED1, ST3GAL1, STX2, TNFSF11, TUBA8, UGT1A10, WNT9B, ATP6V0A4, HLA-DRB5, PLA2G12B, SERPINC1, ST6GALNAC6
Negative_11901	AMT, LPL, ALDH1A2, ALG8, ALOX12, AQP7, ARHGEF6, BAAT, BUB3, CAMKK2, CCND2, CCNG1, CD82, CDC14B, CDC2, COL11A1, DDX19A, DGKZ, DPYD, EDAR, FAT1, FZD10, GABARAP, GALK2, GALNT3, GGT1, GOSR2, GRHPR, IQGAP2, IQGAP3, IRAK2, MMP2, MYH14, OR2H2, OR2M3, OR5H2, OR5M9, ORC4L, PAK1, PDHA1, PIGO, PIP4K2A, POLR2D, PPP2R1B, PPT1, RXRA, SSX2IP, STK11, TAS1R2, TUBA1A, UROC1
Negative_11902	AK5, AMH, AADAT, ACSM3, ALDOC, ALOX15B, ASIP, BAIAP2, CACNA1I, CCND1, CCNE2, CCNH, CFL1, CHPF, CREB5, DAAM2, DKK2, DRD5, FUT6, GALNT3, GNRH1, HTR7, IL20RB, LIFR, NLGN1, OR10V1, OR11H4, OR2A25, OR4D11, OR4D6, OR4F15, OR52M1, OR5K2, OSMR, PAK3, PIGQ, PIP4K2C, PLCD3, POLR2G, PPP3CA, RFWD2, SARS2, SELPLG, SHC1, SNAP25, TIAM2, TPH1, TRAF6, TSHR, TUBB4Q, UMPS, PPARGC1A
Negative_11903	BCR, IL6, NGF, PGP, SRM, XDH, ACADL, ACAT1, ADCY10, AKR1C1, ALG2, AMPD2, BMP8A, C3orf10, CACNB1, CACNB4, CAMKK1, CASK, CCL13, CDC27, CDKN1B, CKMT2, CSNK2B, CX3CR1, CYCS, CYP4F3, DAPK1, DDX52, EDA2R, EFNA5, ENTDP2, EPAS1, FGF20, FIGF, FZD10, FZD8, G6PC, GSTO1, HCCS, HHEX, HNF1B, HYAL1, IMPA2, INSRR, IQGAP2, ITGA1, ITPA, MAP2K5, MAP2K7, MAP4K3, NFX1, NKX6-1, NUMB, OR10A2, OR10A6, OR10C1, OR1D5, OR1J4, OR2M2, OR4C15, OR4D2, OR52E2, OR8A1, PCCA, PDX1, PFN1, PGM3, PHKA1, PIM2, POLR1A, POLR2J, PRKX, PRNP, PVRL1, SLC27A4, SNAI2, STAM2, TAS1R2, TBXA2R, TNFSF12, TXNDC12, ULBP3, WNT3A, TNFRSF10B

Negative_11904	CP, DCK, EPO, SI, ACVR2A, ADRBK2, AHCY, ARG2, ATG3, B3GALT1, BCAR1, CCL3, CCNA2, CCR8, CD72, CLDN3, COQ6, CSF1R, CXCL5, DDX54, DPM2, DUSP10, EGFR, FMO5, GDF6, GPLD1, HHEX, HNF1A, IGF1, IL23R, KLRD1, MDH2, MEF2C, NFATC3, NME2, OR2L3, OR2M7, PGAM1, PHKB, POLR3B, POLR3D, PPOX, PTDSS2, RDH10, RETSAT, SLC25A6, SSH1, TAS2R9, TRPC1, TUBA3C, UAP1, UGT2B11, ULK2, VEGFB, XYLT1, HLA-DQA2, PPARGC1A
Negative_11905	AK5, AMH, CBS, GHR, PGP, ACADSB, AGPAT6, AGRP, AMD1, ARHGEF6, ARPC5, ASIP, ATP5G3, AVPR1A, BACE1, C1QB, CACNA1F, CCL21, CDC25C, CSNK1G2, DGUOK, DHRS4L2, ELK1, GALNS, GALNT1, GFPT2, ICAM3, ITGAM, LAMB2, MAP3K5, MAPK3, NT5C1A, OR10X1, OR4D11, OR51F2, OR5T1, PDK1, PPARA, PRKCB, RASSF5, RFXAP, SESN2, SH2D2A, SLC9A1, SLIT2, SRGAP3, STX6, TAS2R4, TBL1XR1, TGFBR2, TNFSF10, TUBA1A, UGT2B28, ULBP1, YWHAB, TNFRSF10C
Negative_11906	A2M, FN1, IL4, MIF, SYK, ACADVL, ALAD, ALDH1B1, APBB1, B3GAT1, BBOX1, BCAT2, BCL10, CAMK2G, CARS2, CCL1, CCNB1, CDKN2D, CHSY3, CLDN11, CNTNAP2, CREB3L2, CSF3, DAPK1, DUSP9, EPHX1, ESAM, EXTL1, FGF22, FMO2, FMO5, GADD45B, GALNT1, GALNT7, GPX7, GSTM4, HMGCS2, HSD17B3, HYAL2, IARS2, IDH3A, IFNA21, IFNK, MALT1, MFNG, MYH11, NEU1, NFKBIA, OR10A7, OR13J1, OR14C36, OR2AG1, OR4C46, OR4D2, OR4D6, OR51G2, OR5A2, OR6B3, PAFAH2, PDE3B, PDE7A, PDE7B, PER2, PISD, PLXNB3, POLR2D, POLR3K, PP2R2A, PPP3R1, PPT1, PSME1, PTGDS, PTPRZ1, PYCR1, RASA1, RBKS, RPN1, SDC1, SDC2, SELPLG, ST3GAL5, TAS2R1, TNFSF11, TPH1, TRPC1, TSHB, TSTA3, TUBB, TUBB1, UGT2B28, ZMAT3, CACNA2D4, CTNNBIP1, GABARAPL2, PHOSPHO1, PLA2G12B, SERPINA1
Negative_11907	AMT, CSK, IDS, ITK, MPI, MVK, NOG, SI, STS, ABL2, ACSM2A, ACSS1, ACSS3, AGPAT4, AGRN, ATP5J2, BMPR1A, CASP8, CCL22, CCND2, CCR1, CDC25A, CDC42, CDH1, CDK7, CHSY1, CLDN10, CLDN19, CNTNAP2, CREB1, CRKL, CSAD, CSF2RB, CTPS, CXCL9, CYP2C18, DAD1, EPB41, ETNK1, F13B, FABP3, FECH, FLT3, FMO3, FZD10, GALNT10, GANAB, GATM, GOT2, GSTA3, GUCY1A2, HSPA8, IFNA13, IGF1, IKBKE, IL20RA, IL25, IL3RA, IRS1, ITGB7, ITPKA, MAP3K14, MAP3K6, MNX1, NCAM2, NCR1, NRAS, NRG2, OR1L6, OR2AG2, OR2D2, OR2L8, OR2T10, OR2T34, OR51B4, OR8S1, PDE3A, PECAM1, PGAP1, PIGN, PIK3R4, POMC, PPP3CA, PTGER3, SARS, SETD7, SGMS2, SH2D2A, SPRY3, TIAM1, TUBB, UNC5B, ATP6V1B1, CACNA2D2
Negative_11908	BAD, CGA, GSR, MAG, TYR, AADAC, ADAM17, ALG13, ALPPL2, ARPC1A, ATP5I, ATP5J, B4GALT3, CCL4, CDH5, CHAT, CREB1, CYBB, CYP27A1, CYP2A7, DCTD, ENTPD6, FUT8, GADD45A, IL12RB2, IL1R2, IL22RA1, MAP3K13, MAP3K2, MMP14, NADSYN1, NANS, NEU2, NFYA, NR1H3, NRCAM, NTNG1, OR10R2, OR11H4, OR1L3, OR2AT4, OR4M1, PDHB, PIK3R5, PIM1, PIP5K1C, PLCZ1, POLD2, POLD3, PPOX, PRIM1, PRPH2, PSME2, PYGL, RALGDS, RASGRP3, RFXANK, ROBO3, RPS6KA4, SCD5, SEMA4A, SEMA4D, SIGLEC1, SLC25A5, SOCS1, SSH3, STEAP3, STX8, SUCLG2, TLN1, TUBB6, UBE2L3, ULBP3, ZNRD1, ATP6V0A1, SUV42OH2
Negative_11909	AUH, CBS, CS, DLD, GCK, IL2, ADSL, ALDOC, AMDHD2, AMY2A, ANAPC7, ARPC2, B3GAT1, CCL16, CCL8, CCNE1, CD80, CTPS2, CTSS, CX3CL1, CXCR4, CYP2S1, EGLN1, ENTPD7, FARSB, FBXW11, FLAD1, GALE, GART, GPT2, HLA-DOB, HTR2B, ICOS, LIMK2, LRDD, MAP3K1, MAP3K3, MAP4K1, MAP4K2, MGAT3, MLLT4, NCKAP1L, OPLAH, OR4D6, OR4X1, OR51A7, OR56A3, OR5D13, P2RX5, PARD6A, PIGU, PIK3C3, PLCD4, PLCG2, PNPO, PPP2R2A, PPP3R2, PRKAR1B, PROC, PTPN11, RASSF1, ROBO1, SETD2, SETD8, SPRED2, SQLE, ST6GAL1, STAM2, TAP2, TAS2R50, TP53I3, TUBB3, UBE2K, VNN1, WNT11, WNT3A, YWHAB, SERPING1, TNFRSF10B

Negative_11910	CDA, DLD, GSR, JUP, ME3, MIF, SYK, ACAA1, ACSS2, AGMAT, ALG3, ASIP, ATP5D, CCL24, CCL7, CD40LG, CD47, CD58, CD72, CDK4, COQ6, CSNK1E, CTTN, CXCL9, CYP2B6, DAPK1, DGKD, DHODH, DUSP4, DUSP8, EHMT1, EPHB6, FBXW11, FCGR3B, FGF3, GALNT10, GCDH, GIT1, GLDC, GMPS, GRHPR, GSTO2, GSTZ1, GUSB, GYS1, HMOX2, HSPA1B, IFNA10, IFNGR2, IFNK, IL28A, IL8RB, IRS4, KLRC4, LDHAL6B, MAML1, MAP4K1, MASP2, MECR, MGST1, OR10AD1, OR1N2, OR2C1, OR2L2, OR2M5, OR3A2, OR4K13, OR5H2, OR5M8, OR8H2, PFN2, PGK2, PLA2G10, PLK1, PMM1, PMVK, PNPLA3, PRKAR2A, PRKAR2B, PVRL4, PYCR1, RDH10, RFX5, RPE65, SCP2, SEMA3B, SGMS2, SMAD3, STAT6, WARS2, XCR1, CSNK1A1L, MAPKAPK2, SUV420H1, TNFRSF18
Negative_11911	CAD, CBS, DBI, F12, LEP, NPY, PTS, AACs, ACACA, ACP6, ACSS2, ALAS2, ALG11, ANAPC5, APOA2, ARPC4, ASIP, ATP5A1, BCL10, BMP6, BMP7, CACNB3, CACNG8, CD74, CHUK, CPT1B, CSF2, CXCL13, CXCR3, DUSP10, EFNA2, EHMT1, ENAH, EPB41, FASN, FGF8, FGFR3, FSHB, GALE, GALK1, GCLC, GP1BA, HLA-DMA, HSD11B2, HSP90B1, HTR4, IL13RA2, IRF5, ITGA2B, LTC4S, MAML3, MCC1, MCM7, MDM2, MGAT4B, NEFL, NFKBIE, NKD1, OR10G3, OR10G4, OR13C3, OR51F2, OR5T1, OR6B2, OR6F1, P2RX6, PCNA, PHKA2, PIP5K1B, PKM2, PLCG2, PLXNB3, PPA1, PPM1B, PRPH2, PRPS1, PTPRF, ROCK2, RPRM, RPS6KA2, RXRA, SARS2, SELL, SHC4, SLC25A6, SNW1, SOCS4, SOCS5, SOD1, SRD5A1, SRGAP2, ST3GAL2, STX8, TRAF6, B4GALNT1, ST6GALNAC1
Negative_11912	AK7, DDO, F2R, ITK, PLG, PTS, VCL, ADCY2, ALDH3B2, ALOX15, ARPC3, B3GALT6, CALML6, CBR3, CCNA2, CDKN1A, CFL2, CLOCK, COQ3, CREB3L2, CXCR6, CYP26C1, CYP2E1, DCTN1, DDHD1, DGKE, DHRS4, DIAPH3, EFNB3, ELK1, EPAS1, EXTL1, FIGF, FMO4, FOXO1, FRAT1, FZD4, GALK2, GDF5, GDF7, GNAI3, GNRH1, GSTM4, HHIP, HSD17B7, ITGA1, ITGAL, KIR2DL3, KLRK1, MAP4K4, MINPP1, MPP5, MYH13, NME6, NRG3, OR1L6, OR1N2, OR2A2, OR2L2, OR4K17, OR52E4, OR56B4, OR5B3, OR6C74, OR7G2, OR8D1, PAK7, PDE6G, PGK2, PIGO, PIGQ, PNPT1, PRDX6, PRKACG, PRKCZ, RND1, SARS, SDC1, SEMA3B, SMAD7, SPTLC2, STK11, STX12, TBXAS1, TIAM2, TP53I3, UGCG, UGP2, VNN1, GABARAPL2, MAP3K7IP2
Negative_11913	CS, GCK, TH, ACADSB, ACSM5, AKR1C3, ALS2, AMD1, ARPC5L, ARRB1, ATP50, BMP5, BMPR2, CACNA1D, CASP3, CCL11, CDK4, CDS2, COL3A1, COQ7, CREB3L2, CTNNA3, CXCL11, CXCL12, CYFIP1, DDIT3, DTX2, EDA2R, EDAR, ENTPD6, F2RL3, FGF13, FRAT2, GAD1, GCAT, GNAI1, GNAI3, GNRH1, GOSR2, GSK3B, GUCY1A3, HARS, HLA-DOA, IDUA, IL10, ITGA5, MAFA, MAN1C1, MAP3K4, MCCC2, MITF, MYH6, NUDT8, OR10H3, OR1E1, OR1I1, OR2C1, OR2L3, OR51G1, OR5H6, PDE6D, PDE7A, PERP, PFKFB1, PIK3R5, PLA2G2D, PLCG2, PNPLA4, POLR3A, PPP1CC, PRKCA, RAP1B, RBPJ, RPS6KA6, SEMA3B, SEMA3F, SFRP1, SH2D2A, SHMT2, SMARCA2, TAS2R48, TM7SF2, TOLLIP, UGCGL2, ULK3, WWP2, XYLT1, YWHAE, YWHAZ, CSGALNACT1, HSD17B12, TNFRSF13B
Negative_11914	C9, CFD, HPD, MVD, PTS, ACACB, ACADSB, ACHE, ACP, ALDH3B1, APRT, ARPC5, ATP5J2, BDKRB2, CADM1, CD247, CDC7, CDKN2C, CFLAR, CLCA4, CLDN16, COL4A6, DLAT, EFNA4, EPAS1, ERBB2, FCGR3A, FZD10, GAPDH, GLO1, GNPAT, GPD1, GPD2, HLA-C, HSD11B2, IDH1, IRS2, LTBP1, MYH2, NAT2, NUDT2, OR2W1, OR51A2, OR5A1, OR8I2, P2RX7, PARD6G, PDE1B, PDGFC, PDGFRA, PIGP, PIK3R4, PMVK, POLR2B, RHOD, SH2D1B, SHC4, TAS2R1, TMLHE, TSLP, UMPS, CSGALNACT2, PAFAH1B1

Negative_11915	F5, INS, ACAA1, ACADS, ACTA2, AK3L1, ARSE, ATP2A1, B4GALT4, B4GALT7, BDH2, CCL15, CCL28, CCL5, CDK5, CLDN22, CSNK1E, ENAH, EPHA6, FTH1, FTMT, GNAS, GRIN2C, GSTM5, GTSE1, HAP1, IRF3, IRF9, LAMC3, MINPP1, NCR1, NEU3, NFKB1, OR2B11, OR2T3, OR6C74, OR6K2, PDE8B, PHKG2, PIK3CG, PIP5K1C, PNPLA4, POLR1E, PPT1, PRKCB, PRKCI, PTGFR, RAB23, RDH10, SFRP1, SMPD1, SPRED2, SRGAP1, TNFSF4, TOMM40, VAMP4, VCAM1, WNT3, ATP6V1E2, HLA-DPA1, SERPINB5
Negative_11916	C1S, F3, FH, NPY, OGT, AASDH, ACSL3, ACSL4, ACTN4, ALCAM, APRT, ARG1, ARPC5, BMPR1A, CALML3, CDKN1B, CREB3L3, CXCL11, DEGS1, DNMT1, ENPP7, EPHB3, FMO2, GADD45B, GALNT14, GNA13, GUCY1B3, HLA-C, HLA-G, IL8RB, INPP4A, ITPKB, MAGI2, MAP3K6, MAP4K2, METTL6, NCOA4, NCR1, OR10A5, OR10AD1, OR10Q1, OR4L1, OR51B6, OR52E4, OR8K5, ORC1L, PLCD1, PLD2, POLE2, POMC, SETD1B, SMPD4, STX16, TACR3, TAS2R41, TNFSF10, UGT2A1, ATP6V0A4
Negative_11917	DDC, EZR, FN1, FOS, GP6, ID1, NF1, PTS, ACTG2, ADAM17, ALDH1A1, ALOX15, ANAPC4, ANAPC7, BCL10, BPNT1, CCNH, CDH2, CES1, CHST12, CIITA, EHMT2, ENTPD6, FTCD, FZD6, G6PD, GALNT1, GALNT13, GNAI1, GNRHR, GOSR2, GUCY2C, HLA-DMA, HPRT1, HSD17B7, ITGAM, JAK3, KCNB1, LIPE, MAPK3, MGST1, MYL5, NRAS, NUMBL, OR10X1, OR1A2, OR1D2, OR2M7, OR4C13, OR51F1, OR52K1, OR6A2, OXCT1, PIM2, PPCDC, RAB23, RRM1, SEMA3C, SETMAR, SKP2, STAM2, TGFB R2, TRAF3, TUBA4A, UGT2B10, VEGFA, WHSC1, WNT16, HLA-DRB4, SERPINA1
Negative_11918	APP, ID3, ACVRL1, AGRN, ALG12, ARHGEF1, B4GALT4, BAIAP2, CCNE1, CCR8, CDH15, COL3A1, COL5A3, CTBP2, CYP21A2, CYP2E1, DDX47, DIAPH1, FARS2, FSHB, FZD9, GALNT2, GMPPB, GPD2, HARS, HCLS1, IDH1, IL21R, ITPKB, MAML2, MAN1A2, MINPP1, NCOR2, NKD2, NTN1, NUDT9, OR10H4, OR4A5, OR4K5, OR5L1, PANK3, PLCB2, PNMT, PPP2R2B, RPE65, RRAS, SMURF1, SPTAN1, TM LHE, TNFSF14, TPI1, UNC5A, WHSC1, ST6GALNAC6, TNFRSF13C
Negative_11919	GP6, HGF, ADH6, AGXT2, AKR1B10, ALDH1L1, ARRB2, ATN1, ATP4A, ATP6V1F, BDH1, CCL13, CCL27, CCND2, CNGA4, CSNK2A2, CYP4A22, DDX47, DGAT2L4, DOCK1, EDAR, EPHA5, FGF4, FOXO1, FZD10, GBE1, GBGT1, GNA13, HAGH, HIBCH, HPRT1, HSD11B2, HSD17B1, HYAL1, IFT57, IL20RB, INSRR, ITGB5, KIR2DL1, MAN2A1, MAP4K1, MAP4K4, MASP2, NAT5, NCKAP1L, NEFL, NODAL, NUDT9, OR10G3, OR10G7, OR2C3, OR4C13, OR9A2, P2RX1, PAFAH2, PARD6A, PARVB, PECAM1, PHGDH, PIGB, PIGP, PIP5K3, PRKG2, PRKX, PTPRZ1, QARS, RPS6KA6, SFRP1, SLC9A1, SNW1, SULT2A1, SV2A, THBD, TIRAP, TLR5, TNFRSF9, TUBA4A, TYMS, VDAC1, VTI1A, ZNRD1, AASDHPPT, GABARAPL1, PHOSPHO1, TNFSF13B
Negative_11920	BAD, DBT, NF1, UBB, ADCY10, AK3L1, ALDH1A1, AMDHD1, APPL1, ATP12A, ATP2A1, ATP5F1, C1GALT1, C9orf95, CALML5, CDC27, CHRM1, CLDN16, CREB3L2, CSNK1A1, CTF1, CTNND1, CXCL10, CYP2E1, DGKB, DHX58, ESAM, FDFT1, FLOT1, FOXO1, FZD6, GALM, GALNT13, GALNT2, GJD2, GNPDA2, GRIA1, HSD11B2, IARS2, IDUA, IFNA7, INPP4A, IRS1, ITGA8, ITGB3, KIR3DL3, MGAT1, MYH4, NAGA, NFE2L2, NUDT2, OR10A4, OR10H2, OR2D2, OR3A1, OR3A3, OR4D1, OR4K2, OR5AC2, OR5D18, OR5P3, PDE6D, PDX1, PFAS, PIP5K1B, PLXNA2, PMAIP1, POLR1C, POLR2I, POLR2J, POMC, PPAP2C, PRK CZ, PYGM, RBX1, SEMA3B, SIPA1, STX1B, STX6, SYNJ1, TACR3, TAS2R3, TAS2R38, TAS2R48, TAS2R60, TFPI, TGFB3, TPK1, UBA1, UGT2B4, VAMP4, XYLT1, XYLT2, ALDH18A1, B4GALNT1, HSP90AA1

Negative_11921	APP, GNS, UBC, ABAT, ALDH1L1, ARD1A, ASMT, ASPA, ATP5J2, CCL14, CCND3, CLDN5, COL1A1, COQ7, CSDA, DAD1, DDB2, DOCK1, EFNA1, EPHA2, EPHX1, E XTL1, GNB3, GPT2, GRAP2, GUCY2C, HARS2, HCST, HPSE2, IL2RA, KDSR, LIM K1, LRP5, LTBR, MMP2, NEFH, OR10K1, OR2D2, OR4E2, OR5A1, OR8H1, PARD6 G, PARVB, POMC, PPP1R3A, PRKCB, PTTG1, RAPGEF3, RASA1, RDH8, RPE65, R RM2, SEMA4A, TPM3, VTI1A, MAPKAPK5, TNFRSF17
Negative_11922	CFH, EBP, F7, GBA, HAL, HGF, IL2, KDR, ADORA2B, ALOX5, AMPD2, APRT, ARH GAP5, ATP5F1, ATP5H, B3GNT4, B4GALT3, BLNK, C4BPA, C7orf16, CD226, C D3E, CDC45L, CHPT1, CMPK1, CREBBP, CSF2RB, CUL1, CYP11B1, CYP11B2, C YP4A22, DEGS2, DERA, DNMT3L, E2F4, ECSIT, ENPP3, EPAS1, EPB41, EPHB6, FASLG, FLOT1, GFPT1, H6PD, HSD17B8, IDH2, IFNA5, IGSF5, IL17A, IL24, IL29, ITGAD, ITGB8, LTB4R2, MAD2L1, MAPK9, MYH15, MYH7B, NCOR2, NOX 1, OR1M1, OR2AE1, OR4F17, PANK1, PARD6B, PI4KB, PPARA, PPP1R3C, RALB, ROCK2, RPIA, SCP2, SDC2, SDHA, SEMA4A, SEMA7A, SHMT1, SIPA1, SMURF2, SRGAP2, STAM2, STX12, TLR9, VKORC1, WHSC1, YARS, CACNA2D2, CSGALNA CT2
Negative_11923	AMH, AR, AARS, ACACB, ACSL3, ADCY3, ADH1A, ADRA1D, AGPAT2, AKT1, ALG1 0, AMDHD2, ARRB2, AXIN1, BDKRB2, CACNA1I, CACNB2, CCNA2, CD86, CHDH, CHKA, CLDN17, CNGA3, CNTF, CREB3, CRY2, CSNK1G3, CXCL6, CYP2A13, DHO DH, ENTPD1, FZD8, GLI3, GUCY1B3, HES1, IL4R, ITGA5, KLRD1, LTBP1, MGS T1, OR1L6, OR4B1, OR4C16, OR4C6, OR4K2, OR51B5, PAK6, PARVB, PARVG, P CNA, PDGFA, PGM3, PLK1, PNMT, POLE, PPARA, PPP2R5C, PSAT1, RAC2, RGS3, RUVBL1, SCIN, ST8SIA1, TKTL2, TLN2, TUBB1, ATP6VOE1
Negative_11924	BTD, FAH, IL8, MPL, WAS, ACP6, ACSL5, B3GAT1, B4GALT6, BMP6, BMP7, CCN E1, CCR3, CREB3L4, ENO1, ENTPD2, GALNT3, GDF7, HNF4A, IL10, IL22RA2, IL23A, ITGAD, ITPK1, ITPKB, LFNG, NEGR1, NFKBIE, NMNAT1, OCRL, OR14I 1, OR1J1, OR2C1, OR2D2, OR2T12, OR6F1, OR6M1, P2RX3, PDXK, PIM2, POLR 1B, POLR3K, PRKAR2A, RAPGEF4, RASGRF1, ROBO2, SPRY2, SPRY3, STX8, TA S2R7, TSNARE1, TUBA3C, TUBA3E, WARS, ATP6VOD2, HLA-DPA1, ST6GALNAC3
Negative_11925	BID, BTD, F10, FAH, GP9, HK2, VCL, AKT3, ALG10, ALG3, ALPPL2, ARRB2, AS S1, ATP6V1H, BMP2, CAMK2A, CAV3, CCL27, CCR10, CLCF1, CNGA4, COL3A1, CRLS1, CRY1, CXCL3, DDX18, DRD5, EDA2R, GALNT9, GLG1, GSTA5, HLA- DOA, HNF4A, IFNAR1, IFNB1, IGFBP3, INADL, INHBC, IRS2, ITGA8, ITGB1, KLRD1, LAMA4, LFNG, LIPF, LIPT1, LLGL2, LPAR1, MAML3, MAPK10, MYH6, N CKAP1, NEUROG3, OR10J5, OR11H6, OR2G3, OR2Z1, OR4F15, OR4N5, OR51S1, OR52L1, OR6K3, OR7A17, OR7C2, OR8D2, OR8J3, PDE8A, PFKFB4, PVRL1, R AC1, RBL1, RDH5, SETD1B, SORBS1, STAT1, STAT6, TAS2R5, TIAM2, TNFSF8, TPI1, UCK1, VEGFA, WHSC1L1, WNT7A, XCL2, HSD17B12
Negative_11926	F10, GSN, TPR, ABL2, ACACB, ACADSB, ADIPOR1, ALDOA, ALG12, ALG13, AMP D1, APOA2, ATP5I, BMP4, BPNT1, CALML6, CCL20, CD38, CD58, CDK2, CDK4, CDKN2D, CYP4A11, DDX54, DDX55, DGKQ, DRD5, EP300, ERBB4, FM01, GCAT, GGT1, GGT6, GPAM, GSTA3, HADH, HEXB, HTR6, IGF1, IL1A, IL20RB, IL2RB, IL9R, ITGB8, LGMN, MAPK9, MOV10L1, NEFL, NRCAM, OGDH, OR13F1, OR1B1, OR2A42, OR2B6, OR51E2, OR5AN1, OR6N2, OR6X1, OR7G1, OR9G4, PANK2, PC NA, PDE8B, PDGFA, PDXK, PER2, PFKL, PIGK, PLA2G2A, PLOD1, PLOD2, PNPO, POLR2J, PPP1R3D, PPT1, PYGM, RBX1, RDH10, RPS6KA5, STX7, SULT1A2, S V2B, TAP2, TAS1R2, THBS1, TRADD, UGCG, WARS2, WNT5B, ARHGEF12, CACNA 2D1, PHOSPHO1

Negative_11927	ID2, LSS, ACADVL, AGPAT4, ALDH6A1, ANAPC5, ARHGEF7, ATP5E, BBC3, BLNK, BMP7, C5AR1, CNDP1, COL3A1, CRHR1, CTNNA2, EI24, GAL3ST1, GRAP2, KCNQ1, MMP1, MYH9, NKD2, NLGN2, NOX3, OLAH, OR10G3, OR10H5, OR1D2, OR4A16, OR4F17, OR4P4, OR7D4, OR8B4, PIGK, PIGL, PLAU, PLK1, POLR1C, PPP1CA, RGS3, SLC27A1, SPI1, SRGAP2, STX1A, SULT1A1, TCIRG1, TGFBFR1, TM7SF2, TNFRSF9, TNFSF9, TRAF1, VAMP2, YWHAZ
Negative_11928	ADA, AK2, F2, ID3, ACACB, AGPAT3, ALDOC, ALPPL2, ANAPC10, ANAPC4, B3GAT2, B4GALT7, CAMK2B, CAV2, CD44, CDC25B, CEBPA, CHAD, CIITA, CLDN17, CLDN2, COL3A1, CRLS1, CTNNA3, CYP7A1, DDX54, DUSP16, EFNA4, ENTPD2, ENTPD7, FUT1, GART, GNG12, GPD2, HTR2A, IL13RA1, KCNQ1, KIR2DL1, MAN1B1, MAP3K11, NCKAP1, OR10AD1, OR2A25, OR4F15, OR5L2, OR6C74, PIAS4, PIGW, PIP5K1C, PLA2G4A, PNPO, PPP3R1, PRODH2, PTCH1, RHEB, SMAD7, SPRY2, SRGAP2, TAS2R7, TRMT11, VAV2, WIF1, WNT16, WNT7B, YWHAH, HLA-DPA1, ST6GALNAC4
Negative_11929	A2M, AK3, C6, CKM, FER, LCK, PC, ALPI, BET1, CACNA1H, CAMK2G, CCL8, CD59, CER1, CLDN17, CMAS, CTPS, CYP2C19, DARS, DNMT3L, DTX2, DTX4, DUSP2, EI24, GART, GFPT2, GMPPA, GNA01, HRH2, HTR2C, HTR6, IFNW1, MAPK10, NOX1, NUMB, OR13C9, OR1J4, OR1K1, OR56A1, PECAM1, PIAS1, PIK3C2B, PLC E1, POLR2L, POLR3H, SAT2, SHC2, STK36, THTPA, UMPS, WNT2, WWP2, MAPKAPK5
Negative_11930	DCN, GP9, HYI, ACTA2, ADH1A, ANAPC11, ANPEP, AOC3, B3GNT2, BCKDHB, BMPR2, C4BPB, CASK, CCL15, CDKN1A, CEBPA, CES7, CFL2, COL6A1, CTNNA1, CTPS, CUL1, DDOST, DHDDS, DHX58, EPHB1, FADD, FOSL1, GFPT1, GGT7, GJA1, GJD2, HAO2, HMOX2, HSPA1B, IFNA4, IL1RAP, INPP5A, LDHA, LHCGR, MAP2K3, MAP3K5, MGST1, MKNK1, MMP1, NFKB1, OR10G3, OR10P1, OR5H6, OR6C3, OR8A1, PGAM1, PIGT, PRKAG3, RASGRP3, SEMA4D, SKIV2L2, SPTAN1, SRD5A2, TAS1R2, UBA7, UROC1, VANGL1, B3GALNT1, HLA-DQB1, PNLIPRP1, ST6GALNAC1
Negative_11931	BCR, C6, C8A, DCT, GHR, HDC, ME1, NOG, NPL, PRL, ACOT11, ACSM1, ACSM3, AKT2, APOA2, ARPC1A, ARPC5L, ASAH1, ASRGL1, BHMT, BTRC, CACNB4, CADM1, CCL24, CCL8, CCR6, CFTR, CLDN10, CSF3R, CYFIP2, DCTN1, DDX47, DLAT, EPHX1, ERBB4, EXOC7, F11R, FIGF, FLT3, FZD9, GALNT5, GFPT1, GGT1, GNAZ, GRHPR, GSTA1, GSTP1, HAGHL, HAO2, HNF4A, IFNA10, IFNA16, IL1R2, IL22RA1, IL3RA, ITGAM, JAM2, KIR3DL3, LCMT1, LCMT2, MCAT, NADSYN1, NCAM1, NEFH, NMNAT1, NODAL, OR10C1, OR10K2, OR2W1, OR4K17, OR4X2, OR51I1, OR52L1, P4HA3, PDE2A, PDHB, PIK3CB, PIP4K2B, PLXNB3, POLE, POLR3A, SEMA3A, SESN2, SFRP5, SGPP2, SH2D1B, SNAI1, SOD1, SREBF1, SULT1A2, TAS2R4, TICAM2, TNFRSF9, ATP6V0D1
Negative_11932	CR1, DDO, GK, GSS, NLK, PGP, AACS, ABL2, ABP1, ACSM3, ADRB1, AGXT2, AKT1, AMDHD1, APOC3, ARHGEF1, ARPC5L, ATP5F1, B4GALT3, BDKRB2, CACNG6, CALML3, CCND1, CES7, CHD8, CHRM1, CREB5, CYP2D6, DDB2, DHRS3, DVL1, E2F4, EFNA4, EHMT2, EREG, FGF3, FLT4, FPGT, FZD10, GADD45B, GGCX, GOSR2, GRIN1, GUCA1C, HPSE2, HSD17B3, HSPA2, HYAL1, IARS2, IL13RA1, INPP4A, ITGAE, LFNG, LGMN, LIMK1, MAPK13, MGAT2, MITF, MYH15, NFAT5, NLGN1, NRG3, NT5C2, OR52N4, OR6K6, ORC3L, P2RX1, PDE3B, PFN2, PGAM2, PIGB, PIGH, PIGM, PIK3CG, PLA2G6, PLAU, PPP2R5A, PRKAB2, PRPH2, PTGES2, PTTG1, PYGM, RHOD, SH3BP2, SOCS5, ST8SIA5, TIAM2, TICAM2, TUBA8, TUBB2A, UROC1, VAMP4, WARS2, WHSC1L1, WNT7B, PAFAH1B3, SERPINA5
Negative_11933	AK7, FN1, PAH, ACACA, ACVR1, AKR1D1, ALDH2, ATP4B, BAIAP2, CACNA1D, CACNA1H, CACNB2, CD79A, CD86, CDC7, CHRM2, ECSIT, ENPP1, ENTPD1, FARS A, FMO1, GAMT, GNPDA1, INPP5A, LTC4S, MAT1A, MTHFD1L, MYH14, MYL9, NT5C3, OR4B1, OR4N5, OR51A7, OR52B6, OR5H6, OR5M3, OR6M1, PDE3A, PDGFRB, PFKFB3, PHPT1, PLA2G4A, PLCE1, PMVK, PPP1R3C, PRKAR1B, RAC1, RHOD, SPI1, SPP1, TAS2R5, TRAF2, UBE2K, UCKL1, VAV3, WNT2, WNT9B

Negative_11934	GSS, IL5, ACAA1, ACSM2A, ACSM4, APBB1, APOA5, BDH2, CASP7, CCL28, CDC42, CDKN1A, CDKN2D, CHEK1, CSNK1A1, CTSL1, CYFIP1, CYP11A1, CYP2C19, DAAM1, DDIT3, EPHA2, FARS2, FPGT, GDF6, ITGA4, KIR3DL1, LAMB1, MAML2, OR10G8, OR56B4, OR5B21, OR8B4, PKM2, PNPLA3, POLD4, POMC, PRKCI, RELB, SMARCA2, SOCS5, SPHK2, SRD5A1, SSH1, STAT6, TAS2R3, TGFA, TOMM40L, TUBA3C, UPRT, WNT11, SLC25A31
Negative_11935	C6, ID2, KDR, PDC, SMO, TFG, ABP1, ACHE, AHCY, APBB1, ASS1, ATP12A, BMP6, CAMK2D, CARS2, CASP10, CBLB, CCL1, CDC14A, CDH2, CSAD, CTBP2, CTPS2, CYP11B2, CYP1A1, CYP26A1, DDX18, DLAT, DRD1, DTX4, EFNB3, ENTPD5, EPHA1, GAMT, GAPDH, GJA1, GSTM1, GUK1, HSD11B1, HSD17B2, IDI2, IFNA4, IFNB1, IFNGR2, ITGA6, ITGB5, JAK1, MAML3, MAPK10, MDH2, MGAT2, MYH1, MYH11, MYH2, MYH3, NAGLU, NMNAT1, NRG1, NRG2, OR11A1, OR11L1, OR13F1, OR1S2, OR4D6, OR4F15, OR4X1, OR5T3, OR6C75, PAFAH2, PARD6A, PI4KB, PIPOX, PLXNC1, PRPH, PTGER1, RCHY1, RHOD, RND1, RRM2B, SETDB1, SLC2A4, SRGAP1, ST3GAL4, TAS2R40, TMLHE, TPMT, TSTA3, UBE2L6, UNC5D, UPP1, USE1, WNT5A, WNT9A, XYLB, HSD17B10, TNFRSF10C, TNFRSF13B
Negative_11936	BTD, CD6, LSS, NPL, SHH, STS, TK1, TNN, ACYP1, ADH7, ALAS2, AMDHD2, ANPEP, ATP5B, ATP6V1D, B3GALT2, BCAT1, BDH2, BDNF, BPNT1, C1GALT1, CACNA1S, CASP3, CCL27, CD86, CERK, CKS1B, CXCL2, DBF4, EHMT1, FASLG, GAPDH, HMGCS2, IL13RA2, IRF5, KLRC2, LAMB4, LLGL2, MTMR1, NAT6, NKD2, OR10A2, OR10G8, OR4M1, OR51F1, OR52E2, OR5AU1, OR7A10, OR7D4, OR8G1, OR8K5, OXCT1, PAK2, PARS2, PAX6, PIK3CD, PIP4K2B, POLE3, POLR1D, POLR2F, PRKCB, PRODH2, RALB, RASGRF2, RPN1, SDHD, SEMA3A, SEMA4B, SMC1B, SOCS3, SRGAP3, STX1A, TM7SF2, TOMM40L, ULBP3, YWHAZ, ST6GALNAC3, TNFSF13B
Negative_11937	GPT, RET, ACTA2, ACVR1B, ALG3, AOX1, ARPC3, ASNS, ATP13A2, ATP5H, B3GALT2, BMP2, CADM3, CCNB3, CDK6, CLCA4, CLDN15, COL2A1, CUL1, CXCR4, CYP2C19, DPM3, DUSP1, DUSP2, E2F4, EDNRB, EFNB2, EIF4E2, ETNK2, EXT2, FLT3, FUT7, GAD1, GBA3, GSTM2, GSTO1, IL12RB2, KLK3, KLRC3, MAP2K1, MAP3K1, MCCC2, MDH2, MGAT4A, OR10A5, OR2H1, OR2T1, OR4F17, OR4K15, OR52E4, OR6K6, OR8U1, PGAP1, PHKB, PIAS4, PIK3C2A, PLA2G4A, PLA2G5, PLOD3, PNPLA4, POLD2, POLD4, PPP1R3B, PPP3R1, PRKAR1B, PRKCA, RALB, RFXNG, RPIA, SARS, SOCS7, STX4, TBL1X, TPM3, TRMT11, TUBB2C, UROC1, WNT9A, C1GALT1C1
Negative_11938	F11, MPL, OAT, ADH5, ADIPOR2, ADRBK2, AGRP, AGTR1, ALAS1, ARPC4, AVPR1B, B4GALT5, CACNA1B, CANT1, CD46, CDC26, CLCA4, CLDN11, COL1A1, CUL1, CYP21A2, CYP26B1, EDNRB, EGFR, ENPP2, FGF10, FZD1, FZD3, GALM, GALNT2, GRIN2C, HCCS, HTR6, IMPDH2, INPPL1, ITGA2B, ITPKB, JAK2, KARS, KLRC1, LAMB3, MAD2L2, MAT2B, MCAT, NAMPT, NANS, OR10AD1, OR11A1, OR1A1, OR4D11, OR51B2, OR51T1, OR52K1, OR52N2, OR5D16, PECAM1, PER1, PI4KB, PIAS1, PIK3R5, PIP4K2A, PLA2G3, PLAUR, PLEKHA8, PLXNA3, POLD4, PPM1D, PPP2R5B, RAPGEF1, RASGRP1, RPE65, RPS6KA1, RXRG, SESN1, SLC12A2, SLC27A5, SMAD6, SMPD2, SMURF1, SMURF2, SRD5A2, SREBF1, TACR1, TAS2R60, TOMM40, TOMM40L, TP53I3, TUBA1C, UGCG, UGDH, UGT8, ATP6V1G1, PDCD1LG2, SERPINE1
Negative_11939	ADO, AGK, APP, JUP, PTS, AASDH, ABL2, ACADSB, ADSL, AKR1A1, AKT3, ALOX5, APOA5, ARNTL, BCAR1, CACNA1S, CACNG8, CCL3, CD274, CDC14A, CDKN2B, CEBPA, CLTCL1, CYP3A4, DDB2, DGAT1, EFNA1, FABP3, FGF12, FGF23, GAD45A, GALNT9, GALNTL4, GATM, GNRHR, GUSB, IFNB1, IQGAP2, ITGB4, KIR3DL1, LAMC1, LTBR, MAML2, MTHFD1, NEU4, NUDT2, OR10H5, OR12D3, OR1J1, OR2A25, OR4D1, OR52E8, OR8A1, OR9K2, PAK3, PDGFRB, PIGL, PIGO, PIGU, POLR3H, RAP1A, RBPJL, SGPP1, SPHK1, STAM, STAT5A, TGFA, TOMM40L, TUBB4, VEGFA, HLA-DPB1



Negative_11940	C3, GLS, LYN, STS, TAT, WAS, ACTA1, ALDOC, ATP4A, ATP50, CACNG4, CCNB2, CPT1A, CREB3L1, CX3CL1, CYFIP1, CYP2S1, DDX23, EHMT1, ENPP2, FASLG, FGF10, GALK2, GALNT8, GPD1, GSTK1, HSD17B4, IL25, MAOA, MAOB, MICA, MYH6, NQO1, OR10H4, OR10T2, OR11A1, OR1M1, OR2AG1, OR2F1, OR4M2, OR5P3, OR8K3, PDE4C, PIGH, PIK3CD, PPP2R5A, PSENE1, PTPN1, PYCRL, PYGL, SIPA1, SMAD3, SMAD9, SYNJ2, TAS2R9, TGFB2, TSLP, UCK1, YES1, ATP6VOD2, CSNK1A1L, PRICKLE2, TNFRSF11B, TNFRSF17
Negative_11941	CAD, CGA, DDO, FUK, GSN, GSR, IL5, TYR, AASS, ACSL4, ACTB, ACTG1, ADRA1A, ALDH2, ALDH9A1, ATP5J2, C3AR1, CACNA1I, CAMK4, CHRM1, COMT, CSNK1G3, CTSL1, CYP2A6, CYP4F2, DERA, DHRS4, DUSP4, ERBB4, FGF13, FGF20, GADD45A, GLG1, GLYCK, GNRH1, IFIH1, IL20RB, IL28A, INADL, ITCH, KNG1, LCP2, LGMN, LIPC, MAP4K4, MEF2C, MTMR6, NFKB1B, OR10C1, OR2M4, OR4D9, OR5AS1, OR5B17, OR5D18, OR5M3, OR6T1, OR8D1, OR8H1, OR9A4, P2RX3, PCNA, PDIA4, PFKFB4, PFKL, PLCB3, PNMT, POLE, PPM1B, PPP2CA, PRPS2, P RSS3, RAB23, RASGRP2, RASSF1, SETD2, SMPD2, SPAM1, STX10, TBXA2R, THBD, THY1, TP73, TPM3, UBA1, UGT2B4, UXS1, WNT10B, WNT2B, WNT9A, CACNA2D3, SERPINA5, TNFRSF13C
Negative_11942	GPI, LPO, MOS, ACP2, ALAS2, ALG9, BCL10, BDKRB1, CACNA1D, CACNG1, CALML3, CDC25B, CHD8, COL5A2, CSAD, CYP2S1, DUSP16, DVL2, EPHA4, FGF20, GADD45A, GALNT14, HDAC2, HMGCR, IGF1, IL12A, JUND, KLK3, LRDD, MGST1, NEFM, NFATC4, NFKB2, NRG3, NRP1, NTRK1, OLR1, OR5B3, OR6K3, OR7D4, OXCT2, PDE7A, PDHA2, PECAM1, PLA2G4A, POLR1A, POLR2J, PPAP2C, PPARD, PROC, PTPRC, RALA, RARS, SHMT1, SMC1B, SPCS3, SPP1, STK11, TAS2R10, TAS2R48, THY1, TNFSF8, TRPC1, WNT3, ZFYVE9, HLA-DPA1, HSD17B12, TNFSF13B
Negative_11943	GBA, HYI, PLG, TPR, ADCY1, ADRB3, ALPL, ARNTL, ATF4, ATP6V1D, BMP6, C1QA, CACNB1, CAMKK2, CD19, CFTR, CSNK1G3, CTTN, CYP27A1, CYP2A6, DAPK1, DBF4, DHRS4, DIAPH2, DPYS, DTX2, EHMT2, ENTPD2, ERBB2, FOXO1, FUT7, GCH1, GGCX, GMPR, GNA15, GP1BA, GPX5, GRIA3, HAGHL, HSD11B1, IFNW1, IKKBK, IL12B, IL20RA, IL28RA, INHBC, IQGAP3, IRS1, KIR2DS4, KYNU, LDHC, MKNK1, NARS, NEU2, NMNAT2, OR10G8, OR10H3, OR10J1, OR13J1, OR4K14, OR52B4, OR5H2, OR6K2, OR7C1, OR8D1, OR9A2, ORC2L, PDE11A, PDE9A, POLE, PTCH1, SAT2, SEMA3F, SOCS2, SOD1, SOS2, SPTAN1, STAM, SULT1A1, TAS2R42, TBK1, TBL1X, TICAM1, TLN2, TSLP, UAP1, UCP1, ULBP1, ATP6VOD2, ATP6V1E2, CACNA2D1, TNFRSF14
Negative_11944	SFN, ADAM17, ALG2, ATP50, C9orf95, CCNG2, CDC20, CFL1, COQ7, DTX2, DUSP3, ENPP7, EP300, GNPAT1, GPAA1, GUCA1A, GUCA1B, HLA-DOA, HSD17B3, HTR2A, IFNA2, IL28B, LDHAL6B, MAML1, MAOA, MAP3K6, MTMR6, NARS, NAT2, NCK1, OR10G4, OR1A2, OR4K17, OR51I2, OR52I1, PDXK, PLD1, PLK1, SELP, SLC9A1, SNAP23, SPTLC2, SUV39H2, TBL1XR1, TCIRG1, THBS3, UBA1, UGT2B7, UROS, ATP6V1C2, PLA2G12A
Negative_11945	AR, GAA, GNS, GP9, IVD, LPL, TNC, ADRB3, ALG6, ALOX15, ALPL, B3GNT3, B4GALT5, BMP2, C9orf95, CBR3, CCR4, COL1A1, CPT1A, CXCL16, DAPK1, DAXX, DDX52, EFN3, EIF4B, ENTPD6, EPHA2, ER01L, FCGR2B, FDFT1, FLT4, FZD9, GALNT14, GLI2, GNAQ, GNB1, HIBCH, IL2RB, INHBE, IRAK2, LCMT1, MAN1C1, MARS2, MKNK1, MMP9, MPDZ, MRAS, NAGA, NCAM2, NKX6-1, NR1H3, NRG2, OR10J5, OR1D2, OR2A42, OR4A5, OR4F15, OR5D18, OR5T2, OR6K3, OR7A17, OR8H2, PAPSS1, PARD3, PDE6H, PDE8B, PDIA4, PGAM4, PI4KB, PIGP, PLA2G1B, PLA2G2A, PNPLA3, PPARA, PPP2R2A, PRKAG2, SENP2, SESN3, SPRED2, SPRY4, TSLP, TUBA3E, TUBB2A, UGCGL1, VAV1, VDAC2, WHSC1L1, WNT11, ARHGEF12, ATP6V1B2, CACNA2D4, TNFRSF1B

Negative_11946	BTD, BTK, DBI, LCK, ME3, MTR, MVK, PC, PXN, AASDH, ADCY7, AGPAT6, AKT2, ALDH1L1, ALPP, B3GALT5, BDH2, CACNG3, CDC45L, CFTR, CHIA, CLDN22, CM BL, CNTFR, CREB3, CSNK1E, CTTN, CYP2E1, CYP4A11, DGKH, DIAPH2, DVL1, ENO3, ENTPD6, FCGR2B, FGD1, GAL3ST1, GFAP, GGT1, GJA1, GOSR2, GYS2, H SD17B4, ITGA2, JAK1, LEPR, LIPF, MAGI2, MAN1A1, MAP2K1, MMP7, MPDZ, M YH1, NAE1, NCOA4, NPR2, NRXN3, NT5C1A, OR11H4, OR2B11, OR2M5, OR4C13 , OR7C2, P2RX2, PCK2, PDK1, PGS1, PISD, PLOD2, PLXNB1, PNPT1, PPBP, PP P2R1B, PRKY, PTCH2, RDH12, RPN2, RRM2B, SETD2, SETD8, SLC2A1, SOCS5, ST3GAL4, STX5, THBD, TOLLIP, UBA1, UGDH, UGT2B11, MAPK8IP3, SERPINC 1
Negative_11947	C7, FAH, GK2, ACAT2, ADRA1A, ADSL, AHCY, ALG8, ALPI, ARSA, AVPR1A, BAC E1, BAIAP2, BRAF, CCL16, CCL19, CCL23, CCNE2, CD59, CES1, CREB3, CREB 5, CX3CL1, CYP2E1, DDOST, DHODH, DPM3, DUSP14, DUSP3, E2F1, ENTPD1, F 13A1, F13B, FGF10, FUT1, FZD7, GGCX, GRIN1, HADHB, HBEGF, HPSE2, HTR2 B, IFNA8, IFNK, IL17RA, IL19, INHBA, INPP5E, INPPL1, KDSR, LAMC2, MPS T, MTHFD1L, MYLK3, NOS1, NUMB, OR10G3, OR10G4, OR10G8, OR11H4, OR1L1 , OR2A12, OR2H1, OR4F17, OR51E2, OR52E4, OR56A3, PARD6G, PGK1, PGK2, PIK3CA, PLXNC1, POLE, POLR3B, PPCS, PPP1CB, PPP2R5C, PPP3CC, RAPGEF 1, RDH11, RELA, RGS3, SESN3, SKP2, SRD5A1, THBD, PLA2G12A, SERPINA5
Negative_11948	C1S, C8A, CR2, DHH, GNE, KIT, MAG, MOS, NPL, AADAT, ACAA1, ADAM17, ADCY 8, AFMID, AGRP, ALDH1L1, ALDH2, ANAPC4, ATP4A, ATP6V1H, B3GNT5, BPNT 1, CD74, CDK2, CEBPA, CHPT1, CNGA3, CPT1A, CTPS2, CX3CL1, CYFIP2, CYP 27A1, DAPK1, DGAT2L4, DGUOK, DVL2, ENO1, ENPP2, EPB41L3, FGFR1, FIGF , FOXO3, FUT5, FZD1, GPD1L, ICAM3, IL10RA, IL1A, IL28B, ITGB8, KIR2DS 5, LAMA4, LEFTY1, LIMK1, LIPF, MALT1, NAT5, NAT6, NTRK1, NUMB, OR10A7 , OR10G2, OR13C4, OR51B6, OR52W1, OR6C76, OR6T1, OR8H2, PHKA2, PHKG1 , PIGS, PIGU, PLA2G5, PLXNB3, PNPLA4, POLR2K, POLR3H, PPM1A, PRKAR1B , PRPS2, PSME2, PTGER3, RAPGEF3, RASA1, RBPJL, RFXANK, SDC2, SELP, SF RP4, SMPD3, SMURF2, ST3GAL2, STK11, TGFB2, TRAF1, HSP90AB1
Negative_11949	BAD, C8A, FAS, IL8, MTR, NLK, SI, VTN, AANAT, AARS2, ACO2, ACTN1, ALG1, ALG10B, ALG2, ARPC3, ASNS, B3GNT2, CACNG6, CCL15, CLDN5, CNDP1, CNTF R, CYP26B1, CYP2A7, DLAT, ELK1, ETS1, FLT3LG, GALNT2, GARS, GCDH, GLB 1, GLUD2, GUCY2C, HDAC1, HMGCS1, IL22, ITGA11, ITGA5, KLRC3, MARS, MG AT5, MGST2, MYH2, MYH6, MYH7, NME7, NNMT, OR11H1, OR1A2, OR2K2, OR2M3 , OR51A2, OR5K2, OR6C1, OR6C6, OR6F1, OR6Q1, PAK3, PGK2, PIGH, PLA2G6 , PPID, PPP2R5D, RAP1B, RAPGEF1, RARA, RFWD2, RXRG, SKP1, SOS2, STAT2 , STX8, TAS2R38, UAP1, UGCGL1, ULK1, UPB1, UPP2, WNT1, YWHAH, KIR2DL5 A, TNFRSF10A
Negative_11950	CFD, HGF, RET, ABAT, ACY3, ADIPOQ, ALAD, ALG10B, ALOX15B, AQP7, ARHGE F2, ATP50, BDKRB1, CCL11, CFLAR, COL1A1, CXCL2, DERL1, DGKD, DGKQ, DL L3, EFNA4, EGFR, EPHB1, EPOR, ERBB2, FGFR1, FOXA3, FRAT2, GADD45G, GA LNT12, GALNTL1, GMPS, GP1BA, GPAM, GSK3B, HARS, HRH1, IFNA2, IFNA21, IFNA6, IL12RB1, INPPL1, IRAK2, IRF7, KLRC2, LDHA, LIMK2, LIPC, MAP2K 2, MPST, NAT6, NT5E, OR2A2, OR2D2, OR2M4, OR51Q1, OR5D16, OR7C1, OR8K 1, OR9Q1, PAK7, PAPSS1, PGAM4, PGM3, PIK3CD, PLCD3, PLCE1, PLXNB1, PM M2, POLR2A, PORCN, PPARD, PPOX, PPP2R2D, PTGER1, RXRB, SGPP1, SLC12A 2, SNW1, ST8SIA5, TALDO1, TAS2R60, TBK1, TGFB2, THBD, TOMM40L, ULK2 , ZFYVE16

Negative_11951	AK5, BID, C8G, CGN, IL3, ATF2, ATP5A1, AVPR1A, BAAT, BLNK, BMP8B, BTRC, CACNA1F, CD226, CD274, CYP2A6, CYP2E1, CYP8B1, DDIT4, DDX19A, DHRS3, EFN1, FZD7, GAB1, GNA15, GRM1, GUCY1A3, HARS2, HTR6, IFNA10, IFNA5, IL12A, IL21, IL28A, INHBB, ITPKA, KIR2DS5, KYNU, LIMK2, MAP2K1, MAP2K3, MAPK1, MGST2, MOV10L1, MYH4, NEU2, NRCAM, NRXN1, OR56A1, OR5T3, OR9I1, PARVA, PDGFB, PFN3, PGAP1, PIGC, PIK3CG, PIP5K3, PNPLA3, PPI D, PPP1CB, PRKAB1, RBPJ, RDH11, SARDH, SCIN, ST3GAL6, TLR5, TNFSF12, ULBP2, WHSC1L1, WNT10A, HLA-DQB1, MAP3K7IP2, MAPKAPK2, SERPINA5, TNFRSF13B
Negative_11952	C9, GPI, LCT, MAX, SRF, ACP2, AKR1D1, ANAPC4, BCL2L1, C1QB, CCNG2, CCR3, CD244, COMT, CSF3, CSNK1D, CSNK2A2, CTSG, DDB2, DDX54, DGKQ, EIF4E2, ENO2, EPHX2, EREG, FGF5, FGFR2, FMO3, FZD5, GALC, GALNT11, GLUD1, GRIN1, HADHA, HEXB, HTRA2, IKBKG, ITGA4, MAPK1, MGAT5, NAT5, NAT6, NEUROD1, OR13G1, OR14C36, OR2AG2, OR2C3, OR2G2, OR2M5, OR4D1, OR4N2, OR51M1, OR7A10, PARD6B, PCK1, PIGN, PLXNA3, PLXNB2, PPM1A, PPP2R5A, PRKACG, PRKCI, PVRL1, RAC1, RASA1, RUNX1T1, RUVBL1, SAT2, SGPP2, SLC25A6, SMAD7, SPAM1, ST3GAL5, STT3B, STX7, TBL1Y, TBXA2R, TKTL2, TOMM40L, TSC2, TUBA1A, VAMP3, WIF1, CSGALNACT2, HLA-DRB3
Negative_11953	C8B, F2R, FES, GSR, ILK, KIT, LPO, ADCY10, AHCYL2, ATP5D, ATP5J, B3GAT2, BMP2, CACNG6, CAV3, CCL14, CD226, CLOCK, CX3CL1, CXCL5, CXXC4, CYP4F3, DDX23, DKK1, DPAGT1, ETNK1, GADD45G, GBGT1, GGPS1, GNA15, GOT2, GPX5, GRHR, GRIN2A, GRM5, HMGCR, IL1R2, ISYNA1, KLRC4, LAMC2, LPAR1, MCCC2, MCM3, MLYCD, NLGN3, OR10V1, OR13J1, OR1L3, OR2L8, OR4D6, OR52A5, OR52N1, OR5H6, OXCT1, PDE5A, PGM1, PNPO, POLE2, PPP1CC, PRSS1, PVRL2, RAF1, RENBP, ROCK1, RUNX1, SIAH1, STEAP3, STX2, SULT1E1, TAS2R38, TGFBR2, THBS3, TLR5, TNFSF10, UGT2B17, WWP1, MAP3K7IP1, SERPINC1
Negative_11954	AK2, DBT, GAA, PC, SI, ABAT, ACTN2, ADAM17, ALG3, AMDHD1, B4GALT5, BBC3, BCL10, BLVRB, BRAF, CCL15, CCL8, CDC14B, CHKB, CHSY1, CLTA, CNGA4, CXCL13, CXCR3, CXCR4, CYP2S1, DLST, EPHA3, FMO1, GOSR2, GRIN1, GUCY1A3, HEXB, HMBS, IKBKE, IL21R, ITGA2B, ITGAE, MICA, MPST, MTHFS, MYH10, NAGS, NKX3-1, NOS3, NPAS2, NRXN2, NTN1, NTNG1, OR2T29, OR51A4, PAK2, PDGFC, PFKP, PLXNA3, PRKCQ, QPRT, SIPA1, SMPD3, SMURF1, SV2C, TAS2R50, TICAM1, TJP3, TLR3, TRAF5, TSLP, UGT2A3, UPP2, VAMP3, VANGL1, WNT8A, ATP6V1B1
Negative_11955	CEL, DCK, DDC, HPD, ITK, LSS, PGF, SCD, TKT, ACACA, ALOX12B, AMDHD2, ARPC5L, ARSE, ATF4, BCL10, BPGM, C3AR1, CACNB2, CACNG2, CASP10, CCL24, CCNA2, CCNE1, CCNE2, CD55, CDC7, CDH15, COL1A2, CRLS1, CSF3R, CTBP2, CXCL6, DRD2, E2F2, EIF4E2, ENTPD2, ESPL1, FGF13, GRIA3, GSTM3, HHEX, HPSE2, HRAS, HSD11B1, HTR5A, INHBA, INPPL1, ITGA8, ITGB2, ITPA, LIPF, MAN2A1, MGLL, NCF2, NFYA, NLGN2, NOX3, NTSR1, OGDHL, OR10J5, OR13F1, OR2AT4, OR2M4, OR2T8, OR51V1, OR52B6, PARVB, PGK2, PIK3C2A, PIK3C2B, PKLR, PKM2, PLA1A, POLR2F, PRKAR1B, PRKCG, QARS, RAD51, RASSF5, RENBP, RPN2, RRAS, SEMA3F, SFRP5, SLC12A2, SLC2A1, SSH3, TPM3, TSLP, TYMS, UNC5B, UROS, VAMP4, VDAC3, HSP90AA1, PAFAH1B2, PRICKLE2, TNFRSF10A

Negative_11956	AK2, CD2, GK2, GNS, JUN, LTB, TPO, ACAD9, ACYP1, AOX1, ARPC3, ATG3, CAS P3, CCL23, CCL28, CCR2, CDC16, CDK7, CISH, CLDN1, COL6A1, COL6A2, CSD A, CYP2C8, CYP4A22, CYP8B1, DCXR, EFNA2, EHMT1, FGF13, FGF6, GBT1, G GT6, GLDC, GMPS, GNAZ, GNPDA2, GPAM, HPRT1, IL15RA, IL21, IL2RG, IRAK 2, ITPA, KITLG, LIPC, NANS, NUDT8, OR2T34, OR4C16, OR4D11, OR4M2, OR5 1E1, OR52E4, OR5H6, OR5J2, OR5P2, OXTR, PAK2, PANK3, PCNA, PER3, PIK3 C2G, PIK3CD, PLA2G2F, PLEKHA8, PLXNB3, POLE2, PRKAR1A, PTGES2, RAB2 3, RASA2, RBL2, RBPJ, ROB01, RPS6, SAT2, SEMA4D, SOCS7, SPP1, SSH2, ST 3GAL2, SULT1A4, TAS2R49, TKTL1, TUBB2A, TXNDC12, ULK1, VEGFC, WARS2 , WNT1, WWP1
Negative_11957	AMT, CR2, DCC, FGA, SMS, ACSM3, C7orf16, CASK, CASP6, CHST12, COL1A2, COL4A1, CSF1, CTBP2, CYP1A1, CYP4F2, DDX41, E2F4, FADD, FUT3, GCNT2, HMGCL, IFNGR1, IL22RA1, INADL, MALT1, MOV10L1, MTHFS, MYLK2, NUMB, O R2T33, OR52K1, OR5J2, OR6C3, OR6C76, OR8D4, OR8K1, PHKA2, PIK3CB, PI K3R5, PIM1, PLCG2, POLR2G, POLR3D, PRKCI, PRKX, PROS1, PTTG1, RAC2, R ERE, SETD2, SOCS7, SRGAP1, TUBB2B, WHSC1L1, WNT10A, SLC25A31
Negative_11958	FUK, GK, ACACB, ACOT12, ACSM1, AMDHD2, ARPC1B, ATP6AP1, BCAT1, CACNA 1I, CD3E, CDKN1A, CHRNA7, CLDN4, CLTB, CTNND1, CYP2C19, DDIT3, DDX55 , DGAT1, DUSP8, EPHB3, ETNK2, FGF8, FUT8, GALNT7, GCNT2, GLS2, GNA15, GNAQ, GRM5, HAP1, HSD17B4, KLRC2, LAMC1, OR2A2, OR2H1, OR2T3, OR4E2, OR51T1, OR5AS1, OR7D4, P4HA1, PHKB, PIK3C2B, POLR1E, PPP2R5D, PRKAC A, PRKAG2, PRKY, RPS6, RPS6KA6, SMURF1, SOS2, STX2, TGFBR2, TIAM2, TY ROBP, TNFRSF13B
Negative_11959	ABLIM1, AC01, ACSM3, ACTN4, ALG5, APAF1, ATP2A2, BDKRB1, BET1, CBLB, CCND2, CD59, CDC23, CHPT1, CHRM3, COL11A1, COX10, CRHR1, CYP11A1, DD X41, DGKH, DHDH, DNMT3L, ENPP2, EP300, EPHA6, EPHB1, FABP4, FARP2, FC GR3A, FRAT2, GOSR2, GPD1, GRIA2, HSD17B4, IL12RB1, IL1R1, IRF9, MCCC 1, MTMR6, NCAM2, NOX1, OR2M3, OR51B6, OR6B3, P2RX1, PHKA2, PLOD3, PNP O, PRKACG, PTCRA, PTGER3, PTPRR, SEPHS1, SH2D1B, SKIV2L2, SMAD2, SPP 1, SPRED1, ST3GAL3, ST8SIA1, TLR5, UGT2B7, VNN1, WNT16, WNT7A, ATP6V 1C1, B4GALNT1, ST6GALNAC4, TNFRSF10C
Negative_11960	BAX, CAD, CD4, DBI, F9, IDS, LAT, AGXT, ALG12, ATP50, ATP6V1F, B4GALT4 , BCL2L1, BDH2, CALML6, CASK, CBLB, CCL11, CCR5, CLDN18, CYP2C18, DDX 55, DHCR24, ENTPD4, GALNT13, GNAS, GNPAT, GRHPR, GSTM5, IFNW1, IFT57 , ITGA1, KARS, KITLG, KLRC3, MAP2K1, MAP4K3, MAPK10, MGAT4A, NME7, OR 10H1, OR2D2, OR2T4, OR4B1, OR4D9, OR52E8, OR5AR1, OR6K6, PKM2, PLA1A , POLR2C, POLR3D, POLR3G, PPP1R3A, PTGIS, PTPN6, RASGRP4, RPN1, SPRE D2, STK36, SV2B, TAS1R3, TGDS, TSNARE1, ULBP3, UROS, VAV3, ATP6V0D1, ATP6V1B2, TNFRSF10B, TNFRSF13B
Negative_11961	AK1, CD6, IL3, LAT, MPZ, NLK, PXN, ADRA1D, AKR1B10, ALAS1, ARD1A, ATF4 , ATP6AP1, CASP8, CBR3, CCNG1, CNTNAP2, CSF3, CXCR6, DDOST, DGKH, DTX 3, FARSB, GALNT3, GRIA2, GRLF1, GSTM5, HDAC1, HEMK1, HNF1A, IDI1, IRF 5, ITPKA, LAMC1, LFNG, LIAS, MAP3K13, MAPK3, MGAM, MMP1, MTHFD1, NANS , NAT5, NCK1, NFKB1, NT5C2, NTRK2, OR10H3, OR2A42, OR2T3, OR2T34, OR4 D6, OR8A1, PIGP, PLD1, POLR1E, PPM1B, PRNP, PRODH, PYGM, RFXANK, SOCS 4, ST3GAL1, SUCLA2, TIRAP, UGT2B17, ULBP3, MAPK8IP2

Negative_11962	ABO, BTK, C3, CBL, DBH, F2R, GHR, ID3, ITK, PGP, ACP5, ACSM1, ADCY1, ADH1A, AGPAT3, ALG2, AMHR2, B3GNT4, CACNA1D, CACNG5, CCR3, CD44, CDK7, CLDN18, COQ6, DDX41, DGKQ, DPM1, E2F1, FGD3, FLAD1, FMO3, FSHB, GADD45G, GNG3, GRHR, GRIN2C, HAP1, HSPA1B, IL11RA, IL8RB, JAK2, LDHB, MAP3K1, NCF2, NEUROG3, NFKBIE, NSDHL, NT5C2, OR10H3, OR13C3, OR1M1, OR2B6, OR2M4, OR51A2, OR51E1, OR52I1, OR5M9, OR5T2, OR6B3, PFKM, PIK3R5, POLR1D, POLR2I, POLR3A, PON3, PPOX, PPP1CC, PPP2R2C, PRKX, PRSS1, PYGM, QPRT, RAC3, SEMA4F, SGMS2, SNAP25, SOD1, STX1B, TGDS, TMLHE, TOMM40, VASP, WASF2, WNT4, WNT9A, MAPK8IP3
Negative_11963	ADA, AGL, AUH, CFI, CR1, RPE, ACTB, ACTG2, ADH5, ADIPOR2, AOC2, CACNB3, CCL5, CTTN, CXCL9, CXCR4, CYP4A11, DAAM1, DVL3, ECHS1, EDN1, EPHX2, EXTL3, FUT4, GPT2, GRPR, GSTK1, HCST, HPSE, HTRA2, IFNA21, IFNA6, IL12RB1, JAK3, KITLG, LDHB, LPAR1, MAP3K3, METTL2B, METTL6, MPP5, MTMR1, MYH13, MYH7B, MYLK3, NADK, NKD2, NLGN1, OR13H1, OR2H2, OR2T3, OR4C46, OR51G2, PANK2, PDGFRB, PIAS4, PON3, PPCS, PPID, PPP2R2C, PRODH, PRSS2, RALA, RDH5, RDH8, ROB1, SH3BP2, SKP1, SLC2A2, SMPD3, SULT1A4, TAS2R13, UGP2, VTI1B, ATP6V1E2, PAFAH1B1, SERPINB5
Negative_11964	IHH, OSM, SDS, AHCYL1, ALDOB, AMPD3, ARAF, ARPC1B, ATP5A1, BCAR1, BMPR2, CBR1, CCR3, CD79A, CER1, CHST13, CMBL, CTNNA3, CTPS2, CYP21A2, DDIT3, EP300, ESAM, FGF5, FGFR2, GNA15, GOSR2, IL12RB2, IL21R, ITPKA, MAGI3, MAP2K2, NEGR1, OR2Z1, OR4A15, OR4C12, OR52N4, PARVG, PFKFB1, PIK3CA, PIK3R5, PITX2, PKMYT1, POLD3, POLR2F, RBL2, SGMS2, ST3GAL5, TMLHE, TUBA8, UGT1A10, UGT2B28, UNC5D, VAMP2, VCAM1, ZBTB16, ATP6V1G3, SUV420H2
Negative_11965	C2, DCC, FGG, GNE, HYI, IL5, LCT, PLN, TH, ACAA2, ACP5, ADRA1D, AKR1C3, ALG11, ATP5J2, BMPR1B, BPNT1, CCNB2, CD48, CD70, CHKA, COL6A1, COX10, CYP1A2, DAPK1, DDX51, DDX56, DERL1, DIAPH2, EDA2R, FGF14, FGF2, FGF3, GALNTL4, GCNT2, GGCX, GLDC, GMPS, GNRH1, GUCA1B, HLA-DMA, HSPA8, IAPP, IL1R2, IRAK1, JAK3, LAMA3, MAP2K3, MAPK9, MMP7, NAT6, NKX3-1, NOTCH1, OR13H1, OR1D2, OR1I1, OR1J1, OR2A12, OR4K17, OR5M9, OR6C1, OR8S1, OXTR, PAPSS2, PAX8, PDE2A, PDGFRA, PERP, PIP5K1C, PPA1, PRKD, RALGDS, RASSF1, SDC2, SIAH1, SPRY2, SPRY3, STMN1, SULT1A1, SULT2A1, TAS2R60, TGFA, TRMT11, TUBA1C, TUBB3, UBA7, UGCGL1, UNC5B, XCR1, ATP6VOD1, GABARAPL1, PHOSPHO1, TNFRSF18, TNFSF13B
Negative_11966	C9, F10, GSR, MAX, MOS, TK1, AADAC, ABL1, ACP2, ACPP, ADORA2B, AGTR1, ALDH4A1, BMP5, BRAF, CACNA1E, CBR1, CCL17, CDC2, CDKN2C, CEBPA, CSF2RA, DDX23, DHDH, DNMT3L, EIF4B, ENO3, ENPP3, EPHA2, EPRS, EVI1, GALNS, GCLC, GCNT1, GCNT2, GNA12, GNAI1, GNAZ, GNPDA1, GUCY1B3, HEMK1, HMOX1, HSD17B8, IKBKG, IL21R, JAM2, KLKB1, KLRC1, LMO7, LRP6, MCAT, MGAT5, MGST3, MMP9, MYH10, NARS2, NCR3, NFATC3, NRCAM, NT5C2, OR13A1, OR1L6, OR2A12, PANK1, PDE4C, PDE9A, PIPOX, PLA2G4A, PLAT, PLOD1, PPARG, PDX6, RAC3, RDH5, RELB, SC4MOL, SMAD3, SPRED1, SRD5A2, STAT1, STAT2, STX16, SV2C, TAS2R7, TNFSF8, TP53I3, TRDMT1, C1GALT1C1, EIF4EBP1, HLA-DRB5, HSD17B12, SERPING1
Negative_11967	ADC, DBH, MIF, WAS, A4GALT, AARS, ABCC8, ADCY4, APOE, ATP6V0C, AXIN2, B3GALT1, B4GALT5, BAI1, CAV3, CHUK, CRY2, CTPS2, CYP4A11, DAPK1, DDX18, DGKG, E2F3, EHMT2, FDPS, GNAQ, IDUA, IFNA13, IFNW1, IL17RA, IL22RA2, ITGA2, KLRC2, LRP6, MYL5, MYL9, NCR3, NFKBIA, NPR2, NUDT5, NUMBL, OR1B1, OR1J2, OR4A16, OR4C16, OR51A4, OR5AK2, OR5B3, OR6T1, OR8D1, OR8H1, PDE6G, PIM1, PRKAB2, RALB, RFXAP, RHOQ, RUNX1, SDHB, SH2D1B, SOX1, TFPI, UPP1, GABARAPL1

Negative_11968	BAD, CP, RDX, ACO2, ACSM1, ACSM3, ACTN2, ADRB1, ADSSL1, ALCAM, ANPEP, ATP5A1, ATP5I, BIRC2, C5AR1, CAMKK2, CCNA2, CD40LG, CD80, CD8B, CDC23, CDC45L, CDKN2C, CDO1, CLDN7, CMBL, CNGA4, COL4A2, CRLF2, CRY2, CTN NB1, CTPS2, DLL3, DNMT3B, DPM1, DUSP1, ENTPD3, GARS, GMPR2, GSTM2, GU CA1B, GUCA1C, HDAC2, HRH2, HYAL1, IDH2, IL2RG, KNG1, MAN1B1, MAP3K5, NEUROD1, NSD1, NUDT9, NUMBL, OGDHL, OR13H1, OR13J1, OR1D2, OR1J2, OR4C13, OR4E2, OR51B4, OR52L1, OR5J2, OR5K2, OR8H1, PDE10A, PDGFRB, POLR2C, POLR2F, PPM1D, PRKAR1A, PRKCG, RAD51, RALA, RCHY1, RFWD2, SARDH, SESN2, SLC2A4, SPCS1, SSH1, STAT4, STK4, SULT1A4, SYNJ2, TAS2R38, TAS2R40, THTPA, TLR3, TRHR, TUBA1C, CACNA2D4, MAPKAPK3, TNFRSF17
Negative_11969	FAS, FGG, HGF, KDR, LAT, PC, PRL, TNC, UBC, ABL2, ABP1, ALDH6A1, ALDH7A1, ANAPC10, ARNTL, ASIP, ATP5F1, CCL4, CCNB3, CD19, CD38, CDC16, CDC20, CHDH, COL1A2, CRHR1, CSF2RB, CSH1, CYP2B6, CYP2C8, DAAM1, DAPK3, EGFR, ENO3, ENTPD4, ERBB4, EVI1, EXT2, FM01, FUT8, GRIN1, GRIN2A, GRLF1, GSTO1, GTSE1, HNF4G, IL17RA, INHBA, IRAK4, IRF7, MAN2A1, MAP4K1, MAPK13, MCM5, MTHFS, NAGA, NAT1, NLGN3, NMNAT3, OR10A2, OR10J1, OR13A1, OR1I1, OR2A2, OR4C16, OR4X1, OR51G1, OR51G2, OR52N1, OR5J2, OR5M8, OR8I2, PANK3, PCYT1A, PDGFA, PIK3CB, PLXNA3, PNPLA4, PON1, PPP2R2C, PPP5C, PTPRC, QPRT, RCHY1, ROBO2, RPN1, RPN2, RPS6KA4, SETD1B, SKIV2L2, STEAP3, TLR9, TPMT, TRAF1, WNT10B, ATP6V0A4, SERPINB5, SUV420H2, TNFRSF1B
Negative_11970	AGK, CBL, CDA, CTH, F2R, HK1, HK2, ITK, MPI, MVD, PXN, ABAT, ACSL3, AGPAT1, ALDH1A1, ALDH5A1, APBB1, ARSE, ASAH1, ASMT, CCL13, CCND2, CHRM1, CREB3L2, DGKG, DTX2, ETNK2, FADS2, FARSB, FBP1, G6PD, GALNT9, GGPS1, GLS2, GMDS, GZMA, HIBCH, IFNA10, IL20, IL22, ITGB6, LIFR, LTA4H, MCM7, MGAT5B, NOTCH1, OR2M4, OR2T5, OR4K13, OR8K1, PAPSS2, PHKA1, PLCD1, PPP3CC, PRKAA2, PRPS2, PTPN6, RARS2, ROBO3, SC4MOL, SEMA3B, SOS1, TUBB4, UPB1, WASF3, WNT6, ATP6V1E1, TNFRSF10D, TNFRSF18
Negative_11971	FGA, ME2, NF1, RPE, STS, ACOT11, ADSSL1, ALDH5A1, ALG9, ALOX12, ANPEP, CMAS, CRLF2, DHFR, DNMT3L, ENTPD5, FGF7, FZD6, GAL3ST1, GNB1, GRM1, IFNA21, IFNA4, IL13RA2, INSR, KIR2DS4, KLRC1, LDHD, MAGI1, MAML2, MAN2A1, MGAM, NFKBIA, NOS3, NR1H3, NR4A1, OR13J1, OR1J1, OR2A42, OR2A5, OR2T33, OR2T5, OR4D5, OR5P2, PAFAH2, PAK6, PARD6B, PIGM, PISD, PNMT, PPP1CC, RELB, RND1, RPS6KA3, SEPHS1, SGMS1, SRD5A2, ST6GAL1, TAS1R2, TICAM2, TPI1, UBE2K, VAMP4, YWHAZ
Negative_11972	ADO, EZR, GPT, LPL, PXN, SDS, STS, VCL, AACS, ACADM, ACTN2, ADCY6, APOE, ARHGEF2, AVPR1A, BDH1, CACNG6, CCL19, CCR5, CDC27, CDH15, CHST11, CHSY3, CIITA, CLDN4, CLOCK, COL3A1, COL6A1, CRB3, CSNK2A2, CYCS, CYP7A1, DHCR7, E2F4, ENTPD4, EXOC7, FECH, FUT9, GALNT9, GRB2, GUCA1C, IL28A, IL28B, ITGA5, LDHA, LM07, LTC4S, MAML3, MITF, MTMR2, MYH3, NAGLU, NAGS, NRG2, NRXN3, OR51A4, OR5F1, OR7C2, OR8D2, OR8H3, P2RX7, PAICS, PAK1, PLIN, PPP2CB, PPT1, PTCH1, RFXAP, ROBO1, SDHA, SDHB, SMARCA2, SMURF2, SOCS3, SPRY1, SPTLC2, STX2, THBD, UGCGL2, UROS, WHSC1L1, XCL1, XYLT2, PNLIPRP2, SUV420H2
Negative_11973	CBS, GLA, MET, MIF, OSM, PLG, ACACB, ACTB, ACVR1, ACVR1B, ACYP1, AGMAT, AGPAT1, AKR1C2, AMHR2, AOC3, APOA2, ARPC1A, AXIN2, BIRC3, BLVRB, CACNA1C, CCNG1, CD36, CD40LG, CNTN1, CREB3, CYP2C8, DAPK1, EHHADH, ELK4, ENTPD6, EPB41L1, EXT1, F2RL2, FGFR2, FZD4, HADH, HIBCH, IAPP, INPP1, ITGA5, JAG1, JAM2, LIPC, MAP2K7, MOV10L1, NFKBIE, NMNAT2, NRG2, NT5M, OR10AG1, OR2H1, OR2T34, OR56A3, PARVB, PER1, PNPO, PPID, PPP2R5A, PYCR1, SLIT1, STAT5B, STX12, SULT1E1, TALDO1, TAS1R3, TAS2R41, TCF1, TYROBP, UPP2

Negative_11974	HDC, OAT, PLG, ABL2, ALDOB, ALG10B, APPL1, B3GNT5, B4GALT4, CCNB1, CCR1, CLDN20, CMAS, CTPS2, CYBA, CYP1A1, CYP1A2, CYP2A13, DAPK3, DDB2, DKK1, ER01L, GGCX, GPD1, GPT2, GRB2, GSTO1, GUCY1A3, GYS1, HARS, HSD17B4, IL15RA, IL20RB, IL25, IL29, IRF7, MAN1B1, MAP3K3, MAP3K6, MITF, NCOA4, NMNAT3, OR10G9, OR10H1, OR10H3, OR1M1, OR2B11, OR51M1, OR52E2, OR8D1, P2RX5, PCYT1B, PIK3CA, PLA2G10, PLAUR, PNLIP, PPP1R3B, PTGES, SC4MOL, SDHD, SEMA3B, SFRP1, SLC2A2, TAP1, TDO2, TUBA8, TYMS, UPR1, YWHAB, YWHAE, CACNA2D4
Negative_11975	CDA, EDA, GPI, HYI, IL8, LSS, ABLIM3, ACOT11, ADH4, ADORA2A, ALG5, ASAH1, ATF4, BCKDHA, BET1L, C5AR1, C9orf95, CACNB4, CCL14, CCL15, CCL26, CHST12, CKS1B, COL5A3, CREBBP, CYP2A13, CYP2J2, DDX4, DERL1, EFNB1, FABP1, FARSA, FGF14, GCLC, GIT1, GLG1, IL20RA, IL22RA1, ITPKB, LPAR1, MAN2A1, MMP7, NAGS, NOS3, NRG1, NRXN3, NUDT2, OR10A7, OR10Z1, OR13C4, OR1C1, OR52N1, OR6S1, OR9A2, PCNA, POLR1A, PRKAB1, PRPH2, RBX1, SC5DL, SLIT2, SPHK2, SPRY2, SV2B, TAS2R16, UGT2A1, CACNA2D2, SERPINC1
Negative_11976	IL5, LCK, MET, MPZ, TEC, ACVR1B, ADCY10, AKR1A1, ALG9, ALOX15B, ARHGEF7, ATP13A2, BCAT2, BDKRB1, C1QC, CACNB4, CCL19, CCNE1, CD48, CDC25C, CDC7, CDKN2D, CHRM2, DCTD, DDX19A, DDX41, DGKB, EIF4E, EXTL1, FASN, FUT7, GAL3ST1, GALT, GNAI1, GRIA3, HMGCS2, IL6ST, LCP2, LYPLA2, MAPT, METTL2B, MYH9, NCK1, NFATC2, NFYC, OR10G7, OR1J2, OR2AT4, OR2D3, OR5AN1, OR6A2, OR6C1, OR6Q1, OR7D4, OXCT1, PDE1A, PECAM1, PLA2G3, PLOD1, POLR1A, PRKCI, PRKY, PTGIS, PTK2, RASGRP3, RFX5, RPE65, RPS6KA4, SDC3, SMAD5, SMURF2, SNAP23, SPRED1, SPRY2, SPTLC2, STX1B, STX2, WNT4, XIAP, ST6GALNAC4, TNFRSF13C
Negative_11977	ADC, CRK, EGF, IL4, INS, ME1, OTC, TK2, ACSL6, ADCY3, ALDH1A1, ALDOB, AMPD1, BBOX1, CACNA1G, CCL26, CHKB, CHRM5, CKS1B, CNTNAP1, CSNK1E, DDX51, DFFA, ENTPD2, FOSL1, GIT1, GMPS, GNAI2, GNPDA2, HADH, IFNA10, LILRB3, LM07, MYH13, NCK2, NQO1, OR14C36, OR2T3, OR4D11, OR56A1, P4HA3, PAK3, PDE8B, PLCB1, PLCD1, PRDX6, PRKG1, RARA, ROBO2, SDHD, STX2, TLN2, TRMT11, TUBB4, UMPS, ZMAT3, HSP90AA1
Negative_11978	AGL, AK5, DDO, F2, NF1, AACS, ADORA2A, AGTR1, BBOX1, BMP4, CACNB1, CCR1, CDC26, CDH1, CHD8, COQ7, CX3CR1, CXXC4, CYP2C19, DEGS2, DHODH, DNMT1, EFNA4, FRAP1, FUT5, GCAT, GNA12, GNG13, GSTM4, HAGH, HYAL2, IDH3B, IMPDH1, JAK3, KLRC3, MAFA, MAML3, MAP3K11, MMP7, MYH10, MYLK2, NADSYN1, NR1D1, NRAS, OR4C15, OR4C46, OR4K13, OR52E4, OR5M8, OR6C76, OR8B12, OR8K1, PDE1A, PDHA1, PGAP1, PGM3, POLR2B, PPCDC, PRKACA, PRKAG3, PRSS3, PTPN1, RASGRP4, SAT2, SELL, SPAM1, STAT4, TAS2R38, TNFSF12, TRAF1, TSHB, UCP1, VEGFA, KIR2DL5A, MAPK8IP1, TNFRSF10A
Negative_11979	AUH, BTD, C2, F3, FER, FES, IHH, RPE, ACADSB, ACP1, ADH6, AGPAT1, ALG12, ALPI, ALPP, AMPD3, APBB1, APLP1, BMP4, CACNA1H, CADM1, CALML6, CD47, CD74, CFTR, CNTFR, CNTNAP1, CSAD, CX3CL1, CYBA, CYP1A1, DARS, DERA, DIAPH1, DKK2, DNMT3L, DPM3, ERBB4, FADS2, GADD45B, GLS2, GMPR2, GNAZ, GP1BA, GZMB, IARS2, IL18R1, ITPKA, LIPE, MAP3K5, MAPK11, MFNG, MTHFS, NRCAM, NT5C2, NUMB, OR10J3, OR13C3, OR1L3, OR4C11, OR4K13, OR4K5, OR7G3, OR8D2, PAPSS2, PGS1, PHKB, PLA1A, PMVK, PPAP2B, PRKCD, PTDSS2, RASA1, RASGRP3, RRAS2, RXRB, SDC1, SELL, SEMA4B, SEMA7A, SEPHS1, STX5, TACR3, TYMP, UGDH, UGT2A1, WHSC1L1, XCR1

Negative_11980	CFI, TEC, AGPAT4, ALDH1B1, ANGPTL4, ARD1A, BMPR2, CACNA1S, CDKN1B, C DKN1C, CXCL12, CXXC4, CYP2C8, CYP4F3, DUSP1, ESAM, FGF14, GALNT1, GA NC, GLB1, GRLF1, HGSNAT, HYAL1, IARS2, IFNGR1, IGSF5, IL17A, INMT, IT GA11, ITGB7, LARS, LEF1, LIPA, LYPLA1, MAN1C1, MAPK1, MDH2, MYH9, MYL 2, NARS2, NAT5, NEGR1, NKD1, NOX1, NTF4, OR10J1, OR1J1, OR4C12, OR9G1 , OR9I1, PGAM2, PGAM4, PIGQ, PPP3R1, QPRT, RASGRP2, SDHA, SGPP1, SLC2 5A5, SMPD2, SNAP23, SSH2, TBL1Y, TYRP1, UGT2B4, WBSCR22, WWP2, XYLT1 , KIR2DL5A, TNFRSF10D
Negative_11981	CDA, IDS, TNF, ACO1, AKT1, ALCAM, APLP1, ASMT, B3GNT2, BMPR2, BNIP1, C FL2, CHEK2, CHRM2, DAAM2, DEGS2, DIAPH3, DUSP8, ENAH, EPHB3, ESAM, FA SLG, FGF6, FLT3, FPGS, FZD3, GABARAP, GJD2, GNA15, GPD1L, GRLF1, HES1 , HEXA, HLCS, HMBS, HPSE2, IFNA16, IL1R2, INHBA, IRF3, ITGAM, KITLG, K LKB1, LARS2, MARS, MFNG, MYH9, NAGS, OLAH, OR10A6, OR10Q1, OR1L1, OR2 A42, OR2T29, OR2Y1, OR3A2, OR4D9, OR7D2, OR8H2, OR8S1, PAPSS2, PARD6 G, PDGFC, PIGO, PLCB3, PLXNA2, PMM1, POLR1E, PPARA, PPP1CA, RDH8, ROC K2, RPIA, RUNX1T1, SEMA4G, SH2D2A, SLC27A4, SNAI2, SOAT1, SOX17, SPR ED1, SPRY1, STX8, TPH2, TRAF2, UGT2B17, WNT2B, MAPK8IP3
Negative_11982	AK7, CGN, DBT, GK, ID2, LIF, RET, SHH, ABLIM3, ADRA1B, ALOX15, APC2, AR PC1B, ARPC5, B3GNT3, B4GALT2, BCAT2, C7orf16, CACNA1D, CACNB1, CARD 11, CCND2, CD74, CDS2, CHST12, CKS1B, CREBBP, CRY2, CSNK1A1, CUL1, CY P2C9, DFFA, DGKE, DLL3, EPB41L1, EVI1, FGF2, FGF20, G6PC2, GABARAP, G GT6, GGT7, GMPS, GNG12, GSTA1, HCLS1, IL21, IL2RB, IRS2, ITGA3, KLKB1 , LIPE, MAP3K4, MAP4K3, MAPK12, MCCC2, NCAM2, NEU1, NKX3- 1, NT5C3, OLR1, OR2S2, OR4C13, OR4D2, OR4N4, OR51I2, P2RX3, PARS2, PD E6D, PDE8A, PDHA1, PGAM4, PKMYT1, PLEKHA8, PTGER1, PYGM, RASGRF2, SE MA4C, SMAD7, SPTLC1, SUCLG2, TAS2R4, TBL1Y, TSHB, TYMS, WNT2B, WNT7A
Negative_11983	C8B, HK3, ACP2, AKR1D1, AXIN2, CCL27, CDKN2C, COL1A1, CXXC4, CYBB, DG KE, DHCR24, DLST, EPHA8, GALNS, GALNT6, GLI2, GNAO1, HAP1, HSPB1, IGF BP3, INADL, ITGAL, ITPK1, JAK2, LAMA3, MAN1C1, MAOB, MAPK3, MCM7, MMP 9, MYLK3, NKD2, OPLAH, OR13H1, OR14C36, OR4Q3, OR52E4, OR8B12, OR9Q1 , OXCT2, PDE7A, PLCB4, PPP1CA, PPP2CB, PSENE1, PTGES, PTGS2, RASGRP1 , SGMS2, SGPP1, SRD5A2, SULT1A1, TCF7L2, ULK2, WWP2, PRICKLE1
Negative_11984	C4B, F2, MTR, PC, RFK, ABL2, ACAA1, ACAD9, ACVR2B, ADAM17, ADH6, ADSS, AHCY, AKR1C1, AMDHD1, ANAPC5, ASAH1, ATP5H, ATP6VOB, B3GALT4, B3GAL T5, BIRC5, BST1, CCL27, CCNB1, CCNB2, CD58, CDK4, CEBPA, CHEK2, CHRM1 , CIITA, CLCA2, COL1A2, CYP11A1, DCXR, DDX41, DPM1, EFN1, EPHA4, FTC D, GAS1, GGT7, GRHR, GRIA1, HIP1, HLA- F, HNF4G, HSD3B7, IFNW1, IL28RA, INPP4A, INPP5A, IPMK, ITGA5, ITGAL, KARS, LAMB3, LDHA, MRAS, NEFH, NEFM, NME4, NUDT9, OR2V2, OR4E2, OR51A 2, OR52R1, OR6F1, OR8U1, ORC4L, OXCT1, PGAM2, PIAS2, PKMYT1, PLAT, PL OD1, PPP3CB, PPT1, RALBP1, RASGRP1, RFWD2, RXRA, SELL, STK11, STX18, SULT2B1, TAS2R1, TMLHE, TPMT, UPRT, VEGFB, WNT4, WNT5A, YWHAH
Negative_11985	CKM, CRK, GGH, GLS, ACMSD, ACSM5, ALG9, ARNT2, ATP5A1, ATP5J2, B3GALT 2, CACNA1F, CARS2, CCL19, CD244, CD80, CDK4, CDKN1A, CKMT2, CNDP1, CS NK1A1, CYP2E1, DLL4, ENTPD5, ERO1L, FLT4, FUT6, GALNT2, GJA1, GPD1L, GRIN2D, HLA- DOB, HLCS, IL2RB, KCNQ1, KLRK1, LEFTY2, MCM7, MGAT5, NTF3, OR1E1, OR2 B11, OR2V2, OR52K1, OR5B12, OR6A2, OR6B3, OR9G1, OR9K2, PDE1A, PHKA2 , PRKACB, PRKAR1A, PTK2B, PVRL2, RERE, RPSA, RRM1, SETD8, SUOX, TNFSF 12, TUBAL3, UROD, WIF1, WWP2, ATP6V1E2, SERPING1



Negative_11986	ADC, AUH, FGA, SP1, WAS, ACADSB, ACPP, AKR1C3, APRT, ASMT, ASRGL1, CAMK4, CCND1, CCND3, CD40, CD8A, COL2A1, COL5A3, CRHR1, CRKL, CTTN, DOLP, DPAGT1, DUSP14, DUSP2, DUSP8, E2F4, FRAT2, GLUD2, GRPR, HAGHL, HIP1, HSD17B2, IFNGR1, IL12RB1, INSR, ITGA6, JAK2, MAN1B1, MAPK3, MICA, NFATC3, NFYB, NPAS2, NTNG1, OR10J3, OR11G2, OR13D1, OR13J1, OR1J1, OR1L4, OR2M4, OR51A2, OR5L2, OR6K3, OR7A17, PCYT1B, PDGFD, PFKFB4, PKM, PLA2G2D, PLAU, PLEKHA8, PNPO, POLA2, PPAP2C, PPP2R5A, PRKACG, PRKG2, PRODH2, PTGES2, PVRL2, PYCR1, SARDH, SETD2, SHC1, SHISA5, SLC2A4, SLC9A1, SMAD9, SNAI1, SNAP25, SYNJ2, TAS2R8, TGFBR1, THBS3, TKTL1, TNFSF8, TRAF2, TUBAL3, UBE2L6, VDAC3, WASF2, ATP6V1G2, ATP6V1G3, PPARGC1A
Negative_11987	FAS, ID1, PGD, SHH, ACHE, ACSL6, ACTG1, ALDH3B2, ALDH6A1, ALG12, ALS2, AMPD2, APLP1, ATP5G2, BPGM, CALML3, CALML6, CAMK2G, CCDC6, CD47, CDKN2C, CKS1B, CLDN3, COL4A2, COMT, CPT1A, CTBP1, CXCL5, CYP11A1, CYP1A1, DPYS, EDA2R, EGLN3, ENTPD1, EPHA3, F2RL3, FGF1, FGF7, FLT4, FUT2, GAL3ST1, GNG12, GOSR2, GSTA3, HCST, HES1, HSD17B3, IL21, IL2RG, ITGA, LAMB1, MCCC2, MGST2, MLLT4, NT5E, OGDH, OLAH, OR10X1, OR13F1, OR14J1, OR1D5, OR2M4, OR51L1, OR8J3, PDE4C, PDX1, PHKG2, PI4KB, PIGA, PIK3R4, PRDX6, PTGER3, RPIA, SETD1A, SH2D1A, SOCS3, STEAP3, SULT1E1, TALD01, TAS2R3, THY1, TLN2, TLR4, VAV1, VTI1A, YES1, ATP6V1G3, CTNNBIP1, ST6GALNAC4
Negative_11988	FGB, GLA, JUN, LHB, A4GALT, ALDH3A2, ALPL, ANAPC7, ANPEP, BLVRA, BMPR1A, CCL7, CCR10, CD28, CDC14A, CDK2, CYP2C8, FASN, FDPS, FGF4, FGF9, FOXA2, FZD10, FZD2, GSTA2, HLA-C, HRAS, HSP90B1, INPP4A, IQGAP2, ITGAD, ITGAX, ITPK1, LARS2, LEPR, MAN1A1, MAN1C1, MAP4K2, MGST3, NCOA4, NEUROD1, NTF3, OLR1, OR14J1, OR1L1, OR2B11, OR2T5, OR4D6, OR4K2, OR52I2, OR5J2, OR6C74, OR6Y1, PDIA4, PIGF, POLD1, POLR2K, PPP2R1B, PRKAA1, PSME3, PTPRM, RPE65, STAM2, SV2C, TPH1, TSNARE1, TUBB2A, TUBB3, CSGALNACT2, HLA-DPA1, KIR2DL5A, SERPINE1, ST6GALNAC6, TNFRSF11B
Negative_11989	AGL, CKB, GNS, TNF, WAS, ALG2, ATP5D, BCL10, CACNA1F, CAMK2A, CCKBR, CCL17, CHUK, CLTB, CSNK1G1, CXCL9, DDX23, DIAPH1, DNMT3L, DTX3L, EIF4E, EPHA6, FUT3, HADHA, HAP1, HIF1A, LALBA, LAP3, LDHD, LTBP1, MCM5, MYH9, MYL5, NEUROG3, NT5C1B, NUDT12, OPLAH, OR10G8, OR10J5, OR1K1, OR2AT4, OR4F6, OR52B6, OR9Q2, PAK3, PDHB, PGAM1, PPM1A, PSEN1, PTCH2, RAC2, RBKS, SESN1, SH3BP2, SKIV2L2, ST3GAL4, TAS1R3, TNFRSF9, UAP1
Negative_11990	AR, BAD, C8B, GLA, GSS, ME1, ZYX, AASS, ABCC8, ACADSB, ACPP, ACSM4, ACTN1, ARSE, ASMT, BDH1, CACNA1E, CBLC, CCL4, CD36, CNGA3, COL1A2, CSNK1E, CTTN, DARS2, DHCR24, DPM3, DPYD, EDN1, EPHA3, EPRS, FGF12, FIGF, G6PC2, G6PD, GRB2, GRIA3, HLA-DRA, HPSE, HTR7, IDH1, IFNA5, IL11, IL15, IL20RB, IPPK, ITGB3, JAK1, JAK2, MAP3K11, MAT1A, NTN1, NUDT8, OR2A25, OR2AE1, OR2T10, OR52K1, OR52N2, OR5D18, OR6C3, OR7C1, P4HA3, PDIA4, POLE, PRKG2, PRKY, RAB5A, RPS6KA5, SH2D2A, SLC2A4, SMAD3, SMPD4, SOCS2, TGFB3, TOMM40, UBE2L3, UGT1A10, UNC5D, VAV2, VNN1, WASL, XIAP, ZBTB16, GABARAPL1

Negative_11991	CFH, FGA, IL3, MPI, NF1, PGF, AADAT, ACAT2, ACSS1, AGRP, ALAS1, ALDH3A2, ARNT2, ARSA, ATP5G3, B3GALT6, B3GNT3, CASP10, CCND3, CES7, CHSY1, CTBP2, CXCL12, CXXC4, CYP4F2, DKK1, DOLPP1, E2F2, FM01, FOXA3, GAD1, GANAB, GYS1, HAP1, HIF1A, HSP90B1, IFNAR2, INHBE, KIR2DS5, KLRC1, LILRB3, LRP5, MAT2B, MEF2C, NCKAP1L, NCSTN, NFATC1, NRXN1, OPLAH, OR10X1, OR2H1, OR2T1, OR2T3, OR51E1, OR5D18, OR6C1, OR8D1, PDGFB, PFN3, PLA2G3, PRKCG, PTDSS2, PTPRZ1, PYGL, RAC2, RAPGEF4, RFX5, RHOQ, RPS6KA3, RRAS, SCIN, SEMA4A, SNAP23, SSH2, STX18, TAS1R1, TAS2R3, TLN2, TLR4, AASDHPPT, ATP6VOE1, HLA-DPA1, PLA2G12B, SERPINB5, ST6GALNAC1, TNFRSF10D
Negative_11992	FES, HK1, NLK, ALOX15B, AXIN2, CHPT1, COQ6, CTNNA3, CXCL2, EFNA1, EFNA3, EGLN1, FLT3, GALNTL4, GGT5, GNA11, GNA15, GNPAT1, GYS2, HAO2, IGFBP1, IL10, IL23A, IRF3, IRF7, ITGA5, KLK3, LTB4R2, MPDZ, NR5A2, NTF3, OR4K14, OR51A4, OR6C70, OR6N1, OR6T1, OR8H2, PDE8A, PIAS2, POLE3, PRKACB, RASGRP3, SDHC, SGMS1, SULT1A1, THBS2, THBS3, TNFSF4, TRAF3, TUBAL3, TYROBP, UCK2
Negative_11993	AK1, GBA, HGF, SDS, ADH4, AK3L1, AKR1B1, AKR1C1, ATP5J, CACNG1, CCL19, CCL5, CD34, CNTNAP2, CPT1A, CTSL1, DPM2, EHMT1, EHMT2, EIF4E2, ESPL1, ETNK2, FGD1, FGF1, FGF14, FGF22, FLT3, FOXA2, GALNTL4, GATM, GBGT1, GNA12, GNAO1, GOSR2, GUCY2F, HNMT, HRH1, IDH3B, IGSF5, IL20, IL22RA1, IMPDH1, LARS, LCP2, MCM7, MGAT4A, MMP14, MYH4, NOX1, OR14I1, OR1B1, OR1D5, OR2M5, OR4K1, OR4N2, OR52D1, OR52K1, OR5B21, PARD6A, PARVA, PDXP, PGAM2, PHKA1, PIK3R2, PLA2G2F, PLA2G3, PLCB4, PLOD3, PPAR, PRKCH, PRKCI, PTCH2, RBX1, RPSA, SPI1, SRGAP3, STX3, TAP1, TAS2R8, TCIRG1, TJP3, TRAF4, TSHB, UCK2, UNC5D, VTI1A, ATP6V1B1, HLA-DQB1, PAFAH1B3, SERPINB5
Negative_11994	FUK, GHR, HK1, IL3, SDS, SP1, ACADSB, ACAT2, ACO1, ACTC1, AOC3, B3GAT3, CACNB3, CARD11, CCL13, COL1A2, CYP1A2, DHCR24, DUSP4, GALK2, GBE1, GNAI2, GNG3, GPD2, GUCY2C, HMGCS1, HTR4, IL11RA, INHBC, ITGA3, JAG1, KLRD1, LILRB3, MAPK7, MYL9, NEFL, NEGR1, NT5C, OR2M2, OR2M7, OR2T10, OR4A5, OR5M8, OR8B4, PDGFB, PIGO, PLIN, POLR3B, PPA2, PPP2R1A, PPP3R2, PTPRM, RAPGEF4, RIPK1, ROCK1, SLC12A2, SULT1A1, TAS2R48, UBE2K, UGT8, WWP2, ZAP70, ATP6VOE1, HLA-DRB5, HSD17B12
Negative_11995	DCK, DCT, DLD, EPO, GNS, NF1, SDS, AASDH, ACPT, ALDH1A3, APBB1, ARRB2, B3GALT6, B3GNT3, CCL21, CD44, CDC25A, CHKB, CHUK, CMBL, CNTF, COL5A3, CREB3L2, CSNK1G1, CYFIP2, DIAPH1, DMGDH, DTX2, EIF4E, EPHA1, EPHB4, FABP4, FASN, FUT7, FZD5, GPX5, GRM1, GSTA4, IFNGR2, IL10RB, IL11, INADL, IRAK4, LARS2, LIPF, MAP3K12, MAP4K2, MDH1, METTL2B, NFYA, NRXN2, OCLN, OR10A7, OR10H5, OR13J1, OR1L3, OR52E4, OR5AC2, OR7A10, PARD6G, PFKP, PFN1, PIP5K3, POLD2, POLE3, RAF1, RASSF1, REL, RPIA, RRM2B, RXRA, SELP, SEMA7A, SMURF2, SOAT2, STAT1, SYNJ1, TBL1XR1, TGFB3, TRAF6, TUBB, UBE2L3, VAMP3
Negative_11996	AUH, MPZ, AADAT, ADCY10, ADSS, ALDH1B1, BMPR1B, CCL1, CD22, CFTR, CLDN1, CMAS, COL3A1, DHCR24, DLL4, DPAGT1, DRD2, ETS1, FGF17, FSHB, GGCX, GSTA1, HMBS, IMPDH1, KIR2DS5, LAMA4, LDHC, LLGL1, MADCAM1, MAOB, MAT1A, MYH10, NME2, NR1D1, OR13C4, OR1B1, OR52K1, PDCD1, PDE9A, PFKFB1, PFKFB4, PIP5K1A, PLXNA2, PTGER3, SMAD5, STK4, TCF7L1, EIF4EBP1, SERPIN1, TNFRSF10C

Negative_11997	BCR, C2, C8G, CS, EBP, JUP, LEP, TYR, ACAD9, ACTB, AFMID, AKR1A1, ARHGE F4, ARHGEF7, ASIP, ATP5H, BCL2, BHMT, CASK, CASP10, CAV1, CLDN3, CTBP 1, CX3CR1, CYP4A11, DCXR, DDOST, DGKA, DHDH, DHRS4, DLL3, EFN1, EPB4 1L2, FOXA2, FZD10, GGT6, GIT1, GRLF1, GZMA, GZMB, HRH2, IDI2, IL17A, I L20RB, IL21, ITGAD, KAT2A, LRP6, MAP3K8, MKNK1, MRAS, MTHFD1, MTHFD2 , MTHFR, NME2, NSD1, OR10A2, OR10A7, OR10R2, OR11G2, OR11H1, OR1L6, O R2Z1, OR52A5, OR5P2, OR8H1, OXSM, PAK2, PDE10A, PFN1, PPAP2B, PPARG, PRNP, PRSS1, PSME1, PVRL3, PYGL, PYGM, RRM2, SARDH, SFRP2, SLC33A1, S V2A, TAP1, TLN2, TM7SF2, TNFSF12, TRADD, UGT2A1, WASF2, WIF1, YWHAH, HLA-DRB3, TNFRSF10B
Negative_11998	C5, FGG, IL2, ME3, ACTN4, AGXT, ALOX12B, AMPD3, AOC3, ARPC1A, CASP6, C CR6, CD74, CD79B, CD82, CHIT1, CNGA3, CREB1, CSAD, CYP4A22, DERL1, DU SP7, EHMT1, ENTPD2, FARSB, GLS2, GSTT1, GUCY2F, GZMA, HSP90B1, HSPA2 , IRAK2, ITPKB, KITLG, LTBR, METTL6, MGAT1, MTMR2, NEFM, NOX3, NTSR1, NUMB, OR1K1, OR4A5, OR4S2, OR51A2, OR51V1, OR52R1, OR5AS1, OR5C1, OR C5L, OXCT2, PAK7, PANK3, PARD6A, PLCD1, PON3, PPP2R1B, PRPS2, RFX5, S ELE, SEMA4D, SFRP2, SMARCA2, SPAM1, SRGAP3, TAS1R1, YWHAQ, ATP6V0A4 , HLA-DQA2, SERPIND1
Negative_11999	ABO, EZR, GAA, ID1, KIT, OAT, PLN, ACOT12, ACP1, ACVR1C, ACVRL1, AOC2, ARHGEF6, ARRB1, ATP2A3, CACNA1D, CDC14B, CDS1, CLDN8, CNGB1, CPT1B, CTNNA2, CYP27A1, DOT1L, FARSA, GNAI2, HHIP, HPSE2, IFNW1, IL18, IL1A , IL6R, ITGA10, ITGA2B, KCNB1, KIR2DS4, KIR3DL2, LIFR, NCK1, NEUROG3 , NLGN2, OLAH, OR1A1, OR1L6, OR52E2, PAK7, PGAM2, PIAS3, PRKY, PRPS1, SKP1, TACR2, TNFSF11, VASP, ZFYVE16, HLA-DQB1, SERPIND1
Negative_12000	AGK, AK2, GK2, PRL, PXN, ACAD9, ACP2, ACSM4, ACTA2, AHCYL2, ALG12, AMP D2, ANGPTL4, ATP50, BMP4, CD47, CHST11, CLDN4, COL5A1, CSNK1G1, CSNK 1G3, CXCL10, CXCL9, CYP19A1, DEGS2, DGKH, DLL1, ENTPD4, FBP2, FZD5, G NB1, GRIA2, GUCY1B3, IFNA13, IRAK2, IRS1, ITGB2, KITLG, LAMB1, LTA4H , MALT1, NRG1, NUDT2, OR13C5, OR1S2, P2RX5, P2RX7, PDE1A, PIGC, POLE2 , POLR3K, PPP2CA, RASA2, SEMA4F, SOCS5, SPHK1, TCF7L2, TGFB3, THBS4, UGT2B28, VEGFA, WASL, YWHAG, ST6GALNAC6
Negative_12001	A2M, BAX, C2, CGN, F8, HK2, LSS, MAX, PAH, VTN, ABLIM2, ACP2, ACY1, ADCY 2, ADCY8, ALDH1A2, ALG13, CD86, CLCA4, CRLS1, CSNK1A1, CXCL2, CYP2A7 , DHCR24, DTYMK, E2F3, EPHX1, EXT1, GADD45A, GDE1, GNAS, GPX7, GRIA3, HEXA, HSPA1B, IARS, ICAM1, IFNA5, IL17A, IRF7, IRF9, ITGAM, ITGB7, MA GI2, MAT1A, MTMR1, NAGK, NCAM1, NCF4, NEFM, NFKB1B, NUDT2, OR2A2, OR4 A15, OR5A1, OR5D14, OR5P3, OR6X1, OR7D2, OR9A2, OR9G4, ORC5L, PAK4, P DE2A, PFN3, PLOD1, POLE3, POLR1A, POLR2D, PPA1, PRKCE, PRNP, PTAFR, P TPRB, RERE, RPS6KA6, SELP, SHMT2, SLC2A2, SMC1A, SOX17, SRD5A1, SRGA P3, TAS2R40, THBS3, TRAF6, UGT2A1, UGT2B10, VAMP3, WARS2, WNT16, XCR 1, XIAP, ATP6V1B1, MAPKAPK5, PRICKLE2, SERPINF2
Negative_12002	CKB, ID4, KDR, MSN, SYK, TPO, ACPT, ADH5, ALDH5A1, AMDHD2, ARNT, ATP5A 1, CARD11, CCL27, CLOCK, CTBS, CYBA, DHRS4L2, DLL3, FGFR1, FMO3, FSHR , FUT6, GFAP, GLG1, GLI3, GNA11, HADHA, HTR2B, IL12A, INHBA, LAMB4, MY H6, MYH7, NEFM, NFKB1, NRG2, NT5C, ONECUT1, OR2T1, OR51V1, OR5AS1, PI GU, PNPLA4, PTCH2, PTPN6, SEMA4G, SETD1B, SKP2, SMURF1, SOCS1, SPRED 1, STX1B, TUBB2A, WASL, WNT9B, ATP6V1C2, ST6GALNAC6
Negative_12003	FER, ME3, MUT, PLN, SDS, ACO1, ALDH1A2, ASMT, ATG3, ATP4A, ATP5F1, ATP 6VOB, AXIN2, B3GAT2, B4GALT3, BAI1, BCL2, BDKRB1, CACNG6, CCNB3, CDK N1B, CHAD, CLDN18, CTLA4, CTSG, CYP11B2, DLL3, DNMT1, DPYSL2, FLOT1, GLDC, HTR2C, IL15, IL17A, IL18, LTBR, MAT1A, MAT2B, METTL2B, MTHFS, M YH6, NANS, NOX3, NUMBL, OR2G6, OR4F6, OR7G1, PIGL, PLXNA3, POLA2, PPP 5C, PRKACA, PYCRL, RHOA, SEMA3A, SETD8, SMPD3, STK3, TBXAS1, TCF7L2, TUBAL3, VAV2, VTI1A, HLA-DQA2, MAPKAPK5, TNFRSF17

Negative_12004	AGL, CR2, DLD, FST, GBA, GPT, ID1, LIF, OAT, RFK, ABL2, ACP1, AFMID, AGR P, ATIC, ATP5G1, BLNK, CCL2, CCL7, CD79A, CDKN1A, CHKA, CLDN18, CREB3 L3, CTNNA3, CTSG, CXCL2, DGKE, DUSP3, EFNB3, FGF4, GALNTL4, GGT6, GST M5, GTSE1, GUCY2C, HAAO, HAGHL, HES1, HSD3B2, HSPA8, IL12A, ITGA7, LA MC1, LIPE, LTC4S, MAML3, MAP2K2, MAPK1, MCM4, MIOX, NAGLU, NPR1, OR10 G7, OR13C8, OR13C9, OR2AT4, OR2K2, OR52K1, OR5M8, OR5P2, OR5R1, OR6B 2, OR6N1, P4HA3, PAPSS2, PARD6B, PCNA, PDE3B, PDE6D, PDK1, PER2, PHGD H, PI4KA, PIP4K2A, PIP5K1B, POLE, POLR2G, POLR2H, PPAT, PTPN6, RAPGE F4, RARA, RBX1, RPIA, SH3BP2, SLC27A4, SOAT1, SOCS5, SPRY3, SV2B, SYN J2, TAP2, UGT2B7, UXS1, VAV1, MAP3K7IP2, SUV420H2
Negative_12005	DCT, GK2, STS, VCL, ACO1, ACTN1, ADRB2, ARHGEF1, ASNS, BPGM, C1QC, CDC 2, CHRNA7, CNTNAP2, COL2A1, CREB5, CTBS, CTNND1, DAPK1, DPM1, EARS2, ENPP7, EXTL1, FBP1, FBXW11, GANC, GAS1, IL22RA1, KAT2A, LRP5, MTAP, N ODAL, OR10S1, OR4S2, OR8U1, OSMR, PIK3C3, PLA2G5, PPAR, PPP2R2D, RG S3, SNAI1, SPCS1, TFDPI, TRAF6, UBE2L6, WNT10A, YWHAH, ZAP70, ATP6V1 G2, CSNK1A1L, HSP90AA1, PAFAH1B3, SERPINB5
Negative_12006	C3, ID3, AADAC, ACSL1, ADCY3, ADH6, ALDH7A1, ALDOB, APOC3, ATG12, B3G AT1, B4GALT2, BDNF, CACNB1, CAV2, CD55, CDC25A, CTNNA2, CTSS, DDIT3, DHCR24, DOLPP1, EHMT1, EI24, EIF4E2, FECH, FOXA2, FZR1, GADD45A, GBG T1, GPD1, HIP1, IL8RA, INSR, ITGA6, ITGB7, KCNB1, KYNU, MAP2K1, MINPP 1, NAGS, NCR3, NME7, OR10A7, OR10G4, OR2B11, OR6C1, OR7A10, P2RX2, PL CE1, PLTP, POLR2F, PORCN, PPP1R3C, PPP2R2C, PRKCQ, PTAFR, RAB5A, RBK S, RGS3, RPS6KA1, SEMA4B, TAS2R10, TGFBR1, VAMP4, YOD1
Negative_12007	CR2, DBT, DCT, GNS, IL2, INS, KIT, MIF, PRL, TPO, ABLIM3, ACTB, ALDH1A1 , ANAPC11, CACNG2, CCL15, CCL20, CDH2, CDK2, CERK, CHAT, CLDN4, CLDN9 , CSF2RA, CYP1A1, DNMT1, EARS2, EIF4E, EREG, FGF5, FUT1, GALNTL4, GNA I2, GNAT3, GSTM5, GUCY1A2, HSD17B3, HTR5A, IFNA7, IL19, IL20RA, KLRC 2, LCP2, MGAT5, MTFMT, NME6, OR14J1, OR2W1, OR4C12, OR51A4, OR51G2, O R51L1, P2RX6, PLXNA3, PNMT, POLD4, PPP1CC, PPP2R1B, PSME1, RIPK1, SA RS, SETD1B, SHISA5, STX18, STX5, THBS3, TUBB2B, ATP6V1C2, PNLIPRP2
Negative_12008	ATM, CD2, DAO, FER, ME3, MOS, SI, TK1, ACOT11, ACP5, ACSL5, ACVR1B, ALD H1L1, ALG12, AOC3, ARRB1, ASCC3, ATF4, ATG3, ATP12A, BIRC3, CCL3, CCL 7, CCNB3, CD72, CHST13, CLDN15, CTNND1, CYBA, CYP1B1, DCTD, DDX23, DD X41, DUSP16, EPHA6, EXTL2, GADD45A, GCAT, GCNT2, GFAP, IL20, IL22RA1 , ITPKA, KIR3DL1, LAMA4, LAMB1, LIPG, LPAR1, MAML2, MAP3K2, MAPK12, M DM4, MGST2, MGST3, MYH15, MYH3, NCK1, NFKBIE, OR12D3, OR13C3, OR1M1, OR2C3, OR56A3, OR6K6, PAK4, PAX8, PHGDH, PIP5K1B, PLXNB1, PPP2R2B, P SPH, RALB, RELB, SEMA3G, SLC27A1, STK4, SULT1E1, SYNJ2, TUBB4, WNT11 , ATP6V1G2, PAFAH1B2, SERPINE1
Negative_12009	CFH, HAL, IL6, IVD, ME1, MIF, PC, ADRB1, ALPP, ARSA, C4BPB, CCL22, CCR1 , CD247, CSNK1G1, DGKG, DUSP7, EDNRA, EPHA6, EXTL2, FGF9, GDF7, GLI2, GMPPA, GRIN2D, GSTP1, GUSB, HADHB, HAGH, HRH1, ICAM2, IFNK, IL17B, IL 3RA, IL6R, IPPK, ITCH, JAK1, LCMT2, LLGL1, MDH1, MTHFD1L, MYL9, NFATC 3, NFYA, NUDT12, OR1I1, OR3A1, OR52N4, OR9A2, OR9Q2, ORC4L, PAFAH2, P AK2, PHKG2, PLA2G10, POLR2D, PPAT, PRKACA, PTGIS, PVRL2, RAPGEF4, RF NG, ROBO1, RPN2, RUNX1, SETDB2, TALDO1, TAS2R16, TBL1XR1, TNFSF10, T UBA1C, UGCG, ZAP70, ALDH18A1, ATP6VOD1, CTNNBIP1

Negative_12010	BTC, LSS, NNT, ACAA2, ACTA2, ACTB, ADORA2B, ADRB1, ALOX15, AMY2A, ANA PC7, ARPC5, ASPA, BCL2, CCR6, CCR7, CHSY1, CSF1R, CTNNA2, CYP2B6, EP3 00, EPHB3, FCGR3A, FECH, FTMT, FUT7, GLB1, HADHA, HNF1A, IFNA10, IL12 A, IL24, IL9R, ITGA10, ITGB2, KLRD1, LAMB4, LEPR, LIPG, LIPT1, LLGL1, LMO7, MAP3K12, MAP4K1, MAT2B, MYD88, OGDHL, OR10K2, OR11A1, OR14C36 , OR1M1, OR2A5, OR2B6, OR2M3, OR2M5, OR4N5, OR51E2, OR56A4, OR5B3, OS MR, PGK1, PIAS3, PIGA, PIGO, POLD4, POLR2L, POLR3D, PPP2R1A, RELA, RP E65, SEMA4B, SMC1B, SOCS5, ST3GAL1, STK11, STX10, TKTL1, TNFSF12, TU BA3C, VTI1B, ZNRD1, ARHGEF12, HSD17B12, MAPK8IP1, PAFAH1B2, PNLIPR P2, TNFRSF10C
Negative_12011	F2R, PLG, PML, RB1, ADCY5, ADCY6, ADRB3, AGPAT1, AKR1A1, AKR1D1, ALAS 1, AMD1, ASAH1, ATF4, ATP6VOC, BMP2, C4BPA, CACNA1A, CACNA1D, CACNA1 F, CAMKK2, CAV3, CCDC6, CCR7, CDIPT, CKMT2, CLTC, CMPK1, CNTN1, CREB3 L3, CYP4F3, DAPK1, DEGS2, DGKE, DIAPH1, DPYD, DPYS, DUSP6, EPHB1, EPO R, FCGR3B, FUT4, GLYCTK, GNAS, HIBCH, IL8RA, INPP5E, ISYNA1, ITGB6, L DHC, LRP6, MAPK10, MCM7, NFYA, NRCAM, NRXN3, OR2A25, OR2M2, OR2T10, O R4Q3, OR52N5, OR5D14, OR5V1, OR8A1, PARVB, PIGW, PIP5K1C, PPAP2C, PP P1R3C, PPP3CC, PRIM2, RASGRF2, RHEB, ROBO1, ROBO3, RUNX1T1, SARS2, S ETD7, SPHK1, ST8SIA1, STX12, SV2A, UBA1, UXS1, WNT2, WNT3A, ZFYVE16, TNFRSF10A
Negative_12012	DCC, IL6, IL8, MTR, AASS, ACAD8, ADH7, AKR1C4, ALDH9A1, AMPD1, ARG2, A TP2A2, B3GALT5, CACNB2, CCKAR, CCL14, CCL15, COX10, CSF3, CSH1, F13A 1, FCGR3A, FGFR1, FOXO1, GALNT9, GBE1, GGPS1, HSD11B1, HSD3B2, IL23R , INHBB, LAMA3, LEPR, LIAS, LYPLA2, MYH1, MYL5, NFE2L2, NODAL, NPAS2, NR5A2, OR11H6, OR1E2, OR2M3, OR51I1, PFKFB4, PKMYT1, PLA2G5, POLR1A , PPAP2B, PVRL3, QPRT, RND1, SETD7, SMAD9, SPTAN1, THBS4, UMPS, HLA- DRB5, MAPKAPK2, TNFRSF10D, TNFRSF13C
Negative_12013	CD6, DCK, DDC, NNT, SMS, STS, ACSL1, ACSM4, AKR1C1, ALG1, C1QB, CACNB3 , CACNB2, CD58, CDC27, CIITA, COL4A1, CTNNA1, CYP4F3, DGKE, DVL1, EDAR , GALNTL4, GCLC, GFPT1, GZMB, HCST, HEXB, HIBADH, HYAL2, ICAM2, IDUA, IFNA17, IL1RAP, IL25, LDHC, LRP5, NKX2- 2, NUMBL, OR10G3, OR10S1, OR13G1, OR2H1, OR56A3, OR9A2, ORC5L, P2RX2 , PFKFB1, POLR2J, POLR2K, PON2, PPA2, PSPH, RAPGEF3, RPRM, RPS6KA3, S FRP1, SLC27A1, SMAD7, SOS1, SREBF1, TBL1XR1, TFPI, TRAF1, TUBB2C, WA SF3, CSGALNACT2, GABARAPL1, MAP3K7IP1, MAPK8IP1, MAPK8IP2, ST6GAL NAC4, TNFRSF11B
Negative_12014	HK3, NPY, SRM, TXK, ACSL1, ADH5, ADORA2A, B4GALT2, CAMK2B, CCKBR, CCR 5, CDH3, CFTR, CHRNA7, COX10, CTPS2, DUSP6, EPB41, ETS1, FGF19, FLOT2 , GGT7, GPX5, GRIN1, HLA- DRA, HMGCL, HMGCS1, HSPA2, HTR7, IFNA14, ITGB5, MARS2, MBL2, MYH14, M YLK2, NCR3, NME4, NRG1, OPLAH, OR10G3, OR4F6, OR51I2, OR56A3, OR5I1, OR6T1, OR8B4, OR9A2, PCNA, PDE9A, PIP4K2A, POLR2L, PTGES2, SLC2A1, S TK36, UROS, CACNA2D2, PAFAH1B1
Negative_12015	CTH, HK3, LHB, ACADL, ACADVL, ADAM10, ADIPOR2, AGRP, AKR1B1, ANPEP, A PPL1, ARD1A, ARHGEF2, ARHGEF4, B3GNT2, CACNA1C, CD247, CD48, CD79A, CNDP1, DKK4, DUSP14, EFNA4, FGF10, GDE1, GOT1, GSK3B, GSTO2, GUK1, HL A- DOA, IGF1, IL12A, IL25, ITGA4, KAT2A, KIR2DS4, LARS2, MAPK10, MBL2, M ICA, NEGR1, NRG1, OGDH, OR1J1, OR2T2, OR4P4, OR5F1, OR9G4, POLE2, POL R2K, RASA1, SCLY, SEMA4G, SOCS2, SRGAP2, TACR1, TNFRSF8, TUBA1B, WNT 3, PNLIPRP2, TNFRSF13C

Negative_12016	AK2, APP, CKM, CR1, EDA, TNF, UBC, ACOT12, ACVR1, AGRP, ARPC3, ATP5C1, BCAT1, BMP8B, CACNA1I, CD27, CYP2C9, CYP4F2, DHRS9, ENTPD8, FGF20, G AL3ST1, GART, GCH1, GSTM1, HSD3B7, HTR5A, IL13RA1, INADL, KARS, LAMB 3, LTC4S, MAGI1, NME2, NPR2, OLR1, OR10A5, OR4D2, OR51I2, OR52J3, OR5 D16, OR5P3, PIAS3, POLD1, POLR3K, PPARA, PRLR, PTK2, RASGRP3, SKP2, S LC2A4, SMAD2, SUCLG1, SULT1A1, TGFB2, WNT10B, YWHAG, ATP6V1G2, TNFR SF13C, TNFRSF6B
Negative_12017	C5, CAT, LPL, PGF, TXK, ABI2, ACADL, ACHE, ADORA2A, AHCYL1, AKR1B1, AL G8, ALPPL2, APBB1, ARHGEF1, ASAH1, ATP5E, C1QC, CARS2, CASP8, CCL2, C CL5, CCNE1, CCR10, CCR7, CDKN2D, CHPF, CHRM2, CKS1B, COL5A2, COMT, CR LS1, CSNK2A1, CYBB, DDX50, DTX3, DUSP4, EPB41L1, FARSB, FZD5, GALT, G RIN2A, GRM5, GSTP1, GUCY2C, GUSB, HRH2, ICAM3, IL17B, ITGAE, MAP3K4, MPDZ, MYD88, NAT2, NEUROG3, NFKB1B, NLGN1, NOS3, OR2A4, OR4M1, OR5B3 , OR5T1, OR6M1, OR7A10, OR8K5, OR8S1, OR8U1, P2RX4, P2RX5, PDX1, PIK3 C2B, PLCD1, PLXNC1, PTDSS1, PTPN11, PTPN5, RAB5A, RBL1, RPS6KA2, SDC 2, SHISA5, SKIV2L2, SORD, SRD5A1, ST8SIA1, TUBB2A, UPP2, WARS, WARS2 , WASF1, WIF1, WNT1, WNT3A, CSGALNACT1, HLA-DPB1, HLA- DRB4, ST6GALNAC6, TNFRSF10B
Negative_12018	AMT, CGA, LYN, NGF, SI, ADSS, AHCY, ATG3, ATP5F1, AVPR1A, BDNF, CACNB2 , CAPN2, CARS2, CCNB3, CCR5, CD34, CDC25C, CDH2, CFL2, CPT1C, CREB3L1 , CSF1, CSF1R, EPHA2, FGF14, GNB1, IL23A, JUND, MAGI1, MAPK14, NMNAT3 , NOS3, NTNG1, OR10Q1, OR1I1, OR56B4, OXTR, PFKFB2, PIAS4, PIM2, PLCG 1, PPCDC, ROBO2, RPS6KA4, SEMA4A, SESN3, SETD1B, STX18, THY1, TNFRSF 8, TUBB2B, TYMP, UCK2, ATP6V1G2, PLA2G12B, TNFRSF13C
Negative_12019	CDA, F12, LCT, SP1, TXK, ACP1, ACP5, ACSL4, ACSS1, ACVRL1, AKR1C1, AKT 2, ALG3, APLP1, ASMT, ATP5G3, ATP6AP1, BHMT, BIRC2, BLVRA, CACNA1I, C DC25C, CHPT1, CMBL, CTF1, DGKA, DOCK1, ENPP3, FLT4, GRIA1, GUCA1C, GU CY2C, HA01, HSD3B1, IDUA, IL12RB1, IL28RA, ITGAL, KIR2DL2, LCAT, MAP 3K13, MDH1, MGAT2, MMP1, NCKAP1, NMNAT2, OR10H1, OR2W1, OR52L1, OR5V 1, OR7D2, OR7G2, OR8D2, PGS1, PIGB, PIK3C2A, PIK3C3, PIK3R2, PLA2G2D , PLCB4, POLE2, POLR2D, POLR3D, PPP2R1A, PPP3R2, PTGIS, RHOA, SDC4, S ELE, SEMA4C, SHMT1, SMC1B, SULT1A1, TNFRSF4, TUBB2B, VEGFB, YWHAE
Negative_12020	CBS, DHH, EZR, HK3, LIF, ADRA1B, AKR1D1, ALDH7A1, ANAPC4, ATP5G3, B4G ALT7, BCAT2, BDNF, BIRC3, BMP6, CDC25B, CDH4, CDKN2A, CDKN2B, CKS1B, CLDN5, CREB3L3, CSH1, DAAM1, ENTPD8, FASN, GALNT2, GALNT3, GGT5, HLA - C, IL2RA, ITGAE, LIMK2, LIPT1, MDH2, MTMR1, MYH6, OR5P3, OR6S1, OSMR, PCNA, PDE1B, PDE1C, PDE4C, PGK2, PIAS3, PLTP, POLR2E, PPP2R2D, PRKAR 1A, RAPGEF2, RASA1, RPS6KA1, SLC25A4, SPHK1, TDO2, TGDS, TPM3, TUBB4 Q, WIF1, WNT9A
Negative_12021	F5, ID4, NLK, PDC, SMO, UBB, ACLY, ACMSD, ACOT11, ACOX1, ACSM3, AGPAT2 , ARG2, B3GNT2, B4GALT6, BCL2, CACNA1D, CDC14B, CDH15, CDKN2B, CSNK1 E, CYP1A1, DGKB, DVL2, EPHX2, EXTL1, FGF4, FUT1, G6PC2, GNPDA1, GP1BA , GSTT1, IFNA5, INPP4B, IRF3, IRS4, LAMC3, LTB4R2, NAGLU, NODAL, OR11 H4, OR11H6, OR1D5, OR2B11, OR6B2, PCK2, PDE7B, PDGFRB, PHKB, PHPT1, P IGF, PLK1, PLOD2, PLXNA1, PLXNC1, POLR2G, PPP2R2B, PPP3CC, PTAFR, SE MA4C, SKIV2L2, SKP2, SLC2A1, TLR9, TOLLIP, UROS, VNN1, WASL, WNT5B, Y WHAH, TNFRSF11A

Negative_12022	AUH, C8A, F2, F3, ITK, PVR, TAT, TNC, AGRN, APLP1, ARPC3, ATP2A2, ATP5B, ATP5D, B3GAT1, BMP6, CACNA1I, CCL21, CD8A, CDC14A, CDKN2C, CES1, CX3CR1, CYP11A1, DCTD, DGKE, E2F3, ENO3, EPHA2, ESPL1, F2RL2, FABP4, FZD7, GADD45G, GALNS, GALNT11, GCNT4, GLDC, GMPPB, GNG3, H6PD, HARS2, HSD11B2, ICOS, IDH3A, IL20RB, INPP4A, JAK1, NKX2-2, NRAS, OR13H1, OR1E1, OR1E2, OR1J2, OR4F4, OR8A1, ORC6L, PANK3, PDGFRB, PIGN, PPARA, PRKAA1, PSAT1, PYCR2, RASGRP3, SEMA3C, SETDB2, SLC33A1, SPCS1, STT3B, TGFB2, TGFBR1, THBD, THBS1, TRPM5, TUBB4Q, WWP2, HSD17B12, TNFRSF11B
Negative_12023	AMT, F10, F9, HPD, IL5, PLN, XDH, ABL1, ADCY4, AKR1D1, ALAS1, ALDH3B2, APOE, ARG1, ATP5C1, BCAT1, BMP5, CAMK2G, CCKBR, CCL23, CCR10, CDKN1B, CDKN2C, CES2, CLDN2, CNGB1, CREB5, CYP26C1, DDIT3, DDX19A, DHCR24, DRD1, DVL1, EFNB3, ETNK2, FGF5, FLT1, FUT2, G6PC2, GADD45A, GBA3, GPAM, GSTA2, GSTO2, HBEGF, HSD17B3, INPP4B, KAT2A, LDHAL6B, LIMK1, MAP3K13, MFNG, MYL9, NAMPT, NCOA4, NKD1, NTNG1, OR13C4, OR2C3, OR2L2, OR5H6, OR5J2, OR6K3, PIGN, PLA2G3, PRIM2, PRKAG1, PSME3, PTK2, PTPMT1, ROBO2, RPS6KA4, SETMAR, SPAM1, TCF7L2, THBS3, TKTL2, VAMP1, VTI1B, WNT8A, YOD1, ZAP70, ZNRD1, MAPKAPK2, TNFRSF11B
Negative_12024	AUH, BAD, BID, C8B, FGG, MOS, TPR, ADH1A, AGPAT6, ALG9, ALPP, ARHGEF1, ARSE, B3GAT3, BPGM, CACNG4, CAMKK1, CAPN2, CCL25, CCR8, CCR9, CDC6, CDS1, CLOCK, CMPK1, CREBBP, DAG1, DEGS2, DGKH, DIAPH2, ERBB3, FGF22, FIGF, FPGT, GAD1, GALNT13, GLB1, GLUD1, GMPS, GNB3, HIBADH, IDH3A, IFNA4, IFNK, INPP4A, ITGB6, KLRC1, LDHAL6B, LRAT, MAPK12, MAPK8, MAT1A, MGST3, MTHFD2, MYH4, MYL5, NADSYN1, NCF1, NUDT9, OR1J4, OR1K1, OR2A14, OR2L3, OR4N5, OR4P4, OR5AC2, OR5H6, OR5T3, OR6K3, OR8B4, PDGFB, PECAM1, PGM1, PHGDH, PIGF, POLR2I, PPA1, PPP1CC, PRKCQ, PRPH, PTPRJ, RPS6KA4, RPSA, SDC2, SENP2, SMAD3, SMAD7, SOCS4, STAT5B, STK11, STT3B, SV2C, TLN2, TPMT, TRAF1, TSLP, ULK2, ZBTB16, PAFAH1B2
Negative_12025	BAD, EBP, GAA, ACYP2, ADIPOR2, AKT2, APAF1, ARRB2, ATP2A2, B3GAT1, B3GNT2, B4GALT7, BCL2, BMP7, BUB1B, CACNA1B, CACNA1S, CASP7, CCKAR, CCL14, CCL17, CCL28, CCR8, CD226, CDC6, CDH4, CHRM1, CLDN10, CLDN6, CNTF, DAXX, DHDH, DHX58, DUSP3, EPHA3, EPHB6, FBP2, FZD10, GALM, GMPPA, GNPDA2, GOT2, GUCA1B, GUCA1C, IL10, IL8RB, IRS1, ITGA6, JAG1, KCNB1, LTBP1, MRAS, MTHFD1, MYH8, OR2M2, OR2T12, OR4X1, OR51B2, OR5AC2, OR5M9, OR6B2, OR8K5, P2RX4, PCNA, PIK3C2A, PIK3CB, PNMT, POLR3A, POLR3G, PPP2R5A, PPT1, PSME1, RASA1, RBL1, RBX1, RENBP, ROBO1, RPSA, RXRB, SEMA3A, SEMA4A, SPP1, STAT1, SUOX, VAMP2, WNT3A, B4GALNT1, PHOSPHO1, TNFRSF13B
Negative_12026	AGL, CD4, CGA, CKB, EZR, SYK, ACHE, ACLY, ADRA1D, AKR1A1, APLP1, ARNT, ASMT, ATG3, ATP5C1, ATP6V1F, BPNT1, BUB3, C5AR1, C9orf95, CACNA1S, CAMK4, CD247, CISH, CTNNA1, CTTN, CXCL3, DDIT3, DDX50, DGKZ, DTX2, EDA2R, FGF18, FGF19, FSHR, GIT1, GJD2, GLS2, GNAT3, HAO1, HMOX1, HSD17B7, HTR7, KIR3DL2, LAP3, LEF1, LIPF, LTC4S, MAN1B1, MAPK9, MCM3, MMP9, MOV10L1, MTAP, NCK1, NLGN2, OR10G8, OR13F1, OR1J4, OR1M1, OR2D3, OR2T33, OR51L1, OR56A4, OR8K5, PDE1A, PIK3C3, PIK3R1, PLA2G10, PLA2G2D, PLIN, PLXNA3, PLXNB2, POLR2L, PRKCZ, PVRL4, RDH12, RERE, RRM2B, SNAI2, SPRED2, SV2A, THY1, TP53I3, UCP1, ZFYVE9, B3GALNT1, SERPINA5, ST6GALNAC5

Negative_12027	ADA, CTH, DHH, F3, F9, GBA, GSS, MOS, RFK, TH, ADCY8, ANAPC11, ARHGEF1, ARSE, ASIP, BBC3, BCL10, CACNB4, CALML5, CCL11, CCNB2, CCND1, CHEK1, CLDN18, CLDN8, CMPK2, CPT2, CRLF2, CRY1, CTBP2, CYP3A43, DAAM2, DDX23, DGKE, DMGDH, EHMT2, ENTPD6, FGF8, GAD1, GALNTL4, GALT, GARS, GLO1, GNA11, HAGHL, IFNGR2, IL17B, IL20RB, IL24, ITGA7, MCEE, MDM4, MGST3, NCR3, OGDHL, OR10P1, OR51V1, OR5B21, OR5D18, PAK7, PCK1, PDE11A, PIP4K2C, PIPOX, PNPO, POLR2H, POLR2J, PRKCA, PRNP, PRPH, PSPH, RRAS, SDHA, SEMA3A, SEMA3F, SFRP5, SORD, SPRY1, SULT2A1, TAS2R48, TAS2R60, THTPA, TNFSF4, TP53I3, TSLP, UBE2L6, UGT1A10, WNT8A
Negative_12028	AK1, AK5, KIT, A4GALT, ACPP, ALDH6A1, ARG2, ATP6AP1, CACNB1, CCR2, CCR9, CD58, CDK4, CHEK1, CHST11, CREBBP, DAAM1, DDX52, DNMT3B, E2F3, FSHR, GALK2, GLB1, GRIN2C, GRM1, HAGHL, HCLS1, ITGAV, LAMB3, LTBP1, MDM4, MYL2, NAT5, NRAS, OR10T2, OR6C4, PCK2, PFAS, PHKG1, PIK3CD, PMAIP1, PPARA, PTPRJ, RASSF1, RPSA, SARS, SEMA4C, SIAH1, SSH3, TAS2R8, UBE2L3, UGT2A1, ATP6VOA1, ATP6V1C2, GABARAPL2
Negative_12029	ADC, AGL, C9, EZR, ID2, KHK, MVK, AMD1, B4GALT6, BACE1, BIRC3, BMPR1B, DAXX, DDX51, DGKA, DGKD, DHRS9, DOCK1, ENPP6, ENTPD3, F2RL1, FASN, FBP1, FECH, GABARAP, GALNT6, GGT5, GNA11, GSTM2, GUCY1B3, HBEGF, HCLS1, ICAM1, IFIH1, IFNA10, IL12B, IL3RA, INSR, IRF3, KIR2DL2, KIR2DL3, LRP6, LTC4S, MAP3K11, MAP3K13, MAPK7, MGST1, MYLK, MYLK2, NAT1, NFAT5, NKX2-2, NOX1, OPLAH, OR10X1, OR14C36, OR1A1, OR1E1, OR1L4, OR51G2, OR5K2, OR6B2, OR6C76, OR8J3, OSMR, PCK2, PIGT, PLCG1, PON3, PPBP, PPP3R1, PTPCH1, RALGDS, RPRM, SESN2, SIAH1, SMAD2, SMARCA5, SPRY2, SPTAN1, SRGAP2, ST3GAL3, ST8SIA1, SYNJ1, TAP2, TAS2R3, TICAM2, TNFSF12, TPH1, TYROBP, ULK3, WNT4, CSGALNACT2, HLA-DRB5, ST6GALNAC6, TNFRSF10D
Negative_12030	HK3, IL9, NNT, ACP2, ALPL, ARRB1, ATP5F1, B4GALT1, C1QC, C5AR1, CACNG8, CAPN2, CD38, CNGA3, CTNNA3, CXCR3, DDX47, DHRS4L2, DOT1L, DPM2, DUSP14, EGLN1, EHHADH, FGF8, FGFR1, FUT3, FZD8, GANAB, GLI2, GNA11, GNG3, HTRA2, IDH2, IGF1R, IL28B, IMPA2, LAMC3, MCM4, MKNK1, NMNAT3, NT5C, NTNG1, NTRK2, OR10C1, OR1L4, OR2F1, OR4N2, OR51B4, OR51D1, OR52A5, OR5K1, OR6C6, OR8K5, PAX8, PCK1, PDE4C, PGK2, PHKG1, PIK3C3, PITX2, PLA1A, PLCG2, PLXNA2, PNPO, PTCRA, RAF1, RALGDS, RFXANK, SELL, SEMA7A, SLC12A2, SMPD3, SPRY4, STT3B, SULT2B1, TD02, VDAC3, WNT1, XCL1, YWHAH, ATP6VOE1, ATP6V1C1, EIF4EBP1, KIR2DL5A, TNFRSF10A
Negative_12031	CP, GAA, GDA, SPN, TK1, TYR, AADAT, ACSS1, ADCY7, ALDOA, BET1, C1QB, C9orf95, CCND3, CYP3A5, DPYS, DTX3, E2F4, ECHS1, F13B, FECH, INHBA, IRF7, IRS4, JAG1, LIPC, MAP3K1, MECR, MYD88, NCF2, NME4, NRXN1, NT5C1B, OR11G2, OR3A3, OR4M1, OR52L1, OR56A3, OR5AN1, OR5D14, OR5K1, OR6T1, P2RX3, PCCB, PER3, PLXNA1, POLR3G, PRODH2, RAB23, SMPD2, SORBS1, SYNJ1, TAS2R10, TRAF2, VAMP3, WHSC1L1, TNFRSF10C
Negative_12032	C8G, GLA, NPY, ACAD9, ACMSD, ADSL, ADSS, ALAD, ASPA, BCAT1, BMP7, CACNB1, CBR1, CCL1, CCNA1, CD28, CDC16, CDC42, CHAT, CREB5, CTSG, CYSLTR1, DPYD, GALNT5, GDF7, GMDS, GRIA1, HAO1, HCST, HLA-DMA, ITGA7, KCNQ1, KLK3, LRAT, LRP6, MAD2L2, MAN1A2, MAP3K13, MAPK13, MTHFR, MYH2, NEU3, NQO1, NR1H3, NR5A2, OR10K1, OR10Q1, OR51E1, OR52H1, OR5AC2, OR7A5, OR8J1, OXCT1, PGM3, PIGW, PKMYT1, PON3, PRKACA, PRKAG2, PRLR, PTAFR, PTPN5, RASGRF1, RBKS, RPN1, SELP, SLIT2, SPCS1, SQLE, ST3GAL6, TNFSF12, VANGL1



Negative_12033	<p>ABO, CAD, FGG, NPL, TEC, TNF, ABLIM3, ACAA2, ADCY10, AHCY, ALDH2, ALG1 2, ATP5J2, CCL21, CD47, CFL1, CHRM5, CLDN15, CLDN19, CLDN20, COL4A6, COL5A2, CTPS, CXCL1, CYP21A2, DHRS4L2, EFNA2, EGLN3, FCER1G, FUT5, G ALNT11, HAO2, HLA-</p> <p>C, HYAL1, IDH1, IL15, IMPDH2, ITGAD, ITGAM, ITPKB, KIR3DL3, LCP2, LDH AL6A, LDHC, LPAR1, LYPLA1, MAT2B, MGAM, MGAT2, MGST3, NANS, NAT5, NCR 2, NFYA, OR1D2, OR1J2, OR2H2, OR2T1, OR2T2, OR51A4, OR51B4, OR52E4, O R5H6, OR5K2, OR9A2, PDXK, PIK3C2G, POLD3, POLR2C, PRKAA2, PTPN11, PT PRF, RAC2, RAPGEF3, RASGRP1, SELE, SEMA3D, SESN1, SETD2, SOCS3, SUV3 9H2, TAS2R38, TLR2, TLR9, TNFRSF8, TSC1, UGP2, VAMP2, WASF2, WNT10B, WNT6, ATP6V1E2, CSNK1A1L, PPP1R12A, TNFRSF10A</p>
Negative_12034	<p>EPO, FUK, IL9, JUN, MPL, VTN, AASDH, ACY3, AGMAT, AGPAT4, AHCYL1, ALG1 3, ARD1A, ASMT, ATP4B, BET1L, BHMT, BLVRB, BUB1, CCR10, CHIA, CLDN1, C LDN20, CNDP1, CYP2C9, CYP2J2, CYSLTR1, DCXR, DDB2, DGKI, EFNA2, ELK1 , ENAH, EPHA7, FBXW11, FGF13, FGF14, FZD10, GADD45A, GALNT1, GNB3, GN G12, HSD17B1, HSD17B7, HTR2A, ICAM2, IDH2, IFNW1, IL17B, JAK2, KLRC1 , MOV10L1, NCR1, NEU3, OR10K2, OR1J4, OR4F6, OR4K1, OR52D1, OR52N2, O R5L1, ORC2L, PCCA, PDE5A, PGAM1, PHKB, PHKG2, POLR2D, POLR3G, PPP2R2 D, RDH8, RPN1, RRM1, SHMT1, SPTLC2, TAS2R4, TBL1X, PDCD1LG2, PNLIPRP 2, TNFRSF1A</p>
Negative_12035	<p>C8B, DCK, LAT, PVR, ADCY3, ADCY4, ALOX12B, ARHGEF6, ATG3, ATP5G1, B3G ALT2, B3GNT5, BAI1, BAIAP2, CBLB, CCL5, CCR1, CD8A, CD8B, CDC20, CDIP T, CES7, CMAS, CMBL, CRY2, CTNNA1, CXCL6, DDX55, DUSP8, ENPP1, ERBB2, FABP3, FARP2, FGD1, FOXA3, GALNTL5, GGT1, GP1BB, HLA-</p> <p>F, IL12RB1, INPP5E, ITGA10, ITGA2B, ITGA8, ITGB7, KIR2DS4, MARS, MCC C1, MECR, METTL6, MGAT4A, MGST1, MYH11, MYH13, NCKAP1, NUDT9, OR1A1, OR2G6, OR51E2, OR7C2, OR7G2, OR8B8, ORC6L, POLR1C, PPA1, PPP3R2, PSM E2, RDH11, ROBO2, SEMA4D, TAS2R13, TCF7L1, THTPA, THY1, TIRAP, TJP3, TLR5, TPMT, TSHB, UGCGL2, ULBP3, WNT5A, ATP6V1C1, HLA-</p> <p>DPA1, HSP90AA1, PAFAH1B2, TNFRSF10B</p>
Negative_12036	<p>APP, C5, C9, CFI, DCT, MIF, AASDH, ACSM2A, AKR1C2, ALDH3A1, ALDH3B1, A MDHD1, BCKDHA, BDH2, BET1, CACNA1A, CASP6, CCL24, CDC20, CER1, CES7, CSF1R, CXCL12, DIAPH3, DTYMK, DUSP1, FGF22, FLOT1, GALNT5, GAPDH, GU CA1C, IL11RA, IL18RAP, IL19, IL9R, INHBC, INPPL1, KLRK1, KYNU, LICAM , MAP2K7, MGST2, NCF4, NT5C3, OR10G3, OR14J1, OR2K2, OR51M1, PHKB, PL XNB1, PNPLA3, PPM1A, PPM1D, PRKCB, PTCH1, RERE, SFRP4, SKIV2L2, STX1 0, STX7, SULT1A2, TAS2R40, TAS2R9, TNFSF4, VDAC2, VDAC3, WBSR22, ZN RD1, B4GALNT1, KIR2DL5A</p>
Negative_12037	<p>ADK, F2R, LEP, OGT, PC, SRF, ACADL, ACAT2, ACP2, ADRA1B, AGRN, ALDH1A1 , ATP5F1, B3GNT2, BCL2, CASP3, CCL20, CLTC, CRB3, DPM3, E2F5, EDN1, EH HADH, ENTPD6, FGD3, GLI1, GOSR2, HNF1A, IL17B, IL19, IL3RA, INHBB, KL RC2, MARS, MCCC1, MDH1, MGLL, MS4A2, MYH3, OLR1, OR10G4, OR1K1, OR2M2 , OR4C16, OR4M1, OR5D16, OR6B3, PISD, PYGL, RDH5, SGPP1, SNW1, STX4, S TX6, THY1, TLR4, UGCG, UGCGL2, ULBP3, ATP6V1B2, TNFSF13B</p>
Negative_12038	<p>A2M, CTH, DCK, DUT, JUN, LCT, ACTB, ARAF, ATP6V1F, CACNG3, CBLC, CCL3, CCNE1, CFL1, CLTA, DHRS3, DNMT3L, EHHADH, EP300, EPB41L1, FGF4, FZD1 0, GLI1, GNB3, GRIN2A, GUCY2C, HAO2, HPSE2, HRAS, IL12B, INHBC, INPP5 A, INPPL1, KLKB1, LEF1, MASP1, NAGLU, NARS2, NAT1, NFAT5, NRG3, NSDHL , NT5E, NTF3, NTRK2, OR10A7, OR10V1, OR1G1, OR1L4, OR4N5, OR6K2, OR8J 3, ORC4L, PCYT1A, PDE3A, PHKA2, PNMT, POLR1C, PON1, PTGES2, PTGFR, PV RL4, RAF1, RDH5, ROBO2, SC4MOL, SENP2, SHC3, SLC12A2, SLC27A4, SLC2A 1, SMARCA5, STX1A, UGT2B11, ULK2, UPP1, VANGL2, HLA-</p> <p>DRB5, PNLIPRP1, PRICKLE1, TNFRSF12A</p>

Negative_12039	ADA, APP, EDA, F10, MIF, MPZ, A4GALT, ACOT11, ACVRL1, AGTR1, AGXT, ALD H1A2, ALS2, APPL1, ARPC3, B3GNT3, BMP4, C9orf95, CACNG1, CCND1, CCR1 , CDC27, CES1, CNGA4, COL5A2, CREB3L3, CXCL3, CYP21A2, DAAM1, DGKB, D GKE, ENTPD3, ETNK2, FGF2, GSTM1, HSD3B2, HTR2C, IL21, INMT, IQGAP3, K ARS, LIPT1, MAP4K1, MGST1, NAT2, NCAM2, OGDHL, OPLAH, OR10A6, OR13C3 , OR13H1, OR1L1, OR5R1, PCNA, PDE1B, PDE8A, PIGF, PLA2G10, POLA2, POL D3, PPP2R5C, PTGS1, RARS, RASSF1, RDH12, SETD8, SLC2A4, SOS2, ST3GAL 5, TNFRSF4, UBA1, VAV1, WNT10B, WNT11, ATP6V1C1, CACNA2D4
Negative_12040	FYN, MET, SP1, ACO1, ACSL6, ADCY1, ALCAM, ALDH9A1, ALG11, ALPP, ARG1, ARG2, ATP5E, ATP5J, ATP6VOC, BIRC5, CAV3, CCL28, CCL4, CDC25B, CFLAR , CLTB, CNGB1, COL5A3, CYCS, EXOC7, FGFR2, FZD9, GAD1, GARS, GJA1, HES 1, HNF4A, HPSE, HSD11B2, IL11, IRF7, JAK1, KCNQ1, LAMA3, MAP2K1, MRAS , NCOR1, OR10G4, OR10H3, OR10V1, OR1A2, OR2T29, OR51B6, OR8S1, PCCB, PDIA4, PIGH, PLXNB2, POLA2, POLR2D, POLR3H, PRKCA, RBPJL, RPS6, RPS6 KA1, SPRY4, STAT5B, SUCLG2, SYNJ1, TAS2R5, TAS2R50, TBL1XR1, TFDP1, TOMM40, VKORC1, ATP6VOA4
Negative_12041	CFD, CRK, CSK, F12, FAH, ACSL3, ACSM5, ADRA1D, AGXT, AHCY, AK3L1, ALAS 2, ALG11, ALG13, ALS2, ASAH1, ASIP, B4GALT6, C4BPB, CACNA1B, CACNG5, CAMK2B, CD244, CD55, COL6A2, CRY2, CSF1R, CXCL5, DLST, DUSP8, EFNA2, EPB41, EPHA2, ERBB4, FADS2, FGF20, FZD9, GCH1, HMOX2, HNF1A, HNF1B, H RAS, HSD11B1, IDH3A, IFNA16, IFNA7, IKBKE, IKBKG, IL20, IL29, IQGAP1 , LRP5, MAP3K12, MGAT2, MMP7, MMP9, MPDZ, MYH1, MYLK3, OR10A7, OR2AG2 , OR5AC2, OR5AU1, OR5T1, OR7C1, OXCT1, PLOD2, PLXNB2, PLXNC1, POLR1E , PPM1D, PPP2R5A, PTCH2, PTGES2, PYCR1, RPS6KA4, SARS2, SDHA, SLC25A 5, SLC33A1, SMAD7, SMARCA2, SNAP25, STX6, STX8, TBXAS1, TRADD, TRAF3 , TYMP, UCKL1, UPP2, VAMP2, WNT2B, WNT5A, ARHGEF12, ATP6V1E1, SLC25A 31, TNFRSF13C, TNFRSF18
Negative_12042	ABO, BTC, DHH, GH1, GP6, ME3, MIF, OAT, ABL2, ACTA2, ADH1B, ALG12, ALG8 , APOA5, ARG1, BDKRB2, CACNB2, CD70, CDKN1C, CHEK2, CLDN9, CLTCL1, CR EB3L4, CTLA4, CTTN, CXCL12, DHODH, DIAPH3, DTX2, DTX3, FABP4, GALK2, GALNT7, GALT, GBA3, GFPT1, GMPS, GNG13, GP1BA, GRIN1, GSTA3, GSTO2, I L28A, IMPA2, INHBB, ITGA5, ITGAM, KIR2DS5, MAGI2, MAML1, MAML3, MAP3 K11, MAP3K5, MCM6, MGLL, MGST2, MIOX, MTMR1, MYH13, NANP, NARS2, NUDT 2, OLR1, OR11H6, OR1D5, OR4D6, OR4F17, OR5V1, OR6X1, OR8I2, PDE2A, PD E3B, PDE7A, PERP, PFKFB1, PIGT, PIP5K1C, POLE, POLR2I, PON1, PPP1CB, PRKY, RDH16, ROBO3, RRAS, SEMA3B, SETD8, SH3BP2, SYNJ1, TAS2R50, TKT L2, TUBA3E, TYRP1, UBE2L3, ULBP3, UROD, VAMP4, ATP6V1B1, HLA-DPB1
Negative_12043	BTK, F2R, GBA, LCT, PDC, TFG, ADCY5, ADCY8, ADIPOR2, ALDH1B1, APOE, B4 GALT1, BMPR1A, CALML3, CDKN1B, CNTN1, COASY, COL11A1, CREBBP, CTBP1 , CTPS2, CYCS, CYP17A1, DPM3, DUSP7, ENTPD5, EPHX1, F2RL3, FGF5, FGF6 , FTCD, GALK1, GNAS, HAP1, IL17RB, INPP1, ITGA7, ITGB7, KAT2B, LAMA3, MAN1B1, MASP1, MCM7, NCAM2, NRXN3, NT5C2, OR10V1, OR2M4, OR4C46, OR4 N2, OR52A1, OR8D4, OR9I1, PARD6G, PCCB, PGM1, PMAIP1, PPP2R2A, PRPS1 , PSPH, RASGRP2, SOX17, ST3GAL1, ST6GAL1, TACR1, TCF7L1, TOMM40L, TP H2, TPK1, TSHB, HLA-DQB1, HLA- DRB4, PLA2G12A, SERPINB5, ST6GALNAC4, ST6GALNAC5, SUV420H1
Negative_12044	FUK, GHR, PVR, PXN, RFK, AANAT, ADAM17, ADRBK2, ARSD, CCL22, CCL4, CCN D3, CD47, CER1, CPOX, CREB3L3, CSNK1G3, DCTD, DGKB, DUSP5, DVL2, ECHS 1, ENAH, FGF17, IDH1, INHBC, ITGB7, KIR3DL3, LDHD, MAP3K4, MAPK7, MDH 2, MYLK, NANP, NFYB, OR10G9, OR1J2, OR51I2, OR5D18, PGAM4, PON2, PPP2 R2B, PRKACB, PRKY, SLC2A2, SLIT1, SPRY1, STAT5B, WNT9B, YWHAQ, ATP6V OA4, MAPK8IP3, TNFRSF14

Negative_12045	ACSL5, ALDH1A2, ALDH2, ANGPTL4, AOX1, APPL1, B3GALT4, BACE2, BMP5, C7orf16, CACNG5, CALML6, CARS2, CCL1, CCNB1, CLOCK, COL3A1, CXCL13, CXCR4, DLL4, DVL2, DVL3, EFNB2, GAB1, GALT, GLI2, GLUD1, GNMT, GPAA1, GPX5, GTSE1, HLA-G, IL1R2, JAK3, KAT2A, MCEE, MGST2, MLLT4, MMP2, MTHFD2, NCF4, NFATC3, NKD1, OR4K13, OR52D1, OR5AU1, OR6C2, PGM3, PRDX6, PRODH, RDH10, SOAT2, SSH1, THY1, HLA-DRB5, TNFRSF11A
Negative_12046	F11, HAL, IL7, LPO, SFN, ACSM5, ADIPOR2, AGRN, ALCAM, ALG5, AMD1, ARSB, BDKRB1, BMPR1A, C1QA, C7orf16, CCL2, CCR6, CDC26, COL1A2, CRHR1, CSNK1G1, CTNNA1, CXXC4, DDX23, DHCR7, FARS2, FCGR2B, GANAB, GANC, GATM, GFAP, GUCA1C, IFNAR2, IL23A, LRP6, MAP3K14, MGAT5B, NAGA, NCAM2, NOTCH3, NT5M, OR2A2, OR2D3, OR2L13, OR4K14, OR4K15, OR51F1, PIP5K1A, PIPOX, PLA2G5, POLR2B, PRKG1, PTPRM, RAPGEF3, RBPJ, RDH10, SMC1B, STT3B, TAS2R49, TFPI, TGFA, WEE1, WNT10A, WNT4, YWHAB, ATP6VOD2, CSGALNACT1, HSD17B10, MAP3K7IP1
Negative_12047	GLA, LCT, NNT, ACHE, ADAM10, AGMAT, ANAPC4, BCKDHB, C9orf95, CCL3, CDH2, CLCF1, CLDN17, CTSG, CYP3A4, DHDDS, DTX1, ENTPD8, EPHX1, F13B, GG CX, GLO1, GLYCTK, GNPDA1, GPAA1, GRLF1, HDAC2, HIBCH, HSD3B2, HTR5A, IAPP, IKBKG, IL12RB2, IL28RA, MAP3K1, NANP, NAT5, NCR3, NME7, OR10G3, OR2AT4, OR2M5, OR2S2, OR5AR1, OR5D14, OR6C6, PANK1, PARD6G, PFN1, PIK3CA, PITX2, PLCB2, PLCB3, POLA1, POLR2F, PPAT, PRKAR2B, PTGIS, SETD7, SLC2A4, SPHK2, TGDS, TPH2, TSLP, TUBB1, ATP6V1C1, C1GALT1C1, SERPINE1, SLC25A31
Negative_12048	ADO, DCN, DLD, PGF, AARS, ACAD9, ARPC5, BACE1, BMP4, CDH3, COL1A2, CREB3L2, DGKA, DLAT, FABP3, FLT3, GALNT7, GJD2, GLS2, GLUL, GNA15, GNG13, GSTP1, IARS2, IFNA10, IFNAR2, IL13RA2, INPP5E, ITGA5, LCMT2, LGLL2, NEUROG3, OR5L1, OR5T1, OR6N1, OR7A10, PDE4C, PDE9A, PEMT, POLR3D, PON3, RAP1A, RASA1, RDH16, RGS3, TAS2R50, TAS2R60, TLR2, ZNRD1, ALDH18A1, PPP1R12A, TNFRSF10B
Negative_12049	IHH, LAT, MVK, ACOX1, ACTC1, ALDOA, ALG9, AMPD3, CALML5, CD38, CD40LG, CD80, CDC7, CHIA, COL1A2, DAPK2, DHX58, DIAPH3, DLL1, EDAR, ENO2, ENTPD4, ENTPD5, EPHA1, EPHB2, FGF1, FGF6, GALNT13, GALNTL5, GBGT1, GCNT4, GLUD2, GPX5, GRPR, GUCA1B, GUSB, HARS2, HSD3B7, HTR2B, IDH3G, IL1RAP, ITPA, KIR3DL3, LRP5, MPDZ, MTHFD1, NME2, NPR1, OR12D3, OR1S2, OR2M2, OR4C16, OR4D9, OR5AU1, OR5R1, OR9G1, P2RX2, PARD3, PDE4B, PDE6H, PDE9A, PDGFB, PGK1, PIK3C2B, PIK3CG, PIP4K2A, PLCB3, POLR2J, RALA, RUNX1T1, SEMA4D, SMC1A, SOCS3, SOD1, STAM, STAT3, TAS2R1, TPI1, TUBB, UCK1, ULK2, UMPS, WWP1, ATP6V1B1
Negative_12050	FGG, GLS, IL3, IL6, LIF, LSS, SMS, ACSS2, ADORA2A, AKR1A1, AKR1C4, APOA5, ARHGEF7, AVPR1B, B3GALT2, BHMT, BIRC3, CD80, CHST11, CMBL, CNDP1, COL5A3, CREB3L2, CTBS, CTNNA1, CYFIP2, DDIT4, DHCR7, DHRS4L2, EPHA7, EPHB6, ERBB4, FGF17, FIGF, FLOT1, FM01, GALC, GALM, GALNT12, GFPT2, GLB1, GLS2, GNAI3, GRIN2A, GUCY1A3, GUCY2C, HARS, HLA-DRA, HTR5A, IFNA6, IL6ST, IQGAP2, KAT2A, LCP2, LEFTY1, LTA4H, LTB4R2, MAGI3, MAP2K6, MCM7, MDM4, MYH13, NAE1, OR13C9, OR8U1, OXCT1, PDCD1, PDGFD, PDK1, PLOD1, PRKACA, PTPN11, PVRL3, RARA, RBPJL, RDH10, RPS6KA6, SIGLEC1, STX10, TAS2R3, TAS2R60, TJP3, TNFSF12, TUBA3E, TUBB3, UBE2L3, UBE2L6, VAMP4, WBSR17, ATP6VOD1

Negative_12051	ABO, CD6, ID2, MPI, ACADVL, ACSL5, ACTA2, ACY3, ADH5, AK3L1, ALG3, ANA PC1, APOA5, ARG1, ATN1, ATP5G3, ATP5I, BMP7, CACNA1C, CASK, CASP10, CD3E, CDK5, CDKN1A, CDS1, CLCF1, CRKL, CSNK1E, CXCL3, CYP2B6, CYP2C19, CYP3A43, DGKE, DGKH, DGUOK, DHRS9, DVL2, EFNA1, EFN1, FGF4, FZD6, GABARAP, GLB1, GNA11, GOSR2, GSTO2, GUCY1A3, IDI2, IDUA, INPPL1, INSR, ITCH, ITGAX, KLRC1, LRRC4C, MAP3K12, MARS2, MTHFS, NAT1, NOX1, OR2K2, OR2T3, OR2V2, OR51E1, OR51I2, OR6C75, OR8B4, OXTR, PDE6G, PFKFB2, PFKFB4, PGK1, PIAS2, PISD, PLTP, PNMT, POLA2, PPP2R2B, PPP3CC, PPT1, PRKCA, PRKX, RAD51, RASGRP4, RDH11, RERE, ROBO1, RPSA, SEMA3E, SETD1B, SMAD6, TAS2R7, TGFB2, TGFB2, TLN1, UNC5A, ATP6V0A2, CACNA2D4
Negative_12052	BTC, JUN, ABL2, ACSL4, APOE, ASIP, CASK, CCR1, CD40LG, CDKN2C, CERK, CHDH, COL4A6, COQ5, CYP27A1, DAPK2, DGAT2, EIF4E2, EPHA3, FLT1, FLT3LG, FZR1, GATM, GFAP, GSTK1, HCLS1, HPRT1, IL18RAP, IL29, IRAK3, ISYNA1, ITGA2B, ITGA7, KDSR, KIR2DL4, MYLK2, NAT5, NUDT8, OR13C8, OR1J4, OR1N2, OR2A42, OR52E8, OR5P3, OR8I2, OR9Q2, P2RX5, PAX4, PDE1A, PDHA2, PIAS1, PIM2, PLA1A, PNLIP, POLR1D, POLR3G, PRIM1, PRKAR2B, PSAT1, PVRL4, RDH10, SETDB2, SRD5A1, SREBF1, SUCLG2, TGFA, TNFSF4, TUBA1B, UBA1, XYLT2, HSP90AA1
Negative_12053	CAD, CD2, HDC, IL2, PRL, SDS, ACTN4, ALDH1A3, CAMKK1, CCR4, CREB3, CTNNA1, CXCR5, EFNA4, ETS1, FARS2, FOXO1, GALNT9, GCNT2, GLUL, GNPDA1, HAP1, HSPA1B, HTR6, IL21, IL22, JAK1, KIR2DL4, MALT1, MAP3K11, MCCC2, MEF2C, MGAT4B, NKD1, OR10G8, OR10X1, OR4C12, OR4N2, OR7D4, OR9A2, PAK6, PARVG, PDCD1, PNLIP, PPP3CC, PRKCE, RFX5, SMURF1, SOAT1, SUCLG1, TLR4, TOMM40, UGCGL1, WIF1, ZFYVE16, ATP6V1E1
Negative_12054	BAD, F7, GPI, IHH, LSS, MET, ACP6, ADCY10, ALG9, AQP7, ATF4, ATP5F1, ATP50, ATP6V1A, BMPR2, CALML5, CLDN2, COL4A2, CREB1, CREB3L4, CSH1, CTSB, DHFR, EFN3, ENTPD8, FARP2, FARSB, FMO1, GGT7, GNPAT1, H6PD, HADHB, HSPB1, ICAM3, KIR3DL3, LIPT1, MAPK3, MTHFD2, MYH6, NMNAT1, NMNAT2, NRG4, NRP1, OR10H5, OR1I1, OR56A1, OR6C3, PDE1B, PFKFB3, PIK3CA, PITX2, PLA2G4A, PLAU, PLAU, PLCG1, PPP5C, PTGFR, PVRL2, RASA1, RELB, RHOA, RPS6KA5, SELP, SELPLG, SLC2A2, SSX2IP, STAT6, TAS2R40, TMLHE, TUBA4A, UROS, ATP6V1E1, CSGALNACT1, HSD17B12, PPP1R12A
Negative_12055	DBT, EGF, FN1, IL3, ITK, MYC, ACADSB, ACSL5, AKT2, B3GALT2, BACE1, CACNG5, CCNA2, CDH5, CMBL, COASY, CTF1, CYP26A1, DDB2, DDX51, DGKQ, E2F4, EPHA6, EVI1, F2RL3, FCGR2B, FECH, FLAD1, FLT4, FZD4, GFPT2, GPAM, GRAP2, GRIA3, GSTA4, HLA-C, HNF4A, HTR2B, IL12RB1, INPP4A, ITGA4, LAMC2, LAMC3, MAGI2, MAOB, MAP4K3, MAPK9, MASP2, MCCC2, NANP, NCR3, NOS3, NOTCH1, NOTCH3, NT5C1B, OR2Z1, OR4A5, OR52I2, OR5AC2, OR5V1, OR8B8, OR8D2, OR8K1, OR9G1, PARVA, PFKP, PGAM1, POLR2B, POLR3H, PPARA, PPP1CB, PRKACB, RAB23, RELA, RENBP, RPS6KA1, SEMA3G, SLC12A2, STK11, SULT2A1, TAP2, TCIRG1, TKT11, TNFRSF9, TOLLIP, TOMM40L, TRAF5, UCP1, UPP1, VAV2, WNT5B, WNT9B, YKT6, YWHAZ, ALDH18A1, ATP6V1G3, SERPINA5
Negative_12056	CGN, PAH, PTS, TEC, TK2, ABCC8, ACSS3, ALDH1B1, ATP5B, B3GALT4, BAAT, BHMT, CACNA1F, CALML3, CAMK2G, CAV2, CD14, CD40, CD44, CDH1, CDH4, CDK7, CHST13, CLTA, CREB1, CSNK1A1, CSNK1G2, DARS, DIAPH3, DRD2, EFN1, ETNK1, FCGR2B, GADD45G, GALK2, GALT, GP1BA, HAP1, HCLS1, IL13RA1, IL1R1, IMPDH1, IMPDH2, IRF5, JAK1, LIPF, MAP3K6, MAPK9, MGAT4A, MITF, MTHFR, NARS2, NCF1, NCR3, OR2A4, OR2D2, OR4C15, OR51A7, OR5H6, ORC6L, PAX4, PDE3A, PIP5K1C, PLA1A, PLA2G2A, PLA2G2D, PLCB2, PTPRJ, RFXANK, SEMA3B, SMARCA2, SPCS3, TAS2R50, TM7SF2, TNFSF10, TSTA3, TUBAL3, UCP1, VKORC1, WNT16, WNT7B, WNT9B, XCL2, ZNRD1

Negative_12057	CAD, DCN, FGB, LHB, MPL, MVK, ACHE, ACY3, ALAD, ANAPC5, ARHGEF7, BAI1, BDKRB2, BLVRA, CCL15, CD01, DHDDS, DNMT3B, EPHB6, FABP1, FRAP1, FZD5, GALNT14, GP1BA, GUCY2F, ICOSLG, IL17A, IMPA1, IRS2, ITGB2, KARS, KCNJ11, KIR3DL2, LEPR, MCAT, MYH3, NEU1, OR13J1, OR4F6, OR8U1, OXSM, PD E7B, PFKFB4, PIP5K1C, PIP5K3, POLE3, RAC3, RALB, SCD5, SEMA4F, SESN1, SKP2, SMC1B, SNW1, SPCS1, SREBF1, ST3GAL4, STK11, STK36, SUCLG1, TYROBP, SERPINE1, TNFRSF10B, TNFRSF13B
Negative_12058	CAD, LIF, TNF, XDH, ABCC8, ABL2, ADCY9, ALOX5, ASIP, BACE1, CDKN2A, CHST11, CTNNA3, CYP4F3, EPRS, EXT1, FBP2, FECH, FZD2, FZD6, G6PD, IFNA6, IL1B, IL1RAP, IL9R, ITGB4, MAPK13, MGST1, MMP7, MYH8, NAT5, NFASC, NOTCH1, OR10A4, OR10H3, OR1L6, OR1M1, OR1N2, OR51A4, OR5AU1, OR8J3, OR9I1, OR9K2, PAPSS1, PGK1, PHKA1, PHKA2, PIK3CD, PLA2G10, POLR1E, PTAFR, PTGES, PVRL3, RAF1, RETSAT, RIPK1, SARS, SHMT1, SLC33A1, SNAP25, SRGAP1, STX1B, SYNJ2, TBL1X, TSC2, UCP1, UGDH, ULK3, GABARAPL1
Negative_12059	AR, C6, HGF, ID2, LEP, LTB, ACAT2, ADRA1D, ASNS, ATP5L, B4GALT7, BCAT1, CALML5, CASP6, CD247, CD36, CD99, CHDH, COL5A3, CSH1, CYP2C8, DDX50, DHDDS, ENPP6, ENTPD2, FARSB, FLOT1, FLT4, FUT8, FZR1, G6PC2, GANAB, GRIA3, GRPR, IARS, IL12RB1, IL17B, INSRR, ITGA2, ITGA3, JAK2, LARS, LDHA, MAP3K2, MAPT, MCM4, MCM5, MECR, MITF, MTFMT, MYH6, MYH7B, MYH9, MYL9, NAGLU, NME2, NSDHL, OGDH, OR10A3, OR4E2, OR4K2, OR56A3, OR5D14, OR5T3, OR6A2, PARS2, PER2, PHKG2, PIGN, PIGO, PIK3R3, PIK3R5, RAD51, RASGRF1, RRAS, SEMA3F, SETD8, SFRP5, SMURF1, SOS2, STK36, STX1A, SULT1E1, SUOX, TAS1R3, TAS2R3, TBL1Y, TPI1, UBA7, UGT2B10, ULBP3, VDACC2, VNN1, VTI1A, PAFAH1B2, PAFAH1B3, PHOSPHO1
Negative_12060	A2M, AK7, CBS, FAS, MPZ, MUT, TNN, AARS2, ADH1B, AGRP, ALDOC, APPL1, ARPC5L, BET1, BLVRB, BMP8B, C4BPB, COL1A1, CREBBP, CYP8B1, DEGS2, EPAS1, EREG, FARSB, GALNT11, GLS2, GRIA2, GRIN2A, HLA-DOA, HNF1B, HNMT, HSD17B7, IL12RB1, JAK1, LAMC3, LRAT, LRP6, MAFA, MD M4, MGAT2, NAGLU, NFKB1B, NRP1, NTN1, OR2D3, OR2L3, OR2W1, OR5V1, OR7C2, OR9A4, PAK2, PER3, PI4KB, PIGX, PIP5K1A, PLXNB2, PPP2CA, PRSS3, RBL2, RENBP, RPN2, RPS6KA2, SNAP23, SYNJ1, TBL1XR1, TNFSF11, TRPM5, TUBA4A, TYROBP, UGDH, VANGL1, VNN1, ZIC2, ZMAT3, MAP3K7IP2
Negative_12061	ADO, CS, CTH, FAH, IL5, PTS, SRM, STS, TXK, TYR, ACADSB, ACHE, ACOX1, ACTN4, ADCY2, ASNS, BST1, CAMK4, CCL15, CCL21, CCNE2, CCNG1, CFL1, CHD8, CLDN19, CTBS, DDX50, DEGS2, EIF4E, EPOR, FRAT2, GART, GGT6, GNA11, G NMT, GRIA2, GSTT1, HDAC2, IL17RA, INHBC, INSRR, IRS4, KIR2DS4, KITLG, KLRC1, L1CAM, LCMT2, MGAT1, MLYCD, MTMR1, NRXN2, OR10K1, OR13D1, OR1C1, OR2M3, OR3A3, OR52A5, OR5B21, OR6B2, OR7A5, PANK1, PARD6B, PDE1A, PDE3B, PDE4D, PHKB, PKM2, PLA1A, POLD4, POLE2, PPBP, PRKAA2, PTPN1, RAF1, RND1, RPS6KA2, SCP2, SEMA4F, SGMS2, SH2D1A, SLC2A1, SNAI1, SPHK2, SRGAP1, STX12, TAS2R4, TCF7, TGDS, TGFBR1, TJP3, TNXB, TRAF4, ULBP1, VAV2, WARS2, AASDHPPT, ATP6V1G2, MAP3K7IP1, MAPKAPK5
Negative_12062	C1S, F7, FGA, LEP, ABLIM3, ACAD8, ACTA2, ACYP1, AMD1, AOX1, ATG3, BLVRA, CARS2, CCL2, CCL20, CCNA2, CD8B, CDC20, CTSG, CYFIP1, FABP3, FGF7, FIGF, GALNT6, GNPAT1, GPAM, GUCY2F, H6PD, HAP1, ICOSLG, IGF1, IL6R, IPMK, IRF9, ITGB8, LLGL2, MAPK11, MGST2, MPST, NANP, NAT5, OR4K13, OR51B4, OR5C1, PANK2, PECAM1, PIGM, PIM2, PLK1, PNPLA4, POLR2G, PORCN, PPP1R1A, RASGRF1, SETD1B, SLC25A4, STAT4, STX10, STX16, SULT2A1, TCF7L1, TLR4, TUBB6, TYMP, TYMS, XYLT2, ZNRD1, ATP6V1C1, HLA-DPA1, SERPINC1, ST6GALNAC6

Negative_12063	A2M, FYN, ME2, PGP, TNC, ACAD9, ACP2, AHCY, ALDH2, ANAPC11, BMP5, BTRC, CACNG3, CCL17, CCL21, CCL28, CHEK1, CREB3L4, CSF3R, CXCL2, CXCL6, CYFIP1, DRD1, ENO2, ENTPD5, FGF8, FOXA2, GARS, GNB3, GZMA, HARS, HBEGF, ICAM1, IL24, ITGAD, ITGB7, JAK3, LAMB1, LDHA, LIMK1, MALT1, MAPK1, NCF4, NFATC1, NFYC, OR51F1, OR51F2, OR52N5, OR5D16, OR5T3, PARD6G, PCA, PLK1, POLR2L, PPARG, PPP2R5C, PYCR1, RPS6KA4, RRM2, SOCS7, SRGAP3, TAS2R38, TSTA3, UGT2B17, VAMP1, VAV2, YWHAZ, ATP6V1G3
Negative_12064	BTD, MPL, OTC, ACADVL, ALDOB, ARHGEF6, ASCC3, B3GAT1, BLVRB, CACNA1H, CD8A, CDKN2C, CLDN4, CLDN7, CLDN8, CMPK1, CSF2RA, CSF2RB, CYP1B1, DGKA, DUSP8, EPHB2, EXTL2, FADD, FBP2, FOXO3, G6PD, GALK2, GAPDH, HMGCL, HSD17B4, IDI2, IL13, IL15RA, IL2RA, LIPG, MKNK2, MYH8, NEUROG3, NR1P1, NTSR1, OR10G7, OR2AT4, OR2B2, OR2D2, OR2M4, OR2T11, OR4C12, OR51F2, OR52E8, OR8A1, OSMR, P2RX5, PANK4, PPID, PYGB, RALB, SEPHS1, SLC2A4, SORD, ST3GAL4, ST3GAL5, TGFB3, TICAM2, TKTL2, TLR2, TMLHE, TRAF1, TSHB, ULK3, VANGL1, VKORC1, WIF1, WNT8B, ATP6V1G2, CACNA2D3, TNFRSF13C
Negative_12065	CR2, FGG, IL3, MOS, TNF, ACVRL1, AGPAT6, AHCYL1, AKT2, ANAPC11, APRT, ARHGEF1, C3AR1, CCL15, CD40, CD55, CDC6, CDS1, CFL2, CLTC, COL5A2, COMT, COX10, CREB3L1, CRY2, CSNK1E, CYFIP2, DOT1L, ENPP2, ENPP7, ERO1L, FZD10, GLUL, GRHRP, GSTO2, GSTZ1, GUCY1B3, GZMA, HSD17B3, IL18RAP, IL23A, IL2RB, IL5RA, INSR, IRF7, IRF9, ITGA2, KCNQ1, LAMA4, MAP3K14, MPP5, MYH14, NARS2, NR1D1, OR10C1, OR1L1, OR2A12, OR4C13, OR4D2, OR5L1, OR6C76, ORC1L, PIGU, PIK3CB, PLA2G2F, PPAP2C, PPARD, PPID, PPP2R2B, PRKCI, PRKY, RHEB, RPS6KA6, RUNX1T1, SEMA3G, SEPHS1, TAP1, TAS2R13, TRIP10, YARS, ATP6V1C2, CACNA2D4
Negative_12066	BTD, C5, F9, GBA, GSR, MAX, PLN, ACADSB, ACMSD, ACP5, ACTA2, AKR1C4, ALDH1A3, ALDH5A1, ALG8, APAF1, ATP5G3, ATP5I, C7orf16, CACNA1A, CAMKK2, CASP10, CBLB, CCL22, CD79B, CDKN1A, CDKN2B, CXCR4, DAPK3, DGKD, EP300, EPB41L2, FGD1, GRIN2A, GTSE1, HAAO, HMOX2, ICAM3, IFNA4, IL18R1, IL5RA, IRS1, ITGB1, ITGB2, KLKB1, LCMT1, LCMT2, LEF1, MAP4K3, MDH2, MGST1, NRCAM, OR13J1, OR1J4, OR1N2, OR7A5, OR9K2, P2RX6, PDE2A, POLD3, PON3, PRKAG1, PRKAR1A, PRPH2, PTCH2, RALGDS, RFPD2, SDHA, SEMA3G, SFRP2, SH2D1B, SOCS7, SOS1, SRGAP1, STX5, TKTL2, UGCG, UGDH, VAMP1, VCAM1, SERPING1, TNFRSF10B, TNFRSF13C
Negative_12067	C6, GCK, GGH, PRL, ADCY4, ADRB2, AKR1D1, ALDH1B1, ALPI, ANAPC5, AOC2, APRT, ARPC2, ATP6V1H, B3GAT3, BACE2, CDKN2D, CLOCK, CNGA3, COL6A2, CSF3, CYP4F3, DNMT3B, DPM2, ENTPD2, EPHB2, F2RL2, FADS2, FDPS, FMO5, FUT5, GADD45G, GGPS1, GNA14, GNPAT1, HEXB, HIP1, IARS2, IFNK, IL15RA, IL18R1, IQGAP3, ITGA2B, ITGB2, JAK1, LAMB3, MMP7, MYH1, NAT2, NCF4, NOX3, NRG1, OPLAH, OR10H1, OR10X1, OR2F1, OR4C11, OR4N2, OR6C1, OR8D4, OR9Q1, PAK1, PANK2, PDGFA, PIGC, PIGU, PLCG2, PLEKHA8, POLR2H, PPP2R2C, PRDX6, PTGS2, PTK2B, RAP1A, RFXAP, RHOD, ROCK2, SARDH, SEMA3F, SKP1, SKP2, SMAD6, TP73, TPM3, VAMP3, WEE1, GABARAPL1, HSD17B12, PAFAH1B1, ST6GALNAC6

Negative_12068	DBH, DCC, DUT, HYI, NF1, OGT, ACPP, ALDH9A1, ATP4A, ATP5C1, B3GAT2, BB OX1, BDKRB1, BIRC5, CAMK2D, CAV3, CCNA1, CDS1, CHD8, CHDH, COL2A1, CO MP, COQ5, CPOX, CRLS1, CTSB, CXCL13, CXCL2, CYP2C9, DARS2, DIAPH3, DR D5, DTX1, EPOR, FGF4, FOXO1, GBGT1, GSTM4, GZMA, HSD17B4, IDUA, INPP1 , ITGB2, KLRD1, LCAT, LDHC, MAPT, MCM2, MKNK2, MPP5, MYH10, NCKAP1, NC OA4, NKX6-1, NOTCH1, NRG4, NT5C2, NUDT9, OR10G9, OR10Q1, OR1F1, OR2T6, OR2T8, O R2V2, OR4A16, OR51E2, OR5AP2, OR5P3, OR8K1, OXCT1, P2RX2, P4HA1, PCK 1, PCYT1B, PDE4C, PDGFRB, PDX1, PFN4, PGAP1, PGK2, PIGP, PIGW, PIK3R1 , PNPLA4, PPAP2C, PPP1R3B, RAPGEF4, SC5DL, SCLY, SETD7, SH2D2A, STAT 4, TRIP10, WNT16, ALDH18A1, ATP6V1E1, PLA2G12A
Negative_12069	FGG, ME2, VTN, ABL1, ACSL1, AKT3, ASS1, ATP5D, CASP8, CAV3, CBR1, CD44 , CEBPA, CPT1C, CRLS1, CTNNA1, CTNNB1, DOT1L, ENPP2, EPHA8, EPHB3, EP HX2, GAD2, GANC, GCNT2, IFNA5, IL17A, IRS2, KLK3, LAMB1, LRP5, MAP3K2 , MYLK3, NANS, NCAM2, NSDHL, OR2H1, OR4K15, OR4N2, OR5K2, OR8K3, PCYT 1A, PIGC, PIGM, PLA2G2A, POMC, PPBP, PTPN7, RPS6KA4, SH2D1B, STX10, T NFSF14, UNC5D, WNT16, YWHAB, PNLIPRP2
Negative_12070	C1S, C8G, IL8, INS, NGF, OTC, ACOX1, AGPAT3, APAF1, ATP6V0B, CCL16, CD 38, CDH4, DDX51, FGF6, FLAD1, FMO5, FOXO1, GALK1, GCNT4, GNMT, GRIA2, HSD11B2, HTR2C, HTR6, IL18, LARS, LIFR, MCM6, NANS, NCR2, NEU1, NOTCH 1, NRG4, OR12D3, OR2AE1, OR4L1, OR52D1, OR5AN1, OR6K2, PLA2G10, PMM1 , PTPRC, RALA, RPS6KA3, RRM2B, SETD2, SFRP2, SGPP2, SPRY2, ST6GAL1, S TK36, SUFU, TBXA2R, TLR4, TUBB6, USE1, ALDH18A1, ATP6V0A2
Negative_12071	CKM, DHH, GDA, LHB, MPZ, UBC, ABL2, ACADSB, AKR1C2, AMHR2, AXIN2, B3GN T4, B3GNT5, BBOX1, BMP2, BST1, CACNA1E, CACNA1G, CACNG7, CD47, COL4A 4, CUL1, DHODH, DHRS3, ENPP6, FASN, FGFR4, GOSR2, GUCY1A3, GZMA, HNF1 A, HRAS, ICAM2, IFNA7, INHBB, IQGAP1, IRS4, KLRC1, MAPK12, NCKAP1, NO TCH3, NR1H3, OR2AT4, OR2K2, OR4K13, OR5H2, OR6B2, OR8H2, PHKA1, PIM2 , PISD, POLR3H, PPP2R5A, PTPN5, RND1, SEMA3B, SHMT2, SMARCA5, TAS2R4 , TCF7L2, TCIRG1, THTPA, TPH2, TRIP10, UCK1, WIF1, ATP6V1G3, GABARAP L2, PPP1R12A
Negative_12072	C1S, FGB, GDA, LCT, ADCY6, ARNT, ATP5A1, BET1, CASP9, CCNE1, CD82, CDC 16, CDH5, CFL2, CLDN17, COL4A4, CREB3L3, CYP2B6, CYP2F1, DUSP10, ENP P3, FGF5, GDF5, GNAO1, GNPAT, HAO2, HNF1B, IL13RA1, IL1R1, IL1RAP, IQ GAP2, JAG1, NAGK, NCKAP1, NFATC2, NUMB, OR4D9, OR4F4, OR4K2, OR5B17, OR5K2, OR5T3, PARVA, PECAM1, PGAM4, PIGW, PISD, PMM2, PNPLA3, PPP3CA , PRKCI, PTGES2, RAP1A, RASGRP1, SEMA3F, SEMA3G, SHC1, SHMT1, SIGLEC 1, SNAI2, SSH2, ST8SIA1, STAT4, TACR2, WASL, AASDHPPT, CACNA2D4, HLA -DPB1, HLA-DQB1, SUV420H2
Negative_12073	FGA, IVD, AANAT, ACVR2A, BACE1, BPNT1, CALML5, CCL23, CCL4, CTNNA2, C XCR4, CYP3A7, FASLG, FECH, FZD9, GANC, GCNT3, GLI2, IMPDH2, ITGB3, JA M2, MAP2K4, MKNK1, MKNK2, MS4A2, ONECUT1, OR2T2, OR2T8, OR3A2, OR4K1 5, OR5D16, OR5T3, OR6K2, OR8A1, PDE8A, PIK3CA, PLIN, POLA2, PPCDC, PP OX, RAPGEF3, ROCK1, SEMA4D, SETMAR, SYNJ2, TRPM5, TYMP, UBE2L3, UGP2 , UGT1A10, UGT2B17, XCR1, YWHAZ, PRICKLE1
Negative_12074	C2, EPO, F10, GLA, LPL, SRF, TK2, ABL1, ALG10, AMDHD1, APOC3, ATP2A2, C 3orf10, C9orf95, CACNG2, CAMK2G, CANT1, CD27, CD36, CDS2, CER1, CTBP 2, DGKB, DNMT3L, DUSP5, FGF12, G6PD, GCLC, GPAM, HEXB, HHEX, HSD17B4, ICAM2, IL20, IL9R, MTHFD1L, NANS, NCR2, NFATC1, NQO1, NT5C1B, OR13C4 , OR52A5, OR9A4, P4HA3, PI4KB, POLR3D, PPP2R2C, PSME3, RAC3, SARS, SK P1, SPHK1, SPRY2, STK36, SYNJ2, TBXAS1, TD02, TLR2, TNFSF11, TRHR, TU BA1C, VTI1A, WBSR22, WNT3, YARS, TNFRSF17

Negative_12075	C2, PXN, UBB, ACOT11, AGRN, APPL1, ARSA, CACNA1B, CD22, CDC26, CDKN1B, CNGA4, CNTNAP1, COL1A1, CXCL10, CYP2C19, DUSP3, EGLN3, EXT2, GALE, GALNS, HADHA, HTR4, IFNGR1, IL28B, IL4R, IMPA1, KYNU, LTBP1, MAPK10, NAT6, NFKBIA, NR1D1, OR10H2, OR10K1, OR1M1, OR2L8, OR8B12, OR8D1, OR8K3, OR8K5, ORC2L, OXSM, P4HA3, PIGL, POLE, POLR2I, PPP1R3B, RAC3, RA P1A, SIAH1, SMAD2, TAS2R7, TNFSF14, TPM3, UNC5D, UPRT, XCL2, YWHAQ
Negative_12076	AGK, CFH, HYI, LIF, NLK, OGT, ADORA2A, ALDH3B2, ASAH1, B4GALT4, BTRC, CACNA1S, CCL13, CD244, CD8B, CEBPA, CFL2, CHR1, COQ3, CPT1C, CXCL10, CYP3A7, CYP7A1, DAPK3, DGKA, DGKE, DNMT1, DPM1, DPYSL2, ELK4, ENPP7, EPRS, ERO1L, FCGR2B, FOXA2, GALK1, GCLM, GGCX, GIT1, GNAL, GNRH2, GNRHR, GSTM1, GUCY1A2, HAGHL, HCST, HES1, IL15RA, IL1A, IRS4, JAK1, KRAS, LGMN, MAP2K2, MAPK11, MCM3, MECR, MMP14, MPST, MTHFD1, NARS, NAT2, NCR1, NEUROD1, NFATC1, NT5C1B, OR10A3, OR14C36, OR1G1, OR2A5, OR52M1, OR6C70, OR6C76, PDE8B, PDGFRB, PFKL, PIGO, PIPOX, PLA2G3, PRDX6, PTAFR, PTGES, RAC2, RAP1A, RCHY1, SEMA3D, SEMA4D, SPP1, SRD5A2, TCF7L2, TLN2, TLR5, TNFRSF8, TRADD, UCP1, VAMP4, PHOSPHO1
Negative_12077	GCK, IL7, KIT, LAT, NNT, ACVR1C, ADCY10, ADSL, AGTR1, AHCYL1, ALDH9A1, ARHGEF2, CACNA1I, CAMK2G, CBR1, CCL17, CCL23, CCND1, CD226, CD28, CDC45L, CDC6, CDK2, CHRM5, COQ3, COX10, CYP4A22, EPHB6, ESPL1, EXT2, FASN, FBP2, FGD1, FZD9, GRPR, HSD17B2, HSP90B1, ITGAL, ITPK1, KCNJ11, KIR2DS5, LAMB3, MCCC1, MTFMT, MYH6, NAGK, NEU4, NSDHL, NTF4, OPLAH, OR10C1, OR10G2, OR1E2, OR2B11, OR2F1, OR2T4, OR4K15, OR56A3, OR5D14, OR6K2, OR6N2, OR8K1, PAK2, PAK7, PEMT, PFKFB4, PIGK, PIGS, PPP1R3B, PP2R5E, PTEN, PTPN11, QPRT, RASGRP1, ROCK1, RPS6KA1, RPS6KA3, RPS6KA4, SDC2, SMURF1, SOCS1, SPRY4, SSH1, TCF7, THBS4, TNFSF10, TP73, TRAF6, UBE2L6, VAMP2, VANGL1, XYLB, ALDH18A1, ATP6V1E2, MAPKAPK2
Negative_12078	BTK, PGP, TNR, ADCY1, ATG7, ATP2A1, BAAT, BLNK, C1QC, CIITA, CTBP2, DHRS4L2, DUSP16, EPHX1, EPRS, GALNT3, GALNT6, GUCY1A2, H6PD, HAP1, HSD3B2, IGFBP3, IL19, IL20, MAP4K3, NT5E, OR10AG1, OR10H4, OR11H6, OR4F17, OR5M8, OR8J3, OR9A2, OR9G4, PANK3, PDE6D, POMC, PPP1CC, PRKCZ, RALBP1, RBL2, RDH5, SH2D1A, SMAD4, SPCS1, STX5, TFDP1, TNXB, TYMP, ATP6V1B1
Negative_12079	ADK, BTD, EBP, FAH, FGG, KHK, AGRP, AOX1, ARPC5L, ATP5G2, ATP5L, B3GALT4, B4GALT7, BDNF, BMP6, BMP7, BMPR1A, CACNG1, CCL28, CD46, CDH15, CLDN6, CMPK1, CPT2, CRY2, CTNND1, CYP3A5, DDX41, DHDDS, DOT1L, EFNA2, FARS2, FCGR3B, FGF8, FLT4, FRAP1, FUT1, GMPR2, GPAA1, HTR7, IARS2, IL23R, IL24, IMPA1, IQGAP1, IQGAP2, ITPKA, KIR2DL2, KIR2DL3, LIPA, MAP3K7, METTL2B, MYL5, NAE1, NFYA, NR4A1, NT5M, OR1D2, OR2T6, OR8B12, OR9A2, OXCT2, PAICS, PAPSS2, PIGF, PIP4K2B, PLA2G2D, PPOX, PTPRR, RHOD, RPRM, STX8, TNFSF11, TNFSF9, TOMM40L, TUBA1B, TUBA3C, VAMP3, WASF1, YARS, ALDH18A1, HLA-DPB1, HSP90AA1
Negative_12080	JUN, LCT, NLK, ACADM, ACTA2, ALDOA, ALG12, AMY2A, ASRGL1, BAAT, BAI1, BCKDHA, CBLC, CCND3, CHST11, CISH, CLDN15, CLDN5, CXCL5, DAPK3, DPYS, EXOC7, FADD, FGD3, FGF11, G6PD, GALNT3, GNRH1, GUK1, HSD17B7, IL28B, ITGAL, ITGB1, ITPA, KCNJ11, LARS2, LFNG, LYPLA2, MYH8, NCAM1, OR2Z1, OR4A16, OR51A2, OR51B4, OR52N4, OR9G4, PCYT2, PFKFB1, PFKFB2, PLD1, PNPLA3, POLD1, PPA2, PRODH2, PTPRR, RAPGEF3, RBX1, RETSAT, RPS6KA6, SMAD6, SOCS3, STX18, STX2, TAS2R4, TAS2R42, TBXA2R, TYMS, UCK2, UGP2, UNC5B



Negative_12081	C8G, GPT, KIT, MET, TK1, ACOT11, ACP1, ACY3, ALG5, ASS1, ATP6V1A, B3GALT5, B3GNT5, BDKRB1, BST1, CACNG1, CASP10, CHRM1, CLDN4, COQ6, COX15, CSDA, CSF1R, CSNK1G2, CXXC4, CYFIP2, CYP11A1, CYP27A1, CYP2S1, DDX18, FGFR2, GBA3, GFPT1, GNG3, HAGHL, HSD17B8, HSD3B2, IARS2, IFNA10, IFNA5, IL2RB, IL3RA, IQGAP3, ITGAX, KIR3DL1, KLRC3, LLGL2, MAPK1, MOV10L1, NARS2, NCF1, NCR2, NFATC1, NFKBIA, NR1D1, OR13C4, OR13F1, OR1A2, OR2D2, OR2G2, OR2L13, OR2T4, OR3A2, OR4C15, OR4N5, OR8S1, PAFAH2, PDE11A, PFKFB3, PI4KA, PIAS4, PLA2G10, PLAU, POLD1, PPP1CB, PRDX6, PTDSS1, PTPN1, PYCR1, RPN1, SEMA3E, SGMS2, SOCS1, TAS2R5, TAS2R9, TNFRSF9, TNFSF4, TRPM5, TYMS, YWHAH
Negative_12082	CD4, CKM, CP, GGH, IDS, PML, SMS, ACSM5, ADSL, AKT3, AMY2B, ANGPTL4, ARD1A, ATG12, ATP5J2, BTRC, CALML6, CCL22, CCR9, CD22, CDC26, CDC45L, CDH4, CHRNA7, CISH, CRB3, CSNK1G2, CXCL11, DGUOK, DRD1, ECSIT, ENO1, ENTDP5, FGF18, FLOT2, FZD9, GUCY1A2, H6PD, IDUA, IFNB1, IFNGR1, IRF7, KLRC4, MAP3K2, MRAS, MYL5, NMNAT1, NOS3, OR10K1, OR13C2, OR13H1, OR2B11, OR3A1, OR51B5, OR52E6, OR52N2, OR52W1, ORC4L, PAK4, PIGF, PLA2G5, PLCB4, PLCD3, PLD1, PLXNC1, POLE4, POLR2I, PON1, PPP3R2, PPP5C, PTCRA, PTDSS2, PTGER3, PTGS1, SELP, STX3, TAS2R41, TAS2R60, TGFB2, TUBB, VAMP4, WBSR17, ZIC2, PAFAH1B1
Negative_12083	C3, FGA, MIF, PAH, PML, TEC, ADCY4, ADH1B, AKR1B10, ALG9, BMP8A, C1QB, CCL21, CD82, CDC26, CDC27, CHSY1, CXCL2, CYP2C8, DGKQ, DTX3, ENAH, ENPP7, FGF14, FGFR3, FLT3LG, GALK2, GALNT7, GLYCK, GMDS, GUCY2C, GUCY2F, HEMK1, HLA-C, IFNAR1, IL17RB, IL18R1, IL8RB, KIR2DS5, LAMC3, LDHAL6A, LIPC, MAN1A2, MAN1B1, MBL2, MOV10L1, MTAP, MTHFD1L, NCOR1, NFYA, NLGN1, NRG1, OR10P1, OR2L2, OR2T1, OR4K17, OR51B5, OR51D1, OR8H2, PCK1, PHKA2, PIGG, PPP2CB, PRODH2, PRSS3, PSME2, PTPRC, PYGB, RASSF1, RELB, RERE, RPS6KA1, SEMA3E, SEMA3F, SENP2, SFRP1, STEAP3, STX12, TACR3, TAS2R38, TRAF3, TUBB1, UGT2B7, ULBP3, WARS, XYLB, YWHAZ, PNLIPRP1
Negative_12084	CGN, FST, HDC, MAG, MIF, OGT, PGF, ADH1A, ALCAM, ALDH2, ALDH3B1, BMP8B, CHAT, CX3CR1, CYP2J2, CYP2U1, DDX41, DGKI, DTYMK, FABP1, FCGR2B, FCGR3A, FGF8, FGFR3, FIGF, GCNT1, GP1BA, GZMB, HEXB, HNF1A, IL7R, INPP5B, ITGB3, KIR2DL4, MARS2, MGLL, NEU1, NEU4, NPR2, NTN1, NTSR1, OR10G3, OR1E2, OR2M2, OR6N2, OR6Y1, PDE6D, PDGFB, PDGFRA, PIGO, POLR3D, PORCN, PPP3CB, PRKAA2, PRKAR2B, PRKCG, PRKCH, PVRL3, RAPGEF2, ROCK1, RXRG, SLC2A2, SPRED1, SPRY1, SPTLC2, STX7, TBXAS1, TICAM1, TSC1, WWP2, ATP6VOD1, EIF4EBP1, HLA-DQA2
Negative_12085	CAD, CR2, CSK, ADH7, ADRB1, ALDH6A1, APOC3, ATG3, BCL2L1, BMP7, CACNA1G, CCL24, CD46, CERK, CHAT, CLDN6, COL1A2, CTSS, DUSP4, EIF4B, EPHB1, EPHB6, FM01, FUT5, G6PC2, GLDC, GMPPA, GPAA1, GRM5, HSD11B2, IDH2, IL1R2, INSR, ITGA9, ITGB7, LILRB3, LIPC, MMP2, NCF1, NFATC3, NOX3, NRAS, NTF3, OLAH, OR10G8, OR13C5, OR14C36, OR14I1, OR1L8, OR2T11, OR2T12, OR4C12, OR9K2, OSMR, PDE8B, PIGT, PIK3CG, POMC, PORCN, PPA2, PPP1R3A, PTPN1, PTPRJ, RARS, RPIA, RPSA, RUNX1T1, SEMA4A, SLC9A1, TGFB3, TPM3, TUBA4A, UGT2B11, UGT2B28, UPRT, WNT10A, WNT3A, HLA-DPA1, TNFRSF10D
Negative_12086	KDR, ACADS, AGPAT6, ATIC, ATP5G1, BMP4, CHIA, CLDN2, CTBP1, CTLA4, CTSB, CYP2C9, DGAT2, EPB41L1, ESAM, FBP1, FLT3LG, FPGS, FUT6, GDF5, IL13RA1, ITGB8, KLRC2, LARS, LGMN, MAN1B1, MAP3K8, MGAM, NOTCH3, OR2H1, OR2T11, OR3A3, OR4L1, OR51A2, OR6K3, OR8U1, PIK3R5, PLA2G6, PLCD1, PLCG2, PPAR, PPCS, PROC, PTPRJ, RAB5A, SLC2A2, ST3GAL2, ST3GAL3, TAS1R1, TLN1, TNFSF4

Negative_12087	ILK, LAT, ADCY2, ADH7, ANAPC10, ARRB2, ATG12, CCL14, CCL16, CD38, CHUK, CLCA2, CLDN16, CXXC4, DCTN1, DDB2, DDIT4, EFNA4, ENO3, ERBB2, FCGR2B, FCGR3B, FPGT, G6PC, GABARAP, GGT6, GIT1, GRIA3, HTR6, INPP5E, LDHAL6B, MGAT1, NCAM2, OR52M1, OR5B17, OR7G3, OR9Q2, PAX6, PIP5K1B, PIPOX, PLA1A, PLCD1, PLXNA1, PPARD, PRKCI, RARS, SDC4, STX16, TUBB1, ULBP2, YWHAZ, ATP6VOD2
Negative_12088	ADO, CD4, F7, GLA, GNS, NF1, ALG10, APRT, ATP6VOC, B4GALT3, CACNA1B, CBR3, CD79B, CYP2J2, ESPL1, GNPDA1, HSD11B1, HSD3B7, IDI1, IL18RAP, ITCH, ITGB4, MALT1, MYH4, NRG4, OR4F4, OR51B2, OR51D1, OR7A10, PDE1B, PDXK, PGM1, PGM2, PIP5K1C, PLOD1, PLTP, POLE2, PPA2, PPP2CA, PTCH2, RPS6KB2, SCP2, SEMA4C, SHC1, SMPD1, SORD, UCP1, WASL, ATP6VOD2, SUV42OH2
Negative_12089	AK5, AMT, CAD, DAO, SI, ADIPOR1, ALG10, ARSA, ATP6V1F, B4GALT7, CAV3, CCNB1, CCR10, CD19, CDC25C, CMPK1, CNTF, CYP11A1, CYP2D6, DAAM1, DHDH, DKK2, EARS2, GALNT1, GUCA1B, HSD3B1, HSPB1, HTR2A, IL24, ITGAD, ITGB3, ITGB5, KLRC3, MAP2K4, MGST3, MYH14, NFATC1, OR2A2, OR2B11, OR8D4, OR9A4, PCCA, PDE4C, PDGFRB, PIGP, PLD1, PPAP2C, PPP2R2B, RENBP, SEMA3F, SLC25A4, SMAD2, SNAP25, TBK1, TGFB3, TJP3, TUBA3C, UGCGL2, ULK3, VAMP3, WNT3, YOD1, ZAP70, ATP6V1B1, ATP6V1C2, MAPK8IP1, MAPKAPK2, ST6GALNAC3, TNFRSF10A
Negative_12090	DBH, DLD, FAH, OGT, STS, TKT, ADCY6, ADRB2, AHCY, ARSA, BMPR1A, CANT1, CCNG2, CDH15, CLDN7, COQ5, CYP11A1, DGKA, DUSP14, E2F5, GPLD1, GSTM2, HSD17B8, IPPK, JAK1, KAT2B, KLRD1, MAP3K1, MGAT1, MTMR2, MYH4, NT5C, NUMBL, OR2A42, OR4F4, OR4K1, OR51M1, OR5B12, OR5C1, P4HA3, PPARD, PPT1, PRKACA, PTGES2, RELA, ROCK2, RRAS, RRAS2, SETD8, STAT6, TAP2, TNFRSF4, TNFSF4, TUBA8, VDAC2, ATP6V1G2, TNFRSF17
Negative_12091	ADC, C8A, LAT, MTR, OAT, TNC, ADIPOQ, AGXT2, ALAS2, ALS2, AMY2B, AQP7, ARPC3, B4GALT2, B4GALT7, CACNB4, CCL3, CCNB1, CD226, CD58, CLDN6, CTBP2, CTPS, CX3CL1, EARS2, EPHA4, FADD, GPD2, HEXB, HMGCS1, IFNA2, IFNA6, IL17RB, KIR3DL2, LILRB3, LTBR, MAPK11, MAT1A, MLLT4, MMP14, NCOA4, NCSTN, NGEF, NKX2-2, NR5A2, OR12D3, OR2G6, OR2S2, OR4B1, OR5M3, OR6C4, OR6C70, P2RX6, PANK1, PARD3, PDE10A, PDGFA, PFN2, PGLS, PIP4K2B, POLE, POLR1C, PRKG1, PTGES2, RPS6KA6, SEMA3G, SESN3, SKP1, SORD, TNFSF12, TPH2, TUBA4A, VEGFA, WHSC1, ATP6VOD1, GABARAPL1, MAPK8IP3, ST6GALNAC5
Negative_12092	BID, BTD, CDA, F11, HK2, ID3, IL9, IVD, MPL, MPZ, ACOX1, ADAM10, ALDH9A1, ALOX15B, APH1A, AQP7, ARHGEF1, C3orf10, CCL21, CDS2, CHIT1, CHKA, CLDN1, COX15, CSNK2A1, CYP2A13, DAPK1, DDX19A, DEGS2, EPHA4, EVI1, FGF1, FGF6, FM05, FOXA2, FUT9, GADD45G, GCNT4, GLO1, GNRHR, GRIN1, IFNB1, IL3RA, ITGA2B, JAG2, LAMA3, NFYC, NR1H3, NTN1, NTRK2, OR10C1, OR10G9, OR11H6, OR13C4, OR13G1, OR14C36, OR1K1, OR4Q3, OR51D1, OR51V1, OR5P2, PAX8, PDE3A, PDGFC, PDIA4, PFN1, PIP4K2B, PLXNA3, POLR2G, RAPGEF4, RBPJL, SOCS1, SPTAN1, ST6GAL1, TAS2R50, TRHR, WNT2, YES1, ATP6V1E2, B3GALNT1, HLA-DRB4

Negative_12093	DCN, F3, FER, NOG, PGP, ACO1, ACPT, ACVRL1, AGXT2, ALDH6A1, ALG10, ATP5G1, B3GNT3, BAAT, BIRC2, CACNA1I, CDH1, CLDN10, CLDN6, CNDP1, CSNK1E, CTBS, CYP26B1, CYP2D6, DRD5, DUSP2, ENO2, ENPP7, ENTPD8, ESPL1, EVI1, GABARAP, GSTM3, HA01, HLA-F, HSD17B3, HSP90B1, ICAM2, IFT57, IKBKG, IL12B, INADL, IRS2, ITGA8, JAG1, JAM3, KLRC2, LAMB3, LAMC1, LDHAL6A, LDHB, LIMK2, MARS, MGAM, MYH4, NCAM2, NFKB1, NFYB, NOS3, OR2B2, OR2H2, OR4A5, OR51G1, OR52D1, OR6C75, OR6T1, PFKM, PIGQ, PIGS, PIP5K1C, PLA2G2E, PMM2, POLR1B, PPAT, PRKAR2B, PRODH, PRPH, PTEN, RFWD2, ROCK2, RPS6KB2, SC4MOL, SETD2, SETMAR, SGPP1, SMURF1, SPRED2, SRGAP2, STK4, STX1A, TNFSF4, TSC2, WASF2, ATP6V1B1
Negative_12094	AK7, NPL, TK1, ACP6, ACSL6, ADCY6, ADH1B, ALDH2, AXIN2, BCL2, CCL2, CCR8, CLDN14, CNTN2, CRY1, CTNNA2, CTNND1, CXCR4, CYFIP1, DCTN1, DFFB, DGUOK, DHRS4L2, DNMT1, EGLN3, EPHA8, FZD3, GALNT12, GDF7, GRIA2, IL1ORA, IRS1, ITGA11, ITGB1, KIR3DL1, L1CAM, LTB4R2, MAPT, MGAT2, MTHFD1, MYH11, NAT1, NCF1, NME6, NR1H3, NT5C2, NTNG1, OR13C8, OR14I1, OR2T2, OR4A15, OR4N4, OR4X1, OR52E4, OR52K1, OR5B3, OR5H2, OR6Q1, OR8D2, OR8S1, PAK3, PAPSS2, PGM2, PIGN, PLCD1, PLCD3, PLD1, PPAP2A, PPM1A, PRKG1, PTGS2, RAP1B, RASA2, RDH12, RHOD, RIPK1, RPN2, RUNX1T1, SGMS1, SLC2A2, SPHK2, SUV39H1, TPM3, TSC2, WNT9B, YWHAQ, ATP6VOE1, SERPIND1
Negative_12095	ABO, IL3, IL9, KMO, ABL1, ACPT, ACSL5, ALG8, AMPD1, ARSE, ATP12A, BACE2, BCKDHA, BET1, BIRC5, CACNG4, CAMKK1, CBR1, CD28, CHUK, CLTC, COL4A4, CYP2C19, DDHD1, DDX18, DPAGT1, EARS2, ENPP7, ESPL1, FARS2, FGF18, GAB1, GCNT2, GLG1, GMDS, GNA12, GRIN2A, HAGH, HDAC2, HSD3B2, HYAL1, IL10, IL21R, ITGA5, ITGB8, LRP6, MAN1A1, MAP4K2, MAPK11, MNX1, OR10G2, OR10G8, OR52N1, OR8G1, OR9A4, PDGFRB, PTDSS2, RAD51, RAPGEF3, SFRP5, SOCS1, SOCS5, STAT1, TAS2R13, TBL1Y, TGFB2, TRIP10, UBA1, WBSCR22, WNT2B, YWHAQ, ATP6VOD2, MAPKAPK5
Negative_12096	AK3, GDA, IL8, NGF, ACTB, ALDH9A1, ARSB, ATP5G3, BDH1, C4BPB, CACNG2, CARS2, CD80, CHRM1, CIITA, CLDN14, COASY, COL4A6, COL5A1, CRLS1, CSNK1G2, CYP2C9, DDX51, DDX55, GALK1, GGCX, GLB1, GLI2, GNA14, GNB3, HADHA, HBEGF, HIBCH, HMGCS2, IFNAR1, IL13RA1, IL28B, INMT, IPMK, IRF9, KLRK3, LEPR, MAP3K7, MKNK2, MTMR1, NCR1, NFYA, OLR1, OR10H1, OR1L8, OR2L13, OR51S1, OR6C76, PARS2, PAX6, PDGFA, PDGFC, PEMT, PER3, PKM2, POLR2H, POLR2L, PRKG2, PTCH1, PTK2, RALB, RAPGEF2, RPS6KA1, SETDB1, SKP2, SLC25A4, SLC27A1, SLC33A1, SMAD5, STX10, SULT1A4, TAS2R16, TKTL1, UGCGL2, WNT2, YARS, CACNA2D3, HLA-DRB4, HSD17B12
Negative_12097	EGF, LAT, MET, ACAA1, ADIPOR1, ALPL, ALS2, ARHGEF1, ARNT2, ASAH1, ASMT, ATP6AP1, CACNA1I, CCL3, CCL7, CD19, CES7, COL4A2, CSF2RB, CXCL1, DGKB, DHRS4, DNMT3L, DOCK1, DUSP7, FTMT, GALNTL4, GNA11, HMGCL, HNF1A, HNF4G, IDH3A, IL17A, IMPDH2, INPP5A, ITGA10, ITGB2, KLKB1, LAMB1, LIPC, MAN1B1, MICA, MYLK3, NCF2, NOD1, NTF3, OR11A1, OR2AE1, OR2G3, OR4D6, OR51M1, OR6M1, P2RX5, PARD3, PDE4D, PFKFB3, PIGO, POLR2J, PPAT, PTGES, PTPRF, PYCR1, QPRT, RASGRP3, RASSF5, RETSAT, ROCK1, SHC2, SLC25A4, SMAD4, SORBS1, THBS2, UPP1, VANGL1, VANGL2, VNN1, ARHGEF12, ATP6V1C1
Negative_12098	PGD, SI, ABLIM2, ADIPOR1, AGMAT, ALOX15B, ALPPL2, ANGPTL4, ARAF, ATP5F1, B3GNT4, BCAT1, BMP4, CARD11, CCL19, CCR5, CHEK1, CHSY3, CLDN10, CNGA3, COL1A2, COL6A1, COQ5, DDX18, EPHA3, FGF17, FGF3, GAMT, GANC, GSTZ1, GUCY1A2, HSPA1B, IDI2, MKNK2, MYH6, NEU3, NOS1, NOTCH1, NSD1, OR10AG1, OR10H3, OR2S2, OR4N5, OR8G1, PANK3, PER2, PLA2G10, POLR2J, PTPRR, PYCR2, SLC2A2, STX1A, TLR2, TPM3, TSTA3, ULK2, WNT11, WNT4, CACNA2D1, SERPINB5, TNFRSF1A

Negative_12099	ABO, FN1, ACVRL1, AKR1C1, ALDH7A1, BDNF, CACNB3, CALML5, CAMK2D, CD48, CLDN4, CLTB, CNTNAP2, CSNK1G3, CYBB, CYP11A1, DCTD, DDX54, DHDH, DPYD, DPYSL2, DUSP4, ENTPD8, FUT8, GGT5, GNPAT1, GSTA5, GSTP1, HMGCS2, HPSE, IGFBP3, IL12B, IL13RA1, IL22, IL22RA2, INHBC, NCR2, NFATC1, NFKBIE, OR51I2, OR52N2, OR5AU1, OR5H2, OR6Y1, PDE1A, PIP4K2B, PLA2G2F, POLR2H, PPP2R1A, PRKAG1, PTCH1, PVRL2, QARS, RARS, ROBO1, ROBO3, SELPLG, SETDB1, SGMS2, SMAD9, SOCS2, STMN1, STX7, SULT1A2, TACR1, TM LHE, ULK1, ARHGEF12
Negative_12100	CD6, EBP, FGG, KDR, MET, SRM, TNR, ACTA1, AMDHD2, BIRC2, C9orf95, CASP9, COL4A6, CTBP2, CYP26B1, DARS2, DNMT3L, DPYSL2, ENO1, EPHA2, EPHA6, FUT4, GLG1, HYAL1, IFNA4, IL17B, IL22RA2, IMPA2, LILRB3, MALT1, MLYCD, MMP7, MYH1, NARS2, NQO1, NRG1, NRXN3, NT5E, OLAH, OPLAH, OR10P1, OR1J1, OR2A25, OR4K14, OR8K5, PAX4, PDCD1, PFAS, PIK3CG, PIP4K2B, PLA2G2F, PLCD3, PLXNB3, POLA2, PPP2R5D, PRIM2, PTTG1, SDHA, SEMA3D, SETDB2, SGMS2, SH2D2A, SMPD2, SREBF1, TBXAS1, THBS1, TOLLIP, TRPM5, TUBA1C, UCK2, XYLB, PNLIPRP1
Negative_12101	C3, CAT, FER, GK2, SCD, VCL, ACP5, ADCY2, ADRB2, AGPAT3, BACE1, BMP8A, C5AR1, CACNA1E, CES7, CYP1A2, CYP2A6, E2F4, EPB41L1, ETS1, FBP1, FRA T1, HES1, IPMK, ITGA7, KCNB1, MGAT5B, NCOR2, OR2T34, OR4C16, OR51E2, OR51F2, OR52N4, OR5H2, OR6C4, OR8J1, PCCB, PDGFRA, PER1, PFKFB2, PIK3C2A, PLA1A, PLA2G2F, PLTP, PNPT1, PPP2R1B, PPP2R5E, PRSS2, RBKS, RRM2B, SLC25A5, STAT5A, STAT5B, TIRAP, UPP1, UROD, VAV2, XYLB, ARHGEF12, ATP6V1B1, HLA-DRB4, ST6GALNAC1
Negative_12102	FAH, GP5, MPZ, TEC, ACAA1, ACSM2A, ALG6, ASIP, ATP5B, CACNA1I, CBLB, C CNE2, CDC25A, CHIA, CLDN7, CSNK1G3, CYP26C1, CYP3A4, DHDH, DOLPP1, E SPL1, GGBT1, GCLM, GFPT2, GLB1, GLS2, GNAS, GPD2, GRB2, GSK3B, HES1, H IP1, HTR2B, IFNA2, IGFBP3, IL10, IRF5, ITPKB, LDHAL6B, MAOB, METTL6, MGAT5B, MOV10L1, MPP5, NANP, NFAT5, NFKBIB, NNMT, NT5C, OR13C4, OR1A2, OR2A14, OR2A42, OR2L2, OR2T33, OR2T6, OR52H1, OR6C70, OR6F1, PAK3, PIGH, PLA2G3, PTGER1, PTPRM, PVRL3, RAC3, SH2D1B, SLIT1, SSH2, STT3B, TNFRSF9, TP53I3, WASF3, WNT8A, ZMAT3, CACNA2D3, PLA2G12A, PPP1R12A
Negative_12103	AK3, CFD, LSS, NF1, PC, PGD, ACVR1B, AKR1A1, ALDH4A1, ALG13, ALG3, AMDHD1, AMPD3, C1QB, CCNB3, CLTB, CPS1, CREBBP, DDX55, DHRS3, DNMT3A, FCER1G, ICAM2, IDH3A, IFNGR1, IRS1, MAML3, MCM5, MIOX, NKX3-1, NME2, NR4A1, OR10K2, OR10R2, OR1Q1, OR2AG1, OR2D3, OR2V2, OR4K14, OR52D1, OR52E2, OR52H1, OR5D16, OR5D18, PDE1C, PDHA2, PDPK1, PFN2, PIK3R2, PTGIS, RRM2, RRM2B, SDC4, SMAD1, TKTL1, TUBB2B, TYMS, UBE2L6, UXS1, YARS2, ZNRD1, HLA-DPA1, TNFRSF11B
Negative_12104	CD4, FST, HAL, IL7, RDX, AASS, ACVR1, APOA1, BIRC3, BMPR1B, BMPR2, CCN D1, CD38, CDH3, CDK5, CHIA, CRHR1, CXCR6, DAPK1, DGKD, DTX4, EPHA8, GA LK1, IGF1R, IL6ST, LEFTY1, LIMK1, MADCAM1, MYH4, NCF2, NEFL, NFKB1, N ME2, OR10G9, OR2T1, OR51M1, OR51S1, OR52A1, OR52E6, PDE3B, PPP2R5A, SAT2, SLC25A6, TNFSF12, TUBA3E, TYMS, UGT8, UXS1, ATP6VOD2, HLA-DRB5

Negative_12105	CGN, CR2, MSN, ACAD9, ACVR2B, ADH4, ALOX12, ALPP, APOA2, ASIP, ATIC, C ARD11, CLDN14, CLDN2, CXCR3, CYP2A6, CYP2C19, DBF4, EP300, FABP1, FA RS2, FCGR3B, FGF18, FGFR3, FMO1, FMO2, FOXO3, GADD45B, GADD45G, GDF6 , GRIN2B, HADH, HAO2, HTR2B, IL20RB, INHBE, ITGAX, KCNQ1, MAD1L1, MAF A, MAN2A1, MAP3K13, MAPK3, MAPK9, MITF, MYH7B, NCOR1, NCR2, NFAT5, NT 5C2, NTSR1, NUMBL, OCRL, OR13D1, OR14I1, OR2H2, OR2T11, OR4A16, OR4K 17, OR51E2, OR6C74, P2RX2, PAK2, PDE7A, PGLS, PIAS3, PNLIP, POLD1, PO LD4, POLR2K, PPID, PTGS2, PYCR2, RARS, RBPJ, RXRA, SLIT2, SPRY3, TAS1 R2, TOMM40L, TP73, TRPC1, UBA7, VARS, VNN1, WNT4, WNT8B, XYLT1, ST6GA LNAC5, TNFRSF10B
Negative_12106	AR, CGN, GH2, IL3, MUT, NNT, XDH, ACY1, ADCY9, ALDH1A1, ALG10B, ATIC, A TN1, ATP5L, B3GALT5, CAMK4, CD44, CDC25A, CDC26, CDK4, CFLAR, CHRM1, CHST11, CSDA, CSNK1D, DDX51, DNMT3B, DOLPP1, DOT1L, FGF7, FMO5, FZD7 , GALE, GGT6, GOT1, GSTO1, GYS2, HSD17B2, HSD17B3, IL12RB1, INADL, IP MK, IQGAP2, IRF9, ITCH, LTC4S, MAP2K5, MAP4K3, MCM5, MTHFD1, MTMR1, N EUROG3, NRAS, NRCAM, NRG1, NT5C3, OR4C15, OR4C6, OR4D9, OR7G2, OR8B4 , PDCD1, PDGFC, PON1, PPAP2C, PPCS, PRKCA, RALBP1, SDHB, SESN3, SLC2A 1, SLC9A1, SMAD6, SMAD7, SOCS7, SPRED1, TAP2, TUBB1, UGT2B11, UPP2, W ASL, XYLT1, MAPKAPK2
Negative_12107	ADO, BCR, C6, CR1, DCC, F7, ACADM, ACAT1, ACYP1, ALDH5A1, B3GALT5, B4G ALT3, BCKDHB, CD3E, CD86, CDC25A, COX10, CTPS2, CYP11B2, ENPP1, ENTP D4, ENTPD5, FABP1, GALNT7, GARS, GDF6, GDF7, GLUD1, GNPAT, GRIN2C, GS TT1, HARS2, HSD17B3, IL10RA, IL13, IL20RB, IL5RA, IQGAP3, IRF9, ITGA 2B, LDHA, LIMK2, LTC4S, MAPK1, MDM4, MOV10L1, NRAS, OR10A4, OR10Q1, O R2A4, OR51T1, OR52M1, OR5D13, OR6C70, OR6N2, OR8B4, OR8J1, OR9A4, PD E2A, PIAS1, POLR3A, PRKAG3, PRKG2, PRPS2, PTPRC, RASGRP3, RBL2, RPE6 5, RPIA, RPN1, RPS6KA5, SEMA4C, SETD8, SMPD4, SOCS2, TALD01, TAS2R42 , TGFBR1, TOMM40, WARS2, WASF3, WNT9A, ZMAT3, ATP6VOE1, CSGALNACT1, PHOSPHO1
Negative_12108	AGK, CBS, DAO, FAS, ACYP1, ADORA2B, AMPD3, APOA5, ARPC1A, BCMO1, BMPR 2, CACNA1A, CASP10, CAV2, CD27, CDH3, CDH4, CNGB1, COL6A2, CYP4A22, D DX54, DHCR7, DHRS4, DOT1L, EFNA2, GALK1, GALNTL5, GBA3, GBE1, GCNT4, GJA1, GNA14, GNAS, GNRH2, GRAP2, GSTM5, GUK1, HARS2, IL18R1, IL1B, IT PA, KAT2B, L1CAM, LAMB3, LYZL1, MRAS, MTHFS, NRP1, NTNG1, OR10H1, OR1 1H6, OR1L4, OR1M1, OR2G6, OR51F2, OR5P2, OR6B2, OR7D4, PLOD3, PPCS, P RKAA2, PRPH, RCHY1, RPRM, SELE, SLC25A6, SLC33A1, ST8SIA1, TGFA, TLN 1, TUBA3E, TUBA4A, UBE2L6, UCKL1, UPP2, WBSR17, WHSC1, WNT5B, ATP6V 1C2, CSGALNACT2, PDCD1LG2
Negative_12109	C5, DAO, DHH, F2R, GSR, HPD, PML, ACAD9, ADRB1, AKR1A1, ALAD, ATP12A, A TP5C1, ATP6V1A, ATP6V1H, B3GAT2, BUB1B, CAMK2B, CASP3, CCND1, CD34, CD58, CD8B, CDC25C, CDC7, CD01, CES7, CNTNAP1, CRB3, CSNK1G3, CXCL5, CYP2S1, CYP3A5, DDX47, DEGS2, DTX3, DUSP7, EFNA4, FLOT2, FZD9, GALNT 1, GART, GFPT1, GSTM3, HMBS, HSD11B2, HSD17B4, HTR2C, IDH3B, IFNA14, LAMA4, LRDD, MAPK11, MMP9, MRAS, MYH6, NCAM1, NRG4, OR10AD1, OR10H1, OR10K1, OR1M1, OR3A2, OR5AS1, OR5P3, OR8I2, PARVB, PDE6G, PDK1, PGM3 , PIGA, PIK3R4, PLXNB2, PPCDC, PRSS3, RDH10, RELA, RHOQ, RPS6KA2, SEL E, SOCS4, STX12, STX5, SUCLG1, TAS2R60, THBS2, TYROBP, UGP2, UGT2A1, ULK3, WASL, CSGALNACT1, SERPINC1

Negative_12110	AK7, C1S, DHH, GK, GLA, ID2, IL7, MYC, ACP6, ACTA2, ACYP2, AHCYL2, ALDH1L1, ALDH3B1, ANPEP, APH1A, ARG1, ATP6AP1, ATP6V1F, CACNG3, CCL20, CD59, CD79A, CDH1, CDH2, CDKN1A, CDKN2C, CDKN2D, CHRM2, CLDN2, CPT1B, CSNK1A1, CSNK2A1, DTX1, DTX2, EPAS1, EPB41, EPHB4, EXTL3, FGF6, GIT1, GMPPA, GNPAT1, GP1BB, GRIA3, HARS2, HSD17B3, HTR7, IL10RA, ITGAL, KARS, KIR3DL1, KLKB1, LTB4R2, MAP3K8, MAPK12, MYH9, NEU2, OR1L3, OR4K1, OR4Q3, OR52N4, OR5AK2, OR5AP2, OR7A10, PAICS, PDE4D, PDHA1, PFKP, PKMYT1, PLA2G2A, PLAU, PLCD1, PLCE1, POLR3H, PRKG2, PTPN11, RAF1, RARS2, RETSAT, RPE65, SEMA3C, SEMA4A, SEMA4F, SESN2, SETD1B, SLC27A4, SOS1, SPTLC2, TAS2R40, TBK1, TGDS, THBS1, TRAF5, VTI1B, YWHAZ, ATP6VOE1, HSD17B12, TNFRSF13B
Negative_12111	AK7, CFH, FN1, FST, HK1, JUN, AARS, ABP1, ACO2, ACSL3, ACVR1C, ADH1A, ADH4, AKR1A1, AKR1C4, ALPP, ARPC2, ATP6V1F, B4GALT4, B4GALT7, BCAR1, BPNT1, CACNA1D, CCL20, CCL5, CD274, CD70, CDH5, CHSY3, CLDN10, COQ6, CYP2J2, CYP7A1, DAG1, DDX23, DDX4, DTX2, DUSP2, FGF23, GAL3ST1, GAPDH, GFPT2, GNAI3, GNAL, GNPAT1, GSTK1, HSD17B8, HSPA1B, HTRA2, IDUA, IL22, IL22RA1, IL6R, IQGAP1, ITGA2B, LHCGR, LIFR, MAOB, MAPK12, MARS, MYLK2, OR10A2, OR10P1, OR4K17, OR5AS1, OR6F1, OR6T1, PAX6, PDIA4, PER2, PIGM, PLCB3, PLOD2, PTPRM, RASGRP4, RRM1, SEPHS1, SLC25A5, SPHK2, SPP1, SSH1, SSH2, SUCLG1, UCK2, WASF3, YWHAH, HLA-DQA2, PRICKLE2
Negative_12112	C5, MUT, TXK, AARS, ACVR1, ACY1, AKR1D1, AMY2B, APAF1, ARG2, ATP2A1, ATP5A1, ATP5J, BCAR1, CACNG8, CCL22, CDKN1B, CFL1, CLDN19, CNGB1, CREB3L2, CSH1, CSNK1G1, DNMT3B, EFN3, ENPP3, FSHR, GAD2, GLDC, GNAI2, GNAO1, GNB1, HCCS, HDAC2, HLA-DOA, HRAS, ICAM1, IL12RB1, IL15, IL20RB, LYPLA1, LYPLA2, MTHFD1, NAT5, NCF4, NFYB, NLGN1, NTN1, OR10G4, OR1N2, OR2T34, OR4M2, OR51I2, OR6B3, OR8H3, PNPT1, POLD2, PPP2R5E, PTCH2, PTGFR, RFNG, SEMA4B, SOS1, SPRED2, STX4, TIRAP, UGT2B28, UGT2B4, ULBP3, WNT4, XYLB, HLA-DQA2, SERPINF2, TNFRSF17
Negative_12113	C9, CBL, ITK, NLK, SRM, ACTC1, ADH4, ADH6, ALG3, ANGPTL4, ARPC3, BIRC3, BLVRB, C3AR1, CCDC6, CD8B, CDS1, CLDN11, CLDN22, CRKL, CSAD, DKK1, DMGDH, EI24, FCGR3B, FGF2, FZD10, GCLC, GLI2, GNG12, GNMT, GNPDA2, HEXA, HLA-DMA, HMOX1, IARS, KCNQ1, KIR3DL1, LIPG, MTMR1, NEGR1, NEUROG3, NMNAT3, NT5C2, NTF3, NUMB, OR10G9, OR1A1, OR2A5, OR2AG1, OR51L1, OR51S1, OR52A5, OR8H2, ORC1L, PFN3, PLOD1, PPARA, PPP2R2A, PPP3CA, PRKCD, RRM2, SEMA7A, SOCS5, SPHK1, ST6GAL1, STAT1, STX10, SUCLA2, SUV39H1, SV2A, TUBA4A, UBE2L3, VANGL2, WARS2, XCL2, YES1
Negative_12114	PAH, PLG, SRM, TEC, ACAD9, ACADS, ACSL3, ADRB3, ALAS2, ALG3, AMDHD2, ARPC4, C4BPA, CACNA1D, CCDC6, CCL27, CHEK2, CYFIP1, DGKG, DUSP16, ENTPD1, FTMT, GAPDH, GIT1, GNAL, GSK3B, GUSB, HRH1, IFNGR1, IL12A, IL1R1, IL20RA, IL3RA, LFNG, MCAT, MCCC2, MDM2, MGLL, MLLT4, NCR1, NQO1, OCLN, OR13C3, OR13D1, OR2L13, OR2M4, OR51A4, OR52B6, OR52E6, OR7C1, OR9Q2, PARS2, PDXK, PIGV, PIK3C2G, PLCZ1, PON1, PON3, PPID, PRKCI, PTCH2, RBX1, RRM2, RXRG, SDHA, SEMA3A, SESN2, SMAD9, SNAI2, SOCS7, SOD1, STT3B, SUV39H2, TBL1X, THBS4, TUBAL3, TYRP1, UXS1, WBSCR17, WNT7A, TNFRSF10A
Negative_12115	CD4, F7, SRC, TAT, AASS, ACSL4, ALG5, APOA1, ARRB2, ATP5J2, BACE2, BCAT2, C3orf10, CACNG5, CCL19, CCND3, CD244, CD86, CDC25A, CLTB, CTBS, DX55, DHCR24, DHRS4L2, DUSP1, DUSP6, EFNA2, ERBB2, ER01L, EXTL1, FRA2T, GZMA, HSD11B2, LARS2, LGMN, MAGI2, MAP2K4, MAPK8, NEU1, NEU3, OR6Q1, OR8K5, PAK1, PGM2, PGM3, PIAS4, PIGV, PIK3CB, PLA2G10, PLCE1, POMC, PRKACB, PTAFR, RAD51, SDHB, SEMA3E, SPCS1, STX10, STX1A, TAS2R5, THY1, TUBB3, TUBB6, UCK1, VNN1, TNFRSF10C, TNFRSF14

Negative_12116	CGA, PRL, SFN, ACO1, ADRB3, AREG, ASNS, ATP5G2, B3GALT1, BET1, CACNG3, CCDC6, CCL23, CD36, CDC14A, CHUK, CSF1R, CSF2, CSNK2A1, CTNNA1, CTS L1, DAAM1, DDX23, EPB41L1, EXT2, FGF14, FLT1, FUT9, GALNT12, GLUD2, G LUL, GNPDA1, GPD2, HDAC1, HMBS, HSD17B8, HSP90B1, IL13RA2, IL25, IL2 9, IL2RG, INPPL1, IRF5, ITGA9, KAT2A, KIR2DL4, KIR2DS4, LTB4R2, LTBR , MAD2L1, MALT1, MAML1, MAT2B, MKNK1, MTHFS, MYH2, NCAM2, NCOR1, NEU4 , NFKB1B, NFYC, NPR1, NRXN3, NUDT2, OR10A4, OR10H4, OR10K2, OR13C2, O R1L6, OR51A2, OR52E8, OR5AU1, OR6A2, OR6N1, PHKG1, PLCG1, PLEKHA8, P RKCQ, PTPN11, RALGDS, RASGRP4, SKP2, SLC12A2, SMURF1, TCF7L1, TICAM 2, TJP3, TLR9, TUBA1A, UGT2B28, VKORC1, WHSC1L1, WNT9B, ATP6V1C1, HL A-DQA2, HLA-DRB4, MAPKAPK5
Negative_12117	F5, LPO, NF1, NPL, SRM, AARS, ACRY, ALDH1A2, ALG6, AOX1, ARHGEF4, ATP5 B, ATP5J, BDH2, CACNG6, CADM1, CADM3, CAMK2B, CAMKK1, CCL1, CCL4, CX3 CR1, CXCL13, CXCL3, CYP2C9, CYP2E1, DUSP7, EFN1, EIF4E2, EPHA8, FUT 2, GADD45B, GALNTL4, GALNTL5, GALT, GMPPB, GNAT3, HSD17B4, IKBKE, IL 13, IL21R, INSR, IQGAP2, IRF3, ITGAE, KYNU, LAP3, LIAS, MAN1A2, MAPK 10, MFNG, NADSYN1, NEGR1, NME7, NODAL, OR10AD1, OR2A5, OR2G3, OR4D9, OR4K5, OR51I2, OR5D16, PDE3A, PFKFB4, PIGS, PLCB2, PLCB3, PLK1, POLR 2I, PPARG, PRKAB1, PRKACB, PRKACG, PTGFR, RAPGEF2, RELB, SARS2, SELE , SEMA3A, SHC1, SPRY1, SPTLC2, STAT1, THBS3, TM7SF2, TNFSF8, TSLP, TU BB6, VASP, VAV1, WNT5B, YWHAE, HSD17B12, PAFAH1B3, TNFRSF12A
Negative_12118	C4B, C5, DHH, EDA, FH, AADAC, ACAD9, ACTN1, ADSS, ALPPL2, ANPEP, ARG2, ATP5E, ATP5F1, CACNG6, CAMK2D, CD8A, CDH5, COL3A1, COL4A1, CREB3, CT LA4, CTTN, CYP3A43, DUSP4, ENTPD8, FUT1, GUSB, H6PD, HSD17B1, IL10RA , IL17A, ITGB8, KYNU, LAMB4, LIPT1, MAP4K4, MECR, MKNK1, NRXN2, OR4D6 , OR4K15, OR6S1, PAK4, PGAM1, POLE4, POLR1B, PTEN, SARDH, SEMA3A, SEM A3G, SMAD7, SMC1A, SPRY1, TCF7L1, TGFB2, USE1, ZFYVE16, ZNRD1, ST6G ALNAC1, TNFRSF1B
Negative_12119	DDO, F9, FGB, GP6, LSS, TK1, ADCY7, ASRGL1, BDNF, CALML6, CCDC6, CCL1, CDC27, CRLF2, CYP27A1, CYP2B6, CYP3A5, DDX51, DFFA, DLL3, DPAGT1, DU SP2, DUSP9, EIF4E, EPHA5, EPHX2, ERO1L, FGD3, GALNT8, GNAI3, HCCS, IF NA10, IFNA16, INSR, IPMK, IQGAP1, ITGA2B, KIR2DL4, KLK3, MAN1A2, MAP K10, MASP1, OCLN, OR10AD1, OR10H5, OR10P1, OR10R2, OR11H1, OR1L4, OR 4C16, OR4S1, PARVA, PDE1C, PDE6G, PI4KB, PLA2G3, PNPLA4, PPID, PTTG1 , RXRA, SETMAR, SFRP4, SLC25A5, SMARCA5, SREBF1, ST3GAL3, STX2, TNFS F18, XYLT1, PDCD1LG2
Negative_12120	C8A, CAD, CR1, IDS, VTN, ACP6, ADCY10, ADIPOQ, ALDH2, ANAPC10, AOC2, A RHGEF1, B3GAT1, C1QA, C1QC, CACNA1C, CHAD, CHUK, CNTFR, COL1A2, CREB 3L3, CSF1, CSF2RB, ERBB3, GFPT2, GRAP2, HCST, HSPA2, HTR4, IFNA8, IL2 3A, IL8RB, ITGAL, LAMC1, LIPC, LRP6, MPST, MYH13, MYLK2, NCOR1, NLGN1 , NPR1, OR2T4, OR4C16, OR52R1, OR5B17, OR5T3, OR6C75, OR9G4, PCCA, PD PK1, PIM1, PIPOX, POLR1A, PORCN, PPP1R3D, PPP3CC, RELA, RPSA, SEMA7A , SHC3, SPI1, SPRED2, SREBF1, TALDO1, TAS2R40, TP53I3, VASP, VDACC2, X YLT2, YOD1, SERPINE1, TNFRSF10A

Negative_12121	<p>CBS, DLD, IL2, PML, SHH, ZYX, ACOT11, ADAM17, AMPD1, ANAPC1, ASPA, ATF2, ATP5E, BET1, BMP4, BPGM, CAV3, CCL27, CCND1, CD44, CDIPT, CTSS, CX3CL1, CYP3A5, DMGDH, EPHA5, FARS2, FUT4, GADD45G, GCAT, GNAQ, GRPR, HCS, HCST, HNF1A, HSD17B7, ICOSLG, IL10RA, ITGA11, LIAS, LIPA, MAN2A1, MYH10, MYH4, NCOR1, NKX2-</p> <p>2, NQO1, OR10S1, OR2A5, OR2D3, OR4F15, OR51A7, OR52E6, OR5L2, OR9Q2, P2RX5, PAK3, PANK4, PDE3A, PER2, PI4KA, PI4KB, PIGH, PNPLA4, PNPT1, P PP1CA, PPP2R2D, PRKAG3, PRKCB, PTPRM, RAC3, RPS6KA4, RUNX1T1, SDHD, SIAH1, SMPD3, SNAP25, SSH1, STX10, STX12, STX1A, TCF7L1, TFPI, TUBA1B, VANGL1, VDAC1, VEGFC, WBSR17, ARHGEF12, ATP6V1C1, HLA-DQB1, MAPKAPK3, TNFRSF17</p>
Negative_12122	<p>EBP, F11, FST, AADAC, ACTN2, APOC3, ATG12, B4GALT2, BCKDHA, CAMK2G, CAMK4, CASP9, CCL24, CLDN6, CNDP1, CPT2, CTLA4, DDX52, DHRS4, FIGF, FLT4, FTMT, FZD10, GALNT7, GRB2, GSTA5, KIR3DL1, KIR3DL2, LIPF, MAPK11, MGAT4B, NADK, NNMT, NRG2, OR10P1, OR13D1, OR2AG2, OR2H1, OR2T5, OR52A5, OR5P2, OR8H3, ORC6L, PDE1C, PDE3A, PIGL, PIK3R1, POLA1, POLR2A, PPP1CC, PPP1R3C, PPP2R5B, PRKCB, RHOD, RPIA, SELL, TLR4, UGCGL1, UXS1, YARS, EIF4EBP1, TNFRSF17</p>
Negative_12123	<p>C5, CD2, F2R, HPD, MET, NPY, PLG, RFK, SCD, VCL, ABP1, ACO1, ACY1, ACY3, AGXT, ALDH1A2, AMD1, ARD1A, ARNT, ARSA, BCKDHA, CAMK4, CCR8, CD8B, CD C7, CDK2, CER1, CHRM2, DAAM2, DDX19A, DERA, DLL1, DOT1L, EFNA4, ELK1, FADS2, GADD45B, GALNT3, GANC, GDE1, GNRH2, GUCA1A, HSPA1B, IKBKG, IL2RG, IL6ST, ITGA3, ITGA5, MAML1, MAP2K3, MAP3K11, MAP3K13, NAT6, NCR2, NTRK1, OLAH, OR10Z1, OR2B6, OR3A2, OR5AN1, OR6B2, PAK6, PCYT2, PIA S4, PIGC, PPAR, PPP5C, PRKCA, PRNP, PRSS1, PTPN6, RAC2, RFNG, RFXANK, SLIT2, SMC1A, STK3, TBXAS1, UGP2, WNT10B, ATP6V1G1</p>
Negative_12124	<p>CP, HK3, ACOX3, ACSM4, ADSL, AGPAT6, AKT3, ALCAM, ALPPL2, AMD1, ARSB, BCAT2, CD55, CD8A, CDC14B, CLDN22, CMAS, COQ6, CPT1B, CTNNA2, CYP3A4, EDNRA, EPB41, ERBB2, FGF8, FZD3, GLUD2, GNAZ, GNRHR, GRIN2B, IL13RA1, IL22RA2, ITGAL, LRP5, MAOB, MAP3K14, MGAT2, NCF1, NCKAP1L, OR10AD1, OR10H3, OR4C13, OR52K1, OR5B17, OR8J3, PAPSS2, PCK2, PDE4C, PLA2G2D, PLXNA1, PPP2R5C, PRKAR2A, PTGS2, SEMA3B, SMPD2, SMPD3, ST8SIA5, ATP6VOA2, MAP3K7IP1, PNLIPRP2, SERPING1</p>
Negative_12125	<p>AMH, CDA, HYI, MAG, SFN, SI, SMO, ACADSB, ADCY5, ALPI, AMPD3, ATP5D, CC L21, CCR5, CDC27, CDC6, CER1, CYP3A5, EARS2, EFNA1, EPHA4, EPHX2, EVI1, GALNT8, GARS, GATM, GLDC, GMDS, GNMT, GSTT1, HIBADH, HRH2, IL1R1, I TGAV, KIR3DL3, LAMC3, LARS2, LCMT1, LIPA, LIPG, LRDD, MAPK3, MAPK7, M GAM, MYH2, MYH8, NAT6, NEUROD1, NOTCH2, NT5C, OR14A16, OR2Z1, OR52E8, PFKFB4, PGAM2, PLA2G2E, PLCG2, PLXNB3, PRKACB, PRODH, PYGB, RRAS, S ELPLG, SKP1, SPCS1, SPP1, SREBF1, STEAP3, TAS2R4, TBK1, TNXB, TUBA1A, UROS, VDAC2, WNT4, YWHAZ, EIF4EBP1</p>
Negative_12126	<p>C5, ME1, PLN, SDS, STS, ACSL6, ACVRL1, ADCY10, ADH7, ADRB1, ALAS2, ALG1, ATP5G3, BMP7, CCL25, CD70, CDC25C, CLCA2, CLDN11, COL2A1, COQ5, CP T1C, CX3CL1, CXCL2, DDX4, DGKH, EDNRB, EGFR, EHHADH, EHMT1, FARS2, FS HR, GALE, GALNTL5, GNAQ, GOT1, GPX7, GUCY2F, HPRT1, HSD3B1, HTR6, IFN GR2, IL9R, INPP4B, ITGAL, ITGB6, ITGB7, KLRC1, MAFA, MGAM, MTHFD1, MY H6, NADK, NFYC, OR1F1, OR1L6, OR5C1, PIGC, PIGO, PNMT, POLE4, PORCN, P PP2CA, PPP2R2B, PPP2R5D, PVRL1, RAP1B, RPIA, SHC1, SULT1A4, TAS2R16, TAS2R3, TUBA1C, WNT8B, ATP6VOA2, HSP90AA1, SERPINC1</p>



Negative_12127	CFD, F12, PML, SFN, SI, AASDH, ACAA1, ACYP2, ADRB2, APOA2, AXIN1, B3GALT6, CCR6, CLDN4, DUSP3, EPHA8, GLI1, HLA-G, HTR2A, HTR7, IL24, IL6ST, MAP3K11, MAPK13, NCOR2, NFYA, OR56A4, OR5M3, PKM2, PLA2G10, PLCZ1, PLOD1, PNLIP, PPCS, PRPH2, RDH8, RPS6KA3, SHC4, STK3, SYNJ1, TBL1XR1, TRAF1, TUBA8, WNT11, WNT3, YWHAQ, ATP6V1G2, CTNBP1, KIR2DL5A, SERPINB5, TNFRSF1A
Negative_12128	BTC, CP, ABI2, ABP1, ADIPOR2, ADRB1, ALDH5A1, AMPD3, BRAF, CACNB1, CAV1, CDC14B, CERK, CLDN17, CNDP1, COMT, CYP2C18, DLL3, DPAGT1, FGFR3, FZD3, GALNT14, ITGA9, LAMB2, MTFMT, NCR2, NODAL, OR10K1, OR1J4, OR2A14, OR2T12, OR4C12, OR51A2, OR5B21, OSMR, PIGT, PLA2G1B, PLAU, PLXNA2, POLR1E, PPP1R1A, PYGM, RAC3, RETSAT, SDHB, SEMA4G, SOCS2, STEAP3, UGT2B7, YWHAB, YWHAH, ZIC2
Negative_12129	AK7, BTD, GH2, RFK, ACOX2, ACSS2, C3AR1, C3orf10, CCL14, CCR8, CHST11, CIITA, CLCA4, CLDN1, CLDN9, CTSL1, CUL1, CX3CL1, CYBA, CYP2C9, DAAM2, DBF4, DDIT3, DHDH, DLL3, DUSP10, EIF4B, ENO2, FCGR3B, GAL3ST1, GANC, GGT6, GMPR2, GRIN2A, GUCY2F, HDAC2, HSD17B7, IFNA7, IL12A, IL8RA, IMPA2, IRAK3, ITGAV, ITGB8, LAMB4, LYPLA1, MCCC1, MTMR6, MYH13, NAMP1, NME7, OCLN, OR10K2, OR1Q1, OR2A4, OR51A7, OR5A1, OR5M3, OR8H1, P2RX2, PDXP, PGS1, PLA2G2D, POLR3B, PPP5C, PRDX6, PRKCE, PRKCQ, PSAT1, PTPRJ, SCIN, SDC1, SLC27A1, SOCS3, SOS1, SULT2A1, TAS2R5, TP53, TPH2, TUBA1B, WASF2, WWP2, XYLT2, YARS2, ST6GALNAC6, TNFRSF13B
Negative_12130	DUT, HGD, MAG, RFK, TXK, ACMSD, ACY1, ADORA2A, AHCY, ARPC3, ARPC4, ATF4, ATP5J, AVPR1A, BAAT, CACNG4, CACNG6, CCL3, CCND3, CD244, CD74, CDIPT, CDK6, CFTR, CHRM5, COL5A3, COQ5, CRLF2, CRLS1, CSF1R, CSNK1A1, CTLA4, CXCL10, DHCR7, DHRS4L2, DNMT3A, DUSP9, DVL3, FGF14, G6PC, GALM, GALT, GOT1, GPT2, HARS, HLA-G, IFNAR1, IL20RA, IL24, ITGB7, LPAR1, MARS, MDH1, MRAS, MYH11, MYH7, NUDT5, OR10H2, OR2B2, OR2S2, OR51M1, OR5B17, OR6S1, OR7G1, PAK4, PAX4, PLCD4, PLCZ1, POLR3H, PRKACB, PSEN2, PTCH2, PTK2, RPN2, RPS6KA1, SCLY, SELPLG, SEMA3D, SESN2, SMPD3, SOCS7, SORD, ST3GAL5, SULT1A4, TAS2R60, TRADD, TYK2, ATP6V1B2, MAPK8IP2
Negative_12131	AUH, CD6, DBI, EZR, GBA, KIT, PLG, SMS, VCL, AASDH, ACSL1, ACTC1, AFMID, AGXT, ALG12, ALG9, AMD1, ARPC5, ARSB, ATP12A, B3GAT3, BDH2, BDKRB2, CACNG8, CCNA1, CD226, CLDN15, CNGB1, COL11A1, COL5A3, CYP2J2, DAAM1, DDHD1, DGKG, DHRS4L2, DLAT, EDAR, EHHADH, EXTL1, FASLG, FGF10, FUT4, GAD2, GALNT12, GGCX, HTR7, HYAL2, IDH3G, IL17RA, IL28RA, INHBA, INMT, INPP1, INPP5A, KIR2DL3, KLK3, KLRC4, LRAT, MAP2K2, MAP4K1, MAPK13, MGAT5, MKNK2, MMP9, NANS, NTF3, ODC1, OR10H1, OR13D1, OR2AE1, OR3A1, OR51T1, OR5T2, OR7G3, ORC1L, P4HA1, PDE3B, PFKFB1, PIAS2, PIK3CG, PLCB1, PLCD3, PLIN, PNPT1, POLR2J, PPA2, PPOX, PPP2R5A, PTPN11, SETMAR, TIAM1, TNFSF18, ULBP2, ATP6V1E1, ST6GALNAC3
Negative_12132	CDA, CFI, LTB, ACP5, ACYP1, ALCAM, ALDH3A1, ARHGAP5, ATP6AP1, BMPR2, CCND3, CDC16, CNTNAP1, COX10, DCXR, DRD1, DUSP3, FADD, FGF2, FUT5, FZD1, FZD2, GRB2, GSTA3, HPSE, ICOSLG, IL13RA2, ITGA10, KARS, LIPE, MAP2K2, MAPK8, MPZL1, NLGN3, NT5C, NTRK1, OR10K2, OR52R1, OR9Q2, P2RX3, P2RX5, PDE9A, PIGV, PRNP, PRODH2, PSAT1, PTCH1, QPRT, RFXAP, RHOD, RUVBL1, SLIT2, SNAI2, STAT2, STAT5A, SUCLA2, TLR4, TOMM40, VANGL2, WNT8B, ST6GALNAC6

Negative_12133	ITK, PC, PTS, TNF, UBC, ACSM3, ACVR1B, ADIPOR1, ALDH6A1, ALPPL2, ARHGAP5, B3GALT4, BAI1, BLVRA, CACNG4, CASP3, CCL4, CCR5, CSNK2B, CTF1, CXCL12, CYSLTR1, DDX50, DIAPH3, DKK4, EFNB3, EHHADH, EXT1, FPGT, FUT1, GALC, GALNT8, GGCX, GPAM, GRAP2, GUCA1B, HSD3B7, IARS, IQGAP2, ITGA E, MAP2K4, MCCC1, MDH1, MECR, MGST1, MTHFD2, MTHFS, MYD88, NCF1, NFYB, OR10A5, OR2AG1, OR2B2, OR52H1, ORC3L, PAX6, PLA2G10, PLXNB3, PPP1R3C, PRKAB1, PRKCH, PRSS3, PYGL, RALA, RPN1, SGPP1, SHMT2, TBK1, WNT3A, YWHAE, ZNRD1, PHOSPHO1, TNFRSF6B
Negative_12134	CEL, HGD, IDS, LIF, RFK, ABP1, ADCY7, ALDH1B1, ALG10, ANGPTL4, ATP6V0B, B4GALT6, BDH1, CACNA1I, CCKAR, CCND3, CD40LG, CLDN14, COL1A2, CSF3R, CSNK1A1, CTNNA1, CYP21A2, DGAT2, DHODH, DNMT3L, ECHS1, EFNA1, ENTPD2, GALNT1, GSK3B, HEMK1, HIF1A, HIP1, HMGCL, HPRT1, IKBKE, ITGA8, ITGA9, ITGAV, L1CAM, LAMA3, LIFR, MALT1, OR10AG1, OR14J1, OR2Z1, OR4C6, OR51E2, OXCT2, PDE10A, PDIA4, PLCE1, PMM2, PRKCG, PRKCQ, RALB, RAP1A, RHEB, SDC1, SEMA7A, SMAD3, SMAD5, SMPD3, SPRY3, SRGAP2, ST8SIA1, STK36, SULT1A2, SV2A, TAS2R4, TFPI, TNFSF9, TSC1, TUBB4Q, WNT11, GABARAPL2
Negative_12135	PML, ADCY7, AGPAT6, AKR1C4, ALG9, APOE, ARPC2, BAAT, CCNB1, CDC25C, CER1, COL4A1, CSNK1A1, DAD1, DPM3, GCDH, GCH1, GLUD1, GMPPA, GTSE1, IL10RB, IL2RG, KCNJ11, LALBA, LEF1, LLGL2, MAP2K4, MAT2B, MTHFD1, NOX1, OR51I1, OR5B12, P4HA1, PARD6A, PEMT, POLR2A, PPP2CB, PRKG1, RASGRF1, RELA, RETSAT, SEMA3E, SIGLEC1, TAS1R1, TFPI, THBS4, UGT2B17, VANGL2, ST6GALNAC3, TNFRSF10A
Negative_12136	CEL, CTH, PTS, ACSL6, ARRB1, CCL21, CCL23, CDC14A, COL4A4, CXCR3, CYP1A1, CYP2A7, E2F3, EHMT1, ENTPD6, GALC, GALNT11, GMDS, GSTA1, GYS1, HSP90B1, IAPP, IL10, IL25, IL28A, LAMC2, LEFTY1, LYPLA1, MAPK7, MPP5, NOS3, OR10G8, OR13G1, OR1K1, OR2M4, OR4D9, OR52K2, OR5B3, PAICS, PANK2, PDE6D, PEMT, PMM2, POLR3D, RDH5, SLC2A4, SPRY1, TRPC1, VEGFC, CTN NBIP1, HLA-DRB5, MAP3K7IP1, ST6GALNAC3
Negative_12137	AMH, PGP, ACVR2B, AKR1B1, ALOX5, ARPC5, CDC26, CEBPA, CLDN1, DBF4, E2F2, EFNA3, EXOC7, FBP1, FOXA2, FZD2, GCAT, HBEGF, HDAC2, HIBCH, HPRT1, HTR7, ICAM3, IL1R2, IMPA2, LAMA3, MAML1, MAPK14, MBL2, MCAT, NT5C3, OR4S1, OR51A4, OR7D2, OR8G1, PARD3, PI4KA, POLD2, PPAP2A, PTCH1, RALB, SLC27A1, SOCS3, STX3, TLN2, TNFSF9, TUBA3E, UBA1, UGT2B28, VAMP4, WNT5A, SERPIND1
Negative_12138	EZR, HK2, LCT, LIF, AADAT, AASDH, ACMSD, ADCY9, ALOX12, ATP6V1F, C9orf95, CACNG7, CD47, CDC16, CLDN10, CLDN4, CNTNAP2, COL11A1, CSNK2A1, CYP8B1, DMGDH, EDAR, EPB41L1, FGF7, FGF9, GALK1, GALM, GSTM5, GUCY1A3, HNF4A, IFNA21, IGFBP3, IL29, LCAT, MAML2, MAP2K5, MYL5, NEU3, NTSR1, OR10H3, OR10P1, OR1L1, OR2B6, OR2G6, OR2S2, OR4K5, OR51B4, OR52B4, OR5J2, OR8G1, OR8K5, P2RX4, PAK6, PAX6, PDGFD, PIK3C2B, PLCZ1, PLEKHA8, PLXNB3, PPARA, PPID, PRKACB, PRPS2, PTDSS2, RBPJL, RGS3, RHOQ, RPS6KB2, SEMA3E, SEPHS1, SETD7, SHC4, SRGAP1, TAS2R40, TGFB1, TLR2, TP73, TUBAL3, TYK2, VTI1A, ATP6VOD2, MAP3K7IP1
Negative_12139	AGL, CRK, GBA, HK1, LCT, MAG, MTR, NF1, SDS, ADRA1D, AKR1B1, ANPEP, ARPC5, ATP6V0C, B3GAT1, BMP8B, C1GALT1, CCKAR, CCL22, CLDN3, COL11A1, COQ5, CPT1A, CXCR5, DGKH, DRD1, FGF20, FUT9, GFPT2, GNAS, GYS2, HCST, HSD17B1, IL1A, ITGB1, LAMB2, LAMC3, LDHAL6A, MDH2, MYH2, MYLK, NAGK, OLAH, OR1C1, OR4C12, OR4N5, OR51T1, OR52E2, OR5T3, OR9A2, ORC2L, PDE4A, PDE5A, PER2, PHKG1, PIGP, PIK3R4, PLA2G2A, PLCB3, PLXNB2, PRKAB2, PRKAR2B, PRKCB, RAPGEF4, RDH5, ROBO3, SDHC, SEMA4F, SEMA4G, SFRP4, SHC3, SMAD2, SMURF2, SNW1, SPRY2, TACR3, TAS2R9, TKTL1, TRAF1, WEE1, YWHAZ, ATP6V1E1, HLA-DPA1

Negative_12140	C9, CKB, DCK, DDO, DUT, FUK, GDA, IL4, LPO, LSS, B3GNT5, BUB1, CCNG1, CC R6, CHST12, CLDN1, CNTF, CXCL13, CXCR6, CYP2C8, DDB2, DGAT2L4, DGKG, DHRS3, DOCK1, DPM1, DTYMK, EFNA4, FLT3LG, GALE, GALNT9, GAPDH, GNAS, GRAP2, GRIN2B, GSTA4, HEXB, INPP5B, ITGAE, KLRC3, KNG1, KYNU, LEFTY1 , LLGL1, MGAM, MPST, MYL2, NCF1, NFKBIA, NME4, NOTCH1, NUMB, OR13C5, O R14J1, OR1S2, OR4K13, OR5AK2, OR5B17, OR8K1, OR8K5, ORC1L, OSMR, P4H A3, PDE9A, PFN2, PIP5K3, PLA2G2D, PLEKHA8, PLK1, PPP1R3D, PVRL4, RAS GRP3, RETSAT, SETMAR, SH2D1A, SSX2IP, ST3GAL2, SUV39H2, THBS1, TNFS F4, UCK1, UCP1, WASF3, WNT2B, ZFYVE9, ATP6V0D1, ATP6V1E2, CACNA2D1, CTNNBIP1, GABARAPL1, HLA-DPA1, PHOSPHO1, ST6GALNAC4
Negative_12141	CFH, F12, F3, INS, ZYX, ACSL5, ADCY6, AGXT2, ALDH3B2, ALOX15B, AMPD1, ANAPC5, ATP2A1, BAAT, BDKRB2, CCL2, CCL25, CDC14A, CRB3, CYP1A1, DDX 54, DGKE, DHFR, ENTPD1, EPHA6, FGF5, GSTT1, HAGHL, HIP1, IDUA, IL22RA 2, IL28B, KYNU, LIMK1, LTC4S, MAP3K8, MITF, NEGR1, NSD1, OR4A16, OR6N 2, P2RX4, PDE6D, PRKAR1A, PTAFR, SOAT2, SRD5A2, TAS2R7, TBXA2R, WASL , WNT2B, XCL1, CACNA2D2, PNLIPRP1
Negative_12142	CR1, FAH, FH, IL5, SFN, TH, UBB, ACOX3, ADRB1, ALOX15, ARHGEF6, ATP6V0 B, ATP6V1D, C1QA, C1QB, C3AR1, CAMKK2, CCNB3, CCNE2, CCNG2, CDC25B, C DKN2A, CES7, CHRNA7, CRHR1, CXCL3, CXCR3, EDAR, EFNA4, EPHA2, EXOC7, FABP4, FOXO3, GFAP, IL13RA2, ITGA1, ITGA5, ITGAD, KIR2DS4, MAP2K2, M ASP1, OR11H1, OR13C4, OR1N1, OR2A42, OR2T34, OR4P4, OR52M1, OR9I1, P HKA2, PIK3R3, PIP5K1B, PLA1A, POLA2, PRKCH, RDH10, ROBO2, SC5DL, SET DB1, SRGAP1, SSH2, TPH1, TRADD, VEGFC, WNT7B, YWHAG, HLA- DQA2, SERPINC1
Negative_12143	CAT, DDO, HAL, LTB, ME2, MTR, ACSM3, ACTA1, ADH7, ALOX12, AMPD1, ASIP, CAMK2A, CASP7, CCNG1, CD36, CD79B, CD80, CDC45L, CNTN2, COASY, COL6A 2, CYP3A5, DCXR, F13B, FGF14, FGF5, FLAD1, GALNT7, GNPAT, GSTZ1, IFNK , MAPK10, MGLL, NCR2, NFKB2, NFKBIB, NKD1, NOTCH1, NOX3, OR10K1, OR13 A1, OR1B1, OR1E2, OR2A42, OR2AG1, OR2T11, OR2T29, OR4X1, OR51G2, OR5 1Q1, OR52A5, OR52E6, OR6C70, OR6T1, OR8A1, OR8K1, OR8S1, PFKM, PIK3C 2B, PITX2, POLR3G, PPP1CC, PTPRM, RPS6KA3, RRAS, SESN2, SFRP5, TALDO 1, TJP1, TYK2, VASP, VTI1A, ATP6VOE1, PLA2G12A, SERPINA5, TNFRSF13C
Negative_12144	AK3, AK5, CKB, DLD, F10, GGH, GP9, TK1, AASDH, ALAS2, ALG9, ARSA, ATP5G 2, CAMKK1, CD40LG, CDC14A, CDS1, CSNK1E, CXCR4, CYP1A1, CYP2F1, DHRS 9, DPM1, DVL2, FZD10, GGT7, GRIA3, HCCS, HSD11B1, HSD3B2, HYAL2, IFNA 14, ITGA6, ITPKB, LRRC4C, MAGI1, MAGI2, MALT1, MAP2K4, MTAP, MYH8, MY LK3, NR4A1, NTF4, OLAH, OR10H5, OR11H4, OR13C9, OR2AT4, OR2H1, OR5D1 6, OR5T3, OR6A2, OR6M1, PDE1A, PEMT, PERP, PIAS3, PLA2G1B, PLA2G2E, P LEKHA8, PLXNA1, PLXNC1, PPAT, PPP1CA, PPP1R3D, PRKCI, PRKX, PTPRC, R BX1, RFNG, SHMT2, SSX2IP, STX6, SUCLG1, SV2A, TAS2R1, TIAM2, TRDMT1, ZBTB16, SERPIND1, SLC25A31
Negative_12145	C9, CFH, FYN, IDS, TAT, TNR, ACACA, ALG8, ATP12A, ATP2A1, B3GAT3, CACN G8, CD38, CD72, CLOCK, CTF1, CTNNA2, CYP11B2, CYP2A6, EDA2R, EFN3B, E LK1, ERBB3, GALK2, GPT2, GRIA2, GUK1, HTR6, IBSP, IFNA13, IFT57, JAG2 , MAP3K5, MAP4K3, MAPK11, MAPK13, MGAT4A, MITF, NFATC3, NFYC, OR10Z1 , OR1Q1, OR4C15, OR51I1, OR8B4, OR8B8, RHOQ, SEMA3B, SMPD2, STX3, TNF SF12, TUBB1, UNC5A, CSGALNACT2, MAPK8IP3
Negative_12146	C8B, LPL, NOG, PC, ABAT, ARRB2, B3GNT5, BLVRB, CAMK2A, CCL16, CD01, CO L3A1, CYP1B1, DDX41, EDNRB, EPB41L3, ER01L, FBP1, FPGS, GMDS, GNRH1, GUCA1C, HMOX2, HSP90B1, IFNA4, IL11RA, IL6R, IRS1, JAK2, KDSR, KIR3D L1, MAML3, MAP3K13, MYH10, NME2, NOS3, OR10H2, OR10R2, OR1S2, OR3A1, OR4A5, OR4C11, OR6C70, PCNA, PHKB, PIGW, PLD1, PNPT1, PPP2R5E, PRSS3 , RARS2, RPIA, SEMA3B, SHC4, STX12, TCF7, TKTL2, UPP2, VDAC2, ZNRD1

Negative_12147	DDC, GK2, OSM, SPN, ACP5, ATP6V1A, CDC14A, CFL2, COX10, CYP2D6, E2F2, EFNA4, GGT5, GNMT, HRH1, IL10, IL22RA2, KDSR, KLRD1, LAMC2, MYH14, NFATC4, OR10A7, OR10T2, OR13H1, OR1Q1, OR52N4, PAK7, PDE2A, PKLR, PON2, PPM1A, PPP1R3C, PRPH2, PSEN1, PTK2, RAP1B, RAPGEF4, RBKS, RBPJ, SEMA4G, SH2D1A, SPAM1, SREBF1, SRGAP2, TAP1, TOLLIP, TUBA4A, YKT6, C1GALT1C1, MAPK8IP3, ST6GALNAC1
Negative_12148	A2M, ABO, MVK, PGF, TXK, ADRB1, APAF1, APPL1, ATP6VOB, B3GALT2, CCNA1, CHRNA7, CSF3, CTSS, GALNT12, GALNTL1, GLUD1, IBSF, IKBKB, KARS, LAMC1, MAPK14, MAPK8, NRCAM, ONECUT1, OR2L2, OR51A4, OR5D16, OR6C6, OR8A1, PIAS4, PLA2G2D, PLOD3, PLXNB3, POLA1, POLR2I, PRKACG, PRKAR1A, PRNP, PTPN11, RHOA, RRAS, SEMA3B, SETD8, SIPA1, SPTAN1, TACR2, TAS2R7, TFDPI, UBE2K, YES1
Negative_12149	EDA, GSR, ID4, RET, TFG, ABCC8, ACAD8, ACSS1, ACVR2B, B3GALT1, BLVRA, CACNG5, CDC16, CDK6, CEBPA, CHAT, CRHR1, CTNNA3, CYP11B1, DDB2, DUSP6, EPHB4, GANC, GDE1, GSTA4, GUK1, IFNAR1, IFNGR1, INPP5E, IRAK1, IRS4, ITPA, JAK1, KAT2B, KNG1, LARS2, MAPK1, MASP1, MASP2, MTHFS, NKD1, NRAS, NUMB, OR11G2, OR1C1, OR2G3, OR2K2, OR4A16, OR4K1, OR52W1, OR5J2, OR6Q1, OR7C1, ORC2L, PDE4A, PDE7A, PIGM, PIK3CB, PIP4K2C, PLXNB1, PTPRF, ROCK2, RPSA, RRM2B, SLC2A2, SMPD2, SNAP25, STK4, STX1B, TRIP10, WBSR22, WNT3, WWP1, CACNA2D3, CSNK1A1L
Negative_12150	AR, EBP, GP5, HYI, LCT, ACAD9, AGXT2, AK3L1, AMDHD1, ARG2, BDNF, BIRC5, C3orf10, CCL14, CDC14B, CYP2C8, DHRS9, DLL3, EHMT1, ENO1, EPHB3, EPHB6, FGF14, FUT7, GAD2, GMPPB, GSTM2, IL13RA1, IL2RB, LIPC, LTC4S, MAP2K2, MAP2K6, MAP4K2, MAPT, NANP, NFASC, NRG4, OR1N1, OR2F1, OR2L3, OR4F17, OR4F4, OR51A4, OR5AS1, OR8H2, PDE4D, PIK3C3, PIP4K2C, PLOD1, PLXNA3, POLR1C, PON1, PPCS, PPP2CA, PYGL, RND1, RPS6KB1, SEMA3E, SEMA4A, SMAD4, SMC1A, SMPD3, SNW1, SPAM1, STK11, TAS2R50, TYMP, UGT2B10, VTI1B, WNT8B, ATP6VOA1, KIR2DL5A, PAFAH1B1, SERPING1, TNFSF13B
Negative_12151	ADK, CRK, DCC, ID3, ACADS, ACSL6, ACTA2, ADCY8, AKT1, ALAS1, ALG2, CACNA1B, CARS2, CCL17, CCL25, CCL27, CCND1, CCND3, CDC20, CHST11, CKS1B, CNGA3, CREB5, CTSB, CXCR6, CYP3A4, CYSLTR1, DCTD, DGKQ, ECHS1, EFNB2, ENO2, FABP3, GAMT, GLS2, GLYCTK, GPX5, HIBCH, HLA-F, IL23A, IRAK1, ITGA10, KIR3DL2, LAMC1, LYPLA2, MAGI2, MAPK1, MASP1, METTL6, MRAS, NAT5, NME6, OR13C2, OR1L3, OR2A4, OR2M7, OR51D1, OR52N5, OR8J1, ORC2L, PAFAH2, PAK6, PCK2, PDHA1, PER2, PIAS4, PIK3R5, PIP4K2C, PLCZ1, PLXNA3, PPP1R3D, PVRL4, PYGL, RARS, RERE, RETSAT, RHOA, RPS6KA5, SEMA3C, SETD1A, SPHK2, ST3GAL1, STX7, TNFSF18, TXNDC12, UGDH, UROD, MAPKAPK2
Negative_12152	AMT, CR1, GK2, GLA, LYN, TK1, ADIPOR2, AGRN, ALDH3A1, ALDOA, ALPL, ALPP, APC2, ATN1, ATP5C1, ATP6VOC, B4GALT2, B4GALT7, BCKDHB, CCL15, COMT, COQ5, CSF1, DDX18, DIAPH1, DUSP2, DUSP9, EPAS1, F2RL3, FGD1, FTMT, FZD9, GALM, GNAQ, GUCY2D, HCCS, HSPB1, ICAM1, IL2RB, INSR, ITGAM, MAP2K1, MAPT, MTHFD1, NADK, NAGS, NKD2, NRG3, OR2A25, OR4K17, OR4N2, OR52J3, OR5M8, POLR2A, PPP1R3C, SENP2, SPRY2, TKTL2, TPI1, TUBA4A, WHSC1, XYLB

Negative_12153	CBL, CDA, GBA, JUP, PRL, ABCC8, APRT, C1GALT1, C1QC, CADM1, CARD11, CA SK, CCL20, CD38, CDC14A, CDC7, CES2, CHSY3, CLDN20, COL5A3, CRHR1, CY BA, DUSP5, FLT4, FSHB, FZD5, GANC, GLYCTK, GNA15, GNG3, HADHB, HIF1A, HTR2A, IDH3A, IL17B, IL1B, IL1RAP, INPPL1, ITGA8, KYNU, LDHC, LYZL1, MAN1A2, MAP2K6, MGAT1, MYH15, MYH9, NEU4, NOD1, NOX3, NPR2, NT5C2, OR 1C1, OR2AG1, OR2T11, OR51F1, OR5AS1, OR5B12, OR5L1, OR6C74, OR9A4, O R9G1, PDE5A, PECAM1, PI4KA, PIGU, PPAP2A, PPP2R2B, PSEN1, RPS6KA1, R PS6KA3, SDHB, SDHD, SETD2, SNAI2, STAT4, TFDP1, TLR2, TNFSF8, UGT2B7 , UPRT, YARS, AASDHPPT, ATP6V0E1, ATP6V1G3, CACNA2D3, CSGALNACT2, M APKAPK2
Negative_12154	DBT, MPZ, PGP, TNF, AKT3, ALG1, ANAPC1, ARNTL, ATP5I, BIRC3, C3AR1, CA CNG3, CACNG5, CAPN2, CCL22, CCR4, CDK4, CDK7, CERK, CKS1B, CPT1B, DDH D1, DKK2, DLL3, DPAGT1, EPHX1, EPOR, FUT2, FZD5, GALNT13, GRB2, HADH, IL12A, IL17B, IL1B, IL21, ITGAD, LRRC4C, LTBP1, MAD2L2, MARS, NCKAP1 , OR13A1, OR1A2, OR1F1, OR2D3, OR52E6, OR5M9, OR6C76, P2RX5, P2RX7, P HKG1, PIGK, POLR2L, POLR3G, POLR3K, PPP2R2C, PRKAG2, PTAFR, PTPN11, RASGRF2, RBKS, RDH8, SDC2, SEMA4B, SPTAN1, ST3GAL2, ST6GAL1, TBL1X, TLR3, TYRP1, ULBP3, VNN1, WNT10A, ZAP70, ALDH18A1, PHOSPHO1, SERPIN A1
Negative_12155	ADK, ID1, TAT, ACYP2, ALDH5A1, ALOX5, ALPPL2, ATP4A, CACNG1, CD59, CD C27, CFTR, CSF1, CTBP1, CYP1A2, DCXR, DDIT4, DGKA, FM01, GALNS, GNA15 , HTR7, IL12RB2, IL28A, INPP5E, IPPK, LAMC1, MAP3K6, MAPK1, MLLT4, NA MPT, NCKAP1L, OR11H6, ORC4L, P4HA3, PIGL, PLCG1, POLR2A, PRKAA1, PSE N1, PTK2B, PYGB, SLC2A2, SPTLC1, STK11, STK36, TALDO1, TCF7L1, TM7SF 2, TNFRSF9, TPH2, TSHB, TYMS, WNT5A, WNT6
Negative_12156	DLD, IL7, ILK, LYN, MSN, NGF, PAH, PRL, TYR, AANAT, ACP1, ACTN2, ADAM10 , AKR1B10, ALG10B, ANAPC5, ANAPC7, ANGPTL4, ARHGEF6, ATP6V1H, BIRC3 , BRAF, C4BPA, CCNE2, CDH1, CLDN9, CXCL12, CYFIP2, DHRS4L2, ECSIT, EL K4, EPB41L3, FGF21, FGFR4, GCNT2, GGT5, GPD2, H6PD, HIBCH, HNF1B, HPS E2, INPP1, KLRC1, LCAT, LIAS, LRAT, LTBP1, MAP2K6, MAP3K1, MGAT4B, NC F1, NEFL, NT5M, OR56B4, OR5AK2, OR5D16, OR6C3, OR8S1, OXCT1, PARD6B, PDX1, PIGO, PLCB3, PPM1D, PSME2, PTTG1, PYCR2, RASGRP1, RIPK1, RPS6K A5, TACR1, TAS2R1, WASL, WNT3A, ZNRD1, TNFRSF6B
Negative_12157	AMH, C3, C9, IL5, IL7, TNF, UBB, AANAT, ACVR1C, AKT1, ARHGEF1, ARNT2, A TG3, B3GNT3, BDH2, C1QA, CACNG1, CALML5, CCNE1, CCNG2, CDC7, CER1, CL CA2, COL6A2, CREB5, CXCL11, CYP2B6, DTX4, EHMT1, ENO1, ENPP7, FABP4, FGD1, FGF20, FTH1, FUT9, FZD5, GALNT3, GCAT, GDF5, GOT2, GSTM2, HNF1B , HTR2B, IL17RB, IL20RB, IRAK2, ITGA9, ITGAE, KLRC4, LHCGR, LIAS, LTB P1, MASP1, MLLT4, MTHFS, NME7, NOX1, OR10G9, OR13F1, OR2L2, OR52H1, O R8I2, OR8J1, OR9Q1, P2RX1, PCNA, PDE4A, PDGFRA, PIK3C2A, PPP2R1A, PP P2R5A, PPP5C, PRKAR2B, PRKCD, RHOD, RPE65, RUNX1T1, SNAP25, ST3GAL3 , ST3GAL6, ST8SIA1, STAM, STEAP3, TLR4, TRAF6, UGT2B17, VEGFB, WNT1, SERPINF2
Negative_12158	AGL, CGA, F11, GK, LTB, TKT, ALPP, ANAPC5, AQP7, B4GALT5, BLVRA, C4BPB , CACNA1E, CACNG7, CD46, CDC2, CES2, CREBBP, CSF3R, CTSL1, DTX1, FARS A, FGFR2, GUCA1C, HLA- C, HPSE2, IFNA21, IL5RA, MAPK12, MOV10L1, NKX6- 1, NODAL, NRG1, NUDT2, OR13C4, OR14C36, OR1E2, OR1M1, OR2M3, OR2T33, OR4K5, OR52E4, OR6Q1, OR7D2, PDK1, PFKFB4, PLEKHA8, POLD3, PRKCZ, PT K2B, RAD51, RAPGEF4, RASGRP1, RASGRP2, RXRG, SEMA3E, SREBF1, ST3GAL 2, ST3GAL5, TNFRSF9, TOMM40, TOMM40L, TPH2, TSTA3, UROS, VAV2, YARS2 , AASDHPPT, ATP6VOD2, SERPINF2, ST6GALNAC3

Negative_12159	AK5, DCK, DHH, F10, GLA, JUP, LCK, ME3, ACSS1, ADCY4, AKR1C1, ANGPL4, ARHGFE1, BCL10, BMPR1B, BST1, CCNA2, CCR5, CCR7, CDC6, CYP1B1, CYP4A22, DUSP10, EDA2R, ENTPD6, F2RL3, FGF12, FGF2, FLT3LG, FMO2, FTMT, GAD2, GNA13, GPX7, GSTM1, HIF1A, HLCS, IL1A, KIR2DS5, LEFTY1, LIMK1, LIPA, MAP2K4, MCM2, MDM2, MTHFR, MTHFS, MYL9, NFKB2, NKD2, NKX3-1, NME7, NR1D1, OR10A2, OR10K1, OR2AE1, OR4A5, OR4D2, OR4L1, OR51I1, OR51I2, OR6C70, OR7D2, OR9G1, OXCT2, P2RX6, PDE3A, PFN3, PIGO, PKLR, PLTP, PNPT1, POLD1, PON3, PPAR, PPP2R5E, PRSS1, PYCR1, RAPGEF4, RASSF1, SETDB2, SH2D1B, SHC2, SMC1B, SPAM1, TAS2R13, TAS2R14, TBL1XR1, UCK1, VAMP2, ATP6V0A4, ATP6V1G1, CSGALNACT1, CTNBP1, PAFAH1B1, TNFRSF18
Negative_12160	BCR, C1S, C8G, CFD, CKB, EZR, FYN, PXN, STS, ADCY10, ADCY3, AKR1C4, ALG9, AOC2, ARD1A, ATP2A2, BAAT, BMP2, BNIP1, BST1, C3AR1, CADM1, CAMKK1, CASK, CASP7, CAV1, CCKBR, CFL2, CLDN18, CLDN22, CLDN9, CREB3L4, CRHR1, CRY2, CSNK2A2, CTNNA1, CTSS, CXCR4, CYP3A43, DPM2, EDA2R, ENPP2, FARS2, FCGR3B, FZD1, HSD11B2, IL1R1, ISYNA1, ITGB2, KLRC4, LEPR, LTC4S, MGAT4B, MOV10L1, OR10A5, OR10T2, OR12D3, OR13C4, OR1A2, OR4D2, OR4L1, OR6Q1, OR8D1, OR8D2, POLD3, RAC3, RCHY1, RPS6KA1, SEMA3B, SIPA1, SKP1, SLIT1, SPRY3, SRD5A1, SUCLA2, TPH2, TRAF1, TUBA8, WNT6, ARHGFE12, HLA-DPA1, SUV420H1, TNFRSF10A
Negative_12161	BTC, CDA, CR2, CRH, KDR, LAT, MET, NF1, AASS, ADCY6, ADH1A, AKR1D1, AOC2, ARHGFE7, ARSB, ARSD, BAAT, BMP5, BPGM, CACNB4, CALML3, CASP3, CASP8, CASP9, CCND3, CFLAR, CHR1, CLDN5, CYBB, DGUOK, DUSP5, ELK1, FDPS, FGD3, FLAD1, GALNT12, GLI1, GLI2, GRIN2C, GUCY2F, GUSB, HARS2, HEXA, HIBADH, HLA-DMA, HTRA2, ICOS, IGF1R, IL1B, IL6ST, INPP5A, ISYNA1, KLRC2, MAFA, MAN1A2, MIOX, NAGK, NPR2, OR10H4, OR10J1, OR1Q1, OR2T3, OR2T34, OR4F4, OR52E6, OR5T1, OR5V1, OR8K1, PAX8, PDCD1, PFKL, PGK1, PIGL, PLAUR, PLCB4, PPAP2B, RBPJL, RPS6KA5, RXRA, SGPP1, TBL1X, TKTL1, TLN2, UPP2, HLA-DRB5, HSP90AA1, PPP1R12A, SERPINF2, ST6GALNAC6
Negative_12162	C7, CS, FGG, HGF, MPL, PDC, SHH, SMO, TK2, ACADSB, ACTN1, ALCAM, ARRB1, B4GALT7, CAMK2B, CCNB3, CCR3, CLDN6, COL2A1, CRLF2, CSF3, CTS1, CYCS, CYP4F2, DGKD, DGKQ, DOLPP1, EPRS, EXT1, FABP4, G6PD, GALM, GALNS, GAPDH, GNA11, GRHR, HTR2C, HTR5A, IDH3A, IFNA8, IFNGR1, IFNGR2, IL10, IL20, IL6ST, INPP4A, ITGB6, KIR2DL4, LEF1, MAP3K5, NAT2, NUDT9, OR10G7, OR11H4, OR14J1, OR1I1, OR1J1, OR2A5, OR2F1, OR4D1, OR4P4, OR51A7, OR5P3, OR6C6, OR7A5, OR8J1, PAK6, PDK1, PIGX, PIPOX, PPCDC, RHOQ, RND1, RPS6, RPS6KA6, RXRA, SARDH, SETDB2, SLC25A6, SPRED2, STX8, UROC1, WARS, WASF3, WASL, YWHAZ, MAPK8IP3
Negative_12163	C2, HAL, IL4, MPI, MYC, RET, ADSL, ALDH2, APC2, APHA, AQP7, ARPC1A, AXIN2, B4GALT6, BMPR2, BST1, CCKBR, CCL16, CCNB1, CCND3, CCR6, CD27, CDH15, CDK4, COMT, CRLF2, CSNK1G3, DAPK2, DHDDS, DNMT1, DPM2, ECSIT, FABP1, FGF1, FMO2, FUT8, FZD8, GCNT2, GCNT3, GNMT, IL2RB, ITGAE, ITGB3, ITPA, JAG2, KIR2DL3, KLRC3, LHCGR, MLYCD, NAGA, NAGLU, NAT5, NEUROD1, NR4A1, NUDT2, OR13A1, OR13C4, OR13H1, OR2L8, OR2M4, OR2T4, OR5D16, OR5H2, P2RX5, PARS2, PFKFB1, PLXNB3, POLR2F, POLR2H, PPT1, PRKCB, PTEN, RALB, RBL1, RFWD2, RFXANK, RND1, RPS6, RRAS, SAT2, SEMA3G, SEMA7A, SIGLEC1, STAT5A, SUCLG1, TAS2R16, TLR3, TRAF5, TUBA3E, TUBB, UCK1, UGT2A1, UGT2B10, VANGL1, MAPKAPK5, ST6GALNAC6

Negative_12164	F7, GNS, OGT, PAH, SI, SP1, ACP6, ACTC1, ACTN2, ADH1B, ALDH7A1, ATP6V1 F, BLVRA, CASP9, CCL16, CCL3, CCNG1, CCR10, CDKN1C, CFTR, CHD8, CLDN1 5, COL5A2, COX10, CRY1, CSF2RB, CYP17A1, DDIT3, DHDH, GAL3ST1, GALNT L4, GBTG1, GLDC, GLI1, HLA- DRA, HMBS, HSPA2, IDI2, IFNAR2, LAMB4, LDHD, MLLT4, NANS, NPAS2, NR5A 2, NUDT2, OR10R2, OR2K2, OR2T4, OR4F15, OR4F17, P4HA1, PAX8, PCCA, PD E8B, PGAM2, PGLS, PGS1, PIPOX, PLCB4, POLA1, POLR1C, PPA1, PYCR1, RAL BP1, RAP1B, RBL2, SIPA1, TBL1X, TCIRG1, TICAM1, TLN2, TRDMT1, TRHR, U GT2A3, UPP2, YWHAE
Negative_12165	A2M, ATM, C6, ID2, LCT, LHB, MVK, TK1, TKT, AADAC, AARS, ACTG2, AMPD3, A NAPC4, ANAPC5, AOX1, APOA2, APRT, ARAF, BDKRB1, BET1, CACNA1I, CCR2, CCR5, CDC25B, CHST11, CLDN20, CLDN5, CTBP2, CTSG, CXCL1, DUSP9, E2F1 , EFN2, ERBB2, ETNK2, FADS2, FLOT1, FTMT, GALNT2, GBE1, GGT5, GNAQ, G PD1L, GRIN2B, IDI2, IFNK, IL10RA, IL10RB, INPP4B, IRS4, JAG1, KIR3DL 3, LIPE, NCR1, NFX1, OCRL, OGDHL, OR4D5, OR5J2, OR8J1, OR8K3, OXCT1, P AK2, PARVA, PDE6D, PDGFRB, PFAS, PFKP, PHKB, POLR3K, PRKAG1, RDH12, R PN1, RUNX1T1, SCLY, SFRP4, SHC4, SMPD2, SOCS4, SPHK1, SPTLC1, SQLE, S T3GAL1, TP53, TRAF3, ULBP1, VDAC2, WASF1, WASF3, WNT9B, SERPINB5, ST 6GALNAC3, TNFRSF14
Negative_12166	CGN, CRH, FAS, FUK, JUP, RB1, AADAC, ACMSD, ACTG2, AKR1A1, ALDH3A2, AL G10, AMD1, AMDHD1, ARD1A, ARHGEF1, B4GALT7, BCKDHA, C3orf10, CACNB4 , CAMK2B, CAMKK2, CBR1, CCDC6, CCNB1, CCR1, CCR8, CD3E, CLTA, CNGB1, C PT1B, CREB3L1, CUL1, CYBA, CYP2F1, DGUOK, DPYSL2, EVI1, FGF6, FLT3LG , GAPDH, GCH1, GCLM, GP1BB, HBEGF, HIF1A, HNMT, IL12B, INPP4B, ITGB4, KIR2DL2, LIPC, LRRC4C, MADCAM1, MAN1A2, MECR, MMP1, MPST, MYH9, NEU3 , NFASC, NTSR1, OCRL, OR10G3, OR1A2, OR4D11, OR4D5, OR4K15, OR4L1, OR 7C1, OR8G1, OR8K3, OR9G1, P4HA2, PFKFB2, PIK3C3, PLCB2, PMM2, POLR2B , POLR3H, PPAR, PTGES2, PYCR2, RPE65, RUNX1, SDC3, SH2D1B, SUCLG2, T M7SF2, TNXB, TPH1, UGT2B11, UROD, WARS, WASL, WNT2B, YWHAZ, CACNA2D1 , TNFRSF10D
Negative_12167	C9, CBL, CFD, F12, HK3, MPI, PGF, TK2, TNC, ACPT, ACSL3, ADCY10, ADCY4, AKT2, ALDH3B2, ATP5A1, B3GALT6, B4GALT3, BMPR1A, BUB1B, C4BPA, CALM L6, CAMK4, CCDC6, CCL23, CCL8, CFL2, CLDN10, CNTN1, COL1A1, COX10, CO X15, CXCL11, DARS, DUSP5, FGFR3, GAD1, GAL3ST1, GALNT6, GSTM2, GTSE1 , ICAM3, IL22, IL25, KITLG, LCMT2, LTBR, MAPK3, NOTCH1, NPR2, OCLN, OR 10J1, OR10J5, OR1D5, OR2L2, OR4D5, OR51Q1, OR52L1, OR52N2, OR7A17, O R8K5, PAX4, PDE4A, PGM2, PIGM, PIM1, PLXNC1, PTDSS2, PTGS2, RBKS, RPS 6KA5, RPS6KA6, SHMT1, SRGAP1, ST8SIA1, STK11, TACR3, TNFRSF8, TNFRS F9, TUBA3E, TUBB1, UPP1, VANGL2, ZIC2
Negative_12168	DDC, EBP, HDC, RDX, ALDOC, ALOX5, CALML3, CD28, CHPT1, CLCA2, CLDN6, C RB3, DGAT2, DGKG, DHRS9, DRD1, EFNA4, ENTPD5, FECH, FUT4, GALK2, GGT1 , GJD2, GLI2, GMPR, GRLF1, GSTZ1, GUCY2C, HES1, IL1R1, ISYNA1, KYNU, L IMK1, LIPF, MAML3, METTL6, MPST, NME7, OR10G7, OR2A14, OR2AG1, OR4D1 1, OR4K17, OR4K2, OR4X1, OR5AC2, OR6Q1, OR8D1, PDE7A, PFKM, PLXNA1, P MM1, PNLIP, PPCDC, PPM1D, PTGS2, PYCR2, RFNG, SHMT2, TACR2, TAS2R14, TNFRSF4, TRIP10, TSC1, TYRP1, WNT3, SERPINA1, TNFRSF12A
Negative_12169	C5, TNN, TYR, ACAT2, ACY3, AGPAT1, AGXT, ALDH1L1, ALG1, ARRB1, ARSD, C ARS2, CCNH, CDC20, CISH, CLDN20, COX10, CYP1A1, DFFA, DIAPH3, F2RL2, FLOT1, FLT1, FTCD, FZR1, GALNT8, GLUD1, GNA15, HNF1A, ICAM1, ITPK1, L AMA3, LIAS, LRP6, MAPK7, MGAM, NFYA, NQO1, OPLAH, OR10Q1, OR13C5, OR1 E1, OR2K2, OR51I1, P4HA2, PDHA1, PDHA2, PIK3CA, PLXNA1, POLR2F, POLR 2L, PRKG1, PRSS1, RAPGEF2, RPS6KB1, SOCS1, TBK1, TPM3, TUBB, UNC5A, U NC5B, UNC5D, VASP, HLA-DQB1, MAPKAPK5

Negative_12170	BAX, CAD, FAH, PGF, SDS, TK1, ACAA1, ACTN2, ACVR1C, ARPC5, ARPC5L, B3GAT2, BMP8A, C4BPA, CACNA1H, CACNA1S, CD40, CDC14B, CHST11, CLCA4, COL11A1, DGKH, DUSP6, EPHA7, FPGT, GPX7, GRHPR, GSTA1, GSTA3, GSTT1, HLA- G, HRAS, HSD17B7, HYAL2, IQGAP1, ITGAX, ITGB6, LAMC2, MYD88, NFATC2, NRG3, NT5C1A, NT5M, NTF4, OR1D5, OR4A16, OR52N2, P2RX3, PFKFB1, PGAM2, PHPT1, PIGP, PNMT, PRKCE, PROC, PTDSS2, PTGIS, RFX5, RPSA, RRM2, RUBL1, SLC27A5, SLIT1, SMAD7, SPRY3, SSH2, STK3, TRMT11, TSLP, TUBB3, UGCGL1, UGP2, UGT2B4, VDAC1, WASF3, WNT11, YES1
Negative_12171	AGK, HK3, IL5, PAH, AASS, ACSL4, ACTA2, AKR1B1, ARNTL, B3GALT4, BACE1, BIRC3, CCL20, CHAD, CHR1, DAAM1, DHRS9, DUSP7, EFNA1, ENPP7, EPHB2, EPRS, FMO3, FSHB, GDF7, GP1BB, GPD1, HMOX2, IFNA8, IL15, JAG2, NANP, NFKBIA, NODAL, NT5E, NUDT5, OR10H2, OR10V1, OR1C1, OR2A12, OR4D6, OR51B5, OR52A5, OR5H2, OR5M9, PGAM1, PIK3R5, PLCG1, POLD1, POLE2, PRKCI, RASSF5, RDH5, RELA, SMAD7, SMPD2, TNFSF4, TSLP, UNC5C, WHSC1, ATP6V1E1, CSGALNACT2
Negative_12172	IL8, ILK, MET, TNC, ACSL3, ACVR1B, ACYP1, ADCY8, ADSS, ARPC1B, ATP5I, CCL11, CCL22, CD3E, CDC27, CHPT1, CYP2B6, DDX55, DMGDH, DPM2, DRD2, DTX3L, EFNA1, FARSA, FUT3, GANAB, HLA- G, HMGCS1, HSD17B8, IFNA14, JAG1, MALT1, MAPK9, MYD88, NADK, NCK1, NOTCH1, OR10K2, OR10R2, OR2S2, OR2T2, OR4K1, OR4N5, PCYT1B, PFAS, PLCD3, POLR2D, PRPH, RASGRP4, RASSF5, SCIN, STAT6, SUCLA2, TUBB3, TYRP1, VAV2, WNT6, TNFRSF18
Negative_12173	CAT, CEL, EZR, FAH, GP6, ITK, ZYX, ACADM, ACOT11, ANAPC2, ATP5G1, ATP5G2, B3GALT6, B3GAT3, B4GALT4, BMP4, CCL13, CD247, CD44, CDIPT, CDKN1A, COL2A1, COQ7, CSNK1G1, CYP2B6, DDB2, DLL1, DUSP9, EFNB3, EXOC7, FGF21, FGF6, FZD4, GALK1, GANC, GBA3, GNRH1, GRM5, GSTO1, HCST, IAPP, IGFBP1, LAP3, MAML2, MAN2A1, MAP2K6, MAP3K1, MEF2C, MMP2, MRAS, NCF1, OR1J4, OR2T3, OR5B17, OR5K2, PAPSS2, PLD1, PLOD2, PRKACA, PSEN1, PTPRZ1, RAPGEF1, RDH11, SEMA3B, SH2D2A, SHC3, SKP2, SORBS1, SPRY2, STX8, TASS2R14, TJP1, TYMP, UGT2A3, WASF2, WWP1, YKT6, ZFYVE16, HLA- DRB5, PLA2G12B, PPP1R12A, TNFRSF17
Negative_12174	ATM, DAO, DUT, MET, MIF, AARS2, ABLIM3, ACACA, ADCY8, AGPAT4, AGXT2, AKR1C2, ALDH5A1, ALDH7A1, AMY2B, ATP5L, BLVRB, BMPR1B, BUB1B, CCL4, CCR7, COQ7, COX10, CSF2RA, CSF3, CYP1A1, CYP2F1, DAD1, DEGS2, DUSP8, EPHB4, G6PD, GAD1, GAD2, GPD2, GRIN2A, GSTM4, GSTZ1, HCCS, HGSNAT, IDI1, INPP4A, INPP5B, IRF3, LDHA, MAPT, MGAT5, MMP9, NAT5, NCR3, NT5E, OR10H5, OR1B1, OR1D2, OR52J3, OR5I1, OR6C75, OXTR, PER3, PIK3R3, PLCB4, PLD2, POLR3B, PRKG1, RENBP, RRM2, SH2D1A, SH2D1B, TLR9, TSHB, UCK2, UCKL1, WNT3A, HSD17B12, ST6GALNAC4
Negative_12175	ASL, LCK, MIF, OGT, PDC, UBB, AANAT, ACY3, ADAM17, AKR1C1, ALDH3B2, ANAPC7, ARPC5L, CACNA1B, CBR1, CCL2, CCR8, CD8A, CDS1, CEBPA, CHRNA7, CKMT2, CLDN2, COMP, COMT, DGKA, EDNRB, FDPS, FGD3, FGF17, FZD9, GNPDA1, GPLD1, HLA- DOB, IFNA10, IFNAR1, IFNGR2, IL17B, IL28RA, IL2RA, IRF9, LIPT1, LTBR2, MARS, MMP9, NAMPT, NPR1, NRXN1, OR2AG2, P4HA2, PDE10A, PDE1C, PIGM, PIK3C3, RUNX1T1, SCD5, SETD1B, SFRP1, SNAI2, SPRED2, SPTLC2, STK11, TNFSF9, TUBA4A, TUBB2A, UBE2K, ULK1, UROD, PLA2G12A, SERPING1



Negative_12176	CD6, IDS, NGF, PRL, TK1, WAS, AARS, ACADVL, ADSSL1, AGPAT6, AKR1C4, ALDH3B1, AMPD3, AMY2A, ATP50, BMP4, CCL23, CCL7, CD28, CDC27, CDK4, CKS1B, CNTN1, CSF2RB, CYSLTR2, FGF11, FLT1, FLT3LG, FZD6, GFAP, GGPS1, GGT7, GMPA, GSK3B, GSTM5, HHIP, HTR2C, IGF1R, IL8RB, LGMN, MAN1C1, MAP3K1, MAP3K7, MCCC1, METTL6, NFE2L2, NMNAT3, OR10K2, OR14C36, OR1J4, OR2AT4, OR2C1, OR2F2, OR2T2, OR3A2, OR4C6, OR52A1, OR52K2, OR5J2, OR6C76, OR8D2, ORC3L, PDE3B, PER3, PHPT1, PIP5K1B, PKLR, PLK1, PPAP2B, PRLR, PTGES2, PTPN1, RFNG, RPS6KB1, SFRP5, SIPA1, SMAD4, TUBAL3, TUBB2A, UAP1, UBE2L3, VASP, WNT16, ATP6V0A4, ATP6V1E2, ATP6V1G1, HLA-DRB5
Negative_12177	AK5, FER, MAG, PGD, ADCY8, AGXT2, ALDH3A2, ATP5J, C4BPB, CACNG4, CALML3, CCL8, CCR2, CDC25B, CFL1, CFL2, CMAS, COL2A1, CSF3, CYP1A1, EXTL3, F11R, FGFR2, GAD2, GPD1, HLCS, HPRT1, IL13, IL2RB, INPP5E, INSR, ITGA5, LCAT, MCAT, METTL2B, MRAS, OR10K2, OR52E8, OR5M8, PDE11A, PRKAB1, PRKCB, PSENN, PTPN7, RAP1B, RDH10, RPRM, SCD5, SH3BP2, SMAD1, SORBS1, TNFRSF8, TYK2, UNC5B, VDAC2, VEGFC
Negative_12178	C1S, CBS, GK, MTR, PGD, PML, ACTN4, ADSL, AKR1C4, ALG6, ALPP, ARHGEF4, ARPC1A, ARPC5, ATN1, ATP5E, CD3E, CDC25B, CHUK, CKS1B, CLOCK, CXCL10, CYP2A7, CYP2E1, CYP2U1, DDX18, DGAT2, DGKB, ECHS1, EPHX2, FARSB, FBXW11, FGF12, GALNT10, GBA3, GBE1, GCNT4, GRB2, GSTM1, HLA-DRA, HMOX1, IDI2, IFNA8, IL23A, IL4R, IL6ST, ITGA1, ITGA9, ITPKA, KAT2B, LDHAL6A, MAP3K1, MAP3K7, MTMR2, MYL9, NANP, NARS, NARS2, NFAT5, OR1C1, OR1D5, OR1L3, OR2T1, OR51M1, OR7G1, OR8D2, PLAUR, PLK1, PNMT, PPM1B, PPP2R2B, PRIM1, RASA2, RETSAT, SEMA4G, SPHK2, ST3GAL4, TAS1R3, TLR3, TNFSF14, TNFSF18, TUBB, UBA1, UGP2, UROD, XIAP, ZBTB16, CSGALNACT1, MAP3K7IP1, TNFRSF11A, TNFRSF1A
Negative_12179	C9, CKM, DCT, FST, IVD, TXK, ABLIM2, ADIPOQ, ALG8, ARPC1A, ATP5I, BIRC2, BMP2, CALML6, CAMK2G, CCL5, CD40LG, CDKN1C, CHSY1, CYP17A1, CYP3A7, DCXR, DHDDS, DLL4, EIF4E2, EREG, FASN, FGF11, FGF9, FOXO1, GALK1, GALNT6, GLUD2, HTR2B, IL12RB2, IQGAP3, MAT2B, MMP9, MYH15, NAMPT, NAT6, NTNG1, OR10G9, OR10H1, OR1J4, OR2L3, OR2Z1, OR51B2, OR51E2, OR52W1, OR5AR1, OR8H1, OR8H2, ORC2L, PDE1A, PDE4A, PIAS2, PIGX, PIK3R1, POLR2E, PTAFR, RASGRP3, RPSA, SH2D2A, SNAP25, SPRED1, SSH2, TAS2R1, THBS4, TUBB2A, TUBB2C, UPRT, PRICKLE2
Negative_12180	EDA, FOS, ID3, TPO, ABLIM3, ACSL3, ADCY5, ADH6, ADRA1D, ALG13, APRT, ARHGAP5, ATP6V1D, BRAF, C1QA, CADM3, CCR10, CD8B, CFL1, CSF3R, DAD1, DERA, DLL4, FGF21, GANAB, GAS1, GGT6, GNAI2, GPAM, GPX5, GUCA1C, HHIP, LDHD, LRP6, MAP2K7, MKNK2, MYH9, NT5C1B, OR10A2, OR10Q1, OR14J1, OR1N1, OR2G3, OR2T34, OR4C13, OR4N2, OR51T1, OR52I2, OR5AC2, OR5H2, PCCA, PCNA, PIGM, PLCB3, POLE4, PON1, PPARD, PPP1CA, PRKCD, PVRL2, ROBO3, SKP1, SPRED2, SULT2A1, TAS1R2, TAS2R60, TIAM2, TJP3, ULBP1, UXS1, XCR1, ZBTB16, CACNA2D3
Negative_12181	BCR, CD2, FAH, FGA, MAG, MVD, AADAC, ACOX2, ACTA1, ADCY1, ADRB1, AGXT2, AKR1C1, ANAPC5, APOA2, ARHGAP5, ASRGL1, B3GALT4, C5AR1, CASP9, CCD6, CCL27, CCR2, CKMT2, CNDP1, CNTN1, CREB3L4, CYP2C9, DDIT3, DHRS4L2, DLL3, DUSP10, EFNA3, ERBB3, EXTL2, FCGR3B, FOXO1, G6PC2, GAPDH, GOAT1, GRIN2C, GUSB, HAO1, HRAS, ICAM1, IGF1, IL12RB1, IL6R, LIPT1, MAP4K4, MCAT, MDH1, MDM4, MTHFD2, NFYB, NSD1, OLR1, OR11L1, OR13C4, OR1E2, OR2T3, OR3A2, OR4C13, OR4K14, OR51T1, OR52D1, OR5L1, OR7C2, OR8B4, PDE7B, PLAT, PVRL1, RARS, SETD1A, SIGLEC1, SORD, SPCS3, TAS1R2, TAS2R40, UGT2A1, VAV2, VAV3, WNT5A

Negative_12182	GAA, ID1, IL8, MUT, PC, TKT, TNN, TPR, VCL, WAS, AASS, ACTC1, ALDOC, APOA5, ARHGEF7, ARNT, ARPC2, ARSA, AVPR1A, AXIN1, BAAT, BCAR1, BMP4, BPN T1, CANT1, CCL13, CCL28, CDKN2B, CLCA4, CNDP1, CNGA3, CYP1B1, CYP7A1, DGKG, DRD1, DVL1, EXOC7, FMO5, FPGT, GLUL, GPAA1, HNMT, HTR6, LFNG, LTB4R2, MAPK3, MYD88, NEU3, NFASC, ODC1, OR10H3, OR10P1, OR2A25, OR51L1, OR5D16, OR7G1, PIP5K1B, PITX2, PLA2G3, PLAT, PMVK, PNLIP, POLR2I, POLR3G, PPP2R1A, PPP3CA, PRKAA1, PSME1, PTGES, RAP1B, RFXAP, RPS6KB2, SUFU, TAS2R16, TAS2R42, TUBB2A, UPP2, UROD, VEGFC, VTI1B, MAPKAPK3
Negative_12183	GNS, ABAT, ADCY1, ANAPC2, BCMO1, CCKBR, CDH1, CHPT1, COL5A3, CYFIP1, DDB2, DGKA, DNMT3A, E2F1, FABP3, FGF5, FGFR4, FRAP1, GLO1, GMPR, HIF1A, HMGCS1, IL20RA, IRF9, KAT2A, LYPLA2, MMP14, MTMR2, NAT6, OLAH, OR2A2, OR51V1, P2RX4, PARD3, PIK3CD, PLA2G6, PLIN, PLXNB1, PRKAA1, RASA1, RASGRF2, SDC3, SHISA5, SOS2, TAS2R1, TFDP1, THBS2, TNFSF14, TUBA1A, YWHAH, ATP6VOD1, TNFRSF10D
Negative_12184	AUH, C1S, NLK, AADAT, ACADS, ACSL5, ACSM1, ALDOB, ATF2, ATP2A3, CACNA1A, CACNA1H, CCR4, CD40LG, CLDN20, COL5A1, CPS1, CYP11B2, CYP2C8, DD X50, ENPP7, EPHB4, ESPL1, EXTL3, FASLG, FZD9, GALNT8, GANC, GDF5, GUC A1A, HIBADH, HSD3B1, ITGA9, KIR3DL2, MMP14, MPP5, NSDHL, NUDT12, OR1OG8, OR10Q1, OR2L2, OR51D1, OR7A17, OR8K1, P2RX6, PDGFC, PPARA, PRKCA, PTPN5, RDH12, RPS6KA4, RPS6KA5, SLC25A4, SLC33A1, SULT2A1, TAS2R42
Negative_12185	C5, GP9, IL4, IL8, MTR, NF1, NNT, TH, ACOT11, ACP5, ALDOB, AOC2, ARSB, B3GAT1, B4GALT7, BAI1, BNIP1, CARS2, CCR2, CD19, CD99, CDH5, CFTR, CLDN14, CRKL, CSAD, CSF2RB, CTSB, CXCL11, CYP11A1, CYP11B1, CYP27A1, CYP2C9, DDB2, DDX19A, DGAT2, DUSP14, ECHS1, FABP1, FOXA2, FSHB, GAB1, GMP5, GNA14, GNMT, GSTO2, HES1, HMOX1, HNF1B, HYAL2, IFIH1, IFNA5, IFT57, INPP4B, LDHAL6A, LRAT, MAP2K1, MAP3K5, MAP3K7, MCM3, MYH10, NCAM2, NRG3, NT5M, NUDT12, NUDT9, NUMB, OR14I1, OR1J4, OR4P4, OR5P3, OR6C2, OR7G2, OXTR, PAX4, PDE9A, PFN2, PGK1, PIGP, PIK3R3, PRSS1, PTK2B, RAB23, RAPGEF2, RARA, SDC3, SLC27A4, SLIT1, SPCS3, STAT3, SUCLG1, TUBA4A, TYROBP, UROC1, VCAM1, ZAP70, ATP6V1C2, CSNK1A1L
Negative_12186	CFI, GH1, HDC, OSM, ABCC8, ACTA1, ADRA1A, ALDH1A3, ALS2, AMDHD2, ARPC1A, B3GAT3, CACNA1B, CACNA1I, CARD11, CLDN5, CREB3L2, CTNNA1, CXCL5, DAG1, DDX55, DHDDS, DMGDH, DUSP6, EDAR, ENTPD3, FLT4, FUT7, GNA14, GRIA2, HCLS1, HNMT, IGF1, ITGA4, KIR2DL4, MAP3K3, MAPK11, MGAT3, MINPP1, NAMPT, NCF2, NFX1, NR5A2, NSD1, OR10AD1, OR10H4, OR11L1, OR4F17, OR56B4, OR9K2, PGAM1, PIP4K2A, PON1, PPP2R2B, PPP3CB, PRKAA2, PTDSS2, SARDH, SDC3, SOX17, SRGAP1, STK4, STX4, TAS2R13, TAS2R14, TNFSF14, VTI1B, YKT6, ATP6V1B1, TNFRSF10B
Negative_12187	CAD, CEL, DCC, JUP, NPY, PC, RET, STS, VCL, ACOT11, ACSM3, ADORA2A, ADO RA2B, AMY2B, B3GAT2, CCDC6, CCR7, CD58, COL4A1, CRY1, CYFIP2, CYP2F1, EIF4E, EPB41L1, GALNTL1, GLUL, GMPPA, GNAI1, GNAL, GPD2, GRIN2A, HS D11B1, IMPA1, IPMK, IRAK2, ITGA5, LTB4R2, MNX1, NANS, NFKBIB, NOX1, OR2D3, OR2T33, OR51A7, OR5D18, OR6T1, OR7A17, PDE4D, PER3, PLIN, POLR3A, PPAP2B, PPP3CA, PRPH2, PSEN2, SEMA3F, SMPD2, SYNJ2, TAS2R42, TBXAS1, TNFRSF4, TP53, UCK2, UROS, YARS2, YWHAZ, MAPKAPK2, SERPINA5

Negative_12188	ADC, BTK, GNS, HDC, HGF, ID2, KIT, LCT, PC, PXN, ACSL1, ADH5, AKR1C2, ALDH1L1, ALOX15B, ANAPC2, ATP5A1, ATP5J, B3GAT2, BCKDHA, BCL2L1, C1QA, C4BPA, CACNA1H, CCL4, CCNG2, CD226, CD247, CD55, CD58, CDKN2C, CHSY3, CKS1B, CPT1C, CREBBP, CYP27A1, CYP4F3, DDOST, DERA, DHDDS, DNMT1, GNB3, GRIN2C, IDH3G, IFIH1, IL13RA1, IL2RB, INHBB, ITGAE, KLRK1, KNG1, LDHC, LTC4S, MARS, MCM7, MTHFD1L, NCF2, NEFM, NFX1, NKD1, NRG1, NSD1, NT5C1B, OR2AG1, OR2H2, OR3A3, OR4K14, OR51F2, OR52B6, OXSM, PGM2, PIGN, PNLIP, PPCS, PRKAR2A, PRKCE, PTK2, PTTG1, RUNX1, SRGAP2, TJP3, TRADD, UGP2, UGT2B28, WNT3, WWP2, MAPKAPK5
Negative_12189	EBP, FOS, RB1, ACSM2A, ADCY1, ALAD, ALG5, ANAPC4, APPL1, ARPC1A, ARPC2, ATG3, BMP8A, BTRC, CBLB, CDC14A, CDC27, CDS2, CTNNA1, CXCR6, CYP2U1, DGKZ, DIAPH1, DOLPP1, EFNA1, EPB41, F2RL2, FGF9, FUT6, FZD8, GAS1, GFPT1, HMGCS2, HPSE, IFNK, ITGA1, ITGA4, KCNJ11, MAP2K3, MAPK8, MYH10, NEUROD1, NTRK1, OR10G4, OR10H5, OR2F2, OR4K15, OR6C4, PAK3, PDE8B, PIGS, PRIM2, PSAT1, PTCRA, PYGL, SELP, SETD1A, SH2D1B, SUFU, TGFB1, TYK2, UBA7, UCKL1, UCP1, YWHAE, PNLIPRP1
Negative_12190	BTD, F12, HGF, IL3, PRL, SI, SRC, VCL, AASDH, ADRB2, ALG8, ALG9, ALPL, BAIAP2, BCL10, BMP6, C1QB, C4BPB, CAMKK1, CASP3, CCR5, CD27, CD72, CDS1, CLDN15, CREB3L2, CREB3L4, CTNND1, CTS1, CYSLTR1, DKK4, DUSP3, E2F1, EHHADH, F2RL1, FGF9, GCNT2, GPLD1, GSTA4, GUCY2F, HLA-C, IL21, INSR, IRS1, MAML1, MFNG, MICA, MTMR6, NKX2-2, NQO1, NTSR1, OGDH, OLAH, OR10R2, OR11H4, OR1L3, OR2AE1, OR4N4, OR7A5, ORC4L, PIGM, PIGN, PIM1, PLAT, PLCG2, PON2, PPM1D, PRKAR2B, PSENN, PTGES, RPS6KA4, SLC2A2, SMAD3, TAS2R4, TJP3, TNFSF11, TYMS, UGT2B7, ZAP70, TNFRSF1B
Negative_12191	F8, FST, GHR, ID1, KDR, LYN, PXN, ACPP, ALG11, ALPL, ATP12A, BDH1, BDKRB2, C3orf10, CASK, CCL11, CCL16, CCNA2, CCND1, CCR2, CD244, CD48, CDKN2A, CFLAR, CLTC, COQ3, CPT1C, CTBS, DUSP1, DUSP10, DUSP6, DVL2, FARSB, FGF21, GNA01, GSTA2, GSTT1, IARS2, IFIH1, IFNW1, IGFBP3, IL4R, INHBA, ITGA6, MAGI1, MAP3K4, MAP4K3, MAPK14, MCM5, MDH1, MPZL1, NLGN2, ODC1, OLAH, OR1E2, OR2G6, OR2T4, OR2W1, OR2Y1, OR5D13, OR6T1, OR9A4, PDE9A, PFKFB3, PIGS, PLCG1, PNPLA4, PROS1, RAC3, SCP2, SPRY1, STX1A, TRDMT1, UCK1, UCK2, UGP2, ZMAT3
Negative_12192	C8B, F10, SRM, TKT, ACTA1, ADH7, AGPAT6, ALDH1A1, AMDHD2, ANAPC7, AQP7, ATP6V1A, B3GAT3, BUB1, CACNA1D, CCNH, CD274, CDC42, CDK2, CDK7, CRLF2, CRLS1, CSF2, CTBP2, CYP19A1, CYP2U1, DUSP10, DUSP2, DUSP6, EFNA3, EPHA2, EPHA6, ERO1L, F2RL1, FGFR4, FM05, FZD7, GARS, GSK3B, HA01, HSPB1, IGF1R, INHBC, IQGAP1, ITGA2B, ITGA6, ITGA9, KIR3DL1, LEFTY2, MAN1A1, MCM6, MYH7B, NEU2, NLGN2, OLR1, OR10G3, OR10G8, OR1L8, OR2T33, OR4F17, OR5AR1, OR5L1, OR6B2, PECAM1, PFN3, PLOD1, PPP1R3D, PPP2R5C, PPP3R2, RBL2, RUNX1T1, RXRA, SARDH, SELP, SH2D2A, SIPA1, SUCLA2, SUV39H2, TLN2, TLR4, TPM3, TPMT, TRHR, UCK2, VAMP2, VAMP3, VDAC3, WNT10B, KIR2DL5A, SERPINA5, SERPINF2, TNFRSF11A, TNFRSF12A
Negative_12193	ATM, CBL, GHR, GLA, JUN, PML, ABLIM2, ACSM4, ADH5, ALG10B, ALS2, ANAPC1, APH1A, ARHGEF2, B3GNT5, B4GALT1, B4GALT6, CACNA1G, CCDC6, CCL8, CDKN1A, CLDN15, CLDN17, CSNK2B, CYP3A4, DAAM2, DGAT1, EGLN1, EPB41, EPHA4, FGF10, FLT3, FLT4, GALNT3, GALNT8, GGPS1, GMPS, GUCY1B3, HPRT1, ICAM2, IFNA14, IL5RA, IL6R, INPPL1, ITGB5, ITPA, LDHAL6B, MAP2K6, MYH14, MYH6, MYL7, NPAS2, OLAH, OR14A16, OR2T29, OR3A2, OR6K2, OR9G4, PAX4, PIK3R2, PLAUR, PMM1, PNPT1, PPP2R5E, RALA, RELA, RPS6KA1, SELL, SETD8, STAT1, TP73, TSTA3, YKT6, YOD1, GABARAPL2, SLC25A31

Negative_12194	FAH, FGG, IL4, KMO, LTB, NOG, SI, ABI2, ADIPOR2, ADRA1D, ANAPC4, CD72, CDK4, CHEK2, CLDN18, CLDN22, CREB3, CTBP1, DDOST, DVL3, EIF4E2, ERBB4, F13B, FOXA2, FUT3, G6PD, GAB1, GBGT1, GNA15, HNF1B, IFNGR1, IL13RA1, IL18RAP, INHBB, INPP5E, INSR, ITGB8, KLK3, LRP6, MAP2K2, MAP2K4, NLGN2, OR13C5, OR1C1, OR2K2, OR4K13, OR4N4, OR51A4, OR51B4, OR5J2, OR8D2, PAICS, PDGFRB, PDX1, PFN1, PIGS, PIP4K2B, PLA2G2A, PLXNB1, PPCS, PPP2R1B, PPP5C, PTCH1, PTPRC, RALA, RHOA, ROBO2, RRM1, SEMA3E, SEPHS1, SESN1, SFRP2, SKIV2L2, SNAP25, SSH2, STEAP3, TAP2, TAS1R1, TAS1R3, THBS2, THBS4, TNFSF11, UGT2B7, ULBP1, UNC5A, VAMP3, VNN1
Negative_12195	C6, CD2, F11, FGA, GLS, KDR, KIT, ACPP, ACY3, ADCY3, ALDOC, ARSD, AXIN2, B3GNT3, B4GALT5, CAMKK2, CCL21, CD14, CD40LG, CER1, CMPK2, COL2A1, CSNK1D, CSNK1E, CSNK1G1, CTF1, DAD1, DBF4, DHDH, EPB41L2, EPHA7, FDF T1, FGF10, FGF17, FGF4, FGFR4, GALNT11, GBA3, GDE1, GNB1, GNPAT, IGSF5, IKBKG, JUND, LCP2, LRDD, MDM2, MGST3, MTMR1, MYH6, NCK2, NCOR2, NFYC, NLGN1, NME6, NOTCH3, OCLN, OR10A5, OR10G8, OR13G1, OR2H2, OR2T6, OR51I1, OR51Q1, OR56A3, OR56B4, OR5R1, OR6S1, OR8H3, OR9A4, ORC6L, PFN1, PHKA1, PHKA2, PIGA, PIK3C2B, PLIN, PNPO, POLR1B, POLR2B, PPP2R1A, PRPH, PSAT1, RASGRP3, RASSF1, RDH16, SEPHS1, SHISA5, SKP1, SPAM1, SPTLC2, STAT1, SUCLA2, TLR4, WBSCR17, WEE1, GABARAPL1, PLA2G12A
Negative_12196	EBP, LTB, SMO, ACHE, ACSL4, ACSS1, ACTB, ADRA1B, ANAPC7, AOC3, AREG, ATP6AP1, ATP6V1F, BUB3, CCR4, CRHR1, CSF1R, CXCL10, EPHB6, EPHX1, EXT L1, FDFT1, FGF2, FZD2, GALNT6, GALNT7, GSTA3, GSTA5, HEXB, IFNA7, INHBB, MGAT5B, OR2T34, OR4K15, OR51M1, OR52E2, OR5B12, OR5P3, OR6C76, OR8B8, OR8S1, PAPSS2, PIP5K3, PROS1, PTGFR, PTPRF, PTPRZ1, RASA2, RASGRF1, RCHY1, RPS6KA5, TGFA, TPI1, UBE2K, WASF1, WNT7A, GABARAPL2, ST6GALNAC6, SUV420H2, TNFSF13B
Negative_12197	ABO, BID, ID1, JUP, NLK, OSM, PVR, ACTA1, ADRA1A, ADRB3, ALG1, APBB1, AREG, ARSD, B3GNT3, BUB1B, CAMKK2, CCDC6, CHSY1, CHSY3, CLCA4, COL5A3, COQ7, CSH1, CSNK1A1, CTTN, CYP3A4, DHRS3, E2F4, ENTPD7, EVI1, FGFR3, FZD9, GABARAP, GADD45B, GCNT1, GDF7, GFPT1, GPD2, HADHA, HEXB, ICAM1, IFNG, IGFBP3, IL5RA, INHBB, INSR, ITGAE, LLGL2, MAP3K8, MTFMT, NFKBIB, NKX2-2, NMNAT1, NT5C3, OR1J4, OR2T2, OR3A3, OR4B1, OR4D9, OR5A2, OR5AU1, OR5H2, OR6K2, OR8I2, P2RX6, PAICS, PCK1, PDGFC, PIM2, PLA2G1B, PLAUR, POLR1C, PRKACA, PSME3, PTAFR, RAC1, RASSF1, SRD5A2, SSH3, STX8, TPK1, TRADD, YWHAE, HLA-DRB5
Negative_12198	CFI, FN1, IL9, SRF, ACPP, ALDH1A1, ATP4A, ATP5D, BMPR2, C1GALT1, CCL25, CCNB2, CFLAR, CHD8, CLDN8, CSH1, CSNK1G3, CSNK2A1, CTSL1, CYP17A1, CYP26B1, EARS2, EIF4B, F13B, FGD1, GPLD1, GSTT1, HMOX1, HSD17B3, HTR4, ICAM1, IL22RA1, ITGA6, ITGB8, KIR2DL2, MAPK10, MAT2B, MYL5, NCSTN, OGDHL, OR10G4, OR4A15, OR52N4, PDE1C, PDE3A, PDE7B, PDXP, PIK3R4, PLCB4, PNPT1, SHC4, TYMP, UBA7, UGCGL1, YKT6
Negative_12199	IL2, KDR, MOS, TNR, ACAA2, ADCY9, ALPPL2, AOX1, ARAF, BDKRB1, BLVRB, CCNA1C, CCL19, CCNE1, CCR9, CD48, CDC6, CERK, COL4A4, COL6A2, CTSL1, CYP2U1, DCTD, DHODH, DUSP3, DUSP7, FGD1, FGF1, FGFR4, GJA1, GUCY2C, HAP1, HARS, HNF4G, HTR2B, HTR2C, IFNA4, IL10RB, INMT, IRS1, KAT2B, KCN J11, MAP3K8, MAPK13, MAPK14, MPDZ, MYD88, NKX3-1, NRXN1, OR1E2, OR1J2, OR2AT4, OR2T10, OR2T12, OR5T1, OR7C2, PAPSS2, PARD6G, PDE2A, PEMT, PER3, PGM2, PPP1R3B, PSPH, RETSAT, RPS6KB1, SEPHS1, SLC12A2, SPTLC1, TGFB1, TRAF6, TUBA3C, UGCGL1, UGP2, WHSC1L1, WNT16, TNFRSF17

Negative_12200	HDC, PGP, ACSM2A, ACVR1B, ACY3, AKR1C1, B3GNT2, BAIAP2, BUB3, CAMK2A, CCNA2, CDC27, CDH4, CLCA4, CX3CR1, DDHD1, DGKI, DLL4, DNMT3A, DUSP9, ETS1, FABP1, FZD9, GADD45B, GAL3ST1, GALE, GALNT1, GCNT1, GLUD1, HIP1, HTR6, IKBKB, IL25, LIMK1, MAPK11, MYH7B, NFKB1, NKX3-1, OR4K5, OR4N5, OR5B12, ORC6L, PIPOX, PLCB1, POLE4, PON3, PPID, PRIM1, PTPRR, PTTG1, RALB, RASSF1, RDH11, RPSA, SCD5, SDC4, SENP2, SQLE, SREBF1, TBL1Y, TBXA2R, TDO2, TRDMT1, TUBA8
Negative_12201	DUT, FUK, FYN, GPI, HK2, AARS, ABI2, ACAA1, ADAM17, AGPAT4, ALDH3B1, BMP4, BRAF, CACNA1G, CCNH, CD27, CD40, CD40LG, CDC27, CMAS, CREB5, CTNNA2, CTNNA3, CXCR5, CYCS, CYP26A1, DDX54, DPYS, DPYSL2, EDAR, EFNA2, EIF4B, ENO1, EPB41, FARP2, FSHB, FZD7, GCAT, GNG13, GP1BB, HBEGF, HRAS, HSD17B4, IDI1, IL18, ITGA10, ITGB5, KAT2A, KCNB1, KIR3DL3, MAN1B1, MAP3K2, MAPK1, MAPK8, MCM4, MS4A2, MYH6, NLGN3, NTF3, NUDT2, OR10A2, OR1D2, OR4C16, OR52I2, OR52K1, OR56A4, OR6X1, OR7A17, P2RX2, PER2, PIGN, PIP4K2A, POLE4, POLR1A, POLR2J, PPP2CA, PPP2R1A, PYCR1, RCHY1, SEMA3F, SETDB1, ST3GAL1, TCF7L1, TKTL2, TRADD, TUBB2A, TUBB4, UGCG, PRICKLE1, TNFRSF11A
Negative_12202	F9, FGG, MPL, NNT, PVR, STS, TEC, AACS, ACAT2, ADCY3, ADRB3, AGXT2, AHCYL2, AKR1C3, ALAS1, ALDH1B1, APPL1, ATP5H, BAAT, BDKRB2, CAMK2D, CAMK4, CARS, CARS2, CD274, CDC7, CDK7, CHPF, CNTN2, CPT1A, CSF3R, CYP2C9, DRD2, E2F1, EDNRB, ENPP3, EPOR, GLB1, GOT1, HARS2, HSPA2, ICAM2, IDH1, IL17RB, INHBB, IRAK4, LAMC3, LCMT1, MAPK10, MTHFS, MYH8, NEU4, OPLAH, OR10H1, OR11L1, OR1J1, OR2L2, OR2T2, OR51S1, OR5A1, OR5AK2, OR5D18, OR6F1, PDHB, POLD1, PPM1A, PTPRF, RASA2, SELP, SEMA3A, SETD7, SHC2, SHMT1, SORBS1, SRGAP1, STX8, THBS4, TSC2, TSHR, TXNDC12, UBE2L6, UGT2A3, VAMP2, VCAM1, GABARAPL1, PPP1R12A
Negative_12203	CRH, FES, SDS, ADH1A, ALDOB, APOE, ATP6V1A, B3GALT2, B4GALT3, BMP6, C4BPA, CACNG2, CAMK4, CANT1, CCL25, CD28, CD46, CDS2, CER1, CFLAR, CHAD, CNGB1, COQ5, CREB1, CREB3, CSF2, CYP2C18, DAAM1, DAXX, DCTD, DGKE, DIAPH3, DMGDH, DOLPP1, EDNRA, FASN, FM03, FZD6, GLO1, GNG3, GPX5, HAO2, HIP1, IARS2, IDI1, IFNA6, IL12B, ITGB4, ITGB6, JAM2, LDHD, LRRC4C, MAP4K4, NCK1, NFATC1, NT5C, OR13C8, OR4C46, OR52E4, OR6Q1, OR8D2, OXCT2, PGAM4, POLR2E, POLR2I, PRKAG2, PRKCZ, PRPS1, PTPN6, PTPRM, RELB, RETSAT, SEMA3B, SESN2, SMPD2, SPCS3, STK36, STX3, STX5, TRAF5, UNC5B, UPRT, WNT5A, PLA2G12B, PPP1R12A, SUV420H2, TNFRSF10C
Negative_12204	AMT, CGN, IL6, LSS, SI, ACTN4, ADH5, ADSL, ARHGEF2, ASIP, ATP6V1D, BMP7, CACNB3, CCKAR, CCL27, CD44, CDC14B, CHRM5, CTNNA3, DAXX, DDX23, DIAPH2, DUSP7, EI24, EIF4E, FLOT1, FLT3LG, FZD9, G6PC2, GADD45G, GART, GDE1, GNPAT, HNF4A, IL12RB1, IL28A, INPP5E, MAP2K3, MCM7, MYH10, NAT5, NFE2L2, NLGN2, OR10A3, OR10J1, OR1N2, OR2D2, OR4K14, OR4K17, OR4X2, OR7G2, OR9A4, P2RX4, PAICS, PARVA, PDE4C, PDGFB, PGM3, PI4KA, PLA2G2E, PLAUR, POLR2E, PORCN, PPP1CC, PTGIS, RASA2, RDH12, SC4MOL, SMURF2, SRD5A2, STX6, TAS2R8, TBL1Y, TIRAP, TRADD, UGDH, VEGFC, ATP6V1B2, TNFSF13B
Negative_12205	AK7, AUH, CR2, DBI, EGF, FAS, GPT, MPI, ZYX, ACAD8, ACADL, APAF1, ASAH1, BDNF, BET1L, CASP9, CCL15, CCL5, CHDH, COQ5, CSF2RA, CYP19A1, DDHD1, DDX18, DDX41, DIAPH2, DLAT, DUSP6, EFNA5, ETNK2, FGF22, FUT1, GALT, GTSE1, GUCA1C, GUCY2F, HEMK1, HSD11B1, HSD17B8, IL7R, INSRR, ITGA5, KLK3, KNG1, LCMT1, LEFTY1, LILRB3, LIPT1, LRP5, MCM7, MINPP1, MLYCD, NT5E, NTRK2, OR10G2, OR10K1, OR2S2, PIK3C2G, PLCB3, PNPO, PRIM1, PTPMT1, SGMS1, SHC3, SLC12A2, SSH2, STK4, TBL1Y, TM7SF2, TRPM5, TSLP, UPB1, ZFYVE9, ZIC2, ATP6V0A2, CACNA2D2, CACNA2D4, CSGALNACT1, PNLIPR1, SUV420H1

Negative_12206	AGK, CEL, DHH, GP6, GPT, GSN, GSS, INS, SFN, TNN, ACVR1, ADH4, AKR1A1, ALG8, ALG9, AREG, ATP6VOB, CBR3, CCL27, CHAT, CLCA2, CLDN8, CRB3, CTNNA3, CXCL6, CYCS, CYFIP2, DERA, DGAT2, DGKB, DPM2, DUSP16, ECSIT, EHHA DH, ENTPD1, ENTPD4, ENTPD5, EPAS1, FUT6, FZD1, GADD45G, GANC, GGT7, GJD2, GNB3, GSTZ1, HYAL1, IFNA13, IFNA6, IL17A, IL6R, MAGI1, MAML1, MAP3K13, MAPK13, MAPK14, MAT2B, MGAT4A, MIOX, MMP7, NEUROD1, NFKB1, NT5C3, OR2L3, OR4F6, OR52H1, OR6C74, OR6T1, OR7C2, PCNA, PCYT2, PGK2, PLA2G2A, PLA2G2F, PLCG1, POLE, PRKACG, PTCH2, RXRA, SDHA, SESN2, SOAT1, TALDO1, TICAM2, UNC5A, VTI1B, WHSC1L1, ZFYVE9, CSGALNACT2, SUV420H2, TNFRSF10B
Negative_12207	CAD, CFI, CRH, KDR, KMO, MSN, ACOX2, ANAPC10, ATP5J, CDC2, CDK2, CER1, CHPF, CTBP2, CX3CR1, DHRS4, DUSP3, EFN3, EHHADH, FOSL1, GALNT9, GRB2, HMGCL, IL12RB1, IL5RA, IRAK4, IRF3, ITGB2, KIR2DL1, MAP3K3, MAP3K8, MCCC2, MTHFD2, NKD2, NTSR1, NUDT8, OR2C3, OR6X1, P2RX6, PAPSS2, PDE5A, PHKA1, PIGF, PIGH, PIM1, PLCG1, PLXNA1, POLR2G, PSEN2, RDH8, ROBO2, SEMA4F, SIPA1, TJP2, TSHR, WARS, XCL1, YWHAZ, PPARGC1A, SERPING1, TNFRSF18
Negative_12208	C8G, CRH, HYI, STS, SYK, ADAM17, B3GALT2, CCR8, CD55, CLDN1, CPOX, CYP8B1, DHCR7, DIAPH1, DLST, DPYD, EFNA1, EPHX2, FGF17, FRAT1, GAB1, GRM5, IFNA14, IFNA8, IFNB1, IFNG, LIFR, MKNK1, NME2, OR10A3, OR10G7, OR10H5, OR10V1, OR1A1, OR1E2, OR1F1, OR2Y1, PLK1, POLR2G, PPP3CB, SDHD, STX1B, TACR2, TAS2R14, TAS2R50, WNT2, WNT3A, XYLT2, ZFYVE9, PDCD1LG2, PPARGC1A
Negative_12209	BCR, CFD, DBH, F8, HAL, LIF, ACADS, ACOX2, AGRN, ARPC5L, BMP5, CD22, CD244, CEBPA, COL6A1, CPS1, CXCL6, CYP1B1, DAAM2, DIAPH1, DLL4, ERBB4, F13B, FASN, FGF17, GALNT6, GALNTL2, HSD11B2, HSPA2, HTRA2, IFNA17, IL20, IQGAP3, JAK2, KAT2A, KLRC1, LAMC2, LIAS, LIPG, MAN1B1, NTRK1, OR10G4, OR13C8, OR51B2, OR51B6, OR52E6, OR5P3, OR6C70, OR7G2, P2RX1, PFAH2, PARS2, PDE4A, PDHA2, PIGW, PKMYT1, PLA2G2D, POLR3D, PPP2R2D, PRKAB1, RASGRP2, RELA, RENBP, RRM1, SDHC, STAM, STK4, TBL1Y, TCF7L1, TFPI, TUBA1C, TUBB2C, VTI1A, ZIC2, ZMAT3, ST6GALNAC5
Negative_12210	ADK, CAT, CTH, DLD, F2, HYI, PLN, SRF, TK1, ABCC8, ACPP, ADIPOR1, ADRBK2, ALPP, ANPEP, APOC3, ARHGAP5, ATP4A, B3GALT4, B3GNT4, CD40LG, CD46, CD48, CHPF, COQ6, CXCR5, CYP2D6, DTYMK, FASN, FGF10, GRLF1, GSTA1, GSK3, GYS1, HIF1A, IFIH1, MAGI3, MAML1, MTHFS, OR10G2, OR10K1, OR2B1, OR4C46, OR4D2, OR4M2, OR52D1, OR6A2, PIK3R3, POLE3, POLR2K, PTCH2, SLC27A4, SLIT2, SUFU, TNFRSF9, TYK2, VAMP3, WNT1, WNT3A, ZFYVE16, SERPINB5, TNFRSF11A
Negative_12211	BAX, CRH, HGF, HPD, IL6, ILK, ACP2, ACTC1, ACTG2, ATP6V1F, B3GNT4, BUB1, CACNG4, CALML5, CAV2, CD226, CD99, CLTB, CNGB1, CREB5, CTBP1, CXCL12, CYP11A1, DCXR, DOT1L, DPYS, EGLN1, EHHADH, EPHB1, FBXW11, FGF8, GFAP, GP1BB, GRIA1, GUCA1A, GUK1, HNF1A, HTR2A, IFNA17, IFNA7, IL23A, ITPA, KLK3, LARS2, LIMK2, MAD1L1, MAN1A1, MAP3K1, MGLL, MYL9, NADK, NAE1, NCOR2, NEGR1, OGDHL, OLAH, OR13J1, OR1K1, OR4K2, OR51G1, OR5K1, OR7C2, P4HA1, PAK1, PDCD1, PDE6G, PDE6H, PFKM, PIGF, PLAT, POLR3G, PRNP, PRPH2, PTCH1, PTGES2, PTGFR, RAC3, RARS, SARDH, SOCS3, SPRED2, TCF7L1, THTPA, TNFRSF9, TUBB6, UGDH, UPRT, VASP, VEGFC, WNT11, XCR1, ZBTB16

Negative_12212	AK3, AK5, GAA, JUN, NNT, PTS, TKT, TYR, ACAD8, ACP6, ALOX5, APOA5, ARAF, ARPC5, BMP6, CCNA2, CD14, CER1, CHPT1, CHST12, COL2A1, CSH1, CSNK1E, CSNK2A1, CXCL6, DARS2, DCTN1, DHCR24, ENTPD2, ENTPD6, FGF11, FGF21, FGF5, FOXA2, GALE, GNA13, GNPDA1, GOSR2, GP1BB, GPX5, GRHRP, GRIA3, HDAC2, HHIP, HMGCR, HSD17B3, HSPA2, IDI2, IL2RB, ITGA11, ITGA7, LEFTY2, MECR, MYLK3, NKX3-1, NR1D1, OR13C3, OR2B6, OR2T11, OR3A2, OR51G1, OR52N1, OR52N2, OR5K1, ORC2L, P2RX7, PCNA, PER3, PFAS, PFKL, POLR1D, PPP2R2B, PRKCG, PRSS1, PTPRR, RASSF1, SETDB1, SMAD4, SPTAN1, SUCLA2, TCF7, TD02, TRHR, TUBA3E, VEGFA, ZBTB16, ZMAT3, SERPIND1
Negative_12213	C8B, RET, ACY3, AHCY, AK3L1, ALDH1A1, ALG2, ARHGEF7, ATP2A1, ATP5J2, CACNG5, CASP8, CCR8, CEBPA, CREBBP, CSF1, CXCL12, CYP11B1, DARS2, DHDH, DIAPH3, ENTPD6, EPB41L3, FZD10, GAD2, GNB1, GRIA1, IFT57, KAT2A, KCNB1, KIR2DS4, LAMB2, MAPK11, MARS2, MAT1A, MKNK2, MYH3, NCOR1, NOTCH2, NUDT5, OR1A1, OR5K1, OR5L1, PCNA, PER1, PFKP, PLIN, POLR2F, POLR3A, PPP2R2B, PPP2R5C, PTPN11, RARS, SDC4, SELE, SELP, SESN2, SH2D1B, SOCS1, SPRY2, SPTLC2, TAS2R8, THBS3, TKTL1, ZFYVE16, ZMAT3
Negative_12214	AK1, CR1, EBP, KDR, MET, NPL, VTN, ACOT11, ALPP, ARPC5, ATP5C1, ATP5H, BMP5, CDH15, CHRM3, CHUK, CLDN7, CXCR3, CYP2S1, FTMT, GNA11, GOT1, HNT, HPSE2, IFNA17, IL22RA1, LAMC2, NEFL, OR11G2, OR51B5, OR5H6, OR5T1, P2RX1, PAK7, PARVA, PARVG, PDCD1, PIGT, PLAU, PPAP2B, PPP1R3A, PTPRC, RAF1, ROBO3, RRM1, SMPD2, SORBS1, TCF7L1, TLR5, TP73, TUBA1B, TUBA4A, VAMP2, B4GALNT1, TNFRSF17
Negative_12215	GH2, GP5, HGF, LCT, TK2, ACTA1, ADH7, ADSSL1, AGPAT3, AK3L1, AKT1, ALDH7A1, ANAPC1, ARPC4, ATP6AP1, ATP6V1A, BMP8A, CCL3, CCR6, CD274, CDK6, CFLAR, CHSY3, CLDN8, COL4A1, CREB3, CX3CR1, DAAM1, E2F2, EDAR, EFN A3, EFN B1, ENPP3, ESPL1, EXTL1, FGF11, GABARAP, GDF6, GRIA3, GUCY1A2, HAO1, HMGCL, HTRA2, IL12RB2, IL29, IL7R, IL9R, INPP4A, ITGA1, LEF1, LEFTY1, LIAS, MAP2K3, MAP2K4, MAP3K4, MFNG, MYLK2, NAT2, NCR1, NOTCH1, OR10H4, OR10X1, OR1G1, OR1Q1, OR2A14, OR2F1, OR2Z1, OR4B1, OR4D9, OR4F17, OR51A7, OR5D13, OR5T3, OR6B2, OR8H2, OR8I2, OR9K2, PANK2, PAX6, PIGN, PRKCQ, PRKY, PTPN7, RRM1, SENP2, SLC25A4, SNAI1, TAS2R7, TICAM2, TMLHE, TP53, TUBB, TUBB1, TUBB4Q, VNN1, WHSC1L1, WNT5B
Negative_12216	AK2, RDX, TH, ADRA1D, AGPAT1, AGPAT2, ALCAM, ATP6V1A, CARD11, CCL20, CDIPT, CSNK1D, CSNK1E, CTPS2, CXXC4, CYP2B6, CYP3A4, DDX23, EIF4E, EPHX2, GALNT7, GGT6, GRIA2, HBEGF, IL17B, MAPK7, MCM5, MYL2, NRP1, OR13F1, OR2T5, OR4K14, OR56B4, OR5B3, OR5H6, PFAS, PFKL, PLA2G2A, PMM2, PPP3R1, PTPN5, RAB5A, RDH10, RPS6KB1, SOCS7, TGFB2, TKTL1, UNC5A, WNT6, ZFYVE9, EIF4EBP1
Negative_12217	AK3, CAD, CS, LTB, PAH, PML, PRL, RET, RFK, STS, ACY3, AGPAT2, ALDH1B1, ARRB2, ATP6AP1, ATP6V1F, B3GNT4, BIRC5, CACNA1D, CD19, CHSY1, COL3A1, CPT1B, CRB3, CSF3, CSNK1D, CTSS, CUL1, CYP2C18, DDX19A, DDX23, DEGS1, DGKA, DUSP9, ENTPD7, FGF1, FOXO3, GAS1, GPAA1, IAPP, IFNA7, IL7R, ITGAL, KLKB1, MAOB, MAP4K2, MPST, MRAS, MTMR2, MYD88, NEUROD1, NOS1, NT5C3, NUDT2, OR10A5, OR10J1, OR2K2, OR2T10, OR51A4, OR52A5, OR52I2, OR5D18, OR5T3, OR5V1, OR6K6, OR8J3, OR9Q1, PER2, PFN2, PIGK, PIP4K2A, PKLR, PMAIP1, POLR1C, PPAP2A, PPCS, RASGRP1, RPS6KA1, SCIN, SCP2, SH3BP2, SSH3, STAT2, TAP1, TAS2R14, TNFSF14, UGT2B4, UROD, XYLT1, ZMAT3, ATP6V1B1, CACNA2D4, MAPK8IP3, ST6GALNAC4

Negative_12218	AK1, C7, GLA, GSS, ME2, NPL, TXK, ACSM4, ADH5, ADRA1B, ADRB1, ALG3, ARP C1A, ATP4B, C7orf16, CBLC, CCL15, CCNG2, CDK6, CFLAR, CLDN11, CNTN1, COL5A2, CTPS2, CTSG, DGAT2, DRD1, EPRS, EXTL1, GAL3ST1, GALNT8, GAMT , GLUL, GRM5, HLA- DRA, HNF1B, HTR6, IDH1, IL11RA, IL22, IL28B, ITGA10, KITLG, KRAS, LAP 3, LEPR, LMO7, LYZL1, MAPK7, MPZL1, MYH4, NARS, NEGR1, NME7, OR1L3, OR 2AE1, OR2T8, OR4C6, OR7A5, OR7D2, OR9A4, PDE7A, PIAS1, PLIN, PLOD2, P LXNB3, PLXNC1, PNPT1, POLA2, POLE2, POLR2C, POLR3D, PTDSS1, PTGS2, R APGEF3, RELB, RENBP, RHOD, RRM1, SDC2, SEMA4D, SHMT1, SMAD9, SOS2, SP CS1, SPRY1, TFPI, TIAM2, TLR2, TUBA1A, ATP6V0A2, PLA2G12B, SERPINE1 , TNFRSF6B
Negative_12219	HK2, TK2, ACP2, ANAPC5, APPL1, ARPC1A, ARPC2, ATP5J, BCKDHB, CACNA1S , CALML3, CHST13, CNGB1, CPT1A, CSAD, CXCR6, CYCS, DAPK3, DCTN1, EGLN 3, EPHA1, FGD3, FIGF, FOXO1, FPGS, GANAB, GLUD2, HAO2, HCST, HSPA1B, H TRA2, IL21R, INPP4A, KIR2DS5, KLRK1, MAGI1, MAN2A1, MAP2K3, MAP2K5, MYH15, NCOR1, NCOR2, NCR1, NT5M, ODC1, OR10H2, OR13C9, OR9A2, P2RX6, P4HA3, PHKA2, PHPT1, PSME1, PTCRA, TGFA, TUBA1B, TUBB3, ULBP3, ULK1, UPRT, UROS, MAP3K7IP2, TNFRSF1B
Negative_12220	CR2, IL4, LCK, MUT, TNF, ABLIM1, ACADM, ADCY7, ADH5, AK3L1, ALDH3B2, A LG12, ATF2, CACNA1F, CACNG1, CACNG5, CASP7, CCR2, CD99, CDC6, CDK7, C LCF1, CYP11A1, CYSLTR1, DPM2, DUSP10, DUSP8, EDAR, ENTPD7, EPB41, FG FR2, FLT1, FUT7, FZD1, FZD2, G6PD, GALNT6, GCNT2, GCNT4, GIT1, GMPR, G NPDA2, GP1BA, GP1BB, GRIA2, GSTA5, GUCY1A2, GUK1, IDH1, IFNA2, IGFBP 3, IL1R2, IL22RA1, IPPK, IQGAP3, ITGA9, MAN1B1, MAPK12, MAPK8, MMP9, MTHFR, NCAM1, NKX3- 1, NODAL, OR10H2, OR2G6, OR2T12, OR4F4, OR4K13, OR4N4, OR5AK2, OR5C1 , OR8D4, OR8K1, P4HA1, PDE3A, PIK3R1, POLR3D, PORCN, PRKAB1, PRKCI, R PS6KA4, SEMA7A, SMPD1, SPRY2, STK4, TAS2R5, TRAF1, TRPC1, UPB1, UROS , WBSCR22, XIAP, ATP6V0A1, B3GALNT1, CSGALNACT1, GABARAPL2, TNFRSF 10D
Negative_12221	AK2, DUT, KMO, LPL, SCD, SMO, TKT, ACSM1, ACVR1B, ACVR1C, ACYP1, ALDH1 B1, ATP6V1F, C1GALT1, CADM3, CASP7, CCL27, CD8A, CDC25C, COQ3, CTBP2 , CYP17A1, CYP2A6, DLL1, EDA2R, EGLN3, GLUL, GNAS, GNAZ, GSK3B, GSTM1 , HEXA, HSD3B2, IL12B, IL13RA2, IL8RA, ITGB2, LAMC2, LIPA, MAP2K4, MA RS, MNX1, MYH6, NCK1, NFKB2, NFKBIA, NOD1, OR13C3, OR2L8, OR2T11, OR2 T34, OR4C16, OR4F4, OR52A1, OR52I2, OR56A4, OR6C3, OR8K1, OXCT2, P2R X1, PFKFB3, PPP2R2B, PRKG2, PSENEN, RAB23, RAPGEF3, RASSF5, RFX5, RP S6KA2, RUVBL1, SELPLG, SQLE, STX18, TGFA, TGFB2, TNFRSF8, TPK1, TUBB , TUBB6, UBA7, XCR1, ZNRD1, TNFRSF14
Negative_12222	DLD, F11, GH1, HGF, KIT, PLN, SRC, AADAT, ACSM4, ACY3, ADCY1, AHCYL1, A HCYL2, APC2, ARRB2, ATP6V0C, ATP6V1D, B3GALT2, BDH2, BIRC2, BMP7, CA CNB2, CCKAR, CCL24, CCND1, CD27, CD72, CDH5, CNGB1, CTSG, DDX47, DUSP 8, EPAS1, ETNK1, FBP1, FOXO1, GARS, GCNT2, GCNT3, GP1BA, GPD2, GSTK1, GSTM1, HHEX, HNF1B, IFNA17, IGFBP3, ITGAM, KIR2DS4, LAMC3, LCP2, LEF 1, MAP2K6, NAGA, NCOR1, NFYA, OR13C9, OR13F1, OR2M4, OR2T11, OR4A5, O R4K2, OR5B3, OR5M8, OR6K3, PARVB, PLA2G2D, PLCB2, POLR1D, POLR1E, PO LR3G, QARS, RPS6, SARS, SLC25A5, SLC2A4, SMC1A, SOS2, SPCS1, ST3GAL2 , TAS2R10, TUBA3C, TUBB, TUBB4, UROS, VAV2, WARS2, WNT16, WNT9B, XYLB , XYLT2



Negative_12223	AK5, ASL, CFD, ID2, PLG, SP1, TNR, ACLY, ACSS3, ACVR1, ADIPOQ, ALG1, ALG12, AOC3, ARPC4, ASNS, ATF2, ATP6V1H, BCKDHB, C1QB, CCL14, CCND2, CCNE2, CD274, CDC42, CDH3, CDK4, CD01, CMBL, COL5A1, CSF1R, CSF2, CYBA, DAPK1, DHCR7, DHDDS, DVL3, EFNA5, FGF19, FOXA2, FZR1, GLI1, GLS2, GSTM1, GUCY2F, IL11, INMT, ITGB5, JAG2, KCNB1, LEF1, LIMK2, MAPK9, NEGR1, NFKB2, NTF4, OR13C3, OR1C1, OR2A25, OR2F1, OR2W1, OR4N4, OR51E2, OR7D4, OR8J3, OXCT1, PAK4, PDE4D, PIAS3, PIGL, PIGO, PIK3R4, PKM2, PLCB2, PLXNB1, POLA2, PPP1R3C, RASGRF2, RFX5, SEMA3D, SEMA4B, SHISA5, SRD5A2, TRAF2, UBA7, ULK1, VAMP4, WNT8A, XYLB, ATP6VOA4, ATP6V1E1, CACNA2D1
Negative_12224	CRH, GSN, LCK, MAG, MOS, NNT, TAT, AGTR1, ATP4A, B4GALT7, C5AR1, CAV1, CDC2, CDKN2C, CDKN2D, CHKB, CRLF2, CRLS1, DDX50, DGKQ, DPM2, DUSP6, EIF4E, FTMT, FUT5, FZD3, GIT1, GLI3, GTSE1, IFNA10, IRS2, ITGAD, KLRC2, LIPT1, MAGI2, MAP2K3, MASP2, MYLK, NCSTN, NFX1, NKD1, NLGN1, NOTCH2, OR10J3, OR2F1, OR6N1, PDE4D, PDX1, PLCB1, PLXNB2, POLE2, PPP2CA, PRIM1, PRKAR1A, PRLR, PTGIS, RASGRP4, RETSAT, SEMA3C, SLC2A2, SLIT2, ST3GAL6, STX1B, TAP1, TAS2R40, THBS1, UCK1, VAMP4, WEE1, CACNA2D2
Negative_12225	ABO, AR, CBS, CKB, CRK, F7, MVD, OTC, SHH, SPN, TPR, A4GALT, ACADL, ACADM, ACSM2A, ACTA1, ACTN1, ARHGEF7, ASS1, AXIN2, BBC3, BIRC5, CAMKK1, CD14, CD3E, CDH1, CLCA2, CLDN10, CLDN7, COL5A3, CRKL, CSF3, CXCL5, CYP2B6, DOCK1, E2F1, ENAH, EPRS, FABP1, FGF11, FGF2, GALNT12, GIT1, GUCY1B3, HHEX, HTR2B, IFNA10, IL24, IL25, IRF3, KIR3DL2, LCAT, LHCGR, LMO7, LTBR, MAGI2, MAP4K3, MARS2, NAT1, OR1I1, OR1J4, OR2W1, OR51B4, P2RX1, PDE1B, PFN3, PLXNA3, POLE, POLR2D, PPP2R5A, PRNP, PRPS2, PTPRC, PTPRJ, PYGB, RAPGEF1, RETSAT, RPS6KA5, SLC27A1, SMAD1, STAT3, STX8, TAS2R13, TNFRSF4, TNFSF12, UBE2L6, UGT2B10, VAMP1, SUV420H1
Negative_12226	AK5, AUH, CFI, IL4, TPO, ABLIM3, ACTC1, ACY3, AFMID, AKR1B10, AKT1, ALDH3A1, BCL2, BET1L, BMP7, BTRC, CAMK2D, CARS, CD55, CD74, CD79A, CDC26, CLDN10, COX10, CPOX, CSF3, CXXC4, CYP11B2, DARS, DPYD, ENO2, ENTPD3, EPAS1, EPB41L3, F2RL2, GALNTL5, GANAB, GLUD2, GMPR, GNA11, GNA14, GSTM4, GSTO2, HLA-DOB, HLA-G, HPSE2, IDH3G, IL8RB, IMPA2, ITGA4, ITGA5, JAK1, KLRC1, MAGI1, MAP2K6, MYH7, NCAM1, NCF4, NCKAP1, NCR1, NLGN1, NMNAT3, NRXN1, NT5C2, OR10A6, OR10P1, OR2B11, OR2D3, OR2G3, OR51L1, OR51V1, OR52J3, PDE4A, PGAM4, PLA1A, PNPO, PPP2R2D, PRPH, RELA, RPS6KA5, SDC3, SLC27A4, SOCS3, SOS1, SRGAP3, ST3GAL3, SV2B, TRIP10, TUBA4A, UCK1, WNT7A, ATP6V1B2, CACNA2D4, CSGALNACT2
Negative_12227	AR, C5, C8G, CD4, DBI, GBA, GSS, ME3, OTC, ACSS2, AKR1B10, ALOX15, APOE, APRT, B4GALT4, CACNG1, CCKBR, CD36, CD58, CDC14A, CDH2, CHDH, CHIA, CLCF1, CSNK2A1, CXCR3, CYP26A1, CYP26C1, DIAPH3, DVL2, EFNA5, ENTPD1, ERO1L, FDPS, FGFR2, GAS1, GATM, GGT6, GLI1, GLS2, IL12RB2, IL17RA, MAP3K8, MTMR1, MYL9, MYLK2, NFKBIB, NFYC, NMNAT1, NMNAT3, NUDT9, OR10J5, OR10Q1, OR1A1, OR2C3, OR2T3, OR7G2, PCNA, PGM2, PIGB, PIK3R2, PI4K2A, POLR2D, PPP5C, PRKCZ, PTPN6, RPN1, SEMA3F, SOS2, STK36, TALDO1, TCF7L1, THBS1, TRPC1, WNT9A, PAFAH1B1, TNFRSF11B, TNFRSF13B
Negative_12228	CR2, GHR, GNE, GSR, ID2, IL9, ME3, ABL2, ACPP, ALPPL2, ANAPC2, APLP1, ARSA, B4GALT4, BLVRA, CAMK2A, CDC14A, CDH2, CHPT1, CTBP2, CTNNB1, DDX52, EXOC7, EXT2, FZD4, GART, GCNT3, GUCA1C, HLA-DRA, HSD17B8, HTR4, IFNA21, IFNAR1, IL20RA, ITPK1, LAMA4, LAMC2, MAPK10, MAPK8, MCAT, MTMR2, MYLK2, NCSTN, NGEF, NNMT, NOTCH3, NRG3, OR1E2, OR2T4, OR5F1, PAK4, PDE10A, PDE7B, PFAS, PLXNA2, PSENEN, PTCH2, SEMA3B, SLC27A1, SLC2A2, SMAD1, SRD5A1, STAT6, SUCLA2, TLN2, TOMM40L, TRAF4, UGT2B4, WASF1, YKT6, ATP6V1C2, PAFAH1B2, TNFRSF11A

Negative_12229	BTC, CBL, FYN, LHB, MTR, PLG, AANAT, ACTN2, ADSS, AKT2, ALPL, AQP7, ARP C1B, ASAH1, BAI1, BIRC2, CACNB2, CANT1, CARS2, CDK4, CTLA4, CXCR5, CY P2B6, DPM3, DPYS, EDAR, EPAS1, EXT1, HPRT1, IL7R, INPP4B, ITGB1, LDHA , LDHB, LDHD, LIFR, LRRC4C, MTHFD1L, MYH3, NCF1, NFAT5, NLGN2, NRG2, O R2AT4, OR2K2, OR2T4, OR52H1, OR5P3, OR7A17, PDE5A, PDHA1, PKMYT1, PL CG2, POLR2C, PRIM2, PRODH2, RPS6KA6, SARS2, SC5DL, SEMA4F, SKIV2L2, STEAP3, TCF7L1, TGDS, TNFRSF9, TUBB, UGCGL1, UNC5A, CSGALNACT1
Negative_12230	CFD, F10, GP5, HYI, SDS, SHH, ACVR1C, ACVR2B, ADSSL1, ALS2, ANPEP, APO C3, ARNT2, ARSE, ATP5A1, ATP5C1, BLNK, CCNA2, CDC16, CDK2, CDKN1B, CL DN2, CLDN3, CYP11A1, CYP19A1, CYP2S1, DCTD, DUSP2, DUSP7, E2F4, FADD , FOXA2, FOXO3, FRAT1, G6PD, GALNT14, GNA15, GSTM5, HRAS, HSPA1B, IFN A10, IL4R, IL7R, ITGB1, KCNB1, KLRC3, LEFTY1, MAP3K11, MDM2, NANP, NF AT5, NFE2L2, NOS1, OR10A3, OR1E2, OR1L8, OR2F1, OR2T11, OR2T33, OR5C 1, OR5P2, OR6C4, PDCD1, PMAIP1, POLD3, POLR3D, PPCS, PTPN1, PTPN6, RE TSAT, RHOQ, ROBO3, SELE, SEMA4A, SESN3, SOAT1, STAT5B, SULT2B1, TAS2 R38, TAS2R4, TBL1Y, TCF7, THY1, TSHR, WEE1, XYLT1, MAP3K7IP1, MAPKAP K3, ST6GALNAC6
Negative_12231	FAS, GP6, GSS, IDS, PDC, SI, ACAT1, AGRP, AHCYL1, AKR1B10, AKR1C4, ARR B1, B3GNT2, BMPR1B, CASP9, CCDC6, CCL16, CCR8, CDC45L, CMPK1, CSF1R, DPM2, DUSP4, FGF2, FMO4, GNAI3, GNPDA2, HRH2, IFNGR1, IL17A, IL8RB, I MPA2, IRF9, ITGA9, KCNB1, KRAS, MAP3K3, MAP3K4, MBL2, NCAM2, OR10G7, OR10H5, OR13C2, OR13F1, OR1F1, OR2D2, OR5A1, OR5AP2, OR8J3, PDE3B, P DXK, PFAS, PGK1, PIGO, PIK3R5, PIM2, PIP4K2C, PLD2, PLEKHA8, POLR1D, POLR2A, POLR2C, PPID, PPP3R2, PRKAG1, RBPJ, RRM1, ST8SIA1, STEAP3, S YNJ2, TAS2R5, TBXA2R, TNFRSF8, TUBB6, UNC5A, UNC5B, VDAC2, SERPINC1
Negative_12232	ADC, APP, CDA, F11, LEP, ALG12, ALG5, APOA2, ATP5G2, ATP6AP1, B3GAT2, BMP4, CACNA1E, CARD11, CBLC, CCL26, CD22, CD8B, CDC16, COX15, CSNK2A 1, DDX23, DERA, EDNRA, EPB41L2, EPHB1, FABP4, FDPS, GALNT12, GJA1, GN AQ, GPD2, GSK3B, HAGH, HA02, HLA- G, IFNAR1, IFNGR1, IL1B, IMPA2, INSR, ITGA11, ITGA2B, ITGA8, JAK1, LD HA, LIMK1, MAFA, MCM3, MINPP1, NCOA4, NFATC2, NTF4, OCLN, OCRL, OR11H 4, OR13A1, OR1Q1, OR2AG1, OR2G6, OR2T8, OR4S2, OR52E2, OR52K1, OR5J2 , OR6B3, OR6X1, OR9G4, PDE3B, PDE5A, PDGFD, PFAS, PGLS, PI4KA, PIAS2, PIGC, PNMT, POLR2C, RFXAP, SETMAR, SGMS1, SMAD3, SNAP25, TAS2R9, TFD P1, TLR3, VEGFB, WNT2, ATP6VOE1, ATP6V1G3, PAFAH1B1, ST6GALNAC6
Negative_12233	CD6, CGN, IVD, ALOX15B, AMDHD1, AMY2A, B3GAT1, CCKBR, CCL7, CCR9, CD2 44, CD27, CNGA4, COX15, DAD1, DBF4, DDIT4, DHFR, DKK2, ECSIT, FGF12, F UT4, GABARAP, GCLM, GGT7, HA02, HARS2, HSD11B2, HSPA1B, IGF1, ITGA6, ITPK1, JAK3, JAM3, MAML3, MYH14, NKX3- 1, NOS1, OR10G9, OR1F1, OR51G1, OR52J3, OR5H2, OR8I2, OXSM, P4HA2, PD E2A, PFN4, PLCB4, PON2, PPAT, PRKAR2A, PRLR, PYGL, RASA2, RASGRF1, TA S2R8, TBXAS1, TUBA4A, UBE2L3, CACNA2D4, SERPINA5
Negative_12234	CAT, CR1, GH1, KHK, ABLIM1, ALDH4A1, ALDH9A1, ALDOA, AMY2A, BLVRB, BP GM, CCL2, CCL23, CES7, COL6A1, CYFIP1, CYP26A1, CYP2A6, CYSLTR1, DDX 41, DDX50, DUSP14, E2F5, EPHA5, EPHB2, GGCX, GGPS1, GNRH1, GPAM, GSTZ 1, GUCY1B3, HLA- F, HTR2C, KLKB1, MAOB, MAPK13, NFYC, OR1A1, OR1C1, OR1L1, OR2G6, OR3A 3, OR4C11, OR51L1, OR8H1, P4HA2, PIGB, PMM1, PRKAR2B, PRKCB, PTPN11, ROCK1, SARDH, SHC2, SOCS1, SSH3, ST3GAL2, STK11, SULT1A1, SYNJ1, TNF SF10, TSHB, UGCGL2, UGT2B7, YWHAZ, ATP6V1C2, HLA- DQA2, MAPK8IP3, MAPKAPK2, PLA2G12A, PNLIPRP2

Negative_12235	C6, CRH, DDC, GHR, SHH, ACLY, ACY1, ACYP1, ADH1B, ADIPOQ, AFMID, AGTR1, ALAD, AMDHD2, ANAPC2, ATP5D, ATP5F1, BCKDHA, BDKRB2, CCKAR, CCNE2, CD19, CD48, CDC14A, CES7, CTPS, DDX23, DDX56, DHRS9, DOLPP1, DPYD, DTX2, EPHA1, EPHA4, FTH1, GALE, GDF6, GSTZ1, GYS2, IDI1, IFNG, IL17RA, IL23R, IL24, KAT2A, KIR2DS5, LGMN, LHCGR, MAGI3, MITF, MMP9, MYH13, NEU1, NFX1, NOX1, NR5A2, NTNG1, OPLAH, OR10G4, OR1E1, OR2B2, OR2T4, OR3A3, OR4D5, OR7D2, OR7G1, OR8D4, PANK3, PAPSS2, PARD3, PDE8A, PFN4, PGK1, PIP5K1C, PISD, PLD2, PMM1, PMVK, PPAP2A, PPM1A, PTPRM, RAC1, RHEB, RXRG, SARS, SESN2, SRGAP1, ST6GAL1, TAS2R16, TYROBP, UGT2B11, ULBP3, WNT11, YARS, ATP6VOD1, CSGALNACT2, PNLIPRP1, TNFRSF14
Negative_12236	BCR, DBI, DHH, F5, GBA, KIT, LYN, MPZ, SI, ACAT2, AKR1C1, ALAS2, ALOX12, AQP7, ARAF, ATP5H, B3GALT1, B4GALT6, BLVRB, BMP8A, CACNB1, CALML6, CCL5, CCNA1, CD3E, CDC7, CDK7, CFLAR, CHST13, COL1A1, CSNK1G3, CTNNA2, CYP2E1, CYSLTR2, DDB2, DDX41, DHRS4L2, DKK4, DUSP14, DUSP5, FIGF, FLOT1, GATM, GNAI3, HAAO, HSD3B2, IFNA2, IFNAR2, IFNW1, IGF1R, IKBKG, IL10, IL19, IL1R1, INHBE, INPP4A, ITGA7, ITPKB, KLRC1, KLRK1, LDHAL6B, MAGI3, MAN2A1, MASP2, MOV10L1, NAT2, NFYA, NME7, NMNAT3, OR10C1, OR10K1, OR12D3, OR1J4, OR2A4, OR3A3, OR5H6, ORC3L, PIAS2, PPP2R5D, PRIM1, PRKAR1B, PSEN1, RAPGEF1, SDC3, SEMA3C, SEMA4G, SETD1B, SGPP2, SLC25A4, SMARCA5, SNAP23, ST8SIA5, STAT5A, TAS2R5, TNFSF14, WHSC1L1, WNT5B, TNFRSF10C, TNFRSF17
Negative_12237	A2M, CEL, CGN, GNE, LAT, LHB, LPL, ACO2, ACTN1, ADH6, AK3L1, APAF1, CBR3, CCNE2, CD44, CDC25C, CHRM1, CNTFR, COQ6, CSF3R, CTTN, DGKZ, DIAPH3, DUSP1, EDA2R, EGLN1, G6PC, GMPR, GNAL, GRIN2D, HADH, HLA-C, ICAM3, IL20, LDHB, MAML3, MAPK1, MGAM, NAMPT, OR13G1, OR4K2, OR4X2, OR51A4, OR5A2, OR8K5, PFKFB3, PIGU, POLR3H, PPP1R3D, PTPRR, RBL2, RDH12, RELB, ROBO3, RPS6KA1, STX16, TAS2R4, TM7SF2, TUBB1, WNT6, ATP6VOD1, TNFRSF14
Negative_12238	AGL, GCK, AASS, ARPC1A, ATN1, BDKRB2, BUB3, CACNA1A, CACNB1, CAMK2G, CCR3, CCR8, CD8A, CDK2, CES1, CLDN1, CLDN22, COL5A2, CRB3, CYP3A4, DGKI, DHDDS, DRD2, FSHR, GBT1, HSD17B7, HSP90B1, IFNG, INMT, INPP4B, INSR, ITGA4, ITGAE, ITGB3, ITGB7, KDSR, MAD2L1, MTHFD1, NAT5, NCK1, NEU3, NT5E, OR13C3, OR1E2, OR2A5, OR51E2, OR52E2, OR6B2, OR6C4, OR8D4, PGLS, PIK3C2B, PIP4K2C, PIP5K3, PKMYT1, POLD4, POLR3H, PON2, PORCN, PPID, PPP3CB, PSME2, RGS3, SMARCA2, SPCS1, SPP1, SPRED2, SPTLC1, STX5, SULT2A1, TSHB, TUBB4, UNC5B
Negative_12239	DCK, PC, SHH, ADH7, ADSS, AGPAT3, ALDH3B1, ALG3, ANAPC11, ASAH1, ATP5I, B4GALT6, BDH1, CAPN2, CCL13, CCL17, CCL22, CCNB3, CCNG1, CD34, CD70, CD82, CDKN2A, CSH1, CYP27A1, DAXX, DDB2, DDX47, DDX50, DLL1, DUSP2, EFNA1, ENO1, FADD, FUT7, FZD6, G6PD, GAL3ST1, GBA3, GCNT3, GGT1, GNP, NAT1, GP1BB, GSTZ1, IFNA7, IL8RA, ITGA1, KIR2DL2, KIR3DL1, KLRC3, LDHAL6B, MAP3K3, MAPK3, MGAM, MYH13, NARS2, NKD1, NLGN2, NT5M, OR13C2, OR1C1, OR1D2, OR1G1, OR1I1, OR2A2, OR2A42, OR5D13, OR5H2, OR6T1, OR8J3, OR9A2, P2RX6, PDE1A, PLA2G6, PLAT, PLCD1, PLEKHA8, POLR2A, PPARD, PRKCG, RFXAP, RHEB, RHOA, RPE65, SAT2, SEMA4D, SNAI2, SSH3, STEAP3, STT3B, STX7, SUOX, SYNJ2, TBL1X, TGDS, TSC2, UNC5C, ATP6V1G3, ST6GALNAC1

Negative_12240	CFH, CKM, MIF, MSN, NNT, UBB, ZYX, ACVR2B, ACVRL1, ADSL, AGPAT1, ALAD, AMY2B, AOC3, B4GALT2, C3orf10, C4BPB, CACNB1, CACNG8, CAMK2A, CD59, CDH4, CFTR, CHSY3, CLDN1, CLDN4, CSF3, CYP2C18, DNMT3L, EPB41L2, FGF1, FGF3, FLAD1, FLT3LG, GALNT8, GNMT, GNPAT1, HEXB, IDH3A, IL12A, INPP1, INPP5A, IRAK4, ITGB2, LFNG, MAP3K13, MCM7, MMP7, MMP9, MPDZ, MTA P, NAT5, NCF2, NCKAP1, NME7, OR10V1, OR2C3, OR4D1, OR4D5, OR4E2, OR4K17, OR51E1, OR51G1, OR5T3, OR8K3, PDHB, PGK1, PIM2, PIP5K3, PLA2G2F, POLR3H, PPP2R1B, PTPRM, RAC2, RASGRF2, RELA, RPS6KA6, SCP2, SFRP5, SMARCA2, SMARCA5, STX6, SULT2B1, TAS2R16, TRAF4, TUBB, UGCG, VNN1, TNFRSF13B
Negative_12241	CD6, CFD, DDC, GGH, GK, GLA, PML, PVR, TPR, UBC, ACAD9, ACP6, ACSS1, AKT2, AMD1, AREG, ARPC1B, CAMK2B, CDC16, CHRM5, CLDN17, CLTCL1, COL4A6, COL5A1, CYP2D6, DDX18, DHRS4, DPYS, ESAM, ETNK1, FGF12, FGF9, FTMT, G6PC, GLDC, GRIN2B, HMGCS1, IL21R, IL3RA, INSR, ISYNA1, ITPA, LIAS, MAP2K7, MAPK7, MASP1, MGST2, MTAP, MTHFD1, MYH1, MYH13, MYH7, NKX2-2, NPR2, OLR1, OR10G9, OR13C8, OR2B11, OR2G3, OR2L2, OR2T4, OR4F6, OR51F2, OR52A1, OXCT1, PAFAH2, PCYT1A, PGLS, PHKA2, PIGW, PLXNC1, POLR3G, PPP2CB, PTGES2, PTGIS, PTTG1, RDH5, RND1, SDHA, SLIT1, SMAD2, SOS4, SRGAP3, STX1B, STX7, TBXAS1, TDO2, TPMT, TUBB4, TXNDC12, VDACC2, WNT3A, MAP3K7IP2, MAPKAPK3, SERPING1, ST6GALNAC6
Negative_12242	DBH, GNS, GSS, HAL, MTR, NOG, ACSL6, AFMID, APOA1, ARHGAP5, AXIN1, B3GNT5, BMP6, COL5A3, CYP11A1, CYP2D6, CYP2E1, DHCR24, DHRS4L2, DNMT3L, FCGR2B, FGF1, FGF2, FRAT1, GALNTL1, GCNT3, GNAQ, GNAS, GUCA1C, HCST, HSD17B7, HSPA1B, IFNA21, INSR, IRF9, ITGA3, ITGAX, LALBA, LAMB3, MYL2, OR10A4, OR11H6, OR51I1, OR6B2, OR6C74, OR6Q1, OR6S1, PAX6, PCCB, PKMYT1, PLA2G2A, PPP2R2C, RDH12, RERE, SNW1, ZBTB16, ATP6V1G2, B4GALNT1
Negative_12243	BTC, C1S, DUT, GCK, TNN, ACMSD, ATP6AP1, AVPR1A, BACE1, BCKDHB, BMP6, CAV1, CCL2, CDC26, CDS2, CXCL11, EFN3, ETNK1, GALNT2, HCCS, HNF1B, IL12RB2, ITGB4, MCCC1, MGAT4A, MKNK1, NRG1, NSDHL, NT5M, NUDT8, OR13D1, OR4K13, OR52M1, OR52R1, OR8U1, OR9I1, P2RX1, PDHB, PGK2, PLXNB2, PON1, PPARG, PPP1CC, PRKAG2, RALGDS, RBPJ, ROBO1, SEMA3E, SHC2, SPRY2, STK3, TMLHE, TP53I3, TUBA3C, UBE2L3, UBE2L6, WBSR22, XCL2, GABARA PL1, ST6GALNAC1
Negative_12244	FES, GNE, ABL2, ADCY4, ALAS2, ALG12, APLP1, ATP4B, BACE2, CACNB2, CAMK2B, CARS, CEBPA, CER1, CYP2S1, FMO5, GNAO1, HGSNAT, HIP1, HSPA8, IL1R1, IL22RA2, MAD1L1, MCM4, MYH10, NFATC2, OR10H4, OR14A16, OR4K14, OR7G2, OXCT1, PDGFRA, PFN2, PHPT1, PIGP, PLOD3, PPP5C, PRKAB2, PTGES, RAC3, RALGDS, RRM2B, TALDO1, TAS1R3, TBL1XR1, TJP3, TUBA1B, TUBA1C, HLA-DRB4, HSP90AA1
Negative_12245	DHH, FER, HGF, NLK, NOG, TYR, ACYP1, ADRB3, ARHGAP5, AXIN1, CACNA1D, CADM1, CAMKK1, CARS, CASP9, CCR4, CD82, CDS1, CRHR1, CSF3R, CTSP2, CYSLTR1, EGFR, F11R, FGF5, GARS, GLDC, GUCA1C, HLA-F, IGF1, KYNU, LDHAL6B, LDHC, MMP9, MRAS, MYH7, MYL7, OR14C36, OR4K1, OR51A4, OR51D1, OR5P2, OR5R1, PFKFB1, PLOD2, POLR3K, QPRT, RDH8, RND1, RPIA, SGMS1, SGPP1, SHMT1, SMPD2, STAT5A, STX3, TAS2R9, TNFSF9, UGT2B17, UNC5D, VAMP4, VARS, XYLT2, ST6GALNAC4
Negative_12246	AK3, BTK, DLD, HAL, HPD, KHK, LCK, NPY, SDS, ACTC1, ACVR1B, AGPAT6, APOA5, CCR9, CEBPA, CYP2C8, DHRS4, DHRS9, DPAGT1, ENTPD8, FGF17, FZD5, GALNT8, GALT, GNG12, GNPDA2, GUCY2D, HMOX1, IGFBP3, IRF7, ITGB1, LCMT2, MPST, NAGS, NRXN3, NUDT12, NUDT2, OR1D2, OR2H1, OR2T4, OR8K1, PDE4A, PLK1, RFNG, RHEB, RUVBL1, SDC1, SMAD5, ST3GAL6, VANGL2, PLA2G12B

Negative_12247	C8G, DBI, GH1, HK2, IVD, KHK, OTC, ACTG1, AKR1C4, ATP5L, ATP6AP1, BATA P2, BTRC, CACNA1I, CBLC, CLDN1, CLDN16, EIF4E, EPHB6, FGF1, FUT2, FZD 1, GALNT10, GNPAT, GSTM4, IGSF5, IRAK4, ITCH, KARS, LEFTY1, LLGL1, LR AT, MCEE, NME2, NOX1, NQO1, NRG4, OR13A1, OR13F1, OR2A42, OR2T4, OR4L 1, OR51A7, OR52A5, OR52E6, OR52K1, OR6C75, OR6T1, PEMT, PHKA2, PIAS1 , PIK3C3, PLCD4, PPP1CB, PPP1R3B, PSAT1, RHOD, ROCK1, SC4MOL, SDC1, S TK36, STMN1, TAS2R38, TUBA1A, TYK2, WHSC1
Negative_12248	A2M, AK2, C8A, DBT, IL5, VTN, AASDH, ACSM3, ACSS2, ALDH9A1, ATP5D, CAL ML5, CCL11, CCNB1, CD47, CNTN1, CRY2, DGAT2, DRD1, FADD, FGF23, GAMT, GART, GNA13, GSTO2, HADHB, HMGCL, IGFBP3, IL11RA, IL18, INHBE, INPP4 A, OR4K1, OR52N1, PFN3, PLCB3, PLXNA3, PNPLA4, POLE3, PPP1CC, PRKAA1 , PRKACB, PRKCD, PSAT1, PTPRR, RPS6KA5, SDHA, SSH2, ST3GAL2, SULT1A1 , SUV39H2, TAS1R3, TGFB2, TRDMT1, TUBA3C, TUBA8, UGT2A3, UMPS, ATP6V 1C1, CACNA2D1, ST6GALNAC5
Negative_12249	HK2, ID1, LAT, LIF, PGP, ACADL, AGPAT3, ALAS1, ARNT2, ARPC1B, ARPC4, A SRGL1, CACNA1I, CARS2, CASP10, CCL27, CD58, CRKL, CSF1R, CSF3, CXCL6 , CYP4F3, DNMT1, DUSP10, E2F1, E2F3, FADS2, FLT4, FZD8, GANAB, GCNT3, GFPT1, GLI2, GNA13, GNAT3, GNPAT1, GOSR2, GRPR, HADHA, HADHB, HARS, HRH2, HSD3B7, IFNA17, INMT, INPP4A, INSR, ITGB6, KIR2DL1, MARS2, MGA M, NEUROD1, NEUROG3, OR1J4, OR2A12, OR2W1, OR2Z1, OR4N4, OR51F1, OR5 2E6, OR5F1, OR6T1, PDCD1, PIGU, PLCE1, PPA2, PPP2R5B, PTGES2, RXRG, S H3BP2, SIPA1, SPRED2, TACR3, TGFB2, WNT7B, ATP6V1E2, EIF4EBP1, TNFR SF6B
Negative_12250	CD2, INS, ITK, MIF, MTR, ACOX1, ADCY5, ALDH1A3, ALG2, ALG5, B3GAT3, BN IP1, BUB1, CACNA1I, CADM1, CAMK2D, CD8A, CDC25A, CFL1, CRHR1, CSF1, C TNND1, DAD1, DGAT1, DPM1, ENO1, EP300, EXT2, F2RL2, FADD, FRAT1, GDF6 , GGT1, GOT1, GPT2, HCLS1, HIF1A, HLA- DRA, HNF1A, HTR7, IFNGR2, IL12RB2, IL2RB, INPP5E, IRS4, JAG1, LAMC2, MAOA, MMP14, NRAS, NTNG1, OR2AG2, OR4K5, OR52I1, OR5D16, ORC2L, PARS 2, PFN3, PIAS4, PLCG1, PRKACB, PRKACG, PTCH1, PTGDS, RRM2B, SCP2, SMP D3, SULT1E1, TAS2R9, TJP3, TLR2, TLR3, TOMM40, TSLP, TUBA3E, ULBP1, U ROC1, WNT2, SERPINB5
Negative_12251	BTK, C8G, CRH, F2R, HK2, IL5, MVD, TKT, ACVRL1, ADORA2A, ADSS, AGXT, AM HR2, ANAPC1, ATF2, ATP5I, ATP5L, B3GALT1, BET1, C1QC, CCL25, CD247, C HRM1, CLCA2, CLDN17, CSNK1G1, CXCL12, CXXC4, CYBA, DAPK1, DBF4, DGAT 1, DGKH, DHRS4L2, DPAGT1, DPYD, ENPP6, FGF6, FUT6, G6PC, GADD45G, GAL M, GCDH, GCH1, GNAQ, GPLD1, GSTK1, IARS2, IL10RA, IL8RA, JUND, LIPG, M ARS, MGAM, NANP, NCOR1, NRCAM, NRXN3, OR10H5, OR10J3, OR11H4, OR13H1 , OR2G6, OR2Z1, OR4F4, OR52B4, OR52B6, OR5H6, OR5T2, OR6C1, OR8A1, P2 RX2, PANK3, PPCDC, PPP2R2B, PPP2R5E, PTPN6, RPS6KB2, SEMA7A, SOCS1, SPRED2, TLR4, UBA7, UCK1, VAV1, VNN1, ATP6V0A4, PLA2G12B, TNFRSF10D , TNFRSF1A
Negative_12252	CDA, IDS, LPL, NF1, TNF, TYR, ACP2, ALDH3B1, ALG5, ASS1, ATP6V1F, BIRC 2, CACNA1C, CCR5, CDC27, CHUK, FUT7, FUT9, GALNT9, GCDH, GGT7, GLYCTK , GPAM, IL2RB, INADL, IRF9, KIR2DL2, NCR1, NR4A1, NRG1, OR10G7, OR10J 3, OR1F1, OR2H2, OR4S2, OR5L1, OR5M3, OR7G3, PIGQ, PLXNB3, POLD3, RAL GDS, SEMA3D, SOCS2, ST3GAL3, SUFU, TAS2R49, TPH2, TUBA1B, VAV1, WNT1 0B, ATP6V1G2

Negative_12253	DLD, F11, PML, ADH6, ANPEP, APH1A, ASIP, ATP2A3, ATP5L, AXIN1, B3GNT4, BIRC2, CACNA1G, CDO1, CLTA, COL4A2, COL5A2, CYP21A2, DDIT4, DUSP16, EDA2R, EFNA3, ENAH, EPAS1, GALNT14, GMPR2, HIF1A, HNF1A, HSD17B8, HSD3B2, IFNA7, IFNAR1, IMPA2, INHBB, IRS1, ITCH, ITGAL, ITGB6, LDHA, L DHC, MAP3K5, MAT2B, MS4A2, NAE1, NARS, NLGN2, NTF4, OR11L1, OR1L4, OR2B6, OR2F1, OR2L3, OR2T1, OR4F17, OR52W1, OR5T1, OR6C76, OR9G4, P2RX2, PAPSS2, PDE2A, PIAS1, PIGN, PIGT, PIK3CA, PLCD1, PPBP, ROCK1, SCP2, SELL, SETD1A, SGMS1, SMC1A, SPTAN1, SREBF1, TAS1R3, TJP3, TLN1, TRAF5, UBE2L6, ULK2, VTI1A, WNT9A, XCL1
Negative_12254	C3, LTB, ME3, TPR, AARS2, ACMSD, AGPAT2, AKR1C2, ALG13, ANAPC10, ANAPC5, ANGPTL4, ARHGEF7, ASCC3, ATP12A, BAIAP2, CACNA1A, CALML6, CAMK2D, CAMK2G, CCND2, CES7, CRHR1, CTSL1, DDIT4, DUSP10, FBP1, FCGR3B, GALNT3, GGT1, GMPR2, GNPAT1, HDAC2, HMGCL, HSD11B2, IFNA14, IRAK1, IRAK3, IRS1, MAOB, MYLK2, NT5E, OR10R2, OR4K14, OR5T3, PDE4B, PDGFD, PIK3R1, PPAP2A, PPARG, PRODH, PYCR1, RASGRP2, SETD2, STK11, STK3, TCIRG1, TRAF6, TNFRSF1A, TNFRSF1B
Negative_12255	F10, MOS, SP1, ADCY10, AGTR1, AKR1C3, AMY2B, ATP5E, B3GALT6, B3GNT2, BCL10, CACNB2, CALML3, CANT1, CDH4, CLDN17, CSF1R, CSNK1A1, CUL1, CXCL3, CYCS, DIAPH3, DRD5, DUSP8, EPHA7, ETNK2, FCGR3A, FUT8, FZD1, FZD5, GNAI2, HLA-DOB, HSD3B1, IAPP, IFNA4, IL2RG, MAPK7, NTF4, OLR1, OR11L1, OR4N2, OR5B17, OR9Q1, OXTR, PCYT1B, PGM2, PSAT1, PTTG1, RBL2, RHEB, SPCS1, TAS2R40, TMLHE, TNFSF12, TRAF4, YWHAQ, ZNRD1, CACNA2D3
Negative_12256	BTK, C9, CD4, IL5, KMO, ACVR2A, ARHGEF2, ATP5F1, BET1, BUB3, CCL16, CHRM2, CNDP1, CYP1B1, E2F1, ERBB3, FOXO1, GALNT2, GBE1, HNF1B, HTR4, HTR5A, IFT57, INPP5E, MAP2K2, MCEE, MMP7, MTHFD2, NAT5, NFATC2, NMNAT3, OR10C1, OR2D2, OR4C46, OR4N5, OR56A3, OR6C4, OR9A2, PARD6A, PDE5A, PLA2G3, RAC2, RALA, RHOA, RPSA, SH3BP2, STK11, SUV39H1, ATP6V1E2, PRICKLE1, TNFRSF10A
Negative_12257	EDA, IL4, A4GALT, ADH4, AGPAT3, ATP5A1, ATP5J2, B3GAT3, C3orf10, CACNA1B, CCL4, CD79A, CDH1, CDK4, CHEK2, COL5A1, CPT1A, CYP2C9, DDX54, DX56, DPYSL2, DUSP5, EXOC7, FZD8, HAO2, IDUA, IFNA13, IGF1, INHBE, IRAK4, ITGB7, KLRC3, MAPK3, MTMR2, NOTCH2, NT5E, OR2A14, OR2G2, OR4N5, OR51Q1, OR52E4, OR5L2, ORC4L, P4HA1, PLXNC1, PTGS1, PTPMT1, RALB, RXRG, SMC1B, ST6GAL1, STX1B, SUV39H2, SYNJ2, TNXB, ZBTB16, SLC25A31
Negative_12258	F3, HPD, PVR, ADSS, AGPAT3, AKR1B10, APAF1, ASS1, ATG7, ATP5E, BDNF, CACNA1D, CCNE2, CD8B, CYP11B2, CYP17A1, DHDH, DOCK1, EPB41L3, EXT2, FGF21, FUT2, FUT4, GMPS, GPAM, HAGHL, HNF1A, IL17RA, KYNU, LDHD, MAPK12, MAPK9, MPZL1, NFX1, NRXN1, OR1J1, OR52A1, OR52J3, OR9A2, PAX6, PGM1, PIGP, PON1, PPP2CB, RPS6KA5, SCLY, SEMA3C, SHMT2, SOD1, TIAM1, TUBB2B, UGT2B28, UROS
Negative_12259	AGK, CS, DDC, DHH, F2R, FGG, GBA, ALDH3A1, B3GALT2, BCL2, CAMK4, CEBPA, CFL2, CLDN14, CLDN4, CLDN8, CREB3L3, CSNK1D, CTBS, CXCL6, CXXC4, CYP2C18, DGAT1, DVL3, EDA2R, EDAR, ENPP1, ENPP3, FABP1, FZD7, GADD45B, GPAM, HSD17B8, IL13RA1, INPP5A, KARS, KIR3DL3, LDHB, LEPR, MINPP1, MYL2, NAGK, NLGN3, NMNAT1, NUDT8, OLR1, OR13G1, OR1M1, OR2T12, OR3A3, OR4C11, OR4F4, OR8G1, PAK7, PDCD1, PDE5A, PIK3R1, PLA2G4A, POLR2A, PPM1B, PPP1R3C, PRKCZ, PRLR, RPN2, RUNX1, RUVBL1, SARDH, SETD2, SH2D1A, SHC3, SSH1, STK11, STMN1, STX8, TACR1, TUBB1, TUBB4, UGDH, UGT1A10

Negative_12260	AMT, C8B, F8, GH2, GPI, IDS, SMS, TNF, ACAD8, ADORA2B, AFMID, AKT1, AMP D1, ARSA, ASCC3, ASS1, CALML5, CAMK2D, CCR3, CD226, CD27, CES1, CHRM3 , CREBBP, CRHR1, CTNNA2, DCXR, DHODH, DPYD, EFNA2, ENTPD4, FARP2, FGF R4, GALNT10, GLUD2, GNAO1, GNRHR, GPAM, GRB2, GSTO1, HLA- F, HTR7, IARS2, ICAM2, IFNA5, IFNA8, INPP5A, INPP5B, ITPK1, LAMC3, LI FR, MAML3, MAP3K7, MCM7, MGAM, MGAT4A, MYL2, NAGLU, NFKBIB, NFYB, NRG 1, OR3A2, OR4D2, OR5A2, OR5M3, OR6C4, PDE2A, PDE7A, PDK1, PIGX, PIP4K 2A, PLA2G2D, PNLIP, POLD1, PPM1D, PYGB, QARS, SNAP25, SULT1E1, TAS1R 1, TLR3, TPMT, TSNARE1, TUBA3C, WNT10B, XYLT2, B3GALNT1
Negative_12261	F5, F7, GNS, PAH, ACAT2, ACMSD, ACSS2, ACTA2, AGPAT6, ALG12, ALG5, ARH GEF1, ATP13A2, B3GALT2, BIRC2, BIRC3, BMP6, BNIP1, CAMK2B, CASP10, C CL11, CCL28, CCR5, CDC2, CHSY3, CREB3L4, CXCL5, CXXC4, CYP11B1, CYP2 E1, DAXX, DDX52, DTYMK, E2F1, ENTPD6, ETNK2, GALNT8, GMPPA, GOSR2, GU CY2C, HIP1, IARS, IBSP, IL19, INHBE, MAT1A, MGAT5, MOV10L1, NEU2, NFA SC, NLGN1, OR1M1, OR2A4, OR2T11, OR2T4, OR4K5, OR52B6, OR7A5, OXSM, P ANK1, PANK3, PDE6G, PFKFB2, PIAS2, PIP5K3, PLOD1, PLXNA3, PRPS1, PTP RM, RALB, SARS2, SCP2, SEMA4C, STAT5A, STAT6, SUCLA2, SUFU, TBL1Y, TP K1, UGCGL1, UGT2A1, UNC5D, MAP3K7IP1, ST6GALNAC1, TNFRSF14
Negative_12262	ASL, CRK, KDR, KHK, NPL, ZYX, ACACB, ACSS1, ACVR1B, ALDOA, ALG8, ARSD, AVPR1A, B4GALT5, BDKRB2, BET1, CACNA1D, CDC27, COL5A3, CPT1A, CXCR6 , CYP3A7, DCTN1, DDX4, DIAPH2, DUSP6, FZD10, GLI1, GLUD2, GPD1, HLA- F, HTR2C, IL22, KLKB1, LIPC, MAP3K13, MGAT2, MGAT5B, MYD88, NARS, NCK AP1, OR10A7, OR1E1, OR1L1, OR2L2, OR4K15, OR4X1, OR52J3, OR6K6, PER1 , PFKFB2, PIGO, PITX2, PLCB2, PRKARIA, PRKAR2B, PTPRM, RASGRF1, RFXA NK, SEMA3A, SOX17, SYNJ1, TKTL1, TYMP, UGT2B10, VDAC2, WHSC1, HSD17B 12, ST6GALNAC1
Negative_12263	C8G, CR1, HAL, HK3, LPL, LTB, SPN, AKR1C2, ALG6, ALOX15B, ALS2, ANAPC1 0, APOA1, C5AR1, C7orf16, CADM1, CASP6, CCNA2, CHAD, CLDN9, CNTN1, CR EB3L3, CSF2RB, DMGDH, EIF4E2, ENPP1, ENPP6, ENTPD2, EPB41L2, EPHA2, EPHA6, FGF11, FGFR1, FM03, FPGS, GAB1, GALK1, GGT6, GNG13, HMGCR, HSD 17B8, IFNA2, IL20, INSR, KCNQ1, LDHB, MAP3K14, MAPT, MCM7, MGST2, MYH 6, MYLK, NCR1, NFATC4, NT5M, OR10G7, OR10V1, OR14A16, OR2AG2, OR2T34 , OR52K1, OR52K2, OR5K1, OR5K2, OR9Q1, PAPSS2, PDE6G, PDE9A, PFN1, PI GO, PLA2G1B, PLA2G3, PNPT1, POLR2E, RERE, RRAS2, SAT1, SEMA3B, SH2D2 A, SKP1, ST8SIA1, SUCLG2, SULT2A1, TAS2R5, TIAM1, TKTL1, TPI1, UPP2, WNT5A, PHOSPHO1
Negative_12264	GP9, PC, ABLIM1, ADH7, AGPAT1, ALDH9A1, AMD1, ARG1, ATP5L, BCAR1, BDK RB1, BMP5, BUB1, CACNB3, CACNG8, CAV3, CDC7, CDK4, CHAD, CXCL13, CYP1 7A1, CYP2A6, CYP2S1, DDX4, DIAPH3, DPYSL2, EPB41L1, EPHA7, F11R, FAR SB, FBP1, FGF9, GALNS, GDE1, GFAP, GP1BB, GPD1, GSTM4, HAGH, HBEGF, HG SNAT, HLA-C, HLA- F, HNF4A, IGF1R, IL21R, IL23R, IL2RA, IQGAP2, LCMT2, LILRB3, MAGI1, M APK13, NME6, NR1H3, NRG1, NTF4, OR10H2, OR1C1, OR2M5, OR4D2, OR4D9, O R5B3, OR5T1, OR5T3, OR8U1, PDXP, PFN2, PGAP1, PGLS, PI4KA, PI4KB, PIG U, PIK3C2A, PIK3R1, PLXNA1, PNPO, POLR1E, PPP2R2D, PPP2R5E, PSEN2, R ASGRF1, RBPJ, SELE, SEMA3B, SHC2, SHISA5, SLC25A6, SMAD3, SMARCA2, V AV2, VEGFB, WBSR17, XYLT1, YOD1, ZAP70, ATP6V1E1, TNFRSF1B

Negative_12265	EPO, FGG, FYN, HK1, ID4, RET, TKT, ACOT11, ACSS2, ARAF, ATP50, AVPR1B, B3GALT6, B4GALT3, B4GALT4, CACNA1S, CALML5, CAMKK1, CARD11, CCNE2, CD27, CDH2, COL1A2, CSF3R, CX3CL1, CXCL11, CYSLTR2, DGKI, DPM3, FGF12, GALNT10, GBA3, GNAI2, GUSB, HDAC2, HTR6, ICOS, IL20, KAT2B, LARS2, LRAT, MAN1C1, MGLL, NFKB2, OR1B1, OR2B6, OR2D3, OR2L8, OR4P4, OR52R1, OR7G1, OXCT2, OXTR, PIK3C3, PIK3R5, PLD1, POLR2L, PRKCB, PTGS1, RARA, SEMA3E, SHC4, SOD1, STX4, TACR3, TNFSF11, TRAF4, TUBB6, UBA1, UCGGL1, WNT4, ZBTB16, ATP6V1C2, CACNA2D1, ST6GALNAC3
Negative_12266	BCR, AARS, ACTG2, ADCY2, ARG2, ARPC5, ATP5E, BCKDHB, CCL3, CCR2, CD19, CD226, CDC7, CDKN1B, CISH, COX10, CSF2RA, CSNK1G1, CYBA, DCTD, DGKZ, DHODH, DTX1, DTX2, EIF4E2, ENTPD7, ERBB2, FOXA3, GAPDH, GGT1, GSTZ1, GYS2, HAO2, HCLS1, HRAS, HSPA1B, HYAL1, IARS2, IFNB1, IL17RA, INPP1, ITPKA, LCMT2, LILRB3, LTC4S, LYZL1, MALT1, MAPK12, MAPK13, MAPK8, MYD88, MYH10, NEU1, NFKBIB, NSD1, OR11H4, OR2T29, OR4K5, OR52J3, OR6C75, OR6F1, OR8G1, OR9A2, OSMR, P4HA1, PDIA4, PIK3CA, PLA1A, POLR1D, P OLR2I, PPP1R3A, PPP2R1B, PTDSS2, RARS2, RDH5, RRM2, SDHB, SELE, SMAD5, STX8, SULT1A1, TNFRSF4, TSHB, UAP1, UGCGL1, WNT5A, XYLT2, ZFYVE16, CACNA2D3, HSP90AA1
Negative_12267	GNE, HK3, KIT, AADAC, AASS, ACOT12, AKR1C3, ALDOA, ATP12A, ATP5F1, ATP5H, BBC3, BCKDHA, BDH1, BDKRB1, BLVRA, BMP8B, CLCA2, CLDN22, CXCR6, DTX3, ENO2, EPB41, F13A1, FGD1, FGF23, GOT1, GRIA2, H6PD, HADH, HLA-C, HMOX1, HSD17B4, IL15RA, IL23A, IQGAP2, ITGA6, KIR2DL4, LDHAL6A, LMO7, MAP3K11, MKNK2, MMP14, MYH6, NANP, OR10R2, OR11A1, OR13D1, OR2C3, OR51A4, OR52E8, OR5M8, OR6C76, PAK2, PDE4D, PIK3CA, PSEN2, RAPGEF4, RBPJL, ST3GAL3, STX4, TNFSF18, TOMM40L, TYK2, UBA1, UMPS, ST6GALNAC5
Negative_12268	DCN, LPL, AK3L1, ALG6, ARNT, ARPC5L, ASNS, C4BPA, CBR3, CCNE1, CD8B, CDC25B, CDK7, CES2, COL5A3, CSF3, CXCL12, CYBA, DDX56, DNMT1, EGLN1, E HMT2, ERBB3, FZD2, GATM, GPX5, HBEGF, HES1, IFNA6, IFNGR2, IGF1R, IL13RA2, IL1R1, IL28RA, IRAK4, LARS2, LDHAL6A, NEFH, NEFL, NFATC1, NOX1, NTRK2, OR4C11, OR5D18, PDE3A, PFKP, PTCH2, SETD1A, SMPD4, SUCLG1, T AS2R38, TAS2R42, TIAM1, TNFSF14, TOLLIP, UGDH, UROS, WNT5A, XYLB
Negative_12269	CR1, SCD, ACADM, ATP12A, ATP2A1, BPGM, CD22, CDC27, CNTNAP1, DGKZ, EP HB6, EXT2, FIGF, GALNTL2, GANAB, GBA3, GLUD1, GRHPR, HSD17B7, IL22RA2, IL7R, JAM3, LLGL2, LPAR1, MAP3K8, MDM4, MGAT4A, NOTCH2, NSD1, OR12D3, OR2H1, OR51D1, OR5M8, OR6S1, PCYT1B, PIGW, PIGX, PKM2, POLA1, PPP1CC, PRKX, RRM2B, SAT2, SCP2, TAS2R41, UNC5C, CSNK1A1L, HLA-DQA2, HSD17B10, TNFRSF10C
Negative_12270	ABO, ADK, EZR, F12, F7, IHH, JUN, MAX, SHH, AASDH, ACSS2, ACTB, ADCY8, ADH7, ADIPOR1, AHCYL2, APLP1, ARNTL, ASAH1, ATP6V1H, B3GAT3, CACNA1G, CD27, CD46, CHR1, CHST11, COL2A1, CXCL6, DCXR, DDX18, DDX52, EFN1, EP300, FOXO3, FTCD, GALNT13, GBE1, GRIA2, GSTM4, GUCY1A3, HADHA, HIP1, HLA-DMA, HNF1A, IFNA5, IQGAP1, ITCH, ITGA4, LALBA, MAGI3, MAP2K3, MAP3K12, MCM5, MYH11, NARS, NFKB1, NNMT, NTN1, OR11H6, OR13H1, OR1S1, OR51D1, OR5AU1, OR5I1, OR6S1, OR8D1, PAK3, PCYT1A, PGLS, PIAS4, PIGL, PIK3R4, PLA2G10, POLE4, POLR3H, ROBO1, RPS6KA6, SEMA3E, SEPHS1, SHC2, SKIV2L2, SMAD4, STX10, SUOX, TALDO1, TJP2, UBE2K, UCK1, UROS, ATP6VOE1, CSNK1A1L, TNFRSF1B



Negative_12271	ATM, EPO, FST, GBA, GLS, ILK, LPO, MPL, RET, TKT, UBB, ARG2, ARHGEF6, ATP2A1, ATP6AP1, BMP5, C4BPB, CCNB1, CCNB3, CD58, CHST11, CHST12, CHUK, CTPS, CYP26B1, DHCR24, DKK2, DRD2, DTX4, DVL2, EVI1, FARSB, FSHB, GADD45A, GALNT10, GALNT8, GANAB, GCLM, GGPS1, GRM1, HMOX1, HSP90B1, IDH3A, IFNGR2, INMT, INPP4B, ITCH, KIR2DS5, LAP3, LDHA, MAML2, MAPK8, MPDZ, MTHFD1, MTHFS, NEFH, NFASC, NKD2, NR1D1, OR10J3, OR13G1, OR4F5, OR51A2, OR51V1, OR5T1, OR8G1, PDCD1, PDE3A, PDHA2, PIGV, PIM1, PLXNB1, PNPLA3, PRKAR1B, PRKCB, PTCRA, PTPN7, RAF1, RASGRP1, RDH10, RETSAT, RHOQ, SKIV2L2, SLC12A2, SOCS1, TAS2R50, TLR5, ZIC2, ATP6V1C2, MAPK8IP3
Negative_12272	GNS, LCT, MTR, TK1, AANAT, ACVR1B, ASNS, B3GALT6, CD48, CDKN2B, CEBPA, CLDN4, CLTB, DDX41, DHX58, DUSP14, ECSIT, EDNRA, EPHA8, FABP3, GCNT3, HSD11B1, IFNG, IL13, IL17RB, IL8RB, INPP4A, IRAK2, ITGB5, ITGB7, KIR2DL4, LARS, MAP2K3, MAT1A, MDM2, MYL7, NKX2-2, NOTCH2, OR1N2, OR2T34, OR51E2, OR51S1, OR52K2, OR5D13, OR5H6, OR6N1, OR8B12, OR8I2, PDE4A, PDE4B, PGAM1, POLR2B, PPP1R3B, PPP2R5B, PPP3R1, PRKG1, PTK2B, PTTG1, RAPGEF1, SARS, SEMA4G, SLC27A5, SPHK1, STX3, TAS2R7, TGFBR2, THPA, TJP3, TSTA3
Negative_12273	CBL, LCT, ADCY7, ADH1B, ADIPOR2, ALDH7A1, ALG10B, ATP5A1, ATP5B, ATP5D, BIRC2, CCL25, CCL7, CCNA1, CHIA, DGKZ, DKK1, DUSP2, DUSP4, EPB41L1, FARP2, FARSB, FGF10, FGF21, FTH1, FUT6, GALNT14, GAMT, GLI1, HADHA, HAGHL, KCNQ1, MCM3, MCM7, NEFL, OR1J4, OR1Q1, OR2C3, OR4K15, PDE5A, PLA2G6, PMVK, POLR1B, POLR1D, POLR2B, POLR2E, PPA2, PTGFR, PTPRR, SOCS5, SRD5A2, UGT2B17, ULBP3, UXS1, WNT2B, WNT9B
Negative_12274	GPT, LSS, OGT, TNC, AGXT, ALDH1B1, AMDHD1, BCKDHA, CACNA1A, CCL24, CNTFR, CSDA, CTBP1, CUL1, CXCL6, CYP26A1, DARS, DCTD, ENTPD4, EPOR, FARSA, FGF10, FGF7, GNMT, IFNA4, IGFBP3, IMPA2, KIR3DL2, MAP4K1, MCM2, MMP1, NADSYN1, NODAL, NOTCH1, OR1F1, OR2A42, OR2M5, OR2T3, OR4K1, OR52R1, PDIA4, PIGF, PIGH, PITX2, PLCG1, POLR2G, PPP2R2B, PTGDS, RALB, RASGRP1, SETDB1, SKIV2L2, SRGAP3, STX5, TIAM2, TM7SF2, TNFSF11, TNFSF12, WNT4, CACNA2D4, EIF4EBP1
Negative_12275	DBT, F11, ACOX3, ALDH4A1, ALDOB, AMD1, ASCC3, ASS1, CD79A, CHUK, CYP2C18, CYP4F2, ESPL1, FASLG, FCGR3A, GALNT6, GANC, GRAP2, HDAC2, IL6ST, IQGAP1, ITGB5, ITGB6, LCAT, MTHFD2, MYH10, NCF1, NCKAP1L, OR5B3, OR5T3, OR6C70, OR7C2, OR8H1, PIK3R4, PLCB3, PLXNA3, PRKAA2, PTCRA, PTPN11, RELB, RFXAP, SEMA7A, SLC33A1, SPCS1, SRGAP1, TAS1R3, TUBB4Q, UB E2K, UGP2, VDAC1, WHSC1, WWP1
Negative_12276	C6, CR2, CS, F2R, GNE, KIT, LPO, MET, MPL, MPZ, ACP6, ADCY7, ADRB3, ALPI, ARHGEF4, ARRB2, ATP5A1, CACNA1I, CACNG4, CADM1, CD46, CDC6, CES7, CSF2RA, CXCR3, DGKA, DRD2, ENPP3, FGF12, FZD8, FZD9, GFPT2, GNPAT1, GRLF1, HNF4A, HNF4G, HPSE, IDH1, IL10RB, IMPA2, INHBC, LRDD, MLYCD, MNX1, NCR3, NFE2L2, NME6, NPR1, NT5M, NUDT9, OR1I1, OR2V2, OR51E1, OR51F2, OR51Q1, OR56A4, OR8B12, OXCT1, P2RX1, PHPT1, PLA2G6, PNPLA4, PPARA, PTDSS1, PTPRB, PVRL4, RALB, RELA, ROBO1, RPIA, SCD5, SNAP23, SORBS1, SPRY1, STX8, TAS2R42, TJP2, TPMT, TYK2, UGT2B4, MAP3K7IP2, SERPINA1, TNFRSF10B
Negative_12277	CTH, IL7, AADAT, ACOT11, ACTA1, ACTG2, ALDH3B1, AMHR2, B3GAT3, BAIAP2, BET1L, CCL2, CHKA, CLCA2, CNTFR, COL5A3, CTTN, CYP26C1, DHCR7, EPHB6, FGD1, FRAP1, FUT7, GFPT1, GNAQ, GSTA2, JAG1, KIR3DL1, MRAS, MTHFS, MYH7, NCOA4, NFKB2, NTRK2, ONECUT1, OR1M1, OR4D2, OR4M1, OR8S1, PDE1B, PFKFB3, PRKAR1A, PYGB, SAT2, SLC25A4, SLC27A4, SOS2, ST8SIA5, STX18, TGFA, TGFB3, TLR3, VKORC1, MAPK8IP1, MAPK8IP2, PHOSPHO1

Negative_12278	<p>BTC, FES, NLK, SRF, AANAT, ACOT11, ACSM1, ACTA2, ACTC1, ACYP1, ADH6, ALDH3A2, APRT, ATP5G3, ATP6AP1, CCNE1, CDK4, CHR1, CNTFR, CTPS, CYP11B1, CYP1B1, DAD1, DBF4, EPB41, FLT1, GNA11, GNAZ, GPD1L, GUCY1A2, GUCY2F, HLA-</p> <p>DOB, HSPA8, IARS2, IL2RB, ITGAX, KIR2DL1, KIR3DL3, KLRC2, KLRC4, LDHD, MAP3K6, MAP4K3, MLLT4, MYH15, MYH2, NFAT5, NSD1, NTSR1, OR11H4, OR2H1, OR2T2, OR52B6, OR5D16, OR5M8, OR5T2, OR7A10, PDE4A, PGM2, PHPT1, PKLR, PNPLA3, POLR3K, PPP1CB, RERE, RFNG, RPS6KB2, SELL, SEMA4B, SKIV2L2, SMAD1, SPAM1, STAT5B, TNFRSF8, VCAM1, VEGFB, YARS2, CSGALNACT1, SERPINC1</p>
Negative_12279	<p>DDO, F2, IL8, MUT, SMS, TNC, AASS, ACAD9, ACYP2, ADCY4, AHCYL2, ALDH3A2, B3GNT2, BCKDHA, BMP6, CDC27, CMPK1, COL1A2, CSNK1G1, ENTPD1, EXTL2, GALNT11, GDF5, GNA15, HNF4G, IFNB1, ITGA11, ITGA2, KAT2B, KIR2DS5, MAP3K1, NAT5, NOTCH3, OR13G1, OR2AG1, OR51E1, OR52L1, OR8J3, PAK4, PDE4C, PLAU, PPM1B, PPP1CB, PPP2R2D, PTTG1, RASA1, RASSF1, RBL2, SHMT2, STT3B, TGFBR1, THBS2, TM7SF2, TNFSF14, WARS, WNT5B, PLA2G12A</p>
Negative_12280	<p>AK1, HAL, MPL, OSM, ACSS2, AKT2, ALAD, ALDH1A3, APOA5, B3GALT6, BCL2, BET1, CDH15, CHKB, CHST12, COL5A3, CYBA, DAG1, DDX18, DHX58, EDA2R, ENTDP8, EPHB1, FARS2, FCGR3A, FGF4, FIGF, FLT1, FZD6, GFAP, GNB3, GRIA1, GUCA1B, HAGHL, HCST, HLA-</p> <p>DRA, HSD11B1, HSP90B1, IKBKB, IL28A, INHBC, ITPKA, NEFM, NKX2-2, OR10A3, OR1G1, OR2T1, OR2T33, OR56B4, OR5K1, OR6Q1, OR7G1, PCCB, PDXK, PIP5K3, PPP1R3B, PRKAR2A, PSAT1, PTCRA, RAPGEF4, RHOA, RPRM, SPRY2, TNFRSF4, TUBA3C, ULBP1, TNFSF13B</p>
Negative_12281	<p>ADA, C8A, CTH, DLD, FN1, FYN, GLS, LHB, ME3, NPL, STS, AADAC, AANAT, ACY1, ADCY6, ADCY7, AKR1C2, ANAPC11, BCKDHA, C1QB, CASP10, CASP3, CASP6, CCL25, CDH1, CHAT, CHIA, CHKA, CNTNAP2, DDX47, DGKD, DLL3, DUSP14, EHHADH, EHMT2, EPHA4, F2RL2, GLUL, GNB3, GOSR2, GRIN2A, HTR2A, IL10RA, IL17RA, IL17RB, IL28B, INPP4A, IPMK, LPAR1, MAPK11, MASP1, MAT2B, MCM6, MTAP, NFE2L2, NOX3, OCRL, OR2AT4, OR2D3, OR2Y1, OR4C13, OR5D18, OR5R1, OR6B2, OR8B8, ORC3L, PARVG, PCYT1B, PDE2A, PIP4K2C, POLR3K, POMC, PRKCQ, RBX1, RDH12, RUNX1, SCIN, SEMA4G, STX18, SV2A, TAS2R3, TGF3, TJP2, TSHR, TUBA3E, VTI1B, WNT8A</p>
Negative_12282	<p>CAD, UBC, AMY2A, ANPEP, ATP5H, ATP6V1A, BMP5, BRAF, CACNA1G, CACNG8, CCNA2, CLCA2, CNTNAP2, CRHR1, DDOST, DEGS2, FLOT1, FM04, FOXA3, GRIN2D, GSTA2, GSTK1, HEXA, HSD17B8, IFNA21, IFNGR1, IL5RA, ITGAL, JAK2, JAM3, LAMA4, MAP3K14, MASP2, MCCC2, NFKB1, NRXN2, OR10C1, OR1A1, OR2T2, OR51A2, OR52E8, OR52N5, PDX1, PIGT, PIK3R3, PKM2, PLA2G2E, PPAP2A, PTPRF, RASGRF2, RPRM, RXRB, SDHD, STX1A, SULT1A2, TRAF3, TUBB2A, UROS, VTI1B, WNT8B, YWHAH, ZAP70</p>
Negative_12283	<p>AGK, IL6, RDX, TNC, VTN, ALG5, ARHGEF7, ASRGL1, ATG7, B3GAT3, BACE1, BCAT2, C4BPB, CCL15, CCL25, CFL1, CHST11, COL4A2, EFNB2, GAB1, GALC, GALNT12, GNG12, GUCY1A2, HBEGF, IDH2, IL11, IL20RB, IRAK2, MGLL, MNX1, NAMPT, NT5C, OR1Q1, OR2T11, OR3A3, OR4K1, OR51G2, OR5T1, P4HA2, PDE3B, PER1, PKMYT1, POLR2A, PPA1, PVRL2, RPE65, TSC1, UCK1, WARS2, YWHA G</p>
Negative_12284	<p>ADK, C8G, F2, FST, ILK, LAT, TEC, AGRN, APLP1, AQP7, ARNT, ATP13A2, CAV3, CCL23, CCNG1, CDC45L, CTSS, CYP2B6, DDX56, DUSP3, E2F2, EXTL2, FAP3, FDPS, GALNT11, GATM, GCDH, GNAT3, GNPDA2, HDAC2, HLCS, HTR4, IDH3G, KLRK1, MCAT, MFNG, MMP9, NEFH, NFKB2, NLGN3, OR2F1, OR2M2, OR2T3, OR52R1, PIGC, PLA2G2F, POLR1D, PPP3R1, PRKAR2A, PVRL3, RHOD, SENP2, SESN1, TNFSF18, WNT4, XCL1</p>

Negative_12285	DBH, IL4, IL5, LCT, LHB, PLN, ACOT12, ACSM1, AKR1C4, AKR1D1, ARAF, ARG1, BET1L, C1GALT1, CACNB3, CCL21, CHPT1, CREB5, CTSL1, CYP1A1, CYP8B1, DBF4, DEGS1, DFFA, DKK1, DOLPP1, DUSP10, EPHB2, ESAM, ETNK2, FBXW11, FGF23, FLT3LG, FPGT, FSHR, GALNTL2, GRLF1, HGSNAT, HMGCS1, IFNA6, IL18RAP, LIAS, MAP2K1, NCK2, NCR2, NEFH, NME2, NME6, NTRK2, OR10P1, OR1J1, OR51T1, OR5R1, PARD6A, PDE6H, PFAS, PFN3, PLA2G1B, PLA2G2A, PLD2, POLR2K, POLR3H, PON3, PRKG2, PRSS2, PSME3, PTPN1, RAC1, RDH11, SDC3, SEMA4C, SLC27A1, SMAD3, SMURF2, SRD5A1, STK11, SV2C, TNFSF4, TOLLIP, TUBB4, XYLT1, ZMAT3, ATP6V0E1, C1GALT1C1, MAPKAPK5, SERPINE1, SUV420H1, TNFRSF10C
Negative_12286	AK5, CSK, F5, IL8, IL9, LPO, MUT, SFN, UBC, ACSS1, ACTN2, ADCY7, AMPD1, ARPC1A, ASNS, ATP5A1, ATP5L, CCL21, CCR3, CD27, CDC6, CDS1, CSAD, CSDA, CYP11B2, DDX18, DGKQ, DUSP2, ENPP7, F11R, FOXO1, FTCD, GANC, GCNT3, GNAS, GNAT3, GNG3, GOT1, GSTO1, IL6R, ISYNA1, KIR3DL2, LALBA, LIPT1, LRP5, LYPLA1, MAFA, MAN2A1, MLLT4, MYH7B, NFKB2, NPR2, NSDHL, NTF3, ODC1, OR13C5, OR1L6, OR51F1, OR51F2, OR51G1, OR51I1, OR52M1, OR56A3, OR5M3, OR6N1, OR6Y1, OR8K5, PCYT1A, PMM2, PMVK, PON1, PPAP2A, PPP1R1A, PPP3R1, PRKCQ, RAF1, RBL1, RPRM, SARS, SELL, SEMA4G, SETMAR, SLC2A1, SLC2A4, SMAD1, TBL1XR1, TCF7, TKTL1, TLR9, TSHR, TUBB2A, TYRP1, UAP1, UGT2A3, UPB1, WARS, PRICKLE1, TNFSF13B
Negative_12287	CR1, F2, F8, PTS, ACOX2, ACTN1, ADIPOQ, ARRB2, BCAT1, BIRC3, CD86, CDC26, CHPT1, CRKL, CSDA, CUL1, CYFIP2, CYP26B1, CYP7A1, DAPK1, DDX4, DPYS, ENTPD3, FLAD1, GCNT1, GPD2, GRIN2D, GZMA, IFNA7, ITGA5, KIR3DL3, MAP3K5, MAP3K8, MYH9, NOTCH3, OR4C16, OR51L1, OR52E6, OR52M1, OR7A10, PDE10A, PDHA1, PDXK, PLAT, PPP3R2, PPP5C, PTPN5, SFRP4, SMC1A, SOCS5, TGFA, TKTL2, TRAF6, TRDMT1, TUBA3C, ATP6V1B1, TNFRSF6B
Negative_12288	A2M, FUK, FYN, HK3, IL8, LSS, RET, ACADVL, AKR1C1, AMDHD1, AMPD2, AREG, CACNG3, CBR1, CDC23, CHEK2, CLDN17, COL5A2, CREB3L3, CSF2, CYP11B1, DAAM1, DLST, EFNA2, ENTPD3, FCGR3A, FGFR1, FSHR, GDF6, GUCY2F, GZMA, HTR7, IL20RA, IL21, IL23A, KCNQ1, LEPR, MAP3K6, MLYCD, NAT2, OR1F1, OR1J4, OR2M5, OR4D1, OR52K2, OR56A4, OR6T1, PIK3C2B, PLD2, PTGER1, RAS2, RRM2, SARS, SGPP2, SLIT2, SNAI1, SOCS5, SPRED2, SUOX, TRAF1, TRAF2, VANGL1, VANGL2, YOD1, ATP6VOA2, HLA-DQA2, HLA-DRB4, PLA2G12B, SERPINF2, TNFRSF10D
Negative_12289	C8B, CDA, GLA, IVD, MAG, NPY, ADSL, ALDH1B1, CCL28, CCR3, CCR4, CD8A, CDC25C, CDH5, CLDN1, CLDN9, CMPK2, COL4A4, CRY2, CSAD, CYP2F1, CYSLTR2, DCXR, DDX51, DUSP5, ECSIT, EPHA7, EPHB4, EXOC7, FBP2, FRAT1, GALNTL2, GAS1, GNAS, GRM1, ICAM1, IKBKE, IL13RA2, IL2RG, IL9R, ITGA8, JUND, KIR2DS4, NCAM1, NCK1, NKD1, NRG2, NRG3, NRG4, NTRK2, OR10H5, OR10Z1, OR2M3, OR2T29, OR2Z1, OR6C74, OR6S1, OR9A2, PGAM4, PGK2, PLA2G2E, PLOD3, PMAIP1, PTGER1, PTPRJ, RPIA, RPS6KA1, RPS6KA5, SLC27A1, SLIT1, SOAT2, TJP2, TLR9, TRAF3, TRAF5, TYMS, UGDH, VAMP3, WNT10B, YARS, ATP6VOA2, C1GALT1C1, HSD17B10, TNFRSF11B
Negative_12290	CR2, EZR, F9, FH, ID3, IL9, LPO, MOS, MPL, MUT, PXN, SHH, ABLIM2, ANAPC2, ATP4A, ATP6V1D, BMPR1A, CAMKK1, CASK, CLDN9, CREBBP, CTSL1, DAPK3, DDX47, EGLN1, ERBB3, FARSA, FGF7, FTCD, GALNT2, GIT1, GNA15, HNMT, IL12RB2, IL25, IPMK, ISYNA1, KAT2A, LAMA3, LILRB3, NEU3, NOS1, OR4M1, OR51B4, OR52K1, OR52N1, OR5M8, OR5T2, OR6C3, OR6F1, P4HA1, PAICS, PFN2, PGAM1, PIP5K1B, PLK1, PLXNA1, PPARA, PPP1CB, PTEN, PTPN1, RASGRP2, SIPA1, SOCS5, SSH3, SULT1A4, TAS2R40, TGFB3, TLR9, TOMM40, TUBB6, UGT2B17, WNT7B

Negative_12291	DAO, KHK, MAG, TPO, ZYX, ACAT1, ACPP, AGXT2, ALDH3A2, ANAPC10, ATP5I, C1QA, CD19, CD74, CDC16, CSNK2A1, DHDH, DPM3, DUSP14, EFNA4, FMO5, IFNA4, LGL2, MASP2, MCM3, MTAP, MYL9, OR10G2, OR13C3, OR13J1, OR14J1, OR4C12, OR51B6, OR6C3, ORC2L, PIAS4, PLAU, PNMT, POLR2A, RAPGEF1, RARS2, RASGRP3, SELPLG, STK11, STX12, TBL1XR1, TGFB1, TKTL2, WNT6, WNT8B, YOD1, YWHAZ, ZIC2
Negative_12292	BID, C1S, ME3, TPR, ACOT11, ACTG1, ACVR2B, ADH5, ALDH3B1, ARNT2, BCL2L1, CCL15, CDK5, CDKN1A, CXCL9, CYP2E1, DOLPP1, EFNA5, EGFR, ELK1, EPHA4, EPHA7, H6PD, HEXB, HSD3B7, IL28RA, ITGB8, JAK1, MARS2, MTHFR, MYL2, NRAS, OR2C3, OR52K2, OR6T1, OR8K1, OR9I1, P2RX1, PDE1C, PDX1, PLA2G2F, POLR2F, POLR3D, PPP2R5E, PRKY, PRODH2, RPS6KA3, RRAS, SESN3, SLC27A4, STX12, TGFB3, ATP6V1G2
Negative_12293	AK3, CKB, F3, IL6, ACP1, ALG10, ALOX12B, AMPD3, AOC3, ATP5D, B4GALT5, CADM1, CASP6, CCL22, CCNB2, CD14, CERK, CLDN18, COL2A1, CREB1, CSNK2A2, CTPS, CYP2F1, DLL3, DUSP4, EPHB4, FUT2, GALNTL1, GALNTL2, GALT, GT1, GNRH1, HARS2, IDI2, INHBB, INPP5B, KIR2DS4, MAP2K1, MAP3K12, MIOX, NCR2, NRP1, OLAH, OR10H2, OR1A1, OR1J2, OR52L1, OR5C1, OR5L2, OR7G3, PAICS, PIP4K2C, PIP5K3, PLCB2, PLCD3, PON1, PRKX, RARS2, RBPJL, RFXAP, RHOA, ROBO3, SARS2, SEMA4C, SH2D1A, SOS1, STEAP3, TAS2R41, TAS2R42, VAMP2, WASF1, ZFYVE9, HLA-DRB5, PNLIPRP2, TNFSF13B
Negative_12294	A2M, GNS, IL8, MET, PGF, SMO, TXK, ACMSD, ACPP, ATP2A3, ATP6V1A, CASK, CCR9, CD44, CD8B, CHST13, COL5A1, CXCR4, CYP2S1, DRD1, EDNRB, ENTPD8, EPB41L1, FLT4, FMO1, FPGS, FUT7, GALNT9, GDE1, HAGH, IL4R, IL6R, IL7R, IL8RB, IQGAP2, ITPK1, LAMB4, LCMT1, MGAT3, NPAS2, NT5C1A, OR10H3, OR2G2, OR2T6, OR4S2, OR51G2, OR52E4, OR5AC2, OR5AN1, OR7D4, OR8I2, PARVG, PCCA, PIAS4, PIGA, POLD4, POLR1A, PRKAG2, PRNP, PRPS1, PTK2B, PTPRC, PYGB, RAP1B, RASGRP3, ROBO3, RPS6, RRM2, SEMA3C, SEMA4B, SEMA4C, SMAD4, SQLE, STX18, SUFU, SULT1A4, TPM3, WNT3A, XYLT1, YOD1, YWHAH, PPARGC1A, TNFRSF12A
Negative_12295	CAD, CRK, GPI, MAX, TK1, TK2, B3GNT4, B4GALT6, BMP5, CCL11, CCL22, CLDN5, CLTC, CMBL, CREB3L2, CXCL5, CYP26A1, ENTPD6, FABP3, FASN, GALNT11, GALNT6, GMDS, GRHPR, HSD17B8, IDH2, IFNA21, IRAK2, ISYNA1, KAT2A, KYNU, MASP1, MTR2, MYH13, NFX1, NRCAM, OR2B2, OR51F1, OR5H2, OR6C74, OSMR, PDE3B, PGM2, PHKB, PIAS2, PLA2G4A, PLXNA3, PTGDS, RHEB, ROCK1, SELE, SEMA4A, SETDB2, SGPP1, STMN1, TAS2R10, THBS1, TRADD, UBA1, WNT16, YOD1, PAFAH1B3
Negative_12296	ADA, ADK, C8G, CRK, F11, F3, HPD, ME3, PLN, A4GALT, ACADSB, ADCY8, AGMAT, AKR1C3, ALDH1L1, ARNT, ARPC2, ARPC5L, BMP4, BUB1, CACNA1A, CACNA1D, CCDC6, CCL1, CD226, CDC25A, CPT1A, CSF1, CYP11A1, DEGS1, EPHB3, FCGR3B, FGF9, GAD1, GFPT1, GFPT2, GJA1, GPX5, GZMA, HDAC2, HLA-C, HNF1A, HSD3B7, HTR2A, IARS, IDUA, IMPDH2, INPP1, KLRC2, LIMK2, LPAR1, MAP2K2, MAPT, MCCC1, MCM3, MGAT3, MLYCD, MYH14, NAGLU, NEGR1, NEU2, OR10AG1, OR10G3, OR4D11, OR52N1, OR52N5, OR8H1, OXCT2, P2RX7, P4HA1, PARVA, PER2, PFKFB3, PHPT1, PIGX, PLXNA2, PMVK, POLR1C, POLR3K, PON3, PPP1CB, PSME2, RALBP1, RASGRP4, SEMA4B, SLC25A5, SMURF1, SNAP23, SOAT2, SOS1, STAT5B, UGT1A10, PAFAH1B2, TNFRSF10C
Negative_12297	DCC, DDC, LCK, SMO, SPN, AARS, ACO2, ACP5, ACSS1, ADH5, AGRP, APOA1, APRT, ASIP, ASMT, ATP5L, ATP6V1F, BLVRA, CAMK2A, CAV1, CD8B, CDC7, CKS1B, COX15, CYP2C19, CYP7A1, DERL1, DFFB, DVL2, EFNA4, EHMT2, FECH, FOXA2, GALNT7, GCDH, IL11RA, IL8RB, ITGB2, KDSR, KLRK1, LAMB1, LDHAL6B, LILRB3, MAN1C1, MGAT3, MTHFD1L, MYL5, NME2, OR1D2, OR2AT4, OR4P4, OR56A3, PARVB, PFKL, PMAIP1, PPM1D, PRKCQ, PYCRL, SPRY2, STAM, TDO2, TLR4, TRDMT1, VEGFB, WIF1, ATP6VOD1, CACNA2D4, HLA-DRB3

Negative_12298	CP, CS, FN1, PVR, ACSM1, ADCY9, AFMID, ARHGEF2, ASCC3, B3GALT2, B3GALT4, BHMT, CACNA1A, CACNG8, CAMKK2, CCL26, CDK6, CHAT, CLCA4, CREB3, CRY2, CYP3A43, DLL3, DUSP6, ECSIT, ENO3, ENPP1, ENTPD5, EPB41, EPHX2, ETNK1, FLT3LG, FUT4, GANC, GJA1, GLUD1, HAAO, IL18R1, IL2RB, IPMK, IRAK2, KAT2A, KRAS, MAML2, MAPK1, MMP14, NAMPT, NARS, NOX1, NR1H3, NRXN1, OR10H2, OR2A4, OR4C16, OR8H2, OR8H3, OR8I2, PDE8A, PDGFB, PDGFD, PFA, PGLS, POLA2, POLD2, POLR2A, PPAR, PPP2R2A, PVRL2, RAF1, RARA, RASSF5, RDH5, RGS3, SETD7, SHC4, SLC2A4, SNAP23, SULT2A1, TAS2R1, TAS2R38, TSHR, CSNK1A1L, HSD17B10, PRICKLE1, TNFRSF10B
Negative_12299	FGG, HAL, IL5, OAT, PGP, ACADL, ACHE, ACSM4, ACSM5, ACVR1, ALOX15, ALPL, ANAPC11, BMP7, BRAF, CADM3, CASP10, CD99, CDC25C, CER1, CTLA4, DAD1, DDX23, ENO1, FUT6, G6PD, GNB1, GPD1, HSD17B8, HSPA2, HTR5A, ICAM1, IFNA7, IL22RA1, INHBB, IRF7, L1CAM, LIPG, MAPK14, MMP14, MPZL1, MTHFS, MTR2, NTRK2, OR10K1, OR10R2, OR13C9, OR1F1, OR4C15, OR5R1, OR7D2, OR8H3, P2RX6, PDE6G, PIGK, PIK3R3, PIP4K2B, PLCD3, PLCZ1, PMM1, PPP3CB, PRIM1, PRKACB, PRKAG1, PROS1, PRSS1, PVRL3, RIPK1, RPN1, SDHC, SEMA4C, SGPP1, SOS2, SQLE, SRD5A2, TAP2, TNFRSF9, TUBA4A, TUBB, UCKL1, UGCGL1, UROC1, VANGL2, VEGFC, VTI1A, ZMAT3, TNFRSF10B
Negative_12300	F8, LSS, NGF, SDS, SPN, ALOX5, ARHGEF6, AVPR1B, CACNG2, CDH15, CER1, COASY, COQ5, CYP1B1, DAPK1, DBF4, DCTN1, DLST, DNMT3L, DTX4, FBXW11, FGF14, FZD2, GALNT5, GNAI2, GNAO1, HLA-DOB, ICOS, IKBKB, ITGA11, ITPKB, MAP2K5, NARS2, OR1L6, OR2M5, OR51B4, OR52N4, OR56B4, OR5B17, OR5D18, OR8H2, PAK1, PIK3R3, PLA2G2A, PLCB2, PLXNB1, PTGER1, RAC3, RASSF1, RFXAP, SC4MOL, SPCS3, SUCLG1, TAS2R3, TBXA2R, TGFB3, TUBB3, VAMP1, WNT10A
Negative_12301	AGK, FH, GGH, ILK, MPI, TPR, AADAT, AARS2, ABLIM1, ADAM10, ALDH1L1, BDKRB2, CACNB2, CCND3, CD226, CD58, CDH3, CDS2, CLDN11, CLTC, CNTN1, COL6A2, CSF3, DDX54, DEGS2, DLL3, ENTPD8, FPGT, GCH1, GGT7, GNA15, GNAO1, GRIN2C, HLA-DOB, IFNA21, IL28RA, IL6R, INHBE, IRAK4, ITPA, LLGL2, MAOB, NME7, OR13C2, OR1F1, OR1L8, OR1S2, OR2B11, OR4B1, OR4C6, OR51E2, OR5T1, P2RX3, PAK6, POLA2, PPCS, PPM1D, PPP2R2A, PPP2R2C, PRKACB, PRLR, PTK2B, PTN11, RHOA, ROBO2, RPE65, RPS6, SFRP2, SPHK1, SRGAP3, STEAP3, TNXB, YWHAH, ATP6VOD1, ATP6VOD2, ATP6V1C1
Negative_12302	ADO, AK2, AK3, ASL, BAX, BID, F3, IL4, LPL, ACOT12, ADCY2, ADIPOR1, AK3L1, ATP5F1, BNIP1, CAMKK2, CCL25, CCR3, CDKN1C, COL4A2, CYP19A1, DEGS2, ENTPD4, EPHB2, EPHB4, FLT4, FPGT, GFPT1, GMPPA, GNB3, GP1BB, GRHR, HMBS, IFNA6, IKBKE, IRF3, ISYNA1, ITGA6, METTL2B, MYH3, NCF4, NOS3, NR1D1, NRXN3, OPLAH, OR11G2, OR1F1, OR51E2, OR7D4, PDXP, PIK3C2G, PLA, PLCB4, PLXNB3, POLE3, PRKAR1A, PRKCD, PSME1, RALB, RALGDS, RHOQ, SHC4, SMAD5, STAT6, SULT1A2, THBD, TRAF5, TRPM5, ULK1, UNC5A, WNT1, XCR1, YWHAQ, ATP6V0A2, HLA-DPA1, MAPKAPK5, TNFRSF13B
Negative_12303	AR, CR2, FOS, KHK, TK1, ABL2, ABLIM2, ACADSB, ALDOB, ANAPC11, ARHGEF4, ATN1, ATP13A2, ATP5C1, CACNG5, CACNG7, CCL2, CCR1, CXCL11, DHX58, ECSIT, EFN3, EPHA8, EPHB6, FCER1G, FUT9, FZD8, GALM, GLB1, GLUL, GNG13, GNG3, GSTA4, HEMK1, HHIP, IFNA6, IL10, IL17RA, ITGB6, KLK3, LAMB1, MCM7, MTHFD1, NR1H3, OR13G1, OR3A2, OR4D5, OR51G2, OR51Q1, OR52W1, OR56A3, PFKFB1, POLR2H, PRSS1, PSAT1, PTPN11, RAPGEF2, RUNX1, RUNX1T1, SDC2, SENP2, SPRY2, STX5, TAS2R4, TAS2R49, THBS4, TLN1, TMLHE, TNFSF11, WNT3A, WNT7A, YES1, CSGALNACT2, HSP90AA1, TNFRSF10D

Negative_12304	BAX, BTC, CBS, FN1, MAG, ACVR1, BDKRB1, CACNG6, CAMK2B, CASK, CCNE2, CD58, CDK2, CFL1, CHKB, CIITA, COL4A6, CYBA, DAAM2, DLAT, EFNA2, EFN2, EPHX2, ERBB4, FGF13, FGF9, GALE, GNPAT1, GRLF1, HHEX, HLCS, IFNG, IL20, LRAT, LRP6, MAD1L1, MYH7B, NCR3, NMNAT3, OR10H1, OR2G6, OR4K14, OR51A4, OR52L1, OR56A3, OR5A1, OR5A2, OR6C75, ORC4L, PAX4, PDHA2, PDXK, PFKP, PGAP1, PIM1, PLA1A, PLXNA1, POLR2H, POMC, PPAP2A, PPARG, PPBP, PPP1R3A, PPP3CB, PRKY, PRLR, PTPN5, RPSA, SELL, SLC12A2, SLC2A4, SMAD7, SOCS3, SQLE, SRGAP3, SULT1A2, TAS2R40, TMLHE, UBA1, VAMP3, WASF1, WNT2B, YWHAQ, ATP6V1G3, MAPK8IP2, SUV420H1, TNFRSF11B
Negative_12305	SFN, ACOX1, ADIPOR1, ALAD, BUB3, C3orf10, CACNG3, CACNG8, CCL25, CDH1, CDKN1A, CDKN2D, CEBPA, CHAT, CNTFR, COMP, CYP11B1, EFN1, ENO3, GNAT3, GRB2, HMGCS2, HTR4, IL22, ITGA3, KYNU, LARS2, OR12D3, OR2F1, OR51A2, OR6Y1, OR7D4, OR9Q2, OXTR, PNF3, PLA2G2A, PPP3R1, PTGDS, PTPRZ1, QPRT, RBL2, RGS3, SHC2, SPRED1, STX1B, TSNARE1, TUBB4, UGT2B17, HSD17B12, SERPING1
Negative_12306	IL9, AARS, ACADL, ADCY5, ARPC3, ASCC3, ATP6V1D, BDH2, CACNA1F, CCL11, CCL16, CDH5, CREB3, CSH1, DDX23, DKK2, EPAS1, FGF23, FMO3, GAPDH, HARS2, IFNA10, IL2RA, IMPDH2, ITGB8, LCAT, MAML1, MAP2K2, MCM6, MPST, MTHFD2, OR2A4, OR2D3, OR2F2, OR4B1, OR4K13, OR56A3, OR5K1, OR9A4, PAX4, PDE7B, PIGH, PLA1A, PRKACA, PRSS2, ROB1, SESN3, ST3GAL6, STK36, STMN1, SUCLG1, TAS2R40, TSHB, UNC5A, WIF1
Negative_12307	C2, CAT, CFH, EDA, LTB, ACMSD, ADRA1B, ARAF, ARPC3, ARRB2, ARSA, ATP6V1F, BET1, BMPR2, BTRC, CAMKK1, CCNE2, CDC7, CKMT2, CLDN15, COL5A3, COQ7, CSNK2A2, CYP1A1, DIAPH2, FGF17, FGF5, FZD1, GANAB, GLUL, GNRH2, HCCS, HTR7, IFNW1, IL18R1, INHBB, IQGAP2, ITGB1, KLRK1, LIPC, MAP2K2, MAPK12, MPST, MYLK3, NGEF, ODC1, OR10A4, OR51G1, OR52E4, OR6B2, OR6N1, PIGN, PIK3CD, PTPRM, RASGRP3, SLC25A5, SPRY2, STX1A, SUCLA2, SULT2A1, TAP2, TAS1R2, TNFSF11, TNFSF4, TPK1, TSHB, WBSR17, YWHAQ, ARHGAP12, SLC25A31, TNFRSF1B
Negative_12308	AK7, C7, CKB, EPO, F12, LTB, RB1, ACVRL1, ANPEP, APOA2, ARPC2, BMP6, BMP8A, C5AR1, CACNA1B, CAMKK2, CCND2, CCR1, CD3E, CD55, CD82, CTSB, CXC16, DIAPH2, DUSP6, EPHA1, FCGR3B, FMO1, FUT1, GCNT3, GMDS, IFNG, IL17A, IL1B, IL22RA1, IL29, INHBA, ITGA4, JAM2, MADCAM1, MGAT5, OR4C6, OR52N4, OR5AP2, OR5AR1, OR5D14, OR5M8, OR7A10, PCK2, PDE6G, PFKM, PNMT, PPA1, PPP2R5E, PRKAG3, PRKCD, PRKG2, RASGRF1, RDH12, RFNG, RFXAP, RUNX1T1, SFRP2, STEAP3, TAS1R3, TBK1, TPH1, TRAF3, WNT10A, WNT2, XCR1, ZIC2, CSGALNACT1, PLA2G12B
Negative_12309	DDO, FES, GHR, GP6, IVD, OGT, ACAA2, AGPAT2, AGXT2, ALOX12B, ALOX15, ANPEP, APOA2, ARHGEF4, ARNTL, ASCC3, ASIP, ATP2A1, ATP5J, B3GALT2, B4GALT4, BCL10, BMP2, CADM3, CAPN2, CCNA2, CDKN2C, CYP2J2, DUSP6, ENTPD7, FLT3LG, FZD9, G6PC2, GALNT1, GCLC, GNA15, GRAP2, GRIN2D, HPRT1, HSPB1, IFNA17, IGF1, ITGAM, KNG1, LCAT, LCMT2, LIPE, LYPLA1, MAD2L1, MAGI2, MPP5, NT5C2, OR10S1, OR51A4, OR52W1, OR5B17, OR5B21, P4HA2, PAK2, PAK4, PDGFRB, PYGL, RAP1A, SEMA4D, SMC1B, SOCS3, STAT5A, STX1B, TCF7L1, TGFBR1, TLR2, TOLLIP, UNC5B, PLA2G12A

Negative_12310	AR, EZR, HGF, RET, SI, ACOX2, ACSM2A, ADRA1A, AGPAT2, ALOX12B, ALOX15, AMPD1, AMPD2, ARNT2, ATF4, ATP5A1, ATP6V1D, B3GAT3, B3GNT2, CACNB3, CAMKK2, CBLB, CCKAR, CDC25A, CDC42, CFL1, CHRNA7, CLDN20, CNTN1, CP T1B, CSF2, CSF3R, CTBP2, DGKH, DHX58, DNMT3B, DPYSL2, EFNA3, ENPP6, E SPL1, FTMT, FZD8, GADD45B, GNAL, GSTM1, GSTM4, HIBADH, IL24, ITPKA, J AG1, KIR2DL3, LDHC, LDHD, LYPLA1, MAFA, MOV10L1, MPST, MTMR1, MTMR2, MYH13, NAGK, NEU1, NPAS2, NR1D1, OR10A2, OR13C2, OR13D1, OR13H1, OR5 1F2, OR51G1, OR5L2, OR6C6, OR7A5, OR9Q1, OXTR, PAK2, PDE4C, PDE5A, PE CAM1, PFN3, PRKG2, RAD51, RHEB, RUVBL1, SAT1, SFRP4, SH3BP2, SNAP23, SPRY3, STK3, SUFU, TNFSF8, TUBB3, ULK3, UROD, HLA-DRB3, PAFAH1B3, PLA2G12B
Negative_12311	CBL, CKB, CS, FGB, GNE, ID2, MAG, PRL, UBC, ABAT, ABLIM2, ACSM3, ACSM4, ACVR2B, ADCY10, AGRP, ALCAM, ALDH5A1, APC2, ARG2, ARRB1, ATP4A, B3GA LT5, CAMKK1, CD99, CHST12, CNGA3, CRY2, CTBS, CTNND1, EFNA2, ENO1, EN O3, ETNK2, FABP4, FOXO1, GNAI3, GNRH1, GRB2, GSTA2, HADHA, HAO2, IFNK , LIPA, LTA4H, MAN2A1, MAP2K1, MAP2K4, MAPK3, NCK1, NKX3-1, NMNAT2, OR1A2, OR2T10, OR2T11, OR5K1, OR6K2, OR8B8, OR8S1, PAFAH2 , PAK7, PCYT1B, PDIA4, PER3, PLA2G6, POLA2, PPARG, PPP2R2B, PRKCZ, PT PN7, PYGL, RAF1, RBPJ, RPS6KA5, SEMA3C, SPRY1, ST3GAL4, ST8SIA5, STX 4, SYNJ2, TAS2R60, TGFBR2, TICAM1, TIRAP, TUBA1B, TYK2, UNC5C, UPP1, YWHAQ, MAPKAPK3, MAPKAPK5
Negative_12312	GSR, IL7, RET, SYK, ACADVL, ARPC3, BMP8A, C3orf10, CACNA1H, CDC26, CH ST12, COQ7, CPOX, CSH1, CYP3A43, CYP8B1, DAG1, DCTD, DPYS, EPHB6, FBP 1, GLI1, GMPS, GUK1, IL17RB, INHBB, INPP4B, ITGAD, LIPG, MAP3K12, MGA T5, MGST2, MLYCD, MYH3, NCR2, NCR3, NLGN1, NMNAT3, NR5A2, OR10K2, OR1 L8, OR1N1, OR2A25, OR2T29, OR51B2, OR51E1, OR52N1, OR5AC2, OR5AR1, O R5M9, OR6A2, OR6S1, PAPSS2, PLD2, PPM1A, PPM1D, PRSS1, PRSS3, PTCRA, PTEN, PVRL2, RAPGEF2, RDH11, SNAI1, ST3GAL6, TAS2R48, VAMP3, VDAC2, WASL, WHSC1L1, ZNRD1, ST6GALNAC1
Negative_12313	BTD, CAD, CP, DBH, IL6, PXN, SCD, ACTN1, AGPAT3, B3GALT6, BBC3, CACNB2 , CD99, CDC7, CDKN1B, COL6A2, CTNND1, CTPS, CXCL10, ELK1, FBXW11, GDF 6, GNRH1, GRIA3, GUCY1A3, HLA-C, HPSE2, IFNA10, IFNA14, INPP5E, LTBP1, MAPK10, MYH13, NAT5, NEU2, O R10P1, OR2A14, OR2Y1, OR4A15, OR4L1, OR4S2, OR51G1, OR51G2, OR5AC2, OR5R1, OR6C2, PDX1, PIAS3, PLXNA1, POLA2, POMC, PRKAR2B, RASA2, RBKS , RPE65, SELPLG, SOCS4, UBE2L3, UPP2, XCR1, ATP6V1C1, MAPKAPK3, SERP INF2, TNFRSF10C
Negative_12314	CR2, EDA, HGD, OAT, ACADS, AKT1, B3GNT2, CACNA1E, CASP3, CD3E, CDC7, C HAT, CHPF, CNTN1, COMP, CSF3R, CTSG, CYP19A1, EDAR, FADS2, FGF12, FGF R3, GBE1, GNAL, GNPDA2, IARS, IFNGR2, IL17RB, ITGAM, ITGB7, JAK1, KNG 1, LILRB3, MAP2K4, MGAT1, MYL5, OR13C8, OR2T12, OR3A3, OR51B4, OR52J 3, OR5AP2, OR6N2, OR7A17, OR8H3, PER2, PIGV, PKLR, PNPLA3, POLD2, PRK AB1, PRKACB, RASGRP2, SPTLC1, SREBF1, SSH1, TNXB, TRAF3, TYMS, UBE2L 3, ZMAT3, HSP90AA1, KIR2DL5A, MAPK8IP2
Negative_12315	BAX, GLA, HK1, TNN, TPR, ALPL, ANAPC2, ARG1, ASIP, ATP5G1, ATP6AP1, BE T1, CCL11, CCL8, CCNH, CDC26, CKMT2, CLDN16, COL3A1, CTF1, CTSL1, CXC L2, CYP2S1, EIF4B, ELK4, EPAS1, EPHA2, FZD2, GALNT13, GNAS, GSTA3, HT R7, IL18, INPP1, ITGA8, KDSR, LIFR, MAP2K1, MAP4K3, MKNK1, MLYCD, MMP 2, MYH1, NEFL, NEUROG3, NOD1, NOS3, NOX3, NUMBL, OR10G8, OR10H5, OR11 L1, OR4K17, OR51B5, OR52K1, OR52W1, OR5B3, OR8J1, ORC2L, PDE1B, PLA2 G2F, PPCDC, PPM1D, PRKCQ, PTGFR, RALB, RALBP1, RGS3, RPSA, SCLY, SELE , SMAD6, SMPD3, SPHK2, ST3GAL2, STT3B, TFDP1, TGDS, TICAM2, UBA7, UXS 1, YWHAZ, ZBTB16, ZIC2, ALDH18A1, CACNA2D2

Negative_12316	AK3, ADRB1, AKR1C1, ALDOB, ALG10, ALPP, ARSA, ATP5E, B3GNT3, BMP8B, CACNB4, CACNG5, CBLC, CCNB1, CD79B, CDC23, CDKN1B, CFLAR, CLDN22, COL4A2, CRLS1, CXCL10, CXCR6, DFFB, DHRS4, DPYD, EIF4B, EIF4E, ETNK1, FASLG, FGF7, GAL3ST1, GCNT3, GCNT4, GLDC, GRHPR, GRIN2A, GRIN2C, GSTM5, GSTO1, HAP1, HRH2, IFNGR2, KLRC4, LAMB1, LDHAL6B, LMO7, MAML1, MAP3K13, MAPK3, MAPT, MYH13, OR14A16, OR1B1, OR3A1, OR51B2, OR51G1, OR56A4, OR5AC2, OR6N1, PPP5C, PRKAR1A, PRKX, PTK2B, RAB23, RELA, SMAD4, SSH1, STAT5A, TAS2R10, THTPA, TNFSF14, TSLP, UBE2L6, VANGL1, VDAC1, VNN1, WHSC1, WNT2, TNFRSF11A
Negative_12317	ABO, C4B, GP6, HDC, LCT, ACSM3, ALG11, ANAPC1, ARD1A, ARPC3, ATP6V1H, C4BPA, C4BPB, CCL15, CCNE1, CES2, CHSY3, CLDN19, CTBS, DAG1, DRD2, ETS1, FBXW11, GPD2, IL10RA, IL11, LIPA, MAP3K14, MS4A2, NCAM2, NME7, OR10A7, OR1D2, OR1J2, OR2D2, OR51E1, OR6C2, OR6K2, OR8H3, PAK1, PARS2, PDE11A, PDE1B, PFKFB1, PLCB3, PMVK, PPAP2C, PPP1R3A, PPP2R2B, SEMA3E, SFRP1, ST8SIA1, STAT2, SV2C, TAS2R8, TRAF2, VAMP1, VDAC3, WBSCR17, B4GALNT1, MAPKAPK3
Negative_12318	AGL, GK, IL2, OAT, TPO, ABLIM3, ACSL4, ALDH1A1, ATP2A1, ATP5H, BDNF, CNG2, CD74, CDC25C, CDC7, CLDN10, CLDN5, CLTC, CPT1B, CSNK1G1, CTNND1, CXCL1, DARS2, DLST, DOT1L, E2F4, EFNA3, ENAH, EPB41L1, FGF22, GALNS, GALNT3, GALNT6, GRIN1, GSTA2, HMOX1, HPRT1, HSD11B2, HSD17B4, IDH3A, IL1A, ITGB1, ITGB4, ITGB6, KLRC4, KRAS, MAOB, MINPP1, NEGR1, NOX3, NT5C1B, OR1L8, OR2A2, OR2S2, OR4C11, OR51A7, OR51F1, OR52L1, OR52N2, OR5L1, P2RX2, P2RX7, PAFAH2, PAX4, PDE2A, PIGN, PIGW, PNMT, PPP1R3B, PPP2CB, PPP2R1B, PPP3CA, PRKAA1, PRKCH, PVRL1, RASGRP2, RFXAP, SELL, SETD7, SMAD6, SMAD9, STK11, STX5, TAS1R1, TUBB2C, UCKL1, UNC5C, YWHAB, SERPINA5
Negative_12319	C6, GCK, LPL, NPY, PC, ACAA1, ACSL1, AMY2B, ARPC5L, ATP2A2, ATP5E, B3GNT3, CCL15, CCL4, CCND3, CD74, CLDN5, CREB3L1, CRY2, CTBP2, CTNNB1, DVL1, EPB41, EPHX1, F13A1, FGF10, FGF8, GAS1, GJD2, HSD17B4, IL5RA, IRF9, ITCH, LDHD, LILRB3, MAPK3, METTL2B, MYH11, NCOR1, NOTCH1, NR1H3, NR5A2, NUMBL, OR1S2, OR2Z1, OR3A1, OR4K17, OR51D1, OR52B6, OR5H2, OR9A2, PAK1, PARVG, PDHB, PGS1, PLIN, PLXNB2, POLE, PPID, PSENEN, PTPRJ, ROCK2, SC5DL, SEMA3B, SEMA3F, SKP1, SMC1A, SNAP23, STMN1, SUCLG2, TAP1, TAS1R3, TAS2R48, TUBA3C, UGT2B4, ULK3, UPB1, YARS2, SERPING1, TNFRSF10D
Negative_12320	FGB, FOS, HGD, HK3, HYI, STS, A4GALT, ABL1, ABLIM1, ACSL6, ACVR1, ARD1A, ARNT2, B4GALT3, CACNA1F, CCR10, CD86, CLDN2, CRHR1, CSH1, CTNND1, CXXC4, DDX55, DERA, DLST, DVL1, EARS2, EPHB2, FADD, FASN, FGF21, FOXA3, FPGS, FRAP1, FTMT, FUT5, GADD45B, GCNT3, GMPS, GUCY2F, IL10RB, IL12B, IRF9, ITGAE, JAK2, JUND, KAT2B, LAMC1, LDHAL6B, LIPG, LTB4R2, MAN1B1, MBL2, NANP, NKD2, NRG1, OGDH, OR2G3, OR2T6, OR4C46, OR52J3, OR56A3, OR5D13, OR5F1, OR8D4, OR8G1, ORC5L, PARD6B, PAX4, PCK1, PDGFC, PMM2, PTPN1, SMARCA2, STAT5A, TPH1, TUBA3E, UBA7, UPB1, WASL, WWP1, YARS, B3GALNT1
Negative_12321	AUH, CDA, F5, GNE, LTB, OTC, PGD, ACP2, ACVR1C, ADCY5, ARNT, ASS1, ATIC, ATP5C1, B4GALT5, BDKRB2, BIRC2, CARS2, CD28, CDH4, CDKN2B, CHUK, CTBP2, CYP2A6, DCXR, DLL3, ENTPD4, EPHA3, FGF4, FGF5, GOT1, GRAP2, HTRA2, IFNA13, IL23A, IL9R, INHBE, INMT, KCNQ1, LEPR, OR2M5, OR2T6, OR2T8, OR51A7, OR52N5, OR5AU1, OR6K6, OR7C1, OR7D4, OR9G4, OXTR, PI4KA, PIAS2, PIAS3, PIGN, PLA2G1B, PLCB2, PPP2R5D, PTGDS, PYCRL, RFWD2, RPSA, SELE, TAS1R1, TRMT11, UGDH, YWHAE



Negative_12322	AMH, AMT, APP, AUH, C8G, DLD, F2, FER, GSN, HDC, NF1, ACACA, ACOT12, ACP1, ACSS3, ADIPOR1, AGPAT6, ALG5, AMDHD1, ANAPC10, ARHGEF1, B4GALT7, CCKAR, CDC25A, CD01, CDS1, CHRM5, CLDN6, COASY, COMT, CRLS1, CSF3R, CSH1, CTPS, CXCR6, CYP27A1, DTX2, FABP3, FADD, FLT3LG, FOXA2, FTH1, GN B3, GSTM3, HIBCH, HNF1A, HPRT1, HPSE, IKBKB, ITGA1, ITPKA, KDSR, KIR3DL3, KNG1, LAMB1, LIMK1, MAD2L1, MGAM, MGAT2, NLGN1, NT5M, OR1L8, OR2L8, OR2T33, OR2T8, OR52K1, OR52W1, OR5D13, OR5V1, P2RX7, PHKA1, PIP4K2B, PIPOX, PLA2G5, PSME3, PTGER1, PYCR1, RAD51, RBL1, RDH12, SELPLG, TAS1R3, TCF7L2, TGFBR2, THBS2, TICAM2, TKTL1, TRAF5, TSTA3, TUBA8, TUBAL3, TXNDC12, ULBP2, VTI1B, YARS2, ATP6V0D2, SERPIND1, TNFRSF18
Negative_12323	CBL, EPO, F3, TYR, AASS, ACOT12, ACP6, ACSL4, ADORA2B, AGPAT1, ALG10B, ALOX12B, ATP2A3, ATP5J2, CACNG1, CASK, CAV2, CCL5, CLDN6, COL1A1, CREB3L1, CSAD, CYFIP2, DARS, DUSP10, EFNA3, EPHA5, EXTL3, FCGR3A, FSHB, GALNT12, GLS2, GNAZ, HTR2C, IFNA17, IL29, ITGB8, LYZL1, MAN1B1, MCEE, MCM5, MCM6, MYH8, NEU2, NLGN3, OR1J4, OR1L1, OR1L6, OR2T4, OR9K2, PCYT1B, PIAS3, PLCB2, PPID, PRKCQ, PRODH, PTK2, PYGL, QPRT, RAC1, SEMA4C, TAS2R38, TBXAS1, TNFSF10, UGT2B17, WHSC1, YOD1
Negative_12324	C8A, FGB, GH2, LIF, MIF, MPI, MVD, MVK, OAT, PLN, UBC, ABLIM2, ADH4, ALG10, ALG3, BACE1, CACNA1A, CCL4, CD44, CDS1, CMBL, COMT, CTTN, DGKZ, DOCK1, ENO2, EXOC7, F11R, FZD8, GNAZ, GNB1, GRPR, GSTA3, GUCY1B3, HNF4G, HSD17B7, IFNA16, JAM3, KIR2DL4, KLRD1, LIPT1, LYZL1, MAPK9, MGLL, NCK2, NKX3-1, OR1A1, OR1D2, OR6C70, PCK2, PDE1B, PHKA1, PIAS1, PIGN, PLCG1, PMAIP1, POLR2J, QPRT, RAB23, RARS2, RASA1, SOAT1, SUCLG2, TAP2, WNT9B, YKT6, SERPINE1, ST6GALNAC5, SUV420H1, TNFRSF13B, TNFRSF17
Negative_12325	DUT, EGF, GH1, HAL, TK2, ACAT1, ACSM2A, ACSM4, ACTG2, ACYP2, AKR1C3, ALG13, ARSE, B3GNT3, BCKDHA, CTNNA2, DGKB, DMGDH, ENPP2, FSHB, GALC, GALNT6, GBA3, GLI2, HARS, HNF1A, HSP90B1, IFNA13, IL2RB, IRAK3, IRF9, ITGA10, KLRD1, LAMA3, LFNG, LGMN, MAP3K2, MDM2, MGAM, MOV10L1, MYH7B, NADSYN1, NEU1, OR51S1, OR6C2, OXTR, PANK1, PDE1C, PFKM, PPP2R5E, PRKAB1, PRKG2, PTGES, PTPRB, PTPRF, SETD1A, STAT6, TACR2, THBS2, ULBP3, WHSC1, WNT6, ATP6VOA1
Negative_12326	CSK, NPL, TYR, ACADS, ACSL5, ADIPOR1, ADIPOR2, ALG2, APBB1, B4GALT7, BCAT1, CCL11, CDKN2B, CKS1B, COASY, COMP, CSF2RA, DDB2, DHRS3, DKK2, DVL1, EPHA2, FGF12, FGF6, FPGS, FUT2, GAL3ST1, GAPDH, GLO1, GPLD1, IL4R, KARS, MAOB, MAP3K5, MCAT, MMP9, MYL7, NOX1, NTRK2, OR2L8, OR51E1, OR51I2, OR52R1, OR51I, OR8U1, PDE4B, PDE4C, PFAS, POLE, POLR2H, RASGRP3, RBX1, RPSA, SETDB2, THTPA, YARS, PRICKLE2
Negative_12327	AGL, DBT, DCC, FST, GLA, HK1, ITK, PAH, SP1, TPO, ADH5, AKT3, ALDH6A1, ALG3, AMPD1, APOA1, ARPC5, BMPR1A, BPNT1, CAMKK2, CASP7, CCL25, CCNA1, CCNB3, CCND2, CD44, CDC14A, COL1A1, CTSS, CXCL5, CXCR5, CYFIP2, CYP4F3, DDX18, DUSP14, ENPP1, FGF2, FZR1, GAB1, GALNT11, GANC, GCH1, GNAL, GNG3, GRIN2C, GRM5, HIBADH, HMGCR, HMGCS2, ITGA11, JAM3, KAT2B, MAP2K3, MAP4K1, MAPK14, MASP1, MCEE, MGAT5, NCF1, NR4A1, NRG2, NT5C1B, NT5E, OR10G3, OR1L1, OR2M4, OR4A15, OR4F4, PCNA, PDE4B, PIGN, PSME3, RDH5, SEMA4D, SEMA4G, SNAP23, SOCS2, SPHK2, TAS2R9, THY1, TLR4, TNFSF8, TRMT11, TYMP, VEGFC, VTI1A, XYLT1, ATP6V1B1, PPARGC1A, SERPIND1

Negative_12328	ADO, BTC, IL5, AARS, ACTB, ADCY5, ALCAM, ALG11, ARPC4, ATP2A3, B4GALT6, CACNB3, CALML6, CCNH, CD79B, CDC2, CTBS, CTLA4, CTSG, CYP26C1, CYP2A6, DDX18, DHRS4, EFNA5, ESPL1, EXT2, FLOT1, FUT8, FZD5, GADD45B, GALT, GART, GCNT4, GLDC, GUCA1C, HCCS, HMBS, ITGB3, ITPA, LRP6, MAN1A1, MAP3K7, MEF2C, MGST3, NME6, OR10H2, OR10H4, OR10Z1, OR1S1, OR2A4, OR4C11, OR4D2, OR4M1, OR6C70, PAK4, PIGX, PIP4K2C, PKMYT1, PLAU, PLD2, PLK1, PPP1CA, PRPS1, RETSAT, SDHD, SIAH1, SLC27A5, SLC2A2, SPP1, SPTLC1, STK36, TAS2R3, TGFB3, UBA7, UPP1, VARS, GABARAPL2
Negative_12329	EPO, F10, HGF, IL2, JUN, STS, ACVRL1, AGPAT2, ALDH9A1, ALG6, ALG9, ALS2, AQP7, ARPC1A, ATP5G2, C7orf16, CACNB3, CAV2, CCR2, CD38, CDKN2A, CHEK2, CHRM1, CPT1C, CREB1, CSDA, DAPK2, DHCR24, DIAPH2, DKK1, DPAGT1, DUSP9, EPHX1, FOSL1, GALNTL4, GCAT, GNA11, GRPR, GSTK1, IFNA10, IFNGR2, KIR2DS4, KIR3DL1, MAP3K12, MAP4K3, MYH14, NUDT12, OR10J3, ORIM1, OR4C11, OR4C12, OR4C46, OR4C6, OR51B2, OR8K1, OR8U1, P2RX4, PDE6G, PIGB, PIGW, PLA1A, POLR2J, PPP1R3A, RAP1A, SEMA4C, SOCS2, SOCS5, SPRY4, SSH1, ST3GAL5, SUV39H1, TNFSF9, XYLB, GABARAPL1, SERPINF2, ST6GALNAC3
Negative_12330	AR, CAT, CDA, EDA, F3, FYN, GNS, GPT, RPE, ACACB, AKR1C4, APC2, C3AR1, C4BPA, CAV3, CCR9, CD48, CDC14A, CISH, COQ6, CSF1, CXCL1, CYP26B1, CYP3A43, DGAT2L4, DUSP1, EDAR, FARS2, FMO1, FMO4, FOSL1, GMDS, HBEGF, HCCS, HIBCH, IFNK, ITGB1, KAT2B, KIR2DL2, MAP3K8, MYH6, MYLK, NCF2, NT5M, OR2A2, OR2M2, OR2T3, OR2T33, OR4K17, OR52B4, OR52N4, OR5D16, PDE10A, PHGDH, PLXNA2, POLR2I, PYCRL, PYGB, RASGRF2, RDH10, ROBO1, SFRP1, SHC1, SLC27A1, TAS2R48, TBL1XR1, TFDP1, TKTL1, VAMP3, VEGFC, XCL1, YKT6, YWHAZ, ST6GALNAC3, TNFRSF17, TNFRSF1B
Negative_12331	HGF, MPZ, PGP, SCD, TXK, ACVR2B, ADCY7, ATP5G3, BAIAP2, BDKRB1, CALML6, CD27, CLDN3, CREB3L3, CTF1, CYP11B2, CYP2J2, CYP8B1, DDX47, DGAT1, E2F5, EXTL2, FGF22, FZD9, GCLM, GNAS, GRIA1, GSTM1, IDUA, IL28B, INSR, LCAT, LPAR1, MAN1A2, OR1L4, OR2H1, OR52A5, OR52D1, OR7C1, PFKFB4, PLA2G2D, PLA2G6, PLCG2, POLA1, PPAT, PPP2R5A, PTK2, RAC1, RAPGEF4, RFXANK, RHOA, SH2D1B, SH2D2A, SLC33A1, VDAC1, ZIC2, ATP6V1B1, ATP6V1E1, SERPIND1, TNFSF13B
Negative_12332	BID, EDA, FN1, GPT, ACPP, ACVR1C, ADIPOR2, ALG10, ARPC1B, CARD11, CASK, CBR3, CD36, CD40LG, CD99, CDH15, CDKN2C, CHRM5, DAD1, ECHS1, FABP1, GNAL, GUCY2D, IFNK, INHBB, INPP5A, IRF9, ITGA2B, KIR2DS5, LGMN, NEU3, NEUROD1, NOX1, NRG4, NTNG1, OR1D5, OR2G6, OR51A7, OR5AS1, OR5H2, OR5H6, OR6K2, PDE4C, PDE8B, PLCB1, PNLIP, POLR1B, PPP2R1A, PRKCH, PRPH2, PTPRB, RRAS2, SLC2A2, STX8, SUCLG1, TAS2R49, TIRAP, ZFYVE9
Negative_12333	AK3, CGN, CKM, FUK, LSS, NNT, ABI2, ACP1, ACSL1, ACTB, ADIPOQ, ALOX12B, APOC3, BLNK, CACNA1I, CACNG6, CANT1, CAV1, CDH5, CLDN10, CYP2A7, DGKB, DLL3, EREG, FCGR2B, FGF11, FGF9, FLOT1, FOXA2, FUT1, GCLM, HGSNAT, HMGCL, IFNA8, IL28RA, ITGAL, MAP3K4, MAP3K7, NCF2, NFKB2, NQO1, OR10A7, OR4D11, OR5AS1, OR5B17, PAK6, PCK2, PIGS, PLA2G2E, PLA2G2F, PLD2, PPP3CC, PRKAG2, PTDSS1, PTK2B, PTPRM, RHOQ, RPS6KB1, SARDH, SEMA3G, SMARCA5, SSH2, ST6GAL1, STMN1, STX12, SUCLG1, SUFU, SULT1A2, UAP1, UPP1, VTI1A, WNT8B, XYLT2, HSD17B12
Negative_12334	CFH, DAO, LCT, LEP, ABP1, ADORA2A, AKR1A1, ALDH5A1, ALDOC, B3GNT5, CDC16, CLDN9, COL5A1, CREB3, CYP11B1, DCXR, EARS2, EFN1, ENTPD4, ENTPD6, FDFT1, GNRH2, GPLD1, IL8RA, KLK3, LCMT1, LIPG, NKX2-2, NSDHL, OR10AG1, OR10G3, OR10H4, OR2T29, OR4K13, OR4X2, PAX8, PGM3, PIGO, PIK3CB, PROC, PVRL2, PVRL4, RALB, RPS6KA1, SCLY, SETD8, SH2D1B, SLC2A1, SPRY1, TBK1, TGFB1, WNT16, XYLT2, ZIC2, ALDH18A1, ARHGEF12, CSNK1A1L

Negative_12335	C8G, F9, FH, FN1, ACTN4, ALOX12, ALPP, ALPPL2, ARPC5L, ATP5D, B4GALT5, BCL2, BMPR1A, CACNA1F, CACNA1G, CACNG6, CCL24, CCR7, CD70, CLTCL1, CRB3, CXXC4, CYP17A1, DAPK3, DHCR7, DUSP1, DUSP6, DVL2, EPRS, ERBB3, FPGS, FZD7, GAD1, GDF7, GLUD2, GNMT, GSTP1, GSTT1, HARS, HPSE, IFNA8, IL2RB, INHBC, IPPK, ITGAL, KAT2B, LDHC, LEFTY2, MAN2A1, MAP2K1, MAP2K6, MAPK1, NFATC1, NFE2L2, NOTCH2, NRG3, OR2A4, OR2L13, OR2V2, OR4C4, OR4N4, OR4X2, OR51B2, OR5L1, ORC1L, PCK1, PDE11A, PFKFB3, PHKG2, P HPT1, PIAS3, PIP5K1A, PLA2G3, PLXNA2, POLR3K, RND1, RUVBL1, SEMA3E, SHISA5, SLC27A4, STX8, SUFU, SV2B, THBS3, TIRAP, TKTL2, TSHB, TSNARE1, TYMS, WNT4, ATP6V1E2, HLA-DRB5, TNFRSF11B, TNFSF13B
Negative_12336	TNN, AADAT, ACSL1, ADH6, ADH7, AHCYL1, AKR1B10, ALDH1L1, ARSA, ATP5A1, BMPR1A, CAMK2G, CCL17, CFL2, CHAT, CSAD, CXCR4, CYFIP2, DDX47, DIAPH1, DIAPH3, DPM3, F2RL2, FCGR3A, FGF20, FGF21, GALNTL1, GCNT1, GLG1, GMPPB, GNA15, GRM5, IL1B, IL20RA, IL24, INPP4B, IPPK, IRF9, ITGAE, L EPR, LIPG, MEF2C, MMP2, MPDZ, MYLK2, NCKAP1L, NFATC4, OR1S2, OR2A5, OR2M4, OR2V2, OR4C16, OR51E1, OR51I1, OR51S1, OR5AR1, OR5D14, OR5P3, OSMR, PARS2, PIGM, PIK3C2G, PORCN, PPAP2A, PPP2R2B, PSPH, PTDSS1, PTGFR, RASSF5, SDHB, SMAD3, SSX2IP, SULT1A4, TACR3, TAS2R10, TGFBR2, T RAF5, TUBB4Q, TYROBP, UBE2K, UGT2A1, ULK2, UNC5C, UROC1, WARS2, WASF3, ATP6V1E2, ATP6V1G2, TNFRSF10B
Negative_12337	APP, C5, FGG, GBA, ME3, VTN, AACS, ACACA, ADORA2A, ADRB3, AGRN, AGTR1, ALAS1, ARHGEF2, ATP2A3, BCKDHB, CDC25B, CDC6, CDK6, CLTB, CXXC4, CYP2C9, DNMT1, DUSP3, FADD, FGFR3, GALNT5, GALT, GNAI2, GNAO1, GNB1, HAP1, HARS, HCCS, HCLS1, HNF4G, HSD17B1, HSPA2, IGF1, IL17RA, IL28B, ITC H, ITGA10, LAMB2, LLLGL2, MAD1L1, MAP3K13, MAP3K8, MMP2, MRAS, MYH1, MYL7, NKX6-1, NTRK2, NTSR1, OCRL, OR11H4, OR1J2, OR1S2, OR2L2, OR2M7, OR2Z1, OR4N4, OR51A7, OR6B3, PANK2, PFKFB1, PHKG2, PIGN, POLR3K, PPP1R3C, PPP2R5E, PRKAR2A, PYGB, SPHK2, SRD5A2, STAT3, STX12, TAS2R10, TNFSF12, TRADD, VTI1B, WWP2, YWHAQ, HLA-DPA1, TNFRSF1A
Negative_12338	BTD, CAT, CR1, F2, GLA, ABL2, ACAA2, ACO1, ACOX3, ACP1, ADRB1, AGPAT6, ALG13, ALOX15, B4GALT2, C1QC, CACNG7, CD46, CHAT, CLDN3, COL4A4, CXC L13, CXXC4, CYP4A22, F2RL1, F2RL2, FGF17, FGF18, FGF21, FGF23, FGF4, FLT1, GCLM, GMPPB, GOSR2, GPAA1, GRIN2C, GSTO2, HSD17B8, IMPA2, KLRC1, LICAM, LALBA, METTL6, NARS, NRG3, OR10G2, OR10J1, OR10J5, OR11A1, OR1G1, OR2F2, OR2T12, OR4F15, OR51Q1, OR52E6, OR52L1, OR5B21, OR5T3, OR6F1, OR7G3, PAK4, PFKFB2, PLA2G2D, PLAUR, PLCD1, PSENEN, PYCR1, SMAD1, SMAD7, SPI1, TUBB3, WASF2, WNT7B
Negative_12339	EDA, HK2, LYN, TPO, ACP2, ACY1, ADRB1, AHCYL1, ALPPL2, AMDHD1, ANAPC4, APOA1, ATP5J2, B3GALT4, CCNE2, CDK6, CDKN1C, CLDN1, CLDN14, CNDP1, CTSB, DCXR, DGAT2, DHX58, FOXA3, GNAI2, GNG13, GPD1L, GSTK1, GSTM1, G STM5, HSD17B7, IDH3B, IDI1, IL22RA2, LAP3, MTHFS, MYL5, NKX6-1, NTSR1, OR1C1, OR2T29, OR51V1, OR52I2, PDE4A, PDE6G, PFKP, PIGX, PIK3CB, PLOD3, PPP1CC, PRKAR1B, PRKAR2A, PSEN1, RASGRP4, ROBO1, RPIA, SDHB, SETD2, SPTLC1, TBXAS1, TFDP1, TLR9, TRAF3, TUBA1A, WNT3A, PRICKLE2
Negative_12340	DLD, GSN, INS, AGPAT3, ALDOC, ALG13, ATP5J, BUB1B, CANT1, CCDC6, CD28, CLDN11, CNTNAP1, CRY1, CXCL13, DDB2, DDX18, DERA, DNMT3A, DTX3, ESAM, FDF1, FGF20, HAGHL, HDAC1, IDH3A, MAN2A1, MAP4K1, MEF2C, MTHFS, M TMR6, MYH7, NCF4, NT5C1B, NTF4, OR52E6, OR52W1, PARVB, PAX4, PON1, PPP1R3C, PPP2R2B, PRDX6, PRKAG3, RAD51, RAF1, RALA, RBL2, SLC9A1, SPHK1, STX18, YES1, YWHAE, CACNA2D4

Negative_12341	C4B, DBH, DBT, F3, LCT, NGF, PDC, PGF, SMO, AADAC, ACP6, ACVR1, ADCY9, A GPAT4, ALDH5A1, ALG11, ATP5D, BACE2, CCL27, CD28, CD99, CDH15, CFLAR , CKMT2, COASY, CTBP1, CX3CR1, DRD5, DTX2, EFN3, ENPP6, FGD1, GMPR2, GNA13, GRIA1, GRM1, GSTP1, GUCY2D, GZMA, H6PD, HMGCL, HMOX2, IL17B, I L18R1, IL28A, LIMK1, MAP2K7, MAPT, NEU3, OR4C12, OR5B3, OR8K5, OR9A4 , PAPSS1, PARVB, PDE4A, PPCS, PRPS2, PTGDS, PYGM, RAD51, TSHB, UGT2B1 1, WNT3, YWHAQ, ATP6V1E1, MAPK8IP3, TNFSF13B
Negative_12342	GCK, ID3, TNC, ALPL, ANAPC4, ANGPTL4, AOC2, ATP2A3, BMP4, CAMKK1, CCL 1, CD44, CLTB, CRLS1, CSNK1E, CYP26C1, CYSLTR1, DLST, EPHA1, FGFR4, F UT1, GALNT7, GSTO1, HEXA, HIF1A, HLA- G, HMGCL, IFNGR2, IFT57, IMPA1, INPP1, ITGA3, KNG1, LTBR, MGAM, MIOX, MYH6, OR1J1, OR2G2, OR5D14, OR5H6, OR5P2, OR6T1, P2RX5, PHPT1, PIM2, RALGDS, RASGRF2, ROBO3, RXRG, SDHA, SNAP25, SQLE, ST6GAL1, STAT6, TR AF3, UCP1, UGT2B17, YOD1, TNFRSF18
Negative_12343	ADA, AGL, ASL, CTH, GPT, ACO1, ACSM1, AFMID, AKT3, ALG5, ANGPTL4, APBB 1, APOE, ATP12A, B3GNT3, BCKDHA, CACNB2, CACNG2, CAPN2, CASP7, CD247 , CD79A, CHKB, CHST12, CLTB, CNTN1, COQ6, CSNK1G3, CSNK2B, CXCL2, DAG 1, DDX19A, DGKQ, DNMT3A, EPHA4, EPHB2, EVI1, FBP2, FLT4, FZD1, G6PC, G ALNT8, GNAT3, GOSR2, GUCY1A2, GZMB, HPSE, HTR5A, HTR6, HTRA2, IL12A, IL17B, IL23R, IL6R, ITGB3, ITPA, KIR2DL3, KLK3, MCM6, MYH15, NKD2, OR 1E2, OR2T11, OR4X1, OR51A2, OR51B4, OR52K2, ORC1L, ORC5L, P4HA2, PDI A4, PHKG1, POLR2K, PORCN, PPP1R3A, PRKCQ, PTPRC, PTPRZ1, RBKS, RGS3, SEMA3A, SGMS2, SPRED1, TAS2R10, TAS2R42, TICAM1, TSHR, UCK1, ULK1, U PP2, WHSC1L1, WNT11, WNT5A, MAPK8IP2
Negative_12344	FH, GP6, GPI, LPL, MUT, NF1, SHH, ABCC8, ABL1, ACAT1, ACTB, ACYP2, ADCY 2, ADH1A, AGXT, AKR1C3, ALDH5A1, ALDH7A1, AMY2A, ATP5H, B3GNT2, CACN B3, CAMK2A, CD99, CDC23, CNDP1, CPOX, DBF4, DDHD1, DDX23, DFFB, ERBB3 , FBXW11, FGF3, FMO3, FZD3, GALNT2, GSTO1, HPSE, HSP90B1, IDI1, JAK3, LDHD, LEPR, LLGL1, MCM5, MCM7, MTHFR, MYD88, NCR3, NFKB1, NFYC, NRXN3 , NT5C3, OR10J1, OR13D1, OR1D5, OR2T29, OR4E2, OR52J3, OR52W1, OR7G2 , PCYT1A, PER2, PIP5K1B, PLA2G2F, POLA2, POLD3, PRDX6, PRKAR2B, RAPG EF3, RBL1, RDH10, RRM2B, RUVBL1, RXRG, SARDH, SCD5, SKIV2L2, SLC12A2 , SMAD1, SPRY2, SPTAN1, ST6GAL1, STK4, STMN1, STX12, TAP2, TAS2R50, T PK1, UGT2A3, WNT6, WNT7B, WNT8B, MAPK8IP3, PAFAH1B1, SLC25A31
Negative_12345	AK5, AMT, CFD, GGH, KIT, OAT, RDX, SHH, UBC, ACAA1, ACSM5, ACTB, ACY1, A DIPOR1, AKT3, ANGPTL4, APH1A, ASS1, ATP4B, AXIN2, B3GNT2, C4BPB, CDC 25B, CRY1, CYCS, CYP1A2, CYP21A2, CYP2C18, DMGDH, DUSP16, ENPP2, ENT PD2, EPHA3, EPHA5, FLT4, FRAP1, GCNT4, GFPT1, GSTM5, GSTP1, HADHB, HS D3B7, HTR5A, IDUA, IL11RA, INPP5B, MAP3K4, MYH4, NTSR1, OR10J5, OR1J 4, OR2T29, OR4C11, OR4D6, OR4F6, OR52N4, OR6S1, OR8A1, P2RX3, PFKFB4 , PIM2, POLR2A, POLR2D, POLR2G, POLR2K, POLR3B, PTPMT1, SDHA, SLC25A 6, SLIT2, SMAD7, SOCS2, TAS2R42, TCF7, TIRAP, UGCGL1, VAMP2, CSGALNA CT1, HSP90AA1, PNLIPRP2, PRICKLE1, TNFRSF10C, TNFRSF11A
Negative_12346	F8, GHR, GLS, GSN, IL5, KDR, LTB, MPL, OTC, RB1, SI, ADCY4, ADRB2, AFMID , ANAPC11, APOA2, ARPC1B, ASIP, ATG7, B3GAT1, BMPR1B, CACNB1, CCNA1, CCNB3, CD28, CDC23, CHAD, CLDN19, CLDN9, CTPS, CXCL5, CXCR5, DDX50, D LST, FBXW11, FGF11, FGF20, FUT9, GALNT7, GLB1, GNAZ, GNG12, GPX7, HHE X, IFIH1, IGF1, IKKBK, IL11RA, INPPL1, IRF9, KLRC2, MAGI3, MGAT5B, NK D1, NMNAT3, NUDT8, OR10G9, OR10R2, OR10S1, OR10Z1, OR1F1, OR2A25, OR 3A1, OR4F4, OR4N2, OR6B2, OR6T1, PARVG, PKMYT1, PMVK, PPP3CB, PRKAR2 B, PRKY, QARS, RFWD2, RPIA, SDHB, SSH1, STMN1, TDO2, TKTL2, UAP1, WNT5 B, ZIC2, PRICKLE1, TNFRSF17, TNFRSF18, TNFSF13B

Negative_12347	AK5, C5, CDA, DDC, HK2, HK3, MYC, SFN, TKT, ACACB, AGXT2, BBC3, BMP2, BT RC, CCL17, CCL22, CCL26, CDIPT, CHIA, CHST13, CKMT2, CTBP2, CXCL1, DG KA, EARS2, EPHB2, FASLG, FGFR3, FLOT2, GALNT12, GNA15, GP1BA, GSTA1, GUSB, HARS, HCST, HMGCR, HMOX1, HSPA1B, HTRA2, IL10RB, IL12B, INHBB, KLRD1, MADCAM1, MAN1C1, MAP3K3, MGAT4B, NRP1, OCLN, OPLAH, OR10V1, O R13J1, OR2A4, OR2T10, OR2T5, OR4X1, OR52A1, OR56B4, PDX1, PGAM4, PIG F, PIGV, PIK3CD, PIK3R4, PLCB2, PPP1R3A, RAC3, RELB, RHOA, RPS6KA6, S EMA3E, SESN3, SH2D1B, SLC9A1, SPCS1, TUBB3, HSP90AB1, PLA2G12A
Negative_12348	GLA, ID2, NOG, NPY, OTC, SPN, ACLY, ACOT11, ADH4, ANPEP, APLP1, ATP6V0 C, B3GALT5, CACNA1D, CASP6, CDKN2A, CHIT1, CNGB1, COASY, CSNK1G1, CS NK2B, CXCL1, CXCR5, CYP26A1, CYSLTR2, DDIT4, DHODH, DHRS4, EGLN1, EN PP1, EPAS1, EPHA5, FCGR3A, FZD4, GALK2, GANAB, GGT6, GNAI1, GTSE1, HA AO, HMBS, HMOX2, HYAL2, IL15, IL8RA, IL8RB, IRF5, MAPK10, MCM2, NAT1, NEU1, NFATC3, NFYB, NOD1, NOX3, NPAS2, NUMB, OR6C76, OR8U1, OR9A4, PF N4, PGAM2, PIM1, PIP4K2B, PIP5K3, PLA2G5, PLCD4, POLA2, PPARA, PPP2R 1B, PPP2R5C, PRIM2, PRKAR2B, PTGDS, PTGIS, PTPRM, RDH10, RUVBL1, SC4 MOL, SEMA3G, SEMA4F, SHC1, SLC2A4, SMPD2, SOCS2, TACR3, TMLHE, TSLP, TUBB2C, VCAM1, ZFYVE9, ATP6V1C2, ATP6V1G3, MAPKAPK2, PHOSPHO1
Negative_12349	BTC, CBL, DCC, DCT, SHH, ABP1, ACVR1C, ADCY3, AKR1B10, ASRGL1, ATG7, A TP6V1D, B4GALT2, BLNK, CACNA1C, CASP7, CCR8, CD34, CDC26, CHRM3, CLD N8, CREB3L2, CSH1, CYP3A5, DLL4, DTX3, E2F1, EI24, FCER1G, GSTK1, GUC Y2F, HADHB, HSD17B4, IFNA14, JAK2, LIMK1, MAGI2, MAP4K1, MAP4K2, MAP K13, MDM4, MTMR1, MYH6, NAGK, NCOR2, OR2D3, OR5H2, PARD6B, PDGFRB, PD K1, PFAS, PISD, PLTP, PLXNA3, POLD2, POLR1B, PPP2R2B, PPP2R5C, PRKAR 1A, PRSS2, PTGS2, PTK2, PTPN11, RDH5, SELPLG, SLC27A4, SMPD1, SMPD3, SMPD4, SPHK2, SRGAP2, SV2B, TAS2R5, THBS3, TUBA3C, UCK2, UGDH, UROS, VARS, WNT3, HLA-DPB1, PPARGC1A, TNFRSF17
Negative_12350	BTK, LHB, ME1, PGF, UBC, AADAC, ACTA2, AGRN, ALPL, APLP1, CACNA1S, CDC 27, CYP17A1, DDHD1, DDX54, FGF2, FGF3, FGFR4, FMO1, GLI1, GNAI1, GNRH 1, GUCY1A3, IL23R, INHBC, INPP4B, ITPKB, LIMK1, MAP3K2, MEF2C, MYD88 , NMNAT1, OR2F1, OR51L1, PDIA4, PIP4K2B, PLCG1, PSME2, PTPRR, RAPGEF 2, RBX1, SEMA4C, SLIT2, TAS2R13, TBK1, TKTL1, XYLB, ATP6V0E1, HSP90A A1, SERPINB5
Negative_12351	CGA, MAX, ACO1, ADCY10, ALG12, BMP8B, C3AR1, C7orf16, CCL19, CCNH, CD C26, CLTA, CYP1A2, DHRS4L2, DPM1, DPM2, ECSIT, EDNRB, EPHA4, EXTL3, F OSL1, GNMT, H6PD, IL18R1, IL22, INHBC, IQGAP1, MYLK2, NEFM, NME7, NOT CH3, OR1A2, OR51B2, OR51G2, OR52B6, OR5P2, PANK2, PDE8B, PIGW, PTGS2 , SCLY, SELP, SEMA4A, SOD1, TNFSF9, TPH2, TRAF2, TUBB3, UNC5A, VAV1, A ASDHPPT, ATP6V1G1, HLA-DPA1, HSP90AB1
Negative_12352	AK2, AUH, C8G, CR2, IHH, JUP, ME2, MYC, PLN, TH, ACADS, ACP2, ACTC1, ACV RL1, ADAM17, AGTR1, ATN1, B4GALT7, BAIAP2, BET1, CASP8, CD79A, CD8A, COL4A6, COL5A1, CXCL2, CYFIP1, CYP27A1, DDB2, DPYD, E2F5, EDNRA, ENT PD4, EXT1, EXTL2, FASLG, FLT1, FMO3, FZD10, GLDC, GMPS, GNA12, GNA14, GNAL, GRHRP, IDH2, IDI2, IL18RAP, IL20RA, INPP5B, KARS, KDSR, KIR2DS 5, L1CAM, NEFL, NEU2, OR10G9, OR10V1, OR14I1, OR2C1, OR52E4, OR6C76, OR6N1, PARS2, PAX6, PDE6H, PDGFRA, PFKP, PGAP1, POLD3, PPARD, PPP1CC , PRIM1, PRKCE, PSME3, PTPRJ, SEMA4D, SGPP2, SHMT1, SLIT2, SORBS1, SP TAN1, ST8SIA1, ST8SIA5, SUFU, TDO2, TRDMT1, TYRP1, ULBP2, VARS, VDAC 3, WASF1, XYLT1, TNFRSF10A

Negative_12353	AMT, F10, F11, TAT, ADH4, AKT2, AOC2, APOA1, ARHGEF1, B4GALT2, BAIAP2, C7orf16, CARS, CBR1, CD28, CDS1, CHPF, CLDN1, CLDN22, CMPK1, CYP26B1, CYP2A6, CYP2J2, DARS, DARS2, DPYS, DUSP4, ENO2, EPHA8, GUCY1B3, HA DHB, HRH2, HTR6, IFNA17, IL12B, ISYNA1, ITPA, KIR3DL3, KLRK1, LAMC2, LILRB3, MAN1A1, MAP3K2, MRAS, MYH7, NME2, OR10A7, OR2A2, OR2M4, OR2M7, OR2T10, OR2T6, OR3A3, OR4A15, OR4N5, OR51D1, OR56A1, OR5B21, OR5D16, OR5L1, OR9A4, OR9I1, OSMR, PAK7, PARVB, PFN1, PHKA1, PIGN, PIP4K2A, PLCD3, PLXNB3, POLA1, POLR2F, PPID, PROC, PTPN11, PVRL2, PYGB, SEL E, SNAP25, SOAT1, SPRY1, SRGAP1, TAS1R2, TPM3, UGT2B10, WNT7B, ZAP70, ATP6V0A1, ATP6V1E2, HLA-DPB1, HLA-DQA2, SERPIND1, ST6GALNAC1, TNFRSF13C
Negative_12354	C5, CFD, MPL, ABLIM3, ABP1, ADRB3, AKR1B1, ATP13A2, C4BPB, C9orf95, CAPN2, CDC26, COL1A2, COX15, CYSLTR1, DGKD, ENPP7, EPB41L2, EPHA5, EP HA8, EPHB2, EXT2, FGFR4, FOXA3, FTCD, G6PC2, GALNT14, GALNT6, GANAB, GATM, GP1BB, GSTA3, HSD3B7, HTR2B, HTR2C, IFNK, IL18R1, INPP5B, LPAR1, MAPK14, MYH1, NKX6-1, NRG3, NUDT5, OR10Z1, OR1A1, OR2T4, OR4F6, OR5J2, OR5K2, OR5T2, OR7G2, PIK3CD, PLA1A, PNPLA3, PPAT, PTCH2, RASGRP4, ROCK1, SC5DL, SDHC, ST6GAL1, STX8, TBXA2R, THBS2, TYMP, UBA7, WNT11, WNT4, WNT5B, WNT9B, HSP90AA1
Negative_12355	CRH, CRK, FOS, TPR, ACAT1, ACP5, ACPP, AGXT2, ALOX5, ARD1A, AXIN1, B3GAT3, C7orf16, CCL3, CHRM1, COL4A4, DDIT4, FABP4, FARP2, FBP1, FGF1, FGF5, FLAD1, GALNT2, GNAZ, HAP1, LIPF, MAPK11, MASP1, MTHFD1, NAGS, NFATC1, NMNAT3, OR10A7, OR4C6, OR4F5, OR51Q1, OR52M1, OR5J2, OR6B3, OR6N2, OR6S1, OR7G2, PANK2, PCCA, PPP2R5E, PSEN1, RHOQ, SEMA3D, SMPD3, SULT2A1, TBL1X, UPP2, YES1, ZMAT3, HLA-DRB3, MAP3K7IP1, SUV420H2
Negative_12356	AMT, CFH, DUT, F11, FOS, GGH, MYC, PGP, RFK, SRM, AANAT, ACADS, ACP2, ACYP1, ADRA1D, ALDH1A2, ATN1, ATP6V1D, BIRC5, BMP5, C1QB, C3AR1, CAMK2B, CAMK2D, CCL27, CD44, CD58, CLOCK, DDHD1, DDX47, ELK1, ELK4, EPHA3, ERBB4, FARSB, FGD3, FGF2, FTH1, GNAQ, GZMA, HARS2, IL5RA, ITGB5, KRAS, LRDD, MAP4K4, MAPK7, MDH2, METTL6, MGAT4A, MS4A2, NADK, OR10H5, OR11H6, OR3A2, OR4X2, OR52N1, OR52N5, OR5T1, OR7D4, PDE3A, PIK3CB, POLR2I, POLR3K, PPARG, PPP1CA, PRKAB2, PRKCG, PRKCZ, PTPN1, PTPRC, RARS, RCHY1, RPS6KA6, SC4MOL, SESN2, SLC25A4, SOAT2, SPHK1, SULT2A1, TAS2R4, TBK1, TBL1XR1, TOLLIP, TOMM40L, TSTA3, UMPS, WHSC1, XYLT1, YARS2, CACNA2D4, HLA-DQB1, SUV420H1
Negative_12357	AK3, TNF, TNN, ACSL5, ADRA1D, ALDH1A1, AMY2B, APC2, AQP7, ARSD, ASAH1, CACNB3, CD3E, CHRM5, COL4A2, COMT, CTNNA2, CXCL2, CYP3A4, DFFA, EXT2, FLT1, GARS, GYS1, IL15RA, KAT2B, MAOB, MCCC2, NADSYN1, OR10A4, OR10T2, OR10X1, OR4C46, P2RX4, PEMT, PGAM4, PSME3, RAC1, RBKS, RCHY1, RDH16, RGS3, SDHD, SEMA3E, SNAP23, TLR4, TRMT11, TUBAL3, WNT7A, ATP6V1G1
Negative_12358	CFH, F9, FAH, GK2, TH, ABP1, ACTG1, AFMID, ALOX5, AMPD3, BACE1, BMP7, C1QC, CARS2, CD70, CDC27, CHRNA7, CREBBP, CSNK1D, DAAM1, DDX41, DOT1L, DRD5, EXTL2, FBP1, FLOT1, GNAZ, GRAP2, HSPB1, HTRA2, IL1A, IL5RA, ITGA3, KCNQ1, MAFA, MKNK1, MKNK2, MMP9, OR2G3, OR51B5, OR8D4, PGLS, PLAT, PLCB1, PNMT, PNPLA3, PPARG, PRKAB1, PTGES, SEMA4F, SKP2, SLC27A5, SRD5A2, SSH2, ST3GAL5, TKTL2, TYROBP, UCK1, ULBP2, ULK1, WNT10B, ATP6VOD2, ATP6V1G2

Negative_12359	ADK, BTK, DDO, F7, HGF, HK3, IHH, MVK, PLN, PML, TK2, ACLY, ACVR1B, ADCY5, ALDH9A1, APL1A, ARG2, ATP5J, ATP6V1A, B3GNT2, BBOX1, BCL2L1, BMP8A, CBLB, CCL17, CCL2, CDK2, CLCA2, CNTFR, CNTNAP2, CTBS, CUL1, DAXX, DPAGT1, DPYSL2, DUSP16, EDNRB, EPRS, FGF13, FGF18, FOXO3, GNA11, GP1B, GRIN2A, HADH, HCST, HYAL2, IFNA13, IFNK, IL1R1, KIR3DL1, LIMK2, MYL5, NEU3, NKD2, NMNAT3, NSDHL, OR13D1, OR1A2, OR2T34, OR52A1, OR5M3, OR6B3, OR6C75, OR8H2, OR8J3, ORC3L, PAK7, PAX4, PAX8, PDE2A, PDE7B, PDIA4, PDX1, PIGC, PPAP2C, PPP1R3B, PPP2R2A, PRDX6, PRKAG3, PVRL3, PYGL, QARS, RBPJL, RFNG, ROBO2, RXRG, SELP, SEMA7A, SESN2, SLC25A5, TPM1, UGT2A3, YWHAB, PRICKLE2, ST6GALNAC4
Negative_12360	HAL, SI, ACTN1, ACYP1, AKR1C3, AMPD2, AMPD3, ARSE, BRAF, CANT1, CASP8, CCR5, CD38, CDKN2C, CLDN10, CLDN8, CNGA4, CSF1R, CTNNA1, DPYSL2, ENPP3, EPHA5, ETS1, FARS2, FCGR3A, FGF3, FLT4, FRAP1, GAD2, GNAI2, GNPA, GP1BB, GRHR, GUCA1C, HYAL2, IL3RA, IL6ST, IL8RA, IRS4, ITCH, JAK3, JAM3, LYPLA1, MCCC2, MDH1, MGLL, NNMT, NRP1, NT5C, OR13C5, OR1A2, OR2L8, OR2T29, OR8G1, PARS2, PFN4, PGM1, PIP5K1B, PNPT1, POLD4, PON1, PTCRA, RHOQ, RPN2, SLC27A5, SOS1, TRADD, WNT3, MAPK8IP1
Negative_12361	AK7, CRH, EDA, MET, ABLIM1, ACAT1, ACP5, ADCY3, AGPAT1, AGXT2, AKT1, A, SNS, ATP4A, ATP5H, CASP10, CCL20, CCR3, CDH3, CDKN1B, CREB5, CTSS, CXCL10, CYP2A7, CYP3A7, EDN1, ENPP3, FASN, FGF3, GATM, GBGT1, GMPPA, GN, G13, GNMT, GSTA5, HEMK1, HLA-DOB, HSD3B2, IFNA10, IFNA13, IFNA6, KAT2B, MAP2K4, NAT6, NRAS, NRG1, NT5C3, OR10A2, OR13A1, OR2M2, OR2T6, OR51B2, OR52B4, OR52K1, OR52N5, OR5D13, OR6C70, OR8D2, P2RX3, PCYT1B, PGK2, PHPT1, PIGC, PLCB4, PLD2, PRSS3, PTGER1, QPRT, RASSF5, RHOA, SARS2, SAT2, SELE, SPTLC1, SUCLG1, SULT1E1, TACR1, TAS2R4, TAS2R50, TBL1XR1, TMLHE, TRAF6, WASF1, WNT8B, YARS2, HSD17B10, PNLIPRP2
Negative_12362	DDC, FAH, FGG, GHR, HYI, LEP, SMS, ZYX, ACTA2, AGPAT1, AKR1B1, ALG13, ARG1, ARPC2, ATP4B, B3GALT5, B4GALT3, BCL2, BIRC5, CAV3, CCNG1, CCR4, CD3E, CDC27, CHDH, CKMT2, CXXC4, DAXX, EPOR, EREG, FGF20, GALC, GDF7, GFAP, GOSR2, GSTO1, GUSB, ICOSLG, INHBC, IRS2, LAMA4, LARS2, MAOB, MINPP1, MOV10L1, MTHFR, MYH14, MYH6, MYLK3, NRG1, NT5C, OR10H2, OR10X1, OR1G1, OR3A1, OR4D5, OR4F5, OR51B5, OR51G2, OR52K2, OR56B4, OR8B4, OR8H2, OXCT2, PDGFA, PFKM, PIM1, PLA2G5, PLXNA1, POLA1, POLR3G, PON1, PPP3R2, PTCH1, PTDSS1, RDH11, RUNX1T1, SCLY, SEMA4A, SPRY2, STAT5A, STT3B, TPH2, TRAF1, TRAF2, TRAF4, TSC2, TUBA8, USE1, WARS2, WASF3, WNT8A, XCL1, MAPKAPK5, SERPINC1, TNFRSF6B
Negative_12363	ABO, APP, DBI, DDC, EBP, HPD, IL3, MIF, NPL, UBC, ZYX, ABLIM1, ACTN2, ACY1, ANAPC1, C1QC, CACNA1H, CAMKK2, CD36, CDC14B, CHKB, COMT, COQ6, CRHR1, CSDA, CSNK2A2, CTNNA1, CYP4F2, DAAM2, DAPK2, ENAH, EXTL3, FBP2, FGF14, FLT3LG, FZD3, GALNTL5, GARS, GNPAT, GP1BB, GSTM1, GZMB, HHIP, HPSE, HRH1, MTHFS, NFE2L2, NFKB2, NTRK2, OR10AD1, OR10G2, OR2M3, OR4Q3, OR52B6, OR8S1, OR9Q1, PGM3, PIGK, PIGO, PLA2G2E, PLD1, PPM1B, PTC, H2, QPRT, RAPGEF3, RASA1, RASGRF1, RETSAT, RRS2, SEMA3F, STAM2, STAT6, STX8, TBXAS1, TOMM40L, UGT1A10, VAMP3, ARHGEF12, HLA-DRB5, MAP3K7IP2

Negative_12364	CGN, FUK, GAA, IL8, MAG, RDX, XDH, ACAD8, ACOX3, ACSL5, ACTC1, ACTN2, A DIPOQ, AKR1C3, ALOX12B, ATP5G1, ATP5L, B3GAT1, B3GAT2, BLVRA, BRAF, CCKBR, CCL7, CCND3, CCNE1, CCR2, CD46, CDC16, CDK4, CFL1, CLCA2, CMAS , COQ6, CXCL12, DERA, DUSP5, EPHA7, FADD, FGF20, FOSL1, GCLC, GNA13, G RM1, GSTP1, IDH3A, IL17A, IL21, INHBA, INPPL1, ITGA8, LAMB3, LYPLA1, MAPT, MARS, MCM7, MEF2C, MNX1, NAT2, NAT5, NFKBIB, NT5C2, OR10H2, OR2 L2, OR4K17, OR51F1, OR56B4, OR5A1, OR5V1, OR7G1, OR8K1, PDE1C, PDE3A , PDE4A, PIAS1, PIK3CB, PIP4K2C, PPP2R2B, PRDX6, PSENE1, PTPRM, PYGB , RHEB, RHOQ, SFRP4, SMAD7, STX10, TAS1R3, TLN1, TP73, TUBB2C, UBE2L3 , WNT3, WWP2, CACNA2D4, PAFAH1B3, TNFRSF18
Negative_12365	C1S, CS, GSR, IL9, MIF, MOS, PXN, AASS, ACLY, AHCYL1, ANAPC2, ARPC1A, A RRB2, BMP6, BUB1, CACNB1, CCL2, CCL4, CCR1, CD28, CD44, CD86, CDC7, CD KN2B, CMBL, CNGA4, CSNK1A1, CTSB, CTSG, DDHD1, DDX19A, DDX54, DEGS1, DNMT1, EIF4E2, FGFR1, FM05, FOXO1, FSHR, FTCD, G6PC2, GANC, GRIN2B, H MBS, HMGCS1, HTR2B, IARS, IL11, INPP1, LAMB2, MAN1A2, MAP2K4, MECP, M TAP, NCK2, NEU2, NMNAT3, NOTCH3, NUDT8, OR13G1, OR2T6, OR51F1, OR52D 1, OR8D2, P2RX5, PERP, PIAS1, PIGT, PLCB4, POLD2, POLR3B, PPA1, PYCRL , RAPGEF2, ROBO2, STAT2, TAP2, TBL1X, TBXAS1, TGDS, TIRAP, TLR4, TNXB , TRIP10, TUBB, UGDH, UPB1, WASF2, WNT3A, ATP6V1G2, CSGALNACT1
Negative_12366	CAT, DAO, DBI, FGG, RET, SI, ACACB, ACTA1, ACTN1, ADSL, ALOX12, ALOX15 , AMY2B, BCAT2, C4BPA, CASP6, CNDP1, CNTNAP2, COMP, CTBP2, CYP3A4, DD X51, DIAPH1, DLAT, DPYSL2, ENPP2, EXTL2, FCGR3A, GADD45G, GARS, GCLM , GGCX, GNB3, GPAM, GPX7, GRIN2B, HSD17B4, IBSP, IFNA8, IL12RB2, IL1B , IL28B, IL4R, IQGAP1, ITGA3, ITGA4, MAP2K7, MAP3K7, MAP4K1, MGAT1, M YH7B, NME7, NRAS, OR10Z1, OR51F2, OR52I2, OR5AR1, OR5F1, OR9Q2, OXCT 1, PCCA, PFKP, PIGV, PLCD4, POLD3, PPP2R2C, PRKAB2, PTGIS, QARS, RAD5 1, RASGRF1, RCHY1, RERE, RPN2, RRM2, SELP, SEMA3F, SLC12A2, SLC33A1, SOAT1, SSH3, SUFU, THBS3, TSHR, UMPS, WEE1, HLA-DRB3, TNFRSF1A
Negative_12367	CFH, DBT, IVD, ZYX, ACP2, ACSM1, ADAM17, ADIPOR1, ALOX5, APBB1, ASMT, BMP4, CACNA1E, CACNG8, CBLC, CCL14, CD59, CHPT1, CNTN1, COQ7, CREB3L 3, CSF2RB, CSNK1G2, CTNNA3, CX3CL1, CXCL2, DHRS4L2, DTX2, DUSP10, DU SP5, DVL2, E2F2, EFN3, ENTPD2, F2RL2, FGF4, FLOT1, GNA12, GNMT, GRB2 , HCST, HEXA, HHIP, HLA-DMA, HLA- DRA, HSD17B4, IFNA5, IL13, IL20RA, IL2RA, IL5RA, IPPK, ITGA2, JAK3, K IR2DS4, LEF1, LYZL1, MASP2, MAT2B, MYH8, NODAL, OR10A3, OR13C2, OR14 A16, OR52N1, OR56A4, OR7D2, OR7G1, OR8S1, PDE6G, PDGFRA, PDK1, PLA2G 2E, PLD2, PPAR, PPCDC, RFWD2, RHEB, RHOA, SCP2, SNAP25, TBL1X, TUBA1 B, TXNDC12, ULK1, WARS, WWP2, YKT6, YWHAQ, ARHGEF12, PDCD1LG2
Negative_12368	F9, FGG, HGF, LEP, OAT, TPO, UBB, ACAT1, ACOX1, ACP5, ADCY7, ADH4, ALCA M, ALPL, ALS2, APRT, ARRB1, ATP6VOB, BMPR1A, CACNA1S, CD226, CD40, CD 44, CLDN10, CLDN22, CYP11A1, CYP2D6, DTX3L, EIF4B, ENTPD5, EPHB1, FT MT, GALNTL1, GCDH, GSTZ1, HCLS1, HIBCH, HMOX2, IL12RB1, IL1R2, LAMB1 , LEPR, MALT1, MGAT4A, MTHFD1, NFKB2, NODAL, NTF4, OR10AG1, OR10S1, O R10T2, OR1J4, OR2A5, OR2L8, OR5B3, OR5M3, PAX6, PCYT1A, PFN4, PIGA, P IK3CD, PIK3R4, PON3, PPP2R5A, PRKCE, PSAT1, PVRL1, PYGM, RAPGEF1, RO CK2, SDHC, SLIT2, SPRY3, ST3GAL4, STEAP3, TAS2R40, TLN1, TRAF4, TUBA 3E, UBE2L3, ATP6VOA4, HSD17B10



Negative_12369	CAD, CP, CSK, HYI, IL6, ME3, RFK, UBC, AARS, ABP1, ACADL, ACADM, ACSM5, ADRA1D, AK3L1, ALOX15B, ARNT, ATP50, C1QA, CACNA1F, CCL14, CCL2, CCL5, CD27, CDKN1A, CDKN2C, CSNK2B, DHCR24, DIAPH1, DUSP16, DVL1, ELK4, EPB41L3, EXTL1, FMO3, GLI2, GSTA4, HCCS, HNF1B, HSD3B7, ICAM3, IL10RA, IL22RA1, IL6R, ITGB6, JAG1, KIR2DL2, KYNU, LALBA, MAFA, MBL2, NFATC3, NFYC, NRP1, OR13C8, OR1E1, OR2T3, OR4C11, OR51B4, OR5C1, OR5H2, OR5V1, OR6T1, OR8G1, OR9G4, PAK4, PDE1B, PGM2, PIGA, PLXNC1, PPARA, PPM1D, PPP3CC, PRKAR2A, PRKX, PRODH, PTPN6, RALA, RARS, SLC27A1, STX6, SULT2B1, TAS2R8, UCK2, UGT2B11, VANGL1, VANGL2, MAPKAPK3, PDCD1LG2
Negative_12370	ASL, AUH, DCT, HAL, IL8, OGT, PGD, SMS, ACSS1, ALDOA, APAF1, BACE2, CACNG4, CACNG7, CACNG8, CD3E, CFLAR, CFTR, CHIT1, CYP2D6, CYP8B1, DBF4, DCTN1, DHX58, ENPP1, ENPP2, EPHX1, FASN, FGF14, GALNT1, GAS1, GNAI2, GNRHR, GP1BA, HAP1, HCCS, HES1, IFNK, IGF1R, IL10RA, IL15RA, IRS4, ITGA8, KIR2DL1, LMO7, MAPK13, NEGR1, NLGN3, NOS1, NPAS2, OR10G9, OR1M1, OR2A12, OR2M2, OR4N4, OR56A4, OR5T2, OR6C75, OR7C1, OR9Q2, P4HA3, PAICS, PDE6H, PLXNA2, POLR2H, POLR3B, PRSS3, PSEN1, ROCK1, RRAS, SARS2, SH3BP2, SKIV2L2, SOCS3, SOS1, THBS1, TMLHE, TNXB, TUBA1A, UBA1, WIF1, WNT3A, WWP2, ST6GALNAC4, SUV420H2
Negative_12371	ADA, BTB, CEL, CGN, FAH, ID4, LYN, SYK, ACMSD, ACVRL1, ANAPC7, AOX1, APOA2, ARPC1B, ASMT, B4GALT4, BMP2, C7orf16, CANT1, CCL11, CCL27, CCNA1, CCNA2, CD8B, CXCL1, CYP2A6, DARS, DBF4, DNMT1, DTX4, FGD3, FUT5, GALNT14, GNAI2, GNAO1, GPAA1, GSTM3, HLA-DMA, HMOX1, HSPA8, HTRA2, IKBKG, IL6R, ITGAD, LDHD, LIFR, MASP1, MINPP1, MYH7B, NOD1, NOS1, NPR2, NRG3, OCLN, OR10H3, OR10J3, OR11A1, OR2T10, OR2T8, OR4E2, OR56A3, OR5AK2, OR8H2, ORC4L, PER2, PPAT, PPP1R3D, PRODH2, PSME2, PTPN6, RAC3, RALGDS, RASGRP4, RPS6KA5, RXRB, SAT2, SEMA4B, SGPP1, STAT2, STMN1, SULT2A1, SV2B, SV2C, TALDO1, TLR4, TPMT, UNC5B, XCL2, ATP6VOD1, HSP90AB1
Negative_12372	F5, GK, ID4, ME2, ACPP, ADSL, ALG12, ATF4, BCAR1, BCMO1, CALML5, CCL1, COL2A1, CYP4A11, DARS, DDX19A, DPAGT1, DRD5, EFNA1, EPHA4, FGF9, FIGF, FZD8, GMPR, GSTA4, IL2RB, KCNQ1, KLKB1, LDHA, LEF1, MINPP1, NANP, NEUROG3, NRAS, OR13G1, OR13J1, OR2B6, OR52E6, OR52N2, OR5L2, OR6C70, OR7D2, OR7G1, PIGM, PLA2G3, PLAU, PLCD3, POLD2, POLE2, POLR2D, PRLR, PTPRM, RDH12, SDC4, SMARCA2, SOS1, TNFSF10, UGCG, UGP2, UGT2B17, MAPKAPK5, TNFRSF11B
Negative_12373	BTB, C8A, FUK, HGD, HPD, ACOT11, ACP1, ADH4, ARPC1A, ATP6V1F, CACNG5, CCNE2, CHST11, COL2A1, CRHR1, CYFIP1, CYP26A1, CYP2F1, DCTD, DGAT1, DGKD, EPHA7, FOXO3, GCNT3, GNAL, GRIN2D, HIBADH, HTR2C, IL17RA, IL18R1, IL8RB, ITGAE, ITGAX, MAN1A1, MCM3, MINPP1, MPP5, NMNAT2, NR1H3, OR10G4, OR2T11, OR51L1, OR52J3, OR5B3, OR7C2, OR9Q2, OXTR, PFKFB4, PHT1, PIGC, PLOD3, POLR1D, PTGIS, RAC1, RASGRP4, RCHY1, RDH16, ROBO2, SDHD, SELE, SFRP2, SPHK2, SPRY4, TIAM2, TNFSF8, VAV3, WNT7A, XIAP, GABARAPL2
Negative_12374	AK1, C4B, OSM, ACSS1, ADCY3, AMY2B, ARPC2, CBR1, CCR4, CDH4, CPT1B, CXCR3, DGKI, DUSP10, EDA2R, EFNA1, EFNA5, EGLN3, ERO1L, FGF13, FMO2, GMPR2, GUCY1B3, HADHA, HCLS1, KLRC4, MAP3K11, MAP3K13, MAP4K2, MAPT, NEUROD1, NOS3, NTRK1, OR10A4, OR10H4, OR2A12, OR2M5, OR2M7, OR2T12, OR4A16, OR5D18, OR6C70, PDE2A, PDE4B, PEMT, PGM3, PIGH, PLA2G2F, PLA2G3, PTPRF, RASA1, RELA, SC5DL, SETDB2, SFRP1, SMAD4, SRD5A2, SSX2IP, ST3GAL6, STAT1, TAS2R7, TCF7L2, WNT1, ATP6V1B2, CACNA2D4, HLA-DPB1, ST6GALNAC5, TNFRSF10B

Negative_12375	CRH, CTH, DBH, PDC, VTN, AGXT, AKR1C2, AMY2A, APOA2, ARD1A, B3GALT5, B3GNT5, B4GALT4, BIRC5, BNIP1, CACNA1B, CCR1, CEBPA, COL5A1, CYP2S1, DTX1, DVL2, EPHB4, FCGR3B, FUT3, GALK1, GFPT1, HSPA2, IFNA16, ITGB6, JAM2, KIR2DL1, MAML3, MCM5, NAGK, NFAT5, NTRK1, NTSR1, OR13C8, OR1D5, OR1G1, OR1L4, OR4K13, OR4N2, OR4N4, ORC6L, P4HA1, PDE4A, PDGFC, PFA S, PLCG2, POLR3K, PPP2R5A, QARS, SLC27A5, SNAP25, TACR2, XIAP, ZIC2, HLA-DQA2
Negative_12376	CD6, RPE, ACMSD, ADCY10, ALPL, APOA5, ASAH1, ATP2A3, AVPR1B, CCKBR, CCL1, CCL16, CCR6, CXCL9, DAAM2, DERA, EIF4B, ENTPD2, FDPS, FGD3, FZD9, GCNT4, GNB1, GUCA1A, HHIP, IL15, IL21, IL22RA2, IMPDH2, ITPK1, KDSR, KIR2DL1, MAD2L1, MAML2, MCM3, MFNG, MYH7, NCOR2, NFATC4, NODAL, NPR1, OR3A1, OR4K14, OR51L1, OR6C75, OR6Y1, OR8K3, PARVB, PARVG, PAX6, PDE7A, POLD4, PPP1R1A, PTGS2, RETSAT, SMAD1, ST3GAL3, TP53I3, TRAF5, UBE2L6, ALDH18A1, PLA2G12B
Negative_12377	BCR, FYN, NNT, RPE, AARS2, ACOT11, ACPT, ACTA1, AGRP, C1QA, CBR1, CCL4, CCR2, CD46, CHAD, CTNNA1, ENTPD4, ENTPD6, EPB41L3, EPHA2, F2RL1, FADS2, FECH, FUT1, FUT4, GALNTL4, GDE1, GRM1, IGFBP3, IL24, INHBE, ITGB5, JAG2, JAK2, LAMA3, MTHFD2, MYH7, OR10J3, OR2S2, OR2Z1, OR4A16, OR4D6, OR4F4, OR4K17, OR51I2, OR51M1, OR5H6, OR5I1, PIGB, PIP5K1C, PLCB3, POLR2I, PPM1A, PTGFR, ROBO1, SOCS5, ST3GAL6, STX3, TBK1, THBS3, TJP3, TOMM40, TSLP, WNT4, XCR1, ATP6V1C2, TNFRSF14
Negative_12378	ADO, GLS, LCK, ME2, RDX, VTN, ACO1, ADCY4, AGPAT4, AKR1A1, ARSE, BAI1, BBOX1, CDK4, CDKN2D, CTNNA1, CXCL2, CYP4A22, DDB2, DUSP4, ENPP3, EPB41L1, EPHA3, EPHA6, EXTL3, FASLG, FGF21, FGF3, FPGT, FUT1, GCDH, GGT7, HSD11B2, HTR2B, IL19, ITGAM, LRAT, MARS2, MTHFD1L, MYH2, NCAM1, NT5C3, NTSR1, OR10X1, OR13A1, OR2A42, OR2AG1, OR3A1, OR4K13, OR5AN1, OR6C75, OR9I1, OXCT2, PHGDH, PLA2G2E, PTCH2, RBKS, SFRP2, STEAP3, STK4, SUV39H2, UNC5C, UPP2, MAP3K7IP1, TNFRSF11B
Negative_12379	CBS, CTH, F2R, FAH, FYN, GP5, MIF, XDH, ACADVL, ACSM5, ADRA1D, ADSS, ALDOC, ANAPC4, APLP1, APPL1, ARPC1B, ATP5G1, ATP5G3, B3GALT1, B4GALT6, BMPR1B, CAMK2G, CHST11, CLDN5, CMAS, CSDA, CTNNA2, CXCR6, CYP4A22, DAPK1, EFNA5, FARSA, FGF4, FGF9, FGFR4, FSHB, FUT9, GLDC, GLG1, GPD2, HEXB, IFIH1, IL1R1, INHBB, ITGA1, ITGA2B, LAMA4, MAPK10, MAPK13, MARS2, MGST2, MYH13, NAMPT, NOD1, OR10X1, OR10Z1, OR4A15, OR4A16, OR4X2, OR5A1, OR5AR1, OR7G2, ORC5L, OSMR, OXSM, PDHA2, PDHB, PIGQ, POLD4, POLE4, POLR1E, PPARA, PPP2R5D, PRKCQ, PTDSS2, PTPN5, PYCR2, RAB5A, RARA, RIPK1, RRAS, SEMA4A, SOX17, SPRED1, TAS2R14, TAS2R41, TD02, TLR2, TRPC1, UGCG1, UROC1, XCL1, ATP6VOD2, ATP6V1G2, SUV420H2
Negative_12380	GHR, HK1, SDS, TKT, ADAM17, ADIPOR1, ALOX5, APBB1, ATP6VOB, BDH1, BMPR1B, C9orf95, CASP3, CCNB2, CD19, CDC26, CES1, CES2, CHKB, CHRDLN8, CRY2, CXCL16, CYP11B2, CYP26C1, CYP3A7, DGKA, DGKZ, E2F4, EFNA4, EGFR, EPHB2, FARP2, FCGR3A, FDPS, FRAT2, FUT3, GAD1, GJD2, GZMA, HSD3B1, IFNA10, IMPDH1, ITGB4, KIR2DL4, KIR2DS5, LAMB3, MGAT4A, MTHFD2, MYH3, MYLK3, NEFH, OR11H1, OR1J2, OR2A5, OR4F5, OR51F2, OR6K3, OR7C2, OR7G1, OR8K3, OR9Q2, ORC5L, OXCT1, PGLS, PHPT1, PIK3CA, PIP5K3, PLA2G5, PLXNA2, PRKAR1B, PSME1, PTK2B, RAF1, RALA, RBKS, SC5DL, SELPLG, SIPA1, SLC25A6, SMAD7, SNAP23, SOAT2, SPHK2, ST3GAL2, STMN1, STX16, TAS2R13, TPM3, ULBP1, USE1, WNT16, WNT8B, YWHAB, SERPING1, TNFRSF11A, TNFRSF1B

Negative_12381	AK7, DDC, IL7, KDR, LTB, ME3, UBB, ACPP, ADIPOR2, AKT1, AKT3, ALOX12, B AAT, BCL2L1, BCMO1, CACNA1S, CACNG8, CARS, CCL17, CD82, CRB3, CTPS, D AG1, DDHD1, DDX50, DGKB, EIF4E2, FADD, FGF1, FGF13, GALNT2, GALNT8, G NG13, GNPDA2, GPD1, HAGH, IDH1, IFNAR2, IL23R, IL5RA, KLRK1, MAP4K3, MARS2, MGLL, NADSYN1, NAGA, OR10J3, OR10P1, OR2G3, OR4C13, OR4D6, OR 4L1, OR51B6, OR51L1, OR5A2, OR5B3, OR6A2, OR6C3, P4HA3, PARVA, PEMT, PPARA, PTPRR, RDH11, SDHA, SPCS1, TAS2R49, TAS2R8, TGFA, TLN1, TRAF5 , TSHB, UPRT, VDAC1, YWHAQ, ATP6V1E2
Negative_12382	CBL, HAL, HDC, MTR, RPE, SRM, A4GALT, AADAT, ACSM4, ACTG2, AGTR1, ALDH 3B2, ALDOC, ALOX15B, AMPD2, AOC2, ASCC3, ATP2A3, ATP4A, ATP5A1, ATP6 V1A, CD226, CD44, CD79A, COASY, COL4A6, CSF2RA, CXCL2, CXCR5, DUSP10 , EARS2, FGF7, FZD7, GALE, GALNT9, GNB3, GNMT, GPAA1, HAP1, IFNA8, IGF 1, IL29, LAMC1, LARS2, LIPG, MAD2L1, MAN1A2, MAPK9, MGAT4B, MGST1, MI CA, NCF2, NCSTN, NFKB2, NRAS, OCRL, OR10A3, OR10T2, OR2G3, OR2L2, OR4 D1, OR52A1, OR5AN1, OR5D16, OR7A5, OR8G1, PDE4A, PFKFB2, PGK1, PIAS1 , PLCD1, POLR3A, PRIM2, PSME2, PTGER1, RAC2, RARA, RETSAT, RPS6KB2, S EMA7A, SMAD4, SMPD2, SMPD4, SSX2IP, STX10, STX18, SUV39H2, TGFB2, TK TL1, TNFSF12, TUBA1B, TUBA1C, UGCG, UMPS, VAV2, ARHGEF12, CSNK1A1L
Negative_12383	CAD, CFI, CS, GDA, GP6, ACSL6, ADSS, ALOX15, APOA1, ARD1A, ASIP, CACNA 1G, CCDC6, CCL22, CDC16, CDC2, CDK5, CTSG, CYFIP1, DDOST, DEGS1, DVL3 , EI24, F2RL3, FRAP1, GATM, GNB3, GSTZ1, IFNG, IRAK1, ISYNA1, ITGA7, J AK2, KIR2DL4, MCEE, MCM7, MGLL, MTHFS, MYH1, OR1B1, OR1I1, OR2AG2, OR 2T29, OR4N4, OR51E2, OR52B6, OR5B21, PDE5A, PDPK1, PPAP2A, PPARG, SR GAP2, TMLHE, VAMP4, WNT7B, CSNK1A1L, SERPINC1, TNFRSF10A, TNFRSF10 B, TNFRSF10C
Negative_12384	C3, DAO, FOS, IL3, LSS, SHH, ACSL6, ADRB2, AKT3, ALPI, AMY2A, B3GAT3, B AIAP2, BET1, BMPR2, C1GALT1, C4BPB, CACNA1I, CACNB2, CARS, CD34, CD3 E, CD70, CNDP1, COL6A2, CREB3, CYFIP2, CYP27A1, DGKH, DGKQ, DHCR24, D KK2, FARSA, FGF9, FMO2, FRAT2, FZD4, GALNT3, GNA12, GP1BB, HLCS, IFNA R1, IL13, INHBC, IRF3, MAP3K8, MYH15, NEUROD1, NFATC1, NFATC2, NLGN2 , NT5M, OR4F4, OR52E2, PAK1, PAK4, PCYT2, PGK2, SCD5, SETD1B, SHISA5, SRGAP3, STX12, STX8, TAS1R1, TAS2R16, THTPA, TIRAP, WNT2B, CTNNBIP1
Negative_12385	AK2, CS, FOS, IL4, IL6, MAG, RPE, ADRA1B, ALDH1A1, ANAPC2, ARHGEF1, AT P5H, ATP5J2, BCKDHA, CACNA1E, CXCL9, DCXR, DDX50, DHDDS, EFNA2, EXT1 , EXTL2, FASLG, FMO2, FZD2, GDF6, GNAI2, GOT1, HARS2, HSD17B2, INPP4B , IRF9, LAP3, LTA4H, MAP3K2, MARS, MGLL, MKNK2, NKX6- 1, NOX1, NRG4, NT5C2, OR13C4, OR1E2, OR2T29, OR5A1, OR5B21, OR6Q1, OR 9A2, PAK3, PDE7B, PFN1, PLCD1, PLOD3, RAB23, RAC1, RAP1A, RENBP, SLC2 5A6, SMAD4, SSX2IP, STK11, UBE2K, ULBP2, ATP6V0A1, ATP6V1C2, HLA- DPA1, SERPIND1, TNFRSF1B
Negative_12386	AK2, GNE, GSR, PVR, TNC, ACADVL, ACSL5, ADCY1, ADRA1B, AGXT, ALDH3B1, ALG1, ANAPC10, ARSB, ATP50, ATP6V1A, B3GALT2, BAIAP2, BDNF, BLNK, CA CNB4, CADM1, CAMK2G, CASP7, CD01, CHPF, CLCA2, COL1A2, COQ7, CTF1, CT NNA3, CXCR4, CYP11B2, CYP1B1, CYP2B6, EGLN1, FABP3, FGF17, FGF22, FG F9, FOXO1, FPGT, FUT1, FUT8, GMPPA, GNAI3, GUK1, HAAO, HLA- DOA, HSD17B1, HTR2A, IL18RAP, ISYNA1, JAM2, KLRK1, LIPG, LRRC4C, MAP K9, MYH3, MYL7, NFKB1, NMNAT2, OR11H6, OR1D2, OR1L1, OR2AE1, OR2M7, O R52N2, OR5AU1, OR5K1, OR7C2, OR8K3, OR8K5, OR9G1, PAICS, PHKG1, POLE 4, PPARA, PPP2R5A, PPT1, PRKCH, PTGIS, RAC2, RAP1A, SAT1, SC4MOL, SEM A3G, SEMA4A, SESN1, SLC2A4, SMAD1, SUV39H1, TAS2R38, TUBAL3, SERPIN A1

Negative_12387	ADO, BID, DCN, FUK, HK1, INS, ME2, ACVR1C, ALG11, ALOX15, AVPR1A, BNIP1, CCND2, CLDN11, CLDN15, CMBL, CNDP1, CSNK1A1, CXCL10, CXCL12, CYSLTR1, DDX18, DGKQ, EDN1, ENTPD7, ERBB3, ESAM, FDFT1, FGF14, FGF6, FOXO1, GALK1, GALNT3, GCH1, GRIN2D, GUCY1A2, HAP1, HES1, HRAS, HTRA2, IFNA16, IL22RA2, IQGAP2, JAM2, KLRC2, MAN2A1, NADSYN1, OR10J1, OR10Z1, OR1E1, OR2F2, OR4D5, OR4F5, OR4K13, OR4M1, OR51I1, OR5J2, OR5K2, PCK1, PDE1B, PGLS, PGM1, PHKG1, PIGQ, PIK3CB, PLA2G2F, POLD4, PPCS, PPP1R3A, PTPRC, RPN1, RRM1, RXRB, SETD7, SETD8, SLC33A1, SUFU, SV2C, TAS2R42, TFDP1, TGFB3, TJP1, TRAF5, TRPM5, UGT2A1, UGT2B11, VTI1B, WHSC1, WIF1
Negative_12388	ADC, AK2, CGN, CP, DDC, ACAD9, ACAT2, ACSM4, ACY1, ALDH6A1, ALG8, ASMT, ATP5L, BCL10, C7orf16, CASP10, CDIPT, CHSY1, CISH, CLDN11, CLDN3, CLTA, CMBL, COMT, DEGS2, DGKB, ECHS1, ENO1, ENTPD8, EXT2, HSD11B2, IFNA21, IKBKG, IPPK, ITGA10, ITGAV, LDHAL6B, LIFR, LYPLA1, MADCAM1, NAT1, NEU4, NFATC3, NLGN2, NPAS2, NUDT8, OR10A7, OR5V1, OR6T1, OR7G1, OR8U1, PFN4, PIPOX, POLR2B, PPM1A, PPM1D, PRKCG, RASSF1, RFX5, RFXANK, SFRP4, SMARCA2, SOCS2, ST3GAL4, TUBA1B, VAMP4, WNT4, YARS
Negative_12389	C6, F11, IDS, LPL, ACLY, AGTR1, AGXT2, AKT1, ALDH7A1, ALG10, APHA, ATP6VOB, BLNK, BMP8A, CLDN3, CYP2C9, CYP3A4, DGKG, DUSP5, FGFR2, FUT2, GPAA1, GUCY1A2, HAAO, INPPL1, IQGAP1, KLRC3, LIPE, MITF, NCK1, NLGN1, NPR1, OR11G2, OR4N4, OR51A7, OR5V1, PARD6B, PER1, PFKFB4, PIM2, PIP5K1C, POLE2, POLR1B, PPCDC, PPP2R2D, PRIM2, RASGRP1, SDHC, SGMS1, SMAD5, TKTL2, UXS1, YWHAQ
Negative_12390	FOS, GPT, LYN, SDS, ACADS, ACOX2, AGPAT1, AKT2, ALG8, ALOX12, AMDHD2, ARHGEF2, BPNT1, CAMK2G, CCL8, CCND1, CD19, CD244, CD36, CDC20, CDH15, CHEK1, CLCA2, CNTN1, COL6A1, COQ7, CSF3, CSNK1E, CTLA4, CYP17A1, CYP4F2, DERA, DOLPP1, DRD2, DTX3, DUSP7, ENTPD2, EPHB4, EREG, FUT7, GAL3ST1, GARS, GCNT2, GNB3, GNG12, GPAM, GPD1, GPX5, HAAO, HEMK1, IL5RA, ITGA4, KCNJ11, LDHD, LIPG, MGAT2, MINPP1, MYH10, MYH13, MYH7, NR5A2, NRCAM, NRP1, OR2D2, OR4K13, OR4K5, OR51L1, OR52E6, OR8J3, PGAM4, PIGH, PLD2, POMC, PPAP2A, PPP1R1A, PPP2R2C, RARS, RBL2, SELPLG, SIGLEC1, SRGAP3, SSH1, SSH3, TAS1R1, TCIRG1, TIAM2, TMLHE, TRIP10, UNC5B, UROD
Negative_12391	AGK, EBP, GH2, GP5, IHH, IL7, JUN, MAG, PML, SRC, ACP5, ACYP2, ADIPOR1, B4GALT5, CALML6, CD40LG, CSDA, DUSP1, DUSP7, FABP4, FOSL1, FPGT, GCLM, GJA1, GLO1, GNA12, GNAI3, GPT2, HPSE, INPP5B, INSR, ITCH, MAPK11, MCEE, MCM6, NADSYN1, NEFL, NFKBIA, NME7, OR10A3, OR10A4, OR51B4, OR5I1, OR7A10, PIAS2, PLA2G2D, PMAIP1, PNMT, PNPLA3, PTCH1, PTGES, RRM2B, ST8SIA5, STX4, TRPC1, TSC1, TYRP1, CACNA2D4, MAPK8IP3
Negative_12392	ADA, ILK, SP1, TAT, ACP6, ACTC1, AMPD2, APOA1, APOA2, ARSD, ATF2, ATP5D, C1GALT1, CCL1, CDC16, CERK, CRHR1, CXCR5, CYP2A7, DGKA, EFN1, EIF4B, FBP2, FUT8, IFNGR1, IL15RA, IL1B, IL23R, IL29, IRS4, ITGAE, LLGL1, MTHFS, NR1D1, NT5C1A, OR2H1, OR4N5, OR51F1, OR52R1, OR5B12, OR5I1, PFKFB4, PIK3R2, PLA2G2D, PLOD1, PLXNB1, PLXNC1, POLR1E, PPP1CB, PPP2R5D, PRKAA2, RXRA, SLC25A5, STX16, TPH1, UGT2B17, ULK1, XYLB, ZAP70

Negative_12393	ASL, BCR, CD2, DBT, GGH, SYK, AASS, ADH5, AGRP, ALG6, AOC3, APAF1, ARG2, ASAH1, ASPA, ATP5C1, CBR1, CBR3, CHEK1, CHPF, CLOCK, COX15, CTNND1, CXCL10, DAAM1, DDB2, EI24, ENTPD1, ETNK1, ETNK2, F13A1, FADD, FGFR1, GALNTL2, GGT1, GMDS, GOSR2, GOT2, GRB2, HA01, HPSE, IL11RA, KIR3DL3, LDHAL6A, MAN2A1, MAP2K1, MAP2K5, MCCC1, MDH1, MGAT4A, MGST1, NCSTN, NFKB2, NRP1, NUDT12, OR10G4, OR10J1, OR11H1, OR2T5, OR3A3, OR4K1, OR5V1, OR6C6, OR6K2, OR7D2, P2RX6, P4HA2, PDIA4, PGAM1, PIK3CG, PIP5K1C, PIP5K3, PLA2G3, PPP2R5C, PRKAR2A, PRKCI, PTCH2, PTPRM, RRAS, SEMA4F, SETDB1, SLC9A1, SNW1, STAT4, TBXA2R, TRDMT1, WHSC1L1, PNLIPRP1, PRICKLE1
Negative_12394	AK7, C8B, HGD, IL2, TFG, ADCY8, ALDH3A2, ALDH9A1, ALG5, ANGPTL4, ARPC3, ATP5G1, B3GALT6, BCL10, CASP8, CCL19, CCL26, CCNB2, CD74, CDK7, CDKN2D, CD01, CFL1, CISH, CLDN15, CNGB1, COL6A2, CTSS, CX3CL1, CYP26A1, DGKD, DOT1L, DTX1, EARS2, EPHB4, EPHX1, FADS2, G6PD, GLI2, GNRHR, HADHB, HEXB, HMGCS2, HNMT, HSD17B3, IL24, IRF3, KIR2DL3, KRAS, LIPA, MAD2L1, MAML2, MAPT, MCCC1, MYL2, NFKBIA, OR10V1, OR2T12, OR51E1, OR52E6, OR5D16, OR6B2, OR8H2, OR9A2, P4HA3, PAFAH2, PAK6, PCK1, PGK1, PGM3, PIAS2, PIAS4, PIGL, PNPO, POLR2B, PPAT, PPP3CA, PRKAB1, PRKCG, RRM2, SESN3, SETDB1, SHC1, SOAT1, STX2, TAS1R2, TICAM2, TNFSF14, TNFSF18, UGT2B11, UPP2, WNT6, ZBTB16, CSGALNACT1, MAPKAPK5, SERPINA5, TNFRSF10A, TNFRSF10D
Negative_12395	DCK, DCT, DUT, KDR, PXN, AARS2, AGPAT4, AKR1B1, AMPD1, APOA1, ARPC2, ASAH1, B4GALT1, BLVRB, BMP8B, CALML3, CAMK2D, CASP10, CDC14A, CES1, CHRDL, COL6A2, DGAT1, EPHX1, FASLG, GADD45B, HHIP, IDI1, IL12RB1, INSR, KIR3DL1, KIR3DL2, LDHC, MAOA, MCCC1, MMP7, NANS, OR13C3, OR1B1, OR51A7, OR6B2, OR6C3, PANK3, PDXK, PIGS, PLA2G10, PLCD1, PLD2, PPM1A, PRSS3, PYGL, ROBO2, RUNX1, SDC3, SETD7, SGPP1, SKIV2L2, STAT3, UBE2L6, ULBP1, CTNBP1
Negative_12396	AK5, CRH, GPI, MPL, PGD, SYK, TNF, ACAA1, ACTA2, ADH4, ANAPC4, ARAF, B3GNT5, BBOX1, CACNG4, CAV2, CBLB, CCL19, CCL22, CCL5, CCNB2, CCNE2, CLDN18, CLDN6, COL5A2, DDX52, ENPP7, GLI1, GSTO1, IFNA14, LARS2, MCM2, MGST3, NUMB, OLR1, OR10C1, OR11I1, OR1K1, OR2AT4, OR2T11, OR2T4, OR52K2, OR5T1, OR6A2, PCYT1A, PIP4K2A, PLOD1, POLR2L, PPP2CB, PRODH2, PTGES, RAPGEF2, RELB, RHOQ, SETD2, SPRY1, ST3GAL6, STX7, TAP1, TD02, TLN2, TLR3, TNFSF8, TRAF2, TUBB4, UAP1, VAV3, WIF1, WNT16, WNT7B
Negative_12397	DCN, GGH, LAT, NOG, ACTG1, ADH5, ALAS2, ALOX15, AMDHD1, CCL25, CCR8, CLDN4, CXCL2, CYP26A1, DARS, DFFA, DHCR7, DKK1, EP300, EPB41L1, EXT1, FGF12, FGF8, GATM, GLUD1, GUCY2F, HAAO, HSD17B3, IKBKE, IL11RA, INPP1, LCAT, LTB4R2, MAPK7, MCM7, MFNG, MKNK1, MMP9, MTMR1, NEFM, OR2A5, OR2C3, OR2G2, OR2Y1, OR56A1, OR5P3, OR6F1, OR6N2, PAK1, PCYT1A, PDE4A, PECAM1, PIGN, PIGT, PNLIP, POLR1E, PPP2R5D, PTPN6, PTPRF, RASGRP3, SAT2, SLC12A2, SNAP23, SPTLC1, STAM2, TACR2, THBD, TKTL2, TPMT, WNT7B, XYLT2, ATP6V1B2, SUV420H2, TNFRSF10B
Negative_12398	C8G, CSK, FUK, GDA, IL7, XDH, ZYX, ACAT1, ASMT, CACNG8, CDS1, CDS2, CLDN5, CMPK2, CRLF2, CSF2, CYP2S1, DKK2, EFNA3, EGLN1, ELK1, F11R, FGF18, FGF9, FLT3LG, FUT1, GALNS, GLG1, GNPDA2, GUCY2F, GZMB, HTRA4, HTRA2, IL17A, IQGAP3, LAMB4, LILRB3, NEU3, NT5M, NTNG1, ONECUT1, OR4F5, OR52K2, OR6K2, OR8K5, PANK3, PDGFB, PI4KB, PIPOX, PNLIP, ROBO3, RPS6KB2, SETD7, VAV1, WNT8B, ZBTB16

Negative_12399	ADC, AMT, DBH, DBI, EPO, ACSL4, ADCY4, ARPC2, ATIC, ATP5A1, BCMO1, BUB3, CCNE2, CD99, CEBPA, CLDN7, CNTN2, COQ6, CYP4A11, DDX4, DDX52, DHRS4L2, DHX58, DIAPH2, DUSP9, EDNRA, EPHB4, ERBB4, EVI1, FASN, FDPS, FGF13, GALNT12, HLA-DOA, HRH2, IFIH1, IGSF5, INSRR, JAM2, KCNJ11, LDHC, MYH6, NCOA4, NCOR1, NTRK2, OR10J3, OR2A14, OR2Z1, OR4C11, OR4D9, OR4F15, OR51M1, OR52E8, OR5D16, OR6K3, OR8J1, PAK6, PANK3, PDE9A, PHGDH, PIK3C2G, PLA2G5, PLOD1, PON3, PPBP, PPP3CC, PRKAG3, PRSS1, PTPRF, RASSF1, ROBO1, SESN2, SSSX2IP, SUCLG2, TAS2R50, TAS2R9, TM7SF2, TNFSF10, TNFSF12, UBE2L6, UGT2A1, UMPS, VDAC1, YWHAH, CSGALNACT1
Negative_12400	FGA, ACADSB, ACY3, ALG3, ARRB1, ATP5L, BBOX1, C1QC, CACNG8, CANT1, CAV3, CCKAR, CHUK, CREB3L1, CTBP2, CYP2D6, DEGS1, EDA2R, ENO2, ENTPD2, ERO1L, FGF21, G6PD, GJA1, GMPPB, IL20RB, IL9R, INPP5E, ITGA11, LFNG, MAFA, OR10G8, OR11H1, OR14J1, OR4K14, OR56A3, OR5B21, OR8J3, PLA2G4A, POLR2B, POLR3D, PRKCH, PTPN6, QPRT, RASGRP4, RUNX1T1, RXRA, TACR3, VARS, ATP6V1E2, HLA-DPA1, HLA-DQA2, HSD17B12
Negative_12401	C5, CAD, F12, MOS, ALDH3A2, ALDH9A1, ALG12, ARPC4, ATG3, ATP5G3, B3GALT2, BAIAP2, BIRC2, BMP2, C3AR1, CASP8, CD244, CD28, CLCA4, CLDN10, CSF2RB, CXCL1, CYP2C8, CYP2E1, DAD1, DPYSL2, DUSP16, DUSP3, FBXW11, FSHR, GLI2, GSTA1, IDI2, IFNA13, IFNA6, IL10, IL17RB, IRF9, ITGA2, ITGA6, MAGI1, MINPP1, MYH9, NCF1, NEU3, NGEF, NRG3, OR10AD1, OR10K2, OR2L3, OR4C6, OR52L1, OR5K2, OR6K6, PDE5A, PDE9A, PIAS3, PIK3C3, PPAP2C, PSME2, RHOQ, RPS6KA2, SEMA3F, SPTAN1, ST3GAL2, STK4, SV2A, TAS2R49, TAS2R5, THTPA, TOLLIP, TP73, TUBA1A, VAMP2, B4GALNT1, ST6GALNAC4
Negative_12402	AK3, BCR, DBT, F7, ACAT2, ADCY10, ADRA1B, AGPAT4, ALPPL2, ARPC2, BMP2, BMP6, CASP3, CCR6, CDC27, CHDH, CNGA3, COL5A2, COX15, EPHA2, EPHB1, FGF19, FLT3, GALE, GALNT2, GAMT, GSTZ1, ITGAX, ITGB8, LTA4H, MAGI3, MAP3K13, MCM3, MCM5, NFYB, NRCAM, NRG2, OLR1, OR10AD1, OR1A1, OR51A7, OR51B4, OR5AS1, OR8G1, PANK4, PARD6G, PAX6, PCK1, PDE4D, PDE6G, PDE8B, PGM3, PIGL, PIGP, PIK3R5, PLCG1, POLR2B, PPP1R3A, RALGDS, RARA, RASSF5, RDH16, RPS6KA2, RRAS, RUVBL1, SMC1B, STAT2, TBL1X, TIAM1, TUBA4A, ULK3, VANGL2, PRICKLE2, SERPINC1, SUV420H1
Negative_12403	AK3, FN1, IL8, ACSL1, ATP6V0C, ATP6V1D, B4GALT5, CASP3, CCL23, CCR3, CDKN2B, CLDN9, COQ6, CSNK2A1, CYP4A22, DUSP16, EGLN3, EHMT1, EPHA1, EXT2, FM01, FZD2, GALNT12, GNA15, HEXB, KCNB1, KLRC2, LCP2, LEPR, LIMK1, MYL7, NME4, NRG1, OR10H2, OR1K1, OR4K1, OR8K3, PDE1B, PDHB, PEMT, PFN4, PIP5K1B, PPP1R3D, RASGRP1, RPRM, RPS6KA6, SARS, SETD1B, SLC33A1, SLC9A1, SV2A, TLR5, TUBA4A, UCP1, UROC1, VASP, ST6GALNAC3
Negative_12404	AK1, DCT, HGD, HK1, LIF, MUT, ACSM3, ADIPOR1, ADRA1D, AGPAT2, ALDH1B1, ALDH3B1, ALG13, APRT, ARHGEF4, ASNS, ATP2A3, B4GALT4, CAMK2B, CCL28, CDC14A, CHIT1, CHRM5, CISH, COL4A1, COMT, CTBP1, CXCL9, DDHD1, DGKA, EPB41L2, FCGR3A, FGF11, FGF8, FLOT2, GABARAP, GALNS, GJD2, HSD17B4, IKBKE, IL25, IL5RA, INSRR, IQGAP1, IRAK3, LRDD, LTC4S, LYZL1, NMNAT3, NT5E, OR10K1, OR10X1, OR13A1, OR13J1, OR14C36, OR2A14, OR2T3, OR3A3, OR4M2, OR51I2, OR6C2, PAK4, PLXNA2, POLR2H, POLR2I, PTPN7, RPS6KA1, SHC3, SIGLEC1, SLC27A4, SNAI2, SOS2, TACR2, TAS2R4, TAS2R5, TAS2R50, WBSR17, HLA-DRB5, MAPK8IP3

Negative_12405	ADC, BID, SCD, ADCY10, ADIPOR2, ALG10, ARPC5L, ATF4, B3GALT1, B3GNT4, BMP2, BPGM, CACNB3, CANT1, CCL28, CD86, CEBPA, CHPF, CLOCK, CREB3L3, CRLF2, CSF2, CSF3, DHRS3, DUSP16, EFN2, ELK4, EPHB2, ERBB2, FBP1, FPGT, FZD5, G6PC2, GAD1, GFPT1, GLB1, GNPDA2, GUCA1C, HMGCS1, IKBKB, I TGA5, LAMC3, LIPG, LTC4S, MALT1, MAP2K3, MARS, MYL5, NCK2, NFATC4, NF KB2, NRXN2, NSD1, NTRK1, OR1F1, OR4K17, OR4N5, OR52D1, ORC4L, PAFAH2, PAK2, PDE4C, PDE8A, PFAS, PFKFB4, PLCB4, PNPLA3, POLA1, POLD3, PPP1 CC, PPP2R5B, PTEN, PTGES, RAD51, RXRG, SCIN, SDHB, SEPHS1, SOX17, SSX 2IP, ST8SIA5, TSNARE1, TUBAL3, UGT1A10, UROC1, WNT2B, YARS2, YKT6, Y WHAE, ZMAT3, TNFSF13B
Negative_12406	EPO, ID4, ACSS1, AGTR1, ARPC3, ASRGL1, ATIC, ATP50, B4GALT2, CAV1, CC L14, CD82, CHRNA7, ENO1, ENTPD1, EPAS1, EVI1, GNG13, HLA- DOA, HTR6, IDH3G, IL1B, IL25, IQGAP3, LEPR, MAGI1, MAML1, MAPT, MPZL1, MYH4, MYH9, NAGS, NCF2, NT5M, OR13D1, OR52N5, OR5J2, P2RX1, PDK1, PD X1, PGS1, PRKAB2, PTDSS1, SPRY1, TDO2, TYK2, WARS, WWP1, YWHAE, ST6GA LNAC4, TNFRSF11A
Negative_12407	ADA, ADO, AK5, F7, HPD, LPO, NPL, PLN, SRM, AADAC, ACY1, ADSS, AGTR1, AK R1D1, ALDH5A1, ALOX12B, APOC3, ARSB, BAAT, BAIAP2, C5AR1, CACNG6, CC L13, CCL28, CHST13, COASY, EGFR, ENPP2, FECH, GALC, GALNTL2, GCNT4, G FAP, GLG1, GLUL, GSTA4, GSTA5, GUCA1A, GUCY2D, HSD17B4, HTR7, IDUA, I FNA8, IFNG, INPP4B, ITGA2, ITGB6, KIR3DL1, LCMT1, LM07, MCAT, MYL7, N AT5, NCF2, NKD1, OR10H3, OR10J3, OR2A5, OR2AG2, OR4A15, OR51G1, OR51 I2, OR8K3, OR9I1, ORC3L, PARS2, PDHB, PFN3, PIGW, PLA2G10, PLA2G3, PL OD3, PPT1, PROC, PTGDS, PTPN5, RAB23, SETDB1, SGPP2, SHMT1, SPRY1, SQ LE, ST3GAL5, TAS2R42, THBD, THBS2, TNFRSF4, TNFRSF8, TRAF6, TYMP, UG T2B11, UPP2, WWP1, XCL2, ATP6V0A2, CACNA2D2, MAP3K7IP2, SERPINB5, T NFRSF14
Negative_12408	APP, DAO, GSS, HDC, JUN, SFN, XDH, AGPAT6, ALDOA, AOC2, B3GAT3, BDKRB1, CAMK2D, CAMKK1, CCR8, CD40, CD80, CDH5, CLDN6, COL1A1, CTF1, CYBB, D DX52, ENTPD1, FGF6, FZD5, GALM, GALT, GDF7, GLO1, GNRH1, GRIA1, GSTO2, HHEX, HIP1, IFNA14, IL15, IL17A, IQGAP1, ITPK1, ITPKB, LDHA, LIPF, M AP3K5, MAPK13, MGAM, MYLK3, NAT5, NCF4, NFX1, NFYB, NKD1, NKX6- 1, NME4, NMNAT3, OR12D3, OR13A1, OR1F1, OR2M2, OR2M7, OR51S1, OR7A10, PAK4, PANK4, PCYT2, PDE6D, PDK1, PER2, PPAP2A, PPP1CC, PPP2CB, PPP2 R5D, PRKCG, PRKY, PTGS2, RARS2, RASGRP4, SEMA4D, SEMA4F, TAS2R41, TA S2R48, TBL1XR1, TBXAS1, TNFRSF4, TUBAL3, UGT2B11, WHSC1, EIF4EBP1, KIR2DL5A, ST6GALNAC6
Negative_12409	CGA, ID2, IL8, KHK, PTS, SI, TNF, ACTA1, ADRB2, AKR1B1, ALOX12B, ALOX1 5, ARNT, BAI1, CACNB1, CCL7, CCL8, CDIPT, CHDH, CHUK, CMAS, COMT, CTBP 1, CTPS2, CYBB, CYFIP2, DGKI, EDAR, EFNA3, EFN1, EPHB1, FZD8, GCLC, G LUD1, GNAT3, GNB1, GPD1, GPLD1, HIBCH, HTR2C, HYAL2, IDH2, IFNA6, IL1 B, IL28B, IL2RB, IL3RA, ITGB2, ITPKB, KIR2DL2, LAMB2, MICA, NADSYN1, NFKBIB, NFYC, NSD1, OGDH, OR1E2, OR4N4, OR52B4, OR52W1, OR5B12, OR6K 3, OR8H3, P2RX6, PAK7, PPP1R3A, PRKAB1, PRPH, PYGB, RDH12, RELB, ROCK 1, RPN1, SETMAR, SH2D1A, STX5, SULT1A1, SV2B, TAP2, TGFB3, TJP2, TKTL 1, TSLP, UCP1, WWP1, XCL1, ARHGEF12, ATP6V0A1, ST6GALNAC5
Negative_12410	CRH, CSK, ITK, OGT, ACY3, ADCY6, ADRBK2, AGXT2, ALAD, ALDH1A1, ALDH1L 1, ALPL, APLP1, ATP50, AVPR1B, B4GALT7, BMP5, CACNB2, CACNB3, CCL1, C OQ6, CSF1, CSNK1E, CSNK1G3, CXCL13, CYP4A22, DGKA, DHFR, EPHA1, FCGR 2B, GADD45B, GLG1, HCCS, HLCS, IFNB1, IL29, ITGA3, ITGB2, LFNG, MAP3K 4, MMP2, MPST, NCK1, OR3A3, OR4F5, OR4L1, OR56A3, OR5B3, OR6C1, OR7C2, PDGFD, PIGK, PLXNB1, POLE4, POLR1C, PORCN, PPP1R3B, PPP1R3C, PRPS2, PTPN5, RALBP1, RAPGEF1, RPN2, SUCLA2, TCF7L1, TDO2, TPM3, TRAF5, TU BB, YARS2, ST6GALNAC3

Negative_12411	AK7, BTK, FGG, GHR, GP6, GPI, KMO, NPY, ACAT2, ACTN2, ADCY4, ADCY8, ADSL1, AKR1A1, ALG6, BAAT, BMP7, BMPR2, CALML3, CAMK2G, CD70, CDC7, COX15, CSF3, CX3CL1, CYP3A43, DGAT1, DNMT3L, FZD1, GCDH, GCH1, GOSR2, IFNA2, IL17RA, ITGA1, MCM5, MGST2, MINPP1, MRAS, NT5E, OR2T33, OR4C15, OR51T1, OR5B3, OR6Q1, P2RX2, PIK3R5, POLE2, PPAP2C, PTPRR, PVRL4, ROBO1, SPCS3, TGFB2, TOLLIP, UAP1, UPP2, VAV2, VDAC3, WNT2B, XYLT1, ZMAT3, SERPINC1
Negative_12412	AR, CRH, EBP, LAT, TNN, ACAT2, ACSL3, ACTB, ACTG2, ADH6, ADRBK2, AGPAT4, ANAPC1, AXIN2, BCKDHA, BUB1B, CCL15, CLDN4, CNTF, CPT1A, CYP1A1, CYP2E1, DPM2, E2F1, ENO3, EPHA3, FDPS, FUT4, FUT5, GGCX, GLB1, GNAZ, GSTA4, HSPA8, ICAM1, IFNA21, IKBKB, INMT, ITGA2B, ITPKB, KAT2A, MAP2K7, NKX2-2, NRCAM, NT5M, OR1C1, OR6K2, PDGFRB, PIAS2, PIGC, PIK3C2B, PLA2G2D, PPARG, RBX1, SESN1, ST3GAL1, ST3GAL2, STK36, SULT2B1, TBK1, TFPI, UCK2, UCP1, PAFAH1B2, ST6GALNAC3
Negative_12413	ATM, CS, DCK, LCK, MVD, PGP, ADIPOR2, ARPC2, B4GALT3, BACE1, BCKDHA, BCL10, C1QB, CACNA1A, CACNA1E, CASP3, CCL27, CCL5, CIITA, CNTFR, CREB3L2, CXCR3, CYP26B1, CYP2C8, DFFA, DGKG, DPAGT1, ELK1, EPB41L2, F2RL2, FABP4, FBXW11, FGD1, GALNTL1, GGCX, GLUD1, GOT1, HEXB, HHIP, IFNAR2, IKBKB, IRS4, ITGB8, MAOA, MAP2K7, MGAT2, NEFL, OR10A4, OR13C5, OR14I1, OR1L3, OR2AG1, OR2M2, OR4A5, OR4K14, OR51L1, OR7G2, OR8B4, OR8K3, ORC4L, ORC6L, PAFAH2, PDE4C, POLR1E, POLR2D, PRKAG1, PRKAR2B, PTPN6, PTPRJ, RRAS, SLC25A6, SMPD3, TAS2R48, TCF7L1, TRAF4, UGP2, UGT1A10, UNC5B, VARS, VDAC1, YES1, ATP6VOD1, CACNA2D1, CSNK1A1L, PHOSPHO1, SERPINE1, ST6GALNAC5
Negative_12414	CD6, HGF, IHH, MYC, ABLIM2, ACPT, AHCYL1, ALDH3B2, ATP6V1F, BCAR1, C1QA, CASP3, CD247, CMAS, COMT, CRLS1, CTBS, CTNNA1, CXCL3, DAXX, DLL4, EFN1, EHHADH, EPHA4, FGD3, FGF18, FUT1, GALE, GFPT2, GRHR, GSTK1, HIBADH, HSPB1, ICOS, IFNGR2, IMPA1, INPP5A, KLKB1, LAMC1, LCP2, MCCC1, MGAT3, MTHFR, MYH9, NCKAP1, NKX3-1, NRP1, NRXN2, NTRK1, OR2L8, OR4C13, OR4C15, OR5B21, OR5D16, OR5H2, OR5K1, OR5K2, OR8I2, OR9K2, P4HA1, PDE1B, PDE7A, PIGA, PLOD2, PPP2R5E, RAF1, RAP1A, RAPGEF4, RASGRP1, RRM2, SCLY, SETD2, SOCS5, SORD, SULT1A2, SULT1A4, TNFSF18, TYK2, VAMP3, VAV2, WASL, WNT6, ZBTB16, ATP6VOD1, CSGALNACT2
Negative_12415	C4B, CDA, CKM, DBH, F7, FH, GSR, HPD, SFN, ACO2, ACVR1, AOC3, B3GALT5, B4GALT1, B4GALT2, BLVRA, C4BPB, CCL28, CD46, CDC25A, CNGA3, CNTN2, COMT, CPT1B, CRLS1, CX3CL1, CXXC4, DAG1, DDIT3, EDAR, ENPP2, EPHA4, FUT2, GCLM, GLUD1, HCLS1, HIP1, HNMT, HSD3B7, IDH2, IGSF5, IL20RB, IL23R, JAK2, KIR2DL3, KYNU, LIAS, MAPK12, MITF, MPDZ, NAGA, NEU1, NTSR1, OR2A5, OR2T4, OR4C6, OR4K15, OR51F1, OR52N5, OR7D2, OR8B12, PGAM2, PLA2G4A, POLR3D, RDH12, RERE, SC5DL, SEMA4C, SHC1, SLC27A1, SPRY2, STEAP3, TRAF5, TYRP1, VKORC1, WWP1, XIAP, ZMAT3, ATP6V1B2, TNFSF13B
Negative_12416	CD4, GP5, LHB, MYC, SMO, XDH, ABLIM3, AGXT, AVPR1B, BTRC, CACNB2, CACNG7, CANT1, CD226, CDKN2B, CHRM5, CNTN1, COL11A1, COQ5, CYSLTR2, DGKE, DIAPH2, EPHB4, FGF5, GALNT6, GCLM, GGCX, GGPS1, GUCA1A, GUCY2C, HAR2, IDH2, IFNA6, IL6ST, INPP5E, MAD2L2, MYL7, NCR1, ODC1, OR2T1, OR2Z1, OR4D1, OR4M2, OR52I1, OR5M9, OR8K3, PDE1B, PGM3, PIAS2, PLCE1, POLR3B, PPP2R2A, PRPH, PTGS2, TAS2R48, UROC1, WNT11, TNFRSF10B



Negative_12417	AK7, OSM, VCL, ACSL5, ACSM3, AGPAT3, ALDH5A1, ALPPL2, APOA2, ARPC5, A TP4A, B4GALT1, CACNA1C, CCR2, CDC23, CDC45L, CDKN1A, CHEK2, CLTCL1, COL4A2, CREB3L3, CSAD, CSF2, CTS1, F2RL1, FBP1, GALNTL4, HYAL2, IBS P, IDI1, IFNA16, IL22RA1, MAPK1, MTHFD1L, NGEF, NOTCH1, OR10J1, OR1S 1, OR1S2, OR2D2, OR4S1, OR51A2, OR51B4, OR52N4, OR9G4, ORC5L, P2RX4, PDE1A, PDE6D, PER3, PIGH, PIK3C2A, PIPOX, POLE, POLR2B, RBKS, RBPJ, R PS6KA2, SETD2, SNAP23, SOAT1, TAS2R7, TNFRSF4, TPH2, TUBA3E, UGT2B7 , ULBP3, YWHAG, PLA2G12A, PRICKLE1
Negative_12418	CAD, EPO, MAG, OGT, PAH, RET, A4GALT, ACAD9, ACLY, ACSS3, AGRP, ANPEP, APOA1, ARG2, BAAT, BDH1, CACNG4, CCND1, CD226, CDC16, CDC7, COL4A2, C XCL13, CYCS, DUSP9, E2F2, FGF20, FZD5, G6PC, GALNT13, HMGCL, HSD11B1 , HTR6, IFNB1, KLRC3, MAP2K3, MAP2K7, MAP3K11, MYH11, MYL7, NRG1, NT5 C, OR5L1, OR7D4, PAFAH2, PARVG, PCCB, PKM2, PLA2G5, PMAIP1, POLR2I, P TGES, RGS3, SHC1, SHC2, TAS1R3, TRAF2, ULK2, WNT9A, CSNK1A1L
Negative_12419	APP, CRK, KHK, LAT, LHB, WAS, XDH, ABCC8, ADORA2B, ALDH1A2, APOE, ASPA , CASK, CD244, CDH5, CDK7, CES2, CHIT1, CREB3L2, CYP2A7, CYP2D6, DARS , DGAT2L4, DNMT3L, FGF5, FRAP1, GJD2, GNAO1, GNPDA1, GSTA5, GZMB, HIB CH, HLA- F, IFNA21, IFNB1, IKBKB, INPPL1, IQGAP3, ISYNA1, LTBP1, MAN1C1, MAT2 B, MYL5, NEFM, NFKB1, NKD2, NME2, NSD1, NUDT8, OR10J5, OR10S1, OR10X1 , OR2AT4, OR2T3, OR3A1, OR51F2, OR5A1, OR8B4, PAK7, PDE2A, PFKFB2, PG M3, PLCG1, POLR2C, RAF1, RXRB, SORBS1, TUBB1, TUBB2B, ULBP3, UNC5C, W NT3
Negative_12420	APP, CGN, CKM, JUN, SMS, TH, UBC, AARS, ACTC1, B4GALT4, BACE2, CAMK2B, CAMKK2, CCL28, CDKN1A, DUSP8, ECSIT, GAMT, GARS, GJD2, GLI2, GNAI2, G RHPR, HES1, IL10RB, IL13RA2, IL23R, IL6R, INADL, ITGA8, KLRC1, MAD2L 2, MAP2K3, MGAT5B, MYLK3, NKX3- 1, NR1H3, OCRL, OR2D2, OR2T2, OR52E8, OR8A1, PANK4, PDK1, PLA2G2E, PL A2G3, PRKAA1, PRKCZ, PVRL4, RAPGEF1, RELB, RPN2, RPRM, SDC3, SMPD3, U LK3, ATP6V0D2, MAPK8IP3, TNFRSF13C
Negative_12421	AK1, CKM, FAS, FGA, GH1, GP9, HK3, IL5, PGD, ACHE, ACLY, ACSL6, ACTA2, A CTC1, ADH7, ADORA2B, ADRA1B, ADSL, AKR1C2, ATP5B, BMPR1B, BST1, CACN A1H, CACNB3, CAMK2D, CCR6, CHPF, CNTNAP2, CREB5, CSF3, CYP2J2, CYP2U 1, DEGS2, DNMT3L, DPYD, EFNA2, ENTPD5, FBXW11, FGD1, GATM, GZMB, IFNG , IL13RA1, ITGAD, LIPG, MAPK12, MITF, NEU1, NTN1, OR10H3, OR1M1, OR51 V1, OR52B4, OR5A1, OR5M3, OR7A10, PLD2, PNPLA3, POLR3K, PPARG, RBL2, ROCK2, SLC27A1, SLC27A4, ST6GAL1, STAT4, TAP2, TAS2R60, TGFBR1, TOM M40, TRMT11, UCP1, WNT3A, YWHAB, ATP6V1B1, SERPINF2, TNFRSF14
Negative_12422	ADO, LCK, SMS, ABLIM2, ACSS1, ADSL, AKR1C2, ALG2, ASCC3, ATP5I, B3GAT 2, BAI1, BUB1, BUB1B, CACNA1E, CACNB4, CARS, CCR6, CD226, CLCF1, COL1 A2, COL4A1, CPS1, CRLF2, CYP11A1, CYP2U1, DAG1, DEGS1, DFFB, DLL4, DV L2, ENO2, EPHB3, EXTL3, FOXO3, FZD5, GGT6, GNAZ, IGSF5, IL20RB, IL4R, IMPA2, JAK1, LAMA4, LCP2, LEFTY2, LIPC, MAN1A1, MCCC2, MICA, NFYB, NM E7, NTN1, NTSR1, OGDHL, OR13A1, OR1D5, OR2L13, OR2T12, OR2T2, OR4D2, OR52A1, OR52K2, OR5I1, OR5T2, OR6C70, OR6K3, OR8J1, OXTR, PIP5K3, PO LD2, PTPRC, PYCRL, SEMA3B, SH3BP2, ST3GAL1, TAS2R60, TBK1, TCF7L2, T RPM5, UAP1, HLA-DQA2, PRICKLE1, SLC25A31
Negative_12423	DCK, LAT, ME2, MPI, PVR, AANAT, ABCC8, ALDH3B1, ARHGEF1, ATG3, ATP5F1 , B3GNT4, B4GALT7, CD47, CSNK1D, CYBB, CYP1A2, DUSP10, ENPP2, FGFR1, GABARAP, GAD1, ICOS, INPP5E, ITGB7, LARS, LFNG, MAPK7, MAPK9, MCM5, M PZL1, MTHFD1, NAT2, NFKB1, OR52L1, OR52N4, OR7G3, OR9A4, PCYT1B, PDG FRA, PGK1, PIGP, PPAP2A, PPARA, PPP2R1A, PPP2R2A, PPP2R5C, PRKCZ, PR OS1, PRSS1, PVRL3, RARA, RPS6KA6, SARS, SDC3, SUCLG1, WBSCR17, CSGAL NACT2, SERPINA5, ST6GALNAC4, TNFRSF13B

Negative_12424	HK2, LIF, TFG, ACADS, ACVRL1, ADCY5, ADCY8, AK3L1, ANAPC5, ARPC1B, AT F4, ATP6V1D, B4GALT3, CCR4, CCR6, CCR7, CFTR, CHPT1, CIITA, COL5A2, C PS1, CREB3L4, ECHS1, ECSIT, EFNB2, EPHB2, FDPS, FGF18, FIGF, FLT4, FO XO3, FUT9, GNAO1, GNPDA1, GRAP2, GRIA1, GRIN2C, GSTA2, HHIP, HNF4A, H SPA2, KDSR, KLRC3, KRAS, LAMB3, LTA4H, MASP1, MGAT3, NAMPT, NFKBIA, N TRK1, OCLN, OR10J1, OR4D5, OR51B6, OR51L1, OR52A1, OR5I1, PARVA, PCC B, PCNA, PFN3, POLR2D, RARS2, RASGRP1, RASSF5, RDH16, SELP, SENP2, SL C27A5, SOAT2, STX5, TNFSF8, TSLP
Negative_12425	C9, CRK, EPO, GSN, MOS, ACACB, ACADM, ACSL1, ALDH3A1, ASNS, ATP6V1A, B CM01, BUB3, CCND1, CERK, CHST11, CLDN22, CLDN7, CYFIP2, DAAM1, EHMT1 , EIF4B, FARSB, GRM1, GUCA1A, HTRA2, IL13RA2, IL21, IMPDH2, LDHB, LYP LA1, MS4A2, NARS, OR2A25, OR2G6, OR5L2, OR5T3, PANK4, PI4KA, PIGW, PI M1, PLCZ1, PNPT1, POMC, PPA1, PRKAR2B, PRSS3, PTGDS, SCIN, SEMA4B, SO RD, SPTLC1, SRGAP3, ST6GAL1, STK3, STT3B, TBXAS1, THTPA, TLR9, TUBA4 A, UROD, WARS
Negative_12426	LIF, LPO, XDH, ACAD9, ACADM, ACTA1, AFMID, AKR1C1, ANAPC1, APC2, APOC 3, ATG12, AXIN1, BMP8A, CAPN2, CCL11, CCL4, CCNG2, CD40LG, CDC6, CLDN 20, CMAS, CSNK1D, CTBS, CTSG, CX3CL1, CXCL10, DAD1, DIAPH1, DOLPP1, D PAGT1, DUSP3, EARS2, ENTPD8, ERBB2, FABP3, FUT7, GMDS, GOT1, HARS2, H TR5A, IDH3G, IDI2, IDUA, IL12A, IL13, IL2RA, JUND, MNX1, MPST, MYH13, NCSTN, NEFH, NFATC4, NMNAT1, NOS3, NSDHL, ODC1, OR2AG1, OR5B12, PAX8 , PDE7B, PDE8B, PFKFB4, PIGN, PIGT, PIPOX, PLA2G2F, POLE4, POLR2E, PO LR2I, PPP1R1A, PRKCG, PTCH1, PTGFR, RAD51, RENBP, RUVBL1, SIPA1, SLC 27A4, SPAM1, SPHK2, TAP1, TCIRG1, TGFBR1, TICAM2, TUBA3E, UCP1, UGT2 B4, VTI1A, WNT8B, YARS, CACNA2D2, HLA-DRB4, SERPINA5
Negative_12427	AGK, CAD, KMO, SPN, ABP1, AKR1D1, ALPP, ATP5I, CCKAR, CHEK2, DGKQ, EPH B3, FDPS, FOXA3, HSD11B2, ICOS, IL10RA, IRF3, ITGAL, JAG1, LAMA3, MAP 2K4, MAPK13, MDM4, MYH15, NEU4, NMNAT3, OR10G7, OR11L1, OR14J1, OR2M 7, OR4D1, OR56A3, OR6C76, PECAM1, PKLR, PRKCB, PRPS2, PYGB, SEMA4F, S ENP2, SHMT1, SOAT1, SOCS5, SORBS1, SSH3, TBL1X, THBS1, TNFSF4, UGCG, TNFRSF10B, TNFRSF18
Negative_12428	BTD, DDO, DUT, IL2, LCK, SDS, SMS, ADSS, AFMID, AKR1D1, ALDH3A1, ALS2, CCL3, CD3E, CDKN1B, CFL2, CLDN6, CLOCK, DGAT2L4, DHRS3, DPYD, EP300, EPHB1, EXT2, GBGT1, GUCY1A3, IL17RB, INPP1, ITGA6, LCMT1, LEFTY1, MG AT5B, MPZL1, NRXN3, OLAH, OR4N2, OR7A5, OR8S1, P4HA3, PLA2G2E, PLCE1 , PPAR, PPP2R2C, PPP2R5D, PPP3R1, PPT1, PRKCI, PTAFR, SCIN, SMPD3, S TAT1, STX3, TCF7L1, TLR4, TNFSF11, TRMT11, VAMP3, WNT7A
Negative_12429	CGA, MVD, UBB, ZYX, ALDH9A1, ARPC5, B4GALT2, B4GALT6, CACNA1C, CACNB 2, CARS2, CCL11, CCL7, CCND3, CCR6, CD82, CDH1, CDS2, CFTR, CHRM3, CXC R4, DGAT1, FGF19, FZD6, GALNT10, GDE1, GNAZ, GNG13, GPLD1, GZMA, HNF1 A, IAPP, IDUA, IFNA10, IL2RA, IL4R, JAK1, KCNQ1, KIR2DS5, KIR3DL3, KL RC4, LIFR, LIPC, MAML1, MAN1A2, MAPK7, MCCC1, NFYB, NFYC, OR10T2, OR1 4A16, OR14J1, OR1M1, OR2T6, OR51F1, OR5P3, ORC4L, OXCT2, PANK3, PDE3 B, PDHA1, PGAM2, PIGQ, PIGS, PIGW, PIK3CB, PIP5K1C, PLCZ1, PLOD2, PLX NA1, PNMT, POLE3, POLR2A, PPAP2B, PPARA, PPP1CC, PRKAR2A, PSEN2, PTP RJ, RDH10, RFX5, ROCK1, RPS6KA3, SMARCA2, SORBS1, ST3GAL4, TAS2R4, T HBS2, TJP2, TRDMT1, UCKL1, WNT8A, WNT9B, ZFYVE9, ALDH18A1, CACNA2D3 , SLC25A31
Negative_12430	CTH, ACPT, ACSM2A, ACSS3, AOX1, BCKDHB, CACNG3, CCKAR, CCR9, CD44, CD H2, CFL2, CHRM2, CNGB1, CYP26C1, DARS, GALNT11, GANC, GPD2, HSD17B8, IARS2, IKBKB, IL2RG, IMPDH1, INPP5E, INPPL1, ITGB1, MAP4K2, NEU1, NM NAT3, NOTCH2, NUDT2, OR51A2, OR52J3, OR52K1, OR8J1, OXCT1, PDPK1, PG M1, PIGN, PIK3C2A, PLCZ1, RASGRP2, RPSA, SETD7, SMAD7, SPRY1, SUV39H 2, SV2B, WNT6, YWHAQ, MAPK8IP1, PDCD1LG2, ST6GALNAC1

Negative_12431	A2M, C4B, FAH, ADCY4, B3GALT4, BMP8B, CCKAR, CCR9, CHPF, CPT1A, CXCL13, CYP26B1, DPAGT1, EPHA1, EXOC7, FGFR3, GRIN2C, HLA-C, HLA-F, ICAM3, IGFBP3, IL12RB1, MAP3K4, MITF, NKD2, OR10A6, OR13H1, OR1L6, OR2D3, OR2T2, OR5AU1, OR9G4, PARD6B, PLCZ1, PLXNA3, PPARD, PSENE1, RBPJ, SETD2, SMPD2, SMPD3, SPTAN1, STAM2, STX16, TBXAS1, TLN2, TUBB1, WASL, CSGALNACT2, TNFRSF18
Negative_12432	CKM, FYN, GNS, GP9, OAT, PDC, AARS, ACSL4, ALDH2, ALDH7A1, ALDOC, AMHR2, ATG7, CADM3, CAMK2G, CD74, CDC2, CDH2, CER1, CHRM5, CHST11, CNTF, CREB1, CREB5, CXCL6, CXCR3, CYP2C18, DDX55, DTX3, EREG, FGF17, GADD45A, GCDH, GLUD2, GNPAT, GOT1, GSTA1, GUK1, HARS, HMGCR, HSP90B1, IDH2, IL24, LCMT2, LHCGR, LGL2, MAP3K11, MCCC2, MCM6, NCOA4, NKX3-1, NSDHL, OR13C2, OR13C9, OR14J1, OR1L1, OR2T33, OR4C46, OR4Q3, OR52W1, OR5T1, OR8K1, PIGH, PLA2G4A, PLA2G6, PLCB4, PNPT1, PPP2R1A, PSME1, RASGRP3, RBL1, SEMA3F, SPCS1, STK36, TALD01, TAS2R7, TFDP1, TGFBR2, TIAM1, TUBB2A, UBA1, UXS1, SERPINE1
Negative_12433	AGL, DBT, EPO, KHK, NPL, PLG, RPE, TNF, TPR, UBC, ACAA2, ADCY9, ADH1B, ADH5, ALDH6A1, ANAPC10, ANAPC2, ANAPC4, APOA1, BMP2, C3AR1, CACNA1B, CAMK2D, CCL22, CCL5, CCR5, CD70, CDKN1C, CXCL5, CYP26C1, CYP4F2, DDOST, DERA, DHX58, DVL3, EFNA2, EFN1, ENTPD3, ENTPD8, ERBB2, FADS2, FBP1, FCGR2B, FUT8, GLDC, GNPAT, GRHR, HCST, HSD17B8, HSP90B1, HSPB1, ICAM2, IDUA, IFNA10, IL15, IL1RAP, ISYNA1, ITGAX, ITGB6, LAMB4, LM07, LTA4H, LYPLA1, MGAT1, MGAT2, MYH9, NTRK2, NUDT2, NUDT5, OR1L4, OR1Q1, OR52I2, OR5B21, OR5L1, OR6C6, PANK3, PDHA1, PIAS1, PIP5K1A, PPP2R5C, PRKAA2, PTGER3, ROBO2, SH2D2A, SHC3, SNAI2, TAS1R2, TAS2R16, TFP1, TKTL1, TKTL2, TNFSF12, UGT2A3, WHSC1L1, HLA-DQA2, PAFAH1B2, SERPINA5, TNFRSF13C
Negative_12434	ADA, DCT, GK2, IL4, MTR, PAH, TK2, WAS, ACOX1, AHCY, ALG10B, ANAPC4, ARSD, ASNS, ATP5L, BDH1, BTRC, CANT1, CCNB2, CCR9, CD274, CD86, CDK4, CEBP, CLDN20, CLOCK, CNTNAP2, CYP4F3, CYSLTR2, DCTN1, DDOST, DDX55, DNMT3L, DOLPP1, EIF4E2, ENTPD5, G6PC2, GARS, GRIN1, GSTA1, HARS, HNMT, HRH2, IGF1R, IKBKG, IL12A, IL1RAP, ITGB1, ITPK1, LDHA, LIPT1, MAD1L1, MAP2K6, MPST, MYL2, NME4, NPR2, NT5C3, OR10A6, OR1B1, OR2D3, OR2T3, OR4C46, OR6C4, OR6C76, PAICS, PANK3, PARD6G, PHPT1, PIAS3, PIGS, PI3K, PIK3CB, PIP5K1C, PLA1A, PLA2G5, PLCB3, POLR3B, PPAP2B, PRKAB1, PRKCA, PSENE1, RAC3, RBL1, SMPD3, TPM3, TUBAL3, ULBP3, ATP6V1G2, CACNA2D4, HSD17B10, SUV420H1
Negative_12435	AK2, CDA, GCK, GNS, RFK, TAT, AASS, ACP2, ACP5, ACVR1B, APLP1, ASIP, ATP6V0B, B4GALT6, BCL10, BDNF, BMP4, C5AR1, CCL15, CCL24, CCR3, CHRM2, COQ5, DDB2, DNMT3A, EDNRB, ENO2, FGF17, FGFR3, FLT3, FM05, GALNT1, GCDH, GNPDA1, GSTM2, GUCY2C, HLA-DMA, HLA-DRA, HLCS, HSD3B7, ICAM3, IL6ST, KRAS, LAMC2, MAP2K5, MAP2K7, NAT6, NFKB1B, NLGN3, OR10A2, OR51T1, PAPSS1, PHKA1, PIGB, PIK3C3, PIK3CA, PLK1, PLXNB2, PPAP2B, PPAP2C, PRKX, PRODH2, RARS, RASGRF1, RASGRP4, RBPJ, RPS6KA2, SCLY, SMPD2, ST3GAL3, STX7, TCF7L2, TNFSF9, UNC5D, XYL1B, ATP6VOA2, TNFRSF10B
Negative_12436	ADA, FER, MAG, SRF, ALOX12, ARHGEF4, ARPC4, ATP5G1, B4GALT4, BDNF, CACNB2, CAMKK1, CASK, CAV2, CCL5, CCR9, CD8B, CDC27, CLDN22, CNTF, COL5A1, CSH1, DDX51, DGAT1, DHCR7, DHX58, ENTPD3, FBP2, GLYCTK, HLA-G, HSPA1B, IL20, IL8RA, INSR, KCNB1, KYNU, MAPK3, MCEE, MEF2C, MIOX, NCR1, NFX1, OGDHL, OR12D3, OR2L2, OR4C11, OR5AN1, OR5L1, ORC5L, PDPK1, PER3, PFAS, PGAM4, PGS1, PIGO, PIP4K2C, PRKACB, PRPH, PTGES, RPN1, SOX17, ST8SIA1, STAT5A, STK11, STX2, STX3, TAS2R49, TAS2R9, TYMP, VARS, XYLT2, YARS, GABARAPL1

Negative_12437	EGF, GAA, GP5, IHH, MUT, MVD, TK2, ADAM10, ADH4, AHCYL2, APBB1, APOA1, B3GAT2, BUB1, CACNB3, CAPN2, CCNB2, CD79B, EREG, EXT1, FASN, FOXA2, FZD9, GADD45A, GCNT4, GNB1, GSTA4, GUCY1A2, IFNA4, IL10RA, IL4R, INHBC, INPP1, ITGA5, LHCGR, MAP2K2, MAP2K7, MCM6, MIOX, MTHFD2, MYH7B, NRXN1, OR10H3, OR10P1, OR10Z1, OR1C1, OR2T6, OR3A1, OR4C11, OR51G1, OR52H1, OR5AS1, OR6C74, PCYT2, PDE4B, PFKFB2, PGK1, PIP5K1A, PLXNC1, P OLR1D, PPM1A, PTPN6, PVRL2, PVRL4, RASSF1, RASSF5, RFNG, RPE65, SEMA4G, SFRP4, SLC25A6, SOAT2, STX4, TAS2R7, TAS2R9, TGFBR1, TRAF2, TUBA L3, WASF3, WWP2, PNLIPRP2
Negative_12438	AK3, CBS, FYN, GK2, IL7, LSS, SI, AGPAT4, ATP2A2, BUB3, CHUK, CLDN1, CO L4A2, CPOX, CREB3, CXCL9, CYP27A1, EPB41L3, FGF23, FLT4, G6PC, G6PC2 , GALNS, HA02, HTRA2, ITGAV, MAML1, MAP3K14, MAP3K3, MARS, NKX6-1, OR10Q1, OR13A1, OR14A16, OR1M1, OR2G6, OR51A2, PFKFB1, PIK3C2G, P RKAB2, PTDSS2, PTEN, RALB, RAPGEF1, SDHA, SMAD5, SMAD7, SMAD9, TAS2R 3, TNFSF9, TRAF6, WNT6, XYLB, KIR2DL5A
Negative_12439	GDA, ABL2, ACYP1, AOC3, ARPC4, ATP5L, BST1, CAV1, CCDC6, CLDN17, CTPS 2, CUL1, CXCL10, DAD1, DDOST, DLST, DNMT1, DUSP1, ENPP3, GDF6, HSD17B 3, HTR4, ICAM2, IL18RAP, KLRC1, LCMT1, LDHAL6A, LTBP1, MAP4K2, MDM2, NAGLU, NOTCH2, NTRK2, OR1J4, OR2C1, P2RX5, PIGH, PIGP, PIK3R1, PIP4K 2B, PRKAR1B, PRKCH, PTCH2, PTDSS2, RFXANK, SELL, SEMA4C, SETD2, SLC2 A1, TRAF1
Negative_12440	A2M, AK7, NPY, ACSL5, AGTR1, ALDH3A2, ANGPTL4, B3GNT5, BDKRB2, BET1L , BIRC5, CAMK2B, CARS, CD274, CDS1, CFL2, CHKA, CNGA3, CTPS, CXCL10, C YP2U1, DAPK3, DDIT3, DGAT1, DHRS9, DLST, DOT1L, DRD5, DUSP4, EDNRB, E LK1, EXT2, FARSB, GAD1, GADD45A, GTSE1, HTR6, IDH3G, IL1R1, IL2RA, JA K2, KCNQ1, LEPR, LIPA, MARS2, MECR, MKNK2, MYL5, NAGA, NCF4, NRG1, ONE CUT1, OR10K1, OR10Z1, OR2D3, OR2M7, OR4D6, OR4K5, OR4N2, OR5R1, PER3 , PFN4, POLR2E, PPP1CB, PSAT1, RDH11, RERE, SHC1, SMAD7, SNAI1, SREBF 1, STK4, TAS2R41, TLN2, TMLHE, TRAF6, UAP1, UNC5B, XIAP, PAFAH1B1
Negative_12441	ADK, AK5, C4B, EDA, EPO, F8, FGB, ID1, NNT, ACSM1, ACSS2, ACTN1, ADCY9, AKR1A1, B4GALT6, BST1, BUB1B, C1QC, CARS, CBLB, CBR3, CCL13, CCL27, C CNA1, CDH2, CHSY3, CLDN15, CLDN19, CNTN2, COL3A1, DAG1, DUSP7, EDAR, EFNA3, FGFR1, FRAT2, FZD9, GAMT, GNPDA1, HTR2C, IFNA14, KLRC3, LCP2, LEPR, LILRB3, LLGL1, MAP3K13, MIOX, NAMPT, NT5C3, OR10T2, OR4F17, OR 4K15, OR8D4, PERP, PIGO, PKLR, PPP5C, PRPS2, PTPRM, RARS2, RBKS, RETS AT, SLC2A2, SPP1, STEAP3, STX16, TAP2, UGCG, SERPIND1, SERPINE1
Negative_12442	BTC, CBL, F2, KIT, MPZ, RET, TXK, AARS2, ABLIM1, ADIPOR1, AGMAT, AGPAT 4, AKT2, ARNT, ASRGL1, ATIC, ATP2A2, ATP4A, ATP50, ATP6V1H, B3GALT4, B3GAT1, B3GNT5, C3AR1, CHIT1, COMT, COQ7, CTLA4, CYP1A2, CYP2F1, CYS LTR1, EDNRA, EPHA1, EPHA6, EPHA7, FGF3, FLT3LG, FUT6, GDF5, GGPS1, GR PR, GSTM1, GUK1, HLA- DMA, HSD17B2, IFNB1, IL9R, IMPA2, INPP5A, IRS2, JAK2, LCP2, NCK2, NCO R2, NCR1, NFX1, NMNAT2, OR1K1, OR2L13, OR51M1, OR5AR1, OR5F1, OR6B2, OR6K6, OR6T1, OR8K1, P2RX5, PAK7, PER2, PIK3R4, PLCG1, PRKCE, PSEN2, PTPRF, RAC3, ROCK1, ROCK2, SCLY, SSX2IP, TACR3, TCIRG1, TFDP1, THBD, TSHR, TYROBP, VASP, ATP6V1B1, ATP6V1E2, CSGALNACT1, HLA- DRB5, KIR2DL5A, PLA2G12A, PRICKLE2, SERPINB5
Negative_12443	GK2, OGT, ACVR2A, AGMAT, ARHGEF6, BAI1, BST1, CCL26, CLTC, CPT2, CSNK 1D, CXCR4, CYP2U1, DGKE, EIF4E2, GALC, IFNA16, IL10RB, INHBA, IRF7, I TGB5, MDM4, MMP7, MPP5, MTHFD1L, NANS, NFE2L2, NLGN1, NSD1, NUMB, OR1 1H6, OR4N2, OR6C75, PDE6H, PECAM1, PFKFB4, PFN2, PLCB2, PLXNB2, PRKA A1, PRKAG1, PRSS1, PTPRR, RFX5, SARS, SMARCA2, THTPA, TYRP1, UGT2B7, WARS, TNFRSF17

Negative_12444	AMT, MAG, NF1, NPL, PC, PXN, TFG, ADORA2A, ADRB3, AGPAT1, AKT3, BDH1, BDNF, BHMT, C3orf10, CACNG8, CCNA2, CD40, CD55, CDC16, CDK4, CLOCK, CMAS, CMPK2, CNTNAP1, CXCR5, CYP2S1, DBF4, DDX47, EXTL3, FGF6, FLOT1, G6PC, GALNT11, GCNT3, HAAO, HPRT1, HSD17B7, HSD3B2, IFT57, INPP5E, LRDD, MALT1, MCM4, MDH1, MDM4, MGAT1, MYH2, MYL2, NCAM1, NCOR2, NFKB2, NT5E, NUMBL, OR10J3, OR10K1, OR2AG1, OR2L8, OR2T12, OR4F6, OR56A4, OR6B3, OR8D1, P2RX2, PDE3A, PIP4K2C, PLA2G6, PLCB3, PLEKHA8, POLD2, POLE4, POLR3A, PPP3CA, PRKCI, PTPRM, RALA, SEMA3A, SOCS5, SOCS7, SPRY2, STAT5A, STK11, STX3, SUV39H1, TACR2, TBL1X, TGFA, THBS4, TUBA1B, UNC5D, VKORC1, YWHAH, ZMAT3, PNLIPRP2, SERPIND1, TNFRSF10C
Negative_12445	DDO, ILK, PAH, ACAA1, ACADS, ACLY, ACTA2, ACTN2, ANGPTL4, ASPA, ATG12, ATP5G1, B3GALT1, CCL23, CCNB1, CDC16, CDC2, CDC7, CDK6, CHST12, COMT, COQ5, CPT1B, CTLA4, CTNNA1, CYP3A4, CYP7A1, DHRS4, DIAPH3, DKK4, DVL1, GALNTL1, GLS2, HARS, HSD11B1, HTR4, IFNA21, INHBA, ITGA2, ITGA8, KIR3DL2, LIMK1, MPP5, MTHFS, OR1J1, OR2B6, OR2F1, OR5A1, PARS2, PCK2, PFKFB1, POLR2K, PORCN, PRKAB1, PSENN, RASSF1, SDC4, SLC27A4, STX10, TNXB, TUBB4Q, UGT2B10, AASDHPPT, ATP6V1G1, KIR2DL5A
Negative_12446	BID, CFD, GPI, GPT, JUP, LCK, LTB, MPI, XDH, ZYX, ACP6, ACTB, ADRB3, AMY2B, AOC2, APRT, B4GALT4, CHPT1, CNGA4, CREB3L2, CSNK2B, CYP26B1, CYP2J2, CYP2U1, CYP3A5, DDX41, DMGDH, EHHADH, FRAT1, FSHR, GNAI2, GNPNT1, GRAP2, GRM5, GSTA3, HAP1, HIP1, IL18, IL9R, LEFTY1, LEPR, LRDD, LTBP1, MAFA, MAP3K11, MAP3K8, MASP1, MDM2, MINPP1, NFATC1, NT5E, OGDH, OR1N1, OR2T5, OR4D2, OR4F6, OR52A1, OR52N4, OR6B2, OR8K3, OR9I1, ORC5L, P2RX5, PDGFB, PERP, PIGK, PIGO, PIK3R3, PIP5K1B, PLA2G2A, PLXNA3, PNPO, POLD3, POLR3K, PPP1R1A, PPP2R1B, PPP2R5E, PRPH, RARA, RASGRP4, RPS6KA1, SHMT1, STX7, TUBB3, UXS1, WWP1, CACNA2D2, SERPIND1, TNFRSF10A
Negative_12447	C3, GPI, IL4, KIT, NF1, NPY, ACPT, ACSM2A, ADAM17, ADCY7, ADRA1D, AGRP, AKR1C1, ALG5, ATF2, ATP4B, BCAT2, BMP8A, CAMK2G, CCL3, CCNG2, CD28, CDKN1C, COMT, CTNND1, CXCL2, CYP2A7, DHCR24, DHODH, EIF4B, EPB41L1, FLT3, FZD3, FZD7, GALK1, GLUD1, HMOX2, HSP90B1, HTR2A, IKBKG, IL13RA1, IL22RA2, IQGAP3, LAMC1, LIMK2, MAP3K7, MAPK14, MTHFR, NCR1, NEU4, NKX6-1, NODAL, OR1A1, OR51Q1, OR52K2, OR6Q1, OR6S1, OR9A4, OR9I1, P2RX1, PDE1B, PFKL, PIGK, PRKQC, PTDSS1, RAP1A, RAP1B, RUVBL1, SELP, SEMA7A, SESN1, SLC2A4, SPRED1, SPRED2, SPRY4, TRADD, TUBA1C, UCKL1, UNC5C, USE1, VANGL2, WNT2B, WNT5B, HLA-DQA2, ST6GALNAC3, TNFRSF14
Negative_12448	AUH, CD4, IVD, ACLY, ACSM2A, ACTB, ACTG1, ADCY1, ADSL, ALPP, ARNT2, ARSA, B4GALT7, BLNK, BMP8B, CACNB3, CCNA1, CCNB3, CDK5, CNTN2, CPT2, CYP2B6, F2RL3, FZD9, GBA3, GCAT, GCNT4, GLO1, GPX7, IL18, KIR2DS4, MARS2, MYH11, NAT1, NPR2, NT5M, OR2T12, OR51B2, OR52I1, OR5AP2, OR7A10, OR8H3, OR9G1, PCYT2, PER1, PFKM, PPP2R1B, PRODH2, PRPH, RASGRP1, SEMA4D, SEMA4G, SESN2, SH2D2A, SNW1, SOS2, STAT1, TACR2, TAS2R49, TLN2, TRAF1, UCK2, UGP2, VAV1
Negative_12449	GAA, WAS, AACS, ADAM17, AMD1, ATP5H, BUB3, CFL2, COASY, CPT1A, CTSG, CYP2C19, FABP4, FGF12, FGF7, FLT1, GDE1, IL18, ISYNA1, L1CAM, MALT1, MAN1B1, MGLL, MMP7, NAT2, NFKBIB, NLGN2, OR4C6, OR52E4, OR5A1, OR5L2, PDE3B, PISD, PLA1A, PLCB3, PRIM1, RPN1, RPS6KA4, SAT2, SLC2A2, SORBS1, SREBF1, SV2B, TMLHE, TRAF3, TYRP1, UAP1, WNT7B, MAP3K7IP1, SUV420H1

Negative_12450	CD6, F7, GSR, TNR, ABL1, ADSSL1, ARNTL, ARSE, ATP12A, B4GALT3, BMPR1B, CACNB2, CYBA, EDNRA, FGF8, GADD45B, GDF7, GNRH2, GOT1, GPT2, GSTM2, GUCY1B3, HEXB, HTR2B, IL13, INHBC, ITGAL, KLRK1, MAML1, MTHFD2, MYH11, NAGA, NFE2L2, NTNG1, NUDT9, OCLN, OR10C1, OR2T2, OR5A1, OR5H2, PHKB, PTGIS, RBPJ, SPAM1, SUV39H1, TSLP, TUBA8, ULK1, ATP6V0A1, MAPK8IP3
Negative_12451	C5, C8A, MAG, RPE, SP1, TNF, ADCY10, ALDH1A3, ALG10B, ARD1A, ASS1, ATF4, ATP4A, BCL2L1, CAMK2G, CAV1, CBLB, CCNG2, CDC45L, CHDH, CHRM3, CHSY3, CNGA4, COQ3, COQ7, CREB1, CREB3, DDX52, DHODH, DPYS, DVL3, EDNRB, FGF11, FGF20, G6PD, GALNT6, GLS2, GNPAT, GP1BA, HAO2, HSD17B4, IFNA10, IGF1R, IL18, ITGA2B, ITPA, JAK2, JAM2, LRP5, LYPLA1, MAML3, MBL2, MDH1, MKNK1, NARS, NCK1, NRG4, NUMBL, OR13J1, OR4A5, OR52N4, OR5D14, OR5H2, OR5J2, OR5L1, OR7A17, OR8D1, OR8D2, P2RX2, PCYT1A, PDE1A, PDE1B, PFKP, PGM2, PIPOX, PLA2G5, PMM1, PPP1R1A, PRKACG, PTCH2, PTGIS, PYCR1, RAPGEF4, RASGRP4, RCHY1, RPN2, SEMA4B, SEPHS1, SMPD1, SMPD4, SRGAP3, TPMT, TRPM5, TSNARE1, HLA-DRB4, SUV420H1, SUV420H2
Negative_12452	AR, FES, MPZ, PRL, STS, ACADM, ADCY5, ALCAM, ARRB1, B3GAT1, CAMK2A, CAMK2G, CCL23, CCNG2, COL1A1, COL6A2, CREB3L1, CTNND1, CXCL10, DCTN1, DHRS3, EHMT1, GALNT12, GLS2, GPAM, GRIA3, HMOX2, IQGAP1, IRS2, KIR2DL3, MARS2, MEF2C, MYH1, MYH2, NFATC3, OR10R2, OR1L6, OR2A42, OR2F1, OR4C6, OR51T1, OR52N2, OR6M1, ORC3L, PCCB, PIP5K3, POLR3B, RHOQ, RND1, SOX17, TAS2R8, TOMM40, WASF1, HLA-DRB3, HSP90AA1, PAFAH1B3, SERPINA5, SERPING1
Negative_12453	ASL, ID1, ABI2, ADCY6, ARD1A, ARSB, ATP5D, ATP6V1A, BBC3, C1QC, CCNG1, CCR10, CD28, CLCA2, CNTFR, CREB3L1, CXXC4, DOT1L, DUSP10, ENTPD8, EREG, EVI1, FGF18, FSHR, GALM, GALNS, GMPS, GNB1, GNRH1, GSTM5, IDH3A, IL12A, IL20RB, ITGB2, KLRK1, LAMB4, LHCGR, LMO7, MGAM, NAGS, NCR3, NKD2, OR2K2, OR2T2, OR4A15, OR4B1, OR51Q1, OR52R1, OR5M8, PCYT1A, PDE4D, PDGFRB, PIK3R2, PIK3R3, PNP0, POLE, POLR1A, PPA2, PPP1R3A, PRKAR1A, PSAT1, PTPRB, RAPGEF2, RASA1, SARS2, SEPHS1, SETDB1, SFRP2, SLC2A4, ST3GAL1, STX8, TAS2R4, THTPA, TIAM1, TJP2, TNFSF4, TRADD, TSC2, TUBB6, UBA7, UCP1, UGDH, UPP2, VANGL2, WNT10B, WWP2, YARS2, AASDHPPT
Negative_12454	ADA, AK1, DDO, F7, FGB, MPL, NLK, PLG, SDS, SP1, ACSL1, ADRA1D, AKR1D1, ALG9, ARSA, ATP4A, BCL10, BUB1, CASP9, CDKN1A, CPT1C, CTTN, CYP2C19, CYP2D6, DIAPH1, DTX2, DUSP4, EFNA3, ERBB2, FOXA2, GMPR2, GNPDA2, GRAP2, GSTM5, GSTZ1, HIBCH, IFNA7, IL28A, INSRR, JAK1, LIPG, MAOB, MAT1A, METTL2B, MGAT5B, NCK2, NFKBIE, OR10A7, OR10J1, OR1L6, PDE6D, PIGS, PIK3C2G, PLCB4, PLXNB2, PPP1R3D, PSAT1, RAB23, RBPJL, ROBO2, SARDH, SLC9A1, SSX2IP, STAM2, STAT4, STX18, TGFB3, USE1, WHSC1, WHSC1L1, WNT2B, WNT9A, YOD1, HLA-DPB1, HSD17B12
Negative_12455	HK1, LIF, PTS, RET, RPE, AGXT, ALDH4A1, ARNT, ATF2, ATP5E, CACNG8, CASP10, CHEK1, CISH, CLDN15, CLDN5, CPS1, CSDA, CTNNA3, CXCL9, CXCR3, CXCR5, DAPK1, DNMT1, EPHA4, EPHX1, FARS2, FGF14, FGF20, GANAB, GGT1, GNG13, GUCA1A, HNF1A, HTR7, IL22RA1, LAMB3, MASP1, MTHFS, MYH15, NUDT5, OGDHL, OR10G7, OR13C5, OR2L3, OR2M4, OR51F1, OR52W1, OR8B4, P2RX7, PCNA, PKMYT1, PLD1, PLXNA1, POLR3B, PTDSS1, RAB23, RALGDS, RARS, RBPJ, RDH16, RENBP, RPIA, SEMA3F, SEMA4F, SPAM1, TAS2R16, TIAM1, TUBB1, TYROBP, UCK1, UNC5A, UNC5D, VANGL1, WNT5B, GABARAPL2

Negative_12456	CAD, GPT, MSN, TPO, UBB, ACHE, ADSSL1, AHCYL1, AHCYL2, APOA1, ARPC3, A TN1, ATP5G1, CACNA1S, CACNG3, CAMK4, CCR5, CCR7, COQ6, CTF1, DUSP10, ENTPD8, ESPL1, ETNK2, F13B, FIGF, FOXA2, FUT6, G6PC, GALNT9, GNAO1, G RHPR, GUK1, HAAO, HDAC1, HHEX, IDH3G, IL28B, MARS, MRAS, MTHFD2, MYH7 , MYLK3, NCOA4, NME6, NODAL, NOS1, NT5C1B, OR13A1, OR13C4, OR1J1, OR5 1B5, OR51L1, OR5A2, PAFAH2, PCYT1B, PIP4K2A, PIP4K2C, PPARA, PPCS, P PP1R3D, PRKAR1A, PTGER3, RASGRP1, RDH8, ROBO2, RPS6, SC4MOL, SFRP1, SOCS3, SPAM1, SPRY1, TALDO1, TPM3, UGT2B11, VAMP1, VANGL2, HSD17B12
Negative_12457	AMT, AR, CFH, FER, LHB, MPI, SPN, TNR, ACTA1, ACVRL1, ADRB2, ARSA, ATP2 A3, ATP5H, CASK, CCL23, CD59, CDKN1B, CES2, CLCF1, CNTNAP1, COL5A2, C YP19A1, DEGS1, DIAPH1, EFNA5, EPHB3, FGF19, FRAP1, FUT6, GCAT, GGT5, GPD1, GPD1L, GTSE1, HAGH, HEXA, IAPP, ITGAE, JUND, KAT2B, LLGL2, LTC4 S, MAP3K5, MCM6, MGST3, MMP14, MYH1, NCAM1, NR1D1, NRXN1, OR10K1, OR1 D2, OR2L8, OR4K1, OR4K14, OR52E4, OR6N1, OR8D4, OR8K3, PEMT, PGK2, PO LD4, POLR1A, PPP1R3D, PPP3CB, PRNP, PTK2, RFWD2, SC4MOL, SELP, SIAH1 , SOCS5, SULT1A4, TACR3, TAS2R48, TJP1, TPM3, TRAF3, UROS, SERPINA1
Negative_12458	ID3, MPI, SDS, ABL2, ACADL, ACTA1, ALDH1L1, ALDH5A1, AMPD3, ARRB2, B3 GNT2, BBC3, BDH2, CASP9, CBR3, CCL17, CDC26, CDC7, CHRD, CLDN7, CLDN9 , COL4A1, CXCL1, DFFB, DRD2, DTX1, EPHA7, EXTL3, FMO1, GCNT3, GFPT1, G NA14, GPT2, HEMK1, HNF4G, HSPA8, IDH1, KCNJ11, NFKB1B, NNMT, OR10J5, OR2G2, OR52L1, OR5J2, OR6K2, P2RX7, PIK3C2B, PLXNA3, PTGER1, PYGB, R FXANK, RHOQ, RIPK1, SEMA3B, SESN3, SETD2, SPP1, TMLHE, TYMP, WARS2, T NFRSF18
Negative_12459	CD6, CS, FES, IL5, ME1, SFN, A4GALT, ADAM17, AKR1C1, APC2, ARHGEF4, AS IP, ATP5C1, BPGM, CD19, CD244, CDC20, CKS1B, CLDN17, CNTN2, CREB3, CR Y1, DHCR7, DHX58, DRD5, EDNRB, EFNA2, ENPP3, FGFR3, FLT3LG, FMO2, GAR S, GNA15, GPD1L, HIP1, HLA- DMA, HLCS, ICOS, IDI1, IFNA6, IL17A, ITPK1, KARS, KRAS, LFNG, LIPT1, L TBP1, MAFA, MYL2, NAMPT, NCOR1, NEUROD1, NFKB1, NFX1, NTRK1, NUDT5, O R12D3, OR13C9, OR2A4, OR2H2, OR2L2, OR2V2, OR4P4, OR5D13, OR9G4, P4H A1, PGLS, PIAS3, PIGA, PIP5K1B, PLCZ1, PPP1R3D, PPP2R1B, PPT1, RFNG, ROBO3, RPS6KB1, SC4MOL, SRD5A1, SYNJ1, TAS2R14, TAS2R16, TBXA2R, TH BS3, TYMP, UGCGL1, ULK1, ATP6V0D1, ATP6V0E1
Negative_12460	CGN, GGH, GSN, IL9, LTB, OGT, TK2, TKT, AGRP, AKR1B10, APOA1, ATP6VID, BCL10, BRAF, BUB1B, C3AR1, CACNB2, CANT1, CCL26, CD244, CDC20, CDC45 L, CSNK2A1, CYCS, DFFA, DNMT3L, E2F5, ENTPD4, EPHX1, ERBB4, EVI1, FGF 6, GADD45B, GALK2, GALNS, GALNT9, GRB2, HHEX, ITPA, LCMT2, LRRC4C, MA ML1, MTHFD2, OR10AG1, OR13G1, OR1N2, OR2D2, OR2L8, OR4C13, OR52B4, O R52L1, OR5AK2, OR6M1, P4HA2, PDE4C, PDHB, PERP, PIGL, PIK3R5, PLXNB3 , POLA1, POLR2C, POLR2E, POLR2G, PRKAG1, SHC3, SULT1A4, TAS1R3, TUBB , TUBB2B, VARS
Negative_12461	CAD, CD4, CFD, CSK, EZR, FOS, HGD, SRC, AKT2, AKT3, ALDH2, ARG2, ASMT, A SRGL1, ATP5A1, BAIAP2, CACNA1B, CAMKK2, CCL16, CD3E, CD70, CHAT, CSN K1G1, CXCL5, CXCL6, CYP17A1, CYP2E1, DAPK1, DGKZ, DIAPH1, DKK4, DOT1 L, DUSP16, EGLN3, ENTPD4, GALT, GNRHR, GSTA3, GSTT1, HAAO, HADHA, IL1 2A, IL13, IL2RG, IL3RA, LCMT1, LHCGR, LTA4H, MAPK12, MASP1, MGST2, MY H7B, MYH8, MYLK2, NMNAT3, NRXN2, NTRK1, OR10H4, OR10S1, OR1E2, OR1L6 , OR4A15, OR4A5, OR4S1, OR5B17, OR8D2, OR8S1, OR8U1, OR9K2, PAICS, PA RD3, PAX4, PDE4B, PDE7A, PIGU, PLA2G10, PLAU, PPM1A, PTPN7, RDH10, RO BO1, RPS6KA3, RXRA, SLC9A1, TRDMT1, TRPM5, TUBB2B, ULK2, VAMP3, PRIC KLE1

Negative_12462	DHH, F2R, FN1, GCK, GH1, MET, APC2, ASPA, ATG7, ATP6AP1, AVPR1A, CERK, CES1, CHPT1, CNTNAP2, CTSB, CXCR3, CYP27A1, CYP8B1, DERA, DLST, EHMT2, FGF10, GALK2, GBT1, GUCY2D, HSD17B3, HSD17B7, HYAL1, IRS1, LAMA3, LEPR, LGMN, MAD1L1, MDM4, MTMR6, NAT5, OR10V1, OR1F1, OR2M3, OR4X1, OR5A2, OR5J2, OR5M9, OR5V1, OR7C1, OR8G1, PAX4, PIAS1, PIK3C2G, RASGRP2, RCHY1, ROBO2, SLC9A1, SMPD4, SORD, ST3GAL4, THBS4, TICAM2, UGCG L2, VARS, VEGFC, C1GALT1C1, MAPK8IP3, PRICKLE2, TNFRSF10C, TNFSF13B
Negative_12463	ADK, BTD, C3, CBL, DBH, GLA, IL9, MAX, PLG, ACAD8, ACP2, ACSL1, ADCY4, ALG8, ANAPC4, ANAPC5, ARSE, BLNK, BMPR1B, CASP8, CCL11, CCR5, CD28, CD36, CDKN2C, CLDN1, CLDN5, COL4A2, CSH1, CYP2E1, DTYMK, EDN1, EHMT2, ENPP3, FUT3, FZD6, GNAQ, GNPDA2, GUCY1A2, GYS2, HLA-C, HRH2, HSPA1B, ICOSLG, IDI1, IL17A, IL17RA, IQGAP2, ITGB3, MAN1A1, MAN1B1, MAP2K7, MDM2, MTMR6, MYH6, NAT1, NAT6, OR10V1, OR12D3, OR2A42, OR2M3, OR4D2, OR52I2, PAX6, PCK2, PDGFA, PER3, PFN2, PIP5K1C, PLA2G6, PPP2R5D, RAP1A, RASGRP4, RASSF1, RRM2, SARDH, SMAD6, SPHK1, SRD5A1, STX3, SV2C, TAP2, TGFA, THBS1, TKTL1, TPH1, TRPM5, TUBA1C, ULBP3, ULK3, UPP1, UXS1, XCL1, XCR1, YWHAB, ZIC2, TNFRSF18, TNFSF13B
Negative_12464	TH, ABL2, ACHE, ADCY10, ADCY4, ADH1B, ALG13, APRT, ARG1, ARPC1A, ARRB1, ATP5E, BBOX1, BIRC3, BST1, C1QA, CACNB3, CAV1, CDK6, CLDN7, CNTFR, COL1A2, COL4A4, COL5A3, COX15, CREB5, CSDA, CSNK1E, CSNK1G3, CTSB, DGKH, EXTL3, F13A1, FARSB, FZD5, G6PD, GAD2, GRLF1, GSTA1, HDAC2, IFNA2, MAP3K8, MAT1A, MTMR2, OR10H4, OR2W1, OR52N2, PDXK, PIGB, PLA2G2F, PLD2, PPP3R1, PRKARIA, PRKY, PSEN2, SH2D1B, SRGAP3, ST3GAL5, STX1B, STX3, SV2A, TGFB2, UGDH, YWHAB, HSD17B12, PPP1R12A, SERPINC1
Negative_12465	GK2, PLN, TFG, TNR, ACSL4, ARPC5, C1QB, CCR5, CD244, CSNK1G2, CSNK2A1, CYP2A6, DAAM1, DAXX, DDX4, DPM1, EPHA3, EXTL2, FARP2, FTCD, GALNT2, GNA14, GPT2, HARS, HTR6, ICAM3, IRF3, MAP3K11, METTL2B, NCKAP1L, NCO R2, NEFH, NSD1, NT5C1B, NTN1, OR3A3, OR6K6, OR8D1, PDE11A, PDE8B, PFKFB3, PIGB, PIP4K2A, PPM1D, PPP2R5B, PRKAA1, RASA1, RPN2, RUNX1, RXRA, SOCS5, UBA7, HLA-DRB5, HSD17B12, SERPINB5, TNFRSF13B
Negative_12466	F9, JUN, ME1, MPI, SCD, TNR, ACOX3, ADCY8, ADSS, AGXT, ALDH1L1, ALOX12, BLNK, BST1, CASP10, CCND3, CDC14B, CDC25B, CDS2, CHKA, CLDN1, CREB1, CTLA4, CX3CL1, CYSLTR2, DHDDS, DHDH, E2F2, E2F4, EPB41L2, FADS2, FGF21, FZD9, GABARAP, IFNGR2, IGSF5, ITGAV, LAMC2, LEFTY2, MAP3K7, MYH1, MYH11, NADK, NAT5, NCF4, NFE2L2, NMNAT2, NPR1, NRG1, OR10G8, OR1L1, OR2A12, OR2F2, OR52L1, OR5D14, PDE1A, PDE6D, PDIA4, PERP, PLK1, PLD3, PPP2R5D, PPP3R2, PRKY, PTPRM, RASA1, RASGRP3, SCLY, SEMA4A, SFRP2, SHC3, SMAD2, TRHR, VDAC3, WBSCR22, XYLT2, YKT6, ATP6VOE1, HLA-DRB4, KIR2DL5A, TNFRSF10C, TNFRSF11A, TNFSF13B
Negative_12467	F8, LCT, ABAT, ABI2, ACO1, ACVR1C, ALAS2, B3GALT5, BCL2, BTRC, C9orf95, CACNA1F, CCKAR, CDH15, CHSY3, CTNNA2, CYP2C9, DARS2, DGKD, DPYS, DUSP1, ENTPD5, EPHA4, EPHB3, FUT2, GALNT10, GALNT13, GCLM, GNAO1, IL8RA, INSR, ITGA6, ITPA, LIPG, MAD2L1, MAML3, MAPK13, MBL2, NFAT5, NLGN3, NT5C1A, OR10A7, OR13C4, OR1B1, OR2A4, OR2T2, OR3A1, OR5M9, OR9Q2, ORC1L, PDXK, PIK3CG, PIP4K2C, PLXNB3, PPP1R3D, RFX5, RUNX1T1, SCD5, SCIN, SMAD4, SOAT1, STX12, SULT1A4, TAS2R40, TAS2R48, TAS2R7, TCIRG1, TNFSF8, TRADD, TRAF4, VCAM1, WNT16, YWHAQ, B4GALNT1, ST6GALNAC4



Negative_12468	EPO, GLS, GP5, ACAD8, ACADSB, ACSL6, ACTA2, ADIPOR2, AKR1B1, AKT3, ALG1, ARSE, ATP6V1F, BMP2, CACNG8, CCNB1, CHRM5, CLDN17, CMAS, CXCL10, CYP2U1, DBF4, DFFB, DHX58, DLAT, ENTPD3, FCGR3B, GADD45A, GALM, GALNT14, GCNT4, GNA14, GOSR2, GPT2, HLA-F, IFNA7, INPP4B, MAN2A1, MAPT, MCM7, MNX1, NOS3, OCRL, OR10H2, OR2T6, OR6C75, OR7G1, OR7G3, OR8H2, OR9K2, PARVB, PIGF, PIGW, PLEKHA8, POLA2, POLE, PRPH, PTPN7, RALBP1, RASGRF2, RPIA, RXRG, SIGLEC1, SMPD2, SPCS7, SPRY1, SSH2, STAT5A, TCIRG1, TGFB1, TNFRSF9, UPRT, HLA-DPB1, SERPINC1, TNFRSF11A, TNFRSF6B
Negative_12469	CDA, FUK, GGH, ACP2, AGRP, ANAPC10, ATP5F1, ATP5I, BAAT, BCAT2, BLVRB, CCL4, CCND3, CERK, CES1, CNTNAP1, DKK1, DKK2, DPM3, EFNB3, ELK1, EPHA8, FADS2, GPX5, IL1R2, INPP4A, ITGA5, ITGB3, KAT2A, KDSR, MCM6, MYD88, NEUROD1, NFYA, OR1F1, OR2AG1, OR2M3, OR51E1, OR5A1, OR5R1, OR8D1, OR8H1, PFN1, PIK3CB, PNPO, PPM1A, PRKAR2B, PTDSS2, PTGDS, SULT1A2, TLR4, TNFSF11, UNC5C, VANGL2, VDAC2
Negative_12470	ADO, C8A, CFI, DCK, HGF, IL5, OTC, PC, SP1, ACP6, AKR1C4, ALG2, ARPC5, ATP5L, AXIN2, BMPR1B, CACNA1D, CACNA1G, CCND2, CD36, CDH5, CHPF, COL4A4, CTBP2, CYP19A1, CYP4F3, DAD1, DARS2, DCTN1, DDX50, DGKA, EFNB3, ENO3, FLOT1, GDF6, GGT6, GMPR2, HAO1, HNF1A, HSD11B1, IFNA21, IFNW1, IL17A, IL2RG, ITCH, ITGA5, KCNQ1, LIPA, MAP3K4, METTL6, NAT5, NFATC2, NME2, OR13J1, OR1N2, OR2T2, OR4A5, OR6C4, PDE11A, PDE7A, PDGFA, PDGFR, PEMT, PFKFB2, PGM2, PLA2G5, POLR2F, POLR2J, PPM1B, PPP1R3A, PPP3R1, PYCR1, RASGRF1, SELP, SETD8, STMN1, TAS2R41, TAS2R9, TCF7L2, TNFRSF9, ULBP3, WNT5A, ATP6V0A2, TNFRSF10C
Negative_12471	GNE, LHB, NLK, NPL, PDC, PML, SYK, ACTA2, ACVR1C, ADAM10, AMD1, AMDHD1, ANAPC1, ANGPTL4, B3GALT6, CARS, CDC27, CDK6, CDS2, CHUK, CLTCL1, CSNK1E, CSNK1G1, CYP27A1, DHFR, DLAT, DUSP5, EFNB2, EIF4E, EPHA8, F13B, FLT1, FRAT2, FZD3, GMPA, GOT1, HEMK1, HIBCH, HTRA2, IFNA16, IFT57, IL13, IL25, ITGB7, KLRC1, LAMB2, MYH13, NFYB, NLGN2, OR10A4, OR11A1, OR2A2, OR2L2, OR2T10, OR4K17, OR4Q3, OR51B5, ORC4L, P4HA1, PAK2, PAX6, PEMT, PFKL, PIK3R5, PRKCB, PTGIS, PTK2, PTPN7, RAPGEF4, SDHB, SEMA3D, SEMA4C, SH2D2A, TGFB1, TOMM40L, TUBB2A, UNC5A, WHSC1, TNFRSF10B, TNFRSF12A, TNFRSF13C
Negative_12472	AMT, CAT, DBT, EZR, GSN, ABLIM2, ACAD8, ACSS2, ACTC1, AK3L1, AKT1, ALG12, ALPPL2, AMPD3, B3GALT2, BIRC2, C4BPB, CACNA1D, CBLC, CCR3, CDKN1A, CHRNA7, CKMT2, CLDN4, CNGB1, CPT1C, DDX4, EXTL3, FOSL1, GALNT13, GPD2, GPT2, HSD17B7, HSP90B1, IL28B, LTC4S, LYZL1, MAP3K12, METTL2B, MNX1, NGEF, NMNAT3, NT5M, OPLAH, OR10A4, OR1B1, OR52K1, OR5B17, OR7A5, PIGN, PIP5K1C, PLA2G2F, POLD1, POLE3, POLR2B, POLR3B, PRKAR2B, RCHY1, REL, RELB, TGDS, TPM3, UGT2B11, TNFRSF13C
Negative_12473	ADK, ATM, CFD, CRK, DDC, PVR, RPE, AARS, ACAD9, ACVR2A, ADCY4, ALOX15B, APOA5, CARS2, CCND3, CD22, CDC7, CLOCK, CSNK1D, DCTD, DDOST, E2F4, F2RL2, FZR1, GALNT14, GUCA1A, GUCY1B3, HTR5A, IDH3A, IFIH1, LEFTY2, MAML2, MAP2K3, MAT2B, MCM2, MGAT5, MGAT5B, MYH7, NARS, NCOR1, NCR2, NT5C1A, NTRK1, OR10A2, OR2T10, OR2Z1, OR3A3, PDK1, PI4KA, PIK3CA, PLA2G1B, PRKG1, RASGRP1, RBKS, RPS6KA5, SEMA3E, SFRP5, SLC2A2, SMAD1, SMPD3, SMURF2, SPCS1, SRGAP3, TAP2, TSC1, UBE2L3, VAV3, WHSC1L1, WNT3A, WNT5B, ATP6V0A1, PRICKLE2, SUV420H1

Negative_12474	C4B, C8G, CGA, F11, SCD, AADAC, ABCC8, ABL2, ABLIM3, ACAD9, ACP5, ACSL1, ACSM4, ALDH1B1, AOC3, AVPR1B, B3GNT2, BIRC2, CASP3, CCNG2, CCR4, CDC23, COL5A1, CREB1, CTBP2, CTSS, CXCL9, DHODH, DHRS9, DRD5, F2RL1, FGF2, GABARAP, GALNT1, GCNT2, GNG13, GNPDA1, GP1BB, GPLD1, HSPA2, IBS P, IL13, ITGA11, ITGA9, ITGB3, LAMB3, MARS, MYH1, NFATC1, NFATC4, OR10A2, OR10G3, OR14I1, OR1Q1, OR2T12, OR4F5, OR52B6, OR5T1, OR6B2, PIK3C2G, PLD2, PRKACG, PRKY, PRSS3, PSEN1, PTPN6, SEMA3E, SEMA7A, SETD7, SH2D1B, SKIV2L2, STAT5A, SUOX, TLR4, VNN1, WNT5A, WNT5B, XCL2, PNLI PRP2, SERPIND1, TNFRSF11B
Negative_12475	BAD, FGA, IL7, JUN, KMO, MAX, MPL, SYK, ADRB2, ALOX12B, AOC3, BCAT2, BCKDHA, BMP8B, BTRC, CCL1, CD79B, CDH5, CLDN15, CMPK1, CNTN2, COL4A2, CRLF2, CYP2S1, DGUOK, DHRS3, DHRS4, DVL3, EGLN1, ENPP6, EPB41L1, EPHA2, EPHB3, FCGR3B, FDF1, FGF14, FLOT2, FUT7, GALNT1, GGPS1, GNAI2, GNAI3, GSTA2, GUCY1A2, HBEGF, HEXA, IFNA7, IL18R1, IL21R, INHBB, INPP4B, IRF3, ITGA8, MAML1, MAP4K2, MMP9, NAE1, NEU2, NFX1, NR1D1, NTRK2, NUDT2, OR11G2, OR1S2, OR2T34, OR51T1, P2RX6, PER2, PHKA1, PLXNA2, PPBP, PRODH2, PSME1, PTGS2, PTPRB, RERE, SETD8, SLC2A2, SMPD3, SOAT2, SOS2, SPRY4, SPTAN1, SRD5A2, SUCLG1, TAS2R40, TBXA2R, TNFRSF8, TNFSF12, TUBB2B, UGT2A1, UGT2B28, ULK2, WNT5B, XCR1, TNFRSF10A
Negative_12476	FER, FH, GP9, KHK, LTB, SI, SRM, ACADVL, ADRB1, ASCC3, AVPR1B, BDH1, CD274, CES2, CHRM3, COASY, COL11A1, CXCR6, DUSP3, FASN, FCGR3B, GALE, GMP, GNAI1, GNB1, HEMK1, HMBS, HSD17B7, IGF1, IL20, INPP5B, ISYNA1, ITGA10, MTMR2, MYLK3, NCF2, NRXN1, OR13C8, OR1J2, OR2AT4, OR2T10, OR2T4, PARVA, PPA1, PPP3CC, PTGES, PTPRB, PVRL4, RASGRF1, SLC27A4, SOAT1, STMN1, STX4, TP73, TSLP, UBA1, YWHAE
Negative_12477	EGF, F2R, LPL, MSN, OSM, PVR, ADCY8, ALDH1L1, ALG3, ALPP, APRT, ARHGEF4, ATP6V1F, C1QB, CACNB1, CACNG3, CCL1, CCL2, CCL26, CD34, CISH, CLDN3, CNTN2, COMP, COX15, CXCL2, CXCR3, DGKA, DUSP6, ENAH, EPB41L2, EPHA4, EPOR, EXOC7, FASN, FBP2, FGF12, FGF3, FRAP1, GSTM2, GSTM4, GUCA1A, IFNAR1, IL1R1, ITPA, JAM3, KLRC1, LCMT2, LIMK2, MAP3K13, MAP3K3, MMP9, MTFMT, MTHFD1L, NFYB, NME7, OR2L2, OR4K17, OR5B17, OR5H6, PAK6, PANK1, PDE5A, PFKFB2, PIAS1, PIAS2, PMAIP1, POLD1, POLR2H, PPP1R1A, PSENEN, PTPN6, PTTG1, QPRT, RASGRP3, SEMA4A, SHISA5, SNAI1, SPRY4, SQLE, STX7, TCF7L1, TPM3, TRAF1, TUBB4, UGT1A10, ULBP3, UNC5A, VAV1, VDAC3, VEGFB, WNT3, WNT4, WWP1, YWHAZ, ATP6V1C1, ATP6V1G1, SERPINE1
Negative_12478	AR, CKM, FAH, GHR, HK2, PVR, RDX, TH, TNF, ALDH3B2, ANAPC11, BLVRA, CCL17, CCNB1, CDC25C, CDC27, CLDN15, CMBL, CREB1, CRY1, CSF2RA, CXCL13, DDX52, DEGS1, DGKH, DHCR7, DHRS3, DPYS, DUSP16, ENTPD5, EVI1, FUT1, GALE, GAPDH, GFAP, GMDS, HSD17B4, IFNG, IL19, KIR2DL1, LTC4S, MGAT2, NEGR1, NEUROD1, NFKBIB, NOS1, OR11G2, OR2C3, OR2T11, OR2T4, OR51L1, OR5C1, OR6X1, PAK1, PCYT2, PDCD1, PEMT, PIK3CD, PPP2R5A, RAC1, SMAD5, SPCS1, STAT5B, STX1B, TIAM2, TPM3, UXS1, ATP6V1G3, HLA-DRB4, PLA2G12B
Negative_12479	APP, HYI, MPZ, RFK, SMS, ACSM4, ADIPOR1, ALDH1A2, ASCC3, ASNS, ATIC, AXIN2, B3GALT6, B4GALT7, BDNF, BUB1, CD44, CERK, CFTR, CSF1, CTNNA3, CXCL5, ENTPD7, FGF7, FLT1, GCNT4, GJA1, GLI1, GLS2, GNAI2, GNAQ, GNPNA1, GRAP2, GSTA3, GUCY1A3, HSPB1, IFNGR1, IL23A, IL2RB, INHBB, IRF9, KARS, MAP2K1, MAP3K2, MDH1, NKX6-1, NOTCH1, OR13C2, OR1N2, OR2G6, OR4C15, OR4E2, OR51B6, OR51S1, OR56A4, OR5AK2, OR6N1, OR7G2, OR8S1, PGS1, PIGB, PIGN, PLA2G6, POLR2J, PON3, PPAP2A, PPP2R2C, PSEN2, PYCRL, RAC1, RBX1, RGS3, SEMA3B, SFRP2, SFRP4, SH2D1A, SKIV2L2, SMAD7, TPM3, TUBB2B, VARS, WHSC1L1, TNFRSF11B

Negative_12480	BID, BTC, CKB, FES, IL4, PGF, AKT3, ALPL, ANPEP, ARHGEF6, ARPC2, B4GAL T2, BMP2, CADM1, CASP3, CD34, CDC2, CDC25C, CDC6, CDO1, CHAT, CLDN3, C OMP, CXCR6, CYP11A1, DTYMK, EFNA3, ETNK1, FGFR1, GABARAP, GALNS, GCN T3, HADH, IGF1, ITGB5, KLRC2, LYPLA2, MAD1L1, MAT2B, MITF, MYLK3, OR6 C70, ORC5L, OXTR, PANK2, PDCD1, PIK3R4, PIP5K3, PLA2G2F, PPP2R1A, PR IM1, PTAFR, SH2D1B, STX18, TOLLIP, TRAF6, ATP6V1E1, MAPK8IP3
Negative_12481	C8G, DBI, GH1, NGF, ACTC1, ADRA1A, AKT3, ANAPC1, ARG1, ARPC5, ASCC3, A SNS, B3GAT2, CACNA1B, CACNA1E, CALML6, CFTR, CHEK2, CLDN18, CLDN8, C OMP, CSDA, CSF2RA, CSNK1G2, CTPS, CYP4A11, DDOST, DERA, DGAT1, EDA2R , FMO5, FSHB, FZD7, G6PD, GALNTL4, GNAI3, GUCY2F, HES1, HSD17B1, IFNG R1, IL1R2, IL6R, IL6ST, KIR2DS5, LAMA4, LARS, LLGL1, MAP3K12, MAP3K1 3, MYL7, OCLN, OR10G4, OR11G2, OR1A2, OR2G6, OR4N4, OR4S1, OR5C1, OR5 T2, OR6B3, OR6C4, OSMR, PHKA2, PIAS2, PIP5K1C, PNPLA4, PPAP2C, PPAT, PPP2R2B, PPP3CB, PRNP, PSPH, PTPN1, RASGRF1, RPE65, SLIT1, SMPD2, ST X18, TALD01, TFPI, THY1, TICAM1, TLN1, TLR4, TNFSF10, TRAF2, TUBB2C, TYMP, WNT11, MAP3K7IP2, TNFRSF13C
Negative_12482	ACOX3, AGRP, ALDH7A1, ATN1, CARD11, CAV3, CD72, COX15, CSDA, CSNK1E, CYP3A5, DPYSL2, EHMT1, ENPP2, ERBB4, FDPS, G6PD, GSTA1, HSPA2, IL17B , KIR3DL1, MAP4K1, MGAT5B, MTMR2, NCAM1, NRXN1, OR10AG1, OR11A1, OR5 2E6, OR8K5, ORC3L, PDE6D, PIP5K1A, PNMT, PPM1A, PPP3CA, PRPS2, PVRL1 , PYGB, RAPGEF3, RELA, RHOA, RPE65, SCLY, SETD8, SH2D1B, TICAM1, TJP3 , UGDH, UNC5A, WARS
Negative_12483	CR2, FGB, HK3, IL5, NLK, PAH, PDC, SDS, AANAT, ABLIM3, ACAD8, ACP2, ACP 6, ADCY2, AMHR2, ARHGEF1, ATP12A, ATP2A1, ATP4A, ATP50, B4GALT1, BMP 6, BMPR1A, C7orf16, CALML3, CCL23, CCNE2, CD27, CD8B, CHPT1, CHST13, CLDN22, CREB1, CTSB, CXCR3, CXXC4, CYP4A11, DDX18, DDX4, DGKA, DGKI, DHDH, EPHX1, GAB1, GRIA2, GRIN2C, HAP1, HCLS1, HSD17B1, HSPA2, IGF1, IL24, IL28RA, INHBC, INPP5A, ITGA2, KIR3DL3, LAP3, LRAT, MAN1A2, MEC R, MLLT4, NCOA4, NCOR2, NEU3, NT5C3, OR13C5, OR1E1, OR2L3, OR4K5, OR5 A2, OR5AK2, OR5F1, OR6K2, OR6N1, PAPSS2, PCYT1A, PIGK, PTPN5, PTTG1, PYCRL, RPE65, RRM1, SCIN, SCP2, SEMA3F, SEMA7A, SIGLEC1, SNAP23, STK 4, TGFB1, TNFSF11, TP53I3, TSLP, ULK3, UROC1, WNT16, KIR2DL5A
Negative_12484	IL4, MIF, TXK, ACTN4, ADCY8, ALDH1B1, ALDH6A1, AMDHD2, ARPC1B, ATP6A P1, CAMKK1, CD28, CLDN8, CTLA4, CTPS, DAAM2, DPM2, EPHB3, FGFR1, GCDH , GCLM, GUCA1A, HCCS, HPSE, IDI2, IL18RAP, ITGB5, MAOB, MITF, MPDZ, OR 1K1, OR2C1, OR2T12, OR2T33, OR51V1, OR5C1, OR5T2, OXTR, PIGX, PIK3CG , PIP4K2B, PIP4K2C, PLCB1, PLOD1, PPP1CB, PPP1R3C, PRKAR2B, PRKG1, P TGFR, SCP2, SELL, SEMA3C, SOCS4, STT3B, TAS2R50, TBXA2R, TCF7L2, TKT L2, TLN2, TUBB, UGT2B28, VDAC3, ZAP70, C1GALT1C1
Negative_12485	AUH, EPO, GNS, LAT, MVD, NGF, SI, ABL2, AGMAT, ALDH3B1, ARHGEF2, ATP6A P1, BMP2, C4BPA, CAV3, CCR3, CD58, CDIPT, CHRM2, CHRM3, CLCA2, CLDN2, CNTNAP2, COL4A4, CRLF2, DLAT, DUSP2, E2F1, EPB41L1, EPHX2, EXTL1, GA B1, GAD1, GLDC, HDAC2, HLCS, HMGCS1, HNF4A, IDH3G, IL10RB, IL20, IL21 R, IL3RA, IQGAP3, KARS, LIPE, LRRC4C, MAOA, MGAT5, MPST, MTMR1, MYLK, NEU3, NUDT5, OR11H6, OR2F1, OR2L8, OR3A3, OR4F5, OR51B4, OR6C4, OR9I 1, ORC6L, PAK2, PAK3, PER1, PIAS3, PIK3C3, PLA2G2D, PRKAR2A, PTCRA, R ARA, RRAS, SKIV2L2, SMARCA2, SOCS2, STAM2, THBS3, TNFSF12, TRADD, TS C2, UNC5B, WNT10B, B3GALNT1

Negative_12486	AK2, AUH, BID, CD2, JUN, OAT, PDC, TNF, ACYP1, ADCY7, ADH4, ALDOB, CACNB2, CBLB, CCL20, CCL22, CCNB3, CCR9, CDC20, CDC25C, CHKB, CIITA, CLDN5, CNTN1, CNTNAP1, COL4A6, COQ3, CPT1A, CSF2RA, CYP2D6, DCTN1, DCXR, EIF4E, EPHB6, FABP4, FGF17, FLOT2, FMO4, FPGT, FRAT1, FTH1, FUT3, G6P C, GMDS, GNA13, GOT2, GPD2, HARS2, HYAL2, IDI2, IFNA6, IGFBP3, IL17A, INHBA, IRF9, ITGB6, KIR3DL3, LAMC3, LDHAL6B, LDHB, LEFTY2, LTBR, MAML1, MYH7, NFKB1, NFYC, OR10A5, OR1F1, OR2A14, OR2AG2, OR2T2, OR4N5, OR6F1, OR8A1, OR8I2, ORC6L, PIGF, POLA2, POLR2F, PRKAB2, PRKCQ, PRKX, PTCRA, PTDSS2, RFNG, RHOD, ROCK2, SLC33A1, SMPD3, ST8SIA5, STAT1, TCIRG1, TGFBR2, TUBB2A, TXNDC12, WASF3, HLA-DQA2, SERPINB5, TNFRSF1A
Negative_12487	ABO, F9, GSN, ABL2, ACACA, ACVR1, ARPC2, ARSA, ARSD, ATF2, ATP6V1H, BDH2, BRAF, CALML3, CAMKK1, CCL14, CFL1, DVL2, ENTPD4, FBP1, FCER1G, FGR2, GALK1, GDE1, GMPS, GRIN2B, GSTA2, HSD3B7, IDH3G, IL1R1, IL20RA, KLRK1, MAP2K7, MAP3K6, MAP3K8, MASP2, MCEE, MCM2, NOS3, OR10T2, OR11H4, OR2A25, OR4C15, OR4F17, OR51M1, OR5AR1, OR5M3, OR6Q1, OR8D4, OR9G1, P2RX1, PDGFRB, PER1, POLR3H, PPAP2A, PSAT1, PTTG1, RASGRP4, RDH5, RUNX1T1, SARDH, SAT1, SPTLC2, TNFSF8, VAMP2, XIAP, ATP6V1E2, CSNK1A1L, MAPK8IP1
Negative_12488	CSK, GSN, ME1, ACSL1, ACSS3, AMPD1, APAF1, B3GNT2, CACNB4, CCL17, CCL21, CCL8, CD44, CLDN10, CTBP2, DHDDS, DRD5, EFNA4, EPHB3, EPHB6, FCER1G, FUT8, GLUD2, GNAZ, GPX7, GRPR, HDAC1, HSD17B3, IDH3G, IFNAR2, IL10, IL6ST, ITPKA, LCMT1, MAGI2, NCK2, NSDHL, NTRK1, OR10J1, OR11L1, OR1D5, OR2K2, OR51A4, OR52I2, OR6C1, OR9Q1, OR9Q2, PAPSS1, PLA2G3, PLTP, PPP2R2B, PYGL, RDH12, RHEB, RPN2, RPS6KA5, SEMA4A, SHC2, SULT1A4, TDO2, TLN2, UPB1, VAV1, WNT5B, WWP2, ATP6V1C2
Negative_12489	F8, GGH, GNS, KMO, MIF, RFK, TH, ACSL1, ACSL6, ACVR2B, ADORA2A, ADRBK2, ALAS1, ALOX15B, ATG7, BMPR1A, CCL8, CDC25A, CLDN1, CREB3L3, CX3CL1, DCTD, DPYSL2, EPAS1, FGF10, FGF12, FGF8, FMO3, FOXA2, GALNT5, GALT, GANC, GCNT1, GNAZ, GPLD1, GRIN2C, GUCY1A2, GUCY2C, IL13RA1, IRF3, ITGA2B, KLK3, KLRC2, LRDD, MAGI1, MAP3K14, MTHFS, NCF1, NT5C1B, OR10AG1, OR2T11, OR4A15, OR52D1, OR5C1, OR7A5, P4HA2, PAX6, PIM2, PLA2G2D, PLXNA3, POLR1B, POLR2J, POLR3K, PPARA, PRKAB2, PRKACG, RHOQ, SARS2, SDHB, SEMA3D, SETMAR, SMAD3, SORBS1, SPAM1, SPRY1, TAS2R60, TGFBR2, TIRAP, UNC5A, VEGFB, WNT9B, AASDHPPT, HLA-DP1, MAP3K7IP1, ST6GALNAC5
Negative_12490	CEL, HDC, KDR, NPY, PLG, ACOX2, ADCY5, AFMID, ARPC3, B4GALT5, CASP3, CASP6, CCR7, CDS1, CLDN20, CMBL, CREB3L2, CSNK1D, DDX54, ENTPD1, EPHX1, FGF1, FGF12, FUT7, FZD1, GALNT3, GNAZ, GUCY1B3, HADH, HTR2C, IL1RAP, INHBB, ITGA5, KIR2DL3, LDHB, LRP5, MCAT, NFATC4, ODC1, OR1A1, OR2T11, OR51A7, OR8A1, PANK3, PDK1, PDPK1, PIGN, PIGT, PIP5K3, PLA2G2E, PLAUR, POLR2B, PPP1R3C, PRKAG2, PRSS1, PTDSS2, PTK2B, RAB5A, RELA, RGS3, SEMA3F, SPRY2, SUCLA2, TICAM2, UGT2B4, VAMP4, HLA-DRB3, SERPING1
Negative_12491	C9, GHR, LAT, SDS, ACTG2, ACVR1C, ACYP1, ADCY2, AOC2, ATF2, BAAT, BTRC, CCL19, CLOCK, COL6A1, COQ5, CREB3L4, CYP26C1, CYP2A7, DHX58, DKK4, DLST, EPB41L2, EPHA7, FLT4, FOXA3, GALNT5, GALNTL2, GARS, GPX7, GRB2, GUCA1B, GUCY1A3, HPRT1, HPSE, HSD17B4, IFNA2, IL1R1, IL25, IMPDH1, INPP5E, IRF3, JAG1, KIR3DL1, LCMT2, LEFTY1, LRDD, LTB4R2, MAN1A2, MAP3K2, MAPK10, MITF, MTAP, NOX3, NR4A1, NTNG1, NTRK1, OR13C8, OR51Q1, OR51S1, OR52E2, OR52W1, OR5AU1, OR7C1, PCYT1B, PDIA4, PFKM, PGK1, PIP5K1C, POLR2E, POLR2F, PPP2CB, PPP2R5D, PRKAB1, PRKAR1B, PRPH2, PTPN6, RPN1, SOCS7, SULT2B1, SYNJ1, TICAM2, TNFSF9, TUBB, TYK2, UCKL1, WNT9B, YWHAQ, ATP6V0A4, PPP1R12A, SLC25A31

Negative_12492	F7, OGT, PTS, ABLIM1, ACAA2, ACSM2A, ADIPOR2, AKR1B1, AKT1, ARSB, ATP12A, ATP5B, ATP5F1, ATP5J2, AXIN2, B4GALT6, BMP8B, CACNA1I, CAMK2D, CCND2, CDC26, COL1A1, CRY1, CSNK1D, DGAT2, DNMT3B, DNMT3L, F11R, GALK2, H6PD, HARS2, HMOX2, HSD11B2, HTR5A, IARS, IL12A, IL12RB2, ITGB3, JAM3, KDSR, MAP3K13, MMP14, MPDZ, MYH14, MYH2, NODAL, NTRK1, NUDT9, OR1J1, OR52D1, OR5AN1, OR5AP2, PCK1, PDHA1, PRKCE, PRKG2, RHOD, SCIN, SKP1, SMAD7, SMPD3, SPTAN1, SULT1A2, TACR1, TACR2, TPI1, ULK1, ALDH18A1, HLA-DRB5
Negative_12493	C2, DAO, EPO, GHR, LAT, MIF, APOA2, ARG2, ARHGEF1, ATP5B, B3GALT4, BACE2, C3AR1, CBR1, CCND3, CKS1B, CMPK1, CSF3R, CTNNA1, CXCR4, CYP19A1, CYP7A1, DPM1, ENTPD7, FARSA, FUT5, GALE, GATM, GNA11, GNPDA2, GPLD1, HAAO, HNF1A, HTR4, IL13RA2, IL20RA, IL4R, IMPA1, KIR2DL1, KLRC4, LCP2, MAT2B, MCM2, MYH4, NAMPT, NEUROG3, OR11H6, OR13A1, OR1G1, OR1K1, OR2B2, OR2D3, OR2M5, OR2S2, OR4A15, OR52E4, OR9I1, ORC4L, PAK6, PDE3A, PGS1, PIAS4, PIGC, PKM2, PLK1, POLE3, PPAR, PRKACA, PTDSS2, PTGES, RARA, RBX1, RHEB, ROCK1, RPS6KB2, SIAH1, SMC1B, SUV39H1, TACR2, TAS2R42, TGFB3, TIRAP, TLN1, TSHR, WNT2B, YWHAZ
Negative_12494	ADO, AGK, BT, GHR, GP9, ILK, NLK, STS, TAT, ADCY10, AKR1D1, ALDH1A1, ALDH3A1, ANGPTL4, AOC2, AQP7, ARPC3, ASCC3, ATP5G2, CALML6, CCL1, CD47, CD82, CHRM2, CNGB1, CNTNAP1, COL3A1, CYP1A1, CYP1B1, CYP21A2, DAAM1, DAAM2, DARS2, EI24, EXTL1, FGF1, FZR1, GLUD2, GMPR2, GMPS, GNA15, GNAL, GSTA2, GSTM1, GYS2, HRAS, IFNA10, IFNA5, IFNGR2, IFT57, IL12RB2, IL17A, IL3RA, ITGA6, ITGB6, LCMT2, LYZL1, MAP3K8, MCCC1, MGAT2, MMP1, NKX2-2, NSD1, NT5E, OR10C1, OR13C5, OR1A2, OR2T12, OR4D5, OR6F1, OR7G2, ORC4L, PAICS, PDE7A, PIGW, PIGX, POLD3, PON1, PPP2R5A, PRKAB2, PRKX, PTGS1, RAC2, RAP1B, REL, RIPK1, SCD5, SMAD1, SMC1B, SQLE, TBK1, TUBA4A, TYRP1, UGCGL2, UPP1, ATP6V1E1, CSNK1A1L, MAP3K7IP1
Negative_12495	GNE, IL8, OGT, SFN, AADAC, ACAD8, ACOT12, ADIPOR1, ADIPOR2, ADRBK2, ALPL2, ALS2, ANAPC11, ATP13A2, ATP5J, C1QC, C9orf95, CACNA1S, CCL24, CCL3, CCR2, CD48, CDH5, CHST13, CNTFR, COQ5, CREB3L4, CRLS1, DDX4, ENTDP3, EPHA4, FBP2, FECH, FRAT1, GALM, GNA14, GNA15, GNAQ, GSTM1, HAP1, HARS, HMGCS1, HTR6, IDH3B, IFNK, IL17A, IL17RB, JAK3, LARS2, MAP2K7, MAPK7, MYD88, NADK, NAGK, NFKB2, NFKBIE, NOX3, NSDHL, NT5C1B, ONECUT1, OR10G3, OR12D3, OR1F1, OR1N1, OR2H2, OR4K15, OR52B4, OR52E4, OR52N2, OR5AN1, OR6C3, OR8H3, PANK3, POLD3, POLR2J, PORCN, PRKCA, RALB, RASGRF2, SNAI1, SOCS5, SULT1A1, TBXAS1, TGFB2, TP53, UGCG, UNC5C, VANGL2, HSD17B12, ST6GALNAC6
Negative_12496	C8A, CGA, GP5, PGP, AGPAT3, ARHGEF1, ATP5D, ATP6VOC, BMP8A, CACNA1F, CASP8, CAV1, CCKAR, CD8B, CES1, CHR, CLDN3, COL5A3, CX3CR1, CXCL6, CYFIP1, DDB2, E2F2, EXTL1, FCER1G, FDPS, FLT3LG, FLT4, GALNTL4, GALT, GNAI2, GRHR, HIF1A, HSD17B4, IDI1, IFNA2, IGSF5, IKBKE, IL1R1, IQGAP1, KCN11, LALBA, LAMC2, MAPK14, MS4A2, MYL7, MYLK2, NOD1, NOS1, NOTCH2, NRP1, OR2S2, OR51L1, OR6X1, OR8H2, PCYT1B, PFKFB2, PIK3R1, PITX2, PLA2G2A, PLA2G4A, PLCE1, PLXNB3, POLD1, POLR2D, PPP2R5D, PRKG2, PRODH2, PTPN5, RPIA, SDC4, SEMA3A, SH2D2A, SOAT1, ST3GAL1, STK36, SUV39H2, TAS1R2, TICAM1, TLR9, TUBA1B, TUBB1, UGT1A10, HSD17B12, TNFRSF14
Negative_12497	GLS, ID3, ACTN2, ACVR2A, ADRA1A, AGPAT4, BCAT1, BCKDHA, CHRM3, CRY1, DGKG, FM05, GAD1, GGT5, GLS2, GRIA3, GSTM3, HIBADH, HMGCL, IL23A, INSRR, KIR2DL1, MAP3K3, MGLL, MYH11, NKX3-1, OR10S1, OR2T29, OR3A2, OR5A2, OR6K6, OR9K2, PAX4, PER1, PGK2, PHKG2, PIGV, PIM1, PIP4K2C, PLOD1, POLR2H, RARA, SHMT1, SRGAP3, ST3GAL2, STX16, TJP2, TLN2, TLR4, TNFSF8, UBE2K, ULBP2, VAV2, PPP1R12A

Negative_12498	EDA, EGF, F8, HK2, RFK, ACAA1, ACAD9, ADH1B, ADRB2, ADRBK2, AGMAT, AGP AT4, AMPD2, ARAF, ARHGEF2, ATP6AP1, C9orf95, CACNG2, CASP8, CDC20, CDH15, CNTFR, FGF1, FUT9, GADD45A, GLI3, GLYCTK, GRM1, GUK1, GYS2, GZM B, HAAO, IARS2, IDH3G, INPP1, INPP5A, INSR, ITGA5, ITGA9, KIR3DL2, KR AS, LDHAL6B, MGST1, MTHFS, NFYB, ODC1, OLAH, OR13C8, OR13J1, OR2G3, O R2T8, OR52N5, OR56B4, OR8J3, PDE1A, PGK1, PHPT1, PLCG1, POLR2E, PPAP 2B, PVRL2, RERE, RETSAT, SETD1B, SIPA1, SPTAN1, TLR2, UGT2A1, VDAC1, WNT9B, YWHAB, SERPIND1
Negative_12499	AMT, C8A, CTH, DBH, FGB, TK2, TNR, UBC, ABAT, ABLIM1, ACSL3, ADH6, AKR1 B10, ALDH3A2, ALDOA, BDNF, CAMK4, CBLB, CCNH, CMPK1, DVL3, EPHB4, ERB B3, FABP4, FARP2, FZD10, GBT1, HBEGF, HSD17B1, IFNA2, IFNGR1, IL11R A, ITGB3, KCNJ11, MAP2K7, MAP3K2, MKNK2, NEFH, OR10H5, OR2B6, OR2S2, OR2T12, OR2T34, OR52M1, P2RX6, PAK6, PIK3CA, PLAUR, POLR3A, PPA2, PP P2R2C, PTGS1, PTPRF, RPN1, SIAH1, SLC2A2, SMAD5, SPAM1, TAS2R5, TIAM 2, TIRAP, TPMT, ULBP1, VAMP4, WNT8A, ATP6V1C2, TNFRSF11B
Negative_12500	AMH, CP, CRK, CSK, FGA, GLS, HGD, LCT, MOS, TEC, AADAT, ACAD9, ACO1, AGP AT4, ALDOA, AMHR2, ARPC5L, ATG3, ATP2A1, ATP5J, C1QC, CCL1, CCL22, CD 274, CDC27, CREB3L2, CYP26C1, DLL1, DPM2, DTX1, EGLN1, FGFR2, FLOT1, FPGT, FRAT2, FUT2, FZD8, GBA3, GLS2, GP1BA, GRIA1, GRLF1, HAGHL, HIP1 , HPRT1, HTR2B, HYAL2, IL6ST, IL8RB, IMPA2, IQGAP3, IRS4, LDHA, MAML3 , MGLL, MMP9, MYD88, NCK1, NEU1, NODAL, NRXN1, OPLAH, OR2G6, OR4C16, O R4D5, OR5AK2, OXCT2, PFN2, PGM3, PHKA2, PIPOX, PLCD3, PLXNB2, POLR2B , PPP2R2C, PPP2R5E, PRKAA2, PRKAG2, PSME1, RPS6KA6, SELL, SOD1, TAP2 , TBL1XR1, TLN1, TM7SF2, TNFRSF8, TRADD, UGCG, WNT8B, HSD17B12, PAFA H1B3
Negative_12501	AK3, C8A, CD2, GSN, MVD, PLN, AANAT, ACACA, ACSM2A, ADORA2A, AKT2, APA F1, ATP5G2, ATP5J2, CARD11, CBLB, CCNA2, CCNG2, CDKN1A, CDKN2D, CFTR , CNTN2, COASY, COL6A2, CPS1, CYP2C9, ERBB2, EXTL3, FGF1, FGF14, FLT1 , GADD45G, GALNT8, GNA12, GOT2, HCCS, HSPA2, IFT57, IL13RA1, IL2RG, I MPDH2, ITGA10, ITGAV, KIR2DS4, KLRD1, L1CAM, LHCGR, MAPT, MASP2, MCM 5, MECR, NAE1, NMNAT2, NPR2, NR1H3, NRXN3, OR13C8, OR1D2, OR2D3, OR4C 13, OR4C6, OR4D2, OR4K1, OR4K17, OR51I2, OR5L2, OR6K2, OR7A17, PARD6 B, PARVA, PITX2, PLCB2, PLCD1, PLEKHA8, PLXNA3, PNLIP, POLR2J, PRKAC G, PRKAG1, PRKCA, PRKCG, PRLR, RALA, RDH11, SETD1B, SHC1, SHISA5, SMA RCA2, SUOX, TGFBR2, TICAM2, TRAF3, TSTA3, ULK1, WASF1, WNT5A, XCL2, X YLB, ATP6V0A4
Negative_12502	ASL, DCK, F2R, GNS, GP5, ID3, LEP, MSN, ADRBK2, ALDH3A1, APOA5, ATN1, B CAT2, BMP6, CASP9, CCL3, CD79A, CHSY3, CLDN2, COL2A1, CSF2RB, CYP11B 1, CYP1B1, DTX2, DUSP5, EPHA2, FGF18, FUT7, FZD3, GCNT2, GOSR2, GUCA1 A, HAP1, IFNA13, IL3RA, IL6R, INADL, LAMB3, MAP2K3, NAT1, NLGN2, NTN1 , OR14I1, OR2AE1, OR52E4, OR7G1, OR8B12, ORC2L, PDXK, PDXP, PFKFB3, P I4KA, PIGT, PITX2, PLAUR, PLCB1, POLR3B, PPT1, PSME3, RDH11, RPE65, S EMA3A, SGPP2, SMAD5, ST3GAL3, TBXAS1, VAMP1, VAMP2, HLA- DQB1, PAFAH1B1, PDCD1LG2, PNLIPR1, SERPIND1, SLC25A31
Negative_12503	AK5, DCK, MAX, TK2, TNN, ABLIM3, ACMSD, AHCYL2, APLP1, ARHGEF1, CCL4, CCL5, CSNK2A1, CSNK2A2, CX3CR1, CYSLTR2, DCTN1, DDB2, E2F4, EGFR, EP HA3, F2RL3, FARSA, FGF17, FZD5, GNAO1, GPX7, GRM5, H6PD, IBSP, INPP4B , ITCH, LAMB3, MKNK2, MYH6, NAT2, NCF1, NT5E, OGDHL, OPLAH, OR10H5, OR 1D5, OR51E1, P2RX2, PHKA2, PIK3C2A, PIP4K2B, POLR2K, RAF1, RAPGEF3, SPHK1, TAS2R1, WEE1, WWP2, HLA-DQA2

Negative_12504	C2, C3, CSK, MAG, ADSL, ANAPC4, APOC3, BAAT, BMPR1A, CACNG8, CCL1, CD19, CD44, CERK, CLDN3, CLDN7, CYP11B2, CYP2C8, CYP3A43, E2F1, ENO2, FG F20, FMO5, GABARAP, GNAI1, GSTA2, IMPA1, MAGI1, MALT1, MCM3, MEF2C, MYH10, NFKBIA, NOS1, NRG4, OR10C1, OR10H4, OR1G1, OR2L8, OR2M4, OR4X1, OR51G2, OR8D2, OR8S1, ORC4L, PARVA, PAX4, PDCD1, PIP4K2C, PLCB3, POLR1C, POLR2C, PPP1R3A, PYCRL, RAP1B, RDH5, RDH8, RHOD, RPN2, RXRB, SHC3, SOCS3, SPCS3, SV2B
Negative_12505	CBL, DDC, GBA, HPD, PGD, TP0, ACVR1B, ADCY4, ADSL, AKR1C3, CAPN2, CCNE2, CDKN1A, CDKN2B, CMPK1, COL1A1, CYFIP2, DHRS4L2, DPYSL2, DTX2, EPA S1, FGF5, G6PC, GABARAP, GAL3ST1, GALE, GALNT12, GALNT14, GRM5, HARS, HNF1B, HSD17B8, IFNGR2, IL12A, IL12B, IL28A, KIR2DL4, MAP3K7, MAP3K8, MAPK14, MYH14, NAT5, NCK1, NFKBIA, NME6, NSD1, OR11H6, OR2B2, OR2H1, OR52W1, OR6C4, OR7A17, PDE11A, PDE4A, PDE7B, PHPT1, PIP5K1C, PLA2G6, PLCB3, PRKG1, PRPS1, PRSS2, PVRL3, RFNG, RIPK1, SLC25A6, SOCS4, SRD5A2, UGDH, ULK3, WNT7B, HLA-DRB5, TNFRSF10B
Negative_12506	BAD, GHR, AASDH, ABL2, ACADSB, ACTN2, ALG10B, ARG1, ARPC5, C1QC, CACNA1E, CACNA1H, CDC2, CHST13, DAD1, DARS, DDX18, DRD5, ENO1, ESAM, GNAO1, GNAS, HSD11B2, IL12B, IL29, IMPDH2, MAGI1, MAP3K8, MAT2B, MYH10, NADSYN1, NOS3, NTNG1, OR13C5, OR13C9, OR4B1, OR6B3, OR6X1, PARD6A, PDE7A, PPA1, PRKACA, PROS1, PTPRR, PYGL, RAD51, RPRM, RPS6KA2, RPS6KA4, SEMA4F, SLIT1, TUBA3C, UCK2, VNN1, WNT3A, PNLIPRP1, ST6GALNAC5
Negative_12507	BAD, C1S, C3, EGF, GHR, LPL, ACSL6, ADCY1, ADCY4, AGPAT3, ALDH3B1, ARP C4, ASMT, ATP5E, AXIN2, B3GALT4, BAAT, BLNK, CAV2, CCL20, CD274, CD70, CDH4, CLDN6, COMT, CXCR6, CYP3A5, DHRS4, DOT1L, DPYD, DUSP10, ETNK2, FBP2, FGF1, FGF18, FLAD1, FRAT2, FUT2, GATM, GNG12, GP1BA, GPLD1, HRH1, HTR6, IL22RA1, IL4R, IRAK1, ITGA6, ITGAD, KARS, KLRC1, LEFTY2, MAPK13, MEF2C, MGAT3, MTMR1, NANS, NAT6, OR10J1, OR10V1, OR2K2, OR2T12, OR2T4, OR3A3, OR8K5, PANK4, PDGFC, PDXK, PER1, PIGC, PMM2, POLR3D, P OLR3K, PPP1R3C, PPP2CB, PPP2R2D, PRKAA1, PRKAR2A, PRKG1, PTGS2, PVR L4, RALA, RAP1A, RDH10, SCLY, SETDB2, SOCS1, SUOX, SUV39H2, TNFSF10, TRAF4, TUBB6, TYMP, UGCGL1, VAMP2, TNFRSF17, TNFSF13B
Negative_12508	CBL, CEL, CKM, FER, FST, MOS, MPL, RET, ABL1, ABLIM3, ADCY10, ADIPOR2, ALG1, ALOX5, ARPC2, ARSE, ATP12A, B3GNT2, BAIAP2, BMP4, CACNA1H, CAS P9, CCNE2, CCNG1, CCNH, CD48, CSNK1D, CTBS, CX3CR1, DDOST, DGKQ, DVL3, EFNA2, FIGF, GALNT10, GARS, GBA3, GPT2, GSTA4, HSPA1B, IFNA7, IL11R A, IRAK4, JAM2, KCNB1, LFNG, LHCGR, MAPK8, MCCC2, NCR3, NRG3, OR10S1, OR2M4, OR4D6, OR4K2, OR8D1, OR8H2, P2RX6, PANK3, PDE1B, PDE7A, PIGT, PPA1, PPP1R3A, PPP2CA, PRKAG1, PROS1, PTGER3, RETSAT, RRAS2, RUVBL1, SGMS1, SLIT1, SMAD9, SMC1B, STK4, SV2B, TAS2R13, TOMM40, TUBB2A, UG T2B17, CACNA2D2, SERPINA5, TNFRSF13B
Negative_12509	BCR, C8G, GK2, KIT, NF1, STS, ADSSL1, ALG9, AREG, ARPC3, CAMK2G, CLDN19, CRLF2, CSNK1G1, CXCL10, CYP2C8, DDX18, DRD2, DUSP8, ENTPD6, FBP2, FLAD1, GADD45A, GALM, GNG12, HDAC1, HNF1B, ICAM3, IL11, IL1A, IL20, L DHB, LTA4H, MAP2K7, MASP2, MAT1A, MS4A2, NFKBIE, OR12D3, OR2T6, OR56 A3, OR5A1, PFN4, PGM2, POLA1, PON3, RDH8, ROBO3, SARS, SEMA4C, SFRP2, SOS1, SPRY4, STAT1, STAT3, STEAP3, SUOX, TAS2R60, TAS2R7, TGFB1, TL R4, TP53, WARS2, WASF3, WNT5A
Negative_12510	F5, GPI, LIF, SRF, AADAC, ALG1, ALG13, ALOX12, AMPD1, ARHGEF7, CACNA1 C, CACNG4, CAMK4, CASP6, CCR7, CLDN14, CLDN3, CREB1, DGKQ, EDNRA, ENO 2, EXTL2, FGF10, FGF19, FGF5, FZD8, GADD45A, GANC, GOSR2, GSTO2, IGF1, LIMK2, LRP5, LYZL1, MAN2A1, MGAM, MYH9, OR2B11, OR2H2, OR52A5, OR9G 1, PDXP, PIK3C2G, POLR2C, QARS, RRAS2, SETMAR, SPCS1, STX10, SUFU, SY NJ1, UGP2, UPB1, YWHAE, ATP6V0A2

Negative_12511	GK2, HGF, ACSM2A, ACY3, ADCY1, AVPR1B, B3GALT1, BCL2, CACNA1F, CD38, CD01, CLDN8, CLDN9, CMPK2, COL6A1, CSAD, CSF1, CYP19A1, CYP2D6, DDX5, DHX58, EGLN3, ERO1L, F2RL2, FUT6, GMPPA, GNA12, HARS2, HLA-DMA, IFNA7, IFNB1, JAM2, LIFR, LMO7, LRRC4C, MAOA, MCCC1, MGAT5, MYH13, MYH3, MYH6, MYL9, NADK, NAT6, NEUROD1, OR10P1, OR10Z1, OR11G2, OR2AG2, OR2L13, OR4K13, OR52A1, OR6F1, OR8B8, PECAM1, PGAP1, PIGM, PLD1, PLK1, PON3, PPARA, PPARG, PPP1CA, PRKACA, PTPRZ1, RBKS, RBX1, SMARCA5, TAS2R14, TBXAS1, TGFB1, TP73, TRAF3, VDACC2, SUV420H2, TNFRSF17, TNFSF13B
Negative_12512	CKM, DBH, F12, ITK, TFG, TPR, ACSL5, ALDH7A1, ALG12, ANAPC2, ARPC5L, ASRGL1, ATP5J2, BCL2, BIRC2, BLVRB, BUB3, CARS, CAV3, CCL20, CCR7, CDC42, CEBPA, CLDN15, CMAS, COL5A1, CPT1A, DAAM1, DGKG, DUSP4, E2F3, EXT L3, FGF8, FM03, FSHB, GDE1, GL01, GLUD1, GSTM2, GZMA, HMBS, HNF4G, HPS E, ICOSLG, IL28RA, IL8RA, IMPDH1, IQGAP3, IRAK1, ITGAM, KIR3DL2, KLRK1, LALBA, METTL6, MITF, MLLT4, MYD88, MYH1, MYL5, NARS2, NME2, NT5C1A, OR10P1, OR51I1, OR5M9, OR8K5, OSMR, PAFAH2, PGK2, PHKG2, PIAS2, PI GK, PIGN, PIP5K3, PLA2G4A, POLR2K, PRKCI, PSME2, PTPRC, RBPJ, RETSAT, SEMA3E, SFRP1, SLC9A1, SNAI2, SRD5A1, SSH1, STK4, TACR3, TUBB4Q, UP RT, VAMP4, WIF1, MAPKAPK3, PAFAH1B3, PRICKLE1, ST6GALNAC6
Negative_12513	CFI, DDO, IL2, IL3, LPL, OAT, OGT, AANAT, ACAT1, APOC3, ARPC2, ASS1, ATP5G1, BCKDHB, CD79A, CEBPA, CHAD, CHIT1, COL5A3, CTSB, CYP4F3, DUSP16, DUSP6, EDN1, ENTPD6, EPB41L2, EPHA1, FGF13, FGF22, FRAP1, GART, GLYCTK, GSTM5, HCCS, HNF1A, IFNAR2, IFT57, IL28A, INHBC, INPP1, ITGA10, KCNJ11, LARS2, MAD2L2, MAML1, MAPT, MECR, MITF, MYH4, NCF4, NMNAT1, NRP1, NRXN2, NUDT5, OR1Q1, OR2K2, OR2T1, OR2T2, OR2W1, OR52E4, OR8I2, PARD6B, PDX1, PIP4K2B, PLCB1, PRLR, PTGDS, RAPGEF3, SDHC, SEMA4A, S GMS1, SMC1A, SMC1B, SORBS1, SPRY1, SULT1A1, TAS2R49, TGFB1, WNT10B, WWP2, ATP6V1G2, CSGALNACT2, TNFRSF11B
Negative_12514	CEL, DAO, EPO, F12, HPD, JUN, KIT, ACP5, ACSM5, ARNTL, ARPC1A, ATP2A1, ATP2A2, ATP5J, B3GALT1, B3GAT3, CCR10, CD36, CDC16, CHRM5, CLDN3, CREB3, CTSB, CXCR3, DAPK2, DLST, EIF4E2, EVI1, FDPS, FGF21, FPGS, FTH1, FUT6, FZD2, GNAI2, GNRH2, GRIN2D, GRM1, HES1, HLA-C, HMGCS2, HNF1A, IDH3A, INHBA, IRF9, JAK3, KIR3DL1, LARS, LFNG, MMP14, MMP9, NFYC, NME7, NR1H3, NT5C3, OLAH, OR10A7, OR10G7, OR13C3, OR4D11, OR4F17, ORC5L, PARVB, PGK2, PIGF, PIK3R3, PIP4K2B, PLCB4, POLE4, POLR2H, PPP3R1, PRDX6, PRKCI, PRODH, RASGRP2, RDH5, RHOA, RPN1, RUVBL1, SELP, SEMA4D, SETMAR, SMARCA5, SMPD3, SOCS7, SRD5A1, SV2B, TAS2R7, TLN1, UCK2, ULBP3, UROS, WEE1, WNT10B, YARS2, HSD17B12
Negative_12515	ABO, BTD, CEL, MVK, OTC, PLG, ABAT, ACAD8, ACVR1B, AFMID, ALPP, BMPRIA, CACNG7, CAMK2A, CCNA2, CCR8, CD247, CD01, CRHR1, CSF1R, CTNND1, CYSLTR2, DNMT3L, DPM3, EPB41L1, ERBB4, GOSR2, HMGCS2, IFNGR1, IKBKE, MA PK14, MFNG, MYL7, NLGN3, OR1L8, OR51F1, OR8U1, OSMR, PAFAH2, PGK2, PI GS, PIK3CD, PLA2G2A, PLCZ1, PMM2, PPA1, RAPGEF2, SCIN, SEMA3A, SETMAR, SNW1, ST3GAL5, STAT5A, TNFRSF8, UGT2B28, SERPIND1, SERPINE1
Negative_12516	CD6, EPO, F5, FAS, LCK, LSS, PLN, AADAC, ABL2, ACADS, ADCY9, AGPAT2, ALG9, ARG2, CALML5, CCR6, CD247, CDC2, CRHR1, CTNND1, CTSG, CYP1A2, DGK D, DGKZ, DPYD, DUSP1, EFNA4, EHMT2, ELK1, ELK4, ENTPD1, EPHA2, ETNK1, EXT2, FGF12, FLT3LG, FUT3, GNAZ, GNB1, GRIA2, IFT57, IL10, IL10RA, IT PK1, LTBP1, MAFA, MALT1, MARS, MARS2, MCM3, MMP2, MTFMT, NCOA4, NR4A1, OGDHL, OR10G3, OR10H1, OR10T2, OR14A16, OR2T11, OR51F2, OR56A3, OR6M1, OR8K1, OR8U1, OR9Q2, PECAM1, PFKM, POLE3, POLR1A, POLR1E, POLR3G, PPP2R1B, PRKAR2A, PRPH2, QPRT, RALB, RBKS, RPS6KA6, SDHB, SHMT1, SMAD3, SMAD7, SNAP25, STX3, SUV39H1, TAS2R49, ARHGEF12, ATP6VOD2



Negative_12517	ADK, DUT, MYC, AARS2, ACAA1, ACAA2, ACAT2, ADIPOQ, ADRA1A, ALDH3A2, ALG11, AMDHD1, ARAF, ATP5A1, CACNG4, CBR1, CCL14, CCL15, CD22, CMPK1, CMPK2, COL4A4, CYP7A1, DCTD, DDOST, DDX56, DGKD, DPAGT1, EDNRA, ENPP6, FASLG, FDFT1, FGF14, FUT9, GLI3, GNA14, GNPAT, GSTA4, HAGH, HIF1A, HLA- F, IL28RA, IL6R, INPP4A, INPPL1, ITGB6, JAK1, MAN1A2, MAN1B1, MAPK1, MBL2, MGAT2, MGST3, MTHFD1L, NARS, NAT6, NCF1, NFASC, NT5E, NTRK1, OR2AG1, OR2W1, OR4D11, OR4K5, OR4N2, OR5F1, OR6C1, PARD3, PDGFA, PDGFD, PFKL, PFN4, PKM2, PLD1, PLXNB1, POLR1A, PRSS3, RDH16, RGS3, SDHB, SMAD2, SOCS4, SOS2, ST3GAL2, SULT2A1, TICAM2, TSC2, TSLP, TUBB, ULK2, WASL, WEE1, WNT5B, AASDHPPT, TNFSF13B
Negative_12518	EBP, FN1, IL5, ACADVL, ACTG1, ACVR1, ADCY1, AHCY, AKT2, ANGPTL4, ATP5E, CCL4, CSNK2A2, CYFIP2, CYP2D6, DDX41, DFFA, DIAPH1, GALNT14, GCH1, GNAT3, HRAS, IL15, ITGAV, LIPG, MAN1C1, MAPK9, NAGA, NCF4, NKD2, NSD1, OR2L2, OR4C46, OR5T2, OR6N2, OR6Q1, OR7A17, PARVB, PDE7B, PIGT, PLA2G5, PPP1R3C, PRKAR2A, RDH12, SETD1B, SKIV2L2, SLIT1, STMN1, TAS1R3, TSHB, TYK2, AASDHPPT, ATP6VOD2, HLA-DQA2
Negative_12519	CAD, CTH, EPO, FGG, HK3, VTN, ACAD9, ACAT2, ADCY2, ADORA2A, ANAPC7, ANS, ATP13A2, B3GALT5, BACE2, CBLB, CCL27, CD3E, CD86, CDC25A, CDH1, CD01, CER1, CLDN9, CSF1R, CTF1, CYP2C8, DDX55, DGKE, DHCR24, DUSP6, DUSP8, E2F3, FRAT2, GJA1, GLUL, GSTM3, HCLS1, HLA- DOB, ICAM2, IDUA, IL13, IMPA1, INHBE, IRS4, LAP3, LYPLA2, MITF, MYH3, NFKBIA, NQO1, NT5C2, OR2D2, OR2H2, OR4D6, OR4K13, OR4S1, OR51A2, OR7G2, PDGFC, PDGFD, PGAM4, PIGK, PIK3C2G, PIK3C3, PIK3CA, PLCB4, POLR2K, PRKX, PSME1, PTPN5, PTPN6, RDH8, SDC1, SEMA7A, SMPD4, ST3GAL4, STAT4, TAS2R4, TAS2R9, TGFB1, TPM3, TUBB, UMPS, VDAC3, WNT2B, HSD17B10, PAFAH1B1, SERPINB5
Negative_12520	F5, F8, GNE, ME2, OGT, SMS, ACOT12, ACSM4, ALG6, ARHGEF2, ARSA, BAIAP2, BCMO1, BLVRA, CACNA1C, CASP8, CCL8, CD55, CHKA, CPOX, CYP19A1, CYP2S1, DHDH, DLL3, FCGR3A, HMBS, ITPA, KLRC1, LDHAL6A, LIPC, MMP9, NARS2, NMNAT1, OGDHL, OR1N1, OR4K15, OR6C76, OR6N1, OR7G2, OXCT2, PAK1, PDE10A, PFN3, PHKG2, PIK3R4, PLA2G5, PLCE1, PLXNB2, PON3, PORCN, PPP3CA, PTDSS1, RENBP, SDHA, SELE, SMC1B, SNAP25, TAS2R4, TGDS, TYK2, WWP2, XCL2, YES1, B3GALNT1, CSGALNACT1
Negative_12521	CKB, FGG, NF1, VCL, A4GALT, ABLIM1, ACP2, ADSSL1, AKR1D1, ALDH1A1, APAF1, ARHGEF4, ARPC5, ARPC5L, BDKRB2, BDNF, C3orf10, CACNA1D, CD226, CDKN1A, CEBPA, CHPT1, CNTN1, COL5A1, CTLA4, CYP2C19, CYP2C8, DHFR, DUSP4, ECHS1, ERBB4, FGF12, FZD9, GGCX, H6PD, HSD11B2, HSD17B7, HTR6, IGF1, ITGB2, KAT2B, LIMK2, MADCAM1, MAML3, MAP2K2, METTL6, MPDZ, MYH4, NAGLU, NFYB, NODAL, OR10G7, OR1N1, OR2T2, OR4F6, OR51G1, OR5F1, OR6B3, PCYT1A, PDE7B, PKM2, PLCD4, PRSS2, PTPN6, PVRL4, RAPGEF1, RBL2, ROBO3, SETD1B, SOS2, STAT5A, SULT1A1, SULT1A4, SUV39H1, TAP1, THY1, TRMT11, TYRP1, ATP6VOD1, ATP6V1E1, B4GALNT1, GABARAPL1, HLA- DRB4, PRICKLE1, TNFRSF10A
Negative_12522	F2R, GK, LYN, MPI, SYK, ACSL4, AMDHD1, AMY2B, AOC3, APOA5, AQP7, BMPR1B, CACNG2, CD8B, CHKA, CLDN17, CNDP1, CYP27A1, DKK4, DUSP5, ENO1, FGF23, FOXO3, G6PC2, GALNT11, GGT6, HSD3B1, KIR2DL2, LALBA, LAMA3, LIPG, NT5M, OR4F4, OR52A5, OR56A3, OR5D18, P2RX5, PDE6H, PDHB, PFKFB3, PGAM1, PGLS, PIP4K2A, POLR1D, PPP2R2D, PRKCI, PTPMT1, RELA, RFXANK, RFXAP, RPSA, SLC27A5, SPRY2, SRGAP1, SSH2, TRPC1, TUBA4A, TUBA8, TUBB, WNT1, ATP6V1G2, HSP90AA1, TNFRSF13B

Negative_12523	NF1, PVR, ADCY2, AFMID, AGXT2, AKR1C1, ANAPC2, ARHGEF7, BHMT, CASP6, CD19, CD82, CDKN1B, CDKN2C, CFL2, CHPT1, CHST11, CLDN16, CREB3, CRKL, CXCL9, CYP3A43, DAPK1, FTCD, GARS, GRIA1, GRIN2A, GSTA4, HTR4, IDUA, IFNA16, IL25, IL5RA, MASP1, MYH8, NFKB2, NTF4, OR10H4, OR52N2, OR5D16, PKLR, PLCG1, PLCZ1, PNLIP, PPP2CA, PRKACG, PRODH, RASA1, RCHY1, SAT1, ST6GAL1, WBSR17, HLA-DRB3, ST6GALNAC6, TNFRSF1A
Negative_12524	BTD, IDS, PGP, SRM, WAS, ABLIM3, ADCY10, AKT1, ALDH3B1, AMY2A, ARPC1A, ARPC2, ARSE, CARS2, CCNA1, CCR2, CERK, CHEK2, CMAS, CRHR1, CSNK1G3, CTPS2, CX3CR1, CYP2C8, DGAT2, DKK2, DTX2, DTX4, EFNA2, ENTPD1, FGD1, GALNT11, GJA1, GNPDA1, GRLF1, GSTM1, HARS2, HRH1, HSPA8, IFNA2, IL5RA, INPP4B, IQGAP2, ITGB8, ITPA, MDM4, MGAT5, MYH1, NCF1, NFATC3, NOTCH3, OR1F1, OR2T2, OR2V2, OR4A15, OR51Q1, OR51T1, OR52J3, OR6A2, OR7G1, ORC1L, PAK3, PDIA4, PIGH, PIGK, PPM1D, PPT1, PYCR1, PYGM, RALGDS, RASSF5, RPN1, SARS2, SLC12A2, SRD5A1, SV2C, TAS2R38, TNFRSF9, TUBA1C, TUBB6, WNT6, MAPK8IP3, TNFRSF14
Negative_12525	ADA, BAD, CRK, EBP, LCT, LEP, MAG, PLG, ABL2, ABLIM1, ACAA1, ACSM3, ACTG1, ALDOA, ALG10B, ANGPTL4, ATP5G2, B3GNT2, BRAF, CCNG2, CD40, CDC23, CTSG, CYP3A7, DDX51, DIAPH3, DTX3, EFNB2, ENO1, ERBB2, FBP2, FGD3, GPD1L, GRIA2, HHIP, IL21R, ITGA2, LAMB3, LAMC3, MGAT4B, MICA, NARS, NEUROG3, OR11H1, OR2AE1, OR4A15, OR4C13, OR5I1, OR5M8, PHKG2, PIAS3, PIK3CB, PIM2, POLR1C, ROBO1, RPS6KB1, SDHD, SMURF2, STX12, TAS2R42, TUBA8, UGT2A3, ULK1, WASL, WNT10A, ZFYVE16, ATP6V1B1, ATP6V1B2, SUV420H2
Negative_12526	ADC, BAX, C4B, GGH, MPI, SDS, STS, ACACB, ACSM4, ADCY1, ADCY5, ALPL, ASRGL1, ATG7, ATP6AP1, ATP6V1F, BAI1, C1GALT1, C4BPA, CACNB3, CDC20, CDC25B, CREB1, CX3CR1, CYCS, CYP2S1, EGLN1, ENTPD7, GALNT10, GALNTL2, GRHPR, GSTA3, HADHA, HMGCR, IL12B, INPP4B, ITGB1, KDSR, LIPF, MAP2K2, MIOX, MYL2, NANS, NFKBIA, NTN1, OR10J1, OR2Z1, OR3A2, OR5B17, PDHA1, PGAM2, PGM1, PHKB, PIM1, PIP5K1A, PLA2G2E, PLXNB1, POLR2J, PRSS2, RAB5A, RARA, RIPK1, RPN2, SHISA5, SRGAP3, SUV39H1, TLN2, UGCG, WBSR22, ATP6VOD1
Negative_12527	RPE, ACP1, ACP2, ACSM5, ALDH2, ARHGAP5, ARPC1A, ASMT, CASP3, CES1, CHST11, CNGB1, COX15, CYP11B1, DOCK1, EIF4B, F11R, FM02, FZD6, GPAM, HARS, IL12A, IL12RB1, IL13, LIPE, MARS, NFKB2, NFKBIA, NFYB, NRG3, OR4A5, OR4K14, OR4S2, OR51B5, PCYT1A, PDE10A, PDE3A, PIGC, PMM1, PPCDC, PP3CB, PSME1, RASGRF1, RDH16, SDHA, SHC4, SHMT1, ST8SIA5, STEAP3, XYL1, ZBTB16
Negative_12528	A2M, ADK, BAX, F5, GAA, GK2, GNE, GSR, MAX, ABCC8, ABLIM3, ADSL, AHCYL1, ARAF, B3GNT3, BCKDHB, CASP7, CCNG1, CDH2, CDKN2B, CHR1, CLTCL1, CNGA3, CSF1, CSNK1D, CXCL12, CYP2A7, DAPK1, DPYD, DTYMK, EPHA6, EPHB2, EREG, F2RL1, FZD1, GGT7, GLS2, GNG13, GNPDA1, GPD1, GRM5, HMBS, IL1R2, IL23R, INPP5E, IQGAP1, ITCH, ITPKB, LAMC2, MAP2K7, MAPK1, MCM4, NAT2, NEFM, NFATC1, NT5C1B, OR13C2, OR4F4, OR52B4, OR52W1, OR5P3, OR7G3, P2RX4, PANK1, PEMT, PIM2, PLA2G2A, PLCB3, POLR2H, PPAP2C, PPM1D, PPP2R5B, PRKAG3, PRKCH, RASGRF2, RASGRP1, RPS6KB2, RPSA, SKP1, SLC27A4, SPTLC1, TCIRG1, THBD, TNFSF18, TUBB, UROS, VCAM1, WASF3, WNT2, WNT5B, YARS, ATP6V1B2, CSGALNACT2
Negative_12529	EGF, FOS, LPO, ADSS, AQP7, AREG, ARNT, ATG7, BMP8B, BMP2, CACNB1, CACNB2, CADM1, CCR6, CXCL10, CYBA, CYP2C18, EHHADH, EPB41, ESAM, FGF20, GALNT10, GL01, GRB2, GUCY1B3, GUCY2F, HCLS1, HSPB1, IFNA5, IL20RA, LIT4S, LYPLA1, MKNK2, MYH7B, OR10A7, OR14I1, OR5L2, OR6C75, OXSM, PANK2, PRKAA2, PTPN6, RAPGEF1, RBPJ, RXRG, SAT2, STAT2, TAS2R60, TLR9, TP73, TUBB2A, TUBB2C, UGT2B4, WNT4, YKT6, YWHAB, HLA-DPB1

Negative_12530	CFI, EGF, GBA, GP5, HPD, MVK, RFK, RPE, AGMAT, AKR1D1, AVPR1B, B4GALT4, BBC3, BMPR1B, C1QC, CADM3, CAMK2D, CAV2, CD58, CDC14A, CDH1, CDK7, CEBPA, CFTR, COQ3, CREB3L1, CREB3L2, CSF2, CTBP1, CYCS, DVL2, EXTL2, ERTL3, FABP1, FBP2, FOXA3, GANC, HLA-DOB, HLCS, IFIH1, IFNA21, IL23R, INPPL1, ITGA2B, KIR2DL1, KIR2DS4, LARS2, LDHAL6B, MAOA, MAP2K7, MAPK10, MARS, MDH2, METTL6, MKNK2, MYH4, NADSYN1, NFAT5, NRXN1, NT5C, NT5E, OCRL, OR10S1, OR11G2, OR2B2, OR4C13, OR4D6, OR4N2, OR51G2, OR5M9, OR5P3, PDE1A, PDGFA, PKM2, PLA2G3, PLXNA2, PNPLA3, PPP2R5C, PPP3CC, PRKACB, RALGDS, ROB01, SCIN, SEMA3A, SLC2A4, SPTAN1, SSH3, TAS1R3, TBL1X, TNFRSF8, TNFSF11, UGT2B4, UROD, WWP1, ATP6V1B2, ATP6V1C2, HLA-DRB4, TNFRSF13C
Negative_12531	ATM, CR2, PC, RDX, SI, ABLIM2, ALG8, ARPC5, ATP12A, BET1, C3AR1, CCL22, CD28, CERK, CLDN3, CMBL, CYFIP1, CYP26B1, DPYS, DUSP9, EXTL1, FLT3, GALNS, GDE1, GDF6, GLI1, GLUD1, HIF1A, HIP1, ICAM1, IL12RB1, IL17A, IPPK, ITGA1, ITGA9, MPDZ, NCOA4, NEU2, NR4A1, NUDT8, OR13C9, OR51A7, OR5K1, OR9Q1, PLAU, PORCN, PSME1, RPS6KA6, SH2D2A, STAT5A, TAS2R14, TMLHE, TNFSF18, TPK1, TRHR, TUBB, UNC5C, UNC5D, VASP, VDAC1, XCL1, XCR1, ST6GALNAC3, TNFRSF10D
Negative_12532	CAD, CGN, FOS, ID3, IL2, IL3, LAT, ADRA1B, ALDH3A2, ARHGEF7, ATP5G3, B4GALT3, BTRC, CCL16, CD22, CD34, CD47, CDH4, CDIPT, CFLAR, CLDN2, COL11A1, COL6A2, CSF3R, CXCL10, CYP17A1, CYP26A1, DHDH, DKK4, DPM1, DVL3, EDNRA, EGLN1, ELK4, ENPP7, ENTPD4, EPHA8, FGF10, GANC, GCNT4, GNAI1, GNG3, GNPAT, GRIA3, GRIN2A, GUSB, HSPB1, IDI1, INSR, IQGAP3, LRP5, MAPK1, METTL2B, MPST, MYH7B, NCF2, NRG3, NTNG1, OR11I, OR2AG1, OR2L2, OR2T11, OR4A15, OR4D2, OR52E6, OR52N2, OR6F1, PARD6B, PKLR, PKM2, PLCZ1, POLR1A, POLR3D, PPP1CA, PRKCD, PYCR2, ROB02, SDC4, SLC9A1, SPRY2, SRGAP1, STX8, SV2C, TAP1, TPI1, TRAF3, UBA1, ULK3, VDAC3, WARS2, WNT3, MAP3K7IP1
Negative_12533	AK3, GP9, LIF, MUT, OSM, TPR, AGPAT1, ALAD, ALDOB, ANGPTL4, B4GALT2, BAIAP2, CCND2, CISH, CPT1B, DDIT4, DERL1, DGKI, ENPP6, FGF6, GBE1, GDF5, IL1RAP, ITGAL, ITGB8, ITPK1, KNG1, LRRC4C, MAPK1, MPDZ, NCK1, NFAT5, NODAL, NT5C, OR1J1, OR2T34, OR4A16, OR4M1, OR51B4, OR7G1, OXCT1, PDE6D, PDGFC, PHPT1, PIGO, POLE2, PON1, PRKAA1, PRODH2, PSME3, RFWD2, SARDH, SESN2, SMC1A, SPHK1, ST3GAL6, TRAF2, UXS1, ATP6VOE1
Negative_12534	GH2, GP6, MTR, UBB, ACSM5, ADH6, AGPAT3, AGXT2, AKR1C2, ALG1, ARRB2, AVPR1B, CCL24, CD99, CDC2, CDC27, CDKN2C, COASY, COX10, CREBBP, CSNK1G1, CTBS, CTNNA1, CYFIP2, DAAM1, DDIT3, DRD1, ENTPD1, EPHA2, EPOR, F2RL2, FLOT1, GFPT1, GMPR, GSTT1, HTR2C, IFNAR1, IL18, IL18R1, IL19, IL22RA2, ISYNA1, ITGB6, KIR2DL2, LIAS, MGST3, NKX6-1, NRG3, OCLN, OR10AG1, OR13F1, OR1D5, OR2M7, OR4X2, OR51A2, OR51Q1, OR52H1, OR6Y1, PAK1, PIGB, PIGO, PPAP2B, PPARA, PPAT, PPP2R5A, PRKACB, PTPRR, RAPGEF1, RBPJ, RFXANK, SCLY, SKP1, SLC25A6, SMAD5, ST6GAL1, ST8SIA1, STX12, STX2, TAS2R16, THY1, TJP1, ULBP2, WARS2, WEE1, YKT6, GABARAPL2, TNFRSF1A
Negative_12535	C6, DDO, IL9, KDR, MAX, NNT, ABAT, ABP1, ACAD8, ADH1B, C9orf95, CASP6, CCKBR, CCL16, CD99, CDH2, CES1, CLTB, CNTNAP2, COMT, CXCL9, DGAT1, DGKI, DNMT3L, DTX4, EFNA4, EIF4B, ENTPD2, FBP2, FCGR3A, FUT7, GALNT5, GALT, HRH1, IL13RA2, LARS, LDHA, LIPF, MKNK1, NKX6-1, NME4, NTNG1, NTRK1, OR10G9, OR10J3, OR2W1, OR3A2, OR4C12, OR4K14, OR5M8, OR7C2, P2RX1, PDE7B, PI4KB, PLA1A, PMM2, POLR2G, PORCN, PTPRJ, RASSF5, SDHB, SEMA3C, SETDB1, SMAD2, SPP1, SPRED1, TLR9, UGCG, VEGFA, ATP6VOD2, HLA-DRB4, PLA2G12A, PRICKLE1

Negative_12536	C5, C8B, ID3, NPL, AASDH, ACO2, ACTA1, ACTG2, AGRP, AGXT2, ALDH3A1, ALDH4A1, ATP5C1, ATP5L, CCL13, CD58, CD8A, CLCF1, CMAS, COL4A1, COL5A2, CPOX, CSF3R, CTBP1, CTNND1, CYP21A2, CYP4A11, DDIT3, DDX41, DNMT1, ECSIT, FGF22, FRAP1, FUT1, GP1BB, GRIN2A, GSTK1, HAGHL, HAP1, HSD17B8, IL13RA1, IL17RB, INHBE, IRAK1, ITGA8, KCNB1, MAP2K6, MCM2, MLLT4, MS4A2, MTAP, MYD88, NARS, NFX1, NME7, OR11A1, OR4F15, OR51S1, OR5D14, OR5T1, OR8H3, OR8J3, OR9A4, PAFAH2, PFKM, PGK2, PIP5K3, PLCB2, PLXNA3, PMAIP1, PNPLA4, PNPT1, POLE2, POLR1A, PPP1CA, PRIM1, PRIM2, PRKACA, PRKCB, RASGRP1, RFWO2, SCIN, SIAH1, SMAD3, SPTAN1, ST3GAL5, TP73, TRDMT1, VEGFA, WNT2, HLA-DPA1, PNLIPRP1
Negative_12537	C7, DAO, FGB, ABLIM1, ACSL4, ADCY4, ADRB3, ALAS1, ALDH3B1, ALDH4A1, ALG1, AMPD1, ATP5B, B4GALT5, C4BPB, CACNB4, CD3E, CD80, CDK4, CDK5, CFTR, CLCA4, CLDN8, CLTCL1, CPT1B, CREB3L2, CXCR4, CYP11B1, CYP11B2, CYP2B6, CYP4A11, DUSP14, DUSP3, ENPP6, EPHA4, FABP1, FGF7, GALM, GANAB, GMPPA, GNA12, GNPAT, GNRH2, GSTO2, HCLS1, IFNA14, IL20RA, IL5RA, LDHAL6B, LEFTY1, LTB4R2, MAOA, MAP3K13, NKD2, NR5A2, NRG1, NRG4, OGDH, OR10Z1, OR52N5, OR5H6, OR6C1, PDGFD, PHKA1, PIP5K1B, PPARD, PPP1R3D, PRKAG2, RALB, RPIA, SESN3, SMURF1, STK36, TUBB3, UCK2, ULBP1
Negative_12538	BTK, FES, IL7, AASS, ACADSB, ALDH3B2, ATP5I, AVPR1A, AXIN1, BLVRB, CCDC6, CCKBR, CCR5, CD19, CD34, CDC26, CHIA, CLDN6, CREBBP, CTPS, CXCL1, CXCL16, DDIT4, DEGS2, DHODH, EPHA8, FASN, FGF18, FMO4, FZD2, GAD1, GADD45B, GALT, GGT6, GLG1, GNAS, HHIP, IARS, IL10, INADL, ITGAX, KNG1, LEFTY2, MCM3, NSD1, OR10AD1, OR10H1, OR14I1, OR1S1, OR2AE1, OR4D9, OR51A7, OR51B5, OR52N2, OR7G3, OR8J1, P4HA3, PLA2G5, PLAU, PNPLA3, PPAP2C, PPCDC, PPOX, PRKG1, PRODH2, PRPH, RBKS, RDH5, SDHB, SMPD1, SPTLC2, TAS2R5, TKTL2, TRPM5, TUBA1C, UGT2B7, UGT8, ULBP3, USE1, WBSR22, MAPK8IP2, PNLIPRP2
Negative_12539	C2, C9, F5, LHB, PXN, SDS, AASS, ALDH3A1, APBB1, ARPC5, CALML6, CASP7, CCL13, CCR6, CD47, CD59, CES7, CLDN15, CMAS, CSNK1D, DAG1, DDX54, DERL1, DTX3, DUSP1, EDNRB, EPHA1, EPHB3, ETNK2, FADS2, FGF22, G6PC2, GCNT1, GCNT3, GNAO1, GRPR, GZMB, HMBS, IDH3G, IDI2, IFT57, IL13RA1, IL21R, IL23A, ITGAX, KNG1, LTBR, MAML1, MAPK11, MS4A2, MYH7, NCAM1, NCK1, NEU2, NEU4, NPR2, NRG3, NT5C, OR10G7, OR10H5, OR1E2, OR1N1, OR2A42, OR2L13, OR4D2, OR4K14, OR51B4, OR5B21, OR5K1, OR5T3, OR6K2, OR7A10, OR7C1, PDGFRB, PLCD4, POLE3, PPBP, PPP3R2, PRNP, PTDSS1, RAPGEF1, RFG, RHOA, RUNX1, SDC4, SEMA4G, SIPA1, SOS1, SSX2IP, ST6GAL1, ST8SIA1, STX12, TNFRSF4, TPI1, VAMP4, YWHAG, B3GALNT1, CSGALNACT2, HLA-DQB1
Negative_12540	DDO, LHB, MIF, ALDH3A2, ALS2, ATP5D, CBLC, CD247, CDC25A, CDK4, CDKN2D, CHRM1, CLDN3, CSNK1G2, CYFIP2, DRD2, DVL3, ELK4, FGF21, FZD4, G6PD, GGT1, GRIN2B, HBEGF, IKBKB, IL1R2, ITGA11, ITPKB, JAK2, LALBA, LILRB3, MCM6, OR10P1, OR2A14, OR2A2, OR2L2, OR3A2, OR4D9, OR52N2, OR5K2, OR9Q1, PARD6A, PDE2A, PIGL, PNPO, PPP3CB, PTPMT1, RASGRP4, RPS6KB2, RRAS2, RXRA, SETD7, SLC2A2, SV2A, TAS2R4, TAS2R42, TBXAS1, TMLHE, UGT1A10, ATP6V1G2, GABARAPL2, MAPK8IP2, SERPINA1
Negative_12541	CP, F12, F3, MPZ, ACY1, ADCY3, ADRA1A, AKR1C2, ANAPC11, APLP1, ATP5B, B4GALT5, BET1L, C1GALT1, C1QB, CAPN2, CAV1, CCL13, CCL20, CD80, CDC7, CLDN6, CPOX, CTNNA3, CYP26C1, CYP2S1, DDB2, DDX55, DRD5, DTX1, DUSP4, E2F3, ENTPD5, GAS1, HDAC2, HMBS, IFNGR2, IL20RA, INSR, JAK3, KAT2A, KLRC4, MAP2K7, MAPK14, METTL6, NCK2, NUMBL, OR10X1, OR13A1, OR1D5, OR1M1, OR2F2, OR2G3, OR2T2, OR8H3, PARD6A, PDE6H, PIK3C2A, PLCD3, PPM1B, PRIM2, PRKAA2, SHMT1, STK4, TNFRSF8, TUBB3, UGT1A10, WNT10A, ATP6V1B1, HLA-DRB5

Negative_12542	HK3, HPD, IHH, IL8, ACOT12, ACTG1, ADSS, ALDH3A2, ALDH9A1, ALPP, ALPP L2, ARG2, ATG12, CCNB2, CCNB3, CERK, CHRM5, CKS1B, CNGB1, CPS1, CYFIP 2, CYP11B1, EGLN1, ENPP1, GAS1, GGPS1, GLO1, HBEGF, HSD17B3, IFNA4, IRS2, MECR, MMP7, NCKAP1L, NFYC, NME7, NR1H3, ODC1, OR10H2, OR10Z1, OR13C9, OR2H2, OR2M4, OR5F1, OR6C3, OR6C6, OR6C76, OR8B4, ORC1L, PAFAH 2, PIGS, PLCD4, PRKCI, SEMA3D, SLC25A4, ST6GAL1, STX18, STX2, TAS2R4 2, THPA, TNFSF14, TNFSF4, WNT3A, XCL2, ZMAT3, ATP6V1C2, ST6GALNAC3, TNFRSF17
Negative_12543	AK5, MIF, PVR, XDH, ACACB, ACPT, ADORA2A, AK3L1, ARG2, ASRGL1, ATG3, B3GNT3, B3GNT4, BHMT, BMP2, CHD8, COL5A2, CPS1, CSNK1G1, CYP2C9, DAG1, DLST, DPYSL2, DRD5, DTX1, DVL2, ENTPD7, EXTL2, FABP4, FADS2, FRAT2, FSHB, FTCD, FTMT, GAB1, GALNT12, GNB3, GNRHR, GSTA4, HA01, HBEGF, IBS P, IFNA10, IL22, IL8RB, INPP5A, INSRR, MAN1C1, MYH2, NFATC4, OR4X2, OR52H1, OR52N1, OR8D4, OR8J3, ORC6L, PANK4, PDCD1, PGM3, PIK3CD, PLAT, PLEKHA8, POLD1, PRKCD, PTK2, PTPN5, PTPN7, PTPRB, PYGB, RASGRP3, RPSA, RUNX1T1, SKIV2L2, SOCS5, SRD5A1, SRGAP3, TAS2R40, TKTL2, TSHR, TUBB2A, TXNDC12, UGT2B7, UPP1, WASF2, WBSR22, WEE1, ZNRD1, ATP6V1G2, C1GALT1C1, HLA-DRB4, TNFRSF13B
Negative_12544	AMT, DAO, DLD, EZR, F12, IL4, ITK, SMO, TNC, ACTG2, ALDH4A1, ALDH9A1, ALG11, APOA5, ARPC5L, ATP6V1A, CACNB3, CCL16, CDC16, CNTNAP2, CYFIP1, E2F2, ENO3, EPHX1, FGF1, FRAT1, GAPDH, GBT1, GNAS, GPD1L, HSD3B7, IFNA6, IL1R1, IL5RA, IMPDH2, ITGAD, LTC4S, NUDT8, OR10R2, OR11I1, OR2AT4, OR2M3, OR4C46, OR4E2, OR4X1, OR5B17, OR5P2, OR6C70, OR7D4, OR8B12, PANK2, PAPSS2, PFKFB4, PFKM, PLA2G1B, RRM2, RUNX1, SDC4, SETD8, SHC4, SSX2IP, SULT2A1, TKTL2, TNFSF10
Negative_12545	ADC, ADK, CBS, F11, GNS, GP9, SHH, A4GALT, AHCY, ANGPTL4, APAF1, ARHGE F1, ATP5J2, C4BPA, CCNG2, CFTR, CLDN11, CMAS, CYP21A2, DUSP4, ESPL1, F11R, FMO2, GCDH, GLUD1, GNAS, HES1, IFNW1, IL28A, ITCH, KCNQ1, MAP4K1, MCAT, MYLK3, NAGLU, NCK1, NTF3, NTF4, OR10K1, OR11A1, OR5D18, OR8B8, PAK7, PDE6H, PIAS1, PKLR, PPP1R3B, PRKCZ, SCLY, SFRP5, SH2D1A, SHC2, STAM2, STAT5A, STX8, SULT1A4, TAS2R8, TLR3, TUBB6, WNT6, WWP1, ZFYVE9, PPARGC1A
Negative_12546	C2, C3, DUT, FYN, NOG, SRM, TK1, TNC, ABLIM1, ACLY, ACP6, ALDOC, AMPD1, ANAPC11, ARNT, ASIP, C1GALT1, CACNA1F, CACNA1I, CACNG5, CCL11, CD79A, CLDN22, CNTNAP1, CYP11B1, CYP2B6, DHCR24, DHRS9, DMGDH, DOT1L, EP300, FGF1, FTMT, HIBCH, HIP1, HLA-F, HMGCS2, IFNA6, IL1A, IL23R, ITGA4, ITGA9, JAK3, KCNQ1, KLRC3, LRRC4C, MYH7, NARS, NEU4, NR1H3, OR10P1, OR10Q1, OR2V2, OR4D1, OR4F5, OR51S1, OR52H1, OR7G2, OXCT1, P2RX2, PARD6G, PARVA, PDGFC, PIP4K2A, PLCB3, PNPO, PPP3R2, PSME1, PSME2, PTPN1, QPRT, RASGRP3, SEMA3D, SEMA4D, SH2D2A, SPCS1, STX8, SUCLG1, TUBA8, WNT3, ZAP70, CACNA2D1, HLA-DPB1, PDCD1LG2, PLA2G12A, SERPINE1, TNFRSF17
Negative_12547	CEL, GHR, IL7, LIF, PLG, ACVR2A, ACVRL1, AKR1A1, ALDH1A3, ALDH1B1, ANAPC1, APAF1, ATF2, C4BPB, CACNB1, CCL4, CCNE1, CFL2, CRHR1, CSF2RA, CTF1, CYBB, CYP11B1, CYSLTR2, DAPK3, DDX41, DOLPP1, DTX3, EPAS1, EPHB1, FGF9, FPGS, FTMT, GALNT1, GATM, GCDH, GDF7, HGSNAT, HLA-C, IL17A, IL1A, ITGB3, JUND, KIR3DL1, LCMT1, LDHB, MAN1A1, MAP3K4, MARS2, MGAM, MGAT1, MNX1, NARS2, NR4A1, NT5C, NUMBL, OR13A1, OR1M1, OR51G2, OR52I2, OR5A2, OR7C1, OR8B8, OR8U1, OR9A4, PDE2A, PFKP, PIGQ, PLA2G5, PNPO, POLR2C, POLR2F, PPAP2A, PTCH1, RFX5, RFXAP, RHOA, RHOQ, RRM2, RXRA, SCP2, SIPA1, SOX17, STMN1, TAS1R1, THBS4, TSNARE1, TUBAL3, UGT2B7, UMPS, UROS, WNT9B

Negative_12548	A4GALT, ACAD8, ACTN4, ALAD, ATP4A, ATP5I, ATP5J2, B3GNT2, BAI1, CBR1, CCL25, CCL28, CD40LG, CD47, CD01, CHIT1, CHPT1, CHRM1, COASY, COL4A2, CYP11A1, CYP19A1, CYP2A7, CYP2D6, EGLN3, EPOR, EXTL3, FM05, FOXA2, GADD45B, GALNTL1, GDE1, GLO1, GNAS, GOT2, GUCY2F, IFNA4, ITGB1, MCC1, METTL2B, NCK1, NUMB, OR10AG1, OR10C1, OR14A16, OR4A16, OR4M1, OR5B3, OR5H2, OR6C75, OR8J3, PAK3, PARVG, PDE11A, PIAS2, PIK3R5, PIP4K2A, PKLR, PLCD1, PPP1R3C, PRKAR2B, PTCH1, PYGM, RBL1, RELB, ROCK2, SMAD7, SOD1, STAM2, STX12, SUCLG1, SUFU, SULT2B1, TLR2, TYMS, VASP, ZMAT3, ATP6V1C1, MAPKAPK2, ST6GALNAC5, ST6GALNAC6
Negative_12549	CRH, DDO, FGG, GK, MVD, VCL, ABP1, ACSL6, ACTA2, ACTN2, AK3L1, AOX1, ARSD, ASPA, C4BPA, CACNA1E, CASP9, CCL24, CHKA, CMAS, CREBBP, CYP2A6, DPYS, DUSP6, EFN1, ENPP1, EPAS1, EPHA2, EPHB1, FGF12, FGF7, FZD8, FZR1, GNAL, IDH1, IFNA7, INSR, KIR3DL1, MALT1, MECR, MYLK2, OR1L3, OR2M4, OR4N2, OR6C1, OR6C4, OR7A17, OSMR, PGK1, PIGU, PIK3CA, PIP5K1B, PLXNA2, POLR3G, PPCS, PRKAR2B, PRKG2, PRPH, RPN2, SEMA3A, SEPHS1, SESN2, SMAD2, STX10, TAS2R16, TAS2R48, TNFSF12, TP73, TSHR, UGT2B4, ULBP2, ULK1, VAV3
Negative_12550	AK3, GNS, INS, ME2, ACP6, ACPT, AKR1D1, ALDH1L1, ALG5, AOC3, BPNT1, CHAT, CHRM5, CRKL, DDX4, FIGF, FZD6, GJA1, GNAI1, GSTA2, IFNA7, IKBKE, IL15, IL9R, ITGA3, ITGB1, LIPC, LTC4S, MAP2K1, MAP3K7, MGAT4A, NANP, OPLAH, OR14C36, OR1C1, OR1D5, OR1L8, OR1Q1, OR51F1, PDE1C, PDE8B, PFKL, PGK1, PRKAA2, SARDH, SCIN, SMC1B, SNW1, SRD5A2, SULT2B1, TLN1, TUBAL3, UGT2B4, PPP1R12A
Negative_12551	F3, GHR, PML, SPN, ACSS2, AMDHD1, APH1A, ATP5B, B3GAT2, B3GNT2, BHMT, C1QA, CACNB2, CHST11, COMT, CTSB, DAAM1, EARS2, EREG, ESAM, FUT7, FUT8, GADD45A, GGPS1, GSTA5, HA01, HCST, IL18R1, IL28A, IPMK, MAGI1, MAP4K1, MGAT4B, MITF, MYL2, NCF1, ONECUT1, OR10A2, OR10H3, OR5M9, OR5T2, PAPSS2, PLOD2, PMVK, PPP2CA, PTGFR, PTGS2, SHC2, SHMT1, SULT2B1, TAS2R42, TLN2, UGCGL1, VANGL1, XIAP
Negative_12552	F2R, IL2, IL9, LAT, WAS, ACO2, ACPP, ALPL, APC2, AREG, ARSA, ATP2A3, BMP8B, CACNB2, CADM3, CALML5, CDK6, CFL1, CLDN2, CTNNA3, CTSL1, CXCL9, CYP11A1, CYP27A1, DDX50, DTYMK, ENTPD1, GGT7, GOSR2, HES1, HLAG, HTR4, IL12B, IPPK, ISYNA1, ITGAV, LAMB4, MAN1C1, MAP3K4, MCCC1, MGLL, NFYA, OR10C1, OR10J5, OR11H6, OR14J1, OR2B2, OR2C3, OR2V2, OR4C15, OR4F17, OR4F4, OR4K14, OR4L1, OR4X2, OR7D4, PDE1B, PFKM, PHKA2, POLR2D, PRKAR1A, PVRL1, QPRT, RASGRP1, RHOD, SLC2A1, STAT4, STX1B, TLR5, TRAF2, UPP1, MAPK8IP2, TNFRSF11B
Negative_12553	AK2, MTR, AADAT, ADH4, ALG2, ALOX12B, ANAPC4, CARS, CCL2, CCL24, CDK2, CIITA, CLDN20, CLTCL1, DAPK1, DDOST, DGKG, DLST, DMGDH, EHMT2, FOXA3, GBE1, GSTM2, GUCY1A3, HTR5A, IFNA14, LDHD, MAFA, MCM2, MMP9, NEU1, NUDT2, OR10R2, OR2A2, OR2C1, OR5H6, ORC3L, OXTR, PARD6B, PAX6, PIK3C2G, PON1, PRKCI, PTDSS2, PTEN, PTPN5, PYGM, RAB5A, RASSF1, RHOQ, RPN1, SLC9A1, STAT2, TAS2R4, TAS2R49, TNFSF9
Negative_12554	GPT, AADAT, ACADSB, BDH2, BUB3, CDC14A, CFL1, CHPT1, CLDN11, CYP2U1, DIAPH1, DUSP4, DUSP7, E2F3, GADD45A, GALK2, GALNT7, GMDS, ICOS, IFNGR2, IMPA1, LIMK2, LTBR, OPLAH, OR2T29, OR51V1, OR6F1, OR6M1, OR7D2, OR8S1, P2RX2, PARVG, PDE4A, PHPT1, POLE3, POLR2I, PPA2, PRIM1, PRKAG3, RDH11, ROCK2, SARDH, SDHB, SELP, SMURF2, SNAP25, ST3GAL2, SV2C, TPM1, UCKL1, WASL, WNT16, ZAP70

Negative_12555	GPI, ID4, LYN, SDS, ACACA, ACP2, ACTN1, AKR1B1, ALAD, APOC3, ATP5D, ATP5I, BMP8A, CYP3A4, DHX58, EIF4E2, GART, GUCY1B3, HEMK1, HLA-DRA, HMGCS1, IL10, IL29, INSR, IRAK3, ITGAE, ITGB5, JAM2, KAT2A, KIR2DS5, MAP3K14, MS4A2, NANS, NEU3, NKX3-1, NOTCH1, NT5M, OR11H6, OR4B1, OR4F4, OR4X1, OR52R1, OR7A17, OR9G4, P2RX4, PIK3CG, PLA2G2D, PLA2G5, PLXNC1, POLR1A, POLR2I, POLR2L, PTCRA, PYGB, RPS6KA2, SAT2, SOCS4, SPTLC1, STT3B, TAS2R13, TAS2R8, TMLHE, TRPM5, TSTA3, TXNDC12, UGDH, UGT2A3, VEGFA, WIF1, WNT8A, ZAP70, CACNA2D3, GABARAPL2, HSD17B10
Negative_12556	AK2, CBS, FES, GDA, NLK, PML, ACSM3, ADORA2A, AKR1D1, ANGPTL4, B3GAT3, BET1L, C9orf95, CCNG1, CD40, CES2, CLDN3, COL11A1, COL1A1, CRLS1, CYP11B1, DHX58, E2F2, EFNA2, EP300, F2RL1, FUT8, GRB2, GSTZ1, HLA-DOB, IL13RA2, IL20RB, IL22RA2, INPPL1, ITGA2B, LCMT2, MDM2, MOV10L1, NFX1, OR10G7, OR10J3, OR2M5, OR4Q3, OR52H1, OR6B2, OR7A5, PCNA, PDE10A, PDE3B, PDHA2, PKLR, PLA2G5, POLD4, POLR1B, PPP2R2B, PRKAG1, PRKAR1A, PRKCE, PRSS1, PYCRL, SEMA3G, SETD2, SKIV2L2, SLC25A6, SMAD5, SPRY2, ST3GAL4, TAS2R4, TAS2R7, TGFB2, TJP3, VANGL2, VAV3, WNT11, TNFRSF10B, TNFRSF1B
Negative_12557	HYI, SRF, AADAC, ACACA, ACSL5, ACSL6, ACY1, ADRB3, ALG3, APBB1, AXIN1, BACE1, BCAT2, CAPN2, CASP6, CDKN2D, CLDN14, CXCL12, CYP3A43, DERA, DHRS9, EPHX1, FGFR4, GADD45G, HCLS1, HLCS, IL20, IMPDH1, LM07, MAPK12, NCKAP1L, NFKB2, NFYC, NOS1, OR4D5, OR4K5, OR5T1, OR6S1, OR8S1, OR9G1, P4HA1, PARD6G, PDE3B, PDXK, PEMT, PIGK, PIGW, PIK3C2A, PLA2G5, PNPO, POLR3A, PPP1CC, PRPH2, SEMA4C, SNAP23, SSH1, ST8SIA5, STX1B, TFDP1, THY1, TOMM40, TPK1, TRAF3, TSNARE1, WASF1, TNFRSF10D
Negative_12558	C4B, CFD, FGB, MVK, ADCY4, ANAPC11, ARNT2, AVPR1A, C5AR1, CCL26, CCNA1, CCNE1, CCNH, CHST12, CSF2RB, CSNK2A2, CXCR5, DAPK1, DDX18, FOXO1, FTCD, GLDC, GOT1, GRIN2C, GSTT1, GUCA1A, GUCY1B3, HA01, HLA-DRA, HSD17B1, IFNA14, IL1B, IL21R, IL28RA, INHBC, INSR, ITGB6, KLRC4, LRAT, MYH11, NPR2, NR4A1, OR10G9, OR10X1, OR4C15, OR52E4, PER2, PLCG2, PPP2R1A, PPP3CB, PRODH2, PTK2, RAC3, SENP2, SMC1A, SNW1, SULT1A2, TUBA1A, TUBB1, UGT2B28, UPP1, SERPINB5, TNFRSF1A
Negative_12559	CFH, FGG, GLS, SRF, UBC, ACACB, ADAM17, ALPI, ANPEP, ARD1A, ATG3, ATP6AP1, B4GALT6, BAIAP2, BDH2, BMP5, CACNG8, CCL26, CD80, CHAT, CIITA, CLTCL1, CREB5, CREBBP, CXCL12, CYFIP2, DAD1, EPB41, EPOR, EREG, EXTL3, F11R, FGF12, GALNS, GALT, GARS, GMPS, GNA13, GNAQ, GZMB, HLA-F, IL1A, IRS2, ITGA2B, ITGAL, ITPKB, JAG2, LIMK2, MDH2, MDM2, METTL2B, MPST, MYH11, NCK1, NCSTN, NME2, OR10G2, OR10T2, OR1L4, OR1N1, OR4A16, OR4K13, OR4M2, OR4Q3, OR51B4, OR52B4, OR5A1, OR8B8, OR8K1, PAK6, PANK1, PANK2, PDE6D, PFKM, PIAS2, PIK3C2G, PLOD3, RAC3, RASGRP2, RELA, SC4MOL, SCLY, SDC4, SEMA4D, SLC9A1, SSH2, SSH3, TAS2R42, TUBB3, UPP1, VAMP4, WNT3A, MAP3K7IP1, SLC25A31
Negative_12560	AMH, C4B, F12, JUN, PGD, ALDH3A1, APOA2, ATP2A1, ATP2A3, BLVRB, CCND2, CCNH, CD247, CD74, CDC20, CER1, CLDN16, COX15, CTNND1, CXCL1, DDX18, DGAT2, DTX1, DUSP3, E2F3, EIF4B, GANC, GLUD1, GMPR, GNAQ, IL18, ITGA2, LEPR, LIPA, MAOA, MAPK7, MFNG, MGAT3, MLYCD, MMP1, NFYC, OR10K2, OR3A1, OR51V1, OR5C1, OR5L2, OR5M3, OR5T1, PARD6B, PAX6, PCCB, PIK3CG, PON2, RPS6KA2, SAT1, SKIV2L2, SPRY4, SRGAP1, STAT2, TALDO1, TAS2R3, THY1, TNFSF8, TUBB2A, VARS, YWHAH, TNFRSF12A

Negative_12561	CFH, CP, LSS, TH, AARS2, ACOT12, ALDH3B2, ALDH5A1, APH1A, B3GNT2, BDK RB2, BET1L, BMP8B, CAPN2, CASP10, CBLC, CDC2, CHD8, CHRM1, CLDN3, CLD N5, CNGB1, CYP11A1, DDHD1, DKK4, DVL2, EFNA5, F2RL2, F2RL3, FADD, FLT 4, FUT1, GALK1, GALNT10, HDAC1, HDAC2, HTR2B, IFNA17, IL15, INHBA, KI R2DL3, KIR2DL4, LAMB2, LAMB3, LEFTY2, LIPT1, LPAR1, LTA4H, LYZL1, MA GI2, MAP3K8, MCM7, MDH1, METTL6, MYH6, MYH7, NAE1, NAGK, NFATC2, NRXN 2, OR1F1, OR1L8, OR2AG2, OR5F1, OR8D1, OR9Q1, P4HA1, PDE2A, PECAM1, P IK3C2B, PPP1R3A, PPP1R3C, PTK2, SDC4, SFRP5, SKP2, SPTLC2, STX6, TFP I, TOMM40L, UBE2L3, VAMP2, VEGFA, WHSC1L1, WNT5A, ATP6V0D2, ATP6V1G 2, SLC25A31, TNFRSF1A
Negative_12562	MPZ, ADRA1B, ADRB2, ARSD, ATP5C1, ATP6V1F, C7orf16, CACNA1F, CCNB3, CCNG1, CDKN2A, CES2, CHUK, CPT1A, CYBB, CYP19A1, CYP26B1, DAAM1, DDX 18, DDX51, DPYD, DPYSL2, EFNB2, FGF5, GGCX, GUCA1C, HCCS, IDH3B, IL1B , MGAM, NEFH, NFX1, NOTCH2, NR4A1, NRP1, OR13C2, OR2G3, OR4K14, OR51A 7, OR8B4, OR9A4, PIPOX, PLA2G2D, POLD1, PRSS1, SMAD6, SNW1, SORBS1, S TX4, SUV39H2, THBS4, TPMT, UCK1, VAMP4, WASF3, WIF1, XIAP, YWHAB, CAC NA2D2
Negative_12563	F2R, GH2, HK1, NNT, OGT, ACSL6, B4GALT4, CD3E, CDC14A, CDKN2D, CHUK, C OL11A1, COL1A1, COMT, CTLA4, CYP11A1, DHRS3, DHRS4L2, DNMT1, DTX3L, ENTPD4, EPHB4, FZD6, GBT1, GMDS, GSTM2, HEMK1, IFNA8, IGFBP3, IL2RA , IRF9, MGAT5, MTMR2, NME2, NOX3, NRG3, OR10S1, OR2T4, OR56A4, OR8B12 , OR8B8, OR8D2, PDGFA, PFAS, PI4KA, PIM1, PPP2R5A, PRKCH, PTDSS2, RER E, SHMT1, ST6GAL1, ST8SIA5, STX18, SYNJ1, TAP1, TNFRSF9, TRAF1, TRHR , TUBB4, UGT8, ULBP3, ULK1, UPRT, YARS2, YWHAZ, TNFRSF11B
Negative_12564	BID, CEL, IL5, AADAC, AARS2, ACMSD, AMY2A, ANAPC4, ASRGL1, CASP6, CCL 25, CDC14B, CHAT, CHR1, CLDN6, CNDP1, CNGB1, COL5A1, COMP, DGKI, DHDD S, DTX1, EPB41, FASLG, FGF1, GNAI3, GNG13, GNPAT, HNF1A, IFNAR2, ITPK A, NFATC4, NOS1, OR13A1, OR1D5, OR2B2, OR2K2, OR2T3, OR2W1, OR4X1, OR 52E6, OR6B2, OR6S1, PDGFRA, PFKFB1, PHKA2, PLA2G2E, POLR2E, PPA1, PP P2R1B, PYGB, RRM1, SEMA4G, SFRP5, SPAM1, SPRED2, TLN1, TLR2, TP53I3, VDAC2, ZFYVE16, ALDH18A1, TNFRSF10A, TNFRSF1B
Negative_12565	CTH, F2R, RDX, ACSM1, ACSM3, ADH1A, ADRA1B, ALDH1A3, ARPC1A, ARPC5L, B3GNT5, B4GALT6, BLVRA, CACNA1G, CCL3, CLDN11, CREB1, CXCR6, CYP2E1 , DLAT, DMGDH, DNMT1, ECSIT, EPHB4, EPHX2, EXTL1, GMPPB, GPX7, GSTK1, GUCA1B, IARS, IARS2, ICOS, IL23R, MAD1L1, MAP3K3, MPDZ, MYH10, NADK, NFATC2, NODAL, OR2T5, OR4F15, OR4K1, OR51D1, OR52B6, OR9A4, PGK1, PI AS3, PLD1, PLEKHA8, PMM1, PPP3R2, PRKY, SKP2, SMARCA2, SNW1, ST3GAL5 , TKTL1, TUBB2B, UGT2A3, WNT10B, WNT6, XYLT1, HLA- DRB3, MAPKAPK3, PDCD1LG2
Negative_12566	BCR, DCK, F5, ID1, MPI, PTS, PVR, SMO, ACSM5, ALAS1, ALG8, ANGPTL4, BDH 1, C1GALT1, CACNA1F, CCL22, CD34, CES1, CFL2, CHEK2, CLOCK, CPOX, CTS B, CX3CL1, CYP1B1, CYP26B1, DGKD, EGFR, EGLN3, ENAH, EPB41L1, FGF23, FOXO3, GRAP2, GSTM3, GSTM4, GTSE1, GUCY2F, HLA- C, ICAM3, IFIH1, IFNGR1, IL18R1, IL8RA, ITGB3, ITPKA, LEPR, LIPG, LRP 6, MAP3K1, MDM2, MYLK, NAGA, NAT1, NFATC3, NPAS2, OR10G9, OR2T3, OR4K 14, OR51D1, OR52E8, OR5A2, OR5AP2, OR8D2, OR9G1, PDE5A, PDE6G, PDGFB , PIK3C2G, PIP4K2A, POLR1D, POLR2L, POLR3K, PRKCA, RELB, RFXANK, RPS 6KA5, RXRB, SGPP2, SHISA5, SPRY2, SRD5A1, SUFU, TNFSF8, TUBA3C, TUBB 2B, TUBB3, UGP2, UMPS, WNT5B, CSGALNACT1, SERPINB5



Negative_12567	F11, LCK, LSS, MAG, SI, TXK, ACAD8, ADCY7, AFMID, ATP5F1, ATP5G3, B3GA LT2, BTRC, C9orf95, CACNA1G, CDC25B, CFL2, COL2A1, CTBP2, CYP2E1, CY P3A43, DAG1, DNMT3L, FCGR3A, FGF6, FUT5, GGT1, IKBKE, INPP5E, ITGA3, MAOA, NANS, NCSTN, NPR2, NUMBL, OLAH, OR13C4, OR13C9, OR14C36, OR2T2 9, OR2V2, OR4C15, OR4D1, OR6C76, PFKFB4, PON3, PPP2R2A, PTPN1, SARS2 , SLC33A1, TAS2R38, TGFBR2, TRAF4, TUBA1C, WWP2, B4GALNT1, PDCD1LG2 , ST6GALNAC4
Negative_12568	DBH, EGF, TK1, ACVR2B, ADCY8, ALG10B, APRT, ATP6VOB, BACE1, CAV1, CCL 16, CCL27, CCNA1, CDK6, CHIA, CLDN17, DAXX, ELK4, F2RL2, FGF12, FGFR3 , FUT2, GAD1, GCH1, GFPT1, GLS2, GNAO1, HPRT1, JAG1, LIPE, MIOX, MKNK2 , MMP9, OR10G9, OR4A16, OR4F5, OR51D1, OR56A1, OR5F1, OR6C6, OR7G1, P CNA, PIK3C2G, PPP1CB, PTGES2, SARS, SEMA3B, TAS2R38, UGT2B17, MAP3K 7IP1, SERPINF2
Negative_12569	PVR, AADAC, ACVR2B, AGRN, AKR1D1, ALOX15, ANAPC7, C4BPB, CASP8, CCND 2, CD79A, CHRM2, CMPK1, COL6A2, CXCL6, CYP11A1, CYP26B1, CYP26C1, CY P2J2, DARS, DDHD1, FGF19, FZD8, GAS1, GFPT1, GLG1, GLI3, GLUL, GSTM3, GUSB, HARS, HLA- DMA, HNF4G, IFNK, IL13, INPP5E, ITGA5, JAK3, KIR2DL2, LAMC2, MAP3K3, MAPK8, MTHFD2, MTHFR, NLGN2, OR12D3, OR2AT4, OR2D2, OR51Q1, OR52J3, OR5H2, OR5H6, ORC2L, PDE1A, PDE4D, PDHB, PI4KA, PIK3CA, PIK3R2, PKM2 , PLXNC1, PNPLA3, POLR3A, POLR3B, PRKCG, PRNP, PRPS1, SEMA4C, SOS2, S SH2, ST3GAL4, STAT1, SV2C, TAS2R38, TAS2R49, TFDP1, TGFB2, UCK1, WNT 8A, ATP6V1G3
Negative_12570	CAT, CBS, HDC, IL2, LHB, SRC, ALAD, APBB1, ATG7, CACNA1E, CACNB2, CCL1 3, CD38, CES7, CLCA4, CPT1B, CSF1R, DDX4, DGAT1, DGKB, DNMT1, EFNB1, E POR, FARSA, FGF1, FOXO1, GALNT12, GGCX, GIT1, GUCY1A2, HRH2, HSPA2, I L3RA, MAN1A1, MTHFD2, MTMR6, NME7, NPR1, OR1A2, OR2B11, OR4K15, OR7D 2, PAK4, PARD6G, PARVA, PAX8, PGS1, SARS2, SCLY, SCP2, SLIT2, SMAD6, S NAP25, SULT1A4, WNT7A, WWP2, YOD1, HLA-DPB1, TNFRSF10A
Negative_12571	BAX, BTD, HPD, LCK, LEP, AGPAT1, ANAPC2, APOA1, ATP5G3, BBOX1, BCAR1, BLNK, BLVRA, CADM3, CCL8, CDC16, CHRM3, CTF1, CYP3A7, DDX54, DHFR, DU SP3, E2F4, EP300, EPB41L2, EPHA4, FARSA, FRAP1, GNAI3, HSPB1, IFIH1, IFNG, IQGAP1, ITPA, LRDD, MASP1, MCM7, MDM4, NCK1, NOD1, NT5C2, NT5E, OR10AG1, OR13C2, OR4C12, OR51F1, OR56B4, OR6C4, OR6F1, OR8G1, OR8S1 , OR9Q2, P4HA1, PGM3, PHKG2, PIGT, PLA2G1B, PLXNB1, PRDX6, PRKY, RARS , RERE, SDC2, SETDB1, SHC2, SPRED1, STAT2, TAS1R3, TAS2R50, TNFSF10, TPH1, TUBA3E, TUBA4A, ULK3, VASP, PRICKLE1
Negative_12572	CD6, CFD, EBP, F2R, FGG, GGH, HDC, LAT, RPE, SCD, TNF, ACP2, ADCY10, ALO X12, ALPP, AOC3, ATP5J, ATP6VOB, CACNG3, CAV3, CDC6, CFLAR, CHPT1, CI SH, CLDN6, CPOX, CPT1B, CREBBP, CYP2F1, CYSLTR1, DDX55, DLL4, DPM3, D VL2, ECSIT, EPHA4, EPHX1, EPOR, ERO1L, ETS1, FUT1, G6PC2, GALM, GLUD1 , GPD1L, GRM1, HEXA, HNF4G, HSD3B2, HTR2B, IL21R, INHBA, KIR2DS4, KLK B1, KLRC3, LIPC, MAD2L1, MAGI2, MDH2, MPP5, MTHFS, NFKBIA, NKD2, NPR1 , NUDT9, OR10AG1, OR1L6, OR3A2, OR51B6, OR9A4, PDGFC, PDIA4, PGM1, PI GT, PIK3CB, POLR2L, PRKAG1, PRPS2, PYCR2, PYGM, RAC1, RAPGEF2, RPS6K B1, SEMA3E, SH2D2A, SPI1, SSX2IP, TUBA1B, UBE2L6, WARS, WNT8B, ATP6V 1E1, TNFRSF10A

Negative_12573	ASL, ATM, CBL, HK3, LHB, PGF, ACTA1, ACTN4, ADAM17, ADRBK2, ALDH1A3, ALDH3B1, ALG11, ALG8, AMDHD2, AOC3, ARPC3, ASS1, BMP6, CALML3, CARS2, CCNG2, CCR9, CSNK1G2, CTSP2, CXCL6, DBF4, DPAGT1, DTX1, E2F3, FGF12, GAMT, GDE1, GLI1, GSK3B, GUCY2F, HGSNAT, HRH2, HTR4, IAPP, IARS2, ICO S, IDH3A, IL20, IRAK3, ITGA3, KNG1, LIMK1, MADCAM1, MAN2A1, MAPK14, M GST3, MYH1, NCK1, NFYC, NR4A1, OR11H1, OR2T33, OR51S1, OR51V1, OR5C1 , OR5T1, OR6N2, OR9I1, PDE6G, PEMT, PFKFB2, PHKG1, PLAUR, POLR1A, PPA P2A, PPCS, PRKACA, PROC, PRPS1, QPRT, RBX1, SEMA3F, SETD1A, SH3BP2, S TX1A, SYNJ1, TBL1Y, TJP2, UGCGL1, ULK2, UNC5A, WBSR17, WBSR22, ZMA T3, MAPK8IP3
Negative_12574	DBH, IL4, PC, ACOT11, ACSS1, ACYP1, ADCY9, AGPAT2, AKR1C4, APC2, BDH1 , BTRC, CALML3, CAPN2, CDC25A, CDKN2D, CFLAR, CHIA, CLDN10, COL1A1, C SDA, CSH1, CSNK1D, CSNK1G1, CSNK2A2, CYP11B1, CYP27A1, CYP4F3, DDX1 8, DVL3, EGLN3, EPHB1, FARSA, GALT, GNAI1, GSTM4, HHEX, HTR2A, IFIH1, IFNA16, IL1B, IL22RA2, IL2RA, JAG2, JAK1, L1CAM, LLGL1, MAN1A1, MAOB , MAP3K13, MGAT4B, MTMR1, NFASC, NFYA, NT5C1B, NUDT9, OCLN, OR10P1, O R11H1, OR14I1, OR1L6, OR2A25, OR2W1, OR4D5, OR4K15, OR52E8, OR8I2, P DE1C, PDE7A, PHGDH, PIK3C2A, PNPLA4, PTGES, PTPRM, SARDH, SEMA4G, SO CS2, SPP1, SV2C, TNFSF14, TRAF6, TUBB3, VAV1, WASL, WNT10A, WNT9B, PL A2G12A, PNLIPRP2
Negative_12575	ACTN4, AK3L1, AKR1C4, ALDH6A1, ATP6AP1, CDC7, CDIPT, CHST11, CHSY1, CYSLTR2, DERA, EPHA6, FDFT1, FGF21, FGF6, FIGF, GNB1, HDAC1, HSD3B1, IDI1, IFNA17, ITGA6, LDHAL6B, LMO7, MAFA, MAML2, MAPK11, MGAT4B, NAT 1, OR10T2, OR1N2, OR51G1, OR52D1, OR52E4, OR52E6, OR52I1, OR52N2, OR 7D2, OXSM, PEMT, PERP, PFAS, PGAP1, PGM2, PIGA, PIGU, PRPS2, PTPN11, R XRA, SEMA4D, SHMT1, SORBS1, TACR3, TAS2R10, TAS2R38, TAS2R50, TCIRG 1, THY1, TLR5, CSGALNACT2, ST6GALNAC4
Negative_12576	AGL, AK3, DBH, GDA, ID3, OAT, ACADSB, ACOX1, ACYP1, AGMAT, ALG5, ARPC2 , ATP5F1, ATP6V1D, BDNF, CCL15, CCL2, CCND3, CCNG1, CDC6, CHKA, CHRM3 , CLDN14, CLDN15, COQ5, CSNK1D, CTSL1, DDX47, DERL1, DRD5, EPHA3, EPH A4, FBXW11, FGFR4, GNRH2, GRIA1, GZMA, HES1, HMOX1, IL15, IL18RAP, IP MK, ITGA2, LIMK2, MAP3K8, MAP4K2, MPST, MTHFD1, MYL9, NADSYN1, NAGK, NEU4, OR10H3, OR1E2, OR1N2, OR2D2, OR4D1, OR4D6, OR51A4, OR51D1, OR6 K3, OR8J3, PDE4B, PDE8B, PDHA2, PIP5K1C, PLCD1, PLK1, PTPRZ1, PVRL1, SARS2, SDC1, SLC2A4, SMAD1, SMAD9, SORD, SRD5A2, SRGAP1, STX1A, SUCL A2, SUV39H1, TSNARE1, TUBB2B, UGDH, UGT2B17, UGT2B28, UNC5C, YARS, C ACNA2D2, EIF4EBP1, HLA-DRB5, SERPING1, TNFRSF11A
Negative_12577	BTK, CD6, KMO, ABLIM3, ADCY10, ADH4, ADRB2, AKR1B1, ALDH2, ALG6, APH1 A, ARPC5L, ATP6V1F, AVPR1B, B3GAT2, BMP2, BMP6, C4BPA, CACNB1, CD80, CHAD, CLOCK, COL11A1, CPS1, CRY2, CX3CR1, CYP11B2, DEGS1, FARP2, FAS LG, FGF11, GFAP, GNA11, GNB1, GPD1, HTR5A, IL23R, IL6ST, LIPF, MAP2K2 , MAP2K5, METTL2B, MGLL, MMP14, MTAP, MYL2, NCR3, NMNAT1, NSDHL, NUMB L, OLAH, OR11H6, OR1E1, OR1S2, OR2T4, OR2T8, OR4M2, OR52B6, OR52E8, O R7C1, OR8J1, ORC5L, PAK4, PHKG1, PHPT1, PIK3C2B, PIP5K3, PLAT, PLCG2 , PLXNB1, PPT1, RPS6KA5, SCP2, SMAD5, SOCS1, ST8SIA1, THBS4, TYROBP, ULK2, WARS, WNT1, YWHAG, KIR2DL5A, MAPKAPK5
Negative_12578	CR1, LYN, SDS, ACP1, ALDOC, ALOX15B, BET1L, CACNA1C, CCL21, CD14, CD3 E, CD80, CLTB, CPT1C, CPT2, DDX23, DIAPH3, EP300, FGF7, FRAT2, GRIA3, HMGCL, IFNA14, IGF1, LAMB1, MAP3K8, MCCC1, MINPP1, MYH7, NCK2, NEU4, NNMT, NR5A2, OR2L8, OR5D16, OR7C2, PANK4, PCK2, PDE11A, PDE4D, PDGFA , PIGL, PPP2R2A, RAD51, RALA, RBL1, RFWD2, RHOA, RND1, RRM2B, SCD5, SC IN, SCLY, SEMA3E, STX8, TAS2R41, TBL1X, TGFB1, TJP1, TLN2, UGDH, VEGF A, WHSC1L1, YWHAG, ATP6VOD1

Negative_12579	ADA, MPI, OSM, PLN, ACSL4, ADH6, ADIPOQ, CALML6, CCL11, CD226, CLDN15, CLOCK, CNGA3, CNTF, COASY, COL6A2, CREB3L1, CSAD, CYP7A1, F2RL3, GNHR, HADH, HAP1, HDAC1, KLKB1, LDHAL6B, LIPF, LIPG, MALT1, MGST2, MYLK, NCOR2, NMNAT1, OR13C4, OR1Q1, OR2T33, OR2T4, OR51A2, OR52E4, OR8B4, OR8B8, OR8K3, PDGFRB, PHKB, PI4KA, PISD, POLA1, POLR2C, PTPRF, RXRB, SEMA4G, SHISA5, SKP1, SNAP23, SULT2A1, TAP1, TBL1X, TCF7, TGDS, TUBA3C, TUBA4A, TUBAL3, VAV3, WNT10A, ATP6VOA1, HLA-DPA1, PPP1R12A
Negative_12580	AK7, FST, GAA, GP6, IHH, KHK, LAT, LHB, LPL, PRL, TK1, AADAT, AARS, ADRB3, ALAS1, ALDH1A1, ALOX15B, AMPD2, ARD1A, ARNTL, B3GALT5, B3GALT6, CAV1, CCL21, CCND1, CCR10, CDC25C, CDO1, CIITA, CLTC, COL1A1, CREB3, CTNNB1, CYSLTR2, DDX50, DGKG, DUSP2, E2F2, ENTPD4, EPHA2, FTH1, GALNT9, GFPT1, GLI3, GTSE1, IFNA17, IFNA7, IRAK1, ITGA2B, JAK1, LALBA, LAMA3, LEPR, MAP3K3, MTFMT, NCAM1, NCOR2, NFE2L2, NFKB1, NME6, OLR1, OR10H4, OR13C4, OR51A7, OR51G2, OR5H2, OR6C6, OR8J3, PDE8A, PIGP, PIK3CB, PLA2G2F, PON3, PPP2R5C, PPP2R5E, PTAFR, RBKS, RPIA, RPS6KB1, SEMA3F, SLC33A1, SOAT1, SQLE, STX12, TAS2R60, TGDS, THBD, TUBAL3, WBSR17, WBSR22, YARS2, CACNA2D2, SERPINF2
Negative_12581	C6, EZR, FER, FGG, MSN, PML, SMO, ABLIM3, ACTG2, ACY3, ADH5, ADH6, ADRA1D, AKR1D1, ALDH1A2, AMPD1, ATG3, ATP6VOB, B3GNT3, BACE2, BET1L, BLVRA, CADM1, CCL11, CES1, CFL2, CHAD, CLCF1, CLDN2, CPS1, CTPS2, DLL1, EGLN1, EPHX2, FABP1, FM03, GALE, HSD17B1, HSPA8, INPP5A, KDSR, LIMK1, MAML1, MAN1A1, MAP3K8, MAPT, MYD88, NCOR1, NEGR1, NFATC4, NGEF, NME7, NMNAT3, NUDT9, OR10G4, OR10K2, OR1L1, OR2G6, OR4L1, OR51T1, OR6B2, OR6C2, PAK7, PDE4B, PER3, PIK3C2G, PLAT, PLOD1, POLR2H, RAF1, RAP1B, RPRM, SPI1, SSH2, ST3GAL2, STAT6, TGFB1, TPK1, UGCG, PAFAH1B3, PHOSPHO1
Negative_12582	C2, MAG, NPY, A4GALT, ABL2, AKR1C1, ALG2, CCL25, CLTB, CPS1, CPT1C, CSDA, CTSL1, CXCR3, CYP2D6, DHRS4L2, DKK1, DNMT3A, DTX3L, EPHA1, EPHA5, F2RL3, FCGR3B, FGF14, FTMT, FUT8, GALNT14, GLUL, GRAP2, HTR2C, ICAM3, IDUA, IGSF5, IKBKG, LHCGR, MAPK1, MTHFS, OR1E1, OR2T5, OR4D9, OR4L1, OR51B2, OR5D18, OR6A2, OR8G1, PDE1B, PLCD4, PMAIP1, PRKAR1A, RASA1, RASGRP4, RFX5, RHOA, ROBO1, SLC27A4, TGFB1, TJP1, VNN1, XCL2, TNFRSF11A
Negative_12583	C1S, CEL, FER, GLS, GPT, KDR, MSN, AARS, ACOT11, ADCY5, ADIPOR2, ADRBK2, AKR1C1, AKT1, ARPC1A, ATF2, CACNA1E, CCNA2, CCNE2, CD247, CHD8, CHRNA7, CKS1B, COL2A1, CPT1C, CREB3L4, CSNK2A2, DLAT, DPM3, DTX4, DUSP5, EARS2, EDNRB, EGFR, FZD8, GFPT1, GNA14, GNRHR, HGSNAT, HRH2, HSPB1, IFNA17, IL11, IL25, IL28A, ITGA2B, ITGAX, JAG2, LEFTY1, LIPE, MAD1L1, MAD2L2, METTL6, NOS3, NR4A1, NTF4, OR10R2, OR2L3, OR2T4, OR52B4, OR5J2, P2RX7, PAPSS2, PIK3R4, PLA2G2D, PLD1, PSPH, RRM1, SEMA3A, SEMA3F, SEMA4D, SH2D1B, SNAI1, SPTLC1, ST3GAL4, STX12, STX2, TBL1X, TGFB3, TP73, UGT2B28, WNT7A, ATP6V1G3
Negative_12584	CD2, ID1, PLG, TK1, AADAT, ACPP, ACVR1B, ADRB1, ALDOA, ARPC4, BBOX1, CACNG7, CAMK2A, CBLB, CCL3, CD226, CD44, CLTC, COQ6, CSNK1G1, CXCL5, DGKZ, DHCR7, F2RL2, FABP3, FUT5, GNRHR, GUCY2C, HTR5A, IAPP, IL6ST, MAP2K3, NANS, NFATC1, NOD1, OR10H1, OR1I1, OR2H2, OR51B2, OR6C2, OR6T1, ORC5L, PAK2, PAPSS2, PDE1B, PFKL, PLCD1, PON1, PPP2R2D, PRODH2, PRSS1, PTCH2, PTPRB, RASA2, TBL1X, TUBB2B, UROC1

Negative_12585	AGK, BAX, CKB, IVD, JUP, TNR, ACPT, ADAM17, ALAS2, ALDH3B2, ALOX15, ARPC3, ATP5I, B4GALT5, BDKRB2, C9orf95, CACNB2, CACNG7, CAMK4, CHRM2, CLCF1, CLDN18, CLDN7, CNTNAP2, CREB1, CXCR4, CYP19A1, CYP21A2, EFNA4, EHMT2, EPHB6, FGF2, FGF3, GGT7, GLYCTK, GRLF1, GUCY1B3, HRH1, IDH3B, IFNA13, IFNK, IL1RAP, IL21R, KAT2A, KDSR, LLGL2, MYH15, NAT1, NFKBIB, NFX1, NOX3, OR11H1, OR1D2, OR1E2, OR2T6, OR4X2, OR7A17, PIK3CA, PLA2G2D, PLAU, PLK1, PPCDC, PPP1CB, PPP2R5B, PRKAA2, PRKAB1, PVRL2, SETD1A, SLIT2, SPRED2, SSH3, STX10, TUBA1B, TUBB1, TYMP, UGT2B10, ULK2, UXS1, CACNA2D4, SERPINC1, ST6GALNAC6, SUV420H1, TNFRSF17
Negative_12586	CRK, ID3, IL2, ADH5, AGPAT2, AGXT, ALDH5A1, APM1A, ARG2, AXIN2, CASP7, CDC7, CHKA, CPOX, CPT1A, CSNK2A1, CTLA4, CXCL11, ERBB4, EXT1, FGF17, FGFR3, GALK2, GALNT10, GNRH2, GPD1L, GRHRP, GUCA1C, HBEGF, HPRT1, IFNA10, IL23A, IL23R, INSR, KIR2DL3, MAML3, MAP2K3, MAP3K5, MRAS, NEUROD1, NLGN1, NPR1, NUMBL, ODC1, OR10Z1, OR2A12, OR8U1, ORC4L, PIAS1, PLCB4, PLK1, PRKAG2, RPS6KA6, SARS, SKP1, SPCS1, SRD5A1, STAT1, TUBA1B, UNC5D, WASL, AASDHPPT, ATP6VOD1
Negative_12587	FYN, GBA, IL5, MAG, PXN, SRC, ACSM4, AKR1B1, ALG2, ATN1, CAPN2, CCKAR, CDC42, CDH5, CKMT2, CYP11A1, CYP4A22, DDX52, DLST, DOCK1, EHHADH, EPHB4, FZD10, GADD45B, GALK1, GRIN2D, HCST, HMOX1, HSPA8, HTR2A, IDI1, IFNA4, IQGAP1, LRAT, LTBR, MAPK14, MYH4, NKX6-1, ODC1, OR10A3, OR51I1, PARD6B, PARVB, PCYT1A, PIK3R4, PROS1, PTPN11, PTPN5, RFNG, SC5DL, SNAP23, SPCS1, SPRY4, SRGAP1, SULT1E1, TOMM40L, TXNDC12, TYMS, UGCG1, ULBP2, UPP2, HSD17B10
Negative_12588	AMH, ATM, DBT, GAA, HK2, PGD, ACP6, ACTB, ADIPOR1, ADRA1D, ALDH3B1, AMD1, ARHGEF4, CACNA1E, CACNG8, CFL2, CHIA, CYP27A1, CYP7A1, DGKB, DKK4, ELK1, EP300, FECH, FGF1, FGF6, GAB1, GART, GCLC, GNPAT, GNRH2, HEMK1, HRH1, IFNA10, IL1R2, IL21R, INMT, IRF9, ITGA3, ITGAD, JAG1, JAK1, MCCC1, NADSYN1, NCAM1, NFKBIA, NT5C1A, OR2A4, OR2T6, OR2W1, OR4F5, OR8H2, OXTR, PDE2A, PERP, PIAS3, PLA2G2D, POLR2E, PPAP2A, PRKCQ, PROC, PTPRJ, PTPRM, PYCR2, RASSF5, RDH5, SDC1, SORBS1, TACR3, TNFSF10, TPH2, VDAC1, YARS, ZMAT3
Negative_12589	ADC, EPO, HK1, IHH, MUT, ACTN1, ATP5J2, ATP6V1A, CHAD, CKMT2, CREB5, CYP2J2, DPYS, DTX2, DUSP14, EPRS, FMO2, FOXO1, FPGT, HSPA2, IGF1, KIR3DL1, KIR3DL3, KLRD1, LDHB, METTL6, NCK1, NKX2-2, NOS1, OR10H4, OR10J1, OR52K2, OR52N5, PDXK, PPBP, PPP1R3B, PPP2R2D, RAP1B, RASSF1, RUNX1, SMAD6, SMC1B, SPRY2, STX7, TAS2R14, TLR2, TNFRSF4, TPH2, TYMS, XYLT1, XYLT2, ALDH18A1, PPP1R12A
Negative_12590	CBL, DBH, DDO, F10, GP6, HGF, LAT, NLK, TK1, AACS, AASDH, ACSL1, ADIPOQ, AHCYL1, AOC2, ARHGEF4, ARPC5, ATP2A1, BPNT1, CBR1, CBR3, CCL1, CCL5, CCNH, CCR2, CD79A, CER1, CLDN6, CMBL, COX15, CPT2, CSNK1E, CTNNA1, DAD1, DDX52, DHRS4, DNMT3A, ENTPD2, ERO1L, EXTL2, FGF1, FGF19, GBE1, GCLM, GPLD1, HLA-DOB, HSPA8, ICAM2, IL12A, IL7R, INHBC, JAG1, LAMB2, MYH10, MYH15, MYL2, NAGK, NEU2, NLGN2, NRG2, OR10AG1, OR13C4, OR1S2, OR2S2, OR2V2, OR4D11, OR4F15, OR51B5, OR6S1, OR8B12, PFAS, PHKA1, PIGU, POLR1C, POLR3G, PRKAR2A, PRPH2, PTGS1, RAB23, RAPGEF1, RELB, RHOD, RPS6KA6, RPSA, SLC2A4, SPP1, SPTLC2, STAM2, TNFSF4, TRAF4, TUBB2A, UAP1, C1GALT1C1, KIR2DL5A

Negative_12591	FH, GGH, GSS, NOG, PGP, SYK, TH, TXK, WAS, ACMSD, ACOT12, ACOX1, APBB1, ARPC3, ARSB, ATIC, AVPR1A, B4GALT6, BBOX1, BET1L, C5AR1, CCKBR, CCL8, CDC26, CNTNAP1, COQ6, CSF2, CSNK2A1, CUL1, ENTPD8, GCNT4, GGT7, GNA14, GNRH2, HAAO, HEXA, HMGCR, HTR6, IL22RA2, IPMK, KYNU, LAP3, MAG11, MAPK1, MAPK8, MEF2C, MLYCD, MMP7, MYH8, NCF4, NR5A2, OR10R2, OR11I1, OR2D2, OR2H1, OR2T4, OR2T6, OR4K14, OR6C6, OR8H1, OR9Q1, PARD6A, PDE9A, PDHB, PIGO, PKLR, PLCD3, PNPO, POLR1A, PPP2R5C, PRKAA2, PRPS1, PSPH, PTCRA, PTPRR, SELE, SFRP2, SLC25A4, SLIT2, SRD5A1, STAT3, STAT6, TAS2R60, TCF7L1, TLR5, TNFRSF9, TNFSF14, TOMM40L, TPH2, TUBA1A, TUBA1C, TUBAL3, ULK1, VCAM1, HLA-DQA2, PPARGC1A
Negative_12592	AMH, HK2, ID1, KIT, AADAC, ACACB, ACADL, ACY3, APOA1, C3AR1, CACNA1E, CALML3, CASP9, CPT1A, CYP26A1, CYP2C19, DHODH, DPAGT1, DPYS, DTX3, EPHA3, FGF1, FGF4, GMPA, GRIA1, GRM1, GTSE1, HGSNAT, HSD17B4, IDH3G, IFNA14, IFNA2, IFT57, IL17B, INHBB, IQGAP2, ITGA4, KIR3DL1, LIPG, NUDT5, OR13J1, OR2AE1, OR2Z1, OR4C6, OR4F15, OR6C6, PCK2, PDHA1, PLAU, PRKCB, PTPRZ1, RASGRP3, RND1, RUNX1T1, SEMA3A, SEMA3B, SHC4, ST3GAL1, STT3B, TRAF5, TUBA1C, WHSC1, YWHAH, PLA2G12A
Negative_12593	AK5, CFH, CRH, F9, NLK, SFN, ACPP, ACSS3, AKR1C2, AMDHD2, AOX1, ASRGL1, ATP5G2, B4GALT7, BCAT1, BMPR1A, C4BPB, C7orf16, CASP9, CCL15, CD8B, CDC14A, CDC27, CDKN2B, CLCA4, CLTCL1, COQ3, CYP11B2, CYP17A1, CYP27A1, CYP2C9, DGKA, DHRS9, DTX1, DVL1, E2F4, EGLN3, ENTPD6, EPHA8, F2RL3, FGFR3, FOXO3, GADD45B, GAS1, GLG1, GP1BA, HADHB, HNF1A, ICAM2, IDH3G, IL19, ITGA11, ITGB3, KCNJ11, KITLG, MAP2K6, MYH1, NEFH, NEFL, NMNAT3, NRP1, OR10A7, OR1A1, OR2S2, OR4C6, OR4K1, OR52N2, OR5D14, OR7D2, OR7D4, ORC5L, P4HA3, PAX6, PDE6D, PDGFD, PDX1, PDXK, PEMT, PIAS3, PLTP, POLR2J, PTK2, PVRL1, RAP1A, SEMA4C, SETD1A, SLIT2, SNAP25, SOD1, STEAP3, TGFB1, TKTL2, TSC1, TUBA4A, TUBA8, YWHAB, ZAP70, ZFYVE16, ST6GALNAC4
Negative_12594	SRM, ALAD, ALOX12, ALOX12B, AMPD1, AOC2, ARNT2, ARPC1B, B3GNT4, B4GALT4, CD28, CD72, CD8B, CHPF, CLDN20, CLDN8, COL11A1, COL1A1, CSNK1D, CTPS, CXXC4, CYP3A5, DTX4, DTYMK, EFNA5, EVI1, FBP2, FGD1, FGF2, GCDH, GMPR, HADH, HIBCH, HPSE, HRH2, HSD3B7, HSPA2, HYAL1, IDI2, IFNK, LIPA, MCM4, MEF2C, MMP7, MYH6, NCF2, NKX6-1, NMNAT1, NSDHL, OR10T2, OR1J4, OR2F1, OR2T3, OR4X2, OR5AK2, OR5M9, OR6X1, PANK4, PDHA2, PPAP2C, PPP1CB, PVRL2, PYGB, RARS2, ROBO1, RPS6KA2, RPS6KB2, SCIN, SELL, SEMA7A, SESN2, SH2D1A, SMAD3, STX3, SUOX, THBD, TMLHE, TUBA1B, ULBP1, VEGFA
Negative_12595	BTC, FN1, RET, AGPAT4, AMPD1, ARHGAP5, ARHGEF1, ATP12A, ATP5L, CD34, CYBB, DHRS9, EDA2R, EPHB1, FGF14, FLT3LG, FUT8, FZD2, FZR1, GANC, IKBKG, IL15, IL1A, IL6R, L1CAM, MAN2A1, MGLL, OR14I1, OR1E1, OR2A14, OR2D2, OR2T1, OR4S2, OR52E6, OR52K1, OR6K6, OR6Y1, PCYT2, PDE1B, PLAU, PNPT1, PPARA, PRSS2, RAF1, RASGRP2, RPS6KA4, SLC25A4, SOCS2, SRGAP1, SSH3, STX3, TIAM1, TUBB2A, TYMP, YKT6, YWHAG, ZNRD1, ATP6V1G1, B4GALNT1, SUV420H1
Negative_12596	DHH, GPI, HGF, SDS, TKT, ADCY1, ADCY2, ALOX12, ALPP, AMHR2, CBLC, CCNB2, CIITA, CLTCL1, CNTN1, COL4A1, CREB3L1, CTBP1, CTNND1, DDHD1, DIAPH1, DLAT, DTYMK, ENPP2, FOXO1, GALNTL5, GALT, GLB1, GNAT3, GPD1L, GRB2, GUCA1C, HARS, HTR2B, IDI1, INHBC, ITGB1, LEFTY2, MLLT4, OR10H5, OR2AE1, OR2B11, OR2T12, OR4K17, OR4M1, OR52N4, OR5AS1, OR7G2, PLTP, POLR2D, PRKAA2, PRKAG3, RPS6KA4, RRAS, SARS2, SLC33A1, SPRED2, STMN1, TUBA3C, ZMAT3, B3GALNT1, MAPK8IP3, TNFRSF13C

Negative_12597	DDC, F8, ADIPOR2, AFMID, ALOX12, ARHGEF7, CACNA1E, CAPN2, CCKBR, CD47, CD55, CDC6, CFL1, CMPK1, COX15, CPT1C, CUL1, CXCL5, DCTN1, DGKH, DHCR24, DUSP6, EDNRB, EFNA3, EIF4E2, ENTPD7, FARS2, GTSE1, GZMB, HMGR, HNF1A, IRS4, JAK3, KLRD1, L1CAM, LIMK2, LIPE, LTBR, MAD2L1, MAML1, MASP2, NAGLU, NCKAP1, NFATC1, NFYC, NOTCH1, NRP1, OR10Q1, OR2Z1, OR4K13, OR4K14, OR4P4, OR51B5, OR51E2, OR51G1, OR9A4, P4HA3, PARVG, PLCD3, PLCG1, PLXNC1, PPP1CA, SEMA3F, SEMA4G, SNAP23, SRGAP1, STX18, TAS2R9, TBXA2R, TGFBR1, TLR5, TSC2, UGT8, VAMP3, CACNA2D2, PDCD1LG2
Negative_12598	DCN, GH2, PGF, SI, TK2, UBB, UBC, ACAA2, ANAPC7, B3GNT5, BACE2, BAIAP2, BDH1, BET1L, CDK5, CLCF1, COL4A4, COL5A3, COX15, CTPS, DDHD1, DDIT4, ENO1, GCAT, GDF6, HDAC2, HHIP, IFNA5, LALBA, MAN1C1, MAP2K7, NUMB, OR14J1, OR2A14, OR2AT4, OR4K2, OR52N1, OR5AP2, OR8U1, PANK1, PDE7B, PDK1, PGAM2, PIK3CD, POLE4, PPAP2A, PTGDS, PTPRB, SEMA7A, SIGLEC1, SLC12A2, SPHK2, SRGAP2, TNFRSF9, TRPM5, TUBA1C, PRICKLE2
Negative_12599	A2M, BTC, C8A, DBH, DCK, DUT, GDA, MUT, ADCY3, ADCY5, ADRB1, ASCC3, B3GALT2, B3GALT4, BMP2, BMP4, CBR1, CCL24, CCNE1, CCR1, CDS2, CHEK1, COL1A2, COL5A3, COX15, CRLF2, CXCL5, CXXC4, DGKE, DRD1, DUSP16, ENTPD5, EXTL1, F13B, GARS, GDF6, GJD2, GLYCTK, GNRH1, GRB2, GRIA2, GSTA4, HARS, HBEGF, HGSNAT, HLA-DOA, HSPA1B, ITGA8, KARS, KAT2B, MAP2K7, MAP3K6, MGAT1, MYH13, NT5C1B, OR1S1, OR2M7, OR4C12, OR4D2, OR51Q1, OR52N4, OR5H6, OR8H2, PAK1, PDE4B, PGS1, PIGO, PLA2G2F, PLCB1, POLA2, POLR2D, POLR2F, PPP1CB, PPP1R3C, PRDX6, PRODH2, SARS, SEMA3E, SEMA3G, SENP2, SGPP2, SRD5A1, STAT1, STAT4, STEAP3, SULT2A1, THBS2, TUBB1, UNC5A, VDAC3, VTI1B, WNT10B, ATP6V1B2, MAPKAPK2
Negative_12600	BCR, C1S, CBL, KIT, LCK, TPO, ACAD8, ACTG1, ACVR2B, ADRA1A, ALDH1A1, ALPI, ARSE, ATP5F1, B3GNT5, B4GALT6, BMPR1B, CAMK2D, CD14, CDC20, CSF3, CYP2S1, CYP3A7, DAD1, DTX3, DTYMK, DUSP14, ELK4, FBXW11, FCER1G, FGF9, FUT4, GALNT1, GALT, GFAP, GIT1, GMPR, GPD1, GSTT1, GUCA1C, HAO2, HIF1A, HLCS, HMGCL, HTR5A, IKBKG, IL10, IL23R, ITGA10, KIR2DL3, LAMA4, MAFA, MAP3K5, MTHFD2, MYLK2, NMNAT2, NR1D1, NUDT2, OR10H3, OR11L1, OR14C36, OR1Q1, OR2A12, OR2M7, OR2W1, OR52W1, OR8G1, P2RX4, P4HA3, PARVB, PRKAG2, PRKCI, PRPS1, PTGER1, RPS6KA2, SEMA4G, SLC2A1, SUCLG2, SULT1A4, TBL1X, TLR4, TNFRSF4, TOLLIP, TUBB3, MAPK8IP2
Negative_12601	ADA, AMT, ASL, C9, FAS, PML, SPN, ACP2, ADIPOQ, AK3L1, AMY2B, AQP7, ATP5I, CARS2, CHRM5, COMP, CRB3, CSNK1G3, DAD1, DBF4, E2F3, EPHB1, FGF3, FGF6, FMO5, HYAL2, IL1A, IL23A, ITGA8, LAMC1, MTHFD1L, MYL9, NEU3, NQO1, NUDT5, OR13C8, OR1A2, OR1J1, OR1Q1, OR2C1, OR2L3, OR4K14, ORC5L, P4HA2, PFKL, PGAM1, PIGF, PIGS, PIK3C2B, PIK3CA, PLAUR, PLOD1, PMVK, PNPT1, POLR1B, PPP1CA, PPP2R5A, PRKCB, RAF1, RPN1, SELE, SMC1A, SPRY2, TAS2R49, TBL1X, UROC1, VASP, VEGFB, XCR1, YES1, HSD17B12
Negative_12602	AGK, CP, CRH, GAA, ABLIM3, ACSS1, AKR1C4, ALDH5A1, APH1A, APPL1, ATIC, B3GALT6, BDKRB2, CACNA1C, CD3E, CDC2, CREB3L4, CSH1, CXCL2, CYP11B1, CYP3A43, CYP4F2, DCXR, DDX41, DEGS2, DHRS9, DVL1, EDAR, F2RL1, FBP1, FCGR3A, FCGR3B, FGF22, FGFR1, GPD1L, GRHPR, HES1, HMOX2, IBSP, IFNG, IGSF5, IL12RB1, ITPA, LAMC3, LIMK2, LRP5, LTBP1, MAPK12, MAPK13, MMP9, NAMPT, OR10H3, OR11A1, OR2A14, OR2K2, OR51B4, OR6K6, OR8H1, PAR3, PCYT1B, PCYT2, PDE7A, PLXNC1, POLR2H, PPAT, PPP2R2D, RBX1, RFXANK, RHOQ, RPS6KA5, RRAS2, RXRA, STAT5A, TBL1XR1, TICAM2, TOMM40L, UBA1, UROD, WASL, WIF1, XYLT2, YWHAE, YWHAG, ARHGEF12, ATP6V0A4, TNFRSF10C

Negative_12603	FN1, STS, ACADM, ACSM4, ADAM10, ADCY4, ADSS, ALPPL2, ARHGEF7, ASMT, A TP6V1D, BCKDHA, BCMO1, BMP5, CACNG5, CCR4, CDC42, COL1A2, CXCL16, CY P26B1, CYSLTR1, DDX56, DFFA, DOLPP1, EPB41, EREG, EVI1, FGFR1, FIGF, FZD2, GUCA1B, HLA-F, HLA-G, HYAL1, ICAM3, IFT57, IL6R, IL8RB, KIR3DL1, LARS, LDHA, MAML1, MAP3 K8, MMP7, MYH7, NEUROD1, NFKB1, NKX6-1, NLGN3, OR10H2, OR2AG2, OR2G3, OR4K15, OR4K2, OR52D1, OR52L1, OR6A 2, ORC4L, P4HA2, PANK4, PARS2, PDGFD, PHPT1, PIK3R4, PLCD1, PPM1B, PS ENEN, PTGS1, RXRB, SCD5, SCIN, SEMA4B, SHC4, SMPD2, SRD5A1, STAT1, ST AT5A, STAT5B, TJP3, TSNARE1, UGT2A1, ULK1, WARS, XYLB, ZMAT3, MAPKAP K5, TNFRSF11B
Negative_12604	AGK, BID, DAO, LTB, ADCY9, AGPAT1, ARHGEF6, CAMKK1, CANT1, CCL3, CD36 , CD79B, CDC14B, DDX23, EPB41L2, ESPL1, FLOT1, FRAP1, FUT7, GAD1, GFA P, GNAS, GUCY1A3, GZMB, HLA-DRA, HTR6, IBSP, IL10RA, IL24, IRF9, KIR3DL2, MAN1B1, MAP3K13, MCEE, NCK2, NT5C, OR10A5, OR1J1, OR2G2, OR5M8, OR5M9, OR6C3, OR6K6, PDXP, P FKFB2, PIGQ, PIGU, POLR2H, PPP2R1B, RAPGEF3, RASSF5, RBL1, SARS2, SD HD, SELE, TFPI, TP11, TRPC1, UNC5D, WNT10B, ARHGEF12, B3GALNT1, MAPK APK3
Negative_12605	CKM, GP9, MSN, PGF, ADH6, AGPAT2, ARPC5L, CAPN2, CCR6, COL11A1, COL6A 2, CTNNA3, CXCL11, CYP26B1, DDB2, DDX23, DGKH, EFNA1, FCER1G, GRLF1, GUCY1B3, HARS, HSD3B1, IL22RA2, IL23A, IQGAP2, MAP3K4, MAPK9, MS4A2 , MYH7, NAGK, OR10R2, OR13F1, OR1L6, OR5B12, OR5B3, OR7D4, PAPSS2, PD E5A, PFN3, PIK3C2A, PLCD4, POLE2, POLR3B, PRIM2, PSME3, RXRB, SCLY, S ORBS1, ST8SIA1, TRMT11, WNT10B, SUV420H2
Negative_12606	A2M, AK1, ATM, CD2, EBP, FES, MET, RFK, ACTB, ALDH7A1, APOA1, ARNTL, AR PC5L, ATP2A3, AVPR1B, B4GALT1, CHKA, CLTB, CMPK2, CXCR4, CXCR6, DAD1 , DDX47, DOCK1, FADS2, FZD6, GARS, GMPPB, GNAQ, GPAA1, GPX5, GRIA2, GS TZ1, GUCY2C, HEXB, HMGCL, IDUA, IKBKE, IL2RA, JAK3, LIAS, LRRC4C, LTB R, MAP2K1, MAP3K3, MECR, MITF, MMP7, MYH10, NME2, NRG1, OR2V2, OR4E2, OR52B6, OR9A2, PDE4A, PIGK, PIK3C2A, PLA1A, PRPS1, RAP1A, RETSAT, SH MT1, SIPA1, SPRY3, ST3GAL4, ST3GAL5, STK36, TBL1X, THTPA, TP53, ULK3 , XYLT1, ZAP70, GABARAPL1, PAFAH1B1
Negative_12607	C8A, DHH, DUT, HGD, HK1, ID4, ME1, ABL2, ACAD8, ADCY4, ALG6, ALOX15, AR SA, ATP6V1D, C1GALT1, CBR3, CCL17, CCR10, CD22, CD3E, CDC2, CHRM5, CH UK, COL4A6, CTBP2, CXCR6, DDIT3, DHCR24, DOT1L, ENO1, EPB41, EXOC7, F 2RL1, F2RL3, FCER1G, FM01, FM05, GDF7, GNA12, GNAI3, HSD3B7, IFNK, IM PDH2, KIR3DL2, LIFR, NRXN1, OR1L1, OR1M1, OR2M2, OR2Z1, OR4F15, OR9A 4, ORC6L, PLIN, PNMT, PPP2R2B, PRKX, PTAFR, PTTG1, RXRG, STX7, TACR3, TCF7L2, TFDPI, TSNARE1, XCL2, ZNRD1, PRICKLE1, SERPING1
Negative_12608	F8, F9, MPI, PLN, ACAA2, ACACB, ACSS1, ACTA1, AGPAT4, AKT1, ATP4B, B4G ALT6, CACNG6, CDKN1A, CDS1, CREB3L3, CYP2F1, DDB2, DDX23, DFFA, DHRS 4L2, DVL1, EDA2R, ETNK2, EXTL2, FGF12, FGF17, FGF4, GGT7, GPT2, HSD3B 1, IL17A, IL18RAP, IMPA1, IRF7, ITGAM, LARS, MDH1, MYH7, NOS3, OR10G8 , OR10P1, OR2B6, OR2F2, OR2G2, OR2L8, OR4F5, OR51B6, OR51E1, PDHA2, P FKFB4, PGAM2, PIK3C2G, PIK3R2, PITX2, POLR2L, PPCS, PRKCZ, PRKX, RFX ANK, SEMA3D, SIPA1, TAP1, THTPA, TNXB, TSHR, ATP6V1B2, PPP1R12A

Negative_12609	ADC, DHH, GCK, LSS, MAG, ADRB1, ALG10, ALOX5, CACNB1, CASP7, CD48, CDH3, CLDN4, CNTFR, CREB1, CSAD, CSNK1G3, CTBP1, CX3CR1, CXCL6, DLST, DP M2, DPYD, DTX1, EFN2, EPB41L2, ERO1L, FABP1, GADD45G, GALNT3, GIT1, GRLF1, GRM1, HLA-F, HTR2C, HTR5A, ITGB3, JUND, KCNB1, KIR3DL1, LAMA4, LDHA, MAPK14, MI NPP1, OR1L8, OR4K5, OR4S1, OR6T1, PAK6, PARD3, PDGFD, PGAP1, PIK3R3, PIP5K1B, POLR1C, PTEN, PTPRM, SARS2, SELE, STX3, SUCLG1, TGFBR1, THBS1, THBS4, TM7SF2, TSTA3, TYRP1, VKORC1, WNT2
Negative_12610	C3, CFI, EPO, MPI, PAH, ABCC8, ACHE, ACP6, AGRN, ALOX15B, AMY2B, ARRB1, ARSD, BET1L, BMP7, CCL7, CD80, CFTR, CLCF1, CNTNAP2, CREB1, CSF1R, CXCR3, DDX51, DVL3, EDN1, EPHB4, ERO1L, FGF19, FLT1, GALNT9, GCNT1, GLB1, HGSNAT, HSD11B2, HSD17B2, HSD17B3, IGF1R, IL25, IMPDH1, ITPK1, KDSR, KITLG, LCMT1, LIPC, MAP3K5, MASP2, MMP1, NGEF, OR1C1, OR4K14, OR51B2, OR51B6, OR52I2, OR5D14, OR8D1, OR8D4, OR9A2, OXSM, PARS2, PHKB, PIGP, PIM2, PIP4K2B, PLXNB3, POLR2E, POLR2I, PPP2R1B, PRKCD, PSAT1, SLC25A4, SPCS3, SRD5A1, SULT2B1, TBL1XR1, TRAF1, TSLP, TUBB, UBE2L3, UGCGL2, UPP2, UROC1, UXS1, WBSCR22, WNT5A, WNT6, ATP6V1E1, CTNBP1
Negative_12611	CAT, DAO, F10, F9, GH2, NGF, PVR, TNN, ACAA2, ACSL6, ADIPOR1, ADIPOR2, ANAPC11, APBB1, BAI1, CACNG6, CCL1, CD19, CD40LG, CDC25C, CDK2, CEBPA, CERK, CLTB, CNGA3, CRY2, CSF3R, CYP3A4, DGKQ, DLL3, DRD2, EPHX1, FUT7, GALM, GLO1, GOT1, GUCA1B, HSD17B1, HYAL1, IL15, IL6ST, IMPA2, ITPKA, JAK2, KLRC4, LIPC, LRAT, MAML2, NFX1, NGEF, NOS3, NRXN2, OR10X1, OR51E2, OR5AK2, OR5T2, OR7C2, OXCT2, PANK2, PDE6H, PGM2, PLA2G2A, PLCB1, PLCD3, PPA1, PRIM1, PRKG1, PTGES2, RAD51, RRM2B, SDC4, SH2D2A, SOX17, SRGAP1, ST8SIA5, UGT2B4, ULBP1, UXS1, VEGFA, WNT11, HLA-DQB1
Negative_12612	CDA, ID3, TPR, ACP2, ADIPOR2, ALDH3A1, ALG2, ALG9, ARHGEF4, ARNTL, ATIC, AVPR1B, AXIN1, B3GALT1, BACE1, BMP7, BMPR2, C5AR1, CACNB1, CACNG3, CD36, CDC25A, CDKN1B, CHKA, CSF3, CTSG, CYFIP2, CYP2A7, DGAT1, DGA T2, DUSP10, ENAH, ENPP1, ESAM, FBP1, FGD1, GNPAT, GPD1L, HLA-C, HMOX1, HNMT, IFNB1, ITGA5, KLRC3, MCEE, MMP1, MMP14, MMP2, MYLK, NEU1, OR13J1, OR1C1, OR2B2, OR4C15, OR52N2, OR5D13, OR7D4, PDHA1, PISD, PLA2G6, PLCD1, PLD2, PLXNA1, PLXNB1, POLR2L, PRDX6, PRPS2, PRSS1, PTAFR, RASSF1, RRM2, SFRP4, SLIT1, SMC1A, SOCS1, SSH3, UGT1A10, UNC5B, VANGL1, VANGL2
Negative_12613	ID1, MAX, MPL, ACADVL, AGPAT3, ATP5G1, B3GNT3, BCL2L1, CANT1, CCL16, CD47, CHEK2, COL4A6, COMT, COQ5, CSNK2A2, CTBP1, DDX47, DDX52, DDX56, EHMT1, ENTPD8, EPHX2, FGF5, FUT1, GALNT8, GLG1, GLO1, GPD1L, HCLS1, HCST, IL25, IL4R, JAM2, LEFTY2, MAP3K12, MAP3K14, NFAT5, NKD1, NTSR1, OR10K1, OR1N1, OR2T12, OR2T8, OR51I2, OR51Q1, OR52J3, OR56A1, OR5L1, OR6C1, OR7G1, OR9G1, PCYT1B, PDE8B, PDXP, PGAM1, PPARD, PPP2R1A, PRKAB2, PRKAG1, PRODH2, PTGS2, PTPN11, RAB5A, RDH12, RELB, SLC25A5, SMAD4, STAM2, STX7, SUV39H2, TBL1X, TRIP10, UBE2L6, VAMP3, VDAC3, WHSC1L1, PPP1R12A, ST6GALNAC3
Negative_12614	ADC, CAT, ALG3, ANAPC11, ATF2, C3AR1, CAMK4, CD247, CXCL16, CXCL5, DUSP2, EGLN3, FARSB, FUT5, FUT9, GALNT11, GAS1, GBGT1, GNG3, GRIN2A, GYS1, H6PD, HMGCS2, ICAM2, IL22RA2, IL7R, ITGA9, ITGB3, LALBA, MMP7, NFE2L2, NFKB1, NFYA, NUDT5, OR4C11, OR4K5, OR4Q3, OR4S2, OR9Q2, PCCA, PGK2, PLA2G2E, PNPT1, PRPH, RARS2, SAT2, SPCS1, TAS2R49, TNFSF8, TYMS, VEGFA, VTI1B, HLA-DQA2, HLA-DQB1, MAPKAPK5



Negative_12615	GBA, GCK, ACYP2, AGPAT4, AHCY, AKR1C1, ALDH7A1, AMDHD1, ARAF, B3GAT2, C1QB, CCNH, CDC2, CNDP1, COL11A1, DAPK3, DIAPH1, EGFR, FECH, G6PC, G AMT, GBG1, GMPA, GUCY2D, HAP1, ITGAV, MAP3K8, MAPK13, MGLL, MMP1, M YH3, NAT5, NME2, NOX1, NPR1, OR10G4, OR10H1, OR13C9, OR2AG2, OR2G3, O R2T1, OR6C4, OR6K2, ORC3L, PAK7, PLCD3, RFDW2, SETMAR, SLIT1, SOCS4, SPI1, SRD5A2, STX16, STX1A, TAS2R13, TAS2R50, TGFB1, TRADD, UROC1, V AV3, WNT5A, ATP6VOD2, CACNA2D1
Negative_12616	ABO, C6, FAH, HDC, IL3, LTB, NPY, ACVR1, ACVR1B, ADCY4, ADCY5, ADCY9, A LOX15, ARAF, ASNS, ATP2A2, ATP5C1, CCR8, CDKN1B, CDKN2A, CHDH, CHEK2 , CLCA2, CLDN19, COL4A2, COL5A3, CYP1A1, CYP2S1, DARS2, DERA, DOLPP1 , EPB41L3, FBXW11, FUT1, GANAB, GDE1, GLI2, GNPAT, GOT2, GP1BA, GUCA1 B, HMGCS2, HRAS, ICAM3, IDH3G, IL1B, IRF3, ITGA3, ITGA6, ITGA8, MAP4K 1, MKNK1, MTAP, NCF1, NCK1, NFKB2, NME2, OR11H4, OR13D1, OR13F1, OR2F 1, OR2L2, OR4A15, OR4C12, OR52N2, OR7A17, OR8B4, OR8H3, PDE8A, PIGN, PNPLA3, PON1, PPP2R5E, PRKCQ, RAC2, SH2D1B, SPTAN1, SSH2, VDAC2, VKO RC1, WNT16, WNT8B, ATP6VOD1, KIR2DL5A
Negative_12617	DHH, TAT, ZYX, ACADL, ACOX2, ADCY8, ALDH3A1, ALOX15, ARPC2, ASNS, CAM K2G, CCR2, CDC14A, CHKA, CLDN10, COL4A2, CREB3L3, CSH1, CSNK1D, CYSL TR1, DKK1, FABP3, FGF14, FZD3, GRIN2D, GSTA2, GYS1, HSPA1B, IDI1, IFN A14, IFNG, IMPA2, ITGA5, JAK3, LCAT, LIPE, MYL7, NNMT, NT5C, NT5C1A, O CRL, OR4D6, OR51Q1, OR6C4, PAICS, PAK6, PHPT1, PI4KA, PKLR, PMM1, POL R2J, PPAP2C, PPP3CC, PRKCA, PTDSS2, QARS, RHOQ, SLC33A1, SMARCA5, SP RY2, STX1B, TAS2R3, TMLHE, YWHAB
Negative_12618	AK3, AR, C1S, DCK, F3, LTB, MUT, PVR, ACAD8, ACADM, ACSM4, ADAM17, ADCY 5, ARG2, ASIP, ASMT, ATP4B, ATP6VOC, BACE1, BCAT1, CACNA1F, CD59, CD7 9A, CD82, CDIPT, CLDN15, CNTN2, CPOX, CPS1, CREB3L2, CYP2C8, DARS2, D AXX, DGUOK, EFNA2, ENTPD7, EPHB2, ERBB2, F2RL1, FMO1, FZD5, GALNT10, GCH1, GRHPR, GSTM2, HIP1, HMGCL, HMGCS2, HSD17B7, IL21R, IQGAP2, ITG B6, KARS, KIR2DL3, KIR2DS4, KIR3DL2, LIMK2, MAP2K3, MKNK1, MYL2, MYL 7, NANP, NCF4, NCOR1, OR10J1, OR10P1, OR1L8, OR4F6, OR4L1, OR5B12, OR 5B17, P2RX3, PIK3C2A, PPP1R3D, PRKACB, PRKAR1A, PRKCD, PRKCQ, PSAT1 , RASGRP2, SCLY, SENP2, SRD5A2, STAT5A, TLR5, TNFSF4, TPH1, TUBB4, UG P2, ULBP1, UROC1, VANGL1, WBSR17, YARS2, PDCD1LG2, ST6GALNAC4
Negative_12619	F2, F8, IDS, KDR, MYC, PGP, PLG, PML, UBB, AGXT2, AMPD2, APAF1, ARPC3, A XIN1, B3GALT6, BCKDHB, BLNK, BMP1A, CCR2, CDH4, CDKN2D, CHDH, CLDN1 5, CLDN2, CNTF, COL4A6, CPOX, CYP2U1, CYSLTR1, DAAM1, DDX19A, DGKB, D GKE, DGKI, DHFR, EDNRA, EGFR, EVI1, FSHR, G6PD, GAD1, GRB2, GUSB, IL10 RB, LRP6, MAOB, MAPK13, MYL9, NCR2, NT5M, NTF4, OGDH, ONECUT1, OR10G9 , OR2T12, OR4E2, OR7A10, PAK3, PDGFC, PIGV, PON2, PPP1CB, PPP2R2D, PR KAB2, PTPN7, PYGB, RAB23, SETDB2, SFRP4, SPTAN1, TAS2R4, TUBA1A, ZFY VE9, TNFRSF11A
Negative_12620	AGK, CBL, ACAD8, ADCY3, ALAD, ALG1, CLDN1, CPT1B, CRLF2, CYBA, E2F1, E NPP6, EXOC7, FBXW11, FGF1, GAMT, GDF6, GNPAT1, GOSR2, IFNA17, IFNGR 1, IL15, IL28B, MAP2K4, MYLK, OCLN, OR10Z1, OR1J1, OR1S1, OR2A4, OR2C 1, OR2L13, OR2S2, OR4N2, OR8A1, PFN1, POLE, PPBP, PVRL3, PYGM, RFXAP, RHOA, SDC4, SDHD, SEMA3C, TICAM2, TNFSF10, TUBB4, WNT8B, YES1, ATP6V 1C2, HSD17B12, SUV420H1, TNFRSF10A

Negative_12621	DBI, FES, GNS, JUP, OTC, AACS, ACHE, ADH6, ANAPC1, ANAPC4, APOE, ARAF, ATP6VOC, CACNB4, CADM1, CALML3, CAV1, CBLC, CD27, CD38, CD47, CHST13, CLDN15, CLDN20, CREBBP, CSF1, DRD2, DRD5, ELK1, EREG, GLUL, GPD2, GUCA1C, HNMT, IDH2, INPP4B, INSR, IQGAP3, ITGA2B, JAK1, JAM3, KLKB1, LAMB2, LAMC3, LIPT1, MIOX, NSDHL, OR2T33, OR4A5, OR4F17, OR51A4, OR52E8, OR8B4, OR8D1, OR8G1, PDE6D, PDGFC, PFKFB1, PIGU, PIK3C2B, PIK3C3, PIP4K2A, PLAUR, POLE4, PON1, PPP2R1B, PPT1, PRIM1, PRKAB2, PRKACB, PRKAG3, RASGRP1, RPN1, SDC3, SPHK1, TAP1, TNFSF18, UGDH, UGT1A10, CSNK1A1L, SUV420H1
Negative_12622	CP, DCK, EDA, F10, GAA, OGT, TEC, TKT, UBB, ABL2, ACVR1B, AGPAT3, ARHGA P5, ASS1, B3GALT4, B3GAT1, B4GALT2, BMPR2, CLDN19, CLTCL1, CSNK1A1, CTNNA1, CXCL10, DGKD, DHFR, DLL3, DPM1, DTX4, ENPP3, FIGF, FPGT, FUT3, FZD8, GALNT3, GOSR2, GYS2, IBSP, IL11RA, LIAS, MAOB, MAPK1, NME2, NMNAT1, NNMT, NOS1, OR51A7, OR8K5, P2RX5, PAFAH2, PCYT1B, PDE4A, PER1, PPM1A, PRKCI, PTPN5, PTPN6, RASGRP1, SMAD3, SUCLG1, TAS2R14, TFPI, TPH2, TYROBP, YKT6, ST6GALNAC1, TNFRSF18
Negative_12623	ADK, GAA, IDS, LHB, MVD, SDS, TNN, AMY2B, ANAPC7, ATP4B, ATP6AP1, CACNA1F, CCR6, CHIA, CHRM3, CISH, CLDN5, COASY, CREB3L3, CXCL2, CYBA, CYP11B2, DAG1, DGKZ, DKK1, DTX2, EPB41L3, EPOR, FCGR3B, FGD3, GALNT2, GCNT2, GNB3, GP1BA, GPAA1, GRB2, GSTM5, GSTP1, IKBKE, IL22, INHBA, IRF7, MAP2K3, MAP2K6, MAP3K13, MAP3K2, MMP9, MYD88, NAT5, NEUROD1, NFYC, NOD1, NPR1, NTRK2, OR10G7, OR11L1, OR4K14, OR4K5, OR51F1, OR5AR1, OR5M8, PANK1, PCYT2, PDGFC, PHKB, PIAS2, POMC, PRKG1, PROS1, RAP1B, SEPHS1, SLC27A1, SMAD2, SPRY1, TBL1X, UCKL1, UGDH, UGT2B28, ULK2, XCL2
Negative_12624	DCK, FST, GAA, GDA, KHK, LEP, AHCYL1, ALG8, ALOX15, ANAPC4, B4GALT1, BCL2L1, BLNK, BMPR1A, CASP8, CAV3, CBR3, CCKBR, CCL17, CD44, CD79B, CDC26, CERK, CLDN15, COX10, CXXC4, DERL1, DGKI, DPM2, DPYSL2, EFNA3, EPHA4, EPHB1, GALC, GGT5, GP1BB, GTSE1, IL10, IL22RA2, ITGAE, KLRC4, MCAM4, MMP2, MYH14, NCK1, NME2, NR4A1, OR10AD1, OR11H4, OR13C2, OR1L6, OR2A2, OR2G6, OR2V2, OR4F5, OR51E1, OR52A5, OR56A4, OR5AN1, PAX6, PDI A4, PI4KB, PIGL, PIGO, PIGW, PRSS1, PTGES2, PTPRR, RDH5, ROCK2, SETD1B, SRGAP3, STK3, TGFB2, TNFSF14, TNFSF4, PRICKLE2, ST6GALNAC1, TNFRSF13B
Negative_12625	CFD, CR1, GH1, GP6, NOG, NPY, TYR, VTN, ACAT1, ACP2, ADCY3, ADCY6, ADSL, ATF2, BCL2L1, BDKRB2, COL11A1, EGFR, EGLN3, ENTPD6, FGF9, GALNTL2, GPAA1, HRH1, HSD17B7, IL13, IL22RA2, IL2RG, INPP5B, ITGAD, MITF, MYH7B, MYL7, NCOA4, NCOR2, NFKB1, NTSR1, OR10G3, OR11G2, OR13C8, OR1L4, OR2Z1, OR4F15, OR4K15, OR51D1, OR5R1, OR6B3, OR9K2, ORC3L, P2RX4, PFKL, PMM2, PPBP, PPID, PRPS2, PTDSS1, PVRL3, RAB23, SMAD1, STX3, TAS2R4, TLR5, VANGL2
Negative_12626	C8G, CR2, CSK, HGF, LCT, SRM, TNF, TXK, ACOT11, ALG13, ALOX5, APOA1, ARPC4, ATP5D, AXIN1, B3GALT1, B4GALT5, BBC3, C1GALT1, CCNB3, CCND2, CCR4, COL5A1, CSF3R, CSNK1E, CTNNA1, CYP19A1, DDB2, DUSP16, ECSIT, EPHB4, FDPS, GGT5, GRIN2B, GUK1, HLA-DOA, HSD11B2, HSPA8, ICAM1, IGSF5, IL24, ITGA2, ITGA7, ITGA9, ITGB3, LAMB4, MYH1, NADK, NARS2, NOX1, OR10H4, OR13D1, OR1L3, OR2AE1, OR2G3, OR2V2, OR4K14, OR4Q3, OR4X2, OR51B5, OR6C75, PCYT1B, PDGFC, PHKA2, PIGU, PIK3CA, PKMYT1, PLA2G5, PLOD1, POLE4, POLR2E, POLR2G, PRKAG1, PRSS2, PTEN, RASSF1, RENBP, SCD5, SDC4, SETD2, SLC25A4, TIAM1, WARS2, XYLB, XYLT2, ATP6VOA4, MAPKAPK2

Negative_12627	GP6, ILK, LEP, TKT, ACSM5, AGRP, AKRIC3, ALOX12B, ANGPTL4, AOC3, ASPA, ATG3, B3GALT6, BMP8B, BPNT1, CCR3, CDH5, CHPF, CHST11, COL2A1, COL6A2, CYP2C19, DDIT4, ENTPD1, EPHA1, FRAP1, FZD2, IFNG, ITGB5, KCNJ11, KLK3, MAPK14, MAPK8, NR4A1, OR2A25, OR2L13, OR4X2, PFAS, PIGO, PIK3C3, PIK3R3, POLA2, POLR2K, PPP1R1A, PPT1, PTGES, RASGRF1, SDC1, SEMA3G, SMPD4, SPRED2, TIAM1, TLR2, TUBA4A, WNT10A, WNT5B, XIAP, GABARAPL2, HSP90AA1, PDCD1LG2
Negative_12628	C1S, PRL, SDS, ACAT1, ADCY8, ARPC5, ATP12A, ATP5I, B4GALT2, CACNB1, CALML5, CCL14, CDC45L, CHRM5, CLDN15, CLDN7, DUSP3, E2F4, ETS1, F2RL3, FGF22, G6PC, GALNTL2, GJA1, GNPDA2, GRIA3, GRM5, HTR2C, IARS2, IGSF5, IL17B, IL28A, IRS4, ITGB7, JUND, KAT2A, LDHB, LRP5, LTC4S, MAP2K1, MYH8, NFAT5, NFKBIB, NMNAT1, NR1H3, NUDT12, OR1J4, OR2AG2, OR2T1, OR2T29, OR2T3, OR4C15, OR4C46, OR4D1, OR4M2, OR4X1, OR5AP2, OR6N2, OR7G1, OR9G1, ORC5L, PANK1, PDE1A, PDXP, PECAM1, PIM2, PISD, PPA2, PPP2R5E, PPT1, PRKCH, PROC, PTPN5, RAP1B, RRM2, SCIN, SEMA7A, SGMS1, SOAT1, SPRY2, STK36, SULT1A4, TCF7, THBD, TNXB, TUBA8, TUBB3, ULK2, ATP6V0E1, ATP6V1C1, CACNA2D2
Negative_12629	ASL, F7, GDA, GH2, IL7, ILK, ACP2, ACYP1, ALG10B, ALG2, AMY2B, ATP5C1, ATP5G2, ATP6V1F, B4GALT6, BTRC, CCL15, CD19, CDC20, CDH15, CHPT1, CITA, CLTB, COX15, DFFB, DHDH, DHRS3, EFNA3, ELK4, F11R, FZD3, GNAZ, GNHR, GOT1, HMBS, HMOX2, HSD11B1, IL20RB, INSR, IPPK, IRS1, ITGA6, KA2B, LAMA4, MAOB, MAP3K14, METTL2B, NARS, NR1D1, NSDHL, NTF4, NUDT5, OCLN, OR2H2, OR52R1, OR6M1, OR8K3, ORC1L, P2RX5, PARD6G, PAX8, PDE5A, PDE8A, PFKFB1, PIK3R3, PISD, PLXNA3, PLXNC1, POLR2B, POLR3B, PPP2R1A, PRIM1, PTPRJ, RAB5A, RARS, RELB, RFXAP, SEMA4F, SLC25A6, SPHK1, SPRY3, SUFU, TAS2R13, TCF7L1, TICAM2, TJP3, TLR5, TNFSF9, TUBB, ULBP2, WARS, WNT10A, PRICKLE2
Negative_12630	ADK, AMT, C2, GHR, SCD, ACVR1B, ADRB1, ADSL, ALDH1B1, ARHGAP5, ATP13A2, BCAT1, BCL2, BPGM, CDK7, COL6A2, CPT2, CREB3L1, CSNK2A2, DHCR7, DTX3L, EHHADH, EPHA6, EPHB2, FGF4, FGF5, GNAT3, GNG3, GSTM3, HMGCL, HRH1, IFNA10, KLRC1, MAPK11, MPP5, MYLK3, NOX1, NPR1, OR12D3, OR13D1, OR2C1, OR2C3, OR2L13, OR2S2, OR2T1, OR4C12, OR4F4, OR52N5, OR5M9, OR6A2, OR8D1, ORC2L, PDE2A, PFKFB1, PIGS, PISD, PKMYT1, POLR2K, PPP2R5D, PRKCQ, PRSS2, RAC2, ROB3, RPRM, SCIN, SETD1A, SFRP1, SGPP1, SMC1A, STX1B, STX7, SUCLG2, SULT1A1, SULT2A1, TACR2, TKTL2, TSC2, ULK2, WNT9B
Negative_12631	GCK, JUP, MSN, OAT, ACSS3, ARAF, ATP50, BCMO1, BMP6, CACNB4, CAMKK2, CCL22, CCNE2, CD22, CDKN2B, CLDN3, CMPK2, CRY1, CSF3, DPM3, DUSP4, DUSP6, EARS2, EPHA1, ETS1, GJD2, GNAS, H6PD, HSD17B7, HTR7, IL10RA, IL7R, IQGAP3, IRAK2, ITGA2B, KRAS, MAGI3, MAPK10, MTMR2, NFE2L2, NME6, NRG1, NRXN1, NUDT8, OR10H4, OR13G1, OR3A1, OR4D2, OR4F17, OR5D14, OR7C1, OR8B8, PCYT1B, PHKG1, PHKG2, PIK3R5, PKLR, PON1, PRIM1, PRKAR2B, PTGES2, RAC1, RAPGEF1, RASGRF2, RASGRP3, RPS6KA3, RPS6KA6, STAT4, SV2B, TAS2R50, TMLHE, TNFSF18, TRAF3, UCK2, YWHAH
Negative_12632	DCN, F5, JUN, RFK, STS, ACAA1, ACAT1, ACP5, ACSM3, ACSS3, ACTN4, ADH1B, ANAPC10, APOC3, ATP5I, BCAR1, BMP8B, C3AR1, CCL19, CDC14A, CDC2, CDC42, CFTR, CHIA, CLCA2, COL6A1, CYFIP2, DCTD, DDIT3, DHRS4L2, ECSIT, EPHB2, FZD5, GALNTL1, GNA12, GPD1, HBEGF, IAPP, IDH3B, IFT57, ITGA2, KLK3, LMO7, LRAT, MAGI3, MDH2, MPZL1, MTHFS, MYH10, MYLK3, NANP, NAT6, NOX1, NRG2, OR10J1, OR10S1, OR2AT4, OR4B1, OR7C2, OR8K1, P2RX2, PAK7, PCYT2, PDE8A, PFKFB2, PLOD2, POLR3B, PPP1R1A, PRKAG3, PTPMT1, RASGRP3, SDHB, SENP2, SH2D1A, SSSX2IP, TDO2, THBS1, TJP3, TOMM40, TRIP10, ULK2, ZAP70, CACNA2D2, MAP3K7IP2, MAPKAPK2

Negative_12633	CRH, DBT, FAH, FGB, GBA, RET, ADSSL1, AGXT2, ALDH5A1, AMDHD2, ARPC5, B3GALT6, BIRC3, C1QB, CACNA1F, CACNG2, CACNG8, CAMK4, CASP6, CD226, CD99, CHEK2, CSF2, CTSG, CYCS, DOCK1, DUSP16, ENO2, ENTPD7, FGF8, FGFR4, FLT4, FUT6, GALM, GNRH2, HIBCH, HIF1A, HNF4A, HNF4G, IFNA17, IL8RA, IQGAP3, IRAK3, ITGA6, ITGB8, JAG1, KLRC1, LIFR, LRDD, MAP2K5, MAPK7, MCM2, MYH2, NAMPT, NCR2, NFYA, OR10A5, OR13H1, OR1D2, OR2G3, OR2M2, OR4A5, OR4E2, OR51A2, OR56A3, OR5B21, OR6B2, OR6C1, OR6Y1, PDE4D, PDE8A, PDE9A, PIGQ, PIGU, PIK3C2A, POLR1D, PRKCA, PRKCQ, PTGS1, RASGRP3, RHOD, RRAS, SFRP5, STAM2, STX12, STX5, SUCLG1, TAS1R1, TAS2R4, THBD, TOMM40, TYROBP, UGP2, ULK1, VTI1B, TNFRSF11B, TNFRSF1B
Negative_12634	C2, GHR, GP6, TFG, AADAT, ACSM5, ACY1, AKR1B1, AKR1C1, AKR1D1, ANPEP, BAI1, CACNA1H, CASP3, CER1, CLDN10, CLDN14, CLDN6, CTNND1, DHX58, DLL1, FARP2, FGF2, FZD7, GATM, GCLC, GMPPB, GNPDA2, GOT2, GSTK1, H6PD, HADH, HLA-DOB, HMOX2, HTR2A, ITGB8, KLKB1, LDHAL6A, LRP6, LYZL1, MAP2K6, MYH15, NEU4, NFYA, NR1H3, NT5C3, OR10C1, OR10H2, OR1D2, OR1G1, OR2A25, OR2T6, OR3A2, OR4D2, OR51E1, PANK3, PPP1CA, PPP2R2D, PRKG2, PVRL4, RAP1B, RASA2, SEMA3B, SGPP2, STK3, TAP2, TAS2R16, TLN1, TRPC1, UGCG, VEGFA, YKT6
Negative_12635	AUH, F2, HK3, RET, TAT, ACOX1, ACP6, ACSS2, ACYP1, ADCY2, AKT1, ALG1, ALS2, ATP6V0C, B4GALT7, BCL2, CACNA1F, CACNA1S, CAV1, CAV2, CD44, CDKN2C, CLDN4, CNTN2, CSNK1G2, CTBS, CTNNA2, CYP3A43, DAPK1, FGFR2, FUT1, FUT7, GALNTL5, GDF5, GOT2, GSTA3, H6PD, IGFBP3, IL23R, IL4R, ITGB4, LLGL1, MGLL, NFYB, NKD2, NME4, NRAS, OR10H3, OR10J1, OR13C3, OR13C4, OR2F1, OR2G2, OR3A2, OR4F5, OR4K17, OR52L1, OR6K2, OR8J1, PAPSS2, PLA2G10, PLCB3, PLXNC1, POLR3H, PRKG2, PSME1, PTGFR, RALB, RASGRF2, SETDB2, SETMAR, SPRY1, ST3GAL2, STEAP3, STX1B, SUCLA2, THBS3, TM7SF2, TOLLIP, TP53, VDAC2, WNT10B, CSGALNACT1, SERPINC1, ST6GALNAC6
Negative_12636	DUT, PGD, PLG, PXN, AADAT, ACACB, ACADVL, ACAT2, ACOT12, ADIPOR1, ALDH1B1, BMPR1B, CAV3, CCR1, CD59, CD01, CFL1, CHIT1, CHPT1, CLDN19, CLDN6, CREBBP, CYP3A5, CYP4F3, DLL4, E2F1, EPHB4, F13A1, FGF4, FPGT, FZD4, FZD7, GALNT12, GCH1, GNPDA1, GRAP2, GYS2, HNF4A, IL4R, ITGA11, JAK3, MAD1L1, MAP3K12, MGST1, MOV10L1, MS4A2, MYH11, NEFL, NFATC2, NUDT5, NUMB, OPLAH, OR10G3, OR2T34, OR2T6, PAK2, PANK4, PIGU, PIK3C3, PLK1, POMC, PPP2R2C, RALA, RAPGEF1, RASGRP3, SCP2, SETD1B, SFRP1, STEAP3, TAS2R7, TAS2R9, TLN1, TMLHE, TNFRSF9, TNFSF11, TRIP10, TSC2, ULK1, ST6GALNAC4, TNFRSF10D
Negative_12637	CGA, CKB, IL7, NGF, OTC, ACSL3, AGPAT2, ALG3, ANAPC2, APC2, ARSA, ATP5B, ATP6V1D, B3GALT2, B3GNT3, BDH2, BPNT1, CACNA1B, CALML5, CHSY1, CLCF1, CLTCL1, CNGB1, COQ6, CSH1, CSNK1G2, CYP2U1, DDX18, DGKI, DHDDS, EFNA1, ENPP1, EPHB6, F13B, FADD, FZD10, HLA-C, HLCS, HSD17B8, IL15RA, IMPDH1, IQGAP3, ITCH, LCMT2, MAGI3, MAP3K7, MAP4K3, MAPK10, MGAT1, MGST1, MICA, MOV10L1, NR1D1, NRG3, OLAH, OR2M3, OR4S2, OR51A2, OR51I2, OR56A1, OR5AR1, OR8D4, ORC3L, P2RX6, PAK6, PARVG, PDIA4, PDXP, PIGO, PIGS, POLD4, POLR2K, PPM1B, PPP2R5E, PRKAB1, PTCH2, RDH10, RPE65, RPN2, RPS6KB2, SETDB1, SMPD2, SPTAN1, SRGAP3, TAS2R1, TAS2R40, UGT2A3, VAMP4, WNT10B, WNT3A
Negative_12638	CR1, FN1, RDX, ADCY8, ATP5G2, CARD11, CBR3, CCR10, CDH4, CLDN18, CLDN6, CSNK2B, CYP7A1, DAAM1, DGAT1, DHDDS, EFN1, EGFR, EPHA1, ERBB4, ESPL1, FCGR3A, GALK2, GP1BB, GRB2, GUCY2F, HA02, IL17A, IQGAP3, LEFTY1, LTC4S, MYLK2, NOS1, NT5C1A, OR12D3, OR13C5, OR2F2, OR2K2, OR4B1, PAFH2, PDE8A, PIP5K3, POLE4, PPP1R3C, PPP2R5C, PPT1, PTCH2, PTPRB, ROCK1, SELL, SMAD6, SOD1, STX16, TKTL2, TM7SF2, UMPS, UNC5C, UROS, WNT1, WNT10A, TNFRSF10C

Negative_12639	CFD, DBI, OSM, OTC, PGP, TH, ADRBK2, APOE, ARG2, ATP5B, B3GALT6, CACNA1B, CAPN2, CBLC, CLOCK, COL1A2, CXCL11, CXCR6, CYP26B1, DERA, DERL1, DGAT1, DUSP7, EFNA3, ENTPD5, FUT6, GBE1, GIT1, GMPS, GNAI1, IRF5, KLRK1, LRRC4C, MAP4K3, MAPK10, MYLK2, NCF2, OR10A6, OR2G6, OR2M2, OR2T8, OR4C11, OR4C12, OR4S1, OR6B2, ORC1L, PCCA, PGM3, PLA2G3, PLAU, PLD1, PMVK, PTPRJ, RAF1, RDH11, SEMA3A, SETD1A, SMAD7, SPCS1, WBSR17, AA, SDHPPT, ATP6V1B2, MAPKAPK3, ST6GALNAC3
Negative_12640	EPO, GP9, GPI, GPT, HK1, PML, AKR1B10, ALG3, ANAPC7, APOC3, ARD1A, ARP3, ARPC4, ASAH1, ATP5G2, ATP6V1D, CAMK2D, CCNB1, CCND1, CCR10, CD19, CD244, CHKB, CYP3A4, DDX19A, DPYS, DTX3L, EDN1, EDNRA, EPHA8, FCER1G, FCGR3A, FGD3, GFPT2, GNAI3, GNG13, HSD3B2, IFNA8, IFNB1, IGSF5, ITGA11, ITGB3, KLKB1, LIPC, LMO7, MAPK7, MTMR1, NFASC, NFKB1, ODC1, OR13C8, OR4C46, OR4D5, OR4L1, OR5T2, OR6N1, OR8B12, PDE9A, PIGM, PKM2, PLXNA1, PLXNA3, PRKCE, PRKCG, PSME2, SLC25A6, SPI1, SRGAP1, TSLP, TUBA1C, UCK2, ULK1, XCL2, XIAP, PHOSPHO1
Negative_12641	F12, ACAA2, ACAT1, AKR1B10, AKR1D1, ALDH1B1, ANAPC10, AOX1, ARNT2, ASAH1, CCL11, CCL23, CCND2, CERK, CKS1B, CLCF1, CLDN14, CSF1, CYP11A1, CYP4A11, DVL1, EFN2, EPHB2, G6PD, GALNTL2, GCH1, GCLM, GGT1, HCST, IL21, IL23R, LLGL2, LPAR1, LTC4S, MAP3K6, MAP3K8, NAGK, NQO1, OR10G9, OR10K1, OR1B1, OR4K5, PARD6A, PDE6D, PGM1, PIGH, PIM1, PLXNB1, POLR2A, PPA2, PPM1A, PPP2R5B, PRKAR1A, QPRT, SLC27A5, SOCS1, TGDS, UGT2B7, UXS1, VAMP3, WNT4
Negative_12642	AK5, C7, CP, HK2, LCK, OTC, RDX, SI, ABI2, ACTN4, ADIPOQ, ADRA1B, AKT1, ANPEP, CACNG2, CCL22, CCNB1, CD55, CD99, CHRM3, CLDN1, COL4A6, CSNK1D, CSNK1E, CX3CR1, CXCR3, CYP2C19, DDIT3, DDOST, DDX55, DGKB, DHRS4, DIAPH3, DPM3, ETNK1, FECH, FGF9, FLOT2, FSHR, GPX7, GRAP2, GRM5, HBEGF, HSPA8, HTR2B, IFNA4, IL11, MAP4K3, MGAT2, MICA, MYH11, MYL2, NR1D1, ODC1, OR11L1, OR1L6, OR56A3, OR5AK2, OR6F1, OR6N2, PIK3R1, POLR3A, PPP1CA, PPP1R3C, PPP2R5A, PRKX, PTCH2, RFX5, SEMA3D, SGPP1, SMURF2, SPP1, SSH1, STX8, SUFU, SULT1A4, SUOX, TAS2R10, TRAF6, TUBA1A, TUBA3E, UCK2, UGT2B11, UNC5D, ST6GALNAC4, TNFRSF14
Negative_12643	CD6, FN1, FUK, FYN, GSS, PLN, VTN, ACP1, ANAPC11, ARD1A, ARSD, AVPR1A, B3GNT3, CDH3, CES1, CFLAR, CHRNA7, CLCF1, CMAS, CXCR3, DGUOK, DIAPH1, EDNRB, EXTL3, FGF13, GNRH2, GPD1L, GSTK1, HIBCH, HLCS, HYAL1, KCNB1, KITLG, MAGI3, MCEE, MYH9, NLGN2, OR10R2, OR1L8, OR2G2, OR5D14, OR5D16, OR5T3, OR7D2, PDHB, PGK1, PIGV, PLCB4, PPA1, PPBP, PPP2R2A, PRKAG2, ROCK2, RPIA, RPS6KA5, RRAS, SELL, SPTLC2, STAT3, TUBB1, WARS, WNT9A, SERPINE1
Negative_12644	AK1, AK2, GAA, ACOT12, ACP6, ACTA1, ACTN1, ADIPOQ, ADRA1A, ADRA1D, AKR1B10, ALDH3B2, ARHGEF4, ASCC3, BLVRB, CACNG4, CD36, CHSY3, CIITA, CLDN16, CNTNAP1, CRLF2, DHRS9, DPM1, DUSP5, DVL3, EI24, EXOC7, FARSB, FPGT, GALNTL2, HLCS, HSD17B1, IL15, IMPDH1, INMT, ITPKA, LAMC1, MALT1, MGAT2, NFKB2, OR10V1, OR1L8, OR2D3, OR2T2, OR4S1, OR4X2, OR51E2, OR51V1, OR5AS1, PAPSS1, PIM2, PPP2R5E, PRKAB2, PRKCB, PTPRZ1, RXRB, S, T8SIA5, SV2B, TAP1, TAS2R41, ULBP2
Negative_12645	BTK, HDC, HGD, HGF, AADAC, ACLY, AGPAT3, AMDHD1, ARRB2, ATP6V1A, BCAT1, CACNA1A, CD44, CD48, CD79A, CYCS, CYP21A2, CYP2C8, DDX54, E2F4, GALNT8, GAPDH, GNPDA2, GPX5, HTR2B, HYAL1, IARS, IDH3A, IL11RA, IRF5, MARS, MCM7, MGAT4B, MGST2, MLYCD, NT5C, OR14J1, OR2W1, OR56B4, OR5T3, OR6C1, P2RX3, PIP5K1A, PLCD1, PNPLA4, PPP2R1B, PPP3R1, PRKCA, PSEN1, RAPGEF2, SH2D1A, SORBS1, SV2B, TAS2R16, TNFSF9, VEGFA, TNFRSF17

Negative_12646	ATM, IDS, PGF, TYR, ACSL6, ADCY1, ARHGEF7, BLNK, CANT1, CCL24, CCR8, CD48, DAAM1, DARS2, DTYMK, GIT1, GRIA2, GUCA1C, ICOSLG, INHBA, MAP2K4, MAP3K7, MAPK1, NEU1, NFYB, OR10Q1, OR2A14, OR2L2, OR4K13, OR4Q3, OR5B3, OR5K2, PARD3, PFKP, POLR2C, PPP3CA, PRKCD, RHOD, ROBO1, RPS6KA6, RRAS, RUVBL1, TACR3, WARS2, WNT11, WNT7A, ZMAT3, ZNRD1, B4GALNT1, TNFRSF1A
Negative_12647	C8B, EDA, F9, GPI, LEP, AARS2, ACTN4, ACYP1, ACYP2, ALDOA, ALG13, AMHR2, ARPC3, B3GALT5, BCL2L1, CACNB4, CD22, CD27, CD48, CNTFR, CREB3L2, CXCR5, DDX52, DGUOK, DHFR, E2F4, EFN1, ENTPD4, EPHA3, FGF17, FSHR, G6PD, GALNT2, GRB2, GRIN2C, HA01, HPSE2, HTR2B, IL12RB2, IL17RA, IL19, KIR2DL4, KLK3, LIAS, MAPK11, MAT1A, MYH11, NSD1, OCRL, OR13C3, OR13C8, OR2D2, OR2F1, OR52K1, P2RX7, PCYT2, PDE6D, PDGFRA, PLCD4, POLA2, PRKAB2, PRPS2, RAPGEF1, RUNX1T1, SC4MOL, SH3BP2, SHC1, SHMT1, SLC2A4, SMPD3, STAT3, TGFA, THBS1, TJP1, WIF1, WNT8A, CACNA2D2, GABARAPL2, PRICKLE1
Negative_12648	BAX, DBI, GLA, IL3, KDR, KHK, ADIPOR1, ADRBK2, AFMID, AGRN, ALG12, B3GAT2, C3orf10, CACNA1H, CAMKK2, CCND2, CD40LG, CDKN2C, CLDN4, CLTB, CYP3A7, DDX55, EFNA4, EPHA6, FLAD1, FZD5, GALNT11, GCNT4, GLI1, GMPR, GZMA, HPRT1, IFNA5, IFNW1, ITGB2, LTBP1, MAP3K11, MMP2, MS4A2, MYL7, NCK2, NFATC2, NFYC, NMNAT2, OR10A7, OR12D3, OR1A2, OR2D3, OR2M2, OR52M1, OR6C70, OXCT2, PIP5K3, PNPO, POLR1A, PPP3CA, PRKAA1, PRKCQ, PTPMT1, RPN2, SEMA4D, SLC33A1, ST3GAL4, STK3, STK36, TAS2R9, TM7SF2, TPMT, UGT2B17, WIF1, ATP6VOD1, B3GALNT1, TNFRSF6B
Negative_12649	C5, CFD, DAO, LCT, TNC, ACY3, ALDH4A1, ALG12, APH1A, ARPC2, ARSB, ATIC, ATP5J2, BCL2L1, BPNT1, CCL22, CDS2, CFLAR, CHD8, COL1A1, CYP2A13, DERA, DUSP5, FGD1, FGF19, FGF3, FSHB, FTCD, GCLC, GFPT1, GNAS, GZMA, HEK1, HIF1A, HSP90B1, IAPP, IDH3G, INPPL1, LAMA4, LCMT1, LDHC, MAP3K13, MCCC1, NAGLU, NCF2, NME6, NRG3, OR10T2, OR13A1, OR1F1, OR2AE1, OR4C15, OR4K14, OR4M2, OR52E8, OR6C75, PAK1, PFN2, PHKG2, PLA2G2A, POLE2, PPP1R1A, PRKG1, RAB23, RASA2, RFX5, RPN2, SULT1A4, TRAF3, UBE2L6, UPP2, ATP6VOA4, HLA-DPA1, MAPKAPK5
Negative_12650	CRH, EBP, ME1, NLK, PDC, TFG, ACSL1, ACSS3, ADSSL1, AHCYL2, ALDH1B1, ARPC5, ASRGL1, ATG7, CCL28, CCL5, CLTB, CMPK2, CNTF, CYP4F3, DCTN1, DGKH, DGKI, DHCR7, DOCK1, E2F2, EPHA7, FGF3, GALNT11, GATM, GLYCTK, GMPR, GNPDA2, GRB2, GRIA2, HLA-C, ITGA8, ITGAE, ITGAL, ITPKA, KCNJ11, KLRC2, LRP5, MGST2, MYH13, MYH7B, NFATC4, NRG2, OR10H5, OR2Y1, OR5F1, OR5T3, OR6S1, ORC1L, ORC5L, PDE1C, PDE8A, PDHA1, PIGC, PIM1, PPP1R3D, PPT1, PTEN, PTGES2, RAB5A, RAC3, RASGRP2, SEMA3C, SEMA4D, SGMS1, SHC1, SLC33A1, SMARCA5, SNW1, SPTLC2, SSH3, STX18, STX7, TIRAP, TRADD, TSTA3, TUBA1B, UGT2A1, UGT2A3, XCL1, YWHAB, YWHAE, ALDH18A1, SERPINB5, ST6GALNAC3, TNFRSF14
Negative_12651	BCR, CP, F5, HPD, ID4, IDS, IL6, IL9, MPZ, PLG, TKT, ZYX, ACADL, AMDHD2, ANAPC5, ARPC1B, ATP5G2, BPGM, CACNA1H, CASP7, CAV2, CCNB3, CHKB, CHUK, CNDP1, CNTFR, CNTNAP1, CTNNA1, CTNNA2, CXCR3, CYP11B2, ETNK1, F13A1, F2RL2, FCGR3A, FMO2, GCLM, GJA1, GMPR, GNAQ, GNPAT, GUCA1C, HAP1, HNF1B, HSD17B4, IDUA, IKBKE, IL12B, IL23A, IL24, INHBC, IRF3, ITGA5, MAP2K1, MAP2K7, MMP2, NADK, NADSYN1, NARS2, NCKAP1, NEFM, NEU3, NFKB1, NKX6-1, OR10G7, OR2S2, OR51G2, OR52M1, OR5AU1, PAK4, PHKG1, PIK3R5, PLXNA1, POLD4, POLR2E, PTPRC, RASSF5, RPS6KA5, SC4MOL, SCP2, SEMA3A, SMC1A, SOCS7, SPTAN1, ST3GAL4, TD02, TNFRSF4, TNFSF12, TP53, TRAF6, TUBB6, TYROBP, UNC5B, YOD1, HLA-DPA1, HSP90AA1, MAPK8IP3, SERPINF2, TNFRSF17

Negative_12652	GCK, ID4, TH, ABLIM1, ACADVL, ACLY, ADIPOR2, ADRBK2, ALDH5A1, ATP5D, B3GNT3, B4GALT2, BAI1, CARS2, CBLB, CD19, CLCA2, CLTB, CNGB1, CXCL6, CYP26B1, DDX51, EDNRA, ERBB3, FASN, FDFT1, FGD1, FGF12, GALK2, HIP1, HNF1A, IRF7, KLRC1, LRP6, MADCAM1, MYH6, NR5A2, NT5C1A, NT5M, OR10J5, OR1A2, OR2F2, OR4C15, OR5AS1, PAK2, PAK3, PIGF, PIK3R1, PLA2G3, POLD2, RDH16, ROBO1, ROBO3, SMURF1, SNAP23, SOCS3, VAMP3, XCR1, AASDHPT, ATP6V1C1, SUV420H1, TNFRSF14
Negative_12653	C4B, CKB, EDA, LHB, UBB, ACSS3, AHCYL1, ALAS1, ARD1A, BRAF, CASK, CCL1, CD244, CD28, CDC14B, CDC27, CFLAR, CLDN16, CLTC, COL4A2, CTNNA2, DDHD1, DDX19A, DDX50, DLL4, DNMT3L, EHMT1, ENPP3, ERBB4, EXTL2, FIGF, FRAT2, GALK2, GALNTL1, HMOX2, HNF1A, HSD3B2, IL19, LARS, LIPG, MGAM, MGAT4A, NCR1, NKD1, OR4C16, OR4F4, OR4M1, OR52K2, OR6C6, OR6C75, OR8K1, PCYT1B, PER3, PIK3R2, PIP4K2B, PMM2, PPP2R1B, PRLR, PRPS1, PSAT1, PTPN11, PTPRZ1, RAC3, RFXANK, RRM2B, SAT2, SDC2, SEMA3C, SETD1B, SETMAR, SPRY1, STAT5B, STX8, SYNJ1, TAS2R50, TBL1X, TBXA2R, TCF7, TCF7L1, TCF7L2, TRPC1, UGT2A3, WNT9B, XIAP, ATP6V1E2, ST6GALNAC6
Negative_12654	A2M, ABO, C8A, DLD, TH, ADSS, ARG1, ARHGAP5, ARRB1, ASRGL1, ATG7, BCAR1, BET1L, CACNG3, CACNG6, CCL26, CCND1, CD34, CDH4, CHR1, CNTN1, COL11A1, CTSL1, DGAT2, ENPP2, EPHA1, EPHA5, ERBB2, FARSB, FPGT, GALNT2, GALI1, GNPAT1, GRHR, GSTM1, GUCA1A, HMGCL, HTR5A, IDH3A, IL28B, KDSR, KIR3DL2, MAD2L1, MYH13, MYH2, NKX6-1, OGDHL, ONECUT1, OR10Z1, OR12D3, OR51A4, OR51I1, PIGW, PLD1, POLE2, PON1, PTPN5, RHOA, RRAS, SMAD6, SPRED1, SREBF1, ST3GAL4, SUV39H1, TALDO1, TIRAP, TSC1, YES1, ZMAT3
Negative_12655	FAH, FGB, GP9, HK2, IL3, LSS, PML, ABL1, ACYP1, APOC3, ATP13A2, CACNG1, CAMK4, CCR1, CDKN1A, CHRNA7, CXCL12, CYP21A2, ELK1, EPB41, FGF13, GAD2, GALT, GALNT5, GALNTL1, GFAP, GLDC, GLUL, GNAT3, GRIN1, GSTA5, HRH2, IL23A, IQGAP3, IRS2, KRAS, LAMB4, LCMT1, LDHA, LLGL1, MAD2L2, MGA M, MMP9, NEU3, NSDHL, NTN1, OGDHL, OR10P1, OR13F1, OR2M2, OR2T12, OR3A3, OR4E2, OR4N5, OR52E8, PFKL, POLD2, POLE3, POLR3A, PRDX6, PTCH2, SLC25A5, SSH2, TGFB1, TIAM2, TJP1, TNFSF9, TP53I3, TSNARE1, VEGFA, WNT5A, WNT6, YWHAQ
Negative_12656	AK7, C7, KIT, RFK, TPO, ACACA, ACSL1, ADSSL1, AKT3, ALDOA, ANGPTL4, ARSA, ATP5I, AVPR1A, BMP8A, CACNG3, CCL2, CCND3, CDC25C, CNTN2, COL3A1, COL6A1, CREB3, DAPK1, DAPK3, DCTN1, DGKH, DHRS4, DIAPH2, DOCK1, EIF4E, EPHB6, FGF7, FUT2, GALNT6, GALNTL2, GALT, GCDH, GNB3, GSK3B, GSTM5, HPSE2, HTR2B, IFNA8, IMPA1, IRS2, ITGA4, ITGAL, JAM3, MYH11, MYH8, NCKAP1, NEU2, NFAT5, NR1H3, NUDT8, OR1L1, OR2H1, OR2M4, OR4D1, OR52E4, OR5I1, PARD6A, PDE2A, PDGFA, PFKFB3, PGAP1, PGK2, PHKA1, PIGN, PKMYT1, PLAUR, PMM1, POLR1C, POLR3D, PPP2R1B, PPP3CB, PSAT1, RARS, RBL2, SCP2, SDHB, SNAP23, SQLE, TAS2R41, TUBA1C, TUBB2B, UROC1, WNT2B, XYLB, HLA-DPB1, ST6GALNAC3, ST6GALNAC5, TNFSF13B
Negative_12657	DUT, F2R, GH1, IL8, LPL, MYC, OAT, PC, SYK, TNC, ADCY2, AKR1C3, ALDH4A1, ALOX12, ALPL, ANGPTL4, ANPEP, AOX1, APH1A, ATP6VOC, AXIN1, B3GNT3, CCND1, CCR10, CD226, CDC25C, CHAT, CHEK2, CLDN20, CYP4F3, DTX2, FBXW11, FGF18, G6PD, GBE1, GNAI1, GNAQ, HLA-F, HNF1A, HRAS, HYAL2, ICOSLG, IFNA5, IL20RB, IL9R, INPP5A, ITPK1, LIPE, MCM3, METTL6, MLLT4, MYH7B, NAGA, NCF1, NLGN2, NME4, NRG3, OR1D2, OR1L1, OR1L6, OR2T6, OR4D5, OR51G2, OR5D16, OR5M3, OR6C3, PAK2, PAK4, PIK3C2A, PIK3R3, PLCG1, POLD2, POLR2J, POLR2L, PTGDS, PTPRB, RARS, RPN1, RPS6KA3, SAT1, SH2D2A, SKP1, STX12, TAP1, TAS1R3, TAS2R16, TDO2, TNFSF4, TOMM40, TUBA8, ULK2, WHSC1, WNT16, YWHA E, ATP6VOD2, CSGALNACT2, CTNNBIP1, GABARAPL2, TNFRSF10A

Negative_12658	EZR, F5, GBA, GSS, TK2, UBB, AANAT, ACACA, ADRB2, ADSSL1, AGPAT3, ALAD, ARD1A, B3GALT2, B4GALT4, BAI1, CBLC, CCL19, CCL3, CDH4, CDS2, CFL1, CLCA4, CLDN4, COQ3, CPT1A, CREB3, CSNK1G3, CTNNB1, CYFIP2, DGKE, EFN A3, EIF4E, ELK4, EPHX2, FGF8, FOSL1, GSTA2, HARS, HSD17B3, HYAL2, IL2 8RA, INSR, LAMA4, LAMC2, LAMC3, LIPT1, LRP5, MAP3K13, MDH2, MMP1, MT AP, NARS2, NEU1, NT5C, OR1N1, OR2L3, OR4K14, OR51B2, OR5M3, OR8K1, P2 RX5, PER3, PIGL, PLA1A, RAC3, RFWD2, RRM2B, SEMA4C, SEMA4G, SEMA7A, S ETD7, SETMAR, SPHK1, ST3GAL2, STAT3, TUBB4, UBE2K, UGT2B17, YOD1, ZA P70, ST6GALNAC1, ST6GALNAC3
Negative_12659	CRK, DLD, IL4, INS, LIF, NLK, OGT, RPE, TKT, ACO2, ACOT11, ACOT12, ACOX 2, ACSL4, ALDH1L1, ALG10B, APRT, ATP5G2, B3GAT3, BMP6, C1QA, CACNB2, CALML5, CAPN2, CASP3, CAV2, CCNG2, CFLAR, CLDN14, COL3A1, COL4A2, CR EB5, CYP3A7, CYP4F2, DIAPH2, DKK2, EI24, ENTPD8, EREG, FGF12, FGF8, G ALNT9, GNPAT, GOSR2, GPX5, GRB2, HTR2C, IFNA10, IFNA7, IFNAR2, IL28B, IL6R, IRAK4, ITGAD, JAG2, MAML3, MBL2, MCM3, NAMPT, NAT2, NR1D1, NUD T12, OR2A2, OR4K1, OR51A7, OR5D16, OR5L1, OR6K3, OR8H3, P4HA2, PDHA2, PIK3R1, PPAR, PRKAG3, PRKAR2A, PTGER1, RCHY1, SSSX2IP, STX6, TAS1R 3, TPMT, UGCGL1, VARS, WBSR22, WWP2, ATP6V1E2, SERPIND1, TNFRSF12A
Negative_12660	AUH, C8A, GP6, IDS, MAX, PXN, TAT, ACAT1, ADCY7, AGPAT4, ALPL, ANPEP, A SS1, B3GALT5, BCL2, CACNA1E, CACNA1I, CACNB1, CACNG8, CCL21, CD86, C DO1, CHAD, CIITA, CSF1, CTNNA1, CXCL13, CYP26B1, DGKA, DUSP6, EDA2R, ENO3, EPAS1, EPHA2, EPHB1, FZD5, GCH1, GFPT1, GZMA, HMOX2, HSPA1B, HT R5A, IDH3A, IFNA2, INHBE, ITGA9, ITGAM, KARS, KIR3DL2, LLGL2, LRRC4C, MAP4K1, MTMR2, OR10J3, OR13D1, OR2AG1, OR2C3, OR2K2, OR2T10, OR4C1 2, OR4C46, OR52L1, OR5AK2, OR8K1, ORC2L, P2RX2, PANK3, PERP, PIM1, PK LR, POLR3D, PROS1, PTCH2, RALA, RPS6KB1, THBS1, UGT2B10, VEGFB, WHSC 1, WNT10A, SUV420H2
Negative_12661	ADO, GCK, GP5, AADAC, ACOX2, ACY1, ADRB2, ADSS, AKR1A1, ALG3, ALPPL2, AOC3, ATP2A1, AXIN1, C1QA, C9orf95, CBR1, CD19, CLOCK, CYSLTR2, EHHA DH, EPAS1, FGF14, FMO2, FRAT1, G6PC, GART, GLUD1, GMPS, GNA11, GP1BA, HSD11B1, HTRA2, IL18, INHBB, IQGAP3, JUND, LDHAL6B, MDM2, MGAT2, MYL 7, NOTCH3, NPR1, OR10AG1, OR2AE1, OR2AG2, OR2D2, OR2M5, OR4C11, OR4F 17, OR4X2, OR8U1, ORC3L, PIAS1, PIGF, PLA2G2D, POLR2H, PPP3CC, PRKAB 2, PSEN2, PTDSS1, QARS, RDH10, SAT2, SDHC, SGMS2, SLC25A4, SMPD3, STK 3, SYNJ2, TACR2, VEGFC, WHSC1, WNT5B
Negative_12662	AK3, ID1, ME3, MVK, ACAT2, ADCY1, ADRB2, AKR1D1, AKT1, ALDH3B2, AMDHD 1, ARSE, C7orf16, CACNG8, CAMK2A, CCR9, CD48, CFL1, CIITA, CMAS, CNGA 4, CTBP2, CYP19A1, CYP2C19, DDX52, DGKD, FGD1, FGFR2, GMPR2, HLCS, HP RT1, IGSF5, IL23R, INADL, INPP5B, JAK3, MAD2L1, MMP14, MPZL1, NR1D1, OR10A3, OR10A7, OR10H3, OR1L3, OR4D2, OR52B6, OR52E6, OR5P3, PAPSS1, PGM3, PLCG1, PLXNC1, PRKCI, RPS6KA4, SCD5, SDC3, SELPLG, SEMA3A, SE MA4B, SETDB2, STAT5B, STAT6, TAS2R41, THY1, TNFSF18, TPMT, WNT3, ATP 6V1G2, SERPINE1
Negative_12663	ADO, SDS, STS, XDH, ACSL1, ADCY2, AFMID, AOC2, APOA2, ATP5A1, ATP5O, B 3GAT2, BMP8B, CACNA1B, CARD11, CCR3, CHPT1, CHST11, CLDN10, COL4A1, CREB3L1, CTNND1, CTPS, CTSS, CXCL12, CYP2S1, CYP8B1, DLL4, DNMT3A, E NTPD6, EPHB4, FGF19, FLOT1, FZR1, GLI1, GMPA, GRIA2, GSTO2, GUCY2D, HA01, HLA-C, ICAM1, IFNGR2, MAP3K3, NMNAT1, NUDT12, OR10J3, OR14C36, OR2T6, OR 3A3, OR5A1, OR6A2, OR6C70, OR6Q1, PANK3, PDGFA, PGK2, PHKA2, PIK3R5, PPOX, PYGM, RRM2, SHC1, SIAH1, SPAM1, TCF7L2, TGDS, TGFB2, TKTL2, TSH B, TUBB1, UMPS, WNT7A, GABARAPL1, HLA-DQB1, SERPINB5



Negative_12664	C3, CFH, CRH, HK3, IL2, OSM, PGD, RDX, ACO2, ALDH3B2, ALDH6A1, AMY2B, A RSA, ATP5A1, ATP5B, CCR9, CD79A, CDKN1A, CDKN1B, COL2A1, CREB3L4, CS F1R, DAG1, DHCR7, EPHA4, FPGT, GCAT, GNPAT, GNPAT1, GSTM5, GSTT1, GU CY1B3, GUCY2F, IL12RB1, ITGB5, MDH2, NCR1, NEUROD1, OR14I1, OR1E2, O R4D9, OR51F2, OR5D14, OR9A4, PHGDH, PPCS, PPP2CA, PTCRA, RASA1, RFWD 2, RXRB, SOAT1, SOAT2, ST6GAL1, STMN1, SULT2B1, TAS2R1, VAV2, MAP3K7 IP2
Negative_12665	ADA, AK1, BCR, C5, IL6, ME1, PC, TNF, VCL, AARS, ACSL1, ACSL3, ADORA2A, ALDH1L1, ALG2, ASAH1, ASNS, BCL2, BUB1, CAMK2D, CCL25, CD28, CD36, CD C2, CEBPA, CHIA, CLDN18, CREB3L4, CXCL16, CYP11B1, DCTN1, DOLPP1, EF NA2, ENPP3, EPHA4, EPHA8, EXT2, FGF9, GABARAP, GALNT1, GALNT5, GALNT L2, GAMT, GNB3, GNPDA1, GPAA1, GPT2, HADHA, HSD17B1, ICAM3, IFNA7, IL 17B, IL2RA, ITGAX, KIR2DS5, LAP3, LFNG, MEF2C, MFNG, MGAT4A, MGST1, M YD88, NARS, NEUROG3, OR1K1, OR4K15, OR52R1, OR8G1, OR8J3, OR8U1, PAK 3, PER1, PFKFB3, PGM3, PITX2, PPP1CA, PSENE1, PTGS1, RBPJ, RBPJL, RDH 8, SEMA4G, SEMA7A, STAT2, SUCLA2, SULT2A1, TKTL1, UGCGL2, WNT3A, ATP 6V1C1, PHOSPHO1, ST6GALNAC5, TNFRSF10D
Negative_12666	ADA, BAD, PML, AASS, ABL2, ALG5, ALOX15, AMDHD1, APBB1, ATP5L, CASP7, CCL27, CD36, CD48, CES7, CISH, CSF2RB, DUSP16, EARS2, G6PD, GRB2, HSD 17B7, IDI1, IL2RB, IRF5, ITGB5, LIMK2, MAP2K5, MGST2, NGEF, NOS1, OCR L, OR10K1, OR6C75, OR9Q2, PDXP, PECAM1, PGAM4, PLAUR, PLK1, PLXNA3, P OLR2A, PPAP2A, PPP3R2, PRKCA, PRSS2, RRAS, SMARCA2, SUCLA2, TYRP1, Y KT6, TNFRSF10A
Negative_12667	AK7, AR, CDA, MET, MPI, PRL, SMO, AHCYL2, ALG8, ANPEP, ATP5L, BAIAP2, B DH1, BMP8A, CCL26, CD48, DFFA, EPHA2, EPHA4, FABP1, FGF10, FGF21, FGF R2, FUT5, GART, GSTA5, GSTM3, GSTZ1, GUCA1B, IKBKG, INPP4A, LIPF, NFK BIE, OR10H4, OR4C6, OR5D14, OR5T1, OR6C6, PCYT2, PDE7B, PIP5K1C, PMM 2, PPCDC, PPP1R3D, PROS1, PRSS2, ROBO3, SELE, SEMA3F, SNW1, SPCS1, TA S2R49, THBS3, TNFRSF9, TRAF1, TRAF5, UCK2, VNN1, GABARAPL1, TNFRSF1 3B
Negative_12668	BAX, JUP, MAX, ACSL1, ACVR2A, ATP5E, ATP5F1, BMP6, BNIP1, CACNB2, CAC NG3, CANT1, CCL1, CHIT1, CREB3L2, CTBP2, DDIT4, DNMT1, EDNRB, ELK1, E NTPD3, FPGT, FRAP1, GGT5, GUCA1B, HA01, HSPA1B, IFNA13, IL12RB1, IL1 7RB, INSR, IRAK4, LGL1, MCEE, MYH10, MYH9, NAGS, NARS2, NCOR1, OR1D2 , OR2AG2, OR2M7, OR51B6, OR52J3, PDE4D, PLAU, POLR2C, PPP3R1, RASSF5 , SLC33A1, STK36, THBS1, TRIP10, UCK2, UROS, YWHAE
Negative_12669	JUP, ALG13, ATF4, CCR6, CLDN2, COL5A2, CYP1A2, DAAM1, EGLN3, ENTPD2, FGF9, GALNT12, GNRH1, GNRHR, GUSB, IL18RAP, IQGAP1, IRS4, ITPKB, MAP 2K7, MCCC2, OR10A6, OR2A42, OR4K14, OR4M1, OR52B6, OR52I1, OR6C2, OR 6X1, PAK1, PER3, PGK2, PIPOX, PLCB2, PRKX, PTTG1, RBPJ, RELB, RGS3, RP S6KA2, SRGAP2, SV2B, TCF7, TGFA, THBS1, TSHR, TSNARE1, TUBB1, UAP1, W HSC1, MAPK8IP2, SERPINA5
Negative_12670	DCC, DLD, FGB, FGG, TK2, ACTC1, AGXT, ALPI, ALPL, AMPD2, ANAPC11, APOA 2, ARPC4, CACNG7, CCL19, CCND2, CD79A, CDC23, CDC6, CLDN10, CSF3, DNM T3B, DUSP3, ELK1, EPHA3, FLAD1, GBT1, GGCX, GMPPA, GRIN2A, HSD11B2, IL11, IL4R, LEF1, MAFA, MAPK3, MTMR6, MYH3, NFKB2, OR4A5, OR4K17, POL R3A, PPP5C, PVRL4, SGMS2, SOX17, SSH3, SUOX, TAS2R8, TPK1, YWHAB

Negative_12671	BCR, FAS, GNE, HYI, PC, ABLIM3, ACLY, ALOX15B, ANAPC5, AVPR1A, AXIN1, B3GALT1, B3GAT3, BCAT1, BCL10, CD8B, CDH4, CDK6, CHAD, CHSY1, COMP, CXXC4, DHDDS, DVL1, DVL2, ENTPD6, GAMT, GCNT2, GDE1, GNRH2, GP1BB, HAGH, ICAM2, IDH3B, IRS4, ITGB2, ITGB4, LAMC1, LIMK1, MASP2, MBL2, MGAT4A, MYH15, NAT6, NGEF, NMNAT2, OR13C3, OR1K1, OR4K2, OR51B2, OR52J3, OR6C70, OR7D2, OR7G1, P2RX1, PDE6D, PDXK, PIGW, PLXNA1, PLXNB3, POLR1D, PPP3R2, PRKAB2, PTPRB, SDC1, SETMAR, SLC25A6, SMAD3, STAM, THBS2, TLN1, TP53I3, VAMP2, YWHAQ, HSD17B10
Negative_12672	BAD, DBH, IVD, KIT, LYN, MPZ, MTR, WAS, ACTG2, ADCY7, ADIPOR1, ALDH7A1, AMY2B, ANAPC2, ARG1, ARSA, ATG12, ATP5H, B3GAT3, BET1L, CCR6, CDC14A, CDC25A, CLDN7, CRLS1, CXCL3, DAAM2, DGKB, DTX3, DTX3L, DUSP7, EDAR, EGLN1, EPHB1, FDPS, HPRT1, IL20RA, IL6R, KIR3DL3, KLRC2, MAML3, MARS, MMP9, NAMPT, NCF4, OR10A5, OR1J1, OR2B2, OR3A1, OR52A1, OR52N4, OR5P3, OR6C1, OR7G1, OR8K3, OR8S1, PANK4, PAPSS2, PCK2, PDE4B, PRKAR1A, PTAFR, PTGER3, SDHA, ST8SIA5, STAM2, STAT3, TACR1, THBS1, ULK3, HLA-DPB1, MAP3K7IP2, MAPKAPK5, TNFRSF11B
Negative_12673	CP, GLS, VCL, ACOT11, ACVR1C, ADAM10, ADCY5, AKR1A1, ANAPC10, ATN1, CD274, CDKN1C, CLDN18, CREB1, CYP26A1, DCXR, DDX18, DHRS9, ENTPD7, EP300, FGF23, GSTM2, HSD11B1, ICAM2, IFNGR1, IL18R1, IL22RA1, ITGA11, JAG1, KIR2DS4, LCAT, MAD2L1, MAPK13, MASP1, MGST1, NUMB, OR1Q1, OR2A14, OR52N1, PDE6H, PDXK, PGAM4, PI4KA, PIGN, PLA2G2F, POLR3A, PPP2R5D, PRKCE, PRLR, RBKS, RIPK1, ROCK2, SDC2, SELL, SLC9A1, SOAT2, SRGAP3, ST6GAL1, UGT2B17, VAMP3, WNT3, PAFAH1B3, ST6GALNAC1, TNFSF13B
Negative_12674	IL7, LCT, MET, ACMSD, ACTA1, ACTA2, ADCY5, ADCY8, ADRB1, ALOX15, AMDHD2, ANAPC5, ARD1A, ARHGAP5, ARHGEF1, ATP5J2, B3GNT5, BBOX1, BMP4, BMPR1B, CACNA1B, CBR1, CDC20, CES2, CNDP1, CNTN2, COX10, CXCL11, CXCR3, CYP2E1, CYP3A7, DHX58, DRD5, EIF4E2, EPHA7, EPHB3, ETNK1, FUT4, GNAI1, GNAI3, GSTM2, GUCY2F, HMBS, HNF1A, HSP90B1, IL1R2, IL9R, INPP4A, INPP5E, ITGA7, LAMA4, LTC4S, MTAP, MYH14, MYH6, NOD1, NR4A1, OR14I1, OR1J4, OR2A2, OR2AG2, OR2D3, OR2M3, OR3A3, OR4D2, OR4F17, OR4M2, OR4Q3, OR51A2, OR51B2, OR51E1, OR51I2, OR51T1, PANK1, PDE9A, PKM2, PLA2G1B, PNMT, POLR2F, PPOX, PRPS2, PVRL4, RBL2, RHEB, RPS6, SETD2, SH2D2A, SPTAN1, TNFSF8, UGT2B10, MAP3K7IP1, ST6GALNAC1, TNFRSF12A
Negative_12675	DAO, GSN, JUP, LEP, ZYX, ACAA2, ADCY4, AGPAT6, AGXT2, ALG12, CASP6, CCKAR, CCND1, CD247, CD79B, CYP17A1, DCTD, DFFA, DFFB, DNMT3L, EP300, F2RL1, FPGS, GALNTL2, GJD2, GLO1, GNG12, GNRH2, GSTM3, GSTO1, HMOX2, IFNA14, INHBA, INHBC, LCMT2, MCM7, MGAT5B, MGST3, MYH14, NFE2L2, NME7, OR11H6, OR1C1, OR2C1, OR4K1, OR5J2, OR6C6, OR8B8, OR9K2, PCNA, PDE6H, PGS1, PIK3R3, PKLR, POLE2, POLR2E, PPP1CB, PTCRA, RALA, RAPGEF3, RFXAP, ROB01, RPS6KB2, SC5DL, SNAI1, SULT1A2, TNFSF4, TRAF5, ULK1, VAV1, XCR1, ATP6V1G3, HSP90AA1
Negative_12676	CR1, HPD, IVD, JUP, KDR, OTC, AKR1C1, AOX1, ATIC, ATP6V1H, BIRC5, BTRC, CACNG7, CCNB3, CDC7, CTSB, CXCL6, DDIT4, DGUOK, EPB41L1, EPB41L3, EPHA5, FOXA3, FUT1, GNA13, GRIN2B, GUCY1A3, HSD17B4, IFT57, ITGB2, LAMC2, LAMC3, MGAM, MTHFD2, NEFH, NEU1, NLGN3, NSDHL, OR1S2, OR5A2, OR8H3, PARD6G, PDE10A, PDE2A, PDE8A, PIAS2, PPAP2A, PPP2R1A, PRKAG2, PTEN, RAPGEF2, RAPGEF4, RUVBL1, SPCS1, ST3GAL6, STX1A, TAS2R40, TBXA2R, TCF7L1, TLR9, TUBA3E, ULBP2

Negative_12677	C3, CDA, CKM, DHH, HK1, NOG, SDS, SP1, AADAC, ACLY, ADSSL1, AKR1C2, AKT2, ALG12, AMY2B, ASPA, ATG3, B4GALT3, CACNG5, CADM3, CD244, CD47, CDC16, CLTCL1, COL6A1, COQ3, CREB1, CRY2, CYP8B1, DDX54, DGUOK, DIAPH3, DNMT1, E2F5, ENTPD1, EPHA1, FGF23, FLOT1, FMO3, FOSL1, FTH1, GNA14, GSTO2, HLA-DMA, HRH1, IL12RB2, IL1B, IQGAP1, IRAK4, IRS1, ITPKB, LAMA4, LILRB3, MCM7, MYH6, NFASC, NKX6-1, NOX3, NPAS2, OR10AD1, OR10G2, OR1L1, OR4C12, OR51V1, OR52B4, OR52K1, OR6K3, OXCT2, P2RX5, PDCD1, PFKP, PIGN, PLA2G2F, PLCE1, PPM1D, RALB, RRM2B, SMURF1, SNAI2, STX5, TAS2R10, TBXAS1, TKTL2, TPH1, TRADD, XYLB, CTNNBIP1, GABARAPL2, HLA-DPA1
Negative_12678	AK2, GH1, GK2, HYI, ITK, MAG, UBC, ACADM, ADIPOQ, ALG3, AMPD2, ATN1, C1QB, C3AR1, CACNB2, CCL16, CHAT, CLDN17, CLDN9, CMAS, CMBL, CXCL12, CXCL6, DDX18, DDX41, FABP4, GALNT11, GAPDH, GPX5, HIF1A, IDUA, IL1RAP, KAT2B, LARS2, LEFTY2, LIPG, MTMR6, MYD88, MYL9, NCF1, NLGN2, NOTCH1, OR2B2, OR4L1, OR5B12, OR5M9, OR7G1, OR8S1, OR9A2, PFKL, PIK3R3, PLAUR, PPP2CA, PSENE1, RASGRP4, RBX1, RPIA, RRM1, SAT2, SETDB2, SETMAR, SHC1, SMPD2, SPCS3, STX16, TAS2R38, THBS3, TLR4, TNFSF9, TRAF2, UGT2B17, ULBP1, UNC5A, VANGL1, WNT1, CACNA2D2, ST6GALNAC5, TNFRSF13C
Negative_12679	BCR, BTK, C8B, ID3, KIT, SMS, ACMSD, ACSL4, AKR1B1, ALDH9A1, ALPL, APOA1, ASIP, ATP2A1, BBOX1, CADM3, CASP10, CCNE2, CCR10, CLTCL1, DPAGT1, ERBB4, EXTL3, FABP3, FGFR4, GLB1, GZMB, HTR4, IFNA6, ITGB8, MGST1, NCSTN, NT5C1A, OCLN, OR13F1, OR1I1, OR1N2, OR2F1, OR2Y1, OR6X1, OR7A17, ORC2L, PARD6A, PER1, PHKG1, PMAIP1, PRKCG, SELPLG, SEMA3G, SEMA4F, SMAD3, SOX17, ST6GAL1, ST8SIA1, SULT1E1, TBL1X, TOLLIP, VAMP1, YWHAH
Negative_12680	AK1, CFD, F2R, FAH, GCK, GH2, PRL, ALDH5A1, ATP4B, B4GALT6, BDKRB1, CACNB3, CASK, CDC6, CDKN2A, CHIA, CHST12, CLDN19, CYP2A13, CYP2C18, DCN1, E2F3, ENPP6, ENPP7, GDF7, GOSR2, GP1BB, HLA-F, IFNG, IL12B, IL20, IL8RA, INMT, LCMT2, MAML1, MAOA, MAPK1, MDH2, MYH7, NKX6-1, NMNAT3, NOX3, OR4X1, OR5D14, OR8D1, PERP, PFKFB1, PIAS2, PPAP2C, PPP1R3C, PRKACA, RARS, RPE65, SMAD6, SMPD2, TD02, TLN1, VAMP1, VDAC2, MAPKAPK3, ST6GALNAC6, TNFRSF17
Negative_12681	BTC, C8G, DBI, F5, HGF, RB1, ADRA1B, ALAS1, ALDH1A2, ALDH3A2, ATP2A2, B3GAT3, B4GALT2, BIRC2, BMP5, C3AR1, CD38, CD82, CDC25A, CDK6, CES2, CNTNAP1, COX15, CTNNA1, DCTD, DGKE, ENTPD4, ERBB3, FMO2, GMPR, HHEX, HNF1B, HSD3B1, HTR5A, INPP5A, JAM2, LAMB2, LDHC, LIPE, MADCAM1, MAP2K5, MCM5, MRAS, MYH3, MYH9, MYLK, NCKAP1, NUMBL, OR1D5, OR2L3, OR51A2, OR51D1, OR56A3, OR5H2, P2RX2, PARS2, PDE9A, PRKCD, PRKCZ, PTGFR, RCHY1, ROCK1, SCLY, SETDB2, SPRED2, STAM, TAS2R50, TBK1, TFDP1, TRPC1, TUBB4Q, HLA-DPB1
Negative_12682	C8B, CAT, GP9, IL3, TH, ADCY10, AKR1B1, B4GALT5, BLVRB, CANT1, CCL28, CCL7, CCNG2, CCR4, CDC14B, COQ3, CTLA4, CYP2U1, DHRS4, DHRS9, EPOR, FGF10, FPGS, GALE, GALNT12, GANAB, GATM, GMPR2, GNA12, GPAM, GSTM4, GUCY1B3, INHBE, ITGA1, JAK2, MALT1, MAP3K12, MAP4K1, NEFH, NFATC4, NTSR1, NUMB, OR11H6, OR2B11, OR2M5, OR4K14, OR51S1, OR5L1, OR9G1, PANK3, PFAS, PFKM, PIGL, PIGN, PIGP, PIK3C2B, PIPOX, PLA1A, PLA2G2E, PLOD3, PLXNB3, POLD2, POLR2B, POLR3H, PPAR, PPP1R3C, PRKG2, PVRL3, SC5DL, SENP2, SGPP2, SMC1B, SPCS3, TBL1Y, TRAF4, UNC5B, WASF2, YWHAH, ZFYVE16, HSD17B12, MAPK8IP1, SLC25A31, ST6GALNAC6

Negative_12683	C9, ADIPOQ, ALDH1A3, ALOX15, ASPA, ATF4, ATP5F1, BBC3, BUB3, CAMKK1, CCL2, CD19, CDK5, COL3A1, CPS1, CREB3L2, CTNNA2, CYP2C18, EXTL2, FGF11, FOXO3, GARS, GRB2, GSTA2, GSTM1, HAAO, HMGCR, IL18RAP, IL1B, INSR, JAM3, LPAR1, MAP3K11, MAPK3, MAPK9, MICA, NAGLU, NANP, NCK1, NFATC2, NODAL, OR10G3, OR10J3, OR2A2, OR2K2, OR2W1, OR4F4, OR5AK2, OR5D18, OR6C70, OR7G3, OR8B8, OR8J3, PARVA, PAX6, PCK1, PFKP, PIK3CA, PIM1, POLD1, POLD2, POLR2J, PRDX6, PTK2B, RASGRF1, RELA, RFWD2, SHC4, TAS2R16, TAS2R49, UPP1, ATP6V1E2, GABARAPL1
Negative_12684	AK7, BID, CD6, GH2, LCT, MAX, ACACA, ACO2, ADAM10, ALAD, AQP7, ARHGEF1, ARPC1A, ASS1, ATP2A1, BCMO1, BDKRB1, BMP8A, CACNA1F, CAMK4, CCL5, CD14, CD79B, CDC45L, CLDN15, CLDN19, CLDN4, COL6A1, COQ5, CRKL, CTN, CYP19A1, CYP21A2, DARS2, DFFB, DGKB, DGKG, DKK4, DRD1, ETNK1, FGF8, GCX, GGT1, GNAI3, GPX5, GUK1, HADH, HSD17B4, IL21, IQGAP2, LAMB4, LEFTY2, LPAR1, MAN1A1, NAGLU, NEU2, NMNAT2, NRAS, OR10Q1, OR11G2, OR2A14, OR2T29, OR4C16, OR56A4, OR5AR1, OR5M3, OR6C2, OR6C76, OR8H3, OR9I1, OXCT1, PIGH, PLA2G10, PLCZ1, PRKCD, PRKCH, PSEN2, PSME3, RAB5A, RARGE4, RDH8, SELPLG, SETD2, SETDB2, SH2D1A, SH2D1B, SMURF1, SPRED1, TAS2R16, TPMT, TSHR, TUBA3E, UBE2K, YWHAE, CSGALNACT1
Negative_12685	FST, HGD, HK1, MSN, SHH, SI, SRM, ACACB, ACSS2, ARHGEF2, ATP4B, AXIN1, BDKRB1, CACNA1A, CASP6, CCL13, CCL22, CCR9, CDKN2B, CHRM1, CTF1, CYP4A11, CYP4F3, DAAM1, DDHD1, DEGS1, DGKG, DGKI, DKK1, DUSP8, E2F2, ENTPD7, ESAM, FGD1, FGF19, FGF23, FLT4, GALNS, GALNT5, GALNT8, GCNT1, INHBC, KIR2DS4, LCMT1, LIFR, MAP4K3, MGST3, MKNK1, MPDZ, MS4A2, MTHFD1, MYLK3, NAT2, NCR1, NCR3, NEFM, NLGN1, OR52N4, OR5I1, OR6C75, OR8K1, PAK1, PARVA, PDE10A, PGM2, PIGK, PIGX, PLXNB1, POLR3B, POLR3G, PORCN, PPP2CA, PRKG2, PTGES, RFXANK, ROBO2, SC5DL, SCD5, SEPHS1, SIAH1, SKP2, SMURF1, SSH1, ST8SIA1, TGFB2, TNFSF12, TNFSF4, UBE2K, UBE2L3, UBE2L6, WNT7B
Negative_12686	ABO, DBH, PC, ABL2, ACAA1, ACTB, ADIPOR1, ALDH4A1, ALDOC, ATP5D, BACE2, BBOX1, BDKRB2, CAV1, CCL15, CCR2, CD34, CDC26, CPS1, CSNK2A1, CYP4F3, DLAT, EFN3, EHMT2, ENO2, FGF7, FLT3, FLT3LG, FUT2, GDF6, GFAP, GLUL, GPAA1, IL6R, IL8RA, INSR, IPMK, IRF5, ITGB3, ITPKA, KIR3DL2, MAP3K11, MYH1, NAGS, NUDT5, OR1F1, OR2A4, OR2L8, OR4A5, OR51A2, OR51I1, OR5B12, OR6A2, PECAM1, PGAM2, PGAM4, PLXNB1, PTEN, PTK2B, PVRL4, SCP2, SEMA4A, SMURF2, SRGAP1, TDO2, TUBA3E, TUBB2B, UPP1, VNN1, ATP6V1G2
Negative_12687	ABO, C6, C8B, CTH, TNF, UBC, ACPP, ACY1, AFMID, AKR1C1, ANAPC2, AQP7, ARD1A, BET1, BIRC5, BUB3, CACNG3, CAMKK2, CAPN2, CCL4, CCND3, CD55, CD80, CXCR3, CYBA, CYP11B1, CYP2C9, DKK1, DLL4, EPHA5, ETNK1, FADD, FUT4, GGPS1, GJD2, GYS2, HIBCH, HNF1B, IL23R, IL2RA, IL9R, ITGA3, MAD2L1, OR10AD1, OR10G9, OR1L3, OR2A12, OR52K1, OR5K1, OR5R1, OR8B8, OR8H3, OR8S1, PEMT, PGAM2, PIP5K1B, PKM2, PLCZ1, PRDX6, RAB23, SEMA3D, SEN2, SHMT1, STAM, SYNJ1, TAP2, TAS2R42, TOMM40, USE1, VAMP3, WNT1, ALDH18A1
Negative_12688	CKM, FAS, HPD, ID2, VCL, AARS, ACSM5, ADRB1, ADSS, ATP6V0C, B4GALT7, CACNA1E, CACNA1S, CAMK2A, CAMKK2, CDC42, CES7, CREB5, CRHR1, CTNNA1, CYP21A2, CYP2C18, DLL1, FABP1, FGF4, FGF5, FTMT, GCH1, GCNT2, GNA11, GNG13, GUCY2D, HES1, HNF1A, HRAS, HTRA2, IL25, IL9R, IRAK2, JAK1, LDHC, LILRB3, MAP4K3, NAGLU, NFATC2, NRG3, NSDHL, NTF4, NTN1, OR10R2, OR11H1, OR11L1, OR4Q3, OR51T1, OR5A2, OR6C3, OR7D4, OR9Q2, PCYT2, PFN1, PI4KB, PIK3C2B, PIK3CG, PLA2G2E, POLR2H, PPARG, PPOX, PPP2R5C, PRSS2, PTEN, PTGER1, RALB, RHOA, RPIA, SHISA5, SIPA1, SPHK2, SPRY3, TRAF1, TYRP1, WHSC1L1, TNFRSF6B

Negative_12689	ABO, CAT, GP9, SPN, TXK, WAS, XDH, ACOX2, ACOX3, ACSS2, ADRBK2, ALCAM, BACE2, BCL2, BMP6, BMP8B, BMPR2, CACNA1C, CACNA1F, CACNG1, CCR2, CNTN1, CREB3L4, CTBP2, DNMT3L, DUSP8, EFNB2, EGLN3, EPRS, EREG, FADD, FGFR2, FTMT, GALNTL5, GMPR2, GPX5, GSTZ1, HMBS, HNF4A, IDI2, IL10RA, IL18RAP, IL1R2, IL28A, LTC4S, MGST3, MPZL1, MTMR2, MYL7, NANP, NTF4, OR10AD1, OR11G2, OR2H1, OR3A2, OR4P4, OR4X2, OR6B3, OR8H1, OR9G1, P2RX6, PDXP, PLA2G2E, POLR2G, PPAT, PPOX, PPP3CB, PRKACG, PRKCD, PRODH2, PTEN, SEMA3B, SMAD9, SRGAP3, TRADD, YES1, ATP6V1G2, PAFAH1B2, PLA2G12B, SERPINA5, TNFRSF10B
Negative_12690	AMT, BAX, DDO, KIT, AGRP, AKR1C2, ALDH3A2, ATP13A2, ATP6AP1, B3GNT4, CBR3, CCR5, CD244, CD59, CHSY1, CXCL6, CYCS, CYP19A1, EDNRB, ENTPD4, FDPS, FGF23, FGF3, GGCX, GLDC, IGFBP3, IL18, IL23A, IL3RA, ITPA, LAMC2, MADCAM1, MAP3K14, MPZL1, NCSTN, NKD2, NME4, NR4A1, OR10A7, OR13C3, OR1K1, OR2D2, OR5AK2, OR5AN1, OR8I2, OR8K5, PARVA, PAX4, PFKP, PI4KB, PIP5K1B, PPP1CB, PRKCB, PRKCH, PTGER3, RALGDS, RPE65, RPN1, RRM1, SEMA4F, SMAD9, SSH2, ST8SIA1, SULT1E1, SV2C, THBD, TLN1, TUBA1A, UBE2L6, UGCG, ULBP1, CSGALNACT2, SERPINC1
Negative_12691	AMT, BTC, DUT, GPT, IL6, ILK, NNT, PML, STS, TPO, AADAT, ACPP, ACSL4, ADSS, ALG6, AMPD3, ARHGEF4, ASCC3, ATP5E, ATP6VOC, CACNG4, CAMK4, CCL14, CCNA2, CDC16, CDKN2A, CLDN1, CLDN7, CLOCK, COL2A1, CSF2RB, CSNK1G2, CTNNA3, CXCL2, DFFB, EFNA4, ENPP1, EPHX2, GLB1, GNAQ, GPD1L, GRIA1, HIF1A, HTRA2, ICOSLG, IL17RA, ITPA, MAP3K8, MAPK7, METTL6, MMP2, MPZL1, MS4A2, MTMR1, NCF1, NFYB, NRCAM, OR10A3, OR2G6, OR3A2, OR6X1, ORC3L, OXSM, PARD3, PFN2, PGAM4, PIGX, PIK3CA, PIK3CD, PIP5K1C, PLAT, PMAIP1, POLR2J, PPP2R1A, PRKCH, PROS1, PRSS1, RAB23, RAC2, RASGRP3, RBL1, RENBP, SDHA, SETD1A, SMAD5, SPCS3, SREBF1, SUCLG1, TAS2R9, TPM3, UGCG1, WNT7A, YOD1, CACNA2D3
Negative_12692	DHH, F2R, GHR, PRL, SCD, AADAC, ACADS, ACADSB, ADRA1A, ADSSL1, ALCAM, ALG3, ALG8, ATP6V1F, BBOX1, CACNA1I, CASP3, CCL5, CCR2, CD14, CDH5, CHIA, CHKA, CLOCK, CLTB, CSF2, CYP26B1, DHCR24, DPM2, DUSP4, G6PC, GOSR2, GRIN2A, GSTM1, HCST, HSD17B4, HTR2B, INPP5E, ITCH, LAP3, MAP3K11, MARS2, MAT1A, MDM2, NADSYN1, NOTCH1, OR13A1, OR13H1, OR2D3, OR3A3, OR51T1, OR56A3, OR5K1, OR5M9, OR7D4, PAPSS1, PDE6H, PFN3, PLA2G2E, PLXNA1, PPP2CA, PTPN7, RASA2, SQLE, SSH1, TACR2, TAS2R14, UBA7, UCKL1, UROC1, VAV1, ATP6VOE1, ATP6VIC2, PHOSPHO1, PRICKLE2
Negative_12693	C1S, HGF, RB1, ATF4, ATP13A2, BET1L, BST1, CACNB4, CCL11, COL3A1, CTNNA1, CYP2C9, CYSLTR2, DLL3, FLAD1, FTH1, GLS2, GNAI2, GNAO1, GRM5, HEK1, HSD17B2, HTR2C, IFNA2, IRAK3, ITGA11, MAN1A2, MITF, MTHFD1L, MYLK3, NME6, OR2M2, OR5AK2, PDE1B, PIK3CA, POLR2E, PPAR, PRKAR1B, PTGER1, PVRL4, RALBP1, RAP1A, SFRP2, SIPA1, SNAP23, ST3GAL2, TGFA, TSHB, WNT3A, GABARAPL2, KIR2DL5A, PNLIPRP1
Negative_12694	A2M, AGL, EZR, RB1, ACSM1, ADCY10, ADCY2, ALDH3B2, ALG5, ANGPTL4, ATP5B, ATP6AP1, BAAT, BIRC2, BIRC5, BNIP1, BTRC, CACNG4, CCL25, CDC25B, CLDN19, CLDN8, COL4A6, COQ5, CRY2, CXCL1, CXCL12, CYP26C1, CYP2E1, DX50, DKK4, DRD1, DUSP4, EIF4E, FARSA, FGF2, FSHR, FUT1, HSD11B1, IDH3G, IDUA, IL18R1, IRS4, KCNJ11, KIR3DL3, LAMA4, MAGI3, MAPK8, NAMPT, NCK2, NEU4, NFKBIA, OR10G2, OR10K1, OR13C4, OR13D1, OR1J4, OR1S2, OR4K5, OR4S2, OR51F1, OR52A1, OR6C75, OR6K3, OR7D4, P4HA3, PDGFRB, PIAS3, POLE, POLE4, PPARA, PPM1D, PRIM2, RAB23, RAD51, RALA, RAP1A, RFXANK, RPIA, RPS6KA3, SETD2, SETDB1, SLC2A2, SMAD6, SNAP25, SOCS4, SREBF1, TAS2R5, TBL1X, TBL1XR1, VDAC1, WASF3, YES1, ZFYVE16, ATP6V1B1

Negative_12695	AGK, F12, GAA, GPI, TK1, TKT, TXK, AASDH, ACP1, ACSS2, AGRN, APBB1, ARH GEF4, ARRB1, ATP5H, BNIP1, C3orf10, C4BPA, CANT1, CLDN4, COL4A2, COL 4A4, COL5A2, CYP4A22, EDAR, FGF4, FRAP1, FUT7, GALK2, GCNT4, GNPAT, G YS1, HIBCH, HRH1, IDI2, IL24, IRS1, ITGA8, ITGAV, ITGB5, ITGB6, LTB4R 2, MCM3, METTL6, MS4A2, NCOA4, NME4, NRG3, OR10V1, OR13C4, OR2AG1, OR 51M1, OR51T1, OR52B4, OR56A3, OR5K1, PAK4, PARVB, PDE11A, PDX1, PIGM , PLXNA2, POLR3G, PPP2R5A, PRKCD, RELB, RUNX1, SMARCA2, SPAM1, SPTLC 1, TAS2R13, TAS2R42, TKTL2, TNFRSF4, UNC5B, WARS2, TNFRSF14
Negative_12696	AUH, F9, FES, AACS, ADAM17, ADRA1A, ATF2, AVPR1B, BCL2, CARS2, CBR3, C DS1, CNTN1, CX3CR1, CYP1B1, DPAGT1, DPM3, ENPP1, ENPP3, ENTPD8, EPHA 4, FUT7, GALNT10, GDF7, GLI2, HIF1A, MAPK7, OR10Q1, OR2F1, OR2L8, OR4 C13, OR5D13, PER1, PI4KA, PIGF, PLA2G5, PSEN1, PTK2, RAB23, RUNX1, SN AI1, SRD5A1, TBL1X, TLR9, TNFSF9, TYMP, UCK1, UMPS, YES1, ATP6V1B2, T NFRSF1B
Negative_12697	BCR, ID4, NNT, AHCYL1, ALDOC, ALG3, ATP5C1, ATP5F1, ATP5H, BCMO1, C5A R1, CACNA1I, CD244, CHEK1, CYP2F1, DAXX, DVL3, EDNRA, EGFR, ELK1, ERE G, HAAO, JAG1, LAMB3, LIPF, MAP2K3, MASP1, MGST1, MYH7B, NAGA, NARS, N LGN2, NRAS, NUMBL, OR10C1, OR2AG2, OR4D6, OR56A1, OR5M8, OR5R1, PANK 1, PDGFC, PLA2G4A, PLCB2, PORCN, RDH8, SEMA4C, SESN3, SETMAR, TACR2, TUBB, VDAC3, WARS2, WNT1, GABARAPL1
Negative_12698	EZR, FAH, SYK, AKT2, ALG6, ATP50, B4GALT1, BDKRB2, BLVRA, BMP6, CAMK2 D, CAMK4, CCL16, CCL22, CCL25, CD226, CD82, CDC27, CDC45L, CPT1A, CPT 1B, CSF2, CYP3A4, DDX23, DNMT3A, DPYD, EARS2, EPHX2, FCGR3A, FGF12, F UT1, GLI3, GNA13, GNRH1, HSD17B3, IL22RA2, ITGA2B, LLGL1, LRP5, LTA4 H, MAP3K5, MAP4K3, MDM2, NCKAP1, OR10A2, OR1S1, OR2M2, OR2T6, OR3A2, OR52L1, OR5D16, OR5H6, OR5R1, OR6Y1, OR7G1, OR8B4, PARVG, PCYT1A, PD K1, PFKP, PITX2, PTGES2, PYGL, RALBP1, SMURF2, SRD5A1, ST3GAL3, STX1 A, UROC1, YWHAE
Negative_12699	C9, DCK, DCT, GP5, SDS, TPO, ACAT1, ALDH3B1, ANGPTL4, APH1A, B3GNT5, B CAT2, CADM1, CASK, CCND3, CEBPA, CHRNA7, COL6A2, CSF2RB, CTNND1, CYC S, DDX52, DHDDS, DKK2, DPYSL2, EXTL2, FRAP1, FZD6, GLUD1, GMPR2, GTSE 1, GUCY2D, IBSP, IQGAP2, ITGB4, JAG1, L1CAM, LRRC4C, MEF2C, MICA, MPP 5, OR4K2, OR51M1, OR51Q1, OR52N5, PAK2, PAPSS1, PI4KB, PIGP, PIK3CD, PPP1R3D, THBS1, TXNDC12, VANGL2, HLA-DPA1
Negative_12700	GPT, HGD, ID4, ACADL, AC02, ACPP, ACSM1, ACSM4, ACTN4, ADRA1D, ALDH7A 1, AVPR1A, B3GNT4, BBC3, CARS2, CCL11, CCL19, CCL26, CCR9, CD40, CD44 , CD55, CLDN7, CLTCL1, CYP27A1, DOLPP1, DRD5, DTYMK, FGF20, GAB1, GAL NT8, GCNT1, GLUL, GMPR, GTSE1, HDAC2, HSD17B3, HYAL1, IFNGR1, IL20, I L24, IRS1, LDHA, LRP5, NAGLU, NEFH, NLGN3, NRG3, OR51M1, OR8H3, OR9A4 , OR9I1, ORC2L, PAICS, PDE5A, PIP4K2A, PKLR, PLAU, PON2, PPP1R3D, PRO S1, PTGER3, PVRL4, PYCR1, RAP1B, RASGRF1, RASGRF2, RPS6KA1, RPSA, RX RG, SELE, SLC25A5, SMARCA2, SMPD4, SOCS4, ST3GAL1, SYNJ2, TAS2R41, T BL1Y, TLN1, TP73, TSNARE1, TUBA4A, UNC5B, VANGL1, WNT9A, XYLB, ATP6V 1E1, PLA2G12B, PPP1R12A, SERPINA1
Negative_12701	ADK, CFD, DCC, IL8, PTS, ACHE, ACPP, ACSM4, ADH1A, ADH7, ALDH1A2, ALDH 2, ALDOB, APOA5, BDKRB2, BIRC3, CAMK2G, CARD11, CCND3, CD40, CD70, CD 80, CDH4, CES7, CNGA3, COL5A3, CYP11B2, DGKQ, DHCR24, DHDDS, DTX3, FA SLG, FBP2, GALT, GALM, GARS, GCH1, GJD2, GPAM, HEMK1, ICAM2, IFIH1, IF NA21, IFNAR1, MAD2L1, MAP2K6, MAP3K8, MLLT4, MMP14, MMP7, NANS, NCK1 , NGEF, NT5C2, NT5M, NTN1, OR1B1, OR2A14, OR2A42, OR4X2, OR51A7, OR51 B6, OR5A2, OR5B12, OR5D14, OR9A4, PDX1, PER1, PFN2, PHKG2, PIGT, PIGX , PKM2, POLE4, POLR2K, PPID, PPP1R3C, PRKY, PTPN1, RAP1A, RBPJL, SMAD 6, SMPD4, SPHK1, ST3GAL1, STX18, TKTL1, TLN1, TM7SF2, TRDMT1, TUBA8, UGT2B11, UGT8, UPB1, SLC25A31

Negative_12702	AMH, C8B, FYN, GHR, JUP, LHB, VTN, ADRB1, ARRB2, ATP12A, CD48, CDC7, CH EK1, CNTFR, CPT1A, CSNK1D, CYP17A1, DNMT3A, EDNRA, EIF4E2, EXT2, FGF R2, FRAT2, GADD45B, GALNTL1, IL15, IL1A, IL23R, ITGB3, MAD2L2, MAPK3 , MMP9, OGDH, OR10C1, OR1B1, OR1F1, OR1M1, OR2G3, OR2H2, OR51B2, OR51 I1, OR52B4, OR52N4, OR6Q1, OR8B12, PFKFB2, PLAU, PLCZ1, PMVK, PRKAR1 A, PTK2B, SORBS1, TUBB4Q, UBE2L6, USE1, VCAM1, WNT5B, PAFAH1B3, TNFR SF1A
Negative_12703	F2R, GNE, PLG, SFN, TAT, ACACA, ACO1, ADCY4, AGRP, B4GALT6, C1QA, CACN A1B, CCL11, CCNH, CD59, CNGB1, CNTF, CSF2, CSH1, CYP11A1, CYP26B1, CY P2D6, DAAM1, DAD1, DDHD1, DFFA, EIF4B, FLT4, FZD10, FZD9, GLUD2, GNAI 2, GSTA5, HSD17B3, IL5RA, ITGA8, MAPK12, MAPK3, MDM2, NAT1, OR2A4, OR 6C4, OR9K2, PAPSS1, PFKFB2, PLIN, POLR3H, PRIM1, PRKACG, RALA, RASGR P4, RRM2B, SELL, SEMA3A, STAM, STX12, SV2A, UGT1A10, VTI1A, YWHAZ, AT P6VOA4, C1GALT1C1, SERPINE1
Negative_12704	AMT, GLA, HK3, MTR, MVK, PML, ADORA2B, ALCAM, BMP6, C7orf16, CCNG1, CD 44, CD8B, CHR1, CSNK2A2, CTNNA1, DUSP6, ENO3, EPB41L3, FGF13, FUT9, F ZD1, GLG1, GNAL, GNRHR, GP1BB, GUK1, HA02, HSD17B4, HSPA2, IAPP, IBSP , IL12RB2, IL20RA, INPP4B, LCAT, MAN1A1, MAN1C1, MAP3K4, METTL2B, MM P1, MTAP, MYH11, NCF1, NEFL, NGEF, OR10C1, OR11A1, OR2B6, OR7G1, PERP , PIAS2, PIGX, PLA2G1B, PLA2G2A, PPP1R3D, PRKCE, PROS1, PRSS2, PSME2 , PTGDS, RFNG, SELP, SLIT2, SMAD6, SSH2, SSH3, SUCLA2, TAS2R14, TAS2R 38, TAS2R41, TXNDC12, WNT6
Negative_12705	FER, FES, FUK, IL6, MPI, ADRB3, ADSL, APPL1, ATP6V1F, ATP6V1H, CAMK2G , CCNA1, CCR1, CD55, CDH4, CHRNA7, CLDN10, CTPS, CYP26C1, DGAT2, DTX4 , FADD, FGF6, FOXA3, FOXO1, GAL3ST1, GIT1, GNA11, GPLD1, GSTO1, HCST, HNF4G, HTRA2, IL23A, IL29, LEPR, MAP3K4, MGAM, NADK, NOX3, NUDT5, NUD T8, OR1G1, OR2T10, OR4C15, OR4K5, OR5AC2, OR6B3, OR7C2, PFN1, PIP4K2 A, PPP2R5C, PRKAG1, PTPN5, PTPRJ, ROCK1, SELP, SHC4, SLC25A4, SMAD4, SORD, SSH2, TAS2R16, TBL1XR1, THBS3, TLN2, TPH2, TUBA3E, UAP1, ULK2, VCAM1, YKT6
Negative_12706	ABO, C2, C8A, FGB, HPD, LCK, LSS, TPO, A4GALT, AASS, ACSL4, ACY1, ALCAM , ALDH1A2, AMD1, AMDHD1, ARPC3, ATP5I, B3GALT5, CCDC6, CD274, CD70, C DC26, CHKA, CREB3L3, CREB3L4, DAD1, DHRS4, ETNK2, F2RL1, FABP1, FRAT 2, GALNT3, GANC, GDF7, GNG13, GPLD1, GRM5, GUCA1B, GUK1, HSD17B3, IFN AR2, IL1A, ITGA11, KARS, LAMB2, MAFA, MAGI3, MAN1A1, MAP3K2, MCM5, MD M4, MYL2, NADSYN1, NCKAP1L, NFKB2, NOX3, NTNG1, OR10R2, OR1F1, OR4C1 1, OR4D5, OR4F17, OR51V1, OR52E8, OR5D13, OR8B4, OR8B8, OR8J3, PDE10 A, PDHB, PDK1, PNLIP, PPAP2B, PRKCA, PTTG1, RAPGEF2, RDH16, RPIA, RPS 6KA5, SGMS1, SMARCA2, STX10, TAS2R4, THBD, UCP1, WARS2, XCL2, XIAP, Y ARS, YWHAH, CSGALNACT1, HLA-DQA2, HLA- DRB4, MAPK8IP1, ST6GALNAC1, ST6GALNAC4
Negative_12707	C8A, GK2, LIF, NPY, ACVR2A, ACVRL1, AHCY, ALDH2, AMDHD1, ANAPC5, ARG1 , ASNS, BACE2, BNIP1, C1QA, CASP10, CCND1, CLOCK, CTPS, CYP26B1, DDX1 8, DFFB, DOCK1, EGLN1, ENO2, EPHA7, FRAT1, GALNT10, GALNT14, GJA1, GN B1, GNRH2, GRIN2B, GRM5, GSTO1, HCCS, IFNA17, IL15, IL17RB, IL3RA, KD SR, LGMN, LTBR, MAN1A2, METTL6, MFNG, NFKB2, NRAS, NTSR1, OR10A4, OR1 OT2, OR1S2, OR2A5, OR2W1, OR5AR1, OR5K1, OR7C1, OR8B12, OR8S1, PDE6D , PHKG2, PIK3CG, PMM2, PPCDC, PPM1D, PYGL, RUVBL1, SEPHS1, SETD2, SH2 D1B, SHISA5, SIAH1, SORBS1, SPP1, SSH3, SSX2IP, TICAM1, TLN2, TUBB2B , ULBP1, UROD, WNT16, WWP2, XYLB, ATP6V1C1, HSP90AA1, SERPINF2, ST6G ALNAC5

Negative_12708	CR2, HGF, OAT, SHH, ACADL, ACTN2, ALDH5A1, APH1A, ARSE, B3GNT5, BACE2, BDKRB2, BIRC2, C4BPA, CCR5, CDC27, CRB3, CXCR3, DHDH, DPM1, DTX1, DU SP14, FGFR3, GAB1, GNG12, GPAM, GSTO2, INPP1, IRAK2, LIAS, LILRB3, LR P5, LTB4R2, MAP2K3, OR13C8, OR13F1, OR4C13, OR51D1, OR51E2, OR5L2, P AX4, PGK2, PHKB, POLR1B, PPP1CA, PTPN6, RARS2, RBPJL, RFNG, SC4MOL, S DHA, SETDB2, STAT6, THBD, TLR5, UGT2B11, VEGFB, YWHAH, TNFRSF10D
Negative_12709	DCC, NLK, PML, SP1, ACTG2, ACY1, ADH1B, ADORA2A, ALDH1L1, ASNS, ATG7, ATP5J, BTRC, CD8B, COASY, COMP, CPT2, CYP2A7, CYSLTR1, DGKH, EGLN1, F ABP3, FGF22, GNRHR, GSTZ1, HSD3B1, JAK1, LARS, LDHAL6B, MAML2, MYL9, MYLK2, NOTCH2, OCLN, OR10H1, OR13F1, OR1F1, OR51B4, OR5K1, OR7A17, O SMR, PIGU, PIGV, PLA2G1B, PLA2G5, PLCZ1, PNLIP, RAPGEF2, RARS2, RPE6 5, RPSA, SSH1, ULBP3, UXS1, VKORC1, WBCSCR22, WNT9B
Negative_12710	AK7, CGN, DCN, DUT, GH2, MPI, SI, ADCY10, ALDH1A2, ALG13, ALPI, ASCC3, ATG3, ATP6VOB, BAIAP2, BMPR2, CCL23, CDKN1B, CKMT2, CXXC4, CYP26B1, DHCR7, EFNA2, EFNA3, ENTPD6, FGF8, FRAT2, GAD2, HAGH, HLA- DOB, HSPB1, IAPP, IDH3B, IDI2, IFNA17, ITGA11, ITGAX, KYNU, MAN1A1, M APK10, MDM2, MYL9, OGDH, OR10J3, OR13C8, OR2Z1, OR5D18, OR6C2, PIK3R 1, PLOD2, PPP2R5B, ROCK1, SAT1, SEMA4G, ST3GAL1, TACR2, TCF7L2, TIAM 2, TLR9, TP53, TRMT11, TUBA3E, WARS2, B3GALNT1, GABARAPL1, HLA-DRB5
Negative_12711	AR, IDS, LPL, PRL, PVR, ACTB, ALDH5A1, ALG13, ALPI, ARHGAP5, B3GNT2, C 1QA, CASK, CBLC, CCND1, CD22, CD40LG, CES2, CLDN16, CSH1, CSNK1E, CTS S, CXCL1, CYP2C8, CYP3A43, DFFA, DGKI, EI24, FZD9, GAD2, GALNT14, GAL NTL5, GCNT4, GOT1, HMOX2, IFNGR2, IQGAP1, ITGB5, MAOB, NAE1, NCOA4, N EU2, NPR2, OR13C9, OR1L1, OR2A25, OR2AG1, OR51I2, OR52E6, OR56A4, OR 5T1, PFN2, PI4KA, PLA2G10, PLA2G2D, RAB23, SELP, SMAD6, SOCS2, TGDS, TXNDC12, WASL, PRICKLE2
Negative_12712	DBH, ME2, MVK, AARS2, ADH5, ADIPOQ, AGRP, AKR1C3, ATP4B, BLVRA, BMPR1 B, CADM3, CASK, CD47, CDH5, CHPT1, CSH1, CSNK2A1, CTSG, DDX18, DHRS4L 2, DIAPH2, DPM1, E2F4, EPAS1, EPRS, FABP3, FGF17, FUT2, FUT9, GALNT3, GALT, HLA-DOB, HLA- F, HPSE, HTR5A, IFNGR2, IL9R, INHBE, ISYNA1, ITGA2, KIR2DL2, KLRD1, K YNU, LAMB4, LIFR, MDH1, MYH14, NANS, NLGN2, NRAS, NUDT12, OCLN, OGDH, OR14A16, OR1L1, OR2AG1, OR52L1, OR5R1, OR6C6, OR6C75, PAK7, PDE6D, P I4KA, PIP5K1B, PLCD1, PLXNB3, PNPLA4, POLD2, POLR2K, PPA2, PPP2R2C, PRKACG, PTCH1, PTGER3, RASGRF1, SEMA3E, SEMA4C, SEMA4G, SETD1B, SMP D1, SOCS3, ST3GAL4, ST8SIA1, TAS2R49, TPM3, TUBA3E, TUBB2B, UPB1, WN T3A, YWHAH, TNFRSF10D
Negative_12713	INS, MSN, MVK, RET, ACO1, ALPP, ARD1A, BACE2, BNIP1, CACNB4, CARS, CD1 4, CDKN1B, CDS2, CLDN10, COL11A1, COQ5, CRLS1, CRY2, CSH1, CSNK1G1, C XCR6, DDB2, DGKB, DNMT3L, DUSP5, EFNA4, FASN, FDPS, FECH, FGF12, FRAT 1, FUT6, FZD6, GANAB, GGT1, GLI2, GUCY1A2, HEXA, HNF4G, IFNGR1, KIR3D L2, KLRD1, MASP2, MCM6, NEU4, NSDHL, OR10C1, OR2C3, OR2Z1, OR52E8, OR 7A17, P2RX6, PAICS, PDE10A, PDE8B, PIGK, PIGS, PIGW, PIK3R1, POLR1E, RAPGEF2, RBL2, RETSAT, RPS6, SC5DL, SEMA4C, SETMAR, SH2D1A, SMC1A, S ORD, TBXAS1, THTPA, UBE2K, UGT2A1, UGT8, VANGL1, WNT2B, ATP6V1C1, AT P6V1G3, SERPINA1, SERPINE1, SERPINF2
Negative_12714	ADC, SDS, ACTA1, ACTC1, ALDH1A1, ALDH1L1, ASIP, CD247, CDH5, CHIA, CH RM1, CHSY1, COL5A1, CX3CL1, DPM1, EREG, FGF14, FZD4, GBE1, GLS2, HARS 2, IRF3, ITGAM, LPAR1, MMP7, NCKAP1, NFATC3, OR10AG1, OR2T11, OR4C16 , OR52B6, OR56B4, OR6C70, OR7A10, OR8H2, PDE7B, PGAM1, POLD4, PRKAR2 A, PTCH2, RASSF5, RPE65, RPS6KA6, SMAD2, STX12, STX3, SV2C, TAS2R7, T NFRSF4, CACNA2D1, CACNA2D2, SERPINC1



Negative_12715	AK1, GP6, SI, STS, TNN, VTN, A4GALT, ACSM4, ADH5, ADIPOR2, AHCYL1, AKR1B10, ATG12, ATP4A, B3GALT6, BCL2L1, BHMT, BMPR1A, C1QC, CCL5, CD70, CFLAR, CHSY3, COL2A1, CRB3, CSNK1G3, CSNK2A1, CTNNA1, DHCR24, DHX58, DTX3, EXTL3, FECH, G6PD, GADD45A, GALNT7, GALT, GLS2, GMPS, GOT1, GR1A3, HSPA2, HTR2B, IL13, IL22, IL2RG, INPP1, KIR3DL3, LAMA4, LIMK2, LRDD, LTC4S, LYPLA1, MAGI1, MYH15, NEUROG3, NFATC1, NFX1, OR10A6, OR10H3, OR2A4, OR2K2, OR52A5, OR52D1, OR8H1, OXTR, P2RX7, POLR3D, PPBP, PPP2R5C, PRKCQ, RENBP, RERE, RETSAT, RFXANK, SLC27A1, TYMS, UCKL1, UGT2B4, WIF1, WNT8B, WNT9A, YWHAH, ATP6V1B2
Negative_12716	BAD, F10, IVD, PGD, PGF, SFN, ACPP, ACSM1, ADRB3, ARRB2, ASMT, ATP5L, ATP6V1H, AVPR1A, CBR1, CD44, CDH5, CLOCK, CPS1, CXXC4, DAG1, EARS2, ENO3, ESAM, FMO1, FUT9, GNAT3, GPT2, GSTA1, GZMA, HADH, IDUA, ITGB7, ITPKA, KARS, KAT2A, LAMA4, LYPLA1, MADCAM1, MAP2K5, MAPK10, MECR, NCR2, OR10C1, OR10G4, OR1D2, OR1I1, OR2F2, OR2M5, PAK1, PANK1, PDX1, PFAS, PIK3C2A, PLAT, POLR3A, PRKG2, PSME1, RAPGEF2, RPS6KA3, SNAI2, SORD, SPRY4, ST3GAL5, STAT6, STK36, TAS2R16, TAS2R8, TLR5, WBSCR17, WHSC1, WNT1, PPARGC1A
Negative_12717	CFH, GH2, OSM, UBC, AASDH, ACTN1, ACYP2, ADCY2, AHCYL1, ALDOA, APOA2, AREG, BCAT2, BPGM, C4BPA, CASP9, CCR5, CHRNA7, CLDN17, CLTC, CMPK1, CXXC4, DNMT3A, ENO1, FGF13, FGFR4, FLT4, GALNT12, IKBKE, IKBKG, IL12A, IL23A, IL28RA, IL4R, LIPA, MAP3K4, OCLN, OR10A2, OR11L1, OR13C9, OR2D2, OR4C15, OR4S2, OR52W1, OR7A17, PAK7, PAPSS2, PARVB, POLA2, POLR2A, PPAP2A, PROS1, PVRL3, SEMA3E, TOLLIP, UROD
Negative_12718	AK3, SFN, SPN, AANAT, ACMSD, ALDH1L1, ARHGEF6, ATG3, ATP5H, B4GALT6, BPNT1, CACNG4, CCL16, CDH15, CDS2, CHST11, CLDN6, CLTCL1, COL2A1, CYFIP2, CYP1B1, DHFR, EFNA3, ENPP7, FGF5, FGF9, FZD10, GALM, HYAL1, IL15, MAP2K2, OR13D1, OR1A1, OR7A5, OXCT2, PDE2A, PDE5A, PDHA1, POLR2K, PTDSS1, RETSAT, RND1, RPN1, SH2D2A, ST8SIA5, STAT1, TACR3, TBXAS1, TLR3, TPM3, TRAF3, TSNARE1, TSTA3
Negative_12719	CAT, FES, NF1, PML, ACOX1, ADCY1, AHCYL2, APH1A, ASNS, CBLC, CHAD, CHPF, COMP, CSH1, CYP7A1, DAD1, DDX23, DFFA, DFFB, ENTPD1, F13A1, FGF21, GAPDH, GSTA1, HPSE2, KCNB1, LIPG, LYZL1, METTL6, MLYCD, NFKBIA, NKD2, NLGN2, NTRK2, OR1L1, OR2T4, OR5H6, OR7A17, P2RX6, PER2, PGK2, PIP4K2B, PIP5K1B, PLCG1, PLOD3, PPP2CB, PSENEN, RAC3, STX6, VEGFC, WASF2, HSP90AB1, MAP3K7IP1, SERPINF2
Negative_12720	SHH, SMS, TKT, ACO2, ADCY2, AHCY, ALOX15, ALPP, ATP13A2, B4GALT1, BLVRB, BUB1, CACNA1B, CCKAR, CCL4, CDC6, CHSY3, CTTN, CYFIP2, DUSP4, EPHB2, ETNK1, FMO2, GALM, GDF5, GLDC, GNA13, HRH1, HSD17B3, IFIH1, ITGA4, L1CAM, LTBR, MCCC1, NT5C, OR1A2, OR2AE1, OR51I2, OR5B3, OR7D2, OR9A4, PANK1, PCK1, PGAP1, PIAS1, PRODH, RASGRP2, RPN2, RPS6KA6, SETD1A, SOS2, SPTAN1, STX18, TAS2R5, TBL1XR1, TUBA3E, UCK2, WWP2, ATP6VOA2
Negative_12721	AK3, CBL, FER, GPI, HK2, MOS, MSN, ABLIM3, ACVR2B, ARHGEF7, B4GALT3, B4GALT7, BET1L, BRAF, CCNE1, CDC14A, CDK2, CDKN2A, CER1, CHEK2, CHKA, CHRM5, CLTA, CLTC, CNTNAP2, DAPK1, DDX41, DHRS9, DUSP4, EFNB1, ERBB4, FGF5, GABARAP, GALK2, HBEGF, HRH2, HSD11B2, HTR2B, IAPP, IL12B, IL1B, IL20, IL25, IMPDH1, IRS4, ITGA1, LDHAL6B, MAN2A1, MAP2K1, MCM7, NLGN2, NT5C1B, NTF4, OR10A5, OR10J5, OR11H1, OR2G2, OR2L8, OR2T3, OR2Z1, OR51E2, OR56A3, OR6K6, OR7A10, P2RX2, PARD6G, PARVG, PCNA, PCYT1A, PDE11A, PDGFC, PFN1, PFN4, PIK3C2B, PIPOX, PKM2, PLXNB2, PON2, PPP2R1B, PRKAA1, PRKCD, RBL1, RRM2, SEMA4D, SIAH1, SMAD4, SMURF2, STAT1, STEAP3, STK4, TAS2R50, TRPC1, TSLP, ULK2, VTI1B, WNT7A, AASDHPPT, B4GALT1, C1GALT1C1

Negative_12722	CP, DUT, GLA, MTR, RDX, SPN, ACACB, ADIPOR2, ADSS, AHCYL2, ALDOB, B3GAT1, BMP5, CDIPT, CHST11, DAPK1, DHFR, EPHB4, ETNK1, FADS2, FZD8, GALNT5, GAMT, GPAA1, IFIH1, IRAK4, JAK1, LIMK2, LRP5, MAD2L1, MAN1B1, MAP3K11, MAPK3, MMP2, NANP, NUDT5, OR10H3, OR1L3, OR2L2, OR2L3, OR2M5, OR4A5, OR56B4, OR6C74, PIK3C2G, PIM1, PLXNB3, POLA1, PRDX6, PRPS1, RPS6KA2, SNW1, SPHK2, TAS2R49, TDO2, TNFSF12, TPH1, TYMS, YWHAZ, ATP6V1G3, CACNA2D3, HLA-DQA2, HSD17B10, SUV420H1
Negative_12723	AK5, C4B, CP, F9, FGB, GSR, TK1, ABCC8, ABP1, ALDH1B1, ASCC3, ATP2A2, BMP7, BUB1B, CASP7, CD46, CD59, CDK7, COL1A2, CSNK1E, CXCL5, CXCR3, DMGDH, DTX3L, EGLN1, ETNK2, GNAI1, HPRT1, IDI1, IKKBK, IL10, ITGA1, ITGA2B, ITGA9, LDHB, MIOX, MPP5, NANS, NUDT5, OR13C5, OR13H1, OR2T3, OR5B3, OR6C74, OR6F1, OR6K3, OR6N1, OR6Q1, PDGFRB, PEMT, PIP5K3, PPCDC, PTCH1, PTPRJ, RAP1B, RAPGEF4, RASGRF1, RCHY1, RND1, RXRG, SOCS3, STX16, TAS2R41, UBA1, UBE2L6, UPB1, UPRT, MAPK8IP2
Negative_12724	BAD, CBS, HDC, NOG, ACSM3, AKT3, ALG13, ALG8, ASAH1, ATF4, CACNB3, CAR5, CDK7, CHEK2, CRY1, CSNK1G3, CXCR6, DUSP6, EDNRB, GALNT5, GALNTL5, GLS2, GNA13, HPSE, HTRA2, INPP4A, INSR, MAP3K2, MAPK1, MAPK3, MYH4, MYL5, NAGLU, NCSTN, OR10H1, OR11G2, OR2AG1, OR51V1, OR6X1, OR9Q2, PGAM4, PMAIP1, POLR3A, PPCDC, PTEN, SNAP23, TGFB2, TUBA1C, VANG1, VEGFA, ST6GALNAC4
Negative_12725	GLA, GP5, HDC, TH, ABP1, ACAA2, ACADM, ADIPOQ, ADSL, AKR1C3, ALDH1B1, APOA2, ARHGAP5, B3GALT4, BACE2, CCNA2, CD70, CHDH, CTNBN1, CYP2A6, DHCR24, DHRS3, DTX3L, ECHS1, FRAT1, FTCD, G6PC2, HDAC1, IRF7, LAMB1, MGST3, MPZL1, MTHFS, MYH15, NCAM2, NEU2, NFATC2, NODAL, NOTCH2, OCLN, OR10A3, OR10G7, OR4F17, OR5AU1, OR7G2, OR8H2, PCYT1A, PDCD1, PIK3R1, PRIM1, PROC, RAB5A, RUNX1, SETD7, SLC33A1, SMARCA2, SNW1, SPHK2, SSX2IP, STK3, TALDO1, TIAM2, TOLLIP, UGDH, UPB1, VAMP4, XCL1, ZAP70
Negative_12726	BTD, C3, CBS, ADCY2, ASIP, ATP6V1D, B3GAT3, BDKRB1, BMPR1A, CASK, CCL24, CDC42, CHEK1, CSNK2B, CYP4A11, DDX52, DLL1, FOXO1, GALK1, GALNS, GGPS1, GLUL, GNAQ, GRIN2D, HDAC1, HMGCS2, HTR5A, IDH3B, IFNB1, ITGAD, ITGAX, LDHC, MAP4K2, MGAM, MYH1, NCSTN, NFKBIB, NOS3, NT5C2, NTN1, OR10J1, OR1E1, OR6C2, OR6S1, OR7A17, OR8B4, ORC5L, PER1, PIGC, PIK3CG, PPP1R3A, PYCRL, RELA, SCD5, SEMA3A, SHC1, SNAP23, SUCLG1, TAP2, TAS2R13, TGFB2, TLR2, TRIP10, VAMP2, WHSC1, WNT9A, XIAP, EIF4EBP1, PAFAH1B2
Negative_12727	CR2, FES, GK, ADAM10, ADCY7, ADRA1B, APOA2, ATP5B, AVPR1A, BCL2, BMP8B, CACNA1H, CAMK2G, CCL14, CD59, CHRNA7, CLCA2, CLDN10, CLTB, CLTCL1, COL4A4, CRB3, CTSG, DCTD, DHRS3, DIAPH1, EGLN3, EPB41L2, EXTL1, GABARAP, GBE1, GSTA1, INPP4A, IRF9, ITGA11, MAD1L1, MCEE, MYH7B, MYL5, NEFL, NKD2, OR10A6, OR1B1, OR2D2, OR2T1, OR51T1, OR56A1, OR5AS1, OR5D18, OR6F1, OR9Q2, PERP, PIK3R2, PIP5K3, PLXNB2, POLA1, PPID, PRKAR1B, PTK2B, RBL2, RFNG, RXRB, SRGAP2, TDO2, TOLLIP, TPI1, TSNARE1, TUBA4A, USE1, WARS, WNT3A, PAFAH1B1
Negative_12728	CP, GK, ID3, IL3, TNF, TXK, ADCY2, AGPAT3, CDKN2B, CHKA, CLDN16, COL4A2, CYP26C1, DDX4, EXT2, FRAP1, FSHR, FUT2, GLG1, GLI2, GNRHR, GRIN2C, GUCY1B3, HNF4G, HPSE2, IL1R2, INHBC, ITGA10, LFNG, LIPE, MADCAM1, MCC1, MMP9, MYH15, NSD1, OR10K1, OR11H6, PDE4A, PIP4K2B, PPP2R5A, PTPRZ1, PVRL3, RPS6KB2, RRM2, SAT1, SEMA3A, SETDB1, SH2D1B, SSH2, TGDS, TNFSF8, TRHR, TSC1, VEGFB, WNT2, PNLIPRP2

Negative_12729	AK1, FAH, OSM, TNF, ACTC1, ADRB2, AHCYL2, CACNG1, CCND3, CCNE1, CERK, CLDN10, CLDN6, CRHR1, CRY1, CYBA, DAPK1, DGAT2L4, ETNK1, FASN, FLOT2, GAS1, GGT5, GNA14, GNRH1, GPX7, GRIA3, HTR7, ICOSLG, IGF1R, IL23R, IL7R, KIR2DS4, LAMA3, MDM4, NFYA, NR5A2, NUDT12, OGDHL, OR10J5, OR1A2, OR1J2, OR2T11, OR52K2, OR6C6, PAPSS1, PLA1A, PLCB3, PTDSS1, PTPN6, ROBO1, RUNX1, SHC1, SLC25A4, STAT6, TGFB1, THBS3, TSHB, UGT1A10, UNC5A, VTI1A, YARS, AASDHPPT, ATP6VOA2, ATP6V1E2, HSP90AB1, KIR2DL5A, MAP3K7IP1
Negative_12730	CBL, F5, FGA, IL5, PC, ADCY10, ALDOA, ALG11, ALPP, APOA2, ATP5A1, AXIN1, BDNF, BMP8B, CACNA1H, CCL23, CCR6, CD247, CD40LG, CD70, CDK2, CHRN A7, CLDN22, CSDA, CYP2C19, DHDH, DIAPH3, EFNA3, EPHA5, FABP1, FARSA, FCGR2B, FGD3, FGF4, FLOT2, FZD8, GDF7, GFPT1, GMPPA, GNAI2, GSTO2, GUCY2F, HCCS, HEMK1, HEXA, IL12B, ITGB2, MAP4K2, MTHFD2, MYH15, MYH2, NCKAP1L, NFYA, NRP1, OR14C36, OR1A1, OR1F1, OR1J4, OR2A12, OR51E1, OR5B21, OR5R1, OR6K3, OR6N2, OR8D1, OR8S1, PAK4, PAK7, PARD3, PAX6, PFKP, PIGL, PIK3C3, PKMYT1, PPP2R5A, PRKCA, PTGES, PTPMT1, PYCRL, SC4MO L, SDC1, SETDB2, SHC1, SHC4, UBE2L3, ULBP3, WNT10A
Negative_12731	DCC, GP9, NPL, PAH, STS, ACSL1, ACSM2A, ADRB2, AKR1B1, ALCAM, ALOX15, ANAPC4, APOE, BET1, C4BPA, CACNB3, CCL20, CCL21, CCL28, CCR8, CERK, CES7, CRY2, CXCL1, CYBA, DARS, DFFB, EHMT2, EPHA5, EPHA8, EPHB3, FBP1, FZR1, GALK1, GNAL, GRIN1, GSTM1, GSTO2, HMOX2, HTR2A, IL28RA, ITGA10, ITGA2, ITGB2, KARS, KCNB1, LCMT2, MAN1A2, MAP3K5, MGAM, MYH14, NAGA, NEU1, NUDT12, OR4C15, OR5A1, OR6Y1, PDE6D, PER3, PLIN, PPARG, PTPRZ1, SEMA3A, SHMT2, SOCS5, SPRY4, ST3GAL6, STK3, SYNJ2, TAS2R7, TICAM2, TNFSF10, TP53I3, TSHB, TYMS, UNC5D, VAMP3, B4GALNT1, MAPKAPK5
Negative_12732	AK1, F7, IHH, PAH, RDX, ACSL5, ACSM4, AGPAT2, AOX1, ARHGEF7, ATP5G1, B3GNT3, C5AR1, CACNA1E, CAMK2B, CCNE1, CD38, CDK4, CER1, CLDN18, CSH1, CTNNA1, CTSS, CXCL11, CYP26B1, CYP2J2, CYSLTR1, DHDDS, DRD2, ENTPD5, FLOT2, FUT1, GNB1, GNG12, GNRHR, GRIN2A, HLA-C, HSD17B1, HSPA8, HTR4, IDI2, ITGB4, ITGB6, KIR2DS5, KYNU, NAGS, NEG R1, NRCAM, OR51A7, OR52A5, OR52E4, OR56A3, PARD6A, PGM1, PHKA2, PIK3C2B, PIP5K1C, POLD3, PRKAB1, PRKCG, PTPRF, RAP1A, RBPJ, SNAP23, SORBS1, STEAP3, TAP2, TAS1R2, TAS2R60, TLR5, TRPM5, UGCGL2, UNC5B, UPP1, MAPKAPK5, SERPINA5, SUV420H1
Negative_12733	F9, HDC, ACAD9, ADCY3, ADH6, ALG8, ANAPC4, APH1A, ATP6VOB, CAMK2D, CCL5, CFTR, CNGA4, CRB3, CSNK2B, CXCL16, CXCL9, CXCR5, CYSLTR1, DAG1, DUSP7, ESPL1, FADD, G6PD, GAB1, GALNT1, GFPT1, GLG1, HMGS1, HSD11B2, IDI1, IL1A, IRS2, KIR2DL1, MDH1, NT5C2, OR10G2, OR11L1, OR3A2, OR4A5, OR5B17, OR6C4, OR9G4, PDE6G, PDGFD, PDGFRB, PFN4, PIK3C2A, PKLR, POLR2G, PPA2, PYGL, RDH5, RIPK1, RRM2, RXRG, SMPD1, STAM2, STEAP3, TACR1, TRAF1, TSC1, TYROBP, WWP2, YWHAH, HSP90AB1
Negative_12734	ATM, BAX, CFH, GLS, IL8, SI, ACYP2, ADH6, AOC2, ATP5J2, C3AR1, C3orf10, COL5A2, CSF3R, CTNNA3, CTNND1, CTSB, CYP3A4, DMGDH, DUSP8, EPB41L3, FGF19, GGT7, GSTO2, HADHA, HRAS, IFNA5, MTHFD2, MYD88, NMNAT2, NTRK1, OR13C4, OR4K14, OR4M1, OR51Q1, OR5B12, OR6X1, OXCT2, PDE6D, PDX1, PGLS, PIGT, PIK3C2A, PIP4K2B, PLA2G2A, PLA2G2F, PPM1A, PTPN7, QARS, RPSA, VTI1A, WASF2, HSD17B10
Negative_12735	CGN, ACTA2, ACTN4, ADORA2A, ALPPL2, ANAPC10, ARNT2, B3GALT2, CACNA1A, CACNA1G, CACNB4, CACNG6, CAMK2A, CCNB1, CD244, CNGB1, DUSP9, ESAM, FGF4, GCAT, GDF7, GRIN2D, IKBKB, IL2RG, IL3RA, INPP4B, IQGAP2, LALBA, NFKBIB, NFYA, NQO1, NUMB, OR10A5, OR13G1, OR2AG2, OR4D11, OR4D5, OR4K5, OR51I2, OR52E4, OR56B4, OR8D1, OR8D2, PKLR, PLCB2, PPP5C, PRIM2, PRKCD, PTDSS1, PTGER1, PTPN5, SEMA3G, SMAD3, SUCLA2, TAS2R14, TKT L1, XIAP, XYLT1, ATP6V1C1, ATP6V1E1, B3GALNT1

Negative_12736	CKM, TNN, ACAD9, ACSS1, ACTG2, ADIPOQ, ATP6V1F, CCL23, CCR3, COL1A2, CSF3R, CSNK1E, CXCR4, DEGS2, EDN1, FGF2, GBGT1, GCLC, GRM5, HRH2, HSD17B3, HTR2A, IFNA2, IFNA8, JAK1, LAMB2, LCMT2, LDHAL6B, MADCAM1, MAPK1, MBL2, MGST2, MKNK1, NFATC2, NT5M, OR13A1, OR13D1, OR14I1, OR2S2, OR2W1, OR4N2, OR51D1, OR6C75, P2RX6, P2RX7, PAPSS1, POLA2, PPAT, PPP2CA, PRKCQ, PRKG2, PTK2B, PYCRL, RDH5, RPS6KA4, RPS6KB1, SDHC, SLC2A1, SUCLG1, SULT1A4, SULT2A1, TACR1, TCF7L2, TNFRSF8, TNFSF14, TPK1, TSHR, VAMP4, XCL2
Negative_12737	CD4, DBT, GBA, HK3, ILK, ACOX2, ACY3, AKT2, ALG8, AMY2A, APOA5, ARD1A, ATG12, BET1L, BMPR1B, CASP7, CASP9, CCL14, CD244, CDH3, CDK4, CES7, CLDN14, CRB3, EIF4B, FCER1G, FTCD, GABARAP, GCAT, GNA13, GNAI1, HEXA, IDH3A, IL2RG, ITGA1, ITGA9, MIOX, MMP9, MYH3, OR1M1, OR2T4, OR51E2, OR5D16, OR6C76, OR9A4, PFKFB2, PIGX, PKMYT1, POLR3H, PPCDC, PPP2CB, PP2R5E, RAF1, SDHC, SETD7, SFRP4, SH2D2A, TAP1, TOMM40, TUBA3E, TUBA4A, TUBB2A, UPP1, VAMP4, VDAC1, WNT2B, YARS2
Negative_12738	AUH, IL2, ITK, PML, ACOT12, ADCY9, ADORA2B, ADSS, ALG2, ANAPC11, APRT, ARNT, ATP4A, ATP6V1F, BMPR1B, CACNA1I, CBLB, CCL24, CCL3, CCNB2, CCND1, CHST13, CTBP2, CYFIP2, CYP1A2, DUSP1, EIF4E2, EPHA2, FGF8, FSHB, FUT3, GALNT6, GALNTL1, GFAP, GLG1, GNG12, GRM1, HAGHL, HSD3B1, HSPB1, IKBKB, IL22RA2, IL6R, ITGA3, ITGA8, KCNB1, LDHC, LMO7, MAD1L1, MAGI1, MAGI3, MAP3K12, MYH4, NMNAT2, NSDHL, OCLN, OR10A7, OR1M1, OR51D1, OR8B12, OR9Q1, PAK6, PDHA1, PLK1, PLOD3, POLR1B, POLR2D, POLR3G, PP1R3B, PRKCI, PRSS2, PSEN2, RPN2, SDC3, SEMA4B, SFRP2, SIPA1, SPAM1, ST3GAL5, STX7, SULT2B1, TMLHE, TRPM5, VAMP1, ATP6V1E1, ST6GALNAC5
Negative_12739	DBH, DLD, GDA, GK2, HPD, LYN, AADAC, ABP1, ADCY4, ALOX12, APOA1, ARSE, ATP5G2, BMP2, CBR3, CCL15, CD274, CD8A, CNGA4, CNGB1, DAPK2, DAPK3, DPAGT1, FCGR2B, FCGR3B, FGF3, FGF8, GLUD1, GMPPB, IDH3G, IL15RA, IL28RA, IL29, KLKB1, LLGL1, LYZL1, MAD2L2, MAN1C1, MGAT3, MINPP1, MYH6, MYL2, NCOA4, OPLAH, OR10A7, OR10T2, OR14C36, OR1Q1, OR2W1, OR3A3, OR4C15, OR4N2, OR4S2, OR51G1, OR51Q1, OR52N4, OR56A3, OR6C75, OR7D4, OR7G1, OR8G1, PAPSS1, PIGC, PIK3R5, PIM1, PIP5K1B, POLR2L, PPP1R3D, PRKCD, PTPRJ, RASGRP1, SEMA3F, SEMA4A, SETD2, SPTLC2, STAM2, SUV39H2, TNFRSF8, TOLLIP, UCK2, WASL, WHSC1, WWP1, ATP6V1B2, GABARAPL1
Negative_12740	C8B, CFD, GNE, HK2, LIF, NPY, AACS, ACPT, ADSSL1, AGPAT6, AKR1B10, ALDH1B1, ARNT2, ASAH1, ATP4B, ATP5L, B4GALT2, BCMO1, CCR6, CD22, CES1, CHIT1, CHRM2, CNTNAP1, CSF2, CXCR5, DDIT3, DGKB, DRD2, EDNRB, FADD, FBP2, FGF1, FOXA3, G6PD, GALE, GPAM, HCCS, HEXA, IFNA6, IFNB1, IL12A, IRAK1, LTB4R2, MAP2K6, MAPK12, MGST3, MMP2, NCOA4, NFE2L2, NMNAT3, OR10G4, OR10V1, OR13C3, OR2T1, OR2T4, OR4K13, OR5B3, OR5F1, OSMR, P4HA2, PDE8B, PDHA1, PEMT, PLAUR, POLR3G, PRKY, PTGFR, RBX1, RGS3, ROCK1, SEMA4D, SETDB1, SETMAR, SLC12A2, SMURF2, SOCS7, SPRY2, SULT1A2, TAS2R10, TMLHE, UNC5C, UPP1, WBSCR22, YWHAG, CSGALNACT2, HLA-DRB4, PAFAH1B1, ST6GALNAC1
Negative_12741	BCR, C5, FOS, GP5, HAL, IVD, MPZ, MYC, SFN, ALDH1A3, ALPL, ARSE, ATP6V1D, BDNF, CCL2, CD247, CDK5, CER1, CFL1, CLDN8, COX15, CSF1R, CYP2F1, DX55, DIAPH3, DPAGT1, ENPP7, FDFT1, FGF8, FSHR, FUT7, GCAT, GNB1, HHIP, IFNAR2, INSR, ITGA2, ITGB2, KDSR, KLRD1, LIFR, MAP4K3, MMP1, MS4A2, MTMR1, MTMR6, NADSYN1, NEFH, OR10J5, OR13C5, OR1L8, OR2A4, OR52E6, OR5M3, OR6A2, OR6N2, OR8B4, PCYT2, PFKFB2, PIK3R5, PKM2, POLR2C, POLR3A, PSAT1, PTAFR, PTGER3, RAPGEF2, RAPGEF3, SLC25A6, SNAP23, SPRY1, SUCLG1, ATP6VOD2, CSGALNACT1, KIR2DL5A, TNFRSF10B

Negative_12742	F3, FOS, PC, PLG, ACP5, ACPP, ACSL3, ADH1A, ALG10, ATP6V1A, BLVRA, CACNB3, CADM3, CCL23, CHDH, CRHR1, CSNK2B, CXCL11, CYP11B2, DDOST, DDX5, DERA, DHCR24, DOCK1, E2F4, EPHA4, FCGR3A, FRAP1, FUT1, HARS2, HSD3B1, INMT, ITGB5, ITPA, KITLG, LIPA, LRAT, MECR, MTMR2, MYH11, NEFM, NFATC2, NFE2L2, NKD1, NLGN3, NRG3, OR2A14, OR2D3, OR51F2, OR52B6, OR5B21, OR5M8, OR8B4, OR9A2, ORC2L, PAK3, PDGFRB, PIAS3, PLA2G2F, PLOD3, POLR2F, PPP3R2, PRKAB2, PRKACA, PRNP, PTGIS, SCIN, SEMA4F, SLC12A2, SPCS1, SPHK1, SULT1A1, SV2C, TSC1, ULBP2, WNT16, XIAP, ATP6V1B2, TNFRSF14
Negative_12743	DCT, IDS, NF1, ACSM5, AGRN, ALOX15, AOC2, AREG, CACNB2, CCL13, CDH4, COL2A1, CTBP2, CYP3A4, DCTN1, DGKD, EDNRA, ELK4, ENTPD4, EPHA3, GSTA2, GSTO1, HTR5A, IFNAR2, IL15RA, INPP5A, ITGA4, KLK3, LAMC2, LDHA, LIPA, LRAT, MMP7, MYLK2, OR14A16, OR52E8, OR5R1, OR5T3, OR6K6, P2RX5, PER2, PON1, PPP1R3B, PPP2CA, PPP3R2, RDH8, SMAD7, SPHK1, TAS2R38, TGFB2, TNFSF12, TXNDC12, VAV1, VEGFB, SERPINA5
Negative_12744	NPL, ALDH3A1, APOA1, ARHGEF4, ATP5E, AVPR1B, BMP7, C1GALT1, CDC14B, CDC16, CDS1, CLTB, DERA, EIF4B, EPHA1, FCGR2B, GBA3, GSTA5, HEXA, HNM1, HTR2B, IBSP, IL9R, ITGB4, LRP5, NAGLU, OR11A1, OR14A16, OR1L1, OR2A14, OR2AE1, OR5AC2, OR7A17, OR7D2, OR8G1, OR8H2, PDHA1, PDK1, PEMT, PKM2, PPAT, PPP2R5A, PPP3R2, RHOA, RND1, SDC2, SEMA4B, SOCS5, TGFBR1, TUBA1B, UGT2B28, PRICKLE1
Negative_12745	AR, FST, GLS, SCD, SDS, SMO, ACPP, ADH1A, ASNS, ATP5F1, CHKA, CHST13, CLDN10, COL5A2, COL6A1, COQ7, COX10, CYP4F2, DDX18, DKK2, ETNK1, GALC, GIT1, GJA1, GNAO1, GRAP2, H6PD, HARS, IFT57, IMPA1, KYNU, LALBA, MPDZ, NCAM1, NFASC, NPR1, OR10C1, OR2H1, OR4D2, OR52E2, OR52N2, PDX1, PIP5K1A, PIP5K1C, PLA2G1B, PPP2CB, PRIM1, PTGFR, SOCS1, TNXB, TOMM40L, TUBA1C, TYROBP, ULK1, VDAC1
Negative_12746	CR1, DLD, IHH, LPO, LSS, MPI, ACAD8, ACADVL, ACHE, ACVRL1, AKR1B10, ALDH2, ALDH3A2, ALDH3B2, ALG12, ALG6, ALPPL2, ARSE, ATF4, ATP5F1, ATP5G3, C9orf95, CDC16, CDK5, CLDN19, CMAS, COQ5, CREB3, CYFIP1, CYP11B2, CYP2C9, CYP2S1, DFFA, DGKG, ENO3, ENTPD6, EPHB2, FGF5, FLOT1, FUT2, GGT1, GJD2, GNAT3, GSTM5, HARS2, HPRT1, HTR2A, IFNA16, INHBC, IRF9, ITGB4, KIR3DL2, KIR3DL3, LAMB4, LLGL2, MAD1L1, MAP4K4, MBL2, NAMPT, NAT6, NUDT5, OR10G8, OR10H3, OR10J5, OR1M1, OR2S2, OR4C13, OR4D1, OR4F17, OR51I1, OR51L1, OR52A1, OR52E8, OR5T1, OR9Q2, ORC5L, PIGN, PLCG1, PLCZ1, PRKAR2A, PTGER3, RFXANK, RPN2, RPS6KB2, RRAS2, SELP, SEMA3C, SLC2A2, SPCS3, STAT4, STAT5B, SUV39H2, TALDO1, TLN1, ULK2, WWP2, YWHAH, ST6GALNAC4
Negative_12747	HK3, MSN, SHH, ACSS1, ACVR1, ACYP1, ALDOC, ATG12, B4GALT3, BIRC2, CCL14, CDH4, COL5A3, COL6A2, CYP2A13, CYP2U1, DCXR, EHHADH, FASLG, GALNTL1, GCDH, GNAO1, GOT2, GRAP2, HNF1A, HSD17B8, HTR4, HTRA2, IFNA5, LIPC, MGAT1, MGAT4A, NNMT, NTF4, OR2F1, OR51L1, PDE7A, PEMT, PGLS, PIGK, PIGT, PLA2G2D, PLXNB3, PRKAA1, PRKCH, PTEN, RELB, RGS3, SH2D1B, STAT1, TAS2R48, TAS2R5, TRDMT1, YWHAQ
Negative_12748	CAT, CSK, EBP, F11, F8, PAH, SHH, ACP1, ACSL3, ALDH1A1, ALDH3A2, ALDH3B1, ALG5, ALOX12, ALOX15, ATP6V1F, BMPR1A, CCR5, CD14, CDS1, CLDN1, CNGB1, COL6A2, CSH1, CYP2S1, FGFR3, FGFR4, FZD3, GNG3, GNPAT1, IL6ST, KLRD1, LCAT, LDHAL6A, LIAS, NCAM2, NGEF, NT5C1A, OR4K2, OR51B6, OR51F2, OR5M3, OR5P2, OR6M1, OR8G1, PHKA2, PNPLA4, POLR1C, PPP1CB, PTGES2, PTPRZ1, PTTG1, RPS6KA2, SHMT2, SMAD7, SMPD4, SOCS7, TAS2R8, TGFB2, TRAF2, ALDH18A1, ATP6VOD2, ATP6V1G1, CSGALNACT2, PNLIPRP2, SERPINB5

Negative_12749	F3, GK, SDS, TH, ADAM17, B3GNT4, BAI1, BIRC3, CD59, CDC23, CER1, CFL1, CKMT2, CNTNAP1, CREB3, CREB3L4, CSNK1G1, CTSG, CYP11A1, CYP1A2, EP300, GADD45A, GNAL, GNPDA2, GSTA1, HARS2, IAPP, IGF1, IL17RB, INPP5E, IRF7, ITGAV, LIPT1, MAP2K3, MCM4, MGST3, NFYA, NKD1, NRXN2, OR2M7, OR52E2, OR56A4, OR5D18, OR6S1, OR9Q1, PGM1, PIGV, POLR2C, PRODH2, RDH10, SEMA3G, SHC4, SLC2A1, SMURF2, SPTLC2, TAS2R4, TNFSF12, TNFSF8, TSC1, UNC5C, VAV1, YWHAB
Negative_12750	CAT, CGA, DLD, IL5, ME3, PRL, SYK, ACACB, ACHE, ADRB1, ALG1, ALOX15, AMDHD1, ARNT2, ASCC3, ASS1, ATP5G1, B3GALT5, BET1L, CACNA1C, CAV3, CCR9, CD99, CHST12, CNGB1, CXCR3, CYP1A1, CYP2D6, DAG1, DNMT3A, DOT1L, EHMT2, EXOC7, EXTL2, FGF12, FPGS, GADD45G, GAL3ST1, GALK2, GUCA1C, HADHA, HLA-DOA, HLA-DG, IARS, IDH3A, IDI2, IL15, IL18, IMPA2, IRS1, ITGAV, KIR2DS5, KLRC3, LHCGR, NCAM2, NCF4, NRG2, NT5C1B, OR13H1, OR1N2, OR2B11, OR4B1, OR51D1, OR5D13, OR6C2, OR8U1, ORC6L, PARD6G, PLOD2, PNPT1, PON1, PTCH2, PTGIS, SPRY3, ST8SIA5, TAS2R10, TAS2R4, TAS2R60, TBK1, TGFB3, TJP3, TOMM40L, TP53, TSNARE1, UROD, WNT10B, ATP6V1G3, EIF4EBP1, MAPKAPK3, PLA2G12B
Negative_12751	BCR, DUT, F3, FES, FGG, ID4, MYC, NLK, SI, AASS, ALG8, ALOX12B, ATP5J, B4GALT6, BMP7, BMPR1A, CCL27, CDC23, CHRM3, CLCA2, CLDN15, CLDN16, CMBL, CREB1, CXCL1, CYBA, DGKA, DKK1, ENTPD6, ESAM, FABP3, FARS2, GADD45A, GAPDH, GLDC, GMPS, GNA13, GNMT, GSTA1, GUCA1B, GUCY1A3, GUCY2F, HSPA8, IFNA7, IL20, ISYNA1, MAPK14, NCKAP1L, NMNAT1, NR4A1, OR11G2, OR13C9, OR1G1, OR1L3, OR2T2, OR4C6, OR4N4, OR51L1, OR5B3, OR5I1, OR5R1, OR6C75, OR6Q1, ORC4L, OXCT1, P4HA1, PFAS, PHKB, PIK3CA, PLA2G2E, PLOD3, PLXNB1, PMAIP1, POLD1, POLR3H, PPP2R2A, PPP2R5C, PPP3CB, PPP3R2, PRKCG, PSAT1, PTPN6, SFRP2, SH3BP2, SKP2, SMPD1, ST8SIA5, TAS2R16, TBL1Y, TOMM40, TRAF2, TRHR, TUBB, ULBP1, WNT9B, PLA2G12B
Negative_12752	CFH, ALG6, ANAPC5, ASPA, ATP5D, ATP5G2, BLVRA, BMP6, BTRC, CACNA1S, CAMKK2, CD82, CDH5, CREB3, CREB3L2, EDNRA, EPHB6, FUT4, GALNTL4, HTR7, HYAL2, IL15, IL9R, INHBB, ITGB5, MAP2K3, NFKBIA, NOD1, OGDHL, ONECUT1, OR2T4, OR4N5, OR52W1, OR6M1, ORC2L, PAX4, PCCB, PIK3R5, PNPO, PON3, PPP1CA, PRKAB1, SEMA3E, SFRP1, SOAT2, ST3GAL5, STX16, STX2, SUV39H1, TSC2, ULBP3, VDAC3, YARS, YWHAB, PAFAH1B3
Negative_12753	FGG, GGH, PGD, SHH, ABI2, ACTC1, ADRA1A, ALDH3A1, ALDH9A1, ALG3, ARAF, ARHGEF7, CALML6, CCL20, CD244, CD34, CRY1, DDX47, DHRS9, DUSP1, DUSP3, EPHB3, FBP2, GALK2, GAPDH, GSTT1, HLA-DQA1, ITGA1, MGAT3, NCOR1, OR10G4, OR11H4, OR1S2, OR2C1, OR51S1, OR5AP2, OR5AU1, OR5K1, PFKL, PIK3R4, PIP5K1A, PTPN5, RAB5A, RPSA, SMAD7, SOAT2, STX6, TNFSF10, TSLP, ULK1, VANGL2, YWHAQ, CTNNBIP1
Negative_12754	GSN, IL5, LPO, ACVR1, ADSL, ARPC4, ATG7, BLVRB, BMPR1A, CBLC, CCL11, CDK5, CFL2, CHEK1, COL4A1, CREB3L4, CRY2, CSNK2A2, CXCL5, F2RL3, FUT6, GGT5, HSD17B8, IDH2, IL17A, IL5RA, LLGL1, MCAT, MCEE, MGAT2, NCR3, OR10H2, OR2A42, OR4D5, OR5D16, ORC3L, PFKL, PIK3CD, PPP2R1B, PRKACG, PSME2, RASGRP1, RPRM, RPS6KA1, SDHD, SMAD9, STK4, TP53, WNT7A, SUV42OH1

Negative_12755	ATM, GP5, ME2, SCD, TK1, A4GALT, AADAT, ABI2, ADCY6, AKT2, ALDOA, ALG9, ALOX15, ANAPC2, ASS1, B4GALT2, CBLB, CCL1, CCL22, CCL3, CD274, CHR1, CLCA4, CNGA3, CSF1, CTF1, CYP2U1, CYP3A43, DUSP2, EI24, ETNK2, FECH, GANAB, GART, GLG1, GNPAT1, GRIN2D, GSTT1, HDAC1, ICAM3, ICOSLG, IDH1, IFNA13, IL1R1, KIR2DL2, KIR2DL4, LPAR1, MIOX, MNX1, MPST, NCKAP1L, NMNAT3, NT5E, NT5M, OLR1, OR1L3, OR2A5, OR51E2, OR52E4, OR52I1, OR52N4, OR9A2, PAK3, PANK3, PDE8A, PFKFB2, PFKFB4, PIK3C2G, PIK3CB, PMVK, PRKACA, PRKCI, PTPN1, RHEB, SDC3, SEPHS1, SGMS1, SMARCA2, SPRED2, TYMS, YARS2
Negative_12756	CR1, CS, FGB, HDC, HYI, SRC, ACSL6, ACY1, ALPP, B3GALT5, C5AR1, CACNG2, CAMKK2, CAV1, CCL11, CLDN1, CLDN9, CXCR4, DAAM1, DGKG, DKK1, DPYS, DUSP16, EARS2, EIF4E, EIF4E2, EPOR, EVI1, FZD8, H6PD, HNF4A, IFNG, IL12A, IQGAP2, IRS2, KLRC2, LCMT2, MADCAM1, MAOB, MYL2, NFYA, NMNAT1, NTF3, OR2M4, OR4D5, OR52B6, OR5D13, PAICS, PDGFB, PIGB, PLXNA1, POLR2A, PPAP2B, PPP2R5A, PRKG1, PRKG2, RALBP1, RCHY1, RPS6KA6, RPS6KB1, SHC2, SKP1, SLC27A1, SLC2A4, SLIT2, STAT5B, TAS2R50, TBL1X, TJP2, TRPM5, TUBB2A, UGCGL2, ULBP3, ULK2, ZAP70, AASDHPPT, HSP90AA1
Negative_12757	CRH, DHH, F8, GPT, MVK, NLK, PC, ACLY, ADORA2B, ALDOC, AOC2, BMP8B, CAMKK2, CCND2, CCR9, CD22, CD38, CD46, CSNK2B, CYP3A4, DHCR24, DPAGT1, EFN2, EPHX2, GGT1, GRPR, HA01, HSD17B3, IL28B, INPP4A, ITGA11, KDSR, LYPLA2, MAML3, MAP2K4, MAPT, MITF, NFAT5, NRAS, NUDT5, OR11G2, OR1J4, OR3A1, OR4K2, OR52N5, PCK2, PDCD1, PDE9A, PER1, PFKFB3, PHPT1, PIGM, PIP5K3, PLCG2, PLXNB2, PNMT, PPP2R1A, PRKAR2A, RETSAT, SEMA4A, SESN1, SETD1A, ST3GAL2, TUBB4Q, UGT2B7, VAV2, WNT9B, ATP6V0A4, ATP6V1E1
Negative_12758	C8A, CKB, DLD, GAA, GPI, ID1, ASPA, B4GALT2, BDH1, BLVRA, CACNG5, CRB3, DCXR, DTX3, FABP4, GALNTL1, GNAL, GRM5, GSTT1, HADHB, IL20, ITGAE, KIR3DL2, MYH14, NFATC2, NKX6-1, OR10K1, OR10Q1, OR4D11, OR4D2, OR4N5, OR51F2, OR52A1, OR56A4, OR8H1, OXTR, PDE3A, PGAP1, PLA2G10, PLCG1, PMM2, POMC, PSPH, PYGB, RAPGF4, SFRP5, SMAD3, SMPD4, SPI1, TALDO1, TKTL1, UGT2A1, VEGFA, ATP6V1B1, MAP3K7IP1, PAFAH1B1
Negative_12759	TK2, VTN, ABCC8, ACTA1, AKR1C3, AKT1, ARHGAP5, BACE1, CACNB3, CD48, CPT1C, CYP2D6, DDB2, DIAPH1, EARS2, EDNRA, EFNA1, ENTPD3, EXTL1, FM05, FPGT, FZD8, FZR1, GNA13, GNRHR, HHIP, HSP90B1, IFNA2, IFNA4, IL12RB1, IL1A, IPMK, KYNU, MKNK1, NFYA, NTRK2, OR10G2, OR10P1, OR4A16, OR6B3, PAK1, PIP4K2C, POLR2G, PRIM1, PTPRM, PTPRZ1, RPS6KA3, SEMA4B, SEMA7A, SLC25A6, SLC27A4, SMPD4, STAT4, STAT6, STT3B, SUCLA2, TNFSF10, TNFSF4, TYMP, UCP1, WIF1, ZAP70
Negative_12760	A2M, ASL, ATM, ILK, PGF, PRL, TNC, ACOX3, ACYP2, ARG1, ARHGEF4, ATP5G2, BET1, BUB3, CACNA1A, CACNA1I, CD19, CD01, CHAT, CHST11, CHST12, CSF3, DLL4, DPM1, DUSP7, E2F2, ENAH, ESPL1, FGF11, FOXA3, FUT3, GBE1, GLDC, GLUL, GMPPA, GP1BA, GPD2, GRIN1, GUCA1C, HCST, HRH1, IFNA21, IFNA6, IL12RB2, IL29, INSRR, ITGAL, ITGAM, KLRC3, LIPT1, LTA4H, MAPT, MAT1A, MCM4, MCM5, MDH1, MYH1, NCAM1, NEU2, NFKBIB, NRG4, NTF4, OR4D1, OR4E2, OR6N1, OR6N2, OR7C1, PDE1C, PDE4C, PFAS, PIK3R3, POLA1, POLE2, POLR2G, PON2, PPAP2B, PPP2R2D, PRKCA, PRPH2, PTPRJ, PTPRR, PTTG1, SARDH, SEMA4G, SESN3, SMPD3, SNAP25, SPP1, STAT5A, TBXA2R, TNFSF8, TOMM40L, TPM3, TSC1, TSHR, WASF3, ATP6V1G1

Negative_12761	C1S, FH, FOS, IL9, MPZ, SYK, UBB, UBC, ABI2, ACSL5, ACVR2A, ADH1B, AMDH D2, CCL26, CD74, CDKN1A, CYFIP1, DCTD, DDX56, DOT1L, DUSP1, DUSP14, E NAH, ENTPD7, EPHA7, EPRS, ETNK2, FGF17, FUT6, GFAP, GRIA3, GSTP1, HAP 1, HTR5A, ICOSLG, ISYNA1, ITGB2, KLRC3, LAMC3, LCP2, LIPT1, LPAR1, MA GI2, MAP3K11, MGAT1, OR11A1, OR13C5, OR2W1, OR4C15, OR51D1, OR52N5, OR5A2, PANK1, PCK2, PERP, PIK3R3, POLR1A, PRKACA, PTPRF, RAC2, RBL2, ROBO2, SOCS3, SOS2, SOX17, STX16, TALD01, TSC2, TUBB2C, TUBB6, UCKL1 , VDAC3, WASF1, XCL2, ZNRD1, ATP6V1G2, SERPIND1, TNFRSF13C
Negative_12762	DAO, EZR, IL3, STS, AKR1D1, APAF1, CAV2, CEBPA, CISH, CNGA4, CYP1B1, F CER1G, FOXO1, FUT5, GALNT2, GBA3, GNRHR, GRB2, GRIN2B, IDI1, ITGA8, K ITLG, MAP3K13, MITF, MYH14, NAT1, NFYA, NQO1, OR10G2, OR13H1, OR4A15 , OR4F5, OR51G1, PARD3, PGAM4, PHKA2, SETD7, SMAD3, SMARCA2, SPAM1, T AS2R8, TLR4, TNFRSF8, TUBB3, UCK2, WASF3, XYLB, ZFYVE9, ST6GALNAC3, ST6GALNAC6
Negative_12763	ADC, APP, BAD, IL5, JUP, PC, RPE, TNC, ABLIM2, APC2, ARAF, ASMT, B4GALT 2, BUB1B, CASK, CD8B, CDC25C, CES2, CNGA3, COL11A1, COL4A6, CPT1C, CS H1, CYP2C18, DDX19A, DGKI, DGKZ, DPYD, DVL1, E2F1, EI24, EP300, FGF10 , FZD4, FZD9, GLS2, GPAM, GRHR, GRIN2D, HIBADH, IBSP, IL12RB2, IL5RA , INPP1, LEFTY2, MAP2K6, MAP3K1, MCEE, NEU2, NT5C3, OR13C2, OR2T33, O R4C11, OR4D1, OR4E2, OR4N2, OR52W1, OR5H2, OR7D2, OXTR, PCYT1A, PDE8 B, PHKA1, PLCD3, POLR1C, PRKACG, PRNP, PTGS1, PTPN7, RPS6KB2, SLC9A1 , SPRED2, ST3GAL3, STEAP3, STX1B, SULT1A1, THBS2, TRAF2, TYMS, UCK1, UGT1A10, VAMP1, VTI1B, WNT2B, WNT7B, WNT9A, WNT9B, GABARAPL1, MAPK8 IP2, SERPINB5
Negative_12764	BID, IL6, PML, ACSM1, AGPAT3, ALDH4A1, AOC2, ATP6VOC, B3GALT4, C3orf 10, CACNA1G, CACNB4, CCL11, CCL24, CLTA, COL5A2, CSF3, DTX1, DTX4, DU SP7, ENO2, GBGT1, GRIA2, GSTA1, IDI1, IL1RAP, INHBA, ITGA9, MGLL, NAD K, NOTCH3, NUDT12, OR1F1, OR4F4, P2RX3, PAK2, PAK6, PDE3B, PLXNA1, PP A1, PRKAR2B, PTPRB, RAB5A, RALGDS, RPS6KA5, SGMS1, SUCLA2, TNFSF10, TSHR, ATP6V1B1
Negative_12765	DHH, EZR, FN1, ACTA1, ACVR2A, AHCY, AHCYL1, ARHGEF4, BACE2, BBC3, BDN F, CACNA1D, CAV2, CCL19, CCL4, CCNG1, CD80, CLDN2, CYP2B6, FCER1G, GJ A1, GNA13, GUCY2C, HNMT, HSD11B1, HSD3B1, IFNA21, IFNK, IKBKE, IL7R, IMPDH1, INMT, ITPK1, LDHAL6A, LYPLA1, MAPK10, MPZL1, MYH15, OR51E2, OR8K5, ORC5L, PCYT1A, PLOD2, PORCN, PRKCB, PTK2, RFNG, SDHC, SLIT1, S TX1B, TNFSF14, TPH2, TRPC1, TUBA3C, UGT8
Negative_12766	CAT, F12, FAS, ME2, MVD, TK1, TYR, AARS, B3GALT1, BMP6, CACNG5, CAMK2B , CCL17, CCL28, CD19, CD99, CDC16, CDC45L, CHKA, CSF2RB, CTSS, CX3CL1 , DAPK3, E2F1, EPHB3, EXTL2, FIGF, FMO5, FUT4, G6PD, GALNTL2, GNAL, GP X7, GSTA2, HNF4A, IL12A, ITPA, LCMT2, MAN1B1, MCEE, MKNK2, MYH14, NAD K, NR4A1, NRG2, NUDT12, OR10J3, OR11H6, OR4F6, OR51T1, OR5M8, P2RX5, PAK6, PDE4B, PNPLA3, POLA2, POLE4, POLR2D, POLR3A, RAD51, SEMA3F, SG PP2, SLC25A5, SMAD5, SMAD7, SQLE, SRGAP2, TNFSF12, TPH1, UPB1, VAMP1 , VDAC2
Negative_12767	AK5, FAH, ACSL1, ACVR2B, ACYP2, AKR1C3, ALDH1A3, ALPI, ATP5D, ATP5G1 , BIRC3, BIRC5, C1GALT1, CAMK4, CBLC, CCNH, CDC45L, CDK4, CNTNAP1, CR LF2, CTBS, CTNNA3, CTPS2, CXCR5, CXXC4, CYP3A5, DCTN1, DGKB, DVL3, E2 F2, EPHA5, ERBB3, FGF12, FOXA2, FPGT, FSHR, GALNT11, GANAB, HLCS, HMO X2, IFNA10, IFNA7, IL21, IL22RA2, ITPKA, LAMC2, LEF1, LEPR, LIAS, LIM K1, LRDD, MAFA, MAML3, MAN1A1, MEF2C, NCAM1, NT5E, NTF4, NTRK2, NUDT8 , OR2T4, OR52I1, OR5C1, OR5V1, PER1, PLCD1, PPP2R1B, PPP2R2C, PRLR, P RPH, PTPRC, RASGRP4, RFXAP, SESN3, SETD1B, SKP2, SMAD4, SNAP23, SSH1 , ST3GAL6, STAT3, TAS2R14, TP53, TRAF4, TUBB4Q, UBA1, UBE2L6, UNC5B, WARS2, HLA-DPA1



Negative_12768	CGN, GSN, LYN, MAX, OTC, ABL2, ACADSB, ACP5, ALDH1A1, ARNT, ATP2A2, B4 GALT1, CCL25, CD14, CDC25C, CHUK, COQ3, CYP2J2, DAG1, DNMT3L, DUSP7, E2F2, FZD9, HPRT1, IL1B, IMPA2, IRAK1, IRAK3, KIR3DL2, LAP3, LTA4H, M APK7, MAT1A, NAT1, NLGN1, NLGN3, NOTCH1, OLAH, OR2T34, OR5I1, OR7G3, OR8H2, OR9G1, PPP1R3B, PPP2R5D, PRKG1, PTAFR, PTPN5, RASGRP1, RXRA, STAM, TUBB4, TYK2, VEGFB, WNT4, WNT7A, CACNA2D2
Negative_12769	AK1, ASL, CD2, CKB, EGF, IVD, OGT, RB1, TNF, TNR, ACP2, ACY1, ALCAM, ALD H1L1, ALG10, ARHGEF2, ASS1, ATP6AP1, AVPR1B, BIRC5, BUB1, CACNA1H, C ACNB2, CACNG5, CCL22, CCR2, CCR6, CMBL, COL11A1, CTSS, DDX52, DPM2, D PYSL2, ECHS1, ENO2, EPB41L2, FCGR2B, FPGT, GALNT2, GCNT2, GGT7, GNA1 2, GPAM, HRH2, IARS2, IFNA14, IFNA8, IKBKE, IL17B, INPP1, ITGA9, KARS , KIR3DL1, MCAT, MMP14, MYH7, OR1L3, OR2A42, OR2AG2, OR2B2, OR2D3, OR 2H2, OR4F5, OR4K15, OR52B6, OR52H1, OR52K2, OR5V1, OR8K5, PAX6, PDIA 4, PGAM1, PI4KA, PIGF, PIGX, PIK3C2G, PIM1, PLCD3, PLEKHA8, PLXNB3, P PT1, PTPN6, RDH10, RFX5, ROBO1, RPS6KB2, SAT2, SMAD7, SULT1A1, SV2A, TBL1XR1, THTPA, TRPC1, TSLP, TUBB1, UBE2L3, VAMP4, WNT7A, SERPING1
Negative_12770	CFH, CKM, GHR, HK2, PAH, ACTN1, ADH4, ALDH1B1, ATP5F1, ATP5G2, CACNA1 A, CACNB2, CALML3, CCL13, CCL5, CCR5, CDIPT, CES2, CHPF, EPHA8, EXTL3 , FARP2, FGF11, FMO1, GADD45A, GALE, GNPAT, GP1BB, GSTM5, HEXA, HHEX, HIBADH, HPSE2, IFNAR2, IFNGR2, IL18R1, IRF3, ITCH, LALBA, LAP3, LARS , MAPK11, MASP2, MYH10, NEU1, NR5A2, NT5C2, OCRL, OR10A3, OR2M5, OR4D 2, OR6K3, OR6Q1, OR8D2, ORC6L, P2RX3, P4HA3, PANK3, PARS2, PIGK, PLCE 1, PTGFR, RXRB, SDC1, SELL, SGMS2, SHC3, SLC12A2, TDO2, TLR4, TRAF3, U CK2, UXS1, WIF1, WWP2, YARS2, PLA2G12B, SERPINB5
Negative_12771	BTD, CD2, CDA, DBT, FH, GK2, GSR, KHK, ME1, UBB, XDH, ADRB3, ALAS1, ALG9 , ASAH1, ATIC, BIRC3, CACNA1A, CACNG4, CAMKK1, CBLB, CD82, CHSY3, DAP K3, DRD1, ERBB4, FCGR2B, FGF17, FGF21, FGF22, FMO2, FUT9, GALNT11, GD E1, GNG12, GNRH1, HCLS1, HMOX2, HRH2, IL20RA, IL25, ITGB7, ITPA, KLK3 , LAP3, LIMK2, LTBR, MAN1A2, MAP2K3, MAP2K4, MGST2, MS4A2, NAE1, NCR1 , NFYB, NOX3, NR1H3, OR10Z1, OR2A14, OR2AE1, OR4L1, OR52J3, OR6C75, O R8H2, P4HA1, PCNA, PGLS, PIGA, PIGB, PIK3C2A, PLA2G2A, PLA2G4A, PLAT , PON2, PPAT, PPP2R2B, PPP3R2, PYCR1, RASA2, RXRA, SAT1, SEMA4D, SH3B P2, STX12, SUCLA2, SUCLG1, THBS4, TYK2, UNC5C, VDAC2, WEE1, YKT6, SER PINA5, SERPINC1, TNFRSF13B
Negative_12772	C9, DCC, MUT, ACYP2, ADAM10, ALDH3B1, ALOX12, ATP13A2, ATP5D, C1QB, C 5AR1, CD40, CLDN5, CSF2RA, CYSLTR2, DAPK1, DGKG, DLL4, DOLPP1, E2F1, EXT2, FGF21, FUT6, FZD9, GLI2, GP1BA, GSTM3, HSD17B7, HYAL2, IDI2, IF NAR2, IL1R2, ITGAE, KCNJ11, KLKB1, LEPR, MMP2, NCF2, NEFL, NT5C2, OR1 OH1, OR1E2, OR52E8, PFN1, PGAM4, PIAS1, PIGW, PIP4K2C, PKLR, PLA2G2F , PLCB4, PLCD4, RAD51, SARS2, SEMA7A, SPRY1, TGFBR2, UROS, USE1, VT11 B, WNT8B
Negative_12773	CD4, CR2, DAO, F11, LHB, PVR, AADAC, ANAPC11, CACNA1I, CACNG4, CDC20, CDH2, CHST11, CHSY1, CLDN1, COL3A1, COL4A2, COMT, CREB3, CYP11B1, CY SLTR2, DAAM1, DAPK1, DTX4, ENAH, FCGR3A, FGF5, FOXO3, GALNT14, GALNT 3, GALNT9, GMPPA, HPSE2, IKBKB, IL2RG, IPPK, ITGB7, KAT2A, LAP3, LTC4 S, MDM2, MGAM, MYH10, MYH11, OR13C9, OR2H2, OR2K2, OR2Y1, OR51B6, OR5 2N2, OR5AS1, OR6Y1, PAK6, PDE3A, PLOD3, PPP2R5C, PRNP, PRSS3, PSENE1 , PTEN, RRAS, SC4MOL, SDC3, SETD1B, SMURF1, SPAM1, TBXAS1, THBD, THBS 4, TICAM1, TNFSF11, TNFSF8, UCP1, UROD, UROS, VNN1, WBSCR17, WBSCR22 , YOD1, YWHAB, PNLIPRP1

Negative_12774	EBP, GBA, RPE, ADSL, ANAPC1, ANAPC4, BCAR1, CACNA1B, CCL27, CCR8, CHD8, CKS1B, CLTB, CNGB1, CNTNAP2, COMP, CTBP2, CTNNA3, CYCS, ENO2, FECH, FGD3, FGF5, G6PD, GDF7, GZMA, HADH, IFNA7, IKBKE, IL5RA, IRAK2, ITGA9, JAM3, MAPK11, MYH8, OR10G8, OR11A1, OR1N2, OR5D14, OR7G3, ORC1L, PDK1, PGK1, PLA2G2E, POLR1D, PPM1B, PPP2CB, PPP2R5A, PRKAG2, PSAT1, PTCRA, RASGRF1, RPS6KA5, SARS2, SDC4, SLC9A1, ULK3, VAMP4, WNT10B, ATP6VOA4, KIR2DL5A
Negative_12775	BTD, GHR, HDC, MIF, OTC, TNF, TPO, ALDH3A2, AMPD1, BACE1, BCAR1, C1QA, CCL23, CCNB1, CCR10, CDKN2C, CTNNA3, CYP2A13, CYP4A11, FGFR3, FMO5, FTCD, GBA3, GDF6, GIT1, GNG13, GNPAT, GUCY2F, HSD11B2, HSD17B8, HTR7, IL13RA2, IL22, IL28RA, KLK3, MTMR6, MYD88, MYH10, NCKAP1, NSD1, OR2A5, OR2T2, OR2T5, OR4C16, OR4N2, OR5A2, OR5C1, OR5R1, PCCA, PDE7A, PDE8A, PECAM1, PIAS2, PIK3CG, PIM2, PKM2, PLCB4, PMAIP1, POLE3, POLR2C, PTPN11, PTPN5, RALBP1, RARA, SAT2, SEMA3A, SETD1B, SORBS1, SRGAP2, SULT1E1, TUBB3, UAP1, ST6GALNAC3
Negative_12776	C8A, DBI, MOS, MPL, NPL, ACSS3, AKR1C2, AMPD1, ARSD, ATG12, BMPR1B, CANT1, CCL20, CDC42, CD01, CKS1B, CLDN15, CNGB1, CNTN1, CSAD, CSNK1A1, CXCL3, CYP3A43, DHCR24, DHX58, DOCK1, DRD1, EPB41L2, GFPT1, GLUD1, GOT2, IFNW1, IGF1R, IGSF5, IL2RA, INPP5A, KIR3DL2, KLRK1, L1CAM, MCM2, MMP1, NANS, NAT6, NCOR1, NOTCH3, OR10Q1, OR2W1, OR3A1, OR4C12, OR4S1, OR51V1, OR52D1, PFAS, PPM1A, PRSS3, PTGIS, RASA2, RBL2, RFWD2, RRM1, SEMA3E, STAT5A, THBD, UGT2A1, UMPS, WASL, WHSC1, XIAP, ZIC2, HSD17B10, TNFRSF17
Negative_12777	AGL, BCR, GH2, GNS, KDR, NNT, NPY, PAH, AASS, ACYP2, ADCY1, ATP4A, CACNA1F, CACNG2, CACNG7, CALML3, CARS, CCL22, CCL3, CDKN1A, CDS1, CTLA4, CTNNA2, CTSB, CYP1A2, CYP2S1, DDX4, DDX51, DMGDH, E2F2, E2F3, E2F4, ENTDP3, ERBB2, F2RL2, FLT1, FRAP1, GALNT3, GGT6, GGT7, GNA12, GNB3, GRPR, HPSE2, IFNA13, IFNA5, IL1R1, IL22, IL2RG, JAK2, LYPLA1, MAP3K12, MAP3K2, MAPK9, MYD88, NARS2, NFKB2, NT5C1A, OR10Q1, OR10S1, OR51A4, OR51B5, OR51S1, OR5T2, OR7G2, OR8B4, PARD6G, PDE1C, PIGF, PIK3R1, PLCB1, POLR1B, RAD51, RARA, RASGRF2, RASGRP1, RFXANK, SARDH, SEMA3E, SMARCA2, TAS1R2, TUBA4A, TUBB4, TXNDC12, UGT8, VANGL2, VTI1B, XCL2, ZNRD1, ATP6V1E1, GABARAPL1
Negative_12778	AR, DBI, F2R, GGH, KIT, ARHGAP5, ASIP, ASNS, ATG7, ATP5E, BAAT, BMPR1A, CCL28, CCNB1, CDK2, CDKN1B, CFL1, CHRM2, CMPK1, CMPK2, CYCS, DCTN1, DDX55, DTX1, DUSP14, FLT1, FLT4, HSD17B1, HSD17B7, HTR6, IGSF5, IL1R2, IL6ST, IRAK3, JAG1, KLRK1, L1CAM, LDHAL6B, LEPR, MAML1, MAPK7, MGLL, MPST, NCAM1, NOS3, OLAH, OR13H1, OR2A25, OR2W1, OR51L1, OR52K1, OR52W1, OR9A4, PARS2, PDGFD, PNPT1, POLR2G, PPP5C, PRKCB, RALA, RALBP1, RAP1B, SAT2, SESN1, SGMS1, SH2D1A, SIGLEC1, SLC12A2, SLC27A4, STEAP3, TUBA4A, VAMP4, WNT5B, XCL1, ATP6V1G3, MAPK8IP3, PRICKLE1, ST6GALNAC5, TNFRSF10C, TNFRSF12A
Negative_12779	GPT, MTR, SFN, AARS, ACTG1, ATP6V1D, CREB3L3, CYP4A22, DAAM2, DDB2, DHDDS, EFNA1, EPHA4, ERBB3, FGF9, FMO2, FPGS, HADHA, HGSNAT, HSD17B4, ICOS, IL9R, IRS2, LCMT2, MYH15, NAGK, NEU1, NUMBL, OR10H1, OR2T29, OR2T4, OR51A4, OR51E1, OR5D14, OR6A2, OR6C6, PANK3, PDE1A, PISD, PLXNA3, PMAIP1, POLE3, PPP2R5A, PRKCZ, RDH8, SEMA4A, SEMA4C, SLC2A4, SMC1A, SMPD3, TUBB3, EIF4EBP1, TNFRSF10D

Negative_12780	CFD, FYN, GK, HAL, HDC, LHB, MPI, RDX, ACO2, AGRN, AGXT2, ALDH1A3, ALDH3B1, ASCC3, B3GAT1, BNIP1, CAMK4, CAMKK2, CCL3, CD38, CD55, CDKN2D, CLDN5, CYP2U1, CYSLTR1, DCTD, DCXR, DGKZ, DPM3, DPYSL2, DVL1, EDN1, EGN3, EPHA4, FMO2, GGPS1, GJA1, GOSR2, GRB2, HES1, HMGCR, IDH3G, ITCH, KIR3DL1, MAP3K4, MTHFD1, NUDT9, OR10A5, OR11H1, OR13F1, OR2S2, OR52D1, OR8U1, ORC1L, PARVA, PDIA4, PKLR, PPM1D, PPP1R3C, PRKACB, PTSS2, PYCR2, RAF1, RALBP1, RDH5, ROCK1, RPN2, RPRM, SELP, STEAP3, SULT2A1, TNFSF18, TOMM40L, TPK1, TUBB6, WEE1, WNT9A, HSP90AA1, PAFAH1B1
Negative_12781	DCT, EPO, IHH, RDX, TFG, ALDH1A3, ALDOB, ARHGEF7, ARPC1A, ATP2A2, CACNA1S, CADM1, CALML6, CCKBR, CCL23, CLTA, COL11A1, COL1A1, CPT1A, CREBBP, CYP17A1, DHODH, DHRS4L2, DLAT, DLL1, DTYMK, ENO3, EPHB2, EPHB6, FCER1G, FGF3, GALNT5, GGT5, GJA1, GUCA1A, GYS1, IKBKG, IL18RAP, INHBE, IRAK1, LIFR, LYPLA1, MAP4K2, MCM3, MYH10, NFATC1, NRG3, OR10A7, OR10G7, OR1C1, OR1M1, OR51F1, OR52A5, OR52W1, OR5D13, OR6C1, P2RX3, P4HA1, PAX4, PDXK, PECAM1, PIP5K1C, PLCZ1, RAP1A, RRAS, SAT2, SEMA4G, SMURF2, ST3GAL6, STAT4, STX6, SULT1A1, TBXA2R, TFPI, TNFSF12, TNFSF18, TUBB6, TYK2, TYMS, ZFYVE9, ATP6VOD1, PNLIPRP1, TNFRSF12A
Negative_12782	ABO, C5, DCN, DLD, GSS, JUN, RET, WAS, ACYP2, ADSS, AHCYL2, AMDHD2, APOA5, ARSE, ATP6V1H, C4BPA, CACNB4, CACNG8, CADM3, CALML5, CCR4, CD28, CDC6, CHD8, COL4A1, COQ7, CRB3, CSH1, CTSS, CYP26B1, DIAPH1, DLL1, DPYS, DUSP1, EPHA4, ERBB3, FDFT1, FGF10, FGF18, FZD7, GALNT6, GNA15, GRM1, GUCY2F, HSD11B1, IFNGR1, IL10RA, IL25, IPMK, KITLG, MAPK1, MGAT5B, MITF, MYH13, NT5E, OR10H5, OR2K2, OR2T12, OR2T34, OR2T4, OR51D1, OR52A1, OR8D1, OR8H3, OXCT2, OXSM, PAFAH2, PDE1B, PDE3A, PDE9A, PIPOX, PKM2, PON2, PPP2CB, PRKAB1, PRPH2, PTPRJ, ROBO2, SCD5, SMAD2, ST3GAL1, ST3GAL4, SUV39H2, TAS2R41, TAS2R7, TUBB4, TYRP1, VAV2, VDAC1, ATP6V1B2
Negative_12783	FGB, IL4, LCT, LPL, ABCC8, ACAD9, ACOX2, ADAM17, ADIPOR1, ALG2, APC2, BTRC, CACNA1G, CADM1, CDIPT, CDK4, CDKN2C, CLDN10, CSF1R, CYP2U1, DOCK1, EPRS, ESAM, EXTL1, F2RL1, FASLG, FBP1, FMO1, FZD3, FZD7, GNAT3, GNMT, GP1BB, GRB2, IKBKG, IL12A, INMT, ITGA3, LARS, MAD1L1, MAML3, MAP3K4, MLLT4, OR2C3, OR2M2, OR2M3, OR2T34, OR4D9, OR4K2, OR52E4, OR52J3, OR52W1, OR5AK2, ORC4L, PDE2A, PDE7B, PMM2, PRKAR1B, PRODH2, PTGIS, RDH12, RPIA, RPS6KA3, SNW1, SOCS2, STX12, TICAM1, TRAF3, TRPC1, UGDH, ZIC2, HLA-DPB1
Negative_12784	GLS, GNS, IL4, MIF, ACTC1, ALOX12, AMPD2, APRT, ARNT, ARNT2, BCKDHB, CASK, CCL14, CDC6, CLDN7, CLDN9, COX10, CPOX, CXCL1, DGKB, DRD2, EHMT1, EPHA1, FGF1, GALE, GCNT2, GMPPB, GSTA2, GSTA4, HAP1, HEMK1, HSD3B2, ICOSLG, IDI1, IFNA6, IL13RA2, IL19, IL8RA, IMPA1, IRF9, ITGA4, LAMB3, LTB4R2, MARS, NFATC1, NT5M, NUMBL, OR10K1, OR1M1, OR2D2, OR2T29, OR5T2, PGAM2, PIGS, PLA2G4A, PLCB2, PLD2, PRKACG, PRKCH, PRPH, PSAT1, PSEN1, PTGES, RARA, ROBO1, ROCK2, SDC2, SEMA4A, SMC1B, SPRY3, SRGAP1, ST8SIA5, TAS2R7, TBXA2R, TFPI, TP53, TUBAL3, USE1, YWHAB, ST6GALNAC5
Negative_12785	AK2, BID, CSK, DDO, F10, LCT, LPL, AARS, ACOX1, ACPP, AKR1A1, APAF1, ARHGEF7, ARRB1, ASNS, ASPA, ATP6V1A, ATP6V1F, BDNF, CANT1, CASP6, CISH, CPOX, CREB1, CRLS1, CSF3, CYP3A4, DKK1, DUSP1, DUSP14, DUSP16, ENTPD5, FADS2, FLOT1, FLOT2, FUT5, GADD45A, GBGT1, GNB1, GP1BB, GPD1, GRHPR, HRAS, HSD3B1, IFIH1, IFNA2, IL10RA, IL17RB, MARS2, MCAT, MDH1, NAE1, NCF2, NEFL, OR10J5, OR13C4, OR2A5, OR2T3, OR51B4, OR51T1, OR5L1, OR9A2, PARVG, PDE1A, PGAP1, PHKA1, PIGP, PPP2R1B, RBPJL, RHOQ, SAT2, SESN2, SRGAP1, TNFRSF9, ULK1, UROC1, B4GALNT1, MAPKAPK2, TNFRSF17

Negative_12786	CEL, FN1, GPI, IL3, LIF, ACAA2, ADSSL1, ARSB, ATG12, BACE2, BCL2L1, CACNG7, CCL7, CES2, CKMT2, COMP, CYP27A1, DGKI, EPHB1, FBP1, FGD1, FLAD1, GFAP, GNAS, GRIA2, ICAM2, IFNGR2, IL13RA2, IL2RA, LTBP1, LTC4S, MAP2K6, MAPK10, MAT1A, MINPP1, NR5A2, OR2T11, OR4C46, OR51A7, OR5H2, OR8D1, PGK2, PIGN, PIK3R4, PLEKHA8, PLIN, PPA1, PPM1D, PPP1R3C, PRKAR1A, PVRL4, RASGRF1, RERE, SKIV2L2, SLC9A1, THBS2, WASL, WNT11
Negative_12787	DBI, MTR, NOG, OAT, ALG2, ANAPC4, AOC3, APAF1, ATP5J, ATP6VOC, BCAT1, CCR6, CDK7, CDS1, CNTN1, CRY1, CTNND1, CTSL1, CTTN, CXCR5, EDNRB, EPHX2, EPRS, FGF12, GLUL, GNRH1, ICAM2, IL8RA, ITPA, KIR2DL3, KLK3, LILRB3, MAN1C1, MDM4, MLYCD, NCOR1, OGDHL, OPLAH, OR1G1, OR1S2, OR4C6, OR5AU1, ORC1L, PRKAR1A, PRKG1, PTCH1, RXRG, SMAD4, SOCS5, ST3GAL4, STX1B, TAS1R2, TGDS, TRAF5, TUBB4, VDAC2, YWHAB
Negative_12788	C8B, FAH, KHK, PGF, ACTG2, ALAS2, ALOX15, ALPI, ARPC5L, ATG7, B3GNT4, BCL2, BNIP1, CACNA1C, CDC6, CNTNAP2, CYP26B1, DDOST, DLAT, DNMT3A, ECHS1, EDN1, ENTPD6, EPHA6, FCGR3B, GGT1, GNG3, GUCY2D, HIBCH, HLA-DRA, HSD17B4, ITGA2, ITGA3, KIR2DS4, MAGI1, MFNG, NEFH, NME7, OR13C5, OR4C6, OR52W1, OR5D18, OR5F1, OR5M9, P2RX4, PDPK1, PIGU, PNPO, PSEN1, RAB23, RAC2, SEMA4A, SPP1, STX7, TAS2R1, TBXAS1, TGDS, TNFRSF9, TRAF2, TUBA8, UGT2B11, WNT10B
Negative_12789	DCC, ID3, PGF, PLN, SHH, ACSM4, ADCY1, BHMT, BIRC2, BMP8A, CACNG2, CD34, CDC20, CHEK1, CKS1B, CNGA3, CSNK1G3, CYCS, DUSP6, ENTPD1, ENTPD4, ESAM, FASN, FMO5, GAD2, GALNT8, GNA13, GNRH2, GPAA1, HLA-DOB, IDH3B, IKBKE, IL18R1, INPP5B, LHCGR, LIPE, MYH13, NAGLU, NAT6, NT5C3, OR11H1, OR13H1, OR2B11, OR2B2, OR2T2, OR4A16, ORC5L, OXSM, PAX4, PDE4C, PDE8A, PGM1, PLXNA1, SAT1, SH3BP2, SHC1, SV2C, TACR1, TSC2, UGDH, UGT2B10, VAMP1, ATP6V1G1, PDCD1LG2, ST6GALNAC5
Negative_12790	FOS, PDC, PRL, AASS, ABAT, ALOX12, ARNT, ATF2, BCKDHB, BDKRB1, CACNA1D, CACNG2, CAMK2B, CD70, CES7, CLDN14, COQ3, CXCL2, CXCL6, CYCS, CYP4F2, DDX52, GAL3ST1, GNA11, GPT2, GRIA3, GSK3B, GUCY1A2, IL1A, LAMA4, MAML1, MAP2K3, MAP3K14, MAP3K7, MAP4K2, MAPT, MYH11, MYL5, NOD1, OR2G3, OR2M3, OR51F1, OR5F1, PAFAH2, PDE3A, PDGFRB, PTPRF, PYCR1, RPS6, SLC25A5, SLC9A1, SLIT2, TGFBR2, TOMM40L, TRADD, UPP1, ZIC2, ATP6VOD1
Negative_12791	CFI, CRH, ACYP1, AGXT, APOA2, ARPC5, ARSA, B3GALT6, C9orf95, CACNA1F, CCL15, CCND2, CD226, CD247, CD28, CDC14B, CHAD, CHAT, CNTN2, COL4A6, DFFB, EDA2R, EGLN3, EXTL3, FGF10, FZD6, GALNTL2, GDE1, GJA1, GLUL, GNA15, GSTM4, HLA-DOA, IDH1, ITGA4, KARS, KLRC1, MAOB, MAP2K7, MGAT2, MRAS, NAT2, NFATC3, NMNAT3, NOS1, NTF4, OR1L6, OR6B2, OR6C70, OR6Y1, P2RX6, PAFAH2, PARD6B, PGK2, PIGC, PMM1, PNMT, PPP1R1A, PRKCI, QARS, RDH8, RGS3, SELE, SESN3, SNAP23, STAT1, STK4, TAS2R38, TGFA, TRAF3, VAMP4, WNT1, WNT16, YWHAQ, ATP6V1C1, HLA-DPB1, PAFAH1B2, ST6GALNAC1
Negative_12792	C2, CKM, DLD, ITK, PAH, TYR, ABL1, ACAD9, ADCY6, AGMAT, AK3L1, ALDH3B1, ALOX15B, CASP6, CCL25, CD36, COL5A1, COQ3, CTBP1, DAD1, DEGS1, DGUOK, DPYSL2, EFNA1, EFN1, EFN2, EPHA4, ERBB3, FGF19, FOXO1, FPGS, FRA1, FUT3, G6PD, GAS1, GFPT1, GRM5, HCLS1, HIF1A, IPPK, IRS2, ITGA8, ITGB7, LALBA, LRP5, MAD2L1, MAN2A1, MAP2K3, MTHFD1, NLGN1, NLGN2, OR11G2, OR1D2, OR2A14, OR2D2, OR2G6, OR2L8, OR2T10, OR2Y1, OR4C12, OR52I2, OR7C2, PDE1C, PER3, PIGV, PLA2G2F, PLCD4, PRIM1, PRLR, PRNP, PTGS2, PTPN6, RAPGEF3, RDH8, RFWD2, RPS6KA6, RXRB, SFRP1, SLC2A1, SPTAN1, ST3GAL5, TAS2R16, TAS2R42, TAS2R9, TBK1, TJP2, TPM3, TRPM5, WASL, XCR1, XYLT2, HLA-DQB1, MAPKAPK2, PAFAH1B2, SERPINB5, TNFRSF10A, TNFRSF18

Negative_12793	AK3, ID1, MAX, ACTA2, AKR1C2, ALDH1A3, ASMT, ATF4, ATP2A2, B4GALT7, CARS, CDK6, CLOCK, CLTCL1, CNGA4, CNTFR, COL11A1, COL4A4, CRY1, CTBP2, DCTN1, DDX23, DDX51, DPM2, GAB1, GBA3, GLI3, GMPPB, HMGCL, ICAM3, IFIH1, IFNA2, IKBKB, KCNQ1, LEF1, LEFTY1, MGAT5B, MS4A2, NEU1, NFYC, NT5C1B, OR14A16, OR4K2, OR51L1, OR51S1, ORC6L, PAK1, PDK1, PEMT, PFAS, PIK3C2B, PIM2, PRKCD, PRKCZ, RAC1, RBL1, SETDB2, SLC25A4, SRD5A2, STX2, SUCLG2, TALDO1, TBXAS1, TICAM1, TNFRSF9, TSLP, TSTA3, UPRT, WNT10A, ATP6V1B1, HSD17B12
Negative_12794	AMH, APP, GSR, LEP, MPZ, MTR, ACAD8, ACSM5, ACTN2, AGPAT1, AHCY, ALG1, ALOX15, ALPL, AMPD2, CADM1, CASP7, CAV1, CCL20, CD86, CDH1, CLDN14, CLDN22, CXCL3, CYP2A6, DDIT4, DDX4, DERL1, DGKD, DOCK1, EPB41L1, FGD1, GALNT9, GJD2, GNRH2, HEXA, HSD17B8, IFNB1, INPP4A, INPP4B, ITPK1, ITPKB, KIR2DL1, LAMB3, LDHD, LTBR, MAD1L1, MAP3K8, MECR, MGAM, NFYA, NOS3, NOX1, OR10AD1, OR13C2, OR3A3, OR6K2, OR6M1, PGM1, PIGB, PLA2G3, PRKCH, RASGRF2, RRAS2, SGMS1, SLIT2, SNW1, SPRY2, TP53I3, TRAF1, UGDH, XCL1, MAPK8IP3, MAPKAPK2
Negative_12795	ASL, F9, FN1, ACADVL, ACTG1, ACVR1, ADCY3, ADCY9, ALOX12, ALOX5, ARPC4, ARSE, ATP5G1, B3GNT5, BAAT, BMP4, CALML3, CHKA, CNDP1, CNGA4, CNTFR, CREB5, CSF3R, CTNND1, E2F1, ENAH, ERBB3, ETNK1, EXTL3, F2RL2, FUT4, FZD1, GALNS, GPT2, GUCY1A2, GZMB, IL28RA, KNG1, LAMA3, LAMB4, LIMK2, MAP3K2, MMP9, MYH9, NCAM2, NEUROD1, NOD1, NUDT9, OR2T10, OR52A5, OR5D16, OR9Q1, PARD6A, PFN2, PIK3CA, PLAUR, PRKAR1A, PTAFR, PYCRL, RBX1, SMC1A, TBL1XR1, TKTL1, TRAF1, HLA-DPB1, MAPKAPK5, PDCD1LG2
Negative_12796	AK2, LIF, AGRP, ALDH1L1, ALPL, ANAPC2, BMP5, CCND2, CDC20, CLDN8, CREB3, CYBB, DTX3L, EHMT2, ETNK1, F2RL1, FASN, FUT6, GADD45B, GATM, GMPS, GRIN2C, HNF1A, HTR7, IFNB1, IL10RB, IL22RA1, IL23R, IL2RG, INHBB, ITGA4, LIPG, MDM2, MPDZ, NADK, NCF1, NOX1, NRG4, ONECUT1, OPLAH, OR4F17, OR51V1, OR52I1, OR6C4, OSMR, OXTR, PAPSS2, PDGFC, PHKA2, PRKAR2B, PRKCA, RAPGEF2, RFXAP, SLC33A1, SNAI1, SPI1, SPRY2, SRD5A1, TRAF2, TSNARE1, VNN1, YES1
Negative_12797	CGA, CGN, F2, ILK, LHB, ME1, SPN, STS, ALDOB, ARPC4, CCR1, CD19, CDK6, CDMT, CSF1, CTPS2, DLL1, FARSA, FOXO3, GCLC, GMPPB, GUCY1B3, HHEX, HSD3B7, IL1RAP, IL25, ITGAV, JAG2, LTBP1, NFYA, NTRK2, OR1E1, OR52N4, OR5H2, OR7G2, OR8B12, PAK1, PON3, PPAT, PPP2R2C, PRKAR2A, PRKCH, PTGS2, SPRED2, ST3GAL2, TAS2R10, TBXAS1, TGFA, THBS2, THBS4, UNC5D, VAMP4, WASF3, HLA-DRB4, SERPINC1
Negative_12798	C7, CBS, IL6, IL8, ACHE, ADCY8, AK3L1, ALPP, ATP6AP1, BMP7, CDH15, CHST12, CSH1, CXCL16, DDX4, DDX50, DHODH, DHRS4L2, EFNA3, EHMT2, EIF4E2, FGF7, FOXA2, FUT3, GDF6, GNAI2, GPT2, GUCY2D, HAGH, HES1, HSD11B1, IFNW1, IL12A, IL15, IL19, KAT2A, KRAS, LLGL1, LPAR1, MIOX, NCR2, NFATC3, NFKBIE, OR10A5, OR10G7, OR1J1, OR2C3, OR2F2, OR2L3, OR2T10, PDE1C, PDE3B, PLAU, PLTP, PMAIP1, PPP1CA, PPT1, PRKAG1, PRKCH, PSENEN, PTGES2, PVRL4, RBPJ, RHOA, RIPK1, RRM2, SELE, SEMA3A, SKIV2L2, SOCS5, STAT3, SULT1A2, TGFA, THBS2, UGCGL1, VTI1A, WASF3, ATP6V1G2, ST6GALNA C1
Negative_12799	F7, IL6, ME2, XDH, ABCC8, ACADVL, ACO2, ADCY6, ALPPL2, APOA1, ARG1, BHMT, CADM1, CRKL, CSDA, CSF3R, EFNB1, EGLN3, EPRS, F11R, FBP2, FLAD1, FUT4, GALNT3, GBE1, GCH1, GFPT1, GNAZ, GPAM, HSPA8, IDH1, IFNA5, IFNGR2, IQGAP1, KAT2A, KLKB1, MMP2, NANS, NMNAT2, NR1H3, NRCAM, NT5C1A, OGDH, OR2A42, OR2F2, OR2K2, OR2T6, OR3A2, OR52M1, OR5B12, OR6Y1, P4HA3, PCK2, PDE2A, PIGX, PIP4K2B, PLAUR, PTGS2, RBPJL, SH3BP2, SHISA5, SKIV2L2, SPI1, SPTAN1, SRD5A1, SSH3, ST3GAL5, STAT5B, STX12, STX16, TD02, TGFB1, TRHR, UGT2B28, ULK3, B3GALNT1

Negative_12800	C1S, TEC, AADAT, AASDH, ACADM, AMPD3, ARHGEF2, ARRB1, ATF2, ATG7, ATP5D, ATP5I, BMP5, CACNB4, CALML5, CD274, CD79A, CDK4, CNGA3, CRHR1, CRLF2, CSNK1G3, DAPK1, DAPK3, DDX55, EGLN3, EIF4E, ENTPD5, FABP3, FZD10, GAD2, GPT2, HLCS, HPSE2, HSD17B1, HTR7, LPAR1, MAN1C1, MAOB, MYH1, MYLK2, NCSTN, NEU4, NUMBL, OR10K1, OR4E2, OR4F5, OR51A4, OR52I1, OR5AR1, OR6F1, OR7G1, OR8D4, OR8I2, PARVA, PCK1, PDX1, PER1, PFN4, POLD4, POLR2J, PPM1B, PYGM, RASA1, SEMA4F, SLC25A4, SPRY3, ST8SIA5, TAS2R10, TAS2R49, TOMM40, TSNARE1, UBE2L6, UPP1, VARS, WNT2B, XIAP, B3GALNT1
Negative_12801	GH2, LSS, MSN, ABI2, ACMSD, AGPAT3, ALDOC, ANGPTL4, BACE1, BDH2, CADM3, CCNE2, CHIT1, CHST11, CRKL, CSNK1A1, CXCL2, CYP1A2, DAPK3, DNMT3L, DPM2, EGLN1, EXTL2, F2RL2, IDH3G, IDUA, IL18, INPP5B, ISYNA1, MICA, MTMR1, NAMPT, NRG4, NTF4, OR13D1, OR4A16, OR51B5, OR5I1, PFKFB4, PIGF, PPID, PTPRZ1, RPE65, SGPP2, SOD1, TAP2, TLR9, TOMM40L, TSHB, TSNARE1, ATP6V1G3
Negative_12802	AGL, C7, GP6, IL3, LSS, SMS, SRF, ACADSB, ADIPOQ, ALDH5A1, ARPC1B, ATP4B, CACNG7, CAMKK2, CCNB1, CSDA, CSF3R, CYP2J2, CYP3A7, DDX41, DHDH, DUSP9, ETNK2, FOXA2, GALNT5, GALNTL2, GUCY1B3, HAGH, IFNA5, IL17RB, ITGAL, LTBP1, OR1D5, OR2T3, OR4K2, OR4M2, OR5I1, PEMT, PLA1A, POLD3, PRKACA, PRKCH, PRPH2, RPS6KA6, SENP2, SIGLEC1, SMAD4, SMARCA5, SPRY4, TP53, TPMT, WARS2
Negative_12803	CFH, HDC, NPL, PDC, ACSL1, ADH1B, APLP1, APOA2, ATP4A, B3GALT4, BET1L, CACNA1A, CACNB1, CARS2, CDC14A, CHRNA7, CHSY3, CLDN15, COL3A1, CXC L2, CYBB, CYP1A1, FGF14, FUT1, FZD5, GALE, GCH1, HAP1, HARS, IL20, IL2ORA, IL2RA, LIPF, MBL2, MFNG, MGST3, MMP9, MTFMT, NUDT12, OGDHL, OR13H1, OR1A2, OR2T34, OR4A5, OR5AU1, OR8B12, PAX8, PIGF, PIGO, PIGW, PRKCG, RPS6KA6, SETD7, SOCS2, SPHK2, TACR2, TGFB2, UNC5B, WNT5A, YARS, ATP6V1B1
Negative_12804	CR1, IL3, KIT, MAX, A4GALT, ABLIM2, ACAT2, ALDOA, ALS2, APOE, ARD1A, ATP5A1, CACNA1C, CAMK2D, CES2, CFL1, CYSLTR2, EDAR, ENTPD4, EPHB6, FZD4, GALK2, GUCY1A2, HBEGF, HRAS, IFNK, KARS, LAMB4, LHCGR, MAP2K4, MGST2, MTHFR, MYH11, NRAS, OGDH, OR1M1, OR4N2, OR52B4, OR56A1, OR5B12, OR6Y1, OR8U1, PAX6, PDE1C, PIGB, PLOD3, POLE3, PPID, PPP3CA, PRKAR2A, PRKAR2B, PTPRJ, SCLY, SKIV2L2, SOS2, SPRED2, ST3GAL2, STAM2, STX16, SUCLG2, SULT1E1, TACR2, TAP2, TAS2R48, TAS2R9, ULK2, UMPS, WNT10B, WNT3A, ATP6V1C1, ATP6V1E1, ATP6V1G3, CACNA2D1
Negative_12805	F8, GK, HDC, ITK, LSS, PRL, TNF, ACAD9, ADRB3, AKR1C1, ALDH1A3, ALDH3B2, ALG3, ALG8, ALPL, APOC3, ARHGEF4, BMP5, BNIP1, CANT1, CCL5, CCR5, CDKN2B, CLDN17, CLDN3, CLDN4, CSH1, CYP19A1, DAD1, DKK2, DRD2, ENPP2, FOXA3, FSHR, FZD8, GAB1, GART, GPX7, GSTM5, HSD11B2, IARS2, IFNAR1, IFNAR2, IL6ST, ITGB8, LIAS, MAML3, MAP3K4, MAPT, MMP9, NKD1, NKX3-1, NOTCH1, OR10A6, OR4K1, OR6X1, OXCT1, PAK2, PERP, PIK3C2G, PIK3C3, PIP5K1C, PNLIP, POLR2H, POLR2I, PRKCE, PRNP, RDH16, RHOD, SAT2, SEMA3B, SEMA4F, SETD7, SFRP5, SHC2, SLC2A4, SUCLA2, TNFSF11, TNFSF4, TOMM40L, TPM3, UBA1, VDAC1, ATP6V1E1, PNLIPRP1, PPARGC1A

Negative_12806	EPO, HK3, NGF, SI, SRM, TEC, ACP5, ADRA1B, AKT1, ALDH6A1, ALDH9A1, ALG10B, ANAPC7, APAF1, ARAF, ATP5G1, ATP6V1H, BMP4, BMP8A, BUB1, CALML6, CAMK2A, CAMK2D, CCDC6, CCL14, CCL15, CCL4, CHUK, CSNK2A1, CXCR4, CXXC4, CYP2A13, CYP3A5, DAD1, DHCR24, DTX1, DUSP3, EARS2, ETNK2, FASN, FGF10, G6PC2, GNPDA1, GP1BA, GRAP2, GRIN2D, HMOX2, IRF9, KLKB1, LAMA3, LEF1, LFNG, LYPLA1, MAN1C1, MAP2K6, MAP3K11, MOV10L1, MYH6, NFX1, NUDT12, NUDT9, OR2A12, OR2H1, OR3A2, OR51B4, OR52I1, OR5V1, OR6C3, P2RX4, PAK2, PCYT1B, PDHA1, PDK1, PERP, PGAP1, PGM2, PIK3R1, PLK1, PPP1CA, PPP2CB, PRKAR2B, PRKCZ, PRKX, RPSA, SEMA4F, SNAI2, ST3GAL2, STX16, TAP1, TUBB4, UBE2K, VAMP4, VANGL1, WASF2, XCR1, ATP6VOD2, SLC25A31
Negative_12807	DCK, FAS, FES, FUK, KHK, ABP1, ACPT, ADH5, ADH7, AGRP, ALOX15B, ARHGEF7, ARNT, BRAF, CCR3, CD247, CD48, CD82, CNTF, COL5A2, CUL1, CXCR5, CYP2A7, DDX52, DGKB, DLL4, ERBB2, EXT2, FGF17, FOXA3, GALNTL1, GART, GCLM, GLI2, GNA14, GNB3, HAGH, HNF1A, HNF4A, IDH3G, IFIH1, IL12B, ITGAE, KIR3DL1, KIR3DL3, MAGI1, NAT1, NFYB, NSD1, OR10Q1, OR10X1, OR4F5, OR4X1, OR52A1, OR52K2, OR6A2, OR8K5, ORC2L, PIAS2, PIP4K2B, PLCD4, POLR2H, PRKAR2A, RARS2, RPS6KA5, SELL, SEMA3E, SLC12A2, TACR2, THBS4, TRAF6, VANGL2, XIAP, B3GALNT1
Negative_12808	DCC, ID4, ACSS1, ALG9, ANGPTL4, ATP6VOC, BUB1, CASK, CCNB1, CCNB2, CD22, CDKN2C, CSNK1G1, CSNK1G2, CYP2B6, CYP2C19, CYP4A22, DCTN1, DIAPH3, DLST, ENPP1, FGF20, GYS1, HEXA, INPP1, KDSR, LIMK1, LYPLA1, MGST2, NAT2, NEU4, NGEF, OR10Q1, OR3A3, OR51G1, OR52W1, OR5D13, PEMT, PIGA, PLCB1, PLXNA1, POLR2A, PRKY, PSPH, PVRL3, RAP1B, RASGRF2, SCP2, SLC2A2, SQLE, STK11, TAS2R8, TLR2, TRAF2, WARS2, ARHGEF12, ATP6VOA4, ATP6V1C2, CACNA2D4, MAPKAPK2, TNFRSF6B
Negative_12809	FGG, SDS, UBB, UBC, WAS, ACAT2, ACYP2, ALG10, ANGPTL4, APPL1, ARRB2, ATP6V1A, BCAR1, CAMK4, CCL15, CD36, CD8B, CHRM1, CSH1, CXCL9, CYP11B2, CYP2J2, DDHD1, EP300, FARS2, FZD2, GADD45A, GAS1, GNA13, GNAS, GNAZ, GNPDA2, GSTA5, GUCY2D, HMGCS2, HTR7, ICAM3, IDH1, IDH3A, INPP1, ITGB7, LICAM, LDHC, MAP3K7, MCCC2, MYH13, MYLK, NAGA, NEFM, NPR1, OR13D1, OR1C1, OR2T10, OR4K1, OR4K17, OR4S1, OR51B2, OR51B4, OR51E2, OR52L1, OR5P2, OR6F1, PAK4, PER1, PGM3, PHPT1, PIGQ, PIK3C2B, PNMT, POLR3G, PPM1D, PSME2, PTPRJ, PYGM, RALGDS, RFXAP, RHOQ, RPS6KA3, RRM2B, SAR5, SEMA3C, SLC25A6, SMPD2, SOCS5, SULT1A1, TCF7, TRAF1, TUBA4A, UGT2A1, UNC5B, VARS, VASP, WNT7A, XCL1, YWHAZ, ATP6V1C2, GABARAPL1
Negative_12810	CFD, MPL, MVK, RB1, SP1, TFG, AARS, ACYP1, ADAM10, ADH7, ALDOB, ALG10, AMDHD1, ARHGEF4, ASRGL1, ATP5J, B3GNT2, CALML5, CCL13, CCL25, CHDH, CKS1B, COL4A6, CTNNA1, CYP2D6, CYSLTR2, DAPK3, DGKA, DUSP2, EVI1, FGF12, G6PC, GLI1, GNAI3, GRHPR, HLA-DMA, HSD11B1, ICAM2, IFNB1, IL12RB1, IL18RAP, ITGAL, KYNU, LGMN, MAML3, MAN1A1, MAP2K5, MNX1, NAGK, NOD1, NRXN3, OR4A15, OR52D1, OR7D4, OR9A4, P2RX4, PARD6B, PDHA1, PIGB, PIGN, POLR3K, PPA1, PPP2R2D, PSEN1, PTGIS, PTK2, PTPRR, RHOQ, SLC27A1, SOS2, STX1A, TUBA4A, UGCGL1, ULK2, UROC1, VASP, C1GALT1C1, PPP1R12A, SERPINC1, SERPIND1, ST6GALNAC6
Negative_12811	GK, PDC, SHH, ADH1A, ATG12, BAAT, CBR3, CD82, CHEK1, CLCF1, CTF1, DAPK3, DDX51, E2F1, F2RL1, FADS2, FGF13, FLAD1, FLT4, GALNT13, GGT1, GMPR, GNMT, GNRH1, GRAP2, IARS, IPMK, ITCH, ITGAD, MTHFD2, MTHFR, MYH14, NAGLU, OR2T8, OR4K15, OR6F1, OR7A10, OR8H1, PDX1, PER3, PI4KB, PIK3CA, PIP4K2B, PMM1, PPOX, PPP2R1A, SOS2, STX1B, VANGL2, WNT9A

Negative_12812	CAD, SPN, ACYP2, ALAS2, AREG, ARHGEF6, ATP5J, CDC6, CFTR, CNGA4, COMP, CTBS, CXCL5, CXCR6, DAPK2, DNMT3A, EPHX2, FGF23, FGF3, FOXA2, GSTA3, HBEGF, HIBCH, HMOX1, IDH3B, ITGA8, KAT2A, LEF1, MGAT4B, MTAP, MYH15, MYH2, MYH7B, MYL2, NADSYN1, NCAM2, NSD1, OR10C1, OR13A1, OR14C36, OR1J1, OR1J4, OR2M3, OR3A3, OR51G1, OR52H1, PAK3, PAK4, PIP5K1C, PPP2R5B, PRSS1, RDH11, SELL, SETMAR, SLC2A2, TYMP, YWHAE, ATP6V1E2, TNFRSF12A
Negative_12813	AMT, CAT, LAT, SMS, ABI2, ACYP2, AHCYL2, ARHGAP5, ATP50, BDH1, CACNG8, CHIT1, COL4A4, CTNND1, CTSL1, CYP11A1, DFFB, DGKD, FECH, G6PD, GANA B, GCNT2, GIT1, GNAQ, GRIA2, HDAC1, HSPA8, HTR2B, IAPP, IDI2, IL10RB, IMPA1, ITGA7, LAMA4, LCMT2, LIPT1, MAP2K4, MMP2, NAT2, NCOR1, NSD1, OPLAH, OR10A2, OR10AG1, OR10H1, OR1S1, OR2D2, OR2K2, OR2T29, OR2Y1, OR52A5, OR52R1, OR8U1, PI4KA, PIPOX, PMM1, PTPRM, RAP1A, RASGRP4, RHOQ, RPN1, SELP, SKP1, SLC9A1, SSH3, STAT2, STX5, TAS2R42, TGFB2, TP73, TSC2, VAV1, YOD1, ATP6VOA2, HSD17B12, KIR2DL5A
Negative_12814	GCK, ID4, OSM, RPE, ABLIM2, ALDH6A1, ALG13, ANAPC5, APPL1, ARHGEF1, ARNT, ARPC1B, ARPC3, ARSA, BMP2, BMP4, CACNA1D, CACNG4, CAMK2B, CBLB, CCL11, CD19, CEBPA, CXCR5, CXXC4, CYP26A1, CYP2D6, DKK4, DPYSL2, EFN B3, EIF4E, ENPP1, GPD1, HIBADH, IFNA4, IFNGR1, IL13, IL2RG, IRAK3, ITGB2, LDHA, MAD2L1, MDH2, NAE1, NAGK, NCOR2, NT5C1B, OR1L1, OR2AE1, OR2M4, OR2T29, OR51I2, OR51V1, OR56A1, OR9A2, PCNA, PCYT2, PFKP, PIGF, PIP5K1A, PLCG1, PLXNA1, PNMT, PTPRF, ROBO1, RPIA, RPS6KA4, SDC1, SELPLG, SLC12A2, SMARCA2, SPCS1, STX12, TAS2R10, TAS2R7, TLR9, TYK2, UGT2B7, WNT10A, EIF4EBP1, HSP90AB1
Negative_12815	ADK, AR, BTK, CAD, F3, IDS, IL9, MVK, PC, SHH, SRF, ACOT12, ACSS3, ACTN1, ALAS2, ALG2, AMY2B, APOA5, ASAH1, ATN1, BET1, BMP2, BPGM, C3orf10, C9orf95, CCL3, CD8A, CDC20, CDK4, CLDN20, CMAS, CTNNA2, CYP2A6, DFFB, DKK4, EPAS1, EXTL1, GIT1, GNAS, IFNA21, IL20RA, KLRD1, LYPLA1, MAP3K8, MYLK3, NLGN3, NOX3, OR10P1, OR1I1, OR4C6, OR51S1, OR52R1, OR5R1, OR6C75, OR8I2, PCCA, PDE4C, PIP5K1B, PLXNB2, POLE2, POLR2K, PRKCI, PRODH2, RPS6KA5, SMC1B, TAS2R1, TSLP, ATP6VOE1, ATP6V1B2, MAP3K7IP2, PRICKLE1
Negative_12816	AK1, CKM, DBT, GSS, HYI, KDR, SDS, TH, AARS, ACADVL, ACTN2, ACVR1, ADSSL1, AGXT2, AHCYL2, AKR1C2, ALAS2, ARD1A, ATP5C1, B3GNT2, BBC3, BST1, CCL11, CCNA2, CDC26, CDS2, CNTF, CNTFR, CSNK1D, CTBP1, CYP26C1, CYP2S1, CYSLTR2, DAXX, DDOST, EIF4B, ENTPD8, ERBB2, FMO2, FRAT1, GFPT2, GNAI2, GNPDA1, HNF4A, ICAM2, IDUA, IL17B, IRF7, ITCH, ITPK1, KCNQ1, KLK3, KLKB1, LGMN, NCKAP1L, NGEF, NR5A2, OR2M7, OR2T33, OR5AN1, P4HA2, PAK2, PFN1, PFN2, PFN4, PLA2G1B, PLXNB2, PNPT1, POLR2L, PRKAB1, PVRL3, RHOQ, SKP1, SMAD7, SMARCA2, ST3GAL1, STMN1, TGDS, TGFB3, TNFSF18, TRAF5, TUBB4, ULK3, UXS1, VDAC1, YWHAH, CSGALNACT2
Negative_12817	ABO, C3, IL9, NNT, RB1, RFK, ABP1, ACAA1, ACAD9, ACSS3, ALDH4A1, CACNA1B, CCL25, CD55, CHST11, CNTNAP1, CSF1, CSH1, CTPS, CUL1, CYP17A1, DDX51, DNMT1, DUSP7, ENTPD3, EPRS, GNAT3, GNG12, HARS, IAPP, IFNA5, IL1ORA, IL1R1, JAM2, LIMK1, MAP3K14, MAP3K5, MAPK9, NCSTN, NFKBIA, OR2L13, OR5M3, OXCT2, PAICS, PARVB, PDE10A, PIAS4, PLA2G5, POLR2G, PRKACA, PRK CZ, PRKG2, PSEN1, QARS, RAPGEF2, RASGRP4, RBPJ, RENBP, RPS6KA2, SEMA3B, SLC9A1, SMARCA2, SMPD1, STAM, TGFA, TLN2, TNFSF9, ULBP2, VARS, WNT16, ATP6VOA2, CSGALNACT1, GABARAPL2, PAFAH1B3, PDCD1LG2, SERPINE1



Negative_12818	GH1, A4GALT, AGMAT, ALDH5A1, AMPD1, AMY2B, ANAPC10, APOE, AREG, ATF4, ATP12A, B3GALT1, CD55, CSNK1D, CSNK1G3, CYP11A1, CYP2S1, DDX18, DGKG, DGUOK, GALNT12, GATM, GDF7, GRM5, GSK3B, LCAT, LPAR1, MGST1, NCAM1, NRXN3, OR10G7, OR52H1, OR5D13, OR5H2, PIGP, PIM1, PRLR, RARS, RUVBL1, SEMA4C, SGMS2, SORBS1, ST3GAL6, TAS2R4, TJP3, UGP2, VAV1, WHSC1, ALDH18A1, MAP3K7IP1
Negative_12819	AUH, CAT, CBS, DBI, DDC, GPI, OSM, PTS, TNC, AGRP, AK3L1, ANAPC1, ANAPC4, AREG, ARG2, ARPC4, ARPC5, BCKDHB, C9orf95, CACNB4, CD80, CDKN2D, CHST13, CLCF1, CLTCL1, COL5A2, CPOX, CTBP1, CXCL12, CXCR6, DAG1, DUSP8, ENTPD7, EPHX1, ERBB2, FM05, FOXA3, FPGS, GCDH, GCNT1, GLB1, GNG3, GUCA1A, HCLS1, IL13, IL22RA2, IRF3, ITGAX, JAK2, LRDD, MAPT, MASP2, MIOX, MYH11, NARS, NTRK2, OR10V1, OR13C3, OR13C8, OR4F6, OR51I2, OR56A3, OR5I1, OR5L2, OR6S1, PCYT1B, PDE10A, PFKFB4, PFN3, PLCD3, PLD2, POLR1B, POLR2I, PON3, PRKAG3, PRKCZ, PYCR1, RHEB, RPE65, RRM2, SEMA3C, SETD1B, SH2D1A, SOD1, STK11, SUV39H2, TBL1XR1, TGFA, THBS4, TRAF4, TUBA1B, TYRP1, ZNRD1, MAPKAPK2, SERPING1, ST6GALNAC4, SUV420H1
Negative_12820	C3, C8B, DCN, FGB, RB1, UBC, ACADM, ACADSB, ACMSD, ADRB1, ALCAM, ALDH1B1, ALG5, APOA2, ASS1, B4GALT1, B4GALT3, BBOX1, BDH1, C1GALT1, CCL20, CDC42, CKS1B, CLDN7, CMPK2, COL4A2, COL4A6, CSDA, CSF3R, CTSS, CYP4F2, DARS2, DGKH, DPM1, E2F1, EFNA2, ENO1, FLT1, GALNT1, GLUD1, GMPR, GSTM3, GUCY1A2, H6PD, HADH, HHIP, HSPA2, IFT57, IL20, ITGA2, ITPK1, KIR2DL2, KIR2DL3, LEPR, MAN1C1, MGAT3, MMP14, NFKB2, NPAS2, OR10K2, OR13C5, OR2F1, OR4F6, OR4S2, OR51Q1, OR7G1, OR8H2, OR8U1, PARD6G, PDXP, PHKG1, PMM2, PPP2R1B, PPT1, PRKACA, PRPS1, PTK2, RASGRP1, RERE, RFW D2, ROBO1, RRAS2, SKIV2L2, STAT2, STX4, SULT2B1, TAS2R48, TLR3, TRHR, TYRP1, VASP, XCR1, ZMAT3, MAPKAPK2
Negative_12821	AK1, BAX, F2R, FER, IHH, NF1, PGF, TNF, ADRB2, ALDH3A2, APH1A, APOC3, APOE, ARPC1A, AXIN1, CACNA1S, CD8A, CDC16, CLDN8, CRHR1, DAD1, DAPK1, DARS2, DDOST, DEGS1, DHDDS, DUSP9, EDNRB, EGLN3, FABP3, FARS2, FBP1, FGF6, FUT2, GCNT2, GMPR, GNAL, GNAQ, GUCY2F, HIBCH, HPSE, IL21R, INADL, ITGA7, ITGAD, ITGAE, KNG1, KRAS, MGST1, MPDZ, NADSYN1, NAGLU, NLGN3, OLR1, OR10K1, OR1N1, OR4N2, OR4S2, OR52H1, OR52W1, OR5B12, OR7G3, ORC4L, PARVA, PDE3B, PI4KB, PIGS, PLA2G10, PLAUR, PNPLA3, PNPLA4, PPAP2B, PSPH, PTK2, PTPRC, RAP1B, RPS6KA2, SC4MOL, SLC25A6, SPI1, SPRY3, TAS2R16, TLN2, TUBA1A, TUBA4A, UAP1, MAP3K7IP1, SUV420H2, TNFRSF17
Negative_12822	ACSL3, ALG2, ALOX15, ATP5H, ATP5J, CACNB4, CEBPA, CHPF, CTF1, CYP2C8, EDN1, ELK4, FABP3, FZD2, GNA13, HEXA, IPMK, JAK3, LDHAL6B, MAML3, MC M3, MGAT5B, NADSYN1, NEGR1, NOTCH3, NT5C1A, NT5C2, OR11H4, OR1F1, OR52K2, OR6B2, OR6C74, OR6K2, OR6N1, P2RX2, PDGFC, PGK1, PIAS2, PIGV, PRKCA, PTK2, RASGRP1, RBKS, SARS2, SDHD, SLC2A4, ST3GAL1, THY1, TPH2, UGDH, XCR1, CSGALNACT1, HSP90AA1
Negative_12823	BTC, C8B, DDO, FER, IVD, MAX, TKT, ABCC8, ACADL, ADH1A, AGPAT3, ALDH3B1, ALPL, ASMT, ATP13A2, AXIN1, B4GALT4, BCL2, BUB3, CALML3, CAMK4, CD226, CD48, CDKN2C, CFTR, CMAS, CREB3, CTNNA3, CYP4F2, DGKE, DUSP7, EFNA1, ENO1, EXT1, F2RL1, FARSA, FGF2, FGF23, FGF4, FRAT2, GGT1, GLG1, G LUL, GMPPB, GNA13, GSTA5, GSTZ1, IL12RB2, IL13RA1, IRF3, IRF5, ITGAD, LAMC3, LTC4S, MAP2K6, MAP3K11, MAT1A, MICA, MPP5, MYH6, NFYA, NNMT, NRG4, OR10P1, OR13C9, OR1N2, OR52B4, OR5A2, PAK1, PDE6G, PDHB, PGK1, PGK2, PLA1A, PLXNB3, POLR3K, PON1, RFNG, RFWD2, SLC27A1, TGFBR2, THBS1, ULBP1, UNC5C, VASP, WNT16, XYLB, CACNA2D2, SERPING1

Negative_12824	C1S, FGB, HK2, MIF, MPL, NF1, NPY, PML, TPO, ACAD8, ACVR2A, ADRA1D, AGP AT2, ALG2, AMDHD2, AOC2, APOA1, ARAF, B3GALT6, C1QC, CCND2, CD70, CRE B5, CTPS2, DFFB, DPM3, DVL1, EPAS1, EPHA7, FGF1, FUT8, GFPT2, GUCA1C, HSD3B1, IBSP, IDI1, IGF1, IGSF5, IL17A, IQGAP3, ITCH, ITGA1, ITGB8, L AMA3, NAT5, NFASC, OR1J1, OR1J2, OR4C6, OR51L1, OR5AC2, OR6B2, OR9Q1 , ORC2L, PARVB, PCYT1B, PLEKHA8, POLD3, POLR1A, PPP2CB, PRKAG2, PTGD S, PTPN6, PVRL2, QPRT, RAB5A, RAC2, RDH8, RETSAT, SETDB1, SFRP4, SLC2 A1, SOCS1, STK3, STK36, STX5, TAS2R1, TAS2R40, TAS2R5, TGFBR1, TUBA8 , WASL, WNT16, XCL2, XCR1, CACNA2D3, CACNA2D4, SUV420H1, TNFRSF10B, TNFRSF11A
Negative_12825	ADC, BTC, DBT, GAA, GH2, HGF, TPO, ACAA1, ACYP2, ADH6, ADSL, AGXT, ALPI , APAF1, ARSD, B4GALT7, BDKRB2, BLVRA, CACNA1E, CASP9, CBR1, CCL20, C HST13, CLCA4, CLDN5, CNGB1, CXCR4, CYBB, CYP2S1, EPHX1, FBP2, GATM, G NAI2, GNAO1, GNRH1, IFNGR2, IL20RA, JUND, KIR3DL3, KLRC1, KLRC2, KLR C3, LIAS, LYPLA2, MAN2A1, MAPK11, MMP9, MPST, NKD1, NME4, ODC1, OR10C 1, OR10G3, OR4A16, OR4F17, OR52E6, OR6B2, OR6C1, OR7A17, PDGFD, PDPK 1, PIK3CA, PLA2G10, PLD2, PLXNC1, PPP3R1, PRIM2, PRKG1, PROS1, PTAFR , PTPRB, PTPRJ, RARA, RASGRF1, RASGRP4, RIPK1, RPS6KB1, RUVBL1, SKP2 , SNAI1, SNAI2, SORD, SPAM1, ST3GAL4, SUCLG2, TACR3, TAS2R60, TGFBR2 , THBD, TJP3, TPK1, TYMS, UCK2, VASP, YARS2, ATP6V1E1, C1GALT1C1
Negative_12826	C8A, CGN, GK, ILK, MAG, MSN, PLN, ABLIM2, AQP7, ATP6V1F, CCKBR, CD46, C LDN20, CMPK2, COX10, CSNK1D, CTSG, CYP11A1, DDX55, DHRS3, DHRS4L2, E 2F4, EPB41L3, EPHX2, EREG, EVI1, FGF20, FZD6, GRB2, GUCY2C, GZMB, HCL S1, HTR2C, IFNA17, IL10RB, INHBB, KIR2DL3, LALBA, LAMB3, LIAS, MAML3 , MAP3K11, MINPP1, MYH6, OR10S1, OR1D5, OR2W1, OR6C2, OR7C2, PARS2, P DE2A, PGM3, PLXNB3, POLA2, PPAT, PPP1R3A, PRKAB2, PRPH, PTGER3, PTPN 6, SARDH, SEMA3G, SLC2A2, SMAD5, ST6GAL1, TAP2, TAS2R16, TYK2, UCK1, ULK2, YWHAQ, TNFRSF11A
Negative_12827	CD6, FGB, GHR, PML, SMS, TNC, ABLIM1, ACHE, ADH7, ADRA1B, AGPAT6, ALDH 3B1, AQP7, ARSA, ATP5F1, C4BPA, CCL22, CCR3, CD8B, CDC2, CDH5, CLDN2, CREB3, CSNK2A1, DHRS4, DIAPH3, DPAGT1, DPYS, EDAR, ENAH, ENTPD4, FGF 7, FGFR4, FMO4, GBE1, GCNT2, GDF5, GUCY1A3, HEMK1, HTR6, INMT, ITGB7, LDHAL6B, LILRB3, LRP5, LYZL1, MAGI1, MAP4K3, MAPK3, MITF, MS4A2, NOX 1, NT5C3, OR2A12, OR2D3, OR4D11, OR52I2, OR8I2, PARD6A, PARD6G, PDHA 1, PKLR, PLXNC1, PPP2R2D, PRNP, PRPS1, PSME3, PTGDS, RBPJ, SH2D1B, SO X17, SPRED2, SULT1A2, SUV39H2, USE1, XCL2, ZMAT3
Negative_12828	C1S, F12, GPI, GSN, NOG, ADSL, ALDH5A1, AMY2A, ANGPTL4, BIRC5, CASP6, CHRM5, COL5A2, COQ3, CRKL, CXXC4, EGFR, FLOT1, FMO2, FZD6, HMGCL, HNM T, HPSE, IFNAR2, IFNG, IL10, IL17B, IL4R, ITGA10, KLRD1, MDM2, NAGK, N CF2, NFE2L2, OR10H3, OR1F1, OR2D3, OR52J3, OR5J2, OR5P3, OR6K2, OR7G 3, ORC3L, PDGFA, PER2, PIGC, POLA2, PON1, PPP2R5C, PTK2, RAP1A, RFWD2 , SELE, SFRP1, SH3BP2, SHC1, SHMT2, SOCS4, SPCS1, STAM2, SYNJ2, TAP2, TBL1XR1, TCF7L2, TUBA4A, UGCG2, UROC1, C1GALT1C1, CTNNBIP1, SERPI NC1, TNFRSF13B, TNFRSF14

Negative_12829	<p>CDA, F5, IVD, LCK, MIF, MPL, TAT, ACACA, ACVR1, ADCY2, AKT3, ALG1, APOA1, ARHGEF7, BIRC2, CACNB2, CD247, CDK6, CNGB1, COQ3, CRY2, CSDA, DERL1, DGKB, DLST, DPYSL2, EXTL2, FBP1, FECH, FGD3, GALNT8, GLI2, GPLD1, HLAGH, HLA-DOA, HPSE, HSD17B2, IFNA13, IL10RA, IL13, IL7R, ITPKA, KLRC1, LAMB4, LIPA, LLGL2, LYPLA1, MAP2K5, MAP4K3, MAPK12, MAPT, MASP1, MGST3, MYL5, NEFL, NMNAT3, NT5C1A, NTN1, NTSR1, OR10H3, OR1B1, OR1J1, OR1L4, OR51A7, OR51Q1, OR52J3, OR52W1, OR9G1, ORC1L, PANK1, PDE10A, PDE7B, PDGFC, PGM3, PITX2, PLEKHA8, PLXNC1, PMM2, PNPLA3, PPAP2B, PPCS, PPP2R1B, PRKACA, RELB, SGPP2, SPRY4, SREBF1, SRGAP1, SUV39H1, TAS2R7, TCF7, THBD, TPH1, UBA1, UCKL1, VEGFB, VEGFC, ATP6V1G2, MAPKAPK2</p>
Negative_12830	<p>ID2, INS, IVD, SHH, ACADSB, ADAM10, APC2, ATP2A1, BUB1, CACNA1B, CDIPT, CLDN11, CNTFR, CYFIP1, CYP2C9, EDNRA, ENO3, FUT4, GARS, GCNT1, GLUT, GMPPA, HAGHL, IFNA8, KLRD1, LIPG, MAP2K3, MAP3K13, NKD2, NKX3-1, NLGN3, NME2, NT5C1B, OR2H1, OR3A2, OR4E2, OR56B4, OR6C1, OR9K2, PCCA, PIGS, PIGT, PLOD2, PMAIP1, PMVK, POLR3H, PPP3CC, PRKAB1, RDH8, SLC25A6, SNAI2, SPRY4, TYK2, XCL2, YES1, MAP3K7IP1, MAPKAPK3</p>
Negative_12831	<p>F2, HYI, NGF, PDC, ABLIM2, ADH7, ASPA, ATP5I, AVPR1A, B3GALT4, BDKRB2, C1QC, CACNA1G, CAMKK1, CCL11, CD19, CD244, CD27, CHRM3, CHST12, CLTB, CTNNA3, CTSB, DAPK2, EFNB3, EPAS1, EPHA3, EPHA8, EXOC7, F13A1, FGF7, FLAD1, FPGT, GALE, GATM, GCDH, GPD1, GPT2, GSTM2, HAAO, HDAC1, HNF4A, HSPB1, IDH1, IL13, IL24, IL3RA, IL6ST, IMPA1, IRF7, LAP3, LCMT2, LIFR, LTBR, MYD88, NAE1, NCK1, NFKB2, NFX1, OR10H1, OR12D3, OR1M1, OR2L13, OR2L3, OR6C6, PARD6B, PDE3B, PIP5K1A, PLA2G5, PLOD2, POLD3, POLE2, POLR2L, PPAP2B, PPARD, PTDSS1, RAPGEF1, RAPGEF3, RELB, RHOA, SEMA4D, SETDB1, SOAT2, SULT1A1, TBL1Y, TNFSF18, TXNDC12, UBA7, UBE2L3, UBE2L6, VASP, YWHAB, ATP6V1B1, HLA-DQA2, PPARGC1A, SERPINF2, TNFRSF13B</p>
Negative_12832	<p>AGL, F7, KMO, SYK, TPR, ACOT11, ALDH7A1, ALG13, ALPI, ATP13A2, ATP2A2, BCAT1, BMP2, C9orf95, CARD11, CD40, CDK7, CNTN1, COL11A1, CSF2RB, CTNND1, CYP1B1, DAPK3, DDX51, DIAPH3, E2F5, EPB41, FGF2, G6PD, GBGT1, GGT6, GUSB, IFNA13, IL11RA, INPP1, LALBA, LPAR1, MDH1, MMP1, MYH2, NCKAP1, NEUROG3, NPAS2, NUDT2, NUDT5, OR13A1, OR4E2, OR4F17, OR4N4, OR51L1, OR5F1, OR6C3, PARD6B, PDE6G, PDE8B, PER3, PIM2, PKMYT1, PLCG1, POLD2, PRKG2, PRODH2, RELA, SIPA1, SLC2A2, STX16, SULT1A1, TAS1R2, TAS2R13, THTPA, UROC1, UXS1</p>
Negative_12833	<p>ADA, BCR, CGN, DBT, GLA, ME1, MOS, PLN, PVR, AACS, AADAC, AANAT, ACADSB, ACSS1, AVPR1A, B4GALT7, BBC3, BIRC5, BPGM, CES2, CHAT, CHD8, CLDN2, CTNNB1, CYFIP1, CYSLTR1, DGKG, DMGDH, DRD2, EIF4E2, ENTPD3, FCER1G, FUT3, GALNTL1, GDF5, GLO1, GNG13, GP1BA, GPD2, GSTZ1, IARS, IL11, IL1R2, IL25, ITGB6, LDHAL6A, MAP2K4, MARS, MCCC2, MITF, MYL2, NAGA, NAT2, NRG1, NTSR1, ODC1, OR1D2, OR2B11, OR2T1, OR4K15, OR4N2, OR4S2, OR51G2, OR52A1, OR5AK2, OR5P2, OR6B2, OR8H1, OR9G4, PCYT2, PER1, PFKL, PGM3, PIGW, PMAIP1, PPAP2A, PTGDS, PTPRC, RDH8, RUNX1T1, SELP, SEMA3C, SETDB1, SPTLC2, STK3, TCF7, TJP2, TKTL2, TNFSF11, TUBB3, ULK2, WNT7B, C1GALT1C1</p>
Negative_12834	<p>DCT, ILK, JUN, AACS, ABLIM2, ARD1A, ARPC1A, ARPC4, ATG12, ATP5I, B3GNT2, BRAF, C1GALT1, CADM1, CCNG2, CD244, CD40, CES1, CLDN15, COL5A3, CSAD, CYP2F1, DDX4, DUSP6, EIF4B, FGFR4, GLUD1, GOSR2, HA02, IDH3A, IDI1, IL11, IL12RB2, IL19, ITGB3, ITGB8, KAT2B, MGAT1, MGLL, MIOX, OR5B3, OR5H6, ORC4L, PDE6G, PIP4K2C, PLCD4, PRKACB, PSAT1, PTPN7, RPS6, SARS, SLC25A5, SNAI2, ST3GAL2, STAT3, TGFB1, UGT2B10, ULBP2, VAMP1, WNT7B, ATP6V1C2</p>

Negative_12835	PML, PVR, RFK, SFN, ABCC8, AC02, ACVR2B, ADH7, AOC3, ATP2A1, ATP5C1, A TP6VOB, CAV3, CCL19, CCNE1, CCR3, CDC2, CHUK, CNTFR, CYP2S1, DDIT4, D PYSL2, FARSB, FGF2, FGF21, FOXA3, GADD45B, GOT1, HSD17B4, IL12B, IL1 7A, IL18RAP, IRAK1, ITGAD, KIR3DL2, KITLG, LAMA3, MAP3K14, MAP3K4, M ECR, MPZL1, MYH4, NFATC4, NUDT12, ODC1, OR10G8, OR10J1, OR10P1, OR11 H1, OR2V2, OR4A15, OR51M1, OR5B21, OR7A17, OR8J1, OR8J3, P2RX6, PDE6 H, PDGFRA, PFKFB3, PFKL, PHKB, PIGV, PIK3CA, PIM2, PLCG2, PPARG, PRPH 2, RUVBL1, SEMA4F, SETDB2, SHC2, SKIV2L2, SLIT2, SMPD1, SUCLG2, SULT 1E1, TAS2R42, TBL1XR1, TIAM2, TRPC1, UBA7, WASL, WNT7B, ATP6V1B1
Negative_12836	CR2, PLN, ACP5, ADCY9, ADRB2, ALDH1A3, ALDH5A1, ALOX15, ARNTL, CALML 3, CCL28, CCL5, CLDN18, CLDN5, CLTA, DGAT1, DHDH, ENTPD5, FCGR2B, FDF T1, GCH1, GGPS1, GMPS, GUCY1A2, HIBCH, HNF1A, IL25, IL28B, IPPK, ITGA V, KAT2A, LIPT1, LLGL1, NGEF, NMNAT2, OR1E1, OR4C12, OR4K14, OR51A4, OR7A10, OSMR, PANK1, PGM3, PI4KB, PIGL, PLA2G5, POLD2, PPP3CA, PRIM2 , RALA, RCHY1, RHOQ, SFRP2, TBL1XR1, TIAM2, TPI1, TSTA3, TYMS, XYLB, H SD17B12
Negative_12837	FOS, GLS, INS, RPE, AKR1B10, ALOX12B, APC2, APOE, B4GALT4, BUB1, CACN A1H, CALML5, CFTR, COL4A1, CSNK1E, CYP2C19, DLL1, EPHB2, FGF21, GALM , GALNT2, GTSE1, HAGH, HEXB, ICAM1, IDH2, ITPKA, KAT2B, LIMK2, MAPK1, MGAT3, MRAS, NCF4, ONECUT1, OR2V2, OR4P4, OR5M8, OR6C70, P4HA2, PDE1 1A, PIGP, PIP4K2A, POLR2E, PPP1CC, PRKACB, PTGER1, RAP1B, RBPJ, RUNX 1T1, SDHB, SMAD6, ST3GAL1, STX10, WIF1, ATP6V1B2, ATP6V1C2, CTNNBIP 1, PLA2G12A
Negative_12838	AGL, BCR, CFI, CR1, KHK, OSM, TAT, TH, AC01, AGPAT1, CADM1, CASP7, CCNE 1, CCNG2, CDC25C, CDH2, CHAT, CHIA, CHKA, CLCF1, COL1A1, CREB3L1, CSF 3R, CXCL9, CYP2A7, DDX51, DGUOK, DIAPH3, EFNA4, ENTPD4, EPHA8, EREG, FARSA2, FUT3, GDF5, GNA14, GRIN1, GUCA1B, IL12B, IL29, IL2RA, INPP5E, ITGA5, LAP3, MAP4K3, NAT5, NAT6, NQO1, NT5C3, OR10R2, OR14C36, OR2AG 2, OR4E2, OR4K15, OR6T1, OR7G1, ORC1L, PAPSS2, PARVB, PARVG, PDE10A, PITX2, PLA2G1B, PLA2G2D, POLD3, POLR2J, POLR2K, PPARA, PTPN11, RPN1 , SMAD7, TACR2, TKTL1, WNT10B, WNT3A, MAPK8IP1, ST6GALNAC3, TNFRSF1 3B
Negative_12839	IL5, MSN, SMS, ACAD9, ACSS2, ADRBK2, AKT3, ALPL, ATF4, ATG3, CAMKK1, C AV1, CCL16, CD3E, CDC2, CDC26, CHRM3, CRY1, CSF2RB, CTSG, CXCL12, DAG 1, DCXR, DVL3, ENTPD2, EPHB3, ERO1L, GADD45A, GGCX, GPAA1, GSTM3, GST O2, HLA- G, HMGCL, HSD11B2, IRF7, KYNU, LYZL1, MAML2, MAN1A2, MITF, MYLK2, OR1 4J1, OR1L4, OR4B1, OR4S2, OR5B21, OR5T1, OR7A17, PHGDH, PIP4K2B, PIP 4K2C, PPAT, PPP2CB, PTGES2, RFXANK, SEMA3A, SENP2, SFRP4, SLC25A4, S NAP23, SRD5A2, TCF7, TUBB3, UGT2B10, WNT10A, XIAP, HSD17B12, TNFRSF 13B
Negative_12840	IL2, LAT, LPL, LTB, MVD, OTC, TK2, ACP2, ACP6, ACTN1, ACYP2, ARSE, ASS1 , BCAT1, BCL2L1, BNIP1, CACNA1D, CD3E, CFLAR, CRY1, CSF3R, CXCR3, DDI T4, DPYS, EFNA4, ENAH, EPHB3, EXT1, EXT2, EXTL1, FGF10, GALNT1, GLI3, GLO1, GRIA1, GSTO2, GSTZ1, GUCA1A, HARS2, HCCS, HLA- F, HSPB1, IL10, INHBB, ITGAX, ITGB4, JAM3, LAMA4, LDHAL6B, LEFTY1, LI PT1, MAP2K2, MYH8, NAT2, NFKB1, NUDT2, OR10A4, OR10R2, OR11H4, OR51E 1, OR51G2, OR52N2, OR8K5, OR9Q1, PARVA, PDE6D, PDGFRA, PGLS, PIGQ, PK LR, POLA2, PPP2R2A, PPP2R5E, PRPH, RDH5, RDH8, SARDH, SELPLG, SGPP2, TALDO1, TAS2R5, TNFSF9, TNXB, TOMM40L, TRAF2, UPB1, WNT16, ZIC2, SER PINA1

Negative_12841	DHH, FAS, MOS, NPL, PGD, SDS, AASS, ACVRL1, AGXT2, ALAD, ALOX15, ARHGE F1, ATP6AP1, BDH2, BET1L, BIRC2, C1QB, CACNB3, CCNB3, CD3E, CDC16, CD KN2A, COL5A2, CRKL, CYP4F2, DPAGT1, DTX3, DVL3, EGFR, ENPP6, EPHA2, F OSL1, FZD4, GGCX, GPX5, HAP1, IL11RA, LCAT, LIMK2, LTB4R2, MAP3K3, MC CC1, MLLT4, NAT1, NAT5, OR10A2, OR10A6, OR1G1, OR4A5, OR52B6, OR5AN1 , OR5B21, OR6F1, OR8K1, PDGFRB, PIK3CG, PITX2, POLD2, PTCH2, PTPMT1, PTPRM, RPN2, SARDH, SC5DL, SEMA3B, SEPHS1, SH2D1A, SMPD4, STX18, SUC LA2, TKTL1, TNFRSF9, VAV3, ZFYVE16, ATP6V1C1, PNLIPRP2
Negative_12842	DCC, GP9, MAX, NGF, SMS, ADCY1, ADH1A, AKT2, ATP6V1F, BPNT1, BRAF, CAM K2B, CCL5, CCND1, CCR3, CDC26, CDKN1A, CDKN2C, CYP11B1, DPAGT1, DUSP 4, ENPP3, FGF13, FUT1, GALNT8, GAMT, GFPT2, HDAC1, HLA- G, IARS2, IKBKE, IL12B, ITGAM, KIR3DL2, MAOA, MGAT1, MOV10L1, MYH3, N EU2, NGEF, NR5A2, OR2A5, OR2L13, OR52I2, OR5P3, OR6M1, PAPSS1, PDE10 A, PGS1, PLA2G2E, PLCG1, PLD1, POLD2, POLR1B, PPARD, PRKCZ, SETD2, SV 2A, TRAF6, TRHR, TRMT11, ATP6V1G2
Negative_12843	ADO, ME3, AKT1, AMPD2, ANPEP, AOC3, ARAF, ARHGEF2, ATP5G1, ATP6VOB, C 1QB, CACNB2, CCND2, CCNE2, CD34, CD48, CD58, CD01, COL2A1, CSDA, CSF2 RA, CYP1A2, CYP27A1, CYP2C9, CYP2S1, DERA, DKK4, EFNA4, EHHADH, FGF9 , FZD1, GADD45G, GCNT3, GJD2, GLI1, HPSE, HPSE2, IAPP, IL17B, IL23A, I L6ST, INPP5B, IRS2, LTB4R2, MAPK11, MEF2C, MYH2, NOD1, OCRL, OPLAH, O R10S1, OR1B1, OR2Z1, OR4D2, OR52E4, ORC5L, PCCB, PCK2, PDGFB, PDHA1, PLCE1, PLXNB1, POLD2, POLR2J, POLR3D, RXRA, SC5DL, SMAD2, SPHK1, SSH 3, TBXAS1, TJP3, TSLP, TUBAL3, UPP1, VKORC1, WHSC1L1, ZBTB16, HLA- DPA1, KIR2DL5A
Negative_12844	DBH, DBI, DCK, HK2, HPD, SRC, TH, AASS, ACOT12, ACSS3, AK3L1, ALG2, ALG 3, BAAT, CACNG7, CBLB, CCL20, CES2, CHDH, CHIT1, CHRM5, CLCA4, CREB1, CTSG, CYP26A1, DGKA, DUSP16, EIF4E2, FGF7, FTH1, FUT4, GANC, GAPDH, G BGT1, GNB1, HSD3B7, IL17RB, ITGA7, ITGA8, JAM2, MAP2K5, MAPK13, MGST 1, NCR2, NEU3, NMNAT2, ONECUT1, OR2A4, OR4S1, OR51F1, OR6C6, OR6K2, P ANK1, PARD6G, PCYT2, PDE11A, PDE4A, PEMT, PFN2, PGM3, PIAS3, PLOD2, P OLD1, PPP2R5D, PPP2R5E, PRKAA1, PRKCZ, PSPH, PTGS2, RAPGEF2, RASA2, RPIA, RPS6KA2, RXRG, SARDH, SEPHS1, SMAD9, TAS2R41, TBXAS1, TCIRG1, TLR4, TUBAL3, UCK2, WHSC1L1, ZBTB16, PAFAH1B3, PRICKLE2, ST6GALNAC 1
Negative_12845	C5, CD6, FAS, TAT, ACAA1, ACADSB, ACHE, ADCY9, APOE, AREG, ARHGAP5, AR NT, B4GALT5, C3AR1, CACNG3, CAMK2G, CARS, CCND3, CCR7, CLDN9, COL3A1 , COX15, CTPS, CYP2U1, DPYS, EPHA6, FGF20, FSHB, G6PD, GJD2, GNAI2, GP D2, HSD17B4, IDH1, IFNAR1, IL1A, INPP4A, ITCH, KIR3DL3, LAMB3, LIFR, MAN1A1, MAP3K11, MAP3K7, MAP4K2, MAPT, MCM6, MGAM, MINPP1, NAGA, NPR 2, NT5M, OCRL, OR13F1, OR13H1, OR2G2, OR2M2, OR2S2, OR2T5, OR3A3, OR5 1B6, OR51I1, OR6Y1, OSMR, PDE5A, PER3, PIGT, PIP4K2B, POLA1, POLD2, P PA1, PPM1B, PPP1R3D, PRKX, PTCH1, QPRT, ROCK1, SEMA7A, SETD7, SLC27A 1, SMARCA5, SOCS3, STX8, SULT1E1, TRMT11, TYMS, UGCGL1, UGT1A10
Negative_12846	AGK, FYN, PAH, RET, ALDH4A1, ARD1A, ATP5E, B3GNT2, CDC23, CLTC, CPS1, CREB3, CTBP2, DLST, EDN1, GNPDA1, GSK3B, GUCY1A3, HMGCS1, HSD17B3, I DH1, IFNG, IL25, KIR3DL1, KIR3DL2, MAT1A, MGST1, MYLK3, NAE1, NAT1, N CR2, NKX2- 2, NME2, NPR1, OR2B11, OR2T12, OR4N2, OR51Q1, OR5B3, OR5D16, OR6A2, O R6K6, OR7G1, OR8K1, PAICS, PDGFRB, PDHA1, PIAS1, PLAUR, PLCD3, PLOD1 , PMAIP1, PPAT, PRIM2, ROCK2, SC5DL, SEMA3G, SETD7, SMAD3, SOCS7, SSH 3, TBK1, TMLHE, UGT2A3, CACNA2D3, PAFAH1B1

Negative_12847	CKM, F2, MPZ, SCD, UBC, ACSL1, ADCY8, ALDH1L1, APH1A, B4GALT7, C1QB, C3AR1, C3orf10, CACNB4, CCND2, CD22, CD70, CER1, CSNK2A2, CXCL9, CYP4A11, CYP7A1, ENTPD3, ENTPD7, EPHA2, FLAD1, FUT3, FZD8, GCLM, HMOX2, IGF1, IL15, IL1RAP, IRF3, ITGAL, ITGB8, KIR2DL2, KRAS, LAMB3, LIPF, LIPG, MAP2K4, MARS2, MICA, NAGLU, NEUROG3, NRXN3, OR13H1, OR14J1, OR9I1, PGS1, PIGV, PKM2, PLCB3, PNPT1, PON2, PPCS, PPP3R2, PTPRR, RXRB, SLC2A2, SMPD4, STX16, TAS2R8, TIAM1, TPH2, UGCGL2, WNT6, WNT7A, YWHAE, CSGALNACT1
Negative_12848	ADK, BTC, GSN, GSR, OAT, SP1, ADCY9, AKR1B1, ALAS1, ARHGEF4, CCL17, CCNB1, CD36, CHSY1, CRLS1, DAD1, DAXX, ERBB2, ESAM, FGD1, GAD1, GALK2, GDF7, GLUL, GRHRP, GUCY2F, IL11RA, IL4R, ITGA4, KCNQ1, KIR3DL3, MAGI1, MAPK12, MAPK8, MDM4, MYL9, NEFH, NODAL, OR1E2, OR52K2, OR8G1, OXSM, PAK4, PHKA2, PLCB1, PLCB4, PRKAB1, PRKCI, ROCK2, SARDH, SGMS2, SMC1B, SNAP25, SPTAN1, SUCLG2, SV2C, TD02, TRAF5, UBE2L3, WARS, WNT5A, CACNA2D2, SUV420H1
Negative_12849	AK1, F9, GSS, ACO1, ACTG1, ADH6, ALDH9A1, ANAPC1, AOC3, ARNT, ASCC3, ATP5J2, CACNA1B, CALML6, CDC16, CERK, CLDN9, CTPS, DDHD1, DDX55, DGKA, DTX1, EIF4E, FDFT1, FGF14, FLOT1, FZR1, GLG1, GOSR2, IDH3G, IFNA21, IFNA7, IFNAR1, KIR3DL3, MAGI2, MAOB, MMP2, MYL2, NCF1, NFATC2, NFE2L2, NFYC, NRG2, OR10K2, OR2A4, OR2T4, OR4F4, OR51B6, OR52N1, OR5AR1, OR5L1, OR8A1, PAICS, PIGH, PLA2G10, PLA2G4A, PLXNB2, POLR3K, PRKCD, PTPRB, RAF1, RASGRF1, RFX5, RPN1, SEPHS1, SOCS5, SOCS7, SYNJ1, TACR1, TAS2R10, TCIRG1, TICAM1, TRPM5, TSC1, TUBA1A, TUBA3C, UPB1, WBSR22, YWHAG, ATP6V1C1, ATP6V1E2, MAPKAPK2
Negative_12850	EGF, LSS, TYR, ACP2, ACSL5, ACTA2, ACTG2, AGPAT3, AKR1C3, ANAPC10, ASIP, ATP12A, ATP5E, BCL2, BMP4, CASP7, CAV3, CCL21, CCNB2, CD48, CD72, CD79B, CER1, CLDN1, CNTF, COMP, CXCL1, CYP2A6, DOT1L, DPM3, EPHA4, FGF18, FGFFR1, FZD9, GLI2, GRLF1, HSD17B7, IDH3A, IFNA10, IGFBP3, IL13RA2, IL28B, IL9R, INPP4A, LALBA, MTMR2, MYH7B, NEFL, NEU1, OR1D2, OR1D5, OR2H1, OR2M2, OR4A5, ORC6L, P2RX4, PDE9A, PGM3, PIK3R5, PLCD4, PMM2, POLE4, PRKAG3, PTPN7, PTPRC, RPS6KA1, SHC3, SLC27A1, SLC9A1, SMPD2, SNAP23, STK3, SUCLA2, SUCLG1, TALDO1, TAS2R10, TAS2R14, TAS2R9, TCIRG1, THY1, TLR9, TNFSF11, TYMP, VAV3, YARS, ATP6V1E2, GABARAPL1, ST6GALNAC4
Negative_12851	AK2, F2, GSR, ID1, TNF, ALDH3A1, ALOX12B, ATG7, CD44, CLDN9, CMBL, CSNK1A1, CTBS, CXCL6, EPHA4, EPHB6, FLT1, GNA14, GPLD1, HAP1, HMGCS2, ICAM1, IFIH1, IGF1R, IL12B, IL18R1, INHBC, LFNG, LRP5, LTBR, MAP3K8, METTL2B, MOV10L1, MYL5, NAT1, NEU2, NPAS2, NRCAM, OR10V1, OR14J1, OR5C1, PFN3, PGAM1, PI4KA, PLA2G2D, PRKY, RAPGEF4, RASGRP3, TOLLIP, TPK1, TUBA1C, TXNDC12, UCK2, UROC1, AASDHPPT, TNFRSF17
Negative_12852	F3, GSS, MPI, ACMSD, ACSM2A, AKT2, ALDH3A2, ANAPC11, ATP6AP1, C1GALT1, CACNA1E, CCR4, CDH3, CDKN2A, CPT1C, CXCL11, EDN1, ENTPD7, FLAD1, FUT1, FUT8, G6PC, GNG12, GNRH2, GSK3B, IDH2, IFNA10, INHBA, LAMB4, LFN G, MDH1, NANS, NCOA4, NME4, OR2M2, OR51F1, OR5T3, OR5V1, OR9K2, PAICS, PGLS, PLIN, POLD1, POLR1A, PPAP2A, PPBP, PPP1R1A, RBX1, RUNX1, SPI1, SSX2IP, STX4, SV2C, TIRAP, TPH2, TUBAL3, YWHAH, PAFAH1B2
Negative_12853	CSK, GSR, IHH, MVD, ACACA, ACAD8, ALG1, APOA5, AXIN1, B3GNT3, CD58, DHRS4L2, DTX3L, EDNRA, EHHADH, FGFR1, FZD10, G6PD, GADD45A, GALNT11, GJD2, GNA11, GP1BA, GUCY1A3, HSD17B1, KAT2B, KIR2DL2, MAOA, MCAT, MGA T5B, NOD1, NOTCH2, NT5C1A, OR2T33, OR4M1, OR51I2, OR52I1, OR5I1, OR7D2, OR8H3, PDXP, PIK3R4, PLA2G4A, PLAT, PLXNB3, POLR1E, POMC, PTAFR, PTCRA, PTGIS, RALGDS, RAP1A, RAPGEF3, SDC4, SETD1A, STAT4, UBE2K, SUV420H1

Negative_12854	CKB, ID2, IL2, TEC, ACSM1, ACY3, ADH1B, ADIPOR2, B4GALT7, CCR10, CDC45L, CLDN20, CMAS, CNTNAP2, COQ7, DBF4, DUSP4, EFN2, EPHA1, EREG, FGF10, GLI2, GOSR2, GPLD1, GRIA1, GUCA1B, HAP1, HCLS1, HPRT1, HSD17B4, I DH3A, IFNA8, ITGB6, JAG2, KDSR, LEPR, LTBP1, MAN2A1, MCM3, MGAM, MGST3, MPP5, NME7, NT5E, NTRK1, OR1L3, OR52E8, OR5D13, OR8K1, PANK3, PAPS2, PDE5A, PFKFB4, PIP5K1C, PLXNB1, POLR2C, POLR2D, PRKY, RASA1, RAS SF1, RENBP, RXRG, SFRP5, SPHK2, SRD5A2, STK36, STX16, STX2, TAS1R2, T FPI, TGDS, TUBB3, ULK1, WWP2, XYLB, ATP6V0A1, PAFAH1B1
Negative_12855	BTD, CBL, GCK, ILK, MTR, SFN, TFG, UBC, ACSM5, ACTG1, ASRGL1, B4GALT6, CACNG7, CASP3, CD3E, CD74, CHRM5, CHSY3, CLCA2, CXCL3, CYP2C18, CYP4 F2, DGKD, F2RL1, FABP3, FGF14, FLAD1, GNAL, HGSNAT, HLA- DRA, HMOX1, HMOX2, HSD17B8, HTR2A, IFNA10, IFNA13, IFNA21, IL1RAP, M AML3, MAP3K8, NT5C3, OLR1, OR13G1, OR1L1, OR51A2, OR52E4, OR5B21, OR 5C1, PDHB, PPP2R2B, PSME2, RRM1, SDHA, SETD1B, SFRP2, SLC2A2, SLIT2, SNAI1, TNXB, TRDMT1, ULK1, UPP1, WARS2, WNT6, ATP6V1B1, ATP6V1B2
Negative_12856	A2M, AGL, AK2, C8G, CBL, GAA, ACSM3, ADIPOQ, ALOX15, ATP5J2, BCKDHA, B CL10, CACNA1C, CACNA1E, CCNA2, CCNB3, CD48, CDC42, CDC7, CDK6, CLTA, CMAS, CYP11B1, DAG1, DARS, DLAT, DUSP16, ESPL1, FADS2, GALNTL2, GALT , GNA12, GNG3, GPD1, GUCA1C, HA01, HEMK1, HMGCR, HSD17B1, HSPA8, IL8R A, IL8RB, KLRC3, MAD2L1, MAP4K1, MCM5, MLLT4, NODAL, NRG2, NUDT2, OR1 3C4, OR2V2, OR4N2, OR52D1, OR5F1, OR5H6, OR7C2, OR8K1, OR8S1, OR9K2, PAK1, PAX4, PDHB, PFKP, PGM2, PHPT1, PKMYT1, POLR2B, POLR3H, PPP1R1A , PROC, PTPRB, RARS, RFWD2, ROCK1, RPS6KA1, SC5DL, SCP2, SEMA3C, SMUR F2, SPRY3, STX4, WNT16, ATP6V1C1, HLA-DQA2
Negative_12857	FGG, JUP, AADAT, ACSS2, ADRB1, ARPC4, ATP50, CACNG5, CAMK2D, CCL26, C CL5, CCND1, CCNH, CNTN1, CPT1B, CYCS, CYP11B2, CYP2U1, DDOST, DDX19A , DFFB, DLST, EFNA1, EI24, FOXO3, FUT9, GYS1, HMOX1, HSD17B8, HTR2A, H TR5A, IL13, IL1RAP, ITGA1, ITGA6, LAMB4, MAP4K4, MGAT1, MINPP1, MPP5 , MYH6, NFATC4, NME2, NUDT2, OR10AG1, OR1A1, OR1G1, OR2A25, OR4M1, OR 51E1, OR5L1, P2RX3, P2RX4, P2RX6, PARVB, PHKG2, PIGH, PIGQ, PIK3C2A, POMC, PPCDC, PRLR, RAPGEF2, RAPGEF3, SEMA3B, SEMA4F, STMN1, TAS2R5, TUBB2B, UGT2B10, HLA-DRB4, PLA2G12A
Negative_12858	BCR, C2, F3, GNS, PDC, TK1, UBB, ACLY, ACSM5, ACSS3, ADORA2A, AHCYL1, A KR1A1, ALG11, APPL1, ARHGAP5, ASIP, ATP2A3, B3GAT3, BACE1, BMP8B, BR AF, CAMK2G, CCNB1, CCND1, CD79A, CLCA2, CYBB, CYP27A1, DAD1, DGAT2, D OT1L, DRD1, EHHADH, ESPL1, FABP3, FLT4, FRAP1, GALNT12, GATM, GDF7, G GCX, GMPS, GP1BA, GUCA1B, HNF4G, IL20RA, IL6ST, INPP5B, IRF9, KIR2DS 5, LAMA4, MAPK12, MMP1, MMP7, NARS2, NCF4, NME6, NUMBL, OR10H3, OR10H 4, OR4A15, OR51G1, OR5D18, OR5F1, PDHA2, PDXK, PFKFB3, PHKB, PIGF, PI M1, PIP4K2B, PLAT, POLR2G, PPP1CB, PRKCH, PTPRC, QPRT, RPS6KA2, SHMT 2, SIGLEC1, SMAD3, SOCS7, SPHK2, ST6GAL1, TAS2R40, TBXAS1, TICAM2, T PK1, TSLP, UNC5B, YARS2, ARHGEF12, ST6GALNAC3
Negative_12859	F11, FH, IL2, NLK, NPL, OGT, RPE, STS, ACOX1, ACSL4, ADRA1A, AGPAT1, AL DH3B2, ARG2, ARNT, ARPC3, ARSD, ATP2A3, BHMT, BMP2, CCL25, CD79B, COL 5A3, CRB3, CREB1, CSF2RA, CTSS, CYP8B1, DHRS4, DRD2, EPHA1, F2RL3, FG D1, FGFR2, FTMT, GNMT, GPD2, HSD3B7, IDI1, IL10RB, ITGAL, ITGAX, LEF1 , LIPA, MAP2K7, MAP3K1, NLGN1, NRAS, NT5M, OR10A7, OR10G8, OR2T10, OR 56A1, PCCB, PDE8B, PER1, PGM1, PGM3, PIGX, PLCG1, PRKAB1, PYGB, PYGL, RDH5, RHOQ, RPS6KA3, RUNX1, SIGLEC1, SLC2A4, SMC1B, SPRED2, SREBF1, ST3GAL4, TAS2R16, TIAM2, TNFSF9, UNC5B, WARS2, WNT10B, WNT11, ATP6V 0A4, MAP3K7IP2

Negative_12860	FGB, SYK, ACTB, AMDHD1, APAF1, APOA2, ATP6V0B, BDH1, CACNA1F, CACNB3, CDK7, CNGB1, CNTN2, CXCR6, CYP19A1, CYP2U1, DLL3, FGF10, FGF23, FUT4, FUT9, GDF7, GNAS, GNB1, GPAA1, GUK1, GUSB, HAP1, HARS, HEMK1, IARS, ICAM2, IFNA21, IFNA6, IGF1R, IL15, IL28RA, INPP5E, MADCAM1, MAPK13, MTHFS, MYD88, NCOA4, OR1F1, OR4C11, OR4D6, OR4L1, OR51B6, OR51D1, OR5M9, OR6X1, OR8K3, OXTR, PARD6A, PGAM4, PIGH, PIK3CB, PIM1, PRDX6, PTN1, PYGM, RBX1, RCHY1, SMAD2, SNAI2, SULT1E1, TAS2R16, TNFRSF8, TSHR, VEGFB, CACNA2D1, HSD17B12
Negative_12861	AMH, ATM, CRH, MIF, NNT, ABL2, ACHE, ACVR1, ALDH1B1, ALDOC, AMPD1, APLP1, ATP5G3, ATP5I, ATP5O, AVPR1B, BAIAP2, BCAT2, CAV3, CCKAR, CDC2, CDS2, CLDN10, CNDP1, CSNK1G3, CYP11B1, DIAPH3, EPHB1, EPHB3, FGF10, GALT, GLUL, GOSR2, GSK3B, HCCS, ICAM1, ITCH, MAP4K2, NADK, NT5C1B, NT5C3, OR10A6, OR10A7, OR10H5, OR1M1, OR4F15, OR4F5, OR52E6, OR7G3, PDE1C, PFN2, PLA2G4A, PLXNA3, RIPK1, SMAD1, STAT5A, TJP1, TJP2, TRAF1, YWHAE, ATP6V1E1
Negative_12862	CGA, JUP, NPY, PXN, ACAT2, ANAPC2, CDKN1A, CSNK1D, CSNK2A2, DOT1L, DUSP2, DUSP5, ENTPD2, FASLG, GADD45A, GCNT1, ICOS, IGSF5, JAK1, KRAS, MAPK1, MDH2, MNX1, MYLK2, MYLK3, NCK1, NCKAP1L, NMNAT3, NNMT, NPAS2, NT5C1A, OR2T10, OR6B2, OR6C70, PDE10A, PDE2A, PDE3A, PIK3R2, PLCB2, POLE2, PRSS2, PTDSS2, SHC1, SLC9A1, SMPD4, SPRED1, ST8SIA5, SUV39H1, TICAM1, YWHAB, ATP6V1C2
Negative_12863	C5, F3, HK2, HK3, IL3, KHK, TNC, ADCY10, ADSSL1, ALDOB, ANAPC11, ARPC1B, BACE2, CAMK2D, CD244, CLDN20, CRY2, CYBB, CYP3A7, DDX50, DHCR7, DNMT1, ETNK1, ETNK2, GALNTL2, GAPDH, GNRHR, GSTA5, GUCA1A, HLA-DOA, HNF1A, HSPA1B, IFNB1, IL7R, KCNJ11, LAMB1, LAMB4, LDHB, LTBR, LYPLA2, MAP3K12, MCM4, NME4, NNMT, NOD1, NR4A1, NUMB, OR1S2, OR2G2, OR2T6, OR4S1, OR5A1, OR6M1, OR7A5, OR8I2, OR8K3, PAK6, PARS2, PARVB, PDE11A, PI4KA, PIK3C2A, PRSS1, SFRP2, SIGLEC1, SMC1A, SOS1, SPHK1, TICAM2, UROC1, XYLT1, YKT6, ATP6V0A1, ATP6V1G3, CSGALNACT1, PNLIPRP2, TNFRSF1B
Negative_12864	PGP, RDX, SMS, ACADL, ADH1B, AFMID, ALG10B, ATIC, BLVRA, CD27, CDC14B, CHST13, CNGA3, CXCL6, CXXC4, CYP26B1, CYP2F1, DGKE, DHFR, DHRS4, DHRS9, DLL3, DOLPP1, FCER1G, GABARAP, GSTT1, HSD17B2, IL12B, KLRC3, LFNGL, MMP14, MTHFS, MYH8, NSD1, NTSR1, OR10H5, OR1L4, OR2C3, OR4C46, PI3GP, PLAUR, POLR3G, PRNP, RARS, SDC3, SHC3, SUCLG1, TAS2R48, TRAF3, TUBB2A, UPRT
Negative_12865	AGK, ASL, CAD, CRK, F11, F12, KMO, LCK, MOS, TEC, TK1, AANAT, ACACB, ACAT1, ACSM5, ACVR1B, ACVR1C, AFMID, ALDH9A1, ALG8, APC2, ASIP, ATP6V1F, BAAT, CACNA1C, CACNB1, CAMKK2, CCL5, CD244, CDK5, CDKN1A, CNTN2, DGAT2L4, DNMT3B, EREG, ER01L, GADD45B, GADD45G, HDAC1, HMGCL, ICOSLG, IDH3B, IDI1, IRF7, ITCH, KNG1, KRAS, LIMK1, MAP3K8, MAPT, MCM2, MITF, NCAM2, OR1L1, OR2A14, OR2G6, OR2H1, OR2T34, OR51G1, OR5A1, OR6Q1, OR8K1, PCK1, PCYT2, PDHA2, PHPT1, PIK3R4, PIK3R5, PLCB3, PLK1, PLOD3, PON2, PPP2CB, PPP2R5A, PPP3CB, PTGIS, PTK2B, RFWD2, SEMA3E, SETD7, SMAD6, SNAI1, TAS2R5, TP53I3, TXNDC12, TYK2, UROD, WEE1, YES1, YKT6, ZBTB16, SERPINF2



Negative_12866	CFI, CGN, GDA, GK2, GNE, GPI, IL7, JUP, PLN, RFK, ABLIM1, ACSL3, ADRA1D, AK3L1, AOC3, APAF1, AQP7, ARHGEF7, ARPC1B, B4GALT4, BDH2, CCL7, CCR10, CDKN2C, CHST12, CYSLTR1, DHRS9, DTX3L, EFNA4, EHMT1, FBXW11, FGF13, FGF23, FGF9, FMO3, GABARAP, GALNTL1, GFAP, GGT5, GNAZ, GPD1, GRIN2A, HIF1A, HNMT, IBSP, IDI2, IL7R, IPPK, ITGA1, ITGA8, LIPF, MTAP, OR10C1, OR2AG2, OR2T12, OR51B4, OR52E2, OR5AK2, OR5B3, PAK2, PDE3A, PFKFB3, PGLS, PGM2, PIP5K3, PLA2G5, PLCD1, PLIN, PMVK, POLE4, POLR2G, PTN5, RDH12, RHOD, SETDB2, SGPP2, SH3BP2, SMAD6, SNAP25, STAT4, TAS2R14, TRPC1, TSHB, TUBA1B, UMP5, UPB1, HSP90AA1
Negative_12867	AMPD1, ATP5D, ATP6AP1, B3GAT1, BLNK, CARS, CHST12, CRY1, CXCL11, DERL1, DGKH, DNMT3L, EGLN3, ENTPD7, FABP4, FASN, FCGR2B, FGF11, GNAZ, GPD2, HCLS1, HLA-C, HSD17B4, IAPP, IL18, INSR, JAK1, LCMT2, MAP2K3, NCR1, NEFL, OR10H1, OR13F1, OR6C6, OR8B4, OR9Q2, PDE6D, PIGM, PIGQ, POLE, PRKCG, PTPRR, ROCK2, SEMA4B, STK11, TOLLIP, UCKL1, WNT11, XCL1, ARHGEF12, ATP6VOD2, ATP6V1E1, SUV420H2
Negative_12868	DBI, DUT, FAS, LEP, LPL, ACOX1, ALG6, ALPP, CCL1, CCNB2, CD274, CD99, CDKN1C, CHSY3, COQ5, CSNK1A1, CSNK1G3, CXCL3, CYP2A13, DCTD, DERL1, DHODH, DPM2, E2F3, EREG, FABP1, GALNT13, GALNT8, GLI1, GNRH2, HMGCL, ITGA9, JAG1, LDHB, LIMK2, MAP4K4, MKNK2, NADSYN1, NNMT, OR10K1, OR10Q1, OR11G2, OR11L1, OR1C1, OR2A5, OR4C12, OR4L1, OR51V1, OR5A1, OR5B12, OR5D13, OXCT1, OXSM, PARVG, PFN4, PIGA, PIP5K1C, PNMT, POLR2K, PON2, PPBP, PPP1R3D, PRSS1, PTPRM, RAC3, RFX5, SIAH1, STAM, SV2A, TAS2R49, TGFB1, TJP1, TUBA3E, TUBB, UAP1, UGT2B10, UROD, ZAP70, SERPING1
Negative_12869	GAA, GPI, IL6, MAX, ACPT, ACY3, ADAM10, ANAPC1, ANGPTL4, AQP7, ASCC3, ATP5J, ATP6AP1, B3GAT2, CALML5, CBR1, CCL27, CLTCL1, CMPK1, CPT1A, CRLF2, CYP3A43, DHDDS, EI24, EIF4E2, FGF23, FTCD, GALNT6, GMDS, GNRH1, GPX7, GSTA4, GSTZ1, MAD2L1, MAN2A1, MAOB, MMP9, MRAS, MYH14, MYH7, NFE2L2, OR13F1, OR2AE1, OR4K1, OR51F1, OR5D13, OR6C3, OR8A1, PARVG, PAX4, PLA2G2F, PLCD3, PNPLA3, POLR2E, PPP1R3C, PRKCI, PTAFR, RPS6KB2, RPSA, RRM2, SCD5, SHISA5, SLC27A5, SOAT2, STX16, SUCLG1, TAP1, VDAC3
Negative_12870	C4B, EBP, HK2, TNF, XDH, ACOT12, ACSL6, ACTN2, ACY1, AGPAT3, APC2, ATN1, ATP2A1, ATP2A2, ATP4A, BMP7, BUB1B, BUB3, CCL28, CCR9, CLDN2, CMPK1, COASY, CRB3, CSF2RB, CTLA4, DDX19A, DKK1, DUSP3, EP300, FLT3LG, FOXA2, GBA3, GLG1, GLI1, GLI3, GSTM1, GUCY2D, H6PD, HAAO, HLA-DOA, HLCS, HNF1B, HSD17B3, IBSP, IFNGR1, IFNK, IL12RB1, ITGB6, LCP2, LIPG, MAP3K1, MGAM, MGAT3, MGLL, MMP1, MOV10L1, MTAP, MYH10, NKD1, NOS1, NR5A2, OCLN, OR10J1, OR4C11, OR5AS1, OR5F1, OR5T2, OR6A2, PDE7A, POLR1C, PPP1R3A, PRKCI, PTCRA, SHMT1, SREBF1, TAS2R38, TJP2, TNFSF9, TRPM5, VNN1, WARS2, YARS2, CTNBP1, HLA-DQB1, SERPINE1
Negative_12871	AUH, GPT, ILK, MYC, OAT, TPO, AKR1C3, ALG11, APOC3, B3GALT4, BCL2L1, BLVRB, CD19, CDC6, CER1, CHSY1, CISH, COL4A6, CREB5, CSNK1D, CTSL1, DDX18, DUSP8, EFNA1, ENPP2, FARSA, FOXO1, GLI3, GUCA1A, HCLS1, HIBCH, IKBKB, IL17RA, IL1R1, KIR2DS4, KIR2DS5, LIAS, LRP6, MCEE, MGAT4B, MMP14, NCR2, NTRK1, OR10J3, OR11I1, OR1L6, OR4C13, OR4K13, OR6B2, OR7G3, ORC2L, PIGK, PLA1A, PLD2, RALGDS, RAP1B, RBL2, SH2D2A, SNAP23, SRGAP1, ST6GAL1, UGT2B28, VTI1A, WNT16, SERPING1, ST6GALNAC3

Negative_12872	EPO, ADAM17, AKR1C1, ALOX15B, AMPD2, ANGPTL4, ARHGEF4, ARHGEF7, ATP5B, BMP8A, CACNA1S, CASP9, CMAS, COQ3, CPT2, CYBA, DHRS4L2, DNMT3L, EDN1, EFNA4, FZD6, GADD45A, GALNT7, GPT2, GSTM1, GSTP1, MAP3K8, MAP4K1, MMP1, MTMR1, MYH2, MYH6, NTF4, OR1G1, OR6S1, OR7A10, P2RX4, PANK4, PLD1, PLXNA1, POLR2G, POLR3G, PPP3CC, PRKCD, PRPS1, PTGER3, RALGDS, RELB, SCIN, SFRP4, SGPP2, SRD5A2, STX16, TAS2R14, WARS2, ATP6V0A4, S T6GALNAC6
Negative_12873	GGH, HK3, IL8, JUN, ABAT, ACO2, ACP1, ADRB1, AHCY, AKR1B1, APH1A, ATP6V1A, AVPR1B, BET1L, BIRC3, BMP8B, BMPR1A, BPNT1, CDC27, CLCA2, CLCF1, CLOCK, CSF1, CSNK1E, CSNK2A1, CX3CR1, DAD1, DCTN1, DDB2, DHODH, DTX2, DTX3L, EPHA3, ERBB2, EXT2, FTH1, FZD1, FZD6, GADD45G, GCNT2, GJA1, IDI1, INPP5B, MAP3K13, MGST1, NR4A1, OR10A3, OR11H6, OR4K14, OR51D1, OR5AS1, OR5C1, OR5H6, OR6X1, OR8S1, PCYT2, PDE2A, PDX1, PGK1, PGM1, PPP2R1A, PTGES, PTGFR, RASGRP1, RXRG, SH2D2A, SIAH1, SLC12A2, STX10, TAP2, TAS2R3, TAS2R48, VEGFB, WNT10A, YOD1, PLA2G12B
Negative_12874	ADK, C3, ME3, ACHE, ALDH5A1, ARSA, ATP5B, B4GALT1, BLVRA, CDKN1C, CSF2RA, CYSLTR2, ELK4, EREG, GMPBB, GRM5, GRPR, HMBS, IFNA10, ITGB5, MAM L2, MAN2A1, NANS, NRAS, OCRL, OGDH, OR13F1, OR1B1, OR1S1, OR4D2, OR51M1, OR5AN1, OR5AU1, OR6B3, OR7C2, PIK3R3, PLCB1, POLA2, PPP1CB, PPP1R1A, RASA1, SEMA3E, SEMA4C, SMC1B, SOD1, SOX17, SQLE, STX10, SV2B, TNFSF8, WIF1, XCR1, GABARAPL2
Negative_12875	ABO, BCR, C1S, F2, GBA, ID4, SMO, ZYX, ADIPOQ, ADRB1, ALDH1A3, B3GALT4, B3GALT6, B3GAT1, CASP8, CCL24, CCR2, CD40, CD8A, CHIT1, CHKA, COL4A4, CSF2, CYP26B1, DNMT3B, DPM2, ENTPD4, ESAM, FGF17, FUT6, FZD6, GALK2, GSTM5, GUCY1B3, HES1, HLA-DMA, HRH2, HSP90B1, INADL, IRAK4, ITGA4, LAMC3, MAP2K3, MGAT2, MYH14, NARS, NCKAP1L, NFKB1B, OR6F1, PIGF, PIK3C2A, PLXNC1, POLR3B, POLR3K, PPA2, PPP2R1B, RAPGEF1, SAT1, SFRP2, SMAD3, STK3, TGDS, TKTL1, TKT L2, TNFRSF4, TRDMT1, TRPC1, VAV3, VCAM1, XCL1, YWHAQ, MAPK8IP1, SERP INB5, SERPIND1
Negative_12876	C2, C5, CD2, CTH, DHH, EGF, FYN, IDS, IL3, WAS, ACP5, ACY1, ADH1A, ADH7, ALDOA, ATP2A2, ATP5G2, ATP6V0B, CASP6, CBLC, CBR3, CCL17, CCND1, CDK N2A, CHIA, CLTCL1, COL5A1, CXCR6, CYP2A7, DDX23, DLL1, DTX3L, DUSP10, EARS2, ENTPD7, ERBB3, ERO1L, FZD9, GALNT1, GALNT14, GALNTL2, GART, GDF7, GMPR, HSD3B2, HSPA2, IFNA6, INPP5B, ITGAM, KAT2B, KLRC1, LPAR1, MAN1B1, MAP2K7, MAP3K12, MGAM, MYL9, NEFH, NOTCH3, NT5E, OR10G3, OR10X1, OR1A2, OR4L1, OR51T1, OR7C1, PARD6G, PCYT1A, PDGFC, PDXP, PIGO, PLA2G3, PLCD3, PLCG1, PLD2, PMAIP1, POLR2D, POLR2G, POLR3A, PPP2R5B, PRIM2, RAF1, RGS3, ROBO1, RRM2, SEPHS1, SETD1B, SLC2A1, SLC2A2, SOCS3, STAT4, STK4, SV2A, TAS2R8, TPH2, TUBB2C, YARS, YOD1, ZFYVE16
Negative_12877	BCR, DDC, FES, HGD, HGF, MOS, MSN, PC, AASS, ACADVL, ACP5, ADSS, ARG1, BDH1, BDKRB1, CCND2, CCR10, CD55, CDIPT, CDK7, CNTN1, CYCS, DAPK1, DKK2, DUSP7, EPHA6, EXT2, FABP3, FGF22, FRAT2, FZD4, GCH1, GCNT1, GFPT2, GOT1, GSTM1, HADHA, ISYNA1, ITGA6, KLKB1, MALT1, MAML2, NFKB2, NKX3-1, NT5C1B, OR13C9, OR2Y1, OR4K5, OR52N1, OR8K5, PER3, PERP, PFKL, PIA S1, PIP5K3, PPP2CB, RAF1, RARS2, RBPJ, RXRG, TACR2, ATP6V0E1
Negative_12878	GLA, GSR, HDC, PAH, SHH, SI, ACSL3, AHCY, ALAS2, ATP6V1F, C4BPB, CREB3L2, CSNK2A1, CYP2J2, DOLPP1, EFNA4, EIF4E, EPB41L2, ESPL1, EXTL1, FADD, FADS2, FGF23, FLT3, FUT3, GSTM5, HSD11B1, IRS4, ITGAD, KYNU, LAMA3, LDHD, MAN2A1, MGST2, NODAL, NPR2, NT5C, OR11H1, OR1M1, OR4D2, OR56A1, OR5T1, OR8B12, PARD6A, PIK3R4, PLA2G4A, PPP2R2B, PPP2R5C, PPP5C, PRSS2, PVRL4, RPN2, RPS6KA2, SLIT1, SLIT2, SMPD1, SPAM1, SPI1, SV2B, TBXA2R, TCIRG1, TGFB2, TLR4, TMLHE, UGCL1, UPRT, USE1, GABARAPL2

Negative_12879	AK7, APP, CRH, GGH, HK1, MVD, AASS, ABLIM1, ACTN2, ADCY10, ALDH4A1, ALG10B, AMY2A, AOC3, APAF1, APH1A, APOA2, ATP5G1, BCAT2, BMP8B, CCNG2, CHD8, CLCA4, CLDN4, CLDN7, COQ3, CRB3, CTPS2, CYCS, CYFIP1, CYP1B1, DHD1, DDIT4, DGKA, DKK2, EPHA1, EPHB3, FABP4, FGF9, FZD6, FZD7, GADD45B, GALNT1, GALNTL4, GNAS, GRM5, HIBCH, HTR2A, IFNAR2, IL15RA, INPP5E, ITCH, ITGB7, KLRC1, LDHB, LRDD, LTC4S, MAN1B1, MFNG, MYH6, NT5M, OR10H4, OR10J5, OR1S2, OR2G6, OR2T3, OR4X1, OR51F2, OR51V1, OR52E2, OR5AP2, OR6C76, OR7D2, OR8I2, OR9K2, PDE4B, PIK3CD, PON1, PPP1R3D, PPP2R5B, PRKCQ, RXRA, SDHC, SMAD2, SMAD9, SPRY3, SULT2A1, TBXA2R, TLR3, UBA7, VDAC1, WASF2, WNT7B, ATP6V1C1, C1GALT1C1, KIR2DL5A, SERPINC1
Negative_12880	C7, DBH, SRF, ABLIM2, ACSM1, ADRA1B, ALG11, ANPEP, ARPC4, ARSD, ASRGL1, BUB1B, CCNB1, CD70, CSNK1D, CSNK1G2, CXCR3, CYP11B1, DAAM1, EFNB1, EHMT2, EPHX2, ERBB3, FGF6, FUT8, GALNT2, GALNTL1, GUCY1A2, GUCY1A3, IDUA, IFNGR2, IL6R, MTAP, MTHFR, NCR2, NT5M, OR10AD1, OR10V1, OR1J4, OR1L8, OR1M1, OR2AE1, OR2D3, OR2T8, OR4D11, OR5AN1, PIGB, PIK3CA, PMM1, RARA, RASA1, RASGRF1, RHEB, SNW1, SRD5A1, ST3GAL4, TOLLIP, TRIP10, UPP2, CSNK1A1L, CTNNBIP1
Negative_12881	CD6, LEP, MVD, SFN, ACTA1, ADCY3, ALPPL2, ATP5A1, ATP5L, CD34, CD3E, CLDN9, CRLS1, CYP1A1, CYP26B1, ENPP1, EP300, EPB41L3, FZD1, GRPR, GUSB, HIBCH, HLA-C, HNF4G, IFNGR1, INHBC, JAM3, LARS, LCMT1, OR10AD1, OR11H6, OR2A2, OR2T11, OR5J2, ORC3L, PCYT1A, PDE7B, PIK3CD, PPP3CA, PRKCE, RPN2, RPS6KA4, SDHB, STAT1, TAS2R38, THBS2, TLR5, TNFRSF4, TSHR, UPP1
Negative_12882	AUH, C2, CR2, CRH, GP5, ABLIM3, ACOT12, ADCY6, ASMT, ATP13A2, BCL10, BMP2, BMP4, BMP5, C1QB, CCL3, CCNH, CFTR, CLTC, CTPS2, DDX54, ENPP6, EPHA7, EPHA8, FOSL1, FUT7, GALNT8, GALNTL5, GLYCK, GNB3, GSTA2, GUCA1C, HYAL2, IFNGR1, ITGAE, KARS, KIR2DL2, LAP3, LEFTY2, LFNG, MAGI3, NFATC3, NTN1, OR1D2, OR52E6, OR52K2, P2RX7, PAK1, PDHA2, PIGX, PLIN, PLXNB2, POLA1, PPP1R3A, SELPLG, SEMA3G, SPAM1, STAM, STMN1, STX8, TBXA2R, ULBP3, VAV1, B3GALNT1, TNFSF13B
Negative_12883	CAD, CGN, DBH, NF1, SHH, ACACB, ACSL1, AGPAT1, AGPAT6, ALG1, AMDHD2, APC2, ARG1, ARNT2, ARSD, ATF2, B3GALT1, BDH2, BST1, CCL24, CCR4, CDK4, COMT, CPOX, CSF3R, CSNK1G1, CYP11B2, CYP1B1, DDX4, ELK1, EPHB6, FARS A, FZD8, GBA3, GLO1, GSTZ1, GUSB, HDAC1, HNF1B, HPSE2, HTR2C, IFNA6, IL17RB, IL21, IL28RA, INPP5A, ITGA11, KIR2DL1, KLRC4, LAMC3, MAML1, MAP3K7, MYH9, NFASC, NR4A1, NSD1, OCLN, OR13C3, OR13C9, OR1I1, OR4K15, OR52B4, OR5B17, OR5R1, P2RX4, PDE7A, PDGFRB, PDHA1, PGAM4, PIAS4, PLA2G2D, PLA2G4A, PLCB3, PLCD4, POLE4, PPP3R1, PTGER1, SNAI2, SPCS1, STX4, TAS2R13, TAS2R9, TBL1XR1, TLR3, TRAF6, TRDMT1, UGCG, VDAC1, ZFYVE16, CTNNBIP1
Negative_12884	C1S, C6, CKM, F3, FN1, GGH, GNE, IL6, ME2, AGPAT6, AMHR2, ANGPTL4, BCAT1, CACNB3, CCR2, CD27, CHRM2, COL6A1, COMP, CSF1R, CTBP2, CYP4A22, DGAT1, DPYSL2, EFNA4, EPHA8, FADD, FCGR3B, FPGT, FSHB, FUT7, FZR1, GALNT14, GBA3, GNAI1, GNG3, GSTM3, HAO2, HDAC2, HMBS, HSPA1B, IDH3A, IL17RB, IL28B, IL2RA, IMPDH1, JAK2, KRAS, LDHAL6B, LIPG, LTB4R2, LYZL1, MAML2, MAP3K7, MASP1, MCM2, MKNK1, NCKAP1L, NMNAT3, OLR1, ONECUT1, OR13C5, OR13C9, OR2AE1, OR2G6, OR2T8, OR51G2, OR52W1, P2RX4, PPM1D, PRIM2, PRKAR2B, RGS3, SORBS1, SSH3, SUCLG2, TBL1X, TLR5, TNFSF4, TOMM40L, TPH1, TSHB, UGT2B17, ULBP1, UROD, ZNRD1, ATP6V1E2, HSP90AB1, SERPINE1

Negative_12885	CR2, TFG, ABL2, ACOX1, ACOX2, ACVR1, ADCY8, AKT2, ALCAM, ARSA, ATP6V1 F, BIRC3, CCL1, CCL20, CCL24, CCNB1, CCNG2, CCR10, CD80, CDC25B, CHIA , COL1A1, CSF2, CTNND1, CXCR3, CYP11B2, DAPK2, DDX52, DHCR7, DRD2, DT X3, EPHA7, EPHX1, EXT2, GALK2, GALNT2, HPSE, HRH2, IDUA, IFNA10, INHB C, IRAK2, ITGAE, KIR2DS5, MAML3, NAGK, NCK1, NRXN3, OR1J2, OR2S2, OR2 T29, OR4D1, OR52M1, OR5J2, PER1, PHPT1, PLEKHA8, PRKAR1B, PRKCB, PTP N5, RDH16, SH3BP2, SLC2A1, STX7, SULT1A4, TNFSF12, TRDMT1, TUBA4A, V AMP3, XYLT2, HSD17B10, PRICKLE2, TNFRSF10A
Negative_12886	APP, BAD, DDC, DLD, EPO, FN1, NOG, SCD, TYR, AASS, ADRA1A, AKT1, ALDH1L 1, ANAPC7, AOC3, APOA1, ARAF, B3GNT3, BCL10, C1QA, CACNB1, CALML5, CC L7, CD46, CD70, CREB1, CYP17A1, CYP2F1, DHODH, EPB41L3, EPHB1, FGF8, FOXO3, FRAP1, G6PD, GMPA, GSTM5, GSTO1, HAAO, HSD11B1, ICAM1, IDH3G , IL29, INADL, INSRR, ITGA2, ITGAD, KLRC3, LDHAL6A, MAN1A1, MAPK14, M APK9, METTL2B, MYH15, NADSYN1, NARS2, NLGN1, NRXN3, OCLN, OR10A7, OR 10AG1, OR1D2, OR1J1, OR2A5, OR2B11, OR51B6, OR51F1, OR5B21, OR6A2, O R6C1, OR7C1, P2RX3, PDE4B, PDE7B, PER1, PGAM1, PGAP1, PIAS1, PLAUR, P LCB1, POLD1, PPARG, PPBP, PRIM1, PRKCG, PROS1, PTGDS, PTPRJ, RERE, SM AD6, SMC1A, SPRY3, ST8SIA1, SUV39H1, TLR2, TUBB3, ATP6V1B2, CSNK1A1 L
Negative_12887	AK3, DLD, GNE, MIF, NOG, PGD, TNF, ZYX, APOE, APRT, ASRGL1, ATP4A, BDKR B2, C4BPA, CACNG5, CAV3, CCNB1, CD74, CDC16, CKMT2, CLTC, CTLA4, EPHA 2, GCH1, GP1BB, GSTT1, GUCY2F, IARS, ICAM3, IDH3A, IRF3, KIR3DL3, MTM R6, MYLK, NFKB2, NOTCH1, OR13F1, OR52J3, P2RX6, PIK3R2, PPP1R3C, PTD SS2, PTGER3, SEMA4D, SFRP4, SH2D1B, SHC1, SOD1, THBS3, TUBB4Q, TYMP, USE1, WIF1, WNT10A, CSNK1A1L, HLA-DRB3, HSD17B10
Negative_12888	CKM, GPT, IL3, IL6, IVD, LYN, NPL, PGD, RDX, SRM, ACSL5, ACTB, ADAM17, A LG5, ALOX5, ATP2A2, B3GAT1, BDKRB2, CCL7, CCNB3, CCND1, CD79B, CLDN7 , COL5A3, CSNK1A1, CYP2C9, DHDDS, DLAT, DTX3, ESAM, FGF22, FUT9, FZD1 , GALC, GALNT5, HEXB, HGSNAT, HMGCS1, IFNA4, IL18, IL19, INPP4B, ITGA V, LPAR1, MDH2, MKNK2, MYH11, MYH3, NAT1, NCF2, NEU4, NFATC3, NRG1, OR 10T2, OR2Z1, OR4F5, OR5R1, OR8B8, OR9Q2, PDE1C, PDHA1, PFKFB1, PFN4, PIK3CA, PON2, PRPH2, SEMA4A, SMPD4, SPRY3, STX5, STX6, TCF7L1, TKTL2 , TUBB3, UBE2K, UGT2A1, UNC5C, B4GALNT1, CSGALNACT2, PAFAH1B1, TNFR SF14
Negative_12889	APP, AR, C5, CBS, DLD, GLA, GP9, HK2, PLN, ACP2, ACPP, ADSS, ALDH1A3, AL DH3B2, AMD1, ATP5H, BMP7, BMP8A, CACNG3, CD34, CD38, CD82, CDC27, CDO 1, CLCF1, CMAS, COL3A1, CRB3, DDX23, DGKZ, DLAT, DTX3L, EARS2, ENPP1, EPHB4, FRAT1, GDF5, GIT1, GNAL, IDI1, IFNA14, IKBKG, IMPDH2, ITGAL, I TGB3, ITPKA, KIR2DL2, MAGI2, MAPK13, MGAT3, NAE1, NGEF, NSDHL, OR2G2 , OR2M4, OR4C15, OR4P4, OR51M1, P2RX2, PDE2A, PDE4D, PFKL, PIK3CA, PI K3R4, PPP2CB, PRKCA, PRKCZ, PTGIS, RALBP1, RBL2, RND1, SAT2, SEMA3B, SEMA4C, SESN3, SFRP5, TAS2R8, TLN1, TRPM5, UGT2A1, WNT3, TNFRSF13B
Negative_12890	ACPT, ACVR1B, ADCY7, ALDH1A3, ALDH5A1, APOA1, APOE, ARPC2, ARSE, AXI N2, BDKRB1, BIRC2, CACNA1G, CBLC, CCR7, CHRNA7, CKMT2, CLCA4, CLDN7, COL4A1, COMP, CPT2, CTLA4, CYP11B1, DNMT3B, DTX3, DUSP6, EFNA1, ENTP D6, GADD45B, GALNT8, GGT7, GLI1, GPD1, GUSB, HAAO, HES1, HMOX1, HTR2A , ICAM2, IDI2, IFNA8, IFNAR1, IL13RA1, IL17RA, IL18R1, IL1A, LEFTY1, LYPLA1, MARS2, MYL2, NANP, NEUROG3, OR10G4, OR4A16, OR51I1, OR52E4, OR52K1, OR5B17, PAFAH2, PAK6, PLXNA1, PNPO, POLR2H, PPP2R5A, PPP3CB , PRKCZ, PTPMT1, RAPGEF3, RASA1, RASGRP1, RXRA, SHMT2, SRD5A2, SUV39 H2, TDO2, TGFA, TIAM2, UGDH, ULBP3, VAMP4, WASF1, YOD1, YWHAE, ATP6V1 B2, HSP90AB1, MAPK8IP3, TNFRSF10A

Negative_12891	BTK, F7, NNT, ADH1A, AKR1C4, ARG1, BDNF, BET1, BIRC2, CDH3, COL5A3, CSNK1G2, DNMT3A, EFNA1, FLT3, G6PC, GRAP2, GSTM1, HDAC1, HIP1, HSD11B1, IL1R2, INSR, KIR2DL2, MAP2K4, MMP2, MYLK, NEUROG3, NRG2, OR10A6, OR10J5, OR10P1, OR14A16, OR14J1, OR2T2, OR4D11, OR52A1, OR52N5, OR5T1, PFN1, PGAP1, PHKA2, PIP5K3, PIPOX, POLR3A, PON3, PVRL4, SDC1, SEMA3G, SMC1B, SPI1, STAT6, STK3, TLR2, TLR4, TUBA1B, TUBA4A, UCP1, VNN1, YES1, CSGALNACT2, ST6GALNAC6
Negative_12892	APP, CD2, CKB, GGH, GSS, KDR, ASNS, B4GALT6, BCKDHB, CBLC, CD40LG, CDK6, CFLAR, CMAS, COL2A1, DHODH, DUSP6, EFNB1, EHHADH, EPHA1, FABP4, FGFR1, FSHR, GAD1, GFAP, GFPT1, GNPDA1, H6PD, IBSP, IL8RB, ITPKB, LAP3, LYPLA2, MAN1A1, MAP4K4, MMP14, NNMT, NPR2, OR10A2, OR10J3, OR1J1, OR52J3, OR5AN1, PAICS, PANK3, PFN3, PHKA1, PLXNA3, PPM1B, RIPK1, RRM2B, RUVBL1, SELPLG, SMPD1, STX8, TAS2R9, UBA1, VANGL2, YARS2, YWHAZ, SLC25A31
Negative_12893	CR2, DUT, FN1, ACOX3, ARPC4, ATP6VOB, B3GNT4, CACNA1G, CAMK2D, CD8B, CDC14A, CDH2, CKS1B, COL4A6, CRHR1, CSNK1E, CYSLTR2, DGKE, DLAT, DUSP2, E2F2, ENPP1, FLOT1, GFPT1, HARS, HMGCS2, IFT57, INPP4B, LEPR, MAGI2, MGAT3, MYH13, OR10AG1, OR13G1, OR1G1, OR2T2, OR2T8, OR52H1, OR5K2, OR8I2, PAK4, PAK7, PDGFRB, POLR3D, POLR3H, PPOX, PRKAR2B, RAP1B, RASGRF1, RHOQ, ROCK2, RPS6KA3, SGMS2, SLC2A1, SPCS3, SUCLG2, TUBA4A
Negative_12894	MSN, ADH1A, ALDOB, ALPP, ANAPC11, ARHGAP5, BET1L, BUB1B, C3orf10, CAMK2G, CD79A, CDC14A, CDC20, CDC27, CDH15, CES2, CNGA3, CREBBP, DPM2, DPM3, ESPL1, FUT9, GLG1, GLI3, GMPR, GNAQ, GSTO2, H6PD, HRH1, IDUA, IL1RAP, IL24, IRF5, ITGA6, ITGAE, ITPKA, KLK3, KLRD1, MAN1C1, MAP3K4, MAPK3, MAT2B, MIOX, NAT6, NFKB1, NLGN2, NOS3, OR10S1, OR2T34, OR52M1, OR5K1, OR5T2, OR7A10, PDPK1, PLA2G3, PLCD1, PPP2R5A, PRKAA1, PRKX, PTPRM, RAPGEF1, RASSF5, RETSAT, ROCK2, SEMA3B, SESN3, SHMT1, SMAD5, SMC1A, SREBF1, SRGAP3, ST8SIA1, STAT2, TCF7, TKTL2, WASF3, ATP6V1B1, ATP6V1G1, HLA-DRB3
Negative_12895	C3, ID4, MTR, MVK, ADCY2, ADH5, AKR1C3, ALPP, AMPD3, ARPC1B, ATF2, ATP12A, ATP5H, ATP5L, B4GALT4, CCR10, CD28, CDC23, CDC26, CHST11, CLDN6, CLOCK, CRB3, CXCR3, DBF4, DGKG, DUSP16, EFNA5, ENPP3, EXOC7, FDFT1, FMO3, FOXO1, FRAT2, GLUD1, GMPR2, GMPS, GRIN2A, GSTP1, HADHA, HMGCS1, INHBA, ITGA2, ITGA9, MAP3K4, MCCC2, MDH2, MGAT4B, MPST, NAGA, NAGK, NCOA4, NFKBIE, NOX3, OCLN, OR2M4, OR51B2, OR6B3, OR7C1, PDE4A, PFKFB2, PIGC, PMVK, PPAP2C, PRKAR2B, PTCH1, PTGFR, RPS6KB2, RXRA, SESN1, ST8SIA1, STAM2, TAS2R13, UPRT, UROS, ATP6V0A1, MAPKAPK2, PLA2G12B, PNLIPRP2, ST6GALNAC3
Negative_12896	ADO, KIT, NPY, ABLIM3, ACHE, ACYP2, ADCY5, AGPAT1, ANAPC10, APAF1, ATP5J, BNIP1, C4BPB, C9orf95, CACNB1, CCNG1, CD47, CD8A, CLDN7, CNDP1, COL4A6, CPT2, CREB5, CTSL1, CTSS, DAPK2, DOT1L, DUSP2, EFNA1, EGFR, EHHADH, EXTL1, FBXW11, FECH, FGF17, FUT6, GAL3ST1, GMPPA, GSTM3, HNMT, HSD11B2, INPP1, IRF3, ITGA2B, ITGAM, JAK1, KLRC3, LTBP1, MAOB, MGST2, MKNK1, MYL2, NAT6, NLGN1, NME7, OR10AD1, OR13D1, OR1L3, OR1L6, OR2T33, OR51Q1, OR52N4, OR6X1, OR7G1, P2RX1, PDE3B, PI4KA, PIP5K1A, PIP5K1B, PLA2G3, PMM2, POLE2, POLR2A, PPARG, PPBP, PRKCD, RRM2, SAT1, SD C1, SLIT1, SRGAP3, TCIRG1, TIAM1, TSHB, TUBA3C, UGT2B11, UNC5C, VASP, VCAM1, ZFYVE16, EIF4EBP1, TNFRSF1A

Negative_12897	ADO, GK, IL2, IL9, KHK, PRL, PTS, PXN, VCL, WAS, ACSS1, ADIPOR1, AHCYL2, ANAPC5, ASIP, ASNS, ATN1, ATP6VOC, BBOX1, CDC2, CDS2, CHPF, CLDN15, COL5A1, CYP8B1, DGKA, DHDH, DKK4, DNMT3L, ENTPD1, ENTPD5, FARSB, FIGF, FLT3, GALNT11, GALNT12, GNMT, GNRH1, GNRHR, HCCS, HDAC1, HGSNAT, HMOX2, IFNAR1, IGFBP3, IL10, IL17A, IL2RG, IL3RA, JAM3, KLRC2, KLRK1, LAP3, LDHAL6A, LTA4H, MAN1B1, MDM4, MOV10L1, MYD88, MYH7B, NARS2, NCF1, NEFH, NMNAT3, NOX3, NR5A2, NT5C, OR10AD1, OR4K14, OR4N4, OR51G1, OR52E4, OR52J3, OR56A4, OR5T1, OR8I2, P2RX3, P2RX7, PDE1B, PDGFA, PFKFB4, PIK3C2B, PLXNA2, PPP2CB, PRKAG2, PRLR, PTPMT1, SELP, SORBS1, ST3GAL5, STEAP3, TAS2R60, TJP1, TLN2, TNFSF4, TUBA4A, VAMP3, VAMP4, SERPINA1
Negative_12898	C2, C8G, FN1, GP9, HK3, MIF, MOS, PML, ABP1, ACP1, ADCY7, ALG10B, ALG13, APPL1, ARRB1, ATP13A2, ATP5L, B3GALT2, BIRC3, CACNA1G, CCR5, CD46, CDK6, CLCA2, CLDN17, CRLS1, CSF3R, CSNK1G1, CX3CR1, CXCL12, CYP2C19, DDX4, DDX50, DNMT3L, DUSP6, EDA2R, EDNRA, ETNK1, FGF9, FLOT1, GOSR2, GRM5, GSK3B, GSTM4, GUCA1C, HSD17B1, HTR2C, IFNB1, IL15RA, INPP4B, IRF5, LHCGR, LTC4S, MAGI2, MCM3, MDH1, MKNK2, NFASC, NPAS2, NRXN1, OR10C1, OR2G3, OR2T8, OR4N5, OR51I2, OR51S1, OR6C1, P2RX3, PDE10A, PFKFB4, PGM3, PIGS, PIK3R3, PLA2G1B, PLXNC1, PMVK, POLR2B, POLR2H, PPAP2B, PTPRF, PYCRL, RAC3, RIPK1, RRM2B, SC4MOL, SESN3, SOCS5, STK3, SUL1A1, TAS2R40, TNFSF11, WASL, WNT8B, CACNA2D1
Negative_12899	AMT, CFH, LCT, LIF, MTR, TK2, ACSM4, ACVRL1, ADH4, AGXT, ALDH1B1, ATG12, CAV3, CHAD, CLDN1, CLTC, CREB3, CSF2RA, CSNK1G2, CXCL10, CYBB, DGA2L4, DPAGT1, EHMT2, FGF17, FRAP1, IL20RB, IPPK, LDHA, LILRB3, MAFA, MPDZ, NEUROD1, NFKB2, NUDT12, OR10A2, OR10A6, OR13C4, OR2AG1, OR5D14, OR7G2, OR7G3, PARD6G, PARS2, PER2, PFKFB1, PFKFB4, PI4KB, PIAS2, PLCB4, PTTG1, PYGB, RRM1, SEMA3B, SLC9A1, STX1B, SYNJ2, TAS2R1, TAS2R50, UGT2B10, WIF1, WWP2, XYLT2, ZFYVE16, PLA2G12A
Negative_12900	AR, AUH, CDA, DCK, IVD, ABL1, ADH1A, ALPI, ATG12, BIRC2, BIRC5, CAMK2A, CASP9, CD19, CDC45L, CDH1, CSF2RA, DDHD1, DDX23, DERA, DGAT2L4, DNMT3L, DUSP10, DUSP3, EDN1, EDNRA, EFN3, EIF4E, EP300, EPHB6, EXOC7, FDPS, FOXO3, FSHB, GALNT11, GALNT13, GRIA1, GSTA1, GSTM4, HSD17B1, IL17RB, KLKB1, LAMC3, MAPK8, MARS2, MTMR2, NT5C2, OR13C8, OR4N5, OR8A1, OR8K1, P4HA2, PANK2, PDGFD, PI4KA, PIGA, PIP5K3, PLA2G2E, PLXNA2, P OLR3B, PRKACA, PRKACB, PRKAR2B, PRODH2, PYGL, RENBP, RUNX1, SETD7, SH3BP2, SKP1, STK4, TAP2, TAS2R49, TAS2R8, TBL1X, THBD, TJP3, TSLP, UGT2A1, VEGFC, XIAP, MAP3K7IP2, SERPINF2, TNFRSF14
Negative_12901	HDC, JUN, ACP1, ACP2, ACSM4, ADSS, AMPD3, ARG2, ASS1, ATP5G1, BAIAP2, CACNB1, CD46, CDC7, CHAD, CHEK1, CNGA4, COL4A2, CYP21A2, CYP21A3, DUSP4, EPB41L3, EPHA8, EXT2, F11R, F2RL2, FARSB, FPGT, FUT2, GNRHR, GP1BB, INHBB, MAPK7, MCCC1, METTL6, MYH13, NEGR1, NFASC, OR2F2, OR4C46, OR52B4, OR5H2, P2RX1, PAX8, PCK2, POLR1B, RDH16, RHEB, RRAS, SLC33A1, STX2, ZBTB16, MAPK8IP1, SERPINE1, TNFRSF11B
Negative_12902	LTB, MVD, TK2, XDH, ACO2, ACTG1, ADRBK2, ANAPC11, AOX1, ATP5C1, BDKRB2, CACNA1B, CARS, CCNE1, CDKN1C, CHAT, CNGA4, CSF3, CYP3A7, DDB2, DRD2, EPHA6, EPHB1, ERBB2, FGF21, FGFR1, FMO4, GNAQ, GNB1, ITCH, ITGB6, KLRC2, LIFR, LIPA, MYL7, NQO1, OR10A2, OR51S1, OR5B21, OR7G1, PAX4, PER3, PFKFB2, PGM2, PHKG2, PIGB, PIK3C2G, PKMYT1, PLA2G2D, PRKAR1A, RDH11, SDHA, SEMA3E, SIPA1, SLC25A6, ST3GAL4, STT3B, TRDMT1, TSHB, ATP6V1E2

Negative_12903	<p>CBL, CKB, F3, GK2, GP6, HYI, KMO, LCT, LPO, MET, MOS, NPY, TK2, VCL, ACAC B, ACTC1, AKR1C1, ALDH1A1, ALDH6A1, ATP5J2, BDH2, BUB1, CALML6, CAMK K2, CD27, CD28, CD44, CD70, CDC23, CDC25B, CDKN1C, CHPF, CLDN10, CMPK 2, CSF2, CYP2C9, CYP4F2, DGAT2, DMGDH, DPAGT1, ENTPD3, EPB41, EPHA3, EPHB3, FMO2, GALM, GCNT2, GNAI2, GPX7, HLA-</p> <p>DRA, HTR7, IDH1, IL18, IL9R, KYNU, LHCGR, LTA4H, MFNG, NCR2, NFATC3, O R10G2, OR10H4, OR10K2, OR4F5, OR4S1, OR51I2, OR5K2, P2RX4, P2RX7, PA K1, PCYT2, PDE7B, PDGFRB, PDHA1, PFKP, PIK3C2A, PIK3R2, POLE3, POLR2 F, PPP2R5E, PPP5C, PSPH, RAC2, RGS3, RPE65, SEMA4F, SETD1A, SMAD4, SP RED1, SSH3, SUV39H2, TAS2R49, TBL1Y, TRPM5, TUBB6, UGCGL2, UMPS, ATP 6V1G2, HLA-DRB4</p>
Negative_12904	<p>AK1, CRH, HPD, PLN, SRF, TEC, ACAA2, ACADSB, ACOT11, ADH7, ADSL, AHCY, ALAS1, ALG1, ALOX15, ATP5H, Bmpr2, C3orf10, CACNA1F, CAV3, CBR3, CCL 17, CCNH, CCR5, CDS1, CHST13, CMPK1, COL4A4, CRB3, CRY1, CSAD, CTSL1, CYP2F1, DDX18, DLL4, E2F5, ELK4, EPHB4, FUT3, GALNS, GSTT1, INHBE, IQ GAP1, ITGA8, JAK3, KITLG, MAGI3, MAP2K7, MAP3K5, MCCC2, MYH3, NCAM1, NUDT12, OR10J5, OR10X1, OR13C2, OR13H1, OR13J1, OR2Y1, OR4C12, OR4X 2, OR52A5, OR5A1, PDXK, PER2, PLA2G3, PLCB1, PLXNB1, PMM1, PPP2R2B, PPP2R5A, RPS6, SDC4, SDHD, SELPLG, SESN1, SIAH1, SOCS2, SOCS4, SOD1, SRGAP1, STAT3, STK11, STK3, SULT1A4, TUBB3, UCP1, UGP2, VDAC2, YARS, YARS2, YOD1, EIF4EBP1, PLA2G12B, PNLIPRP2</p>
Negative_12905	<p>DCT, F2R, GSN, AARS, ACSM2A, ADCY9, ADORA2A, APOA2, ASMT, BAIAP2, BBO X1, BCL2L1, BNIP1, CDC7, CTSG, EXTL1, F13A1, FADD, FGF19, GAD1, GPX5, GPX7, HLA-</p> <p>DOB, HTR2C, IL22RA2, ITGB7, LARS, MAP4K1, MGST1, NEFM, OR10A6, OR13H 1, OR2B2, OR4X2, OR6N2, P2RX7, PIGH, PLXNB3, PMM1, POLE, PRNP, PYGL, R ASGRP1, RCHY1, RPS6KB2, RRAS, SFRP1, SIGLEC1, ST3GAL1, TACR3, TBXA2 R, TCF7L2, TPH2, TUBA1B, TXNDC12, ULBP1, VARS, YWHAE, TNFRSF12A</p>
Negative_12906	<p>CGN, FAH, ME3, MIF, MPL, MVK, SPN, SRC, ADCY5, ADH1A, AKR1B10, BTRC, CA V1, CCR4, CD244, CDC23, CHAD, CPT1B, CTBP1, CTNNA1, CYP2C19, DDOST, D PM2, ENAH, EPAS1, GALM, GALNT9, GCAT, GCNT2, GLI1, GSTO1, HADH, HAGL , HLA-</p> <p>DOB, IL17RA, IL1A, KLRC3, MALT1, MAP2K3, MGAT4A, MGAT5B, MOV10L1, NC OR1, NEU3, NTRK1, NTSR1, OGDHL, OR10AD1, OR11H4, OR1E2, OR4C11, OR51 A2, OR5B12, OR5B21, OR5F1, OR6B2, OR6C1, OR6C3, PDE4A, PIP4K2B, PLCB 3, POLR2A, PON2, PPP2R2C, PRNP, RELA, RGS3, ROCK2, SHC3, SMPD4, ST3GA L3, STX12, SUOX, SV2A, TAS2R8, TIAM1, TPK1, TYK2, UGT2B7, YWHAE, ZBTB 16, ATP6V0A2</p>
Negative_12907	<p>A2M, AK5, DHH, HPD, KDR, NOG, ABAT, ACAT1, AGPAT2, ALG10B, ALPP, ARPC5 , CACNA1I, CCR7, CDC42, CDK2, CLCA2, CTSL1, CX3CL1, DCTN1, DVL3, EPOR , FARP2, FLT3LG, GALNT14, GFPT1, HADHA, HPRT1, ICAM1, IL12B, IL19, IN HBC, INPP5B, ITGA1, MAP3K4, MFNG, MGAT1, MYH14, NAT6, NRG2, NTF4, NTR K1, OR10A5, OR10G9, OR10H3, OR1N2, OR2A42, OR2D2, OR2H2, OR2S2, OR3A 2, OR4C16, OR52N1, OR5T1, OR5T2, OR6N2, PDE1A, PDE4A, PDGFD, PDHB, PE R2, PFKL, PISD, PLXNB3, PPP1R3A, PRKACA, PRODH, PTGFR, RAC1, RALBP1, RARS2, SDC4, SELPLG, SETDB2, SLC25A6, TJP3, TSHB, TSHR, TUBA1B, UGCG L2, UPP2, UROC1, UXS1, WNT3A, WWP1, TNFRSF11B</p>
Negative_12908	<p>PC, SMO, ACVR2A, AKR1D1, ALDH2, ALG6, APRT, ARHGAP5, ARNT2, ASNS, BPN T1, CD36, CFL1, CYP2C19, DEGS1, DKK2, FPGS, GFAP, GNAI2, GUCY1A2, HIF 1A, ICOS, IFT57, MAP4K2, NCKAP1L, NFKB1, NFYA, NMNAT3, NT5C1A, OR10Z 1, OR8H3, OXSM, OXTR, PAK2, PAK4, PDCD1, PGK2, PIGB, PIGO, PLEKHA8, PO LD2, POLR2G, ROBO3, STX1B, SULT1A2, TAS2R41, USE1, WIF1, XYLB, XYLT2 , PAFAH1B2, ST6GALNAC5</p>

Negative_12909	C8A, GP5, NGF, TAT, ABLIM2, ATP2A2, B4GALT6, BAAT, BCKDHA, CCNE1, CD3E, CEBPA, CLDN17, CXCL12, CXCR4, EARS2, FGF18, FGF23, FOXA3, FRAP1, F TCD, FZD9, GGT1, GSTZ1, IFNA4, IL10RB, IL11, INHBA, ITGAD, LAMA3, LDH AL6B, NAT1, NFYC, NOX3, NT5C2, OR10R2, OR1D2, OR4C11, OR4K14, OR4Q3, OR5R1, OR7C1, PARVA, PER3, PFKM, PLCB4, PLCG2, POLR2D, PPP5C, PSEN2, RENBP, SEMA3A, SEMA4C, STX4, TBK1, TCF7L2, TKTL2, TLR5, TRAF6, TRMT1 1, UGCGL1, XYLT1, YWHAE, TNFSF13B
Negative_12910	A2M, C4B, JUP, ZYX, ACAA2, ACSL4, AGMAT, AGPAT1, ALDOC, ALG10B, AMD1, BMP7, BST1, CCR1, CCR5, CDS2, CER1, CHPF, CLDN8, CLTA, COQ5, CSF3, CTS L1, CXCL11, CXCL12, CYP3A5, DIAPH2, DTYMK, DVL1, ENPP6, ENTPD2, EPHA 1, FCER1G, FECH, GALNT13, GGT7, GMPS, GRLF1, HLCS, HNF4G, IFNA8, IL21 R, INHBE, IQGAP1, ITGAE, ITPA, JAK3, LAMC2, LGMN, MAGI1, MAP3K13, MAP K7, MCCC2, MS4A2, NNMT, OR11H6, OR14I1, OR2H2, OR3A2, OR4D9, OR5P3, O R6M1, OR9A2, PARS2, PDHA2, PFN4, PPP2R5C, PRKAA1, PRKX, PTPN1, PTPRR , RDH11, SEMA4F, SFRP1, STX5, STX6, TCF7L1, TGFB1, TNFSF9, TPI1, TPMT , XCR1, ZMAT3, PFAH1B3, TNFRSF10D, TNFRSF11B
Negative_12911	FUK, GCK, NF1, ABP1, ACAD9, ACSL4, ACTB, ACVR1B, ACVR2B, ADSS, ALCAM, ALDH1A1, ALDOB, BMP2, BMP8A, CACNB3, CCL25, CDC45L, CES2, CKMT2, COQ 5, COX15, CREB3L2, CXCR5, CYBA, CYP2C18, DDIT4, DKK1, DUSP7, EHMT2, E LK1, FGF22, FPGS, FZD7, GDF7, GNAS, HAAO, HADH, HDAC1, HHIP, HNMT, HYA L1, ICAM3, IL1B, ITGAM, KAT2A, MAP2K5, MAPT, MGST3, MNX1, MTHFD1, MTM R1, MTMR6, NAE1, NAGS, NAT5, NEFH, NOS3, OLAH, OR13F1, OR4A15, OR5R1, P2RX4, PCYT2, PIGH, PLCE1, PLCG1, POLR2K, PPP2R5A, RBPJ, RFXAP, RPN1 , RUNX1, RUNX1T1, SOCS3, SPRY4, SRD5A2, SRGAP2, STK11, SULT1A4, TRDM T1, UGT2B4, UMPS, WASF1, WNT7B, ZFYVE9, ATP6V1C2, MAP3K7IP2, PPP1R1 2A, ST6GALNAC1
Negative_12912	CBS, DCN, FN1, SDS, SI, AADAT, AASDH, ABAT, ACAD9, ACSL3, ASMT, AVPR1A , CCDC6, CD244, CDK6, CMPK2, COASY, CRKL, CYP8B1, FADD, FARP2, FASN, G NMT, HARS, IL12RB2, IL1R1, LIPG, MBL2, MCEE, MKNK2, MMP14, MYH13, NCR 3, NFASC, NME7, OR11A1, OR1J1, OR7A5, PCYT1B, PDE3B, PDHA2, PIGL, PIP 5K1B, PNLIP, PNPO, PRIM2, RPS6, RPS6KA2, STEAP3, SV2C, TIRAP, PPARGC 1A
Negative_12913	SRF, TFG, ACADL, AMDHD2, CAMKK1, CCNA2, CCNH, CDC25A, CHSY3, CLDN1, C LDN18, DGAT1, EDNRB, FADD, FECH, GAPDH, GCAT, GCH1, GNA14, GPX5, ICAM 2, IL18RAP, KIR2DL4, KYNU, LFNG, MAML2, MAP3K3, MAP3K6, MGAT3, NLGN1 , NSD1, OR13H1, OR4D11, OR5A1, OR5D16, OR5T3, OR8K1, OSMR, PDPK1, PHK B, POLR2I, PRKCD, PTGES2, RAPGEF1, RBL2, SEMA4F, SHMT2, SLIT1, SPCS1 , STX6, TCF7, TOMM40L, UGCGL1, UPP1, VDAC2, WNT8B, ATP6V0A1, ATP6V1G 1, PFAH1B2, PLA2G12B, SERPINF2
Negative_12914	C7, CP, ABL2, ABP1, ADCY6, ADRBK2, BACE2, BLNK, CCKBR, CCL23, CFTR, CH AD, CHST13, CLDN15, COL11A1, COL1A2, CRHR1, DARS, DLL4, DTX2, EPHA3, FRAT2, GART, GNAL, GNRH2, GSTA1, GSTP1, GTSE1, HIBCH, ICAM1, IRAK3, I SYNA1, KNG1, KRAS, MASP1, METTL6, MGST2, MTAP, NFKBIE, NRG1, NTN1, OR 10H2, OR2V2, OR4D9, OR52E4, OR5AS1, OR8D2, P2RX5, PDE4A, PDE7B, PGM1 , PIAS1, PIGB, PTTG1, SETMAR, STX1A, SULT2B1, TLR5, UBE2K, WARS2, YWH AZ, ATP6V1G2



Negative_12915	AK5, CRH, F9, GSR, MAX, NOG, RFK, ACY3, ADORA2A, ADSL, AGTR1, AKR1B1, ALG13, ALG5, ANAPC10, B4GALT2, BCKDHB, C1QA, C9orf95, CAPN2, CCNB2, CD247, CD48, CHRM2, CLDN6, CLDN7, CYP26B1, CYP2C19, CYP2S1, DOT1L, FCGR3A, FLT1, GABARAP, GCLM, GGPS1, GOT2, GSTK1, HEMK1, HLA-DMA, ICOS, IL18, IL1B, IL20RB, IL23A, IRAK3, IRF5, ITGB6, KIR2DL2, LCM T2, LIMK1, MMP7, NME4, OR4F6, OR51B2, OR51D1, OR51I1, OR52E4, OR6B3, OR6S1, OR8G1, PIK3R3, PIP5K1C, PLCD1, PLCG2, PPCS, PROC, SEMA4F, SETD2, SFRP2, SHMT2, SMAD4, SOAT1, STT3B, STX12, SUV39H1, TAS2R5, TRPM5, UGP2, UGT2B4, MAPK8IP3, SERPINC1, TNFRSF18
Negative_12916	APP, GGH, ID3, IL2, IL9, RFK, TK1, ACADVL, ACLKY, ACP5, AREG, ASRGL1, ATN1, ATP5J2, BDH1, BIRC5, BTRC, CACNA1E, CCDC6, CD274, CD79B, CD8B, CD C7, CDH4, CHIT1, CNGA3, CNTNAP1, CUL1, CX3CR1, CYP26C1, DAAM2, DDX4, ELK4, ENTPD1, ENTPD3, F2RL2, FGF13, FUT8, FZD3, GALNTL4, GCLC, GIT1, GLI3, GSTA3, GSTP1, GUCA1A, HEMK1, HRH2, HSD17B7, IFNA10, IL3RA, IL7R, IL8RB, INPP4B, LEFTY1, LMO7, MADCAM1, MAPK11, MCM2, MGAT3, MLLT4, NTSR1, OR1I1, OR2T1, OR4D1, OR5B3, OR5T3, OR8D2, PAX4, PDE11A, PDE1C, PDE8B, PLA2G2E, PLCG2, POLD1, POLR2D, PON3, PPARG, PPP2R2A, PTEN, P YCR1, RDH11, RPS6KA6, SETD7, SHC3, SLIT2, SOCS3, ST8SIA5, TUBB4Q, UG T2B11, UGT2B4, UPRT, ATP6V1E1, HLA-DRB4, HSP90AA1, MAP3K7IP1, PAFAH1B3
Negative_12917	AUH, CD4, CKB, IVD, ACSL1, ADIPOR1, AGRP, AKT1, ALDH1B1, ALG9, ALPI, A TP5C1, B3GAT2, BST1, C3orf10, CACNB4, CAMK2D, CDK7, CFLAR, CHPT1, CL DN3, COL1A2, COMT, DDX18, DHODH, DKK4, DPM2, EHHADH, ERBB2, GALC, GMP PA, GRAP2, HBEGF, HCCS, HDAC2, L1CAM, LAMC1, LTBR, MASP1, MTMR1, NEUR OG3, NFYA, NLGN3, NOX1, NRXN3, OR10H5, OR2L2, OR2M4, OR2T10, OR2T12, OR4N5, OR6B2, OR7C2, ORC6L, P2RX2, P2RX6, PARS2, PDE3B, PER2, PHKG1, PKLR, PLCG1, PPP3R2, PRKACB, PRKCA, PROC, PTGER3, RALGDS, RASSF1, RC HY1, RFWD2, RFXAP, RHOD, RXRB, SCIN, SDC2, SELL, SKIV2L2, SLC9A1, SOC S4, ST8SIA5, STMN1, TNFSF10, TNXB, TRAF5, UGT2B10, UNC5B, VAMP2, VDA C1, VDAC3, VTI1A, WASF1, WWP2, XCL2, ZAP70, ATP6V1E2, C1GALT1C1, TNF RSF11A
Negative_12918	CKB, CRH, F11, F7, F9, GSN, MVD, SMS, SP1, ACYP1, AKR1B10, ALG13, ALG6, APBB1, ARG1, ATG12, ATP2A1, ATP5G2, BET1, CAV2, CBLC, CCL19, CCL22, C DC14B, CDK6, CHEK2, CXCL12, CXCL3, DHRS3, DUSP8, E2F3, ERBB4, EXTL1, FBP2, FGF22, FTMT, GALC, GALK2, GCH1, GGCX, GRHPR, HEXB, HLA-F, IL11, IMPDH2, INADL, IQGAP3, ITGAL, KIR2DL4, LAMC2, LIFR, LIPE, MA D2L2, MADCAM1, MECR, MTFMT, MYH10, NAMPT, NCF4, NCR3, NEU2, OGDH, OR1 0A5, OR10T2, OR12D3, OR51A4, OR51L1, OR5B12, OR9A2, PAK2, PAK4, PAX6, PCYT1B, PDHA1, PHGDH, PIK3R4, PPP1R1A, PYCRL, RBPJ, RXRA, SCD5, SET DB2, SHC4, SOAT2, SPTLC2, SRGAP2, ST3GAL6, STX4, SUV39H1, TACR3, TAS 2R42, TBL1XR1, UBE2K, UMPS, WNT6, HLA-DQA2, MAP3K7IP2, SERPINE1
Negative_12919	BAX, C2, CGN, DCN, IDS, AADAC, AMDHD1, AMDHD2, AMY2A, AOX1, ARNT, ARPC 1B, ATIC, BAIAP2, CDC42, CDKN1C, CIITA, CPOX, CYP1A1, CYP26A1, DEGS1, ELK4, ENPP7, EPHB1, ESPL1, FCGR3A, FLT3LG, FUT2, GALK1, GLB1, GNB3, GRM5, GSTO1, HLA-F, LCMT2, MYH10, NFYB, OR10AG1, OR11H1, OR11L1, OR13C2, OR13C8, OR2B 6, OR4K14, OR4K15, OR4N2, OR6K3, OR9I1, ORC1L, ORC2L, PDE4D, PDXP, PI GT, PPARA, PRKACG, RAPGEF4, RELA, RPS6KA4, SLC25A5, STAT4, STAT6, TR PM5, TSC1, TSLP, TUBA3C, TUBB2C, TYMP, UCKL1, ULK2, VEGFB, WASL, YKT6, ATP6V1G2

Negative_12920	ATM, C1S, CRK, ARSE, ATP5J, BLVRA, CACNG5, CAV2, CCNB2, CCND3, CDK7, C HKA, COMT, CSDA, CYP2U1, DHFR, EIF4E2, EPB41, EPHA1, FGF10, FRAT2, GA D1, GANC, GNRHR, GSTO2, HMOX1, IKBKB, IL18R1, IMPDH2, MAP3K3, OR1I1, OR1L8, OR2F2, OR2H2, OR2K2, OR5J2, OR6A2, OR9A2, PAK3, PGAM1, PIGF, P LCZ1, POLR2A, PPP3R2, PRIM2, PRKAR1B, PRKCH, PRSS3, PTK2B, RARS, RAS SF5, SARDH, SH2D2A, SMAD3, SMAD4, SRD5A1, SSX2IP, TAS2R10, TAS2R42, CACNA2D2
Negative_12921	AK7, CFD, GDA, ME1, SRM, ZYX, ABL1, ACSM5, ACY1, AKR1A1, ALS2, ARD1A, B 3GNT4, C4BPA, CD8B, CDK4, CLDN2, CLTCL1, COL1A1, COL4A4, COL6A2, CRK L, EPHX1, EXTL1, FUT1, GLI1, GRIA2, HADHA, HSPA8, IRAK3, ITGB8, LYPLA 2, MAN1A1, MAP2K7, MAP3K5, MCM6, MTHFS, MYH7B, NCF4, NPR1, OR2A14, OR 4L1, OR4S1, OR4X1, OR52N2, OR8B12, P4HA3, PARVG, PDGFRA, PMVK, PPP5C , PPT1, PRKCB, PSPH, RASGRP4, RDH12, RPN2, SEMA3D, STAT4, SUFU, TGFBR 2, TNFSF14, TSC1, UCP1, CACNA2D4
Negative_12922	ABO, FUK, GAA, GNS, TFG, AADAT, AARS2, ACVR1B, ADRA1B, ADRBK2, ALOX12 , ATG3, B3GAT3, BNIP1, CBLC, CCL8, CCR4, CD82, CDC2, CLDN17, COL5A2, C SF2RB, CYFIP2, DCXR, DIAPH3, DMGDH, ECSIT, ENTPD6, ENTPD7, EPHA6, FG F14, GAD1, GALNT6, GNPAT, GPD1, GYS1, HADHB, HHIP, HMGCR, HPSE, IDH3G , IDUA, IFNA16, IFNGR2, ITGB4, MAN1A2, MAN1C1, MARS, MARS2, MICA, MPS T, NEFH, NT5E, OR10A4, OR10G9, OR10H4, OR51B2, OR56A3, OR5M9, PDCD1, PDE7A, PHKG1, PIGH, PIM1, PPBP, PRKAG1, RAC1, RRAS2, SDHC, SGMS1, SLI T1, TAS2R50, TP53, TSC1, UMPS, UNC5D, WNT4
Negative_12923	CEL, FES, MVD, SDS, ACLY, AMY2B, APOC3, ARNT2, ATP5J2, BBOX1, CACNA1E , CACNG7, CD58, CD74, CIITA, DDX18, DOLPP1, DUSP16, EPB41L3, FDFT1, F UT5, GLDC, IFNW1, IL18RAP, MAP4K2, MCM3, MYH15, MYLK3, NCR1, NEFM, NL GN3, OR10G9, OR11H1, OR2H2, OR4D11, PDX1, PIGH, PIP4K2A, PKLR, PLTP, POLE, SDC2, SEMA3D, SETDB2, SH3BP2, SMPD1, SOS1, SSH1, SUV39H1, TBXA 2R, TSC2, UGCG, WIF1, SLC25A31
Negative_12924	AK1, FN1, IHH, MVK, RFK, TYR, ACPT, ACVR1, ALDH5A1, ALG1, ALS2, ARAF, A TP12A, ATP5G1, B3GALT5, CACNA1G, CASP10, CCL28, CCL8, CD58, CDS2, CH IT1, CLDN6, CXCL10, DDIT3, DGKD, DUSP1, DUSP10, EDN1, FABP1, FASN, FG F1, FZD5, GALNT1, GNA15, HAAO, HDAC1, HIP1, HSD17B3, IFNA16, INPP4A, INSR, ITGA1, JAK2, KAT2A, KLRC4, MASP1, MYH11, NT5C1B, OLR1, OR2M3, O R2S2, OR4C11, OR4D2, OR4X1, OR5T1, OR5V1, OR9I1, PAFAH2, PIGS, POLR2 D, POLR2K, POLR3H, PPP3R2, PTGER3, PTPN1, PYCRL, PYGL, RDH8, RGS3, RO CK2, STK4, STX1B, STX5, SULT1E1, TCIRG1, TJP3, TPK1, UCKL1, WNT8B, AT P6V1G2
Negative_12925	C1S, C3, CAT, EPO, GBA, GLA, GP9, ME1, OAT, ACP6, ACVR1, ADH4, AFMID, AL AS1, ALG11, ALOX5, ALS2, ANAPC4, ATP6VOC, CDC7, CDH5, COQ6, CTNNA2, C TNNB1, CXCL11, CYP11B1, DDHD1, DUSP7, EDAR, EFNA4, EFN1, EHHADH, EN AH, ENTPD7, EPRS, FARP2, FDFT1, GALNT1, GBE1, GLG1, GMPS, GNRH2, GPAM , GUCY2F, HA01, HCST, HMGCR, HSD11B1, IFNB1, IL15RA, INPP4A, ITGA11, ITGA8, KCNJ11, MAPT, MINPP1, MTMR1, MYL2, NANS, NCK2, NEU1, NME6, OR1 OT2, OR1L3, OR2A25, OR4M1, OR51I1, OR52K1, OR56A1, OR5AC2, OR5H2, OR 5M8, OR8H2, OR8U1, PEMT, PLCB1, PLD1, POLR2K, PPA2, PRKAB2, PRKAG3, R FX5, RGS3, RHEB, RPS6KA1, SETD1B, SETMAR, SH2D1B, STX10, TCF7L2, TCI RG1, TIAM2, TOMM40, TSHB, TUBA4A, UROS, VANGL1, WWP2, SERPINC1

Negative_12926	ABO, BTK, F12, GDA, ME3, TPO, ACADM, ACO1, ADCY2, ADCY6, AGPAT6, ALPI, ANAPC4, ASAH1, ATP4B, ATP5E, ATP6V1H, B3GNT2, BUB1B, CACNA1D, CD22, CD244, COL3A1, COX15, CPT1B, CSNK1D, DAPK2, DDX18, DDX41, EFNA4, EFN B3, EIF4B, ENPP2, ENPP7, EPHA6, EXT2, FCGR2B, FGF9, FOXA3, FZR1, GLI3 , GOSR2, GRIA3, GSTM3, GSTM5, IFNW1, IL15RA, INSR, IRAK3, IRF7, KIR3D L2, LAMC3, LDHB, LEF1, MAD2L2, MAP3K12, MAP3K6, MDH1, MYH2, NAT6, NLG N2, OR10A3, OR13C9, OR1B1, OR2H1, OR2T1, OR4A15, OR8B12, OXCT1, PAX6 , PAX8, PFKP, POLE3, POLR3H, PPA2, PPAP2B, PPARD, PRKAG3, PTDSS2, PTK 2, SCD5, SPTAN1, ST3GAL1, ST3GAL2, SUV39H1, TAS2R3, TAS2R5, TKTL1, T LN1, UGT2A3, UNC5B, WARS2, WEE1, ZFYVE16, TNFRSF10D
Negative_12927	AK3, BAX, BTB, C8A, IL5, PML, ALG2, ASIP, BDNF, CD99, CMPK2, COL11A1, C YP2U1, DDIT4, ESPL1, FCGR3A, FGF11, GNRH1, GP1BA, GPAA1, GSTA4, HSPA 8, IL12RB1, IL12RB2, IL18RAP, KLK3, LMO7, MAN1A2, NEFL, NME2, NRXN3, NT5C1B, NTF3, OCLN, OR1K1, OR1Q1, OR2C3, OR5AC2, OR6B3, PERP, PFKM, P HKA2, PIK3R2, POLR3A, PTGS1, RPS6KA2, SMC1A, SMC1B, SOS2, STEAP3, TN FRSF8, TSHR, UGT8, PLA2G12B, SLC25A31, SUV420H2
Negative_12928	ADK, C4B, DHH, HYI, ACSL5, ACTG1, ADIPOR1, AGPAT2, ALDH3A1, ALG1, AMP D1, ANAPC1, ANPEP, ATG12, B3GALT2, B3GNT3, BBC3, C1QA, CACNG1, CACNG 2, CACNG5, CALML5, CCL11, CHEK2, CHPF, CLCA4, CSNK2A1, ECHS1, ECSIT, EFNA3, EPB41L3, EPHX1, EVI1, GCLC, HCLS1, HSPB1, IGF1, IL20, IL3RA, L ALBA, LAMB1, LYZL1, MALT1, MAP2K5, NFE2L2, NUDT2, OR10A3, OR11H4, OR 11H6, OR1J2, OR2A4, OR2L3, OR2T1, OR2T34, OR5J2, OR7D4, OR7G3, PHKA1 , PNPLA3, POLE2, PPM1A, PRKCI, PTGER3, RAPGEF2, RERE, SLIT1, SPRED2, SSH2, ST8SIA1, SULT1E1, TAS2R42, TMLHE, TNFSF8, YKT6, TNFRSF10C
Negative_12929	CEL, PDC, ACYP1, AHCY, ALG5, B4GALT1, CCL22, CCR10, CCR7, CNGA3, CYP2 E1, DAAM2, DDX41, DIAPH1, DIAPH3, DTYMK, EPHA7, FMO5, GAB1, GNAI1, HA RS2, HEXA, IFNB1, IKBKG, IL28RA, IRF5, LTB4R2, MAPK10, MYL2, NOX1, NR G4, OR6C2, PDE7A, PGAM2, PLA2G2A, PLA2G5, POLR2K, PTCH2, PTTG1, RPS6 KA4, RRM2, STAT2, SULT1A4, TNXB, TSC2, TUBA3E, TUBB4Q, TYMP, WNT2, YW HAG, YWHAQ, ATP6VOD2, PAFAH1B1
Negative_12930	CKB, F10, GP6, IDS, IL2, LAT, ME2, NLK, TFG, ACTA2, ADH4, ADH5, AQP7, AR SE, B4GALT6, CBR3, CCL14, CCL27, CCR4, CFTR, CMBL, CRKL, CYP2J2, CYP3 A4, DDX18, DGAT2, DHRS3, DIAPH2, DNMT1, EFNA4, F2RL3, FGF23, FLAD1, F MO1, FTMT, FZD5, GCAT, GLI2, GNAT3, GNB3, GP1BA, GPAM, GRAP2, GSTA5, H ES1, IDH3B, IFNA13, IL6R, INHBC, JUND, LAMB3, LYZL1, MCCC1, MPZL1, MY H11, NFASC, NMNAT2, NT5C1B, OGDH, OR10AD1, OR10T2, OR2B6, OR52I1, OR 5B12, OR5C1, OR5M9, OR5V1, OR8B8, OR8D2, OR8I2, OR9K2, ORC5L, PANK1, PFKFB2, PIAS3, PKLR, PNPLA4, PPA1, PPAP2C, PRKAB1, PROC, ROCK2, SCP2 , SEMA4G, SOAT2, SOX17, SPRED2, SRGAP1, SSH2, STK11, TAS1R1, TBK1, TP 53I3, TSC2, TSHR, TSTA3, WBSR22, SERPINC1
Negative_12931	ADC, C4B, C8B, HDC, JUP, ZYX, ACY3, ACYP2, ADCY7, ALDH1B1, BCAT2, C5AR 1, CD244, CD47, CLDN3, DERL1, DFFB, DPAGT1, EDA2R, FABP1, GMPR, GRB2, HSD3B7, IFNA4, MGST3, NEU1, NMNAT1, NNMT, OGDHL, OR51F2, OR52H1, OR5 2R1, OR56A3, PFN2, POLE2, POLR1D, PRKG1, PYCR2, RAB23, SDHD, SLC12A2 , SLC25A5, TACR1, TAS2R13, TFPI, TICAM2, TPI1, TUBA1C, TUBB2A, UCP1, UGT2B10

Negative_12932	DLD, EDA, EPO, F11, MPZ, MSN, PGF, ACADVL, ALDOB, ALG11, ANAPC4, AQP7, ARHGEF1, ATG12, CACNG4, CAV2, CCNG2, CHKB, CREB1, CSNK2A1, CXCL16, CXCR4, CYP21A2, DDX50, DKK4, ENO2, ENTPD2, ESPL1, FGF1, FGF13, FGF5, GARS, GDF6, GPD1L, GUCA1C, HHEX, HTR2C, IFNA6, IL13RA1, IL2RB, IL3RA, IRF3, ITGA3, ITPKB, LCAT, LYPLA2, MECR, MIOX, MKNK1, MTHFD2, MYH6, NAMPT, NOD1, NRG4, OGDHL, OR10G2, OR12D3, OR1D2, OR1G1, OR2A4, OR2F2, OR2T11, OR2T12, OR4C11, OR4F15, OR8H2, PAPSS1, PDE4C, PITX2, POLE4, P OLR2I, PPP1R3A, RARS, RASGRP2, RBKS, RBX1, RELB, RPS6KA3, RRAS, SELL, SEMA4A, STAM, STAT5B, TAS2R5, TLR9, TRAF6, TYMS, TYROBP, XCL1, YARS, YWHAG, B4GALNT1, SERPINA5, SERPIND1
Negative_12933	F9, GLS, ITK, MTR, RDX, ACADM, ACMSD, ACSS2, AGPAT4, ALDH3B2, ALG10, A RRB1, ATP5J2, BCKDHA, BPNT1, CASP6, CBLB, COL1A2, CREB3L3, CRHR1, CS F3, CYP4F2, ENO1, ENTPD1, ENTPD3, FASLG, FDPS, FGF6, FPGT, GALNTL5, G LB1, GLI2, GNA12, GNA14, GNA15, GPD2, IFNGR2, IFNW1, IL13RA1, INPPL1, ITCH, ITGA4, ITGB1, LIAS, LLGL1, MAP3K11, MAP3K8, MAP4K1, NSD1, NT5 M, NTSR1, OR10G9, OR2A25, OR2L2, OR5D13, OR5T1, OR6C2, OR6N2, OR8U1, PFN3, PIGS, PLCZ1, PLXNA2, POLE3, PSPH, RASGRP4, RBL1, SFRP1, SKP2, S TK4, TAS2R49, TIAM1, TRPC1, VDAC1, WASF2, ZFYVE16, SLC25A31
Negative_12934	AGK, CAD, CRH, MPI, OAT, ACVR2B, ACYP2, ADAM17, AKR1C4, AKT2, B3GALT2, CDH3, CDKN2C, CREB3L1, CSDA, CTNNB1, CYP11B2, CYP1A1, DAPK3, DGKB, EHHADH, ERO1L, EXT2, GADD45G, GALNT5, GDF5, GSTT1, IFNA17, IFNG, IL1 1, IRF7, KIR2DL2, KIR3DL2, LYPLA1, MAN2A1, METTL2B, MNX1, NCAM2, NOS 1, OLAH, OR14J1, OR2AG2, OR2F2, OR4K14, OR52N5, OR5D18, OR9A2, POLD2, POLR3B, PTPRB, PTPRC, RPS6KB1, SOCS7, STX1A, SULT2B1, TAS2R42, TBK 1, UPRT, SERPINA5, TNFRSF12A, TNFSF13B
Negative_12935	CAT, CFH, DBT, DDO, F8, LSS, ACSL1, ALAS2, ARHGAP5, ATP5B, CACNA1C, CA CNA1E, CD247, CD36, CD79A, CDK4, CFL1, CNTNAP2, CTSL1, CTTN, CXCL2, C YP2C9, CYP2F1, DDX19A, DDX4, DVL1, ENPP1, ENTPD3, EPHA1, EPHA5, EPHB 6, F2RL3, FASN, FTMT, GPD2, HAAO, HHEX, HTR2B, IFNA16, IL12RB2, IL28B, INHBE, JAK2, LIPF, MAP4K1, MAPK3, MCM6, NLGN1, NOX3, NT5C2, OR10H1, OR51G2, PDE4B, PDK1, PIK3C2G, PLA2G6, PPARG, PPP1R3D, PPT1, RAF1, RA SSF1, SMPD2, SMPD3, SRGAP3, TM7SF2, WASF3, B3GALNT1, MAP3K7IP2, PAF AH1B3, ST6GALNAC5, TNFRSF10A
Negative_12936	AMT, BCR, CKB, FN1, STS, UBB, AARS, AFMID, ALG8, APBB1, ARRB2, ATP4A, A TP5G3, BDNF, CD82, CREB3, CTPS, DHX58, EPB41, ETNK2, GAD1, GGT5, GPX7, GYS2, H6PD, HCLS1, HLA- DMA, HSD17B2, IL10, IL24, IL8RA, ITGA6, KYNU, MARS, MARS2, NFE2L2, NO TCH1, OR10A5, OR2AT4, OR2L13, OR2T12, OR4C6, OR5AS1, OR5T2, OSMR, PA K1, PDCD1, PHKA1, PLA2G5, PLAU, POLR2J, PPBP, PPP3CB, PRKX, PVRL4, RA C1, RAP1B, RELB, RRM2, SEMA4F, SIGLEC1, SLC27A5, SLC2A1, SMC1B, UGCG, UGCGL1, UGCGL2, UGT1A10, WNT9B, YOD1, ZBTB16, TNFRSF6B
Negative_12937	AK1, AMT, HPD, IL6, OGT, RET, STS, ABCC8, ADCY4, ADRB2, APOA5, APOE, AR HGEF1, ARPC5L, BCKDHB, CACNA1G, CAMKK1, CCKBR, CCL8, CDKN1B, CLDN4, CNTNAP2, CSF3R, CSNK2A2, CYP11B1, CYP17A1, CYP21A2, CYP7A1, DAPK1, DGKA, DUSP6, EFN1, FGF12, FGF9, FUT5, FZD8, G6PC, G6PC2, GALT, GIT1, GNAL, GRIN2B, GSTA4, GUCY1B3, GUK1, HAP1, HNF4G, HTR4, IGSF5, IL22RA 1, IL9R, INPP5E, IPPK, ITGAD, KYNU, MAP2K7, MAPT, MOV10L1, NEUROD1, N UDT2, OCRL, OR10Q1, OR13C9, OR1E1, OR2H2, OR3A3, OR51A4, OR51L1, OR9 G1, PAK4, PIGS, PIGV, POLR2I, PPP1R3A, PPP2R1A, PPP3CC, PRKCQ, PTPRF, RBL2, SEMA4F, SLC27A4, SMAD3, SPAM1, TAS2R16, TAS2R38, TGFBR2, TLN 2, TXNDC12, TYRP1, UGT2A3, VANGL1, VDAC2, VDAC3, MAP3K7IP1

Negative_12938	BAD, C8A, CD4, EGF, NOG, STS, ACTC1, ADH1A, ADRA1B, ALG6, ATP5H, B4GAL T2, CASP3, CD27, CDC2, CDS2, CES1, CES2, CIITA, COL1A2, CSH1, CXCL11, CXCL5, CYP26C1, CYP2A6, DERA, DKK2, DRD5, DTX2, EFNA3, ENTPD4, EPHA6 , FABP1, FCER1G, FLT4, GALNT5, GCNT4, GOT1, GPD1L, GRM1, HADHA, HMGCS 2, HRH1, HRH2, ICOSLG, IFNA16, INPP5E, ITGA8, ITGB8, KCNB1, KCNJ11, K IR3DL1, KIR3DL3, KLRC1, LDHAL6B, LIPE, MAD2L2, MPST, MTMR1, MYH1, MY L9, NFAT5, NKX6-1, OR10G4, OR2T4, OR4F5, OR51G1, OR5AC2, OR5I1, OR9G4, P4HA2, PANK2, PCK2, PDCD1, PDIA4, PIAS2, PLCE1, PLOD2, PMAIP1, PPAT, PRKAR2B, PSME 2, PTGER3, RAC1, RBX1, SMARCA5, SPRY2, SPTLC1, SSH3, STAT5B, STMN1, T AS2R1, TMLHE, UPRT, WNT1, ZFYVE16, ALDH18A1, ATP6V1G3, TNFRSF10B
Negative_12939	ADC, BAX, CGA, CKB, MVK, ACVR1B, ALDOA, ALPI, APH1A, BDH1, BMP7, CASP8 , CCL8, CCR4, CCR7, CD28, CD82, CLDN22, COL1A1, CRY1, CTBP1, DERL1, DH DH, DNMT3B, EFNB3, EPHA1, EPHA4, ETS1, FARP2, FDFT1, FZD3, GALNT11, G CNT3, GMPS, GRIN2C, GSTA4, GUCY2F, HLA- DRA, HRH1, HTRA2, IL17B, IRF5, KIR2DL1, KIR2DL4, KLKB1, LAMB2, LTBR, MDM4, NARS2, NAT6, NCR1, NT5C2, NUDT9, OR10R2, OR10Z1, OR2AE1, OR2Y1 , OR4C13, OR4X1, OR51B2, OR51F1, OR5A2, OR5J2, OR8D2, OR9G1, ORC4L, O XTR, PANK1, PDE4C, PFKFB3, PGAM1, PGK2, PGS1, PHKG2, PIGO, PKLR, PLA2 G2F, PNPLA4, PPP2R2B, PPP5C, PRKCI, PTPRZ1, RPS6KB1, SDHC, SFRP2, SG MS1, SKP1, SMAD2, SMC1A, SORBS1, ST3GAL2, STAT2, TJP1, TLR3, VAV1, WH SC1, ZBTB16, MAP3K7IP1, MAPKAPK3
Negative_12940	BAX, CGA, EZR, F8, ID1, MUT, TAT, ACADS, ACY1, AK3L1, ALDH1A3, ALOX5, A RNTL, ARSE, ASIP, ATP5F1, ATP5J, B3GNT2, C9orf95, CD8A, CDC14B, CDK4 , CHST13, CLDN11, CPT1C, CPT2, CSF3R, CSNK1G2, CYP19A1, CYP2U1, DERL 1, DVL1, EDNRB, EPB41L3, EPHX2, FABP1, FARSB, FSHR, GALK2, GLI2, GP1B A, GYS1, HIP1, HLA- DRA, HSD17B4, IFNK, IL20RA, INPP1, KLRC2, LAP3, LEFTY2, MAD1L1, MAP3 K1, MAPK7, MEF2C, MGAT4B, NCOR1, NFATC1, NQO1, OR52E2, OR5K2, OR5M9, OR7A10, PDE6G, PDE7A, PFN3, PGS1, PIGK, PIP5K1B, PIP5K1C, PLCB1, POL R1A, PPP2R1B, PPP3CA, PPP3R1, PRKAR1A, PROC, PTGES, RBX1, ROCK2, SEN P2, SLIT1, SORD, SPTLC2, STAT5A, STX18, SUCLG2, TKTL1, TPMT, TSHB, TU BA3C, UCK2, WARS, ATP6VOA1, TNFRSF11A
Negative_12941	AGK, ID1, AASDH, ACSM3, ADSSL1, AGPAT4, AGRP, ALDH3A2, ALDH5A1, ALG3 , BCL2L1, CCL21, CCL25, CCR4, CD14, CD226, CDC25B, CHEK1, CHKB, CHST1 3, CNTNAP2, CREB1, CREB3L4, CYP3A7, DDX19A, EPHA5, EPHB2, ERBB4, F13 B, FABP1, FGF7, FGF8, GLS2, HA02, HIBCH, HLA- DOA, IGSF5, IL9R, INSR, ITGB3, LGMN, MAP3K3, MAT2B, MCM2, MKNK1, MTHF D1, MTMR6, MYL2, MYL5, NCKAP1L, NFASC, NQO1, NUDT8, OR4E2, OR52J3, OR 52N1, OR5AC2, OR5K1, OR8D2, OR8G1, OXCT1, OXTR, PAPSS1, PDE3A, PGAM4 , PIAS3, PIGA, PIGP, PIGQ, PIP5K3, PLOD3, PNPLA3, POLE2, PPP1R3B, PRK CB, PRPS2, PTPN11, PTPN7, PTPRZ1, PYGL, RAPGEF2, RAPGEF4, SEMA4B, SH C3, SIGLEC1, SLIT1, SOCS4, TAS2R38, TUBB2A, UGT2B7, WNT10B, C1GALT1 C1, TNFSF13B
Negative_12942	ADO, BTC, CGA, GBA, GSN, HAL, ID3, TNF, AGRN, ALPPL2, ANAPC5, ARSA, B3G ALT1, CACNG7, COMP, CPT1B, CSF2RB, CXCL5, CYP1A1, DHDDS, FGF20, FLT4 , FOXA2, GALNT13, GDE1, GNAI3, GNAS, GNMT, HNF1A, ICOSLG, IFNA8, IGFB P3, IL18R1, IL2RG, JUND, LTB4R2, MIOX, MKNK1, MS4A2, NFAT5, NOTCH3, O R10H4, OR1J1, OR4D2, OR4F5, OR4K14, OR51L1, OR52E4, OR5A2, OR7A17, P AK4, PCYT1B, PPAP2A, PPP3R2, PYCR2, QPRT, SDC2, SFRP5, SLC25A4, SRGA P1, TAS1R3, TRPC1, UNC5A

Negative_12943	CDA, GNS, MOS, OAT, TNR, ACADSB, ACAT2, ACSL3, ALCAM, ALDH5A1, ALPPL2, AOX1, ARAF, ARG2, ATN1, C1GALT1, CD40, CD48, CD8A, CDC25A, CMPK2, CREB5, CRLF2, CTNNA1, CXCL3, CYP2A13, DPM3, EPHA4, FLT3LG, FMO1, GALNT10, GGCX, GRIA1, HDAC1, HIBCH, HTR7, IFNA2, IL25, IRAK1, LIAS, LTBP1, MAOB, MGAM, MGAT2, NR5A2, OR13H1, OR1M1, OR2T1, OR4F6, OR5B3, OR5T2, OXSM, PANK3, PDE8A, PDHA2, PDK1, PIGO, PLA2G2F, PLIN, POLR1E, PPP1CC, PPP1R3A, PPP5C, PRKCA, PRKCH, RAPGEF3, RASSF5, RHOA, RPE65, SELE, SEMA4A, ST3GAL1, ST6GAL1, TAS2R14, TAS2R3, TAS2R7, TPH2, VANGL2, WWP1, MAPK8IP3
Negative_12944	C3, CBL, LIF, ABP1, ACTC1, ADRB3, ADSSL1, AKR1B1, ARSA, CCL19, CCNG1, CDC6, CNDP1, CXCL5, DGKA, DKK4, DUSP10, FGF5, FLT3, FZD10, GALE, GGT7, IFNA5, IFNA7, IL13RA2, IL4R, JAK2, MAPK7, NAT6, NCF2, NOS1, NR4A1, OR2B2, OR4X1, OR5AR1, OR5D18, OR7G3, PCYT1B, PGM1, PGM2, PLAUR, PLOD3, POLR1E, PPP2R5C, PPP2R5E, PRKCZ, RARA, RDH11, RUVBL1, RXRB, SAT1, SCD5, SFRP1, SMPD1, SNAI2, SPCS3, SREBF1, SSH1, ST3GAL5, STAT1, STAT3, TLR2, TPH1, ULBP2, VANGL1, TNFRSF10B, TNFRSF11A
Negative_12945	ADO, KIT, SRF, TYR, ACACB, ADH7, ADIPOQ, AMPD2, BET1L, BHMT, CCKAR, CCR4, CHRM5, CLDN10, CSNK1D, DDX50, FGF17, GADD45A, GMPPA, IFNA21, IL8RA, INPP5E, IRF5, ITGB1, KNG1, LLGL1, MGAT2, NARS, NEUROD1, OR10AG1, OR10G4, OR1D2, OR4C13, OR5D18, OR5T1, PDXK, PER2, PI4KB, PIK3CD, PLA2G10, PPP2R1B, PROS1, PTK2, PTPN7, SC5DL, SCLY, SEMA3A, SEMA7A, SPTLC2, TRADD, UCK2, CACNA2D3, HSP90AA1
Negative_12946	BTD, CBL, CGN, ID1, IHH, IL6, KDR, MPL, PDC, ZYX, A4GALT, ABAT, ACACA, ACYP2, ARD1A, ARNT, ARPC3, ASAH1, B3GALT4, B4GALT2, BMP5, CCNG1, CDIPT, CLDN4, COX10, CXCL5, ESAM, EXTL3, FGF8, FGFR1, FZD4, GAS1, GCLM, GGT6, GGT7, GMPPB, GUCA1A, HMOX2, IDH3G, IL13, IRAK1, ITGB2, KLRC3, KLRD1, KLRK1, LDHAL6B, MASP1, MIOX, MYH15, MYH7B, NAGS, ODC1, OR11H4, OR14I1, OR2T5, OR4A16, OR4M2, OR51F1, OR52A5, OR52E2, OR52E4, OR52K1, OR8J3, PAK3, PIGL, PIPOX, POLR2J, PPARD, PRPS2, RASGRP3, RBPJ, SIAH1, SLC9A1, SOCS7, STT3B, SULT2B1, TICAM2, TSHR, ULBP1, ATP6V0A4, ATP6V1B1, ATP6V1C1, CSNK1A1L, MAP3K7IP2, PAFAH1B2, PLA2G12A, TNFRSF13C, TNFRSF14
Negative_12947	BAD, C8G, CKB, HGF, STS, ACVR1B, ADORA2A, ADSSL1, AHCYL1, ALG12, ANAPC11, ATP5C1, ATP6AP1, BMP4, CCR6, CDC23, CHIT1, CLCF1, CNTF, CREB5, CSF1R, CYP11B2, DDIT4, DUSP5, ECSIT, EDNRA, EFNA2, ENTPD1, EREG, FUT4, G6PC2, GAD1, GALK1, GALM, GDF5, GNPAT1, H6PD, HNF1A, IARS, ICOS, IFNA2, IFNA6, IFNG, IFNGR2, INMT, JAK3, LYPLA1, MAP4K4, MTHFD1, MTMR6, NEFL, NLGN3, NT5C, NT5C2, NUDT12, OR10G2, OR10G7, OR11H1, OR2D2, OR2W1, OR5I1, OR6C70, OR6Q1, OR8D4, PAX6, PIK3R1, PLA2G10, PPOX, PPP5C, PRKAB2, PRKG2, RASGRP3, RETSAT, SEMA3B, SLC2A2, SOAT1, SQLE, TAS2R4, TRIP10, VDAC2, HLA-DQA2, MAPK8IP2, SLC25A31
Negative_12948	ITK, SRC, SRF, ALOX15B, ATP6AP1, BCAT1, CCND3, CCR4, CRHR1, CX3CL1, CYP2C9, DHCR7, DHRS3, EI24, ENO1, EPHA1, EXOC7, EXT1, GNAQ, GSTT1, GSTZ1, GUCY2F, HAAO, HAP1, HDAC2, HLA-F, HMGCR, HSD17B3, HTR4, HTR5A, IKBKB, IL12RB2, INSRR, IQGAP2, ITGB6, LEF1, MAP3K11, MBL2, NFX1, NRG2, NTRK2, NUDT5, OR10R2, OR2C1, OR2T3, OR4P4, OR52E6, OR52I2, OR6B2, OR6B3, OR6C75, OR7A10, OR8U1, PANK4, PCYT2, PGK1, PIAS1, PIAS4, PIGB, PPP2R1A, QARS, RARS2, ROBO1, RPN2, RRM1, SNAP25, ST3GAL3, STAT4, TSHB, ULK1, CACNA2D1

Negative_12949	F9, FN1, RDX, ACSL1, ACSM3, ACY3, ADCY6, ADRBK2, AGPAT3, ARPC1B, CACN G5, CAMK2D, CHEK2, CKMT2, CNGB1, CREB3L2, CREB3L4, CYFIP2, CYP7A1, E PB41L3, F13A1, GSTM5, HNF1B, HYAL2, IDI2, IL23A, ITPKA, MYH9, NFKB2, NRG3, OR10Z1, OR2A12, OR3A1, OR52A5, OR5D13, OR5L1, OR6M1, OR8J3, OS MR, PAX8, PFKFB2, PIK3R1, PIK3R3, PLAT, PPAP2A, PSME2, PTCRA, RPS6KA 2, RXRA, SEMA4B, SOS2, SPRY4, SPTAN1, SSH2, TCIRG1, TNFSF18, TUBB1, U NC5C, WNT3, ATP6V1G1, C1GALT1C1, GABARAPL2, HLA-DRB5, SERPINE1
Negative_12950	BTK, IL6, RB1, TH, ADCY4, ADSSL1, ASNS, CACNB4, CALML5, CCL22, CDC20, CNTNAP2, COL5A3, CREB3L4, CSNK2A2, CYP26C1, CYP3A4, DKK4, ENAH, FIG F, FZD6, GLG1, GPX5, IDUA, LIPC, MYL2, MYLK, OR10A7, OR2A5, OR4D2, OR4 D6, OR52M1, OR5L2, OR8G1, PANK1, PANK2, PER3, PIPOX, PNMT, POLR2C, PP P2R2C, SFRP2, SKP1, SLC2A4, SLC9A1, SNAP25, SULT2A1, TAS1R1, TAS2R1 3, TNFRSF8, WARS2, ZFYVE16, B3GALNT1, TNFRSF1B
Negative_12951	ADC, AMH, BTD, CBS, EDA, FUK, GH1, GLA, HK3, IVD, SFN, SYK, TNR, ABLIM1, ABLIM3, ADCY10, ADRB3, ARSA, ATP5H, B3GNT4, CADM3, CD58, CHPT1, CISH , COL3A1, CRY1, CYP2F1, DDHD1, DGKQ, DLL1, EI24, ENPP2, FADS2, FGF1, G ARS, GGT7, GRIA2, GUCY2C, GYS2, IFNG, IGSF5, IL2RB, IL2RG, LIAS, MYLK , NAGLU, NCOR1, OGDH, ONECUT1, OR1L4, OR2AE1, OR2M3, OR4C6, OR4F17, O R4K2, OR51B4, OR52N5, OR56A1, OR5P3, OXTR, PAX8, PDHB, PER3, PGAM1, P GK2, PIPOX, PMAIP1, PPCDC, PRKAR1A, PTGER1, SENP2, SHMT2, STAT1, TAC R1, TAP1, TCF7L1, TUBB2B, VDAC1, WBSR17, PHOSPHO1
Negative_12952	BAX, BCR, FGB, AARS, ACSL3, ACSS2, ADRB1, ADRBK2, ATF4, ATG7, ATN1, BM P2, BMP8B, C9orf95, CAMK2A, CASP8, CCL5, CHAD, CHUK, COL5A2, CRHR1, C XXC4, CYP21A2, CYP2B6, CYP3A5, DDX19A, DPYS, DTYMK, EFNA5, EP300, EP HA8, FADD, FBP2, GALNT3, GLI2, GNA15, GNB3, GPLD1, GSTO1, GUCA1B, GUC Y1A3, HARS2, HTR4, IDI1, IL15RA, IL22, IL7R, IRS2, LALBA, LIMK2, MAN1 A1, MAT1A, MEF2C, MGAT5, MRAS, MTHFD1L, NKX2- 2, NUDT5, OR10G8, OR1F1, OR2AE1, OR2K2, OR2L2, OR2M3, OR4F17, OR5T3, OR9A2, OR9A4, PDE11A, PDE6H, PDGFC, PFN3, PIGL, PLAUI, POLR2B, PPP1R3 C, PRDX6, PRKG2, RAPGEF3, RASA2, RDH12, RHOA, SEMA3B, SOAT2, STT3B, U GCG, ULBP2, VAMP1, XIAP, YWHAE, MAPKAPK2, TNFRSF10C, TNFRSF13B, TNF SF13B
Negative_12953	RFK, ADCY7, ALG10, ARRB2, B4GALT3, BMPR2, CAPN2, CD3E, CDC2, CHPF, CS F1R, CTPS2, CYP2A13, FGF18, FGF3, FGF4, FZD4, GAB1, GALNTL4, GLYCTK, HIF1A, HMGCL, HNF1A, HSP90B1, IL2ORA, IL28A, IRAK4, ITGA10, KIR2DS5 , MAGI3, MGAT5B, MPDZ, NCSTN, NRG3, NUMBL, OR10Q1, OR2AG2, OR6C1, PCY T2, PDE7B, PIP5K1A, PLOD1, PLXNA1, PPP2R1B, PPP2R5B, PRLR, PTGER3, R ASGRP4, RPS6KB1, SHC2, SIAH1, STK3, STT3B, SUFU, TAS2R13, THBS4, TKT L1, TSTA3, TYRP1, UCKL1, ATP6VOE1, CSGALNACT2, SERPINB5
Negative_12954	DHH, GDA, IL9, NNT, AASDH, ABI2, ABLIM3, ACSL1, AGXT2, ARSA, BACE1, BU B1B, CACNA1D, CCL28, CD19, CD28, CDH15, CDKN1A, CHKA, CPT1B, CSNK1D, CX3CR1, CYBB, CYP11B1, CYP19A1, DGKG, DHX58, EP300, FGF3, GALNT6, GA LT, GGT7, HADHB, HAP1, HPRT1, HSPA2, IFNGR2, IL9R, ITGAM, LAMC2, LGMN , LMO7, LRRC4C, MAML1, MAP2K1, MAPK3, MAPK9, MYH1, MYH15, NADSYN1, NF X1, NODAL, NSDHL, NT5M, OR10A3, OR11A1, OR11H4, OR14A16, OR1J1, OR2H 2, OR4B1, OR51B5, OR52M1, OR6C1, OR7G3, PAK2, PFKL, PGAM1, PIGK, PISD , PPOX, PRIM1, PSEN2, PSME1, RDH8, RFXAP, SEMA4D, SMC1A, SOX17, SRGAP 3, SULT1E1, TXNDC12

Negative_12955	AGL, C7, C8A, CD2, GH1, HDC, PXN, SMS, ACSL4, ACSS1, ADAM10, ADCY1, ARG1, ATP2A2, ATP4A, BCL2, BIRC3, CCL4, CD28, CD3E, CHIT1, CSNK1G1, CXCL6, DGUOK, DUSP7, DVL2, EFNB2, EHHADH, EIF4E2, FLOT1, GALM, GBA3, GNA14, GNG13, GYS1, IL10RB, ITGAD, KNG1, LIPF, LRDD, MAN1C1, MAP2K1, NARS2, NEU2, NOTCH2, ODC1, OR10A7, OR10G2, OR13C8, OR1L3, OR2G3, OR2T2, OR51A4, OR5V1, P2RX1, PDE1A, PIK3C2A, PLXNA2, POLR1A, PRKACB, PRKCA, RAP1B, RERE, ROCK1, SAT2, TAS2R50, TFPI, TNFSF9, TRAF4, WNT8A, CSNK1A1L
Negative_12956	CKM, F2, PTS, RDX, TPR, ACAD8, ACPT, ACTN4, ACVR1C, ADRA1A, ALG12, ATP5G3, ATP5J, B4GALT2, BACE2, BHMT, CARD11, CCR5, CD46, CES2, CHAT, CTBP2, CTBS, CYP2J2, DAAM2, DHX58, DPYS, DTX3, FADD, FARSA, FTH1, GALNTL2, GAPDH, IPMK, ITPKA, LCAT, LRDD, MCCC1, MGAT2, MYH4, NAT6, NME6, NOS3, NT5C3, OR5P2, OR7C1, OXTR, PER1, PIGB, PIGS, POLE3, SARS2, SDHA, SEMA3E, STAT2, STAT3, TAS1R2, TBXA2R, TNFSF10, TYK2, VAV1, ATP6V0E1, SERPING1
Negative_12957	DBT, FGG, GPT, ITK, PLN, ACTA1, ACYP1, AKR1B10, ALDH4A1, ALG2, ASPA, ATP5G3, B4GALT1, CCL13, CCNB2, CD82, CDK4, CLDN10, CNGB1, CSNK1D, CYCS, CYP17A1, DIAPH3, DVL1, ENPP7, EPHA6, F13B, FOXA3, FZD8, GALNT3, GALNTL1, GCAT, GNG13, GNMT, HSD17B7, HTR5A, IDH3G, IFNAR2, INPP5E, ITGAE, JAM3, LCAT, MAP3K7, MAP4K3, MAPK8, MIOX, MTHFD2, NKX2-2, NT5C1A, OR10G2, OR1A1, OR4K15, OR51A7, OR52A5, OR9G4, PAFAH2, PAICS, PGM2, PHKA1, PIK3R2, PMM1, POLE2, POLR2D, POLR2F, PRKAB2, PRPH2, RASGRF1, SETDB2, SMURF2, SRGAP3, TACR1, THBD, TPI1, TPMT, TSLP, UCKL1, UGT2B4, VAV3, WBSR22, PAFAH1B3
Negative_12958	DUT, F10, GAA, GK2, JUP, NLK, TPR, ABP1, ACPT, AREG, ATG12, ATP5C1, C3AR1, CAMK2B, CCR5, CCR7, CD70, CLDN7, CXCL1, CYP11B2, CYP3A7, DDX54, D ERL1, E2F1, FARSA, FLOT2, FRAT1, GFPT1, GRIN2D, HEXB, IDH1, JAK3, KLR C2, MCM7, MGLL, NLGN3, NTF3, OR2C1, OR2T29, OR7A10, PANK4, PGM3, POLD4, POLR2B, PPAP2B, PPP3R1, PTGS2, PTPRC, RASGRF1, SEMA4F, SOX17, SRGAP2, TNFRSF4, TRPC1, ARHGEF12
Negative_12959	APP, DUT, PRL, ABCC8, ABLIM2, ADH1B, ADORA2B, AFMID, ARG2, ARHGAP5, BDNF, BMP8B, BUB1B, CCL22, CDC42, CLDN3, COL5A3, CREB3L1, CTNNA2, CXC L11, CYP2A6, CYP2C18, DUSP9, EDNRA, FADD, FGF3, FOXO1, FPGT, GALNT6, GALNTL5, GLUD2, HIBADH, HSD3B2, LIPC, MAD2L1, MAGI3, MAP3K8, MAPK1, MMP2, MTHFS, NR1H3, NT5M, OLAH, OR13C2, OR2L13, OR4K17, OR5D13, OR5D18, PFKM, PLCG1, PLCZ1, PLOD1, PLXNB1, PNPLA3, PTDSS1, PVRL3, SEMA4C, SKP2, SLIT1, SMAD6, STAT1, TAS1R3, TUBB, WHSC1L1, WNT8A, XYLT2, YKT6, YWHAB, ST6GALNAC6
Negative_12960	ADO, CBS, FGB, GH2, IHH, MTR, TK1, ACSM1, ADCY9, ADIPOQ, AGRP, AKR1D1, ALDH3B1, BCL10, CACNG7, CASP7, CCNA1, CCNG2, CD34, CD3E, CDC6, CDH1, CERK, CLDN18, CSF2RA, DUSP16, DVL2, ELK4, FOXA3, FUT2, FUT9, GALNT8, GNAS, HTRA2, IFNG, JAG2, KIR2DS5, KLRC1, KYNU, MAP4K2, MTMR1, NME4, NME7, NPR1, NQO1, NUMB, OR10G8, OR11H1, OR13A1, OR2B6, OR5V1, PAK7, PARD6B, PFKFB4, PFKL, PPP3R1, PRPS1, PRSS2, RAPGEF1, RCHY1, SETDB1, SHMT1, SLC12A2, STK4, STMN1, STX5, TAS1R1, TAS2R50, THBS1, THBS4, UROD, VTI1A, WNT8A, YWHAG, ATP6V0D1, C1GALT1C1, KIR2DL5A, PLA2G12A, SERPINF2
Negative_12961	AK5, CFD, F3, GNS, ILK, ABI2, ACAA2, ADRB2, ALOX5, AMPD2, APOA2, ATP5D, ATP6V1A, ATP6V1F, B3GALT6, B4GALT6, BPGM, C3AR1, CAMK2B, CCND3, CCR5, CD247, CDC26, CREB3, CTF1, CYP11B1, CYP26C1, DHRS9, EARS2, EPHA6, FLT4, FSHB, GNG3, HSD17B2, INHBC, MAD1L1, MAML3, MAP2K7, MBL2, MCCC2, MEF2C, MPST, MTHFD1, NCK1, NEGR1, OCRL, OR13G1, OR14C36, OR2T8, OR4S2, OR51S1, PGK1, PIAS1, PIK3C3, PLCB4, POLR2C, SETDB2, TAS2R13, TKTL2, TRIP10, TUBAL3, TXNDC12, WNT9A, PAFAH1B1, ST6GALNAC1



Negative_12962	KHK, ACSL5, ADCY3, ADH1A, ALDOC, ATG7, CACNB3, CDC26, CDK7, CHKA, CLDN5, CSNK1G1, CSNK2A2, CYP27A1, DDX18, DIAPH2, DNMT3L, DTX4, DUSP2, DUSP9, EPB41L3, FGF18, FGF19, FRAP1, FUT5, GALNT11, GATM, GCLC, GGT7, GNRH2, HAP1, HLA-DRA, HTR7, IARS, IFNB1, INHBB, INSR, ITGA7, LAP3, LIPG, LYPLA1, MAGI3, MAP3K5, MEF2C, NOD1, NOX1, OR13G1, OR1D5, OR1E2, OR2A25, OR2T2, OR4C16, OR4D9, OR4E2, OR4F5, OR4K17, OR6C4, OR7G1, OSMR, PDE6D, PIGF, PMVK, PPP3CB, PRKAR1A, PRPS2, RASGRP3, RPN2, RUVBL1, SEMA3F, SENP2, SOCS2, TAS2R9, TGFB2, TLR4, TPH2, ULBP2, VTI1B, WASF3, XYLB, YARS, YOD1, ZMAT3, SERPINB5, TNFRSF13B, TNFRSF1B
Negative_12963	C9, GK, LIF, RPE, AASDH, ADH1A, ARRB2, ATP6V1F, CBLC, CCL24, CCNH, CDC7, CEBPA, CLDN5, CRKL, DPAGT1, EDNRB, EGLN1, FMO3, FUT8, GRIA1, HLA-DMA, HMBS, IFNA16, IL2RB, INPP5B, KIR2DL4, MAPK10, MGAT2, NCOA4, NFA3, NR1H3, OR10A2, OR10H3, OR10K1, OR4D5, OR51V1, OR52A1, OR5AK2, OR6T1, OR8D4, PEMT, PIGW, PIK3C3, PLA2G2A, POLR2F, PPP3CC, PRLR, RAD51, RXRB, SMPD1, STX10, TGFB2, TUBA1B, XCL2
Negative_12964	C2, C4B, C6, CKM, GP6, LCK, OAT, SRC, WAS, ABLIM1, ACSS3, ADCY4, AGMAT, ALPP, ARPC3, ASIP, ATG7, BDKRB1, BHMT, CCL11, CD82, CLDN17, CRKL, CSNK1D, CXCL6, CYP11A1, CYP2S1, DIAPH2, DMGDH, DOCK1, DUSP3, EFNA2, EIF4E, EPB41, EPB41L1, FGF6, FZD5, G6PC2, GNPDA1, GRIN2C, HSD3B1, IDH3A, IL12B, IL21R, IL2RG, IRF5, IRS2, ITGB4, KLRC1, KYNU, LIPG, MAPK1, MDM4, MGST2, NEU2, ONECUT1, OR13C4, OR13F1, OR14J1, OR1E2, OR51B5, OR52L1, OR6C4, OR6F1, OR7A5, OR8H2, OR8K3, PAK4, PHKG2, PIP4K2C, PIP5K1C, POLR1D, POLR2B, PPP1CB, PTPRF, ROCK1, RPS6KA2, SC5DL, SGPP1, SMAD7, SMARCA5, SPCS3, SPI1, SSH3, STX3, TCF7L2, TKTL2, TUBA4A, TXNDC12, TYMS, UBE2L6, WEE1
Negative_12965	F7, FH, GP9, NPL, ACADL, ALCAM, ALDH1A3, APOA1, ASPA, B3GAT2, BDH2, C1QB, CCL1, CCR5, CDC45L, CDKN1A, CHST13, COL4A2, COQ6, CREB3L4, CTLA4, CTNND1, CYP3A7, DLST, DTX3, ETS1, FZD4, G6PC2, GALM, GANAB, GLG1, GPD2, GPLD1, HNMT, IFNA10, IL11, IL23A, JAG2, LDHC, MALT1, MAN1A1, MCM2, MPP5, MS4A2, MYL9, MYLK3, NFATC2, NPR2, NTRK2, OGDHL, OR2C1, OR2L3, OR4F5, OR51M1, OR5AN1, OR5H6, OR5K2, OR9G4, OSMR, PAK6, PDGFD, PDHA1, PFN2, PIGC, PLA2G2F, PLXNA2, POLR1E, PORCN, PPP3CA, PTGIS, PTK2, RASGRP4, RPS6KA2, SEMA4B, SSH3, STAT4, STAT5B, STX2, STX4, STX5, SV2A, TCF7L1, TNFRSF9, TOLLIP, TRAF5, TUBAL3, TUBB4, UGT1A10, WHSC1L1, WNT10A, YARS2, ARHGEF12
Negative_12966	DLD, FGB, LTB, PML, ALDH1A2, ALG13, APAF1, ARRB1, ARSA, BMP5, C1QC, CACNA1C, CCKAR, CCL14, COMT, CPOX, CRB3, CSF3, CTLA4, CYP4F3, DHRS4, DNMT1, ENPP7, EPHB1, ERBB3, ESPL1, EXOC7, FGFR3, FUT8, GALK1, GMPPB, HA01, IAPP, IL18R1, IL23R, IRS2, ISYNA1, KCNQ1, KITLG, LFNG, LIPT1, LTB4R2, MDH2, MDM4, MYH2, MYLK, NFE2L2, NTF4, OR11L1, OR14I1, OR2M3, OR2T10, OR3A2, OR52H1, OR5AC2, ORC4L, P4HA1, PDIA4, PERP, PGAP1, PHGDH, PIP4K2B, PMM1, POLR2D, POLR3K, PORCN, PPID, PPP1R3A, PSEN2, PTGIS, PTPN11, PTPRR, PYGB, RDH16, RHEB, SESN2, SMAD3, SMC1A, STK36, TRDMT1, TRPC1, UGT8, WASF2, MAPK8IP3, ST6GALNAC4

Negative_12967	BAX, SHH, ADCY3, ADH1B, ADH4, ALDH4A1, ALG3, AMDHD2, BAAT, BAI1, BDNF, BET1L, CAV3, CCNA2, CCND2, CLDN19, CLTA, CNTNAP2, COL1A1, CREB3, CRHR1, CXCL16, CXCR3, DCTD, DTYMK, ELK4, FECH, FGFR4, FZD10, GPAA1, GPT2, GZMB, HBEGF, HTR2C, IBSP, ICAM1, IMPDH1, JAK2, KAT2A, KLRC3, LCP2, LGMN, MNX1, MTMR2, MYL2, NFKB1, NUMBL, OR12D3, OR13C9, OR1L3, OR1L6, OR4K13, OR51A2, OR52B4, OR52N2, OR5C1, OR5V1, OR6C70, OR8U1, OXSM, PAPSS1, PAPS2, PHKG1, PIK3R4, PLCG2, PLK1, PLXNB2, PMAIP1, POLR1A, PAPP2C, PRDX6, PRKCQ, PRKG2, PTK2B, PTPRR, RAPGEF4, RDH10, ROBO3, SETDB1, TACR2, TALDO1, TAS2R13, TBXA2R, TLR5, ULBP3, VAMP1, WNT10B, ZIC2, ATP6V1E2
Negative_12968	F3, FAS, HYI, PTS, ABLIM3, ACP6, ACSM4, ADCY1, ADH5, ADSL, AHCYL2, ATP2A1, AVPR1A, CALML3, CCR10, CD46, CLTA, CRKL, CYP8B1, DGKD, DUSP9, EPHB1, FLOT1, FMO4, FZD7, GALNT11, GDE1, GL01, GRM5, GUK1, HSD17B4, IDH2, IFNA10, IL23A, IL6ST, MTHFD1, NUMB, OR10H4, OR14A16, OR2G6, PARVA, PARVB, PDE3B, PFKFB3, PHKA2, PIK3C2A, POLR1B, PPAP2A, PPARD, PPP1R3B, PRKCB, PRKCI, PTK2, PVRL4, RALBP1, RPSA, SETD1A, ST3GAL6, STAT4, UGCGL2, VAMP4, WNT7A, ATP6V0E1
Negative_12969	ADA, GK2, LTB, AANAT, ALAS1, APOC3, AQP7, ARHGEF6, ATP5G3, CNTFR, CNTNAP1, CXCL12, CYP2A13, DAG1, DEGS2, EHMT1, F2RL3, FGF20, GLG1, GRIN2B, HTR2C, IFNGR1, IL12B, IL8RB, IRAK1, JAM3, KIR3DL3, LAMA3, MAN1A1, NFKBIE, NKX3-1, NMNAT1, NUDT5, OR10Z1, OR5P2, OR6C1, OR8J3, OR8K5, PAFAH2, PAK7, PDE7B, PITX2, PLA2G1B, PLAU, PON3, PPP2R2D, PRKCB, PSME2, PTCH2, RAP1A, RPIA, RPS6KA3, RUNX1, SLC9A1, SOCS3, SPRED2, ST3GAL2, ST6GAL1, SULT2B1, CSGALNACT1, PAFAH1B3, TNFRSF14
Negative_12970	CBL, CBS, CR2, IL3, ITK, JUN, SHH, SI, ACAA2, ACYP2, ADH1B, AKR1C2, AKR1C4, APOA1, APOC3, ATP6V1A, B3GALT6, BBOX1, BCKDHA, CCL17, CCL22, CCL4, CCNH, CLDN15, CRHR1, DDIT3, DERA, DGKQ, DPM1, DVL2, EHMT1, ENO2, EPB41L1, FCGR3A, FLOT1, FOXO1, GFAP, HADHA, HARS, HLA-DOB, HMOX1, HSD3B7, IFNA13, IL10, KDSR, LCMT1, NAMPT, NCF2, NCK2, NCSN, NOX3, OR10G2, OR11H1, OR2A2, OR2H2, OR2V2, OR51Q1, OR52E4, OR52K2, OR56A3, OR5R1, OR5V1, PCCA, PDE5A, PFN4, PLCB2, POLD2, PRSS3, RASGRP1, RHOD, SFRP1, SHISA5, SSX2IP, STX5, THBS1, TP53I3, TYRP1, ATP6V0E1
Negative_12971	MIF, MPZ, TAT, ABLIM2, ACAT1, ACSL3, AHCY, AMDHD1, BCMO1, CCL20, CD14, CDC25B, CDH15, CNTN1, CNTNAP1, COL5A2, CPT1B, CYSLTR1, DDIT4, DFFA, EDA2R, EFNB2, ERO1L, FLT1, FOSL1, GAD2, GALNTL5, GLB1, GLI2, HAAO, HAO1, HNF4A, IL12RB2, IL13RA1, IL20RA, IPMK, IQGAP3, LAMC2, MAP3K4, MGST3, MMP7, MYH11, NEGR1, OR4C12, OR4C13, OR4C15, OR51A2, OR52K1, PDIA4, PHKG2, PIK3CA, PLA2G2A, PPP1R3C, PPP2R5E, PPP3CB, PPP3R2, PTCRA, RBX1, RPS6KA5, RPS6KA6, SETD7, SQLE, ST3GAL5, STX18, STX3, STX8, SYNJ2, TAS2R48, TBL1Y, TJP2, UCK1, WNT8B, SERPINF2
Negative_12972	CGN, GDA, GNE, GSN, AANAT, ACSM1, ACVR1B, ALDH3A2, ANAPC11, APOA2, APOA5, ARPC1B, ATN1, ATP13A2, BCL2, BPGM, CAMK2D, CASP3, CBR1, CCR1, CCR6, CD82, CDKN2D, CLDN5, CLTB, CMAS, COQ7, CXCL16, DDB2, DOT1L, DPYD, EIF4E, EPHA8, EPHB6, FUT4, FUT9, GALK2, GPX7, GUCA1A, IL17A, IL19, IL4R, KIR2DL3, LAMB4, LTBR, MAP2K1, NCR3, NFYC, NMNAT3, NOX1, OR10J3, OR13J1, OR1E1, OR2T3, OR4A16, OR4C12, OR4C6, OR4F15, OR4K2, OR51G1, OR5D16, OR5M8, OR5P3, OR6K2, OR7D2, ORC2L, OXCT2, PDGFRB, PDHA2, PFN4, PNPLA3, POLE4, POLR2K, PPBP, PRKCI, PYGL, RAPGEF3, RXRB, SDC2, SFRP1, SLC12A2, SLC27A4, SSH1, TAS2R5, TMLHE, UROC1, VANGL1, B3GALNT1, EIF4EBP1, MAPKAPK2

Negative_12973	DCN, F5, HDC, IDS, NNT, ACADVL, ADH1A, ADRB2, AMPD2, ANGPTL4, AREG, BA CE2, BDH2, BDKRB1, BLVRA, BMP8A, C1QA, CACNB2, CCNE1, CDC25B, CDKN2A , CFL1, CLCA4, CNGA4, COQ5, CSF2, CSNK1G1, CTNNA1, CYP11A1, CYP2C18, DDB2, DIAPH1, DOT1L, ELK4, FCGR3A, FMO2, GALNT7, GNPDA1, GNPAT1, GP 1BA, HLA- DRA, HSD17B2, IFNA13, ITGB2, KIR2DS5, LDHAL6B, LILRB3, MAN1C1, MAP3 K5, MCEE, MYH13, NEU3, NTRK2, OLAH, OR10J3, OR1E1, OR2F1, OR52K1, OR5 K1, OR5M8, OR6A2, OR6S1, OR7A5, OR7G1, OR8I2, OR8J1, OR8J3, OR8K1, OR 9I1, PAK2, PCK1, PIAS3, PLCG1, PPP2R5D, PYCR2, RETSAT, RPRM, SENP2, S IAH1, SLC25A5, SNAI2, SOS2, SREBF1, STK11, SULT1A2, TUBB4, WNT1, CAC NA2D4, PNLIPRP1, TNFRSF1A
Negative_12974	DBI, IL6, OAT, TNN, AANAT, ACLY, ACSS2, ADH1A, ATP6V1F, C3orf10, CCL2 3, CDKN1A, CHEK1, CRY1, CSNK2B, CYP2E1, DDHD1, DDX54, DTX1, EFNA2, F2 RL1, FCER1G, FUT3, GGT1, GNA01, HADH, HLA- G, HMGCS2, IDH2, IFNGR2, IL1RAP, IL21R, LCAT, LLGL1, MAP3K7, MAPK11, MTHFS, MYH7B, NARS2, NCR3, NFYB, NKX3- 1, NPR1, NRAS, OGDH, OR10A6, OR14J1, OR2T8, OR4C12, OR4F6, OR4K2, OR5 1I1, OR52N1, OR5A1, PHKA2, PHKG1, PIGS, PIGX, PNPT1, RAD51, ROBO3, RP S6KA2, SDHC, SFRP5, SNAI1, SOCS4, STK11, TPK1, TSC1, UGT2B28, VDAC2, XCR1, SUV420H2
Negative_12975	GDA, LCT, ME1, AARS, AKR1C1, ALDH1A2, BMP8B, C3AR1, CACNB1, CACNG5, C CR2, CD14, CD40LG, CDKN2B, DDX18, ERBB3, ETNK1, G6PC2, GALNT11, GPAM , GUCY2C, IGF1, IL29, INHBA, ITPKB, LAMC1, MYLK3, NCAM2, NFKBIE, NFYC , NLGN1, NOTCH3, NT5C, OR10AG1, OR10H3, OR1J4, OR2M3, OR4K5, OR52B6, OR52H1, OR52W1, PAX8, PDXK, POLR2B, PRIM1, PTGER3, RAC3, RASGRP4, RA SSF5, RPS6KA1, SARS, SMC1B, STX10, TAS2R40, TAS2R60
Negative_12976	C8A, C8G, F11, INS, MSN, NNT, ACTN2, ADCY8, AGPAT2, AKR1C3, ANAPC2, AP OA1, ATP6AP1, AVPR1A, CCR6, CDC25B, CDK4, COX15, CYP2B6, DTX3L, EHHA DH, ESAM, FGF13, FUT4, GSTA5, HNF4A, IKBKG, IL17A, IL17RA, IL1R2, KCN Q1, KDSR, LYPLA2, NPAS2, OR12D3, OR14A16, OR51Q1, OR5T2, OR6B3, PFKL , PHKG1, POLE3, PPAT, PRKAR2B, RPRM, RPS6KB2, SNAP25, TUBB6, WNT10A, CSGALNACT1, SERPINE1
Negative_12977	AK2, BTC, C7, CGA, FOS, IL7, MPI, NPL, OTC, ADH1A, AHCY, APBB1, B3GNT4, CACNA1S, CDC14B, CHEK1, CKMT2, CLDN18, CLDN7, CTNNA2, DOCK1, DOT1L, ETNK2, FGF14, FPGT, GMPA, HMGCS1, HRAS, IFNA13, IL21, IL28RA, IRF7, ITPA, KCNJ11, LMO7, MTMR1, MYH6, OR13H1, OR1N1, OR2L2, OR2W1, OR51A2 , OR51F1, OR7C2, OR9A4, PAPSS2, PCK1, PHGDH, PIGT, PIK3C2A, PIP5K1B, PLAT, PPAP2B, PVRL3, RARS2, RXRA, SULT1A2, TGFB3, TIAM1, TYMS, VARS, WASF2, ATP6V1G2, B4GALNT1, PHOSPHO1
Negative_12978	AADAC, ABL2, ACP6, ADSSL1, ALG10, ALOX15, ASNS, BET1, C1GALT1, CBR3, CCL21, CCL23, CDC42, CDKN2B, CER1, CLDN3, CREB3L3, CSDA, CYCS, CYP27 A1, DPYD, EFNA2, EHHADH, ENTPD8, FGF23, FGFR1, FLOT1, FUT5, GALNTL2, GCNT4, GRIN2A, GSK3B, GSTA4, GSTM2, GSTM5, HTR5A, HTRA2, IDH3G, IFNA R1, IL12A, INPP4B, ITGAE, ITGB3, LCP2, LIMK1, MAOB, MAPK3, MS4A2, MYL 7, NRG1, ODC1, OR10J1, OR13A1, OR14C36, OR5AP2, OR5K1, OR5P2, OR6T1, OR7A5, PARVA, PFKFB4, PIGH, PIK3R2, PIPOX, PKMYT1, PLA2G10, PLA2G2A , PLCD3, PLXNB3, PPP2R5C, PRKG1, RFX5, SAT2, SDC1, SDC3, SETD8, SFRP2 , SMC1A, SNAI1, STK11, STX1A, STX2, SUFU, SUV39H1, TAS2R13, UGT2A1, W BSCR22, WNT9B, ATP6V1B2

Negative_12979	ADO, HAL, KIT, NPY, VTN, AKR1B10, ARPC1B, ASPA, ATP6VOC, CACNA1D, CD72, CLDN22, CNGA3, COL5A3, COQ6, CPS1, CSF2RB, DDX50, DGKD, DHRS4, DIA PH1, DUSP14, ENPP7, FLOT1, FOXO3, GALNT6, GNRH2, GRHPR, HADH, HCLS1, HMGCL, IDH3A, OR10X1, OR13D1, OR2G2, OR4C12, OR6C6, OR8K1, PAX4, PFK M, PHKA2, POLR3D, PPP1CC, PRKCG, PTGES, RASGRF2, RBPJ, RBX1, SDHA, SM AD2, SOX17, TAS2R7, TLR2, TOMM40, TRPM5, AASDHPPT, ARHGEF12
Negative_12980	C4B, CKM, FYN, GP5, ID3, ME2, SRC, TNF, AARS2, ACSM1, AKT1, ARG1, ASIP, ATP5J, ATP6V1A, BCKDHB, BMP7, C3orf10, CD22, CD40LG, CKMT2, COL1A2, DAPK3, DNMT1, DOLPP1, EPAS1, FOXA3, GADD45B, GDE1, GNA15, GNMT, GRIN 2A, HEXB, HNF1A, HNF1B, HSPB1, INHBB, ITGB1, MAPK7, MGST1, MTHFS, MYH 2, NPR2, NSD1, OR11H1, OR13J1, OR4C12, OR4C15, PGM3, PIK3C2B, POLR2L , PPM1A, PRKACB, PTPRB, RERE, RPS6KA1, SGPP1, SLC2A1, SPRY3, SPRY4, S T8SIA5, STX12, TALD01, TGFBR1, THBS3, UGT2A1, UPP1, UPP2, VAV2, XYLT 1, ZFYVE9
Negative_12981	ABO, GHR, BCL10, BDNF, BLNK, BMP4, CD247, CHAD, CNGA3, COL2A1, CSF3, C SNK1E, CTBS, CXCL11, CYP3A7, EPHA8, FABP1, FGF7, FZD1, GNA12, GRIN2A , HADHB, HLA- G, HSP90B1, IGF1R, IL22RA2, ITGB5, KIR2DL3, KIR2DL4, KRAS, LAMB4, LD HD, LEF1, LYPLA1, MAOB, MTHFD2, MYH9, MYLK, NAT6, NFYA, NRP1, NT5C2, O LAH, OR10H2, OR13C2, OR1A2, OR2A5, OR5B21, OR5M8, OR5T1, OR6N2, OR7D 2, PANK2, PGAM1, PIAS4, PKLR, PLA2G2D, PLXNA1, PNPLA4, PNPO, PPAT, PP P3R1, PRKAA1, PYCRL, RASSF1, SDHA, SH2D1B, SH2D2A, TAS1R2, TAS2R8, T BXAS1, TCF7L2, TGDS, TJP3, TOMM40L, WNT5B, ATP6V1G1, EIF4EBP1, GABA RAPL2
Negative_12982	CFD, DBH, NLK, VTN, ACTG1, ADORA2A, AK3L1, ALDH3B1, ALG8, ALG9, ANGPT L4, ARHGEF4, AVPR1B, BUB1, CXCR5, CYP26A1, DDX55, DFFB, DGUOK, DHCR2 4, DPM1, EPHA4, EPHB1, F2RL1, FUT7, GALNS, GPD1L, GPLD1, HSD3B2, IL22 , IL8RB, LTC4S, MAML2, MYL2, MYL5, NCSTN, NOTCH1, OR11A1, OR11G2, OR1 3C5, OR4M1, OR51F1, OR52E6, OR5M9, OR8K5, OR9A2, PDE11A, PDE1B, PDE2 A, PDPK1, PGS1, PLXNA2, PRKCB, PRPH2, PSME1, RPS6KA5, SDC1, SETD8, SN AI2, STX16, STX4, TCF7L2, TLR4, TSHR, TUBB3, UBE2K, UGT2B10, VKORC1, YWHAZ, SUV420H1
Negative_12983	GK2, GSR, HYI, IHH, IL7, TNF, ACP2, AGRN, ALDH2, ALG8, ALPPL2, AMDHD2, AQP7, ARSE, ATP2A3, C3orf10, CADM3, CCL8, CD14, CD19, CTBP2, CTSL1, C YP11B2, DAG1, DDHD1, DFFA, EXTL1, FGF4, GFPT2, GNA12, GNRHR, GRIA2, G STA3, GUCA1C, HAGH, HARS, HSD17B8, HYAL2, ICAM2, IKBKG, IL10, IL11, I L12RB1, INHBE, INPP5E, IRF3, LAMC3, LARS, LIMK2, LTB4R2, LTBP1, MAP4 K2, MKNK1, MRAS, MYH3, MYLK3, NADSYN1, NEGR1, NFATC3, NFATC4, NFYC, O R10AG1, OR10H4, OR2L3, OR2M2, OR2T10, OR2W1, OR2Z1, OR4M1, OR51B6, O R52N2, OR52N4, OR6C2, OR6C3, OR6M1, OR8H1, P2RX2, PANK4, PDE10A, PFK L, PIGC, PIK3C2A, PIK3CA, PPARG, PRODH, RARS2, SDHD, SGMS1, SIAH1, ST AT6, STX3, SULT1A2, THY1, TP53, TPK1, VTI1B, YARS, ARHGEF12, TNFRSF1 1A
Negative_12984	LSS, MAG, ZYX, ADSS, ALDH1B1, AMHR2, ANPEP, ATN1, ATP5D, C4BPB, CCDC6 , CDC14B, CDC42, CEBPA, CNGA3, COASY, CREB5, CXCR4, DARS2, DDX18, DDX 41, DNMT3A, EFNA5, EGFR, ENTPD5, EPHA3, FCGR3B, FLOT2, GDF5, IL13RA1 , INPP5A, MGAT5B, MLYCD, OR10Z1, OR1N2, OR2D2, OR4K13, OR52I2, OR5L2 , OR5M3, OR6N1, P4HA2, PDE8B, PGAP1, PGK2, PGLS, PIAS1, PKM2, POLR2G, PPP3R1, PPP5C, PRKCG, PRNP, PTCRA, PTGER3, ROBO1, SAT1, SETD1B, SHMT 2, SLC2A4, TNFRSF4, TSLP, PNLIPRP1, TNFRSF11B, TNFRSF17

Negative_12985	F5, FGB, FGG, FUK, GP6, IL8, LCT, PC, PGD, PRL, RB1, AARS, ACOX3, ACP1, A CSS1, ADH1A, ADIPOR2, ADRB1, ALG10, ALS2, AMD1, APOC3, ARRB2, B3GAT1 , BACE1, C4BPA, CACNA1D, CAMK2A, CANT1, CCL26, CCL4, CCR9, CD55, CD80 , CHST11, CNDP1, COX15, CXCL5, DDIT4, DHRS4, DUSP6, E2F3, ESAM, FDF1T1 , FGF1, GALNT10, GAS1, GDF6, GNA11, GRHPR, HAP1, HMGCR, HSPB1, ICOSLG , IDUA, IL10RB, IL8RA, ISYNA1, KCNB1, KLRK1, LRAT, MBL2, NCR2, NEGR1, NEU2, NFX1, NR1H3, OR10J1, OR10X1, OR1J4, OR1K1, OR2S2, OR2T33, ORC4 L, P2RX6, PIGC, PIGM, PLK1, POLR1D, PPP2R1B, PTGER1, PTPRR, SARS2, SC 5DL, SDHA, SELP, SLC12A2, SREBF1, THBS2, TPI1, TUBA1B, UROS, VDAC3, W NT9A, YWHAZ, CSNK1A1L, HLA-DQB1, PHOSPHO1
Negative_12986	CTH, HYI, RB1, TFG, ADORA2B, ADRA1D, AGPAT6, APOA1, ARPC1B, ATP5B, BC L10, C4BPA, CDC23, CDC42, CDC6, CTNNA2, CTSB, DCTN1, DDX23, DGKZ, DPM 1, DPM2, GAB1, GNPDA1, GNRH2, GPX5, HLCS, IFNGR1, ITPKB, LDHD, MAP2K6 , MAP3K5, MYD88, NNMT, OR5V1, OR8H3, OR8K3, OXTR, PDHA1, PPA1, RAPGEF 1, RASGRF1, RENBP, SAT2, SDC3, SLC27A5, SMAD2, SORBS1, TXNDC12, UPB1 , UXS1, VARS
Negative_12987	CFD, CR1, ILK, KMO, ME2, PAH, SCD, TEC, ACSM5, ADH7, ADRB1, ALAS1, AMD1 , ANAPC2, ARD1A, ATP5I, B4GALT7, BCAT2, CACNG4, CCL5, CCNG2, CD44, CD 74, CPT1A, CREB3L2, CYP19A1, DAPK3, DDIT3, DEGS1, DEGS2, DERA, FGF5, FMO5, FOXA3, GCNT1, GGT7, GJA1, GJD2, GPD1, GRIA3, GSTK1, IL28A, IQGA P3, LCP2, LRP6, MAPT, MCCC1, MMP14, NCR3, NT5C, NT5C2, OR11L1, OR4N5, OR4P4, OR52M1, OR6K2, OR8K3, PI4KB, PIAS1, PLOD3, PPP2R5A, RAB5A, RX RG, SH2D1B, SHC3, SMURF1, SRD5A1, TGFB1, TNFSF18, TPI1, UAP1, WNT8A, PNLIPRP2
Negative_12988	AR, ASL, CFH, FGG, IL7, ZYX, AADAC, ACACA, ACHE, AKT3, ALOX12B, ARHGEF 4, BDNF, CD247, CDC6, CDK6, CHDH, CHRM1, CIITA, CREB3L2, CTNNA1, CTSG , CYP2F1, DDX54, DDX56, EI24, FARSA, FGF19, GLUL, GRIA3, GUCA1A, HMGC S1, HSPA1B, IL17RB, JAG2, LYPLA2, MECR, MFNG, NAE1, OLAH, OR51B6, OR5 M3, OSMR, P2RX6, P4HA2, PLD1, PPP3CA, PRKCG, RASSF5, RBPJ, SH2D1B, SL C27A4, SMAD3, SRGAP2, STX12, TAS2R5, WNT3, WNT8A, WNT8B, CSNK1A1L, P AFAH1B2, PHOSPHO1
Negative_12989	AR, CAD, CEL, F10, NPL, NPY, ACHE, ADCY1, ALDH4A1, APOE, ATG7, B4GALT6 , BCL10, BMP6, CCL8, CCR2, CDC25A, CDS1, CLDN16, COL1A2, COQ6, CYFIP2 , CYP2S1, DHX58, DUSP14, DUSP2, E2F5, EPHA2, FARSA, FRAP1, GALNT14, G BA3, GLI1, GLI2, HAP1, HMGCS1, HSPA8, IL2RG, INPP1, KIR3DL3, LEPR, LR P5, MCCC2, MYH2, NCK2, NFASC, NFAT5, OR10H3, OR10P1, OR2A2, OR2AG1, O R2T29, OR2T3, OR4K1, OR4N2, OR51F1, OR51G2, OR52K1, OR8S1, PANK2, PD E8A, PDE9A, POLE, PPP1CA, PTDSS1, RASGRP3, RBPJ, RIPK1, SC5DL, SEMA3 C, SEMA3G, SOD1, TBK1, TIAM2, UBA7, VDAC1, WHSC1L1, PDCD1LG2, SLC25A 31, TNFRSF18
Negative_12990	AK1, GGH, ILK, MPL, TNF, VTN, ACTN4, ADRB1, ADRB2, ARPC2, C3AR1, CCKBR , CCNB3, CDH2, CLDN10, CLTB, CXCL13, CYP1B1, DBF4, DDHD1, DPM3, GALNT 7, GRHPR, HMOX2, IL24, KLKB1, NFYB, OGDHL, OR13C5, OR13H1, OR2AG2, OR 4F5, OR5M9, OR6C6, OR8B8, P2RX2, PDE3B, PDE8A, PIAS1, PLCG2, PLIN, PP P2R2B, RAPGEF2, SDC1, SPCS3, STAT5A, TICAM1, TUBA4A, ULBP2, UPB1, C1 GALT1C1, PFAH1B1
Negative_12991	C8A, CR2, EBP, F2, HPD, HYI, OGT, ACTN4, ACYP2, ADRA1B, AGRP, AHCYL2, C ACNG5, CDC23, CDH4, CDKN1B, CHIT1, CLDN1, CMAS, CXCR6, CYP1A2, DCTD, DPYSL2, DUSP8, EHHADH, ESPL1, FARSB, FUT2, FUT7, GGCX, GRIA1, GRLF1, HAGHL, HPSE, IDI1, IFIH1, IL1RAP, IQGAP2, KLRC4, KNG1, LDHD, OGDH, OR 10G7, OR13H1, OR1S2, OR51G2, OR52M1, OR8S1, PPA1, PRKAG3, PTPRR, RAL GDS, SGMS2, SHMT1, SLC25A4, SPAM1, SV2B, UBA7, UNC5B, PDCD1LG2

Negative_12992	C1S, GNS, IL2, SP1, AANAT, ACP5, ALAD, ALDH9A1, ALG5, AMDHD1, ATP5E, A TP6AP1, BDNF, BST1, CCL1, CCR7, CD86, CHKB, CLCA2, CLDN6, CMAS, COL11 A1, DDX56, DRD2, DUSP9, EDAR, ENTPD5, EPHA5, FGF23, FGF7, G6PC, GALT, GLI1, HA01, HIBADH, IL25, IL6ST, IQGAP3, KRAS, LIPT1, LRP6, MAP3K5, N EGR1, NFYB, NRXN3, OR10H3, OR13C9, OR1N2, OR4A5, OR4C15, OR4F6, OR4M 1, OR51D1, OR5H2, OR9G4, PAPSS1, PDE4A, PDE4B, PDE4C, PDGFB, PGAM1, P I4KA, PIK3CG, POLE, PPARA, PPM1A, PRKAB1, PRKCG, PRPH, PRSS3, RAPGEF 4, RBPJL, SOS2, STK11, TLN1, TMLHE, TUBB1, ULK1, YWHAG, MAPK8IP2, TNF RSF14
Negative_12993	C7, GP5, ID3, MOS, MUT, MVK, ACYP2, ADCY10, ALDH1A1, ALG10B, ALG3, ARD 1A, ATP5I, ATP5J2, B3GALT6, B3GNT5, B4GALT2, BNIP1, CACNA1S, CARS, C ARS2, CASP7, CBLB, CD55, CD79B, CDH3, CDKN2A, CDS1, CNTN1, CNTN2, CXC L10, CYP3A43, DCXR, DDIT4, DGKZ, DHRS3, DIAPH2, DPM1, DPYD, DRD5, EGF R, ENTPD8, GALNTL2, GALNTL4, GANAB, GLI1, GNAT3, GSTT1, HAGHL, HYAL2 , IDH3B, IL22RA1, INPP1, ITGA8, LEFTY1, MAP3K7, MAPK11, MARS, MTHFR, MYH15, NCF4, NR1H3, NTN1, OR12D3, OR4N2, OR51G1, OR52E6, OR6C70, OR7 D4, ORC5L, PAPSS2, PARVG, PIAS4, PIK3R5, PIP4K2B, PIP5K1C, PLA2G2E, POLE4, POLR3D, POMC, RAPGEF1, RBX1, RFNG, ROBO3, SEMA3C, TACR3, UNC5 C, VAMP4, WHSC1L1, WNT10A, WNT8A, XYLB, YARS2, ATP6V1C1, MAP3K7IP1, ST6GALNAC5, TNFRSF14
Negative_12994	AK5, BTD, CAT, DCC, ILK, SCD, SI, ACHE, ALDH3A1, ALG9, ALOX5, ALPI, APL P1, ARNTL, BMPR2, CALML3, CCR2, CD8B, CDH1, CDH15, CDKN1A, CDKN1B, CL DN6, COL4A6, CPOX, CYP1A2, CYSLTR1, DAAM2, DEGS1, DUSP5, ENTPD8, FGF 17, FIGF, FUT7, GBGT1, GGT1, GRIA2, GRIA3, GSTZ1, HYAL2, IDI2, IKBKG, IL11RA, IL28B, IPPK, JAM2, LDHAL6A, MAPK8, MCCC2, MCM7, MTHFR, NANP, NCOR2, NFKB2, NRXN2, OR11A1, OR2AE1, OR2S2, OR4K13, OR51F1, OR6C75, ORC4L, OSMR, PAFAH2, PDCD1, PFN2, PIGP, PIK3CA, PLXNC1, RHOA, RIPK1, ROCK2, RRM1, SRGAP2, STX16, STX8, TSLP, TUBA3C, VAV3, AASDHPPT, SERP IND1
Negative_12995	DCT, LEP, LYN, AADAT, ADRA1B, APOA2, ATF4, ATP6V0B, C4BPA, CACNA1B, C ACNA1E, CCL16, CD8B, COL4A2, CYP11A1, CYP2E1, DGAT2, DHCR7, FBXW11, G6PC2, GBA3, GMDS, GNPDA1, HAP1, HEXB, HRH2, HTR4, ICAM3, IL12RB1, IT CH, ITGAV, ITGB5, LIFR, LYPLA2, MGAT5B, MOV10L1, NAT5, NFX1, NLGN1, O R1J2, OR2T3, OR6K6, P4HA2, PAK6, PDHB, POLR2B, POLR3D, PON3, PSEN1, P TGDS, RALB, RELA, STX2, SULT1A4, SUV39H2, TAS2R9, TCF7, TD02, TNFSF4 , TSC2, UGT2B28, VAMP1, VAV3, WNT9B, AASDHPPT, C1GALT1C1, TNFRSF6B
Negative_12996	AUH, BTC, F12, IDS, IL6, KIT, NLK, SP1, TFG, TKT, ACTC1, ACTN4, ALDH4A1 , AXIN2, CACNA1S, CCL19, CD244, CDK4, CEBPA, CXCR6, CYP26B1, DGAT2L4 , DHRS3, EPB41L3, EPHA3, FGF19, FLT4, FUT6, GFAP, GFPT1, GLYCTK, GMPR 2, GNPAT, HBEGF, IBSP, IL13, IRS4, ITPKA, JUND, KYNU, L1CAM, LEFTY1, L IPG, MAN1C1, MAP2K5, MITF, MRAS, NKD2, NPAS2, NTF4, OR2AT4, OR2L2, OR 2T12, OR2T29, OR52I1, OR52N5, PAFAH2, PFN3, PIP5K1C, PLA2G3, PMAIP1 , POLD4, PPP2CB, PPP3R1, PPP3R2, PTGDS, RCHY1, RFXANK, RPS6KA6, SDC1 , SEMA4F, SETDB2, SH2D1A, SMAD5, SPRED2, STX16, TAS1R1, TLR2, TUBA3C , UGT2B17, EIF4EBP1, TNFRSF10A
Negative_12997	AK3, AK7, C2, NPL, ACTA1, ACY3, ADCY7, AGRN, AGTR1, ALDH3B2, ATF2, ATI C, BPGM, CCR1, CLDN18, CMPK1, E2F5, FLT3, FTMT, HTR2B, IFNW1, IL12B, K YNU, L1CAM, LILRB3, LTC4S, MAP4K1, MCAT, MGAT4B, NT5C2, OR10G2, OR2K 2, OR2T6, OR3A2, OR4X2, OR51I1, OR5T1, OR8D1, PIAS2, PIGL, POLR2F, PP P1CB, PPP1R1A, PTCH2, RALA, ROCK1, SDC3, ST6GAL1, SUCLG2, UGT2B4, UR OC1, HLA-DPB1, MAP3K7IP2, SERPINC1

Negative_12998	C4B, C5, C6, FYN, IL6, SMS, ABLIM1, ADCY10, ADH1B, AKR1C3, ANAPC1, APO C3, ARHGEF1, BCAT1, BMP8A, CCR9, CDKN1A, CLDN16, CPT2, CREBBP, CSNK1 G1, EPHX1, FUT3, GNA12, GZMB, HAP1, HSD3B1, IRAK2, LEFTY2, LIMK1, MLL T4, MPDZ, MPST, NSD1, OR13C3, PAX6, PFKFB1, PTPN1, RGS3, RPN1, SMARCA 2, SMPD2, TAS1R3, TAS2R3, TAS2R50, TLR9, UAP1, UBA1, WNT4, XYLT2, ARH GEF12, ATP6V0A1
Negative_12999	CBL, EBP, GPT, IDS, LHB, MVK, RDX, ALCAM, ALOX15B, ATP5J, BRAF, CAMK4, CD86, CHD8, CHIA, COL5A1, CREB3L4, CSAD, CSNK2B, CX3CL1, CXCL12, DDI T3, DGKQ, DRD2, DUSP9, EVI1, HSPA1B, ICOSLG, IFNA7, IL25, IRAK1, KCNQ 1, KIR2DL1, METTL6, NRAS, OR2D2, OR2L13, OR2T4, OR51B2, OR52E6, OR52 J3, OR52K2, OR52W1, OR6A2, PAK2, PDE10A, PDGFD, PDIA4, PIK3CG, PIP5K 1A, POMC, PRKACB, PVRL1, RXRB, SH3BP2, SOCS2, STX7, SULT2B1, TNFSF8, TUBA1C, PLA2G12B, PPARGC1A, TNFRSF1A
Negative_13000	ADO, AGL, DUT, ILK, ITK, LIF, MVK, TFG, ACSM1, AKR1C4, AOC3, ATF4, ATP5 G2, C7orf16, CACNG5, CASP3, CBLB, CCNB3, CD27, CDC16, CHKA, COL11A1, CYP1A1, ENO1, ESAM, GNRHR, GOT2, GUCY2D, IKBKE, IL28B, ITGAV, MAP2K3 , MAP3K6, MTAP, NCKAP1L, NTSR1, OR1G1, OR6C4, OR8A1, PIP4K2C, PPP1R3 D, PRIM1, RDH12, SH3BP2, SPTLC2, TUBA1B, UNC5A, WNT3A, ATP6V1C1, GAB ARAPL1
Negative_13001	BAX, CR1, MVK, TAT, ACOX3, ACY1, ALG1, AMPD1, BAI1, CACNG7, CCL14, CDC 2, CDKN1A, CHRM2, CHST12, CLDN18, CNTNAP1, CPT2, DDX51, DDX54, DIAPH 1, DTX3L, DUSP7, ELK1, FCGR3B, FLOT1, FUT4, GALNT3, GUCA1B, HCLS1, HS PA8, IDH3B, IFNA21, IL1RAP, IL22RA2, IQGAP2, IRS2, ITPK1, KIR3DL2, L DHAL6A, MAPK8, MGST3, MMP2, MYL9, NEFM, NRP1, NT5C1A, ONECUT1, OR10H 3, OR1L6, OR2M4, OR2V2, OR4F17, OR5AU1, OR9K2, P2RX2, PAK2, PERP, PIK 3R5, PIP5K1C, PSEN1, RPS6KB1, SARDH, SDC3, SELP, SEMA4A, SMPD4, SNAI 1, SPHK2, ST3GAL1, ST3GAL2, ST8SIA5, STEAP3, WNT3, WNT6
Negative_13002	FH, IL8, KHK, ALDH7A1, ARHGEF2, B4GALT7, BAAT, CACNA1A, CACNB2, CAV3 , CCR6, CD40, CDC7, CHRM2, CHST12, CSNK1D, CX3CL1, CXCL6, DDX52, DDX5 4, ELK1, ENPP3, ENPP6, FBXW11, FGF18, FZR1, GCAT, GCDH, GJD2, GLUD1, G MPS, GNAT3, GNB3, GRHPR, HAAO, IL18R1, KIR2DL1, NOS3, NT5E, OR10G3, O R10J5, OR2AE1, OR2L3, OR2Y1, OR5AP2, OR9K2, PIGP, PLA2G2A, PLA2G4A, PLXNB2, PMAIP1, PPT1, PVRL2, PYGB, RASGRF1, RFXAP, RPS6KA1, SEMA3D, SEMA4F, SEMA7A, SIAH1, SLIT2, SOD1, TACR3, THBS1, TYK2, ULBP1, ULBP3 , VAMP2, VAV2, WNT3A, TNFRSF12A
Negative_13003	C3, DCT, LPO, LSS, LTB, TFG, TNF, WAS, ADRA1A, ALDH1A2, ALDH1B1, APAF1 , ARPC5, CACNA1I, CCL15, CCL28, CCL8, CD48, CD59, CERK, CHRNA7, CLTC, COL6A1, CSF1, DNMT3L, DUSP1, ENTPD4, EPHX2, FASN, FSHB, FUT7, FZD8, G ADD45A, GGT7, GLG1, GLYCTK, GPD1, GPD1L, GPX7, HYAL1, IL22RA1, ITGB7 , ITPK1, JAK1, LMO7, LPAR1, MAN1C1, MIOX, MYLK3, NFKB2, NGEF, NT5M, NU DT9, NUMB, OR11G2, OR11H1, OR13J1, OR1D2, OR5AK2, OR5F1, OR6C70, OR8 G1, ORC1L, PIK3CG, PLCG2, PSEN1, PSENE1, PSME3, RAC2, RALBP1, RFXANK , SDHD, SHC3, SMAD9, SMPD4, SPAM1, STAT1, STX4, SV2A, TAS2R14, TYRP1, UGT2A1, ZAP70, MAP3K7IP2, PDCD1LG2
Negative_13004	C1S, C9, CD6, DBI, GLS, ID1, ID4, ITK, OGT, SMO, TK2, TKT, VCL, ACSL4, AG RP, APAF1, AREG, B3GAT1, BMP2, CAV1, CAV2, CCNE1, CD226, CD46, CD8A, C DC25A, CDK6, CSNK2B, CXCL1, CYP1A1, DAG1, DDX55, DERA, EGLN1, EPHA5, FGFR4, FUT2, GNG12, GSTA5, GUSB, HSP90B1, ICAM3, IL13, IL21R, IQGAP1 , LCP2, LRP5, MAPK1, MGST3, MPDZ, MTMR6, NAE1, NCAM2, NEFH, NFYB, NPR2 , NRAS, NRP1, NSD1, NTF3, OR10G9, OR12D3, OR13H1, OR2C3, OR2T33, OR5M 8, OR9A2, PER2, PIK3R5, PLCB1, POLR2L, PPP2R2B, PPP2R5E, PTTG1, RDH5 , ROCK1, RPE65, RPIA, RRAS2, SENP2, SOS2, STAT4, STAT6, STX16, SULT1A 1, SV2C, TAS2R49, TLN2, TPH1, TUBB3, UGT2B17, UPRT, WNT3A, MAP3K7IP1 , TNFRSF18

Negative_13005	GSN, MVD, NPL, ACAD9, ACADM, ACHE, ACOT11, ADCY6, ALAS1, AOX1, B3GALT6, CACNG5, CADM1, CCNA1, CD47, CDC25C, CLDN17, CLDN6, CSF1R, CXCL3, CYP11A1, CYP11B2, CYP2U1, DEGS2, ENO2, EPHB6, FGF7, FIGF, FOSL1, GABARAP, GALNT8, GAMT, GLB1, GNPAT, GRIN2A, GUCY1B3, HLA-DMA, HSD17B3, HSD17B8, HTRA2, ITGAD, ITGB2, ITGB3, ITGB4, KIR2DL4, LAMB2, LPAR1, MAOB, MAP4K3, MARS, MECR, METTL2B, MGAT4A, MYH13, NFATC4, NUDT2, OR10H3, OR13G1, OR1K1, OR2M3, OR2S2, OR52M1, OR5M8, OR6B3, OR8H1, PAFAH2, PDE4A, PIP5K1C, PYCR1, SPTLC1, SUV39H2, TAP2, TAS2R48, TLR3, TNFRSF9, TOMM40L, SERPINA1
Negative_13006	ABO, C8G, C9, CGN, FST, ID4, ABP1, ACSL1, ADAM17, ADRA1B, ADSL, AKT2, APBB1, APH1A, APLP1, ATP2A1, ATP5G2, BCKDHA, BLNK, CACNA1I, CBLB, CD38, CHIA, CLCA2, CLDN17, CLTCL1, CMPK1, CNTF, CXCR3, CYFIP1, CYP2U1, CYP4F2, DHDDS, DTX4, EFNA4, EPHA2, EPHA8, FGF2, FOXO1, GADD45G, GSGT1, GCDH, GLO1, GNAZ, HADHA, HLA-G, HNF4A, HTR2A, ICAM2, IL18RAP, IRF3, IRS2, ITGB4, KCNB1, KLRC4, LDHC, LIPT1, MAML2, MCM4, MTHFD1L, MYLK2, NFATC1, NRG2, OLAH, OR10A4, OR10H2, OR2K2, OR2T10, OR2T3, OR4C46, OR4N5, OR4S2, OR51L1, OR5AN1, OR7G3, PGS1, PI4KB, PNPO, PPP2CA, PPP3R1, RALB, ROCK2, RPS6KA4, SAT1, SMC1B, SMPD2, ST3GAL5, STX6, STX7, TAS2R14, TBXA2R, TCIRG1, TRPM5, UNC5B, YWHAE, HSP90AB1
Negative_13007	AK3, HK1, ME1, ME2, TK2, A4GALT, AANAT, ACP1, ACP2, ADCY3, ADCY7, ALG2, BLNK, CDC2, CDK2, CEBPA, CLDN10, DDB2, DDX56, DPYS, EGLN3, FGF10, FRAP1, GLUD2, GP1BB, GRAP2, HSPA2, IL12A, INMT, LAMB2, LFNG, LMO7, LRAT, MCM2, MCM4, MYH10, NCK1, NEU4, NGEF, NRG2, OR10G9, OR10H3, OR2T11, OR2T2, OR6B3, OXSM, PDHA1, PGAP1, PIGA, PIGO, PIP4K2C, PLA2G10, PLK1, PON2, PPAP2A, RAB23, RARS2, SAT2, SEMA3A, SHC1, STMN1, SUFU, SYNJ2, UBE2L6, UGCG, ZBTB16, ZFYVE9, SLC25A31, TNFRSF10B
Negative_13008	CBL, CP, EBP, ME1, PTS, TPR, ACACA, ADRA1A, ALOX15, ALOX15B, ALPL, ANAPC10, AOX1, ARSA, B3GNT3, BCMO1, BMPR1B, C5AR1, CHPF, CHUK, CLDN6, COL4A1, COQ7, CX3CL1, DAAM2, DDX18, DGKE, DKK4, FARSB, FGFR2, FRAT2, FUT7, FZD7, GOT1, GRM5, GYS1, HAGHL, HEXA, IDI1, INPP4B, INPP5B, MAP2K3, MYH14, MYH2, NAGLU, NARS, NCF2, NRCAM, OR13C4, OR13C8, OR2A42, OR51M1, OR5L1, OR6K6, OR6M1, PANK2, PDE1B, PFN4, PIGW, PLA2G2F, POLD2, POLR3D, PPAP2B, PTDSS1, QARS, RAC3, RFXANK, RPS6KB1, TALDO1, TRADD, TRAF4, TUBB6, UBA7, VTI1A, YKT6, HSD17B10
Negative_13009	AUH, BID, BTK, FST, ID4, IL7, IVD, MTR, PML, TKT, ACADS, ACVR2A, ACVRL1, ADSSL1, AFMID, ALG10, ALPP, ASAH1, B3GNT5, B4GALT3, BAI1, CACNG2, CAV2, CAV3, CCND2, CD8B, CDH5, CDS1, CLCA2, CLDN15, CYFIP2, CYP8B1, DDAX1, DVL1, EI24, ENTPD1, EPHA3, EPOR, FARP2, FGF3, FLT4, HADHB, HEMK1, HEXA, HSD17B7, IAPP, IDI1, IL15RA, IL17RA, IRS1, JAG2, JAM2, LDHB, LRDD, MAGI2, MARS, NARS, NOX3, NUDT2, OR11A1, OR11G2, OR11L1, OR52I1, OR5V1, PER1, PIGB, PIP4K2C, POLR1A, POLR1D, PRIM2, PTAFR, PTGFR, SMA D7, STX2, SUCLG2, TALDO1, TAS1R2, TFPI, TUBA3C, TUBB6, UBA1, UPRT, VAMP1, WIF1, SUV420H1
Negative_13010	CRK, ACAD8, ADCY10, ALG8, ASMT, CACNA1G, CNTNAP2, CREBBP, CXCL9, CYP11B2, DFFA, DGKD, DGKZ, DHDDS, DHODH, DLL3, DVL3, EIF4B, ERO1L, FBP1, FGF3, FM02, FOXO3, GAS1, GOT2, HSD17B4, HTR6, LCAT, LCP2, MOV10L1, NAT5, OR13J1, OR1D5, OR5AU1, OR6C1, OR6C75, OR8H2, PAPSS2, PCK2, PIAS1, PLEKHA8, PLXNB1, POLR2K, POLR3K, PPP1R1A, PPP5C, PRKCZ, PSME3, RAC1, RASGRP4, SFRP1, SMC1A, SORD, SUV39H2, YWHAQ, CTNNBIP1



Negative_13011	C8B, DHH, FAS, GCK, GP5, PAH, PVR, ACP6, AKR1B10, AKT2, AMD1, AMY2B, ARNT2, ARNTL, ARPC5, ASNS, ATP13A2, ATP5A1, BCL2L1, CCNG1, CD40LG, CD8B, CDC6, CFL2, CTS1, CYP26A1, DAPK2, DEGS2, DHFR, DOCK1, EDA2R, EGLN1, EHMT2, EXTL1, GALT, GNG12, GPD1L, HSD17B7, IL12B, IL18R1, INPP5A, IRF7, KIR2DS4, LTC4S, MAD2L1, MAML3, MAP3K3, NEU1, NRXN2, OR10K1, OR4A16, OR4K17, OR51T1, OR52J3, OR7A10, OR8S1, PNPO, POLE2, POLR2B, RAPGEF2, RETSAT, SIGLEC1, SOCS7, SOD1, ST6GAL1, TBL1X, TCF7, TGFB2, THBS4, TMLHE, TPM3, TUBA1B, TUBB4Q, VAV3, CSGALNACT2, HLA-DQB1, PAFAH1B3
Negative_13012	CAT, CS, DCK, AASS, AHCY, ALDH1A2, AMDHD1, ANAPC7, ATP2A1, B4GALT6, CACNA1H, CASP7, CD226, CDC45L, CDK6, CHSY3, CLTCL1, CPT1A, CREB1, CRY1, CYP2F1, DARS2, FGF11, GADD45B, GALNT11, GCNT2, GLDC, GNA13, GRIA3, HLA-DOA, HSD3B7, IARS2, IL6R, KNG1, LIFR, LIPE, LYPLA2, MAP3K6, MCM2, MIC A, MITF, NEUROD1, OR10J3, OR13F1, OR1S2, OR2D2, OR2M3, OR4K1, OR6C74, OR9Q2, PANK4, PDE2A, PDGFA, PLXNA3, PNPLA3, POLA2, PTPN11, RHOQ, SC5DL, SPTLC1, TAS2R16, TBK1, THBD, TUBA8, UGCGL2, UGDH, UGT2B10, WNT10A, WWP1, ALDH18A1, CTNNBIP1, PAFAH1B1
Negative_13013	CAT, HK1, JUP, UBB, AADAT, AARS2, ACOX2, AKR1C3, ALG12, AOX1, BBOX1, C5AR1, CCL11, CHAT, CXCL12, CYP26A1, DDX41, DKK2, DTX3, DUSP8, EXTL1, GP1BB, GRIA2, IL1R2, IL28A, IL6R, INMT, INPP5A, KLKB1, LAMB1, NQO1, OR2L13, OR52L1, OR7A5, PAK3, PARVG, PLA2G2A, PLA2G3, PLCB1, PRPH, RAPGEF2, RARA, RASGRP4, SCD5, TAS2R60, TGFB3, TOMM40, TUBAL3, UBE2L3, UGT2B10, VAMP3, VANGL2, VAV1, WBSCR17, WBSCR22, HLA-DQA2, PAFAH1B3
Negative_13014	C8A, EDA, ID4, IL3, KDR, MIF, NPY, TYR, WAS, ACMSD, ADCY9, ADSSL1, AGPAT2, AK3L1, ALAD, ALDH7A1, ARHGEF2, ARHGEF4, ARPC5L, ASIP, ATIC, ATP5E, BMPR1B, CAMKK1, CAMKK2, CCND3, CCR10, CDH1, CDH3, CDK2, CLDN2, COL1A2, CSNK1A1, CXCL13, CXXC4, CYP2C9, DARS2, DPYSL2, E2F2, EIF4B, ENTPD5, EPOR, FOXA3, GALNT7, GBA3, GDF6, GNA12, GTSE1, HAO2, HDAC1, HHIP, HMGCL, HSPA2, IARS2, IDI1, IFNA17, IL12RB1, ISYNA1, LLGL1, MAP3K8, NFE2L2, NR1D1, NT5M, OR2A4, OR2M3, OR2M5, OR5H6, OR6Y1, PHGDH, PIGS, PIK3R5, PKMYT1, PLA2G6, PLCB4, POLR1D, PPM1D, PPP3CB, PRKCE, PTGIS, PTGS1, PYGL, RAB5A, SEMA4F, SETD7, SLC27A1, SOD1, SORBS1, SPRY4, TYROBP, UGT2B28, WNT4, YWHAH, ZBTB16, ATP6V0E1
Negative_13015	SRF, TPO, AKR1B10, ALDH1L1, ALDOA, APOA1, CD274, COL4A6, COQ3, CYP2A13, CYP4F2, DUSP8, EDN1, ENPP3, FZD10, GALK2, GGCX, GLI2, HNF4A, INPP1, JAG1, LAMC1, LIPT1, MAP2K2, MAPK3, NCOA4, NFKBIE, OR2L2, OR4K14, OR5P3, OR5R1, OR6C1, PARVA, PDE8B, PDIA4, PGAP1, PGLS, PPP2R5B, RXRA, SDC1, SGMS1, SLIT1, SOS1, SSX2IP, TAS2R48, VDAC3, WNT5A, ARHGEF12, C1GALT1C1, SERPING1
Negative_13016	CBL, LYN, ACADSB, ACSL4, ACTC1, ALG10, AMD1, ARNT2, ARPC1B, B4GALT2, CACNA1C, CALML5, CAMK2G, CCR5, CCR9, CDKN2D, CHIT1, CHST13, CLTC, CNTF, CNTFR, COL5A1, CXCL11, DCTD, DLST, FARP2, FARS2, FPGS, FZD1, G6PC, GADD45G, GAS1, GCAT, GCNT4, GFPT1, GNB1, GRIA1, HAO1, HEXA, HHIP, HLA-G, HLCS, IFNAR1, IFNK, IL11, IL18, IL7R, IL8RA, ITGA4, LARS2, NEFM, NMNAT2, NOTCH1, NUDT8, OR10G4, OR13C2, OR14I1, OR1L1, OR2A4, OR2H2, OR2T11, OR2T5, OR2T8, OR2Z1, OR3A2, OR5H2, OR5M8, PAK7, PDE6D, PGS1, PIGA, PIP4K2A, PLA2G2F, POLR2C, POLR2G, PPP3R2, PRKAA1, PRKCH, PTCRA, PVRL4, RBKS, RGS3, SDHA, SLC12A2, SRD5A2, SSH3, TAS2R13, TBXA2R, UGT2A1, UGT2B7, UNC5D, VASP, WNT2, ATP6V1C1, MAPKAPK3, PPARGC1A

Negative_13017	LYN, PRL, ACAA2, ACSS2, ACTN1, ACY1, ARPC3, ARPC4, ATP5L, BDH2, BUB1B, CACNA1E, CAV3, CDC2, CHR1, CNTFR, COL5A3, COX15, CSNK1G3, CYBB, DNM T3A, GALM, GALNTL5, GNAQ, GNG12, HAP1, HCCS, HCST, ICOSLG, IL12RB1, I L2RA, IL8RA, KITLG, MAD1L1, NFKBIE, NMNAT2, NUDT12, OR2T10, OR51M1, OR52I1, OR5D18, OR5I1, OR5M3, OR8U1, ORC2L, PANK4, PCK2, PLXNB3, ROC K1, ROCK2, SEMA4C, SLC2A2, SPTAN1, STAT1, TAS2R10, UCKL1, ATP6VOD1, TNFRSF10B
Negative_13018	ADC, CRK, ILK, KMO, SCD, AASDH, ABLIM2, ABP1, ACTA1, ALDH3A2, ARAF, AT P13A2, ATP6V1D, BMPR1A, CAMK2A, CCL21, CCNG1, CD44, CDC42, CDKN1C, C DKN2C, CSNK2B, CXCR6, CYCS, CYP2A13, DBF4, DDB2, ENO2, ENTPD3, EPHA8 , F13B, FUT7, GALNT3, GSTA5, HNF4G, IL8RA, IRS2, ITGAM, ITPK1, ITPKA, KCNJ11, LAMB3, LILRB3, MAGI3, MAML1, MAP2K3, MAP4K3, MMP1, MOV10L1, NSD1, NT5M, OR13C2, OR1J2, OR2S2, OR4K15, OR51I2, OR52D1, OR5AU1, OR 5T1, OR5T3, OR6X1, P2RX5, PAICS, PAK1, PARD6A, PIGA, PLA2G2F, POLR2F , PRSS2, PTGES2, PTGS2, QARS, RPSA, SEMA4B, SFRP1, SMARCA2, SNAP25, S TX1B, TAS2R1, TUBB2C, UGCG, WNT9B, ATP6V1C2, SERPINA1
Negative_13019	CAT, F2R, GK2, ID3, NLK, NPL, OSM, TK1, ACVR2B, ADH6, ADIPOR2, ALCAM, A SRGL1, BUB1B, CAV3, CBR3, CCL22, CCNE2, CHR1, CHRNA7, CHST13, CSF1R, CYP2U1, DARS2, DOLPP1, DTX4, EPHA5, F11R, F2RL2, GAMT, GMDS, GMPPB, G STM4, HADH, IL15RA, ITGA6, KLRC2, MAP3K4, MAP4K4, MGST2, MYLK, NT5C2 , OLR1, OR1B1, OR1M1, OR52J3, OR52K2, OR5A1, OR5AU1, OR6N2, OR8B8, P4 HA3, PFKFB2, PIGQ, PIGU, PLA2G2E, PLXNA3, POLR1C, PPP1R3B, PPP2R5B, PTCH2, RDH5, RETSAT, RFXAP, SARS2, SESN2, SFRP1, SKIV2L2, SOCS7, SRD 5A1, SRD5A2, SSH1, ST8SIA5, STX8, TAS2R7, TGFA, TUBB2A, TYMS, WNT10A , ATP6VOD1, SUV420H2
Negative_13020	FH, HDC, IL8, ME2, PDC, PGF, TFG, XDH, ADIPOQ, AGXT2, ALDOC, ANGPTL4, A TP2A1, ATP6VOC, B3GNT2, BAI1, BAIAP2, BHMT, CD14, CD19, CD74, CDC16, CFTR, CLDN2, CLTB, CSNK2A2, CTSG, CUL1, CYP2C8, DHRS9, FADD, FGF19, F GF2, FLAD1, GCNT3, GMPR, HYAL1, IL12B, IMPDH2, IPPK, IQGAP1, ITGB8, L RAT, LTBR, MNX1, NAGS, NEU1, NOD1, OR13A1, OR1D2, OR4A15, OR51G1, OR6 C3, OR6K6, OR9Q1, ORC3L, PDGFRA, PFKFB2, PIGO, PNPO, POLR2L, PTEN, PV RL3, RAC3, RAP1A, SAT1, SKP2, SPRY2, TAS2R38, TUBA1C, TUBB6, WHSC1L1 , WNT2, HSD17B12, SERPINC1
Negative_13021	C2, C9, DBH, F7, FOS, GPT, IHH, NOG, SMO, SYK, AASDH, ADCY4, ADORA2A, AD RA1B, ANAPC2, ARHGAP5, ATP6V1F, BHMT, BMP6, CDC25A, CDC27, CEBPA, CP T1A, CTBP2, CTSL1, CXCL12, DDX55, DGKI, DLL1, DNMT1, EXT1, FGD1, FGF1 0, FGFR4, FMO2, GDF5, GFAP, GNPAT1, HDAC2, IDI2, IFNA5, IL17B, KIR2D L1, MAN1B1, NADK, NAGK, NCR3, NCSTN, NFATC3, NKX6- 1, OR10AD1, OR10G7, OR13C3, OR1L4, OR2T2, OR4A5, OR4E2, OR51B4, OR5H 2, OR6N1, P2RX2, PARD3, PDGFRA, PHKB, PIP4K2A, PIP5K1B, PPP2R5D, PRN P, PSME3, PTPN5, RASGRP3, SESN3, SLC25A5, SLC33A1, SV2C, TAS2R48, TI AM2, VTI1A, ZFYVE9, HLA-DPA1, MAP3K7IP2
Negative_13022	CR1, FAH, MIF, TFG, ACADS, ACAT1, AGMAT, ASCC3, CCNB2, CCNG1, CHEK1, C HSY3, CLDN3, CYP2F1, DCTN1, DDX51, ENO2, FGF13, FGF14, FLAD1, GALNTL 4, GCDH, GCNT1, GFAP, GLUL, GNAL, GYS2, HTR2A, ICAM3, LAMB1, MAP3K3, M APK7, NFE2L2, NOX3, NRG2, OR1D5, OR2A4, OR4C15, OR52N4, OR8H2, OR8K5 , ORC2L, PANK3, PDGFB, PGK2, PIGH, PIK3CD, PIK3R2, PIP5K1C, POLR2C, P RKCE, PRKCG, RALB, RARA, RPS6, SLC25A6, SMURF1, SSX2IP, STAT5A, SV2A , SYNJ1, TACR3, TAS1R2, TUBB, UBE2L3, UCP1, VANGL2, VCAM1, YES1, ST6G ALNAC5, TNFRSF10D

Negative_13023	CFH, DBH, F8, ADRB2, ADRB3, AGPAT4, ALDOB, ALPP, APOE, CARD11, CD14, CD40, CPT2, CX3CR1, CYP2C9, DHODH, ENPP6, FSHR, FUT5, FZD7, GALNT10, G ALNTL4, GOT2, GUCY1A3, HHIP, HMGCL, HMGCR, HPRT1, LEFTY1, MYH4, MYL2 , NFASC, OR2A25, OR4A5, OR51A2, OR5D16, PLAT, POLR2D, POLR3B, SEMA3B , SESN1, SMPD1, SRGAP3, TACR1, TAS2R3, TAS2R50, TCF7L1, UGT2A1, UGT2 A3, MAP3K7IP1, SUV420H1
Negative_13024	CDA, FYN, GAA, AASDH, ADCY7, ADIPOQ, AGXT, ALDH9A1, ALS2, ANPEP, ARNT 2, ATP6V1H, CALML3, CCL20, CD226, CNGB1, CREB3, CSF2, CTBS, CXCL12, C YP2A6, CYP3A5, CYSLTR1, DDOST, DDX18, DDX23, DGKG, DPYD, E2F4, ECSIT , EFNA3, EXTL3, FUT4, FZD5, GLI2, GRB2, HCLS1, HMBS, HYAL1, IFNA13, IL 17A, ITGB4, JAM3, LILRB3, LRAT, LTA4H, MAP3K5, MAP4K2, MCM5, NCR3, NF AT5, NT5C2, OR10J5, OR1F1, OR4N2, OR5AK2, OR5K2, OR6C70, OR8H2, P2RX 6, PDE11A, PGK2, PIGV, PMAIP1, POLD4, PORCN, PPCDC, PPP3R1, PRKCD, PS ENEN, PTGIS, SORD, SPI1, STAT3, STAT5B, STX18, SYNJ1, TLR5, TPI1, VAN GL2, ALDH18A1, PDCD1LG2
Negative_13025	C8G, CFH, F2, MET, NPL, ACOT11, ACSL4, ADCY2, ADRA1D, AKR1C3, ALDH1A2 , ALDH1L1, ALDH5A1, APOA5, APOE, ARG1, ATP2A2, ATP5I, BUB1, CACNA1D, CCKAR, CCL17, CCL2, CCL5, CD58, CPT1B, CSF2RA, CYP3A7, DARS, DAXX, DG KI, FGF18, FRAT2, FZD3, GALNT2, GALT, GNAI3, GPAA1, GRHR, GSTP1, GUC A1A, GUCY2D, HEXA, HLA- F, IL1RAP, INADL, ITGA11, JUND, KAT2A, KAT2B, KIR2DS4, LEFTY1, LILRB 3, MAPK9, MARS2, MASP2, NANP, NEFL, OR10J1, OR11L1, OR1E2, OR2L2, OR2 T8, OR2Z1, OR4C11, OR4F15, OR52N4, OR5M9, OR6N1, OR7A17, OR8I2, OXTR , P4HA2, PIP5K3, PLXNA2, POLR2F, PPAR, PPM1A, PRKAR1A, PRKCG, PSME1 , RASGRP2, SEMA4A, SEMA4B, SH2D1A, STX8, SV2A, TALDO1, TAS2R42, TM7S F2, TXNDC12, UCK1, UGCGL2, UPB1, CACNA2D3, HLA-DRB5
Negative_13026	CTH, GPT, GSR, MYC, PAH, RFK, ACSL5, ADRA1D, AGPAT2, ANAPC10, BCL2L1, BMP8A, CFLAR, CLDN2, COL6A2, CPS1, CSNK1D, CYP19A1, CYP4F3, CYP8B1, DAD1, DCTN1, DHODH, DIAPH3, EFNB2, EHHADH, FGF3, FGFR1, FLT1, FZD6, G ALNT9, GCLC, GMPR2, GNG12, GNG13, GPAA1, GSTA5, IARS2, IDH1, IGF1, IL 8RA, IRF5, KLRC2, KNG1, MAML3, MCM6, MMP7, MYH6, NCF1, NLGN1, NRAS, NT 5C3, OR10A5, OR10V1, OR4M2, OR5AU1, OR5C1, OR6B2, OR6C1, OR8D1, ORC1 L, PDE10A, PHKA2, PIGU, PLCG2, POLA1, POLD3, PPP3R1, PRKCB, PTDS2, P TGIS, PYGL, RHOD, RRM2B, SETMAR, SLC27A5, SMPD4, STAT6, TBL1XR1, TGD S, TNFSF14, TPH1, ULBP3, ARHGEF12, SERPINE1
Negative_13027	FGA, ID1, IL8, PXN, ACAT1, ADRA1A, AGXT, ALDH1A1, APLP1, ARNT, ASMT, A SPA, ATP2A3, B3GNT3, BMP8B, BRAF, CACNA1D, CACNG2, CCL22, CCNH, COAS Y, CPS1, CSF3R, CTF1, DBF4, DDX18, DUSP4, ETNK2, FGF11, FOSL1, GPD1, G STM5, HSPA2, HTR6, INHBE, NEFH, NEUROG3, NFASC, NFE2L2, NRCAM, NUDT2 , OR2C3, OR4F17, OR51A4, OR52K1, OR52N2, OR56A4, P2RX3, PAX4, PIAS3, PIAS4, PLD1, POLR3A, RAC1, SAT1, SMAD9, SOD1, SORD, SRGAP2, SUCLG1, X CL1, ATP6V0A1
Negative_13028	ADC, CD4, CEL, FAH, FAS, SCD, STS, ADRA1A, AGPAT2, ARPC1A, ATP5D, ATP5 J, BUB3, CACNG5, CANT1, CCL19, CXCR6, CYFIP1, DAPK2, DGKB, DGKG, DTX1 , EFNA3, ENTPD4, ESAM, F2RL1, FABP1, FARSB, GALNT13, GDF6, GLI3, GMPR 2, GNAL, GNRHR, GRIA2, GRPR, GUCY1A3, GYS1, HAGHL, HAP1, ICOSLG, IDH3 G, IGSF5, IL11RA, INADL, KIR3DL1, KLK3, KLRD1, LDHB, LRP6, MAP2K5, MA PK12, MGAT5B, MYLK3, NAE1, NCR1, NUDT2, NUMB, OR11I1, OR4D1, OR5P3, OR 6B3, OR6N2, OR6Y1, OR7G2, ORC2L, PAK4, PAPSS1, PCYT2, PDE4A, PDE7B, P HKG1, PKMYT1, POLD3, PON1, PPP1R1A, PROS1, RBX1, RERE, SC5DL, SDC3, S LC25A6, SPI1, SRD5A2, TAS2R10, TAS2R41, TUBA1B, WNT1, ZMAT3, ATP6V1 E1, SERPINF2, TNFRSF10B

Negative_13029	ADC, ASL, CDA, FER, A4GALT, AARS2, ACOT11, ADRA1D, AK3L1, AKR1D1, ALD H1A3, ALG10B, ALG5, ALOX15, ATG3, ATP5H, ATP6V0B, CALML6, CARS, CCL7 , CCNG2, CDC14B, CHDH, CHRM3, CLDN22, COX10, CXCL1, DEGS1, ENTPD1, EP HB3, FADS2, FGD3, FGF3, FM03, GCAT, GPX5, GRPR, GSTA5, HAGHL, HCST, HG SNAT, HMGCR, HPSE2, IDH3A, IFIH1, IL19, INPP4A, ITGA7, KAT2B, KIR2DL 2, KITLG, LAMA3, MAP2K3, MAP3K11, MAP3K7, MAPK1, MCCC2, MECR, MMP2, M PDZ, NRXN1, NT5C1B, OR10Q1, OR1F1, OR4E2, OR4N5, OR51V1, OR5D18, OR5 P2, P2RX6, PEMT, PLA2G5, PPCDC, PRKACB, PRKCA, PRLR, PTPN5, RAF1, RBP JL, RFXANK, RRAS2, SELL, SH2D1A, SPRED1, ST3GAL2, ST8SIA1, TNFSF12, TNFSF9, TPK1, UPP2, VDAC1, WARS, WNT7A, ZNRD1, ATP6V1B1, MAP3K7IP1, MAPK8IP2
Negative_13030	C3, CP, FES, ILK, LCT, LYN, NF1, ACAD9, ADRB2, ALDOB, ALG9, ALOX12B, AT P5H, BACE1, CACNG4, CCND1, CCR4, CHEK2, CLDN1, CREB5, CTPS2, DPM1, DT X1, DUSP1, EIF4E2, ELK4, F11R, FCGR3A, FGF22, FOXO3, GALNT6, GDF6, GN AI2, GNMT, HIBADH, HTR4, ITGB4, LAMC2, LARS, MAP2K6, MAT2B, MGAT4A, N AE1, NAGA, NKX2- 2, OR2G3, OR3A3, OR4B1, OR4D6, OR51G2, OR52N2, OR5D16, OR6K3, OR8J3, P2RX7, PDE8A, POLR2G, PROS1, RDH11, RFXANK, SNAP25, SOCS2, SREBF1, S T3GAL5, SULT1A1, SV2A, TACR3, TAS1R3, TAS2R40, TBL1X, TGFBR1, UGT1A 10, WNT10A, XIAP, YWHAG, ATP6V1B2
Negative_13031	C3, GLA, GPT, INS, MOS, ADCY5, ADIPOR1, ANAPC4, ANAPC5, B4GALT7, CDH3 , CDKN1A, CDKN2B, CLDN19, CLTB, CMPK1, CPS1, CPT2, CYBA, CYSLTR1, DAR S2, DGAT1, DVL1, ECHS1, ENTPD6, EPHB1, EXT1, EXTL3, FGF17, FGF20, GOS R2, HHIP, HMGCS1, IL12B, IL12RB2, INPPL1, KAT2A, KNG1, MDH2, MEF2C, M NX1, MPDZ, NANS, NAT1, NFKBIE, NKX3- 1, OR10A5, OR10G7, OR1B1, OR1E1, OR2C1, OR2T11, OR2T2, OR5AC2, OR5AR 1, PDE10A, PDE1A, PDE1B, PIGN, PNLIP, PRKX, PTDSS1, PTGES, RELB, RERE , STX7, TAS2R9, TGFB2, TGFB3, TOMM40L, XYLB, YWHAH, ZBTB16, MAPKAPK5 , TNFRSF10B
Negative_13032	APP, CAD, FER, HK3, PAH, ABI2, ABLIM2, ABLIM3, ACO2, ADAM10, ADSSL1, A LG8, AMD1, APBB1, BBOX1, BCMO1, CCR7, CD244, CDC25A, CHRM1, CXCL11, C YP2F1, DRD2, F13B, FADD, GCLM, GMPPA, HEMK1, HEXA, HTR5A, IFNA2, IL10 RA, IL10RB, ITGB1, ITGB8, ITPK1, LCAT, LHCGR, MAP2K7, MAP3K3, MAPK14 , MFNG, MINPP1, NAT6, NCAM1, NCOR2, OR10V1, OR2T10, OR4X2, OR5B3, OR8 H3, OR9G4, PITX2, PPP2R2D, PTAFR, RBPJL, SDHB, SESN2, SOCS7, ST3GAL3 , TJP3, TLR2, TNFRSF8, ULBP3, XCR1, GABARAPL1, HLA-DRB5, PPP1R12A
Negative_13033	AK1, CEL, MYC, SMO, SYK, ABAT, ACAA2, ACADVL, ACAT2, ACP2, ACPT, ACSS1 , ADAM10, ADCY2, ADRBK2, AKR1C3, ALAD, AMHR2, ARHGEF6, ARNT, BMP4, BU B1, CBLB, CCR9, CD19, CDC45L, CHIA, CLTB, CYP3A5, DGKZ, DLL4, DPM2, DP YS, ENO2, EPHA1, FGF5, GALNT13, GDF6, GGT6, GP1BB, GRIA2, H6PD, HMGCR , HRAS, IFNA6, IGSF5, IL15RA, IL4R, IRAK1, IRAK3, ITPKB, JAG1, KIR3DL 2, MAP2K7, MAP4K3, METTL6, MTHFR, MYD88, OCLN, OR10H3, OR10P1, OR10Z 1, OR51A4, OR5D13, OR5M3, PAK2, PAX8, PDE3A, PGAM4, PLCE1, POLD2, PPP 2R1A, PTPRB, RDH11, RDH5, RFNG, RHOA, RND1, SEMA4B, SEMA4G, SMARCA5, TFPI, TGFBR1, TNFSF18, TUBB2A, UGT2B28, VDAC3, YES1, YWHAG, ATP6VOD 1, TNFRSF17
Negative_13034	AR, CRH, IL6, KDR, ABLIM1, ALDH3A1, BCL2, BUB3, CACNA1C, CAV3, CCND3, CD226, CHST11, DGKG, DPAGT1, FGF21, GDF6, GRIA1, GRIN2B, GSTK1, HSD1 7B7, HTR2C, IFNGR2, IL29, IMPA1, IMPDH2, KLRK1, MAP2K5, MAPK3, NAT6, NME2, NRXN3, NT5C3, OR10G9, OR2B6, OR2L2, OR52J3, OR7G1, ORC5L, PAK2 , PARD6G, PDE8A, PGK1, PIGK, PROC, PRSS3, PYGM, SDHB, SEMA3A, SGPP1, S PAM1, TAS2R40, TUBB3, UNC5A, WWP1, MAPKAPK5, SUV420H2

Negative_13035	F8, FST, MIF, AADAC, ACAA2, ACOX2, ADRB1, AGPAT1, AKR1B10, AKR1C1, ALPP, ANAPC2, ASPA, B3GALT5, CFTR, CLTB, CYP3A43, DHRS3, DUSP1, DUSP2, FGF9, GALNT13, GALNT7, GP1BA, IFNA2, IKBKB, IL19, IL7R, ITGA10, ITGA4, ITGAV, LIPF, MAP3K14, MAT1A, MYH3, NAGK, NAGS, NAT5, NFATC2, OLAH, OR13C8, OR14A16, OR2C1, OR52B4, OR52K2, OR6K2, OR8G1, ORC2L, P2RX5, POLD1, PPOX, PPP1R3C, PPP2R2C, PPP3CB, PTPRR, RPN1, SEMA3C, SIAH1, SMAD7, ST3GAL4, ST8SIA5, SUCLG1, TAS1R2, TOMM40, TRDMT1, UBE2K, VAMP1, VCAM1, ATP6V1E1, MAPK8IP3, SERPINC1
Negative_13036	F11, GAA, GBA, KIT, ME2, MYC, OGT, PRL, ACAT1, AKR1B1, AMPD3, APPL1, ASSNS, ATP50, BCAT1, BMPR1B, CACNG1, CACNG2, CALML3, CCL8, CLDN20, COX10, CREB3L2, CTBP1, CX3CR1, DGUOK, DTX4, DUSP7, FZD5, GALNT5, GAMT, GNAT3, GNPAT, GNPDA2, HRH1, IL29, IMPA2, ITGA6, JAG1, MAP2K5, MAP3K1, MDH2, NRP1, NTNG1, OR10H1, OR10H2, OR11G2, OR1A1, OR2M5, OR2T10, OR4X2, OR52L1, OR52W1, OR56A1, OR8B12, OR8B8, OR8J3, OR8K1, P4HA3, PDE4C, PDHA2, POLR2A, POLR2L, PPAP2C, SDC1, SELE, SETDB1, SLC25A5, SLC25A6, SNW1, STK11, STX1B, SUFU, TAS2R10, TGFA, TJP2, TOMM40L, TPM3, YWHA B, ZNRD1, ATP6V1B2
Negative_13037	CBL, FN1, IL2, TNC, ACACA, ALPPL2, ARPC5L, ARSA, ASAH1, ATP5A1, B4GALT2, C1QC, CACNG5, CARS2, CCNA1, CCR4, CHPT1, CHSY3, CNTNAP1, CREB1, DFFA, DHODH, EPHB2, EPHB3, FARP2, GLUD1, GSTT1, GUCY1A2, HSD17B4, ITGAD, JAM3, LCMT1, LDHD, MAGI2, MAML3, MAP2K4, MCM7, MYH13, NAGS, NAT6, NEFH, NMNAT2, NUDT9, OR2M3, OR2T29, OR6K6, OR8H3, ORC6L, PAX8, PDE5A, PDPK1, PFAS, PGK1, PGM3, POLR1C, PROS1, PRPH2, RALB, RASA2, RFXANK, RPIA, SHC4, SHMT1, SMAD3, SSH3, STMN1, SYNJ1, TBXAS1, TFPI, TRAF2, TUBB6, WNT10A, WNT6, MAPK8IP1, TNFRSF14
Negative_13038	AK1, F7, GNE, SCD, ACP2, ACTB, ACTG1, ACTN1, AGTR1, ALAD, APOE, ARG2, ATP5H, B3GALT5, BBOX1, CCL21, CHST11, EFNB3, FMO3, FSHR, GCNT2, GGT6, GLO1, GNAI2, GOT1, GSTA1, GSTZ1, GUCY1B3, HAGHL, HSD17B2, HTR5A, HTR7, IL12B, IL6R, LAMC2, LTBP1, MYH15, NAT2, NEU3, NTRK1, OR1L8, OR2A12, OR5B12, OR5T2, OR6Y1, OR8H3, PAPSS1, PGM1, PKM2, PPP2R5E, PRKACB, PSENEN, RAB5A, RPS6KA5, RRAS, SEMA3E, SNAI1, SOS2, TOLLIP, TRAF1, ATP6VOE1, TNFRSF10B
Negative_13039	BCR, C3, JUP, ACAT1, AMPD1, ARPC2, ATP12A, ATP5J, ATP6V1D, CAMKK2, CD82, CDC25C, CHKB, CHRD, COL4A4, CSF2, CXCL6, CYP4F2, DUSP2, EI24, EIF4E, ENPP6, FABP3, GANAB, GBE1, GJA1, GNG13, GUCY2C, HIBCH, IL1R2, LHCGR, NT5M, NTF3, NTN1, OGDH, OR51F1, OR5H2, PDPK1, POLR3A, PRKCA, PTK2B, SEMA7A, SLC25A4, STK11, THBS1, VEGFB, WNT5A, ATP6VOD2, MAPK8IP2, PRICKLE1, TNFRSF10C
Negative_13040	C7, F10, LAT, TXK, ADRBK2, AKT2, ALDH3A2, ALG8, ALPL, ATP13A2, BMPR1A, CACNA1A, CCL14, CCL19, CCR9, CDC25A, CLDN19, CLTA, CYSLTR2, DDX52, DPM2, EFNA3, FCGR3A, FDFT1, FUT2, GALNT8, GALT, GCDH, GNAT3, GNG12, GNPDA1, GRIN2D, HIBCH, IFIH1, IKBKB, IKBKG, IMPA2, INPP5A, KAT2B, KDSR, KIR2DS5, KNG1, MAP2K6, MCCC1, MCM6, MFNG, NFATC4, NGEF, NKD1, NKX31, NPR2, NT5C3, OR10A6, OR13A1, OR14J1, OR1J1, OR3A1, OR4M2, OR51A4, OR5K2, OR5P2, OR5T3, PARD6B, PCCA, PDE7B, PIGQ, PIP4K2B, PIP5K1B, PLXNB3, POLR2B, POLR3A, PON2, PRKAA1, PRKACA, PYCR1, RAF1, RAPGEF4, RBKS, RDH12, RHOA, RHOQ, RPRM, RPS6, RRM2B, SMAD1, SPTAN1, SUCLA2, VASP, WBSR17, GABARAPL1, MAPKAPK5, PAFAH1B1, TNFRSF13B

Negative_13041	CAT, DCN, ABCC8, ABLIM2, ACSL6, ACY1, ADIPOQ, ALDH6A1, ALDH9A1, ALG6, ARG1, ARPC2, B4GALT7, BAAT, BMP2, BMP5, CCNG1, CCR4, CD14, CDS1, CLDN7, COL5A1, CXCL3, DHODH, DRD1, DUSP5, ERBB2, FGF7, FPGT, GBE1, GMPR, HPSE, IL12B, JAM2, LAMA4, LRDD, MCM4, MGAT4B, NAMPT, NCKAP1, NTNG1, NECUT1, OR11L1, OR11I1, OR4E2, OR4F15, OR4N4, OR7A5, PAICS, PANK2, PAR6G, PDE1C, PGAP1, PRKAR1B, PTPRF, SMAD2, SNAI1, STAT5B, TGDS, TKTL1, UGT2B11, ZIC2, PPP1R12A, SERPINA1, SUV420H1
Negative_13042	EBP, FES, IL8, LYN, MSN, ABI2, ACTC1, ADCY3, AREG, ARNT, ASAH1, CACNB1, CCR2, CD72, CNTNAP2, COL1A2, CSF2RB, CYP26A1, DNMT3B, EFNA1, ENPP1, EPHA4, EPHB1, EPHB3, F2RL3, FUT3, GAPDH, GGCX, GOSR2, HCLS1, HHEX, HLCS, HRH1, IARS2, IFNA6, IMPDH2, INPP4A, INPP5E, IPPK, IRF9, ITCH, LDHAL6A, LIMK1, MARS2, MCCC2, MGAT4A, MICA, MKNK1, MRAS, MYH11, MYH3, NAT1, NCOR2, NFKBIA, OR10H3, OR14J1, OR1G1, OR2M4, OR2T4, OR51M1, OR52J3, OR52M1, OR6C3, OR8K1, P4HA1, PCK1, PCYT1B, PDE4B, PGLS, PIGH, PIGM, PLXNA3, PMM1, PRKACA, PRKCH, PTPN1, SCP2, SDC4, SEMA3B, SESN2, SLIT2, SMAD9, SPRY3, STX16, SUCLG1, THBD, TPMT, TUBB, UGT2A3, WBSCR22, WNT11, XCL2, ZMAT3, B4GALNT1, MAPK8IP1
Negative_13043	DCN, IVD, MUT, TH, AADAT, ALDH3A1, ALOX15B, ATG3, CADM1, CASP8, CSNK2A2, CYBB, CYCS, CYP2A6, CYP3A7, DHRS3, ENTPD5, EXTL1, FLT1, GALNT8, GDF7, GLUL, GNB3, GP1BB, KCNB1, KLRK1, OR11H1, OR2G6, OR4C11, OR4D11, OR52M1, OR6Y1, PDE1C, PFN3, PIAS4, PIGU, PKMYT1, PLCD4, POLD1, PPP3R1, PRKACB, RAB5A, SARS, SETMAR, SKP2, ST3GAL2, TACR1, TXNDC12, UBE2L6, UPB1, YWHAE, HLA-DQB1
Negative_13044	AUH, GSS, LIF, UBB, ADH6, ALS2, AOX1, APOA5, ASRGL1, CACNA1A, CAMK2A, CAMK2D, CCL14, CCL21, CD3E, CNTN1, COL4A6, CSF2, CXCL10, DDX19A, ENO3, ENPP3, FMO3, HMOX2, HSD17B3, IL28A, ITGB5, KIR3DL3, MAPK1, NOTCH1, NSDHL, OR10G9, OR2T1, OR4A15, OR6B2, OR6C4, OR7G2, PARD3, PDCD1, PIAS2, PLA2G10, PLCB1, PNPLA4, POLR1E, PRIM1, PTGS2, PTPRF, RRM2B, SEMA3A, TGFBR1, TPMT, TUBB2A, VARS, VAV3, VDAC1, ATP6VOD2, CSGALNACT1, CSGALNACT2
Negative_13045	CAT, CP, F2, IHH, ZYX, ACSL6, AOC2, B3GNT2, BCL10, BLVRB, CCL26, CCL8, CCNE1, CDC14B, CDC7, CLCF1, CLDN18, COL5A1, DDX52, DEGS1, DGKD, DPM1, DUSP7, EPHB6, FGD1, FGF13, FGF17, GSTM1, HEMK1, HSD17B3, HTRA2, IL29, IL6ST, IQGAP2, ITGA7, ITGB6, LARS, MAML1, MAT1A, MCEE, METTL6, MGA M, MOV10L1, NAGA, NANP, NEU1, NPR1, OR13C8, OR14I1, OR1G1, OR11I1, OR52E2, OR52J3, OR52N1, OR56A1, OR6C4, OR8K1, PGS1, PPP2R2A, PPP2R2D, PYGM, SESN2, SKP2, SOAT2, SPTLC1, STX3, SV2B, TPK1, TSC1, TUBB2C, WNT8B, EIF4EBP1
Negative_13046	ADA, BTC, GPI, AACS, AARS2, ACY3, ALDH1L1, ALPI, ATP4A, ATP6V1D, CCKBR, CCNB2, CD44, CDC26, CNGA3, CNGA4, CPT2, DUSP1, DUSP16, EFNB2, ENPP3, EPB41, EPRS, EVI1, FARS2, GALE, GPD1L, HNMT, HTRA2, LIPA, MAP4K4, MASP1, MEF2C, MYD88, MYH2, OR10R2, OR1L1, OR1L8, OR2A42, OR4D2, OR4P4, OR51B4, OR5F1, OR9Q2, PDE8B, PIAS2, PIGM, PIPOX, PLXNB1, PPP1CC, PP3CA, PRODH, PTDSS1, PTPN5, PYGB, RBPJL, SHC2, SHC3, SIAH1, SOCS1, SSH3, ST3GAL4, STX1B, TAS1R3, TAS2R16, TMLHE, TNFRSF9, TSC1, ATP6VOD2, C1GALT1C1, HLA-DPA1, HLA-DRB4

Negative_13047	ADO, AK5, CGN, CKB, F10, F2, GBA, TEC, ACSL5, ACTN4, ACVR1B, ADAM10, ADH4, ADORA2B, ALAS1, ATG7, ATP6V1A, B3GALT2, B3GALT5, B3GNT2, BCAT2, BCKDHA, C7orf16, CASP9, CCL22, CCL7, CCNB3, CCNE1, CCNE2, CLOCK, CNTF, COL6A1, CSF2RB, CYP2A13, DPYD, DTX4, EHMT2, EIF4B, EPHA8, FMO5, GALK1, GDE1, GLUD2, GMPR2, GRHPR, HBEGF, HNF1A, IDUA, IL13RA2, IMPA2, INADL, IQGAP1, JAM3, KAT2A, LDHD, LTA4H, MAP3K13, MDH2, MGST1, MYH11, MYL5, NAGS, NANS, NCR2, NFYA, NKX2-2, NME7, OLAH, OR11H6, OR2K2, OR51Q1, OR52B4, OR5K2, OR6C3, OR6T1, PANK2, PGK2, PIK3C2A, PIK3CG, PLCD3, POLR1D, PPA1, PPOX, PRLR, PTPRC, RASA2, RFNG, ROCK1, SCLY, SETMAR, SMAD6, SMAD7, SUFU, TRAF1, TSC2, UGT2A3, YWHAH, KIR2DL5A
Negative_13048	CD4, CTH, FGG, HK1, PDC, AK3L1, AMPD3, ARSE, ATP50, BAAT, CCL21, CCL7, CCR6, CCR8, CD59, CDC2, CDH15, CDK5, CMBL, CXCL1, CXCR6, CYP11B2, CYSLTR1, DBF4, DERL1, E2F2, ERBB2, FGF9, FMO3, FUT2, GALNT3, GGT1, GNPNT1, HSD3B7, IL19, INPPL1, ITGA2B, LPAR1, LRRC4C, MAPK12, MAPK9, MGAT5B, MTHFD2, MYH9, NCR1, NFKB1, NFYA, OLAH, OR10J3, OR13C8, OR2AE1, OR4B1, OR51A4, OR51G1, PDK1, PON2, PPP2CB, PROS1, SEMA4D, SETDB2, SFRP1, SIPA1, SULT1A2, TAS2R16, TAS2R50, TUBB4Q, UGCGL2, VDAC3, WASF1, TNFRSF13B
Negative_13049	ADO, CBS, DDO, FAS, FGB, FGG, ID3, SCD, TPR, A4GALT, ACP2, ACSM1, ALDH1B1, ALDH5A1, ARG2, CCL25, COL6A1, CREB3L4, CYP2S1, DERL1, EFNA2, GCNT4, GNG13, HHIP, HTR2A, IL17RB, KLKB1, LIPA, MAN1A2, MAP3K13, MECR, OR13C2, OR13C3, OR13C8, OR2L13, OR2T10, OR2Y1, OR4C12, OR52N1, OR5V1, OR7C1, OR8D1, OR8S1, POLE, PPP1R3D, PPP3R2, PYCR1, RFXAP, SC5DL, SCIN, SGPP2, SHC4, SOD1, TAS2R1, TBXA2R, THBS1, THBS4, TOMM40L, UGT2A1, WBSCR22, XYLB, YOD1
Negative_13050	C8A, GP6, TEC, TXK, ZYX, ACTA1, AGXT, ALDH2, ANAPC11, APOC3, ARSE, BIRC2, BMP5, C5AR1, CCL11, CDKN2A, CLDN8, COX15, CXXC4, CYSLTR2, DDIT4, DKK4, DOCK1, DUSP2, DUSP5, EI24, FDPS, FGF1, FGF22, FPGT, GADD45B, GJD2, GOT1, GRHPR, GUCY1B3, HHEX, HMGCR, HRH1, HSD17B8, HTR6, IDI2, IL13RA1, INADL, KAT2A, KDSR, LLGL2, MAP2K1, MAT1A, MGAM, MKNK1, MTHFS, NCKAP1L, ONECUT1, OR1L1, OR2AT4, OR2G3, OR51M1, OR7G1, OR9K2, ORC2L, PAPSS2, PDE1B, PIK3C2G, PIK3CB, PIP5K3, PLCZ1, PLXNA2, PRKAA1, PRKE, PRKCI, PROS1, PRSS2, PTCRA, PTGER3, PTGFR, RASGRP1, SNAI2, TAS2R40, TP53, TSTA3, TUBA4A, TYK2, UNC5A, VANGL1, GABARAPL1, MAP3K7IP1
Negative_13051	C3, MTR, SP1, TXK, ACSL3, ADIPOR1, B3GALT4, CASP7, CCNE1, CD38, CLDN1, COQ6, CPS1, CSAD, CXCR3, DGKI, DHCR24, DLAT, EGFR, EPHB6, FGF20, FUT9, GCNT3, GGT5, GLUD2, GNB1, GNMT, GSTA1, GSTM3, IFNA4, IL18R1, IL9R, LAMC1, LPAR1, MAP2K6, MECR, MYH10, NCR2, NFX1, NUDT12, NUDT5, OR10A4, OR10S1, OR1A2, OR1J4, OR2G3, OR4D1, OR4D6, OR5C1, OR5D18, OR6M1, OR7A10, PAICS, PEMT, PIK3CD, PLA2G2A, PLA2G3, PPP2R1B, PPP5C, RASGRF1, RFX5, RUNX1T1, RXRB, SEMA4G, SENP2, SLC25A5, ST3GAL3, TACR2, TM7SF2, ATP6VOA4, B3GALNT1, CSNK1A1L, MAPKAPK3, ST6GALNAC3, TNFRSF10C, TNFRSF11A
Negative_13052	GNE, OGT, SI, ACAA2, ACAT1, ACY1, AKR1C4, AKT1, AOC2, APAF1, APC2, ARNT2, ATP5G2, BCL2L1, CACNG3, CAMKK2, CCR4, COL6A2, CTTN, CXCL11, CYP2B6, DKK4, DUSP14, EIF4B, EPHB6, FRAP1, GALC, GALK2, GNPDA1, HSPB1, IDH3G, IFT57, ISYNA1, LYPLA2, MAN2A1, MOV10L1, MYH9, NCR3, NEU1, OLR1, OR12D3, OR51I2, OR5AK2, PDE1B, PDE6H, PGM3, PIP5K1A, POLR2H, PPA1, PPARA, PPP1CB, PRPS2, RASGRP1, RASSF1, SARS, SH3BP2, SMAD5, THBS1, TPH2, UGT8, ULBP3, USE1, ZIC2, HSD17B10, MAP3K7IP1, TNFRSF17

Negative_13053	HGF, IL2, ACOX2, ACSL6, ACTG2, ALDOB, ATP12A, BLNK, CANT1, CD244, CDC6, CHAT, CREB3, CTNNA2, DCTD, DNMT3B, E2F2, ERBB2, FZD5, GALNT3, GATM, GBE1, HADHA, HAO2, HIF1A, LDHB, LIAS, MAPK11, NAMPT, NCR2, NCR3, NME6, NTF4, OR2A5, OR2C1, OR2M7, OR4X1, PFN1, PIP5K1B, PLXNA1, POLR2D, P OLR2G, PON2, PRKCE, PRKCQ, RHOQ, ROBO2, SLC2A2, THBS1, TLR9, TYMS, WN T8A
Negative_13054	CAT, CBS, F5, LIF, MSN, NNT, OTC, ACP1, ACTA1, AKR1B10, ALOX12, AMY2A, ANAPC2, ATP5D, CACNA1E, CACNA1F, CCL5, CHKB, CHR1, CSH1, CSNK1G3, CY P2A6, DBF4, DHRS4, DUSP8, EPB41L2, FGF2, GATM, GLI3, GNG12, GSTM3, GU CA1C, HSPA2, IL1B, IL28A, IL28RA, IL2RG, ITGAV, MAML1, MAPK3, MTHFD1, NEFM, NKX3-1, NLGN2, NNMT, NSD1, NSDHL, NTN1, OR11G2, OR2W1, OR4D9, OR8H3, PDXK, PGAM2, PHKB, PIK3R4, POLD1, RDH12, SDHA, SEMA4A, SH2D2A, SLC2A4, SNA P25, SOAT1, SPTLC1, ST3GAL2, SYNJ2, TAS2R8, TD02, TJP2, TLR5, UXS1, W ARS, WHSC1L1, PLA2G12B
Negative_13055	C6, DAO, F3, GDA, OGT, SI, TH, TK2, ACPT, ADIPOR2, ALDH1B1, ALG10B, ALO X12, ATP2A3, ATP5E, ATP6V0B, CCL22, COL4A2, CTBP2, CTBS, CTSG, CYP2A 6, DCXR, FGF4, FGF8, FOXA3, GNRHR, IFNGR1, IL1A, IRAK4, ITGAM, JUND, K IR2DS5, MGAT4B, NANS, NUDT8, OR10H5, OR10J1, OR1M1, OR2M3, OR2Z1, OR 4N2, OR52I2, OR6T1, OR8H1, OR9K2, PDGFB, PLA2G3, PRKCE, PRSS2, RFXAP, SUFU, TAS2R38, TAS2R49, TUBB1, ULK3, WARS2
Negative_13056	ASL, FAS, HGF, IVD, LTB, MIF, OAT, PXN, ABI2, ABLIM2, ACSL1, AGRN, AMD1, ANAPC11, CARS2, CCL15, CDC16, CDC25A, CX3CL1, CYCS, DIAPH2, DUSP8, EPHA4, FABP1, FCGR2B, FZD2, GAS1, GNAL, GNAZ, GSK3B, GSTM1, HEMK1, HL CS, HYAL1, IL23R, IRAK4, IRS4, ITGB3, KIR3DL1, MAPK13, MAPK9, NFASC, OR11H4, OR51F2, OR56A3, OR6C3, OR7D2, PDE4C, PLTP, POLR2A, PVRL2, RA PGEF1, RBL2, ROCK2, SELL, SGPP2, SMAD1, SOCS4, SPRED1, SPRY4, SPTLC2, TAS2R41, TLN1, TSHB, YWHAB
Negative_13057	AR, F2R, LAT, MAG, MYC, SDS, ABAT, ACTC1, ATG3, BCL2L1, BMPR1A, CACNG7, CCL27, CD28, CD74, CDC2, CMAS, CTNNA1, CXCL11, DDX18, DIAPH1, DNMT3 A, FGF3, FRAT2, FUT7, FZD1, GLUD1, GNRH2, GSK3B, HES1, IDH3A, IL15, IT GB6, LAMB4, LAMC3, MAP3K7, MAPK1, MTHFR, MYD88, MYH13, MYH6, NCK1, NR 4A1, NT5C1B, OR14I1, OR2B6, OR56A4, OR5B3, OR5D16, OR8J3, P4HA3, PAR D6A, PAX4, PCNA, PDPK1, PGM2, PSAT1, RARS2, RIPK1, ROCK1, SDC1, SDHD, SEMA3B, ST3GAL4, TAS2R10, TAS2R48, TPMT, TRAF3, TSNARE1, TUBB2B, CS GALNACT2, MAPKAPK3, SLC25A31
Negative_13058	BAD, CAT, CS, DCK, FGG, GLS, IL9, MPZ, NOG, AHCYL1, ALCAM, AMHR2, ARSB, BACE1, CACNA1D, CCL19, CD55, CDC25A, CDKN2D, CUL1, DAPK2, DTX1, DUSP 9, EARS2, ECSIT, EDNRA, FARP2, FCGR3B, FGF7, FGFR1, GMPA, GP1BB, HLA - DOA, LIPC, MAP3K5, MMP1, MTAP, MTMR6, MYH4, MYL2, OR10Z1, OR13G1, OR5 AR1, OR8B8, PGAM4, PGM3, PIGT, PLD1, PPP3CB, SMPD4, STX16, STX18, TAS 2R14, UGT2B7, VEGFB, WNT10A, EIF4EBP1
Negative_13059	AUH, DBH, DCN, FST, HGD, ID3, JUN, ME1, ACHE, ACVR1B, ACVR2B, APC2, AQP 7, ARPC5L, ATP6V1A, BCKDHA, BDKRB2, CALML5, CARS2, CCR4, CD79B, CDC2, CDKN1A, CFLAR, CLDN17, COL3A1, COMP, CREB3L2, CREB5, CYP7A1, DGKH, DOT1L, DUSP3, DVL1, E2F5, EI24, ENTPD8, FASLG, FRAT2, FZD7, G6PC2, G6 PD, GFPT2, GRIN2A, HSPA1B, IKBKB, IL11RA, IL1R1, KLRC2, MYH6, NEUROD 1, OCRL, OR10G9, OR13C5, OR1C1, OR1K1, OR1S2, OR2D3, OR2T3, OR2T6, OR 4K13, OR51E1, OR5R1, OR6C74, OR6F1, OR8H2, P4HA3, PFN4, PGAP1, PLAUR, PLXNB2, POLR2E, PRKAG1, PROS1, PYCRL, PYGM, ROCK1, RPS6KA6, STX12, STX1B, TNXB, ULBP1, ULBP3, UMPS, VASP, VEGFC, WARS, B4GALNT1, MAPKAP K2, TNFRSF13B



Negative_13060	<p>ADA, DCC, F2R, ITK, IVD, MIF, PLG, TXK, AANAT, ACO2, ACVR1, ADIPOQ, AKR1B1, AMPD3, ATP12A, ATP50, BMP2, BST1, C7orf16, CACNA1S, CACNB2, CALML5, CCL23, CD14, CD19, CD244, CD55, CLDN22, CXCL3, DDX19A, DUSP3, EIF4B, ENO2, ENPP3, EP300, FUT6, G6PC, GADD45A, GARS, GDF7, GLI3, HAP1, HLA-</p> <p>F, IL17RA, ITGA3, LRP5, LRP6, MAP3K2, MTMR1, MYD88, MYH15, MYL2, MYLK3, NRP1, NRXN3, NTSR1, NUDT12, NUMB, ONECUT1, OR10G4, OR10X1, OR1A1, OR4A5, OR4D6, OR5AN1, OR5P3, OR6K2, OR8A1, OR8H2, PAPSS1, PGK1, PIGH, PIK3R2, PIP4K2A, PLCG1, PLK1, PPP1R3D, PTPRF, PYCR1, RAPGEF2, RETSAT, SEPHS1, SESN3, SFRP1, SGPP1, SMAD9, SMC1A, SORD, SPHK1, STAT5B, SULT1A4, SV2A, TACR2, TAS2R48, TLR4, UGCG, WBSCR17</p>
Negative_13061	<p>DAO, DBH, DCK, PRL, SFN, ACHE, ALDOB, APOA1, ARNTL, BIRC5, CD28, CDO1, CHRDL, CLCF1, CXCL16, CYP2U1, ESPL1, FGFR3, GCNT3, GGT7, GLB1, GNPDA2, GUCA1B, IAPP, IMPDH2, IQGAP2, ISYNA1, ITGB1, LIMK2, LTBP1, MALT1, MAPK7, MGST3, MYL2, NEGR1, NFAT5, NKX2-2, OR10V1, OR13C3, OR13H1, OR2AE1, OR2Z1, OR3A2, OR4Q3, OR52J3, OR5L2, PAX8, PDGFA, PEMT, PIP5K1A, PLAUI, PPP2R5B, ROCK1, SKP1, SMAD9, SNAI1, SPP1, SPTLC1, TACR1, TICAM2, WARS, WWP1, ATP6VOA2</p>
Negative_13062	<p>C8A, C8B, FAH, GDA, ID3, OGT, OTC, SFN, ACMSD, ACSM5, ADCY3, ANAPC11, ARHGEF2, ASAH1, ATP5B, ATP5G2, B3GALT6, B3GNT5, B4GALT3, BIRC5, C3orf10, CCL27, CCL8, CCNB3, CD82, COASY, COL1A1, COMP, COX10, CREB1, DDX18, DPYS, E2F2, EDN1, ENO3, ENPP3, EPHA1, ERBB2, EREG, FZD10, GABARAP, GDF6, GSTM2, GSTM3, GSTO1, GUSB, IL12RB2, IRF9, ITGA7, ITGAE, LAP3, LEFTY2, MALT1, MAOA, MAP2K4, MMP2, MPDZ, MTHFD2, NCSTN, NGEF, NMNAT3, OCRL, OR10J3, OR10R2, OR13C9, OR1C1, OR2AE1, OR2F2, OR2T3, OR5AK2, PAICS, PANK3, PHKG1, PIGM, PLA2G2D, PLA2G4A, PLA2G6, PLCE1, PPARD, PRKCD, RPN1, RPS6KA1, RRAS2, RRM1, SDHD, SFRP4, SIGLEC1, SLIT1, ST3GAL1, TLN1, TNFRSF9, TYRP1, ULK3, UNC5A, YKT6, AASDHPPT, HLA-DRB5, TNFSF13B</p>
Negative_13063	<p>BTK, C8B, F2, HDC, HGF, ID4, KIT, LEP, NF1, TXK, ACOX1, ACOX2, ACSL5, ACVR1C, ALDH3A1, ALPL, AMY2B, ANAPC5, APLP1, ATP2A2, BST1, CACNA1F, CACNG7, CASP8, CCL11, CD247, CD74, CD82, CES7, COMT, COQ7, CUL1, CYP4A22, CYSLTR2, DDX4, DUSP10, DUSP14, DUSP6, EFNA4, ELK4, ENTPD5, EPHA2, GADD45G, GGCX, GNAT3, GYS2, HEMK1, HTR5A, IARS2, IL19, ITGA4, ITGA8, MAD2L1, MEF2C, MPZL1, MTMR2, NOX1, NUDT12, OR13F1, OR2F2, OR2T2, OR4C11, OR4C16, OR52K2, OR5V1, OR6C2, PGM1, PHPT1, PLCD4, PLCG2, PRKCZ, PTPN11, PYGL, RASGRP1, RPS6KB1, SOS2, SRGAP2, SSH3, STAM, TICAM1, TNFSF9, TYROBP, ULK2, VANGL2, WHSC1L1, ZAP70, PNLIPRP1</p>
Negative_13064	<p>AK5, BTD, C2, CFH, LPL, ACSL1, ACTN1, ADORA2B, AGRP, AGXT, ALDOB, ALOX15, ATP4A, BCAR1, BLVRA, CACNB2, CCL21, CCNA1, CCNB1, CDC14B, CDC42, CHAT, CLDN11, CRY1, CTPS, DCTN1, DDIT3, DHRS9, DIAPH1, DPM1, EDNRA, FGF22, FLOT2, GALNTL1, GUCY1A2, IL15, IL1R2, IL28RA, IL2RB, IMPDH2, LALBA, LCMT1, LEFTY1, LYPLA2, MAPK3, MGAT4B, MRAS, NARS2, NEU2, NFE2L2, NR5A2, NT5C2, OR10A6, OR13J1, OR1A2, OR1S1, OR2B2, OR3A1, OR4P4, OR51F2, OR5H6, OR8S1, PDGFRA, PIK3CD, PRODH2, PRPH, SETD2, SOAT1, SPRY2, STAT4, TUBB2B, UGT2A3, UNC5D, VAMP4, VAV2, VEGFC, WNT7A, WNT8B, ATP6V1B1, ATP6V1C1, SERPING1</p>
Negative_13065	<p>CKB, CSK, PAH, SI, TNF, ADAM17, ALG12, ATF4, B3GNT3, BACE2, BDKRB1, CACNG1, CCND3, CHSY3, CLDN8, CNGB1, CSAD, CSF3R, CYP19A1, CYP3A5, CYSLTR1, FGF13, FPGS, GPD1L, GSTA4, GZMB, HIP1, IL2RG, INPP5A, KCNQ1, LALBA, LIPF, MCCC1, MDM4, MECR, MGAT1, NFATC4, NPR1, NRG2, NRG3, OR10G4, OR2AT4, OR2T12, OR5M8, OR8D2, OXSM, PHKA1, PLCD4, POLR1D, POLR2I, PON1, PTGER3, RASGRP3, RPS6KA6, STAM, TCIRG1, TDO2, PNLIPRP2</p>

Negative_13066	C4B, CGN, IL5, ACSM2A, AHCYL1, ALG8, B3GAT3, CCR8, CDK6, CREB3, CYP11B2, CYP4F3, EPHA2, EPHA4, GFPT2, GNAI1, HPSE, HTR2A, IDI1, IL29, LIPG, LYPLA2, MAML1, MAP3K11, MCCC1, MCM6, MGAT3, NCOA4, NCOR1, NME6, NOD1, OLR1, OR1N1, OR4N2, OR52H1, PLIN, PLOD1, PNLIP, PPP2R5C, PRDX6, PTPRZ1, RASGRP1, RFXANK, RHOD, RXRG, SMURF1, SULT1A4, TGFA, TNFSF9, UB A7, VEGFC, XIAP, ZBTB16, KIR2DL5A
Negative_13067	C3, F10, F9, GP6, MVK, VTN, ACP6, ACY3, ADSL, ALG2, ALOX12, CAMK2G, CCR9, CDC27, CRHR1, CSNK2B, CUL1, CXCL5, CYP4F3, DHCR7, E2F1, EARS2, ENT PD6, EREG, EXT1, FGF18, FSHB, FZD10, GLUL, HRAS, HTR2C, IARS2, KIR2DS4, MAGI3, MGST1, MYH7B, NOD1, NQO1, NT5E, NUMBL, OR2AE1, OR4F5, OR51A2, OR51B6, OR5T3, OR8H1, PCNA, PDE10A, PDE11A, PDE9A, PDXK, PIGB, PIK3R4, PNPLA3, PRKCQ, RHOD, RPS6KB1, SCD5, SETMAR, SMPD1, SSX2IP, ST3GAL2, STX1B, SULT1A2, TAS2R7, TNFSF9, TSC2, TUBB1, UBE2L6, ULK1, ULK3, UNC5D, WNT5A, ZNRD1, ATP6VOD2
Negative_13068	AK1, C8B, LTB, RDX, ACSS1, ACTA1, ACTB, AHCY, APRT, ARAF, BCAT1, BLVRA, CACNA1B, CD8A, CDH1, CLDN5, COQ5, CREB3L4, DERA, DOCK1, EFNA3, EPHA6, FOXA3, GP1BB, HAO1, IDH2, IL9R, INPP4A, IRS4, ITGB5, ITGB6, KAT2B, LEF1, LEFTY1, MAP2K6, MAP3K11, MAPK3, MAT1A, MTHFD1L, MYH7B, NME4, NRCAM, NT5C, NT5C1A, OR10V1, OR4N4, OR52E2, OR6C74, OR7C2, OR7G2, PDE5A, PLA2G4A, PLCB1, POLR3B, PPBP, PRKAR1A, PRKG1, RAB23, RAC1, RALA, SCIN, SELL, SLC12A2, SOCS2, STAM, TCF7L1, TIAM1, TLR2, UCK2, VAMP2, VDAC3, YARS2, ALDH18A1, ATP6V1B2, ATP6V1G3, HSD17B10, MAP3K7IP1, MAPKAPK3, TNFRSF11A, TNFSF13B
Negative_13069	ACSM4, ADRA1D, AGTR1, ALDH5A1, AOX1, ASCC3, ATP2A3, B3GALT6, BMP8A, CD44, CHPT1, CLDN2, CNGA3, CXCL16, DDX18, DGAT1, DHRS3, DPYD, EPHA2, FGFR4, GADD45G, GCLC, GFPT2, GNAS, GNB1, GUCY1B3, HES1, HTR2B, IFNA2, IL9R, INPP5B, MAD2L1, MAPK14, MTHFD1, NEFM, NFKBIA, OR13J1, OR1N2, OR4C46, OR4D1, OR51B4, OR5M3, OR6C4, PDE4B, PDE8A, PER3, PGAP1, PGM1, PIGL, PLXNC1, PPAP2A, PPP1CA, PTPRJ, RAP1A, RAPGEF2, RCHY1, RXRB, SMAD6, SMPD3, SSH3, SUCLG1, TAS2R3, TKTL2, WHSC1, ST6GALNAC4
Negative_13070	ATM, DLD, GPT, TAT, AACS, ACP1, ACSL3, ADIPOQ, BAIAP2, BMP6, CACNG2, CAMK2G, CCL14, CCL23, CD40, CFL1, CHPT1, CLDN7, COMP, CYP27A1, CYP2E1, E2F5, EHHADH, FASN, FCER1G, FRAT1, FZD1, GLDC, GRM1, IKBKG, IL28RA, IL7R, INPP4B, INPPL1, IPMK, KAT2A, KDSR, KLRC4, LTB4R2, MAOA, MMP1, NAT2, NCK2, NEFL, OR1J2, OR5D13, P2RX2, PDCD1, PGAM1, PHPT1, PIGM, PLOD3, PNMT, PPM1D, PPP2CA, PPP2R2A, PRKG1, PRPH2, RAB23, RALGDS, ROBO1, SELP, SESN2, STX12, SUCLG2, TFPI, ST6GALNAC6
Negative_13071	BCR, C8A, F7, JUP, MVD, RDX, TK2, ABCC8, ACACB, ADH1B, ADORA2B, AKR1B1, ALDH3A2, ALDH3B1, ANAPC5, BACE2, BCL2, CAMKK2, CCNH, CHD8, CMPK2, CYBB, DGAT1, EXTL1, FABP4, FECH, GALC, GALE, GALT, GPT2, IAPP, ITCH, KLRD1, LRRC4C, MAP3K14, MAPK7, NAGA, NFKBIE, NKX3-1, OR2V2, OR8H2, PGAM2, PGK1, PLXNA2, PRKCE, PRODH2, PRSS1, PYCRL, RELB, SC5DL, SLC33A1, SMAD5, TBK1, TRIP10, TNFRSF12A
Negative_13072	BAD, C8B, CDA, EGF, F11, PGP, PVR, ACTA1, ADCY4, ADH7, AGPAT3, AMY2A, ANAPC5, ARAF, ATP2A1, ATP5G2, B4GALT4, BBOX1, CBLC, CCL26, CNGA3, CNTF, CYP1A2, DGKQ, EFNA1, ENPP3, EPOR, FGF8, FGFR2, GCLM, GCNT2, GGT6, GNPAT1, GRIN2B, GUCA1C, IAPP, IDI2, IFNA5, IL11RA, IL7R, INPP4B, ITGA11, ITGA3, ITPKA, LDHAL6A, MTHFS, OR10A3, OR1L1, OR2AG1, OR4C12, OR4C13, OR5AK2, OR5B3, OR6N2, PDGFRA, PIGM, PITX2, PLXNB1, PPAP2C, PRKCA, PRSS1, PTK2B, PYCRL, RAD51, RALBP1, RPRM, SIPA1, SORBS1, SORD, SQLE, SYNJ2, TAP1, TAS2R14, TAS2R50, TLR4, TRAF3, TUBA1C, VEGFB, TNFRSF6B

Negative_13073	DHH, IDS, IL8, INS, LAT, PTS, TAT, UBC, ACOX3, ACSM5, ADCY1, AHCYL2, ALAS1, ALDH1L1, ALDH3B1, ANAPC7, ASRGL1, B3GNT5, CAMK4, CCNB1, CCR6, CDK5, CHEK1, CLOCK, CLTB, CNGB1, CREB3, CTBP2, CYP26B1, CYP2A13, DHCR7, DPM2, DTX4, ENTPD4, EP300, FZD10, FZD3, G6PC, GALK2, GLS2, HMGCS1, ICAM3, IFNA13, IFNK, INADL, LDHAL6B, LILRB3, MAT2B, NCF4, NFAT5, NFKB2, NME4, NRCAM, NRXN2, OGDH, OLAH, OR10A3, OR12D3, OR1C1, OR1K1, OR2G2, OR2T10, OR2T29, OR2Y1, OR52K2, OR5AP2, OR6X1, OR6Y1, OXSM, PCYT1B, PDE7A, PGS1, PHKB, PIK3R4, PPARG, PPCDC, PRKCB, PRKCZ, PTGS2, RPN1, RRM1, RUNX1T1, RXRA, SARS, SPHK1, SPHK2, STEAP3, STX4, TAS2R4, TAS2R48, TPH1, TPH2, UMPS, VAV2, VKORC1, WEE1, ALDH18A1
Negative_13074	TYR, ABCC8, ACTN1, ADORA2A, ADRB2, AKT2, ANGPTL4, APH1A, ATP6V1F, CCL4, CD82, CDH2, CDK7, CFLAR, CLDN19, CLDN22, CNDP1, CRKL, CYFIP2, CYP26A1, CYP2S1, CYP4A11, CYP4F3, DDX51, DDX54, DHRS3, DHX58, DUSP3, FCGR3B, FDPS, FMO2, GAL3ST1, GMPR2, GOT1, GUCA1A, LAMA4, LDHB, LTBR, MAPT, MGAT2, MYD88, MYH10, MYLK, NCF4, OR10G8, OR10J1, OR1L6, OR2D3, OR2T5, OR4S2, OR52N1, OR5V1, OR6C2, OR6C6, OR6C76, PDE1B, PDE7A, PDHA1, PFAS, PFN2, PIK3C2B, PLCG2, PSAT1, RALB, RAPGEF3, RASGRP1, SEMA3G, SIPA1, SORD, TAS2R41, TBL1X, TLR9, TSC1, UGCGL2, UGT2A3, ULK3, VAV1, WNT9B, XYLB, YARS, AASDHPPT
Negative_13075	GLS, GSN, TEC, ACSM1, AKR1B10, ALDH1L1, APPL1, ATP5C1, ATP6V1D, BCAT1, CACNA1I, CCNE2, CD27, CDH2, CHRM3, CLTCL1, COL4A1, CREB1, CREB3L3, CTSG, CYP1A1, CYP26C1, DGKZ, DOCK1, EP300, EPB41L3, EPHB4, EPHX1, FSHR, GALT, GCLM, GCNT1, GUCA1C, HMGCS1, IL13RA2, IL22, IMPA1, INPP4B, IQGAP2, ITGB1, ITPKA, KCNB1, KIR2DL3, LARS, LTA4H, MAD1L1, MAML3, MAP3K5, MMP14, NAT5, NRG2, NRXN2, OR10V1, OR14J1, OR1A2, OR2H1, OR5B3, OR6N2, OR8D2, P2RX3, PAPSS2, PAX8, PDXP, PHKA2, PIK3C3, PITX2, PLCB4, POLR2B, PPP1CC, PRIM1, PSME1, RDH8, RHOD, SNAP23, SRGAP2, STAM, SULT1E1, THBS3, TP53, TSC1, WNT4, WNT5B, MAP3K7IP1, MAPK8IP1, PRICKLE1, TNFRSF10D
Negative_13076	C2, FOS, ACADVL, ACSS1, ATF2, BLVRB, CCL24, CCR2, CDK6, CER1, CHPT1, CNGB1, CTLA4, DRD5, DTYMK, EI24, EIF4E, ELK1, FGFR4, GUCY1A2, GUSB, IDH3B, IFNA17, IFNA21, IKKBK, IL11RA, MAT2B, NEU3, NFYC, OLR1, OR10A5, OR11H4, OR13C2, OR51E1, OR51Q1, OR6C4, OR6N1, OR8D4, PDE5A, PFN2, PIGB, PIK3R4, PIPOX, PLAU, POLR3H, PTGIS, PYCR2, RBL2, RPS6KA5, SAT2, SEMA3D, SETD8, SLC25A6, STX18, TALDO1, TAS2R8, WNT7B, ALDH18A1, ATP6V1E2, TNFRSF1B
Negative_13077	F3, F5, FGG, ID4, MAG, PLG, XDH, ACSMD, ADRA1D, ALG8, ANAPC4, AOC2, ASS1, ATP5I, B3GNT5, CACNA1S, CACNG3, CAMKK1, CCDC6, CCL1, CD36, CD70, CSAD, CSNK1G3, CYP19A1, DRD5, EPHA6, ETNK1, FGF10, FUT4, FZD9, GADD45B, GALM, HADHA, IDI1, IL17RB, IPPK, ITGA5, LCMT1, LEFTY2, LIAS, MAP3K5, MASP2, MCM3, MDM2, NAMPT, OR10G7, OR11H4, OR11H6, OR13F1, OR2AG2, OR2G2, OR4K14, OR4M2, OR6C2, OR8B8, OR9Q2, PANK2, PDGFA, PDGFB, PDGFC, PIGS, PNLIP, PON1, PPAT, PRKCG, PSME2, PTDSS1, PVRL1, SEMA3E, SETD2, STAM, STAT6, SUCLG1, TRAF5, UBA1, VEGFC, PDCD1LG2
Negative_13078	GK, HK1, ABL2, ACADL, ADIPOR2, ALDH3A1, ALDOB, ALG12, ANAPC2, ARNTL, ATP5O, BCKDHA, BIRC2, BMPR1A, CES2, CTNNA1, CYP2A7, DKK4, EFNA4, ENTPD3, EPHX1, FARP2, FASLG, FIGF, FMO3, FZD4, GART, GCNT4, GFPT1, GRIN2A, HSP90B1, ICAM3, IKBKE, INPP5E, MAP3K6, MDH1, NFAT5, NOX1, OR10G8, OR4K14, OR52B6, OR5AC2, PAPSS2, PGM3, PPP1CA, PPP1R1A, PPP2CB, PRLR, PTGIS, RAB5A, RPN2, SPRED1, SRGAP2, STK4, SV2B, TBXAS1, TCF7L2, TUBB2C, ATP6V1C2, PAFAH1B1

Negative_13079	CAD, GP6, LAT, LPL, RPE, AADAT, ACAD8, ACOT12, AGPAT1, ALDH3B2, ALPPL2, ANAPC4, ANAPC7, AVPR1B, B3GAT3, BMPR1B, CACNA1B, CACNB2, CCNB3, CCR8, CD247, CD79A, CDC26, CYP2F1, DVL3, EFN3, EPHX1, EXTL3, FUT6, GALT, GLI2, GLUL, GNAZ, GNRH1, GRIA3, HADHB, HCCS, IL28B, ITGA3, ITGA5, LAMC1, LIPC, MCM3, MYH7, NUMBL, OCLN, OLR1, OR10A6, OR10H3, OR10K2, OR2C1, OR3A2, OR52N5, OR5I1, OR5R1, OR7D2, OR8H1, PARVB, PDGFA, PFN2, PIAS3, PIP5K1A, PLXNA1, POLR1A, PPP1CB, PRPH2, RERE, ROBO3, SESN2, S OAT2, SPCS3, STK3, SULT1A1, SULT1E1, TBK1, UBA1, UBE2K, UGT8, VCAM1, WNT11, YOD1, ATP6V1B1, ATP6V1E1
Negative_13080	AGK, AK3, AMT, CS, FGB, FGG, HDC, HK1, ID2, UBB, ACSS1, ACTN1, ACTN4, ADCY9, AKR1D1, APOA1, ARNT, ASAH1, ATP12A, ATP6VOB, BACE1, C1QC, CCKBR, CCND1, CCR1, CCR5, CDH4, COQ6, CRB3, CSF2RB, CXCL5, CXCR4, CYFIP1, DX41, DEGS1, DPYD, DTX4, ENTPD6, FGF18, FOXA3, FPGT, GALNT12, HSP90B1, IARS2, IFNA13, IFNW1, IL1A, IL20RB, INPP5B, KIR2DL1, KIR3DL2, KLR C3, KLRK1, LAMB1, LDHC, LDHD, LEF1, MAFA, MAGI3, MAPK9, MCCC2, MMP2, MPST, MTHFD1, MYH15, MYLK, NGEF, NT5M, OR10J5, OR1D2, OR1G1, OR2T1, OR6S1, OR9G1, OR9K2, PARD6B, PCCB, PCYT1B, PDPK1, PLA2G10, PON2, PPA2, PPM1B, PRIM1, PRKG2, SMAD5, SRGAP3, TAP2, TBK1, TNFSF12, TRAF6, TUBA1B, VDAC3, CTNBP1, GABARAPL2, SERPIND1
Negative_13081	AK1, CDA, CKB, DDO, FGB, GAA, HK2, ID2, MPL, ACAD9, ACVR1C, AGPAT1, ALDH3A1, ALPP, ATP12A, ATP5A1, ATP5D, BACE2, CAMK2G, CAMK4, CCR4, CD58, CLDN14, CLDN2, CTBS, CXCL10, DDX54, DGUOK, DHRS4L2, DNMT1, ENPP7, EPB41, FARSB, FLT3LG, FZD5, GADD45B, GALNTL2, GNPDA2, GYS2, IL6ST, INP5A, ITPKA, LYPLA1, MAN1A1, MAN1A2, MAPK10, MCM3, NAT5, NEFL, NTRK2, OGDHL, OR1L1, OR1N1, OR2F2, OR2S2, OR4K17, OR51Q1, OR5AC2, OR5D16, OR5H6, OR5I1, OR7A10, OR8D2, OR8I2, PANK4, PGK2, PHGDH, PIK3CA, PLCD4, PPP1R3A, PPP2R1A, PRIM1, PTPRF, RAPGEF1, RELA, RFWD2, SCIN, SMAD1, SORD, STAT5A, TBK1, TD02, THBS1, TP73, TRADD, TSHR, UROS, VAMP2, ZAP70, ATP6V1C1, MAPK8IP3
Negative_13082	C7, DDO, F2, GP5, STS, UBC, ABL1, ACOT12, ADRBK2, ATP6V1D, B3GALT2, CCNG2, CDC27, CFLAR, CFTR, CTSL1, CYP2A6, CYP2C18, GALNT14, GART, GCNT2, GDF6, GGT7, GNRH1, GPD2, GRM5, GSK3B, HES1, LDHD, LRP6, MAP2K3, MAPK7, NRXN3, OR1D2, OR4X2, P2RX4, PCCA, PDE3A, PFKFB4, PGAM1, PIGS, PTPRR, RDH16, SMAD6, STAT4, TAS1R2, TAS2R48, THBS2, TKTL1, TMLHE, SERPINF2, TNFRSF11B
Negative_13083	ILK, MPI, ACPT, ACSM3, ACTA1, ADIPOQ, AGPAT6, ALPI, ANAPC5, APH1A, ARPC1A, B3GNT4, BMP2, BST1, CACNA1C, CASP3, CCL11, CCL24, CDKN2C, CNGA4, CYP26A1, CYP2U1, DAPK2, DDX52, GALE, GALNT1, GANAB, GATM, HHEX, HTR6, IL11RA, IL8RA, KLRC4, MAP3K11, MAT2B, NCSTN, OR13D1, OR14I1, OR1S1, OR4D2, PAK4, PDE4A, PERP, POLR2F, PPP2R2D, PRKAG2, PTPN11, RAPGEF1, RHOQ, SEMA3G, SULT1A4, THBS3, TICAM2, TRADD, TRDMT1, WNT11, YWHA E, ZFYVE16, PDCD1LG2, PLA2G12B, TNFRSF10A
Negative_13084	TKT, TNR, ACSS3, AGRN, ALAD, ALDOA, ARPC2, ATP5A1, BLVRA, C1QC, CAMK2D, CUL1, DGAT1, DHRS3, DPM1, DVL1, FASLG, GAPDH, GSTZ1, HLA-DOA, IL2RG, ITGB4, KDSR, KLRK1, LDHAL6B, LRP5, MADCAM1, MAP2K5, MOV1OL1, MTMR1, MYL5, MYLK, OR1L4, OR2C1, OR52D1, OR5K1, ORC2L, PDGFRA, PFKFB4, PGM3, PI4KA, PLD2, POLR3B, PRPH, RAD51, SLC25A4, SPCS1, SPHK2, SULT1A2, TACR1, TACR3, TCIRG1, TGFB1, UROS, PPP1R12A, SERPINC1

Negative_13085	BTC, HGF, RFK, TPO, ADIPOR1, AMPD2, AVPR1A, BCAT1, BMPR2, BUB3, CACNA1G, CCND2, CCNE2, CD34, CNTFR, CXCL16, DAAM1, DDX47, DGAT2, EPHA2, EPHA7, FGF10, FGF14, G6PC2, GALC, GALNT1, GALNT11, GALNTL4, GANAB, GLU D1, GNRH2, HCST, HMGS2, IL13RA2, LDHAL6B, MAP4K1, MPP5, MYD88, MYH2, NTF4, OR2A4, OR2M5, OR3A1, OR5B17, OR5I1, OR8K5, PAK3, PAPSS1, PARD6B, PDE1B, PRKAB1, PTCRA, PTK2B, RFWD2, SNAI1, SSH3, STAT5A, TJP3, TP M3, TRMT11, ULK2, WNT1
Negative_13086	C8B, CR2, DBI, FN1, PVR, AARS, ABL1, AMD1, ANGPTL4, ARHGEF6, ASS1, ATP4B, ATP5A1, ATP5J, BACE1, BDKRB2, BMP5, BPNT1, CACNA1B, CACNA1G, CCR3, CDC2, CHUK, CLDN6, COL5A3, COX10, CTPS, CXCL1, CYP4A11, DDX18, DVL1, E2F1, EPB41, EPHB3, FGF11, GALNT3, GANAB, GSTM1, HIBADH, HLA-F, IL22RA2, ITGB1, ITPK1, JUND, KIR2DS4, LAMB3, LAMC3, LCMT1, LTC4S, LYPLA1, MAP3K4, MAPK8, MAT1A, MAT2B, NFYC, NME2, NRCAM, NUDT8, OR13C3, OR4B1, OR52I2, OR5B3, OR5L1, PANK2, PAX4, PCYT1A, PDGFRB, PFKFB3, PIGW, PIK3CD, PLAU, PLAU, PNPLA4, PPP2R5C, PRKAG1, PRKAG3, PSPH, RXRG, SEMA4B, SGMS1, STMN1, TAS2R10, TAS2R13, TCF7, THBS4, TICAM2, TSHR, TUBB2A, TUBB2C, UGP2, WBSCR17, ATP6V0A1, ATP6V1G1, CSNK1A1L, HLA-DPB1, PLA2G12B, TNFRSF1A
Negative_13087	F3, ID3, MAG, MPI, PAH, PGP, TEC, ADH5, ADORA2B, AMDHD2, B4GALT2, B4GALT5, CAMK4, CCND1, CCND3, CCR1, CDKN2C, CHST11, CLCA4, COQ3, CRKL, CXCL9, CYP26C1, ER01L, FZD3, GADD45A, GNB1, GUCY1B3, HSPA1B, IL21, IL8RB, KLRC1, LPAR1, MAGI3, MAP3K11, MAPK10, MCM3, MCM5, MDM2, MGAT3, NOD1, NRG3, OR10G7, OR1S1, OR2T29, OR4A16, OR4K14, OR52W1, OR5AR1, OR5B3, PDE1A, PDE3A, PHKG2, PIGC, PNLIP, PPP2R5A, PRKAA2, PRKAG1, PRKG2, PVRL3, RDH10, RELB, RXRG, SRD5A2, STX5, SULT1A1, TAS2R16, TAS2R38, TAS2R42, WBSCR22, XCL2
Negative_13088	CRH, F3, FER, GSR, HK1, ID1, AANAT, ABLIM1, ACOX3, ACYP1, AGTR1, ALG1, ANAPC11, ASS1, AXIN2, B3GALT1, BAIAP2, BUB3, C1QB, C9orf95, CCNE2, CDH5, CFTR, COQ3, CXCL9, CYP21A2, CYP4A22, DHX58, GNG12, HCCS, IFIH1, IFT57, IRAK1, ITGA2, LAMC1, LRP5, LTBR, MAP2K3, MAT2B, MCCC2, MINPP1, NME2, NOTCH2, NR1D1, NT5C3, OR10A4, OR10C1, OR1N1, OR52E8, OR5A1, OR5K1, OR8G1, P4HA2, PIK3R5, PLA2G1B, PLCZ1, PPA1, PRKCA, PTGES2, RALA, SENP2, SGPP1, SNAI2, SNW1, ST8SIA5, SUFU, TAS1R1, TAS2R50, THBD, TNXB, TSLP, TUBA1A, VAMP2, VAMP3
Negative_13089	EDA, FES, GP6, ADIPOQ, ADIPOR1, ALG11, B3GNT2, C1QB, C3orf10, CASP6, CCL14, CCL3, CD79A, CES1, CHAD, CKS1B, CLDN11, CMAS, COQ7, DARS2, DBF4, DDX19A, DGKD, DHRS9, EFNA3, FGF20, FGF5, HLA-DRA, HLCS, IKBKE, IL17RA, IL20, LHCGR, MAP2K6, MAP3K4, MS4A2, NFKBIA, OR2M3, OR2T12, OR4C6, PANK2, PGK1, PPP1R3A, PTPMT1, SHC3, SHC4, SNW1, SPAM1, SPHK2, ST3GAL2, TACR3, TGFBR1, TNFSF10, UGT2B4, YKT6, MAPK8IP2
Negative_13090	DBT, ALDH3B2, ALG2, AREG, BMPR1A, BNIP1, CCDC6, CD19, CD82, CDC14A, CHAD, COL2A1, CXCR4, CYFIP1, CYP7A1, DDIT3, DGKQ, DGUOK, DLL3, ENTPD1, EPB41, EPHA2, EXTL2, F11R, FGF4, FGF6, FPGT, GALNT5, GALNTL5, HRH2, IFNW1, IRF5, ITGA11, ITGA7, MAD2L1, MYL2, NKD1, OR10R2, OR2B6, OR2L3, OR3A3, OR56A1, OR5D16, OR6K6, OR7G3, PAK3, PDGFD, PGM3, POLD1, POMC, PRPH2, PTK2B, SAT1, SH3BP2, SMARCA5, TBXA2R, XYLT1, KIR2DL5A, TNFRSF6B
Negative_13091	DCT, ID1, SDS, ADORA2A, ARD1A, ARNT2, ARSA, B3GALT2, C4BPB, CBLB, CCNB2, CD48, CTLA4, CYFIP1, CYP3A7, DPYS, EGFR, FGF17, FSHR, GLB1, GLO1, GRIN2C, HGSNAT, KIR2DL1, LIPE, LRP6, MCM5, NOTCH1, OR2L3, OR4D1, OR4L1, OR9A2, ORC1L, PDGFA, PDGFB, PDGFRA, PIGL, PLOD1, PRODH, PTGES, ROBO1, SETD7, SHMT1, SMPD2, STX8, TRADD, TSHB, WNT4, PAFAH1B1, SUV420H

Negative_13092	ADC, CAT, CBS, F9, GP6, IL7, LEP, ACACB, ACTA2, ALG3, ARPC4, ATG7, BIRC5, CCL25, CCR2, CDC45L, CX3CL1, DAG1, DCXR, DGKE, DHCR24, DKK2, DLL4, DUSP5, EGFR, ERBB3, F11R, FZD10, GALNTL4, GBE1, GCNT2, H6PD, HRH1, IFIT57, IL11, KITLG, LGMN, MAGI3, MASP2, MINPP1, MPST, NFASC, NFKBIE, NODAL, NTNG1, OR10G3, OR10J1, OR13A1, OR13D1, OR11I1, OR2B2, OR4K1, OR51L1, OR52N1, OR52R1, OR6C2, OR8H2, OR9I1, PAK7, PFAS, PIGB, SEMA4A, SHMT2, SLC2A4, ST3GAL2, ST3GAL5, STMN1, TAP2, TBK1, TBXA2R, TRAF1, TRAF2, TUBAL3, WARS, XYLT1, YWHAG, ALDH18A1, CSGALNACT1, EIF4EBP1
Negative_13093	C5, GP9, HK1, ME2, ACADL, AHCYL2, APC2, B4GALT7, BDH2, C1QA, CACNA1I, CAMK4, CCL5, CD14, CD34, CHRM3, DDOST, DMGDH, EDNRA, EFNA4, ENO2, EPB41L1, EPHA8, GALNTL5, GCAT, GRHPR, GUCA1C, KAT2A, LAMA4, LAMC2, MAP2K3, MINPP1, MYH13, NCOR1, NEU3, NFATC4, NKD1, OR12D3, OR1J1, OR1J4, OR2AG1, OR9I1, PIK3C2B, PLA2G2E, POLR3D, RETSAT, SGPP2, SIPA1, TBL1Y, TUBB2A, WASF3, HLA-DPB1, PAFAH1B3
Negative_13094	BAD, FH, GBA, JUP, MAG, NPL, ACACA, ACSM3, ADRBK2, AFMID, ARHGEF7, ARSD, ATG12, ATP5B, C3AR1, CCL15, CCND1, CDC25B, CDC42, CFL2, CKMT2, CLDN11, CNTNAP2, CREB3L4, CRKL, CYP2C18, DUSP7, EHMT2, EPHX1, EREG, FMO4, FSHB, GALNT7, GNPDA1, GRM1, GSTK1, HAO2, HBEGF, INPP5B, ITGB8, KYNU, LEFTY2, LIPT1, MIOX, MITF, MRAS, NAGA, NARS, NTF3, OR1F1, OR1L6, OR4F4, OR7D2, OR8J1, OR9A4, PANK2, PIAS1, PIGO, PIGV, PIK3CB, PLXNA1, POLR2B, POLR2F, POLR2J, PPAP2B, PRKAR2B, PRPS2, QARS, ROBO3, SC5DL, SEMA3B, SLIT1, SLIT2, SOD1, SPI1, STX18, SUCLA2, SULT2B1, TAS2R9, TBK1, TRHR, VAMP4, VDAC3, WNT16, YWHAH, CACNA2D2, TNFRSF10A
Negative_13095	A2M, AK1, CEL, F11, GH2, PLG, RFK, SDS, TFG, ACSL1, ADH1A, ADH6, ALG12, AMPD3, B3GNT2, BMPR2, BPNT1, BUB1, CCL2, CCL4, CCR2, CCR8, CREB3L1, CTNNA1, DUSP9, DVL2, E2F2, EI24, EPB41L3, EXTL3, FGF12, FGF17, GNPDA1, GRB2, GRLF1, GSTP1, IDI2, IFNA6, IL10, IL20RA, INHBA, KLRD1, LMO7, MYH6, NME7, OR10H4, OR2A12, OR52E8, OR8B8, PAICS, PARVA, PDE1B, PIK3CA, PLA2G2A, PLCB4, PLXNA1, PNPLA4, PPP2R2A, PPP3R2, PTGDS, PTPN7, PVRL3, ROBO3, ROCK2, RPS6, SARS, SARS2, SELPLG, SETD1B, SHC4, SPTLC2, TAP1, TPH1, VAMP1, WIF1, ZFYVE16, ARHGEF12, HLA-DQB1, MAPK8IP1, PNLIPRP2
Negative_13096	BTK, C6, GLA, HGD, IDS, IL7, MET, SFN, TNC, ADIPOQ, AFMID, ALDH1B1, AMD1, ATP5I, C3orf10, CD34, CDK4, CDKN1A, CFL1, CHST11, CLDN15, CLTB, CYP26B1, CYP2A7, DAXX, DGKA, DHRS4, ESPL1, EVI1, FGF11, FGF23, FUT2, GAD1, GALC, GDE1, GRAP2, GRIN2A, GRIN2B, GSTM1, IL22RA1, IL3RA, IMPA1, INHBE, INPP5A, IPPK, KDSR, KIR2DS5, KIR3DL3, LAMB1, LAP3, LDHC, MGAT5, MKNK2, MYL9, NEGR1, NFATC2, NOTCH3, NRG1, OR11A1, OR2A14, OR2B6, OR2T4, OR4A16, OR51L1, OR6C76, OR7C1, OR7G2, OR8A1, OR8H3, PANK2, PDE8A, PDX1, PGM2, PKM2, PLK1, POLR2E, POLR2G, RAB23, RENBP, SEMA3B, SEMA3F, SHMT1, SNW1, STX10, TYK2, UBA7, UGT2B28, VAMP4, WASL, WNT9B, TNFRSF11B
Negative_13097	CAT, DHH, OTC, TNN, TPR, AOX1, ARAF, ASIP, BET1, CCNH, CCR6, CD14, CDKN2D, CHIA, CMAS, CYP3A4, DHRS3, DHRS4, DRD2, EPB41L2, EPHB3, ESAM, GAT, GRIN1, GRIN2D, HAAO, HMGCL, HNMT, HSD3B1, IARS2, ICOSLG, IDH1, IL28B, ITGA6, LIPA, MAP3K6, MCM6, NAT6, NMNAT3, NRP1, OR10T2, OR11H1, OR1J4, OR2D2, OR51E2, OR6X1, OR8H3, OXTR, PDE8B, PPP5C, PRKAG3, PRKCH, PRSS3, RERE, SGMS2, SKP1, SOS1, STX16, SULT1E1, SV2A, SYNJ2, TACR2, TAS2R48, VANGL1, YARS2

Negative_13098	ATM, CBS, DCT, DDC, FUK, HPD, MIF, AADAT, ABL1, ACVR2B, ALG10B, ANGPTL4, AOC2, ARPC1B, ARPC2, ASAH1, ATP5C1, BAI1, CAMKK1, CCL27, CHAT, CLDN18, CPT1B, CTS1, CTSS, CYP27A1, CYP2C8, DGKQ, DUSP2, EFNA1, ENO2, F2RL3, FABP1, FARP2, FSHB, GCDH, GNRH1, HAGHL, HMGCS2, HSP90B1, HSPA2, INPP5B, INPP5E, LAMC3, LDHAL6A, LIMK1, MAN1A1, MAP3K12, MAP3K7, MLYCD, MNX1, MPDZ, MTHFD2, NPR2, NRG4, NUMBL, OR10A7, OR2AG1, OR3A2, OR4N4, OR51D1, OR51G2, OR5AS1, PAK4, PDXK, PIGU, PIP5K1C, PLCD4, PLEKH A8, PTCRA, PTGS1, RPS6KA2, SMAD3, SPRY1, STAT6, TAS2R3, TSHB, WNT1, ALDH18A1, ATP6V1B2, GABARAPL1, PAFAH1B3, TNFRSF12A
Negative_13099	CFH, GP5, LPO, LSS, LTB, MOS, RFK, UBB, ATP4B, B3GAT3, CBR1, CCL25, CCR8, CD55, CD59, CDC6, CSAD, CYP7A1, EGLN3, ETS1, EVI1, FBXW11, FGF14, FPGS, FUT5, GAPDH, GGT5, GNA15, GNPDA1, GOSR2, HMOX1, HRAS, ITGB4, KIR2DL1, LAMB1, MAT1A, MYH7, NFYC, OR51Q1, PAK6, PDE11A, PLAU, PLK1, PPP2CB, PTPN6, PTPN7, RBPJL, RHOQ, SEMA7A, SUCLA2, THBS2, TNFRSF8, TNFRSF9, TPM3, UBE2L3, ZFYVE16, PAFAH1B3, TNFRSF10D
Negative_13100	CD6, FST, GLS, GP6, SDS, SP1, SRM, TNF, TNN, VTN, AARS, ABI2, ACTN2, ADCY1, ADRA1A, ARG2, B3GNT5, BCKDHB, CALML5, CCL3, CHR1, CHRNA7, CHST13, COQ7, CPT1B, CPT2, CSF2RB, CXCR3, CYP17A1, DARS2, DDOST, DDX54, DUSP2, E2F4, ECSIT, ENPP6, F13A1, FGF10, FSHB, FZD3, FZR1, GFPT1, GSTA4, HAGHL, HNMT, HSD17B3, IFNA6, LDHC, LIMK1, MEF2C, MPZL1, MYH15, MYLK3, NAT5, NCOR1, NFKBIA, NUDT9, OR11G2, OR13G1, OR1J4, OR51B6, OR52H1, OR52R1, OR5F1, OR6C75, OR6M1, PANK4, PARS2, PEMT, PFKFB1, PKLR, PLA2G3, POLR2J, PRKACB, RHOA, SFRP4, SHC1, SMURF1, SOAT2, SOCS4, STT3B, T ALDO1, TBL1Y, THTPA, TNFRSF8, UPP2, VAV2, WNT2, ATP6VOD2
Negative_13101	ASL, BTD, DAO, FN1, MVD, PDC, SDS, SP1, VTN, AHY, ALDH6A1, ALG13, ATF2, B3GALT4, BIRC2, CCKAR, CCL28, CCR6, CCR8, DDX4, DKK2, DVL3, EFNA1, EFNA2, EPHA7, GALNT10, GALT, GLUD2, GPT2, HADHA, HTR2A, IRAK1, ITGA7, ITPKB, LIMK1, LYPLA2, MAP3K6, NARS2, NTSR1, ODC1, OR10H2, OR1L1, OR2V2, OR52N1, OR6F1, PDHB, PHPT1, PIK3C3, PLA2G2D, PLCE1, PLCZ1, PPP2CB, PRKAB2, RDH10, SEMA3F, SETD8, SETDB2, SGMS2, SUV39H1, TP53I3, TSC1, TSTA3, TUBB2B, UBE2L3, UROS, VANGL2, CACNA2D3, ST6GALNAC3
Negative_13102	C6, CGA, FST, VCL, AARS2, ADCY8, APLP1, ATP2A1, B3GNT5, BACE1, BMP2, CCR1, CDC20, CEBPA, CHST13, CREB3L2, CSNK1G1, CTNNA1, CXCL6, DDX41, DHX58, EPHA1, EPHA6, EPHB1, FGF13, FPGT, FSHR, GAD1, GALNT12, GNB3, GUCY2D, GUK1, HHEX, HNF1A, IDH3B, IFIH1, IQGAP1, ITGA3, ITPKB, KIR3DL1, KIR3DL2, LIMK1, MAD1L1, MCM3, MTMR1, NANS, NCOR1, NCOR2, NKD2, NT5M, NUDT8, OPLAH, OR4C12, OR4C6, OR4K5, OR51B6, OR51I2, OR51Q1, OR52J3, OR5AK2, OR9Q1, ORC2L, PAK4, PCCA, PDGFC, PGAP1, PIGA, PIGH, PLA2G2E, PLCD4, POLA1, POLR3B, POLR3G, PPBP, PPP3CB, PRNP, PSPH, PTCH2, PVRL3, RAD51, RAPGEF4, SH2D2A, SMPD1, SOCS2, SPTAN1, SULT1A1, SULT2A1, SULT2B1, TCF7L1, TCIRG1, TGFBR1, TLN2, TUBB6, ULK3, WARS2, XIAP, ATP6VOD1, ST6GALNAC1
Negative_13103	CRH, EZR, GK, LYN, MSN, SYK, ACOX1, ADH1A, ADRA1B, ALDH1A2, ALG9, BUB1B, CACNG3, CDC26, CDC27, CKMT2, CREB3L3, CSF1, CSH1, CTF1, CYBA, CYP26C1, CYP2B6, CYSLTR2, DUSP7, DVL3, F13B, FZD2, GSTA4, GUCY2C, KIR2DL3, MAML1, MAN2A1, NCF2, OR2B2, OR5AR1, OR8D2, PDK1, PERP, PLCB2, PLXNA2, PSPH, RPS6, SFRP1, SNAI2, ST3GAL2, TP53, TUBB4, UROS, WHSC1, WHSC1L1, MAP3K7IP1

Negative_13104	ADO, F3, ILK, ACP5, AKT1, AMPD3, AMY2B, APBB1, APOA2, ARHGEF6, ARPC1B, C1QB, CACNG4, CCND2, CDC14B, CDKN1A, CLDN1, CMPK2, CTSG, CX3CL1, CYP11B2, CYP1A1, DDX23, DLST, EFN3B, EPHA4, FBP2, FGD1, FUT7, G6PC2, GDF6, GRHRP, IFNA13, IFNA21, IL12B, IMPDH1, KRAS, LDHC, LLGL2, LRP6, MAP3K4, MTHFD1, MYD88, NCOA4, NEU4, NOX1, OR10G9, OR13C5, OR51B2, OR52I2, OR5A1, OR8D4, OR8G1, OR9A4, PDE7A, PGM3, POLR3B, PPID, PPP1R3D, PRKAB2, PRKAR1B, PTPMT1, PVRL2, RND1, RPS6, SLIT1, STX3, TKTL2, TUBAL3, UBA7, UBE2K, ATP6V1B2
Negative_13105	F5, KDR, MSN, ABL2, ACSS1, AGPAT4, ARNTL, ATP5G3, BET1, C7orf16, CACNB1, CASK, CCL19, CDC26, CHAD, CLDN22, COL2A1, COL5A2, CPT2, CRLF2, CXCL1, CXCL3, DEGS2, EPHA8, FGF2, FZD1, GNRH2, GPX7, HGSNAT, IL13, JAG1, JAG2, KARS, MAML2, MGAT5B, MTHFS, MYH1, NEFL, NEGR1, NT5E, NUMB, OR10A7, OR10X1, OR2T11, OR5AP2, OR6C6, OR8H2, PCK1, PDGFC, PIP5K3, PISD, PPM1B, PRIM2, RASSF1, RASSF5, RGS3, SCP2, SGMS1, SMAD3, SNW1, SSH2, STAT5B, STX12, TAS2R14, VASP, YWHAG, ZFYVE16, ARHGEF12, ATP6V1C1, C1GALT1C1, ST6GALNAC6, TNFRSF14
Negative_13106	GAA, LCT, AC02, ALG5, ARG1, BBOX1, CACNA1I, CCL17, CCL3, CDC25C, CDC45L, CHIT1, CHRM5, CPT2, CSF3R, CYP2E1, CYP2J2, DGKI, ELK1, FGF1, FGF2, FGF5, FGFR4, GNA01, GSTZ1, HTR2A, IL22, IL8RA, INMT, INPP4A, ITGA3, KAT2B, KIR2DS5, LDHAL6B, MAPK10, MGST1, NCSTN, NGEF, OR10G4, OR4B1, OR5J2, OR7G3, PIGN, PIPOX, PSME2, PVRL2, RENBP, SMAD6, SPHK2, ST8SIA5, TAS2R38, TBXAS1, WNT3, YWHAQ, ATP6V1E2, GABARAPL2, TNFRSF10C
Negative_13107	BAD, C3, DBH, DCC, EDA, GP6, RET, ADCY10, BUB3, CRB3, CSF1R, CSF2RA, CYP2D6, CYP2U1, DDOST, DHRS9, DRD2, EP300, FGF2, FTH1, GALK1, GBA3, GRIA2, GSTM4, IFNK, KIR2DS5, NPR2, NT5C3, OR2L3, OR2W1, OR51G2, OR56A1, OR5I1, OR8K5, OR9G1, PARD6A, PDE4D, PDIA4, PGM1, PLCB4, PPA2, PPP2R2C, PRKAA1, PRSS3, RBPJL, ROCK2, SMC1B, TAS1R2, TUBB3, UBE2K, VAV2, CS GALNACT2
Negative_13108	EPO, FGG, HK3, NF1, TKT, VCL, ABLIM3, AC01, ACSL5, ADCY10, AHCYL2, ALDH3B1, ALOX5, ALPPL2, ARAF, BTRC, BUB1, CACNA1C, CD47, CD99, CKS1B, CLDN7, CPT2, CTPS, CYP26C1, DCXR, DUSP5, FADD, FMO4, GNG12, GP1BA, GRM5, HPSE2, HRH1, HSD17B2, IDI2, IFNA16, INHBE, LIMK1, MASP2, MGAT4A, MGST1, MGST3, MLLT4, MYH3, NFATC3, NME2, NR1H3, OR10G4, OR13H1, OR1E2, OR2T12, OR4C15, OR4C6, OR4K5, OR51S1, OR6K6, OR8K5, PDE1C, PDX1, PFN4, PIGQ, PIGW, PNPO, PPBP, PRKY, RHOA, RPS6KA3, RRM2B, SDC3, SEPHS1, SETDB1, SHC3, SHMT2, SOCS2, SPI1, ST6GAL1, TNFRSF4, TSLP, VAMP3, WNT4, WNT5B, WNT7B, YARS, YWHAH, SERPINA1, SERPINF2, ST6GALNAC6
Negative_13109	BAD, FER, ABL1, ABP1, AC02, ACOT12, ADCY5, ADH7, ADRBK2, AKR1C2, ANAPC1, ARNT2, CACNA1D, CACNG3, CLDN5, CYFIP2, CYP2A7, DLAT, EIF4E, EPHA7, EPHB6, FGFR4, HSD3B1, IRS2, ITGA6, LDHC, MAOA, MECR, MKNK1, MYL2, OR10H1, OR4C12, OR4K13, OR5B12, PHKA2, PIGU, PIK3R4, PLXNB1, SC4MOL, SKP2, SNAP23, SPHK1, ST6GAL1, STAT1, TAP2, TLN2, TNFRSF9, UBA7, WASF3, XCL1, SERPINB5
Negative_13110	AUH, BAD, BTK, C8A, CBS, DBT, EDA, EZR, F3, FOS, IL9, UBC, ACOX3, ADRA1A, ADSSL1, ALDOA, ANAPC1, ARSE, ATP6AP1, B4GALT4, BCL10, BDH2, BMP2, C9orf95, CALML3, CCKAR, CDC45L, COL4A4, COL6A2, COX15, CSF2, CYP26A1, DGAT2L4, EPOR, FARSB, FUT4, GALNT6, HSPB1, IRAK2, ITGA7, MAN1A1, MITF, NCF2, NCKAP1L, NGEF, NME4, OR10AD1, OR10AG1, OR10Z1, OR13A1, OR2B2, OR2T34, PAX8, PDE4A, PIGU, PIP5K1C, PLA2G10, PPP2R2C, PPP3R2, PRIM2, PRKG1, PRNP, PVRL1, RAC2, RDH5, RFX5, RPS6KA3, RRAS, RRAS2, RUNX1, SAT2, SDC3, SEMA4D, SFRP5, SH2D2A, TAS2R50, TCIRG1, TIAM2, TUBB3, USE1, WNT8A, XYLT1, ATP6V1C2, MAP3K7IP2



Negative_13111	F2, FAH, TEC, AHCY, ALG10, ATP4B, ATP5F1, BAAT, CDC25A, CDKN1A, CLDN3, CREB3L1, CXCL6, DHDH, DHX58, EHMT1, FGF9, FZD10, FZD3, GALNT1, GPX5, HBEGF, HSD11B2, IL17A, LIMK1, MAN1C1, MGAT4B, MIOX, NAGLU, NARS2, NLGN1, NMNAT2, NOX1, OR1A2, OR51E1, PARVB, PFKM, PGM1, PGM2, PIGL, PIK3C2A, PIK3CD, PIP4K2B, PLA2G1B, PLOD2, POLR1B, PPP1R3C, PPP2R2A, PRKACB, RRM2B, RXRB, SMAD2, SMAD3, SMPD1, TUBB, TUBB4, UGT2B28, VEGFC
Negative_13112	AMH, AUH, CRK, F5, PGF, SDS, AADAT, ACADL, ACADSB, ACOT11, ACP6, ADCY10, ADCY5, ATP6V1H, BBC3, CACNB3, CARS, CASP8, CDC42, CDKN2B, CNTNAP2, CXCL10, CXCR4, DAPK1, DDX47, DDX54, DGAT1, EFNA2, EGLN3, ETNK1, FCGR3A, FM01, FUT1, FZD5, GALT, GALNT5, GNAL, GSTA4, HSD17B7, HSD3B7, IL10RB, IL15RA, IL2RB, INPP5E, IRAK1, ITGB1, KLKB1, LTBR, MAP4K3, MKNK1, NCOA4, NCSTN, OGDH, OR10R2, OR1A1, OR1J2, OR2A2, OR4A15, OR51E1, OR51E2, OR51L1, OR52E6, OR6C70, OR8J1, OR9Q2, P2RX2, PAK7, PER3, PIGK, PIGM, PIGN, PNPT1, POLR2K, POLR3H, POLR3K, PRLR, PVRL1, RDH12, SENP2, SKP1, SLIT2, ST3GAL5, STK4, TAS2R1, TGFB2, TIRAP, TRPM5, UNC5C, WIF1, HLA-DRB3, HLA-DRB5, HSP90AB1
Negative_13113	AK7, AMH, CP, LCT, ACSL4, ALOX15B, ALS2, CCNA1, CCR2, CD46, CHPT1, CLDN9, CSF2RB, CSNK1G1, CX3CL1, DCXR, DPM2, DTX3, E2F5, ENPP3, FGF22, FLOT2, GCLM, GNMT, IGF1, LAMC3, MAOB, MDH2, MYH15, NAGLU, NARS, NFE2L2, NMNAT1, OR10R2, OR1A1, OR52B4, OR6C2, OR6K2, OR7D4, OR8D1, OR9A2, ORC1L, PFKP, PIAS1, SEMA3G, SOD1, SULT1E1, TCF7, TGDS, TNFSF12, UCK2, UCP1, WWP1, B4GALNT1, CSNK1A1L
Negative_13114	CR2, CSK, EGF, IHH, LSS, ME2, NLK, RFK, SI, ADCY2, B3GNT2, BMP6, BMPRIA, CASP10, CCL5, CDS1, CHUK, CKS1B, CMPK1, CNGA3, CYP11B2, CYP2C18, CYP2F1, DGKZ, DNMT1, ENTPD3, FGF18, FLOT2, GUCY1A2, GYS2, H6PD, HSPA1B, IL4R, IL6ST, JAM3, LAMB1, MAD2L1, MFNG, OLR1, OR10G8, OR1L3, OR2T5, OR4F17, OR52A5, OR52L1, PFKP, PITX2, PLEKHA8, PPCS, PRKCH, PRODH, PTK2B, RAPGEF1, RBL1, RPN2, STAT3, STK36, SV2C, TALDO1, TAS2R4, TCIRG1, ZAP70, HLA-DQB1, HLA-DRB4, HLA-DRB5
Negative_13115	CRK, IHH, IL9, ITK, KDR, PAH, TH, AGPAT1, ATN1, B4GALT2, BNIP1, CANT1, CCKBR, CCL16, CCR9, CD226, CDH1, CDKN1A, CDKN1C, CUL1, CYCS, DDOST, DEGS2, ECHS1, EHMT2, ENTPD1, FGF19, FGF22, FGF4, G6PC, GALE, GCLC, GMPR, GNA14, GSTA4, GUCA1B, GUCY1A2, GUCY1B3, HHIP, HLCS, HMGCL, HMGCS1, HSD11B2, IFNA8, IL12A, IL22, IL24, INPP1, IRF5, ITGA5, KLRC3, LDHB, LDHD, LEFTY2, LRRC4C, MECR, MYH13, NCKAP1L, NFKB2, NFX1, NMNAT3, ONECUT1, OPLAH, OR2T4, OR51A7, OR51B6, OR52E4, OR52I2, OR5AP2, OR5D16, OR8K3, PARVB, PDE4D, PFKL, PHKB, PIGU, PPAP2C, PPP2R2D, PRKG1, PTAFR, RAF1, RPS6KA4, SARS, SEMA4F, SLC27A1, SMPD3, SRGAP3, SULT2B1, TGFB1, THY1, UNC5B, WNT5A, WNT9A, WWP2, HLA-DRB3, TNFRSF10B
Negative_13116	CD6, CKM, F10, IL2, TAT, ABLIM2, ACSM5, ACVRL1, ANAPC4, APAF1, ATP5A1, AVPR1A, BAI1, BBC3, BCL2, C1QC, CACNA1I, CACNG5, CCKBR, CDH2, CMPK2, COL5A2, CTF1, CX3CL1, DDX54, DGKA, DHCR7, DTX1, EDAR, EFNA2, EHMT1, F13B, FGF8, GLYCKT, GNAI1, HHIP, HNF1B, HRH1, IL10RA, IL22RA2, IL7R, IRAK3, IRF7, ITGA11, KAT2A, KLKB1, MALT1, MAN1B1, MAT1A, MCM3, MTHFS, NFE2L2, NUDT8, OR13C4, OR4F6, OR5AR1, OR6C70, OR6K2, OR7C1, OR7C2, PCYT1B, PIGP, PLA2G4A, PLCD1, PLOD2, PLOD3, POLR1E, POLR2D, PPP1R1A, PPP2CB, PPP5C, RDH8, SMAD7, STX12, TBK1, THBS2, TNXB, TPK1, TUBB, TUBB4Q, WNT10B, WNT11, WNT7B, TNFRSF10D

Negative_13117	C8G, DCN, LTB, RFK, AADAT, ACTA2, ALDH3A2, ARAF, BDH2, CACNB1, CCL25, CCL5, CCNB1, CDC27, CES2, CHRM1, CLDN8, CNDP1, COQ3, CYP4A11, DIAPH1, EIF4E, ELK4, FASN, FDPS, FGF4, FTMT, GALNS, GRHPR, HHIP, IFNA10, IFN A6, IL12RB2, LIPG, MAP3K14, MGAT5, MGAT5B, MICA, MTFMT, NANS, NAT5, N CR2, NFASC, NUDT5, OR2A5, OR2D3, OR2T34, OR2T4, OR2W1, OR51I2, OR52E 6, OR8B12, OR8D1, OR8J3, PDGFD, POLR3K, PPAT, PPP2R2D, RAP1A, RPS6KA 4, SAT1, TAS2R13, THPA
Negative_13118	CD6, CGN, EBP, EDA, FAH, GK2, ABLIM2, ACOT11, ACOX1, ADCY1, ARNTL, ATP 5C1, B3GNT4, BACE1, BDNF, CLTCL1, CSNK2B, CTSS, CYP2C19, DDX54, DUSP 7, ENTPD6, FASLG, GAL3ST1, GLYCTK, GRIN2A, HLA- DOB, IDUA, IL17RB, ITCH, ITGB6, KLRC2, LARS2, MAFA, MAN1A2, MAPK13, M CAT, MCM6, MYH11, NCK1, NOX3, NT5C1A, NUDT5, OR10H2, OR12D3, OR1G1, O R2A2, OR4X1, OR6A2, OR6C4, OR8H1, ORC3L, P4HA2, PDHA2, PFN1, PLA2G5, POLR2I, PRKAG1, RAP1B, SDC2, SETD2, SMAD4, SOS2, SUV39H1, TNFSF18, T RDMT1, TUBA4A, ATP6V1B1, HLA-DRB4, HSD17B12
Negative_13119	AK7, C8B, SMS, SPN, AARS2, ABLIM1, ACSL4, ADCY7, AGPAT4, AK3L1, ALDOA , BDKRB2, BMP8A, BMPR2, CCND2, CD36, CDC26, CDK6, CDS2, CHEK1, CLTB, C OQ3, COQ5, CREB3L2, CYFIP1, CYP2A13, DDOST, DDX23, DVL3, E2F3, FARP2 , FCER1G, FMO2, GAD1, GALNTL1, GCLC, GMPS, GP1BA, GRIN2B, IFNA7, IFNG R1, IFNGR2, IL28A, IRF9, KAT2A, LRAT, LRDD, MAN1C1, MAP3K7, MAPK9, MA RS2, MEF2C, MPZL1, NAMPT, NKD1, OR10AG1, OR10X1, OR11A1, OR14I1, OR4 D5, OR51B6, OR52L1, OR5AC2, OR5L1, OR6B3, OR6K3, OR8D1, OR8J1, OR9Q2 , OXCT1, P2RX4, PGK1, PIGN, PLA2G2A, PLCB1, PLCB4, PLXNC1, PMVK, PPOX , PRKAR2B, RFX5, RPS6KB2, SELPLG, SETD7, SLC12A2, SLC25A4, SOS1, STA T5A, SUCLA2, TLR9, TNFSF4, TUBB4Q, UCP1, VAV2, WNT8B, YWHAE, CACNA2D 2, SERPINA5, TNFRSF10A
Negative_13120	A2M, DCK, FGB, KMO, MUT, SMS, TPO, UBB, AARS, ACACA, AMPD2, APOA5, ARSE , ATP50, C5AR1, CNTN1, COL4A2, CSAD, CTLA4, CXCL13, DARS, FBP2, FRAT1 , GALNS, GALNTL1, GALNTL2, GALNTL5, GFAP, GNB3, GRIA1, HADH, HNF1B, I CAM2, IL28B, INHBB, IRS1, ITGA4, L1CAM, LDHC, LEFTY1, LYZL1, MAP3K1, MAP3K8, MYH7, OCRL, OR10G4, OR10G8, OR10J1, OR11G2, OR4F15, OR52I2, OR5B12, P2RX2, PAPSS2, PDHA1, PIGL, PIGM, PIGS, PLOD2, POLR2H, RAP1B , RASGRP2, ROCK1, SETD7, STAT3, TFDP1, TICAM2, TIRAP, TNFSF18, TRHR
Negative_13121	AGL, IHH, KIT, MYC, SFN, AANAT, AGTR1, AHCY, ALDH1A2, ALOX5, ANGPTL4, APOC3, ARD1A, B3GALT5, BMP4, CBR1, CCL3, CCNH, CCR1, CCR8, CD99, CDC6 , CDK6, CLTB, COQ5, CREB3L4, CREBBP, CSNK1E, CSNK1G1, CXCL12, CYP11A 1, CYP3A4, DDX18, DGAT2L4, DOLPP1, FDFT1, FUT1, GDE1, GRIA1, GSTM1, G UCY1B3, HAAO, HDAC2, HIBADH, HMGCL, HPSE, HTR6, IFNA17, IFNGR2, IL10 , ITPK1, LGMN, NKX2- 2, NOD1, NUDT9, OR2V2, OR51D1, OR6X1, OR7G2, OR9Q1, PANK3, PFKFB2, PI AS1, PIGL, PIP5K1A, PPP2CA, PPP2R2D, PRKAR2B, PTGS1, RCHY1, RDH16, R HEB, SKIV2L2, TAS2R10, TNFSF14, TNFSF18, VAV1, VTI1B, TNFRSF11A
Negative_13122	ADO, F10, ILK, MYC, RET, ABLIM3, ABP1, ACSL1, AMD1, AMY2A, ATP2A3, ATP 5J, BCMO1, CACNB2, CACNB3, CAMK2D, CD70, CDC42, CDH3, CHST11, CLDN18 , CLDN6, CNTN1, CREB3L4, DPAGT1, DRD2, EGLN3, ESPL1, FTMT, GRAP2, GST A5, GZMB, IL10RA, IL1A, IL5RA, ITGA6, LCAT, LDHD, LEFTY2, MAGI3, MAP4 K3, MICA, MPZL1, MYH14, NCAM1, NFYC, NRG1, OR1S1, OR4D11, OR5H2, OR5T 3, OR9G1, PDE6G, PLXNB1, POLE4, PRIM1, PRKAG2, PRKAG3, RBL2, ROCK2, R PS6KA2, SPTAN1, TACR3, TKTL1, WARS, ARHGEF12, C1GALT1C1, CACNA2D3, HLA-DQB1, HSP90AB1

Negative_13123	CBL, CFD, F11, ILK, ME2, NPY, PML, PRL, ALAS2, ALG8, ARHGEF4, ARSA, ATN1, BAIAP2, BUB3, C1QC, CACNG1, CCL5, CD244, CD72, CDK5, CLDN11, CNTNAP2, CRHR1, CSNK2B, CTNNA3, CXCR4, CYP26B1, CYP2C19, CYP8B1, DAG1, DBF4, DGKH, DPYD, EPHA6, FOXA3, GAL3ST1, GCAT, GGPS1, GGT1, HIBCH, HLCS, HTR7, IDH2, ITPK1, JAM2, MAD2L2, MADCAM1, MCCC2, MIOX, MITF, MS4A2, MYH15, MYH6, NFATC1, OR10V1, OR1E2, OR4C11, OR52W1, OR6T1, OR8B8, OR8K5, OR9G1, PAPSS1, PDE6H, PKLR, PPP1R3A, RFWD2, SGPP2, SH3BP2, SIAH1, SULT1A2, SV2C, TFDP1, THBS4, UNC5A, YWHAH, CACNA2D4, GABARAPL1, HLA-DQA2, PLA2G12B
Negative_13124	F10, GH1, ID1, IL2, IL7, ME2, MYC, TYR, AANAT, ABP1, ACADL, ACSM2A, ALAD, ALDOC, ALOX12B, ANAPC7, AQP7, ARHGEF2, ARNT2, ATP2A3, B4GALT2, BCAR1, BIRC2, CADM1, CADM3, CBR1, CD34, CDH3, CKS1B, CNTN1, CRY2, CXCL5, DAAM1, DEGS2, DKK2, DNMT3A, DVL1, EPB41L2, EPHX1, ERBB4, FGF18, FLOT1, GNG13, GPD1L, GZMA, HES1, HLA-DOA, HMGCR, HTR7, ICOSLG, IDI1, IFNAR2, IL10RB, IL5RA, IPPK, ITGAE, ITPKB, KIR3DL3, LIMK2, MAGI1, MAPK13, NAGK, NAGLU, NAT2, NTF4, OCRL, OR1D2, OR1L1, OR2T34, OR4N2, OR51A4, OR52K2, OR6C3, OR8B4, OR8J1, OXTR, P2RX6, PAK7, PDE6G, PDGFD, PDK1, PGS1, PIP5K1C, PKLR, PLOD3, POLE3, PPP1R3D, PPP2R2B, PTPN6, RASGRP1, RIPK1, RPS6KA6, SEMA3C, SLIT2, SUCLG2, TNFRSF4, UGT2B4, YWHAZ, SLC25A31
Negative_13125	BTC, CBL, F2R, GLA, LHB, MSN, NNT, SCD, SMO, AADAC, ACSS1, ALG3, ARHGEF2, ARPC1B, ATP5G3, ATP6V1D, BDH2, CAMK4, CASP3, CBR3, CCNG1, CCR2, CD14B, COL1A1, CX3CR1, CXCL1, CYSLTR2, DEGS2, DLST, DNMT3B, DPM3, DRD2, DUSP16, EIF4E, FMO4, FOXA3, FSHR, GART, GDF5, GFPT2, GNA15, GRIN1, GRM1, HCST, HNF1A, IL2RB, ISYNA1, ITGA9, KCNJ11, MAD2L1, MAML1, MAN1A1, MAP2K2, MDM4, NLGN2, NR4A1, NTSR1, OR10G7, OR10H4, OR13G1, OR2H1, OR2L2, OR6C3, OR6T1, OR8U1, OR9G1, P2RX6, PDE10A, PFN2, PIGS, PIK3C2B, PLA2G3, PLCD4, PLXNB3, PPOX, PRKCD, PRSS1, PTPRC, RELA, SLC2A1, SMURF2, SOAT1, SOCS2, SPRY2, STAM2, STAT6, SUFU, TACR2, TAS2R7, TGFB3, TPMT, UNC5B, VDAC3, VKORC1, WNT7B, ZNRD1
Negative_13126	ADK, C8G, DUT, F10, F5, GP6, MPL, ALPL, AMY2B, AVPR1A, C4BPA, CCL22, CNTRF, COQ3, CREB1, CREB3L3, CRLS1, CXCL6, CYP2S1, DGAT1, GALNT9, GNAL, HAP1, HMOX1, HSP90B1, IGFBP3, IL13RA1, IL8RA, ITGB8, JAK3, KAT2B, MAP2K3, MAP2K4, MAP3K12, OGDH, OR2C3, OR5F1, OR5J2, PLXNA2, PLXNB3, PDLR2L, PPP2R2D, PTGIS, RFWD2, RHOD, SARS2, SETD8, TJP3, TNFRSF8, TRPC1, USE1, WNT16, ZAP70, PLA2G12A
Negative_13127	C4B, C8G, CD6, CP, GLA, IVD, PGP, ATP2A2, ATP5G3, CACNB4, CACNG7, CASP8, CD40LG, CD86, CES1, CFTR, COL4A1, CSNK1A1, CSNK2B, CXCL13, DBF4, DTX4, EHMT1, ENPP3, ENPP7, ERBB3, FGD1, GNAI2, GNAL, HHEX, HPSE2, HSD3B2, IDH2, IFNA10, IFNW1, IL20, IL22RA2, IRS2, ITGA2, LTB4R2, MGAT3, MYL7, NCAM2, OR11H1, OR13C3, OR52L1, OR5D18, P2RX6, PAK2, PHGDH, PHKA2, PLCZ1, PRKCA, PTGS2, PTPN6, RARS2, SELL, SELP, SEMA4F, SHC4, SPRY3, SRGAP2, TPMT, TYROBP, TYRP1, UBA7, UNC5C, YES1, ATP6V0D2, ATP6V1E2
Negative_13128	APP, C2, F7, GPI, INS, LIF, LSS, TNN, ABI2, ACAA2, AKR1B1, BUB3, C7orf16, CACNG4, CD8A, CREB3, CSNK1D, CXCL12, CXCR5, CXCR6, DDX19A, EFN3B, EHMT1, EIF4E2, FIGF, FRAP1, GAB1, GGT7, GLUD1, GSTT1, ICAM1, ITGAM, ITGB4, ITPA, KIR3DL1, LTB4R2, LTBP1, MCM2, MYH13, MYLK2, NFAT5, NRXN3, NTN1, NUMB, OR10G2, OR10P1, OR13D1, OR1L6, OR4D2, OR4N2, OR4Q3, OR52E6, OR5AP2, OR6C1, OR6N1, OR8D1, ORC1L, PAK1, PARVA, PAX4, PAX8, PCK2, PDHA1, PHKA1, PLCB4, PLTP, POLR1D, PPID, PROS1, RHOQ, SARDH, SC5DL, SMAD7, SOD1, SORD, SPTLC1, SRGAP1, ST3GAL2, SUCLG1, TAS2R8, TNFRSF18, WNT6, EIF4EBP1, HSP90AB1, PNLIPRP2

Negative_13129	AGK, CKB, DBT, DUT, F9, ID4, MPL, PXN, RB1, TH, ACACA, ACTN1, ADCY8, ALG11, ALS2, ARHGEF1, ARPC4, BCAR1, BMP7, C1QA, CCL1, CCL20, CCND1, CD247, CES2, CFLAR, CNGA4, CTNND1, DHCR24, EDNRB, EPAS1, EPHB3, FARP2, FGF7, FRAT1, FUT9, GAD1, GALNT3, GCNT4, GNAI1, GSK3B, GSTA2, GUCY2C, HAGHL, HIBADH, IDI2, IFNB1, IL10RB, IL12RB1, IL18RAP, ITGB6, KLK3, LIP E, MTHFD1, MYH11, MYH2, NAE1, OR4S1, OR56A3, PDHA2, PDXK, PIAS1, PIGV, PLA2G2E, PLD2, PLXNA2, PLXNC1, POLE2, POLR2H, PPP2R2A, PRKCZ, PTAFR, RAC1, RBPJL, SEMA4F, SETDB2, SMARCA2, TLR9, TUBA8, UGT2A1, WWP1, ATP6VOD1, ST6GALNAC4, SUV420H2, TNFRSF18
Negative_13130	BAX, LCK, ABAT, ABL2, AGPAT3, AKR1C4, APOC3, ARD1A, ARPC3, CARS, CASP7, CCL5, CD8B, CLOCK, CRKL, CSF2RA, CYFIP1, CYP1A2, CYSLTR1, DHCR24, DNMT3A, EPHA6, EXTL2, FGF17, GATM, GOT1, GP1BA, IARS, IL17A, INADL, INPP5A, IRAK4, LDHC, MAP2K1, MCCC2, MGAT4A, MMP1, MTHFD1L, OR1B1, OR2H2, OR5AR1, OR5L2, OR8K3, P2RX5, PAK6, PFN3, PIGM, POLR3G, PPM1B, PPP2R5E, PTPMT1, RPS6KA2, RRM2B, SARDH, SETD2, SLC2A1, SMAD9, SMARCA5, STX2, TFDP1, TRMT11, ULBP1, UROS, VAMP3, CACNA2D1, TNFRSF10A
Negative_13131	CGN, DCN, GH1, IDS, PGD, ASMT, B4GALT1, BUB1B, CACNA1I, CCL8, CD82, CDKN1C, CHIT1, CNTN1, DDX23, DERA, DGKA, DHODH, DPYSL2, ENAH, FASN, FCGR3A, FGF19, GABARAP, GALNS, HHEX, IFNA13, INPP5B, INSR, IRS1, ITGA11, ITGA2, JAK3, KIR3DL1, LDHC, MAP3K11, MAP3K6, MITF, MMP14, NARS, NFKBIA, OR10Q1, OR13D1, OR14C36, OR2G6, OR4A15, OR4K13, OR51A7, OR5I1, OR7A17, PDE7B, PHGDH, PPP3CA, PRKAB1, PTDSS1, SGMS2, SMARCA2, TUBA1A, TUBA3C, UPP2, VAMP4, ATP6VOD2, HSD17B12, SERPINA5
Negative_13132	BAD, DAO, DDO, DLD, MPL, ACSL3, ACTN1, ACTN4, ALDH1L1, ALDOA, ANAPC2, APPL1, ARSA, ASMT, BCMO1, C1QB, CACNA1D, CACNB2, CACNB3, CASK, CD274, CDIPT, CDK4, CPOX, CSNK1D, CYP11B1, DGKZ, ERBB2, FM05, FPGT, FSHR, FTCD, HHIP, HSD3B2, IFNA7, IL20RB, INPP1, LTA4H, MAML1, MGAM, NAGK, NLGN1, OR10H3, OR2B6, OR2D2, OR2T10, OR2T5, OR6C70, OR8S1, PAK6, PAK7, PARD6G, PHKB, PIK3R4, PROS1, RARS2, SEMA3B, SOS1, TALD01, TKTL2, TSLP, WNT8A, TNFRSF13C
Negative_13133	NLK, PGF, RDX, SRC, ACVR1B, AKR1B1, AMDHD2, APC2, BHMT, CCL13, CCR8, CDC7, CMBL, CXCL3, CXCR6, CYP1A1, CYP3A5, DDX50, DEGS1, DHRS3, DRD2, EPRS, FARS2, FGF4, FIGF, FM01, GADD45G, GALNTL1, GANAB, GAPDH, GATM, GMPBP, HLA-DOA, HSD17B4, IFNA10, IL1RAP, IL23R, IL28A, IQGAP2, KIR2DS5, LTC4S, MRAS, NFYB, NT5C, OR10AD1, OR10V1, OR2T33, OR4C46, OR4K15, OR56B4, OR5AS1, OR7A17, OR7G2, PHKA1, PNPLA3, POLD1, PPAP2A, PPAT, PPM1B, PRKAR2A, PRKG2, RALBP1, RHOA, RPRM, SAT1, SDHB, SH2D2A, SMAD2, SMAD7, SSX2IP, ST3GAL1, ST3GAL4, TAS1R1, TAS2R3, TAS2R42, TRHR, TUBA1C, TUBA3C, TUBB1, TYRP1, UGCG, WNT3A, WNT9B, ZFYVE16, MAP3K7IP2, PRICKLE2
Negative_13134	ADC, AGL, KIT, KMO, MPZ, NPY, ZYX, ADRA1A, AGXT, AKR1A1, APC2, ATP5B, B3GNT4, BAI1, BCL10, CD19, CD79B, CLCA4, CPT1A, CTBP2, CTNNA3, CYBB, DARSA, DMGDH, GNA11, GNA13, GNPAT, GRIN1, GSTM1, IKBKE, IL17RA, IL28A, IRAK1, ITGA7, KIR3DL2, LAMB1, LAMB4, LRP5, MAML3, MAP3K13, MAP4K3, MAPK13, MMP7, MTHFS, MYH3, NAE1, NEU4, NME6, NQO1, OR10A2, OR10A3, OR10A6, OR13C5, OR1B1, OR52N2, OR9K2, P2RX5, PDE6D, PGAM2, PHGDH, POLD3, PPAP2A, PRIM1, PRKX, PRNP, PSPH, PTPRR, RAB5A, RALBP1, SETD2, SHMT1, SOS1, SOS2, STT3B, SUOX, TAS1R1, THBS1, TKTL2, TSHB, TUBA1A, UGDH, VTI1A, VTI1B, WHSC1L1

Negative_13135	ADO, CAT, CDA, DBT, F10, HDC, MSN, UBB, ABLIM1, ACSS1, ACYP1, ADAM17, A NAPC11, ATP5A1, CAMK2A, CBLC, CCKAR, CFL2, CLDN3, COL5A3, CSNK1G1, C TSB, DDOST, DDX47, DLL1, DOLPP1, DRD5, DUSP5, ETNK1, GDF5, GLI1, GLS2 , GPX7, HADHB, HAP1, HTR2A, IFNA14, ITGAL, KCNB1, MCEE, MKNK2, MYLK2, OR3A1, OR4N4, OR52M1, OR6C3, OR8A1, PDE3B, PDE9A, POLD4, POLR1D, PTP RZ1, PTTG1, RAPGEF1, RASSF5, SDHD, SPCS1, SUCLG2, TAS2R4, UMPS, WARS 2, MAPK8IP1, SERPINB5
Negative_13136	ADK, DAO, FUK, TH, ACAA2, ACACB, ACAD9, ACSM2A, ACTC1, ARPC2, ASMT, AT F4, ATN1, AXIN2, BNIP1, C1QC, CD47, CHEK1, CHRM1, CLDN17, CREB3L2, CX CL1, DDIT3, DDX4, DTYMK, DUSP3, DUSP8, EDN1, EPB41L1, FOXO3, FUT4, GA MT, GCH1, GGT1, GRIN2C, GUCY1B3, IFNB1, IL18RAP, IMPA1, INPP5A, INSR , ITPK1, KLRD1, LGMN, MAFA, MAGI2, MAP2K4, MAP3K4, MAPK1, MASP2, NEU3 , NT5C3, OR10J1, OR2M5, OR2T11, OR4K5, OR52L1, OR8H3, PANK1, PGM2, PH KA2, PIGX, RALBP1, SLC27A1, SNW1, SORBS1, SOS2, SPAM1, SPRY1, THBD, T UBB, TUBB2A, VDAC2, WARS2, WNT6, WNT9B, XYLB, MAP3K7IP2, PDCD1LG2
Negative_13137	BTC, ILK, MVD, SP1, AARS, ACADS, ACSM1, ADSSL1, AHCYL1, ALS2, ARG2, AT P50, AXIN2, BCL2, BCL2L1, BIRC2, C9orf95, CCL11, CCL15, CD82, CDC6, C DH3, CDKN2B, CLDN1, CREBBP, CTNND1, CTSG, CXCR4, CYP26A1, CYP4F3, DA AM2, DDHD1, DDX47, EI24, EPB41L3, EPHA1, EPHB3, FGF8, GALNTL4, GGT7, GMPPB, GNAI3, GPD2, GRLF1, HIBCH, IAPP, IFNGR2, INHBE, ITPKB, LRRC4C , MMP1, NARS2, OR10P1, OR14C36, OR2AE1, OR2G6, OR2T29, OR4S2, OR51B6 , OR52K2, OR5P2, OR7G2, PAK1, PCK1, PFKFB4, PHKA2, PI4KA, POLR1D, PPP 1CB, PPP1R3D, PPP3CA, PSPH, PTTG1, RALA, SPRED2, TAS2R8, THBS1, TP11 , TUBB1, TYRP1, VAV3, WASF3, WNT3A, ATP6V1G2, HLA- DQB1, MAPK8IP1, TNFRSF10D, TNFRSF1B
Negative_13138	ADK, AK2, AUH, IL6, LTB, MOS, MUT, ACTB, AKR1C4, AKT3, C3AR1, CBR1, CCL 17, CCR8, CD34, CD44, CD79A, CD8B, CES1, CHR1, CNTFR, CREBBP, CXCL12, CXCL9, CYP2U1, CYP4A11, DUSP10, DUSP8, EPHB2, EVI1, FZD1, GALT, GUCA 1B, GZMB, HADH, IL21, IRF5, ITGB6, LCMT2, LRP6, LYZL1, MGST2, NT5C1B, OR10J1, OR2AT4, OR2B11, OR4C13, OR9Q1, PAK3, PAK6, PDGFC, PIM1, PRKG 2, RASGRP2, RGS3, SDHA, SETD7, TFDP1, TIAM2, TLR4, TPH2, TSTA3, ULBP1 , ULK3, UPP2, XYLB
Negative_13139	CSK, EDA, FGB, TNC, ACAT2, ACO2, ACVR1C, AGRP, AGTR1, ARRB2, B3GAT2, C ACNB2, CBR1, CCL1, CCL19, CD99, CHRM1, CHRNA7, CHST13, CLDN5, COL5A1 , CYBA, CYP2J2, DDX4, DKK1, DPAGT1, DTX3L, ENTPD2, EXT1, FBP2, FECH, F GF14, FGF21, FUT7, GABARAP, GMPS, GNG13, HTR2C, IL17RA, INHBB, ITGA3 , ITGB1, ITGB2, ITGB3, ITGB7, KCNJ11, LAMA4, MGAT5, MYH4, NAT2, NRXN2 , NT5C1A, OR13C5, OR1E1, OR2M2, OR4C15, OR4C46, OR4E2, OR4N2, OR5AK2 , OR6C2, OR7A10, OR8B8, OR9A2, PGAP1, POLD2, POLR2B, POLR3D, PPAP2A, PPAP2B, PPCS, PTGES, SLC12A2, SPTLC1, SRD5A2, STX2, SV2B, TAS1R1, TI AM1, TKTL1, TRPM5, TUBA1B, TUBA3E, TUBA4A, UGT2B17, VAV1, WNT2B, YES 1, PLA2G12B
Negative_13140	CFD, DCN, FOS, LTB, PGF, TKT, ACAT2, ACOT12, ACVRL1, ADCY1, ALOX15, AN APC1, ARPC3, AXIN1, B3GAT1, CD8B, CDIPT, CRY2, CYP1A2, CYP2A7, DGAT2 L4, DKK4, DNMT3L, EFN2, FGD3, FMO2, GAS1, GBE1, GMPR2, GOSR2, GSTO2, HADH, HRH1, HTR2C, IFNA21, IFNW1, JAK1, KCNQ1, KNG1, LILRB3, MAOA, MA P3K5, MGAT4B, MGAT5B, NAT1, OR10H5, OR3A3, OR4A15, OR4M1, OR52R1, OR 5M3, OR8H3, PAK2, PDGFRA, PFKFB3, PFN4, PLXNB1, PPP2R5C, PYCR2, QARS , RBPJ, RPS6KA2, SETDB1, SIAH1, SLC9A1, SPTLC2, SRGAP3, ST3GAL1, TAS 2R49, TCF7, TLR2, XCR1, YWHAH, MAPKAPK5, TNFRSF10B

Negative_13141	EPO, F2, STS, ACOX3, ACSM2A, ACSM5, ALDH3B1, ALPL, AMD1, AMPD2, BCMO1, CD86, CDH2, CER1, CES2, CHDH, COL1A1, COL5A2, CSF1, CSH1, CXCL12, CY P4F2, DDX50, DGUOK, DKK2, EFNB2, F13A1, FABP1, FGF3, FLT4, GCDH, GRIN 2D, IFNB1, INADL, ITGB8, MAT1A, MS4A2, OR10A6, OR4K2, OR51B5, OR52E2, OR52E4, OR5M9, PARVB, PHGDH, PMM2, PNMT, PNPT1, PON3, PPCDC, PTGDS, RHOQ, RND1, RPS6KA1, SC4MOL, SDC2, SDHC, SEMA4G, SFRP5, THY1, TP73, T PM3, PAFAH1B1, TNFRSF10C
Negative_13142	FGA, HYI, PC, SMS, ACSM5, ALG8, ANAPC2, ARPC1A, ATP5G1, BUB1B, CDC16, CHRM1, CHRM5, CHST11, DDHD1, DUSP8, ETNK2, FOXO1, HEXB, HLA-G, HMOX2, IRAK4, MAPK12, NRXN3, NT5E, OR10H1, OR1N2, OR2T4, OR5P2, OR 6K6, OR8K5, OR9I1, PGM1, PIP5K1C, POLR2D, PPARG, PYGB, RARS, SEMA3D, SMC1B, SPRY2, SUFU, TAS1R3, TGFB2, THBS2, TPMT, VNN1, WNT2B, ATP6V1 C2, PNLIPRP2, PRICKLE2, SUV420H1
Negative_13143	AGL, C7, ILK, LCK, PC, SMS, ACADL, ACADVL, ACY1, ALOX12B, ATF4, ATP5I, BMP2, BMP8B, BPGM, CCL17, CCL28, CCNB2, DKK2, DUSP14, EIF4B, FGF13, F LT3, GZMB, HBEGF, HRH2, HTR6, IL22RA1, IL28A, KARS, MAN1B1, MAP2K1, M GAT4A, MYH2, NR4A1, NUDT2, OR10P1, OR13C9, OR2A2, OR2AG2, OR2T34, OR 2T4, OR4F17, OR4S2, OR52A5, OR5V1, PAK2, PDGFA, PDXK, PER3, PLCB3, PP P2R5A, PRKCI, PTPRM, SDHB, SELL, SLC25A4, SMAD5, SMPD4, SOCS2, SQLE, STAM, TNFRSF8, TUBA1A, TUBB2A, TUBB4Q, WASL, ATP6VOA1, ATP6VOA2, MA PKAPK3, PRICKLE2, SERPINA5
Negative_13144	AK7, CFH, FYN, GBA, VTN, A4GALT, ABL1, ACSS3, ADH6, ALDOB, ALPP, ARHGE F6, ATP5G1, ATP6VOC, B3GNT5, BMP8B, CACNG4, CANT1, CAV1, CCL8, CD3E, CD59, CER1, CHR1, CLCA4, CLDN15, CLDN8, CXCR3, CYP2D6, CYP2E1, DDB2, DGKQ, DLL1, E2F4, EFNA2, FM01, FOXO1, FZD1, FZD5, FZR1, GAD1, GBE1, GJ A1, GLI2, GOT2, GSTA1, HEXB, HLA-F, HMOX2, HSD11B1, IFNAR2, IL15RA, IL28A, IMPDH2, IRAK4, LAP3, MGAM, NAGS, NARS, NLGN3, OR13C9, OR2M2, OR4D5, OR51L1, OR52A1, OR56B4, OR5 T2, OR6B3, OR6C76, PDGFRB, PIGL, PKLR, PLOD1, POLR1C, PPAP2B, PPP1CB, RBL2, RENBP, RXRG, SGMS2, SRD5A1, STX3, SUCLG1, TAP1, TAS2R42, TNFR SF4, UBE2K, UGCGL2, ULK1, UPB1, VDAC2, WASF2, ATP6VOD1, HLA-DRB3, MAPK8IP2, PPP1R12A, ST6GALNAC1
Negative_13145	AK3, APP, ASL, FGG, ITK, LEP, OTC, ACOX2, ACSS1, AFMID, ALAD, ALDH4A1, ALG10, AMDHD2, APOC3, ARHGEF4, B4GALT2, CALML6, CCNA1, CD34, CDC25A, CDS2, CSF2RB, CSF3R, DCXR, DHX58, ENPP7, EXTL1, FABP4, FARP2, FDFIT1, FGF5, FLOT1, FUT1, FUT7, GAD1, GBA3, GDF5, GLB1, GNRHR, GOT1, GOT2, G PD1, GUCY1B3, IDUA, IL20RB, IL22, IL24, IL28B, ITPK1, LARS, LIPA, MAN 1C1, MAOA, MAP2K3, MAP2K4, MCM6, MECR, MICA, NFX1, NOTCH3, NR1H3, NUD T8, OR2B11, OR2C1, OR4C15, OR51F1, OSMR, PANK1, PDE2A, PDE6G, PIGC, P LD2, POLR1A, PPCDC, PRKY, PTPRM, PVRL3, RAB5A, RFX5, RPIA, SGPP2, SLC 25A4, SOCS7, STAT5A, SUCLG1, TACR2, TBXAS1, TFDP1, TGFB2, TJP1, TRA F4, TSC1, UPP1, VANGL2, VDAC3, WNT7A, HSD17B10, SUV420H1
Negative_13146	C7, DCT, DHH, F3, JUN, MPZ, MYC, SMS, ACTC1, ACVR1, ADCY3, ADH6, ANAPC1 0, BDKRB1, BMPR1A, CACNG8, CASP7, CBR3, CCNB3, CD74, CDH15, CDKN1C, C MAS, CNTFR, CNTN1, CRKL, CSAD, CTNND1, CTTN, CXCR3, CYP2C9, CYP7A1, C YP8B1, DEGS2, DNMT3A, DPM1, DVL3, EPB41L1, EXTL1, FGF12, FLAD1, FTH1, GABARAP, GBE1, GFPT2, GNMT, GRPR, HEXB, IGSF5, IL20, IL5RA, INPP5A, KIR2DL3, LDHAL6B, MAD2L1, MAPK8, MCEE, MCM2, MCM7, MLYCD, MPST, NODA L, NT5C1B, OR10J5, OR10P1, OR4C6, OR5AC2, OR7C2, OR8B12, OR8J1, P2RX 4, PARD6G, PCK1, PIK3R4, PLTP, POLR3D, PPOX, PRDX6, PRKCI, RBPJL, SEM A7A, SFRP5, SHMT2, SKIV2L2, SOCS2, SPP1, SUCLG1, SULT1A2, UBE2L6, UG P2, UNC5B, PAFAH1B2, PNLIPRP2

Negative_13147	C4B, F11, F9, FER, ACPT, ACSL1, ACY1, ADIPOR2, AFMID, AKR1C4, ALG11, A MDHD1, AOC2, APOA2, APRT, ARSE, ATP2A1, ATP5J2, BCAT2, C4BPB, CCL27, CD47, CLDN10, CYP4A22, DERA, DHODH, FARP2, FARS2, FUT2, GPX7, HSD17B 3, IBSP, ICAM1, IFNK, ITGAX, ITPKB, JAK1, KLRC1, LTB4R2, MAP3K2, MAP3 K5, MAT1A, MIOX, MYH7B, NANS, NCK1, NR5A2, NTNG1, OPLAH, OR10A2, OR1J 4, OR2G2, OR4X1, OR4X2, OR51B6, OR8S1, PCYT1B, PDE11A, PDGFD, PGM2, P LXNC1, PPP1R3A, PRKAG2, PTK2, RPRM, RRAS2, SFRP2, SHC2, SULT1A2, SUV 39H1, TRADD, TYRP1, ULK3, WASF2, TNFRSF1A
Negative_13148	LCK, NGF, TH, ACTA1, ALDH3B2, BLVRB, C4BPA, CCL8, CCNB2, CD274, CDC25 C, CDKN2B, CHR1, CLDN1, CMBL, CYP2S1, DFFB, EFN1, FZD9, GAB1, GALT, G JD2, ITGB5, LLGL1, MAD2L2, MARS2, MDM4, NAGS, NRXN1, NUDT9, OR10Z1, O R1L3, OR4B1, OR5T1, OXCT1, PAK2, PARVB, PDHB, PIK3R4, PLCB2, PMVK, PN MT, RFXANK, SEMA3D, SMARCA5, SOS2, ST8SIA5, TAS1R3, TYMS, WHSC1, WNT 8A, HLA-DRB5, ST6GALNAC1, TNFRSF10C
Negative_13149	AGK, CFD, GH2, ID3, INS, AADAT, AARS, AASS, ABLIM1, ABP1, ACOX3, ATP2A 3, B3GALT5, B3GAT2, BACE1, CCKAR, CCL26, CDC20, CFL2, CTNNA1, CTNND1 , CYBB, DAAM2, DEGS1, DHCR24, DOT1L, DUSP4, EXOC7, FGF6, FTMT, GFPT2, GZMA, HLA- DRA, HNF1A, ICAM3, IL11, IL2RA, IQGAP1, ITGA5, KNG1, LCP2, MAD1L1, MP DZ, NANS, NAT2, NME4, OR10H3, OR13J1, OR1J4, OR1N2, OR4C46, OR4K1, OR 4K14, OR51B2, OR51D1, PANK4, PAX4, PGAM2, PLCD1, PMAIP1, POMC, PPM1D , PTGIS, RAPGEF2, RND1, RXRB, SMAD2, SPRY2, SRD5A2, STT3B, TJP1, TSHR , TSTA3, UGT2A3, B3GALNT1, MAPK8IP2
Negative_13150	MOS, OSM, RET, SDS, ACMSD, ADH4, ALDH1L1, ALOX12, APAF1, B4GALT3, CAC NG1, CD274, CLDN16, COMT, CTBP2, CYP8B1, DDX47, DOLPP1, EXT1, FABP3, GALNTL2, GMPS, GNB3, GRIA3, IL28A, IMPA2, LEPR, MAN1A2, MAP3K8, NR5A 2, OR1B1, OR2L8, OR2T3, OR51A4, OR51B6, OR51L1, OR5P2, OR6M1, P2RX4, PARD6G, PDE1B, PDGFA, PIP5K1C, PNPT1, PTCH2, RAPGEF3, RPS6KA2, SPTL C1, ST6GAL1, SUCLA2, TPK1, TRMT11, TUBB4, UGT2B17, WWP1, CACNA2D1, M AP3K7IP1
Negative_13151	CTH, DDO, HGD, HPD, ID2, ID4, KIT, MTR, PLG, SP1, UBC, AACS, ACTG1, ACYP 1, ADH4, ALAS1, ALG6, BCAT2, BCMO1, BMP8A, C1QA, CCNH, CD27, CLDN19, C LDN5, CSF3R, CYP19A1, CYP3A4, DDIT3, DDOST, DDX51, DGKA, DGKZ, DHCR2 4, DUSP1, EHHADH, EIF4E, EPHA3, GAMT, GBE1, GLS2, GRIN2B, HEMK1, HHIP , HMGS2, HNMT, HSD17B2, HSD17B3, HTR2B, ICAM2, IDH3G, ITPK1, LDHAL6 A, LYPLA1, MAT1A, MGAT2, MLLT4, MMP14, NKX2- 2, OCLN, OR10AD1, OR10G3, OR10G7, OR13D1, OR2F2, OR2M2, OR2T1, OR4A5 , OR4C46, OR4K17, OR4L1, OR5H2, OR5J2, OR5M8, OR8K1, PIK3C3, PLA1A, P LA2G6, RFXAP, SEMA4B, SEMA4C, SETDB1, SMARCA2, TUBAL3, ATP6V1G2, EI F4EBP1, MAPKAPK2, PLA2G12B
Negative_13152	CDA, OGT, ACAD9, ACOX3, ADIPOR1, AKR1D1, ALOX15B, APC2, ATIC, BBOX1, BLVRA, BMP7, CCDC6, CD79B, CLDN19, CMBL, CRB3, CRHR1, CYP2D6, CYP2J2 , CYP4A11, DARS2, DPM2, E2F1, EHHADH, ENO2, FGFR1, FZD7, FZD9, GFPT2, GPX7, GRB2, GZMA, ICOS, IFNA13, IFNA21, IFNGR2, IFNW1, IL1A, IL1R1, J AK1, JAM3, LAMB4, LPAR1, MAML2, MMP2, MYL2, NCR2, OR2F1, OR4A16, P2RX 2, PCYT1A, PGLS, PIGM, PIGO, PKLR, PLCG1, PMAIP1, PRODH, PYGB, RFXANK , RPS6KA1, SDHC, SGPP1, SLC12A2, SPRY1, SUV39H2, TAS2R48, TBL1Y, TUB A3E, UNC5A, USE1, PRICKLE1

Negative_13153	AGK, AK7, BID, FGB, IDS, LCK, ME2, PNX, ACOX3, AGPAT3, AKR1C3, ALG13, A VPR1B, BDKRB2, BET1L, BHMT, CCL27, CRLS1, CX3CR1, CYCS, DEGS1, DOLPP 1, DUSP5, EFNA2, FGF19, GADD45B, GPD2, GSTO2, HNF4G, HRAS, HYAL1, IL2 2RA1, ISYNA1, ITGA2, ITGA3, KDSR, LRAT, MGLL, MGST1, NAE1, NCR1, NFAT C3, NTF3, OR10H2, OR10K1, OR1S1, OR3A2, OR4D9, OR4F5, OR51A2, OR52A5 , OR52K1, OR5I1, OR5R1, P2RX7, P4HA3, PANK4, PCNA, PLCG2, PON1, PPP2R 5E, PRPH2, RPN2, RRAS, RUNX1T1, SELP, SEMA3C, SENP2, SLC25A4, SPHK2, SRGAP3, TCF7L2, XYLB, ZFYVE16, HSD17B10, HSP90AB1, SERPINE1
Negative_13154	C3, IL8, LYN, ME2, ACP5, ADAM10, ADORA2B, ALDH1B1, ALG8, ARRB1, ATP6V 0B, B3GAT3, BCMO1, CACNG2, CCL25, CCNG2, CD36, CDC16, CDC27, CER1, CL DN16, CMAS, DDX54, DDX56, DHX58, FADS2, FGF22, GGPS1, GNRH2, GRB2, HD AC2, HHIP, IDH3A, IL28RA, INPP5E, KIR2DL3, KIR3DL1, LIPF, MAPK3, MAT 2B, MEF2C, MYH8, MYL7, NEU4, NFATC1, NOTCH3, NSD1, NT5C, OR10Z1, ORIM 1, OR2L13, OR3A2, OR4D6, OR51B6, OR51S1, OR5K2, OR5P2, OR6K2, OR7D4, OR8D1, OR8J1, OXCT1, PARD6G, PAX4, PCCA, PDE1B, PDE4D, PLCD1, POMC, P TCH1, PTPRM, RBPJL, RFXAP, RPSA, SETD7, SLC2A4, SLIT2, SOD1, SOS1, ST AT5B, TAS2R1, TJP2, TLR3, TOMM40, TUBB4, UBA7, UGCG, UGT2A1, UGT2B4, UROS, YWHAB, GABARAPL1
Negative_13155	AK3, CBS, DBI, FUK, PDC, PGD, SRF, ACAA2, ADCY10, ADORA2B, AGXT2, ALAD , APOA1, ATG3, ATP6V1H, B4GALT1, B4GALT3, C1GALT1, CAV2, CCL8, CDC45 L, DEGS2, DHDH, DKK1, DPM1, EDA2R, GAD2, GJA1, GLO1, HTR2B, IDI2, IFNG R1, IL23R, IL24, IL25, INADL, INPP4A, LEFTY2, MAPK1, MGST3, MICA, MTA P, MYH1, NAT6, NEUROD1, NLGN3, NR4A1, OR11H6, OR1J1, OR2K2, OR2T10, O R4A5, OR4D6, OR4P4, OR51A7, OR51I2, OR52A5, OR52B4, OR52E6, PFKFB2, PIGC, PLIN, PLXNA2, PON1, PTAFR, PTGS2, PTPRF, PVRL3, RASGRP3, RDH10 , SC5DL, SDHC, SIGLEC1, SMC1B, SRGAP1, STX6, TAS2R60, TCF7L1, TICAM1 , TKTL1, TRAF2, TYMS, UCKL1, VEGFC, WNT16, WNT7B, XCR1, ATP6V1E2, C1G ALT1C1
Negative_13156	ID2, ME2, TEC, AANAT, ACP1, ACY1, ADIPOR2, AHCYL1, ATF2, BMP8B, CDS2, CSNK1G2, CSNK1G3, CXCL5, CXCR6, ENO2, EP300, EPHB2, EREG, GAL3ST1, G GT5, GNA14, HCLS1, HNMT, IL12A, IL12RB2, IL22, ITGAV, LTA4H, MAGI2, M AP2K2, NR4A1, OR2A42, OR4K5, OR52A5, OR5I1, OR6T1, OR6Y1, OR8A1, PIG L, PLA2G10, PLCG1, PPT1, PRIM2, PSENN, PYGL, ST3GAL5, TJP1, TRADD, T YRP1, VDAC1, VTI1A, YWHAQ, MAP3K7IP2, TNFRSF10C
Negative_13157	CAD, DHH, EBP, FGA, GAA, LTB, PC, TPR, AARS2, ACPP, ACSM1, ACTG1, ALG13 , ARSB, BCKDHA, CACNA1A, CDKN1B, CHIT1, CPT2, CXCL10, CYP26C1, CYP2C 18, DAPK2, DDHD1, DDX41, F13A1, FTMT, GCAT, GCDH, GJD2, GP1BA, HAGHL, HMGCS1, IDH1, ITPK1, KIR2DL1, KIR2DS5, MAD2L2, NEFH, NOTCH1, NTF3, O R1S2, OR2G6, OR5AU1, OR5D18, OR7C1, PDHA1, PIGF, PIGL, PLCD4, PLXNB2 , PPBP, PPP1CB, RAPGEF3, RELA, RERE, SLC2A2, STAM, SUOX, SYNJ1, TICAM 2, TXNDC12, ZAP70, PRICKLE1, ST6GALNAC3
Negative_13158	ID2, ID3, PGD, PML, TNN, AACS, ADRBK2, ALDH7A1, ALG13, ALG2, ALOX12, A PPL1, ATP5I, B4GALT4, CCL23, CLDN22, CNDP1, CPT1C, CSNK1A1, CTSG, CX CL1, CXCL9, CYP3A7, DDX41, DRD2, DUSP9, ENTPD6, FGF5, FGFR4, FOXA2, F OXA3, FZD10, GBGT1, GLI3, GNA11, GRIN2C, HARS2, HNF1A, HPSE, IDH2, KC NQ1, LCMT2, LGMN, MAN1A1, MAN2A1, NAGS, NAT6, NPR1, OR10G8, OR10H2, O R10H5, OR10J3, OR1A2, OR2A14, OR2T1, OR51A7, OR51B6, OR51L1, OR6C75 , OR7D4, PGAM2, PIP4K2B, PLOD1, PON1, PRKAB2, PRKAG1, PTGFR, PTPRJ, R ASGRF1, RASGRP2, RHOQ, SH2D2A, TAS2R40, TRAF3, UROD, WBSCR17, ALDH1 8A1, ATP6V1G2, HLA-DRB5, TNFRSF13B



Negative_13159	APP, BTD, CP, LAT, MSN, NPL, ACVR2B, APBB1, ATP6V1F, BDNF, C3orf10, CALML5, CALML6, CCKBR, CCNG2, CDKN2D, CFLAR, CFTR, CLDN7, COMT, DDX47, DHCR7, DHRS4L2, DIAPH3, DUSP14, E2F4, FLT3, GNA13, GPX7, IDH1, IDI2, IL6R, ITGA8, MAGI1, MBL2, MCCC1, MGAM, MTHFR, MYH8, NAT6, NCR2, NLGN1, NTSR1, NUDT12, OR10J1, OR14I1, OR2A12, OR2L2, OR2T4, OR51B6, OR51Q1, OR52B4, OR52E8, OR5AP2, OR5L2, OR6C6, OR6Q1, OR8D2, OR9Q1, ORC6L, PDE6H, PIP5K3, POLD2, POLR1B, POLR2K, PPCDC, PPP3CB, PRKAR1B, PRPH2, PRPS2, RAPGEF2, RDH12, SETD2, SH2D1B, SMURF2, SOD1, SPRY1, STAT5A, STX16, STX4, TAS2R48, UBE2L3, UGT8, ZBTB16, ST6GALNAC3
Negative_13160	CFD, GLA, MET, SPN, AANAT, ACACA, ACP1, ACTA2, ADH4, ALDH3B1, ANAPC11, BACE1, BLVRB, CASK, CCL8, CCNG2, CD19, CSNK1G1, CXCR6, CYP26B1, DUSP14, EPB41L1, FASN, FPGT, GGT6, GLS2, GUCY1A3, HBEGF, HNF1A, HSD17B8, HSD3B7, IKBKB, JAM3, LRRC4C, MAP3K3, MCEE, MGST3, NAT2, NCOA4, OPLAH, OR10H3, OR11H1, OR14A16, OR1N1, OR5A1, OR5T2, OR6B2, ORC5L, PDE3A, PDE8A, PDGFB, PDIA4, PLaur, PLCB1, PNPT1, PON1, PPP1CA, PPP3CA, PYGM, RAB23, RAC2, RASA2, SC4MOL, STK3, TSTA3, TUBA3E, UGCGL2, UGT2B10, WARS, WWP1, MAPKAPK2
Negative_13161	BCR, HK2, PC, ABLIM1, ACP2, AK3L1, AKT3, ANGPTL4, BMPR1A, CASP8, CCL15, CCR7, CD274, CHEK2, CHRM1, CHRM5, CLCA4, CLDN10, CMPK1, DDX41, DRD1, E2F1, EHMT1, GCNT3, GNG12, GP1BB, GSTT1, HRH1, INPPL1, IRF7, LAMA4, LAMB4, LRDD, LTB4R2, MGAT5B, NCAM1, NCKAP1L, NFATC3, NMNAT2, NTNG1, OR13C3, OR13H1, OR2A2, OR2B6, OR2G2, OR2M2, OR2T29, OR2Z1, OR4K13, OR51F1, OR56B4, OR5A1, OR5I1, OR7A17, OR7C2, PARVG, PDE4A, PDE8B, PI3K, PIP4K2C, PKMYT1, PMVK, PNPLA4, POLD2, POLD4, POLE, POLR2D, POLR3B, PTGIS, RALA, RAP1A, RASGRP3, RDH11, RFXANK, SELE, SEMA3F, SKP1, SLIT2, SPRY4, STAT4, STX16, STX1A, SULT2A1, SV2B, TAS2R1, TAS2R40, TSC1, TXNDC12, UCK2, UMPS, VAMP4, VEGFA, WBSR17, WHSC1, WNT10A, WNT10B, YES1, ZAP70, MAPKAPK2
Negative_13162	CEL, CRH, F8, FGB, HGD, IL4, MET, PGD, SP1, TK1, ALG5, AMY2B, BAIAP2, CCL13, CFL2, CHKB, CHPT1, COMP, CTNNA1, CYP3A4, DAG1, FCER1G, FLT3, GLUD2, GNA12, GNAT3, GNB3, HCCS, HIBCH, HIF1A, HSP90B1, HTR2A, IL1A, INPP4B, KIR2DL3, LHCGR, LIMK2, METTL6, MGLL, NCOR2, NNMT, NODAL, NRCAM, NTNG1, OR10J3, OR13C4, OR2A25, OR2G2, OR4Q3, OR6C76, OR8G1, PARVG, PHKG2, PLAT, PNPO, PPARG, PPT1, RDH12, RPE65, SDC3, SHC3, SMAD3, SPCS3, TICAM2, TNFSF18, TOMM40L, UGT2A3, UNC5D, USE1
Negative_13163	F2R, FAH, PTS, RET, RPE, TPR, ACOX1, ACTN1, AKT3, ALG8, APOA2, ATP5H, B4GALT3, BACE1, BCKDHB, CACNG4, CADM1, CCL17, CCL25, CSF2RB, CXCL12, CYP2A7, DAAM2, DCTD, DCTN1, DGAT2L4, DNMT3B, ECSIT, EPHA7, ETNK1, FAHP4, FGD1, FGD3, FUT9, GALNT9, GCNT4, GNAS, GPD1, GRAP2, GSTM5, HARS, IARS2, IL8RA, IRS4, KCNQ1, NOS3, NRXN3, NTRK1, OR13C5, OR2L3, OR3A2, OR4L1, OR51G1, OR5D18, OR5L1, OR8B8, PARD6B, PCYT2, PI4KB, PIGM, PLXNA1, PRKAA1, PTK2B, PTPRF, RALBP1, ROB1, SCLY, SETMAR, ST3GAL6, TLR9, TNFSF18, TP53, TUBA3C, TUBB6, TYMP, UGT2B7, VARS, ZBTB16, ATP6V1G1, GABARAPL1
Negative_13164	AK1, BAD, FAS, FUK, GP6, KMO, LPL, OGT, ACACB, ACSS2, ACVR1C, AGXT2, AKT1, AMDHD1, ARRB1, BCKDHB, BET1, CACNG6, CAMK2A, CCNE2, CDC45L, CDKN1B, CER1, CSNK1G2, CYBB, CYP2C9, CYP8B1, DKK2, ECHS1, EIF4E2, FGF17, FGF21, FGF23, GALNT5, GALNTL2, GCAT, GGT1, GNAI2, GNAT3, HSP90B1, IFIH1, IL7R, KIR2DS4, LAMC2, MCEE, MFNG, MYL5, NFATC2, NSD1, OR2L8, OR3A3, OR4C6, OR51I2, OR52D1, OR5D16, OR5P2, PDE1A, PFKFB3, PFN1, PKMYT1, RELA, RHEB, RPS6KA4, SCIN, SELE, SEMA7A, SOAT2, ST3GAL5, SUCLG2, TAS2R3, TIAM2, TNFSF4, UCP1, UGCGL2, UGT2A1, VEGFB, WBSR22, ZAP70, CACNA2D4, PPP1R12A, TNFRSF10C

Negative_13165	AK2, DDC, EDA, F10, MAX, NF1, PC, ZYX, ACSM3, ACTA1, ADCY2, ADRA1B, ADRA1D, AMPD1, AREG, ASMT, ATP13A2, ATP5I, ATP50, ATP6V1A, BDH2, CACNB3, CAV3, CBLB, CCL2, CLDN6, CTBP2, DDX55, DFFA, DKK2, DUSP3, EPB41L3, ERTL1, F2RL2, FUT8, GRAP2, GSTA5, GSTK1, GSTM1, GTSE1, HNF1B, IFNGR2, IL10RB, IL12RB1, IL20RA, IL23A, ITGAX, LAMB4, MAN1A2, MAP3K12, MYLK3, NLGN3, NOD1, NT5C, NTRK2, OCRL, OR1J2, OR4K5, OR5C1, OR5D14, OR5L1, OR6C76, PDHB, PER2, PHGDH, PI4KB, PIGS, PIGW, PIP4K2A, PISD, PLCD3, PLXNC1, PNPT1, PRKCQ, PTK2B, RASSF1, RND1, SELL, SNAP25, SOCS5, ST6GAL1, STAT1, STAT5A, SV2A, TAP2, TAS2R14, TGDS, TJP1, TKTL1, TRAF5, UGT2B10, UPRT, VAV3, WNT10B, WWP1, HSP90AA1, PLA2G12A
Negative_13166	ME3, TNR, ALDH3A2, ARPC1A, ASMT, B3GNT3, CACNA1C, CASP10, CBLC, CD40LG, CD46, CERK, CHST11, CIITA, CISH, CLDN11, CXCL16, CXCR3, CXXC4, CYBA, CYP2U1, DHRS9, FGF12, GLI3, GNAT3, GPT2, GUCA1A, HSD17B7, IFNA4, INHBA, JUND, KIR2DL1, LAP3, LCAT, MMP2, NCR1, NKD2, NNMT, NOX3, NT5C1A, OR10G8, OR1J1, OR2D3, OR4F5, POMC, PPP2R5D, SETD8, SMC1B, TAP2, THBS3, WNT1, PRICKLE1, TNFRSF1A
Negative_13167	CBS, TNC, ADH5, ADSS, ALDH5A1, ARG1, CBLC, CD34, CDC7, CDK4, CNTF, CSNK2B, CTPS, CYP2F1, CYP4F3, DUSP10, DUSP3, FGF20, FZD4, GALC, GALNT6, GALNTL1, GNA13, GNA14, GNRH2, GPD1L, GSTM2, IL18R1, LIAS, LYPLA2, MYH1, MYL5, NME7, NR4A1, OCLN, OR51T1, OR5R1, PARVB, PLA2G2A, PLA2G2F, PRIM2, PRKAA2, PRPH2, PTK2B, SLC2A2, SLC33A1, SOS1, STX1B, TAP1, TAS2R16, TLR4, TNFSF10, VDAC1, MAPK8IP2
Negative_13168	C3, CSK, ADCY10, ALG8, ANAPC5, AOC2, BHMT, CASP7, CDH1, CHD8, CHRDLN7, COL5A3, COL6A1, CSNK1E, CTNNA1, CYBA, CYP3A5, DDIT4, EHHADH, EIF4E, ENTPD4, FGF19, FGF23, FGF4, GLB1, GLI1, HDAC1, HDAC2, IARS2, IGFBP3, INSRR, IQGAP1, LARS2, MAML1, MMP14, NEUROD1, NOTCH1, OR10Z1, OR2C3, OR4C15, OR56A3, OR5M8, OR8B12, POLE, PON1, PPP1R1A, PRKAR2A, PRKCQ, PRKG1, RELB, SDC4, SEMA4D, SGMS1, SMAD5, SUCLG1, VAMP4, CACNA2D4
Negative_13169	AK5, CFI, DBH, FER, HAL, ABP1, ACAD9, ADH1B, ADIPOR1, ADRB1, ALOX15, ALOX5, AMD1, APC2, ATP5G3, BET1L, CACNA1C, CADM3, CAV2, CCNG2, CD14, CD40LG, CD70, CDC23, CLTA, COASY, COQ5, CSNK1E, DUSP6, FGF11, GALK2, GPD1, HBEGF, HEXA, JAG1, LLGL2, MAN1A1, MAN1A2, MAN2A1, MAP2K5, MAP3K13, MAPK8, MGST3, MMP2, MPST, NEFH, OR10G4, OR2T11, OR3A1, OR52E8, OR52J3, OR52M1, OR52N1, OR52R1, OR5D18, OR6C76, OR7A17, OR9K2, PHKG1, PHKG2, PLCG2, PLXNB2, PRKAA1, RENBP, RPS6KB1, SPRY1, SSX2IP, SUCLG2, TSHR, TUBA1C, TUBB1, UGCGL1, UGT2B11, CACNA2D3
Negative_13170	C8G, EGF, GK2, MPZ, PDC, TAT, TKT, ABP1, AMPD3, ANAPC5, BUB1, CCL15, CD244, CD40, CDC6, CDKN1C, CHDH, COQ7, CPS1, CSNK1G3, CTNNA1, CYP26A1, CYP2B6, GALNT12, GSTM5, HDAC2, IL1A, IRAK2, KCNQ1, KIR2DL4, MAP3K6, MGAT4B, MYL5, NFATC4, NFYC, NME4, NTSR1, NUMB, OR10J5, OR2T4, OR51G2, OR51L1, OR5AK2, OR6C3, PARD6A, PCYT1A, PDXK, PLXNA2, POLR2H, POLR3H, PPP5C, PRKAG1, RBL2, RDH10, RFXAP, SEMA4D, SGPP1, SOCS4, SV2A, TACR2, TAS2R38, UGT1A10, UGT2B11, UGT2B17, UROD, VANGL1, WASF2, WNT10B, WNT5A, YES1
Negative_13171	AGL, CBL, F11, GK, HK1, ACTG2, ATP5A1, BDKRB2, CACNG3, CCR2, CLDN17, CLDN3, COL6A1, CTSS, CYP19A1, DEGS1, ECSIT, FGF10, FOXA3, GNPDA1, GOSR2, IL13RA1, IMPDH2, ITGA6, MAN2A1, MAP3K8, MGST2, NFAT5, NODAL, OR10G8, OR4A5, OR4K17, OR52E2, ORC6L, OXSM, P4HA3, PCCB, PDE8A, PDGFB, PGM1, POLD4, PPP2R2A, PRKCH, RPS6KA6, SEMA3E, SULT1A2, TNFSF14, WNT2, CACNA2D2, CTNNBIP1, MAPK8IP1, ST6GALNAC5

Negative_13172	A2M, AK2, C8G, DCC, PVR, SMO, TH, ABLIM2, ACSM5, AGXT2, ARPC1B, ASCC3, ATG3, BMP8A, BUB1B, C9orf95, CAV3, CCL13, CCL22, CDK6, CFTR, CLCA4, CLDN17, CXCL9, DDX19A, DPM2, DUSP4, ENTPD6, EPRS, FGFR1, FRAP1, FZD10, GCAT, GNA14, GSTA4, HAP1, HDAC2, HSD17B8, ICOS, IL15, ITGA10, ITGA4, ITGA7, KIR2DL4, LCM1, LIMK1, MAP4K1, MCM3, MDH2, MNX1, MTHFS, MYH10, MYH15, NFATC3, NKD2, NMNAT2, OR10T2, OR12D3, OR2M5, OR4P4, OR51B4, OR5D16, OR9A2, PANK4, PARD6A, PDE6G, PDGFA, PPP3R1, PPP3R2, PROC, PSENEN, PTPRJ, RAPGEF3, RRAS2, SAT1, SELP, SETD1B, SMAD4, STK36, TLR9, TRPM5, TUBB4, VAMP1, VARS, VASP, CACNA2D1, SERPINC1
Negative_13173	ADO, AK7, CEL, GNS, RFK, TEC, ACVRL1, ALG13, AREG, ARHGEF4, ATP5H, BACE2, BCMO1, BMP4, CAMK2D, CD247, CD80, CDH1, CSNK1G1, CTNNA2, CYP2F1, CYP3A4, DHRS3, DRD2, ENO2, FGF17, FGF22, GART, GSTA2, HAGH, HLA-DRA, HMGCR, HSD17B2, HSPA8, HTR7, IL24, IL5RA, LIFR, LILRB3, LYPLA1, MAP4K1, MLYCD, MPDZ, NME4, OR10S1, OR1L6, OR2A14, OR2T34, OR4A5, OR4C16, OR4Q3, OR56A1, OR8J1, OR9A2, PARVB, PDE11A, PDE3B, PIK3CB, PIM2, PPP1R3C, PPP2R1A, PRKCA, PRKCG, PRKG2, PTEN, RAC1, RHEB, RUNX1, RXRG, SCLY, SREBF1, STAT3, TIRAP, TP73, TUBB4Q, VEGFA, WNT1, YARS, ATP6V0A2, ATP6V1C1, HLA-DPB1, PNLIPRP2, TNFRSF10A
Negative_13174	C3, C6, JUN, ABLIM1, ACACA, ALG10, ALS2, AMDHD2, ARPC2, ATP5J, BUB1, CACNA1G, CALML3, CBR3, CCL11, CHRM1, COL4A4, CRY1, CXCL12, CYP2A13, CYP2B6, CYP3A43, DAD1, DHRS4, GAD1, GALNT7, GUSB, HAAO, HNF4A, ICAM3, IGF1, KLRC1, MAPK12, MAPK8, MAPK9, MCM6, MOV10L1, MTHFD2, NCOA4, NCSN, OGDHL, OR2G6, OR52R1, OR5D18, OR5K2, OR6A2, OR7C2, OR8H3, PCCB, PLCE1, PLEKHA8, POLR2K, PPP2R5A, PTCH1, QARS, RAF1, RENBP, RPS6KB1, SAT2, SETDB2, SLC2A1, TSHR, TUBA4A, VAV1, WASL, ATP6V1C1, CACNA2D1, TNFRSF13B, TNFRSF14
Negative_13175	CP, FUK, KIT, LPO, LYN, ACAD9, ADRA1D, ADRB2, AGPAT2, AGTR1, ALAS1, ATP5L, B3GALT1, B3GAT3, B4GALT4, BUB3, CACNG1, CALML5, CD59, CDC14A, CDKN2A, CHDH, COL1A2, CREB1, CRLF2, CTNNA2, DDIT4, DGKD, ENO1, ENTPD5, ETNK2, FGF10, GADD45A, GALNT12, GDF5, GNRHR, GRIN1, GSTA3, GUCY1B3, GUCY2C, HA01, HCCS, HTR6, IL17B, IL29, IL8RB, ITGB5, LIAS, LIPE, LRP5, MAD1L1, MAP2K7, MAPK1, MCM3, MTMR6, MYH6, NOX1, NRXN1, NTN1, OR1N1, OR2T34, OR4C13, OR4C15, OR51T1, OR52B6, PARD6A, PDE11A, PDE4A, PDE7A, PGK1, PLCB3, PRKAR2B, PYGL, RAC3, RAPGEF2, RDH12, RGS3, RPIA, SKP2, SMAD5, SRD5A2, STX1A, WASF1, XCL2, YARS
Negative_13176	AK7, ASL, CAT, GLA, ID2, MYC, PLN, SI, SYK, TPR, ACAA1, ACSS1, ACYP2, ADCY2, AVPR1B, BCL2, C9orf95, CADM3, CCL16, CCR8, CDH3, CRLS1, CYP7A1, DDOST, DGKD, DRD5, DVL1, E2F4, EFNA2, ENTPD7, EPHA4, ERBB4, F2RL2, FARP2, FGF5, FOXA2, FUT7, GLG1, GNB1, HLA-DOA, HNMT, IL1RAP, INPPL1, IRS2, ITGA2B, KIR2DS5, LDHAL6A, LIAS, MADCAM1, MBL2, METTL2B, MPDZ, MTAP, MTHFS, NAGLU, NCAM1, NEFM, NEUROD1, NKX2-2, NRXN1, OR2L13, OR4K17, OR4K5, OR51G2, OR52I1, OR52K1, OR52N4, OR56B4, OR5M3, OR7A5, OR8U1, ORC5L, PARS2, PDE6H, PDE7A, PHGDH, PIK3C2G, PIK3R4, PLD1, PMM2, POLA2, POMC, PTPRC, RHOA, RUVBL1, SC4MOL, SEMA3B, SMURF1, SOAT1, SRD5A1, ST3GAL6, TJP2, TMLHE, TP53I3, TXNDC12, ATP6VOE1, EIF4EBP1, HSD17B12, PRICKLE1
Negative_13177	AK7, CTH, GSS, ALAS1, ARHGEF7, ASAH1, ATG7, BLVRB, BMP4, CCL4, CDC23, CDH4, CLDN14, CRKL, CXCL1, CXCR3, DIAPH3, DTX4, EHHADH, FGD3, FOXO3, GLDC, GPT2, IFNB1, IPPK, KIR2DL4, LICAM, LALBA, LTB4R2, MECR, MGAT1, NFKB2, NRG3, OR10G7, OR1I1, OR4C11, OR7G1, OR9A2, PAICS, PANK2, PGM2, PLA1A, PMM1, PON2, PPP2R1B, PRKCQ, PRODH, RBKS, RELB, RPS6, SESN3, SH2D1B, ST3GAL3, TOMM40L, TP53, TSC1, ULBP1, ULBP3, UNC5B, HSD17B10

Negative_13178	CAD, CD6, HGD, MIF, MPI, PGP, TNR, ACP2, ALDH3A1, ALDH6A1, ALOX15, ANA PC1, ANAPC10, ATP4B, B3GAT1, CACNB1, CDK2, CIITA, CLTC, CSNK1A1, CSN K1D, CSNK2A2, CYP2C8, EFNA1, EGLN1, ENO3, ENTPD4, FM01, FUT2, GALNT1 1, GALNT5, GAMT, GPD1L, GRIN2D, HHEX, HLA-G, HMGC, IFNA10, IFNA4, IL11RA, IL1RAP, IL24, IL9R, ITGB7, JAK3, LAM C1, LTB4R2, LTBR, MAP2K4, MCCC1, MMP1, NFX1, NKX3-1, NRXN1, NT5C1A, NUMB, OR111, OR2G2, OR4C6, OR51E2, OR5D13, OR8H2, P IGT, PIK3CD, PLTP, PPAT, PPOX, PTGS1, RBX1, RDH10, RETSAT, RFWD2, SMA D2, SPRY4, TAS2R9, THTPA, TNFSF11, UGT1A10, XYLT2, ST6GALNAC6
Negative_13179	CEL, CP, GH2, KIT, ACACA, ACTA1, ACTG2, AGRN, ALDH1A3, ARPC3, ASMT, AT P12A, ATP4A, ATP5B, BUB1, CARS2, CD244, CLTA, CNTNAP1, CXCL9, CYP11B 1, CYP26A1, CYP2S1, EFNA2, FCGR3A, FGF19, FGF2, FIGF, FM02, FUT3, GAL NT11, GALNT7, GART, GDF7, GFPT2, GJD2, GRIA1, HSD11B1, IDH2, IFNA21, JAK1, KIR2DL3, LCAT, MAOB, MAPK10, MBL2, MECP, MGAT1, MS4A2, MYL2, NF KBIB, NME2, NOX1, NUMB, OR2A2, OR52M1, OR52N4, OR6M1, OR8H3, ORC2L, P DE1B, PFKL, PIK3R1, PIP5K1A, PLOD2, PMM2, POLR2I, PPP1CC, PRKACA, PT CRA, PTPMT1, RAPGEF3, RCHY1, RPS6KA4, SOCS1, SOCS3, STX12, TAS2R10, TNFSF12, TRHR, UBA7, UNC5D, UXS1, ALDH18A1
Negative_13180	DBI, GSS, STS, VCL, ZYX, AADAC, ABL2, ACTN1, ACVR2B, ADRB3, ALDH5A1, A LDOC, APLP1, ATP13A2, B3GALT1, BACE1, BACE2, CALML5, CCL26, CLCA2, C XCL13, CYSLTR1, DDX18, DPM2, DUSP1, EPHX1, HAAO, HHIP, IL13RA1, IL18 RAP, ITGAX, KAT2B, KIR2DS5, MAN1B1, NADSYN1, NFKBIE, NMNAT2, NRP1, O DC1, OR4E2, OR52J3, OR7G2, POLR2K, POLR3B, PPID, PPOX, PRKAR1A, PRKC E, PTPRZ1, RASGRP2, RFX5, SELL, SESN1, SMAD9, SMC1A, TAS2R40, TOMM40 , TSTA3, TUBB2C, VTI1A, WNT10A, XIAP, CSNK1A1L
Negative_13181	F12, PLN, ACP5, AHCYL1, AKR1B10, ALDH1L1, ARSE, ATF2, ATP6AP1, B4GAL T1, BCAR1, C9orf95, CDKN1C, CHST13, CLDN3, CTPS, CXCL1, CYP2B6, DDIT 3, DGAT1, DKK1, EDNRA, EPB41L2, FARP2, FDFT1, FGD3, GALT, HADH, IL10R B, INSR, JAG1, LARS2, LFNG, LRRC4C, MAP4K3, MGAT4B, MMP7, MTHFD2, NCF 4, NRXN2, NSD1, OLR1, OPLAH, OR1D5, OR2AG1, ORC6L, PAK2, PARD6G, PDXK , PGAM2, PGAM4, PGS1, PHKG1, PIGS, PLXNB2, POLR2I, RAPGEF1, RASGRF1, SDC3, SH2D1A, STAT5A, STX4, SUFU, TAS2R3, TLN1, TLR5, YKT6, EIF4EBP1 , HLA-DRB4
Negative_13182	CRK, DCT, F10, FES, GNS, UBC, ACVR2B, ADCY4, B4GALT7, CACNA1S, CCL23, CTPS, CXCR6, DDX54, DTX3L, DUSP10, ECSIT, EI24, EPHX1, FGF3, GPD1, HN F4G, HSD3B7, IDH2, IGFBP3, IL23R, IMPA2, ITGA6, MAP2K1, MKNK1, OR10X 1, OR1L8, OR2T10, OR51T1, OR52D1, OR7A5, PFKFB3, PHKA2, PKM2, PLAUR, PLCB4, PLXNB1, PPOX, RELA, RGS3, SFRP2, SNAP23, SSH1, STAT5A, TACR3, TM7SF2, TYROBP, UGT1A10, UGT2A3, HSD17B12, PPP1R12A, TNFRSF11B
Negative_13183	F8, GNE, PTS, ACAT2, ACTN1, ADCY9, ATP13A2, ATP2A1, ATP2A2, ATP5I, BB OX1, BCMO1, BDKRB1, CACNG5, CALML3, CBR3, CDC2, CDC26, CREB3, CXCR3, DDX56, EDNRB, FGF17, FZD8, HA01, HEXA, IDUA, ITGA2, KCNQ1, L1CAM, LAM C3, LCAT, MAT2B, NEFM, OLR1, OR1S2, OR2H1, OR2Y1, OR4N4, OR5AU1, OR8S 1, OR9A4, OXCT2, PERP, PIP5K3, POLR2H, PPARD, PPP2R2C, RAP1A, SEMA4F , SHC3, SKIV2L2, SMURF2, SPI1, SPTLC2, STAT6, SULT1A1, TSNARE1, TYRP 1, WASF2, YKT6, ATP6V1B1, GABARAPL2, HSP90AB1

Negative_13184	CBS, CEL, KDR, OGT, ABLIM1, ADRBK2, AKR1C1, ALDOB, ANGPTL4, APH1A, BDH1, CCL15, CCR1, CD55, CLOCK, COX10, CXCL2, DAAM2, DAPK1, DHCR7, DVL1, ENO3, EPHA8, FADS2, FTH1, GALNT2, GALNTL5, GLI2, GNAT3, GNAZ, HSD17B3, HTR6, IFNA13, INPP1, ITGA2, ITPKA, KIR2DL1, KRAS, L1CAM, MAP3K3, MEF2C, MYH14, MYLK3, NCAM1, NCR1, NLGN2, OR10J1, OR13J1, OR1L1, OR2F1, OR2G2, OR5AK2, OR7D4, OR9I1, OXTR, P2RX1, PDE2A, PIP4K2C, PLCG1, P OLR2A, PPAT, PRKAR2B, PSME1, PTAFR, PTPMT1, PTPRF, RBPJ, RELA, RUNX1T1, SARDH, SELE, SESN1, SHC3, THY1, UGP2, UGT8, UMPS, VEGFA, HLA-DQB1, SERPINF2
Negative_13185	AK2, AR, F8, IL5, JUP, ABLIM1, ACMSD, ACOT11, ACTG1, AGTR1, ATP5D, AXIN1, CACNA1G, CASP3, CCDC6, CD34, CD48, CD86, CDK6, DHFR, EDNRB, EGLN1, EPHA6, FM01, FSHR, GAB1, GMPR2, GNB1, HSD11B2, IFNA5, IFNA6, IL13, IL28RA, INPPL1, IPPK, KIR2DL1, KIR3DL2, LAMA4, MAN1A1, MAP4K1, MAPK9, MTAP, NARS, NEU1, NOD1, NT5C1A, OR10H2, OR10K2, OR10Q1, OR2T1, OR3A2, OR4N4, OR51L1, OR52N1, PARVA, PDE6G, PLCB4, PLOD3, PLXNA3, POLR1E, POLR2E, PPP1R3B, RBPJ, RDH8, RHOQ, SEMA3G, SKIV2L2, ST3GAL4, TCF7L2, TGFB1, THBS2, TNFSF18, TOMM40, TRHR, TYK2, TYMP, UAP1, UBA1, VCAM1, WASF1, WNT10A, YWHAG, HLA-DRB4, MAPKAPK2, PRICKLE2, TNFRSF10A, TNFRSF12A, TNFRSF14
Negative_13186	BTC, CP, ID3, AACS, ABLIM2, ACHE, ACP, AGTR1, ALG3, ALS2, ASNS, BACE2, BCAT2, CACNA1S, CALML6, CASP8, CBR1, CCL21, CCNE2, CFLAR, CSH1, CSNK2A2, CTPS2, CXCL12, DAG1, DDHD1, DEGS1, DOT1L, EIF4B, ENPP2, FZD8, GALK2, GALNT1, GNPAT1, GSTM1, HPRT1, IFNA10, IL22, IL24, ITPK1, KLKB1, MAD2L2, MAP3K12, MAPK1, MDH2, MGAT2, MYL7, NARS2, NEFM, OR10G2, OR10H5, OR10K2, OR3A3, OR4K14, OR52H1, OR5P3, OR5V1, PAK2, PDGFRA, PHKG1, PIP5K3, PLOD2, PPP3CA, PRKG2, PRPH, PTCH1, RARS, SPRED2, SREBF1, TAS1R3, TGFB2, TKTL2, TP73, CACNA2D2, MAPK8IP3, TNFRSF1A
Negative_13187	AK1, FYN, GBA, HK3, RDX, TH, ABCC8, ACP1, ARHGEF7, ARPC5L, ATIC, BHMT, BMP4, BUB1B, CALML3, CCNA2, CDKN2C, CLCF1, CLOCK, CLTA, CMAS, COL3A1, COL5A3, CPT1A, CREB3L3, CX3CL1, CYP17A1, CYP3A5, DBF4, ENPP7, EPHA3, EXTL3, FOXO1, G6PC, GABARAP, GAMT, GGCX, GMPR2, GRIN2B, GRLF1, HPR1, HTR5A, IDUA, IL12RB2, IL28B, IMPDH2, INPP1, INSR, LIMK1, LIPT1, LYPLA1, MAT2B, MDH1, NFATC3, ODC1, OR10AG1, OR10H1, OR1L6, OR1L8, OR1M1, OR2B6, OR2T2, OR4D1, OR4K2, OR51B2, OR52E6, OR52M1, OR5M9, OR6B3, OR6C76, OR6S1, OR8S1, OR8U1, PANK2, PARD6A, PLD1, PLTP, POLE3, PPP1R3A, PPP2CA, PRKCA, SELP, SLC27A4, SMPD1, SSX2IP, STEAP3, TICAM2, TIRAP, TMLHE, TPK1, TRPC1, WARS2, WNT3, YWHAB, ATP6V1B2, ATP6V1C2, ST6GALNAC6, TNFRSF13B
Negative_13188	BID, FGB, OAT, ADH1A, AGXT, AHCY, ALPI, ALS2, CACNA1F, CCL28, CDK5, CDKN1C, CHIT1, CHRNA7, CHST11, CSNK1E, CXCL1, CYSLTR2, DNMT3L, ENPP3, FGF18, FGF19, FZD8, GALT, GGPS1, GLYCK, GNAI3, GTSE1, HRAS, ICOS, IKKB, IKKKG, IL17RA, IL22, IMPA1, LCMT2, MAML2, MCEE, MGLL, NFYB, NOD1, NOTCH3, NQO1, NTRK1, OR10A2, OR2AG2, OR52B4, PGAM1, PGM3, PIGC, PIGT, PIGU, PIP4K2B, PIP5K1B, PLXNB2, PMAIP1, PPM1A, PPP3CC, PRKG2, PSME1, RPE65, RUNX1T1, SDHA, SLC12A2, SPRED1, ST3GAL1, ST3GAL6, TAS2R60, TRAF4, TUBB2C, TUBB6, ULK2, ULK3, WNT5B, SERPINA1
Negative_13189	C2, ME1, MOS, TXK, ACO2, ACSM4, ADIPOQ, AGPAT1, ALG8, AMPD3, ATP5A1, BMPR1B, C9orf95, CDC6, CDC7, CDK5, COL4A1, COL4A6, COQ5, CREB3, CSF1R, CTSG, CXCL5, CYCS, DDHD1, DFFA, DTX1, EFNA3, FGF2, FIGF, FOSL1, GNPA1, GOT1, GP1BB, GSTO1, IKKKG, IL23A, IL2RA, JAK1, KARS, MAPK11, MAPK12, MGAT2, MYH7, NFE2L2, NNMT, OGDHL, OR10G2, OR1L8, OR1N2, OR2C1, OR2T3, OR51G2, OR5H2, OR5V1, OR8I2, P2RX7, PDE3A, PDGFRA, PDX1, PGM1, PIP5K1B, PLCB3, PLCE1, POMC, PON1, RAC2, RXRA, SOAT1, SUCLG1, UCK2, WSCR17, WNT1, XCR1, CACNA2D3, SLC25A31, TNFRSF12A

Negative_13190	<p>PC, PGD, PGP, PTS, TAT, ACSM2A, AKR1B1, AKR1C3, ALDH1A3, AREG, ARG2, A RNT, ATP5G3, ATP5J, AVPR1A, B4GALT1, CCL26, CD40LG, CES7, CSH1, CTNN A2, DAPK2, DERL1, DGKZ, DNMT3L, ENTPD3, FASN, FBP2, FECH, FGF9, FMO2, GNG13, HIBADH, HLA-</p> <p>DOA, HSD3B1, KLRC3, KNG1, LIPC, MAD2L2, MAP3K3, MECR, NAGK, NAGS, NFY A, NQO1, NTN1, OR10A3, OR10G7, OR10R2, OR11H4, OR13J1, OR1N2, OR2G3, OR4A15, OR5H2, OR7A5, OXTR, PCYT1B, PDE4D, PDXK, PGLS, PLA2G4A, PLCZ 1, PLIN, POLD4, POLR3K, PORCN, PPM1B, PPP1CC, PPP2CA, PRKG2, PROC, PS ENEN, RPN1, RRAS, SETDB2, SLC27A5, SPRY4, STAT5A, STK4, SV2A, TACR3, TALDO1, ULBP2, CACNA2D4, HLA-DQA2, HSD17B12</p>
Negative_13191	<p>AK2, CFI, FYN, IL7, IVD, LPL, ACACB, AMY2A, AQP7, ASPA, CACNG5, CAMKK1 , CHAT, CLCA2, CNTNAP2, CSF2, CXCL2, DDX54, DDX56, E2F3, EPHA4, ERBB2 , FLOT2, FTH1, GAL3ST1, GCDH, GUCY2D, GUCY2F, HMGCS1, HMOX2, HSD17B8 , HYAL2, IFNGR2, IL2RB, ITGAE, KARS, LEFTY2, LIMK1, MAP2K6, NOS3, OR1 OA2, OR2AG2, OR2F1, OR2G3, OR2T3, OR2W1, OR4K14, OR4N2, OR52D1, OR52 E6, OR52J3, OR8K3, P2RX2, PECAM1, PIGW, PIK3CB, PLOD1, PTDSS1, RXRG, SAT2, SETMAR, SMAD2, SPTAN1, STX8, TICAM2, TLR9, TPI1, TUBB4Q, TYRP1 , C1GALT1C1, PNLIPRP1, ST6GALNAC4, TNFRSF14, TNFRSF6B</p>
Negative_13192	<p>EGF, LEP, LPO, NPY, ACO2, ADCY6, ALDH9A1, BCKDHB, CACNB2, CCNB2, CD38 , CD99, CDK2, CDK6, CHDH, CHRM3, CLDN8, CNTF, CXCL9, DLST, DMGDH, DUSP 6, DVL1, FTCD, FZD4, GALNTL1, GCNT4, GGT7, GSTP1, HA01, HDAC1, IL10RB , IL1B, IL8RA, ITPKA, KCNB1, MAPK12, MIOX, NFATC3, OR10S1, OR2A5, OR2 AG2, OR2F2, OR4N2, OR5A1, OR8G1, ORC3L, P4HA2, PAK7, PFKL, PIAS4, PIG Q, PLD1, RND1, RPS6KA2, RXRA, SELE, SEMA4B, SHMT1, SLC25A4, SPRY3, ST 8SIA1, TBL1X, TLR2, TLR9, TUBB6, VARS, YWHAZ, ZIC2, ATP6V0A1, SERPIN A5</p>
Negative_13193	<p>AMT, C1S, C9, IL5, ME1, ADIPOR1, ALCAM, ANAPC10, ANAPC11, AREG, ATP5A 1, BMP5, BTRC, CASP8, CCDC6, CCKBR, CD44, CD70, CD72, CHEK2, CHUK, CII TA, CYP26B1, DDOST, DFFA, DGUOK, DOLPP1, DTX3L, DUSP1, EXOC7, FDPS, F ZD2, GALNT14, GALNT8, GALNTL4, GLB1, GLI1, GNA13, GPT2, HTR7, IFNA6, IRAK4, ITGAM, KIR2DS5, LDHD, MAP2K2, MAPK13, MDH1, METTL2B, NFKBIA, OR10A7, OR1K1, OR2T11, OR51F1, OR5B12, OR9A4, PAK2, PCK2, PNPLA3, PP P2R2B, PPP2R5D, PPP3R1, QARS, RARS, RHOA, ROCK2, SARDH, SMAD4, SMPD1 , SRGAP3, TIAM2, TOMM40L, TRIP10, TYMP, UGCGL2, USE1, VEGFC, WHSC1L1 , XYLB, AASDHPPT, ATP6V1C2, TNFRSF13B</p>
Negative_13194	<p>C8A, CBL, EDA, MAG, ADRA1D, AKR1B1, ALG12, ALG13, APPL1, ATP6VOB, BDH 2, BMPR1A, CACNB2, CASP6, CASP8, CCL22, CDK4, CLDN4, CPT1B, CRLS1, CY FIP1, DDIT3, DDX23, DHDDS, DOLPP1, DRD5, FCGR3A, FGD3, GALNT1, GNAI1 , IDI1, IGF1R, IL12A, KIR2DL2, LARS, LDHC, LEFTY1, MAOA, METTL6, MICA , NEFL, OR10A4, OR1G1, OR2D2, OR2T3, OR4F5, OR5V1, OR6C74, P2RX7, PAK 7, PDE1C, PGLS, PHPT1, PLAU, PNLIP, PPP2R5E, PVRL1, RAB5A, RARS2, RFX AP, TPH2, ULK3, WNT7A, WNT8A, ATP6VOA4, B4GALNT1, CACNA2D1, TNFRSF1 0C</p>
Negative_13195	<p>AK1, ACADL, ADCY1, ADCY6, ADH1B, ALG2, ARPC1A, ATP4A, BET1L, C3AR1, C ACNA1E, CCL25, CHD8, COQ7, CPT1A, CREB5, CTNNA2, DHCR7, DPM3, DUSP16 , EARS2, FABP3, FZD3, GALNTL5, GNA12, GRIA1, GSK3B, HCCS, IL24, IL7R, JAM3, KLRK1, LILRB3, LIPF, MAP3K14, MTMR6, NCF4, NCR2, NEU2, NTRK1, O R13A1, OR2A2, OR2K2, OR56A1, OR7D2, OR8J1, OXTR, PANK3, PARD6B, PDE1 C, PDHB, PFKFB2, PIM1, POLD3, POMC, PPP2R2A, PRDX6, RFXAP, RPS6KA5, T AS2R14, TRAF3, TSNARE1, TYROBP, UGP2, VDAC1, ATP6VOA4, CTNNBIP1, PD CD1LG2</p>

Negative_13196	AK2, EPO, F2R, TK1, TNF, UBC, ACVR2A, AGRP, ALDH1A2, ALG5, ALOX15, ALOX15B, ARHGEF7, ATP5G1, ATP6V1F, B4GALT3, BCL2L1, C1QC, CASP10, CCL20, CD244, CD80, CDKN1B, CPT1B, CSF2RB, CSF3R, CYP2A13, CYP2U1, CYP3A5, DAG1, DDIT3, DGKZ, DVL1, ENO2, EPHA4, FCGR3A, FGF9, FTMT, FZD4, GAD2, GAL3ST1, GAMT, GMD5, GSTZ1, HIF1A, HNF1B, HSPA8, HTR2C, IFNB1, LDHAL6B, MYLK3, NEGR1, NR1H3, OR10H1, OR13C5, OR2T12, OR2T3, OR4A15, OR52N1, OR6C2, OR6K3, PAK1, PDGFC, PIP5K1C, PITX2, PLA2G2D, PNPO, PTCH2, RELA, RFWD2, RHEB, ROCK1, SC4MOL, SETD1A, SMPD2, ST3GAL5, SULT1A1, TFDP1, TKTL2, TNFSF10, TUBB3, WNT11, ATP6V1G2, CACNA2D1, CACNA2D4, HLA-DQB1, HSP90AA1, PNLIPRP2, TNFRSF18
Negative_13197	GBA, MSN, PTS, RDX, TK2, ACAA2, ACTA2, ACYP1, ADH7, ADORA2A, AGXT, AMPD2, AMY2A, ANAPC11, BDKRB1, BIRC3, CARS, CBLC, CCR10, CHEK2, CHRM3, CHSY3, CYP3A5, DTYMK, FZD10, FZD9, GALNT14, GARS, GCNT2, GDF7, GPAM, HNF4G, HNMT, HTR6, IFNAR2, IL12B, IL28B, IMPDH2, INPPL1, LRRC4C, LTBP1, MPP5, NCOA4, NSD1, OR10G8, OR14C36, OR1B1, OR1C1, OR2H1, OR51L1, OR8K1, P4HA1, PDE10A, PER3, PLA2G10, PMAIP1, PMM2, PPP1CB, PPP2R2B, PPP3R1, RBX1, RENBP, RETSAT, SARDH, SARS2, SDC3, SDHA, SELP, SEPHS1, SGM2, SGPP2, SIAH1, SPI1, SSH3, STEAP3, STX18, SULT2A1, TAS2R9, TM7SF2, TUBA1A, UNC5A, YWHAB, HLA-DPA1
Negative_13198	C5, DLD, EPO, GAA, SP1, ACAD9, ACAT2, ADCY9, ALG1, ALG13, ALOX15B, ARHGEF1, ATP5A1, ATP6V1F, BLNK, CAMKK2, CDH2, CHKB, COL2A1, COL6A2, COQ7, CRHR1, CSDA, CSF2RB, CYP11A1, CYP27A1, CYP2A13, DPM1, EPHA6, EPHA8, EPHB4, ESPL1, FZR1, GAMT, GUK1, HMGCS1, HSD11B2, IDH3A, IL10, IL11RA, IL12RB2, IL17RA, IL19, IL28A, INHBC, INSR, IPPK, KLRC2, KNG1, LAMB4, LIPC, LLGL1, LMO7, MAPK11, MASP2, MCCC1, MLLT4, MTHFR, MYH7, NARS2, NME2, NOTCH2, NPAS2, NRG1, NUDT8, OR1I1, OR1J1, OR1L6, OR2H1, OR52J3, OR52W1, OR5H2, OXCT2, PARD6B, PFKFB1, PIGO, PIGP, PIK3CG, PPAP2B, PPP2CA, RPSA, SHC3, SLC27A5, TBL1XR1, TLR5, UGT2A1, VAMP2, YWHAG, ATP6V1B1, CACNA2D3, MAPK8IP2, PNLIPRP2, TNFRSF10B
Negative_13199	F2, F8, F9, GK2, ACMSD, ADH6, AKR1A1, ANAPC10, AOC2, ATF2, BACE2, BPGM, CALML6, CCL15, CCL24, CHKB, CLDN6, CLDN8, CLTA, CSAD, CSDA, CYBB, CYCS, CYP11B1, CYP2A7, DIAPH1, EGLN3, EHMT1, ENTPD5, FGF19, FPGS, GALNT14, GNRHR, GSTZ1, GYS2, HSPA1B, INHBE, ITGB4, JAG1, KCNB1, LDHC, LDHD, MALT1, MAPK10, MDM2, MMP2, MYH3, MYH6, NEU3, NFE2L2, NRCAM, OR10H2, OR10P1, OR11A1, OR1C1, OR2T33, OR2T6, OR5M8, OR8K5, PARVB, PAX4, PDE6G, PIGN, POLR2G, PRDX6, RPN1, SETD2, SLC33A1, SSH2, SV2C, TLN2, TP53, TPI1, ULK1, UPP2, WWP1
Negative_13200	AK3, CFD, CFI, DCC, MIF, ACTG2, ACY1, APOE, CARD11, CCL23, CCNA1, CD59, CDC25C, CLCA4, CMBL, COL4A4, CTSL1, CXCL1, DDX52, DFFB, DUSP9, EPB41L2, EPHB2, FCGR3A, FGF11, FGF2, FZD7, GOT1, IRS2, KIR2DS4, L1CAM, LIPE, MDH1, MGAT2, MKNK1, NCOR1, NCR1, NFATC3, NOD1, OR1C1, OR2AG2, OR2K2, OR52J3, PKLR, PLA2G3, POLA2, PRKAG3, PROS1, RASGRP4, RPS6KA1, SOD1, SRGAP3, SULT1A1, TAS2R40, TAS2R42, UGP2, UNC5B, WBSR22, WIF1, ALDH18A1, GABARAPL2
Negative_13201	CAD, F2R, FGG, HK1, HK2, HYI, LYN, MTR, ABLIM3, ACTN2, AHCYL2, ALDH3B1, ALG6, ALOX12, ALPI, ALPP, APLP1, ARPC1A, BAI1, BUB1B, CACNA1A, CANT1, CASP8, CASP9, CBR1, CCL4, CD72, CD79A, CNTNAP1, COL5A1, CPT1A, CREB3L2, CYP26A1, CYSLTR1, CYSLTR2, DAAM1, DAXX, DDX18, DPYSL2, ENAH, ENTDP8, ETS1, FGF12, FMO4, FOXA3, FPGT, GCNT1, GGPS1, GGT6, GMPPA, GYS2, HMGCL, HSPA8, IL22, IRF9, ITGAD, LAMC1, LCMT1, MAP3K8, MGAT3, MGAT5B, NEFL, NFATC1, OR10K2, OR1K1, OR4K15, OR4Q3, OR51T1, OR52E2, OR52J3, OR5AC2, PDE4D, PGM3, PIGC, PKLR, PLA2G5, PLXNA3, PSME2, RAPGEF1, RASGRF2, RDH11, RUVBL1, SELPLG, SPHK1, STAT5B, STX6, TAS2R14, THBD, TNFSF14, UBE2L3, UGCG2, XCR1, XYLT1, B4GALNT1, CTNBP1

Negative_13202	TEC, AC01, ACSL3, ACTG2, ALG1, ALG13, ATG3, CAMK2A, CD55, CDC23, CRLS1, CSH1, CUL1, CXCL5, CYP11A1, DAXX, ENPP6, GALK2, GALNT12, GALNT3, GLG1, GNA12, GNB1, GUCY1B3, GUCY2C, HARS, HES1, HSD11B1, IL25, IQGAP2, ITGAV, JAG1, KIR2DS5, KNG1, LDHB, MCCC2, MDH1, NCR2, NNMT, NUDT8, OCLN, OR10H3, OR51E2, OR8G1, PDHA2, PGK1, POLR2B, POLR2E, PPAP2C, PPM1B, PRKCG, SHMT2, SIAH1, SORD, SV2B, TAS1R2, TJP1, UPP1, XCL2, ZNRD1, TNFRSF11A
Negative_13203	CDA, F8, FYN, GLA, ME3, PC, SDS, TPR, ACTG1, ADRB2, ALG12, ARPC2, ARPC3, ATP5J, BAAT, CACNB1, CBLC, CFL1, CIITA, CLDN18, COL6A1, CYP2C19, DCSD, DGAT2, DPYSL2, DTX3L, FABP1, GGT5, GNA01, GPLD1, HSD17B3, HTRA2, HYAL1, IL12RB1, IQGAP3, IRAK2, ITPA, KARS, MAOB, MCM4, NAE1, NARS2, NCSTN, NT5C3, OR10A3, OR11H4, OR12D3, OR13C3, OR1Q1, OR2G3, OR2M5, OR51B4, OR6S1, OR6Y1, OR9Q2, ORC6L, P4HA1, PDE1C, PIGS, PPOX, RARS2, RRAS2, SARS, SDHA, SEMA3G, SEPHS1, ST3GAL3, STX16, TAS2R7, UNC5D, VKORC1, XYLT1, YWHAZ, HLA-DQA2, ST6GALNAC4, TNFRSF12A
Negative_13204	BTC, EGF, PTS, ACVR1, ADORA2B, ALDOB, ARAF, ASNS, ATP5G3, BBOX1, CACNG7, CCDC6, CCL27, CES7, CHST13, CLDN11, CSF2RB, DDX50, DVL3, E2F2, ENAH, EPB41L1, EXOC7, FGF12, FRAT1, GLYCTK, GUCY1B3, H6PD, HMGCR, HMGS2, HSPA8, IDH3A, INMT, INPP1, JUND, KLRC3, KRAS, MARS, MYLK2, NCF2, NFYC, NOX3, NT5C1B, OR10G2, OR2L8, OR2M4, OR4L1, OR51M1, OR52B4, OR52D1, OR5H2, OR9G4, PANK1, PARD6A, PDE4D, PIGH, PLCB4, POMC, PPA1, PPAP2A, PPP2R5A, PPP3CC, PSME3, PSPH, PTGIS, PTGS1, PYCRL, QARS, RAP1A, ROB01, SETDB1, SKP2, SLC27A5, ST3GAL3, TNXB, TUBA4A, UCKL1, WASF1, ATP6V1B1
Negative_13205	AK2, F2R, FH, PVR, RDX, AASS, ACAA2, ADH1B, ADH4, AK3L1, AQP7, ARHGEF7, ATP12A, B4GALT4, BDH2, BLVRA, CCDC6, CCL16, CCL27, CD3E, CFL2, CREB3, CSNK2B, CTNBN1, DFFB, DTX1, DUSP16, GJD2, GLS2, GNB3, GRIA3, HARS, HIP1, HSD11B1, HTR2A, HTR2C, IBSP, IFNA10, IFNA7, IMPDH1, INHBB, ITGA2B, LGMN, MAP3K14, MAP3K5, MAPK13, METTL6, MYH13, MYH7, MYLK2, NCF4, NCR2, NUMB, OR1E2, OR1I1, OR2G2, OR52I1, OR52N5, OR56A1, OR5B21, PDPK1, PFKL, PGAP1, PIAS4, PIK3C2A, PLAUR, PLIN, PPP2R5D, PSEN2, PSENN, PSME1, PTGIS, PTPN11, SENP2, SLC25A6, ST3GAL4, TRAF3, TRIP10, TSHR, TUBAL3, VAMP3, ATP6VOA4, PRICKLE2
Negative_13206	CKM, FYN, IHH, KIT, ACSM3, ALG2, AMY2B, ANAPC11, ATP12A, AXIN1, B3GALT2, BET1, CCL13, CSNK1G2, DERL1, EFN2, EPRS, FGF3, GRAP2, GRIN2C, GRLF1, GUK1, HLA-C, HMGCL, HTR5A, IFNA16, IL21R, IL24, IL9R, LAMB2, MCAT, MCM5, NUDT12, OR52I2, OR8I2, PDXK, PIGS, PLOD3, POLE2, POLR3G, PPM1B, PRIM1, RAF1, RAPGEF4, ROBO2, RRM2B, SEMA7A, SFRP4, SLC33A1, SOS2
Negative_13207	AGK, C3, CTH, F11, HPD, ITK, SHH, TNC, ZYX, ACSS1, ACY1, ALDH9A1, AMY2A, ARRB1, ATP5D, ATP6V1A, ATP6V1D, BLVRA, CD28, CDKN1A, CDKN2B, CRY2, CSF1, CTNBN1, CYP2F1, DAAM2, DDX56, ENTPD1, ENTPD8, FADD, GJD2, GMPR, GNPAT, GPT2, GUCY2D, HARS, IFNK, IKBKB, IL18R1, ITGA8, ITPKB, KLRC2, LYPLA2, MAD2L2, MASP1, MECR, MTHFR, OPLAH, OR10G8, OR13C3, OR13H1, OR51G2, OR52L1, OR56A4, OR6F1, PDHA2, PGS1, PIGH, PIK3CD, PLEKHA8, PTPN6, RBL2, SH2D1B, SHC3, SIAH1, SKIV2L2, SPCS1, SRD5A2, TNFRSF4, TRPC1, TUBAL3, TYMP, ULBP2, ATP6VOD1, HSD17B10, TNFRSF1A
Negative_13208	DAO, ACSM4, AGPAT4, BMP8B, CCR9, CDC45L, CNGB1, CREB3L1, CYP11A1, DD X52, DPAGT1, E2F3, EDNRA, EI24, ERBB3, FGF5, FLT4, GAS1, GPD1, GRB2, GRLF1, GUCA1C, GYS1, IFT57, IKBKB, IMPDH1, ITPA, LTC4S, MITF, MMP2, MTR2, NCR1, NFATC3, NFKB2, NPAS2, OR10R2, OR1F1, OR2G3, OR2G6, OR2T4, OR3A2, P2RX4, PCYT1A, PGAP1, PRKACG, RDH8, SLC27A1, SRD5A1, ST3GAL1, STX18, SYNJ2, TGFB2, UCK2, ULK2, VEGFA, ATP6V1G1, CSNK1A1L



Negative_13209	DBH, DCT, F2R, IL5, ILK, KIT, LPO, ACP2, ACSL5, ALDH1A1, ARNT2, ARNTL, ATP6V1A, B3GAT2, BCKDHB, BUB1B, CBR3, CCL11, CCR7, COL2A1, CXCL2, DDHD1, DERL1, DHDDS, DPM1, DRD2, EFNA4, ENPP7, FCGR3B, FGF10, FGF2, GALK2, GFPT2, GPAA1, GUCY2F, HDAC1, HHEX, HLCS, HSD17B8, HYAL2, IFNGR2, IL11, IL12RB2, IL17A, IL7R, KARS, KCNB1, KLRC1, LDHD, LTB4R2, MAP3K1, MAP3K12, MEF2C, MGST3, NCR3, NKD1, NOTCH2, NOX3, NPR2, NRG4, NT5C1B, OR2T11, OR4C11, OR6C70, OR7G2, OR9Q2, P4HA3, PANK1, PAX6, PDE6G, PDK1, PGM2, PIK3CB, PISD, PON1, PRIM2, PRSS2, PTGIS, PTPRB, PVRL3, RAB5A, RAPGEF1, RAPGEF4, STAT5B, STK3, STK4, TACR3, TAS2R16, TBK1, TIAM1, TJP1, TNFSF8, UBA7, UNC5A, WASL, ATP6V1C1, PNLIPRP1, TNFRSF18
Negative_13210	AK7, CD6, EZR, GLS, KDR, NPL, SMS, ACVR2A, ADCY4, ADH5, ADIPOQ, AMDHD2, AMY2A, ATP5L, BACE1, CACNA1S, CBLB, CCKAR, CCR7, CLDN20, COL6A2, CP T2, CX3CL1, CX3CR1, CXCL5, CXCR5, CXXC4, DDIT3, DUSP2, DVL3, FCGR2B, FZD8, GGPS1, GMDS, GUCY2C, HLA-DMA, IKBKB, IL21R, IMPDH1, KYNU, LAMC2, MTHFR, MYD88, NCSTN, OR1E2, OR4D6, OR52B4, ORC5L, PANK3, PDXP, PIAS4, PIGA, PKLR, PLA2G2D, PLA2G3, PMVK, PRKAB1, PRKAR2B, PRPH2, PTGDS, SC4MOL, SPRED1, TRPM5, TSC1, TYMS, UROS, XIAP, ATP6V0A2, SLC25A31
Negative_13211	DBT, ID2, PGF, RPE, TNF, ACO1, ALDH2, ALPP, AMPD1, AQP7, ATP2A2, B3GNT3, CAV2, CCL11, CCL20, CCNB3, CCNG1, CCR8, CD27, CIITA, CTLA4, CUL1, CXCL12, CYP2F1, DCXR, DLL3, DNMT1, EIF4E2, FZD4, GALNT10, GNAI2, HAGHL, IFNA2, INPP1, ITGA3, LEFTY1, LIPC, LYPLA1, MMP1, MPST, MTAP, NFE2L2, NMNAT3, NT5M, OR1K1, OR2A4, OR2L2, OR4A15, OR4K13, OR4K15, OR51E1, OR52D1, OR9G1, PDHB, PFKM, PLCD3, PLIN, PLK1, PORCN, PSPH, RND1, SDHD, SEMA3D, SETD8, TYMS, WBSCR22, WNT6, KIR2DL5A
Negative_13212	AGK, APP, FES, HGD, TK1, ABP1, ACTA1, AGPAT1, ASCC3, C9orf95, CACNA1E, CDC2, CDC25C, CFTR, COL1A2, CRHR1, CTNNA2, CXCL3, EFNA4, FLOT2, FSHB, FUT9, FZD4, GLG1, HIP1, IFNW1, IL18R1, IL6ST, ITGAM, JAG2, KIR2DL4, KYNU, LEFTY1, MGAT5, MTHFR, MYLK, NFATC2, OGDHL, OR10H3, OR12D3, OR1E1, OR1L3, OR52D1, OR52N1, OR5AS1, OR8A1, OR8K3, PAK6, PARD6B, PDE1C, PDE6G, PDPK1, PIGV, PLCB1, POLE, PRKCB, RASA2, RBPJL, SCP2, SUFU, S YNJ1, TAS2R42, TAS2R9, UGT1A10, VANGL1, WBSCR22, ZFYVE9, TNFRSF13B, TNFRSF18
Negative_13213	BTK, CKB, F2, HPD, NNT, SDS, ACOX3, ADCY7, ADH5, AGPAT4, ANAPC7, ATP5H, B4GALT4, BCMO1, BDH1, BMP2, C1QB, CCL3, CCR8, CDC25A, CDC6, CFTR, CLDN3, CNDP1, CNGA4, COL11A1, CTSL1, CXCR3, EFNB3, EGFR, EIF4B, ENPP1, ENTPD4, EPHA3, FASLG, FGF20, FGF23, FUT3, GALNTL4, GNA11, HHEX, HYAL2, IGFBP3, ITGAX, MAPK7, MGAT5, NAT1, NCKAP1L, NFATC3, NFKB2, NFKBIA, NFKBIE, OGDHL, OPLAH, OR10A3, OR52N2, OR6C2, OR7C2, OR8U1, PAK4, PDE6G, PECAM1, PFKFB3, PPID, PPP2R5B, PRKCI, PTK2, QPRT, RAP1A, RARS, SDC2, SDHB, SEMA3G, SETD1B, SIPA1, STAT5A, TLR2, VAMP1, VAMP2, WEE1, WNT9B, ZMAT3, CACNA2D2, HLA-DQA2, PNLIPRP2, TNFSF13B
Negative_13214	HPD, ID4, PTS, PXN, ADCY9, ALDH3A1, ALDH3B2, ALDOA, B3GALT5, B4GALT1, CACNA1F, CD274, CDKN2C, CES1, CHAT, CHIA, CPT1C, CTBP1, CXCL10, CXCL6, DGKB, DPM2, EGLN3, EPHB1, EPHB4, EXTL2, FLT4, FZR1, GNAQ, HTRA2, I NMT, LIAS, LLGL1, LTBP1, MAP3K11, MAP3K13, OR1L3, OR2G2, OR2T29, OR52E8, OR8H2, PDGFA, PFKFB4, PGLS, PIGQ, PIGW, PIK3R5, PRSS2, SAT1, SESN1, SOD1, SPRY2, STAM, STX18, STX1B, TIRAP, TXNDC12, ULK3, VASP, YARS, ATP6V0E1

Negative_13215	CAD, CKM, CR1, F2R, HK2, IL5, IL8, ACTG1, ADIPOR2, ALDOA, ARRB2, BST1, CASP8, CCNG2, CDC20, CDK4, CHR1, CLDN22, CXCL3, CYP2B6, EPHA6, EXOC7, FADD, FGF13, FGFR1, FLT3, GALC, GAMT, GCDH, GDE1, GIT1, GOT1, GUCA1C, HA01, HHIP, HMGCL, IFNB1, IFNK, IFNW1, IL1R1, IMPDH1, ITGB2, KCNJ11, KCNQ1, LARS2, LDHAL6A, LMO7, MGLL, MITF, NTF4, OR13A1, OR2H2, OR2M4, OR2T12, OR2T3, OR2T5, OR52I1, OR5AN1, OR5B21, OR5F1, OR6C6, PAFAH2, PFN1, PIM1, PISD, PNPLA3, POLR2K, PPP2R2D, PPP2R5D, PRKCH, PSPH, PTGES2, PTGIS, PTPMT1, RAPGEF1, RASA1, RETSAT, RGS3, RRAS2, SETD7, SNAI1, SOD1, ST3GAL1, ST3GAL5, SULT2B1, TYK2, UCKL1, VAV3, VEGFA, WEE1, ATP6V1G3, HLA-DQB1, PHOSPHO1
Negative_13216	ABO, CKB, DHH, GP9, IHH, RDX, ACADL, ACP5, ADH4, ADIPOR2, APOC3, ARSE, ATF2, CD247, CD79A, CDK7, CREB3, CSF3, CYP1A1, CYP2A6, EDA2R, ENPP6, EPHX1, FDPS, FGF13, FGF5, FSHB, FZD9, GALNTL1, GGT6, GNB3, GOT2, GUCY2C, GZMB, HHIP, HSD17B3, IDUA, IFNA4, IRAK1, ITGAE, LAMB1, LAMC2, MYL5, NCF2, NCOR1, NCR2, NRG2, OR10Z1, OR2F1, OR2T8, OR51D1, OR52K1, OR52L1, OR5F1, OR5M8, OR6C70, OR6C74, OR6Y1, OR8B4, OR8H2, OSMR, PDE5A, PFKFB4, PIGH, PIP4K2B, PKMYT1, PLA1A, PLA2G4A, POLR2B, PRKACB, RASGRF2, SNAP23, SRD5A1, TAS2R13, TGDS, TRHR, TYMS, UGCGL1, WASF2, ATP6V1C1, MAPKAPK2, PPARGC1A
Negative_13217	CR1, CR2, EPO, FAS, LIF, PML, STS, ACO1, ACSL6, AGMAT, AGPAT6, AKR1B1, AMD1, APLP1, ASPA, BET1L, BLVRA, CARS2, CAV2, CCL20, CCL26, CDKN2C, CD01, CHEK2, CHST11, CRKL, CSH1, CSNK2B, CYSLTR2, DERL1, DGKI, DKK1, DKK4, DOLPP1, EPHX1, EXTL3, GLG1, GNAS, GUCY1B3, HNMT, HSD17B1, HSD3B2, HTR6, IFT57, IGSF5, IMPDH1, IRS2, ITGAM, LIFR, LILRB3, LRP6, LTA4H, MAPK13, NQO1, OR10G3, OR10H1, OR14A16, OR2B11, OR4C6, OR51A4, OR5K1, OR6C70, OR6Y1, OR8A1, PANK1, PCCB, PDE6H, PDPK1, PLA2G6, PPP1R3B, RALB, RASGRP3, RRAS2, SC4MOL, SEMA3A, SENP2, SETD1B, ST3GAL2, TAS2R42, TFPI, TGFB3, TYROBP, HLA-DQA2, PPARGC1A, SERPIND1, TNFRSF14
Negative_13218	ADC, ID1, PAH, ACYP2, AGPAT4, ARNT, BST1, CACNG8, CD38, CDC25B, CXCL2, DAPK2, DDX4, DRD1, DTX3L, EPHA7, EREG, F2RL2, FADD, FBXW11, FGFR2, GNAL, GRIN2D, HIP1, HSD17B1, IL24, JAM2, MICA, NARS, NPAS2, NPR1, NT5E, OR10H1, OR2AG2, OR2M2, OR4N5, OR5AC2, OR5T2, OR6M1, PDE6H, PIK3C2B, PMM2, PRKAB1, PRKY, PRSS2, PSPH, PTAFR, PTGER1, RAPGEF2, SETD7, SETDB1, SH2D1A, SHC2, SPRY3, TACR3, TBL1Y, TLN1, TM7SF2, TNFSF14, TNFSF9, UGP2, UGT2A1
Negative_13219	CGA, DBH, DBI, DCT, EPO, FST, GP9, ID4, OGT, TPO, UBB, ABCC8, ABL2, ACPT, AGPAT6, AGRP, AKR1C3, ALDH1A1, ALOX12B, AMY2A, BCAT1, BIRC2, BMP7, BPGM, CACNA1G, CAPN2, CCKBR, CLDN7, CLTA, CNGB1, CPT1C, CXCL2, DLST, DRD5, EFN1, ESAM, FUT1, FUT7, GALC, GALNT12, GARS, GNG12, GNG3, GPD1L, GRIN2C, GSTM4, GSTO2, GSTP1, HSD11B1, INHBE, INMT, IPPK, KIR2DS4, KLKB1, KLRC3, LAMB4, LARS2, LTBP1, MCAT, MCCC1, NME7, NOTCH2, OR13C9, OR2T2, OR2T8, OR52H1, OR52J3, OR6B3, OR6C6, OR9Q2, PER2, PGK2, PIK3R3, PIP5K1A, PMVK, POLR2I, PPAP2A, PPP1R3B, PPP2R1B, RAB23, RAF1, ROBO2, RRM2, SCIN, SDC3, SHC2, SMAD3, SOX17, STX1B, TMLHE, TUBB2A, USE1, WBSR22, ALDH18A1, HLA-DRB5, MAP3K7IP1, MAPKAPK5, SLC25A31
Negative_13220	EZR, AHCYL1, AHCYL2, ALPP, ARNT2, CALML3, CD244, CNGA4, CYP2J2, DCXR, DOLPP1, DUSP9, EPHB2, EXT1, FARSB, GAD2, GP1BB, GRIN2C, HCLS1, IL13, IL28A, IRS4, ITGAD, KLKB1, MAP3K7, MKNK2, MMP9, MYH10, NARS2, NEUROD1, OCLN, OR2B11, ORC3L, PARVG, PEMT, PIGS, PIK3C2A, PIP4K2B, PIP5K1B, PIP5K3, PLA2G3, PLA2G6, PNMT, PTPRF, RASGRP2, ROBO1, RPS6KB2, SEMA4C, SHC2, SLC9A1, SNAP23, SPRY3, SPTLC1, SUFU, TACR1, TD02, WASF2, YWHAG, KIR2DL5A, PPARGC1A

Negative_13221	A2M, BTK, CTH, FUK, SDS, AADAC, ACAD8, ADORA2B, ADSS, AGMAT, AGPAT3, ALOX12, AMPD2, AOC2, ARPC5L, ATP4B, ATP5C1, BAIAP2, BMP6, C3orf10, CANT1, CARD11, CD86, CDK2, COQ6, CSF1, DDIT3, DDIT4, DNMT1, DVL1, ENPP2, GAL3ST1, HNF1A, HTR2C, IFNA13, IL15RA, INPP5A, ITGA9, JAK1, LDHAL6B, MGST3, MPST, MTFMT, NCAM1, OR10A3, OR1J4, OR1S1, OR2B11, OR2T8, OR4L1, OR52B4, OR52J3, OR5B12, OR6X1, OR7G2, OR8S1, PDE2A, PGM1, PLA2G1B, POLR1D, PPP5C, PTGFR, RDH10, RPS6, RPS6KA1, SDHD, SLC25A4, SPCS3, SULT2A1, TFDP1, TFPI, TICAM1, TRPC1, UBE2K, UGT2B17, VAV3, WIF1, WNT9B, C1GALT1C1, CACNA2D1, SERPINA1
Negative_13222	CR2, GPT, TNR, ATP5B, CADM1, CASP3, CD247, CD36, CDH15, CRKL, CYFIP2, DTX3L, DUSP14, EFNA3, EI24, EIF4E, ENO3, EREG, GDF7, GSTM1, GSTO1, HEXB, IL11, IL13, IMPA2, MAPK7, MS4A2, MYLK, NFKBIE, NLGN1, OR2A2, OR2L3, OR4X2, OR5D13, OR5M9, PDE6D, PDXP, PER1, PIGT, POLR3B, PPP1CC, PRKAG1, RAPGEF1, ROBO1, ROCK2, SDC3, SFRP5, SMARCA2, STX18, UNC5A, CTNNBIP1, HSP90AB1, MAPK8IP1, TNFSF13B
Negative_13223	AMT, C8B, CAT, CKB, EZR, HK1, LCK, AANAT, ACOX2, AHCY, ARNT2, BET1L, C3orf10, C9orf95, CCNE2, CD244, CERK, CLDN15, CMBL, CNTNAP1, CTF1, DGA2L4, ENTPD5, FGF13, FGF21, GALNTL2, GLYCTK, GNAS, GNPDA2, IL1B, ITGAE, LAP3, MAGI1, MAP3K3, MAT1A, MCEE, MGST2, MTHFD1, MYH6, OR2G6, OR5M8, OR8B8, PDE4D, PMM1, PROS1, PTEN, PTPRB, SDC1, SMC1A, SMC1B, ST3GAL3, STAT4, TAS1R3, UGT2B11, VEGFB, WNT5A
Negative_13224	FGA, KDR, LCT, A4GALT, AARS, ACAT1, ADCY4, ADCY9, ANAPC7, ATP5L, ATP6VOC, B3GALT5, BAI1, CCNA2, CD48, CDH4, CDKN1C, CES1, CFTR, CLDN18, CPT2, CREB3L1, CREBBP, CSF1, CYBB, DMGDH, DPM1, FADS2, FRAT2, FSHB, FZD1, GALNT3, GBGT1, GCNT3, GGT5, GJA1, GLG1, GMDS, GSTA4, GSTM5, HAP1, HEX, HIBADH, IFNA10, IL3RA, IRF9, ITPKA, KCNJ11, KIR2DL2, KIR2DL4, LDHC, LEF1, LIPG, LIPT1, LTA4H, MAN1B1, MAN1C1, MAP4K2, MAPK12, MYH11, MYLK, NRG3, OR14I1, OR4C46, OR4D6, OR52A1, OR5T1, OR6C76, OR7G1, PLD1, POLR2K, PPP1R3A, PRDX6, PRKG1, RARS, ROCK2, RPS6KA2, SELPLG, SEMA7A, SKIV2L2, SNAP25, SPRED1, SPTLC2, ST3GAL6, SUOX, TAS2R1, TBL1XR1, TGFBRI, TLR5, UCK2, VCAM1, YWHAE, ATP6V1B2, B3GALNT1, PAFAH1B1
Negative_13225	AK7, AR, ADAM10, ADH1A, ADH7, AGPAT6, ALAS1, APH1A, ASRGL1, B3GNT3, B4GALT4, BMP6, BRAF, C3AR1, CAV3, CDC7, CLDN17, CNGA4, CNTNAP1, COL4A2, CPT2, CSH1, CTNNA2, CUL1, CYP11A1, EFNA4, EFNA5, FECH, G6PC, GALNT10, GALT, GART, GFPT1, GMPA, HAO2, HPSE2, HRH2, IDI2, IFT57, IL15RA, IL22, IMPA2, ITGA4, KLRC3, MGAT5, MYH2, OR10H4, OR10J3, OR10S1, OR13G1, OR2T6, OR2W1, OR56A3, ORC4L, OSMR, P2RX1, PAX8, PFKFB2, PPID, PPP2R2A, PPP2R2B, PRKAR2A, PRPH2, RCHY1, RND1, RPS6KA3, RPS6KA5, SEMA4A, SEMA7A, SMAD4, SMAD6, SMPD2, SPAM1, ST8SIA5, STMN1, STX6, TAS2R41, UNC5A, XYLT1, GABARAPL1, MAP3K7IP2, MAPKAPK2, PHOSPHO1, PLA2G12B, PNLIPRP1
Negative_13226	ABO, ID2, LTB, ME1, OSM, PGP, SI, AGPAT1, AHCYL1, AKT3, ALOX15B, AMPD3, ASS1, ATP5H, BMP4, C9orf95, CDK6, COL6A1, CYP26A1, DIAPH1, ECSIT, EHMT2, GLG1, IFNA6, IL13RA1, IL1R2, MAP2K7, NLGN1, NRXN2, OR2A25, OR4C13, OR4D2, OR4F6, ORC3L, P2RX1, PAX8, PDHA2, PLCZ1, RRAS, SESN2, SGP2, SMPD2, SPCS3, STX16, TAS2R50, THBS2, ULK2, WWP1, YKT6, MAPKAPK2, PHOSPHO1, SERPINE1

Negative_13227	C4B, DBH, GSS, ID2, LPO, MUT, MVD, NPY, PDC, VCL, AARS, ACOT12, ACYP1, A DSS, BNIP1, CACNB4, CCL28, CCR6, CD86, CDK2, CHDH, CHSY3, CLDN17, CMA S, COL2A1, COL5A2, COL6A1, CPT1C, CSF3R, CYP11B2, CYP1B1, CYP2C19, D AAM2, DDX23, DEGS1, DEGS2, DTX2, EXTL2, FGF12, FGFR2, GALK1, GBE1, GR B2, GUCY2D, IRF5, ITGB8, LEPR, MAOB, MAP2K3, MAP3K14, MAP3K7, MCM4, M ECR, MFNG, OR10K2, OR10V1, OR2C1, OR52E2, PFN2, PGAP1, PLD2, PMVK, PP ARA, PRKG1, PRODH, QARS, RRM1, SMAD2, SOAT2, SPCS3, TAS2R38, TCF7L1, TLR4, TRMT11, TUBB2B, TYMP, UGT2B10, EIF4EBP1, HSD17B10, MAPK8IP2, SERPING1
Negative_13228	C8G, F2R, GP5, ID1, LYN, PGF, PTS, SHH, ADCY1, ADSS, AGPAT3, ALAS2, ALD H1L1, ALS2, ANAPC11, ANAPC2, AOC2, ARHGEF6, ARPC5L, BACE2, BCAR1, BD KRB2, BMP2, CCNA2, CHRM1, CLDN5, CNDP1, CREBBP, CRKL, CSNK1G1, CYP4A 22, DNMT3L, EI24, EPHX2, EREG, EXOC7, F2RL3, FGF2, FGF21, GAD1, GLG1, GNA12, GNPDA2, HRH2, IFNA4, IL13, INPP4B, IRF9, ITGA1, KIR3DL1, KLK3 , MAP4K2, MGAT2, MGLL, MLYCD, NFKB2, OCRL, OR10AD1, OR1F1, OR1Q1, OR2 M5, OR4D2, OR4M2, OR52N1, OR5D13, OR9G1, OXCT2, P4HA1, PDE6D, PDIA4, PDK1, PIGS, PIGX, PIP5K1B, PKLR, PPAP2A, PPAR, PTGES2, RASGRP1, RDH 5, SETD1A, SFRP4, SHMT2, SLC27A5, SLIT1, SNAP25, TNFRSF4, TNFRSF9, W NT6, YWHAG, ZMAT3, SLC25A31, TNFRSF13C
Negative_13229	GLA, GLS, GP6, LCK, SDS, VCL, ACTN4, ADH1B, ALCAM, ALDH3B2, ALG2, ARPC 1A, ATP12A, CASP10, CCL19, CCNA1, CD86, CDC14B, CDC2, CLDN16, CNTNAP 1, COL4A1, COL4A2, CREBBP, CXCL9, DDX55, DNMT3A, DRD5, DTX4, ELK4, FA BP3, FUT2, GCNT1, GDE1, GNAS, GNB1, GRAP2, HAAO, HAGHL, HLA- G, HSD11B1, HSD17B1, HTR2A, IDI2, IFNGR2, IL11RA, INPP5E, IRS1, ITGA 4, ITGAE, ITGB8, KDSR, LTBP1, LYZL1, MAP2K1, MAP3K4, MINPP1, MYL2, NA NP, NEGR1, NTRK2, OR10G3, OR1L1, OR1L6, OR4C12, OR4F4, OR4F5, OR5B3, OR5C1, OR6C76, OR6Y1, ORC6L, PAK1, PDE4B, PFAS, PI4KA, POLR2B, POLR2 C, SELL, SGMS1, SLC33A1, SMPD3, SRGAP2, STK11, SUFU, TLR2, TNFRSF8, T NXB, UAP1, UBE2K, UCP1, WNT1, HSP90AB1, ST6GALNAC4
Negative_13230	ASL, CKB, IHH, NPY, TK2, ACAA2, ACSM5, ACSS1, ADAM10, ALG11, ALPP, AMP D2, ARHGEF1, BMP8A, CCNE2, CD19, CD82, CFLAR, CLDN6, COMT, CREB1, CRE B3L4, CRLS1, CYSLTR1, DDB2, DDX56, DFFB, EDAR, EFNA5, ENTPD8, FGF2, G ALNT3, GALNT7, GANAB, GFAP, GLYCTK, GNAS, GNAZ, GSTM2, H6PD, HARS2, H MGCS1, IL5RA, IL6ST, ITGB5, KAT2B, KLKB1, MYH1, NFE2L2, OR10A2, OR11 H4, OR2A42, OR4A5, OR4X1, P2RX5, PANK3, PDXK, PGAM1, PGK2, PI4KB, PMV K, PPP2R1A, PPP2R5B, PTPN11, RAB23, RALA, SEMA3G, SETMAR, SH2D2A, SO RBS1, ST3GAL6, THTPA, TRAF4, WIF1, B4GALNT1, C1GALT1C1, HLA-DRB5
Negative_13231	DLD, IHH, KMO, RDX, ACAD9, ACPT, ADH4, AGPAT3, ASAH1, ASMT, B3GNT2, B3 GNT5, C5AR1, CACNB3, CASP6, CCKAR, CCNG2, CD58, CDC2, CDH2, CHRM2, CX CR4, DAAM2, DCTD, DCTN1, ENTPD8, EPHA5, EPHA6, EPHA7, EXT1, FBP1, FIG F, FZD9, GDF7, GMPR2, GRIA2, GSK3B, GSTO1, HPSE, HTR2A, IAPP, IDI2, IF NA17, IFNK, IL15RA, ITGB2, KIR2DL2, MAP2K1, MASP1, MKNK2, MRAS, OR10 H3, OR10K1, OR1B1, OR2M7, OR4C16, OR4C46, OR51G2, OR5T2, OR5V1, OR7G 3, PCK2, PER3, PFN4, PIAS3, PIGA, PLA2G4A, PLXNB3, PRKAA1, PRKACA, PR NP, PTPN6, RASGRF1, RDH10, SELL, SEMA4F, SKIV2L2, SOCS3, SRGAP1, SYN J1, TAS2R40, TAS2R60, TBL1XR1, TLN2, TNFRSF4, TOMM40, TPMT, TRAF5, T UBB3, UGCG, UGP2, UXS1, WNT4, GABARAPL1, TNFRSF10A, TNFRSF11B

Negative_13232	CKM, MVK, NF1, SYK, ZYX, ACAA1, ACP2, ADH5, ADSSL1, AKT1, ALAS1, ALG10, APAF1, ATF2, BRAF, C3AR1, CACNA1D, CACNG2, CD99, CLDN16, CNTN1, CSH1, CX3CR1, CXCL10, E2F3, FGF17, GALNT7, GDF6, GLB1, GLS2, HHIP, HIBCH, HIP1, HRH2, HSD17B4, HTR2C, IFNA5, IL22RA1, IL28RA, IPPK, LIPA, MAML3, MDH1, MINPP1, MYH7, NFKBIA, NPR1, OR2A14, OR52E8, OR7A10, OR7A5, OXTR, P2RX4, PAK2, PDE11A, PDE9A, PIAS1, PIGW, PLA2G6, PLCZ1, PLK1, PMM1, PPP1CB, PRKACB, PRKG2, RAPGEF1, RASSF5, RHOQ, SOCS2, TUBAL3, UCP1, UGT8, VANGL2, WNT3A, ST6GALNAC3, TNFRSF10D
Negative_13233	BTD, IHH, NPY, SI, ACAA2, ACSM4, ACVR1C, ACVRL1, ALDOB, BMP8A, C3AR1, CACNG6, CAMK2G, CD70, CD74, CD99, CHIT1, COL5A3, CPS1, DAPK1, DDX56, DTX3, DTX3L, EDA2R, EFNA5, FASLG, FBXW11, FDPS, FECH, FSHR, FUT8, GNAI2, GNAI3, GNAZ, GP1BB, GPX7, GSTM4, GUCY1A2, HADHA, HNF1B, HSD3B7, IL17RB, IL1A, JAM2, KITLG, KLRK1, LCAT, LDHD, LIAS, MCCC1, MGAT4A, MTHFD1L, NRP1, OR1L1, OR1L3, OR2D3, OR2T1, OR2T11, OR4C6, OR4L1, OR56B4, OR6C74, OR6M1, OR6T1, PCCB, PDE1C, PGK2, PISD, PLCD3, PLK1, POLD2, POMC, PPAP2C, PRKCD, PRKCZ, PRKX, PTDSS2, PTPRJ, RDH11, RGS3, RUVBL1, SCLY, SEMA4C, SLC25A6, SMC1A, SQLE, SRD5A1, SRGAP1, TAS2R38, UGT2A3, UGT2B17, WASF3, WNT3, YARS2, GABARAPL1, PAFAH1B1
Negative_13234	AMH, PAH, ACADM, ACSL5, ACVR1B, AKR1B10, ALDH1A3, ALDH1B1, ALG8, ALG9, ANAPC1, APOA2, ARG2, ATP5I, CD55, CDH15, DEGS1, DTX4, ENO2, GALNT6, GART, GDE1, GFPT1, HAP1, HEMK1, HEXB, HSP90B1, HTR6, IL23A, IL4R, IRF3, KIR2DS4, LAMC3, MAGI3, MAN2A1, MAPK7, MYH10, NFATC2, NFKBIE, NPA S2, OR2M3, OR2T34, OR4D5, OR52B6, PARVB, PGAM2, PIAS4, PRKACG, PRLR, PTGES, PTGS2, RHOQ, SDC2, SEMA4A, SGPP1, SRGAP3, TUBB6
Negative_13235	HDC, HK2, ILK, LTB, PTS, SYK, ACO1, ADH7, ALG13, ARAF, ATP5D, B3GNT5, C1QC, C4BPA, CACNA1E, CARD11, CCL16, CCL19, CD28, CDC45L, CHAD, CHEK2, CHST11, CHUK, CLDN3, COASY, CX3CR1, DIAPH2, DUSP14, DUSP8, ENTPD5, FARP2, FGF17, GDF7, GPD2, GSTM4, HRH1, HSP90B1, IARS, ICOSLG, IFNA13, INHBB, IRF9, ITCH, KCNJ11, LFNG, LRDD, MAFA, MAP2K1, METTL2B, MGAT5, MTMR2, MYD88, NCKAP1L, NCSTN, NEFM, NKD1, NT5C, OR10AG1, OR14C36, OR2AT4, OR4A5, OR51I1, OR52I2, PARD6A, PGK2, PIK3R3, POLR3G, PPP1R3D, PPP3R1, RASSF5, RFXANK, RRAS2, SCIN, SDC4, SEMA4G, SMAD9, SMPD2, SRGAP3, ST3GAL3, STAT3, SYNJ1, UAP1, UBE2K, YWHAH, CSGALNACT1, GABARAPL1, HLA-DPA1, MAP3K7IP2
Negative_13236	CD6, FGB, GGH, TPR, ACTB, ADAM10, AGPAT2, AK3L1, ALG12, ARG1, BBOX1, BUB3, CCL4, CHAD, COL2A1, CPT1A, CREB1, CYP2A13, CYP2A6, DDX56, DHRS4L2, ENPP3, FADD, FBXW11, FGF1, FGF21, FUT7, GALNTL5, GANAB, GFAP, GGT7, GNA15, GNRHR, GSTA5, HARS, IDH2, ITGAV, KDSR, LHCGR, MASP1, MDH2, MGAM, MGAT2, MGAT5, MTHFS, NADK, NAGK, NFATC3, NMNAT2, NRXN3, OR10H5, OR13C2, OR1J4, OR2AG2, OR2T3, OR8A1, OR8B4, OR8J1, PARD3, PCK2, PGAM1, PPP1CA, PPP1R3D, PPP3CC, RAC1, RAP1A, RETSAT, RFX5, RHOQ, SDC2, SEMA4F, SGPP2, SMARCA2, SOS1, TBL1X, TPI1, TXNDC12, TYROBP, VAMP1, VKORC1, ATP6V1B2, MAPKAPK5
Negative_13237	BTC, CRH, F10, FES, HAL, PRL, A4GALT, AGMAT, ANGPTL4, ATF2, ATP5E, ATP6V1D, C9orf95, CD27, CMBL, CSNK1G3, CXCR4, EFNA2, EPHB2, EXTL1, FLOT1, FUT4, FUT8, GGT1, HGSNAT, IRS1, ITGA5, JAM2, KAT2B, KLRK1, LEF1, MBL2, MGAT4B, NME4, NOX1, OR4N2, OR4S1, OR5AK2, OR6C76, OR7C2, PIGX, PLXNA2, PPM1D, PSEN2, RBL2, SRD5A2, TICAM2, TRAF6, VAV1, WNT7A, PHOSPHO1, SERPIND1

Negative_13238	AK1, C5, C8A, FER, ILK, SRF, ACAD9, AGPAT3, AGPAT4, AMDHD2, APOE, BMP8 A, CALML5, CAMK2A, CD38, CD82, CLDN11, CTNNA3, CXCL16, CYP26A1, CYP26C1, DIAPH2, ERBB2, FARSA, FSHB, FZD1, GAMT, GRIA1, GRPR, GSTP1, HAAO, HHEX, IL3RA, ITGA5, ITGAV, ITPKB, LAMC3, MAP4K3, MAPK7, METTL6, MPDZ, OR10Q1, OR2T29, OR4C15, OR5AR1, OR5AS1, OR5H2, OR6T1, OR7G3, PGAM2, PHKG2, PIK3R4, PPP2R2B, PRKG1, PRODH2, PYCR1, RAPGEF2, RARS2, RASGRP1, RASGRP3, RDH12, SETD8, SHC2, SHC3, TIRAP, TNFSF12, TUBB1, TXNDC12, VASP, WNT9A, ATP6V1C1, GABARAPL2, HSD17B12, PLA2G12B
Negative_13239	ADK, CBS, CFI, CTH, FUK, GH2, MAG, MTR, SHH, ACTB, ADCY5, AGPAT6, ALG2, ARG1, ATP5B, ATP50, ATP6VOC, BPGM, C7orf16, CACNG2, CCL15, CD58, COQ6, COX10, DUSP6, EFNA4, EFNB3, ENO3, FBXW11, FZD1, GALK2, GALNT2, GAN C, GSGT1, GP1BB, GZMA, HLA-F, HRAS, IBSP, ICOS, MTHFR, NFAT5, NT5C1B, NT5C3, OLR1, OR1J2, OR2AT4, OR2T4, OR2W1, OR4F4, OR4K14, OR51E1, OR52I1, OR5P2, OR6K2, OR8D2, OR8D4, ORC6L, PCYT1B, PFAS, PFN3, PLCE1, PLCZ1, SDC2, TAS2R48, TJP2, TOLLIP, UGT2B10, VDACC, WNT11, ZFYVE9, ATP6V1B2, ATP6V1C1, ATP6V1G2, PHOSPHO1, TNFRSF11B
Negative_13240	AK2, C8A, CP, NOG, ACSS3, ADH7, AKR1C3, ALDH5A1, ARSA, ATP5I, ATP5J2, BHMT, CAMKK1, CCKBR, CCL19, CCL4, CD247, CD274, CDK7, CHKB, COL5A1, C RHR1, CYP17A1, CYP26B1, CYP3A43, DGKB, DTX2, ENTPD6, FABP3, FDFT1, F RAT2, GALK2, GALNT1, GANC, GIT1, GLI2, HAGH, HMBS, HSD11B2, IFT57, IL 23R, IL2RA, INHBB, KLRC2, LDHAL6B, MAD2L2, MAN1C1, MAP2K7, MCCC1, MC M3, MCM4, MDM4, MTHFD1, NMNAT2, NRP1, NRXN2, OR1D5, OR4A15, OR4M2, OR 6K2, OR8U1, PIPOX, PLA2G10, PLCZ1, PLD1, PMVK, PRKCD, PTGES2, PTK2B, PYCR1, PYCR2, RPS6KA6, SELE, SGMS1, SH2D1A, SNAI1, SPAM1, TAS2R38, T AS2R40, TBL1XR1, TGF2, THY1, TLN2, TNFSF18, TUBB2B, VAMP3, VAMP4, W NT3, YKT6, YWHAB, ATP6V1C1, CSGALNACT2
Negative_13241	BAX, GBA, GP5, HAL, HPD, IL3, PAH, TNR, ACOX3, ADAM17, ADCY1, AGPAT2, A RG1, ATP2A2, B4GALT4, CASP9, CCNH, CDC14B, CLCA2, CLDN1, COASY, CREB 5, DDX47, DKK1, DLAT, DVL3, EGLN3, EPHA5, FARP2, GLO1, GLUD1, GMPA, G MPR2, GSTA2, HES1, HLA-DMA, HLA-DRA, HMGCR, IAPP, IDI1, IKBKG, IL5RA, IL9R, IMPA2, INPP1, IQGAP2, ITG A1, KARS, KCNJ11, LDHAL6A, LLGL2, MAN1A1, MFNG, MGST1, MPP5, MRAS, NA E1, NPR2, OR10A3, OR4A5, OR4C13, OR4C46, OR4C6, OR52R1, OR6C75, P2RX 2, PCK2, PDE4B, PDE4D, PIK3CD, PLCB3, PLXNA1, PNPLA4, PPAP2B, PPARA, PPCDC, PTPRZ1, PYGB, RENBP, RHOD, SDC4, SIGLEC1, SIPA1, SLC27A5, SRG AP2, STK4, THBS1, TLR9, TUBB6, VAMP1, WASF3, WEE1, WNT9A, YWHAE, ATP6 VOA2, HLA-DQB1, SERPINF2
Negative_13242	CKB, FGB, GSN, HPD, TEC, ACACB, ACAT1, ACP6, ADRA1A, AKR1B10, ALPL, AP LP1, AREG, ARHGAP7, BCL2, BDKRB1, CACNB4, CARD11, CCNG2, CDC20, CDC2 7, CDIPT, CFLAR, CNTF, CRLF2, CSF3R, CXCR6, DCTN1, DFFA, DIAPH1, EHHA DH, EIF4E2, ENPP1, ENTPD8, F2RL2, FLOT1, GALK1, GJD2, GLI2, GNPDA1, G STM2, HARS, HIBADH, HTR5A, IL13RA1, IL20RB, IL4R, ITGB1, MAPK9, NEGR 1, NKX3-1, NMNAT3, NPR1, NRG4, NTF4, OR11H6, OR1S2, OR2T2, OR2T29, OR2T6, OR3 A1, OR4K13, OR4N2, OR51T1, OR6C4, OR8J1, OR9Q1, PAX8, PDIA4, PLEKHA8, POLR2A, PPP1R3B, PPP2R2C, PPP3CA, PRKAA2, PRKCE, PRKCG, PTGER3, PT PRF, PTPRJ, PVRL3, RASGRP2, ROBO2, RPS6KB2, RPSA, SLIT2, SOS1, SPRED 1, ST3GAL5, STX3, TGF2, TNFSF9, TOLLIP, UBA1, UCK2, WEE1, YES1, TNFR SF17

Negative_13243	AMT, C8A, DDO, GBA, GP5, ID1, IL3, ILK, LCK, PGF, ACSL5, ACSM1, ACTB, AD CY10, ADRB1, AGPAT3, AGPAT4, AKR1C3, ALOX15B, AMY2A, ATP5A1, ATP5D, AXIN2, B4GALT7, BBC3, C1QA, CAV2, CCL21, CCNG1, CCR7, CD36, CDK5, CYP 21A2, DNMT3B, FSHB, FZD5, GALNT2, GALNTL5, GCLC, GGCX, GRIA2, GRIA3, HPSE2, HSD17B2, HSPA2, IL7R, INSRR, IPMK, ITGA2B, ITGB2, JAK2, LAMC1 , LDHAL6B, LLGL1, MAP3K4, MCAT, MGAT3, NCF1, NTF4, NUMB, OR10A2, OR10 G9, OR2A4, OR2AG2, OR4N5, OR51A4, OR52H1, OR52L1, OR52M1, OR5J2, OR6 K3, ORC4L, PDE4A, PEMT, PIGN, PLAT, PLCB3, POLR3D, PPARD, PPP2R2B, PR KAG2, PROS1, RAPGEF4, RDH10, RPS6KA3, SGPP2, SPRED2, SPTAN1, STK3, S TX5, TRAF4, TSC1, UCK2, UGT2A1, UROS, ATP6V0A4, PAFAH1B1
Negative_13244	ADK, CFI, CKB, FOS, ID1, IL3, IL9, LSS, ACTA2, ALPPL2, ATP6VOC, BMP2, B MPR1B, CACNB3, CAMK2D, CDH3, CDKN1B, CFLAR, CHDH, COMT, CTNNA1, CXXC 4, DIAPH2, DPYS, DTYMK, DVL1, EFN3, FGF19, FSHR, FUT9, GSTZ1, HDAC1, HGSNAT, HLA- DOA, HMGCS2, ITGA7, LDHD, NCR1, NOTCH2, NT5C2, NUDT12, OGDHL, OR10A6 , OR10G8, OR13F1, OR1D5, OR4A5, OR51E2, OR51G2, OR5AC2, OR7G3, PGAP1 , PGK1, PI4KB, PIGN, PITX2, POLR3B, PPA1, PPP3CA, RFXAP, RPS6KA6, SEL P, SMAD1, SOD1, TBL1XR1, TRAF6, TYROBP, VDAC1, XCR1, ALDH18A1, ATP6V 1G1, PAFAH1B2
Negative_13245	A2M, CGA, TXK, AK3L1, ARNT, ASPA, ATP5C1, ATP5E, ATP5O, BMPR2, BUB1B, C1GALT1, CDH5, CMPK2, COL1A1, COL5A3, COMP, CPT1C, CSF1R, CSH1, DLL3 , ENTPD7, FGF22, GALNT6, GCAT, GGPS1, GLYCTK, GUCY2C, HTR5A, HTRA2, I RAK2, MAP4K1, MDM2, MKNK2, MYH10, MYH7B, NEFM, NME2, NRG3, NUDT12, NU MB, OR10S1, OR10V1, OR2V2, OR4K1, OR51V1, OR5AK2, OR5T1, OR6C4, PARD 6G, PFN4, PIGU, PLCB3, PLXNA3, PPA2, PPP2R2D, PPP3CB, PTPN11, RAPGEF 1, SPCS3, SSH2, STAT4, STX3, STX5, TCF7, TNFSF18, TUBB2B, VANGL1, VAR S, WNT9A, ARHGEF12, PRICKLE1, SLC25A31, TNFRSF1A
Negative_13246	JUN, TNF, ZYX, AADAT, AGRN, ALG1, ANAPC11, ARPC4, ASNS, BBC3, CLDN14, COL5A3, DDX19A, DGKA, DTX3, EPHA1, FABP4, FGF21, GALNT10, GNPAT, GST T1, HBEGF, IKKB, LLGL1, MAGI3, MAP3K12, MGAT2, NCR1, NLGN2, OR1N2, O R2A12, OR2G2, OR2L3, OR4F5, OR56A4, OR5AN1, OR5C1, OR5D18, OR5P2, OR 6B2, OR8B12, OR8G1, PAFAH2, PDE3B, PIK3C2A, PLCB2, RPSA, SEMA3B, SNA I1, STX16, TGFB3, YES1, YOD1, B3GALNT1, TNFRSF17
Negative_13247	CAT, GGH, GP9, HK2, MVK, RET, ACOT12, ACTC1, ACYP2, ADIPOQ, AGPAT6, AK R1B1, AMY2A, APPL1, ARAF, ARRB2, ATP5L, BAIAP2, BBC3, BMP5, CCNG2, CD 226, CDK7, CHUK, CLCA4, CREB3L4, CXCL9, CYP1A1, CYP3A7, DLL1, EFNA3, EPHA2, FGF13, FGF7, GALNS, GBA3, GLUL, GMDS, GPX5, GRIN1, GSTA4, GUSB , HAGH, HLA- F, HPRT1, HYAL1, IDI1, IFNA2, IFNA6, IL12RB1, IL12RB2, IL2RB, IRAK1, LALBA, LIPA, MAGI3, MPDZ, MTHFD2, MYH4, NCF2, NFKBIA, OR10H3, OR10T2 , OR1I1, OR2T33, OR2T4, OR4A16, OR4P4, OR51G1, OR52E4, OR5P3, OR6C6, OR7G1, OR8S1, PDE3A, PRKCB, PTAFR, PYGL, RAC2, RIPK1, RXRA, SEMA3D, S MPD2, STEAP3, STK36, STX10, TAP1, TAS2R13, TAS2R50, TGFB1, TJP3, TOM M40, TXNDC12, UGT2B11, WNT2B, YARS, HLA-DPB1, HSP90AA1, PAFAH1B3
Negative_13248	AK2, DDO, VCL, ACP2, ACTC1, ALDH6A1, AMDHD2, ARRB2, BAIAP2, C4BPA, CC L19, CCL24, CCL3, CDH4, CDK7, CHKB, CIITA, CNDP1, CREBBP, DDX56, DHOD H, EFNA1, FPGS, GGT6, GZMB, HAP1, HLA- DMA, HTR6, ICAM1, IDH1, MAD2L1, MAGI3, MGLL, OR52B4, OR6X1, PARVA, PI M1, PIP5K3, PKMYT1, PLA2G1B, PLXNB1, PPP3CA, SLIT1, SMPD3, SPCS1, ST 3GAL6, SUCLA2, SUOX, TGFB2, TPM3, UBE2L3, WARS, B4GALNT1, MAPK8IP2

Negative_13249	DHH, FYN, GSR, KIT, RET, ACYP2, ADRA1B, AGPAT6, ASAH1, ATF4, B3GALT5, C9orf95, CACNA1E, CCL26, CCR2, CD86, CDC16, CDH15, CFL1, CHD8, CNTF, COL4A2, CSF1, CSF2RB, CYP2A6, DUSP14, DUSP5, ENTPD5, FARSB, FCER1G, FLAD1, FM03, FSHR, GALNT2, GOT1, GRM5, GTSE1, HCLS1, HES1, HEXB, IL18 RAP, IL22RA2, IRS2, ISYNA1, ITGA1, LAMC3, LLGL1, MAML2, MAML3, MAP2K2, MAP3K2, MDM2, NFASC, NKD1, OR10H1, OR1L4, OR1Q1, OR51M1, OR51S1, OR5T3, OR6C2, OR6C6, OR6Y1, OR7A17, PARVG, PCYT1A, PDE8B, PDXK, PFN3, PGK1, PHKA1, PIK3R4, PKMYT1, PLCB4, PMM1, PPP1R3D, PRKCA, PRNP, PTK2, PTK2B, RAC2, RALGDS, RBKS, SHC4, SMAD4, SRGAP1, STX16, SYNJ1, TUBA1C, TUBB2C, UNC5C, WARS, YOD1, HLA-DQB1, MAPK8IP3, PAFAH1B2, PLA2G12A, SLC25A31
Negative_13250	VCL, ACACB, ACVR1B, ADCY3, AOC2, ARPC5L, BCAT2, BIRC5, BTRC, CACNA1S, CASP6, CIITA, CRB3, CREB3L1, CSNK2A1, CTBP2, CTPS, CYFIP1, CYSLTR1, DFFB, FBXW11, FRAT2, FUT6, GSTA1, HHIP, HLA-DRA, HLA-G, HPSE2, IL10, INPP5E, INSR, IQGAP3, LCAT, MAP2K1, MAPK13, MGST2, MP P5, MYD88, NARS2, OLAH, OR2AE1, OR2M2, OR2T3, OR4D11, OR5R1, OR6Q1, OSMR, PLA2G6, PNPO, POLR3K, PPP2R5D, PRKG1, PRNP, PSME2, ROCK1, SDHA, SEMA3E, SGPP1, SMURF1, TAS1R3, TAS2R3, THBS1, TICAM1, UNC5D, VARS, CACNA2D1, TNFRSF10C
Negative_13251	C8A, CKM, CSK, GBA, IVD, PDC, ACADSB, ATP2A1, B4GALT2, BACE2, BMPR1B, CACNA1B, CAPN2, CCL28, CD22, CD8B, CLDN17, CLDN5, CNTN1, CTSS, CXCL9, DAPK2, DAPK3, DGKI, DVL3, EFNA1, EPB41L1, EPB41L2, FARP2, FGF14, FGF20, FGFR2, FZD5, GNA12, GNAZ, HMGCS2, IL4R, JAK1, KLRC1, LCMT2, MAP4K4, MCM2, MYLK2, NCOR1, ONECUT1, OR10J1, OR13C4, OR6K3, OR8H3, OR9A2, P2RX6, PANK1, PCCA, PGK2, PIGP, PIP5K1B, POLE3, POLR1A, PRKAA1, PRNP, PTPRC, RELB, RPS6KB1, SAT1, SRGAP1, TACR3, TAP1, TAS2R13, TCF7, UNC5B, WNT5B
Negative_13252	GSN, KMO, PTS, SRC, ABCC8, ACADL, ACOT12, ACTG2, ALG2, APH1A, CACNA1G, CCL24, CCR9, CD47, CLTC, COQ6, CXCL6, DGKH, EPHB2, EVI1, FGF10, FGF23, GLG1, HARS2, IDH2, IDH3B, IFNA21, IGSF5, IL20RA, KARS, LRAT, MDM4, MTHFD1L, NUMBL, OR10AG1, OR11G2, OR13C3, OR13F1, OR2F2, OR3A2, OR51M1, PDGFB, PGM1, PITX2, PLA2G2E, PLAU, PLXNA2, PPA1, PPAP2A, SESN3, SPRY4, STEAP3, STK11, TBK1, TGFBR1, TLN2, TNFSF9, UGDH, ULK1, USE1, VAMP4, VEGFB, HLA-DQB1, SERPINE1
Negative_13253	BTK, F2R, HYI, LYN, ABCC8, ALDOB, ALS2, AMY2A, ANAPC4, B4GALT2, CACNA1I, CCKAR, CD72, CDKN2D, CFL1, DGAT2, EDNRB, ENTPD5, EP300, FRAT2, FUT1, FZD3, GBA3, GNA13, GNB1, GSTA2, IFNA6, IMPA1, INHBC, MCM7, NADSYN1, NCAM2, NEFH, OR10S1, OR10Z1, OR11L1, OR4F17, OR52K1, OR8D4, OR9K2, P4HA3, PFN1, PIGC, POLD3, PON1, PRSS3, PTTG1, RAC2, RPRM, SPTAN1, ST8SIA1, ST8SIA5, TNFSF9, VEGFA, WASF1, EIF4EBP1
Negative_13254	HK3, LPL, OAT, TK1, ADIPOQ, ADRB1, AKR1C3, ARPC4, ATP5G1, B4GALT4, BNIP1, CADM3, CAMKK1, CDC7, CDKN1A, CDKN2B, CFL2, CHRM1, CPT1B, CREB3L2, DTX1, F13B, GMPR, GNAZ, IMPDH1, ITGB5, MAGI3, MAP2K1, MCCC2, MPDZ, NFASC, OR13A1, OR2T11, OR52B4, PARS2, PDE8B, PFN1, PGAM1, PIGA, PRPH, PSME1, PTEN, RAD51, RBL1, SH3BP2, SRGAP3, UCK1, WNT16, MAPKAPK5, PRICKLE2



Negative_13255	APP, F2R, FH, GHR, ME3, NGF, SCD, ACAD9, ACY1, ADH1A, ADIPOR1, ALAD, ALDH1B1, ALDH2, ALDH4A1, ALG5, BAAT, BAIAP2, CASP9, CCNB3, CD244, CD82, CFL2, CHD8, CLDN14, COMT, CSF3R, CYBB, CYP26A1, CYP2D6, DPYD, EHHADH, ENTPD7, EPB41L2, EPHX1, EXT2, FCGR3A, FGF18, FGFR2, GUCY1A3, HLA-F, HSD17B4, ITGA11, KLRC4, KYNU, LRDD, MAPK3, MCM5, MINPP1, MNX1, NAGLU, NARS, NR1D1, OR10A2, OR2K2, OR2T10, OR4E2, OR4K2, OR51F2, OR51Q1, OR5D18, OR6F1, OR9G1, PDIA4, PDXP, PLXNC1, PPP2R2C, PRKCZ, PRSS1, PSME1, RAC2, SETD1B, SFRP2, SH2D2A, SMPD2, TAS2R1, TCF7L1, TPH2, TRAF5, UGT2B4, VANGL2, HLA-DRB4, HSP90AA1
Negative_13256	BTC, CD2, GP9, SPN, ABCC8, ABLIM3, ACSL1, ACSM4, ACTN1, ADCY10, AGPAT1, ALG2, ALPPL2, AMDHD2, ANAPC11, ATP5B, CACNA1I, CAPN2, CASP9, CD46, CDC26, CLDN17, CLDN18, CTBP1, CYP26A1, DDB2, DDX47, DUSP3, DUSP8, EFN1, EPHA2, EPHA5, EPHA8, FGF6, FOSL1, FUT5, FZD8, GALNT11, GALNT6, GPAM, HGSNAT, HMOX1, HNF4A, IFNA8, IGSF5, INHBC, IPPK, JAG2, MAP2K5, MPP5, NR4A1, NRG3, NTN1, OGDH, OR1L1, OR2H2, OR3A2, OR4D2, OR52A5, OR5A2, OR5B3, OR6C74, OR8D2, PAPSS2, PARD6B, PDGFRB, PDIA4, PIAS3, PIK3CB, PIK3R1, PLA1A, PLOD2, PLXNB1, POLR3A, PTGS1, PTPRM, SETD7, SETD8, SFRP4, SMAD6, SMARCA2, SUCLG1, TGFB2, TLR3, TRADD, TRAF5, UBE2L6, UGDH, VARS, VAV2, WNT1, GABARAPL1, SERPIND1, TNFRSF12A
Negative_13257	TPR, ACADVL, ACVR2B, ADH6, AHCYL2, AKR1A1, ALOX15B, AOC3, APAF1, APOA1, ATG12, ATP50, BLVRB, BMPR2, CACNA1G, CCL2, CCL24, CCR10, CD80, CLDN7, CMBL, CNTFR, CNTNAP2, CPT1A, CXCL12, DDX51, DERL1, DNMT3A, EDA2R, ENAH, EPB41L2, ESAM, F13B, FLT4, FZD2, GAS1, GCAT, GFAP, GNG12, GUCY1A3, HAGHL, HIF1A, HMGCR, HSPA8, IAPP, IFNAR1, IKBKE, IL15, IL21R, IL23R, IL2RA, IRF5, ITGA8, ITGB6, JAK2, MYH7, NME6, NRXN2, ONECUT1, OR10G7, OR13F1, OR2M5, OR6B3, OXSM, PANK3, PCYT1A, PDHA1, PDXK, PIK3C2A, PLCD3, POLR2A, PRDX6, PRPH2, PTGER3, RASA2, RASGRF2, RPS6KA1, SARS, SEPHS1, SMAD1, SPAM1, TPI1, TRAF1, TUBB2C, UBA1, UGT2B17, ULK1, VN1, WIF1, ZNRD1, ATP6V1C2, KIR2DL5A
Negative_13258	BCR, ID4, IL7, NF1, SHH, AACS, ADAM17, ALDH1A3, ANAPC10, ARSD, ASRGL1, BACE1, BDH1, CCND3, CD19, CD274, CDK2, DKK2, EFNA5, ENTPD2, ENTPD8, ETNK2, FUT5, GALNT11, GAPDH, ICAM2, LCMT2, LIMK2, LYPLA1, MAPK9, MAT2B, METTL2B, MGST2, MYLK, NR4A1, OR11H6, OR6C75, ORC5L, PLA2G2F, POLR4, PORCN, PPP3R2, SENP2, SGPP1, SMARCA2, SPAM1, TIAM1, TNFRSF9, UGT1A10, VCAM1, TNFRSF12A
Negative_13259	AK7, EGF, GNS, MAG, MYC, RDX, ACVR2B, ALDH3A2, AMHR2, AQP7, ATP5J, B3GNT2, C1GALT1, C9orf95, CACNA1F, CCR1, CD226, CDKN2A, CER1, CHRNA7, CNGB1, COQ7, DDX55, DHCR24, DHRS3, DIAPH3, EFNB2, EIF24, EIF4E2, ENTPD4, EPHA2, FGF5, FGF8, FSHB, GPAM, GRAP2, HIF1A, HMOX1, IFNA17, IFNAR1, IL22RA2, IL8RA, INADL, JAG2, LDHA, LYPLA2, MAD2L1, MAN2A1, MAP2K7, MCM3, MRAS, NADK, NEFH, NUDT9, OR10G9, OR1N2, OR2F2, OR2S2, OR52E8, OR6C3, OR6K6, PAX4, PAX6, PIM2, PKM2, PROS1, PTPMT1, PTTG1, RAPGEF4, RPE65, RXRB, SCD5, SHISA5, SIAH1, SLC27A1, SLC33A1, SMAD7, SMAD9, STX6, SUV39H1, TAS2R7, TICAM1, TRAF2, TUBA4A, UGDH, UGP2, ULBP3, YWHAE, ZIC2, AASDHPPT, ATP6V1G3, CACNA2D4, PAFAH1B1
Negative_13260	AMT, AUH, CFH, CP, DDO, RET, UBC, ACOX1, ADCY8, ADH4, AKR1A1, AKR1D1, ALDH2, ALDOB, AMD1, ARNT, ASPA, B4GALT2, BDKRB2, CACNB3, CACNB4, CBR3, CCL4, CD247, CD86, CDC26, CES2, CHKA, CLDN18, CSF2RB, CYP11A1, DGAT2L4, FGF3, FUT9, GALNT7, GIT1, HDAC2, IDUA, IFNA4, ITGB3, ITPKA, JAK1, LTBP1, MAP2K7, MAP3K13, MCM3, MYH2, NKX2-2, NRP1, NSDHL, OR2S2, OR4C12, OR4D6, OR4K1, OR51B4, OR52A1, OR52D1, OR56A3, OR56B4, OR5B12, OR6B2, OR9Q1, PFAS, PHKG1, PIGV, PLA2G2D, PLA2G5, PNPT1, POMC, PPBP, PPCDC, PRIM2, PRKACB, SDC1, SDHC, SEMA4A, SH2D1A, SLC2A4, TRAF4, TUBA1A, UBE2L6, UPP2

Negative_13261	APP, DBI, EBP, OGT, SPN, ABLIM1, AGPAT2, AGTR1, ALG1, APPL1, ARPC5L, A SRGL1, ATP13A2, ATP6VOB, AXIN2, BMPR1B, CACNG7, CASP9, CCL25, CD79A , CHKA, CLTA, CNTFR, CSNK1E, CTNNB1, CTTN, DFFA, DNMT3A, EPHB4, FCGR3 B, FGF13, FM05, FPGS, GAL3ST1, GALNTL5, GFAP, GLI2, GNAI2, GP1BA, GUC Y2D, HTR4, INHBA, IRAK1, ITGA10, ITPA, KIR2DS4, LEPR, LFNG, MAPK1, MA T2B, MCM4, MYH7B, NGEF, NUDT2, NUMBL, OR10G4, OR1M1, OR2G2, OR2Y1, OR 4D5, OR4F15, OR52K2, OR52N1, OR56A1, OR5T2, OR6C76, OR8B8, OR9A2, PD E8B, PGAM1, PGK1, PIK3C2A, PIK3C2B, POLR2J, PPAT, PRIM1, PRKAG2, PRS S2, PTPRC, PYGL, RALB, SAT1, SAT2, SELE, SMAD9, SOCS1, SPRY2, STX2, TA P2, TAS2R3, TM7SF2, TSC1, TSTA3, TYK2, VTI1B, ZMAT3, ATP6VOA4, CSNK1 A1L, PPP1R12A
Negative_13262	C8B, CBS, FGB, JUP, LTB, OGT, PTS, SMS, UBB, AASS, ACTG1, ATP5E, CCL21, CCNB1, CDKN2A, CHAD, COL4A6, CTNNB1, DHDDS, DNMT1, EDN1, FARP2, FBP2 , FGF20, IDI1, IL6ST, IRAK4, ITGA6, KLRC2, LMO7, MPZL1, MYL9, NAMPT, N KX3- 1, NMNAT3, NUDT9, OR10Q1, OR11H6, OR5B21, OR5H6, OR6C1, PDE3A, PDE5A , PIGP, PIK3C2G, PLA2G1B, PLCB4, PPAP2B, PPP2R2C, RDH8, RETSAT, RRM2 B, SMARCA5, SOCS5, SREBF1, STX6, SULT1A1, TAS1R1, TNFSF11, TNFSF14, TYK2, UGT2B11, HLA-DRB3, TNFRSF10D
Negative_13263	F3, GP6, GPI, PDC, ADIPOR2, AGTR1, ALDH3B1, AMHR2, APH1A, ATP6V1A, CA CNG5, CASP6, CCKBR, CLDN11, CSNK1G3, CTNNB1, CTTN, CYP2C19, DAG1, DD X52, DUSP5, ELK1, F13A1, F2RL1, GALNS, GALNT10, GALNT6, GRIA1, GSTA1 , IFNA17, IL18, ISYNA1, ITGA2, LDHAL6B, MAPK8, NARS, OR13C9, OR1L3, O R1L8, OR2AG1, OR2G6, OR52I2, OR5AR1, OR5T1, PCK1, PIK3R2, PIM1, PLA2 G1B, PRKCG, PSENE1, SESN1, SGPP1, SQLE, STAT1, STAT3, TYRP1, UGT2A3, UPB1, VASP, ATP6VOA2
Negative_13264	AR, C9, GHR, AGPAT6, AREG, ASPA, CCR4, CD79B, CREBBP, CYP2A7, DUSP14, EHMT2, ERBB2, FECH, GALNT6, GNPAT, GRB2, GRIA1, HES1, IL2RG, LRP6, MY H9, NEFL, NFYC, NT5C2, OR10J1, OR2AT4, OR4D9, OR52B6, P2RX3, PAK7, PI K3CA, PIPOX, PLOD2, POLR3D, PRKCE, PRSS3, PTEN, RASA2, SDHD, SHMT1, S MPD1, SOAT2, ST3GAL3, STAM2, STAT1, TAP1, TAS2R49, TRIP10, VAMP3, HL A-DRB3, SERPINE1
Negative_13265	CBS, FGA, ID4, NOG, SFN, SPN, TNF, TYR, AGPAT2, AKR1D1, ATP5E, B3GALT5 , BPNT1, CCKBR, CDC25A, CDC42, CDH4, COL5A2, COL6A1, CSAD, CYSLTR2, D CXR, DHRS4, ERBB4, FGF8, FOXO1, GAD1, GALNS, GALNT11, GFAP, GLI1, GNG 13, GSTP1, HARS, HLA- C, IDH3G, IFNA6, IL18RAP, IQGAP3, IRF9, IRS4, KLK3, KLRD1, LLGL2, MFN G, MGAT4B, MYH4, NARS2, NEU3, NFYB, NMNAT2, OR1B1, OR1N2, OR2G2, OR51 B4, OR52A5, OR52J3, OR5AC2, OR5D14, OR5M8, OR6B2, OR8I2, PANK1, PDE1 A, PDGFB, PFKP, PHKA2, PLA2G5, PLCD1, PPP2R1B, SESN1, SIGLEC1, SLIT1 , SUV39H2, TACR3, TAS2R38, UMPS, VAV1, WNT2, XCR1, YOD1, ZAP70, ZMAT3 , ATP6V1B1, PLA2G12B, PPP1R12A, ST6GALNAC1
Negative_13266	AMH, SCD, TNN, XDH, ACAT2, ADCY10, AGRN, ALDH1A1, AMPD3, ASCC3, ATP5J 2, BMP5, BUB1, CCL4, CD244, CD86, CHEK1, CREB3L4, CYP2C9, CYP2U1, DCX R, DGKB, EPHA3, EPHA5, FZD7, GALNTL4, GNA11, GNA15, GZMA, HIF1A, IFNA R2, IL12B, IL17RB, INHBA, INPP4B, KAT2A, LDHAL6A, MAPK13, MEF2C, NEU ROD1, NTSR1, OR2D2, OR2L2, OR4B1, OR4F17, OR4F6, OR52B6, OR5B3, OR5L 1, OR5R1, OR6Y1, OR8A1, OR9K2, PDE8A, POLR2C, POLR2K, PRKG1, PTGER3, RAC2, RAC3, SETMAR, STX16, TAS1R2, TOMM40L, TRAF1, TRAF5, TRDMT1, UB A7, UGDH, UGT2B10, UNC5C, WNT5B, ZFYVE9, ZNRD1, ATP6V1G3, B3GALNT1, TNFRSF11B

Negative_13267	F9, ID2, ACY1, ADCY5, AGXT, ALDOC, ARD1A, ARHGEF6, ATP2A2, AXIN1, BAC E1, BAIAP2, BMPR2, CARS, CD80, CDH1, CHR1, CHST11, CLDN15, COL6A2, CR KL, CYP2A13, DAPK2, DDB2, DGKB, DGUOK, DHX58, EDA2R, EFNA3, EPB41, EP OR, ETS1, FABP1, FLT3, G6PC2, GNB1, GNG3, GUCY2C, HGSNAT, IPMK, IRS2, LIPG, MAD2L1, MAP4K3, METTL6, MKNK1, MOV10L1, MPST, MYH9, MYL7, MYLK 3, NRAS, NRP1, ODC1, OR10J3, OR10R2, OR2B11, OR56A3, OR8H1, OSMR, PAX 4, PDE1B, PDGFC, PHPT1, PIAS1, PIAS3, PIGS, POLR1A, POLR2E, POLR2I, P PBP, PPM1B, PPP1R3D, PRODH, RAC1, RBL1, RBPJL, RERE, SETDB2, SUCLG2, SUV39H2, TBXA2R, TLR2, TOMM40L, TUBA1B, TUBB, UPP2, YARS, ZMAT3, AAS DHPPT
Negative_13268	A2M, BAD, CFD, ITK, IVD, NF1, TNF, TYR, ACOX2, ACVR1B, ADSSL1, AMPD1, A PC2, ARG2, ARPC2, ASCC3, BBC3, C1QC, CACNA1F, CASP7, CBLB, CCNB3, CD2 47, CLDN1, CLDN10, CPT1B, CREB1, CX3CL1, CXCL12, CYP2U1, EIF4E2, EPH B2, GLO1, GMPA, GSTM3, HIF1A, HPSE, HTR4, IL20RA, IMPA2, IRAK2, IRS2 , MAD2L1, MAP4K4, MDH2, MPZL1, NAGS, NFYB, NKD2, OCRL, OLAH, OPLAH, OR 1J4, OR1M1, OR2K2, OR2L2, OR2T11, OR2T12, OR4K2, OR6C2, ORC4L, PAPSS 2, PGM1, PIK3C3, PRKAB1, PRKACA, PRKCZ, PSME1, PTGS2, PTTG1, RAB23, R ALA, RHOD, ROBO2, SEMA3B, SLC27A4, SMC1B, SPP1, ST8SIA5, SUV39H2, TB L1XR1, TRDMT1, TRHR, TUBA1C, TUBA8, TUBB2B, TUBB3, UGP2, WASF2, WNT5 A, WNT9B, ZFYVE16, ATP6VOA2, TNFRSF12A
Negative_13269	CS, GNE, HK1, LCT, PGP, ACTA1, ADRB1, AGXT, ARAF, ATP5D, AXIN1, B3GALT 6, C1QA, CAMK2G, CCL17, CD22, CLDN14, CLDN16, COQ3, CTNNA1, ENTPD1, E XTL1, FZD9, GNG12, GNRH2, GRM5, GSTM4, HEMK1, HPSE2, HSD3B2, HSP90B1 , IL21R, IL6R, IRF5, ITGA7, LDHD, MDH2, MYH7, NAT5, NCF2, NEUROD1, NFA SC, NMNAT3, NOD1, ONECUT1, OR1E1, OR1N1, OR4K15, OR51E2, OR6B3, OR8K 1, OSMR, PAX4, PLXNC1, POLR2G, PRKAR1A, PTGIS, PTPRB, RBPJL, RDH16, R ETSAT, RPIA, SIGLEC1, SMURF1, SPAM1, SRGAP3, STX18, TJP1, TKTL1, TNF SF18, TPMT, TUBB, UBE2L6, UGT2A3, WNT11, WNT6, HSP90AA1, HSP90AB1, T NFRSF14
Negative_13270	CRK, ADCY2, ADORA2B, ATP5E, CCL7, CCNA1, CCNE1, CHSY3, CREB3L3, CTSG , CXCL1, DDX47, DHODH, DUSP9, EDNRA, EPHA8, FPGS, GALNTL1, GNA12, GUC A1B, IGF1R, IL1B, ITPKB, KCNQ1, MAP3K6, MAP4K1, MKNK1, NCKAP1, NEU4, OCRL, OR4D11, OR6A2, OR6S1, OR6Y1, OR7D2, PANK3, PDE1C, PDE6D, PKLR, PLXNB3, POLE, PPP1R3C, PTPRM, PVRL4, ROCK2, SC4MOL, SUCLA2, TACR1, T NFSF12, TUBB2C, WNT2B, WNT9B
Negative_13271	AK5, FAH, IL8, JUP, LSS, MPZ, RB1, ALOX12B, ARPC5L, ATP2A2, ATP50, AVP R1B, B3GNT3, BUB3, CARS2, CASP6, CCL19, CD36, CD79A, CHEK1, CHST13, C ISH, CLDN8, COQ5, CREB3L4, CSNK2A1, CYBA, CYP3A7, DGAT2L4, EPRS, ESP L1, GBGT1, HADHB, HES1, IDH3G, IDI2, IFIH1, IL11, IL6ST, LIPE, MARS2, MYH2, MYLK, NAT5, NRG3, OLR1, OR10A4, OR10G8, OR10R2, OR13H1, OR1N2, OR2T8, OR4N2, OR51A2, OR5AC2, OR5AU1, OR5D13, OR8A1, OR8D1, ORC6L, P IAS3, PIGX, PIK3CA, PLA2G1B, POLE, POLE4, PPP1R3D, PRKCA, PRKCQ, PSE N1, PTPN1, RASGRP3, ROCK2, SLC25A4, STK11, STX2, SV2A, SV2B, SYNJ1, T AS2R9, TRAF1, TUBB4, UBE2L3, CACNA2D2, HLA- DRB5, MAPKAPK5, SERPINB5, ST6GALNAC5
Negative_13272	CEL, EPO, FYN, MTR, PLN, ABCC8, ACP2, ADCY5, ADRB2, ALOX5, AMDHD1, ATG 12, ATP5E, BPGM, CCL26, CD55, CD74, CDC25A, CES7, CLTCL1, CSH1, DGKB, DLL1, DUSP10, EIF4E2, ENTPD7, GALNT7, GNAI3, GP1BB, HIBCH, HSD11B2, HTR2B, IL12B, ITGA9, KIR2DL3, KRAS, LDHD, LIPC, MAP4K2, OR2G3, OR2T3 , OR4F6, OR4K15, OR51I2, OR7A5, OR8H1, PDE4C, PHKA1, PIK3C2A, PIK3R4 , PLA2G3, PLXNA1, PLXNA2, PMAIP1, POLR2G, POLR2K, PPP2R2A, PPP3R1, P RIM1, PRSS2, RAP1A, ROCK2, SFRP5, SLC27A1, TAS1R2, TKTL2, UCK1, WARS , YWHAB, YWHAQ, ZFYVE16, ATP6VOA1, HLA-DRB5, PLA2G12B

Negative_13273	GBA, GH2, GP6, ID4, RFK, ACTN2, ADCY10, AKR1B1, ANAPC1, ARPC2, BMP6, B MP8A, CACNA1H, CDC7, CHAT, CHD8, CKS1B, CMAS, COL4A1, CRKL, CYP11A1, CYP8B1, DDX55, DGKI, DLL4, DUSP8, EHHADH, FGF23, FMO5, FUT4, GALNT7, GSTM5, HTR5A, IDH2, IL20RB, KDSR, LAMA4, LAMB3, LIPE, MALT1, MMP1, MT HFR, NCR1, NMNAT3, OR2A5, OR4C16, OR4N4, OR4X1, OR51A2, OR52L1, OR5B 12, OR7G1, OR8H2, OR8K3, PDE1B, PGK2, PLA2G3, PLCB1, PPP2R2C, RPS6KA 2, RUNX1T1, SCP2, SLC25A4, SMAD7, SOAT1, SPTLC2, STAT1, THBS1, TUBB1 , VEGFA, XCL1, ATP6V1C2, MAPK8IP1, SERPIND1
Negative_13274	AK1, AK7, CD4, GBA, MPI, NPL, ACOT12, ACP6, ACP6, ALDH6A1, BBC3, CASP6 , CCR1, CD44, CD74, CLDN20, CMPK1, CTNND1, CTTN, CYP3A5, CYP4A11, DGU OK, DKK4, E2F1, ENTPD2, ETNK2, FARP2, FASLG, FBP2, FUT3, GBE1, GCLM, G NG3, GNRHR, GSTA2, GUCA1A, HCLS1, HSD3B1, IAPP, IDI2, IFNA14, IL25, I NHBB, INPPL1, ITGB4, JAK2, LDHAL6B, MAP2K6, MAPK9, MDH1, MFNG, MYL5, MYL9, NEUROD1, NLGN2, NME6, NMNAT3, NRAS, OR1E1, OR2A12, OR2T11, OR2 T5, OR3A2, OR4F6, OR4P4, OR5AN1, OR5P2, OR6M1, OXCT1, OXSM, PCYT2, PD E10A, PGAM2, PMAIP1, PPAP2A, PPM1D, PPP2R1A, PPP2R5A, PRKCZ, PRSS3, PTDSS2, PTGS2, RALGDS, SC5DL, SEMA4C, SEMA7A, SH2D1A, SMARCA2, SMUR F2, SPTAN1, ST3GAL1, UPP1, WNT7A, WNT9A, XYLT1, ZFYVE9, HSD17B12, ST 6GALNAC4
Negative_13275	APP, GCK, HPD, INS, RB1, RET, ACSM3, ADH5, AGPAT1, ALAS2, ARHGEF4, CCK BR, CCL4, CD274, CYP26B1, CYSLTR2, DAPK3, DERA, DPM1, DPM3, ENO1, ENT PD3, EPHA8, EXTL2, FMO5, FUT3, GALC, GALNS, GLUD1, GPLD1, HMGCS1, IAR S, IFNA13, IL12RB2, IL1A, IL7R, IRF9, ITGAD, JAK2, LAMC1, LCMT2, LYPL A2, MAGI2, MPZL1, MYH7, MYH9, NEUROD1, NEUROG3, NFATC2, NOS3, NR4A1, OR10J1, OR1A1, OR1D2, OR1E1, OR1I1, OR4K13, OR4M2, OR4N2, OR51A4, OR 5B21, OR5L2, OR5M8, OR6N2, ORC1L, PGAM2, PPP3R2, PRKAR2A, PRKCQ, PTP N6, RFXANK, RPS6KB2, SETDB1, SH3BP2, SMPD2, TAS1R3, TAS2R16, TAS2R8 , VASP, VEGFC, C1GALT1C1, CTNNBIP1, HSD17B12, ST6GALNAC4
Negative_13276	GP5, PNX, TK2, VCL, ACAD8, ACOT12, ASPA, C4BPB, CACNG6, CALML5, CCL17 , CDC23, COL5A2, COL5A3, CRLS1, CXCL2, DDX50, EHMT2, EPHB4, FBP2, FGF 4, FLAD1, GAMT, HSD3B7, IL23A, IL28RA, INPP1, INPP4A, ITGA2B, KAT2B, LCAT, MAP4K2, MECR, MINPP1, MPST, OR2AE1, OR2F2, OR2M7, OR52I2, OR56 A4, OR5F1, OR5R1, OR6C1, PLA2G2E, PPARD, PRKAR2B, PRLR, PRNP, PSPH, P YGB, RAPGEF1, RPRM, RPS6KA3, SMAD7, SNAI1, SNAI2, SULT1E1, TAS2R41, UGT2B11, VTI1B, ZAP70, PPARGC1A, TNFRSF10B
Negative_13277	DDC, EGF, F12, MVK, RET, ACAD9, ACADM, AGPAT6, ALPP, ARNTL, ARSE, ATP6 AP1, BMP6, CD72, CD8B, COX15, CPT1C, CYP2D6, DAPK2, DCXR, EFNA2, IGF1 , IL12RB1, IL20RB, INHBB, ITGA7, MAN2A1, NFASC, NGEF, NR4A1, NTRK2, O R1E2, OR4X2, OR51A2, OR5L2, OR6C1, OR8H1, OR9Q2, PDHB, PFN1, PIGL, PL A1A, PPP3R1, PYCRL, RPS6KA6, SMAD4, SMAD6, STX2, TUBB2B, TUBB3, VAMP 4, VAV3, VDAC1, WNT4, ATP6V1E1, ATP6V1G2, HSP90AA1, SERPINF2
Negative_13278	BID, CDA, EZR, FGB, GBA, ID4, ME3, MPL, AADAC, ABLIM2, ACAD9, ACTG2, AD AM10, AGXT2, AQP7, ARPC1A, ATP5G1, B3GNT4, BDH1, CACNG3, CAMK2D, CCN E1, CD55, CPT1A, CRLF2, CTBP1, DCTD, DUSP14, EPHB4, EXT1, FDPS, FMO2, FUT9, GANAB, GGT6, GJD2, GSTP1, HHIP, HMOX2, IGF1, IL8RA, KCNQ1, KLRC 4, LAMB1, LARS2, MAML3, MAP3K2, MCCC2, MMP1, NUMBL, OR10A6, OR10A7, O R10T2, OR10X1, OR2T1, OR4A15, OR4E2, OR52E8, OR5AR1, OR5R1, OR6X1, P 2RX7, PDIA4, PPT1, PRKCD, PTGDS, PTGER3, RASA2, SNAP23, SPRY3, TCF7, TCIRG1, TSLP, ULBP2, WNT8B, ATP6V1G2

Negative_13279	RPE, ABP1, ACADL, ALG13, ALG3, ATF2, ATP5H, BCL2, CACNG8, CARS2, CD70, CD8B, COL5A1, CXCL10, CYP11B1, DGAT1, DHODH, EDN1, EPHA6, EXOC7, FARS2, FASN, FGF8, FMO2, FRAT2, GALNT3, GLUD1, GRHPR, IFNA5, IL10RA, IL17RA, LTA4H, MAP3K6, MASP1, MGAM, NCK1, NEU3, NFKBIE, NRG4, NSD1, OR2M2, OR4K2, OR51L1, OR52I1, OR5T1, OR6C75, OR7C2, PANK2, PFKM, PLCB3, POLD3, POLE4, PON3, PPA1, PROS1, RAPGEF3, RASGRF2, RRAS, RXRB, SEMA3E, SRGAP1, SV2B, TAP1, TAS2R42, TBK1, THTPA, TRPM5, UBE2L3, UROD, TNFRSF6B
Negative_13280	DBH, F2, HDC, TEC, AARS, ACPT, ACSS2, ACSS3, ADCY5, ADSSL1, ARPC1B, ATP5G3, BDH1, CBR1, CCNA1, CCR1, CES2, CHIT1, CHPF, CHSY1, CLOCK, CNTN2, COL4A2, COQ3, CREB5, CTS1, DDX18, FDPS, FTH1, GALK2, GBA3, GLYCTK, GNAI3, GRIA1, GUCY1B3, IARS, IPMK, KLRD1, LDHB, LEPR, LFNG, MAPK11, MPST, MYH8, NOS3, NT5C2, NTF3, NTRK2, OCRL, OR10K2, OR1M1, OR2T34, OR4D1, OR4K15, OR56A4, OSMR, P2RX6, PARD6G, PCYT1A, PDE3A, PDE6G, PDE6H, PGM1, PIAS1, PIGU, PIK3R5, PLEKHA8, PPID, PPP2R2B, PPP3CB, PSPH, RDH11, SC5DL, SETMAR, STX12, SULT1A4, TACR3, TGFB3, THBS3, TNFSF14, TOMM40, TPMT, TRAF1, TSNARE1, TYMP, UPB1, VANGL2, WASF1, WIF1, WNT2B, ATP6V0A2, MAPKAPK2, MAPKAPK3, PRICKLE1, SERPINF2, ST6GALNAC1, TNFRSF11B
Negative_13281	F9, HAL, MPL, RB1, ACADSB, ADSSL1, CACNG5, CCL15, CD244, CD34, CD82, CLDN1, CPT1B, CYP26C1, DDX56, DGUOK, DUSP3, EIF4B, ENAH, FECH, FSHB, FZD10, FZD9, GAD2, GUCY1A2, INHBA, ITGA7, LAMC2, NCAM1, NRAS, OR10G7, OR10H4, OR4C12, OR4K2, OR51I2, OR52J3, OR6M1, ORC3L, PCYT2, PDE7B, PIK3R2, POLR2I, PPOX, PPP1CA, PPP2R1B, PRSS2, PTPRC, RASSF5, SETDB2, SLC2A1, SULT2B1, TAS2R4, TCF7, TNFSF18, UCKL1, ULBP1, ULK2, UROD, VDAC3, YWHAH, ZFYVE9, CACNA2D3, CSGALNACT2, ST6GALNAC3
Negative_13282	DBT, DDC, GK2, LAT, ME2, ME3, MOS, MUT, NF1, PXN, TAT, ABLIM1, ALDH3A1, APH1A, ARRB2, ATG12, ATP5D, ATP5G2, ATP50, B4GALT3, CAV2, CLDN1, COL2A1, COL4A2, CSF2RB, CSNK1E, CTBP2, CYP3A43, DBF4, DDX19A, DUSP10, DUSP4, DUSP8, DVL3, ENO3, EPHB3, EVI1, F13B, F2RL3, FSHB, FUT4, FUT6, GALNT2, GCNT1, GFAP, GLI3, GSTO2, HTR7, IFNA14, IKKB, IL9R, INPP4B, LDHC, LIAS, MASP2, MTHFD1L, NADK, NAT1, NRG1, OR11H4, OR13C5, OR14A16, OR1K1, OR2Y1, OR51B2, OXSM, P2RX4, PAX4, PAX6, PIGX, POLR2J, PTEN, RALGDS, RUNX1, SNAI2, SOS2, SOX17, SPRY2, STX1A, SULT1E1, TCF7, TNFRSF9, PPP1R12A
Negative_13283	C1S, C8G, F7, HAL, NLK, XDH, ACOT11, ACVR2A, ALDH1A1, ATP4B, ATP5G3, ATP50, ATP6V0C, CCL1, CCR2, CCR7, CD14, CD01, CEBPA, CLDN22, COL2A1, CXCL12, CYP2C9, DDX50, DFFB, DOT1L, DTX4, EDNRA, EFNA2, ENTPD4, EPHB2, EXTL1, HRH2, HTR6, IFIH1, INHBA, INPP5A, INSRR, ITGA2, KLRC3, MAP2K7, MYH9, NANP, NQO1, NT5M, OR10A3, OR12D3, OR1K1, OR1L1, OR2AT4, OR4S1, OR52E2, OR7D4, OR8B12, PIGB, PRSS3, RAPGEF4, RASGRP3, RBL1, RPN2, RXRG, SFRP2, SFRP5, SPHK2, SSH2, STX10, TAS2R14, TUBA3E, TXNDC12, UBE2K, UBE2L3, WNT3, ZMAT3, ATP6V1C1, CACNA2D1, MAPK8IP1
Negative_13284	CFI, GAA, KHK, SP1, TFG, ABCC8, ACO1, ACYP1, ADCY7, ADIPOR1, ADSSL1, AGRN, ALG13, ALG5, C1QB, CCND1, CCR10, CD274, CD28, CDC27, CEBPA, CES1, CHRM2, CLDN22, COL5A3, CRLS1, CSF1R, CTPS2, CXCL5, CYP2S1, CYP4A22, DGKB, DGKD, DKK4, DOCK1, DPM2, ECHS1, FGF1, FGF21, GMPR2, GMPS, GSTK1, HIBCH, INPP5B, ITGB4, LAMA3, LDHC, MAP3K2, MCCC1, MGLL, MGST3, NR5A2, OR13C8, OR13C9, OR2A42, OR4C12, OR6C1, PANK1, PDE3B, PFKFB1, PLAU, PLCD1, PLIN, PNPO, PPAP2C, PPP2CA, PROC, RENBP, RETSAT, SMARCA2, ST3GAL6, ST8SIA5, STAT4, STX1A, TBL1Y, TIAM1, TKTL1, TPK1, TSC2, WHSC1, ZFYVE16, PNLIPRP2, ST6GALNAC5, SUV420H1

Negative_13285	CKM, HK3, IL6, IL8, LYN, MPI, RDX, VTN, ACVR1C, ADCY9, ADH5, ALDH6A1, A RHGEF4, BIRC5, BLVRB, C1QB, CASP6, CAV2, CCR10, CD14, CDC14A, CDS1, C FL1, CSNK2B, CX3CL1, CXCL5, CYP1B1, CYP2B6, CYP2C9, CYP3A7, DDX18, E GLN1, ENTPD8, EPHB1, EXTL2, GALNT13, GNRH1, HAO1, HNMT, HSD17B1, HSD 17B2, IL1A, IMPDH2, INPP4B, LDHA, LDHAL6B, MTHFD1, MYH7B, NAE1, NCK2 , NEFH, NOD1, NOTCH1, OGDHL, OR10G8, OR13C3, OR13D1, OR13G1, OR4F17, OR4K5, OR52A1, OR52J3, OR56B4, OR5AU1, OR6N1, OXTR, PDE7A, PFKFB4, P IK3CG, PIP5K3, PLA2G3, PMM2, PPP2R2D, PYGL, RAC1, RND1, SELPLG, SH2D 1A, SPRY1, STAT4, TAS2R16, TAS2R5, TLN2, ULK2, UNC5C, ATP6V1C2, ATP6 V1E1, HSP90AA1
Negative_13286	AUH, F7, GCK, GSR, LCK, TYR, ACACB, ACADS, ACPP, ACSL6, ACVR1, ADRBK2, AKR1C1, AKR1C3, ALDOB, ALG13, ASCC3, AXIN2, B3GAT1, C7orf16, CCDC6, CCR2, CD79B, CDH15, CLDN20, CSF1R, CTSS, CTTN, CYP3A5, DDX18, DDX41, DGKH, DGUOK, DHODH, DIAPH2, ELK1, ENTPD2, EPB41L1, EPHA8, F2RL2, GCN T2, GLI1, GRIA3, HSD17B1, HTRA2, IL15RA, IL22, IL28RA, IL8RA, ITPK1, KCNQ1, MAN1A1, MAOA, MAPK3, MINPP1, NRAS, OLAH, OR10Z1, OR4A5, OR4S2 , OR51L1, OR52R1, OR5AN1, OR5D16, OR5V1, OR6C3, PCYT1B, PDE5A, PFKM, PGAM2, PIP4K2B, POLD3, PPP1R3B, PRKCB, PRKG2, PTGER1, PTPRZ1, PTTG1 , RBPJ, RFXAP, ROCK1, RPS6KA1, SFRP4, SHISA5, SOAT1, SPRED1, SSX2IP, ST3GAL1, STX6, TLR4, TUBA3E, UPP2, VEGFC, WASL, CACNA2D3
Negative_13287	GK, WAS, ZYX, ATP6V1A, B3GAT1, BMPR2, CAV2, CD247, CD8B, CDH15, CHEK1 , CLDN3, COMP, CREBBP, CSNK1G3, CTNNB1, CX3CR1, DFFB, DPM3, DUSP2, EX OC7, F2RL3, FBP1, FGD3, FGF19, FZD3, GALM, GALNT5, GGT6, GMPPB, GSTK1 , GUCY1B3, HDAC1, IL22RA1, IL2RB, JAK2, LAMB2, LDHAL6B, MTMR1, NT5C2 , NTRK1, OR1J4, OR2M3, OR3A2, OR4D11, OR52A5, OR7A10, OXTR, P2RX2, PC CA, PDE8B, PRKAR2B, PRKG1, PRPH2, PTCH2, RASGRF1, RETSAT, SELE, SETD 8, SGPP2, SHC4, SKIV2L2, SLC12A2, SMAD1, SMAD2, SPRED1, SREBF1, SSH1 , STX1B, TAS2R16, TPM3, WNT5B, YWHAG, ALDH18A1, PDCD1LG2
Negative_13288	CTH, F9, GSR, ACTA2, ANAPC4, AOX1, ASCC3, CAV2, CDC23, CDC6, CDK4, CHR D, CLDN22, COL4A2, CSNK2B, CXCL6, DGAT1, DTX1, DUSP4, E2F4, EXOC7, FA SN, FLT4, FUT3, FZD10, GANAB, GCNT4, GNG13, HAGHL, HPSE, HTR5A, IGF1R , IL8RB, IPPK, ITGA6, KIR3DL3, LEF1, LHCGR, MYH11, NEU2, OR10S1, OR2V 2, OR4D9, OR51F1, OR52E8, OR52K1, OR5C1, OR8B4, OXSM, OXTR, P2RX5, PD E11A, PDE8B, PGAM4, PIK3C2B, PMAIP1, POLR2D, PRKAB1, SELE, SHC1, SLC 33A1, SMAD4, SPI1, STAT1, SULT1A1, TFDP1, TNFSF18, TUBA3C, WNT1, WNT 3A, GABARAPL2, TNFRSF6B
Negative_13289	GPI, ITK, PAH, PC, ADSSL1, AKR1C2, AMPD1, ATF2, ATP5G3, ATP5J2, AXIN1 , BNIP1, CARS2, CCNB1, CD34, COL1A1, CRHR1, CSH1, CYP1B1, DAPK2, DGKH , DPM3, E2F1, E2F3, EARS2, EDNRB, EPRS, F2RL2, GABARAP, GNB3, GSTA3, G STM3, GUK1, HSD17B7, IL17RA, ITGB8, LEF1, LILRB3, MAT2B, MGLL, NAE1, NRCAM, NUDT9, OR10AD1, OR2F1, OR4B1, OR52K2, OR6C75, PGK1, PLA1A, PL OD2, POLD1, PPCS, PPP2R1A, RALB, RETSAT, RRAS, SLC25A5, SLC27A1, SPR Y3, SPTLC2, STEAP3, SYNJ2, HSD17B12
Negative_13290	C5, OAT, PVR, ACADS, ADCY8, ADH1A, AKR1A1, APOC3, AXIN2, B3GNT2, CALM L5, CD34, CD8B, CDIPT, CDKN1A, CRKL, CRLF2, CSH1, CTSS, CYP1A1, DDX18 , DGAT2, EPHA2, EPHA6, EPHA7, GCAT, GJA1, GLUD1, GSTO1, GZMA, HCCS, HI P1, HPSE2, HYAL2, KYNU, LILRB3, LRP6, MAP4K2, MNX1, MYL7, NFATC3, NKX 6- 1, OR10H4, PGM3, PHGDH, PIGC, PPAT, PTPRJ, RBL2, RCHY1, SDC4, SOCS3, S TAM, TCIRG1, VAMP3, VDAC2, YARS2

Negative_13291	HK2, MTR, AADAT, ADH1A, AVPR1B, BCL2, BET1L, CCNB1, CD70, CDH3, CIITA, CPS1, CRLS1, CTBP2, CXCL6, DDX50, DKK4, GABARAP, GGCX, GMPR, HADHB, HLA- DRA, HTR6, ICOS, IDH3B, IL22RA1, KCNB1, LAMB1, NEU3, NT5C2, NTRK2, OR10G3, OR4D5, PCYT2, PFN2, PFN4, PMVK, POLE2, RBPJL, RFX5, RPS6KA6, SARS, SLC12A2, SOCS2, SPRY3, SSH1, ST8SIA1, TSC1, ATP6VOD1, GABARAPL1, HLA-DRB3, TNFRSF10A
Negative_13292	DCC, GLS, ILK, NF1, PC, SPN, ABLIM3, ACAD8, ACADM, ACP6, ACYP2, ANAPC5, ARPC4, ATP5F1, ATP5G3, CDK6, CHPF, CLDN7, CYSLTR1, DGKG, EDN1, EPHA6, GGT6, GP1BA, GRLF1, GRM1, GSTT1, HMOX1, IL17RB, KLRD1, MAP2K6, NCO R1, NKX6- 1, NME7, OR2H2, OR2L3, OR4A15, OR5V1, OR6K3, PDE11A, PFN4, PIK3R2, PIP5K3, PLA2G2E, PNMT, POLA2, POLE, PRKAB2, PRKAG3, RRM2B, SELE, SETD1B, SETDB2, ST3GAL6, STAT2, TD02, TNXB, TSC2, TSNARE1
Negative_13293	C8A, CFH, CGA, F8, NLK, VTN, AARS, APRT, ARNT, ASRGL1, ATP6V1F, BRAF, CD55, CD82, CDH5, EFNA5, EXOC7, FCGR2B, FZD4, FZD5, IL21R, IL8RB, IQGAP3, LEFTY1, MDH2, MEF2C, MINPP1, NCAM2, NCKAP1, NCOR1, NCR2, OR10R2, OR1E1, OR1F1, OR2B6, OR51I1, OR52B6, OR5AK2, P2RX7, PAK7, PGK2, PIK3R4, PITX2, PLXNB1, PPAP2B, PTGFR, RPN1, STX1B, TAS2R5, TP53I3, TPK1, TSNARE1, UROC1, VARS, WNT2, ATP6VOD1, MAP3K7IP2, TNFRSF12A
Negative_13294	AK3, CRK, F3, FGG, JUP, LTB, ABAT, ADORA2B, AHCYL2, ALDH5A1, ARPC1A, ARSA, ATP50, B3GNT2, BAIAP2, BIRC3, BLNK, CACNG4, CCL11, CCL13, CCL28, CCR2, CD55, CERK, CFL2, CNGA4, CYBA, DBF4, DGAT1, DGAT2L4, EFNB2, EP300, FGF14, FUT9, GALNT6, GMPR2, GNAL, GNPDA2, GRIN2D, HCST, HMGCS1, IL6ST, INADL, INHBA, ITGA4, ITGB6, JAG2, L1CAM, LILRB3, LIPT1, MAP4K2, MCCC2, MYH3, NCSTN, NUDT12, OR10H1, OR10J5, OR12D3, OR13G1, OR1J4, OR2D2, OR2T33, OR2T8, OR51B4, OR51I1, OR52I1, OR6Y1, PDE4D, PFKFB2, PFKFB4, PGK1, PHKB, PIP4K2C, PPM1A, PPP2R2C, PSENEN, PTPRR, PYCR1, RASGRF1, RGS3, SEMA4C, SETD8, SETMAR, SOCS5, SORBS1, STT3B, STX8, TAS2R50, TCIRG1, TNFSF10, TPM3, TPMT, UBA7, VDAC1, ZIC2, ATP6VOA2, MAPKAPK2, PLA2G12A, SERPIND1
Negative_13295	FGG, FOS, GHR, MPI, PML, ALDH1L1, ARPC1B, B3GAT2, BCKDHA, CAMK2B, CASP8, CCL7, CCNA1, CD247, CEBPA, CYBB, DHRS4L2, DOLPP1, DRD5, ETS1, F13B, FADS2, FBP1, GADD45A, GNG3, GRLF1, GSTT1, HARS, ITGA2, ITGB2, LAMC2, LRDD, LRRC4C, LTA4H, MAPK10, MMP7, NEFH, NSDHL, OGDH, ONECUT1, OR10G3, OR11H4, OR1L8, OR1M1, OR2A12, OR4F4, OR52I1, OR5K1, OR6N2, OR8I2, OR9I1, OSMR, PIP4K2A, POLE4, PPP1R3C, RAD51, RERE, RHOA, RRM2, SMA D6, STX3, STX6, SV2B, TUBB2B, UGT1A10, WHSC1, WNT11, ATP6V1G3
Negative_13296	CFD, DCT, GNS, ID3, MOS, ATP5J, AVPR1B, CAMK2G, CDKN2A, CSNK1E, CTSL1, CYP2S1, CYP4F3, E2F5, ENO1, F2RL3, FGF17, FLAD1, FZR1, GCNT1, GNG13, GPX7, GRM5, IFNA4, JAK2, KLRD1, MYL2, NLGN1, NSD1, ONECUT1, OR14A16, OR14C36, OR14I1, OR1E1, OR5AC2, OR6A2, PDE6H, PIK3CB, PPP1R3D, PTA FR, QARS, SEMA4C, SSH3, SV2C, TUBB2B, UGT2A1, VNN1, ATP6V1G3, HLA-DPA1, TNFRSF14
Negative_13297	CD6, CRK, EDA, ACP, ACSM3, ACVR2A, ADSS, AGRN, AOC3, ARNT2, ARRB2, ATP12A, ATP5A1, ATP6V1A, CCL16, CDC25B, CES2, CLCA4, CRLS1, DAPK2, DCTD, DGAT1, DHFR, DRD1, ENPP2, ENTPD6, ETNK1, FABP4, FOXO1, G6PC2, GNAT3, GPAA1, GRIN2A, GSTK1, IFNG, IFT57, IL28RA, IL4R, IRAK2, KIR3DL1, KLRK1, LDHB, LPAR1, MAN1B1, MGAT3, MNX1, MYH13, NCOA4, NFYC, NLGN3, OR10A3, OR2A4, OR2G3, OR2T5, OR2V2, OR9I1, PDE7B, PGM3, PKMYT1, PLCB1, PMM2, POLD4, PRKCI, PTEN, ROBO3, SLC33A1, SNAI2, SOS1, STK3, TUBA1B, TUBB2B, VEGFC, WNT5A, WNT7B, ATP6VOA4, PLA2G12A

Negative_13298	CDA, INS, PTS, SI, ACSL4, ADH7, AKR1A1, AKT3, ARSE, CAMK2D, CCNB2, CCN D2, CD40, CNTNAP1, CYP1A2, DGKZ, DTX4, DUSP5, FOXA2, GALK2, GALNT10, GNAL, HIP1, IL1A, MAP2K2, MGAT3, MGAT4B, MTMR2, NANS, OR10A2, OR10AG 1, OR10K2, OR13A1, OR4L1, OR52A1, OR56B4, OR5AU1, OR8K5, OR8S1, PAK4 , PLA1A, PLCG2, PRNP, PSAT1, RPS6KA2, TAS1R1, TSTA3, UGT2B7, WNT3, B3 GALNT1, PNLIPRP2, TNFSF13B
Negative_13299	C8A, DAO, ACOX1, ACP1, ACTN4, ADH6, ARG1, CSNK1G2, CYP4A22, DVL1, EDN RA, EP300, EPHB2, FTCD, FUT2, GAD2, GALNT2, GALNTL5, GCAT, GNRH2, GST M5, GSTO1, GTSE1, HNF4G, INPP4B, IRS4, ITGA8, LAMB2, MOV10L1, MYH7B, NRG3, OR10S1, OR13C2, OR2T8, OR9G1, PIGW, PPP3R1, PRIM1, PTDSS1, PVR L2, RHEB, SOCS5, SPAM1, STK3, TFPI, TRDMT1, TYMS, VAV2, WNT9A, PPP1R1 2A, TNFRSF13C, TNFRSF1A
Negative_13300	GGH, GNS, LPO, PML, ACADL, ACADM, ADCY4, ALDH1A3, ALDH3B1, AMD1, ANAP C2, ARHGEF1, ARNTL, BMP5, CDC42, CLCA2, CTTN, CYP2C18, DCTN1, DHCR24 , ENTPD5, EPB41L2, EPHB2, GALK1, GCDH, GMPR, GYS2, ITGA8, ITPA, LIPT1 , LRRC4C, MAPK1, MCM2, MPP5, MTHFS, NAT6, NCKAP1L, NFKBIA, NRXN3, OR1 A2, OR1F1, OR52N2, OR5B21, OR6B2, OR8S1, PCK1, PDIA4, PIGN, PIK3R5, P IP5K1C, PISD, PLCG1, POLR1D, RAP1A, RND1, RRAS, SARS2, SEMA3G, SMAD6 , SNAP23, SNW1, SOCS4, STAT1, TAS2R5, TBL1XR1, TDO2, THBS3, TUBA3C, T UBAL3, TUBB, UGCGL2, VNN1, WNT2, WNT9B, GABARAPL1, HLA- DQA2, HSD17B12, MAPK8IP3, SERPING1, ST6GALNAC3, TNFRSF1A
Negative_13301	C4B, CAD, CFD, ADIPOQ, AGRN, ALAS2, ALDH2, ARHGEF4, BAAT, CD38, CDC7, CYP21A2, DDX23, E2F1, GCH1, GNRH1, GUCA1A, GUCA1B, GZMB, HSD3B2, IL1 R2, JAM3, MAPT, NCKAP1L, NPAS2, NUMB, OR10K2, OR2C1, OR5C1, OR6C6, OR 6C70, ORC4L, PIK3CA, PLCB1, PNPT1, PRKAR1A, PRPH2, RAC2, RFNG, RRAS2 , SPTLC2, TAS2R9, UGCGL2, UGT1A10, YES1, ATP6V1C1, CSNK1A1L, PAFAH1 B1, PHOSPHO1, SERPINB5
Negative_13302	C7, KIT, PML, SFN, ABP1, ADCY10, AMPD1, ANPEP, ATP6VOB, BMP6, CACNG6, CCL28, CCL4, CD22, CD274, CD28, CD46, CDC42, CDK4, CSNK2A1, CTTN, CXC L13, CYP11A1, DDX19A, DDX51, DHRS3, DKK4, DNMT3L, EARS2, EIF4E, EPB4 1, EPOR, GALNT1, GALNTL5, GAPDH, GIT1, HADHA, HSD17B2, HTR2C, IDH3B, IFIH1, IFNA6, IL2ORB, IPPK, KDSR, KLK3, LIPT1, LTA4H, MALT1, MAP3K6, MAP4K4, MCM4, MGAT1, MTHFS, MTMR6, NAT2, NFATC1, NME2, OR10V1, OR1B1 , OR1I1, OR2T1, OR2T4, OR4M2, OR51A2, OR51A4, OR51A7, OR51I1, OR5AS1 , OR5M8, OR7C1, OR7C2, OR9A4, P2RX1, PFKFB3, PPAT, PPP2R2D, PPP2R5B, PPT1, RASGRF1, RUNX1, SDHB, SETDB2, SHMT1, SMAD2, SPTLC2, ST3GAL5, S UV39H2, TAS2R41, TAS2R49, TGFA, TLR3, TRMT11, VAMP2, VAV2, WNT7B, HS P90AB1, MAPK8IP1, PAFAH1B3
Negative_13303	BTD, C7, C8A, CFD, KHK, MVK, NNT, RFK, ACACB, ACADL, ACADSB, ACVR2B, AL G13, ALG8, ANAPC5, ARG1, ATP5C1, BMP6, BMPR1B, BTRC, CACNB4, CASP9, C D70, CD86, COQ5, DAAM1, DDOST, DDX19A, DNMT3L, DUSP2, ECHS1, ENPP6, E TNK1, FGFR1, FLT4, GALNT10, GDF7, HSD17B1, HSPA2, IFNG, IL10RB, IL15 , INHBC, INPP1, INSRR, IQGAP3, KIR2DL1, LCAT, LIPE, LIPT1, LTBR, MAP3 K5, MAT2B, MYL7, NPAS2, NRG2, NTN1, NUDT2, OR10Z1, OR14I1, OR2L13, OR 52I1, OR52N2, OR7A17, PDE3B, PGAM4, PIGW, PLCB4, POLE2, POLR2L, POLR 3D, PPAP2B, PPP1CA, PRKAB2, PSENEN, PYCR2, RAPGEF3, RASA1, RELA, RRM 2B, SMPD2, SREBF1, TAS2R5, TBL1XR1, TICAM2, TJP3, TLR5, TP53I3, TYRP 1, UGCGL1, UNC5B, SERPINA1, SERPIND1, SERPING1, SUV420H2, TNFRSF10 D



Negative_13304	FN1, GAA, HPD, PRL, STS, TEC, TPR, ABL2, ACADM, ACP1, ACSL1, ACVR1B, ALDH3B2, ARHGEF7, B3GAT1, BAIAP2, BCL10, CD40LG, CEBPA, CLDN14, CLDN5, CLDN8, COL6A1, CREB5, CSF2RB, DKK4, DUSP2, DVL3, ELK1, ERBB4, FGF22, FPGS, GNAZ, GPAM, GSTP1, IFNAR1, IL17RB, IL6R, KLK3, KRAS, LIPF, LRA T, LYPLA1, MAP2K3, MCM6, NEFH, NFE2L2, NME6, NMNAT2, NSDHL, OR10Q1, OR13C2, OR1A2, OR1J1, OR1L8, OR1S2, OR52I1, OR5B12, OR8A1, PIP5K3, PRKAR2B, PTPRZ1, RND1, SGPP1, SPRY2, TAS2R4, TNFSF9, VANGL1, PAFAH1B3, SERPINF2
Negative_13305	AGK, AMT, C8A, F8, INS, ACY1, ATP4B, ATP5D, B3GNT4, CACNG1, CD72, CHKB, CHST13, CREB3L3, CSF2, DGKB, ENO2, EPHA3, EPHB1, FRAP1, GRM1, IL17R A, IL20RB, IL28RA, KLRC1, KNG1, LRP6, LRRC4C, MAP4K1, MAPK11, NADK, N FATC4, NR1H3, NR4A1, NRXN1, NT5E, NUDT9, OR51D1, OR9Q2, PDE6G, PGM2, PIM1, PLCZ1, PNPLA4, PVRL3, RPN1, SHMT1, SMURF1, STT3B, SV2B, SV2C, T GFB3, TNFRSF8
Negative_13306	AR, BTK, CGA, CGN, HPD, MTR, PLN, APC2, ATP13A2, ATP4A, AXIN2, B3GNT4, BCKDHA, BMP8A, CACNB4, CALML5, CCL26, CDC26, CDKN1B, CLTA, COASY, CR HR1, CTNNA3, DERA, DUSP7, ENO2, EPHA4, EPHA5, F13A1, FIGF, FLAD1, FSH R, GALNT2, GARS, GDF6, GLYCTK, GNA12, GNAI2, GNAL, HCST, HSD3B2, IGF1 R, IKBKB, IL19, INPP5B, IQGAP3, ITCH, ITGA2, ITGB2, LAMA4, LAMC3, LIP F, MAP2K1, MGAM, MGST2, NR1H3, OR13C2, OR13J1, OR1D2, OR2T34, OR4L1, OR4P4, OR8J1, OR9K2, PLCG1, POLR2K, PRKAA2, PTCRA, PTGER1, RALGDS, R OCK2, RPS6, SESN3, SH3BP2, SIPA1, SMAD5, SULT2A1, TAS1R1, TAS2R49, T CIRG1, TICAM1, TPH1, TRAF3, TRAF4, TUBB2B, WIF1, WNT1, HLA-DQB1, HSP90AA1, TNFRSF11A
Negative_13307	CGN, TH, AADAT, ACSL4, ADH1B, ADH4, ALG8, ALG9, ALS2, ANAPC7, AOX1, AS MT, CD28, CD40LG, CDH4, COL4A1, CYP1A2, CYP1B1, DVL3, FABP3, FGD1, GL YCTK, GNA14, GOT1, GRIA1, HSD17B1, IAPP, MAD2L1, METTL6, MYH14, NCR2, NSD1, OR10J3, OR13F1, OR1L8, OR2B2, OR52R1, OR9G1, PDGFD, PIAS2, PR KACG, RBKS, ROCK1, SNAI2, SPTLC2, TFDP1, TFPI, TMLHE, TUBB2C, UGT2B1 1, USE1, VAMP2, WASL, WNT1, WNT8B, XYLB
Negative_13308	AGK, DLD, EBP, ADCY6, ADRA1D, ALDH7A1, ARNT, ATP6AP1, BACE1, BCAT2, C CL22, CCL28, CCNB3, CD72, CDKN2C, COL6A1, CTBS, CTSB, DIAPH3, DRD2, F LT4, GALNT3, GALNTL5, GFPT1, GRM5, HBEGF, HEXA, HNF1A, IFNA10, INPP5 A, IRF5, KIR2DL3, LRAT, LRP6, MAML1, MAP3K13, MICA, MYH11, MYLK2, OR1 OH2, OR1A1, OR1E2, OR2AG1, OR51T1, POLR1B, PRKCZ, RFNG, SARS2, SDC1, ULBP2, WIF1, WNT1, YARS
Negative_13309	BTD, CBS, DDC, GH2, IL9, MPZ, ACVR1, ACVR2A, ADH5, ALG10, ALS2, ANAPC1, ANAPC4, ARPC5L, B3GNT4, BAI1, BNIP1, CACNG4, CCL19, CCNH, CCR5, CHS T11, CHSY3, CLDN7, CMAS, DDX19A, DUSP16, DVL1, EFNA4, ELK1, ENTPD2, E XT1, FGF4, GABARAP, GFPT2, GGT1, GRIA3, HTRA2, MOV10L1, NOTCH1, OR2C 3, OR3A2, OR51I1, OR8K1, PAX6, PDE1B, PGM1, PIGA, PIGV, PKLR, PPCS, PT GER3, PTGS2, PTPRZ1, RAC3, RPIA, SARS, SH3BP2, SMPD3, SSH3, STAT5A, S TX12, TNFSF4, ULK2, CACNA2D4
Negative_13310	BAD, CAD, CFH, DDO, PVR, SMO, TNN, AKR1D1, ALAS1, ALDH4A1, ALG1, ARG1, ARPC2, ATP4A, BAI1, CCR6, CDH15, FOXA3, FZD2, GALNT3, GNAS, HAGHL, HL A- DRA, IGF1, IL20RA, IL2RG, ITGA7, MAP3K11, MCM5, NAMPT, NCOA4, NUDT2, OR10G3, OR10H5, OR10K1, OR10S1, OR2A2, OR2G2, OR2M4, OR2T4, OR4D6, O R6C75, PCK1, PHKG2, PIGV, POLR2A, PRKACG, PRKG2, PSME1, PTTG1, RASGR P3, SLIT2, SPP1, STX1B, TBL1Y, TNFSF18, TP53, WNT2B, SERPINC1

Negative_13311	GH1, ADCY10, ADH1B, ADORA2A, ADSL, ALG10, ARHGEF2, ATP13A2, ATP6V1D, C1QB, CD80, CDK4, CMAS, CSF1, CSNK2B, CYP19A1, DVL2, EVI1, GJA1, HTR6, IFNA17, IL24, INHBA, ITPA, LGMN, MYH8, NAGS, OR1D2, OR1L6, OR2A2, OR2D2, OR2T33, OR2T5, OR52N5, OR5L2, OR6X1, OR8K1, PDGFRA, PHKG1, PIGB, PIGQ, PIK3R3, PLA2G1B, PPP1R3B, PRSS2, SDC4, SEMA4A, SHISA5, SSH1, TAS2R13, TCF7L2, VEGFA, WNT8B, CSNK1A1L
Negative_13312	C8G, CS, F2, FES, JUN, PLG, TFG, TH, AACs, ABP1, ACAD8, ADSL, AFMID, ALG5, ATP5H, CACNG2, CAPN2, CCL27, CDK4, CHPF, CNTNAP1, COMP, CPT1A, CSNK1G2, CYP4F2, DAAM1, DGKI, DIAPH2, ENAH, FARSA, FLT3LG, FOSL1, FOXA3, FSHR, FUT4, GALE, GANC, GNMT, GNRH1, HES1, HSD11B2, IFNAR1, IL21R, IRAK2, IRS2, LEF1, MAP3K13, MAP3K14, MAPK9, MYH9, NCR2, OR13A1, OR2L8, OR4C6, OR51G1, OR7C1, OR8H3, PAPSS1, PAX8, PDE4A, PGAM1, PLA2G10, P OLR2A, POLR2J, PPP2R2A, PPP2R5D, PPP3CA, PTEN, RASA2, RPN1, SOCS3, T PH1, TRPM5, VTI1B, YWHAH, ZBTB16, ZIC2, KIR2DL5A, PPP1R12A
Negative_13313	DCN, FH, LEP, TXK, TYR, UBC, ACAA2, ACPT, ACTN4, AK3L1, ALG11, APOA2, A POC3, ARHGEF7, ARNTL, ARPC1B, B3GNT2, B4GALT5, BDH2, BMP2, CCNB3, CC ND2, CD22, COASY, CTNNA2, CYP11B1, DAAM1, DGKQ, DTX3, DUSP14, EDAR, F GF7, FZD1, GCLM, GRIN2D, GSTM3, HTR2C, IL19, ITGA11, JAK2, MAPK11, MT AP, OR13D1, OR2T2, OR52W1, OR5D14, OR5I1, OR5R1, OR8K1, OXCT1, P4HA3, PFN2, PIAS4, PIGM, PIGO, PISD, PLD2, POLA2, POLR2F, PPBP, PPP2R1B, P PP3CA, PRKAA2, PSENEN, RAC2, RPN1, RRM1, SC4MOL, SESN2, SHC3, SREBF1, SUV39H2, TFPI, TLR5, TPH2, TSNARE1, UBE2K, ATP6V1G2
Negative_13314	CBS, GK, LCK, ME1, SHH, VCL, AGPAT1, ALPL, ALPP, ANAPC4, APPL1, ARNT2, C5AR1, CAV3, CDH1, CLDN22, COL6A1, EPB41L2, EPHA3, EPHX2, FCGR3A, GU K1, HDAC1, ICOSLG, IL19, IRF7, LPAR1, MAD2L1, MAP2K5, MMP9, NR1H3, NR G1, OR7G3, OR8D1, OR8J1, PDGFC, PDHA1, PFKL, PIP5K1A, PTAFR, SARS2, S PHK2, TAS2R3, TUBA3E, TUBAL3, UBE2L3, UNC5C, UROC1, YARS, KIR2DL5A, MAPK8IP1
Negative_13315	CBS, CFI, GSR, ABLIM2, ACMSD, ACY3, ADIPOR1, AGPAT6, B4GALT2, BUB1, C ACNB2, CADM1, CASK, CDK4, CDKN2B, CHRM2, CLDN1, CLTCL1, COL1A2, COL4 A2, CSF3R, CTBS, CTTN, CYP2S1, DAAM2, DDX56, DHDDS, DIAPH2, DVL1, EPH A8, FGF19, FGF22, FGF3, FLT3LG, FOXA3, FOXO1, FPGS, GAPDH, GNAL, GNAZ, GPD2, GSTZ1, IFNA2, IKKBK, IL17A, IL25, IQGAP1, KAT2B, LLGL1, MAP4K 2, MGAM, MINPP1, NCAM1, OCRL, OR10A5, OR10H3, OR1A2, OR4F5, OR51E1, O R52J3, OR5A2, OR5M3, OR5P2, PAK7, PARD6B, PDE1A, PDXK, PIGB, PLAUR, P MM1, PPP3CB, PRSS2, PTGES2, RRM2, SDHB, SEMA3A, SRD5A2, STX16, TAS2R 60, TPMT, HLA-DPA1, MAPK8IP1, TNFRSF10C, TNFRSF10D
Negative_13316	BAX, GH2, GPT, RPE, ATP5J, BDNF, C7orf16, CACNB1, CASP10, CASP8, CCKA R, CCL17, CCR2, CD40LG, CEBPA, CHRM5, CLDN5, CRY2, CXCR3, CYP2C9, DAR S2, DOLPP1, DPYD, DUSP6, ECSIT, EFN1, FASN, FGFR4, FOXA3, GALNTL2, G AMT, GLUD1, GPAM, GSTM4, HGSNAT, IL1B, KIR2DL1, LAMC2, LFNG, MBL2, NC R3, NFASC, NFYA, NKX6-1, NRAS, NUMBL, OR12D3, OR2H2, OR2L2, OR4C16, OR5A2, OR5I1, OR5L1, OR C1L, P2RX5, PIP5K1C, PKMYT1, POLE4, PPP2R2B, PPP5C, PRKAA2, PSENEN, PTPRR, RARS2, ROCK1, RXRA, SELPLG, SOX17, ST3GAL4, SULT2B1, WASF3, W NT9B, ATP6V0A4, B4GALNT1, CSGALNACT2

Negative_13317	CR2, GH1, GH2, HK2, IL9, MTR, MVD, PGF, PLG, TEC, TK2, TYR, ACTA1, ALAS1, ATP5D, ATP5I, BMPR1A, CAMK2A, CAMK2B, CCL28, CCL4, CCNA2, CD3E, CDH15, CHRM1, CLDN10, CLDN19, COL5A2, COQ3, CREB3, CSF1, CTBS, CYP2C9, DUSP8, EDNRA, ERBB4, ETNK2, FARS2, FGD1, FGF10, FGFR4, FLOT2, FOXO1, GALNT6, GOSR2, GRIN2B, HSPA2, IFNB1, IGF1R, IL12RB1, IL17B, IL18RAP, IL29, LTBR, MAP3K5, MARS, MIOX, MMP9, OLAH, OR10A7, OR10G2, OR10H5, OR2V2, OR4C46, OR4D1, OR4L1, OR51B6, OR51V1, OR52L1, OR52N2, OR6A2, PDE6G, PDHA2, PIGT, PPAP2C, RAPGEF2, SARS, SEMA3G, SETD1A, SKIV2L2, SLC2A2, SMARCA5, SPCS1, SPCS3, SPTLC2, STK36, STX4, SULT2A1, TACR2, TFDP1, TM7SF2, ZFYVE9, ATP6VOA4, B4GALNT1
Negative_13318	BTK, GH1, GSN, HGD, RB1, RPE, ABLIM3, ACP1, AGXT, AGXT2, ATP6V1H, BAI1, BET1, CCKAR, CDC14A, CSF1R, CSH1, CUL1, CYFIP1, CYFIP2, CYP2A13, DKK1, EXT1, FLAD1, GALNTL1, GLDC, GNA13, GOT1, GPLD1, GRIA2, GSTO2, GUCY2F, HADH, HAGH, IL8RA, INHBA, ITGB1, LCP2, LTBP1, MAP3K4, MAPK10, MYL5, NTN1, OR10H2, OR2T12, OR4K14, PDHB, PIGV, PLCB2, PLOD3, PLTP, POLA2, POLD3, PRPS2, PSPH, RASSF5, RBKS, RUVBL1, SMURF1, SOCS2, ST3GAL6, ST8SIA5, SULT1A2, TAS2R41, TBL1XR1, TNFRSF8, UPP2, ZNRD1, PNLIPRP2
Negative_13319	C1S, EZR, F11, GNE, GP5, SYK, ACADSB, AKT3, ATG12, ATP5C1, BMPR1B, BUB1, C9orf95, CAMK2D, CCDC6, CDH4, CDK7, CFTR, CHIA, COX10, CSNK2B, CYFIP2, DAXX, DOCK1, ENPP2, EPHB3, FGF12, FGF19, FOXO3, FTMT, FUT4, FZD10, FZD3, GBGT1, GJD2, GLUD1, GLUD2, GNAL, GNAO1, GSTZ1, GZMB, HBEGF, HSPA2, HSPB1, IL8RB, IMPDH2, KYNU, LEFTY2, LIPC, MAP2K2, MAP3K1, MAP3K14, MICA, MMP1, MTHFD2, TMTR1, MYH4, MYLK, NME7, NOTCH3, NR4A1, NRG2, NUDT5, OGDHL, OR2C1, OR5D18, OR7D2, PANK4, PARD3, PARVB, PDE10A, PDE8A, PDE9A, PHKB, PLA2G2A, PLAT, PNMT, PNPLA3, PTDSS1, PYGL, SARDH, SOS1, SPRY4, SPTAN1, TAS2R10, TIAM2, TLR4, TNFSF18, TNFSF4, TUBA1B, UGT2B4, VAMP3, WNT10A, WNT11, WNT6, ATP6VOA4, ATP6V1G1, TNFRSF10B, TNFRSF10D
Negative_13320	DBH, ME1, OGT, VCL, AARS, ACACA, ACTA2, ACTN1, ACVR2B, ALDH3A2, AMPD3, BCL10, BCL2, BLVRA, CACNA1F, CACNB2, CCL4, CDC25A, CSF1, CTBP2, CYP26A1, CYP3A43, DBF4, DGKI, DIAPH2, DPYS, EGFR, ENPP1, FDPS, FUT5, FZD9, GANAB, GBGT1, GDE1, GNB1, GNPDA1, GPX7, GRPR, GSTA4, GUCA1C, GUCY2D, HYAL1, HYAL2, ICOS, IDH3G, IFNA16, IL13, INHBB, IRAK1, KIR2DL1, LIPC, MDH1, MMP2, NEGR1, NKX3-1, OR10H3, OR1Q1, OR4A15, OR51Q1, OR52I1, OR52K2, OR52N1, OR7G3, OR8A1, PIGU, PLXNA1, PMM1, PNPO, POLR2K, PON1, PTPRF, SC5DL, SEMA3B, SENN1, SETD7, SH2D1B, SLC2A4, SYNJ1, TBL1XR1, THBS3, VANGL1, VTI1A, WNT5A, ATP6V1G1, HLA-DQB1, PRICKLE2, SERPIND1
Negative_13321	MUT, ABLIM2, ACVR1C, ALAD, ALDH2, ALDH9A1, BDH2, CACNA1H, CACNG2, CCL23, CD72, CD79A, CDK6, COL4A4, CSF2RB, CYP26A1, CYP26C1, DGKG, EFNA4, EFN2, EFN3, EHHADH, ENTPD2, FUT3, GCNT2, GYS2, HTR2B, IDI2, ITGA2, LIFR, LTC4S, MAML1, MAP2K5, MGAT1, MYL2, NAGLU, NANP, NUDT8, OR4K13, OR52B6, OR56A4, P2RX3, PIK3R2, PPP1R3B, PPP1R3C, PRKACB, PRKACG, PRSS3, PVRL4, RARA, SDC4, SPTLC2, SQLE, ST3GAL2, STAT5B, SV2A, TRAF1, ULBP2, WIF1, WNT1, WNT5B, WNT6, ZBTB16, TNFRSF11A
Negative_13322	AGL, BAD, CKM, CR1, DCC, EGF, F8, GCK, SYK, TEC, TFG, TNN, TXK, ACSL1, ACTA2, ADCY10, ADH5, AOC2, ARNT, ATF2, BAI1, CARS2, CD40LG, CD47, CDC27, CDKN1A, CLDN20, CREB3, CSF1, CXCL6, DGAT2, DGKZ, DHRS9, FPGT, FZD1, GPX5, GRIA2, HRH1, IL1R1, IL20, IMPDH2, LAMC2, LAMC3, LEF1, LLGL2, LTBR, TMTR2, NEFH, NFYC, NOTCH1, NRXN2, NT5C3, OR10G7, OR10H1, OR14A16, OR1F1, OR2M3, OR4X1, OR52I2, OR5M9, OR9Q2, ORC5L, PIGT, PLCB4, PLXNA3, PPA2, PPP2CA, PPP5C, PRKAR2A, PRSS3, RAPGEF1, RARS, SDHD, SEMA3F, SMURF1, SNAP23, THBS1, TM7SF2, TPK1, TUBA1A, UGT2B4, YARS2

Negative_13323	C4B, DBT, FAH, FN1, HAL, HGF, IL7, LIF, MAG, TNC, ADCY1, ADCY4, AGPAT2, APOA2, ARHGEF4, ARHGEF7, BCAT2, CACNA1I, CCR5, CD244, CD8B, CDS2, CHAT, CPT2, CREB3, CREB3L3, CTBP1, CXCL12, DDIT4, DDOST, DDX54, EPHX2, ERBB3, ETNK2, FASLG, FOSL1, GADD45G, GALNT5, GGPS1, HAO2, HIBCH, HNF4A, HPSE, HSD17B3, IL17RA, IL17RB, IL20, IL23A, IL23R, ITGA10, ITGA2B, LIPF, MAGI2, MAP3K1, MAP3K2, MDM2, MGAT1, MYH14, NCKAP1, NCOR2, NKD2, NKX6-1, NT5C, OR11H1, OR2A4, OR2G6, OR4S1, OR52R1, OR5D16, PAK6, PDGFRA, PIGA, PLAU, PPP3CA, PRKAB2, ROCK2, RXRA, SARDH, SELP, SIPA1, SLC2A1, SMAD4, SOAT2, SULT2B1, TAS2R1, TAS2R16, TFDP1, TGFA, TGFBR1, TNFRSF9, TPH2, TRPM5, TUBB4Q, TYMS, TYROBP, WNT2B, ATP6VOE1
Negative_13324	DCC, NGF, ACYP2, AKR1B10, AKR1C4, ALAD, ATP5J2, BMP8A, CARS2, CASP8, CCL3, CDC20, CKS1B, CTNNA1, CYP1A1, CYP2A13, CYP2S1, EDAR, EPB41L3, F13B, FLT4, GALNT12, GALNT5, GFPT2, GNG3, GP1BB, GRIN2D, GSTA5, IDH1, ITGAX, MAP2K4, MAP4K4, MECR, MYL9, NARS2, NFKB2, NLGN3, OR2T12, OR8J3, PAK2, PDE4B, PIK3CA, PIP4K2B, PKM2, RAB23, RDH5, RHOA, SC4MOL, SD C4, SMURF2, SUCLG1, TACR3, TAS2R4, TGFB1, TPH1, TNFRSF13B
Negative_13325	DLD, GLS, TH, ADCY10, ALDH3A1, AMPD1, CD3E, CDC42, COL1A2, CREB1, CSDA, CSNK2A2, CTS1, DDX19A, DIAPH2, GCNT1, GLG1, GLUL, GYS1, IL1A, IL1RAP, KIR2DL4, KITLG, LRAT, MAD2L1, MARS2, MCAT, MOV10L1, MYH1, MYH6, MYL5, NAGA, ODC1, OR2C1, OR52M1, OR6A2, OR6K3, P2RX2, PHKB, PIP5K1C, PISD, PLD2, POLR2I, SAT1, SDC1, SETD8, SIAH1, SPRED2, TAP1, TNFSF12, TUBA3C, UGCGL1, ULBP1, C1GALT1C1
Negative_13326	A2M, C8B, CBL, CGA, GCK, GP6, IDS, MIF, ACTB, ALG11, ATP5F1, CDKN1C, CHIT1, CREB3L3, CRY2, CTBP1, DLL3, FTCD, GALNT10, GSTA2, GSTM3, HMOX2, IFNA14, IL6ST, IL7R, LAMA3, MAP2K5, MAT2B, MNX1, OR2AG1, OR2C3, OR2W1, OR52W1, OR5H6, OR5M9, OR8K5, OR9Q2, PAPSS2, PEMT, PKLR, POLD2, PRKCE, PRPH, PRPS1, RAPGEF2, RASGRP2, SETDB1, TAS2R9, TIAM1, UPB1, UPP1, WNT10B, SERPINA1
Negative_13327	ADC, C6, EBP, FST, LCT, LPO, MTR, ACYP2, ADH4, ADRA1A, ALG12, AMPD2, ANAPC2, ARPC1B, ARPC5, ATP5B, ATP5D, CD19, CD28, CLDN7, COQ7, COX15, CP T2, DDX52, DOLPP1, EDNRB, EFNA1, EFNA3, FMO2, FSHB, FZD3, GLDC, GLI3, GPD1, GSTA2, GSTM3, GZMB, HSD3B7, ICAM1, IFNA13, IL8RA, IL9R, IMPDH2, KYNU, LAMC1, LFNG, LRRC4C, LYPLA2, MAPK11, MCAT, METTL2B, MGST3, MINPP1, NADSYN1, NCF1, NEUROD1, NOX1, NPR2, OR3A1, OR4X2, OR51G1, OR51M1, OR5K1, OR5T2, OR8J3, PDE1B, PECAM1, PLCG2, POLA1, POLR3D, PPAR, PRKCG, RASGRF1, RRAS2, SEMA7A, SETD7, SIGLEC1, SMAD9, SMARCA2, SPI1, SPRY3, ST3GAL3, STAT2, TACR1, TFPI, THBS3, TLR3, TRIP10, WASL, YWHA B, YWHA E, CSNK1A1L, TNFRSF17
Negative_13328	C8B, INS, TH, TNR, ACTN1, ADCY9, APLP1, ATF4, BST1, CARS, CDC16, CLDN1, CLDN5, CLTA, CNGA3, CREB1, CYP11A1, DDX4, DUSP5, EDN1, EFNA2, ERBB4, FADD, FECH, HMOX1, IL10, IL22, ITPKB, MECR, MYH6, NEGR1, NT5M, OR14I1, OR1S1, OR2T8, OR4C15, OR5D16, OR5P3, OR6Q1, PAFAH2, PANK2, PDHB, PGK2, PHGDH, PIK3R3, PLOD1, PPID, PPP2R5D, PRSS1, PTAFR, PTPRC, SHC2, SLC25A4, TALDO1, ULK2, ULK3, VAMP1, VAV1, WNT2B, ZBTB16, ATP6VOA4, MAPK8IP3, SERPINF2

Negative_13329	LAT, TK1, ADORA2A, AGPAT1, AGPAT4, AKR1B10, ALOX12B, ATP2A3, ATP5G3, ATP5J2, BMP2, CCL21, CCL26, CCNH, CCR1, CDC6, CDH3, CMBL, CRHR1, CSNK1D, CXXC4, CYCS, CYP1A2, CYP2C18, DAXX, DGKD, EFN1, EHHADH, EPHA4, FCER1G, FLT4, GANAB, GSTO2, HCLS1, HIF1A, IDUA, IL15, INHBA, ITGA6, KCN1, KIR3DL3, KLRC1, LARS2, MAP3K8, MGAT5, NCK2, NKD2, NRXN2, NTN1, OR10H3, OR10J1, OR1L8, OR2A42, OR2C3, OR2F1, OR2G3, OR51T1, OR51V1, OR6K6, OR8K3, PCCB, PGS1, PIGK, PIK3R1, PIP4K2A, PIPOX, PLCD1, POLR1B, PPT1, RAC1, RARS, RPIA, SFRP4, SMC1B, SORD, SPRED2, STK36, STX8, SULT1E1, TAS2R9, VASP, WNT6, YWHAG, YWHAZ, B3GALNT1, TNFRSF13C, TNFRSF1B
Negative_13330	C5, CGA, CR2, GHR, GSR, IVD, ACO2, ACSS3, ACTA1, ADCY2, ALG11, ALG5, ALOX12, ARPC1B, ATP6VOC, AXIN2, BBOX1, BCL10, C1QA, C3orf10, CACNA1I, CACNG1, CALML6, CCL8, CCNH, CD14, CD46, CDKN1A, CFLAR, CHDH, CLDN4, COASY, COL2A1, CRY1, CTNNB1, DARS2, DDX23, DGKQ, DIAPH2, FASLG, FBP2, GUCY2D, HLA-DOB, HPSE, HSD3B1, HSD3B7, HSP90B1, IFT57, IL1R2, ITGA5, LAMC2, LDHD, MASP1, MCAT, MIOX, MTHFS, NAE1, NAGS, NOS3, NTRK1, OR11H1, OR1K1, OR2H2, OR4C6, OR4N2, OR4X1, OR52N5, OR5D13, OR6K6, OR7G2, OR8H2, PANK3, PDGFD, PFN2, PIK3C2B, PPAP2C, PPP3R1, PRLR, PSENEN, PTPMT1, RDH12, RELB, RPE65, RRM2, SETD8, SOS1, STK36, STX12, TDO2, TICAM2, TLR9, TUBB6, UCK2, UGT2B10, MAPKAPK2
Negative_13331	C8A, EPO, EZR, FH, GNE, GP5, GPT, KMO, MAX, PRL, WAS, ACACA, ACADS, ACOT11, ACOX2, ANAPC11, ATP12A, ATP4B, BNIP1, BPGM, CACNB2, CAV3, CD14, CDC7, CDK5, CHSY3, CRY1, CYP4A11, CYP4A22, DHRS4L2, DIAPH2, DLL1, DUSP2, EXT1, FARP2, FARS2, FBXW11, GADD45G, GNPDA1, GRAP2, GRHR, GUCA1B, HMGCL, HSPA1B, HYAL1, IFNA17, IFNG, IFNGR2, JAM3, KYNU, LYZL1, MAP3K14, MAPK3, MCCC1, MLLT4, OR10C1, OR1G1, OR1S2, OR2AG2, OR2K2, OR4C12, OR8A1, OR8J1, PDGFD, PIGO, PIPOX, PLCD1, PLXNB2, PPP1R1A, PRKAA2, PRKAG2, PRKAG3, PRKAR2A, RAB23, RASGRF2, RBPJ, RPN2, SARDH, SDC4, SPTAN1, SSH3, TGFB1, VEGFB, WNT4, WNT6, XCL2, YWHAH, C1GALT1C1, PRICKLE1
Negative_13332	CBL, DCC, SCD, UBB, ACO1, ALG10B, ATP5F1, CACNA1C, CACNG8, CASP8, CD244, CHD8, COL6A2, DAPK1, DKK4, DPM1, F2RL3, FSHR, GAD1, GALNS, GCNT3, GLUD1, GNAS, GNPDA2, GSTA2, GUK1, HADHB, HIF1A, HTR5A, IL13, KLRC2, MAPK13, MECR, OR10G2, OR10R2, OR11H6, OR1A1, OR4C16, OR4C46, OR4L1, OR52D1, OR5B12, OR7D4, ORC1L, PAICS, PARVA, PARVG, PDE8B, PLAUR, POLE4, PRIM1, RASGRP4, RFWD2, RFXANK, SARS, SPTLC2, STAM, STX10, TGFB2, VTI1B, WASF3, ATP6V0A4, MAPKAPK3
Negative_13333	CR2, F8, OTC, PGF, ACVR2B, AK3L1, ALG3, APC2, ARHGEF6, ARNT, ATP5L, B3GALT1, B3GALT4, BAAT, BCL2L1, CAV1, CD22, CDK7, CHEK1, CLDN22, CSF3R, CTNNA3, CTSS, DOT1L, DUSP8, EARS2, EFNA1, EPHX2, ESAM, FBP1, FGF5, GALNT12, GRM1, GUCY1A3, HMGCS2, HRH2, HSD3B1, HTR7, IFNA2, IKBKG, ITGB8, ITPK1, LAMB1, LAMC3, MLLT4, MYLK, NCSTN, NLGN1, NMNAT3, NTRK1, OD1, OR10C1, OR11H6, OR1N2, OR2F2, OR2M7, OR4A15, OR4F17, OR4K5, OR4L1, OR4M1, PAK4, PDE1A, PDE1C, PFKFB1, PIK3C3, PIK3R3, PLOD2, POLD2, POLR2J, POLR2K, PON3, PRKACB, RFWD2, RPRM, SRD5A2, TAS2R13, TAS2R48, UPP2, ATP6V1B2, PDCD1LG2, SERPINA1

Negative_13334	CGN, HGF, HK2, IL7, ACO2, ACPP, ADCY8, AHCYL2, AKR1B1, AKT1, ALPPL2, A TG7, ATP5G2, BRAF, CCNB1, CDC45L, CKS1B, COL4A2, COMP, CSF2, CTPS, CY P2A7, DUSP5, ETNK2, FLOT2, FUT3, FZD10, G6PC2, GNG13, GRB2, GRIN1, HN F1A, HTR4, ITGAE, JAG2, KIR3DL2, KNG1, MFNG, MKNK1, MOV10L1, NCF2, OR 10G4, OR14A16, OR1N1, OR1S2, OR4C6, OR52A5, OR52K2, OR52W1, OR6C3, P AK3, PANK1, PDE10A, PDE7B, PDX1, PIGV, PKLR, PKMYT1, PLCD1, PPP2CB, P PP2R2B, PRKAG1, SC5DL, SDHD, SETMAR, SFRP2, SGPP1, SLIT2, STAT3, TBL 1XR1, TCF7L1, TKTL2, TP53I3, TRAF4, UROS, VAV2, WWP2, ZAP70, TNFSF13 B
Negative_13335	JUN, MYC, PGP, PLG, RB1, RPE, TPR, ACTC1, ADAM17, ADIPOR2, ALOX12, ATF 4, AVPR1A, CACNG1, CAV3, CBR1, CCL15, CD28, CDC14B, COMT, COQ6, CSF1R , CTNNA2, CXCR6, CYBA, CYP11B1, CYP2E1, FGD3, FGF14, FLOT1, FPGS, GAD 1, GNAI2, GYS2, HA01, HLA- G, HSD17B4, ICOSLG, INHBA, ITGA8, ITGAE, KCNQ1, KLRC4, LAMB4, MAD2L1 , MCEE, MKNK1, MYL2, NEGR1, NLGN1, NOTCH2, OR13C4, OR13C8, OR2A5, OR2 B11, OR4L1, OR4Q3, OR5A51, OR5B12, OR5K2, OR6B2, OR7A10, OR7D2, P4HA 2, PDE9A, PGM1, PIM2, POLR2C, PPCDC, PPP3R1, PTK2B, PYGL, RFNG, SARS, SCP2, SEMA3G, SENP2, SESN2, SHC4, SMAD6, SPCS1, ST3GAL5, STK11, STK3 6, THBS3, TICAM1, TKTL2, TSC2, TUBB2B, TNFRSF14, TNFRSF1A
Negative_13336	AUH, CFH, CTH, FAS, GAA, IL4, PTS, AQP7, ARNTL, ATP12A, ATP2A3, AVPR1A , B4GALT1, BUB1, CCL5, CCR3, CD40, CDH5, CDK7, CDKN2C, CLDN8, CSNK1D, CSNK1G3, EFNB2, ENPP2, ERBB3, FZR1, HPRT1, HSD17B1, IFNA16, IFNA17, IL21R, IPMK, LARS2, MAP2K5, MAP4K1, NEU2, NLGN2, NRXN3, NUDT2, OR10A 2, OR10J1, OR1F1, OR4K14, OR52B6, OR56A1, OR5T2, OR8D2, OR9G1, OR9Q2 , PCCA, PGAM2, PGK1, PIGH, PLA2G10, POLR2L, PPBP, RAPGEF3, RFNG, SDHB , SETDB2, ST6GAL1, TAS2R41, UBA1, UGT2A3, UROD, YWHAB, TNFRSF13C
Negative_13337	CEL, DCN, MYC, SP1, ABP1, ADIPOR1, ALDH6A1, ATP5A1, AVPR1A, CD34, CLD N3, CLDN5, CNTNAP2, COX10, CYP2A6, EPB41L3, EPHA4, GLG1, GPAA1, GSTA 4, GSTM2, HARS2, HTR2B, IDH3A, IFNB1, IL11RA, IL1R2, IRF7, ITGA10, KI R2DL1, LCMT1, MAP3K5, MYH9, NCOR1, NODAL, NOS1, NUDT5, OR10H4, OR2W1 , OR4C15, OR6F1, P2RX3, P2RX5, PAK1, PFKM, PHKA2, POLD2, POLR1C, PPAP 2C, PPCS, PPP3R1, PRKY, RPS6KB1, RRM2, SC5DL, SEMA4D, SESN3, SETDB2, SNAI2, SV2A, TUBA1C
Negative_13338	FER, MYC, NPY, ACADVL, AGXT, ALDOC, ALG1, APLP1, BMP7, CDC23, CD01, CS F3, CTLA4, DARS, DDX50, DGKH, E2F1, EPB41L3, ETNK1, ETS1, FASN, G6PC, G6PC2, GRM1, HIBADH, HSD17B8, IDH1, IFNA6, IKKB, IL13RA1, IL13RA2, IL17B, IRF5, LEFTY1, MASP2, MGAT1, MGAT5B, NAGLU, NOTCH2, NPR1, OR14 C36, OR14I1, OR2L8, OR2Y1, OR4A15, OR4A5, OR51Q1, OR52M1, OR6M1, ORC 5L, PAX4, PDK1, PHGDH, PHKG2, POLR3K, PPP1R3D, PRKCZ, RIPK1, ROCK2, R RAS, SARS2, SEMA3C, SHISA5, SKIV2L2, SKP2, THY1, TNFRSF9, TSHB, ULBP 1, WNT2, ATP6V1G2, MAPKAPK2, PPP1R12A
Negative_13339	CDA, CKM, FAS, HK3, MVK, NGF, AGPAT2, AGPAT3, ARPC1A, CACNA1A, CAMK4, CAV2, CCL16, CLTA, CNTFR, CSNK1G2, CSNK1G3, CXCR3, CXCR5, CYBB, CYP1 A1, CYP1A2, DDX4, DFFA, DGAT2L4, DNMT3B, DRD5, DUSP9, EPHB4, FZD9, GG T1, GLUD2, GMPR2, GNRH2, GPD1L, GPT2, GRIN2B, HADH, HMGCS2, IARS, IFN A13, IFNA5, IL25, IL2RG, LGMN, MAFA, MAN1A1, MAP2K5, MGAM, MYH4, NCF1 , NT5C3, OR10G7, OR2F2, OR4D9, OR4F17, OR51B6, OR6C3, OR9K2, PAK7, PP AP2A, PPP3CA, PRDX6, PRKACG, PRKG1, PTPN6, RXRB, SEMA3C, SHMT2, STX1 8, STX5, TOMM40L, TUBB2B, TXNDC12, UBA7, UGCG, UROD, ZMAT3, PLA2G12A , SERPINF2

Negative_13340	CEL, CGA, CR1, IL3, IL8, MOS, TAT, UBB, ABAT, ACP2, ADCY7, ADCY8, ALOX5, B3GAT2, BET1L, BPNT1, CAV1, CCR2, CDKN1B, COQ6, CTPS, CTSB, CYP26B1, DARS2, DNMT1, FLOT1, FZD8, GGT7, GSTM5, IL11RA, IL12RB2, IL1RAP, MAFA, NGEF, NTN1, OR2A2, OR2G6, OR52E4, OR6A2, PIAS1, POLA2, POLR1B, PP2R5B, PRSS3, PTPN1, RCHY1, RDH10, RENBP, ROBO2, RXRG, TCF7L2, TFDP1, TUBB2C, VASP, VAV3, ZIC2, PAFAH1B3, TNFRSF10D
Negative_13341	C3, DCC, GPT, HAL, LCK, LIF, LSS, MAG, ME3, MOS, PML, TNC, ACOX2, ACSS1, ACVRL1, ADRA1B, ADSL, AKR1C4, ATP5G3, CACNA1E, CACNB2, CCR6, CD40, CLDN11, CLDN2, CLDN3, CLTB, CRHR1, DARS2, DBF4, DPM3, FABP4, FCGR3B, FGF13, FGF17, FLT3, FMO3, FOXA2, FOXO1, GALNT10, GDE1, GGT5, GMDS, GPAM, GUCY1A3, GZMA, HSPA2, IGFBP3, IGSF5, IL20RA, IL7R, IRAK2, LDHAL6B, MCEE, MTHFR, MYL9, NEFH, NR1D1, ODC1, OR10G7, OR14J1, OR11I1, OR2T6, OR6F1, OR7G2, PARVA, PCK2, PIGT, POLR2B, PRKAB2, PRKY, RARA, SMAD1, SNW1, STAT3, STAT6, TAS2R14, TAS2R4, TAS2R60, TIRAP, TUBB4Q, YWHAH, ZMAT3, B4GALNT1, MAPK8IP2
Negative_13342	PXN, VCL, AGPAT6, AGRP, ALDOC, BLVRB, BPGM, CCL11, CCL5, CD48, CDC2, CDKN1A, CHRM5, COASY, CREB3L1, CXCL11, DERL1, DGKB, DOCK1, DOLPP1, DRD2, EIF4E, GMPPA, GNG12, GPD2, GRIN1, GSTA5, GSTT1, GSTZ1, GZMB, IFNAR2, IPMK, ITGA7, MAPK13, MYD88, NT5M, NUDT9, OR1K1, OR4K17, OR6C6, OR6S1, PAK4, PANK1, PLCG2, POLR3H, PPP1R3B, PPP3CC, PPT1, PTTG1, RRM1, SMPD2, SULT1E1, TRAF4, UGT2B7, VANGL2, VNN1, XYLT1, HLA-DRB3, ST6GALNAC3
Negative_13343	AK5, AMT, ILK, SYK, AADAC, ACSL1, AGPAT4, AHCY, AKR1C1, ALOX15, AMD1, ANAPC7, APOA5, APOE, ARHGEF1, BCKDHA, BDH2, BMPR1A, C3AR1, CBLC, CBR1, CD74, CDS2, CHIA, CHPF, CHRNA7, CXCL12, CXCL2, CYP4F2, DERA, EHMT1, EIF4E, ENPP2, FCGR3B, FDFT1, FGF3, FRAT1, GALM, GGT1, GMDS, GNA15, GNMT, GRIN2B, HSD17B1, IFNA14, IL13RA1, IL23R, KCNB1, KLRC2, LAMA4, LTB4R2, MARS2, MLYCD, MTMR6, NEU3, NKX3-1, NOX3, OR10A4, OR2A14, OR2L2, OR4F17, OR52A1, OR52N5, OR6B3, OR6C76, OR7D4, P2RX6, PARS2, PDE1A, PDE9A, PER1, PIK3R3, PLCG2, PLCZ1, PNP1A4, PPP1R1A, QPRT, RDH12, RPS6KA5, SMARCA2, SULT1A1, TAS2R41, TRPC1, TUBB4Q, TYMP, WNT2B, CACNA2D1, SERPINA1
Negative_13344	F11, FUK, MYC, ADCY1, AKT3, ALPL, AMD1, ARPC5L, CANT1, CASP8, CCL14, CCL7, CD47, CDC16, CDC42, COL2A1, CYP3A43, DHRS3, EFNA5, ENO3, ENTPD1, EPHA5, ETNK1, FTMT, FZD6, FZD7, GDE1, GRM5, GSTM5, HAGH, IFNA5, IFNA8, IL17RA, JAG1, LIMK1, MAPK13, MDH2, METTL2B, MYH1, NKX2-2, OGDH, OLAH, OR2T5, OR5AS1, PAICS, PDE8B, PIAS2, PPA2, PYGM, RALBP1, RELA, SCP2, TAS2R14, TBXAS1, TNFSF18, TP73, WHSC1, XIAP, YOD1, ARHGAP12
Negative_13345	FGB, GCK, HPD, IHH, LYN, NGF, OAT, TEC, ABAT, ALAD, ALG3, ARNT2, ARPC1A, ATP5H, BCKDHB, C9orf95, CERK, CHUK, COQ3, CTLA4, CXCL16, CYP1A2, DUSP5, ENO3, EPHA2, EPHB1, FCGR2B, GAB1, GLDC, GMPR2, GUK1, HMGCS1, HRH1, HTRA2, INPP5A, LGMN, MYH4, NCOA4, NSD1, OR13C3, OR4D5, OR5J2, OR5P3, OR6T1, OR7A5, OR8G1, PCK2, PDE8B, PDIA4, POLD3, PPAT, PRIM2, RDH5, SEMA3F, SH2D2A, SHISA5, SYNJ1, TAS2R40, TGFB1, TPH1, UGT2A1, UGT2A3, UPB1, WNT2, PPARGC1A
Negative_13346	CR1, GP5, GP6, TK1, ABI2, ALG13, C1QC, CACNG6, CCL23, CCR7, CHKA, COX15, CYP2D6, CYP3A7, DNMT1, DTX3L, EFN2, EHHADH, ENTPD7, EPHB2, EXTL3, FTCD, FZD4, GCNT1, GUCY1A3, HGSNAT, HSD17B4, HTRA2, ICAM3, IFNA13, IFNA8, IL17RA, IL20RA, IPMK, MAML2, MAP3K1, METTL6, NAGK, NFATC4, OR1Q1, OR2AG1, OR2Z1, OR4D2, OR52R1, OR5D14, OR6A2, OR8H1, OR9I1, PDGFB, PFKFB2, PLA2G4A, PLCE1, PTGDS, RBKS, SETD7, SIAH1, SORBS1, TAP2, WBSR17, WHSC1, AASDHPPT, B4GALNT1, ST6GALNAC6

Negative_13347	BTC, CGA, CSK, F10, FES, GLA, HYI, LCK, OSM, TFG, ACVR2A, ALG12, ANAPC7, ARHGEF4, B3GALT5, B3GALT6, B3GNT5, B4GALT5, C3AR1, CACNG3, CACNG5, CCL1, CCL22, CD247, CD74, CDH2, CHPF, CLDN1, CNDP1, COL3A1, CYP1A2, DDX23, DGKQ, FGF13, FGF19, GALNT14, GFAP, GNAS, GNG12, GRLF1, HEMK1, HRH1, IARS2, IFNAR1, INHBA, IRF9, ISYNA1, KIR2DL3, LARS, LDHD, MAP2K6, MGAT4B, MTHFD1, MTHFR, NAT5, ONECUT1, OR10A7, OR10X1, OR2T11, OR4K15, OR4L1, OR52A1, OR5P2, OR5T3, OR8S1, PARVG, PHKA2, PIGA, PIK3C2B, PIK3CB, PIK3R5, PLAT, POLR1C, PPCS, PRIM2, PRKG2, PTCRA, RDH10, RPS6KA1, SESN1, SHISA5, SKP1, SMAD4, SRGAP2, STX12, SYNJ1, TAS2R60, THBS2, TICAM2, TIRAP, TLN2, TLR2, UNC5A, UNC5C, MAPKAPK5, PPARGC1A
Negative_13348	AUH, CEL, EDA, ADSS, ALDH1B1, ANAPC11, AOC3, ATP5I, ATP6V1A, BCKDHA, CHRM3, CSF2RA, FGF14, GALM, GRIA3, GUCY2F, HCLS1, IFNW1, IL28RA, IL2RG, KIR2DL1, LIMK2, MAN1C1, MAPK8, MLLT4, MYL7, NAGA, NOX1, NUMB, OR10J3, OR11A1, OR2M4, OR4A5, OR5B21, OR7A10, PDE6H, PDGFRB, PIK3R3, PP3R1, PSME1, RASGRP3, RFXANK, RFXAP, ROB3, SOCS3, STX16, TRAF1, TRAF3, WNT10B, YWHAG, YWHAZ, PDCD1LG2, TNFRSF14
Negative_13349	BAD, EDA, GLA, MPL, NOG, VCL, ABL2, ALG10B, ARG1, ARSD, ATP5G2, BACE2, C4BPA, CCL27, CPS1, CSNK1G1, DDIT3, DKK2, ENTPD3, FGF22, FZD2, GANAB, GARS, GCLC, HSP90B1, IL1R2, IL28A, MAP3K5, MGAT1, OR10AG1, OR2AT4, OR4D11, OR4D5, OR4F5, OR9Q2, PDIA4, PGK1, PHKG2, PIK3CB, PIP5K3, PKM2, PLIN, POLA1, PPP2CA, PPP2R2B, PRKAA2, PRKCZ, PTPRF, RRM2, SRGAP3, STX4, TCF7L1, TNFRSF9, TPMT, TUBB3, ULBP3, ATP6V1E2, ATP6V1G3, TNFRSF1A
Negative_13350	ATM, C3, CRH, ME1, MIF, PLG, ACAT1, ACAT2, ACP, ACPT, ACSS3, ACYP1, ADCY2, AGPAT2, ALPI, APBB1, ASCC3, ATP5I, BDH2, CCR5, CD36, CD82, CD8A, CHRM3, CHRM5, CNTN1, CRY2, CYBA, CYP2U1, DEGS2, DIAPH3, DLL3, DPM1, DVL1, EPHA3, FGFR3, GALE, GART, GCNT4, GLI1, GNAI1, HIP1, HRH1, HSD11B1, IFNA4, IL10RA, IRS4, KIR2DL4, KRAS, LAMB4, LARS, MALT1, MAP3K2, MC7M7, MPZL1, NFATC2, NRXN2, OR10H3, OR10Z1, OR2A12, OR4A5, OR4F15, OR6C76, OR6Q1, OR8U1, OSMR, P2RX5, P4HA3, PDE10A, PDE7A, PDGFA, PLA2G2F, PLD2, RAPGEF1, SARS2, SMARCA2, SOX17, SPP1, SPTLC1, STK11, TAS2R5, TBXAS1, TLN1, TUBA3C, TUBB1, UGT2B10, UGT2B11, WNT1, XIAP
Negative_13351	GSR, HGF, MOS, PDC, TNF, XDH, ACACA, AKT1, APAF1, APLP1, ATP5A1, BMP8A, C1QC, C5AR1, CAMKK1, CASP8, CD79A, CDC42, CDC6, CHD8, COL5A3, COL6A2, CYP2S1, DTX1, EPB41L3, EPHB6, FGF19, FUT4, GCAT, HAAO, HCCS, IGF1, IL13, IRF7, ITGA6, MAN1A1, MTMR6, MYH7B, NEGR1, NOS1, OR2M5, OR4C6, OR52A5, OR52E8, PARD3, PLA2G2D, PRKAG2, PVRL1, RASA2, RBX1, RRAS, RUNX1T1, SEMA4B, SETD1A, SETD8, SPRY3, STX10, TAS2R41, TGFBR2, TLN2, VDAC3, ZBTB16, PNLIPRP1
Negative_13352	CD6, F5, FAH, FOS, GH1, GK2, HK1, MET, NGF, PGP, ACTG2, ACTN2, ACTN4, ADIPOR1, ADSL, ADSSL1, AHCYL2, ALG2, AMY2B, ANPEP, ASCC3, ASNS, BAIAP2, CCL7, CCR10, CDC45L, CDH15, CDH5, CHST11, CLDN22, CLTA, CMBL, CRLS1, CTBP2, CYFIP2, CYP11B1, CYP2E1, DARS2, DDX47, DHODH, EHHADH, EVI1, FGF4, FOSL1, FOXO3, FPGT, GADD45A, GALNT14, GAPDH, GP1BA, GRB2, IFNA10, IFNGR1, IL5RA, IL7R, IRS4, LRP6, MAP3K7, MAP4K2, MAPK8, MCEE, MPDZ, MYLK3, NRG3, NRP1, OR4D11, OR52N4, OR9G1, P4HA2, PDGFB, POLD3, PRKAG2, PSEN2, PTGDS, RCHY1, RPS6KA3, SENP2, SESN1, SSH2, ST3GAL3, ST3GAL4, STX2, STX5, SULT2A1, SULT2B1, THBS1, TRHR, TSHR, XYLT1, YARS2, YWHAZ, PLA2G12B



Negative_13353	AK2, C2, MTR, TPR, VTN, ACMSD, ADH7, AK3L1, AKR1C2, ALOX5, AOC2, CDC26, CDK4, CLDN14, COL1A2, CTSL1, DHCR7, DTX4, EPHA2, ESAM, FGF22, FGF8, FLOT2, GRM1, GUCY1A2, GUK1, HIP1, HTRA2, MGAT5, MMP1, MYL5, NEU4, NFA T5, NME4, OR12D3, OR1E1, OR4E2, OR4F5, OR4P4, OR52E8, OR5A1, OR8B8, OR9G4, PHKB, PIGQ, PIK3CG, PMM1, POLR2E, POLR3B, PPID, PRKCD, RDH16, SDC4, SESN2, SFRP4, SHC4, SOD1, TM7SF2, YWHAZ
Negative_13354	EDA, F8, FAH, HPD, SCD, ADH1A, AGPAT3, ALG9, ALS2, AOC3, APOC3, ATP50, ATP6VOB, BDH2, C1QA, CBR3, CCKAR, CCL16, CCR3, CDC6, CHKA, CHPF, CLCA4, CLDN4, COL6A2, CRKL, CYP2C18, DARS, DCTD, DDIT3, DDX51, DGKG, EIF4E, EREG, F13A1, FTCD, GADD45B, GLUD2, GNA14, GNA15, GRM5, GSTM3, HNF1B, HRH2, IARS2, IL10RB, ITCH, ITGA11, JAM2, LCMT1, LIPG, MGST1, MYH15, NMNAT1, NR5A2, OCRL, OR1L1, OR1Q1, OR4A16, OR4E2, OR51E1, OR51S1, OR5D13, P2RX2, PHKB, PTGER3, PVRL4, RELB, RND1, RPS6, SEMA3B, SEMA4D, SH2D1A, SMAD5, SPRED1, STX1B, STX5, SULT1A2, TPH2, TUBB6, VAMP4, VAV2, WASF3, WNT2, B4GALNT1, CACNA2D2, EIF4EBP1, PAFAH1B2, ST6GALNAC4, TNFRSF1B
Negative_13355	ADO, AK2, FGB, SYK, TNN, ACP5, ACSL3, ADH7, ADORA2A, AGRP, ALDOB, ALPP, ARHGEF7, ATP2A3, ATP4A, BCAT1, BCL2L1, BDNF, CD48, CDK5, CES2, CLCA2, CNTNAP1, CSNK2B, CTNNA3, CYP2A7, CYP2S1, CYP4A22, DCTD, DGAT2, DLL3, DOCK1, DPM3, ENPP1, ESPL1, FBP1, GALNTL5, GGT6, GLUD2, GNPDA1, GSTA1, HEXB, HIF1A, HSD3B2, IBSP, IDH1, IDH3A, IPMK, KLRC3, MALT1, MAN1A2, METTL6, NAE1, NCOA4, NT5C3, OR10G7, OR11G2, OR2K2, OR4A16, OR4D1, OR4F15, OR4K1, P4HA2, PANK3, PLA1A, PLA2G2A, PLXNC1, POLR1B, PRNP, PROS1, PRPS2, PTDSS1, PYCR1, RALB, RASSF1, SEMA4A, SEMA4C, SH3BP2, SHC2, SMPD1, SOCS7, STAT3, STX1A, STX2, TSTA3, TUBA1C, TYRP1, UBA1, UCKL1, XYLT1, ZNRD1, HLA-DRB5
Negative_13356	GH1, MIF, MVK, NGF, OTC, TK2, ABAT, ACSL4, AGXT2, ALG13, ARHGAP5, ASRGL1, BAAT, CAMKK1, CCKAR, CD79A, CD8A, CDC14A, CHIT1, CHSY1, CLDN4, CLDN5, COL6A1, CREB5, CYP4A11, DARS2, DDX41, DGAT2, DPYD, DUSP3, EARS2, EIF4E, ENO1, ENTPD8, EPHX1, ESAM, FBP2, FGD3, FLT3LG, FMO3, FZD6, GLO1, GNG13, GPD1L, HDAC2, HMOX2, IFNA17, LAMA3, LIPT1, MAGI1, MGAM, MGST3, MICA, MPZL1, MTHFD1, MYL2, NSD1, NSDHL, NTN1, NUDT12, OLR1, OR10H2, OR2AT4, OR2K2, OR2S2, OR4D6, OR4M2, OR7A17, OR8D4, OR8K1, OR9G1, PANK3, PDHA2, PFKFB3, PITX2, POLR3B, PPARA, PPP1CC, RDH11, SOAT1, ST3GAL5, ST3GAL6, TAS2R5, TGFBR2, TNFSF12, TOMM40, UGT2B28, VAV1, VDAC1, WNT2, ZFYVE16, B3GALNT1, CSGALNACT2, HLA-DQB1
Negative_13357	CFH, CP, CRK, EBP, HYI, OGT, PGD, ACAD9, ACTA1, ASS1, ATP2A3, B4GALT3, BPNT1, CDC2, CDK4, CPT1B, CRY2, CXCR4, DAXX, EDN1, EFNA3, EI24, ENPP6, EXOC7, FABP3, FGF7, GGPS1, HBEGF, HLA-DOA, IKBKG, IL10, IL25, IRAK2, IRF7, ITGA10, MAP3K2, MAP3K7, NOS1, NOTCH3, NPAS2, OR2H1, OR2T6, OR2T8, P2RX2, PAK4, PARD6G, PDE6D, PIGA, PIGP, PLA2G3, PLXNC1, POLD2, PRKCA, PRKCH, PRPH, PTGER1, RHOQ, SPTAN1, THTPA, TLN2, TMLHE, TUBB3, UBE2L3, WASF1, CACNA2D3, MAPKAPK3, SERPINE1
Negative_13358	AK3, HDC, ITK, SHH, ACP2, ACP5, AK3L1, ALCAM, ALDH3B2, ALG13, ARRB2, ASRGL1, ATF2, ATP5C1, BCKDHA, BCL2L1, C7orf16, CASP3, CCL24, CD74, CDKN2B, CLDN15, CLDN3, CLDN8, CNDP1, CNTNAP1, CSF2RA, CXCL12, CXCL6, CXXC4, DDX4, DFFA, DNMT3B, EDNRB, ELK4, EPB41L2, ESAM, FBP2, GALNT12, GALNTL5, GANAB, GANC, GART, GGT6, GGT7, GMPPB, GPT2, GRIA3, GZMB, HMGCL, HNF4G, HSD17B4, ICAM2, IFNA2, IL10RA, IL1R1, JAK1, KITLG, LCMT2, MAP3K4, MEF2C, MYL2, NMNAT3, NPAS2, NRAS, NRCAM, NSD1, OR11G2, OR2T11, OR52N2, OR56A1, OR6M1, PARD6G, PDE8B, PFKFB4, PLCD1, PLD2, PLXNB3, PNPT1, PPAP2B, PRIM2, PRNP, PSPH, PVRL2, RASSF5, ROBO1, SLIT1, SPRED2, SPTLC2, TBXAS1, THBS2, TOMM40, TRAF4, UBE2L3, WASF3, ZMAT3

Negative_13359	CRK, GP5, GPT, SPN, TK2, ALDH1A3, ALG10B, ANAPC4, ANAPC5, APOA1, CBR3, CCR10, CDK2, CDKN1C, CHAD, CLTC, COQ5, CYP2A7, DIAPH3, DOT1L, E2F5, ECSIT, EFNA4, EPHX2, F13A1, GALNT9, GBE1, GSTM3, HMBS, INPP5B, ITGB5, JAM2, LDHAL6A, LIPG, LYPLA1, MFNG, MMP1, MYLK2, NFKBIE, NUDT5, OR10G4, OR10G9, OR2H1, OR4D5, OR4Q3, OR5D13, PARVA, PIK3C2A, PIK3R2, PIK3R4, PLEKHA8, POLR2C, POLR2H, POLR2I, PSME2, RAC1, RAC3, RASSF1, RFG, RFXAP, SDHD, SELE, SPRY2, TMLHE, TSC1, VCAM1, VDAC3, YWHAE, YWHAQ, CACNA2D3, PPP1R12A
Negative_13360	DDO, LPL, SDS, TK2, A4GALT, ACADSB, ACO2, ACP1, ADIPOR1, AKR1C4, ATP5F1, ATP50, ATP6V1A, CACNA1H, CAV3, CBLB, CCL3, CCND2, CD79A, CDC7, CXCL5, DAD1, DUSP1, EDNRB, EVI1, FGF23, FM03, FUT4, FZD8, GALNT14, GNAO1, GSTA1, GUCY1A3, HTR4, HYAL2, IBSF, IFNK, IL12A, INHBB, INPP1, ITGB8, KIR2DL1, KYNU, LMO7, LYPLA2, MAPK10, METTL6, MGST2, MPZL1, NEFH, NFYC, NOS1, NUDT5, OR10Z1, OR11G2, OR2A25, OR3A1, OR51T1, OR52B4, OR52B6, PDE1A, PISD, POLA1, POLD1, PORCN, PRODH, PTAFR, RAPGEF4, RASA2, RPS6KA5, SCP2, SDHA, SLC27A1, SLC27A4, SOCS1, SRD5A2, STAT4, STX2, TLR4, TLR9, TM7SF2, TP53, UGT2B17, WNT16, HLA-DQA2, ST6GALNAC5
Negative_13361	AK2, C7, CDA, FAS, LAT, MVK, ACAT1, ACPP, ACTA2, ADRB1, ALDH1A2, ALDOA, ATP12A, ATP50, C5AR1, C7orf16, CADM1, CBLB, COL5A1, EFNB1, FASLG, FGF12, FGFR1, FLT4, GCDH, GCH1, GNAQ, HAO2, HNF4G, IFNA8, IL9R, INHBA, ITGA10, LRP5, MAPK1, MGAT1, NRXN1, NT5M, NUDT12, OR10H4, OR13C9, OR1A1, OR2G3, OR4A5, OR7G1, ORC4L, PDE4D, PGM2, PHKG1, PLA2G3, PLA2G4A, PLAU, PLCE1, POLE2, POLE4, PRKCZ, RASA1, RPE65, SEMA3F, SIAH1, SRGAP3, STAT3, STX4, SUCLA2, SULT1A4, TPH1, TPH2, TRPM5, TYMS, UGT2B11, UPR, VANGL1, WASF2, WNT5B, ZAP70, B4GALNT1, TNFRSF1A
Negative_13362	A2M, CD2, CEL, CFD, F8, LTB, SMS, SP1, TNN, AARS2, ACVR2B, AGPAT3, AKR1D1, ALPL, AMD1, APOA2, B3GNT3, BCMO1, BDH2, CACNB2, CBLB, CCL16, CD226, CD79A, CDKN2C, CHRM1, CLTA, COASY, COL1A1, CYP2F1, DHDDS, DPYS, E2F3, EPAS1, EPHX2, FGF9, FTMT, GABARAP, GRIN2A, HCCS, HSD17B1, IFIH1, IGFBP3, IRAK2, KIR2DL2, KLK3, KLKB1, LAMA3, LARS, LCMT1, LIMK1, LIPG, MMP14, NFATC3, NFYC, NODAL, NRG3, OR2A4, OR2G2, OR2G6, OR2L13, OR2M7, OR4C11, OR4F15, OR52N2, OR6C4, OR8G1, ORC5L, PGAM4, PIK3C2B, PPP1R3B, PSME3, RHOD, SEMA4B, SMAD9, SOCS7, TACR3, TAS2R38, TICAM2, TLN2, TPK1, TXNDC12, UGT1A10, UGT2B11, VCAM1, HLA-DRB3
Negative_13363	APP, ID1, ACVR1, ACY1, ACY3, AGXT, ALDH2, ALDOB, AMPD2, ARHGEF2, ARNTL, ARPC4, ATP2A3, CDC6, CDKN1A, CHR1, CLDN18, CMBL, CNTN1, CPS1, EFNA2, EP300, FABP1, FDFT1, GAMT, GAS1, GBE1, GNA14, GNAI2, GNAO1, HEXA, HSP90B1, IFNA13, IFNA7, IL7R, INHBA, INHBE, IRAK2, IRS2, KLRC2, MDM2, MYH11, NANP, OR2G3, OR2G6, OR51E2, OR51I1, OR52N5, OR5B21, OR5D14, OR8A1, P2RX5, PAK6, PIGH, PIM2, PLXNA3, PNMT, PPA1, PPP3CC, PTGER3, PTGES, PTK2, PTPN5, PTPN6, RHOA, RHOD, RIPK1, SEMA3F, SGMS2, STAT4, STX18, STX5, TAS2R60, TGFBR2, TNFRSF8, TNFSF10, TUBB2C, UGT2A1, VCAM1, HLA-DPB1, HLA-DRB3, TNFRSF10A
Negative_13364	AGL, EBP, HYI, OGT, PC, RET, ACSM1, AGMAT, ALCAM, ARSE, BUB3, CASK, CDKN1A, CDKN2B, CREB3L2, CRLF2, CSH1, DDX52, DLL3, DNMT1, DUSP1, FGF12, FM01, FOXO3, FUT2, GAMT, IKBKB, LMO7, MYH2, NCR2, NUDT5, OR10G8, OR10K2, OR1L6, OR2A25, OR4M1, OR51G1, OR52E4, PCCB, PCYT2, PIGH, PPARG, PSPH, PTCRA, SKIV2L2, SLIT1, STK11, STMN1, TRADD, TRPM5, UGT2B28, UMP, XYLB, ATP6V0D1, CSGALNACT1

Negative_13365	AMT, C8G, GSR, HDC, KDR, RPE, A4GALT, ACP6, ACSL5, AGPAT2, ALG5, ATP2A1, CACNA1B, CAV3, CCL8, CCR3, CD28, CREB5, CYP2A7, DAD1, DHFR, ECHS1, EIF4E2, ENTPD7, FCGR3B, FOSL1, GALC, GIT1, GNPDA2, HMOX1, HTR2A, IFN A17, IFNA4, IL1A, IL21, IL8RA, IRS4, ITGA5, ITGB8, MAOA, MCM4, METTL6, MITF, MYL9, NAT2, NEU2, NFE2L2, NPR1, NTF4, NUDT9, OGDH, OR13C9, OR2D3, OR2T8, OR4F4, OR56A4, OR5AK2, OR5H2, OR6C1, OR8B4, ORC4L, PFN4, PIGF, PLCZ1, PPP1CB, PPP2CA, PYGM, RDH16, RPS6KA6, RPS6KB2, RUNX1T1, SMAD5, STK36, STX5, TAS2R1, UBA7, VAV2, WNT7B, ZIC2, ZNRD1, ATP6V1E1, CACNA2D2, ST6GALNAC5
Negative_13366	CAD, CD6, F10, HDC, ACP5, ALDH4A1, AMD1, ATF4, BCAT1, BUB3, CACNB1, CHEK1, CHRM1, CLDN18, CPT1C, CREBBP, CTF1, CXCL1, CYP4F3, DHRS3, DIAPH3, EPAS1, F2RL3, FLOT1, FOXO3, GGT6, GMPR, HRH1, IKBKG, IL4R, ISYNA1, JAG2, KLRC2, MAOB, MGAT5B, MGLL, NOX1, OR2T34, OR4C11, OR52J3, OR6X1, PARVG, PCNA, PDE4D, PDX1, PDXK, PFN1, PIAS1, PIGF, PIGT, PLAT, PLXNB1, PLXNB3, POLR1A, PPP2R2D, PRKCG, PTGFR, SDHD, SIPA1, SLC2A2, TAS1R3, TRPM5, TUBAL3, VEGFC, VTI1B, WNT3
Negative_13367	APP, DCN, ID1, IL9, MSN, TKT, ACSS1, ADIPOQ, ALOX12B, APOA5, APOC3, CD226, CD79A, CSNK1E, CTBP1, CX3CR1, CYP17A1, CYP3A5, DHRS4, DPM1, DRD5, E2F5, EPHB3, FABP1, FCER1G, FCGR3A, GPD2, GSTZ1, HEXA, HLA-DOB, HYAL2, IFNGR2, IFNK, IL12A, IQGAP1, ITGAV, KIR2DL1, KLRC2, LAMB2, LEPR, MAPK3, MTHFD1L, MYL7, MYLK3, NAT2, NOTCH2, OGDHL, OLR1, OR10H4, OR2M7, OR51F1, OR6B2, OR8H1, OR8J3, OR8K1, PGM2, PIGH, PIM2, PLCB3, PON3, PPP3R1, PPP5C, PTCRA, SEMA4G, SGMS1, SLC12A2, SQLE, STX12, SYNJ2, TAS2R60, TJP1, TLR5, WASF2, WNT3, ZIC2, ATP6VOD2, CACNA2D2, SERPIND1, TNFRSF10B
Negative_13368	C6, DCT, FGA, GNE, IL6, IVD, JUN, LPO, LYN, SP1, XDH, AANAT, ACSM3, ACVR1B, AGPAT4, ALDH7A1, ARPC5, BCAT1, CACNA1C, CASP10, CBR1, CCNA1, CD8B, CPOX, CSNK2B, CXCL11, CYFIP2, CYP2C19, CYP3A5, CYP4A22, DHRS4L2, EIF4B, ENPP7, ENTPD2, FGF7, GALNT1, GNA14, GNB3, GPD1, IL19, IL1R2, INPP5B, IPPK, IRS4, ITGB8, KLKB1, LARS, MAP3K14, MAPK10, MDM4, MGAT2, MYL5, NAMPT, OR12D3, OR13C9, OR4L1, OR51Q1, OR8G1, OR9I1, PANK4, PDGFRB, PDHB, PDPK1, POLR2C, PPP2R1A, PRKAG2, PTGS2, PVRL2, RASSF1, RBPJ, SGPP1, SKP2, SPTAN1, SQLE, STEAP3, STMN1, TBL1Y, TGFB1, TYMP, WIF1, ATP6V1C1, ATP6V1G2, ATP6V1G3
Negative_13369	AGK, PRL, SFN, ABL2, AKR1D1, ALCAM, ANPEP, ATP4A, CBR3, CCNG2, CHRM5, CTPS, DAPK1, DGKZ, DNMT3A, ENTPD2, FGF10, FGF14, FSHR, GBGT1, GLO1, IL18R1, IL25, ITGAX, KCNQ1, LGMN, LLGL2, MEF2C, MGAT4B, MMP1, NAMPT, NUDT9, OR10X1, OR4A5, OR4N4, OR51S1, OR5C1, OR9Q2, PDGFRA, PGM3, PHPT1, POLR3G, PORCN, PPP1CA, RASA1, RXRB, SENP2, SMURF2, SPRY1, SREBF1, TAP2, TAS2R16, WIF1, ATP6V1C2, HLA-DQA2, ST6GALNAC4
Negative_13370	AK1, CAT, FES, PGP, ACLY, ACP1, ADH6, ALDH3B2, ATIC, CACNA1C, CD79B, CDH1, CLTCL1, CREB3L4, CYP2C9, DDX18, DDX23, DDX4, DGKE, FARP2, FGF19, GADD45B, GNAI2, HES1, HSD3B1, HSPA8, IARS, IFNA8, IL12RB2, ITPKA, LMO7, LPAR1, MYL7, OR2M2, OR2T33, OR4C12, OR52W1, OR6C1, OR9Q2, ORC3L, PIGF, PIGK, PLTP, PLXNB2, PLXNB3, POLR2L, PPP3CC, PSPH, RALB, SMAD1, TAS1R3, PNLIPRP2
Negative_13371	AK1, CKB, DCN, FGG, FYN, GGH, HK1, ID4, IL7, IL8, SRM, ACO1, ADRBK2, ANAPC1, ASIP, ASS1, B3GALT2, B4GALT1, C4BPB, CACNG3, CCNB1, CFL1, CHRM1, CHRNA7, CXCR3, CXCR5, CYP2A7, DHDDS, FECH, FLT3LG, GALNTL1, GMPR, GNG13, GPLD1, IFNGR1, IRF5, ITCH, JAM3, LALBA, LAMB3, MAP3K14, MIOX, MLYCD, MTMR6, NAT6, NEUROG3, NFAT5, NOX3, NTSR1, OR13C4, OR2B6, OR2C3, OR2D2, OR2H1, OR4K5, OR52A1, OR52N1, OR5K2, PFKP, PKMYT1, PPAP2A, PRKCQ, PVRL3, RETSAT, SDHD, SEMA3A, SEMA3C, SIPA1, SMAD9, SMARCA5, TD02, TSC1, UGT2B10, VAV1, WIF1, YWHAB, CSGALNACT1

Negative_13372	ADA, C1S, GDA, IL6, RET, TPR, ACSM3, ADCY2, AKR1C4, ASPA, CBR3, CHST12, COL1A2, CSF3R, CYP2S1, DARS, EFNA3, ENTPD8, FUT4, GGCX, HAGH, HAP1, HCST, HSPA2, HTRA2, IDI2, LAMC1, LEF1, MYH3, NMNAT2, NUMBL, OR10Q1, OR13C3, OR4K13, OR51S1, OR56B4, PCNA, PIK3R1, PIK3R2, PON2, PYCRL, RARS2, RXRA, SFRP2, STX8, TRMT11, VTI1A, HLA-DRB3, PRICKLE2, TNFRSF14
Negative_13373	ADA, BAX, BTC, SRF, AGXT2, ALG1, ATP6V1F, CAV3, CD36, CDKN1B, CHEK2, C OMT, CYCS, CYP2A6, FADS2, FGF8, FGFR4, FOXO1, GSTM5, INPP4B, IRF9, IT GB1, LHCGR, LIPC, MAGI1, NR5A2, OR2L13, OR2T3, OR4F15, OR4K13, OR52B 4, OR5P2, OR8H3, ORC1L, PDE3B, PDE6H, PLCB4, POLR2J, PRKCI, RAC1, RRM 1, RUNX1, SARDH, SESN1, SH2D2A, SMAD6, SOCS4, SORBS1, SPHK2, TAP1, TA S2R42, TMLHE, TSC1, UCK1, VAMP1, WASF1, GABARAPL2, MAPKAPK3, SUV420 H2
Negative_13374	A2M, ADA, FOS, MOS, RDX, ACADS, ACPT, ACTN2, AKR1C1, ALOX5, ARRB1, BUB 3, CCR10, CYP2A13, CYSLTR1, ENO3, ENTPD8, FGF21, FOXO1, FZD2, GCH1, G NAI3, GNAT3, HIBADH, HTR6, IL1A, IL22RA2, IL28A, ITGAD, MCEE, MGAT5B , NCF4, NFATC4, NPR2, OR10V1, OR13A1, OR13H1, OR2A12, OR2A14, OR4C11 , OR5AS1, OR9G1, PDE2A, PDXP, PER2, PFKFB4, PIGL, PIK3R2, PORCN, PRKA B2, PRKACG, PROC, PTCH2, RXRG, SEMA4F, SMAD7, SPTLC2, SSX2IP, STAT4, SUFU, TAS2R5, TIRAP, ULBP2, ULK2, VANGL2, MAP3K7IP1
Negative_13375	FUK, NLK, SHH, SRC, ACADSB, ACAT2, ACSM2A, ACSS3, ACYP2, BDH2, BIRC2, CACNA1S, CDC25C, CLDN11, CPT1B, CSDA, CSF1R, CYSLTR2, DAPK3, EPHX1, EXTL1, EXTL2, FABP1, FABP4, FECH, FGF9, FZD1, GALNT14, GGT6, GGT7, HB EGF, HSD17B2, HSP90B1, IDI1, INPP4A, ITCH, LDHC, LMO7, LPAR1, MAP3K5 , MASP1, MTMR1, NNMT, NPAS2, OR10K1, OR11H4, OR2T2, OR4E2, OR52L1, OR 52M1, OR52N1, OR56A4, PCYT1A, PIAS1, PLCD1, PLXNA1, POLR2K, PPBP, PS ME1, RAC1, RAPGEF1, RHOA, SARS, SLC27A1, SRD5A2, STAT5A, STAT6, SV2B , TAS2R38, TP53, TRAF1, TUBB, VDAC3, VTI1B, WARS2, WWP1, ZIC2, ATP6V1 C1, PNLIPRP2
Negative_13376	C6, FH, GP5, GP9, TNC, UBC, ACSL4, AGPAT2, AHCY, ANAPC10, AREG, ARHGEF 6, ARPC1B, CCL13, CCL16, CD47, CD80, CDKN1B, CERK, CES2, CHRNA7, CMPK 2, CNDP1, CTSB, CXCL9, CYP4A22, DFFB, DOLPP1, DRD5, EFNB2, EPRS, FOXO 3, FTH1, FUT8, GADD45A, GMPPA, GMPR2, GNPAT, GPT2, GRAP2, IL13RA1, IL 17RA, IL19, IL23A, INMT, ITGB2, ITGB8, LAMB4, LHCGR, LYPLA1, MAPK10, MAPK12, MGAM, MTHFD2, MYL2, NAGA, NAGLU, NCOR2, NEUROG3, NME4, NUDT8 , OR10C1, OR10J1, OR1N2, OR2C1, OR2T12, OR2T4, OR52B4, OR52D1, OR5T1 , OR8G1, PAX6, PER2, PLAUR, PPARG, PPP1R3C, PPP2R2B, PPP3R1, PRSS1, P TPN7, RAF1, RASGRF1, RDH10, ROCK2, STK36, SV2A, TAS2R40, TPH1, TXNDC 12, VAMP1, VAMP2, ZIC2, AASDHPPT, ATP6V1B2, PAFAH1B2, PPARGC1A, TNF RSF10D
Negative_13377	KMO, PML, TFG, UBC, ACPP, ACSS1, AGPAT1, AGPAT3, ALDH1A3, APOA1, AQP7 , ARG1, ASS1, ATP5G3, B3GALT5, BDKRB1, BIRC5, BMP4, CCR4, CD44, CD46, CNGB1, CRB3, CRKL, CTBP1, CTBS, CXXC4, CYBB, DDOST, DERL1, DGAT1, DGK I, DHRS4, DPM1, ENTPD7, ERBB3, GABARAP, GALNT1, GALNT12, GNAI1, GRLF 1, HSD3B1, IFNA10, INHBA, KLRK1, LYPLA1, MAP4K2, MAPK7, MASP1, NAT6, NEFM, NRXN1, NSDHL, OR10G2, OR10R2, OR13H1, OR2M7, OR4Q3, OR8H1, OR8 K1, OXCT1, PDE7A, PIPOX, PLA2G2F, PNMT, POLD1, POLD2, PSPH, RND1, RPS 6KB2, SELPLG, SHMT2, SKP1, SMAD5, SOCS3, SPI1, STAT5B, TBXAS1, TRADD , TRAF2, TSHR, TUBA8, TUBB3, UCKL1, VASP, WASF1, WWP2, XYLB, ATP6V1G2 , CACNA2D1, MAPK8IP1, SERPINA1, ST6GALNAC3, TNFRSF10C

Negative_13378	EGF, FGA, MOS, ABL1, ACP1, ACP2, ACTN4, AGRP, ALPI, AOC3, BDH2, BET1, B MP4, BMPR2, BRAF, CD38, CD70, CDC6, CDK5, CDKN1B, CHAT, COL3A1, CSNK2 A2, CXCL10, CYP26A1, DPM2, EFN1, EPHA6, FUT3, GNG3, GSTM5, HPSE, IGF 1, IL17B, IL24, IMPDH2, ITGA11, ITGAL, ITGB8, LDHB, MRAS, NAMPT, OR4N 5, OXCT2, OXTR, PEMT, PFKP, PGM2, PLA2G10, POLR2E, PPP1R1A, PRODH, RA C2, RPN1, SARS2, SFRP5, SMURF1, SOD1, SRD5A2, TAS2R50, TNFSF8, TRADD , TUBB6, UGT2A3, ULBP1, UPP1, WNT10A, MAP3K7IP1, PLA2G12B, TNFRSF18
Negative_13379	IL7, IL8, ACACB, AGPAT4, AHCYL2, ARD1A, ARPC3, ATP6V1A, B3GALT1, C1G ALT1, C1QB, C4BPA, CCR4, CCR9, CD247, CD82, CDKN1C, CREB5, DTX2, EARS 2, GALNT11, GANAB, GNRHR, GSTM2, HAAO, HARS, HDAC2, HMGCL, HSD17B8, I L17B, LARS, LRP5, LTA4H, MAN1A2, MAPT, METTL2B, MPDZ, NAGK, NFKBIE, N R1H3, OR4D6, OR8G1, OXTR, P2RX2, PAPSS2, PARVA, PEMT, PIAS3, PIK3R4, POLR2J, PPP2R5B, RFWD2, SETD1A, SPRY1, SRD5A1, TAS2R1, TAS2R50, TJP 1, ULK1
Negative_13380	LCT, LEP, ACSM2A, ACVR2B, ADAM10, AGPAT6, AKR1D1, ARHGEF4, BUB1B, CD 274, CD47, CHRM3, CLDN2, COL1A2, COL4A1, COL4A6, COX15, CREB3L1, CYP 3A7, DAAM2, DPM2, ENTPD8, GALNT13, GBT1, GNPDA1, HSPA8, HTR2B, IFNA 16, INPP4A, ITPKB, KIR2DS4, LAMC1, LIPE, MAP2K1, MAP3K7, MAPK1, MPZL 1, NCOR2, NRCAM, OGDH, OR1G1, OR2A5, OR2T1, OR4K14, OR5K2, OR5M3, OR8 S1, P2RX3, PCCA, PDGFA, PGAM1, PGAM2, PLAUR, PLCB2, PNLIP, PRKAA1, PR SS3, PSEN1, PTCH2, PTPMT1, SEMA3D, SEMA4D, TAP2, TAS2R1, TGDS, TOMM4 OL, UPP2, YWHAZ, PRICKLE1
Negative_13381	AK1, C2, DCT, HGF, IDS, RB1, A4GALT, ACAD9, ACY1, ADRB1, APAF1, CD99, C DC14B, CDH1, CDK6, CLCF1, CYP2C9, DAPK2, DGKQ, DUSP10, FLT3, FZD9, GI T1, GNAS, HSP90B1, IL6R, IMPA2, JAK2, LAP3, MAGI2, MAPK1, MCM4, MDM2, MYL9, NEFM, NRXN3, ONECUT1, OR10K2, OR13C2, OR1L4, OR2K2, OR2T29, OR 4A15, OR4D2, OR52B6, OR6B3, OR8I2, PAX6, PAX8, PDE1B, PDGFC, PI4KB, P NPO, POLR2E, POLR2H, PPP3CB, PYCRL, RPS6KA4, RPS6KB2, RXRG, SARS, SE TDB1, SPHK1, SPRED2, STK36, TCIRG1, TOLLIP, TYK2, TYRP1, ULK1, UNC5D , VCAM1, WBSCR22, WWP1, ATP6V0A4, MAPKAPK3, SERPINA5, SUV420H1, TNF RSF10B
Negative_13382	AK2, BCR, CBS, DBH, GH1, LPL, SCD, VTN, ACAT2, ALDH1B1, ALG10, ALOX15B , AMPD1, ASCC3, ATP5G3, BMP7, CCNA1, COQ7, CTNNA3, CYP2J2, DLAT, ELK1 , EPHB6, FABP3, FIGF, FZD10, G6PD, GNA12, GPAA1, GUCY1A2, HAGH, HSPA2 , HSPA8, IL23R, IL8RB, INADL, KDSR, KIR2DL3, KRAS, MAP4K4, MGAT5, NAG LU, NOTCH1, OR1J2, OR2AE1, OR2AG2, OR2L13, OR2T4, OR5AP2, OR5M9, PIK 3CB, PLA2G1B, PLTP, PRKAR1A, PRKCE, PRPS2, PTPRR, RASGRP3, RRM2, SOC S5, ST3GAL1, TD02, TGFA, TUBAL3, TUBB3, UGT2A3, VDACC2, VNN1, WARS, AT P6V0A1, MAPKAPK5
Negative_13383	AK2, AMH, C6, CSK, TAT, ACAA2, ACSL1, ACVR2B, AKR1A1, AKR1B10, AKT1, A LDH3B2, ALG8, ARG2, ASCC3, ATF4, ATP5G1, BDH1, CACNA1H, CASK, CASP3, CCL7, CSNK1G1, CYFIP2, DDX19A, DHFR, DTYMK, ENO3, EPAS1, EREG, FGF20 , FOXA2, GFAP, GLI2, HTR5A, ICOSLG, IDI1, IFNG, IL20RB, IL29, MAGI1, M GST3, MYH11, NKX3- 1, NSDHL, OR2G6, OR4L1, OR4S2, OR51B4, OR5AU1, OR5M3, PDE7A, PDE7B, P HKA2, PIGT, PITX2, PON3, PPP1R1A, RASSF5, SELP, SMAD7, STX18, TNFRSF 8, TXNDC12, TYMS, VCAM1, VNN1, XCL2, ATP6V0E1, ATP6V1C1, ATP6V1G3, P NLIPRP2, TNFSF13B
Negative_13384	IL5, SCD, WAS, ABLIM1, ALDH1L1, APC2, APRT, ATG12, CCL17, CCNG2, CDC2 , CER1, CLOCK, EFNA5, ENTPD1, EPHX1, EPHX2, FGF5, FUT5, GALNT9, GLS2, H6PD, IL12RB1, INHBE, KRAS, MAOA, MBL2, MDM4, MYH7B, NFE2L2, OR13H1, OR2A5, OR4F6, OR4M1, OR51B4, OR5P2, PFN3, PLCD3, PLTP, PPP2R1B, QARS , RALB, RAP1B, RASGRP2, RFWD2, RRM2, STK36, TGFB2, UPB1, WNT10A, ATP 6V0D2

Negative_13385	<p>C1S, C9, GP6, ID1, MOS, PTS, RPE, ALDH4A1, ARHGEF1, BUB3, C3AR1, CACNB3, CBLB, CDC16, CHAT, CHPT1, CNTNAP2, COQ7, CXCL3, DHODH, DHRS3, DUSP1, F2RL3, FARSA, FGF22, FGF3, FGFR4, G6PD, GAL3ST1, GBE1, GMPR2, GNA13, GNA14, GNAO1, HLA-</p> <p>G, HSPA8, IDI2, IFNAR1, IL2RA, ITGA10, ITGA11, KAT2A, LIMK1, MALT1, NOD1, NR1H3, NUDT12, NUDT5, OR1L8, OR4K17, OR51A7, OR51B6, OR52A5, OR56A4, OR5D14, OR7A17, OR8U1, OXCT2, OXSM, PER1, PER3, PFKFB3, PFN3, PGK2, PHKG2, PIGU, PISD, PLD2, PLXNA3, POLR3H, PPM1A, PPP1R3B, PRKAA1, PRKACB, RDH10, RDH16, RUVBL1, SH2D1B, ST3GAL6, TICAM1, TLN2, TUBA1C, UGT2B17, UXS1, XYLB, ATP6V1B1, PNLIPRP1</p>
Negative_13386	<p>FAS, SMO, SP1, SYK, ADCY7, ADSL, ADSS, AKR1C2, ALDH4A1, APH1A, ARSB, ATP5J, CACNB2, CDC14A, CDC25A, CERK, CES2, CHAT, CYBA, DAPK1, DBF4, DGKG, DGKI, E2F5, EFNA1, EHMT2, ENTPD3, FARSB, FGF1, GALE, GCLC, GNA15, GRIN2A, GSTA3, HADHA, HLA-</p> <p>DMA, IDUA, IFNG, IL17B, IL19, IPPK, IRF9, KLRC1, LARS, LPAR1, MALT1, MAPT, MYH7B, NCAM1, NCF4, NCSTN, NFKBIB, NOS1, OR10G2, OR10G4, OR10G8, OR10H4, OR2A14, OR2AE1, OR4K1, OR7G1, PDIA4, PFKFB2, PFN2, PNLIP, PNPLA3, POLR1D, POLR1E, PPP1CA, PRKAB2, PSME2, PTGDS, PTGER1, PTGFR, PTPRM, PYCR1, RBL1, RPRM, SAT2, SMPD4, SOD1, SPHK2, ST3GAL2, ST6GAL1, STAT5B, SULT1A1, TRAF1, TUBA1C, ULK2, WNT9B, CSGALNACT1, TNFRSF11A</p>
Negative_13387	<p>C5, HDC, ME3, NNT, ACSL4, ADCY1, ADCY3, ADCY8, ADCY9, AKR1B10, ALG10, ANAPC7, ANGPTL4, APOA1, APOA2, B4GALT1, CADM3, CCNA1, CES2, CFLAR, CHRNA7, CYP4F2, DHRS4L2, DTX4, FGF11, FZD9, GALNT10, GART, GCH1, GDF5, GNA14, GOSR2, HHEX, HMGS2, IL7R, IPPK, ITGB4, KIR2DL3, LAMC3, MCM2, MMP1, NFYB, NOX3, NUMBL, OR2M4, OR5AR1, OR5H6, OR6C1, OR7A17, OR7G1, P4HA3, PANK2, PANK3, PHGDH, PKMYT1, PON1, PPP2R5D, PRKCA, PYGL, RXRB, SLC25A5, SMAD9, SMARCA2, SPAM1, STAT5A, STK3, STX10, STX7, TFDP1, TIRAP, UAP1, VDAC3, VEGFC, WNT11, HLA-DRB3, KIR2DL5A, SUV420H2</p>
Negative_13388	<p>GK, PGF, RDX, AACS, ACHE, ACOT11, ACSM1, ADAM10, ADCY4, ADORA2A, ALOX5, ARPC4, ATP2A1, BMP4, CACNG5, CCDC6, CD70, CD99, CHRM1, CLDN2, CLTC1L1, CTF1, CXCL10, CYP11A1, CYP2J2, DDX4, DRD1, EFNA3, ENPP1, FGF19, GNPDA2, GRLF1, GSTM5, HLA-DOB, HLA-</p> <p>F, ICOS, IDUA, IL18, LCAT, LCMT1, MAN1C1, MCM7, NADSYN1, NEFH, NLGN1, OR10G2, OR4C12, OR51V1, OR56A4, OR5B21, OR7G2, OR8B12, PI4KA, PIM2, PITX2, POLR1D, PPA2, PPP2CA, PRKCD, PRKG1, PTCRA, PTTG1, RAB5A, RASA1, RFNG, RRM2B, SEMA3E, SH2D2A, SHC1, SPHK1, SPRED2, STT3B, TUBB4Q, WASF1, WNT7B, ZNRD1, KIR2DL5A, SERPINB5</p>
Negative_13389	<p>CBS, GSR, IL9, SI, ACTG2, ADH4, AGRN, ANAPC1, ARSB, ATP5B, AXIN1, BDKRB2, BMP7, C4BPA, C5AR1, CBLC, CCL8, CCNA1, CD3E, CDC25A, CDH2, CDH3, CHUK, CNGA3, CNGA4, COL5A3, CPOX, CSNK1G3, CTPS2, CXCL2, DGAT1, DGKG, DHCR24, DKK1, DPYSL2, ENO1, EPHB1, ERBB2, EXT1, GCDH, GGT5, GSTM5, GUCY2C, HAAO, HSD3B2, IFNK, IL19, INPP5B, ITGAM, MAGI1, MAOB, MAP4K2, MAP4K3, MAPK10, MAPK9, MFNG, MKNK2, MTHFD1, MYH10, NEU4, OR10J5, OR10S1, OR10V1, OR2C3, OR2G3, OR5AK2, OR5F1, OR6C75, OR6C76, OR8D2, OXCT2, PHPT1, PIGT, PRKCQ, RCHY1, SC4MOL, SEMA3G, SFRP1, SGMS1, SLC2A2, SOCS3, SUCLG2, SULT1E1, TAS1R2, TLR9, UCKL1, UNC5B, WASL, WNT10B, WNT8B, XYLT1, YOD1, YWHAG, CSGALNACT2, MAP3K7IP1, SERPINB5, TNFRSF1A</p>

Negative_13390	CBS, ACACA, ACSS3, ACTN4, ACYP1, ADSSL1, AKR1B1, AMDHD1, ANAPC11, AP OC3, ASRGL1, BCKDHA, CACNA1I, CACNG5, CDC14A, CDK6, CHST12, CNGA4, C OL5A2, DUSP4, EFNA3, FABP3, GANC, GLDC, GMPPB, GNAO1, IDH3B, IKBKE, I NPP5B, ITGA8, ITPA, LARS2, LIMK1, LTA4H, MAP3K2, MBL2, NCK2, OR10H1, OR13F1, OR13H1, OR14C36, OR1L6, OR2G6, OR2W1, OR5H2, OR8K1, P2RX4, P DE6G, PIGA, PIGN, PIM2, PLCB2, PRKAA1, SELL, SOX17, STEAP3, TAS2R40, TAS2R5, TRPM5, UNC5C, ZMAT3, MAPK8IP1, SERPINC1
Negative_13391	AK3, CD4, CGN, DAO, F9, PTS, TK2, AARS2, ABLIM1, ACACA, AKR1C1, ALDH7A 1, ALDOB, ARHGAP5, ATP5G1, B4GALT5, BMP6, CBR1, CCL21, CD40LG, CMBL, CNTN1, COQ7, COX10, CRY1, CYP19A1, DAPK3, DAXX, DHRS4, EPHB3, ERBB2, ERBB3, EXT2, F13A1, FGD3, FGF12, FMO1, GAL3ST1, GCH1, GCLC, GMPR, GST A2, HLA- DOA, IDH1, ITGA6, KLKB1, LAP3, LGMN, LTA4H, LTBR, MAN1A2, MGST3, MKNK 2, NCOR1, NMNAT3, OR10A5, OR2L8, OR4K15, OR52N1, OR6T1, OR8B12, OXCT 2, P2RX6, PANK4, PDE3A, PDGFRA, PIGA, PIK3CG, PLCD3, POLR2I, PPAP2C, PPP1R3B, RBKS, RPSA, SH2D1B, SHC3, SLC33A1, SPRED1, SSX2IP, STX7, TL R5, TOMM40, TUBB4Q, UBE2L3, VAV3, WWP2, XCL1
Negative_13392	F2R, MPI, TKT, TYR, UBC, ALDH1A2, AMDHD1, ARPC1B, ATP6VOC, BST1, CACN A1S, CACNG7, CD244, CDC6, COL6A1, CSAD, CYP4A11, DAD1, DTX3L, EDA2R, ETNK1, EXOC7, EXT1, FARSA, FGF20, FIGF, GALM, GNRH1, GSTM2, IFNB1, IK BKB, IL1R1, LGMN, MAPK8, MCEE, MYH3, NEU2, NKX6- 1, NME7, NTRK2, OGDHL, OR2AT4, OR4B1, OR4L1, OR6M1, PDE1B, PIAS2, PIK 3C2B, PIM1, PIP5K3, PLA2G2E, PRKACA, PRPH2, RAC3, RARS, RBL2, SEMA3F , SFRP1, SH2D2A, SHMT1, SLC27A4, SPCS3, SULT1A4, SV2C, TAP1, THY1, TR AF2, TRAF6
Negative_13393	FGG, SPN, TKT, TNR, AHCYL1, AKR1C2, ALDH3A2, ANAPC5, APLP1, ARHGEF2, AVPR1A, BHMT, CAMKK2, CD19, CDH15, CDKN2B, DDX18, DERL1, EGLN1, ENPP 7, ENTPD8, FARS2, FASLG, FGF11, FLOT2, GCLM, GFAP, GNPDA2, GPX7, GSTA 3, GUCY1A2, HLA- DMA, IFNA4, IL15, IMPA2, IMPDH1, ITGAM, ITPA, KLRC4, LDHA, MAT2B, MGA T4B, MS4A2, MYH3, NAE1, NAT1, NCAM2, NFKB1, NNMT, NOS3, NT5C3, NTRK2, NUMB, OR10H1, OR10T2, OR1E1, OR4C11, OR51B2, PFKFB2, PHKA2, PLA2G6, PNPLA3, PPM1D, PPP1R1A, PTK2, PTPN1, PTPN5, RASGRF1, RDH10, RERE, SA RS, SMAD1, SMAD4, SOAT2, STAM, STAT5B, STT3B, TAS2R50, TAS2R8, TCF7L 2, TJP3, TSC2, ZNRD1, ATP6V0A2, GABARAPL1, HSD17B10
Negative_13394	DDO, F10, ABAT, ACADVL, ACOX2, ACSL6, ACY1, ADORA2B, ALDH5A1, ARPC1A , BACE1, BIRC3, C3AR1, CCL27, CCR6, CDC42, CMPK1, CYP3A7, DEGS2, DGKQ , EGLN1, ERBB2, FOSL1, FUT6, GALE, GALK2, GPX7, GUK1, IRAK1, KLRC4, LA MA4, LAMB1, LIFR, MAP3K1, MAT2B, MBL2, MCM3, NAGA, NFATC1, NOD1, NTF4 , OR10J5, OR1A1, OR1A2, OR2A12, OR52E4, OR5AR1, OR5B12, OR5P3, OR6N2 , OR8I2, OR8K1, ORC6L, P2RX2, PHPT1, PLCD1, PLCD4, PPP2CB, PSENE1, PT GDS, RFXAP, SAT2, SEMA4A, SMAD2, SPP1, STAT5A, TAS2R13, TLR4, TPM3, S T6GALNAC6
Negative_13395	CFH, IL8, LCK, MVK, OGT, OTC, RB1, RPE, ABL2, ACTG1, ADCY7, AGRN, ALDH1 A3, ALDOB, AMDHD2, ARSA, ATP5J, BDKRB2, CALML6, CANT1, CDK4, CIITA, C ISH, CSDA, CSNK1G1, CYP27A1, DFFB, DTX3, EPB41L2, EPHB1, GDF5, GUCY2 D, HSPB1, IL18RAP, INPP4B, ITGA9, KIR2DS4, MAPK14, MASP2, MGAT1, NCR 2, NUMBL, ONECUT1, OR51L1, OR5K1, PAFAH2, PAX8, PIGF, PIM2, PLA2G1B, PNPT1, PPCS, PROC, PSME3, RAB23, SLC25A6, SOCS1, SOCS2, STK4, SUCLG1 , SUOX, TAS1R3, THBS1, TJP2, TP53, WHSC1, WHSC1L1, YWHAB, ZFYVE9, SER PINA1

Negative_13396	ATM, FH, GPI, MPL, PAH, ACAA2, ACAD9, ADSSL1, ALDH2, ATP5G3, B4GALT6, C4BPB, CCDC6, CCL1, CCL17, CDH3, CLTB, DAG1, EPRS, FGF23, FGF7, FLAD1, FOXA2, FRAT1, GALE, GCH1, GLI3, GRM1, HTR5A, IFIH1, ITGAM, KIR2DS5, LDHC, LTB4R2, MAP3K14, MGAT4A, NCOA4, NEUROD1, OR10K1, OR2C3, OR4D5, OR56A4, OR5AR1, OR5K2, OR5T2, OR8K5, ORC1L, OXSM, PAK3, PDHA2, PIGT, PLA1A, PNLIP, PPA2, PRIM1, PRKCZ, PRODH2, PSME1, RERE, SCD5, SDHA, S DHD, SETD1B, SMAD2, SMARCA2, SMPD4, ST8SIA5, THBD, TRAF1, WBSCR22, A ASDHPPT, ALDH18A1, B4GALNT1, SERPINA5
Negative_13397	GDA, ID3, UBC, ADRA1B, AGPAT2, ANAPC10, ANAPC11, ANGPTL4, ARRB1, ATP 2A2, ATP6VOC, CACNG3, CALML6, CASP6, CASP8, CAV3, CCL21, CKMT2, CLDN 10, CPOX, CRY2, CYP2U1, DBF4, FBXW11, FIGF, FMO2, GALNT1, GALNTL5, GJ D2, GNA13, GNAL, GNAO1, GZMB, HLA-DOA, HLA- DRA, INPP5E, IRF5, LALBA, LAMC2, LIMK1, LLGL1, MARS2, MASP2, MCM3, MY H1, MYL2, NLGN3, NOTCH3, NRP1, NT5C1A, NTNG1, OR10AG1, OR10P1, OR1F1, OR4E2, OR5AS1, OR8H1, PANK1, PHKG2, PIP5K1B, PLCD1, PLXNC1, PNPLA4, POLR2E, PRKAR1A, PYGL, RASGRP4, RPS6KB2, SMAD2, SMARCA2, STAT3, TA S2R13, TBK1, THBD, TOMM40, TP53I3, WNT8B
Negative_13398	FAH, HDC, ID4, RPE, TEC, XDH, ADCY1, ADCY4, ALDH1A3, ALDH1B1, BDKRB2, BMPR2, CD80, CDH5, CMBL, CNGA3, COL2A1, CSF2, CTSB, DDHD1, DERA, FGFR 1, FGFR3, FLOT1, FZD7, HPSE, IDH1, IFNA6, INHBC, LARS, LTB4R2, LTC4S, MCM5, MECR, MYH2, NFKB2, NOD1, OR2A5, OR2L3, OR4C16, OR52E6, OR6N1, O R8S1, PDGFA, PFKFB3, PHGDH, POLR1C, PPP1CC, PVRL1, RFXANK, SEPHS1, S FRP2, SGPP2, SKIV2L2, SNAP25, SOCS4, TAS2R16, THTPA, TLR2, UBE2K, WN T8A, HLA-DRB3
Negative_13399	AK3, APP, GLA, LIF, MTR, MYC, RB1, SI, ACOX2, ACSM1, AGPAT4, ALAS2, AMP D1, APBB1, APH1A, ARPC5L, BUB1, CAMK2G, CASK, CCL21, CCNA2, CCR3, CDC 25C, CDH3, COL1A1, COL5A1, COL6A2, CSNK1G3, CTNND1, CYP2D6, CYP3A4, CYSLTR1, EARS2, ENTPD5, EPHB4, EPHX1, ETNK1, F2RL3, FABP1, FGF22, FG FR3, GABARAP, GALE, GART, GDE1, GDF6, GSTA3, GTSE1, HAP1, HDAC1, HLA- DOB, IBSP, IQGAP1, IRF7, MAML2, MAPK7, NADSYN1, NCOR2, OR11A1, OR2A2 5, OR2AG1, OR2B2, OR3A3, OR4N4, OR51A7, OR52N4, OR5AC2, OR5D16, OR6C 76, OR8H2, OR9G4, PGAP1, PIK3CD, PLXNB3, PORCN, PPBP, PPP1R1A, PPP1R 3C, PPT1, PTCH2, PTK2, PTPRM, RASGRF1, SOAT1, SRD5A2, STX4, TNFSF14, TRPC1, TUBA3E, UGT2A3, YARS2, CSGALNACT1, PLA2G12B
Negative_13400	C2, CGN, FGG, GGH, IL5, TPO, A4GALT, ACAA2, ACOT12, ACTG1, ARSB, ATG7, CCL5, CDC14A, CDH4, CDKN2C, CISH, CNGB1, COMT, CRLS1, CYP2A7, DDOST, EFNA3, ENPP6, EPHB6, FIGF, FOSL1, FTMT, GARS, GLUD2, GNAI1, GNAZ, HAG H, IBSP, IFNGR1, IGFBP3, IL17RA, ITGA4, KCNQ1, LAP3, LIPG, MAPT, MCEE, MGST1, NPR1, OR51A2, OR51I2, OR52L1, OR5C1, PARVA, PCK1, PDE4A, PDE 4D, PDXK, PFKFB4, PFKM, PGAM2, PGM3, PIP4K2C, PIPOX, POLR3G, PTGIS, R DH11, SETDB2, SOCS1, TAS2R7, TLR2, TUBB4, ULK3, UPP2, XYLT2, YWHAQ, A TP6VOD2, HSP90AA1, SERPINC1, TNFRSF11B
Negative_13401	ATM, CRK, DDC, F8, FGB, HK2, PAH, AMDHD2, BET1, BMP5, BMP6, BMP8A, CACN A1H, CACNG2, CD34, CDC14A, CDS1, CHDH, CLDN17, CNDP1, COL1A1, COQ3, C OX10, CX3CR1, DDX56, DLAT, G6PD, GLI3, GUCA1A, HDAC2, IL1A, IL4R, INP P5E, IRF7, IRS4, LAMB1, LEF1, LRP6, MAP2K7, MCM3, MOV10L1, NCF4, NCOR 2, NKX6- 1, NOS3, OPLAH, OR1I1, OR1L8, OR4F5, OR4F6, OR4N2, OR4X2, OR52N2, OR5 2W1, OR5R1, OR6C4, OR7G3, OR8K5, OSMR, OXCT1, PDGFB, PFKM, PGAM2, PHK A2, PIGM, PIP4K2A, PLA2G10, PLXNB2, POLD1, POLR2E, PPP3CC, PSAT1, PT GER3, RBL2, RDH8, RRM2, RUVBL1, SDHD, SMAD2, SNAI2, SOCS1, SOS2, SPRY 3, SPTLC2, TFPI, TJP2, TLR9, UGDH, UGT8, USE1, WASL, XYLT2, MAP3K7IP2



Negative_13402	CFH, DLD, MUT, ABP1, ACADL, ACY1, ATP6V1A, BCKDHA, CASP10, CCL21, CDH5, CHIT1, CNTF, CTBP1, CXCR4, DGKE, FCER1G, GNMT, HIF1A, HMBS, IARS2, INHBE, ITGB7, JAG1, LDHAL6B, LIPF, LRP6, MAP2K6, MCM7, MLLT4, MYL5, N EU4, NTNG1, OR13F1, OR2V2, OR4D2, OR5AN1, PARD6B, PCCA, PFN1, PGM2, P IGV, PPAP2C, PPAR, PRKAG2, PRPH2, PSEN1, RAP1A, RAPGEF4, SDC2, SKP2 , SLIT2, SOAT1, SOAT2, STK36, TNFSF8, TRMT11, VKORC1, B3GALNT1, CSGA LNACT1, HLA-DRB3, HSD17B10, HSD17B12
Negative_13403	AK3, BT, CFI, FAH, IL8, KDR, LCT, ME1, TNN, WAS, ACADM, APPL1, AQP7, AT P5J, ATP5J2, CACNA1I, DDX41, DLL4, DUSP1, DVL3, EPHB4, EXT1, FZD4, GG CX, GLUL, GNRH2, HADHB, HDAC2, HLA- F, HSPA2, IFNA21, IL23A, IL5RA, MAP2K6, MYD88, NEFM, NFKBIE, OR2D2, O R2D3, OR2T3, OR4K2, OR4K5, OR52R1, OR6F1, OR8G1, P2RX2, PI4KA, PLK1, PNMT, POLR2G, PPP2R1A, PPP2R5C, PTGER1, PTPRC, PYGL, RASGRP1, RDH11 , SEMA4D, SLC27A4, STK11, TNFSF9, TRDMT1, UPP1, ATP6V0A4, PDCD1LG2, SERPINB5
Negative_13404	CR2, DDC, GH2, JUN, LIF, SI, ABCC8, ACOT12, ACOX1, ACSL3, ACVRL1, ALPL , APLP1, APRT, ARHGAP5, ATN1, ATP5L, ATP6V1H, AXIN2, CD36, CD40, CD79 B, CHEK2, CKS1B, CPS1, CTPS, CXCL5, DGKB, ENTPD4, EREG, FPGS, FUT9, GN AI2, GNB3, GRIN1, GSTA5, HIBCH, HIF1A, HLCS, HMGCS1, HSPA8, IFNG, IL1 3RA2, ITPA, KLK3, KLKB1, L1CAM, LTA4H, MAP2K6, MAP3K4, MASP1, MMP9, M OV10L1, NFATC4, NFKBIB, NLGN1, OR13C5, OR51V1, OR5B17, PAK2, PANK1, PCK1, PDE10A, PGK1, PGM3, PIM1, PLOD1, PLOD3, POLR1E, PPAR, PTGS1, P TGS2, PTPRM, RUVBL1, SLC2A2, SNAP25, ST3GAL6, STAT1, STAT6, TAS2R1, TCIRG1, THBS2, TLR4, TNFSF10, ULBP1, UMPS, VNN1, WNT2, ATP6V0A2, C1G ALT1C1, CACNA2D2, SERPINB5, SLC25A31, TNFRSF14
Negative_13405	C1S, F3, LYN, RET, ACVRL1, ADRA1B, ADRBK2, B3GALT1, CCL11, CCL15, CCL 19, CD3E, CD86, CDC45L, CHSY1, COQ7, CYFIP2, CYP2J2, DDX19A, DUSP3, F 2RL2, FGF21, G6PC, GAMT, GCDH, GFPT2, GNB1, GRIN2B, GRPR, HNF4G, IFIH 1, IPMK, ITGA10, LCP2, LEFTY2, MADCAM1, MAPK14, MCM5, MCM6, OR1A2, OR 2L8, OR8B12, OR8H2, OR8U1, PAK1, PIGA, PIGP, PIK3C2G, PIK3R1, POLR2D , RCHY1, RRM2B, SETD1B, STAT6, TYMS, UCK1, UROC1, WNT7B, SERPINC1, ST 6GALNAC4
Negative_13406	AMH, AR, IL9, LIF, ME2, MVK, XDH, ACO2, AKR1B1, ARAF, C1QC, CASP10, CLD N20, COL1A2, COQ7, CXCL13, CYP2U1, DUSP3, FGF13, GNPAT1, GPD1L, GRI N2D, HSPB1, HYAL2, IFNA17, IL13, IL1R1, INPP5B, MAP3K13, MAP3K14, MA P3K2, MASP1, NCF2, NOS3, OR10A6, OR51A2, OR8B12, PFKFB2, PIP5K1C, PL A2G10, PLCB2, PPP3R2, PRKAR2B, PRPH2, PSAT1, PTPRC, RDH10, SEMA3C, S MAD1, SOCS7, WNT11, MAPKAPK3, PRICKLE1
Negative_13407	FN1, GK, NPL, AACS, ACOX1, ACSL3, AK3L1, ALDOA, AMDHD2, AOC3, ARPC2, B 3GNT2, CARS, CCR4, CHIT1, CKS1B, CTBP2, CYCS, DDX23, DHFR, DOT1L, FAB P3, GATM, GGT1, GNA12, GPAM, IL1RAP, IL28A, IL6R, ITGA10, ITGA4, NEFL , NOD1, NT5C2, OR13G1, OR4C12, OR4N5, OR52A1, OR56A4, OR5K2, OR6A2, O R7D4, PITX2, PLCB3, POLR3H, PORCN, PVRL4, RAP1B, SHMT1, SOCS1, TRIP1 0, TYMP, WNT1, WNT5A, HSD17B12

Negative_13408	AK2, C8G, MTR, MUT, ZYX, AADAC, ABL2, ACPT, AFMID, AKR1C1, ALG1, ALS2, AQP7, ATP13A2, ATP2A3, ATP5I, B3GALT2, B3GAT1, BAIAP2, CCL15, CCL17, CCL7, CCND2, CD80, CDK4, CHDH, CLDN10, COASY, CXCL13, CYP11A1, CYP3A5, DDX23, DDX47, EP300, EPB41, EPHB6, FLAD1, FMO4, FPGT, FZD6, GGPS1, GNAQ, GPX5, HLA-DRA, HSPA1B, ICAM3, IFNA17, IFNA7, IL12RB2, IL23A, JAG1, LIPA, MAML2, MAPK9, MCM4, MGAT4B, NOS1, NRG3, NUDT5, OGDHL, OR10H4, OR14I1, OR1E2, OR2T34, OR4K13, OR4M2, OR52A1, OR56B4, P2RX4, PAK2, PDX1, PDXP, PLA2G3, POLR2K, PPARG, PPP1CA, PPT1, PTGFR, PTPRF, RBKS, RND1, RUVBL1, SEPHS1, SLC27A4, SRD5A2, STX2, TBXAS1, UNC5B, VAV2, VDAC2, ATP6VOD1, HSD17B10, ST6GALNAC5, TNFRSF17
Negative_13409	ABO, AK2, CR2, CS, NLK, STS, ACOT11, ACSL5, ACSL6, ALG3, ANGPTL4, ARPC1B, ATP5A1, B3GALT2, B4GALT2, BCL2, CASP7, CCL19, CCND3, CCR3, CDC42, CHUK, CNTF, CPS1, CTSG, CUL1, DDX19A, DPYS, E2F2, EDA2R, EFNB3, EPHA5, EPHB2, EPHB6, FOXO3, GLS2, GPD1, HEMK1, IL10RB, IL12A, IL2RA, IRAK2, ITGA4, ITGA5, ITGAM, KLRC2, MAP2K4, MAP4K3, MAPK12, MASP2, METTL6, MYH15, NEGR1, OR10AG1, OR11H4, OR1G1, OR2AT4, OR2M5, OR4D9, OR5K1, PDE4C, PFKFB3, PIGA, POLE3, PPP2R2A, PRIM2, PRKAG2, PRNP, PYGM, RALBP1, RPS6KB1, SETDB1, SFRP1, SLC27A1, STAT5B, SV2B, TUBB1, VAMP2, YWHAQ, YWHAH, ATP6V1G1, HLA-DPA1, HLA-DRB4
Negative_13410	AK5, AMT, SRC, AACS, ABAT, ACADL, ACYP1, ADCY3, AGRP, ALAD, ALG5, APAF1, ARSE, B4GALT5, BCAT2, C7orf16, CACNB1, CD247, CD55, CD8B, CKS1B, CLDN5, CLTB, COL5A1, CTNNA1, CTTN, CXCL16, CYP2J2, DAPK2, DCXR, DERA, DGKB, DHRS9, DNMT3B, F11R, FCGR3A, FGF20, FGF6, FPGT, FRAT1, GGCX, GLDC, GNPDA2, GRPR, GUCY2D, HARS2, HIBADH, HLA-C, HTR6, IDH1, IFNG, IL28B, KCNJ11, KIR2DS5, KIR3DL3, KLRC2, LAMB1, LDHA, NGEF, NME2, NMNAT2, NRG3, NT5C1A, NUMB, OR5B12, OR5B21, OR8D2, PCTY2, PDE3B, PIGH, PIK3R5, PLA2G2E, PLAUR, PLCG1, PPAT, PPP2R1B, RASA1, RDH16, RPS6KA5, SEMA4D, SPRY2, STK4, TBK1, THBS1, TNFSF8, TSHR, VANG2, WBSR22, ATP6V1G1, CACNA2D4
Negative_13411	ABO, FER, HGD, HK2, ID1, IL6, A4GALT, ADCY6, AGTR1, ALDH7A1, ARD1A, BCAR1, BPGM, CARD11, CDC14A, CDC26, CERK, CMAS, CYP2A13, DCTN1, DUSP9, DVL2, E2F4, EHHADH, GALNT12, GOT1, GSTA3, HAP1, HEXA, IFNA4, IGF1, KLKB1, MAN1C1, NKX2-2, NOS1, OR2B6, OR2H2, OR3A2, OR4M2, OR51F2, OR5V1, OR8U1, PLCE1, PPT1, PRIM1, PRKG2, PRNP, RAC2, RFX5, SPTAN1, STX7, TSC1, UCK1, YES1, YOD1
Negative_13412	AK5, AK7, C8G, DCT, F5, FYN, GP9, ABLIM2, ADCY6, ADH1B, ADRB3, AGXT, ARPC4, CCL20, CD34, CD48, CD86, CLDN11, CLDN22, CNGA4, COMT, CPS1, DARS, DDX50, DGKE, DGUOK, DIAPH3, DUSP3, ENO1, ENPP1, EVI1, EXT1, FGF10, GADD45A, GALNT1, GCLC, GCLM, GLI1, GSTO2, GZMB, HDAC2, HHIP, HSD3B7, IFNA17, IL8RA, INPP5E, INSR, IRS1, ITGAL, ITGAX, LIPF, LTC4S, MAP2K6, MAP3K4, MAPK11, MECR, MYLK3, NFYB, NT5M, OR10H3, OR13D1, OR13F1, OR1A2, OR2AT4, OR2T1, OR4X1, OR51A2, OR51G2, OR5AN1, OR5AS1, OR7G2, OR9A4, P4HA3, PAX6, PCNA, PDE1C, PDE5A, PFKL, PIK3C3, PPP2CA, PPP2R2B, PRKCZ, SCIN, SETDB1, SH2D1A, SMAD5, SSX2IP, STAT4, TAS2R4, TGFA, TGFB1, THBS1, TNFSF9, TP53I3, TRMT11, YARS2
Negative_13413	BAX, C4B, C8B, DAO, F11, GBA, HK2, PGP, SRF, AADAC, ACAD8, ARHGAP5, BDKRB1, C1QC, CACNG5, CAMK2G, CARS2, CD82, CHRM3, COX10, CREBBP, CXCL12, CXCL16, CYP2E1, DDIT3, EGLN1, FDPS, FGF9, FUT9, GALM, GARS, GMDS, GPTAA1, GUCY1A2, HDAC2, IFNA14, IL28RA, LIMK1, MGAT4A, MGST2, NCK1, OR10J1, OR13H1, OR6Q1, PAPSS2, PIK3C2B, PIK3CB, PIK3CD, POLR2G, POLR3G, PPP3CA, PRKCG, PRKCI, PTGDS, PTPRZ1, SEMA7A, SLC2A1, SLC33A1, SMAD2, SSH2, UGT2A3, MAP3K7IP2, SERPIND1

Negative_13414	C3, C8G, CRH, GH2, LCK, ME2, MPZ, ACOT12, ACVR2A, AKR1C1, AKR1C4, ALCA M, ALDH9A1, ARHGEF7, ARNT, ATP5C1, B3GAT1, BCAT1, BRAF, C4BPA, CAMKK 2, CCL24, CDKN1B, CHST12, CLTC, COL5A2, CPT1C, CYP7A1, EARS2, EFNA2, ENTPD1, EPHB1, FASLG, FCGR3A, FPGS, GADD45A, GALNT13, GRIA3, GRM1, H ADH, HCLS1, HSPB1, IGFBP3, IL1R2, ISYNA1, ITGA2B, LARS2, MAPT, MYL2, NRCAM, OR1A1, OR4Q3, OR51S1, OR52W1, OR5B17, OR7D2, OSMR, PAK7, PARS 2, PAX8, PDGFD, PGAM2, PIGC, PIK3CB, POLR2J, POLR3H, PPBP, RASA2, RPR M, SETDB1, SPCS1, STK11, SUV39H1, TIRAP, TJP3, TUBA1B, TXNDC12, VDAC 3, WASF3, CTNNBIP1
Negative_13415	AUH, HGD, ID4, LEP, AANAT, ACACA, ACOX1, ACP5, ACSL5, ALDOB, ALPPL2, A OC3, ARNT2, ASPA, BET1, CASP7, CCKBR, CHRM1, CPT2, CSF3, CYP4A11, DFF B, DHDDS, DLST, ENO2, EPRS, EXTL3, F13B, FGF10, FMO3, GALNT11, GGT1, G GT5, GNAI3, GRB2, GRIN2C, HMOX1, HSD17B7, IL21R, KLRC2, MAD2L1, NAT5 , NCOR1, NUMB, OR11H6, OR1N2, OR2B6, OR4E2, OR52E4, OR6C74, ORC3L, PF AS, PIGB, PIK3CB, PIK3CD, PLOD3, PPP2R5E, PRDX6, PSEN1, RDH10, RPS6K A3, SELP, SEPHS1, STX4, TBL1XR1, TGDS, TSC1, UGT2B4, VEGFB, VEGFC, YA RS, ZIC2
Negative_13416	CEL, CR1, FGA, ID2, NF1, NLK, SDS, SMS, STS, ABLIM2, ACSM4, ACY1, ATP50 , CACNB1, CREBBP, CSNK2B, CTSB, CYP11B1, DDX41, DGKA, DRD1, EPHB2, F1 1R, FMO2, FPGT, FZD8, GAL3ST1, GART, GCLM, GPLD1, GSTM4, IL1A, KIR2DS 4, METTL2B, MYH11, MYH4, NMNAT3, NQO1, OR11H1, OR51I2, OR5D16, OR5F1 , ORC3L, PDCD1, PDHA2, PERP, PFKP, PIGC, PIGN, PNPLA3, PPARA, PTGFR, R HOA, SCIN, SPRY3, TLR5, TP53, TRAF4, TRIP10, UGT2B4, ULBP3, WASF2, YO D1, PPP1R12A, SLC25A31
Negative_13417	EPO, F9, KHK, ACOT12, ACTG1, ADAM10, ALDOC, AMY2A, ARRB1, ARSB, ATP2A 3, ATP6AP1, B3GNT4, BDH2, BET1, BUB1B, C1GALT1, C3orf10, CACNB4, CAC NG4, CCL3, CHPT1, CRB3, CYP3A43, DUSP9, ENTPD3, EPOR, FTMT, FUT7, GAD D45G, GDF6, GPX7, GTSE1, GUCY2D, H6PD, HA01, LIMK2, MAPK11, NAGS, NPR 2, OR10A3, OR11H1, OR1S2, OR2T1, OR4X2, OR5AU1, OR6B2, OR7G2, PHKA2, PIGQ, PIGT, PLA2G1B, POLR2I, PON1, PPP2CA, PPP2R2A, PTAFR, PTPN5, RA LGDS, RPS6KA1, SESN2, SETD2, ST3GAL4, TAS2R38, TAS2R8, TGFA, TLR3, T RMT11, XYLT2, ZNRD1, TNFRSF1A
Negative_13418	GGH, GSS, IHH, LAT, ABL2, ACSL1, ALDH3B1, AMY2B, AOC3, APH1A, ATP4B, B CL2L1, CD40LG, CDC45L, CHST12, CLDN17, CTSG, CYSLTR2, DARS, DHRS3, D KK4, DPM2, DRD5, ETNK1, GALNTL5, GUCY1A3, HIP1, HLA- DOA, ITGA10, ITGB8, LAMC1, MAGI2, MAP4K1, MAPK9, NCK2, NEU2, OR1C1, O R2A12, OR4X1, OR51F2, OR52D1, OR52J3, OR8D4, OR8K5, PDE1C, PLAUR, PO LD4, PTPN6, RARS2, SDHD, SETMAR, SPCS3, ST3GAL3, ST8SIA1, TACR3, TAS 2R10, TAS2R38, TIAM2, TUBA8, ULBP1, VDAC1, WNT10A, XYLB, ATP6V1B1, P AFAH1B3, SERPING1
Negative_13419	ATM, F2, F9, GLA, HGD, MOS, OSM, PML, TNN, ABP1, ACADSB, ASIP, ATP4B, B3 GNT4, BMPR1B, CACNB1, CAMK2G, CDC42, CDC45L, CLDN22, CRHR1, CYP26A1 , DGKD, ENPP7, EPHA7, ETNK2, EXOC7, EXT2, FLAD1, GALNTL2, GNPAT, GNRH 2, GRIN2A, GRLF1, GSTO1, IFNAR2, IFNW1, KLRC3, KLRD1, L1CAM, MDM2, MM P1, MPP5, MPZL1, NFKBIA, NOS1, OR10C1, OR10J5, OR14A16, OR2H2, PFN2, PIGW, PIPOX, PISD, PLA2G6, PON1, PON2, PTCRA, RCHY1, SLC12A2, SNAP23 , SPCS3, SPRY2, STAM2, STK4, TAS2R41, TRAF3, TRDMT1

Negative_13420	CD2, DCC, EPO, TPR, WAS, ABL1, ACSM4, ALG11, APC2, ARPC1B, ATP2A1, ATP5J2, C5AR1, CCL24, CD80, CDH15, CDKN2A, CHRM5, CHRNA7, CHST11, CREB1, CREB5, CSF3R, CTNNA2, DCTN1, DEGS1, E2F3, ENO2, ENPP1, EPOR, FOXO1, GALNS, GGT7, GNPAT, GRPR, GUCA1C, HADH, HIBADH, IFT57, IL10RA, INSR, KLKB1, LAMA3, LGMN, MASP2, MAT1A, MCM2, NCR2, NCSTN, NMNAT2, NRP1, NTRK1, OR10J3, OR13J1, OR1K1, OR1N1, OR2T11, OR3A2, OR4C13, OR4D1, OR4M1, OR51I2, OR52N5, OR5R1, PDK1, PLA2G1B, PLCB2, PLCZ1, POLD2, PTGDS, PTPRR, PYCR2, RAC2, RASGRF1, RBL1, SARDH, STX3, TSHR, ULBP2, ATP6V1B2, ST6GALNAC3
Negative_13421	ADO, C9, DCT, GP5, HPD, IL6, KHK, MVK, RET, SHH, ABCC8, ACPP, ALDH1A2, ANAPC4, B4GALT7, CACNB3, CASP9, CCL28, CCND2, CDC45L, CPS1, CREB3L2, CRLF2, CX3CL1, CXCL13, CYP21A2, DCXR, DDIT4, DDX52, DRD5, EGLN3, ENTPD8, EPB41L2, FECH, GALK2, GP1BA, GRLF1, HCST, HNF1B, IL3RA, LIPT1, MAML2, MAP3K3, MKNK2, NCSTN, NFATC1, NME6, NUDT8, OR2Y1, OR51S1, OR5A2, PDE6G, PDK1, PEMT, PIM2, PLXNB1, POLR3D, PRKAR2A, RBKS, RETSAT, SCD5, SESN3, SOCS1, SOD1, SPCS1, SPRY2, SUV39H1, TAP2, TAS2R9, TGFA, TGFBR2, UBE2K, UCK2, ULK3, WNT4, MAPKAPK2
Negative_13422	DAO, FN1, GAA, GPT, LAT, AARS, ACAT2, ACTA2, ACVR2B, ALG2, ATP6V1H, AXIN1, CACNA1G, CASP6, CLDN15, CNTFR, COL4A4, CREB3L1, CRY2, CSF3, CYFIP2, CYP1B1, CYP27A1, DTYMK, EDAR, EREG, GCNT3, GOT2, GPD1L, HLA-DOA, HLA-F, HSD11B2, HSD17B4, ICOSLG, IL11, IL13RA2, IL25, IL6ST, MAP2K2, MAPK7, NCSTN, OR10A2, OR10H2, OR10Z1, OR11H1, OR2AG2, OR2L8, OR51I1, OR5F1, OR6T1, PARVA, PER1, PIK3C2A, PIP4K2A, PLAUR, PLD1, POLA2, POLR1B, POLR2F, POLR2I, PPCS, PRKAR1A, PRPH, PTGIS, RAP1A, RDH8, ST6GAL1, SUFU, SULT2A1, TRHR, TRIP10, UGT2B11, USE1, XYLB, ZAP70, ATP6VOA1, MAPKAPK3, PHOSPHO1, TNFRSF11B, TNFRSF18
Negative_13423	C8B, GSN, TNF, AKR1C4, AMPD2, AMY2B, APBB1, ARNT, BIRC2, CACNG4, CFTR, COL4A4, CTNNA3, CYP1A1, DLAT, ETNK1, FARSB, FOXA2, GLI1, GNAS, GOT2, GPAM, HLA-DMA, HSD3B2, IFNB1, IL5RA, IRS4, ITGB2, KLK3, LAMA3, LIFR, MYLK3, NCK2, NOTCH1, OR14I1, OR2C1, OR2L13, OR4C16, OR4S2, OR5T1, OR7D4, OR8D4, PDE4B, PGM2, PPP2CB, PRKAG3, RAC2, RASGRP2, RPRM, RPS6KB2, SDC3, SEMA3A, SEMA4D, SLC25A6, SNW1, SPRY1, TICAM2, TPK1, VKORC1, YWHAG, EIF4EBP1
Negative_13424	CEL, CSK, HAL, AASS, ACOX1, ACP1, ADORA2A, ALPL, APH1A, ARPC5, B4GALT3, C1GALT1, CACNB3, CARD11, CCNB1, CD47, CDK7, CDKN2D, CERK, CHIA, CHPF, CKS1B, CLDN6, CNGB1, CSNK1E, CTSS, CYP2D6, DDX41, DOCK1, EARS2, EIF4E, EXTL3, F2RL3, FCER1G, FZD3, GMPS, GRIA1, GRIA2, GSTK1, GSTZ1, HNMT, IFNGR2, IL13RA2, LRDD, LTC4S, MAN1B1, MKNK1, MPP5, NT5E, OR10A5, OR13A1, OR1D5, OR1J1, OR1N1, OR5AS1, OR7C2, PIK3R3, PIP4K2C, PLIN, PLXNA3, POLR2J, PPP1R3B, PPP3CA, PRIM1, PRKCB, PRKCI, PRODH2, RAPGEF2, RRM2, SLC2A2, SMAD2, SMAD9, SMPD4, SSH3, ST3GAL3, STK36, STX1A, SYNJ2, TBL1XR1, TMLHE, TNFSF9, TRDMT1, TUBB3, UAP1, UNC5B, UPRT, KIR2DL5A

Negative_13425	BCR, GLS, LPO, XDH, ACAT2, ACOT11, ACOT12, ALG6, ATG3, ATP5J, BIRC5, C5AR1, CACNB1, CCR1, CD22, CFLAR, CHRM5, CLDN10, CNGA3, CNTN1, COL4A4, COMT, COQ5, CXCR4, CYP2A7, DAPK2, DGKB, DHODH, DNMT1, DUSP8, GANC, GAS1, GNG12, HDAC2, HSPA2, IARS, IGF1, IL18RAP, IL1R2, IL20RB, IRS1, KIR2DL1, LHCGR, LTA4H, MAPK3, MGST2, MTMR1, MYH7, NKX6-1, NOD1, NOS1, OR11G2, OR2AG2, OR4A16, OR4N5, OR4S1, OR4X2, OR51B5, OR51B6, OR51I2, OR52I2, OR52J3, OR5AS1, OR5M3, OR7A5, PAX8, PCNA, PFN2, PIGH, PIK3CD, PIK3CG, PISD, POLE4, PPCDC, PRKAR2A, PRKG1, RASGRF1, RBL2, RDH8, RGS3, RPN2, SCIN, SETD2, SHC1, SPAM1, STK3, TAS2R13, TGD S, TUBB4Q, UGT2B11, ATP6V1G1
Negative_13426	DCN, ME3, ACSL3, ADH7, ALAS2, AMPD1, ARPC1B, ATP4A, BCAR1, BIRC2, CDH3, CREB3L4, CYFIP2, CYP2J2, DTX3L, DUSP4, FBXW11, FCGR3B, FRAT2, GAPDH, GDF6, IBSP, IL18R1, INHBE, ITGAL, KCNJ11, KIR2DL1, KLRC4, MPDZ, MYD88, NEUROD1, NFYA, OR10H1, OR2C3, OR4K17, OR6B3, OR6C76, ORC6L, PIGN, PLD2, PLK1, PRKACA, PSME3, RBKS, RERE, SEMA4A, SEMA4C, SETD7, SLC27A4, STX6, TACR1, TOLLIP, TRAF4, UGT2B11, UGT2B7, XCL2, YARS2, ZFYVE9, AASDHPPT
Negative_13427	GLS, ID1, OTC, PML, ACOX1, ACSS1, ACVR1B, ADCY6, AKR1C4, ALDH6A1, ALG10, ALG6, ALOX12, APLP1, ATP6V1H, B3GNT3, CCNB3, CCR4, CDH2, CEBPA, CLDN18, CLTC, CRKL, CSF3R, CTPS2, CXCL1, CYP4F2, DNMT3L, EGLN1, FDFT1, GYS1, HLA-DOA, IFNA10, IFNA7, IFNB1, JAM3, MGLL, MMP1, MYLK2, NTRK2, OPLAH, OR10Q1, OR1D5, OR52B4, OR52J3, OR52W1, OR6K3, OR8B12, OR9A2, OXTR, P2RX3, PIPOX, PLIN, POLR1B, PPAP2C, PRKACB, PRKCQ, PRPS2, PSPH, RALB, RAP1A, RDH12, RPS6KA4, SLC2A1, SMAD9, SMPD3, SPHK1, SPI1, SPP1, SSH2, STK4, STX4, TAS2R1, TLR3, MAPKAPK3
Negative_13428	C7, DLD, FER, IHH, MSN, TK1, ADCY6, AGPAT1, AKR1C3, ALAS2, ALDH1A2, ANAPC11, ANGPTL4, BDH1, BPNT1, C5AR1, C7orf16, CACNB2, CAMK2D, CCNB1, CD99, CDH15, CHAT, COL2A1, COL4A1, CREB3L1, CSNK1A1, CTNNA2, CTSS, CTTN, CYP3A5, DHFR, DLL1, DUSP16, EPHB1, FOSL1, GALNTL5, GNAZ, GSTA3, GUCY1A2, HARS, HARS2, HIP1, HTR2A, IBSP, IDH2, IL20RA, IL21, IMPA2, IRF3, ITGAE, ITGAX, LDHAL6A, MAGI3, MAN1C1, MCM6, MECR, NFATC3, OR11H1, OR11H4, OR1B1, OR1L6, OR1N2, OR2T11, OR2T33, OR51A4, OR51B5, OR5D18, OR6N2, OR7A17, OR8A1, OR8B4, P2RX6, PARVB, PAX6, PDE3A, PLA2G2E, PLAU, POLR3D, PPAT, PRKCH, PRKCI, RAPGEF3, RARA, RASGRP4, RRAS2, SDC4, SENP2, SNAP23, SPRY2, ST3GAL6, VCAM1, VTI1B, PLA2G12A, TNFRSF11A
Negative_13429	ADK, AK1, C6, CBL, ACVR1B, AKT1, ALDH1B1, AQP7, BDNF, CACNA1E, CBLC, CHIT1, CLCA2, CSF2, CXCL13, DAAM1, DARS2, DDHD1, DGAT2, DHCR24, EDA2R, EGLN3, EXT2, FMO4, FPGS, FUT2, GAPDH, GCDH, GCLC, GNAQ, GNAS, HAAO, HLA-F, IKBKG, IL13, ITGB1, MAP3K12, MDH2, MYH7, MYLK2, NAGLU, NCF1, NFAT5, NLGN1, OR10Z1, OR13J1, OR2C3, OR2Z1, OR4A15, OR52N2, OR5M3, OR6N1, OR7A17, ORC3L, P2RX7, P4HA1, PAPSS2, PDHA2, PECAM1, PER1, PGAM1, PIGX, PPA1, PPP1R1A, PRPH, PTDSS1, RAP1A, RUNX1T1, SENP2, SMARCA5, SRD5A1, SREBF1, SUFU, TAS1R3, TAS2R8, TUBB3, YWHAG, ZBTB16, ZMAT3, HSP90AA1, PHOSPHO1, SERPINA1, ST6GALNAC3, TNFRSF1B
Negative_13430	C9, DDC, KHK, ME1, PLN, RDX, SDS, SI, AARS2, ACADM, ADIPOQ, ALAS2, ARPC5, ASNS, ATP5J, B3GNT4, B4GALT6, BMP4, CLDN5, CREB3L4, DEGS2, DOLPP1, ERBB2, FGF20, FTH1, IFNGR1, IL13, JAG2, KAT2A, KIR3DL3, LDHC, LRP6, MAP3K3, MTFMT, NUDT12, NUDT5, OR10C1, OR13C4, OR1L8, OR2T10, OR2T33, POLE3, POLR3D, PPP2R2C, PRKAG3, RDH16, RFNG, RUVBL1, SFRP4, SMPD3, SOCS4, STX7, TACR1, TBL1XR1, TBXAS1, TUBB3

Negative_13431	CKB, DCK, FN1, NNT, PRL, SCD, UBC, ABP1, ADCY5, ADRB1, AKR1C4, AMD1, AM DHD2, ANAPC1, ARHGEF2, BACE1, C9orf95, CBLB, CCL24, CDC14B, CFLAR, C HAD, CMPK2, CRKL, CSF3R, CYP2U1, CYP4A22, DCXR, DDX55, FLOT2, GCNT3, GLUD2, GP1BB, GSTA2, HADHB, HSD17B7, IFNW1, IL23R, IL29, IL6ST, ITGA 11, MAD2L2, MDH2, NOTCH1, OR51B2, OR51T1, OR6B2, OR8D2, OR9G1, PHGDH , PHPT1, PIK3CA, PLA2G1B, PPP1CA, PPP1R1A, SARS, SLC27A1, SLC2A4, SP RED2, ST3GAL1, TGFB2, TLN1, TNFRSF8, TUBA1A, TUBB3, VAV2, WHSC1L1
Negative_13432	ABO, C4B, SMO, TKT, ACAD8, ACOX2, ACTN2, ACTN4, ADAM17, ADRBK2, AFMID , ARHGEF1, ARPC2, ATP4B, BCL10, CACNA1G, CACNG4, CCNE2, CD40, COX10, CRHR1, DDX52, DERA, DGKG, DUSP14, EP300, EPHA3, EPHA4, FCGR2B, FGF23 , FUT9, GALNT1, GBGT1, GUCY1A3, GZMB, HAAO, HIBCH, HTRA2, IARS2, IFNA R2, IL8RB, IMPA1, IRF3, JAM2, KCNB1, LAMA4, LDHD, LGMN, MAP2K3, MTHFS , NAMPT, NARS2, NEFM, NEU4, NOX1, NTF3, OR10H2, OR1N2, OR4F6, OR4K5, O R52M1, OR5L1, OR6B3, OR6C2, OR6C74, OR9A4, PARS2, PDE4B, PER2, PGAM1 , PITX2, PKMYT1, PNPLA3, PNPO, POLR2A, POLR2J, PSEN2, PTCH1, PTGIS, R HOD, RRAS2, SEMA4D, SLC2A1, STEAP3, TACR3, ULBP3, VAV2, ZBTB16, CSNK 1A1L, EIF4EBP1, HLA-DPA1
Negative_13433	C3, IL8, IL9, MUT, SRC, ACPP, ACTB, ADIPOR2, AKT3, ANAPC5, BAIAP2, BLV RB, CAV2, CCL25, CD34, CDC7, CDH3, CDKN2A, CNTN2, CPT1C, DLL3, DLST, E DA2R, EGLN3, EIF4E2, EPHA5, ERBB4, FCGR2B, FRAT1, FZD10, GALNT6, GNA I1, GNMT, ITPA, MCCC2, MYLK2, NOS3, OR13J1, OR2A2, OR2W1, OR4C6, OR5B 17, OR5D14, PHKA1, PIGM, PIK3R1, PIP5K1B, PIP5K1C, PISD, PLCD4, PMVK , POLR3K, PTPRB, PYCRL, RBL1, RENBP, SELE, SEMA4G, SGPP1, SHC2, SPAM1 , STAM2, TAS2R38, TICAM1, UGCGL1, UGT8, VEGFA, WEE1, WHSC1, ATP6V1B1 , ATP6V1E2, GABARAPL2, SUV420H1
Negative_13434	AGL, DBH, DCT, F10, F11, ITK, LPO, MIF, TFG, WAS, ACSL4, ANAPC10, APOA2 , ARAF, ATP6VOC, CCND1, CLTB, COMP, CREB3L1, CYP19A1, DAPK3, DDHD1, D GKQ, DUSP10, DUSP4, EGLN3, EXOC7, F11R, FADS2, FRAP1, GATM, GCDH, ICO SLG, IDI1, IDI2, IL17B, INPP5A, ITGA9, ITGB7, KAT2A, KAT2B, MAP3K14, NAE1, NAT6, NCOR2, NKD2, OR13C9, OR1C1, OR1J4, OR1L8, OR1S1, OR2G2, O R3A1, OR56A1, OR6N2, OR8I2, P2RX6, P4HA1, PANK4, PARD6G, PGAM2, PGM2 , POLR2C, PON3, PPOX, PRKCQ, PRKCZ, PSENN, PYGM, RAP1B, RPS6KA2, RPS 6KB1, SPHK2, STEAP3, STK11, STX8, SULT1A2, TAS2R14, TAS2R41, UGT2B1 0, ULK3, VAMP1, MAPK8IP2, MAPK8IP3
Negative_13435	AMT, CBL, CBS, ATG7, BAAT, BCAT2, CAV2, CHPT1, CPT1A, CSNK1E, CTSP2, C TSB, CYP17A1, CYP1A2, DARS2, ETNK1, FGF23, FRAT1, GBE1, GPD1, GSTT1, HADHB, HPSE, HSD17B1, IFNA6, IFNAR1, INPP4B, ITGAE, KIR3DL2, MDH2, M TMR2, OR10Q1, OR2M5, OR4C11, OR51A7, OR8H3, PANK4, PAX4, PIGA, PIK3C D, PLA2G10, PLA2G5, PON2, RASA1, RUNX1, SARS2, SEPHS1, SPI1, TUBA4A, TUBB2C, SERPING1
Negative_13436	CD6, CTH, HGD, MVD, PGF, PTS, PXN, ACVR2B, ALOX12B, ANPEP, AVPR1A, BUB 1, CDC25B, CLTA, CMPK2, CSF2RA, CXCR5, CYP8B1, DEGS2, DGKB, EDN1, ERB B4, FGD1, FLAD1, FZD2, FZD8, GDF5, GLI3, GLUD2, GPLD1, HTR6, IBSP, ICA M3, IL11, INSR, MALT1, MAP2K4, MAP3K1, MAT1A, MDH1, MS4A2, MTMR6, NA GK, NFKBIE, OR1L3, OR2A5, OR2T8, OR51B2, OR5M8, OR6C74, OR6S1, OR7D4 , OR7G2, PDGFD, PDHB, PHKG2, PHPT1, PIGV, PPP3CB, PSPH, RERE, RFXANK, SARDH, SCLY, SIAH1, SLC27A4, SNAP23, ST3GAL2, SUFU, TNFRSF9, TRAF3, TRAF4, TUBA1C, TUBB4Q, TYROBP, VARS, WARS2, WNT8A, ATP6V1B2, C1GALT 1C1, MAPKAPK3, ST6GALNAC5, ST6GALNAC6

Negative_13437	GHR, GK2, IL6, ME2, MUT, NLK, ADCY10, ADORA2A, AKR1C4, AOC2, APRT, ATP12A, B4GALT7, BCL2L1, CARS2, CCL14, CCR6, CDC23, CDK5, CDKN2A, CHD8, CIITA, CYP1A2, CYP3A5, ELK1, ERBB3, EREG, FGF11, GALNT12, GALNT7, GLS2, GMPPB, GNAT3, GRM1, GUCY1A3, HHIP, HSD17B7, IDH3G, IFNGR2, IL1R2, IMPDH1, ITGAD, ITGAV, KAT2A, LEFTY2, LIMK1, LIPA, LYPLA2, LYZL1, MAP3K3, MAT1A, MGAT4A, MPDZ, MYH2, MYH9, NKD1, NOD1, OR4Q3, OR5AS1, OR6C2, PCK2, PDGFD, PFKFB1, PIAS2, PIK3C2A, PLAT, PLK1, POLA2, PPM1A, PTDSS1, RAD51, RASSF1, RIPK1, ROCK2, RPS6KB1, SMARCA2, SMPD3, SPHK2, SULT1A4, TAS2R16, TNFSF14, TRAF3, TSTA3, UGT2B7, ULK3, WNT5B, MAPKAPK5
Negative_13438	ABO, AUH, C1S, CFD, F10, SRM, ACOT12, ADORA2A, AGXT2, ALDH2, AMY2B, CAR, CASP6, CCL20, CDK2, CDKN2A, CLDN17, COL5A2, CSNK1D, CYP2S1, DDX47, DPYS, EFNA3, EXTL1, FGF4, GGPS1, GMDS, GYS1, HADHA, HDAC2, HTR2C, IFT57, IKBKG, IL23R, ISYNA1, ITCH, LCAT, MAPT, MCCC1, MGAM, MYH15, NME7, NMNAT1, NNMT, NR4A1, OR1K1, OR2A14, OR2A42, OR2S2, OR4D5, OR4F17, OR52K1, OR52L1, OR52N5, OR6C3, OR6C70, OR6N1, OR8B4, OSMR, OXSM, P2RX5, PARVG, PDE4C, PFN4, PGK2, PIP5K1A, PKLR, PLCB1, PLCB4, PLXNA2, PNLIP, PRKACG, PTPRM, RASA2, ROCK1, RPS6, SEMA3D, SMARCA5, SPCS3, SUGL1, SULT1E1, SV2C, TACR2, TAS2R48, TUBA3C, WBSCR17, WNT10B, YWHAB
Negative_13439	BCR, EPO, F9, ITK, MVD, NF1, ACADL, ACP6, ADAM17, ALDH9A1, AMDHD2, ARPC3, ATP5L, BAAT, CACNA1I, CCL1, CD244, CDC7, CHAD, CHRM3, CLOCK, CREBBP, CX3CL1, CYFIP2, CYP21A2, CYP3A7, DARS2, DDX55, DRD1, DTX3, FBP2, FUT7, GALNT1, GNAI1, GP1BA, IDH3A, IFNA5, IFNA8, ITGB1, JAK2, LALBA, LAMC3, MAN1B1, NAT6, NEFL, NEFM, OPLAH, OR1J1, OR2AT4, OR2M4, OR4A15, OR4E2, OR4K15, OR5L2, OR6Y1, ORC1L, OXTR, P2RX4, PI4KB, PIP5K1C, PRKAR2A, PTPN1, RAF1, RHEB, RPSA, SC4MOL, SCP2, SDHB, SLC2A2, SMARCA5, SMURF1, SOS1, SRD5A2, SSH1, STX16, VANGL2, VDAC1, YWHAG, ATP6V1G2, MAPK8IP1, PLA2G12A
Negative_13440	GP9, NOG, PGF, SYK, ABI2, ACTA2, ALDH1L1, ALPI, AMY2A, ARPC4, BMP7, C1QC, CALML5, CAV1, CCKBR, CCNB1, CD99, CNTN2, CREB3L2, CSF2, CXCL1, CYBB, CYP17A1, DDHD1, DDX18, DHCR7, EIF4B, ENPP3, FGF21, FIGF, HSD3B1, IFNA7, LGMN, LTC4S, MAD1L1, MAP3K11, MAT2B, MTHFR, NUDT9, OR10T2, OR1J4, OR2L2, OR4C6, OR4F5, OR51B6, OR52K1, OR5D18, PAK6, POLR2L, PRKX, PTCH1, PTGES2, PTPN11, RFXAP, RPS6KA1, RPS6KA4, SCIN, SEPHS1, SYNJ1, TNFSF8, TP53I3, TRAF6, TRIP10, UGCGL2, AASDHPPT, MAPKAPK5
Negative_13441	ADC, FGA, TH, AK3L1, AKT3, ALG12, ATP5J, B4GALT5, CACNB4, CARD11, CDO1, CES1, CRB3, CRHR1, CSAD, EFNA4, EFNB2, ENTPD8, EPHA2, F13B, FBP2, FLT1, GALC, GNPDA2, GPD2, GRIN2A, GUSB, HSD11B1, ICAM1, IFNA14, IGF1R, IL7R, IQGAP3, IRAK3, IRS1, ITGA11, ITGA2, LCAT, MAP3K4, MAPK14, MGAT1, MKNK1, MYL9, NOS3, OR10A6, OR11L1, OR13G1, OR1N2, OR2B6, OR5AP2, OR7C2, OR7D2, OR9A4, OR9G1, OXCT2, PCNA, PDE3B, PGAM2, PIK3C3, PLCG1, PLXNB2, PMM2, POLE2, PPARG, PPP2CB, PRKAR2A, RCHY1, SCLY, SDC3, SEMA3G, SFRP2, SHC2, SPRY3, SPTAN1, ST3GAL2, STAM2, SYNJ2, TAS2R4, TLR5, TRADD, TSHB, UGT2B17, UPB1, VAV3, WWP2, XIAP, AASDHPPT, ATP6VOD2, HLA-DRB4, HSP90AB1, SERPIND1, SERPINF2
Negative_13442	ADK, F9, MPZ, NNT, ACADVL, ACVR1, ACVR1C, ADCY2, ALG8, ALPP, AMPD2, ATN1, ATP5G3, B3GAT1, B3GNT5, BAI1, CCNG2, CDK4, CLTC, CREB3L3, CYP3A4, CYP4F3, DGKB, DHRS9, DIAPH3, DUSP9, EPHX2, FABP4, FCGR2B, FUT8, FZD10, GAB1, GALK1, GALNT3, GAS1, GDF5, GIT1, GMDS, GUCY1A2, HARS2, HIF1A, HSPA1B, IFNA10, IFNA8, IGFBP3, IL12B, IL5RA, JAG2, LAMC1, LHCGR, MAD2L2, MAP3K8, MYH3, NCOR1, OR10H1, OR11A1, OR11H1, OR1L3, OR2B2, OR5B17, OR5M3, ORC6L, OXCT1, P4HA2, PLCE1, PLD2, PLIN, PPAP2C, PRKACG, PRLR, RAPGEF4, RBL2, SELE, SFRP1, SMARCA5, SYNJ2, TAS2R50, THBS1, TIAM1, TUBB2B, UROD, VARS, YWHAB, MAP3K7IP1

Negative_13443	ADO, BCR, CR2, DAO, FAS, FGA, NF1, SYK, ASCC3, B3GAT2, B4GALT2, CDH2, C REBBP, CYP17A1, CYP3A43, CYP8B1, DDX19A, DUSP8, E2F3, EPB41L1, ETNK 2, FGF8, FM04, FZD2, GALK2, GALNT5, GMPPB, GNPAT1, GPLD1, ITGA3, LAM C2, LRP5, LRRC4C, LTA4H, MAPK9, MECR, MPST, OR12D3, OR2A12, OR2A5, OR 4D5, OR6C74, OXSM, PDCD1, PFKP, PLA2G6, PPP2R2B, SEMA3F, SHC2, SMARC A2, SMPD3, SULT1E1, TDO2, TUBB6, TYRP1
Negative_13444	C4B, LCK, LPO, OGT, OTC, ACPP, ACSL1, ACVR1, ACVR1C, ADH1A, AGPAT6, AH CYL2, AK3L1, AKR1B10, ANGPTL4, AOC3, APRT, ARPC5, BMP5, CD48, CD74, C DC20, CDC27, CER1, CHRM2, CHUK, CLDN5, CSNK1E, CTBS, CXCR4, DHRS3, DT X2, DTYMK, EPB41L2, FGF8, FGFR4, FPGT, FZD4, GAS1, GATM, GSTA3, HIF1A , HPSE, HSPA8, IL10RB, IL12RB2, INHBB, IQGAP1, IQGAP2, ITGB4, LDHB, L GMN, LTC4S, MAN2A1, MAPK10, MAT2B, MPZL1, NARS, NEGR1, NOTCH1, OR1A1 , OR2T3, OR2T8, OR52N5, OR5AC2, OR6K6, OR6M1, OR7D4, PAX6, PDE1C, PFK FB1, PHKG1, PMVK, POLR2E, PRKCE, PTPRJ, PTPRM, RBL2, RBPJ, RDH12, RPS 6KA6, SLC2A1, SLC2A4, SLIT1, SOAT2, STAT2, TDO2, TMLHE, TRAF1, UCP1, VAV3, VEGFB, WASL, ZFYVE16, ST6GALNAC1
Negative_13445	AGL, BAD, C8B, CKB, FST, GDA, KMO, LEP, LHB, MPZ, PDC, SPN, SRF, TK2, ACA DVL, ACAT2, AGXT2, ALOX15B, ALPI, APOA2, AXIN1, BMP6, CCNH, CLOCK, CR EB3L1, CSF2RA, DEGS1, DLL1, E2F5, ECHS1, EFNB1, FGF22, FGF3, FOXO1, F RAP1, GCH1, GLI3, GNAT3, GSTM3, H6PD, HNMT, IFNA4, INPPL1, JUND, KIR2 DL1, LRRC4C, LTB4R2, MAML3, MAP2K2, MAPT, MLLT4, MS4A2, MTMR2, MYLK, NT5E, NUMB, OR10A3, OR2AE1, OR2T29, OR4D5, OR52D1, OR5AP2, OR5AR1, O R5R1, OR5T2, OR8S1, PAX4, PDE3A, PIK3C2G, PISD, POLR2I, PRKAB1, PTEN , PTPN7, RARS, SCD5, SLC27A5, SPRED2, ST3GAL5, STX10, TAS2R13, TAS2R 50, TGFB3, TICAM1, TOMM40, TSC2, TUBB4Q, TYMP, UGT2A1, UGT2B28, VAMP 2, VTI1B, ATP6V0A4, MAPKAPK5, TNFRSF18
Negative_13446	CS, FUK, HK3, IL3, NOG, RPE, ABI2, ADRB3, AGMAT, ALG10B, AOC2, ASRGL1, CAPN2, CASP9, CCR5, CDKN1C, CHRM3, CRLF2, CSNK1A1, CTBP1, CXXC4, CYP 2B6, CYP2C8, CYSLTR2, DFFB, DNMT1, DUSP14, DUSP6, ENPP3, EPHA7, FZD7 , GALNT10, GSTM5, HAAO, HA01, HSD17B8, HSPA2, ICOSLG, IFNA6, INPP1, I TGAM, KIR2DL4, LIFR, MAGI3, MYH10, MYH14, MYH3, NFKB1, NUDT8, NUDT9, OCLN, OR1J1, OR1L1, OR2A4, OR2T1, OR4C15, OR51D1, OR51G2, OR52E4, OR 52N1, OR6C3, OR8J3, P2RX1, PAPSS2, PDE8A, PGM1, PIGC, PLA2G2A, PLOD3 , PPBP, PRIM2, PRSS2, PTCH2, PTPN5, RAB23, RDH12, RFX5, RFXANK, RPS6K A5, RRM2B, SH2D2A, SLIT2, SMAD5, SPRY1, ST8SIA5, STAT2, STK3, TBL1X, TCF7L2, TRPC1, TSC1, TUBA1C, TYROBP, UGT2B11, YARS2, YOD1, YWHAH, ZN RD1, TNFRSF13B
Negative_13447	BTD, IHH, PTS, SRM, VCL, WAS, ABAT, ACVR1C, ACYP1, ACYP2, ADCY3, ADSSL 1, AMPD3, ARSD, ATP5G3, B3GALT1, BUB1, CAMK2G, CARS, CDK2, COL6A1, DD X50, DGKD, EIF4E2, ENPP3, EPHB4, FARSB, FBP1, FGF19, GNB1, HAAO, HLA- DMA, HNMT, HSD17B4, ICAM3, INSRR, ITGAD, ITPK1, LHCGR, LIPT1, NAT1, O R5AR1, PFKFB3, PI4KA, PIGV, POLR1B, PPCDC, PPP3CB, PRKACB, PRKCG, SM PD3, UGP2, VEGFB, WNT2B, YOD1, ZAP70
Negative_13448	DCN, GBA, GNE, ILK, MAG, ME2, SRM, AADAT, ACAT1, ADRB1, APRT, ATIC, CAV 2, CCL16, CD58, CD79B, CDC23, CFL2, CHRM1, CHRM3, CLDN15, CLDN6, CMPK 2, COX15, DDX55, DHDDS, E2F2, EGFR, EPB41, EPOR, FGF12, FM02, GALNT7, GAMT, GDF5, GJA1, GSTO2, GUCY2F, IFNA21, IL20RB, INPP1, INPPL1, KAT2 B, LAMA3, MCCC1, MECR, MGAT3, MYH10, NFKBIA, OR10H1, OR10H2, OR10H4, OR11A1, OR2C1, OR2M4, OR4N5, OR52E8, OR5H6, OR5M8, OR5T3, OR6C6, OR6 K3, P2RX4, PDIA4, PDX1, PIP5K3, PLA2G3, PLK1, PSEN1, PYGB, ROCK2, SEM A4D, SETD1A, SKP1, SMAD7, SNAI2, SPP1, STAM, STAT5A, STX3, SUCLA2, TA CR1, TGFB1, TUBB3, UCK1, WARS2, ATP6VOD1, TNFRSF1A



Negative_13449	AK1, CD2, SI, UBC, ACSS2, AKR1A1, ALDH1L1, ARNT2, ATP6V0B, B3GALT1, B3GALT2, B3GALT4, CACNA1E, CCL21, CCL25, CCR9, CD8A, CFL1, CHDH, CNTN1, CSF1, CXCR6, DAPK2, DDIT3, EGFR, ENO1, ENO2, FGF2, FPGS, FPGT, FRAT1, FUT6, GDF6, GLI1, GLUD1, GNPDA2, GPLD1, GTSE1, GUCA1B, IL6ST, IRF5, KCNQ1, KNG1, LCMT1, LHCGR, MAPK7, MCM2, MMP1, NFKB2, NME6, NSD1, NT5C3, NUMBL, OR10S1, OR2AG1, OR4D9, OR5J2, OR9A2, PARVA, PDCD1, PFKFB3, PGAM2, PPP1R3C, PPP2CB, PYCRL, PYGM, RAC1, RAPGEF2, RFX5, RHEB, SNAI1, SNAP23, SNAP25, SOAT2, SPAM1, STX2, TAS2R38, TAS2R48, TNFSF10, UGCL2
Negative_13450	HGD, ILK, SDS, UBB, ABL2, ACOX3, AKR1D1, ALG10B, ALG13, ARSB, BMP4, CALML3, CAV3, CCL16, CCL23, CDC16, CMPK2, CYP26A1, DDX54, DEGS1, DLL3, ECHS1, ENO2, FASN, G6PC, GLS2, GNAQ, HEXA, IBSP, IFNK, IL22RA1, ITGA11, LEPR, MCM6, MKNK1, MKNK2, MYL7, NCF4, OGDHL, OR13H1, OR1E2, OR2AG1, OR2G2, OR2V2, OR4F15, OR4K1, OR51I2, OR51S1, P4HA1, PDE1C, PGK1, PIGN, PLA2G2A, PRKCZ, PYCRL, RASGRP1, RBL1, RDH16, SFRP1, SMPD1, SPTLC1, ST3GAL6, STAT2, STAT3, STX2, TAS2R41, THBS3, TLN1, TRAF1, TRPM5, WASL, CTNBP1, SERPINF2, ST6GALNAC1, SUV420H2
Negative_13451	CBS, CTH, EZR, F12, FGB, FH, FUK, ABI2, ACADM, ACO2, ACSS2, ACTA1, ACTN1, ADH5, AHCY, ANPEP, ARHGEF1, ASRGL1, B3GNT5, CCL28, CD40LG, CDKN1B, CDS1, CLDN1, CLDN2, COASY, CREB1, CRY2, CSAD, CXCL11, CYP2C19, CYP2C9, DDOST, DGKI, DHDDS, FECH, FGF20, FM01, GALNT9, GCNT4, GDE1, GNAI1, GNB3, GPD1, GSTM5, HEXA, INPP5E, IQGAP1, IRF7, ITGA4, KCNJ11, KLKB1, LYZL1, MAD1L1, NCK1, NOD1, NODAL, NPR2, NT5M, OCLN, OR4F4, OR4F6, OR5AN1, PAICS, PANK4, PDE9A, PDGFB, PER1, PGLS, PGM3, POLR1B, PON1, PRKCG, PRPH2, PTPRR, RASSF5, RPS6KA5, SETD7, SIPA1, SULT2A1, TYMS, TYROBP, TYRP1, UGDH, ULK1, UROS, XCR1, HSP90AA1, ST6GALNAC1, ST6GALNAC5
Negative_13452	C5, ID2, OGT, ACADL, ACO2, ACOX2, ADRBK2, ALDH4A1, AMD1, ATP13A2, BAIAP2, BCKDHA, BET1L, BTRC, CCND3, CD55, CDIPT, CDKN1A, CHEK2, CTSS, CXCL5, DAPK1, DDIT3, DHCR7, DHODH, DPYS, DPYSL2, FGF17, GLUD1, GMPA, GRIN2C, GSTO2, IFNK, IFNW1, IL10RB, IL13RA2, IRAK3, ITGA6, JAK3, LEPR, LIPT1, MAP3K4, MPZL1, NFATC3, NRG2, NT5C3, NUDT2, OR10Z1, OR14A16, OR2A4, OR2C1, OR2T2, OR2W1, OR4L1, OR4X1, OR6C76, OR7G3, OR8D4, OR9I1, PCYT1A, PDE1C, PDGFD, PFKFB3, PGS1, PLA2G2A, PLCE1, POLD4, POLR2K, PPM1A, PPP1R3A, PRKAG3, PTPRB, PYGB, RAP1B, RBX1, ROCK1, RRAS2, SETD7, SH2D1A, SKP1, SOAT2, SRD5A2, STMN1, STX18, TJP2, TLR5, UCK2, UGP2, UGT2A3, UGT2B7, UPRT, XCL1, YKT6, HLA-DPB1
Negative_13453	LPO, LSS, MTR, ABLIM2, ACY1, ANAPC1, ATP5D, CCL26, CCL27, CCL28, CX3CR1, DTX4, DUSP3, ENO3, FM02, G6PC, GANAB, GIT1, HMGCS2, INPP5E, ITGB8, LLGL2, LTC4S, MAP3K4, MCM7, MOV10L1, MYH15, NAT2, NT5E, OR2T29, OR4B1, OR4K1, OR5AS1, OR6C6, PARVA, PFKP, PIGO, PIGQ, PRKCI, PRKX, PTAFR, PTGER1, RASA1, RXRB, TRMT11, UGT1A10, UMPS, UNC5C, UROC1, VEGFB, YARS, ST6GALNAC5
Negative_13454	ADA, DCT, KDR, LIF, PGD, TK1, AMPD3, ATIC, ATP5D, ATP5G1, BCAT2, BLNK, CAMK2D, CCKAR, CCNA2, CCNB1, CDKN2A, CHAT, CLDN16, CLDN8, CRKL, CSNK1D, CSNK1E, CTNNA3, CYFIP1, DARS, DBF4, DDX23, DHDH, DHRS9, DOCK1, GCNT3, GDF5, GGT1, GNAI2, GNPAT1, HADHB, HLA-F, HNMT, HRH1, IL12A, IL29, IL6ST, INHBE, INPP5B, ITPKA, KRAS, LAMA4, LIPA, MAN1B1, MAOB, MINPP1, NFKBIA, NFYB, NQO1, NR1H3, NT5C1B, OR10G9, OR14C36, OR1C1, OR1J1, OR2AT4, OR8H2, OXCT1, PAFAH2, PCNA, PCYT1A, PFKFB1, PFKFB4, PGAM2, PLCD1, POLR1C, POLR2A, PTCRA, RFXANK, ROCK1, RPN1, SEMA4C, SETD1B, SHC4, SMURF1, SOS1, STAT2, STX18, SULT1E1, TAS1R2, TGDS, TICAM2, WNT7B, ALDH18A1, PAFAH1B2, SERPINC1

Negative_13455	AMH, CR2, DBI, MYC, SDS, SRM, UBC, ACLY, ACTB, ACTG2, ADRB1, ALG10B, AM DHD2, ARHGEF4, ARPC3, ATP5C1, B3GALT4, B4GALT5, CADM3, CAMKK2, CDKN 2D, CDS1, CLDN22, COL11A1, COL4A4, COQ7, CTNNB1, CXCL10, CYBA, CYP11 A1, CYP2A6, DEGS2, DNMT3A, DOLPP1, FGF17, FGFR3, FLOT2, FTH1, FUT9, G ADD45A, GNPAT, GPX7, HPSE2, HRH2, HSD11B2, IFIH1, IKBKE, IL2ORB, IL2 8B, INPP4A, JAG1, LDHA, MCM2, MGST2, MYL2, NFYA, NKD2, ONECUT1, OR10V 1, OR14I1, OR2M3, OR4A15, OR52N4, OR7C2, OR9A2, OXTR, PCCA, PDE8B, PD GFD, PGK1, PGK2, PLCB1, POLR2A, POLR3D, PPP2R1B, PRKACB, PTGES2, RAP 1B, RASGRP3, SETMAR, SNW1, ST3GAL5, STK3, THBD, TOLLIP, TYRP1, UPP2, XYLB, XYLT1, SERPINE1, ST6GALNAC1
Negative_13456	ATM, CBL, IDS, ABL1, ACSS1, AKR1A1, AKR1C1, ALDH1A3, ALDH1L1, ALDH3B 1, ARHGEF4, BCL10, CACNG3, CD22, CDC14A, CDH1, CES7, COQ3, CSNK1A1, C YP3A4, DAD1, DHFR, DTX3L, DTX4, ENTPD2, EPHA2, FSHR, GDF7, HSD3B2, IL 17B, IL5RA, JAK2, LIPF, LYZL1, MGST2, NR5A2, NT5C, ONECUT1, OR1L1, OR 2B2, OR2F1, OR5AC2, OR5P2, OR6K2, OR8G1, OR9A4, PFN3, PLA2G6, PNMT, P PA2, PPP2R5A, PSME3, RCHY1, RPS6KA2, SH2D1B, SPTAN1, SSX2IP, STAT3, STX8, SUV39H2, THBS3, TPK1, UGT8, UPP1
Negative_13457	A2M, AK3, FGA, ITK, MIF, ACSL1, ATIC, B4GALT1, BLVRB, CACNA1B, CD244, CD58, CDC25B, CDKN1A, CLDN14, CXCL11, CYP3A4, CYP4A22, CYP7A1, DCXR , DPAGT1, EI24, F2RL2, GNAT3, GUCY2D, IL4R, INHBC, ITGAL, MEF2C, MYLK 3, NFATC2, OR11H4, OR13H1, OR4C13, OR4E2, OR51E2, OR51G1, OR7A10, OR 8H2, PGAM2, PLAT, PLTP, POMC, PON1, PRKCB, PRSS2, RAC2, SENP2, STAT2, STK36, SUCLG2, TGFB2, TRDMT1, VANGL2, VTI1B, WHSC1L1, WNT10B, MAPK 8IP2
Negative_13458	A2M, ZYX, ADCY3, CER1, CLDN1, CNTFR, CYP2C8, DAPK2, DDHD1, DPM2, DRD1 , EXOC7, FABP4, FUT2, GNMT, GPAM, GRM5, GSTK1, HBEGF, HPSE2, HSPA8, IG F1, IL11, ITGAL, JAG1, MAGI3, MAML1, MAPK9, NCF4, NFX1, OR10A4, OR10Q 1, OR1F1, OR1L6, OR6C74, POLR2J, PPP2R2B, PRKAB2, SAT1, SEMA4C, SETD 8, SPTAN1, SRD5A2, SULT2B1, TAP2, TAS2R38, TBL1Y, TGFB1, TUBB4Q, TUB B6, TYK2, WASL, WHSC1, TNFRSF1B
Negative_13459	ADO, FGB, LPL, OSM, PDC, SMO, TNN, ACAD9, ACOX2, ARHGEF1, ARHGEF2, ASC C3, ASS1, CACNA1H, CCL24, CCL4, CD59, CDK7, CDS2, CES1, CHPF, CLTB, CT NND1, CXCL3, DCXR, FBXW11, FUT4, GNAT3, IL17B, IL6R, MAGI2, MGAT5, NC K2, OR10H1, OR1K1, OR4A5, OR8H2, PDIA4, PFN4, PGS1, PIGT, PLA2G1B, PL CE1, PRKCH, SH2D1A, SH2D2A, SLC12A2, SMC1A, SMC1B, TAP2, THBS1, TUBA 1C, UBA7, UGT2A3, UNC5C, UPP2, YARS2, YWHAH, HLA-DRB5
Negative_13460	LIF, NLK, ACTN4, ADCY1, ATP50, BAAT, BMP6, CCL19, CCL20, CCNA1, CDC2, CDK4, CSNK1G3, CXCR3, CYP4F3, DARS, DHRS9, EPHB4, ETNK1, GADD45B, GA S1, GRIA3, GSTM2, HMBS, HSP90B1, IARS2, IFNAR1, IL8RA, JAG2, LAMA4, L AMB3, MALT1, MAP2K5, MAPT, MAT1A, NME2, OPLAH, OR10H3, OR2V2, OR4C6, OR52A5, OR9K2, POLR2K, POLR3K, PPARG, PPM1A, PPP1CB, PRKCA, PTPRZ1, RAC1, RDH5, RENBP, SDHB, SEMA3F, SMPD1, TMLHE, TUBA1B, TYMP, TYRP1, W IF1, WNT9B, ATP6VOD1, ST6GALNAC1
Negative_13461	EZR, HPD, PTS, ACADL, ACP2, ADAM10, ADCY6, ADIPOR1, ADIPOR2, APOA1, A QP7, ATP5J, CD274, CFL1, CHD8, CLDN6, CTTN, CXCR3, DDX55, DHDDS, DLL4 , ECHS1, EPHA2, FGF7, FGFR3, FLAD1, FTCD, GCLM, GSTM2, IBSP, IL12A, IT CH, ITGA9, ITGB2, KIR2DL1, LYPLA2, MAT2B, MTHFR, MYH8, NEU4, NLGN1, N PR2, NT5C, NT5E, OR10A5, OR10G9, OR14A16, OR2H2, OR2L2, OR5P2, OR9K2 , PAICS, PARD6B, PDE6H, PHKG1, PIGN, PIGS, PLA2G2A, PLA2G4A, POLR2G, PPP1CC, PPP2R1B, PPP3CB, PTGS2, PTTG1, RDH11, ROCK1, SEMA3D, SFRP1, SQLE, SYNJ1, TAS1R1, TAS2R10, TAS2R3, TAS2R7, UGT1A10, WASF1, GABAR APL2

Negative_13462	BID, IL6, MPL, PVR, SHH, UBC, ABP1, ACSL6, ACTB, ADCY6, ADIPOQ, ADIPOR2, AGPAT6, AK3L1, AMY2B, ASMT, ATP5I, ATP5J2, BET1L, BIRC3, C1QB, CCL14, CCNG2, CDKN1C, CIITA, CLCF1, CNGA4, CTPS2, CYP2B6, DUSP3, EARS2, ENPP3, EPHA1, EPHA3, F2RL1, FGF11, GALNT3, GCLM, GMPR2, GOT2, GRIA1, HSD17B2, IARS, IDH2, ITGA2, ITPKA, LHCGR, MGLL, MPZL1, NCR3, NKD1, NODAL, NOX3, OR10AG1, OR10S1, OR13C8, OR1F1, OR1J2, OR4B1, OR52A1, OR52I2, OR56A4, OR5P3, P4HA3, PARD6G, PCCB, PDE8B, PFN2, PIK3CG, PLCD3, PLXNB2, POLR3D, PRKCG, RAC3, RBL2, RELB, SH2D1A, SHC1, SQLE, TAS2R13, TPMT, UGT2B4, YARS, ATP6V1G2, HLA-DPA1, HSP90AB1, PRICKLE1
Negative_13463	CAT, ILK, TYR, ACP2, ALCAM, ATP6V1H, CCR1, CD19, CDKN1C, CSF3R, CSNK2B, CTLA4, CTPS2, CYP2A6, CYP2J2, DDIT4, FABP1, FGF5, FZD9, GALNTL5, GAMT, GLO1, GLUD2, GMPS, GRIN2B, IBSF, IGF1R, ITGA1, ITGA11, ITGA7, ITGB8, LIMK2, LRP5, MGST2, NFKB2, NFYA, OR10H1, OR4C13, OR5D16, OR5D18, OR5V1, OR6K3, P4HA1, PDE4A, PRKAB2, PSME2, RPS6, SNAP25, TNFSF9, UGT2A3, VAMP1, VEGFB
Negative_13464	GGH, NNT, SDS, ACO1, ACP6, ACSM5, ADH7, AGPAT2, ANAPC2, ATP6AP1, BAI1, BDNF, CACNA1D, CALML5, CD27, CDH1, CDKN2D, CFTR, CLDN20, CLDN6, CSDA, CSNK1E, CTPS, CYP2C19, CYP2S1, DAAM1, DGKI, DIAPH2, ECSIT, EDA2R, FGF1, FLT4, FMO3, FOXA3, FTMT, GLUL, GUCY2D, GUCY2F, HAAO, HCST, HES1, HLA-C, JAM2, MAML1, MAML3, MAP3K12, MYH14, NTF3, NTNG1, OR10K1, OR1M1, OR2B11, OR2Z1, OR4D11, OR52M1, OR5I1, OR5P2, OR5P3, OR6T1, OR7D4, OR9K2, PFN4, PHKG1, PLA2G6, PLCB3, PLCG1, PMM2, POLR3B, PSENEN, PTPN1, PTPN7, RASGRF2, RPSA, RUNX1T1, SETD7, SMAD6, STAT5B, STX1B, SYNJ1, TAP1, WBCSCR17, WEE1, SERPIND1, TNFRSF10B
Negative_13465	EZR, HK2, AANAT, ACADS, ACOX1, ARG1, ARHGEF1, ARRB2, ATP6V1F, CACNG6, CADM1, CEBPA, CHRM3, CNTNAP1, COMT, CTNND1, CTPS2, CYP2F1, CYP3A43, CYP8B1, DAPK3, DCTN1, DDX19A, DLL1, E2F3, EI24, FLT3LG, GADD45B, GFAP, GNG13, GSTA2, GUCY2D, HA01, HMOX1, HSD17B1, IFNA13, INHBE, JAG2, LLGL1, LLGL2, MCM6, MMP2, NCK1, NRXN2, NRXN3, OLR1, OR14I1, OR14J1, OR1A2, OR2A5, OR2T33, OR2V2, OR4D11, OR51B6, OR52E4, OR5T3, OR6X1, PAPPSS1, PDE3B, PDGFC, PDGFRB, PER1, PGM1, PISD, POLA1, POLR2K, PORCN, PPP1R3B, RALB, RAPGEF1, SAT1, ST8SIA5, TGFBR2, TUBB, TXNDC12, CSGALNACT2, MAPK8IP2, PPARGC1A, TNFRSF1A
Negative_13466	DDC, F2R, GK, PDC, SMO, ACTA2, ADIPOR2, ALAD, ALG10B, APAF1, ARAF, ARPC5, BST1, CBR3, CD72, CD8A, CHEK1, CIITA, CLDN2, CLDN20, CREB3, CRY1, CYBB, CYP2E1, DIAPH3, DLL4, ENPP2, EPB41L3, EPHB6, EPRS, FLT4, GALNT2, GLO1, GNA13, GPAM, HAGHL, HNMT, IFNA6, IFNW1, IL12A, IL8RA, LALBA, LAMB3, LIPC, MAGI1, MAPK11, MGAT4A, MKNK2, MPST, NEUROG3, NFYA, NRG1, OR4B1, OR4K13, OR5AC2, OR7C1, PDE4B, PDGFC, PDHA2, PHKB, PI4KB, POLE, PPP1R3D, PPP3R2, PRKY, RCHY1, SEMA3A, ST8SIA5, TRAF2, TRMT11, TSC2, WWP2, PAFAH1B2, PHOSPHO1
Negative_13467	BTC, DBT, F12, GH2, IL9, JUP, NPL, ACAT1, ACLY, AKR1C2, ALDH1B1, ALG12, AMD1, APOE, ASAH1, B4GALT7, BACE1, C9orf95, CACNA1C, CACNB3, CCL28, CCNA2, CCR9, CDK7, CLDN8, COL1A2, CRB3, CREB3L1, CRKL, CYP2A13, DDX19A, DERA, DTYMK, DUSP9, E2F2, EDA2R, ELK1, ENTPD4, F2RL1, FGF3, GART, GNB3, GPD1L, GPLD1, GSTM3, HIF1A, HMGCR, HSP90B1, INPP5B, INPP5E, KLBK1, KLRD1, LAMA3, LDHB, LIPT1, LYPLA1, MADCAM1, MAP2K2, MTFMT, NCK2, NKX3-1, NR4A1, NRXN1, NTF3, NTSR1, OR13C8, OR14C36, OR4C46, OR52E8, OR52L1, OR52W1, OR5C1, OR6B2, OR6X1, OR9I1, P2RX3, PAK4, PDGFC, PIGF, PLCG2, PLTP, PLXNA2, POLE2, POLR2G, RFXAP, SELP, SOAT1, SQLE, SSH1, TACR1, TKTL1, TUBA3E, TXNDC12, VDAC3, CACNA2D4, CSNK1A1L, TNFRSF14

Negative_13468	AK7, C2, CSK, EZR, GLA, IL3, VCL, A4GALT, ABLIM1, ACAD8, ACPT, ACTN1, A LG13, APRT, BCMO1, BMP4, CCR10, CHEK1, CHKA, CHRM3, CLDN14, CLDN3, CO L6A2, CREBBP, CSF2RB, CSNK1G3, DGKE, DHODH, E2F2, EDA2R, EI24, FZD7, GPAA1, GUCA1A, HMBS, IL20RA, ITGA5, MGST1, NADSYN1, NUDT12, OR13C3, OR2Y1, OR56A4, OR6A2, ORC4L, PAX6, PLCG1, PPAR, PPM1D, RPS6KB1, SAT 2, SEMA4A, SHC2, SMAD2, SPCS1, STX18, TAS2R38, THBS4, TLR5, TRADD, TU BA3E, WASF3, B4GALNT1, TNFRSF12A
Negative_13469	AR, ATM, EGF, MET, PGP, TEC, UBC, AADAT, ADCY6, ADRA1A, ALPP, B3GNT5, B 4GALT7, BET1L, BMPR1A, CCDC6, CCKBR, CD59, CD82, CD8B, CDKN1A, CES7, CHAD, CLCF1, DDB2, DDX41, DGKA, DRD1, ENO3, ENPP2, FUT9, FZD2, GNMT, G STA1, HLA- C, HMGCR, HSD11B1, IFNA2, IRAK1, JAG1, LAMC2, MAD1L1, MAP3K4, MYD88, MYH10, MYH11, NPR2, OR10J5, OR12D3, OR13C9, OR13J1, OR1L1, OR2A2, OR 4C13, OR4D2, OR52I1, OR56B4, OR5B3, OR6A2, PDE11A, PLAU, PLCB1, PLCG 1, POLR1C, PPARG, PRKAR2B, PTDSS1, PTPN5, PTPRF, PYGM, SDHA, SLC25A6 , SMARCA5, SSX2IP, TAS2R49, TBXAS1, TLR9, TPH1, TUBA3E, TUBA4A, WBSC R22, GABARAPL1
Negative_13470	KHK, LYN, TKT, UBB, ACTN4, AGXT2, ATP5J, B3GALT2, C1QC, C3AR1, CAV3, C CL4, CCND2, CD72, CD86, CDC7, CFTR, CKMT2, CLDN10, CXCL11, CYP2A7, CY P2C8, FBP2, FGF14, GNA13, GNPDA1, GUSB, HADHB, HSD17B4, HSD3B2, HSP9 0B1, HTR2C, ICAM3, IFNA4, IL10, IL17A, IL21R, JAK2, JAM2, KLKB1, LRDD , MS4A2, MYL5, NKX2- 2, OR13F1, OR1M1, OR2AE1, OR4C12, OR4X1, OR6C1, OR9Q1, PDE6H, PLA1A, PLA2G4A, PLCB1, PLCD3, PLTP, POLD3, POLR2C, PPOX, PYCR1, SARS2, SEMA 3F, SPI1, STX8, VAMP2, VAV2, ALDH18A1, HLA-DRB4, MAPKAPK2, PRICKLE2
Negative_13471	IL9, ACSM1, ADCY2, BDH1, CD40LG, CDC23, CDKN1B, CHSY3, CLCA4, CNGA3, COL4A2, CUL1, CYP19A1, DGAT2, DHRS9, DOLPP1, ENTPD6, FABP4, FARSA, F CGR2B, GALNTL5, GLUD2, IL18RAP, IMPA1, KLRC3, MAN2A1, MAP3K12, MAPT , MFNG, NAT5, OR11A1, OR13C9, OR2H2, OR2T1, OR52E8, PDE4C, PDE4D, PDH B, PERP, PIP4K2C, POLE4, POLR3B, RASA2, RELB, ROBO2, SARS2, ST3GAL4, STEAP3, TIAM1, TM7SF2, TNFSF18, UGT2B28, WARS, WHSC1, TNFRSF12A
Negative_13472	ABO, CBL, CFI, DDO, HGD, TNF, ACTG1, ADRB3, AKR1B1, ALG12, B3GNT4, BCA T1, BIRC3, BIRC5, BST1, BUB1B, C1GALT1, CACNA1B, CACNG3, CASP3, CCL2 5, CDK5, CERK, CES1, CHEK2, CLDN1, CSNK2B, DARS2, DLL3, FARSA, FGF22, FZD7, GNMT, GPX5, GSTO2, IKBKG, IL17B, IL2RB, ITGAV, JAM2, LIPG, MAP4 K2, METTL6, MGAT5B, NCKAP1, NKD1, OR10G9, OR10R2, OR11H4, OR1N2, OR5 1B2, OR51Q1, PDXP, PFKFB3, PLXNB1, POLR2L, PPP2R5D, SELE, TAS2R4, TA S2R40, UROD, B4GALNT1, CACNA2D2
Negative_13473	AK5, AR, GH1, HK3, HYI, SDS, ACTA2, AGTR1, ANAPC11, ASNS, ATP5G1, BUB1 B, CALML5, CCR7, CCR9, CDH2, CPOX, CPT2, CSNK2B, DDX55, DNMT3L, DTX4, DUSP14, E2F1, EHMT1, EXTL1, FASN, FLOT2, FLT3, FZD8, GGT5, GNG12, GNG 13, GNPAT, GRIA2, HNF1B, HSD17B1, IFNA8, IFT57, INPP4B, ITCH, ITGA11 , KCNJ11, MAPK13, MCCC1, MCEE, MINPP1, MYD88, NADK, NFYC, NQO1, OR10A 4, OR1J2, OR2B6, OR2T10, OR4D6, OR4F5, OR4K15, OR4N4, OR52A1, OR52B6 , OR52L1, OR5J2, OR9K2, PCK2, PDE1A, PDE4C, PDE8A, PEMT, POLR2B, PON1 , PPCDC, PRKACB, PTGDS, PTGS1, QPRT, RARS, RASGRF1, RASGRP1, RBL2, SD HD, SHC1, SMAD5, SMAD9, SOD1, SPAM1, TOLLIP, TPH1, WARS, WWP1, ATP6V1 C1, PHOSPHO1, TNFRSF13C

Negative_13474	GP9, ID2, PVR, ABAT, ACLY, B4GALT3, B4GALT7, BACE2, BLVRA, BMPR1A, CA CNB2, CALML3, CCL4, CCL7, CD58, CES1, CHRM2, COMT, CSDA, DERA, DGKE, D IAPH1, DIAPH3, DKK2, E2F5, EPAS1, ERBB3, EVI1, FARSA, FGD1, FMO2, FOX 03, GALNT13, GNAL, GNG13, GUCY2D, IL11RA, IL20, IRS2, ITGAL, KCNJ11, MAML2, MAP2K4, MAPK8, MKNK2, MYH14, NFYC, OR10Z1, OR13C9, OR1C1, OR4 N4, OR8K5, PARD3, PARVA, PAX6, PIGH, PRDX6, PROC, SMC1A, SNAI2, STAT2 , SULT2B1, SYNJ1, UGT2B7, ATP6V1G1, CACNA2D3, TNFRSF10C, TNFRSF11A , TNFSF13B
Negative_13475	CD2, HDC, IL9, MTR, MUT, RET, ACAD9, ACAT2, ADCY2, ADCY9, ADH4, ADRB1, ALAS1, APBB1, ARHGEF1, ATP2A2, ATP5G2, BCL2L1, BCMO1, BDH2, BIRC2, B ST1, CD34, CMBL, CTLA4, CYP1B1, CYP2E1, CYP4A22, DCTN1, DDB2, EPB41L 1, EPHA1, FASLG, FGF9, GLB1, GLUD2, GNRH2, HAP1, IFNA17, IL23R, IL28R A, INPP1, INPP5E, KIR2DL4, KLRC1, KLRD1, LEF1, LYPLA2, MAP2K2, MAP4K 1, MCCC1, MYLK, NCSTN, NKX3- 1, NMNAT1, NUDT8, OR1B1, OR1N2, OR5V1, OR6C1, OR7D2, PARD6G, PDE6D, P DE8A, PDGFB, PFKFB3, PIAS1, PIGT, PKMYT1, PLK1, PTCRA, PTGS2, RBPJ, S TAM, SULT2A1, THTPA, XCR1
Negative_13476	CGN, HYI, KHK, KMO, MPL, RFK, SYK, TYR, UBC, ACSL4, ACSM2A, ALG12, AMD1 , ANAPC2, ATG3, ATP5C1, ATP5D, BLVRB, CACNB2, CACNG1, CALML5, CCL26, CCNE1, CD58, CD59, CES1, CHAT, CHEK1, CHRM1, CMBL, CYP4A11, DGKA, DTX 2, FDF1, FGF3, FGF5, GALNT9, GCNT2, GPT2, HLA- G, HSD11B2, ICOSLG, IFT57, IL13RA1, LPAR1, MAN2A1, MAP3K1, MCCC1, MM P14, MYH2, NKX2- 2, NLGN3, NT5C1A, OGDH, OR10AG1, OR10J3, OR13F1, OR2C1, OR2Y1, OR4D1 1, OR4K14, OR51E2, OR52K2, OR8D1, OR8D2, PDE1C, PDE6H, PDGFB, PEMT, P ER3, PIK3CD, PISD, PNPLA4, POLR3G, PON2, PPP1R3C, PPP1R3D, PRIM1, PY CRL, RBX1, SDHA, SLC27A1, SSH3, ST3GAL3, STAT2, SUCLG2, SULT1E1, TAS 2R1, TAS2R48, TGFB3, TLR3, TNFSF14, TRPM5, TUBB6, WARS2, WBSR17, WN T7A, SERPINE1, SUV420H2
Negative_13477	C8A, DUT, LSS, PML, WAS, ACP1, ARRB1, B4GALT7, CCL24, CD27, CLDN3, CPS 1, CXCR5, CYCS, DARS, DPM1, ETNK2, GADD45A, GALK2, GALNTL1, GOT1, H6P D, HPRT1, ICOS, IFNA10, IGF1, IL10RB, IL12A, INHBB, LTBP1, MAPK13, MY LK2, NAGK, NCR3, NME2, NR1D1, OR10K2, OR11A1, OR2L3, OR4E2, OR52I1, P GK1, PIK3C2A, POLA2, RPS6KA5, SEMA3C, SMAD9, SOCS7, ST3GAL4, SV2C, W IF1, XCR1, TNFRSF1A, TNFRSF6B
Negative_13478	AK1, BAD, CBL, CS, GNS, ME2, SDS, ADCY1, ADORA2B, AGPAT6, ARHGEF7, ATP 4B, ATP5J2, BAAT, BACE2, C3orf10, CCL15, CCR3, CDKN1A, CKMT2, CLTB, C OL6A1, DDHD1, DDX52, DEGS2, DPM3, DUSP4, EHMT1, FBP2, FGF14, FOXA3, G FPT2, GNG13, GNG3, GUCY2C, HEXB, HLCS, HNMT, IBSP, IFNG, IL20RA, KIR2 DL3, LARS2, LILRB3, MAP3K2, METTL6, NRXN1, ONECUT1, OR2T34, OR4C16, OR4C6, OR51E1, OR5H2, OR5P2, P4HA3, PLXNB1, PNLIP, PRKACB, PRKACG, R DH10, RXRB, SLC2A2, TALDO1, UBA1, UBE2K, UGT2B28, YWHAG, ATP6V0A2, A TP6V1C1, ATP6V1G3
Negative_13479	AGL, CD2, CGA, CRH, F5, FAS, FST, GH2, GPI, IL3, PAH, TNN, UBB, ALG9, BDH 2, BIRC5, BUB1, C1QB, CDC14B, CDC16, CDC23, CES1, CHAD, CSNK1G2, CXXC 4, CYSLTR1, DAPK1, DGKA, DNMT3A, EFNA3, FABP3, FGF23, GLI1, GLO1, GNA I1, GPLD1, GZMA, HARS, HLA- DMA, HSD3B1, IFNA10, IGF1, ITPA, JAK3, JAM2, KIR2DL1, KIR2DS4, LDHA, LTC4S, MAP2K1, MAP3K12, MAPK12, MCM4, MGAT4A, MLYCD, MMP14, NADK, NM NAT1, NTNG1, OR14J1, OR4Q3, OR51F2, OR52A1, OR52K1, OR56A1, OR5D14, OR5F1, OR5I1, OR5L2, PDE3A, PDE4D, PECAM1, PIAS1, PIGQ, PLCD3, POLR1 C, POLR2J, POLR2L, POLR3A, PRKX, PRPS1, PYGL, RBX1, RPSA, SHISA5, SLC 33A1, SMPD1, SPTAN1, ST3GAL3, SULT1A1, TP73, ULK2, AASDHPPT

Negative_13480	CRH, HYI, LAT, LYN, NF1, OGT, ACOX2, ACTC1, ADCY8, ADH1A, AREG, ATF2, A TP5L, BBC3, BCL2L1, BMP6, CACNG8, CAMK2G, CASP8, CCL23, CD40, CD70, C FTR, CHRM5, CHRNA7, CNTNAP1, CRB3, CSNK2A2, CYP3A4, DCXR, DDX52, DFF B, DHCR7, DUSP14, E2F3, ENPP7, EPHA2, EPOR, GGT6, GNA14, HCLS1, HSD17 B7, HTR4, IAPP, IL12A, IL12RB1, INPPL1, ITCH, ITGA8, ITGB3, ITPK1, KR AS, LFNG, LIPF, MAGI2, MALT1, MAP2K6, MAP3K2, MTMR2, NAE1, NTN1, OR1I 1, OR51B4, OR51E2, OR51F1, OR6C76, OR8J1, P2RX7, PDE10A, PIGW, PIK3C B, PLIN, PLXNC1, PMM1, PON2, PPM1A, PRKAA2, PSPH, PTDSS2, PTGER3, PVR L3, SDC4, SETDB1, SFRP2, SOCS3, SULT1A2, TACR2, TJP1, TLN1, TRIP10, T RPM5, TUBA1C, VAV3, VEGFA, WIF1, ATP6V0D1, ATP6V1C1, CSGALNACT1, TN FRSF13B
Negative_13481	AR, CKM, DUT, NLK, SRM, AANAT, ACADS, ACSL1, ACVR2B, ACYP2, ADIPOR2, A LDH1A3, ALG3, APOA1, ARSA, ATF2, BCMO1, CBR3, CCKAR, CCL27, CD79A, CD 80, CDK2, CHRM1, CYP4F2, DVL1, EDN1, ENPP3, FCER1G, FGF14, FZD2, FZD9 , GDE1, GIT1, GNPDA2, GRM1, HIF1A, HSP90B1, HTR2A, IDH3A, IRF5, JAK3, LIAS, MTAP, NADSYN1, NEUROD1, NFE2L2, NOS3, NUMB, OR11H6, OR4A16, OR 4C11, OR4D11, OR6C3, OR6N1, OR8J1, OR8U1, ORC4L, PAK2, PAK3, PLCB4, P LK1, POLA1, POLR1C, POLR1D, PPCDC, PRKCZ, PTPRJ, QPRT, RAB5A, RFXANK , SELL, SENP2, SH2D1A, SLC27A4, ST3GAL3, TAS2R4, TGFB1, TLR4, TRAF6, MAPK8IP1, PLA2G12B
Negative_13482	FOS, GP5, ID1, ID2, LSS, ACSL6, ADCY9, ALG2, ALOX12, AMD1, APBB1, ASPA , ATP5G1, CACNB2, CCNA2, CD14, CD8A, CDK7, CLDN16, CLDN4, CYP3A4, DDX 4, DGAT1, FADS2, FLT1, FMO3, FRAT1, GLI3, GNAL, GNG13, GOSR2, HAO2, ID H1, IFNA5, IRAK1, JAM3, NCK2, NCOA4, NFYC, NOS3, OR10P1, OR2A25, OR2M 4, OR2T6, OR51A4, OR51B6, OR6C2, OR8B12, ORC3L, PDE4B, PIGU, PIK3CB, POLR3G, PPAP2B, PPAR, PVRL3, REL, RFX5, SDC1, SDC4, SFRP5, SHC1, SH ISA5, SPRED2, SQLE, STAM, SULT2A1, SUOX, TUBB2B, VEGFB, VEGFC, VT11A , YES1, SERPINF2
Negative_13483	BCR, CAT, CFI, EDA, LPO, UBB, AANAT, ACACA, AMDHD1, AVPR1A, BLNK, CDC1 4A, CLDN11, COMT, CREB3L2, DDX19A, DGKB, DHCR24, DTYMK, DUSP1, ERBB4 , FUT6, GADD45B, GNMT, IFNA14, IL2RG, INPP4A, KIR2DL4, LHCGR, LTA4H, MAP2K2, MAP3K1, NCR2, NRP1, NRXN3, NTN1, OR10H5, OR10T2, OR10V1, OR1 N1, OR2B6, OR51A2, OR52N2, OR5AR1, PIK3C3, PIP4K2B, PLCB2, POLR2G, P SME3, PTAFR, PVRL2, SIGLEC1, SPHK1, SUV39H2, TAS1R3, THBS1, TSC1, UG CG, YOD1, MAPKAPK5
Negative_13484	ADA, C7, CFH, DCN, IL3, ACO2, ACTB, ACYP1, ADCY4, AREG, B4GALT5, BCAR1 , BCAT1, BCL2, C4BPA, CACNA1D, CACNA1F, CD38, CDC6, CHKA, CLDN5, CNGA 4, CREB3L2, CRY1, CXCR3, CYP4F3, DLAT, DMGDH, GALNTL1, GNAZ, GNG13, G PD1L, HEXB, HMGCS2, HRH1, IL23R, IRF9, LRP5, MCEE, MGAT4B, MMP14, MTM R6, MYH3, MYLK3, NAT5, OLR1, OR10A5, OR10G8, OR2T12, OR2Y1, OR3A3, OR 4D11, OR4K15, OR8D1, OR8K3, PIAS4, PIGM, PIGU, PLCD4, POLD3, POLR2F, POLR2I, PTGER1, RBKS, SMAD5, SPTLC2, STK11, STMN1, TOLLIP, TRAF2, TR AF4, ULBP2, WNT9B, YWHAB, MAPKAPK3
Negative_13485	ADA, CFI, CGN, GSS, PGP, VCL, ABP1, AMDHD2, ANAPC1, APOA1, ARG2, ATP5L , BBC3, CACNB2, CARS, CD59, CDK6, CEBPA, CHPF, CLCF1, CSF2RB, CXCL3, C YP2J2, DEGS2, DHFR, DNMT3L, DTYMK, E2F1, EGFR, EIF4E, FABP1, FCGR3A, FGFR3, FZD3, FZD8, FZR1, GCAT, GNAQ, GNAZ, GNB3, GSTP1, GSTT1, GUCY1B 3, GUK1, HMGCS2, IDI2, IFNA17, IKBKE, ITGB3, LAMB2, LEFTY1, MARS, MTH FD1L, NAE1, NAT1, NCF4, NEU2, NKD2, NNMT, OCRL, OR10Q1, OR2A2, OR2W1, OR4F6, OR5J2, OR7C2, OR7G2, P4HA2, PHKA1, PIAS1, PLCB4, PLCZ1, POLR3 D, PPP1R3B, PRKAG1, PRODH, RPE65, SEMA3A, SMPD2, SNAI1, SOD1, SPRY2, SUCLG2, TBL1X, TLN1, TLR4, UGT2A1, UGT2B11, VANGL1, VCAM1, B4GALNT1 , MAPK8IP1, SERPINC1, SERPIND1, SUV420H2, TNFRSF1A

Negative_13486	C2, CKM, FGA, TK1, TKT, ACP1, ADH5, ALDH1A1, ALG6, ARPC5L, ASPA, ATP6V0B, BAI1, BCKDHB, CD36, CD44, CDC7, CDKN1C, CLCA4, COQ7, CXCL10, CXCL16, CYP3A5, CYP3A7, DAPK1, DBF4, DDX23, ENTPD1, ENTPD2, EPHA4, ETNK2, FPGT, GALNT10, GGT5, GNAL, GUCA1A, HAGH, HGSNAT, IFT57, IRS1, LDHB, LTB4R2, MAP3K3, METTL2B, MGAT5B, MYH8, NANP, NFYC, NNMT, OR1B1, OR2A E1, OR4C13, OR51Q1, OR5D14, OR8I2, OR9G1, OR9Q1, PDE4C, PGK2, PIGK, PIP4K2B, PLCB2, POLD1, POLR1D, PPARD, PPAT, PYCR1, ROBO2, RUNX1T1, SCP2, SDHB, SNAI1, ST3GAL6, TNFSF12, TUBB2C, TUBB6, UNC5B, WHSC1L1, ATP6V1G3
Negative_13487	EBP, GNS, GP9, MIF, MYC, ACO2, AGRN, ALDH5A1, ANAPC2, APLP1, BCAR1, C1QB, CACNG1, CAMKK2, CD79B, CREBBP, CXCL6, DGKG, DUSP4, DUSP6, ENPP6, ERBB4, FRAP1, FUT2, FUT8, GALNS, GFAP, GNG13, GSTM2, HSD11B1, HYAL1, IL18RAP, INPP4A, MAPK13, NKX3-1, OR10H1, OR2L3, OR2T2, OR52H1, OR5T3, OR6C74, PARS2, PPAT, PRKAR1B, SDHD, SETMAR, SMAD7, TACR1, TP53, TPI1, UGDH, WASF1, XYLT1
Negative_13488	AR, F7, NNT, NOG, PAH, SP1, ACO1, ALPP, ANGPTL4, ATG12, ATP5D, ATP6V0B, CDC27, CDH2, CDK5, CLDN22, CYP2C18, DAG1, DGKA, DRD5, DUSP8, FABP1, FGF20, FZD2, GMPR, GNB1, GRIA2, HDAC1, HIBADH, IL8RB, INPP1, IPMK, ITGAV, ITPK1, NPR1, OR4K14, OR56A3, OR5P2, OR6C6, OR7G2, PDGFRA, PHKB, POLE, PTPN11, PTPRF, PYCR2, RAD51, RARS, RPS6KB1, SETD1A, ST3GAL3, STAT4, TCF7L2, WARS2, CTNNBIP1, HLA-DQA2
Negative_13489	ABO, F3, SMO, SYK, TK1, AKT1, ALDH5A1, ARG1, ATP5J, BLVRA, BMP6, BPNT1, CAV1, CES1, CNTF, CXCR6, CYBB, CYP1B1, CYP2C18, DEGS2, DGKH, DOCK1, EPHX2, FABP3, FARSA, FGF11, FZR1, GAB1, GADD45B, GAS1, GNPDA2, GRIA3, GRIN1, HIBADH, HSD11B2, IFNA2, INHBA, IRS2, ITGA10, ITGA2, MICA, NAGK, NOTCH3, NUDT8, NUMBL, OR1L1, OR4C11, OR4C46, OR4K1, OR51B4, OR52N1, OR6T1, OR8B8, ORC3L, PARVB, PAX6, PIGW, PLA2G6, PLCZ1, PMVK, PPAP2B, PPP2R5D, PRKAA1, PRKAG2, PRSS2, RALBP1, RASA2, RENBP, ROCK2, RPN2, SETD8, SKP2, SMAD6, SRD5A1, SRD5A2, SSSX2IP, ST6GAL1, STX2, TCF7L1, TGFBR2, UPRT, VTI1A, WNT10A, PNLIPRP2, SERPINA1, SLC25A31, TNFRSF11A
Negative_13490	AK1, C5, FAH, GBA, KDR, MVD, PLG, PML, RDX, SMS, AMHR2, ARPC5, ASCC3, ATP2A1, ATP5D, ATP6V0B, B4GALT4, CADM1, CARD11, CD48, CDKN1C, CERK, FCGR2B, FGF10, FZD2, GP1BB, GSTA1, HPRT1, IL21R, IL8RB, ITGB3, LAMB1, LCAT, LRP6, MAML1, MYH11, MYH13, NEFM, OR10A3, OR13C4, OR2T11, OR4M1, OR51B5, OR52J3, OR5P3, OR8H1, PDXP, PISD, PITX2, POLA1, PPBP, PRKCG, PTPN5, RAD51, SESN3, SNAI1, SPRY2, SPTLC1, SSH1, STT3B, TJP3, TLR2, TM7SF2, TOLLIP, UGCGL1, XYLB, HLA-DPA1, ST6GALNAC5
Negative_13491	AK7, FES, TNF, ABLIM1, ACVR1, ACY1, ADCY6, ALS2, ARPC1A, ARPC3, BUB1, CACNG7, CCR10, CD19, CD244, CDC27, CHKB, CSNK1A1, CXCL5, DMGDH, EPB41L2, FPGS, GNMT, HRAS, IL11RA, IL12A, KAT2A, LAMB2, LHCGR, MCAT, MYH1, MYH15, NAT1, NEU2, NNMT, OR13C8, OR2K2, OR4A15, OR4C16, OR4L1, OR4Q3, OR5J2, OR5M3, OR7C2, PAK6, PIPOX, POLR3B, PRKAG1, RRAS2, SETDB2, SMC1B, SPRED2, TLR4, TXNDC12, UGCGL1, WNT1, PLA2G12B, TNFRSF18
Negative_13492	FER, GSN, LYN, ME1, RDX, ACP1, AGRP, AGXT, AKR1C2, ALDH2, ALDH7A1, ANGPTL4, APAF1, ARAF, ARSD, B3GALT5, CCL2, CCND1, CCR5, CDC20, CDH3, CDO1, CDS2, CER1, CERK, CLDN3, CNTF, CTNNA3, DEGS1, DHDH, DVL1, EPHB4, ER01L, FCGR3B, FOXA2, GAD2, GALNT10, HCCS, IFNA5, IL12B, IL17A, IL5RA, IMPDH1, INPP4B, ITGB5, ITPKA, KLRC1, KLRC2, MAGI1, MAP4K3, MYL9, NFKB1, NLGN3, NME2, NTN1, OR1G1, OR1L8, OR5K2, OR6N2, PARS2, PAX8, PDE7B, PFKL, PIAS3, PIGO, PLA2G10, PPA1, PPP2R5C, PRKCH, PTGDS, PTGER3, RASGRP4, SDHA, SEMA3G, SLC2A2, SPRED1, STEAP3, SUCLG2, TAS2R4, UPP1, WNT2B, HLA-DQB1, HSP90AB1, MAP3K7IP2

Negative_13493	AUH, DDO, FGB, KMO, SMS, ADH4, ALAD, APOC3, BMP7, CACNA1C, CAMK2D, CBL C, CCR6, CDK7, COL6A2, CSDA, CYP2C8, CYP4F3, DDIT3, DGKD, DUSP14, DUS P16, EPB41, EPHB2, EPRS, ERBB2, F13B, FGF5, GMPR2, GNAI3, GNPAT1, GS TO2, HRH1, HTR2C, IFNA10, IL12RB2, IL18, IL6R, INMT, INPP1, KLRC1, LA MB1, LIPG, LYPLA2, MAP3K8, MGAT1, MGAT5B, MIOX, MMP7, MPZL1, MTHFD1L , MTHFD2, NKX6-1, NPR2, OR10G4, OR10H4, OR10R2, OR12D3, OR1J1, OR2B11, OR2T12, OR4X 1, OR52H1, OR5D18, OR5L2, OR5M8, OR5R1, OR6K3, OR8D1, OSMR, PARD6B, P CNA, PDE8A, PDE8B, PIP4K2A, PIP5K1A, POLR1A, PRKCE, PRPS1, PTPMT1, S EMA4D, SUCLA2, TKTL1, TRIP10, UGCG, WASF3, ATP6V1C2
Negative_13494	A2M, JUP, LPO, RDX, ACP5, ACTN2, AHCYL2, ALG6, B3GNT4, BUB1B, CBLC, CC L28, CD46, CHAD, CISH, CNGA4, COQ6, CSNK2A2, CTLA4, CTSS, DAAM2, DGAT 1, DUSP10, DUSP14, EPHX2, ETNK2, FASN, FGF7, FM03, FTMT, GALM, GALNT1 0, GALNT6, GCLC, GMDS, GRAP2, GSTA5, HDAC2, HGSNAT, IFNAR1, IL10RA, I RF7, ITGA1, ITGB2, KIR2DL1, LLGL1, MCEE, MMP14, MYD88, NCAM2, NFKB1E , NME2, NOD1, NTF3, NTN1, OR10AG1, OR10K1, OR4F15, OR51G2, OR5H2, OR5 M8, OR7A17, OR8H3, ORC4L, PANK1, PARS2, PAX6, PCCA, PDE2A, PDK1, PDPK 1, PI4KB, PLXNA3, POLR1A, PRPS1, RALA, RAP1B, RELA, RRAS, SELL, SEMA3 E, SMAD1, SPCS1, SRGAP1, TPH2, TYMP, VCAM1, YWHAH, ATP6V0D2, PNLIPRP 1
Negative_13495	JUP, LAT, AARS2, ACTN4, ADH6, AGRN, ALDH1B1, ALG10B, AMY2B, APC2, ARN T2, ARPC1B, ARSB, ATG7, AVPR1B, C7orf16, CALML5, CANT1, CCL15, CLTCL 1, CMPK2, CSNK1E, DNMT3B, DTX4, EFN2, EVI1, EXTL3, FGD3, GGT1, GLB1, HSD11B1, HTR4, ITGA7, ITGAV, MAFA, MAGI1, MAP4K2, MDH1, MMP1, MYH3, N R1H3, OR10T2, OR2AE1, OR4N2, OXTR, P4HA3, PARD6G, PDGFA, PKLR, PRKAG 2, RAPGEF1, RBPJL, SARS2, SPTLC1, TAP2, TAS2R60, TNFSF18, WNT3, TNFR SF10A
Negative_13496	C8A, LAT, SHH, UBC, ABL1, ACACA, ACP5, ACSM2A, ACSS2, ACTA1, ACVR1B, A RPC5, BMPR1A, CACNG8, CAMKK2, CCKBR, CCR1, CDK7, CDKN2D, CLDN17, CTF 1, CTTN, CXCL1, DARS2, DTX4, FGF22, GAL3ST1, GCNT1, GLUL, GRIN2C, GSK 3B, HIF1A, IFNW1, IL1R2, IMPA1, JAG1, JAG2, JAM3, MAML3, MAPK3, MYH13 , NRCAM, NT5C2, OR14C36, OR1F1, OR51F1, OR7G2, OR8H2, PDE2A, PGM1, PI AS4, PIM1, PKMYT1, POLD3, POLR1C, POLR1D, PPP2R2B, PRKCA, PTAFR, RBX 1, SOS2, SPHK2, SULT1A2, SULT2A1, TJP1, TYMP, UGCGL2, CSGALNACT2
Negative_13497	DLD, PAH, PLG, ACTA1, ACTG2, ALPPL2, APOA5, ASPA, ATP12A, C1GALT1, CA CNA1A, CAV2, CCNA1, CD274, CD99, CHRM3, CMBL, CNGB1, CREB3L3, CSNK1G 2, CXCL6, DLAT, EFNA4, ERBB2, EXT2, GALNT6, GCNT3, GSTM3, GYS1, HIF1A , IFNG, IGF1R, IKBK, IL28A, LRDD, MAN1B1, MAP4K1, NADSYN1, NLGN2, OR 2V2, OR8J1, PPP1CB, SDHB, SEMA3A, SFRP4, SMAD5, TGFA, THBS4, UBE2K, U GT2A1, UGT2B10, VAMP4, VAV3, WASL, ATP6V1B2
Negative_13498	CDA, FAS, LHB, SMS, ACAD9, ACSM4, ACTN4, ADORA2A, ADORA2B, ASMT, AT1C , ATP2A1, CADM1, CCL5, CCNE1, CCR6, CD226, CD72, CHRM5, COL4A4, CTPS2 , CX3CL1, DGKE, DNMT1, DPYS, EFNA5, EGLN3, ELK1, EPHB4, FLAD1, GALNTL 1, GPX5, GSTT1, HSPB1, HTR6, ICOSLG, IFNA21, KIR2DS5, LAP3, LDHB, LYP LA2, MADCAM1, MDM4, MYH6, NCOR2, NUMBL, OR10V1, OR4D1, OR4F4, OR8J3, P2RX2, PAK3, PFN4, PGAM1, PHKA2, PIAS2, PKMYT1, PLA2G4A, POLA1, POLR 2D, PSEN2, RASA1, RASGRP4, SGPP2, SRGAP2, SRGAP3, THBS2, TNXB, TRAF5 , WNT9B



Negative_13499	AK1, CFH, CGN, CS, EGF, LIF, MVD, PGD, ACOT11, AKT1, APBB1, ATF2, ATP12A, ATP4A, ATP50, BCAR1, BIRC5, C1QA, CACNB4, CCNG2, CD8A, CDC16, CDS2, CNTN2, COL5A3, CSF2RA, CTSG, CYP3A5, DDX54, DEGS1, DGAT1, DGKH, DHX58, DKK2, DUSP8, EDA2R, EFNA1, ENTPD3, EPB41, EPB41L3, ESAM, FADD, FASLG, FRAT1, GALM, GPD2, GSTM5, GUCY2F, HA01, HPSE, HSD3B2, HTR6, IFNA6, IFNA7, IFNAR2, IL18R1, IL18RAP, IL22, IRF5, ITPK1, JAG1, LIMK2, MT FMT, MYL9, NCF1, NT5C2, OR10AD1, OR13H1, OR2G2, OR6B2, OR6F1, OR8B4, OR8K1, PDE5A, PDE6G, PLAU, PLEKHA8, POLD3, PON2, PPAP2C, PRKAG3, PTGER3, QPRT, RASGRP2, SARDH, SESN3, SNAP23, STAT4, TAS2R10, TGFB1, TRAF2, TSLP, TUBAL3, ULBP3, WIF1, WNT8B, CSGALNACT1, PPP1R12A
Negative_13500	AGK, CP, GK2, ID2, LYN, MSN, PC, ACY1, ADCY3, ADCY6, AKR1B10, ALPI, ARG1, ATG3, ATP6V0C, BCKDHB, C1QA, CCL19, CCL5, CCNB3, CCNH, CD40, CD55, COQ6, CPOX, CPT2, CRY1, CSNK1G3, CYP1B1, CYP2F1, DHRS3, ESPL1, FABP3, FGD3, GALNT2, GBGT1, GLDC, GNPAT1, GP1BB, GRIA3, GSTO1, HCCS, HDAC1, HLA-C, IARS, ICAM2, IL1A, ITGA4, ITGB3, JAK3, KDSR, LIPG, LLGL2, MYH14, NGEF, OR10S1, OR13C9, OR2C1, OR2G6, OR2L3, OR2M5, OR4A16, OR51L1, OR52E4, P2RX7, PANK2, PDE4D, PGS1, PIP4K2C, PLCD1, PMM1, PPP3R2, PRDX6, PRKCA, PVRL4, RASA2, RPS6KA3, SARS, STT3B, TAS2R3, TBXA2R, TUBB4, ZBTB16, ALDH18A1, ATP6V1E1, HLA-DPB1, HLA-DQB1, MAPKAPK2, SERPING1
Negative_13501	A2M, FER, MIF, PGD, SDS, TNN, ACY1, AGRN, AGXT, ALDH2, ALOX15B, CDH15, CDH5, CFLAR, CHAT, CREB1, CSDA, CSF1, DTX4, E2F1, EFN1, FGF11, FGF19, FLT1, FUT4, GALNS, GNAQ, GPAA1, HSD3B2, IL13RA2, INPPL1, ITGAM, LAMB4, LCMT1, LRAT, LRP6, LTBR, MAP4K4, NRP1, NT5E, OR2T11, ORC1L, PAK3, PDK1, PISD, PLCB1, PRKACA, RASA2, RPS6KA4, SELL, SEMA3C, SLC27A1, SRGAP3, SULT1A2, TFPI, TNFSF8, WASF1
Negative_13502	GP6, ID2, LAT, LCT, MAG, ME2, TPR, ACADVL, ACO1, ACP6, ALDH3B2, ATG12, ATP50, ATP6V1D, AXIN1, B4GALT5, BDH1, BMP6, C7orf16, CADM3, CAMK2D, CASP7, CCL28, CCR10, CD36, CHIT1, CNTF, CRY2, CXCL12, DDIT3, EARS2, ENPP1, FADS2, G6PC2, GALNT11, GALNT6, GALNT8, GANC, GART, GCH1, GGT5, GLB1, GSTM1, GYS1, HPSE2, IL12A, IL9R, ITGB6, LYPLA1, MAPK9, MMP2, NCF1, NME4, NUDT8, OR10A6, OR2AE1, OR2T33, OR4N5, OR51G2, OR52J3, OR5L1, OR8D1, OR8H1, PDE6G, PDGFD, PGK1, PHKA1, PLCB2, PMM2, PPARG, PRKCB, PROS1, PRSS3, PSME3, PTEN, PTPRJ, RCHY1, RPN1, SAT2, SDHB, SELPLG, SFRP4, SMAD7, SMAD9, SPHK2, STEAP3, STX7, TAS2R8, TBL1XR1, THBD, TJP2, TKTL2, WARS, WARS2, WASL, ATP6V1G2, HLA-DQA2
Negative_13503	NPY, ACTB, ADH1A, BAIAP2, BET1L, BRAF, CACNA1A, CASP9, CDKN2B, CD01, CDS2, CLCA4, COL5A3, CYBB, DDIT3, DRD5, ENPP6, ENTPD8, FBXW11, FGFR2, FIGF, FLT3, FOXA3, FZD2, FZR1, GALNS, GSTO1, HARS2, IFNGR2, INPPL1, KAT2A, KITLG, LRP5, MAP2K1, MYH4, NAMPT, NRCAM, NTN1, OR1N2, OR2M2, OR2S2, OR2T4, PDGFB, PI4KB, PIK3CG, PIK3R4, PRDX6, PROC, RAD51, RBL2, RCHY1, RPS6KA4, SELE, SEMA3C, SLC27A1, STAM2, SV2A, TALDO1, TGFB2, TICAM1, VEGFC, WNT6, SERPINF2
Negative_13504	BCR, CGN, DUT, F9, FYN, GK2, MSN, RFK, SYK, ACACB, ACSM1, ADRB3, ALCAM, APOE, BMP2, CACNA1F, CCR4, CD247, CDKN2C, CERK, COASY, COL4A4, COMT, COX15, CREB3L2, CTBP2, CYP8B1, DGUOK, DMGDH, ENPP2, FASLG, FZD4, GALM, GAPDH, GPT2, HCLS1, IFNW1, IL12B, IL2RA, MAP3K11, MTAP, MTHFS, NCO R2, NODAL, OLAH, OR1A2, OR1L8, OR2D2, OR2M5, OR4A5, OR5D16, OR8B4, PAX4, PDPK1, PIGX, PIP5K1B, PNPO, POLD1, PPP2R5E, PSEN2, PSME2, RAPGEF4, RPRM, SCLY, SLC2A4, SMAD9, SPRY3, SSH3, TAS2R40, TBL1X, TIRAP, TJP3, TUBA4A, UGDH, VANGL1, WARS2, WASF1, ATP6V1G1

Negative_13505	A2M, AK1, AK3, VTN, AANAT, ABAT, ABLIM1, ACTN2, ADIPOQ, ANGPTL4, ARD1A, BMP6, BRAF, CACNG3, CBLC, CCR7, CDC26, CHRM2, CLTB, CNTNAP2, CXXC4, CYP11A1, DUSP9, EFN3, ENO2, ENTPD8, FOSL1, G6PC2, GADD45A, GALNT1, GNA12, GNB3, GSTA2, GUCA1B, HYAL1, IGF1, INMT, IRF7, ITGB7, MCM4, NRP2, OR3A3, OR4A16, P2RX4, PAK4, PDE6H, PIGH, PLCB2, POLE4, PPP3CC, PP3R1, PVRL1, RALB, SETDB2, SLIT1, SMURF2, SNW1, SOCS4, SPTLC1, STX16, TAS2R49, THBS4, TLN1, TNFRSF8, TRAF3, UBE2K, UNC5C, UPP1, WNT6, MAPKAPK3, PHOSPHO1, PNLIPRP2, TNFRSF1B
Negative_13506	BTC, DCC, F2R, ACPT, ACSL4, ACSM3, AGPAT6, AMDHD2, CACNA1F, CAV1, CDC25C, CDKN2A, CLCF1, CNGA3, DUSP5, DVL2, FZR1, GADD45B, GBE1, HADHB, LTBP1, MTFMT, NCOA4, NEGR1, NUDT9, OR2H1, OR4C16, OR4D9, OR51I2, OR5A1, OR5AU1, PDCD1, PDE10A, PIAS1, PIGC, PKMYT1, PNLIP, POLD1, PRIM1, PTPN7, RIPK1, SRD5A1, THTPA, TRAF4, TSLP, TUBA3C, UGCGL2, UGT2A3, XYLB, HSP90AB1, SERPING1, TNFSF13B
Negative_13507	ABO, F9, GCK, GLA, PVR, SYK, ABI2, ACOX2, ADH7, AFMID, ALPP, AMDHD2, ARPC3, ATP50, B3GAT2, C3orf10, CACNG6, CALML3, CCR8, CD244, CDC42, CDKN2C, CD01, CHRM2, DUSP8, FCGR3A, FMO4, FUT4, GALNS, GAMT, GNA13, GNRH2, HPSE, HTR2A, HTR6, IDH2, IFNA4, IRF3, ITGA3, LIPC, MAP3K7, MTHFD1, NADK, NQO1, OR10G7, OR10K1, OR10P1, OR14A16, OR4D9, OR5F1, OR6T1, PAK1, PGAM1, PIGV, PMM2, POLR2E, PRKAG3, RASA2, RDH16, SGPP1, SKIV2L2, SLC9A1, SOCS2, SPHK2, STX12, TAS2R50, TRMT11, VAMP4, WNT3A, XYLT1, ATP6V0E1, CACNA2D4, PDCD1LG2
Negative_13508	ASL, BID, CDA, CR1, IL2, ME1, TH, AKR1A1, ALAD, ARPC1B, ATP5H, BMPR1A, C3AR1, CACNA1B, CCL2, CFTR, CLDN2, COQ7, CRLF2, CUL1, CYBA, CYP17A1, CYP4A11, DLL3, DTX1, DUSP9, EFN2, EREG, FGF19, FLT1, FOXO3, GLUL, GPD1, GRAP2, HDAC2, HPSE2, IL12A, INPP5E, IRF7, ITGA3, ITGB2, ITGB6, KLRC3, KNG1, LEF1, LIPG, MAFA, MAGI2, MASP2, MAT1A, MYH9, NANS, NFKB2, NRP1, NTSR1, OR2T4, OR4K1, OR4X1, OR5K1, OR5K2, OR7A10, OR8D1, PARVA, PIGK, PLXNB3, POLD3, POLR2D, POLR3D, PVRL2, RARA, RHOD, SDC3, SELE, SETD2, SLC2A1, SLIT2, SMC1A, STAT4, STX4, TLR4, TNFRSF4, UGT1A10, VTI1A, WARS, XYLT1, YKT6, CACNA2D1, HLA-DPB1, HLA-DQB1, HLA-DRB3, SERPINA1, SUV420H2
Negative_13509	C8A, KHK, KIT, NOG, SP1, ABL2, AKR1B1, ALDH6A1, ARNT, ATP5C1, AXIN2, BCKDHB, BUB3, CACNA1A, CDC14B, CXCL12, CYP26A1, CYP2D6, CYSLTR2, DIAH2, DKK2, EDNRB, FBXW11, FGF18, FGFR2, GALNTL5, GDF7, HNF4G, HTRA2, IFIH1, ITGB3, LIMK1, MAP3K14, OR1D2, OR52J3, OR5R1, OR7G3, OR8A1, OR8K1, OR9Q2, POLR1A, POLR2A, PTPRJ, RASGRP3, RPS6KA3, SCP2, SGMS1, STX4, SUV39H1, UGT1A10, WNT3A, ZMAT3
Negative_13510	GPI, ITK, MAG, RFK, AKR1B1, ANAPC5, ARD1A, ARSD, ASMT, B3GNT3, CACNG8, CASP9, CHRM3, CLDN16, CREB1, CXCL2, CXCR6, DLAT, EPHB4, EPRS, FGF14, FGF6, FMO2, GAL3ST1, GBA3, GCNT1, GGT7, GLI3, GUCA1A, HSD17B2, IRF3, ITGB5, ITPKA, KAT2B, KLRC1, KNG1, LIPG, MYL7, NAGK, NEFH, NEFM, NME7, OR10AD1, OR1K1, OR2A42, OR3A2, OR51B2, OR56B4, OR5T2, OR6C6, OR6K6, OR8H3, PCYT1B, PDE6D, PHKA1, PIGH, PIGN, POLR2G, PRPS1, PRSS1, PTDS2, PTPMT1, RARA, RELA, RPS6KA1, RXRG, SEMA3B, SH2D1A, SKP1, SMAD5, STX18, TBL1XR1, TFPI, TGFB2, TGFB2, THBD, THBS1, TRPM5, UGCGL2, VAMP3, VASP, VEGFC, WBSR17, WNT10A, WNT5B, YWHAG, ZIC2, MAPKAPK2
Negative_13511	LTB, ACOT11, ACSM2A, AHCYL1, ALG9, ARHGEF6, ATP5E, B3GALT2, BMPR1B, BUB1B, CACNA1E, CAV2, CCKAR, CCR4, CDH4, CISH, CLDN8, COL5A2, CXCL3, CYP2B6, DARS2, DHCR24, FTMT, GAPDH, GLUL, GRIN1, GSTM1, IL20RA, IMPA2, IQGAP3, JAK3, JAM2, LAMB1, LDHC, LIFR, MAP3K4, NKX6-1, NTRK1, OLR1, OR1G1, OR1L1, OR51A7, OR52W1, OR5C1, OR8K3, PARD6B, PIGP, PIK3CA, PPCS, PTK2, RDH16, SESN3, SETD1A, SETDB2, SKP2, SPTLC2, STX8, TP53, TRAF1, WBSR17, HLA-DQA2, PHOSPHO1, SERPIND1

Negative_13512	CFI, NPY, AGRN, ALS2, APOA5, ARD1A, ARHGEF7, ASRGL1, CHRM3, CTSG, CYB A, DPM1, DVL2, F2RL2, FARSA, FLT3, FZD2, HIBCH, HIP1, IFNG, IL12B, INP P4A, INSR, IRAK2, LCMT2, MEF2C, MGLL, OR2B2, OR2L13, OR4S2, OR4X2, O R5AU1, OR5H2, PDE6H, PERP, PLCB1, POLR2E, PPAP2A, PRKAR1B, PRKY, PRO S1, RPE65, RPIA, RXRG, SGMS1, SNW1, SOS1, TAS1R1, TJP1, UAP1, UGCGL1, HLA-DRB4
Negative_13513	IL8, ACTB, ADH5, AKR1C2, ALDH4A1, APH1A, ARHGEF4, ATP5E, ATP5J2, CAS P9, CBR1, CCL7, CD36, CD59, CD72, CISH, CNTFR, CPT1A, CTLA4, CXCR5, CY P3A4, DEGS2, E2F4, F2RL1, FADS2, FCGR3A, FGF19, FUT3, FUT4, FZD10, GA DD45G, GALK2, GLG1, GSTM5, HAO2, HAP1, HMOX2, HTR2C, IGF1R, IL28RA, I NHBE, KLRC4, LRRC4C, METTL6, MTMR2, NCOR1, OR10AD1, OR1A1, OR2AG1, O R4C13, OR4K14, OR52I2, OR5D14, OR5L2, OR5V1, OR6Q1, OR8U1, OXTR, PDX P, PGM1, PIAS2, PIK3R5, PLA2G4A, POLR2H, PRKAG1, PRKG1, RXRG, STMN1, STX10, SUCLG2, TAS2R60, THBS4, TICAM2, UROD, VEGFB, WHSC1L1
Negative_13514	CBL, IL7, ACADS, ACTG1, ADCY9, APH1A, ASRGL1, BMPR2, CCL14, CCL4, CD4 0, CDC27, CLDN5, COL3A1, CTSB, CYP2C9, DCTN1, ERBB4, FGF1, FGF19, FGF 23, GALK2, GALNT12, GALNT6, GALNTL4, GGT6, GUCY1A3, IFNA17, IFNA21, IL20RB, ITGB8, MAP4K2, NAT1, NEU4, NKX2-2, NRG1, NT5E, OR11G2, OR9A4, PDE4D, PHPT1, PLA2G2E, PLXNA2, PNMT, PR ODH2, PTPN11, PTPRC, RALGDS, RAP1B, SLC25A5, STK11, TLR5, TNFSF10, T SLP, WBCSCR22, PLA2G12B, SERPINA1
Negative_13515	ADA, AK2, NPL, PLN, ABI2, ACO2, ANAPC1, CCNH, CLTB, COL1A1, COL1A2, CR EB3L3, CRKL, CRLS1, CTNNA1, CYP2C9, DHCR24, EFN1, GALK1, GMDS, GNAO 1, GPD2, GSTA1, GUCA1B, HPRT1, KIR2DL4, KIR2DS4, LIPG, MASP1, MNX1, M YLK3, NEUROG3, NKX2-2, OR13C4, OR2G2, OR4K14, OR51B2, OR5H2, ORC5L, PGM1, PGM3, PIGV, PLE KHA8, PPAT, PPP2R5C, PRKCZ, SAT2, SLC9A1, SMARCA2, STAM, TAS2R49, TK TL1, VAMP1, VDAC2, WBCSCR22, ZFYVE16, CACNA2D4, MAPKAPK2, SERPINC1
Negative_13516	ASL, GHR, HYI, TK2, ACP1, ALG8, ARRB2, ATG12, ATP5L, ATP6V0C, CACNA1G , CCR5, CD22, CLDN15, COL4A6, CREB3L1, CXCL5, DNMT3L, EFNA5, ENAH, EP HA7, FZD8, GABARAP, GIT1, GNAI3, GOT1, HAGHL, IFNAR1, ITPKB, LIMK2, M AD2L1, MAPT, MCM6, NNMT, OR1K1, OR2T8, OR2V2, OR5AC2, OR8D4, OR8J1, P IK3R2, PLA2G5, POLE2, PRKCQ, PSENEN, PTGS2, RCHY1, RDH11, RND1, SEMA 3D, SGPP2, SUCLG2, SULT2B1, SYNJ2, TYMP, UBE2L3, XCL1, CACNA2D3, ST6 GALNAC4
Negative_13517	C8A, CR2, HK2, TFG, AOX1, ARPC2, CD36, CD55, CDC14A, CDC16, CES7, CHRN A7, CLDN2, CLDN4, CNTNAP1, CYP2C18, DRD1, EPHA4, EPHB1, FGF13, FRAT1 , FUT1, GALNTL4, LCAT, MAPK1, MCM3, MGAT4A, NCK1, NPR1, OR13C9, OR2H1 , OR52N4, OR5T1, OR6K2, OR9K2, PDGFA, POLR1A, PPP2R2B, PRPH, PTCH1, R BPJL, SLC2A2, SMURF1, SOCS1, SRD5A2, STAT1, TAS2R48, TNXB, TUBB, VAV 1, WHSC1
Negative_13518	APP, F9, ITK, LPO, LTB, ACSL3, ACTA2, AKT1, ALDH7A1, AREG, ASS1, ATP6V 1H, CDC20, CERK, CISH, CKMT2, CREB1, DGKI, DLL3, DTYMK, EPHA6, ERO1L, FUT9, GGPS1, GYS1, GZMA, IFNA13, IFNA8, IL28B, JAK1, MCEE, MCM3, MFNG , OR2B2, OR2H2, OR4D6, OR4F4, OR8A1, PAK7, PIP4K2B, PPP2R2B, PRIM1, P TPN7, RBPJ, SETD1B, SFRP4, SH2D1A, STMN1, TGDS, THY1, TLR5, TRAF6, MA PK8IP3

Negative_13519	AGK, BAX, MET, PC, TPR, ACO1, ADH4, AKR1B10, AKT2, ALOX12, ARHGEF6, ARSE, ATP5G3, B3GALT2, BMP5, CADM3, CDC20, CDK7, CHSY1, CLDN16, CTLA4, DDX18, DHDDS, DHX58, DPM1, DPM2, EPOR, FBXW11, FGD3, FGFR1, FTH1, GARS, GMPS, GRIA3, GSK3B, GSTM4, GUCY1A2, IARS2, IDH3B, IL13RA1, IL23R, IL24, IMPA2, JAK2, LTB4R2, MAP2K1, MYH2, NEFH, NOS1, NR1D1, NRG2, OR2A2, OR2M4, OR4K5, OR4N5, OR51A4, OR51I1, OR52K2, PAPSS2, PARD6A, PDE4C, PDGFRA, PFN2, PHKB, PIGS, PIP5K3, PLCB2, POLR1B, POLR2E, PON2, PPARD, PPCDC, PPM1A, PPP2R5E, PSME3, RFNG, RHEB, RPRM, SLC25A4, SLC2A1, SSH1, TBL1Y, UGT2B17, VTI1B, PRICKLE1, SERPIND1
Negative_13520	A2M, BAX, C9, DCN, GP5, OGT, PGF, RB1, XDH, ACSM2A, ANGPTL4, APBB1, APLP1, ATP5J, BPNT1, CAMK2A, CCL15, CCL17, CCR10, CDC42, CDH5, CDKN2D, COL1A2, CREB3L4, CTPS, CXCR3, CYP17A1, DPYS, EHMT2, FADD, FARSB, FGF12, FGF20, FZD1, GNB1, GRIN2C, HAP1, ICOSLG, IFIH1, IKBKG, IL17RA, IQGAP1, ITPKA, MTHFD1, NAGLU, NFKBIE, NTF4, ODC1, OR11H1, OR2L2, OR2T33, OR3A2, OR4N5, OR52H1, OR52K2, OR6C70, PDE1B, PLCD4, PLXNA1, PLXNB2, PPP2R5D, RARS, SEMA3C, SGMS2, SKP2, SOCS3, SRGAP1, SULT1E1, TKTL2, TLN2, YARS2, TNFRSF6B
Negative_13521	AK1, BTD, FGB, GP9, MET, ACAD8, ACVR2A, ADCY5, APPL1, CAV2, CBR1, CDKN1B, CHST11, CLDN18, COL6A2, CREB3L4, CXCL5, CYP3A5, CYP4F3, DDOST, DHRS4, F13B, FGF17, GAD2, GBE1, HAAO, IGF1R, IL10RB, IL12B, ITGA9, LIP1, LTB4R2, MARS, NAT5, NOTCH2, OR10Z1, OR1E2, OR1S2, OR2AT4, P4HA2, PIP4K2C, PKMYT1, PLA2G2A, PLOD1, PRKCG, RFWD2, RPS6KA2, RRM2B, SEMA4F, SESN3, SETDB1, SLC27A1, SOCS3, SPRY2, STAM2, SV2A, TRAF3, TUBA1C, UGP2, ATP6V1G1, PAFAH1B3, TNFRSF10B
Negative_13522	ADK, C3, CFH, CGN, DCC, F9, FGA, GLS, HK1, ILK, LCT, OSM, ABLIM1, ACADM, ACADSB, ADRB3, AGRN, AGXT, ALPL, ARHGAP5, B3GALT6, B3GNT3, B3GNT4, CACNA1G, CACNA1H, CACNG7, CCL11, CD22, CDC6, CDKN2D, CNGA4, CPT1C, CSNK1E, CXXC4, DHRS4L2, DIAPH1, DRD1, DUSP1, E2F5, EDNRA, ENTPD7, FIGF, FOSL1, FOXA3, FZD8, GAMT, GANC, GOT2, GUCA1C, HMGCR, HSD17B2, HSD17B8, IFNA17, IL17A, IL17RB, IL8RB, IPMK, KCNB1, KIR2DL4, MAP4K2, MDH1, MDH2, MTHFS, OR13G1, OR1S2, OR2H2, OR52H1, P2RX3, PHKA2, PIGC, POLR3B, PRKAR1A, PRKG2, PTEN, PTPRB, PVRL1, RRM1, RXRA, SEMA4F, SETD2, SPAM1, SUV39H1, TNFSF4, TRPC1, HLA-DPB1, PAFAH1B3
Negative_13523	MIF, ACSL4, AK3L1, ALPL, AMHR2, ATN1, BDKRB2, CASK, CASP10, CCNA2, CD74, CDC25A, CER1, CFTR, CLDN22, CYP1A1, CYP26C1, DAG1, DUSP10, EPB41, GLI2, GRIN2C, GRLF1, GSTM4, HLA-F, IFNA21, IL20RA, IL2RA, JUND, LAMA3, LLGL2, MNX1, NCR3, NEU2, NME2, NTSR1, OR52L1, P2RX4, PDE1C, PHPT1, PLCB1, PPCS, PRKCA, PTAFR, PTEN, PTGIS, PTPN7, QARS, RPN1, RRM2B, RUVBL1, SGPP1, SLC33A1, SLC9A1, SORD, STK36, TAP1, TAS2R4, TAS2R8, TNFSF12, VASP, VAV1, WIF1, CACNA2D1, PAFAH1B1
Negative_13524	AMT, F7, HK1, SP1, ABLIM2, ADH5, ADH7, AGMAT, BUB1B, C7orf16, CAMKK2, CASP7, CCL23, CD47, CLDN9, CLOCK, CPT1B, CRB3, CXCL1, CYP11B1, DLL3, DNMT1, EFNA2, ENTPD5, EPHA1, ETNK1, GMDS, GPD2, GUCY1A2, HNF1B, INHBA, IRS1, ITGAL, JAK1, KDSR, KRAS, LYPLA2, MGLL, MYH4, NFYB, NUDT5, OR10K2, OR2L8, OR4F17, OR51B2, OR6N2, OR6S1, OSMR, P2RX5, P4HA3, PAPSS1, PFKFB2, PIP4K2A, POLR2C, PPM1A, PPP2R2A, PPP2R5E, PPP3R1, PRKAA1, PRKACA, PRKAG2, PTDSS1, PVRL3, RASA2, RBKS, RBPJ, ROBO3, SCLY, SENP2, SMPD4, SPP1, ST8SIA5, STAT3, THBD, THBS1, TLR4, TYMP, UGCGL2, UPRT, YARS2, GABARAPL1, SERPINE1

Negative_13525	APP, HAL, JUP, ACSS3, ALDH3A2, AOX1, ARHGEF7, ASAH1, ASMT, ATP5G1, BD KRB2, BMPR2, CACNG3, COX15, CXCL5, CYP1A2, DEGS2, DHRS4L2, DNMT3L, D OT1L, DPYD, E2F1, EGLN1, ENPP7, FCGR3A, GAL3ST1, GOSR2, HEMK1, HSD17 B8, ICAM3, IL20, INHBA, ITGA5, KCNQ1, KLRC3, LYPLA2, MAP3K12, MARS2, MDH1, MYL5, NADSYN1, NCAM1, NEU2, NOS1, NOTCH2, OR11H6, OR14I1, OR1J 1, OR1L4, OR2D3, OR4B1, OR4M2, OR6A2, PAX6, PIGC, PLXNA1, PLXNA3, PPA P2A, PRKAG1, PVRL3, QARS, RPSA, SARDH, SC5DL, SDHB, SESN3, SETD1B, ST 8SIA5, SUV39H2, UROS, VAMP2, VAV3, ATP6V0E1, CSGALNACT1, HLA-DQA2
Negative_13526	CD2, DBI, DCT, GNS, GP5, GSR, KDR, SFN, TK1, TKT, TNN, ABCC8, ALDH1L1, A LOX15, AQP7, ATIC, ATP5C1, B4GALT4, C7orf16, CCR9, CDC14B, CHRNA7, C HSY1, CTBS, CYP2U1, CYP7A1, DGKI, EFNA2, ENTPD3, EPHA6, EXOC7, FZD8, GLO1, GNAZ, HSD3B7, IL8RA, ITGAL, ITGAV, JAM2, LTBR, MAP4K1, METTL2B , MTAP, MYL9, NARS, NKX3-1, OR1J2, OR52W1, OR5A1, OR8B8, P4HA3, PCCA, PGM1, PLA1A, PLA2G10, PO LR3H, PPM1B, PRIM2, QARS, RALBP1, RASSF5, SH2D1A, SMAD4, THY1, TNFRS F9, TP73, TPK1, TRDMT1, VNN1, ATP6V1G3, HSP90AA1, SERPINE1
Negative_13527	F9, LCT, ACTB, ADSSL1, AKR1C2, ARHGEF2, BACE2, BMP7, BPNT1, CD86, CHS Y1, CMPK2, CSAD, CTBP1, CYP11A1, DAAM2, DARS2, DERL1, EXTL1, GLG1, GL I3, GRIN2B, HADHA, HAO2, HDAC2, IFNA4, ITPKB, LDHC, MAP3K3, NOS1, NSD 1, NTRK1, OR8D1, OR8U1, OR9A2, PAK6, PDE4B, PLA1A, PLA2G2A, PLXNB2, P RKG1, PRPH2, PTK2, RAC1, RFX5, RXRA, SYNJ1, TNXB, TYK2, TYRP1, WNT4, G ABARAPL1
Negative_13528	BTD, MYC, RET, XDH, ABLIM2, ACAD9, ADRA1A, AGPAT6, AGXT2, ALG1, ANAPC 11, APC2, B3GALT6, B3GAT1, BMP2, BPGM, CD55, CD72, CDC45L, CHAD, CHDH , CLDN18, CNGA4, CNTNAP2, CREBBP, CSNK1G2, DUSP6, EHMT1, ENAH, ENO2, ENO3, ENTPD5, EXTL2, GADD45A, GANAB, GCH1, GGT7, GLO1, GP1BA, GPX5, G STO2, HAP1, HNF4A, HSD17B7, HSD17B8, HSPA8, IDUA, IFNA10, IRAK2, ITG A9, ITGAL, LAMB2, LAMB4, LPAR1, MAP3K12, MASP2, NCR3, NFKBIA, NSDHL, OR10G9, OR10J1, OR12D3, OR2C3, OR4D5, OR51B2, OR51E2, OR51F2, OR51I 1, OR52B4, OR5T3, OR6B2, OR7C1, PCK2, PDE1C, PGK1, PHKB, PLA2G1B, PMV K, POLE4, PRPS2, PSME1, SAT2, SSH2, STAT4, STX10, STX16, SULT2A1, TBK 1, TUBA4A, UGT1A10, XYLT1, ATP6VOD2
Negative_13529	AGK, BAX, BTD, CD4, IDS, MSN, MVD, SPN, ABL2, ABLIM1, ALG10, ARPC2, ATI C, BUB1B, CADM3, CCL28, CCNB2, CD55, CDKN2B, CD01, CHAT, COL5A3, DUSP 5, EHHADH, ENTPD2, F11R, FGFR3, GALK1, GALNT10, GANC, GLUL, GOT2, GSK 3B, GTSE1, HNF4G, IGF1R, ITGA6, JAG2, KDSR, LAMB3, MAOB, MAP3K12, MAP 3K13, MAP3K2, MAPK11, MGST3, NEFM, NFKBIA, NTF3, ODC1, OR14I1, OR1N1 , OR2B2, OR2T29, OR4K1, OR4K15, PCCB, PDE2A, PFKP, PIAS2, PLA2G4A, PP P2R5C, PRKAB2, PTGES, SCIN, SEMA3C, STX10, STX5, TAP1, TAS1R1, THBS3 , TRIP10, TSHR, TSTA3, TUBA1C, YWHAQ, ZNRD1, TNFRSF10C, TNFRSF6B
Negative_13530	LSS, NF1, ACVR1, ALG1, AMHR2, ATG3, ATP6AP1, BPNT1, C3orf10, CCR1, CD 79B, CHAT, CLDN22, CYP2C19, CYP8B1, DAAM1, DFFA, EDNRA, EGLN3, EPHB6 , GDF6, GUCY1A3, HMOX1, INHBB, IRF9, JAK3, LARS2, LCAT, LCMT1, LYZL1, MDM2, MTHFD2, MYH7, NRG3, OR11L1, OR13C2, OR1J2, OR2T10, PAK4, PLTP, POLR2F, PRKAA2, PSPH, SAT2, SDC3, SKIV2L2, SOS2, STK36, TUBB2B, UGT2 B4, VARS, WNT10B, WNT2B, CACNA2D3, HLA-DRB4
Negative_13531	BTD, CDA, PC, ABLIM3, AKT1, ALDH1B1, ATP6VOC, BDKRB2, CDC2, CDH5, CHR M2, COL5A1, COX15, CTBS, CYP26B1, ENAH, EXOC7, FABP1, FOXA2, FRAT2, G ALNT1, GCLC, GOSR2, IL17B, KCNB1, LAMC3, LRP5, MAML2, MAP2K4, MARS2, MAT1A, MLLT4, NME4, NT5C, NT5C1B, OR14I1, OR4B1, OR4C13, OR6Q1, PDGF C, PON3, PORCN, PPAP2C, PPM1A, PPM1B, PPP1CC, PPP1R3A, PRKCB, PRKCH, PRODH2, PTPMT1, PVRL2, RASGRP3, SIGLEC1, SLC2A2, ST6GAL1, STAT3, TA S1R3, TAS2R13, TSC2, XIAP, ATP6VOD1, MAPKAPK3, TNFSF13B

Negative_13532	CFH, DLD, HAL, MUT, ACSM4, ADSL, AGXT, ALDH4A1, AMY2B, ATP5C1, CACNB3, CAV2, CD22, CLCA4, CRY1, CSDA, CTSS, CYP26B1, CYP2J2, DFFA, EFNA3, EPHA2, GYS2, GZMB, IL7R, IRF7, KDSR, KRAS, LAMC2, MAP3K6, MAPK1, MCAT, MDM4, MFNG, MICA, OR14I1, OR56A1, OXSM, PCYT2, PIK3C3, POLE4, POLR1C, PRIM2, PTK2, RPS6KB2, TGFB2, TGFB1, TSC1, WASF2, HLA-DRB3, SERPINB5, SUV420H2
Negative_13533	F5, LSS, NGF, TNC, ACTA1, ACY3, AKR1C3, ALDH3A1, ALOX12, ANAPC1, ATP5J2, AXIN2, BAIAP2, BLNK, CACNG7, CDH2, CES2, CMPK1, DOLPP1, FUT2, GNRHR, HLA-DRA, HRH1, IDH3G, ISYNA1, KIR3DL2, KLRC3, MAFA, MAP4K4, MAT2B, MCAT, MTHFR, NFKB2, NFKBIE, NRXN2, OR10H5, OR10X1, OR14I1, OR2T11, OR4K1, OR52W1, OR56A4, OR7G3, OSMR, PEMT, PLCB1, PLIN, PLXNB3, RARA, SARDH, SLC27A5, SMURF1, SREBF1, SULT1A4, TBK1, TNFSF8, UGCGL1
Negative_13534	ADA, ACVR2B, AKT3, ARPC5, ATP5L, BCMO1, CADM1, CCL19, CD58, CXCL5, CYP2A6, DAAM2, DTX3, EFN3, FGF12, FMO4, GLUD1, GLUD2, HMOX2, HSD11B2, ITPK1, LHCGR, LIMK2, LRAT, LRP6, LTBP1, MECR, MTHFD2, NCKAP1, NCKAP1L, NUDT2, NUMBL, OR2D2, OR2M7, OR2T12, OR5AN1, OR7G3, PDE1A, PER2, PLD2, POLR2A, PTPRF, RAPGEF4, RPS6KB1, RRM2, SDHB, SEMA4A, SHC3, SIPA1, SSH2, TAS2R50, TBK1, TUBA1C, WNT11, TNFRSF11B
Negative_13535	FGA, GBA, ITK, XDH, ZYX, ACO2, ADSS, ALDH9A1, AMPD2, ASAH1, ATP2A3, ATP4A, BDH1, CAPN2, CLTA, CLTCL1, CREB3L1, CRLF2, DAAM1, DGKH, E2F1, EIF4E2, FMO3, FTH1, FUT7, GALT, GPD2, HTR7, IFNA6, IRAK4, KIR2DL3, LDHA, LTB4R2, MAPK13, MINPP1, NTF4, OLR1, OR10J5, OR1M1, OR52B4, OR5B3, PFN2, PRDX6, PTAFR, PTGES2, PTPRJ, RASGRF2, SEMA3B, SPRED1, STT3B, TNFSF18, TYROBP, UCK2, UPRT, WNT3A, ATP6V0A1
Negative_13536	AUH, DHH, GK, IL8, LHB, MPI, MPL, ACVR2B, ALG8, ATP4B, BAI1, BLNK, BPGM, CAMK2A, CARS, CCR7, CD8B, CDC14A, CHIA, CHUK, CLDN1, CLDN3, COL3A1, CPOX, CRLS1, CXCL1, CYBB, DCTD, EARS2, ERBB2, FARSA, FZD8, GNG3, GNMT, GRIN2C, GYS2, IL10RA, IL8RB, INADL, INHBC, IPPK, IRF5, IRF9, MAP3K6, MCEE, MYLK2, NAT6, NCR2, NKD1, NMNAT3, OR10A2, OR11A1, OR4K14, OR51A2, OR52E4, OR52J3, OR5B17, OR6X1, PAK1, PDE4D, PGK2, PIGH, PLD1, PLOD2, PLXNB2, PPAT, PPCS, PPP1R1A, PRKY, RAPGEF3, RARS, RDH5, SLC2A1, SPHK2, SULT1A2, SULT2A1, TUBA3E, UROD, USE1, VTI1A, XYLT2
Negative_13537	C5, C9, CD2, CD6, FYN, HK3, MAG, PGD, PGF, SRM, AACS, ABLIM1, ACADL, ACVRL1, AGPAT6, ALDH1A1, ALG11, ALPL, APOA1, B4GALT1, BCAT2, BST1, CACNA1B, CACNB1, CD70, CDC20, CDC6, CHRM3, CLDN2, CLDN20, COQ7, CRY1, CSNK2A1, CYP1A1, CYP26B1, CYP7A1, DAAM2, DUSP1, DUSP4, ERBB4, FTH1, FUT6, GALNT5, GAMT, GANC, GMPR2, GNB1, GRIA3, GUK1, HEMK1, HIP1, IL2RA, LARS2, LCAT, LCMT2, LLGL2, MALT1, MAP3K12, MAPK9, NCK2, NNMT, NT5C1A, OR13D1, OR1E1, OR2A14, OR2T33, OR4S2, OR52A1, OR5AU1, OR7D2, PDE1C, PIK3C2A, PIK3CD, POLR3K, PRNP, PTDSS2, PYGL, RALGDS, RAPGEF2, SEMA3B, SESN3, SKIV2L2, SLC27A4, SSH2, ST8SIA1, STAM, TCF7L2, TLR5, TNFSF11, ULK2, UNC5B, WHSC1L1, WWP1, ZFYVE9, B3GALNT1
Negative_13538	APP, C8A, C8B, DDC, FGA, GBA, HK3, ACY1, ALG2, APAF1, ARNT, BACE1, CACNG3, CASP6, CCKBR, CCL20, CD226, CD44, CDKN1B, CES2, CLCA4, CLTC, COL4A1, COMT, COX10, CSF1, CSNK1D, CTNNA3, CYP3A43, CYP3A5, DHX58, EPB41L3, EPHA7, ERBB3, FABP3, FGF21, GAPDH, GBE1, GNAS, GNG3, HA01, HSD17B7, HSD3B1, IL17RA, IL4R, IMPA2, INPP5B, KIR2DL4, LRP6, LTBR, MYH7B, NFAT5, NMNAT2, NPR2, NSD1, NSDHL, OGDH, OR1E1, OR4A5, OR52W1, OR5B3, OR6A2, OR8B8, PDE8B, PDGFRA, PGAP1, PGK1, POLR2H, PPA1, PPT1, ROBO3, SRGAP3, SV2B, TAS2R10, TBL1X, TFDP1, TGFB2, TRDMT1, TUBA1C, UGT8, WARS2, WNT10A, WNT16, WNT6

Negative_13539	AMH, C7, DUT, NPY, A4GALT, ACSM4, AHCYL2, ALG10, ARG2, BMP2, CACNA1C, CD3E, CD46, CD79A, CDC2, CDC45L, COL11A1, COL6A2, CREB3L3, CTTN, CYP7A1, CYP8B1, DLL4, DPM2, EIF4E, ENTPD6, GALC, GALNT9, GDF7, GLI1, H6PD, HSD11B1, KARS, KIR2DL1, KIR2DS4, LAMC2, LTBP1, LTBR, MAPK7, MAT2B, MFNG, NT5C3, NT5E, OLR1, OR10A5, OR1L8, OR2W1, OR4F6, OR51E2, P2RX5, PIAS4, PIK3R4, PLXNB2, PPBP, RALBP1, RAPGEF3, RETSAT, SOCS1, STMN1, TGFA, TJP1, TRAF3, UPRT, WBSCR22, PAFAH1B2, TNFRSF11B
Negative_13540	AGL, AR, BID, C4B, FAS, HK3, TNC, TNF, ACACA, ACY3, ADH1A, ALAS1, AOX1, ATP6V1D, CCNA2, CD74, CNTNAP1, CREB3L2, CRLS1, CTNND1, DHRS9, EREG, FBXW11, FGF2, FTH1, FTMT, GAD2, GNG3, GPLD1, GSTA1, H6PD, HES1, HSD17B4, ICAM2, IFNA17, LIPA, MLLT4, NADSYN1, NFKB2, NFX1, OR13D1, OR2T10, OR4C6, OR4F4, OR5AK2, OR5R1, OR6X1, OR9G1, ORC4L, OSMR, PDE7B, PHKB, PIGA, PIGL, PIGP, PIP5K1A, PLA2G2A, PNPT1, POLE3, PON3, PORCN, PRKAR2A, PVRL3, RARA, ROBO3, RPS6, SLC27A5, SOS2, SPRY4, ST3GAL5, STAT5A, STX7, TAS2R40, TAS2R42, TRADD, WASF1, WASF2, WNT6, ZFYVE16, MAP3K7IP2
Negative_13541	DBH, F9, GH2, ILK, LPL, ACVR1C, ADCY5, B3GAT3, BAAT, BIRC5, CD22, CDKN2C, CES1, COL4A4, CTF1, E2F3, ENPP6, EVI1, FADD, GCNT1, GJD2, GRIN2B, GZMA, IGF1, IL18R1, MPDZ, MPP5, NFYC, NMNAT2, OR13C4, OR2AE1, OR4F5, OR51I1, OR5AN1, OR5V1, OR8B8, PAK2, PLA1A, PLCE1, PMM1, POLR2C, PRKG2, PTGER3, PTGIS, PVRL3, PVRL4, PYCR2, SESN1, SMPD2, ST3GAL6, SULT1A2, THY1, TNFSF18, ULBP3, WNT8B
Negative_13542	AGK, ATM, AUH, CD2, DCN, MPL, ACSM4, ARPC4, ARSD, B3GAT1, BDKRB2, CACNA1A, CBLB, CBLC, CCNA2, CD247, CDC23, CHRM3, CPS1, CSNK1D, DDX19A, DD4, F11R, F2RL3, FARS2, FGFR4, FOXO3, FZD10, GCNT2, GGT5, GNA14, HES1, HRH1, HSP90B1, IDH1, IMPDH2, INMT, ITGA6, LTBP1, MAT1A, NRXN1, NT5C3, NTN1, OR10G2, OR1I1, OR2AG2, OR6C74, PANK3, PIGF, PIGO, PNPLA4, POLR2C, PPP3R2, PRLR, PTPN6, RPIA, SAT1, SH2D1B, SLC12A2, SLC25A5, SMA D9, SMPD3, SRGAP1, TDO2, TNFRSF4, TSC2, XYLT1, ST6GALNAC6
Negative_13543	DBH, FER, HAL, HGF, HK2, LCK, LYN, MAX, PDC, ACAD9, ACLY, ADCY6, ARG2, ARRB1, ATP5F1, BDNF, BIRC5, CALML3, CCDC6, CCL20, CCNB3, CD274, CD40, CHDH, COL1A2, CXCL2, DKK1, DRD1, ENPP2, EPB41L1, EPHA6, FGF13, FZD7, GALNT12, GGT7, GJD2, GLS2, GNB1, GOT1, GP1BA, HSPA2, IBSP, IRAK2, ITGA4, ITGB6, LIMK2, MAPK11, NARS, NPR1, NT5C, NTSR1, OR10H1, OR1A1, OR1S2, OR2D3, OR2L13, OR2S2, OR6C4, ORC1L, P2RX4, P2RX5, PANK2, PARVB, PDE4A, PHKG1, PLCB4, PPID, PPOX, PRKCD, RUNX1, SNW1, ST3GAL2, STX1A, STX2, STX7, TAS1R2, TAS2R4, TCF7, THTPA, TPI1, TRMT11, TUBB2B, VAV1, PHOSPHO1
Negative_13544	AGK, CFD, CFI, DCC, GGH, LIF, MIF, SPN, ACADVL, ACOX3, ALDH1B1, APPL1, ASIP, CADM1, CADM3, CASP7, CD36, CDC7, CDH1, CLDN10, CREBBP, CXCL3, DGKH, DGUOK, DMGDH, ERO1L, F2RL2, GAPDH, GLI3, GNAL, HDAC2, HSP90B1, IDH3A, IL18R1, IL22RA1, IL7R, INPP5B, IQGAP3, ITGB8, KIR2DL4, L1CAM, LARS2, MAP4K3, MAPK10, MGAT2, MGST2, MTHFS, MYL5, NARS2, NCF1, NLGN1, NOS1, NRG4, OR14C36, OR51A4, OR51E2, OR5P3, OR5R1, OR8H3, PLK1, PLOD3, PLXNA1, POLR2H, PPAP2C, PPP1R1A, PYCR2, RDH10, RRM2, RXRA, SEMA3F, SETD8, SMAD5, SNAP23, SPAM1, SPTLC1, STK3, SULT1E1, SULT2B1, SUOX, TAP1, TLR5, TOMM40, TRADD, TUBA8, WHSC1, WNT2, XCL1, SUV420H2, TNFRSF10C

Negative_13545	<p>BTK, CR1, CRK, HK2, HK3, INS, NNT, TEC, VTN, ACADVL, ACOX1, ACYP2, ADCY4, ALOX12B, BCMO1, CACNA1B, CCNE1, CD86, CD8A, CD8B, CDC25B, CES7, CFL1, CFTR, CISH, CPS1, CRLF2, DDX41, DFFA, EPHB1, EPHB6, FGFR3, FLOT1, FTH1, GPT2, GSTO1, HLA-</p> <p>DOB, HSD11B1, IL8RA, IRAK2, ITGA8, ITGB2, KAT2A, MAPK1, MCCC2, MDM4, MTAP, NCK1, NEFH, NEU2, NRG2, OR111, OR2M7, OR5111, OR52K1, OR52R1, OR5B12, PDX1, PHPT1, PLA2G2F, PLAU, POLD3, POLE2, POLR1A, POLR3K, PORCN, PPAP2A, PPP3CA, PRIM2, PTK2B, PTPN6, PYCRL, QARS, RPS6KA5, SETMAR, SMAD9, SNW1, SPCS1, SREBF1, ST3GAL3, STX1A, TBXAS1, TUBB6, UPRT, VDAC1, ATP6V1B1, HLA-DRB3, PDCD1LG2</p>
Negative_13546	<p>BID, CKB, DCK, F10, GP9, SCD, TK2, TPO, ACADS, AKR1C1, ALOX5, AMPD3, APC2, BDKRB2, CARD11, CCKBR, CCNB1, CD44, CD01, CLCA2, COL4A1, CSF2RA, CYP4F3, DDX23, DKK1, E2F1, FGF6, FTCD, FUT5, FZD10, GALNT8, GLO1, GPD1L, GPX7, HMBS, HMGCR, HPRT1, IARS, IL9R, INPP4B, IRF9, ITGA10, KLKB1, LEF1, LRDD, LTB4R2, MAN1B1, MAPK10, MGST1, MLYCD, MPZL1, MYH3, MYLK, NOTCH2, OR13C9, OR1B1, OR1K1, OR2T10, OR4K2, OR52A5, OR7G2, OR9I1, PDE3B, PFAS, PGAM2, PIAS3, PLCE1, RPN1, RPS6KA1, SOCS4, SOCS5, SORBS1, SOS1, SRGAP3, STAT3, SULT1E1, TACR1, TALDO1, TAP2, TAS2R7, THBS4, TICAM2, TPH2, UGT2A3, WNT9B, MAPK8IP3, PAFAH1B2, ST6GALNAC3</p>
Negative_13547	<p>C9, F12, F3, GK, PDC, A4GALT, ABAT, ACP6, AKR1B10, AKR1C1, ALDOC, APOA1, APOE, ATIC, B4GALT1, BBOX1, CACNA1A, CACNA1H, CD59, CD8B, CHKA, COL5A2, CXCL10, DERA, DHCR7, DHRS3, DUSP1, DVL1, EHMT1, ENTPD8, GMPS, GPLD1, GRAP2, HTR7, IDI2, IGF1, IL22, INHBE, KIR3DL2, KIR3DL3, LIFR, LIPF, LLGL2, MAD2L1, MDM4, MIOX, NEU2, NFKB1, NRXN2, NUDT9, ODC1, OR13C8, OR1D5, OR1K1, OR2M4, OR2T12, OR52K2, OR5M3, P2RX4, PARVG, PDGFC, PDXP, PFN3, PIK3C2A, PIK3C2G, PLA2G5, POLR2C, POMC, PPARG, PPP1CB, PRKAR2B, PRKG2, PTEN, PVRL2, PYGL, RARA, SEMA3B, SHC1, SPRED2, SPRY1, SRGAP1, ST3GAL1, ST8SIA5, SUCLG1, SUV39H1, UROD, WHSC1, XYLB, PNLIPRP1, ST6GALNAC3</p>
Negative_13548	<p>C7, C8G, DDO, GBA, HK2, ITK, ME2, TAT, TXK, ACVR2A, ADRA1B, AGRN, AKR1C1, ALDOA, ASS1, BNIP1, CAMKK1, CCR5, CCR8, CD79B, CER1, CHEK1, CHPF, CLDN15, CPT2, CSNK1G1, CTF1, CXCL16, CYCS, DAPK2, DHRS3, DTX4, EIF4E2, ENPP6, FGF14, FGFR4, FRAP1, GADD45A, GALT, GANC, GCNT4, GJD2, GLG1, GNAI2, GNAT3, HES1, HLA-</p> <p>DOB, IARS2, INHBE, IRAK1, JAM2, KLK3, LEF1, MAP3K7, MARS, MAT2B, MCAT, MDM2, MYH14, MYL5, NCAM1, NCKAP1L, NEUROG3, NFYA, NME2, OR10J3, OR2T10, OR2T2, OR2T3, OR2W1, OR4C46, OR4F5, OR4K17, OR51L1, OR9I1, P4HA1, PAX6, PCCB, PDE5A, PNPLA3, PPP1CA, PPP2R1B, PTK2, SARDH, SC5DL, SEPHS1, SKIV2L2, SUOX, TAS2R7, TGFA, UCK2, UGT2B11, ZFYVE9, ATP6V1B2, TNFRSF10A</p>
Negative_13549	<p>C2, EBP, F8, F9, ID4, ACOX2, AOC2, ARNT, ATP5H, BCMO1, C1GALT1, CALML5, CHRM5, CLDN20, CSF3R, CSNK2B, DUSP14, ECSIT, EREG, FGF7, FPGT, GUCA1B, HMGCL, IFNGR2, IL12RB2, IL28B, IRF5, KARS, KIR2DL3, MAML3, MAP3K12, MAP4K2, NAE1, OR1G1, OR2M3, OR2S2, OR4K15, OR4M1, OR6Y1, PAX6, PDE9A, PLCD1, PMAIP1, POLR2D, PPAP2A, PRKAG2, PRKCZ, PRKY, PTK2, SELE, SEMA4C, SETD8, STAT5B, TCF7L2, TNXB, TSHR, TUBA1A, VDAC3, ATP6VOD1, TNFRSF11B</p>
Negative_13550	<p>AMT, F8, GLA, GLS, HAL, ID1, RB1, TNF, ACADSB, ACVR1C, AGPAT3, AKR1C2, ALG13, ALOX12, CCL11, CLDN4, CYFIP2, DDX50, DLL1, DTX3L, ENO3, FMO4, GALNT10, GJA1, GNAT3, IL1RAP, JAG1, KARS, LIFR, MAOA, NKD2, OR14C36, OR2A25, OR2C3, OR51D1, OR52E2, OR52H1, OR6Y1, PHGDH, PHKA1, PIGW, POMC, PTPRC, RRM1, SC5DL, SPAM1, STX3, TACR1, TDO2, THBS1, TLN2, TM7SF2, TYRP1</p>



Negative_13551	CFD, GAA, IVD, ABCC8, ACMSD, ATP5C1, B4GALT2, BAI1, C1QB, CACNA1H, CACNG6, CD28, CDC45L, CHRM3, CNGB1, CTF1, DGKD, DRD1, DUSP10, ENO3, F13B, FZD1, GALNT8, GSTM4, HBEGF, HNF1A, HTRA2, KIR2DS5, LTA4H, NKX2-2, OCRL, OR10AG1, OR10V1, OR2L2, OR51A2, PLA2G5, PLOD1, PPP2R5E, PRPH, PSENE1, RASA1, SDHB, SELPLG, SEMA3F, SIPA1, SMAD9, SUCLG2, TIAM2, TMLHE, TUBB4Q, YWHAH, SERPINE1
Negative_13552	DDO, LEP, MAG, PLG, ACSM5, ACTN2, AGRP, ANAPC2, ATP5F1, BPGM, C4BPA, CAV3, CCNA1, CFTR, CTBS, CTNND1, CXCL5, CYP11A1, DDX52, EGFR, EHMT2, FGF5, FLT1, GAMT, GLYCK, GNAL, HMOX2, IL23R, KCNQ1, LIMK2, LRP5, MAML2, MAML3, MAP3K14, MGAT2, MINPP1, NEU4, OR10A4, OR10A5, OR2F1, OR4K14, OR52I2, OR5B3, OR5K2, OR6C1, OR6M1, PHGDH, PLXNA1, POLR3A, SELP, SEMA3C, SNAI2, SOCS3, ST3GAL5, STAT3, STX1B, VEGFA, WNT10A, WNT7A, WNT9A, WWP2, PRICKLE2
Negative_13553	ASL, CD4, GP9, PGP, PLG, SCD, TNN, ACOT12, AHCYL1, APPL1, ARD1A, ATIC, ATP6V1D, BHMT, BUB3, CANT1, CCNB1, CDS1, CHAT, CNGB1, CSNK1D, CSNK2A2, CYP2C18, CYP3A4, DGKG, DHCR24, ENO1, ENO2, ENPP3, FGF8, GABARAP, GJA1, GUCY2F, HTR5A, IL12RB1, IL17RB, ITPK1, JAM2, KAT2A, MAML3, NAE1, NFATC1, NFATC4, NFKBIB, NFYB, NODAL, OPLAH, OR10Q1, OR2A25, OR2AE1, OR2B2, OR2D3, OR2L13, OR2Z1, OR51D1, OR51G1, OR51L1, OR52K1, OR5D16, OR6C3, OR8D1, OR8J1, OR8K5, OXCT1, PCYT2, PDHB, PHKG2, PIGX, PPAT, PPP1CC, PSME3, PTCH1, PTGS1, PTPRF, RAB23, RAPGEF3, RASGRF2, SMPD2, SOD1, TP73, TPH2, TRADD, UROS, VEGFC, WASF2, B4GALNT1
Negative_13554	FES, GSS, ID1, IL7, MTR, ATP5J2, CD22, CDH4, CHAT, CISH, CLDN19, CPT1C, CYP11B2, CYP3A7, DHCR7, EDAR, EPB41L1, ETNK1, FABP3, FMO2, GALNTL4, GNAI1, GNAQ, GOT1, IFT57, IL17A, IMPDH2, INSR, IQGAP2, KLRC4, LIMK2, MAFA, MAML2, MDH2, MGAT4B, NCK2, NME7, NOTCH3, NRXN2, OR1K1, OR4B1, OR4D1, OR52N5, ORC1L, P4HA2, PARD6G, PLAUR, POLE, POLE4, PPP2R5A, PSEN2, RARS2, RELA, SDHD, SESN3, SHC3, SMPD2, SPCS1, SPRY4, STAT6, STX2, TAP1, TCF7, TGFBR2, TYRP1, UGT8, VDAC2, VEGFC, ZIC2, TNFSF13B
Negative_13555	C4B, DDO, F3, MVK, SMO, AANAT, ACADL, ACSM4, ADRBK2, AHCY, ANAPC1, ARG1, ATF4, B3GALT5, B3GAT2, CDH15, CDO1, CPT2, CTNND1, CYP11B2, DCTN1, DKK4, DTX1, ENO1, EPB41, FUT6, G6PC, GALNT1, GJD2, GNAO1, HAGHL, HARS, IFNA14, IKBKB, IKBKE, IL1R2, IMPA2, IRF9, ITGAE, KIR2DL1, MAPK12, MYLK, NFATC4, NT5C2, OR11H1, OR13D1, OR1J1, OR2T8, OR52N4, OR5D16, OR8D4, OR8G1, PANK1, PDXP, PGAP1, PIK3R3, PLA2G2A, PLCD3, POLD2, POLR2A, POLR2I, PPP1R3C, PRKAR2B, PRKG1, PTPRC, RBKS, RBPJ, SAT1, SDC1, SPRY2, SUV39H1, THBS3, TLR5, TSLP, YWHAZ, ZMAT3, MAP3K7IP1, MAP3K7IP2, PPARGC1A
Negative_13556	KMO, LAT, ME1, ACVR1B, ADCY7, AGXT, ANAPC4, ARNTL, ATP5F1, BACE2, CBR3, CCL28, CCL3, CCL7, CD22, CDC14A, COL3A1, DKK4, GATM, GFPT2, HIP1, HNF1A, HTR5A, IL13RA2, IL22RA1, JAG1, KLRD1, KNG1, LIPC, MAP3K14, MAPK3, MCCC2, MGST2, NTNG1, ONECUT1, OR10AG1, OR5AC2, OR5V1, OR6C2, OR8B4, P2RX4, PARVB, PGLS, PGS1, PLA2G2F, POLE2, POLR2H, PPP1CC, RAP1A, RELB, SEMA3C, SOD1, SULT1A2, UGDH, UGT2B4, WNT11, SERPINE1, TNFRSF13B, TNFSF13B
Negative_13557	C8A, DCC, UBB, ACSM2A, ACSS1, ADORA2B, ADRB3, ALG13, AQP7, ATP5F1, C1QB, CACNA1H, CALML5, CASP9, CCNE2, CTNNA2, CXCR3, CYP3A7, DAAM1, DAA M2, DTX2, ESPL1, FLOT1, GZMA, GZMB, HRH2, IAPP, IFNA21, IL13RA2, IL20RB, IL21R, IL29, IL4R, IMPDH1, ITGB5, ITGB6, LRP5, MECR, MYH10, NAGK, NOTCH2, OR2T3, OR4S2, OR51L1, OR8D1, P4HA2, PRKCZ, SELL, SMAD2, SPCS1, SSH1, STK36, TICAM1, TRAF1, TRPM5, TUBA3C, VEGFC

Negative_13558	IL3, MET, PGD, RB1, ACTN2, ADSL, ALAS2, CD14, CD44, CD82, CD86, CLDN15, CMPK2, CTSG, CXCL3, CYP2B6, DEGS2, DGAT1, DUSP9, DVL1, E2F3, FOSL1, FOXO1, FZD9, GALNTL2, GALNTL4, GANC, GCAT, HHEX, IL17RB, KIR2DL2, MA P3K8, METTL6, MINPP1, MNX1, MPZL1, MYD88, MYLK2, OR52J3, OR5V1, OR9K 2, PMVK, POLE4, PRPH, PTPRM, RBX1, SAT2, SMPD1, TAS2R14, TNFSF12, ATP 6V0A4
Negative_13559	BCR, IL4, ITK, MAX, AACS, ACACA, ACACB, ACSM2A, ACSM4, ACTC1, ADAM10, ADAM17, ADRA1A, AKT2, ALDH4A1, AMPD1, AMY2A, ATG12, ATP12A, ATP5G1, ATP6V1H, BET1, CACNG2, CAMK2B, CBR1, CD80, CLDN9, CNGA3, CSH1, CSNK1 G2, CTBP1, CTNNA1, CXCL13, DDX19A, DDX54, DERL1, DGAT1, ENO3, ENTPD3, EPB41, EXT2, FGF22, FTMT, GALNT11, GALNTL4, GGCX, GRPR, HCCS, HNF1A, HSD17B2, HTR5A, INSR, ITGA4, KIR2DS5, KITLG, MAML2, MAPK14, MFNG, NFYA, NRXN1, NRXN2, NTRK2, OCLN, OR10AG1, OR10H5, OR14J1, OR1F1, OR2 A2, OR4C13, OR4K5, OR4M1, OR51I2, OR52H1, OR7G1, OR8K5, OR9G4, PANK3, PARS2, PCYT1A, PCYT2, PDE6G, PLA2G10, POLA2, PRLR, PRPS1, PSEN2, SE TD2, SLC2A2, SSX2IP, ST3GAL3, TAS2R60, THBD, THTPA, TNFSF9, TUBB6, U GCGL2, ULK1, CACNA2D2, HLA-DRB5
Negative_13560	ADK, CS, GLA, LCK, AASS, ACSL5, ALDH5A1, ALDH9A1, ATP5J2, CACNA1F, CA CNA1G, CACNA1H, CACNG2, CBLC, CCKBR, CD47, CLDN17, CLTB, CTBP2, DCTD, DCXR, DDX18, ENO3, ENPP6, EPB41L2, FLAD1, FOXA3, FUT1, GDE1, GLYCTK, GNG3, GUCY1B3, H6PD, HADHB, HIBADH, IL12B, IL22RA1, IRS2, LIPE, LRP 5, MDH2, MTMR1, NTF3, ONECUT1, OR2L2, OR4K13, OR52A5, OR52I2, OR5B12, OR5K2, PDE4D, PDE6G, PHKA1, PIGV, PPARD, PPP2R1B, PPP3R2, PTGS2, RF WD2, ROBO3, RPIA, SLC25A5, SPP1, STX2, STX7, TAS2R50, TFDP1, TUBB2B, UGCG, VANGL1, ATP6V1C2, GABARAPL1, SERPINC1, SERPIND1
Negative_13561	CD4, MAX, TPO, ABI2, ACACA, ACTB, ACY3, ACYP2, ADCY5, AKR1C4, ALDH1A2, ALDH3B2, APPL1, ATN1, ATP2A3, BCL2, BLVRB, CAPN2, CASP6, CCL25, CCL 3, CCR3, CD86, COQ3, CSF2, CTPS2, CYP17A1, CYP4F3, DDX52, DGKE, DHRS9, DPM1, DUSP6, EFNA4, ETS1, FTH1, FUT3, FZD8, GALNT2, GALT, GLI3, GMPS, GNA15, HRH2, IQGAP3, KLRC1, LAMC3, LYPLA1, MAN1A1, MAP2K5, MYH3, NE U3, NFKBIB, NPAS2, OR10G8, OR13G1, OR1E2, OR2G3, OR4N2, OR52N4, OR5A P2, OR5T2, OR6C70, ORC2L, PCCA, PITX2, PLA2G2F, PLD2, POLR2H, POLR3G, PRKCZ, PTCRA, RDH8, RUNX1T1, SEMA3G, SEMA4D, SIPA1, SMAD5, SPTAN1, STAM2, SV2A, TGFB1, TLN1, TUBA1C, VAV2, WNT5A, ATP6V0D2, SLC25A31, T NFRSF10B
Negative_13562	CD4, DBI, F7, FST, GPI, HPD, MAG, PAH, ACY3, ALDH2, ANAPC5, ARPC5L, CAC NB3, CCL22, CD40, COX10, CTLA4, CX3CL1, CYBA, DNMT1, DTX3L, EFNA5, EN O3, F13B, FMO3, GALM, GALNT11, GUK1, HLA- F, IL4R, IRF9, ITGA3, KLRC2, MDM2, MEF2C, MGAM, MIOX, MYH1, NCKAP1L, N EU1, NT5E, NUMB, OR11H6, OR1D2, OR2C1, OR2T29, OR4D11, OR4K2, OR4Q3, OR6A2, OR6F1, P4HA2, PAK1, PAK3, PIGQ, PPP2CB, PSME3, PTGS2, RAB23, R BL1, SC4MOL, SEMA4F, SEMA4G, SETD8, SHC3, SLC27A4, SPRY3, STAM2, SV2 B, TAS2R48, UBE2L6, PLA2G12A
Negative_13563	F7, GSR, IL9, OTC, SRC, ACTB, ADH4, AGMAT, AMDHD1, AOC3, ARNTL, ARPC5, ATP2A3, ATP5E, AXIN2, B3GALT2, BCAR1, BCL10, BDKRB1, BRAF, CDH5, CDK N2B, CHAT, COL4A4, CYP2C18, DDIT3, DOCK1, EHHADH, EIF4B, EPHB4, FUT2, GLYCTK, GUCY2F, HMGCS2, HTR7, IAPP, IDH3B, IL20RA, ITGB7, ITPKB, MA PK13, MAPK9, MARS, MCAT, MLLT4, NFYB, OR1M1, OR2D2, OR2L8, OR2T29, OR 2T34, OR2Y1, OR4K14, OR52N4, OR5A1, OR5B17, OR7G1, OR8J1, P2RX1, PDE 11A, PIM2, PIP4K2A, PLOD2, POLR3A, PRKG2, PTGES2, PTPN6, RAB5A, RASS F5, RPSA, ST3GAL1, STAT4, STAT5A, SUCLA2, SUCLG2, TALD01, TSTA3, UBE 2L3, UCK2, VAMP3, VTI1A, YWHAG, ATP6V0A4, SERPIND1

Negative_13564	ABO, EPO, IL4, LTB, NNT, ACADSB, ACP2, ADCY5, APOE, BAAT, BDH2, BLNK, BTRC, CAMK2A, CASP7, CCL13, CD74, CRLF2, CSF2, CSNK1D, CTBS, DHRS3, ED A2R, ENTPD6, GRM5, HDAC2, HRAS, IL22, IL2RA, LAP3, MTHFD1L, NFKB2, NM NAT1, NUDT8, OR10G7, OR13A1, OR13J1, OR1Q1, OR4F5, OR52W1, OR5T3, OR 6Q1, PDE8A, PFN1, POLE2, PON3, RALB, SCLY, SETDB2, TJP3, TYRP1, WNT16 , PDCD1LG2
Negative_13565	BTC, CDA, CFH, DCK, MPI, MVK, ACY3, ADH1B, ADRBK2, AKR1B10, AKR1C3, AL AD, AXIN2, BIRC5, BMPR2, CACNG5, CDC16, CDK7, CPT1A, CTBS, DKK4, DNMT 3L, DUSP7, FRAT2, GNRH2, HLCS, IBSP, IDI1, IGF1, IL20RB, IL7R, IRAK1, IRF5, IRF9, ITGAV, LRDD, MAP3K2, MGST3, MS4A2, NOTCH1, NT5C1A, OR10G 3, OR13J1, OR1B1, OR2Y1, OR52A1, OR56A3, PDE11A, PIGN, PMM1, POLE3, P OLR2F, PTDSS2, PTEN, RALBP1, RFWD2, RPE65, RPIA, RPSA, SCLY, SKIV2L2 , SLC25A5, SPRED2, SRD5A2, SUCLG2, TALD01, TAS2R38, TD02, TGFBR1, TJ P3, TNFSF9, TSC1, TUBA3C, UBE2L6, VDAC3, XYLB, ATP6V1G3, PDCD1LG2, S ERPINA1
Negative_13566	BID, F2, IL4, ME2, ACAT1, ADORA2B, ALDH4A1, ALG11, ALG8, ANAPC2, ARHG EF7, ARPC3, ASRGL1, ATP2A3, ATP4A, ATP6V1A, BMP8A, CASP10, CCNE1, CD C6, CLDN5, CYP11B2, DAPK1, DDX23, DFFB, DPM3, DRD2, EFN1, ENPP3, ENT PD4, ERBB2, FARSA, FZD7, GALE, GALNTL5, GCNT3, GNAZ, GPAA1, GSTA3, HE XB, IL15RA, IMPA2, IRF5, ITGA10, JAK3, LCMT1, LCMT2, LEFTY2, LIPT1, L TA4H, MAP2K5, MAP2K7, MAP3K14, MAPK13, NLGN2, NOX3, OR10A5, OR13J1, OR1N2, OR51G1, OR52D1, OR6C4, OR7A17, OR8B8, OR9Q1, ORC1L, PAK7, PFK FB4, PFKL, PIK3C2G, PIK3CD, POMC, RIPK1, SFRP1, SPHK1, STK36, STX7, T HY1, TIRAP, TLR3, TNFSF10, TNFSF8, VASP, PHOSPHO1, TNFRSF12A
Negative_13567	GCK, LIF, NGF, PAH, RDX, RPE, UBC, ADORA2B, AGXT, ALDH2, ALDOA, ARNT, C ACNA1I, CCR7, CDH2, E2F5, EDAR, EIF4B, EXTL2, FGF1, FRAT2, GLUD2, GNM T, GPAM, HAO2, HDAC1, IFNK, IL1RAP, INPP1, ITGA11, LALBA, MAML3, MAP3 K6, MRAS, NOX1, NOX3, NUDT5, OCRL, OR14A16, OR2AE1, OR4C11, OR4K15, O R51E1, OR52K1, OR5D18, OR6N1, OR8H1, PANK4, PARD6A, PIGB, POLR2G, PT GES2, PTPN1, PTPRF, RAP1A, RASSF5, RETSAT, RGS3, RPE65, RPS6KB1, SAT 1, SETD1B, SHC3, SLC12A2, SULT1A4, TAS1R2, TGFB1, THBS1, VANGL1, VDA C1, XYLB, CSNK1A1L, TNFRSF1A
Negative_13568	DHH, F3, F7, GSR, AARS2, ADIPOR2, ALDH1L1, ALG5, ANAPC11, APC2, APOA2 , ATP4A, BCAT1, BMP8B, BPGM, CAPN2, CD274, CDK5, CFL2, CRY2, CSNK1A1, CYP19A1, CYP1A2, CYP2B6, DCTD, DDIT4, DGAT2L4, DHCR24, DNMT3B, DTX1 , DTX4, E2F3, EFN2, EIF4E, FRAP1, FZD3, GCAT, GCNT2, GFPT2, GNA11, GN AZ, GPD1, GSTZ1, HDAC2, HRH1, IDH2, IL12RB2, IL15, IRS2, IRS4, KCNB1, KIR2DL2, LEPR, LIPA, MGAT2, MKNK2, MYH15, NCF1, NKX3- 1, NT5C, OR11H1, OR3A3, OR4K14, OR4S2, OR51A2, OR5AN1, OR9A4, P2RX4, PDCD1, PDXP, PLCB4, PNMT, POLR2J, PON2, PPP2R1B, PPP2R5B, PRKX, PTGS 2, RAP1A, RASGRP2, RELB, SESN2, SETD2, SMAD2, SMC1A, TP73, TUBA8, URO D, CSGALNACT2, HLA-DPB1, PHOSPHO1
Negative_13569	ATM, CGA, DDC, GP9, GSR, IL6, UBB, UBC, A4GALT, AADAT, AASS, ACSS3, ALD H3A2, ALDH3B2, ALDOB, ALG9, APPL1, ATF2, ATP5F1, AVPR1A, CACNA1C, CA CNA1I, CDC27, CPT1B, CTBP2, DUSP7, ENO1, EPB41L3, FGD3, FLT4, GNAS, G NRH2, HCCS, HMBS, IL22RA1, IL2RB, IRF5, IRF9, IRS2, JAG2, LCAT, LRRC4 C, MGAT5, MYH6, MYL5, NAT6, NCKAP1, NLGN2, NOS3, NRXN3, OR11H1, OR13C 5, OR13C8, OR1A1, OR1J4, OR1S2, OR2A14, OR3A3, OR4K17, OR52E8, OR52N 2, OR7A10, OR7D2, PARVA, PCCB, PFN2, PFN3, PLAT, PLEKHA8, PPP2R5D, PR SS3, PTCH1, RERE, RFXANK, ROCK1, SAT1, ST3GAL1, ST8SIA5, STK4, TAP2, TGFBR2, UGCG2, UGT2B7, UROC1, VAV2, WNT11, ZBTB16, KIR2DL5A, SERPI NB5, ST6GALNAC3, ST6GALNAC5

Negative_13570	CR1, GLA, IL4, MAX, ME2, TK1, ACSL4, ACTB, ACVR2B, ACYP2, ARSE, ATP6V1D, AVPR1B, BCL10, BCMO1, CD82, CDC25A, CHST12, CLDN16, CNTFR, CSF1, CSF2RA, CSF3, CYP1A2, CYP3A4, CYP3A43, DGKQ, DHRS4, DLL3, ENTPD6, EPHA8, FCGR2B, FRAT1, GALC, GALNT6, GALNT8, GCNT1, GLI2, GLI3, GNPDA1, HIP, HMGCS1, HMOX1, HPSE2, IFNA14, IL15RA, IL22RA2, IL6ST, ITPKB, LRAT, MAP3K12, MAT1A, NAE1, NCAM2, NEU4, NOTCH1, NR5A2, NT5E, OR12D3, OR1S1, OR2H1, OR5P3, OR8B4, OR8J1, OR8S1, P2RX1, P4HA1, PFKFB1, PLXNA1, POLD1, POLR2K, PTGDS, RAD51, RAF1, SARS, SEMA4C, SIGLEC1, SOD1, ST3GAL5, TPI1, VAV2, VDAC2, VEGFC, EIF4EBP1, KIR2DL5A
Negative_13571	AK3, CRH, GP5, HK1, MAX, PDC, TK1, ADCY1, BMP4, CAMK2B, CAPN2, CASP10, CCL22, CCR5, CYP2C9, DPYS, EPHA7, FASLG, FUT4, GALNT13, GJD2, HAGH, HLA-DOB, HSD3B7, IL29, IRS2, LDHA, LRRC4C, MAN1C1, MAP3K8, MICA, MNX1, OCRL, OR11H4, OR52N5, OR5R1, OR6K6, OR8J1, OR8K3, PARVB, PHKG2, POLR3G, PPAT, PROS1, SETD8, SPI1, STK4, SUV39H2, TNFRSF9, VASP, XYLT2
Negative_13572	GDA, GH1, IL8, NPL, ABP1, ACP1, ACSM1, ADCY1, ADH6, ANAPC1, ARPC3, B3GALT4, CCND3, CCR2, CDIPT, CDKN2B, COL4A2, COL5A1, CSF1R, EP300, EPHB4, EXT2, FABP3, FGF17, FUT3, FZD1, GART, GCNT1, GIT1, GOT1, GUCY1A2, GYS2, HLCS, HTR4, IL15RA, IL7R, IL9R, ITGAE, LAMB2, LILRB3, LTB4R2, MCC1, MGAT2, MGST3, MYH9, NAGLU, NMNAT1, NRAS, NT5E, OR13C9, OR2AE1, OR2T12, OR4P4, OR52N4, OR6A2, PER3, PIK3R5, PLA2G10, POLR3D, PPP1CC, PRKACB, PRKACG, PRLR, PSAT1, RGS3, SHC3, SLC25A4, SLIT1, SUCLA2, TAS2R42, TAS2R49, TGFB3, TUBB4, VTI1B, WNT16, YARS, AASDHPPT, CACNA2D2, HLA-DPB1, HSP90AA1, TNFRSF11A
Negative_13573	ASL, CGA, FUK, ACACB, ARSA, ATN1, BET1L, CCL22, CDKN2C, CLCA4, CLDN7, COX15, DCTD, DDB2, DDX4, DGKI, DHX58, DPYSL2, DTX2, FGD1, GAB1, GAL3ST1, GALK1, GPD1L, HAO2, IDH3A, ITPKB, MAN1C1, MCM4, MOV10L1, NAGLU, NCOA4, NFAT5, NPR1, NT5C1B, OCRL, OR2A12, OR5L2, OR5M8, PARVA, PFN1, PI4K2A, PLA1A, PSEN1, PTDSS2, RHEB, SEMA3G, SEMA4C, SETD7, SLC33A1, SPTLC1, TACR2, TLR4, TNFSF9, TOMM40, UGDH, ULBP3, YWHAH
Negative_13574	C9, CS, CSK, GK2, IL6, MVK, NPY, A4GALT, ADCY2, AMDHD2, ANAPC10, CADM3, CCL25, CD274, CDC23, CYP1A1, CYSLTR1, DGKH, ELK4, EPHB4, FBP2, FOXO1, FSHR, FUT8, GALNT1, IFNA14, KLRK1, LAMB3, MAP3K8, MCM2, NCK2, NFAT5, NOTCH3, OR1J2, OR2A5, OR52M1, OR5P3, OR8S1, OR8U1, PPM1A, PRPS1, PTCH2, PVRL4, RAC3, RAPGEF3, RASA2, RDH16, RGS3, SEMA3D, SNAP25, STX16, SUCLA2, TAS2R9, UGT2B4, UGT2B7, WBSCR17, TNFRSF13B
Negative_13575	AK2, HPD, HYI, PTS, RFK, AACS, ABAT, ACSL1, ACSS3, ALPL, ANAPC4, ANGPTL4, ATP5G1, ATP50, C7orf16, CREB5, CYP3A5, DCTD, DCXR, DLL3, EHMT1, ENTDP7, EPB41L3, GNAI3, GRIA1, HRAS, IGFBP3, IRS1, LRDD, MAPK11, MCM5, NMNAT2, OR10AD1, OR10C1, OR2A5, OR2B2, OR4F15, OR5L2, PIK3CD, PISD, POLR3K, PPBP, PRKACB, PRKAR2A, PTPRR, ROCK2, RXRB, SLC12A2, SMURF1, SOAT1, TRHR, TSC1, UGT2B11, CACNA2D2, CACNA2D4, MAPKAPK5
Negative_13576	C9, CAT, FN1, GP9, SRC, ACTG2, ADCY6, AKR1C1, AKT2, AMPD3, B3GAT1, BCAT1, CACNA1E, CCL17, CCNB2, CD46, CDC16, CFLAR, CMPK2, COL5A3, CTNNA1, CTPS, CX3CR1, CXCL2, DAD1, DAPK2, DGKZ, E2F4, EARS2, EFNA3, EPB41L2, EPB41L3, EPHA5, ETNK2, FGFR2, GCNT3, GGT1, GNAI2, GUCA1C, HSD3B1, HTR2B, IBSP, IFNA5, IFNG, IL17RA, INPPL1, MAD2L1, MAN1B1, MAN2A1, MCC1, MDM2, MGAT1, MLYCD, MYH15, MYH7, MYL5, NCAM1, NEU4, NEUROD1, NFASC, NSDHL, OR2A25, OR2AT4, OR2K2, OR2T2, OR4N4, OR4N5, OR7D4, PER1, PGAM1, PIGS, PLXNB2, POLR1E, POLR2H, POLR3B, PTCH1, PTPRF, PYCR2, RAC2, RASGRP2, RFX5, ROCK2, SEMA3B, SMAD2, SREBF1, SSH1, SUV39H2, TAS2R50, TBL1XR1, TPH1, TUBB6, ZMAT3, ARHGEF12, HSP90AA1, TNFRSF13B, TNFRSF17

Negative_13577	AGK, AR, FGA, FGB, OTC, ACACA, ACP1, ACY1, ACY3, ALOX15, CASP8, CD247, CDK7, CHRM1, CMPK1, CTSS, CYP11A1, DGAT1, DLL4, DTYMK, DUSP6, EPHB4, GNAI1, GSK3B, HEMK1, HES1, HSP90B1, HTR7, IL13RA2, IL1R2, IPPK, KLRC3, KRAS, LEF1, MCCC1, OR2L13, OR4D2, OR7C2, OR7D2, OR8K3, P4HA1, PGAM2, PPP2R2B, PPP3CA, PRKAA1, PRKCA, PTEN, RETSAT, TAS2R50, TGFBR2, TKTL1, TLR9, TUBB4Q, UCKL1, UGT2B4, WNT4, WNT8A, YOD1, HLA-DPA1, ST6GALNAC5
Negative_13578	DDO, IL4, LYN, SRC, TPR, ABP1, ALDH7A1, CAPN2, CD46, CD86, CLTC, COL4A2, CREB3L3, CYP3A4, CYP7A1, DAPK3, DUSP1, EIF4E2, FUT3, G6PC2, GAD2, GALNT11, GSTA2, GUCY2D, IFNA5, IL15RA, MAP2K7, MGST2, NME7, NOX1, NR1H3, NTRK1, OR4C13, OR4P4, OR6C2, PAX6, PFN1, PGM1, PIP5K1B, PLEKHA8, POLE, PROC, RDH10, RPS6KB2, RXRA, SEMA4F, SPTLC2, TIAM2, UBA7, UGCG, UGT2B10, VAV1, WASF3
Negative_13579	AK3, CAT, CGN, DCC, LTB, PAH, AADAT, ACAA1, ACTN4, ADH4, AKT2, ALG2, ANAPC2, ATP6V1H, B3GALT4, CACNA1G, CADM3, CCR1, CD8A, CDC14B, CREB1, CSF3, CYCS, DDX50, DLST, DNMT3B, DUSP5, EGLN1, ENTPD2, FOXA3, FRAT1, GFPT1, GLUD1, GMPR, GNAQ, HAGHL, HIP1, HMGCS2, IBSP, IFNG, IMPDH1, INHBC, LDHA, LIPA, LRP6, LTBR, MGAT3, MYH13, MYLK, MYLK2, NARS, NAT2, NFX1, OCRL, ODC1, OR10A5, OR10H5, OR10K2, OR11H6, OR14A16, OR2T34, OR51I1, OR51L1, OR5A1, OR6C3, OR6K2, OR8J3, OR8S1, ORC6L, PAK2, PIGA, PIGU, PIP5K1A, PLCB3, POLD1, POLE2, POLE3, POLR1B, POLR2B, PRKCE, PRKCH, PSEN2, PSENE1, PSPH, PTPRF, PVRL4, RRM2, RXRG, SPAM1, SPRED2, SSH3, TIAM2, TNFSF8, TP53, TPH2, ULBP2, VAMP1, WASL, TNFRSF13B
Negative_13580	FUK, ACACA, ACSM5, BCL2L1, CD27, CHRM2, CLDN11, CMPK2, CNTN1, COQ3, COQ5, CPT1C, CYFIP1, DPYSL2, ELK4, EPHX1, FGF19, FUT8, GADD45B, GLS2, GNG12, LTB4R2, MADCAM1, MAML2, MAP3K14, MCM3, NCK2, NFKB1, NPAS2, OR10H2, OR1G1, OR1S1, OR51E2, OR51M1, P2RX1, PDE8A, PFKFB4, PIGV, PLAU R, PON1, PRKCH, RAPGEF2, RHEB, RPS6KA2, SDC1, SESN3, SMARCA2, SPRED2, SPTLC2, ST8SIA1, TAP2, TNFSF4, ULBP2, VAMP1, VDAC2, WARS, WASF1, ATP6V0A2
Negative_13581	C4B, EGF, IL4, IL5, MYC, NPY, TEC, ACOX3, ACP5, ALG13, ATP5A1, C3orf10, C9orf95, CACNA1H, CACNG6, CCNA2, CCNH, CDC25C, CFL1, CNTN1, COL4A4, CSNK2A1, CYCS, CYP19A1, CYP4A11, DARS2, DDB2, DUSP14, DUSP3, G6PC, GAPDH, GLYCTK, GPAM, HAAO, HBEGF, HSPA2, HTR4, IL28A, IMPA1, INPP1, KDSR, KYNU, LAMB2, LEFTY2, MYLK, NADSYN1, NCOR1, NFYC, NOTCH3, OR1G1, OR1L3, OR51A7, OR52B6, OR5C1, OR7C2, PDE6H, PIK3C2A, PLAUR, PLCD1, PRKAR2A, PTPN5, RALA, RBPJL, ROBO2, SKIV2L2, TFPI, TLR4, TUBA1C, VTI1A, VTI1B, WIF1, WNT2, TNFRSF1A, TNFRSF6B
Negative_13582	AMH, DUT, F3, FAH, TXK, ABI2, ACACB, ACOX3, ALAD, ALG3, ATP5A1, B4GALT4, C4BPB, CACNG6, CASK, CCL16, CCL22, CHRM3, COMP, CRY2, CYP21A2, CYP2C19, DUSP6, EPOR, FLAD1, FZD1, GALK1, GALNS, GFPT2, GIT1, GRIN1, GSTO2, HAP1, HIP1, ITGA6, JAG2, MAD2L2, MAGI1, MAPK14, MARS, MITF, MMP9, NARS, NKX2-2, NUMBL, OR10Z1, OR4N4, OR5B21, OR9A2, PDGFB, PHKA1, PKMYT1, PLA1A, PPP2R2C, PPP3CB, PRPS1, PSPH, PTDSS2, PTGER1, PTGIS, PVRL4, SESN2, SHMT2, SPCS3, SSH1, STK4, STX18, SUV39H2, TALDO1, TGFBR1, TLR4, TP53I3, XCL1, ATP6V1E2

Negative_13583	ABO, OSM, SPN, SRF, ABP1, ACOX1, AGXT, ALDH4A1, ARG1, ARRB1, ATF4, AXI N1, CACNA1G, CAPN2, CDH4, CNGA3, COMT, CYFIP2, CYP19A1, CYP2S1, DDB2 , DDX50, DUSP4, EPHB2, ERBB3, ESAM, FLT3, GMPA, HARS, IL22RA2, IRAK3 , ITGB6, KIR2DL1, LAMB1, LRRC4C, MYH8, MYL7, NAT1, NCAM1, NOS3, NRXN3 , NUDT12, OR10H3, OR1J4, OR2K2, OR4B1, OR5K1, OR6F1, OR8G1, OXCT2, PD E1C, PIGA, PKM2, PLOD2, PMM1, POLR3B, PPP2R2A, RAPGEF4, RASGRP2, ROB O2, SEMA4F, SESN2, SHC3, SOCS2, STK11, TAS2R4, TKTL2, TRPM5, UBA1, UB E2L6, UNC5C, WARS, WIF1, WNT7B, GABARAPL2, PPP1R12A, PRICKLE2, TNFR SF11A
Negative_13584	C2, GSR, ACACB, ACOT12, ACVR1, ANGPTL4, BPNT1, CACNA1G, CCR9, CD82, C DC25B, COL4A1, COMT, CREB3L1, CRHR1, CSAD, DERA, E2F4, FABP3, GADD45 G, GNPAT1, GRM5, GSTA2, HIBADH, HSD17B4, IL28RA, ITGA10, LIPA, OR13 C4, OR2AG1, P4HA2, PAICS, PDE10A, PDXK, PERP, PHKG2, PIM1, POLA1, PPA 2, PPAP2C, PRKX, QARS, RAPGEF4, RHOQ, SEMA3C, SEMA4G, SETD7, SLC2A1, SOX17, ST8SIA5, SUL1A1, ULBP3, VCAM1, CACNA2D1, SERPINB5
Negative_13585	CD4, GP9, ID2, LIF, MUT, ALOX5, AMY2A, ARPC4, ATP5A1, AVPR1A, B3GAT1, BMP8A, CD244, CD8B, CERK, CREB3L4, CTF1, CTNNA2, DAAM1, DTX4, ENPP1, EPHA5, ERBB3, FGF10, GLI2, GLO1, GMPR2, GRIA2, GUCY1A2, HLA- G, HNF1A, ICAM1, IDUA, IL15, MAP3K4, MTMR6, MYH11, NAGS, NCOA4, NME6, NRCAM, OR10J1, OR1C1, OR4D11, P2RX5, PIGC, POLR2J, PPP2R5B, PRSS2, P SEN1, RAB23, RFNG, ROCK1, SKP1, SOAT2, WNT5B, MAPKAPK5, TNFRSF13B
Negative_13586	DBI, GHR, GP9, ACP6, ACSS1, CALML5, CASP3, CCL21, CD46, CDC25A, CDC27 , CYP11A1, CYP11B1, DDX19A, DERL1, FABP1, FTCD, GCNT3, GNAI1, GUCA1B , HIP1, HRH2, IL29, JAK1, LRRC4C, MAPK3, MMP2, NT5M, OR1N1, OR2T5, OR4 A16, OR4D5, OR5D18, OR5L1, OR6M1, OR7A10, PAK6, PDE6D, PI4KB, PIK3CG , PLA2G2E, PPP2R5C, SEMA4B, SMAD7, SPRED2, STK4, TAS2R60, TGDS, THTP A, TOMM40, YWHAH, ZMAT3, SERPING1, TNFRSF12A
Negative_13587	BAD, C2, CBS, HYI, PC, AANAT, AKT3, ATG3, BBC3, CCKAR, CD226, CD247, CD H5, CHST11, CLDN1, CREB5, CX3CR1, CXCL2, CXCL9, ENAH, EPHA1, ESAM, FU T8, GCLM, GNRHR, GSTK1, GUCY2F, HARS2, HES1, HSD3B2, HTR7, IL23A, IL6 ST, LGMN, LMO7, LRP5, MAD2L2, MAOB, NFATC2, NFE2L2, NRCAM, NUDT12, OR 2AG2, OR2G6, OR2T33, OR4A16, OR4F5, OR5B12, OR5B3, OR5K1, OR5T3, OR6 K2, PHKA2, PHPT1, PIK3C2A, PIP4K2B, PITX2, PLA2G4A, PLAUR, PLCD1, PL OD1, PPM1D, PPP1CC, PRKAR1A, RND1, RPS6KA3, SCLY, SH3BP2, SLC27A1, S LC2A4, SOCS3, SRGAP2, STK11, SV2A, SV2B, TCF7L2, TKTL1, TLN1, TRAF2, TRDMT1, TUBB2B, MAPKAPK3
Negative_13588	CAT, EBP, F3, IHH, KIT, NPL, SP1, SRC, TPO, ABL2, ACP1, ALG8, APPL1, ASN S, ATP5L, CCL5, CDH15, CHD8, CHKA, CSNK1G1, DGKZ, DGUOK, DPAGT1, EDA2 R, EHHADH, EPB41L3, ETS1, FPGT, GALNTL4, GJD2, HIBADH, HRH2, IL9R, KI R2DL2, MAP3K14, MTMR6, NCF1, NSDHL, OR1L4, OR2A5, OR2T10, OR2T33, OR 5P2, P4HA2, PARVA, PGAM4, PIP5K1C, POLR2A, PPP1R3C, PPP1R3D, PTGES, PTPRM, QARS, RPRM, RPS6KA4, SC4MOL, SLC27A4, TIRAP, TUBA3C, TUBB2C, UGT2B11, ULK3, ATP6V1G3
Negative_13589	DUT, HK1, MVK, PGD, ADRA1D, BET1, BMP4, BRAF, CAMKK2, CD44, COQ3, CTNN A3, DDX19A, DEGS2, DHFR, DLL3, EFNA5, EHHADH, ENTPD7, FGD1, FGF11, FG F7, FRAT1, GADD45B, GALT, GRB2, GRM5, HDAC2, HSD3B2, KIR2DL4, MAP2K2 , MYLK3, OR10Z1, OR1I1, OR1J1, OR1M1, OR4X2, OR51T1, OR52M1, OR5A1, O R5K1, OR5P3, OR8U1, PDE7B, PIK3R2, PIPOX, POLE, POLR2B, POLR3G, PRKA CG, PRKCA, PRPH2, RARS2, SIAH1, SOAT1, SV2C, UCKL1, WNT1, WNT3, WNT9B , XCL1, HSD17B10, PDCD1LG2, TNFRSF17

Negative_13590	CD6, CGN, IL9, KIT, ADCY1, ADH7, ALDOA, APOA5, ASIP, BDNF, BPGM, C4BPB, CCL5, CCR7, CHSY3, CKS1B, CMPK1, CNGB1, FCGR2B, FGF9, FMO2, FMO4, GN A12, GPT2, GSTO2, GUCY2F, IDI1, IL28A, IL3RA, INPP4B, MAP4K4, METTL6, MYH1, MYH4, NCR2, OR11H4, OR2C3, OR4E2, OR4F15, PGLS, PIP5K1C, PPP3 CA, RFWD2, SEMA3B, SETDB1, STK11, TBL1X, TFPI, TNFSF11, TRDMT1, WASF 1, CSGALNACT2, TNFRSF18
Negative_13591	AK3, F9, GGH, LIF, LSS, PGP, XDH, ACOX2, AMY2A, ATP5F1, AVPR1A, CANT1, CCND1, CCNE2, CD226, CD72, CREB3, CXCL5, CYP2A13, DDB2, DPYS, DRD2, E 2F2, ERBB4, FADD, FUT5, GALNT5, GATM, GBE1, GMDS, GSTM5, HA01, HLA-C, IDH3G, IL20, INPP5E, IRAK3, ITGA8, MYL2, NAT2, NEU2, NME2, NNMT, OR 10H5, OR2L3, OR2S2, OR6K2, OR8I2, PDGFB, PDHA1, PIGC, PIGL, PLA2G3, P LAT, PLAU, POLR2K, POLR3D, PRKAR1A, PSPH, QPRT, RAC1, RAPGEF4, SEMA3 B, SEMA3C, SHMT1, SKP2, SSX2IP, STAM2, SUOX, TBXAS1, TNFSF18, TPM3, T YRP1, UGT2B28, WNT7B, WNT9A, XYLB, YWHAE, ATP6VOD2, TNFRSF10B
Negative_13592	ATM, JUN, KIT, VCL, ACSM5, AGMAT, AGRN, AGXT, ATP6AP1, AVPR1B, BMP4, B ST1, CBLB, CDK4, CHRM3, CHST12, CISH, COL11A1, COL6A1, CXCR6, DDX56, DUSP14, ELK4, F11R, FCER1G, FZD1, G6PD, GBGT1, GDF5, GNAS, GRIA1, GRI N1, GYS1, HDAC1, HTR2C, IAPP, IFNA13, IFNGR2, IKBKE, IL22RA1, INPP4B, KRAS, LARS2, MAP2K5, MAP3K5, METTL2B, MYL9, NAT6, NOTCH3, NT5E, OR1 3C4, OR2D3, OR52D1, PAK3, PIAS3, PIK3CD, PLA2G10, PLCB1, POLR2L, PON 2, PPP2R5C, PPP3R1, PRKCB, PROS1, PTGS1, RAF1, RASGRF1, RBPJ, SCLY, S IAH1, SMAD3, SNAP23, SOX17, STX10, SULT1E1, TAS2R50, TCIRG1, TGFA, T HTPA, TNFRSF4, TRADD, TUBA8, TYMS, ATP6V1E2, HLA-DPB1, HLA-DRB4
Negative_13593	ABO, AK5, CBS, DCN, DCT, FAH, GSN, TAT, TFG, ACSL6, ACVR1, ADCY2, ALAD, AMD1, ASIP, ATF2, ATP5E, ATP5G2, CBR1, CCR9, CDH3, CDK7, CLDN6, CLDN7, CNTNAP1, COQ3, CYP19A1, DGAT2L4, DVL2, ENO1, ENPP1, FGF6, FLOT2, FP GS, GNA14, GNAI2, GNRH2, GTSE1, GUCY1A2, HHEX, HIF1A, IFNAR2, IL22RA 1, IL3RA, IL6R, ITPA, KLRC2, KLRK1, LRP5, MAP3K2, MGAT2, MINPP1, MIOX, NANS, NAT2, NFAT5, NMNAT3, NR5A2, NTF4, NUDT2, OR13C2, OR13J1, OR2S 2, OR2T34, OR4D6, OR5K1, OR8B8, P4HA2, PIGA, PLTP, POLR1D, POLR2F, PO N2, PPBP, PTK2B, RAP1A, RAPGEF2, RASSF5, RXRA, SETDB1, SLC2A4, SMPD4, SSH2, STX3, TAS2R14, TBXAS1, TGDS, TPMT, UBA7, UPRT, UROS, VCAM1, VD AC1, VTI1B, WNT11, ATP6V1C2, TNFRSF13B, TNFRSF14
Negative_13594	DBT, FAH, FYN, GK, HYI, PLN, RPE, TNN, ACP2, ACVR2B, ADCY1, ADCY2, ADCY 3, AKR1C4, ALPPL2, ANAPC5, ATP5B, ATP5I, ATP6AP1, B3GAT2, BPNT1, BUB 1B, CBLC, CBR1, CCL21, CD27, CD36, CHKA, CHPT1, COQ7, CREB3, CSNK2B, C YP17A1, CYP26A1, DAPK2, DHRS4, DIAPH3, DTYMK, EDAR, ENTPD6, EPHB3, F ARSA, FOXO1, FUT9, FZD5, GANC, GJA1, GNA13, GNPAT1, GRIN2A, GSTA3, H IF1A, HLA-G, IGSF5, IL19, IL1B, ITGA1, ITGB7, KARS, KIR2DL2, NCKAP1L, NTRK2, OL R1, OR4D1, OR51B5, OR52H1, OR52K2, OR5AC2, OR5B12, OR5M8, OR5P2, OR7 D2, OR8K5, P2RX1, PAX8, PEMT, PFKFB3, PIGU, PIK3R1, PMM1, POLR2E, POL R2I, POLR2J, PPAP2A, PRKCD, PRSS3, SEMA4D, SOX17, STAT6, SULT2A1, TX NDC12, ULK2, XCL2, ZNRD1, HLA-DPA1, TNFRSF10B, TNFRSF10D

Negative_13595	ATM, DCN, GK2, ID4, KIT, ME2, ACVR1C, ADH7, AKR1C3, ALOX12, ALPI, B4GAL LT1, BAIAP2, BMPR1A, C3orf10, CACNB3, CAMK4, CASP7, CCKBR, CFL1, CLD N20, CMPK2, CSNK1A1, CTBP2, CXCL5, CXCR3, DARS, DDX56, DEGS1, DGAT1, DGKD, E2F4, EGLN1, EPHA2, EPHA3, EPHA6, EPHB6, FARP2, FASN, FSHB, G6P D, GSTZ1, GZMA, HMGCR, IFNA8, IL20RB, IL8RB, IMPDH2, INHBB, KIR2DL4, MAML1, MAN1A2, MCEE, MCM7, MYH7, NEUROD1, NFYB, NKX3- 1, NME4, OR14C36, OR2T1, OR2T2, OR52K1, OR6C76, OR7D4, PANK4, PDE8A, PDE9A, PDHA2, PGK1, PLA2G2E, PLOD3, PLXNA3, POLD4, POLR2B, PORCN, PP AP2B, PPP3CA, PRKCQ, QPRT, RAPGEF1, RASGRP3, RENBP, RPS6KA2, SC4MOL , SDHC, SMC1B, ST3GAL2, TAS2R42, TAS2R60, TBXA2R, THBD, TLR9, UBE2L6 , UNC5C, UROC1, CACNA2D1, HLA-DPA1
Negative_13596	F10, ME1, RFK, TKT, ACADSB, ACTC1, ARPC2, ARSD, CAMKK1, CDC14A, CDC25 B, COL11A1, ENO2, ENTPD1, FIGF, GNPAT, GPD1L, GSTO1, GTSE1, HAGH, HIP 1, HLA- DRA, IFNA5, IGF1R, IL1A, IL2RG, ITPKA, LIAS, NEFM, OR10G4, OR2F2, OR5 1I2, OR52I1, PIK3CB, PIP5K3, PIPOX, PLXNB3, PLXNC1, POLD1, POLR1C, P TPN6, RXRA, SEMA3E, SHC2, SMAD1, SMAD5, ST3GAL6, SULT1A4, TRIP10, TS TA3, CSNK1A1L
Negative_13597	AGL, C8G, CFI, F3, HYI, MVK, SRM, ACYP2, ADH4, AKT1, ALDH1L1, ALG2, AMP D1, ATP5L, B3GAT2, BPGM, CACNG5, CAMKK2, CAPN2, CBLB, CCL2, CD247, CD 28, CD34, CD36, CDC2, CFL2, CHAT, CRY2, CYP7A1, DGKQ, DKK4, EDN1, EIF4 B, ERBB3, FBP2, FUT4, FUT8, GCNT4, GMPR2, GSTK1, HARS, HHIP, HLA- DMA, HSD3B1, HTR5A, ICAM2, MAN1C1, MFNG, MLYCD, MOV10L1, MPZL1, NCAM 1, NFYB, NFYC, NTNG1, OR10Q1, OR2L8, OR2M5, OR2T29, OR4C16, OR51B6, O R52E4, OR52E6, OR5AK2, P4HA2, PDIA4, PFKM, PIP4K2C, PON1, PRKAA2, PR KCG, PSENE1, PYGM, RDH10, RERE, SDHA, SEMA4A, SENP2, SPHK1, SPP1, STA T2, STX5, SYNJ2, TAS2R1, TAS2R40, TBL1XR1, THY1, TLR3, TMLHE, TUBA3E , TYRP1, VAV1, VEGFB, WNT10A, WNT8B, PAFAH1B1
Negative_13598	AGXT2, ALDH5A1, AOX1, ARSE, CES2, CHD8, CHEK2, CHRM5, COL4A2, CRKL, C YP21A2, DAG1, ENTPD3, EPHA1, EPHA8, ETNK2, FLAD1, GAPDH, GNAI3, GSTA 3, HEXA, IRS2, JAK1, LILRB3, MBL2, MECR, MTHFD1, OR10A3, OR2M4, OR56A 1, P2RX5, PAPSS1, PDGFRB, PFAS, PIAS2, PIP5K1C, PLCB4, PNPO, PTGER3, PTPN11, RAC2, RALA, RHEB, ROCK2, SELP, TBXAS1, TNFSF14, TUBB2C, UGT2 B17, ULBP1, WASF3, WNT8B, CTNNBIP1, MAP3K7IP1, SUV420H2
Negative_13599	BTD, F9, FYN, GNE, LAT, PGD, AARS, AARS2, ABLIM3, ACACB, ADAM17, AKR1A 1, ALDH3B1, ARSE, B4GALT6, CACNA1S, CAMK2B, CCNB1, COMT, CRLF2, CSNK 2A1, CTLA4, CTNND1, DDIT3, EDAR, EPHA8, EPHX2, ESAM, EXT2, F13A1, FGF R1, FZD1, GALNTL1, GLDC, GPD1L, GSTP1, GZMB, HNMT, HSD17B8, IFNK, INS RR, LLGL1, LTA4H, MCM3, MCM4, MDM4, MKNK1, MYH8, NLGN2, OR1N1, OR2A2, PCYT1B, PDE4B, PDE6D, PIK3R4, PITX2, PLA2G10, PLA2G4A, PLCB3, PNPO, PPP2R1B, PRKAR1B, PRKAR2B, RELB, RPRM, SEMA3E, SEMA4F, SPTAN1, STAT 5A, STAT6, STX16, TIAM2, UROD, VCAM1, VEGFC, WARS, WBSR17, B4GALNT1
Negative_13600	AR, ASL, C7, CR1, F9, GHR, GK, SHH, SRM, ABAT, ADCY7, C7orf16, CD59, CDC 45L, CHKB, CLDN14, CLDN22, CLDN6, CSF2RB, CSF3R, CTF1, CTNNA3, CTSB, CYSLTR2, DOLPP1, DUSP4, DVL1, E2F4, EHMT2, EIF4E, ENTPD7, FOXA3, GBE 1, GCLM, GNB1, GSTT1, HES1, HSD3B1, HTR6, IFNA8, IL12RB1, INPPL1, KIR 2DS5, KITLG, LIPG, MGAT4A, MRAS, NFATC4, NRG2, NRG4, NTF3, OR2G2, OR5 1B6, OR52E6, OR52K1, OR6A2, OR8S1, OSMR, PCYT1A, PDE3B, PDE4A, PKMYT 1, PLCB2, PLCD3, PLXNC1, PON2, PPM1B, PPP1R3A, PRKACG, PRPS2, PSEN2, PYCR2, QPRT, RENBP, ROB3, RPE65, RPN1, RPS6, SETDB2, SMURF2, SOD1, S RD5A2, STX1A, STX5, SV2A, TNFRSF4, TRAF4, TSHR, VAMP4, VEGFB, XCL2, Z FYVE16, C1GALT1C1, SERPINC1



Negative_13601	F2, ABL2, ACADL, ACSM3, ADAM10, ADRB1, ALOX15B, ANPEP, ATP5E, BLVRB, CACNA1F, CCL11, CDH5, CDKN1B, CNTN2, CSDA, CYP4A22, DIAPH1, E2F1, EP HB6, GGT1, GRIA3, HEXB, HTR4, IFNA8, IPMK, IRAK1, KLK3, MAN1C1, MAP2K 5, MAPK11, MGAT4A, NCSTN, NFX1, NR1D1, OR10H4, OR10K2, OR12D3, OR1J2 , OR4F15, OR51I2, OR5B17, PAFAH2, PDE1C, PLA2G2D, PLA2G2E, PLCD1, PR KCZ, PTTG1, RFXAP, ROCK1, SV2C, TAS1R3, TICAM2, TJP1, USE1, WNT16, WN T4, AASDHPPT
Negative_13602	ABO, CD4, CKB, HGF, IL4, NLK, PC, PGP, ACAA1, ADORA2B, B3GNT5, B4GALT1 , B4GALT4, BNIP1, CD226, CHEK2, CHST13, CTSB, CXCL16, CYCS, CYP4A22, DNMT3A, E2F1, ENPP7, FGFR3, GAB1, GMPR, GNAL, GRB2, GRIN2A, GUK1, IGF 1, IL28B, JUND, KIR2DL4, KIR2DS5, KITLG, LRAT, MMP14, MYLK2, NCR3, NR G3, NRP1, NTRK2, OR10J5, OR14C36, OR2D2, OR2T12, OR56B4, OR5T3, OR5V 1, OR8S1, PAPSS2, PARVB, PDE5A, PKLR, POLR2G, PPP3CB, PRODH2, PTGIS, PTPMT1, RBL2, SCIN, TAS2R13, TUBB6, HLA-DQA2, PPP1R12A
Negative_13603	AUH, LSS, PML, SCD, WAS, ACSM2A, ADSSL1, ANAPC5, ARPC4, ATP2A3, BCKDH B, BCL2L1, C1QA, CASP7, CCL5, CD244, CDK7, CHUK, CLDN10, CLDN11, COL3 A1, CPS1, CTNNA1, DDX56, EGLN1, EHMT2, EPHX2, GALE, GBA3, GCNT3, GSTA 1, GUCY1B3, GZMB, HPSE2, IDH3B, IL9R, INHBE, IRF5, ITGA2, LIPE, LPAR1 , MAN1A2, MAP3K2, MAP3K5, MCCC1, MPDZ, MYH14, NCOR2, NFASC, NTNG1, NU MBL, OGDH, OR10A3, OR10H4, OR14J1, OR1K1, OR1M1, OR1S1, OR2F1, OR51B 6, OR7D4, PDE1C, PDE6H, PDXP, PIGK, PIM2, PKM2, PRKAR2A, PSEN1, SDC2, SELE, SETD1A, SETDB2, SNW1, SPI1, SQLE, STAT5A, TGFB1, TLN2, TP73, TU BB, VAMP1, CSGALNACT1, MAPK8IP2, TNFRSF6B
Negative_13604	GGH, HK2, ME2, MOS, OAT, SP1, ACY1, ACY3, APOC3, B3GALT2, BBC3, BLVRB, CCKAR, CCL27, CD46, CHPF, CHRM5, CNTNAP2, CYFIP2, DAPK1, EPHB1, EPHB 4, FARS2, GNRH2, HSD3B1, IFNW1, IL23A, IL24, IL8RB, IL9R, INADL, IQGA P2, LARS2, LEPR, MCCC2, MDH1, MGAT3, NAT6, NEU2, NME6, OR13C4, OR1E2, OR1J2, OR4C11, OR4D6, OR51A2, OR52E8, OR52N1, OR56A1, OR7C1, OR8D4, OR8G1, OXCT2, PDE4D, PER3, PIGQ, POLR2C, POLR2D, PPAP2B, PPP3CA, PRK CZ, PTCH2, ROBO1, SEMA3B, SEMA3F, SFRP2, SHC1, SMARCA5, TGDS, TSHB, U LBP1, ULK2, WWP1, ST6GALNAC4
Negative_13605	APP, ASL, C7, CRK, SRM, ACP6, ACVR1B, ATP6V1D, B3GALT4, CBLB, CCKAR, C CL16, CCL17, CCR10, CCR5, CHRM3, CYP2E1, CYP2S1, CYP4A22, DCXR, DFFA , DLL1, DOCK1, DTX3L, DTX4, FARSB, FPGT, G6PC2, GUSB, H6PD, HNF1B, IFN A21, IL20, LIMK2, MAT1A, MCM2, MDM4, MGAT2, NADSYN1, NANP, NCKAP1L, N RG4, NRP1, NUDT9, OR10G7, OR10J3, OR10T2, OR1L1, OR4K5, OR51E2, OR52 N5, OR5D14, PAK6, PARVA, PCCB, PFKL, PI4KB, PLA2G5, PLXNC1, PRKY, PRS S1, ROBO1, SEMA7A, SMARCA2, SNAP25, SOD1, ST3GAL5, STX7, TAS2R3, TAS 2R48, UBE2K, VAV2, WNT7B, ATP6VOA1, ST6GALNAC3, TNFRSF10C
Negative_13606	CRK, EPO, GK2, HK1, LHB, LPL, TAT, ACTA1, ACTN1, ADH1B, AMPD3, APLP1, A TP12A, B3GNT3, BCMO1, CACNB2, CANT1, CCL14, CCR6, CDK5, CLDN1, CLDN1 0, CNTFR, CTPS2, CYFIP1, DAG1, DGAT2L4, DVL2, FRAT1, FZD6, GFAP, GFPT 1, GNAI1, GNAO1, GNPAT, GPD1, GRIN2D, HAGH, HAO2, HTR4, ITGA2B, ITGA3 , ITGAL, JAK2, LAMB2, LIPA, MAP2K4, MAPK1, MEF2C, MGAT4A, MGST1, MKNK 2, MPST, MYLK3, NCR3, NR4A1, NRG3, OR10C1, OR13C9, OR1Q1, OR1S2, OR2M 2, OR4P4, OR52K1, OR52R1, OR56B4, OR5L2, OR7A10, P2RX1, P4HA1, PDE4C , PIGA, PIK3R5, PLA2G10, POLE2, PPP2R5E, PRKCA, PTPN11, RAF1, RASGRP 1, RPS6, SC4MOL, SGMS2, SIGLEC1, SLC12A2, SOCS2, SULT1A4, TAS2R13, T KTL1, TPH2, TUBA3C, UCKL1, UMPS, WHSC1L1, YWHAH, YWHAZ, HSP90AA1, MA PK8IP3, PRICKLE1

Negative_13607	CFH, CTH, GCK, ID2, ACAT1, ADH1A, ATG3, BBC3, CACNG8, CD70, CFTR, CLDN20, CREB5, CTSL1, CXCL5, CYP19A1, CYP27A1, DDX4, EPHA6, EPHB6, FMO2, FZD1, GALNT3, GALNTL2, GFPT1, GNB1, HLA-DRA, HSD3B2, IDI1, IFNA8, IL22RA1, IL23A, ITPKB, KIR3DL3, LDHAL6A, MALT1, MASP1, MASP2, MCEE, MYH9, NR1H3, OR51L1, OR51S1, ORC4L, ORC5L, QPRT, RALBP1, RDH10, RGS3, SDHC, SRD5A1, THTPA, TMLHE, UGT8, UNC5A, MAP3K7IP1, SLC25A31
Negative_13608	C5, CBL, MVK, ADCY4, AGPAT2, AGTR1, AHCYL1, ALDH3A1, ARHGEF4, ATP6V0B, CACNA1B, CCNA1, CCNB3, CSNK1G3, CXCL1, DGKI, E2F4, EDNRA, EPHA1, FGF8, GAD2, GOT2, HRAS, HTR2C, ISYNA1, ITGAE, KYNU, MAML3, MAN1A1, MCA T, MNX1, NCKAP1L, OR14I1, OR4D11, OR5C1, OR5T2, OR6C76, OR8B12, PER1, POLR3G, RCHY1, RDH10, RPS6KA2, SETD1B, SNAI2, SPCS1, SREBF1, TAS1R1, TBL1XR1, TBL1Y, TJP2, WASF3, WWP1
Negative_13609	ADK, FAS, LTB, MPZ, OAT, RPE, ABLIM2, ACHE, ACOT12, ADCY1, ADCY7, ADRB3, ADRBK2, ADSSL1, ALAS2, ALG10, AMDHD2, AMY2B, ANAPC5, APAF1, ARSE, ATP13A2, ATP2A1, ATP5F1, ATP5J2, B4GALT3, B4GALT6, C4BPB, CCL23, CCND3, CD48, CHST13, CTLA4, CXCL11, EHMT2, EPHA3, EXTL3, FGF8, FPGT, FUT7, GAPDH, GUCY2F, HSD11B1, HYAL1, IL28RA, KLKB1, LAMB2, MAGI1, MAP3K1, MLLT4, NEFL, NFASC, NFATC1, NRG2, NTF3, NUDT12, OR10G9, OR1B1, OR2A4, OR2AG2, OR5AS1, OR5D13, OR7A5, P4HA3, PDHA2, PDHB, PFKL, PIGM, PIGT, PLXNB2, POLA1, PON2, PPA2, RASGRF1, RFNG, RPS6KA4, SLC2A1, SPHK1, SQLE, TAS2R41, TAS2R8, TNFSF9, TRPC1, TUBA1C, TUBA4A, UGCGL2, WNT5A, ZAP70, ARHGEF12, PAFAH1B1
Negative_13610	CFD, F5, F9, GSN, LYN, ABLIM3, ACADL, ADIPOQ, ALG9, APOA1, ATP6AP1, ATP6V1F, BBC3, BET1L, BMP8B, CCDC6, CCL23, CCL26, CCR3, CDC6, CHUK, CLDN8, CMAS, COL4A6, CSNK2A1, CUL1, CYP21A2, DDIT4, DHX58, E2F3, EREG, FADS2, FGD3, FUT1, GALT, GGT7, GLO1, GMDS, GPX7, GRHPR, GRIN2A, HAO2, HRH2, HTR6, HYAL1, IFNAR1, IL1B, INPP1, MAP3K1, MAP3K8, MAPK14, MGST1, MICA, MYH7B, NAGLU, NAT5, NFASC, NFATC3, NME4, NTF3, NTSR1, OR14A16, OR1A1, OR1D5, OR2C1, OR4F4, OR5C1, OR6K3, PDHA2, PIAS3, PIGW, PLCE1, PLD1, POLR2D, PPP2R5D, PRPS1, PTPRM, PYCR1, RPS6KA4, SEMA3C, STMN1, TAS2R42, TCIRG1, TRAF5, WNT8B, MAP3K7IP1, PRICKLE1, TNFRSF17
Negative_13611	CGA, SRF, ACAT2, ACOT11, ACSM3, ACTN4, AMD1, APC2, ATP5J, C4BPA, CACNB4, CCND1, CDC25C, CHIA, CHRM1, CHST11, CHSY3, CKS1B, CLDN8, CYBA, CYP3A43, CYP4A11, DLL3, DRD2, F2RL1, FBP2, GMPPB, GRIA2, GSTM2, HDAC2, HPSE2, IKBKE, IL12B, INPP1, ITGAM, KYNU, LTBP1, LTBR, MGAM, MYD88, NANS, NCAM2, NCOA4, NEFM, OR10G8, OR2T12, OR3A2, OR51Q1, OR52J3, OR6A2, PARVB, PDGFRA, PHKA2, POLR1C, PRKCZ, PSPH, RCHY1, SESN2, SMAD1, SORD, SPAM1, STK36, UPP2, WNT8A, ZBTB16, ST6GALNAC3, TNFRSF1A, TNFRSF1B
Negative_13612	CAD, LCT, ME2, AFMID, APOA2, ARHGAP5, ARHGEF6, ASS1, BUB1, CAMK2D, CAMK4, CCR5, CHAT, CLDN3, CLDN9, CREB3L1, CSNK1D, CTPS2, CYP21A2, DDX4, DGKB, DGKH, DLL4, DNMT3B, ETNK2, EVI1, FZR1, GCNT4, GMPR, GP1BA, GSTA1, GSTO2, GUCY1A2, GYS1, HADHA, HCLS1, HSD3B7, IARS, IDI2, IFNB1, IRAK1, LARS, LCMT1, LYPLA2, MASP1, METTL2B, MGAT1, MGAT5B, MLYCD, NAGLU, NCR3, NME6, NRG2, OR2L13, OR2T5, OR4C12, OR4N5, OR51I2, OR8U1, PCCB, PIGX, PIK3CB, PIK3R5, POLR1B, POLR1E, PTK2B, RELA, RRM1, RUNX1, RXRB, SDC3, SEMA3D, SH2D1A, SIAH1, SKP2, SLC25A5, SOS1, ST3GAL6, STX16, TAS2R40, UGT2A3, UNC5C, UROC1, VEGFC, TNFRSF12A

Negative_13613	AK1, C4B, CSK, GH1, MPI, SRM, ACSL5, ACSM1, ALDH9A1, ANAPC1, ANAPC10, AOC2, ARNTL, ATP6V1D, BCKDHB, BDH2, BLNK, BMP8A, CCKAR, CDC26, CDH1, CHPF, CHRM3, COL4A1, CRKL, CSAD, CX3CL1, CXCL1, CYP11A1, CYP19A1, CYP3A43, EDNRA, EFNA3, EVI1, EXT2, FCGR3B, FGF19, FGFR4, FLOT1, FPGT, FSHB, FZD4, GLDC, GPLD1, GUCY1A2, HSPB1, ICAM1, IDI2, IL7R, ITGA8, ITGB1, KITLG, LAMB1, MAOB, MCCC2, METTL2B, MKNK2, MYH4, MYH8, NADSYN1, NCR1, NOTCH2, OR10H3, OR13H1, OR4C6, OR4D5, OR52N2, OR6M1, PANK2, PDGFB, PIGH, PIK3C2A, PLA2G10, PLCB3, PNPT1, POLR3A, POMC, PPCS, PPM1A, PPM1D, PPP1R3C, PPP2R5E, PRKX, SFRP5, SPRY1, SPRY3, STAT6, TRADD, TRDMT1, TRHR, UBA1, VEGFB, VNN1, ARHGEF12, ATP6V0E1, PNLIPRP1, SUV420H2, TNFRSF6B
Negative_13614	C6, DAO, EBP, F10, F2R, FAH, GGH, ID3, SFN, SPN, VTN, ADCY7, AKR1C1, ALCAM, ALG1, ALG10B, ALG11, ALG12, ANGPTL4, ATP6V1D, BMP8A, BRAF, BST1, CCL17, CCR3, CCR8, CDC25A, CDC42, CDS1, CREBBP, CTSS, CXCL6, CYP17A1, DAPK3, DLL4, EARS2, ENPP2, EPHB4, FPGT, FZD7, GALNT5, GDF5, GMPS, GSTZ1, HEXA, IFNA7, IL13RA2, IL17B, IL19, IL1A, IRS4, ITGB5, JAG1, JAK2, KIR2DS5, LYPLA1, MAN1A2, MTMR1, NAGA, NEFL, NFASC, OR10C1, OR5J2, OXCT1, P4HA3, PAK1, PDE1B, PDX1, PDXP, PER1, PGAM2, PIK3CD, PLCG2, PNM1, PYGM, SEMA4A, SRGAP3, STX10, TAS2R41, TJP2, TLR3, TNFRSF9, TNFSF9, TUBB, UGDH, ULBP1, WNT3A
Negative_13615	C3, CAT, IL6, TYR, ZYX, ABAT, ACO1, ACOT12, ACOX3, ACVR1B, AGXT, ATN1, B4GALT1, BCAT2, CACNA1G, CACNB4, CAMK2A, CCNG2, CHDH, CPT1C, CRB3, CTSB, CYP2C9, DBF4, DDX55, DGKH, DHRS4L2, DPM3, FARSB, FIGF, FOXO3, FPGS, GALNTL5, GGCX, GSTA2, HCLS1, HSD11B1, IL23R, INMT, KIR2DS4, KLRK1, LDHAL6A, LIFR, LRDD, MAP3K14, MGAM, MGAT3, MMP1, NCK1, NCR3, OR10G8, OR14J1, OR1L6, OR2AE1, OR4C15, OR51B5, OR51E2, OR52E8, OR5L1, OR6K2, OR6X1, OR7A10, OR8D1, PCK2, PGAM4, PIGF, PIGL, PLAUR, PMM1, PPP3C, PSME1, PTPRR, RAP1B, RHOQ, SESN1, SETMAR, SLC27A4, SPTLC1, SRD5A2, STX12, STX6, TMLHE, TSNARE1, UGT8, WNT11, WNT2, ARHGEF12, ATP6V1E1, CACNA2D3, HSD17B10, SERPINB5
Negative_13616	C3, C8B, DBT, LEP, PRL, PTS, ACSL6, ACVR2B, ADRB1, ALDH3B2, ALDOB, ALG10, ALOX5, AMPD1, B3GALT5, BIRC5, BMP8B, CD40LG, CDC26, CDIPT, CHEK2, COQ5, CREB3L2, CYSLTR1, DDIT3, DDX50, DERL1, DUSP5, FZR1, GCNT1, HDHA, HMOX2, ICAM2, ICAM3, IFNA4, IFNA6, IL6ST, IMPA2, INHBB, INPP4A, IPMK, LLGL1, MAD1L1, MAP4K3, MAPT, MAT2B, NAGK, NCF1, NFYB, OR2A12, OR2AE1, OR2AG1, OR2C3, OR2M5, OR2T33, OR2V2, OR4K1, OR52J3, OR5D13, OR7A10, OR8A1, OR8H1, PDGFRA, PDGFRB, PDIA4, PIAS1, PIGT, PIPOX, PNLI1, POLD1, POLR2A, PON1, PORCN, PRODH, PTGFR, SDC4, SFRP5, SHC4, SOCS5, STK11, TM7SF2, TP73, TUBA1B, TUBB2A, UGDH, ULBP3, WASF3, TNFRSF1A
Negative_13617	CD2, GSR, IL5, SCD, ACP5, ACSM2A, ACVRL1, ADCY6, ADORA2A, AKR1C2, ALDH1L1, ALDH5A1, AOC2, APRT, ARRB1, BMPR1A, C1QB, CDC27, CDIPT, CEBPA, CHAD, CLDN11, CLDN16, CMAS, CMPK1, COL4A4, CREB3L1, CSDA, CYSLTR2, DVL2, EXOC7, FPGS, FZD5, HLCS, IFNA7, IGF1R, IL19, IL29, IL7R, ITGAM, KIR3DL2, LEF1, LIFR, MAP2K2, MAP3K11, MAPK13, MMP7, MYH3, MYH9, NT5C, ONECUT1, OR11L1, OR12D3, OR14J1, OR4K1, OR52M1, OR5I1, OR7A17, P2RX6, PIK3R1, POMC, PPAP2C, PRKACG, PRKX, PRKY, QPRT, RAC3, RASGRF2, RASGRP1, RASGRP4, SNAP23, SPTAN1, SREBF1, STK4, TAS2R14, TNFSF10, TNFSF12, TNFSF4, ULBP3, VAMP3, WNT10A, YWHAH, ATP6V1G2, PAFAH1B1, PDCD1LG2, TNFRSF17

Negative_13618	CGA, GSS, ACPT, ALOX12, ATP5I, CASK, CCL22, CERK, CHEK1, COL5A1, CPT1 C, CRKL, DNMT3B, DTX2, FARSA, FGFR3, G6PD, GUCY1B3, HDAC1, HEXA, IL2R G, INPP4A, IQGAP2, LIMK1, MASP1, NCAM2, NCOR1, NLGN2, OR1F1, OR2T8, O R4C6, OR52B6, OR52K1, OR6B2, OR6B3, PDE4D, PIK3CD, PPP1R3A, PPP3R1, RAB5A, RALBP1, RAPGEF3, SKP1, SLC25A6, SNAP23, SSX2IP, SULT1A1, TAS 2R1, TFPI, TNFSF4, WNT3A, WNT4, KIR2DL5A, SERPINC1, SERPIND1
Negative_13619	CRH, ME1, TNN, AKT2, AMD1, ATP6VOC, B3GAT1, CACNB2, CD72, CRLS1, CXCL 11, CYP2C9, CYP7A1, DDX18, DHODH, DPAGT1, DUSP5, FGF22, GCNT3, GNA15 , GPAM, GUSB, HEMK1, ICOS, IFNA13, IL18R1, IRAK3, ITGA1, LYPLA2, MAP3 K2, MMP9, MPDZ, NARS, NPR2, NTRK2, OR3A3, OR4M2, OR51G1, OR5AP2, OR5J 2, PPP1CA, PRKCI, PRKX, RASGRF1, RASGRP3, RXRB, SV2A, TSC1, TUBA8, WN T8A, YARS, SERPINA1, SERPINF2, TNFRSF14
Negative_13620	C7, FUK, HAL, NPY, OAT, PGF, ADH5, ALG13, ATG3, BMP5, BMPR1A, CD47, CDK N2B, CTSG, CYP2A6, DDX18, GLDC, GMPPB, GRM1, GSK3B, HAGHL, HNF1A, IL1 2A, IL17RB, IL18, IL8RA, IQGAP1, ITCH, ITGA2, JUND, KRAS, LDHA, LEF1, LTB4R2, MAP3K13, MMP2, MTFMT, NFATC4, NPR2, OR10J5, OR1L6, OR7A17, O R8J1, P2RX1, P4HA1, PARVA, PER2, PGK2, PIGA, PIPOX, PLA2G2F, PLXNB2, PVRL3, RBX1, ROCK1, SAT2, SC5DL, SPCS3, SPHK2, SPRY3, ST3GAL6, TAS2R 14, TBL1Y, TLR4, UBA7, UNC5D, YWHAZ, ATP6V1G2, HSP90AA1, ST6GALNAC3
Negative_13621	CGN, F2R, GSN, IL4, TAT, ADCY9, AGRN, AK3L1, AKR1C4, ALG6, ANPEP, ARRB 2, ARSA, ATP2A3, AVPR1A, BIRC3, CALML3, CAMK2A, CCL15, CCL5, CD226, C D274, CHRM1, CLTCL1, CPT1A, CRLF2, CYP4A22, DKK2, DUSP3, EFNA3, EPB4 1L1, EPHA7, FSHR, GIT1, GMPPA, HIBCH, HIP1, HLA- G, HTR5A, IDH1, IDI1, IL19, LILRB3, MDM2, MMP14, NARS, NCR2, NFKB1, NP R2, OR10Q1, OR12D3, OR2D3, OR4F6, OR4K15, OR5H6, OR6C4, OR6X1, OR8G1 , OSMR, P2RX1, PAK3, PFKFB2, PGAM1, PIGF, PIGH, PIGS, PLA2G5, PLXNC1, PPARD, PPP1CC, PPP2R5E, PRKAA1, PRKAB2, PRKACB, PSME3, PTTG1, RASA1 , RCHY1, RUNX1T1, SDHA, SEMA4F, SKIV2L2, SLIT1, SMPD4, SPHK2, TAS2R1 , TAS2R40, TAS2R41, TAS2R8, THTPA, TUBA1B, UBE2L6, WARS, WNT6, ATP6V 1C1, C1GALT1C1, HSD17B12, PAFAH1B1
Negative_13622	ADA, AMT, CFI, EGF, F5, GP5, LIF, SRC, ABLIM1, ACLY, ADCY8, AMDHD1, ARN T, B3GALT5, CADM3, CALML5, CASK, CCND2, CCR4, CDK4, CDK7, CMAS, CMPK1 , CXCL2, DARS2, DTYMK, DUSP16, EGLN3, EPHA4, EPHB3, FCER1G, FGD3, FMO 5, GALM, GGPS1, GNPDA1, HIF1A, HLA- DRA, HTRA2, IARS, KIR2DS4, LRDD, MAN1B1, MLLT4, MNX1, NMNAT3, OR2B6, OR3A1, OR51B5, OR52D1, OR8K3, PAK4, PANK4, PDGFC, PEMT, PLAT, PLXNA3 , POLR2C, PPP1R3C, PRKCD, PSME3, PVRL2, RARA, SDHC, SEMA3B, SETD1A, S TX1B, TAS2R9, TP73, TUBA1C, TUBAL3, YARS, CSGALNACT2, PNLIPRP1, TNF RSF11A
Negative_13623	HYI, AADAC, AASS, ACSM1, AGPAT3, ALG10B, ANAPC4, APAF1, BAIAP2, BDH2 , BMP2, CNTNAP2, COX15, DFFB, DGKH, ENAH, EPB41, FADD, FCGR2B, GPAM, G STK1, GSTM2, GUCY1A2, HIP1, HSD11B2, HSPA1B, LYZL1, MAPK10, MDM2, ME TTL6, OR1N2, OR2L3, OR2T33, OR4K2, OR5D16, OR6C75, PDE8B, PI4KB, PIG L, PIGX, PIK3CA, PIK3CD, PIK3R3, POLR1C, PTCH1, PTDSS1, PTPN6, RELA, RXRA, SKP2, STX18, TUBA1A, TYRP1, UNC5A, WBSCR22, MAPK8IP1
Negative_13624	CAT, GDA, SDS, TEC, ACOX2, ACTG1, ADIPOR2, ARHGEF7, ARPC1B, BMP6, CCL 11, CDS2, CREB1, CRHR1, CRLS1, CTNNA1, CTSB, E2F1, ENTPD3, EXTL3, FAS N, FZD3, GABARAP, GADD45B, GLUD1, GNPAT, GRLF1, GUCY2D, HMBS, HRH1, H SD17B1, IRAK2, LDHC, MYD88, NAT6, NGEF, OR10H5, OR10P1, OR11G2, OR1M 1, OR2A14, OR51I2, OR51T1, OR6K6, OR8S1, PIK3CA, PLA2G10, PLEKHA8, P OLR2L, PPP2CA, PRKACB, PTGES, RAC3, RBL1, RENBP, RPS6KB2, SCIN, SMC1 B, TJP3, ARHGEF12, TNFRSF13B

Negative_13625	C6, FUK, IL3, JUN, TKT, ACADS, AGPAT2, AGPAT4, ATP5J, BDNF, CACNB1, CA RS, CCL20, CCR10, CDKN1B, CHEK1, CLDN22, CLTA, DAD1, DFFA, GALT, HCLS 1, HSPB1, IKBKB, IL1B, ITGB6, JAK1, KIR2DL2, MAD2L2, MAP3K6, MASP1, M CEE, NFATC4, NRCAM, OR10AD1, OR10T2, OR11A1, OR51I1, OR6C74, OR7A10 , OR7G1, OR8A1, PIK3R5, PLCB4, POLD2, PPP2R2C, PTK2, PTPN11, RCHY1, S AT2, SGMS2, STK36, STX12, VKORC1, HSP90AA1, MAPKAPK3, PAFAH1B1, TNF RSF11A
Negative_13626	SMS, ABCC8, AHCY, ALDH3B1, BAIAP2, BDKRB1, C1QA, CYCS, CYFIP2, CYP2C 8, DIAPH2, DNMT1, EDN1, HIF1A, HSPA8, IARS2, IKBKE, IL12RB1, IL2RA, I L2RG, INHBC, MAP2K2, MGST3, MNX1, MTR6, NCK1, OR1L8, OR4K13, OR4L1, OR4M2, OR56B4, OR5P2, OR6X1, OR7D2, P2RX4, PDE6D, PGAM1, PIK3CB, PIM 1, POLA2, RXRB, SC4MOL, SCD5, SLC33A1, SMARCA2, SOAT2, SSH3, TLR9, TM 7SF2, WASF1, WIF1, WNT16
Negative_13627	BTK, CBS, DCC, F7, LCK, PDC, RET, TNF, ACY1, AKR1A1, ARPC1B, ATP2A3, AT P5I, ATP6V0B, B4GALT1, BAI1, BDKRB1, CADM3, CBR1, CCL24, CD19, CD40, CD74, CD79A, CKMT2, CMBL, CRLF2, CSF1, CXCL12, CYFIP2, DHRS4, DPYSL2 , ELK1, ENPP1, EPHA3, FGF4, FIGF, FUT7, GPLD1, GPX7, GSTM1, HMOX2, IDH 2, IGFBP3, IL9R, INHBB, ITGB6, MAT1A, MS4A2, MYH4, NCOR1, NMNAT3, NOT CH3, NRAS, OR11G2, OR2A25, OR2A5, OR2AG1, OR2C3, OR2K2, OR52B4, OR5A N1, OR5P3, OR6C74, OR6N1, OR7C2, OR8H1, PANK1, PDE8B, PGK1, PLXNA1, P OLR1B, POLR3H, PPAP2B, PPID, PPM1A, PTPRJ, RXRG, SC4MOL, SH2D1B, SUC LG2, SULT2B1, TAP2, TAS2R14, TAS2R41, TAS2R49, THY1, TNFRSF8, TUBA1 B, UCKL1, VEGFA, VNN1, VTI1B, HLA-DPA1, MAP3K7IP2, PAFAH1B1
Negative_13628	ABO, F3, GK, IL4, MVK, ACADSB, ACPT, ANAPC5, APRT, BIRC2, BMPR2, CAMKK 1, CCKAR, CCL5, CCND3, CD79A, CD86, CHEK1, CHPF, CLTA, CTSB, CTTN, CXC L16, CXCR3, DDX18, EPB41, ETS1, FARSB, FZR1, GLB1, GRAP2, GRIN2C, GRI N2D, GRM5, GSTM5, HAO1, INSR, JAK2, KIR3DL1, LCMT1, MAP3K13, NRXN3, N TN1, OR2T8, OR4L1, OR52W1, OR5AS1, OR6C1, OR6C3, P4HA2, PDE6H, PDXK, PIK3R2, POLD1, POLR2A, POLR3A, PPM1B, PRSS2, PTDSS2, PTPN11, PTPN6, SMURF1, SNAI1, THY1, TSHR, UGCGL1
Negative_13629	BCR, CAD, CBS, CTH, F10, F7, FAS, SDS, SRM, ACAA1, ACACB, ACADVL, ACSS3 , ACYP1, AGRP, ARPC1B, B3GNT2, BBOX1, BMP5, BUB3, CCNB1, CDK5, CDKN2A , CFL1, CHD8, CHRM1, CMAS, CPT2, CTBP2, CXCR5, CYP1A2, DMGDH, EP300, E PHA8, EPHX2, FADD, FARSB, FGF2, FLAD1, FOXO3, FSHB, GNAQ, GNRH2, GRAP 2, HCLS1, HSD17B2, IFNA4, IFNAR2, IKBKE, IL12RB1, IL17RB, KDSR, LDHD , LTB4R2, NTN1, OR1N2, OR6C76, P2RX1, PANK1, PAPSS1, PDE6D, PFKFB3, P HGDH, PIP5K1C, PITX2, PLA2G2E, PLXNB1, POLR1A, PPP2R2C, PRIM1, PSME 1, PTCH2, RALBP1, ROBO2, SFRP2, SMAD1, SOX17, SSX2IP, TSHR, XCL2, ATP 6VOD2, HSD17B12
Negative_13630	C9, CRK, GK2, HGF, AASDH, ACYP2, ALDOB, ARHGEF6, ASMT, ATIC, ATP5D, C3 orf10, CCR10, CCR2, CDH15, CHSY3, CREB3, CTPS2, DDX18, DLST, DRD2, DV L3, FGF14, GALNTL2, GLDC, GUCY1A2, HRAS, HTR2A, HTR2C, IGFBP3, MAPK1 , MPDZ, NOTCH1, OR1J1, OR1L4, OR2A4, OR2Z1, OR4C15, OR4F6, OR5AN1, PA X8, PERP, PGK1, PGS1, PLAUR, POLR1C, PPAP2C, PPCS, PPP2R5D, PTGES, RB KS, ROBO2, ROCK1, RPSA, SDHD, SENP2, SGPP2, SHC2, SOCS2, SRGAP3, STX3 , STX8, THBD, TNFSF11, TNFSF18, TSTA3, WNT11, WNT5B, YWHAB, HSD17B12

Negative_13631	ADA, AMT, C3, IL2, IL4, ACADS, ACSL4, ADCY6, ADRA1D, ALDH1A1, ALOX15, AMHR2, ANAPC2, APOE, ATIC, B4GALT2, CCL17, CCL3, CCND2, CD19, CD80, C DC7, CHIA, CHKB, CLCF1, CTPS, CYP3A43, DKK2, E2F1, EXT1, FGFR4, GUCY1 B3, HAO2, HARS, HNF4A, HNF4G, IDH3B, IL2RA, ITGAX, ITPA, KLRK1, LALBA , LTA4H, MTAP, MTHFS, MYH10, NEU3, NOX1, NPR1, NTF4, NTRK1, OGDHL, OR1 OG8, OR10Z1, OR13H1, OR2M4, OR2T12, OR52W1, OR5D18, OR5L1, OR8U1, PA NK3, PLTP, PNLIP, PNPLA3, POLE, PPAT, PPP2R5C, PPP3R2, PRKACA, PRSS1 , PTGS1, RALA, RAPGEF2, RFWD2, SELE, SNW1, SOAT1, SOS1, SPRY1, SRD5A2 , STAT1, SULT1A4, SULT2A1, SUOX, TUBB6, VAMP1, VAMP4, ZMAT3, ATP6V1B 2, CTNNBIP1, TNFSF13B
Negative_13632	FAH, IL6, OSM, ADSSL1, B3GNT5, C1QA, C9orf95, CACNA1D, CALML3, CAMK2 G, CLDN8, COX15, CTF1, CYP27A1, CYP2E1, DDHD1, DLL1, EARS2, EGLN3, EL K4, FCGR3A, FGF4, GYS2, HCLS1, IDH3B, IFNA10, IL4R, INPP1, IQGAP2, LI FR, MALT1, MAN1C1, NCKAP1L, NEU3, OR2AG2, OR51G2, OR6C6, P2RX1, PIK3 C3, PSEN2, SESN3, SMURF1, SMURF2, ST3GAL3, SUFU, TAS2R48, TAS2R7, TC F7L1, VTI1B, HLA-DRB5, MAPK8IP3
Negative_13633	CD6, GCK, GP9, ID1, RFK, ACAT2, ACTG2, ACTN1, ACVR2B, ADRA1D, AGXT, AH CYL2, ALOX12, BLVRB, CAMK2G, CCNG2, CCR10, CHIA, DHCR24, DLL3, DPM1, DPYD, EDNRA, ENTPD6, GNPAT1, GRIN2C, GUCY1B3, HSPA8, IAPP, ICOSLG, IDH3G, IL18R1, LIMK2, MAN2A1, MCCC1, METTL2B, MGAT2, MKNK1, MYH15, N ADK, OR10AG1, OR10K2, OR2A4, OR2G6, OR2T5, OR4C11, OR52I2, OR6N2, PO LR2C, PPP1CB, PPP1R3B, PRNP, RASGRP4, SEMA4F, SESN3, SLC25A5, SMAD6 , SMC1A, SOAT2, SOS2, STAT5A, TRAF1, WNT11, ATP6VOD2, CSGALNACT1
Negative_13634	CD4, GNS, GP6, ME3, MPL, ADAM17, AHCYL2, APOA1, APPL1, ATG7, ATP2A3, B 3GALT6, B3GAT3, BUB3, CADM1, CAMK2D, CD27, CDH2, CDK2, CDKN2C, CHEK2 , CHRNA7, CLCA2, COX15, CRLS1, CRY2, CXCL2, CYP1A2, DGKQ, DNMT3B, DOT 1L, E2F3, EDA2R, ENO1, EXTL3, FADS2, GALNS, GLUD2, GRIA2, HADHA, HARS 2, HIP1, HMGCR, HMOX2, IARS, IL1B, ITGA7, KCNJ11, KIR2DS5, LIMK1, MAP 3K12, MAP3K5, MAPK13, MAPT, MKNK2, MYH11, NMNAT2, NOX3, NTF3, OCRL, O LR1, OR51B2, PDCD1, PHKG1, PHPT1, PIGM, PLXNB2, PPA2, PSME1, PTPN6, R ARS, RBPJL, RPN2, SOAT1, TDO2, TRIP10, TUBAL3, UGT2B10, UPRT, UROD, V AMP2, VEGFB, VTI1A, SERPIND1
Negative_13635	C9, CDA, FYN, GBA, ID3, MAX, TFG, AANAT, ACVR1B, ALG6, ALG9, APRT, ARHG EF7, ARPC2, ATP5L, AXIN1, CDKN1B, CHKB, COMP, CRLS1, CSNK2A1, DDX52, DOCK1, ETS1, FGF1, GARS, GNAZ, HLA- C, IBSF, ICAM1, IDH3B, IL12RB2, IL1R1, IL9R, ITGA3, KIR2DL2, KIR3DL1 , KLRC1, MAML3, MAP2K5, MAP3K14, OR13C9, OR2A25, OR2H1, OR51V1, OR52 E8, PGK1, PIAS3, PIGT, PIP5K1C, POLR1B, PYCRL, RAC2, RALBP1, RPIA, SE LPLG, SOX17, SREBF1, STAT3, TALDO1, TBXAS1, UAP1, YWHAG
Negative_13636	BTD, F10, HK3, KDR, LHB, LPL, MIF, PLG, TAT, TK2, TPO, ADCY10, AHCY, AKT 2, ALDOC, AMHR2, APAF1, ATP5G2, BCMO1, CCL5, CCL8, CD74, CES1, CFLAR, CLDN6, CRB3, CSF1, CYP4F2, DERA, DFFB, ENTPD2, EXTL1, FABP4, FDFT1, G LI2, GNAQ, GNPDA1, GRM5, HMBS, HSD3B7, IGF1R, IL12B, IL1A, IL20RA, IM PDH2, IRAK3, ITGA2B, ITGB6, KDSR, KIR2DS4, KLRC1, LPAR1, MAOA, MAP3K 2, MITF, NEUROG3, OR10AG1, OR2A12, OR2T5, OR4M2, OR6C75, OR9K2, PAK1 , PCK2, PCYT2, PDIA4, PFAS, PHPT1, PLXNA1, PLXNA3, POLR2I, PPP1R1A, P RKCA, PRNP, RASGRF2, RHOQ, SAT2, SDHC, SEMA3D, SEMA7A, SLC2A2, SMAD9 , SPI1, ST3GAL1, ST8SIA5, STAT3, SULT1A1, TPI1, TRADD, VDAC1, HSP90A B1, SERPINE1, SUV420H2

Negative_13637	BTD, DDO, FYN, IL4, MPL, PLG, ACADSB, ACADVL, ACTG1, ADCY5, ADRB3, ARE G, BDH1, BMP4, C1QC, CASK, CMPK2, CNTNAP1, COL2A1, CREB3L3, CYFIP2, CYP2S1, DDX52, DGKG, E2F2, ECHS1, ERBB3, FGF4, FUT2, FZD9, GLI1, GUCA1C, GUCY1A2, HSPA2, ITGA6, ITPKA, KDSR, LAMA4, LDHAL6A, LDHD, LTA4H, MARS2, MGAT1, MYH9, MYL9, NOX1, NRG3, OR10S1, OR2G2, OR4A16, OR4D11, OR51I1, OR51L1, OR56A1, OR5H6, OR6K2, PAFAH2, PCK2, PFKM, PGM2, PIGT, PLA2G2F, PLCB4, PLTP, PNLIP, POLR2G, PRSS3, PSEN1, PTGFR, RASGRF2, RPN2, RRAS2, SC4MOL, SCD5, SCLY, SEMA4B, SENP2, SGMS2, SHMT2, SOCS5, STAT3, STX1B, TBL1XR1, TPI1, TUBA1C, YARS2, ATP6V1C2, HLA-DRB5, PAFAH1B2, PHOSPHO1
Negative_13638	AK7, DDC, HYI, LPL, TEC, AARS2, ACADS, ACYP2, ANGPTL4, APH1A, ASIP, ASPA, ATP5F1, CD70, CDKN2C, CHD8, CLDN18, CPT1B, CYP11B1, DHDDS, DOT1L, EFNBI, FUT8, GALT, GSTK1, IFNA5, IL11, IL1RAP, IL2RB, IRF5, ITGB2, ITPK1, MMP14, MTHFD2, NEFH, NEU2, NOS1, NTRK1, NUDT9, OR10K2, OR10X1, OR2M3, OR2Z1, OR4M1, OR5AK2, OR5L2, OR6K6, PFKM, PIK3R1, POLR1B, PPM1B, PSME1, PTCH2, PTGS2, PTPMT1, RDH10, RXRA, SEMA4A, SLC25A4, SOD1, STAT5A, STAT5B, THBS2, TRDMT1, VANGL2, YWHAE, MAPK8IP2, MAPKAPK5, PAFAH1B1
Negative_13639	C3, C4B, F3, ID2, SRF, AADAT, ACADM, ADH1A, ADSS, ANPEP, ARPC1A, B3GNT2, BMPR1B, BTRC, C4BPA, CDH1, CDH2, CHKA, CHST13, CLDN17, CNTN1, CTSL1, DKK2, DTX1, ECHS1, FOSL1, GNB3, IL15RA, ITGA11, ITPA, LCMT1, NAGS, OR10G9, OR10J3, OR13F1, OR2W1, OR4M1, OR7C2, OR9Q1, PHKG1, PIP5K3, PDLR2A, POLR2C, POLR2D, RASGRP4, RPS6KB1, SESN1, ST6GAL1, STK4, TACR3, TLR4, WEE1, SUV420H2, TNFRSF6B
Negative_13640	AK1, HYI, ILK, PGD, TPO, ACAA2, ACYP1, AK3L1, AKT1, AMPD3, ANAPC2, ARNT, ARPC5, B3GALT2, BLVRB, CARS2, CCNB1, CD27, CD28, CD79A, CDC7, CDKN1A, CHEK2, CHUK, CLDN5, CYP2A7, DDB2, DDIT3, DIAPH3, DPYSL2, DVL2, EFN3, EHHADH, ENTPD1, ENTPD8, ERBB4, ESPL1, F2RL2, FDFT1, FGD1, FLT3LG, GNAI2, GNPAT, HHEX, HLA-DOB, HPRT1, IDH3B, IL13, KIR2DL3, KYNU, LEFTY1, LIAS, NCF1, NKX2-2, NKX6-1, NTRK1, NTSR1, OR2T6, OR4D6, OR4Q3, OR7G2, PAK6, PARVB, PFAS, PI4KB, PIGT, PIK3R1, PIM1, PLA2G2D, PLAU, PNPLA4, POLD4, POLE3, POLR3B, PPPCDC, PPP1R3A, PRKAB1, PTPN11, RDH11, RFXAP, SARDH, STK11, SYNJ1, TAS2R5, TAS2R50, TUBA1B, TUBB3, VASP, ATP6V1B1, TNFRSF6B
Negative_13641	ATM, ACAD9, ADH4, ADIPOR1, AHCYL1, ALOX15B, APOA1, ATP4B, ATP6V1H, C9orf95, CASK, CCND1, CD226, CDC25C, CLDN3, CREBBP, DOCK1, FCGR3B, FIGF, FSHB, GRB2, HARS, HSD17B3, IFNA2, IL11, IL11RA, IL5RA, ITGA6, ITGB1, ITGB8, MAPK12, OR10R2, OR1N2, OR2T6, OR5L2, OR5P3, OR8D2, OR8S1, PARD6G, PDE2A, PPM1B, PVRL3, RASSF5, RRAS2, SNW1, SPRY1, SREBF1, SSH2, STAT5A, UGP2, UNC5B, WEE1, ARHGEF12, PNLIPRP1
Negative_13642	CAD, DCT, DDC, MOS, PAH, TKT, ACSL4, ADRB3, ALAS2, ALDH1A3, AMDHD1, ANAPC11, APOA2, APRT, BAI1, C4BPA, C4BPB, C7orf16, CAMKK1, CARS, CCL3, CD38, CDKN2D, CLDN16, CLDN6, CNTNAP2, COMT, CREBBP, CRKL, CYP7A1, DCNTN1, DUSP6, EGLN3, ENPP1, ETNK2, FARS2, FCER1G, FGF22, FUT6, GGT7, GNAI3, GNG13, GRM1, IL19, IL21R, IQGAP2, IRAK1, IRF7, LAMA4, LAMB4, LARS2, MAP3K12, MAT2B, MCEE, MFNG, MYL2, NAGS, NARS, NEUROD1, NRCAM, OR10G9, OR14J1, OR1J1, OR4C15, OR4F15, OR4X1, OR52E2, OR5AR1, OR5R1, OR6M1, PCK1, PDE1C, PDE4A, PIGU, POLD3, PPP2R2A, PTDSS2, RFNG, RHOQ, SEMA3F, SEMA4C, SOCS5, SRD5A1, SRD5A2, ST3GAL4, TIAM1, TKTL2, TNFRSF8, TUBA1A, UGP2, WNT2B, WNT5A, GABARAPL2, TNFRSF1A

Negative_13643	CGN, CR1, CR2, LSS, PAH, ACOT12, ACP6, ACSL1, ACSL5, AGXT, ALG11, ALOX15B, ALPI, ASNS, ATP12A, ATP50, ATP6V1D, AVPR1A, B3GAT1, BCL10, BIRC2, BUB1, C1QB, CACNG1, CCNE1, CCR8, CD226, CKS1B, CNTF, COMT, COX15, CSNK2A2, CTBS, CTNND1, CX3CR1, DDIT4, DERA, FGF6, G6PC, GMPR2, GRHPR, GRIN2C, HMGCS2, IL12A, IL1RAP, IL21R, ITGB2, KIR2DS4, KLRC4, LTB4R2, MALT1, MAP3K5, MAPK7, MLYCD, NRG4, OR1E1, OR52E4, OR7C2, OR9Q2, PDE4C, PGAM2, PHKA1, PIAS3, PIAS4, PIGK, PLCB3, PMM1, POLR1C, PON3, PPM1D, PRODH2, PRPH, PTAFR, PTCRA, ROBO1, ROBO2, RPS6KB2, SDC4, SDHC, SHC2, SMPD1, STK11, SULT2A1, TOMM40, UBE2K, UNC5A, VARS, AASDHPPT, ARHG EF12, ATP6V0E1, KIR2DL5A, MAPKAPK5, SLC25A31
Negative_13644	DCC, F2R, F8, GDA, HK3, MAG, NF1, PML, RFK, TPO, TPR, ADH6, ADIPOQ, ANAPC11, ARPC5, C7orf16, CCL16, CD22, CERK, CLTC, CLTCL1, CPT1C, CYP26A1, ELK1, EPHA3, FDPS, FGF3, GNRH1, GRLF1, HAGHL, HDAC1, HIBCH, HRAS, INHBC, KLRC4, MGAT4B, MYH14, NRXN2, OR10J1, OR10Z1, OR51G1, OR52W1, OR5B3, OR8G1, OR8J1, PLCE1, POLD4, PPCDC, PPP3R2, RAB23, SARS2, SAT2, SELE, SEMA4G, SMARCA2, SNAI1, TAS2R40, TUBB3, UBE2L3, WWP2, YES1
Negative_13645	AMT, BTC, GP9, ID4, KMO, MVK, OGT, ACVR1B, ACY3, ANAPC11, ARPC1B, ARSD, ASMT, ASNS, BIRC5, BMP8A, BRAF, CACNA1I, CALML3, CDK7, CDKN1C, CES1, CES7, CYP2F1, DTX1, EGFR, ENPP2, ESPL1, FARSA, FUT3, GIT1, GOT2, GPX5, GRIA1, GUCY2C, HHIP, IFNGR2, LEFTY1, LRAT, MAP3K7, MYLK3, OLAH, OR10J5, OR13H1, OR1E1, OR2F1, OR5C1, OR9Q1, PGK1, PISD, PLCD3, PLXNB3, PPM1A, PRKACG, PRKCE, PRKCH, PTGER1, RERE, RHOQ, SOCS4, SRD5A2, ST3GAL1, STX18, SYNJ2, TRAF4, TSHR, UGT2B17, UPB1, VDAC3, WBSR17, WNT3, WNT3A, YWHAE, HSP90AA1, SERPINF2
Negative_13646	AMT, CD2, CFI, CR2, DCT, SHH, TH, ACADS, ACVRL1, ACYP1, ALG11, ALS2, AMPD1, AMY2B, ANAPC5, AXIN2, B3GALT4, BBOX1, BHMT, BIRC5, CACNA1H, CCL26, CCR9, CKS1B, CRY1, CXCL13, CXCL9, CXCR3, DERA, DGKQ, EPB41L3, F13B, FARP2, GCNT4, GNA11, GSTA2, IFT57, IL4R, ITGA2, KCNB1, NCAM1, NT5E, OR5M8, OR7C2, PITX2, PMM2, PRKAA2, SNAI2, SOCS4, STAT5A, UBE2K, SERPINB5
Negative_13647	EGF, FGA, FGB, HGD, PLN, AARS2, ABP1, ACOT12, ACOX1, AGPAT6, AGXT, ALCAM, ALDH1A3, ALDOC, BIRC5, CAMK2A, CAMK4, CDS2, CLDN2, CMPK1, CNGA3, COL5A2, CSF3R, CYP11B1, CYP2U1, CYP3A43, EPB41, EPHB6, ERO1L, GNAO1, GNAT3, GNB3, GSTA5, GSTM1, HBEGF, HLA-DMA, HLA-G, HMGCL, HNF1B, HSD17B4, HSPA8, IARS, IL25, KYNU, LAMB3, LILRB3, MAD2L1, MALT1, MAN1A2, MAN2A1, METTL6, MFNG, MPZL1, NEGR1, NRAS, NRXN2, NUDT12, NUDT5, OR1D5, OR1Q1, OR2M4, OR2T34, OR4X1, OR5AN1, OR7G1, OR8B12, OR8K5, PDGFB, PGM3, PIGF, PMM2, POLE3, PPP2R2D, PRKAA2, PRKAG3, PRNP, PYGL, RARS, RBX1, RPSA, SFRP4, SNAI2, SPRED1, SRGAP2, TAS2R41, TGFB3, TNFSF12, TP53, TRADD, UPP1, WASF3, WASL, ATP6V1G1, SERPINB5
Negative_13648	ADA, AK3, C6, CRK, IL3, PDC, RFK, SRC, TNF, ACOX2, ADH4, ALOX12B, ATP5J, CASP3, CCNH, COL4A6, CTLA4, DPM2, DPYSL2, DRD1, DUSP2, EFNA2, EP300, FLT1, FPGS, G6PC, GMPA, HAGHL, HLA-DOB, HMGCR, HMGCS2, HSP90B1, IDH1, IFNG, IL19, JAG1, LYZL1, MAPK8, MEK1, MPDZ, MYH9, MYL5, NARS, NKD1, NPAS2, NT5E, OR10S1, OR14A16, OR1L3, OR2A14, OR52K2, OR5AK2, OR6C75, OR8B12, OSMR, PDGFRB, PGLS, PGM3, PHKG2, PIGW, POLA2, POLR2A, PPA2, PRKAR2A, SEMA4D, STK36, TAS2R4, TAS2R42, TGDS, TOMM40, TPM3, TRAF2, TRAF4, VAV1, WARS, WHSC1L1, WNT2B, WNT3, WNT7A, MAPK8IP2, TNFRSF10C



Negative_13649	CR2, JUN, LEP, MET, ACACB, ACADL, ACOT12, ACSL4, ADCY6, ATP6V1F, C7orf16, CAV2, CCKBR, COL6A1, CYSLTR1, DDX19A, DGKG, DUSP8, F2RL2, GLG1, GZMB, HNF4G, HYAL2, IDH3A, IFNA2, IFNAR1, IFT57, IL2RB, IMPDH1, INPP4A, IRAK1, LAMB2, LAMB3, LILRB3, MCEE, NAT5, NEGR1, NFKB1, NME6, NT5M, OR10Q1, OR1K1, OR2A14, OR2AT4, OR2M4, OR4A5, OR52B6, OR9K2, PAICS, PDIA4, PIP5K1A, POLR1E, PPAP2B, PRIM2, PYCR2, RBPJ, RFXAP, SIAH1, SKIV2L2, SMAD1, SOCS2, SOCS3, SULT1E1, SUV39H2, SV2B, TGFBR2, VAMP1, WHSC1, WWP1, XCL2, SERPINC1
Negative_13650	BTD, HDC, ACAD9, ACSL1, ACTA2, AKR1D1, CPS1, CTNNA1, CTSG, DNMT3L, EFNA1, FMO5, GANAB, GCLM, HCST, HMGCS1, IL8RB, IRAK2, JAG2, KIR3DL1, MAOB, MTHFD2, MYL5, NGEF, NMNAT1, NMNAT2, OGDHL, OR10H1, OR1D2, OR1D5, OR1G1, OR2D2, OR4C11, OR5I1, OR8S1, OXTR, PIAS3, PIGW, PRKAG3, PRNP, QPRT, RASGRP3, RND1, SDC3, SEMA4D, SGMS1, SIPA1, SLC2A2, SRGAP3, STAT4, TACR2, TAS2R40, TUBA1C, ULK3, UXS1, VDACC2, XCL1, MAPKAPK2
Negative_13651	AUH, C2, CR1, FES, FGG, ME2, MOS, ALOX15B, ARNTL, ARSB, ASMT, ATP4A, CACNG7, CCL26, CCL3, CREB5, CSNK2A1, CXCL9, CYCS, DIAPH1, DUSP1, EDA2R, EFNBI, ENTPD5, ENTPD8, EPHA8, FADS2, GALK2, GCNT2, GNRH2, GPAM, GSTM2, IFNA8, IFNAR2, IGSF5, IPMK, ITGA10, ITGA8, ITGB1, MARS, MARS2, MAT2B, MDM2, MGAM, MNX1, MTHFR, MYH10, MYH6, NT5C, OR14J1, OR2B6, OR4Q3, OR51A2, OR51B6, OR5A2, OR5AP2, OR6S1, OR8H1, OR8H3, OR9G4, PIAS1, PIGM, PIK3C3, RBKS, RDH11, RRAS, SELPLG, SYNJ2, TBL1Y, TGFB3, TOMM40L, TUBB2A, VEGFA, HSP90AA1
Negative_13652	ABL1, AOC2, BDNF, CCL1, CCL14, CDC14B, CD01, CFL1, CMPK2, DAD1, DNMT1, DTX2, EIF4B, FARP2, FUT9, FZD9, GNRH1, GRIN2A, HLA-C, IL12B, IMPA1, MAGI2, NFAT5, NFKBIB, NME6, NOS3, OR13C2, OR1C1, OR4A5, OR4C12, OR4K13, OR5H2, OR6T1, P4HA2, PAX6, PDE1C, PDE7A, PGK2, PIAS1, PIGM, POLR1B, PPAP2C, RDH11, RHEB, SARS, SELL, SMAD4, SOCS2, ST3GAL5, STAT5A, TAS2R50, TBK1, TOLLIP, TUBA3C, UPRT, XIAP, ATP6VOA4
Negative_13653	CRH, F11, F8, FGA, IL3, JUN, KMO, TEC, UBC, ACP1, ACP5, AKR1A1, ALG11, AMPD1, AMY2A, CCNE1, CDH3, CDKN1B, CHST12, CLDN11, CNGB1, COASY, COL5A2, COL6A2, CTSG, DDX4, DDX47, DDX54, EDN1, EFNA3, EPB41L1, FASN, FGD1, FGF21, FTH1, G6PD, GALM, GNB3, GRM5, HCLS1, HIBADH, IDI2, IGSF5, IKKB, IL10RA, IL11, IL12RB1, IL23A, IRF9, ITGA11, ITGA5, ITGAM, ITGB1, KIR2DL1, KLRK1, KRAS, LGMN, MAP3K14, MAPK13, MYH8, NAT2, NCF4, NFATC2, NR1D1, NRCAM, OR4C12, OR51V1, OR52R1, OR5AU1, OR5M3, OR8H3, PFN1, PHKA2, PHKB, PI4KB, POLE3, PPP3R1, PROS1, PTGIS, PTPRC, RHEB, ROCK2, SELPLG, SMAD1, SORD, SPCS3, STX8, SYNJ1, TAS2R10, TIAM1, TLN2, TNFSF9, TSHB, UGCG
Negative_13654	F2R, ACADM, ADCY10, ADORA2A, AGPAT1, ARPC1B, ARPC5, ATP5E, BAAT, BCAR1, BCL2L1, CBR1, CCL17, CD79B, CSNK1G1, CYSLTR2, DAG1, EREG, GCLC, GT7, GMPPB, GNA14, GRIN2B, GSTA5, GYS2, HA02, HGSNAT, IL12B, IL2RA, ITGA7, ITGAM, LRP5, MAP4K2, MMP14, ODC1, OR10Z1, OR4B1, OR4K5, OR51D1, PNLIP, PRKCZ, PRPS1, RASGRP4, RBPJL, SH3BP2, SOS2, TAS2R38, TNFSF10, TYROBP, UGP2, PDCD1LG2, TNFRSF1A
Negative_13655	ADC, CS, F10, FH, LCK, LIF, ME3, TK2, AKT3, ALG2, ALOX15B, APOA1, ATP2A1, CCR3, CDKN1A, CREB3L2, CRKL, CTNNA1, CTPS2, CYP17A1, DDX52, DFFA, DFFB, DTYMK, FBP2, FLT4, FOXO3, GABARAP, GMPR, GNG12, ISYNA1, KLK3, LCMT1, LDHAL6B, LRRC4C, LTB4R2, MAP3K6, NNMT, NUMBL, OR1L8, OR2A2, OR2G6, OR2T2, OR2Z1, OR4S1, OR52R1, OR8J1, OXCT1, PAK6, PGM3, PIGT, PLA2G1B, PNLIP, PON3, PRIM2, PRKCE, PRKY, PRPH2, RAPGEF3, RASGRF2, SEPHS1, SFRP5, SMURF1, ST3GAL6, SUOX, THBD, TUBB1, UBE2L3, UGDH, WASF3, WNT3A, WNT5B, ZMAT3, EIF4EBP1, MAP3K7IP1, ST6GALNAC6, TNFRSF10A

Negative_13656	C7, EDA, F9, FGB, HGF, IL4, MVK, PDC, TH, ABL1, ACPT, ADH6, ALAD, ALPP, ALS2, APRT, ARPC5L, ASS1, ATP6V1A, CCL1, CCL3, CDC6, CDKN1B, CDS1, CFL2, CIITA, CLTB, COL4A2, COMT, CTBP1, CXXC4, CYP3A43, CYP8B1, DPM3, ENTPD6, EPHB1, F2RL1, FTMT, FUT4, FUT7, GNRH1, GPLD1, GSTA2, HES1, HSPA1B, IL11, IL17RB, IL25, IL6ST, ITPKA, JAG1, JAK2, KIR2DL3, MAPK3, MYH6, MYL5, MYLK3, NRG1, NRG4, NUDT12, OR11L1, OR2M5, OR2T2, OR4M1, OR4Q3, OR52N5, P2RX3, PAK4, PAX8, PDE7A, PEMT, PLA2G2F, POLD4, POLR2L, PP1CA, PPP3CB, PPP3CC, PPT1, PRIM2, PRKCA, RFWD2, SLC27A1, SLC2A4, STAM, TFPI, TUBA3E, UGT1A10, UGT8, WASF2, ZNRD1, ATP6V0D1, MAPK8IP2, SERPINC1
Negative_13657	CBL, CGN, F2R, IL6, ITK, LTB, TAT, ACSM1, ADCY9, ADIPOR2, AKR1C2, ALDH6A1, ALOX12B, APPL1, ARHGAP5, ARSD, BCL2L1, BLNK, C5AR1, CADM3, CCL25, CCNA1, CDK2, CES7, COL4A6, CTBP2, CYP2S1, DNMT3B, DPM3, DVL2, EPB41L2, FLT1, FM05, FZD6, GNAQ, HLA-F, HPRT1, HTRA2, IKBKG, IL13RA1, ITGA11, ITGA9, KIR3DL1, LAMB3, LRP6, MFNG, MGAT5B, MYH4, MYH7, NCAM2, NPAS2, NR1H3, OR2A14, OR51F1, OR5D18, OR7D2, OR7G3, OR8A1, PARD6A, PDE11A, PER1, PGAM2, PIGS, PIK3CD, POLE3, PON2, PPARG, PRKAG1, PRKCH, PRSS2, PTCH1, RASGRP3, RHOD, RPIA, SH2D2A, SMAD1, SNAP23, SNW1, SOCS3, STAT6, TAS2R1, TLR9, UGCGL1, VAMP4, WNT3A, WNT8B, ATP6V1E2, TNFRSF13B
Negative_13658	AUH, BAD, BCR, CDA, FAS, ACSM5, ACTB, ADIPOR1, ADRBK2, ATP2A1, BBC3, CACNG2, CDKN2B, CHEK1, CMPK1, CYP3A7, CYSLTR2, DAAM2, DFFA, DGKH, DVL3, FLOT1, FLT3, GALNT3, GALNTL4, GAS1, GNA14, GPX7, HADHB, HDAC1, HSD17B4, HSPB1, IL20RB, ISYNA1, LCP2, MARS2, NOTCH3, NRCAM, ODC1, OGDH, OR10Q1, OR1J4, OR2A5, OR5F1, OR7D4, OR8B8, OR8K3, PARS2, PNPLA4, PPA2, PPP2R5B, PRIM1, PRKAB2, PRKACA, PRPS2, PTGS1, PTPRR, RDH8, RPS6KA6, SAT2, SPRY4, STAT2, STX10, TCF7L1, TLR9, CTNNBIP1, HSD17B12, MAPK8IP2, SERPINA5
Negative_13659	AGK, BTC, C6, CS, EBP, FYN, HDC, IL6, NF1, NGF, OGT, ACADSB, ACVR1, ADIPOQ, ALDH1A2, ALG12, ARHGEF7, ARRB2, ASAH1, BDH2, C9orf95, CACNG4, CALML6, CASK, CDC42, CHAT, CHRNA7, CLDN11, CNGB1, CXCL9, CYP2F1, CYSLTR2, DAD1, DLAT, DTX1, ENPP2, ENPP7, EPB41L3, EXTL1, FARP2, FGFR2, FMO2, GAD1, GALNT8, GANC, GGPS1, GGT7, GOSR2, GRM1, GSTO1, IFIH1, IL23A, INPP5B, IRF9, ITGA8, KDSR, L1CAM, LAMC1, LIMK1, MMP7, MYD88, MYH7, NEU1, NMNAT3, OR10K1, OR11L1, OR2T4, OR6B3, OR6C3, OR7G2, OXCT2, PDE6D, PIGC, PPAT, PPP1R3B, PRKG2, PTCH2, RASGRP2, RASGRP3, RHOA, ROBO3, RPS6KA2, SDHB, SLC2A4, SPAM1, SRD5A1, ST3GAL5, TLR9, TM7SF2, TSHB, VAMP3, PLA2G12B, SERPINA5, SUV420H1
Negative_13660	ADC, AUH, FN1, GP5, HYI, ID2, ITK, MAG, PXN, ACP5, ACSS3, ADCY7, ADH7, ADORA2B, AKR1C1, AKR1D1, ALCAM, ALG10, ALPL, APOA5, BMP8B, C3orf10, CACNB3, CACNG6, CASP10, CCL11, CD14, CD19, CD3E, CLCA4, CRKL, DDX18, DUSP1, DVL1, HCCS, HEMK1, IFNK, ITGA6, KAT2A, KIR2DL1, KIR3DL2, KRAS, LEPR, LYPLA1, MAP3K11, MAP3K3, MCCC1, MTMR1, NEGR1, NEU1, OR1N2, OR4M1, OR4N2, OR4X1, OR5AR1, OR6B2, OR8S1, PAPSS2, PCK2, PDE8A, PDGFB, PIGS, PLAT, POLR1C, POLR2B, PPAP2B, PPARA, PRKAR2B, PTGER3, PTPRB, RAC2, RASA2, RERE, RUNX1, SEMA3D, SHC4, TNFSF8, TPM3, TRAF2, TUBA3E, TUBAL3, TXNDC12, UGT1A10, WNT9B, ATP6V1G1, KIR2DL5A, MAPK8IP1
Negative_13661	AMH, FGB, KDR, LCK, MUT, TPR, ACSS3, AK3L1, AMDHD1, AMPD3, ARRB1, ASCC3, ATP5I, AVPR1A, C1QB, CASK, CD3E, COL4A2, CRB3, CTTN, CXCR6, DGKE, DIAPH2, EPHB4, FARSB, GJA1, GNRHR, HAO2, HDAC2, IMPDH1, KYNU, MAN2A1, MMP9, NRAS, NT5C1A, NUDT2, OR13C9, OR1Q1, OR2B6, OR4E2, OR4S2, OR51V1, OR52I2, OR5M3, PGM1, PHKA1, PIAS3, PIGS, PIK3R5, PIP5K1A, PMVK, POLR2K, PPAP2A, PRODH, PRODH2, RALA, RBKS, SEMA4D, TAS2R48, TUBB3, TYRP1, WNT7A, ATP6V0A4, HSP90AA1

Negative_13662	ADA, F3, FGG, GGH, GK2, GP9, HPD, ACADSB, ACVR1C, ADH4, ADORA2B, ADRA1B, AKT3, ALDH4A1, AMPD3, ANAPC10, ARPC5, B4GALT3, BMP6, BMP7, CAMKK1, CDC26, COL4A1, CSF2, CTPS2, CX3CR1, CXCR3, CYP26A1, DARS, DBF4, DDO, ST, DGKA, DKK2, DTX1, FGF1, FZD8, GALNT12, GCDH, GMPR, GOSR2, GSTZ1, HMGCS1, HTR6, IDUA, IFNA8, IGF1R, IQGAP1, IRAK3, ITGA11, ITGAL, LMO7, MAFA, MAPK14, MMP7, NOD1, NRCAM, NRG4, OR10AD1, OR14A16, OR4K13, OR4K14, OR51G1, OR5B21, OR5M8, OR9I1, PFAS, PFKP, PLCD4, PNPO, POLD4, PON2, PPAP2C, PRKG2, PTGES, PTGIS, RAF1, RASGRP3, RASSF1, RHOD, SEMA3C, SEMA4A, SEPHS1, SGPP2, SLC27A1, SLC9A1, SPI1, STX5, TACR1, TAS2R41, THBS4, TRADD, TUBA1B, TUBB2C, WNT1, PAFAH1B2, TNFRSF13B, TNFRSF6B
Negative_13663	F10, F8, ACSS1, ADIPOR2, AKR1D1, ALDH3B1, ALG11, ALPL, ANAPC1, ARG2, ARPC4, ATP5H, ATP6V1F, CD14, CD22, CD36, CD47, CDC14B, CTNNA1, CXCR4, CYP2B6, DDOST, DGKI, DHRS4L2, DNMT3L, EGLN3, EI24, EPB41, EPHX2, GLI2, HLCS, HMOX2, HPSE2, IL15, IL17RA, IL2RA, ITGB8, KCNQ1, LRP5, LTBR2, MCCC1, MGAT1, MLYCD, MOV10L1, NCK1, NEU2, NOS1, NSD1, OR10G9, OR1N2, OR4M2, OR51B5, OR51B6, OR52A5, PAX8, PDE7B, PDHA1, PDHA2, PER1, PGM4, PGM3, PIK3C2G, PIK3C3, PIP4K2A, PLOD1, PLTP, POLR3D, PPM1B, PTDSS1, RAPGEF4, RRAS2, SDC3, SELPLG, SIGLEC1, SLC27A1, SMARCA2, SPRY4, SSX2IP, STAT3, SULT1A2, TAP2, TFDP1, THBS4, TICAM1, TLN2, TOLLIP, TRAF1, TRAF4, TRMT11, VAMP4, VEGFB, WARS2, WNT3A, ARHGEF12, CACNA2D4, CTNNBIP1, PAFAH1B1, PNLIPRP2, ST6GALNAC1
Negative_13664	AGK, CFI, GK2, KHK, ABCC8, ABL1, ALPI, ARD1A, B3GALT1, BHMT, CACNA1D, CACNA1S, CCL22, CDC20, CDC25B, CDK5, CLCF1, CXCR5, CYP11A1, CYP1B1, DCXR, DDX4, DTX3, FBP1, FGF20, GALNT6, GSTA1, HSD17B8, IL18R1, ITGAV, KLK3, KLRC1, MALT1, MAPK10, MYL5, MYL7, MYLK, NRAS, OR2H1, OR4F15, OR52E2, OR5C1, PCK1, PDE1C, PHKG2, PIAS4, PLCB3, PNPLA4, POLR2K, RDH8, SARS2, SDHB, SETD2, SETDB2, SLC27A5, SMAD7, SNAI1, SQLE, ST3GAL6, STAT6, STX1B, TFPI, TKTL2, UBA7, WIF1, WNT1, ZBTB16, SERPINF2
Negative_13665	ATM, CKM, CS, LAT, LTB, MPI, SMS, ACO2, ACOT11, ADIPOQ, ALG10, BMP5, CACNA1B, CAMK4, CAV3, CBR3, CCL25, CD36, CHKA, CHST13, CSNK1G3, CUL1, DBF4, DFFB, ENO2, GNAL, GSTA3, HNF4A, INADL, INHBE, INSR, KCNQ1, MCM3, MTHFD1L, MYH11, NCKAP1L, OR13D1, OR14A16, OR14I1, OR1F1, OR1J2, OR1S1, OR4K1, PCCA, PCYT1B, PDE6H, PLA2G10, PLXNB1, POLR2A, PPP5C, PTEN, SGMS2, SNAI2, STAT5A, STX2, TAS2R14, THY1, TICAM2, TUBB2A, VTI1A
Negative_13666	AGL, APP, C3, CFH, F8, GLS, RPE, UBB, ACP1, ADCY3, AGPAT3, AKR1D1, AKT2, ARHGEF4, ATP50, B3GNT2, B4GALT6, BCAT2, CACNG4, CCR7, CEBPA, CHKA, CHST12, CHSY3, CSNK2B, CTLA4, CTSL1, CXCL11, DERA, DIAPH3, DRD1, DUSP6, FABP1, FARP2, FGF17, FUT4, FUT9, FZR1, GART, GCLC, GNAO1, HAO1, INHBA, INPP4A, IQGAP3, KARS, KIR2DS4, LILRB3, MAP4K4, MAPK14, MCM2, MGAM, MICA, MYLK2, OR10G8, OR10V1, OR1B1, OR2L13, OR5P2, OR6F1, ORC6L, P2RX2, PAPSS2, PCCB, PDGFA, PER1, PIGM, PIK3R3, PNPLA4, PON3, PPAR, PPP2R5C, PRSS3, PSME3, PTGES, PTGS1, PYGM, RAF1, RPSA, SETD1B, SMAD9, SPRED2, ST3GAL3, STEAP3, SULT1A1, SULT1A4, TNFRSF9, TNFSF11, TPH1, TSHB, TUBAL3, UGCG1, UROC1, WARS, WASL, GABARAPL2, TNFRSF14, TNFRSF17, TNFRSF1A

Negative_13667	ADA, ASL, CDA, FUK, JUP, LHB, NNT, PLG, TFG, ACP5, ACTG1, ACVRL1, AGPAT3, AKR1A1, ALG10, ALPPL2, ATP2A2, B3GNT5, CAV1, CD38, CD74, CLCA4, CLDN17, CLTB, CREB3, CSF2RB, CTNNA2, CYP1A1, DAPK3, DGUOK, EDNRB, ENTPD3, ETS1, FADS2, FARS2, FPGT, FRAT1, FZD2, G6PC, GABARAP, GALNT8, GBA3, GGBT1, GNA12, GRIN2A, GRM1, GSTM4, GSTM5, HTR2B, IL12B, IL13RA1, ITPA, KAT2B, KLK3, KLKB1, L1CAM, LTBR, MAP2K3, MAP3K3, METTL6, MGAT2, NCR1, NRAS, OR10Z1, OR1C1, OR1N1, OR2F1, OR4N5, OR5B12, P4HA1, PARVA, PGLS, PISD, PLCB4, PPP2R1A, PRKACA, PRKCA, PTGFR, RPSA, RRM2, RXRB, SFRP2, SMAD5, SMPD4, STX18, TAS2R8, TGFB3, TNFSF8, TSHB, TYRP1, UNC5A, WARS2, WASF3, WHSC1L1, YWHAQ, TNFRSF6B
Negative_13668	APP, C5, RPE, TPO, APLP1, ATG12, B3GALT6, BBC3, CCKAR, CCL1, CD59, CDC20, CHPT1, COL4A2, CREB3L3, CTNNA1, CXCL9, DPYS, ENO2, EP300, EPHB3, FCGR3A, FGF12, FGFR2, FMO2, GNG3, GRHR, GZMA, HAGH, HGSNAT, HMOX2, INS, ITGA11, JAG2, KAT2A, KIR3DL3, LAMC3, NCF1, NEU2, NEU3, OR10V1, OR5L2, OR5M8, OR9I1, OXSM, PAK6, PANK1, PAX6, PCYT1A, PDE7B, PDXP, PIPOX, PPP1R3A, PPP2R5D, PTGES, PTGS1, PTPN7, SAT1, TM7SF2, TUBB4Q, TYK2, UGT2A3, UGT2B17, WNT16, WNT2, PAFAH1B3, PLA2G12B
Negative_13669	CTH, FGB, GNS, GSS, TAT, TEC, TK1, ACOT12, AGPAT3, ARNTL, ATP5B, ATP5J2, BCL2L1, BLVRA, C3orf10, C4BPA, CADM1, CCKAR, CDC20, CDC26, CDKN1B, CES7, CLDN22, COQ5, CTBP1, DPYD, DUSP7, EPHA5, FZR1, GALNS, GBE1, GLB1, HA01, HYAL2, IARS2, IKBKB, IL2RB, INADL, ITGAM, KCNB1, LDHA, LIMK1, LTBR, MMP7, MNX1, NCKAP1L, NFASC, NKD1, NOD1, OR10A5, OR1A1, OR1G1, OR1Q1, OR2A14, OR2V2, OR5AP2, OR5L1, OR5P3, OR8B4, OR8D4, PCCA, PDGFRB, PFN3, PGK1, PHKA1, PLA2G2E, POLE4, PRKCD, PRLR, PTGS2, SENP2, SETMAR, SHC4, SKP1, SMPD3, STMN1, TAS2R48, TKTL2, TNFSF11, TOMM40, TRAF4, UGT2A1, HLA-DRB4, TNFRSF11B
Negative_13670	CKB, CSK, ILK, KMO, PAH, ACSM4, AKR1B1, ALDH2, ALDH4A1, AMPD2, ARPC1B, BACE1, BCL10, BUB1, CCL17, CCNB3, CLDN18, CNTNAP1, CRHR1, CSF2RB, CXCL3, DDIT3, DHRS9, DPYS, ENTPD8, EP300, GCLM, GDF7, GNRHR, HAGHL, HARS, HSD17B3, HSP90B1, IL12RB1, IL17RB, IL24, INMT, INPP1, ITGAD, KLRK2, LIAS, LIPC, MAP4K1, MARS2, MCCC2, MLLT4, NEFH, NEU1, NOS1, NT5C1A, OR10H5, OR1D5, OR1K1, OR2H1, OR3A2, OR6K2, PARD6B, PLCB1, PVRL3, RHOD, RPE65, STAM, STAT5B, STX8, SULT1A1, TD02, TKTL2, TNFSF14, C1GALT1C1, HSP90AB1, SERPIND1, TNFRSF18
Negative_13671	CFH, CRH, ME3, OTC, TFG, AADAC, ACAT1, AKR1C2, ALAS1, AOC2, ATP2A1, B4GALT2, BMP8A, CAMK2G, CAMKK1, CARS, CCL11, CCL14, CD46, CDC27, CDH4, CHPF, CHST12, CHSY3, CKS1B, CLCA2, CPT1B, CYP27A1, DHX58, EPHA1, FABP3, FASN, FGF8, FLOT2, FMO2, GAD1, GADD45A, GALNT2, GCLM, GLI3, GNAI3, GNAQ, GNMT, GRM1, GUCY2D, HADH, HRH2, HSPA8, HTR6, IFIH1, IL12RB2, IL29, IRS4, KDSR, KIR2DL2, LALBA, LDHAL6B, MCEE, NT5M, OR10H2, OR11L1, OR12D3, OR4K13, OR52E2, OR52K2, OR5T3, OR7G1, OXTR, P4HA1, PAK3, PI4K2C, PLCG2, PRPS1, RAB5A, RAPGEF4, RPS6KA6, SEMA3G, SHC2, SIGLEC1, SKIV2L2, SNW1, SPTLC1, SRGAP2, STAT5B, SV2B, THY1, TOMM40L, UCK1, UGCG2, WASF3, WNT11, YARS2, ZBTB16, B3GALNT1, TNFRSF14
Negative_13672	AMT, CD2, IL5, MET, PLG, TEC, AKR1D1, ANPEP, ARAF, ARPC1A, ATP5G3, B3GAT3, BCMO1, BET1, CBLC, CD19, CDK5, CLDN11, CXXC4, DDX41, DTX2, EFNA5, F2RL3, FARP2, FARS2, FECH, FSHB, GLDC, HSD17B3, IARS2, IL20RA, IRAK2, MAPK7, MS4A2, MYL9, NEU4, NME4, OR10J3, OR1A1, OR1F1, OR2B11, OR4K15, OR5D14, OR5M8, OR7A5, OR8D1, PLA2G2E, POLR2E, PRKAB1, PYGB, RPN1, TNFSF14, TRADD, TSC1, UGCG2, UROD, XYLT2, ATP6V1C1, MAPK8IP2, TNFRSF10A

Negative_13673	DAO, DHH, LPO, RFK, VCL, ABAT, ACPT, ADCY2, AKR1C3, ANAPC10, AOC2, ARS D, ATP5I, BCKDHB, BDKRB2, CCL1, CCL19, CD48, CDC25C, EFNB3, EPHA5, FA BP3, FLT1, FUT9, G6PC2, GABARAP, GALNT9, GRM1, GRM5, HCCS, IDH3B, ISY NA1, ITGA6, KIR2DL1, LEFTY1, MAGI1, MAP3K11, MYH4, NFASC, NOX3, OR52 I2, OR52N4, OR8K3, OR9A4, PARD6G, PDIA4, PGAP1, PIK3CG, POLA1, POLR2 F, POLR2G, PPP1CC, PRKAA1, PRKAG1, PRSS1, PRSS3, RRM2, RUNX1, SLIT2, SOCS3, SORBS1, SSX2IP, TALD01, TAS2R48, TAS2R5, TSTA3, UCK1, VEGFC, WNT8A, MAPKAPK2
Negative_13674	C9, CD2, F5, ID3, LHB, MOS, NLK, SYK, TNC, ACTN1, ACTN4, AGPAT2, AKR1A1 , ARSD, ATP5I, CCR3, CDKN1B, CHST11, CLCF1, CPS1, CREB3L1, CSNK1G2, C XCL10, DGKB, ERBB2, FABP3, FPGS, GALNT13, GLS2, IFNA4, IGF1, IL22, IL 3RA, ITGAM, KIR2DL4, KIR2DS5, KLRC4, MCAT, MYH11, NMNAT2, OR10P1, OR 14A16, OR1C1, OR2L3, OR4C6, OR4E2, OR4L1, PAFAH2, PAX4, PFKFB4, POLR 2J, PPID, PRKCQ, PRPS1, PSME2, PTAFR, PTPN6, PVRL4, RHOQ, ROCK1, SKP1 , SPRY2, SRGAP2, STAT6, TAS2R7, TGFBR1, THBS3, TNFSF10, TRDMT1, TUBB 6, UROD, VTI1A, WHSC1L1
Negative_13675	CR1, CRK, CSK, MVD, PRL, ABLIM2, ACTA1, ACTN4, ALDH1A1, ALDH2, AMDHD1 , AOC2, ASIP, ATP5H, ATP5O, CACNA1I, CACNB2, CAMK2D, CCR5, CCR9, CDC2 5C, CHSY1, CLCF1, CLDN22, COL6A1, CSH1, CXCL3, EPHX2, EXTL2, FMO1, FZ D9, G6PC, GALNT13, GCNT2, GNA12, GNG13, GSTK1, HMBS, ICAM1, IFNA17, I FNG, IL10RA, IL1RAP, IRS1, KIR3DL1, KLKB1, LAMC2, LDHD, LEPR, MAN1C1 , METTL2B, NEFH, OR1D5, OR2A2, OR2T34, OR4D5, OR4F6, OR4L1, OR4X1, OR 51E1, OR52B4, OR5C1, OR5M3, PAK2, PLA2G2F, POLR2F, POLR2L, PRKCB, PT GDS, RARS2, RASGRP1, RDH8, SKP2, SUCLA2, SUFU, TAS2R50, TRAF4, UBE2L 6, VDAC1, VDAC3, VEGFC, WNT2, XIAP, MAP3K7IP1, MAP3K7IP2, MAPKAPK2, PPP1R12A
Negative_13676	C1S, HK2, PLG, ZYX, ADRB3, AGXT, AHCY, ANAPC7, ATP5H, ATP5L, BCL2L1, B ET1L, CCKBR, CHDH, CLTCL1, COQ5, DUSP3, DVL2, DVL3, EPHA4, F13A1, FGF 11, FLAD1, FMO3, GGT5, GNPDA1, GNPAT1, HARS2, HRH2, IDH3G, IL6R, ITG AV, JAM2, LALBA, MAD2L2, MCM5, NCAM2, NMNAT2, NOD1, NPR1, NT5C2, OR1F 1, OR3A1, OR52W1, OR6Y1, PARVB, PIGU, PLD2, POLR1E, POLR2E, PPM1B, PR KCI, PTGS2, RUVBL1, SORBS1, ST3GAL2, TAP1, TAS2R3, TAS2R60, VNN1, WW P2, YWHAB, ST6GALNAC1
Negative_13677	AK2, CKM, EGF, LSS, TAT, ACAA1, ACLY, ACPT, ACTC1, ADH5, ADIPOQ, ADRA1 B, ALG2, ATP2A2, ATP5C1, ATP5J, B4GALT4, BMP6, BMPR1B, CASP8, CCL15, CCL23, CIITA, CNTFR, CNTN1, CXCL11, CYP3A43, DGKZ, G6PC, GALNT12, GS TA5, INSR, KIR3DL3, LTC4S, MAPK12, MGAT5, MRAS, MTHFS, MYH8, NAT2, N CKAP1L, NCR1, NKD2, OR13H1, OR1C1, OR2A42, OR2L2, OR51B2, OR52D1, OR 52E8, OR5AP2, OR6C75, OR8D1, P4HA2, PDE1A, PDE5A, PIGW, PIP4K2A, PIP 5K1B, PKMYT1, PLEKHA8, PMM2, POLR3H, PORCN, PPP5C, PYCR1, SDHD, SEMA 7A, SKP2, SMPD3, SOCS2, SUFU, TAS2R42, TAS2R9, TBL1XR1, TGFB1, TUBB4 Q, WHSC1, YES1, HLA-DRB4, KIR2DL5A
Negative_13678	BTC, CRK, FN1, GPI, ID4, AHCY, AKR1B10, AKR1C1, APH1A, ARPC5L, B3GALT 1, CACNB2, CACNB4, CCL19, CCR3, CD19, CD99, CFTR, CHEK2, CHSY3, CLCF1 , CLDN16, CPS1, DMGDH, FGF6, FLT1, FSHR, GABARAP, GALNT11, GCLC, GNPD A2, GUCY2C, HARS2, HDAC2, IDH3G, IFNAR2, L1CAM, MADCAM1, MARS, MYL7, NOS1, NOX3, NRG4, OR13C3, OR2T5, OR4D6, OR5B17, OR5T1, OR6C4, OR9Q1, PDGFRB, PDHB, PER1, PI4KB, PIP5K1C, POLD1, POLR2C, POLR2F, PPP1R3D, PPP2R1A, PRODH, RAPGEF2, RDH12, RPS6KA6, SETDB1, SHC3, SHMT2, SMARC A2, SPCS1, STX4, TNFSF10, TRIP10, TXNDC12, UCP1, WASF3, ATP6V1E1, AT P6V1G2, KIR2DL5A, PPARGC1A, SERPINF2

Negative_13679	BTK, C4B, CBS, KIT, NPY, ACADM, ACSL5, ADH1B, ADRB1, ALDH1A3, ALG5, AMPD3, ASPA, ATP12A, ATP5J2, BAI1, BIRC2, CAMK2A, CCL1, CDC25A, CES1, CMAS, COQ7, CSNK1G2, CXCL9, CYP2C9, CYP2S1, DDHD1, DDIT3, DDX41, DGKE, DKK1, DLL1, E2F4, FGD3, FMO3, FZD3, GALNT13, GAMT, GLDC, GP1BB, GRIN2C, GSTM5, ITGA1, LAMC1, LIMK2, LRP6, LTA4H, MAGI1, MAP2K4, MAP3K2, MASP2, MDM2, MYL5, OR13A1, OR13H1, OR4C46, OR51D1, OR51F1, OR51S1, OR52R1, OR5C1, PLIN, PLXNB2, POLD2, POLR3K, PPID, RDH5, RHOD, RRAS2, SEMA3C, SETDB2, SGMS2, SHC1, SMC1B, SORBS1, STK4, TALDO1, TLR3, TUBA1B, VAMP3, VNN1, WBSCR22, ATP6V0A1, SERPINF2
Negative_13680	AK7, IL7, ACP5, ACSM1, ACVR1B, ADCY9, ASPA, BAIAP2, BCAT1, BMP4, CACNG3, CBLB, CCL7, CDC6, CPT1C, CREBBP, CTPS, CXCR6, CYP1B1, CYP2C9, ETNK2, FASN, GCNT1, GMPS, GNA11, GNA13, HCLS1, HTRA2, IL12RB2, INPP4B, ITGA10, ITGA2B, JAK3, KLKB1, MAT2B, MYL2, NAGA, NOX1, OCRL, OR3A3, OR51L1, P2RX3, P2RX6, P2RX7, PAFAH2, PDE1B, PDIA4, PFN1, PGM2, PIK3CB, PLA2G10, PLA2G2D, PLCD1, PPP1R3A, PPP2R2C, RASA1, RBPJ, RHOD, RPS6KB1, SARS, SH2D1A, SKP1, SUCLG1, SULT1A4, TCF7L1, TJP2, TLR3, TSC2, TUBA3C, UCK1, UNC5B, MAPK8IP2, PAFAH1B3
Negative_13681	CAD, CAT, DCK, GDA, GH2, NPL, TAT, TH, TNR, AARS, ACP1, ACTA2, ALAD, ARNTL, CARS, CD28, CD44, CLDN14, CNDP1, CXCL2, DDB2, DDX4, DDX50, DDX54, DNMT1, DTX4, EPB41, EXOC7, EXT1, EXTL1, FUT8, GNAZ, GSTA3, HGSNAT, HS1D17B8, IFNA21, LALBA, MAOA, MAP4K2, MGAT4A, MPST, NAT2, NRXN3, OR1C1, OR2C3, OR51I2, OR51M1, OR52E8, OXCT1, PCK2, PDGFRB, PIAS1, PMAIP1, PRKCB, PSAT1, PTPN1, PYCR2, PYGB, RELB, RETSAT, SDHC, SPRED1, STX7, SULT1E1, THTPA, TICAM1, TLN2, TOLLIP, VAV2, MAPK8IP2, SERPINA1, TNFRSF11A
Negative_13682	AK7, C6, GAA, OTC, PLN, SRC, B3GNT5, BCAT2, CACNA1C, CACNA1F, CAMKK1, CCNA2, CD79A, CSNK1D, CTLA4, CUL1, DCXR, DGAT2L4, DTYMK, EDNRA, ENPP1, FUT5, FUT9, GAB1, GALNT9, GAMT, GCNT1, GGCX, GPD1L, HGSNAT, IFNA5, INPP5B, ITGA9, LIFR, LIPA, MAP4K2, NCK2, NLGN1, NUMB, NUMBL, OR13C4, OR4D5, OR52E6, OR52I1, OR5V1, OR6S1, ORC3L, PAICS, PAK2, PDE8B, PIAS3, POLR1B, POLR2B, POLR2J, PPP3CB, PRKCQ, PSENEN, RFXAP, ROBO1, SETD2, SGMS1, SOX17, STX3, STX5, TRAF4, VEGFB, WNT9A, YARS2, ARHGEF12, TNFRSF12A, TNFRSF13B
Negative_13683	AK3, FAS, GGH, GHR, HGF, LAT, AASDH, ACSL1, ADCY1, ADORA2A, ALAS2, ALDH6A1, AMDHD2, ATP5J2, B3GNT2, CAMK2G, CCL8, CD28, CLDN11, CREB3L2, CRKL, CSF2RB, CXCR4, CXXC4, CYP1B1, DERA, DGKQ, DHODH, DNMT3A, DUSP16, DUSP8, FMO4, GALNT3, GDF6, GJD2, GLG1, GNRHR, HADHB, HBEGF, HCST, IL21R, IL9R, IRF3, IRF9, ITGB5, KARS, KIR2DL3, LLGL2, LMO7, MAML2, MGAM, MYL9, NAGS, NEU2, NOTCH1, NOTCH3, NRXN3, OR13C2, OR1M1, OR2B2, OR2H2, ORC4L, PERP, PHPT1, PIAS4, PIGC, PIP5K3, PISD, PKMYT1, PLAU, PMAIP1, PNPLA3, PNPO, PRKAA2, PRKAG3, PSENEN, PSME2, RASGRP1, RPS6KA6, SESN3, SETMAR, SOCS4, STAT1, TAS2R14, TSLP, TUBB, YOD1, YWHAQ, MAP3K7I1, MAPK8IP2, MAPKAPK3
Negative_13684	CEL, IL9, LIF, MSN, NOG, ALG12, ANAPC2, ATP4B, B3GNT2, B4GALT7, CHUK, CTLA4, CYP2C19, DDX41, ELK1, FGF9, GALNT5, GALNT9, GRPR, HIP1, HYAL1, ICOS, IDH3A, IL21R, INPP5E, IRF7, ITGB7, LIMK1, LRP6, MAPK8, MASP2, MYL5, NCR1, OPLAH, OR10G4, OR11H6, OR2A2, OR2A42, OR2B2, OR2L8, OR52M1, OR5B3, PDGFD, PGK2, PIK3CD, PIP5K1A, PLA1A, POLE2, PPAP2B, PRPS1, PSPH, PTGS2, RFX5, RFXAP, RHEB, RPS6KA2, RRM2B, SETDB2, SGMS1, STAT2, STAT4, SV2C, THY1, TJP2, TUBB2B, UNC5C, CSGALNACT2, TNFRSF14

Negative_13685	CBL, IDS, LSS, RPE, ACAA1, ADCY9, ALG5, ALPP, B3GNT2, CAMK2G, CHIT1, C HKA, CREBBP, CRY1, CTSG, CXCL11, CYP26A1, DDB2, DVL3, FRAT2, FTH1, FZ D5, GCLC, GLS2, GPD1, GPX5, GSTM1, GSTM4, HMOX2, IFNA5, IKBKE, IL7R, I MPA2, IPMK, LAMB3, MAD2L2, MAP2K3, MAPK9, OR13A1, OR2T6, OR4F5, OR4M 1, OR51I1, PARD6B, PARVB, PHKG1, PIGW, PIGX, PIK3C2A, PLCB3, PLCG1, P LXNB2, PON1, PRODH, RAC1, RGS3, RND1, SCIN, SGMS2, SMPD3, SNW1, SRGAP 1, SSH3, ST3GAL3, STAT3, STX18, THBS1, TNFSF12, TUBB, UCK2, WNT16, TN FRSF6B
Negative_13686	FGA, ACP6, ADORA2A, ALPI, ANAPC1, ARSA, ATP6V1H, CASP8, CCL11, CDK6, COASY, COL6A2, CYP3A43, CYP3A7, DDX4, DHCR24, DPYSL2, DTX2, ENAH, FG F5, FZD1, FZD8, GAD1, GFAP, GLUL, HSPB1, IL2RA, INPP5A, INPP5E, ITGB3 , LFNG, LTC4S, NCR2, NFKBIE, NGEF, NOX3, NUDT2, OCLN, OR10G4, OR10H5, OR1A2, OR2Y1, OR51A4, OR52H1, OR52I1, OR56A4, OR5AK2, OR5F1, OR8K3, PAPSS1, PDE6D, PIK3CB, PLCB3, POLD3, POLD4, POLR1C, POLR2K, PON3, PT DSS1, PTPN5, RIPK1, SDHB, SHISA5, SMAD9, STX3, TDO2, TPH2, UMPS, USE1 , VEGFC, ATP6VOA2, HLA-DQB1, KIR2DL5A, SERPIND1, TNFRSF10C
Negative_13687	AK1, DDC, F3, IL4, IL7, ME3, MPL, MVK, ABP1, ACADL, ADCY1, ALPP, AMDHD2 , BAIAP2, BIRC5, CACNG3, CACNG4, CASK, CCNA1, CCNB2, CCR7, CDC2, CDK4 , DUSP10, E2F5, EVI1, FABP3, GNPAT1, GUCY1B3, KAT2B, LAMA3, MADCAM1 , NARS2, NEGR1, NFAT5, OR10H2, OR4Q3, OR51B5, OR51G2, OR52N5, PIK3CG , PLA2G2A, PLAUR, POLR2I, POLR3D, PTPN11, QPRT, RPS6KA3, SDHA, SH2D1 A, TAS2R41, TRAF4, TRHR, TUBA8, VDAC1, WBSCR17, ALDH18A1, TNFRSF6B
Negative_13688	AK1, ACTC1, ACVR1, AMY2A, APOC3, ARHGEF1, ARRB1, ASNS, ATP5B, ATP5G2 , CNGA3, CXCL6, CYP2C9, CYP4F3, DUSP5, DUSP6, DVL1, ELK1, EXTL3, FARS 2, FGF8, FM03, FZD8, GALNT3, GNRH2, GNRHR, GPD1, GUCA1B, HSD17B2, IFN AR1, ITGB7, KCNQ1, KIR3DL3, LAP3, MAPK1, MARS, MYH14, NRAS, NSD1, NTS R1, NUMB, OR1J1, OR51Q1, OR52K1, OR7A5, PANK4, PCCB, PDE11A, PIGA, PL A2G3, PLEKHA8, PPAT, PPP2R2C, PRKG1, RALB, RAPGEF1, RASSF5, RPIA, TD O2, TFPI, TNFSF8, TUBA1A, UGT2B7, VAMP2, YKT6, ATP6VOA1, HLA-DPA1, PRICKLE1
Negative_13689	AMH, APP, F2R, GHR, LYN, PRL, TYR, ABL1, ACTN4, ACY3, ALG8, ALPI, APBB1 , BLNK, BMP4, BMP5, CBR3, CCL13, CCR1, CDC25C, CDK2, CLDN14, CLDN16, C MAS, CTNND1, CYBB, DDX52, EDNRB, EPHA3, ERBB2, ETNK2, FBP2, FOXO3, FZ D2, GALNT2, GLI2, GRPR, GYS2, HAGH, HAP1, HLCS, HMOX1, HSD17B8, HTR6, IL1A, IL1RAP, IL28B, ITGA8, ITPK1, LHCGR, LMO7, MAPT, MTHFD1, MTHFR, NADSYN1, NTN1, OR1S1, OR2A2, OR2T3, OR2T33, OR51E1, OR56A4, OSMR, PD E1A, PDGFD, PKLR, POLR1B, POLR2A, PORCN, PPBP, PRIM2, PRKACA, PRODH, PTPN5, RDH12, RPS6KB1, SEMA3A, SMAD6, SMPD3, TAS2R41, TCF7L2, TNFRS F9, TYK2, ULBP2, ATP6VOD1
Negative_13690	ADK, AK3, DLD, EBP, F10, ACPP, ACY3, AGPAT6, ALDOC, ALG13, APOC3, C7or f16, CCND3, CCNE1, CDC25B, CDK4, CLDN16, COASY, CRKL, CRLS1, CYP3A4, DCTN1, DGKQ, DTX1, EDN1, EPHB3, EPHX1, EXOC7, FLT1, FOXO3, G6PC2, GNA T3, GNPDA1, GNPAT1, GRIA1, GSTA3, HAO1, HIBCH, HLA- DOB, HMOX2, ICAM2, IL12RB2, IL17B, IL20RA, INPP1, LDHAL6B, MAD2L2, M AP4K2, MAPK1, MAPK7, MCM2, NAGK, NCAM1, NCOA4, NKX3- 1, NOTCH3, NUMBL, OGDH, OR14C36, OR1G1, OR2T1, OR4A15, OR4A16, OR51D 1, OR6N2, OR9Q2, PCNA, PDE9A, PER3, PERP, PFN3, PNLIP, PNPLA3, POLR1A , PPP3CC, PTAFR, PYGL, RALB, RALGDS, RHEB, RXRA, SDC3, SETD1B, SGPP1, SPCS3, SRGAP3, ST8SIA1, TBL1X, TNFSF4, TP73, WASF2, TNFRSF10C

Negative_13691	CEL, F5, IL6, LPL, MAG, NNT, NPY, SPN, ACAT2, ACY1, ADH7, ALDH3A1, ARRB2, ATP4B, BCL10, BCL2, CACNA1B, CACNG5, CD47, CEBPA, CHPT1, COL1A1, CRLS1, CTNNA1, CYP2C18, DPYD, EGLN1, EIF4E, EPHA8, EREG, FGF1, FGF22, FZD9, GAD2, GALNT7, GGT1, GLI1, GMPPB, GPD2, GUCY1A2, HA02, HHEX, IFNB1, IL6ST, ITGAM, ITPKA, LCMT2, MAP3K8, MCCC1, MLLT4, NAT1, NOS3, NUDT8, OR13C3, OR13C8, OR1L1, OR2A12, OR2A4, OR2T4, OR4D2, OR52B4, OR52I1, OR8D2, OR8H3, P2RX2, PDGFRB, PER1, PFKFB2, PIGM, PNPT1, RUNX1T1, SEMA3F, SETD7, SETDB1, SHMT2, SMAD9, SMARCA2, SMC1B, TBXAS1, TCF7L1, TGFB2, TUBA4A, TYMP, UGCGL1, UNC5A, WNT3A, ATP6V0D2, B4GALNT1, EIF4EBP1, SERPINA5
Negative_13692	FAS, GH2, PTS, ACSM1, ACTG1, ADAM17, ADRB1, AKR1D1, ALAD, APM1, ARHGAP4, ATP2A1, ATP6V0B, B4GALT1, BCAT1, BDH2, BDNF, CACNA1H, CASP7, CCL20, CDC14A, CDC14B, CDS2, CHIT1, CHRM2, COL4A1, COMT, COX10, CRB3, CSH1, CXCL11, CYP2C19, DNMT3A, DUSP2, ESPL1, ETNK1, FGF14, GAD2, GJD2, GLDC, HNF4G, IARS2, IKBKB, IL13RA2, IL8RB, LAMB1, LAMC1, MOV10L1, MYH3, NCF2, NCKAP1, NTRK2, OR10G2, OR1D2, OR4D1, OR4D11, OR4K1, OR51F1, OR5B12, OR5F1, PIM1, PLA2G4A, PLCD4, PTCH1, PYCR1, RAC2, RALBP1, SARS, SEMA4A, SHMT1, SOCS1, STMN1, STX18, SULT2B1, TLR4, TSNARE1, TUBA3E, UPP1, VNN1, WWP1, HLA-DPB1, SERPINA5, TNFRSF10C, TNFRSF18
Negative_13693	BTC, GCK, MAX, STS, TK2, ACOT11, ACPT, ASAH1, CAPN2, CCL5, CCND3, CFLAR, CLTCL1, CNGB1, COASY, CYP17A1, DDX47, EDNRA, ENPP6, FLT3, FTCD, FZD6, HSD17B2, HSPA2, IBSP, ICAM1, IL15RA, IL28A, IQGAP2, KIR2DL3, LIPC, MAGI3, NFX1, NT5E, OR2AT4, OR4A5, OR4M1, OR5AS1, OR5T3, OR7C1, PI4KA, POLR3K, PPP1CB, PPP1R1A, RARA, RASA2, RFXANK, RHEB, SMC1A, SOCS2, SPP1, ST3GAL5, TAP2, TJP3, TKTL1, TRPM5, WIF1, YKT6, CSNK1A1L, EIF4EBP1
Negative_13694	ASL, PXN, ACSS1, ACTC1, AHCYL1, AKR1B1, ARG2, ARPC4, AXIN1, CD86, CD8A, CLCA2, CPT2, DLL4, DUSP10, ENO1, F2RL3, FARS2, FARSA, FPGT, GGT7, GYS1, HTR6, IL1R2, ITGA2B, JAK2, KDSR, KIR2DL2, LDHAL6A, LFNG, MDH2, MTFMT, MYL9, NEU1, NEU3, NOS3, OR11A1, OR1D2, OR2D2, OR2H1, OR51G1, OR52E8, OR5M8, OR8K1, ORC5L, OXCT2, PIM2, PIP4K2A, PIP5K1B, PORCN, PPP2R5B, PRKAB2, PRNP, SH2D1A, SHC4, TACR1, TAS2R9, TYRP1, TNFRSF1A
Negative_13695	ADA, C5, CAT, DBH, GSN, IL6, SI, ADAM10, ATG3, B3GNT3, BUB1, C1QC, CD40, CDC7, CLTC, CRKL, CYSLTR2, DARS2, DNMT3A, ENTPD5, EXTL3, FDPS, FGF11, GAL3ST1, GNA11, GPT2, GSTA3, GUCY1A2, HA01, IFNA7, IGF1, MCCC2, MYH6, NCAM2, OR10A5, OR2C1, OR2Z1, OR51I2, OR52A5, OR5L1, OR5R1, OR5V1, OR8H3, OXCT1, PAK1, PARD6B, PDXK, PER2, PLXNA3, POLR2B, POLR3D, PSENL2, RAP1A, RBX1, ROBO3, ST3GAL2, STAT3, STX16, TAS2R41, TBXAS1, THBS1, TNFRSF8, TNFSF14, TRHR, TUBB4, TYMS
Negative_13696	DBH, FST, GSS, LCK, MAG, ABLIM3, ACADVL, ACTG1, ACYP2, ADH6, ALOX5, ANAPC7, APAF1, APM1, ARHGAP5, ATP2A3, BUB3, CD14, CD28, CD99, CHRM1, CPS1, CYP2C19, CYP2J2, DAPK2, DHDDS, EHMT1, F2RL1, FLT3, GANC, GSGT1, GLYCTK, GYS1, HBEGF, HPSE, ICOSLG, IDI1, IFNAR2, IL13, IL1B, IL1R2, IRAK2, LYZL1, MAT2B, MPP5, NAE1, NOTCH1, NT5E, OR13C8, ORC2L, PCCB, PFN2, PIK3R4, PIP4K2A, PIP5K1C, PMAIP1, POLR2E, PRKAA2, PRKCH, PRKCQ, PTGIS, RALGDS, RBX1, RIPK1, SCP2, SSSX2IP, TAS2R14, TKTL1, UBE2L6, VCAM1, YARS



Negative_13697	CFD, GDA, ACPP, ALG11, ARHGEF2, CACNA1C, CAMK2A, CCL25, CD19, CNTNAP1, COL1A1, COQ3, CXCR3, DTX4, EPB41L1, EPHB2, FABP3, GFPT1, GLS2, GPD1, GRIN2A, GSTA1, HSD17B3, IFNA2, IFNB1, IL13, IL28B, IL2RG, ITGA2B, ITGAM, KLRC2, LEF1, MAT2B, MGAM, MNX1, MTMR1, NEUROG3, NFAT5, NTRK1, OR13F1, OR1M1, OR2T29, OR51T1, OR8B8, OR8J3, PDE3A, PGM1, PLCD3, PLEKHA8, PRKAR1A, RBL2, RDH11, SDHD, SMAD4, SMURF2, SNAI1, STK4, STX16, TAS2R7, TKTL2, TUBAL3, WNT3, YWHAB, YWHAQ, ALDH18A1, EIF4EBP1, SERPINF2, TNFRSF10D
Negative_13698	AMT, DDO, GSN, LCT, LSS, AADAC, ACSL3, AGMAT, ALG2, ARPC2, B4GALT4, BCMO1, BDH1, CD74, CHIT1, CYP2C19, EFNA3, ELK4, ENTPD4, FASN, FBP2, FECH, FPGT, FTH1, HLA-DRA, HLA-F, IDI1, IFNA5, IGSF5, IKBKE, IL10RA, IL12RB2, IL20RB, IL2RA, INSR, LAMC2, MAGI3, MAP2K2, NQO1, OR1M1, PDGFA, PIGX, PIP4K2B, PKM2, PPP1R3B, PTAFR, PTDSS1, SC4MOL, SLC27A4, SLC33A1, STMN1, TAS2R3, UNC5A, ATP6V1B1
Negative_13699	ABO, CFI, DAO, EDA, IL2, ITK, AARS, AGPAT1, ATG3, BAAT, BBOX1, C9orf95, CACNA1S, CCKBR, CCL14, CD82, CHKA, CMBL, CYP2S1, CYP3A5, DGAT1, DRD1, EI24, EIF4E2, EPAS1, EPB41, EPHA7, FGF11, GNAI2, GNG3, GPD1, GRPR, GYS2, HCCS, HLA-F, HMBS, HTR2A, ICOSLG, IKBKE, IL10RA, IL17RA, IL20, ITGA5, LGMN, LRD, MAGI2, MAML2, MAP3K3, MAP4K1, NKD1, NOS3, NT5C3, OR10AG1, OR14A16, OR1S1, OR2T4, OR4K14, OR4X2, OR52B4, OR52H1, OR52J3, OR56A1, OR5AC2, OR5T1, OR8H1, PDE3B, PDE6G, PFKFB1, PIGC, PLXNB1, PLXNB2, PLXNB3, POLD3, POLR1E, POLR2J, PPP2R5E, PSEN2, RALB, SFRP4, ST3GAL2, SULT1A4, TAP2, TFPI, TM7SF2, VDAC3, WBSCR22, WIF1, YWHAQ, PAFAH1B2, SERPINA5, SERPINC1
Negative_13700	F11, HGD, PRL, RFK, ACPP, ACSL1, ADCY2, ADRB2, ALG9, ALOX15B, AOX1, ARNT2, ATP5J, ATP6VOB, CASP7, CCL4, CCR8, CHPT1, CHUK, CLDN18, CREB3, CSNK1A1, CTNNA3, DHDH, DRD5, DTX2, DUSP4, GBA3, GLUD1, GNB3, GNPAT1, GOT1, HNMT, IFNA14, IQGAP1, IQGAP2, ITPK1, MAP4K3, MAPK7, MS4A2, MTHFS, NADSYN1, NCOA4, NFKBIE, NRG2, NTF3, ODC1, OR12D3, OR1F1, OR4A5, OR51F2, OR52N2, OR5A1, OR5AK2, OR5B3, PARD6G, PCCA, PDE3A, PDHA1, PERP, PIGV, PNPT1, PRKAG3, PTDSS1, RRM2B, SELE, SLC25A4, SPRY4, SPTLC2, STX3, SULT2A1, THBD, TNFRSF4, UPB1, VEGFA, ZFYVE16, TNFRSF11A
Negative_13701	ADA, BTC, CAD, CFD, EBP, F7, RDX, AADAC, ACMSD, ACVR1C, AKR1D1, ALDH2, ATP5G1, ATP5G2, B4GALT5, BIRC5, BMPR1B, CAPN2, CBR3, CCND1, CD3E, CFLAR, CLDN17, CPT1B, CSF1, CSF2RB, CYP3A5, DGKQ, DPM3, F13A1, FGF1, GLB1, GSTM2, HSD17B4, IDH1, IDH2, IMPDH1, INHBE, INPP5B, ITGA4, KCNB1, LAMC3, LCMT1, LEFTY1, LRRC4C, MAP3K4, MAPT, MCEE, MLYCD, MPDZ, MYH13, NLGN1, OR1J4, OR2A12, OR4D11, OR4K17, P4HA2, PFKFB3, PGAM1, PHKA1, PIGS, PLCG1, PPM1B, PRKCZ, PRPS2, PTDSS1, ROBO3, SELE, SEMA4A, SIPA1, SLC27A1, SOCS7, SSH3, ST3GAL2, STAM, STX7, TUBAL3, UCP1, ATP6VOA1, HSP90AB1, PDCD1LG2, SERPINA1, TNFRSF13B
Negative_13702	AGK, CKB, FAH, MAG, MPZ, MUT, PLN, ADH6, AFMID, AGRP, ALS2, AMDHD1, AMY2A, ANAPC4, APOA5, ATP2A3, BCMO1, CD3E, CD8A, CDH3, CLCA4, CLOCK, CMPK1, CPT2, CREB3L4, CTBP1, CTNNB1, CYP4F2, E2F3, EPHA3, ESPL1, FABP4, FRAT2, FTCD, GADD45B, GALNT1, GANAB, GCLM, GNG13, GOSR2, HSPB1, IFNA14, IFNA17, IL18, IRS4, JAG1, LEPR, NRXN2, NT5E, OR1M1, OR1S1, OR2M3, OR4D1, OR52E2, OR5A1, OR6C70, OR6C76, OR9A4, P2RX6, PARVA, PDE4B, PER1, POLR3A, PPP2R5C, PRIM1, RAC1, RAP1A, RASGRP2, RBPJL, SFRP1, SKP1, SPTAN1, SRGAP3, ST3GAL4, STK4, STX2, STX7, SUCLG2, TAP1, TAS2R13, TCIRG1, THY1, TJP1, UCP1, UGT1A10, VTI1A, WNT8A, CSGALNACT2, PRICKLE2, SERPING1, TNFRSF11A

Negative_13703	C3, CTH, FOS, FYN, GK2, HGF, HPD, IDS, B3GNT4, B4GALT6, C1QC, CCL19, CCNH, CD36, CDC25B, CDK6, COMP, CTSB, CXCR4, CYP4A22, DVL1, EFN1, ENTPD1, FARSB, FMO3, FMO4, FRAP1, FZD10, GALC, GALK1, GALNT11, GLUD2, IFNGR2, KCNJ11, MAP3K13, MAP3K14, MLLT4, NAGLU, NFKBIB, NTRK1, OR4A5, OR51G2, PCK1, PDCD1, PORCN, PPARG, PPP2R2C, PTPRM, SEMA4C, SPCS1, TGF A, TGFB3, TNXB, TPI1, TPK1, WIF1, ZAP70, CACNA2D1, CACNA2D4
Negative_13704	AK2, HK3, NGF, PXN, ADRA1A, ALPPL2, ANAPC4, ARD1A, ATP13A2, BMP5, CALML5, CAMK2G, CCNG2, CES7, CFTR, CLDN4, CSNK1G2, CYP11B1, CYP4A11, DGKA, E2F1, EDN1, EHMT1, GALNT1, GAMT, HARS2, HMGCR, ICAM1, IL12RB2, ITPK1, LDHC, NEUROG3, NFKB2, NFYB, NMNAT2, OR10H5, OR4N2, OR51I1, OR6K3, OR6K6, OR7A17, PGAP1, PIAS1, PIP5K1B, PPP2R1B, PPP2R2D, RELB, SDHB, TAS2R1, TD02, THBS3, TICAM2, TLR5, TNFRSF9, UBA1, WNT6
Negative_13705	C8G, DLD, IL9, ACADM, ACVR1B, ADCY2, ALDH1A1, AMHR2, ATP2A3, ATP4B, ATP5B, AVPR1A, C1QC, CAMK2G, CASP9, CCL26, CCL8, CD3E, CDS1, COL4A2, CTBP1, CXCL16, CXCL9, EIF4E, FCGR2B, FRAP1, GCAT, GGPS1, GGT7, GJD2, GUCA1A, HIBCH, IDH3A, IKBKE, ITGAV, KAT2B, MGLL, MYH9, NOS1, NTF3, NTRK2, OR2AG2, OR2T4, OR4X2, OR52L1, OXSM, POLE, PYCRL, SDC2, SMC1B, SNAI1, SPAM1, SSH3, TBXA2R, TGFB1, VAMP2, WNT7A, ATP6V1G3, TNFRSF10D
Negative_13706	C8A, FAH, ID4, KIT, AKR1C2, AKR1C4, ALDH5A1, AMY2B, APAF1, ASCC3, ASMT, ASNS, B3GAT1, CARD11, CARS2, CASP8, CCL5, CD14, CDC42, CNTN1, CSF2RA, CTNNA1, DGAT1, ECSIT, FOSL1, FZD7, G6PC, GALM, GAS1, GNMT, HLA-DMA, IFNA4, IFNAR2, INPP1, MAP3K7, NAGK, NAMPT, OR10G3, OR13F1, OR2A5, OR2T6, OR6K3, OR6S1, OR8U1, P2RX5, PER2, PGLS, PIAS2, PLAUR, POLR2J, PPAP2A, PPP1CC, PPP2R2A, PRKACG, PTAFR, PTPRJ, RRM2, SOS1, STAT2, STK4, STX5, TALD01, TAS2R1, TSC2, WARS, CACNA2D2, CSGALNACT1, MAPKAPK5
Negative_13707	DDO, GGH, JUN, RET, TNN, ACTN2, ANAPC5, ASPA, CCKBR, CCL7, CDC14A, CSF1, CXXC4, CYP8B1, DCTD, DHCR24, EIF4B, ENO3, FARS2, FZD9, GALNT5, GNAL, GNAS, GNRH2, GPD2, GSTM4, GUCY2D, HBEGF, HLA-DRA, HMGCS2, IL10, LIPT1, MAML2, MAN1B1, MAP4K3, MAPK10, MCCC2, MICA, NFE2L2, NQO1, NT5C1B, OR10J3, OR2M5, OR4F5, OR4L1, OR51F2, PARVA, PDX1, PGAM2, PITX2, POLR3H, PPARA, PRKAG1, PRKCE, SEMA7A, SLC25A6, SLC2A1, SMC1A, SRGAP3, TGDS, TGFA, TLR5, TSC2, VTI1A, WNT2, YWHAZ, PNLI, PRP2
Negative_13708	CD4, DLD, IL7, RB1, SRM, ACY3, AGPAT2, AMHR2, B3GAT3, CAMK2B, CCL5, CCR10, CD38, CDC14A, CNTF, CPT1B, CYP2B6, DHRS3, EP300, FDFT1, FGF18, FUT1, GNAI2, GRLF1, HES1, HMOX2, IFNA5, INPP5B, ITGB5, LIAS, MAP2K7, MAP3K4, MAP3K7, MBL2, METTL2B, MS4A2, NARS2, NUDT5, OR52A1, OR6K6, PAPPSS2, PMM2, POLA2, POLR2L, PRKG1, RALB, SETDB2, SV2B, TLR4, TLR9, TUBB2A, VAV1, WNT11
Negative_13709	CFI, F2, GBA, GK, HK3, JUN, TNC, ACAT1, ACTG2, AMY2B, ANAPC10, ARAF, B3GALT1, B3GNT4, BIRC3, CARS2, CASP8, CCL13, CHSY1, CLTA, CLTCL1, COQ5, CTNND1, DAPK3, DARS, DDHD1, DDX54, EFN3, EPHX1, FGFR1, GGPS1, HMGCL, ISYNA1, ITGAE, LIPF, MAP3K12, MAP3K2, MYH1, NFKBIA, NRAS, OR13A1, OR1L6, OR1N2, OR2AE1, OR2AT4, OR2C1, OR2C3, OR2M5, OR4K1, OR51F1, OR51Q1, OR56A3, OR5H6, OR8H2, P2RX4, P4HA2, PCK2, PDE1B, PFKP, PIK3R1, PLCB3, POLR1B, PPP3CB, PTSS1, PTGDS, PTPMT1, PTPN1, PYGL, RALA, RAPGEF4, ROB3, SLC27A1, SMPD3, SREBF1, TCF7L1, TUBAL3, UGP2, VTI1B, WNT4, WNT6, PPP1R12A

Negative_13710	AGL, GPT, HGF, ID2, ME1, MYC, ACAD8, ADIPOR2, AKR1B1, APH1A, ATP6VOB, ATP6V1A, ATP6V1F, CALML6, CCL26, CDC25C, CDKN2A, DDB2, DDIT3, EDA2R, EIF4E2, GADD45G, GALNTL4, GANC, GCNT2, GGT6, GSTO1, GUCY1A3, HAP1, HCCS, IL17A, IMPA1, INHBC, ITGB7, LFNG, LIMK1, LTB4R2, MAP2K3, MAP3K8, MDH2, MNX1, MS4A2, NCR2, NMNAT1, NMNAT2, OR1K1, OR2T10, OR4C46, OR4C6, OR4P4, PARD6A, PDE4D, PDE7B, PDIA4, PER2, PFKFB3, PLCB3, PNPT1, PPA2, PROS1, PTPN6, PYGM, RPS6, SFRP5, SPRY2, ST3GAL3, SUV39H1, THBD, TP53I3, TUBB2B, UNC5C, VEGFC, WBSR22, ZBTB16, PNLIPRP1
Negative_13711	FYN, PLG, VCL, AGPAT6, ALOX5, ARSB, ATP5J2, CACNA1H, CCL3, CCNH, CCR5, CD44, CDIPT, CREBBP, CSF2RA, CYBB, DAD1, DDX4, DNMT3A, EPHA5, EXTL3, FDFT1, FGF10, FGF12, FGF22, FLOT1, GCNT2, GNAL, GPX7, GSTA3, GSTM1, GUCA1A, GUCA1B, HADHB, HMGCL, HPSE2, IDH1, INHBA, INHBB, ITGA8, LEF1, LPAR1, MAP2K3, MAP3K12, MAP4K3, MYH8, NAGA, NOX1, NUMB, OR10A4, OR10AD1, OR10H1, OR13A1, OR1N2, OR1S1, OR3A2, OR5P3, OR6B2, ORC1L, PDXK, PIK3C2A, PIP5K1C, PLCD1, PLCG1, PLXNA2, PLXNB3, POLD3, POLR2K, PPP1CA, PPP3CC, PPT1, PRKCZ, RENBP, RFNG, SCD5, SCLY, SIGLEC1, SOX17, ST3GAL2, TAS2R60, THBS2, TJP2, TRPC1, ULK2, VDAC2, YES1, ATP6V0A4
Negative_13712	F3, MUT, ACAT2, ADORA2B, ADSS, AMDHD2, ATP13A2, BBOX1, C4BPA, CACNB2, CALML3, CCKAR, CHRM5, CIITA, COQ3, CTBP2, CYP2U1, DCTN1, GBE1, GNAQ, GUCA1A, HLA-DRA, HLA-F, HTR6, IFNA17, IKBKG, IMPA2, INPP4B, KLRD1, LAMC1, LDHD, MAPT, NFYC, NRG4, OR10H1, OR10H5, OR1D5, OR2D3, OR4F17, OR4K2, OR5K2, P2RX1, PIAS4, POLR2E, PPP3R1, PRKAR1A, RAC1, RALBP1, RAPGEF3, RARS, RIPK1, SEMA3G, SHISA5, SIAH1, SOCS1, SPRY1, ST3GAL6, STMN1, TCF7L1, WASF3, ASDHPPT, CACNA2D2
Negative_13713	DCT, GSR, IVD, TXK, AOC3, B4GALT1, CCNB1, CCNE1, CD14, CDKN2A, CNTF, CSNK2A1, DRD2, DUSP7, ENPP2, ENTPD1, EPHA8, ETNK2, FARSA, FGF19, GALNT1, GBT1, GCNT1, GDE1, GLI3, GNAO1, HDAC1, HIBADH, IDH2, IL12RB1, IL22RA1, IL8RB, KIR3DL3, LDHD, LEFTY1, NADSYN1, NEGR1, OR10J5, OR2B2, OR56A1, PARVG, PCYT1A, POLR2C, PPP1R1A, PPP2R2A, PSME1, SGMS1, SKP2, SXX2IP, STX6, ST6GALNAC3, TNFSF13B
Negative_13714	AGK, GLS, MAG, XDH, ACOX3, ACSS1, ALAS2, AMPD2, ARHGEF6, ARNT, ATP6V1F, C3AR1, CASP6, CD226, CD99, CLCF1, CLDN11, CREB3L1, CSNK1D, CTBP1, CXCL12, DAAM2, DPM1, DVL3, EHMT1, ENTPD4, EPHA7, FPGT, GAD1, GCNT1, GYS2, HEXA, IDH3B, IL11, IL20RB, IL22RA1, ITPKB, JAK2, NCR2, NSDHL, NTN1, OR10J5, OR4D1, OR4D5, OR4D6, OR4F17, OR51E2, OR52N1, OR52W1, OR5D16, OR6K2, OR6S1, ORC6L, PDPK1, PLD2, PRKY, PSPH, RPS6KA6, SEMA3G, SFRP2, SGPP2, SLIT2, SSH1, TLR4, TUBAL3, UBE2L3, UGT1A10, UGT2B17, WNT5B, YARS2, PAFAH1B3, PRICKLE1, TNFRSF10B, TNFRSF1A
Negative_13715	GNE, NNT, ABLIM1, ADCY3, AGRN, AK3L1, ALDH2, ANAPC1, ARD1A, ATIC, ATN1, AVPR1B, BNIP1, C1GALT1, CASP9, CBLC, CD40LG, CES7, CHD8, CHPT1, COL2A1, CTSS, DDX52, ECHS1, EPHB3, EPOR, FGD3, FGF23, FM04, GALNT7, GBGT1, GNRH1, HAAO, HAO1, HTR4, ICOS, IDI2, IFNA7, IL12A, IL1R1, IL2RA, IRF5, LAMC3, LRP5, MAOA, METTL2B, MGAT1, MGLL, MYL2, NCAM2, NCKAP1, OR10Z1, OR2AG1, OR2G3, OR4F4, OR51F1, OR52A5, OR5C1, OR8G1, PDE8A, PDXP, PGAM4, PIGS, PIP5K3, PLA2G2A, POLD2, PSEN2, PTCRA, PYGL, RALBP1, SEMA4D, SIGLEC1, SMAD9, SRGAP2, STMN1, SUCLG2, TAS1R3, TAS2R41, TGFA, TNFSF10, TNFSF11, TSLP, TUBA1C, TYROBP, UCK2, VEGFA, VTI1B, WBSR22, ZIC2, ATP6V1C1

Negative_13716	IDS, RFK, ALG10B, APOC3, ATP50, B3GNT3, BET1, CARS2, CASP3, CCL25, CMAS, CMBL, COL3A1, CYBA, CYP3A7, CYP8B1, DDX18, DKK4, DLL4, DTX4, EHMT2, EIF4B, FZD2, FZD3, FZD6, IL13, IL1B, ITGA2, ITGB1, LAMB4, LEPR, LRD, MAPK1, MMP1, MYL5, NT5C3, OR10A4, OR10G3, OR1D2, OR4D11, OR4K15, OR52N1, OR5AK2, OR8B4, PDE2A, PDE4A, POLD1, POLR2G, PPID, PPP2R1A, PRKACA, PTCRA, SETDB1, SMAD3, SMURF1, SSH3, SSX2IP, TKTL1, TRAF2, UBA7, ULBP1, ULK1, UNC5B, WNT2, WNT7B, YWHAE, YWHAG, ALDH18A1, HLA-DQA2, ST6GALNAC3, TNFRSF1B
Negative_13717	FGG, ACLY, AC01, ADCY10, ADH1A, ADRB1, ADSS, AGPAT6, AHCYL1, ALDH4A1, APRT, ATP6V1H, B3GAT1, BPNT1, CACNG8, CARS, CD72, CHIA, COMP, COQ5, CYP26C1, DFFA, DGAT2L4, DNMT3L, EVI1, FARSA, FGF23, FPGS, GALNTL5, GCNT2, GPD1, GRIA3, GRIN1, GSTP1, GUCY2F, IBSP, KIR2DL3, NCK2, NEU3, NQO1, OLAH, OR10R2, OR2A25, OR2L13, OR4X1, OR51I1, OR52B4, OR6Q1, PIGV, PIP4K2A, PLCB3, PLD2, PPP2CA, PTGFR, RASGRF1, RFXAP, SARDH, STAT1, TUBA3E, UGDH, WIF1, ATP6VOA4, CACNA2D1
Negative_13718	C3, CBS, RFK, TXK, AGMAT, AKR1C2, ALG10, APC2, ARRB2, ATP13A2, B3GAT3, CCNA1, CD274, CD40, CDC27, CDC42, CDS1, CLTC, CXXC4, DAPK3, ENTPD3, EPHA1, EPHB3, FGF4, GCDH, HSD17B7, HSD3B7, IL13, IL4R, ITGB2, ITGB4, JAM3, LDHD, LEFTY2, LRRC4C, MAP4K3, MAPK7, MEF2C, MLYCD, MYLK2, NAT5, NCF1, OR10H1, OR10Z1, OR4K5, OR5AU1, OR6T1, PDE6H, PGM2, PHPT1, PIGF, PIGU, PKMYT1, PLCD4, PLOD3, POLR1C, PPAT, RALA, RENBP, SGMS1, SH2D1A, SLC25A6, SMARCA5, TNFSF14, TUBB4Q, USE1, VDAC1, XCL2, CACNA2D2, EIF4EBP1, HSD17B10
Negative_13719	AGL, CS, GPT, KMO, PML, ACADSB, ALDOA, ASCC3, B3GAT3, BDH1, CCL21, CDH4, CNGA4, E2F1, FGF17, FRAP1, FUT7, GFPT1, GLUD2, GUCY2D, HCCS, HHEX, HIP1, HMGS1, HSPA2, IFNG, IL13RA1, KIR3DL1, LILRB3, LTB4R2, MAD1L1, MALT1, NAGLU, NCOA4, NFYB, NOTCH3, OR13A1, OR13C4, OR14J1, OR2T12, OR4C6, P4HA1, PAX8, PDE8A, PKLR, PLCB4, POLD1, POLR2I, PPA2, PRKAB2, RARS2, SESN2, SLIT2, SPRY2, STX1A, SULT1A4, TICAM2, TNFSF18, TUBA8, TUBB4Q, UGT2A1, VAMP2, HSP90AA1
Negative_13720	BAX, BCR, DAO, LSS, MPI, TXK, ADCY3, ANPEP, ASPA, ATF4, ATG12, ATP5G1, BCMO1, C1GALT1, CAPN2, CD274, CDC20, CDKN1B, CHEK2, CHIA, CLCA2, COL2A1, CX3CR1, DPM1, DUSP14, EDAR, FGF17, FGF20, FLAD1, GALNTL1, GMPR, GRIN2A, GSTM3, GZMA, HIF1A, HNMT, IDH2, IDI1, LDHC, MAP3K6, MCM7, MGA T5, NAGA, NTRK1, OR2T10, OR4C16, OR5AU1, OR6B3, OR6Y1, P2RX3, PCK1, PCK2, PHKB, PIK3R4, PLXNA3, PLXNC1, POLR1B, PTPRC, RAP1A, RND1, ROBO3, RPS6KA6, SHC3, SLC33A1, SMAD9, SULT1A4, TLR4, TUBA1C, VASP, HLA-DRB4, PNLIPRP1, SUV420H1, SUV420H2
Negative_13721	FYN, GGH, HDC, JUP, SFN, ADCY6, ALAS2, ALDH1A3, BCAT1, C3AR1, CACNG5, CADM3, CBR3, CCL22, CCR8, CDK2, CNTNAP2, COL11A1, DCXR, DLL1, DOT1L, DPM1, DUSP1, DVL3, ENPP2, ENPP6, FGFR1, FGFR4, FUT5, GCLC, GZMA, HDAC1, HES1, HSD17B3, IKBKG, IL10RB, IL23R, IL25, INHBC, IRF5, ITCH, ITGA7, ITPA, ITPKA, LIMK1, MINPP1, MMP9, MPDZ, MYLK, NEU4, NNMT, NTN1, OR1OK1, OR1I1, OR2W1, OR5A1, OR5AK2, OR5L1, OR8B4, PHGDH, PIP5K1C, PLXNB1, PROC, PRSS2, SOD1, STX2, STX6, TAS2R7, THBS3, THY1, ULK2, VKORC1, WASF2, HSP90AA1, MAPK8IP3, SERPING1, ST6GALNAC1, ST6GALNAC5, ST6GALNAC6

Negative_13722	ADO, C3, DBT, HK3, IL9, MUT, PC, PTS, ACAA2, ACOX1, ACOX3, ACVR1, ARPC5 L, ATP6V1D, B3GNT2, CCL20, CD36, CSNK2B, CTNNB1, CYBB, CYP17A1, DPYSL2, DVL3, EPHX1, EPHX2, ERBB2, FDFT1, FUT7, GABARAP, GALNT8, GAMT, GCNT3, GCNT4, GP1BA, GSTM1, HLA- DRA, HNF1A, ITGAL, LAMB1, LYPLA1, MAN1A2, MAOA, MASP1, MGST1, MS4A2, NOTCH2, OR10T2, OR2T2, OR3A1, OR5L1, OR5M8, ORC2L, ORC6L, PAX8, PDE3A, PGK2, PIP5K1A, PLAU, POLR1C, RCHY1, SCLY, SEMA3D, SLC27A5, STX7, TGFBR2, TNFSF18, TRADD, ULK1, USE1, VDAC2, VEGFB, MAPKAPK5, TNFRSF13B
Negative_13723	F12, GDA, HK2, IL6, ABI2, ACTA2, ACTN2, ADH1A, AMPD2, APLP1, APOA1, BMPR2, CHKB, COL5A1, CXCL6, CYP2C18, CYP3A43, DCTN1, DDIT4, EPHA8, EPHX2, FLAD1, IAPP, IL5RA, IRAK3, ITGA11, KLRK1, LAMA3, LAP3, LARS2, LILRB3, MCM2, MGST1, NCR1, OR11H1, OR2L2, OR4F5, OR56A3, PFKM, PHKA2, PI4KB, PLA2G5, PTCH2, SEMA3G, TSC1, UBE2L6, UCK1, WNT10A, HSD17B10, MAPKAPK2
Negative_13724	CDA, CFD, FGA, LPO, PRL, AASS, ACACB, ACSM5, AHCY, ALDH5A1, ALG12, ALPL2, ARR2, CCNB2, CCR2, CCR8, CD01, CHST11, CNDP1, COL1A2, COQ5, CRHR1, CTNND1, CYFIP1, CYP2D6, CYP7A1, DDX50, DEGS2, DRD5, EGLN1, ERBB3, FUT7, GCNT2, GGT5, GNG13, GNMT, GSTA3, HHEX, HSD11B1, HSD11B2, IRF9, ITGA1, MAN1B1, MAOA, MAP3K5, NEGR1, NEU3, NRG4, NUDT12, OCLN, OR10Z1, OR2A5, OR3A2, OR4C46, OR51G2, OR52L1, OR52N4, OR6C4, OR8H1, PAK3, PARS2, PCK2, PCNA, PLCG2, PLK1, PNLIP, PPP2R2D, PPP2R5A, PRKX, RBKS, SGMS1, SHISA5, SMC1B, SMURF2, STEAP3, SV2B, TP53, TUBB1, TUBB4, UBE2L6, VAMP4, WBSR17, WNT11, WNT7B, ALDH18A1, ATP6VOA1, PAFAH1B3, TNFRSF10D
Negative_13725	AK2, DAO, F7, MVK, TNC, ABI2, ACADVL, ACHE, ACOX1, ADH4, ALCAM, AQP7, ATG3, ATP6VOB, B3GALT4, BIRC3, BLVRA, C1QC, CADM3, CCNB1, CDC16, CDC26, CHPF, CHR1, CXCR4, CYP2S1, DLL3, DUSP8, EPB41L2, EPHA2, EVI1, F2RL2, FGFR3, FUT2, GALNS, GALNT6, GFAP, GNRH2, GRIN2A, HSPA8, IFNA13, IL29, INHBE, ITGAX, LAMC3, LTB4R2, MAP2K4, MYH2, MYL2, NGEF, NR5A2, NRXN1, OCLN, OR10G3, OR10G8, OR13D1, OR14J1, OR2L3, OR52E2, OR5AR1, OR5B3, OR5M8, OR5V1, OR6Y1, OR8S1, PAK6, PIK3R1, PIP4K2B, POLD3, PPAP2B, PPP3R1, PSENNEN, PTGFR, PVRL1, PVRL2, RDH16, SETDB1, SFRP5, SORBS1, STK4, STX1A, SUOX, TAS2R8, TRAF6, UAP1, UGP2, WNT8B, WNT9B, ATP6V1G1, B4GALNT1, CSNK1A1L, KIR2DL5A, MAPK8IP2
Negative_13726	ADK, BTD, CKM, FES, GSN, LIF, NF1, PGF, PVR, SRC, TK2, ACOX2, ACVR1B, ADSSL1, AGPAT6, AKR1C4, ALG11, ALPL, B3GNT3, BDKRB1, CAMK4, CCKBR, CCL28, CCL8, CCR7, CD74, CDH15, CDK7, CER1, CLDN15, CLDN18, CRY2, CYP2A7, DAPK2, DHCR7, DLL4, DOT1L, DPYSL2, DUSP10, EI24, FZD3, GADD45G, GALNT13, GJA1, HNF1A, IFNA5, INSR, ITGA10, KCNQ1, LCMT1, LCP2, LIPT1, MCM4, MKNK2, MYL7, NCK2, NQO1, OR11I1, OR2B6, OR2L2, OR51B4, OR51B6, OR51E1, OR5D16, OXTR, PDE4C, PDX1, PFN4, PIGM, PIGT, PIP4K2B, PLTP, PLXNA1, PMM2, PRLR, RHOD, STX12, SV2B, TGFA, TIAM2, TJP2, TNFSF14, ULK1, WARS2, ATP6VOA1, ATP6V1C1
Negative_13727	AMT, AR, AUH, DCT, HGD, PGF, ACAD9, ACP5, ADCY2, ADRB3, AKT2, ARPC2, ATG3, BCL2, CACNA1D, CACNB2, CAV2, CD36, CDC14A, CHKB, CLTC, CLTCL1, COQ5, CSF1, CSNK1G3, CXCL2, DGKA, E2F1, E2F3, E2F5, EFN3, ERBB4, FABP4, FGF17, FGF4, FGFR1, GALNT13, GCNT1, GCNT3, GPD1L, GRHR, GRIN2B, GSTO2, HEXA, HSD17B7, HTR4, IARS, IL11RA, INPP5A, ITGB1, MAPK11, MAPK8, MFNG, MMP1, NEGR1, OR10H3, OR4F15, OR51V1, OR52A5, OR52K2, OR5B21, OR5K1, OR8D2, OXSM, P2RX6, PANK2, PER3, PIGT, POLR2E, PPM1D, PPP3R2, PTPN1, RBL2, RRM2B, SEMA4G, SGMS1, SH2D2A, SH3BP2, SKP1, SMAD5, SMAD7, ST3GAL4, STAT5B, SUCLG1, TAS2R16, TBL1Y, THBD, TNFSF4, VEGFA, WBSR17, MAPK8IP1

Negative_13728	CTH, SFN, ACSS1, ALG13, ALPPL2, APLP1, CHRM2, CPOX, CSF1R, CXCL5, CYP2A13, CYP2E1, DVL2, ETS1, FGF6, FUT4, GADD45A, GMPS, GNAI2, GRIN2D, GUCY2F, IL24, MAD1L1, MAPK3, MLLT4, MMP7, MYH11, NADK, NUMB, OR10P1, OR11H4, OR1J1, OR4C13, OR5AP2, OR5I1, OR8D4, OR8K3, PAFAH2, PHPT1, PIK3CB, PIP5K3, PPCS, PRIM2, PTPN1, RAB23, RASGRP4, SIGLEC1, SLC25A6, SPRED1, SQLE, ST3GAL1, TACR3, TALDO1, TAS2R14, TMLHE, TNFSF18, TSC2, WNT5A, TNFRSF10D
Negative_13729	AK5, CEL, GH2, SHH, TNC, TPO, ACADM, ADRB2, ALDH3B1, APBB1, APOC3, ARSD, ATP5L, ATP6V1H, B3GALT1, B3GAT1, B3GNT2, B4GALT6, CACNB3, CAMK2D, CCR6, CLCA2, COMT, CXCL16, CYP1A1, CYP2C19, DGKD, DUSP8, ECSIT, ENPP2, EP300, FGF8, FMO3, GGCX, GNA11, GNAS, IFNA8, LEFTY2, MAML2, MAP3K6, MAPK7, MTMR1, MYH4, MYL5, MYL9, NFATC1, NFKB2, NLGN3, OLAH, OR2AT4, OR4C6, OR6A2, PARVA, PCCA, PDE10A, PGM1, PIP4K2B, PLA2G5, PPA1, PPOX, PPP3CC, PRKCI, PRKG2, PSPH, PVRL3, RAPGEF4, RETSAT, RFXAP, ROBO3, SHC2, STEAP3, STX18, THBS4, TLR9, TUBB1, UAP1, UBA1, UPRT, WNT3, HLA-DRB5
Negative_13730	FES, JUN, TK2, ACOT12, ADCY7, AFMID, AGMAT, ALDOC, ALG1, ANAPC11, ATN1, C4BPB, CCKAR, CCL4, CD74, CDKN2C, CLDN11, CPS1, CRY2, CTLA4, CTPS2, CX3CR1, CXCL10, CXCR5, CYP2C18, EDAR, ESAM, FCER1G, FCGR2B, FGF13, FGF21, FZD6, GALNS, GALNTL5, GLG1, GOT2, GPD1L, IL1R2, INHBC, ITGA9, LIFR, MARS, NAGA, NCK1, NGEF, NR1H3, NT5C3, NTF4, OR1N1, OR1S2, OR4K5, OR51I2, OR52R1, OR5AN1, ORC4L, PIGV, PLCD4, POLR2B, PTCRA, RRM2B, SLC12A2, SNAP23, TGFB2, TNFRSF8, TRADD, XIAP, PAFAH1B3
Negative_13731	AGL, DLD, ME1, MUT, SDS, ACOX1, ACSL6, ACVR1, AKT3, ALDH1A2, ALDOA, ALG13, ALOX15, AMY2A, APRT, ARHGEF6, ARHGEF7, ARRB1, B4GALT7, CARS2, CDC2, CDK7, CDKN1B, CHKB, CLDN15, CTSB, CYP11B1, CYP2J2, CYP4A11, DCTD, DHCR7, DKK4, EPHB2, ETNK2, FGF12, FLAD1, GALK1, GBGT1, GMDS, GNAL, GUCY2F, HSD17B3, IARS2, ICAM3, IDI1, IL13RA2, IL22, INPPL1, LAMA4, MAML2, NANS, NEU4, NPR1, NSD1, OR10H4, OR2AG2, OR2T11, OR4N5, OR5AS1, OR8A1, OR9K2, P2RX1, PAK2, PARD6B, PARS2, PDGFRA, PDK1, PIAS3, PLCB2, PRKACA, PRKAG2, PTCH1, PTPRJ, PTPRZ1, RAF1, RERE, RPRM, RXRB, SMAD4, SMARCA2, SOCS3, STK3, SULT1E1, SV2B, TBL1X, TRMT11, TUBAL3, TUBB6, UBA7, UGT2B11, YWHAZ, ATP6V0A2, PAFAH1B1
Negative_13732	AK7, CFH, CRH, CRK, GK2, LSS, PXN, TNF, AADAC, ACADL, ACOX2, ARSE, B4GALT7, CAMKK2, CCR1, CDC16, CHRM2, CHST12, DCTD, EPAS1, FABP3, FRAT1, GAB1, GADD45B, GALNT12, GYS1, HMOX2, INPP5B, INPP5E, ITGB6, MPP5, NFKB1E, OR1Q1, OR52H1, OR5AR1, OR5T3, PDE5A, PDE8B, PGM3, PIK3C3, POLR3H, PTPMT1, RHOA, RPS6KA5, SEMA4D, SESN1, SFRP4, SPHK2, ST3GAL1, ST6GAL1, TIAM2, SERPINE1
Negative_13733	CDA, ME3, MIF, SRF, ACSM2A, ATP6V1H, B3GALT1, BCL2, CCNH, CCR3, CCR9, CD8B, CDC20, CDC25B, CLDN9, CTPS, CXCL5, DGKZ, ENO3, FGD1, FUT6, GAB1, GARS, GNB3, GYS1, HBEGF, IFNGR1, INHBA, IRS1, LEPR, LIAS, LPAR1, LRP5, MTHFD2, NOTCH3, OR10A7, OR2C1, OR6K3, PDE10A, PDE8B, PIGT, PIP5K1B, PLXNC1, PPCS, PPP2CB, PTPN7, RPN1, STX1A, TAS2R8, TCIRG1, THBD, TNFSF9, TRAF6, HSP90AB1, SERPINA1
Negative_13734	KIT, MOS, PLN, ACADS, ALDH3A1, BLNK, BRAF, CASP7, CCL22, CCNG1, CCNG2, CDC6, CHAT, DUSP10, ENO2, EPHA3, FGF19, GALNT7, GIT1, GUCA1B, HADHA, HSD3B1, IFNA6, IL18, IL8RA, ISYNA1, LLGL1, MGAT2, MPZL1, NEGR1, NFYB, OR10AD1, OR1J1, OR2F1, OR2T33, OR4S1, OR51A4, OR51L1, OR5B3, PIK3C2G, PLAUR, PPM1D, PRODH, RAB5A, RARS, SETD1A, TP73, TPH2, TPMT, VKORC1, XYLT1, CACNA2D2

Negative_13735	DBH, DCN, DDC, ITK, ME2, ABLIM3, ACADL, ACSL6, ALDOA, ALG8, BPGM, C1QC, C3orf10, CAMK2D, CCL1, CD40LG, CHST11, CLDN16, DAAM1, DGKB, DKK1, D NMT3B, FUT5, GALNT9, GALNTL2, GCDH, GNAT3, GSK3B, INMT, ITGA3, ITGB2, JAM2, LAMA4, LRP6, MCM4, MOV10L1, NT5M, OR10K1, OR13C5, OR1J2, OR2A 42, OR4F6, OR56A1, OR5P2, PGAM2, PGK2, PGM2, PIK3CG, PLA2G2E, PLCG1, POLR2J, RELB, RRAS, SLC33A1, SMAD6, SMPD1, SOD1, STT3B, SUFU, TICAM2, TRAF4, TRPC1, VEGFB, WASF2, XYLB, YKT6, HSD17B12, TNFRSF10A
Negative_13736	CEL, DAO, DCC, FOS, GSR, GSS, INS, LEP, MPZ, ACAD8, ALG11, ARNT, ASNS, B MPR1B, CKS1B, CTSG, DAPK1, DGKQ, DPAGT1, DUSP6, IFNA7, INSRR, ITGA5, KIR3DL3, KLKB1, LLGL2, LRRC4C, MAT2B, MCM5, NCR2, NKD2, NMNAT3, NODA L, OR1M1, OR52B4, OR5D13, PDPK1, PFN1, PIGV, PKMYT1, PLA2G2D, PLAT, P LD1, PLOD3, POLE2, RASGRF1, RUNX1T1, SFRP5, SMURF1, SNAI1, ST3GAL4, SULT1A4, TKTL1, TLR4, ULK1, WNT6, SERPINF2
Negative_13737	BTD, C1S, EPO, GSS, OGT, PLG, RFK, AADAT, ABL2, ABLIM2, ACY1, AGPAT3, A GXT2, AKR1A1, ALDH2, ALG6, ARPC2, ATP5A1, ATP5E, BMP2, BUB1, CCL3, CC L5, CD27, CLCF1, COL5A1, CPT2, CSNK1A1, CXCL6, CXCR3, CYSLTR2, DIAPH 2, DVL2, E2F3, EFNA4, FGF2, FGF7, FPGS, GALNTL5, GCLM, GNA15, GNAO1, G STT1, IL11, IL20, IL22RA1, INPP4A, ITGB1, ITGB8, JAG2, KIR3DL1, LAMA 4, LAMB2, LARS, MAML3, MAP4K3, METTL2B, MYH9, NCF4, NRP1, OR1J4, OR2H 2, OR52B6, OR6C76, PDGFA, PIK3C3, PIK3R2, PNPO, POLD1, POLR2C, PTDSS 1, PVRL1, PVRL3, RAPGEF1, RARS2, RDH10, ROCK1, RPS6KA6, SHC4, SHISA5, SLC2A2, SMPD4, SNAI1, SNW1, SRGAP2, STAM, TACR3, TAS2R13, TAS2R42, TRPM5, TUBB3, UCP1, UGT1A10, WHSC1L1, WWP1, YWHAQ, CSNK1A1L, PRICKL E1
Negative_13738	A2M, AK7, C8A, FYN, IL3, LHB, SHH, AGRP, ALAD, ALAS1, ALDH3B2, ARPC5L, ATP5D, CANT1, CD72, CHEK2, CHSY3, CLDN10, CMBL, COL6A1, COX10, CRLF2, CSDA, CSNK2A2, DAPK1, DDX23, DNMT3L, ENPP1, FOXO3, FTH1, GATM, GSTM 5, IFNW1, IKBKE, ITGA4, ITGB1, KDSR, LAMC1, MAD2L2, MDM2, MGAT5B, MLL T4, NFAT5, NR4A1, OR10A4, OR10V1, OR1G1, OR4C46, OR51I2, OR5J2, OR5L 1, OR6K3, OR7C2, PDHA1, PLIN, PPAP2A, PPM1A, PPP2R5B, PPP3CC, RDH10, ST8SIA1, STK3, SULT2B1, TAS1R3, TLR5, TSC2, UGT2B4, VDAC3, ATP6V1B2, ATP6V1C1, HSD17B10, PPARGC1A
Negative_13739	DUT, NPY, ACVR2A, AMDHD1, ARPC2, BCL2L1, CALML6, CCL22, CER1, CTLA4, CXCL5, CXCL9, CYP2C9, CYP8B1, DHRS4, EFNA2, EGFR, ERBB4, FGF23, FGF5, GALK2, GALNTL1, GLI2, GNPDA2, GNRHR, GRM5, HAO1, HMOX1, IDH2, IGF1R, IL1RAP, IL22RA1, IL6ST, INHBB, JAM3, LDHAL6A, MAML2, MAN1B1, MAPK1 0, MCCC1, MCM6, MGAT5B, MYLK, OR13G1, OR51B2, OR5A1, OR8D4, PAK3, PDE 6G, PFAS, PIGK, PLA1A, PLIN, POLA2, PRKCZ, PROS1, PSME1, PTPN1, SEPHS 1, SOS2, ST3GAL1, STX10, TAS2R14, TOLLIP, UAP1, VKORC1, CACNA2D2, SE RPING1
Negative_13740	FUK, ME1, MVD, PAH, SHH, AARS2, ACTG1, ALOX12B, ARG2, ARPC1B, ARPC5, B CKDHA, CD22, CES1, CHST11, CLDN1, CRLF2, DAPK3, DEGS1, ENAH, ENTPD2, ERBB3, FGF12, FGF21, FGF23, GCNT2, GGT7, GNAI1, GNAZ, GRIN2C, IL5RA, IMPDH2, ISYNA1, LCMT1, LCP2, LILRB3, LRRC4C, MAPK3, MDM2, MGAT5B, NC OR1, NQO1, OR1G1, OR2T6, OR5A1, OR5B3, OR7C1, OXCT1, PDK1, PGM2, PHKG 1, PIGC, PIK3C2A, PNPO, POLE3, POLR3H, PTPN1, SIAH1, SKP1, SLIT1, SRD 5A1, STT3B, SV2A, TACR1, THTPA, TKTL1, TP53, TSLP, UBA7, WNT3A, ZFYVE 9, AASDHPPT, CACNA2D2, SERPINA1, TNFRSF11B

Negative_13741	BID, BTD, C4B, C8G, CD4, DCC, F2, FAS, GAA, HYI, ID1, NOG, OTC, TKT, TYR, ADIPOR2, ARPC1A, ARSB, B3GNT5, B4GALT3, CADM1, CAMK2G, CASP3, CD38, CD40, CDC26, CDK5, CHRM2, CLDN1, COL4A2, CYP11B1, CYP1A2, CYP1B1, CYP4F3, DEGS2, DIAPH1, EFN2, ENTPD4, FGF7, FLOT2, GNAI2, GNAL, IDI1, IFNA7, ITGB4, LIPC, LLGL2, MINPP1, MYH9, NANS, NEU1, OR10K1, OR11G2, OR2B11, OR2T10, OR4C6, OR4D6, OR5M3, OR6N1, OR8I2, PAPSS2, PAX8, POLE4, POLR1B, PPP3CA, PPP3R2, PRKAR2A, PTPRZ1, RAB23, RBL1, RENBP, RFXAP, RUVBL1, RXRA, SYNJ2, TALDO1, TAS2R50, TBL1X, TBL1XR1, VASP, ZIC2, ATP6VOA1, HLA-DRB4, PAFAH1B3, ST6GALNAC6
Negative_13742	AMT, CBS, CR1, GH1, GP6, IL2, AACCS, ACAT1, ACSL4, ADH7, AHCY, ALAD, ALDH3A1, ALOX15B, AOX1, APOE, APRT, ARSE, ATP6V1H, CCNG2, CD28, CLCF1, CLDN16, CLDN17, CLTA, COL4A4, CPT1C, DHRS4, DUSP16, FARP2, GALNT9, GALNTL5, GLUD2, GNAZ, GNB1, GNPAT1, GRAP2, GRHR, GSTA2, HARS, HCST, HRH1, ICOS, IFNA13, IFNA8, IFNG, IFNGR1, INPP4A, IRS1, ITGA9, ITGB4, ITPKB, KLRC3, LIPA, MAP2K3, MKNK2, MYH9, NCK1, NFKB1, NME4, NNMT, NQO1, OR10H1, OR13D1, OR2G3, OR52B4, OR5B17, PAK7, PDE4C, PDGFA, PER1, PIGV, PIP5K1B, PLA2G5, PLCB4, PMM2, POLR1D, PPP2R2B, PTGER3, PTTG1, RELB, RFNG, ROCK2, SCLY, ST3GAL6, STEAP3, STK11, TDO2, TGFBR1, UCKL1, UPP1, UROS, TNFRSF18
Negative_13743	CD6, DDO, ID2, MIF, TFG, AARS, ACACB, ACP1, ACTG1, ALDH9A1, APAF1, B4GALT4, CCNG2, CCR5, CD19, CD28, CMAS, CTTN, DKK1, DUSP8, ENTPD2, FBP2, FGF12, FM05, GALNTL1, GP1BB, HAO2, HEMK1, HSD17B8, IFNAR1, IFNAR2, IFNK, IL20RB, IQGAP2, KIR2DL2, MCM7, MPST, MYH4, MYLK2, NADSYN1, NCR1, OR10J1, OR1N1, OR2A14, OR2A5, OR2G6, OR2T33, OR4C46, OR4S2, OR51I2, OR6C4, OR6T1, OR7G2, OR8H1, OR9K2, PANK4, PFKFB3, PIAS3, PIGO, PIGP, PLK1, PPA2, PPM1B, PPP2R1B, PRDX6, PYGL, SIAH1, SMAD7, SPHK1, SPRED2, SPRY3, SPTAN1, TAS2R16, TJP3, UCK1, CACNA2D2
Negative_13744	AK2, AR, C8B, CAD, IL5, PLG, PRL, UBC, AACCS, ABCC8, ACPP, ACTC1, AGRP, AKR1C2, ALAS1, ALOX12B, ATF2, ATG3, ATP50, ATP6V1F, BHMT, CAMKK1, CAMKK2, CCNG2, CD247, COQ5, CYP1A1, CYP3A43, CYSLTR2, DDX4, DHCR7, DHDDS, DTX3, DTX4, EDN1, EFN1, EPHB6, FOXO3, GALNT2, GLUD2, GNB3, HAP1, HCCS, IDH3G, IMPA1, MMP9, NR1H3, NRG2, NT5C1B, NT5C2, OCLN, OR2T3, OR2Z1, OR4Q3, OR56A1, OR6K6, PAK7, PARD6A, PDE11A, PIP4K2C, PPID, PPP2CB, PTGS2, PTTG1, RASA2, RFXANK, SAT2, SCP2, SEMA3G, SEPHS1, SETDB2, SLC25A4, SMAD2, SOCS5, SPTLC2, ST8SIA5, STX10, SYNJ1, TPM3, TRAF3, TUBB2B
Negative_13745	EGF, GK2, JUN, KIT, RET, AADAC, AGPAT4, ALDH3B2, ARG1, ATG12, B3GNT4, BLNK, CAMK2G, COL5A2, CREB3L1, CXCR3, CYP3A4, CYSLTR2, EFN3, F13A1, FLAD1, FPGT, GALNTL1, GLUD1, HLA-G, HNF4G, HNMT, IARS2, IL17A, ITGAD, JAK2, LIPC, LIPE, MAD2L2, MAFA, NCKAP1L, OR13C3, OR2G6, OR2T1, OR4D1, OR4N4, PDE10A, PFN1, PIAS2, PLEKHA8, PYCRL, RND1, SEMA3C, SNAI1, SNAI2, SPTLC2, STAT5A, TPI1, TUBA1C, TUBAL3, UBA7, UNC5C, VDAC3, WNT5B, PLA2G12B, TNFRSF1B
Negative_13746	BID, C9, GSR, PML, SPN, AGPAT3, ALPI, AOC2, ATG12, ATP2A3, ATP5E, ATP6VOB, BDH1, CCR7, CMAS, CSNK1G1, CYP2S1, DHCR7, DKK1, EDNRA, F13B, FGF3, FRAP1, FZD5, GJD2, GMPR2, GNAI1, GNRHR, GP1BB, GSTM2, HCST, HHIP, HIBCH, HSD11B1, IDH3B, IFNA4, IFNA7, IL1R1, INPP1, ITGA3, LTA4H, MAD2L1, MAP2K2, MAP3K13, MAP3K7, NCK2, NEU2, NRG3, NRP1, NSDHL, OR10G7, OR1K1, OR2T8, OR51M1, OR52N1, OR6C4, OR6N2, OR8D2, OR8K5, OXCT1, OXSM, PECAM1, PIGO, PLXNB3, POLD2, PPBP, PRSS3, PTGFR, RRM2B, SEMA3E, SHISA5, SPP1, SPRY2, STX2, THBS3, TIAM1, TPI1, CACNA2D4, HSD17B12, PLA2G12A



Negative_13747	CAT, EZR, F12, LCT, LIF, TK2, AADAT, ACYP1, ADCY7, ADCY8, ADRBK2, ALDH1A1, ANAPC7, BDH1, CCL16, CCNA1, CCND2, CFTR, CLDN9, CYP21A2, DPM3, E DNRA, EXOC7, FZD4, GCNT1, GLI2, GNG3, GNPDA1, GNPAT1, GOT2, HDAC2, H NF4A, IL6R, JUND, KIR2DL4, KLRD1, LDHAL6A, MMP7, MYH4, NAGA, NMNAT2, NUDT5, OR13J1, OR1Q1, OR4F15, OR4Q3, OR5A1, OR5AU1, OR7G1, OXSM, PAX 4, PCYT2, PIGB, PLCZ1, PMAIP1, POLR2E, POLR2J, PPARG, PPAT, PPOX, PPP 2R5A, PRKCA, RPS6KA2, SDC1, SHC2, SLC27A4, SPRY1, STT3B, TRIP10, TYR OBP, ULBP3, VCAM1, XIAP, YWHAG, PNLIPRP1
Negative_13748	ADC, CBS, F12, HYI, SHH, ACAA2, ACVR1C, ACY1, APOA2, ATP5C1, B3GAT3, C 3orf10, CACNG2, CD38, CLCA4, COQ6, CPT1C, CSF1R, DPYD, DUSP3, F13A1, FGF8, FRAP1, FZD1, GART, GAS1, GNG12, GNMT, HLA- DRA, HMOX1, HSD3B2, HTRA2, IL22RA2, IRAK3, IRF5, KDSR, MAP4K2, MASP1 , MICA, MTHFR, NCF2, NEUROD1, NMNAT1, OGDHL, OR13F1, OR1L8, OR2A2, OR 2AT4, OR2Z1, OR51F1, OR6B3, PDE4C, PDE8B, PDXP, PFKP, PIAS2, PIGV, PI GW, PLCB1, RPS6KA5, SFRP4, SLIT2, SORD, SPRY1, STAM2, TYK2, YWHAZ
Negative_13749	IVD, ACOX1, AMPD3, ARPC5, ATP4B, BHMT, BMP5, CCR8, CDC27, CMBL, COL1A 2, COX10, CREB3L2, CXCL10, DAPK2, DPM1, EPHA5, FASN, FBP2, FOSL1, GNA 14, GRIN2C, GSTO2, HRAS, IL1R2, ITGA2, KIR2DL3, MRAS, OR10J3, OR2T4, OR52J3, OR7C1, PDX1, PGM1, PKM2, PRKAA2, PTPN1, RASA2, RBX1, RERE, ST K11, SV2C, TAS2R8, TNFSF10, UCKL1, UGT1A10, UGT2B10, UGT2B17, XCL1, ZBTB16, ARHGEF12, CTNNBIP1
Negative_13750	BAD, CGN, ID1, NPL, AACS, AGRP, APOA2, BCAR1, BLNK, CAV3, CCL16, CCL23 , CCR2, CCR4, CDC6, CDH2, CDIPT, CHAT, CHEK1, CLCF1, COL2A1, COL5A2, C SNK1A1, CSNK2B, CYP2C18, DARS, DLST, DUSP7, EPHB4, ETNK1, FUT2, GALN T6, GAS1, GNMT, GNRH2, HIBADH, HPSE, HTR2C, HTR4, IFT57, IL17A, IRF3, KLRC3, MAP3K1, MDH1, MKNK1, MTMR1, NCR3, NCSTN, NUDT12, OR10G7, OR10 G9, OR1A2, OR2W1, OR4F6, OR4N5, OR52E8, OR5L2, OR5P3, OR6C1, OR8B4, P CYT1B, PIK3CD, PLA2G1B, PMAIP1, POLR2G, PPP3R2, PRLR, PRPS1, PTGFR, PTPN11, PTPRZ1, RPN2, SEMA3E, SGPP1, STX7, TAS1R2, TYROBP, UBE2L6, U GT2B28, HSD17B12, PAFAH1B1
Negative_13751	EGF, NOG, PML, ACP5, ALOX12, AOX1, ARPC3, ASAH1, B4GALT1, BDKRB2, C7o rf16, CACNG8, CADM1, CAV1, CCL27, CD59, CLDN3, COL6A2, CREB1, CTNNA1 , DPM3, FZD10, GALM, GMPR2, GNPDA2, GPAA1, IDI2, ITGAM, KIR2DL2, LAMC 2, MAP3K7, MAPK3, MAT1A, NSDHL, NUDT9, OR1I1, OR1Q1, OR2T4, OR2V2, OR 4E2, OR4K5, OR52J3, OR5D16, OR8D1, PAK6, PCYT1B, PLOD1, POLR3D, RASA 2, SARS2, SCP2, SESN2, SETD2, SLC25A5, ST6GAL1, TRMT11, TUBA1A, WHSC 1L1, ZMAT3, ATP6VOA2, SERPINB5, SERPIND1
Negative_13752	IVD, OTC, RB1, ACTC1, AMY2B, ATP5G2, B3GNT2, CCND2, CD79A, CD8B, CNGB 1, CREB3L4, CSNK1G2, CX3CR1, CYP26C1, DAG1, DGKI, DHRS9, ENTPD8, FAS LG, FGF12, GLUD1, HSD17B1, IL2RA, ITCH, LILRB3, MAP4K4, MGAT2, MS4A2 , NAMPT, NCR3, NUDT5, OR1S1, OR6C3, PFKFB1, PIP4K2C, PLA2G10, PPP3R1 , PRKAA1, PRKAR1B, PVRL3, PYGM, RARS2, SMAD4, SSH3, SUV39H2, TAS2R13 , THY1, UCKL1, UGT1A10, UPRT, EIF4EBP1
Negative_13753	F10, GLS, HPD, RPE, TKT, ACSS2, ACTA1, ALDH3A1, ALG8, ALS2, ARRB2, ATP 5F1, ATP6V0B, BMP2, CACNG5, CCL5, CDKN1B, CIITA, CLTA, CRY1, CSF2, CX 3CL1, CYBB, CYP2A13, CYP2C8, CYP4F3, CYSLTR1, DNMT3B, FADD, FGD3, FU T2, FZD5, GADD45A, GALNS, GDE1, HMOX1, IFNA4, IL13RA2, IL17RB, IL18, IL21R, IL22RA2, IL23R, IMPA1, ITGAV, KIR3DL2, LAMA4, LIMK2, LYZL1, M APK3, MCCC2, NFYB, NODAL, NOTCH2, NSDHL, NUDT8, OR10A3, OR11G2, OR1M 1, OR2T3, OR51A4, OR51E2, OR51Q1, OR5P2, OR8H3, OR9Q1, PARD3, PCCB, P DGFB, PFKM, PFKP, POLE, PPP2R2C, PRKACB, PTTG1, RPRM, SEMA3B, ST6GAL 1, STK11, STMN1, STX12, TALDO1, TBL1XR1, THBS3, UGT2A3, WARS, WASF3, WNT10B, WNT11, HSP90AA1, PLA2G12A, PPP1R12A, SERPINE1, SERPINF2, S UV420H2, TNFRSF11A

Negative_13754	IL9, MAX, SYK, TPR, XDH, ACADS, ADH4, APOA2, ARPC2, BRAF, C4BPA, CASP3, CCR5, CD80, CDKN2B, CMBL, CRY2, CTNNA3, CTSG, CXCR4, CYP3A5, DERL1, DHCR24, ENPP3, ERBB4, F2RL2, HCCS, HRAS, ITGA9, ITGAD, ITGB8, LAMB3, MMP2, MPZL1, NAGK, NAGS, NOX1, NRG1, OR10T2, OR1S2, OR2T33, OR4D2, OR4E2, OR52E2, OR52N2, OR6C1, OR6N1, OR8D1, ORC4L, PIGA, PPCDC, PPP2R5B, PRKAA2, PTGES2, PYGB, RDH10, ROBO2, RPS6KA4, SLIT2, SOCS1, TAS2R13, UGDH, VANGL1, WWP2, MAPKAPK3, TNFRSF17
Negative_13755	CEL, DDO, NPL, AACS, ACP1, ACSL5, ACTG1, ACVR1, AKR1C1, ALAS2, AMDHD2, ARG2, ATP50, BMP8A, BPGM, BTRC, CACNA1S, CCR9, CDH5, CDIPT, CSNK2A1, CTNNA1, CX3CL1, CXCL6, DCTN1, DDIT3, DHRS4, DLL1, DTYMK, DUSP6, EVI1, EXOC7, EXTL2, F2RL3, FLT3, GAL3ST1, GALNT10, GCNT2, GPX7, HADHA, HAO1, HSD3B1, IGFBP3, IGSF5, IL22RA1, INADL, INPP4A, INPP5A, INSRR, KCN11, MAP4K2, NARS, NFATC4, NT5E, NUDT5, OR11H1, OR2L13, OR2M3, OR2T3, OR2T5, OR5AP2, OR5T3, PDE7B, PFKM, PGAP1, PIGN, PIM1, PLA2G10, POLR1D, PPT1, PROC, PTK2, PTPN5, PVRL4, RPS6KA4, SELE, SLIT2, SRD5A2, STEAP3, TAS2R13, TOMM40L, TRHR, UCK1, UGT2A3
Negative_13756	AK3, F9, OSM, AACS, ACTB, ACVR2B, ALDH3B2, APRT, ARG2, BMP4, C5AR1, CCL1, CFLAR, CHST12, CSNK2A1, DGKE, DLST, EGLN3, EPHA5, FIGF, FUT4, GUCY1A3, HLA-F, IL18, INPP1, INPP5A, INPPL1, KITLG, LPAR1, NCR3, NFATC1, OR10G7, OR4P4, OR4S1, OR51I1, OR7A17, OR7C1, OR8B12, PAFAH2, PARS2, RDH5, RFXANK, SHMT2, SLC27A4, SMAD6, SMAD9, THBS4, TM7SF2, TSNARE1, UGCG, ZNRD1, CACNA2D4, TNFRSF10C
Negative_13757	ADK, FGA, FGG, GSN, JUN, NGF, NNT, ACSM1, ACTG2, ADH1B, AKR1D1, ALG3, ALOX12B, ARHGEF6, BCL2, CACNB4, CACNG1, CARS2, CD247, CDC27, COL5A1, CYP2A7, DGUOK, DHRS4, ECHS1, EIF4E2, EPHA1, EXTL2, FGF13, FMO4, FTCD, GAD1, GADD45A, GALNT6, GLI2, GSTK1, IDUA, IL18, IL18R1, IL1B, ITGB6, KITLG, LEFTY2, MAGI2, MAP3K1, MYD88, NEFL, OR10G4, OR2F2, OR2L13, OR2Y1, OR4C16, OR4M1, PAK4, PAK6, PLA2G2F, PLCB4, POLD4, PRKY, PTCH2, RBL2, RPN1, SCIN, SEMA3A, SEMA3G, SHC1, SHMT1, SKIV2L2, SMAD4, STAT1, STAT2, SUCLG1, TAS2R49, TP73, TSC2, VKORC1, WNT7B, B3GALNT1, CSNK1A1L
Negative_13758	AGK, OGT, ACADM, ACP5, AKR1D1, ALOX12B, APOA2, ARPC1B, ARPC5L, ATP5B, ATP5G2, B3GNT2, BBC3, BIRC5, BUB3, CCL16, CCL20, CD59, CDIPT, CHEK1, CLDN2, CSDA, CTSG, CYP26B1, CYP2D6, CYP2F1, DDX55, DMGDH, DUSP1, EDN1, FZD8, GGT6, GIT1, GPAA1, GPD2, GSTM3, HAP1, HPRT1, HTR5A, ITGB6, MAP3K3, MITF, OR14A16, OR2D3, OR52E8, OR7A17, PAX6, PCYT2, PDE3A, PDHA1, PGM1, PHKB, PIK3R4, PLA2G4A, PTDSS2, RFX5, RPRM, RPSA, SEMA4A, SKP2, SPHK1, ST8SIA5, TBXA2R, THBS4, TLR5, UBE2K, ULBP1, VDAC3, ZAP70, HLA-DPA1, SERPINF2
Negative_13759	HK1, TAT, AARS2, ACMSD, ACSS2, ACTB, ALCAM, AMPD2, ANAPC10, APOC3, ARPC2, CDC2, CD01, CXCR3, DGKE, GAS1, GBGT1, GMPPA, GRIN1, HRH1, IQGAP1, ITGA1, JAK1, MALT1, MAP2K4, MAPK11, MPST, NUMB, OR10P1, OR1J1, OR2A12, OR2T8, OR6B2, OR7D4, P4HA3, PIGB, PIGK, PLA2G6, PLCB1, PPA1, PRKCG, RAPGEF3, SIPA1, TAS2R4, TUBB2C, TUBB6, WNT1, CACNA2D3, MAP3K7IP1, TNFRSF11A
Negative_13760	AK5, EDA, IL5, RDX, SRC, TKT, ADH1A, AKR1C4, ARHGEF2, ARNT, B3GALT5, C1QB, CD247, CNTF, CREB3, CTSL1, CXCR5, CYP4A22, CYP7A1, DFFA, DNMT3L, DTX3, ENPP1, EPHB6, FDPS, FGF7, FLAD1, GDE1, GGT7, GMDS, GNB3, HNF4A, HYAL2, MFNG, MTAP, NADSYN1, NFKB1, NT5M, OR10K2, OR2D2, OR4C13, OR5D13, OR9A2, PANK2, PLAT, PTPN11, RDH12, RPS6KB2, SCIN, SNW1, ST3GAL1, STX10, TRDMT1, TUBB2A, UGCGL2, VNN1, MAP3K7IP2, PNLIPRP2, PRICKLE2

Negative_13761	IVD, PGF, SFN, ACSL5, ACY1, ADCY4, ALG10, CACNG4, CCL27, COL6A2, CXXC4, CYP11B1, CYP21A2, CYP3A7, DEGS1, EFNA4, EHMT1, FARSA, FARSB, FOXL1, FUT6, GSTA1, GSTZ1, HARS, HTR6, IL21, IL28A, IMPDH1, IRAK3, ITGB3, MAPK12, MINPP1, MYLK, NAT1, NFATC4, NFKB2, NOTCH1, OR10AD1, OR1A2, OR3A2, PANK2, PDE8B, PPAP2B, PPCDC, PPP2R1A, PRKACG, PTPRZ1, SHISA5, SLC12A2, SNW1, STK4, UGT2B11, SERPINC1, TNFRSF12A
Negative_13762	FOS, GHR, LCK, MTR, OGT, ALPP, ANPEP, ARHGEF2, ATG12, CCNE2, CDH3, CEP350, CES2, CHD8, CLCF1, CLTC, CTNNA2, CYP27A1, DUSP5, ELK4, ENPP1, EPHB1, FGF9, FMO3, FMO5, GFAP, HEMK1, IFNA8, IGF1, IL23R, IL24, JAM3, LDHD, MAFA, MAPK11, MMP2, NPR1, OLAH, OR11G2, OR4F4, OR4K2, OR51B5, OR5A2, OR6C76, OR9A2, ORC6L, P2RX3, PARD6A, PARS2, PMAIP1, PPA2, PRIM1, PRKAB1, PRKAB2, PRODH2, RDH11, SETDB2, ST8SIA1, STAT3, SULT2A1, TAS2R14, TAS2R60, TICAM2, TYROBP, UGT2B4, UROC1, ZMAT3, SERPINA1, SERPIND1
Negative_13763	C6, C8B, CEL, SP1, ANPEP, APOA1, ATP5C1, B4GALT2, BMPR1A, C5AR1, CCL11, CMAS, CRY1, DARS2, DDX54, ENTPD4, EPHB3, FBP2, FLT4, GABARAP, GALNT12, GALNT8, GALNTL5, GANC, GDF7, GSTA1, GZMA, HLA-DOB, HMOX1, HPRT1, IFNAR2, IL18RAP, IL25, INPP1, ITGA2B, KIR2DL2, MAPK14, MTHFR, MYL5, NAE1, OR4C16, OR5M3, PAK7, PANK4, PLCD4, POLR1D, PRKAB1, PRKAB2, RHEB, SEMA3E, SV2C, TRADD, TUBA4A, UNC5C, USE1, VAMP1, VDAC3, YARS2, ZNRD1, ST6GALNAC6
Negative_13764	AGL, ACP2, ACPT, ACSM3, ACSS1, ACVR2A, AKR1D1, ALDH1L1, ATP6V1H, B3GNT5, CASP9, CDC14A, CDKN1A, CDKN1C, CDKN2A, DDIT3, EDN1, EDNRB, ENAH, GALNT8, GBE1, H6PD, KARS, LAMA4, LYPLA2, MEF2C, MGST2, MTHFS, MYH7, OR2T4, OR4D1, OR4F17, OR51L1, OR52M1, OR56B4, OR7A10, PDE4C, PDE6H, PIGS, PIGT, PIGW, PNMT, POLE2, PRIM2, PRKY, PSME2, PTEN, RAD51, RAPGEF3, RPN1, RRM1, SDC2, SELPLG, SPRED2, STEAP3, TACR2, TAP1, TGDS, THY1, TRAF5, TUBA3E, UBA1, UGT8
Negative_13765	C2, CRK, ACAD9, CDS1, CHAD, CYBB, CYP8B1, DDIT4, DGKI, DLL3, ETS1, FUT5, GJD2, GSTM2, GSTM5, GSTO2, HLA-DRA, HLA-F, HMOX2, ICOS, IFNAR2, MAP3K6, MASP2, NEGR1, NMNAT3, NT5C3, NUDT9, OR13A1, OR1A2, OR2T3, OR4Q3, OR51E2, OR52N4, OR5B3, OR6C3, PIK3C2B, PLA1A, PLA2G4A, PRKCG, SPTLC1, STAM, THBS4, TKTL2, TNFSF14, TPM3, TRMT11, TRPC1, TUBA4A, UCP1, WWP1, YWHAG, ZMAT3, C1GALT1C1, PNLIPRP2, SERPINF2
Negative_13766	AMT, HGD, PGP, RPE, ADH5, ADH6, ADRB3, AHCYL2, ALAS1, ALPL, CACNA1C, CACNA1H, CCNE2, CCNH, CDH1, CDK4, CES2, CREBBP, CTNNA1, CXCL6, DERA, EPHA3, EPRS, FLT1, GCLM, GMPPA, GSTM3, GUCY2F, HLCS, IL23A, IRF3, ITGAV, KARS, LDHC, LEF1, MRAS, MYH8, NFKBIA, NTF3, OR13C4, OR4A5, OR4D11, OR56A3, OR6M1, OR8H1, P2RX7, PAPSS2, PCCA, PER1, PHKA2, PIK3CG, PIP5K1A, PLCG2, PPP2R5D, PPP3CB, RASGRF1, SIGLEC1, ST8SIA5, TFDP1, THPA, TMLHE, UCP1, VANGL1, WIF1, PPP1R12A
Negative_13767	BTC, C9, OGT, TEC, AASDH, ACSL1, ALPP, ARAF, B4GALT4, CCL8, CCNH, CD79B, CLDN19, CLDN4, CXCL5, CXXC4, CYP2A6, DDX52, DERL1, DGAT2L4, DUSP2, DUSP7, EFNA3, FGF18, FGFR3, FSHB, GFPT2, HCST, HDAC2, IFIH1, IL2ORA, IL2RG, IL7R, ITGA2B, JAG2, KLRC2, L1CAM, MGAM, MTHFS, MYLK2, NAGA, NCF2, NODAL, OPLAH, OR1K1, OR4B1, OR4C46, OR5AP2, OR8H1, PCK2, PDGFRB, PIK3R2, PMAIP1, PPP2CB, PRKCH, RFXANK, SDHB, SMAD1, SMAD7, SMPD2, SMPD3, WASF1, YWHAQ, SERPINE1, TNFRSF10B

Negative_13768	CEL, DBI, GP9, GSN, KMO, PML, TPR, ACADS, ACOX1, ADRBK2, APLP1, ARSA, A TP5I, CACNA1B, CACNG4, CAPN2, CASP6, CCND3, CDIPT, CPT1B, CYP2C18, D IAPH1, DUSP3, DUSP9, EDAR, F11R, FGF10, GGT6, IAPP, IL11RA, IL12B, IL 12RB1, IMPA1, ISYNA1, ITGA4, ITGB3, JUND, KIR2DL2, LALBA, LDHA, LYPL A2, METTL2B, MGAT3, MTMR1, MYH15, NANS, NFATC1, NRIH3, NTN1, OR10A4, OR13C5, OR13J1, OR2T34, OR4E2, OR51M1, OR51T1, OR56A4, OR5AR1, OR5M 3, OR6C74, OR6N1, OR6Q1, OR7G2, P2RX7, PARD6A, PARD6B, PDXK, PER1, PI K3R5, POLR1E, POLR3D, PPCS, PPP2R5B, PPP3R1, PRDX6, PRKCZ, PTPMT1, R AC1, RAF1, RHOQ, ROCK2, SENP2, SGPP1, SPRED1, ST3GAL3, STX12, TAS2R4 0, TUBB3, TYROBP, UROD, ZNRD1, CSGALNACT1, HSP90AA1, MAP3K7IP2, SER PIND1
Negative_13769	C4B, CFI, FAH, FGG, FOS, GLS, GNS, HK2, LIF, MVD, TPR, A4GALT, ACLY, ACS L6, ACVR1B, ADH1B, APOA5, ARD1A, ARPC2, ARPC5L, BAIAP2, BCL2L1, BMPR 2, CACNA1H, CACNG3, CADM3, CDC6, CLDN4, CNTF, CXCL3, DTX3, EPHB3, FAB P4, FGF6, FPGS, GALM, GDF7, GPX5, HLA- G, HMGCS2, IL12A, INADL, INHBB, ITGA11, ITGB1, KAT2A, LALBA, MAD1L1, MTMR6, NANS, NCF1, NCSTN, NEGR1, NRP1, OR11A1, OR13C5, OR13C8, OR13H 1, OR2A14, OR6Q1, OR8B8, OR9G4, PI4KA, PIGF, PIGW, PIK3CA, PLXNB1, PP P2R2A, PRKAB2, PRKAR1B, PRPS2, RPS6KA6, RPS6KB2, SEMA4A, SETD8, SLC 25A6, SLC27A5, SRD5A2, TACR2, TCF7L2, TGFB2, TLR2, TLR9, TOMM40, UGT 2B7, WNT4, WNT5A, ALDH18A1, PLA2G12A, SERPING1
Negative_13770	GLA, PTS, ACSM4, ACTN2, ANAPC5, B3GAT1, B3GNT4, C4BPB, CACNA1E, CCL2 6, CCL8, CDC23, CDK4, CDKN1C, CES7, CHST12, COL4A6, CSF2RA, CSNK1A1, CSNK1G2, CTSL1, DHDH, GSTM4, IDH1, ITGA5, LCAT, MAP3K5, MGAT1, OR11G 2, OR2G3, OR52J3, OR52W1, OR6F1, OR6M1, OR7G2, OR8B4, PDE7B, PDXK, PF N4, PIK3R2, PKM2, PLXNA3, PRKACA, PRPH, RASGRP2, RUNX1, TAS2R1, TIAM 1, TSHR, TUBA8, WNT10B
Negative_13771	ADA, DCC, HK3, KHK, TPR, ACAA1, AKR1B1, B3GALT1, BCMO1, C4BPA, CAMKK2 , CCL22, CD244, CIITA, CPT2, CYBB, CYCS, CYP26B1, EGLN1, FGD1, FGF5, F ZD4, GALNTL4, GCDH, GCNT4, HSD17B1, IL1B, IL21R, LIPE, LTA4H, MTHFD1 , NADSYN1, NAMPT, NR1D1, NRAS, NRP1, OR10H1, OR13D1, OR2T12, OR4D1, O R51S1, OR56B4, OR5H6, OR6A2, P2RX7, PDE2A, PIGM, PIGW, PLA2G2D, PLAU R, PLCB2, POLA1, POLE3, PPP2CA, PROS1, PRPH, ROBO3, RRM2B, SCP2, SELL , SGMS1, SH3BP2, SSH2, STX2, SUCLG2, TAS2R14, UGCG, VTI1B, WNT7B, WWP 1, WWP2, YWHAH, ZAP70, ZBTB16
Negative_13772	CKM, HK2, ME3, PLG, PTS, SDS, ACVR2B, ALDH3A1, ALG5, AMPD2, ATF2, ATP5 A1, ATP5G3, B3GALT5, CACNA1S, CCL8, CCND2, CCNG1, CDC16, CDK2, CLDN1 8, CLDN19, CNGB1, CRB3, CXCL11, CXCR4, CYP4F3, DFFB, DNMT3B, DUSP10, E2F4, EPAS1, ERO1L, FGF13, FZD7, GBTG1, GGT7, GLI2, HCCS, IL22RA2, KI R2DS4, LEFTY1, MPDZ, NOTCH1, NPAS2, NT5C1B, NTSR1, OGDHL, OR10G2, OR 2B2, OR51Q1, OR52I2, OR52K2, PEMT, PGAM4, PHKG1, PLCB4, POLA1, POLE, POLR2E, POLR3G, PPT1, PSENE1, PTCRA, PTGS1, PTPN7, RUNX1, RXRA, SAT2 , SLC2A1, SMAD6, SMPD3, SPHK1, TAS2R42, TAS2R49, TNFSF8, TUBA1A, TUB A1C, TXNDC12, UGCGL2, UROD, TNFRSF18
Negative_13773	AR, FGB, PC, SFN, ADH1B, AGPAT2, AMPD3, ARSE, ASS1, ATP5G3, B4GALT5, B DH1, C3AR1, CBLC, CBR3, CD274, CD80, CDK7, CD01, CLDN6, CRB3, CYP1A1, DFFB, DGAT2L4, DGKH, DLAT, DLL4, EPB41L2, FGF2, FGF5, FGF9, FLT4, G6P D, GNAZ, GNB1, GYS1, HAGHL, JAG1, JUND, LTA4H, LYZL1, MTHFD1, MTMR6, N OD1, NT5C1A, OR10A3, OR10C1, OR13F1, OR1J2, OR2A5, OR2Y1, OR3A1, OR4 N5, OR51E2, OR52N4, OR56A4, OR7A10, OR8I2, PAK3, PCYT1B, PDGFD, PIM1 , PLAU, PPP3R2, PRKAR1A, PTPN5, RDH16, ROBO3, RUNX1, SFRP5, SLC27A5, SULT1A1, TACR3, TAS2R8, TRAF2, TRAF3, TSTA3

Negative_13774	FER, MOS, AASS, ACAD9, ACSL4, ADH5, ADH7, ANPEP, ARHGEF4, ATP2A3, AXIN1, B4GALT7, C1QA, CAV3, CCL17, CCL22, CCR2, CHPT1, CMAS, COL5A3, DPM1, DVL2, FGF22, FPGT, GALT, GFAP, GRPR, HSD11B1, ICOS, ITGAX, LAMC3, LARS2, MAPK1, MASP1, MTAP, NEUROD1, NFX1, NRP1, NSD1, OR10A4, OR1E2, OR1J2, OR1L1, OR2S2, OR4N4, OR8G1, PFN3, PIGS, PISD, POLD4, PPAT, PPP2R2C, PPP2R5C, PSME2, PTPRF, RDH8, RENBP, SEMA4F, SGMS1, ST3GAL4, TBK1, UMPS, WEE1, WNT4, MAP3K7IP1
Negative_13775	BAD, CD2, F9, GLS, OAT, RFK, ABP1, ACVR1, ACY3, ADCY1, AKR1C4, APPL1, AQP7, ATP5J2, C1QC, CAMK2A, CD244, CDC42, CXCL10, CXCL3, DDIT3, DDIT4, DGUOK, DUSP8, ESAM, FLT1, GALC, GGPS1, GNRHR, HLA-DOB, HSD17B7, IL12RB2, ITPKA, KLKB1, LAMB4, LDHC, LIPG, LTBP1, MAPK1, MGAT1, MKNK2, MLLT4, MOV10L1, NCOA4, NGEF, NRG2, OR10A4, OR10S1, OR11H4, OR13C8, OR1L8, OR2G2, OR51E1, OR51I2, OR5AK2, OR5AN1, PIM2, PLA2G3, PLAT, POLR1A, POLR2G, PRIM2, PTPRC, PYCRL, RPS6KB1, SELPLG, SETD2, SLC27A5, ST3GAL4, TUBB2A, ULBP1, UPB1, WNT4, C1GALT1C1, HLA-DQA2
Negative_13776	BTD, FOS, GSR, ME3, NPL, XDH, ACO2, ACTG1, AGRN, ALDH7A1, AOC3, ARPC4, ATP6AP1, C3AR1, CACNB2, CASP6, CCNG1, CD79B, CDC6, CDKN2C, CLCA4, CNDP1, COL4A4, CSF2RB, CXCL1, CYP1B1, DAPK3, DDB2, DDX23, DLAT, DPM1, EFN1, ENPP3, ERBB2, EXTL2, F2RL1, GJD2, GP1BB, HNF1B, IARS2, ICAM1, IL21R, IL22RA2, IL28A, ISYNA1, ITPKB, LAMB3, LARS2, LEPR, LRP5, LTA4H, MAP3K5, MCM4, MINPP1, MYH13, NCK2, NFE2L2, NKX2-2, NTNG1, NTSR1, OR1M1, OR2C1, OR2G2, OR2S2, OR51S1, OR52B4, P2RX2, PAK7, PIP5K1A, PLA2G2A, PMM2, POMC, PPP3CB, PRPH2, PTPRM, RALGDS, RASGRP4, RENBP, RPIA, SNAI2, STT3B, SUV39H1, TLR3, TMLHE, TSC1, TSC2, TUBA4A, TYRP1, USE1, YARS, AASDHPPT, CACNA2D4, TNFRSF11B
Negative_13777	F8, MYC, NLK, ABLIM1, ACO1, ACOX1, ADRA1B, ADRBK2, AKR1C1, ALDH1A2, ALDH4A1, ALOX12, ANAPC2, ARNT, ARPC5L, CCL5, CCNB3, CCND1, CLDN11, CLTC, CRY2, DDX54, DHCR24, DHRS4, DLL1, DNMT3A, DUSP3, EARS2, EFNA5, ENTPD7, EPAS1, ERBB2, FLOT1, FM05, GALK1, GLYCTK, IFNK, IL6R, ITGB2, LDHC, MINPP1, NAGS, NCSTN, NT5C, NT5C3, NTNG1, OR10Q1, OR2M5, OR4A16, OR7D2, OR8D2, PNPT1, POLE2, PPP1CC, PRKAA1, RELA, ROCK2, SMPD4, SMURF2, SOCS1, STK3, TAS2R10, TRAF3, TRAF6, TRMT11, HLA-DPA1
Negative_13778	C4B, FUK, GDA, IHH, MUT, PLG, PML, PXN, ADH1A, ADRA1A, ADRB1, AK3L1, AKR1C3, AMHR2, AOX1, ARHGEF1, ATP5B, ATP5J2, AVPR1A, BDH2, BET1L, CASK, CFL1, CHIT1, CNDP1, CXCL13, CYP19A1, DDIT3, DPM1, FARS2, GBA3, GCNT2, GNAQ, GRIA3, GRIN1, GUCY1A3, IKBKB, IL21, MAGI1, MAML3, MAN1A2, MYH1, NEU1, NEU4, NUDT12, OR10J1, OR10K1, OR1G1, OR2L2, OR2S2, OR52A5, OR52N4, OR5AP2, OR5T1, OXCT1, PCCA, PIP5K3, PLCB3, PLXNA3, PPP3CB, PRKACG, PRKCI, PRSS3, PTPRF, RASA2, SARDH, SEMA4D, SETD2, SETDB1, SLC2A4, SPAM1, ST6GAL1, STAM, TKTL1, TLR4, TYROBP, VARS, VAV2, VKORC1, WWP2, YKT6, ATP6V1E1, PNLIPRP2, PRICKLE1
Negative_13779	C2, C5, F11, F9, IVD, LIF, PVR, UBC, ACTG2, ADCY1, ADRA1A, ADRB2, ALDH3B1, AMY2B, ARAF, CACNA1G, CALML3, CCL15, CD82, CDC14B, CDH2, CDKN1A, CFTR, CNGA4, COL6A1, CSAD, CSF3R, CSNK1A1, CXCL11, CYBB, CYP11A1, CYP3A7, DTX4, EPHB2, HSD11B2, HSD17B8, HSPA8, IL25, IRS2, LIMK1, MTHFS, MYLK2, NCOR1, NCR2, NFATC4, NRG1, OR10A4, OR10A6, OR2H1, OR2Y1, OR56A1, OR5A2, OR5K1, OR6Q1, PAX8, PIK3C2B, PIM2, PLA2G10, PLAU, PLTP, POLE4, PTGER3, PYCR2, SGPP1, SLC27A1, SMPD2, SPCS3, SREBF1, STX3, SULT1A1, SV2C, TNFSF11, TRAF1, TRMT11, TUBB1, UGT2B7, EIF4EBP1

Negative_13780	ADA, TPR, ADIPOR2, ARPC5, ASS1, BPGM, C4BPB, CACNB4, CAV3, CNTN1, CRY2, DDIT4, E2F3, ERBB3, ERBB4, FCGR3B, FZD9, GALNT5, GALNTL5, GARS, GN G13, GPD1L, HTR2C, IBSP, KIR3DL2, KLK3, KLRC2, LDHA, MAP2K1, MAP2K4, MYH8, MYL2, NT5M, OR10G3, OR13C5, OR1L4, OR51B2, OR52B4, OR6N1, OR7A10, OR9G4, ORC1L, PARVB, PIK3CD, PLD2, PLXNC1, SHC2, SMPD2, SPRED2, ST3GAL5, STK11, STK4, SUCLA2, TAS1R3, TLR3, TP53, TSHB, UNC5C, SUV420H2
Negative_13781	AGL, BAD, DBT, F2R, NGF, NNT, PC, ACOX1, ACSL3, ADCY6, AGRN, ARSB, BUB1, CBLB, CCNA1, CCNE2, CDH5, CES1, CHST12, COL1A2, CYP4A22, DGKZ, DPM3, DRD2, E2F4, EFNA1, ENPP6, EPHB2, FGF1, FMO3, GRIN2A, GRIN2C, GUCY1A2, IFIH1, INMT, L1CAM, LDHAL6A, MGAT5, MYH3, NCR3, OR10A6, OR14A16, OR2AT4, OR5D14, OR6F1, ORC2L, PCNA, PGLS, PIGU, PIK3R3, PPA2, PPP1R1A, PRPS1, PRSS1, PTCH1, PTGER1, PTK2, RFX5, SEMA3D, SETD1B, SFRP2, SKP1, SLC25A5, SRD5A2, STX1A, STX3, TSLP, TUBB4Q, UBE2K, ULBP2, VASP, VAV2, ZMAT3, ARHGEF12, MAPKAPK5
Negative_13782	ADO, AGL, ASL, CP, CTH, GNE, ID3, IL3, SPN, AARS, ACSM4, ALPI, ATP5A1, CASP8, CERK, CFTR, CHDH, COL1A1, CRLF2, CYP2J2, DDOST, DFFA, DGKI, DKK4, ENTPD5, FGD1, GSTM2, GSTZ1, IMPDH1, INPP1, ITGAL, LAMA3, LHCGR, LTBP1, MLYCD, MYH14, OR2G6, OR6A2, OR6B3, OR8B8, ORC1L, PAPSS2, PARD3, PDCD1, PIP5K3, PNMT, POLD4, PRKAA2, PTPRM, PVRL2, RBX1, RERE, SEMA3C, SETD8, ST3GAL3, TJP1, UNC5C, VARS, WNT16, YWHAQ
Negative_13783	CD2, F5, IL6, IL9, MAX, OGT, AACS, ACPT, ACYP1, ANGPTL4, ANPEP, APRT, ARPC3, ATG3, CACNA1I, CDC14B, CDC25C, CHUK, CLOCK, COL4A2, CYP26A1, DOCK1, EPHB3, FLAD1, FRAT1, FZD3, GCNT2, GFPT1, GGT5, GUCY1A3, HSD11B2, IDH1, IFNA16, IRF3, ITGA5, JAK2, LCMT2, MAPK11, MITF, MKNK1, NRXN2, NT5C1B, OR10C1, OR10H3, OR10J3, OR13F1, OR5AP2, OR5T2, OR7C1, OR7D2, OR8K5, PCK1, PER2, PIK3C3, PMM2, PNPLA4, POLR2C, PSEN1, PSME1, PYGB, RUNX1, SEMA4G, SEMA7A, ST8SIA5, STAT6, SUV39H1, TNFSF12, TPH2, TRADD, UROD, MAPK8IP1, TNFRSF10B
Negative_13784	C3, GP6, NNT, ACY1, APAF1, ATN1, ATP5B, ATP6V1F, B3GNT4, BCAT1, C3AR1, CAMK2A, CCL17, CHUK, CNTN2, COL4A6, CPT2, CRY2, CYP11A1, CYP2A6, DUSP6, EIF4E2, FLAD1, FLOT2, FOSL1, GMDS, INSR, ITGA1, KARS, MASP1, MDH1, MYH10, NAGA, OCRL, OR10A3, OR13C3, OR13C4, OR5D13, P2RX1, PIGK, PIK3C3, PPARG, PTCH2, QARS, RALB, RALBP1, SARS2, SMAD2, SRD5A2, TGDS, TJP2, ZAP70, TNFRSF10C
Negative_13785	F12, F9, OGT, PC, ACSL4, ACYP2, ADH6, AK3L1, ALG2, ATP6V1A, BBOX1, BCAT1, C9orf95, CAMK2D, CD86, CD8B, CERK, CLCA2, CLDN17, CNTFR, CSF3R, CSNK1G1, CYP11B2, DARS, DDIT4, DEGS1, DPM3, EFNA4, EHMT2, ELK4, ENTPD2, FCER1G, FCGR3A, GALM, GALNTL2, GLYCTK, GSTA2, IDH3G, IGSF5, JAG1, METTL6, MLLT4, MPZL1, MRAS, MYH15, NEU4, NFASC, NOTCH1, NPR2, NUDT12, OR10H4, OR4K13, OR6F1, OR6N2, OR9I1, OR9Q1, ORC4L, PCYT1A, PFN2, PI4KA, PLIN, PMM2, RAP1A, RGS3, SDHC, SLC27A4, SPRY1, STX12, STX16, SULFU, SULT1A2, TNFSF12, TP53, TPH2, VNN1, WASF1, YKT6, MAPK8IP1, MAPK8IP3
Negative_13786	FAS, HGD, SHH, SRM, ASPA, BDKRB2, BMP8B, BMPR1A, C1QB, CD244, CDC2, CDH2, COMP, CTSB, CXCL3, CXCL6, CYP2E1, DDIT3, DHRS9, ENTPD8, FMO4, FUT9, GALK1, GALNS, GCLC, GGT5, HAO1, HEXB, HSP90B1, IFNA10, INMT, JUND, KCNQ1, KLKB1, NFKB2, OR10A6, OR10G2, OR2C1, OR4A15, OR4D11, OR4F5, OR51B2, OR6C2, OR7A17, P2RX6, PARD3, PDGFRA, PIK3CG, PRKACG, RBKS, RERE, SEMA4D, ST3GAL5, TAS1R3, TCIRG1, VAMP3, YKT6

Negative_13787	CRK, FN1, GHR, GLS, PAH, PGF, PTS, ADIPOR2, ADSL, AKR1C1, ALDH1A1, ALD H3A2, ALDOC, ATP5E, ATP6V1A, ATP6V1F, BDKRB1, CACNG3, CADM3, CASP7, CCNE2, CD72, CD80, CDH15, CDK7, CLDN18, CNTFR, CYFIP2, CYP3A7, ENPP6 , F13A1, FUT9, GALNT14, GALNTL1, GAPDH, GLB1, GSTM4, HLA-DMA, HPSE2, IL12A, IL20RA, IL28RA, IL9R, INSR, LAMB3, LRP6, LRRC4C, M AP3K13, MCM7, MKNK2, MPP5, NCK1, NFATC1, NFKB1, NME6, NOX3, NUDT8, OR 10H1, OR2A2, OR2M3, OR2T34, OR4S2, OR52E4, OR6C74, ORC1L, PDE1B, PDH B, PHGDH, PIGH, PIP5K1A, PLA2G1B, PLOD3, POLA2, SDC4, SMAD2, STAT3, S TX16, SUCLA2, SULT2A1, SV2C, TAS2R4, TBL1Y, TGFBF1, TUBB6, UPP1, WAR S2, WWP1, YWHAZ, ST6GALNAC5
Negative_13788	BCR, EBP, F8, ID3, ACP2, ACSM5, ACTA2, ACY1, AGPAT6, AGXT2, AHCYL1, AK R1B10, ALDH1A1, ATG3, ATP6V1F, C1GALT1, C3orf10, CCL25, CCL27, CCL8 , CD27, CDKN1B, CDS2, CHRM5, CLCA4, CLDN16, CLDN22, CLDN4, CMBL, CREB 3L3, CREB3L4, CYBA, EFNA2, ENPP3, ENTPD6, EXTL1, FGF2, FUT8, GLO1, GM DS, GMPPB, GNAI2, GNB1, GPD2, GRIA3, HDAC2, HRH2, IL23R, INHBE, ISYNA 1, ITGA6, ITGA9, LTC4S, MAD2L2, MCM5, MFNG, MOV10L1, MS4A2, NKX2- 2, OR10H3, OR10Q1, OR14I1, OR1J2, OR2D2, OR2H2, OR2T6, OR4M1, OR51V1 , OR52J3, OR52K1, OR5T3, OR9A2, PDE2A, PFN3, PIGX, PLXNB1, PNLIP, POL R2J, PPAP2A, PPP3CA, PRKCE, PRKCH, RAPGEF1, SETD7, SKP1, SOCS1, ST8S IA1, STAT1, STEAP3, TAS2R9, TNFRSF8, UROC1, UROS, WNT1, WNT9A, ATP6V 1G1, HSP90AB1
Negative_13789	CBS, EDA, HAL, HK3, LPO, MAX, TPR, VCL, ABL2, ACPP, ACSS3, ACTG1, ACYP1 , AGXT, ALG12, APOE, ARHGEF1, ARRB1, ARSE, AVPR1B, C1GALT1, CACNB3, C CNA1, CD226, CDKN2B, CLDN17, CLDN7, CRHR1, CRY2, CTBS, CYP21A2, CYP2 C19, CYP2C8, DDX54, DGKA, DOLPP1, DTX4, DVL1, E2F4, EPB41, FGF7, GALK 1, GALNT7, GALNTL4, GGT1, GLDC, GLI1, GLUD2, GOT2, GUCY2D, HLA-C, HSD3B7, IDI2, IFNA10, INPP1, INSR, ITGA7, KIR2DL3, LDHAL6A, LIPG, LMO7, MS4A2, NCOA4, NEUROD1, NFX1, OR10A2, OR1A1, OR2AG1, OR2B2, OR4 C13, OR4K15, ORC2L, PDE1C, PFKM, PFN1, PIK3R1, PPM1B, PRKCE, RAF1, RA SGRP4, RCHY1, RDH5, RFXAP, RHOQ, SLC2A4, SOX17, STK36, TACR3, TAS1R1 , TAS2R42, TAS2R60, TGDS, TOMM40
Negative_13790	EZR, FAH, NGF, NNT, OGT, ADCY2, AGXT2, ARAF, ARHGEF7, ATP13A2, ATP5B, ATP5G2, B4GALT1, B4GALT5, BDH1, BLVRA, CHDH, CLDN16, CLDN6, CLTC, CY P21A2, CYP4A22, DCTN1, DIAPH3, EDNRB, EFNA5, EPHA7, FABP1, FGF14, FL T4, FMO3, GLDC, GNA11, GRIN2C, HAO2, HMGCL, HSPB1, HTR2B, ICOS, IDH2, IFNB1, IL11RA, IL23A, INPP1, ITGB8, JAK3, KIR3DL1, LDHAL6A, MCM2, MG AT1, MINPP1, MLYCD, MYH3, NAGA, NAT2, NCK2, OR4A5, OR4N4, OR52N5, OR5 A2, OR8K5, P4HA1, PDE5A, PDGFC, PGK1, PIP4K2C, PKLR, PNPO, POLR2K, PO LR3A, PPBP, PPP3R1, PRPH, RALA, RARS2, RPS6, SLC25A4, SLC9A1, SMAD9, SPP1, SSH3, STAM2, STT3B, STX6, TIAM2, TXNDC12, VEGFB, WASF1, HSD17B 12, TNFRSF10D
Negative_13791	ADO, AGK, F12, ABLIM2, AKR1C2, B3GNT5, CACNA1S, CCL21, CCL24, CNTF, C RKL, CYP11B1, CYP21A2, DAXX, DDIT4, GDF5, GSTK1, HRH1, HSD17B2, IL6S T, INHBB, LIPA, MAPK11, MYD88, NEU1, NOS1, NOTCH1, OR10A5, OR10H1, OR 1L6, OR4C6, OR4K14, OR52M1, PDPK1, PIGU, PON2, PPP1R1A, PRKACG, PRKA G1, PTGDS, RASGRP4, ROB01, SEMA4C, SLC12A2, ST8SIA1, STAT5A, SUV39H 1, TACR2, TAS2R41, TAS2R7, YWHAB, TNFRSF13C
Negative_13792	ME2, SP1, ABI2, ACSM3, ALG12, AMPD2, APH1A, ATP4B, C1QA, CACNA1F, CAM K2G, CCL25, CD274, CDH4, CDH5, CLDN3, COQ5, CRLS1, CTPS, CYP1A2, DUSP 3, EHMT1, FZR1, GLI2, GNPDA2, GNRH2, GRPR, GUCY2F, HSD17B1, ICAM2, IL 12A, IL24, ITGB1, LAMC3, LEFTY1, MFNG, MYL9, NEU1, NEUROD1, NODAL, NR AS, NRG3, NUDT12, OR5B12, OR5B17, PDE2A, PDE4B, PDE6G, PLXNC1, POLR2 D, POLR2H, PON3, PPM1D, SMAD1, ST3GAL5, TBL1Y, VAV3, YWHAG, SERPINE1 , TNFSF13B

Negative_13793	DUT, MVK, NGF, UBB, XDH, AADAC, AARS, ABCC8, ACSS2, ACVR1C, ACY1, AKR1C3, AMD1, ARG1, ARSA, ATP5G2, AXIN1, BDH2, CANT1, CCKAR, CCL19, CCL26, CCR2, CDC23, CDKN2D, CHEK2, CHPT1, CHRM2, CKMT2, COQ3, COX10, CPS1, CXCL1, CXCL3, DDX55, DUSP4, EDNRA, GRB2, HMGCS2, IL11RA, IQGAP2, IRF9, ITGA2, KIR2DL4, LDHAL6B, MAPK13, MASP1, MGLL, MTHFR, MYL2, NAGLU, NCOR2, NT5C3, OLAH, OR2F2, OR2T4, OR3A2, OR4A5, OR4C6, OR4K14, OR5M9, PANK1, PDX1, PIK3C2G, PNLIP, PPARA, PPP2R5B, PPP3R2, PRKAR2A, PRKE, PRKCI, ROBO3, RXRG, SELPLG, SEMA3F, SENP2, SMAD3, ST3GAL5, STK36, TAP1, TAS2R4, TFPI, TUBAL3, VAMP3, SERPINB5, SERPINE1, ST6GALNAC5
Negative_13794	MSN, TH, ANAPC5, ARHGEF6, CCL16, CD14, CDK4, CFL1, CKMT2, CLDN15, COQ5, DPYD, EARS2, ENPP2, ENPP6, EPHB3, FCGR3A, FOXO1, G6PC2, HAGHL, HMB S, HSD17B8, IDH2, IL1R1, MGST1, NME6, NMNAT3, NOTCH1, OR10A5, OR10H3, OR13A1, OR2AG1, OR2T3, OR2V2, OR51E2, OR8H2, ORC2L, PDGFB, PFN3, PGAM4, PHKA2, PIK3R5, POLE2, POLR1A, PORCN, PPP3CA, PTCH2, RALBP1, SHC2, TYMP, SERPINA1
Negative_13795	ADO, ATM, CP, F9, GLS, AOX1, APOE, ARHGEF7, ATG12, ATP5E, ATP5G1, BAIA P2, BCKDHB, BLVRA, CACNG6, CDH2, CLCA4, CSNK2A1, CXCL9, CYP4F3, DAPK3, E2F4, EI24, ENTPD3, EPHB6, FGF18, FLAD1, FUT4, GADD45B, HCST, IFIH1, ITGAL, LAMB1, LIPA, LPAR1, MAPK1, MCCC1, NKD1, OR10A7, OR10T2, OR4A15, OR5B17, OR5B21, OR6B3, OR6Q1, PARVG, PFKFB2, PGAM4, PHGDH, PIGK, PLCZ1, POLD2, PTPRZ1, RDH8, RPS6KB2, SEMA3E, SOAT1, SREBF1, TAS2R13, TAS2R49, TICAM2, VAV3, WASF1, TNFRSF1B
Negative_13796	BTK, CAD, DLD, IL9, TK1, ADCY5, AGPAT4, AKR1C4, ALG8, ANAPC1, ARHGEF2, BST1, CACNG6, CBLB, CBLC, CCR10, CLTB, CNGA4, COL1A2, CTNNA3, DLL4, EPRS, FADS2, FMO3, FUT6, GALNTL5, GSTK1, HIF1A, HSPA1B, IL10RB, ITGB5, ITPA, KIR3DL1, LEF1, NKD1, NLGN3, NR1H3, NTRK1, OR2L13, OR4D5, OR52N2, OR56A1, PFKFB3, PPCDC, PPP5C, PRODH, PTPRC, SEMA4A, STX16, TAS2R60, TCF7, UNC5A, VAV3
Negative_13797	CR1, DDO, OGT, VTN, ACPP, ACSM5, ALDH1A1, ARSB, B3GALT6, C1QC, CACNG7, CARS2, CCKBR, CD28, CD01, CHRM1, CLDN11, DHFR, DUSP3, G6PC, IL8RA, ITGAE, KLRC3, MGAM, MGST3, NT5C1B, OR11G2, OR2S2, OR2T29, OR5M8, OR6M1, PDE10A, PDE2A, PFKL, PLA2G10, POLR3H, PPAP2A, PROC, PRPH2, PVRL4, RAPGEF4, RPS6KB2, RUNX1, STX7, TAS2R9, THBS2, TKTL1, TNFRSF8, TUBA4A, TXNDC12, UGCGL2, VEGFA, ATP6V1E1, CTNNBIP1, MAPKAPK3
Negative_13798	C9, ID3, LHB, MUT, NPY, PGD, ACAA2, ACSS2, ADAM10, ADH1B, ALDH4A1, ARR B1, B3GALT6, BBOX1, BMP5, C5AR1, CACNA1F, CAMK2B, CARS2, CCR1, CDC16, CDIPT, CDK5, CERK, CHD8, CHRM2, CHRNA7, CHST13, CLDN18, COL3A1, CRHR1, CSNK1A1, CSNK1G3, CYP3A4, DDX55, DGKB, DGKG, DHRS9, DUSP5, EDNRB, ETS1, FABP4, FDFT1, FGF14, FMO4, FZD2, GCNT3, GDF5, GSTM1, HSD3B7, IL13RA1, IL15, IL6ST, ITCH, MAPK7, MCEE, METTL2B, MPP5, NAT1, NKX6-1, OR10P1, OR13F1, OR11I1, OR2A4, OR2L3, OR2T11, OXCT1, P2RX2, PDXP, PGM1, PIP5K1A, PLA2G2E, PLCB1, PPCS, PPP2CB, PTGES2, PVRL3, RAB5A, RARS2, RBPJ, RDH12, SDHB, SEMA3D, SEMA4A, SHC2, SHMT2, SLIT1, SOD1, SPHK2, SUCLG2, SULT2A1, TAS2R48, THBS2, ARHGEF12, ATP6V1B2, ST6GALNAC1
Negative_13799	ATM, CKB, HAL, SPN, TPR, ADAM10, AGPAT2, ATP4A, BRAF, CAMKK1, CASP3, CCL24, CD40, CFL2, CHRM2, CLDN20, CLDN22, COL1A1, CREBBP, CYP11B1, CYP11B1, DAG1, DGKB, DHRS3, DLL4, EHMT2, GALNT11, GGT1, GIT1, GNAQ, IARS, IFNA5, IPMK, ITGAL, NAT1, NCKAP1, NFASC, NME2, OR13D1, OR9K2, PARS2, PDCD1, PDGFB, PLXNA3, PPP1R3A, PTCH2, RBL2, SARDH, SDC1, SKP1, SPAM1, TGFA, TLN2, TUBB4, USE1, ST6GALNAC5



Negative_13800	CFH, CFI, FH, HGF, HYI, KIT, SRF, TK2, ACP2, AKR1C1, ATP6V1F, AXIN2, BAI1, BAIAP2, BCL2L1, CACNA1G, CANT1, CCL5, CD55, CDC6, CHAD, CHIA, CNTR, CREB3, CYP3A4, DGAT2L4, DHRS4L2, DTX3, ENPP3, EPHA4, EXT1, FCGR3B, FGF22, FGF9, FSHB, GAD2, GLUL, GSTM4, HAO2, IDH2, IFNW1, INPP4B, IPK, ITGA3, JUND, LCMT2, LILRB3, MAP2K1, MYH14, NAMPT, NCR1, NFKBIA, NOX1, NPAS2, OR1I1, OR2AE1, OR4N5, OR5K1, OR6Y1, OR8A1, OR9G4, P2RX4, PDE1C, PDK1, PIK3CB, PLA2G2F, PLXNA1, PNPLA3, PPP2R1B, PTPN1, PTPN7, RERE, ROBO1, SGPP2, SOCS7, SSX2IP, TPM3, UGT2A1, UROC1, VDAC1, VDAC2, WASF2, WNT8B, WWP1, CSNK1A1L, PAFAH1B2, PRICKLE2, ST6GALNAC5
Negative_13801	C9, CGA, VCL, ACTN1, ADSL, ADSS, APOA5, CAMKK1, CCL17, CD274, CD72, CDC2, EIF24, EIF4B, FGF22, FGF5, FIGF, FLT3LG, FUT6, GCLM, GSTP1, GUCY1A3, HSD3B7, ICAM1, KIR3DL1, LAP3, MAPK9, NADSYN1, NFKBIA, NME2, NSDHL, NT5E, OR13C9, OR1B1, OR1G1, OR4D11, PDXK, PPP3R1, PTGER1, PTGES, RDH8, RFXAP, SC5DL, SEMA3C, SESN1, SLC2A4, SOS1, SUCLG2, SULT2B1, TICAM1, UBE2L3, UGT2A1, ATP6V1B1, CSGALNACT1, PLA2G12A
Negative_13802	FOS, HK2, LAT, LCT, SDS, SP1, TKT, TNC, ALOX15B, AMPD2, APOE, ARSA, ATP5C1, ATP6V1F, BCAT1, C1QB, CACNA1B, CCL24, CCR6, CD274, CKS1B, COL4A2, DARS, DERA, DPM3, DTX4, DUSP10, ENAH, FABP1, FDPS, FGF4, FRAP1, GDF7, GFAP, GSTA3, HAP1, HLA-C, HNF1B, IFNA6, IFNGR2, IL17RA, IL1RAP, LCMT2, MAN1A2, MCAT, MPST, MTHFR, MYD88, OR10G8, OR1N2, OR4D6, OR52I1, OR52W1, OR56A1, OR56A4, OR5D13, OR5F1, OR5T3, OR6Y1, PAPSS1, PDCD1, PECAM1, PERP, PHKA1, PIK3R1, PLCG2, PMVK, POLD2, POLR1A, PPM1A, PPP2R5D, PPP2R5E, PRKCZ, PTAFR, PTPN6, RALB, RFXAP, SCP2, SLC2A1, SPRED2, STT3B, STX1A, SUFU, TGDS, TLR5, TSC1, PDCD1LG2, PNLIPRP2
Negative_13803	GLA, GP9, MAG, NNT, PXN, UBB, ABL1, ACP5, ACP6, ADIPOR1, ADSSL1, AGTR1, AHCYL2, ALOX12B, APOA1, ARHGEF4, ARPC5L, BMPR2, CALML5, CD8A, CDC25A, CES7, COL4A2, COL5A3, DAAM1, DGAT2, DPM1, EDA2R, FCGR3A, FGFR4, GAPDH, GAS1, GPX5, HCLS1, IGFBP3, IMPA2, KLRC1, KRAS, MAGI3, MAML3, MARS2, MGAT1, MICA, MINPP1, NCR3, NFATC2, NKD1, NUDT9, OR10G7, OR4D6, OR4M2, OR5B21, ORC1L, PDE1B, PIGF, PPA2, PPAR, PPARG, PPP1R3C, PSEN1, PSENEN, PTDSS1, ROBO3, RPE65, SARS, SNAI1, TGFB3, TOMM40L, TPMT, TSTA3, UBE2L3, UGT2B7
Negative_13804	C1S, C8G, DAO, DLD, HDC, PAH, PTS, RPE, SRM, ACP1, ADRB2, C1QB, CD82, CD8B, CMBL, CXCR4, DDX47, EDA2R, EGLN1, EPB41, FCGR3B, FGF14, FGF5, FGF R2, GAD1, GADD45A, GMPR, GNA14, IFNA17, IFNGR2, INPP1, LDHAL6B, LDHD, MAFA, MAN1A1, MAP3K5, MGST1, MTHFR, NR5A2, OR10AD1, OR2G3, OR7D2, PAPSS2, PDXK, PIGA, POLR2F, RAP1B, RPS6KB2, SEMA4B, SMAD7, SMPD4, SOS4, STX2, TAS2R41, TLN2, TYRP1, PRICKLE1
Negative_13805	C5, ID3, LIF, STS, ACTB, ACYP2, ADH1A, ADSS, ALDH4A1, ANAPC11, ATP6AP1, CACNB2, CAMK4, CAV1, CCL1, CCNB2, CDC7, CDH5, CER1, CHUK, CLCA2, CLDN16, COX10, CSNK2A2, CXCL16, CYFIP1, CYP2A13, CYP2C19, DCXR, DDX55, DOLPP1, DPM2, ELK4, EPAS1, FZD4, GPAA1, HDAC1, HRH2, HSD3B7, HSP90B1, IL15, IL2RB, INPP4A, ITGA5, ITGAD, LEFTY1, NARS, NAT1, OR2F1, OR2L8, OR4C12, OR6K6, OR9Q1, PANK2, PIGS, PLA2G2F, PLCD1, PMVK, PRKAR2B, PTPRC, RASGRP2, RFXAP, ROBO3, SCD5, SEMA3D, SEMA4B, SFRP2, SIPA1, SMAD6, SOCS2, STX12, THY1, TOMM40, TSTA3, UGT2A1, GABARAPL1

Negative_13806	APP, C7, GLA, HGD, VTN, ZYX, AARS, AGMAT, AHCYL1, AHCYL2, ALDH3A2, ALP PL2, ASCC3, ATP13A2, ATP2A1, ATP5J, B3GALT4, C3AR1, CACNA1H, CAMK2D , CCKAR, CCL19, CCNB3, CCND2, CCNH, CIITA, CLTC, CTSG, CYFIP1, DCTN1, DHRS3, EPHA2, EPOR, FARP2, FZD10, FZD6, GAD1, GALNS, GCLM, GLUD1, GMP PA, GMPR2, GRIN2C, HADH, HYAL2, IFNAR2, IL23A, IMPA2, ITGB2, LTC4S, N FKBIE, NOX1, NSD1, NT5C2, OR10G8, OR10Q1, OR14A16, OR1C1, OR1E2, OR2 A5, OR2B6, OR4F17, OR4Q3, OR51B5, OR5V1, PCYT2, PDE4A, PDXK, PGM1, PH PT1, PPP2R5B, PPP5C, PTGES, PTGES2, RCHY1, RUVBL1, SDC3, SUFU, TAP1, TAS2R50, TBL1Y, TICAM1, TRDMT1, TUBA4A, TUBB4Q, TYROBP, WNT10A
Negative_13807	IHH, ME3, AASS, ADH1B, AFMID, ARSD, ASAH1, ATF4, ATG3, B3GAT3, BCAT1, BMP8A, BUB1, BUB1B, CACNA1G, CD244, CHD8, CXCL16, CYBA, DAPK3, DDX52 , DDX56, ENO1, EPHA2, ETNK1, EXT2, F2RL1, FGF2, FUT8, GALNT10, GALNTL 4, GBA3, GLS2, GSTA2, HADHA, HIBADH, HSD17B7, HSPA1B, HSPB1, HTR2A, I CAM2, IFNA5, IL12A, IL12RB2, INSR, IQGAP2, IRS1, LIMK2, MAN1B1, MAOA , MAP2K6, MAP3K8, MAP4K2, MAT1A, MIOX, MMP2, NFKBIE, NR1D1, NT5E, NUD T9, OR10H1, OR1S2, OR2B2, OR2S2, OR2T3, OR4A16, OR51I2, OR52A5, OR56 A4, PARD6G, PFN1, PIAS2, PIGF, PKM2, PLOD1, POLR2H, PPAP2A, RAB23, RU NX1, SEMA3C, STMN1, STX12, TICAM1, TUBA1C, TUBB1, TUBB2A, UGCG, UGT2 B17, VCAM1, WNT8B, XYLB, YARS2, ZFYVE9
Negative_13808	AR, CAD, F10, LYN, NOG, ACSL3, ALG5, ANGPTL4, ASRGL1, BCL10, BUB3, C1Q B, CACNB3, CASP3, CCL1, CD28, CDC23, COQ5, CTBS, CTNNA1, CXCL6, CXCL9 , DDIT3, DHDH, DHRS3, E2F4, EDNRB, EPHA6, FLT3LG, GMPR2, GNMT, MGAT5, NFYA, NTSR1, OR10G3, OR2H2, OR4C11, OR4D6, OR4P4, OR51G2, OR5P3, OR6 N2, PDE3B, PGLS, PIGT, PIK3C2B, PIK3CG, PIP5K1A, PIP5K1B, POLR3B, PO N2, PON3, PPAP2A, PPP2R5D, PRDX6, PTEN, TAS2R38, UGT2B4, WNT6, WNT8B , YKT6, ATP6V1E2, PDCD1LG2
Negative_13809	ADC, AK5, FOS, GP5, IL4, LHB, LTB, ME2, ABL2, ACP2, ACSM4, ACTG1, AGRN, ALDH3B2, ANAPC10, ARSD, ASIP, B3GNT4, C1QB, CCL24, CD48, CD99, CDS2, CEBPA, CFTR, CLDN6, CLTCL1, CNTFR, COL4A6, CXCL3, DDX55, DMGDH, DPM2 , E2F4, EDNRA, ENO3, EPHB2, ERBB3, FABP4, FGF14, GALNTL4, GCAT, GUCY1 B3, HRH1, HSPA8, IL20, IL21R, IQGAP2, MKNK1, MYH6, NADSYN1, NCOR2, NF KB1, OR1L1, OR2T12, OR4N4, OR52M1, OR5AC2, OR5M3, OR8K1, P2RX7, PDE1 B, PFKL, PNPT1, POLR2A, PPARA, PPP1R3C, PPP3CC, PSEN2, PTPRJ, RARS, R CHY1, RDH11, SLC27A4, SLIT2, SOAT2, SSH3, STAM2, TALD01, TNFSF14, TO LLIP, TP73, TRIP10, TUBB6, WARS2, WHSC1, YKT6, HLA-DRB5, SERPINA5
Negative_13810	CBS, DCC, LTB, NNT, OGT, PGP, AASS, ACHE, ADAM10, ADIPOR1, ALDH3B1, AL G10B, ARHGEF2, ARHGEF4, ASS1, ATP5J, B3GAT3, B4GALT5, BIRC5, BLVRB, CACNG5, CANT1, CAV3, CLDN1, CSNK1D, CSNK2A2, ENPP2, ERBB4, FGF9, GAL NT5, GMPR2, GNA12, GRIA3, HGSNAT, HLA- DRA, HPSE, HSPA1B, LDHD, LIAS, MAPK1, MYLK3, NFATC3, NPR2, OGDH, OR2M 5, OR4N4, OR52E2, PARVG, PDE6H, PDE8A, PIGW, PKMYT1, PLCD4, SETMAR, S GMS2, SUOX, TNFSF4, VAV3, WARS2
Negative_13811	ADA, BAX, CGA, CSK, LSS, MOS, MVK, RET, TK1, UBC, ABP1, ACAD9, ACO1, ADA M17, APLP1, ATF4, BPGM, CAV2, CCL23, CCND2, CCR3, CNTN1, COMT, CPT1C, CREB3L4, CXXC4, DHRS4, DVL3, ENTPD3, HCST, HTR6, IGF1R, IL18, ITGB7, KIR2DL1, LIAS, LYZL1, MAML2, MAPK3, MCAT, MYH2, NADK, NARS2, NPAS2, O R13A1, OR4D11, OR4D2, OR6N1, PAK2, PARS2, PAX8, PDE2A, PLA1A, PLA2G2 F, POLR1D, PVRL3, RDH11, RUNX1T1, SESN1, SH3BP2, SHC3, SPRY3, TM7SF2 , TSHB, UMPS, UNC5A, ZMAT3, HLA-DRB4, PAFAH1B1, SERPINC1

Negative_13812	CFD, ITK, ACAT2, ACHE, AHCYL2, AKR1B10, ALG2, ANGPL4, B3GALT1, B4GALT3, CHKB, CLDN2, CPT1C, CREB3L4, CSF3R, CYP1A1, DAG1, DERL1, ECSIT, FUT1, G6PC, GALNT5, GSTA2, GSTM1, HIBCH, HLA-DOB, HLA-F, ICAM1, ICOSLG, ITGA6, LDHAL6B, LYPLA1, MAN1A1, MAP3K14, MAPK3, MARS2, MYL2, MYL9, NANP, NCOR1, NEU3, NOX1, OGDHL, OR1E1, OR2A2, OR2M3, OR2M5, OR4N4, OR4S1, OR52I2, OR52N1, OR52N2, OR6C74, OR7A17, ORC3L, PDE4A, PIGM, PLA2G3, PLAT, PNPT1, POLR3K, PRKAB1, PTSS2, PTGFR, PTPN7, PTPRR, SDHB, SOS2, TGFB2, TYMP, UXS1, ZMAT3, SLC25A31
Negative_13813	ADC, TPR, VCL, ADCY10, ALDH3B2, ALDOB, ALG11, ARPC1A, C1GALT1, CACNG8, CBR1, CCNE1, CDC26, CERK, CES2, CHPT1, CKMT2, CLDN22, CNTFR, DBF4, DKK4, DUSP1, DUSP2, ENPP2, ENTPD1, FABP3, FGF18, FMO5, FUT2, GADD45G, GALNT10, GCLM, GLI3, GL01, GPLD1, GRIN2A, HDAC2, HIBCH, HMOX1, IGFBP3, IL7R, IRF5, ITGA9, ITGB5, LCMT1, MAP3K8, MARS, MASP2, MMP7, MTFMT, MTMR6, NCF2, NQO1, OR1N1, OR2AT4, OR2K2, OR3A3, OR4C16, OR4F6, OR51E1, OR6F1, PDE8A, PDK1, PDPK1, PGAM1, PGM1, PIGO, PIK3CA, PON2, PPP3CB, PTPRR, RASGRP2, RDH8, RIPK1, RPS6, SLIT2, STK36, TPM3, TUBA3E, TUBB1, VEGFB, WARS2, ZAP70, ST6GALNAC3, TNFRSF10D
Negative_13814	ADC, C9, HGF, HK2, HYI, IDS, IVD, KDR, MPZ, ABLIM1, ACSL4, AHCY, AKR1D1, ALDH2, ALDH3A1, ALG6, ALOX15, ARHGAP5, AXIN1, BCL10, CD247, CHSY1, CHSY3, CLDN5, CNGB1, CREB3L3, CYSLTR1, DCTD, DUSP5, FECH, FGFR3, FTH1, FZD7, GADD45A, GNPAT, GSTA1, GSTM4, HADHA, HMGCL, IL19, IL1R2, IL2RB, INPP1, INPP4B, INSR, ITPKA, MAP3K7, MGAT5B, MTHFD2, MTMR6, MYH11, NAGK, NEUROG3, NFKBIA, NFYC, OR1S2, OR2D2, OR4K2, OR4N4, OR52N5, OR5A1, OR5D13, OR6K3, OR7G1, PANK1, PDE1A, PDE6H, PDXP, PIGC, POLR2C, PPP2R2D, PPP2R5C, PRKAG2, PRKCA, PRKCI, PTCH2, PTPN6, RHOD, SFRP2, ST3GAL4, SULT1A4, UBA1, VAV3, VTI1A, WNT8B, TNFRSF1B
Negative_13815	CAT, CD6, DCC, HGF, ID2, KIT, LTB, PML, RPE, ACSS1, ACTN2, ADCY9, ALDH3A1, AMY2B, ATP4A, B3GAT1, CCL24, CCL25, CCND3, CD79B, CDC26, CDK5, CDK7, CNGA3, CNTN2, COQ6, CSNK1G3, CTF1, CUL1, CXCL5, CXXC4, DDIT4, DTX4, EDN1, FARSB, FGF11, FLT3LG, GALNT13, GALNT8, GNA12, GNAS, GPPA1, GPRIN2D, HDAC1, HIF1A, HLA-G, HSD3B1, IDH1, IL1A, IMPDH2, IRAK2, IRF7, KLRC3, MAP3K8, MAPK13, MDH2, MICA, MMP9, MYH7, MYL2, NAE1, NAGK, NKD1, OR10A7, OR13A1, OR2B6, OR4F6, OR4N2, OR51A2, OR51A4, OR5K1, OR6K6, PARD3, PGM3, PIK3R2, PNMT, POLR2H, PPP2R5B, PRKCD, PRKCQ, PTGER1, RPS6KA2, SESN3, SH2D2A, SLC27A1, SRGAP2, ST8SIA1, STAT6, STMN1, TAS2R40, TP73, UCK1, WNT16, TNFRSF10D
Negative_13816	CEL, DBH, F3, FAH, GNE, IL3, SMO, TPO, ADCY3, ADH7, AGPAT4, AGPAT6, AHCY, ALDH2, ALOX12, ARPC5L, ASS1, ATG12, BET1L, BST1, CACNB1, CACNG6, CCKAR, CDC45L, CDH1, CDK5, CLDN11, CREB3L3, CRY1, CXCL16, DARS, DDB2, DDOST, DTYMK, EPHA4, FCGR3B, FMO1, FUT5, G6PC2, GALNT2, GGPS1, GRM1, GSTA1, HCST, HHIP, HYAL2, IDUA, ITGB6, ITGB7, ITPK1, JAK3, KLRC2, LIFR, MAML2, MCM3, MDM2, MINPP1, MLLT4, NT5E, ODC1, OR10G3, OR11G2, OR11H4, OR1E1, OR2T5, OR52A5, OR5D18, OR6K2, PCNA, PDE1C, PGM3, PLOD2, POLR1A, PPARD, PPP2R5A, PPP3CA, PTPN6, RALA, ROBO3, RXRB, SCLY, SHC2, SMAD9, SPCS1, SRGAP3, STT3B, STX6, TAS2R13, TGFB2, TJP3, TNFSF4, TUBA1B, UGT8, WARS, ATP6V1E2, ATP6V1G2, PNLIPRP2, ST6GALNAC4

Negative_13817	A2M, AK5, ATM, BTC, F9, VCL, VTN, ACO2, ACSM5, ACTA2, ACVR1, BDKRB2, BMP2, C4BPA, CACNA1F, CCKBR, CCL11, CCL19, CD47, CD79A, COX15, CPOX, CYP2J2, DAPK3, DFFA, DVL1, ECHS1, EFNA3, EHMT2, FMO4, FRAT2, G6PC, GABARAP, GALM, GDF7, IMPA1, KIR2DL3, LIPE, LLGL1, MADCAM1, MAGI1, MAML3, MAPK8, METTL6, NLGN1, NR1H3, OR10J5, OR2K2, OR4E2, OR4N4, OR51B5, OR6C76, OR6M1, OR8B8, OR8J1, PLAUR, PPP2R1B, PRSS1, RASSF5, RIPK1, RPS6KA2, RXRA, SDC1, SEMA4B, SHC4, SMAD5, SPI1, ST3GAL3, SUV39H1, SYNJ1, TAS2R48, THBS1, USE1, WARS, WASF2, WBSR22, SLC25A31, TNFRSF18
Negative_13818	BCR, BTC, DUT, F2R, FGG, GLS, HYI, MAG, OGT, TFG, TNF, TPR, TXK, ACP2, ACSM1, ADCY8, ADRB3, ARD1A, ARPC3, B3GNT3, BCAR1, CD3E, CDC14A, CHKB, CMPK1, CRKL, CSF2, CSF3, CTPS, CYP4F3, DAAM2, DDOST, DFFA, DNMT3L, ENP7, EPHA7, FGD3, GALNT1, GGPS1, GLG1, GSTA4, GUCY2C, HA01, IL10RA, IL17A, IL18RAP, IL22RA1, IL8RA, IQGAP1, KARS, KIR3DL2, LAMC2, LRDD, MAN1C1, MAP3K2, MAPK13, MAPK14, MASP2, MOV10L1, NOX3, OR2AG2, OR2M4, OR3A1, OR51A2, OR51T1, OR5D13, OR5D18, OR5F1, OR6F1, OR6S1, OR8H1, OR8K5, ORC3L, PARVG, PIK3C3, PIK3R1, POLR2H, PTPN5, RASGRF2, RBPJL, RDH10, SPRED2, TBL1X, TNFSF14, TSTA3, TUBA1C, UGCGL2, YWHAE, TNFRSF1B
Negative_13819	BTC, GNE, HAL, ACAA2, ACSS2, AGXT, AKR1C4, ALDH5A1, ALPL, ARNT, ATP5A1, BCKDHB, BNIP1, CAMK4, CARS2, CCL23, CD34, CD38, CD72, CDS1, CLCA2, CLTB, COQ3, CTSB, CYP2A13, DAPK3, DARS2, DDIT3, DDX23, DGKH, DRD2, DUSP4, EGLN3, ENPP1, EXTL1, FADD, FARSB, FGF20, FZD9, GALK1, GNA11, GRIN1, GSTA3, HTRA2, IL1A, IMPDH2, INPP1, KIR2DL1, KIR2DL4, LAMB1, LIPF, MGAM, MYH6, MYLK2, NLGN3, NME6, NUDT5, OGDHL, OR11A1, OR2T3, OR51G1, OR5L1, OR6N1, OR6X1, OR9Q2, PDE1C, PDE7A, PDXP, PIAS3, POLD4, POLR1B, POLR2E, POLR3A, PRNP, PSEN2, RAB23, RFXAP, ROBO2, SEMA4D, SNAP23, SPRY3, SSH2, ST8SIA5, STK3, TGFB2, THY1, TOMM40, TUBB2A, TUBB2C, TUBB6, UCKL1, VARS, VEGFB, TNFSF13B
Negative_13820	CBS, CRH, GPT, INS, LYN, TK1, ABL1, AK3L1, ALG13, AMDHD2, AQP7, B4GALT2, BDH2, BMP5, CCL19, CHST12, CREB3, CYFIP2, DBF4, DOCK1, DUSP4, EGFR, ELK4, EPB41L2, FGF22, FLOT1, FOXA3, FSHB, GMPS, GRPR, GUCY2F, HCLS1, HES1, HSD11B1, IFIH1, IL18R1, ITGA4, L1CAM, LDHB, LEF1, MAT1A, MGAM, MGST2, NCK2, OR10H1, OR2M7, OR4E2, OR51B5, OR5D14, ORC4L, PDE7B, PGAM2, PIGO, PIP4K2A, PLD2, POLR1B, PPA2, PRKAG1, PRODH2, PTGES2, RALGDS, RDH10, SEMA3G, SGMS1, SHISA5, SOAT1, ST6GAL1, STX5, TAS2R38, TNFSF8, TRMT11, TUBA1C, UNC5D, ZBTB16, SERPINC1, ST6GALNAC5, TNFRSF11B
Negative_13821	AMT, HK3, IL8, LHB, AADAC, ACSM2A, ADCY10, AKR1B1, ALG1, ALG10B, ALOX15B, AMY2B, ANPEP, ARPC3, ATP5E, ATP5G2, AXIN1, C4BPB, CACNG8, CBLC, CCL13, CCR10, CD40, CLCA2, CLDN14, CSF2RB, CSF3R, CYP2A13, DCTD, DDX52, DTX3L, DTX4, EFNA1, ENO2, FASN, FBP1, FGD1, FGF17, FGF18, FGF19, FOSL1, FOXA3, G6PD, GABARAP, GALC, GGCX, GLUL, GMPS, GNB3, GOT1, GUK1, HSD3B7, HTR2B, HTRA2, IBSP, IL17B, IL18, IL18RAP, IL21R, IL23R, INPP1, ITGB4, LRP5, MAP2K6, MAPK10, MAPK14, MYL2, NFATC3, NLGN2, NT5C1A, OR10S1, OR1E1, OR4S2, OR51G1, OR5AN1, OR6C6, PANK1, PLIN, PLTP, POLR2A, PPP3CA, PRNP, PRODH, RAC1, SMAD7, STK4, TJP3, TLR9, TPI1, TUBB2A, UPRT, WHSC1, GABARAPL1

Negative_13822	ADC, CD6, FH, GGH, GP9, HK1, MAG, MUT, NPY, TKT, TPO, ACADL, ACVR2A, ADSL1, AGXT, ALPPL2, ANAPC5, B3GALT1, B4GALT5, BDKRB1, CDC14A, CLDN19, CLDN20, CLTA, CNDP1, COASY, COL4A6, COMP, CREB1, DARS, DEGS1, EDA2R, ERBB4, FARS2, FSHB, GAL3ST1, GCH1, GLDC, GLG1, GLS2, GNRH1, HADHB, HLA- C, IDH3A, IDH3G, IL11, IRF3, L1CAM, MCM5, MDM4, METTL2B, METTL6, MTMR1, NFATC3, NRG3, OR10Z1, OR13C2, OR4K17, OR4X2, OR5J2, OR5M3, OR6S1, OR6Y1, P4HA3, PCCA, PDE11A, PDE4D, PHKA1, PIGB, PKLR, PMM2, PRKAR1A, PRKAR1B, PTCH1, PTGS2, PVRL2, RASA2, ROCK2, SLC27A5, SOAT1, UNC5C, UROS, WNT7A, GABARAPL1, MAPK8IP2
Negative_13823	FGA, HAL, LEP, NNT, SPN, VCL, ACAD8, ACSM5, ASRGL1, BMPR1B, CACNG7, CD8B, CDIPT, CHIA, CISH, CNGA3, CPT1A, CRY1, CTNNA2, DIAPH1, DPYS, EXT1, GGT1, HNF4G, INHBA, IRAK1, ITGB6, LEFTY1, LRP6, MAP3K3, MTAP, MYH10, MYL9, MYLK2, NKX2- 2, NTRK1, OR10A7, OR10K2, OR1Q1, OR2C3, OR2T8, OR4F4, OR52K1, OR9A2, PDE9A, PDPK1, PIK3R2, PIP4K2A, PLXNB3, PMM2, PORCN, RIPK1, SEMA7A, SH3BP2, STX2, UGT2B11, UPP1, WNT6, WNT7A, KIR2DL5A, PLA2G12A, SERPINC1
Negative_13824	C2, GK2, KHK, TPO, ACOX1, ADRB2, ALDH3A1, ANAPC4, ATIC, ATP4A, ATP50, ATP6VOB, BCL2, CADM3, CAV3, CCR6, CD274, CD01, CES2, CHEK2, CLDN2, CYFIP1, CYP1A1, CYP2A6, DRD5, EDAR, ENPP3, ENPP6, F2RL2, FABP1, FGF6, FPGS, FZD9, GALNT1, GCNT4, GPD1, GPT2, GRM5, HCLS1, HMBS, IFNA10, IFNA17, IFNA5, IFNG, IL13, IL20RB, IL23A, LFNG, MAN1A1, MAP2K3, MAP3K4, MGAT4A, MYH3, NCR2, NT5C, OR10Z1, OR2M2, OR52L1, OR5B17, OR8D4, OR8H1, OR8K5, PDCD1, PER3, PI4KA, PIP5K1C, PNLIP, POLR2B, PPP2CB, PRKAB1, PTGES2, RAPGEF3, RDH10, RPS6KA5, SDHC, SEMA3B, SEMA4G, ST8SIA1, SUCLA2, SYNJ2, TACR1, THY1, TMLHE, WNT1, YWHAB, ATP6V1G3, HLA-DQA2
Negative_13825	AK7, CDA, CEL, CKB, FAH, FN1, GHR, KIT, RB1, ZYX, ACSM1, ACTN4, ACY1, ALAD, ASNS, ATF4, AVPR1B, BET1L, CACNG4, CAMK2B, CAMK2D, CCR1, CD82, CDC26, CHKB, CKS1B, CXCL5, CYBA, DGKA, DMGDH, EFNB2, ENPP2, ENPP7, ENTPD5, ERBB3, FGD1, FZD2, GAB1, GALNT10, GALNT5, GGCX, GPD2, GSTO1, HLA-DMA, HNF4G, HPSE2, IGSF5, IKBKKG, ITGB3, KLKB1, MAP4K4, MAPK10, MIOX, NAMPT, NAT2, NFKB1, NOS1, OLR1, OR10AG1, OR13C3, OR4A5, OR51F1, OR51M1, OR52I1, PFKM, PIAS4, PIGM, PLA2G2E, PLA2G5, PLOD2, PLXNB2, PPP2CB, RAC3, RAF1, RBPJ, RDH11, RPRM, RRM2, SELP, SEMA7A, SETD1A, SETD2, SHC2, SSH3, STX18, TFPI, TIAM2, TSNARE1, TUBB6, UBA7, ULK3, WHSC1, WNT8A, YWHAB, MAP3K7IP1, SERPINB5, TNFRSF14
Negative_13826	EGF, GSR, ID3, IL3, LSS, MAG, AASS, ADIPOR1, ALG10B, ARRB1, ATP5J2, CD58, CDKN2D, CHSY1, CPT1B, CX3CL1, DDX4, DEGS2, DGKD, DLST, DPM3, ELK1, EPHA4, ESPL1, FGF9, FUT4, GALNT5, GNRHR, HMGCS2, IARS, IDH3A, IFNA2, IL1R1, ITGA1, MAP3K13, MGST1, NAGA, NCAM1, NEU1, NFYA, OR1F1, OR1J2, OR2L3, OR2Z1, OR4C6, OR52I2, OR52N1, OR5B12, OR6C76, PIK3R5, PPP3CB, PTK2B, ROCK1, SEMA4A, SMURF2, TAS2R4, TAS2R50, TJP2, TRIP10, UROS, VDAC3, VNN1, CACNA2D3
Negative_13827	AR, LSS, MTR, SRM, AACS, ACSL4, AGPAT3, AKR1A1, ALDH3B2, ARG2, ARHGEF1, B3GALT2, CNTF, COL4A2, CPT1C, DHDDS, E2F4, FDPS, FGD3, FGF11, FGF20, FGF8, GALNT11, GNAI1, GNB3, GSTM5, HIF1A, HLA- DRA, IL1R2, IL20, IL22RA1, KLRK1, LDHB, LIMK1, LIPC, MAN2A1, MAP2K1, MCM5, NFASC, NFATC4, OR4F5, OR5AU1, OR5H6, OR6C74, OR9G1, PAK7, QARS, RPRM, SEMA4C, SMPD2, SNW1, ST3GAL6, STX12, SUCLG2, TAS2R13, TAS2R38, VAMP2, CSGALNACT2, HLA-DPA1, ST6GALNAC5, TNFRSF6B

Negative_13828	CSK, F12, HAL, LHB, LSS, MPZ, PC, ACAT1, ACOT12, ACTC1, ALPI, ANAPC1, ARAF, ARHGEF6, ATG12, BCAT1, CADM3, CAV3, CD14, CD72, CD99, CDC14B, CP T1C, CSNK1G2, CXCL5, CXCR3, CYP11B1, CYP3A7, CYP4A11, DLL1, EDNRA, E FNA2, EXOC7, FADD, FGF8, FZR1, GALNT1, GATM, GP1BB, GRIN1, GSK3B, GST Z1, GZMA, HIF1A, HPRT1, IL1RAP, IL22RA1, IL8RA, KCNQ1, KIR3DL2, LHCG R, LIPT1, LMO7, MALT1, MAPK1, MGST3, MPP5, MYH11, MYL5, NCOR2, NME4, N RAS, OR1J4, OR1L3, OR2B11, OR2B2, OR2D2, OR2M5, OR2T34, OR5AC2, PLA2 G5, PLCB2, PLCG1, PLXNB2, POLR1D, POLR2D, PPP3R2, PRKAB1, PRKG1, PRP H, PYGB, RASGRP4, SEMA3E, ST8SIA1, ST8SIA5, SUCLG2, TAS1R2, TAS2R48 , TAS2R5, TIAM2, TPMT, TYMS, UPB1, WNT6, C1GALT1C1, HLA- DQB1, MAPK8IP2, TNFRSF6B
Negative_13829	CFH, FGG, MUT, PLN, TNF, ALDH1A2, ALDH9A1, ALG2, APAF1, ARPC1B, ATP5D , ATP5L, BLVRA, BMP8A, CASP3, CBLC, CCR1, CHIT1, CISH, CLDN2, CSNK1A1 , CXCL5, DAD1, ENTPD7, FOXO1, GCNT1, GGPS1, GMDS, GMPA, GNA15, GPX5, HARS2, LAP3, LDHAL6B, LIPT1, MAP3K6, NCAM1, NOX3, NUDT8, OR10A5, OR1 B1, OR2K2, OR2T4, OR4P4, OR51B4, OR52E4, OR56A4, OR5B21, OR9K2, P4HA 1, PAK4, PLA2G3, POLR3H, PPP2R5C, PSPH, RASGRP3, RUVBL1, SEMA3B, SHC 2, SMURF2, TOLLIP, TUBAL3, TYROBP, ULBP2, HLA-DRB4, HLA- DRB5, SERPINA5
Negative_13830	AR, JUN, KHK, MIF, SCD, SRC, TK2, AASDH, ACAT2, ADAM17, APOE, ASNS, ATP 50, BCMO1, BIRC2, CASP10, CCL17, CD46, CD70, CDS2, CTNNA2, CYCS, DCTN 1, DDX23, DHRS4L2, DMGDH, DPM1, DUSP1, EPHA7, FECH, FZD7, GUCY1B3, HL A- DOB, HNF1A, HSD17B1, HTR7, IL1A, ITGA8, ITGAX, KLRC2, LILRB3, LYPLA2 , MAGI1, MAP2K3, MAP3K14, MMP14, NARS, NUMBL, ONECUT1, OR10R2, OR52N 5, OR5M8, OR6B3, OR6C2, OR6Y1, OR8D1, OR9I1, PCYT1A, PCYT1B, PFAS, PP M1A, PPP2CA, PTK2B, PTPN1, PTPN11, RPE65, SESN3, SPRY4, STAT2, STK3, STX3, SULT2A1, TAS1R3, TNFRSF9, TUBB3, UCK2, VANGL1, YARS2, ZFYVE16 , ATP6VOD1, HLA-DRB3, MAPK8IP3
Negative_13831	AK7, BAD, FN1, GP5, GSR, LEP, NLK, SPN, ADCY4, AHCY, ALDH1A3, ALOX15, A OC2, APAF1, APOA2, APOE, ARNT, ARPC4, B3GALT2, CD36, CREB3L2, CSH1, C YP2E1, DGKZ, EFNA2, ENTPD3, ENTPD7, EPHB2, FARS2, FGF8, GLYCTK, GNAI 3, GNAO1, GNPDA1, GPD2, HSD17B7, IL13RA1, ITGAE, LARS2, LDHB, LIPA, L YPLA1, MAGI1, MAOA, MAP2K4, MAPT, NADSYN1, NCAM2, NFKB2, NFKBIA, NUD T5, OR1E1, OR1J4, OR2A5, OR4C15, OR4M2, OR51G2, OR5A1, P2RX2, PDE2A, PDE3A, PDE4C, PDE6H, PIM1, PLCB2, PLXNB1, PRSS2, PYCR1, RAP1B, RARA, RASGRP3, RELB, RUNX1, SDC3, SESN1, SLC27A5, SMPD3, SPCS1, STAM2, STA T3, STAT5A, TAS2R49, TICAM2, UBE2K, UGP2, UROD, VAV2, VDAC1, CSGALNA CT1, TNFRSF11A
Negative_13832	AGK, CFI, CSK, DDO, F12, PAH, PVR, TNN, ADCY1, ALOX5, AMPD1, ATP5C1, BM P7, CCND1, CD40, CEBPA, CERK, CTBP2, CYP2S1, DHDDS, ENPP6, EPB41, FLT 3LG, FUT2, FZD6, GRIN1, GSTA5, HDAC1, HNF1A, LDHC, LPAR1, LRP5, MAN1B 1, MINPP1, NEUROD1, OR10AG1, OR51L1, OR52N2, OR5D13, OR5D18, OR5M3, OR5T3, OSMR, PARD6G, PCNA, PDE6D, PGS1, PLCZ1, PPP3CB, PTPRR, RAC1, R PS6KB1, SELE, SGMS1, SLC25A4, SOCS3, SREBF1, STX4, TIRAP, CSGALNACT 1, MAPKAPK5
Negative_13833	EBP, F11, MAX, MVD, OGT, SCD, ACSM2A, AKR1D1, ALDH3B2, ALG10, C3AR1, C DC42, CDIPT, CDKN2A, CLDN6, COL5A2, CSNK1D, DDIT4, DPM2, EPAS1, EPHB 1, GALT, HIBCH, HSD11B1, IFNA21, IKBKE, INHBC, ITGB5, MGLL, MYL2, NAD SYN1, NME7, OLR1, OR1D5, OR2AE1, OR51L1, OR5B12, OR5B21, OR5D13, OR5 T1, OR5T2, OR7C2, OR8D4, P2RX2, P2RX5, PAK7, PANK4, PARVG, PCK2, PCYT 1B, PGM2, PI4KB, PIP4K2C, PKLR, PLCB1, PLCB4, PLXNA3, POLE2, PPCS, PP P3R2, PTSS1, RFXAP, RIPK1, RPE65, SELE, TUBB3, VAV3

Negative_13834	ABO, AR, C8B, DHH, HK2, VTN, ACY1, ADORA2B, AKR1C4, ALG12, APOA5, ASCC3, B4GALT4, BBOX1, BUB1B, CCL2, CD14, CDC23, CDC42, CDC7, CER1, CHRM3, CHSY3, CNTN2, CREB1, CREB3L1, CREBBP, CRHR1, CTSS, CYP2C18, DUSP14, EREG, F11R, FCGR3A, FGF14, FSHB, FZD2, GALNTL1, GRM1, GSK3B, HADH, HMOX1, ICAM1, IL11RA, IL20RA, IL22, IQGAP1, ITGB5, JAK3, KARS, LEF1, MAN1C1, MAP3K4, MAP4K3, MKNK1, MYH4, NAT1, NRG2, NSD1, OR2F1, OR2M7, OR3A1, OR4F17, OR5AR1, OR9K2, OR9Q2, ORC1L, PDGFB, PDGFRB, PHKB, PPM1B, PRKCE, PTAFR, PTGFR, RAB23, RAC3, RASA2, SETD2, SH3BP2, SLC2A2, SPHK1, SULT1A4, SULT2A1, TNFSF14, TUBA1C, YARS2, YWHAG, TNFRSF17
Negative_13835	EBP, LCK, SI, ACADL, ACLY, ADCY3, AKR1B10, ALG10, B4GALT5, CCL28, CD86, CD99, CDKN2A, CHR1, CLDN19, CLDN6, CNGB1, DAAM2, DDX18, EFNA1, F2RL2, FASLG, FGF13, FLT3, GALNT11, GALNT8, GPX5, GUCY1A3, IMPA2, INHBC, INSR, IRAK2, IRS4, LAP3, MAPK12, MAT1A, MGAT4B, MRAS, NANP, NME4, OCLN, OR11H6, OR1N2, OR1S1, OR4F4, OR51M1, OR5K2, OR5R1, OR6C1, PIGW, PLXNA2, PRKAB1, PTCH2, QPRT, RAPGEF3, SDC4, SEMA7A, SPHK1, ST3GAL1, ST3GAL4, STX6, TAS2R38, TRADD, XCL1, XYLT1, CSGALNACT2, GABARAPL1, PLA2G12A
Negative_13836	F11, F2, HGD, HGF, IL3, IL9, KHK, LPL, NOG, ACAT1, ACOX2, ACSL5, ARPC3, ATG7, ATP5F1, ATP5G2, B3GAT2, B4GALT1, CACNA1G, CAV2, CCL4, CDK7, CREB3L1, CYP2U1, CYP4F3, DDX41, DKK2, DTX4, E2F5, ECHS1, EFNA2, EHHADH, EPHA6, EPHB6, ERBB4, EXTL1, FGD3, FGF17, FIGF, GAD1, GALNT3, GALNTL5, GAS1, GNAI2, GNB1, GNPDA2, GZMA, HMGCS2, IFNA16, IL13, JAM2, LIMK1, LTC4S, MDH1, MLLT4, NOX3, OR10H1, OR10Q1, OR10T2, OR1A1, OR1J4, OR2T10, OR4K17, OR4Q3, OR51L1, OR52A1, OR5AN1, PARD3, PDHA1, PLCB4, PPBP, PRKAB1, PRKAR1A, PSEN2, SEMA3E, SETDB1, SH2D2A, SHC2, SLC12A2, TOLLIP, UGT2A3, VANGL2, VDAC2, WNT1, YARS
Negative_13837	F5, KHK, PVR, SDS, ACSL3, AMY2B, BLVRA, BST1, CCL26, CNGB1, CSF2RB, CSNK1G3, CTBS, CTNNA2, CYP26C1, DPM3, ENPP6, FMO1, FMO2, FUT8, GART, GPAA1, HEXA, HLA-C, HMGCS1, ICAM2, IDI1, IL13, IL28RA, INHBE, INPP4B, INSR, ITGAL, ITGB7, KLKB1, NT5C1A, OR5C1, PIK3R4, PLCE1, PLXNB3, PSME1, PTPN5, RELA, SELPLG, SMURF1, SSH3, STEAP3, STK11, TAS2R16, TUBAL3, UGT2B11, YWHAH
Negative_13838	DBH, F9, GP5, IL2, KHK, PRL, TEC, AADAT, ACADL, ACP, ACYP1, ADCY4, ALDH2, ANAPC10, ARSA, ATP4A, BIRC3, CALML3, CCL7, CCL8, CD01, CES1, CHPT1, CYP2B6, DAPK1, DIAPH3, EGFR, EGLN1, EPHA7, FCER1G, FGD1, FMO3, GALK2, GNA13, ITGAM, ITGB3, LAMB4, LDHD, MGAM, MYLK2, NEFH, NR1D1, NT5C3, OR10A3, OR10C1, OR10G3, OR11I1, OR2H1, OR3A3, OR51V1, OR52E6, PAK4, PFKL, PLCZ1, PLEKHA8, PPP2R1B, PRKACA, RASGRP2, SMURF2, SUFU, SULT1A4, TBL1Y, TUBB4, VAMP1, PDCD1LG2, ST6GALNAC4
Negative_13839	AK7, CD4, CEL, CRK, MAX, NLK, PGD, UBB, ACP6, ADH7, ALDH1A3, ALDH6A1, ALG10B, ANAPC11, APOC3, BIRC2, CACNA1G, CCNG2, CD74, CHRM2, CLDN20, COL1A2, COL6A1, CSDA, CSNK1E, DDB2, DHRS4, DUSP3, EPHX2, ERO1L, EXOC7, FABP4, FGF8, FRAP1, GDF5, GPAM, GSTA1, GSTM5, HADHB, HGSNAT, HSPB1, IL18, IL9R, IRF5, ITPA, JUND, KDSR, LALBA, LAMA4, LRAT, MAGI3, MALT1, MYLK2, NFATC4, NR4A1, NRG3, NRG4, OR13D1, OR2C1, OR3A2, OR4P4, OR6C7, OR8J3, PAK2, PCYT1B, PDIA4, PDPK1, PIAS3, PIP5K1B, PLCD1, PLOD1, PP3R1, PRKCD, PVRL2, RAF1, RRM2B, SMAD9, ST8SIA1, SUCLG1, TAS2R49, TGDS, TGFBI, WNT10B, XYLT2, CSGALNACT1, MAP3K7IP2

Negative_13840	F11, GLA, HK1, HK2, MPI, MYC, TXK, ZYX, AANAT, AARS, ACAD8, ACTG1, ANAP C11, BACE2, BCL2L1, BMPR1B, CACNG5, CCL27, CD47, CES1, CHSY3, CMAS, C TPS, DDX50, DEGS2, DGAT2L4, DMGDH, EPHX2, EREG, FABP1, FECH, FLT4, FT CD, FZR1, HTR4, ICOS, IKBKE, KRAS, LARS2, MLYCD, MMP2, NME4, NOS1, NR1 H3, NR5A2, NRXN3, OR10X1, OR13A1, OR13C4, OR14J1, OR2A42, OR2H1, OR5 1B5, OR52E8, OR52M1, OR6X1, OR8J1, P4HA1, PDE2A, PDE6G, PDGFB, PTPRM , PYCR2, RAB5A, RASGRP1, RASSF5, RFNG, RRM2B, RUNX1, SIAH1, SNAI2, ST AT6, TAS1R3, ULK3, GABARAPL1, TNFRSF12A
Negative_13841	DAO, GH2, ME2, SHH, SRM, STS, ABL1, ADAM17, AKT3, APPL1, ASS1, ATN1, BA IAP2, C1QA, C4BPB, CASP8, CYP2C19, DDX56, DGKZ, DRD5, ENAH, EPHB4, FR AT1, FUT5, GCNT3, GDF5, GGT5, GSTO2, HSPA1B, HTR2C, HTR4, IFNA6, IL13 RA2, ITGA6, LDHD, LIMK2, LRAT, MAD1L1, MAN1C1, MAP3K12, NCSTN, NTF3, OGDH, OR2C1, OR2T2, OR4F6, OR52E6, OXCT2, PCNA, PIK3C2G, PIK3R2, PKM 2, PKMYT1, PLCG2, PLXNA3, POLE3, PPP2R5A, PTDSS1, PTGS1, PYGM, STX18 , TAS1R2, UCP1, WASF3, WEE1, YWHAH
Negative_13842	AGL, IL9, ABCC8, ADSSL1, AKR1C1, ARPC3, ARSD, ATN1, ATP5I, BACE1, CCL 24, CCL5, CDC14A, CDK4, CFLAR, CHAD, CYP21A2, DUSP3, DUSP5, EPHX1, FA BP3, FZD6, GGT5, GOT1, GPD2, GSTM3, HAGHL, IL7R, MCEE, NCAM2, NFKBIA, NTN1, NTRK2, ONECUT1, OR10C1, OR13G1, OR14J1, OR1C1, OR3A2, OR4S2, O R5AU1, PARD6B, PDXK, PFN4, PIM2, PLA2G6, PLCB2, PLCD3, POLD1, PPAT, P PP2R1A, PTGS1, PTPRR, SC5DL, SMAD1, SUCLG2, SUV39H1, TAS1R1, TAS2R3 , TAS2R50, UGT2B11, YARS2, ATP6VOD1, CSGALNACT2, CTNNBIP1, HLA- DQB1, ST6GALNAC5
Negative_13843	AK1, C7, DCC, PAH, ACTG1, AKR1D1, ALOX5, BCAT1, BDKRB2, BUB1B, CACNB3 , CADM1, CCL7, CD79A, CLDN19, CXCL5, CYP19A1, CYP21A2, CYP8B1, DLL4, E2F2, FTH1, GADD45B, GALNT1, GNB1, GUCA1C, INMT, LRDD, LTB4R2, MYH1, OR10Z1, OR1Q1, OR2L3, OR2T10, OR4K15, OR52A5, P2RX3, P4HA1, PAICS, P AK4, PAPSS1, PCNA, PDE6G, PDGFRB, PDHB, PFAS, PLXNB3, PMVK, PRKCB, PR KCI, RPS6KA6, SEMA4D, SESN2, SETD1A, SFRP4, SLC25A6, TALD01, TICAM1 , TNFRSF9, TNFSF14, TPH1, WASF2, YWHAH, HSP90AA1, ST6GALNAC1
Negative_13844	BAD, C9, CFI, CP, RPE, TKT, WAS, AADAT, ABL1, ACVR1, AGPAT1, B3GAT1, CC R5, CDC42, CDKN2C, CDS1, CFTR, CPT1A, CREB3L2, CXCL11, DGKB, DHDH, DP AGT1, EP300, EPB41L3, EPHA7, EPHB4, G6PC2, GALNT1, GDF7, GFPT2, GJD2 , HMGCR, ITGA2B, ITPA, KARS, KAT2A, MGAT3, NAGK, NME6, NOTCH1, NPR2, N R1H3, OR13H1, OR51Q1, OR7A17, OR8K1, PDGFA, PGM1, PISD, PLEKHA8, POL R2C, PRPH, PTGES, RALB, RPS6, RPS6KA3, RPSA, SCP2, SELPLG, STX1B, TAS 2R13, TNFRSF8, TPH2, TRAF1, UROS, VAMP2, WNT2, ZFYVE16, GABARAPL1, S ERPIND1
Negative_13845	AGK, AUH, BAX, C1S, CKM, CP, DBH, DDO, GH1, GK, HK3, OGT, AACS, ACTG1, AL DH7A1, ALDH9A1, APBB1, APPL1, ATF2, ATP5I, BUB1, CACNA1C, CAMK2B, CD 274, CRY1, CXCL5, DDX4, EPHA8, ETNK2, FBXW11, FCGR3A, GLI2, GNPAT, GR IN2A, IDH1, IFNK, LDHD, MAP3K4, MPST, NTSR1, OR2W1, OR5P2, P2RX4, PAK 3, PGM1, POLD1, PRKAG2, PRSS2, PTPRR, RND1, SEPHS1, SETDB1, SOS2, SPC S1, TBK1, THBS4, UGCGL2, UROD, TNFRSF10A
Negative_13846	GHR, IL6, LHB, PXN, SRC, ACVRL1, AKR1B1, ALDH6A1, ALG1, ARG1, ARHGEF2 , ATP5G1, CASP10, CCD6C, CCL25, CD48, CDH4, CHDH, CSF3, CSNK1G1, CYP2 7A1, CYP2B6, DCXR, DHDDS, DNMT3B, DUSP10, FECH, FGF9, GRM1, HAO2, HMG CS1, HSPA1B, IFIH1, LAMC2, LRDD, MAP3K1, OR10AG1, PLOD1, PRKCE, SETM AR, SFRP1, SNAP25, TCF7L2, TRAF4, VEGFA, WASF2, WNT11, WNT2B, YES1, A TP6V1C1



Negative_13847	AK7, FAH, GHR, IL9, PLG, ACADM, ACTA2, ADAM17, AGPAT2, ATP5B, B3GAT3, BAIAP2, CCL20, CD58, CD72, CFTR, CHAT, CHRM1, CLCF1, CLDN1, CXCL16, CXXC4, CYFIP1, DDX47, DGKE, FCER1G, FDPS, FGFR1, FUT4, GLB1, GNAI3, GOSR2, GPD1, GSTO2, GUCY2C, HSD17B7, IDH3A, IL10RB, IL11RA, INHBB, IRS1, ITGAX, JAK2, KCNB1, LAMC2, LDHC, MAPK3, MCEE, NAGK, NFKBIB, NR1D1, NRG4, OR10H2, OR11H6, OR14J1, OR4K14, OR4S2, OR51B6, OR52I1, OR5T1, OR5V1, OR6C74, OR6K2, OR6N1, OR8J1, PAK7, PDXP, PLOD1, PPAT, PRKCD, PRKCI, PTGER3, RAC1, SELP, SETD8, SLC27A4, SMARCA2, SMC1B, SULT1E1, TAS2R14, TKTL1, TLN1, TMLHE, TNFSF9, UROD, WNT7A, HLA-DRB4
Negative_13848	TK2, ACHE, ACSM1, ADCY1, ALG12, ARHGEF1, ATF2, B3GAT3, B3GNT2, BACE1, CERK, CHPF, CLCF1, CLDN1, CLDN11, CMPK1, CREB1, CTSL1, CTTN, CXCL10, CXCL3, DDIT4, DHFR, DPYSL2, DRD1, DUSP14, EGLN3, ENAH, EP300, ERO1L, FGF11, FOXO1, GALM, GALNT2, GANAB, GNB3, GPD2, GSTM3, HTR5A, ICAM3, KCNB1, KDSR, LMO7, MINPP1, MKNK2, NMNAT3, OR10H5, OR1F1, OR52R1, OR5M8, OR6A2, PIGC, PIGL, PIGT, PLA2G2A, POLR1E, QARS, RASSF1, SLC33A1, STEAP3, STK11, STMN1, SUCLG2, ATP6V1G1
Negative_13849	AMH, GP6, HGD, ACHE, ACLY, ACTB, ADH1A, ADH1B, ADORA2B, ALDOB, ATN1, ATP5D, CSF2RA, CYP27A1, DDX56, DOCK1, EGLN1, EVI1, GDF7, GNRH1, GTSE1, HARS2, HSD17B7, HSD3B2, IARS2, IL25, IL4R, LFNG, MAGI2, MOV10L1, MRAS, MYL5, NCKAP1, NCR2, NFAT5, NFE2L2, NR1D1, OR13J1, OR5B12, PDGFD, PLA2G1B, POLD3, PRNP, PTPN7, QPRT, SCP2, SEPHS1, SMURF2, SPHK2, SUFU, SV2C, TACR1
Negative_13850	AK3, EBP, MPL, SI, SP1, TPO, TPR, TXK, TYR, AADAT, ABI2, ACOX3, ACTB, ACY1, ADH7, ALG10B, ANPEP, ARAF, ATP5L, AVPR1A, BAAT, CCR1, CD14, CNDP1, CNTF, CREB3L2, CSNK1G2, CYP2S1, DAAM1, DDX47, DPM2, DUSP9, FGF7, FGFFR3, FLT1, FOXA2, FUT1, FUT8, GLI1, GLS2, GNB1, HARS, HDAC2, IDH2, INHBE, IRAK4, LAMA4, LIPF, LTA4H, MAGI2, MAP4K1, MAP4K3, MS4A2, MYH14, NCF2, NCOR2, NKD1, OR10AD1, OR10H3, OR11G2, OR13C4, OR1L3, OR2B11, OR4C11, OR4C6, OR4K13, OR5A2, OR5AR1, OR7G1, OR8S1, P2RX4, PAPSS1, PDX1, PGK1, PGM2, POLE3, PPP1R1A, PPP2R5E, PRODH, PROS1, RPSA, RRAS2, SEMA3D, SGPP1, SMAD9, ST3GAL2, STX18, TACR2, TPH1, VASP, ZFYVE9, TNFRSF1A
Negative_13851	AGL, AMT, FYN, HYI, WAS, ACOX1, AHCYL1, ALDOC, ALOX15B, APPL1, ARG1, ARNT2, ARSB, BMP7, BNIP1, CALML5, CARD11, CASK, CCNB2, CD3E, CD58, CDC26, CDKN1C, CDKN2D, CLTCL1, CSF2RA, CYP2A13, CYP3A4, EFN2, ELK1, EXOC7, FABP4, FGF2, FZD7, GAD2, GALE, GALNTL4, GNA11, GRIA1, GSTZ1, HDAC1, IL1RAP, KIR2DL3, MASP2, MYH7B, NRXN3, NT5C3, OR1M1, OR1N2, OR2A12, OR2A4, OR2M2, OR4M2, OR5P2, OR5R1, PARD6A, PARS2, PCYT1B, PDE8B, PDGFRB, PHKA2, PIGS, PKM2, PLCB2, PLK1, PMAIP1, PRKAA1, PRPH, PSPH, SEMA3C, SKIV2L2, SKP2, SLC33A1, SUCLG2, TALDO1, TAS2R4, TAS2R60, TBL1XR1, TPH1, TUBA3E, XYL, ATP6V1G1, PPP1R12A, SERPINA5
Negative_13852	ADA, AUH, BAX, LCT, TNF, ABLIM1, ALOX12, ASAH1, ATP6V1A, BAAT, BCL10, C1GALT1, CASP8, CCL16, CCR9, CHIA, CLDN16, CREB5, CYP2D6, CYSLTR2, DMDH, DNMT1, DVL2, EFN2, EPHA4, EPHX1, F2RL2, FADD, FDFT1, FDPS, FTM, FZD2, GALNT1, GNA13, GPD1L, GRIA2, GTSE1, HEXA, IARS, IDI2, IL8RA, INPP4A, ITGB2, LEFTY1, MAN1C1, MAP3K2, MGAT2, NARS, NGEF, NRXN3, OR10AD1, OR13C5, OR2G3, OR2T29, OR4S2, OR6C2, OR7C2, P2RX2, PARVA, PDE4D, PDIA4, PFN4, PGM3, PITX2, PLA2G5, PLCG1, PMAIP1, POLR1E, PPP3R1, PPP5C, PRKAA1, PRKACA, PRKCG, PRLR, PTGS2, PTPRR, PVRL3, RENBP, RRM1, SOCS5, STX8, TBK1, TLN2, TP53I3, TUBA8, TUBB4Q, UCK2, WBSCR22, WHSC1, PAFAH1B2, TNFRSF11B

Negative_13853	AUH, CGN, HGF, SCD, SRC, SRM, TNN, ACVR2A, ADCY7, ALDH1B1, ALG2, ASPA, ATIC, B3GALT1, B3GALT6, BCAR1, CD79A, CFL1, COX15, DGUOK, DHCR7, DHR S3, DHRS4L2, DIAPH2, ENO3, ERO1L, F13A1, F2RL2, FGF6, FIGF, FLT3LG, F SHR, GNAI3, HADH, ICAM2, ICAM3, IDI2, IKBKE, IL11RA, ITPKA, KLRC1, L1 CAM, LAP3, MAT2B, MGAT1, MNX1, NANS, NME4, NRCAM, NT5C1B, NUDT12, OR1 3D1, OR1I1, OR2C3, OR4D6, OR52A1, OR52K1, OR5AK2, OR6K3, PIGW, PIK3C A, PIK3R3, PLCB2, PLXNA2, POLR3H, PRKCE, PRKCG, PRKCH, PSME3, PTPN6, RALGDS, RELB, SFRP4, SMPD2, STAM, STX1A, STX7, THY1, TNFSF11, TRAF4, TUBB2C, ULBP1, VDAC2
Negative_13854	AMT, DAO, LEP, NGF, AASS, ACLY, ACTC1, ANGPTL4, BCAT2, CACNA1C, CALML 3, CASP7, CCKBR, CD28, CNTN2, COL5A2, COQ5, CREB3L4, CSNK1G2, DHRS4L 2, DNMT1, DPYS, E2F5, EI24, ENTPD4, EREG, FGF7, FLAD1, GDF7, GGPS1, GR IN1, HHIP, HLA- C, IFNA10, IFT57, IGFBP3, IL17RB, IL23A, IRF3, LM07, MCCC2, MDH2, MMP 1, NFAT5, NFYA, OR10C1, OR10H4, OR10J1, OR13C8, OR4K14, OR4N2, OR4P4 , OR5AR1, OR5B17, OR7G1, P2RX2, PDGFA, PECAM1, PIGQ, PTPN11, QPRT, RI PK1, SC4MOL, SMAD3, SNAI1, SRD5A2, STAM, STAT2, STX16, TBXA2R, TBXAS 1, TPM3, ULBP3, XYLT2, YES1, ZBTB16, HSD17B10, PPP1R12A, TNFRSF10D, TNFRSF12A
Negative_13855	F12, GBA, IL5, KDR, PGF, ADRB3, ALOX5, ANAPC1, ARPC1B, ASAH1, ATF2, AT P5J2, ATP6AP1, BPNT1, C1QC, CCL1, CD244, CDKN2A, CNTF, CRB3, DMGDH, F ABP3, GGCX, HDAC2, HYAL2, IFNA16, ITGB8, LIPF, MAP4K2, MAT1A, MCM5, M YH13, MYH15, MYH8, NRXN3, ODC1, OR10AD1, OR2A5, OR2T8, OR51A2, OR52H 1, OR5AP2, OR7G3, PCYT2, PIK3CD, PLA1A, PLCG2, PPP1R1A, PRKCI, SCP2, SELPLG, SORBS1, SPRY1, STAT4, STX8, SUV39H2, TCIRG1, TP53I3, WARS2, YKT6, ZIC2, ATP6V1E2, HLA-DPBI, PRICKLE2
Negative_13856	CBS, CD2, EPO, GH1, JUP, LHB, RB1, AASDH, ABP1, ACO1, ACSM1, ADRB3, AMD 1, APOC3, ATP5E, B3GALT2, B3GNT4, CACNA1E, CCNG1, CD27, CDC14A, CHR D , COL4A1, COL6A1, DAXX, DTX1, ENTPD2, EPHB3, EPHB4, FADD, FADS2, FRAT 2, GALE, GNAL, GRIN1, HSD11B1, HTR2A, IDH3G, IFNA5, IL20RB, IL7R, IMP DH2, INPP5E, IRF5, LRP5, MAD2L2, MAP3K5, MGAT2, MMP14, MRAS, MYH9, NC F2, OR10G3, OR10H4, OR12D3, OR1B1, OR2M3, OR4C15, OR51T1, OR5R1, PAK 6, PDE2A, PECAM1, PIGF, PLOD1, POLR2H, PRDX6, PRSS3, PTPRC, PYCRL, RA LA, RFX5, RGS3, SEMA3E, TAS2R16, TBL1Y, TCIRG1, TDO2, TIAM2, TNFSF18 , TRIP10, VAV1, WNT3, YWHAH, MAPKAPK3
Negative_13857	BAX, C4B, F10, GLA, KHK, LAT, LHB, MET, MOS, MPI, ACO2, ACVR2B, ALDH1L1 , ANAPC11, ARG2, ARNT2, B4GALT3, BAI1, BIRC5, BPGM, CARD11, CASK, CBR 1, CCL14, CCL19, CD28, CD59, CD79A, CHAT, CNGA3, CTTN, CYP11B2, DBF4, ENAH, EPB41L1, EPHB3, EPOR, FDFT1, G6PC, GALNT12, GJA1, GMPR, HSD11B 2, HTR7, HYAL1, ITGAE, KIR2DL4, LALBA, LDHD, LIPF, MAP3K4, MYLK3, OR2 A42, OR2G2, OR2T8, OR3A1, OR6C3, OR6K2, OR8D4, OR8I2, PLA2G2F, PLCB4 , PPAR, PPM1A, PRKAB1, PRKAG3, PROS1, PTGES2, PTGS1, PVRL1, RPS6KA2 , RPS6KA5, SKP2, SNAP25, SUFU, VAMP2, XCL2, CSGALNACT2, HSD17B12, KI R2DL5A

Negative_13858	A2M, INS, ITK, MOS, PDC, TNN, UBC, ACLY, ACPT, ADORA2A, ADRB1, APRT, ARHGEF2, ARNT, ARSB, B3GALT4, BIRC2, BMP4, C9orf95, CACNB1, CD40, CDC27, CHUK, CISH, CLDN11, CLDN18, CMAS, CSF3R, CTTN, CXCL6, CYFIP1, CYP11B2, DAAM1, DDIT3, DUSP16, FADS2, FGF22, FLOT1, GAL3ST1, GAS1, GGCX, GLUD1, GNA14, GSTM2, HLA-DMA, HPRT1, HSP90B1, IL10RB, IL5RA, INSR, MAD2L2, MYH2, NADSYN1, NCR2, NCSTN, NEU4, NFYB, NRXN3, OR1A1, OR1J4, OR2K2, OR2T34, OR4C15, OR5C1, OR5L1, ORC6L, P2RX1, PDE6D, PGAM2, PI4KB, PIGO, PIK3CG, POLE3, PTCH2, PTK2B, RARS, RFX5, RUNX1T1, SHISA5, SLC27A1, ST3GAL3, TCIRG1, THBS4, TLN2, TUBB4, UAP1, UBA1, UGCGL2, WNT2B, WNT3, XCL2, ZFYVE9, ATP6V1B1, CACNA2D1
Negative_13859	ADA, AK7, F2, MVD, TK2, ABL2, ACLY, AGRP, AOX1, AREG, ATF2, ATP6VOB, ATP6VOC, COL11A1, CSH1, CXCR3, CYSLTR2, DAXX, DIAPH3, DLAT, DOLPP1, DUSP14, EGFR, FARS2, FUT4, GALNT1, GLO1, GLYCTK, GP1BB, GSTK1, GSTM2, HSPA1B, IL17A, KIR2DL4, LCMT2, MAD2L2, MYH6, NARS2, NCKAP1, NTNG1, OR2G6, OR2M4, OR4D11, OR5K2, PAK2, PAK4, PANK2, PDCD1, PEMT, PGAM2, PHKB, PHKG2, PIK3CA, PIP4K2C, PLXNC1, POLR3B, PPID, PPP2R5C, PSME3, PTGDS, PVRL3, RASGRP2, RBL1, SDHB, SETD7, SHMT2, STMN1, SYNJ2, TIAM2, TLN2, TSHR, UPRT, HSD17B10
Negative_13860	DBH, GPI, HAL, LEP, LHB, OTC, ACSL5, ACSM3, ACTG2, AK3L1, ATN1, BIRC3, CALML3, CHDH, CLCA4, CTBS, CTNNA2, CXCL12, CYP19A1, DCTD, DEGS2, DFFA, DGKG, DGKZ, E2F5, EFN2, ENO2, EPRS, FOXA3, FUT8, FZD1, FZD2, GALNT12, GFPT1, GNRH1, IFNA17, IFNA2, IGFBP3, IL17RB, INPP5A, LPAR1, LTA4H, MADCAM1, MAN2A1, MMP14, MYLK3, NAGLU, NGEF, NR4A1, OR12D3, OR1N1, OR2A42, OR2M7, OR2S2, OR4D2, OR52A1, OR6S1, OR6T1, OR7C1, PAK1, PANK2, PCK2, PER1, PFKP, POLR2C, PRSS1, PSME3, RASGRP4, SCLY, SPHK2, SUV39H2, TACR3, TGFB2, TUBA3E, VAV1, ALDH18A1, ATP6V1B2, CACNA2D1
Negative_13861	C4B, CD4, LSS, RPE, UBC, ACAD8, ADIPOR1, ADRB3, AFMID, AKR1B10, ALOX12, ARRB2, AXIN2, CASP9, CCL28, CD82, CDC7, CHRNA7, CLDN22, CXCL13, CXCR4, DCXR, DUSP9, ENPP1, FASLG, FECH, FTMT, GCLC, GCNT4, GJD2, GPX7, GRAP2, HNF1B, HSPB1, IFIH1, IL10, IL10RB, IL20RB, IL23R, IMPDH2, KLRC1, KRAS, MAP3K14, MAP4K3, MOV10L1, MPDZ, NADSYN1, NANP, NCKAP1, OR13F1, OR2AG1, OR2T3, OR4X2, OR5L1, OR8S1, OR8U1, OR9Q2, P2RX2, PDE5A, PHKG2, PLA2G2D, PLCB3, PNPO, POLE3, PPA1, PPP1R3C, PPP2CA, PRNP, PTCH2, PTGES, RAP1B, RARS2, RCHY1, RPN2, RUNX1, SARDH, SDHA, SELPLG, SKIV2L2, SPTAN1, SRGAP1, ST6GAL1, TAS1R3, THBS3, TRIP10, TYMS, VAMP4, XYLT1, ATP6V1C1, ATP6V1C2, HSP90AB1
Negative_13862	OAT, PLG, ADAM10, ADH6, AHCY, AKR1A1, ALDH3B2, ALG2, CADM3, CAV2, CCD6, CX3CL1, DIAPH1, DLL4, DTX2, DUSP5, FCGR3B, FGD1, FGF2, FUT4, GALNT7, GDE1, GZMB, HNMT, IRAK1, MAPK14, MCCC2, MOV10L1, NCF1, NFKBIE, NRXN1, OR10H4, OR10J1, OR13J1, OR1D5, OR4L1, OR6M1, OR6Y1, PANK4, PDGFA, PDHA2, PIGP, PIK3C2A, PLA1A, POLR2G, PRKCZ, PRKY, RDH12, RPN2, SCLY, SNAI1, SPRY1, STX1A, STX4, TACR3, TAP1, TAS2R60, TGFB3, TP73, TRAF2, VAV2, YWHAG, HLA-DQB1, HLA-DRB4, TNFRSF10A

Negative_13863	FUK, HAL, HYI, NPY, TYR, AARS, ACADSB, ACSS3, ADCY7, ADSL, AHCYL2, ALD H7A1, AMPD1, AQP7, BCAT1, BCL10, CALML6, CARD11, CCNE1, CDKN2C, CLDN 7, CSNK1D, CXCL3, CXCL9, CYP26A1, CYP3A43, DDX50, DPYD, EFNA1, ENPP2 , ESAM, FBP1, FMO1, GALK1, GALNT7, GNA15, GNPDA2, GP1BA, GPX7, GSTK1, GSTP1, HAGH, KIR2DS4, KRAS, LAMC2, LDHAL6A, LIMK1, MAN2A1, MTFMT, NC K2, NEFM, NFX1, NFYC, NPR2, NR1D1, NTRK1, ODC1, OR10H1, OR51E1, OR52B 4, OR52W1, OR5AK2, OR7D2, OR7G1, OSMR, PARD6A, PIGS, PIK3CD, PLA2G5, PNPO, POLR2D, POLR2H, PORCN, PPAP2A, PPARA, PPAT, PRKCH, PROC, PTCH1 , PTPRC, RAPGEF3, SELP, SEMA3C, SETMAR, SMURF2, SSH1, TAS2R50, TGFB1 , TSC1, UGT2B4, UGT8, VAMP2, WNT8A, XYLB, ZMAT3, CSGALNACT2, HLA- DPB1
Negative_13864	ABO, BAD, CR1, IL2, LHB, LTB, PLG, SMS, ADSSL1, AGMAT, ALG10, ALG10B, A MHR2, ANPEP, ARPC3, ARPC5, ATP5F1, ATP5L, B3GAT2, B4GALT7, BDNF, BET 1L, BHMT, CACNG1, CAPN2, CASP7, CD70, CDK5, CHSY3, CLDN8, CLTC, CTBS, CYP2C19, CYP2C8, CYP2J2, CYP3A7, DDX52, DDX56, E2F5, EARS2, ECSIT, F UT6, FZD3, GALNT13, GFPT2, GRIA2, GSTM1, GUCA1A, ICAM2, IFNA10, IQGA P2, ITGAM, JUND, KAT2A, LEFTY1, LIAS, LRAT, OR10P1, OR2A12, OR2B2, OR 2B6, OR2G3, OR2T34, OR4F17, OR7G3, OR8H1, OXTR, PDE4A, PFKFB1, PLCD1 , PPARA, PPARG, PPCS, PPP5C, PROS1, RAP1A, RPN2, RPS6, RRM2B, SETD2, S MAD3, SPHK1, SPTAN1, SULT1E1, SYNJ2, THBS4, TOLLIP, TSC1, USE1, WNT1 1, WNT4, XCR1, XYLT1, ZNRD1, AASDHPPT, TNFRSF12A
Negative_13865	A2M, AR, CAD, CDA, CRH, LYN, SMS, ACSS1, ANAPC5, APC2, APH1A, ARAF, ASR GL1, ATP4A, ATP5F1, BET1, C1QC, CACNA1D, CAMK2B, CAV2, CCL3, CCL4, CC L8, CDK6, CLDN16, CLDN18, CSNK2A2, CYP2B6, DAXX, DUSP3, EPB41L2, GAD 1, HAAO, HLCS, HTR2C, ICAM1, IL18R1, INPPL1, JAK1, KDSR, KIR2DL3, KLR D1, LRP6, MAN1C1, MARS2, MCM7, MGAT3, MTAP, MYLK, NEFH, NOD1, OR10A7, OR52E4, OR52E8, OR7A17, PARD6B, PDE8B, PEMT, PIK3R2, PLCD1, POLR1C, PRKCH, RAP1B, RERE, SETMAR, SMAD4, SRGAP2, STAT5B, SV2A, TAS1R3, TNF RSF4, TRAF6, UNC5B, WIF1, TNFRSF18
Negative_13866	AMH, FER, GP5, LPO, PGP, A4GALT, ALDH1A2, ALPI, ALS2, AMDHD2, ARSA, AT P5F1, BACE2, BDKRB2, CACNA1H, CASP8, CAV3, CD46, CMBL, CMPK2, CREB3L 1, CXCL10, CXCL13, CXCL6, CXXC4, CYP1A2, CYP4A11, DEGS2, DERA, ENO1, ETNK1, GLUD1, GNAI3, GPAA1, GRLF1, GSTA1, GUCY2C, HAGH, HAGHL, HMBS, HMOX2, HNMT, ICAM2, IL17A, IL1A, ITPKB, KIR3DL2, KLRC4, KLRK1, LDHB, MAP3K13, MEF2C, MMP9, NCOR1, NEFM, NTNG1, OR10V1, OR12D3, OR13C8, OR 13G1, OR2A4, OR2T2, OR52N2, OR8D4, PDE7B, PDGFB, PLTP, PPA1, PPP1CA, PPP1CB, PRKAG2, PTGIS, RASGRP2, RHOA, SMPD3, SOD1, TAS2R16, UCKL1, U GT2A1, VAV3, ZIC2
Negative_13867	AMH, EDA, RB1, TPO, VTN, XDH, ABLIM3, ADH5, AHCY, AHCYL1, ALCAM, ALG8, ALPL, APH1A, ATP5G1, BMPR1A, BUB1B, CACNA1E, CACNG5, CAV2, CCR2, CDC 25C, CERK, CHST11, COL2A1, COL6A2, CPT1A, CYP2A13, CYP2A7, DDIT4, DE GS2, ERBB2, EREG, FPGT, G6PC, GBE1, GMPS, GNB3, GSTM2, GSTM5, IARS2, I L10, IL17B, LFNG, LRP6, LTB4R2, MGST1, MTHFS, MYH2, NCF1, NEU2, NFYB, NRXN1, NT5C, OR10G4, OR10H5, OR11H6, OR1D5, OR2AE1, OR2T1, OR4F15, O R4P4, OR51B4, OR51M1, OR56A1, OR5A1, OR5A2, OR6F1, OR6N1, OR6S1, OR6 X1, OR8S1, ORC3L, P2RX6, PAPSS2, PHKB, POLR1C, PPP2R1B, PRKCZ, PTPMT 1, PTPRJ, RDH10, SDHC, SFRP1, SOCS7, ST8SIA1, STK3, TAS2R9, TFPI, TNF RSF4, TRAF3, UGT1A10, ULBP2, YOD1, PNLIPRP2, SERPINB5
Negative_13868	NOG, PLG, TEC, ACAT1, ALDOA, ARHGEF1, ARR1, BMP5, BMP8B, CACNA1C, CA SK, CASP7, CERK, CHRM3, CYP2C18, CYP3A4, DLL4, DOLPP1, EI24, ENTPD4, EPHB2, GALNT3, GARS, GDF5, GNAT3, GP1BA, GUCY1A3, GUCY2F, IFNA6, IL1 0, ITGA8, LIPE, MAPK3, MDM4, MTFMT, NFX1, NTF4, OR2C3, OR51A4, OR8I2, P2RX5, PKM2, PLA2G2D, PLCZ1, POLR2E, PPP1R3C, SMAD6, SOS1, TCF7L1, T PMT, VEGFC, SERPINB5, ST6GALNAC1

Negative_13869	DDC, MTR, OSM, ACADL, ACSS3, ADRBK2, AKR1B1, ALG13, ARNT2, B4GALT2, B AAT, CD3E, CHSY3, CLDN11, CRKL, CSF1R, DAD1, DGKA, ENPP7, EVI1, FGFR4 , GALNT8, GGT1, GUCA1B, HSD3B1, IFT57, IKBKB, INPP4B, IRF5, LRP5, LTB 4R2, MAP4K1, MAT1A, MINPP1, NOTCH3, OR11L1, OR2A14, OR56A1, OR5AK2, OR6B2, OR9I1, PDE4A, PLA1A, POLE2, POLR1E, POMC, PRKCD, PTGES2, ROCK 1, RPN1, SETDB1, SULT1A1, TAS2R7, TP73, UROD, WNT9A, GABARAPL2
Negative_13870	DAO, FES, ID2, ITK, LPL, NNT, ACADVL, ACOX2, ACP5, AKR1B10, ALAS1, APB B1, APOE, ARHGEF7, ASNS, ATP2A2, ATP6V1D, B4GALT1, BNIP1, BPGM, CBR1 , CBR3, CCL8, CCND2, CCNE1, CD22, CDK4, CLDN4, CLDN6, COMP, COX10, CRY 2, CSNK1D, DERL1, DIAPH3, EFNA5, ENTPD4, EPAS1, FBXW11, FUT7, GABARA P, GMPPB, GSTA4, GSTA5, GUCY1A2, HARS, HLA-C, HLA- DOB, HNMT, ICAM2, IL6ST, KIR3DL3, KRAS, LAMC2, MALT1, MAP4K2, MCCC1, MDM2, MGAT4B, MGAT5B, NUDT2, OR10A7, OR10G3, OR10P1, OR1C1, OR1J2, O R1S2, OR2A12, OR3A3, OR6C2, OR6C70, OR7G3, PARD3, PDE11A, PIGM, PIP5 K1A, PLK1, PRKAG2, PRKCD, PRKCG, PRODH, PSME3, PTCH1, PTPRB, RAF1, RA P1A, RASGRP2, SEMA3B, SSH3, TFPI, TICAM1, TSC1, UROC1, VNN1, WARS2, Y WHAQ, PHOSPHO1, SUV420H2, TNFRSF10D
Negative_13871	AR, GP5, LPO, PVR, SCD, SHH, ARSE, BPGM, CARS2, CBLB, CCNA1, CCNB3, CD7 9B, CD80, CHPF, CLTCL1, CYFIP2, EPHA8, GAS1, GPT2, GUCA1A, GUCY1A2, G UCY2C, HSD3B2, IL15RA, IL21R, ITGB4, LIPG, MAML1, NCR1, NFAT5, OR2A2 5, OR2B6, OR2D3, OR52E2, OR6C74, OR7D4, ORC4L, PAICS, PLA2G2E, PMVK, POLE3, PRLR, PTPRF, RFXANK, RUNX1T1, SETD1B, SLC25A6, SNW1, SULT1E1 , TM7SF2, TNFSF18, TRAF1, TSC2, UBA7, MAPK8IP2, PDCD1LG2
Negative_13872	GLS, ILK, ME1, OTC, ACHE, AKR1D1, ARAF, CBLC, CCL20, CCNB2, CDC16, CDC 20, CDC7, CRKL, CXCL13, CXCL9, CYP3A4, DUSP14, DUSP2, ENO3, ENTPD4, E PHA5, EVI1, EXOC7, FARP2, FZD8, GFAP, GJD2, GNA12, GNG13, GRIN1, GRLF 1, GUCY2D, HARS, HDAC1, HIF1A, HPSE, HSD3B2, ICAM2, IDH2, IGF1, IKBKE , IL12RB1, IL17RB, IRF5, LIAS, MAD2L2, MPDZ, OR1J2, OR2D2, OR4C6, OR5 D18, OR7A10, OR7C1, PIAS1, PLEKHA8, PLTP, PPP1R3C, PPP3CB, PTTG1, RA SA2, SNAP23, SNAP25, SOD1, STX18, SULT2B1, SV2B, TACR1, TNFSF11, TUB B4, UAP1, UGT2B10, UROC1, WWP2, ATP6V1C2, PAFAH1B1
Negative_13873	EPO, EZR, AGTR1, AOC2, ARHGAP5, B3GNT2, BAAT, BDKRB2, CACNA1D, CCL20 , CHR1, CHRM2, CHST12, CLCA2, DGKA, DGKG, DLL1, DLST, ENTPD5, EVI1, FG F10, FMO2, GALNT12, GATM, GGT7, GPT2, GSTZ1, IL24, ITGA2B, ITPKB, JAK 1, KIR3DL3, KYNU, LEF1, MAOA, MAPK7, MAT1A, MIOX, MNX1, MYH10, MYLK3, NUMBL, OR2A2, OR2T2, OR3A2, OR5AR1, OR7C2, PCNA, PFAS, PIM2, PISD, PM AIP1, PNPT1, POLD2, POLR2F, PPARG, PPCS, PRIM2, PRKAR1A, PRKAR2B, PR OS1, PRSS2, RRAS2, SEMA3E, SFRP1, SHMT2, SPCS3, SUOX, TSC1, TSC2, TSH B, TUBB, TXNDC12, VAMP3, WNT1, YWHAH, MAP3K7IP1
Negative_13874	CAD, CD4, DDO, GSN, NOG, PLN, SI, SYK, AADAT, ACACA, AKR1B10, ALDOA, AN APC2, ANAPC4, AQP7, B3GALT2, B4GALT6, CARS, CD19, CD46, CD58, CHRM3, CLCA4, CLDN11, CPT1C, CRY1, CYP2A13, DDX19A, DHFR, DUSP10, DUSP4, FA BP3, FGF12, FZD5, GALNT11, GALT, GAS1, GMPR, GNPAT, HARS2, HLA- DMA, HSD17B7, IFNB1, IL6ST, INHBA, IRAK4, LAMB2, MCEE, MGST2, NLGN3, NRAS, NT5C1A, OR14A16, OR1L8, OR2L2, OR51F1, OR6B3, OR6Y1, OR8I2, OR 8K1, P2RX5, PDCD1, PDE7B, PGAM2, POLR2H, PRPS2, PSME2, PSME3, RAD51, RASGRP2, RASGRP4, RDH16, SMAD1, SOS1, SRGAP2, TLR9, TNFSF18, TUBAL3

Negative_13875	ADC, BTB, CBS, CFD, GK, IVD, SMO, ACOX2, ACTB, ADRBK2, ALDH6A1, ALG5, A MPD1, ATF2, B3GALT1, B3GAT2, BCL2L1, C1QC, C7orf16, CARS, CCL22, CDK N2A, COL11A1, CTSB, CTSG, DRD1, DUSP4, EI24, EIF4E, EPHB6, EPHX2, EXT 2, FGF7, FUT2, GUCY1A3, GUCY2D, HSD11B1, HSD17B1, ICAM3, IL23A, JAK2 , KLRC3, LIPE, MAPK13, MCM7, MDM4, METTL6, MGAT2, MYH8, MYLK, NFAT5, N R1D1, NT5C1A, OR10G2, OR10X1, OR1J4, OR2A2, OR5K1, OR6Y1, OR7A17, P2 RX1, P2RX4, PARVB, PDE4B, PDE7A, PHKG1, PRKAA1, PRSS2, SLC27A1, SLC2 A4, SPAM1, TALD01, TAS2R13, TLR9, MAPKAPK5, ST6GALNAC3
Negative_13876	CBL, DBT, DCN, HK1, MVK, NNT, ABLIM2, ACAA2, ACADSB, AGXT, APLP1, BACE 2, CCL25, CD58, CDC45L, CDH2, CDH5, CES2, CKMT2, COL5A1, CSNK1E, DGKH , DUSP5, DUSP7, EPHA7, FGF18, FGF9, GALNT2, GALNT5, GDE1, GPLD1, HAO1 , HEMK1, HMOX1, HSD17B7, IL2RA, INPP5A, ITPKB, LLGL1, LYZL1, MALT1, M AN1A1, MAPK10, MMP1, MMP14, NCOA4, NOS3, NT5C1B, OR10C1, OR10T2, OR2 A2, OR4A16, OR5L2, P2RX3, PAICS, PFKFB1, PGAM4, PLXNC1, PNLIP, POLR3 H, PON1, PPP2R1A, PPP2R5C, PPT1, PRPS1, PSME1, PTCRA, SETD1B, SH2D1B , SLC27A1, STAT4, TAS1R2, TGFBR2, THY1, TNFSF4, TRAF5, TRDMT1, TYRP1 , MAPK8IP3
Negative_13877	A2M, AK3, AK7, BID, BTB, C4B, CD6, LCK, PLN, ABCC8, ACAA2, AHCYL1, ALOX 15, AMHR2, ATP5E, BCMO1, BRAF, CAMK4, CBR3, CCL14, CD40LG, CD74, CDKN 1B, CLCA2, CLDN14, CNGA4, CPT2, CREB1, CYP8B1, DRD5, FGF11, GCNT2, GJ D2, GLUL, GMPS, GSTA3, HSD17B3, IRF3, ITGAX, LIPF, MDM2, MNX1, MTMR6, NFKB1, OR10S1, OR10Z1, OR13C8, OR2W1, OR52N2, OR5F1, OR6C2, PAK7, PA NK2, PCCB, PDE3B, PDK1, PIAS3, PLOD3, PPA2, PRKAB2, PRKAG1, PTGES, RP E65, SKP2, SPRY2, STX2, TBXA2R, TPH2, SUV420H2
Negative_13878	CGA, DUT, FH, OGT, ADCY6, ALDH3B2, ALOX12, ATG7, B3GNT4, BCMO1, CACNB 1, CCL1, CD244, CD48, CD8A, CDK6, CNTFR, CREB5, CSF2RA, ENTPD1, ENTPD 4, ENTPD8, ERBB3, F13A1, FZD10, GPX7, GRIA1, GRM5, GSTM1, HADHB, IFNA 13, IFNW1, IL28B, IL5RA, MAP3K14, MAPK10, MAPK3, MMP2, NFYC, NRXN3, N TF3, OR4F5, OR4S2, OR52K2, OR5H6, OR9G4, PDE3A, PDK1, PIK3R5, POLD4, PPAT, PRKAA2, PROS1, PRSS2, RPS6KA2, RUNX1, SETD2, SMPD3, SNAI2, SPC S3, SSH1, STAT2, UCK2, B4GALNT1, TNFRSF12A
Negative_13879	AK5, ASL, F10, MPI, NLK, TFG, TXK, ADIPOR2, ALDH5A1, AMPD3, ATP5H, CAC NA1E, CAV3, CKMT2, CLDN16, CNGB1, CYP2S1, DGKA, DGKZ, DNMT3L, ETS1, F ARP2, FGF12, FLT4, FMO4, FZR1, GNA12, GRIA2, HTR2A, IL12B, ITGB8, JAG 1, JAG2, KAT2A, KLKB1, KLRC4, L1CAM, LAMB3, LIMK2, LTA4H, MAPT, MYLK2 , NEU2, NOX3, NR4A1, OGDH, OR10H4, OR13C4, OR13G1, OR1K1, OR52N2, OR9 Q2, P2RX4, PIK3C3, PLA2G1B, PLCD1, PLCG1, PLIN, PPP5C, PRKG1, PTK2B, RPS6KA5, SDC1, SEMA3D, SRGAP1, SSH3, SV2C, TNFSF11, UGP2, EIF4EBP1, SERPING1
Negative_13880	C1S, DBI, DCC, LHB, LTB, PLN, STS, ACSS2, ACYP2, AMPD2, BDH2, C3orf10, C9orf95, CDKN1A, CHRM3, CREB3, DIAPH1, EHMT2, EPHA4, F13B, FGF22, FG F8, FGF9, FLAD1, GABARAP, GGT7, GUK1, HCLS1, HSPB1, IRAK2, ITGA10, KN G1, LLGL2, MAP3K11, MAPK1, MDH2, MGAM, MKNK1, NADSYN1, NCKAP1, NEFH, NUDT9, OR13C5, OR4F5, OR4F6, OR4K15, OR52E8, OR5D16, OXCT2, P2RX6, P IGL, PLXNA3, PLXNC1, POLR2K, PRKX, PTPN1, RAC3, RAPGEF1, RARS2, RPIA , SESN2, SLIT1, SMAD2, SRD5A2, ST3GAL2, TAS1R2, UBE2L3, HLA-DPB1
Negative_13881	C8B, CDA, CEL, F2R, NPY, ACAA2, ALG11, AOX1, ATIC, ATN1, B4GALT2, B4GA LT5, BCL10, CASK, CHST12, CTNNA3, DGKE, DTYMK, EGLN1, ELK4, FGFR3, GM DS, GNA12, GPLD1, HSD17B8, IGFBP3, IL6R, IL7R, IMPDH2, IRF5, ITPKB, K LRC2, LIPT1, LRDD, MAN1A2, MAOA, MIOX, NAGA, NCOA4, NKX6- 1, NLGN3, NUDT9, OR2G3, OR5M3, OR6A2, OR6B2, PCYT1A, PLCB3, PLD1, PLE KHA8, PMVK, POLR1D, PPP1R1A, PTTG1, RAPGEF2, RASSF1, SPCS3, ST3GAL5 , SV2B, TNFSF4, TP53, UGT2B28, ULBP2, YOD1, B4GALNT1

Negative_13882	C6, HAL, AC01, AC02, AHCYL1, ANGPTL4, ATP2A3, B4GALT7, CAV1, CDS1, CFL1, CNTNAP1, CTF1, CYP1B1, DKK2, DPYD, EDAR, EFNA1, EPB41, FGF21, FGF4, FOXA3, GADD45G, GALNT13, GANAB, GCAT, GMPR2, GSTM3, HLA-C, HTR7, IQGAP3, ITPKA, LCMT1, LEFTY2, MAN1B1, MAT1A, MCM3, MYD88, MYL9, NEGR1, NKX2-2, OR10T2, PDE11A, PDHA1, POLR1E, PPM1D, PROS1, PSAT1, PTPRC, SETD1B, SYNJ1, THBS1, UGT2B10, UNC5A
Negative_13883	CR1, DHH, FAS, HYI, ITK, JUN, LYN, NLK, RET, SPN, TH, TKT, ACSL5, ADSS, AK3L1, AKR1B10, ALG5, ARNTL, ARPC4, ATP4B, ATP5F1, B3GALT1, BCMO1, CAMKK2, CCL7, CCNB3, CD22, CHAT, CNTN1, CXCL13, DAPK1, DHRS9, DPYSL2, DRD2, ENO1, EPB41L3, FUT9, FZD10, GGPS1, GNA11, GNAZ, GOT1, HNF4A, ICA M1, IL12A, IL22RA2, IRAK3, IRF5, IRF9, KAT2A, KIR3DL2, LAMB4, LCAT, MAP2K1, MCM6, MPZL1, NEGR1, NLGN2, NRG3, NT5C1A, OCLN, OR10A5, OR11I1, OR2C1, OR2D3, OR2F2, OR2T4, OR2T6, OR4C6, OR4K5, OR51M1, OR52B4, OR9A2, ORC1L, PAICS, PER1, PIAS2, PIK3R1, PKMYT1, PLCD1, PLXNB1, PPBP, PPM1D, PPP1R3B, PRKAB2, PSPH, RALBP1, SEMA3B, SLC12A2, SMPD2, SRGAP2, SUOX, TNFSF4, UCK2, UGCG, PPP1R12A, TNFRSF13C
Negative_13884	AK3, ASL, C7, CTH, FAS, FGG, FN1, GSS, NF1, ACTB, ACVR2B, ADH4, ADH6, ANAPC11, APH1A, APOC3, ASAH1, ASS1, BET1, BMP8B, BUB3, CAPN2, CD80, COL1A2, COL5A2, CSNK2A2, DGKA, FABP3, FCGR3A, FCGR3B, FLT3LG, FUT7, GPD1, IL11RA, IL15, ITGA10, KAT2A, KLK3, LCMT2, LRRC4C, MARS, MARS2, MCM3, MGAT1, MGST3, MPP5, MYH14, MYH6, NADK, NFKB2, NODAL, NR1D1, NSD1, OR10G3, OR1A2, OR2C3, OR2W1, OR51A2, OR52E8, OR52I2, OR7A5, OR8I2, OR8K3, P2RX3, PARVA, PLCB1, PPP3R1, PRKCZ, PSAT1, SESN2, SLC27A4, SMPD2, SORBS1, TALDO1, TAS2R10, THBD, TPH1, TPI1, XYLB, B4GALNT1, CACNA2D3, CSNK1A1L, MAPK8IP1, TNFSF13B
Negative_13885	ADK, AK3, C6, CBS, MIF, MPI, SRC, TNR, ABAT, ACADM, ACOX3, ADH1A, AGRP, ALDH1A2, ALDH5A1, BAAT, BCAT1, BNIP1, C1QA, C1QB, CADM3, CHKA, CIITA, CLDN14, CLDN16, COL3A1, CTNNA2, CXCR3, CYFIP2, DEGS1, DHRS4L2, ECSIT, F13A1, F2RL2, FUT5, FZD3, GGCX, GMPS, GNAI1, GNAT3, GSTM5, GSTZ1, HTR4, IFNGR2, IL17A, IL17B, IL8RA, INHBA, LDHD, MAPK13, MARS, MAT1A, MGAT5B, MTHFD1, MYH7B, MYL2, NCK1, NR4A1, NT5C1B, OR10Q1, OR3A3, OR4K2, OR52L1, OR5P2, OR7D2, OR8H1, PCCB, PDHA1, PIAS4, PIGA, PIP4K2B, PRKAB1, PRKAG1, PRKCB, SDC1, SLC27A5, SMAD9, SOAT2, SOCS2, SOCS4, SRD5A1, STAM, SULT2A1, TAS2R50, TAS2R7, TOMM40, TRAF2, TRIP10, WNT1, WWP2, PLA2G12B
Negative_13886	CEL, HDC, IVD, SP1, VTN, ADCY3, ADH4, AGPAT1, ALDH3A2, ALDH4A1, B4GALT1, CCR5, CDC2, CHEK2, COL1A2, DDOST, DFFB, DNMT3B, DPM2, ENO2, EXOC7, FLOT2, FRAP1, GMPR, GNA11, HIP1, HMOX1, HNF1A, ITGB3, ITPK1, LRRC4C, MAGI3, MCEE, MYL2, OR5K1, OR5M8, OR6Y1, OR8U1, PDX1, PGK1, PLA2G2E, POLR3D, PPARG, PTPRC, SEMA4G, SFRP2, SLC9A1, SOD1, SRGAP2, STAT1, STAT2, SULT1A4, TALDO1, TCF7L1, TGFA, TGFBR2, TSC1, UGCGL1, WBSCR22, ATP6V1C2, GABARAPL2, HSP90AA1
Negative_13887	CAT, F8, OSM, TPR, ACTN4, ADAM10, AGTR1, ALOX12, BMP6, CASK, CCKAR, CD40LG, CLTA, ENO3, EPHB3, EPHB4, FABP1, FGF13, GALNT3, GNA14, HAO1, HPSE, HSD17B3, IDI1, IL13RA1, IRAK4, NCOR2, NMNAT2, OR1C1, OR1Q1, OR2A4, OR2AG2, OR56B4, OR8D1, PAK3, PARD3, PARVA, PGK1, PRKCQ, PRPH2, PRSS1, PYCRL, TACR2, TACR3, TLR3, TUBA1B, TXNDC12, UNC5C, VEGFB, WASF2, YWHAE, ATP6V1E1, MAPKAPK5, PPARGC1A

Negative_13888	C4B, C7, CRH, GH1, ACSM4, ADCY6, ADH1B, ADH6, ADRB2, ATN1, ATP2A3, ATP6AP1, B4GALT3, BDKRB2, BMP8A, CACNG2, CACNG7, CASK, CCL19, CDK2, CDKN1B, CLCA2, CMPK1, CXCL3, DGUOK, DTX3, DUSP10, EPHB1, EXTL3, FARS2, FBP2, FGF12, G6PD, GALNT10, GGT5, GJA1, GNA14, GNAI1, GNAO1, GNAT3, GP2, GRIN2B, GUSB, HIBADH, IBSP, IL12RB1, IL13RA2, JAG1, JUND, LALBA, LAMB1, LCMT2, MAP3K4, MDH1, MGST3, MTMR1, MYL2, NCOA4, NRXN1, OR10G3, OR10X1, OR2T2, OR4F6, OR4K13, OR51B6, OR51G1, OR5B17, OR7A5, OXCT2, P2RX1, PDE1B, PKMYT1, POMC, PRSS2, RBPJL, RPN2, STAM2, STX6, SYNJ2, TAS2R41, THY1, TNFSF8, TUBAL3, UGCGL1, ULBP3, ULK3, UNC5C, KIR2DL5A
Negative_13889	CFH, DDC, EBP, F5, KHK, MUT, NOG, ADSS, ARG1, ARHGEF1, ARHGEF2, CCR10, CD14, CDS1, CFL2, CNGA3, COL2A1, CSF1, CSNK1G2, CTNNA2, CTNNB1, CTNND1, CYP19A1, DCTD, DDHD1, DGUOK, ENPP3, ENTPD4, EPRS, FGF11, FGFR1, FLT1, FMO1, GBGT1, HMGCL, HPSE, IDI1, IL1R2, IL21R, KDSR, LEF1, MAFA, MAP3K6, MAP4K2, MASP1, MYH4, MYL5, MYLK3, NCKAP1L, OR2A12, OR2A5, OR2L2, OR2M3, OR51D1, OR5H6, OR5M3, OR6A2, OR6C74, OR6F1, OR9A2, PANK1, PARD3, PARD6A, PERP, PFN2, PGAP1, PHKG2, PIGH, PIGQ, PIP5K1A, POLR2C, PPP2R1B, PTPN7, PTPRC, RAC3, RDH16, RPRM, RPS6KA2, SDC4, SENP2, SMPD3, SPHK2, STAT5B, TAP1, TAS2R10, TKTL2, TM7SF2, TOMM40, VDAC3, VNN1, WNT7B, ZBTB16, PAFAH1B3
Negative_13890	OTC, AKR1C1, ALDH3A2, ALG9, AOX1, APOA2, ATP5G1, B4GALT6, BDNF, CACNA1I, CCR10, CISH, CPT1C, CTBP2, CXCL2, CYP1A2, CYP3A5, DDX56, EGLN1, GADD45G, GALNS, GRB2, IL10, LRAT, LRP5, MARS, NAGK, NAT6, NODAL, OR12D3, OR2B2, OR4K13, OR56B4, OR7C2, OR9G1, PAK7, PDE3A, PGM2, PIAS1, PLA1A, PLD1, PPP2CA, PPP2R2D, PRKACB, RFXAP, RRAS2, SCD5, SDHD, SLIT1, SPI1, SUCLG1, TACR3, TFPI, TUBB6, WNT10A, XYLB, YWHAH
Negative_13891	AR, DBH, EPO, F11, OAT, PLG, SRM, STS, ACSL1, ADRA1B, ALDH3A1, B3GALT6, B3GNT4, C3AR1, CARS, CHEK2, CLTA, ECSIT, EPHA3, FMO5, FOXA2, HEMK1, IFNA14, IL13RA2, KIR3DL2, MAFA, MAPK13, MPZL1, OLAH, ONECUT1, OR4C46, OR4S1, OR4S2, OR5T3, OR7A10, OR8B12, OR8J3, OR8K1, PIGC, PLIN, PMM1, PON3, PRKAR2A, PRLR, RPIA, SEMA3G, ST8SIA1, STX16, STX18, TALDO1, TAP2, TAS2R8, TCF7L1, TUBB4, WEE1, CACNA2D4
Negative_13892	AK7, EDA, GHR, GPI, ID1, MYC, ABLIM2, ACVR1B, ADCY9, AGMAT, ALDOC, ALPI, ALS2, ANAPC7, ANPEP, APPL1, ATP6V0B, C1QB, CCL24, CD22, CD34, CD70, CD79A, CDS1, CLDN16, CLDN17, COMP, CREBBP, CYP1A1, CYP26B1, DDX54, DGUOK, DHDH, DVL2, EP300, EPB41L3, EPHB1, ETNK2, FABP4, FZD7, GANAB, GNAQ, GNPDA2, GSTO1, GYS2, IFNAR1, IMPA2, IMPDH1, ITGA5, ITGA6, JUND, LYPLA1, MAPK11, MKNK2, MYL5, NCR2, NME7, NTF3, NUDT12, OLAH, OR10H2, OR13H1, OR1I1, OR4D6, OR52L1, OR5A2, OR5D14, OR6M1, OR7A10, OR8I2, PDGFRA, PGK1, PIGW, PLD1, PMM1, POLR3B, QPRT, RALGDS, RAPGEF1, RARA, SCIN, SDC2, SELE, SGPP2, SPRY2, TAS1R2, TAS2R5, TNFSF9, UCP1, UPP2, CSNK1A1L, GABARAPL1, HSP90AA1, TNFSF13B
Negative_13893	BTK, CD6, GK, HDC, HGD, PGF, RB1, ADIPOR2, ALG12, ATF4, ATP13A2, CASP3, CAV1, CCNB3, CD79B, CDH3, CLTCL1, COQ3, CPT1C, CRLF2, CXCR4, CYP4F2, DDX23, FCGR3B, FSHR, GALNT13, GNA14, GNAT3, GSTA5, HAGHL, HMGCS2, HSD11B2, IDH2, IFNGR1, IGF1R, IL13RA1, INPP5A, ITGB8, KYNU, LIPE, MAD2L1, MAML2, MAN1B1, MAN1C1, MAP4K1, MAPK9, MCAT, MGST1, MMP2, MTMR1, MYH7, MYL2, NME4, NPR1, NRG4, NRXN1, OR4D9, OR4P4, OR51T1, OR52B6, OR6K2, PDHA2, PGAP1, PIGO, PIGP, PPM1D, PPP1R3B, PPP2CB, PRKAG1, PRKCD, PSME2, PTPRM, QPRT, RASGRP2, SELP, SGMS2, SHC4, SV2C, TAS2R60, TRAF4, UROS, WASF1, YARS2, PPP1R12A, SUV420H2



Negative_13894	ID3, NPL, PC, ACSM4, AGRP, ANGPTL4, AOX1, ARPC1B, ARRB1, B3GAT1, BAI1, BTRC, CAMK2G, CCL21, CSF1R, CSH1, CSNK1G2, CXCL9, DDX52, ENTPD5, EPHB4, FGF23, FZD3, GALNT9, GGT5, GNA14, GSTK1, GUCY2C, HAAO, IFNA14, IL1B, IL28RA, INADL, ITGA2, LLGL2, MAD2L1, MAGI1, NEGR1, NRG1, NTRK1, OR10AD1, OR10G3, OR10H5, OR1K1, OR2S2, OR4D5, OR4N5, OR51G1, OR5V1, OR9I1, PDIA4, PIK3R4, POLR3B, PPP1R3C, PPP2R1B, PRKCD, PVRL4, RPS6KA5, SLC33A1, STAT1, STX8, SULT1A2, TIAM1, TNFSF4, TRPC1, TSHR, WWP1, XYLB
Negative_13895	BID, C5, CD4, F7, NLK, SRF, TNC, ACP1, ACP2, ACSL6, ACSM5, ACVR1C, ADRA1D, ALG2, BCAR1, BDH1, BDH2, CCL21, CD27, CMBL, CXCL13, CYFIP2, CYP11A1, DUSP4, EGLN1, EPOR, F13A1, FZD5, GDF7, GOT1, GSTK1, GUCY2C, HADHA, HMGCR, IDI2, IL12RB2, IL1R1, IL23A, KCNB1, KCNQ1, KIR2DL4, MDM2, ONECUT1, OR11A1, OR11G2, OR12D3, OR13J1, OR1A2, OR1L6, OR2T1, OR2T5, OR2W1, OR3A1, OR5K1, OR7C1, OR9I1, PIGV, PIK3C3, PIP4K2C, PITX2, POLE4, PPA2, PTGES2, PTGIS, RAPGEF4, RPS6KA6, RPS6KB2, SFRP1, SLC25A6, TASA2R9, TGFA, TGFB2, TLR9, TNFSF9, TP11, TSHB, TUBA4A, TUBB4, ULBP3, VNN1, WASF1, WNT8A
Negative_13896	MVK, TK2, UBB, AARS, ACOT12, ACP6, ACTN2, ACVR1B, ACVR2A, ADCY3, ADH6, AGPAT4, AK3L1, AKR1C4, ALG1, ARHGAP5, ARPC4, ATP2A3, BMP7, CACNB4, CALML6, CCR1, CCR3, CD48, CD55, CDC7, CLDN19, DDX47, DUSP9, EPHB3, F11R, FARP2, FGF19, FUT4, GGT6, GNRH1, GPD1, HCST, HTR4, HTR7, IDH2, IL12RB2, IL21R, IL6R, IMPDH2, INPPL1, ITGA2, ITGB7, KCNJ11, KITLG, LAMB1, LIPF, MICA, MYH4, NAT2, NCKAP1L, NCOA4, OR10A5, OR1M1, OR2T4, OR4E2, OR4K5, OR52E8, OR52K2, OR52N4, P4HA2, PHKB, PIGU, PIGW, PLCD1, PLXNB2, POLR1D, POLR2B, PPP1R3B, PPP2R5E, PRKG2, PSME3, PTCH1, PTK2, PTPRR, RRM2, SEMA4G, SLC27A1, SLC2A4, SMC1A, SOCS7, SPRED2, STX7, SYNJ2, TACR1, TALDO1, TAS2R1, TAS2R7, TBL1XR1, TUBA3E, VAV1, SUV420H2, TNFRSF18
Negative_13897	AK7, BTC, UBC, ACO2, ALG3, ANAPC5, APBB1, ATG7, B3GAT1, B4GALT1, BCKDHB, BCL2L1, BHMT, BLVRB, CADM1, CBR3, CCL17, CCL5, CHKA, CLDN22, CPT1C, CUL1, ENTPD6, FDPS, FGFR3, FOSL1, FPGS, FRAT2, FUT5, GGT7, GNAI3, GRIN2B, GSTA2, GUK1, HIF1A, ITGA8, ITGAX, MAP2K6, MKNK1, NFKBIA, NMNAT1, NRCAM, OR1D5, OR2AT4, OR2G2, OR3A1, OR51B4, OR51G2, OR6C74, PANK1, PGAM4, PLAU, PPP3CA, PRKAA2, RAD51, RAP1A, RASGRF2, RHOQ, SETDB1, SOAT1, SOCS2, STK36, STMN1, STX3, UBA7, UROC1, WNT6, GABARAPL1
Negative_13898	CFI, CP, EDA, GP6, GP9, MPL, SHH, SMS, ADCY4, ADH6, ADIPOR1, AREG, ATP5L, BDH1, CACNA1S, CD274, CD74, CDC6, COL5A3, CRY1, CSNK1A1, CYP11A1, CYSLTR1, DUSP1, ENPP1, FGFR3, FGFR4, FLT4, FZD5, GALNT14, GLI1, IFNK, IL15RA, IL28A, INHBA, IQGAP2, JAM2, LRP6, MCEE, NR4A1, NSD1, NT5C3, OR10G9, OR1L3, OR4C6, OR4M1, OR52K2, OR5D13, OR6S1, P2RX4, PPBP, PRKAG1, RAPGEF1, RHOQ, RPN2, SEMA4F, SLC2A1, SOCS1, SOCS3, ST3GAL3, TAS2R9, TUBB1, UGCGL1, WNT8B, CACNA2D3, SUV420H2
Negative_13899	C7, GSS, HPD, IHH, IL2, MUT, ABL2, ACOT12, ACSM4, AGMAT, ALDH3A1, APC2, APOA5, ATP5F1, B3GNT2, CCL16, CD72, CDK2, CLCF1, CLDN14, COQ5, CSNK1G1, CYP2D6, DGKZ, DUSP1, E2F1, FOXO1, FUT8, GBE1, GPD1, IFNA8, IL13, MCEE, MYH7B, MYLK, NAMPT, NFAT5, NT5C1B, ODC1, OR10G3, OR10H4, OR2M4, OR2T1, OR51B5, OR52K2, PAPSS1, PCCB, PDXK, PNPLA4, POLR1B, POLR2F, PRKCB, RUVBL1, SEMA3C, SEMA7A, SHISA5, TIAM2, WNT8B, CSGALNACT1

Negative_13900	AMT, DDC, EPO, FAH, FER, HK1, IL2, STS, TNC, ABCC8, ACYP2, ALG3, ANGPTL4, AOC3, ATP5A1, ATP5H, BCAR1, CACNG7, CCNG1, CCR4, CD79B, CDC14A, CDH15, CERK, CHPT1, CLDN19, CLDN2, CLDN7, CSDA, CXCL5, CYP17A1, CYP1A2, CYP21A2, CYP3A5, DNMT3A, DOCK1, DPAGT1, E2F4, FGF17, FLOT2, FZD3, GALM, GALNT10, GAPDH, GNA15, GPT2, HBEGF, HEXB, HSD3B2, HSPA2, ICOSLG, IL2ORA, ITPKA, KAT2A, LIMK2, MGLL, MNX1, MYH1, NFKBIE, NKX3-1, NRXN1, OR14C36, OR2T12, OR4D2, OR51S1, OR52E8, OR52I2, OR52K1, OR5P2, PAK7, PARVG, PDE4A, PIGH, PIK3CB, PLA2G10, PLA2G2D, PLA2G6, PLXNA2, PLXNA3, PLXNB3, POLD2, POLR1E, POMC, PPID, PTCRA, RAB23, RASA2, RASGRF1, SEMA3B, SKP1, SOCS5, SORBS1, STMN1, TCIRG1, TNFSF8, TPMT, TRAF3, VNN1, WNT1
Negative_13901	CAD, DCK, DLD, LCK, LEP, MVK, ACTN1, ADRA1B, ADSSL1, APOA2, ARPC5, ATG12, BCAR1, CACNA1E, CARD11, CARS2, CD79A, CFTR, CLCF1, CLDN16, CSNK1G3, CTNNB1, DDX51, DGKG, DRD1, EPHA1, EPHA4, ERBB2, FGF7, GALNT2, GBE1, GLS2, GOT1, GSTP1, HTR2B, IL1A, IRS4, ITGB4, LAMB2, MAN1C1, MCCC2, MGAT5B, MTHFR, NADK, NOS3, OR10J3, OR52B6, OR5H2, OR7D4, OR8H1, OR9A2, PCCA, PGK2, PGLS, PHKG1, PHKG2, POLA2, PPP3R1, PRKACG, PYGL, PYGM, RALBP1, RBKS, RUVBL1, SCIN, SEMA3D, SGPP2, SLC9A1, SMAD6, SMPD2, STX4, SUOX, TBL1Y, TLN1, VEGFC, SERPINE1
Negative_13902	ADA, FN1, HGD, IL2, JUP, NF1, PAH, SMO, TFG, AARS2, ACOX2, ADCY3, ADRB2, AGPAT4, AKR1B1, AOC2, APOA5, APOE, ASAH1, ATP6V0B, BLVRA, CAV2, CCL13, CD34, CD74, CD8A, CDC23, CDK2, CREBBP, CSNK1E, CYP2A7, CYSLTR2, DAAM1, ENAH, F2RL2, FGFR3, FSHR, FUT9, FZD2, GGT1, GIT1, GNA12, GOSR2, GP1BA, GPD1, GRM1, HLA-C, HMGCS2, HTRA2, IL2RB, ITGA1, ITGB8, ITPK1, LLGL1, MALT1, MAP3K3, MGAT4B, NME2, NSD1, NTSR1, OR4D6, OR51Q1, OR9A4, PDE6G, PFKM, PLAU, PP3R2, PRKG2, RALA, RHEB, RPS6KA3, SIPA1, SLC27A1, ST8SIA1, SUFU, TAS2R14, THTPA, TUBB2A, UGT2B11, ULK3, WNT3, ATP6VOD1, PHOSPHO1
Negative_13903	CGN, EPO, FUK, GLS, TH, ABI2, ACVR1B, ADCY7, ANAPC4, ATP50, BLNK, C7orf16, C9orf95, CASP3, CBR1, CHR1, CLDN1, CNTNAP1, COL2A1, CX3CR1, CYBB, CYP11A1, DEGS2, DUSP10, EPHX1, EPHX2, EPOR, FCER1G, FMO2, GALNS, GALNT5, GALNTL4, GGCX, GMPR, GNAL, HEMK1, HSD17B3, IL17RB, IMPDH1, JAK1, KIR3DL3, KLRC3, KLRK1, MAPK11, MTAP, MYH2, NR5A2, NSD1, OR1L8, OR2C3, OR2M3, OR51A4, OR51F2, OR52J3, OR5B3, OR5K2, OR6C76, OR9G4, PAX6, PDE4B, PEMT, PGM2, PIGX, PIP4K2B, POLE2, POLR1D, POLR3H, PPP3R1, PRKCA, PRNP, PTPRR, RARS, RELA, RPSA, RUNX1T1, SFRP5, SMAD5, SMPD2, STK36, STX6, SUOX, ULBP3, WARS, WNT2B, PLA2G12A, PRICKLE2
Negative_13904	ADA, C8G, C9, LAT, LPL, UBC, ADCY6, AGRN, ANAPC11, B3GALT6, B4GALT2, CASK, CCKBR, CD58, CDC14A, CDH15, CHR1, CLDN9, COL1A2, CYP2A7, ETNK1, ETNK2, FGF23, GLI2, IL20, MPP5, MYH11, NAGS, NCK1, NOTCH1, ODC1, OR10A2, OR10G4, OR13C2, OR1L1, OR1L4, OR4D1, OR5D13, OR8A1, PARD6B, PDE5A, PFKFB3, PGAM2, PIP4K2B, PLA2G2A, PLTP, SEMA4B, SMAD3, TLR2, TMLHE, CSGALNACT1
Negative_13905	BID, CS, F9, FH, HGF, MYC, VTN, ACADM, ACSM4, APOA1, APOA2, ARNT, BCAT2, CDK4, CDKN2C, CKS1B, CPT1C, CYP2A6, DLL3, DLL4, DOCK1, EFNA3, ENPP6, EPHB1, FARS2, FRAT1, GCAT, GCNT2, GGT1, GSTO1, HIF1A, HSD17B7, IL19, IL23A, IRF9, LDHB, LEFTY1, LIPF, LRP5, NFATC1, OR2F2, OR2K2, OR4M1, OR4X1, OR51B2, OR51F1, OR52A5, OR56A1, OR9A2, PAK4, PANK4, PAPSS1, PDE6D, PDE7A, PGAM4, PIP4K2C, PLA2G2F, PLA2G6, POLA1, POLR2E, POLR2J, POLR3H, PPP1CB, PRKACB, PYGB, RPN1, SEMA3G, SHC2, SLIT2, STK11, TAS2R16, TAS2R3, TPH2, UNC5C, VAV3, VDAC3, VKORC1

Negative_13906	AMH, DHH, EBP, MET, ACADM, ACTG1, ACY3, ADCY5, ADH7, AHCY, AKR1B1, ALD H4A1, ARPC2, ATP5D, CAMK2D, CCL20, CD19, CD27, CDH2, CDKN2C, CHST12, CLDN9, CSF2RA, CXCR4, CYP4F2, DFFB, DLL4, ECSIT, ETS1, F2RL1, FARSB, GLB1, GNRH1, GP1BB, GUCY2D, IFNA4, IL1B, IL4R, IPPK, KLRC2, KLRK1, MA P3K6, MDM2, MTFMT, MTMR2, MYH2, MYH3, NRG1, OR10H3, OR2A5, OR4A15, OR 4C6, OR51E1, OR6K2, OR7G1, PAK3, PARD6A, PCK1, PDXK, PECAM1, PGAM4, P LAT, POLR2I, PPP1CB, PRKAG2, PTGER3, PTGFR, RBX1, RELA, SCD5, SMPD2, SOX17, TAS2R3, TAS2R38, TAS2R4, TBL1XR1, TBXAS1, TRIP10, WNT16, ATP 6V1C2, HLA-DRB5, HSD17B12
Negative_13907	ADA, CD2, SYK, ALG10B, ANPEP, AQP7, ARPC2, ARRB1, AXIN1, CCL22, CDC2, CHUK, CLDN22, CLDN7, CNGA3, COX10, DCXR, DDX47, DHRS3, ECHS1, EP300, EXTL1, FECH, FGF2, FGF20, FGF9, FLT3LG, FUT8, GATM, GGT1, GSK3B, GUK1 , HES1, HIBCH, HLA- C, HNF4A, ICOSLG, IFT57, IL10RB, IL20RB, IMPDH2, INMT, KDSR, LEFTY2, NADSYN1, NEU2, NT5C1A, NTN1, OR10R2, OR11H1, OR7D2, ORC2L, OXSM, PAI CS, PDPK1, PHKB, PIP5K1C, PLCG2, PPAP2C, PPP2R5E, PRKCZ, RASGRP2, SC 4MOL, SDC3, SEMA3F, STAT2, STX3, TLR9, WNT1, ARHGEF12, ATP6V0A4, CAC NA2D3, HLA-DQB1, HLA-DRB4, SERPINE1, TNFRSF14, TNFRSF6B
Negative_13908	ASL, DBI, F11, F5, IL2, IL4, AACS, ACADL, ACSL3, ACTA1, ACVR2A, ALDH4A 1, APOA5, ARNTL, ATP6V1D, CACNA1S, CCNB3, CDC16, CDC42, CES7, COL4A2 , CSNK2B, CYP2A6, DNMT3L, EPHA3, FGFR3, GCDH, HMBS, IFNAR1, INPPL1, I TGA10, ITGA7, JAG1, LDHAL6B, LTA4H, MAN1C1, MARS, MDH2, MGAM, MYH15, NEFH, NEUROD1, NRXN1, OR10H3, OR2AG1, OR2M3, OR4F15, OR5J2, OR5L2, O R8H2, PANK2, PDE2A, PDXP, PER1, PLCD4, POLE3, POLR3B, PRSS3, SARS2, S ELE, SMAD7, SPRY3, TAS2R14, TGFA, TIRAP, TRPC1, TUBB4, UPB1, WNT8B, Z AP70, ATP6V1G1, HLA-DRB5, MAPK8IP1, TNFRSF11B
Negative_13909	ADC, C4B, CFH, MAG, SDS, ACP5, ADCY8, ADORA2B, ALG10B, ALOX12B, BDH1, BMP8B, C3AR1, CD59, CFL1, CNGA3, CSNK1G3, CTF1, CTPS2, DAPK2, DDX51, DGKD, DTX2, ECSIT, EPB41L1, EPHX2, FBXW11, FGF6, GALNT9, GCDH, GLG1, GRLF1, GSTZ1, GUCY1A2, HGSNAT, HMGCS1, IDH3G, IFNA16, IL12A, IL20RA , IL25, IRAK2, ITGA10, KLRD1, MYH13, NAE1, NCR1, NT5C1A, OR10G3, OR2A G2, OR4F6, OR51A2, OR51A4, OR51L1, OR51M1, PAICS, PGK2, PKLR, PNPLA4 , PPP1R3C, PPT1, RIPK1, SARS2, SH2D1B, SRD5A2, SULT2B1, THBS3, TIRAP , WNT5A, YWHAB, SERPINE1
Negative_13910	EPO, F2, NPY, PVR, SP1, ACADM, ACHE, AGXT, ALDH3B2, ALPPL2, AMHR2, B3G AT2, B4GALT3, CAMK2B, CBR1, CCL21, CCL8, CCR1, CD28, CHAT, CHEK1, COL 4A2, COL5A3, DOT1L, DPM1, DUSP9, EDNRA, ENTPD1, FARSA, FARSB, FASLG, FGF10, FOXO3, FRAT2, GALT, GAMT, GBA3, GRIA1, GUCA1A, HSD17B4, IFIH1 , IFNA21, IGSF5, IKBKE, IL1A, ITGB1, KIR2DL1, LEFTY2, LRRC4C, MAP3K6 , MCCC2, MTMR2, MYH7, MYLK, NEFH, NTNG1, OR10A5, OR10H5, OR2T1, OR51G 1, OR51T1, OR5D14, OR5K2, OR6A2, OR6C75, OR8G1, OR8I2, P2RX5, PCYT1A , PDE1A, PGK2, PLA2G2D, PPP1CB, PPP2R2A, PRIM2, PRKG1, PROS1, SDHC, S ETDB2, SFRP2, SOAT1, TGFB1, TJP3, TOLLIP, TSLP, UGT2B10, MAPKAPK2, T NFRSF14
Negative_13911	CRH, FUK, GLS, IHH, IL6, PXN, TNC, ACADSB, ACSS1, ACVR2B, ADIPOR1, AKT 1, ALDH9A1, ANAPC4, APC2, APOA2, AREG, BHMT, BIRC5, CAMK2A, CAMK2B, C LDN19, CLDN6, CSF1R, CYSLTR2, DDX52, DIAPH3, DLL1, DNMT3A, EPHA6, FG FR1, G6PC, GNAI2, GNRH1, GRIN2D, GUCA1A, IDH2, IDUA, IL17B, IL1RAP, I SYNA1, ITGAV, KAT2B, KITLG, LAMB1, MAPK3, NARS2, NCAM2, NEU2, NLGN1, NTF3, OR6C6, OR6Q1, OR8B12, OR8H2, PAK2, PANK3, PIAS1, PIGF, PIK3C3, PLXNB1, PNLIP, PRIM1, PROC, RASSF1, ROCK1, SDC3, SDC4, SH2D1A, SKIV2 L2, SMAD9, SNAI1, SPCS1, ST3GAL2, TAS2R40, TBK1, TUBB4Q, UGT2B28, WN T6, CACNA2D4

Negative_13912	CD2, HK3, TPO, ACAD9, ACP6, AKR1C2, CACNA1E, CHAD, CYP3A43, DKK4, FCG R2B, FLOT1, GALNTL1, GALNTL4, GP1BB, GRIN2D, GSTA1, GSTO2, H6PD, ITG B3, LYPLA2, MAPK7, MCCC2, OLAH, OR2AG1, OR52K1, PIK3R5, PITX2, PLA2G 2F, PPAP2A, PTPRM, RASGRP1, RPRM, RPS6KA2, SDC2, SELE, SESN1, SPAM1, STK4, STX1B, TAS2R8, THBD, THY1, TP53, TUBA1B, UGCG, WNT9A, XCL1, KIR 2DL5A, TNFRSF14, TNFSF13B
Negative_13913	ABO, GK2, AADAC, AARS2, ABLIM3, AGPAT6, ATN1, C4BPB, CACNA1D, CALML6 , CAMK2B, CCR2, CD48, CD86, CDC2, CHSY3, CHUK, CXCL13, CXCR5, CYP2C9, EPHX1, FBXW11, FRAP1, GLUL, HNF1A, ICAM2, IL11RA, IMPA1, KDSR, LYPLA 1, MITF, MKNK1, NOD1, OR10P1, OR2AG1, OR2D3, OR8B8, PDHA1, PIP5K1A, P OLD4, PYCR2, RBL1, SARS, SEPHS1, SHC4, SQLE, THBD, UNC5B, VTI1A, ARHG EF12, CACNA2D3, TNFRSF13C
Negative_13914	CAT, GAA, GH1, ACAA1, ACSM4, AMPD1, APH1A, ATP5F1, B3GALT5, BCAT1, CC L5, COL4A1, DUSP6, EPHB3, ERBB3, GCH1, GNRHR, HSPB1, INPP5B, IRS2, JA M2, KIR2DS4, KLRK1, MAN1A1, NEGR1, NFYA, NSD1, OR1J2, OR4D1, OR4X1, O R52N2, OR5A1, PAPSS2, PER2, PGAM1, PIAS2, PIGW, PLA2G2A, PPP2R5B, SC 4MOL, SELPLG, SMC1A, STX2, TAS2R50, TFDP1, TLR5, TRAF4, TRPM5, TUBA1 B, UCK2, XYLT1
Negative_13915	ADK, BTK, LAT, NNT, ACAT2, ACYP1, ADCY6, ALG3, BET1, BTRC, CACNG4, COL 5A1, CTPS2, DARS2, EPRS, FLT3, FRAP1, GNAI2, GPD2, GSTO1, IAPP, IL21R , KYNU, LAMB2, MAP3K14, MCM3, MGAT5B, NEUROD1, NODAL, NOS1, NTF3, OR1 1L1, OR1E2, OR4N2, OR52E4, PIGS, PITX2, PLA2G2A, POLD1, POLR2E, PPAP 2B, PPP2R1B, PRKACG, PRSS1, PVRL3, RASA2, RCHY1, RUNX1T1, STX1A, TNX B, VDAC3, WNT5B, XYLT1
Negative_13916	OTC, ACAA2, ALDH1A2, BET1, BMP4, BMP5, C1QA, C1QC, CD14, CD8B, COQ6, C YP1B1, CYP3A4, EDNRA, EIF4E, EXT1, EXT2, FGF7, FOSL1, GAD2, GNAZ, GST K1, GUCA1C, INMT, KLRC3, KNG1, LHCGR, MDM2, MGAM, NOS1, OR10R2, OR52I 1, OR52R1, OR8G1, PCYT2, PDGFRA, PDK1, PEMT, PIGQ, PIGX, PNLIP, POLA2 , POLR2E, POLR2F, RALA, RFNG, SGMS2, SMPD3, SRD5A2, SSH3, UGT2B11, YK T6, ATP6V0A1, ATP6V1B1, PNLIPRP2
Negative_13917	C5, CFH, GP9, LCT, RDX, ACYP1, AMPD1, APOA2, ASAH1, ATN1, ATP4A, B4GAL T3, B4GALT7, C1QC, CACNG2, CACNG7, CACNG8, CAMK2G, CDC25B, CHKB, CLC A2, CLDN10, CLDN18, CLTB, CLTCL1, CPOX, CSF2RB, CYP2A7, DGUOK, DTX3, EDN1, ERBB3, EREG, FADS2, GALNT14, GGCX, GNA13, GNRH2, HES1, HRH1, HS D11B1, IFNW1, IL1RAP, KLRD1, LDHAL6A, LEPR, LRDD, LTBR, LTC4S, MECR, MYH10, NKX3- 1, NLGN1, NME6, NTN1, OLR1, OR10A2, OR14A16, OR1S1, OR2H2, OR4C11, OR 4D5, OR51E1, OR51F1, OR6B3, PARD6A, PFN3, PGK2, PIGS, PLXNC1, POLR2L , PPP1CC, PPP3CA, PRKACG, SELP, SEMA3D, SH2D1A, SHC4, ST3GAL1, STAT5 A, SULT1A2, SV2C, TAS2R50, TICAM1, TIRAP, TMLHE, TRAF4, UGDH, VARS, W NT7B, WNT8B
Negative_13918	IL4, LEP, OAT, PTS, TK2, AARS, AASDH, ACTG2, AGXT2, ALG9, B4GALT2, BCA R1, BTRC, BUB3, CANT1, CFLAR, CHDH, CHPF, CNTNAP1, COMP, CSNK1G2, CTS G, DDX19A, EFNB2, ELK4, EPHB3, FABP4, FZD10, FZD6, GALNT14, GNB1, GOS R2, GSTZ1, GTSE1, HEXA, HSD3B7, IFNA21, IL17RA, IL2RA, INMT, ITGA6, K AT2B, KLRC4, MAD2L2, MAP2K4, MAP3K8, MAPK7, MGAT1, MYL2, NFKBIA, NLG N1, NR5A2, NTNG1, OR1B1, OR2V2, OR5AR1, OR5D13, OR8B8, OR8K3, PAK1, P DXP, PECAM1, PFKP, PGS1, PIGP, PIK3R5, PLA2G6, PPCS, PRKAA1, RAC3, RA SSF1, RIPK1, RPS6, SEMA3F, SHMT2, SIAH1, SLC25A5, SRD5A2, STT3B, STX 4, SUCLA2, TBL1X, TNFSF18, TUBA1A, ALDH18A1, ATP6V1C1

Negative_13919	WAS, ACAD8, ACADSB, ALDH7A1, ATP5G1, BUB1, CADM1, CARS2, CCND3, CHD8, CTF1, DGAT1, DLL4, DPM1, ENPP7, FUT5, GATM, GNPDA2, GZMA, HIBCH, HIF1A, IDH3G, IL7R, IRAK2, IRS2, ITGA9, ITPK1, KLRC4, LRDD, MAP2K7, MECR, MFNG, MGAT5, NT5C3, OR1L6, OR4C11, OR4D2, OR4K5, OR4X1, OR52I1, OR5D16, OSMR, PLD2, PON3, PRKACB, PTGS2, RASSF5, SELE, SETDB1, SGPP2, SLC25A4, SPRED1, SSH2, ST3GAL3, STX4, TAS2R38, THBS2, TLR3, TLR5, VASP, VKORC1, VTI1B, WNT1, YWHAB
Negative_13920	AUH, CGN, MSN, ACO1, ADORA2B, ADRA1D, AKT1, ARG2, BIRC5, CACNA1D, CAPN2, CCL28, CD34, CHIA, CHKB, CIITA, CMPK1, DGKA, GADD45B, GDF6, GLI2, GNMT, GRLF1, GUK1, HNF1A, IDH3G, IFNA4, INSR, ITGAM, JAG1, LTA4H, MAPK10, MAPK11, MINPP1, OR10G3, OR10K2, OR10S1, OR11G2, OR13G1, OR1L6, OR2Y1, OR51L1, OR6A2, PARD6B, PDE7B, PECAM1, PFKFB4, PIGN, PIGP, PIGX, PLAU, POLR2I, POLR3B, PPP2R5E, PRKAG3, PTPN11, PTPRB, PTPRJ, SETD2, SOCS2, SOX17, STX6, TAS2R49, TLR4, TRADD, TSHB, UGCGL1, VAV3, WNT1, XCL2, ATP6V1G3, HLA-DQB1, PLA2G12B
Negative_13921	ADC, AK7, BAX, CKB, CR2, CTH, DBI, GCK, MSN, SHH, ADRB3, AQP7, ARG1, B3GALT4, BCL10, BMP5, CCL20, CDC20, CSF3R, CYP3A43, CYP3A7, DARS, DDX19A, DOLPP1, DOT1L, DUSP5, F2RL1, FGF12, FGF17, FGF23, GNMT, GYS2, HLA-DRA, HLA-F, IL17RB, ITGB6, LGMN, LIMK2, LIPE, MMP1, MTHFR, NAT2, NEUROG3, NFE2L2, NPAS2, OR1I1, OR2A42, OR2L2, OR2T8, OR4K1, OR52B4, OR52K2, OR52N4, OR5AR1, OR7C2, PAK1, PAK7, PCYT1A, PDE1A, PIAS4, PIM2, PLCB2, POLR3A, PPA2, PPAP2A, PRKCB, PTGER3, PTPN11, RAPGEF3, SEMA4B, SGPP1, SHC1, SPRY3, ST3GAL1, SYNJ1, TAS2R3, TICAM2, TKTL1, UMPS, VASP, VEGFC, WASL, ATP6V0D1, ATP6V1G3, CACNA2D4, ST6GALNAC3
Negative_13922	FGG, FOS, ILK, MET, MPI, TK1, ACAT2, ACYP2, ADORA2B, ALAS1, ARSD, ATG3, B3GAT3, BCAR1, CCNA1, CDS2, CEBPA, CYP2U1, DARS, DERA, DGKB, EDAR, FCER1G, FGF2, FOXO3, GP1BB, HNF1A, HTR2C, HYAL2, IDI1, IKBKE, IKBKG, KDSR, MAP2K7, MCM7, METTL2B, NANP, NEFL, NKX2-2, NNMT, NOTCH2, OR13F1, OR13J1, OR56A4, OR6S1, OR8S1, P2RX1, PAK2, PARD6A, PIP4K2A, PLA2G5, PPARA, PPCDC, PRKCA, PTK2B, PVRL4, RALBP1, SHC2, SMAD7, SPRY1, SYNJ2, TAS2R50, TNFSF10, TUBA3C, TUBB1, TXNDC12, VEGFC, WNT7B
Negative_13923	BAD, IL6, LPL, TPR, ACAD9, AKT3, ALPL, AMHR2, ATP2A1, BACE2, CACNA1A, CAMKK2, CHST12, CLDN5, CREB1, CXCL12, FZD5, FZR1, GADD45B, GFPT2, HSD3B2, IDUA, KCNB1, KITLG, LAMA3, LDHAL6B, LHCGR, MAD1L1, MEF2C, NEU2, NEU4, NOTCH2, NRG2, NUMB, OR10A3, OR2A2, OR2AE1, OR4D11, OR52A5, OR6A2, OR6C70, OR9I1, OR9Q1, PARVG, PDE4B, PIGP, PLA2G1B, PPA1, PPAP2A, PTPRJ, PTPRR, RETSAT, RUNX1, SOS2, SSH2, STX4, SUOX, TAS2R16, TBXAS1, TJP1, WASF1, TNFRSF14
Negative_13924	DLD, GPT, HK3, IL7, LYN, A4GALT, AASS, ACSL5, ALCAM, ATN1, ATP13A2, BMP7, C3AR1, CACNG1, CAMK2A, CBR1, CD34, CD40, CDC6, CDH1, CDKN2C, CLCA2, CRLF2, CXCL2, CYP1A1, DCTN1, DMGDH, DPM1, DUSP4, EI24, FABP4, FGF9, FOXO3, GGT7, GNG12, GSTT1, HSPA1B, ICAM2, IL5RA, ITGA1, ITGAX, ITGB3, KLRC3, LAMB1, MAP2K4, MAT2B, MCM3, NFATC3, NFYB, OR10G3, OR13C4, OR1E1, OR2T3, OR4Q3, OR9G1, ORC3L, PIGH, PLCD3, POLR3H, PORCN, PRLR, RASGRP4, RDH8, TPMT, ULBP1, ULK2, UNC5C, WWP2
Negative_13925	AGL, DUT, FER, IL8, ACAA2, ACAD8, ADCY7, CALML5, CCL24, CD19, CD36, CLDN10, COL1A2, CYP11B2, CYP26C1, CYP2C9, CYP2S1, CYP7A1, DDX51, DRD2, DVL2, EPHA8, EPHX1, GGT5, GLYCTK, GSTM3, HES1, HLA-DMA, HPSE, HTR2C, INMT, LAMA4, LDHC, LIMK2, LIPE, NCR2, NFASC, NFYC, OR10G8, OR10Q1, OR10X1, OR5D14, OR5V1, OR6B3, OR8B8, PDE2A, PIGM, POLA2, PRSS3, RAB23, RAD51, RELB, SLC27A4, SMC1B, STT3B, TGFA, TRAF5, TRDMT1, TRMT11, UGT2B11, WWP1, TNFRSF10B, TNFRSF13C

Negative_13926	EZR, F7, FOS, IL2, TNN, VCL, AHCYL2, ALDH4A1, ALG13, AMDHD1, ARHGEF4, ATP13A2, BTRC, C5AR1, CALML5, CCL4, CRKL, CTF1, CYP2S1, DAPK1, DIAPH1, DPAGT1, E2F5, FABP1, FCGR3A, FGF2, FOXA3, FZD9, GAD1, GSTA5, HADH, HSD3B2, IL18, ITGAM, KDSR, LTB4R2, NEU1, NFASC, NFAT5, NFE2L2, NFYB, NODAL, NQO1, NT5C1A, OR1A2, OR2Z1, OR52N1, OR5K1, PAICS, PDE7B, PEMT, PER2, PIGV, POLR1A, PPP2R2B, RBL1, RPRM, SDC4, TLN1, TLR9, TUBB2A, TUBB2C, WBSR22, MAP3K7IP2
Negative_13927	ABO, BAD, C6, F9, FGG, HK2, LIF, PAH, RB1, ZYX, ADH4, AKT2, ALDH1A2, ALG8, ATP5F1, CAMKK2, CCND1, CD38, CD79B, CHSY1, CLDN5, CSNK1G3, CXCL6, CYFIP2, CYP2A6, EPB41L2, EPHA3, EPHA6, EPOR, ESPL1, FGF7, GALNT3, GATM, GNAO1, IARS, IDUA, IFIH1, IL18R1, KLRC2, MAML2, OR13C4, OR14C36, OR1S2, OR3A1, OR4A15, PIAS2, PLXNB1, PPAP2B, PRODH, RENBP, SARS2, SC5D5, SEMA3G, SESN3, SGPP2, SLC27A5, SPHK1, ST8SIA1, STK4, SV2A, TAS2R48, TUBA3C, TYRP1
Negative_13928	CAD, GLS, MET, ADAM17, ANAPC1, ANAPC11, ARPC5, ATP5D, CACNA1B, CALML5, CAMK2A, CCL25, CCNE1, CD48, CES7, CLDN16, CRY2, DARS2, DHRS3, DVL2, EDAR, ELK4, EVI1, FGD1, FRAT2, GALNT5, GBE1, GMDS, HRH1, IL17RA, IL2RB, IL3RA, IMPA1, INPP1, ITPKB, JAG2, KAT2B, KCNQ1, MAP2K3, MAP4K2, MAP4K3, MGAT3, MS4A2, NCR1, NEFM, NME2, NNMT, OLAH, OR11A1, OR5D18, OR6Q1, PDE11A, PDGFA, PER3, PERP, PIGU, POLR1D, POLR2D, PPP1R3B, PRKAR1B, PRPS2, PTPMT1, RAC1, RAPGEF1, RIPK1, SC4MOL, SDHC, SMAD4, TAS2R49, TSHR, TYROBP, VARS, AASDHPPT, ATP6V0A2
Negative_13929	AR, BAD, CEL, F3, HYI, ID4, IDS, KMO, NLK, PDC, AACS, ACTN1, ADCY10, ADRB3, AFMID, AGPAT1, ALDH1B1, B4GALT5, BLVRA, BPGM, BUB1B, CES2, CES7, EXTL1, FARSA, GAD1, GALNT5, GALNTL2, GART, H6PD, HSD17B1, IFNA8, IGSF5, IL13, IL20RB, IRS4, ISYNA1, ITGB6, KIR2DS5, MAPK1, MCAT, MYLK2, NFKB1, OR10A2, OR10X1, OR2D2, OR51Q1, OR5A2, OR5B21, OR5T1, OR6C75, OR8D1, PARD3, PDGFA, PHKG2, PLXNA1, PLXNB3, PMVK, POLR3A, PPP3R2, PRSS3, RARS2, SIPA1, SMAD7, SPRY3, SREBF1, STT3B, SULT2B1, TICAM1, VAMP3, ZBTB16, CACNA2D4, HLA-DQB1, HLA-DRB3, TNFRSF1A
Negative_13930	F5, FYN, ME2, NLK, PTS, PXN, RDX, ALDH4A1, ALG3, ATIC, BIRC2, CDS1, CES2, CREB3L3, CSF1, CYP2C19, DDIT3, DHCR24, DKK1, DLL3, EFN2, ENAH, ENTPD7, FARP2, GADD45B, GALNTL1, GZMB, HA01, HPSE2, IFNA2, INPP5E, LIPA, MAPK8, MFNG, MYH14, NCKAP1, NTSR1, OPLAH, OR10A5, OR13C9, OR2A14, OR2D2, OR4F4, OR4X1, OR4X2, OR6K3, OXCT2, P2RX2, PDCD1, PDHA2, PGAM1, PLCG2, PRLR, PRNP, RAB23, RAPGEF2, RPS6KA3, RXRB, SEMA3A, SEMA3B, SKP2, SLIT2, SREBF1, SUOX, SYNJ2, WNT5A, ATP6V0D1, KIR2DL5A, SERPINA1
Negative_13931	BTD, C9, FST, GPT, LCK, ME1, ALDH3A1, BET1, BMP4, CACNG8, CAMKK1, CCL25, CD22, CD28, CDKN2D, CLDN17, CNDP1, COL4A6, CRHR1, CSF2, CXCL13, CYP21A2, EFNA2, GRIN2C, GRPR, HEXB, HSPA1B, IFNA8, JAM3, KAT2B, KCNB1, LTC4S, MAGI1, MICA, MPP5, MS4A2, NME6, NMNAT2, OR10A4, OR2T29, OR3A1, OR51A4, OR6N1, P2RX6, PDHA1, PFN1, PIK3CG, PLA2G2E, PNLIP, POLD1, PPM1A, PSEN2, PSME2, PTDSS1, PTGIS, RPS6KA3, SESN2, SLC25A6, SORBS1, SULT2B1, SV2A, TUBA3E, UGCG2, WHSC1L1, WNT7B, WWP2, ATP6V0A2, ATP6V1B1, CSGALNACT2
Negative_13932	C4B, MUT, TH, AKR1B10, AMD1, AQP7, BDNF, C1QA, CACNA1H, CD55, CD58, CLOK, CPT1B, CSNK1A1, CYP11A1, CYP21A2, CYP4F3, CYSLTR2, DUSP7, EPOR, FASN, FGF17, FMO5, GALNT9, GLUD2, GYS1, HAGH, HSD17B1, IDI1, IFNA4, IL17RA, IQGAP3, JAG1, KLRC4, KLRD1, LDHC, MAP3K3, MAP3K4, MS4A2, NEG R1, OR1L6, OR2V2, OR2W1, OR51B5, P2RX2, PAK1, PDGFRB, PGK2, PISD, PLA2G10, PLCB2, PLCZ1, POLR2J, PPA2, PPP2R1B, PTPMT1, PYCR2, ROCK1, RPSA, SSH1, ST3GAL5, SUCLG1, SULT2A1, TALD01, TBK1, THBS3, TRAF3, WNT9A, XYLT2, PRICKLE1, TNFRSF10B, TNFRSF6B

Negative_13933	CR2, DCK, EZR, FGB, KMO, RFK, SHH, ACVR1B, ALG10B, ANAPC2, ARHGEF4, ATP6VOC, BIRC3, C1GALT1, CACNA1A, CACNB3, CACNG5, CCR7, CHST12, CLTB, COL6A1, CREB5, CTPS2, CYP11A1, CYP19A1, DVL1, EPHB3, FLT3LG, FZD7, GAB1, GALNT14, GAS1, GNRH1, GPX5, GUCY1B3, HARS2, HMOX1, HNF1B, HTR6, IDH1, IFNA5, IL17A, IL19, MAGI2, MALT1, MAP3K13, MAPK7, MGST1, NAT2, NRG2, OR10A6, OR1L8, OR4K13, OR4X1, OR56A4, OR5J2, OR6B3, OR6C76, OR7G3, OR8K3, PAX4, PFAS, PGS1, PI4KB, PLAU, PLCD4, PLCG1, POLR1D, PON3, PPP2CB, PTGDS, RALB, RASA2, ROBO1, RPS6, RUNX1, SEMA3A, SEMA3D, SEMA3E, SEMA4F, SEMA7A, SLC9A1, SNW1, TRMT11, TRPC1, HLA-DRB4, PAFAH1B1, PNLIPRP2, SERPING1
Negative_13934	APP, GCK, NPY, TKT, TXK, ACSM3, ALPI, ATP50, AXIN2, B3GNT5, B4GALT4, CACNA1D, CAMK2B, CCL26, CER1, CFLAR, CHAT, DDX52, DVL2, FGD1, FOXA3, FRAT1, GAMT, HLA-DMA, IL1RAP, IMPA2, IRAK2, LAMC2, LIPG, LTA4H, MAT2B, MLLT4, MTHFD1L, NRG4, OR10Z1, OR4D9, OR51A7, OR52N5, OR5T3, PFKFB1, PIK3CG, PIP5K1A, PLCB2, PLCE1, POLR2G, PPM1A, PRKAB2, PYCR1, RASGRP1, RERE, SEMA7A, SMURF2, TAP1, TAS2R3, TLR9, WNT6, ATP6VOA1
Negative_13935	JUP, PLG, ADCY6, ADH6, AKR1B10, ATP5G1, BMP2, BMP7, C1GALT1, CARD11, CASP10, CASP6, CD28, CLDN8, CRB3, CYP2F1, DAPK1, DGAT1, DUSP9, GALK2, GALM, GSTA5, HSPA2, IAPP, IDI1, IGF1, IL24, IRAK2, JAG1, LAMA3, MAGI1, MAN1C1, MAP2K5, MCAT, NCAM2, NOS3, OR2C1, OR4C15, OR56A1, PARD6B, PDGFRB, PTGER3, RAP1A, RDH5, ROBO3, RRM1, RXRA, SNW1, SPTAN1, STX5, TCF7L2, TCIRG1, TM7SF2, TSLP, TSTA3, YWHAB, AASDHPPT, ATP6VIC2
Negative_13936	GH1, AANAT, ADRA1D, ARSE, ATP4B, ATP50, B3GNT2, BPGM, CCL2, CERK, CISH, CKMT2, CLCF1, CLDN14, CMPK2, CNTNAP2, COL5A3, CREB3, CXCR4, DDX56, EFNA2, EIF4E2, EPOR, FGFR3, FLOT1, FLT1, GALNT1, GALNT7, GAS1, GLUD1, HMGCL, IFNA16, IGFBP3, IL18RAP, IL1R2, KIR2DS5, LYPLA2, MAP2K3, M GAT4B, MKNK1, NEFL, NUDT2, OCLN, OR4D9, OR5D18, OR6N1, OR8B4, PAFAH2, PARS2, PAX4, PDE1C, PDE2A, PIK3CD, PLTP, PMM2, PNPO, PPP1CA, PPP5C, PSME3, SARS, SEMA4G, SHISA5, SLIT1, SMAD7, SOCS2, STX4, TAS2R42, TAS2R5, THTPA, TRAF6, XIAP, YARS, ARHGEF12, ATP6VOA1, MAP3K7IP2, MAPKAPK3, PAFAH1B2
Negative_13937	CBL, DDC, FST, GGH, GK, GSN, LPL, ABL2, ACP1, ALOX12B, AMPD2, B4GALT5, BDKRB2, BLVRA, C9orf95, CACNA1E, CD40LG, CDC16, CDC25A, CHRD, COL6A1, CSNK1G1, DAAM1, DDX41, DGKE, DKK1, DOCK1, EDA2R, EPHB1, F2RL1, FARS2, FBP1, FGF21, FUT2, GLG1, GLUD1, GMPR, GNAL, GNB1, GSTM3, HIBADH, HTRA2, IFNA4, IFNAR1, IFNAR2, IL28A, INPP5E, IPMK, ITGB8, KLRC2, LAMB1, MAP2K7, MAPK1, MAT2B, MFNG, MGAT1, MYH10, NMNAT2, ODC1, OR1C1, OR1J4, OR2T34, OR4C15, OR4X1, OR5AS1, OR5M9, OR6B3, OR8D4, OR8G1, OR8K3, OR8S1, OR9G1, OR9K2, PARVA, PAX4, PDGFA, PDGFB, PFAS, PFN3, PGM2, PLCE1, POLD1, POLR2L, SHISA5, SIGLEC1, SRGAP1, ST3GAL4, STX2, STX6, SUCLG2, TAS2R60, THBS3, WWP2, CSNK1A1L, PAFAH1B2, SERPINB5
Negative_13938	CRH, GSN, GSR, HGD, ACOX2, ACOX3, ADRBK2, ARSE, ATP2A1, BLNK, CACNG6, CARS, CD226, CYP1B1, DLAT, FABP3, FARS2, FECH, FGD3, FGF2, FOXO3, FTH1, GAD1, GAD2, GALNTL4, GALNTL5, GCAT, GNB3, GTSE1, HAAO, HEMK1, HSD3B1, HTRA2, IL17RA, IMPDH1, IMPDH2, ITGA2B, JAG1, JAG2, KCNJ11, KCNQ1, KNG1, LIMK1, MAN1A1, MINPP1, MYLK, NFAT5, NME4, NRG4, OR2A25, OR2B2, OR2M3, OR2T12, OR4D6, OR51B5, OR56B4, OR5AR1, OR5D18, OR5P2, PAK2, PLA2G2D, PLXNA3, PPA2, PTPN6, PTTG1, RELA, RPS6KA1, SELP, STX16, SULT1E1, TACR3, TKTL1, TYMS, UGCGL2, UGT8, VARS, XYLB, YARS2

Negative_13939	C8A, EDA, IL6, PGD, PML, ABAT, ACSL1, AHCY, AKT2, ALDH5A1, APH1A, ATP4B, ATP5A1, ATP5G2, B3GALT2, BAIAP2, CACNB4, CCL14, CCL4, CD80, CKMT2, CNDP1, CXCR6, DCXR, DPM3, ENTPD1, FGF13, GMPPA, GNAI3, GNB1, GRIA1, HLA-C, HSD17B7, IFNA2, INHBA, LAMC2, MAD1L1, MAP2K4, NAE1, NKD1, NOTCH1, NOTCH2, NUMB, OR10A5, OR10AD1, OR10S1, OR2AT4, OR6B3, PIAS4, PIK3C2A, PLAU, POLE2, PRKAG1, PTPRB, RALB, SETD2, SPHK1, STX4, SULT1A1, TAS1R3, TAS2R5, TNFSF14, TRAF2, TYROBP, UBE2L6, UNC5B, WNT8B, ATP6V0D2
Negative_13940	IHH, ACACA, ALCAM, ANAPC4, ARD1A, ARG2, BCL10, CACNA1I, CCND3, CD27, CPS1, CSAD, CSF3R, CX3CR1, CXCL5, CYP11B1, CYP2B6, DDIT4, ENTPD2, FABP1, GABARAP, GALK2, GDF6, GRIN2D, GSTK1, HA01, IL22RA2, IL23A, IMPDH2, MAP2K4, MCCC2, MGAT5, MMP7, MNX1, MRAS, MYH15, NANS, NEU4, OR10Z1, OR11H6, OR4A15, OR5I1, PAK1, PNPLA3, PPP2R5A, PPP2R5C, PRKCA, PRNP, PROC, RBPJL, RDH16, SEMA3E, SENP2, SH2D2A, SMC1B, SPAM1, SV2A, TAS2R60, TJP1, TSC2, TSNARE1, UCKL1, VAMP3, YWHAB, ATP6V0E1
Negative_13941	CD6, CKM, FGG, GP6, HK1, KHK, KMO, OAT, PVR, SRF, ACHE, ACSM2A, ACSM4, ACTN2, ACTN4, AGPAT1, ALOX15B, ATG7, BAAT, BAI1, CACNA1A, CASP6, CCNB1, CYP2A6, ECSIT, EHMT1, ENPP6, EPHA6, ERBB2, FGD3, FGFR3, GADD45G, GNPAT1, GP1BB, GUCY2F, HMOX2, HSD11B2, ICOSLG, IL13RA1, IL20RA, ITGAE, JAM3, KCNQ1, MINPP1, MYH10, MYH6, NAGA, NODAL, OR10H1, OR10K1, OR51G1, OR51I1, OR5AN1, OR8H3, OR8J1, OR8S1, PFKM, PGK2, PGS1, PHPT1, PLD2, POLD2, POLR2A, PPA2, PTK2B, RAB5A, RALA, RALBP1, RAP1B, ROCK1, RPN2, RUNX1T1, SARS2, SEMA4A, SFRP5, SOS1, STX1B, TIAM1, UGT2B28, UGT8, WNT10B, YKT6, YWHAB
Negative_13942	ADO, C2, GNS, TPR, ACSL6, ADH4, ADORA2B, ALDH1A3, ANAPC2, ATP2A3, C5AR1, CASP3, CAV3, CDK4, CHRM1, CSF2, CXCL1, CXCL2, CXCR5, CYP2C19, DDX51, DUSP14, FABP3, FUT5, GAD2, GCH1, GCNT4, GZMA, HAGHL, HA02, HPSE, IL17RA, INSRR, KITLG, LIPC, MRAS, NCKAP1, NEU4, NR5A2, OR14I1, OR1C1, OR1D2, OR4A16, OR51G2, OR5D16, OR7A10, PAX8, PGAM1, PGM1, PMM2, PRKG2, PTPN7, RARS2, RFX5, RPE65, SDHA, SESN2, SMAD3, STAT2, TAS2R49, TBXA2R, TGFB3, THBS2, TJP1, TNFRSF9, TUBB2B, UCK1, UCKL1, UGT2A3, XCL2, SERPING1, TNFRSF1B
Negative_13943	AK5, F12, GGH, GP6, LEP, MAX, RDX, SRM, TEC, TK2, AGRP, AHCYL1, ALOX15, ARNT2, ATP6VOC, CCNB2, CCR8, CD55, CHPT1, CNTF, COL3A1, CREB1, CYP2A7, DTX3, EARS2, EPHA6, EPHX1, FGF5, FM01, FPGS, GMDS, GNAZ, GSTM3, GSTO2, GSTP1, GUCA1B, GUK1, HAAO, HMGCS2, HSD11B2, HSD3B1, IAPP, IDH3A, IQGAP1, LIMK2, LIPA, LTB4R2, MAML3, MAOA, MARS, MPZL1, NMNAT1, NOTCH3, OLAH, OR10J5, OR1A1, OR4E2, OR51B2, OR52R1, OR5C1, OR7G2, OXSM, P2RX3, PARVB, PER2, PFKFB1, PIK3R5, PLAUR, PLD1, PNLIP, POLR2H, POLR2J, POLR3D, PPAP2B, PPARA, PPOX, PRKCE, PSEN2, RAC1, RASGRP2, RFX5, RIPK1, RPS6KA1, SARDH, SEMA7A, SKIV2L2, SRGAP3, TICAM1, TPK1, ULK3, WASF3, WHSC1L1, WWP1, ZIC2, PLA2G12A
Negative_13944	C4B, CFH, HYI, ITK, KIT, PML, ACSL4, ACTA2, ACVR1, ADH4, ADIPOR2, AKR1C2, APPL1, ATP6V1D, BMP8A, CACNG8, CAV1, CCL17, CCL20, CCND1, CCNE2, CD27, CD74, CDS2, CHUK, CLDN9, CPT1A, CTSL1, CXCR4, EHMT1, EPHA2, EXOC7, FDPS, GAD2, GCNT1, GSK3B, HMGCL, HSD17B4, IKBKG, IL12B, LRP6, MAPK7, MYH10, NEFM, NEU4, NOTCH1, NPR2, OR14I1, OR2A12, OR2A4, OR2C1, OR4K13, OR4K17, OR4M2, OR51G1, OR6T1, PANK4, PARD3, PARVA, PDXK, PERP, PFAS, PGK1, PGS1, PIAS2, PIP5K1A, PRKACA, PVRL3, RHEB, SDHC, SMAD9, SOAT1, SSH2, STAM2, STK36, TAS2R60, TPH2, UGCG, WNT3A, WNT7B, CACNA2D1, KIR2DL5A



Negative_13945	BCR, EPO, IL9, ACSL6, ACSM4, ADORA2B, AKR1C2, ARG1, ARPC5L, B4GALT6, CCL28, CCR10, CD8B, CDH4, CHIA, CLDN18, CMBL, COL5A2, CRKL, CRY2, CXC L6, CYP21A2, DHDH, DPYD, EFNA4, FGF7, FOXO3, FUT5, GGT7, GNAQ, GNAS, G STP1, HHIP, HMGCS1, IRF7, LGMN, MAP4K1, MAP4K2, MYLK, NEUROD1, NFATC 2, OR10T2, OR13C3, OR2T11, OR2T3, OR2T33, OR4C12, OR4K13, OR52E4, OR 52L1, OR52R1, OR5H6, OR5V1, OR6B3, OR7G1, PARD6B, PIK3R5, PLAU, PLD1 , POLR3G, PPP2R2B, PROC, RAC1, SMC1B, SULT1E1, TAS2R48, TGFBR2, TP53 , TPM3, TPMT, TUBA3E, TUBA4A, TUBA8, UGT2B7, UPRT
Negative_13946	BTC, CBL, CP, TAT, ADORA2A, ADSL, APPL1, ATP6V1D, BDH1, BDKRB1, BLVRB , CACNB3, CAMK2A, CERK, CSNK2A1, CYP11A1, ENPP1, FZD3, GPX7, GTSE1, G UK1, ICOS, IL10RA, IL11, IL18RAP, KLRC2, MCM4, MYH14, MYLK2, NEU4, NF YB, NTN1, NTRK1, OR1J1, OR2D2, OR4P4, OR6N1, OXTR, PAFAH2, PAPSS1, PA RD6B, PDE4A, PDE8B, PDE9A, PERP, PGAM4, PLA2G3, POLR2I, PPP3CA, PRKA B1, PTPN6, SETDB1, SLC33A1, SOCS2, SRGAP1, STX12, SULT2A1, TAS2R41, TUBA3E, TUBA4A, TUBB1, UGT2B17, UPB1, WARS, WEE1, MAPKAPK3, TNFRSF1 4
Negative_13947	ADA, AUH, EDA, LAT, RET, ACTG2, AGPAT2, AHCY, AOX1, ARNT, B3GALT5, B4G ALT1, B4GALT2, BMP7, CDK6, CES1, CLCA2, CTNND1, CXCL12, CYP11B2, DER L1, EFNA3, EHMT1, ENPP7, ENTPD2, EREG, FGF22, FLT3LG, FZD8, GCAT, GMP R2, GRHR, GRM5, HAGH, IFNK, IL17A, KLKB1, LYPLA2, MPDZ, MTHFR, NOS3, NUDT8, NUDT9, OR12D3, OR4L1, OR5AS1, OR8H2, PAX6, PDHB, PLXNB2, PPA2 , PPARG, PTSS2, RALB, RASSF1, RPS6, SCLY, SELPLG, SEMA4A, SFRP1, SMA D1, SMURF2, SOCS1, STX4, SV2B, TGFBR2, THBS1, TJP2, TRAF5, WHSC1, YWH AE, YWHAQ, MAP3K7IP2, PRICKLE2, SERPIND1
Negative_13948	AK1, APP, LPO, PDC, RB1, TNF, ACADL, AKR1B10, ALDH5A1, ALG12, APH1A, A RNTL, ASCC3, C1QB, CLCA2, CPT2, CYP3A43, CYP4A22, CYP4F2, DGKI, DHX5 8, DRD2, ENTPD7, EPHA1, EPHA3, EPHA7, FGF9, GALNT10, GALNTL2, GDF6, G NPNAT1, HPSE2, HSD17B2, HSD3B1, IFNA6, INHBA, INMT, INPP4B, JAK2, LE FTY1, MAP3K14, MAT2B, NCSTN, OR2G2, OR2T34, OR4C13, OR4D5, OR4P4, OR 51A7, OR5K1, OR8I2, PAK1, PIGP, PON2, PPP1R3A, PRSS3, PTPN1, RXRA, SE SN2, SETMAR, SHC1, SHISA5, SOS1, SPI1, SPTLC1, STX7, SUV39H1, TNFSF9 , TOMM40L, TPK1, TRAF3, ULBP3, YWHAQ, ATP6V1G3, B4GALNT1, SERPINA5, TNFRSF1A
Negative_13949	DCC, GAA, GSS, PGF, SMO, TH, ACTA1, AKR1B1, ALDH3B2, APOA2, BAIAP2, BD KRB1, CCL20, CCL28, CCNE2, CD44, CEBPA, CFL2, CHAD, CLDN14, COL1A2, C OX15, CRHR1, CSH1, CTNNA1, CTSS, CXCL9, CYP11B2, DOT1L, DPAGT1, EPB4 1L1, EPHA7, EPHB6, ERO1L, EXTL1, FOXA2, FRAT2, FUT3, FZD5, FZR1, GGCX , GSTT1, HSD17B7, IDI2, IKBKE, IL13, IL18R1, IQGAP2, LIPE, MAP3K14, M CM3, METTL6, MTHFD2, MYLK3, NAT2, NLGN2, NRXN2, OR1L1, OR3A1, OR4S1, OR51A4, OR51G1, OR51M1, OR52J3, OR52L1, PCNA, PHKG2, PIP5K1A, PLEKH A8, POLD1, POMC, PON1, PPP1R3A, PRIM2, PRNP, RAC2, RALA, RRAS, SARDH, SEMA7A, SLC27A1, SLC27A4, SMPD4, SOCS7, ST3GAL5, STK3, TALDO1, TAS2 R48, TNFSF10, TNFSF12, TSHR, TUBAL3, ULBP2, VANGL2, WEE1, WHSC1, ATP 6VOE1, CACNA2D4, SUV420H1
Negative_13950	ADK, DBT, DDC, EBP, FAH, SRM, AACS, AADAT, ACAT2, ACSL1, ACVR2B, ADSSL 1, AGRP, AKR1C4, ALDH1L1, ALDOB, ALG12, AQP7, ARNTL, ATP5L, B4GALT6, BCL10, CCND1, CCR8, CD38, CD48, CDK2, CLDN1, CSNK2A2, CSNK2B, DHRS3, DUSP10, EPHA1, ERBB2, FGF8, FLT3LG, FZD10, GALNT8, GALNTL5, GALT, HS D17B8, IAPP, IARS, IKBKG, IL5RA, IRS4, ITGAM, KITLG, KNG1, LAMB3, LIM K2, MAD2L1, MGLL, MLYCD, MYH7, NCK2, NPR1, NUDT9, OR13C9, OR1A1, OR1J 1, OR2AE1, OR2T33, OR4C11, OR4E2, OR4F4, OR51M1, OR56A4, OR7G2, OR8B 12, PAK2, PCCB, PDE5A, PIGQ, POLE, PPP2R2A, RPS6KA3, RPS6KA6, RPS6KB 1, SDHA, SEMA3D, SEPHS1, SOS2, SRGAP1, THTPA, TLR2, TOMM40, TRAF3, TS LP, TXNDC12, TYK2, VDAC1, WHSC1L1, WIF1, YWHAQ, AASDHPPT, GABARAPL2

Negative_13951	BTD, CFI, HK2, NLK, TXK, ACADM, ACAT2, ACSL6, ADAM10, ALOX15B, ALPI, A NPEP, ARPC2, B4GALT7, BDNF, CDH3, CSNK1G3, CXCL3, DCTD, DGKA, DLST, E PB41L2, FARP2, FPGS, FZR1, GALC, GALE, GATM, GP1BA, GRIN2C, GYS2, H6P D, HARS, HCST, HSP90B1, IFIH1, IFNGR1, IL12RB2, IL29, LPAR1, LRRC4C, MAN1C1, MAPK8, MCM4, MPZL1, NCSTN, NEGR1, NR5A2, OGDH, OR10G4, OR2A1 2, OR2T2, OR2V2, OR4K15, OR51E1, OR52A1, OR5P2, OR6A2, OR6C6, OR6K2, OR6S1, OR7G3, OR8B12, PARVB, PDGFRA, PFN4, PITX2, PLCD1, POLD4, PON2 , PRPH, PSEN1, PTCH1, PTGFR, PTPN6, SC4MOL, SEMA3F, SESN2, SGMS2, SKP 2, SMPD2, ST8SIA1, STAT2, STX18, SYNJ2, TRAF4, TSHR, ULK2, WHSC1L1, M APKAPK2, SERPIND1
Negative_13952	DBT, GLS, KIT, MUT, PLN, RPE, SPN, ACSL1, AHCYL1, ALG10B, AMPD2, ARG2, ATG12, ATP12A, B4GALT5, BCL10, CAPN2, CCNA1, CD274, CLDN17, COL5A1, COMT, CSNK1E, CTNNB1, CXCR6, CYP2A7, CYSLTR2, DHDH, DUSP3, DUSP8, EP HB6, GALNT12, GLI1, HCST, HRH1, HRH2, HSPA2, IL13RA2, IRS1, LAMB3, LA RS, MCCC2, MNX1, MYH7, MYLK, ODC1, OR1B1, OR2A25, OR2C3, OR2H1, OR2T3 , OR51D1, OR6C1, OR6C3, OR6C75, OR8S1, OR9G4, P2RX2, PAPSS2, PDE4B, P ER1, PGLS, PLA2G6, POLR3A, PPP2CA, PSENE1, PTPN6, RBPJL, SHC3, SKIV2 L2, SKP2, SMPD1, SNAP23, SOX17, SRGAP1, TACR1, TAP1, THY1, TICAM1, TN FSF18, TPK1, WNT8A, YES1
Negative_13953	BCR, C3, DAO, DCN, GH2, HGF, NLK, PDC, RET, ACAA1, ADCY4, AKR1C3, ALCAM , ALG10, B3GALT4, CACNA1A, CCL16, CHEK1, CRY2, CYP2C18, CYP4F3, DARS , DCXR, DEGS1, DGAT2L4, DLAT, DPM1, EP300, ETS1, FIGF, GALNTL2, GLS2, GNG3, GSTA1, HAO2, IDH3A, IL13, IL21R, IL29, IL4R, MALT1, MAP2K7, MAP 3K11, MAPK14, METTL6, MMP14, MS4A2, MYH2, NAGK, NME2, NOTCH2, OR10G4 , OR11H6, OR1Q1, OR2G6, OR2T29, OR4D1, OR4D6, OR4F4, OR51L1, OR5P3, O RC2L, PAFAH2, PANK2, PAPSS2, PDE5A, PDHB, PER2, PFKFB1, PPP1R3D, PPP 2R2A, PTGDS, RASSF1, RASSF5, ROBO2, RRAS, SCP2, SMAD1, SORD, SPRED2, SRGAP1, TAS2R4, TLR2, TNFSF8, TUBAL3, UPB1, UROS, VDAC1, YWHAQ, ATP6 V1C2, CACNA2D1, MAPK8IP2
Negative_13954	C1S, CGN, FER, GSS, SRM, ACSM3, ADRA1A, ADRB1, AGXT, AMDHD1, AOC3, CCK BR, CCL22, CCL4, CD8A, CD8B, DCTN1, DTX1, E2F5, EFNA3, EPHA3, ERBB4, F ARSA, FGF8, GCNT2, GIT1, GUCA1A, HSPA8, ICAM3, IL21, ITGA10, ITGB7, K LRC4, MCEE, MGAT4A, MGAT5B, MKNK1, NAGA, NFKBIB, NOTCH2, NT5C, OR10T 2, OR13C4, OR14C36, OR1J2, OR2G6, OR2L8, OR5AC2, OR9A4, PDE1A, PLCD4 , POLR2B, POLR3D, PPA2, RAD51, RPSA, RXRB, STX3, TAS2R1, UNC5D, WNT11 , ZIC2, PAFAH1B2
Negative_13955	C8G, CP, EPO, GP5, IL9, NOG, SMS, AADAT, ACAD9, AKT2, AMDHD2, ANAPC7, A TP13A2, B4GALT2, BAIAP2, BUB3, CAMK2B, CCR6, CD82, CHD8, CHUK, CPS1, CTBP2, DGKI, DHX58, DUSP2, ENO3, FMO1, FUT9, GAL3ST1, GDE1, HAGH, HNF 4A, IDH3G, IFNA21, IFNGR2, IL1B, INHBE, IPPK, ITCH, KLRC4, MAP3K11, M AP3K7, MGLL, NQO1, OR1D2, OR2L8, OR4C15, OR51D1, OR51L1, OR5H2, OR7A 5, P2RX3, PHGDH, PLK1, PRKAR2B, PRNP, RPE65, SC4MOL, SEMA3E, SGPP2, S LC12A2, SMAD5, SPP1, STK36, TLR5, TUBB3, TYK2, ULK1, WNT3, XYL B, ATP6 V1G1, CTNNBIP1
Negative_13956	BID, CEL, CTH, SFN, A4GALT, ABP1, ACHE, ADH1A, AGPAT1, ARPC1A, ARPC5L , CAV2, CD47, CMBL, CSF2RB, CXCL5, CXCR6, CYFIP1, CYP1A1, DDX51, DGKE , DGUOK, DHCR7, DMGDH, DPM3, E2F2, EGLN3, EPHA3, GRHPR, ITGAV, LEFTY1 , MTMR1, MYH7B, NFE2L2, NLGN3, NR5A2, NRG2, OR2G2, OR2L8, OR2T10, OR2 T5, OR4B1, OR52N1, OXCT2, P2RX4, PAK4, PLCD1, PPA2, PRLR, RPSA, SCD5, SEMA3B, TGFB3, UGT2B28, VDAC3, WNT3A, HSP90AB1

Negative_13957	IL7, ACADM, ADCY10, ADH7, ALDH1A2, ALPPL2, B3GALT1, BCKDHA, CD58, CHIA, CISH, CLDN10, CTF1, CXCL1, DDX23, DDX51, DGKH, EFN1, EHMT2, FGD3, GAD1, GDF6, GLI2, GNA12, GP1BA, HCLS1, MAPK11, MINPP1, MMP2, MMP7, MOV10L1, MYD88, NFKB2, NMNAT3, OR1B1, OR1J1, OR2H2, OR52J3, PAX4, PHKA2, PIGS, PLA2G2E, PLCE1, POLR2F, POLR2I, PYGL, TBL1Y, TLR4, TPMT, WHSC1, XCL1
Negative_13958	CSK, MPL, SP1, TEC, TK1, ACAT1, AGPAT4, ALAD, ALG8, ASPA, B3GALT4, BDH1, CANT1, CD40, CD48, CFL2, CHPF, COL3A1, CTTN, CX3CR1, CXCL1, CYP1A1, GAL3ST1, GNRH1, GRIA1, HARS, HLA-DOA, ICOS, IFNA2, IL1RAP, IL2RB, IRAK4, ITGB8, KLRC2, LAP3, LILRB3, LMO7, MAP3K13, MLYCD, NEU3, NFATC2, NFATC3, NKD1, NT5C, OR10H1, OR10J3, OR11H1, OR13C9, OR1J1, OR2AG2, OR2T11, OR2T12, OR52N2, OR52R1, OR5B17, OR5L1, OR6X1, OR9A2, PAK6, PGM1, PMVK, PSME3, PSPH, RASSF1, SMAD1, SSH1, SSX2IP, STMN1, STX1B, TAS1R3, TM7SF2, ULBP1, VAV1, WNT16, WNT8B, WWP2, CACNA2D3
Negative_13959	C9, CKM, CP, DDO, EGF, F2, HPD, KHK, MPI, SI, ZYX, A4GALT, AQP7, AREG, ARPC4, ASMT, ATG3, B4GALT6, BCMO1, BMP6, BPGM, CACNA1F, CCL5, CDC20, CHDH, CYP27A1, DDX55, DERA, DGUOK, EXTL3, FLT3LG, GALNT1, GNAI2, INMT, IRAK1, ITGA4, LDHD, LGMN, MAP3K7, MDH2, METTL6, MYH4, MYLK2, NRCAM, NT5M, OR2F1, OR2T4, OR4F4, OR4N4, OR51B5, OR52A1, OR8A1, PDE9A, PFN1, PLA2G5, PON3, PPP1R3A, PPP2R5E, PPP3CA, PPP3CC, QARS, RAD51, RARS, RFXANK, RPSA, SCD5, SLIT2, SSH1, STAM2, TAS1R3, TIAM2, TJP2, TRADD, VEGFA, VNN1, WEE1, YKT6, PHOSPHO1, SERPING1, TNFRSF1A
Negative_13960	C8B, DHH, HGD, ACSM1, ACTN1, ADORA2B, AHCYL1, AKR1C3, AKT3, ANAPC10, APBB1, ATP5I, B4GALT7, CACNA1E, CASP6, CCL3, CCR3, CLDN19, CSNK2A1, CYP2B6, DUSP7, EHHADH, FGF4, FLAD1, FM05, FTH1, GGPS1, GGT6, GNG12, GRM5, GSTA5, GSTP1, HMGS1, IL22RA1, JUND, LAMB2, LMO7, MDM4, NCAM2, NODAL, NTF4, NTSR1, OPLAH, OR10X1, OR1J1, OR2A2, OR2D2, OR52D1, OR5D18, OR8S1, ORC4L, OXCT2, OXSM, PDK1, PIAS1, PLCB4, PMM2, POLR2H, PON3, PORCN, PRKAG2, PTDSS2, RPS6KA4, SHISA5, SLC9A1, STAT4, TRIP10, UCK2, WASF2, YARS
Negative_13961	ATM, DDC, F12, LEP, LTB, NGF, OSM, TNN, ACY3, AGPAT3, ALPPL2, ATP2A1, BMP7, C3orf10, C4BPB, C5AR1, CACNG8, CCL1, CLDN9, DGKZ, DTX3L, DVL2, EPOR, FGF17, FGF2, FZD1, GRIA2, HRAS, ICOSLG, IFNA8, IL23R, ITGAX, KIR2DS4, LIPF, MAP2K5, MAP3K8, METTL2B, MTHFD2, NANP, NCR2, NFKB1, NRXN2, NTF4, NUMBL, OR10X1, OR1M1, OR2D2, OR2T29, OR51D1, OR51I1, OR52E6, OR5D16, OR6T1, OR7D2, OR7D4, P4HA3, PFKP, PFN1, PHKB, PLAT, PLD1, PPP1CB, PRPS1, STX10, SV2B, TLN2, TRAF5, TUBA3E, GABARAPL2, PPARGC1A
Negative_13962	C2, CFD, DCT, IL7, ITK, MPL, ADCY3, ADSL, ASAH1, ATP5B, CACNB2, CFL1, CHPF, CHST13, DGKQ, EDAR, ENTPD4, EP300, GDF6, GJA1, GPD1L, HPRT1, HSD17B2, IFNA21, IL17A, IL18, ITCH, KCNQ1, MYH2, NAT1, NLGN2, OR10A3, OR10A7, OR1G1, OR1Q1, OR1S2, OR2W1, OR5AS1, OR6C75, PDIA4, PGAM4, PIGM, PLCZ1, POLR2L, PPAP2B, PSPH, PTCRA, PTDSS2, PTPRZ1, PYCR1, PYGM, RBKS, RELA, SMAD7, SNAP25, SSH1, STX2, TICAM1, TNFSF18, TSC2, UPP1, YWHA, ATP6V0D1, HSP90AA1, HSP90AB1, PRICKLE2
Negative_13963	BTD, CAD, DCT, DHH, FYN, GLA, SFN, TK2, ACHE, ACSL3, AMY2B, ATP5D, B3GALT4, B3GAT1, CACNA1I, CASP10, CCR9, CDC42, CFTR, CTBS, CYP1A1, CYP2A7, DDX56, EPHA5, FASLG, FRAT1, IL12RB2, IL13RA1, LIFR, MADCAM1, MDM4, NRAS, OR10P1, OR2A12, OR2F1, OR2T5, OR4C13, OR4K1, OR56A1, PGAP1, PI5K1A, PLTP, POLR1D, PRKAB1, PTPN7, RAPGEF3, RUNX1T1, SUOX, TGFB3, TRAF4, UGCGL2, UGT2B7, ATP6V1B1, CACNA2D2

Negative_13964	F8, GLA, IHH, IL4, AACS, ABI2, ABL1, ABL2, ADIPOR2, ADSSL1, ALDH4A1, AMPD3, AMY2A, ARNT2, ATG3, ATP5G1, AXIN2, B3GALT2, BMPR1A, BUB1, CCR3, CDK4, CHUK, CISH, CMAS, CSF1R, CTBS, CX3CR1, CYP1B1, ELK1, ENTPD4, ENTPD5, EPHX2, FGD1, GALNTL1, GLB1, GRLF1, IDH3G, LAP3, LIAS, MAN1A1, MYH13, NCSTN, NRG3, OR10T2, OR10Z1, OR2A4, OR2T1, OR4C46, OR5A51, OR9G1, PDGFD, PGK2, PIAS1, PISD, POLE2, POLR2H, PPP1CB, PPP2R5B, PRKCQ, PTDSS2, RPS6KB1, SCP2, SEMA4G, SETD1A, SLC25A5, SLC2A4, SMPD1, STK36, TALD01, TRAF4, TSTA3, TUBB4Q, UAP1, UPP2, WASF1, YOD1, YWHAQ, CACNA2D3
Negative_13965	AK2, DCK, GSN, LCK, LPL, SI, ACADSB, ACSM5, ACYP1, ADCY5, ADSSL1, ALDH9A1, ASRGL1, ATP2A3, BMP5, CACNG3, CDK6, CERK, CHRM2, CISH, CLCA2, CREB1, CREB3L3, CSF1R, CTNNA3, CUL1, DAXX, DHRS4L2, DHRS9, ENTPD3, EPHX1, F2RL1, FUT2, G6PC, GALNT6, GATM, GGT1, GLB1, GNA12, GNPDA2, GSTA4, GSTA5, GYS1, HADHB, HA01, HTR6, IL25, INPP4A, IQGAP1, ITGA9, KAT2A, LAMA3, LFNG, MAPK1, MAPK14, MICA, NEU2, OR10H5, OR10S1, OR13J1, OR1C1, OR3A3, OR4D11, OR4D6, OR51Q1, OR5L2, OR7G1, PAX4, PIK3R3, PLOD1, PMVK, PRKCZ, PTPMT1, SARDH, SDC3, SFRP5, SOS2, SSH3, TAS2R38, TJP3, TP53, TSC2, VTI1A, ATP6V1E2, CACNA2D1
Negative_13966	C8A, F10, SYK, TNN, VCL, ACAT1, ACP1, ADAM10, ARPC5, ARRB1, B3GALT1, CD72, CDK5, CES7, CHKB, CNTN1, CX3CL1, DDOST, DPYSL2, ER01L, FECH, FLT3LG, GDE1, GLB1, GSTO1, IMPDH1, ITGA9, ITPK1, MCCC1, NAGS, NRG4, OR10A2, OR10H5, OR1J1, OR51G2, OR52I1, OR52N1, OR52N5, OR6K6, OR9A2, PDE1C, PRPS1, RAD51, RPS6KA5, SARS2, SCD5, SLIT1, SOS1, STK3, SYNJ2, TFDP1, VAMP4, XYLT1
Negative_13967	A2M, BID, CTH, EPO, HPD, SFN, TAT, AADAC, ACOX1, ALOX15, ALPP, ARHGEF1, ARPC1A, BCKDHA, C3orf10, CAMK2D, CAPN2, CASP8, CCR3, CDKN1A, CLDN20, COL4A4, COMT, CXCL1, CXCL9, CYBB, DARS2, DFFA, DPM2, ENPP1, ENTPD7, FLT3LG, FZR1, GAD1, GPLD1, HDAC2, HSD17B8, IPMK, IRS1, ITGA8, KITLG, LMO7, MGLL, MRAS, MTMR1, NCR3, NFATC1, NFATC3, OR4B1, OR5AR1, OR5T2, OR7A5, OR8D2, OR9G4, P4HA2, PI4KA, PIGN, POLE, POLR2K, PPAP2A, PPP3R1, PTDSS1, RDH8, RELA, SFRP2, SREBF1, UNC5A, UNC5C, XYLT2, YWHAB, YWHAE, CACNA2D1, HSP90AB1, PNLIPRP2
Negative_13968	CD2, CR1, IL7, LIF, SFN, ALCY, ACTA2, ACYP2, ADH4, ADSS, ALDH9A1, ALDO C, ASCC3, ATP5B, BET1L, BTRC, CCND1, CD40LG, CD74, CD79A, CISH, CLTCL1, CRLF2, CSAD, CSDA, CTBP2, CTSS, CYFIP1, CYP4F2, DAAM1, DMGDH, DTX1, DUSP1, FGFR3, FLT3LG, FM04, GAD1, GALNT13, GATM, GNB1, GNRHR, GPT2, HSPB1, IBSP, IFNAR1, IKKBG, IL12RB2, IL21, IL24, IRAK1, ITGB8, KLKB1, LDHC, LIPT1, MAML2, MGLL, NADK, NOS1, NOS3, NUDT8, OR10G9, OR2M3, OR2Y1, OR4D1, OR52N2, OR7D2, OR7G3, PAX4, PCK2, PCYT1A, PDCD1, PDHB, PGK1, PLAT, POLR2C, POLR3G, PTPN1, PTPN7, SAT2, SC5DL, SLC27A1, STX3, SV2B, TAS2R14, TICAM2, TRIP10, UBE2K, WHSC1L1, WNT10A, ATP6V1B1, ATP6V1C2, CSNK1A1L, GABARAPL1, KIR2DL5A, TNFRSF12A, TNFRSF18
Negative_13969	ADC, CEL, EBP, ID2, LYN, ABLIM2, ACAD9, ACTC1, ADCY4, ADCY6, ALDH3A1, ALPP, ANAPC5, AREG, B3GNT4, CACNA1S, CASP6, CCL14, CCL22, CD79B, CDC7, CDK7, CDS2, CHST13, CLCA4, CYP27A1, DAG1, DARS2, DIAPH1, EIF4E, FADS2, FGF12, FGF20, FGF5, FM01, GALNS, GALNT2, GFAP, GNG12, GSTP1, GUCY2C, HDAC1, HSPA2, IDH3B, IFNA16, IPMK, ITGA1, KYNU, MAP2K2, MAP2K4, MAP3K8, MDH2, MTFMT, NFKB1, NOX3, OR13C5, OR2T10, OR2T4, OR4D5, OR4F5, OR4K1, OR52I1, OR6F1, OR9I1, PANK2, PDE5A, PGM1, PLA2G2F, PLCB2, PLOD2, PNPT1, PPP1CC, PRKCA, PSME1, PSME2, PTGS1, QPRT, RPS6KA3, SEMA3B, SESN1, SGMS1, SGMS2, SRD5A2, STK3, STX4, SUCLG1, TAS2R40, TRIP10, TSHR, TYK2, ARHGEF12, ATP6V1G1, SERPINE1, TNFRSF10A, TNFRSF10B

Negative_13970	ADC, FH, GGH, LCT, LSS, SDS, ABLIM1, ACADSB, ADORA2A, ALG10B, ALG6, ALG9, APOA2, BBC3, BCAR1, CACNA1A, CACNG4, CDC26, CLDN7, CPOX, CPT1C, CXCL6, CYP2S1, DGAT2, DNMT3B, DPAGT1, DUSP8, ENO2, ENPP7, EPAS1, EPHA8, ETNK1, EXOC7, FGD3, FGF13, FPGT, FUT1, GANC, GNPAT1, GPT2, HMGCS1, HSPA1B, IDI1, IFNA14, IL10RB, ITGA11, LIPE, LYZL1, MBL2, MGST3, MPP5, MTAP, MYH10, MYH15, NCOA4, NEUROG3, NRG4, OR10H5, OR1J2, OR1L6, OR4C12, OR4D9, OR51E2, OR8B8, OR8G1, PIGX, PIK3CB, PLCB4, PON1, PPAT, PVRL2, RASSF5, RBL2, RBPJL, RELB, SAT1, STAT5B, STX16, TNFSF18, TUBA3E, UNC5A, UROC1, UROS, VDACC2, WNT2, EIF4EBP1, TNFRSF10A
Negative_13971	BID, GH1, GPT, INS, LPL, ME1, NNT, PML, ACMSD, AKR1B1, ALDH1A3, ARD1A, ARPC1A, ASCC3, ASPA, ATP5F1, ATP5O, BMP8A, CACNA1H, CARS2, CDK7, CDKN1C, CDKN2D, CX3CL1, CXCR4, DUSP9, FABP4, FARSB, FIGF, FUT4, GALNT14, GMPPA, HDAC1, IL1RAP, LEPR, LIPC, LYPLA1, MAOA, MAPT, NFASC, NRXN3, NT5C1B, OR10A7, OR10H5, OR1A1, OR1S2, OR2A5, OR4K14, OR9K2, PDE1B, PDXK, PER3, PHKB, PLA2G2A, PMAIP1, PPP2CB, PRPH, RDH16, SETD1B, SH2D1B, SOCS3, SPRED2, SSH1, TICAM2, TLR3, VANGL1, WIF1, XYLT1, ARHGEF12, PAFAH1B3
Negative_13972	CD2, IL6, IVD, MOS, PGP, PRL, TNR, TPR, ACOX1, ADORA2B, APOA1, ASIP, ATP5A1, CBR1, CDKN1A, CDKN2B, CLDN15, CLDN19, CYP2U1, DAXX, DTYMK, DUSP6, EARS2, EPHX2, FARSB, FDPS, FGD1, GYS1, HSD17B3, IDUA, IGF1, ITGA4, MCCC1, MGAT1, NCF2, NSD1, OR3A2, OR4X2, OR5A1, OR8U1, ORC2L, PDE3A, PDE4A, PFN1, PI4KB, PPP2R1B, PRKAG2, PTCH2, RXRG, SETDB2, SLC27A1, SRGAP2, TAS2R16, WASF3, WNT6, WWP2, ATP6V1B1
Negative_13973	A2M, ADC, CP, DAO, DBH, DLD, EGF, FER, GHR, RPE, ADCY7, ALG6, ARHGEF6, ATP5E, ATP6AP1, B4GALT5, BBOX1, CBR1, CCKAR, CDC45L, CNGB1, COASY, COL5A1, CTBS, CYP11B2, DCTN1, FMO3, GALM, GCAT, GNAL, GSK3B, HAP1, HEXA, HSD17B3, HSD3B7, IL13RA1, IL13RA2, IMPA2, ITGA4, ITGAX, KRAS, KYNU, LDHA, MAD2L2, MAOA, MAPK14, MYD88, NCR3, NUMBL, OR12D3, OR13C4, OR1N1, OR2A5, OR2V2, OR4C11, OR4D11, OR4D2, OR52B6, OR5F1, P2RX1, P2RX5, PAK1, PCYT1A, PDE4A, PDHB, PDXK, PFN1, PLA2G2A, PLA2G6, PPA1, PPP3CB, PRK CZ, QARS, SFRP1, SKP2, SLIT2, ST8SIA1, TNFSF14, TNXB, ULBP2, XYLT2, HLA-DQB1
Negative_13974	F10, F9, LHB, MUT, NPL, OGT, RFK, ACP5, ACYP1, AK3L1, AKT3, ALDH5A1, CACNG4, CAMK2A, CCKBR, CDC42, CDH2, CHKB, CLCA4, CNDP1, DERL1, DHRS9, FABP1, FLOT1, GSTA5, GSTK1, GSTP1, HADHA, IL7R, ITGAE, KARS, KDSR, KLRD1, KYNU, LFNG, MECR, MYL7, NOTCH3, NRG2, OR13C8, OR2T34, OR2Y1, OR4K15, OR5C1, OR6Y1, OR8H2, PDE4B, PDXK, PDXP, PGAP1, PHKG2, PIGA, PIGH, PLXNC1, POLR2E, PSENNEN, PTCH2, RPS6KB1, RUNX1T1, SESN2, SHMT2, SULT2A1, TAS2R14, TBL1XR1, TOMM40, TRAF4, TYMP, UPP2, WIF1, MAPKAPK3
Negative_13975	AGK, AK3, FH, GDA, ID2, ACAT2, ACTN4, ADRA1D, ALDH1A2, ALDH3A2, ANGPTL4, ARAF, CCL11, CCL26, CCL7, CD36, CD79B, CIITA, COL11A1, CREB3L3, CREB3L4, CTBP1, CYP3A5, E2F3, EFNA4, EHMT1, EXT1, FABP4, FLT4, FZR1, GNAI3, INHBC, ITPKB, LIMK2, LRAT, MNX1, MYL7, MYLK, NAT5, NFKBIB, NRP1, OR10A7, OR4L1, OR5D16, ORC5L, PAFAH2, PDK1, PEMT, PHGDH, PHKA2, PLA2G5, PLCB4, POLR2G, PRKAA2, PROC, RPS6KA3, SETD1B, STX1A, TAS2R40, TRAF1, TRAF2, TRPC1, UPRT, UROC1, VAMP4, VAV3, WNT2, PPP1R12A

Negative_13976	APP, CAD, FAS, HGF, HK2, PVR, UBB, UBC, ACOX2, ACSM3, ADCY2, ADCY4, ADCY9, ADIPOR1, ALDOA, ARG1, ARSB, ATP6V1D, BCL10, CACNG6, CCL16, CCL25, CCL5, CD38, CD44, CDC6, CD01, CMAS, COL4A6, COMT, COX10, CTSS, CYP2U1, CYP3A7, DHDH, DIAPH1, DOT1L, EFNA3, FLT3, FMO3, FZD1, GALNT11, GFA P, GLYCTK, GNA14, HMGCS2, HPSE, HSD17B1, HSPA2, IARS, IFNGR1, IL1RAP, IQGAP2, KCNJ11, LARS, MAD2L1, MYL7, NCR3, NEFH, NFYA, NRP1, OR1Q1, OR4M1, OR52E4, OR6C74, P2RX7, PANK1, PFN2, PIK3R3, PLA2G5, POLR2K, POLR3A, PPP2R2C, RPS6KA3, RUNX1, SEMA4G, SGPP2, SHC2, SPRY4, TAS2R38, TAS2R50, TNFRSF9, TSTA3, ULBP3, VEGFC, WARS2, WNT10B, XCR1, XYLT1, KIR2DL5A
Negative_13977	SPI1, TYR, ALDH1L1, ANAPC4, ARHGEF6, ARSE, ATF2, BMP8B, BPNT1, C1QC, C4BPB, CADM3, CCL15, CCNG2, CNTN2, CTLA4, CXCL6, CYP2A13, DEGS1, EPHA5, G6PC, GALNT6, GJA1, GSTM1, HIF1A, HSPA8, HTR4, IFNA10, IL11, IL2RA, ITGA7, KIR2DL1, MTHFR, MYH1, NKD1, NMNAT1, NUMB, OR13C4, OR2L2, OR52N4, PAK4, PDHA1, PIGS, PIGU, PIK3C2G, PIK3CA, PITX2, PPID, PSEN1, SESN1, SPAM1, SRGAP1, STK11, UGT2B17, VANGL1, VEGFA
Negative_13978	CD6, GPI, HYI, IL2, JUP, MVD, ACTN4, ACVR2B, ARHGEF1, BCL10, BDKRB2, CNB1, CCNG1, CHIT1, CHST13, CLDN1, CLDN20, CNTFR, COL1A1, CYCS, CYP11B1, DUSP9, FUT8, GALNTL4, IDH3A, IKBKE, IL10RB, IL21R, LDHA, LDHD, MAP2K7, MAP3K3, MMP9, NT5C3, OR1C1, OR1G1, OR1L8, OR2M2, OR4B1, OR52N1, OR6C6, PFN4, PGM2, PIGF, PLCD4, PLCE1, POLR2D, PVRL3, RDH11, SCP2, SEMA3D, SETDB1, SETDB2, SNAP23, SPRED1, TAS2R38, TBL1XR1, TOLLIP, TRAF2, TSC1, TUBB2B, XYLB, XYLT2, ZFYVE16, ATP6V1B1, PAFAH1B3
Negative_13979	CGN, ILK, LTB, PC, TAT, TXK, UBB, AGTR1, ARPC1B, ATG12, ATP5E, B3GNT4, BCKDHB, CACNB2, CASP6, CD79A, CD80, CDC16, CHSY3, COMP, CYP2C8, DAPK2, DDX55, DGAT2L4, DHODH, DHRS4L2, E2F5, ENTPD3, EPHA1, EXTL2, FGF11, FUT2, GABARAP, GART, GFPT2, GMPS, GNRHR, GPD2, GSK3B, GSTM2, HAO1, HLA-DRA, HTR7, IDI1, IL12A, ITGAD, ITGB4, KCNQ1, KIR2DL2, KIR2DL4, LCMT2, LDHAL6B, LDHD, LTBP1, LTBR, MAP3K12, MAP3K6, MGAM, MTFMT, MYH11, NCKAP1, NFKB1, NFKB2, NFX1, NME4, NMNAT2, NPAS2, OR10G3, OR11H4, OR14C36, OR2B6, OR2T3, OR2T33, OR51A2, OR51E2, OR5D18, OR6X1, PARS2, PFKFB1, PIP4K2B, PLA2G3, PRKAR2B, PTGIS, PTGS1, PTPN1, PVRL1, PYCRL, SELP, SH2D2A, SOS2, SYNJ2, TAS2R9, TPH2, ULK2, UPB1, YWHAG, CACNA2D4, TNFRSF10D
Negative_13980	F12, LEP, MAX, MOS, NPY, ACAT2, ACSL6, ALG3, ALPPL2, AMDHD1, AOC2, ARD1A, ARHGEF7, ASS1, ATG3, C3AR1, CASP10, CASP6, CCL11, CCL13, CD01, CES1, CFTR, CHD8, CKS1B, CLDN8, CLDN9, CYP2U1, DGKD, DPM1, DUSP14, DUSP3, ECSIT, EDNRA, ENO3, ENPP7, ENTPD1, ENTPD7, GALNT11, GALNT2, GCNT1, GCNT2, GNAI1, GP1BB, GSTA2, GSTK1, GSTT1, GUCY2D, HNF1A, HRH2, IL13RA1, IL28RA, IRAK4, ITGAE, JAK1, LRAT, MAP2K2, MMP9, NCKAP1L, NRG1, NRG2, NTF3, OR10G7, OR11I1, OR2T11, OR2T8, OR4A16, ORC3L, OXTR, PDE6G, PDE8B, PGAM2, PGM3, PIM2, PLCD3, POLR3D, PRKCQ, PTPN6, PYGB, QARS, RENBP, RRM1, SC5DL, SLC27A1, STAM2, STAT1, SV2A, SV2C, TAS2R49, TM7SF2, TRHR, TUBAL3, UBE2L3, UGT2B28, WNT3A, HSP90AB1
Negative_13981	DAO, FES, HGD, ALPL, ANAPC5, ARNT, B4GALT1, BHMT, BMPR2, CACNA1C, CAR3, CD8B, CDC26, CDK5, CLTA, CREB1, CREB5, CYP2J2, DDX55, DFFA, DGKI, ENO3, EP300, ERBB2, FGFR1, G6PD, GPT2, GSK3B, ITGA2, ITPKB, KIR3DL2, MAP3K5, MAPK1, MAPK13, MGLL, MYH11, NT5C, NTN1, OR2A14, OR4L1, OR4M1, OR5H6, OR8D4, OR8H1, OR9K2, PIP5K1C, PLA2G2D, PLCB1, RASSF1, SEPHS1, SMPD4

Negative_13982	<p>AMT, CP, TNC, ABI2, ACSL1, ACSM1, AHCYL2, AKR1C1, AMDHD1, ANAPC4, AOC3, BCL2L1, BUB1, C1QB, CANT1, CASP7, CCL7, CD19, CDH15, CDKN2D, CHD8, CHEK1, CLDN17, CLTC, CNGA3, CPOX, CXCR6, CYCS, DDX23, DRD5, EFNA5, EHMT1, ENTPD6, FUT7, GCH1, GDE1, GJD2, GMPPB, GNB1, GUCY1A3, GZMB, HDAC2, HLA-</p> <p>DOA, IARS2, IFNA10, IL12RB2, IL24, IMPDH2, IRF9, ITGA3, ITGB8, LILRB3, MAGI1, MKNK2, MMP9, NAGA, NCAM2, NEU3, NFATC2, NME2, NTRK1, OR14C3, OR2T10, OR2T8, OR4A16, OR52I1, OR52I2, OR52J3, OR5L1, OR6B2, OR6C1, OR6K3, PDGFD, PIGX, PIPOX, PNPO, PPCDC, PPOX, PTGES2, RAC3, RASGRF2, SDC3, SLC2A2, SOAT2, SOCS1, TRDMT1, TUBAL3, TYK2, WIF1, GABARAPL1, HLA-DPA1, TNFRSF13C</p>
Negative_13983	<p>ABO, BTD, CGN, FAH, HK3, OAT, PGD, ABL2, ACAA1, AGPAT1, ALPPL2, AMPD1, AREG, BCKDHB, BMP7, CACNA1E, CAMK2G, CCL15, CCNB2, CCNE1, CD19, CDKN1A, CNGB1, CXCL13, CYBB, CYP7A1, DIAPH1, DLL1, E2F2, EPHA2, EPHX2, F13B, G6PC2, GNAI3, GNAS, GSTZ1, GUCA1B, HIP1, IAPP, ITGA3, KCNJ11, KIR2DL3, KLKB1, MAD2L1, MAPK11, MTHFS, NAT5, NCSTN, NEU2, NFKB2, OR51T1, OR51V1, OR52E4, OR52E6, OR52N4, PAK6, PCYT1B, PCYT2, PDCD1, PDE8B, PDHA1, PDIA4, PFKM, PFKP, PGAM2, PGM1, PIAS4, PIGX, PLOD2, PPAP2C, PRKAG1, PRKAG3, PRNP, PTGES, PVRL2, RAC1, SARS, SCD5, SLC12A2, SLC27A1, SMURF1, SQLE, STX1A, TAS1R3, TAS2R10, TAS2R13, TNFRSF9, TRAF4, TSC1, UBE2L3, VASP, XYLB, YWHAH, SERPIND1, TNFRSF6B</p>
Negative_13984	<p>BCR, HDC, LTB, SMS, TXK, AKR1C4, ALG11, APOA1, ATP6V1A, BCAT1, CACNG5, CALML3, CARD11, CASK, CASP7, CCL3, CCL8, CHSY1, CLDN15, COMT, CTSB, CYBB, DHRS3, DNMT3A, DOLPP1, ENAH, FGF1, FGF3, FSHB, GGCX, GMPR2, GNA T3, GNAZ, GRPR, HES1, HSD3B2, ICOSLG, IFNA16, IL23A, INPP5B, ITGB4, JAK3, LCAT, LEPR, MAP2K7, MAPK10, MAPK11, MGAT2, MGST1, MGST2, MTRM2, NAE1, NAT1, OR13A1, OR1A2, OR2M5, OR4K14, OR5AC2, ORC4L, ORC6L, PCNA, PFKP, PIK3R5, PIP4K2C, PLA2G5, PLEKHA8, POLD4, POLR2I, POLR3K, PPA P2B, PPP2R1B, PPP5C, PRKACB, PRSS1, PTPN1, PTPRJ, RASGRP1, RBL2, RENBP, RIPK1, RXRG, SARDH, SHC3, SHMT2, SPRY2, STX1B, SV2C, TJP1, TNFSF14, TNFSF9, TXNDC12, TYK2, UPRT, WIF1, ATP6VOA4, HLA-DPA1, HSP90AB1, TNFRSF1B</p>
Negative_13985	<p>BID, CKB, CSK, AASS, ABAT, ACRYL, BMP4, BMPR1A, CDH1, DAAM2, DGAT2, ECSIT, EPHA6, FECH, FGF5, GALM, GBGT1, GNAI3, GRLF1, INPP4B, IRAK3, MLYCD, MYL7, NFYA, NUDT8, NUMBL, OR10A7, OR11H4, OR1L1, OR52A1, PFKFB4, PGAM4, PIK3R3, PIP5K1B, PKLR, PNPT1, PRKCH, RASGRF2, RPS6KA3, RUNX1T1, SESN3, SLC2A1, SUCLG1, SULT1A4, TAS2R16, TAS2R49, TLR9, TYRP1, ATP6V0E1, PLA2G12A, PPP1R12A</p>
Negative_13986	<p>AK1, C3, F9, LTB, OSM, PAH, AADAC, ACO1, ACTG1, ADRA1D, AGPAT1, ALDH3A1, ARSB, B3GNT3, BPNT1, BUB1, C1QA, CCKBR, CD99, CLDN19, COL6A1, CSDA, CYP2J2, DGKG, DUSP6, EFNA1, FZD10, GDF6, GNG13, GRIN2D, HARS2, HEXB, HIP1, HMBS, HTR6, ICOS, IDH3A, IL10, IL2RA, IL8RB, IRAK1, LCAT, LLGL2, MAD2L2, MPZL1, MYH15, NCF1, NCOR1, NODAL, NOS1, ODC1, OR2A5, OR2B2, OR2T5, OR4C11, OR4S2, OR6B3, OR8A1, OR9A4, PLA2G4A, PLCG1, POLD4, POLR2I, PRKCE, RRM1, SIPA1, SNW1, SOCS4, SPAM1, SRGAP3, STX6, SULT1A1, TACR1, TFPI, THTPA, TXNDC12, UCP1, UGP2, ULBP2, WHSC1, WNT10A, ALDH18A1, ATP6V0A2, ST6GALNAC6</p>

Negative_13987	GGH, GH2, IVD, LEP, NPL, PDC, ACADVL, ACOT11, ACOX1, AKR1B10, ALG9, AL OX12B, APAF1, APOC3, ATG3, ATP5E, B3GNT3, BMPR1A, CACNB4, CHKA, CLOC K, CMPK2, CTNND1, CTPS, DARS2, DHRS4L2, E2F4, EGFR, EXT1, FZR1, GALNT L5, GDF5, GLI3, HAO2, HIP1, HMGCS2, HNF4A, HSD17B4, IFNA6, INPP1, ITP K1, ITPKA, LARS2, LRAT, MAFA, MPST, NEFL, NEU2, NME6, NT5C1B, OR1L3, O R1L4, OR52W1, OR5H2, OR5T2, OR6C1, P4HA3, PAICS, PAK4, PDGFC, PI4KB, PIK3C2A, PIK3CB, PIP5K1C, PLAT, PLCG2, PLD1, POLR2A, PVRL4, RPS6KA3 , RRAS, SHMT1, ST3GAL4, TPH1, TUBA1C, TYK2, UBE2L3, WNT7A, ST6GALNAC 5
Negative_13988	AK7, CAD, CKM, GDA, HK1, LAT, MPL, PDC, SDS, ACAT2, AHCYL1, ALDH1L1, AN APC5, APOA2, APOC3, ASIP, ASPA, AVPR1A, CARD11, CAV2, CCNE2, CHIT1, C LTA, CSNK2A2, CTF1, CTSB, CXCL6, CYP21A2, CYP26A1, DOCK1, DPAGT1, DP YSL2, ECSIT, EDNRB, ENTPD4, GLUD1, GNG3, GPX7, GSTM3, HLA- DOB, HMGCS2, HRH1, IL12B, INPP4B, ITGAD, KCNQ1, KRAS, LRAT, MAP3K5, M TAP, MYH14, MYH3, MYL9, NAT1, NCOR2, NRG4, OR2Y1, OR3A2, OR4K14, OR51 A7, OR51F1, OR52N2, OR5D18, OR5H6, OR5M8, OR5P3, OR6C74, OR6K6, OR7C 1, PFKFB2, PIP5K1C, POLR2D, POLR3D, PRPH2, PRSS2, PSME1, RARS, RHOA, RPN1, SEMA4G, SESN2, SPRED1, STAT2, STX16, TKTL2, TNFRSF9, TRAF5, TR IP10, UGT8, VTI1B, WBSCR17, ATP6V1B2, HLA-DQA2, TNFRSF17
Negative_13989	ASL, DBH, HK2, LPO, NPY, SPN, STS, AGPAT3, AKR1C1, AKT2, ANAPC7, ASRGL 1, BET1, CASP9, CAV2, CDH1, CXCL9, DNMT1, DNMT3L, ECHS1, ENTPD7, EREG , FCER1G, FGD3, GNAQ, GTSE1, HSPA2, IAPP, ICAM2, IL10RA, IL3RA, KCNB1 , MAPK11, MGAT5, MYH7, NCR3, NEGR1, NFKBIA, NKD1, NRP1, OR1J1, OR5AR1 , OR8B12, OR9Q1, PCK2, PDK1, PFKFB1, PLOD1, PLXNA2, PPP3CC, RAPGEF3, RFWD2, RHOD, SCD5, SEMA4F, SFRP1, SIPA1, SKIV2L2, SOD1, ST3GAL1, UGT 2A3, UGT2B17, ULBP2, UPP1, ZFYVE16, MAP3K7IP2
Negative_13990	EBP, EGF, EPO, GCK, TYR, VCL, ALDH3B1, ALG12, ATP6VOC, BNIP1, CACNG7, CCL26, CCND3, CD28, CLDN15, CLDN6, CSNK1G2, CSNK2B, CYP11A1, DGAT1, DGKA, DGKQ, DGUOK, DUSP9, FRAT2, FZD8, GABARAP, GCLC, GFPT2, GLI1, GN MT, GPAM, GSTZ1, HLA- G, HSPA1B, IL20RA, IL4R, INSR, ITGA8, JUND, LEF1, MPDZ, MTHFD2, NFASC , OR10A6, OR13C9, OR4C15, OR4S2, OR51B2, OR51B5, OR52E2, OR52N1, OR6 C75, OR9I1, OXSM, PAFAH2, PKM2, POLR2H, PPP1CB, PPP1R3C, PRKAA2, PRK CA, RRM2, SEMA4F, SGPP1, SRGAP3, SSX2IP, TAS2R38, TAS2R41, TJP3, TLR 9, TSHB, UPB1, VDAC3, WNT10B, XCL1, XYLT2, C1GALT1C1
Negative_13991	CBL, CGA, CRH, FN1, GAA, GNE, HDC, INS, SYK, ATG3, ATP5J, BLVRA, CACNG2 , CALML5, CCKAR, CD274, CD36, CDC14A, CDC16, CREB3L4, CSF2, CTBP1, CT BP2, DDHD1, DKK1, DRD1, DUSP2, EPHB6, ERO1L, FM05, FOXA2, GUCY2D, HHI P, HLA- G, HSD17B1, IL17A, IL5RA, IPPK, ITGA4, ITGB1, LILRB3, LIPF, MAPT, MGA M, MTMR6, MYH15, MYL2, NAGK, NAT2, NCR2, NEUROG3, NLGN3, OR10S1, OR13 C4, OR1S1, OR2H1, OR2Z1, OR4F17, OR4N4, OR6B3, OR8J3, PARVG, PCK2, PD E7B, PDHA1, PDPK1, PPP2R2B, PRDX6, PRKY, PTDSS1, PTGES, ROCK1, RPS6K A2, RPS6KB2, SDC2, SLC25A4, SLC9A1, SMAD4, TAS2R8, TCIRG1, UBE2L6, V KORC1, WNT7A, YWHAQ, PLA2G12A
Negative_13992	CFD, DHH, F8, SPN, ALDOB, APLP1, ARPC1A, ARRB2, ATN1, ATP5C1, BBOX1, B ET1L, CALML5, CDKN1A, CKS1B, CNGB1, COMP, CSAD, CSF2RB, CSF3, CXCL6, CYP19A1, DVL1, EHMT2, GCH1, HAAO, HLA- F, HLCS, HSD3B2, ICAM3, LYPLA2, MMP9, MTFMT, NADK, NFKBIE, NTN1, OR10 A5, OR10Z1, OR2A5, OR4X1, OR5P3, OR5T3, PIGB, PLCD4, PLXNB3, PNPT1, P OLD3, POLR2I, PRKY, SETD1B, SHC4, SLC25A6, SLIT1, SPRY3, SULT2A1, TA S2R49, TLR9, GABARAPL2, MAPKAPK3, MAPKAPK5, SUV420H2



Negative_13993	CR2, DCN, F3, GH2, ABL2, AGPAT3, ALDH4A1, ANAPC4, AOC2, ATP6V1F, B3GALT4, CACNA1E, CCL17, CCL3, CD22, CSF1R, CXCL5, DOLPP1, FDFT1, GMPPA, GYS1, HSP90B1, IL28A, IRS1, ITGA2, KAT2B, LIPF, MINPP1, MYH7B, NAE1, NCOR1, NTF4, NUDT12, OLR1, OR10G3, OR2A25, OR51B5, OR7A17, PAK4, PANK3, PPP2CA, PRKG1, PSENE1, PSME1, RHOA, SDC1, SEMA4A, SMAD3, SNW1, SPRY4, TAS2R8, TDO2, TICAM1, TLN2, TRDMT1, TUBB4, KIR2DL5A, MAPKAPK3
Negative_13994	AK3, DHH, GPI, HYI, ACTA1, ALG1, ANAPC1, ATG3, BMP6, CACNB2, CCL13, CDK6, CMBL, COX15, CRKL, CYP7A1, DLST, EHMT1, FGF2, GALT, GIT1, GNRHR, HADHA, IFNA13, MAN1B1, MAP3K1, MMP7, MPST, NANS, NOTCH2, OR2M2, OR51B2, OR52K1, OR52M1, OR5P3, OR8K1, PCYT1B, PLTP, POLD1, PPP2R2B, PTCH2, PTGES, RAPGEF1, SEMA3B, SEMA7A, SSH3, STAT5A, STX5, TAS2R3, UXS1, WNT1, WNT2, YWHAQ, ATP6VOD1, ST6GALNAC6
Negative_13995	CBL, EGF, GNS, GSN, IL2, LCT, PC, PTS, ACSL1, ALDH1A2, APOE, ATP5L, BHM T, CD14, CES2, CHIT1, CLDN22, CTBS, CYP2E1, CYP4A22, DAAM2, DGKZ, DIAPH1, DIAPH2, DTX1, FMO2, FOXO1, FZD8, FZR1, GGPS1, GNA14, GNAI3, GNMT, GOT2, IDH3B, IDI1, MAML2, MKNK2, MMP7, MYL9, NRCAM, NSDHL, NT5M, NUDT5, OR12D3, OR13D1, OR51E1, OR56A3, OR5L2, OR7C1, PANK3, PDGFD, PDXK, PIGS, PIGU, PLA2G2F, PLCD1, PLTP, POLE3, POLR3B, POLR3H, PPAP2C, PPID, PPP1R3C, PRPH, RND1, RRM1, SCIN, SFRP4, ST3GAL1, TGFBR1, TOMM40L, TP73, TPH1, TRAF2, HLA-DQB1
Negative_13996	FYN, ID4, LIF, NF1, PVR, RB1, SP1, VTN, AADAC, ACTG2, ADCY3, AGRP, AOC2, ATP4B, BAAT, CARS, CASP7, CCL23, CCND3, CD74, CDK2, CES2, CLDN6, CYP17A1, CYP27A1, DHX58, DIAPH2, DKK4, EARS2, EFNA2, EGLN3, EPHX2, EPRS, FBP2, FCER1G, FGF6, FSHB, GDF5, GGT7, GLUL, GNAQ, GNPAT1, GSTK1, GUCY1A3, HARS2, HSPA8, IGF1, IL18R1, KLRK1, LARS, MADCAM1, MDM4, MGAT3, NKD1, ONECUT1, OR10J5, OR10K2, OR1Q1, OR2A4, OR52K1, OR52L1, OR7G1, OR9A2, PARD3, PGAP1, PLTP, PNMT, POLR2A, PPAP2B, PPP1CC, PPP2R2B, PRLR, PRPS2, PSME3, RFX5, SC4MOL, SHC2, ST3GAL3, ST6GAL1, STK36, TAS2R13, TIAM1, TPMT, TRAF5, TUBA1C, UBE2L3, UPP2, UROS, YARS2, YWHAQ, B3GALNT1, SERPINA5, TNFRSF10C, TNFRSF14
Negative_13997	F3, GLA, MUT, TPR, AHCYL1, ALG12, ALG8, ALPL, ARHGAP5, ATN1, ATP5G1, BCKDHA, BMP7, CACNA1S, CARS, CAV3, CCR4, CD36, CDH5, CHRM1, CTBP2, CX3CL1, CXCL3, CYP3A7, DDX4, DLL3, DUSP1, ENTPD3, ENTPD8, F11R, FGD1, FGF18, FUT3, GRIN2C, IFNA14, IL28B, IL6R, INPP5E, ITGA3, MAP4K3, MYH8, NFASC, NFATC2, OR10G7, OR1S2, ORC1L, PARS2, PCK2, PDE8B, PIK3C2G, PLA1A, PPP1R3B, PPP2R1B, PPP2R2A, PRKAB1, PTDSS2, RPS6KA3, SETD7, SPHK2, SUCLA2, TMLHE, UBA7, VCAM1, WNT11, WNT16, B4GALNT1, PDCD1LG2, ST6GALNAC6, TNFSF13B
Negative_13998	AK5, DHH, HK3, IL3, LYN, ME2, XDH, ABCC8, ADORA2B, ALDH1A3, ALG10, ANAPC4, ANAPC7, ATP2A3, BUB1B, CACNA1H, CACNG6, CARD11, CAV3, CCNB2, CD244, CDC25C, CHAT, CLDN7, CLTB, CSH1, CXCR6, CYP1A1, CYP2B6, DHFR, DUSP9, ENAH, ENTPD4, FMO3, FRAT2, GALNT14, GALNTL4, GGT7, GLG1, GMPPA, GMPR2, GSTA2, GSTA5, GSTM4, HADHA, IFNA2, ITGAD, JAM3, LRDD, NAGK, NFYE2L2, NFYA, OGDHL, OR10G4, OR1C1, OR1D2, OR4F4, OR4X2, OR51G1, OR52K1, OR52W1, PARVB, PDE7A, PGM1, PIGV, PLCE1, PPP2R5B, PVRL4, RDH11, RPS6KB1, SAT1, SAT2, SC4MOL, SDHB, SFRP4, SHMT1, SOCS4, SRD5A2, TAS2R10, TNFSF11, UGT1A10, ZFYVE9, ZNRD1, ALDH18A1, PRICKLE1
Negative_13999	GP6, INS, KMO, LSS, MAG, ABL2, ACMSD, ACOX1, BCL2, CCL27, CLDN19, CX3CR1, CXCL3, CYP27A1, CYP2A6, DHFR, DPM3, EHHADH, FGF17, GADD45B, GNAL, GSTA3, HAP1, ICAM3, IRS1, ITGA5, ITGB1, MAP3K12, MCM4, MITF, NFATC2, NFYB, NMNAT3, NRXN2, OR10C1, OR2H2, OR2T33, OR6C4, PIP5K1A, PLCB2, PSENE1, PSPH, PTPN1, PVRL3, SELE, SMAD7, SMPD3, SULT1E1, TAS2R7, TIAM2, TKTL1, TPM3, UGT2B7, ZAP70, ATP6V1C2

Negative_14000	ADK, C8G, GSS, SMO, SRF, WAS, ACSS1, ACVR1C, ADCY5, ALDH1B1, ALOX15B, ATP5J2, C9orf95, CCR5, CDC7, CES7, COX15, CTPS, CYP1A1, CYP26A1, CYP4A22, DCTD, DPM1, EXTL1, FLT4, FUT9, GABARAP, GNAI2, GSTA3, GSTO1, HAH, HPSE, HSPA8, ICAM1, IL1R1, IRF3, IRS4, LYPLA1, MAP2K5, MBL2, MLLT4, MYH15, MYH7B, NAGS, NANP, NEU2, NPR1, NT5C2, OR10G3, OR10G4, OR1E1, OR1L6, OR2A12, OR2T34, OR6C76, OR6S1, OR8D2, OR8U1, OR9I1, PHKA2, PLA, PPAT, PPID, PPP5C, PTGER3, SFRP1, SHISA5, SLC25A4, SPTAN1, ST3GAL6, STAT5B, STX1B, TAS2R13, TGDS, TNFSF18, TSHR, TSNARE1, TUBA4A, UGT2B11, VDAC1, WNT2, WNT3A, YKT6, MAP3K7IP2, PNLIPRP1
Negative_14001	GPI, HPD, NNT, RET, SRC, ABL2, ACAA2, ALDH4A1, ALPI, ALPL2, APOA2, ARPC4, ATP5A1, BMP8B, BST1, CCND3, CCR2, CD247, CES7, CYSLTR2, FECH, GCAT, GRHRP, GRIA3, IFNA8, IL13RA1, IL1R1, IL25, MGAT3, MTMR2, MYD88, MYH11, MYL9, OR10G7, OR1J2, OR1Q1, OR5M3, OR9G4, PDE8A, PHPT1, PLCB1, PPP1CC, PTEN, RASGRP3, RFWD2, SDC4, SEMA3C, SETDB1, SIAH1, SLC2A4, SMAD7, SOCS7, SORD, TAS2R42, TLN1, UCP1, VDAC3, WARS2, WASF2, YARS, HLA-DQA2, HLA-DRB4, PLA2G12B, ST6GALNAC3
Negative_14002	BAD, GAA, GHR, NF1, ALDH7A1, ARHGEF4, BUB1, CAMKK2, CHAD, CHST12, CLDN18, CMPK1, CREB5, CXCL10, CXCL2, CYP2C18, F2RL1, FZD10, FZD5, GALNT7, GCLC, GCLM, IL10RA, INHBB, IRF3, LAMB4, MALT1, MAML3, MAP4K2, MCAT, NRG1, OR10AD1, OR10C1, OR10G9, OR1G1, OR2K2, OR51S1, OR8B12, P4HA3, PFAS, PIGS, PLXNC1, PPP3CA, RENBP, SNAI2, STX2, TJP2, TLR5, TYMP, PLA2G12B
Negative_14003	F11, F5, NGF, NOG, UBB, ACSL3, ADRA1A, ADRA1D, AKR1C3, ALDH1A3, ALDH1L1, ASCC3, ATP5G3, ATP5J, B3GNT5, BACE2, BIRC5, CACNA1E, CCL8, CCNG2, CD38, CDC25A, CFLAR, CHAT, CLDN17, CLDN18, CRLS1, CSNK1G2, CYP2F1, DAAM2, DCTN1, DDB2, DDX18, DGKA, ENO2, EPHB3, FGF23, FGF7, FLOT2, FLT1, FOSL1, FZD2, GALM, GALNT5, GMPR, GNAZ, GRIA3, HCST, HLCS, HMOX1, HPRT1, HSD3B1, IFT57, IL1A, IL1R2, JAK1, JAM2, KIR2DL4, LCAT, LTB4R2, MAP2K2, MTMR2, MYH2, NRG2, NTF3, OR10A2, OR1N2, OR2T29, OR51A7, OR51F1, OR52I1, OR8H1, P4HA1, PAK4, PDE9A, PER1, PFKFB3, PIP4K2A, PLA2G2E, PMVK, POLA1, PRDX6, PRKAA2, PTEN, RPS6KA5, SELE, ST3GAL2, STAT5B, SUV39H2, TNFSF9, TYMS, HLA-DRB5, ST6GALNAC3
Negative_14004	AMH, APP, F12, GSS, JUP, LPO, NOG, ACP1, AKR1B1, AKR1B10, AOX1, ARG1, ARNTL, BDKRB1, CACNA1E, CACNG3, CAMKK1, CARS, CCL15, CD79B, CLTC, CSF1R, CTSL1, CUL1, DGUOK, EHHADH, ENTPD3, ESPL1, EXOC7, FGF10, FLT3LG, FOSL1, FRAT2, GGT7, GNA12, HMGCS2, IDH1, IFNA5, IGSF5, IL1R2, IMPA1, ITGAD, ITGAM, ITGB7, KIR2DS4, KIR2DS5, KLK3, KLRC3, MAP2K1, MAPK1, MKNK1, MPP5, MYL9, NFATC4, NOX3, NR4A1, OCLN, OR10J3, OR1J1, OR1J2, OR2AG2, OR2F2, OR2T10, OR4S2, OR51E2, OR52N4, OR5AR1, OR5B21, OR7G1, OR8G1, OR9Q2, OXTR, PDGFD, PI4KA, PIGO, PIP4K2C, PITX2, PLCB1, PPAR, PPM1D, PRKAB1, PRKAG3, PSAT1, PTPN7, RARS2, SIAH1, SKP1, SLC25A4, SMAD2, STX12, TACR1, TSHB, ULK1, VEGFC, YES1, B3GALNT1, HSP90AA1, TNFRSF11B, TNFRSF13B
Negative_14005	CD4, SRC, ACVR1, ADH1A, ALDH1A1, ASRGL1, ATP5G3, ATP6V0B, B3GALT1, B4GALT2, BIRC5, CALML5, CDC14A, CHEK2, CYP2A6, DRD1, DUSP6, ERBB3, FASN, FGF10, FGF21, FGF3, GPAA1, HCCS, HSD11B2, IL12B, INPP5B, IPMK, IRS4, ITGB2, JAK1, JAK2, LIMK1, LRP6, MAP4K3, MAPK1, MFNG, NCAM1, NCAM2, NTRK2, OR10H2, OR10X1, OR5T1, PPAP2C, PPCS, PPM1D, PTPN11, PYCRL, SLC25A4, SLC2A1, STX1A, SV2A, TAS2R4, TFDPI, UGT8, PNLIPRP2

Negative_14006	NPL, ACACA, ACYP2, ALPPL2, ANAPC11, ATP5D, ATP6V0B, CD14, CSNK1G2, CYP1B1, DGKG, EPRS, F2RL1, FARSA, FCGR2B, FGF5, FUT8, GAB1, GALNT10, GPT2, GRM5, HBEGF, HSD11B2, IDH2, JAM3, NFATC3, NFKB1A, NRP1, NUMBL, OCRL, OR4D1, OR5AR1, OR5B12, OR6T1, ORC6L, PDE11A, PDX1, PIK3CG, POLD1, PRKY, RALBP1, RAPGEF4, SDHC, SOCS4, TBL1X, TSTA3, UGP2, VEGFB, GABARAPL2, SUV420H1
Negative_14007	FOS, ACAA1, ACVR1B, ADCY6, AGPAT6, AKR1C2, ASPA, ATP2A1, B3GNT4, CCL20, CCL7, CCR5, CDC26, CDC42, CSH1, CSNK2A1, DARS, DARS2, DUSP8, EFNA2, ENO1, FZD1, GALNTL5, GSK3B, GSTM3, HMGCL, IAPP, INSR, IRF5, LEFTY1, LYPLA2, OR10H1, OR14I1, OR2AE1, OR8B4, OR9G4, PAPSS2, PCCB, PCK1, PDE1B, PGM3, PIPOX, PLA2G10, PLA2G1B, PMAIP1, PRKCH, RFXANK, RRS2, RXRA, SDHB, SEMA7A, SMAD5, SREBF1, TAS2R4, UPRT, ZAP70, CACNA2D1
Negative_14008	F10, F5, LCT, ACSS1, ADRA1D, AMPD3, ATG12, ATP2A3, BAAT, BLNK, C1QC, CDC23, CDK4, CDS1, CHAD, CLCA4, CLCF1, CYP11A1, CYP2C9, DEGS2, DGAT2, DRD1, DUSP10, ERBB2, FOXO3, FZD1, GAB1, GCLC, GMDS, GRIN1, HHIP, HNF1A, IGF1, IL10RB, IL18RAP, MAN1A1, MAP2K4, MCAT, MTHFS, MYH3, NFKB1B, OR10AD1, OR7C2, OR8H3, PDE4A, PFKFB1, PIGT, PIGV, PIM2, PPA1, PRIM2, PVRL1, RDH16, RETSAT, RPSA, RRM2B, SELE, SFRP2, SOCS7, SPRY1, TAS1R2, THBS4, TLN2, ULK3, VANGL2, VASP, WNT5A, ATP6V0D1, ST6GALNAC4
Negative_14009	AR, GAA, GK2, SDS, A4GALT, ACP2, ACSL1, ALG13, ALOX5, B4GALT1, BAIAP2, CAMK2B, CASP8, CCKAR, CCL3, CCNB1, CCND3, CCR9, CDC27, DDIT3, DEGS1, DGKH, EPRS, EXT2, F11R, GSTM1, GSTO2, GSTT1, GUK1, HDAC2, HRAS, HSD11B2, HTR7, IL13RA1, ITGA8, ITGAD, ITGB1, KIR2DS4, KYNU, LDHAL6B, LYZL1, MPST, NEUROD1, OR10H5, OR10P1, OR13C4, OR2Z1, OR4K5, OR51B2, OR51B4, OR5M8, PAK3, PGM2, PPAP2B, PRKAR1A, PRKCH, PYGM, RHOQ, RPS6KA2, SEMA3E, SNAP23, SNAP25, STMN1, TP53I3, UPRT, YARS, ATP6V1E1, MAPKAPK2, ST6GALNAC1, TNFRSF11A
Negative_14010	CKM, DCT, FAS, GAA, MAX, PLG, ABLIM3, ACHE, AKR1A1, AKT2, APPL1, BLVRA, BMP8B, BMPR2, CACNG7, CCNB2, CDC2, CDC6, CDH2, CKS1B, CNTF, CX3CL1, DRD2, EXT1, FPGS, FPGT, GNA13, IL11RA, INHBB, KIR2DS4, LTC4S, MAN1C1, MASP1, MGAT5B, MTHFR, NCOR1, NEFM, NFKB1, NODAL, NT5C2, OCRL, OR10A4, OR2Z1, OR4A16, OR51G2, OR51I1, OR7G1, OR9A4, PAK3, PARD6A, PDE6H, PFKFB3, PIK3CG, PIP5K1B, PLAT, PLXNA1, POLD2, POLR2D, POLR2E, PPT1, PRKAB1, PRKCB, RXRG, SH2D2A, SIAH1, SPAM1, TCF7L1, TICAM1, TUBA1B, ZFYVE16, PPP1R12A, TNFRSF14
Negative_14011	DCK, FYN, HPD, ILK, INS, MAX, ACHE, ACPT, ACTG2, ACVR2A, ACVRL1, ALDH1A2, ARSD, BIRC2, C7orf16, CD55, CLDN20, COL5A3, CSNK2B, CTSL1, DAPK1, DHODH, DPYD, DVL2, ENTPD1, FABP3, FCGR2B, FMO4, GALNT3, GALNT6, GAS1, GDF7, GIT1, GNA15, IGSF5, IL21R, IPMK, LALBA, LPAR1, MAP3K12, MCCC2, NEUROD1, NFKB1, NFKB2, NOTCH2, NR1H3, OR10Q1, OR13C4, OR1D5, OR4X1, OR51B5, OR5T3, OR6C1, OR6C70, OR8J1, PDE4D, PGAM2, POLE, POLE4, POLR2J, PPARA, PSPH, PTCH1, PYCR1, RHEB, SEMA3B, SEMA4G, SH2D1A, SHMT2, SLC2A2, SLC33A1, SOCS7, SQLE, SUV39H2, TFPI, TICAM2, TNXB, TPMT, TRMT11, WNT7A, HLA-DRB4, ST6GALNAC5, TNFRSF14
Negative_14012	NF1, TKT, WAS, ACSM3, ACVR2A, ADRB2, AGPAT3, AKR1C1, ALG12, AOC3, B3GNT5, CAMKK2, CASP9, CCL11, CD226, CDKN1B, CHRM1, CTTN, DGKZ, DUSP7, DUSP8, EFNB3, ENTPD5, EPRS, FGF23, FLT1, GAL3ST1, GALNT5, GMPPB, GPX5, HDAC2, HEXB, HSD17B3, IL1B, IL21R, INPP4A, MAP2K3, MAT1A, MGAT2, MMR2, MYH7B, NARS, NTF4, OR10G3, OR1E1, OR51M1, OR52N1, OR5D14, PFN2, PIK3R1, PIK3R3, POLR1A, PPP1CA, PTPMT1, PYGB, RALBP1, RAP1B, RAPGEF3, SEMA3G, SEMA4F, SOCS2, SRGAP2, UGCG2, VDACC2, CACNA2D3

Negative_14013	CS, PVR, SHH, SMS, ACAT1, ACMSD, ADRB2, ALG5, ARAF, B3GNT4, B4GALT7, BAI1, CCL3, CD274, CLTB, CSF3, CUL1, CXXC4, DTX3, FCGR2B, FDFT1, GALNS, GDF7, GGPS1, GLS2, GMDS, GMPPB, GP1BB, GRIA2, H6PD, IFNA6, IFNG, IL20, ITGA2B, MCAT, NAGLU, NAMPT, NCR2, OR2T10, OR4C11, OR4F5, OR52N5, OR5AN1, OR6T1, OR8H3, PDE10A, PIAS1, PIK3C3, PLCZ1, PLIN, PMVK, POLR2A, PPOX, PPP2R5E, PRKAA2, PRKX, PTPN7, RBL2, RFXANK, SEMA3B, SETMAR, TAS1R1, TAS1R2, TAS2R40, TLR3, TOMM40L, TRMT11, UBE2K, UPP1, WNT10B, WNT2, SERPINE1, ST6GALNAC1
Negative_14014	A2M, SHH, ABLIM2, AQP7, ARAF, ARRB1, ASAH1, B3GAT1, BMPR2, CCNB3, CD59, CHRM2, CLDN19, CMBL, CPT1B, CYP17A1, CYP3A5, CYP7A1, DDX23, DDX52, DHFR, DIAPH2, E2F3, EFN1, EPHB4, FUT1, GALNT9, GFAP, GMPPB, GNPAT, HAP1, HSPA8, JAK3, MAG1, MAP3K3, NCOR2, NR1H3, OR10S1, OR5P2, PCYT1B, PDE9A, PIK3CB, PKLR, PNPT1, POLR3H, PSEN1, PTGS2, STAT2, TALDO1, TAS2R1, UROC1, YKT6
Negative_14015	CD2, DLD, HK3, IL7, AARS2, ACPP, AGMAT, APOC3, ATP5G3, CACNG4, CACNG6, CAPN2, CCL14, CCL20, CCL4, CCR1, CLDN2, CNTFR, CXCL13, DDX23, DHCR7, DLL4, EFNA3, ESAM, FDPS, FGD3, FSHB, GANAB, GGCX, GNB3, GPX5, GRIN1, HARS2, HSD17B2, HSD17B8, HYAL2, IGF1R, IL17B, ITGB1, ITGB5, KARS, KNG1, LIFR, LRAT, MAP2K5, MTMR6, NARS, NAT1, NEFM, NTN1, OR2F2, OR51A2, OR51L1, OR52I1, OR8A1, OR9Q2, OSMR, PDE4C, PDE5A, PIP4K2B, PORCN, PIP2CA, PRKAR1A, PSAT1, PTCRA, PTPN5, PTPN7, PVRL2, RARA, RDH10, RRAS2, SHMT1, SIGLEC1, SOAT1, STAM, SV2A, TBK1, TCF7L1, TLR4, TPH1, TSC2, TSHR, VANGL1, ZFYVE16, PAFAH1B1
Negative_14016	C2, CKB, DDO, EPO, MUT, PLN, TNF, ZYX, ADRA1B, ALS2, ATG7, BET1L, CD99, CLDN16, COQ5, DDX47, EFNA3, FGF14, GANC, GRIN2D, HSD11B2, IAPP, ICAM3, IL10, IL4R, KIR2DL4, LCP2, MAP4K3, MNX1, MYH7B, MYLK2, MYLK3, NCAM2, NCOA4, NCR3, NTF4, NTN1, OLAH, OR10AG1, OR13C3, OR4B1, OR51I2, OR5A2, OR5I1, OR7D4, PER1, PIK3CB, POLR1A, PPP1CB, PRSS2, RAPGEF1, RDH8, SFRP1, SFRP5, SLC2A2, SOCS1, STAM2, SULT2B1, TNFRSF9, TNFSF8, TOMM40L, YES1, TNFRSF13C
Negative_14017	AGK, CRH, F2R, GP6, RB1, RFK, ACPP, ACSL6, AGRN, ALDH1A1, ALDH9A1, ALG2, AMY2B, APOA2, BDH1, CBR1, CCL24, CCR6, CDC42, CDH3, CLDN11, CNGA4, CPOX, CYP11B1, DAPK3, DCTD, DTX3L, ENTPD1, ETNK2, FGF11, FGF13, FGF7, FSHR, GALNT10, GALNTL5, GDE1, GFPT1, GNAZ, GPX5, GRB2, GSTK1, HEXA, HRH2, HSD17B7, HSPB1, ITGA2, LAMB4, LDHAL6B, LTB4R2, MAN2A1, MAP2K3, MAP2K4, MAPK3, MGLL, MGST1, MS4A2, MTMR2, NEU2, NFATC1, NTF3, OR1E2, OR52N5, PAPS1, PDE9A, PDXK, PER1, PHGDH, PIP4K2C, PKLR, PLA2G5, POLR3A, PRKACB, PRPS2, PSEN1, PTGS1, RASGRF2, RASGRP4, ROBO3, RUNX1, SDC1, SDC3, SLC33A1, SRGAP3, STX3, TACR1, TAS2R4, TGFB1, TNFSF9, TPI1, TRMT11, UROS, VAMP4, WSCR17, WNT4, MAPKAPK2, PPARGC1A, TNFSF13B
Negative_14018	BAD, FES, HK2, NOG, UBC, ALDH4A1, ALDH6A1, AMPD1, ATG7, ATP5A1, ATP6V0C, BAI1, BCL10, C5AR1, CACNG1, CACNG8, CCR8, CLDN18, CSNK1A1, CXCL3, CYBA, DARS2, DDIT3, DPYD, E2F4, EPHA1, ERBB3, ESAM, FADS2, GMPA, GMPPB, GNA13, GNA14, GSTO1, HARS2, HMOX1, ITGA11, KLRK1, MAPK13, MRAS, MTHFD1L, NAGA, NAGS, NFATC3, NME7, NT5C1B, OR10AD1, OR3A1, OR51A4, OR5D16, PDE2A, PDE7A, PFKFB3, PFKL, PIPOX, PLCE1, POLR2D, PPAP2B, PPBP, PPP1R3B, RAC1, SEMA3D, SETD8, TFD1, UROC1, VANGL1, VANGL2, WARS, WNT7B, XCL1, YARS2, MAPK8IP2

Negative_14019	F8, LPL, ACADL, ACVR1B, ATP5B, ATP5D, ATP6AP1, C1QB, CAMKK2, CBLC, CC L13, CCR10, CD79A, CDK2, CKS1B, CNTNAP1, CPT2, CSF3R, CYP1B1, CYP8B1 , DCXR, DDX47, EGLN3, EPB41L1, FLT1, GALNT6, GNA13, GNRH2, GSTA4, HCL S1, HPRT1, HRH1, IAPP, IL18R1, LDHAL6B, LTBP1, MCM3, MGST2, MMP9, OR1 OV1, OR6S1, OR7D4, OR9G4, POLR2K, PSENE1, RAC3, RERE, SETD8, SHC3, SO S1, ST3GAL1, TALDO1, TAS2R1, TBL1Y, WNT7A, YOD1, ATP6V1B1, CACNA2D4 , KIR2DL5A
Negative_14020	VTN, ACOX2, ADH6, ADIPOQ, ARG2, BDKRB2, CCL2, CDC2, CHRM5, CSNK1G1, C X3CL1, DDX54, DKK2, ENTPD3, FGF10, FOXA3, GSTA1, GSTM1, HADHB, HLA- F, IFIH1, IRAK3, IRS4, LAMA3, LMO7, MAP3K1, NEU4, NFATC1, OR10Q1, OR1 G1, PDCD1, PGM2, PIK3R1, PLD1, POLD3, PPAP2B, PRKAR1A, PROC, PYGM, RD H11, RXRA, SESN1, SHISA5, SOX17, SPCS1, STX2, SUV39H2, UGT2B28, HLA- DRB3, SLC25A31
Negative_14021	AK1, C6, CGN, GLS, INS, LAT, RFK, SYK, ADIPOR1, ADORA2B, CACNA1A, CACN A1E, CACNB3, CCL2, CCL4, CD44, CDH2, CDKN2C, CHRM3, CLDN15, CREB3L2, CYP2F1, DDX51, DERL1, DUSP9, EFN1, ENO1, EPOR, GDF5, GIT1, GMPPB, GR IN2A, GSK3B, HEXB, IARS2, IFNA10, IFNGR2, ITGAV, KCNQ1, KDSR, LAMC3, LTBR, MAP2K4, MAPK13, MDH1, MTFMT, NEU1, NT5M, OR11A1, OR14J1, OR2AG 2, OR2C1, OR52K1, OR8H1, P4HA2, PGS1, PLCD4, PLOD3, PLTP, POLR2C, PPM 1B, PPP2R5D, PRIM1, SDHD, SEMA3E, SENP2, SLC33A1, THBD, TNFRSF8, TNF SF11, TPMT, UCP1, VAV1, ATP6V0D1, HLA- DRB3, MAPKAPK3, TNFRSF10B, TNFRSF10D
Negative_14022	ADK, FOS, KHK, TK1, TNN, ABP1, ACAT2, ACOT12, ADAM10, ALG9, ALOX12B, A MHR2, CCL23, CCL8, CCR8, CDH3, CDS1, CTLA4, CTNNA3, CXXC4, DAPK1, DLL 4, DTX3, EDAR, EPHA3, FABP3, FARSB, FUT6, FZD1, FZD9, GART, GCNT1, GOT 1, GRIN2D, GYS2, HA01, HDAC2, HEMK1, ICAM1, IFNGR2, IL22, INPP1, IRF5 , IRS1, ITGA6, KITLG, KLRC4, LEFTY2, LILRB3, MAPK7, METTL6, MYH15, OR 13C4, OR51F1, OR5H6, OR7D2, P2RX1, PIP4K2A, PLAU, PRNP, PYCR1, RARS, SARS2, SETDB2, SHC1, SOCS4, STX1B, SULT1E1, TAS2R5, TNFSF8, TP53I3, UCK2, ATP6V1B1, B4GALNT1, HSD17B10, TNFRSF10C, TNFRSF12A, TNFRSF6 B
Negative_14023	AR, BAX, BTK, CS, DAO, HK2, SMO, UBB, ACSL3, ACSM1, ADAM10, ALG11, ALG1 3, AMDHD1, ARD1A, ATG7, AXIN2, B3GNT3, BIRC3, BMP2, CCL1, CCL15, CCL3 , CCNA1, CCNB2, CCR6, CDC20, CDH5, CDIPT, CYBB, DAAM2, EDN1, EDNRB, EP HB4, ETNK2, EVI1, FLT3, FMO2, G6PC, GCNT3, GNA13, GPD1, GZMB, HLA- DMA, HSP90B1, IFNA4, IL11, ITGAX, KLRC3, LCMT1, LRDD, MADCAM1, MARS2 , MGAT3, MKNK1, NCOA4, NTRK1, OR10A7, OR10H3, OR10J1, OR14I1, OR1L3, OR2A4, OR4F17, OR5AS1, OR5K1, OR6T1, OXCT2, POLD4, POLR3K, PPP3CB, P RKAG3, PTGFR, RPRM, SMAD6, SNW1, SUCLG1, SULT1A1, TCF7, TCF7L1, TJP3 , TRAF5, TRMT11, ATP6VOA2, MAPKAPK5
Negative_14024	C7, DCC, F7, GNS, ID1, PGP, RPE, AARS2, ABLIM2, ACVR1, ADAM17, ADRA1B, AKR1D1, AQP7, ARSB, ATF4, B3GALT2, BLVRA, BPGM, C7orf16, CAMKK2, CCN G2, CDKN2A, CHRNA7, CYP17A1, CYP2J2, DAPK2, ECSIT, EDNRA, ESAM, FGF2 0, FMO4, FZD5, GADD45A, GCLM, GCNT4, GNAQ, GNB1, GNPDA1, GNPDA2, GNRH 2, GRIN2A, HADH, HSD17B4, HSD17B7, ICAM2, ITGA1, KCNQ1, LARS2, LHCGR , MAFA, MAGI1, MAP3K14, MAPK3, MBL2, MECP1, MGAT2, MPP5, MYH1, NADSYN1 , NAGK, NEFM, NPR1, OR10G3, OR2S2, OR6B3, PANK4, PARD3, PFN3, PNLIP, P RKAR2A, PRKCH, SCLY, SIAH1, SKP1, SRGAP1, UGT2B11, ULK3, USE1, VEGFB , WNT16, YOD1

Negative_14025	BTK, CD4, FES, LHB, PLG, TNR, ACOX1, ACSM3, ALDH1L1, BMP8A, CCND2, CX3CL1, CXCL1, CXCL5, DAG1, DGKB, EPB41L2, FGF8, FRAP1, FUT4, G6PC, GDF7, GNAZ, GP1BA, IFNAR2, IL21, IL3RA, IRF3, IRF5, ITGA11, JAG1, LAMA4, LIPA, MINPP1, MTHFD1L, NCOR2, NEFL, NEU1, NRP1, OR10T2, OR10X1, OR1E1, OR1S2, OR2M5, OR5AP2, OR5P3, OR6B3, OR8B4, PARVB, PDHB, PLA2G4A, PLXNA3, PPARA, RFXAP, RPS6KA5, SLC12A2, SMAD6, SNAI1, SPAM1, THBS3, TYRP1, VEGFB, VKORC1, YWHAG, ALDH18A1, ATP6VOA1, ATP6VOA2, PPP1R12A, SERPIND1
Negative_14026	BTC, CBS, CD4, CEL, EGF, F9, GP9, IL9, PML, TPO, UBC, ACAA2, ACSM2A, ADH1B, ALDH7A1, ALOX12, APBB1, ASS1, ATIC, ATN1, BET1L, C1GALT1, CAV2, CCL26, CCND3, CD3E, CDH3, CHD8, COMP, CREB3L3, CSNK1G1, CTBP1, CYP17A1, DDX41, DGKA, DUSP2, FRAT1, GCLC, GLYCTK, GTSE1, GUK1, HNF1B, HNF4A, IFT57, IQGAP2, ITCH, ITGB4, KCNB1, KIR2DS4, LCAT, LFNG, MICA, MYH7B, NCOA4, NCR3, NUDT8, NUDT9, OPLAH, OR10P1, OR10Z1, OR1A1, OR1M1, OR5AP2, OR6B2, PARD6B, PLA2G3, PMAIP1, PPP3CA, PRKACG, PRKAR2A, PTPN7, SIPA1, SLC2A4, SOS1, SSH2, ST3GAL4, STT3B, SULT2A1, TNFSF11, TRAF1, TRAF2, TUBA3E, XCR1, ZBTB16, ATP6V1C2, ATP6V1E2, CACNA2D2, HLA-DRB5, TNFRSF12A
Negative_14027	AMT, ATM, C6, C8B, EZR, ID3, IVD, ACOX2, ACSM3, ADRBK2, AHCY, AMY2B, ARHGEF4, ATG3, ATP5A1, ATP5I, BDH2, CACNA1A, CACNB2, CD3E, CD72, CD86, CDC26, CDK5, CLDN18, CXCL6, CYP7A1, CYSLTR2, DDHD1, DUSP8, EIF4E2, ENO3, EREG, F2RL1, FGF21, FM05, GAD2, GALNT9, GGT5, HAGH, HNF1B, IFNK, IL5RA, INHBC, IRAK3, JAK2, KLRC4, LFNG, LYPLA2, MAGI3, MAPK10, MAPK13, MNX1, MTMR1, NCOA4, OLAH, OR10A2, OR4N2, OR6B2, OR8K1, PI4KB, PIGA, PIK3R1, PIPOX, POLR2E, PYCR1, RAPGEF1, RENBP, SDHB, SKP1, SPRED1, STX10, STX7, TAS2R3, TAS2R50, TBL1X, TLR3, WNT9A
Negative_14028	BAD, CFD, CR2, F12, FGG, KHK, LPO, MOS, SRF, A4GALT, AADAT, ABI2, ABLIM3, ACSL5, ADCY10, ADIPOR2, AOC2, APOA2, ARNT2, ATP50, BDNF, CAMK2B, CAMK2D, CASK, CCND1, CCNE2, CHRM5, CPT1C, CSF2RB, CXCL3, CYP4A22, DCXR, DHDDS, DIAPH3, DUSP4, EFNA5, EI24, ENO1, F13A1, FLT3, FZD3, GALNT1, GNG13, GPD1L, GRB2, GUCA1A, HCST, HLA-C, HTR2A, IFNA10, IL18, IRAK1, IRAK4, ITGA2B, JAK3, KAT2B, LAMC1, MNX1, NFATC3, NRXN1, OR10G2, OR10G9, OR11H6, OR13C8, OR14J1, OR2B11, OR2T8, OR4B1, OR4D2, OR4K13, OR52E6, OR56A1, OR8S1, PAICS, PGK2, PGM2, PIM2, PLCD4, PLCZ1, POLD4, POLR2F, PPP3CA, PPP3CC, PTEN, RAC1, RASGRP4, SHMT2, SMAD5, SMAD6, SORBS1, SPP1, SPTLC2, SUCLA2, TAS2R13, TFPI, TLN1, TNFRSF8, ATP6VOD1, HLA-DRB4
Negative_14029	ADA, GSS, MAG, SRC, ADSS, AKR1C4, AKT3, ATP5F1, CACNB1, CD72, DPM1, EGN3, ENTPD7, EPHB3, EPHB6, FGFR2, GRPR, GUCY2C, HAP1, HDAC2, HSPA1B, HSPA8, IDI1, IFNA17, IFNA2, IL15, ITGAV, KIR2DL2, KIR2DS4, KNG1, MAN2A1, MDM4, MGST1, NOTCH1, NTN1, OR10R2, OR10Z1, OR4D11, PCK2, PDGFA, PGAP1, PIGV, PLCD3, POLR2L, PRKCB, PTDSS2, RASGRP4, RBPJL, ROCK1, SPRED1, SUOX, TBL1Y, TUBB1, UMPS, VAMP2, VEGFA, WNT3A, WNT5A, YWHAH, PHOSPHO1, PRICKLE2
Negative_14030	C9, ID3, IL9, LCK, ACVR1B, AKR1B1, AKT1, ALG13, ALOX12B, APPL1, APRT, B3GALT1, CALML5, CCND2, CDC25B, CLCA2, COL4A6, CPT1C, CSNK1G2, CXCL12, DDX19A, DGKI, EPHA8, FGF4, GALNT9, GBE1, GFPT1, GMPPA, GNAI1, GRPR, GSK3B, HNF1B, HSPA1B, IL11, IL13, IL13RA2, IL6ST, IMPDH1, ISYNA1, LAMB3, LGMN, MCAT, MCM7, MECR, MLYCD, MTMR1, NCR3, NFASC, NMNAT1, NTF4, OR10G4, OR2M7, OR4C15, OR4N4, OR56A3, OR5D16, OR8J1, OXCT1, PCCA, PGAP1, PI4KB, PIAS1, PIGK, PRKAR2B, RASA1, SGMS1, SH2D1B, SHC4, SPRED1, STK36, TRAF6, TUBB3, TYMS, ULK2, CACNA2D3, MAPK8IP3, SUV420H2

Negative_14031	A2M, PML, TK1, TPR, ABLIM3, ACOT11, ACP5, AHCY, APOA2, BIRC3, C1QB, CA SK, CCKBR, CCL15, CDC14A, CHST13, CLDN18, CNGA4, COQ3, CREB3L3, CYBA , DAPK1, DCXR, EARS2, GJD2, GPX7, HIP1, LDHA, LGMN, LIPG, LPAR1, LTA4H , MAN1B1, MAPK10, MCCC2, NTF3, OR1A2, OR2Y1, OR5B17, ORC5L, P2RX5, PA ICS, PANK3, PFN3, PIP4K2C, PLA2G2D, PPP3CC, PPP5C, PRSS2, PYGL, RDH5 , SFRP1, TAS2R50, TLN2, VAMP3, VAV1, PAFAH1B2, ST6GALNAC4
Negative_14032	EZR, IL5, ACAD8, ACADM, AMHR2, CCL19, CD99, CDK5, CDK7, CFTR, CKS1B, C LDN19, CPS1, CYP8B1, DAD1, DLL3, DPM2, ETNK2, GAS1, GNRH1, GP1BA, GRP R, GSTM1, IL7R, IRAK1, ITCH, ITGA8, MYL9, NEU4, NOX1, NPR1, ONECUT1, O PLAH, OR1J1, OR1L6, OR2H1, OR2M5, OR4C16, OR5AK2, OR5J2, OR5L1, OR5L 2, OR6C2, OR7G3, PARVA, PDIA4, PLCE1, POLR2B, PPA1, PVRL1, RAPGEF3, S RD5A1, SRGAP2, THBS3, TIAM1, TUBA1B, WNT2, ATP6V1G3, C1GALT1C1, CAC NA2D2
Negative_14033	GPI, NLK, ACSL3, ACSL5, ADORA2B, ANAPC2, ARNT2, ATP13A2, B3GALT5, CA CNA1E, CARS, CDC42, CDKN1B, COASY, DUSP5, E2F3, F2RL3, FGF11, FUT1, G ALNT11, GALNTL5, HDAC1, HHIP, IDH3G, IFNA16, IL18, IL1R2, ITGA1, ITG AL, LAMB1, LIAS, LTB4R2, MKNK2, NRG3, NRG4, NT5E, OGDH, OLAH, OR11H4, OR2S2, OR5L2, OR9Q1, ORC2L, PANK2, PDE6G, POLR1D, POLR2A, POLR2J, PO LR2L, PRKACA, RALB, RASGRP1, ROBO2, RXRA, SEMA4F, ST3GAL3, ST8SIA5, TLR4, TMLHE, TYRP1, UMPS, YES1, TNFRSF11A
Negative_14034	CEL, DDO, HYI, IL2, ME1, PLN, RPE, ACPT, ACTA2, ACVRL1, ACY1, ADCY8, AD RB3, ADRBK2, ARPC4, ATP5G3, ATP5J2, B3GALT2, B3GALT5, BDH2, CACNB2, CDKN1B, CES1, CFTR, CHRM1, CLDN6, COASY, CREB5, CSNK1G2, CTBP1, CXCL 2, CYP27A1, DPM1, DUSP14, EHHADH, EPHA6, EREG, FLAD1, FUT1, GAL3ST1, H6PD, HRH1, IL19, IL23A, IMPDH2, IQGAP2, ITGB1, KRAS, LIPG, LYPLA2, M APK7, MAT1A, NEU4, NFYC, NPR2, NRG3, NUDT12, OLAH, OR13H1, OR1A2, OR1 S1, OR2K2, OR2T34, OR5AU1, OR6B3, PDE4B, PIP5K1C, PKMYT1, POLE4, PPP 2CB, PPP2R1A, PRODH, PSME2, RAC3, SCD5, SHMT2, SMARCA5, SNAP25, STAT 1, STAT6, TAS2R4, TBL1Y, TCF7L1, TRPC1, TSLP, UGDH, UGT2B11, UPB1, VA MP2, WASL, XYLT2, ATP6V1G1
Negative_14035	CD4, DCT, PGP, ABLIM1, ACTB, ADAM10, ADRA1A, ARSE, B3GALT5, B3GALT6, B3GAT3, B4GALT2, BAI1, BCMO1, CCKAR, CD38, CER1, CHST13, CLDN7, CRLS 1, CTLA4, CYP19A1, CYP2S1, CYP7A1, CYP8B1, DAG1, DHDH, DHFR, DPAGT1, DUSP7, DUSP9, ENPP3, EPB41, ERBB4, F2RL2, FBP2, FGF2, FGF5, FUT2, FUT 8, FUT9, G6PD, GALM, GRAP2, HADH, HCCS, HLA- F, HTR2C, INPP5A, ITGAL, KIR2DL4, LAMB1, LHCGR, MAP2K1, MAP2K5, MCAT , MTHFD1L, MTMR1, MYH8, NOS3, NRAS, OR10R2, OR2C3, OR2F2, OR4C13, OR5 M8, OR6A2, P4HA1, PDGFB, PER3, PIAS4, PIP5K1C, PMAIP1, PMVK, PNPLA4, PPM1B, PPP1CA, RAPGEF4, RARS, RENBP, RRAS2, SEMA3E, SMAD6, TAS2R48, TM7SF2, TNFSF18, TPK1, CACNA2D4
Negative_14036	CKM, CRK, DBI, F2R, FGG, FUK, RET, ABAT, ABLIM3, ADH7, AMDHD1, ARHGAP5 , ARSA, ATP4A, ATP5B, BCAR1, BMP8B, CADM3, CCNB1, CD22, CDC6, CDKN1C, CHKB, CLCA2, COL4A1, COQ6, CTTN, FGF11, FGF18, FLOT1, GALT, GRIN1, GU CY1A3, HADHA, HMOX2, HPSE, HSD17B2, HSD17B3, HSD17B7, IFNA5, IFNA7, IL17A, IL4R, MGAT4B, MKNK2, MMP1, MYH7, NFKBIA, NRG2, NRXN1, OR10G2, OR10H3, OR1S2, OR4C13, OR4C16, OR51E1, OR5L2, OR6C74, OXSM, PARVA, P AX8, PDE6D, PGAM2, PHKA2, PIK3R2, PLXNA1, PLXNB2, POLD1, POLD3, PPP5 C, PRPS2, PTPN1, PTPRM, RASSF5, RBPJ, SDC3, SIGLEC1, SLC25A6, SPRY1, SSH3, SSSX2IP, ST3GAL3, STAT5B, TACR2, TAS2R10, TAS2R40, TGFB1, TM7S F2, TUBA1A, UCK1, UGT2A1, VKORC1, HLA-DRB5, TNFRSF1A

Negative_14037	C7, CSK, HGF, ILK, JUN, LIF, NGF, PDC, SFN, ACSS3, ADCY6, ALPI, BPNT1, B RAF, CAMK2D, CAMKK2, CCL4, CD14, CHPF, CSF2RA, CTNNB1, EPHA5, FUT4, G RIN1, GRIN2C, GSTA4, GUCA1B, H6PD, HAGH, HARS, HSD17B3, IFNA4, INPP5 A, MAP3K7, NAMPT, NFYA, OR2B6, OR2D2, OR2F2, OR2L3, OR2M7, OR5I1, ORC 4L, PARD6A, PIK3C2G, PLA2G2E, PLA2G4A, POLE2, PPP2R2D, SAT1, SETD8, SLC33A1, SMAD1, SOCS1, THBS2, ZFYVE16, ATP6V1G2, HLA- DPA1, MAPKAPK3, ST6GALNAC4, SUV420H1
Negative_14038	RDX, SRC, AKT3, ALDH1B1, ARHGEF2, ATP5H, B3GALT6, BDKRB2, CACNG5, CA SP10, CCR3, CDC16, CHSY3, CSNK1E, CYP3A43, DAD1, DGKH, DNMT3L, FARSB , GNA11, GNAI2, IL17B, INPP1, MAN1C1, MCAT, OR10A7, OR10K1, OR13C4, O R52J3, OR6C4, OR6C6, OR9A4, ORC3L, PAK7, PARVA, PDGFC, PMM1, POLR1C, PORCN, PYCR1, RALB, RETSAT, SEMA3F, SKP2, SOD1, TBL1XR1, TPM3, UCKL1 , UNC5D, WASF3, WNT16, YKT6
Negative_14039	FUK, GK2, SFN, ACVR2A, ALDOB, ARD1A, ASIP, ATP6V1D, B4GALT5, C4BPB, C CL3, CDKN1A, CLDN7, DDX55, DLL4, EFNA1, EPHB4, FLAD1, FOXA2, FUT7, FZ D2, GNAZ, HAP1, IL28A, IL2RB, ITPK1, MAN2A1, MAP4K1, NAGLU, NNMT, OR1 OX1, OR1I1, OR6A2, OR8H3, OR8U1, PAK3, PCCA, PCNA, PER1, PIGS, PLXNB1 , RALGDS, RDH12, RPS6KA1, SCIN, SGMS2, TACR3, TAS2R7, UGT2B28, VAV1
Negative_14040	CKM, CTH, GBA, GSN, IL8, LCT, PRL, RB1, TKT, TNN, TPR, ZYX, ACAA2, ADCY9 , AGRN, ALDH1B1, ARG2, B3GAT1, BBC3, C5AR1, CASK, CCKAR, CD46, CDC23, CLDN11, CTSG, CTSS, DDIT4, ECHS1, EPOR, G6PC, GALNTL5, GCNT2, GDF5, G GT1, GNPDA2, GSTK1, HDAC2, HLCS, IFNA17, IL21, IPMK, LAMC3, LCMT2, LI PC, MAML2, MAN1A2, MCM3, MGAT4A, NAGS, NME4, NUDT8, OR10K1, OR2A42, O R2L3, OR2T34, OR8H3, PDIA4, PNPT1, POLD4, POLR3K, PPP5C, PRKCD, PRPH , PTDSS2, PTPN5, RXRB, SFRP5, SRD5A1, SSH1, STX3, TACR3, TRMT11, ULBP 1, ULK1, ATP6V1G3
Negative_14041	CDA, GSR, GSS, IHH, ME2, OAT, STS, ACPP, ACYP2, ADH1B, ADH6, AMPD2, AOX 1, ASIP, B4GALT5, BMPR1A, CACNG5, CCR5, CDC25C, CFLAR, CNDP1, COL6A2 , CPT2, CXCR3, CYP2C19, CYP3A4, DUSP6, EPHB4, FLT4, FM05, GAB1, GALNT 9, GCLC, GLB1, GSTO2, HLA- DOB, HTR4, IKBKB, IRAK2, ITGA10, LLGL2, MAN1A2, MAPK14, MYD88, MYH4, NODAL, NQ01, OR10K2, OR1A2, OR2A4, OR4C6, OR52I2, OR56A1, OR5D13, OR 7D2, OR8H2, PIGH, PLCG1, POLA1, PRKAB1, RAPGEF4, ROBO1, RRAS2, SDHC, SOCS7, SOD1, SREBF1, ST8SIA5, SUV39H2, TAS1R3, TNFSF8, TYMS, UAP1, U ROS, WNT2B, PRICKLE1
Negative_14042	DCK, EDA, LCK, MAX, NF1, PLN, RB1, SMS, SRC, TNF, TNR, ACACA, ACTN1, ADI POR1, BMPR2, CASP8, CCL27, CCR6, CDC14B, CDH2, CLDN4, CLTC, COL3A1, C TSL1, CXCL16, DNMT3L, DUSP16, EARS2, EFNB3, FGF11, GALC, GNAS, GNRH2 , GSTM4, HBEGF, HCST, IBSP, IGSF5, IL20RB, JAK3, LDHC, LRDD, MAPT, MEF 2C, MOV10L1, NCF4, NOD1, NOTCH2, OR10H2, OR10H3, OR10J3, OR10X1, OR2 D3, OR4C16, OR4K5, OR4M2, OR51M1, OR6S1, OR8B4, ORC4L, PAK6, PHKG1, P IGH, PIK3CB, PLA2G2F, PNMT, PRKCH, PSENEN, PTGIS, PYCRL, RFX5, RND1, RPN2, RPS6KA2, RPS6KA3, SARS2, SGMS2, SLC25A4, SMPD2, SPHK2, ST3GAL 6, TAP1, TAS2R40, TBK1, TUBA1B, TYMP, VEGFC, WNT4, YOD1, HLA- DRB4, TNFSF13B
Negative_14043	CD4, GH2, AADAC, ALS2, CACNA1B, CALML3, CASP3, CCL27, CCR2, CDC7, CDK N2A, CSNK1G2, CTBP1, CYP11A1, DGAT2, DPM3, DVL3, EFNB2, EPB41L1, FAR SA, FOSL1, GART, GCLC, GNAZ, GNPAT1, HNF4G, IDI1, IDI2, IFNA7, IFNAR 1, IL12RB2, ITGB8, LHCGR, MCCC1, NCF2, NCF4, NEUROD1, OR10R2, OR1D2, OR2Z1, OR51E2, PAK1, PCYT2, PHKG2, PIK3CG, PLTP, POLR1D, PPARG, PRKA G2, PTPRZ1, RASGRF2, RPRM, SCD5, SLC33A1, SMAD5, ST3GAL1, ST3GAL4, S TAT6, STK11, TNFRSF4, TOLLIP, UGCLL1, YARS2, SERPINA5, SERPINC1



Negative_14044	CR1, DHH, F2R, FOS, TAT, TEC, TPO, ACACA, ADCY6, AGRN, ALDH1A2, ALG1, A LG10B, AOC2, APH1A, ARPC5L, ARRB1, B3GAT3, BDNF, CACNA1A, CACNG5, CC L13, CCR2, CDC16, CHAT, CHR1, CLCA2, CSF1R, CTTN, DGKA, DTX3, DUSP9, E FNA2, ENPP3, FPGT, GALNTL1, GGT7, GNG3, HNF4G, HNMT, HSD17B7, HSD3B1 , IGF1R, IL1A, IL4R, IL7R, IMPDH1, INPP4A, INPP4B, ITGA5, KIR2DL4, MA P3K6, MAPK11, MDH1, NOTCH2, OR13C3, OR1M1, OR2H2, OR4K14, OR7A17, OR 8S1, PCCA, POLR2I, POLR2K, SETD7, SETD8, SMPD2, SPCS1, STX1B, STX3, S UCLG2, TACR1, TBL1Y, UNC5B, VEGFB, WEE1, WWP2, ARHGEF12, ATP6VOD2, S ERPINE1
Negative_14045	CR2, DAO, DBI, FGG, INS, JUP, LCT, ME3, TXK, VCL, ACAA1, ACTG1, ADRB1, A LDH1A3, ALOX15, ANAPC5, ATP5C1, ATP5J, AXIN2, B3GALT1, C1QB, CCND1, CCND3, CCNH, CCR4, CCR8, CD19, CD28, CD3E, CDK7, CDS1, CKMT2, COL11A1 , CXCL9, CXCR4, CYP11A1, DIAPH1, DUSP10, EARS2, EDNRA, F11R, FABP1, F LT3, FOXO3, FZD10, GABARAP, GALNT13, GLG1, GOT1, HDAC2, ICAM2, IFNAR 2, IQGAP1, LAMC2, LIPT1, MAD1L1, MADCAM1, MAGI3, MCM5, MTFMT, NEFM, N TN1, NUMB, OR10A3, OR10J1, OR1S1, OR2A25, OR2T3, OR4C11, OR5C1, OR9Q 1, P2RX1, PARVB, PIGN, POLA1, PTGFR, RIPK1, RPS6KA5, SETD7, SLC27A1, SMPD3, SOD1, SORBS1, ST6GAL1, STEAP3, TBL1XR1, TKTL1, TLR9, TRADD, U GT2B17, ULK2, VAMP4, ATP6VOD1, ST6GALNAC5, TNFRSF10B
Negative_14046	IL9, MVK, ADAM10, ADCY2, AKT1, ALDH1L1, ARNTL, ARPC2, AVPR1B, BDNF, C ACNG3, CASP6, CCL21, CDH2, CDK5, CDKN2B, CDS2, CLDN16, CNGB1, COL5A3 , ENAH, FPGS, FTCD, FZD1, GALK2, GALNT2, GNA14, GNRH2, GPD1L, GRM1, GS TP1, GUCY1A3, IRF3, IRS1, MAD2L1, MAGI1, MAT2B, MEF2C, METTL6, MGAT4 A, MMP14, NEFL, NKX6- 1, NPAS2, NRG2, OR10A2, OR10AD1, OR1D5, OR2A2, OR2T4, OR4D5, OR52J3, OR5T2, OR6C4, OR8K1, PAK2, PDXK, PECAM1, PLA2G2E, PRKAB2, PRKCB, PSP H, PTPMT1, PVRL3, ROCK2, RPS6, RPSA, RRAS2, RUNX1, SDC2, SFRP2, SIPA1 , SNW1, SOS1, SUV39H2, TBK1, TJP1, VAV3, WNT2
Negative_14047	AK3, C7, HGD, PDC, AKT2, ALDOA, ATP5C1, BIRC3, CACNG5, CAMK2B, CAV2, C CDC6, CD22, CD247, CD38, CD79A, CD86, CLDN6, CNDP1, CSNK2A2, DGKH, DP YS, DTX3L, ENPP1, FOXA2, FSHB, GBA3, GBGT1, GDE1, GGT5, HAGHL, HLA- DOB, HSD17B3, HSPA8, HTR2C, IL12RB2, IL2RG, ITGA10, JAK1, LALBA, LCM T1, LCMT2, LCP2, LEFTY1, MAP2K3, MAT1A, MMP14, MYH13, MYH14, OR10T2, OR2W1, OR4M1, OR8B12, OR8G1, P2RX6, PAK3, PAPSS2, PARD3, PARVA, PDE2 A, PDE6G, PFKFB4, PFKL, PIGA, PIP5K1B, POLR1A, PRKACA, SESN1, SFRP2, SIAH1, SMAD7, SPRED2, TACR2, TGFB3, THBD, TUBA8, ZBTB16, ZIC2, CACNA 2D2, MAPKAPK3, ST6GALNAC3
Negative_14048	CD6, CRH, MVK, PTS, ACMSD, ACTG1, BCL2, BMP8A, CACNA1C, CACNG2, CAMK2 G, CLDN14, CYP1A2, CYP2A6, DRD5, EHMT1, FTMT, GCNT3, GJA1, HNF4A, IFN W1, IL6R, JUND, LDHAL6B, MAML2, MAP2K5, MCCC2, MGAT5B, NFYA, NODAL, N QO1, OR13D1, OR2D2, OR5L2, OR6C74, PAX8, PDE1B, PDE8A, PIM1, PIP4K2C , PMM1, POLR2A, PORCN, PRKAG2, RPIA, SEMA3C, SGMS2, SMPD3, ST3GAL2, S TMN1, STX1A, TXNDC12, TNFRSF10A
Negative_14049	DDC, F8, FGG, OSM, PLG, UBC, ACADS, ACSM4, ADCY2, ADCY7, ADRA1A, ALDH3 A1, ALOX15, ARG1, ARHGEF7, BCAT1, BCL2, CCL16, CCR2, CDH5, CDK7, CKMT 2, CLDN3, CREBBP, CSNK2A1, DAPK3, DGAT2, DGAT2L4, DTX3L, EIF4E, ENPP 2, FGF21, FOXA3, FUT5, FZR1, GALK1, GATM, GNAT3, GRM5, GSTA4, HBEGF, I FNA6, IL20, LEF1, MAP3K13, MFNG, MYH1, MYLK2, NANP, NCOR1, NFKBIB, NM NAT2, NR1H3, NR5A2, OCRL, ONECUT1, OPLAH, OR10G9, OR13A1, OR13C2, OR 1M1, OR1N1, OR2Z1, OR5A1, OR5K1, OR6C74, OR8B8, OR8D4, OR8H1, PCYT2, PLA2G4A, PLAT, PLAU, PLXNB1, PLXNB2, POLR2E, POLR3G, PPP2R5C, PRKAR 2A, PRPH, PTAFR, PTGDS, PTPRC, RCHY1, RDH8, SC5DL, SMAD6, TPH1, TRMT1 1, ULBP1, WNT9A, XCL2, CTNNBIP1, MAPKAPK3

Negative_14050	AK5, FER, HGD, JUP, TFG, ACSL5, ACTN1, ADRA1D, AHCY, ALG2, ANGPTL4, ARSE, ATP13A2, CCL11, CCNB2, CCR3, CHIT1, CHPT1, CLTB, CNGA4, CSF2, CSF2RA, DNMT3L, ENPP2, ENTPD4, FGF19, FGF6, FLT3, FUT3, GALNTL1, GPD1, GPD1L, GSTA1, HSD17B2, IFNA8, ITGB5, JAK3, KIR2DL1, LDHB, LLGL1, LRRC4C, MAFA, MASP1, MGST2, MYH14, NFYC, NPAS2, NT5C3, NTSR1, NUDT8, OR10J3, OR14C36, OR4C13, OR4D6, OR51G2, OR51Q1, OR56B4, OXCT2, PERP, PFKFB3, PGAM1, PIGL, PIP4K2B, POLD1, PPAP2C, PRKAB1, PRPS2, PRSS2, PVRL2, RBL1, RHOQ, SELE, SFRP1, SMAD7, SOAT1, SOS1, SPTAN1, SRD5A2, STT3B, TGFB3, TKTL1, TSLP, TSTA3, UGT2B7, WIF1, WNT9A, ATP6V0D2, SERPINA1
Negative_14051	ABO, BTB, PC, RFK, SFN, ADCY9, ADH1B, AKT1, APH1A, ARPC1A, ATP5J2, BET1L, BTRC, CAV1, CCL25, CD244, CDIPT, CFL1, CHD8, CHST11, CYP1B1, DPAGT1, DUSP10, EHHADH, ETNK1, FCGR2B, FGF4, FGF7, FGF9, FGFR4, FOXO1, GNA14, GNAL, GYS2, HIF1A, HMGCL, IFNGR2, IL23A, KAT2A, KCNB1, KITLG, KYNU, LAMC3, MAOB, NAT5, NCKAP1L, NKX2-2, NODAL, NOS1, OR13J1, OR2T8, OR51I1, OR52E4, OR52J3, OR5M9, OR9G4, PAPSS1, PARD6A, PDK1, PER2, PIGL, POLA2, POLR2K, PON3, PRIM2, PRPS2, PTPN7, PTTG1, PYGB, RAP1A, RUNX1T1, SETMAR, ST3GAL6, STMN1, SUCLA2, TAS2R10, TAS2R49, TICAM2, TRMT11, TRPC1, UGT2A3, UGT2B28, WNT1, WNT10A, WNT5B, EIF4EBP1, HLA-DPA1, HSD17B10, HSP90AA1, TNFRSF11B
Negative_14052	CDA, F2R, GNS, IL6, IVD, ACACA, ACADL, ACVR1C, AHCYL2, AKR1B10, AMY2B, ATG7, ATP4B, B3GALT1, BCAT2, C9orf95, CACNG5, CACNG6, CAV1, CDC7, CDH1, CHRNA7, CLDN15, CLDN5, CNTN2, CRY2, CSNK1E, CTNND1, CTPS2, CXCL16, CXCL6, DDX56, DHDH, DLL4, DUSP9, ENTPD2, EPHA4, FCER1G, FGD1, FGF20, GALNT6, GRIA2, HMOX2, IRS4, ITGA6, LIAS, MCM3, MCM7, MITF, NCK1, NCOA4, NFATC4, NRAS, NRXN2, OR13D1, OR1I1, OR1S1, OR2M4, OR4K2, OR5T2, OR9Q1, PDE3B, PIK3CA, PLA2G3, PON1, PPP2R5C, PRKAR2B, PTGES2, PTGS1, PTPRZ1, SH3BP2, SIPA1, SNAI2, SOAT1, STX4, TNFSF8, TYROBP, YWHAZ, ATP6V1C2
Negative_14053	FGA, ME3, TYR, ABI2, ACO2, ACVRL1, ADIPOQ, ADRB3, ALG12, ALPI, AVPR1B, B4GALT1, BCKDHB, CAMK2D, CASP8, CCKAR, CCR5, CD79B, CDC23, CHKA, CYP2B6, DNMT1, DTX1, DUSP6, DVL3, EPB41, ERO1L, FGF1, FGF2, FZD5, G6PC, GCLC, GDF5, GLUD1, GP1BB, GPD2, GPT2, GSTA5, HTR6, IFIH1, IL21, IL6R, IRS2, KDSR, KYNU, LHCGR, MCEE, MDH2, NADK, NUDT12, OGDHL, OR10G3, OR10P1, OR13C4, OR1J2, OR2D2, PARD6B, PAX6, PDE8A, PDGFRB, PLA2G5, POLR2K, PPP1CA, PPP2CA, PPP3CC, PTCH1, PTPRB, RASA2, SDC2, SPTLC1, STX12, TALDO1, TNFRSF9, TNFSF11, UGT8, VAMP3, WNT8B, MAPKAPK5, SERPINA5, ST6GALNAC1, TNFRSF11A, TNFRSF13C
Negative_14054	GNE, MIF, MPL, MTR, PRL, SPN, ACTG1, ACTG2, ADRB2, ALCAM, ALPP, AQP7, AVPR1B, BCAT2, BCKDHB, BDH2, BMPR2, CACNG1, CAPN2, CASP7, CCL4, CDH3, CHSY3, CLDN17, CLDN20, CNGA4, COL5A3, COL6A1, CPS1, CRKL, CSDA, CXCL13, CYP27A1, CYP2E1, DPM3, EFNA5, ENPP1, EPHA5, EXT1, FGF21, FGF9, G6PC, GALNT3, GNAI2, GPD1L, GRIA2, GSTP1, GUSB, HIP1, HLA-C, IFNAR1, IL22RA1, IL22RA2, LCAT, MAP2K5, MAT2B, MGAT4A, MYH1, MYH13, MYH7, MYL7, NR1H3, NRG1, OR10J1, OR1L1, OR52A1, OR52W1, OR6B2, P2RX2, PAPSS1, PMVK, PPAP2B, PPARD, PRKCI, PRKX, PROS1, RELA, SKIV2L2, SPAM1, SRGAP3, TAS2R1, TAS2R5, TBL1XR1, TJP3, TNFSF9, TSC1, UGCGL2, UGDH, WASL, YARS

Negative_14055	CEL, CP, FES, GP9, MVK, TPO, ACHE, ACVR2B, AGTR1, APBB1, APOA1, BHMT, C AMKK1, CCNG1, CD40, CD70, CHPF, CHRM5, COMP, CSH1, DDX50, EPHA7, EPHA 8, FMO2, GAL3ST1, GLB1, GLUD1, GSTZ1, HCLS1, HTR5A, HYAL1, IDH3G, IFN A8, IFNG, IL15, IL18R1, ITGA4, KARS, LAP3, MAP3K13, MGAT5, NAE1, NCOR 1, OR10A4, OR14C36, OR1K1, OR2Y1, OR5B17, OR5P2, OR7G3, PARD6B, PDE9 A, PGAM1, PIK3CB, PLA2G5, PLCB1, POLR2B, PRKG2, RAC2, RDH16, RGS3, RO BO3, RPS6KA1, SEMA3A, SEMA4G, SKP1, SUOX, TGFB2, TRAF5, UROC1, AASDH PPT, ARHGEF12, HSD17B10, SERPINA5
Negative_14056	C4B, DBI, EZR, FST, GPT, LCK, RB1, ACY1, AMPD3, AMY2B, ATP4B, ATP6V1A, ATP6V1F, CACNG4, CD34, CD47, CDC16, CD01, CSAD, CSF2RA, CSNK2B, CYCS , DFFA, EPHX2, FCER1G, FGFR1, FZD3, GLO1, IFNA21, IQGAP1, ITGB8, JAK2 , KIR3DL2, MAPK7, MGS3, MYH14, OCLN, OR13C4, OR14J1, OR1Q1, OR2A4, O R2AE1, OR4C12, OR5AK2, OR6C75, OR7C2, PFKL, PITX2, PPP1R3A, PRKCG, P TPN1, RARS2, RASGRP1, RDH16, SDC2, SHMT1, SOCS7, SRD5A1, ST3GAL1, SU LT2B1, SV2A, TAS2R13, TAS2R60, TYMS, VEGFA, VEGFC, WASF3, YWHAG
Negative_14057	F8, HPD, OAT, SP1, ACSL1, ADCY9, ALDH7A1, ALOX5, B3GNT2, CACNA1I, CAC NG4, CAV3, CCL13, CD40LG, CER1, CHRM2, CLDN2, CLTC, CRKL, CRLF2, CYP4 F2, DTX1, DUSP14, G6PC, GDF7, IL18RAP, ITGB7, KIR2DS4, KITLG, LAMB1, LGMN, MYH11, OGDH, OR10A5, OR10H1, OR4F5, OXSM, PDE11A, PDHA1, PEMT, PLCZ1, PRKACB, PRKAR2A, RAB23, RBX1, RDH16, RPS6KB1, SEMA4A, SKP2, S MC1B, STMN1, TCF7L2, TKTL2, TSC1, TUBA3E, TYROBP, UROC1, ATP6V1B2, B 3GALNT1
Negative_14058	CFD, LPO, MAX, PTS, TNC, ABL1, ACTN4, ALCAM, ALG8, AMPD1, AOC3, ARSA, B AIAP2, BLNK, BMPR2, CACNA1G, CACNA1H, CD46, CXCL1, CYP2D6, DAPK1, DK K2, DUSP6, DVL2, E2F1, EPHB6, FGF17, GCNT2, GRIN2D, GUSB, HEXA, HIF1A , HTR2A, IFT57, IL8RB, LCMT2, LTBR, MAP3K8, MLLT4, NCAM1, NCAM2, NFE2 L2, NTRK2, OR10H2, OR1Q1, OR2A25, OR2A5, OR2B2, OR4Q3, OR52W1, PANK4 , PARS2, PARVG, PIAS4, POMC, PTGS2, RAP1B, RAPGEF2, RELA, RUVBL1, TNF RSF4, UAP1, YWHAG, SERPINA5
Negative_14059	DUT, TAT, ABL1, ACSS3, ADIPOQ, AHCYL2, ALPI, APOA2, CACNA1H, CDH15, C DK2, CDKN2B, CHSY1, CYP21A2, DPM2, FABP1, FDPS, FPGS, GBE1, HGSNAT, I KBKG, IL6ST, INHBA, KIR2DL4, LAMB3, MMP2, OR2AG1, OR4A5, OR4P4, OR4S 2, OR51G1, OR7A10, OR8H1, PFN2, PIGK, PIP4K2C, PKM2, PLA2G2A, POLA2, PPP3R2, PRODH, QARS, RDH12, SCD5, SFRP4, TAS2R13, TSC2, TSLP, HLA- DRB3, PNLIPRP2, TNFRSF13B
Negative_14060	GSR, ADSS, AGXT, AKR1B1, ALG6, ATF4, CACNA1A, CCNG1, CCR10, CDC16, CD K5, CD01, CLDN20, CLDN7, CLTC, CSF2RA, CSNK2B, CYP3A5, DDX41, DTX3L, EFN3, FZD8, GAB1, GALNTL2, GLB1, GRM5, HCCS, HNF4G, HTRA2, IFNA21, I FN1, IL17RA, INSRR, IRF7, LGMN, MAP3K11, MAPK1, MYH6, NFATC4, NR1D 1, OR10AD1, OR13C8, P2RX1, PDE4D, PDXP, PLCE1, POLR2G, PRKAA1, PRKCB , PTDSS2, PTGES2, RFWD2, TCIRG1, TLN1, TNFRSF4, VDAC3, ST6GALNAC5
Negative_14061	AMT, GH1, HAL, MVD, OAT, SCD, ADH1A, ADORA2B, AGRP, ALDH6A1, ALG12, AL OX12B, ALPPL2, AMPD2, APOA2, BCAT1, BIRC2, BST1, BUB3, CCL8, CTBP1, D USP2, EGLN1, ENO1, FADS2, FARSA, FGF12, FGFR3, FZD3, GALNT10, GCNT1, GPAM, GUCY1A2, HMGCR, IFNA13, IKBKG, IL20, IL6ST, MAP2K3, MAP3K13, M TMR6, NFKBIA, OR1D2, OR2A12, OR2A42, OR2B6, OR52E6, PDCD1, PDE2A, PG AM2, PIGQ, PIP4K2B, PLAT, PLCD1, POLE, PPP2R5D, PRKAR1A, PRKCZ, PRKY , PRPS1, PSEN1, PTPRR, RAB23, RPS6KA3, SEMA3E, SLC12A2, SOCS2, SPP1, TNFSF9, TUBA1A, UGCGL2, VDAC3, XYLT2, ZFYVE16, ZFYVE9

Negative_14062	A2M, CAD, CSK, GDA, LCK, SYK, ACP5, AK3L1, APOE, ARHGEF7, ARPC4, ATP6V1D, ATP6V1F, CD99, CHST12, CLDN19, CXCL5, DIAPH2, ENTPD1, GALNT5, GLG1, GNPAT, GP1BB, GSK3B, GSTO2, HSD3B2, IFNA4, IRAK4, ITPKA, ITPKB, LAMA3, MAPK14, MYLK, NUDT2, OR2M7, OR4D5, OR4S1, OR51M1, OR6K6, P2RX4, PDE6D, PMVK, POLE2, PPP3R1, SHC4, SLC12A2, SLIT1, TSNARE1, TUBA1A, ATP6V1C2, CACNA2D4, PAFAH1B2, PNLIPRP1
Negative_14063	DLD, F12, F3, GP9, GPI, LCK, MUT, AADAC, AACL5, ACVR2A, ALAS2, ARHGEF2, ARHGEF7, BMPR2, C9orf95, CACNG6, CAMKK1, CCL28, CCR2, CDKN2C, CD01, CLTA, CNGA3, CXXC4, CYP3A5, DAG1, DAXX, DGKD, DIAPH2, DNMT3L, ECSIT, EPOR, EXTL1, GALNT2, GP1BA, GRB2, HAAO, HPSE, HRAS, HSD17B1, ICOS, IL10, IRF5, ITGA2, ITGA8, LIMK1, LRAT, MAP3K6, MAPK3, MAPK9, MEF2C, MICHA, MNX1, MYH14, MYL5, MYLK3, NAE1, NNMT, NRG3, OR10J1, OR1J2, OR2A2, OR2H1, OR4D2, OR4N5, OR5D14, OR5P3, OR8D2, OR8H1, OR8J1, OR8S1, P2RX3, PAPSS2, PGM3, PIK3C2B, PIM1, PLA2G1B, PLD1, PNPLA3, POLE3, PPP3CA, PRKCH, PRLR, QARS, RHOA, RPN2, RRAS, SENP2, SHMT1, SLC25A4, SORBS1, TAS2R49, TNFSF14, UBE2K, ULBP3, UMPS, VANGL2, VAV2, ATP6VOE1
Negative_14064	ADO, CS, JUP, LCK, ME1, OGT, PC, PDC, PTS, ZYX, ABL1, ACACB, ADCY6, ALDH4A1, AMHR2, ANAPC11, APH1A, APRT, ATP13A2, AVPR1A, AXIN2, BMP8A, CACNA1H, CAMK2B, CCL4, CD58, CD79B, CDKN2B, CHRDL, CLDN17, CMPK2, CPT1A, CTTN, CYP2C8, DHRS9, DNMT3B, EHMT2, ENTPD3, FGF3, FLOT1, GAB1, GNA15, GNB1, GPD1L, GSTA1, HSD17B1, IARS, IL17B, IL18RAP, INSR, INSR, MAML1, MDH1, MGST2, NFBYB, NOS3, NPAS2, OR10A7, OR11H1, OR2B6, OR4D11, OR4M1, OR51G1, OR51M1, OR5A1, OXTR, PDGFC, PDXP, PIGV, PPAP2B, PYGL, RBX1, SDC3, SFRP2, SNAP23, TCIRG1, TJP1, WNT10B, YWHAE, YWHAH
Negative_14065	CD4, HK3, IDS, ME1, MET, PGD, SDS, SI, SRM, AACSB, AASS, ABLIM2, ACO2, ACSS3, ACTN1, ADH5, AGPAT6, AGRP, ALG12, ATP6V1F, CACNG4, CAV1, CCNA1, CDS1, CER1, CFLAR, CMPK2, CRY1, CSH1, CTNNA3, CTSG, CYFIP2, DAPK1, DHODH, DTYMK, EDAR, ENTPD3, FMO5, GALNT10, GAMT, IL11, IL17A, IL3RA, ITPKA, KIR2DL4, KLRC3, LAMC3, MADCAM1, MAP3K11, MAPK13, MEF2C, MTHFS, NADSYN1, NFKBIB, NFYA, NGEF, NOTCH2, NPAS2, NRG2, OR10G8, OR2F2, OR51F2, OR56A4, OR5AP2, OR5AU1, PARVB, PFN1, PHKG2, PMM2, POLR2L, PPARA, PRPS2, PTGER1, SCP2, SOS1, SOS2, SUOX, TNFRSF4, TNFSF8, TRMT11, UBA7, UCKL1, UGT1A10, VASP, WNT2B, WNT4, ATP6V1G2, MAPKAPK2, TNFRSF13B
Negative_14066	DBH, FUK, IL5, INS, LEP, MET, AACL5, APOA1, ARHGEF2, ARPC5, ATG7, BMPR1B, CACNA1I, CACNB4, CAV2, CD58, CDK7, CES1, CHKB, CLTA, COQ6, CPT1A, CREB3L4, CYP1B1, DDX56, DLAT, DLL1, DUSP7, ENTPD1, EPHA7, ESAM, FBP2, FECH, FUT1, GJA1, GOT2, HNMT, HTR2A, HTR2C, ICAM3, IDUA, KCNB1, LIAS, MAPK1, NANP, NRG1, OR10G2, OR10K1, OR1B1, OR1J1, OR2T3, OR51L1, OR56B4, OR5AS1, OR7C2, PFKP, PHKG2, PIGP, PIGS, PIP5K3, PLXNB2, PLXNB3, POLR1D, POLR2I, PPM1B, QPRT, RAC1, RAF1, RDH12, RDH8, RPE65, RRAS, RRM2B, SHC1, STK11, SUCLG2, TAS1R1, TRAF5, TUBB4, UBE2L3, ULK3, VEGFC, WEE1, WNT9B, SUV420H2, TNFRSF10B
Negative_14067	AK5, APP, C6, GGH, GNS, HK1, IL2, IL9, LCK, TK1, ACADSB, ACOT11, ACOX1, ACOX3, ACSM5, ADCY8, ADIPOR2, ADORA2B, ATP5J2, BCL2L1, BDNF, BIRC2, CAMK4, CCL16, CD70, CERK, CHKB, CSF3R, CTNNA3, CXCL2, CYP1A1, CYP2C9, CYP2J2, DUSP8, ENAH, ENO2, EPHB3, FCGR3A, FLOT1, GDE1, GNA14, GSTZ1, HIBCH, HSD11B1, IL28RA, INPP4B, ITGB3, JAG1, KRAS, KYNU, MAML1, MAPK10, MYH2, NAGLU, NCAM2, NRXN3, NTSR1, NUDT9, OR10H5, OR1L8, OR2C1, OR4C46, OR51I2, OXSM, PAX6, PFN1, PIP5K1B, PRKACG, PTPN5, SELP, SPRED2, ST3GAL1, ST8SIA5, STX5, TBL1X, TGDS, TXNDC12, UBE2K, ATP6V1C1, ATP6V1E2, PAFAH1B2, TNFRSF10A

Negative_14068	F9, GK2, LPO, MSN, PXN, TNR, AARS, AASS, ACTA1, AFMID, AMHR2, ANAPC2, A RSA, B3GNT4, BBC3, BCAR1, BCKDHA, C3orf10, CAPN2, CCL22, CDC23, CDS1 , CHEK2, CLDN5, CYP2J2, CYP2U1, DDX41, DDX52, DGKA, DTX3L, DTYMK, ELK 1, GBA3, GGPS1, GNAL, GPX7, GRIA1, GSTA5, GSTM4, GUCY1B3, HGSNAT, HLC S, HPSE, ICAM3, IGF1, ITPKA, JAG2, LIPT1, MAPK13, MAPK14, MMP2, MYLK3 , NAT5, NKD1, NMNAT1, OR13H1, OR4A16, OR4C13, OR4K13, OR4K2, OR52L1, OR5AU1, OR5B17, OR5M3, OR6C6, OR6S1, OR9I1, OR9K2, PARD6B, PARVA, PA X4, PHKG2, PIGP, PIP5K1C, PLCD3, PLXNA1, POLR1E, POLR2G, PPP2R2A, PR KAB1, PTGS1, PYGB, RAPGEF1, RASA2, RBX1, RPE65, RRAS2, SMPD4, SMURF2 , SOCS3, ST3GAL1, TAS2R16, UGT2B10, UPB1, VDAC3, ZNRD1, ATP6V1G2, B3 GALNT1, SERPINF2
Negative_14069	DBH, IL2, ILK, MUT, TXK, ACHE, ACMSD, ACYP1, ADSSL1, AKR1C2, AKT2, ALG 10, ALG11, ARPC5, ATP6V0B, AXIN1, B3GAT2, BMP8B, C9orf95, CD8B, CHAD , CLOCK, COL2A1, COL6A2, CYP2C8, DGKA, DKK1, DVL1, DVL3, EPHA2, FARP2 , FCGR3A, FLOT1, FOXA3, GLI3, GNA14, GNRH2, GPAM, GUCA1C, IFIH1, IFNA 4, IMPA1, IMPDH2, KARS, LAMB2, LARS, LIFR, LRDD, MAD2L1, MAN2A1, MGST 1, MMP14, MPZL1, NT5C1B, NT5C3, NUDT9, OR11H6, OR14I1, OR1J2, OR1L4, OR4K1, OR6C2, OR8D4, ORC6L, OXCT1, OXSM, PARS2, PDHA1, PHKA2, PIGS, P IK3R1, POLR3K, PPID, PPP1CB, PSME1, PTPN11, RCHY1, RRM2B, SEMA4D, SR EBF1, STK3, SULT1A4, TICAM1, TYMP, UGCGL1, YARS, ATP6V0D2
Negative_14070	AGK, BTC, F2R, GK2, HK3, PAH, ARHGAP5, ARHGEF2, ARRB2, ATP2A2, ATP2A3 , BMP8A, BRAF, BUB1, CACNA1C, CACNG5, CAMK2A, CHAD, CKS1B, CLDN16, CT F1, CYP4F2, DDX23, DDX55, DGAT2L4, DHCR7, DTX1, EIF4B, EPOR, FZD7, GG T1, GSTA4, GSTZ1, GUCA1B, HSD17B8, HTR6, IL20RB, IRAK3, ISYNA1, KIR2 DL4, LAMB1, LFNG, LTA4H, MAP3K14, MAP3K8, MAT1A, MMP1, NRXN3, OR10G3 , OR12D3, OR2B6, OR2C1, OR2K2, OR2L8, OR4D2, OR51E2, OR8S1, ORC1L, PA RD3, PCYT2, PLA2G1B, PLA2G6, PLAU, PLXNB3, POLR1C, POMC, PRKAA2, PRL R, PTPMT1, RERE, SOCS3, SRD5A1, STX6, SV2A, TCF7L1, TNFRSF9, TPH1, TR MT11, TUBA1A, UBE2K, ULK2, VANGL2, XCR1, YWHAE, YWHAZ, ATP6V1G3, CSG ALNACT1
Negative_14071	CAT, DBH, MIF, ACSL6, CCNA1, CD8A, CHRM1, CYP26C1, DTX3L, ENO1, EPHB4 , FGF1, FUT9, GALNT1, GCH1, GNB1, HAAO, MAN1A2, MAP3K13, MASP2, MCCC1 , MICA, MLLT4, MOV10L1, MRAS, OGDH, OR10V1, OR2AE1, OR2M2, OR4F17, OR 52E4, OR5P3, OR5V1, OR8K1, OXCT2, P2RX2, PDE6D, PDGFA, PIK3C2G, PLK1 , POLR1E, PRIM2, PTGFR, PTGS1, RALGDS, RPS6KA1, ST8SIA1, TAS2R5, UGT 8, WNT2B, WNT4, B3GALNT1
Negative_14072	F10, HYI, IDS, LEP, LHB, MOS, SHH, AANAT, AASDH, ABLIM3, ACADVL, ACSM4 , AFMID, ALDH1A2, ALDH6A1, ALDOB, ANAPC5, APLP1, ARHGEF7, ARPC5, ATG 3, BUB1B, CACNG4, CCL22, CD28, CDC23, CHRM1, CISH, CLDN1, CSAD, CXCL1 2, CYP11B2, DFFA, DGKE, DOCK1, FGF21, GLI3, GNG3, GRIN2B, HGSNAT, IFN A8, IL1RAP, IL6R, ITGAX, KLRC1, LEF1, MAPK11, MDM4, MPST, MTFMT, MYL2 , NAT2, NCF1, NFATC2, NLGN3, OCLN, ONECUT1, OR10Q1, OR11H6, OR13F1, O R1B1, OR1E2, OR2M4, OR52K1, OR52M1, OR56B4, OR5R1, OR6C74, OR9Q1, OR C4L, PDCD1, PIGN, PIGT, PIP4K2C, PLCB4, PRNP, PTGFR, RHEB, SLC33A1, S TK4, SULT1A1, SV2B, THBS4, TUBA3C, TUBB1, TUBB2A, UCK2, PHOSPHO1, TN FRSF13C
Negative_14073	A2M, AK3, EGF, FAS, HPD, KIT, MUT, TNC, A4GALT, ACVR2B, ADH1B, ARAF, AT P6V0B, BIRC5, CCNA1, CCR8, CXCR3, CYFIP1, DDX4, EPB41, EPB41L2, ERBB 4, EXTL2, FADS2, FGF4, FGF9, FUT1, GSTA5, GSTM1, HRH2, IL5RA, INPP4A, JAM2, JUND, MAPT, MCAT, MCM6, MLLT4, MPP5, NFATC4, NLGN3, NOS1, NOTCH 2, OR10K1, OR2T3, OR51D1, OR51G1, OR52N1, OR5F1, PDHA2, PIP4K2C, PLC G2, POLA1, PPID, PPP3CC, PRKAG2, PRODH, PTPRF, RALGDS, RDH8, ROBO3, R PE65, SEMA4A, SESN2, STAM, STK11, STX18, TUBA1C, XYLB, ATP6V0D1, ATP 6V1E1, HLA-DRB4, PRICKLE2

Negative_14074	LCT, PGF, SDS, SPN, ACP6, ADORA2B, AK3L1, ALG6, AOC3, ARPC1B, ATP5F1, ATP6V1A, B3GAT2, BCAT2, C9orf95, CACNA1I, CACNB3, CALML3, CAMK4, CFL2, CHPF, CLDN19, COL5A2, CXCL13, CYP2B6, DDB2, DDIT3, DVL2, ENAH, ERBB3, ESAM, GADD45G, GNB1, GOT2, GPD2, GPX7, GRIN2B, GSTK1, HEMK1, ICA M1, IL10RA, IMPDH2, KIR2DL3, LALBA, LAMB1, LCAT, LLGL1, MAN1B1, MAP3 K1, MARS, MCM5, MGAT4B, MTHFD1, NANS, NARS, NCK1, NCKAP1L, NFKBIA, NR1H3, OR13C2, OR14C36, OR2A5, OR2C3, OR2K2, OR2M2, OR3A1, OR4C6, OR6F1, OR6K6, PANK4, PAX6, PDE6D, PIGV, PIM1, PLAU, PPAP2C, PRKCI, RARA, RBKS, RDH12, SAT2, SDC3, SELP, SLC27A1, TKTL1, TPM3, TUBA8, TUBB2B
Negative_14075	AK2, F5, GHR, LTB, OGT, PRL, ACP2, AGXT2, AKR1B1, AKR1C4, AMD1, BDH1, CDC6, CCL3, CD8B, CDC25A, CLDN16, CX3CL1, CX3CR1, DAAM2, DGKD, EPB41L1, EPHB4, FABP3, FGF18, FLT3LG, FZD7, G6PC, GADD45B, GDF5, GSTM2, HBEGF, HEMK1, HLA-DMA, IARS, ICAM3, IL17B, INADL, INSR, ITGA7, ITGA8, ITPA, MCEE, MCM3, MIOX, MYLK3, NEU4, NOX3, NT5C3, NUMBL, OR10G2, OR3A2, OR4K5, OR51E2, OR51V1, OR52N2, OR5H6, OR5T2, OR6B2, PAFAH2, PDE4D, PFKFB2, PFKFB4, PGM3, PI4KB, PKM2, POLE3, PPP2CB, PPP2R5D, PRDX6, PROC, RBL2, RFNG, RPS6KA1, RUNX1, SEMA4A, SMAD2, STK36, SV2B, TAS2R40, TYMP, VKORC1, WNT1, MAP3K7IP1, PNLIPRP2
Negative_14076	BID, CEL, CKB, DUT, F5, GAA, LHB, MYC, PDC, SI, SRC, TPR, ZYX, AARS2, ACA A2, ACSM4, ACYP2, ADIPOQ, AGRN, ALDH1B1, B3GNT3, B4GALT1, CALML3, CAPN2, CCL23, CCR6, CD36, CD79B, CDH2, CLTCL1, CRHR1, CXCR4, CXCR5, CYP2C19, DPM3, EFN1, FM03, FUT9, GALNT10, GUSB, HES1, HMOX1, HSD17B2, ICAM2, IL13RA1, IL28A, ITGA4, LLGL2, MAGI3, MAP3K13, MARS, MDH2, MICA, MS4A2, MYH7, NQO1, NRAS, OGDH, OR10AG1, OR1L6, OR2M5, OR4K1, OR52A1, OR52N2, OR5AR1, OR5J2, PANK1, PDE6G, PDGFD, PFKFB4, PNPLA3, POLR3A, PPP2R1A, PPP2R1B, PPP2R2B, PPP2R5D, PRKCI, PRPS2, RBL1, RPN2, SIAH1, STK3, TAS1R2, TBL1Y, TLR4, TSC2, TUBB3, WASL, WNT6, YWHAZ, ZAP70, ATP6VOA1
Negative_14077	A2M, C8G, DUT, ILK, MTR, SMS, AARS2, ABI2, ACPP, ACSS2, ACVR2B, ADCY9, AHCYL2, ALDOB, AMY2A, ARNT2, CACNA1A, CAMKK1, CCDC6, CCL25, CCL5, CCNB2, CD274, COASY, COL1A2, COL5A2, CYP11A1, CYP3A5, DDX52, DHRS4, DLL4, FABP4, FARSA, FDFT1, FZD5, HADHB, HAGH, IDH3A, IFNA2, IL12RB1, ITGB2, KLRC3, MAPK8, MYL2, MYL5, NGEF, NPAS2, NT5C, OR2B6, OR2T5, OR4N4, OR52K2, OR52N5, OR5AR1, OR5V1, OR6N2, OR7G2, OR9I1, PARVG, PDE1C, PDE8A, PDGFA, PIGM, PIGU, PIM2, PIP4K2B, PIP5K3, PPP2R2B, PPT1, PRPS1, RBPJL, RCHY1, SPRED2, TAS2R4, TAS2R48, TD02, TGFB1, TRAF1, TUBA8, UNC5C, VAV3, ATP6V1E1, GABARAPL1, HLA-DQA2, MAPKAPK5, SUV420H1
Negative_14078	BAD, FH, PTS, ABL2, ACAT2, ADCY2, ADCY8, AGPAT1, AKT1, AMY2A, ARG2, ARHGEF6, ASIP, ATG7, ATP2A2, ATP6V1A, BDKRB2, CCL1, CCL19, CD247, CDKN1A, CDKN2D, CISH, CMPK2, CTTN, CYP26B1, EHMT1, EPHB4, FGF2, FLT1, FPGS, G6PD, GALNT2, GART, GDF6, GFPT1, GGT7, GMPS, GNAT3, GNPDA1, GNRHR, HAO2, HPRT1, HSD11B2, HTR4, ITGA4, ITGB7, JAM2, KCNQ1, MAD2L1, MAP2K2, MECR, MINPP1, MYH10, MYH4, NCAM2, NCK2, OR10H4, OR1N1, OR2B6, OR52N5, OR5AR1, PANK1, PFKFB2, PIK3C2B, PIK3R3, PLCE1, POLR2H, PPARG, PPP1CA, PPP3R1, PRODH2, PTPRR, RAC3, SAT2, SDHD, STAT4, TACR2, TD02, TNFSF18, UGT2B10, UPP2, WARS2, XCR1, ZBTB16, PPP1R12A, TNFRSF1B

Negative_14079	ADC, ADO, CD6, CRH, F8, IL2, MOS, ACAD9, ACO2, ADCY9, AGPAT3, ARPC4, ATN1, BUB1B, CCNA1, CD38, CSF1, DDX18, DGUOK, DPYD, DTX2, DTYMK, DVL1, FBXW11, FGF13, FMO3, FZD4, FZD6, G6PC2, GADD45B, GMPPB, GNA11, GNG12, GPT2, GRIN2D, GUCA1C, HPRT1, IDH1, IDH3G, IL1R2, IL20RB, IL2RB, ITGA11, KDSR, LTA4H, MAGI3, MAN1A2, MARS, MFNG, MGAT1, MGAT3, MGST1, NAGS, OR11L1, OR13C3, P4HA2, PDE2A, PDE5A, PER2, PFN1, PIK3CD, PNPT1, PPARA, PPP3R1, PTDSS2, PTEN, PTK2, PTPN1, PTPRF, RAC1, ROBO2, SDHA, SLC25A5, SMURF1, SRD5A2, STMN1, SULT2B1, TGFB1, TNFRSF9, UGT2B11, VT11B, ATP6V1G3, MAPK8IP3, TNFRSF18, TNFRSF6B
Negative_14080	AR, MET, ADIPOQ, AHCYL1, ALDH5A1, ALPI, ANAPC2, ARNT2, BDH2, BMPR2, CACNA1C, CACNG2, CASK, CCR5, CD19, CD274, CDC20, CDKN1B, CDS2, CHUK, CPT1A, CSNK2A2, DGUOK, DTX3L, EHMT2, GNAZ, GRLF1, HARS2, HNF1B, HSD11B1, HSD11B2, IFNA16, IL21, KIR3DL1, KITLG, LILRB3, MAPK10, MGAT4A, NCR1, NFKB2, NKX3-1, OR1D5, OR2B6, OR2T10, OR4N2, OR8H1, OR9K2, P2RX4, PARVB, PFKM, PHKB, PIK3R4, PIP5K1B, PLA2G2A, PPP1R1A, PRKACG, PRKCA, PROC, PSME1, RPK1, ROCK2, SARS2, SETMAR, SH3BP2, SHISA5, SLC2A2, TAS2R16, THBS4, TJP3, UGP2, ULBP1, WHSC1, WNT16, YWHAZ, TNFRSF17
Negative_14081	AMT, CP, DAO, GLS, HYI, LTB, MOS, PLN, ACAA2, ACADVL, ACTN4, ATP2A1, ATP2A2, B4GALT1, BIRC3, CCR8, CDKN2C, CHST11, CNGA4, COL11A1, COMP, CSAD, EFN3, ENPP6, EVI1, FGF17, GAD2, GMPR, GSTA3, GZMA, HSD17B1, IKBKB, IL12B, INPP5A, MDH1, MITF, NEGR1, NSDHL, NTRK2, OR10G2, OR10J3, OR2T2, OR4X1, OR52N5, OR5R1, OR6N2, PFN4, PIGX, PIP4K2C, PLOD1, PNLIP, POLR3K, RAC2, ROBO2, SAT1, SKP1, SOS2, STAT6, STT3B, SV2C, TALDO1, TAS2R10, TAS2R60, TLR5, ULK1, UPRT, UXS1, WNT3A, TNFSF13B
Negative_14082	APP, CEL, CP, F11, ACSM5, ACSS2, ADIPOQ, ALDH7A1, AMY2A, ARRB1, BAIAP2, BCAT1, CCND3, CCR6, CD46, CDC14B, CDC20, CLDN3, CLTA, CMBL, CXCL5, CYP1B1, CYP2C18, DIAPH1, DKK4, ENO2, ENTPD6, FCGR2B, GLS2, GNB1, IDI2, IFNGR1, IL13, IL17B, IMPDH1, KIR3DL2, LDHC, MALT1, MAP3K4, NCAM2, NFATC3, NFKB1, NTF4, OR10H1, OR11H1, OR1C1, OR51Q1, OR5T2, OR6T1, OR7A17, OR8H3, OR8S1, P2RX5, PARD6A, PFKFB2, PIK3CB, PLCD4, RAC2, RASGRP3, RPS6KA2, SKIV2L2, SMARCA5, ST8SIA5, SUFU, TNFRSF8, TOLLIP, TPH2, UGCGL1, UGP2, VAV2, WNT1, WNT10B, ATP6V1E2
Negative_14083	DCT, GDA, NOG, PC, SYK, TNN, ACADVL, ACPP, ACYP2, AKR1C4, AOC3, APAF1, ASRGL1, BET1L, CACNG5, CD70, CHPF, CHST13, COL4A1, COL5A1, CSF2RA, CX3CL1, CYFIP2, DDX47, DHRS4, DUSP7, FARS2, GADD45G, GGT1, GLS2, HSD3B1, IFNK, IL20RB, IL25, ITGA5, LEF1, MAP2K4, MTHFS, MYH4, NFX1, NLGN1, OR10A7, OR4A16, OR51E2, OR52A5, OR52H1, OR52R1, OR56A1, OR6B2, OR6C75, ORC4L, PAPSS1, PDE8B, PFN3, PLEKHA8, POLR2G, PRKX, PTGS1, PYCRL, RASA1, RASGRP3, ROBO3, SAT2, SELL, SSH1, ST3GAL6, STK3, SULT1A1, TUBA3C, TUBB6, XYLB, TNFRSF1A
Negative_14084	ADC, ADK, CAT, CR2, F8, GLA, IL8, SFN, AANAT, AK3L1, ALOX15, AQP7, BHMT, CCL2, CD46, CHEK2, CXXC4, CYP1A1, DAD1, DOLPP1, DUSP2, DUSP6, ENTPD1, EPB41L3, ESAM, FABP4, FGF18, FUT7, FZD6, GADD45A, GADD45G, GALNT7, GALNTL5, GNAI2, GNAS, GRAP2, GSTA1, HTR6, IFNA17, IFNA6, IL18, INPP1, INPP4B, ITGAE, ITPKA, KIR2DL1, LAP3, LHCGR, MAP4K3, MAPK8, MDH2, MGAT1, NAGK, NCF4, OCLN, OR10J1, OR1M1, OR3A1, OR4K14, OR52B6, OR6Q1, OR7D4, ORC2L, P4HA1, PAK3, PDE11A, PDXK, PGK2, PI4KB, PIP4K2B, PLA2G2E, PLA2G5, POLR2D, PPP2R1A, RCHY1, RELB, SDHB, SETDB1, SH2D1A, SOS2, SREBF1, STX8, TSLP, TUBA3E, TUBB, UGT2B4, ULBP2, VDAC1, XCR1, ZAP70, ATP6V1E2, TNFRSF12A, TNFRSF17

Negative_14085	GSR, IL3, SPN, TNR, AASDH, ABL2, ACAT1, ACOT11, AGPAT4, AKR1C3, AKT2, AMDHD2, AREG, ATN1, ATP2A3, ATP5E, ATP5G1, B3GALT6, CACNB1, CD27, CHAT, CLTCL1, CNTNAP1, COL4A6, CPT1A, CXXC4, CYP2A13, DAPK3, DDX47, EIF24, EIF4E2, ENTPD5, EPHB1, EPHB4, GALNT1, GLI1, GNAT3, GP1BA, GSTM1, HADHA, HSD17B4, IARS2, IDH3G, ITCH, MAGI2, MLLT4, NR1H3, NRG2, OLR1, OR11L1, OR2Y1, OR52H1, OR6K6, OR6S1, OR7A17, OR7G2, OR8D2, PAX6, PLCE1, PSAT1, PSME3, PTGIS, PTPN11, PVRL2, RASA1, SDHD, SETMAR, SGMS1, SKP2, SMAD4, SMURF2, SORD, SOS1, STX8, TAS2R50, TBXAS1, TPK1, TUBA1C, UBE2L6, ULBP3, ULK2, VAV2, WNT2, WNT3A, ATP6V1G3
Negative_14086	BTD, GP5, HGF, ID3, IVD, MET, PGD, SHH, AASS, ACSL3, ACTN2, ADIPOR2, ADRA1D, ALDH1A3, ALG1, ATG12, B4GALT2, BUB1B, CACNB2, CCR2, CD247, CD3E, CDC25A, CES1, CES7, CHEK1, CLDN8, COL5A1, CSNK1G3, CTSS, DDIT3, DLL1, DOT1L, ENTPD1, ENTPD2, FGF4, FLT3, FUT5, GDF7, GLI3, GLUD2, GNAQ, GRIA3, HPRT1, HTR4, IDI1, IFNAR2, IL18RAP, IL1B, IL21R, IL29, IL9R, INPP5E, IRF3, ITGA5, KARS, KIR3DL3, LCMT1, LDHB, LRDD, MAP3K13, MAPK10, MS4A2, MTHFR, NMNAT3, OR14I1, OR4F4, OR52I2, OR5B17, P2RX1, PARVA, PFKFB2, PFKP, PIGX, PKM2, PLCE1, POLD3, POLR1C, PRKX, PTDSS2, RAB5A, RASGRF1, SDHB, SEMA3D, SLC25A4, TRADD, TUBB2C, MAPKAPK2, ST6GALNA C1, SUV420H2, TNFRSF1B
Negative_14087	CBS, DDO, F12, HGF, SI, SP1, A4GALT, ADAM10, ADIPOQ, ADSSL1, AGMAT, AH CYL2, ARG1, C1QA, CACNB3, CD14, CDK4, CREB1, CSF3R, CTF1, CYP26C1, DBF4, E2F5, EARS2, ELK4, ENO2, EPHA5, FBP2, FMO2, FUT1, GGPS1, GUCA1A, HCCS, HPRT1, HSPA2, IL17RA, INPP5A, IRAK3, ITGB1, JAK3, JAM3, LILRB3, MAP3K13, MAP4K4, MCCC1, MCCC2, MEF2C, MITF, MYH15, NAGK, NAGS, NME6, NMNAT3, NOTCH1, NPR2, NRAS, NRCAM, OR10G9, OR10H1, OR11H1, OR2L2, OR4C6, OR51B6, OR52B6, OR5B17, OR6Q1, OR8H2, OR9A2, PDGFA, PIGF, PLCB3, PLCG1, PLOD2, PNPLA3, PTPN5, RAC1, RBX1, RERE, RPS6KA4, SEMA3B, SENP2, SGMS2, SHMT1, SPRED2, TAS2R38, TAS2R48, TLN2, TNFSF11, UPB1, VAV1, AASDHPPT, ATP6V1E1, MAPKAPK5, PRICKLE2, TNFRSF11B, TNFRSF12A
Negative_14088	C2, C5, CEL, GLA, OGT, ABCC8, ACACA, ACO1, ADH4, ALPP, ALS2, ATP6V0C, BACE2, BCL2L1, CASP9, CCL19, CCR10, CHRM5, CSF3, DDX54, EPB41L1, FZD1, GLDC, GSTA5, GUCA1A, HLA-DOA, HSD11B2, MCAT, MMP7, MTMR6, MYH4, NAT6, NFX1, NOS3, NOTCH3, OR10G9, OR10X1, OR6C74, OXSM, PCCB, PDE4A, PIGO, PIP5K1B, POLR3A, PPCDC, PRKAB2, RARA, RDH8, RHOD, SEMA4B, STAM2, VEGFA, WNT2B, XYLB, ATP6VOD1, ATP6V1G2, ATP6V1G3
Negative_14089	AUH, CD6, CGN, DUT, IL5, NGF, SMS, VTN, ACP5, ACSM4, ADCY4, AKR1B10, APH1A, APOA2, ARHGEF6, ARPC3, B3GAT3, B3GNT3, C1QB, CD38, CD44, CDKN1A, CLTCL1, COL3A1, CTSS, CYP11A1, DAPK3, DDB2, DHRS3, FCER1G, FGF4, FLOT2, FOXA2, FUT5, FUT6, GABARAP, GADD45B, GADD45G, GNA12, GNAI1, GOT1, GUCY2C, HIBADH, HMGCR, HSD11B2, IGF1R, IL13RA2, IL15, IL22, ITGA2B, ITGB5, LRAT, MTAP, NKX3-1, NRP1, NUDT8, OR4A16, OR4K14, OR4K2, OR51B4, OR51G2, OR51Q1, OR6K2, OR9Q1, PIGL, PIGV, POLR1A, PRKCI, PSEN1, PSME3, RDH12, SMC1A, SOCS1, SORD, SOS2, STX7, SUCLA2, TM7SF2, TPK1, TRADD, UNC5B, UROC1, VAMP2, CACNA2D3, HLA-DPB1, HSD17B12, TNFSF13B
Negative_14090	DHH, FGB, HK2, LYN, A4GALT, ACACA, AKR1B1, ALG5, AMDHD1, APOC3, B3GAT1, CDKN1B, CLTC, CSNK2A2, CX3CL1, DLST, EDN1, FRAT1, FRAT2, HAP1, HSD3B1, IBSP, IL13RA2, IL15RA, JAK2, JAM2, MCM7, MEF2C, MFNG, NCAM2, NMNAT1, OR5P3, PDE8B, PHKG1, PHPT1, PI4KA, PPP1CA, PRKCG, PROC, RASGRP4, RFNG, RPS6KA2, RPS6KA4, SEMA3B, SLC2A2, STAT2, TCF7L1, THBS4, UAP1, WASF3, ATP6V1C1



Negative_14091	ASL, OAT, ACSL6, ACTA1, ACTN4, ALG3, AMPD2, ANGPTL4, APAF1, APPL1, ARPC5, CDC6, COL4A4, CYP2A6, CYP4F3, DDX47, E2F3, G6PC, GAD2, GFAP, GLO1, GNAO1, HHEX, IL17A, KIR3DL3, KLRK1, LCMT1, LEPR, LRRC4C, MAN1B1, MBL2, MCM4, NT5C1B, NUDT5, OR10G7, OR11H6, OR2A14, OR2A5, OR2D2, OR2T2, OR51F2, OR51I1, OR51I2, OR8H3, OR8U1, PDE11A, PDE4B, POLE, POLR2H, PSPH, PTSS2, PTGER3, PTPN11, RHOQ, SHISA5, SHMT2, SPP1, STAM2, SULT1A2, TAS2R14, TAS2R41, TGFA, THBS4, TLR9, TNFRSF9, SERPIND1
Negative_14092	AK3, C7, CEL, F7, MET, ACACA, ACO2, ALDH3A2, ALDH7A1, APPL1, ATP6VOC, AXIN1, BDKRB2, CAMK4, CCL11, CCR4, CD34, CDKN2C, CES2, COX15, CREB3L1, CSNK2A1, CTBS, CXCL10, CYP21A2, DOLPP1, DPYD, EFNA2, EFNA3, EPB41L3, ERBB2, EXTL2, FADD, FCGR3B, FMO4, FRAT2, GGT5, GLUD2, GNG13, GSTM4, HNMT, IFNGR1, IL17RA, JAM2, LTBR, LYPLA1, MAP3K13, MCEE, MITF, MKNK1, MYH11, MYH13, NCR2, NEUROG3, NOX3, NTF4, NTRK2, OR11H1, OR1N1, OR2A12, OR2G2, OR2L3, OR2S2, OR4X2, OR51F1, OR51G1, OR52M1, OR6B2, OR6C3, OR6C4, PARD6A, PIK3C2B, PIP4K2A, PLXNB1, POLR1B, PTPRM, PYCR1, RAB23, RARS, RDH16, RFXAP, SDC3, SGMS1, SH2D1B, SPHK2, SULT2A1, TAS2R7, TLN1, TLR3, TLR4, TUBA3C, TUBB6, UPP1, WNT2B, WNT7A, HLA-DPB1
Negative_14093	AMT, CFH, FGG, KDR, OGT, ABL1, ACADL, ALDH2, ALDH7A1, ALOX15, AMHR2, APLP1, ARNT2, B4GALT1, BMP8A, BTRC, CACNG6, CAV3, CCNE2, CCR9, CDC6, CMAS, CREB3L1, CYP7A1, EPHA1, EPRS, FOXA3, FZD3, FZD9, GAD2, GADD45A, GALE, GLUD2, GNAO1, HTR2A, IBSP, IL6R, IL8RA, IRAK1, LDHA, LRP6, MADCAM1, MAFA, MCM6, MNX1, MYH9, NAGK, NME7, NTNG1, NUMBL, OR10J3, OR13J1, OR2A2, OR2G6, OR4M2, OR51G1, OR51Q1, OR5AR1, PRLR, RASGRF2, RPS6KA4, RPS6KB1, SETD2, SH2D1B, SHC2, SLC33A1, SMAD5, SOAT1, ST3GAL6, TAS2R7, TFPI, THTPA, THY1, TP53I3, TYMS, ULBP2, WNT7A, CACNA2D4, MAP3K7IP2
Negative_14094	CEL, DCT, F10, FGG, HGD, ID3, IL8, MVD, RDX, TK2, ABP1, ADRA1A, AKR1D1, ASAH1, B3GALT4, BMPR1B, C4BPA, CCL23, CHST11, COL4A6, CPS1, CREB1, CXCR5, CYFIP1, CYP2J2, CYP3A7, DDX47, DEGS2, DGAT2, DNMT1, EDA2R, EI24, EPHA1, FUT3, GCLC, GLO1, GLS2, HADHA, HEMK1, HLA-DMA, HNF4A, IMPA1, IRF3, ITGB7, KIR2DL1, LARS, LIMK1, MAP3K13, MTMR1, NFKB1B, NKD2, OR10Z1, OR11G2, OR4C11, OR4C15, OR51E2, OR51T1, OR51I1, OR6F1, OR7A5, PCCB, PDE4B, PHPT1, PI4KB, PIGP, PIP4K2C, PLTP, PPARA, PPAT, PPP2R2B, PRDX6, PTCH1, PTK2B, RAF1, RAP1B, RPS6KA3, RPS6KA5, SESN3, SLC12A2, STAT3, STX1B, SULT1A1, TACR1, TFDP1, TLN1, TNFSF10, TOLLIP, TUBA3C, TUBB2C, UPB1, VAMP4, HLA-DQA2
Negative_14095	DDO, EDA, GNE, GPI, MET, ACAT2, ACOX2, ACSS1, ACVR1, AHCY, AKR1C3, ANPEP, ATP5H, B3GAT2, CAMK2D, CCNA1, CERK, CFTR, CHRM3, COQ7, CPT2, CYFIP1, CYP26A1, DAAM2, DERA, DHRS9, ENTPD6, EPB41L2, EPHA7, EPHB1, FMO3, FOXA3, FZD10, GLS2, GMPPB, HSPA1B, IFNAR1, IGF1, ISYNA1, LGMN, LIAS, MARS2, MMP2, MPDZ, NAT2, NCK1, NCR3, NEUROG3, OR10A2, OR10G3, OR11G2, OR13C2, OR1L3, OR1L4, OR2L8, OR4D11, OR5M3, OR6T1, OR8J3, PARVB, PDXK, PER1, PFAS, PFKM, PIK3C3, PIK3R5, PIP4K2C, PLCD3, PLXNB2, POLR1A, PPP2R2B, PRKAG3, PTGER1, PTGS2, RND1, SEMA4F, SPCS1, TAS1R2, TRAF1, VAMP3, VDAC3, VKORC1, WNT1, YOD1, YWHAG, PRICKLE1, TNFRSF13C
Negative_14096	BID, CKB, MET, MVK, TPR, AKT2, AKT3, ANAPC2, APH1A, ASPA, ATP2A2, B3GAT3, BCAT1, C5AR1, CALML5, CASP6, CCNB3, CCND3, CD8B, CDC25A, CDK6, CDKN1A, CLDN9, CLTC, CSNK2A2, CYP26A1, DDB2, ENPP3, FLOT1, FZD5, GALNT11, GSTP1, GUCA1C, IKBKB, IRAK3, ITGA2, KARS, LRP6, MAGI1, MAP3K5, MDH1, MYLK3, OR10A3, OR2K2, OR4A16, OR5AU1, OR5H6, OR6A2, PGK2, PPP2CA, PRKACG, SLC27A1, SMURF2, SOAT1, STK3, SUV39H2, TAS2R14, TSC2

Negative_14097	AK1, BAD, LPO, PDC, RPE, ACAD8, ACAD9, AGTR1, ARNT, AXIN2, BAI1, BMP6, C4BPB, CACNA1A, CALML6, CCL7, CDKN2C, COL3A1, CSNK1G3, CYP17A1, CYP4A22, CYP4F2, DAPK1, DGAT1, DGKD, DGKI, DHODH, DNMT3A, DPYD, DPYS, ENTPD7, EPB41L2, F2RL1, FM04, FRAT2, FSHR, FZD9, G6PC, GPAA1, GRM1, HMB S, HNF1B, HSPA1B, IFNA6, IL15RA, IL18R1, IL21R, IL28RA, LYPLA2, MAP3 K13, MAPK7, MMP9, NADSYN1, NFKB2, NMNAT3, OR10G9, OR1S2, OR2C3, OR4C 11, OR8B12, PDE4A, PDE6G, PIP5K1C, PISD, PKMYT1, POLA1, POLR2A, POLR 2L, PPA1, RASGRP4, RELA, RRM2B, RUNX1, SGMS1, SMARCA2, SMPD1, ST8SIA 1, STAM, STK11, TIAM2, TICAM1, TLN1, TMLHE, TSHR, VEGFB, VNN1, GABARA PL2, PNLIPRP1
Negative_14098	AMT, GSN, SHH, TNF, ZYX, ACADM, ADCY5, AKR1C1, ATP5C1, BMP6, CCL14, CL DN16, CPT1A, CSNK2B, CXCL13, DEGS2, ENPP7, EPOR, EPRS, FABP4, FCER1G , FECH, FGF4, FM02, GFAP, GRIA1, GSTA2, GUCY1B3, HSD17B3, IL12RB1, IL 20, IL29, KIR3DL3, LAMB3, MCM2, MYL2, MYLK, NAGK, NEU1, NMNAT2, NRG1, NUDT5, NUDT8, OR10J1, OR11L1, OR2Y1, OR4C16, OR4K1, OR52B6, OR5H2, O R6B2, OR7C2, ORC3L, OSMR, PI4KB, PLCB4, POLD4, PORCN, PPA1, PPBP, PTK 2, PTPRJ, PYGB, RASGRF2, RASGRP3, RDH16, ROB03, SEMA7A, SH2D1A, SMPD 4, SOD1, SOS2, STX16, SULT1A1, SULT1E1, THY1, TNFSF10, UGT2B4, UNC5D , YARS, YWHAZ, SERPINB5, TNFRSF10A, TNFRSF10D
Negative_14099	BTD, SHH, ADCY10, ALDH5A1, ARPC5, ATP50, CCL17, CDC26, CDC27, CDKN2A , CRY1, CSF3R, CYP1A2, DDX51, DGKA, DUSP1, ENPP1, ENTPD2, FGF8, FRAT1 , GMDS, GMPR, GNA14, GSK3B, HADH, IDI2, IMPDH2, IRF7, LTBR, MAT2B, MMP 2, NAGS, NOS3, NR5A2, OR1J4, OR4A16, OR51B6, OR52E8, OR52J3, OR52N1, OR52N2, OR6C70, OR6T1, OR7G1, OR8G1, OR8K1, OR8K5, P2RX5, PIGT, PIGW , PLCB4, PPP2CA, PRIM2, PTPRR, RASA1, RETSAT, RPS6KA5, SDC4, SGPP1, S ULT1A2, TPK1, UGT2B11, WNT11, TNFRSF14
Negative_14100	KHK, SRC, UBB, ADRB1, AGMAT, ARNT2, BMPR1B, CASP10, CD244, CD8B, CHEK 1, CHPT1, CHRNA7, CKS1B, DDIT3, DHCR7, ENTPD2, ENTPD6, ERBB3, GALC, G AMT, GMPR2, GRIA3, HARS2, IFNA8, INPPL1, ITGB1, JAK2, JAM3, KAT2A, LY PLA2, MGAT4A, MTAP, NAGLU, OR1B1, OR2S2, OR2T2, OR5D18, OR5L1, OR6C7 6, PDE4C, PDPK1, PPM1A, PPP1R3C, PTPRM, RBPJL, RFWD2, RIPK1, RUVBL1, SEMA3D, SHMT1, SNAP23, STK3, SUCLA2, UCKL1, UGT2B7, HLA-DPA1, HLA- DRB4, MAPKAPK2, PLA2G12A
Negative_14101	AGK, AK5, ATM, BTK, C9, CR1, CRH, FST, GPT, HK2, MVK, ACHE, ADCY1, ALDH7 A1, ATP2A1, ATP5C1, ATP5J, B3GNT4, BLNK, C1QA, C4BPB, CACNA1G, CCL7, CCNE2, CD82, CNTNAP1, CREB5, CSF1, CTNNA1, CTTN, CX3CR1, CYP2S1, DIA PH1, DNMT3L, DPAGT1, EGLN1, EPHA8, FGF22, FUT4, GNAT3, GOT2, GRAP2, H LA- F, HTR2C, HYAL1, IBSF, IL28RA, KAT2B, LAMA3, LTBP1, MAN1A1, MMP2, NEU ROG3, NKX3- 1, OGDH, OR10J1, OR2T6, OR52B6, OR52E2, OR56A3, OR5H2, OR5H6, OR5T2, OR6Q1, ORC3L, P2RX5, PAPSS2, PARD6A, PCK2, PDE5A, PGAM4, PIK3C2B, PL XNA2, PLXNB1, PPBP, PPP1R1A, PRKX, PRSS1, RBPJL, SEMA3E, SLC2A2, TAS 2R1, TNXB, UPP1, VAMP2, WARS, WBSCR17, WNT7A, ST6GALNAC4, SUV420H2, TNFRSF13B, TNFRSF18
Negative_14102	ADA, F12, ME2, MYC, PGD, SMS, TK2, XDH, ACY1, AFMID, AKR1D1, AKT2, ALDH 3B1, ALDOC, ATP5A1, ATP5G1, BDKRB1, BHMT, CDC20, CDC45L, CDS1, CHKA, CKMT2, CLCA4, CXCL10, CYFIP2, DVL1, ERBB3, FGF1, FGF13, FM05, GCNT3, GMPR, GNPDA2, GPX5, GSTA1, GUCY2C, HADH, HMGCL, HSD11B1, ICOS, IL11, IL15RA, IL29, IRAK4, ITGB2, ITGB4, MAP3K7, MDM2, MITF, NARS2, NCK1, N CK2, NEGR1, OR10J1, OR13C8, OR13C9, OR2AG2, OR51I1, OR9Q2, P4HA3, PD E3A, PDX1, PECAM1, PHKG1, PIAS3, PIP5K3, PKM2, PLA2G1B, PRKCE, ST3GA L5, TGFB1, TMLHE, TOMM40L, TRPC1, TUBB6, UGT1A10, USE1, VARS, WBSCR2 2, ZFYVE16, ZNRD1, GABARAPL2, PHOSPHO1, SERPINA5

Negative_14103	CRK, F3, IHH, PLN, PTS, TKT, ADRA1B, ALG6, ANAPC2, AREG, ARG2, ATP5H, A TP5L, B3GNT2, CCL14, CCNE2, COL1A2, CSF2RA, CTPS2, CXCR3, DDX50, EFN B1, EHMT1, EREG, EXT1, FARP2, FTCD, GDE1, GJA1, GLUD1, GNAS, GRPR, GUC Y2D, HADHB, HCST, HLA- DOA, HSD17B2, HSP90B1, JAK3, KLRC2, NEFH, NODAL, ODC1, OR10R2, OR1J4 , OR2B2, OR2G2, OR4C11, OR4F15, OR4Q3, OR4S1, OR5A2, OR6C6, OR6T1, PD E8B, PIGQ, PLD1, PLD2, PLXNC1, POLR1A, PTPRB, PYGB, SORBS1, SPRY3, SP TLC1, SULT1A2, TLN1, TYRP1, WNT8A, XYLT1, YWHAB, ST6GALNAC5, SUV420 H2
Negative_14104	BID, C8B, ID4, MVD, MVK, ACOX1, ALDH1A3, AXIN2, BDH1, BMP6, BMP8A, CDC 45L, CHRM1, CHST13, COL3A1, CTS1, DPYD, E2F1, FCER1G, GCDH, GJA1, GP X5, IL10RB, IL28B, IL6ST, IRAK4, MAML2, MAPK1, NAT6, OR10A6, OR10J1, OR10X1, OR13H1, OR5D16, OR6F1, OR8D2, PARD6G, PFKFB4, PLOD1, POLD4, PRKAG2, PRKCD, PRKCQ, RASGRP3, RBPJ, RRAS, SMARCA2, TAS2R4, TUBA1B, TUBA3C, TUBB6, VAV1
Negative_14105	BTC, CD2, FAH, FUK, IL8, KIT, NNT, PRL, AADAC, AADAT, ADAM10, ADAM17, A LDH6A1, ALDOC, ALG11, APRT, ATP6V1H, BIRC2, C7orf16, CASK, CDC14B, C HIT1, CLDN4, CNDP1, DAD1, DHDH, E2F3, FGD1, GNA12, GNG3, GPD1L, GSTM1 , HDAC1, HNF4A, IFNA4, IL28B, IQGAP3, ITGB1, KLRC2, MAGI3, MICA, MNX1 , MPP5, NME2, NPR1, OR10A2, OR13G1, OR1A1, OR1L3, OR2T5, OR4K2, OR5L2 , OR9G1, PARD3, PDGFRB, PITX2, PPP2R5C, RELA, SC5DL, STEAP3, STX2, SU LT1A4, TGFB3, TGFB2, TPMT, TSC2, TUBA1B, TUBB4Q, UROD, VTI1A, WNT7B , HLA-DRB3, HLA-DRB5, TNFSF13B
Negative_14106	C2, PML, ACO2, ACSM3, ALDH3B2, ALOX12, ANAPC7, ARHGEF2, CACNA1I, CCN A1, CDH4, CXCL1, CXCL5, CYP1A1, EPHX2, EPOR, FABP1, FOXA3, GALNTL2, G PD1L, GPX5, HARS, ICAM2, IL10RB, INHBA, LRP5, LTBR, MAML1, MITF, MYH1 3, MYH6, NEUROG3, NFATC3, OR10G4, OR10H2, OR2T33, OR4C11, OR4D11, OR 51E1, OR56A4, OR9G4, PFKP, PIGO, PIK3R2, PNPLA3, PRKAA2, RPSA, RRAS2 , SEMA3G, SGMS2, SHC3, SOX17, STX10, TGFA, TUBA3E, UROS, WNT10A, CACN A2D1, CACNA2D2, GABARAPL1, PNLIPRP1
Negative_14107	ALG13, ATP4A, AXIN2, CACNB4, CCR9, CDH2, CDH4, CLDN2, COMT, CTTN, CYP 17A1, DHDDS, ENO1, FMO1, FZD7, GADD45A, GALNT12, GALNT2, GNAT3, GOT2 , GRB2, GRM1, GUCY2F, HIF1A, HLA- DOA, IDH2, IL17A, ITGA4, ITGB1, KDSR, LAMA4, LIPT1, MRAS, NFKB1, OR1L 8, OR4F17, OR52I2, OR52N1, OR52N2, OR9A2, PANK3, PCYT1B, PDE1A, PIGA , PIGO, PPP2R2D, PRPS1, RASGRP1, SEMA4G, SNAI2, STEAP3, STK4, SULT1A 2, TAS1R2, TFPI, THBD, UPP1, ATP6VOA2, ATP6V1G1, CTNNBIP1, EIF4EBP1
Negative_14108	C8B, F12, GSN, HGD, IHH, MUT, NLK, OAT, PXN, ACOT11, ACSS3, ACVR1C, ADC Y9, AKR1D1, ALDH3B1, ALG10B, APRT, BLNK, BMP4, CAMKK1, CASK, CASP3, C DC14A, CDK2, CDS1, CHPF, CLDN22, CRB3, CRLF2, CYCS, CYP27A1, CYP2C9, DAXX, DGKH, DLAT, EXTL3, F2RL3, FCER1G, GALNT1, GCDH, GJA1, GMPR2, GN A13, GRIA3, HTR7, IL2RG, INHBC, ITGAM, KLRC1, KRAS, LARS2, MAD1L1, MA GI2, MALT1, MAML1, MAPK1, MYD88, NEUROD1, NSDHL, OR10K2, OR2F1, OR2T 34, OR4F15, OR51F2, OR51T1, OR52N4, OR5D18, OR5K2, OR8H1, PAK3, PFKF B3, PLXNB1, PON3, PPP1R1A, PPP1R3B, PYGB, RAC3, RASGRF2, RFXANK, RHO A, SEMA4G, SETD1B, SETMAR, SIGLEC1, ST8SIA1, STAT6, TOMM40, UCK1, UG T2B4, VNN1, WNT10A, XCL1

Negative_14109	CD4, EZR, F12, MSN, ACO2, ACSM3, ADSSL1, AKR1C3, AMPD2, ARHGEF2, B4GALT6, B4GALT7, BET1L, CACNA1G, CCL23, CCL27, CDK7, CDKN2B, CHAD, CHST13, CLCA4, CLDN22, CLDN7, CPOX, CYP11B1, DDX4, EDAR, EI24, EPRS, GRIN2D, HSD3B2, ICOS, IFNA10, IPPK, MAPK10, MCM2, MKNK1, MLLT4, MTAP, NAMPT, NLGN3, NPR2, OR4N5, OR51A2, OR51A4, OR5AC2, OR5D18, OR5J2, OR8K3, P2RX2, PAPSS1, PCYT1A, PDE4D, PIP5K3, PLCD4, PRKAB2, PTPMT1, PTPRR, RAB23, RASA1, SORD, SQLE, TKTL1, TLR9, TYK2, TYMP, VAMP4, ZFYVE16, PP1R12A, TNFRSF12A
Negative_14110	AGL, AK2, ASL, C8G, DCC, FOS, PXN, SRM, ACOX1, ACSL4, ADRB2, AFMID, ALDH9A1, ALOX12B, ALOX15B, ALS2, ATF2, ATP4A, ATP5D, CCL20, CCL4, CD247, CD01, CPT1A, DDX55, DGKH, DHCR7, DTYMK, ECSIT, FDPS, GNA13, GNG3, GNPD1, GRIN2B, HAGHL, HSD17B2, HYAL2, IFNGR2, IKBKB, IL6R, KITLG, LEFTY2, LFNG, LTBR, MAP3K12, MAP4K3, MAT1A, MRAS, NCAM1, NEU2, NFASC, NQO1, OR10A5, OR10A6, OR10H5, OR10K1, OR1L1, OR4D2, OR4M2, OR52E6, OR5D18, P2RX2, PAK1, PAK3, PARVA, PDXP, PI4KA, PIGQ, PIP4K2C, PKLR, PRKE, PTCH2, PTPRM, RALBP1, RAPGEF2, RFXAP, ROBO3, RRAS2, RRM1, SEMA4A, STAM2, STX1B, TACR2, TBK1, TIRAP, TSC2, TYK2, TYMS, UCK1, UPB1, VCAM1, VKORC1, YWHAZ, CACNA2D2, PAFAH1B2, PHOSPHO1
Negative_14111	ABLIM3, ACVRL1, AK3L1, ALPI, APPL1, AVPR1B, B3GNT2, BET1L, CCNH, CD80, CD8A, CDC25B, CDH1, COL6A1, COQ7, CTSB, CYP2E1, CYP4A11, DDX56, DHRS3, EGLN3, EPHA8, ETNK1, EXT1, FECH, FOXO1, FZD10, FZD2, GALNT12, GNAQ, GRIA3, HMGCL, IL7R, INHBC, INHBE, ITGA3, ITGAD, L1CAM, MAP3K5, MNX1, NCKAP1L, NLGN2, NMNAT3, OCRL, OR13J1, OR14C36, OR2AG1, OR4C15, OR6M1, PFKFB1, PFKFB2, PNPLA4, PPP1R1A, PTTG1, RASGRP3, STAT6, SUL1A4, TAS2R42, TLR4, TNFSF14, UBA7, VARS, WWP2, ZAP70, ZIC2, ALDH18A1, SUV420H2
Negative_14112	FUK, GSN, MAX, ME3, MOS, RFK, ACACB, ACTN4, ACY1, AGMAT, ALS2, AMHR2, ANAPC5, APRT, ARNT, B4GALT7, BIRC5, C1QA, CARS2, CAV2, CCL20, CD8B, CKMT2, CKS1B, CLCA4, CLDN9, COL11A1, CRY2, CTBP1, DDIT3, DOT1L, ENTPD3, FARSA, FGD3, GFPT2, GNA14, GNRH1, GPAM, GRIN2B, GSTZ1, HHEX, HSD3B1, IFNB1, IL10, IL2RA, IMPDH1, KCNB1, KIR3DL2, L1CAM, LILRB3, MLLT4, NFKB2, NTRK2, OR10K2, OR10Q1, OR10R2, OR13C4, OR13C9, OR2A2, OR2B6, OR2S2, OR4A16, OR4C13, OR4N2, OR5T3, OR6Y1, OR8B12, PDE4C, PFN4, PGM1, PGM3, PIAS2, PIK3CA, PIK3R4, PIP5K3, POLR2K, PRKCB, RFXANK, RGS3, SDHB, SELE, SETD2, SFRP5, SKP1, SLC2A2, SOCS3, SOX17, SPCS3, ST3GAL3, STAT5B, TPH2, VDAC1, VNN1, YWHAB, TNFRSF10B
Negative_14113	AK2, CAT, FER, GNS, LIF, ACTG2, ADCY7, AGXT, ALDH9A1, ALPPL2, CACNG1, CCR10, CDC2, CD01, COL4A4, CPT1B, CXCL13, DGKG, DHX58, DLL4, DUSP6, DVL3, GLI2, HCCS, HMGCS2, IBSP, IL13RA1, IL23R, ITGA11, LAMB3, LRP6, METTL6, MGAT5B, MYH3, NADSYN1, NCF4, NT5C1A, OR10G4, OR10S1, OR11H6, OR1D5, OR1J2, OR2T5, OR6S1, OXCT1, POLA2, PPM1D, PPP1R3B, PROS1, PTGS2, RAPGEF3, RASGRF1, RERE, ROBO1, RRAS, SFRP5, SPP1, TCF7L1, TPK1, TUBA1C, HSD17B10
Negative_14114	C3, HAL, HYI, ACSM4, AK3L1, ALG2, ALPI, ALPPL2, B4GALT5, CCL27, CD44, CD79B, CD86, CDK5, CDKN2C, CLTCL1, CNGB1, CSNK1G2, CTSS, CUL1, CXCL1, CYP4A11, CYP4F2, DEGS1, DGUOK, DHRS9, DTX1, EPHA4, EPRS, EXT1, GADD45G, GBA3, GFAP, GLB1, HEXA, HRH2, HSD17B4, HSPB1, ICAM3, IL21, IL4R, INPP1, IRAK3, ITCH, LTBR, MAP3K13, NT5C1B, NTNG1, OR10A7, OR13A1, OR1L3, OR2G6, OR4K13, OR8H2, PAX8, PCYT1B, PDE4A, PDGFRA, PDIA4, PIGF, PIGP, PIK3CB, PLA2G1B, POLE3, PPBP, PPP2R1A, PRODH2, PYCR1, RERE, RETSAT, RXRG, SEMA4B, SLC25A4, ST3GAL1, TBXAS1, TNFSF18, TUBA1A, UBE2L6, VAMP3, VNN1

Negative_14115	BTC, GH2, HDC, IL4, MPZ, RDX, TK2, ABP1, ACHE, AKR1C2, ALDH1A3, AMPD3, APLP1, ATG7, B4GALT6, BCL2L1, CACNA1D, CBLC, CCL21, CTNNA3, CYP3A4, DEGS2, ENO3, FGF22, FGF8, GABARAP, GALNTL2, GNB1, HLA-DMA, HLA-DRA, IFNGR1, IFT57, IL29, IL3RA, LYPLA1, MAOA, MAP3K13, MAP3K8, MECR, MGAT4A, MYH10, NOD1, NT5C1A, NUDT12, OR10Q1, OR2G2, OR4D11, OR4N4, OR52J3, OR8B4, PARD3, PIAS4, PIGA, PIK3C3, PORCN, PPP2R1A, PRIM2, RALBP1, RPS6KA4, RRAS2, SETD7, SPHK2, SRGAP1, TBL1X, TNFRSF8, PAFAH1B2, ST6GALNAC1
Negative_14116	MPI, MYC, SI, WAS, ADCY5, BMP2, CACNA1H, CTNNB1, DARS2, DFFA, DKK2, DUSP1, EPHA3, FGF6, FLT3LG, FZD8, GOT1, GSTA5, HAO1, HPSE, IDI1, IL2RA, ITGAL, JAG1, MADCAM1, MAN1A2, OR1S2, OR51I1, OR51L1, OR52N4, OR56A3, PCCB, PLK1, PRSS3, PTPRC, PTTG1, RERE, SPRY4, SREBF1, SSH3, STAT6, SUGLG2, TAP1, TKTL2, TSHR, UGDH, WIF1, ATP6V0A1, GABARAPL1, TNFRSF1A
Negative_14117	EGF, EZR, HK1, MIF, ABP1, ADIPOR1, ADRB1, CACNG5, CAMK2G, CCR7, CD27, CHEK1, CHRM2, COL4A6, CYP2D6, DAD1, EDA2R, EPHA2, FADS2, FLT3LG, FTM T, GALNT7, GALNTL2, GDF7, GMPR, GP1BA, GSTA1, GSTK1, HTR2A, HTR5A, IL28RA, IRAK1, ITGA2B, JAK3, KARS, KLRC2, MAP3K1, MAPK12, MASP1, NCR3, NEUROD1, NRG3, NTSR1, OR2T34, OR4A5, OR4C11, OR4F4, OR52H1, OR52M1, OR5P3, OR8K3, OXCT1, PDE7B, PIK3C3, PIK3R4, PLXNC1, POLA1, PRPH, PTPRC, PVRL4, RAC2, RPS6KA5, SESN2, SETD2, SH2D2A, SLC27A4, STAM, STAT1, STX8, TYMP, UBA7, ULK2, SERPIND1, SUV420H1
Negative_14118	BID, CD4, ZYX, ACOX3, ADCY4, ADIPOR2, ANGPTL4, APPL1, ASPA, ATP12A, ATP5J, AXIN2, BCAT2, CACNG6, CCR4, CD55, CDK7, CER1, CLDN9, CNTN2, CREB3, CSF1, CTPS2, CXCL13, CYP2C8, DAG1, DGUOK, DKK1, DNMT1, EGLN3, ENO1, FMO1, FMO2, GRIN2C, GRIN2D, GRM5, GSK3B, HCCS, HMGR, HNF4G, IDI1, IL21R, ITGAX, LIPT1, MAPK1, MAT1A, MCCC1, MCCC2, MGAM, MPST, MTHFR, NFEU1, NFAT5, NRAS, NUMB, OR10A6, OR10V1, OR1C1, OR1L8, OR4A16, OR51E2, OR51M1, OR5F1, OR6K2, PGM3, PIGT, PLXNB3, POLR2H, PPP2R1A, PPP2R2A, PPP5C, PSME3, PTPRF, RARS2, SDHA, SGPP2, SLC2A1, SMAD4, SPRED2, ST3GAL4, STX3, TAS2R38, TGFB2, TIAM1, TSC2, UBA7, UBE2L3, UGCGL2, VAV1
Negative_14119	C7, SHH, ACMSD, ALG10, AQP7, ARG2, ARHGEF4, ATG3, CLDN3, CPT1A, CSNK1A1, CTSS, CYSLTR1, DHRS9, DPYD, DRD5, ENPP7, EPHB1, FECH, FGD1, FZD1, GADD45A, GRAP2, GRM5, GSTP1, HTR2B, IDH2, IFNK, IL13, IL15, IL17B, JAG2, LCMT2, LRP6, MAN1B1, MAP2K5, MAP4K2, MAPK11, NANS, NCOR2, NNMT, NTN1, OR10H3, OR1D5, OR4C15, OR52B4, OR5K1, PIGO, PIP5K1B, PLA2G2A, PLA2G6, POLR1B, POLR1E, PPP2R2A, PSME2, PTPRR, PYGM, RDH12, RELB, RGS3, SARS, SAT1, SEPHS1, SIPA1, SLC12A2, SMC1B, SOS2, SPCS1, SPRY3, TBL1Y, TP73
Negative_14120	ADK, BAX, CRK, DLD, ILK, KIT, SFN, A4GALT, ACMSD, ACSL1, ACTG2, ADCY10, ADCY6, AGMAT, ALOX15, ARRB1, ATP5G2, CALML5, CAMK2A, CD58, CDIPT, CDK4, CHIA, CHRM2, CHST11, CLDN1, CPT1B, CTNNB1, CUL1, CYP1B1, CYP4F3, DAD1, DHDDS, DLL1, DOCK1, DPAGT1, DVL2, E2F4, EGLN1, EIF4E2, EPHA4, EXOC7, FOSL1, GABARAP, GALK2, GIT1, GRIA3, GRIN2B, GUCY1A3, HSPA8, HTR6, IFNGR2, IL18RAP, IMPA2, KLRK1, LEPR, LTA4H, MAT2B, MDM4, MMP9, NCAM2, NR1H3, NRG1, OR2AT4, OR2F1, OR2M7, OR4X1, OR5J2, OR6K2, PAX6, PFKFB3, PLXNA3, PLXNB2, PPARA, PPP1R1A, PRKCI, PTK2B, RBKS, RDH11, RETSAT, SEMA4A, SHC2, SMARCA5, SPTLC1, STAT5B, SULT1A1, TAS2R8, TBK1, THBS4, TRIP10, ULBP1, ULBP2, UNC5A, VAV2, YWHAB, AASDHPPT, PLA2G12A

Negative_14121	AGL, C2, CD4, EGF, EZR, F10, LIF, SRM, ACADVL, ACOX1, ADCY6, ADCY8, AGX T, AKR1C1, ALAS1, AMPD1, B3GALT1, BMP6, CD38, CHSY3, CSNK2A2, DCTD, DKK2, EFNA5, EFNB2, ENO3, GAB1, GALNTL2, GCLM, H6PD, HARS2, HSD17B4, HYAL1, IDH3B, IL5RA, IMPA1, ITGAX, ITGB1, ITPKA, ITPKB, LIPT1, MADCAM1, MAPK10, MAPK8, MIOX, MS4A2, MYH14, NAE1, NRXN1, OR10V1, OR13F1, OR1E2, OR4X2, OR51B5, OR52K1, OR5B17, OR6C74, OR6Q1, OR8D4, P4HA3, PANK4, PCCB, PDE1C, PDE8A, PFKL, PIGM, PLCZ1, POLA2, PTCH1, RALBP1, RRM1, SDC4, SEMA3E, SETD1A, SLC25A6, SLIT2, SMAD2, TAS2R50, TBL1XR1, TJP3, ULBP2, UMPS, YWHAZ, ATP6V0E1, HSP90AA1, PLA2G12B, ST6GALNAC6
Negative_14122	AK7, F10, HK1, TFG, ACPT, ADCY8, ALDOA, ARHGEF1, ARPC2, ATP5L, B4GALT4, BRAF, C4BPA, CACNB2, CLTB, CMBL, CTNNA1, CXCL2, CYP2A7, DAPK2, EDNRB, FCGR2B, FGF8, FOXA2, FOXO1, GAPDH, GMDS, GSTA1, HIP1, IDH3B, IFNA2, LEF1, MAN1A2, MAOA, MAP3K4, MAP4K1, MLLT4, NOS3, OR2K2, OR4F5, OR4N2, PGS1, PIGB, PIP5K1A, PLA2G6, POLA1, POLE2, PPP1CB, PRKAR2A, PRPS1, PYGM, RASGRP3, RDH12, RPS6, SDC4, SOX17, SV2A, TAS2R48, TDO2, TYROBP, UBE2K
Negative_14123	ILK, MTR, ACOX1, ACP1, APPL1, AQP7, CARS, CCR3, CDC16, CES2, CISH, CLDN1, CRLF2, CTNNA3, CYP11B2, DKK4, DUSP16, ERBB3, ESAM, FOSL1, FOXO1, GCH1, GLS2, GRIA1, GUCY2D, GYS2, HPRT1, IL13RA1, IL20, IL20RB, JAM2, KLR3, LDHAL6A, NCF2, NFYA, OR2B2, OR8D2, PDE3A, PDGFRA, PGAP1, PIK3C2A, PLA2G2F, PRKCG, PRPH, PTCH2, RDH11, RIPK1, RRM1, SESN2, SGPP2, TLR9, WARS, WBSCR17, SERPINA1
Negative_14124	AK7, ATM, DCT, F10, GSN, INS, LYN, MVK, PC, ACADM, ACTB, ACTN4, ACY3, ADRBK2, ALS2, ARHGEF7, ATP5C1, BIRC3, BMP8B, BMPR2, CAMK2A, CCL17, CCL3, CCND1, CD19, CDH1, CDKN1A, CDKN2C, CLOCK, CLTB, CNGA3, CXCL12, CXCR4, CYP27A1, CYP3A43, DHODH, ENPP6, ERBB4, FGF10, FUT7, FZD6, GCDH, HLA-C, HSPB1, IL24, INPP5A, IPMK, KLRK1, LDHA, LTBP1, MAP3K5, MARS, MCM2, MPST, NAGLU, NCR1, NFE2L2, NKX2-2, NOS1, NRG4, NTRK2, OLR1, OR12D3, OR2B6, OR2T10, OR2Z1, OR4E2, OSMR, OXCT1, PAICS, PLCD3, PNPLA4, PPP1R3D, PRIM1, PTCH2, SDC1, SDC4, SESN3, SMC1B, SRGAP1, SUCLG2, SULT1A2, TIAM1, TJP2, TNFSF8, TUBB1, ULK1, UNC5A, UXS1, WHSC1L1, YWHAZ, HSP90AB1, TNFRSF10D
Negative_14125	C8G, IL7, RDX, SRC, SRM, ABI2, ABLIM1, ABLIM2, ACYP1, AKR1C2, ALDOC, APRT, ARHGEF2, ASS1, BMP2, CCL1, CCNG1, CCR5, CD55, CNTFR, CSF3, CSNK2A1, CTBP1, CTSS, CYP2B6, DAXX, DHDDS, DIAPH3, DRD5, DTX4, EPHA5, FASN, FGF2, GABARAP, GALNTL5, GNAL, GSTO2, HA01, HTR7, IL17RB, KIR2DL1, NADK, NAE1, OR10H1, OR2A4, OR2S2, OR5A1, OR8D4, PI4KB, PIGB, PIGT, PLCB1, PLCB3, POLA2, POLD1, POLR3D, PPP2R2D, PRKX, PRODH2, PTCH2, RBL1, SHC2, SMC1A, SNAI2, SOCS7, SSH1, STAT6, STX16, TACR3, TFPI, TKTL2, TNFSF4, TOLLIP, TRHR, UBE2K, UNC5D, UROC1, WBSCR17, TNFRSF11A
Negative_14126	BAX, C4B, PAH, SPN, TNF, UBC, ACSM1, ADCY1, ADCY6, AGPAT6, ALCAM, ALDH3A2, ALS2, AOX1, APAF1, AQP7, ARHGAP5, ATIC, B3GNT3, CASP7, CCL16, CD46, CDC7, CEBPA, CHEK1, CHKA, CHSY3, CLDN22, COASY, CREB3L2, CRLF2, CTLA4, CXCR4, CYP11B2, CYP2J2, DNMT3L, DTX4, ENPP6, FLT3, FSHB, GADD45B, GMPR2, HDAC1, HNF1A, HSPA1B, IL18RAP, INHBB, INHBC, ITGB1, ITPA, MAGI2, MAP3K8, MDM4, MOV10L1, MTHFR, NAGK, NFATC4, OR1G1, OR1Q1, OR51M1, OR6C3, OR8H2, OR8J1, OR8K5, PFAS, PIGO, POLD3, POLR3B, POLR3K, PORDX6, PRKAR1A, RRM2, RUNX1T1, SARS2, SDHD, SEMA4F, SGPP2, SHC2, SLC25A4, SMAD2, SOS2, SPHK1, SSH1, STAT4, STEAP3, SUV39H1, TSTA3, TYMP, ULBP1, ATP6V1C1, ATP6V1G1, ATP6V1G3, HSD17B12, SERPINE1, TNFRSF11B

Negative_14127	AGL, APP, F7, GSS, ME2, MPI, UBB, ACSL5, ACSS1, ACTA2, ACVRL1, ACY3, ADH6, AHCY, ATF2, ATP5E, ATP5H, BDH2, BDKRB1, C1QB, CACNG7, CDC14A, CDO1, CHUK, CYP11B1, CYP2E1, CYP2J2, CYP4A11, DCTD, EPHX1, FGF18, FGFRL1, FLT3, FM05, FUT1, GALE, GALNT5, GALNTL5, GLB1, GLG1, GNA15, GNAL, GN G12, GRIN1, GRLF1, HPSE2, HTR2B, IDH2, IL11RA, IL21, INHBE, ITGB1, KI R2DL2, LM07, MAPK3, NEU2, OPLAH, OR10K1, OR10Z1, OR2G2, OR2T5, OR4L1, OR51F2, OR52I2, OR6C1, OR7G2, PAPSS1, PAPSS2, PIGB, PIGV, PMAIP1, P PP1CC, PRKAA1, PTGS1, RALB, RASGRF2, SENP2, SNAI1, SREBF1, TFDP1, TG FB3, TLR2, TNFRSF4, TOLLIP, TRPC1, TSHB, UGT2B28, VAV3, WARS2, WNT3, YWHAG, ZIC2, ATP6VOA1, HLA-DQB1, ST6GALNAC5
Negative_14128	BCR, CFI, FUK, GGH, TAT, AACS, AGPAT4, AHCYL1, ALAS1, ALDH1A3, ALG10B, ALPPL2, ARNTL, B3GALT6, BCMO1, CAV2, CCR10, CLDN15, CREB3L1, CSNK1 G2, CYP3A7, CYP4A22, DERA, DHRS4L2, EFNA4, ENO2, ESAM, FCER1G, FDFT1, FLT3LG, FOXA3, FZR1, GALNT11, GLUL, GNB3, GSTA5, GSTM4, IDI2, INSR, ITGB7, KIR2DL4, LRAT, MAPK12, MGAT5, MTAP, MYH15, MYH2, MYH3, OR11H4, OR2T3, OR4K15, OR51B5, OR52W1, OR5H2, PCCB, PDCD1, PDHB, PGM1, PLAUR, POLR2D, PPA1, PRKAR1A, PYGM, RIPK1, RRAS, SEMA3B, SETD8, SMURF2, TBL1XR1, TOLLIP, TSNARE1, TUBB1, PNLIPRP2
Negative_14129	BCR, HGF, LSS, NGF, TNF, ACSL4, ACTA1, ADRA1B, ALDH1B1, ATP5E, B3GAT3, CASP9, CCL20, CD22, CD74, CDC42, CDKN2C, CKS1B, CLDN18, CLDN19, CLTCL1, COL11A1, CXCL5, DCTN1, EP300, FGF12, GALNT12, GIT1, GNAQ, HCCS, HLA-DOA, HPRT1, IL17A, IL2RB, IRF9, KIR2DS5, LYPLA1, MIOX, MITF, MYH10, MYLK3, NFKBIB, NPR1, OR10K2, OR13J1, OR14I1, OR2L2, OR51B2, OR51F2, OR5R1, P2RX5, PDGFRB, PDXP, PIGM, PIM1, PLA2G4A, POLR1B, PPOX, ROCK1, SHC1, SLC9A1, SPHK2, SPI1, TAS2R16, TAS2R42, TBL1XR1, THBS2, TNFRSF9, TSHB, WASF2, YARS2, ATP6VOA4, ATP6V1B2
Negative_14130	F2R, GLS, GSN, GSR, IL4, OGT, PRL, ATP2A2, AXIN2, B3GNT3, B3GNT4, C1QB, CLCF1, CLDN16, CLDN8, CNTF, CPT1B, DUSP16, DVL3, ENO3, EPOR, EXOC7, FADS2, FBXW11, FGF5, FOXO3, G6PC2, GFPT2, GLUD1, GNAQ, GNAS, GNPAT, GUCY2F, HARS, HTR2A, HTR6, IAPP, IDUA, IL18RAP, IL22RA2, LCMT2, MAP3K3, MARS2, MDM2, MGAT5, MINPP1, MS4A2, NFX1, NUDT5, NUDT9, OR10P1, OR1OR2, OR2A25, OR4D2, OR52N4, OR6K3, OR9K2, PDK1, PGS1, PHKA1, PLA2G2A, PPARG, PPP2R5B, PRKAR2B, PRKX, RAC3, RPRM, RPS6KB2, SETD1B, SQLE, SRD5A2, SSH2, TBXA2R, TGFB3, TP53, TPH2, TSC2, UGT2B11, UGT2B4, VDACC3, CSGALNACT1, HSP90AB1, SERPIND1
Negative_14131	ADC, BTD, CP, FH, ADAM17, AGPAT1, AMPD2, CACNB3, CARS, CYFIP2, DUSP9, EDAR, ENTPD5, EPB41L1, FOXA3, FZD5, FZR1, GALNT9, GNPAT, GNPDA1, HMGCR, IL11, MAPK13, MARS2, MPST, NAGLU, OR11H1, OR4E2, OR4Q3, OR51E2, OR52M1, OR5B3, OR8B8, OR9G1, PIP5K3, POLD1, PPP2R5C, PPP3CA, RXRA, SH2D1B, SMARCA2, SNAI2, SOD1, TGDS, TGFB1, TPH2, TSNARE1, UGT8, ULBP3, USE1, WASF3, WIF1
Negative_14132	ADK, F5, HGF, IHH, LAT, MPL, PLN, TYR, AASDH, ACADM, C3orf10, CACNA1B, CASP3, CDC26, CDKN2B, CDS1, CFLAR, CNTF, CNTN1, CXCL9, CYP1A2, CYP2B6, DPYSL2, DUSP6, EDNRA, ELK4, FARS2, FGF9, FUT9, GALNS, GMPPB, GSTM2, ICOSLG, IRAK1, MAP3K4, MCM4, MFNG, MGAM, MTMR1, NARS, NCF4, NME4, NQO1, OR14A16, OR2Z1, OR52N5, OR5B17, OR9K2, OXCT1, PAICS, PARVG, PCYT2, PFN2, PIP5K1B, PLA2G5, POLR3A, POLR3K, PPP2R2C, PRSS3, PTCRA, PTDSS1, PTPN1, RENBP, RFXANK, RPSA, SDC1, SEMA3D, SEMA4F, SESN2, SMAD1, SMURF1, SPP1, TAP2, UPRT, UXS1, WASF3, HLA-DPA1, HLA-DRB5, PNLIPRP2, TNFRSF11A

Negative_14133	BTK, CD2, OTC, ACHE, ACOT11, ACSL5, ACTN2, ADH6, AGPAT3, ALAS1, ALG5, AOC2, ASMT, ATP2A3, ATP5I, BCAT1, BCAT2, CCNB2, CHEK2, COASY, CREB3L3, CYP2C9, CYP2E1, DHFR, DPAGT1, ELK1, EPB41L1, EVI1, FGF5, FGFR2, FTCD, IL17B, IL18, IL18RAP, IL29, LAMB2, LGMN, LIMK1, LIPT1, LRAT, MAP3K7, MPDZ, MYH11, NCKAP1L, NFYA, NFYC, NME2, NUMB, OR13A1, OR14J1, OR1D2, OR2D2, OR6X1, OR7C1, OR7G2, PIGO, PIGS, POLR2I, PPP3R2, PRDX6, PRSS2, RAC3, RBX1, RIPK1, SNAI1, SQLE, SRGAP2, TAS2R42, TLR5, TP73, VCA M1, PDCD1LG2, SERPINC1
Negative_14134	ADO, C5, DLD, GDA, ABLIM3, ADIPOR2, ADRA1B, AGPAT1, ARAF, ARSD, ATP5L, CCR1, CDC14A, CDC42, CDH15, DUSP16, HHIP, IFNA17, IL20RB, ITPKB, KL RD1, LCMT2, LDHAL6A, MAML1, MAPK14, MARS, MYH6, NEUROD1, OR10G8, OR13C3, OR13D1, OR1A1, OR2L8, OR2T1, OR51A4, OR52E2, PFN3, PHGDH, PNPLA3, POLE3, PPP1R3A, PTPN5, PTPRM, RIPK1, RXRB, SETD1B, SIAH1, SMAD6, S TX5, TAS2R38, TAS2R48, UBA1, UNC5C, WHSC1, ZIC2, CACNA2D3, HSD17B12, MAPK8IP2
Negative_14135	AR, BAX, F5, GCK, UBB, ACSL6, ACSM3, ACTC1, ADCY9, ADH1B, ALDH1A2, ATP5D, B4GALT3, CDC25A, CERK, COQ5, CXXC4, CYCS, EPHB6, FABP3, FUT4, G6P D, GALNT11, GALNTL4, GPLD1, HSD11B1, ICAM3, IL1R1, ISYNA1, ITGA2, LL GL2, MADCAM1, MAP3K12, NCF1, NFKB1, OR4C11, OR8J1, PARVA, PDHA1, PGM3, PGS1, PLCB4, PMM1, PNMT, POLE4, PPARA, PPP2R5C, PRKCB, RASSF5, RDH10, SARS, SCLY, SPHK2, STAT4, TAS2R4, TIRAP, UROS, USE1, YOD1
Negative_14136	ADA, DLD, GLA, LPL, ABP1, ACOX3, ACTC1, ACVRL1, ADSSL1, AFMID, B4GALT4, BMP4, CCDC6, CDC27, CDH4, CEBPA, CHST11, CLCA4, CLDN1, CLDN9, CUL1, CXCL11, DAPK3, DOT1L, DPYS, DTX3L, DUSP5, GALNT8, GNAT3, GNMT, GOT1, HADH, ICAM2, IFNGR1, IL15RA, IL7R, ITGB2, KIR2DS5, KLRC1, MAP3K8, M AP4K1, MMP7, MYH10, MYH11, NCK1, NEUROD1, OR10C1, OR13C4, OR1D5, OR2A2, OR4Q3, OR51V1, OR7A17, OR8H3, ORC3L, PDX1, PDXP, PFKFB4, PHKB, POLR3H, PRDX6, PRKACB, PRKCH, PTK2, PVRL3, RAB5A, SIAH1, SKP2, SLC25A5, SMAD1, SMAD7, STAM, SV2C, TAS1R1, TAS2R14, SERPIND1, SERPING1, SLC25A31
Negative_14137	DHH, FYN, IDS, MSN, OSM, SYK, ARPC4, BAIAP2, CACNG1, CCL4, CCNG1, CDC25A, CEBPA, CHR1, CLDN4, CNTN1, CREB3L1, CSF2RA, CSF3R, CYP2E1, DGAT1, DNMT3A, DPM1, DUSP14, E2F3, EHMT2, EPB41L1, FUT4, GDF6, GFAP, GPD2, HARS, HSP90B1, IL17RA, IL5RA, IL7R, INHBB, KIR3DL3, LCMT2, LLGL2, MA N2A1, MCEE, MPP5, MYH4, MYH9, NKX6-1, OR10G4, OR51I2, OR51L1, OR52E8, OR6N2, OR7C2, OR9A4, P2RX4, PDGFD, PIGF, PIK3C3, PLA2G1B, POLR2L, PRKAG2, PTK2B, PTPN5, PVRL4, RCHY1, SDC4, SEMA3F, SH2D1B, SOAT1, SOCS1, SPHK1, SV2A, TPI1, TRPC1, UBE2L6, UGT2B17, ATP6V1G2, CACNA2D4
Negative_14138	BTK, C7, GAA, MAX, MTR, NOG, OTC, SMO, XDH, ADORA2A, APOC3, ATP2A1, C3A R1, CDC14B, CDC26, CES1, CHD8, CHRNA7, CNTNAP2, CYP2A13, DNMT3B, EFN A3, EP300, EXOC7, GALE, GALK2, GALNT1, GOT1, HLA-DOB, IARS2, IFNA14, IL1B, IMPA1, IMPDH2, IRAK3, ITGA2B, ITPKB, KDSR, MASP1, MCAT, MDM2, MGAT4B, MKNK1, MOV10L1, NCAM1, OR10A2, OR1S2, OR2AT4, OR2V2, OR4F15, OR4X2, OR5K2, OR6Q1, P2RX1, PDE8A, PIGL, POLR2F, POLR2H, PRPS2, RAB5A, RALBP1, RARA, RASSF1, SDHA, STK3, SUFU, TFPI, UGT8, VDAC1
Negative_14139	C3, CFI, ACY3, ADRB3, AKR1B10, ARHGEF7, BCAR1, C1QB, CDKN2C, CSNK2A2, CTBS, DPM1, FOSL1, FSHR, GGT7, GLB1, HBEGF, HLA-DOB, LAMB2, LRAT, MS4A2, MYH3, NFATC4, NME6, OLAH, OR10A5, OR1A1, OR1L1, OR1L4, OR52E4, OR5AR1, OR5D16, OR5L2, OR9A2, PIK3CD, PIK3R5, POLR2A, POMC, PRKCE, PRKX, PRPS2, PSEN2, SDC2, SELPLG, SPRY3, SPTAN1, SSH1, TCF7L1, TUBB, WNT3, YWHAZ, EIF4EBP1



Negative_14140	GP5, HK1, ID4, MOS, SDS, TPO, ABAT, ACP6, ACTN4, AKR1B1, ALCAM, ALOX12, ANAPC7, ATP5B, C3AR1, C7orf16, CACNA1C, CACNB1, CACNG2, CCNE2, CES7, CHRNA7, CRY2, CYP3A43, CYP3A5, CYSLTR2, DDHD1, DHCR7, DOT1L, ENTPD6, ESPL1, FGF19, FLT1, FTCD, GADD45B, GMPR, GRIA2, GSTM5, HCST, IL12B, IL21, INHBB, IRS4, ITGA4, ITGB2, MAN1B1, MEF2C, MGAT3, MYH15, NCR2, NCR3, NFASC, NRP1, NRXN2, OR2A14, OR3A2, OR4F6, OR5L1, OR6S1, OR7A5, PDGFD, PDHA1, PFKFB3, PIK3R2, PIM1, PIP5K1A, PLA2G4A, PLCD3, PLOD2, PNPLA4, PNPO, POLD1, POLR2D, PPP2R2B, PPT1, PRNP, PYGL, SESN3, SFRP2, STAT5A, STT3B, TNFSF12, TNFSF4, TRIP10, CTNNBIP1, TNFRSF13C, TNFRSF17
Negative_14141	GNE, HK3, OTC, ACTN2, ATP2A3, BPGM, CACNG2, CD79B, CLDN15, COL4A1, CSDA, CXCL1, DDX18, DDX51, DNMT1, EDA2R, EHMT2, EIF4E2, ERBB2, FDPS, GALD2, GALNTL4, GCAT, GNA11, GNAI2, HHIP, IFNA6, IL20, LIAS, MAPK8, MASP1, MPDZ, OR2AG2, OR4B1, OR4N2, OR51D1, OR5AS1, OR6C6, P2RX6, PAK7, PERP, PLK1, PLXNA3, POLR2H, PPP3CB, RAP1B, STK11, SUL1E1, UGT8, UROC1, WNT7B, ATP6V0A2, CSGALNACT2
Negative_14142	LPL, ME1, OGT, PGF, PVR, ADCY10, ADCY4, CCNE2, CDKN1A, CHRNA7, CLDN16, CNTNAP2, COQ3, CTNNB1, EPHB6, FLAD1, FMO3, GCNT3, ICAM1, IFNA16, IFNA2, ITGAX, LAMB2, LLGL1, MAPK7, MYLK3, NCR3, NRXN2, OR10A4, OR1B1, OR3A2, OR5A2, OR5M8, OR9Q2, PER1, POLA1, PPOX, PPP1R3C, PPP2R5B, PTGES, RAPGEF3, SFRP1, ST3GAL5, ST8SIA1, SV2C, TBL1X, TPK1, UMPS, UROS, VNN1, TNFRSF13B
Negative_14143	C8G, F11, FES, GCK, ID1, PLG, RB1, ZYX, ADCY8, ALAD, ALG12, ARHGEF6, BBP3, BUB3, C5AR1, CACNG5, CAMK4, CASP10, CCL20, CDS2, CHRNA7, CTSS, DHX58, EGFR, ERO1L, FGF1, FGF13, FGF3, FLT3LG, FZD8, GLDC, GNAS, GNRHR, GOT2, HEXA, HMOX1, IL13, IL1A, IRAK3, ITPKB, KIR2DL3, LALBA, MDM2, MICCA, NCR3, NEFL, NFATC2, NRXN3, OR10A6, OR14I1, OR1D2, OR2M5, OR4K2, OR4L1, OR6T1, PCYT1A, PI4KB, PIGW, PLCD3, PON2, PPP3CA, PRKAR1A, PRKX, PTPN7, RHOA, RXRB, RXRG, SDC2, SETMAR, SIAH1, SMC1A, SNAI1, STAT2, TASP2R41, TCF7L2, THY1, TOMM40L, TUBB4, WNT10A, CACNA2D3, HSD17B12, PPP1R12A, SERPINF2
Negative_14144	CFD, GGH, ACAT1, ACSM3, ACSS3, ADRB3, ALOX15, ASMT, AXIN2, CACNA1E, CCNE2, CD44, CFLAR, CPS1, CYP2U1, DCXR, EFNA3, EPAS1, GALNS, GNA13, GRM5, HNMT, IFNAR1, IL12A, LAMA4, LMO7, MAD1L1, MAN1A1, MAPK11, MAPK12, METTL6, MGAM, MITF, MYL2, NCF2, NFASC, OR11A1, OR1M1, OR2M7, OR2Y1, OR4A15, OR51A4, OR51D1, OR5B12, OR6Y1, OR8I2, ORC4L, P2RX7, PDE7B, PLA2G2E, PTGFR, QARS, RAPGEF4, STX1A, TAS2R9, TGFA, TNFRSF8, TNFSF12, VEGFB, WASF1, WIF1, XIAP, ATP6V0A1, ATP6V1G3, CSGALNACT1
Negative_14145	AK1, CD2, F5, IL7, KIT, ME3, MPL, OSM, PAH, RB1, SFN, TFG, ACP1, ACSM5, ACTG1, ADAM10, ADCY7, ALPL, ATP2A1, ATP5E, BDKRB1, BMP4, BPNT1, CCND3, CD36, CD79B, CDH3, CDKN2C, CLDN17, CNTN2, COL4A2, CYP17A1, CYP19A1, DDX52, DGKA, DGKE, DUSP2, EIF4B, EPHA6, FUT9, FZR1, GLS2, GPX7, HRAS, IAPP, IL22RA1, INPP1, INPP5B, KAT2B, KLRC4, LDHAL6A, MALT1, MAP3K14, MYH14, NCK2, NCOR2, NRCAM, NTF4, NUMB, OR13D1, OR1L8, OR1S2, OR2L2, OR4F4, OR52K1, OR5T2, OR6C6, OR7G3, OR9A2, ORC5L, PAICS, PDE1C, PGK2, PIGK, PLAU, PLOD2, POLR1D, POLR1E, POLR2I, PRDX6, RASGRP1, RPN1, SCLY, SH2D1B, SH3BP2, SPRED2, SRGAP1, SRGAP2, TBK1, TRIP10, UGCGL1, UNC5B, UNC5D, CTNNBIP1, HLA-DPA1, SLC25A31, SUV420H1, TNFRSF10B
Negative_14146	AK3, DBH, KIT, ACOX3, ADORA2B, AGPAT3, AKR1C2, ATP13A2, ATP2A3, ATP5L, CD82, CPT1A, CSDA, DUSP5, DVL2, ENTPD1, FGFR3, FMO5, GNAI2, GNAL, GRIA3, HSD3B7, ITPK1, MAPK11, MGLL, NCKAP1, NEU3, OR2A12, OR2C1, OR2D2, OR2T33, OR2V2, OR51E1, OR52N1, OR5T1, PAPSS2, PDE1B, PDE2A, PER2, PIAS3, PIGS, PLCD3, PNLIP, POLR2A, PPP2R2C, PYCR2, RENBP, RFWD2, SPAM1, ST8SIA1, TGFB1, TIAM1, TUBA1C, CSNK1A1L

Negative_14147	PAH, PML, SHH, TXK, A4GALT, AANAT, ACADSB, ACP1, ACSL3, ALOX5, ATP5J, BACE1, CDC2, CNTNAP2, CRHR1, CSH1, CSNK1A1, CTNNA2, CYP11B2, CYP27A1, DGKB, DHRS4, DPM1, DTX4, EARS2, GLI1, HHIP, HLA-DRA, HNF4A, IDH3G, IFNA16, IFNA4, IL1B, ITGAV, LAMC2, LCMT2, MAP3K11, MCM5, MTFMT, MYH8, NAE1, NCF4, NCR2, NFYB, NMNAT1, NPAS2, NUDT5, OR2M3, OR4D2, OR56B4, OR5D16, OR7A5, OR9Q1, PAK6, PARD6B, PDCD1, PDE3A, PLD2, POLR2F, POLR2G, PRKG2, RFXAP, SEMA3G, SETDB1, THTPA, TYK2, USE1, VASP, WNT11, WNT16, WNT9B, XIAP, GABARAPL2, MAP3K7IP2, SUV420H2
Negative_14148	DAO, DBH, F12, F2, FYN, NLK, SMO, WAS, AADAC, ABLIM1, ACADL, ACOX1, ACSM1, AKR1B10, ALCAM, AQP7, AVPR1A, CACNA1C, CACNA1F, CDC25B, CDS1, COL6A1, COQ5, CSNK1G1, CYP11B1, CYP11B2, CYP3A43, DDX51, FCGR2B, FGF8, GFPT1, GMPPA, GRIA2, GRIA3, GSTP1, GUCA1A, GUSB, HTR5A, IARS2, IFNG, IL15, IL3RA, JUND, KCNB1, LTBR, MAD2L1, MGST3, MITF, MYH14, NANS, NOX1, OR10Q1, OR2A25, OR2B2, OR2T29, OR2T4, OR4C46, OR52A1, OR6C75, PDE11A, POLE2, PPP2R1B, PRIM2, PRKCE, PYCR2, RERE, RFXD2, RFX5, SEMA3C, SLC33A1, SMAD2, SPHK2, TALDO1, TAP2, TM7SF2, TUBA1A, VARS, VAV3, WASF3, ATP6V1B1, GABARAPL1
Negative_14149	C2, DHH, FER, GP6, GSN, RPE, ACOX3, ACPP, ACY1, ADRB1, AHCY, AKR1C3, ALDH3B2, ALG8, ARPC3, ATP6AP1, BRAF, C3orf10, CASK, CDKN1C, CEBPA, CHRM1, CLDN2, CPOX, CSNK1G1, CXCL1, DBF4, DDX51, DGKB, EIF4B, ENO2, FUT1, GALC, GALNT13, GALNT8, GATM, GLS2, GPAM, GRIN2C, HMOX1, HNF1B, HTR2B, IL10, IL1B, IL21, IL6ST, IMPA2, INSR, ITCH, ITGAE, KIR2DL4, KLRC2, LAMA3, MAGI1, MYH7, NRXN2, OR2M4, OR2T6, OR4F5, OR4K14, OR4K5, OR51B4, OR5B12, PAK3, PAPSS2, PARD6B, PGS1, PIGX, PLA2G3, PLXNB2, PMVK, POLR3D, PPP2R2A, PPP2R5D, PSPH, RAPGEF1, RARS, RDH12, SEMA4D, SLC33A1, SPTAN1, STAT3, TAS2R14, THY1, TMLHE, UCP1, VDAC2, ATP6V1C2, EIF4EBP1, HLA-DRB3, PRICKLE1
Negative_14150	CFI, F10, GGH, SHH, ACVR2A, ADCY3, AMD1, AMHR2, ARPC1A, ATG7, ATP6VOB, CACNA1B, CASP10, CCR5, CD79B, CDKN1A, CFL1, CFL2, COL5A2, CREB3L1, DGKQ, DHRS4, FARSA, FASLG, FGF3, FLAD1, FPGT, GALNTL4, GBGT1, GNB1, GNB3, HARS2, HMGCS2, IMPDH2, KIR2DS4, LRP5, MAP2K2, MAP2K6, MGAT5, MYH1, NANS, NT5C, OR10K1, OR10V1, OR1E1, OR2A4, OR2T11, OR3A1, OR3A3, OR4D1, OR4K15, OR4P4, OR52I2, OR6X1, OR9Q2, PDE1C, PFKFB2, PIGL, POLR2K, POLR3H, PPAP2B, PPM1B, PPP2R1A, RAPGEF2, RBPJ, RRAS2, RRM2B, SEMA4C, SMAD3, SOCS7, SOX17, SRD5A1, TAS2R4, TLN1, TP53I3, TRADD, TUBA1C, TYROBP, TYRP1, YES1, ZMAT3, CACNA2D1, HLA-DQB1, MAP3K7IP1
Negative_14151	FGG, FYN, GNS, PGP, PLG, ACO2, ADRB3, AHCYL1, ANAPC7, ARHGEF4, ARNT, ASENS, ATG3, B3GALT2, BACE1, BDKRB1, CBR3, CD40LG, CMBL, CTPS2, CTSS, DLL3, FGF1, FGFR2, FSHB, FZD4, FZD6, G6PC, GAS1, GPAM, GUCY2D, HSD3B2, IFNK, ITCH, ITGA6, ITGB7, ITPKB, LRAT, MYH13, NCOA4, OR1F1, OR4K2, OR52K2, OR6C6, PANK2, PDGFRB, PGLS, PIP4K2B, PKM2, PLA2G6, RDH12, RPE65, RUVBL1, SDC4, SNAI1, STAT1, WNT11, ATP6VOD2, B4GALNT1, GABARAPL1
Negative_14152	FES, GSR, HK2, PTS, RDX, ACOT11, ACTA2, ACVRL1, ADORA2B, ALDH1B1, ALDH5A1, ALDOA, ALG1, ALOX15, AQP7, ATP5G3, BDH1, BTRC, CCL4, CD14, CDC16, CDKN2A, CDKN2B, CES2, CTNNA2, CTSG, CYBA, DDX41, GAL3ST1, GALK1, GDF5, IFNB1, IKBKG, IL22, ITGB4, KLRK1, LDHA, MGAT2, MIOX, MTAP, NARS2, NCSTN, ODC1, OR13C8, OR1I1, OR2T12, OR2T33, OR2T6, OR4A16, OR4C11, OR4K17, OR4M2, OR8J1, OR9A2, ORC1L, P2RX6, PDE6G, PDGFA, PDGFC, PIP4K2B, PIP5K1A, POLR1D, PPP1CA, PRKAG3, PRKCA, PTPRR, RAPGEF4, SEMA3F, SENP2, SIPA1, SOCS4, SOS2, TPK1, TRAF4, UGT1A10, USE1, VEGFB, YWHAQ

Negative_14153	BAD, CTH, GNE, IL7, LAT, SI, TYR, ACSM3, ADSSL1, ALG10B, AMDHD1, ASNS, ATP12A, ATP2A1, B3GAT3, BACE2, BMP5, CCND3, CCR4, CD46, CDH15, CHPF, CXCR6, CYP1A2, CYP3A7, DHDH, DHX58, DNMT3B, ENTPD6, FGF12, FMO2, FPG T, FZD4, GALNT9, GJD2, GLS2, GNAT3, GPT2, GUCY1A3, HLA-DOB, HRAS, IDI1, IFNA4, IFNGR2, INPP5B, INPP5E, ITGA3, KIR2DL3, KLRC4, LCAT, MAP4K1, MAPK9, MARS, MARS2, MPDZ, MYD88, MYH11, NME2, NRXN1, NTSR1, OR10J1, OR2AT4, OR4C6, OR8I2, OR8K5, OXTR, PAK1, PARD6B, PIAS1, PIAS4, PIK3CG, PIM2, PLA2G6, PLOD3, PPP2R2B, PRIM2, PYGB, RAC3, RRM1, RXRG, SC5DL, SLIT2, SMAD7, SMC1A, SPRY1, SQLE, STAM2, STX16, TALD01, TGFB1, THBS3, TSLP, WNT9A, HLA-DRB3, MAP3K7IP1, TNFRSF10D
Negative_14154	BTK, DAO, DLD, GSR, ITK, TYR, XDH, ABP1, ACSL3, AKR1B1, ALAS2, ALDH1A1, ALDOB, ATF2, ATP5D, BMP8B, C4BPB, CACNG8, CCL7, CCR2, CD99, CES2, CI SH, CNTFR, CNTN1, DIAPH1, DMGDH, DVL3, E2F3, EPHA6, EPHB3, F11R, GALK1, GCH1, GSTP1, HNF4A, IARS, IDI2, IKBKB, IKBKG, IRF3, ITGA4, JAG1, KL RK1, MALT1, MAP3K14, MGAT1, MYL5, NEUROG3, NGEF, NOTCH1, OGDH, OR10H3, OR13C4, OR1S2, OR2F2, OR5B3, OR5J2, OR5V1, OR8B4, OR9A4, OR9G4, PANK3, PDE1B, PGAM2, PON1, PON3, PPOX, PPP2R2B, RBPJL, RBX1, RPS6KA2, SRD5A2, STK36, TAS1R2, TD02, THBS3, TKTL2, TUBB2B, UPP2, VDAC1, CACNA2D1, TNFRSF10A
Negative_14155	AR, DBH, DHH, FAH, GH1, NGF, NPL, UBB, ACPP, ACVR1B, ALDH3A1, ARG2, ARNT, ATP4B, BCMO1, CACNG7, CCL19, CCNA2, CCNE1, CD72, CDS1, CHRNA7, CLCA2, CLCF1, COMT, CPOX, CXCL13, CYFIP1, DDX18, DVL2, ENTPD3, EPOR, ETNK1, FGF14, GAD1, GANAB, GART, GLO1, GNAI3, GUK1, IDH1, IDI1, IL1B, IL1R1, ITGA8, ITPKA, JAM2, KAT2B, MITF, MMP2, MPDZ, MPZL1, NAMPT, NANP, NKX3-1, NT5C1B, OLAH, OR13A1, OR13C4, OR14C36, OR4K15, OR52N5, OR5AR1, OR5L1, OR6B3, OR7G3, OR8I2, OR9Q2, P2RX5, PDHA2, PGLS, PIGO, PIK3C2B, PLCE1, POLR1E, POLR2L, PRKAR1A, PTGS1, PTPN5, RASA1, SEMA4G, SMPD1, SOCS1, SOS2, SPRED2, SUFU, TAS2R3, TIRAP, TRAF6, TYROBP, UCK1, ULK2, WNT6, ZAP70, ATP6V1B1, HLA-DPA1, HLA-DQA2, ST6GALNAC1, TNFRSF18
Negative_14156	FUK, LIF, ADRA1A, ADRBK2, ALDH5A1, AMY2B, ARHGEF7, ARPC1A, ASMT, B3GNT4, CACNB1, CAPN2, CASP6, CAV3, CCND1, CCR7, CD59, CHPF, CHPT1, CHRM1, CHRNA7, CKS1B, DCTD, DDX18, DHCR7, EFNA2, EHMT1, ENPP2, ENPP7, FIGF, FOSL1, GALE, GALNT12, HSD3B7, ICAM3, IFNA14, IFNA16, IL15, IL20RB, IL23A, IPPK, IRF5, ITGA5, ITGB3, ITGB5, KIR3DL2, LIFR, MAP2K7, MASP2, MDH1, METTL6, MGAM, NFE2L2, NTRK2, OR10G7, OR10H1, OR10H5, OR1L4, OR2T1, OR3A1, OR4D9, OR52B6, OR6K2, ORC3L, P2RX4, PANK4, PLA2G4A, PPA2, PRDX6, PTGER1, PYCR2, RASGRF2, ROBO3, RPIA, SELL, SHC3, SMAD5, SOX17, SSH2, ST3GAL1, STK11, TACR3, TAS2R3, THTPA, UNC5D, VAMP1, WHSC1L1, TNFRSF10A, TNFRSF6B
Negative_14157	APP, BAX, BCR, EGF, FOS, GP5, AASS, ARPC2, ARSB, BCL10, BLVRB, C4BPB, CCND2, CCNE2, CDKN1B, CLTB, CLTCL1, CXCR6, CYP2F1, DARS2, DTX4, DUSP5, FGF19, FLOT1, FOXO1, GART, GFPT1, GNAZ, GNB1, GPX7, GRIA1, GSTT1, HMB, HSD3B1, IDH3G, IGFBP3, IL23A, IL8RB, ITGAE, KYNU, MAP4K1, MCM5, MYL9, NAE1, NME6, NOD1, OR2L8, OR4C15, OR52E8, OR7G1, P2RX7, PER1, PIK3CA, PIP4K2C, PLA2G4A, PLCB3, PLXNB3, POLD1, POLE3, PPP2R5B, PPP3CB, RPN2, SETDB1, SIPA1, SPP1, TAS2R50, TNFSF18, TSHR, TUBB4Q, TXNDC12, UGT2A3, ULBP1, WNT8A, MAPK8IP1, SLC25A31, TNFRSF13B, TNFRSF17

Negative_14158	DCC, DCK, FGB, HGD, UBC, ABLIM2, ACACA, ACTG1, ADORA2B, ADRA1B, APOA2, APOC3, APPL1, B3GAT1, B4GALT3, CACNG5, CALML5, CASP9, CCL21, CCL26, CD80, CLCA2, CLDN7, CSNK2B, DERL1, DHRS4, DTX3L, EPHA6, EPOR, FMO5, GCNT3, GNA11, GNB1, GNG3, GRB2, IFNA6, IL12B, KLRC4, LDHA, LILRB3, MAP2K1, MAP3K4, MAPK11, MGAT5, MMP1, NCKAP1, NPAS2, NRG1, NTF3, OR13C8, OR1J1, OR2H2, OR4B1, OR51B5, OR51G2, OR5T3, PGAP1, PHPT1, PIGB, PPP2R2B, PTPMT1, RFWD2, SEMA3G, SKIV2L2, SULT2A1, TALDO1, TCF7L1, THBS4, UGCGL1, WNT1, WNT4, C1GALT1C1, PLA2G12A
Negative_14159	F7, IL3, KMO, ME1, OGT, ACSM4, ADSSL1, AOX1, APH1A, ARAF, C3AR1, CACNA1A, CCL8, CCNB3, CD38, CDH4, CLCA4, COL6A1, CSDA, CYP26C1, CYP8B1, CYSLTR2, DAPK2, DOLPP1, EIF4B, EXTL1, FGF13, FGF5, GCNT1, GNAI1, GRIN2D, HCST, IFNA7, IL12RB1, IPPK, ITGA4, ITGB2, KAT2B, LALBA, LIPA, MAGI2, MAP3K2, MDM4, MYH9, NEU3, NT5C1A, NT5M, NTSR1, NUMBL, OR1E2, OR1J4, OR2AE1, OR2W1, OR2Y1, OR2Z1, OR4A16, OR51F1, OR5B12, PAFAH2, PAPSS1, PDGFB, PER2, PIP5K3, PLXNA2, PRKAG2, PTCH1, PTPRB, PTTG1, PVRL4, RAPGEF2, RASA1, RPE65, SHC2, SMAD6, SMAD9, TAS2R5, TPM3, TUBB2A, UAP1, UBA7, UGCGL1, UROC1, VEGFA, ATP6V1G3, CACNA2D2, MAP3K7IP2, ST6GALNAC3
Negative_14160	C7, DUT, F2, LEP, TNF, AKR1C4, ALDH1A1, ALG8, AMPD3, AMY2B, ARPC4, ARSD, BBC3, CACNA1A, CACNA1D, CADM3, CCL21, CCNH, CD58, CFTR, CKMT2, CTN, CYP19A1, DAPK2, DDX19A, DGKB, DPM1, DTX2, EGLN1, FZD3, FZD7, GAD2, GADD45A, GALNT1, GLUD1, GNG12, GOT1, HLA-DOA, HSD3B1, HSPA8, IFNAR1, IQGAP2, IRF7, KIR3DL2, LAMB4, LDHC, MAD2L1, MADCAM1, MALT1, MGAT2, MGST1, MTHFD2, NANP, NFE2L2, NQO1, NRG1, NSDHL, OR10K1, OR10K2, OR10S1, OR13D1, OR1E1, OR2A25, OR4C46, OR4C6, OR4D5, OR4M1, OR4N2, OR51S1, OR5AC2, PCYT1A, PPCDC, PPM1B, PTGER3, PTMT1, PYGM, RAP1A, RFXAP, RPS6KB2, SENP2, SESN1, SGPP1, SIPA1, SLC12A2, SLC2A1, SMC1B, SOAT2, SOS1, SPI1, TPK1, TUBA1B, ATP6V0A2, HLA-DRB4, HSP90AB1, MAPKAPK3
Negative_14161	BID, CKB, EPO, FES, FGB, GSN, PGD, STS, AACCS, ADAM10, ADH4, ADRB1, AGXT2, AHCYL1, ALDH1B1, ALG6, ATP5G2, CACNA1B, CACNB1, CCL11, CCL23, CDH3, CHPF, CHR1, COQ6, DAXX, DDB2, DHRS3, ETNK2, FGF23, GALNT14, GIT1, GSTK1, ICAM2, IDH3A, IFNGR1, IL11, IL12RB1, IL23R, ITGB7, LARS, MAML2, MITF, MLYCD, MYL2, NCAM1, NFE2L2, OR2G3, OR4F4, OR51B6, OR5L2, OR6C4, OR7A17, ORC1L, PDE1C, PFKP, PIGX, PPAP2C, PRKG1, PRLR, PYGM, RAC2, RHEB, RPIA, SARDH, SFRP4, SH3BP2, SMURF1, SSH3, ST3GAL3, STEAP3, STX12, STX4, TACR3, TGFBR2, TNFRSF8, TPH2, UPB1, YWHAZ, CACNA2D4, HLA-DRB3
Negative_14162	AMH, AUH, CP, GH1, GLS, HYI, IL5, ITK, SPN, WAS, ABLIM1, AHCYL2, ALDH3A2, ALDH4A1, ANAPC4, APOA1, ATF2, BIRC3, BNIP1, CACNA1C, CAMK2G, CD47, CDH2, CDK5, CER1, CHKA, CHRM3, CLDN16, CLDN2, COL4A2, CREB1, CXCR4, DCXR, DLAT, ENTPD6, EPHA1, EPHX2, FADS2, FGFR1, FSHB, FUT9, GANC, GLU2, GMPPB, GSTM3, GUCA1C, HARS2, HEMK1, HIBADH, HMOX2, HSD17B8, IGSF5, IL22, IRF3, ITGB7, LRAT, MAD1L1, MAP3K14, MAPK11, NFX1, NME7, NRP1, ODC1, OR4A5, OR4C15, OR4C6, OR5B12, OR5V1, OR8H1, OR9K2, P2RX1, PARS2, PDE9A, PFN3, PLA2G6, PLXNA2, PRKCZ, PRODH, PYGM, RASSF5, RHOA, RUVBL1, SEMA3D, TAS1R3, TAS2R8, TGFA, THBS1, TJP2, TNFSF12, TUBB4, UGT2A3, WASL, ATP6V1B1, PHOSPHO1, ST6GALNAC5, TNFRSF10A
Negative_14163	DAO, IHH, MAG, MUT, MVD, RDX, ALOX15B, ANAPC10, ARHGEF6, CSF3R, CSH1, CYP1B1, DCXR, DERA, EFN1, FLOT1, GNPAT1, HEXB, HGSNAT, HHIP, HSD17B4, HSPA8, IMPDH1, IQGAP3, ITGA2B, ITGA5, MAD2L2, MINPP1, MTHFD1L, NAE1, NOTCH2, NPAS2, NRG1, OR14J1, OR1A1, OR4M2, OR51E2, OR8K1, ORC5L, PER2, PER3, PHKA1, PNLIP, POLR1C, PON2, RPE65, STX18, TSLP, UMPS, VAMP2, WNT10A

Negative_14164	BTK, DCT, PXN, ABLIM2, ACYP1, ADRA1D, AHCYL1, ALG10B, ARSA, ASIP, B3G ALT1, CXCR5, DDX56, DERL1, DNMT3L, EGLN1, ELK1, ENPP7, EREG, FRAT1, G ADD45G, GLO1, GNAI2, GRIA2, GRIN2D, HSPA2, IFNK, IMPA2, ITGA7, ITGB3 , KYNU, MAP2K5, MAT2B, METTL6, MYL7, OR10J1, OR10V1, OR2B2, OR2F2, OR 2M3, OR4C12, OR51A7, OR8A1, PAK6, PDE7B, PRKCG, PRKCZ, PRPS1, RASSF1 , RHEB, SOD1, SUV39H2, TAS2R1, TGFB1, TLR9, TNFSF10, UBE2L6, UGT2B1 7, WNT4, ZFYVE16, ATP6V1E2, HLA-DPA1, HSD17B10, MAPKAPK3
Negative_14165	CFH, F8, FAH, TYR, AADAC, ADH7, ALG11, ARD1A, ATP2A2, C3AR1, CACNG3, C D244, CD58, CD8B, CLDN6, CYP3A4, DKK4, DVL1, EFNA3, EIF4E2, ENPP6, EN TPD1, ENTPD7, FCER1G, FRAT1, GCH1, GRPR, GTSE1, HTR2C, IL13, IRS2, KI R2DL4, MBL2, MTHFD2, MTMR2, MYL7, NCOA4, NT5M, NUDT8, ODC1, OR2H2, OR 4L1, OR52R1, PDE8A, PIGM, PIGN, PIM1, POLR3A, PPP3R2, PPT1, PRDX6, PT GIS, RDH11, SLC25A5, SMARCA5, SOCS5, TAP1, TAS2R10, TGFB2, TMLHE, T UBA1C, HLA-DRB4
Negative_14166	C7, CFD, DCK, FYN, GNS, GSR, HK2, ID3, KHK, MUT, ACSL5, ACTN2, ADCY1, AD CY3, AOC2, ATP5G1, B3GNT2, B3GNT3, BCL2, BHMT, BMP5, BTRC, CALML3, CD C14A, CKMT2, CNTN2, COL11A1, COX10, CREBBP, CRHR1, CXCR3, CYP2E1, E2 F5, EFNA2, EPHA8, F11R, F13B, FADD, FGF20, FGF23, FGF6, FGFR2, FLT3LG , FOSL1, FRAT1, GCDH, GGCX, GGT1, GGT7, GLG1, GP1BB, GRIN1, GSTM4, GUC A1C, HSPA2, IAPP, ITGB7, ITPA, LAMB1, LARS2, MAP3K2, MEF2C, NAGK, NFK BIA, NFKBIB, NNMT, NPR1, OR13C9, OR1D2, OR2A12, OR2D2, OR2D3, OR2T12 , OR4N2, OR51B5, OR5P2, OR5T3, P2RX5, P2RX6, PDE3A, PIAS1, PIP4K2C, P LIN, PPP3CB, PTGES2, RUVBL1, SDC4, SH3BP2, SLIT2, SMAD5, SPAM1, ST6G AL1, TAS2R49, TLN2, TRAF6, TUBB, VDAC1, VEGFB, WNT3
Negative_14167	CDA, CGA, CP, FH, ID3, NGF, AMDHD2, ARHGEF7, ASS1, ATIC, B3GNT2, BLVRA , BMP8A, C1QB, CACNG2, CLDN19, CSNK2B, CYP2D6, DDX23, DGUOK, EIF4E2, EPHA4, EPHX2, EPRS, FOXO1, HSD17B8, IDH3A, IFNGR2, MMP1, NADSYN1, NC KAP1L, NKX2- 2, NRG2, OLAH, OR1A2, OR1C1, OR1L6, OR2AG2, OR2F2, OR4A5, OR5A1, OR5B 17, OR6C76, PAK7, PDX1, PFKFB4, PRPH, PTPRC, RAPGEF2, SESN1, SETDB1, SH3BP2, SHC2, SMARCA5, SREBF1, ST3GAL6, STX1A, SULT2B1, TSHR, ZAP70 , ATP6V1C1, ATP6V1G1, MAPKAPK3, PHOSPHO1
Negative_14168	CFI, FAH, GSN, ID1, UBB, AASS, ABCC8, ABI2, ACSL6, ADH1B, ADH6, AFMID, AHCYL1, ALDH3B1, ALG2, ALPP, AOC2, B4GALT1, BCKDHB, CCKAR, CHPF, CLT CL1, CXCL12, DAPK3, DDX55, DMGDH, EARS2, EPAS1, GBA3, GLUD1, GRIN2B, GSTA1, GSTZ1, GUCY1A3, HEXB, IBSP, IL13, ITPK1, KARS, KAT2A, LAP3, LC P2, LDHC, MCM7, MGAT4B, MTMR1, NTRK2, NUDT2, OR10Z1, OR2Y1, OR4S1, OR 52N4, OR5H2, OR6K6, P2RX4, P2RX5, PARD6A, PDE6G, POLE4, PPP2R5B, PSM E2, PTCRA, PTK2, PTPRJ, RAPGEF4, RRAS, RUVBL1, SARS, SDHB, SOCS4, STA T6, STK4, STMN1, STX5, STX6, TNFSF8, UCKL1, ULBP1, WBSR22, ZBTB16
Negative_14169	F10, FER, ME2, ACTN2, AGPAT6, ALOX12, ALPI, ANAPC10, ATIC, BLVRA, CAC NG6, CASP3, CAV2, CPS1, DDX47, DDX52, DUSP8, EGLN1, EIF4E2, ENPP1, GB E1, GLYCTK, GPT2, GUCA1A, HES1, IL10RA, IL10RB, IL24, ISYNA1, KCNQ1, LARS2, MAD2L2, MAP4K1, MAPK12, MPST, NADSYN1, NCOA4, NEU1, OR1E1, OR 2G3, OR2L13, OR2T6, OR56A4, OR5V1, OR6K2, OR6K6, ORC4L, PAX4, PDE3A, PDIA4, PI4KA, POLD3, POLR1A, POLR1C, POLR1D, PPP1R3B, RFXANK, SC5DL , SDHD, SPRY4, STAT5B, TOMM40L, TP53I3, TSNARE1, TYMS, UNC5A, VNN1, Y WHAE, ALDH18A1, ATP6V1E2, PRICKLE2, SERPINA1

Negative_14170	DLD, AANAT, ABI2, ACVRL1, ADAM10, ALAD, ALCAM, ALDH4A1, APOE, ARSE, BAIAP2, BPNT1, CALML6, CAMK2A, CD274, CPT1C, CREB3L3, CTSL1, CXCR5, D AAM1, DCTN1, DDX4, DDX47, DGAT2L4, DUSP10, DUSP16, DVL3, E2F3, FGF14, FUT3, GGT6, GNA12, GSK3B, GSTO2, HNMT, HSD11B2, IARS, IDH3A, IL6ST, KLRK1, MAP3K5, MAP4K3, MAT1A, MCM2, MMP14, MYH1, NAT5, NUDT9, OR1L3, OR4C13, OR4F15, OR52E6, OR5AU1, P2RX1, P2RX4, P4HA1, PARD6A, PIGS, PIP4K2C, POLD2, PRKCI, PRPS2, PYCR2, RPSA, SC5DL, SFRP4, SPRY3, STAM, STAT1, STX18, TAS2R50, TSLP, TUBA4A, UGDH, USE1, YES1, CSGALNACT2, HLA-DPA1, MAPKAPK3
Negative_14171	F2, GPI, NPL, SCD, AARS2, ACMSD, ACOT11, ACTB, ACTC1, ADH4, APAF1, ARPC5L, ATP5A1, B4GALT1, BACE2, BCMO1, CACNG4, CAV3, CCL22, CCL27, CD79B, DDX19A, DRD1, EFNA4, EFNB3, ELK4, FZD3, GADD45B, GALNT14, GGT6, GPX5, HLA-DRA, HSD17B3, IFNB1, IL11, ITGA10, LDHC, MAP3K12, MAPK13, NCK2, NCOA4, NR1H3, NUDT8, OR10A7, OR10G9, OR10P1, OR4F5, OR4S1, OR51A7, OR51G1, OR6C4, OR9A2, PARD6G, PLOD1, POLR2B, POLR3K, PPP2CB, PPP2R1A, PRKAA1, PTK2, RAPGEF1, RRM2, SMAD6, SMURF2, SOAT1, SOCS4, SPRY2, SPTAN1, STAT6, TACR2, TCF7L2, TNFSF14, UCKL1, HLA-DRB4, TNFSF13B
Negative_14172	AR, DHH, NPL, TFG, TK2, ACOX3, ADCY4, AGPAT2, ALDH2, ARPC4, ARSE, BUB1B, CACNA1H, CAV1, CCKBR, CD28, CHUK, COL11A1, COL6A1, CRB3, CSAD, CTBP2, CXXC4, CYBB, DAPK1, DDX47, ETS1, FABP1, FTMT, FZR1, GABARAP, GUK1, HDAC2, IL17B, IL7R, INHBC, INPP4A, ITGAE, KDSR, KYNU, NCOR1, NOTCH3, OR10AG1, OR12D3, OR13C3, OR2C1, OR2T3, OR51L1, OR52N5, OR5C1, PIAS4, PPP2R5C, PTTG1, RASGRP3, RPS6, SEMA3A, SEMA3C, SEMA4A, SH3BP2, SMAD1, SOCS4, SULT2B1, TPH1, UGDH, WASF2, XCR1, ZMAT3, HLA-DQA2, HLA-DRB5, TNFRSF14
Negative_14173	BAX, HK3, KIT, LPO, UBC, ACAT1, AGMAT, AKR1B1, AKR1D1, ALDH1A2, ALDOC, APOE, ASNS, ASS1, ATG3, BCL10, BPNT1, BUB1, CAV3, CCNG2, CD40, CD80, CLDN18, CPT1A, CTBP1, CYP2E1, DDIT4, DHRS9, DTX1, DTX3L, ER01L, FIGF, GALNT5, GNAL, GNPDA2, HPSE2, IGF1R, INPP1, LCP2, LM07, MAP2K4, MAP3K1, MKNK2, NAGS, NME7, NOX3, NRAS, OR13A1, OR1A1, OR1L8, OR4D5, OR4F15, OR51I1, OR51V1, OR52D1, OR5C1, OR5P2, PAPSS1, PDHA1, PIK3C2A, PLCD3, PLOD2, PMM2, POLR1E, PORCN, PPM1D, PRKAG2, PRSS2, RARS, SPP1, SPRY3, STK11, TAS1R2, TKTL2, WASF2, WASL
Negative_14174	BTC, DDC, DLD, GLS, ID3, LPL, NLK, NPY, SCD, AARS2, AASS, ABP1, ACP1, ACPT, ACSL5, ACVR2A, ADCY2, ADCY5, ADCY8, AGPAT4, AGXT, AMY2A, AMY2B, APBB1, ATP2A3, CCNA1, CD34, CFL2, CLDN3, CRY1, CYP4A22, EGFR, FGD1, FGF19, FGFR3, FZD7, GNAS, GNPDA1, GNRH1, HCLS1, HIP1, ICOSLG, IFNA16, IL23A, INSR, LFNG, LIPE, MAP2K4, MAP3K2, MAP3K5, MARS, MYLK3, NAGA, NRXN3, OR10C1, OR10G2, OR10H3, OR1C1, OR4M2, OR52R1, OR5B21, OR5T3, PDCD1, PFKL, PLCZ1, PLOD2, POLR1B, POLR2D, POLR2H, POLR3D, PPP3R1, PRKAR1B, RAP1A, RAPGEF3, RARA, RHEB, RPS6, RRAS, SHC2, STAM, TNFSF11, TPH1, TPM3, TRAF5, UCK1, VAMP3, TNFRSF1A
Negative_14175	CP, CRK, FST, GPI, ACP5, ACTA2, ALG11, ALOX5, ALPP, ARSE, CACNB1, CACNG5, CAV1, CCL5, CD27, CD36, CNTF, CXCL2, DAG1, DGKQ, ENPP3, FZD9, GANC, GFAP, GFPT1, GLG1, GNPAT, HLCS, HSD17B2, IFNA8, IL12B, IL18R1, IQGAP1, IRS2, ITGA7, LRAT, MASP1, MGAT2, NAE1, NEFM, NUDT2, OR10R2, OR11L1, OR51B6, OR56A1, OR5AR1, OR5L1, OR9G1, PFKFB1, PFKFB4, PKMYT1, POLR2I, POLR3D, PRSS3, PSEN2, PTGES2, RPSA, RUNX1, SEMA4F, SMARCA5, STAT2, STT3B, TICAM2, TNFSF12, TUBB1, TUBB4, UCK1, UGCGL1, VEGFC, WNT16, EIF4EBP1

Negative_14176	CGN, GAA, ABP1, ACSS1, ACTB, AK3L1, ALPI, ASRGL1, ATP6V1A, B3GNT4, C3AR1, CLDN17, COL1A1, COL5A1, COMP, CPS1, CSDA, CTNND1, CTPS, CYP2C8, DGKE, E2F3, ENPP7, EPB41, EPHX1, EXT1, FZD1, GLUL, GMDS, GRLF1, GUCA1B, HDAC1, HSD17B4, IARS, IGFBP3, INHBE, IQGAP3, KCNB1, KIR2DL1, MGAT2, NAGA, NFYC, NME2, NMNAT3, NODAL, NUMB, OR10A2, OR10K2, OR1J2, OR2B11, OR2L2, OR2T12, OR51B6, PDE4A, PIGH, PON1, PON3, PPP2R5D, PRKAG1, PRSS3, RRM2B, SFRP4, SHISA5, SORBS1, SPAM1, SPHK1, SPRY2, STX2, SUCLA2, TAP1, TGFB2, TGFB1, TNFSF12, TSC1, UMPS, PLA2G12B, SERPINA5
Negative_14177	AUH, FGG, GCK, IHH, MVD, PXN, STS, AMPD1, AMPD2, BIRC5, BTRC, CACNA1S, CCL3, CDC25C, CLCF1, COASY, COL6A1, COQ6, COX10, CRKL, CSF1R, CTNNA1, DGAT2, DPM1, EFNA2, EGLN3, EIF4E2, EPAS1, F2RL2, FGF1, FGFR4, GAD2, HDAC2, IFNAR1, ITGB8, JAM3, LCMT1, LTB4R2, MCM4, NFKB1, NFYA, NME7, OLAH, OR52I1, OR56A3, OR5C1, OR6C74, OR7A17, ORC1L, PDCD1, PGAP1, PHKA1, PLA2G2E, PON3, PTGFR, RFNG, SAT2, SEMA3B, SETDB2, SMAD6, TUBB4Q, UCK2, UGT2B7, WNT9B, YES1, MAPKAPK2
Negative_14178	DAO, TK2, AANAT, ABL1, ACMSD, ACOT12, ADRBK2, AMDHD2, ANAPC7, ANPEP, ARPC5L, ATP5J2, B3GNT2, BLVRB, CD274, CLDN7, CREB3L3, CYP2A6, CYP3A7, DLL1, DTYMK, DUSP9, EDA2R, EFNA3, EPOR, FRAT1, GRM5, GSTA2, GUCY1A2, HTR6, ICAM2, IL1RAP, IL20RA, MAP3K2, MAPK3, MITF, MPDZ, NCOR2, NFX1, OR10Z1, OR2K2, OR2T2, OR2T5, OR9G1, PDGFD, PFKM, PLA1A, PLXNA1, PPA2, PSME3, PTDSS2, PTPN6, RBX1, RPS6KB2, RUNX1, SETMAR, ST3GAL3, SUV39H1, THBS1, TUBB, TUBB2A, VASP, WNT2, TNFRSF14, TNFRSF18
Negative_14179	C8G, GBA, ACOX2, ACSL1, ACTB, AKT2, ALDOB, AMD1, APLP1, ATP5H, ATP6V1F, BMP2, BTRC, CACNA1C, CLCA2, CNTN2, COL5A3, CREB3L4, CSF2RA, CYP26A1, DAPK3, DARS, DFFA, DLL3, DPM1, ELK1, F13B, FARSB, FLT3, G6PC, GADD45G, GALNT5, GMPS, GP1BA, GSTM3, IDUA, IFNA14, IL17B, ITPKB, KIR2DL2, KLRC1, LMO7, MAGI1, MGAT5B, MTHFD2, NEFH, NRXN2, OR2L2, OR4D11, OR51A7, OR52D1, PAK1, PANK4, PDGFA, PMVK, PPP2CB, PSENEN, PTGS2, RARS, RDH12, RPS6KA4, SDHD, SENP2, SNAI2, SOCS3, SSH2, STAT6, TAS2R60, TCIRG1, TDO2, TLR9, TOMM40, TUBB2B, VNN1, WNT7B, PRICKLE1
Negative_14180	C1S, C3, GSS, IDS, MPI, OAT, SRC, ACPP, AKR1C3, AKT2, ALDH9A1, ALDOC, APOA2, B3GALT6, CACNA1G, CCL26, CCR6, CD48, CNDP1, COX15, CPT1C, CSF1, DAPK2, DDX4, DIAPH3, DKK1, ELK4, ENTPD7, FGF3, GALNT13, GALNT3, GGT1, GSTP1, HADHB, HSPA2, HTR7, HTRA2, IKBKE, IL23A, IL2RA, IRS2, ITGB4, KCNQ1, KLRD1, LCMT1, LRAT, LRRC4C, MCM6, MDM4, MKNK2, NCOR1, NPR1, NRXN1, NT5E, OR1E1, OR4D1, OR4K13, OR51Q1, OR52L1, OR6C2, PDCD1, PDE11A, PDE4B, PDE8A, PGLS, PHKA1, PLCD4, PLTP, PLXNA1, PNPO, PPOX, PPP3CB, PRKAR1A, PRKCB, PRSS3, RHOA, RPS6, SDC1, SEMA4A, SESN1, SHC4, SOCS7, SORD, ST8SIA1, TAS2R3, TBXAS1, TCF7, THBS2, TICAM1, TJP2, TOMM40L, TUBB2C, WIF1, WNT5B, XCL2, YWHAE, HSD17B12, MAP3K7IP1
Negative_14181	CFI, EDA, FGG, ADCY10, ADH5, AKT1, ATP5A1, B4GALT1, B4GALT4, CACNG1, CCL23, CHRM1, CRKL, CRY1, CYP2C8, DGKI, DNMT3L, DPYS, EGLN3, ENTPD6, FADD, FDPS, FOXO1, FUT7, FZD7, GALNT12, GCNT2, GNAS, GNG13, GOT2, GSTA2, HEXB, HMBS, HNF1A, HSPA2, HTR7, IFNA13, IFNA7, INPP5E, KIR3DL1, KIR3DL3, LRDD, LTB4R2, MAGI1, MAGI3, MAP4K3, MS4A2, NFATC3, NPR1, OR13C3, OR13J1, OR14I1, OR1S1, OR2AG2, OR52D1, OR5AS1, OR9G1, P2RX1, PANK1, PDXK, PIGF, PIP4K2B, PLA2G2E, PLA2G4A, POLE, PPAP2A, PRKG1, RBX1, RFNG, RPS6, SGPP1, SIPA1, SPRED1, ST3GAL4, TGFB3, TICAM1, TNFSF18, TP53, ULK3, WARS2, WWP1, ATP6V1G1, B3GALNT1, HSD17B12, MAP3K7IP2, PAFAH1B1, TNFRSF11B

Negative_14182	C7, HPD, MOS, ACVR2B, ADSL, AGPAT6, AKR1C4, ARPC3, ATP12A, ATP4B, AXI N2, CCNE2, CD72, CDC42, CMPK2, COL1A1, CYP2C8, DNMT3A, DPM1, DVL3, EN AH, FBP1, GGT1, GLO1, GNPAT1, GRB2, GSTA4, IL4R, LCMT2, LIFR, LRDD, M AP2K1, MAP4K1, MGLL, NFKBIB, NKD1, NUMBL, OR10AG1, OR10G3, OR56B4, P DGFRB, PIGU, POLR1A, POLR3D, PPP5C, PSME1, PTEN, SEMA3C, SMAD9, SPP1 , TCF7L2, TKTL1, TLN1, TNXB, TP53, XYLB, MAPKAPK5, ST6GALNAC5
Negative_14183	CD6, F9, IL7, PC, PXN, ADH1A, ALG12, ARPC3, AXIN1, C4BPA, CCL17, CCL20 , CCR5, CHPT1, CLDN16, CSH1, CXCL11, CYP27A1, CYP3A4, DGKA, DPM3, EPB 41, EXTL1, F2RL1, FGF8, FUT5, FUT8, GMPS, HCLS1, HSD17B8, IKBKE, MAN1 A2, MAPK8, MCCC1, MGAT3, NADSYN1, NAT6, NKX3- 1, OR10Z1, OR2T4, OR4K1, OR8H3, PAK3, PFKFB4, PGLS, PIGS, PIK3C2B, PI K3CB, PIK3R5, PSEN2, QPRT, RFXAP, ROBO1, RPS6KA1, SCD5, SEMA3E, SEMA 7A, SLIT1, ST3GAL5, TAS2R13, TAS2R38, TGFB2, TLN1, VAV2, WEE1, ATP6V 0A4, HSD17B12
Negative_14184	CFD, CFH, GP6, PDC, ACP2, ADCY3, AMD1, ARHGEF7, BACE2, CACNG1, CACNG8 , CDC42, CHD8, CNGA3, COL4A4, CREB3L1, CYP2C19, DGKZ, DKK1, E2F4, EFN A4, EI24, FECH, GBE1, GCLM, GLS2, GSTP1, GYS1, IL19, INSR, IRAK2, ITGA 7, ITGAL, ITPK1, JAK2, MAP2K2, MAP3K6, MASP1, MCEE, NTNG1, OR4K1, OR5 2I1, OR52R1, OR7G2, OXCT2, PDE4B, PDE9A, PGLS, PLOD3, PPCS, PRKAA2, P TDSS1, PTDSS2, PTPRM, PYGB, RUNX1, SCLY, SORD, SREBF1, STMN1, TAS2R8 , THBS2, TPH2, UGCG, YOD1, ZMAT3, SERPING1
Negative_14185	CGN, EZR, FAH, LPL, SI, SMS, ADORA2A, ADRA1D, ADRB2, ALG2, ARSB, ATP4B , B3GALT4, BHMT, CASK, CCL22, CD44, CISH, CKS1B, CLTB, CSNK1E, CTNNA2 , CYP11B1, DAPK2, DDIT4, DFFB, DKK1, DLL3, EFNA5, EXTL3, FLT1, FRAT2, GALM, GALNTL1, GLI1, GNG3, GNPAT, GP1BA, GRIA2, GSTA1, GSTA3, IRF3, I TGA1, LDHA, LDHAL6A, MAD1L1, MAN1A2, MAN2A1, MASP2, MTHFR, MTMR6, MY H13, NAT6, NR1H3, NRG2, OR1G1, OR2T1, OR2T33, OR5M3, PDE2A, PECAM1, P GK1, PIGL, PIP5K3, PKMYT1, PLA2G10, PLCB1, PLCB3, PLIN, POLR2D, PPM1 D, PTPN6, SMAD3, SMAD4, SOCS5, TMLHE, TUBB3, VAV2, ATP6V0D1
Negative_14186	C1S, IL8, OAT, PGD, RB1, SYK, ACY3, ADH6, ALDH2, ALDH6A1, ATG3, ATP5E, BCL2, BET1L, C3orf10, CACNB4, CALML6, CCR7, CDC26, CDKN2A, CLTC, CMA S, DEGS2, DGKQ, EPAS1, FGF12, GSTO2, HLA- DMA, HSD17B7, IFNK, IL17B, IL18R1, IL2RA, ITPA, JAK3, KIR2DS5, KLRC4 , LARS2, LIPE, MAP3K11, MAP3K2, MAPK11, MARS, MCCC2, MDM4, METTL6, NA T2, NTF4, OCLN, OR51A4, OR51I2, OR52W1, OR5H2, PLA1A, PTCH1, PTPN1, R ARS2, RRM2, SEMA3D, SMAD7, SMARCA2, SMURF2, SOCS7, SPAM1, SREBF1, ST AT2, TAS2R38, TICAM1, TUBB3, VANGL2, WNT8A, XYLT1, TNFRSF13C
Negative_14187	CD6, CTH, EGF, PVR, TNF, ABLIM1, ACSL4, ACVR1, AGPAT3, ALDH6A1, BIRC3 , C4BPB, CACNG7, CAMKK1, CASP7, CCDC6, CLDN5, CLOCK, CTSL1, CYP26A1, DNMT3B, DTX4, E2F3, EPHA3, F2RL3, FASLG, FSHR, FUT6, GNAQ, GNRHR, GRM 1, GSTA3, GUCY1A2, HAAO, HAGHL, HSPA1B, IFNA8, IL2RG, INPP4B, INPP5E , KIR2DL4, KLRK1, LYPLA1, MTAP, MTMR6, NEU1, NEU4, NFX1, NNMT, OR10A2 , OR10A4, OR10AD1, OR11G2, OR14C36, OR2B2, OR51A7, OR6Y1, PAICS, PDE 4A, PFKM, PKMYT1, PLOD2, POLD1, POLR2G, PRKAG2, PTGS1, RASSF5, RUNX1 T1, SARDH, SHC2, SKP2, SMAD6, SNW1, SOCS5, SPHK1, TUBA1A, ULBP1, UNC5 A, XIAP, CTNNBIP1
Negative_14188	CR2, F8, FST, MPL, PAH, TEC, ACHE, ACSM3, ACTG2, ANAPC5, ASCC3, B4GALT 3, BMP6, CAMKK1, CCL2, CD244, CDC20, CDKN1B, CHEK2, CHR1, CNTFR, COAS Y, COQ3, CTNNA2, CYP11B1, DOCK1, EFNA1, ENO3, FCGR3B, FRAT2, GANAB, G LI2, GMPR2, IFNA21, IL28A, LPAR1, LTBP1, METTL6, MGST1, MYH9, OR10K1 , OR13J1, OR2K2, OR2S2, OR5AK2, OR6B3, ORC3L, PARD6A, PDE3B, PIP4K2B , PIP5K3, PLA1A, PPP3R1, PTDSS2, PTGDS, PTGIS, PYCR1, SESN3, SH2D1A, STX6, TAS2R49, TFDP1, TSLP, UGT2B4, WASL, WNT9A, ATP6V0A4, HLA- DQB1, TNFRSF11A



Negative_14189	<p>ABO, CFI, F2R, LYN, ME1, ABLIM1, ADCY7, ADRB3, ALDH1B1, ANAPC5, AOX1, APH1A, ARPC1B, ATP6V1D, CASP3, CCNA1, CCND3, CCNH, CD79B, CD99, CHAD, CHD8, CLDN1, COQ5, CSF1, CXCL3, CXCR5, CYP17A1, DDIT4, DFFA, EDA2R, ENTPD4, EPB41, F11R, FLOT1, GABARAP, GADD45B, GALNT8, GNAI2, HSD3B2, HTRA2, ICAM2, IFNA10, IFNB1, IL12RB1, IL3RA, IPMK, IRAK3, LAMB4, LHCGR, LYZL1, MAD2L2, MAT1A, MDM2, NAE1, NCAM2, NKX6-1, NLGN1, NOX1, OGDHL, OR11I1, OR1L1, OR2B2, OR2G6, OR4D11, OR4F5, OR51V1, OR52J3, OR5P2, P2RX1, P2RX5, PARD3, PDHA1, PDXK, PGAM2, PIK3C2G, PLAU, PLOD3, PLXNA2, PPAP2B, RPN2, RRAS, RUNX1, RXRG, SUCLA2, TAS2R13, TCF7, TCF7L1, THBS1, THTPA, TIAM1, TPM3, TRAF2, TSC1, TUBA1B, TYK2, UGP2, YES1, CSNK1A1L</p>
Negative_14190	<p>FGA, ID1, LHB, LYN, MIF, OGT, PVR, TK1, ADORA2A, AGTR1, AKR1A1, ATG7, ATIC, CASP7, CCND3, CCNH, CD226, CLCA2, CLDN4, CREB3, CRLF2, CTPS2, CXCL2, CYP21A2, CYP2A6, CYP2B6, CYP3A5, DARS, DHRS9, EFNA4, ENPP2, FGF4, GALNTL2, GCLC, GNAZ, GRHPR, GSTA4, HMOX2, IDI2, IL11RA, IL22RA2, IPMK, ITCH, LDHA, MAN1A1, MARS, MCM3, MGAT5B, MTHFR, MYLK3, NCOR1, NEFL, OR10A6, OR10G8, OR10P1, OR2AE1, OR2L13, OR2L8, OR4A5, OR4X1, OR52J3, PARD3, PGAM4, PHGDH, PLA2G2F, PPCS, PPP2R2A, PRKAR2B, PTPN11, RELA, RPIA, RUNX1T1, SARDH, SEMA4C, SMPD1, SOCS2, STAT1, TAS1R1, TCF7L2, TGFBR2, TNFRSF4, TOLLIP, TRAF5, TYK2, UCKL1, UGT2B17, WHSC1L1, XIAP</p>
Negative_14191	<p>F2R, F9, HAL, KHK, SHH, ACHE, ACVR2B, ADH6, ALDH1B1, ALDH3B2, ALDH7A1, ALOX15, ALPPL2, ARPC1B, ATP4B, ATP5B, ATP5J, B3GALT1, B3GAT2, BAAT, BCMO1, BMP8B, BPNT1, CACNB2, CALML6, CARS2, CCL20, CCR10, CDC20, CHUK, CLOCK, COMT, CRY2, CXCL9, DDX23, DOT1L, EI24, ENTPD3, FGF1, FGF23, FTCD, FZD8, GCLC, GLUL, HMGCL, ICAM2, IFIH1, IFNA17, IL28A, IRAK1, ITGAD, LCMT2, MAP2K4, MAP3K1, MAPK11, MCM6, MMP7, NCF1, NFKBIE, NR1D1, NUMB, OR10AD1, OR10H2, OR14J1, OR2S2, OR2T10, OR4E2, OR51F1, OR51G2, OR52J3, OR6C2, PFKFB3, PHGDH, PPARD, PRSS1, PSPH, PTAFR, PTGES, QARS, RHEB, ROB3, SDC2, SEMA4B, SEMA4D, SH2D1A, SLC27A5, SMAD4, SMURF1, SPP1, SRD5A1, STAT4, TAP2, TRAF5, TUBB3, UGT2B28, UPRT, HLA-DRB3, PNLIPRP1, SUV420H2</p>
Negative_14192	<p>DDO, FGG, LYN, SFN, TPR, AARS, ABP1, ACACA, ANGPL4, AOC3, ASMT, ATN1, CD8A, CDKN2C, DAPK2, DDX4, DLL4, EGLN1, EPHB2, FGF6, FZD1, GNPDA1, GYS2, HGSNAT, IL6ST, ITPKA, KLRC2, LAMB4, MALT1, MAN1A1, OR4F5, OR56A1, PDE6D, PDGFC, PIGO, PIK3C2G, PIK3C3, PLA2G10, PNPLA3, POLR3A, PPA1, PPP2R1A, PRKG1, PTPRZ1, SEMA4F, SOCS7, TAS2R10, TOLLIP, TYK2, UGT2A1, VNN1, YWHAZ, PRICKLE2, SERPINF2</p>
Negative_14193	<p>DCT, OSM, TXK, ABL2, ACSL6, ARNT2, ATP12A, CADM1, CBLC, CDC23, CDC27, CFLAR, CMPK1, CYP11B2, DGKH, EPHA4, EPHA6, FABP1, GMPR, GNA13, GRHPR, GRIA3, HES1, IL12B, IL22, IL7R, ITGA6, MADCAM1, MAP4K3, MGAT2, MTHFD1L, MYH4, NAT2, NCK2, NR1H3, OR1D5, OR2A5, OR2G3, OR4S1, OR51G2, OR51I1, OR5D13, OR6C3, PAK4, PIK3C3, PIK3R3, PLA1A, PLCD1, PPAP2A, PPP2R1A, PPT1, PRKAG3, PTPN6, RALBP1, RRM2B, STX12, TNFRSF8, TPH1, TSTA3, VEGFA, WNT8A, PLA2G12A</p>
Negative_14194	<p>GK, ID1, MPL, AARS2, ACACB, ALG12, ALOX5, ARRB2, CACNG6, CALML6, CASK, CCL16, CCL27, CCND2, CD22, CD59, CDC14A, CDC6, CES2, CNTNAP2, COL4A1, CTSB, CUL1, CYP2A6, CYP2A7, CYP7A1, DIAPH3, EPB41L3, EPHA1, G6PC, GMPR, GRIN2C, HAAO, HMGCS1, HRAS, HSD17B1, HSD3B7, IL10RB, IPMK, ITGA9, KIR3DL1, KRAS, KYNU, LRP6, MAML3, MYLK3, NAGA, NCF4, NKD2, NRP1, OGDH, OR11H4, OR13H1, OR1C1, OR1F1, OR2Y1, OR4K17, OR52A1, OR52N1, OR5C1, PANK1, PAX8, PCYT1A, PFN1, PIGO, PIGP, PLXNB2, PNMT, PNPLA3, POLE3, PPCS, PPP2R1B, PRPH2, PTEN, RAPGEF1, RRM2, SCIN, SETD1A, SOD1, STX18, TUBB6, UBA7, UBE2L6, VAV3, VCAM1, ZFYVE9, ST6GALNAC6, TNFRSF1A</p>

Negative_14195	DDO, HYI, ME3, RPE, ACLY, ACSL3, ADRB1, BHMT, BUB1B, CASP7, CHKB, CIIT A, CLDN3, CLTCL1, CMPK1, COL4A2, COL4A4, CXCL5, CYP1A1, CYP2E1, DHRS 3, E2F3, ENPP6, ERBB2, FLAD1, FZR1, GALE, GLI2, GNAZ, GRIA1, HARS, HCS T, HNF1A, HSPA8, IFNA2, IL19, IL22, IL28B, LIPT1, MAML2, MAPK7, NFYA, NFYC, NKD2, NT5C1B, OR4S1, OR5M8, OXSM, PAK7, PCK1, PERP, PHPT1, PIGL , SOCS4, SPHK2, STAM, STEAP3, STX12, TALD01, THTPA, TICAM1, TPH2, TRH R, TUBA3E, CSNK1A1L
Negative_14196	C1S, C7, DA0, HK3, LPO, MUT, ACOX3, ACSM5, APC2, ARPC5L, ARSD, ASS1, AT P2A2, ATP50, AVPR1A, B4GALT7, CAMK2D, CSNK1G1, CYP2E1, DGKE, DHRS4, DHRS4L2, DPM1, EGLN1, FBP2, GFPT1, GPX5, GUCA1A, GUCY1A3, HCCS, IL23 A, IL25, KIR2DL4, MAGI2, MAGI3, MAP3K13, OR5I1, OR8I2, PFN4, PIGO, PK LR, PLA2G2E, PLCE1, PNPO, PRKX, PSAT1, QPRT, RASSF1, SMAD6, STT3B, ST X16, TAS2R50, THTPA, TRDMT1, TUBA1B, UBA1, UROC1, WASF1, TNFRSF11B
Negative_14197	ADK, ASL, BAD, INS, ME3, ACOX2, ACP6, ADRA1D, ARD1A, ARPC4, ATF2, B3GA T2, BAAT, CAV2, CERK, CREB3L2, CREB3L4, CXCL1, CXCL12, CYP2D6, CYP2F 1, DDX47, DRD2, DUSP10, ENTPD4, EPHA2, EXT2, F13A1, FGF5, GNRH1, GPAA 1, GRIN2A, GSTA4, GUCY2C, IL21R, ITGB1, LRP5, MYH10, MYH11, NAGK, NCR 3, OR2C1, OR4F17, OR52B6, OR5AK2, PAK7, PANK3, PARD6G, PGM1, PIGP, PL XNB1, POLR2J, POLR3B, PON3, PPCDC, PVRL1, RAD51, SCLY, SEMA3B, SEMA3 D, STX16, TSNARE1, UAP1, UBE2L6, UGCGL1, UGT2B28, WASF3, WNT11, WNT3 A, YARS, YWHAQ, ATP6VOA2, PAFAH1B3, TNFRSF10C, TNFRSF11A
Negative_14198	BAX, CFD, F7, NOG, SHH, SMS, TK1, ACSS3, ALDH1L1, ALG8, ALOX12, ALPP, B 3GALT2, CALML6, CASP6, CCL22, CDC23, CDH1, CDKN1A, CDKN2B, CHST11, C RY2, CSF2RB, CSNK1G2, CTSB, CUL1, CYSLTR2, DLL4, EHMT1, EHMT2, ENTPD 3, FBP2, GALNT12, GATM, GCH1, GLDC, GLS2, IFNA5, IGSF5, IKBKG, IL20, I L2ORA, IL24, INPP5E, MAN1A1, MAPK10, MAPK3, NFATC4, NME6, NR1H3, NT5 C3, OR10H3, OR11L1, OR14C36, OR1A1, OR1N1, OR2M2, OR2T12, OR4A15, OX CT2, PAFAH2, PIAS3, PIGV, PLA2G6, POLR3H, PRIM2, PRKACA, PRKCH, RALB P1, RDH11, RDH12, RPS6KB1, RUVBL1, SAT1, SDHB, SHMT2, SKIV2L2, SORD, SPRY3, ST3GAL1, STT3B, SV2A, TGDS, TIAM1, TRAF6, TSHR, TSLP, TUBA1A, TUBB2A, TXNDC12, UMPS, WARS2, WASF3
Negative_14199	RDX, VTN, ABLIM1, ACPT, ACTG2, ACVR1B, ADRA1D, ADSS, ARPC4, ASCC3, AT P6V1H, CASP8, CCNA1, CDC16, CDS1, CHIA, CLDN14, CMPK1, COQ3, CTNNA2, FUT6, GAL3ST1, GALNS, GALNT6, GCDH, GMDS, GNPAT1, GNRHR, HMGCS1, IA RS2, IFNA16, IFNAR2, IL11, ITGA11, LICAM, NAGLU, NARS2, OR4A15, OR52 J3, OR5AN1, OR6K3, PDE11A, PDE2A, PFN1, PGK2, PIGV, POLD3, PPM1A, PTG ES, RGS3, SCD5, SEMA3B, SEMA3F, STAT2, STX12, TALD01, TAS2R9, TGFBR2 , TRMT11, TUBB4, UBE2L6, UNC5D, YWHAE, ARHGEF12, PLA2G12B
Negative_14200	MET, OAT, PLN, RET, ACSS2, ACVR2B, AKR1B10, AKR1C2, ALDH1A3, ALDH5A1 , ATP5F1, B3GNT4, CD58, CHAT, CISH, CLDN17, COMT, COQ3, CPT1A, CX3CR1 , CXCL3, CYP11A1, CYP3A43, DAPK1, DDX23, DRD5, EDAR, ENO3, FASLG, FGF R4, FMO2, GALNTL1, GDE1, GMPR2, GNAQ, HPSE, HSD3B1, IGF1R, IL10RB, IL 12RB1, IL1R1, IL24, INHBE, IRS1, KYNU, LAMC3, MAP2K3, MITF, MPZL1, NA DK, NFE2L2, ODC1, OR10H3, OR11H6, OR4A16, OR52E4, OR56B4, OR6A2, OR7 A5, P2RX4, P4HA3, PAPSS1, PI4KA, PIGP, PIK3C3, PIPOX, PLCG2, PLOD1, P NPT1, POLD4, PPP3CA, PRKCQ, PTPRZ1, PYCR1, PYCRL, RPRM, SEMA4F, SMPD 3, SORBS1, SREBF1, STAT3, STK3, STX8, SV2B, TCIRG1, THBS2, TLN2, UBE2 L6, PDCD1LG2, PRICKLE1

Negative_14201	AR, BTD, C8G, DCK, ACACA, ACADM, ACP5, ADIPOR2, ALDH1B1, ALOX5, AOC3, APOE, ARPC5L, BUB1B, BUB3, CAMK2D, CD79A, COX15, CRHR1, DARS, DDX4, D GKQ, EFNA2, EPB41L1, EXTL3, FGF23, FOSL1, FRAT1, G6PC, GALNT12, GLUD 1, GNAZ, GPLD1, GRIN2C, GSTM4, GSTO2, GUCY1A3, ICOSLG, IL13, INHBB, I NPP5B, KIR2DS4, LDHA, MAPK12, MAPT, MGAT4A, MPZL1, MRAS, MTHFS, MYH1 1, OLAH, OR13D1, OR2F1, OR2T10, OR2T12, OR2T4, OR51E2, OR52K2, OR56A 1, P4HA3, PARD6B, PCYT1B, POLR2E, PPP2R2B, PPP2R5C, PRIM1, PRKAA1, P TPN1, RALBP1, RAP1B, RDH12, RFXAP, SDHB, SGMS1, SORD, SQLE, STAT6, TA LD01, TAS2R16, TCIRG1, TJP2, TP53, TRAF1, UAP1, VCAM1, WNT3A, CSGALN ACT2, PLA2G12A
Negative_14202	ASL, DDC, EPO, GP6, RB1, ADRA1D, AGPAT2, AGRN, ALDOC, AMDHD1, ARPC1A, CACNA1C, CACNA1I, CD3E, CD99, CDC2, CDC23, CNTF, CTNNA3, CYP21A2, DH RS3, DHRS4, DPYSL2, F2RL1, G6PC, HADHA, HLA- DRA, IDH2, IDH3B, INPPL1, IQGAP3, KCNB1, KIR2DS5, LARS, NAMPT, NCF1, OR2T1, OR2T5, OR51M1, P2RX2, PIK3CD, POLR2A, PPP2R5A, RHOA, RPN2, RP S6, SDHA, SELPLG, SLC9A1, SQLE, TLR3, TNFSF12, GABARAPL2, MAPKAPK3
Negative_14203	CKB, F3, F9, GH2, IL5, SPN, ATG7, CACNA1E, CD226, CLDN5, CRKL, CYP2S1, CYP8B1, DCTD, DRD5, GAB1, GYS2, HMGCS2, INADL, IRAK3, KLRC3, MGAT1, M GST1, NANS, NOS3, NOX3, NRG4, NT5C3, OR10A4, OR10AD1, OR10K2, OR13C5 , OR1J4, OR1L1, OR2F2, OR2M4, OR2M7, OR3A1, OR6C4, OXTR, PDE1A, PLCB4 , PLXNB3, PON1, PPM1B, PPP2R5D, RAC1, RCHY1, SAT2, SFRP1, SKIV2L2, SM AD3, SOX17, STX2, TKTL1, TUBB2B, ATP6V0A2
Negative_14204	AK1, F3, IDS, LHB, LSS, MAG, SMS, ACAT2, ACP2, ALAS2, ANAPC1, ARG2, ARP C5L, ATG3, B3GALT5, BCKDHB, BMPR2, COL4A1, CREB3L2, CYP2C19, DPM1, D PYD, DTX3L, EGLN1, FABP4, FGF5, FUT4, GRIN2D, GUCY2C, ICAM1, IKBKE, I L10RA, LALBA, MAD2L2, MAML3, MCM4, OR10K2, OR11A1, OR14A16, OR1L6, O R2B6, OR51L1, PDE6G, PDE9A, PHPT1, PIAS4, PIGB, PIGN, PTCRA, RUNX1, T PI1, TRHR, VEGFC, WASF2, WNT5B
Negative_14205	CAD, ACVR1B, ADORA2B, AK3L1, ALDH5A1, ANPEP, ATP4A, ATP5F1, BMPR2, C ACNG1, CASP6, CCR8, CFTR, CYFIP1, DHDDS, DNMT3L, EPHA7, ERBB2, EXTL3 , FGFR3, GALNS, GDE1, GIT1, GMPPB, GNAO1, GUCY2F, HLCS, HNF1B, IFNA5, IFNG, IL15RA, IL23A, ITPK1, MAN2A1, MMP9, MPDZ, MYH4, OLAH, OR10A3, O R1L1, OR4E2, OR51S1, OR6B3, OR6N1, OR8B8, ORC3L, PDE6H, PI4KB, PIGB, PLXNA1, PMM1, POLR3H, PPAP2A, PPP2R2D, PRKCB, PTGFR, PTPRZ1, SLIT2, SPAM1, STEAP3, STK3, TAS2R16, TRDMT1, UBE2L6, VASP, HLA-DPA1, HLA- DRB3, HSP90AA1, SERPING1, TNFRSF1A
Negative_14206	BCR, C5, C8G, CR2, CSK, EBP, FAH, HGD, KMO, ACAT1, ACSM1, ADCY6, ALDH7A 1, ARHGAP5, ARHGEF4, BUB1B, CCL20, CCNB2, CCND2, CDC45L, CDKN2D, COA SY, COL6A2, COQ3, CSNK1G2, CTNNA3, CX3CR1, CYP2A6, CYP3A7, DDX47, DG KG, DNMT3L, ENO1, EXTL1, FGF10, FGF5, FGF6, GADD45G, GALNT9, GNRH2, G PAA1, HSD3B7, HTR4, HTRA2, ICAM2, IDH2, IL15, IL23A, IL28RA, KLRC4, L GMN, LIPE, MAPK3, MDH1, MGST1, NEU2, NFKBIE, NMNAT3, NODAL, NRAS, NRG 3, NTSR1, OR10AG1, OR1B1, OR2A12, OR2G6, OR4K15, OR4S1, OR6T1, PDIA4 , PGM3, PKMYT1, POLE, POLR3H, PRKCZ, PTGS2, PTPRC, RPN1, RUVBL1, SETD 1B, SGPP2, SOCS4, SPRED1, STAT1, STX10, SUOX, TAS1R2, THBS1, TLN2, TO MM40, UGCGL1, WNT7B, WNT9A, XYL B, ATP6V0D2
Negative_14207	ADK, MVD, ACSS3, ADCY4, AGPAT6, AMY2A, ATP50, ATP6V1D, BDKRB1, BMP7, CLDN8, DIAPH2, EIF4B, EPHX2, FGF4, GUCY2C, HSPA1B, HTR2A, IL12RB2, I MPDH2, LAP3, LIPC, MAT2B, MTHFD2, NCF4, NEGR1, NFATC4, OR1C1, OR2C1, OR2Z1, OR4S2, OR51F1, OR52W1, OR8S1, ORC4L, PEMT, PFKFB4, PI4KA, PIG A, PIGO, PIK3R5, POLE2, POLR1B, POLR2H, POLR3A, PPM1A, PPP1R1A, PYCR L, RALBP1, RELA, SMPD1, SOX17, TIAM2, TUBA1A, UGDH, VEGFC, WEE1, WHSC 1, WNT2B, XCL1, YKT6, ATP6V0E1, MAPK8IP2, PDCD1LG2

Negative_14208	ADO, C3, GGH, MET, ACADSB, ACSL6, AKR1A1, ALAS2, ASS1, ATP6V1D, CACNG1, CAMK4, CAV1, CHAD, DPM3, ENTPD8, EXTL3, FMO2, FOXA3, FTMT, GALNTL5, GANAB, ICAM3, IL15, IL19, MAN2A1, MAP3K11, MCM3, NOS3, NT5C1B, OR4E2, OR56B4, OR6C2, OR9G4, P4HA3, PIGQ, POLR2F, PPP1R3D, PPP2R1A, PPP3R2, PRKAB2, PRKAG1, PTPRC, SARDH, SMAD9, SPCS1, STX7, TAS1R3, TAS2R38, THBD, TNFSF18, ZNRD1, GABARAPL1, HSD17B10, KIR2DL5A, PDCD1LG2
Negative_14209	BCR, ID2, ADAM10, ALAS1, ARPC5L, ASNS, BAIAP2, CASK, CBLC, CREBBP, CTSS, CYP2A13, DGUOK, DTX3L, DTX4, FUT6, GART, GBA3, GNA11, HAP1, IL25, IL8RA, INHBB, ITGA11, ITGA9, MAP4K4, MAPT, MCM2, MCM7, NEGR1, NEU2, NMT, NRG1, OR10G2, OR10G7, OR13D1, OR13J1, OR1Q1, OR2V2, OR4A15, OR51I1, OR5B12, OR6C4, ORC2L, PGS1, PIK3CA, PLA2G2E, PPA2, PPP1CC, PPP2R5C, PRSS1, RAPGEF3, RGS3, RHOA, SARS2, SEMA3E, STK11, TGFBR2, TRAF6, UGT2B11, UPP2, WBSR22, WIF1, XCR1
Negative_14210	CDA, CGA, DCT, FST, GPI, MET, OTC, SRC, TAT, ACAA2, ACMSD, ACP1, ADAM10, ALDH3B1, ALDH5A1, ALOX12, ARNT, ARPC3, ATP2A3, ATP5J2, BMPR2, BST1, C1GALT1, CACNA1I, CCL15, CCNG1, CD40LG, CD46, CDC25C, CDKN1C, CKMT2, DDX19A, DIAPH1, DLAT, DTX1, DUSP9, EFNB2, EPB41, EPHB2, ETNK1, F2RL2, FASN, FLOT2, FMO5, FOXO1, FTMT, FZD8, GPD1, GRIA3, GUCY1B3, GUCY2C, IARS, IFNA2, IFT57, IKBKG, IL4R, KIR3DL3, LDHD, MAOB, NAE1, NAGLU, NRP1, NTNG1, ONECUT1, OR10J1, OR10K2, OR1E2, OR2A4, OR2M3, OR2T3, OR6N2, OR8D4, PARVA, PIAS3, POLR1D, POLR2F, PPP2R1B, PTGDS, PTK2B, PYCRL, SAT2, SFRP2, SPTLC1, SSX2IP, STAT5A, TALD01, TAS2R16, TAS2R50, THBS4, UGT2A1, UPP2, ATP6V0D1, ATP6V1C2, SERPINA1
Negative_14211	DCT, FN1, PC, PGP, ACYP1, ADAM17, ADSSL1, AGTR1, ALPL, BCMO1, BLVRA, CARD11, CDKN2B, CLDN18, COQ5, CSF3R, DGAT2, DUSP5, E2F3, EPHB3, EXT1, F11R, GALM, GNAI3, HARS, HRH2, IFNA16, ITGB5, MAN1A2, MARS2, MYH7, MYLK2, NOTCH3, NR5A2, OR10H5, OR10J5, OR13C4, OR2B6, OR51F2, OR5D14, OR5T3, OR6C3, OR7A17, PARD6B, PCCA, PDE3B, PHKB, PIGT, PIK3R2, PLTP, POLR2K, POLR2L, PPAP2C, PRKG2, PSEN1, RDH16, ST3GAL1, TAS2R5, TGFB2, VARS, ATP6V1G2, PAFAH1B2, TNFRSF1B
Negative_14212	PDC, SDS, SRM, TPO, ACLY, ACTC1, ADCY4, AGTR1, AKT2, ALDH1A2, ALDH3B2, ARSB, ATP5F1, AVPR1B, B4GALT2, BCAT2, BCKDHB, CAV2, CBR3, CCR10, COL2A1, COQ7, CPT1B, CREB1, CYP4F3, DOCK1, DRD5, DUSP1, EHHADH, ENO1, EXTL3, FBP1, FCGR3A, G6PC2, GALE, GALNT11, GALNT9, GALNTL1, GFAP, GLG1, GLI1, HCCS, HIBADH, IL28RA, IL2RG, ITPK1, KIR2DL3, KRAS, L1CAM, LCAT, LEF1, MAP2K5, METTL2B, NARS, NCKAP1L, NFYB, NOS3, NTN1, OR2L13, OR2T11, OR4K1, OR4K5, OR51B6, OR52K1, OR5P3, OR6Y1, OR8U1, P2RX2, PIK3R3, PPP5C, PRKCZ, PRPS2, PTPRR, RPN1, SDC1, SEMA3G, SH2D2A, SSH2, ST3GAL6, STAT1, STK11, STX6, TAS2R3, TAS2R5, TAS2R60, TBXA2R, UGT2A3
Negative_14213	ADK, HYI, KHK, OAT, TKT, ADCY8, ADIPOR1, ALG2, AOX1, ATF2, ATP5L, C1QC, CAMK2A, CAMK2D, CBR1, CD14, CDC27, CHSY1, CLCA2, CLDN9, CRLF2, CSNK1G3, DCXR, DPM3, DTX1, EHHADH, ETS1, FGFR2, FUT6, FZD5, GAD2, GALNT7, GALNTL5, GMPR2, HCLS1, IFNA10, IL29, INHBB, INHBE, IRAK1, ITGA10, KN1G1, LCMT2, MASP2, MNX1, MYH7, NANS, NEU1, NOS1, NT5E, NTF4, OR10A5, OR2AG1, OR52N4, OR8A1, OXSM, PAK3, PARVB, PDGFA, PGM3, PIK3R1, PKM2, PLA2G1B, PLAU, PRSS1, PTPN1, PTPRM, PVRL4, PYCR2, PYGM, RASGRP2, RGS3, RPS6KA2, SDHC, SOS1, SPRY1, SPRY3, ST3GAL2, STAT2, STAT6, TAS2R8, TCIRG1, TUBA8, UGCGL1, ST6GALNAC4

Negative_14214	BTD, NGF, ADH4, ALDH1A1, ARPC1B, ARPC5L, ATP6AP1, ATP6V1H, CD247, CD28, CREB3L1, CRLS1, CTNNA3, CXCL6, DDX19A, DRD2, EXTL1, FABP1, FZD10, GNAS, GNRH1, GRM1, GSTA3, IRS2, MAFA, MAP2K5, MAP3K8, NADK, NARS, NEGR1, OR10R2, OR4F17, OR4K15, OR52E2, OR5B21, OR6A2, OR8I2, OR9I1, PAR6B, PFKFB4, PGM3, PIGV, PIK3CD, PIK3R1, PKMYT1, PLIN, RASGRP3, RDH10, RPS6, SARS, SCD5, SDC4, SHC4, ST3GAL2, STX16, TNFRSF4, TNFSF8, TSTA3, UGP2, UPP1, VASP, WNT4
Negative_14215	CFD, CKB, DHH, EBP, GLA, GNE, IL7, MPI, PDC, ACTN1, AKT2, ALOX12B, ARPC4, ATF4, ATP6V1D, BIRC3, CACNA1C, CACNB1, CAMKK1, CARS, CD36, CD40LG, CDK5, CEBPA, CHST11, CNGA4, CNTNAP1, COL5A2, CTNNA1, CXCL12, CXCL2, DDX55, DGAT1, DLL3, FUT3, GLO1, GNA15, GNPDA2, GRIN2D, GSTM4, GUCY2C, HHIP, HIP1, HLA-C, HNF4G, HTR2B, IL19, INHBC, ITCH, LRRC4C, MAP2K4, MFNG, MINPP1, MMP1, MMP7, NFKBIE, OR10A7, OR10G7, OR51B4, OR5A1, OR5T1, OXCT1, OXCT2, PAPSS2, PCCA, PGLS, PIK3CD, PIM2, POLD2, POLR1C, PON2, PTGES, RAPGEF4, RCHY1, RFNG, SMAD5, ST3GAL2, ST3GAL5, TBL1X, THBS3, THTPA, TPH2, TPM3, TRPC1, TYK2, VAMP3, VEGFC, YWHAE, AASDHPPT, SERPINA1, TNFRSF17
Negative_14216	C1S, CEL, ABP1, ACAD8, ACO1, ACSS1, AGRN, ALPL, APOC3, ATP5B, CLDN10, CLDN18, COL4A2, CTBS, DARS2, DHDH, DHRS9, DOCK1, ENTPD1, ENTPD6, FGF17, FRAP1, GALNTL1, GATM, GNAI2, HES1, HTR2B, IRF9, ISYNA1, LTB4R2, LYPLA1, MAPK13, MFNG, MYL7, NSD1, OR14I1, OR2T12, OR4D11, OR52E8, OR5K1, OR6X1, PDE3A, PFN1, PGM1, PIPOX, PLA2G2E, PLXNB3, POLR3A, PPM1B, RPE65, SNAP25, TBL1X, THBS2, TLN2, TRAF2, UGCGL1, UGCGL2, VEGFA, MAPK8IP1
Negative_14217	C8B, CS, LIF, SRM, VTN, ABL2, ACOT11, ACTG1, ADSS, ANAPC2, ATP5G3, BUB3, CASP9, CBR1, CCL5, CCND1, CDH1, CDO1, CLDN3, CXCL13, CXCL2, CYP2A13, CYP3A4, CYP3A43, DDX51, DNMT3B, EDNRB, EPHB3, GAB1, GANAB, GJA1, I NADL, ITGAL, ITGB7, JAG1, LARS, MAP2K6, MAPK7, METTL6, NEFM, NRXN3, OR10J3, OR13C4, OR11I1, OR1L4, OR52B4, OR52J3, OR5M9, OR5T2, PFKM, PLA2G1B, PLCD4, POLR2L, PPP2R2B, RASGRF2, RBKS, SGMS2, SHC3, SIAH1, SKI V2L2, STAT5B, STMN1, UGT2B7, UNC5B, PAFAH1B3
Negative_14218	IL9, NF1, WAS, ABLIM3, ACOT11, AHCY, ANAPC5, ARSB, ATP5C1, B3GALT6, B4GALT1, BMPR1B, CACNB1, COMP, CSF1, CXCL1, DTX2, EPOR, FGF11, FLAD1, FUT2, GAL3ST1, GALNS, GSTZ1, HAP1, HNF4G, INHBE, INPP1, LIPT1, LTC4S, MAPK9, MGLL, MICA, NEFL, OR10A3, OR10G7, OR1N1, OR2T10, OR51B6, OR52E4, OR9A2, PCK2, PCYT1A, PIGN, PIGP, POLD3, RAPGEF2, SHC4, SLC2A2, SPCS1, SPRED1, TAS2R1, TBXAS1, TJP3, VAMP2, VDAC1, VEGFB, VNN1, VT11A, WNT3, YARS2, YOD1, MAPKAPK2
Negative_14219	BTK, EDA, EGF, VTN, ADCY3, ADH1B, ALS2, AMY2A, ATP13A2, ATP5F1, BCKDHB, BNIP1, BTRC, CCL26, CCNA2, CCR5, CD14, CKS1B, CSNK1G1, CTF1, CYP2A6, CYP2C19, DDHD1, DDX56, DHCR24, DHRS4L2, EFNA1, EPHA5, F2RL2, FBXW11, FCGR3A, FECH, FGF11, FGFR2, FUT7, GDF5, GNAT3, GRIN1, GTSE1, HAO1, HTR5A, IFNGR1, IL18RAP, KIR2DL3, LAMB4, LCP2, LIMK2, LTC4S, LYZL1, MAN2A1, MAP3K14, MGST3, NUDT12, OR10AG1, OR10H5, OR1L8, OR1S1, OR2A5, OR51F1, OR52E2, OR56A1, OR5R1, PAK3, PFN2, PIAS4, PIK3R4, PLA2G10, PLCD1, PLK1, POLR3A, PPCDC, PPCS, PPP2R1B, PRKAA2, PRKX, PTGS2, RASGRP4, RASSF1, RFX5, RPS6KB1, SENP2, SESN2, SLC25A5, SOAT2, SORD, STX6, TDO2, TRAF2, TSLP, TYMS, UGT2B10, UPRT, VAMP3, VT11A, WNT8A, YKT6, GABARAPL1

Negative_14220	F11, HK2, KHK, LHB, MUT, ABCC8, ACADSB, AFMID, ALG11, ARNT2, B4GALT4, B4GALT5, B4GALT7, CACNG1, CCNB2, CD34, CD58, CNDP1, CNTN1, CPS1, CYP11A1, DAD1, DHX58, EIF4B, ELK4, EPHB1, FBP2, FUT8, GRHPR, HEXB, HNF4G, IDUA, IL6R, ITGAV, LAMB3, LDHAL6A, LRDD, MIOX, MYD88, MYH14, NFX1, ODC1, OR10S1, OR2T34, OR4D1, OR4E2, OR4M1, OR4N5, OR4P4, OR51S1, OR5M3, OR6A2, OR6F1, OR8B8, OR9G1, P4HA2, PAX8, PIGX, PPAP2C, PPP3CC, PPT1, PTGES, QRPT, RAPGEF4, RUNX1T1, STMN1, SULT1A2, TBK1, TCIRG1, TLN2, TUBA1A, PLA2G12B
Negative_14221	BAX, HYI, ID2, AKR1C1, ALG10, ATP5E, B3GALT2, C4BPA, CACNA1A, CAMKK1, CDC6, CLDN5, CREB3, CSH1, CTSL1, CXCL13, CXCR4, CYBB, DBF4, EFNA1, ETK1, FRAP1, G6PC, GALNT5, GDE1, GUCY1A2, HAP1, HCLS1, HLCS, HSP90B1, IDH1, IL13RA2, IL15RA, IL20RB, IL22, KCNJ11, LALBA, MCM2, MTAP, NANS, NCR3, NMNAT2, NTRK2, NUDT9, OR10S1, OR1A2, OR2A2, OR2G6, OR8J3, OXSM, PARD6B, PAX4, PDE2A, PDE7A, PLD1, POLE2, POLR2D, PPP1CA, PRKG1, PSME2, PTGES, PTTG1, RELA, RRM2, SC4MOL, SFRP1, SFRP2, TAS2R8, TGFB2, WNT5B, XYLT1, CSNK1A1L, TNFRSF10D
Negative_14222	ADA, BAX, C9, CFI, CGN, F5, FGG, HAL, RET, ZYX, ADRA1D, AFMID, ALOX12, ANAPC1, APAF1, APBB1, APOA2, ATP5F1, B4GALT4, CAMK2D, CCKAR, CCR5, CD226, CDH3, CDKN1B, CLDN20, CTBP2, CYP1A1, CYP21A2, DHCR7, DNMT3B, DUSP16, DUSP8, E2F2, E2F5, EGLN3, ENPP7, EXT2, FGF8, FOXO1, FUT5, GNG3, GPX5, GRPR, GSK3B, GUCA1A, HAAO, HARS, HMOX2, HTR2B, IFNA16, IFNA6, IL11, IRF5, ITGA8, LGMN, MAD2L2, MAML1, MTMR6, NAT5, NEFM, NMNAT2, NRCAM, ONECUT1, OR10Z1, OR1G1, OR4C13, OR4E2, OR51B6, OR5A1, OR6N1, OXC1, PCK1, PHKG1, PIGH, PKLR, PLOD1, PPA1, PSEN1, PTPN5, RUVBL1, SETMAR, SHMT1, SMARCA2, SRD5A2, ST6GAL1, STAT5B, THBS1, TNXB, TOLLIP, UGT2A1, WBCSCR22, WIF1, TNFRSF14, TNFRSF18
Negative_14223	EPO, F2, FN1, HK2, PTS, SCD, ABP1, ACO2, ACSM4, ALOX15B, APAF1, APOA1, ARSA, ARSD, ASCC3, ASIP, ATP50, BCMO1, BMP8B, CACNA1S, CXCL1, CXCR4, CYP21A2, DGAT1, DHRS9, EXTL3, FLOT1, GALNT14, GLS2, GNB3, GSTA2, GSTA5, GZMA, IL15RA, INPP5B, LAMB4, LARS, LGMN, LIPC, NCF2, OR1I1, OR2T1, OR4B1, OR4D6, OR51A4, OR5L2, OR5M8, OR6Q1, PDE10A, PHKG2, PLXNA1, PRLR3B, PRSS3, RARS, RFXANK, ROBO1, RRM2B, SAT2, SEMA3C, SEMA4A, SETD7, SOAT1, SOS2, TBL1X, TUBB4, UROC1, PAFAH1B3, PPARGC1A
Negative_14224	DHH, SI, XDH, ACADVL, ANAPC1, ATP4A, B4GALT7, C5AR1, CACNA1I, CACNA1S, CHAT, CHEK2, CHRDL, CLCF1, CSNK2A1, DGUOK, DUSP6, E2F2, EFNA2, EFNA3, EIF4E2, F13B, FASN, FGF9, FLT1, GALNT1, GDF7, GSTM2, HSD17B4, IARS, INPPL1, L1CAM, MAPK1, NFE2L2, NTN1, OR10AG1, OR10H3, OR13C4, OR2G6, OR2T34, OR4C16, OR51A4, OR6N2, OR7D4, OR8G1, PARD6B, PGAM1, PIGK, PLA2G10, PLCB2, PLOD1, PMM1, POLE, PPP1R3C, PTPRZ1, RARS2, SHMT2, SREBF1, TAP1, TBL1XR1, TGFB2, TKTL2, TOMM40, TUBB4Q, WNT7B, ZIC2, ATP6V0D2
Negative_14225	ATM, C3, C8B, DDC, F7, PDC, PGF, RB1, ABCC8, ALAD, ALG10B, AOC2, B4GALT2, B4GALT3, BCL2L1, BMP6, CASP3, CCL26, CCL7, CCR2, CD14, CLDN11, COL11A1, CPS1, CSF1, DARS, DCXR, DGAT2, DKK2, EPB41, EPHA6, ERO1L, FARS2, FGF5, FOXA2, GALNTL1, GCLC, GJD2, GLB1, GNAL, IFNAR1, LAMC2, MGAT4B, NAE1, NMNAT2, NTF4, OR2AE1, OR2M5, OR2W1, OR4D5, OR4K2, OR4M1, OR4S1, OR51B4, OR51F1, OR5AC2, OR6A2, OR6C2, P2RX4, P4HA1, PDHA2, PLCG1, PPP2R2A, PRSS2, RALB, RDH11, SARS2, SDC3, SMAD4, SOCS7, SRGAP2, TACR2, TGFA, TLR2, TOMM40L, UROC1, WNT8A

Negative_14226	CKB, DDO, FES, ACO1, ACY3, AHCY, AKR1A1, ALDH2, ALPL, ATF2, ATP5J2, C3AR1, CADM1, CCKBR, CCNE2, CHEK2, CLDN17, CXCL11, CYFIP1, CYSLTR2, DLL3, DOCK1, EHMT1, FIGF, FOXO3, FUT3, FZD7, GGT5, GLI3, GMPR, GSTM3, GTS1, GUSB, HARS, HLA-C, HYAL2, IL15RA, IL22RA1, MAP2K2, MAPK12, MCM5, NFATC3, NFX1, NT5C2, NUDT9, OR10A7, OR1A1, OR2AE1, OR51B6, OR5H6, PARD3, PDE3B, PFKFB1, PIGW, PIPOX, PLXNA3, PPM1D, PTTG1, RDH11, ROCK2, RXRB, SDHB, SEMA3G, SULT1E1, TAP2, TDO2, TLR4, TNFSF8, YWHAQ
Negative_14227	C1S, FAH, GK2, GSR, IL6, NF1, PRL, RFK, A4GALT, ADCY2, AKT2, ALG2, ANAPC10, ARG1, ATG3, B3GAT1, CACNA1G, CAV3, CBR3, CCL25, CCNG2, CDH3, CHRM3, CLDN16, COL1A1, COMP, CPOX, CXCL11, CYP2B6, DDHD1, DFFB, DGAT1, DKK1, DPM1, ENPP6, EPHB4, EPHX2, FGF13, FZD3, GLUD1, GLUL, GPD1, GSTA1, GTSE1, HSP90B1, IFIH1, IL17RA, KRAS, MAP3K1, MAP3K7, MEF2C, OR10J5, OR10K2, OR1J2, OR2T5, OR3A2, OR5A2, OR5D13, OR7C1, OR8U1, OR9G1, ORC1L, P4HA1, PARVB, PDXK, PIGF, PIGW, PLXNA1, PPA2, PRKCH, PVRL2, PYGB, RBPJ, RDH11, RHOA, ROCK1, SDHC, SIPA1, ST3GAL5, STAT4, STX7, SUFU, TASP2, TBL1X, TBXA2R, TGDS, TNFSF12, TUBA4A, WNT4, PAFAH1B2
Negative_14228	CAT, EPO, GPT, MYC, TH, TPO, ABLIM1, ACAD8, ACOT12, ACSM4, ALDH1A2, ALDOC, ALG1, APC2, ARNT, AVPR1B, BCKDHA, CACNA1D, CACNA1S, CAMK4, COL4A4, CRKL, CSNK1E, DNMT1, E2F2, EFN3, EPHB1, EXTL2, FARP2, FMO5, FZR1, GCNT2, GDF5, GGT6, GLI2, GLYCTK, GNRHR, GRIA2, HDAC2, HNF4A, HRAS, HTR4, IL11RA, IL17B, INHBA, INHBB, INPP1, ITGA2B, JAM3, KRAS, LCMT2, LTB4R2, MTHFR, NAT2, NFATC4, NME6, NOX3, OR2AT4, OR4C11, OR4C15, OR6C76, OR6N2, OR6T1, OR6Y1, P4HA1, P4HA3, PIGC, PIGN, PIGV, PIK3R4, PIP4K2A, PLXNB3, PORCN, PRKAG1, PTGS2, PTPRJ, RAF1, RALA, RARS, RPRM, RPS6KA2, RUNX1T1, SETDB2, SHC2, SLC2A4, SLC33A1, SMAD5, SOCS5, STEAP3, SUFU, TAS2R49, TIAM1, TJP3, TP53I3, TUBB2C, UAP1, UNC5B, WEE1, MAPKAPK5
Negative_14229	ASL, BTC, BTD, CKM, CTH, DDO, HK3, ME3, OGT, UBC, ACSL3, ADORA2A, AGTR1, ATP6V1F, BCAR1, BDKRB1, CACNG7, CASP7, CBR1, CD79B, CDK5, COL4A6, CTSB, CYP2F1, DGKH, DPAGT1, DPM3, DUSP8, E2F4, EFNA2, EFNA5, EGLN1, ENTPD7, FARSA, FGF5, FMO4, GAD1, GADD45G, GATM, HAO1, HLA-DOB, LMO7, MAD2L2, MTHFR, MYD88, MYH4, MYH7B, NAGLU, NRP1, OR12D3, OR13C8, OR1L6, OR2C3, OR2L3, OR51F2, OR51G1, OR51T1, OR52B4, OR6C4, OR8B12, PERP, POLR1B, POLR2H, PPM1B, PPOX, PPP1CA, PPP2R5C, PRKAR2A, PRRS2, RAPGEF2, RBKS, SFRP1, SPI1, STAT6, TAS2R8, TJP1, TM7SF2, TP73, UNC5D, UROS, VKORC1, WIF1, WNT16, YKT6, C1GALT1C1, CSGALNACT1
Negative_14230	CRK, FGB, MET, AADAC, ACSS2, AKR1C4, AKT1, AMD1, APAF1, ARG1, ATP6V1A, B4GALT5, BCKDHA, CLDN2, CNTFR, CREB3L3, DDIT4, ENO3, EPB41L1, F11R, GGPS1, GSTT1, HTR4, HTRA2, IL8RB, ITGB1, LRP6, MAP3K12, MCEE, MDH1, MGLL, NAGK, NT5C, OCLN, OR1I1, OR1J2, OR8K3, P2RX7, PDE10A, PDGFD, PPARG, PRIM2, PTPN11, RHOA, SCP2, SEMA4F, SKIV2L2, SPAM1, STX2, TAS2R8, TRAF2, TUBA8
Negative_14231	ADK, DBH, GNE, GPI, VTN, XDH, ACOX1, ACSM2A, AGRN, AHCYL2, ALPI, ALPL, ARRB2, ATP5A1, B4GALT6, BAIAP2, C3orf10, CACNG3, CCL14, CCR5, CD226, CD244, CDC27, CDKN1B, CLDN11, COL1A2, CREBBP, CSNK1E, CTBS, CTPS, DX18, DDX50, DDX52, DERL1, ENO2, EXT2, FUT3, FUT6, GANAB, GANC, GGT1, GLB1, GLYCTK, GNA12, GNAI1, GNAI3, GUCY2C, GUCY2D, IFNB1, IGF1, IL10RA, IL23A, INPP5E, IRAK4, ITGA6, LEPR, MDM4, MGAT1, MMP2, MYH7, MYH7B, NME4, NMNAT2, NR5A2, NSD1, NTN1, OR10G2, OR14C36, OR2T12, OR51B4, OR52I1, OXCT1, PARD6G, PARS2, PCK2, PIK3R4, PLCD4, PPP2R2A, PPP2R2D, PRLR, PTGIS, RAC2, RAD51, RAPGEF1, RIPK1, SETDB2, SIGLEC1, SMC1B, STAT4, TAS2R5, TNFSF18, TPM3, UGCG1, WNT1, WNT4, HSD17B10, PLA2G12B, TNFRSF10C

Negative_14232	AMH, AR, CDA, CRH, HAL, HK2, HYI, IL9, MUT, ABL1, ACAA1, ACP5, ACSL4, ACYP1, ADCY4, ADORA2A, ALPP, APH1A, BUB1B, CADM1, CD3E, CLDN15, CLDN3, CSNK1D, CTBS, DDX56, DGAT1, DLST, EPB41L2, F2RL3, FBXW11, FECH, FGFR1, FUT3, GGT1, GLG1, GOSR2, GPD2, HNF1B, HSD17B2, ITGAD, KCNJ11, KCNQ1, LAMB1, LEFTY2, LHCGR, LLGL1, MAPK13, MECR, MGAT4A, MYH8, NCAM2, NOTCH1, NT5C1A, OCRL, OR10AD1, OR11L1, OR1G1, OR1Q1, OR4B1, OR51I1, OR56A1, OR7A10, ORC2L, OXSM, PAICS, PANK1, PAPSS1, PIP5K1C, PLCG1, PLD1, PPP3CB, PTPRZ1, PYGB, RELA, SETD8, SLC27A4, SLIT2, SMAD4, SOCS7, SPCS1, SPTAN1, TAS2R10, TCF7L1, TFDP1, TP73, TSHB, TUBA1C, TUBB1, UGCG1, ULBP3, UNC5C, UPP2, VAMP4, WNT10B, CSGALNACT1, HLA-DPA1, HLA-DRB4
Negative_14233	ADK, CEL, CR2, FER, RFK, AANAT, ADH4, AMDHD2, ANPEP, ASMT, BET1L, CACNB4, CASP7, CD14, CDIPT, CSF3R, CSNK1D, CXCL2, CYP26A1, DARS2, DHCR24, DKK4, DUSP3, ENPP1, FGFR4, FOSL1, GATM, GGT6, GNMT, GSK3B, GUCY1B3, IARS, IFNA14, IL13RA1, IL21R, IL22RA1, INPP4A, IRF9, MGAT3, MITF, NAE1, NOX1, OPLAH, OR2S2, OR2T8, OR4C16, OR5T2, ORC6L, PANK2, PGAP1, PHGDH, PHKA1, PLCB1, PPP2R5B, PRKAR1B, PRSS1, RBPJ, RDH12, RERE, RRAS, SEMA4B, SEMA4D, TBK1, THBS4, TPH2, TYMS, WNT2, TNFRSF1A
Negative_14234	C3, CTH, EDA, F2R, FUK, GK, GSS, IVD, LSS, NGF, AARS2, ACADVL, ACSM4, ADH6, AGTR1, ALDH1A3, ALDOB, ALG9, ARAF, ATP5A1, ATP5B, B3GALT6, C1QC, CAMKK2, CCND1, CD34, CISH, CLTB, COQ6, CRLF2, CRY1, CSNK1G2, CXCL13, CYSLTR2, DCXR, DDX18, DDX50, DPM1, DRD2, EDNRB, EPB41L2, ETNK2, FGF5, GALNTL1, GALNTL2, HEXB, HNF1B, HTR2C, ICAM2, IDH3A, IDUA, IFNA17, IGFBP3, IL11RA, IL23A, INHBE, ITGA7, ITPKB, LAMB1, LMO7, MFNG, NCR3, NFKBIE, NFX1, NFYB, NRG2, NRXN1, NSD1, OR13G1, OR2AG2, OR2S2, OR4A16, OR4L1, OR52N4, OR5AU1, OR5R1, OR9A4, PDE4D, PIGT, PLD1, PLXNA3, PRKAG2, PRKY, PTCRA, RAPGEF1, RELB, SDHA, SHC3, SOCS1, THBS4, TJP2, TPM3, UBE2L6, CACNA2D3
Negative_14235	CKB, DCK, FN1, GLA, HPD, PRL, ABLIM2, ACADM, ACPT, ACVR2A, ADAM10, ADCY1, ADCY6, ALG10B, ARPC3, ASS1, BLVRA, BMPR2, C7orf16, CD3E, CD46, CD99, CFLAR, CIITA, CLDN1, CMAS, CPT1A, CREB1, CSNK1E, CSNK1G2, CTSB, DGKD, DUSP10, ENO2, EPHA2, EPHX2, GALC, GCDH, GOT1, GRM1, HAP1, HLA-F, HRH2, HTR7, IBSP, IDI1, IFNA17, IFNA7, IL11, INPP5E, KIR2DS4, LILRB3, MAP3K13, MAPK10, MGAT4A, MS4A2, MYH6, NARS2, NCOR1, NEFH, NFAT5, OR10J3, OR11G2, OR1G1, OR2A2, OR2C3, OR2F2, OR2G6, OR4C11, OR5P2, OXSM, PANK4, PDE7B, PDK1, PIAS4, PLXNB3, POLR1B, POLR3G, PTPRF, PTTG1, PVRL4, RPS6KB1, RPSA, STX6, TAP1, TCF7L2, UNC5A, UPP1, USE1, WNT5A
Negative_14236	ADC, C4B, DAO, DHH, FAH, ME1, TK1, ACYP2, AGPAT6, AMPD1, ATP2A2, CD226, CLCF1, CLTCL1, COL1A2, CRLS1, CXXC4, DARS, DGKG, DPM1, FLT4, G6PC2, GALM, GSTP1, HTRA2, IL20RA, LGMN, LTC4S, MAFA, MAP2K2, MYH11, MYL9, NEU4, NEUROD1, NLGN1, NR4A1, OR2T10, OR4K17, OR4N4, OR51A2, OR6K2, PDE3A, PDE8A, PFKFB2, PGLS, POLR3D, PPP2R1B, PPP3CB, PPT1, PTK2, PTPRM, RASA2, RRM2, TAS2R50, TNFSF8, TSHR, ULK1, MAP3K7IP1
Negative_14237	ADC, AMT, FAS, GLS, IL9, MET, NGF, ACADS, ACADSB, ACSM3, ACVR1, ADCY6, AGPAT4, AGRN, AGTR1, ARHGEF2, ATG12, ATP6VOC, BAI1, BCAR1, CAMK2A, CNE1, CD74, CDK2, CDK7, CTSB, CXCL16, CYP19A1, CYSLTR1, DUSP8, EI24, FARSA, FBP1, FOXA3, FRAT1, FZD9, GALC, GALNT12, GJA1, GNB3, GUCA1C, HPISE, ITCH, ITGB6, LAMB1, MYLK3, NEUROG3, NFYA, NSD1, NTRK1, NUDT8, OR10S1, OR11L1, OR1L6, OR1N2, OR2T3, OR4C12, OR4N5, OR51E1, OR5F1, OR8J3, PARD3, PGLS, PIP5K1B, PLCB2, POLR2H, PRKAA1, PRKAB2, PRKACG, RXRA, SEMA4D, SLC25A4, SMPD3, SPRY2, STAT3, TAS1R2, TCIRG1, TICAM2, TNFSF4, TSNARE1, ULBP3, UROD, ALDH18A1, CACNA2D3, HLA-DPA1, PNLIPRP1, SERPINB5



Negative_14238	C9, FYN, ABI2, ACOT12, ACP6, ALAS2, ALDH2, ALG9, ANAPC5, ARHGEF7, BCM01, CACNA1H, CAMK2A, CCL21, CCL3, CCNH, CHRM1, CLDN11, CPT1B, CREB5, CXCL1, CYCS, DAG1, DHRS4L2, EARS2, ENPP7, FUT5, FZD5, GADD45G, GFPT1, GLS2, GSTO2, HNF4G, IDH3G, IL17RB, IL28A, INPP5E, ITGB4, KCNB1, KLC1, LDHA, LDHC, LRP6, MAP2K5, MGST2, MITF, MLLT4, NEGR1, OR10G3, OR10Z1, OR13C2, OR13D1, OR2A42, OR2AG2, OR2M7, OR4A15, OR4A5, OR4S1, OR52N4, OR5B21, P2RX2, PI4KA, PIGH, PNMT, PNPO, PPP2R5B, PSME3, PTGES2, PTGS2, SLC2A4, SPHK2, SPTLC1, STX1A, SULT1A4, TAS2R1, TLR9, TPH2, TSNARE1, TUBB4, UBE2K, UGT2B11, VKORC1, YWHAH, ZNRD1, MAP3K7IP1
Negative_14239	HGF, APBB1, CCL8, CD86, CDS2, CSNK1G3, CSNK2B, CYP2D6, DHRS9, DLST, DRD5, DVL2, EDNRA, EIF4E, ENTPD7, F13B, FADS2, GNG3, GUCA1B, HGSNAT, M GAT1, MTFMT, MTHFR, NADSYN1, NEFH, NOS1, OR13A1, OR1L4, OR2AG1, OR2L2, OR5AR1, OR6K6, OR8H2, OR9A4, OR9G1, PECAM1, PIK3CB, PIK3R2, PITX2, PRKAR2A, PRKG2, PTPRZ1, RPIA, SMPD3, SMURF2, THBS4, TSHR, TUBA3C, TYK2, ULBP1, HSP90AB1, PPARGC1A
Negative_14240	CFI, CRH, DDO, FOS, LTB, MAX, SFN, TEC, TNF, ACADVL, ACP5, ACP6, ACTN1, ADH4, AGPAT4, BDKRB1, CCNG2, CD8A, CES1, COL4A2, COQ5, CREB3, CRY2, CXCR6, CYP26B1, DUSP6, EGLN3, EPHB2, FABP3, FGF19, FZD6, FZD8, GALNT14, GUCA1A, HCST, HHIP, HLA-C, HSD17B3, HTR6, INHBE, KIR2DL2, LAMA3, LDHAL6B, LDHB, MAN1A2, MCM4, NCOA4, NEUROG3, NMNAT2, OR13F1, OR2M7, OR4E2, OR52H1, OR5B3, OR7C1, OR7G2, OR8U1, ORC3L, PARD6B, PAX6, PDE7A, PLA2G2E, PLCE1, PPP2R5E, PRKAB2, PRODH, PSME2, PTGER1, RAB5A, SLC33A1, SMPD2, SRGAP3, TAS2R5, TLN2, TSNARE1, TUBA1B, YES1, ATP6VOA2, ATP6V1B2, HLA-DQA2, PLA2G12B, TNFRSF18, TNFRSF1A
Negative_14241	AGL, CRK, F7, HK2, INS, MET, OTC, TKT, TXK, ABI2, ACADVL, ACOT11, ACVR2B, ADH1A, ADH6, ARHGEF2, ATP5G1, BPGM, CASP6, CDK5, CDS1, COL4A6, COL6A2, CSF1R, CTSS, DOT1L, DPYSL2, DRD1, EPB41L3, FGFR4, FPGS, FUT6, FZD9, GLS2, GNA14, HBEGF, HLA-DOB, HSD3B7, IFNGR2, IRAK1, IRS4, KIR2DL4, KIR2DS5, LAMA4, LEPR, LIFR, MAP2K2, MAP2K5, MAPT, MAT2B, METTL6, NOTCH3, NR5A2, OR1G1, OR2T11, OXCT1, P4HA3, PAPSS1, PECAM1, PIGH, PLK1, PMVK, RALA, SGPP1, SPHK2, STAM, STAT4, TAS2R13, TUBB4, ULK2, YARS2, YWHAH, ZIC2, ATP6VOD2, SERPINA1
Negative_14242	CDA, GCK, HK3, PML, ARPC1A, ARPC1B, ATP4A, BCL10, BET1, C9orf95, CCL11, CCL25, CD247, CDC23, CSH1, CTNND1, CYP17A1, DOT1L, ETNK1, FBP2, FDF1, FGFR4, FMO3, GNAQ, GOT1, GRAP2, HIF1A, IAPP, IFNA16, IFNA4, IL22, L1CAM, MAN1A2, MTHFD1L, MTMR6, MYH11, NCOR1, NOTCH1, OR10T2, OR14A16, OR51Q1, OR5T1, OR8H3, PAICS, PDE4C, POLR2B, POLR2G, PRKG1, PRPS1, RETSAT, RND1, SC5DL, SCD5, SHMT2, SIGLEC1, SPHK2, SUV39H1, TSC1, TUBA4A, ULK2, WNT7B, HSP90AB1, PAFAH1B3, PRICKLE1, ST6GALNAC5, TNFRSF14
Negative_14243	KHK, TH, ALDH7A1, ARPC1B, ASS1, ATP13A2, ATP5J, BLVRB, CACNG5, CCL20, CSF2, DDX56, DIAPH3, EXT1, FGFR4, FTCD, GALC, GALNT14, GFPT1, GGCX, GRM5, GSTM1, GZMB, HIF1A, HMBS, HTR6, IL17A, IL20RA, IMPDH1, ITGAM, KIR2DL2, MAN1B1, MAN1C1, MAP4K2, MAP4K3, MASP2, MCEE, METTL6, OCRL, OR10G4, OR2W1, OR4S1, OR51A4, OR51Q1, OR52H1, OR5B3, OR5P3, OR9A2, OXTR, PDGFRA, PIK3CG, PIP4K2C, POLR1B, POLR2K, PORCN, PPP1R3D, PRKCB, PSPH, RALBP1, SH3BP2, STAT2, SUFU, TACR1, TAS2R7, TJP2, VAV2, GABARA PL2, PLA2G12B, TNFRSF10A

Negative_14244	ADK, ATM, CGN, IL6, KHK, TNF, WAS, ALG13, ANAPC7, BPGM, CCND1, CDC14A, CHR1, CLTC, COL4A6, CRLF2, CTNNA3, CYBB, DDB2, DDHD1, EIF4E2, EPB41, FADD, FASN, FGFR3, FMO5, GPD1, GSK3B, HSD3B2, IFNG, IMPDH2, ITGA11, JAK3, KITLG, KNG1, MYH10, OR1D2, OR51B2, OR52D1, OR5A1, OR6F1, OR8H2, OR8K3, PDE8A, PER1, PIAS1, PIK3R5, PPP1R3B, PRIM1, PRKACB, PRLR, PYGB, RUNX1, SDC2, SDHA, SGPP1, SLC2A2, SMAD7, SOCS1, SPRED1, SULT2A1, TRADD, UGCGL1, UPRT, WNT8B, ST6GALNAC6, TNFRSF10C, TNFRSF1A
Negative_14245	CFI, DAO, GK, ACAT1, ALG5, ARNT, C1GALT1, C7orf16, CCDC6, CCR1, CD28, CD40LG, CDH4, CDK5, CLDN2, CLTC, CNTN2, COL4A2, DDHD1, DNMT3L, FLAD1, FMO2, GAD1, GNG13, HARS2, HHEX, HIBCH, HMOX1, HNF1B, ICAM1, IL9R, INHBA, ITGAD, KCNJ11, LARS2, LDHC, LIFR, LPAR1, LTBR, MAP3K4, MCAT, MGA T4B, MYH2, NEU1, NKX6-1, NMNAT3, NRG1, OR10AG1, OR10G2, OR4D1, OR4K13, OR4M2, OR52J3, OR5A R1, P2RX7, PANK1, PANK3, PDE9A, PIP4K2A, PLCE1, PLOD2, PNPLA4, PNPT1, POLR1A, RPIA, RPS6KB2, SEMA4D, SEMA7A, SPI1, STAT1, TGFB1, UBE2K, UGT2B4, VEGFA, VNN1, WNT7B, ATP6V1B2, ATP6V1C1, SERPING1, TNFRSF11A
Negative_14246	CDA, CR1, GP5, HYI, ID1, IL2, TFG, ABLIM1, ACSL1, ACSM2A, ACTG1, AKR1C 2, ANAPC11, AOC3, B4GALT3, BACE1, BMPR1A, CACNA1B, CACNA1E, CACNG7, CANT1, CCL7, CD3E, CDK2, CIITA, CSNK2A2, CYP26C1, CYP2D6, CYSLTR2, DDX23, DDX55, DHCR7, DHDH, DTX2, EIF4B, EPB41L2, F13B, FGF18, FZD9, GBGT1, GCDH, GGT6, GMPPB, GNMT, GPD1, HNF1A, IL20RB, IMPA1, IRF7, ITGA1 0, KLRD1, LAMB4, LGMN, MAP2K4, MDH2, MTMR6, MYH10, OR10A4, OR11L1, OR12D3, OR1D2, OR2T1, OR5H2, OR5P3, OR5T3, OR7A10, PAICS, PAX4, PDE7A, PDGFA, PIGN, PIGS, PMM2, POLD1, PPP1R3C, PRKCE, PTGER1, PTGS1, PVRL4, RRM2, SENP2, SUCLG1, UGCG, ATP6V1C1, MAPK8IP1
Negative_14247	A2M, AK3, AUH, CD6, GH2, GK2, TKT, TNF, ACYP2, ANAPC11, ANAPC4, AOX1, ATP5C1, ATP6AP1, BCL2L1, BDH1, CALML6, CAMKK2, CASK, CD22, CD44, CD46, CDH5, CRY1, CYP26B1, DGKI, DTX2, ENTPD2, ENTPD3, EPB41, FDFT1, FGF1, FLT3, G6PC, GAD2, GALNTL4, GLO1, HIP1, HSPA8, IFNA13, IL12A, IL29, IMPDH2, ITGA3, ITGB1, ITGB6, KIR2DS4, LARS2, LTC4S, MCM4, MGST1, NCKA P1L, NCR3, NR1H3, OR11G2, OR13C5, OR7C2, OR8K1, P2RX6, PCYT1A, PFKL, PIP5K1A, PMAIP1, PPA1, PPT1, PRPH2, PYCR2, RHOQ, SELPLG, SLC25A5, SLC25A6, STMN1, SV2C, TNFRSF4, TSTA3, VTI1A, WNT8A, YWHAB, TNFRSF11B, TNFRSF12A
Negative_14248	IL5, ILK, INS, NF1, NOG, SRF, ACAD8, AKT1, ALDH6A1, ALDOC, ALPL, ASMT, ATP6V1A, CCR2, CD79B, CDH1, COL5A1, COQ7, CXCL16, DUSP7, DUSP9, EHHA DH, FGF5, FPGT, GARS, GJA1, GNA11, GNAI3, GRIN2B, GUCA1B, HES1, HNF4A, HPSE2, IL17RB, IMPDH1, LDHA, MAP2K5, MCEE, MFNG, MLYCD, OR10V1, OR2 T29, OR52N4, OR5V1, OR6C76, PIK3C3, PLAUR, POLD2, PPM1A, PROC, PSEN1, PSME1, PTGS1, PYCR1, PYGB, ROBO3, SCIN, SHC2, SLIT2, SNAP25, STAT1, STK4, SUV39H1, UROC1, MAPKAPK5, PNLIPRP1
Negative_14249	FUK, GCK, HPD, ACADM, AGPAT6, ALAS2, ALDH1A2, AOC2, ARRB2, BLVRA, CARD11, CCNB1, CDC25A, CMPK2, COQ5, CSNK1G2, DNMT3L, ENTPD4, EPHA6, GANAB, GPAA1, GSTO2, HSP90B1, IDI1, IFNAR1, IL9R, INMT, ITGB3, KIR3DL1, LAMB2, LIFR, MADCAM1, MBL2, MCM5, MLLT4, MPDZ, NANP, NCAM2, NEFH, NUMBL, OR4C15, OR4F5, P2RX3, PGK1, PHKG2, PIP5K1B, PITX2, PON3, PPP2R1B, ROBO2, ROBO3, SH2D2A, SKIV2L2, SRD5A1, ST3GAL6, TAS2R42, TAS2R60, TRAF2, TYMP, ULBP2, ATP6V0E1

Negative_14250	EDA, PAH, PML, UBB, XDH, AACS, AADAC, ACVR1B, AHCYL2, ASMT, ATF4, ATP5D, BCAR1, BET1L, CD58, CD8A, CHSY1, CLDN9, CNTN1, COL4A2, CPT1A, CTNNB1, CTTN, DHCR7, DOCK1, DRD2, EFNA2, EPAS1, ERO1L, ESAM, F11R, FCGR3A, FGD3, FGF13, FGFR1, FGFR2, FGFR3, FUT4, GALNT2, GALNT7, GBGT1, GCH1, GUCY1B3, GUCY2D, HHIP, HMGCS2, IFNAR2, IL13, IL13RA1, IL18RAP, IL9R, IRAK3, KIR3DL1, LIPC, LRP5, MAN1B1, MGAT2, NRG1, OR10H5, OR2T10, OR4K13, OR51A2, OR56B4, OR6C1, OR6K3, OR6N2, OR7A10, OR7C2, OR7D2, OXCT2, PAK3, PAX6, PGAM2, PLCG2, PLOD1, PLTP, PNMT, PPP5C, PROS1, PRPS1, PTPRC, PYCRL, RIPK1, RUNX1, SEMA7A, SLC25A6, SNW1, SPHK2, STX3, TAS2R40, TAS2R42, TIAM2, TIRAP, TYROBP, UGT1A10, CACNA2D1, CACNA2D4, MAPKAPK3
Negative_14251	ADO, IL5, LIF, MSN, TNN, VTN, AGRP, AMPD1, APC2, B3GNT3, CACNG6, CARS, CASP3, CCR10, CER1, CPT1A, CSNK1D, CTBP1, CXCR6, CYP26A1, CYP7A1, DEGS2, DFFA, DLL4, DUSP10, DVL3, ENPP6, ENTPD4, EPHA1, GADD45G, GALNT11, GCLC, GIT1, GNMT, HCCS, HMGCS2, HTR2C, HTR6, IL18, IL21R, INPP4A, IRAK1, ITGA6, KARS, KCNJ11, KIR2DL3, KLRC4, LDHA, MAPK10, MTMR6, MYH14, MYH4, MYH7B, MYLK, NAT2, NCOR1, NEU3, NR1H3, NT5C2, OR10G2, OR10J1, OR2A42, OR2M5, OR4L1, OR8J3, OR9Q2, PAX4, PIK3R5, PLD1, PLOD2, POLE4, PPCDC, PROS1, PSPH, RASSF1, ROBO2, RPS6KB2, SEMA4A, SIAH1, SMAD7, SOCS5, SPCS3, SUOX, TRAF3, TRHR, UNC5C, UPB1, XYLT1, ZAP70, GABARAPL1, MAPK8IP2
Negative_14252	CRK, DBI, GHR, HYI, MYC, RB1, ACP5, ADCY10, ADH5, AFMID, ALDH1B1, ARHGEF1, ATP5J2, B4GALT1, BIRC3, BMP8B, BUB1, CAMK2D, CAMK2G, CD36, CD3E, CDC25A, CDIPT, CDS2, CFLAR, CHUK, CXCL6, CYP8B1, CYSLTR1, DAPK3, DBF4, DUSP4, FOSL1, FUT9, FZD7, GALNT13, GALNTL5, GPAM, HES1, IL13RA2, ITGB2, MAML2, MRAS, NAGA, NARS, NCF2, NEGR1, NEU1, NFKB2, NTSR1, OR1D5, OR1E1, OR2M3, OR51G1, OR56A3, OR6A2, OR7G3, PDCD1, PDE10A, PDE6H, PDGFA, PER2, PIGK, PIM1, POLR1B, POLR2I, PON3, PPP3CB, PRSS1, RFXAP, SORD, SREBF1, ST3GAL6, STX1A, STX6, SULT2A1, SUV39H1, TAS2R3, TPM3, TUBB1, TYMP, WNT2B, MAP3K7IP1, PDCD1LG2
Negative_14253	AMT, GNE, IL5, TNC, ACP5, ACSM2A, ADCY10, ADCY2, ADRBK2, AGPAT4, ALDOB, ALPI, AMPD3, ARPC5L, ATG7, ATP6VOC, BMPR1A, CACNG3, CAMK4, CBR1, CNA1, CCND3, CD36, CHDH, CHIA, CHR1, CPT2, CTNNB1, DLST, DOLPP1, DVL2, EI24, FCER1G, FGF5, FGFR4, FSHR, FUT9, GALK2, GALNT6, GALNTL5, GGPS1, GJD2, GLI2, GMPR, GNPAT1, H6PD, HCLS1, HSPB1, IL18R1, LAMC3, LIPG, MAOB, MAPK1, MDH2, MGAT2, NAGK, NARS, NKD2, NOTCH1, NRG2, NUDT2, OR10G3, OR13C5, OR2T2, OR4D11, OR4S1, OR52K2, OR6C76, OR6M1, OR6Q1, OR8K3, PGAM4, PLCE1, POLR2H, PPAR, PPP1R3A, PTK2B, RBX1, REL, RRAS, SOS1, SPCS1, SPI1, STAT1, TRAF5, VTI1A, WNT6, ATP6VOD2, ATP6V1C2, MAPK8IP1, PAFAH1B1, TNFRSF10C, TNFRSF18
Negative_14254	BTC, F2, FUK, ABCC8, ACP1, ACVR2B, ADCY8, ADRB1, ALDH3B2, BBC3, CACNA1D, CDH4, COX10, CTTN, EDNRA, ENPP6, EPHB3, ETNK2, FADD, GBGT1, GRIN2B, GSTO1, GUCA1B, H6PD, HAGH, HBEGF, HEMK1, IFNA13, ITGB5, KITLG, LCM T2, LFNG, MASP1, NEFM, NEU2, OR12D3, OR4D6, OR51B5, OR52A1, OR5B12, OR5B17, OR7A5, OR8H3, PDGFC, PDK1, PER2, PLCD1, PNPT1, POLR2C, PRDX6, PRKCI, PRKCQ, PRODH2, SFRP5, SGPP2, SMPD1, SPP1, STK36, STX5, STX8, UNC5B, WNT7B, XYLB, ATP6V1C1, TNFRSF1B

Negative_14255	DBT, EZR, FGG, GH1, GHR, GNE, LYN, ACVR2B, ADRB1, AGRP, AKR1C2, ALG6, B LVRA, BPGM, CCL1, CCNB1, CD80, CHIA, CLCA4, CYP2A7, CYP3A5, DGAT2, DL ST, EPHX1, ESPL1, FBP1, FGFR3, GALNTL5, GNAI1, GRIN2A, HMGCS1, HSD17 B7, HSPB1, IDH3G, IL11RA, IL8RA, IQGAP1, IRAK3, JAK1, KLK3, LCMT2, LL GL2, LPAR1, MAGI1, OR10A5, OR10K2, OR2H2, OR51A4, OR51E2, OR51G1, OR 52N2, OR5L2, OR5P2, OR6A2, PDE1A, PDGFA, PDXK, PER2, PFKFB2, PIGU, PL A2G2A, POLR1D, PPP1R3B, PRSS2, PTGER3, RARA, ST3GAL5, THBD, THY1, TP M3, HLA-DRB3
Negative_14256	C6, CSK, F11, HPD, KHK, PVR, TNR, ACACA, ACSL5, ACSM3, ACTN2, ACVR2B, A DCY1, ADIPOR2, ALAS2, ALDOB, AOC2, ARPC5L, ASMT, ATG12, BACE2, BAI1, CCKAR, CCL7, CCNB3, CDC20, CLDN10, COQ3, COX10, CTSB, DDX51, DHCR7, D LAT, EFNA4, EFNA5, EXT2, FBP1, FZD3, G6PC, GAD2, GALNT12, GFPT1, HBEG F, HDAC1, HIP1, HLA- DMA, HNMT, HSD3B2, ICAM2, IL25, IL6R, IRAK1, ITGA8, JAK2, LAMB4, LARS , LRAT, MGST1, MITF, MTFMT, NOS1, NSDHL, NUDT2, OR10A6, OR1F1, OR1L8, OR2M7, OR51B6, OR5P2, OR8D1, OR9G4, OR9Q1, PAX8, PIGK, PIGT, PIM2, PL AUR, PLXNB3, PPP2R5D, PTPRZ1, RENBP, RERE, ROCK2, RUVBL1, SLC9A1, SM AD6, SUV39H1, TAS2R16, TAS2R9, TCF7L2, TNFRSF4, TRAF4, UNC5A, UPP1, ALDH18A1, ATP6V1B2, MAP3K7IP2, SUV420H1, TNFRSF10A
Negative_14257	C8G, CAD, DCC, FAH, LIF, MVD, RET, ACAD9, ACADSB, ACPP, ALDOB, ANAPC5, B4GALT5, CCL26, CCL5, CD14, CHAD, CHRM3, CHRNA7, CLDN19, COMP, CYP21 A2, DCXR, DRD5, E2F5, EDNRB, F2RL2, FGF17, FGF4, FOXO1, FUT2, GALNT11 , GALNT7, HLA- C, HTR2B, HTR6, IDH2, IL21R, INPP5A, ITGA7, LAMC1, LMO7, MLLT4, NFYC, NT5M, OPLAH, OR10H1, OR10J3, OR1S2, OR2AG1, OR2S2, OR4C12, OR4D2, OR 51G2, OR52L1, OR5B21, OR6C3, OR6F1, ORC1L, ORC2L, PAPSS2, PDE1A, PDX K, PHGDH, PPAT, PRSS3, PTPRB, PYCR1, RPN1, SMARCA2, SPRY3, SYNJ1, THB S1, UGT2A1, UGT2B11, VDAC2, YOD1, GABARAPL1
Negative_14258	CR2, DCT, F12, GLS, ACSL3, ADCY5, ALG6, AQP7, ARHGEF6, BLNK, CD244, CD 59, CD99, CDIPT, CDK2, CDKN1B, CDKN1C, CHRM1, CYP4F3, EFNA2, EFNB3, E NTPD4, FBP1, G6PC2, GMPS, GUCY2D, HLA- F, HTR4, IL6ST, MADCAM1, MAGI3, MAP2K4, MASP1, MCEE, MYH4, NCR3, NEU1 , NKX6- 1, OR1B1, OR2S2, OR3A2, OR4S2, PARD3, PLOD2, ROBO2, RPN2, SC4MOL, SEM A3A, SETD7, SIAH1, SLIT1, TUBA1C, UGT8, VDAC2, WARS2, HLA-DRB4
Negative_14259	ASL, DBI, F5, IL5, IL8, MPI, OTC, TYR, ADIPOQ, ADORA2B, AKR1C1, AKT2, A TP6VOB, B4GALT5, BCAT1, BCAT2, BMPR2, CCL13, CCL4, CD247, CD79A, CDK 7, CHPT1, CMPK2, COL1A2, CPOX, CSNK1G3, CXCL10, CYP17A1, DARS, DKK4, DLST, EDA2R, EPHA1, ERBB2, ETNK1, EVI1, FLT1, FOXA2, GALNT3, GALNTL5 , GPD2, GRIN1, HMGCS2, HPSE, IFNA5, IL12B, IL28A, IMPDH1, INHBB, INHB E, IQGAP3, JUND, LAP3, LTBR, MAN2A1, MAP3K1, MASP2, MMP9, MYL7, NANP, NLGN2, NT5E, NUDT9, OR2G6, OR2M5, OR2T10, OR4M2, OR9Q1, OXSM, P2RX1, PDHA1, PFN3, PIGH, PIP5K1A, PLCB4, PLXNA3, POLR2K, PPA2, PPP1R3D, PP P2CA, PSEN2, PTK2, RDH11, SC4MOL, SETDB1, SETMAR, SGPP2, SPHK2, TNFS F14, TRPC1, TYROBP, UGT2B4, VDAC3, YOD1, ZAP70, AASDHPPT, MAPK8IP2

Negative_14260	ADK, AK7, BID, KIT, NF1, NPL, SCD, TNF, ACACB, ACADL, ACP5, ACSM4, ACTN2, ALDOC, ARHGEF7, ARRB1, ATG7, ATP5H, BACE2, BCL2L1, BLNK, BTRC, CACNG7, CD70, CHIT1, CHKA, CNTN1, CRY1, CXCL5, CYP7A1, DAD1, EFNA4, EGLN1, EPHB1, F11R, FADS2, G6PC, GAB1, GALNT5, GMPS, HAGHL, HCST, HSP90B1, ITCH, JAM2, KAT2A, LTB4R2, MAML1, MAP2K6, MBL2, NCSTN, NTN1, OPLAH, OR10AG1, OR10K1, OR13A1, OR13C4, OR2AG1, OR2G2, OR2H1, OR2M4, OR4D1, PER2, PIK3R1, PMM2, PPARA, PPID, PPP2R5A, PPP3R2, PRKCB, PRKCG, PRSS3, RAPGEF2, RDH10, RFXANK, RPN2, RRM2, SLC2A2, TACR3, TAS2R3, TRAF1, TRIP10, UCK2, UCP1, UGT2B7, ULBP2, UPP2, WARS2, ATP6V1B2, B4GALNT1
Negative_14261	ATM, C8A, C8G, CP, CRK, DHH, GPT, GSR, ID3, MPZ, ABAT, ACADS, ACADVL, ACP2, ADSSL1, AGPAT2, AKR1D1, ALG10B, ATG7, B4GALT6, BCKDHB, CAMK2G, CCL23, CCL28, CCNA1, CD8B, CHRNA7, CREBBP, CYP1B1, CYP8B1, DAXX, DPM2, E2F2, FADS2, FUT8, G6PC, GMPR2, GNAI3, GUCY1A2, HADH, HAGH, HLA-G, HMGCR, HMOX1, HSD11B2, ICAM1, IL15, IL1A, IL28RA, INPPL1, MCM6, MECP2, METTL6, NAT1, NCAM1, NEUROG3, NFKB1, NPAS2, OR10H3, OR10R2, OR4C12, OR4P4, OR51G1, OR6Q1, OR7C1, OR8B12, OR8H2, OR9K2, OR9Q2, ORC1L, PCCB, PDE4B, PIP5K1C, PPP2R2C, PRSS1, PYCRL, RAC3, RBL1, RERE, RPIA, SH2D1B, SLC25A6, STX7, TFPI, TRAF5, UAP1, UGT2B7, ULK2, WASF1, YES1, ZFYVE9, ATP6V0D2, CSGALNACT2, TNFRSF1A
Negative_14262	AK3, C2, FAH, ID4, NGF, ACOX3, ADH6, ADIPOR1, AHCYL1, AKR1C2, ALDH3A2, ALG5, ASCC3, BST1, CACNA1I, CCL8, CCR4, CXCR6, DAD1, DBF4, DGKD, DGKQ, DTX2, EDNRA, EDNRB, EFNA3, EGLN3, EPB41L1, FGF20, FZD5, GATM, GDF7, GGT1, GMPPB, GNAI3, GNAZ, GUCY2D, IDH1, ITGB3, LAMB3, LCMT1, LDHC, LIMK1, LIPC, MAP3K2, MAP3K7, MARS, NEUROD1, NOD1, OR1L4, OR3A1, OR52M1, OR6C4, PDGFA, PHKG1, PON1, RFX5, SEMA4G, SH2D2A, SMAD7, SMPD1, TNFSF8, UGT2B7, WBSR17, YWHAH, SUV420H1, TNFRSF10C
Negative_14263	C3, GK, ME3, SDS, ALDH5A1, AMY2B, ARG2, ARPC2, ATP6V1H, BCL2L1, BHMT, C1GALT1, CFLAR, CHPT1, CIITA, CLDN2, COL6A1, CSNK1G2, CXXC4, CYP4A2, DDOST, DERA, EDA2R, G6PD, GAS1, GDF5, GNPDA1, GPT2, HSD17B8, HSPA8, HTR2A, IFNK, IL2RB, INMT, JUND, KLK3, KLRD1, LIPA, MAML1, MAN2A1, MMP14, NAT5, NCSTN, NEFL, NUDT8, OR10G3, OR1D2, OR2A42, OR2H1, OR4D1, OR4K2, OR51G1, OR51Q1, OR52I2, OR52N5, OR6F1, OR8K3, PCYT1B, PDE8B, PHKA2, PIGT, PLA2G3, PMM2, POLR1A, PPAP2B, PRKG2, PSPH, RAB5A, RUNX1, RXRB, SOCS4, SORBS1, SPRED1, STAT3, UPB1, UXS1, WNT11, PHOSPHO1, SERPINB5
Negative_14264	AGL, PTS, ACOX1, ACSS1, ACSS3, ACTA1, ALG12, ARPC5, ASAH1, ATG3, ATIC, CACNA1G, CD40LG, CDC25C, CNTN2, CTPS, CYP3A5, DDOST, DIAPH1, EIF4E2, ENPP1, ENPP2, ENTPD5, ENTPD7, FGF10, FZD9, GALNT3, GAPDH, GMPPB, GMPR, GNAI2, GNPDA2, GP1BA, GSTT1, HDAC2, HMGCR, ICAM1, IGSF5, IMPA1, JAG2, LCMT1, MYL2, OR1C1, OR4K13, OR4S1, OR4X2, OR9I1, PDE10A, PLA1A, POLR3B, PPP2R5D, PRKG2, PRPS2, PTPRC, PTPRM, RAP1A, RENBP, RIPK1, SDHC, SELE, SLIT2, ST8SIA5, ARHGEF12
Negative_14265	GSN, MPZ, PLG, ABI2, ALG10, ARSD, ASMT, ATF4, ATP5G2, CACNA1B, CD40LG, CD58, CD82, CDKN2B, CD01, CNTFR, CNTNAP2, COL4A4, CRY1, CTF1, CYP26A1, DARS, DGKQ, DOT1L, DUSP7, EHMT2, EPHA8, FCGR3B, FGF21, GAL3ST1, GCNT4, GGT5, GOSR2, GSTO2, HA02, HLA-DOA, HSD17B4, HSD17B8, IDH3B, IFNA4, IGSF5, IKBKG, IL21, IL22RA2, IL3RA, IL6R, IRAK1, IRS4, ITPK1, LAMA3, LAMA4, LIPC, LYPLA1, MAD2L1, NPOR2, OR1E2, OR2G2, OR5AS1, OR6C70, OR8A1, PIGO, PLAT, PNPT1, PPP3CA, PTPRC, RUNX1T1, SSH3, STX12, SUFU, SULT1A4, SUV39H2, TAS2R48, UBE2L3, WNT7A, ZFYVE16, ATP6V1G2, HSP90AA1

Negative_14266	ADK, DUT, GDA, GPI, LTB, PDC, ABLIM1, AHCYL1, ALPP, ARG2, ARSB, ATG7, A TP12A, AXIN1, B4GALT3, BIRC3, C3AR1, CASP3, CD27, CFL2, CLDN4, CRY2, CSF1R, CXCL16, DDX50, DIAPH1, DVL2, EI24, FSHB, FUT3, GADD45B, GNPNA T1, GPAA1, GSTM3, GUSB, IL15, INPP4A, ITGA2, KCNQ1, MAP2K5, MBL2, MYL K3, NFE2L2, OR10A5, OR2L13, OR2L2, OR51B6, OR52E6, ORC6L, PDHA1, PER 1, PLTP, POLR3K, PORCN, PRSS3, PTGER3, RAPGEF4, RPS6KA5, SDHC, SMC1B , TPMT, UPP1, VDAC2, WNT10B
Negative_14267	F10, OAT, ALDH3B1, ALG2, AOX1, BDH2, C1QC, C3orf10, CFL1, CFL2, CFLAR , CHST13, CLDN14, CSF2RA, CXCL6, CYP3A4, DDIT4, DGKA, EFNA5, EIF4E2, ENPP3, EPOR, F13B, FZD3, GBGT1, GRIA3, GZMB, HIBCH, HMOX2, IKBKB, IQG AP1, ISYNA1, JAG1, MAP2K1, METTL2B, MMP14, NCK2, NEU4, OR10G8, OR10R 2, OR13C4, OR1A2, OR2T2, OR6C3, PIGA, PIGH, PIGS, PLD2, POLR2E, POMC, PRKAG1, ROBO3, RPIA, RPS6KA4, RXRB, SEMA3E, SPRY1, ST3GAL2, STAM, TA LD01, TAS2R60, WWP2, ATP6V0A1, HLA-DPB1, PLA2G12A, SUV420H1
Negative_14268	ADC, CKB, GSN, LHB, SRF, TEC, TNF, ACLY, ACSL5, ADCY3, ARG2, BAI1, BMP4 , CAV3, CDC42, CDC45L, CLCA2, COL5A2, CRKL, CTF1, CXCL9, CYP26B1, DIA PH1, DPYD, ENTPD7, EPHA8, GADD45G, GCNT1, GNAL, GNAO1, GP1BA, GUCY1A 2, HSD11B2, IGF1, IL28B, LAMB1, LARS2, LYPLA2, MADCAM1, MAP3K8, MCCC 2, MYL9, NCF2, OR10G2, OR13C8, OR1A1, OR2L3, OR4C46, OR4X2, OR51A7, O R5AC2, OXSM, OXTR, PARD3, PCK1, PDE1A, PFN4, PGAM2, PIM2, PLA2G3, PMM 1, POLA1, POLR3D, PRPS2, PTGS1, RARA, RDH8, SEMA3C, SH2D1B, SIAH1, SP RED1, ST3GAL2, STT3B, STX1A, TAS1R2, TRPM5, TSLP, VNN1, WEE1, WNT8B, YWHAB, MAPK8IP2
Negative_14269	AMH, C7, JUP, TNC, TYR, ASS1, BCAT2, BDH2, C4BPA, CACNA1H, CCL2, CD86, DTX4, FUT1, GALT, GLG1, GNAT3, HMGCS1, HSPA1B, IFNA13, IMPDH2, ISYNA 1, ITGA10, ITGB6, ITPK1, MAP3K12, MGST1, NEFM, NRP1, OR10J1, OR14J1, OR2T11, OR2T34, OR52A5, OR8D1, PCK2, PLXNA2, POLR2I, PPP1R3D, PPT1, PRKAA1, PRKCG, PTCRA, RASGRP4, SLC27A1, SMAD7, SULT1A2, TNFSF11, UL K3, WBSCR22, WNT11, YWHAZ, ZBTB16, SLC25A31, TNFRSF13B
Negative_14270	CAT, FES, IL3, LPL, PLG, UBB, AADAT, ACACA, ACP5, ACVR2B, ANAPC1, ANAP C11, AOC3, ATP5G3, AVPR1B, BDH1, CACNA1D, CADM3, CD79B, CDH15, CSF2, CXCL3, DDIT4, DGAT1, DGAT2L4, DLL1, EPHA4, FARSA, FGF14, FGF19, GAD2 , GNAT3, GRB2, GRIN1, GUCY2D, HA01, HTR7, IFNA7, IL12A, ITGAV, LCP2, L RP6, MFNG, MYH1, NFKBIA, NMNAT3, NT5C1A, OR10X1, OR2A12, OR2A42, OR5 I1, OXSM, P2RX6, PARD6A, PIGO, PIGQ, PLA2G2D, POLE4, POLR1A, ROBO2, R XRA, SDHB, ST3GAL2, STX16, STX2, TUBB3, UROD, VTI1B, PRICKLE2
Negative_14271	AUH, CFI, LHB, OGT, ACVR1C, AGXT2, AKT1, ALDH1B1, ARPC1A, CACNG8, CAL ML3, CAMK2A, CAV2, CCNG2, CCR8, CD72, CD8B, CTNNA3, CTSB, CYP2C19, CY P4A22, DOLPP1, HSD3B1, IFNA13, IFNAR2, IL6ST, MCM7, MYLK3, NLGN3, NM NAT2, OGDH, OR10P1, OR2T12, OR4D6, OR52B6, OR6C70, PFKFB4, PIM2, PIP 5K1B, PLCB2, PLCZ1, POLR2G, PPOX, PRKAG2, PRKCB, PRSS3, PSENE1, PTPM T1, PYCR2, RBPJ, RGS3, SETDB1, SLC27A1, SNAP23, TAS2R38, TBK1, TIRAP , TNFSF18, WHSC1L1, ARHGEF12, ATP6V1C2, HLA- DRB4, HSD17B12, SERPIND1
Negative_14272	AK5, CBS, HK2, SRF, AKR1C3, ALG10B, ANAPC5, AOX1, ATP5F1, ATP5I, BBOX 1, BTRC, CACNG4, CD226, CD48, CD58, CD72, CDH15, CYP19A1, DFFB, DGAT2 L4, DPM1, EGLN1, ENPP2, EREG, FGF14, FGF22, FZD8, GCNT2, GLG1, GMDS, G MPS, GNPDA2, GNRH2, HEXB, ITGA2B, LGL1, MAP2K3, MAPK1, MGST2, MYH8, NAGA, NFKBIA, NKX3- 1, NME4, OR10AG1, OR10G8, OR13J1, OR1J2, OR2B11, OR4C11, OR51F1, OR6 S1, PAK3, PCYT1B, PFKM, PLA2G3, POLR2J, PTPRJ, RAF1, RDH5, SGMS2, SMA D9, SMPD4, SOCS1, TAS2R4, TLR2, TNFSF9, TRAF1, TRAF6, TUBA1C, TUBB1, UGP2, ULBP1, ARHGEF12, MAP3K7IP1, PAFAH1B3

Negative_14273	BTC, C8G, CD2, CSK, EDA, TEC, TPR, AGPAT3, ALG6, ARNT, ARPC5L, AVPR1A, CAMK2B, CCL17, CCNG2, CD226, CD70, CDKN1C, COL5A2, CRY1, CSNK2A1, CTNNA1, CXCL10, CYP2C9, DHCR24, DUSP5, EFNB2, EPB41L1, F2RL2, FGF18, FGF, FMO4, FOXO1, GRIN2B, GSTA2, ICAM1, IGF1, IGFBP3, IGSF5, IMPA1, IQGAP3, MAP2K5, MCM7, MYH2, NCOA4, NCR1, NFKB1, NOS1, NPR2, NSDHL, OR2G2, OR4C11, OR52B4, OR52K1, OR5L2, OR6F1, OR6K3, OR6K6, OR6X1, OR7A17, OR8D2, OR8H1, P2RX3, P2RX4, PCYT1A, PGAM1, PIK3CA, POLD4, PSEN2, PYGB, RFXANK, RPS6KB2, SETD8, SPHK2, STAM, TICAM1, TNFSF12, UGCG, UPP1, UROC1, YES1, YWHAQ, HSP90AA1
Negative_14274	HAL, IL3, MIF, PXN, ALAS2, ALDH1B1, AMPD3, AMY2B, ARPC3, B3GNT5, BAIA P2, BLVRB, CAV3, CCL5, CCNG1, CCR5, CD48, CLOCK, CRB3, CREB3, CTNNA3, CXCL1, CYP26A1, DHX58, E2F3, E2F5, EARS2, ENO1, ERBB2, ER01L, EXOC7, FMO3, FOXA2, GADD45A, GCLM, GLYCTK, GPX5, GRLF1, GUCY1A3, HMGCL, IL8RB, INADL, INHBC, ITGB8, LTC4S, MCCC2, MYH7, MYLK3, NARS, OR2T6, OR2Y1, OR4A15, OR4C6, OR4M1, OR51A7, OR51G1, OR5AN1, OR6K3, OR6M1, PDE5A, PDE6H, PIK3C2B, PLCD4, POLR1D, PPA2, PTCH2, TBL1XR1, TPK1, TRADD, TRAF4, TXNDC12, TYMS, VAV2, WASF3, HLA-DQA2, HLA-DQB1, PHOSPHO1, SLC25A31
Negative_14275	CRK, DDC, LAT, MUT, NOG, ADRA1B, ALDH3B2, AQP7, ATP6V1H, BAI1, BCKDHA, BTRC, BUB3, CHSY1, CLDN9, CSH1, DAXX, DDIT3, DGKG, DLST, EGLN3, ENTPD4, FARP2, GAD2, GALNT11, GLUD2, GUCY1A2, JUND, LILRB3, LIPT1, MAD2L2, MAGI3, MAN2A1, OR56B4, OR6C6, OR9G1, PCCB, PDE1C, PNPO, POLA2, PPP1CA, PRKAR2B, PTPRM, RDH10, RXRB, SDHB, SOCS3, STEAP3, TALDO1, TOLLIP, TRAF5, UGT2B17, WNT4, ZIC2, GABARAPL2, PPARGC1A, PRICKLE1, ST6GALNAC6, TNFRSF1B
Negative_14276	DCT, LIF, SHH, TEC, AANAT, ACY1, AHCYL1, ALDH1L1, AMPD3, ARHGEF7, ARSE, ATP13A2, ATP5D, AVPR1B, BET1, CACNA1A, CCL3, CCNG2, CD55, CD70, CD C25A, CDIPT, CISH, CXCL16, DAXX, DHCR24, FOXO1, G6PC, GALNT11, GALNTL5, GJA1, GLUD1, HRH1, IFIH1, IL29, IMPDH2, ITGAL, KLRC2, LAMB3, LRAT, LTC4S, MAP4K3, MDH2, MNX1, MYH2, NCAM1, NFATC1, NFKBIA, OR10A4, OR1OG3, OR10J1, OR10S1, OR2D3, OR2T12, OR4K13, OR4N5, OR51E1, OR51I2, OR52N1, OR8I2, ORC2L, PDE1A, PDHA1, PIAS4, PIK3C2A, PPP2R2B, PRKAR2A, PSENEN, PTGFR, PTPRZ1, PVRL2, SEMA4C, SMAD1, SMURF2, SOX17, SREBF1, SULT1A4, TNFSF10, TRDMT1, TUBA8, TYROBP, WASF1, XYLT2, ZBTB16, SERPINE1, TNFRSF13C
Negative_14277	AK5, C8A, C9, CSK, DCC, F10, GK, XDH, ACAA1, ACP2, ACSM5, ACSS2, ADORA2B, ASRGL1, ATP5F1, ATP5O, BDH1, BMPR1A, CCL25, CDKN2A, CHEK2, CREB3L2, CTLA4, CXXC4, DPAGT1, EFNA4, EPOR, EREG, FIGF, FTCD, GALNT7, GMPS, GNMT, GSTM4, HLA-C, HSD17B8, IL12A, IL20, INPP1, IRAK3, MAN1B1, MGLL, MMP9, MRAS, MYH7B, OGDH, OR13A1, OR2C1, OR4F17, PCNA, PDGFA, PFN4, PGK2, PIGO, PIGQ, PISD, POLD2, PORCN, PPAP2C, PRKCG, SMAD1, TAS2R41, TJP1, TSC2, TUBB, UGT2B10, UPP2, VAV1, VDAC1, CACNA2D4, SUV420H2
Negative_14278	CKB, GBA, GCK, PGP, VTN, AK3L1, ARHGEF4, ARPC1B, B3GALT5, C3AR1, CCL11, CCR5, CD34, COMP, CRY2, DGAT2, DHODH, EFNA2, ELK4, EP300, EPB41L1, GALNT2, HNF4A, HPSE, HPSE2, HSD17B8, IGFBP3, IL13, IL21, IL28B, INMT, INPPL1, IQGAP1, IRF3, ITGA1, ITGAM, JAM2, LAMB1, MADCAM1, MAPK14, NCKAP1, OR10Q1, OR11I1, OR4K2, OR5AK2, OR5B21, PGAM1, PLA2G10, PLCB3, PLCE1, PRKCI, RASGRP4, SDHC, SPRED2, TPH2, TRDMT1, UGP2, HLA-DQA2, PHOSPHO1, SERPINA5, TNFRSF6B

Negative_14279	BTK, FGA, FGB, GBA, GNE, LCK, PRL, UBC, ACOX1, ACSM4, ADORA2A, ALG13, A TF2, ATP6VOC, B3GAT1, B4GALT5, BBOX1, BPGM, C3AR1, CACNB1, CDC42, CF LAR, CHEK2, CHSY3, CSF1R, CSF3, DGAT1, DIAPH1, DLST, DTYMK, DUSP9, EG FR, EI24, ENTPD7, EPB41, FGF12, GNAI1, GRB2, GUCY1B3, HCST, HMGCS1, H RH1, HSD17B4, HSPA2, INPPL1, IQGAP1, ITGAV, LCMT1, MAD2L1, METTL2B, METTL6, MYH9, NFKB1, NME2, NTF3, OR10H2, OR1D2, OR2T2, OR6B2, OR6C2, PDE8A, PIGB, PIK3R2, PITX2, PNPT1, POLR1D, POLR1E, PPARD, PPP2R5C, P RCAA1, PRKCG, PSPH, RBL1, RDH8, SETDB1, SRGAP1, TAS2R38, THY1, TUBB4 Q, ULK1, UROD, WARS, WASF1, WHSC1, ATP6V1C2, PLA2G12B, PNLIPRP1, SUV 420H2, TNFRSF12A, TNFRSF18
Negative_14280	AR, CAT, FAS, GSR, JUN, MYC, PDC, ACSM3, ACTN2, ADCY2, ADIPOR2, ALDH1A 1, ALDOA, APBB1, ARHGEF6, ARPC4, B3GNT2, B3GNT5, BET1, CCKAR, CDC16, CLDN17, COL3A1, COL5A1, CYP2C19, CYP2J2, EHHADH, EIF4E2, EPAS1, EVI 1, FGF8, FZD5, HEXB, HTR2A, IFNA2, IFNK, IKBKE, INHBB, IRF3, LARS, MAP K1, MMP9, NEU1, NEUROD1, NEUROG3, NFATC2, OR51E2, OR51I1, OR5V1, OR6 Q1, ORC2L, PLA2G2E, PLCD4, PRKAB2, PRNP, PSPH, RARA, RELA, SETD1A, SO CS7, SPRY4, SRGAP1, ST3GAL6, STAT6, WNT7A, YOD1, SERPINA1
Negative_14281	BAX, BCR, CBS, PML, UBC, ACP2, ADAM10, ADRB3, AKR1B1, ALAD, ALDH5A1, A LOX12B, ALPI, ASNS, BLVRB, BNIP1, BRAF, CACNG2, CACNG7, CBLC, CCKBR, CCL27, CYP2A7, DHFR, DNMT3A, EDN1, EFNA5, EPHA4, EXT1, FARP2, FCGR3A , FLOT1, FRAP1, GBE1, GNAI1, GPAA1, GRIN2A, GSTM1, IL10RA, INPP4A, IP PK, LDHAL6A, LIPT1, LTB4R2, MAML1, MYL5, NCR1, NRG4, NTRK2, OR10C1, O R10H2, OR10Z1, OR13C5, OR2D3, OR56A4, OR5I1, OR6Q1, OR8U1, ORC5L, PD E1B, PFKP, PIAS4, PIGS, PIK3R1, PIK3R4, POLR1C, PPCS, PRKCQ, PTCRA, P TPN11, RALBP1, RELA, RND1, SGPP2, TAP1, TBXAS1, TGFBR2, UGCG, WBSCR2 2, WNT11, EIF4EBP1, SERPINC1
Negative_14282	CD6, IL3, PC, TK2, AADAC, AASDH, ABLIM2, AKR1B10, ALDH1A1, AMPD2, APA F1, ARHGEF7, CACNG3, CACNG7, CHAT, DAAM2, DDX41, DHRS4, GBE1, HMGCS2 , HNMT, IFNB1, IFNG, ITGA11, ITGA4, MAGI3, MLYCD, MYH6, NEFL, NFATC2, NME2, NME4, NT5C2, OGDH, OR10G3, PPID, PPP2R2D, PPP3R1, RDH11, SOD1, SPTLC2, SSH2, SUV39H2, TMLHE, TNFSF11, TPH2, UBE2K, UBE2L3, UGT1A10 , UGT2B10, UGT2B7, EIF4EBP1, HSP90AB1, MAPKAPK5, PAFAH1B2, PLA2G12 B
Negative_14283	AK1, CKM, FN1, PTS, ABI2, ACADS, ACVR1C, ADCY6, ADSSL1, AGRN, AMY2A, A QP7, ARRB2, B3GNT4, BPGM, CCL5, CDC2, CERK, CHAD, CMBL, CPOX, DAPK3, D GKI, DGUOK, DNMT3B, EIF4B, FGF8, G6PC2, GALK2, HHEX, HTR2B, ITGAM, LD HAL6B, LILRB3, MAOA, NCF1, NODAL, NRXN1, NSD1, NUDT5, OR3A3, OR4B1, O R4N5, OR51F1, OR52R1, OR5D16, OR6S1, PCCB, PDE6D, PFKFB2, PHPT1, PIP 5K1C, PLA2G5, PLCE1, PPAP2A, PPP2R2D, SNAP23, SUCLG2, SULT1A2, TNFS F11, TSHB, TXNDC12, YOD1, HLA-DRB5, PDCD1LG2
Negative_14284	HGF, PC, ACOX1, AGPAT4, APBB1, B4GALT4, BIRC2, CACNB2, CAMK2D, CAMKK 2, CASP10, CCNB3, CCR10, CTNNB1, CYP2B6, DAAM2, DLAT, DRD1, ERO1L, FP GS, GALNT12, GRAP2, GRHPR, IL20, IL28RA, IL4R, IPMK, JAG1, KCNB1, LDH AL6B, LYZL1, MAOB, NRG4, OR10C1, OR10K1, OR10R2, OR2T11, OR2T12, OR4 A16, OR52I2, OR6K6, OR9A4, OR9I1, PARD3, PARVA, PCYT1A, PDGFRA, PDGF RB, PGM2, PIGA, PIGF, PIGK, PIK3CG, PNPT1, PSME2, PTGES2, PTGS2, RDH5 , RFWD2, SETDB2, SUV39H1, TACR2, TAS2R5, TUBA8, ULBP1, ATP6V0A1, CAC NA2D3, ST6GALNAC3, TNFRSF6B



Negative_14285	BTC, CGA, DCC, DUT, F2, IL9, KDR, SI, ABL2, ACADL, ALG5, ARAF, ATP5G1, B CAR1, CARD11, CD28, CES2, CREB5, CSNK1G3, CTNNA3, CTSG, DDX47, DDX50 , DERA, F13A1, FGF7, FGFR1, GABARAP, GANC, GDF5, GFAP, GRPR, IFT57, IN HBE, JAK1, LRDD, MAFA, MMP14, NCF2, NME2, NMNAT3, NUDT2, OLAH, OR13C5 , OR1J4, OR2T12, OR4C6, OR7A10, PI4KA, POLR1C, POLR3A, PYGB, RARS, RF XANK, RUNX1T1, SETMAR, SGPP1, SLC25A5, SMAD3, SOCS7, STAT2, TICAM1, TM7SF2, TSNARE1, VEGFB, WNT9A, ZIC2, CACNA2D3, CSGALNACT1, CSNK1A1 L, MAPKAPK5
Negative_14286	AMT, IL3, ABL1, ACO2, ADAM17, ALG8, ARSA, ATP2A3, ATP6V1H, CARS2, CAS K, CCL7, CCNG1, CDC23, CDC25B, CDC42, CIITA, CLTCL1, CREB5, CYSLTR2, DNMT3B, EGFR, FCER1G, FZD5, GNAT3, GZMB, IFNA13, IL23A, IRF3, ITGB1, ITGB3, MTHFD2, MYD88, NT5M, NTN1, OR10AG1, OR2A14, OR52L1, OR6K2, OR 6T1, OR8G1, P2RX5, PGM1, PHKG1, PIGH, PIK3CD, PRKAR2B, RXRB, SETDB2, SULT1A2, WARS, ST6GALNAC6
Negative_14287	IL8, ABLIM2, ACADM, AKT2, ALOX15, ATP13A2, ATP4A, BST1, CD36, CDKN1A , CKS1B, CLDN9, CNDP1, COQ5, DUSP9, EDN1, EPHA3, FLT4, FPGT, HAP1, IDU A, IFNA5, IL13, INSRR, IRS4, ITGA3, JAK1, LDHAL6A, LTBR, MAP3K11, MAP K13, MCM5, MYLK, NT5C3, NUDT8, ONECUT1, OR10A6, OR10G4, OR1N1, OR2AT 4, OR52I2, OR6C74, OR7A17, OR8D2, PDE1C, PER1, PIK3R1, POLE3, PON3, P VRL1, RAPGEF1, RRM2, SDHB, SEMA4B, SEPHS1, SFRP1, SHMT1, SLIT1, SMAD 2, SNAI2, SOCS5, STX1A, STX6, THBS4, TNFRSF9, UGCG, XIAP, ATP6VOE1, S LC25A31, TNFRSF1B
Negative_14288	ADK, AGL, BID, CP, EBP, EPO, F12, GPI, OAT, ACYP1, AKT3, ALAD, ALDH6A1, AMDHD1, ATP6V1F, B4GALT3, CCL1, CCND3, CD19, CDKN1C, CHAD, CLDN18, C OMP, DGKZ, DRD2, DUSP8, EFNA1, EFNA3, ENPP6, FADD, FMO2, FOXO1, GTSE1 , H6PD, HMOX2, IL12B, IL15RA, INHBE, IRAK3, ISYNA1, JAM3, KLK3, MYH10 , MYH14, NANS, NCKAP1, NEFL, OR10H1, OR14C36, OR1N1, OR2G6, OR4C46, O R52B4, OR56A3, OR5H2, OR7A5, P2RX4, PDE3B, PGS1, PIGM, PLOD3, PLXNC1 , PPP1CC, PRKCD, PRKY, PRNP, PRPH, PTGIS, SELL, SPCS3, SSH2, STX4, TAS 2R41, TLR2, TUBA1A, UBA7, UROS, WASF2
Negative_14289	DBH, EGF, MUT, PML, TAT, TFG, ACSL3, ACSL6, ADCY1, AGPAT2, AHCYL1, ALS 2, ARHGEF1, ARPC2, ATP6AP1, B3GALT5, BCMO1, CAPN2, CCL8, CCR5, CDC26 , CES7, CHUK, CLDN11, CMAS, CNTNAP2, COL6A2, COQ5, CSF1, CYP21A2, DCX R, DDB2, DDX52, DTX3L, EI24, ENO1, FZD9, GNG3, HNF1B, IFNA17, INPP4B, IPMK, ITCH, ITGAV, JAK2, LAMA4, MMP14, MYD88, MYL9, NCKAP1, NFATC3, N FKBIE, NOTCH3, OR1J2, OR1N1, OR2D3, OR2F2, OR2M7, OR2Y1, OR4C11, OR4 F17, OR4N5, OR6F1, OR6K2, OR6K6, OR9G4, OSMR, PFN4, PIGW, PIK3CA, POL R1D, PORCN, PPOX, PRKCH, PRKX, SMAD7, SMPD3, SMURF2, SSH1, SSX2IP, SU CLA2, TNFSF12, TPI1, VEGFC, PNLIPRP2
Negative_14290	ATM, DCN, KIT, ABCC8, ACAT1, ACOT11, ACSL1, C1QC, CCL23, CCNH, CD40, C HSY1, CNGB1, CREB3L2, DDX19A, DKK2, FLT3, FZD1, GALNT7, HLA- C, HNF1A, HTR2B, IFNA17, KIR2DS5, KIR3DL2, KLRC4, MAP2K1, MS4A2, NFE 2L2, NFKBIA, NFYC, P4HA1, PAK6, PDE6G, PGAM1, PGS1, PIGH, POLR2G, PPA 1, PPP2R5E, PTGDS, RASGRF1, SCLY, SEMA4G, SHC1, SLIT1, STAT2, SUCLG1 , SV2A, TALDO1, TAS2R8, THBS2, TNFSF18, TRAF1, UGT2B11, VAV3
Negative_14291	AGK, FGB, GLS, HDC, IL3, LEP, SYK, UBC, AADAT, ABL2, AFMID, AGTR1, ALDH 9A1, AMPD3, ARNT, ARPC1A, ARSB, BBOX1, BIRC2, BLVRA, CACNA1S, CASK, C CL11, CCL22, CCL27, CCNA2, CD3E, COMT, DERL1, DPAGT1, ENTPD6, GALK2, GPD2, HDAC1, HSD3B1, MAPK3, METTL6, NLGN1, NNMT, ODC1, OR1S1, OR4D1, OR4X1, OR6B3, PGM2, PIM1, PLAU, PLCB3, PRKCQ, PVRL2, RERE, RFNG, SEMA 7A, SGPP2, ST3GAL5, TGFB3, WNT4, WNT9B

Negative_14292	AK2, CFI, FYN, OAT, A4GALT, ACAD9, ACADVL, ACTN1, ALG5, ATG12, BAI1, CACNA1C, CDC23, CDH15, CHR1, CHST12, CMBL, COL11A1, CPT1A, CSNK1G3, CYP3A7, DEGS2, E2F3, EDNRA, EHHADH, EPB41L1, GALC, GNB1, IFNA13, IL17RB, IQGAP3, ITPKB, KRAS, LDHA, LDHC, MAML2, MAP2K6, MAP3K14, MAP3K2, MKNK1, MYH3, NOD1, NT5C, OR10G2, OR8D1, OR9A4, PDE1C, PIGV, PISD, PMVK, PNMT, PNPLA3, POLR3B, PPP1CA, RASGRP4, TCF7L1, VAV1, VEGFB, CSGALNACT2, ST6GALNAC5, TNFRSF10D, TNFRSF12A
Negative_14293	CRK, CS, DAO, KHK, TAT, ACYP1, ADCY7, ATP6V1H, BCL2L1, BMP8B, CACNA1B, CACNA1C, CALML6, CCKBR, CTTN, DOT1L, DUSP9, FSHR, GSTA1, HLA-DOB, HSD3B2, IFNA14, IFNK, IL1A, IL22, IL8RA, INHBE, LAP3, LDHAL6A, MGAT5, MS4A2, MTMR1, OR1A1, OR2W1, OR4C16, OR51G2, OR6B2, OR6Q1, OR9G4, P2RX3, PDE5A, PDHA2, PDXP, PFN2, PIP5K3, PPAP2C, PPP3CA, PRKACB, PRKG1, SEPHS1, SLC9A1, SSH1, SSX2IP, TFPI, THBS1, TP73, TPH2, UGCG, VAV1, WNT5A, ST6GALNAC1
Negative_14294	C2, ID1, ID3, MAG, SFN, ABLIM3, ACOX2, ACSM2A, ACSS2, APC2, AREG, BUB3, CADM1, CDC6, CDH5, CHKB, CNTNAP1, CTSS, DDX54, DRD2, DRD5, DUSP6, DVL2, EDA2R, EFN2, FLAD1, FOSL1, FOXO1, FUT2, FZD3, GADD45G, GNB1, GRPR, GZMA, HDAC1, HSD17B8, IFNAR1, IFNAR2, IL1R2, INHBC, INPP5B, IRF5, KCNJ11, KIR2DL2, KITLG, LDHAL6B, LIFR, MAP2K3, MAP3K12, MAPT, MDM4, MIOX, MMP1, MYLK, NADK, NANP, NCKAP1L, OR10A5, OR1A1, OR2B6, OR2S2, OR2T11, OR4C16, OR4D9, OR51E1, OR51F2, OR52A1, OR5D18, OR6F1, OR6Y1, PAPSS2, PCK1, PIAS4, PIK3R4, PIP4K2B, PLK1, PNPT1, POLR2H, POLR2K, PPP2CA, PRKACB, PRKCA, PSME1, PTDS2, PVRL4, RAB5A, ROBO2, RPE65, SELP, STMN1, THBD, TYMS, UAP1, YWHAB, ZIC2, AASDHPPT, PRICKLE2, SERPIND1, TNFRSF17
Negative_14295	GHR, HK1, JUP, LIF, PLN, TAT, TNC, VTN, AKR1B10, ALDH1A1, ALDOC, ALG13, ASMT, BCL10, BUB1, CACNA1I, CAMK2B, CCNA1, CCND3, CCR4, CREB1, CRY1, CYP2S1, DBF4, EDAR, EDNRA, FABP3, FCGR2B, FGF12, FUT3, FUT9, GGPS1, GNAI3, GSTM1, HLA-C, HYAL1, IMPA1, KITLG, KLRK1, LDHAL6A, LLGL2, LYPLA1, MAD2L2, MAGI1, MDH1, NAMPT, NCOA4, NFYA, NRCAM, NT5M, OR10G2, P2RX4, PDXP, PGAM4, PIGP, PIGV, PLAT, POLR3H, PTGDS, PVRL3, RAPGEF4, RPN2, RRAS2, SH2D2A, SLC27A4, SOAT2, TAS2R13, TAS2R40, TUBA3E, UBA7, UGT8, ULK1, UNC5D, YES1
Negative_14296	DBH, F7, F9, LIF, LTB, MAG, MIF, ABLIM2, ALDH4A1, ALDH5A1, ALDH6A1, ARHGAP2, ATIC, ATP4B, BMP5, CCR10, CDC45L, CHDH, CLDN11, CLDN14, CMAS, COASY, COL6A2, CSAD, CSF3, CYP2C8, DNMT3B, DPYS, EDNRB, EGLN1, EPHX2, EXTL2, F2RL1, FCGR3A, GALNT8, GBE1, GGT1, GUCY2F, HMBS, HSD17B4, ICAM2, IFNAR1, IL12B, IL22RA2, IL7R, INSR, IRS2, KDSR, LTBP1, MAPK8, MICCA, NANP, OR10A4, OR14J1, OR2B11, OR4A16, OR4K5, OR5T1, OR6C1, OR8D4, OR9G1, P2RX2, PAFAH2, PIK3C2B, PIK3CA, PPARA, PPP1CB, PROC, RAC3, RAPGEF4, SCP2, SDHB, SH2D1A, STAT6, STX18, TCIRG1, TRAF5, TRMT11, TSHR, UBE2K, UGDH, UNC5C, ZBTB16, ATP6V1B1, PDCD1LG2, TNFRSF18
Negative_14297	AK2, BAD, CTH, GP9, INS, KMO, LAT, LIF, LYN, SFN, TK2, TNF, ABLIM2, AKR1C4, AOX1, APC2, BCKDHB, BTRC, CACNA1E, CASK, CD36, CLDN15, CNGB1, CYP11B1, DDX50, DPYD, EPHA7, FARSA, FRAT2, GALNT2, GLO1, GNAS, GPT2, GPX5, HBEGF, HDAC1, HNF1B, IL1R1, INHBE, MAP2K7, MAP3K14, METTL6, MGST2, MPDZ, MYH7, NCAM2, OR10G9, OR10J5, OR10T2, OR13D1, OR4C6, OR51B4, OR6C76, OSMR, PDK1, PGS1, PHKA1, PIP5K3, PLK1, POLR3D, PPAP2C, PPP1CC, PPP1R3A, PSENE1, PTPRM, RAB5A, RALGDS, RAPGEF3, RXRA, SDC2, SMAD7, SPRY2, TUBAL3, VEGFB, VTI1B, WBSR17, TNFRSF6B

Negative_14298	AR, CEL, DCC, F2R, HDC, LPL, OTC, ACSS1, ACSS2, ACTA2, ACY1, ADAM10, ADORA2A, ALDH1B1, ALOX12B, ANAPC4, B4GALT6, BLVRA, CACNA1C, CCND3, CD22, CD28, CD55, CDC14A, CDC23, CDC27, CDIPT, CES7, COL6A2, DAPK2, DAPK3, DDX19A, DDX54, EFN2, FASN, FGF12, FZD2, GALNTL5, GATM, GNG3, GNPDA2, GRM5, GZMB, HADHA, HDAC1, HRAS, IFNW1, IL9R, LCP2, LYPLA2, MYL7, NCKAP1L, NFYB, NR5A2, OR2T1, OR51B2, OR52N2, OR5P2, OR6F1, OR8K3, PAK3, PDXP, PIGK, PIK3CB, PKLR, POLR2I, PPM1D, PPP2CB, PPP2R2C, PPP3R2, PRKG2, PTK2B, PTPN11, PVRL3, RAPGEF1, RBPJ, RRAS, SARS, SDC2, SDHB, SEMA3G, SLC27A4, SMC1B, SPRY4, SUFU, TAP1, TAP2, TCIRG1, THBS4, TNFSF11, TUBA1B, UGT1A10, B3GALNT1, HSD17B10
Negative_14299	ATM, BAD, HK1, IDS, ACACB, ACYP1, ADSS, AGTR1, APOA5, BIRC2, CARS, CD55, CDC20, CEBPA, CERK, CLCA2, CLDN8, CPT1A, DGKG, DUSP3, EPHB4, EPHX2, F2RL3, FRAT2, GALNTL5, GGT1, GMPS, GNA12, HMGCR, IBSP, IDUA, IL1R1, IL4R, MAP3K14, MAPK14, MGST1, MTHFD1L, NRG3, OR9A4, PDE8A, PEMT, PRKAG1, PRPH2, PTGES2, RELA, RPS6KA2, SCD5, SDC3, SDHA, SDHD, SETD1A, SIGLEC1, SNW1, TBL1XR1, TGFB3, WBSR17
Negative_14300	AK3, CD2, CDA, EPO, F5, F7, HGF, MAG, MVK, OTC, PAH, ACSL5, ADH1A, ADRA1D, AFMID, AGPAT6, ALDH2, ALOX15B, ANAPC4, AOC2, ATP12A, ATP6AP1, CACNG2, CACNG7, CAMK4, CCR10, CHUK, CNTFR, CREBBP, CX3CR1, CXCL2, CYP2F1, DDX23, DDX50, DGKG, EREG, FGD3, FPGS, GMPPB, GNPAT1, GSTA3, GSTZ1, GUCY1B3, HLA-DOA, HLCS, IMPA1, LAMB3, MAP4K2, MMP2, MYH15, MYH7B, NAGA, NEU3, NFYA, NLGN1, NOX1, OR2AE1, OR2V2, OR4A16, OR51V1, OR5C1, OR7A10, OR9A2, PAPS2, PARVB, PER1, PIGV, PLA2G2D, PLCD1, PLTP, POLE2, POLR3A, PPP1R3B, PPP2R1A, PPP5C, PRKAB1, PTPRC, SAT1, SC4MOL, SETD2, SMAD3, SOCS7, SPRY3, SREBF1, SSH2, TAS1R1, TGFB3, TLR5, TRAF1, TRMT11, UPP1, UPP2, VAV2, XYLT1, B4GALNT1, C1GALT1C1, MAPK8IP1, MAPK8IP2, SERPING1
Negative_14301	BTD, CDA, ABL1, ACPT, ACSS1, ALDH1A3, C1GALT1, CACNB2, CARS, CDC26, CEBPA, CLDN9, CREB3L3, CSNK1G3, DLL1, ETNK2, F2RL3, FBP1, FRAT2, GALNT2, GMPPB, GYS2, HSD3B1, IL1RAP, IL20, IRF7, KIR2DL2, LARS2, MASP2, MYD88, MYH4, OR52B4, OR5R1, OR6C6, OR6F1, PDHA1, PDHA2, PGK2, PLD2, PSYH, RHOD, RPS6KA5, SEMA3C, SETD2, SMAD5, SULT1A4, UAP1, UGT2A1, UPP1, YARS, ATP6V0D1, ST6GALNAC5
Negative_14302	CR2, F8, ID2, PGF, ZYX, AMPD1, ANAPC10, APPL1, BCKDHB, BMP5, CAMKK2, CCL15, CFLAR, CREB3L4, CXCL5, DHRS9, EPHB4, ERBB4, FDFT1, FLOT1, FLT3, GALNT13, GBE1, GLUD2, GSTZ1, HADHB, HHEX, HYAL1, IDH2, IFNA13, IL5RA, INHBC, ITGA6, KAT2A, KIR2DL3, LILRB3, LIPT1, MAOB, MAP3K4, MGAT1, MMP2, MPDZ, NCR1, NEGR1, NOX3, NTNG1, NUDT8, OR1L3, OR51V1, OR5C1, OR8D4, OXCT2, PERP, PFN3, PLA1A, PLXNB3, PRKAR2A, PRKCE, PTDSS1, RARS2, RASGRF2, RFXANK, RXRA, SOS2, SPRED2, TAS2R42, TLR3, TRHR, UGT2A3, VDAC2, WARS2, ST6GALNAC3
Negative_14303	F8, FST, ACOT12, ACP2, ADCY5, ATP5G1, CACNA1I, CASP9, CCL13, CCNG1, CD40LG, CHRM3, CLDN14, CLDN16, COASY, CTTN, DDIT4, EGFR, FPGS, GALNTL2, GARS, GFPT1, GLG1, GNAI2, GNG13, GSTO1, HAP1, IGF1R, IMPA1, ITGA6, ITGAE, KLK3, LDHB, LTC4S, MAT1A, MCM6, NPR2, OR10A5, OR2T8, OR4D11, OR4F17, OR51I2, OR5AC2, OR5B12, OR5K1, OR5T3, OR6C6, OR6M1, OR8K5, P2RX1, PDE6H, PGK2, PHKB, PI4KA, PLA2G3, PLCE1, POLR2K, PPAP2C, PPP2CB, PPP2R1A, PRKAA2, PRKAG2, PRKY, PRLR, PSME1, PTDSS1, SEMA4C, SMAD6, SOCS3, STEAP3, STX18, STX2, TBL1Y, TLN2, TLR2, TUBB2C, UCP1, UGDH, UNC5C

Negative_14304	CFI, F3, NNT, PLN, RDX, SPN, TNF, ACVR1C, ACVRL1, ADRA1A, AGRP, AMD1, A MPD3, ARHGEF7, ATP12A, BCKDHB, BCL2L1, BDNF, C4BPA, CAPN2, CCR6, CD8 0, CLDN10, CYP2C19, DARS, DDHD1, DHCR24, DUSP1, F13A1, FGF6, FZD3, FZ D4, GLS2, GNB3, HADHA, HMGCR, HSD17B8, IFNA21, INSR, ISYNA1, ITGA8, KCNB1, KIR3DL3, LRDD, MAP4K2, MAPK7, MTAP, NMNAT3, NUMBL, OR10A2, OR 11L1, OR13D1, OR1N2, OR2L8, OR4A5, OR56A1, OR9K2, ORC6L, PFKFB1, PPC S, PRKCB, PYGL, RELB, SEMA3F, SLC12A2, SMURF1, STT3B, TAS2R16, TGFBR 2, TPM3, VANGL1, WASF1, WWP1, ATP6V0E1, B3GALNT1, CSGALNACT2
Negative_14305	OTC, PVR, UBC, XDH, ABCC8, ACSS3, ADCY9, ALDH1A3, ALG6, ARPC1A, ARPC5 L, B3GALT5, B4GALT4, BCL2, BET1L, CD27, CD80, CDC25C, CHPT1, CHST12, CLDN17, CNGB1, DIAPH1, E2F1, EIF4B, FCGR3B, GALNT13, GNAT3, HEXA, HS PA2, HSPA8, IDI2, IL12A, IPMK, LALBA, LDHAL6A, LIAS, MAGI3, MAML2, NC F2, NMNAT3, NTRK2, OR11H6, OR11L1, OR1Q1, OR51D1, PDGFD, PFN3, POLR1 B, RASGRF1, RELA, RHOA, RXRB, SH3BP2, SHC2, ST3GAL3, STK3, SULT1E1, T AS2R8, TUBA8, UGT2B11, ULK1, VDAC3, WNT16, ZMAT3, CACNA2D2, CSNK1A1 L, CTNNBIP1
Negative_14306	FYN, AANAT, ACOX3, ACSL3, ACTN4, ALPP, C1QC, CAMK2B, CCL22, CREB3L1, CRLF2, CSF2, CSNK2A1, CYP2U1, DGKG, DGKH, DPYSL2, DTX3, EARS2, ECSIT , ENTPD2, FABP4, HPRT1, IFNGR2, IGSF5, IL17RA, IL7R, ITGA7, KIR3DL1, KLRC2, LEFTY2, LIPA, LLGL1, MAP2K7, MAP4K2, MPDZ, OR1J1, OR2B2, OR2F 2, OR2G3, OR2T2, OR4C16, OR4L1, OR52L1, OR8K1, P2RX1, P2RX3, PDGFA, P IK3C2A, PIK3CB, PISD, PITX2, POLD1, POLE, PRKAG1, PRKAG3, RELB, RUNX 1T1, SARS, SEMA4C, SMC1B, SOCS3, TAS2R13, TNFRSF9, WIF1, WNT6, ALDH1 8A1, GABARAPL1, HSD17B12
Negative_14307	C7, GBA, LSS, VCL, ACP6, ACTG2, ADCY8, AGPAT1, ALDOC, ARRB2, ARSB, B3G NT5, CACNB4, CACNG8, CARD11, CCR5, CDC42, CDS1, CHRM5, CYP11B1, CYP2 1A2, CYP26A1, ENPP1, FARP2, FIGF, GUCY1A2, HYAL2, IDH1, IL21R, INHBE , ITGAE, ITGB6, JAM3, MAN1A1, MCM7, MECR, NEGR1, NQO1, OR13G1, OR2V2, OR51E1, OR52R1, OR5B21, P2RX3, PFKFB4, PIK3C2G, PIK3CB, PLCD1, PTPR R, RETSAT, RHOQ, RPN1, SDC4, SH2D1B, SLC2A2, SUV39H2, TAS2R1, TAS2R4 1, TFDPI, UCK1, ULBP3, PDCD1LG2
Negative_14308	CAD, F7, NOG, PLN, PML, AGPAT6, AREG, ARRB2, ATP13A2, B3GAT3, BCAT1, B UB1, CAMKK2, CCL15, CHAT, CHEK1, CLTA, COQ3, DDX56, DHX58, DLL3, DUSP 5, FGF23, FPGS, FUT5, FZD5, G6PC2, GALNT11, GALNTL5, GLI3, GRAP2, GST M2, HAP1, IL22RA2, IPMK, LTBR, MAP3K1, MAPK1, MMP7, NCR3, NEU4, NFATC 1, NTF4, OR10A6, OR4N5, OR4X2, OR8A1, PIK3CG, PLXNC1, RAB23, RAB5A, R APGEF2, RXRG, SDHC, SETD1A, SMAD4, SORBS1, TAS2R10, TAS2R14, TBL1XR 1, TBXAS1, TPM3, TRAF4, TUBAL3, TYMP, WNT10A, HLA-DQB1, SERPIND1
Negative_14309	C3, CAD, MAG, NF1, PTS, TK2, WAS, ACTN2, ALDH1B1, AMPD2, BCAR1, CAMK2G , CCDC6, CCL21, CCL4, CDH15, CHST13, CREB3L3, CTSG, CTSL1, CYCS, CYP2 1A2, CYP4F3, DAPK2, DDX51, DTX4, EXOC7, FABP4, GALC, GALNT10, GCDH, G NG13, GZMA, HA02, ICAM2, IL18, IL23R, IMPA2, LAMC1, LDHB, MAFA, MAP2K 1, MAP2K5, MAPK14, MMP14, NEUROD1, NOS3, NRXN2, OR51G1, OXSM, PANK2, PFKFB2, PIP5K1B, PLCB2, PPP5C, PRODH, RASA2, SIGLEC1, ST3GAL1, TAS2 R1, TFDPI, TUBB4Q, WNT9A, YWHAH, ARHGEF12, CSNK1A1L, EIF4EBP1
Negative_14310	GH1, GNS, TKT, A4GALT, ABLIM3, ADH1A, ALDH3B2, ALG6, ALOX12, ARSB, AT G12, BCL2, CACNA1F, CACNG8, CCNB3, CD14, CDH3, CHAD, CYP4F2, DPM3, DU SP7, FGF23, G6PC, GALK2, GALNT6, GSTZ1, HCST, HRH2, HYAL1, HYAL2, IL1 B, IQGAP1, ITGA11, KAT2B, KLRC1, MAN1B1, NFATC2, OR10Q1, OR51G2, OR5 2I1, OR5P3, PCK2, PDHA2, PKLR, PNPLA3, POLD2, PRLR, PTGES2, SEMA3E, S LC25A4, SPCS1, TFDPI, TRAF4, UGT2B10, UGT2B28, CACNA2D4, SERPIND1

Negative_14311	DAO, DCN, FER, SP1, ACPT, ADORA2A, AKR1C3, ALG6, BNIP1, CCND1, CD36, C IITA, CLDN22, COL6A2, CXCR5, CYP21A2, DDX51, EFNA3, EGLN3, EIF4E2, F RAT2, GCH1, GNPAT1, GSTM5, HIBADH, HNF4G, HSD17B1, HSPA2, JAG2, MAP 3K14, MAPT, MKNK1, MYL5, NARS, NRXN1, OCLN, OR1C1, OR4C12, OR4D9, OR4 M1, OR51F2, OR51L1, OR51M1, OR52E6, OR52N1, OR6B3, OR6N2, OR7C1, OR7 C2, OR8B4, PFKFB2, PIGB, PIGO, PIK3C3, PLA1A, PLIN, PNPT1, POLD1, PPP 1R3C, PROS1, PVRL2, PYGB, SAT2, SLC25A6, SOS1, SPTLC2, SREBF1, TGFBR 1, TLN1, TP73, TRAF5, WIF1, YWHA, MAPK8IP2
Negative_14312	AMH, EBP, F9, GSN, GSS, ID4, UBB, ACTG1, ATP5H, B3GAT3, BAIAP2, BNIP1, CCL23, CCR7, CD55, CD8A, CDC7, CLDN16, CLDN20, COL5A3, ENPP7, EP300, FGF6, FMO3, GNB3, GSTO2, HAP1, HSD3B1, IDH3G, IFNA17, IFNA5, IL17RA, IL2RG, INADL, ITPA, KITLG, LAP3, LARS, LDHA, LHCGR, MAP2K2, MAP4K4, M ASP2, MCEE, MDH1, NCOA4, NCOR1, NCR2, NRG4, OR1L1, OR1N1, OR2A25, OR2 B2, OR2T29, OR4E2, OR4L1, OR4S2, OR7A10, OR8B8, ORC6L, P4HA2, PDE4D, PDGFB, PLA2G10, PLCB3, PPP2CA, PTTG1, SETD7, SETD8, SMPD4, SNAP23, S PHK1, SUCLG1, TAS2R50, TCF7L2, THBD, TNFRSF9, TNFSF11, TRHR, TSLP, T UBA1A, UBA1, UGT2A1, ULK1, UPP1, VTI1B, WASF3, WNT11, WNT3, ARHGEF12 , HLA-DRB5, SERPINB5, SERPINE1
Negative_14313	AK7, CBL, F8, FER, PGF, TK2, ACMSD, ACP6, ACYP1, ALPI, B3GNT5, BLNK, BM P5, BMP7, BPNT1, C3orf10, CACNA1H, CAPN2, CCL26, CDC26, CREB3L2, CSA D, CYP26C1, DGKE, ERBB3, F2RL1, FMO3, GANC, GPX5, GUCY2C, HMGCR, ICAM 1, IFNA10, IL15, IRF9, JAG1, JAG2, JAK1, KIR3DL3, MAD2L2, MAN1B1, MOV 10L1, MYL5, NCKAP1, NLGN2, OGDHL, OR12D3, OR1D2, PAK1, POLR2G, PPARD , PPP2R2C, PPP3R1, PYGM, RHOD, RPS6KA6, SMAD9, SULT1A1, SYNJ1, ULBP1 , VKORC1, WNT2, PLA2G12B
Negative_14314	HDC, PGD, ACPT, ADCY1, AXIN2, BIRC2, CAMKK2, CCNH, CREB3L4, CYP19A1, DAPK3, DGKH, E2F5, ENPP2, EPB41, EVI1, F13A1, F13B, FDFT1, FUT8, GAL3 ST1, GNPAT, GPAA1, GRPR, GUSB, HMGCS2, HSD17B2, IL28RA, INMT, IQGAP2 , ITGA2B, MASP1, MLYCD, NAGS, NOD1, NR1D1, NTNG1, NUMBL, OR10G7, OR10 X1, OR4A5, OR4F15, OR51S1, OR52D1, P4HA1, PDE11A, PIGT, PRKAB1, RHOD , TRAF6, ATP6V1B2, PNLI1P1
Negative_14315	CDA, DCT, ACYP2, ADRA1D, ANAPC7, APOA2, BACE2, BDKRB2, CADM1, CASP3, CBLC, CD14, CD244, CD47, CDKN1C, CPS1, CTNND1, CYP3A7, DGKE, DHX58, D LL4, DUSP2, ENTPD6, F2RL3, FTCD, FUT1, G6PC2, GADD45A, GALNT12, GIT1 , GNAQ, GRLF1, GUCY2F, HLCS, IL12RB2, IL17B, IL20, IL28RA, IL4R, INHB A, INPP5A, KLRC1, LIPA, MCM4, MNX1, MYH2, OGDHL, OR11H6, OR4X1, OR51M 1, OR52J3, OR5V1, PCCA, PCYT2, PIGW, PLA2G3, PLOD1, POLR2A, POLR2I, P PCDC, PPT1, PRKY, RELB, RND1, RPN2, SELPLG, SH2D2A, SMC1A, SNAI2, SUL T2B1, TJP2, TRAF5, TRAF6, VAMP2, WNT16, YWHAQ, CACNA2D1, KIR2DL5A
Negative_14316	CDA, CFI, DBT, PC, SHH, AASS, ABI2, ACADVL, ACOX1, ARHGEF6, ASNS, ATG7 , B4GALT5, B4GALT6, BDNF, CADM1, CD247, CDH5, CDKN2A, CHKA, CLDN7, CL TB, COQ6, CYP2C18, CYP2E1, CYP2S1, DHDH, DPAGT1, EGFR, ENTPD5, FGF14 , FGF19, FMO4, FRAP1, G6PC2, GALNT5, GALNT9, GBA3, GSTM5, GUCA1C, GUC Y2F, HGSNAT, HSD3B7, IDH3B, IL1R1, IL6R, LEPR, LIPE, LRRC4C, MAP2K1, MAP3K5, MCCC2, MGST1, MYH7, NCOA4, NME4, NOX1, NRXN1, NSD1, NT5M, OCR L, OR13D1, OR14A16, OR2M2, OR4N4, OR52M1, OR5K1, OR5L2, OR6S1, ORC5L , PDGFD, PFKL, PLK1, POLD4, PRKAG2, PVRL3, PYGM, RARA, RDH16, RPE65, S ETD2, SFRP5, SOCS3, ST3GAL1, STK4, THBS4, TJP1, TUBA3E, TUBB, UCP1, U NC5A, VCAM1, CSGALNACT2, CTNBP1, HLA-DPA1

Negative_14317	APP, CRH, F11, F3, JUN, OGT, TNF, ACACA, ACVRL1, ADCY6, ADSSL1, ALPPL2, ARRB2, ATP5I, BCKDHB, BCL10, BMP7, CDC14B, CDC25A, CHRM5, CLDN18, CXCL1, CYP26C1, CYP2C9, CYSLTR2, DTX3L, DUSP5, ENTPD8, FASLG, FCGR3A, FGF4, FTCD, GALM, GPAM, GPD1L, GUCY2D, HSD17B8, HSD3B2, HTR7, IMPA2, ITGAD, ITGAX, KLRD1, KYNU, LDHD, LIAS, MAP2K2, MAP3K5, MGAT5, MGST3, MLLT4, MYH4, NCF1, NEUROD1, OLAH, OR4F17, OR4Q3, OR51F2, OR56B4, OR5B21, OR5K2, OR6C4, OR9G1, PCNA, PECAM1, PFAS, PFN3, PIGO, POLD3, PRKAB1, PRSS2, PTEN, PTGES2, PTPMT1, PYCRL, RARS2, RPS6KA5, SC4MOL, STAT3, TCF7L2, TNFSF11, UGT2B17, UMPS, YES1, ATP6V1G2, PRICKLE1
Negative_14318	AGL, BCR, CFI, HGD, HYI, ID3, ME1, MOS, AMY2A, AMY2B, ANPEP, ARNT, B4GALT7, BACE1, BLVRB, CACNA1A, CAMK2A, CAV3, CCL21, CCNE2, CCNH, CHRM3, CNTFR, CREB3L2, CSF2, CSNK1G3, CXCL9, CYP2C8, CYP4A22, CYSLTR1, DDX41, E2F4, FGF9, GFAP, GLB1, GNA12, GNAS, GPLD1, HHIP, HYAL1, IL13, IL8RB, INADL, LFNG, LYZL1, MAFA, MYH13, MYH4, MYH6, NAMPT, NCKAP1, NOD1, NTRK1, OR12D3, OR2A2, OR2L3, OR2T8, OR4E2, OR4K13, OR4K15, OR51S1, OR51V1, P4HA2, PARVB, PCK2, PDK1, PHKA1, PIGF, PITX2, PLCB2, POLA1, PPAP2A, PRKCD, PRPH, PTPRM, RAPGEF1, RDH11, RDH12, RERE, SEPHS1, SHC2, SLC27A1, SMURF2, SOCS1, SOCS3, SOCS7, STAM2, TCF7L2, UPB1, XCL2, XYL B, ATP6VOE1, CACNA2D2
Negative_14319	IL7, JUP, MVK, SFN, WAS, ACADM, ACOX3, ACSM3, ADRB1, ALG13, AMHR2, ANAPC10, ANAPC11, ARD1A, ARHGAP5, ATP5D, ATP6V0C, CCL4, CCNG2, CCR3, CDC2, CHRM3, CISH, CSNK2A2, CTNND1, CYP4F3, DDOST, DNMT1, DPYD, FGF22, FUT5, FZD10, FZR1, GALM, GATM, GGT7, GNRH1, GSTM1, HSD17B8, IL5RA, LAMB2, MYH2, NOS1, NT5C3, OR2C3, OR2W1, OR52E4, PGM1, PI4KB, PLEKHA8, P OLR1D, PPP2CA, PPP2R1B, PPP3CC, PRKG2, PTDSS1, PTGFR, PTGS2, SH3BP2, SOCS4, SSX2IP, TIAM2, UBA7, UBE2L6, UGT2B11, VKORC1, WNT5A, YARS, ASDHPPT, ATP6VOA4, B3GALNT1, CACNA2D1
Negative_14320	FGB, MPZ, MTR, MUT, PVR, AADAT, AASDH, ACADSB, ADCY6, ADRB2, AFMID, ALDH9A1, ANAPC7, ATP5H, B3GNT2, B3GNT4, B4GALT2, BCMO1, BRAF, CCL17, CCL3, CCR1, CHIT1, CLCA2, CSDA, CXCL9, CYP2A7, DKK4, DNMT3B, EPHB2, ETNK1, FZD9, GAD2, GALK2, GSTO1, HCCS, HLA-C, HSPA2, INHBE, INPP5E, LAMB2, LEF1, LIMK2, MAD1L1, MAPK1, MYH1, MYL5, OR10G3, OR11H1, OR1S1, OR2A5, OR2H2, OR2M4, OR52J3, PIK3C2B, PLCE1, PLTP, PPCS, PTAFR, SETD7, SLC27A5, SPTLC2, ST3GAL2, STX7, TM7SF2, VAV3, WNT3A, ATP6V1C2
Negative_14321	C2, FGB, HYI, KDR, KMO, MAX, SRF, ACPT, ADCY4, ALG3, B3GALT4, BMPR2, BNIP1, CACNG1, CADM1, CCR1, CDKN1C, CDKN2D, CES1, CMPK2, CPT2, CSF2RA, CUL1, CXCR5, DIAPH2, ENTPD7, EPHA6, EPHB6, ETS1, GARS, GCDH, GNAQ, GS TT1, HMOX2, HPSE, IBSP, IFNGR1, IL22RA2, IL28RA, IL7R, IL8RB, IQGAP2, ITGB3, L1CAM, MAOB, MCM7, MGAT4B, MGAT5, NTRK2, NUMB, OR10G3, OR2AT4, OR4F5, OR52N4, OR5A2, OR5M8, OR6B2, OR8D4, PDE10A, PDE1C, PIGA, POLA2, PRKAG1, PRKCI, PSME2, PTCRA, PTPN11, PTPN7, RAC1, RBL2, RFXAP, RUVBL1, SDC3, SHC1, SMC1A, STAT6, TACR1, TUBA3E, TXNDC12, UAP1, ZBTB16, PPP1R12A
Negative_14322	BAD, CP, GNE, LCK, MPI, SMO, ACAA1, ARRB2, BACE1, BMP8A, CKMT2, DGKQ, ENAH, ERBB3, FADD, FPGT, FZD1, G6PD, GNA11, GNAT3, GSTA3, IDH3B, INPP4B, LEFTY1, LRP6, LYPLA1, MINPP1, MITF, MKNK1, MYH8, NADK, NAT5, NMNAT3, OR10G7, OR10H4, OR2T4, OR8B8, OR8G1, ORC4L, PEMT, POLR2C, PPCS, PRKACG, QPRT, RDH10, RRM2B, RUNX1, SEMA4B, SEMA7A, TNFRSF8, TRAF6

Negative_14323	CKM, MPZ, PGF, SRC, ACADL, AMD1, AMY2B, BET1, BLVRB, CCL25, CD55, CDK4, CDKN1A, CHEK2, CKMT2, CX3CL1, CXCR4, CYBB, DDIT4, EREG, FDFT1, FLT4, FOXO3, FUT4, GALNT11, GCLC, GGCX, GRLF1, GSTP1, HEMK1, HSD17B2, IFN A6, IFNGR1, IFNW1, IL13RA2, IMPA2, INPP5B, IQGAP3, ITGA6, MCM4, MINP P1, NMNAT1, NRXN1, OCLN, OR13G1, OR14J1, OR2AG1, OR51F2, OR52L1, OR5 AN1, PCCB, PDE6D, PDGFD, PIAS4, PIGT, PIK3CB, PIP4K2B, PLCB1, POLD3, POLR2H, RELA, SORD, TLR3, TNFRSF4, TNFRSF9, TYMS, UROS, WNT8A, B4GAL NT1, HLA-DRB5, KIR2DL5A
Negative_14324	BTD, CRH, GGH, GP6, HK3, MSN, ABL2, AMY2A, ANAPC7, B4GALT4, CARS2, CCN B3, CFL1, CHRM2, CLDN2, CLTB, CYP2C9, CYP3A4, CYSLTR2, DGKD, DHODH, D HX58, EARS2, ECSIT, EPHB2, FTMT, G6PD, GALNT5, GALNTL2, GALT, GDF5, G NAI1, HDAC2, HTR7, IFNA5, MCM7, NRG3, OR11L1, OR1D5, OR2B6, OR2T12, O R7D4, OR9K2, PDE4D, PDE6H, PGLS, PLA2G4A, PLCD1, POLE3, PPA1, PPP1R3 D, PPP2R2D, PPP3R1, PRKAA1, PROC, RAPGEF4, RRAS2, RRM2, SSH2, STX7, S ULT1E1, TALDO1, TLN1, TRAF2, TSC1, UBA1, UGT2A3, VAV1, WASF3, WNT8A, ATP6V1G3, MAPK8IP2
Negative_14325	AK3, AUH, C8G, CP, CSK, DAO, EBP, KMO, PAH, TNR, AADAC, ACP6, ADH1B, AKR 1C2, ALAD, ALOX12, ALPI, ANPEP, APOA2, ARHGEF1, ATG3, ATP6V1H, B4GAL T7, BIRC3, C1GALT1, CALML5, CALML6, CCL16, CCNH, CD40LG, CD72, CHSY3, CREBBP, CTNNB1, CYP2B6, DGKA, E2F3, EPHA5, FPGT, GCNT2, GLUL, GNAS, GRM1, GSTP1, HLA- DMA, HPRT1, ICOSLG, IL15, INHBC, INHBE, ITGA3, ITPKB, KIR2DL3, LDHAL 6A, LLGL2, MAML1, MAP3K13, MAP4K3, METTL6, MYH15, NCOR2, NLGN1, OR10 C1, OR10G2, OR10J5, OR51V1, OR8A1, PIAS1, PIK3R5, POLR2A, PPP1R3D, P RPH, PSME2, PTDSS1, PTPRR, RARS, RFXAP, RHOQ, SC5DL, SKP1, SOAT1, ST3 GAL1, TAS2R38, TFPI, UBA7, WHSC1, WNT5B, WNT9B, YWHAQ, ATP6V0A4, ATP 6VIC1
Negative_14326	AR, FER, IHH, ACO2, ACTN1, ADH1A, ADH5, ADORA2B, ANAPC4, ARHGEF4, ATP 2A3, CCL2, CHRM5, CLDN1, CNTN2, COQ5, CRLF2, CYCS, DPM2, DRD1, EFNBI, EI24, EPB41L1, FGFR3, FGFR4, GRIA1, HADHA, HNF4G, HSD3B7, IL10RA, LA MC3, LEF1, LFNG, MAML1, NLGN1, NMNAT2, OR2C3, OR52L1, OR6M1, OR6S1, O R8D1, PFKFB3, PHKG2, PIGO, PIK3C2G, PIP5K1C, PLA2G4A, PLCG2, PPP5C, PTTG1, RFXANK, SEMA4B, SETDB1, SHC4, TBL1Y, TIAM2, TRDMT1, WBSCR22, TNFRSF18
Negative_14327	BAX, DCK, MVK, RET, ADIPOR2, ANPEP, BCAT1, CACNG1, CCNG2, CHRM1, CKMT 2, CYFIP1, DAAM2, DDX50, DDX52, DHRS9, EFNA2, ETNK1, F13A1, FGF20, FL T3, GOSR2, HAAO, IL13RA1, IL22RA1, KIR2DL3, LIPG, MAN2A1, MCM4, MTHF D1L, NEFM, NSD1, NTN1, OR10AD1, OR14C36, OR1E2, OR2G3, OR4C6, PAX4, P HKA2, PISD, POLA1, PPP1R3C, PPP3R2, RELA, SEMA3D, SENP2, SETDB2, SH3 BP2, SOS2, SULT2B1, TBXA2R, UBE2L6, HLA-DPB1, MAP3K7IP2, TNFRSF1A
Negative_14328	DDO, RFK, ABLIM2, ALG13, AMDHD2, ASIP, ATP5E, BCMO1, CACNG6, CAMKK2, CCL7, CKS1B, CYP2A7, DCTD, DHRS3, EDA2R, ENTPD5, FECH, FGF17, FGF3, F LT3, FZD1, GALNTL4, GLYCTK, GNMT, GUCA1C, HLA- G, HSPA2, INPPL1, LARS, MAP3K14, MAPK11, MECR, OR10A4, OR1D5, OR4F6, OR4K15, OR6F1, PFKP, PIK3C3, PLCB1, PLK1, PTGES, RALA, SDHA, SKIV2L2, SLC2A2, TP53I3, TUBA4A, UGP2, VASP, VDAC2, YES1, ATP6V0A1, HLA- DQA2, HSP90AA1, TNFRSF11A, TNFRSF12A

Negative_14329	ATM, C4B, EGF, HPD, ME2, ME3, AANAT, ADCY2, ADIPOQ, ALOX5, AOC3, ATG12, B3GAT3, BNIP1, CASP3, CCR10, CHUK, CRKL, CYCS, DEGS1, DGKZ, DUSP14, FGF7, GALNT5, GNG3, GRIN2B, GZMA, IDH3A, INPP5B, ITGAE, ITPK1, ITPKB, KAT2A, KLRD1, MAN1A1, MAP2K2, MYLK3, NFATC4, NFE2L2, NFKBIA, NFYC, NME4, NR1D1, OR1J4, OR1N2, OR2B6, OR2T29, OR4A16, OR4B1, OR4D9, OR4S2, OR52A1, OR5T1, PANK3, PAX4, PDE6H, PGM1, PIGL, PIGS, PIM2, PIP5K1C, PLCB1, PRKAA2, PYCR1, RAC3, RETSAT, SEMA4F, SLIT1, SPP1, STX4, SUCLG1, TGFBR1, TJP2, TRADD, ULBP1, UXS1, WNT10A, XIAP, YWHAH, CACNA2D1, CTNNBIP1, SERPINE1
Negative_14330	GBA, KMO, SRC, SRF, STS, TK2, TKT, ACAD9, ACTA2, ADCY8, AHCYL1, AOC3, ARSB, ATN1, ATP5G2, CACNA1A, CASP9, CCL21, CD40LG, CDC25C, CFL1, CLCA4, CPOX, CYP2S1, DDX51, DHFR, DKK2, DTX3, EFNA5, EPB41L2, FABP4, FBP2, GNB1, HDAC1, HDAC2, IDH2, IL10RA, IRAK1, KCNB1, KIR2DL4, KIR2DS4, KLK3, LIPA, LIPC, LM07, LTC4S, LYZL1, MNX1, NARS, NCF1, NCKAP1L, NOD1, NRXN1, OR2T6, OR4N2, OR52B6, OR5V1, OR6C4, PDE4D, PHKB, POLR2C, PTGER1, PYGM, RARA, RASGRF1, SARS2, SKP2, SLC27A4, SQLE, SRGAP2, STK4, TAS2R49, TGDS, TGFBR1, TNFRSF9, ST6GALNAC5
Negative_14331	ABO, AGK, AK2, HYI, OGT, ABCC8, ALOX5, ANAPC2, ANAPC7, AOX1, ASNS, ATP50, ATP6V1A, B3GNT4, CACNA1F, CACNB2, CHSY1, CKS1B, CTF1, CXCL3, CYP1A2, EPHA3, FABP4, FGF11, FGFR4, GCNT4, GMPA, GSTM1, HMGCL, HPSE2, HSD11B1, IL10, IL22RA1, IPMK, ITGB6, ITGB8, LEPR, MAPK14, MAPT, NAT2, NCR1, NME2, OR10C1, OR2A4, OR2G6, OR4K5, OR6M1, PDGFD, PHPT1, PIGB, POLD2, PPP1R3C, PRKCZ, PTSS1, PTK2, RARA, RHEB, RHOA, SMAD4, SMAD6, SRD5A1, SRD5A2, SSX2IP, SUCLG1, SULT1A2, TACR2, TXNDC12, VAMP1, WASF2, ATP6VOD1, HSP90AA1, PHOSPHO1
Negative_14332	AK1, AMH, CEL, CR2, HK2, TKT, ACOX1, ACVR1B, AGXT2, ALAD, ARG1, ARPC5, ASIP, ATP13A2, ATP5C1, B4GALT2, BMPR1B, CACNA1A, CALML6, CAV3, CCL1, CD48, CFL2, COL2A1, CPT1A, CRY2, CTNNA1, EDNRB, FGF21, FLT3LG, FMO1, FOXA2, GNAQ, GNRHR, HDAC1, HSPB1, HTR4, IFNA4, IL1R1, IL20, L1CAM, MAP3K8, NANS, NCKAP1L, NEU3, NODAL, NRAS, NUDT8, OR10G3, OR13A1, OR4K1, OR51A4, OR51B2, OR56A4, OR5AC2, OR5B12, OR6C76, OR7C2, PAK2, PER3, PFAS, PGAM2, PIK3C2B, PIP4K2C, PMVK, POLR1C, POLR2J, POMC, PON1, PRSS3, PYGM, RAC2, RARS, RASSF1, RCHY1, RETSAT, SEMA4B, SETD1A, SOCS3, SPCS1, SULT1A1, TNFSF4, TRADD, TUBA1C
Negative_14333	CKB, FST, HDC, LHB, LPO, LTB, NLK, PXN, SCD, SMO, ACVRL1, AKR1C4, AMPD3, CCNH, CD47, CDC20, CLDN2, CLDN4, CLOCK, CRB3, DERL1, ENTPD4, FUT4, GIT1, GUCA1C, GZMA, HCCS, ICAM1, IL17A, IL2RG, KLK3, LGMN, MAP2K6, MAPK1, MPST, NAT5, NFKB2, NT5C2, NUDT9, OR11H6, OR1N1, OR1N2, OR2F1, OR4K14, OR4K2, OR56B4, PCYT1A, PCYT2, PEMT, POLR2F, PON1, PPA2, PPM1D, PRKCE, PRSS3, PSEN1, PYCRL, RFNG, RPS6KA2, RUVBL1, SEMA3C, SHMT2, SPP1, STAT4, STAT5B, SULT1A4, SYNJ1, TIRAP, TLR9, TNFSF12, TRAF1, TUBAL3, UNC5C, VANGL1, HSP90AA1
Negative_14334	LSS, AHCYL2, AK3L1, BET1L, BUB1B, C5AR1, CAMK2B, CCL16, CCNA1, CHDH, CTNNA1, CYP2U1, CYSLTR1, DARS, DUSP4, ECHS1, ENPP3, EPHX2, FLOT2, GART, GLB1, GLS2, GRIN2A, IFNA8, IRAK4, ITGB3, KCNJ11, KLKB1, LDHAL6B, LRAT, MFNG, MNX1, OR11A1, OR13C3, OR1L1, OR2AE1, OR4C15, OR4Q3, PLAUR, PRKAG1, PTPN1, PTPN11, RASGRP4, RPN2, SETD2, SHC2, SSH2, STAT5A, SUFU, TALD01, TRPM5, WNT6, ZFYVE9, ATP6V1C1, ST6GALNAC3



Negative_14335	C2, FH, FN1, SMO, ABL2, ACADSB, ADCY9, BCL2L1, BMPR1A, CACNG3, CCKBR, CCNB3, CMPK2, CPOX, CTNNA1, CYP21A2, DARS2, DPM2, DRD1, EHMT2, ETS1, FMO2, GSTA2, IL22RA2, IMPDH1, MAP4K2, MYH6, NAGA, NKX3-1, NR4A1, OR10H3, OR1S1, OR2T11, OR52E8, OR8A1, OSMR, PCK2, PDIA4, PFN3, PIGX, PTPRR, SLC2A1, SMARCA2, SOX17, STX16, SUV39H2, TAS2R16, TSHR, TUBA3E, UGP2, WNT2B, YARS2, ATP6V1B1, B3GALNT1, CSGALNACT1, GABARAPL1
Negative_14336	C7, CBS, CFD, EBP, MAG, PGP, ADCY3, ALOX5, AMPD2, AOC2, ATP6V1D, BCMO1, BLVRA, C3orf10, CASP3, CASP9, CCL17, CCND1, CDKN1C, CLDN6, CNTN1, CPT1B, CRKL, CXCL5, E2F3, EFNA5, FARP2, FUT8, GNA12, GNG3, GYS2, HSPA2, IL5RA, IL7R, ITGA9, ITGB5, ITGB6, KARS, LRP6, LTBP1, LYPLA1, MDH1, MEF2C, MPZL1, MRAS, MTMR1, NEU1, NFAT5, NPR1, NUDT8, OR10P1, OR2Y1, OR4X2, OR51L1, OR52K1, OR52L1, OR52N5, OR56A4, OR6T1, P2RX6, PAPSS2, PARAD3, PAX4, PCCA, PDX1, PFKFB1, PIK3C3, PPARG, PPP2R1B, PRPS2, PTPMT1, RBPJL, RPS6KB2, SEPHS1, SETDB2, SOD1, TBL1Y, TBXA2R, TSHR, TUBB1, UCP1, UGT2B11, VDAC1, WNT7A, TNFRSF1A
Negative_14337	ADA, ARPC5, ARRB1, ATP6V0C, CADM3, CCND2, CCNG2, CD3E, CES1, CKMT2, CYP4A11, ENPP1, ENPP2, ERBB2, FCGR2B, FDFT1, GALNT1, GALNT12, GALNT2, GJA1, HSD11B1, HSD11B2, HSPA2, IL6ST, ITGB2, ITGB7, MAP2K2, MAP2K5, MAPK7, MINPP1, MYL7, NFASC, NOTCH3, NQO1, NRG4, NSDHL, NT5C, OR10Z1, OR14A16, OR2A5, OR2B11, OR2G2, OR51A7, OR5D14, OR5H2, OR6C3, OXTR, PDGFD, PIK3R2, PLOD2, PNLIP, PPARA, PSEN1, PTPRC, RFXANK, RPS6KA5, SETD1A, SHISA5, SRD5A2, SRGAP2, ST3GAL3, TNFSF9, TRPM5, TUBB2C, TYMS, UGT2A1, UROC1, UROD, VTI1A, YOD1, ST6GALNAC6
Negative_14338	ATM, BTC, CD2, CFH, NF1, ADSL, AGPAT6, AHCYL1, AKT1, ALDH3A2, ALG13, ARHGEF2, ARNT, ARSE, ATP5F1, CASP8, CCL20, CHRM1, CLDN2, DHCR24, DIAPH3, EFNA4, EI24, FBP2, GSK3B, GUCY1A3, HNMT, HTR5A, IFNGR2, IGF1, IL28A, IQGAP3, LAMB4, LTC4S, MTHFD1, OR10A6, OR2F1, OR4C15, OR4C16, OR4S2, OR4X2, OR5D16, OR5P2, PDE3A, PDHA2, PGM2, PLXNC1, PRKAR2B, PRKCG, PTTG1, PVRL1, RAPGEF4, RARS2, SELP, SFRP1, SULT2B1, SYNJ1, THY1, ARHGEF12, HLA-DPA1
Negative_14339	AGK, C8G, CP, GGH, GP5, ACADM, ACSL6, AMPD1, ARHGEF4, ARPC1A, BMP4, CACNG6, CANT1, CASP10, CASP7, CD79A, CDC6, CDKN2D, COL4A2, CTNND1, CX3CR1, CYP2E1, CYP8B1, DARS, ENPP1, FADS2, FUT9, FZR1, GLDC, GLI1, GNA11, GRHPR, GRIN2D, GSTA1, GUCY1B3, H6PD, HDAC2, IKBKB, INHBA, ITGAE, ITGAV, ITGB1, MAP2K2, MDM2, MLYCD, MTAP, MYH10, MYH11, NANS, NKX2-2, NKX6-1, OR13C5, OR1M1, OR4F17, OR51L1, OR52M1, OR5M3, OR6Q1, OR9A4, OR9Q1, OXCT1, PFAS, PFKP, PGAM4, PIGF, PIPOX, PITX2, POLR3G, PPARA, PRKAB2, PRKCG, RAB5A, RUVBL1, SEMA3G, SENP2, SESN2, SLC33A1, SPRED2, STX5, SV2A, TAS2R5, THBS1, TYK2, ULK1, ATP6VOD1, ST6GALNAC6, TNFRSF6B
Negative_14340	DBH, DCC, HK2, ID4, IVD, MYC, TNF, ACAT2, AMPD3, APOA1, ATP5G1, B3GALT4, CACNB1, CARS, CCR3, CD28, CDS2, CMPK1, CTF1, DGKB, DOCK1, DUSP8, EXTL3, GALC, GP1BA, IL29, JAK1, JAM2, KAT2A, MAN1A2, NR1D1, NT5C, NTRK2, NTSR1, OR10J5, OR56B4, PGK2, PPP1R3D, PRKAR2A, PROS1, SFRP5, SOCS3, SRGAP2, SUCLG2, TACR2, TUBB2A, TYRP1, UGCGL2, WNT5B, XCL1

Negative_14341	CD4, ID2, KDR, LTB, TK1, ACP5, ACP6, ACVR2A, ADH1A, ADRB3, ALDH1A2, ALPP, ARPC1B, ATP5B, ATP5L, BCL2, BDKRB2, CACNG2, CALML3, CCKAR, CCL19, CD48, CDH3, COMP, CSNK1A1, CTPS2, CXCL11, CXCL13, CXCL2, DDX51, DER A, DHRS3, EDNRA, EIF4E2, ENAH, EPAS1, EPHB4, FGF20, FMO2, FOXA3, GCH1, GCNT3, GLUD1, GNPAT1, HPSE, HSD17B1, IL5RA, LIPG, MAGI3, MARS2, MA SP2, MGAM, MNX1, NME7, NR1D1, NSD1, NTSR1, OR10AD1, OR1L6, OR2B2, OR2 G2, OR51B5, OR51F1, OR52B4, OR52M1, OR52N5, OR5AC2, OR8B12, P2RX3, P 4HA1, PARD6G, PIK3C2A, PLA2G5, POLR3A, PSAT1, PTDSS1, PTGDS, PVRL4, PYGB, PYGL, PYGM, RAB23, REL A, RIPK1, ROCK1, RPN2, SEMA3F, SRGAP1, TL R3, TRAF5, TYMS, WNT10B, ZFYVE16, CSGALNACT1, HLA-DRB4
Negative_14342	C8G, CDA, CGN, F11, GPI, LAT, LPO, SRM, UBB, ADH4, AGPAT4, ALDH9A1, ARN T, ATF4, BHMT, CLDN5, CTNNA1, CYCS, CYFIP2, CYP7A1, DBF4, E2F4, EDA2R, EDAR, EP300, F11R, FABP1, FABP3, FGF9, FLT3, FMO4, GALNT5, GNG13, HE MK1, HRH1, HSPA8, IL12RB2, IL22RA2, INPP1, ITPKA, KIR2DL2, LCMT2, MC CC1, NADK, NANS, NCSTN, NFATC1, NOS1, NOX1, OR2D3, OR2L8, OR51D1, OR5 C1, OR6C2, OR7G3, OR9I1, P2RX1, PARVG, PGS1, PITX2, PSME2, PTTG1, RAS GRP1, RFWD2, RFX5, RND1, RPE65, SARS2, SLIT2, SORD, STX1B, TCF7L2, TS HR, WNT10B, ZNRD1, AASDHPPT, ATP6VOD1, TNFRSF10C
Negative_14343	DHH, IHH, LCT, SP1, ACSM3, ATP4B, BDH1, BMP7, CSF2RA, CSNK1G1, CTBP1, CTPS, CX3CL1, DTX4, DUSP1, ECSIT, EXT2, FUT5, GALNT14, HMGCS1, HYAL2, IAPP, IL10, IL29, IL2RB, IL5RA, INPP4B, LYPLA1, MAOA, MTHFR, NCK1, N FYA, OPLAH, OR11A1, OR1G1, OR2Y1, OR5C1, OR5J2, OR6A2, OR8K5, POLR2H, POLR3D, RBPJL, SENP2, SMURF1, SPTAN1, STAT2, SUCLA2, TLN2, WNT5A, H SD17B10, SUV420H2, TNFRSF10A
Negative_14344	FGG, FH, GHR, SMO, ACTA2, ALDH3B1, AMDHD2, ARPC5, ATP12A, AVPR1B, B4G ALT7, BDH2, CACNA1C, CAMKK2, CDC42, CDKN2C, CLDN9, CXCR6, CYP3A43, D LL3, DVL2, EFNB2, ETNK2, GABARAP, GPX7, GSTA2, GSTM3, H6PD, HNMT, HTR 4, IAPP, IL10, IRF7, LDHC, MCM3, MYH10, NUDT12, OR10G2, OR1D5, PER2, P GS1, PIK3C2G, POLE, PON3, PRKAB2, PRKAG3, RDH12, RPRM, RXRG, SHC2, SO CS2, SOX17, SPRED1, STAT5A, STMN1, TAS2R10, TOMM40L, UBE2L3, MAP3K7 IP2, PNLIPRP1, SERPINE1
Negative_14345	CDA, CS, DAO, DCT, DUT, FES, HGF, IL8, KIT, KMO, LYN, TYR, ABAT, ACSM3, A QP7, ARNT, ATP6V1A, CACNA1A, CACNA1G, CASP8, CD247, CHST12, CHSY1, C NGB1, CNTN1, CTBS, DGKB, DKK2, DNMT3B, DTYMK, EPOR, FTMT, GADD45B, GL O1, GLUD1, GNAI3, GSTO2, HAO1, HARS2, HDAC1, HDAC2, HLCS, HPSE, IFNB1, IRAK3, KAT2A, LDHA, MAPK3, MAPK9, MCM6, METTL6, MTHFD1L, NAT2, NCK1, NUDT12, OR1K1, OR2B11, OR2T5, OR4L1, OR52N1, OR5B17, OR5J2, OR5M8, OR6T1, OR7D4, P2RX7, PANK3, PDCD1, PDGFA, PFAS, PFKFB4, PIAS3, PIK3R 3, PLXNB2, PORCN, RND1, SEMA3B, SEMA3G, SEPHS1, SH2D2A, UBE2L3, WNT5 B
Negative_14346	ADA, F11, F5, GH2, RFK, ABP1, ACLY, ACSM4, ACTA1, ALDH1B1, ALDH3B1, AL DH9A1, APRT, ATP2A2, ATP5H, ATP6V1F, ATP6V1H, BHMT, BIRC2, C5AR1, CA PN2, CCL24, CCL25, CCL7, CCR9, CDH2, CES7, CLOCK, CLTC, COL5A2, COL6A 2, CPOX, CXCR3, CYCS, DGAT2L4, DHCR24, DHRS4L2, DPM3, ENPP2, ERO1L, F ABP3, FZD7, G6PC2, GALNT10, GNAL, GRB2, GRLF1, HLA- DOA, HMGCS1, HSP90B1, IFNA14, IL11RA, IPMK, ITGA11, KNG1, LAMA4, MAP K3, MGAT2, MYH10, NAGLU, NPR2, OGDH, OR10A4, OR10AD1, OR10J1, OR13A1, OR13C9, OR1S1, OR2H2, OR4C6, OR6C74, OR6S1, OR8D1, OR9A2, PARD6G, P LIN, POLR1B, POLR1D, POLR3A, PRKAR2A, PRKCH, PVRL1, REL A, SIGLEC1, S MAD3, TNFRSF8, VAV3, WHSC1, XYL B, ATP6V1C2, MAPK8IP1, PHOSPHO1, PPP 1R12A

Negative_14347	AK7, FAS, LCK, MPL, TH, ACADSB, ACY1, ADRA1A, ALDH1A1, ALDH7A1, BUB1B, CACNA1C, CASP10, CDH1, CDKN1B, CIITA, CYP1A2, DARS2, DIAPH3, EFN3, ENTPD2, ETNK1, FMO2, GALK1, GLUD2, GMPS, GPLD1, GRIN2C, HDAC2, IARS2, IL17A, IL17RB, IL19, MAD2L2, MAN1A1, MAP4K2, MAT1A, MGST2, NFKB2, OR10Z1, OR1Q1, PANK2, PIK3R1, PIK3R4, PLA2G4A, POLR2I, PPAP2C, SHMT2, STX12, STX3, TACR1, TD02, TGFB2, TSLP, WASF3, CACNA2D2, CACNA2D4, CSGALNACT1, HLA-DQA2, TNFRSF12A, TNFRSF14
Negative_14348	C2, C8B, PTS, TXK, ACADVL, ADSS, AGXT, ARSA, CACNG8, CCL5, CCNB2, CCNB3, CCR1, CLDN6, COL11A1, CYP2C18, DGKH, DLST, DTX1, ENAH, ERBB3, FOXO3, GFPT2, GPX5, GRLF1, HPSE2, IFT57, ITGA7, KLK3, KLRD1, MRAS, MYH3, NANS, NME6, NOTCH2, OR5H6, OR6K6, OR9G1, PGAM2, PLCD4, POLR2C, PPARA, PSEN1, SEPHS1, SESN2, STX16, TAS2R48, TIRAP, TLR9, TRADD, WNT2B, GABARAPL2, PRICKLE1, SERPINE1
Negative_14349	BAD, LAT, MAX, ADRA1D, AKR1B10, AKR1C1, AKR1C2, ARHGEF6, BCL2L1, CACNG8, CCL14, CCNE2, CD8B, CES1, CTNND1, DBF4, ENTPD5, EPHX1, EREG, FGF14, FUT3, GCNT1, HTR6, IL10, IMPA1, LCP2, MAP3K14, NCKAP1, NEFH, NEU1, NFE2L2, NMNAT2, NRXN2, NUDT9, OCLN, OR2B11, OR51F1, OR51T1, OR5F1, OR9A4, PAFAH2, PCYT1B, PDE4D, PDE7A, PFKFB2, PHKG1, PIGO, PLA2G10, PLIN, POLD2, PSME1, RFNG, SMAD3, STAT3, TBL1Y, THY1, TLR4, UGT2B4, UROS, WBSR22
Negative_14350	A2M, ADA, BTC, IL4, ACAD8, ACADL, ACOX2, ACSL6, AGPAT3, ALG1, AMPD2, ASIP, C1QA, C4BPB, CACNA1S, CCL15, CCL4, CD47, CHSY1, CNTNAP1, CREB3L3, CTNND1, CTSG, CYP2S1, DGKE, DOT1L, DTX1, EIF4E2, ENTPD5, EPB41, ERBB3, FGFR2, GALNT11, GALNT12, GCLM, GGT7, GLI3, GMPPB, HMGCL, IL12B, KIR3DL1, LEFTY2, LEPR, MAN1A2, MAP2K6, MAP4K3, NCSTN, NFAT5, NKX3-1, NRG1, NTF3, OR10J3, OR11A1, OR11L1, OR2L2, OR5B12, OR5B3, OR5I1, OR6A2, OR7A10, OR8D2, PDE6H, PDK1, PER3, PIGB, PIGQ, PIK3C3, PIM2, PLA2G2F, PTAFR, PTGS2, PTPRR, RASGRP1, SAT2, SETD1B, SMAD2, ST3GAL4, STAM, SULT1E1, TAS2R1, TPM3, TYMP, WNT3A, ATP6V1B1
Negative_14351	C6, ITK, MOS, ACSL1, ADAM17, ALDH3A1, ATP5G3, BLVRA, CCL13, CDC25B, CHSY1, CLTB, CMPK2, COL3A1, CYP2A7, ELK1, ENTPD3, EPHA2, FBP2, FZD1, GALNT12, GGT5, GRIA1, GUCY2C, HAO2, HES1, ITPA, KRAS, LAMB4, LFNG, MAML2, MAP2K3, MTMR1, NEGR1, NFX1, OR13C8, OR13H1, OR2AE1, OR2T5, OR5D13, OR6C75, ORC6L, PLCB3, PRKY, PTGFR, PTPRC, RFXANK, SELL, SLC2A4, SPI1, ST3GAL1, STAT5B, UGT2B10, XIAP
Negative_14352	AK5, CAT, DCK, FER, LCT, LYN, STS, SYK, ACAA2, ACTA1, ACY3, ADH6, ALG1, ALG10B, ARG2, ATP12A, BMP8A, C3AR1, CACNA1A, CASP8, CASP9, CD244, CLCF1, COL11A1, CSNK1G1, CYBA, DARS2, DDX4, DDX51, DGKI, DHODH, DHX58, DIAPH3, DOCK1, DPYD, DUSP7, EFNA1, ENO3, EPAS1, F13B, FRAP1, FTCD, GALNT12, GBE1, GPLD1, HIBCH, HSPB1, IFNAR1, IGSF5, IKBKE, IL29, INPPL1, IRAK3, ITGB4, LLGL1, LMO7, MAP2K3, MECR, NEU1, NRXN1, NTF4, OR10C1, OR2T34, OR4X1, OR51F1, OR5M9, ORC2L, P4HA1, PDE7A, PDGFRB, PGM2, PIGF, PIGN, PPCDC, RASSF1, RDH5, SEMA4G, SOCS1, SORD, SPRED1, SPRY1, ST3GAL3, SUOX, TBL1X, TGFA, TUBAL3, UCK1, WASL, WNT2B, WNT3A, XCR1, ATP6V1E2, HLA-DRB4

Negative_14353	FER, PGD, ACAT1, ACOX3, ACSL5, ADAM10, ADSL, ADSS, ALAS2, ALDH3A1, ALG9, ATP5J2, B3GALT4, B4GALT2, CAMK4, CAPN2, CARD11, CASP3, CDC20, CER1, CSNK2A2, CSNK2B, CYCS, CYP4A11, DPYSL2, ENAH, ENTPD2, EPHA7, FGF12, FGF22, FPGT, FUT7, FZD2, GALNS, GALNT1, GAPDH, GNAO1, HPSE, HSD11B2, ITGA2, ITGAD, MAN2A1, MAT1A, MDM4, METTL2B, MGAT4A, NOTCH1, NTRK2, NTSR1, OCRL, OR10A7, OR10AG1, OR1D5, OR1F1, OR1I1, OR2A12, OR52J3, OR8D2, ORC3L, P4HA3, PDGFD, PFKM, PIK3C2B, PTPN5, QARS, RBKS, RDH8, RUNX1T1, SETMAR, SSH1, SV2C, TBL1XR1, TNFSF8, TUBB6, TXNDC12, TYMS, UBE2K, UGCG, VANGL1, WARS, WASF2, WIF1, WNT10B, YARS2, MAP3K7IP1, PNLIPRP1
Negative_14354	CD2, CKM, DCK, MVD, NOG, SPN, VTN, ACO1, ACSM2A, ACVR1, ADRBK2, ALCAM, ANAPC4, APOA1, ARD1A, ATN1, ATP5J, AXIN1, AXIN2, BDKRB2, CAMK4, CD48, CDC20, CLCF1, CLDN10, COL1A1, COL6A1, CREB3L2, DTX3L, E2F3, FLT3LG, GADD45A, GAL3ST1, GALNS, GLYCTK, GUCA1A, HA01, HEXA, HNF4G, IFNA4, IL23R, IL3RA, IL7R, IL9R, KLRC3, LCMT1, LLGL1, MAD1L1, MAFA, MAPK14, MAPK3, MTMR2, NANP, NCK1, NEFM, OR10A6, OR10H3, OR1D2, OR2S2, OR5AC2, OR5M3, PARVG, PDGFC, PFN4, PITX2, PPAP2A, PPP2R5E, PTCH1, RBL2, RCHY1, SEMA3C, SMAD2, SMAD9, ST3GAL6, STK11, TNFRSF8, TRAF2, TUBA4A, UGDH, UROS, WARS2, HLA-DQB1, MAPK8IP2, SERPINA5, ST6GALNAC3
Negative_14355	C8A, CKB, DCC, GBA, LEP, RFK, SRF, ACADVL, ADH1A, ALDH1A2, B4GALT3, BACE2, CACNA1C, CCND1, CDC16, CKS1B, CLDN4, CNTN2, DPYS, FADS2, GMPPA, HIF1A, HIP1, IGF1, IL23A, IL5RA, ITGAM, ITPA, JAG2, LDHC, LIAS, MAN1B1, MAP4K2, OR1C1, OR2A25, OR2AG2, OR2B2, OR2L3, OR4F15, OR4L1, OR56A1, OR7A17, OR7G1, OR8D1, OR9A4, P2RX3, PIGN, PITX2, PLK1, PRKCQ, RARS2, RDH11, RENBP, SDC3, SEPHS1, SUOX, TAS2R14, TPMT, VDAC3
Negative_14356	DDC, FAS, FES, GK, GP6, ME1, PGD, UBB, ACAA1, ACAD8, ADCY6, ADSS, AHCY, ALDOC, APOE, ASPA, ATP2A2, ATP5B, B4GALT6, BMPR1B, C3orf10, CACNA1A, CCR3, CDC14A, CDC20, CHST13, COL2A1, CREB3, CSF3, DHRS4, DVL2, ECSIT, EFN1, EPHX2, FZD10, FZD7, GBA3, GBT1, GMPR, GNA12, GRM1, GSTO2, HBEGF, HDAC2, IFNA13, LILRB3, LTBP1, MAP2K1, MAP4K1, MYL7, NANS, NAT2, NCAM1, OR11H6, OR1A1, OR2T3, OR4D2, OR5J2, OR6C2, OR7G1, OR8B8, OXSM, PDE10A, PGAM1, PHGDH, PIGK, PIGS, PIM1, PON2, PPP1CA, PPP2R5A, PRKAR2A, PRKCD, PROC, PSME1, RPS6, RRAS, SH2D2A, SRD5A2, SSH2, ST3GAL4, SUCLG2, SUV39H1, TAS2R13, TGFB1, THBS4, TRMT11, TSHB, TSLP, UBE2L3, UGP2, VAMP1, VAV3, ZBTB16, CTNBP1, MAPK8IP3, TNFRSF10B
Negative_14357	C8B, F8, GLA, KDR, ME1, MYC, NNT, OTC, TYR, ACSS2, AHCY, ALG9, APRT, ATP12A, ATP2A3, ATP6V1A, BACE2, CACNG2, CANT1, CCR2, CD47, CD80, COL4A1, COL5A2, COQ6, CXCL10, DGKD, DGKG, DMGDH, DNMT3B, DOT1L, EPHA1, EPHX2, FARP2, FBP1, FLOT2, GBE1, GLDC, GLUL, GLYCTK, GSTA4, GSTM4, GSTO1, HMGCS2, HTR7, ICAM2, ICOS, IDI2, IL15, IL1A, KDSR, KIR2DL4, LAMC3, LMK1, LTB4R2, LYPLA2, MAP3K5, MCM5, MDM4, MMP14, NFATC2, OLR1, OR11L1, OR1K1, OR1L8, OR4K1, OR52N4, OR6K2, OR6Q1, PAFAH2, PANK2, PGLS, PLOD1, PPP1R1A, PSENEN, PTGIS, PTPMT1, QARS, RDH12, RETSAT, RPIA, RPN2, SFRP1, SHMT2, SKP1, SSH3, TAS2R4, TFDP1, TRPC1, UGT2B28, VNN1, WNT8A, MAPK8IP2, ST6GALNAC4
Negative_14358	EDA, FN1, GP5, IL2, IVD, JUN, RB1, AASS, ACVRL1, AFMID, AGPAT3, AGXT2, ALG8, ALG9, ARNT2, CAV1, CCL13, CCL25, CCND2, CDIPT, CLTC, CNTN1, CPT2, DGAT2L4, DGUOK, EPHA6, F13B, F2RL3, FPGS, GALT, GALM, GMPR2, GRM5, HAO2, HSPA8, INMT, KIR2DL4, KLRC2, MAP3K11, MMP14, MYH1, NTRK1, OR1E1, OR1J2, OR2L2, OR5A2, OR5D14, OR8D2, OR8J3, PDE8A, PIAS1, PIGW, PLIN, POLD1, POLE4, POLR3A, PPA1, PPAP2B, PPP1R3A, PPP2R2B, PRDX6, PRKCI, PSEN2, PSPH, PTPRM, RAC2, SMAD4, SMPD2, SOCS7, SREBF1, TPK1, TRDMT1, ZMAT3, HSP90AA1, TNFRSF11A

Negative_14359	C8A, CBL, DBI, DHH, F10, FN1, HAL, SRC, SYK, AGRN, ATP5G3, BMP6, C3orf10, CADM3, CAMK4, CCL8, CCR1, CIITA, CPS1, CYBA, CYP11B1, DDIT4, DHRS9, DRD1, E2F1, EARS2, ENTPD3, FABP1, FGF17, GBGT1, GGCX, GLUD1, GNA14, HYAL2, IFNA13, IFNA7, IL10RA, INHBA, ITGAE, ITGB2, ITPK1, KCNB1, LEFTY1, MPZL1, MYH9, NARS2, NFYB, NKX3-1, NOS3, NT5E, OGDHL, OPLAH, OR10J1, OR1B1, OR1C1, OR2A14, OR2L8, OR56A3, OR7D4, PIAS3, PIGT, POLR2J, PTGES2, RPS6KA4, RRAS, SH2D2A, SKIV2L2, SMARCA5, SPP1, SREBF1, TAS1R1, TAS2R13, TAS2R3, UBA1, VAV1, WNT8B, GABARAPL2, TNFRSF1A
Negative_14360	AUH, DBI, DCK, F11, IL2, IL9, ILK, ME3, TNC, ACSL1, ADH6, AGPAT2, AGPAT6, AHCYL2, ANAPC11, BMP8B, CCR10, CIITA, CNGB1, COL4A1, CRY1, CYP2A7, DDX18, DFFA, DRD2, FADS2, FECH, GALC, GBA3, GRLF1, GSTK1, IARS2, IL22RA2, IL25, ITGB5, KIR2DL1, KNG1, LALBA, LIPE, MKNK2, NEFH, NFAT5, NME2, OR4F4, OR4K15, OR4L1, OR51F2, OR52E8, OXCT1, PIK3R5, POLR3G, POLR3K, PROS1, PRSS3, PTCH2, PTGES2, RFXAP, SOX17, SPHK1, ST6GAL1, STAT2, TBXAS1, TCF7L1, TCF7L2, TKTL1, TM7SF2, YWHAQ, C1GALT1C1, PLA2G12A, SERPINF2, TNFRSF13C, TNFRSF17
Negative_14361	CP, F11, FAS, FYN, GBA, GH2, MSN, MYC, SPN, TNR, ACAD8, ACVR1, AGRN, ALAS1, AMY2A, AREG, CCNE2, CDC25C, CDC26, CDKN2C, CIITA, CLDN22, CMPK2, COL6A1, CPOX, CYP3A4, DAXX, DDX4, DEGS2, DMGDH, DVL2, ELK4, ENO3, EPHA6, EPHX2, EXTL2, FGF6, FGF7, FGFR3, G6PD, GAD1, GARS, GATM, GNA13, GPD2, HCCS, HDAC2, HEMK1, IDI1, IQGAP1, ITGAD, ITGAM, KIR2DL4, KIR2DS4, MAD2L1, MCM7, MYH9, MYL5, MYLK, NFAT5, NFATC4, NUDT5, OR10A4, OR10G4, OR11H6, OR13C8, OR14J1, OR1L6, OR4D9, OR52N1, OR5M3, OR6N1, PANK4, PDIA4, PGAM2, PIGF, PIP4K2A, PLA2G2D, PLCG2, PMVK, POLR1C, PPAP2C, PPP2R5C, PPT1, PRKX, SOCS5, SORBS1, SV2C, TALD01, TAS1R3, TCF7, TM7SF2, UGCG, ULBP2, UPP2, XIAP, MAP3K7IP2
Negative_14362	CBL, GHR, OTC, PGP, TNF, AACS, ADCY10, ALCAM, ALDH5A1, AOC2, ATG12, ATP5L, CBR1, CCL19, CCND1, CDKN1B, CFL1, CPOX, CPT1A, CTBS, CYP2C8, DAG1, DCTD, DLST, ECSIT, EHMT1, ELK4, FDFT1, FGF14, FGF23, FGF7, FUT3, FUT6, GALNT3, GARS, GNAT3, GNRH2, GUCA1A, HCLS1, IFNGR1, IL15, IL22RA2, IL6R, ITGAX, JAM3, LCAT, LDHD, LLGL1, LTBP1, MTMR6, MYH2, MYH4, NCAM1, NUDT2, OR10R2, OR13C8, OR1E1, OR1F1, OR1L8, OR2A2, OR2L2, OR4D11, OR4K13, OR5AC2, OR6C76, OR8K5, PDE4D, PHKB, PIGH, PIGO, POLR3D, PPBP, PPP5C, PTCH2, PTEN, PTGIS, RAB5A, RHOA, SEMA3E, SMAD5, SPRY2, TAS2R16, TGFB3, TLN2, TNFRSF8, TUBAL3, UBA7, UCK2, UGT2B28, XYLT2, ATP6V1E1, MAPK8IP2, SUV420H2
Negative_14363	ADK, CBL, FAS, INS, LCK, MOS, MUT, PGD, ALDOA, AQP7, B4GALT7, BCKDHB, BMP4, CAMK4, CARS2, CHST11, CKS1B, CTBS, CTNNA3, CTSS, CX3CR1, DEGS1, DRD5, DTX1, ECSIT, FADS2, FGF5, FGFR1, GNPAT1, HLA-DOB, ICOS, IL18RAP, INADL, ITGB6, ITPA, LDHB, MGAT2, MS4A2, MTAP, MYL9, MYLK3, NCOR2, NKX2-2, NOTCH1, NRG1, OPLAH, OR10A7, OR10H4, OR2L8, OR4C16, OR4M2, OR8K1, PARD6G, PLCG1, PLIN, PTGES, RBKS, RPS6KA5, SCD5, SEMA4B, SFRP1, SORBS1, SPAM1, SULT1A4, TNFSF14, TP73, TRPC1, TSTA3, UGCG1, WARS, ZFYVE16, ATP6VOA4, CACNA2D4, HLA-DRB3

Negative_14364	DHH, JUN, MVK, ACSL4, AKR1D1, ALG3, ALS2, ARHGEF1, ATP13A2, ATP5B, B3 GAT2, BBC3, CACNG1, CAV2, CCNG2, CCR4, CD22, CD40LG, CHR1, COL11A1, C SNK1G1, CTBP2, CTNNA3, CXCR5, CYFIP1, DTX3L, ENAH, EPAS1, EPHB1, ETN K2, FABP3, FGF20, FGF6, FUT9, GCH1, GMPR, GNG12, GPD2, GRHR, GSTZ1, H 6PD, HADH, HCST, HLA- DMA, IFNG, IL13RA2, INSR, KAT2A, MAN2A1, MAP4K3, MLYCD, MPP5, NFASC, NOX3, NPAS2, NPR1, NUDT8, OR111, OR1L3, OR2A2, OR2V2, OR51D1, OR5B17 , PLXNB1, PMVK, PRKCQ, PRPH, PYCR1, PYGB, RAB23, RHEB, RPS6KA2, SDHB, SELP, SEMA4C, SEMA4G, SENP2, SGMS2, SPAM1, SUV39H2, TAS2R41, TM7SF2 , TOLLIP, TUBB2C, UGT2A3, ULK2, WNT5B, ZFYVE16, ARHGEF12, PRICKLE1
Negative_14365	BTD, LCT, TNF, ACAA1, ACP5, ACSL4, ACSM1, ACSM5, ACTA2, ACVR2B, ACVRL 1, ADIPOR2, ANGPTL4, ATP4B, ATP50, ATP6V1A, BAAT, BIRC5, BUB3, CCL8, CD274, CLOCK, CLTC, CMPK1, COQ7, CYP2B6, CYP2C9, DBF4, DDX19A, DDX50 , DNMT1, DNMT3A, ENTPD5, EXT2, FBXW11, FGFR1, GAD1, GALM, GALNT9, GAP DH, GGT6, GLI1, GRM1, HMGCL, HSD17B3, ITGA9, KLRC2, MPST, MYH9, NAGK, NEFL, NMNAT2, NR4A1, NUDT2, OR13C2, OR13C8, OR4C11, OR52L1, OR5M9, O R6F1, OR7G3, OR8G1, OR8K5, OR8U1, OR9K2, PCK1, PDGFD, PFKFB2, PGAM2, PIGX, PIM1, PLEKHA8, POLR2I, POLR3D, PON2, PPA1, PPP1CB, PRKACB, PRO DH, PSPH, RBKS, RERE, SOCS3, ST3GAL1, STX16, SUOX, TALD01, TNFRSF4, T RAF1, VKORC1, WNT2, TNFRSF10D
Negative_14366	ADC, FOS, GK2, IL9, MOS, MSN, OGT, OTC, TK1, AASDH, ACSL1, ACSM2A, ACSM 5, AGRN, AKR1C3, ANAPC4, ARPC5L, ATF2, ATN1, BUB3, CCL24, CCR8, CD59, CDH1, CISH, CLDN16, CNGA4, CNTFR, CNTNAP1, CREB3L1, CSF2, CXCL6, CYF IP2, DARS2, DCXR, DVL1, FM05, FUT8, GAD2, GCNT4, GUCA1A, HNF1A, IDH3A , IL13, IRAK4, ITGB1, LDHD, MAGI2, NCK1, NCKAP1, NRG1, OR2A14, OR2A5, OR4P4, OR52K1, OR52N1, OR6C4, OR7A17, PDE1B, PDE6H, PDX1, PI4KB, PIG L, PIGU, PIP4K2C, PLCD1, POLR3G, PPOX, PPP1R1A, PPP2R1B, PPP3CB, RBP JL, SEPHS1, STX12, SULT1E1, TAS2R38, TIAM1, TYROBP, UGCGL1, WEE1, WN T10A, WNT8A, CTNBP1, EIF4EBP1, HLA-DRB5, SERPINA5, ST6GALNAC6
Negative_14367	NOG, ABLIM3, ACSL1, ACTG1, AKT2, BLVRB, CACNA1B, CACNG8, CCL11, CCR3 , CD8B, CHRM5, CSNK1G2, CYP1A2, DTX2, EDN1, EPOR, GAMT, GMPPA, GSTA1, IL22RA1, INPP4B, ITGA1, ITPA, KIR2DL3, MAGI2, MAP3K14, NCAM2, NME2, NOD1, NT5E, NT5M, NUDT8, OR11H4, OR1J1, OR1S1, OR2A25, OR2AG2, OR4A1 6, OR4S1, OR4S2, OR52H1, OR5D16, OR8D4, OR9A4, ORC1L, OXCT2, PARVG, P PAT, PPP2R2B, PRKAG3, PRKCD, PROC, SEMA3E, SETD2, SETD8, SHC4, SRGAP 3, ST3GAL3, TAS2R4, TAS2R5, TBXAS1, TKTL1, TLR4, UBE2L6, UNC5A, WNT3 A, PPP1R12A
Negative_14368	C2, OSM, XDH, ABL2, ACTC1, ADCY6, ADRA1D, ATP2A2, BUB1, CCNH, CCR10, C CR5, CER1, CFTR, CLDN7, CREB1, CRHR1, CSNK1E, CSNK1G2, DNMT3A, DOLPP 1, ENTPD8, EPB41, FGF13, FOSL1, GALNTL4, GRHR, HTR5A, IFNA14, IL17A , INPP5E, LYZL1, MAGI2, MAN1A1, MAP3K3, MAT1A, MGAT3, MICA, MTHFD2, N LGN2, OR51B4, OR52N1, OR6C2, OR7A10, PDE6D, PLXNA1, PPID, PRDX6, PRK CD, RBL1, SOCS3, SPRED2, TAS2R13, UGT2B17, VKORC1, HLA- DRB3, TNFRSF14

Negative_14369	AK5, CS, F2R, GLS, IHH, IL4, LPL, LYN, MVK, PRL, TAT, TPO, ADCY5, AGXT2, ANPEP, APLP1, ARHGEF2, BAAT, BMP5, BMPR1A, CBLC, CD48, CDK2, CFLAR, C HRNA7, CLCF1, CSNK1D, DDX47, DPM2, ELK1, FARSB, FGF14, FUT5, FZR1, G6 PC, GALNS, GBA3, GCH1, GLUD1, GSTA2, HLA- DMA, HNF1B, HTRA2, IL22RA1, INHBC, IPPK, ITGB3, JAM3, KLK3, LCP2, MAP K3, MGAT4B, NAGS, NFYA, NOX1, OR10V1, OR2T10, OR2T11, OR3A3, OR4A15, OR4C15, OR51F1, OR5M3, OR8B8, ORC1L, OXCT1, PCNA, PCYT2, PDHA1, PIM1 , POLR1C, PPAP2C, PRKG2, PRODH2, PTPN11, PVRL4, RAC2, RASSF5, RRAS, S EMA3D, SOAT2, SOCS5, TACR2, TGFBR2, TJP2, TRDMT1, TUBA1B, TUBA1C, TU BA3E, UGT2B11, WNT8A, ATP6V1E2, CTNNBIP1, MAPKAPK2, PNLIPRP1, SUV4 20H2, TNFRSF11A, TNFSF13B
Negative_14370	CGN, GH2, IL6, JUP, LPO, ZYX, ADCY7, AHCY, APOA2, BTRC, CARS, CD226, CD 34, CDK6, CLTCL1, CREB3L4, EGLN1, ENAH, ENTPD3, EPHB2, FGF21, FZD4, G ALK1, GMPPA, IFNGR2, IL25, IL28A, INPP5E, LAMA4, LAMB2, LDHAL6B, LIP C, MGST2, MYH7, NEGR1, NFYB, NLGN2, NPR2, OLAH, OR10J3, OR2T29, OR51G 1, OR52M1, OR5AR1, OR5AS1, OR5H2, OR9I1, PCCB, PNMT, PTGFR, PTPRR, PY CRL, PYGB, RALBP1, RAPGEF4, RHOQ, SFRP5, SLC25A4, ST3GAL2, TAS2R8, T SLP, UBA7, ST6GALNAC4, TNFRSF12A
Negative_14371	AMT, CS, DCC, GHR, PLN, ADCY9, AKT1, ARHGEF7, ARPC1A, BACE2, C5AR1, CB LC, CCL13, CCL22, CCL3, CHKA, CHSY3, CLCA2, CLDN20, CLDN8, CYBB, DAPK 1, DLST, DPM3, EHHADH, ENTPD7, FAR2, FBXW11, FZD5, GALNT6, GANAB, HA GHL, IDH3A, IFNA10, IFNA16, IL25, IRS4, ITGA1, KLKB1, KLRC4, LAMA4, L CMT2, MAP4K2, MAPK3, NCR1, OR10K2, OR1B1, OR2S2, OR3A3, OR52N1, OR52 N2, OR6F1, OXCT1, P2RX7, PAX4, PCCA, PHKG1, PLAT, POLR3D, PRKACG, RAS GRF2, RPN1, RRAS, RRM2B, SETD7, SETD8, ST6GAL1, STK3, TAS2R60, TBL1Y , THY1, TNXB, TRMT11, VTI1B, XYLT1, CACNA2D3, TNFRSF11B, TNFRSF12A
Negative_14372	C5, MOS, MSN, ACO2, ADRB2, AGXT, ALDH3A2, BCAT1, C4BPB, CKMT2, CXCL10 , CYP3A4, DAG1, DHFR, DKK1, DPYSL2, DRD2, EFNB3, ENTPD4, EPHA2, FBP2, FOXA3, GADD45B, GBA3, HLA- DMA, IL2RA, LMO7, MALT1, NARS, NCKAP1, NOD1, NOX1, NRP1, OR13C4, OR5D 18, PANK1, PDXK, PIK3C2B, POLR2D, PRKAG3, RRAS, SULT1A4, TAS2R40, TB K1, TUBA1B, UGT1A10, UGT2B17, UPP2, ZBTB16, SERPIND1
Negative_14373	DBH, MIF, PVR, SI, ACACB, ACADS, ALDH1B1, B3GAT1, BCMO1, C1QB, CASP10 , CD244, CDH1, CD01, CHPF, CTNND1, DHDH, FGF20, FZD3, GNAZ, GNB3, GRM5 , HLA- DMA, HPSE, HSD17B2, IL12RB1, LARS, LTBP1, MAGI3, NOD1, OR13C9, OR4A5 , OR4K2, OR56A1, OR5B21, OR6K3, OXCT1, POLE3, POLR2D, PPA2, PRDX6, PR KCI, SEMA3E, SEMA3G, SOD1, SORBS1, SPHK1, TGFB2, TGFB1, TUBB6, VKOR C1
Negative_14374	AK7, AMH, C7, CKM, DBH, GSS, RDX, ABCC8, ABI2, ABL1, ACACB, ACOT11, ACV RL1, ADIPOQ, ADIPOR2, ALDH3A2, ANAPC7, C5AR1, CACNG1, CAPN2, CCR7, C DKN2B, COQ3, CSNK1G1, CTBS, DMGDH, DNMT3A, DUSP8, E2F1, ENTPD3, FGF7 , G6PD, GALNT10, GGT7, GRHPR, GRIN2D, IFNA6, IFT57, INPP5A, INSR, LDH B, LFNG, LHCGR, LIMK2, LTA4H, MCM7, MYH7B, MYL5, NCKAP1L, NCOR2, NFAT C4, NNMT, OR2F2, OR4C46, OR51A4, OR52H1, OR56A4, OR5AN1, OR6C70, OR8 J1, PAK3, PAX6, PDE7B, PGM2, PIP4K2C, PLA2G2F, PMVK, PPP2R5B, PSEN2, PSENE1, PTPRZ1, RASSF1, RCHY1, RPS6, SARDH, SLC27A5, SMARCA2, SMC1B , STT3B, TAS2R1, TAS2R14, TAS2R48, TCIRG1, TFDP1, TICAM2, TLN2, TRAF 2, TUBA1C, TUBB1, VAV3, ATP6V0E1, GABARAPL2, PAFAH1B1, TNFRSF13C, T NFSF13B

Negative_14375	HAL, HPD, ME3, RPE, ABCC8, ACLY, ACP6, ACTN2, AGXT, AHCYL1, ARPC5, ATP6V1H, BMPR1A, CCL14, CDK6, COL3A1, COL5A1, CXCR5, DAXX, DDX19A, EFNA4, EPB41, ETS1, GNAT3, GRIN2D, HADHA, HBEGF, HHIP, HLA-DRA, IL10RB, IL4R, IL6R, IRS2, KIR2DL1, KLRD1, MAML1, MAPK12, MINPP1, MTHFD1L, NKX3-1, NUMBL, OR11H6, OR2T4, OR3A3, OR51T1, OR8K5, OR9G1, OSMR, PFN1, PRPS1, PTGER1, QARS, RAC2, RCHY1, SCP2, SHC3, SUCLG1, TAS2R3, TAS2R4, TGDS, TLN1, UGT2A1, UPP2, UROC1
Negative_14376	AR, DUT, GP5, GSS, LTB, SI, SMO, ACAA2, ALPP, ANAPC7, ANPEP, ATP2A2, BBC3, BCMO1, BDH1, CACNG6, CASP10, CCL22, CCL7, CD79B, CDK7, CHIA, CNGB1, COL3A1, COQ6, CPT1A, CRLF2, CTNNA1, CYBB, CYP2C9, CYP2D6, DGKZ, EPHA5, FZD8, GLB1, GLUD1, GRIN2A, GUCY1B3, HAP1, HCST, HSD17B1, IL12RB1, IL22RA1, IMPA2, LIPC, MAD2L2, MAFA, MAGI2, MAPK10, METTL2B, MRAS, MYH2, NODAL, NRG3, NTNG1, OR10A4, OR10G9, OR10H3, OR10H5, OR10J5, OR11H1, OR13D1, OR1E1, OR52K2, OR5A1, OR8K3, OXTR, PCK2, PFKL, PHKA1, PLTP, POLR2H, PPP1R3C, PPP2R5B, PTGES2, RETSAT, SIGLEC1, SLC25A6, SLC27A5, SPP1, STAT2, SUCLA2, TKTL1, TRPC1, UCKL1, UNC5D, VAV3, VDAC2, VEGFA, WARS2, ATP6V1B1, ATP6V1E2, PLA2G12B
Negative_14377	CFD, FYN, NNT, UBC, ADSL, APPL1, ARHGEF4, ASRGL1, ATP2A2, AXIN2, B3GAT3, CCKBR, CCNE1, CDC2, CHIA, CHSY3, CTSB, CYP2C8, DCTD, FGF10, GANC, GDF7, GNG13, GZMB, HAAO, HHEX, HTR4, ICAM1, IDH3B, IQGAP3, IRF9, KIR3DL3, MAPT, MDH1, MICA, NR1H3, NRG2, NT5C, NUDT8, OR1J4, OR56A1, OR5C1, OR5D13, PARD6A, PARVA, PAX8, PCCB, PCYT1B, PHKB, PIGU, PKMYT1, PLAUR, PLXNA1, POLD3, POLR2L, PPCS, PSEN1, PTPRR, RRAS2, SDC4, SEMA3B, SEDD1B, SHC1, SMAD6, SUCLG1, TAS2R14, TBXA2R, TCF7L1, TUBA1B, UBA7, UNC5C, VAV3, CACNA2D2, SERPINC1, TNFRSF12A
Negative_14378	GSR, SI, SRC, ACAT1, ADIPOR1, AKR1D1, ALDH3B1, ARHGAP5, B3GALT2, BCMO1, CBR3, CCNB3, CCND3, CD59, CDC6, CES1, CNTF, COL4A2, DAD1, DNMT3L, E2F3, FUT6, FUT7, GGT7, GMPPB, HSD17B8, IFNAR1, IL13RA1, IL21, ITGA10, ITGAL, ITGAV, MAN1A2, MYH2, NFKBIA, NME6, OR14A16, OR1L1, OR1L6, OR5AU1, OR5B21, OR5D13, PMVK, POLR1C, PPP2R2B, PSPH, RAB5A, RASSF1, RBL2, ROCK2, TRPM5, TYROBP, WBSCR17, XYLT1, YWHAZ
Negative_14379	C9, CFH, DAO, GBA, GHR, GNS, GP5, TPO, ABCC8, ACAT1, ACOT11, B3GALT5, B4GALT1, CACNG3, CD86, CDH1, CDIPT, CDK2, CMPK1, CTPS, CYP2C19, DHODH, DLL4, DPAGT1, E2F3, FGF17, FGF9, GAMT, GBGT1, GCNT1, GMPPB, GNAI1, GUK1, HIBCH, INPP1, INSR, IPPK, IRAK2, ITGAL, KLK3, LEPR, MFNG, MYLK3, NAT5, NTSR1, OR2F1, OR4D5, OR4K15, OR51F1, OR52R1, OR5A2, OR6B2, OR6X1, OR7D4, OR9G1, PAPSS2, PGK2, PI4KB, PIGP, PIP5K1B, PPP2R2C, PPP2R5D, PTDSS1, PTK2B, PYCRL, RFW2, SPTAN1, SRGAP2, THBD, TIRAP, UNC5B, WBSCR22, WNT9B, MAPK8IP2, TNFRSF14
Negative_14380	C2, CRH, GK2, AARS2, ALDOC, BMP7, CHIA, CISH, CYP11A1, DKK4, EHMT2, ESPL1, FBXW11, FGF3, GADD45B, GLI2, GMDS, GNPDA1, HAO2, IDI1, IKBKE, IL12RB2, ITGB7, KRAS, MAD1L1, MBL2, MEF2C, MMP7, NCSTN, NEU3, NTF4, OR13C5, OR3A3, OR4F17, OR51I1, OR52I1, OR5C1, OR6Y1, OR8H2, OR9A2, PIAS4, PLA1A, PLA2G3, PLEKHA8, POLA2, PON1, PPAP2A, PTDSS2, PTPRB, RBX1, RFX5, SAT1, SEMA7A, SKIV2L2, STX7, SULT1A1, SV2B, TAS1R3, TBL1X, TICAM1, TJP3, TUBA1C, TUBB2B, UCKL1, UCP1, WNT7A, CSGALNACT1, HLA-DRB3



Negative_14381	CKM, EDA, JUP, PC, AADAC, ABP1, ACAD8, ADCY3, AKR1B1, ALDH6A1, ATP4A, ATP5J, B3GALT5, BCKDHB, BCMO1, CACNB1, CAV2, CCL8, CCR10, CD22, CDC2, CDS2, CHKA, CNTNAP1, CREBBP, CXCL10, CYP17A1, CYP2C18, DARS2, DGKB, DHDH, ENPP1, ENTPD3, FPGS, FZD10, GSTA4, IFNA14, IL18, IL1R2, IL21, IL3RA, INHBE, MCM2, MTHFD2, MYH7, NEFL, NEFM, NOS1, OR13C2, OR2A2, OR4P4, OR51G1, OR5B21, OR8H3, P4HA2, PER2, PERP, PLCD1, PRIM2, PRKAG3, PRKCE, PRKX, PTPRR, PYCR2, RALA, SDHD, SETMAR, SHMT2, SLC25A6, SRGAP3, STAT2, SUV39H1, TDO2, THBS3, TIRAP, UBE2L6, UGT2A1, UGT2B17, ULBP2, SERPIND1
Negative_14382	C6, CKB, DCC, GPI, IHH, PML, SYK, TPR, UBB, ACADSB, ACP2, ACVR1, ADRB1, AGPAT3, ALDH6A1, ALDOA, ALPI, ANAPC11, APAF1, ARRB2, ATP5F1, ATP6V1A, BMPR1B, CASP9, CDH3, COL3A1, DDIT4, DPYD, EFNA5, ENPP3, FABP1, GALC, GBE1, GSTA3, GSTM2, HAGH, IL17RA, ITGA1, JAG2, KLRC2, LDHAL6A, LEP R, MAML3, MAP4K4, MCAT, MCM5, MDH1, MITF, MMP2, NCAM2, NCF1, NFATC4, NSDHL, NTF4, OR13J1, OR2AG2, OR2L8, OR2M5, OR4C13, OR4C6, OR4M2, OR52I2, OR6C76, PAK3, PAX4, PDE1B, PGAM4, PRKAR2A, PSENN, PTK2B, PYCRL, RBL1, ROB01, RPS6KB2, SETDB1, SNAI2, SNW1, TBL1X, TRAF1, TRAF4, TUBB2A, TUBB4Q, VDACC3
Negative_14383	AUH, FGB, FN1, PAH, ACSS1, AKR1B1, B4GALT4, BLNK, BUB3, CACNA1B, CACNA1C, CACNA1H, CES1, CHIT1, CNDP1, COL1A1, CSNK1G3, DCTN1, DDOST, DGKD, DOCK1, EPOR, FGF12, GANC, GLUD2, GSTM5, GUCA1B, ICAM1, INHBB, IRAK2, KLRK1, LAMA4, MCM5, NCK1, OR2A25, OR2A5, OR4A16, OR5L2, OR5T1, OR6X1, OR8J1, PDE2A, PLCG1, PLXNB2, PON1, PRIM2, SPCS1, SPTLC2, SRD5A2, STX1A, TBL1XR1, VEGFC, WBSR22, WNT3, PRICKLE1, SERPINC1
Negative_14384	BID, GP5, MTR, PC, TKT, AARS, ABAT, ACADM, ACOT11, AKR1B10, ALG10, ALOX15B, AOX1, ASCC3, ATP5G1, BACE2, C1QC, C7orf16, CACNB2, CAV2, CAV3, CDC6, CDK4, CXXC4, CYP7A1, DAPK3, DAXX, DOCK1, E2F2, EPHX1, EREG, FABP4, FLOT2, GUCY1A2, HIBCH, HMGCS2, HSD17B4, IFNGR1, KIR2DL4, KLRD1, KLRK1, LDHAL6B, LEF1, LFNG, MAT2B, NEU2, NGEF, NOTCH2, NPR1, OR1D5, OR1N2, OR2B2, OR2S2, OR4K5, OR6Y1, PAPSS2, PAX6, PDXK, PFKFB4, PIK3R2, PLA2G5, PLCB2, PRDX6, PRIM2, PTPRR, RAD51, SDC3, SFRP5, STAT2, SV2A, TBL1XR1, TGFB2, TNXB, USE1, VANGL2, VKORC1, VTI1A, WNT3A, WNT7B, PP1R12A, PRICKLE1, TNFRSF10D, TNFRSF12A
Negative_14385	C7, CAD, ID1, SPN, STS, AASS, ABI2, ACY1, ADCY5, ALG3, ARSD, ASIP, ATP12A, B4GALT4, CAMK4, CCL11, CCL7, CCR1, CNTNAP1, COX10, CSF3, CTSB, CXCL6, CYP2A7, DAAM2, DGKA, EIF4E2, EXTL3, FGF10, GAPDH, GRIN2B, GSTK1, HADHA, HMGCL, HSD3B7, IFNW1, IL2RA, JAK2, LRDD, MAFA, MDH2, NAT5, NGEF, NT5C1B, OR10G4, OR1K1, OR2A42, OR4C11, OR5AU1, OR5B12, OR6K3, OXCT1, PDE7A, PIK3C2G, PIK3R2, PIP5K1C, PITX2, PPA2, PRKX, SNAI2, SSH1, ST3GAL2, STAM, TBL1XR1, TJP1, TNXB, TPM3, TSNARE1, KIR2DL5A, TNFRSF13C
Negative_14386	CTH, ID4, ITK, MSN, TK1, TYR, AGPAT1, AGPAT3, BBOX1, BMP2, C4BPA, CCL1, CD247, CFL2, CSF1, CTBP2, EDNRA, EPOR, EXOC7, FABP3, FADS2, FTMT, GG T7, GIT1, HTR2A, IL2RB, LAMB1, LAMC2, LPAR1, MAML3, MYL2, NAT2, NFYC, OR10V1, OR11A1, OR13C8, OR2A14, OR2T4, OR4N5, OR51B2, OR52I1, OR56A1, OR8G1, PLA2G3, PLCZ1, POLR1B, PPP2R5D, PTGES, RAC2, RASGRP3, RBPJ, RXRA, SDC1, SPAM1, TDO2, TLR2, UGT2A3, UNC5A, WNT8A, WNT9B, XCL1, YES1

Negative_14387	AUH, DDO, FGG, PC, ACSM3, ACSS2, APOA5, B4GALT5, BMP6, CAV2, CCL26, CDKN2A, COL4A4, CSF1R, CSF2RA, CSNK1G1, CX3CL1, DKK2, DLST, EPHB4, FGD1, FIGF, FMO5, FSHR, GALNT11, GALNT3, GART, GGT1, HIBCH, IMPDH1, KCNJ11, LRDD, LTA4H, MARS, MBL2, MYH7, NAGS, NCR2, NFAT5, NOX1, NRXN3, OR1A2, OR1N2, OR2B11, OR2S2, OR2T2, OR4K1, OR5R1, OR8B12, OXSM, PARVA, PDE4A, PDXK, PGM3, PI4KA, PIGS, PTK2B, SSH3, STX16, TAS2R13, TGFBR2, UBE2K, UNC5D, UPP1, VDAC1, WASF1, WNT7A, ATP6V1C2, SERPINA1, SERPINA5
Negative_14388	C4B, CGN, HK1, LIF, ACY1, ALCAM, ALPPL2, ANAPC11, ARSA, ATP5A1, CACNA1A, CCNE2, CDC25C, CKS1B, CXCL16, CYFIP1, DPM2, ENPP1, ENPP2, ERBB2, ERBB4, ESAM, FLOT2, FUT7, FZD10, GPT2, HLA-C, IL1A, IL2RB, ITGAE, ITGB5, LIMK2, MAGI2, MYL2, MYLK2, OR2T2, PARD3, PGAM1, PLTP, POLR3D, PTPN6, PTPRR, RASGRF2, RPSA, SARDH, SESN3, SLC27A1, SOCS4, TACR1, TLR3, TUBA8, UNC5D, WASL
Negative_14389	ADK, DCC, DLD, GDA, GK, HK3, MET, MVK, TFG, AASS, ABLIM3, ACVR1C, ACVRL1, AKR1C4, CAV1, CAV2, CCNE1, CD74, CDC14B, CDC25C, CDK5, CHEK1, COL6A2, CRB3, CYP1B1, CYP2A6, FGFR1, FLT4, GALM, GALNT8, GAPDH, GCDH, GRI2C, HAO1, IFNA4, IL17RB, KLRC1, LALBA, MFNG, MYH6, NAT5, NEU3, NFATC4, NSDHL, OR10G9, OR10K2, OR4P4, OR5AP2, OR5C1, OXCT1, PDK1, PLOD2, PNPT1, PRKAR1A, PVRL3, RARS2, RRM2, SH3BP2, SPCS1, SSH1, TAS2R60, TUBB2B, VANGL1, XCL2, ATP6V0A1, HLA-DRB4, MAPKAPK2
Negative_14390	CAD, CFI, CGN, FYN, GK2, GPT, ACAT1, ACPP, ACVR1C, ALDH3A1, ALOX15B, ATP6V1A, CASP3, CCR4, CXCR6, CYSLTR1, E2F3, EI24, FTCD, FUT5, GBE1, GGCX, GLG1, HSD17B8, HYAL2, IDUA, IFNA13, IL17RB, IL18RAP, INPP5A, IRAK3, ITGAV, LAP3, LIAS, MAP3K13, MCEE, NEFH, NFE2L2, NKD1, NKD2, OLAH, OR13F1, OR13J1, OR2K2, OR2T34, OR4K13, OR52E6, OR5M3, OR5R1, OR9A2, PCK2, PIK3R2, PPP1CB, PPP1R3A, PTPMT1, RIPK1, RPN1, SETDB2, SMARCA2, SQLE, ST3GAL6, TMLHE, UGP2, UNC5D, VTI1B, ZIC2, CSNK1A1L, TNFRSF10B
Negative_14391	AMH, C8G, CD2, FST, GHR, IL5, LPL, MSN, OSM, OTC, PC, ACVR2A, ANAPC11, ARG2, ATP12A, ATP5H, ATP50, CASP10, CD48, CHPF, CLDN3, CMBL, CRY1, CSDA, CTNNA2, CYP2U1, CYP4A22, FGF6, FLT3LG, GALNT2, GALNTL1, GATM, GBE1, GFAP, GGCX, GLYCK, LCMT2, MAGI1, MAN1A2, MAPK12, MCM2, MYL7, MYL9, NAGK, NPAS2, OR1A1, OR2H2, OR4C16, OR4D1, OR52K1, OR52N5, OR56A3, OXTR, PDE6D, PDE6G, PFKFB1, PIGN, PIK3C2G, PKM2, POLD1, PPARA, PPCS, PP2CB, PPT1, PTPN1, SEMA4F, STT3B, STX10, TAS1R3, TAS2R49, TNFSF8, TSNARE1, TYROBP, UGCG2, XIAP, AASDHPPT, ATP6V1G2, PPP1R12A
Negative_14392	AK2, BAD, BCR, BTD, CAD, EDA, GNE, ME2, SI, ADCY10, ALDH1A1, ALDOB, ALOX12, ALOX15B, AMPD3, ARNTL, BMPR2, CCND1, CD28, CDC2, CFL2, CHRM2, COL2A1, CYP2A6, DGAT2L4, DGKD, EFN3, FSHB, GABARAP, GGPS1, GSTM1, GUCY2C, HAO1, HBEGF, ICAM2, IGF1, IMPDH2, INPPL1, ISYNA1, ITCH, JAK3, JAM3, KLRD1, LIPF, MAPK11, MAT1A, MGST1, NARS, NAT5, NFYB, NKD2, NME7, OCRL, OR13C2, OR2D3, OR4C46, OR4D1, OR51B2, OR52K2, OR5B17, OR8B4, PAICS, PDK1, PIAS1, PIK3R1, POLR2L, POLR3G, PRIM2, RAB23, RAF1, RXRA, SHC2, SNAI2, SPRED1, SRGAP1, TLN2, WNT7A, CACNA2D3
Negative_14393	JUN, ABLIM3, ACO1, ACSL4, ACVR2B, ADCY9, AKT3, ANGPL4, ARG2, BBC3, BMP4, CD22, CD247, CD40, CLTA, CRHR1, CYP8B1, DDOST, DTX3, EIF4E, ENO3, FARSB, FASLG, GALNT13, GALNT7, GDF6, IKBKE, INPP5E, IPMK, LAMC1, MASP1, NAE1, NTF4, NUDT2, OR10H1, OR1D2, OR1G1, OR1J2, OR4A16, OR4E2, OR6C70, OR7G1, OR8S1, P2RX6, PAPSS2, PDGFA, PGM1, PGM2, PHKA2, PKMYT1, PLXNB3, POLD4, PRKAB1, PROC, PRODH2, PYCR1, RAF1, RHOQ, RPS6, SDC1, TBL1Y, TLR2, VAV3, HLA-DPA1, PRICKLE1, TNFRSF10D

Negative_14394	CD6, HK1, ZYX, ABLIM3, ADCY9, ALDH3B1, ALG5, ATP4A, B3GNT3, CCNB1, CD47, CTNNA3, CYP2A13, CYP2C8, CYP2E1, GALNTL4, GCNT2, GRIN1, GUCY2D, HARS2, IDUA, LYPLA2, MAML2, MFNG, MTHFS, NCR2, NEGR1, OR10J5, OR1E2, OR2A14, OR52A5, OR5D14, OR7G1, OR8J1, OXSM, PAK7, PFKL, PLCZ1, PMM2, PPP3CB, PTGES2, RPIA, RPS6KA5, SEMA3G, SPHK1, SPI1, STAM2, STMN1, SU LT1A4, TAS2R60, TJP2, UGCG, HSD17B12, MAP3K7IP2
Negative_14395	AMT, SHH, ZYX, ADAM17, ALG1, BET1L, C9orf95, CAMK4, CAV2, CD01, CFL2, CHRD, CLDN14, CXCL6, CYP2E1, DDX55, DUSP10, ENTPD1, FOXA2, FSHR, FUT1, GALNS, GCLC, GJA1, GNPAT, GOT2, IRF7, LTC4S, MAPT, MYH3, NAMPT, NAT6, NCK2, NKX3-1, NTF3, NTN1, OR1L1, OR1L4, OR2AG2, OR5I1, PDE1A, PDE1C, PDE3B, PGS1, PIGU, PIK3R3, PRKAA2, PRKAR1B, PRKCZ, PSEN2, PTGIS, PTK2, PYCR2, RAB23, RALA, RAPGEF3, RBPJ, SCD5, SLC2A2, STAT5A, TAS2R38, TAS2R5, TPI1, UGT2B28, VASP, WBSR22, WNT11, YKT6
Negative_14396	F10, GDA, IL7, AGTR1, AHCY, APBB1, CAMK2G, CARD11, CD86, CDK2, CES1, C HRNA7, COL5A2, CYP2C18, DRD1, F2RL1, FPGT, FTH1, GALNT11, GALNT13, GDF7, GJD2, GP1BB, GSTM5, HSD17B4, HSD17B8, IL20RB, IL7R, ITGAE, JAM2, KLRC2, MASP1, NCOA4, NFATC4, NTRK1, OR4C11, OR4N2, OR4Q3, OR51A4, ORC5L, PLAU, PNPLA4, PPOX, RAPGEF1, SARS2, SGPP1, SIPA1, SPTLC2, SRGA P1, STT3B, THBD, WASF3, GABARAPL1, TNFRSF13C, TNFRSF1A
Negative_14397	FES, SHH, AARS2, ACADL, ADCY6, ADRB3, AHCYL2, AKR1C4, ALG1, AMPD2, AT F2, ATP5B, ATP5E, BCKDHB, BIRC3, BMPR2, BUB1B, CCNH, COMP, COMT, CSF1, DCTN1, DGUOK, ENPP2, FPGS, FUT4, FUT6, FZD8, FZD9, G6PC2, GAL3ST1, G ALNT6, GUCA1A, IFNA10, IFNA4, IGF1R, KAT2A, KIR2DL3, LDHA, LEF1, LHC GR, LIMK2, LYZL1, MAD2L1, MAP3K7, MBL2, OR10AG1, OR10H2, OR4A16, OR4 C46, OR52R1, OR5M8, OR8H2, PCK2, PDE4D, PIK3C2G, PLCG1, PPP3R2, PPT1, PSAT1, RAP1A, RPN2, SSH2, ST3GAL6, TBL1XR1, TKTL2, TUBA4A, UCK2, AT P6VOD2, PNLIPRP2, SLC25A31, SUV420H1
Negative_14398	ASL, IL5, INS, LYN, AGRN, APOE, ATP12A, ATP6V0C, AXIN2, B3GALT2, BLVR A, BMP4, CACNB2, CCL11, CDH15, DPYSL2, EPB41, EPHA4, FGF19, GGT1, GLG 1, IFNAR2, IFNG, INMT, IPPK, LAMB1, LEFTY1, LILRB3, LIPE, LIPT1, MAP2 K4, MAP4K4, MYH14, NGEF, NR1H3, OR10R2, OR2S2, OR2T34, OR51A2, OR8J3, PIK3C2A, POLD1, PPP1R1A, PYGL, ROBO1, SEMA4G, SLC27A5, SPRED2, STA T2, STAT4, SUOX, TLR2, YWHAG, SLC25A31
Negative_14399	C3, CTH, DCC, GSS, UBC, ACADSB, ACYP2, ALG11, APOC3, ASMT, BMPR1A, CAR S2, CCL21, CCNG1, CD14, CLDN15, CNTFR, COL11A1, CXCL9, CYP2U1, DGKQ, ENPP3, FGF22, FOXO3, FUT3, GALNTL1, GCH1, GIT1, GNG3, GPX7, HADHB, HE XB, HPRT1, HSD3B2, IDH2, IFNA21, IFNGR1, IL1B, IL21R, IMPDH1, ITGA4, JAK3, KIR2DS4, KIR3DL2, LAMB4, LARS2, MICA, MTMR6, NAMPT, NCF2, NCOR 2, NRAS, NT5C2, NUDT5, NUMB, OR10S1, OR14J1, OR1N1, OR3A3, OR5B17, OR 5M9, PAK6, PANK1, PLA2G2F, PLCZ1, PNMT, PON3, PPP1R3B, PTPRR, RAB23, RAF1, RAP1A, SDC4, SEMA3C, SESN2, SLC2A2, SNW1, STAT4, TGFBR1, TRPM5, TUBA3E, YWHAZ, EIF4EBP1
Negative_14400	ABO, BTC, AADAC, AGPAT6, ALAS1, ALDH1A3, ALG13, ATIC, BMP4, CCL26, CL TC, CNTF, CXCR6, CYP2A13, CYP2S1, CYP4F2, DDX23, DDX41, E2F4, EPHA1, FUT1, FUT7, GALNT1, GARS, GCLC, GNAZ, GSTA3, GSTM5, IDH1, IL1B, ITGAE, MEF2C, NAT1, NGEF, NRG3, NRXN3, OR13C4, OR1Q1, OR2A4, OR2AT4, OR4P4, OR5AS1, PANK2, PDHA2, PLA1A, PPBP, PRKAR1B, PTGS2, SELL, SLC2A4, SM AD5, TUBB6, UCKL1, UPB1, ZMAT3, HSP90AB1

Negative_14401	DDO, OGT, PVR, VTN, ABLIM3, ACAT1, AGRN, AK3L1, AKT2, ALS2, AOC2, APC2, ATP12A, B4GALT3, BCAT2, CAMK2A, CCL17, CD72, CDC25B, CDC27, CHAD, CHAT, CHSY3, CMAS, CMBL, COL3A1, CXCR4, CYP2J2, DGAT1, DGKG, DPYSL2, FMO1, G6PC2, GALNT11, GOT2, GPAA1, GRPR, GSTP1, HHEX, HSD3B7, IFNA8, ITGAL, LTB4R2, LTBP1, MTHFR, MYH6, NFKB2, NT5E, NUDT2, OR10G7, OR10J1, OR1E2, OR1G1, OR1S2, OR2H2, OR51A4, OR51B6, OR5AP2, OR7A5, OR7C1, OR7G1, P4HA2, PGK2, PIK3R2, PLK1, PMM2, POLR3H, PRKCQ, PTPRB, PVRL1, RBPJ, ROCK1, SAT1, SC5DL, SMARCA5, SRGAP2, STK3, STX6, TRIP10, TRMT11, TUBB2B, UGCGL2, WNT5B, ATP6V0A1, CSNK1A1L, MAPK8IP3, PDCD1LG2
Negative_14402	DCC, GK2, LCK, LTB, MET, MPL, TK2, ACAA2, ACADL, ACO1, AHCYL1, ALDH1A2, ALG12, ALG8, ANGPTL4, ARAF, ARHGEF1, BCL2, BLVRA, BPGM, CACNG7, CCL20, CD48, CDH3, CERK, CHST11, CLDN16, CSNK1G1, CXXC4, CYP19A1, DGKB, DGKE, DGUOK, DPM2, DUSP9, ECSIT, ENPP7, FGF7, FGFR3, FZD2, GALNT1, GALNTL4, GRIN2D, IL2RA, INHBC, JAK3, LTB4R2, MAGI1, MMP7, MTHFS, NANP, NQO1, NSD1, NSDHL, NUMBL, OR10G4, OR13J1, OR4A16, OR52I1, OR56B4, OR6K2, OR8B8, PAK7, PANK4, PCNA, PDE4D, PDE5A, PDGFRA, PIGQ, PIK3C2A, PIP5K1B, PIP5K3, PLK1, PNLIP, POLR3K, PPP1CA, PPP1R3C, PTCH1, PTPRR, RAPGEF2, RBKS, SELP, SLC27A1, SNW1, SOD1, SOX17, TRAF2, TUBB4, ULBP1, YWHAQ, HLA-DRB3, PRICKLE2, SERPINA1
Negative_14403	AK3, HK1, MPI, TAT, TYR, ABL1, ACVR1C, AMDHD2, APOA1, ARHGAP5, ATP12A, ATP5G2, ATP6V1H, C1GALT1, CACNA1S, CCL17, CDK2, CHD8, COL1A2, CREBBP, CTSB, CYP3A5, DDX54, DHDDS, EFNA1, EGLN3, ENTPD4, FTH1, GART, GBGT1, GJA1, GSTA2, GTSE1, HADHA, HYAL2, IL17A, IL21, KARS, KIR3DL2, MAP4K3, MAPK14, MS4A2, NKX2-2, NOX3, OR13G1, OR4K13, OR4K14, OR4K5, OR52N5, OR9A4, PDGFRB, PFKM, PI4KA, PIK3C2G, PPT1, RASGRF2, SGPP2, SLC2A1, SOS1, SPRED2, SRD5A1, THTPA, THY1, TNFSF8, UCK1, UGT2B11, ZAP70
Negative_14404	DBI, HK1, LYN, TPR, WAS, ACOX3, ADSSL1, ALAD, ALS2, ARAF, ATP6V1H, B3GALT4, BACE1, BCMO1, CDC23, CLDN7, CSF3R, ENAH, FARS2, FGD1, GMPR2, HLCS, IFNA17, IL17RB, IL18R1, LLGL2, MGAT4A, MTHFS, NAGA, NKD1, NTF4, OR10G4, OR2B6, OR4D11, OR4P4, OR4X1, OR52K1, OR52K2, OR5T3, OR6C70, PDE4A, PGAM2, PLA2G2F, POLR2H, PPA2, PPCDC, PPP1R3A, PTPRB, RALB, SHC3, SPHK1, TUBA3E, TUBB3, WASF3, YARS, AASDHPPT, PRICKLE2
Negative_14405	ADA, ADC, CBL, IHH, KDR, ME2, NPL, PGF, ACP2, ACTG1, ACVR2B, ADORA2B, ANAPC10, APOA2, ATF4, BACE2, C1QC, CCNG2, CCR1, CD8B, CDC25C, CDK6, CLDN10, CMBL, COASY, COMT, CRHR1, CSF1R, CSF2RB, CTF1, CYP2A13, CYP2C9, DDX47, DEGS2, DGKE, DUSP14, GALNT11, GALNT14, GMPPA, GNA13, GNB3, GRLF1, GSTM5, GSTO1, HNF4G, HPRT1, IL18, IL22, IRF3, LCMT1, LIPF, MAN1A1, MAP2K3, MAP4K2, MAT2B, MGAT2, NAT2, NAT5, NCF2, NEUROG3, NFKB2, NKX6-1, NT5E, NTNG1, OR10Z1, OR11H1, OR5M8, OR8B4, OR8H3, PAK2, PCYT1B, PDE1A, PIK3R5, PIP4K2A, PLCB4, PLXNA2, POLR2K, PPM1D, PRKX, PSPH, RAF1, RARA, SC5DL, SHC1, SPCS1, SPCS3, SPHK2, SPRED2, STAT1, TAS2R14, TBL1XR1, TIAM2, TPM3, TPMT, TRAF1, VEGFA, YARS2, HLA-DRB5, SERPINA1
Negative_14406	CEL, GBA, AGPAT2, AKR1B1, APC2, ATP5G1, ATP6V1H, BET1L, CAMKK2, CASK, CD19, CDC27, CDH4, CKS1B, CLDN18, COL4A4, CPT1C, CRY1, CSAD, CSDA, CYP4F2, DGKG, DGKZ, DNMT1, DUSP3, EARS2, EFNB2, EI24, ERO1L, F11R, FMO5, FUT8, GALNT9, GJD2, GMDS, GNPDA1, GSTA4, HADHB, HES1, HMBS, HSD3B2, HTR2C, HTR5A, ICOSLG, IRAK2, ITGA6, KARS, LCMT2, MAP3K1, NFKBIB, NPAS2, NRG2, NSDHL, OGDHL, ONECUT1, OR10A7, OR10V1, OR2H1, OR2M4, OR52R1, OR6B2, OR6K2, PDE4B, PDE4C, PGM1, PHGDH, PIK3C3, PLCB4, PPP2CA, PRKAA2, PSPH, PTDSS1, PTPRB, PTTG1, PVRL3, RPSA, RXRA, SDHB, SLC9A1, SNAI1, SPRY2, SULT1E1, TAS2R13, TRAF4, TRHR, TSNARE1, TUBB3, UAP1, UGT2B17, UGT2B4, YES1, YWHAQ, C1GALT1C1, SERPING1, TNFRSF12A

Negative_14407	BTK, OTC, TPO, TPR, AADAT, ACTC1, ADIPOQ, AKR1C1, ALDH2, AMD1, ARPC5, B3GALT5, C5AR1, CASP3, CDC45L, CISH, CKMT2, COL5A1, CYP17A1, DARS, D EGS2, DGKA, DKK1, FGF11, GLO1, HAAO, HMBS, IDH3B, IL28RA, ITGA2, ITGA M, LDHD, LIPT1, MMP2, OR10AD1, OR1J2, OR2L8, OR3A2, OR51E1, PAPSS2, P DE7B, PER2, PGM1, PIGX, PRKG1, RRM2B, SETMAR, SLC12A2, ST3GAL5, STK3 6, TLN1, YWHAG, ATP6V1C1, TNFRSF13C
Negative_14408	APP, C1S, C4B, CD4, CKM, GAA, GLA, KHK, LAT, PML, SMS, TPO, ACSM1, ADCY8 , AKR1D1, ALDH2, ALDH5A1, ALDH7A1, ASMT, CACNA1I, CCR6, CHRM2, CREB3 , DAAM2, DDX4, DGKA, DUSP1, E2F2, ESPL1, GCNT3, GNAI1, GRIN2C, GSTT1, HEXB, HHIP, HSD17B8, IDH3B, IGSF5, IL18RAP, IL20RA, JAK3, LCP2, LHCG R, MAGI2, MYH7, MYH8, NCR1, NT5E, ONECUT1, OR2T5, OR4A5, OR4C46, OR4S 1, OR52A5, OR52W1, OR5P3, OR7A5, OR9G4, PDE3B, PDGFC, PFKM, PIGF, PLA 1A, PLCB2, POLR2B, POMC, PRKAR2B, PRKG1, PYGM, RAPGEF4, RDH10, RRM2, SETD1B, SNW1, SPRY2, ST6GAL1, SUOX, TBK1, TYROBP, UBE2K, UGDH, ULBP1 , ULBP2, WHSC1L1, WNT1, WNT10B, B3GALNT1, HLA-DQA2, HLA- DRB4, MAPK8IP2, MAPK8IP3, PLA2G12A, PLA2G12B
Negative_14409	ABO, MPI, TEC, ATF4, ATP5G3, ATP6AP1, C3orf10, CCL19, CD22, CFLAR, CO L11A1, COL4A1, CPT1A, DOT1L, EDNRA, GIT1, GRIA3, GUCY1B3, HEXB, IFNA 4, IL1A, IRF3, LIPT1, MYH7, NFE2L2, NMNAT3, OGDHL, OR4X1, OR52A1, OR8 U1, PDE2A, PFAS, PIGS, PIK3CD, PLCB3, PLCD1, POLR2G, POMC, PRIM2, PRK AA2, PRLR, PTPRM, RAPGEF3, SELL, SETD7, SETDB2, SRGAP2, ST3GAL2, THB S3, ZMAT3, MAPKAPK2, TNFRSF1B
Negative_14410	ADA, CRH, F7, FOS, AARS, AKT1, BCAT1, C7orf16, CAPN2, CAV1, CCL16, CCN B1, CD36, CDK4, CES2, CFL1, CNGA3, CSNK1G1, CYP11B2, CYP3A4, DGUOK, E PHA1, ESPL1, FLT3, GOT1, GUSB, HAGHL, HPSE2, IFNGR2, LTC4S, MAD1L1, M AML2, NFE2L2, OR2AT4, OR4A5, OR5M8, OR5P3, PARVB, PDE7A, PDGFD, PIK3 C2B, PON2, RALGDS, RERE, RPS6KB2, SHC4, SHMT1, SIGLEC1, SPRED1, SPRE D2, STAT4, TAS2R9, TCF7, TGFB1, TUBA4A, TUBB2A, VCAM1, WASF1, WBSCR2 2, WNT2, WNT9A, CACNA2D1
Negative_14411	ADA, C1S, CFI, CS, DBT, MET, MTR, PC, ACOX1, ADIPOQ, ADORA2B, B3GAT1, B 4GALT2, CCL16, CCL19, CDC14B, CHUK, CLDN8, CLTB, COL4A2, CSNK2A2, CY P4F2, DGKD, DLL4, DLST, EFN1, EPHA1, F2RL1, FGF14, FGF6, FUT1, FUT7, GAD1, GNAO1, GUCY1B3, GYS1, HADH, HLA- G, HMGCR, HMOX1, HTR5A, IDH2, IDH3G, IFNA7, IFNGR2, IGF1, IKBKB, INMT , KNG1, MAFA, MAPK8, MAT1A, MPZL1, NFASC, NKX3- 1, NOD1, NRG4, NTF3, OGDH, OR2A25, OR6B2, OXTR, PDPK1, PFKFB2, PHKA2, PIK3R5, POLA2, POLR1A, PON1, PPP2R5A, PRKACB, PRKAR2B, PRPH2, PTGES , RHOD, RPS6, SDC3, SELL, SESN2, SH3BP2, SIAH1, SIPA1, SLC9A1, SOCS3, STAM2, STT3B, SUFU, TSHB, TUBA3E, TYMP, UGT2B28, UPB1, VEGFC, VNN1, Z NRD1, PAFAH1B3, PNLIPRP1, TNFRSF10B
Negative_14412	AR, BID, CFI, DAO, MVD, TFG, TPO, VTN, ACOX1, ADH6, AKR1B1, ALG12, ALOX 15B, ANAPC2, APOA2, ATP6AP1, BMP6, CACNA1B, CCL14, CDKN2C, CHRNA7, C LDN1, CREB3L2, CREB5, CSDA, CX3CR1, CYP11B2, CYP4A11, DDX56, DFFB, E DAR, ENO3, ENPP2, ERBB3, FGF18, HLA-DOB, HLA- F, ICAM1, IL13, ISYNA1, LARS, LIPA, MGAT2, MTHFD2, NARS2, NFYB, OR13H 1, OR1K1, OR2T34, OR5A1, OR6K2, PARVG, PDE3A, PDXK, PFKM, PLAT, POLR3 G, PYGL, RAPGEF2, SC4MOL, STAT4, STX8, TKTL1, UCKL1, VDAC3, ATP6V1E2
Negative_14413	C1S, C9, GP9, ID2, ME3, MIF, RFK, TPO, ADCY1, AGPAT3, ALDH1A2, ARG2, B4 GALT2, BPNT1, C3orf10, CAMK2G, CASP3, CCR4, CCR8, CDKN2D, COL4A2, CS NK1G2, CYBB, DDX50, DFFB, FUT6, GALNT2, GOSR2, HAGHL, HMOX2, HSPA1B, KARS, MAOA, MKNK2, NTF4, OR10A7, OR10T2, OR4D9, OR5A2, OR5V1, OR6C3, OR9I1, PCCA, PCYT1A, PFKFB2, PPP2R2D, PPP2R5D, PPP3R2, RIPK1, SDHB, SEMA4A, SOAT2, SPRED2, STX8, TCF7, UBE2L3, WNT2, MAP3K7IP1, TNFRSF1 0A

Negative_14414	EBP, GHR, IHH, PGP, AADAT, AARS2, ACAA2, ACAD8, ACADL, ACOT12, ACTB, A DRA1B, ADRB1, ADRB3, ALG10B, ARHGEF2, ARPC2, ARPC5, BCL2L1, BET1L, C ACNA1G, CACNA1H, CCL19, CCL3, CD82, CDC6, CDKN1C, CNGB1, COL3A1, CRY 2, CTSS, CYP2E1, CYP4F2, DFFA, DHCR7, DTX4, EFNA3, EPB41, FMO3, GGT1, GRIN1, GSTO2, GUK1, HIBCH, IFNA16, IL12B, IL13RA1, ITGB7, ITPKB, LRA T, MAN1B1, MAP2K5, MYH7, NADSYN1, NEFL, NFATC2, NFYB, NUDT9, OR10G3, OR10G7, OR1N1, OR1S1, OR52N1, OR56A3, OR5AN1, OR6Q1, OR8J1, OR8S1, P AK1, PDE4D, PIGF, PIK3C2B, PIM2, PIP4K2C, PIPOX, PMAIP1, PRODH, RAB2 3, RASA1, RASGRF1, RASGRP4, RDH8, ROBO2, RPS6KA2, SHC2, SLC27A5, SMA D2, SMAD6, ST3GAL5, TAS2R48, TLR4, ZMAT3, CACNA2D4
Negative_14415	CFI, FH, MYC, RPE, TK2, ACAA1, ACAD8, ALDH1A2, ANAPC4, ARG1, ARNT2, CA CNB1, CCDC6, CD8A, CDK7, CHRM1, CLCF1, CX3CR1, CYP4F3, FARS2, GALC, H NF1A, ICAM3, INHBB, KAT2B, MAP2K7, MTHFD1L, MTMR6, OR10A4, OR1N2, OR 4A5, OR6C1, OR6N1, PARD6A, PIAS1, PIGL, PLA2G2D, PON3, PPP1R3D, PRSS 2, RPS6KA5, SCIN, SNAI1, SPP1, SUCLA2, UCKL1, UROC1, ATP6V1G2, CACNA 2D2, HSD17B10, SERPING1
Negative_14416	GP9, SFN, TAT, TNN, TXK, ACADVL, ADH6, ARHGEF4, CCL11, CCR1, CD01, CRE B3L2, CSNK1E, CYBA, CYP2B6, DHRS3, E2F2, FGF20, GALNT1, GRM1, GUCY1A 3, HAO2, HMBS, IGSF5, IL8RB, IRAK1, ITGAX, KIR2DS4, KLKB1, MAP3K11, M AP3K8, MKNK1, NFKBIA, OR10R2, OR1I1, OR2T29, OR4D1, OR4S1, OR5H6, OR 5P2, PHKG2, PIK3CD, POLE3, PPP1R3A, PYGB, RRAS, STX1A, TACR2, TAS2R8 , TLN2, TP53, UGT2B10, UROD, ALDH18A1, CSGALNACT1
Negative_14417	FER, IDS, ACP1, ACSL4, AKR1A1, ALG3, ALPPL2, C7orf16, CCL2, CD14, CD4 6, CD79A, CDC25C, CDH5, EHMT1, EPHB6, EXTL1, FLT3LG, FUT8, GDF6, GRIN 2B, GUCA1B, HIP1, HNF4A, HSD3B2, IL10RA, IL7R, IL8RA, IMPA1, ITGA4, J AK3, LTC4S, MAD2L1, MAPK9, OR51A4, OR51B6, OR51G1, OR52N5, OR5AN1, O R5V1, PAK4, PDE9A, PDIA4, PIGT, PIP5K3, PLA2G2F, PPP1CA, PRKAR1B, PS PH, PTPRB, PTPRJ, RAC3, RDH5, SETDB2, SPRED2, TAP1, TAS2R50, TGFBF1, THBS3, TRDMT1, TSNARE1, UGCGL2, UNC5C, WIF1, WWP1, YES1, PAFAH1B2
Negative_14418	CGN, F12, TK2, ABCC8, ACLY, ACSL3, ACTA2, AKR1B10, ALDH1B1, ALG10B, A MY2B, AOX1, APOA5, ATG3, CANT1, CD55, CDH3, CHRM1, CLDN4, CREB3L4, CS NK2A1, CTSG, DAPK1, DGKH, DPAGT1, FGF5, GCNT1, GNA13, GNPDA1, GNPDA2 , GNRH1, GRIN2B, GSTM4, HLA- F, HMGCS2, ICAM3, IGFBP3, IMPA2, IRS4, KIR3DL3, LDHD, LTC4S, MAPK11, MAPK8, MINPP1, MYH4, NADK, NAMPT, NEU4, NODAL, NT5C1B, OR11H1, OR2Y1 , OR51A7, OR52A5, OR52L1, OR5T1, OR6F1, OR8K3, P4HA1, PCNA, PDE10A, P DE4A, PDGFB, PHPT1, PIGO, PIK3C2A, PLA2G2E, PLCD1, PLXNB2, PPP1R3D, PRKAR1A, RAPGEF1, RASA1, RHEB, SARS2, SC4MOL, SETD8, SHMT2, SLC25A5 , SMAD1, SRD5A2, TRAF1, TUBB1, UROC1, USE1, VANGL2, VTI1A, XCR1, ATP6 V1C2, CACNA2D4, HSP90AB1, TNFRSF10B
Negative_14419	IL4, PTS, ABCC8, ACOX2, ACVR1B, ALDH1A2, ALPL, ALS2, ASNS, ATP5J, AXI N2, BRAF, CCR3, CMAS, CREB3L2, CYP7A1, DGKB, DLST, EDNRA, ENPP7, EXTL 3, FGFR4, GALNT12, GANAB, GPLD1, GRIN2A, HAGH, IMPA2, ITGAD, MAN1B1, MDM4, MGAT4B, OR10A2, OR10P1, OR1S1, OR2A5, OR2B2, OR5M8, OR6A2, OR6 T1, PAK7, PLK1, PNPT1, PON2, PPAP2A, PPCDC, PPP3CA, PVRL4, SCLY, SH2D 1B, SHMT2, SLC27A5, SMAD7, SPRED2, SUV39H1, TKTL2, TPMT, WNT4, CSGAL NACT2, HSP90AB1

Negative_14420	FST, GDA, MUT, NLK, ABP1, ACYP2, ADAM17, ADCY3, AMDHD2, AMPD1, ATP5J2, ATP6V1D, BMP4, C9orf95, CCL8, CCNB3, CD86, CDH3, CDKN2B, CHST13, CMK2, CSF1R, CYCS, CYP4F3, DFFA, DPAGT1, DPYS, EI24, EPRS, FPGS, GBE1, GNAI2, GNAS, GNG12, GSK3B, HIBCH, HSD3B2, IDH3G, IL18, IL18R1, LYZL1, MAGI1, MAP2K1, MAPK7, MASP1, MBL2, MICA, MYL5, NFASC, NLGN2, NOD1, OR13C9, OR14C36, OR1L1, OR2B6, OR2G6, OR2L3, OR2T10, OR2T12, OR4C46, OR4N4, OR4S2, OR51V1, OR5A2, OR6N1, PDE11A, PDE9A, PIK3R2, PLXNA2, PAPP2C, PPM1D, PROC, RFNG, RFWD2, SDC3, SHC2, SOX17, TACR1, TAS2R13, TAS2R4, TCF7L2, TNFRSF9, TPMT, TRMT11, TRPC1, TUBA1B, TUBA4A, UMPS, WNT11, YKT6, YWHAB, ZFYVE9
Negative_14421	LYN, PLN, SRF, ADH1A, ADH4, ALDH1L1, ALPPL2, BTRC, CACNA1F, CACNG3, CALML5, CMPK1, CNGB1, CXCR6, DGKZ, ECHS1, FCGR3A, FGD1, FGF2, HSD3B2, IL1A, IL2RG, ITGA5, KLKB1, LEF1, MAP3K1, MGAT4A, MTMR2, OR10A2, OR1L8, OR2C1, OR2T6, OR4C13, OR52E4, OR5B17, OR6X1, PGAP1, PIK3R2, POLR2J, PPP1R3C, RFXANK, RPS6, SDHB, SEMA3C, SEMA4F, SLC25A6, UCK1, VASP, WNT16, WNT9B, CACNA2D4, HLA-DPA1
Negative_14422	GPI, GSS, IVD, MVK, TNF, TNN, TXK, ZYX, ALDH1L1, AMD1, ARHGEF4, ASRGL1, ATP6V1D, BRAF, CCL17, CDC42, CHPF, CLDN16, CPT2, CSF3, EFNB2, FADS2, FBXW11, FLAD1, FMO2, FOXO3, GALNT1, GRHRP, GRIA2, GRM1, HSD11B1, IL17A, IQGAP2, KLRC1, LDHD, LRP5, MAD2L1, NADK, NT5C, OR10AG1, OR11H6, OR13F1, OR1J2, OR1K1, OR51E2, OR8H3, OR9K2, PDHB, PIGP, PPARA, PSME1, PTPRM, PYCR1, RPS6KA2, SLC27A5, SLC2A2, STMN1, STX4, SUCLA2, TRAF1, TRAF3, TSLP, TUBA1B, UGT2A1, YES1, SERPINC1
Negative_14423	DBH, HGD, HK2, NPY, ZYX, ACTN4, ADH4, APBB1, ARHGEF4, B3GNT3, BLVRB, BNT1, CACNG7, CAMK2G, CAV3, CCNE1, CD19, CD226, CDK5, CLDN9, CNTNAP2, CSF3, CSNK1G3, CYP26B1, CYP2D6, DHDH, DPYD, FTCD, GCNT3, GNAS, HLA-DOB, HTR7, IARS, IKBKB, IL4R, IMPA1, INMT, ITPA, ITPKB, LIPE, MAN1A2, MAP2K1, MAP2K7, MASP1, MFNG, MGAT3, MGST1, MGST3, MTHFD2, MTHFS, NFE2L2, NFKBIB, NQO1, NTN1, OCRL, OR10J3, OR10K2, OR1B1, OR1L4, OR4P4, OR5D18, OR5H6, OR7C2, OR8J3, PCYT1B, PHKA2, PLA1A, PLCG1, POLE, POLR2C, PRDX6, PRKAG3, PSAT1, PSEN1, PTGER1, PTPN11, RAB23, RAPGEF1, RPS6KA3, SEMA4B, SEPHS1, SETD1A, SOCS7, SPRY4, SSH3, TLN1, TNFSF8, TRADD, VKORC1, WNT7B, ATP6V1G2, HSP90AA1, SERPINA5, ST6GALNAC5, TNFRSF14, TNFRSF1A
Negative_14424	ASL, CRH, DCT, GSS, MTR, AACS, ADCY8, AFMID, AOX1, ATP5F1, BDNF, BUB1, CD226, CD47, CHAD, CHRNA7, CLDN16, CREB3L1, CSNK1A1, CTSS, DDHD1, DKK4, DTX3, EI24, GRHRP, HBEGF, HIBCH, IFNGR2, IL2RB, ITPKA, MCCC1, MCM5, MKNK2, NAT1, NAT5, NFKBIB, NFX1, NKD2, NOX1, OR5B3, PDE1C, PDE4D, PFKFB2, PGLS, POLR3H, POLR3K, PPARG, PPP2R2B, PPP2R5B, PRKAB1, PRKG1, PTGS1, RALB, RAP1B, RHOD, SFRP4, STK36, SULT1E1, TICAM2, UGDH, YWHA G, AASDHPPT, C1GALT1C1, HSD17B12, PHOSPHO1
Negative_14425	EPO, FAS, MIF, MVD, ACTG1, ADSSL1, ALOX15, APOA2, CACNB3, CD19, CD99, CKMT2, CLDN15, COL5A2, CSF2RB, CTNNA1, EIF4E2, ENO3, FGF9, FOXO3, FZD5, G6PC, GADD45G, GALNT10, GMPR, GNG13, GRHRP, GUCY2D, HRH2, HTR6, IFNA13, INHBB, JAK3, KLRC4, LARS2, LYZL1, MCCC1, MCM3, NMNAT2, OLAH, OR4C12, PANK1, PGS1, RDH10, RPS6KA5, SELPLG, ST3GAL4, YES1, YOD1, ST6GALNAC5, ST6GALNAC6

Negative_14426	IL2, IL9, LYN, SDS, TPR, ACOX3, ADCY4, ADRBK2, ALDH1B1, ALDH3B2, ALDH4A1, APH1A, ATP4A, B3GNT2, BCL2, CACNA1E, CACNG2, CAMKK2, CANT1, CCKAR, CD244, CDKN1A, CNTNAP2, CPT1C, CYP3A5, DDX18, DERL1, DHX58, DPYSL2, EFNA1, EGLN3, ENAH, ENTPD1, EPB41L2, FARSA, FGD3, FGF4, FLOT2, FRAP1, FUT5, G6PC2, GATM, GRIA1, GSTK1, GSTZ1, GZMA, HIF1A, IARS2, ICOS, IRAK2, KCNB1, MAP3K13, NEFM, NT5E, OR14C36, OR1F1, OR1S2, OR2AG2, OR2T4, OR4A16, OR4C46, OR4K14, OR5D18, OR6C1, OR8A1, PCYT2, PDGFRA, PIP4K2A, PLCD4, PNPLA3, POLE4, POLR2B, PPP1R3A, PPP3CB, PRKAG3, PRKAR1B, PRKCQ, PRSS2, PTPRZ1, RASA1, RUNX1, SARDH, SARS, SDHC, SETD1A, SLC2A1, SMAD2, STMN1, SV2B, TGFA, TRHR, UGP2, VEGFA, WNT2B, WNT4, ATP6V1G1, CACNA2D4, SERPIND1
Negative_14427	AGK, AK5, DCT, EGF, FOS, GSS, MAG, MPI, PTS, RPE, ACADM, ACP2, AKT1, ARHGEF4, CACNG1, CCNH, CD247, CES7, CLDN22, CNGB1, CNTN1, CRLF2, CXCR4, CYP4F2, DGAT2, DPAGT1, DRD1, DTYMK, E2F2, EFNB3, F2RL2, GCH1, GGT1, GRIA2, GUCA1B, IDH3G, IDI1, IGSF5, IL20, ITGAD, ITGAM, KIR2DL2, LTB4R2, MAGI1, MYH15, NPR1, NTSR1, OR2A25, OR2L8, OR51T1, OR52A5, OR5A1, OR5D13, P4HA1, PARD6B, PDE6H, PDHA2, PGAP1, PHKA1, PIK3R5, PLTP, PLXNA3, PMAIP1, PNLIP, POLR2H, PPAP2C, PPP2CA, PPP2R2D, PRKAG1, PRKCE, PROS1, PTPMT1, RAP1B, ROCK1, SELE, SLC25A6, SLC9A1, SMAD3, SMC1A, STAT5B, TPM3, UROC1, VAV3, VKORC1, WNT9B, XCL2, HLA-DQA2
Negative_14428	CSK, ACPP, AMY2A, ATP6AP1, BBC3, BIRC2, CCR4, CSH1, EPB41L1, EPHA2, FECH, FGF14, FIGF, GADD45G, GALNT11, GANC, GGT5, GMPR2, GNA14, GNPNT1, GPAM, GTSE1, HIP1, HNF1A, HSD11B1, HTR2A, IL2RA, INSR, ITGB1, LTA4H, MTMR2, MYLK2, NCK2, NGEF, NKX2-2, NUDT8, OR10G3, OR2T6, OR4A16, OR4F15, OR4F4, P4HA2, PCCB, PDGFA, PFKP, PIAS3, PIGX, PLA2G1B, PLaur, PLCG2, PLXNB3, PPP2CB, RASGRF2, RBL1, RDH16, SDC4, SELE, SQLE, SRGAP2, STX10, SULT1E1, TACR1, TACR3, TC7L1, TGDS, TKTL1, TRADD, XYLT2, CACNA2D4, TNFRSF11B, TNFSF13B
Negative_14429	CAT, CBS, FGB, SFN, STS, TEC, TK2, ACSS3, AHCYL1, AKR1A1, ARPC5, ASS1, CACNA1I, CADM3, CD47, COL5A1, CSNK1G3, DDX52, DGAT2L4, DTX4, EI24, ETKN1, FARSA, FGD1, FGF10, FGF23, GNAS, GP1BB, HAAO, HSD3B2, HSPA2, IGFBP3, IL2RA, IRF5, ITGAX, MDH1, MGAT3, MGAT5, MIOX, MYH11, NCOR2, NFKBIB, NME2, NSDHL, NUDT9, OR10A7, OR11H4, OR1N2, OR2A5, OR5B21, OR8B8, PAK1, PDGFC, PYCR2, PYCRL, PYGL, RAC3, RAPGEF4, RPS6KA6, RXRB, SESN3, SIGLEC1, SLIT1, SMPD3, SORBS1, TAS2R9, TNXB, ULBP3, VEGFA, VEGFB, ZMAT3, ATP6VOA1, CACNA2D3, TNFRSF10D
Negative_14430	C8B, CKB, FES, GPT, IL5, LCT, MAG, ACSM4, ADRB1, AHCYL2, CCR1, CD28, CD3E, CD48, CER1, CLCA2, CLDN14, CLDN8, COQ5, CREB3L1, CSNK2A2, CXXC4, DGAT1, DHCR24, EFNA1, FGF23, FGF7, FLOT1, GALNT10, GSGT1, GLUD2, HAO1, HGSNAT, HMOX2, HRAS, IL1A, IL1R2, IL7R, INSR, IRF7, IRF9, KLK3, LIPI, METTL2B, MGAT5, MPZL1, NAT5, NFKBIE, NTF3, OPLAH, OR1S1, OR2AT4, OR4M1, OR51B6, OR52A5, OR52D1, PDIA4, PFKFB2, PGAM2, PIAS3, PIGF, PIGM, PIGV, PLOD2, POMC, PRKAA1, PSAT1, PSPH, PTGES, RBKS, SCP2, SGPP1, SLC12A2, SNAP23, TAS2R49, TNFRSF4, TPH2, UGT2B28, VANGL1, VNN1, KIR2DL5A, TNFRSF10C, TNFRSF1A



Negative_14431	AGL, DCK, GCK, PGF, ACVR1B, ADCY1, AFMID, AGPAT6, BHMT, BMP8A, BRAF, CACNA1D, CD80, CHR1, CLDN2, CLTA, CNTF, CNTNAP1, DAAM1, DAD1, DDX51, DGKQ, DHDDS, DHDH, DPYSL2, DUSP16, DUSP7, DVL1, EGLN1, FABP3, FBP2, FGF22, FUT5, GALNT1, GALT, GFPT2, GLO1, GNPDA2, GOSR2, GP1BA, HIF1A, HMGCL, IFNA6, IFT57, INPP4A, ITGB4, LHCGR, LIPT1, LTA4H, MAD2L1, MAP2K1, MAP2K5, MMP14, MTHFD2, MTMR1, MYLK2, NCOR2, NEU1, NFYA, NME7, NMNAT3, NRG4, NUDT2, OR10G4, OR13A1, OR4C13, OR51B6, OR6C4, PCK1, PHGDH, PIK3R1, POLD1, POLR3K, PPA2, PPCDC, PROC, PSPH, PTGER1, RAB23, RASGRF2, RDH16, RXRB, SAT1, SCD5, SDC2, SHC4, SHISA5, SOS2, SUCLG1, TPK1, UGT2A1, ULBP1, UPP1, CACNA2D2, MAPK8IP3, MAPKAPK3, PPARGC1A, TNFRSF10C
Negative_14432	AR, ATM, FES, GHR, GK, GK2, NOG, SMO, AARS, ACADM, ADCY3, AGXT, ALPL, APBB1, ARG1, ARHGAP5, ARHGEF1, ARHGEF2, ASS1, ATP5G2, B3GAT3, BCMO1, CD34, CD86, CKMT2, COL4A6, CSNK2B, CYP2S1, CYP4F2, DDOST, DGAT1, DGAT2L4, DKK4, ENTPD4, EPHA1, FGFR4, GALNTL1, GLYCTK, GNA12, GSTA5, HARS2, IL11RA, INPP5B, ISYNA1, ITGA1, ITGAV, LDHA, LPAR1, LYZL1, MDH1, MYH7B, NCK1, NQO1, OR10H3, OR11A1, OR2B6, OR2G6, OR2T33, OR2Y1, OR51B5, OR52D1, OR52N1, OR8A1, PAPSS1, PARD6G, PDE2A, PDGFRA, PDHB, PDX1, PGAM4, PI4KA, POLR2F, PRKG2, PRODH, PRSS2, PTPRC, RAPGEF3, RAPGEF4, RARS2, RPSA, SDC2, SGPP2, SH2D1B, SMPD3, SQLE, TAP2, TLN2, TPH1, TUBAL3, UGT1A10, UROC1, ZNRD1, CSGALNACT1, HSP90AA1, PRICKLE1, SLC25A31, ST6GALNAC1, TNFRSF10B, TNFRSF13C
Negative_14433	CTH, ID4, NLK, PVR, ACSL3, AGPAT6, AGRN, ALDH3A1, AMY2A, APOE, B3GALT6, B3GNT2, BUB3, CACNG2, CACNG6, CAMK2B, CASP9, CBLB, CCL15, CHRNA7, CLTC, CLTCL1, CNTF, CYP2B6, CYP3A43, CYP7A1, DCXR, DDX55, DGKA, ECHS1, EHMT2, ERBB4, FLOT1, GALNTL4, GGT1, GLUL, HEXB, HLA-C, HTR6, IARS, IDH2, IFNA16, IFNA17, IFNA5, LTB4R2, MCM7, MFNG, MMP7, MMP9, MS4A2, MYH14, NAT2, NCKAP1, OR10J1, OR2AG1, OR2M3, OR51A7, OR51I2, OR52B4, OR52M1, OR5I1, OR5M8, OR6Q1, OR6S1, OR8H3, OR8I2, ORC3L, PDE1C, PDE4B, PIGT, PIM1, PIP5K3, PLA2G4A, PLXNB2, PLXNB3, POLD4, PTPRM, PVRL2, RND1, SHC4, SMAD4, SMARCA2, SREBF1, SULT1A4, TAP1, TAS1R3, TM7SF2, TMLHE, TP73, TPI1, UCK2, UGCGL1, WARS, WNT4, WWP1, ZBTB16
Negative_14434	AMT, BTC, FH, IL9, MSN, AGPAT3, AOC3, BCAT1, C1QA, CACNA1H, CD48, CTNNA2, DGKH, DHDH, DHRS9, FCER1G, FOXA3, GOSR2, GSTA4, GSTO1, HADHB, HIBADH, HSD17B7, INSR, ITGAD, JAM3, KIR2DL1, MAPK12, MTHFD1L, NADSYN1, NSDHL, OR10V1, OR4S1, OR51B4, OR5I1, OR6C2, OR7D4, PDPK1, PFAS, PI4KA, PKMYT1, PPP2R2C, PPP5C, RAPGEF4, RDH5, RPS6KA6, SESN3, SLC27A1, ST8SIA5, STX6, THBS2, TNFSF12, WNT3A, ST6GALNAC4
Negative_14435	CBL, CFI, CP, GGH, MVD, PAH, UBC, ACOT12, AK3L1, AMPD1, AOX1, ARRB2, ASMT, B3GALT5, CACNB2, CD74, CD80, CDC20, CHR1, COL11A1, CTNNA1, CTSL1, CXCL16, CXXC4, DAPK1, DARS2, DHRS4L2, DMGDH, EPHA2, GAMT, GLDC, GNA12, GUCY2D, HRAS, IDUA, IL11RA, IL12B, IL28A, KAT2B, KIR2DL2, KIR3DL3, LAMB4, MTHFD2, NEU1, NME7, NT5C2, OR2AG1, OR2L8, OR2T12, OR3A2, OR56A3, PGAM4, PLD2, POLR1C, PTPRZ1, RFXANK, RXRA, SCLY, SIAH1, SLC12A2, SOCS3, STAT5A, STK11, TKTL1, TNFSF9, YWHAB, PNLIPRP2, TNFSF13B
Negative_14436	AK7, IL9, LPL, TNC, A4GALT, ABLIM1, ACADL, AGPAT4, AMPD2, BIRC3, CCR8, CD34, CHPF, CHR1, CLCA4, CNTN2, CPS1, CYP2B6, CYP3A43, CYSLTR1, EIF4E2, EPHA2, F2RL1, FBP2, FGF7, FUT5, GAB1, GIT1, GLUD1, HARS, HARS2, IDH3B, IDH3G, IMPDH2, LGMN, MAN1B1, MAP3K12, MARS, MPST, NAT6, NLGN2, NPAS2, NT5M, OCRL, OR1M1, OR2A25, OR2T29, OR52A5, OR52B6, OR5A2, OR5V1, OR6C2, OR7C1, PFN3, PHKG1, PKM2, PLCG2, PLD1, PLXNB3, PRIM1, PSME2, PTPMT1, RDH12, RGS3, ROBO1, RPS6KA4, SDC3, SFRP4, SNAI1, STK36, STX10, TDO2, TKTL1, TNFRSF9, UGT2B4, UGT8, WIF1, WNT4, WWP2, ZMAT3, CACNA2D4, HSP90AB1, PRICKLE2

Negative_14437	ADO, DBH, DCK, FN1, GPI, LSS, NPL, SI, ABLIM1, ACSM3, ADCY7, ADH7, ADRA1B, AGPAT1, ARPC1B, ARPC5L, ATP12A, BPNT1, CASP6, CCR10, CLDN9, CYP2C18, CYP4A22, DGKD, DGKG, DUSP3, EDN1, EPHB6, F13B, FARSB, FZD2, GALNT6, GALNTL4, GNAO1, GSTM3, GYS1, HGSNAT, IFNAR1, IPMK, ITGA10, LIPE, MAGI2, MARS2, MDH2, NFATC2, NFKBIA, NOTCH1, NUDT2, ONECUT1, OR2D2, OR2T1, OR4C11, OR5D16, OR7A10, ORC4L, P2RX7, PARD6G, PDE4C, PIGB, PIGL, PIGV, PKMYT1, PNPT1, POLR2I, PON2, PPBP, PRKCB, PRSS3, PYCR2, SEMA3F, SHC2, SNAI1, SPP1, SSH1, STK4, SUCLA2, SULT1A1, ULBP3, VAV1, VAV2, WEE1, WHSC1, WNT8A, YWHAH, MAPK8IP3, PHOSPHO1, PPP1R12A, TNFRSF10D
Negative_14438	C8A, F3, F8, GNE, ACLY, ACSL3, AHCYL1, ALDH5A1, ANAPC11, ANAPC5, ATG3, BET1L, BHMT, BMPR2, CARS2, CCL1, CD244, CD274, CD74, CD82, CDH4, CLDN8, CREB3L1, CSF3, CSNK1A1, CXCR4, CYP11A1, CYP7A1, DARS2, DHODH, EIF4B, ENO1, ENPP6, EPHB6, FGF12, FLOT2, FRAT1, FUT9, G6PC2, GGT5, GLO1, GOT2, GPD2, GUK1, HCLS1, HSPB1, HTRA2, IL12RB1, IL22RA2, INPP5A, ITGAX, KIR2DL4, KRAS, MAOA, MAP3K7, MRAS, NFKBIA, NTSR1, OR51A4, OR51B2, OR6C74, OR6Q1, PDE4D, PDE5A, PFKFB3, PFN3, PIK3C2B, PIK3C2G, PNPT1, PPCS, PPM1A, PPP1R3A, PRODH, PSME1, RASGRP3, RGS3, SETMAR, SMPD1, SNAI1, SOCS7, SUOX, THBS4, TNFRSF8, TUBA3C, UGT2B4, UXS1, VDAC1, YWHAB
Negative_14439	DCK, EDA, GHR, IL9, ITK, SFN, ZYX, ALPI, ASAH1, B4GALT4, CDC14A, CDH5, CLDN14, COL1A2, CSF3, CX3CR1, DHCR24, DTX3, DUSP8, FGF8, FRAT1, GARS, GDF7, GIT1, GLI3, GPAM, GPX7, HLCS, HYAL2, ITGA10, ITGA2, JAK2, LDHB, MAT1A, MMP2, NARS2, NGEF, NPR2, OCLN, ONECUT1, OR10G9, OR13C5, OR13J1, OR2L3, OR2T2, OR5AC2, OR8S1, OXSM, PDGFC, PER2, PFKFB4, PHKA2, PLA2G2D, PLOD3, POLR1C, POLR2F, PTCRA, RUVBL1, TAS2R14, TBL1X, TIAM2, TP73, TPH2, TUBA3C, UBE2K, VAMP1, VANGL2, VEGFA, WBSR22, ATP6VOA1
Negative_14440	A2M, DDC, EPO, NGF, SRC, ACOX3, ACVRL1, AFMID, AHCY, ANAPC10, ARPC1A, ATP5C1, BPGM, BST1, CACNA1D, CACNG5, CBLC, CCL21, CDH5, CDS2, COMP, CSF2, CX3CR1, CYP27A1, DDX52, DGKD, DNMT3B, ENPP7, EPHA8, F11R, GAD2, GALNT14, GCNT3, GMPPB, GP1BB, GPAA1, GSTA2, HEXA, IL10, IL12B, IL21, ITGB6, ITGB7, KAT2B, KIR2DL3, LCMT2, MGAT3, MGAT4A, NFKB1, NUDT2, OR13C8, OR1B1, OR2G3, OR4K1, OR51A7, OR6B2, OR6N2, P2RX3, PGS1, PIK3C2G, POLA2, PPOX, PPP2R5B, PRKCI, PRSS1, PTPRB, SEMA3D, SLC27A4, SSH1, THBS1, TNFRSF9, ALDH18A1, TNFRSF10B, TNFRSF14
Negative_14441	F8, FYN, JUP, ADCY5, BCAR1, BPGM, CACNB4, CACNG6, CAMKK1, CCL1, CCNA1, CDKN2B, CHEK2, CRKL, CSNK1G3, DDHD1, ENAH, ENTPD6, EPHA1, FLOT2, GSTM5, GSTZ1, GUCY2C, HCLS1, HSPA1B, IL17RA, IL9R, MLLT4, MTMR6, MYH15, NEUROD1, NOTCH2, OR52L1, OR52W1, OR5T2, PAICS, PHPT1, PIAS3, PMAIP1, PPARG, PPAT, PVRL4, RPS6KA3, SHC2, SMAD9, SRGAP2, SV2B, TACR1, TYROBP, UGT2B28, YARS
Negative_14442	A2M, HK1, IL2, NF1, TK1, ACVR2B, ALG5, ARHGEF4, ASNS, BUB1B, CALML3, CKAR, CCND3, CDC16, CLTC, CYFIP1, CYP2D6, DAPK2, DHFR, ENAH, FGF2, FOXA3, FRAT2, GALNTL2, GANAB, GARS, GCNT3, GDE1, ICOSLG, IL13RA1, IMPDH2, LAMC2, LARS, MAP3K12, MAP3K5, MKNK2, MTHFR, MYLK, NAT2, NFYB, NTF3, OR1J2, OR4E2, OR6T1, PARD3, PDE1B, PIGS, PLEKHA8, PORCN, PVRL2, RPSA, RRM2B, SAT1, SDHB, SESN1, SETD7, SPI1, SPTLC1, STAT4, STX1B, TFPI, TUBA8, WARS, WNT7A, WNT7B, ATP6V1G2, CTNNBIP1, MAPKAPK3, ST6GALNAC5

Negative_14443	CD4, LEP, SPN, ACP5, AGTR1, ALPP, ARPC5, ATP2A1, ATP2A3, ATP6V1D, B3G AT3, BCMO1, C5AR1, CDC14B, CDC27, CDKN2D, CES7, CLDN7, DDX54, DGKZ, D IAPH2, DPYD, DVL3, EPHA7, EXTL1, F2RL2, GPX5, IFNA6, ITGB7, MAML1, MA P3K13, MLYCD, MMP1, MYH6, NRXN2, OR56A3, OR5T3, OR8J3, PDE7B, PLCG2, PPP2R2B, PRODH2, PTPMT1, RFWD2, RRAS2, SAT2, SEMA4A, SH3BP2, SHC3, S MARCA5, SRGAP1, THBS1, TJP2, TNFSF18, XYLB, ATP6VOA1, ATP6V1E2, B4G ALNT1, MAPK8IP1
Negative_14444	ATM, BID, C3, CFH, DBH, GDA, GP6, RFK, ACO2, ACOT12, ACSS1, ASIP, B3GNT 2, CAMK2A, CBR1, CCL11, CCL15, CCL28, CCL5, CD36, CDKN1C, CDKN2A, CES 2, CHAT, CSNK1A1, CYSLTR2, DGAT2, DHDH, DOCK1, EGLN1, EHMT1, EPB41, E PB41L1, GALNT14, GLB1, GNA13, HDAC1, HLA- DMA, HSD17B2, HSD3B1, HTR2B, IDH3G, IL18RAP, IL6ST, MAD1L1, NADSYN1 , NFASC, NFYC, NKX3- 1, NNMT, OCRL, OR10AG1, OR11H1, OR1B1, OR2L3, OR2T2, OR2T5, OR51A2, O R51E1, OR51F1, OR52I2, OR5M9, OR8H3, OR9I1, OSMR, PHKG2, PIGQ, PLA2G 2F, PLCD3, PLXNB3, PMAIP1, POLD2, POLR3G, PPP2R5B, PRKCD, RHOQ, SDHC , SEMA3F, SIPA1, SOAT1, SOCS4, SOS2, TAS1R2, TBXAS1, TOMM40, TRAF5, T UBB6, VDAC1, WNT9A, WWP1
Negative_14445	CFI, FAS, LHB, ACAA2, ACO1, ADCY7, AGRP, AHCYL1, AKR1A1, ALDH2, AMY2B , ARHGEF1, ARSE, ATG12, ATG7, ATP2A3, ATP5B, ATP6AP1, B3GALT4, B4GAL T6, BDH1, CCNE2, CD46, COL2A1, CSF1R, CTLA4, CXCL13, CXCL6, CXCR3, CY P19A1, DUSP16, EIF4E2, EXOC7, FCER1G, FGF3, GP1BB, GRIA2, IDH3A, IGF BP3, IL10, IL12A, INPP4B, ITPK1, KCNB1, KIR3DL3, KYNU, LALBA, LARS2, LLGL1, MAPK7, MLLT4, NCKAP1, NOTCH2, NPR2, NRCAM, NTN1, OR10K1, OR13 A1, OR1S1, OR2G2, OR2T4, OR4A5, OR4C16, OR51B4, OR7A10, OR7A5, P2RX7 , PIK3R4, PLA2G2A, PLXNB3, PPP2R2B, PRKAA2, PRKACA, PRKCH, RARA, RBL 2, RIPK1, SH2D1A, SH2D2A, SKP2, SPAM1, SPTAN1, TBL1X, TGFB3, TKTL2, T NFSF11, TPK1, TUBB1, UGT2A1, UMPS, WBSR22, CTNBP1, KIR2DL5A, PPA RGC1A, TNFRSF14
Negative_14446	C6, CS, DDC, FYN, IDS, SCD, TK1, ACSL3, ACSM3, AMDHD1, ASPA, ATF4, ATP2 A2, BCAR1, BCAT1, BLVRA, CACNA1C, CAV3, CBR3, CCL26, CCND2, CD40LG, C DH15, CHST11, CLDN11, CLTA, COL4A2, CSNK1G3, CSNK2A2, CYP17A1, DDX1 9A, DIAPH1, DNMT1, DRD2, EFNB2, ENTPD8, EPHA7, FLT3LG, FUT2, GMPA, G NAL, GPD1L, GSTO1, HAO1, HSD11B2, HSD17B1, HSD17B3, IL12RB1, IL9R, I NHBC, LIMK1, MAML2, MAP3K7, MAPK13, MCM4, NARS2, NOTCH2, NR1H3, NTRK 2, OR1L8, OR2A4, OR52N5, OR5AN1, OR8D2, PCCA, PCYT1B, PIP5K1C, PLAU, PLOD1, PNLIP, PRKG1, PRSS1, PTK2B, QPRT, ROBO2, SDHB, SIPA1, SLC12A2 , SLC27A1, SMPD2, SPRY3, SSH3, ST3GAL2, STAT4, STX3, TFPI, TGDS, TRAF 5, TUBB, UAP1, UGT2A3, UGT2B11, UGT2B7, VDAC2, YWHAB, ATP6VOD2, MAPK 8IP1
Negative_14447	BAX, ID4, MTR, MYC, OAT, PLN, WAS, ACSL4, AGXT, ALDH1A2, AOC2, ARPC2, A TG7, CCL26, CD274, CD86, CEBPA, CLCA4, COL6A2, CREB3, CTF1, CYP2A7, E FNA4, EP300, EPHA8, EXTL2, FPGT, FUT8, FZD10, GALNT6, GNMT, GUCY2F, H LCS, HSD11B2, HSPA8, IL21R, ITGA9, KLRK1, MALT1, NTF3, OR1E1, OR2AE1 , OR2M3, OR2T33, OR4F6, OR51G2, OR9G4, OXSM, P2RX3, PDE1C, PIGN, PIK3 C2A, PRKG1, PTGS2, PYGB, RUVBL1, SDC4, SKP2, SMAD6, STAT3, SULT2B1, T NFSF18, TRAF4, TRMT11, YKT6, ZFYVE16
Negative_14448	CBS, DAO, FGB, FH, GSR, IL6, NPY, OGT, TXK, ADAM17, ADH6, CCNB3, CD74, C DKN2A, CSF2, CTSG, CYP4F2, DLAT, EDNRA, EPHA1, EPHB1, FARP2, FCGR3A, GALK2, GNA01, GNPDA1, GUCA1A, HSD17B7, IL12A, IL20RA, ITGAV, LEFTY2 , LYZL1, MAP4K2, MBL2, NFYC, NLGN2, NTNG1, OR13C8, OR13J1, OR2T10, OR 51B4, OR52E6, OR5A2, OR8S1, P4HA2, PDX1, PIK3R5, PLA2G6, PPAP2C, PPP 1CB, PRLR, PTPRJ, RAC2, RPS6KA1, RPS6KB2, TCF7, TOMM40, TRPC1, TSC2, TSHR, UCP1, UROS, VEGFB, XCL1, MAP3K7IP2

Negative_14449	MET, MIF, TPO, AARS, ACP6, ADRB1, AGRP, ALDH1A3, ALDOC, ALG10, ATP5D, ATP6V1A, ATP6V1H, CARS, CASP3, CAV3, CCL23, CCL25, CDC27, CHUK, CRHR1, CTNNA3, CTSS, DGAT1, EDAR, EXT1, F13B, FGF11, FGF5, FLOT2, FZD3, GG1, GLUD1, GSTA5, HAGH, HAGHL, IL1B, MAPT, MDH2, NCF1, NFYB, OR10X1, OR1L8, OR2M4, OR2T4, OR4C46, OR4K15, PDE6D, PGM1, PI4KA, PNPO, PPBP, PPIID, PPP3CC, PROC, PTPN11, PTPRC, RFNG, RPS6KA4, SHC1, SLC2A4, SLIT1, ST8SIA1, TBK1, TBL1Y, TSLP, UGP2, YWHAZ, GABARAPL1, PPARGC1A
Negative_14450	ADO, BCR, C8B, CEL, DCT, LCT, NOG, SFN, TAT, TNN, ACPT, ADCY8, ALG10, ATP6V1F, AVPR1B, C1QB, CACNA1I, CACNG2, CACNG6, CDC25C, CDS1, CPT1C, ERTL2, FDFT1, G6PC, GRHR, GSTK1, HIP1, HSD3B2, JAG1, KIR2DL1, LPAR1, MAP4K4, MDM2, NAE1, NFASC, NUDT12, NUMBL, OR1G1, OR1M1, OR52I1, OR56A1, OR9A2, PAFAH2, PDE10A, PDE4A, PDE8A, PGAM4, PLK1, PPM1B, PRKY, PSAT1, PYGM, RUNX1T1, SOS2, SV2C, TXNDC12, UNC5C
Negative_14451	F3, F7, FST, KDR, PC, PXN, SHH, ACVR1B, ASAH1, ATP6V1D, BMP7, C4BPA, CACNB3, CDK7, CES2, CHPF, CLDN6, COL5A1, CSF1, CXCR3, CYP21A2, ELK4, FCGR3A, FGF19, G6PC2, GALNTL1, GCDH, GCNT1, GJA1, GSK3B, GUSB, HMGCR, IL2RA, IL7R, LAMC1, LCAT, MGAT2, MMP7, MYLK3, NCR3, NPR2, NT5E, OR10Q1, OR2G6, OR3A2, OR4C46, OR4K14, OR6N2, OR8D2, PAFAH2, PCK2, PER3, PGA1, PHGDH, PIGX, PIP5K1C, PLA2G2E, POLR3D, PON1, PTGER3, RDH5, SARDH, SCD5, SHC3, SHMT1, SMAD3, SMPD3, SPRED1, SRGAP2, STAT5B, SV2C, TAS2R7, TGFB1, UCK1, YWHAH, GABARAPL2
Negative_14452	CD2, ME1, SRM, TKT, ACADS, ACOX2, ACSM4, ACTB, ACVR2B, ADRB1, ALOX5, BCAR1, C3orf10, CACNG7, CCL16, CCR9, CFL2, CFLAR, CMPK2, CPT1C, CREB3, CRY1, CSF1R, CSF3, CSH1, DDX51, DLL3, ELK4, ENO1, FBXW11, FCGR2B, FGD3, FGFR1, GSTM3, HDAC2, HSD17B4, IL13, INHBC, INMT, ITGA9, KCNB1, LAMC2, LARS, LRP5, MAP2K6, MPZL1, NR1H3, NT5C1B, OR1Q1, OR2M2, OR2W1, OR52D1, OR52N4, OR5B12, OR5B21, OR5H6, OR6C4, OR6X1, OR8B12, PAK3, PD1XK, PPAP2B, PRIM1, PRKAB1, PRODH2, RAC2, RAP1A, RAP1B, RASGRP2, RBL1, RDH12, SPRED1, TBXA2R, TOMM40, TPMT, TUBAL3, UGT8, ULK2, ULK3, WNT2B, XCL1, HSP90AA1, SERPINC1, TNFRSF11A
Negative_14453	ADA, GPT, ABLIM1, AK3L1, ALDH3A1, ALPL, AXIN2, B3GAT3, B4GALT7, BAAT, BDKRB1, CALML5, CCL5, CSDA, CXCL2, CYP4A11, DDX4, DNMT3A, DRD2, EPHB2, FGF20, GAL3ST1, GLI2, HIF1A, IL13RA1, IQGAP2, LLGL2, MAP3K2, MYH9, NEU3, NFATC1, NKD2, NLGN1, OR10H4, OR11A1, OR13C4, OR1E1, OR1L8, OR5B17, OR8K5, PDGFC, PDCG1, POLR3D, PRSS3, PTPMT1, PTPRZ1, RPN1, SMPD1, SMURF1, ST8SIA1, SULT2B1, TMLHE, UCK2, VCAM1
Negative_14454	C9, CP, IVD, SMS, AANAT, AASS, ALDH5A1, ARHGAP5, CDK2, CDKN1A, CHKA, CNTN1, COX15, CXCR5, DAPK2, DGKG, DPYD, DUSP14, E2F2, FGF11, FGF20, FRAP1, FUT5, FZD2, GAB1, GART, GCNT1, GPX7, GRAP2, GRIA1, GSK3B, GTSE1, GUCY2C, HMGCL, HRH1, IL28B, INHBC, ITGA2, KIR3DL1, LEFTY2, MAFA, MAP3K12, MGST2, MINPP1, MTFMT, NANP, NT5C, OR1J2, OR2AE1, OR2T5, OR4F6, OR4K14, OR51B5, OR51M1, OR52H1, OR5C1, OR5I1, OR5P2, OR6T1, PARD3, PAX4, PDE6D, PLXNB1, POLR2J, POLR3A, PPP2R5E, PTCH2, RALB, RAPGEF1, SELPLG, SETD7, SKP2, STK11, STK3, SV2B, TAS1R3, TRADD, TRAF2, TRAF3, UAP1, UGT2A1, UGT2B7, WNT4, XCR1, ZMAT3, CACNA2D3, PNLIPRP2

Negative_14455	C9, DBH, DCK, DHH, EBP, FGB, NGF, PXN, ACP1, ACSM1, ACTA2, ADAM10, ADSS, ALDH3A1, ALDH6A1, ASAH1, ATP5G3, ATP6VOB, BAAT, BCMO1, C4BPA, CACNA1A, CACNA1S, CACNG1, CDC45L, CFL1, CNGA4, CNTN1, COL4A2, CRB3, CSF1R, CSNK1D, CTSB, CYBB, DCXR, DPYSL2, DTX1, ENTPD5, FRAT2, GANC, GMPS, GNPAT1, GSTA3, HLA-F, HYAL1, IFNA2, IFNA21, IFNA4, ITPKB, LALBA, LLGL2, LM07, LPAR1, LTA4H, MAN1B1, MAP3K3, MAPK11, MYH4, NEFH, NME2, NOTCH2, NTF4, NUDT12, OR10H5, OR10J5, OR2AT4, OR4C13, OR4K17, OR51S1, OR52R1, OR8H2, OR8K1, P2RX3, PLCD3, PLXNA1, POLR2B, PPP1CA, PPP1R1A, PRSS3, PTDSS1, RERE, RPS6KA1, SNAI2, STAT4, SV2A, TFPI, TSTA3, TUBB4Q, WNT9A, YWHAB, MAP3K7IP1
Negative_14456	CFI, KIT, SP1, VTN, ABP1, ACSM2A, ACTA1, ARPC1A, ASNS, AXIN2, BMP2, BMP4, CACNA1G, CDK7, CLCF1, CLDN19, CMPK2, CTPS, DARS2, DDX47, DHRS4, F13A1, FGF9, FGFR4, FLT1, FOXO3, FZD1, GALNT10, GALNT14, GNA11, GRIN2B, GRIN2D, IFIH1, IGFBP3, IQGAP3, KLK3, LAMA4, MOV10L1, NFE2L2, OR10K2, OR11G2, OR11H4, OR1F1, OR2M7, OR4K17, OR5AU1, OR8D1, OR9G4, PAK7, PFN1, PIGC, PLA2G3, PRKAA2, PSME1, PVRL4, SEMA4B, SEMA4F, SPHK2, TC7L1, TUBB3, ZIC2, PLA2G12A
Negative_14457	LPL, PGD, SYK, WAS, ACSS3, ADCY6, ALG10B, ARHGEF6, ARSE, B3GNT5, C9orf95, CAMK2B, CHKB, CREB5, CTPS2, CYP1A2, DDX23, EIF4E, ERBB3, GAL3ST1, GALK1, GFPT2, HNF1A, IKBKE, ITGA9, LCMT2, MAPK11, NFATC1, NRP1, OGDH, OR2T2, OR5D14, OR6C4, PDE6H, PLCB3, PLCD3, PPP2R5A, PSPH, PTCH2, RARA, RELA, RXRB, SARS, SMC1A, ULK2, VANGL1, VCAM1, WNT10A, WWP2, EIF4EBP1, ST6GALNAC4
Negative_14458	ATM, IDS, TPR, ABLIM1, ACSL1, AGRN, AHCYL2, AKR1D1, AKT2, ALDH7A1, AMHR2, AMPD1, ANAPC7, ANPEP, AQP7, ATP5G3, C1QC, CADM1, CCNG2, CDC14A, CERK, CNTN1, COQ6, CPT1B, CTBP1, CTPS2, DDIT3, DDX18, DKK1, ENPP7, F2RL2, FABP3, FUT7, FZD6, GALNTL5, HSD17B2, HSD17B8, IFNA2, IL10RA, IL1A, KIR2DS5, KLRC2, LGMN, LRDD, MNX1, NADSYN1, NCK1, NT5C, OR10H5, OR10S1, OR1L3, OR2G2, OR4C46, OR5AR1, OR5L1, OR8B12, P4HA3, PDE8A, PDGFRB, PDHA1, PFAS, PIM1, POLR2B, PPM1D, PRKCE, PSME1, PTPN6, PTPRF, RXRA, STX2, SULT2A1, SUV39H1, TNFSF12, TYRP1, VANGL2, WASF1, WASF2, YOD1, HSD17B10, TNFRSF12A
Negative_14459	AK3, BTK, ID1, PVR, ALDH1L1, ASNS, BNIP1, CCR5, CCR7, CDC7, CHEK2, CSF2RA, CSNK1G1, CXCL12, CYP21A2, DAPK2, ENO1, GAS1, HMGCS1, IL13, INPP5B, ITGAV, MICA, MINPP1, MYH7B, NAT1, NOTCH1, NUDT9, OR2A14, OR4F15, OR4N4, OR51Q1, OR52B4, OR52R1, OR8S1, PCCA, PLAT, RASGRP1, SMC1B, STX16, SUOX, TAS2R16, TAS2R42, TLR5, TNFRSF8, TPK1, TSHR, TUBAL3, UNC5C, HSD17B10
Negative_14460	ADK, BAX, CKM, HK3, OGT, TAT, ACSS2, ALPP, ARHGEF7, B3GALT4, BIRC5, BMP4, CAV2, CCR9, CDH1, CHST13, CTNNA2, CYP2A13, DARS2, DBF4, GLI1, GSTK1, GSTT1, GUCA1B, HNF4A, HPSE2, IDH3B, IFNA8, IKBKB, IL10, IL18, IL2ORA, IL28A, INHBC, KYNU, LCMT2, MAPK14, MCM4, MYH10, NCSTN, NSDHL, NT5C1A, OR13G1, OR2D2, OR52N2, OR6C3, OR6C75, PARD6B, PDE10A, PGLS, PHGDH, PIM2, POLE, PTGS1, RBPJ, RHOD, SHC2, SLIT2, SULT2B1, THBS2, TUBA3C, WNT1, TNFRSF12A

Negative_14461	AK2, F2, GLS, ID2, IL5, IL9, NGF, PLG, ACY1, ADRBK2, AMPD1, APOA2, ATP6 V1D, CCL27, CCNE1, CD40LG, CD59, CHST12, CLDN3, CSF3, CTSG, DERL1, DG KH, DHFR, DHX58, DLL3, DPM2, EHHADH, EPAS1, FBXW11, GCDH, GNAO1, GNB3 , GNG3, GNPAT, GNPAT1, HMGCL, HTR4, IL17B, IL24, IMPDH2, ITGB5, KIR3 DL1, LAMC3, LDHC, LIFR, MASP1, MPDZ, NAGK, NOD1, NT5E, OR2A14, OR2F2, OR52B6, OR52J3, OR52N4, OR5T1, OR8K1, OR9A4, P4HA2, PAK4, PARD6A, PD CD1, PDX1, PHPT1, PIAS1, PIK3R5, PLA2G4A, PLCD4, PLCG1, PLXNB3, POLD 1, POLR1B, POLR2B, POLR2E, PRODH2, PSME2, PYGM, RAPGEF1, RDH16, ROBO 3, SESN1, SHMT1, SKIV2L2, SLC25A4, SOS2, SULT2A1, TBL1XR1, TBXA2R, T FPI, THBS2, TRAF3, ATP6V1E2, CACNA2D2, CSNK1A1L, HLA- DQB1, SUV420H1
Negative_14462	AR, DLD, GDA, IL7, MIF, TK2, TXK, AACS, ACAA2, ADCY2, ADIPOR2, AKR1C3, ALDH1A3, ALDH9A1, ANAPC7, AOC2, BMP4, CACNA1A, CACNG4, CCNA2, CDKN2 A, CLOCK, CNTNAP2, COQ5, CRLF2, CRY2, CSNK1E, CYP2B6, DGKE, DTX2, DUS P2, DUSP7, EREG, ESPL1, FDPS, GLS2, GNAI3, GNRH1, GPD2, HMGCR, HYAL2, IDH3B, IGSF5, INSR, IPMK, IRF5, KNG1, MGAT1, MGAT5B, NFYB, NFYC, NR1 H3, NRCAM, NT5C1B, OR2T33, OR4C46, OR4K17, OR4X2, OR51G2, OR52B6, OR 52I1, OR52N5, OR5A2, PDHA2, PDXK, PFKFB1, PIGF, PIK3R3, PLD2, PPAP2C , PPBP, PPP1R3A, PRKCG, PSAT1, PTPRC, RARS2, RELA, SCP2, SGPP1, SPRY1 , STX3, SUFU, TAS2R60, TCF7, THTPA, TUBA8, TUBB2B, VAMP4, VANGL2, ZMA T3, GABARAPL2, TNFRSF10A
Negative_14463	C6, CKM, EBP, GK, NOG, PRL, SFN, ASMT, BDH1, CACNB4, CASP10, CCL11, CCL 16, CCNB1, CCND1, COL1A2, CTSG, CYP11A1, CYP1B1, DGAT2L4, FGF10, FTM T, GNG13, GOT2, GSK3B, HIP1, ICAM3, IFT57, ITGA10, LEPR, MARS2, MOV10 L1, NFYC, NGEF, OR13C5, OR51G2, ORC1L, PHKG2, PIPOX, PTPN11, RALGDS, RASGRF2, SDC2, SLIT1, SOS1, SPHK2, TICAM1, TUBB2B, VEGFA, WIF1, SERP INB5, TNFRSF10C
Negative_14464	C6, DLD, HGD, HYI, ID4, TAT, XDH, AADAC, ACMSD, ACOT12, ADRBK2, AKT2, A NAPC2, ANPEP, ARD1A, ATF2, ATG12, B3GAT2, BUB1B, C3orf10, CALML3, CA SP7, CCL17, CCL26, CCL7, CCNE1, CCR7, CD48, CD72, CDK5, CPT2, CTPS, CY P11B2, DGKI, DNMT1, EHMT1, EIF4E, EPHA8, ERBB4, FABP1, FGFR3, FOXO3, FZD10, FZD2, GGT7, GNAQ, GNPDA2, GPD1L, GSTA3, GSTM5, GSTO1, HSD11B2 , HTR7, IDH2, IFNGR2, IL1A, IL3RA, IRAK4, LAP3, LIMK2, LTBR, MAML2, MC M2, MMP7, MTHFD1L, NANP, NANS, OR10A5, OR10G2, OR13C4, OR13G1, OR1E1 , OR4P4, OR5A5, OR5H6, ORC2L, P2RX4, PIK3R5, PPA2, PPAT, PPP1R3B, PV RL2, RASGRF2, RDH11, RDH12, RHOD, SCIN, SPHK2, SPP1, STAM2, THBD, TUB B4Q, SERPIND1, TNFRSF1A
Negative_14465	CRH, DBT, F2, GSN, ID1, MAX, NLK, PML, RDX, TYR, AARS2, ABAT, ADCY6, ADC Y7, ADH4, ALCAM, ALPPL2, ANAPC5, ARPC2, ATP6V0B, BACE1, CACNB4, CAMK K1, CCNB1, CD22, CD40LG, CD82, CDKN2B, CDKN2D, CLDN11, CLDN17, CREB3 L2, CSH1, CYBB, CYP19A1, DIAPH3, DUSP4, E2F5, EPB41L2, EPHA7, EXOC7, FGF23, FGF4, FM05, FSHB, GMDS, GNPDA1, GYS1, HSP90B1, HYAL2, IARS, ID H3B, IL17RB, IL18RAP, KIR2DL2, LDHB, MGAT2, MKNK1, MYL2, NCAM2, NFKB 1, NRG2, NTNG1, OR1I1, OR1M1, OR1N2, OR2G2, OR2T12, OR51I1, OR6T1, PE CAM1, PHGDH, PIP4K2B, PLXNC1, POLD3, POLR3B, PPM1D, PPP2R1A, PRKCD, PTPRB, RPS6KA1, RPS6KA3, RAS, RRM1, SCD5, SEMA3G, SH3BP2, SMARCA2, SPTLC2, SREBF1, STX6, TLR5, TRAF1, TUBA1A, UPP2, WNT8B, XYL, ZBTB16
Negative_14466	C2, F2, TPR, AARS, ACTB, ACYP2, AGPAT3, AMY2B, AREG, BMP6, CAMK2B, CAR S2, CHEK2, COL5A1, CYP4F3, DNMT3A, DUSP16, GALNTL5, GNAO1, GPLD1, HN MT, HRAS, HTR2B, ITGA3, KITLG, METTL6, MTMR6, MYH15, NARS, NCF1, NCOR 2, NEUROD1, NLGN1, NPR2, OR10V1, OR4D2, OR4M1, OR51D1, PDE5A, POLA2, POLR3D, PRKAR2A, PRKAR2B, PRSS3, SPRY1, ST3GAL4, STT3B, TCF7, THBD, ULK1, VNN1, WHSC1, XYL

Negative_14467	FOS, TNR, AACS, ACO2, ADH5, ALG5, AMDHD2, ARHGEF6, ATG3, B3GAT2, BMP4, BUB1, CACNA1E, CACNA1G, CACNB1, CAMKK1, CCR3, CD99, CHAD, COL2A1, CREB3L3, CRY1, CYP2A7, EHMT2, EIF4B, FLT1, FZD4, GALNT3, GALNT7, GBE1, GFPT1, GNG13, GSTM1, HNMT, HSPA2, IL15RA, IL18RAP, IL28B, IL29, ITGB8, MAPK14, MCCC2, MGAT1, MGST3, MMP9, MPZL1, NEUROD1, NRCAM, NT5C3, OR10A2, OR10A6, OR10J5, OR2D3, PDE6H, PIGO, PLXNA1, PRKCB, PSAT1, QA, RS, RAD51, SEMA3E, SESN3, SMAD2, SMAD6, SMARCA5, SPHK2, SPRED1, TCF7L2, TLN1, TRAF1, TSTA3, UGT8, UROS, ZIC2, HLA-DQA2, HLA-DRB5, MAP3K7IP2, TNFRSF10B, TNFRSF18
Negative_14468	GSN, IL6, RDX, ACADS, ACP2, ACTG1, AKT1, AKT3, ARSA, B3GNT2, BIRC3, C3AR1, CDC25A, CNTF, CSNK1D, CSNK1G2, CTNNA1, CXCR6, CYP2S1, CYP3A7, DPYSL2, EPB41L1, EPB41L3, EPHB2, GAD1, GLO1, HEMK1, HES1, HEXA, HNMT, HRH1, IFNA6, IL17A, IL17RB, IL1B, ITPA, KIR2DL1, LAMB4, LDHAL6B, MAP2K6, MYH1, NAT6, NCR1, ODC1, OR10A2, OR10A7, OR10G7, OR2F1, OR2M3, OR2T10, OR4X1, P4HA1, PAX6, PFN2, PGM3, PIAS3, PIGP, PLA2G10, PLCB2, PLCE1, POLR2K, PRKCG, PTEN, PYGB, RAPGEF4, RDH12, RPIA, RPN1, SORBS1, STAT5B, STX1B, SUV39H2, TP53, TSC2, TUBA1C, TUBB1, UNC5D, VAMP2, VASP, WNT5B, SLC25A31
Negative_14469	TEC, ACTA2, ACVR2B, AK3L1, APH1A, B4GALT1, BCL2, BLNK, BRAF, CACNA1S, CAPN2, CASK, CCL16, CCL27, CD14, CD46, CD48, CLTA, CREB3, CSNK1D, CTNND1, CTPS, CTS1, CYP2C19, DDX41, DTX3, EIF4E2, ENTPD5, ENTPD6, FARSB, FBP1, FGF7, FLAD1, FZD10, GALNT1, GALNTL4, GART, GNAQ, HES1, HRAS, IL17RA, IL23R, IL24, IRF7, ITGAX, KIR2DS5, LAMC3, LIAS, NANP, NCF2, NPR1, OR10V1, OR2C3, OR2D3, OR4S1, PDE2A, PDE6D, PGM1, PIGC, PPP2CB, PRDX6, RAC1, RASGRP2, RBPJL, SELP, SETDB1, SPHK1, SPTLC1, SRGAP2, SULT1A4, TAS2R3, TLR2, TNFSF4, TRAF3, TYMP, UGCG, VNN1, WASF2, WWP1, XYLT2, YWHAG, MAP3K7IP2, PLA2G12B, TNFRSF10D, TNFRSF13C
Negative_14470	A2M, GGH, MIF, MPZ, OAT, SMO, TFG, UBC, ACAA2, ACO1, ACOX3, ADSSL1, AHCYL1, AOC3, ARHGEF4, C5AR1, CACNG1, CD8A, CDKN2B, CNTFR, COL5A1, CTBS, CYBB, DAG1, DAPK3, DCTN1, DGAT1, DLL4, DPYSL2, DUSP3, EDN1, ENTPD7, FUT8, GALK2, GCLM, GJA1, GJD2, GNAS, GOT1, GPD2, GUCY1A3, HMOX1, IL12RB2, IL13, IL23R, ITPKA, LIPT1, MPST, NAT6, NCOR2, NT5C1A, NUDT8, OR2AE1, OR51F1, OR5B3, OR8K3, OR9G4, OR9K2, ORC4L, P2RX6, PAK2, PDGFRB, PDHA1, PIK3C2G, PPARA, PPP2R1B, PRKAG3, PRKAR2B, SETD8, SKP1, TPI1, WBSR17, ALDH18A1, ATP6VOA1, SERPINE1
Negative_14471	A2M, GH2, MPI, MVD, AARS2, ALDH9A1, ALPP, APOA5, ATF4, B3GNT5, BMPR2, CCL19, CCNB3, CCR9, CD226, CLDN8, CREB3L4, CYP3A43, DGKB, EFNB2, GOT2, HAP1, HHEX, IARS, IDI2, ITPKB, KLRC4, MAP2K2, MCM4, MYL2, NKD1, NME4, OR2D3, OR4M1, PARVG, PLCE1, PRKAB2, PTPRC, PTPRF, RDH16, RHOA, RRM2, SELPLG, STK3, SULT2A1, TGFB1, TJP3, TP53I3, TRMT11, UGT2B10, WNT2B, PNLIPRP1
Negative_14472	C8A, GPT, ACOT11, ACOT12, ACSL5, ADCY4, ALDH3B2, CACNA1I, CCL26, CHRNA7, CLDN11, CLDN18, COL4A4, CPS1, CYCS, DAAM1, ENAH, ENO3, ENTPD7, EPHA4, GMPR2, GNAS, IQGAP3, JAG1, MAP2K4, MAT2B, NAT5, NUDT2, OR11H6, OR13C3, OR1L1, OR2AG1, OR2T33, OR5H2, ORC5L, PDE7A, PIGF, PIGK, PIGO, PLA2G3, PPP1CA, PRSS3, PTPN7, RAB5A, RCHY1, RUNX1T1, SETDB2, STAM2, STAT3, UCP1, VAV2, ZAP70

Negative_14473	C8G, CBS, GLA, SHH, TK1, ACAT1, ACOT11, ADCY2, ADSS, ADSSL1, ALG10, ALG5, ATP50, B3GALT6, BET1L, CACNB4, CAMK2B, CASP7, CCL8, CCNB2, CD34, CDC20, CDKN2B, CES7, CLDN10, COASY, CXCL11, CXCL9, DERA, DTX1, DUSP1, DUSP14, EGFR, ESAM, FABP3, FARSB, GGT6, GRPR, ICOSLG, IFNA17, IL4R, INHBC, ITGAV, MAN1A2, MARS, MGAT4A, MINPP1, MOV10L1, MPZL1, MYH3, NEU4, NGEF, NRG3, NRG4, NUMBL, OR10J1, OR11H1, OR13J1, OR3A2, OR4D11, OR4K14, OR52N5, OR56A1, OR5C1, OR5J2, P2RX2, PDGFB, PDHA2, PI4KA, PIK3R4, PLXNB3, PPAR, PPP3R2, PRKAR1B, PSAT1, RAF1, RASSF5, SDHC, SFRP2, SGMS1, SGMS2, SMPD2, STAM2, THY1, TNFRSF8, TSNARE1, TYMS, UGCG, VCAM1, WIF1, AASDHPPT, CACNA2D1, HSP90AB1
Negative_14474	DBH, DCT, F2, F7, PC, PLN, ADCY3, AGXT, AKR1C3, AKR1D1, ARSD, ATP5B, CACNB4, CACNG5, CCND1, CDK5, CHIA, CNGB1, CYP2A7, DAXX, DGKE, EGLN1, FUT3, GABARAP, GMPR, GNA14, GNAT3, GNRH1, GRM5, GUCY1A2, ICOS, ITGB6, JAG1, LDHC, LIFR, MGAT5B, MMP14, NKD1, OR10P1, OR13C2, OR1J2, OR4D1, OR51T1, OR51V1, OR5I1, P2RX7, RASGRP4, ROBO2, SMAD1, STAT5A, TNFRSF4, TNXB, TP73, TRHR, TSTA3, UGT2B28, UGT2B4, UPB1, WASF1, ATP6V1C2
Negative_14475	CP, F2R, GP9, IVD, LPO, ME3, OAT, OGT, PGP, UBB, ALDH2, ALDH7A1, ALPP, ASIP, ASNS, ATIC, B3GALT4, BMP8B, BMPR1B, C1GALT1, CAMK2D, CAV1, CD27, CDKN2A, CDKN2C, CHPT1, CLTA, CNGA3, CYP27A1, CYP2A7, DDX51, DOCK1, E2F2, EDAR, EI24, ESAM, FABP1, FARS2, FGF12, FMO4, FTCD, GALK1, GALNT6, GCNT2, GLS2, GNA11, GNAL, GNA01, GNPDA2, HLA-G, IFNA21, INHBE, IQGAP2, ITGAE, ITGB3, KIR2DL1, LIPT1, MAP2K3, MAP3K4, MAPK8, MCAT, MFNG, MYH7B, OR2V2, OR4B1, OR5V1, OR6Q1, OR7C1, PCK2, PHKG1, PLXNA3, PNPLA4, POLR2A, PPM1B, PPP1R3B, PRKAR2A, PRKCH, PRO C, PTPN1, PTPRB, RASGRF1, SDC1, SEMA3B, SRD5A1, TAS1R2, UGT2B10, UXS1, VDAC2, WASL, YARS2, HLA-DQA2, PNLIPRP1, ST6GALNAC1
Negative_14476	A2M, GP9, LSS, MPL, PGP, PXN, ACADL, ACAT1, ACTN2, ADCY10, AHCY, ALDH3A2, AMDHD2, ATG3, BMP5, BMP6, CBR1, CCL21, CD27, CHAT, CLDN6, CLDN7, CLTCL1, COMP, CRB3, CYP26A1, DAPK3, DDX23, DDX56, DPAGT1, EFNA2, EHHA1, GALNS, GALNT12, GALNT13, GGT7, HAGHL, IL28A, IL4R, ITGA4, ITGAV, LARS, LCAT, MALT1, MAN1A1, MAP2K5, MAP4K2, MMP1, MYH8, NAE1, NAT2, NCOR2, NFKB1B, NKD1, ONECUT1, OR10G2, OR10J3, OR1E2, OR2M3, OR2T1, OR2T3, OR51M1, OR8B8, ORC6L, PEMT, PHKG2, PLA2G2E, PLOD1, PPAP2A, PSME1, RBPJL, ROCK2, RUNX1, SAT1, SCIN, SDHA, SKIV2L2, SOCS1, SRGAP3, STAM, STXB, TAS2R16, TGFA, THBD, TNFRSF4, TPI1, TUBAL3, UBA1, UGCGL1, UGT2B11, UNC5D, WIF1, YWHAE, ZBTB16, ZFYVE16, ATP6V1G2, C1GALT1C1
Negative_14477	CAD, LCK, MPI, BMPR1B, CACNA1B, CASP3, CDK4, CDS2, CNTFR, CTS1, DAD1, DCTN1, DGAT1, DLL1, DUSP7, ECHS1, ENTPD8, GNA11, IL17RB, IL25, ITGA2B, ITGA3, KYNU, METTL6, NKD2, NR5A2, OR1S2, OR4C16, OR4C6, OR4S2, OR6C74, PIGA, PKMYT1, PLA2G1B, PTPN7, RASA1, RPS6KA4, SIGLEC1, SMARCA2, SPCS1, STAM, THBS2, TOMM40, UGT1A10, UPP2, WNT10B, WNT9B, YWHAG, ATP6VOA2, CACNA2D4, GABARAPL2
Negative_14478	HYI, ACAD9, ADSSL1, ALPPL2, APRT, ARHGAP5, ARPC1A, ARPC2, ATF4, ATG3, CD79B, CDC27, CDK5, CSF3, CYP3A7, CYP4A11, DOLPP1, EDNRB, EPB41, ERG, FRAP1, GALNT10, GNG12, GNG3, GNPDA1, GTSE1, HGSNAT, IFNAR2, IL13RA2, IL22, IL2RG, IPMK, IQGAP1, ITGB7, KIR2DL4, LDHAL6A, LTBP1, MAN1A1, MAP4K1, MIOX, MYH15, MYH2, NEU1, NMNAT2, NTN1, OR4C6, OR51B5, OR5D18, OR8G1, PIM1, POLD1, PRSS3, PYGL, RASGRP2, RENBP, SKIV2L2, SYNJ2, TAS2R42, TRAF6, TUBB2B, UCK1, VDAC2, WNT10B, XYLT1, YARS2, ATP6V1E2



Negative_14479	AK3, C7, DHH, GP6, IVD, MPL, PC, ALDH9A1, ATP4A, BDH1, BHMT, C7orf16, CD22, CD244, CDC42, CDK2, CLTC, COQ3, CYFIP1, CYP4F2, DDIT4, DTYMK, EFN3, FRAT2, FUT9, FZD8, GADD45A, GLYCTK, HPRT1, IL19, INPP5E, ITGA2, ITGA4, LDHAL6B, NKX3-1, OR10K2, OR1B1, OR2M2, OR2T8, OR4C6, OR4K2, OR52I1, OR5B17, OXSM, PDE1C, PECAM1, PRPH2, RFXANK, SDHD, SELL, SIPA1, SMAD3, TAS2R4, TIAM2, UGCGL1, ULK2, VTI1B, WNT7A, WNT9B, MAPKAPK5
Negative_14480	HK2, ID2, OAT, SPN, ACTN4, ADCY10, ALOX12B, CACNG4, CBR1, CD74, CDC45L, CDS1, CHRM1, CLDN7, DDOST, DUSP7, E2F3, EFNB2, ENTPD1, EPHA6, EPHX1, FZD4, GALM, GRM1, GSTO2, HSPA2, IFIH1, IGFBP3, IL1RAP, ISYNA1, ITGA5, ITPA, MASP1, MCEE, MGAT4A, MLYCD, MTHFD1L, NCR2, NFKB1, NGEF, NMNAT3, NRG1, OR10H3, OR4F5, OR52E6, OR5D16, OR6C2, OR7D4, PSPH, RAC1, RDH11, SEMA3B, SULT1E1, TNFSF10, UAP1, ATP6V1C1, PAFAH1B1
Negative_14481	ATM, C8B, CD2, CTH, GH1, HAL, HK1, PC, ABCC8, ACYP2, ALDH1L1, ALDH2, APOA5, AQP7, ATP5G1, B4GALT2, BUB3, CCND3, CD274, CD3E, CDC23, CDC45L, CFLAR, CHD8, CMBL, COL2A1, CYP2A13, CYP4A22, DCTD, GALNT5, GRIN2A, GSTM3, HIF1A, HSD3B1, HSPA2, HYAL1, IL6ST, IMPDH1, IMPDH2, INPP5E, KIR2DS5, LCAT, LCP2, LFNG, MAP3K6, MYH1, MYL9, NEU2, NTN1, NUDT12, OR10G2, OR10G3, OR10S1, OR13F1, OR2Y1, OR3A3, OR4K17, OR5L2, OXCT2, OXSM, P4HA3, PFAS, PFKFB3, PLXNB1, PPAP2B, PRPS2, PTGDS, PVRL4, RDH12, SDHC, SEMA4A, SH3BP2, SHC4, SLC2A2, ST6GAL1, SUCLG2, SV2A, TICAM2, TKT1L, TM7SF2, TPMT, TUBB, TUBB6, WNT2, YES1, ATP6V0A4, ATP6V1G3, KIR2DL5A, TNFRSF12A
Negative_14482	ATM, DLD, TNR, AADAC, ACSL3, ACTG2, ADRA1B, ALDOC, ALG2, ALPPL2, ARHGAP5, ATG7, ATP5G3, B3GNT5, BMP5, CD22, CD82, CHRM2, COL11A1, COL4A4, CSF2RB, CSNK1E, CTTN, CYBA, DARS2, FECH, FLT3LG, G6PD, GPAA1, HAGH, HMGCL, HNF1A, IL20RB, IRAK4, ITGB7, LAMB4, MAN2A1, MAP2K2, MCEE, MCM4, MCM6, MYH7B, NTNG1, OR11G2, ORC1L, PDE1C, PHKA1, POLD4, POLE, PTEN, RDH12, SDHD, SGMS1, SGMS2, SLC25A4, TFPI, TPI1, TUBB4, VAMP3, MAPK8IP2
Negative_14483	DBI, ID2, IL7, TPO, ALAS2, ALDH1A2, ALOX15B, AMY2A, APOA5, APOE, ATN1, AVPR1B, B3GALT1, B3GAT2, BAI1, BNIP1, C4BPB, CACNA1G, CALML6, CARS, CASP7, CD70, CD80, CDC14B, CD01, CES7, CHSY1, CRLF2, CSF1, CTBP1, DARS, DARS2, DCTD, DGKD, DHDDS, DKK4, ECHS1, EFNA1, EFNA3, ENAH, GALNT2, GDF7, GGPS1, GNA12, GNAT3, GSTP1, HADHB, HAO2, HBEGF, HNF1A, HSD3B1, IFIH1, IFNA6, IFNAR1, IL13RA2, IRF3, KLK3, KLRC1, LIPG, MAPK12, MYH8, MYL9, NTRK1, OR10A5, OR10Z1, OR1E2, OR4K14, OR52W1, OR5D13, OR8B8, OR8D2, PFKFB2, PIK3CB, PLXNB1, PON2, PPAP2B, PTGER1, QPRT, RBPJ, RDH16, RGS3, SETD1A, SH2D2A, STX12, TICAM1, UROC1, XCL1, ZFYVE9, CSGALNACT1, HLA-DQA2, PPP1R12A
Negative_14484	ADO, AMH, ATM, MOS, STS, TPO, TXK, ACOX2, ACSM4, ACYP1, ADH4, ASA1, B4GALT4, BPGM, BST1, CDH5, CES2, CHPF, COL1A1, CXCL5, CYP2F1, DNMT3A, FGF12, FGF14, GLDC, GNMT, HHIP, HNF4G, IAPP, IKBKG, KRAS, LHCGR, MKNK1, MPST, MS4A2, OR4K14, OR5P2, OR8K5, PANK2, PIK3C3, PIP5K1B, PLA2G4A, PLCG2, PPM1A, PRKCA, PSME2, RPS6KB1, RPSA, SEMA3G, SSX2IP, ST3GAL3, TGFB3, TRIP10, TUBA1C, WNT10B, CACNA2D2, ST6GALNAC6
Negative_14485	LIF, NPL, TNC, ACPP, ADH6, ALDH3A2, ARHGAP5, BCL2, CCL17, COL4A4, CSNK2A1, CTNNA1, CX3CR1, CYBA, CYP2C18, CYP2F1, DHRS3, DVL2, FSHR, GNAO1, HSP90B1, IL21, INHBA, INHBE, MAD1L1, NFKBIB, NT5C, NUDT9, OR2C3, OR4C11, OR51A2, OR5P3, OR6T1, PFKFB2, PFN1, PIAS1, PIGH, PIGS, PLAT, PLCD4, PLXNA3, PRKCB, PSAT1, PTGER1, RFWD2, RAS2, SARS2, SDC2, SLC27A1, SOCS4, SRGAP2, UGP2, UGT2B17, UGT2B7, XYLB, ARHGEF12, C1GALT1C1

Negative_14486	F5, GBA, LCK, TNC, AASDH, ADORA2A, AGPAT6, AHCYL1, ASCC3, ASIP, AXIN1, BUB1B, CACNA1A, CLDN3, CSNK1E, CYP4A22, CYP4F2, DAAM1, DLL1, EGLN1, FARSB, GANAB, GLYCTK, GNRHR, GOT2, GSTT1, GSTZ1, HNF1B, IFNA13, IL1A, IL6R, KYNU, LHCGR, MAPK13, MAPK7, MCCC2, MTHFD1L, NAT6, NCK2, NLGN2, NRXN3, ONECUT1, OR10G3, OR10K1, OR1J2, OR1L8, OR2AE1, OR2T29, OR2Y1, OR51B5, ORC3L, PANK3, PAX8, PIGB, PIP4K2B, PLA2G2D, PYCR1, QPRT, RALB, SLC2A2, SMAD1, STX6, STX8, TIAM1, TRDMT1, TSHB, UGT2A1, B4GALN1, CACNA2D2, KIR2DL5A, MAPKAPK3, TNFRSF10D
Negative_14487	ADC, MVD, PTS, SI, ACSL4, AGPAT4, AHCYL1, ALG11, ALG5, AOX1, ATP2A1, ATP5G3, B3GAT3, B3GNT5, BCMO1, BIRC2, C9orf95, CACNA1H, CCL28, CD86, CDS2, CISH, CNTN1, COX10, CREB3L3, CREB5, CYP2C18, CYSLTR1, DDX54, ENO1, FGF13, FGF3, FLT3LG, FOXO1, FRAP1, FUT1, FUT2, GAPDH, GCNT1, GMPR2, GNAI1, GNPDA1, GUCY2F, GYS1, ICOS, IKBKG, IL25, IMPA2, IRS2, IRS4, LARS, LFNG, MAOA, MAP4K1, MARS2, MAT1A, MCAT, MMP1, MS4A2, MTFMT, NFYC, NLGN3, OR10K1, OR10S1, OR13H1, OR2A5, OR2L8, OR2T6, OR4C11, OR4F15, OR5D16, OR8K1, ORC5L, PIK3C2G, PNMT, POLD1, POLR1E, PRKY, PRLR, PSENE1, RAD51, RASA1, RASGRP4, RPN1, RUVBL1, SESN2, SGMS1, SLC27A1, SOD2, SPHK2, ST8SIA1, TNFRSF18, UGCGL2, UPRT, MAPKAPK2
Negative_14488	FAH, IHH, OGT, TYR, UBC, ACAD9, ACTN1, ADRA1B, AGPAT1, ATP2A1, ATP5A1, BMP2, BMP5, BMPR1A, CASP6, CCL21, CCL26, CCNH, CCR1, CDKN1C, CHEK1, CLDN19, CNTN1, CPT1C, CSNK2A2, CYP2A6, DLL3, E2F5, EDNRA, EIF4E, ENPP1, FOXO3, FPGS, FTMT, GARS, GCNT1, GCNT2, GDF7, GLG1, GNB3, HLA-DOB, HMGCR, IFNA4, IFNK, IGF1R, IL10RB, IL20RA, IL22, IL4R, IRF7, MADCAM1, MAP2K4, MPST, MTAP, MYL2, NKD1, NMNAT2, OR1E1, OR2AT4, OR2D3, OR2T12, OR5J2, OR6C75, OR9G1, OR9G4, PFKFB2, PFN1, PI4KA, PIK3R3, POLA1, POLR1B, POLR2G, PTGDS, RHOD, ROCK1, RRM2B, SETDB2, SLC25A6, SLC2A1, SNAI1, TAS2R49, TLR2, TNFRSF4, TNFRSF9, TPH2, TUBA1C, VANGL2, TNFRSF10A
Negative_14489	CFI, DCN, LPL, MVD, VCL, ALOX12B, APOA2, CD28, CD79B, CDC27, CDH4, CNTFR, COQ5, CYSLTR1, DDX18, DKK2, EFN2, EHMT1, ENPP2, ESAM, EXTL3, GALT, GBE1, GBE2, GRM5, ICOSLG, IFNA2, IFNA21, IL24, ITGA9, LDHAL6A, LGMN, MTAP, MTFMT, NFKB1A, NME2, OR10A5, OR13G1, OR2A42, OR5A2, OR5AP2, PDE5A, PFN2, PIGA, PIGW, PRKCB, PTGS2, SETD2, SETDB2, SORD, TAP2, TAS2R8, TBK1, TNFRSF8, TPH1, WARS2, ARHGAP12, SERPINA1
Negative_14490	FN1, ACADS, ACY3, AKR1A1, ALDH1A2, ARHGAP5, BAAT, CAV3, CCL13, CCNB1, CD01, CHKB, CNTN2, COL2A1, COL4A1, CRY1, CSH1, CYP2U1, DGAT2, EPB41L1, ERBB2, FABP4, FZD7, GNA12, GNG3, GP1BB, HLA-DMA, IL28A, INHBE, ITGAM, LEFTY2, MAP2K4, MTAP, MYLK, NFYC, NTF4, NUDT9, OR11H1, OR1L6, OR4A15, OR8D4, PARVG, PCYT1B, PIGP, PLD2, PMM1, PSME3, PTGER3, RFXANK, SELL, SGMS2, SMAD4, SMPD4, TBXA2R, TNFRSF18, TPM3, TUBB3, UBE2L3, VDCA2
Negative_14491	AK7, CFD, F8, PRL, TNN, ACSL4, ALDH3B1, ALDH5A1, ALG8, ANAPC4, APC2, ATF2, B4GALT6, CDC14A, COMP, DGKQ, DKK1, DKK4, DUSP5, FGF20, FGF23, FGF7, GAB1, GALK2, GCNT2, GMPR, GNAI3, GNAL, HMOX1, IL3RA, KITLG, MAP3K7, NAGA, NT5C2, OR2L3, OR2M2, OR4D1, OR8J1, P2RX3, PAX4, PFKFB1, PIAS1, PLA2G10, POLR3G, PPAT, PRKAR2B, PSEN1, PSME2, PTAFR, QARS, RND1, SEMA3F, SOS1, ST3GAL3, ST8SIA1, TAS2R5, UROC1, PLA2G12B
Negative_14492	APP, BID, DBT, F5, GGH, IL9, NGF, ACSM1, ACSS2, AFMID, AKT3, ARPC5, ARSB, ATP5D, ATP6V0B, CACNA1H, CACNG3, CCL13, CTNNA1, CYP3A7, DEGS2, EXTL2, FGF18, GRIA2, HAGH, IFNA21, INADL, ITGA5, MAT1A, MDH1, NCF2, NUDT9, OR13C5, OR1A1, OR2M7, OR2T3, OR51M1, OR56B4, PAX4, PIM1, PIP5K3, POLE3, POLR2B, PPM1D, PPP1R3B, PPP1R3C, PPP2R5E, PPP5C, PTGFR, RBPJL, RDH10, SCLY, SDHC, SLIT1, ST3GAL4, STX6, TAS2R1, TXNDC12, UBE2L6, VTI1B, WNT6, ATP6V1B1, MAPK8IP1, TNFRSF13B

Negative_14493	CP, IVD, MOS, PVR, ABP1, ACAA2, ACADSB, ACOX2, ACP6, ACP6, ADAM10, ADC Y10, ADRA1A, AGPAT1, ALG1, AOX1, ATP2A2, ATP5A1, B4GALT4, CCL16, CCL 28, CD40, CDH15, CHRM3, COL1A2, CPT1A, CRKL, CSDA, CSNK2A2, CTSB, CTS G, DARS2, DDX50, DDX52, EIF4B, FBP1, FGF8, FOSL1, FUT1, FZD3, GABARAP , GALNT5, GGCX, GNA12, GNA13, GPAM, GUCA1B, GUCA1C, HADHB, HPSE2, IGF BP3, IRF3, ITGAX, KAT2B, LYPLA1, MAOB, MAP3K6, MAT1A, MDM4, MYH2, NAD SYN1, NCOR2, NFATC1, OR10G8, OR56A1, OR8J3, OR9G4, ORC6L, PDGFA, PIK 3CG, PLTP, POLA2, PPP3CA, PTGER3, RENBP, SAT1, SEMA3C, SMPD3, SNAP23 , SPTLC2, SRD5A2, THBS2, TICAM2, TNFSF12, UROC1, WHSC1L1, YWHAQ, TNF RSF11A
Negative_14494	BTD, GK2, ACADSB, ACSS2, ADAM17, AGPAT4, AMHR2, APAF1, ARPC3, COL4A4 , DGKQ, DMGDH, DPYS, ENO3, FGF20, FZD10, GLUL, HYAL2, IDH3G, IGSF5, IL 8RA, LDHB, MADCAM1, MIOX, NFKBIA, NOD1, NRG1, NRG3, OR10H3, OR13D1, O R1C1, OR2C1, OR2Y1, OR51E1, OR51G1, OSMR, PCYT1A, PPP1CA, PRKX, PRPS 2, ROBO2, SESN1, SMPD4, SPHK2, SRGAP1, SULT1A4, SV2B, TSC1, UCP1, WNT 2B, KIR2DL5A
Negative_14495	CSK, HPD, MPI, NNT, NOG, ACP6, ACVR1C, ADCY10, AGPAT1, ALG10B, ALG6, A POA2, ARHGEF2, ARSB, ATP2A3, ATP6V1D, BCL2, CCL15, CCL7, CD47, CDK5, CKS1B, CREBBP, CSAD, CSF1R, CSNK2A1, CTNND1, CTPS2, CX3CR1, CYP1B1, DDX4, DGAT2L4, DLAT, DOLPP1, DRD5, EGLN3, EIF4E, FMO2, FMO3, FMO4, GA LNT2, GAMT, GLUD1, GMPS, GRIA2, HLA- DMA, HSD17B4, IDH3G, IFT57, LAMA4, LDHC, LTBP1, MGAT5B, NAGA, NUMB, O R1J1, OR2A42, OR2B11, OR2G3, OR2L2, OR2L8, OR2T3, OR4K5, OR5B17, OR6 C70, OR6C75, OR8B8, OR8U1, PDE1A, PLXNB2, POLR2A, POLR3A, PPP3R2, SD C1, SETDB1, SGMS1, SNAP23, SRD5A1, STAT1, STK4, STT3B, STX10, SUV39H 1, SYNJ2, TAS2R40, TAS2R8, TRIP10, TSTA3, XCR1, ATP6V0A4, ATP6V1G3, PNLIPRP2
Negative_14496	APP, CAT, DBT, EDA, ACP1, ACSL3, ACTG2, ADRB1, APOE, ATG7, ATP5J2, ATP 6V1A, BCAR1, BPNT1, CCKAR, CD59, CDC25C, CHR1, CPS1, DBF4, DDX54, DGK H, DOCK1, EFN1, EHMT1, EPB41L1, EPRS, GADD45A, GALE, GARS, GCNT4, GL UD2, IKBKG, IL20RB, IL29, INPP5E, ITGA8, MCCC1, MECR, NNMT, NOTCH1, O CRL, OR1C1, OR2K2, OR2T33, OR2T34, OR4K13, OR51A4, OR52N1, OR56B4, O R7C2, PDHB, PFKFB3, PGS1, PIAS3, POLR3H, PRKAB1, PRPH, RARA, SGPP2, S OAT1, SREBF1, SUFU, SV2A, TKTL2, TLR3, TP73, TSC2, TUBA1B, TUBB6, UBA 1, UCK2, UGP2, WEE1, WNT7B, XCL2, ATP6V0A2, ATP6V1B1, PLA2G12B, SERP INC1
Negative_14497	AGK, NGF, NLK, PML, TPO, ACY1, ADAM17, ADSSL1, ANAPC7, ATIC, ATP2A3, A TP5A1, ATP6V1H, B3GALT4, B4GALT5, C1QB, CAMK2G, CD27, CEBPA, CTBS, D DX41, EDA2R, FARS2, FMO3, GALT, GALNT1, GFAP, GMPS, GRLF1, HTR2A, HTR A2, IFNA16, IL13, IMPDH1, IRS1, ITGAM, ITPK1, MAPK3, MCM6, NRAS, NT5C , OCLN, OR1S1, OR2G2, OR4X1, OR5AR1, OR8A1, P2RX2, P2RX4, PAK1, PDE11 A, PRIM1, SETD7, SLC2A4, SLC33A1, STK36, TAS2R5, UAP1, UGT2A3, CSNK1 A1L, EIF4EBP1, MAPKAPK5
Negative_14498	AK1, ASL, LEP, AGXT, AKR1A1, ALDH7A1, AMPD1, AOC3, APPL1, ARG2, ATG3, B3GAT2, BCAR1, BMPR1B, BUB1, CCR8, CHEK2, CHKA, CIITA, CKS1B, CLDN8, CMAS, CNTNAP2, CYP17A1, DAXX, DEGS1, DGKA, DIAPH3, DTYMK, E2F5, ENTP D8, EPHA8, FGF9, FZD10, GNAI2, HIP1, IL17RB, IMPA2, ITGA10, ITGAL, MA P3K14, MAPK9, MGST3, MTHFD1, MYH10, NFYC, NTN1, OR1B1, OR1C1, OR1L3, OR2F2, ORC2L, PDE1A, PDE4A, PDGFD, PFKM, PI4KB, PRKCH, PTPRB, RXRA, S CD5, SDHB, SHMT2, SPTAN1, SUV39H2, TAS1R2, TAS2R49, TCF7L2, YWHAB, A TP6V0A2, ATP6V1C2, CACNA2D3, TNFRSF13B

Negative_14499	FAH, GHR, GSR, IHH, TXK, ACTB, APPL1, APRT, ARRB1, AVPR1B, BAIAP2, CCL4, CD244, CDK7, CHST13, CTSB, CXCL13, DAPK3, DBF4, DCXR, ENPP1, ENPP2, ENTPD6, F2RL2, FBP2, FPGS, FZR1, G6PC2, GLUD1, GNG3, GSTT1, GUCA1A, HEXB, HIP1, IDH3B, IFNA13, IFNA7, IL28A, IL2RG, IL8RB, ITGA8, LAMB3, LDHC, LEF1, LEPR, MBL2, METTL6, MYD88, NCF1, NFE2L2, OR10H5, OR13G1, OR1A1, OR1E2, OR2AG1, OR2M2, OR4C6, OR4F15, OR56A4, OR5AK2, OR5T3, OR6K6, OR7G2, OR8H1, ORC3L, OXCT2, PAX4, PAX8, PLCZ1, POLA2, POLR2F, PPM1D, PPP1R1A, PPP3R1, PRKCI, PROS1, RHOD, RUNX1T1, SC4MOL, SDHA, SP TAN1, STAT5B, STK36, STX4, STX5, SUCLG2, TGDS, THBD, TPK1, UGT2B4, ULBP3, WIF1, WNT16, WNT4, SERPINE1
Negative_14500	C8A, MVD, PLG, ACAD9, ACY3, ADORA2A, ATP5L, BMPR2, BRAF, CBR3, CCL20, CCL21, CCL24, CCL4, CCR6, CD79B, CDC25A, CNDP1, COL4A1, COL4A6, CYP21A2, CYP2C18, CYP2C8, DAPK3, ENTPD5, ER01L, FBXW11, GALNT11, GALNT3, GAS1, GATM, GCNT1, GNRH1, GSTM2, GUK1, HSD3B1, IFNGR2, IL1R1, INPP4A, ITGAL, KCNQ1, LAMC2, LAMC3, LEF1, MCEE, MECR, MGAM, MGAT3, NAT6, NLGN2, NME7, NOD1, NOX3, OR10Q1, OR14I1, OR2A2, OR4D1, OR51G1, OR52D1, OR56B4, OR5D14, PANK3, PCYT2, PHKG1, PIGC, PLOD2, PLXNA1, PPP1R3D, PPP3CA, PRKAB2, RFX5, RPRM, SGPP1, SIAH1, SMAD6, SMAD9, SOCS2, SOCS7, SRD5A2, STK11, STX10, STX4, SULT1E1, TNFSF4, TPI1, VARS, VAV1, HLA-DRB3, SERPINC1, ST6GALNAC4
Negative_14501	AUH, FN1, HDC, HK2, NNT, TH, AADAC, ABL1, ACOT11, ACP6, ACSL1, ADCY3, AKR1C2, ARPC3, ASCC3, CCL11, CHIT1, CHRM2, CYP7A1, EFNA2, ENO2, EPB41L1, EPHB2, F2RL3, FCGR3A, FGF20, FGFR1, FTCD, GALK2, GIT1, GSTP1, HAGHL, HIBCH, HLA-DOB, HNMT, MGAT5B, NCAM2, NCR2, OLAH, OR10R2, OR2AT4, OR2M7, OR4F15, OR4L1, OR51B4, OR5D14, OR8K1, ORC3L, PAK2, PCCB, PDE10A, PIAS3, PLTP, POLD4, PRKACB, PRKCE, PTK2, SC4MOL, SEMA4B, SESN1, SLC12A2, ST3GAL3, TAS2R7, TGFBR1, TSNARE1, UXS1, WNT1, ZBTB16, HLA-DPB1, PRICKLE1
Negative_14502	CFI, EGF, GNE, IL4, AADAT, ABLIM2, ADH1B, AGPAT2, ALAD, BAIAP2, CCL3, CD70, CDC2, COL5A1, COL5A2, CRHR1, CYP2E1, DGKZ, DHRS4L2, DLST, DVL3, FGF5, FGF9, GBA3, GSTP1, GYS2, HIF1A, HRH2, IFNA5, IL3RA, ITGA6, MAP3K4, MAPK13, NAE1, OR10K2, OR13C9, OR13J1, OR1N2, OR2AG1, OR2AG2, OR4F4, OR4K5, OR56A4, OR5K1, PCK2, PFKFB1, PPA1, PPP1R1A, PRODH, PTK2B, RPSA, SDC3, SHC3, SHMT1, TSNARE1, UCK1, WIF1, WNT4, YWHAH, ALDH18A1, ATP6V1G1, CACNA2D4
Negative_14503	AGK, AMT, CGN, F8, GDA, HK1, IL6, TK1, UBB, ACTG2, ADCY2, ADRB3, APPL1, B3GAT2, B4GALT2, BCAR1, CACNG6, CARS, CDC20, CDKN2D, CLDN7, COL4A6, COL6A1, CREB3L2, CRKL, CXCR5, CYP2D6, DKK1, E2F4, EFNA5, EFNB1, EFNB3, ENPP7, EXTL3, FUT6, GALNTL2, GPAA1, GRIN1, GSTO1, HPRT1, IL22, IL23R, ITGB7, KIR3DL3, LIPE, MAD2L2, MAML3, MAN1B1, MAP3K7, MCM3, MGAT4B, MGST1, NARS2, NAT2, NEFL, NEU2, NFX1, OR10H4, OR4S2, OR52A1, OR52K2, OR56B4, OR5D18, OR6Y1, PAK1, PAK7, PANK1, PANK4, PDE1B, PIK3CD, PLA2G5, PLTP, PLXNB3, PPP3CC, PRKCI, PSME1, RDH11, RDH8, RRAS, SPAM1, STK11, STX2, THBD, TLR5, TSNARE1, UNC5A, UNC5D, VDAC1, WIF1, MAPK8IP3, SERPIND1, ST6GALNAC4, TNFRSF11A
Negative_14504	CRK, ID3, LAT, NNT, TH, ACACB, ACTN4, ALOX12B, B3GNT3, BET1, CBLC, CDKN2B, CHRM3, CHRNA7, CMAS, CSAD, CSNK1D, DDB2, DGKZ, EPHA2, FGF19, GALNT13, GATM, GUCY1A2, HDAC1, IARS, IFNGR1, IFNGR2, IL22RA2, IL5RA, INPPL1, INSR, LILRB3, LYPLA1, LYPLA2, MAP3K12, MCEE, MCM4, NCR1, NEGR1, NUDT12, OR10A5, OR2T29, OR52K2, OR5D16, ORC5L, PDE4C, PIP4K2C, PPP2R5C, PPP3CC, PRKG1, PSENE1, PSME2, RERE, RRM2, SETD1A, THBS2, UGP2, GABARAPL1

Negative_14505	IL8, MET, MOS, TNF, ACP1, ADCY4, AGPAT2, AKR1B1, AKR1C1, ALOX15, ARAF, ARHGEF4, ARSD, ATP2A1, ATP2A2, B3GAT3, BCAT1, BDH1, BLVRB, BMP8A, CACNA1B, CACNG8, CANT1, CCND3, CDC6, CLDN3, CSNK1E, CTNND1, CYP11A1, CYP2C9, CYP2J2, CYP7A1, DERA, DGKD, DKK2, DTX1, DUSP7, ESAM, FGF10, FTH1, FZD5, FZR1, GALNT6, GALT, GAS1, GCH1, GNAI3, GNAZ, GYS2, HAGHL, HLA-DMA, HLA-DOA, HSD3B1, IFNA10, IFNAR2, IGSF5, IRAK3, IRF3, JAK2, JAM3, MAPK9, MLLT4, MLYCD, MMP7, NEFM, NFKBIE, NRG1, OR10A4, OR2L13, OR52R1, OR5M8, OR7C2, OR8D4, OR8U1, OXCT2, PIGF, PIGQ, PIPOX, PNPLA3, PRKAA1, PRKCD, RRAS2, RXRA, SELP, SEPHS1, SKP2, SMAD4, SPCS1, SPP1, TRDMT1, TUBA3C, WBSR17, XCL1
Negative_14506	LSS, AARS2, ACADL, ALDH4A1, APRT, C9orf95, CACNA1A, CDKN2A, CERK, CES1, CNGA4, CREB5, CYP11B2, DLL1, DPYS, EDN1, FECH, FOXO1, GNMT, GZMA, IFIH1, ITGA6, KLRC4, MAPK1, MCM5, MEF2C, METTL2B, MGST3, MYLK3, NCOR1, NTRK1, NUMBL, OR10V1, OR10Z1, OR1F1, OR1L8, OR2A12, OR2T10, OR4C16, OR4N5, OR51S1, OR5C1, OR6C3, OR6C75, OR6Y1, PARD6A, PGAM1, PIK3C2B, PIK3CA, PIK3CB, PLA2G2A, POLR3A, PPP2CB, PTPN11, SEMA3G, SEMA4F, SMARCA5, SMPD3, SPCS3, STAT4, TALDO1, TSC1, TUBB4Q, UGT2B10, VEGFA, ATP6VOA1, ST6GALNAC5, TNFRSF14
Negative_14507	ADC, ASL, CAD, CAT, CGA, GGH, GPT, IL9, KDR, LHB, ME1, ACADSB, ACTN1, ACTN2, AGRN, ALAD, ARNTL, ASIP, ATG12, BCL2L1, BMP7, BMP8B, CACNG8, CD14, CD44, CDKN2D, COL1A1, COL5A3, CREBBP, CRLS1, CTPS, CYCS, CYP4A11, DGKG, DHFR, EPHB2, FABP1, FOXO3, FPGT, G6PC2, GART, GNA14, GNAI1, GNPAT1, GUCA1B, HEMK1, HPSE2, HTRA2, IL12B, IRS1, ISYNA1, ITPK1, KIR3DL2, LEPR, MGST3, MTRR1, NAGLU, NFE2L2, OR2Z1, OR3A1, OR51A7, OR51G1, OR52D1, OR5L1, OR8K1, P4HA1, PAK1, PFKL, PIGF, PLXNA2, PLXNB3, PMM2, POLD4, PPP1R3B, PPP2R1B, PPP5C, PRKAG1, RAPGEF2, RDH11, RDH8, ROBO1, RXRG, SEMA4F, SETD8, SETMAR, SHMT1, SNW1, SYNJ1, TLR5, TOLLIP, TUBB, UROC1, CACNA2D3, PLA2G12A
Negative_14508	C8G, DAO, EBP, MTR, RPE, AADAT, AANAT, ADIPOR2, AKR1C1, BMPR1A, BRAF, CARD11, CCL21, CFLAR, CHEK2, CKMT2, CMPK2, COL5A3, CPS1, DHRS9, ENTPD8, EPHA3, FGF11, FGF14, FGF20, GLUD2, GRHPR, HMBS, HSD11B2, IL28A, KLB1, NARS2, NCR3, NRXN3, OR2D2, OR2F1, OR2T11, OR3A1, OR52I2, OR7C2, OR8H3, PCCA, PCYT1B, PERP, PIGH, PLA2G5, PNPLA3, PPP3CC, PYGL, RDH8, SNAI1, STX5, TAP2, TM7SF2, TNFSF14, TUBB2C, UPB1, YARS2, ATP6V1C2
Negative_14509	GP6, HYI, ME1, ACSL1, ADORA2B, AGPAT3, ANAPC10, ASIP, B4GALT7, CACNG2, CASP10, CCL7, CCND2, CDC2, CD01, CEBPA, CLDN15, CLDN17, CREB1, CRLF2, DAD1, DAPK1, DDX4, E2F3, EFNA1, EHHADH, ENTPD3, GANC, GCLC, GGT6, GNG3, HSD17B1, IFNW1, ITGAD, MADCAM1, MAN1A1, MAP3K2, MAP4K1, MAT2B, MGAT1, MTHFR, MYL2, MYL5, NCF2, NEU2, NGEF, NT5C1B, NT5E, OR1D2, OR2T33, OR2Y1, PNLIP, POLD4, POLR2B, PPAP2A, PRPS1, PTPN7, RALBP1, SDC4, SELP, SKIV2L2, SMARCA2, SMURF1, TLN1, TRPM5, WASF3, XYLB, ZNRD1, ATP6V1G2, CTNNBIP1, TNFRSF10A
Negative_14510	FGA, GDA, GGH, GH1, GHR, LAT, OTC, RFK, TAT, TNN, ALG2, ALPP, APOE, ARHGEF4, BMP8B, CACNG2, CCL22, CCNB2, CCNG2, CDH15, CHSY1, CLDN16, COL4A2, CRKL, CXCL16, CYP2U1, CYP4F3, DGKB, DRD5, EARS2, F11R, F2RL3, FGF8, GPLD1, GRAP2, GRIN2B, GUCY2F, HLA-DOB, HNF1A, HSD17B1, HSP90B1, IDH3B, IFNW1, IL1B, IL1R1, IPMK, JAG1, LARS2, LIAS, MAN1C1, MAP2K4, MAP4K4, MGAM, NFATC2, NRAS, OR10AG1, OR1N1, OR6C70, OR8H3, OR8K1, P2RX2, PDE1C, PDE3A, PGAM2, PIGX, PLCG2, PLD1, PPAP2A, PRKACG, PRKX, PROC, PRPH, RALB, RIPK1, SARS2, SDC1, SMAD5, SOCS3, SQLE, SULT1A4, SYNJ2, TAS2R40, TAS2R48, TAS2R49, TOMM40, TRPM5, VAMP3, VDAC3, VEGFC, VKORC1, WWP2

Negative_14511	KMO, WAS, XDH, ACTA1, ACVR1, ACVR2B, AGPAT3, AKR1B10, AKR1C3, ALG10B, AMD1, ANAPC10, ANAPC2, APAF1, AXIN2, B4GALT3, BDH2, BLNK, CACNG4, CND1, CCNE1, CD72, CDC23, CNTNAP2, DIAPH1, DNMT3A, E2F3, ELK4, FADD, FGF22, HAGH, HMBS, IARS2, IFNA6, IQGAP1, KIR2DL1, MAP3K6, NANP, NAT2, NCAM2, NCKAP1L, NPAS2, NUDT2, OR2G6, OR2T2, OR4F15, OR5B21, OR7C1, PAK3, PARVB, PERP, PGK1, PGS1, PIGA, PIGB, PIPOX, PLA2G2F, PLA2G5, PLAUR, PPP1CA, PPP3CC, PRKCE, PTDSS1, SCD5, SMPD3, SPTLC1, STAT4, TBK1, TUBB2B, TUBB4, WBSCR22, WNT10A, PDCD1LG2
Negative_14512	C7, JUN, SI, UBC, AADAT, ACAD9, ACVR1, ADRA1B, AKR1A1, ALG11, B4GALT4, BRAF, CACNG7, CD55, CDH15, CDK6, COL6A1, CXCR4, CYP2B6, DDX23, DHFR, EFNA1, EFNB3, ENTPD4, FZD1, GART, GNAZ, GRAP2, ICAM2, IL17RB, ITPKA, LAMB1, LDHAL6A, MAPK1, NARS2, NCSTN, NPR2, NUDT5, OR1J4, OR2H2, OR4F5, OR51B5, OR51G2, OR5A1, OR5M9, P2RX2, PDE4D, PGK2, PIGT, PRKCG, PTGER1, RAB23, RAPGEF3, RARS2, RDH12, SDHD, SH2D1A, SHMT1, SLC12A2, SLC25A4, THBS4, THTPA, TNFRSF4, MAPKAPK3
Negative_14513	APP, C5, INS, TNN, AARS2, ACACA, ALDOB, ARSE, CDC27, CDK5, CHIT1, CNGA3, COL4A4, CRLF2, CSNK2A1, CYP8B1, DDIT4, DDX52, DHCR7, DNMT1, E2F5, FUT9, GFAP, GMPS, GNAO1, GNB1, GNPDA1, GUCY1A3, IL15, INPP4A, IRF5, IRS1, ITGB2, MAOB, MKNK2, MNX1, NME2, NRP1, NRXN2, OR10G9, OR11H6, OR2D2, OR3A2, OR5D16, OR6Y1, P2RX7, PARVA, PGK2, PLA2G6, PNPLA4, PRKAB1, ROBO1, RRM2B, SPAM1, ST8SIA5, SUV39H1, TBK1, TCF7, TRPM5, UGCGL2, WNT9B, EIF4EBP1
Negative_14514	BAX, C9, CDA, FAS, LCT, LYN, MAG, MYC, AASDH, ADH6, ADSSL1, ARG2, ATP2A1, BCAT2, BMP7, CCL22, CCNB1, CD59, CERK, CES7, CHAT, CISH, CLDN1, CNTN2, COL4A1, CRY1, CTPS, CYBB, CYP2S1, DAPK1, DNMT3A, EXOC7, FRAT1, FZD8, GALNT11, GALNT9, GLB1, GLO1, GNRH1, GP1BA, GPAA1, GPX7, HEXA, HNF4G, IFNA5, IRF7, ITGAM, KIR2DL2, KIR2DL3, MTMR1, NLGN3, NR5A2, OR10S1, OR1K1, OR2A12, OR2A25, OR2Y1, OR4D6, OR56A3, OR5T1, PANK2, PDHB, PDIA4, PFKFB4, PLCE1, PLXNA3, PNPLA3, POLD4, POLE3, POLR3G, PTGER3, RARS2, RASGRP2, RCHY1, RPRM, SGPP2, SPRY2, TAS1R3, UGCG, VANGL1, XYLT2, AASDHPPT, MAP3K7IP1, PAFAH1B2, SERPINA1
Negative_14515	F10, F9, GNS, GP6, IVD, LPL, MPL, PC, PLG, TH, ACOX2, ACP5, ACTN4, ADCY7, ADORA2B, ADRA1D, AKT3, ALDH3B2, ALG10, ARPC4, ATP5J2, ATP6AP1, BIRC5, BRAF, C1QC, CD79A, CDC27, CDC7, CLDN19, CTNND1, CTPS2, CYP2C9, DGKI, ENTPD7, FBXW11, GUCA1A, HSD3B2, HTR5A, IFT57, IL13, IL21, IL7R, IQGAP3, ITGA10, ITGAD, ITPA, LRRC4C, LTBR, MAN1C1, MAPK9, MMP14, MMP7, NANP, NT5C1A, OR10A6, OR10J5, OR10R2, OR11H4, OR13C9, OR1J4, OR2A4, OR2F1, OR2L2, OR2T33, OR4Q3, OR51A7, OR51E2, OR5I1, OR5R1, OR5T2, PCYT1B, PIGF, PIGS, PLCD1, PMAIP1, PMVK, POLR1B, POLR2K, PRKAR2B, PSM E1, PSPH, RASA1, SDHA, SEMA4G, SGPP1, SPP1, STX8, TLN2, TLR2, TSC1, TYMP, ULK1, VTI1A, WNT11, YES1, ATP6V1B1, GABARAPL2, HLA-DQB1, TNFRSF18
Negative_14516	CRH, F11, IL7, ME2, MSN, PTS, SMS, ACOT12, ACTN4, ADH6, ADRBK2, AKR1C1, ALDH1L1, APOA2, ATP2A1, ATP5D, BCL2L1, CADM3, CCDC6, CCL5, CDC2, CDC20, CES7, CHEK2, CRHR1, CSAD, CSF2RB, CTBP1, DHCR24, DUSP9, EHMT2, ENTDP1, ENTPD4, EP300, FGF17, FGF20, FUT5, GALNT2, GALNTL1, HAP1, HTR6, IGSF5, IL2RG, IL9R, ITGAL, MAP3K1, MCM7, MTMR6, NAT5, NFYB, NOX3, OR1J1, OR1J4, OR2G2, OR2M2, OR4D5, OR5K2, PAK4, PDCD1, PDGFA, PHKA2, PIAS4, PIGL, PIGW, PIK3C2A, PIP5K1B, PLA2G2D, PLCD4, PLK1, PPP3CA, PTK2B, RAPGEF4, ROBO1, SKP2, SMARCA2, SPI1, SSX2IP, TNFSF9, TOMM40L, VAMP3, WBSCR22, XYLT1, CSNK1A1L, MAPK8IP3, SERPING1

Negative_14517	C2, GNS, PLG, PML, AACS, AGXT, ALDH1A2, ALDH1A3, ALPPL2, AOC2, AQP7, C ASP6, CASP9, CD36, CDC25C, CDKN1A, CNTNAP2, CTPS2, CYP2D6, DCXR, DKK 2, DOLPP1, ELK1, FGF13, FGFR2, GALC, H6PD, LAMA4, LAP3, LDHB, LTB4R2, MDH1, NFATC3, OR10A2, OR13C2, OR2T8, OR4M2, OR52E6, OR5D16, ORC3L, P CYT1B, PHKG2, PRKAA2, PRNP, RASGRP3, RRAS, SEMA3C, SEMA3E, SHMT2, SP CS3, TLR2, UBA7, PAFAH1B2, SUV420H1
Negative_14518	ADC, AGL, CR2, CRK, HK1, IL9, LTB, MUT, SDS, ADRB3, ADSSL1, ALAD, ALDH4 A1, ALDOB, ANAPC4, ARAF, ATP5J2, BBC3, C1QA, CAMK2B, CCL19, CCL26, CC L8, CCNA2, CD244, CD55, CD79B, CHR1, CLCA4, CLDN11, DGKG, DHODH, ENTP D2, EPHA2, FGF9, FLT4, FOXO1, GADD45A, GALM, GRB2, HLA- DOA, IFNA8, IL17RB, INPP1, ITPK1, MAP4K3, MYH9, NAT6, NEU3, NFYB, NT5 C1A, OR10K2, OR1C1, OR2A12, OR2F2, OR2Z1, OR4C11, OR4D6, OR51A7, OR8 J1, OXCT2, PAK2, PAPSS2, PARD3, PAX4, PDE8B, PDXP, PGS1, PLAUR, PLIN, PMM2, PMVK, PNPLA4, PPAP2C, PPP2R5A, PRKAR2B, PYGL, RAPGEF2, RERE, R PS6KA3, SETD2, SMAD2, SORBS1, SPRED2, ST3GAL6, STK4, STX8, TUBA1A, W ASF3, WNT3A, ATP6V1E1, HLA-DQB1, TNFRSF1B, TNFRSF6B
Negative_14519	AMT, DHH, DLD, GPI, VCL, ACADS, ACADSB, ACTN4, ADH6, ADIPOR1, ADRBK2, APOA1, ARG1, ARSA, ARSE, ATP5H, B3GALT2, BDH1, BRAF, C1GALT1, CACNA1 D, CARD11, CD247, CD36, CDKN1C, CHRM1, COL6A2, CXCL13, DAD1, DFFA, DO CK1, ENTPD4, GGCX, GOSR2, GPD1, GRLF1, HIBADH, HTR6, IFNA2, IL22, IL3 RA, ITGA11, ITGAV, LTA4H, OR10H2, OR10J5, OR11H1, OR4A15, OR4K1, OR4 S1, OR52J3, OR6X1, OR8K5, PDXP, PGK2, PIP5K3, PLA2G2E, PMM2, POLA2, P OLR2E, PPP2R1A, PPP2R2B, PPP2R5C, PRKAR2A, PSAT1, RPS6KA5, SHC1, SM PD1, ST3GAL1, TACR2, TLN2, TP73, UNC5C, MAPK8IP3, SERPINF2, TNFRSF1 0B, TNFRSF6B
Negative_14520	CBS, CRK, EZR, F10, GH1, IL4, MAG, PLG, UBC, ACOX3, AHCY, AKT2, ANGPTL4 , ATP6V1H, CDC14A, CDH15, CLDN20, CLDN6, CYP1A1, CYP2S1, DDB2, DPM1, DTX3, EPHA3, GAMT, HLA- C, HSPA1B, IFNA8, IL18, INSR, ITGB8, LIMK2, LTB4R2, MADCAM1, NEUROD 1, NFATC2, NTRK1, OR13A1, OR2D2, OR52A5, ORC6L, P2RX2, PDE11A, PER3, PIGT, PIK3C3, POLR2B, POLR2I, POLR2K, PPP2R1B, PRLR, PSME2, SOCS3, S TK36, STX7, UGT8, VNN1, WARS2, WNT7B, CACNA2D3, MAPK8IP3, PRICKLE1
Negative_14521	ADC, FAH, OTC, PML, TAT, ZYX, ACAA1, APOA2, B3GALT1, CCL19, CCNG1, CLD N9, COASY, CTF1, CYP1A2, FLT4, GABARAP, GCH1, GUCA1C, HMGCS2, HMOX1, IFNA14, ITGAX, KIR3DL3, MCM6, NADK, NFKB1, OR10T2, OR4B1, OR4X1, PAK 4, PDE1B, PFN1, PIAS3, PIGA, PIGM, PIK3R2, PLXNA1, POLR3D, PPP2R5A, P TGER3, PTGES2, RAB5A, SHC1, SLC2A2, SMAD9, STAT2, TACR1, TCF7L2, TIC AM1, TNXB, TOMM40, TUBB1, UNC5A, VTI1B, WASL, ATP6V1B2, SERPINB5, TN FRSF1A
Negative_14522	ABO, AK2, DBT, HDC, IL4, PVR, SI, SRC, AMY2B, ARNT2, ASNS, ASRGL1, B3GA LT6, BUB3, CACNA1E, CAMK2B, CAMK2G, CASP9, CDC6, CDKN1B, CDKN2C, CHA D, CNGA4, COX10, CRB3, CRLS1, DTX4, EHHADH, EPHA5, GALE, GALNT8, GLYC TK, GNMT, GUCY1A2, HCLS1, HEXB, HTR2B, IL29, ITGA7, ITGAD, MAGI3, MAP 3K12, MAP3K7, MMP9, NAE1, OR10A3, OR51E1, OR5M8, OR7A5, OR8H1, PCCB, PDE11A, PDE1B, PDE5A, PFKFB3, PPP1CC, PPP2R5B, PRIM1, PRKAR2A, PRKC H, PRKCZ, RAPGEF3, RPS6, SDC4, SHC2, ST3GAL2, TNFSF11, TSC1, TSC2, TU BB, VCAM1, WASF3, WWP2
Negative_14523	CBL, DBT, GNS, MYC, ZYX, ABL1, ABP1, AMPD3, AOX1, ARG2, ATG3, B3GALT4, BHMT, CACNA1A, CCL15, CDC25C, CNTN1, COL6A2, COMT, CYP2U1, FLT3, GAL NT7, GNRH1, GSTO1, IGF1R, JAK1, LIPG, MAFA, MAGI1, MAOB, MTHFD1, NCF4 , OR10Q1, OR1K1, OR51V1, OR52R1, OR5AU1, OR6K3, OR8K1, P2RX1, PDXP, P ER1, PFKFB1, PRKX, RAC1, RARS, RFX5, RRAS2, SDHA, SELPLG, SH3BP2, TCF 7, TJP1, TKTL2, UGT2B4, ULK3, WNT9B, ATP6V0A4, TNFRSF12A

Negative_14524	<p>ADO, BAX, CGN, LSS, RDX, RFK, AMPD1, ARHGEF6, ASRGL1, B3GALT2, B3GALT5, BRAF, CAV1, CCL17, CDC26, CDKN2A, CFL2, COL6A2, CSF2RA, CXCL2, CXCR4, DDX18, DGKI, DIAPH1, DNMT3B, DPYSL2, ENPP2, ETNK2, EXOC7, F13B, FADD, FGF20, FLAD1, FMO2, G6PC, GART, GLS2, GNG12, GRIA2, GYS1, HES1, HLA-DOB, HLA-F, HLA-G, ICOSLG, IFNG, IRF5, LGMN, LLGL1, MCEE, MYH2, NAT5, NCOA4, NEFH, OLAH, OLR1, OR10G7, OR13C4, OR13J1, OR2D3, OR2T12, OR2T3, OR2V2, OR5AK2, OR5T1, OR8B4, PFN2, PIP4K2B, PLA2G6, PLOD3, PMM2, PPA1, PPP2R2D, PRKCE, PRKY, PTGES2, RPSA, SLC25A5, SMAD3, SPRY2, SPRY4, STX10, TAS1R3, TAS2R16, TAS2R48, TBL1Y, TNFSF14, TOMM40, TP53I3, TSC1, TSHB, TSLP, TYMS, UBA7, UGT2B11, WASF3, XYLT2, YWHAZ, C1GALT1C1</p>
Negative_14525	<p>CAD, GK, HK3, IL6, LHB, PLG, AARS, ACADL, ACSS2, ALG5, ALG6, AMPD1, ATP5A1, ATP5G2, B3GNT2, BPGM, CACNA1B, CCNG2, CCR5, CD70, CD8A, CERK, CNTN1, CXCL13, CXCL3, DCTN1, DDHD1, DDX18, DDX19A, DGKE, DNMT3A, DOT1L, DPM2, EIF4B, F11R, F2RL1, FBP2, FZD5, GALNTL5, GARS, GPD2, GSTO2, HCLS1, IGF1, IL8RA, INHBE, JAK2, LAMA4, MINPP1, MNX1, MYL7, NR1D1, OR10V1, OR2M7, OR52N2, OR5AN1, OR6S1, OR8H1, OR8S1, P2RX4, PHKA1, PIAS3, PLCG1, POLE, POLR1E, PRKACB, PSEN2, RRM2B, SETDB2, SHMT2, SIAH1, SMURF2, TAP2, TAS2R9, TICAM1, TJP1, TNFSF9, TUBA3C, ULBP1, VANGL1, WNT6, ATP6V1B1, ATP6V1E2, ATP6V1G1</p>
Negative_14526	<p>BTK, CD6, GP6, IL4, LCK, LIF, LPO, ME3, TKT, TPO, ACVRL1, ACY1, ANAPC2, ANAPC4, ARNT, ARNTL, ARSB, ATP5J2, BRAF, CACNG7, CARD11, CCL21, CCL23, CD47, CDK5, CFL1, CRLS1, CXCL3, CXCL5, CYSLTR1, DAG1, DRD2, DUSP6, FARP2, FARSA, FSHR, GART, GGT6, GNA12, GNAQ, GNAS, HMGCL, IKBKG, IL18R1, IL22RA1, IRS1, ITGA11, LAP3, LDHAL6B, LYPLA2, MAP3K12, MPZL1, MYH15, NCKAP1, NOS1, ODC1, OR14A16, OR1D5, OR1L1, OR52B4, OR52E4, OR52K1, OR5T1, OR7A10, OR8B4, P2RX7, PDXP, PERP, PIGF, PIPOX, PLA1A, PLTP, PMAIP1, PNPO, POLD2, PRKY, PTGES, RDH11, RETSAT, RXRB, SFRP4, SPRY3, STX18, TBXA2R, TSLP, VAMP3, ATP6V1E2, ST6GALNAC5</p>
Negative_14527	<p>CAD, CD4, NGF, NPY, TK1, ACSS3, ACYP2, APBB1, AVPR1A, B4GALT5, BMP5, BMPR2, CD27, CD55, CDH3, CHDH, CNTF, CSF2RB, CYBA, DDX47, DDX51, DGAT2, FABP4, HBEGF, HCST, HYAL1, IDH3G, INHBE, JAK2, LPAR1, MGST1, MYH4, NCR3, NFKBIE, NKX3-1, NME2, NRXN3, NUDT12, OR10G4, OR10H1, OR2T29, OR2V2, OR5AN1, OR5M8, PFKFB4, PI4KA, PIGA, PIK3C2G, POLR2B, PPAT, PRIM2, PTGES2, RAPGEF2, RPS6, RRM1, SREBF1, TAS1R3, TAS2R41, TNFSF4, TPI1, TUBB2A, TUBB4, UCK1, UGCG, UROD, ALDH18A1, ATP6V1G1, CSNK1A1L</p>
Negative_14528	<p>AK2, AK3, CFI, GPT, HK2, IHH, IVD, LTB, PXN, SFN, ABCC8, ACVR1B, ADIPOQ, ALCAM, ALPL2, ARSB, BCL10, CACNB3, CADM1, CAMK2D, CASP6, CD44, CDKN2D, COL11A1, CSF2, CTTN, CYP2A7, DDOST, DDX18, DGKD, DHRS3, EGLN1, EP300, EXTL1, FUT1, GLUD2, GRIA1, IFIH1, IL12RB2, IL24, IL6ST, ITGA2, ITGB4, JAK1, LAMB1, MAPT, MCAT, MGLL, NEFM, NEU3, NEUROD1, NFKB1, OR13F1, OR2A5, OR4D5, OR4F6, OR51L1, PHPT1, PIGN, PIGV, PLCB2, PPCDC, PTGES, PTPN1, RAPGEF3, RAPGEF4, RIPK1, SFRP5, SKIV2L2, SLC9A1, SPTLC1, TAS2R48, TAS2R49, TAS2R7, TCF7, ULK1, UPRT, HLA-DQA2, TNFRSF12A</p>



Negative_14529	DDC, FGA, GDA, IL8, LCK, ME2, SCD, SPN, ACSL1, AKT3, ALDH1A2, ATP5C1, BCL2, CACNB1, CADM3, CASP7, CCNB3, CCNE2, CD79A, CLTA, COL3A1, CREB3L2, CSNK1D, DIAPH3, DLL3, DRD1, ENTPD1, EPHX1, EREG, GAD1, GALNT12, GNAT3, GNPAT, HBEGF, HPSE, IAPP, IDH3A, IL11, IL13RA2, IL20RA, IMPDH2, IPPK, ITGB4, JAK3, KCNJ11, KLRK1, LCP2, LIAS, MAGI1, MCEE, NAGK, NAT2, NOD1, NR4A1, NRXN2, NUDT9, OR10G4, OR10J3, OR11H6, OR1L4, OR4K17, OR51A4, OR5D16, OR9A2, OR9I1, PDIA4, PGK2, PHGDH, PLCD3, PLD2, PLXNA1, POLR3D, PPAP2C, PRKCQ, PTGDS, RAC3, RAP1B, RASA2, RASGRP1, RBKS, RDH11, SDC2, SH2D1B, SOCS2, STK4, TAS2R40, TCF7, TJP1, TPK1, ULBP3, UNC5B, UNC5D, VAV3, WNT2B, YWHAB, CACNA2D2, TNFSF13B
Negative_14530	CAD, RDX, ABP1, ACSM3, ADAM17, AKR1B10, ALPP, AMY2A, ATIC, BMP2, BMP8B, CDC27, CDS1, CHKB, CMPK2, CNTN2, CNTNAP1, CYP2C8, DERA, DVL2, EP300, FOXO3, HSPA2, IL12RB1, IL13RA1, LDHB, LIPF, LRP6, OR10H1, OR51A4, OR6C1, PDE1B, PGK1, PIK3CD, PLCG2, PLXNC1, PMM2, POLD1, POLR1C, POMC, PON3, PPAP2C, PPP2R1A, PRKAG2, PRKCI, RASGRP4, RCHY1, RHOQ, SEMA4B, SLC2A2, ST3GAL5, STMN1, STX10, SULT1A2, TCF7, TOLLIP, TOMM40, ZFYVE16, MAPK8IP3
Negative_14531	PTS, ACP2, ACPT, ACYP1, ADH1A, ALDH1L1, ALDH6A1, ARHGEF4, ASAH1, ATP5H, BAI1, BET1, CARS, CBLC, CFL1, CHEK2, CLDN14, DDIT4, DEGS1, DKK2, DUSP2, FBXW11, FCGR3A, FGF22, FZD10, GAL3ST1, GALNTL5, GBA3, GLUL, GP1BB, GTSE1, HIF1A, IL23A, JAG2, L1CAM, LTBP1, MAPK3, MGAT2, NCSTN, OR10A7, OR4F15, OR52W1, OR5F1, OXCT1, PDGFC, PGS1, PIGO, PIP4K2B, PLAT, PRKAB2, PTGS2, ROBO2, SELPLG, SEMA3D, SMPD2, TAS2R41, TIAM2, TRAF3, VASP, HSD17B10, ST6GALNAC4
Negative_14532	AK5, DBI, FH, GPT, ADAM17, ADIPOR2, ADRA1B, ALPP, ARPC3, DHRS4, DTYMK, EHMT1, EIF4E, EPHB4, FGF21, FIGF, GLUD2, GNAZ, HIP1, IL12RB2, IMPA1, ITGA9, MARS2, MKNK1, NT5C1B, OR13C5, OR1S1, OR2F2, OR2L2, OR2L3, OR4A15, OR4D9, OR5P2, OR6X1, PDE1B, PFN1, PLA2G1B, PLA2G5, POLR2I, PPA2C, PPP2R2C, PPP2R5C, PTDSS2, RASGRP2, RASGRP4, RRM1, RRM2, SELPLG, TNFSF9, WNT11, SERPINE1
Negative_14533	AK5, CR2, CRH, ID2, MAX, OTC, ADH5, ADORA2B, ATP5I, B3GALT5, BCL2L1, BET1, CASP8, CD28, CD34, CERK, CHRM2, COL1A2, COQ5, CTBS, CXCL1, CYFIP2, DDX47, DDX50, DGKH, DHODH, DLL1, DMGDH, DTX2, DTX3, FCGR2B, FCGR3B, GALNT12, GCNT2, GFPT2, GNA13, GOT1, GRHPR, GSTK1, H6PD, HLA-C, HMGCS2, HSD3B1, IL11RA, IL28A, IL9R, IRF5, KLRK1, LCP2, LIPF, MAN1A1, MAP3K2, MTFMT, MTMR2, NARS, NAT2, NRAS, OR10A4, OR10J1, OR1B1, OR1J2, OR2AG1, OR4C16, OR4K14, OR4M1, OR6C74, OR6S1, PARVA, PDCD1, PIGX, PLA2G2E, PLD2, POLR2D, RAF1, RRAS2, SARDH, SEMA3E, SGPP1, SLC25A6, SSX2IP, ST6GAL1, STK3, TAS2R8, TGFA, TMLHE, TRIP10, TRPM5, UCP1, VAMP2, VDAC1, WNT5A, WNT9A, YWHAQ, C1GALT1C1, CTNNBIP1, EIF4EBP1, MAPK8IP3, TNFRSF1A
Negative_14534	EPO, GNE, OTC, PLN, PXN, ADCY6, ADRA1B, ALOX15B, ANPEP, ASNS, ATP5G2, BAI1, BMP2, CES2, CHSY1, COQ5, DTX3, DUSP3, EFNA2, FBXW11, FUT6, FUT7, FZR1, GMPA, H6PD, HSD3B1, HSPA2, IL1RAP, IL2RB, INADL, INPP1, INPP5A, IRS2, LRP6, MAP3K1, NT5C1B, OLAH, OR1B1, OR2T2, OR51B5, OR51Q1, OR52L1, OR5H6, OR7G3, PDE3A, PDGFRB, PFKFB2, PI4KB, PIK3R2, PLA2G6, PPID, PPP2R1B, PTPN7, ROCK1, ROCK2, RPS6, SMAD5, TRAF4, TSHR, TYMS, UCK2, UGCG2, VAV2, VEGFC, YES1, YWHAG

Negative_14535	BID, CD4, CD6, PTS, SRC, UBB, ABLIM1, AMY2B, ANAPC10, ARD1A, ATP5I, B4 GALT4, CACNA1A, CACNG1, CACNG5, CDC2, CLDN1, COL5A2, CXCL13, EXTL1, FPGT, GLYCTK, GNPDA2, GNRH1, ICAM2, INPP5B, IRS1, ITGA1, JAK1, JAM2, LRP6, LTB4R2, MS4A2, MTHFD1L, NFKBIA, NOX3, OR1M1, OR3A1, OR5T2, PDE 4A, PERP, PI4KA, PIK3C2G, PIK3R3, PLAT, POLR1E, POLR2D, PRKAG3, PYGB , SMAD6, SPI1, SRD5A2, STAT2, TP53, TRPM5, TUBA1A, TUBB2A, GABARAPL1 , HSD17B10
Negative_14536	AK3, DBH, FST, HPD, IVD, NPL, ACACA, ACOX3, ACP5, ACYP2, ALG5, AVPR1B, AXIN1, C5AR1, C7orf16, CALML5, CDC16, CSF3, CXCL6, DGKQ, DHRS3, DTX2 , EGFR, ENTPD4, F13B, FECH, FPGT, GALNT9, GRIN2D, HTR2C, ICAM1, INPP5 B, INPPL1, IQGAP3, ITGA1, KYNU, LEFTY2, MAML2, MMP2, MYL5, NFKB2, OR1 4I1, OR1L1, OR2D3, OR4D1, OR4F6, OR52K1, OR5L2, OR7D4, OR8G1, OR8J3, PGS1, PIAS1, PLD2, PMAIP1, PMM2, PNPLA3, PPBP, PPP3R1, PRKAB1, PTPRZ 1, RASSF1, SCD5, SDC2, SETD1B, SETD8, SFRP4, SV2A, TIAM2, SERPINA1
Negative_14537	AUH, CR1, JUP, MSN, PC, PGD, RPE, VCL, ALDH1B1, ALG10B, ARRB2, B4GALT7 , CD22, CHRNA7, CHST13, CNTFR, CNTN1, CSF3, CSH1, CYP2C18, DDX19A, DD X54, DERA, DGKI, DHRS4L2, DLL3, DVL1, E2F3, EGLN3, EPHA5, GALNT14, GC NT1, GCNT4, GFAP, GGT7, GUCY1A3, HMOX1, ICAM1, IL17RB, IL22, LILRB3, MAP4K1, NEU3, OR10H3, OR11H1, OR13C2, OR13C9, OR4C46, OR51M1, OR6N2 , OR8D4, OR8I2, OR9G4, OR9Q1, P2RX6, PDE4C, PDK1, PIGH, PIGW, POLR1D, PPCDC, PPOX, PPP1CB, PPP2R5D, PRKACA, PYGB, SETD8, SLC2A4, STX18, TA S1R1, TAS2R38, TAS2R9, TLR9, TNFRSF4, UGT2B7, ULK1, VANGL1, VAV3, AT P6VOA4, GABARAPL2, TNFRSF1A
Negative_14538	ADO, APP, BTK, C8B, LAT, PGD, RPE, ADH1B, AGRP, AGXT, APOC3, ATG7, BMP4 , CASP8, CCR1, CCR10, CLDN14, CLDN19, COL5A3, CTSS, CXCL12, CXCR3, CY P1A1, CYP4A22, DDOST, DDX41, DGKA, EFNA4, EPHA1, FGF11, FGF2, FGF8, F LOT2, FUT8, GCNT1, GNAZ, GNG3, GSTA1, IL5RA, ISYNA1, LAP3, LIPA, LIPT 1, LRP6, LYZL1, MAPK7, METTL6, NRG3, NT5C3, OR2T6, OR4M1, OR52B6, PDE 10A, PDE3A, PGAP1, PMAIP1, PMM2, PPCS, PPP2R1A, PTK2, PTPN6, PVRL3, S ORBS1, SRGAP3, SYNJ2, TAS2R41, TAS2R5, CACNA2D1, CACNA2D2
Negative_14539	CDA, IVD, KIT, ACO2, ACVR1, ACVR1C, AGTR1, AKT2, ALDH1A2, ALG9, ALPL, ARPC3, ARRB1, CACNG7, CDK4, CHDH, CLDN5, CSF2, ELK1, FADS2, FGD1, FLT 3LG, GART, IFNAR2, IKBKG, IL1A, KLK3, LAMA4, LLGL2, MYL5, NEUROD1, NR 4A1, OCLN, OR10A5, OR14J1, OR51A4, OR51V1, OR52B6, OR5M9, OR5P3, PDE 8A, PFN2, POLR2D, ROCK1, RUNX1T1, SETDB2, TBK1, TLR2, TLR9, TNFSF4, T YMP, UNC5D, PNLIPRP1
Negative_14540	AK5, C2, CRH, FUK, GBA, IL2, NF1, SRM, SYK, ACSS2, ACVR1C, ADAM10, ALOX 15B, APLP1, ARPC3, ATP5G3, BPNT1, CALML5, CCL5, CD80, CFL2, CHSY1, CL CA2, CREB3, CREB3L3, CSNK1A1, CYBA, CYFIP1, DAXX, DOCK1, DUSP8, EFNA 4, ELK1, ERBB2, EXTL1, FCGR2B, FPGT, FZD5, GAPDH, GLI3, GNAI3, IFNA2, IL12RB1, IL20RB, IL22RA2, INPP5E, ITGA3, ITGA9, ITGB1, KLK3, LLGL2, MAPK10, MDH2, MKNK1, MYH15, NCR2, NEU4, NOTCH3, NSDHL, NTNG1, OR10C1 , OR10S1, OR1I1, OR2M4, OR4S1, OR5D18, OR5V1, OR7C2, P4HA3, PDE1C, PG M2, PLXNA1, PON3, PPID, PRKACB, PRKCQ, RAP1B, RGS3, SEMA3F, SLC33A1, SLIT1, SMURF2, SPTLC2, SREBF1, STX6, TAS2R3, UGCG, UPP1, UXS1, WHSC1 , YARS2, ZFYVE16, ZFYVE9, ATP6V1C1, ATP6V1G2

Negative_14541	BAD, BTD, F9, HDC, ME3, MUT, SRC, ABLIM1, ACADVL, ACYP1, APOA1, ARPC1A, ATIC, BAAT, BCAT2, C1QC, CCKAR, CD27, CD40, CD44, CDC25C, CDH3, CDO1, CES7, CHPF, CSNK1G1, CYP19A1, CYP2U1, FGF10, FRAP1, GNPAT1, GRIN2D, HBEGF, HLA-DOA, IFNGR2, IL11, IRF5, KIR3DL2, MAP3K12, MAPK10, MCM3, NCOA4, NFYB, OR10H3, OR1S2, OR2G3, PDE2A, PDE4A, PDIA4, PHKG1, PPP1CC, PPP2R2C, PPP3CC, PRIM2, PRKAA2, PVRL3, RALA, RCHY1, RDH5, RHEB, ROCK2, RRAS, SCLY, SHC1, SOS1, ST3GAL4, STAM, STEAP3, STK36, TAS2R48, TBK1, TBXA2R, TCF7, THBS3, TUBB2A, VEGFC, ATP6V1G1, HLA-DPB1, TNFRSF1A
Negative_14542	ADC, AGL, DUT, EDA, GP5, IL2, ME3, TPO, ACY1, ADH4, AK3L1, ALDH1A3, ALDH7A1, ALDH9A1, ALOX15B, AOC3, APOA2, BAIAP2, BMP6, CALML3, CCR9, CD22, CD247, CD8B, CLCF1, CRB3, CYP2A7, DAXX, DNMT3L, DOCK1, DTX4, DUSP14, EARS2, ETS1, FARP2, FGF18, FGF21, FGFR1, FLOT1, GALNT1, GART, GAS1, GLUD1, GSK3B, GYS2, HDAC1, IL15, IRF7, ITCH, ITGA3, ITGAX, LAMB4, LIPT1, LMO7, LRP6, MMP14, MPZL1, OR10H3, OR10X1, OR2D3, OR2T5, OR4C6, OR4M2, OR4X2, OR52K1, OR6T1, OR9G1, P4HA3, PFN3, PGLS, PHKB, PLA2G10, POLR3G, RARA, RRAS2, SARS2, SIPA1, SMPD1, SOCS2, TAS1R2, TRAF6, UGP2, XYLB
Negative_14543	AK3, MTR, SP1, ACAA2, ALDH1A1, ALDH1L1, ANAPC10, BDKRB2, BIRC5, C7orf16, CAMK2A, CCND3, CD244, CD38, CDC42, CNDP1, CRB3, CTPS, CYP2C18, DPM1, ENTPD4, FGF11, FZD10, GAD2, GALNT5, GBE1, GNG13, GNRH1, GRIA2, IAPP, IFNA13, IL11RA, IL12RB2, ITGB2, KLKB1, LALBA, LAMB4, LGMN, MAP3K3, MAPK12, NEFL, NFKBIA, NLGN2, NR1H3, OR10G9, OR13C3, OR1L1, OR1L3, OR2T1, OR4D5, OR51B4, OR52E6, OR52I2, OR56B4, OR9Q2, OSMR, PAICS, PAK1, PARD6G, PER1, PIGX, PLA2G2D, PLA2G5, PLOD3, PNLIP, POLR2E, POMC, PRKX, PVRL2, RHOA, ROBO2, SELPLG, SEMA3A, SEMA4G, SESN2, SGMS1, SIAH1, SMAD3, TBXA2R, THBD, TRPC1, UGT2B4, WBCSCR22, WNT5B, ATP6V1G3, EIF4EBP1, HLA-DRB3, SERPING1, TNFRSF10B
Negative_14544	CKB, DCC, DLD, FGA, FN1, GPT, IL4, ACTC1, ALG8, ARSE, ATP5J, CASK, CRLF2, CTPS, CYP11B2, CYP19A1, DGKB, DMGDH, DNMT1, EIF4E, FABP3, FADD, FGF7, FMO3, GABARAP, GALNT1, GMPR2, GNA13, GUSB, HEXB, HNF1A, HNMT, IAPP, IDH2, IFNAR2, IFNGR1, IL13RA2, IL17A, ISYNA1, LILRB3, MAGI1, MAP3K1, MYH4, NAGS, NAT1, NCAM1, NOTCH1, NRXN1, OR10S1, OR4D9, OR4M2, OR4Q3, OR56B4, OR5AU1, OR6C1, P4HA3, PDGFB, PDGFRA, PER3, PIK3R3, PLXNB2, PMM1, POLE4, PRKX, PRODH, RENBP, SAT1, SGPP1, SMARCA2, SOAT1, SOS2, SPTLC2, ST8SIA5, TAS2R41, TUBB4, UGP2, HSD17B10
Negative_14545	BAX, CKM, FER, KHK, ACADSB, ACSL4, AGRP, ALOX15, ALOX5, ALPL, ANAPC5, ANAPC7, B4GALT6, BMP6, BPGM, CAV3, CCL1, CCL23, CHDH, CLDN8, CLTA, CNTF, CNTFR, COL1A1, COL5A3, CTLA4, CTSL1, CXCL2, CXCR4, CYP3A43, CYSLTR2, DBF4, DDOST, DDX54, DIAPH2, DUSP6, FASN, GALNT11, GOT2, GRIN2A, GSTA1, GUCY1B3, ICOSLG, IDH1, INADL, ITGA3, LEPR, MYH9, NARS, NODAL, NUMB, OR10C1, OR2A25, OR51G1, OR51L1, OR52E6, OR7A10, OR8B8, OR9G1, ORC6L, PARVG, PDE1A, PDE4C, PDIA4, PGLS, PITX2, PLCG2, POLR3A, PTGS2, RPS6KB2, SENP2, SEPHS1, TBL1Y, TLR9, TUBA1B, B4GALNT1
Negative_14546	ATM, C2, FAS, ACSS2, ADH7, ARD1A, ATP6VOB, BET1, BMPR1A, CACNA1D, CCKAR, CCNB3, CLDN8, CREB3, CYP2J2, DIAPH1, EFNA4, G6PD, GALK1, GJD2, HLA- F, HLCS, HPSE2, IL11RA, INPP1, MAP3K14, MAPK10, MYH9, NAT5, NCK2, OR1E2, OR2T4, PDE1A, PDE4C, PDGFA, PECAM1, PIK3R4, PLA2G10, PLXNA3, PNLIP, PPAR, PPCDC, PPP3CC, PRKAR1A, PTEN, RPS6KA5, RPS6KA6, SPRED2, SULT1A2, SV2A, TSHR, UCK2, UNC5C, VAMP4, WNT5A, GABARAPL2

Negative_14547	BTD, GK, HK1, PVR, TYR, ACACB, ALDOC, ANAPC7, B4GALT7, BAI1, CARS, CCL11, CCR7, CD59, CD01, CHRM3, COQ6, CSH1, CTNNA3, CYBA, CYP2F1, DAAM2, DDX54, EDNRA, EI24, EPAS1, ERBB3, F13B, FBP1, FGF6, FUT9, GCNT3, GRIA3, HARS, IL18RAP, IL28RA, LAMA4, LLGL1, MTHFD1, OR10H5, OR10S1, OR2L8, OR4A16, OR4C46, OR52K1, OR52R1, OR8G1, PCCB, PDPK1, PFN2, POLR2I, PPP2R2C, PRKAR2A, PTDSS2, RCHY1, RPS6KA6, SC4MOL, SLC27A5, SMC1B, TP53I3, TRIP10, TUBA4A, TYMP, UGCGL2, UPP2, WNT16, WNT2B, YWHAZ, B3GALNT1, MAP3K7IP2, MAPK8IP2, MAPK8IP3, SERPINA1
Negative_14548	AR, CFD, DUT, JUP, RET, UBC, ADCY1, AGMAT, ANAPC1, APOA1, APRT, ATP2A1, BST1, C1QC, CANT1, CCNB1, CLCF1, CPT1C, CPT2, CTBP2, CYSLTR2, DPYD, DTX3L, EP300, FARP2, FSHB, GCDH, GDF7, GRHPR, GSTM5, HEXA, IL12A, IL1RAP, IL4R, INPP4A, IRAK1, LIPF, LRAT, LRP5, MAPK8, MAT2B, MMP14, NANS, NCF1, NCK2, OR2A4, OR2B2, OR2L13, OR4X1, OR5I1, OR6S1, OR9G1, PDE4D, PDK1, PFAS, PIAS3, POLR1A, POLR2C, PTPRZ1, RAPGEF3, RPN2, SDC4, SELL, SH2D1A, SMAD2, SOX17, TBL1Y, TNFSF11, TUBB2B, UGT2B17, VDAC3, WNT5B, WNT7B, PAFAH1B2
Negative_14549	DBI, HAL, PGF, PML, AACS, ACVR2B, ADIPOR2, AMD1, ANAPC7, ASPA, ATP5D, ATP5F1, ATP6V1D, BLVRB, CACNB1, CACNB3, CCNB3, CD34, CD01, CHST12, CLDN15, CLDN9, CNTN1, CPS1, CSF3, CTSL1, CXXC4, CYP2J2, CYP4F2, DARS, DHDH, DUSP10, ENAH, EPHA6, FMO1, FMO3, FMO5, FUT6, FZD6, GAL3ST1, GRIIN2A, GSTP1, HCLS1, HSPB1, IL20RA, IMPDH1, ITPKB, JAK3, MAPK11, MARS2, MIOX, MMP1, MPP5, NANP, NCK1, NFYA, OR10A3, OR1F1, OR1J2, OR2AG2, OR2M3, OR2T10, OR5AR1, OR6C74, OR6N2, OR7A10, PGAM1, PHGDH, PIP4K2C, PISD, POLE3, PPAP2B, PPP1R3D, PPP2R1A, PPP2R5B, PRPH2, PSEN1, PTPN5, PTPRF, RASGRF1, RDH12, SEMA4C, SEMA4G, SETD1A, SSH1, SSX2IP, ST3GAL5, TBL1X, THBD, TRPC1, ZAP70, CACNA2D3, SERPINB5
Negative_14550	AR, CP, CRK, DCK, DCT, F5, FAS, VTN, ABAT, ABLIM1, ACSM2A, ACTC1, ALG12, APOA5, ASPA, BMP7, C3orf10, CACNA1C, CBR1, CCL22, CD247, CHRM2, CLDN16, CLDN9, COMP, CPT2, CSNK1G1, CUL1, CYP8B1, DDX41, DGKB, DGKG, DIAPH3, EHMT2, EPHA8, FDPS, FGF18, FMO5, GALNT9, GCNT2, GP1BA, GSTA5, HEXA, HGSNAT, HLA-G, HSD3B1, IL4R, INHBE, IRAK1, LAP3, LIAS, LIPG, MAD2L1, MAPK14, MCAT, MFNG, MYH14, MYL2, NEUROD1, NFAT5, NPR2, OR10K1, OR10R2, OR13C5, OR13C8, OR2G3, OR2M2, OR6C4, OR7A10, OR8H3, PANK3, PDK1, PHKA2, PI4KA, PPP2R5B, PRIM2, PTCH2, RDH11, SDHB, SLC25A4, SLC25A6, SLIT2, SMARCA5, SPRY3, SRGAP1, STX1A, TALDO1, TCF7L1, UGT2A1, UGT2A3, WASL, WNT9A, YWHAQ, MAPKAPK5, ST6GALNAC4
Negative_14551	F5, GLS, MSN, RDX, WAS, ABLIM2, ACOT12, ACOX2, ACSL1, ADRB1, ALPPL2, ASS1, ATP5J2, BCKDHB, CACNG5, CCL15, CCNA1, CCND3, CCR3, CD14, CES7, CHUK, CPOX, CREB3L3, CREB5, CXCL13, CYP19A1, CYP1A1, CYP2F1, DDX55, DHR9, DUSP6, EGLN3, FASLG, FBXW11, FCGR3B, FGF19, FUT2, FZD8, GATM, GMPR2, HBEGF, HTR2A, IAPP, IGF1, IKBKG, IQGAP3, KITLG, LIPA, MAN1C1, MAP3K3, MAP3K4, MAP3K7, MICA, NEFM, OR1D5, OR2C1, OR52N1, ORC3L, PAK7, PAPSS2, PIGT, POLR3D, PRKCA, PTGER1, PYCR1, RALBP1, RAP1B, ST8SIA5, SV2A, TAS2R14, TLR2, TLR3, TNFSF4, TYMS, VASP, WNT4, CSNK1A1L, PDCD1LG2

Negative_14552	BTC, FAS, FYN, GPI, NLK, PTS, ACO2, ALDH1A1, AMDHD2, ATP5F1, BCL2, BDH1, BMP8B, CCNG1, CDKN2B, CDKN2C, CDKN2D, CLDN8, CNGA3, CREB3L1, CSAD, CTSS, DDX18, DHDH, DLST, DUSP5, FCER1G, GART, GMPR2, GNAS, GNPDA1, GPLD1, GRIA2, GSTA5, GSTM3, GUCY1B3, GUCY2C, HBEGF, IAPP, IFNA7, IGSF5, IL23A, IL6R, IL8RB, ITGB6, KIR3DL1, KYNU, LPAR1, MDM4, MYL9, NCF1, NCR1, NKX6-1, NUDT5, OR2AG2, OR2C3, OR2T2, OR2V2, OR4D2, OR4K14, OR5K1, OR5P3, OR6C2, OR6C75, PANK3, PARD3, PDK1, PDXK, PIM1, PLAT, PLCD3, PLD1, PLTP, POLA1, PPCDC, PPP1CA, PPP1R3C, PRKAR2B, RPSA, SDHC, SOCS4, SOCS5, STAT2, SUFU, SUV39H1, TKTL2, TPH1, WNT9B, CSGALNACT2, CTNNBIP1
Negative_14553	ADA, ADC, BTC, F10, ID4, MUT, MVK, PAH, PDC, SFN, SP1, TNN, ACOX2, ACP5, ACTN4, APOA2, ARG2, AVPR1B, B3GALT5, B3GALT6, B4GALT7, BACE1, C7orf16, CACNA1I, CCKBR, CCNB2, CD28, CD80, CHRM2, CTNNA3, CYCS, CYP3A7, CYSLTR2, DDX19A, DDX23, DEGS2, DGKG, ENO1, ESPL1, ETS1, FGF1, FPGT, GNA11, GP1BA, HAP1, HTR2A, IBSP, ICOS, IDH3A, IFT57, IL15, INPPL1, IRF5, LTB4R2, MAN1A2, MECR, NCR1, NCR2, NCR3, NFKBIB, NR5A2, OR10R2, OR2A4, OR2Y1, OR4L1, OR51B2, OR52K2, OR5C1, OR7A17, OR7C1, OR8H1, OR9I1, PGM1, PGM3, PIGQ, PLA2G3, PLD1, PNPO, PPA2, PPP2R2A, PRKCZ, RASGRF1, RRM2, SH3BP2, SPRY2, SPRY4, SSH3, STX16, TAS2R9, THBD, TICAM1, ARHGEF12, MAP3K7IP1, MAPK8IP1, TNFRSF1A
Negative_14554	AK7, AMH, ASL, C8A, DBH, LAT, MIF, AASS, ABLIM1, ADH4, AKR1D1, ALOX12B, ALPI, AOC2, ARNT2, ARNTL, B3GNT2, BCL10, BET1L, BST1, CCL5, CD14, CD48, CD59, CHIA, CNTNAP1, COL5A1, CSNK2A1, CXCR6, CYP11A1, CYP1A2, DERL1, EFNA2, EFNB3, EGFR, ENTPD3, F2RL3, FCGR3A, FZD2, FZD6, GAD2, GATM, GFAP, HDAC1, HSD3B1, IDUA, IL17RA, MGST1, MPDZ, NAMPT, NFAT5, NFKBIB, NTF3, OR1J1, OR4C15, OR4S1, OR5AU1, PAK4, PAPSS1, PARVG, PCYT1A, PDE9A, PDHA2, PEMT, PFN4, PLCG2, POLR3K, PPAP2A, PTGDS, PYGL, STX2, SULT1A2, TALDO1, TCF7L2, TPK1, TRPM5, UGT1A10, WARS2, WNT2, ATP6V1E1, MAPK8IP3
Negative_14555	ACY3, AK3L1, ALDOA, AMDHD1, AMPD2, ANAPC2, ATP5E, CASP8, CD70, CDC14A, CDH3, CDKN2C, CDS1, CEBPA, CLDN9, CYP2C19, DHCR24, EPHB4, FGD1, FM04, FZD6, GRHRP, GSK3B, HES1, HNF1A, IDUA, IKBKB, IL3RA, KLRC4, KLRD1, MAGI1, MAP4K2, MTMR2, ONECUT1, OR13C4, OR2M2, OR4A15, OR4C46, OR4M2, OR52N4, OR6A2, OR9A2, ORC2L, P4HA2, PAFAH2, PCYT1A, PDGFD, PIK3C2A, PIK3CA, PLD2, PLXNA3, POMC, PPP2R5D, PRKCI, RBX1, RPS6KA1, SEMA4B, SNAI1, SSH2, TAS2R38, TRAF1, TSHB, UNC5C, PRICKLE2
Negative_14556	CKM, CRK, DHH, LHB, NOG, RFK, SMS, TKT, WAS, ACTG2, ACVR1B, ADCY7, AK3L1, AKR1C4, ALG1, APPL1, ATP2A1, BCAR1, CACNB1, CBLC, CCL11, CD46, CDO1, CES1, CHPT1, CTF1, CYP11B2, DGAT2L4, DPYS, DUSP16, DUSP2, EGFR, ENTPD2, EPHA4, ERO1L, FGF4, GAL3ST1, GMPR, HAGH, HIF1A, HTR7, IFIH1, IFNA17, IFNAR1, IL18RAP, IL1RAP, IL25, IL28B, KIR2DS5, MECR, NCF4, NCO R1, NRXN3, OPLAH, OR1S1, OR2A42, OR2AE1, OR2L2, OR56A1, OR5K1, ORC6L, PCYT1B, PDCD1, PDE11A, PDXP, PIGX, PLA2G1B, PLCZ1, PMVK, POLE, PPARG, PRKAR2A, PRKY, PTPRR, PVRL2, RASGRF1, RRM1, SEPHS1, SLC33A1, STX12, TBL1Y, TKTL1, TLR2, TNFSF14, TUBA3E, TUBB2A, UNC5D, CTNNBIP1
Negative_14557	AK2, BTD, CP, GDA, MUT, ABAT, ACP6, ACTN2, ADCY3, AMPD3, ATIC, B3GALT4, CDC42, CDS1, CEBPA, CHEK2, CXCL2, DDX50, DGKD, FGFR4, FZD8, GALNT1, GNRH2, GP1BA, IAPP, ICAM2, IFNA4, LFNG, LHCGR, MDM4, MEF2C, MTMR2, MYH9, NCAM2, OR10AD1, OR13C8, OR2G3, OR4K13, OR4N4, OR51T1, OR6C70, OR7A17, OR8H1, OR9G4, ORC5L, PCK2, PHKG2, PMAIP1, POLR2F, POLR3K, PPP3CC, PPP3R2, RAB5A, RASGRP4, RDH11, SDC4, SELPLG, SOCS1, SSH2, SUFU, SUV39H1, TAS2R14, TAS2R9, TNFRSF4, ULBP1, UMPS, USE1, VARS, YWHAE, ATP6V1E2, C1GALT1C1, PRICKLE1, PRICKLE2, ST6GALNAC4, SUV420H2

Negative_14558	CBS, CFH, DCT, F2R, HK2, IL7, PAH, SDS, SFN, AASS, ADRB1, AQP7, AXIN2, CACNB4, CASP8, CCL17, CDKN2A, CER1, CNGA3, CTPS, CYP21A2, DDIT3, DDX4, DFFB, DHRS4L2, DTX3L, DUSP3, DUSP9, ERBB2, FIGF, GADD45G, GLUD2, GNAI1, GPAA1, GUCA1A, HES1, IL10RA, IMPDH1, IRAK3, JUND, LLGL2, MIOX, MYH7B, NCSTN, NME7, OR10G8, OR10H2, OR1L6, OR1Q1, OR3A2, OR4K17, OR52A5, OR8K3, PDHA1, PDXP, PGK2, PI4KA, PLAU, PPA2, PPM1D, PPP3CB, PRKX, PRSS2, RAD51, RALGDS, RARA, RASGRP4, RND1, RPS6, RRAS2, SEMA3B, SEPHS1, SFRP1, SLC33A1, SOCS2, STX7, SV2B, TNFSF11, VEGFA, WNT5A, ZNRD1
Negative_14559	BTC, GNE, SMS, AADAT, ACVR1B, AHCYL1, AKR1D1, ALDH5A1, ATP5I, CAMK4, CCNG1, CDK2, CER1, CHD8, CKS1B, CNTN2, CNTNAP1, COL6A1, COX10, CYP4F3, DTX3, DUSP6, ENTPD3, EXTL3, F2RL2, FLOT1, GADD45B, GRIN2C, HIBCH, HIF1A, HLCS, HMGCS2, IDH3A, IFNW1, IGF1, IL3RA, ITGAD, JAK2, JUND, KIR2DS4, KLKB1, MAFA, MAP2K1, MAPK7, MYLK2, NAT1, OR13C8, OR13H1, OR2M2, OR3A2, OR4A15, OR4B1, OR4K17, OR4N2, OR5D14, OR6T1, OR8U1, P2RX4, PANK1, PCK1, PIGH, PIGL, PIGQ, PIK3C2A, PIK3CA, PIK3R1, PKMYT1, POLD1, PPP2R1A, PPP2R2B, PPP2R5D, PRSS3, PTDSS2, RASGRP2, RPS6KA6, SAT1, SETD7, SMURF1, SPTLC2, SRGAP1, SUFU, TNFRSF9, UGCGL2, UNC5B, ATP6V0A2, EIF4EBP1, PRICKLE2
Negative_14560	ABO, CBS, DLD, GK2, HAL, KIT, MAX, MPL, NGF, OSM, ADRB3, ALG3, ALOX12B, ANGPTL4, ARHGEF1, ASMT, ATG7, BIRC5, BMP8B, BST1, CCL1, CCL2, CCL8, CCND1, CHD8, CHKB, CLDN10, CXXC4, CYFIP1, CYP26C1, DAPK2, DPYSL2, EHHADH, ETS1, FOXO3, FUT8, GALNTL2, GPX7, GZMA, HSPB1, IFNA17, IL10RA, IIRF9, MAP2K3, MAPK9, MCM2, MDH1, MGST3, MKNK1, NCAM2, NKX3-1, OR10H5, OR14I1, OR2H2, OR2M2, OR4F15, OR52R1, OR6C2, OR6C70, OR8U1, PLD1, PLK1, POLR2C, PPP3CB, PRKAR2B, PRODH, PTCH1, RALA, SCP2, SH2D1B, SIGLEC1, STAT5A, STX18, TAS2R50, TLR9, TPH2, WNT3A, HLA-DQA2, ST6GALNAC6
Negative_14561	C3, EBP, FAS, GH1, IL8, OSM, PGP, TPR, ADSL, ALPPL2, APAF1, ARPC1B, ATF2, AVPR1B, BMP6, BPNT1, BUB1B, CER1, CHPT1, CHRM2, CLDN4, CNTF, COMT, DKK1, FGF12, FLOT1, FM01, FM05, GALNT10, GNB1, GRIN2A, GRM1, HCST, HEXA, ICOS, IDH3G, IL2RG, ITPA, JAK3, JAM2, KCNB1, MAN1C1, MAP2K6, MAP3K4, MAP3K7, MYH10, NCAM2, NCF2, NCOR1, NCOR2, NME2, NT5C1B, ODC1, OLR1, ONECUT1, OR13D1, OR1N2, OR2C3, OR4F5, OR51G2, OR52I2, OR56A3, OR5H2, PIGS, PLA2G1B, PNPLA3, PPP2R2C, PRDX6, PRODH, RPE65, RRM1, SARS2, SETDB1, SKIV2L2, STAT5B, SUOX, TAS2R38, TSLP, UPRT, WNT1, YES1, ZMAT3, HSP90AA1, MAPKAPK3, PLA2G12B, ST6GALNAC6
Negative_14562	ADO, DBI, F2, FUK, ILK, ME3, PVR, ABAT, ACAD8, ACAT1, ACP6, ALDH3A2, ALOX12B, ALOX15B, APBB1, B3GAT3, CACNB1, CARD11, CARS, CASP3, CHUK, COX10, CXCL12, DBF4, DCTN1, DGAT2, DGKI, DHRS4L2, DLL4, ENTPD7, FCGR3A, FGF6, GALM, GNPAT, GRIN2D, GSTA4, GSTM5, HMGCR, HMGCS1, IDI1, IFNA5, IL11, IL23A, IL5RA, JAM3, KCNQ1, KIR2DL1, MAP3K11, MGAT1, MYH11, NEFL, NEU1, NFX1, NME2, OR10AG1, OR13C4, OR1J1, OR2L3, OR2T12, OR5K2, ORC1L, OSMR, OXTR, PAFAH2, PIK3R5, PLA1A, POLR2K, PRKCZ, PYCR1, RAP1B, SETDB1, SHMT2, STAM2, STX1A, SUCLG2, TAS2R14, TBXA2R, TUBB, UBA1, UGCGL2, WIF1, WWP1, GABARAPL2, TNFRSF18, TNFRSF1B

Negative_14563	DCC, F2, GAA, OSM, ABAT, ACSM1, ADSSL1, ALG12, BIRC3, C1QC, C4BPB, CAS P8, CCNB3, CD14, CD34, CES2, CHRM5, CLDN17, CNTN1, COQ3, CYFIP2, ENO2, ENO3, EPAS1, EXTL3, FGF8, GADD45G, GALNTL1, GLB1, GMPR2, GNAO1, GNG12, GRIA1, GRM5, GSTO1, GUCY2F, IL18RAP, IL1A, IL2RA, IPMK, IQGAP3, ITGA2B, ITGA7, LILRB3, LYPLA2, MAP2K5, MAPK12, MCCC1, MICA, MTHFD1, NRAS, OR13C3, OR13C9, OR11I1, OR1S1, OR2AT4, OR2L13, OR3A1, OR4C13, OR4D5, OR4F15, OR51G2, OR52K1, OR5M8, OR6C2, OR9A2, OR9A4, PARD6B, PIGX, POLR2L, POLR3G, PPID, PPOX, PPP2R2B, PTDSS1, RAC2, RALGDS, RAPGEF2, RARS2, SOCS1, TNFRSF8, TNFSF4, UBE2K, UCP1, UGT2B7, ULBP1, ULK1, WBSCR17, WHSC1L1, XYLB, ATP6V0A2, B3GALNT1
Negative_14564	DUT, GHR, GSS, HGD, HK1, LHB, MUT, SRF, AMPD1, ANAPC5, ARHGEF4, ATP6AP1, B4GALT1, B4GALT4, BDKRB2, CACNA1S, CACNB4, CAMK4, CCL25, CCR4, CD99, CDH5, CHSY1, CIITA, CSNK2A2, CTNNA3, CYP26A1, CYP2A13, DOLPP1, F13B, GALNTL2, GMPPA, GMPR, GRAP2, GSTA4, HMGCR, IKBKB, IL15, IL19, IL8RB, JAK1, KIR2DL4, MAOA, MAPK9, MGST2, MKNK1, NFATC1, NLGN1, NRXN2, OR10A2, OR1L4, OR2C1, OR2G2, OR2M7, OR4K2, OR52B6, OR5M3, OR9K2, ORC3L, PLA2G3, PLCZ1, POLR2J, POLR2L, PPCDC, PRNP, PTPRF, PYCRL, RAP1A, RASSF1, RDH12, RIPK1, SELP, SHC3, SSX2IP, STAT2, STX12, TALDO1, TBL1X, TM7SF2, TSC1, TUBB4, TYMP, UGT1A10, UGT2B10, WNT8A, YWHAB, ATP6V0A4, CACNA2D1, CACNA2D3, HSD17B12, PAFAH1B3, TNFRSF17
Negative_14565	AGL, LCK, ALAS2, ALDH2, APOA2, ARSE, BMP4, CACNA1D, CCL26, CCND3, CCNG2, CD27, CHST11, CSNK2A1, DAPK2, DDX50, DHRS3, ECSIT, FASN, FUT1, GMD5, GPD2, HBEGF, IL17B, MCM5, METTL2B, MGST1, MINPP1, MTHFD1L, NEU2, OR10G9, OR1N1, OR2AT4, OR2C3, OR5AK2, OR7G1, PLCD1, PLCD3, PNLIP, PP2R2C, RASGRF2, RBL1, RPN1, SEMA3E, SGPP2, SNAP23, SPCS3, TCF7, TCF7L2, ZMAT3, ZNRD1, TNFRSF10C, TNFRSF6B
Negative_14566	AR, DHH, EBP, EZR, F11, PLN, WAS, AARS2, ADCY2, AKT2, ALDH3B1, ALPPL2, AMY2A, ARAF, ATP5F1, ATP5G2, CAMK2A, CHAD, CREB3L4, CSF3R, DEGS2, EPB41L2, GAMT, GFPT1, GNAL, GNG3, GRIN1, H6PD, IDH3B, IDI2, IL17A, IL18R1, IL7R, KIR2DS5, LAP3, LARS2, MGAT3, MTHFD1L, MTMR1, NT5C1A, OCLN, OGDHL, OR11L1, OR13D1, OR4F4, OR4N2, OR4S1, OR7D4, OR8I2, PCYT2, PDE4A, PDE7A, PFAS, PIGX, PITX2, PPID, PPM1B, PPP2R1B, PPP5C, PRKAR1A, PSEN1, PTTG1, RASGRP2, RFNG, SETD7, SFRP4, SKP1, STX16, SUCLG1, TACR2, TBXAS1, TP53I3, TPH1, TUBA4A, UNC5D, ATP6V1G1
Negative_14567	ADC, C9, FGG, WAS, ZYX, ABI2, ADH1A, ADRB2, AGPAT4, ALDH1A2, AMDHD2, ANGPTL4, BLVRA, CAV2, CCL13, CCNH, CDC2, CDK6, CIITA, CNGA3, COQ5, CSNK1A1, CTTN, CX3CR1, CXCL6, DFFA, DOLPP1, EDAR, EFN3, EPHA7, EPHB4, EXT1, F2RL2, FABP1, FBP1, FRAP1, GCNT3, GNB1, GSTK1, GYS1, H6PD, IBSP, IRS4, ITGA4, KDSR, MADCAM1, MALT1, MGAM, MYLK, NEU2, OR13H1, OR2AT4, OR3A3, OR51E1, OR8B12, PAX6, PCYT1B, PDE5A, PLK1, POLR2I, PPP1R3A, PPP2R5B, PRKAB2, SLC2A2, STX5, UBA7, UPP2, PLA2G12A, TNFRSF10B
Negative_14568	APP, CKB, DBT, GAA, GPI, NLK, PGD, PLN, ACSM1, ALG3, C4BPB, CACNG3, CDC14A, CHAT, CSAD, CTSL1, DGAT2L4, EDN1, FGD3, FLOT1, GNAZ, GOSR2, GRB2, IL8RA, INPP5A, KLRC2, LIFR, MAGI3, MAP2K2, MAP2K6, NAT2, NFATC4, OR1L8, OR4E2, OR4N2, OR52K1, OR6C2, OR9A2, P2RX4, P4HA1, PAFAH2, PIGP, POMC, PRKAR1A, PSME2, RENBP, RUNX1, SMAD4, STAT6, TIRAP, TOMM40, UXS1, VARS, WEE1, ATP6V0A4, MAPK8IP3, SERPINA5
Negative_14569	HAL, KDR, ABP1, ACPT, BDH1, CAPN2, CBR3, CCR3, CCR7, CLDN4, CLTCL1, CTBS, CYP2C18, DDX55, ERBB3, FGF18, FLOT1, FZD2, GALNT6, GCNT4, GRIN2C, GUCY1A3, HSD17B4, HYAL2, IL18, JAG1, KIR2DL2, LDHB, LTBP1, MPST, OR13D1, OR51B2, OR51M1, OR51V1, OR5D18, OR6A2, PCYT2, PFKP, PGK1, PITX2, PLCD3, PRKACA, PTPRB, PVRL1, PVRL2, RELB, RHOQ, RPS6KA6, SC4MOL, SETD8, SMAD7, SMC1B, SOCS5, SRGAP1, STAM, TAS2R7, TICAM2, TSC1, UGT2B17, HSP90AB1

Negative_14570	F8, GPT, GSS, IL3, LSS, SFN, ADCY9, AGPAT2, AGRP, ALDOB, ATP6V1A, B3GA LT2, BCMO1, CASK, CCNA1, CD48, CDC2, CDC7, CHEK2, CHPT1, CLCA4, CLDN1 4, CLTCL1, COASY, COL4A1, COL6A2, CPT1C, CUL1, DFFB, DGKI, DHDH, DMGD H, DOT1L, E2F5, EPHA6, FOXA2, GAMT, GLO1, GUK1, GYS2, HMGCR, HTR7, IL2 8RA, INADL, LAMB4, LTBR, MAPT, MPZL1, MTFMT, OR10A2, OR2T10, OR4K15, OR8G1, PGM3, PIGV, PLA2G10, POLR1C, PPP1R1A, PPP2CB, PROC, PRODH, RB L1, SIAH1, SLC12A2, SLC27A4, SOCS5, SV2C, TSLP, WNT5A, CACNA2D2
Negative_14571	F7, GK2, ID1, LCK, TYR, ACP5, ACTA1, ADCY3, ALDH1A3, ALG10B, AMY2B, AP RT, ATP5D, CCDC6, CCL19, CD59, CDKN2B, CDKN2C, CNTNAP2, CSNK1A1, CYP 26C1, DAAM2, DGKG, DTX3, FARSB, FUT8, FZD7, GALNT12, HLCS, HTR5A, IFT 57, IL22RA1, IQGAP3, ITGB8, JAG1, LEF1, LEFTY1, MAP2K7, MINPP1, MYH1 3, MYH7B, MYLK3, NR4A1, OCLN, OR10T2, OR14I1, OR1D5, OR2A12, OR2D2, O R52E8, OR52R1, OR56A1, OR5I1, P2RX1, PAK6, PAPSS1, PGS1, PIK3C2B, PL CB3, PLTP, POLR1C, PPAP2C, PPP3R1, PTDSS2, PTPRZ1, RPS6KA4, SARS, ST X2, SYNJ2, TICAM1, TOMM40L, UGCG1, UGT2A3, VANGL1, WASL, WNT1, WNT9 B, ATP6V1C2, ATP6V1G3, HLA-DQA2, SERPINC1
Negative_14572	BAX, F12, MPL, PRL, SP1, XDH, ADCY9, AGMAT, AGXT, ALAS1, ALDH1A1, ALG9 , APAF1, ATP50, CACNA1C, CADM3, CBR1, CCL27, CD274, CDC14A, CDH2, CDK 7, CHSY1, CLDN17, COASY, CRB3, CRY2, CTSL1, CX3CL1, CYP4F3, DHX58, EH MT2, FGD1, FLAD1, FUT8, FZD7, GALNS, GARS, GUCA1A, GUCY1B3, HSPA2, HT R2C, IL1RAP, IL22RA1, ITGA4, ITGB2, KLRK1, LAMA4, LAMB3, LDHAL6A, LR RC4C, MAML2, MAN1C1, MDM2, MGLL, MGST3, NCR3, NPAS2, NTNG1, NUDT5, OR 11H4, OR11H6, OR4A15, OR4C11, OR4K17, OR4M1, OR51S1, OR5B12, PAK2, P IK3C2G, PLK1, PNPLA3, PSME2, PTPRM, RAC1, RASGRP4, RFWD2, RFXANK, RP S6KB1, RRM2B, SEMA3D, SKP2, SMC1A, STK4, TCF7, TNFSF14, TUBA3E, UGT2 B17, VEGFA, WNT11, ATP6V0D1, ATP6V0E1, HLA-DRB5
Negative_14573	ATM, BTC, BTK, CD2, F5, ID1, MUT, VCL, ABI2, ACOX1, ALOX15B, ARHGEF6, A RNT2, ARPC1B, ATN1, B3GALT1, CASK, CBLB, CCKBR, CCNB2, CDC42, CDKN2C , CHEK1, CHKB, CHUK, COL5A1, CTSS, CYP19A1, CYP1A1, DHDDS, DUSP2, FBP 2, FGF6, FMO3, GALM, GALNT10, GCNT1, GGT1, GGT6, GLI2, GNB1, GSTA1, HG SNAT, HLA- DMA, HSPA8, ICAM3, IDH2, IKBKG, IL10RA, KDSR, LAMB1, LILRB3, MCM5, MY L9, NFASC, NFATC3, NTSR1, NUMB, OR10A6, OR10A7, OR13C5, OR2A4, OR51G 2, OR51I1, OR52E8, OR5M8, OR6K3, OR7D4, OR8U1, OR9Q2, OXSM, PDE7A, PI AS2, PIGA, PKMYT1, PLD2, POLR1C, PTGER1, RASGRP2, RPSA, SDHD, SEMA4A , SOS1, SPCS1, STAT1, STAT2, STK11, TACR2, TOLLIP, TUBA3C, WASL, ATP6 V1C1, PLA2G12B, SERPINE1, SERPINF2, TNFRSF13B
Negative_14574	AGK, GGH, MVD, ADSS, ALS2, ARPC4, ATP5L, B4GALT3, BMP6, CCL27, CCR10, CD274, CDC20, CKS1B, CNTN1, CTBS, CXCL2, CYFIP1, DLL1, DUSP10, EIF4E 2, EPB41, EPHA2, EXT1, FARSB, FGF20, FOXA2, FUT6, GGCX, GNA12, GRLF1, IKBKG, LEPR, MAML1, NCAM2, NOD1, OR10X1, OR11H6, OR13D1, OR2AG1, OR4 M1, OR52J3, OR5K1, OR6F1, OR6Q1, ORC6L, PDE3B, PDIA4, PIP5K1A, PISD, PLXNA3, PPP3R1, RDH10, SEMA4D, SGMS2, SLC27A1, STAT5B, TAS2R1, TNFS F18, UGT2A1, UMPS, YES1, HSP90AB1, TNFRSF17
Negative_14575	CAT, TEC, ABLIM2, ADAM17, ADSL, AGMAT, ALDOC, ATP5E, ATP5G2, B3GALT2 , C3AR1, CHSY1, CLDN10, CTBP1, DCTN1, DDIT3, DFFA, GCNT4, GGT6, GOT2, GSK3B, HAGHL, HTR5A, IL29, LAMA3, LCMT1, LRRC4C, MCM6, MMP2, NAGLU, N EU3, NKX2- 2, NR1D1, NUDT8, OR13C2, OR2H2, OR51A7, OR6C75, PIK3CD, PIK3R4, PIK3 R5, PKLR, PLK1, PPP1R3A, PSME3, RAP1A, RARS2, SETD1A, SPTLC1, SRGAP3 , TBL1X, TPH1, TRMT11, WHSC1, B4GALNT1, HLA-DPB1, HSP90AA1



Negative_14576	AK3, AK7, APP, FGB, LSS, LYN, MAG, OSM, ADAM10, ALG9, ANAPC10, C3AR1, C5AR1, CASP6, CD36, CDC6, CNTFR, CRB3, CSAD, CYP2A13, DKK1, DPYS, DUSP8, EGLN3, ETNK2, FGF11, GADD45A, GLG1, GNRH1, GUCY2D, HSD3B2, IFNK, IL2ORA, INPP5E, ITGA8, ITPK1, LEF1, LIPF, MAPK3, MGAT4A, MICA, MOV10L1, MYLK3, NKD1, NRXN3, NTN1, OR10A2, OR10A3, OR10K1, OR1G1, OR2G3, OR2M3, OR2T12, OR52N2, OR6K2, OR7C2, OR7D4, OR8J1, PANK2, PDGFB, PFKL, PGM1, PIP4K2B, PPP2R1A, PPP3CA, PSPH, RAC1, RPS6KA3, RUVBL1, SESN1, SGMS2, SMPD1, STK4, TOMM40L, TRAF2, TYRP1, WNT3, XYLT1, ATP6V0A4, CACNA2D1, SERPINB5
Negative_14577	CEL, CP, DHH, MSN, TFG, ACAD8, ADORA2B, ARPC1B, BACE2, CACNA1D, CACNB4, CCR5, CD8B, CSNK2B, DAXX, DNMT1, DUSP1, EPHB6, FLT3, GFAP, H6PD, HGSNAT, HSD17B3, IFNA4, IL11, INHBC, IRF5, IRF7, JUND, L1CAM, LCP2, LRP6, MAP3K3, MCM2, MDH2, MMP14, NARS, NFATC2, NMNAT3, OR13D1, OR14I1, OR1A2, OR1Q1, OR51B6, OR51M1, OR9A4, P2RX7, PDE6D, PHPT1, PIGK, PIK3CA, POLR2C, PPT1, PRKAG1, PTK2, PTPRZ1, RAPGEF2, RPS6, STX2, STX4, SUFU, TAP1, TBL1XR1, TSLP, UGP2, ULBP3, VTI1B, WNT3, ZFYVE9, ATP6V1B1, PFAH1B3
Negative_14578	GPI, GSS, HGF, ID4, LCK, NNT, RET, ZYX, ABP1, ACAD9, AK3L1, ALAD, ALDOA, ALG10B, ARD1A, ASIP, ATIC, ATP6V1D, B4GALT4, BIRC5, BTRC, CAMK2G, CCL17, CCNA1, CD226, CHEK2, CXCL5, CYP4F2, DNMT3A, DTX3, EFNA2, EGFR, EPHA5, F13A1, FDFT1, FGF8, FOSL1, GNAQ, GP1BA, GRPR, GSTA3, GSTA4, HS D11B1, IARS2, IL12A, IL21R, IRF9, KIR2DL4, KLRC2, MAD2L1, MAP2K6, MAP4K4, MGAT4B, MRAS, NEFH, NTNG1, OR10K1, OR2T1, OR2T34, OR4K5, OR5V1, OR6C3, PDE3B, PER1, POLD1, PPCS, PPP2CA, PPP2R1B, PPP3CC, PTPRC, RAC3, RALA, RBL2, RHEB, RIPK1, SHC1, SIAH1, SPAM1, ST6GAL1, SULT1A4, TAS2R50, TYRP1, UGCGL2, WASF1, WHSC1L1, WWP2, ST6GALNAC5
Negative_14579	AK5, CFI, FST, FYN, GNE, IDS, LPL, PAH, SDS, SP1, XDH, ACADM, ACOX1, ACSM5, ACTN1, ADH4, ADH7, ADSSL1, ARHGEF6, BMPR1B, CDS2, CNTNAP1, COASY, COL3A1, COQ3, CRHR1, CTNNA1, DEGS1, DLAT, DLL1, DTX4, E2F1, FDFT1, FGF5, FOXO3, GALK1, GBA3, GNA12, GOSR2, GSTA4, GUCA1B, HIBCH, HLCS, IARS2, ICOSLG, IFNA16, IGFBP3, INADL, KCNJ11, LARS, LIMK2, MAT2B, NT5C1A, OR10Q1, OR2F2, OR4E2, OR52A5, OR5T3, OR6N2, OR6Y1, OR9G4, ORC5L, P2RX5, PFKFB2, PIGT, PIP5K1A, PLD1, POLD4, POLR1B, PPCDC, PRIM1, PRKAA2, QPRT, RAPGEF1, RASGRP2, RCHY1, RDH11, RPN2, SFRP2, SLC12A2, SLC25A5, SQLE, SSX2IP, STK36, SUCLA2, SV2A, TAS2R1, TLR3, TP53, UGDH, WASL, WNT4, AASDHPPT, ATP6V0E1, TNFRSF11A, TNFRSF13B
Negative_14580	AK1, CSK, DBI, DCT, DDC, DLD, F7, GAA, LIF, ME1, MET, STS, TNR, TXK, ATP5O, ATP6VOC, AVPR1B, B3GALT6, B4GALT5, BDKRB2, C1QA, CCL19, CCR6, CDH2, CHST11, CNTFR, CPT1B, DVL1, EPHB3, EXOC7, EXTL1, FZD10, GALNTL5, GCH1, GNAI2, GNPDA1, GRLF1, GSTP1, HADHA, HLA-DRA, HMOX1, HNMT, HSD11B2, HSD17B8, ICAM2, IFNA8, IL12B, IL12RB1, IL23A, ITGB1, JAM2, LDHAL6B, LGMN, MAP2K3, MAP3K13, MARS, MMP1, MYH1, NKX3-1, NT5C, NUDT8, OR1D5, OR1S1, OR2K2, OR2L3, OR2M4, OR51B5, OR5L1, OR5M3, OR6M1, OR9Q2, OXCT1, PIGS, PIK3R3, POLR3A, PTAFR, RASGRP3, RHOA, RHOD, RUNX1, SCD5, SEMA4C, SMPD1, STX4, SUOX, TICAM1, TUBA1A, UGT2B10, VEGFB, XYLT2, YWHAE, GABARAPL1, MAPKAPK3

Negative_14581	CR2, FOS, HGD, ID1, KDR, TXK, ABLIM3, ACVR1, ALCAM, ATP50, B3GNT2, BCA T2, CASP9, CD28, CD55, CD8B, CDK4, CDKN1A, CDKN1B, CLDN9, CTNNA2, CYP 2A7, DHCR7, ENTPD1, EPB41L1, EPHB6, F13A1, FGF1, GALE, GAMT, GNG13, G SK3B, GSTK1, GUCA1A, GUK1, HARS2, HIBADH, INHBB, IRS2, ITGA4, MAP2K1 , MAPK10, MCEE, MTAP, NCAM1, NLGN3, NOS3, NRG3, NRXN1, ONECUT1, OR10A 4, OR2AT4, OR4D2, OR5B3, PGK2, PHKG2, PLXNB2, POLD2, PTPN6, PTPRC, RB X1, RHOD, SC4MOL, SLC12A2, SMC1A, SNAP23, ST3GAL5, THBS4, TM7SF2, TY RP1, UGT2B11, VAMP3, WASL, XIAP, YARS, ATP6V0D2, MAPKAPK5
Negative_14582	A2M, ADO, FAH, GDA, MTR, SFN, ARHGEF6, ATP5A1, BDKRB1, CASP3, CCL8, CC R3, CD14, CLDN20, COL5A2, CSF3, CTTN, CXCL5, CYBB, EFNA2, EFNA5, FUT9 , FZD10, GANAB, GFPT1, GGT6, GLS2, MAP2K3, MAP2K4, MAPK3, MCAT, NAT5, NCSTN, NRG4, OR13J1, OR2B2, OR2T3, OR4C13, OR4S2, OR52A5, OR5D14, OR 5L1, OR7G2, OR8J1, ORC5L, PAX6, PDE1A, PIGC, PIGM, PIK3R4, PLTP, PPA1 , PPAP2B, PRKAR1B, PTPRZ1, PVRL2, RAB23, RAP1B, RARS, RARS2, RBX1, RR M2B, SEMA3G, SMAD5, SPRY1, STAM2, SUOX, SV2C, TUBB, TXNDC12, WHSC1L1 , XYLT2, SERPIND1, ST6GALNAC3
Negative_14583	FH, GLA, HPD, LAT, RFK, RPE, ADRBK2, ALAS1, ALDH6A1, ALOX15B, ATIC, AT P5H, BAAT, BAI1, BCAT1, BIRC3, CAMK4, CD40, CDC25A, CD01, CYFIP2, DGK I, EPHA6, FIGF, FRAT1, GALNTL1, GRAP2, GUCY1B3, HSD11B2, IL12B, INHB C, INMT, INPP5E, LEF1, MAP3K1, MAP3K8, MDH1, MECR, MGAM, MLYCD, NAE1, NFATC2, NKX3- 1, NMNAT1, NT5E, OR1D2, OR1G1, OR4M2, OR52M1, OR5H6, OR7G2, OR8K1, PA K4, PDE5A, PDE6D, PDE6H, PFN3, PIGS, PIK3CG, PYGB, RELB, RPSA, SETDB2 , SHMT2, SLC2A4, SOD1, ST3GAL4, STX10, TAS2R9, TLN1, TNFRSF4, TRMT11 , TYMP, UGT2A3, ULK2, WHSC1, ATP6V1E1, CSGALNACT1, KIR2DL5A, MAPKAP K3, SERPINC1
Negative_14584	AK2, ASL, CD4, KDR, TH, ACTN4, ACY3, AKT2, ATP2A2, BIRC3, BST1, C9orf9 5, CAMKK2, CCL4, CD79A, CHPT1, CNTN2, CPT2, CYP11B1, DHDDS, DLL1, FMO 1, FZD4, GADD45B, GAPDH, GGT1, HTR2B, IL12A, IL15RA, IL17B, IL7R, ITG AX, LIPT1, MAP4K3, NT5C2, OR2M7, PDXP, PECAM1, PHKG2, PIP5K1B, PLD1, PLOD2, PTCH2, RPE65, SDC3, SH2D1B, SLC25A6, SNAI1, STX16, SUCLA2, TA S2R10, TAS2R13, TAS2R60, TUBA3E, UGT2B17, UNC5A, VARS, WBSCR22
Negative_14585	DBI, FUK, TFG, ACSL6, ACTA1, ADH4, AKR1C3, ALDOB, AXIN1, CACNG8, CCNG 2, CD40, CDC2, CHRM2, CKMT2, CNTN2, CXCL9, CYCS, CYP2C19, DTYMK, ENPP 6, EPHA5, G6PC, GAD1, GALNT14, GAMT, GARS, GCH1, GRM1, GUCY2D, HDAC2, IDH3A, IKBKB, IL1R1, IL20RA, KIR2DL3, KIR3DL2, LAMA3, MAP3K6, MMP2, MYL2, NEUROD1, NMNAT1, NOD1, NT5M, OR11G2, OR1J2, OR2Y1, OR4C11, OR4 F4, OR8D4, PGK1, PIGH, PNPT1, PRIM2, PRKAG1, PRKAG2, PRLR, PSAT1, PYG L, RASSF1, SDHB, SDHD, SEMA3G, SRGAP2, ST6GAL1, TBL1Y, TYMS, UGCGL1, GABARAPL1
Negative_14586	CR1, DCT, FUK, GBA, HK1, MPI, ABLIM2, ACAA2, ACO1, ADRB3, AKR1C4, ALDO C, ALG1, APAF1, B3GNT2, BDKRB2, BIRC3, BMPR1A, CACNG2, CACNG5, CCNA1 , CCR2, CCR3, CDC27, CLDN18, CNDP1, DHCR7, DPYSL2, DRD1, DRD2, E2F4, E RBB2, FUT9, GANC, GCDH, GGT5, HDAC1, HMGCS2, HRH2, IFNB1, IFNW1, IL13 RA2, KCNQ1, KIR2DL2, KLRK1, MCM5, MPZL1, NEUROG3, NFKB1, NR5A2, OR10 H3, OR4X2, OR5B3, OR5P3, OR8K5, OXCT1, PDX1, PDXP, PFKM, PIK3C2B, PIT X2, PLTP, PMM2, PON1, PPP1CA, PPP2R1B, PRKY, PYGB, RDH8, RFXAP, SEPHS 1, SMPD3, SPRY2, STX2, TLR4, TNFSF14, TRAF4, UPP1, UROS, VAMP1, VEGFC , MAPK8IP1, SERPING1, TNFRSF6B

Negative_14587	F9, GDA, ID3, ILK, LCK, LPO, MAG, RB1, ACADM, ACO1, ACTB, ACTC1, ACYP1, ALDH3A1, APAF1, ARNT, ASMT, B3GALT6, BHMT, CACNA1S, CCL22, CCL3, CCR6, CD40, CDH15, CHRM1, CNTNAP1, CPT1C, CSDA, DDIT3, DDX52, DDX56, EXT2, FCGR3B, FGD1, FGF1, FGF19, FGF22, FZD1, GLUL, GSTK1, GUCY2F, H6PD, HADHA, HMGCS2, IBSP, IFNA21, IKBKB, IL2RA, IL5RA, ITGAM, ITPKA, LILRB3, LIPE, MAML3, MAP3K6, MKNK1, NCAM2, NCF2, NEGR1, NSD1, NSDHL, OR4C46, OR4D5, OR7G1, OR8H1, PANK3, PANK4, PDE1A, PDK1, PFN1, PFN4, PIGP, PKM2, PSME1, PSPH, PTDSS1, PTGER1, SIGLEC1, SLC2A1, SPP1, ST3GAL2, ST6GAL1, STX4, STX8, TAS2R41, TAS2R5, TAS2R50, TBL1Y, UCKL1, WNT2B
Negative_14588	CD4, CGN, F11, ME3, PRL, ACADVL, ACSL6, ACY3, ADCY2, AKR1C3, ALDH1L1, ALDH3B1, ALDOB, ALG8, ATP5D, ATP5L, CDH3, CDK5, CDK7, CES1, CLCA4, CLDN10, CNGB1, COX10, CXCL9, CYP2B6, EFN2, GANAB, GART, GCNT1, GLB1, HDAC1, HGSNAT, HSD11B2, HSD17B4, HSD3B7, ITGB4, KIR3DL1, LTA4H, LTBP1, MCCC1, MRAS, MYH7B, NFASC, OR13C3, OR1L3, OR2L2, OR4K14, OR51S1, OR5L2, OR5T2, OR5T3, PAK6, PAPSS1, PFKFB4, PKM2, PLCD4, PLOD3, POLD3, POLR1C, PPP1R3D, PPP2R5C, PRKAB1, PRPS2, PTCH2, RERE, RND1, RPIA, SEMA4C, SEMA7A, SIAH1, SMAD1, SMAD6, SMAD7, SOCS1, ST3GAL2, STAT2, TAS2R50, TBL1XR1, TBL1Y, TCIRG1, TSHB, WNT10B, YARS2, SUV420H2
Negative_14589	CBS, IDS, LCT, PGD, SRC, ALOX12B, APOC3, ARHGEF7, B4GALT1, C9orf95, CHR5, COL11A1, CREB3L3, DGKG, DLL1, DUSP7, EIF4E, FGF19, FGFR3, GSTT1, GUCA1C, HMGCR, INPP4A, IRAK2, ITGAX, MBL2, MOV10L1, NADK, NCF2, NMNAT1, NOD1, NTN1, OR13G1, OR2A14, OR4F6, OR51F2, OR6C3, OXCT2, PANK3, PDE7A, PLCG1, RAP1B, RASSF5, RPE65, SEMA4B, SLC2A2, STX5, SV2B, SERPINA1, ST6GALNAC4
Negative_14590	EZR, HK3, VTN, ALDH5A1, ASAH1, ATG7, BACE2, BRAF, CACNB2, CCNE1, CD47, CD55, CDC23, CDC7, CDH5, COL5A3, CTSB, CYP3A4, DARS2, DLAT, DNMT1, F2RL2, GLDC, GMPS, IMPDH2, INHBA, L1CAM, MCM2, MYL9, NCKAP1L, NME6, NUBL, OR2D3, OR2L3, PDE1A, PLD2, RGS3, SEMA3E, SKP1, SLC33A1, STX16, TAS2R50, THTPA, TUBA1A, ULK2, WNT11, WNT8A, ATP6VOA2, HLA-DQA2, TNFRSF18
Negative_14591	AMH, CD4, INS, ACTA1, AFMID, ALG3, BIRC5, C7orf16, CCNG1, CES2, CHRNA7, CIITA, COX10, CTBS, CYP19A1, CYP2C8, CYP2D6, DCTN1, DHRS4L2, E2F5, ERO1L, FCGR3B, FGF11, FGF22, GADD45G, GRIN2D, HGSNAT, LEFTY1, LYPLA2, MAP2K7, MAP3K5, MTHFR, MYLK3, NKX2-2, NT5E, OR2B2, OR4Q3, OR5A1, OR8J1, OR8K3, PDE1B, PLK1, POLR2D, PRODH, PSME3, PTGIS, RBL1, RDH10, RRM2, SEMA4B, SLC27A4, STAT1, STX18, TAS2R8, VAMP3
Negative_14592	GCK, HAL, HGD, ID1, ME2, SPN, AADAT, ACADM, ACADS, ACHE, ACPP, ACTA1, ADCY9, ALG10, ALG13, BDKRB2, CACNA1B, CACNA1G, CCR10, CD46, CD86, CDK6, CHR1, COL5A2, CYP11A1, CYP26C1, CYP2E1, DARS2, DDX41, DUSP3, ENPP2, ENPP7, FLT1, FMO2, GART, GCNT1, GNAI3, GNAT3, GNG12, GNMT, GZMB, HPSE, INPP4A, LEFTY1, LIAS, LLGL1, MAGI1, MAPT, MTAP, MTHFS, NNMT, OR10K2, OR10X1, OR13G1, OR2B2, OR4K17, OR5A1, OR7C1, PAK1, PGK1, PIP5K1B, PLXNC1, PMVK, POLR3A, PPAP2C, PPP5C, SMPD4, SOAT1, SOAT2, SRD5A1, TAS2R13, TP53
Negative_14593	BTK, C1S, CBS, CD6, CR2, HGD, NGF, AADAT, ACADS, AKR1C1, ALAS2, ATN1, B3GAT1, B3GNT3, CAPN2, CDKN2B, COMP, CYP2A13, CYP2S1, EPB41, ETS1, FGF19, FGF20, FUT3, G6PD, GNA12, GSTM1, GSTM2, GUCY1B3, GUSB, HTR2B, ITGA1, LDHA, MCCC2, MDH2, MTHFS, MYH8, NFKB1B, NOTCH1, OLR1, OR1K1, OR5AC2, OR6K2, OR9G1, P2RX5, PAK7, PANK4, PIP5K1C, PLA2, POLR2F, POLR2J, PVRL3, SEMA4C, SOS1, STAT5B, TBXA2R, THY1, TRPM5, UBE2L3, YWHAZ

Negative_14594	AK7, F2R, GPT, PAH, TNC, ABLIM1, ADCY8, AMDHD1, ARRB1, ATP12A, CACNG6, CCND3, CCR2, CD58, CHKA, CSF2RA, CTSB, CYP3A7, DBF4, DDX51, DDX52, DGKH, DNMT1, FOXO1, GAD2, GADD45B, GGT1, GRB2, GSTM2, GZMA, HNF4G, IL17RA, IL20RA, IL6R, KLRD1, KRAS, LTA4H, MAPK8, NAT5, NCKAP1, NKX2-2, NR1D1, NT5M, OR13C5, OR2D3, OR5A1, OR5AC2, OR5H6, PDE3B, PFKP, PLCE1, PLXNC1, POLE3, PPP1R3D, PTPRJ, RAP1A, RPRM, RPS6, SETD1A, SPCS1, STAM, TBL1XR1, TRADD, HLA-DPB1, TNFRSF6B
Negative_14595	BCR, GAA, GSS, ITK, PVR, TNR, ACOX1, ADCY5, ADIPOR2, AKR1C2, ARRB2, ARSA, C9orf95, CACNA1B, CCL1, CCL7, CD247, CDC25B, CLDN1, COX15, CREB3L4, CX3CR1, DDX23, ETNK1, FUT4, GALNT7, GNA15, GRIN1, GSTA3, HLA-G, HRH1, HSP90B1, IL29, IL3RA, ITGB1, LAMC2, LCAT, LEFTY1, MAP3K8, NRG4, OR1J4, OR2S2, OR2T1, OR2T33, OR4D11, OR8H3, OR9K2, PCK1, PDE11A, POLD4, RPS6KA2, SEMA3A, SPRY3, SPTLC1, TBK1, TUBB4, UNC5D, ARHGEF12, HSD17B10, TNFRSF13C
Negative_14596	C8B, GSN, IL4, IVD, ACADVL, ACLY, ACSM3, ADCY4, AKT1, ALCAM, ALDH1A2, ALG1, ANAPC1, ANAPC5, AVPR1B, CACNB3, CBLB, CCL26, CDC25A, CHUK, CLDN1, CYP17A1, CYSLTR1, DDX55, E2F4, ETS1, FGD1, FGF23, FZD9, G6PD, GALNT9, GNA11, GPLD1, GUCY1B3, HDAC2, ITGB5, ITPA, METTL2B, MIOX, MKNK1, MTHFD1L, NCF4, NCOR1, NOX3, ODC1, OR10AG1, OR10G7, OR4C15, OR51V1, OR6A2, P4HA1, PAK1, PECAM1, POLR1B, PORCN, PPP1R3B, PRKCE, PTCH1, RFXANK, SEMA4D, SFRP5, TICAM1, TRADD, TUBB, UPB1, ATP6VOE1
Negative_14597	AK7, BID, F9, FAH, GBA, GH2, GP9, JUN, TPO, ACAA1, ACSL6, ALDH3A2, ALG3, ALOX15B, APH1A, ARPC4, ASRGL1, ATP6V1D, BACE1, CCL21, CCL8, CD74, CREB3L3, DAG1, DGKE, EGFR, EPHA4, GPT2, GRPR, GUCA1A, ITGAL, MCM2, MEF2C, OR10X1, OR13F1, OR1A2, OR52H1, OR5T1, OR5T2, OR8K1, PANK1, PGAP1, PIGF, PLXNA2, POLR1D, PPID, PPP2R1A, PPP2R5A, PRKAA2, PRKAR1B, SEMA3B, SHC2, SMAD7, SPRY1, SULT1A1, SV2B, TACR3, TAS2R10, TJP1, UMPS, WNT1, WNT4, ZMAT3, AASDHPPT, SERPING1
Negative_14598	CBL, CD4, GP6, GSS, IL2, ACACB, ACTN2, AGXT2, ALDH2, ALDH3B2, ATP5G2, ATP6V1D, C1QC, CACNG1, CAMKK2, CHRM5, CREB5, CYP4F2, DDX50, DGKD, DNMT3A, ETNK2, FASN, FGF21, GNAL, GUCA1A, HHIP, HYAL2, ICAM2, INHBC, KIR3DL1, MARS2, NAGS, NAT2, NT5E, OR10G3, OR10G8, OR2B11, OR4A5, OR4C13, OR4D6, OR4X2, OR5T1, PER2, PIGM, PIP4K2C, PPP1R3B, PRKACG, RASA1, RRM2, SIAH1, SMAD5, SPRY1, ST8SIA1, STT3B, SULT2B1, TAP2, TGFB1, TLR3, UMPS, WASL, WNT8A, AASDHPPT, CACNA2D2, MAPK8IP1, PHOSPHO1, TNFRSF1B
Negative_14599	CTH, F11, FYN, GK2, HAL, KHK, LHB, MPI, ADCY10, ALAS2, ALG1, ALG9, ALOX5, ANAPC7, AOC3, ATP12A, B3GNT5, BIRC3, CACNG4, CAV1, CBR1, CCL20, CCNA1, CDKN1C, CYP1A1, CYP2A6, DDOST, DERA, DKK2, ELK1, ENPP7, FGD1, FGF8, GALNTL1, GLI3, GNMT, HCLS1, IL1R2, IL5RA, INADL, ITGA5, ITGAD, ITGB4, KLKB1, LAMB3, LDHA, LIFR, MAP3K7, MCAT, NAMPT, NARS, NFYC, NME2, NRXN2, NTSR1, OR10G3, OR2T11, OR4S2, OR51I2, OR5D14, OR5M8, PFAS, PIGN, PIP5K3, POLR2B, PTGDS, RALB, SDHA, SMPD1, SPAM1, SRD5A2, STAT6, SUCLA2, TD02, TICAM2, TNFSF9, TP53I3, TXNDC12, YARS, YWHAZ, ARHGEF12, ATP6V0D1, TNFRSF10D, TNFSF13B

Negative_14600	CAD, GLA, ITK, MAX, RPE, AACS, AASDH, ABP1, ADCY5, ALCAM, ANGPTL4, ATG7, BCAT2, BCKDHB, C4BPA, CAMK2D, CCL17, CCL25, CD44, CD80, CDKN1C, CHEK2, CLDN19, CLDN9, CMAS, CSNK2A2, CSNK2B, DERA, DMGDH, DPYS, EHMT2, ENAH, ENO3, EXTL2, GBE1, GLB1, GRIA3, GSTT1, IFNA7, KLRC1, L1CAM, LIMK2, LLGL1, MAP2K7, MAPK9, MTHFD1, MYH11, NAT1, NCF2, NME2, NOX1, NR4A1, OR10A2, OR14C36, OR1E1, OR1N2, OR1S1, OR4F15, OR51V1, OR8B8, OXTR, P2RX1, PDGFD, PIK3R1, PLA2G5, PPP2CA, PSENE1, PTAFR, RARS, RDH10, RPE65, RRM1, SAT1, SEPHS1, SGPP2, SMAD6, SMC1B, SMPD1, SOCS1, SPI1, STAT3, STK3, SUFU, SUV39H1, TGFB2, TJP2, UNC5A, VKORC1, WASF3, WBSR17, XYLB, XYLT2, ATP6V0E1
Negative_14601	AK3, FES, GAA, PML, VCL, XDH, AADAC, AARS2, ACOT12, ACTN1, ADIPOR1, ADRA1B, ADSS, ALDH1L1, ALG12, ALPPL2, AMDHD2, ARHGAP5, BCAT1, BMP2, CACNG4, CCL2, CHSY1, COL4A4, COL6A2, COQ5, DKK4, DUSP3, EFNA2, ENPP2, EPHA5, FCGR3A, FGF10, FLT4, GAL3ST1, GANC, GCNT2, GFAP, GIT1, GNAI3, GNB3, GNPDA1, HLCS, HTR6, IARS2, IFNA13, IL10RA, IL15RA, IL18, IL1B, ITGA10, KLRC2, MAP3K4, MAP4K1, MECR, NRG4, NSD1, NT5C3, OLR1, OR13C3, OR13C9, OR2M5, OR2T11, OR4K2, OR52R1, OR5D14, OR6A2, OR8D1, PIK3R4, PLA2G2E, PPP1R3A, PPP3R1, PRKAG2, PTPMT1, QPRT, RERE, SELPLG, SKP1, SLC33A1, SRD5A1, SSH1, TKTL1, TNFSF9, TP53I3, TSTA3, UGDH, UNC5D, WNT1, ATP6V1E2
Negative_14602	F5, GK, HYI, JUN, OGT, RDX, ACP2, ACSL1, ACTA2, ACTN2, ALG10, ALG12, ATP5G1, BCAT2, CACNB2, CAMK4, CARD11, CCL24, CCL5, CD46, CDC26, CLDN16, CNTNAP2, COL4A1, CRY2, DGKE, DNMT1, ENTPD6, ESAM, FGFR1, FSHB, GALK1, GPD1L, GUCA1C, HMGCR, ICAM2, IL15, IL18RAP, ITPK1, MAPK11, MAPK14, MGLL, MYH14, NCK2, NEUROG3, NFASC, NT5M, OR1E1, OR2A12, OR2D2, OR4C11, OR4D11, OR4F6, OR4K13, OR52E4, OR5C1, OR6F1, OR6K6, OR7D2, OR9A2, PDE11A, PDE6D, PHGDH, PIGA, PLA2G5, POLR3G, PRKCE, PTK2, RASGRP4, RBX1, SEMA4B, SLC2A4, SMAD4, SOAT1, SPHK2, STMN1, TAS1R1, THBS4, TIAM1, UGP2, ULBP3, VAMP4, ZIC2, ATP6V1G2, MAPK8IP2
Negative_14603	A2M, AGK, BAD, KIT, ME2, NPY, TK1, XDH, ACTB, ACVR2B, ACYP2, ADSS, ALG3, ANAPC11, ARNTL, ATP2A1, AVPR1B, BET1, CCL19, CCL8, CISH, CNTN2, COQ5, CRY2, CSNK2B, CXCL10, CXCL13, CYP4A11, DAAM1, DGKH, DNMT3L, DUSP5, FGF11, FGF21, FGF6, FMO4, GDF5, GDF6, GSTM5, GZMB, HEXA, IDH3G, IFNA10, IFNA5, IL23R, IMPDH2, IRS1, ITGAD, ITGB5, ITGB7, ITPKB, KLRC4, LIPIA, LRAT, LTBP1, MAPK10, MARS2, MTFMT, MYH1, MYH7B, MYLK3, NAGS, NCKA1, NEFH, NKX2-2, NR1H3, NRXN2, OR11H4, OR2M3, OR4S2, OR8J1, PDE1B, PDE4C, PGK1, PGM3, PIPOX, PLCD3, PNPLA3, PPP1R3D, PYCR2, RAD51, RAP1A, RETSAT, RHOQ, SEMA4G, SHC4, SHMT2, SKP2, SPCS1, STAT1, TP73, UBE2L6, ULBP1, WBSR22, YARS, ATP6V1G2, SLC25A31
Negative_14604	CAT, DAO, MYC, TK2, ACMSD, ACSL4, ADAM10, ADCY7, AKR1C4, ALDH7A1, AMY2B, APC2, BDH1, CACNG3, CCR4, CISH, CLDN22, CLDN6, COL3A1, CSDA, CYP27A1, CYP4A11, DAAM2, DUSP6, EPHA3, GALNT3, GIT1, GNAI2, GNG13, GRAP2, GSTO2, HMGCL, IL18, IL18RAP, IL19, INPP5A, LFNG, LTB4R2, MAOA, MAP3K14, MBL2, MGST2, NCOR2, NEU1, NEU3, NRCAM, NRG2, OR10AG1, OR10G4, OR13A1, OR1A1, OR1N1, OR2S2, OR3A1, OR4K15, OR52H1, OR5I1, OR6N2, OR8K5, PCK2, PISD, PLA2G3, PLA2G4A, PLA2G5, PLCD1, PLXNB2, PPARG, PRKAR1A, PRKCQ, PSME1, RERE, RHOA, SAT1, SEMA3C, SESN3, SFRP4, SGMS2, SKIV2L2, SMPD2, SORBS1, SPRED1, SPRY3, SRD5A1, SSH1, STX10, STX5, SV2C, TAS2R38, TAS2R42, TUBA1B, TUBA4A, TUBB4Q, ULBP1, VDACC2, ATP6V1C2, MAPK8IP2, PHOSPHO1

Negative_14605	A2M, GBA, HGF, IL7, MVD, ABCC8, ASMT, BAAT, C3orf10, CACNG7, CAMK2D, CBLC, CCL13, CCNH, CD36, CD3E, CD82, CDKN2B, CDS1, CHIT1, CLDN20, CREB BP, CSF3R, CYP11A1, DDX50, DEGS1, DGKA, DRD1, DTX3L, DVL2, E2F1, EFNA4, ENPP2, ETS1, FADD, FGF14, FGF3, FPGS, FUT6, GGT6, GOSR2, GPAM, GRIN2B, GSTM5, HA01, HSD3B2, IFNW1, IL15RA, IL17RA, IRAK2, KLRC2, LILRB3, MAOA, MTMR1, MYH7, OR14J1, OR1K1, OR4D9, OR51G1, OR51M1, OR5AP2, OR5D13, OR5L1, OR6B3, OR6F1, PCCA, PDHB, PIGA, PLA2G10, PON2, PPARG, PPM1B, PRKAA1, PRKAR2A, PSME3, RASGRP3, RENBP, RPRM, SEMA3B, SETMAR, SMAD1, SPHK2, SRD5A2, TAS1R2, UROD, YWHAE, HLA-DRB3, TNFRSF1A
Negative_14606	AK7, CR2, DCK, EGF, FAH, TFG, ABLIM2, ACVR2B, AGXT2, AKR1C4, ALDH6A1, AMD1, ASIP, ATP5C1, ATP5I, BDKRB2, CACNB3, CAMK2D, CAMKK1, CCL1, CCL27, CRLF2, CRY1, CSNK2A1, CYFIP1, DCTD, DGKQ, DPM1, DUSP1, E2F4, EPB41L2, EXT1, FRAT1, FZD4, GCLM, GNPDA1, GP1BB, HSPA1B, IFNK, IL13RA1, JAK1, KIR2DL3, MCCC1, MKNK2, NAGK, NCKAP1, NFKBIE, OR10G4, OR1N2, OR2A14, OR2F1, OR4C12, OR4C16, OR4N4, OR5D14, OR5M8, OR9G1, ORC4L, PDE6G, PDX1, PFN3, PIGL, PIK3CA, PIM1, PLCD3, PPP2R5C, PPP3CB, PRKACA, PRKCB, PYCRL, PYGL, RASA1, ROCK1, RPS6, SDC1, SELPLG, SEMA3G, SETD1B, SKIV2L2, TRDMT1, UGCG, UGT2B10, VEGFB, WASF2, XCL2, YWHAQ, PRICKLE2
Negative_14607	DUT, FGB, GBA, IL5, MUT, ABL2, ADIPOQ, AGMAT, AKR1C4, ALAS1, ALDH1L1, ALG9, AMHR2, AMPD2, BET1L, BPGM, BUB1, C9orf95, CDC26, CHAT, CHDH, COQ7, CREB5, CTSG, CYP27A1, DERL1, DGAT2, DGKH, DPM1, E2F5, ETS1, FABP1, FCER1G, FDPS, FGF18, FLOT2, FOSL1, FUT6, GNA11, GPD2, HTR2C, ICAM1, IFT57, IL8RA, ITGAE, KDSR, LCAT, LCMT2, LMO7, MAP3K2, MAP4K3, MASP1, MTMR2, NFKBIE, NT5C1B, OR10H4, OR2V2, OR51F1, OR52N1, OR5M9, ORC5L, P4HA1, PCCA, PCYT1B, PDE5A, PDE6G, PGLS, PIGA, PLEKHA8, RHEB, SHMT1, SLC27A4, SMPD3, SNAP23, STX18, TALDO1, TAS1R1, TCF7L1, TUBA3E, UGT2B17, UNC5C, WNT10A, WWP2, XYL, TNFRSF10B
Negative_14608	DAO, F12, FH, FYN, ITK, STS, TAT, UBB, ACOT12, ALDH1L1, ALG8, APOE, ATG7, BMPR2, CACNG4, CCL15, CCNH, CDKN1C, CHUK, CLTCL1, CSF2, CSNK1D, CTNNA2, CTNNA3, DDX54, DEGS1, DGKA, DHX58, DLST, DUSP3, EFNA3, EPB41, FGF17, FGF8, GALNT9, GNA01, GSTM3, HCST, IKBKG, IL25, INHBC, IRS2, LDHD, LIFR, LRP6, MAP3K7, MAPK11, MDH1, MYH2, NCKAP1L, NRXN2, NRXN3, NT5C, NUDT2, OR10S1, OR2AE1, OR2C3, OR2L2, OR4N4, OR51I2, OR52I1, OR52W1, OR6C74, OR7G2, OR9Q2, PAK4, PDE9A, PDIA4, PIM2, PISD, PPM1A, PPP1R3D, PRKCG, PRPS1, PTPRJ, PYGB, RFWD2, RXRB, SMAD2, SUOX, SV2B, TAP1, TBL1XR1, TCF7, TNFSF11, TSTA3, ULK1, USE1, VANGL2, VCAM1, VEGFB, VNN1, VTI1A, CACNA2D1, CTNNBIP1, HLA-DRB5
Negative_14609	CR2, ACVR1, AK3L1, AKR1C3, ARSA, CALML3, CAMK2G, CAMKK1, CARS, CASP6, CCNB1, CD274, CD55, CTBS, CYP2C19, CYP4F2, DIAPH2, DPM3, FBP1, GADD45G, HSD3B2, IL12A, IL6ST, MAGI1, MAN1B1, MAPK9, NLGN1, NMNAT1, NUMB, OR10G7, OR51F1, OR56A4, OR5L1, PAK7, PLCG1, PLOD3, POLR2B, PPM1A, PTPRJ, PVRL3, RAB5A, RALGDS, RPS6KA5, SEMA3A, SEPHS1, SLC12A2, SPRY2, STX7, TACR1, TBXA2R, TRAF6, UBA1, UROD
Negative_14610	EBP, FOS, SP1, TAT, ACHE, ADIPOR2, ALG13, AMY2A, ARRB2, ATN1, CACNA1D, CACNB1, CAV3, CCL3, CCL4, CDC16, CSF1, DTX3L, EPHA1, F13B, FGF20, GAB1, GFPT2, GLI1, HAAO, IDH3B, IL17B, KIR2DS5, KYNU, MAML1, MGST3, MYH7, NCKAP1L, OR4K13, OR4N5, OR6A2, PEMT, PIGP, POLR1A, POLR2I, PPP1R3A, PPP2R5B, PRKAA2, PTPN1, SCLY, SLC27A1, TUBA1C, WIF1, ZBTB16, MAPKAPK5, TNFRSF10A

Negative_14611	HDC, HPD, LPO, VTN, ADORA2A, ALDH1A2, ALDH2, ALG11, ARSE, ATP6V0C, B3GNT4, BBOX1, BDH2, CALML6, CASP10, CASP7, CD19, CD99, CDS1, COQ5, CXC L12, DHDDS, DLL3, DTX1, DUSP10, EFNA4, GDF5, GGT1, GGT7, HCST, ICAM3, IFNAR2, LTA4H, MAP3K7, MYH13, NCOR2, NCR3, NFKBIE, NLGN2, NODAL, NOTCH1, NUDT5, OR2T34, OR4D11, OR52N2, OR52W1, OR56A3, OR5AN1, OR5T2, OR7G1, PHKA1, PRSS2, PTTG1, RUVBL1, SCP2, SEMA4F, SMC1B, SMURF1, STX16, SUV39H1, THBD, TP53, YWHAQ, CACNA2D4
Negative_14612	ADC, AMT, CP, GAA, IL2, LAT, LYN, MVD, ACTN1, AMY2B, ANAPC4, APLP1, ARPC1B, ATP5C1, ATP6V0B, B3GALT2, CACNA1D, CCDC6, CCNH, CDH15, CHEK1, COL4A6, COQ7, CRLS1, CXCL1, CXCL6, CYP2D6, DHDDS, DTX1, E2F1, ENPP7, FDF1, FGF14, FPGT, GAB1, GALNT11, GSK3B, GUCY2D, INMT, ITGB3, KDSR, L CMT2, LMO7, MAPK13, MMP14, NANS, NFASC, NMNAT2, NNMT, NT5C3, OR1G1, OR2T4, OR4C6, OR4K13, OR51G1, OR52B6, OR5D13, OR6C76, PCNA, PER1, PFN4, PIGA, PLCB4, PLOD1, PLXNA3, PMAIP1, PMM2, POLR3H, PPAR, PPP1R1A, RHOD, SDHB, SEPHS1, SHC4, STAT6, STEAP3, SUCLG1, SULT2A1, TP53, TXNDC12, UROS, VDAC1, ATP6V1E2, TNFSF13B
Negative_14613	MAX, ABL1, ACADS, ACOT11, AOC2, ASIP, ATP6V0B, B4GALT4, BCAT2, CACNA1A, CARD11, CHST13, DDX23, EFNA4, EREG, GALK2, GALNT9, GLUD2, HAP1, HARS, HCLS1, HTR5A, IL21R, JAK3, KLRC2, MAPK3, MTHFD1, MTHFD1L, MYH7B, MYLK2, NRXN3, OR1N1, OR2M3, OR56A3, PFKFB1, PIGU, PPP3CA, PPP3R2, PRKCG, PRODH2, PTGIS, PTPRR, SMPD2, SOS1, SSH2, STX2, SUOX, TLR2, TRIP10, TUBA1A, TUBB1, UROC1, UXS1, SERPINE1
Negative_14614	GP6, HK1, ACSS2, ACTN1, ACYP2, ALPPL2, B3GALT1, C9orf95, CCL20, CCNB2, CCND2, CD44, CDH2, CDKN2D, CHAT, CHIT1, CKMT2, COQ7, CSF2RB, CYP17A1, CYP1A2, CYP2A6, DAPK3, DCXR, DDHD1, DDX50, DHCR24, DPAGT1, DPYSL2, ENPP3, ETS1, FGD3, FLT3, GARS, HADHB, HDAC2, HSPB1, IARS2, IBSP, IL2RG, ITGAD, KAT2B, LEF1, LTC4S, MAP2K1, MEF2C, MYH10, NAGS, NCOA4, NCOR2, NLGN2, OR10AG1, OR10H1, OR13H1, OR2T4, OR2Y1, OR5B3, PAPSS2, PARVG, PDE4C, PHKB, PIAS1, PIGH, PIK3C2B, PIK3R4, PLD1, PTGES, RPN2, SEMA3G, SHMT2, SQLE, STT3B, TUBA3E, YWHAZ, CACNA2D1, TNFRSF13C
Negative_14615	C1S, TPO, ACAA2, AKR1A1, ALG12, ANAPC5, BBOX1, BCAT1, CAV1, CCL20, CCL26, CD70, CISH, CYFIP2, DDX54, DNMT1, FBXW11, FGF21, FZD2, FZD7, GABARAP, GATM, GCLM, GMPR, GUCA1A, GUCY1A3, GZMB, HLA-F, HMGCL, IFNA10, IL18, ITGB8, JAG2, MAP2K6, MAPK11, MYH7B, NME6, ODC1, OR10A4, OR10H1, OR10H5, OR51Q1, OR5F1, OR5K2, OR9Q2, PAK3, PFN4, PLA1, SCD5, SOCS5, STAT1, SULT1E1, TGFB1, TICAM2, TKTL1, TUBA1B, UBA7, UNC5D, ATP6V1E2, TNFRSF1A, TNFSF13B
Negative_14616	ACOT12, ACSM3, ACTC1, ALDH1A1, ALPL, ATP5L, CANT1, CDC16, CLDN22, DNMT3L, ENO3, ENTPD2, EPAS1, EPHA3, EPHA5, EPOR, FOXO1, GALNT5, GCNT4, HBEGF, HCCS, HMOX1, IL23R, INPP4B, IQGAP3, ITGA2, ITGAE, KLRC2, KLRD1, MINPP1, NODAL, NT5C1B, NTRK2, OR10G9, OR13J1, OR6C70, OR8U1, P2RX2, PDPK1, PERP, PFKFB1, PLA2G5, PPP1R1A, PPP2R2B, PRKAB1, PRKACG, PRO, PSEN2, PTEN, PTPRZ1, PYCR2, RBX1, RRAS, SHMT1, TJP2, TMLHE, UBE2L6, UGCG1, GABARAPL1, TNFRSF10B, TNFRSF14
Negative_14617	DBT, DLD, FGA, RDX, SRC, ACSL4, ACSL6, ARAF, ARNTL, B3GALT5, CACNA1E, CACNA1G, CCL4, CDC2, CDC26, CDKN2A, CNTNAP2, COL4A4, COL6A2, DTX2, EPHA1, FGF18, FGFR1, FIGF, GCLC, GRIN2A, GSTO1, HNF1A, IDI2, IFNA4, INPP5A, ITGB2, NFATC3, NRCAM, OR10AG1, OR1D5, OR2T2, OR4C15, OR4D6, PIP5K3, PNPT1, PPP2R2B, QARS, SEPHS1, SETD1B, SETD8, SLC25A4, STK4, TAS2R7, TGFB1, TLR9, TUBB4Q, WNT8B, ZNRD1, SUV420H2

Negative_14618	C7, IL2, INS, MIF, PGP, ACOT11, ADSSL1, AGPAT6, AK3L1, ALG5, ARHGEF4, ATG12, B3GAT2, BACE2, BMPR1A, BTRC, CACNA1G, CCL20, CISH, DARS2, DLL1, DUSP1, DUSP5, DVL1, E2F5, EFNA3, ENTPD1, EPB41L3, FARS2, GALE, GALNTL4, GNAZ, GPT2, HAGHL, HARS2, HES1, HPRT1, HPSE2, IDI1, IDI2, ITGA4, LDHD, MAP4K2, MAPK14, MTFMT, MTMR6, NOX1, NR5A2, NRG4, OR10A3, OR10A7, OR2L3, OR2M7, OR4A16, OR52B4, OR52M1, OR9I1, PAK6, PAX6, PDE10A, PDHA2, PGM3, PIGT, PIP5K3, PLCB3, POLR3A, POLR3H, PRKG1, PTK2, PTPN6, PTPN7, RALBP1, ROCK2, SESN1, SMARCA5, SOAT1, SRGAP3, TAP2, TJP3, TUBB2C, UGDH, PAFAH1B2, SERPINA5, TNFRSF11A
Negative_14619	FGA, FOS, GPT, MOS, SFN, AANAT, AKR1C3, ALAD, APC2, ATP5A1, ATP5G2, ATP5J2, CACNA1E, CADM1, CANT1, CCL23, CD46, CHRM5, CHSY3, CMAS, CSNK1A1, DAAM2, DMGDH, DNMT3L, FUT1, FUT7, GPT2, HHEX, HTR7, IKKBK, IRF7, ITGA2, KLRC2, LTB4R2, OR10G4, OR10P1, OR13G1, OR6B3, OR6F1, OR8H2, ORC5L, P2RX6, PGK2, PLIN, PLK1, POLR2B, PRKAA1, RASGRP2, RASGRP4, RHEB, SEMA7A, SETDB2, SORBS1, STAM2, STX1B, TAS1R2, UROD, ZFYVE16, ATP6V1C2, TNFRSF10B, TNFRSF10D
Negative_14620	FYN, ID4, IL7, LPL, LSS, MPZ, MUT, SMS, XDH, ABLIM1, ACOT12, ADAM10, AGPAT2, APH1A, B4GALT6, CCNA1, CD48, CDKN1C, CLDN17, CNTFR, COL11A1, COQ7, CREB1, CRLF2, CYP19A1, CYP2F1, DTX3L, EPB41L2, EPHB1, EXTL3, F11R, F13B, FUT8, FZD6, GMPPB, GNA13, GPX7, HGSNAT, HTRA2, IL19, IL20RA, IMPA1, JAK3, MAP2K7, MCCC1, NCAM2, NFAT5, NOTCH1, OR10J1, OR10K1, OR10X1, OR2AG1, OR2S2, OR52M1, OR7G1, OR8S1, P4HA3, PCCA, PFAS, PGS1, PHKG1, PIP5K3, PLOD2, POLR2D, POLR2J, PPM1D, STX18, TCF7, TKTL1, TLR5, TUBA3C, TUBAL3, UPB1, ATP6V1G3, PRICKLE2
Negative_14621	ADC, AK1, AUH, CR2, FOS, IL7, NPY, OSM, ADAM17, ADH1B, AGPAT1, ALOX15B, APOA2, ATN1, CD14, CD38, CDKN1B, CHST11, CLDN14, CLDN20, COL6A1, COQ7, CREB3L4, CRLS1, CX3CL1, CXCL3, DFFB, DUSP3, EDN1, FLAD1, FOXO1, GALNT14, GAS1, GNPDA1, GPD1L, GSTM5, GUCA1A, HMGCS1, HTRA2, IDI2, IDUA, IFNA21, IL1A, IL28A, JUND, KCNB1, LAMC3, LRP6, MGST1, MYH11, NFYB, OR13A1, OR13F1, OR52E8, OR6X1, OR7G2, OR8H3, ORC5L, PGLS, PIK3CA, PIK4K2A, PLCB2, PLXNB2, POLD1, POLR2E, POLR3K, PON2, PPM1D, PRKACA, PRSS1, PTK2, PTPN7, PTPRJ, RASGRF2, RBPJ, RPRM, RPS6KA1, RPS6KB1, SHC4, SIPA1, SNW1, SPRY4, TAS1R3, TAS2R8, TOMM40, TPMT, UNC5B, WWP1, ZNRD1
Negative_14622	GH1, HDC, HGD, NLK, PTS, SMO, AARS, ACP2, ACPT, AGPAT3, AKT2, ANAPC10, AOC3, APRT, ARHGEF6, ATP5C1, ATP5J, B4GALT7, BLVRB, BMP4, BMPR1A, BMPGM, CCL25, CHRNA7, COQ3, CPS1, CREB3, CREBBP, CXCL12, CYP2A6, CYSLTR2, DAAM2, DCTN1, DDB2, DFFB, DKK2, ENO1, EPB41L3, ETNK1, FDPS, FTMT, FUT6, GART, GIT1, GNAO1, GPX7, GSTM3, HES1, IFNAR1, IFNGR1, IL17B, IL1A, INSR, IRAK1, ITGA9, ITGB7, JAK1, JAM3, MAP3K4, MCCC2, NFKB2, NFYA, NOS3, ONECUT1, OPLAH, OR4K14, OR4M1, OR51A7, OR52E8, P4HA2, PDE1C, PDE7B, PIP5K1C, PLA2G1B, POLR2G, PPA1, PPP1R1A, PTPRR, RAC2, RAPGEF2, RELA, SDHB, SDHD, SEMA7A, SLC12A2, SPTLC1, SRD5A1, STK11, STX6, TACR1, TNFRSF9, ULBP1, VASP, VDAC2, SERPING1
Negative_14623	AK2, ASL, BAD, DBT, FES, GPT, IL4, IL8, ME3, AADAC, ACACB, ACSM1, ACTG2, ADH1A, ALG11, ALPI, AMPD3, ANAPC4, ARNT2, ARRB2, ATP5B, ATP5C1, CAV3, CCNG1, CDC25C, CDC6, CDK7, CLDN2, CLOCK, CPT1A, CTNNA3, CYP11B1, CYP2E1, DAPK2, DEGS2, DPM3, EPB41L2, FABP3, FBP1, FLOT1, FUT4, FZD9, GDE1, GNA15, GOT1, GSTM2, HIF1A, IBSF, IPPK, ITGAX, JAG1, LGMN, LILRB3, MAP2K2, MAP2K5, MAT1A, MCM7, NCK2, NCSTN, NFKBIA, NFYB, OCRL, OR10A6, OR13D1, OR1L1, OR2A2, OR3A2, OR4D2, OR4D6, OR6C3, P2RX7, PANK1, PCAC, PDE4A, PDE7A, PEMT, PGM2, PIK3CG, PIP4K2C, PLAU, PLOD3, PROC, RAB5A, SDC3, SEMA4A, SHC1, SLC25A5, STX3, TNFRSF8, TPH2, TRMT11, TUBA1B, UAP1, VARS, VEGFA, B3GALNT1, ST6GALNAC3, TNFRSF13C



Negative_14624	C8A, C8G, IL6, LSS, PLG, ALDH1A3, APH1A, ASCC3, ATP5B, ATP5G2, BMP6, CACNB4, CCL4, CCR3, CDC27, CYP2C9, EGFR, FGF8, FLT3, FSHR, GMPPB, HADH, HYAL2, IL8RB, INPP5E, LCAT, MAP2K3, MTHFS, NFAT5, NMNAT2, OR4A15, OR51A2, OR6C4, OR6K6, PAX6, PDGFD, PDXK, PIGX, PON1, PPP2R5B, PPP3CA, PPP3R1, PRKG2, PVRL4, ROBO2, SDHB, SETD2, SOCS4, TRPC1, TUBB2B, UROC1, YKT6
Negative_14625	A2M, ASL, MVD, RFK, WAS, ACHE, ADH1B, AGPAT3, AGXT2, ALOX15B, APOC3, ASCC3, ATP4B, ATP5D, ATP5L, AXIN2, B3GALT2, CBLB, CNTNAP1, COL5A3, CPOX, CPT1B, CXCR5, CYP11B2, CYP27A1, DVL3, FLOT1, GALNT10, GNAI2, GNRH2, GRB2, GRIN2A, HLA-DMA, HYAL2, IFNA7, IFNW1, MAPK13, MMP9, NTF3, OR10H4, OR2M3, OR4K17, OR4L1, OR5H2, OR6Q1, P2RX3, PGM3, PIGF, PIGO, PIK3C2B, POLR2F, POLR3H, PPA2, PPP2CA, PPP2CB, PRKAG2, PRNP, PTCH2, PTGIS, RBL1, RPS6KA6, RRM1, SH2D1B, SPRED2, SSH1, VARS, ATP6VOD2, MAPK8IP1, TNFRSF12A
Negative_14626	AGL, DHH, AADAT, ADCY6, AMPD2, ANAPC1, APPL1, ATP6VOC, BDH2, BMPR1A, BUB1, CCL20, CDIPT, CDKN2B, CPT1B, CYP2S1, DAAM1, DHCR24, DHDH, DRD2, EIF4B, EPHX2, F2RL1, FGF1, FLT1, GALT, GCDH, GMPPA, GRB2, GUCY1A2, HARSA, HIF1A, HMBS, HMOX1, HRH2, HTR2B, HTR4, IFT57, IL29, INHBB, ITGA2B, ITGA7, KAT2A, LAMA3, MAT1A, MMP14, MPDZ, MYH11, MYH7B, NPR2, NTF3, NTRK2, OR1B1, OR1C1, OR4C11, OR51B6, OR52I1, OR6K3, OR7C2, PDE9A, PER1, PGAM1, PLAT, PPP2R2B, PPP2R2D, PRKCA, PSME1, PTPN11, PTPRC, RAPGEF2, RASGRF1, RERE, RRM2B, SHC3, SLC27A5, SMARCA2, SUV39H2, TAS2R10, TICAM2, TP53I3, UGT1A10, UGT2B7, ATP6VOA1, ATP6VOD1, SERPIND1, TNFRSF10C, TNFRSF11A, TNFRSF6B
Negative_14627	BAD, GPT, ME2, ABAT, ACLY, ACYP2, ADRBK2, ALG11, ALOX12B, APOA5, ARG1, BMP8A, CCL19, CSF3, CYFIP2, DVL3, EDNRB, ENTPD5, ENTPD8, FUT4, GALNT13, GRIA3, HSD17B2, IDH2, ITGB2, KAT2B, LDHC, LIFR, MINPP1, NRP1, NT5E, OR1L1, OR2K2, OR6F1, OR7C1, PDE4D, PDIA4, PFKFB3, PIAS1, PLXNC1, PPP2R5A, PPP2R5C, PTGER1, RETSAT, RPRM, SLC2A2, STAT4, STEAP3, STX6, STX7, UGDH, UGT2B11, WNT3, TNFRSF12A
Negative_14628	ADC, C2, GSR, HAL, ME2, MPI, MUT, SI, AOC3, ATF4, CADM1, CCKBR, CD79A, CD79B, CDK2, CLDN19, CPT1A, CTBP1, CYP2C9, DIAPH3, DKK4, EI24, FASN, FGF12, FLT3LG, FUT1, FUT5, GJA1, GUCA1B, H6PD, HIF1A, HNF4A, HTR6, IDH3A, IL22RA2, IL8RB, IRAK4, ITGA6, JUND, LTA4H, MAPK1, NAE1, NEU3, NOTCH1, NRXN3, NTSR1, OR10A7, OR11H4, OR1K1, OR2Z1, OR4C16, OR4L1, OR52L1, PANK1, PARD3, PDX1, PDXK, PFAS, PIGP, PPP1CC, SENP2, SETDB2, SLC25A4, SV2A, SYNJ2, TM7SF2, TP53, TPMT, TRMT11, TYMS, VDAC3, YWHAE, C1GALT1C1
Negative_14629	AMT, GP9, IVD, PC, ACSL1, ADCY3, AKR1C3, ALDH3A1, AMPD3, ARHGEF2, ARHGEF6, ASRGL1, ATF4, ATG3, AVPR1B, BCAT1, CBLC, CCKAR, CCNA2, CDC42, CHKB, COQ3, CXCL1, DAAM2, DDB2, DEGS1, DEGS2, DMGDH, DPM1, DTYMK, EXOC7, GART, GNAT3, HRAS, ICOSLG, IL1B, IL23A, ITGA1, ITGA3, JAG1, JAM2, KLRC1, LAMA4, LIPA, MAT1A, MTMR1, MYH7B, NCK2, NGEF, NKD1, NRXN2, NUDT5, OLAH, OR10AG1, OR11L1, OR13C8, OR2G6, OR2Z1, OR4C11, OR51G1, OR51I2, OR5R1, OR6A2, OXTR, PANK1, PARVG, PAX6, PECAM1, PFN4, PIGB, PIGC, PIGM, PIGP, PIP5K3, PLA1A, POMC, PPM1D, PRIM1, PRKAB2, PRKACG, PTDSS2, RAB5A, RARS2, ROBO2, RXRA, SEMA3F, STX1A, STX4, TAS2R8, TSNARE1, UGT2B11, UGT8, ATP6V1E1, PAFAH1B1

Negative_14630	C9, DCT, HGF, ABAT, ACSS2, ADCY2, ALG11, BDKRB1, CACNB3, CBLC, CCR1, CD55, CDC14A, CDC14B, CDC7, CNGB1, CPT1C, CRB3, CREB3L1, CXCL12, CXCR3, DCTN1, DIAPH2, E2F1, EGFR, EHMT1, ENO1, EPHA8, FGF10, GAL3ST1, GCNT4, HMGS1, HSD11B2, HTR2C, IL12B, IL15RA, IL4R, IPPK, ITPA, LEFTY1, MCM7, MITF, NCOA4, NCSTN, NME4, NT5M, NUMB, OR12D3, OR1J1, OR1S2, OR2A2, OR2L3, OR2M5, OR51V1, OR6N2, OR6Y1, OR9I1, OXSM, P2RX4, PDIA4, PIM2, PISD, PKM2, POLR1C, PRIM2, PTK2, SCIN, SEMA4C, SEMA4F, SIAH1, SLC27A4, SRGAP1, ST3GAL2, ST8SIA5, TAS2R49, TBL1X, UGT1A10, UNC5C, WNT9B, PHOSPHO1
Negative_14631	AK3, CBS, CFD, EZR, IL8, PC, PRL, SCD, SHH, SRM, ACAD9, ACPT, ACSM1, ADRA1A, ADRB1, AHCY, AMD1, ANAPC2, AOX1, APOA2, ATP5F1, CACNG4, CAMKK2, CCL20, CCR6, CD82, CDK5, CLDN5, COL4A4, CSNK1E, CXCL2, CYP1A2, CYP8B1, DDHD1, DGAT2, DRD2, DTYMK, EDA2R, EPHX1, F2RL1, FADD, FCER1G, FGFR1, FIGF, GADD45A, GCNT4, GNB3, GNRH1, GSTM3, HCST, HHIP, HSP90B1, IDH3G, IDI1, IL1B, IL5RA, INSRR, IPPK, ITPK1, LAMA3, LAMB2, LIPF, LRP6, METTL6, MTMR6, MYH14, NCF2, NCK2, NCSTN, NOD1, NOS1, NRCAM, NRG4, NT5C2, OLR1, OR10C1, OR13C3, OR1I1, OR2G6, OR4C15, OR4D2, OR4D5, OR4K15, OR4P4, OR52N2, OR6C75, OR8K3, OR9Q1, OXTR, PAPSS1, PARD6G, PDE11A, PFKL, PLCD4, PPM1D, RBL2, SEMA4B, SLC25A4, SLC25A5, SLC27A1, SLC2A1, SOAT2, STX7, SUCLG2, SUV39H2, TAS2R8, TBK1, TICAM1, UBA1, UCK1, UGCG1, UGT2B28, UPP1, VAMP4, VAV1, WASF1, WNT4, ZFYVE16, ZIC2, ATP6V1E1, MAPK8IP3, SERPING1, TNFRSF13C
Negative_14632	C3, CFD, CTH, EZR, FES, LCK, MYC, TEC, AASDH, ACMSD, ADCY3, AGPAT1, AKR1C4, ALDH9A1, ANAPC10, ANPEP, APC2, APOC3, ATP6V1A, ATP6V1F, BCKDHB, C3orf10, C4BPA, CACNG1, CAMK2A, CAV2, CCL22, CCNG1, CD38, CD86, CD8A, CHPF, CLCA2, CMBL, COL4A2, CSF1R, CSNK1E, CTF1, CTSB, CUL1, CXCR3, DDX47, DIAPH1, DNMT3L, ECSIT, ENO2, ENPP2, ENPP7, EPHA6, EPHX1, F13B, FGF11, FUT3, FUT3, GAPDH, GART, GLYCTK, GNG12, GNG3, GNPAT1, GPAM, GSTA3, GYS1, HBEGF, HPSE2, HSPA1B, HSPB1, ICAM2, IFNA5, IL28RA, IL3RA, INADL, ITGA10, KIR2DS5, LAMC1, MAPK9, MLLT4, MYLK, NKD1, NKX6-1, NPAS2, NRXN3, OR10K1, OR10K2, OR1A1, OR1Q1, OR2H2, OR51B4, OR6K2, OR6Q1, OR8D2, OXCT1, OXTR, P4HA1, PFN3, PGM2, POLR3B, PORCN, PPP2R2A, PRKAR2B, PTDSS2, RAP1A, RAPGEF1, RAPGEF3, SCD5, SDHA, SHMT2, SSH1, ST3GAL1, STX1A, STX5, SUOX, SV2A, TALD01, THBS3, TRPC1, TUBB2B, UGT1A10, ULBP3, UPRT, WBCSR17, ATP6VOE1, CACNA2D2, PLA2G12B, PRICKLE2, TNFRSF18
Negative_14633	C7, FOS, HGF, LSS, MOS, MUT, TEC, WAS, ZYX, ACAT2, ACVRL1, ADCY10, AKR1B1, AKT1, ALDH2, ANGPL4, APAF1, ASS1, B3GNT4, BMPR1B, CACNG7, CCL4, CCR6, CCR9, CD58, CD79A, CDC14B, CDC45L, CHDH, CIITA, COL6A1, COMP, CREB3, CREB3L4, CTNNA1, CTNNA3, CXCL5, CYFIP2, CYP26A1, CYP2S1, CYP4F3, DARS, DGKB, DHCR7, DLST, ECHS1, EIF4B, ENTPD2, ENTPD5, F13A1, FCGR3A, FLT4, GGT1, GNA13, GPD1, HARS2, HDAC2, HIF1A, HMGR, HNF1A, HSPA1B, IL18R1, IL4R, INHBE, IRF7, IRS4, ITPK1, LAMB2, LCAT, LDHC, LEFTY2, LRAT, MAN2A1, MAPK13, MCEE, MDH2, MGAT4B, MGAT5B, NCAM2, NCK2, NFYA, NRG2, NRXN1, NTSR1, OCLN, OR10A4, OR10K1, OR13H1, OR1L4, OR2AG1, OR51I2, OR51L1, OR5D18, OR5F1, OR5I1, OR6A2, OR6B2, OR6C4, OR8D2, P2RX1, PAPSS1, PDE10A, PHKA1, PIK3C2G, PLCD4, PLD1, PLEKHA8, PLOD1, PNPLA3, POLE, POLR1C, PPP5C, PRKAG2, PRPS1, PTDSS1, PTGES2, PTGIS, PTRZ1, PVRL2, RASA1, RDH8, RENBP, SARDH, SARS, SARS2, SOS1, SPCS3, STAM2, STK11, SUCLG2, SV2B, TAS2R40, TFPI, THY1, TIRAP, TPH2, TRPC1, TSHB, UBA7, UGT8, UPP1, WWP1, ATP6V1C1, HSP90AA1, PLA2G12A, SERPIND1, TNFRSF10C, TNFRSF18

Negative_14634	A2M, DCK, DDC, FAS, GLA, GLS, ID1, IL6, ME1, MOS, OTC, PTS, SCD, TNN, UBB, VTN, ACAA1, ACTC1, AGXT, ATP5F1, BLNK, C3orf10, C7orf16, CACNA1F, CACNA1I, CARD11, CAV3, CBR1, CD226, CD55, CD72, CDC25C, CHUK, CLDN3, CNTN1, COL1A2, COL4A6, CPT1A, CSF1, CSF3R, CTLA4, CYFIP1, CYP2C18, DAPK2, DGKH, DPYD, EFNA4, ENPP1, ENTPD2, EPHA8, EPHB3, FASN, FGF9, GADD45G, GALE, GALNT13, GDF6, GNRHR, GPD2, GSTM1, GUCA1B, HDAC1, HEMK1, HPR1, HRH1, IFNA4, IFNA5, IFNA7, IFNGR2, IGSF5, IL12B, ITGA5, LARS2, MPZL1, NCF2, NEGR1, NMNAT1, NQO1, NTF3, NUDT8, OR14J1, OR1K1, OR2A12, OR2A25, OR2M7, OR4D9, OR51E1, OR51L1, OR52R1, OR6B2, OR6C1, OR6T1, OR8J3, P2RX5, PARD6A, PDGFC, PFKL, PHGDH, PHPT1, PLA2G2E, PLOD2, PLXNB2, PMVK, PPP1R3A, PRKAA2, PRKAR1B, PRSS3, PVRL2, RALB, RDH8, SEMA3F, SIAH1, SLC2A1, SMAD9, SMURF2, SNAI2, SOCS1, SSH2, SSX2IP, ST3GAL2, STAM2, STAT5A, STMN1, STT3B, SUCLG2, SUFU, SUV39H2, TCF7L2, THBD, TNFRSF8, TNFSF11, TNFSF18, UGT8, UNC5A, YKT6, YWHAH, ALDH18A1, ATP6V1C1, TNFRSF10B
Negative_14635	AMT, ATM, CD2, F9, MAX, ME1, RB1, SHH, TNC, ACP2, ACSS2, AKT3, ALDOA, ALDOB, ALG10B, ARSA, BBOX1, BMP4, CACNA1A, CALML6, CASP9, CD48, CD74, CLDN2, CNTNAP1, CREB3, CREB3L2, CTNNA2, CXCL5, CYP11A1, DDHD1, DFFA, DHRS4L2, DUSP4, DUSP5, ENPP7, EXTL2, FGF23, FMO3, GALNT3, GALNTL1, GJD2, GMPPA, GNAI2, GRIA2, GRM1, HES1, HHEX, HSD17B8, HTR4, IL8RA, ITGA10, ITGB7, KDSR, KITLG, LIAS, LRAT, LTBR, MAFA, MTHFD1, MYH4, MYH7B, MYLK, NEU4, NEUROD1, NRP1, NT5C2, OR10A5, OR10C1, OR10V1, OR1E2, OR2A5, OR2T1, OR4P4, OR52E8, OR52H1, OR5AU1, PARS2, PDE1A, PER1, PHGDH, PHKG2, PLA1A, PLK1, POLD4, POLR1B, PPCDC, PRKCG, PSME1, PYCR2, RASA1, RASGRP4, RBL2, SC5DL, SDC2, SDHC, SELE, SEMA3G, SEMA4F, SETD1B, SLC25A5, SRGAP3, TAS2R38, TRHR, VDAC2, VEGFB, WARS2, WNT10B, CSNK1A1L, TNFRSF11B
Negative_14636	BTK, GPT, ID1, JUP, PGP, XDH, AKT1, ALDH7A1, ARPC1B, CACNG5, CBR3, CCND2, CD22, CD74, CDH4, CHSY1, CNTFR, COL4A6, COQ7, CPT1A, CSF3, CSNK1A1, CYBA, DARS2, DAXX, DCXR, DDB2, DHRS3, DUSP14, DUSP5, EPHA2, EREG, FGF8, FLOT1, FZD1, GLUD1, GP1BA, HAO1, HIP1, HSD3B1, HYAL1, IRS2, KIR2DL2, LDHA, MAN1B1, MAP3K4, MAT1A, MGST2, MPZL1, MTMR1, MYLK3, NEFH, NT5E, OR10K1, OR10K2, OR11H6, OR13F1, OR1A2, OR2M4, OR2T10, OR4A5, OR51F2, OR51T1, OR5T3, OR6K6, OR6N2, OR8B8, P2RX7, PDCD1, PDE4A, PDGFR, PECAM1, PGAM4, PIAS2, PIGH, PLCD4, PLD1, POLR1A, PON2, PPA1, PPP2C, PPP2R1A, PTTG1, RBKS, RFWD2, SELL, SEMA3B, SOCS1, SORBS1, SSH3, STAT2, STX3, SUV39H1, TJP2, TP73, TSTA3, TUBA1B, TUBB, UBE2L3, UCKL1, UPR1, VARS, WHSC1, WNT3A, HLA-DPA1, TNFRSF10C
Negative_14637	CTH, FOS, GNE, GNS, IDS, IL6, LYN, MPZ, MVD, ACADL, ACAT2, ACSM1, ACYP1, ADCY5, ADCY9, ATN1, ATP5J2, B4GALT2, BLVRB, CACNA1B, CACNA1S, CAMK4, CCL5, CD48, CDC20, CDC26, CD01, CHPT1, CMBL, CSAD, CSNK1E, CSNK1G1, CXCL11, CYBA, CYP11A1, CYP2A13, DCXR, DDX54, DGKD, DUSP10, F2RL1, FRAP1, FUT1, GALNT12, GGT7, GNG3, GRIN2B, HAP1, HMGR, HSD3B1, IFNA6, IFNW1, IL13RA1, IL17RB, IL1B, INPP1, INSR, IQGAP2, ITGAL, KARS, KIR2DS4, KIR3DL2, LAMB2, LAMB4, LCP2, LDHB, LPAR1, MAD1L1, MAP3K5, MCCC2, MECP, MKNK1, MPP5, MYH1, MYL5, MYLK, NAT5, NEU4, NMNAT2, ODC1, OR10A2, OR10AD1, OR13C5, OR2A14, OR2G3, OR2Y1, OR4F17, OR4S1, OR4X2, OR52M1, OR5AK2, OR5B3, OR5D16, OR6C70, OR6K2, OR8S1, OR9Q1, OXCT1, PAK2, PDE4A, PGAM1, PGAM2, PIGK, PIM1, PIP5K1B, PLA2G2F, PLA2G6, PLOD1, POLD3, POLR3D, PPP1R3D, PPP5C, PRPS1, RALA, RAPGEF4, RPS6KA6, SESN3, SETD2, SFRP5, SLC2A2, SPP1, SPRY4, SPTLC1, ST8SIA1, THBD, THBS1, TRPM5, TSTA3, UBE2L3, ATP6V0A1, ATP6V1E1, HSD17B10, PLA2G12A, TNFRSF10C

Negative_14638	<p>C9, EBP, FGB, STS, TK2, TYR, ACADL, AHCY, ALDH3B2, ALDH5A1, AMPD1, APOA2, ARPC3, ARPC5, ASCC3, AXIN1, B3GNT3, B4GALT2, BMP2, C3orf10, CACNA1A, CACNB4, CAMK2D, CCR9, CD38, CDK5, CES2, CHRM2, CISH, CSF3, CTSL1, CXCL11, CXCL5, CXCR5, CYFIP1, CYP26A1, CYP27A1, CYP2A7, CYSLTR1, DAXX, DDIT3, DDX23, DGKE, DUSP14, DUSP6, EPHA2, EPHX2, ER01L, ETNK1, FGD3, GAB1, GAD2, GALNT11, GCNT3, GGCX, GMPR2, GNRH1, GUCY2F, HMGCS2, ICAM3, IL17A, IL17B, IL1R1, IL1R2, IL28A, IL8RB, INPP4A, ITPKB, KLRC3, LARS2, LIPG, LLGL1, MAD1L1, MAD2L2, MAP3K1, MAP3K12, MCM4, MYL7, NAT6, NFATC1, NFKBIB, NR5A2, NSD1, NUDT12, NUDT5, NUDT9, OR10AG1, OR13H1, OR1G1, OR2B2, OR2D3, OR2M7, OR2T10, OR51F1, OR52A1, OR52J3, OR5AU1, OR5M3, OR6C6, OR6F1, PAK1, PCYT2, PDGFA, PECAM1, PGAM1, PGM1, PIGO, PITX2, PLAU, POLA2, POLE, POLE2, POLR3B, PPP1R3A, PPP2R2D, PTGS1, PTPN7, RARS, RFNG, SC4MOL, SELPLG, SEPHS1, SESN1, SHC3, SOCS7, SRGAP1, SSH1, ST3GAL4, ST8SIA5, STK3, STX2, TALD01, TAS2R60, TLN1, TLR9, UGT2B17, WNT2, WNT6, WWP2, YWHAE, HLA-DPB1, PAFAH1B1, SLC25A31, SUV420H1</p>
Negative_14639	<p>C2, CDA, CEL, DCK, GHR, IL5, MVD, ABL1, ACY3, ALCAM, ASAH1, B3GALT2, B4GALT2, B4GALT3, BLVRB, CACNG6, CD8A, CFL1, CNDP1, CSNK1D, CYP11A1, CYP2B6, CYP2U1, DDX41, DDX56, DGKD, DKK2, EIF4E2, FGF10, FLT4, FOXO3, FUT6, GALNT10, GARS, GNPAT, GSTM2, HNF1A, IFNA10, IL13RA2, INPP4A, INPP5B, INPP5E, IQGAP3, LCAT, MAOB, MDM2, MGST3, MITF, MMP2, MTHFD1L, MYLK2, NAE1, NCKAP1L, NFKBIB, OR10H2, OR1S2, OR2T2, OR2T6, OR4A15, OR4R2, OR52I1, OR5B3, OR5H6, OR6C3, OR6C6, OR6N2, OR8B12, OR8H1, OR9A4, PDE9A, PDHA1, PGK2, PHKB, PIGS, PISD, PLA2G2F, POLD1, POLR2B, PPAP2B, PPM1A, PPP2R5B, PRKACG, PTEN, PTGES, PTGES2, PTPRM, RAC2, RASGRF1, RHOQ, RXRB, SEPHS1, SHMT1, SMC1A, SOCS5, SQLE, ST8SIA1, STAT5B, STT3B, SULT2A1, TAS2R8, TBL1Y, TCF7, TLR5, TUBB4, TUBB6, UGT2A1, UGT2B17, ULBP1, UPB1, UXS1, VANGL2, VDAC1, XYLT1, ZNRD1, GABARAPL2, SLC25A31</p>
Negative_14640	<p>CBL, FER, GPT, IDS, ILK, LAT, PXN, TNF, TYR, ABL1, ACACA, ACVR1, ADCY7, AGPAT3, AGTR1, AHCYL1, AKR1A1, ALDH1B1, ALPPL2, ATP6V0B, B4GALT5, BUB3, CACNG1, CACNG4, CACNG6, CACNG8, CCL17, CCL26, CD22, CERK, CLDN1, CLDN7, CMPK2, CPS1, CTPS2, CXCL1, CYP2A13, CYP2D6, DAD1, DDX50, DUSP6, ENTPD1, FARSA, FLT1, GALNTL5, GBA3, GLS2, GRIA1, GRIA3, GSTA4, GUCY1A3, HLA-DOA, HMOX1, IFNW1, IMPA1, INPP4B, IQGAP2, ITGA2, KLRK1, LAP3, LGMN, MAML2, MAPK9, MTMR2, MTMR6, MYH14, MYH3, MYLK3, NFE2L2, NOX1, OR10P1, OR1D5, OR52K1, OR52L1, PCCB, PDE11A, PDGFD, PDGFRB, PFKFB4, PI4KB, PIAS2, PLA2G10, PLD1, POLD1, POLR1B, PPAP2B, PPAP2C, PPP2CA, PPT1, PRKAB1, PRKCQ, PSME2, PVRL4, RASSF5, RDH12, RFX5, RPS6KA1, SEMA3B, SEMA4C, SHC4, SIGLEC1, SKP1, SMPD4, SMURF1, SPAM1, SPTLC1, STAM2, STX4, STX8, SULT1A4, THBS1, TRAF3, TRAF4, TUBA1A, TUBB4, TUBB6, TYMS, UGT2B28, AASDHPPT, PAFAH1B2, PRICKLE1, SERPINA5, TNFRSF10D</p>

Negative_14641	<p>AGK, C8B, DLD, GP5, IVD, LCT, PLN, SHH, TFG, TNC, TNF, ACADSB, ACAT2, ACSS3, ADCY8, ADSL, AKR1D1, ALDH1A3, AMPD2, APH1A, ATP6V1F, B4GALT4, BCAT1, BMPR1B, C1QB, C3AR1, CACNG3, CASP3, CCL17, CCL3, CCND1, CCND2, CD40, CDS1, COL4A4, CPT1B, CYP11B1, DAG1, DDX18, DGKG, EDA2R, EDN1, EPHA5, EPHB2, F13A1, FARS2, GDF5, GGT7, GRAP2, HADHA, HCCS, HMGCS1, HS D11B2, IDUA, IFNW1, IL28A, IMPDH1, INPP1, IPPK, IQGAP2, MAFA, MTAP, MTHFD1L, MYH9, NCF1, NLGN1, NRCAM, OGDHL, OR10R2, OR11H1, OR13C5, OR13H1, OR1E2, OR2AG1, OR2M5, OR2M7, OR51A7, OR52I2, OR52N1, OR5AP2, OR5B3, OR5K2, OR6A2, OR6B3, OR6C76, PAX8, PDE1C, PIAS1, PIGW, PIP4K2B, PLA1A, PLOD3, POLR1E, POLR3G, PPP5C, PSPH, RDH11, RPE65, RPS6KA3, SEMA3C, SEPHS1, SETD1A, SFRP4, SLC27A5, SLC2A1, SOCS3, SPRED2, SREBF1, ST3GAL5, STEAP3, STX1B, SUFU, SV2A, TAS2R38, TCF7, TGDS, TKTL2, TNFSF14, TSHB, TSNARE1, TSTA3, TUBA3C, TUBA8, TXNDC12, UGT2A3, UNC5B, UNC5C, VAMP4, VNN1, WASF2, HLA-DRB5</p>
Negative_14642	<p>ATM, C8B, CKB, F3, FST, NOG, RB1, RPE, SFN, SRF, ACAA2, ACSM1, ACSS1, AKR1A1, AKR1D1, ALDH5A1, AMDHD1, APOC3, APOE, ATP12A, ATP6VOC, B3GALT5, BUB1B, CAMK2G, CCL11, CCR2, CCR5, CES2, CLDN22, CLDN7, COL1A1, CSF3R, CSNK1G2, CSNK2A2, CTSS, CXCL1, CXCL13, CYP2C19, CYP2J2, DDHD1, DGKB, FLOT1, FLOT2, GALNTL1, GALNTL5, GCNT3, GLS2, GLUD2, GNA13, GRIA3, GSTA4, HADHA, HEXB, HHIP, HLA-DMA, IAPP, IL1B, IL1RAP, IL20, IL23A, INMT, INPP4B, IRF3, ITGB1, KIR3DL1, LAMC3, LDHAL6A, LYPLA1, MAP2K7, MCCC2, MGAT5B, MYH1, NAMPT, NAT2, NEFH, NFKBIA, NME6, NQO1, NR1H3, NRG4, OR10A3, OR10J1, OR1E1, OR2C1, OR2Y1, OR5B3, OR5M9, OR8J1, PARD6A, PARVA, PAX6, PFN2, PIAS3, PITX2, PLA2G1B, POLE2, POLR1C, PPARA, PROS1, PRSS3, PTGDS, QARS, RHOD, ROCK2, RPN1, SARS, SIAH1, SLIT1, SPTLC1, ST6GAL1, ST8SIA1, SV2B, TGFB1, TRAF3, TSTA3, UAP1, UBE2K, UGT1A10, VANGL1, VANGL2, VASP, WNT7B, WNT9A, WWP2, XYLB</p>
Negative_14643	<p>BCR, C4B, CP, IVD, JUP, LEP, NNT, PAH, XDH, AASDH, ACAT1, ACP1, ACSL1, ALPP, ALS2, ATP6V1A, AXIN1, B3GALT1, B3GALT2, BCAT2, BNIP1, C4BPA, CACNG7, CAMK4, CCL2, CCL5, CCNH, CD99, CHRM2, CYP26C1, CYP2A6, DAG1, DC TD, DVL1, ECSIT, EDAR, EIF4E, ENTPD4, EPHA6, EPHB1, EPHB3, ERBB4, ESSL1, F13B, FMO2, GNA01, GUSB, HNF1B, ICAM1, IFNAR1, IGSF5, IL11, IL1R2, IL20RA, IL22RA1, IRS2, IRS4, ITGA2B, ITGB6, ITPA, MAGI3, MCM6, NCK1, NCOR1, NFX1, NRAS, NTN1, OR10G2, OR14A16, OR1L3, OR1Q1, OR2B2, OR2C3, OR4F17, OR4F4, OR4K13, OR4K17, OR51T1, OR52B4, OR5D13, OR5H2, OXC T1, PDE8A, PDHA2, PGAP1, PGM3, PIM1, POLE2, POLR2H, PON2, PPAP2B, PRKCI, PRKCQ, PRPS2, PRSS2, PSME2, PTGS2, RPE65, SDHA, SELE, SHMT1, SOCS4, SORBS1, STK36, SULT2A1, TAS2R13, TBK1, THTPA, TLN2, TNFSF18, TUBB1, UBE2K, UNC5A, WIF1, WNT2, WNT3A, ATP6VOA4, HLA-DRB4, PAFAH1B3, TNFRSF10C, TNFRSF14, TNFRSF1B</p>
Negative_14644	<p>AK7, F2R, FER, GNE, HK1, MVK, PML, TAT, TXK, ACP5, AKR1B1, AKR1C2, ALG5, ALOX15, ALPPL2, ATF4, ATG3, ATP5B, B4GALT1, B4GALT3, BAIAP2, BPGM, CACNA1C, CACNB4, CCL17, CD80, CDC27, CDKN1B, CXCL13, CYP2C18, CYP2C19, DDX54, DGAT1, DGKA, DIAPH3, DTX3L, EDA2R, EFNA1, ENPP2, FGF19, FZD10, FZD8, GALNT11, GNPDA1, GPAM, GPLD1, GRM5, HHEX, HRH2, HTRA2, IDI2, IFNA21, IFNA5, IL23A, INPP5A, ITGA5, KIR2DL4, LAMA4, LCMT2, LDHD, LEPR, LPAR1, MAP3K1, MGAT5, MPP5, NARS, NEFM, NEU1, NEUROD1, NFATC3, NTNG1, OR10X1, OR13C5, OR1L6, OR1N2, OR2C1, OR4F5, OR51F2, OR51L1, OR52E6, OR52J3, OR5I1, OR5M8, OR6C4, OR6N2, PIGN, PIGP, PKLR, POLR2F, PPOX, PPP1R3D, PPP3CA, PRKCB, PRKCH, PRKCZ, PSAT1, PYCR1, RASSF5, RDH16, SEMA3F, SETD8, SFRP4, SGPP2, ST8SIA1, TAS2R40, TAS2R42, TAS2R49, TRPM5, TSHB, UBE2L6, UCK1, UGCG, UMPS, VDAC3, WNT5A, PLA2G12A, SUV420H2, TNFRSF11B</p>

Negative_14645	AUH, BAX, FGG, FST, LHB, LSS, PXN, TNF, TNN, TPR, ABLIM2, ACAD9, ADCY10, ADH1A, ADH7, ADRA1D, AGPAT1, ALDH3A2, ARNTL, ARPC1A, ATP6VOC, BUB3, CCL16, CD38, CLDN11, CTBP1, CXCL9, CXCR6, CYP3A43, DFFB, EFNA4, EGLN3, ENTPD1, EXTL3, FASN, FOSL1, FUT8, G6PC, GLB1, GNA12, GNA13, IL17A, IL1R2, IL6R, ISYNA1, ITGA3, ITGB8, KARS, MAPK8, MS4A2, NME6, NRG1, NRXN3, OLR1, OR13A1, OR14I1, OR1J2, OR1L6, OR1S1, OR2M3, OR4C16, OR4F5, OR4M1, OR51I2, OR52K1, OR6C6, OR7G2, OR8B4, PCNA, PDE6D, PDE9A, PFKFB4, PIK3R4, PIP4K2B, PIP4K2C, PIPOX, PLA1A, PLA2G1B, PORCN, PPARA, PPM1B, PRSS1, PSPH, RBPJL, RDH16, RHEB, RUNX1T1, SETDB1, SMPD1, STMN1, SUOX, TAS2R13, TPI1, ULBP2, WNT10B, AASDHPPT, ATP6V1G1, HLA-DPA1, PLA2G12B, ST6GALNAC6
Negative_14646	ABO, C8B, F2R, LYN, MET, SRF, ABCC8, ACSL1, ACVR2A, ADRA1B, ALAS2, ALOX12, ARHGEF4, ASMT, ATG7, ATP5G1, ATP5J, ATP6VOC, ATP6V1D, B3GALT4, B3GNT2, BCAT2, BMP2, CCL4, CHST13, CLDN18, CLDN6, COL1A2, COQ7, CTSS, CYP2A13, DGAT2, DHODH, DPM1, DTX4, ECSIT, EHMT1, ENTPD5, EPHB6, FDF T1, FGF3, FSHB, GLYCTK, GNAL, GNPAT1, GP1BB, GRIN2A, GUCA1A, GUCA1B, HMGCL, HSD3B1, ICOSLG, IFNA13, IFNA4, IFNB1, IFNW1, IL15, INPP4B, INPP5A, IQGAP2, ITGA11, LGMN, LYPLA2, LYZL1, MAN1A2, MAP2K3, MASP2, M TMR1, MYH9, NCF2, NEFH, NFATC4, NFX1, NLGN3, OR10H1, OR1A1, OR1E2, OR1L8, OR2H1, OR2S2, OR2T1, OR51B5, OR51B6, OR51L1, OR52I2, OR52N5, OR52R1, OR5AU1, OR6X1, OR9A4, OXSM, P4HA1, PCYT2, PDHA1, PEMT, PIGN, PIGV, PLEKHA8, PLOD3, PMAIP1, PNPLA4, POLR3A, PPAT, PRKACA, PRLR, PRODH2, PSME2, PTPMT1, RAPGEF3, RAPGEF4, RASSF5, RDH8, RPS6KA6, SEMA4C, SEMA7A, SMAD6, SMPD3, STT3B, STX1A, TCF7L1, TRAF2, TRMT11, TRPM5, UNC5D, WASL, ZMAT3, ATP6VOA1, B3GALNT1, CSNK1A1L, HLA-DRB4, HSD17B12, TNFRSF13B, TNFSF13B
Negative_14647	BTD, CGN, DBI, EPO, EZR, F11, GSS, JUP, LEP, ABP1, ACPT, ACSL5, ADRA1A, AGRP, ALDH1A3, AMDHD1, AREG, ARHGEF1, ARHGEF4, ATP5D, AVPR1B, BDH2, CAV3, CCL11, CCNE2, CD22, CD40, CD48, CD55, CD74, CDC16, CLDN17, CNGA3, CXCL9, CYP1A1, CYP2E1, CYP2F1, DAD1, DDX41, DEGS1, DMGDH, DNMT3L, DUSP16, DUSP2, EARS2, EPHA3, EPRS, FBP1, FBXW11, FDPS, FGFR1, FTH1, GLYCTK, GRB2, GRIA3, GSTA1, GZMB, HSD17B4, HTR7, IGSF5, IL13RA2, IL1R2, INPPL1, ITGAE, ITGAM, LARS2, MCCC1, NAT1, OR10H3, OR12D3, OR2A2, OR4D11, OR4S2, OR51A4, OR5K1, OR6K3, OR6Q1, OR8U1, P2RX3, P2RX7, PARD3, PDE4A, PDXK, PI4KB, PIGP, PIK3CA, PIK3CD, POLR3H, PPAP2C, PRKACA, PRKCD, PRPS2, PRSS2, PSEN1, PTGIS, PTPN1, PTPRC, RPN2, RPS6KA4, SDHA, SEMA4A, SGMS1, SV2A, TACR2, TGFB1, TIAM1, TLN1, TNFSF4, TP53, WASF3, WNT3A, PDCD1LG2, TNFRSF10C, TNFRSF1A
Negative_14648	A2M, CD2, CFI, DAO, GPT, GSS, KIT, MTR, NPL, PLN, SRC, TK2, ACAA2, ACVR2B, ACYP2, ADCY2, ADCY4, AGPAT4, ALDH2, ALDH3B1, ALG5, ALPL, BCAT2, BDKRB1, BLVRA, BUB3, C9orf95, CACNA1C, CAMK2A, CCNA2, CDC26, CDK6, CIS H, CLDN1, CNTF, COL11A1, COL2A1, CYP26C1, DDB2, DDX23, DHRS4, DTX1, E2F2, EFNA1, EGLN1, ELK1, EPAS1, EPHB2, EXTL3, FECH, FGFR4, GALK2, GALNTL4, GFAP, GNPAT, GRHRP, GRM1, GSTA2, GSTP1, GUCY2D, IFNA4, IFNA5, IL10, IL6ST, IMPA1, IRF5, LFNG, LGMN, LIFR, LRRC4C, MAT1A, MAT2B, MYH10, NCKAP1, NLGN3, NT5C3, OR10G8, OR10H1, OR10K2, OR11H6, OR13C3, OR1L4, OR4D6, OR4L1, OR51A4, OR5A2, P2RX5, PARD6B, PDE10A, PER3, PHGDH, PIAS3, PIGK, PIK3CD, POLR3A, POLR3D, PPCS, PPP1CC, PPP1R3B, PPP1R3D, PRKCB, PRKCQ, PTK2B, PTPN7, PVRL2, RAPGEF2, SC5DL, SCP2, SDHB, SEMA3D, SLC27A1, SLIT1, SMC1B, SORBS1, SOS2, ST8SIA5, STAT5B, SULT1A2, TGDS, THBS2, TUBB, TUBB2A, UBA1, UPP1, VARS, VDAC3, WARS2, WBSR22, WNT2B, ZIC2, ZMAT3, ATP6VOA2, ATP6VOE1, PRICKLE2, SUV420H2, TNFRSF17

Negative_14649	EDA, HDC, LHB, PGP, PRL, RDX, SHH, TNC, VTN, AASDH, ADRB1, ALDH9A1, ANA PC11, ARD1A, ARHGFEF6, ARNT2, ARSA, ATP5J, B3GALT5, BMPR1A, BST1, BUB 1B, CACNA1S, CCNB1, CD36, CEBPA, CKMT2, CLDN4, CLTB, DHCR7, DVL2, EPH B6, FASN, FMO2, FUT6, G6PD, GADD45A, GNG12, GPAA1, GPD2, GSTM1, GSTM3 , HA01, HRAS, IDH3B, IFNA10, IL22, IL2RG, IMPDH2, INPP5A, INSR, ITPA, KIR2DS5, KLRK1, LLGL2, MAML2, MFNG, MYL7, NEU4, NEUROG3, NFYC, NRCAM , NTN1, OR10A4, OR10G4, OR2A25, OR2M7, OR3A3, OR4D6, OR4F6, OR4K15, O R52K1, OR52M1, OR5AN1, OR5AP2, OR6A2, OR6N1, OR7C1, OR8K3, OR9G4, OX SM, PAK7, PARVB, PDE7A, PHKG2, PIM1, PITX2, PLXNA1, PMM2, PPP1R3A, PP P2R1B, PPP2R2A, PRKAR1B, PRKY, RAD51, RAP1A, RARS, SEMA4D, SMURF2, S UCLA2, SUCLG2, SULT1A4, SV2A, TCF7L2, TFDP1, TGFB3, TIAM1, TNXB, ULK 1, WNT2, YWHAB, AASDHPPT, CACNA2D2, GABARAPL2, MAPK8IP1, PNLIPRP2, PRICKLE2, TNFRSF10A
Negative_14650	AMT, DDO, FAS, FOS, FYN, GH2, ITK, KHK, LSS, ME2, MPI, PTS, RB1, SMO, TK1 , TPR, ACY1, ADRA1B, AHCYL2, ALDOA, ATP4B, ATP6VOC, AXIN2, B4GALT7, B LVRB, C1QA, CACNA1B, CACNA1H, CAMKK2, CBLB, CCR2, CD46, CDC25B, CDC7 , CDH15, CDKN1A, CDKN2B, CHRM2, CLDN5, COQ6, CUL1, CYP21A2, CYP2S1, D CTD, DHRS4, DLAT, DTYMK, ENPP3, EP300, ERBB4, F2RL1, FBXW11, FCGR2B, FGF18, FLT3, FUT1, G6PC, GNAI2, GNG3, GPAM, GRIN2D, HADHB, HAO2, HARS 2, HMGCL, HNF4A, HSD17B2, HSP90B1, HYAL1, IFNA5, IFNGR1, IL11, IL28R A, INHBA, INPP1, ITGA5, ITGAD, ITGB6, LAMC1, LIPG, LRP6, MAGI3, MAN1A 2, MAP3K6, MAPK10, MAT1A, MPDZ, MYL9, NFATC1, NTF4, OR10A2, OR10AG1, OR10G4, OR14C36, OR11I1, OR1L8, OR2L13, OR2T4, OR51B2, OR5AU1, OR5K1 , OR6M1, OR8J1, ORC5L, PANK2, PARD3, PCCB, PER2, PFKP, PGK2, PLA2G2F, POLA1, POLR2D, PRKY, RASGRP2, RDH5, RFWD2, RPIA, RPN2, SEMA4A, SETD1 B, SH2D1A, SMPD1, SNAI2, SPRED2, SRD5A2, SSH1, STK11, TCIRG1, TGFA, T M7SF2, UBE2L3, ZNRD1, ATP6VOE1, HLA-DRB3, PRICKLE2
Negative_14651	AMH, CRK, GAA, LEP, LPL, VCL, ABL2, ACAA2, ACADL, ACLY, ACSL6, ACSM2A, ADH4, ADSSL1, ALOX15, AMHR2, AMPD3, APOA1, ARG1, ARPC4, ASIP, ASMT, B 3GNT5, BCKDHA, BHMT, BPGM, CD34, CDK6, CLCF1, COL3A1, COL5A1, CRKL, C XCL13, CYP11A1, CYP2E1, DDHD1, DGAT2, DGKE, DHODH, DOLPP1, DRD2, ENT PD3, FGF8, FLT3LG, GALC, GALNT13, GALNT9, GGT1, GRIA3, HAO2, HLA- DRA, IQGAP3, LAMB3, LRP5, MAD1L1, MAML3, MAP2K5, MAP4K1, MGLL, NEU4, NFATC4, NKX6- 1, NME7, OPLAH, OR14A16, OR1L6, OR1M1, OR2T29, OR4D1, OR51I1, OR5H6, OXSM, PDE4A, PHKA2, PIGX, PIM1, PLAUR, POLR2H, PPA2, PPP2CA, PTCRA, P YGM, RIPK1, ROCK2, SEMA3D, SEMA3G, SETD2, SETDB1, SH3BP2, SLC27A5, S NW1, SOCS2, SPTAN1, SSH1, ST8SIA1, STAT4, TAS2R10, TAS2R40, UCK1, UG DH, ATP6VOA4, MAPKAPK5, SERPINE1, SUV420H1
Negative_14652	C3, C4B, CAT, CFH, DBI, DCN, FER, FH, FOS, IL8, KDR, MIF, PTS, SYK, AACS, AADAT, AFMID, ANAPC7, APOA2, ARPC1A, ATP2A1, AXIN2, CACNA1B, CACNG4 , CALML3, CD40LG, CDKN1A, CHR1, CHRM3, CHRM5, CLDN16, COL6A1, CSAD, C SF1, CTBS, DGAT1, DGKB, DHRS4, DHRS9, DHX58, DOLPP1, DUSP10, EFN2, E NO3, EPB41L1, EPRS, ESAM, FCER1G, FCGR2B, FECH, FUT7, FZD9, GANC, GCN T2, GGCX, GSTM4, GUCY2C, HPSE2, HSD17B3, HSD17B8, HTR7, ICAM1, IDH1, IFNA14, IFNAR1, IL28RA, IL3RA, ITGAL, KLRC4, MAP3K2, MAP3K6, MCM3, M FNG, MGAT4A, MYH2, NEUROD1, NFATC2, NNMT, OGDHL, OR10G2, OR2W1, OR4L 1, OR5AR1, OR5V1, P2RX1, PDXK, PIK3CA, PIM1, POLR3H, PPAT, PPP1R3C, P PP2R2C, PPP5C, PRKAB2, PRKAR2B, PRPS1, PSME1, PYGL, RASGRP4, RBL2, S DC1, SEMA3F, SESN2, SESN3, SMAD1, SMPD4, SORBS1, SPAM1, STX3, STX8, T CF7L2, TJP2, TKTL1, TNFRSF4, TOLLIP, TSTA3, TUBA3E, UGT2B4, UPP1, WN T2B, GABARAPL1, SUV420H1, TNFRSF13B, TNFRSF17, TNFRSF1B

Negative_14653	<p>CSK, FGG, GP5, HYI, KHK, ME2, SHH, XDH, ABCC8, ACADSB, ACOX2, ACTC1, ACYP2, ADCY6, ADSL, AGPAT3, AKR1C2, APOC3, ATG12, ATP5J2, ATP6V0B, BIRC3, CACNA1C, CAMK2G, CAV3, CBR1, CCL14, CD14, CD80, CD86, CDC25C, CDS1, CNTNAP1, CXCR6, CYP27A1, CYP2F1, CYP3A4, CYSLTR2, DAPK2, DFFB, DHODH, DTX3, DUSP4, ELK4, ENPP7, EPHA3, ER01L, FGF4, FGF9, FM01, FSHB, GALC, GALK1, GALK2, GNAT3, GRIA3, GRIN2D, GSTP1, GSTT1, HARS2, HBEGF, HRH1, HSPA1B, IDI1, IFNA4, IL12RB2, IMPDH1, JAG1, LMO7, LRAT, LRP5, LYPLA1, MAPK14, MDH2, MGAT4A, MICA, MPP5, MTMR2, NADSYN1, NANP, NCR2, NFATC3, NT5E, OR10P1, OR11H4, OR13C5, OR2G3, OR2T4, OR4L1, OR4M1, OR4X1, OR51A4, OR51B4, OR52K1, OR5B21, OR5J2, P2RX3, PANK1, PAX4, PPP2R5B, PRKACB, RAB5A, RAP1B, SELP, SEMA4A, SETMAR, SLIT2, SQLE, STK3, TICAM1, TUBA3C, ULK1, VAMP2, YWHAB, YWHAE, TNFRSF12A, TNFRSF18</p>
Negative_14654	<p>C3, C8B, CTH, EGF, FAH, GAA, GSS, ID4, NNT, RB1, TKT, UBC, A4GALT, ACAD8, ACADS, ACP6, ACVR1B, ACVR2B, ADCY8, ADIPOQ, AGRN, AKR1D1, ALDH6A1, AOC2, APC2, ARNTL, ARPC3, ARPC4, B4GALT1, BPGM, BRAF, BUB1, CARD11, CBR1, CCL14, CCL19, CCNB2, CD46, CDC14B, CHAT, CHRM5, CHST13, CLDN16, CLDN8, CXCR4, CYP26C1, CYP3A7, DHDDS, DVL2, EARS2, EIF4E, EPHA7, EPRS, FASN, FBXW11, FCGR3A, FGF10, FGF5, FOSL1, FRAT2, FZD10, GALNTL1, GANC, GCLC, GMDS, GNAS, GRB2, GRHRP, HAAO, HLA-C, HMOX2, HTR5A, IFNB1, IFNGR2, IL10, IL12A, IL13, INADL, KDSR, KNG1, LIMK2, LIPA, LPAR1, MAPK14, MCAT, MCM5, MLLT4, MS4A2, MYH1, MYL7, NCOA4, NEU3, NEUROD1, NRXN2, NT5M, OCRL, ODC1, OR2A25, OR4D1, OR51A4, OR51B6, OR52B4, OR5C1, OR5L2, OR8H1, ORC4L, PANK2, PCK1, PDE7A, PGK2, PIGS, PITX2, PMM1, POLR2E, PPAP2A, PRIM1, PRKCD, PTGES, SCLY, SDHC, SMAD1, SMAD4, SMURF1, SOX17, SPHK1, ST3GAL5, SULT1A4, TGFBR1, THY1, TPH1, TUBB2C, TUBB4Q, TUBB6, TYROBP, ULK2, WNT11, WNT6, YWHAZ, ATP6V1G2, CACNA2D3, HLA-DPBI, MAP3K7IP1, ST6GALNAC1, SUV420H2, TNFRSF18, TNFRSF1A</p>
Negative_14655	<p>CGA, CSK, DBI, GH2, GLS, GSS, LSS, MTR, MYC, NLK, AASS, ACHE, ACO2, ACP5, ACSL6, ACTG2, ADCY2, ALG9, AMHR2, ARPC1A, B3GALT4, BBC3, BLNK, CCND3, CD14, CD19, CDH5, CIITA, CLDN1, CLTB, COL3A1, COL4A1, COL6A2, CPT1A, CPT1C, CREB3L1, CSNK1E, CTSL1, CXXC4, CYP11B1, CYP1B1, CYP4A22, DHDH, ENTPD3, EXTL1, F11R, F13A1, FGF1, FZD3, GGT1, GLG1, GNPAT, GSTT1, HLA-C, IAPP, IARS, ICOS, IL13, IL28RA, IL5RA, IMPA2, IQGAP2, IQGAP3, IRAK4, ITGA11, ITGA3, ITGA7, KCNB1, KCNJ11, KIR3DL3, KRAS, LIPA, LPAR1, LTBP1, LTC4S, MAFA, MAP3K1, MAP3K8, MGLL, MYH13, NPR2, NT5E, NTRK1, OR1B1, OR2T12, OR2Z1, OR4D6, OR4K15, OR5P2, OR8U1, OR9Q2, OXSM, PARVG, PCNA, PDE1B, PFKP, PFN2, PIAS4, PIK3R5, PLA2G5, POLR1C, POLR3A, PORCN, PPARA, PPARG, PRKAG3, PRPS1, RAPGEF2, SGMS1, SMC1B, ST3GAL4, SV2C, TAS1R3, TBXAS1, THBS1, TNFRSF8, TPK1, TRPM5, TUBB2A, UCP1, UGT1A10, UGT2B17, WARS, WASF3, ATP6V0D2, CACNA2D1, MAPK8IP2, TNFRSF18</p>



Negative_14656	BTC, C3, DCN, ME3, SMO, TXK, XDH, ABI2, ACADVL, ACP2, ACTG1, ALDH1L1, ANAPC11, AOC2, APOA1, APOE, APPL1, ARHGAP5, ARHGEF4, AVPR1A, B4GALT5, BMP7, CAMK2D, CCL20, CCR6, CD34, CD55, CDH3, CDS2, CHKB, COL4A1, CPT1C, CRHR1, CSNK1E, CYP21A2, CYP2E1, CYP4F3, DAAM2, DTX3L, DUSP16, DUSP9, EI24, EPAS1, FABP3, FADS2, FMO4, GBA3, GRHPR, GUCA1B, GUK1, H6PD, HTR7, ICAM2, IFNAR2, IFNK, IL12RB2, IL9R, IMPA1, IMPDH1, INHBC, IRS1, JAM3, KIR2DL3, KITLG, KLK3, KYNU, LAMC2, LIAS, LTBR, MECR, MPP5, MYD88, MYH8, MYLK2, NEUROG3, NFE2L2, NT5M, OR10A4, OR10G9, OR13C4, OR1L6, OR4N5, OR52K2, OR5D16, OR5H6, OR8H3, ORC5L, PCK2, PDE2A, PDE3A, PDHA1, PFKL, PGAM2, PIGQ, PIGU, PPP1CA, PPP1CB, PPP3R2, PROS1, PRSS1, PSENNEN, PTK2, PYCR1, PYGB, RFXAP, RIPK1, RRAS2, SAT1, SHC4, SNAI2, SOS1, SOS2, STAM2, SV2C, TAS2R1, TGFB3, THBS3, TOMM40, TUBA3C, TUBB2A, UBE2L3, UGP2, UGT2B10, ULBP3, WNT1, XCL2, CSGALNACT2, HLA-DRB5, PLA2G12B, SLC25A31, TNFRSF14
Negative_14657	AK3, BAX, DAO, EBP, HK2, ID3, IHH, IL4, LEP, ABLIM1, ACOT12, ACTA1, ACVR2B, ADAM10, ALG11, AMY2B, ANAPC7, AQP7, BCAT2, BHMT, BIRC2, CASP10, CCL26, CCR6, CD40LG, CD86, CDC25A, CDIPT, CISH, CNGA4, COL6A1, COQ5, CREBBP, CYP26A1, CYP2E1, CYP2U1, CYP3A4, CYP4A11, DDX19A, DGKG, DVL1, FARP2, FASN, FGF11, FOSL1, GGPS1, GMPS, GNMT, GP1BB, GRAP2, H6PD, HGSNAT, HIBCH, HTR2B, IDI1, IFNA16, IFNGR2, IRS2, LRAT, MAPK11, MAPK8, MASP2, MGLL, MICA, NAE1, NCF2, NCKAP1L, NFKBIB, NTRK2, OGDH, OR11A1, OR1J4, OR2A2, OR4D6, OR4M1, OR4M2, OR51G2, OR52M1, OR6B3, OR7D2, OR8J3, OSMR, PDE2A, PDE3A, PDE7A, PDIA4, PIGX, PIK3R1, PLA2G2F, PLCB2, POLR2B, PPBP, PRODH2, PROS1, PTEN, PTPRR, RFWD2, SDC1, SDHB, TAS1R3, TSHB, TSTA3, UGCGL1, UGT2A1, VAV1, WHSC1L1, CSGALNACT2, HLA-DRB3, PNLIPRP1
Negative_14658	AMH, CR1, CR2, F12, FGG, HDC, KHK, PAH, RDX, TAT, ACTG2, ACVR2B, ACY3, ADCY5, ADH4, ADIPOR1, ADRA1D, AHCYL2, ALG10, AMDHD1, ARHGEF7, ATP4B, B4GALT6, CACNG4, CAMK2B, CAMKK2, CASK, CAV3, CCNG1, CD40, CDK7, CHEK1, CHKB, CLDN9, COL1A1, COQ6, CSNK1A1, CTBS, DLL4, DRD5, EPHX1, FDPS, FGF11, FGF13, FMO5, FZD6, FZD7, GALT, GNA14, GNAS, GNPDA2, GSTA5, HAO2, IFNB1, IFNG, IFNW1, IL1A, IL22RA2, IRAK4, ISYNA1, ITGB3, JAG1, KLRK4, LCMT2, LFNG, LIPT1, MAP3K11, MPDZ, MTHFD2, MTHFR, NME4, NOS3, NOTCH3, OR10A2, OR10G9, OR10H5, OR10Q1, OR11G2, OR14J1, OR2A5, OR2C3, OR2G3, OR2M7, OR2T4, OR2Y1, OR4F15, OR51L1, OR5R1, OR5V1, OR6M1, OR7C2, OR8K1, ORC4L, OXTR, PARD3, PDE1A, PDE3A, PFKFB1, PIGF, PIK3R3, POLR3H, PPA1, PRKG1, PRPH2, PSME2, PTEN, RASA2, RASGRF2, RBL1, RCHY1, RDH16, RPS6KB2, SARS2, SEMA3B, SIPA1, SLIT2, SOS2, SPRED2, SRGAP1, SRGAP2, STAT1, STAT5B, STAT6, SYNJ2, TAS2R48, TAS2R7, TFDP1, THBS2, TSHB, TUBA1B, TYMP, VEGFB, WASF1, WNT6, XCL1, ZAP70, B3GALNT1, CACNA2D1, MAP3K7IP1, PDCD1LG2, TNFRSF6B
Negative_14659	CBL, EPO, FAS, ID4, OTC, ACADL, ACP6, ADCY1, ADSS, AGPAT2, ALDH7A1, ALOX5, ALPLP2, ALS2, AMY2B, ATP5C1, BBC3, BCL2L1, BMPR2, BPGM, CAV2, CCNB2, CD14, CD70, CD74, CIITA, CSNK2A1, CTTN, CYP1A2, CYP2E1, DAD1, DHFR, DLST, DPM3, DTX3L, DUSP10, EI24, EPHA7, F2RL3, FADS2, FMO1, FUT5, GLO1, GPX7, GRM5, GRPR, GSTZ1, H6PD, HARS2, HCCS, HEXB, HSD17B3, IL12B, IL22RA1, IL29, MCCC2, MGAT3, MYH14, NCF4, ONECUT1, OR11L1, OR13C5, OR1B1, OR2T4, OR4C15, OR4C16, OR4P4, OR52L1, PDE4B, PDE6H, PDGFRB, PDHA2, PDHB, PGAP1, PI4KB, PIGC, PIGL, PIGO, PIGS, POLD1, PPAR, PPOX, PRKCB, PTPRZ1, RBX1, RHEB, SEMA3G, SLC27A4, SLC2A4, ST6GAL1, STX12, SULT1A4, SUOX, TAP2, TP53I3, TRADD, TUBAL3, TXNDC12, TYROBP, USE1, VANGL1, XCL1, YWHAG, YWHAH, ATP6VOD2, HLA-DQA2, KIR2DL5A, TNFRSF17

Negative_14660	<p>AGK, AUH, C8G, CGN, GH2, IL6, KHK, LSS, SHH, AANAT, ACHE, ACSS2, ACVR2A, ADH5, ADIPOR1, AHCYL1, ALAS1, ASIP, ATP5G3, ATP5J2, AVPR1A, BUB1B, CARS2, CCDC6, CCNA2, CCNE1, CCR3, CD58, CDC25A, CDC45L, CDK2, CDKN2D, CLTCL1, COX10, CREB5, CSF1, CTNND1, CYP21A2, CYP2S1, DIAPH3, DOCK1, DUSP7, FGF11, FUT7, G6PC2, GALE, GALNT12, GALNT14, GCLM, GPD1L, GSTO1, HES1, HLA-</p> <p>DOB, HNF1A, HPSE, IFIH1, IFNGR1, IFT57, IGSF5, ITGAD, ITGB3, JAG1, JAG2, KLRD1, LAMB1, LCMT2, LRAT, MAD2L2, MAP2K2, MAP2K3, MAP3K5, METTL2B, MYH9, NFASC, NMNAT1, NOX1, NUDT9, OR10A4, OR11I1, OR2B11, OR2B6, OR2K2, OR4D6, OR4K2, OR51A4, OR51I1, OR51T1, OR5V1, OR6A2, OR6C3, PDE6G, PIGK, PIK3CA, PITX2, PLA1A, PLOD3, POLD1, PPBP, PSAT1, PTGS2, RASSF1, RPS6KA1, RPS6KA6, SETD1A, SKP2, SQLE, SULT1A2, SUV39H2, TAS2R5, TCF7, TGFBR2, TLR2, UCKL1, UGT2B10, UPRT, VAV3, VEGFC, WARS2, WBCSR17, WBCSR22, WNT2B, CSGALNACT1, HLA-DPA1, ST6GALNAC6</p>
Negative_14661	<p>ATM, CKB, GLA, IVD, MTR, PGD, PGF, PGP, ABLIM2, ADH1B, ADH7, ALG1, AMPD3, ARHGAP5, ATF2, BAI1, BCKDHA, CALML5, CCL13, CCL27, CD38, CD72, CDC25B, CDH3, CDKN2D, CHD8, CHEK2, CIITA, CLDN10, CXCL16, CYP17A1, CYP1B1, CYP4A11, CYP4F2, DHRS4, DNMT3A, EARS2, EGFR, ENO1, ENTPD4, ESAM, FBXW11, FOXA3, FPGT, G6PC, GALNTL4, GANAB, GCLC, GLUD2, GSTM2, GSTP1, HLA-</p> <p>G, HMOX2, ICAM2, IFNA4, IFNA8, IL13RA1, IL25, IL9R, ISYNA1, ITGAL, KIR2DL4, KLRC3, LCP2, LIMK1, LYZL1, MAP3K8, MAPK14, MAT2B, MMP7, MYH7, NCOR1, NEGR1, NFAT5, NMNAT3, NOTCH2, NPR2, NRXN3, OCLN, ODC1, OR2T2, OR4A15, OR51G1, OR52B4, OR52N1, OR5B21, OR6T1, OR8G1, OR8K5, OSMR, PDPK1, PFKFB1, PGM2, POLR2L, PRKX, PRPH2, PVRL3, RFXANK, SCP2, SELPLG, SEMA7A, ST6GAL1, STX3, STX6, SULT1A1, SV2B, TGDS, THBD, TOLLIP, TPK1, TSC1, TSLP, UGT2B4, UNC5C, CACNA2D2</p>
Negative_14662	<p>AK5, AMH, AUH, CFD, EZR, F10, HGD, ID3, MYC, PML, SI, TNN, UBB, ACSL6, ADCY6, ADH7, ALDH1A2, ALDH3A1, ALDH3B2, ALOX12, ANAPC5, APBB1, BCAT2, BHMT, BIRC2, BUB3, CCKBR, CD226, CD48, CD55, CHRM2, CKS1B, CNTN2, CPOX, CRB3, CYP4A22, DLL3, DTX3, EPHB4, FM05, GADD45G, GALNTL4, GLYCTK, GSTK1, GUCY1A3, HPSE, HSD17B1, IDUA, IFNA21, IL1A, IL20, IL23A, IPPK, ITGB1, KAT2B, LCP2, LRP5, MAP3K11, MASP1, MCM5, MGAT4A, MINPP1, MMP1, MTR2, MYH4, MYLK2, NAE1, NAGS, NAT6, NUDT9, OCRL, OR10A4, OR10A5, OR1D2, OR2B6, OR2W1, OR4F4, OR51B4, OR52N2, OR56A4, OR5D18, OR8J3, OR9Q2, PANK3, PDGFRB, PECAM1, PEMT, PGAP1, PIGK, PLCB4, PLXNC1, POLE4, POLR1C, POLR2A, PPP1CA, PPP1R3C, PRKAB2, PRKCG, PTCH2, PTGES, PYCR1, RFX5, RHOA, SEMA4B, SMC1B, SOX17, SPCS1, SREBF1, STMN1, THBD, TNFSF18, TNFSF4, TOMM40L, UGT2A1, UGT2B17, UPP2, USE1, WNT4, HLA-DRB4, TNFRSF13B, TNFRSF14</p>
Negative_14663	<p>AGL, BCR, GGH, GH2, ID2, IL6, ME3, PGF, PRL, AASS, ABL1, ACOT12, ACP6, ACSM4, ARAF, ARHGEF4, ATG7, ATP2A1, BET1L, BLVRB, BMP8B, CACNA1E, CACNA1G, CACNB3, CBLB, CCL16, CCL2, CCL3, CD244, CD40, CD70, CD8A, CPT1B, DGKI, DHX58, DLST, E2F5, EIF4E, FBP1, FBP2, FGF17, FLAD1, FZD9, GCNT1, GLYCTK, GOT2, GRIN2A, GSTA2, GSTA3, HMOX1, HSD17B1, IFNW1, IL9R, INHBE, ITGB8, KLRC2, LIPT1, LTBP1, NAMPT, NOX1, NOX3, NUDT9, OR13G1, OR14C36, OR1D2, OR1G1, OR1K1, OR2B11, OR2M7, OR2T8, OR4C46, OR4K15, OR51B4, OR7C1, OR7D4, OR8D1, PDGFA, PFKFB4, PIGX, POLR2D, POLR3D, PPP1R3D, PPP2R5A, PRKAR2A, PSENEN, PTGER1, RAB23, RBL1, RENBP, RND1, SED8, SIPA1, SLIT2, SOX17, TAS2R8, TIRAP, TNFSF11, TOLLIP, TRAF6, TUBB4, UCK2, UGT1A10, UNC5C, VEGFC, WNT8B, WNT9B, YARS, YWHAH, ATP6V0A1, B3GALNT1, CTNNBIP1, PAFAH1B3, PDCD1LG2, PNLIPRP2, TNFRSF1A</p>

Negative_14664	<p>CBL, DDC, F10, IL2, KMO, LYN, PLN, ABCC8, ABLIM1, ABLIM3, ADRA1B, ALDH1B1, ARHGEF6, ATG7, ATP5L, BNIP1, C5AR1, CACNA1D, CASK, CD48, CD55, CD79A, CD99, CFTR, CHRM2, CHST11, CLDN22, CMBL, COASY, COL4A2, CRKL, CRY2, CSNK1D, CTNNA1, DDX23, DKK2, DKK4, DLST, DNMT3L, DUSP4, ENO2, FADS2, FGF19, FLOT1, FSHR, FUT2, G6PD, GANAB, GLI1, GNA11, GPD2, GRPR, GSTM4, GSTO2, HLA-C, HNF4G, HPRT1, HPSE, HSPA8, HTR7, HTRA2, ICAM2, ICOS, IDI2, IL17RB, IL21R, IL22, IL23R, IL2RA, IL8RB, INHBC, JAG1, KIR2DL1, LAMC3, LCP2, MAN2A1, MAPT, MBL2, MCM5, MOV10L1, NME7, NR1D1, OR10Q1, OR2A2, OR2G2, OR2T11, OR4F6, OR4K1, OR4N4, OR51D1, OR52B4, OR52N4, OR6K3, PARVG, PDE11A, PDE7B, PDHA1, PFKFB1, PIAS2, PIK3CG, PMM1, PMVK, PNPLA3, PPM1A, PPP2R5D, PRPS1, RAC3, RAP1A, RASA2, SDHD, SELPLG, SEMA3C, SEMA4D, SESN2, SH2D2A, SLC27A5, SNAI2, SOS2, STAM2, SYNJ2, TAS2R38, TAS2R41, THBS4, TKTL1, TLR2, TRHR, TRIP10, TUBA1C, VEGFA, YOD1, CTNNBIP1, HLA-DRB3, HSP90AA1</p>
Negative_14665	<p>AK2, BAX, BCR, C7, CD6, CS, F5, HDC, IL2, IL6, JUP, MPI, SCD, ACSL5, ACTN2, AHCY, AHCYL1, AKRIC2, ALG11, AOX1, APRT, ATP2A2, ATP6V1D, B3GAT2, B3GNT3, BCKDHA, BNIP1, CAV2, CD48, CDH4, CDK2, CHEK2, CLCA4, CLDN18, CMAS, CPT2, CRY1, CSNK1G3, CXCL5, CYP11A1, DDOST, DDX18, DEGS2, DOT1L, E2F4, EFN1, ENPP2, EPHA7, FADS2, FBXW11, FCER1G, FGD3, FGF14, FGF7, G6PC, GAMT, GANC, GGT1, GGT5, GNAT3, GSTA4, HIF1A, HNF4G, HSD3B2, IFNA10, IFNAR2, IMPA1, INPP4B, IPMK, ITGAX, LAMB4, LCMT2, LIMK2, LTBR, MYH10, NCKAP1L, NCR3, NFATC4, NKX2-2, OR13C9, OR1L3, OR52L1, OR52N1, OR5L2, OR8D2, OR9G1, OR9I1, PANK3, PDE2A, PFKFB1, PI4KA, PLD1, PLOD2, PLTP, PPAP2B, PRNP, PTCRA, QARS, RPS6KB2, SEMA3F, SHMT2, SLIT1, SNAI2, STX3, SUCLG1, SYNJ1, TACR3, TAS2R49, TAS2R7, TLN2, TNFSF11, TRHR, TSHR, VANGL1, VAV2, VEGFB, ZBTB16, MAPKAPK3, SERPINA5</p>
Negative_14666	<p>ADC, LEP, MAG, MUT, MYC, OAT, OGT, RB1, AASDH, ACOT11, ACOX3, ACVR2A, ADCY2, AMPD1, APOE, AQP7, ARPC2, ARSE, ASAH1, ATP12A, ATP5B, B3GALT4, B3GAT2, BMP8B, BPGM, BPNT1, C9orf95, CALML3, CCL1, CCL14, CCL24, CCR9, CD34, CERK, CFTR, CHRM3, CLDN15, CXCL6, CYP2U1, CYP8B1, DHDDS, DUSP10, EHMT1, EPB41L3, FARS2, FGF10, FLT1, FTMT, FZR1, GABARAP, GALK2, GALNT7, GCH1, GDE1, GGT1, GJD2, GLS2, GNA14, GNAQ, HCCS, HEXA, HYAL1, IFNA10, IGFBP3, IKBKB, IL18, IMPDH1, IPMK, IQGAP1, JUND, LARS2, LHGR, LRP6, MAPK12, MKNK2, NCOR2, NEFL, NLGN3, NME2, NMNAT3, NPR1, NR5A2, NUDT9, OR10A6, OR13A1, OR2AG1, OR2AG2, OR2G2, OR4M1, OR52M1, P4HA2, PDE3B, PDXP, PGM1, PIGW, PIP5K1A, PISD, PLXNA2, PNMT, POLR2C, PPM1D, PRKAG2, PRKAG3, PRKCA, PTCH2, PVRL4, PYCR2, SEMA3F, SEMA3G, SESN1, SLC12A2, SMAD2, SMAD7, SRGAP3, STX1A, SULT2B1, SUV39H2, TACR3, TAS2R42, TGFBR1, TLR5, TPMT, TSNARE1, TSTA3, TUBA8, TUBB4Q, TYK2, TYMP, UGCG, VAMP3, WNT8A, WNT8B, ATP6V0D1, ATP6V1G2, HSP90AB1, PRICKLE2, ST6GALNAC5</p>
Negative_14667	<p>AK7, EGF, ID1, ID3, LPL, OAT, TK1, UBB, ACAA2, ACADS, ADH7, ADIPOR2, AK3L1, APOA1, BCAT1, BDH2, CACNA1A, CACNA1G, CACNA1H, CBLB, CD47, CDC25A, CDC42, CDC7, CD01, CFL1, CHEK1, CHUK, CNDP1, CPS1, CSNK1G3, CTSP2, CYCS, CYP2A6, CYSLTR1, DAPK3, DLAT, EFNA3, EPHA6, FM03, G6PC, GALNTL2, GAS1, GCAT, GCH1, GGT5, GGT6, GGT7, GLB1, GLS2, HGSNAT, IL12A, IL19, IRAK1, IRS4, LIFR, MAGI2, MCCC1, MTMR1, MYH4, NOS1, NRG2, OR1L8, OR2T8, OR4F15, OR52B4, OR52N2, OR6T1, OR8A1, PAK3, PFKFB1, PIGK, PIK3C2G, PISD, PLCG1, PLK1, PMM2, POLR3K, PPP1R3A, PPP1R3B, PPP2R5C, PRKAR2B, RALBP1, RALGDS, RARS2, RBKS, SEMA3B, SEMA4D, SETDB1, SHMT1, SLIT1, SMPD2, STAT6, TBK1, TOMM40, UNC5D, UPB1, WNT4, XYLT1, ATP6V0A2, ATP6V1C2, HLA-DRB4, ST6GALNAC6</p>

Negative_14668	BCR, DCT, FES, FOS, GSN, HK3, LCT, TNC, ACACA, ACAD9, ACSS3, ACVR2A, AKR1B1, ALG13, AMPD1, AMPD3, ANAPC11, APLP1, ARHGEF1, C1QB, CD86, CDC25A, CDKN2A, CDKN2C, CISH, CLTA, CXCR4, CYP19A1, CYP2A7, CYP2C19, CYP2S1, CYSLTR1, DAPK1, DDIT3, DDX52, DEGS2, DFFA, E2F3, ENTPD2, ESPL1, FCGR2B, FGF19, FGF2, FTCD, FZD8, GALNTL1, GJD2, GRLF1, GSTA5, HMGCS1, HMOX1, HSPA1B, IFIH1, IFT57, INPP4B, ITPKA, LRP5, MAP3K5, MASP1, MD2, MGAM, MMP1, MOV10L1, NCR1, NCR2, NFATC2, NFATC4, NT5E, NT5M, OCRL, OGDH, OR10H3, OR12D3, OR1M1, OR2A4, OR2A42, OR2T34, OR4D2, OR51V1, OR6C75, OR8K1, PFKFB2, PLAUR, PLCG1, PLTP, POLD3, PPBP, PPP3R2, PRKAR2A, RAC3, RALBP1, RPS6KB2, RXRB, SARDH, SDC2, SH2D1B, SHC1, SKP2, SPAN1, ST3GAL3, TRPC1, TUBA1B, TUBA3E, TUBB3, UGT2B7, ULK3, ZFYVE16, ATP6V1G3
Negative_14669	C1S, CFH, DCN, GH1, LPL, RDX, ABP1, AGRN, ALDH1B1, ALDOC, ALOX12B, ATP5E, ATP5G2, ATP5I, AXIN2, CACNA1C, CACNA1E, CACNG4, CCR9, CD19, CD34, CD59, CDC25C, CDKN2D, CEBPA, CER1, CHAD, CHST13, CISH, CTTN, CYP26C1, CYP3A4, DFFB, DGKI, DHFR, DRD1, DRD2, EHMT2, ENTPD2, EPHA2, ERBB3, ETS1, EXTL3, FBXW11, FGD3, FGF10, FGF22, FSHR, GALNT3, GART, GJD2, GNA15, GNAI2, GNAO1, HCCS, HNMT, HTR5A, IL15, IRS1, ITGAV, ITGB6, JAK2, KCNJ11, LFNG, LTBR, MAD2L1, MAGI3, MIOX, MTMR2, MYH6, MYH7, MYH9, NFATC1, NLGN1, NPR2, NR1D1, NRG3, NRXN3, NSDHL, OR13A1, OR1M1, OR1N2, OR2C3, OR2T2, OR52M1, OR5A2, OR5AS1, OR5L2, OR6C2, OR7C2, OR8B4, PAK6, PARVB, PCNA, PDE6H, PDX1, PERP, PGAP1, PHKA2, PIGF, PLEKHA8, POLD4, P OLR2H, PPP1CA, PPP2CB, PRKACA, PRKAR1A, PTPRF, RASSF5, RHEB, SEMA3D, SIPA1, SLC12A2, SLIT2, SOAT2, SOX17, SPI1, SRGAP3, STAT5A, SUCLG1, SULT1E1, TGFB3, TKTL1, TLR5, TNFSF4, TUBB3, TYROBP, UGT2A3, UNC5C, UPB1, WASL, WNT3, ATP6V0A1, ATP6V0D2, PAFAH1B3
Negative_14670	EBP, F8, HDC, ID4, IL6, SDS, ACAT1, ACP1, ACPP, ACTA1, ADCY3, ALDH1A2, ALG1, ALOX12, AOC2, ARPC2, ATP5C1, ATP5G2, BAI1, CACNB2, CCL7, CCNA2, CCNH, CD274, CDC14A, CDH5, CDS1, CDS2, CLCA2, COL11A1, COL4A6, CUL1, CYP17A1, CYP19A1, CYP2A13, CYP2B6, DPAGT1, EDAR, EFNB2, EPHA4, EPHB6, EPOR, ETS1, FDFT1, FGF18, FGF19, FGF22, GNA15, GNG13, HHEX, HSD3B7, IFNG, IL13, IL18RAP, IL22RA2, INMT, ITGA1, JAM3, LIMK2, LTBR, MAD2L2, MGST1, MYH13, NCR1, NME4, NUDT5, OR10G4, OR10P1, OR10T2, OR2B11, OR2F2, OR2T2, OR4C16, OR4K13, OR51F2, OR5P2, OR6B3, OR6X1, OR8D2, OR9A4, ORC6L, P2RX7, PAPSS1, PDE10A, PDE6H, PEMT, PER3, PFAS, PIK3C2A, PLA2G10, PPBP, PPCS, PRDX6, PRIM1, PTDSS2, PTPRR, PVRL2, RARS2, RDH16, RPS6KA6, RUNX1, SCP2, SESN2, SLC9A1, SMAD6, SOCS4, SRGAP1, ST3GAL4, STAT3, TAS2R10, TAS2R13, TIAM1, TNFRSF8, TPI1, TRPM5, TUBB2C, ULBP1, UPB1, UROC1, USE1, WASF1, WNT5A, ATP6V1B1, ATP6V1G2, SERPINF2
Negative_14671	C8B, F2, LTB, MPZ, ACVR1C, ADCY8, ADORA2B, ADRA1A, ALDH3A1, ALDOC, ALG12, ALOX15B, ARAF, ARNT, ATP2A3, ATP6V0B, B3GNT4, B4GALT1, B4GALT2, BPNT1, BUB1, CACNA1F, CARS2, CD226, CD80, CHDH, CHST12, CLDN8, CNTNAP2, CPOX, CRLF2, CSAD, CTBP1, CXCL12, CXCL3, CXCR4, CXXC4, CYP2J2, CYP3A4, DCXR, DGKG, DUSP3, EFNA4, GCAT, GRIN1, GRM5, GSTA3, HAP1, IDI1, IGF1R, IL22RA2, IL28RA, IL4R, IL7R, IL8RB, IPPK, ITGB1, ITPKA, KLKB1, LAMC2, LDHAL6A, MAOB, MAP3K6, MCM4, MCM7, MGST1, MYH1, MYH8, MYH9, NCOA4, NR1H3, OR4X1, OR5B21, OR5D18, OR6K6, OR8A1, OR8B8, OR9K2, PDE8B, PGAM1, PIGB, PIP5K1B, PLCB1, POLR2A, PPBP, PPP2R5B, PRPS2, PRSS2, PTPRC, PYGB, RALBP1, RAP1B, SARDH, SAT2, SLC33A1, SOCS7, TAS2R41, UGP2, VEGFC, MAPKAPK3, TNFRSF14

Negative_14672	<p>AGL, DDO, MUT, PGP, PLG, RPE, A4GALT, ABL1, ADRB1, ANAPC1, ARAF, B4GALT5, BBC3, BBOX1, BCAT1, BDNF, CACNA1A, CCL24, CD28, CD82, CLCA4, CLDN15, COASY, CSDA, CTPS, CXCL10, CXCL9, CXCR4, CXXC4, CYP1A2, CYP2C9, CYP3A5, DAD1, DGKA, DKK2, DTX3, EHHADH, ENPP1, ENTPD1, EPB41L3, EXOC7, EXTL1, FCER1G, FCGR2B, FOSL1, GALNT3, GFPT1, GLI3, GNA14, GSTA5, GSTM1, HCLS1, HEMK1, HHIP, HLCS, IDH3G, IFNW1, IL20, IL29, IL2RB, IMPA1, INHBB, ITCH, KCNB1, LMO7, MAD1L1, MAN1B1, MAP4K3, MBL2, MNX1, NOTCH2, NR1D1, NT5C, OR10AD1, OR1A1, OR2AE1, OR4A15, OR4A16, OR4A5, OR51A4, OR52B4, OR52E2, OR5C1, OR6Y1, OR8K5, OR9A2, PAK6, PANK2, PDE1A, PGM3, PHKA2, PI4KA, PIK3CA, PIP4K2C, PLA2G10, PLAU, PLOD3, POLA1, PPP2R5D, PPP3CB, PRDX6, PTPRR, RAC3, RPRM, RPS6KA3, SEMA3A, SHC3, SOAT2, SPHK2, SULT1A1, SV2A, TAS2R42, TDO2, TJP3, TPK1, TRIP10, VAV3, VEGFB, VKORC1, WNT10A, ZNRD1, ATP6V1E1, PNLIPRP2, SERPIND1, SERPING1, TNFRSF10A, TNFRSF13B</p>
Negative_14673	<p>AGL, BID, CD6, DBT, JUN, NPL, RDX, SP1, ABP1, ACADSB, ACTN4, ADCY2, ADSL1, ALDH1A3, ALG10B, ANAPC7, ARG1, ARHGEF7, C4BPA, CACNG4, CALML6, CAMKK1, CAMKK2, CANT1, CCR2, CCR8, CD27, CD72, CHEK2, CMPK1, CNTNAP1, CTNNA3, CYP8B1, DDX50, DHDDS, DHODH, DLST, DPM1, DTX1, DUSP2, EDN1, EIF4B, EXOC7, FBXW11, FDPS, FLT1, FUT4, FUT7, GCLM, GLO1, GMPPA, GNPA1, GNRH1, GPAA1, GPD2, GRIN2D, HLCS, HNF1B, IGSF5, IL18, IL18R1, IL8RB, IRAK1, LAMB1, LEF1, LIPT1, MAOA, MAP2K5, MAP3K1, MAP3K7, MARS, MYH10, MYH7, MYH8, MYL5, NAT6, NCSTN, OR10G9, OR10H1, OR1S2, OR2AE1, OR2D2, OR2H2, OR2T4, OR2T5, OR4A5, OR4C16, OR4C6, OR52A1, OR5AS1, OR6Y1, OR9G1, P2RX3, PIAS3, PIGK, PLXNB2, POLR2K, PPAP2C, PPARA, PPBP, PPP2R1A, PRKAA2, PSENE1, PTCH2, PYCR1, SCD5, SETDB1, SHISA5, SOS2, ST3GAL5, TAS2R8, THBD, UPRT, VAMP4, VCAM1, WASF3, MAPK8IP2</p>
Negative_14674	<p>AK5, CSK, EZR, GGH, HYI, KDR, LHB, SRM, TH, TNF, TYR, ACAT2, ACY3, AKT2, AMDHD1, ANAPC11, ATP5B, ATP5J2, B3GAT2, BDNF, BST1, CACNG3, CALML3, CASP3, CCR5, CDKN1C, CDKN2B, CLDN14, CTBP2, DPM2, DUSP14, EI24, EIF4E, ENPP1, FGF21, FLT1, FM04, FZR1, GSGT1, GIT1, GLS2, GLUL, GSTO2, HMOX2, IDH3A, IL12B, IMPA1, KLRC2, LAMA3, MAP3K11, MCCC2, MCM7, MMP9, MYH2, MYL5, NCAM2, NCSTN, NEFH, NFATC2, NLGN1, NPR2, NUDT8, OCLN, OR10G2, OR10S1, OR2T29, OR2T5, OR4C15, OR4C6, OR52N5, OR6K3, OXCT1, P2RX7, PDE4B, PDGFB, PDGFRA, PFKL, PGLS, PIK3R1, PIP4K2C, PLAT, PLTP, PRKAR2B, PRKY, PRODH, PRPS1, RAF1, RASGRP2, RDH11, RDH16, RETSAT, SCAMOL, SH2D1A, SREBF1, SULT1E1, SUV39H2, TBXAS1, UGCGL2, UGT2B11, ULK1, WNT8B, YES1, YWHAH, CACNA2D3, CSNK1A1L, MAPK8IP2, ST6GALNAC3, SUV42OH1, TNFRSF11B</p>
Negative_14675	<p>ADC, CAT, CBS, CS, F11, FAS, HK3, MVK, TFG, ABP1, ACP5, ADCY8, AGPAT6, AKT3, ALG1, ALG10, ALPI, AMPD2, APPL1, ARRB1, ASNS, B3GALT2, BCL2, BMPR1A, BRAF, BUB1, CACNA1A, CACNB1, CD226, CDC45L, CDK5, CHPT1, CHRM2, CHRM3, COMP, COQ7, CRLS1, CSF2, CXCL16, CYP26B1, CYP2C8, CYSLTR2, DD2, DEGS1, DGKD, DGKI, DKK4, DTX3, EPAS1, EPRS, ESAM, FBP2, FM01, FZD7, GAB1, GAL3ST1, GALNT2, GALT, GCAT, GRAP2, GUCY2C, HAGHL, HIBADH, HNF4G, HSD11B1, HSD17B3, HTR2B, HYAL1, IDI1, IFNA14, IFNA6, IL12RB2, ITGA5, ITGAV, ITPKA, KIR2DL3, LLGL2, MAP2K6, MAP3K1, MS4A2, MTMR1, NAGS, OLAH, ONECUT1, OR10A2, OR10K1, OR10T2, OR14I1, OR1G1, OR1Q1, OR2T33, OR4F5, OR51B2, OR52J3, OR56A1, OR5AK2, OR6C1, OR6C4, OR6C70, OR6K2, OR8G1, OR8H3, ORC5L, OXCT1, P2RX5, PFKFB3, PGM2, PIM2, PLCD1, PLCZ1, POLR2D, PPP2R2C, PTGFR, QARS, RAB5A, RALA, RDH5, RPN1, SAT2, SCAMOL, SCLY, SHC4, ST3GAL5, ST6GAL1, STAM2, STX8, TAS2R1, TAS2R38, TAS2R41, TGFB1, TICAM1, TKTL1, TNFRSF8, TP53I3, TUBB2B, TUBB3, TXNDC12, UGT2A1, YWHAH, ATP6V1C1, ST6GALNAC3, TNFRSF11B</p>

Negative_14676	ADC, ASL, ATM, BID, C7, CP, DBH, DCT, FGG, GAA, IL6, IL9, LAT, LPO, MAG, R PE, ACAA2, ACAD9, ACADL, ACADM, ADAM17, ADSS, AKT3, ALAS1, ALDH7A1, A LG10, APOE, ARPC3, BCKDHA, BMP7, C4BPA, CACNA1E, CACNA1I, CASP3, CCN E1, CD58, CD99, CDC14A, CFL2, CHAD, CHR1, CLTCL1, CMPK2, COL6A1, COQ7 , CREB3L1, CRY2, CXCL3, CYP17A1, CYP2C19, CYP2C9, CYP2S1, CYP3A4, DO T1L, EFNA4, ENPP7, F13B, FARS2, FASN, FGD1, FGF11, FPGT, FTMT, GAPDH, GDE1, GDF6, GNRH2, GSTM3, GSTZ1, GUCY1A2, GYS1, HAAO, HAP1, HHIP, HSD 17B1, HSPA1B, HTR2C, HTR7, IDUA, IGSF5, IL11, IL1R1, IL3RA, IL5RA, IQ GAP2, ITPK1, KDSR, KLRD1, LAMB1, LDHD, LRAT, MAN1A2, MARS2, MYH7B, MY H9, NFATC1, NMNAT2, NOD1, NOS1, NR1H3, ONECUT1, OR10G2, OR10Z1, OR13 C2, OR1D2, OR4D5, OR5B17, PDE3A, PDE3B, PDK1, PGAM1, PLA1A, PLAT, PNP T1, POLD1, PPCS, PPM1B, PPP1R1A, PPP2R5C, PPT1, PSAT1, PTK2, PYGB, RA B5A, RAP1B, RBPJL, RERE, ROBO2, RRM2B, SEMA3A, SFRP1, SGPP2, SMAD9, S OCS7, SULT2B1, SV2B, TALDO1, UBE2K, UCP1, WNT5A, MAPKAPK2, SERPING1 , TNFSF13B
Negative_14677	BTC, DCK, FGB, GH2, SRM, TXK, ACVR1B, ADCY4, ADH4, ADIPOQ, ADRB3, AGRN , AHCYL2, ALDH2, ANAPC2, APLP1, APOA5, APOE, ASMT, ATP5G2, ATP5L, BDH 2, BHMT, BLVRB, BMP4, CACNA1E, CAMK2G, CASP10, CASP9, CCNB2, CCR5, CD 80, CHR1, CHSY3, COL2A1, CRLS1, CTNNA1, CYP21A2, DDIT4, DDX41, DGUOK , DNMT3A, DVL1, DVL2, ENTPD5, EPOR, ERO1L, EVI1, FABP1, FBXW11, FGFR1 , FLT3LG, FPGS, FUT6, FUT7, GBA3, ICOS, IMPA2, IMPDH1, INPP1, IQGAP2, KLRC2, LALBA, LYZL1, MAP2K5, MBL2, MMP9, MRAS, MYLK3, NADK, NEFH, NOT CH2, NRP1, NSDHL, NUDT5, OGDHL, OR10A5, OR10Q1, OR10V1, OR13J1, OR2B 2, OR2T12, OR51A7, OR52N4, OR6C70, OR6F1, OR8D4, PANK1, PDE1C, PFN4, PGM2, PIGS, PIK3C3, PIM1, PMVK, POLR2I, PPP2R2D, PRKAG1, RARS2, RBL2 , RPS6KB1, RRM2, SETD7, SHC2, SMURF2, STAT5B, SV2C, TIRAP, TKTL2, TRH R, TUBB6, UGT2B28, UNC5C, WNT8A, XIAP, ATP6V0D2, ST6GALNAC6, TNFRSF 17, TNFRSF18
Negative_14678	AK1, AK7, C2, C3, CTH, F7, HAL, ID3, LHB, TPR, ACSL4, ACSL5, ACTN1, AK3L 1, ALAD, ALDOB, ALOX5, AOC3, APOC3, APOE, AXIN1, BMP6, CACNG1, CCKAR, CCL27, CCL5, CD70, CD82, CDC16, CDO1, CHR1, COL1A1, CREB3L3, CRY2, CS F1R, CXCL2, CXXC4, CYBB, CYP11B2, CYP26B1, DFFB, DOT1L, DUSP1, E2F4, EFNA1, EFNB2, EGLN1, ENTPD3, FABP1, FARSB, FCGR2B, FGFR4, FMO5, GALN T11, GALNT8, GATM, GLS2, GNA14, GRIA1, GSTP1, GUCY2D, HDAC1, HRAS, HT R7, IL3RA, INADL, JUND, KIR2DL2, KLRC4, KLRD1, LALBA, LMO7, MCEE, MDM 2, MGAT3, MGLL, MOV10L1, NCR2, NPR1, NUMB, OR10X1, OR12D3, OR1B1, OR1 E2, OR2A5, OR2AT4, OR2T12, OR4S1, OR51A7, OR52I2, OR52L1, OR5I1, OR6 B3, OR7G1, OR8B12, ORC6L, PCYT2, PDE7A, PFKFB4, PFKP, PLOD3, POLE3, P PAP2B, PPBP, PPM1A, PRDX6, PRKAR1A, PRKCQ, PSEN2, RARS2, RASGRP1, RP N1, RPS6KA3, RRM2B, SDC2, SEMA4G, SENP2, SETD2, SGMS2, SMAD2, TAP2, T GDS, TOLLIP, TRHR, TUBA3C, TUBA8, TUBB2C, UGT2B4, WHSC1L1, WNT2, WNT 5B, YARS2, YWHAH, ZMAT3, CTNNBIP1, EIF4EBP1, ST6GALNAC1
Negative_14679	BCR, FYN, GHR, SMO, TNF, VCL, WAS, ACP5, ALCAM, ARG2, ARPC2, ARSA, ATP1 3A2, B4GALT1, BNIP1, BTRC, BUB1B, CAMK2B, CCL1, CCL14, CHUK, CMAS, CN TN2, COQ7, CRB3, CSAD, CXCR3, CYP2B6, CYP2E1, DNMT3B, ENPP3, EPB41L2 , EREG, FBP2, FGD3, FLT1, FOSL1, G6PC2, GABARAP, GALNS, GFAP, GNAZ, GR AP2, GRIN1, GSTM1, HIF1A, HNF4A, HSP90B1, HSPA1B, IDUA, IGFBP3, IL12 RB2, IL18RAP, IL19, IL2RA, KCNQ1, LAMB2, MDM2, MGST2, MNX1, MTHFR, MY H15, MYH3, MYLK3, NAT5, NCOR2, OR10K1, OR10T2, OR2A2, OR2T34, OR3A3, OR4K2, OR51I2, OR52N2, OR52W1, OR8J1, OR8K3, OR9A2, PDE10A, PIGC, PI GK, PLOD2, POLA1, POLE2, PON1, PPAP2A, PPP2R2A, PPP2R2B, PRLR, PSEN1 , PTGDS, PTTG1, RAPGEF2, RASGRF1, RASGRP1, RRAS, SELPLG, SFRP4, SMPD 1, SPRED2, SPRY1, ST3GAL4, SUV39H1, TAS2R8, TBL1XR1, UPP1, USE1, VAN GL1, VCAM1, WBSR17, WNT9A, XYLT1, ZBTB16, ZIC2, PHOSPHO1, TNFRSF1A

Negative_14680	BCR, C7, DBT, HK3, ID1, ID2, IL4, ILK, LPO, OSM, A4GALT, ACACB, ACMSD, ACO1, ADCY4, AKR1A1, ALDH1A1, ANAPC2, B3GAT2, C7orf16, CCL16, CDC16, CLCA2, CLDN2, CMBL, CREB3L4, CSF2, CXCL3, CYP11B1, DHFR, DNMT3B, E2F5, ECSIT, EFNA3, EPB41L1, FADD, FARS2, FGF13, FIGF, FUT7, FZD7, G6PC2, GADD45A, GJD2, HAP1, HCLS1, HNF1B, HTR7, IFNA8, IL10RB, INPP4A, IRF9, ITPKB, KAT2B, LDHAL6B, LEFTY2, LYZL1, MADCAM1, MAFA, MAP4K1, MYH14, NCR1, NOX1, NT5C3, NT5M, OR10H1, OR10J1, OR10Z1, OR13A1, OR2C1, OR2M5, OR4D2, OR7G1, PDE6D, PFAS, PIAS2, PIPOX, PLXNB2, PMAIP1, PTCH1, PTGER1, RHOQ, RRAS2, SEMA3A, SEMA4F, SHC3, SOCS2, STMN1, SULT2A1, TA S1R1, TCF7L1, THBD, UCK1, UGCG, WASL, WNT2, ZIC2, ALDH18A1, GABARAPL1, PAFAH1B1, PHOSPHO1, SERPINC1, TNFRSF10B
Negative_14681	ATM, BTD, C3, C5, CAD, CGA, GH1, GH2, GP5, HPD, IHH, KDR, LIF, OGT, SRF, UBC, ABLIM2, ACSL1, ACSS3, ACY1, AFMID, ALG6, AMDHD2, APC2, ARPC4, ATG7, ATP5H, ATP50, B3GALT1, CALML5, CAMKK1, CCL26, CD274, CDC14B, CDK4, CDKN2A, CMBL, CPT2, CTTN, CYFIP2, CYP2C18, DDX47, DPAGT1, DTX4, E2F2, ELK1, ENTPD5, ESPL1, F13A1, FABP1, FGF10, GALM, GLDC, GLG1, GNAQ, GPAA1, GRM5, GUCA1B, HA01, HLA-G, HNF4A, HSPA8, IL10RA, IL13RA1, IL15, IL18, ITPK1, MAN1A1, MAP2K5, MARS, MITF, MPZL1, MYH6, MYL5, NANS, NEFM, NFATC1, NFATC3, NKX3-1, NLGN1, NUDT12, OR10A3, OR10H2, OR2AE1, OR2AG2, OR4C46, OR4S1, OR51B5, OR52I2, OR6C75, PAX6, PDE6G, PER3, PFKM, PFKP, PFN1, PKM2, PLA2G1B, PLCB4, PLCZ1, PPARC, PPBP, PPID, PPP3CA, PRIM2, PRKCG, PRNP, RAB23, RAP1A, RARS2, SEMA3D, SESN1, SOD1, SQLE, STX4, TAS2R14, TBL1XR1, TUBA1B, UGT1A10, ULK1, WNT5B, WNT9B, XCL1, SERPINA5, SUV420H2
Negative_14682	AK1, BTD, CRK, DHH, F11, KIT, LCK, LIF, MET, ACAT2, ACSM1, ADCY4, AGPAT1, AGXT, AHCYL2, AKR1C4, ALDH3A1, ALDH5A1, ALG3, ARRB2, ATP5J, ATP6V1A, BCAT2, BNIP1, BTRC, CARD11, CCL26, CCR6, CDKN2B, CERK, CHIT1, CHSY1, CLTC, CRLS1, CSAD, CSDA, CSF2RB, CSH1, CXCR4, CYP7A1, DAAM2, DAPK1, DDX50, DKK2, DLL4, DLST, DPYS, DUSP5, E2F4, EI24, ERBB2, FUT4, GAB1, GCDH, GCLC, GLS2, GP1BA, GSTM5, GUCY2D, HCLS1, HEMK1, HHIP, HIF1A, HLA-DOB, HNF4A, IARS2, IFNA7, IGFBP3, IL4R, IRS4, ITCH, ITGA5, ITGA7, ITGAL, KCNJ11, LAMC1, MAPK3, MYH9, NAT6, NRG4, OR10H2, OR14C36, OR2A25, OR2H2, OR4A16, OR4B1, OR51S1, OR56A1, OR5J2, OR5M3, OR5T1, OR6C4, OR7C2, OR8I2, PAX4, PCCA, PDE4B, PDE6G, PDE8B, PDXP, PFKL, PGAM1, PIAS1, PIP5K1B, PLCG2, POLA1, PPCS, PPP2R2B, PRKAR1A, PRKG1, PRSS1, PTEN, PYCR2, RAD51, RAP1B, RFNG, RND1, ROCK1, RRM2, SARDH, SEMA3F, SEMA4D, SOD1, SPRY1, STX1A, TRADD, TUBA1B, TUBB2A, TUBB2C, ULBP3, USE1, VAV1, YWHAB, ZAP70, PRICKLE1, SERPINB5
Negative_14683	AK5, CD6, F3, FST, GPT, OGT, TPR, ACTN2, ACYP1, AFMID, ALAS1, ALG3, ALG5, AREG, ASPA, ATP5G2, BCL2L1, BIRC3, BPNT1, CCL16, CCNA2, CCNB2, CD44, CD46, CDKN1B, CES2, CHKA, CNTN2, COL4A6, COX10, CSF2RB, CTLA4, CYP1A2, CYP4A22, DARS2, DDX41, DKK2, DPYSL2, DUSP10, DUSP7, EP300, ESAM, F13A1, FBP2, FOXA3, GADD45B, GALNT6, GAS1, GATM, GCLC, GCNT2, GNPDA1, GPAM, GRHPR, GRIN2C, HEXA, HLA-DRA, HNMT, HSD17B8, IL22RA2, IL6R, IRAK2, IRF9, ITGAL, ITGB8, JAG2, KIR2DL1, KIR2DL4, MAN1A2, MRAS, NFE2L2, NRXN2, NSD1, OR10A7, OR10G3, OR10H3, OR10H5, OR10J1, OR1C1, OR1J2, OR1L4, OR4A16, OR4K14, OR52E6, OR52H1, OR6Y1, OXCT2, PCYT1B, PDE10A, PHKG2, PIK3C2A, PIK3CD, PIK3R4, PLA1A, PLCE1, PNLIP, POLR3B, PON1, PPA1, PPP1CC, PRKACA, PSME1, PTK2, RASA1, RASA2, SDHA, SELL, SEMA3G, SESN3, SETD1B, SGMS2, SLIT2, SMARCA5, ST8SIA1, STEAP3, SULT1A1, TAS2R3, TBXAS1, TNFSF8, TRAF3, TYMS, UBE2L3, UGCG, UGT2B4, UXS1, WASF3, CSGALNACT1, PNLIPRP2, TNFRSF18

Negative_14684	<p>ADO, DAO, ID3, IL5, KMO, LHB, NF1, NNT, XDH, ABL2, ACO1, ACOT11, ADCY6, AHCY, AKR1B1, AKR1C1, ALDH3B1, ALOX15, AMD1, AMPD2, AOX1, APC2, APH1A, ASPA, ATF4, ATG12, ATP5I, B3GAT1, BACE2, CBR3, CCR4, CCR8, CD247, CD47, CD86, CDC45L, CFLAR, CNTNAP2, COL3A1, CXCL11, CXCL12, CYP4F3, DAAM1, DCTN1, DDX56, DPYD, DTX4, EHMT2, EIF4E, ENO3, EPHX2, FUT1, FZD10, GBE1, GLDC, GPAM, GRIA1, GZMB, HLA-DMA, HLA-DOB, HSPA2, IDH3G, IFNA8, IKBKB, IL11, IL8RA, LARS, LCMT2, MAP3K1, MAP3K6, MAPK3, MCCC1, MCM6, METTL6, MLLT4, MNX1, NAT5, NCOR2, NCR1, NOD1, NUMBL, OGDH, OR10Q1, OR1Q1, OR2H1, OR2M5, OR4B1, OR4D11, OR4E2, OR4F15, OR4K5, OR51E1, OR51T1, OR52N4, OR5K1, OR7A10, OR9A4, PDE4D, PDE8A, PDGFRA, PDXK, PFKP, PGS1, PHKA2, PIK3R2, PLAUR, PLCD1, PLD1, PLXNA2, PLXNB3, PNMT, PON1, PPP2R2D, PPP2R5D, PRKAB2, PRKCE, PRSS1, PTGES, PTK2, PTPMT1, PTPRJ, RGS3, RHOD, RPS6, RUVBL1, SEMA4B, SMURF1, SOCS1, SORD, ST3GAL2, STX3, TFPI, TGFBR1, TIAM2, TJP1, TLR3, TLR4, TRADD, TUBA8, TYRP1, ULK2, UNC5D, VEGFB, WBSR22, ZAP70, ATP6V1B2, TNFRSF11B, TNFRSF1B</p>
Negative_14685	<p>ABO, AR, ASL, DDO, GLA, GPI, IL2, KHK, MPI, PGD, AADAC, ACADM, ACSL4, ACVR2B, AGPAT1, ALDH3B2, ANAPC1, ANAPC4, ATP5B, ATP5H, B3GALT2, B3GALT1, B4GALT3, BIRC2, BLNK, CASP9, CCND2, CCNG2, CD226, CD40LG, CDH3, CD51, COASY, COQ5, COQ6, CRLS1, CTLA4, CX3CR1, CYP26B1, CYP26C1, CYP8B1, DAD1, DHRS4L2, DTX3L, E2F4, ESAM, FCER1G, FGF8, FM05, GALNT11, GLI1, GNA14, GNPAT, GPX7, GUCY2D, HAGHL, HAP1, HPSE2, HSP90B1, HYAL1, IL3RA, IRF7, ITGA2, ITGA7, ITGB4, KLRC4, LAMC1, LCMT2, MAD2L2, MADCAM1, MOV10L1, MPP5, MPZL1, MTMR1, NAGK, NEFM, NEUROG3, NFATC1, NMNAT3, NOTCH3, OR10S1, OR14C36, OR2H1, OR2H2, OR4C15, OR4F5, OR4K2, OR4N5, OR51B5, OR52E2, OR52H1, OR5D13, OR5L2, OR6C74, OR6C75, OR9K2, PANK4, PAPSS1, PARVG, PDE8A, PDE8B, PIK3C3, PIP4K2C, PLA2G5, POLR3K, PPP2R1B, PPP5C, PRPH2, PVRL3, PYCR2, RDH11, SEMA3G, SETD1A, SFRP2, SORBS1, SOS2, SOX17, SREBF1, SRGAP3, STX10, STX1A, TBK1, TNXB, TSHR, VEGFB, WNT2, WNT5A, WNT7A, YWHAQ</p>
Negative_14686	<p>ADO, C8A, CEL, GBA, IVD, ME3, MVK, NPL, OSM, OTC, PML, ACAA1, ACHE, ACOX3, ACPT, ACVR1, ACVRL1, ADH7, ANAPC7, ARG2, ARNTL, ARPC3, ARRB1, ASS1, ATF4, ATP2A2, ATP5G3, BCAT2, BCL2L1, C1GALT1, CASP3, CASP6, CHAT, CHPF, CIITA, CISH, CLTA, CRLS1, CTBP1, CTTN, CYP17A1, CYP2E1, DGKB, DHCR24, DNMT3L, DUSP14, DVL1, EFN1, ENPP6, FARSA, GFPT2, GLUL, GNA11, GRIN1, GSTM1, HADHA, HIBADH, HLA-C, HPSE, IARS, ICOSLG, IDH1, IL11RA, IL13, IL1A, INHBB, INPP5E, ITGA11, ITGAL, ITPK1, JAG2, KCNJ11, KLRC2, LALBA, LIMK1, MAD2L2, MCCC2, MC2, MGST3, MTHFD2, MYH7B, NCF2, NFATC3, NOTCH1, NT5M, NTN1, ONECUT1, OR2A5, OR2AG1, OR2T33, OR4C11, OR4D6, OR4L1, OR4M1, OR56A3, OR5H6, OR5L1, OR5M9, OR6K2, OR7A5, OR7D2, ORC1L, PDGFD, PER3, PLIN, PMVK, POLR2J, POLR3G, POMC, PPP2R2C, PRKCH, PRPH2, PTAFR, RASGRF2, SIGLEC1, SIPA1, SKP1, SMAD9, SMPD1, SOCS4, SOS2, TAS1R2, TAS2R41, TGFBR2, THBS2, TMLHE, TNFSF8, TOMM40, TP53, TSHB, ULBP2, WASF1, WNT11, WNT4, YARS, ATP6V0E1, ATP6V1E1, ATP6V1G3, B3GALNT1, C1GALT1C1, HLA-DRB5, PLA2G12A</p>



Negative_14687	<p>ADA, ATM, BAX, CBL, F10, FAH, GLS, HK3, ID4, NPL, RPE, TK1, AANAT, ABCC8, ABL2, ACADL, ACSM5, AKR1A1, AKR1B10, ALG13, ATN1, BAIAP2, CACNG2, CBLB, CCKBR, CD55, CDH3, CDK2, CHEK2, CHIA, COL1A2, CSNK2A1, CYCS, DDX55, DGKD, DTX4, ERO1L, FCGR2B, FGF10, FGF14, FOXO1, FZD10, FZD5, GALNT12, GALNT13, GPAA1, GRIN1, GUCY1B3, HCLS1, HLA-DRA, HRH2, IFNA13, IL1B, ITGA11, ITGA4, ITGB8, ITPKB, LCAT, MEF2C, MLT4, MOV10L1, NAMPT, NCF2, NCKAP1, NTF3, OR10H5, OR2H2, OR4C11, OR5A2, OR6C75, OR6X1, OR8D1, OR8J1, PAFAH2, PANK3, PDE4C, PIK3R1, PLA1A, PLAUR, PPARA, PPM1D, PRKCA, PRKCE, PRKCI, PTPN6, PTPRB, SCIN, SDHC, SEPHS1, SH3BP2, SHC3, SKP1, SMAD5, SSH2, TACR1, TKTL1, TRAF4, TUBA4A, UBA1, UBA7, WNT11, WWP1, XCR1</p>
Negative_14688	<p>CBS, CD4, DBH, EBP, F12, F3, IDS, LCK, MAG, A4GALT, AADAC, ACAA1, ACSL4, ADIPOR1, ADRA1D, ADSL, ALDH3B2, ALDOA, ASAH1, B4GALT7, C1QB, CCNB1, CDC23, CHR1, CRB3, CSF3, CYP2U1, CYP4F2, DDIT4, DDX18, DDX52, DERL1, DHFR, DUSP5, EDN1, ENTPD2, EPB41, ESPL1, EXT1, F2RL3, FGF21, FMO4, GOT2, GPX7, GRIA1, GRM1, GYS2, HMGCL, IDH2, IDH3G, IL12RB2, IL20RA, IL23R, IL2RB, INHBB, INPP4A, ITGAL, ITGB4, KIR2DS5, LAMC3, LCMT2, LDHC, MAT2B, NCOR1, NEU3, NMNAT1, OR10R2, OR2M3, OR2M5, OR2T8, OR3A3, OR4C13, OR51I1, OR52I1, OR5H2, OR5V1, OR6C2, OR6C75, OR8J3, PCCA, PCCB, PDCD1, PDE1B, PER3, PIGK, PLA2G5, PLXNA1, PNLIP, POLR3B, PPP1CA, PRKAB2, PRKACA, PTSS1, PTPRB, PTPRR, PTPRZ1, PYGL, RHOQ, ROCK1, RPIA, RAS, SAT1, SEMA3B, SETD8, SHC2, SLC2A4, SMPD1, SMPD3, SNAI1, SNAP25, ST3GAL4, STAM, STX1A, SUCLG1, SV2A, TNFSF10, TNXB, TP53, TP73, UCKL1, UNC5A, UXS1, ATP6VOD2, HLA-DRB5, TNFRSF10D, TNFRSF13B, TNFRSF17</p>
Negative_14689	<p>ADC, CP, DUT, F12, GAA, GHR, GK, HK3, PGD, VTN, ACOX1, ACTB, ADCY3, AFM1D, ANAPC1, ARHGEF2, ARHGEF7, ARPC2, B3GNT2, BCKDHB, BIRC2, CACNG8, CAMKK1, CANT1, CAV2, CCL22, CCR10, CCR2, CD48, CDC2, CDKN2A, CHRM1, CHRM3, CLDN11, CREB3L4, CSF1, CSNK1G1, CTBP1, CTNNA3, CXCR4, CXXC4, DDIT3, DDX54, DGKB, DHDDS, DPM3, DUSP1, ENAH, EPAS1, EPB41L1, EPB41L3, EPOR, FGF12, FUT2, FUT8, GAD2, GMPPA, GUCA1A, HES1, HHIP, HPSE2, ICAM3, IGFBP3, IL25, ITGA3, ITGAL, ITGB3, JAK3, LCMT1, LTA4H, MAGI3, MAML1, MAML3, MAP3K11, MAPK13, MAPK3, MTHFD2, NAE1, NAT6, NCOA4, NCOR2, NFE2L2, NSD1, NTF4, OR2A12, OR2B11, OR52D1, OR52N5, OR5A1, OR5I1, OR5J2, OR5L1, OR6F1, OR9A2, PANK2, PARD6G, PDE4A, PDK1, PIGQ, POLR3D, PPARA, PPID, PPP2CB, PPP2R2C, PRKAR1A, PRKCD, RAPGEF2, RDH16, RXRG, SCIN, SMAD5, SMPD2, SPHK2, STX18, STX1A, TLN2, TLR4, TNFSF14, TNFSF4, TUBA1C, WIF1, YWHAG, PPARGC1A, SERPING1, TNFRSF11A</p>
Negative_14690	<p>AMH, CRH, CTH, GK, GLS, IHH, NGF, PTS, ABI2, ACAA1, ACO1, ACPT, ACSL4, ACYP1, ADH1B, AHCYL1, ALDH1A3, ALDH9A1, ALG12, AMDHD2, ARHGEF2, B4GALT1, BMP4, CACNA1H, CACNG7, CANT1, CD36, CDC25A, CDH1, CHKB, CSAD, CSNK1D, CSNK1G1, CXCR4, CYBB, DKK2, DUSP6, DUSP8, EIF4E2, EXT2, FGF13, GADD45G, GALE, GDF6, GNA14, GSTA3, GUCA1A, HCST, HSD17B4, IL25, IPMK, IPPK, IRAK1, ITCH, ITGB8, KIR2DS5, KLRD1, LCAT, MDM4, MGAT5B, MYH3, NKD2, NPR2, NQO1, NRG4, OR10H3, OR13C9, OR1L6, OR2M4, OR4B1, OR4D6, OR4X2, OR51A7, OR51M1, OR5AN1, OR5R1, OXCT1, PAK3, PDE1B, PFKFB4, PHKG2, PIGS, PKMYT1, PNPO, PPP3R1, PRKACB, PSPH, RAP1A, RDH16, SCLY, SETMAR, SMC1B, SREBF1, SV2B, TACR1, TAS2R4, TGFB2, THBS3, TLR5, TRAF5, TSC2, TSNARE1, TUBB4Q, UGDH, VAV1, XIAP, YWHAE, ATP6V1G2, CACNA2D4, PFAH1B1</p>

Negative_14691	ADC, CR1, MAG, PML, SP1, TNN, ABP1, ACACB, ADCY5, ADORA2A, ADSSL1, AKT2, ALPPL2, ANPEP, ARHGEF1, ATN1, ATP2A3, B3GALT4, BDH1, BUB3, CACNG4, CANT1, CCL21, CD247, CD34, CD3E, CD58, CDKN1B, CHPF, CHRNA7, CHUK, CLDN6, CTNND1, CYSLTR2, DAD1, DAPK3, DKK4, DVL3, EPRS, ETS1, EXOC7, FECH, FOXA3, FPGT, GALNT13, GGT1, GNA12, GNB1, GPD1, GPD2, GPLD1, GRIA2, HAGH, HIF1A, HLA-DRA, IFNA2, IFNA21, IFNA8, IFNGR1, INPP5E, IQGAP3, ITCH, KIR2DL4, KLRF1, KRAS, LAMC1, LCMT1, LDHAL6B, LIPT1, LYPLA1, MAFA, MAP3K7, MGAT3, MYH15, NANS, NFASC, NFAT5, NME4, NSD1, OR13G1, OR2M3, OR2T34, OR4B1, OR4K2, OR4S1, OR51G2, OR5A1, OR5AS1, OR5L2, OR5R1, OR9A2, ORC1L, PAICS, PCCB, PCNA, PDE2A, PDE4B, PDGFC, PIGL, PIK3R3, PNMT, POLD4, PON1, PPM1A, PRKAR2B, PRKCG, PTDSS2, RPIA, RPS6KA2, RPS6KA3, SHC2, SLC2A1, SPCS3, SRD5A2, SRGAP1, STEAP3, STX8, TGFB2, TLR5, TNFSF8, UBE2L6, UGT2B11, UROD, WEE1, B4GALNT1, HLA-DRB3, PLA2G12A, PPP1R12A, SERPINF2, SERPING1
Negative_14692	AR, CRH, DCN, EDA, IL5, ITK, LHB, PAH, PGD, TEC, TNN, TXK, VTN, ACAD8, ACP1, ACP5, ACSL6, ACY3, AGPAT2, ALDH6A1, ALDOA, ALDOC, APOE, AQP7, ARPC2, ATF2, ATP5F1, ATP6V1A, AVPR1A, AXIN1, BCAT1, C1QB, CADM3, CCKAR, CCKBR, CCL15, CCR10, CD3E, CHR1, CNTF, CRY2, DLL3, EFNB3, EPB41, EXTL2, FPGT, FSHR, GSTM4, GUCA1A, HADHA, HARS, HLA-DOB, HLA-DP1, HSD11B1, IFNB1, IFNG, IL24, IL2RG, ITGB2, ITPK1, JAG1, MAP3K14, MASP2, MMP2, MYD88, NTF3, OR10AD1, OR10J5, OR10X1, OR1E1, OR2K2, OR2T5, OR51F1, OR6C3, OR8H1, OR8K1, OR9Q1, PCNA, PFKFB4, PIK3C2B, POLR1D, POLR3A, PON3, PPCS, PPP2R5B, PPT1, SARDH, SAT1, SDHB, SEMA4C, SENP2, SESN2, SPRY4, SPTLC1, SRGAP1, ST3GAL3, SV2C, TAS1R1, TBK1, TCF7, TUBA3E, TUBB2A, UNC5C, WASF2, WWP2, ZAP70, MAPKAPK5, PPP1R12A
Negative_14693	ABO, CD4, CR1, CRK, CTH, LHB, PML, SRC, UBC, AARS, ACADS, ACADSB, ACSS1, ACTG2, ACTN4, ADCY8, ADCY9, AGMAT, AMPD1, AMPD2, APOA5, ARG1, B4GALT1, BIRC5, BTRC, CDKN2D, CHPF, CLDN10, CREB3L3, CSNK2A2, CXCL9, CYP27A1, CYP2A7, CYP4F3, DAPK3, DDHD1, DGUOK, DHCR24, DRD1, EFNA4, ENTPD2, EPHA3, ERBB3, ERO1L, EXTL2, EXTL3, FTMT, FZD9, GALNTL1, GNB1, GSTO1, HEXA, IL23R, IL24, IMPA2, KITLG, LIMK2, MAP3K4, MGAT4A, MLYCD, MYH1, MYH3, NCOR2, NPR2, NQO1, OR10C1, OR13C3, OR14C36, OR2G3, OR2L8, OR2M5, OR3A1, OR51I1, OR51Q1, OR5AR1, OR9A4, PANK2, PIK3R3, PIK3R4, PIP5K1C, PLCB4, POMC, PPARG, PPBP, PPP2CB, PRKAA2, PTGES, PTTG1, RARS2, RGS3, RPIA, SEMA7A, SESN1, SH2D2A, SLC33A1, SPRED1, SQLE, ST3GAL3, STX7, TAS2R60, TAS2R7, TBXAS1, TJP3, TRAF5, VDAC1, CACNA2D3, TNFRSF12A
Negative_14694	C3, CD2, CRK, FUK, GPI, GPT, AARS, ADCY8, ADSL, ALDOA, ALG10, APAF1, APC5, B3GALT5, BCMO1, CCR4, CD274, CKS1B, CLTA, CRB3, CSDA, CSF2RA, CYP2A13, CYP2C18, CYP2D6, CYP8B1, DAAM2, DCXR, DGKQ, ENTPD1, ENTPD2, EP300, EPHA8, EPHB3, EXTL3, FLT3, GADD45B, GALNT6, GAMT, GFPT1, GNAS, GRIN2D, GSTM1, GSTM4, GSTP1, HADHA, HCST, HHIP, HTR5A, IDH3A, IFNK, IL10, IL12RB2, IL28B, IL3RA, INPP5E, ITGA6, JAK1, MAD2L2, MAGI3, MAP3K1, MAP3K8, MAP4K3, MARS, MCM5, METTL2B, MFNG, MTHFS, MYH15, NADK, NCOR1, NCR2, NSDHL, OCLN, OR10P1, OR2T2, OR4F5, OR4N5, OR51L1, OR56A1, OR56A3, OR5P2, OR8J1, OR8K5, OR9G1, ORC3L, PAFAH2, PAK1, PAK3, PARD6, PAX8, PDE1B, PER2, PER3, PFKP, PFN4, PIK3CD, PIK3R5, PIP5K1C, PLD1, PMAIP1, PNPO, POLR1E, POLR2I, PPM1D, PPP1CB, PRKAR2B, RBKS, RELA, RERE, RHEB, SDHC, SH3BP2, SIAH1, SKP1, SLIT2, SMAD2, SPHK1, SPTLC2, STAT2, STK36, TCF7L1, TGFA, TLR2, TNFSF18, TPI1, TUBA3E, UAP1, UCP1, UGT1A10, VAV1, VDAC1, WWP2, ZNRD1, HLA-DPA1, TNFRSF10C, TNFRSF14

Negative_14695	AUH, C7, CBL, HPD, JUP, SHH, TXK, ABI2, ACAA2, ACADSB, ACTN2, ADIPOR2, AKR1C3, ALG1, ARHGEF6, ARSE, ATP12A, BCKDHB, C4BPA, CACNB2, CAMK4, CCL14, CCL26, CES2, COL4A2, COL4A6, COMP, COQ7, CSNK2A1, CTNNB1, CXCL10, CYP7A1, DDX51, DEGS2, DGAT2L4, DHDDS, E2F2, EFNA5, ENPP6, EPB41L2, EPHB2, FCER1G, FGF18, FLOT2, FUT3, GALNT5, GNG13, GRM1, GSTM3, GUCY2D, HPRT1, IFNA6, IGSF5, IL17RA, IL17RB, ITGAV, KIR2DL4, LAMB2, LIP T1, MAN1C1, METTL2B, MNX1, MPDZ, MYH11, MYH7B, MYH8, NFATC3, NRG4, OR10H4, OR10J5, OR4N5, OR51B6, OR51G2, OR52A5, OR56A1, OR5D16, OR8U1, PNPT1, POLR2E, PRKAB1, PRKCH, PRPH, PVRL4, QARS, RBX1, RIPK1, RUVBL1, SORD, TAS1R3, TAS2R38, TGFA, TICAM1, TLR3, TNFSF14, TP53I3, TUBA4A, UGT2A3, WNT6, ATP6V1G3, HLA-DPA1
Negative_14696	CTH, HYI, KIT, LSS, MOS, OSM, AADAT, ACSL5, ADH7, ALCAM, ALG13, APRT, ARHGEF2, B3GNT2, B4GALT1, BLVRA, BMP5, BMPR1B, CD8A, CDC16, CDK4, CLDN6, CMPK2, COL1A1, CRLS1, CXCR3, CYBA, CYP4F2, CYSLTR1, DAD1, DDX55, E2F4, ELK4, ERO1L, ESAM, FGD3, FTCD, FUT5, FZD6, GCLM, HA01, HEMK1, HIF1A, HLA-DRA, IDH2, IFNK, IL10RA, IL28A, ITGA11, ITGA2, ITGAD, LAMB2, LIPE, MAP3K8, MAPK10, MASP2, MGAT3, MGAT4A, MTHFD1, MYH14, MYH3, NEU1, NKX3-1, NME6, NODAL, NPAS2, NT5C3, NTF4, OR2M3, OR4X2, OR51I1, OXTR, PDIA4, PIGA, PLTP, POLR1A, POLR3K, PPP3CC, PRKACA, PRKAG1, PTPRZ1, RALGDS, RELB, SLC2A2, SMAD6, SOCS3, SORD, SQLE, ST3GAL5, TACR1, TAS2R60, THY1, TLR3, TOMM40L, UBE2L3, UGT2A3, YARS, YOD1, YWHAE, CACNA2D3
Negative_14697	CD6, GGH, GSN, HDC, JUN, MUT, MYC, TK2, AARS, ABLIM2, ADH6, AGXT2, AKT3, ALDH1L1, ALOX12, AMDHD1, APOE, APRT, ARSA, ASS1, ATP2A1, ATP5I, BHM T, C3AR1, CACNB4, CACNG1, CASP6, CCL13, CCL2, CCL22, CCL28, CD79A, CDKN1B, CHDH, CLTA, COL4A6, COL5A1, COQ5, COX15, CTNNA3, CTPS2, CXCL13, CXCR3, CXCR6, CYFIP1, CYP2A13, CYP4F2, DAPK2, DDX47, DDX56, DHCR24, DHX58, DKK4, DNMT1, E2F3, ECSIT, EGLN3, ENAH, ERO1L, EXT1, FDPS, GALNT7, GCH1, GLI3, GRAP2, GSTP1, GUCA1B, GUCY2C, HDAC1, HIBCH, HLA-DOA, HNF1A, HSD3B1, HTR5A, IGFBP3, IL10RB, IL11, IL22, KIR2DS4, LAMB1, LEPR, LFNG, MAP2K1, MAP2K6, MGLL, NADK, NAGLU, NLGN2, NOTCH1, OLR1, OR10H4, OR10K2, OR11A1, OR13C3, OR1S2, OR4C11, OR4C15, OR4Q3, OR5P3, OR9I1, P2RX4, P4HA1, PARD6B, PDE1C, PDE7B, PIP4K2B, PPM1D, PRKG1, PSEN2, PSENE1, PVRL1, RAD51, RPIA, RPN2, SARS, SDHC, SEMA3C, SEMA3F, SFRP1, SHC2, SREBF1, STAT2, STX10, STX12, STX6, TAS2R14, TAS2R16, TGDS, TJP1, TNXB, TOMM40, UCK1, YWHAZ, CACNA2D4, MAPKAPK3, SLC25A31, S T6GALNAC4
Negative_14698	APP, EBP, FAS, FN1, GH2, KMO, LHB, PLG, ACAA2, ACMSD, ACSM1, ACTN1, AGPAT1, AGPAT2, AGPAT3, ALAS2, ALDH1B1, ALPI, APLP1, ARD1A, ARPC1A, ARPC1B, ARRB2, ATG3, ATP5A1, C1QA, CCL8, CCNA2, CCR1, CD46, CD48, CHRDL, CQQ3, CPT1B, CSF2RB, CSNK2A2, CTNNB1, CXCR4, CYCS, CYP2C18, CYP3A5, CYSLTR1, DDIT4, DDX51, DERA, DGKG, DRD2, EARS2, EPHX1, F13B, FGF23, FOXA2, FZD1, GALNTL1, GLI1, GRIN1, GRIN2D, GSTA5, GUCY2D, HAGH, HAGHL, HRH1, HYAL1, ICAM3, IGFBP3, IL10RB, IL11RA, IL15, IL17B, IL1RAP, IL29, ITCH, ITGB5, KCNB1, KLK3, LCP2, LDHA, MAN1A1, MAP3K2, MAP3K6, MAPK8, MCCC2, MTMR1, NCR2, NR5A2, NRG3, NRXN3, OR10G2, OR11A1, OR11G2, OR13H1, OR14A16, OR1B1, OR1J2, OR2B2, OR4X2, OR5M9, OR5T2, OR6C70, OR6Q1, OR7A17, PAK7, PFKP, PPA1, PPM1B, PPP2CB, PTPMT1, PTPN11, RAB23, RAPGEF2, RASGRF2, SCIN, SESN1, SFRP2, SHC1, SLC27A1, SLC2A2, SMURF2, SSH1, SUCLA2, SYNJ1, TAP2, TYRP1, UCK1, VAV1, AASDHPPT, ATP6V1G3, TNFRSF1A

Negative_14699	<p>AK3, ASL, CAD, CR2, FES, ID1, SI, TNC, TYR, ABAT, ACACB, ACP5, AHCYL2, ALG3, ALOX12B, APC2, BCAT1, BMPR1B, C1QB, CACNB3, CARD11, CCL14, CCNG1, CLDN19, CLDN8, CLOCK, CLTCL1, COL5A1, COL5A2, CPOX, CSNK2A2, CSNK2B, CYP11B2, CYP19A1, CYP3A7, DAD1, DCTN1, DLAT, DOT1L, DUSP9, EPHA8, EPHX1, FBP2, FGF9, FOXO1, FUT6, FZD2, GADD45G, GALNTL4, GNPAT1, GPLD1, GRIA3, GRIN2D, GRPR, HMOX1, HNF1B, HSPA2, HSPA8, HYAL1, IL28RA, IRS1, ITGA3, ITPKA, KAT2B, LTBR, MAP3K12, MASP1, MDH2, MKNK2, MYH4, NT5C3, OR13F1, OR1G1, OR1J2, OR2C1, OR2F2, OR2M3, OR4Q3, OR51F2, OR56B4, OR6C74, OR6M1, OR8A1, OR8J3, OR9Q2, P2RX6, PDPK1, PFKFB3, PGAP1, PKM2, PLCG2, PPP1CC, PRKACG, PRKG1, PROC, PRODH, PTPN5, RALBP1, RASA2, ROBO3, SHC3, SIGLEC1, SIPA1, SMARCA2, SORBS1, TALD01, TAS2R10, TAS2R60, TBXA2R, TRHR, VAMP3, VAV3, WNT10B, WNT9A, YKT6, CSGALNACT2, KIR2DL5A, MAP3K7IP1</p>
Negative_14700	<p>CGA, DAO, EDA, F7, FAH, GHR, IDS, ILK, KHK, MAG, PLN, SPN, UBB, ZYX, ACOX2, ADCY4, AGRP, AK3L1, ALDH1A1, ALPL, APLP1, APOA2, ARHGEF1, ARNTL, ARSE, ATP6V0B, B3GALT4, BBC3, BCAT2, BMP4, BUB1, CACNA1B, CACNA1D, CACNG5, CCL2, CD8A, CDH2, CHIA, CHPF, CLDN1, CLDN16, CNTNAP2, DDX56, DPM2, DUSP16, EDN1, ERBB2, GADD45B, GALNT12, GALNT3, GALT, GBE1, GCAT, GDF7, GPT2, GSTM2, HADH, HHEX, HLA-F, HSD11B2, HYAL2, IARS2, IFNA6, IL23R, INHBA, IPMK, IRF5, IRF7, JUND, KLRC3, KLRD1, LAMB1, LPAR1, MAD2L2, MAP2K6, MAP3K11, MAP3K6, MAP4K1, MCM3, MPDZ, MTFMT, MTHFD2, MYL5, NADSYN1, NCAM1, NFATC1, NFE2L2, NKX2-2, NTRK2, NUDT5, OR10A5, OR1L6, OR4F17, OR4F4, OR4K5, OR4Q3, OR51B5, OR51I2, OR56A1, OR5T1, OR6K2, OR9A4, PCNA, PDPK1, PHPT1, PIK3CG, PIP5K1B, PISD, PLA1A, POLR3K, PPM1D, PPP2CB, PPP2R5A, PRNP, PTDSS1, PVR13, RAD51, RPRM, RXRA, SC4MOL, SDHD, SETD1A, SETDB1, SGMS2, SIPA1, SLC2A4, SMURF2, SPRY2, STAT3, STT3B, SUCLA2, SULT1A4, TAS1R1, TAS1R2, TBL1XR1, TLN1, TNFSF12, UBE2K, UMPS, UPP2, VAMP3, WNT4, PAFAH1B1, TNFRSF14</p>
Negative_14701	<p>BCR, DCN, EZR, GPT, LSS, RFK, TK1, XDH, ACSL3, AGPAT2, AGXT, ALDOB, AMY2B, ARPC5L, ASS1, ATF4, BCL2, BST1, C9orf95, CAV3, CCL5, CD36, CD48, CDC20, CDC25A, CDC7, CDIPT, CLDN3, CLTC, CNTNAP2, COQ6, CPT1B, CYP2A13, CYP2B6, DAAM2, DAPK2, DGKD, DGKZ, DUSP7, DUSP8, E2F5, EDN1, EFNB1, EPHA5, ESAM, ETS1, EXT1, FIGF, FZD6, GADD45B, GARS, GLI2, GSK3B, GSTA4, GZMB, HEXB, HMGCS1, HNF1A, HSD3B2, IDH3G, IFNGR2, IL17B, IL6ST, ITGAE, ITGB1, ITPK1, L1CAM, LAMC1, LGMN, LIFR, LIMK2, LIPC, LM07, MAP2K5, MAP3K11, MMP9, MYH1, NCOR2, NLGN2, NPAS2, NRP1, ONECUT1, OR11H6, OR13C3, OR13C4, OR1D5, OR2G6, OR2T33, OR51T1, OR5AS1, OR5AU1, OR5B3, OR5D13, OR5M9, OR8A1, OR8K1, PANK4, PDK1, PIK3CD, PIP4K2A, PIP5K1A, PMM2, PNLIP, PPCDC, PPP1CC, PRKACG, PTK2B, RASGRP2, RCHY1, RPS6KB1, SELPLG, SH3BP2, SRGAP1, STX16, SYNJ2, TAS2R16, TNFRSF4, TRAF4, TRPM5, TSHB, UBE2L6, VARS, WARS2, WHSC1L1, XIAP, ATP6V1E1, ST6GALNAC1, ST6GALNAC4</p>

Negative_14702	BAD, CKM, CRH, DCC, EBP, KDR, PC, TFG, ACSM5, ACTA1, ACVRL1, ADAM10, AKR1B10, ANAPC10, AOC3, AQP7, ATP5G2, BCL2, CACNB1, CALML3, CAMK2D, CBR3, CCR3, CD70, CDC6, CDH2, CHUK, CLDN15, CNGA4, COX10, COX15, CSAD, CSF2, CSF3, CSNK1G3, CXCR5, CYP21A2, DHODH, DLL1, DLST, DOLPP1, DPM3, DUSP10, EPB41L3, FGF2, FGFR4, FIGF, FM01, FUT5, GALM, GALNT2, GALNT5, GDF7, GGT7, GNG12, GPX5, GSTT1, GYS1, HSD17B2, HSPA8, IL19, IL23R, INPPL1, ITGAL, ITGB1, LAMC1, LPAR1, LRP6, MADCAM1, MAFA, MAP3K12, MGA T5, MPDZ, MYH11, NEU1, NEU2, NFKB1B, NOD1, NRG1, NSD1, NT5C1B, OR10A3, OR2M3, OR51A4, OR9A4, P2RX4, PANK3, PDE5A, PHKG1, PLA2G2A, PLA2G2D, PLOD1, PRKAA2, RPS6KA1, SCIN, SESN3, SOS1, SPHK2, SPRED1, STAT6, SUOX, SUV39H2, TGFB2, TNFSF18, TRADD, ATP6V1B2, ST6GALNAC4, TNFRSF13C
Negative_14703	APP, C1S, CD4, CGN, FOS, FUK, GAA, LPL, NGF, UBC, ZYX, ACVR1, ADCY4, ADCY5, AGRP, ALG10B, ALS2, ARHGAP5, ARPC5, BACE2, C7orf16, CAMK2A, CARS2, CCNG2, CCR10, CD70, CDH3, CHRM2, CKMT2, COL4A2, CX3CL1, CXCL9, DARS2, DGUOK, EXT1, FBXW11, FPGS, FZD5, GALM, GLUL, GPD2, GPX7, GSTM3, HA02, HAP1, HBEGF, ICAM3, IL12RB1, IRAK2, ITGA11, ITGB4, ITGB8, MAN1A2, MAP3K5, MGST3, MYD88, NOTCH2, NTRK2, NUMBL, OR10AD1, OR10J1, OR11G2, OR2C1, OR2L3, OR2T10, OR51B4, OR52N1, OR56A1, OR8D2, PAX6, PDE8A, PDE9A, PDXP, PFKL, PGK1, PIK3CG, PKMYT1, PLCD4, PLCE1, PPP2R2A, PPP2R5A, PRODH, PTGDS, RAP1B, RAPGEF1, RASSF1, RASSF5, RDH10, RDH12, RPS6KA5, RUNX1, SEMA3C, SEMA4A, SEMA7A, SETD7, SFRP5, SOCS2, SOCS4, STAT1, TAP2, TAS2R49, TNFSF4, TP73, TPMT, UGT2A1, ULBP2, UROS, VNN1, WASL, WNT2, WWP2, ARHGEF12, PPP1R12A
Negative_14704	ATM, DBT, FST, IHH, VCL, WAS, ACVR1, ACY3, ADIPOR1, ADORA2A, AGPAT3, AGTR1, AGXT, AKR1B10, AKR1D1, ALPPL2, AMPD1, ANAPC4, ARAF, ATF4, ATP5E, ATP5G1, ATP6V1H, B3GAT1, BPGM, CACNB1, CADM1, CCL16, CDC25A, CDC27, CDK2, CES2, CHSY1, CHUK, CLDN15, CSF2RA, CXCL12, DDX56, DEGS1, DGA T2, DGKI, DGKQ, DLL3, DUSP16, DVL1, EDAR, EFNB2, EPOR, FCGR2B, FOXO3, G6PC, GALNT9, GALNTL1, GMDS, GNPDA2, GOT1, GUCY1A2, HADHA, HNF4A, HRH1, HSD11B1, IFNG, IFNGR1, IL6R, INPP1, IRAK2, ITGA4, KLRD1, LDHC, LIPG, LRDD, MAD2L2, MARS, MDM2, MECR, MOV10L1, MYL5, NAGS, NANP, NANS, OR10C1, OR13D1, OR1M1, OR1S2, OR2D2, OR2G6, OR2K2, OR4X2, OR5AN1, OR6C4, OR6F1, OR7D2, OR9A2, PDE6G, PDE8A, PDX1, PEMT, PFKL, PIGA, PLA2G6, PLAU, PLOD1, PLOD3, PPA1, PPP1R3A, PPT1, PSEN1, PTCH2, PTGS1, RALBP1, RASGRF1, RASGRF2, RBPJ, RETSAT, SDC3, SEMA4G, SENP2, SETDB2, SLC25A6, SLC2A4, SMAD2, SOAT1, SPTLC2, SRD5A1, TBL1Y, THY1, TICAM2, TSLP, TUBB2A, TYROBP, ULBP1, ULBP2, UNC5A, VAMP1, VNN1, WASF3, WNT10A, ATP6VOA2, ATP6VOE1, TNFRSF13C
Negative_14705	CGN, CKB, ABLIM2, ACADSB, ACPP, ACTG1, ADRB2, AGXT2, AOX1, APRT, ARHGAP5, ARHGEF1, ASS1, B3GALT5, BMPR1A, CACNG8, CALML3, CCL7, CCNG2, CD38, CD72, CHAD, CYP4A11, DDX47, DLST, DTYMK, ECSIT, EPHA4, FABP3, FGF20, FGF21, FLOT1, GAB1, GNAZ, GNPAT, GPT2, GSTA3, HSD3B7, IFNGR2, IL1ORB, IL11RA, INPP5B, LCAT, LYPLA1, MMP2, MYLK, NAGA, NAGK, NARS2, NFX1, NRXN2, OR10A6, OR10S1, OR12D3, OR13G1, OR14A16, OR1L4, OR2S2, OR4F15, OR5D14, OR7G1, OR8J1, PDE8B, PDXK, PEMT, PI4KA, PIGH, PIK3CB, PLA2G3, PLCB1, PLCG2, PLIN, PLK1, PMVK, PPBP, PRKAG2, PSME1, PTCRA, RDH16, RELB, RPRM, SCP2, SEMA3E, SH2D1A, SH2D2A, STK11, STX1B, TAS1R3, TICIRG1, TJP1, TSHB, UGT2B28, ULK2, WNT7A, YWHAE, CSGALNACT1, MAP3K7IP2, PAFAH1B1, PLA2G12B, PNLIPRP2, TNFRSF1A

Negative_14706	CFH, F7, GH1, IDS, IVD, LHB, MOS, NOG, TK1, AARS2, ALDH3B1, ALG13, ANAP C10, ANAPC5, AOX1, ATP6V1A, AVPR1A, B3GNT4, BACE2, BUB1B, CACNA1F, C CL13, CDC2, CDK7, CDKN2A, CHDH, CLCA2, CMPK2, CRLF2, CYP2A7, CYP2C18 , CYP4F2, DNMT1, DPM1, EGFR, EHMT2, EPHA8, EPOR, F2RL1, FCER1G, FZD6, GALNT3, GDF6, GGT5, GLDC, GLI1, GRB2, GSTA1, HTR6, IL1A, IL22RA2, IL2 4, IL25, IRS4, LAMA4, LIFR, LYZL1, MAP3K5, MAPK1, MGAT2, MGLL, MYH10, NAT2, NRAS, NUDT9, OR2L3, OR2T10, OR2T34, OR4E2, OR4S2, OR4X1, OR52H 1, OR5AR1, OR5T3, OR6Q1, PAX4, PDE4B, PERP, PFN1, PIGT, PIK3R1, PIK3R 4, PLA2G5, PLD1, POLE, PON3, PPP1R3B, PRKACA, PTCRA, PTDSS2, RASSF1, RBL2, RBPJ, RHOQ, SAT2, SESN1, STAM, TFDP1, TNXB, TP53I3, UROS, VAMP3 , VCAM1, WNT5A, WNT8B, B3GALNT1, CACNA2D4, ST6GALNAC3
Negative_14707	BAX, CFD, CKB, CKM, FGA, NNT, TXK, UBC, A4GALT, ABL1, AKR1C1, ATP6V1H, BET1L, BST1, CACNB2, CALML3, CD58, CDC42, CHRM2, CHRM3, CLDN7, CRLF2 , CSF2RB, CTTN, DAPK3, DKK1, DOT1L, DPYD, DUSP16, ELK4, ENO3, ENTPD5, FLT4, FRAT2, GBA3, GCAT, GLYCTK, GNAI2, GSTA1, GSTM3, GSTT1, GZMB, HI BCH, HMBS, HTR5A, ICOSLG, IFNB1, IL10RB, IL13, IL1R2, IL28A, KLKB1, L ARS2, MAFA, MECR, MMP14, MTMR2, MYD88, NFAT5, NRG2, NUMBL, OR10Q1, OR 1A1, OR1C1, OR2H2, OR4C16, OR4C46, OR4F5, OR4N2, OR51B5, OR52B4, OR5 H6, OR6F1, OR7G3, P2RX3, PDGFC, PGAP1, PI4KB, PIGT, PIP4K2C, PLA2G2D , PLEKHA8, POLD1, POLE, PPM1B, PPP1R3D, PTDSS2, PTGS2, RAD51, RDH8, R RM2, SELL, SETMAR, SLC27A1, SORD, SPCS1, SPTLC1, TBL1Y, TCF7L1, WNT1 , CSNK1A1L, PPARGC1A, SERPINE1
Negative_14708	AMH, C7, CFI, EDA, FN1, GH2, HPD, LHB, NF1, OTC, TKT, WAS, ABP1, ACO2, AC OT12, ACYP2, AGRN, ALPP, AMHR2, ASNS, ATP2A1, B3GAT2, BDNF, BET1, CAS P9, CCL2, CCR2, CDC25B, CHAT, CPOX, CRY1, CSDA, CTSL1, CXCL1, CYBA, DU SP16, EDNRB, EI24, ENPP7, EXTL1, EXTL2, FASLG, FGFR2, FGFR3, FM04, FU T4, GALE, GALNT11, GJD2, GLI1, GLI2, GPD2, GRIN2C, GUCA1B, HLA- DOB, HNF1A, HRAS, IL11, INHBB, INHBC, IRAK1, ITCH, ITGB6, KAT2A, MNX1 , NADSYN1, NAE1, NT5C1B, OR10X1, OR4C16, OR4D9, OR4N5, OR5B21, OR5I1 , OR5M3, OR5T3, OR6C70, OR7A17, OR9Q1, PDGFB, PDGFRA, PDPK1, PFAS, PG M2, PIK3C2G, PITX2, PMVK, POLR2C, POLR2I, PPP1R3D, PPP2R5D, PSENEN, PTDSS2, PYCR1, RARA, RPRM, SDC3, SELP, SH2D1B, SHC3, SMAD5, SOAT2, SO CS3, SOX17, SPCS1, TACR1, TACR2, TAS2R8, UROD, UROS, WHSC1L1, WNT4, W NT7A, XYLT1, YWHAQ, ARHGEF12, TNFRSF10B, TNFRSF13C
Negative_14709	BTK, C8A, DAO, FH, GCK, LPL, LSS, PDC, PGF, SMS, SP1, TNC, TYR, ACOT11, A DH1B, AKT2, ALG1, AMPD1, ANAPC2, APBB1, ARRB2, ATP13A2, B3GAT3, B3GN T4, BDH1, CCL2, CCL28, CD72, CD86, CDC14B, CDC2, CDKN1A, CHAD, CISH, C LCF1, CLDN14, CPT2, CRKL, CSF1, CSH1, CSNK1E, CTPS, CTSS, CXCL13, CYP 11A1, CYP2C8, DFFA, DGKG, DHCR24, DPM2, DUSP5, ELK1, ENO1, ETNK1, F2R L1, FARP2, FPGS, GABARAP, GALNT2, GCNT4, GIT1, GLUD2, GMPR, GNG12, GN PNAT1, GNRHR, GUSB, HADH, HHIP, HSD3B1, IBSP, IFNA21, IFNA7, IL10, IL 10RA, IL15, IL17RB, IL9R, ITGAM, MAN1C1, MAP4K2, MDM4, MGST1, MMP9, M TAP, MYL5, NAE1, NAT5, NFATC2, NRG4, NTF3, ODC1, OR10G3, OR1L3, OR1Q1 , OR2AG1, OR2AG2, OR2T11, OR4D9, OR4F17, OR4K14, OR51E1, OR52N2, OR5 AC2, OR5T1, OR6A2, OR9A4, PCCB, PDXP, PERP, PHGDH, PIGQ, PIGT, PIP4K2 C, PLD1, PTGDS, PTGFR, PTGIS, PYGM, RBX1, RHEB, SCP2, SEMA7A, SESN3, S ETDB2, SHMT1, SOCS1, SOX17, ST8SIA1, STT3B, TAS2R13, TAS2R9, TBXA2R , TFDP1, TFPI, THBS1, TNFSF10, TNFSF14, TRAF2, TUBB3, UCK1, UCGG, UGC GL2, ULBP3, WNT3A, XCL1, YWHAG, ZAP70

Negative_14710	AK1, EGF, FUK, MTR, WAS, AARS2, ACADSB, ACOT11, ACOX1, ACTC1, AHCY, ALG8, ALG9, APOC3, ARPC1A, ATP5E, ATP6VOC, CCR10, CCR3, CDC42, CDK2, CLDN18, COL2A1, COX10, CTLA4, CYP1A1, DARS2, DGKH, EDN1, EFNA4, FGF10, FGF3, GAL3ST1, GALNT9, GBE1, GNA13, GNG12, GPX5, GRPR, HBEGF, HEMK1, HEXB, HNF1A, HSD11B1, IFIH1, IFNA4, ITGAX, KIR2DL4, LALBA, LAP3, LCAT, LDHD, LEFTY2, LRDD, MADCAM1, MCCC2, NAGA, NRAS, NTF3, OLAH, OR1B1, OR1L4, OR2A2, OR2AG2, OR2L13, OR4D2, OR4K15, OR52B4, OR5L2, OR6N2, OR8A1, OR8J3, P2RX7, P4HA3, PAFAH2, PARVA, PDE6H, PDGFB, PER2, PGM2, PIGF, PIGK, PIGQ, PLXNA3, POLR1B, POLR3D, POLR3K, PPARA, PPAT, PPP2R1B, PRKG2, PRODH, PRPH, PTEN, PTGS1, RAP1A, RASSF5, RBKS, RELB, RETSAT, RFWD2, SGPP1, SH2D2A, SHC4, SLC33A1, SSX2IP, ST6GAL1, STX6, TAS2R10, TAS2R41, TBL1X, TIAM2, TLR2, UCKL1, UNC5B, VAMP2, VEGFC, WASL, WNT3, WNT7B, YWHAH, SERPING1, TNFRSF14
Negative_14711	APP, CDA, DCK, IL7, RDX, ABLIM1, ACSM1, ADIPOR1, AGRN, AGXT, ALAD, ALOX15B, AMD1, ANGPL4, B4GALT1, BDNF, BNIP1, C3AR1, C9orf95, CACNG8, CAMK2D, CCNA1, CD247, CD8A, CDK2, CLDN10, COL11A1, CYP2U1, DCXR, DGAT2L4, EGLN1, EPHB3, FGF10, FOXO1, G6PC2, GBGT1, GNAI3, GNAQ, GRIN1, GRIN2D, GSK3B, GSTM1, HLA-G, HPSE2, HSD3B7, IGF1, IGFBP3, IKBKE, IL8RA, JAG2, KIR2DL2, LAMB3, LIPT1, LYZL1, MAML3, MAP3K7, MCAT, MDH2, MMP7, MTMR6, NAT1, NME7, NR5A2, OR12D3, OR13C2, OR14J1, OR1S1, OR4C46, OR51V1, OR6C4, OR8D2, PCNA, PDE4A, PDE6D, PDGFA, PDIA4, PDPK1, PIGF, PIK3C2B, PIK3R1, PLA2G6, PLCD4, POLR2A, PRKCQ, RALBP1, RAPGEF4, SHISA5, SKP1, SRD5A1, ST3GAL5, ST6GAL1, TOMM40L, TRAF3, TUBB2C, UNC5B, VANGL1, VARS, VAV2, XCR1, ATP6VOE1, ATP6V1B1, CACNA2D4, PRICKLE1
Negative_14712	F7, F8, FER, GPI, HPD, ITK, NGF, NPL, OTC, TFG, TK2, ACADVL, ACAT1, ACSL6, ACTA1, AGPAT1, AHCYL1, ALDH1A2, AMDHD2, ARHGEF4, ARPC3, ATIC, BCKDHA, BDKRB1, CAPN2, CCR2, CD82, CDC14A, CDK5, COQ7, CREB1, CXCL6, CYP1A2, CYP2A13, DAD1, DDX56, DNMT3L, E2F3, EDA2R, EFNA5, FABP3, FCGR3A, FGD1, FGF5, GALE, GALNT11, GALNT6, GBE1, GLYCTK, GNMT, HMGCS2, HRH1, HSPA2, IL13RA1, IMPA2, IMPDH2, INPP5B, KIR2DL2, KIR2DS4, KLRC3, LAMB3, LDHAL6A, MAP2K2, MAP3K1, MAP3K11, MAP3K8, MAPK1, MIOX, MYL5, NEU3, NFYC, NTF3, OR13G1, OR1A2, OR2Z1, OR4C12, OR4D6, OR56A3, OR6M1, OR8J3, OXSM, PANK3, PCCA, PDE1B, PDE6D, PKM2, PLCB1, PLXNA2, PPARG, PPP3R1, PRKACB, PTPN11, RDH12, ROBO2, RPS6KA5, SESN2, SLIT2, SMAD2, SMAD4, SSH3, SUCLG1, SUCLG2, TALDO1, TAS2R42, TAS2R7, TD02, THBS1, TLR2, TUBB, UAP1, UCKL1, VDAC2, VEGFA, C1GALT1C1, ST6GALNAC4, TNFRSF17
Negative_14713	AUH, C3, F2R, GAA, KHK, OTC, AARS2, ACSL5, ADCY5, ADCY8, AGPAT6, AGXT2, ALDH5A1, ALDH6A1, ALG9, APPL1, APRT, ARHGEF4, ARPC1B, ATP5J, BMPR2, CACNG7, CARS2, CAV1, CCKBR, CCL13, CD226, CDC25C, CHAD, CKMT2, CLCF1, CNTNAP1, COL5A2, CREB3L2, CRHR1, CSNK1A1, CSNK2A2, CYP2A6, CYP2S1, DDX51, DTX1, EFN1, EPB41L3, EPHA2, ETNK1, FIGF, FRAP1, GALE, GCDH, GLI1, GNAI1, GNAO1, GNMT, GNRH1, GOT1, GRAP2, GSTM4, HAP1, IMPDH2, ITGA8, ITGB5, LDHAL6A, LDHD, MAPK13, METTL2B, MYH7B, NAGS, NCF2, NCSTN, NFATC2, NME4, NOTCH3, NTRK2, OR10V1, OR2Y1, OR4K13, OR51F1, OR51Q1, OR5H6, OR8B4, ORC3L, PARD6A, PEMT, PI4KA, PIP4K2B, PIP5K3, PLXNA2, PNLIP, PNPLA3, POLR1A, POLR1D, PPP1CB, PRDX6, PTPRR, RAB23, RFXANK, SDHA, SESN1, SGPP1, SPRY1, SSH2, STMN1, SV2B, TGFB2, THBS4, TJP1, TLR9, TSHR, TSLP, TYMS, UGCG, UROC1, VAMP1, WHSC1L1, WNT1, ZBTB16, CACNA2D2, HSD17B12

Negative_14714	<p>BTK, DCT, F9, GCK, ID1, IL8, ME3, NF1, TNF, AASS, ACAA1, ACACA, ACAD9, A CADS, ACP2, ACSL5, ACSM1, ACTA1, ADCY5, AGPAT4, AGRN, AKR1B10, ARG1, ARSA, ARSE, ATP12A, B3GNT5, BAI1, BDNF, C1GALT1, CAMK4, CDC6, CEBPA, CHAT, CMPK2, COL2A1, COL4A2, COL4A6, CTBP1, CTBS, CTPS2, CXCL13, CYP 2A13, CYP4A22, DHX58, DUSP14, EHMT2, EPHA8, FGFR4, FUT5, G6PD, GOSR2 , GPD1, GPT2, GPX5, GUCA1C, HADH, HAGH, ICOSLG, IFNA7, IFNG, IGF1R, IL 15, IL1B, IL1RAP, IRS1, ITGB1, ITGB2, JAG2, KCNB1, KCNQ1, KDSR, KLRC1 , LAP3, LCMT1, MAML1, MAP2K4, MAP2K6, MAP3K3, MGAT5, MPST, NAGA, NCOR 1, NFKBIB, NT5E, OR10G8, OR11H4, OR13C8, OR14A16, OR1A1, OR1L8, OR2G 3, OR4C15, OR4C6, OR4M1, OR51I1, OR51I2, OR5A1, OR5D14, OR6B2, OR6C7 5, OR8B12, ORC5L, P2RX7, PDE8A, PDE9A, PDGFRB, PDK1, PDXK, PIGQ, PISD , PLAU, PLXNA1, PLXNB3, POLA1, POLR2C, PPAP2B, PPP1R3C, PPP2R2B, PPP 3CB, PRKAR1A, PTDS2, PTGS2, RAC2, SETDB2, SFRP4, SMC1A, SRD5A1, STA T2, STX16, SULT1A2, SYNJ2, TAS2R48, TP73, TUBA3C, UCKL1, UCP1, VAMP4 , VANGL2, VAV1, ZFYVE16, ATP6VOA2, ATP6VOA4, MAPKAPK3, PLA2G12A, PP ARGC1A, PRICKLE1, TNFRSF10B, TNFRSF6B</p>
Negative_14715	<p>AK2, BCR, CD4, CDA, DDO, F12, F7, GCK, GK, HDC, NF1, NLK, NPY, SDS, TFG, A CAT2, ACSL6, ACTA1, ACTG2, ADCY6, AKT1, ALDOA, AMY2A, APRT, BPNT1, CA MK2B, CANT1, CAV3, CCDC6, CD46, CD74, CDC2, CDH15, CDH4, CES7, CLDN14 , CMBL, COL1A1, COX15, CSAD, CTBP1, CTSS, CXCL10, CYP2B6, DAD1, DCXR, DDX52, DPM3, DUSP4, ELK4, ENPP1, EP300, EPHB2, EVI1, F11R, F2RL2, FCG R2B, FGF3, FUT1, FUT2, GADD45B, GALNS, GANAB, GDF6, GLO1, GNAQ, GRIN2 C, GUK1, GUSB, HTR4, IL12B, IL1A, INPP4A, IRS1, ITGA1, ITGA8, LARS, LE F1, LHCGR, LIPG, MASP1, MCEE, MGAT5B, MMP1, NCAM1, NCKAP1, NEUROD1, N ME7, NOTCH2, OLR1, OR10J3, OR10T2, OR1A2, OR2A4, OR2G6, OR2M4, OR4X2 , OR51A7, OR51I2, OR5AU1, OR5P3, P2RX4, PAK2, PFKFB1, PGAM2, PIGP, PL XNA2, PRKAB2, PRKAR2B, PRPH, PTDS1, PTPMT1, PTPN1, PTPRC, RAPGEF2, RBPJL, RBX1, RPS6KA5, RPSA, SAT1, SCD5, SEMA3E, SETMAR, SFRP2, SHC1, SIAH1, SKP2, SLC25A6, SLC2A2, SMAD9, SPCS1, ST3GAL4, STK4, TAS2R3, T BXA2R, TJP3, TLN2, TOLLIP, TRADD, TRHR, TRPM5, TSC2, WBSR22, WHSC1, WNT6, WNT9B, WWP1, PPARGC1A</p>
Negative_14716	<p>C2, CTH, GK, PTS, ZYX, AANAT, ACY1, ADCY2, ADRBK2, ALCAM, ALG12, AMDHD 1, AMY2B, APOE, APPL1, ATP13A2, BDH1, BRAF, BUB1, C1GALT1, CACNG6, CN TNAP1, CNTNAP2, COL2A1, CTSS, DDX54, DEGS2, DGUOK, DTX3, ENTPD4, ERB B2, FGF4, GAB1, GALNT2, GART, GNAT3, GUK1, HADHA, HNF4G, IL10RA, IRF3 , KIR2DL3, KIR3DL1, KIR3DL3, LAMA3, LIPG, MAML3, MAP4K4, MASP2, MCAT , MGST1, MINPP1, MRAS, NFE2L2, NKX2- 2, NME7, NODAL, NPR1, OGDH, OR2C1, OR2L2, OR2T2, OR4K2, OR4S2, OR51I2 , OR6C70, OR7C2, OR9A2, PAFAH2, PCYT2, PDGFRA, PHPT1, PIGM, POLR1A, P OLR1B, POLR3A, PPM1B, PRKACA, PTGS1, RAD51, RPS6KA1, SFRP4, SFRP5, S HC4, SNAP25, SV2A, TACR2, TACR3, THBS4, THTPA, TNFSF10, TSNARE1, ULB P1, UMPS, UROC1, VAMP3, VARS, VKORC1, WNT6, ATP6V1C2, PRICKLE1, TNFR SF14</p>



Negative_14717	C3, CBL, DAO, F7, JUP, LCT, ME1, MPL, OAT, SMO, ACSM4, ACVR1, AFMID, ALDH1A1, ALDH1B1, ALS2, AMDHD1, ANAPC1, AQP7, ASMT, ATP13A2, BCKDHB, C9orf95, CACNA1C, CAMKK1, CAV2, CD46, CDC23, CHRD, CHRNA7, CMAS, COL1A1, CSAD, CSDA, CSF1, CSNK1A1, CTBP1, CTS1, CXCL2, CXCR5, DGKH, DHCR7, DPM2, DUSP10, FGF18, GCAT, GIT1, HAGHL, HCST, HMGCL, HSD17B8, IFNA5, IQGAP2, ITGAE, KLK3, LAMC3, LGMN, LIPA, LLGL2, LPAR1, MAN1B1, MGAM, MITF, MYH4, MYLK, NCAM1, NOTCH2, NR1D1, NRXN2, NTF3, OR10J5, OR13C2, OR1E2, OR2A14, OR2B2, OR4C12, OR4F17, OR51I2, OR5L2, OR6K2, OR8D4, OR8H2, P4HA1, PAFAH2, PANK1, PANK2, PDHA1, PLA2G2A, PLA2G3, PMM2, POLR2H, PPP2R2A, PRKX, PTGDS, PTPN6, RAPGEF4, RDH12, RERE, SFRP2, SH2D1B, SLC2A4, SMURF1, SNAI1, SNAI2, SPRED1, SV2B, TALDO1, TAS2R41, TGFB2, TRAF6, TSC2, UROC1, USE1, WIF1, WNT6, ALDH18A1, HLA-DQA2, MAP3K7IP1, MAPK8IP2, ST6GALNAC1, TNFRSF10A
Negative_14718	AUH, CR2, DLD, IL2, PGD, TK1, VTN, ACADM, ACSM3, ADCY1, ADCY2, AMHR2, APLP1, ARNT2, ARNTL, ASCC3, ATN1, B3GALT6, B3GNT2, B3GNT5, BDH2, CADM1, CCL20, CHAD, CHKA, CHRM3, CKMT2, CLDN2, CNTN1, COQ7, CPT1C, CSNK1D, CSNK1G3, CYP19A1, CYP2D6, DAPK2, DGAT2L4, DHDDS, DLL1, DVL2, EFNA2, EPHA7, ERBB4, FASLG, FGF1, FGF7, FRAP1, GAL3ST1, GALNT6, GDF5, GFPT2, GOSR2, GSTA5, GSTZ1, HIBCH, HMGCR, HSD17B3, HSD17B7, HSD17B8, HSD3B1, IDI2, IFNA14, IMPDH2, INPP5E, ITGA11, ITGB7, KITLG, LAMB1, LDHB, MAGI2, MAP2K6, MARS2, MASP1, MPZL1, MTFMT, MTHFR, NANS, NGEF, NR1D1, NUDT5, OR10G9, OR10H3, OR10P1, OR13C8, OR13D1, OR1N1, OR1S2, OR2A5, OR2G2, OR2L2, OR51B6, OR5F1, OR6C76, OR7D4, OR8U1, P2RX4, PAK7, PCCB, PDGFB, PHKA1, PIGT, PLCZ1, PLD2, PLEKHA8, PNLIP, POLR3K, PPM1D, PP1R1A, PRKAA1, PYGB, RAC1, RARA, RBPJL, RELB, RPS6, RUVBL1, SARS, SCIN, SDC4, SEMA3E, SETD2, SFRP2, SHC4, SOD1, STK11, STX4, TGDS, TIRAP, TUBB3, UBE2K, UGP2, UGT1A10, UGT2B11, ULK1, VAMP2, WHSC1, WNT7A, WWP1, XCL1, YARS, TNFRSF10C, TNFRSF11B, TNFRSF1A
Negative_14719	DBI, EPO, F11, HGD, IL4, OAT, SP1, TNC, AMPD3, ANAPC5, APOA5, BCAR1, BCMO1, BMP8B, CACNA1E, CCL17, CCNB2, CD14, CDC7, CDH5, CDKN1C, CES1, CFLAR, CHRNA7, CLDN19, CLDN5, CLDN6, COL6A2, CX3CR1, CXCL13, CYP26C1, DCXR, DDX47, DDX51, DFFB, DLAT, DLST, DMGDH, EGLN1, EIF4B, ENTPD5, FGF12, FGF6, FIGF, FMO1, FMO2, GADD45G, GALE, GRIA3, GRIN2C, HAGH, IFNA4, IFNW1, IFT57, IL11RA, IL12RB2, IL20RB, IL23A, IRS1, LIPG, LTC4S, MGST1, MPZL1, MTHFD1L, MTMR2, MYL9, MYLK, NAGA, NAT2, NEUROD1, NT5C, ODC1, OR10C1, OR10H2, OR1N1, OR2T34, OR4Q3, OR6B2, OR7A17, PAK1, PARD6B, PARVG, PDE8B, PDHA1, PGAM2, PGK2, PIK3CD, PLK1, POLA1, PPP2R2D, PRKG2, PSEN1, RAB23, RAC1, RBL2, RIPK1, RRM2, RUVBL1, SELE, SENP2, SH2D1A, SOD1, SPRED1, STX12, STX2, STX4, TGFA, TNFSF18, TP53, TUBB1, UNC5D, WNT8B, B3GALNT1

Negative_14720	<p>A2M, AGK, C2, C7, CSK, CTH, GAA, GSR, ME3, OSM, UBB, ACACB, ACSL3, ACSS2, ADH7, AHCYL1, ALDH4A1, ALDH9A1, AMPD1, APAF1, ARHGEF1, ARPC4, ARRB1, ASCC3, ATP6AP1, B4GALT1, CACNB2, CCKBR, CCL2, CCND1, CCND3, CCR1, CDC16, CD01, CDS1, CLDN17, COL5A3, CPT1C, CXCL3, CXCL9, CXXC4, DAPK1, DARS2, DCTD, DDX41, DDX51, DNMT3A, DPYD, EFNB2, EIF4E2, ENO2, EPHA7, FABP1, FGF12, FGF6, FPGT, FTMT, FUT5, GAB1, GADD45G, GALNT5, GCDH, GGT5, GMDS, GNG12, GUCY1A3, HMGCR, IARS2, IFNA16, IFNA4, IFNG, IL8RB, IQGAP1, ITGA2, ITGA8, ITPKA, KIR3DL3, LYPLA2, MAPK14, MARS, MEF2C, MGST3, MNX1, MPDZ, MRAS, MTAP, MTMR2, MYH10, NCR1, NFKBIA, NFX1, NFYA, NFYC, OPLAH, OR10G8, OR1G1, OR1K1, OR2M3, OR2M5, OR4D5, OR4S2, OR51Q1, OR51T1, OR52B6, OR5D16, OR6C75, OR6C76, OR6K3, OR8D4, OR8K3, OR8S1, OR8U1, PAK7, PAPSS1, PDHA1, PER2, PHKG1, PIGM, PIGT, PIK3R3, PLCD4, POLR1E, POLR3B, PPA1, PPAT, PPP2R2A, PRSS2, PTGES2, RAP1B, RBL2, RELB, RPRM, RRAS, SCLY, SNAI1, SRGAP1, SULT1E1, SV2A, TAS2R40, THBS2, TOLLIP, WNT11, ALDH18A1, ATP6VOA1, HSD17B12, MAPK8IP2, SERPINA5</p>
Negative_14721	<p>A2M, ABO, FGA, GDA, KDR, LIF, MSN, NF1, NNT, NPL, PAH, TPO, AACs, ACSM2A, ADCY4, ADH1B, ALDH1L1, ALOX15, APOA1, ARNT, ARPC2, ATP5A1, ATP5G3, ATP6V1F, BCAT1, BCAT2, CAV3, CCL21, CCL28, CCNA2, CCR8, CD28, CD46, CD79A, CFL1, CLDN15, CMAS, CNDP1, COQ3, CREB3, CSAD, CTF1, CTTN, CXCL6, CXCR5, CYP2A13, CYP2C18, CYP4F2, DERL1, DFFA, DHDH, DOCK1, DPAGT1, DPM3, EARS2, ENO2, EPHA6, EVI1, FABP4, FGF18, FOXA3, FTMT, GARS, GLI3, GNA13, GNPAT1, GOT2, GPT2, GSTA4, GUCY2F, HADHB, HSD17B8, IFNAR1, IFNAR2, IFNW1, IGSF5, IL13, IMPA2, ITGB8, JAK3, LIPA, LYPLA1, MAN2A1, MEF2C, MTHFS, NCF4, NEU1, NT5C2, ODC1, OR1L3, OR2F2, OR4D6, OR4K15, OR4S2, OR51G2, OR52K1, OR52N4, OR52N5, OR5B17, OR5M9, OR5P3, OR5T1, OR6C2, OR8B12, OR8J1, P4HA2, PARS2, PCK1, PHKA1, PIAS3, PLAU, PLXNA1, PLXNA3, POLD3, POLR1E, PPP1R3D, PTGFR, PTGIS, RAP1A, RASA1, RFXANK, ROCK2, SDHA, SFRP4, SIGLEC1, SMAD6, SNAP25, SOCS7, SPTLC1, ST3GAL2, STK3, STX7, SULT1E1, TLN1, TUBA1B, TUBA3E, TUBB1, VASP, ZIC2, C1GALT1C1, SUV420H1, SUV420H2, TNFRSF12A</p>
Negative_14722	<p>CAD, CEL, IL5, OAT, OGT, SI, ABLIM2, ACVRL1, ADRA1A, AGMAT, AGPAT1, AGXT2, ALAS2, ALG6, ALG8, ALOX15, AMY2A, ANAPC11, ATIC, ATP5G3, B3GALT1, BET1L, BMP8B, BMPR2, CACNB4, CCL26, CD58, CDC26, CHPT1, CLDN9, CLTA, CNTF, CPOX, CSF2RA, CSNK1G1, CYP4A22, DARS, DHODH, DIAPH3, DMGDH, EPB41L1, FGF1, FLOT2, FLT4, FUT2, FZD8, GAL3ST1, GALE, GALNT3, GARS, GLUD2, GNB3, GNG13, GPAM, GSTA1, GSTM5, GSTP1, GUCY1B3, HGSNAT, HIBADH, IBSP, IL1RAP, IL6ST, IQGAP2, ITGA1, ITGA6, LALBA, LAMB2, LIFR, MAPT, MCCC2, MCM4, MPZL1, MYH3, MYL7, NCR3, NFATC4, NFYB, OR10G8, OR10H2, OR1S1, OR2A2, OR2B11, OR2W1, OR4L1, OR4N5, OR51V1, OR52I2, OR52J3, OR56A1, OR6C1, OR8D1, OR8K5, OR9I1, ORC6L, PARD6G, PDXK, PHKG1, PIK3CA, PLA2G10, POLR2B, POLR3K, PPA2, PPCS, PPP3CA, PRKAG1, PTAFR, PTGS2, RAPGEF2, RAPGEF3, RPS6KA2, RPS6KB2, SESN1, SETDB2, SFRP2, SH3BP2, SHMT1, SLIT1, SLIT2, SMURF1, SOCS2, SOCS7, ST6GAL1, STX4, TAP2, TNXB, TRAF2, UGT8, VAV2, YWHAH, ALDH18A1, ATP6V1C1, HLA-DPB1, PAFAH1B3</p>

Negative_14723	BCR, CS, DBT, F2R, FAH, FGG, GGH, GP9, IL5, LAT, NF1, OSM, ACADM, ACP2, A CTA1, ADH4, ALDH9A1, AMY2A, AMY2B, ARHGEF2, ASMT, ASS1, BCKDHA, BDKR B1, CADM1, CCL25, CHDH, CLCA2, COL2A1, CSF2, DAPK2, DDX41, DGAT1, DNM T3B, DUSP7, EPAS1, EPHA4, FASN, FCER1G, FGF19, GAL3ST1, GALNT7, GALN TL1, GCAT, GFPT2, GLDC, GMPPA, GMPPB, GRPR, GSTA4, GSTK1, HDAC1, HNF1 B, HSD3B1, ICOS, IL17RA, IL1RAP, IL20, INHBA, ITCH, ITGB7, ITPKB, KAT 2A, KIR2DL1, KLK3, LALBA, LAMA4, MAD1L1, MAFA, MAP3K11, MAPK10, MCEE , MCM5, MOV10L1, MPDZ, NEU4, NFATC3, NFYC, NME6, NOTCH2, OR10A3, OR10 R2, OR13C5, OR13C8, OR1J2, OR2C3, OR2M5, OR2M7, OR2V2, OR5B3, OR7A17 , PAK1, PARS2, PIAS4, PIGF, PIGN, PLA2G2F, PLCB4, PNPLA3, PPP1R1A, PP P3CA, PRIM1, PRKACG, PRKAR2A, PRKCG, PRKG1, PRKG2, RAB5A, RBKS, RRM2 B, RUNX1T1, SETD7, SIGLEC1, SMAD9, SOCS3, SOCS7, SOS2, SPRED1, SPRY3 , SPTLC2, SYNJ1, TGFB1, TLR2, TNFSF11, TUBB, TUBB3, TUBB4Q, UROC1, VA MP3, VANGL2, WASF1, WBCSR17, WNT5A, XCL2, XIAP, YWHAE, YWHAH, ATP6V1 C1, ATP6V1C2, GABARAPL2, SERPIND1, ST6GALNAC5, SUV420H1
Negative_14724	AK3, CKM, FYN, HAL, HGD, HK3, MAX, MPI, SFN, SHH, SI, SMS, SYK, TAT, TEC, TNN, ACAD8, ACOT11, ACPT, ADCY7, AKT1, APOA5, ARHGEF7, ATP5G1, CARD1 1, CBR1, CCL7, CD274, CD40LG, CHRM1, CHRM5, CYCS, CYP1A1, DDX52, DNMT 1, DPM2, DTX2, EI24, EPHA1, EPOR, FDPS, FGD1, FGF20, FLT1, FLT3LG, GAL NT12, GIT1, GMDS, GMPPA, GNB3, GRIA1, GSTM5, HSD17B8, IFNA6, IL20, IL 2RB, ITGA11, ITGAD, ITGB2, KYNU, LAMC1, LIMK1, MAN1A2, MCCC2, MGAT5B , MTMR1, MYH2, MYL5, NCF4, NEFH, NLGN1, NRG2, NTF3, OR10H2, OR11H4, OR 13D1, OR1E2, OR2S2, OR2T1, OR2T29, OR2W1, OR4C13, OR4D11, OR4D2, OR4 E2, OR4K1, OR51M1, OR52A5, OR6T1, OR9Q2, P2RX4, PHPT1, PIAS3, PIGL, P IGT, PPA1, PPP2R5A, PRKAA2, PRKCH, PYGL, RALBP1, RAPGEF2, SCIN, SESN 1, SETDB1, SHC1, SMAD9, SNAP25, SPRY4, STT3B, STX7, SUV39H1, TALDO1, TAS2R41, TIAM1, TKTL2, TOMM40L, TPH2, TRAF2, TRAF6, UGCGL2, WHSC1, W NT10B, WNT2, WNT9B, MAPK8IP2
Negative_14725	A2M, ATM, C8G, CS, F7, FER, FN1, GGH, GNE, GSR, HGD, HK1, LAT, MVD, PLG, P XN, TXK, ACP5, ADAM10, ADCY10, ADSS, AGPAT4, AMHR2, ARHGEF1, ASCC3, A TG7, ATP5G3, B4GALT5, BCL2, BST1, C5AR1, CCL15, CCL5, CCR3, CD22, CD2 26, CDC23, CDC45L, CHEK1, CHUK, CLDN20, CMAS, COL3A1, CPT1A, CREB3L4 , CSF2RB, CSNK1G1, CTBP2, DDX54, DDX55, DHX58, DOT1L, DTX1, EDA2R, ED N1, EIF4E2, ENTPD4, ERO1L, FGF10, FGF14, FGF8, FM01, FM03, FSHR, GALN T5, GANC, GFAP, GPLD1, GRHPR, GSTM2, GSTM5, HES1, IKBKG, IL17A, IL20R A, IL23A, ITPA, KLRD1, MAP4K1, MCM6, MDM4, MMP9, NARS, NCR1, NFX1, NFY C, NLGN3, NT5C, NT5C2, NT5E, OR1J2, OR2G3, OR4M2, OR51G2, OR51S1, OR5 2B4, OR52K1, OR52N4, OR52W1, OR5AC2, OR5M9, OR6B2, OR7G3, OR9Q2, PAR D6G, PDE7B, PIGV, PIK3CB, PIK3CG, PKM2, PLA2G4A, PLIN, PMM1, POLD3, P OLR3A, PRKAB2, PRKCD, PRODH2, PTPRM, RAC3, RALB, RASGRF2, RBL1, RBPJ L, RCHY1, RDH12, RDH8, RUNX1, SDHB, SGPP1, SIAH1, SLC25A6, SSH2, ST6G AL1, TIAM1, TJP1, TP53I3, TPH1, TYRP1, UBE2K, WNT2, ATP6V0D2, ATP6V0 E1, CTNNBIP1, HLA-DPA1, PAFAH1B2

Negative_14726	<p>ADA, AK7, AR, BCR, BTK, CAT, CRK, FH, GK2, GLS, IL9, NPY, SRF, TNF, TPO, VTN, WAS, AASS, ACAA2, ACMSD, ACO2, ACSL5, ACTG2, ACVR2B, ACVRL1, ADH6, AGPAT2, ALG12, APOA2, APOE, ARPC1A, ATP2A2, ATP6AP1, B3GNT2, BET1, C1QA, C1QB, CASP6, CCL14, CD247, CD40LG, CDH2, CDK7, CDKN1A, CDKN2D, CDS1, CERK, CHST13, CPT1B, CXCL10, CXCL3, CYP11B1, CYP17A1, DDX19A, DERA, DHCR7, DRD1, EARS2, EPHB1, EPHB6, EXTL1, FADS2, FGF1, GAL3ST1, GALNTL5, GRIN2D, GSTT1, GTSE1, IDH3G, IDI2, IFNW1, IGF1, IGFBP3, IL6R, INSR, IRS1, ITGB2, ITGB7, JAK3, KRAS, LALBA, LIAS, LRDD, MAP3K3, MAPK14, MAPT, MYH7, NCF4, NEUROD1, NFKB2, NFX1, NFYB, OCLN, OR1J2, OR1L4, OR1N2, OR1Q1, OR2T29, OR4C12, OR52B6, OR5A1, OR5P3, OR6C4, OR6C6, OR8J1, ORC3L, P2RX7, PCCB, PCK1, PDHA1, PHPT1, PIAS4, PKMYT1, POLD3, POLR2B, POLR2G, PPOX, PPP1R3D, PPP2R5E, PRKACB, PTDSS2, PTPRR, RAB23, RARS2, RFXANK, RRM2, SEMA3A, SFRP5, SLC25A6, SLC9A1, SRD5A1, SSH1, STAT5B, STX1B, SULT2A1, TAS2R50, TCF7, TOLLIP, TP53, TRAF6, UCP1, VAV2, WNT2B, YWHAG, ATP6V1B1, HSP90AB1, PDCD1LG2</p>
Negative_14727	<p>EDA, FES, FGB, GLA, HGF, ID1, IHH, MVK, PML, STS, TAT, XDH, ZYX, AADAT, ACACB, ACP6, ACTC1, ACVR1B, ADAM10, ADRA1D, ADSSL1, AGTR1, AHCYL2, ALAD, ALPL, ALPPL2, AVPR1A, AVPR1B, B4GALT2, BPNT1, CACNA1S, CBLB, CCL14, CCR4, CD44, CD47, CDC27, CER1, CES1, CHAD, CHUK, CLDN19, COL3A1, CORB3, CYFIP2, DHDDS, DMGDH, ENO3, ENTPD6, EPHA5, EPHB3, FABP1, FDFT1, FGF12, FUT9, GALNT1, GALNT7, GALNTL4, GAMT, GANAB, GGT1, GLS2, GNAI1, GNRHR, GUCY2C, HARS, IDH2, IDUA, IFNA2, IL23R, IMPA1, LAMA4, LIMK2, MAGI2, MAT1A, MCCC2, MGAT1, MGST2, MYH15, NCR3, NEU3, NQO1, NRAS, NTF3, OR10H2, OR10H5, OR13D1, OR14J1, OR2T6, OR4D5, OR4K2, OR51A4, OR51A7, OR51B6, OR51I1, OR52R1, OR56A3, OR5B3, OR6A2, OR6B3, OR7G3, OR8U1, P2RX2, PDE6D, PER3, PIGO, PIGT, PIK3CA, PIP5K1B, PMM2, POLR1B, POLR3K, PPA1, PTDSS1, PTGER1, PTK2, PTPN1, RXRA, SDHB, SELE, SESN3, ST8SIA1, STEAP3, STX4, SUCLG2, SULT1A1, TAS1R1, TAS1R3, TAS2R13, TIAM1, TNFSF11, TRAF4, TSC2, VDAC3, WHSC1L1, WNT3A, WWP2, ATP6V0D1, B3GALNT1, C1GALT1C1, HLA-DRB4, PNLIPRP2, SERPINA1</p>
Negative_14728	<p>ADC, AMH, C8B, CEL, DCC, DHH, F12, HYI, TAT, ACAA2, ACACA, ACSS3, ACTB, ADIPOR2, ARNT2, ARPC5, ATP5F1, ATP5O, AXIN2, BCAT1, BDH1, C4BPA, CACNB2, CACNG1, CACNG7, CARS2, CCKAR, CCNA1, CCNG1, CD82, CD8A, CDKN2D, CDO1, CHRM3, CLDN14, COL11A1, COQ5, CYP4F3, DDX47, DGUOK, DLL3, DUSP3, ENO1, ENO2, ENPP3, ENTPD7, EXTL2, FARS2, FGF5, FGF6, FGFR4, GMDS, HARS, HNF4G, HSD17B3, HTR2A, HYAL2, IDI1, IFNA5, IFT57, INHBA, INPP5B, KLRC3, MARS2, MGAT1, MGAT5B, MYL5, NCKAP1, NFKBIA, NKD2, NLGN2, NME7, NNMT, NOTCH1, NRAS, NTSR1, ODC1, OR10H1, OR1L1, OR2C3, OR2G6, OR52B6, OR5A1, OR5B17, OR5I1, OR5L1, OR6Y1, OR7D4, ORC1L, OXCT2, P4HA3, PARVG, PCYT2, PIGF, PLA2G2A, PPOX, PPP1CB, PRKCG, PRPS1, PTGDS, PYGB, RAPGEF1, RBPJ, RBX1, RDH16, RUVBL1, SC4MOL, SDHD, SELL, SETD2, SIAH1, SMAD4, SORBS1, SOS2, SPCS1, STX4, TACR2, TAS2R50, TBK1, TBL1XR1, TKTLL1, TNFRSF8, TOLLIP, TPMT, WNT10A, XYLT2, GABARAPL1, PHOSPHO1, TNFRSF12A</p>

Negative_14729	<p>AK1, DBH, IL3, MET, SPN, ACSM3, ADIPOR2, ADSL, ANGPTL4, AQP7, ATP2A2, BDNF, BMPR1A, CCL4, CCR6, CDC2, CDC45L, CLDN11, CNGA4, CREB1, CXCL3, CYP11B1, CYP3A5, DHCR7, EIF4B, EXT2, FARSA, FGF21, G6PD, GALNS, GNPDA2, GSTO2, HA02, HLA-DOB, HSPA2, HTR7, IFNA2, IFNA21, IFNGR2, IGF1R, IL17B, IL18R1, IL18RAP, IL1R2, IL8RB, ITGA10, ITPK1, ITPKB, KAT2B, KIR2DL3, KLK3, LYPLA1, MAN2A1, MAP2K3, MCM4, MDH2, MGST3, MYH13, NCOR2, ONECUT1, OR13C8, OR2T34, OR4A16, OR4C13, OR4E2, OR4P4, OR51A2, OR52R1, OR7G2, OR8H3, OR8J3, P2RX1, PFKFB2, PFKFB3, PKM2, PPCDC, PRKAG1, PTCH1, QARS, RDH10, RDH11, RPSA, SARDH, SEMA4A, SETDB1, SGPP2, SOAT2, SOS2, SQLE, TACR2, TAS2R1, TLN2, TNFSF10, TNFSF4, TRAF1, TRAF5, TYMP, VANGL2, VTI1B, WBSCR22, SERPINC1, ST6GALNAC1</p>
Negative_14730	<p>FOS, GP5, GPI, IL6, RFK, TFG, UBC, ACSL4, ACSM1, ACVR2A, ALAS2, ALDOC, ALOX15, ALPP, APOA2, ARPC2, ARSD, ASCC3, ASRGL1, ATP5L, ATP6AP1, B3GALT2, BET1L, BPGM, CAMK4, CCL14, CCNG1, CCR6, CDC27, CDK5, CHD8, CHRM1, CHST12, CLDN7, CNGA3, COQ7, CTSB, CYP2C9, CYP3A4, DDX50, DGKG, DNMT3B, DOT1L, DRD2, EIF4B, ESPL1, EXTL2, FGF7, FLOT1, GALNT7, GALNTL4, GCAT, GLI1, GNAI2, GPX7, GRIA1, GUCA1A, HMGCS1, HTR2C, ICAM1, IL11, IL25, IMPDH2, INPP4B, ITGB3, ITGB4, KIR2DL4, LRP6, MAD2L1, MAP3K12, MASP1, MGAT5, MGST1, NFYB, NUDT12, OR10AG1, OR10H1, OR11A1, OR13A1, OR1B1, OR1L1, OR4C12, OR4K1, OR51A2, OR6C70, P2RX4, P2RX6, P4HA3, PDE1B, PDE5A, PDHB, PERP, PGM3, PIGV, PIP5K3, PLA1A, POLR2B, PPAP2B, PPP2CA, PRKCA, PTGIS, RDH5, SELP, SHMT2, SIGLEC1, SKIV2L2, SPP1, STAT5A, STEAP3, SV2A, TRAF4, TUBA4A, TUBB1, UGT8, UROC1, WHSC1L1, WNT2B, CACNA2D1, CSGALNACT1, PLA2G12B, PRICKLE1, SLC25A31, TNFRSF10C</p>
Negative_14731	<p>C8G, CBS, DCK, F11, F3, GGH, JUN, LPL, MSN, NNT, TAT, VCL, ACSL5, ACTN1, AGPAT1, AGPAT3, ALOX15, ANAPC7, ARG1, ARSD, ATP5C1, BDKRB2, BLVRB, C7orf16, C9orf95, CACNA1H, CALML5, CCL15, CCL21, CCNH, CD34, CD70, CD8A, CHRM1, CLDN9, COASY, COL2A1, CPT1C, CREB3, CSNK1A1, CYFIP1, CYP26C1, CYP2C19, CYP2S1, DDX50, DDX54, DPYD, E2F2, ENTPD4, EPHX2, ETNK2, EXOC7, FCER1G, FGF2, FGFR3, GALNTL2, GALNTL4, GCAT, GNA14, GSTA2, IFNA6, IL12B, IL1RAP, IL25, IRAK1, JAG2, JUND, LDHC, LDHD, LEF1, LEFTY1, LHCGR, LRP6, MASP1, MBL2, MGAT5, MYH11, NEFM, NRXN3, NT5M, NUDT12, NUMB, OR10AD1, OR10AG1, OR10H1, OR13H1, OR1A1, OR1B1, OR1C1, OR1L8, OR2A5, OR2Y1, OR51G2, OR52W1, OR5AC2, OR5D14, OR5K2, OR7C2, OR9K2, ORC1L, P2RX5, PAFAH2, PDE6H, PDGFC, PDXP, PIK3C2B, PIK3CG, PIP5K1C, PLA2G5, PLCB4, PNPO, PRPH, PSME1, PTCH1, RBL1, RHOQ, RIPK1, RPSA, SEMA3A, SIAH1, SLIT2, SMAD1, SMC1B, ST3GAL4, ST8SIA1, STAT1, STX1B, STX2, TAS2R4, TAS2R41, TAS2R8, TLN2, TLR5, TM7SF2, TRAF5, TRAF6, UGCG, UGCGL2, UMPS, VAMP1, VEGFC, VKORC1, WHSC1L1, XCL2, XYLT2, YOD1, PAFAH1B3, ST6GALNAC4</p>

Negative_14732	<p>C1S, CFH, IL4, MET, MUT, PDC, RDX, AARS, AARS2, ACADL, ACAT1, AGPAT2, A GPAT4, ALDH3A1, ALDH3A2, ALDH4A1, ALG3, ALOX12, APC2, ARAF, ARNTL, A TP5D, ATP6V0B, B3GAT2, B3GNT5, B4GALT1, BCAT1, CALML6, CBLC, CCND1, CCR10, CCR3, CCR9, CD55, CDC20, CDS2, CLDN3, CREB3L3, CRLS1, CSDA, CS NK1G2, CXCR3, CXXC4, CYSLTR2, DAAM1, DOT1L, DVL1, EPAS1, EPHA7, EREG , EXTL2, FGF4, FLOT2, FOXA2, FOXO3, FUT7, G6PC2, GLDC, GLYCTK, GNAT3, GNB1, GP1BB, GSTA3, GUCY2D, GUSB, H6PD, HSPA1B, HYAL2, IFIH1, IFNA5, IL10RB, IL15, IMPA2, INSR, IRF9, ITGA10, ITGB1, LYPLA2, MAP4K3, MGA M, MYH2, NCAM2, NKX3-1, NRG1, NSDHL, OR13C2, OR2A2, OR2L3, OR4C16, OR4S1, OR51B4, OR51Q1, OR51T1, OR52H1, OR5F1, OR8S1, OSMR, PAK3, PDE9A, PDGFC, PDHA1, PEMT, PFKL, PIAS4, PIGH, PIGK, PIP4K2C, PLCB4, PLXNB2, PPM1A, PPP1CA, PPP2 R5A, PPT1, PRKCH, PRLR, PSME2, PSME3, RAB23, RASGRP3, SARS2, SC5DL, S RGAP3, ST3GAL6, STK36, TAS2R10, TAS2R38, TFDP1, TNFSF10, TSHB, UNC5 B, UPP1, UPRT, VEGFB, XCL2, ARHGEF12, ATP6VOD2, MAP3K7IP2, PLA2G12B</p>
Negative_14733	<p>ATM, EPO, F9, FER, GPI, IL2, UBC, ACADM, ACSL6, ACTA1, ADORA2B, ADSL, A GRN, ANPEP, ARRB2, ASCC3, B4GALT3, BMP4, BMPR1A, BMPR2, CAMK2G, CD27 4, CHIA, CHIT1, CLCF1, CLDN7, CTNNA1, CXCL1, CYP11A1, DUSP14, EFNA5, ELK1, EPHA3, FTCD, FZD10, GALNT12, GFPT1, GJA1, GMDS, GNMT, GSTA2, HA DHA, HARS, HNF1A, IFNA6, IL25, IL2RG, INPP4B, ITGB6, KCNJ11, KLKB1, L AMB2, LDHC, LEFTY2, LHCGR, MAP3K12, MAP3K13, MAPK3, MASP1, MTHFS, MY H7, NADSYN1, NCAM2, NCOA4, NEU1, NME2, NUDT12, ODC1, OR10A2, OR10G7, ORIN2, OR4E2, OR4F4, OR52I2, OR5D18, OR5F1, OR5I1, OR6K2, OR8B4, OR8 K5, PAICS, PAK4, PER2, PER3, POLR1C, POLR3A, PPM1A, PRKAB1, PRKCE, PR PH, RARS2, RASGRP2, RPS6KA4, RRM1, SLC2A2, SLIT1, SMAD6, SOAT1, SOCS 7, SQLE, SREBF1, SUCLA2, SUCLG1, SUCLG2, TAS2R16, TGFA, TRAF1, TRAF3 , TYMS, ZMAT3, MAPK8IP2, TNFRSF12A</p>
Negative_14734	<p>FYN, GSN, GSR, HK1, HK2, HPD, MSN, OGT, PDC, SCD, ACADL, ACHE, ADH1A, AD ORA2B, AGPAT6, ALG10B, ARAF, ARPC1A, ASNS, ATF4, ATIC, B3GAT1, BET1, CACNA1H, CAV2, CCL25, CCNB1, CCR5, CD247, CD3E, CDIPT, CHRM2, CHSY3, COQ3, CRLS1, CRY1, CSNK2A1, CYP2U1, DDX47, DDX55, DIAPH3, DLL3, EFNA 1, ENTPD2, ENTPD3, EPHX1, ESPL1, ETNK2, FARSA, FGF7, FLOT1, FOXA3, GG CX, GGPS1, GLYCTK, GNPAT1, HARS2, ICOSLG, IGFBP3, IL12RB1, IL13, IL 6R, INPP4A, IRS4, ITGAX, KARS, MAPK10, MAT1A, NFATC3, NFX1, NLGN1, NO DAL, OCLN, OR10P1, OR10Q1, OR1N2, OR1Q1, OR4A5, OR51V1, OR56A3, OR5V 1, OR8S1, OR9Q1, OXSM, PAPSS2, PARD6B, PDE6D, PIAS3, PIGM, PIP5K3, PL A2G4A, PLXNB3, POLR2L, PPAP2B, PPARD, PPT1, PRKCG, PTDSS2, RASA1, RA SA2, RERE, RFXAP, ROCK1, SESN1, SFRP2, SLC12A2, SLC25A5, SOCS1, SOCS 5, STAM2, STX6, SUOX, TAS1R2, TAS2R4, TCF7, TLR2, TPM3, UCK1, UCK2, UG T2B7, VAV1, VNN1, WHSC1, EIF4EBP1, HLA-DPB1, MAP3K7IP2</p>

Negative_14735	<p>GP5, HGF, ILK, JUP, LTB, RB1, SI, TNF, ADSSL1, AGXT, AKT2, ARAF, ARPC5, ARRB1, ATG7, ATIC, ATP5I, BCL10, BLNK, CACNB3, CALML6, CASP7, CD19, CD48, CD59, CDC45L, CHEK1, CLDN15, CNTNAP2, COQ7, CSDA, DCXR, DDB2, DD X55, DGKD, DIAPH2, DLAT, DNMT3A, DPAGT1, DPM3, EDAR, ENTPD6, ETNK2, F13B, FARSB, FDPS, FGF23, FGFR2, GADD45G, GMPS, GNRH1, GPT2, GRM1, GUC A1C, GUCY2C, HGSNAT, HMBS, HPRT1, IDH3G, IFNGR1, IFNK, IL10RB, IL18, IL19, IL1B, IL24, INHBC, INPPL1, ITGA9, ITGAD, KIR2DS4, LCMT2, LIPG, MCAT, MCM5, MEF2C, MGAT5, MPST, NCK2, NEU3, NEUROG3, NR4A1, NRP1, NSD HL, NTNG1, NUDT2, OR1D2, OR1G1, OR2A42, OR2F1, OR51G2, OR5AR1, OR5M3, OR6A2, OR6C4, OR8H2, OR9A4, OR9I1, OXCT2, PDE7B, PGAM2, PIK3CB, PLIN, POLE3, POLR2A, POLR3D, PPM1D, PPP5C, PPT1, PRKX, PSME2, PTPN6, QARS, RAPGEF4, RPS6KA3, RPSA, SEMA3D, SLC25A4, SPP1, SPRED2, ST3GAL6, ST6GAL1, SUCLG2, TGFB3, TP53, TRPM5, TUBA3E, TUBB2B, TUBB4, UGCG, UGCL2, UGT8, ULK2, ULK3, UNC5C, VDAC1, VEGFA, WNT11, CACNA2D3, SERPIND1</p>
Negative_14736	<p>BAD, CFD, CRH, DBH, GHR, GK, ACAD8, ACO1, ADCY8, AKR1B1, ALDH4A1, ALOX15, ALS2, AMPD1, AMY2B, ARHGFE6, ARSB, ATG3, ATP5G1, B3GALT1, BLNK, BMP8B, C1QC, C3AR1, CACNB1, CADM3, CARD11, CCL1, CCR4, CD72, CD79B, CE S2, CHST13, CHSY1, CLDN2, COQ6, CPT2, DAPK1, DHX58, DNMT1, DVL3, EFNA4, ERO1L, ETNK1, ETS1, GCLM, GDF6, GGT5, GNB3, HLA-DRA, HMGCR, HTR6, IGF1R, IL7R, IRAK2, ITGA2, ITGA7, ITGA9, LEPR, MAPK3, MAT1A, MINPP1, MMP9, MRAS, NAE1, NARS, NOX3, NSD1, NUDT9, OR10A6, OR10K2, OR10P1, OR1A1, OR1N2, OR2T29, OR4D11, OR4D5, OR4M1, OR4S1, OR51A2, OR52N5, OR52R1, OR6F1, OR8G1, OR8J1, PCNA, PCYT1B, PIGO, PIK3CG, PLCD4, PLXNB2, POLD1, POLE, PPAP2B, PPM1B, PPP1CC, PRDX6, PTCRA, PTPN1, PTTG1, RAP1A, RASGRF1, RASGRP4, RELB, RERE, SELPLG, SMPD4, SMURF2, SORD, SUOX, TAS2R5, TAS2R50, TBXAS1, TCF7, TFDP1, TNFSF9, TPMT, TSTA3, WNT11, WNT2B, XCL1, ZFYVE16, CACNA2D4, GABARAPL2</p>
Negative_14737	<p>C8B, C9, GCK, GLS, IL5, MAX, MET, PML, TNC, ACSM4, AGPAT2, AHCYL2, ALAS2, ALOX5, ARHGFE6, ATP5I, ATP6V1F, BCAT2, BHMT, BUB1, CALML6, CAMK2B, CCL20, CD3E, CDK4, CLDN10, CLTC, COL1A1, COL4A2, COQ5, CYBA, DAG1, DHD1, DGKD, DMGDH, DUSP2, EFNA3, EXTL3, FABP4, FOSL1, G6PC2, GAMT, GCNT4, GGPS1, GP1BB, HLA-F, HMOX2, IL21, IL4R, JAG1, KIR2DL4, KLRC3, LARS, MAP2K2, MCCC1, MCM3, MGAT2, MITF, MTHFS, NAE1, NAGK, NAMPT, NCOR2, NCR1, NFKBIB, NMNAT3, NNMT, NRXN2, NUMBL, OR10S1, OR11A1, OR2B11, OR2G6, OR2T2, OR2V2, OR3A2, OR4E2, OR4K1, OR51F2, OR51V1, OR52D1, OR5AU1, OR5B12, OR5J2, OR6A2, OR6Y1, OR7A5, PCNA, PDE10A, PFKP, PGAP1, PIK3CG, PIK3R3, PKM2, PLD2, PLEKHA8, PLK1, PLXNA3, PMVK, POLR2B, POLR3K, PPARG, PPP2R2A, PRKAG1, PTGDS, PTGS2, RPE65, RPS6KA1, RPS6KB1, RPS6KB2, SAT2, SEMA3E, SKP2, SRGAP2, ST3GAL1, ST3GAL2, STX12, STX1A, STX7, TAS1R3, THBS3, TJP1, TKTL2, TLN1, TNFRSF4, TOMM40, TRDMT1, TUBA8, UMPS, UNC5A, WARS2, WNT3A, ATP6V1E2, C1GALT1C1, HLA-DRB3, HSP90AA1, SERPINE1, TNFRSF10C</p>

Negative_14738	<p>ADK, AR, C4B, C9, HGD, IHH, OAT, PGD, PGP, SFN, TK2, ABLIM2, ACTA2, ALAD , ALOX12B, AMPD2, AMY2A, AOC3, AREG, ARG2, ATP6VOC, B3GALT4, B3GALT5 , BACE2, BNIP1, CALML3, CAV2, CCL15, CCL17, CD40, CD58, CDK5, CLDN17, CLDN4, CLDN9, CNGA3, CNTN1, COL1A2, COL2A1, COL5A2, COL6A2, CPOX, CS F2RA, CTF1, CXCL10, CYP2D6, CYP4F2, CYP4F3, DNMT1, DPM2, EFNA5, EXT2 , EXTL1, FARP2, FLAD1, FM02, FTCD, FTMT, FUT9, GJA1, GLUD2, GSTZ1, HAD HA, HAO1, HARS2, HIBCH, HLA-</p> <p>DMA, HSD17B4, IL19, IL22, IL28RA, ITGB5, JAK1, JAM2, KLRC4, L1CAM, LD HC, MAN1A1, MAP3K11, MAPK11, MAPK9, MCM2, MDM4, MGAT4A, MPST, MYLK2, NCK2, NTSR1, OGDHL, OR4L1, OR4N4, OR51A7, OR6C75, OR6S1, P4HA3, PAIC S, PANK3, PARD6A, PARD6B, PCYT1A, PDE2A, PDE3B, PDPK1, PHKG2, PHPT1, PIM2, PLCG1, PLCG2, POLD1, POLE2, POLR3A, PPP2R1A, PVRL1, RHOA, RRM2 B, SARS, SCD5, SELL, SFRP1, SIAH1, SMAD7, STAM2, STAT3, STAT5A, STX2, STX6, SUCLG1, SULT2B1, TAS1R2, TAS2R48, TAS2R7, TGFBR1, TJP1, TM7SF 2, TNXB, TRHR, UBE2L3, UCP1, UGCGL2, VEGFB, WHSC1L1, ATP6VOD1, HSP90 AA1, TNFRSF1A</p>
Negative_14739	<p>AMT, DAO, DCC, IL2, KIT, MIF, NNT, VCL, ABL2, ACSM2A, ACSM3, ACTN2, ADR B3, AGMAT, AGTR1, AGXT2, ALDH9A1, AMDHD1, ANPEP, AREG, ARG1, ARHGEF7 , ARPC1A, ATF2, B4GALT1, BBC3, BMPR1A, CCR2, CD244, CDC26, CHAD, CLDN 10, CLDN16, CNTNAP2, CUL1, DAXX, DGAT2L4, EPHB6, EVI1, FARSA, FCGR3B , FLT1, FUT6, FZD9, GATM, GCLM, GDE1, GGPS1, GSTA3, GSTA5, HLCS, ICOS, IGF1, ITCH, ITGB6, LCP2, LIPT1, LRP6, MAN1C1, MAP3K14, MAT1A, MGAM, M GST3, MMP2, MPST, NAGA, NFKBIE, NKX2-</p> <p>2, NNMT, NSD1, NTN1, OR10A5, OR10T2, OR13F1, OR14I1, OR1G1, OR2C3, OR 3A1, OR51A4, OR51F1, OR51G1, OR51V1, OR52B4, OR5B17, OR6A2, OR7C1, O R7G1, PANK4, PARD6G, PDE4B, PDE6H, PFKM, PKLR, PLA2G10, PPID, PRKAG2 , PRKAR1A, PRKG2, PRPH2, PSEN1, PTEN, PTTG1, RALA, RALB, RAP1A, RAP1B , RASGRF2, RASSF5, RPRM, SARS2, SETD8, SGMS2, SHC3, SLC27A1, TAS1R1, TAS1R3, TAS2R13, TAS2R3, TAS2R5, TAS2R7, TAS2R8, THBS1, TLR3, TNFRS F4, TNFSF14, TSHB, TUBA8, UGT2A1, UGT8, UNC5A, WNT7B, YWHAH, ZBTB16, ATP6VOA4</p>
Negative_14740	<p>AK3, C8G, FGA, INS, LHB, TFG, ABLIM2, ACADS, ACTN1, ACVR1B, ACYP1, ADC Y2, ADORA2B, AKR1B1, ALDH3B1, ANAPC4, APC2, ATP6VOC, B3GAT1, B3GNT4 , BNIP1, C5AR1, CACNA1F, CACNG4, CADM1, CALML3, CAMKK1, CCL21, CD48, CLDN20, CLDN7, CTSB, CXCR6, CYP26A1, DERL1, DLL4, DMGDH, DTYMK, EFNA 5, EGLN1, ENTPD6, ETNK1, EXT2, FCGR2B, FCGR3A, FGD3, FGF17, FGF2, FPG T, GAD1, GART, GSTM2, GUCA1A, HLA-</p> <p>DMA, HMOX2, HTR2A, HTR4, IL10, IL18RAP, INSR, ITCH, ITGA4, ITPA, ITPK B, JAM2, KRAS, LIFR, MAOA, MAPK7, MYH15, NUMBL, OR10V1, OR2D3, OR4D11 , OR4D9, OR51I1, OR52N4, OR5L1, OR8B4, P4HA2, PAPSS2, PARD6G, PARVB, PCK1, PDE3B, PGAP1, PIK3C2B, PIK3CA, PLA2G2E, PLA2G2F, PNMT, PNPO, P OLE2, POLE3, POLR2H, POLR3G, PPCS, PPP1R3C, PPP2R1A, PPP2R5B, PRKAR 2A, PRKCG, PRKG1, PTEN, PTGER3, RFXANK, RHOQ, RPN2, RPS6KA1, SDHC, SE MA3C, SEMA3G, SORBS1, TAS2R9, TGFB2, TRDMT1, UCP1, ULK2, UNC5A, WARS , WBSR17, YWHAB, MAP3K7IP1, MAPK8IP1</p>



Negative_14741	<p>BTD, CAD, CGA, CRK, DDC, LPL, ABLIM2, ACVR1B, ADH1B, ADRA1B, ALDH7A1, ALG10, ALG3, ARHGAP5, ATG12, ATG7, ATP5J, ATP6AP1, B3GNT4, BMPR2, CACNA1D, CCL14, CCL8, CCNE2, CCR2, CD72, CDC2, CES7, CFL1, CHST13, CMPK2, CSF1, CSF2RB, CYP2C18, CYP3A5, DDX4, DUSP2, EHMT2, EPHA1, FLT3, FPGS, FZD9, GAB1, GALNT2, GALNTL2, GCNT2, GNRH2, GPX5, GRIN1, GSTM5, HBEGF, HMGCS2, HNMT, HSD17B3, HSD3B7, ICOSLG, IGF1, IL12A, IL17RB, IL18RAP, IL28RA, IMPA2, IRAK4, JUND, LILRB3, LRRC4C, MAGI1, MGAT2, MGAT5, MKNK2, MTMR2, MYD88, MYH2, NFATC1, NLGN1, NRAS, NRG4, NSDHL, NT5C2, OR10H3, OR13C3, OR13J1, OR2A42, OR2L8, OR2T12, OR4C13, OR4F6, OR4M1, OR51B6, OR5K1, OR6Q1, OR8H3, ORC5L, PARVB, PDE4D, PERP, PFAS, PIGN, PIK3C2A, PLA2G5, PLCD1, PLEKHA8, PNPT1, PPP2R2B, PTGS2, RAP1A, ROBO1, SEMA3E, SFRP2, SMAD2, SMAD7, SOCS7, SSH3, STAT5A, TAS2R38, TNFRSF8, WEE1, WNT5A, WWP2, YWHAQ, MAP3K7IP2, TNFSF13B</p>
Negative_14742	<p>DBT, DCK, ID2, RET, SMO, SRC, TPR, AARS, ACP5, ACVR1B, AGPAT3, AKR1C1, ALDH3B1, ALOX12, APRT, ARD1A, AREG, B3GNT4, BDKRB2, C4BPB, CAMKK2, CBL, CCKAR, CCL21, CD99, CDC20, CHRM3, CLDN2, COL2A1, COL4A1, CSNK2A1, CTSL1, CXCR5, CYBB, DAD1, DGKH, DOLPP1, ECSIT, EFNA4, EP300, EPHA2, F2RL2, FARP2, FLT1, FRAT1, FSHR, GARS, GCAT, GMPR2, GNPAT1, GSTK1, H6PD, HSD11B2, IDH2, IL1B, IL21R, KAT2B, LIMK1, LYPLA2, MAPK1, MGAT2, MGST3, MPP5, MS4A2, NLGN3, NMNAT3, NODAL, NRG2, OR10H4, OR10J1, OR10J3, OR1N1, OR2M4, OR4K1, OR51B2, OR52I1, OR52N2, OR5T1, OR6B2, OR9Q2, OXCT1, PDE7B, PDGFRA, PDHB, PFN3, PGS1, PIAS2, PIGB, PIK3CB, PIK3R4, PISD, PMVK, PPAP2B, PPP1R3C, PRKAA1, PRNP, RASA1, RFX5, RHOD, RPSA, SC5DL, SCIN, SDHA, SHMT2, SIAH1, SLC27A4, SMAD2, SNAP23, SPRY3, STK3, STX18, TAS2R9, TUBA4A, TUBB1, UGT2B7, UMPS, XCL1, YARS, ZNRD1, SERPINF2</p>
Negative_14743	<p>CKB, CR1, F2, LIF, LPL, OAT, PML, SPN, TH, ABAT, ABL2, ACAA2, ACOX1, ACVR1B, AGMAT, ALOX15, ATP5E, C4BPA, CARS, CBR3, CCL14, CCL25, CD274, CD8B, CDC25A, CDK5, CFLAR, COL4A2, CXCL12, CXCR3, CXCR4, CYP11B1, DAPK2, DHRS4, DRD1, ECSIT, EDNRA, EGFR, ENPP2, EPHB2, EXT1, FGD3, FGF21, GNA13, GOT2, GSTA3, GUCA1C, IDH3B, IL12A, IL28B, IPPK, ITGA3, KITLG, LARS2, LDHC, MAGI3, MAP3K3, MAP4K4, MCEE, MGST1, MMP14, NAE1, NAT1, NFAT5, NKX6-1, NMNAT2, NTRK1, OR1J2, OR2C3, OR51E1, OR7D2, PAPSS2, PER3, PHKB, PIGL, PIK3C2G, PLA2G5, PLCZ1, PLOD1, POLA2, PPCS, PPP3CA, PPP5C, PRKX, PROS1, PTPRC, PVRL3, RND1, RPS6KB2, RUNX1T1, RUVBL1, SHC4, SIPA1, SLC2A2, SPCS1, SULT1A2, TBK1, TP53, UGT2B7, VEGFA, YARS2, YWHAB, ATP6V1G3</p>
Negative_14744	<p>AK2, AK5, CKB, CRK, CSK, GBA, GGH, GK2, RPE, ACSS3, ALPL, ANAPC1, APOA2, ARHGAP5, ATP4A, ATP6VOB, B3GALT6, B3GAT2, B4GALT6, BAI1, BCL2L1, BMP2, BMP8A, CAMK2D, CBLB, CCL1, CCNB2, CCR10, CD72, CDC42, CDH4, CDK2, CDK7, CDS2, CLDN11, CMBL, COASY, CRY1, CTNND1, CTSL1, DIAPH2, DUSP9, EPHB1, ERBB2, FABP4, FARSB, FMO3, FMO5, FOXA3, FZD7, GALNT12, GALNT13, GARS, GCDH, GGT1, GLG1, GMPR2, HHIP, HSPA2, IFNA13, IL29, ISYNA1, ITGB8, KDSR, KIR3DL3, LYZL1, MAML2, MAN1C1, MAP3K6, MAPK7, MOV10L1, NCR1, NKX2-2, NUMB, OR10S1, OR13C2, OR13C9, OR1I1, OR1J4, OR2A4, OR2T5, OR4M1, OR4N4, OR51Q1, OR51V1, OR8G1, OR9A2, PCCB, PFKFB1, PIAS1, PIGT, PIK3C3, PLD2, PLOD1, PLOD3, PMM2, PNMT, POLR1E, PPP1R3D, PPP2R2B, PRKAR1B, PRKCI, PROS1, PRSS3, PTCRA, PTDSS2, PTGFR, PTPN5, PTPRJ, RAD51, RAPGEF4, RDH16, RDH8, RETSAT, ROBO1, RRM2B, SMAD2, SMAD4, SMPD2, SQLE, SULT1A4, TAS2R1, TFPI, TUBA1C, ULK1, WNT8B, YARS2, AASDHPPT, TNFRSF10C</p>

Negative_14745	BTC, F7, FER, LPO, MOS, RFK, SHH, STS, ABL1, ACMSD, ACSS3, ACTB, ADCY5, AGTR1, ALDH1A1, ALDH2, AMDHD1, AOC2, APBB1, ATF4, ATP2A1, B3GAT3, B3GNT4, BMP8B, BMPR2, C1QB, CACNA1E, CACNG5, CBLB, CD80, CDC26, CDC7, CHST12, CYP11A1, CYP4F2, DARS2, DDX19A, DTYMK, DUSP8, DUSP9, EFNA5, EFN3, F2RL1, FCGR2B, FGFR4, FZD2, FZD7, GALNT8, GNB1, GNRHR, GRIN2C, GUCY2D, HEXB, HLA-DRA, IL10RA, IL2RB, ITGA6, ITPKA, LAMA4, MAP3K13, MCCC2, MCM6, MECR, MYH7, MYLK3, NAGS, NEFM, NFKB2, NFKBIB, NMNAT2, NQO1, NR5A2, NRXN3, ODC1, OR10S1, OR13C9, OR14I1, OR1E1, OR2T33, OR4M2, OR51G1, OR52W1, OR5B21, OR6C70, PAK2, PDE6H, PHKG1, PIGC, POLD2, POLR1B, PPP2R2C, PRKCG, PRKCZ, PSAT1, RAC1, RPS6KA4, RXRG, SCP2, SELPLG, SIGLEC1, SMPD1, STAT1, SUOX, TGFB3, TLR5, TPI1, TUBA1C, VAMP4, VEGFC, WNT10A, YKT6, ZFYVE16, ATP6V0A4, CACNA2D1
Negative_14746	AK7, BID, CEL, CR2, DCN, DLD, EPO, TNN, UBB, AASDH, ABAT, ACAA2, ACACA, ACAD8, ACO2, ACOX2, ACOX3, ACSL3, ARG1, ASIP, ATP12A, ATP5F1, B3GALT4, C1GALT1, CACNA1A, CACNG1, CACNG5, CAMK4, CCL27, CCNB1, CCND2, CDS2, CERK, CHD8, CHST13, CIITA, CLDN4, CLDN7, CMPK1, CNTFR, COQ3, CTNNA3, CTSG, DAPK1, DDX23, DEGS1, DGKA, DGKZ, DHRS4, DLL1, DTX4, ENPP2, EPHX2, EXT2, FGF17, FGFR3, FOXA3, FOXO1, FRAT2, FUT7, FZD8, GAL3ST1, GARS, GDF5, GOT2, GZMA, HAO2, HHEX, HPRT1, IL21, IL2RG, IMPDH2, INHBE, IQGAP3, ITGA2, ITGA6, LDHB, LIPG, MGAT4A, MTHFS, MYH1, MYH11, MYH15, NATA1, NQO1, NT5C1B, NTF3, OR10A5, OR1L1, OR2L8, OR2M7, OR2T34, OR6B3, OR7D4, OR8J1, P2RX5, P4HA3, PARVB, PAX8, PCK2, PDE11A, PHGDH, PIP4K2A, PIP5K3, PLA2G10, PLAT, PMAIP1, POLD3, POMC, PPA1, PPCS, PPP3R1, PTPRC, PTTG1, PVRL2, PVRL3, RAC2, SARDH, SEMA4C, SKP2, SMC1A, SOAT2, SORBS1, STEAP3, TNFRSF8, UMPS, UXS1, YES1, ATP6V1G3, TNFRSF18
Negative_14747	AK3, AK5, CGA, FAS, FH, FST, GAA, IVD, TFG, UBC, ACP6, ADH6, ADSS, AKT2, ALAS2, ALDH1A2, ALG12, ANAPC5, ARPC5, ASRGL1, ATP5D, ATP6VOC, BAIAP2, C3AR1, CACNA1E, CAMKK2, CCL2, CD38, CD80, CDH1, CHEK1, CHEK2, CHSY3, CLTCL1, CTPS2, CXCL12, CXCL5, CYP2A7, CYP4F2, DDX41, DHRS3, DUSP5, DVL2, ETNK1, ETNK2, F2RL2, FLAD1, FOXA2, FZD8, GALNS, GGCX, GMPPA, GNA14, GRIN2C, GRPR, GUCY2F, GYS1, HMGR, HRAS, HSD17B8, IDUA, IKBKE, LIPG, MAD2L1, MAN1A1, MAP2K5, MAP3K14, NANS, NEU4, NFE2L2, NRG3, NUDT8, OR1L8, OR2A2, OR2T10, OR3A3, OR51G2, OR5M8, OR5M9, OR6C3, OR6F1, OXSM, PDHA1, PECAM1, PEMT, PFAS, PMAIP1, POLR1E, PPARD, QPRT, RHOD, RIPK1, RPIA, RRM2B, SKP2, SLC25A6, STT3B, STX10, SULT1E1, SV2B, TAS1R2, THBD, THBS3, TLR2, TNFSF18, TRAF2, ULBP2, UNC5B, UPB1, ATP6V1E1, B4GALNT1
Negative_14748	C9, CD2, F12, GH2, ITK, SP1, TNN, AANAT, ABLIM3, ACPT, ACSL1, ACTN1, ACY3, AGXT, ALG13, ALS2, AMDHD2, AOX1, APBB1, ATP5A1, ATP5B, ATP5F1, B4GALT5, BCAT1, BLNK, CAMK4, CCND1, CD14, CD274, CDK6, CLCA4, CLDN10, COL4A1, COQ5, CSF1R, CSNK1G1, CTBP2, CTNND1, CYP2F1, DCTD, DEGS1, DVL3, EDNRA, EFNA1, ENPP6, FGF14, FGFR3, FZR1, GALNT6, GATM, GCDH, GGT1, GNAS, GNB1, GRIA3, GSTA3, HNF1A, IFNA14, IL10RB, IL12RB1, IL7R, INPP4B, KLKB1, LAMA3, LDHA, MAD1L1, MAP2K3, MAP4K3, MASP2, MCM2, MGAT3, MIOX, MRAS, MS4A2, MTHFS, MYH1, MYH15, MYH4, MYH6, NANP, NCKAP1L, NEU2, NFKB1, NT5M, OGDHL, OR10S1, OR2A5, OR2T12, OR2T29, OR4D11, OR4K14, OR51G1, OR52K2, OR56A3, OR5M8, OR7C1, OR8G1, P4HA3, PCCB, PIP5K1B, PLEKHA8, PNPLA3, PPP1R1A, PRKAG1, PRKG2, RARA, RBPJ, RND1, RPS6KA3, RPS6KA4, RPSA, SCIN, SLC27A4, SMAD5, SMAD9, SPTAN1, SRGAP1, SULT1A1, SYNJ2, TJP1, TNFSF11, TP53, UGT2B17, UROS, VDAC2, WNT5B, YWHAQ, MAPK8IP1, MAPKAPK2, MAPKAPK5, SERPINA5

Negative_14749	BAX, C5, CD2, F3, FER, GH2, HYI, IL6, ILK, ME2, OSM, SFN, TFG, ACADSB, ACVRL1, AFMID, ALDH1A3, ALOX12B, ALS2, ARHGEF4, ATP13A2, ATP50, ATP6A1, B3GNT2, B3GNT5, CACNA1S, CACNB1, CACNB4, CCL22, CD82, CDC25B, CDKN2A, CEBPA, CHPT1, CHST12, CLCF1, COL6A2, CREBBP, CYP3A4, DDX18, EIF4E2, EPHA1, EPHB2, ERBB4, FCGR3B, FGF1, FGF3, FUT1, FUT7, GALNTL2, GNA14, GOSR2, GSTM2, GSTO2, HMGCS1, HSD17B8, IFNA14, IL6R, IL9R, JAM3, KIR3DL3, LDHAL6B, LTA4H, MAN1A2, MAP3K6, MAT1A, MYH2, NARS, NEGR1, NFKB1, NLGN1, NODAL, OCRL, OGDH, OR10G4, OR13C9, OR2A12, OR2A4, OR52A1, OR56A3, OR56B4, OR5A1, OR5B3, OR5H6, OR5J2, OR5L1, OR5R1, OR6K2, PAK2, PAK4, PAPSS2, PARD3, PIAS1, PIK3CG, PLA2G5, PLCD1, PLXNA3, PPP1R3A, PPP1R3B, PPP2CB, PRPH, PSME1, PTAFR, PYGM, RAPGEF1, RERE, RPS6, SEMA3E, SETD8, SH2D1B, SHISA5, SIAH1, SLC27A5, SMAD2, SPCS3, STK36, TAS2R1, TBXA2R, TCF7L1, TGFB1, TNFSF14, TNFSF9, TPH1, TPH2, TPMT, TRADD, TUBA3E, UGCGL2, UMPS, WEE1, WHSC1L1, XIAP, ST6GALNAC1
Negative_14750	BAD, CEL, FGB, FOS, FST, IHH, INS, ADORA2A, ADRA1D, ALDH1L1, ALDH3B1, ARNTL, BDNF, CCNB2, CCND2, CD46, CD79B, CHDH, CHST11, CLDN15, CPT1C, CREBBP, CXCL3, CYP4F3, DDX23, DOCK1, FGF17, FGF23, FGF5, FGF6, GIT1, GNAT3, GRIN1, HGSNAT, HNF4A, HTR7, HTRA2, IL18R1, IL2RA, ITGA6, ITGB5, JAM3, LIMK1, MAN1B1, MAP3K1, MGAT5B, MTHFR, MTMR1, MYH1, MYH7, NCR1, NME6, NRG2, NRXN2, OR10G9, OR10K1, OR10T2, OR10V1, OR1L8, OR2Z1, OR4A16, OR4X2, OR52B6, OR6C74, OR7D2, OXCT1, PAK3, PANK4, PIGP, PIP4K2B, PLCB2, PLOD3, PLXNC1, PMM1, PNPT1, POLR1D, PPP2R5C, PPP2R5D, PTGIS, PTPN1, RAC1, RPSA, RRAS2, RXRB, SCIN, SMC1A, STAT1, TAP2, TAS2R49, TAS2R5, TAS2R60, TCF7L1, TJP3, TNFRSF9, UGT8, VAMP3, VDAC3, CACNA2D4, HLA-DPA1, MAPKAPK2, SERPINB5
Negative_14751	AGL, BTC, BTD, C5, F11, GHR, MUT, SI, AGRN, ALDH1A1, ALDH1A3, ALDH1B1, ANAPC4, BCL10, BLNK, CACNB3, CACNG5, CALML3, CBLC, CCR10, CD8A, CDC6, CDKN1B, CLDN14, COL6A2, CPT1B, CRY2, CYP2C19, DDHD1, DPM3, ECSIT, F13A1, FZD3, GAB1, GABARAP, GAMT, GCLM, GFPT2, GNAL, GPD1, GRB2, GUCA1A, HADHB, HDAC2, HSD11B1, HSPA2, IL17A, IL18RAP, IL1A, ITGB6, KCNJ11, MAML2, MAML3, MAPK9, MARS2, MICA, MITF, MTHFD1L, MYD88, MYH2, NCAM2, NFATC1, NFE2L2, NPAS2, NRG1, OR10G9, OR12D3, OR1J4, OR1L1, OR4K5, OR52A1, OR8K5, PAK1, PDE3B, PDX1, PER2, PIP5K1C, PIPOX, PLCB4, PLOD3, POLE3, PPP2R5A, RALBP1, SCLY, SEMA3A, SEPHS1, SGMS1, SIPA1, SOCS1, TGFB3, THBS3, TP53I3, TRMT11, TSC2, ULK2, WARS2, WNT5B, WNT9B, YWHA, PPARGC1A
Negative_14752	ASL, CRK, OGT, TAT, ACAA1, ACAA2, ACSL6, ACSM4, ADH1A, ADSS, ALDH9A1, ANAPC1, ANAPC11, ARSA, ATG3, ATP6V1A, B3GAT1, B3GNT3, BACE1, BDKRB1, BMP7, CCL2, CD99, CFLAR, CHPT1, CHRDL, CSF1, CYP26C1, CYP2E1, CYP2S1, DHRS3, DOT1L, DPYS, ENO2, ENTPD7, FGF7, FLAD1, FPGT, GALK2, GALNT10, GSTK1, HA01, HARS, HDAC2, HEXA, HTR6, IL1RAP, INHBB, IRAK4, IRS1, MAP3K4, MCM4, MCM7, MFNG, MMP2, MYL2, NCOR2, NFATC1, NMNAT3, NUMB, OR10A2, OR13C9, OR1B1, OR2A42, OR2L3, OR2T3, OR4C12, OR4C15, OR51B2, OR52M1, OR5B12, PDE1A, PDE7A, PDGFB, PGAP1, PIGH, PIK3R4, PLK1, PLXNB2, PMAIP1, POLE, PPP1CB, PPP2R1A, PTK2B, RAPGEF3, SETD1B, SETD2, SMPD3, STAT5B, STX2, STX8, TAS2R50, TNFSF12, TNXB, TPM3, ULK3, UNC5C, VTI1A, WNT5B, WNT6, WWP1, HLA-DRB3, MAPK8IP2, MAPKAPK3, PPP1R12A, PRICKLE2, SERPING1

Negative_14753	CAT, CGN, F2R, F5, KIT, LEP, OTC, PRL, TK2, VCL, ACOT12, ACSM4, ALAS2, A LDH4A1, APRT, B3GALT1, BCAR1, BCKDHA, C1QA, CACNA1E, CCL21, CCNA1, C D38, CD48, CKS1B, CLDN17, CLTA, CPT1A, CSF2RB, CSNK2A1, CYP2A7, DFFB , DGKA, DIAPH3, EFNA4, EHMT2, GADD45A, GAS1, GBE1, GCNT3, GNG12, GNMT , GOSR2, GPAM, GSTM4, GSTT1, IL5RA, IRAK3, ITGAD, LARS, LARS2, LCP2, L RAT, MAP4K4, MCM4, MPP5, MS4A2, NEU4, NFAT5, NFKBIE, NMNAT1, NTRK2, O R11G2, OR1J2, OR1L1, OR2D2, OR4C46, OR4E2, OR5AC2, OR6C70, OR6K2, PA FAH2, PDE3B, PDK1, PIGP, PIP5K1B, PIPOX, PLA2G1B, PLTP, POLR3G, PPM1 A, PPP1R3D, PRIM1, PRKAG3, PSME2, PYGB, RAD51, RARA, SH2D1A, SHC4, SK P1, SMARCA5, ST3GAL4, TAS2R16, TIAM2, TICAM1, TSHB, UCK1, UGT2B7, WN T10A, XYLT2, HLA-DQA2
Negative_14754	CD4, CFI, GNS, HK3, ID4, JUP, NOG, TH, UBB, ADH1B, ADRB1, ADRBK2, AKR1A 1, ALG5, ALOX15, ARHGEF2, B3GALT4, B3GAT1, B3GNT3, B4GALT1, BAI1, BD NF, BMP8A, CACNB4, CBLC, CCL1, CDKN2C, CHD8, CLDN2, COQ3, CPT2, CRLS1 , CXCR4, CYP2C19, DAAM1, DPYSL2, DRD5, EPAS1, EXTL2, F2RL1, FGF1, GAL NS, GALNT14, GGPS1, GNAT3, GNPDA2, GSTA1, GUCY1A3, HCST, IFNB1, IL10 RB, IL22RA2, IL2RA, IL9R, IMPA2, LAP3, LCMT2, LEFTY2, LM07, LRRC4C, M AOA, MAP3K7, MAPK1, MCM3, MGAT5B, MYH1, NCAM2, NOX3, NT5C3, NT5E, OR1 OG3, OR12D3, OR1J2, OR1L1, OR2C3, OR2Z1, OR3A1, OR4E2, OR4K14, OR51M 1, OR5B21, OR6C75, OR6F1, OR8H2, PAPSS1, PCK2, PDHA2, PFAS, PFN3, PGA P1, PLXNA2, PPCDC, PPID, PTCH2, PTGER1, RPS6KB1, SELP, SGPP2, SHC3, S SH1, STAT2, STX16, SULT1A4, SUOX, TP73, TUBB3, UBE2K, ULBP1, ZNRD1, A TP6VOE1, C1GALT1C1, MAPK8IP3, TNFRSF1A
Negative_14755	AGL, CD6, CEL, CGN, EPO, GHR, GPT, IL7, ILK, MUT, PGD, PLG, SMS, AASS, AB I2, ACAA2, ACSM1, ACTN2, ADCY1, ADCY3, ADH1B, ADIPOQ, AGPAT3, AHCYL2 , AK3L1, APBB1, ARNTL, ATP5E, B3GALT6, BTRC, CACNA1A, CALML6, CASK, C CL26, CDC2, CHAD, CHEK2, CNTNAP1, CREB3, CYP11A1, DAG1, DDX23, DDX55 , DHFR, DKK1, DPM3, DPYS, DUSP7, E2F3, EDAR, EPB41, FUT2, FZD2, FZD8, G ALM, GALNT3, GAMT, GFPT1, GMPR, GRHPR, GRIN2B, GSTA1, HARS, HIF1A, HN F4G, IFNA13, IFNA4, INPP4B, LCMT2, MAPK14, MCM3, MTHFD1L, NADSYN1, N CKAP1, NOX3, NT5C1A, NUMB, OR13G1, OR14J1, OR51B5, OR51F2, OR51S1, O R52E4, OR8I2, PAK3, PGK2, PGLS, PHKB, PIK3CG, PPAP2C, PSPH, PTPN11, R ASGRP2, RFWD2, ROBO1, RRM1, SEMA4A, SEMA4C, SETD8, SGPP1, SMAD6, SMA RCA2, SMURF1, SNAP23, ST6GAL1, TGFA, TOMM40L, UCK2, ULBP1, XCL2, YAR S, YOD1, ZFYVE16, GABARAPL2, MAPK8IP2, SERPINB5, SERPINE1, ST6GALN AC5, TNFRSF11B
Negative_14756	AK3, BCR, CR1, DCK, FOS, GLS, HPD, PML, XDH, ACAA1, ACSM5, AGPAT6, ALDH 4A1, ALG8, ARHGEF1, ARHGEF6, ATP2A1, ATP5G3, ATP6AP1, B3GALT1, BCL2 L1, BCMO1, BLNK, CASP3, CCL3, CCNA2, CCNB3, CD38, CD86, CDKN1B, CHDH, CHIA, COL2A1, COMT, COQ7, CTSB, CTTN, CYP11B2, CYP2F1, DDX56, DGAT2, DHX58, DKK1, DOCK1, DUSP16, DVL2, EDAR, FGFR3, FZD3, FZD4, GADD45A, G BE1, GFAP, GLDC, GLI3, GNB3, GNPAT, GUK1, HAGHL, ICOS, IFNA13, IGF1, I L28RA, INHBB, IRAK4, JAK2, JAK3, LAMC2, LIAS, MCM6, MECR, MYH7, NCKAP 1, NOS3, NUDT9, OR10G7, OR10G8, OR13C9, OR13D1, OR1D2, OR1E1, OR4C46 , OR4F6, OR51I2, OR52E6, OR5J2, OR5R1, OR5T2, OR7G2, OR8D2, OR9A2, OX CT2, PARS2, PDE4B, PDE6G, PDHB, PEMT, PER2, PHKA1, PLCB3, PLD1, PPAP2 C, PPP1CA, PPP2CB, PPP3CA, PRKG1, PTGES2, RASGRF2, SCIN, SETDB1, SLC 2A2, SOCS2, SOCS3, SOCS4, STEAP3, TAS2R1, TJP1, TP53, TRHR, TRPM5, UG CGL2, ULK2, UROS, VANGL2, VEGFA, XCL1, XYLT2, YWHAZ, HSP90AA1, ST6GA LNAC6

Negative_14757	AGK, BTK, GK, KIT, LSS, MPZ, PXN, RPE, STS, UBB, UBC, WAS, AACS, ABL2, AC AA2, ACHE, ADAM10, ADCY10, ADCY6, ADRB1, ADSS, ADSSL1, AKT1, ALDOB, A MHR2, ANAPC7, APLP1, CACNB2, CCL8, CES2, CUL1, CXCL2, DAG1, DBF4, DGK A, DHRS9, DVL1, EFNA4, EIF4E, ENPP3, F2RL3, FARSA, FGD3, FGF3, GALK2, GALNS, GARS, GDF7, GP1BA, GUCY1A3, IL12RB2, IL22RA1, IL2RA, IPPK, KC NJ11, LDHAL6A, LEF1, LRDD, LTC4S, MAD2L2, MAGI2, MAP3K12, MAP3K14, M AT1A, MCM6, MFNG, MPDZ, NGEF, NPAS2, OR10G9, OR10H2, OR10P1, OR13C2, OR2D2, OR4C15, OR4N5, OR5AN1, PAICS, PAK3, PITX2, PLCE1, PMM1, POLR2 E, POLR3D, PPARG, PRKCH, PSME1, PTGDS, RDH16, RERE, SAT2, SHC4, SLC2A 1, SOS2, SPHK2, SPRY3, ST3GAL6, ST6GAL1, SULT1E1, TAS2R1, TBXA2R, TK TL2, TPH2, TRMT11, TUBA1C, WNT9B, YES1, ATP6VOD2, TNFRSF13C
Negative_14758	C3, CFH, FAH, ITK, PC, ALOX12, ARAF, ASIP, ATP2A3, BDNF, BMPR2, C4BPA, CAV1, CCL19, CHD8, CIITA, CPT1C, CRKL, CTNND1, CX3CL1, DDHD1, DGKD, D USP4, EDN1, EFNB3, EXTL2, GANC, GFAP, GLDC, GNB1, HIF1A, HNF4G, HSPA8 , IFNA21, IFNW1, IKBKB, INHBC, IRS4, ITGAX, KDSR, KLRK1, LAMB1, LAMB4 , LDHA, LIPG, MAGI2, MAN1A1, MAP4K1, MAPK7, MAT2B, MLYCD, MTHFS, MYH1 1, MYH4, NFATC4, NFYB, NME6, NR4A1, OR2A2, OR2L2, OR2M3, OR4K2, OR51B 5, OR51E1, OR52A1, P2RX1, PCNA, PIAS1, PKM2, PLOD1, PPCS, PTK2, RASSF 1, RENBP, RFX5, RFXANK, SC4MOL, SC5DL, SELL, SESN2, SETD1A, SLC27A1, SLC2A1, SMARCA2, STX3, SYNJ1, TAS2R60, TD02, THTPA, TPK1, TUBA3E, UB E2K, UCK1, ULBP1, VARS, VAV2, VEGFC, WHSC1L1, WNT5B, WNT6, YKT6, ZIC2 , TNFRSF10B, TNFSF13B
Negative_14759	DCC, FN1, NNT, PAH, RDX, SYK, VTN, AASS, ACLY, ACMSD, AC01, ACSM4, ADCY 7, ADH1B, ADRA1A, ADRB2, AGPAT3, AHCY, APOA5, AQP7, ARD1A, ARPC3, ATP 6V1A, AXIN1, BMP8A, BRAF, CCR1, CD247, CD28, CD38, CD74, CDKN2A, CHEK 2, COQ7, CREB3L1, CSF2RA, CX3CR1, CYP1A1, CYP3A43, DCTD, DEGS2, DGAT 2L4, DGKG, DPM3, DUSP10, EGLN1, ENTPD8, EXOC7, FARP2, FGF12, FGF18, F LT4, FMO4, FOXA2, FRAP1, GALM, GLI1, GNAQ, GRIN1, HMGCS2, IL2RG, IMPA 1, ITPKA, LEFTY1, MDM2, MGAM, MGLL, MITF, MS4A2, MYH10, NAT6, NFATC1, ODC1, OR1L4, OR2B11, OR2F1, OR2Y1, OR4K13, OR51A2, OR52E2, OR52R1, O R5F1, OR5R1, OR6Q1, PDE8A, PGAM2, PIGU, PIK3C2A, PIK3R3, PLA2G2E, PR KAA2, PSEN1, PTGS1, PYGL, RAB5A, RARS2, ROBO1, SDC2, SHC3, SMAD4, SMA RCA2, SORBS1, TAS2R10, TBXA2R, TNFRSF4, TUBA3C, UGT2A3, UROD, VEGFA , WARS, EIF4EBP1, TNFRSF13C
Negative_14760	C8B, GAA, GBA, GK, PML, SPN, ACSL3, ACVR2B, ADAM10, ADCY3, AHCYL1, ALD H3A1, ALDH7A1, AOC2, AOC3, ARHGEF7, B3GAT1, BCKDHA, BLVRB, BMP4, BMP R2, BUB1B, C1QC, CACNA1C, CCL1, CCL11, CCL25, CCNB2, CCR5, CD55, CER1 , CHRM3, CLDN6, CLTA, CREB5, CRKL, CXCL5, CYP2U1, DDOST, DHRS9, DTYMK , E2F4, ENO1, FGD3, FGF10, FMO4, FRAT2, GAS1, GDF5, GUCY2F, HMGCR, HSD 3B2, HTR2B, HTR5A, HTR6, IL28RA, ITGA10, ITGA2, ITGB7, ITPKB, LAMB2, LDHA, LIMK2, LTA4H, MAP2K5, MKNK2, MYH14, NCR2, NEUROG3, NRXN1, OR10 A4, OR10H3, OR10V1, OR14J1, OR1I1, OR2S2, OR2Y1, OR4F17, OR4F6, OR51 T1, OR52A5, OR52E8, OR52N2, OR5L1, OR5T1, OR5V1, OR6M1, OR8A1, P2RX2 , PDE6H, PFKFB4, PFKM, PHKA1, PLA2G2F, PLCD4, PLOD3, PPP2R5C, PPP3CC , PRKCZ, PSAT1, PTDSS1, PTGES, RASA2, RASSF5, RHOD, RPS6KA4, SLC2A1, SMAD4, SMURF2, SNW1, SPRY2, SPTLC2, TAP2, TAS2R14, TAS2R48, TAS2R9, TGDS, THBS4, TNFSF14, TRAF5, TRPC1, UBE2K, WNT10B, CACNA2D4, HSP90A A1

Negative_14761	<p>AMH, CD6, CFD, CS, DCK, GSN, INS, KDR, MVK, NF1, NPY, SCD, TNN, ACACA, ACOT11, ACOX1, ADCY9, AKR1B10, ALDH3B1, ALOX5, ATP5B, C3AR1, CACNB2, CAMK2A, CAMK2D, CAMK2G, CCL28, CCR9, CD58, CDH1, CLDN22, COL4A1, COQ5, CSF2RB, CTNNA3, CTNNB1, CTPS, CTSB, CTSL1, CXCL12, CYSLTR2, DGKB, DGKQ, DUSP4, DUSP7, E2F1, EFNB3, ENTPD4, EPAS1, ESAM, EXTL3, FDPS, FGF R1, FUT1, GALNTL5, GANC, GDF5, GLUD1, GLUD2, GMPR, GNA13, GOSR2, GPAM, GPD1, GRPR, GSTZ1, HBEGF, HLA-</p> <p>DOB, ICAM3, IFT57, IL10RA, IL18R1, IPMK, ITGB1, KRAS, LGMN, LIMK1, LRP5, MAPK3, MCCC2, MCM6, MGST3, MPDZ, MPZL1, MTHFD1L, MYH11, MYH14, NFATC2, NT5C1A, OR10A2, OR10H3, OR10J5, OR10K2, OR1C1, OR2C3, OR4L1, OR51A2, OR51M1, OR51S1, OR52E2, OR52E8, OR6K3, OR8J1, OXSM, PDHA2, PGM3, PHPT1, PLA2G2E, PORCN, PPP1R3A, PPP1R3C, PPP2R2D, PRIM1, PSPH, PTAFR, PTDSS1, RETSAT, RPS6KB2, RUNX1, RXRB, SDC2, ST3GAL2, SULT1A2, TAS2R10, TAS2R7, TSHB, UAP1, UGT2A1, UNC5B, ATP6VOA4, HLA-DRB4, PDCD1LG2, SUV420H1</p>
Negative_14762	<p>ADK, AMH, ATM, DCN, HYI, ID3, KHK, MUT, NPL, ADRB2, AKR1A1, ALDH1L1, ALG1, ANPEP, ATF2, ATP5B, ATP5D, B3GNT3, BAIAP2, BDKRB2, BMP6, CACNA1D, CACNA1E, CASP6, CCR4, CD48, CD79A, CDH3, CDKN2A, CLDN11, COL11A1, COL3A1, CRB3, CTNNA2, CTSB, CXCL5, DAPK3, DRD1, DUSP10, EARS2, EDNRB, EPHA3, FADD, FCGR2B, FGF6, GALNTL4, GCH1, GLG1, GNA11, GNA15, GNB1, HADHB, HNF4A, HSD17B1, HSPA8, IDH2, IL1RAP, IL20, IL21R, INPPL1, IRS4, ITGB3, KLRK1, LAMB2, LCAT, LEF1, LIPT1, MAD2L2, MAML2, MAP2K6, MAP3K13, MAP4K4, MAPK8, MCM6, MDH1, MTMR1, MYLK2, NAT1, NCF1, NFE2L2, NR5A2, OR11H6, OR1L4, OR2AG1, OR2B6, OR3A3, OR7G1, OSMR, PDE10A, PDE1B, PIGN, PIGO, PIK3C2A, PIK3R2, PIK3R4, PLA1A, PNMT, POLR1D, POLR3B, PON3, PRDX6, PRKCD, PSAT1, PYCR1, RAB23, RIPK1, RPE65, SENP2, SLC25A4, SLC9A1, SMPD3, STX16, STX18, SULT1A4, TACR2, TAS2R10, TGFBR2, TNFSF8, TRPC1, TYRP1, UGT2B17, VDAC2, WARS2</p>
Negative_14763	<p>ADK, ASL, FST, LPO, TH, AADAC, ADRB1, AGMAT, AGXT2, AKR1C3, ALDH3B1, ALDOC, AOX1, APRT, ASAH1, ATP5I, AVPR1B, B3GNT4, BCAR1, CACNA1F, CALML5, CCNA1, CCR3, CD14, CD74, CDH2, CHRM1, CLDN14, CNTN1, CREB3L1, CSF3, CSNK1A1, CTSS, DDIT3, DDIT4, DOT1L, EPHA5, EPHB1, FASN, FGFR4, FLT3LG, FMO4, FZD1, FZD8, FZR1, GAS1, GDF6, GGT5, GNPDA2, GSTZ1, HYAL2, IFNB1, IMPDH2, ITGB3, KNG1, LAMA4, LTB4R2, LTC4S, LYPLA2, MAN1A2, MAOA, MAP2K4, MBL2, MCAT, MITF, MTHFR, MTHFS, MYL9, NAGLU, NAMPT, NANS, NCR3, NME6, NMNAT1, NNMT, NOX3, OLAH, OR10G7, OR10S1, OR13J1, OR1Q1, OR1S2, OR2T34, OR4D2, OR4K2, OR4Q3, OR51E2, OR5H6, OR7A17, OR7D2, OR8D1, OR9G4, PFKP, PGLS, PIGK, PIGW, PLA2G2F, PLA2G3, PLCD3, PLCE1, PLD1, PLOD2, PLXNB1, PLXNB2, PPP1CC, PTK2, PYCR2, SARDH, SGMS1, SGPP2, SLC27A1, SMC1A, SNAP25, SPAM1, SRGAP3, STX7, TUBA4A, UNC5C, ZMAT3, EIF4EBP1, SERPINA1</p>
Negative_14764	<p>F10, FST, GCK, GK2, NOG, TKT, TYR, AACS, ABI2, ACTA1, ACTN1, AKT3, ALDH1B1, AMPD1, APOA2, ARHGEF4, ARHGEF6, ATF4, ATN1, BMP5, CADM1, CAMK4, CARS2, CCND2, CD59, CD74, CMPK2, COX10, CSF2, CSNK1E, CYP2A7, CYP2F1, CYP4F2, DHDDS, DHRS4, DLAT, DVL1, EPHA4, FGF10, GADD45G, GLUD1, GNA T3, GNRH2, GSTA1, GSTM5, HA01, HCCS, HTR6, IL18, IL1RAP, IL22, IL24, IMPDH2, LRDD, LTC4S, LYZL1, MAP2K5, MGST2, NAMPT, NKX6-1, NT5C, NT5E, OR2T4, OR4A15, OR4C16, OR4D11, OR4X1, OR4X2, OR52A5, OR56A4, OR5K2, OR7D2, OR8H2, PDE3B, PGAM1, PIGF, PIGL, PLOD2, POLR2B, PPP2R5E, PPP5C, PTDSS1, PTPRJ, PYGB, RAD51, RBX1, RDH12, RELB, RPN1, RPN2, RRM1, SCD5, SEMA4D, SFRP2, SKP1, SMAD6, SOCS1, SRGAP2, TBXA2R, TPH1, WEE1, WNT2B, ATP6V1E1, ATP6V1G2, B4GALNT1, SLC25A31, TNFRSF1B</p>

Negative_14765	BAD, C3, CKB, EZR, FAH, FUK, GDA, GH2, GP6, HK2, KDR, NPY, PRL, AASDH, AC LY, ACVR1, ADIPOR2, APOA1, ARNTL, ATP5J2, B4GALT3, BMPR1B, CD28, CLD N6, CLDN7, CNTNAP2, COQ5, CREB1, CSNK1A1, CTSG, CTSL1, DDX56, DTX3L, EPHA4, ERBB3, FASN, FZD2, GAD1, GAD2, GADD45A, GALNS, GBGT1, GCLC, GM PPA, GSTK1, HCLS1, HHEX, HIBCH, HNMT, IDH3G, IFNA17, IL11, IL13RA2, I L23R, ITPK1, KLRC1, LDHAL6A, LEPR, LTB4R2, MAT1A, MLYCD, MTHFR, NAT2 , NCK1, NODAL, OCLN, OR13A1, OR1E1, OR2B11, OR2B2, OR2C1, OR2T29, OR4 B1, OR4F4, OR51I1, OR52W1, OR5AC2, OR9Q2, OXCT2, P4HA3, PDE10A, PDE3 A, PDGFC, PIAS2, PIK3R4, PLA2G2D, PNMT, PNPT1, POLR1D, PRIM1, PRKAG1 , PRKG2, PTPN1, QPRT, RARA, RBPJ, RPIA, RPS6KA3, RRAS, RXRA, SAT1, SEM A3C, SEMA3E, SETD8, SOX17, SPHK2, SUCLG1, SULT1E1, SULT2A1, TUBA8, T YRP1, ULBP2, YWHAB, ATP6V1C2, TNFRSF10C, TNFRSF12A
Negative_14766	CR1, F2R, GP9, GPT, HK2, KIT, OAT, SRF, SYK, ABL1, AKR1C4, APPL1, B3GNT 4, BMP7, CACNA1H, CACNG5, CADM1, CASP9, CD59, CDH1, CDH3, CDKN1C, CHR M3, CHST11, CLDN18, CMAS, COASY, CXCL16, CXCR6, CYP4A22, DDB2, DDIT3 , ENO1, ENPP1, EPHB1, FGF5, FIGF, GAMT, GJD2, GNAQ, GNAT3, GPAA1, HAAO , HBEGF, HES1, HLA- G, HSD3B2, HSPA8, ICAM1, IFNA13, IL17A, JAM2, KLRC2, LAMB4, LTB4R2, L TC4S, MYH13, NAT2, NKX2- 2, NME7, NTSR1, OR2S2, OR4K15, OR52I2, OR7A17, OR8H1, P2RX2, PDE6D, P ERP, PFKFB2, PGM1, PIGC, PIGO, PIGX, PLCB2, PLCG2, PLEKHA8, PLXNA3, P NPT1, POLR2I, PPOX, PPP2R5A, PTGES, RAD51, RDH16, RPS6KA4, RUNX1, SD C3, SKP2, STX18, STX1B, STX4, SULT1A1, SULT2B1, TACR3, TICAM1, TLN1, TOLLIP, TOMM40, TUBB4, UGT2A1, WNT11, WNT5B, ATP6VOE1, ATP6V1G2, PP ARGC1A
Negative_14767	CD2, GPI, LEP, PGD, PXN, SMO, TNC, AADAC, ACADSB, ACSS1, ACVR1C, ADH1A , AKR1D1, ALOX12, B4GALT7, BPGM, BUB1, C4BPA, CACNG3, CCL1, CCL27, CD 22, CD58, CDK6, CFL1, CFL2, CLDN16, CLDN17, CLDN2, CLDN9, CLTA, CLTC, CNTF, COL4A6, CSNK2A2, CTBP1, CTF1, CTNNA2, CYP21A2, CYP26B1, CYP2C 9, CYP3A5, DAD1, DARS, DDX47, DHRS3, DPYD, E2F1, E2F4, ECSIT, EFNA2, E HMT1, EP300, EXTL3, FLT3LG, FUT7, GDE1, GJA1, GMPPA, GMPR, GUCA1A, HA P1, HMGS2, HPRT1, HTR2A, IAPP, IFNA17, IL22RA2, ISYNA1, ITGA2B, ITG B8, KNG1, LDHAL6B, MAD2L2, MAP3K6, MARS2, MBL2, MCCC2, MGAT4A, MGAT5 , MYL9, NOTCH1, NRG1, NTNG1, NTRK2, OLR1, OR10J1, OR1L4, OR2A42, OR4D 6, OR51F1, OR6S1, OR8G1, P2RX4, PIGB, PIGL, PIK3C3, PLA2G10, PLCB2, P LCE1, PLD1, PLOD3, POLD3, POLR2A, POLR2I, PPP2R1B, PPP3CB, PRKCQ, PS EN1, PTGES2, PYGB, RASA1, RASA2, RASSF1, RBPJ, RDH10, ROBO3, SCLY, SE LE, SEMA4B, SETD1B, SFRP5, SHMT2, SLC2A4, SMURF1, SOCS5, SOS2, SPRY2 , SPTLC2, TOMM40L, TUBB4Q, UGT2B17, UROS, VEGFA, VKORC1, ZFYVE9, ATP 6VOA2, ATP6V1C2, CSGALNACT2, SERPINB5, SERPINE1, TNFRSF1B
Negative_14768	CD2, EPO, INS, KIT, MPZ, PGD, SRF, ACAA2, ACOX2, ACSL5, ADCY9, AHCYL1, AKT2, ALDH2, ALDH3A2, ALDH5A1, ALG3, APH1A, APOC3, ARHGEF1, ARNT2, A RPC1B, ATP6AP1, ATP6V1H, B4GALT1, C4BPA, CARS, CCL3, CCR7, CDKN2D, C SNK1G1, CTBP1, CXCR3, CYP2F1, CYP7A1, DDX50, DEGS1, EPHB1, FGF3, FLO T1, FLT3LG, FUT6, FUT9, GAL3ST1, GALK2, GALM, GART, GCH1, GPD1L, HMGC R, HNF4G, HSD3B7, HTR5A, IL4R, IMPDH2, ITGA4, JAM2, KLRK1, LAMA4, LTB P1, LYPLA2, MAD1L1, MPDZ, NARS2, NFATC1, NLGN2, NNMT, OCRL, OPLAH, OR 1J4, OR2A12, OR2Z1, OR4B1, OR4K17, OR51I1, OR51V1, OR52E8, OR5AS1, O R6T1, PAK6, PDE3B, PDE7B, PFKFB1, PGK1, PGM3, PIGO, PIK3CB, PIK3R5, P LCD3, PLOD1, POLE, PPP2R5A, PROS1, PTGES2, PTGS1, PTPN11, PYCR1, QAR S, RALGDS, RARS2, RBKS, RDH10, SARS2, SELE, SEMA3B, SKP2, SLC2A4, SLC 33A1, ST3GAL1, SV2B, TNFRSF9, TRAF3, UGCG, UGT2A3, ATP6V1G3, HLA- DQB1, PLA2G12A

Negative_14769	<p>AGK, C5, FES, HK2, IHH, ME1, MVK, SRM, ABL2, ABLIM1, ACAD8, ADIPOQ, AFM ID, ARHGEF1, ARPC5, ATIC, ATP5A1, B3GNT5, BDNF, BIRC3, BTRC, CACNG7, CALML6, CCL24, CD28, CD74, CDC20, CDC26, CDH3, CDKN1A, CDKN1C, CDO1, CDS1, CHSY1, COL4A6, COL6A1, CRHR1, CSF3R, CSNK1E, CXCL12, CYP11B2, CYP2C19, DCTD, DGKQ, DHRS3, DNMT3B, DUSP8, ENTPD8, EPHA2, EPHA8, EPH X1, ERBB2, FABP1, FGF11, FGF9, FUT5, FZD9, GALNTL2, GANAB, GCLC, GRIA 1, GRIN2C, GSTO1, GSTO2, GSTZ1, HAO2, HIBADH, HLA- C, HPRT1, HSD17B1, IFNA17, IL15, IL21R, IL25, INADL, ITGA4, LAMC3, LC MT1, LDHC, LILRB3, LPAR1, MAP4K1, MASP1, MDM2, METTL2B, MGAT5B, NAMP T, NFX1, NKX3- 1, NQO1, NRG4, NSDHL, NT5C1A, NT5C2, OR10AG1, OR1B1, OR1E1, OR1E2, OR 2B6, OR2C3, OR2K2, OR2T2, OR2Z1, OR4A16, OR4D5, OR51M1, OR6C2, OR9A2 , PDE4A, PDXP, PFN4, PGLS, PIK3C2A, PIK3R4, PIP5K1B, PLXNA2, PPCDC, P PP1CB, PPP1R3A, PRKCB, PRKG1, PRODH, PROS1, RUNX1T1, SDC4, SHC3, SIA H1, SNAP23, SOAT1, SSX2IP, TAS2R38, TFDP1, TJP3, TKTL1, TOMM40L, TRA F5, TRHR, TRMT11, TYK2, UGT2A3, ULBP1, UPP1, UPRT, VAV3, VEGFA, WASF2 , CTNNBIP1</p>
Negative_14770	<p>CGN, CRH, F7, GNS, KMO, LCK, ME1, ACAA2, ACHE, ACP5, ACTG2, ACVR2A, ADR A1B, ALAD, ALDH1L1, ALDH2, ALDOA, ANAPC4, ARG1, ARHGEF2, ASCC3, AVPR 1A, AVPR1B, B4GALT7, CCL23, CHAD, CHSY1, CHUK, CLCA4, CLTC, CNTFR, CN TN1, COL3A1, COL4A1, CYFIP1, CYP8B1, DCXR, DGKD, DKK2, DPAGT1, DPYS, EDAR, EPHA7, F13B, FGD3, FGF6, FGFR1, FIGF, FOXA3, FUT7, GALNT14, GCN T2, GNB3, GNG12, GRIN2A, GSTA3, HCCS, HSD17B4, HTR6, IFNA5, IFNG, ITC H, ITGA4, KIR2DL1, LAMB1, LAMC3, LDHD, LRP6, MAGI1, MAP3K2, MAPK11, M CCC2, MGAT2, MYH6, MYH7, NCAM1, NRG2, NTSR1, ODC1, OR10A2, OR10Q1, OR 10V1, OR1B1, OR2A25, OR2H1, OR2T8, OR6F1, OR7C1, OR8U1, PDE4B, PIGF, PIK3C2G, PIM1, PNPO, POLE3, PPP1R3B, PRKCG, PRPH, RBX1, SAT2, SEMA4A , SGMS1, SLC2A1, ST3GAL3, SULT1E1, TAS2R9, TUBB2C, TUBB4, UBE2L6, UG T2B7, VDAC3, WHSC1, ST6GALNAC6, TNFRSF1B</p>
Negative_14771	<p>ASL, BTC, FN1, IL6, TAT, ABLIM3, ACAD9, ACOT12, ADCY1, ADCY3, ADORA2A , AFMID, ALDH7A1, ANAPC7, APOA1, APOA2, ATF4, B3GALT4, BAAT, BLNK, BM P8A, CASP3, CAV1, CCL26, CD40LG, CD48, CD59, CDIPT, CDK6, CERK, CHRM3 , CHRNA7, CLDN15, COL5A1, COL6A2, CSAD, CTSG, CXCR3, CYP2A7, CYP3A43 , CYP3A5, CYP3A7, CYP4F2, DDOST, DDX52, DHRS4L2, DLL4, DPYSL2, DUSP9 , ECSIT, EPB41, EPHB2, EPHX2, ESPL1, ETS1, FLOT1, FLOT2, FSHR, GSTM5, HADH, HIP1, HLA- DMA, HSD3B2, IFNA6, IL1B, IL2RB, INPP5B, INPPL1, KDSR, KIR2DL4, LTA4 H, MAP2K5, MKNK2, MMP7, MYL2, NTN1, OLAH, OR1N1, OR2T4, OR4F6, OR5I1, OR6K6, OR8J3, PCYT2, PDE6D, PDIA4, PFKFB2, PIGN, PNPLA4, POLR3K, PTP N6, PYGM, RUVBL1, SAT1, SDC3, SELPLG, SMAD3, SOCS3, SPI1, SPRY3, TGDS , TGFB3, ULK3, UNC5B, UROS, YWHAQ, ARHGEF12, HSD17B12, PAFAH1B3, PHO SPH01</p>



Negative_14772	ADK, CAD, CDA, F10, FGB, GGH, PGP, ACAA2, ADH6, ADRB1, ALG11, ALOX12B, ANGPTL4, AOX1, ARHGAP5, ARNT, ATP5A1, ATP5C1, BAAT, BMP6, BMPR1A, C3orf10, CAMK2B, CAMK2D, CASK, CCL1, CCL19, CD40LG, CD79B, CHDH, CHSY3, CLDN18, CLDN9, CLTB, CREB5, CRKL, CXCL1, CXCR4, CYFIP2, CYP11A1, CYP19A1, CYP26B1, CYP4A11, DAAM2, DDX47, DIAPH1, DTX3, DVL2, EDA2R, EGN3, EIF4B, ENPP2, EPHA1, EPHA5, EXOC7, FARP2, FARSA, FGF22, FGF5, GAL3ST1, GALNT8, GCNT1, GNA15, GNG12, GPX5, GSTA2, HEXA, HIF1A, HTR2B, IDH1, IL13RA1, IL28B, IMPDH1, IQGAP1, ITPKB, KLRC1, KLRC3, KYNU, LDHD, LIPC, MAML3, MAP2K5, MCM5, MDM2, METTL2B, MMP1, NAGA, NAT2, NCAM1, NPR1, NR4A1, NRP1, NT5C1B, OR10A5, OR10T2, OR13F1, OR13J1, OR1N1, OR2A5, OR2H1, OR52A5, OR7A17, OR7G2, ORC6L, OXTR, PDE1A, PIGL, PIGU, PISD, PNPT1, POLR1D, POLR2L, POLR3G, PPP2R1B, PRKCG, RALB, RASA1, RELB, RENBP, RETSAT, RGS3, ROB01, RUNX1T1, SETMAR, SH2D1A, SHC4, SKIV2L2, SORBS1, SPAM1, STK4, STT3B, STX6, SUOX, SV2A, SYNJ2, TAS2R49, TAS2R8, TKTL2, TUBB2A, UBE2K, UGCGL2, UGT2B7, VDAC3, WNT3A, YOD1, CACNA2D1
Negative_14773	AMH, CD2, F2R, FST, ID3, KDR, ME3, PLN, TH, ACOT11, ADH4, ADRB3, ALDH2, ALDH3B1, ALG2, AMHR2, ANAPC2, ATG12, ATP6V0B, BIRC5, CASK, CDH4, CEP350, CES1, CES2, CHIA, CLDN16, CLDN9, CMBL, COL6A1, CPS1, CREB3L1, CREB3L3, CTBS, CXCL12, CXCL3, CYFIP2, CYSLTR1, DLL3, DLL4, DMGDH, DRD1, EFN2, ENAH, FGF23, FLT4, GALE, GALNTL1, GARS, GNAI2, GNPDA1, GPD1, GRIN2A, GRIN2C, GSTM1, HTR2B, IFNAR1, IL11, IL1RAP, IL23A, ITGB3, JAG2, LICAM, LTC4S, MAGI3, MICA, MMP1, MPST, MYH9, NCF4, NCR2, NOS1, NUDT9, OR11H4, OR13C9, OR1D5, OR2AG2, OR2T29, OR4D11, OR4E2, OR52N5, OR5D13, OR5P3, OR6S1, OR8S1, OR9G1, ORC1L, PARD6B, PDXP, PIK3CA, PIK3CD, PIP4K2B, PKMYT1, PLOD2, POLE3, PPP3CC, PPP3R2, PSEN2, PTGER1, PTGFR, PTK2B, RPS6KA6, RRM1, SLC9A1, SMAD4, SRGAP2, STMN1, TAS2R60, TFPI2, TGDS, TNFRSF8, UCP1, UPB1, WHSC1L1, ATP6V1G3, PAFAH1B2
Negative_14774	HPD, ITK, NLK, TH, ADH6, ADIPOQ, ANAPC5, ATP2A1, ATP6V1D, B3GAT2, C1QA, CACNA1C, CACNA1F, CCL25, CCL8, CDH3, CDH5, CLDN1, CNTNAP1, COL5A1, COMT, CRLS1, CTSG, CYP3A5, DGKQ, DGUOK, EFN2, ELK4, ENPP7, EP300, EPHA2, EPHX1, ETNK2, FBP1, FBXW11, FGF21, FUT7, GALNT6, GBA3, GFPT2, GGLY1, GMPPA, GMPPB, GNPAT, GNPDA1, GOT1, HHEX, HMOX1, HTRA2, IGSF5, ILL1B, IRAK1, ITGA8, KIR3DL1, LDHAL6A, LDHB, LEPR, LTB4R2, MBL2, MTHFR, NADSYN1, NAT5, NFYB, OR13G1, OR2L3, OR2M7, OR2T5, OR2Y1, OR4C11, OR4F6, OR4K1, OR4S1, OR52M1, OR5AU1, OR7D4, OR8D4, OR8K1, PAK4, PAK6, PAPP2, PDGFRA, PGM3, PIK3C2A, PIK3C2B, PISD, PLA2G10, PLCE1, POLR2D, PPP2CB, PSEN1, PTK2B, PTPRM, RASGRP2, RDH5, RPIA, SEMA4A, SLC27A4, SMAD4, SMARCA5, SNW1, STX18, SUCLG1, TBL1X, TCIRG1, TLN1, TYMS, UGT8, WBSR22, XCL1, HLA-DPA1
Negative_14775	AK3, C8A, EDA, GLS, GPT, HYI, IVD, MVD, TK1, ABAT, ACAD9, ADCY8, ALAS1, ALG1, ALOX12B, ATP5L, BHMT, BMPR1B, C7orf16, CADM3, CCR5, CDC27, CDC42, CDC6, CDIPT, CHRM2, CHST11, CLDN9, CNDP1, CSNK1G2, CX3CL1, CYP2E1, DHRS9, DPM2, DUSP16, DVL2, EFN2, EHHADH, EIF4E2, ETNK2, F2RL3, FBXW11, FLAD1, GLI2, GNAT3, GRIA2, GRIA3, GTSE1, GUK1, HA01, HA02, HIBADH, HMBS, IL23R, IL29, IRAK3, ITGA1, ITGB7, KLRC1, MAD2L2, MAP3K7, MAPK13, MGAT4A, MMP1, MOV10L1, MTHFD1, MTHFS, MYL7, NARS2, NAT2, NEUROD1, OR10AG1, OR10R2, OR10Z1, OR2C3, OR2T3, OR4X1, OR51F1, OR51I1, OR51I2, OR52R1, OR5AU1, OR5D16, OR7A5, OR8B4, OR8D4, OR8H2, OR9K2, PAK4, PANK3, PIK3R1, PLK1, PNPLA3, PPP2R5C, PSENEN, RAC3, RAP1B, RARA, RANG, RFWD2, SCD5, SDHC, SETDB1, SLC12A2, SMARCA5, SOX17, STAT2, TAS2R3, TCF7L2, TNFSF11, TNFSF4, UGDH, WHSC1, WNT8A, WNT9B, PRICKLE1, ST6GALNAC1, TNFRSF17

Negative_14776	AK2, BID, BTC, C5, CEL, CRK, DBI, EBP, F2R, F7, GNS, NPY, PRL, TEC, TKT, A DCY6, ADH1B, ADRA1A, AGTR1, AK3L1, AKR1C1, AKR1C2, ALDH1A3, ALDOB, A MD1, ARSD, ATP5G2, ATP5H, ATP5I, ATP6V1D, AVPR1B, BDNF, BMP2, CACNB4 , CACNG7, CASP10, CDC14B, CDKN2B, CES2, CNTN1, CNTNAP1, COL5A3, CPT2 , CREB3L1, CRKL, CSNK1G1, CTTN, CXCR6, CYP11A1, CYP2U1, DDX47, DDX54 , DKK4, DUSP4, ECSIT, ERBB3, EXT1, EXTL1, FGF17, FGF22, FGF4, FLT1, FM 05, GCDH, GNB1, GRIA1, GRIA3, GSTT1, IFNG, IL17RA, JAG2, LCAT, LIPT1, MAML2, MAP3K14, MAP4K3, MARS, MAT2B, MGAT4A, MGAT5B, MMP2, NADSYN1, NCOR2, NLGN1, NTRK2, OCRL, OR10J1, OR14C36, OR1N1, OR2A4, OR2G3, OR4 F15, OR4K2, OR4S2, OR51F1, OR51I2, OR52N2, OR5AK2, OR5J2, OR6Q1, OR7 D4, OXCT1, PAICS, PDE6H, PDE8A, PHKA1, PHKB, PIGT, PLA1A, PLA2G1B, PL A2G2A, PLOD1, PLXNB1, POLR2C, POLR3G, POLR3K, PPCS, PPP2R5B, PTGFR, PTK2, RASGRP2, RASGRP4, RPN2, RPS6KA2, RXRG, SDHD, SEPHS1, SLC2A4, S MAD1, SPAM1, SRD5A2, SSH2, ST3GAL3, TAS1R1, TAS2R41, TAS2R8, TPI1, T RAF1, TRIP10, UCP1, VAMP4, VTI1B, YES1, SERPINC1
Negative_14777	AGK, APP, AR, EGF, F11, IL9, MPI, MPZ, MTR, PRL, PVR, TXK, ABL1, ACAT1, A K3L1, AKT1, ALDOB, ALG5, APOA1, ATP5B, ATP5E, AVPR1B, B4GALT3, BCL10 , BDH2, BIRC2, BRAF, C1GALT1, C1QB, CDC2, CDH2, CHAT, CHST11, CLTCL1, CNDP1, CNTN1, COL4A2, CYP2J2, DAAM1, DARS, DDX52, DGUOK, DHODH, DRD2 , EHHADH, EPB41L1, ETNK1, FABP1, FLOT2, FTCD, FZD2, GAD1, GGT1, GJD2, GNPAT, GSK3B, GUCY2C, HDAC1, HTR6, IFNA10, IFNA2, IL10RB, IL1RAP, IL 25, IL29, ITCH, ITGAE, KLK3, LAP3, LIPT1, MAN1B1, MAP3K3, MCM2, MDH2, NARS2, NUDT2, OR10J3, OR14C36, ORIG1, OR2T34, OR2T4, OR2V2, OR51B4, OR51B5, OR51L1, OR5D13, OR9G4, P4HA3, PAK6, PER2, PIAS3, PIK3CB, PLA 2G2F, PLCD3, PLCG1, PLCG2, POLR3D, PRKAB1, PRNP, PSEN2, RAD51, RAP1B , SHC4, SIGLEC1, SLC25A4, SSH2, SUFU, TAS2R16, TAS2R7, TIAM1, TIAM2, TP73, TUBB, UNC5C, UPP1, VAMP3, VARS, WASL, CSGALNACT2
Negative_14778	ADA, AMH, C5, F2, GK2, NOG, PLG, SYK, XDH, AANAT, ABP1, ACADSB, ACP5, AC VR1C, ADCY1, ADCY8, ADSS, ANAPC1, ATP12A, ATP5G2, CACNA1F, CACNB3, C ADM1, CCL17, CCL2, CHIT1, CHRM1, CLDN5, CPT1C, CYP26A1, CYP2F1, CYP3 A4, CYP7A1, DKK4, DVL2, E2F4, ENO1, EPHA4, ERO1L, FABP4, FGF9, FMO3, F SHR, GALE, GALK1, GALNT7, GAMT, GARS, GNAI3, GNG13, GNG3, GNPDA2, GUC Y2F, HADHA, HEMK1, HMOX2, IDH1, IGFBP3, IKBKB, INPP5A, IRF3, ITGB7, L 1CAM, LCMT2, LRAT, LRDD, MAML3, MAP2K6, MMP7, MYH1, NARS, NCR2, NEFH, NODAL, NR5A2, NRXN3, OR13A1, OR1L4, OR4A16, OR51G1, ORC4L, PFKFB3, P HKB, PIK3C2B, PLCG2, PMAIP1, PPCDC, PSAT1, PTPRB, RAPGEF1, RETSAT, R FXANK, SAT1, SC4MOL, SCD5, SETD2, SLC27A5, SMAD1, SMPD1, SMPD2, SNAI 2, SPAM1, SSH2, ST3GAL4, STAT3, STX5, SULT1E1, TCF7, TNFSF4, TP73, TY K2, YARS, YWHAE, B3GALNT1, B4GALNT1, HLA-DPA1, HLA-DQB1, TNFRSF11B

Negative_14779	<p>BID, C8A, DLD, DUT, IDS, ILK, LCT, MSN, ACPT, AKR1C2, ALDOA, APAF1, ARP C4, ATP5C1, ATP5G3, B3GAT3, BST1, CCR8, CD14, CLDN14, COL5A3, CRHR1, CTNNB1, DDX56, DGKB, DRD5, ECHS1, EFN3, EGLN1, EI24, ENPP3, EPHA4, EPHA7, FADD, FZD2, GADD45B, GAPDH, GCNT4, GDF6, GGT1, GLUD2, GNB3, GRM5, GSTM4, HLA-F, HMOX2, IFNA4, IFNG, IL13, IL13RA2, IL23A, INHBC, IPMK, ITGA4, ITPA, KIR2DS5, KIR3DL1, KLRK1, KNG1, LFNG, LLGL2, LRP5, LRP6, LTC4S, MAGI3, MAN1A2, MAP2K6, MCCC1, MCM3, MCM4, MGAT5B, MYH2, MYH6, MYL5, MYLK3, NAMPT, NCAM2, NLGN3, NSD1, NUDT8, OCLN, OR11H4, OR1E1, OR1J1, OR2G2, OR2H2, OR2S2, OR51I2, OR52J3, OR52N1, OR5D14, OR5K1, OR5V1, OR6C6, OR6C76, P4HA3, PARD6B, PCYT1B, PDE1B, PDGFRA, PERP, PFKFB1, PFKP, PFN4, PIP5K1B, PLA2G2D, PLCB3, POLE3, PON3, PPP2R1B, PRKCE, PRKCQ, PRKY, PROS1, PRPS2, PSPH, PTPMT1, RAB23, RASGRP1, RELB, RPE65, RPRM, RPS6KA1, RPS6KA3, RRM2B, SIPA1, SLC2A4, SMPD3, SPTAN1, STAT4, TAS2R38, TBXAS1, TNFRSF9, TYK2, UGCG, VARS, VEGFB, WNT16, YWHAH, ATP6VOA2, B4GALNT1</p>
Negative_14780	<p>BAX, GH1, IL9, PGF, AARS2, ACHE, ADCY3, ADH5, AGXT2, ALPPL2, ARPC1B, B3GALT2, BBOX1, BDKRB2, BLVRB, BUB1B, CACNG2, CARD11, CAV1, CCL22, CCL24, CCL4, CD79B, CFL2, CHKB, CKMT2, CLDN14, CLDN6, COL4A1, COQ6, CREBBP, CRY1, CYP4A11, DGKB, DTX1, EIF4E, ENTPD1, EPHA6, FOXA2, GALNT6, GCDH, GLYCTK, GMPPB, GNAI1, GNPAT1, GSTA4, GZMA, HSD11B1, IL6ST, INMT, IQGAP3, ITGAV, ITGB8, JAM3, KIR2DS5, LIPT1, MGST3, MPP5, MYH7B, NAGS, NPR2, OR10A3, OR10G9, OR13C5, OR1L4, OR1S2, OR5B21, OR6N1, OR7A17, OR7D2, OR8S1, PAK4, PDE6H, PDE7A, PDE8B, PDXK, PIGA, PIK3CA, POLR2H, POLR3B, POLR3K, PPAP2C, PRSS3, PSME1, PTGES2, PTGFR, PYGM, RPE65, SEMA3C, SNAI2, SOCS5, SPTLC1, STAT4, SUV39H1, TAS2R49, THBD, TNFSF10, TNFSF11, TSC1, TSTA3, TUBA4A, TUBB2B, UCK1, ULK2, UROC1, WBSCR17, WEE1, XCL1, ATP6V1B1, HLA-DRB4, PAFAH1B3, SUV420H1, TNFSF13B</p>
Negative_14781	<p>BID, KIT, ME2, SHH, ADIPOR2, AKR1C3, ALG12, ANAPC4, ARHGEF1, ARHGEF4, ARNT, ATP5G2, B4GALT6, BAIAP2, BCL10, BDH1, BLVRB, BMP2, BMP8B, CACNB4, CCL28, CCNG1, CCR1, CDC16, CDC27, CER1, CHDH, CHKB, CHRM2, COL3A1, COQ3, CPT2, CSAD, CTBS, DBF4, DTX1, EDNRA, ETNK1, F2RL3, FGF21, FGF6, FMO2, FZD2, FZD4, GCNT3, GLDC, GLUL, GNPAT1, GNRH2, GPT2, GTSE1, GUCY2F, IAPP, IGSF5, IPMK, IQGAP1, IRAK1, ITGA2B, ITGAX, JAG1, LCMT2, LMO7, LRRC4C, MALT1, MAP2K5, MCEE, METTL6, MGAT1, MINPP1, MLYCD, MMP7, MNX1, MYLK2, NCSTN, NEGR1, NMNAT3, NPR1, OR10Z1, OR1L6, OR2B2, OR2G2, OR2T1, OR4C13, OR4Q3, OR51G1, OR51M1, OR5K1, OR6C70, P2RX7, PDGFRA, PDK1, PERP, PGAM2, PNPLA4, PPM1B, PPP1R3C, PPP2R2C, PRKAG3, PVRL3, PVRL4, RASSF5, RPIA, SC5DL, SCP2, SEMA3C, SHC1, SHMT1, SLC2A4, SMC1B, SMPD2, SOCS5, SORBS1, SOS2, STK11, STK3, STX2, STX4, TAS2R16, TAS2R3, TAS2R7, TBXAS1, TCF7L2, THBS3, TLN2, TPH1, TRAF3, USE1, WASF2, ZNRD1, ATP6VOA2, ATP6VOE1, MAPK8IP2, PPP1R12A, SERPINE1, TNFRSF14</p>

Negative_14782	ADC, APP, DCC, EZR, KIT, ACADM, ACP, ACSL1, ACTA1, ACYP1, ADIPOQ, AGT R1, ALG11, ALG5, ALG6, AMDHD1, AMPD3, ANAPC11, ANPEP, APLP1, ASAH1, A TIC, BCL2, BST1, CAPN2, CCL16, CCR8, CD82, CDH1, CDK4, CDKN1C, CHKB, C LCA4, CLDN22, CLOCK, CNTNAP1, COL3A1, COX15, CRLF2, CTSS, CTTN, CYFI P2, CYP1B1, DDX54, DERL1, DGKD, DHX58, DIAPH1, DOCK1, ENTPD1, EP300, EXOC7, FBP2, FCER1G, FGF3, FLAD1, FPGS, FTH1, FZD1, GALNT7, GARS, GMP R, GPX5, GSTK1, GZMA, HAP1, HSD17B2, HTR2B, HTR2C, IL1RAP, IL4R, IMPA 2, LFNG, LRRC4C, LTC4S, MAP4K1, MAPK8, MGLL, MGST3, MINPP1, MOV10L1, NCF1, NFE2L2, NFKB1, NMNAT2, NUDT8, NUMB, OR10G8, OR11A1, OR1L3, OR2 G6, OR2T6, OR52N5, OR6C74, OR9A2, OR9Q1, PAK2, PAX8, PCCA, PIK3C2B, P IK3CG, PIK3R1, PLXNB3, PON1, PPP2R1A, PRSS2, PYGM, RAF1, RELB, RPE65 , RPS6KA1, SETD1B, SKP2, SMURF2, ST3GAL2, STX12, STX16, TAS2R41, TSH B, TUBA8, UBE2L6, UGT2B28, WIF1, XYLB, CSGALNACT2, HLA-DRB4, HSD17B12, PNLIPRP2
Negative_14783	ABO, ADC, DCK, GH1, HAL, ID3, ID4, MIF, MVD, TNF, AARS, ADCY9, ADIPOR2, ALS2, AREG, ASPA, ASRGL1, ATP13A2, B4GALT3, BACE1, BMPR1B, CASP3, CA V1, CCDC6, CCKBR, CCL3, CCR6, CCR8, CHUK, CISH, CMBL, COL2A1, COMT, CS NK1G1, CTNNA1, CTSP2, CXCL10, CXCL16, CYP11A1, CYP17A1, CYP19A1, DA PK1, DBF4, DDX4, DHCR7, DIAPH1, DPM2, EDNRB, EFN1, ELK1, EPHB1, EXOC 7, F2RL3, FGF12, FGF17, GALNT2, GBA3, GCNT1, GNPDA1, GOT2, GPD2, GPLD 1, GUCY1A3, HIBADH, HLA-C, HSD3B1, IFNG, IL10, IL18, IL18RAP, IL1R2, IL20, IPMK, ITGB4, KLRC2 , LHCGR, LRDD, MAML2, MAML3, MAP2K3, MYH7, MYH7B, NAT5, NMNAT3, NNMT, NR4A1, NRXN3, OR10AG1, OR10J1, OR11H6, OR1D5, OR1S1, OR2B2, OR4C46, OR51E2, OR52M1, OR52N2, OR5AC2, OR5C1, OR5V1, P4HA1, PDCD1, PDE5A, P DE6D, PER1, PGM1, PIP4K2A, PIP5K1B, PLA2G4A, PLCD4, POLR2I, POMC, PP AT, PPP3CC, PRKAR1A, PRKAR1B, PRKAR2A, PVRL3, RALGDS, SDC1, SFRP2, S MARCA5, STK4, TAP1, TAS2R40, THY1, TIRAP, TNFSF18, TNFSF8, TP73, TRA DD, TSTA3, TUBA1B, TYMP, UCK1, UROC1, UROS, VEGFA, WNT9A, YWHAG, CTNN BIP1, EIF4EBP1, PAFAH1B3, SERPING1, ST6GALNAC5, TNFRSF10B
Negative_14784	BAD, C8B, FYN, GP5, KHK, MSN, TNF, TXK, AASDH, ACYP2, AHCYL1, AKT2, ALD H9A1, ALDOB, ANAPC10, ANAPC2, APC2, ARHGEF1, ARNT2, ASCC3, ASNS, ASR GL1, ATP6V1F, B4GALT1, BCKDHA, BUB1B, CACNG4, CCDC6, CCL4, CD70, CLD N20, CNDP1, COL4A4, COL4A6, CREB3L3, CSH1, CTNNB1, CX3CR1, CYP2C8, C YP2S1, EARS2, EHHADH, F13B, FGFR3, FRAP1, GADD45B, GALK2, GALNT7, GL I2, HAGHL, HIBCH, HSD17B7, IDH1, IFNAR1, IL13RA2, ITGB6, LDHA, MAP3K 4, MFNG, MITF, MNX1, NCR1, NEU4, NFATC2, NFYB, NR1H3, NRG4, OR10G4, OR 10R2, OR10V1, OR13A1, OR13D1, OR1B1, OR2T34, OR2T5, OR4C13, OR4K5, O R51E2, OR51I2, OR5H6, OR9A4, P2RX1, PDK1, PLA2G2D, PLOD3, POLR2B, PO LR2E, PPARA, PPP2CB, PRKAR1B, PRKCQ, PTDSS2, PYGM, RFXAP, SC4MOL, SE LP, SPRED2, SRD5A1, SULT1A2, TAS2R41, TAS2R8, TNFRSF9, UAP1, UNC5A, WBSCR17, WNT8A, XYLT2, PLA2G12A, PRICKLE1, SLC25A31, TNFRSF12A

Negative_14785	<p>ADA, BCR, CDA, F12, FGG, HYI, LCK, LEP, TNR, ACAA2, AHCY, ALDH7A1, ALG1  1, ALG2, AMDHD2, ASMT, B4GALT2, BET1, CACNG2, CASP3, CCL1, CCL14, CCR  1, CD27, CD59, CDK7, CISH, CLDN17, CLDN9, COL2A1, CREB3L3, CX3CL1, DG  AT1, DHCR24, E2F1, EP300, EREG, FADS2, FARSB, FGD3, FGF20, FOXA3, GAL  NT8, GCAT, GCH1, GLYCTK, GNAI2, GNB1, GNPDA2, GRIN1, GRLF1, GUCA1C, G  UCY1A2, HAGHL, HPSE2, HRAS, IDI1, IFNK, IL11RA, IL15, IL1RAP, IL4R, I  L5RA, IRF5, ITGA5, ITPKA, JAM2, MAGI2, MAP2K1, MASP2, METTL6, MPDZ, M  YH7B, NADK, NAGLU, NCR3, NEFL, NEU1, NEUROG3, NLGN1, NOS3, NTSR1, NUD  T2, OR10R2, OR10Z1, OR13A1, OR13F1, OR14I1, OR1A2, OR4C15, OR4K2, OR  51B5, OR52W1, OR5V1, OR7A10, OR7C1, OR8D2, ORC3L, PDGFRB, PDXK, PLA2  G2E, PLCB2, PLCB3, PLCG2, POLR2I, POLR3G, POLR3H, PRKAR1A, PRKCA, PS  EN2, PTCH2, PTEN, PYGM, QPRT, RAF1, RARA, RASA2, RFWD2, ROCK2, RRM2B,  SCP2, SEMA3E, SEMA4D, SMAD9, ST3GAL1, STX5, TACR3, TFPI, TLR3, TLR9,  TNFRSF4, TNXB, TRAF1, TRDMT1, TUBA1B, TUBB2A, UNC5C, XIAP, XYLT2, CS  GALNACT1, CSGALNACT2, MAPKAPK5, PNLIPRP2</p>
Negative_14786	<p>AGK, AK2, CS, HPD, IL6, LCT, LHB, LPO, TH, ACO2, ACTB, ADAM17, AGPAT3, A  GXT2, ALDOA, ALG3, BBC3, CCND3, CCR2, CD38, CD48, CDC20, CMPK1, CNDP1  , CSDA, DHRS4, DIAPH3, DLL3, DTX4, DUSP5, EHMT1, ENTPD1, EPB41L1, FGF  17, FMO1, FMO3, FUT5, FUT7, FZD2, GABARAP, GALNTL2, GBA3, GNAZ, GSTP1  , GUCY1A2, HNF4A, HSPA1B, IDH1, IKBKE, IL17RA, L1CAM, LDHAL6A, LDHC,  LEFTY1, LRRC4C, MAFA, MAML2, MAP3K8, MIOX, MYH2, NCF4, NCK1, NEUROD1  , NEUROG3, NME4, OR2G2, OR2H1, OR2T29, OR52E8, OR52H1, OR52K2, OR5A2  , OR6C74, OR8D1, OR8H2, OR8K1, ORC1L, P4HA2, PAK6, PARS2, PFN1, PFN4,  PGLS, PLTP, PON3, PPM1B, PPP1R3A, PPP2R5D, PPP3CC, PRKAG3, PRPS1, PT  CH2, PTK2, PYCR1, RAB23, RAC3, RALGDS, RFNG, RPS6KB2, SDHA, SHISA5, S  HMT1, SMPD1, STX6, TAS2R41, TCF7L2, THBS2, TLR9, UCK2, UGT2A1, USE1,  VEGFB, HSP90AA1, MAP3K7IP1</p>
Negative_14787	<p>C8B, CBL, DBH, F3, ITK, LCK, LHB, LSS, MUT, PC, RPE, AACS, AASDH, ACAA1,  ACAA2, ACAT1, ACTN4, ADRA1B, AKR1C2, ALDH3B2, AMPD1, ARRB2, ARSB, AT  P2A2, B3GAT2, BMPR1B, BUB1, CDKN2B, CNDP1, COL5A2, COL5A3, COMP, COQ  7, CXCL9, CYP11B2, CYP19A1, CYP2J2, DUSP3, E2F3, EFN2, EI24, ESAM, E  XTL3, F2RL3, FARSA, FUT1, GALNT9, GALNTL5, GATM, GCLC, GDF7, GLB1, GL  O1, GNA12, GNRHR, GPD2, GSTT1, GUCA1B, HNF4A, HRH2, HSD11B2, HTR6, IF  NA21, IL15RA, IL17B, IRS2, ITGA8, ITGB6, JAG2, LTB4R2, MADCAM1, MAOB  , MAP2K7, MAP3K8, MAP4K3, MLYCD, MNX1, MPDZ, MYH2, NME4, NMNAT1, NOTC  H3, OR10H2, OR10V1, OR10Z1, OR1E1, OR2B2, OR2S2, OR2Y1, OR4K17, OR4K  5, OR5A1, OR5AK2, OR5I1, OR5L2, OR5M3, OR6N1, OR8U1, PDGFC, PIP5K1C,  PLOD2, POLD1, POLR2I, POLR2L, PPA2, PPARG, PPP5C, PRIM1, PRKCB, PTK2  B, RARS2, RRAS, SEMA3F, SEMA4B, SHC2, SHISA5, SIGLEC1, ST3GAL3, STAM  2, STEAP3, STX16, TGFB1, THBD, TIAM2, TRAF6, UROS, WASF1, WHSC1L1, WN  T10B, WNT6, YWHAB, YWHAH, ZMAT3, ATP6V1G3, HLA-  DRB5, TNFRSF10D, TNFRSF11A, TNFSF13B</p>

Negative_14788	ADK, BAX, CD2, CD4, CRK, EPO, F5, FYN, KIT, TNN, AARS, ACAD8, ACMSD, ACTB, ADRA1D, AHCYL2, ALOX12, ANAPC7, APOA2, BCAT1, C1QA, CACNG2, CCL4, CCR9, CD46, CD74, CDC20, CDK5, CPOX, CREB5, CSF2, CSNK2B, CTLA4, CXCL2, CXCR5, CYP2F1, CYP2J2, CYP3A5, DDB2, DLL4, DPYSL2, DUSP6, DVL1, E2F4, EFN2, EGLN3, EREG, ER01L, ESAM, EXT1, F11R, FARSA, FGF19, FGF2, FPGS, FZD3, GALM, GCAT, GGT1, GGT5, GLO1, GNAQ, GNPDA2, HBEGF, HPRT1, HYAL1, ICOS, IDH2, IL19, IL20RA, IL22, KLRD1, LARS2, LTB4R2, MAN2A1, MAP3K8, MAPK12, MINPP1, MLLT4, MYH1, NOTCH2, NOX1, OR10H4, OR13A1, OR1L4, OR1L6, OR2H1, OR2S2, OR4K17, OR4N5, OR51M1, OR52K1, OR5AK2, OR5M3, OR6F1, OR6K3, OR6Q1, OR9I1, P2RX3, P2RX4, PANK4, PFN2, PGK2, PIGC, PLCB1, PMAIP1, PMVK, PNMT, POLR3G, PPAP2A, PPP1CA, PRKAR2A, RBX1, RFD2, SCD5, SEMA4C, SOCS7, SPTLC1, SRGAP3, STAT5B, SULT2A1, SUOX, TAS2R1, TAS2R48, THBS4, TPH2, TRPM5, TSHB, TUBA4A, TUBB6, VASP, VAV1, VCAM1, WWP1, XCL1, XCL2, YWHAB, YWHAH, ZBTB16, ATP6V0A1, ATP6V0A2, CACNA2D1, GABARAPL1, MAPK8IP3, MAPKAPK3, ST6GALNAC5, SUV420H2
Negative_14789	BID, CAD, CFH, HK2, IL6, LPO, ME1, MPI, SI, ACADM, ACMSD, ACOX2, ACP6, ACSM4, ADRB2, ALDH3A1, ALDH6A1, ARHGEF6, ARPC4, ARSE, ASIP, ATP50, ATP6V0C, AXIN1, BDKRB1, BPGM, C3AR1, CASP9, CCL21, CCL5, CD46, CD82, CDC25B, CHIT1, CSF2RA, CSNK1G2, CTBS, CXCL16, CXCL3, CYP17A1, DDX18, DX55, DEGS1, DGKA, DGKG, DHODH, DIAPH1, DLL3, DPM3, DUSP5, ENO1, FADD, FZD9, G6PC, GALNT12, GALNT14, GART, GMDS, GMPR2, GNA11, GNAI2, GNB1, GNMT, GRM1, GSK3B, GSTA5, HPRT1, HTR7, IDI2, IFNAR2, IL11, IL5RA, IRS2, ITGA3, ITGAL, LTBP1, MDH1, MYL2, NAGS, NGEF, NRXN1, NTNG1, NUDT8, OR10AD1, OR10Q1, OR11H6, OR1J2, OR1S2, OR2AE1, OR4K14, OR4K15, OR4K5, OR4N5, OR4P4, OR51B4, OR5K2, P2RX3, PAICS, PARD6B, PCCB, PCYT1A, PDE10A, PDGFA, PER1, PIAS1, PITX2, PNMT, POLR2J, POLR3H, PPP3CC, PRKACG, PRKCZ, PRKX, PSEN1, PTPN1, PTPN5, RASGRP4, RFWD2, RHOA, RPIA, RPS6KA5, RUVBL1, SELE, SESN2, SH2D2A, SHMT1, SLC25A6, SMPD1, SPRY1, ST3GAL2, STMN1, SV2A, TACR2, TLR2, TLR5, UGT8, VAMP2, VAMP4, MAPK8IP2, MAPKAPK2, PHOSPHO1, TNFRSF14
Negative_14790	AMH, C1S, DDC, F10, LIF, LYN, MET, SMO, ACTN2, AGPAT3, ALDH2, ALDH3A1, ARG2, B3GALT6, B3GNT5, BACE1, BCKDHA, CCL16, CCL17, CCL19, CCL25, CCND3, CCNH, CD14, CDKN2D, CES2, CHEK2, CLDN22, CLDN7, CYP19A1, CYP2C9, CYP2U1, DAD1, DGKD, DHRS9, DLST, DUSP6, ENO2, FASLG, FCGR3B, FGF13, FGF21, FLT3LG, GBA3, GLUD2, GMPS, GPX7, GRB2, GRIA3, HHEX, HIBADH, HIBCH, HSD17B3, HSD3B1, HTR2C, IFNA14, IL13RA2, IL28B, INPP5A, KCNQ1, KIR3DL1, LIFR, LTA4H, MADCAM1, MAPK11, MASP2, MCCC1, MTHFD1L, MYH10, MYH2, NEU4, NFASC, NOS1, OLAH, OR10A3, OR10G2, OR13D1, OR13J1, OR2AG2, OR2B2, OR4C46, OR4F4, OR5D14, OR6C74, OR6N2, OR7G2, OR8D2, P2RX6, P2RX7, PAK2, PAPSS2, PFN2, PIGL, PIGW, PIM1, PIP4K2C, PLCB3, PLCG2, POLR2I, PPA2, PPAT, PPP2R5E, PRKAG3, PRKAR1B, PRKAR2A, RAC2, ROBO2, SEMA3A, SHC4, SLC25A5, SORBS1, SPRY4, STX1A, TACR3, THBS1, TICAM1, TLR2, TRMT11, TSLP, TSTA3, UPP1, XCL2, HSP90AB1, SERPING1
Negative_14791	A2M, CD4, F8, FAH, HK1, PTS, ABCC8, ACADS, ACAT2, ACSM4, ACVR2B, ADRA1B, ADRB2, ADRB3, ALOX15, ANPEP, ARPC5, ATP6V1A, BDNF, BET1L, BNIP1, CASK, CCND1, CD28, CER1, CRLF2, CSNK2B, CX3CL1, CYP2C18, DAAM1, DARS2, DKK2, DKK4, DTX4, ECHS1, ENPP6, FDPS, FGF11, FGF5, FLT1, FMO2, FUT1, FUT9, GNB1, GNRHR, GRIA2, GRM5, GSTM3, HIBCH, HIF1A, IL2RB, IRS2, ITGA11, ITGA2, LMO7, MAN1B1, MAP3K1, MCM3, MEF2C, MYH10, MYH7B, NAGLU, OR10A7, OR2H2, OR4C11, OR4Q3, OR56A4, PCYT1B, PI4KA, POLA1, POLD1, POLR1E, POLR2K, POLR3H, PPP3CB, PRKAR1B, RARA, RFWD2, RPN1, RPRM, RXRG, SEMA3E, SESN1, SGPP2, SIGLEC1, SMAD1, SPHK1, STMN1, STX1B, TACR1, TACR3, TJP1, TPH2, VANGL2, WNT2, XCR1, ATP6V1B1, SERPINA5, TNFRSF17, TNFSF13B

Negative_14792	<p>CGN, FAH, FOS, FYN, IL5, IL7, MOS, NPL, RDX, UBB, WAS, ACSM2A, ACSS2, AC TN4, ADIPOR1, ALG1, APOA2, ASMT, BAIAP2, BDH1, BET1L, BIRC2, BST1, C1 QC, C5AR1, CACNG4, CACNG8, CALML5, CASP3, CBR1, CCNG2, CD74, CDC20, C DKN2C, CLDN19, CLDN2, CLDN5, CMBL, CNTF, COL4A4, COL5A2, COX15, CPT2 , CREB5, CXCL12, CXCL13, CXCR6, CYFIP1, CYP2S1, DHFR, DHRS9, ENTPD4, EPHB3, EPHB6, EPHX2, FCGR3A, FGF7, FGFR4, FOXO3, FUT1, FUT3, FZD6, GA LNT10, GANAB, GGT7, GNB3, GNG13, GP1BB, GSTA3, GSTK1, GSTM1, IGF1R, I L7R, INPP5A, ITGA10, ITGA5, ITGB5, KITLG, KNG1, LAMC1, LIMK2, MAPK3, MGAT5B, MNX1, NAGK, NEU3, NFYC, NOX3, NRAS, NUDT2, OPLAH, OR10Z1, OR1 1H6, OR13F1, OR1N2, OR2A25, OR2T11, OR4K1, OR51A4, OR51F1, OR5C1, OR 6C1, OR7A17, PARS2, PAX8, PCCA, PDE4C, PDE6G, PDE6H, PDGFD, PGS1, PHG DH, PLA2G2F, PLCG1, POLR2E, PRKAR1B, PRODH, PYCR1, QARS, RBPJL, SESN 2, SETD2, SH2D2A, SLIT1, SMPD3, SPRY1, ST8SIA5, STAM, STK36, TCF7L2, THBS3, THTPA, TIRAP, TJP2, TJP3, TNFRSF4, VAMP2, WASF3, WNT10B, XYLT 2, YARS, ARHGEF12, B4GALNT1, CACNA2D2, MAP3K7IP2, SUV420H1, TNFRSF 1B</p>
Negative_14793	<p>C1S, GSR, KDR, OGT, TK1, TPO, ABL1, ADRB2, APH1A, ARHGEF6, ASMT, ATIC, AXIN1, AXIN2, B3GNT3, BCAT1, BET1, BIRC2, CACNA1I, CCND3, CD14, CD47 , CDC20, CHRM5, CLTCL1, COL3A1, COL5A2, CRY2, CTBP2, CXCL1, CXCL11, C XCL2, CXCL3, CYP17A1, CYP2A13, CYP2C9, CYP2F1, CYP2J2, CYP3A5, DAAM 1, DARS, DDX56, DHRS4L2, DLL1, DNMT3L, E2F4, ECHS1, ENPP1, ENPP7, FGD 1, FGF19, FMO3, FUT8, FZD3, GALNT10, GAPDH, GLI2, GNG13, GNPDA1, GP1B A, HAAO, HMBS, HNF1B, HTR2C, IFNAR2, IKBKE, IL2ORA, ITPKA, KLK3, MAN1 C1, MAP2K5, MAPK10, MAPK11, MAPK14, MCEE, MYH14, NADK, NAGLU, NARS2, NEUROG3, NFASC, NKD1, NKX3-1, OR11H6, OR2B6, OR4E2, OR51B2, OR51E2, OR6C75, OR6C76, OR8B4, OR9K 2, P4HA2, PAK4, PAPSS1, PGM1, PISD, PLA2G1B, PLAT, PLD2, PLXNB3, PPAP 2A, PPP1CB, PPP1CC, PPP1R3B, PPP2CB, PPP2R1B, PPP2R5A, PRKAB1, PRKA CB, PRKCH, PTGIS, PVRL1, RAB5A, RAF1, RALB, RASA1, RBX1, ROBO3, RPS6K A4, SCP2, SGPP1, SMPD3, SOCS5, SPAM1, STX6, SV2A, TAS2R38, TAS2R50, T JP2, TRAF2, WARS2, YARS2, ZIC2, ATP6V1B1, B3GALNT1, PNLIPRP2, SERPI NF2, SUV420H1, TNFRSF14</p>
Negative_14794	<p>BCR, CP, DHH, FGB, FH, GK2, GP5, MPL, SHH, SI, SRM, ACADM, ACAT2, ACSM2A , ACSS1, ADRA1B, ADRB1, ADRB3, ALPP, ATP6V1D, BDH2, BLVRB, BMP2, CD55 , CDH15, CLCA2, CLDN15, CLDN8, CNGA4, CNTN2, CSF1R, CYP3A43, DBF4, DH X58, DKK2, ECHS1, ENO2, FGF18, FGF21, FGFR2, FRAP1, G6PD, GANAB, GPD1 L, GRM1, GSTM4, GUCY2F, HA01, HMGCL, HMGCR, IDH3G, IL1R2, IL25, INMT, INPPL1, IPPK, IRF5, ISYNA1, ITGA3, ITGAV, LIPG, MGAT5, MTHFS, MYLK2, NADSYN1, NAMPT, NANS, NKD2, NOS1, OR10H2, OR13F1, OR1C1, OR1K1, OR1M 1, OR2V2, OR4A5, OR4C46, OR4P4, OR51B5, OR51E2, OR51M1, OR52R1, OR5M 9, OR5T1, OR5V1, OR6C74, OR6N1, OXTR, P2RX2, PDE7B, PDPK1, PGLS, PIP5 K1C, PLCB2, PPP3CA, PRKCZ, PRPS2, PTPRR, RPE65, SETD1A, SLIT1, SPRY3 , STAT5B, STX3, SUCLG2, TACR1, TAS2R16, TBL1Y, TDO2, TNFSF8, TPI1, UG T2A1, VAV3, VEGFA, ZAP70, ATP6VOD2, ATP6V1B1</p>

Negative_14795	<p>ABO, C4B, C8A, DBI, DCK, F7, GHR, GP5, ID4, LCT, LYN, MYC, NGF, OAT, OTC, AACs, AADAT, ABP1, ACAA2, ACAT1, ACSM5, ACVR1, ACVR1C, ADRA1A, AMDHD2, ARNTL, ASNS, ASRGL1, ATP5G2, ATP6AP1, BNIP1, C1QC, C7orf16, CACNG5, CASP7, CCL17, CDC2, COL5A1, COQ5, CRKL, CSNK2A2, CTSS, CXCR3, CYP17A1, CYP21A2, E2F1, EFNA2, EPHA3, FZD3, GNPAT1, GNRH2, GSTM1, GUCY1B3, HGSNAT, HSPA1B, HSPB1, HTR2C, ICAM2, IDH2, IL23A, IL29, LDHA, LDHAL6A, MAP3K5, MBL2, MCM4, MGST2, MMP1, NAT6, NCAM2, NEUROD1, NFKB1, NOS1, NPR1, NR1D1, OR11H6, OR2B2, OR2W1, OR4N4, OR4S1, OR6C76, ORC4L, P4HA3, PAK2, PARVA, PDE3B, PDE4B, PDGFD, PDGFRB, PGK2, PI4KB, PIGH, PLA2G2A, PNLIP, POLR2F, POLR2G, POLR2J, PPCS, PRKCI, PTPRB, RFWD2, RPK1, RPN2, RPS6KA4, RRM2B, SCP2, SDC4, SDHC, SEMA4A, SFRP2, SGMS1, STK36, SULT2B1, TAS2R13, TAS2R3, TNFSF10, TNFSF9, TRDMT1, TUBB2C, VASP, WIF1, CACNA2D3, KIR2DL5A</p>
Negative_14796	<p>BAD, GGH, LYN, MSN, SRC, TNF, ABCC8, ABLIM2, ACADS, ACO2, ADCY9, AGTR1, AK3L1, AKR1A1, ALDH3B1, ALDH6A1, ARSB, B3GNT5, BCKDHB, BIRC5, CACNA1E, CACNB1, CACNB4, CACNG4, CBLB, CD244, CD55, CDC45L, CHRM5, CNTN1, CNTN2, COQ3, CREB5, CRKL, CSF2RB, CYFIP1, CYP2D6, CYP7A1, DERA, DVL1, EGFR, EPHA3, FARS2, FIGF, FSHR, GFPT1, GNB1, GNB3, GNPAT1, HLA-G, IDUA, IGSF5, IL18RAP, IL28RA, IRAK2, JAM2, KIR2DS5, KIR3DL2, LYZL1, MAN2A1, MAPK10, MAPK12, MAPK9, MAT1A, MEF2C, NPR1, NRG3, OR10G4, OR10H4, OR10H5, OR10Q1, OR11H1, OR1N1, OR2F1, OR2M2, OR3A1, OR4N4, OR51I2, OR56A1, OR56A3, OR5B21, OR5K1, OR8B8, PAICS, PDGFRA, PGAM2, PKMYT1, PNPT1, POLD2, PPT1, PRODH, PSENN, RAB23, RAD51, RPRM, RRAS, RXRG, SEPHS1, SETD1B, SETDB1, SMPD4, SORD, STX7, SULT2A1, TACR3, TLR3, UGT2B7, WNT10A, WNT2B, WNT6, ZFYVE9, ZMAT3, TNFRSF13C</p>
Negative_14797	<p>BTD, CAD, DCT, FER, LCT, PC, PTS, ACADVL, ACTC1, ACTN4, ADRB2, AGXT, AKR1B1, ANAPC4, APOA1, ATN1, ATP5G1, CALML6, CAV1, CAV2, CCL3, CCNH, CCR1, CD19, CDC14B, CDH4, CDKN2A, CER1, CPT1C, CREB3, CSNK2B, CTS1, CXCL3, CYFIP2, CYP2C19, DGAT2, DGUOK, DHRS9, DLAT, DUSP5, EPHB3, ERBB2, ESPL1, FABP4, FASN, FLT3, GLS2, GNA14, GNG3, GSTP1, HSP90B1, IARS, IL12B, INHBA, ITGB7, JAM3, KIR2DL1, LICAM, LTB4R2, LYPLA1, MAD2L1, MYCD, MYL9, NARS2, NMNAT2, NNMT, NT5E, OR10G4, OR1L4, OR2A12, OR2B11, OR2F2, OR4B1, OR51S1, OR56A3, OR5AK2, OR5I1, OR6C70, OR6K6, OR7A10, OR8D2, PANK2, PAX8, PDGFRA, PFAS, PIK3CD, PIK3R1, PIP5K1C, PNPLA3, PPIR3C, PRPS2, PTPN11, RARS, SC5DL, SDHA, SETD7, SETDB2, SOCS5, SRGAP3, ST3GAL6, STX6, SUV39H1, TALDO1, TAP2, TAS2R38, TNFRSF8, TUBB2B, VEGFA, VEGFB, WNT5B, ATP6V0A4, PPARGC1A, TNFRSF13B</p>
Negative_14798	<p>ADK, AGL, CBS, GDA, KIT, LAT, VTN, ACAD8, ACADL, ACP5, ACSL5, ADCY10, ADSS, AGPAT2, AKR1D1, ALDH9A1, ALG10B, ARNT, ATP5F1, ATP5G3, BACE2, BCAT2, BNIP1, C5AR1, CADM3, CARS, CBR3, CCL19, CCND2, CCR8, CD247, CD28, CDC25B, CISH, CLDN9, CNDP1, CNGB1, CNTF, CSF1R, CYP27A1, DAPK3, DD41, DHDDS, DHODH, DNMT1, DOLPP1, DPM2, DUSP3, EDAR, ENO1, EPHB3, ERB4, FARP2, FBP1, FGD3, FGF11, FGF21, FGF5, FGFR3, FSHB, GALNT12, GALT, GCLM, GGT7, GLS2, GNG3, HTR2C, ICAM1, IL1B, ITGB5, ITPKB, JAM2, KIR2DS5, KLRC2, KLRC3, MAN1B1, MAP3K14, MAPK11, MCEE, MCM4, MGAT2, MMP7, MYH13, MYH2, NADSYN1, NEFM, NMNAT1, OCLN, OCRL, OLR1, OR13C2, OR1J2, OR2A14, OR2K2, OR2L8, OR2M2, OR4C11, OR51L1, OR52K2, OR5A1, OR5B12, OR5D16, OR5T2, OR6A2, OR6B3, OR6K2, OR6X1, OR7D2, OR8K5, PFKFB1, PFKM, PFN2, PIGV, PIK3C2B, PITX2, PNPO, POLA2, POLE, PRIM1, PRKCE, PTGES2, PTPRC, PYCRL, RASGRF1, RDH8, RFWD2, ROCK2, RPS6KA4, RUNX1T1, SARS2, SDHD, SELPLG, SETD7, SGPP1, SMAD3, SMC1A, SNAP25, SOAT2, STX4, THTPA, TRAF5, TUBA1C, TUBB3, UBA1, UGT1A10, ATP6VOD2, HLA-DRB4, HSP90AA1</p>



Negative_14799	<p>C8A, F12, INS, LTB, TEC, TPO, ACADM, ACOT11, ADAM10, ADIPOR1, ADSL, AKR1D1, ARNT, ASIP, BAIAP2, BDH2, BMP8A, BMPR1A, BRAF, C4BPA, CAMK2B, CAPN2, CCNA2, CCNG2, CCR4, CCR9, CDC7, CHKA, CLCF1, COX15, CYP2A13, DAPK3, DDX47, DDX50, DGKE, DOT1L, DPAGT1, E2F2, EPHA4, EPHB3, FTH1, GALNS, GTSE1, HAAO, HAGH, HHEX, HNMT, IKBKE, IL13RA2, IL28A, ITGB8, KLRD1, KNG1, MAGI3, MAOA, MAP4K1, MGAM, MGAT3, MGAT4A, NCK2, NCR3, NFYA, N KX3-</p> <p>1, NR1D1, OPLAH, OR10J5, OR10P1, OR10V1, OR2AG1, OR2AG2, OR2L8, OR2T33, OR4D1, OR4M2, OR4N4, OR51B4, OR5M8, OR6K6, OR7A10, OR8A1, OR8H1, OR8J3, OR8U1, PANK2, PDIA4, PFN1, PIAS4, PIGL, PIGW, PPP3CA, PRKAG3, PRKAR2B, PSPH, PTGES2, PTPN5, RASGRF2, SLC27A5, SLC2A4, SOCS1, SOCS4, SPTLC2, STAT6, STK3, STX1A, STX7, TAS2R1, TAS2R50, TCIRG1, TNFSF18, TOMM40, TRMT11, TRPM5, ULK1, UPP1, XCL2, ZMAT3, KIR2DL5A, PAFAH1B3</p>
Negative_14800	<p>ADK, AMH, F2R, F8, FN1, GNS, ILK, LTB, TXK, ACADM, ACADVL, ADCY10, ADCY9, ADRA1B, AKR1C2, ARG2, ARHGEF2, ATF4, ATP5G1, ATP5G3, B3GAT1, B3GNT5, BCAR1, BLVRA, BMPR1B, C1QA, CCL1, CNDP1, CSF2RA, CTSB, CX3CL1, CXCL13, CXCL6, CYP2A6, CYP2C19, DAXX, DIAPH3, DTX3L, E2F2, EFNB3, EPHB6, EXOC7, FGD1, FIGF, FZD2, GAD2, GALT, GGT1, GIT1, GLI1, GUCY1B3, GYS1, GYS2, H6PD, HSD17B4, IFNA8, IFNAR1, IFNW1, IL13RA1, IL3RA, IL9R, I NADL, ITGA2B, KARS, KLRC2, LAMC1, LDHA, LEFTY1, MAGI2, MAP2K7, MAP3K1, MAP3K11, MMP9, MPZL1, MYH15, MYH8, NADSYN1, NAGS, NCF1, NEGR1, NEUROD1, NTN1, NUMB, OR10AD1, OR10H5, OR10R2, OR4C16, OR4L1, OR52H1, OR56A4, OR5I1, OR5M3, OR5M9, OR6A2, OR7G3, OR8H3, PAK1, PAK4, PANK4, PCCB, PDE3B, PDK1, PDXK, PERP, PFN3, PGAM1, PIGS, PIK3C3, PKLR, PLK1, PLOD3, POLE4, PRKCD, PROC, PSENNEN, PTCRA, RBX1, ROBO1, RPE65, SAT1, SIAH1, SOS2, SUCLA2, TACR3, TAP1, TAS2R1, THBS2, TNFSF8, WBSR22, XYLT2, ZMAT3, B4GALNT1, EIF4EBP1, TNFRSF10A, TNFRSF11A</p>
Negative_14801	<p>AK2, C8B, F8, GDA, LYN, MPZ, MSN, PAH, TEC, TPO, UBC, AARS, ACRY, ADCY4, ADH7, AGRP, AKR1C4, ALDH3A1, ALS2, ATP6V1F, BACE2, BCAR1, BUB1B, CACNA1D, CADM3, CAMK2A, CDK5, CLDN3, CNGA3, CYP2E1, CYP3A7, DDX18, DFFB, DGAT2L4, DGKQ, DMGDH, DUSP2, EPHB2, EXTL3, FARS2, FBXW11, FGF21, FGF3, FPGS, GALNT3, GALNTL1, GALNTL5, GLB1, GMPPB, GNAO1, GSK3B, GSTM2, GSTZ1, HADHA, HMGCS2, HTR2B, ICAM2, IDH3G, IFNB1, INMT, IQGAP1, ISYNA1, LTB4R2, MAP2K2, MAP2K7, MARS, MCM6, MFNG, MGAT1, MLLT4, MMP9, MYH15, NEU3, NNMT, NRG4, NTNG1, NUDT9, OR10A3, OR10H2, OR13C5, OR13C9, OR13F1, OR2A25, OR2G2, OR2T12, OR2Z1, OR4K5, OR4S1, OR4X2, OR5AR1, OR5D18, OR9I1, OR9K2, OR9Q2, PDGFA, PDPK1, PERP, PFKFB3, PHGDH, PHPT1, PIK3CB, PKMYT1, PLCD3, PLD1, POLR3K, PRKAR2A, PRKCG, PRKG2, PROS1, PTGER3, PYCR1, RAPGEF4, SDHB, SRGAP1, ST3GAL4, TACR1, TGFBR1, TMLHE, ULK2, VAMP4, WEE1, ATP6VOA2, ATP6V1C2, CACNA2D1, MAPKAPK5</p>
Negative_14802	<p>CAD, EDA, GCK, GGH, GLS, TNN, ABL2, ACHE, ADAM10, ADAM17, ALDH3A2, ARG1, ATP6VOC, B3GALT5, BPGM, BRAF, CACNG6, CAMK2A, CCL23, CCR10, CDKN1B, CFTR, CLDN8, CLDN9, CMPK2, COL4A4, CRY2, CSNK2B, CTBP1, CXCR5, CYP11A1, CYP4A22, DBF4, DCTD, DHODH, DPM1, DTX3L, EHMT2, ENPP3, EPHB1, FABP3, FGF14, FOXO1, GATM, GBE1, GNAS, GRIN1, GSTZ1, IFNA2, IL13, IL1R2, IL7R, IL8RB, IMPDH2, INPP5E, ITGAL, ITGAV, LEF1, MAD2L2, MAPK10, MDH1, NAT6, NR4A1, NSD1, NUDT5, OR10A5, OR11L1, OR1G1, OR2A25, OR2M4, OR2T34, OR3A3, OR4B1, OR51G2, OR51L1, OR56A4, OR7G1, OR9Q2, P2RX1, PDE2A, PDE4B, PDGFA, PER1, PKM2, PLA2G2E, POLE3, POLR2G, PON3, PPAP2A, PPCS, PRIM1, PRKAB2, PRKG1, PRSS1, RGS3, RHOQ, ROCK1, RRM1, SESN2, SH2D1B, SNAI1, SOCS1, STX1A, STX7, TALD01, TCF7L1, TP53I3, TUBA3E, ULBP3, UPRT, VAV1, WNT7A, XIAP, ATP6VOD1, CACNA2D4, HLA-DQB1, TNFRSF13C</p>

Negative_14803	AK1, AMT, AUH, BAX, BID, BTB, DDC, DDO, GH1, ITK, LCK, ACAT2, ACP6, ACPT, ADORA2A, ALDOC, ALG13, ATP13A2, ATP4B, BCAT2, CASP7, CCNG1, CCR3, CLDN2, CLDN20, COL5A1, COMP, COQ6, CRLF2, CTBP2, CTTN, CXCL13, CYP26C1, CYP2C8, CYSLTR2, DGKD, DUSP8, E2F2, ECSIT, EHHADH, EIF4E, ENTPD7, FGF17, FLT3, FZD3, FZD8, GALNT12, GLDC, GMPPB, GRIN1, GRIN2D, GSTA3, GSTA5, GUCA1C, GYS1, HLA-DOA, HSD17B2, IFNGR2, IL10, INPP4A, IRF9, LEFTY1, LMO7, MAFA, MAPK11, MAT1A, MGST2, MYL2, MYL5, NCF4, NEU4, OR13J1, OR2A12, OR2F1, OR2M7, OR2T4, OR2Y1, OR4Q3, OR5H6, OR8H2, OR8H3, ORC6L, OXSM, PECAM1, PFKFB2, PIGB, PIGK, PLXNA2, PPARG, PRIM1, PRKAA2, PRSS3, RALB, RASA2, RDH10, SC5DL, SH2D2A, SH3BP2, SMAD1, SMAD3, SOS2, SPI1, STEAP3, SULT2B1, TAS2R50, TMLHE, UNC5D, UROS, ZAP70, HLA-DPB1, PDCD1LG2, ST6GALNAC1
Negative_14804	C6, CS, DDO, F11, FAH, GNE, IL5, LAT, TNC, AARS2, ACSS2, ACTN2, ACY1, ALG8, AMPD1, ARNT, ATP6V1A, AXIN2, C1QA, CACNA1S, CCL28, CCL4, CCR6, CD47, CD74, CERK, CHST12, CLDN15, CLDN17, CLTA, COL5A3, COQ6, CSNK1E, CSNK1G2, CTNNA3, CXCL16, DAAM1, DRD5, EDA2R, ENAH, EPB41L2, ERBB3, F11R, FSHB, FUT8, GMPS, GP1BB, GUCA1C, H6PD, HEXB, HIF1A, HTR2A, IFNAR2, IL6ST, IPMK, KCNB1, KCNQ1, LAMA3, LCAT, LDHC, LRRC4C, MAP3K12, MAP3K6, MGST1, MPP5, MTMR6, MYL7, MYL9, NEU3, NKX3-1, NTRK2, OR1E2, OR1F1, OR2Z1, OR4A5, OR4E2, OR52N5, OR5D13, OR5P3, OR6C76, PAK1, PCCA, PDE11A, PDE4C, PDHB, PDXK, PGAM1, PGK1, PIGO, PIGS, PIGV, PLA2G6, PNLIP, PNPLA4, POLD1, POLR2D, PTGES, PTGES2, PTPRZ1, RAP1B, RASGRF1, RELB, RHOQ, SPRY1, SREBF1, SSH3, TAS2R38, TAS2R4, TCIRG1, TGFB1, THBS3, TLR3, TLR5, TNFRSF8, TRPM5, TSC1, TUBB6, UGT2B11, WASF2, YWHAG, ZAP70, AASDHPPT, ATP6V1G3, HSP90AA1, SERPINF2, TNFRSF10B, TNFRSF12A
Negative_14805	APP, AUH, BID, C7, C8B, DHH, F2, F7, MPZ, OGT, PGD, RB1, SDS, ABCC8, ACSM5, ACYP1, ADCY2, AKR1B1, ALG10, ALOX15, AMY2B, ANAPC1, ARPC1A, B3GALT1, B3GNT4, BCL2L1, BMP2, C4BPA, CACNA1B, CADM1, CCL11, CCL4, CCNB1, CCR9, CD34, CLDN17, COQ3, CPT2, CYP2S1, DDOST, DGKG, DUSP1, DUSP8, FGF7, FMO5, FSHR, FZR1, G6PC, GMPPB, GNPDA1, GOSR2, GRIN1, GUCY1B3, HAO2, HARS, HNF4A, IFNGR2, IFNK, IKBKG, ITGA5, ITPKB, KCNJ11, KIR2DS5, LCAT, LIPG, LRAT, MAOB, MAP3K7, MS4A2, MYH11, MYL2, NAGS, NFASC, NFATC3, OR13C4, OR2G3, OR2M2, OR2Y1, OR4D1, OR4N2, OR52N5, OR5H6, OR6C1, OR6C75, OR6N1, OR6N2, OR8B8, OR8H2, OR9G4, P2RX1, PDE6D, PFN4, PIGL, PIGN, PIK3C2B, PIP5K1C, PLXNA3, PLXNC1, POLE2, PPP1R3C, PRKAA1, PRLR, PSME3, PTGER1, RALBP1, RASSF1, RDH5, RND1, RPN1, RPS6KB2, RXRB, SETDB1, SLC2A4, SOAT2, SOS2, SRGAP1, ST8SIA1, SULT1A2, TAS2R5, TCF7, TNFRSF8, TUBB2B, UCK1, UCP1, ULK1, VAV1, VAV2, VEGFC, WNT6, CACNA2D3, CSGALNACT1, HLA-DPB1, KIR2DL5A, TNFRSF17
Negative_14806	F2R, GDA, RB1, ACADM, ACVR1, ADORA2B, ADRA1A, AHCYL1, AKT3, ALAS2, ANAPC1, ARHGEF2, ARNT2, ASS1, ATP5F1, ATP5G1, BIRC3, C7orf16, CACNG2, CBLB, CBLC, CD48, CDIPT, CDK5, CLCA4, CLCF1, COMT, CXCL2, CYBB, CYP1A1, DRD1, DTX2, DVL3, FARSA, FGF9, FUT2, FUT7, FZD1, GALNT11, GNPAT1, GP1BB, GUCY2D, H6PD, HSPA2, ICOS, IGF1, IKBKG, IL12RB2, IL29, IQGAP2, ITGAE, ITGB4, KIR2DL4, LFNG, LTA4H, MAP2K6, MAPK3, MAT1A, MCM7, MLYCD, MYH14, NLGN1, NRG4, NRXN1, NT5C3, NT5E, OR14J1, OR2M2, OR2M7, OR2T29, OR52J3, OR8D2, OR8J3, OR9A4, P4HA2, PDE1B, PDE3B, PDGFRB, PFKM, PIGL, PIK3CD, PLAUR, PPP3R1, PRIM1, PRKAA2, PROC, PSEN1, PTPRC, RAC2, RFWD2, RPS6, SSH1, SULT1E1, TGFB1, TLN1, TOMM40L, TSLP, TUBB2A, UROS, VNN1, WNT3A, WNT5B, ATP6V0A2, HLA-DPB1, MAPKAPK2, TNFRSF13B

Negative_14807	CAD, CGN, F3, FST, GLS, ME2, PC, PDC, SRF, STS, ACAT2, ACTA1, ACVR1B, ADAM17, ALPL, AMY2B, ANAPC10, APOA1, ASNS, ATP4B, ATP5G2, ATP50, B3GNT5, BMP5, BMPR1B, CACNB3, CD47, CDC14A, CDC25A, CDC7, CDS2, CES1, CLDN5, CREB3L3, CSF3R, CTBS, CTSG, CYP2S1, DEGS2, DNMT1, DPM2, E2F2, ENO2, ENTPD8, EPB41L1, EPHB1, EXOC7, F11R, F13B, F2RL3, FARP2, FCGR2B, FGD1, FGF4, FMO4, FTCD, FUT1, FZD5, GALNT11, GDF5, GOT1, HMBS, HSD17B4, IFNGR2, IL10RA, IL20, KCNJ11, KITLG, KLKB1, LARS, LCMT1, LILRB3, LIPA, LYZL1, MAD2L1, MAP2K4, MAP3K8, MTAP, NANP, NARS, NAT6, NFYA, NFYB, NUDT9, OR13C2, OR14C36, OR2AE1, OR2G2, OR2K2, OR2T33, OR4D6, OR4F4, OR4L1, OR4S2, OR52E6, OR56A1, OR6C1, OR6K2, OR8A1, OR9A2, PARD6G, PARS2, PDE1C, PDE3A, PGLS, PIGN, PIK3CB, PIP4K2A, PKM2, PLA1A, POLR2D, PPP1R3B, PRPS1, PTGER1, PVRL2, RAC2, RAD51, RALBP1, RALGDS, RAPGEF3, RELA, RIPK1, RPS6KA6, RXRA, SELL, SEMA4D, SMPD3, STAT4, SULT2B1, TAS2R16, TD02, TLR9, TNFSF10, TPH1, TRAF5, UGT2B17, WNT5A, WNT7B, ATP6V1B2, HLA-DQB1, MAP3K7IP2
Negative_14808	CDA, CP, GK, KMO, MSN, ACOT12, ACSS3, ANAPC11, AQP7, B4GALT2, BACE2, C3orf10, CACNG7, CAMK2A, CCL11, CD247, CD274, CDC14A, CDC14B, CDC42, CDIPT, CES1, CFL1, CHD8, CHSY1, CPT1B, CYP1A1, CYP4A11, CYP4A22, DARS, DDX56, DHCR7, DTYMK, DUSP6, FGF19, FGFR4, FOXA2, FZD5, FZD8, GALC, GGT5, GNA11, GNAZ, GPX5, GYS2, HSD11B2, HTR2C, IL17RB, IL1R1, IL9R, INHBC, INHBE, KCNB1, LIPG, LRAT, MAGI3, MAP2K6, MAP3K13, MCAT, MCCC2, MCM3, MYH6, MYL9, NAT1, NAT5, NEFL, NFASC, NOS1, NPR1, NR4A1, NSDHL, NT5C1B, NTF4, NTSR1, OR10AD1, OR10J1, OR11G2, OR13A1, OR14C36, OR1D2, OR1D5, OR1J4, OR2AE1, OR51G1, OR56A1, OR5L1, OR5L2, OR5M9, OR6B3, OR6C4, OR6C6, OR6K3, OR7C1, P2RX2, PAK6, PARVG, PCK2, PDE8A, PFKM, PGS1, PIGL, PIGM, PIK3CB, PIM2, PLCB2, PLOD3, PPP1R3B, PRKAR1B, PRODH, PSME1, RAF1, RARA, RARS2, RPS6KA3, SDC1, SEMA3F, SETD1B, SIPA1, SKP1, SMAD3, SPRED2, STX5, SULT1A2, TAP2, TAS1R1, TAS2R42, THY1, TLN1, UBE2K, UGT2B10, UROS, VAV2, WASF3, CACNA2D2, EIF4EBP1, GABARAPL2, MAP3K7IP1, MAPK8IP2, MAPKAPK3, PNLIPRP2, TNFRSF10A
Negative_14809	A2M, BID, C3, C8A, GK, GP5, ID1, MAX, OSM, PC, SDS, SRF, ABLIM1, ABP1, ACACB, ACTC1, AGPAT6, ALG10, ALOX12, AMPD1, ARSE, ASRGL1, ATP4A, ATP5B, BACE2, BDNF, BET1, BPNT1, BUB1, CARS2, CCDC6, CCR1, CD244, CD72, CDC42, CDKN2B, CHDH, CHST12, CLTC, CRY1, CTNNA3, CTNNB1, CYFIP1, CYFIP2, CYP2A6, CYP2B6, CYP4F3, DLAT, ELK1, EPHB1, EPHX2, EREG, ESPL1, FLOT1, FTMT, GCH1, GDF5, GMPS, GNG12, GOT2, GSTM4, HGSNAT, HLA-DOB, HMBS, HRH1, IL1R1, LDHB, LDHC, MAN2A1, MAP3K14, MMP9, MYH6, MYLK3, NT5C2, NTN1, OR10A2, OR10G8, OR11H6, OR2M4, OR2W1, OR52A5, OR52B4, OR52N4, OR6Q1, OR8G1, OR9Q1, P2RX1, PECAM1, PLXNA3, PLXNB1, POLE2, PPP2CB, PRKCH, RASGRP3, RHOA, SMURF1, SORD, TAS2R40, TBXAS1, TGDS, TSNARE1, TUBB2B, TYRP1, UGT2B4, UROS, VEGFC, VTI1B, WNT3A, WNT7A, YARS, ATP6V1E2, SERPINA5

Negative_14810	<p>ADA, C8A, CAD, KMO, MPI, PGF, PGP, ACADM, ACOT11, ADH1A, ALDH7A1, AREG, ATG7, ATP4B, CALML6, CARD11, CCL13, CCL27, CCL4, CCNH, CD40LG, CDC27, CDS1, CES2, CNTN1, CPOX, CPT1A, CSF1R, CTNNB1, CTSS, CYP2C19, DAG1, DGKE, DLL4, DUSP2, DVL1, DVL2, E2F4, EFNA3, ENTPD1, ENTPD4, EPHA5, EPHB3, EXT2, FGF23, FLOT1, GPLD1, GRIN2C, GUCA1B, HNF1A, IAPP, IDH2, IDI2, IFNA10, IL3RA, KDSR, LDHAL6A, MAPK10, MASP2, MCCC2, NANS, NAT2, NEUROD1, NOX3, OR10J5, OR10K2, OR11L1, OR12D3, OR13C2, OR14I1, OR1A2, OR4C12, OR4C6, OR4K15, OR52A1, OR5B3, OR5D18, OR5M3, OR5P3, OR5V1, OR8K1, OR8K5, PAFAH2, PANK1, PCYT2, PEMT, PLAT, PON1, PPA1, PPT1, PRKG2, PRKX, PTAFR, PTGFR, PTPN1, PTPN6, RASGRF1, RETSAT, RHEB, RHOQ, RPS6KB2, SARS, SETD2, SMAD4, SOAT1, TAS2R41, THBS4, TOMM40, TSC2, TSLP, TUBB2C, VAMP2, WASF1, WNT2, ZAP70, ATP6V1G3, HSD17B12, MAPKAPK2, TNFRSF12A</p>
Negative_14811	<p>ADC, C8B, C8G, HAL, PML, TAT, A4GALT, ACSM2A, AKR1C1, ALDH1B1, ALG2, ATP2A3, CAMK2D, CCL13, CCL24, CD3E, CD40, CHRM2, COL3A1, CPT1A, CREB3L1, CREB5, CYFIP1, DAAM2, DGAT2, DHRS3, DOCK1, DUSP4, DUSP7, E2F5, EHADH, EI24, EXT2, FMO2, FZD7, GBA3, GDF5, GDF6, GOSR2, GRM1, GTSE1, HARS, HEXB, HLA-C, HSD3B2, IFNA14, IFNA7, INHBE, INPP5A, IRF7, ITGA1, ITGA8, ITPK1, KAT2B, LAMB1, MAD2L2, MBL2, MGST3, MMP7, MYLK2, NCAM1, NME4, OR2A2, OR4D11, OR4F6, OR52B4, OR52B6, OR5H2, OR5K1, OR5K2, OR5M8, OR5M9, OR8A1, OR8D2, OR8K3, ORC3L, OXCT1, PAK1, PAPSS1, PDE4C, PDGFB, PECAM1, PFKM, PHKG1, PIK3C2A, PLA2G6, POLR1E, PTPRM, RARS2, RGS3, ROCK2, RPS6KA5, SDHC, SEMA7A, SHMT1, SKP1, SPHK1, SSH2, ST3GAL2, STMN1, SV2A, TAS2R38, TUBA1B, TUBA8, TUBAL3, TYMP, UAP1, UBA7, UPRT, VDAC3, VEGFA, WASF3, WWP1, YARS, YARS2, CACNA2D1, MAP3K7IP1, PPP1R12A, TNFRSF11B</p>
Negative_14812	<p>ADO, CFD, CSK, FST, GGH, GP5, KHK, TH, A4GALT, AASDH, ACAD8, ADRA1B, AGRN, AKT2, ALDH6A1, ARHGEF4, BMP5, CCL26, CLDN7, COL4A6, CSNK2A1, CTNNB1, CXXC4, CYP2C9, DNMT3L, DTX3, ELK1, ESAM, ETS1, EXOC7, F2RL2, FCGR3B, FPGS, FTH1, GALNS, GNG13, GRLF1, GSTM5, GUSB, HAAO, HCCS, HIBCH, HSD11B1, IL15, JAK1, LAMB2, LRP5, LYPLA2, MAD2L1, MAP2K1, MAP4K4, MAT2B, MYH8, NEUROD1, NFATC3, NFYB, OGDHL, OR10AG1, OR13D1, OR2A5, OR2C1, OR2M3, OR3A1, OR4D5, OR4K14, OR5AR1, OR5J2, OR5K2, OR6Q1, OR8G1, OR8H3, OR8U1, P2RX4, P2RX5, PDE4B, PFKL, PIGX, PLCB4, PLCG1, PMAIP1, POLE4, PPP2R5E, PRKX, PRODH, PYGL, RERE, RPS6KA2, SAT1, SPCS1, TAS2R16, TBL1XR1, TGDS, TJP3, TKTL2, CACNA2D1, CACNA2D4, CTNNBIP1, PAFAH1B1, TNFRSF17, TNFRSF1B</p>
Negative_14813	<p>C8B, CD6, DBT, FUK, HGD, HK2, ID3, MUT, MVD, NPL, PRL, PVR, SPN, ACOX2, ADCY1, ADCY2, AGRN, AKR1C4, ALDH1L1, ALG2, ALG9, APOA1, ATIC, ATP2A1, ATP4B, ATP6V1F, BMP6, C4BPA, CACNA1A, CAV1, CAV2, CCL3, CD74, CD99, CHPF, CHST12, CMPK1, CRLF2, CYCS, CYP1A1, CYP21A2, CYP27A1, CYP3A7, DBF4, DHDDS, DHRS3, DOLPP1, ENTPD3, EPHA3, EPHB1, FDFT1, FGF22, FOXO3, FPGS, FRAT1, FTH1, GATM, GDF6, GLG1, GLUD1, GNA12, GPD2, GRIA3, GUK1, HDAC2, HIBCH, HMGCR, IAPP, IL12B, INPP5E, ITGA2B, JAM3, KLRD1, LIPC, LTB4R2, MAML2, MAML3, MARS, MAT2B, MCAT, MEF2C, MTAP, NCOA4, NEFL, NFATC2, NLGN2, NME6, NUDT9, OR10G2, OR10J1, OR10T2, OR14A16, OR1D2, OR1G1, OR2A12, OR2M3, OR4C11, OR4K1, OR4K2, OR4N2, OR51A4, OR51S1, OR51T1, OR56A3, OR5T2, PANK2, PGM1, PGM3, PIGW, PIK3R1, PLA2G2F, PLA2G5, PLIN, POLD1, PRKAB2, PRKCA, PTCRA, PTGER3, PTPMT1, RALGDS, RARS2, RRM2, SDHB, SEMA4C, SFRP5, SMAD7, SMC1B, SMPD3, SOX17, STX6, TACR1, TICAM2, TJP2, TKTL1, TNFSF9, TRAF2, UGT2B28, ULBP3, UPB1, WNT2, CACNA2D4, MAPK8IP3, PPARGC1A, SERPINC1, ST6GALNAC4</p>

Negative_14814	C8A, CD2, DBH, GK2, GNE, IDS, LPL, SP1, SRM, ABLIM3, ADRB3, ALDH3B1, ALDH5A1, ALG9, ANAPC1, ARAF, ARPC2, ARPC4, B3GALT6, B3GNT5, BMPR1B, C1QC, CAMKK2, CASP6, CCL23, CDC16, CES1, CHPT1, CLDN2, COL4A2, CXCL12, CYP1A2, CYP2J2, DGKZ, DHDH, DUSP3, EPHB3, EPHB6, EPOR, FLT1, FLT3LG, FMO3, FUT2, GJA1, GNPAT1, GPX5, GUK1, IARS, IFT57, IL6R, INHBC, ITGA2, ITGAV, JAK3, KLRD1, KRAS, LCAT, LFNG, LRAT, MAP3K1, MCEE, NCAM1, NR1H3, OR10R2, OR11G2, OR1A1, OR1J4, OR2A5, OR2T2, OR4A15, OR4A16, OR4C15, OR4D1, OR4D6, OR4F6, OR4X1, OR51Q1, OR52L1, OR5H6, OR5R1, OR6T1, PDXP, PGK2, PIK3C2A, PIK3R4, PIK3R5, PIP5K3, POLA1, PPP1R3A, PPP2R5D, PPP3R1, PPP3R2, PRKG1, PRKG2, PSPH, SC4MOL, SDHD, SEMA3C, SGPP1, SLC27A1, SMPD4, SOCS4, SPRY1, STAT2, SV2A, TBXA2R, TBXAS1, TFPI, THBS3, THTPA, TICAM1, TPK1, TSC1, UGP2, UGT2B10, WNT6, ZBTB16, ZIC2, KIR2DL5A, PNLIPRP2, SERPINB5, SUV420H1, TNFSF13B
Negative_14815	ADC, CDA, DDC, F2, F8, LYN, TFG, AASDH, ACSL1, ADSL, ALG5, ALPP, AMY2B, ARAF, ATP5A1, ATP6V1H, BLNK, C4BPB, CADM1, CBR1, CCL26, CD22, CD86, CEBPA, CHPT1, CHST12, CLTB, CLTC, COQ3, COX10, CPT1C, CSF1, CTNNA2, CYP26A1, CYP2U1, DGKD, DHX58, DTX1, DUSP9, E2F3, EGLN1, EP300, EPHA3, EPHA4, ERBB2, ETNK1, FGF9, FOXA2, GALNT13, GMDS, GRIA2, GRM1, GSTA2, HAGHL, HLA-DOB, HSD11B1, IFNA17, IFNA21, INPP4B, JAK1, KCNJ11, KNG1, LAP3, LEFTY2, LMO7, LPAR1, MAT2B, MCAT, MCCC2, MCM3, MMP9, MTHFD2, MTMR2, NFATC3, NFX1, OPLAH, OR14I1, OR14J1, OR1L1, OR1L8, OR2T10, OR4N2, OR52E8, OR52R1, OR6Q1, ORC5L, PAFAH2, PDCD1, PDGFB, PIGS, PKMYT1, PLOD3, PPP3R1, PPP5C, PRKCZ, PVRL1, RASGRP4, RDH8, ROBO3, SDHB, SELP, SMAD4, SMAD5, SMURF2, SOAT2, SQLE, ST6GAL1, STAT3, TACR3, TCIRG1, TD02, TMLHE, TUBB2B, UGT2B28, WNT10A, WNT5A, YKT6, ATP6V0A1, CACNA2D3, TNFRSF11A
Negative_14816	AMT, C1S, FGG, HPD, IL2, PRL, SHH, UBC, AACS, ACSM5, ADH6, ALDH4A1, AMHR2, ATP5G3, CASP7, CBR3, CCR1, CD14, CD226, CD82, CDC20, CDH5, CEBPA, CLDN2, COL4A4, CSF2RA, CTBS, CXCL13, CYP11B2, DMGDH, DPYD, DTX1, DUSP10, EFNA5, ENPP7, ENTPD6, EPB41L3, ER01L, FARSA, FGF1, FGF18, FLOT2, GCNT3, GCNT4, GGPS1, GGT7, GLI2, GNA11, GNG13, GRIN2D, GRM1, HMBS, I DUA, IGFBP3, IL15, IL22, ITCH, ITGA3, ITGA5, JUND, LTA4H, LTBR, MAG11, MAP4K3, MAPK8, MAT2B, MGAT4B, MYLK, NFKBIB, NRG3, NT5E, OR13C8, OR1L1, OR4S1, OR51A7, OR51E2, OR51F1, OR52E6, OR56A3, OR56B4, OR5K1, OR7C2, PAICS, PAPSS2, PDCD1, PDE4C, PDE6D, PDK1, PFKL, PHKA1, PIGS, PIGW, PLCD3, POLR1D, PPP2R2C, PTGES2, PTK2B, PYCR2, RAB5A, RAPGEF1, RAPGEF4, RASA2, RPE65, RPSA, SEMA3E, SMARCA5, SPCS3, TBXAS1, TLR2, TLR4, TRAF3, TUBB, UCK1, UGT1A10, UNC5A, ZFYVE9, ATP6V0A4, HLA-DPA1, TNFRSF10A, TNFRSF13C
Negative_14817	EDA, EGF, FST, GLA, HDC, IVD, NLK, PDC, RB1, VTN, AACS, ABCC8, ACADS, ACSM2A, ACY3, ADCY3, AGMAT, AHCY, AMDHD1, ARPC5, ATN1, ATP5C1, BMPR1A, BMPR1B, CACNA1E, CAMK4, CARS2, CCL11, CCL22, CCNG2, CDKN2A, CHST12, CIITA, CKMT2, CLCA2, CNTNAP1, CPT2, CTNBN1, CYCS, CYP26B1, CYP3A4, DX4, DIAPH1, ELK1, EPHA6, FGF17, FUT7, GALM, GALNTL2, GNAI3, GP1BB, GRIN2C, GUCA1A, GYS1, HMGR, HSD17B1, HSPA1B, IBSP, IFNA7, IL13, IL20RA, LAMC3, LRAT, MAP4K4, MASP1, MGAT4B, MGAT5, MMP9, NCAM1, NCSTN, NFATC1, NKD2, NMNAT3, NOS3, NRXN1, NT5C2, NTRK1, OR10Q1, OR10X1, OR2A12, OR4C13, OR4K13, OR52K1, OR6C70, OR9A4, OR9Q2, PAX4, PHKB, PIGN, PLCD3, PLD2, PLXNA3, PNPO, PPP2R5C, PRKACA, PRKACG, PRKAR1A, PRKCG, PRKCH, PYCR1, RALGDS, RAPGEF4, SDHD, SEMA4F, SESN1, SGMS2, SGPP2, SMAD6, SPAM1, SRGAP2, SRGAP3, STK4, STT3B, TAP2, TJP1, TLR4, TNFSF11, TRAF6, TRDMT1, TYMS, WBSR22, WNT16, WNT7A, ZFYVE9, ATP6V0D1, PNLIPRP1

Negative_14818	<p>BTK, GNE, GSN, HAL, MPI, TH, UBC, ACAD9, ACADL, ACHE, ALDH3A1, ALDOA, A LDOC, ANAPC10, ARRB2, ATP5H, ATP6V1H, B3GNT5, BCKDHA, BDH1, BDNF, CB LB, CCR8, CD72, CD99, CDC45L, CEBPA, CES2, CFL1, COL4A1, CYP2F1, DDHD 1, DLL3, DTX3, EPHA7, FZD10, FZD2, GNA14, GNAI3, GNAO1, HADH, HEXA, IF NB1, IL12A, IL17A, ITGAV, KRAS, MAPK1, MAT1A, MGAT2, MGAT4A, MMP1, MT HFR, MYH10, NADSYN1, NEUROD1, NKX3- 1, NRG2, NT5C3, OR10G9, OR11H4, OR12D3, OR14J1, OR2A25, OR3A1, OR4D9 , OR4F6, OR52D1, OR5J2, OR8B4, ORC5L, ORC6L, PI4KA, PIGT, PNPLA4, POL E3, PRKAB2, PRPH, PTDSS2, PTPRB, RAC3, RAP1B, RETSAT, RHOD, ROCK1, SE MA3C, SETD1A, SLC9A1, SMPD3, SRGAP1, TAS2R38, THBS4, TLR9, UNC5B, WA RS2, WBSR22, WNT3, WWP2, CACNA2D1, CTNNBIP1, HLA-DPA1, HLA-DRB3, PPP1R12A, ST6GALNAC1</p>
Negative_14819	<p>AGL, AR, ATM, BTK, CAD, DCK, DUT, FGG, FYN, IHH, IL8, ME3, MOS, OSM, PTS, SMO, TFG, ABAT, ACOX3, ACSM2A, ALDH1L1, ALG3, APH1A, ASMT, ATIC, ATP5 A1, ATP5L, B3GALT6, CADM1, CARS2, CCL5, CD46, CD99, CER1, CES2, CHAD, CLDN19, CLDN22, COL4A6, COMT, CRHR1, CTTN, CXCL1, CXCL16, CYP3A43, C YP4A22, DAAM2, DHRS4L2, DNMT3A, DPYSL2, DUSP14, EPHB4, F13A1, FGF19 , FUT1, FZD10, GAB1, GADD45A, GALM, GBA3, GCDH, GGT6, GNAO1, GP1BB, GR IA2, GSTK1, HAGH, HNF1A, IARS, ICAM2, IGF1R, IL10RB, IL13RA1, IL1R2, INADL, IRF7, ITGA2, ITGA9, ITGAX, JAK3, KIR2DL1, KIR3DL1, MAP3K14, M AP3K5, MYL7, NAGK, NAT5, NEGR1, NEU1, NRXN3, OR1E1, OR4N5, OR5B21, OR 5M3, OR5V1, OR9A4, PDE3B, PDE6H, PDGFD, PDX1, PHPT1, PIK3C3, PIPOX, P LCD4, PLTP, PNMT, POLR3H, PPP2CA, PRDX6, PRKG2, PRSS1, RELA, SEMA3B, SETMAR, SLC25A5, SNW1, SOX17, SRGAP1, SSH1, ST6GAL1, STX12, TAS1R1, TGDS, TKTL2, TNFRSF8, TUBB4, UGT2A1, UGT2B28, VANGL2, VKORC1, YWHAZ , ZIC2, ATP6V0A1, HLA-DRB5, MAPKAPK3, PHOSPHO1, TNFRSF10A, TNFRSF11B</p>
Negative_14820	<p>CRK, F3, FUK, HGD, ID4, IDS, NNT, PC, TNN, ACSM1, ACSM4, ACTA1, ACTG1, A DCY4, ADIPOR2, ADRB1, ADSSL1, AGPAT4, AGXT2, AKR1B1, ALDH1A1, ALDH2 , ALDH9A1, ALG8, ANGPL4, ARD1A, ARG1, ASCC3, ATG7, ATP5I, B3GALT1, B 3GAT2, BET1, CAMK2D, CCL17, CD14, CD28, CD72, CD86, CHD8, CHRM3, CLDN 4, CLTB, CNDP1, CRHR1, CSAD, CYP17A1, CYP2C8, CYP2F1, CYP2S1, DAAM2, DDIT4, DIAPH2, DPYSL2, DTX3, DTX4, DUSP1, DUSP3, DUSP9, ETS1, EXTL1, FGF4, FGF9, FLOT2, FRAP1, GADD45G, GALC, GALNT11, GDE1, GLS2, GNAL, G RM5, GRPR, GYS1, H6PD, HA02, HCCS, HPRT1, IFNW1, ITGB8, MYH15, NARS2, NKD2, OR10K1, OR10V1, OR1E2, OR1S1, OR2B2, OR51G2, OR51S1, OR6C75, O R8H1, PDE4C, PDGFRA, PI4KB, PIGV, PIGW, PIPOX, PLA2G4A, PLCZ1, PMAIP 1, POLD3, POLR1A, POLR2D, PPOX, PPP2R2D, PRKY, PRLR, PROC, PRODH, PSM E2, PTDSS2, PTK2, PTPRZ1, PYCRL, RAB23, RALB, RASGRP2, SEMA4F, STAM, SUFU, SYNJ2, TAS2R3, TAS2R38, TCF7L2, TLR2, TUBB2A, TUBB3, UPP2, URO C1, UROD, VAMP3, VCAM1, WNT16, WNT4, ZBTB16, ATP6V1G1</p>
Negative_14821	<p>BAD, CS, ITK, MTR, MYC, ACP2, ACY1, ADCY4, ADH4, AGTR1, AKR1B10, ALDH2 , AQP7, ATP2A2, ATP5I, B3GALT1, B3GALT2, BCL2L1, BLVRA, BMP4, BMP7, C CDC6, CCL24, CCNA1, CDH5, CRY2, CX3CR1, CXCL3, DCTN1, DIAPH1, EI24, E NTPD1, ETNK2, EXTL2, FABP1, FZD9, GJD2, GLS2, GOSR2, HCST, HMOX2, IFN GR2, IL12RB2, IL18, IL1RAP, IL20, IRF9, ITGB3, ITGB6, ITPKB, MAT1A, M CCC1, MYD88, MYH3, NAGS, NOX3, NRAS, NT5C1A, NTRK2, OR10J3, OR2A25, O R2T4, OR4F4, OR4X1, OR51A4, OR5D16, OR8B12, PDE6D, PDE7B, PDGFD, PER 2, PHKA1, PIK3C2G, PIP4K2A, PKM2, PLAU, PLCD3, PLOD2, POLR2C, PPP1R3 D, PPP2R2D, PRNP, RASA2, RFXANK, RRAS, SKIV2L2, SKP1, SKP2, THBD, TNF SF9, TUBAL3, TUBB2B, ULBP3, UNC5C, UROC1, WHSC1L1, WNT8A, YWHAH, MAP KAPK5, TNFRSF18</p>

Negative_14822	BTD, F8, GCK, GPT, ILK, IVD, LYN, PLG, SDS, SFN, SP1, TEC, ACACB, ACSL1, ACVR1, AK3L1, ARRB1, ASCC3, ASNS, ATP2A1, B3GNT5, B4GALT2, BMP4, CACNA1A, CACNB1, CACNB4, CAV2, CBLC, CCL27, CD247, CDK5, CLCF1, CLDN7, CLTA, COQ7, CTS1, CX3CL1, CYP2S1, CYP7A1, CYSLTR2, DDB2, DDX47, DGAT1, DHCR7, DVL2, EDN1, EPHA1, EXT2, FDFT1, FGF10, FGF23, FGFR2, FOXO3, FTMT, GCH1, GDF6, GNA15, GPD1L, GSTA4, GUCY1A3, GUCY1B3, GUSB, HAGHL, HAP1, HEXA, IDI1, IFNA13, IFNG, IL22RA1, IL8RB, IL9R, INADL, ITGA1, JAM3, LAMB1, LDHC, MAN1A1, MAN1B1, MAP2K7, MPP5, MTHFD1L, NCR3, NEFH, NFATC4, NFKB1, OR10K1, OR13C5, OR14I1, OR1D5, OR2AT4, OR4C6, OR4N4, OR52I1, OR5A2, OR7A10, OR7G2, OR8H3, ORC1L, PCCA, PGAM4, PHGDH, PIK3CD, PLA1A, PLXNB2, PRKAG2, PRKAR2A, PSME2, PSME3, PTAFR, PTPRC, PTTG1, QPRT, SELE, SHC4, SHISA5, SPHK2, ST6GAL1, STMN1, SUCLA2, TKTL1, TNFSF11, TPH1, UGT2B4, WHSC1, WNT2B, XCL1, XYLT2, YKT6, PAFAH1B1, SERPIND1
Negative_14823	AK3, BTK, CFD, CGN, DLD, FGG, GNS, ME1, TEC, AARS2, ACSL1, ACVR2A, ADCY6, ALAS1, ALG8, APH1A, APOA5, AQP7, ASMT, ATP5I, ATP6VOC, AXIN2, BACE1, BIRC3, BMP4, BMPR1B, CACNB3, CALML6, CCR9, CD58, CD74, CDC16, CDH5, CDS1, CFLAR, CHAT, CNGB1, CRY2, DLL3, DUSP16, ENPP3, EPHA8, EPOR, FCGR3B, FLOT2, FMO1, G6PC2, GNA13, GPAM, GPX7, GSTA3, HIBADH, HMOX2, HRH2, HSD17B4, HTR2B, ICOS, IFNW1, IGSF5, IL12A, IL15, IL1A, IQGAP1, IRF9, IRS1, IRS4, KIR2DL4, LTBP1, MAP3K12, MAP4K2, MAPK3, MDM4, MRAS, MYH10, MYL9, NAGK, NEU4, NFYB, NOTCH1, NQO1, NUDT9, OR10J3, OR10X1, OR11H1, OR1N1, OR2A2, OR2AT4, OR2G2, OR2H2, OR2L13, OR4B1, OR4F15, OR4N2, OR51F1, OR6A2, OR8B8, OR8U1, PDE7A, PDHA2, PDK1, PERP, PHGDH, PHKA2, POLR2I, PRKAB2, PRSS3, PSEN2, RAC2, RAD51, RASSF1, ROCK1, SEMA3G, SEPHS1, SFRP5, SNAI2, SOCS3, TCIRG1, TGFB1, TNFRSF8, TOMM40L, TRPM5, WARS2, ZAP70, C1GALT1C1, CSGALNACT2, GABARAPL2, HLA-DQB1, PLA2G12B, PPARGC1A
Negative_14824	ADA, AK3, AUH, BTK, C4B, C8G, CKM, EGF, FH, HYI, LCT, ME3, MOS, NPL, TPO, ABP1, ACHE, ACTA1, ACY1, ALG13, ALG8, ANAPC7, APOC3, ARHGEF2, ATG3, ATP5F1, ATP5J, B3GNT4, BDKRB1, CASP10, CCKAR, CCL1, CD44, CD59, CDK4, CHST12, CHSY3, CLDN20, CLDN4, CNTNAP1, CPT1C, CRY1, CSF2, CYP2A13, CYP2A6, DAPK1, DARS, DCTD, DGKA, DGKD, DLL1, DTX3, FCGR3B, FGFR1, FIGF, FUT5, GALT, GANAB, GART, GFPT1, GGPS1, GMPR2, GOT2, HADHB, HHIP, HLC, HMGCL, HSD3B7, HTR4, ITGA5, ITGA7, KIR2DL3, KLK3, LAMA4, MAD2L2, MCEE, METTL2B, MGST2, MINPP1, MKNK2, NAGA, NAMPT, NFATC4, NT5C, OR10J3, OR10P1, OR2D2, OR4B1, OR4C11, OR4C46, OR52A5, OR52N5, OR5A2, OR5A2, OR5B12, OR6C4, OR6C75, P2RX4, PAICS, PANK2, PDE5A, PER1, PIM1, PLCD4, PLXNC1, PNPLA4, POLR1C, POLR3B, PPP2CB, PPP2R5B, PRKAB1, PRKG1, PROS1, PRPH2, PSAT1, PTGFR, PYCR1, RAC2, RAPGEF3, RARS2, RASGRF2, ROCK1, RPS6KA3, SENP2, SIPA1, SLC2A4, SMURF1, SOCS4, STK36, SULT1E1, TBL1Y, TUBB2A, UAP1, ULK1, WARS, WHSC1L1, WNT10A, WNT3, YARS, PAFAH1B3
Negative_14825	BAX, CAT, F2, GSN, HPD, ME2, PXN, ACADM, ALCY, ACVR1, AGRP, AKT1, AOC3, AREG, ATP5A1, ATP5I, ATP6V1A, C9orf95, CACNG6, CARS, CCL19, CHRM1, CLDN14, CSF2RA, CXCL1, CXCR6, CYP11B1, CYP2A13, DKK2, DPM3, DUSP10, EPHB1, FCGR2B, FGF1, GAPDH, GGT5, GLUD2, GLUL, GLYCTK, GNA13, GRLF1, GYS1, HAGHL, ICAM1, IDH1, IFNGR1, IGF1, IL22, IL22RA1, INPPL1, ITGB2, JAG2, JUND, KYNU, LAMC1, MAGI1, MAP3K14, MAP3K2, MAPK14, MDH1, MGAT5B, MTHFR, MYLK3, NOTCH2, NT5E, OR10H3, OR13C8, OR2A4, OR2A5, OR2AE1, OR4D9, OR51V1, OR52E6, OR6Q1, PAPSS2, PARVA, PIP4K2C, PLOD1, POLR2H, PPID, PPP2R1B, PTGFR, PTPRB, PTPRR, PTTG1, RALGDS, RFNG, RPS6, SETD2, SFRP4, STX12, TAS2R60, TCF7L1, TYK2, WNT10A, WNT9A, ZMAT3, HLA-DRB3, PNLIPRP1, SERPINA5

Negative_14826	CKM, GPT, GSR, IL2, IL8, MAX, MVK, RPE, SP1, SRC, SRM, TKT, ACADVL, ACSM2A, ACSM3, ACSS3, ACVRL1, ALCAM, ALG6, AMPD3, ARNT, ASAH1, B3GNT2, B4GALT5, BDNF, CAMKK1, CAPN2, CCL5, CCND3, CCR6, CD34, CD48, CDKN2C, CIITA, CREB3L4, CSF2RA, CSF2RB, CSF3, CXCL5, CYFIP2, CYP1A1, CYP2E1, CYP4A11, DARS2, DHODH, DHRS9, DLAT, DUSP6, EDAR, EDN1, EHHADH, EIF4B, EPHB2, FGF21, GBA3, GCH1, GLG1, GNG13, GRIA2, GRIN1, GRIN2C, GSTZ1, HSP90B1, IFNA2, IFNK, IL2RA, IL5RA, IRS1, ITGB4, JAK3, LAMC1, LCP2, MAP3K11, MAPK10, MCAT, MKNK2, NCOA4, NFKB1, NR1D1, NRG4, ONECUT1, OR10A3, OR13C4, OR14I1, OR2L13, OR3A2, OR4C16, OR4K13, OR4M1, OR4N2, OR52J3, OR52W1, OR5K1, OR6C76, PFKFB4, PLCE1, POLR3D, PPP2R1B, PTPN5, PVRL2, PVRL4, RASGRP3, RBX1, RCHY1, RDH8, RERE, SARS, SDC4, SEMA3G, SESN2, SH2D1A, SKIV2L2, ST3GAL6, SV2C, TAS2R1, TRAF4, UAP1, UPP2, USE1, GABARAPL1, SERPIND1
Negative_14827	AK3, BCR, BTC, DCK, HK1, PAH, PGD, SRM, VTN, ABAT, ABLIM3, ACP2, ACSM3, ADRB2, ALG12, ALG6, ARG1, ATP5F1, ATP50, BBC3, C4BPA, CAPN2, CCR6, CCR8, CDC23, CDIPT, CDS2, CES2, CLCA4, CLDN15, CNDP1, COL3A1, CYCS, CYP1A1, CYP26B1, CYP2U1, CYP4F2, DAAM2, DVL3, EGLN3, EPOR, FGF5, FGF8, FPGS, FSHR, GALNT1, GBA3, GGPS1, GRM1, GSTA4, GUCY2C, GZMB, HIBADH, IL2RA, INPP4B, INPP5A, INPP5B, IQGAP3, ISYNA1, ITGA1, ITGAE, ITGB2, KCNB1, LAMA3, LEF1, LTB4R2, MAN1A1, MAPK8, MDM2, MECR, MMP14, MMP9, MTHFD2, MYD88, NCOR1, NEU3, NMNAT2, NRXN3, NT5C3, OR10H2, OR11G2, OR13D1, OR1I1, OR1L6, OR1L8, OR1N2, OR2A14, OR2B11, OR2T33, OR2T5, OR3A3, OR4C16, OR4K13, OR4P4, OR51E1, OR52R1, OR5D13, OR8J1, OR8K1, PARD6G, PDE3B, PDK1, PIGV, PLA2G10, PLA2G3, PLOD1, POLR1D, PPCDC, PRKCH, PRKG2, PSME3, PTAFR, PTPN6, RAC1, RALA, RAPGEF3, SHC1, SHISA5, SREBF1, STAM2, TCF7L1, THY1, TIRAP, TRPM5, TUBB2A, TUBB4, UAP1, UROC1, KIR2DL5A, MAPK8IP1, MAPK8IP3, MAPKAPK2, MAPKAPK5, TNFRSF11B, TNFRSF13C
Negative_14828	CFD, FST, GSS, HK1, LAT, MVD, SFN, STS, TKT, ABL1, ACY3, APOA1, ARNTL, B3GALT5, CACNA1E, CAMK4, CAPN2, CCL8, CDC14B, CDC25A, CDC6, CLDN8, CNGA4, COMP, CREB3L2, CTPS, CXCL3, CYCS, CYP1A2, DDX56, DHRS9, E2F1, EFNA5, ERBB2, FGF22, FZD9, GDF7, GMPS, GNB1, GSTM3, HADHA, HIBADH, HMOX1, HTR2A, ICAM2, IL24, INHBA, ITPA, LAMB4, LAMC3, LLGL2, LPAR1, MAD2L2, MAP3K3, MDH2, NAT6, NCF4, NFATC1, NKD2, NT5C3, OR10A6, OR1E2, OR2G6, OR2T4, OR52A1, OR5C1, OR5L1, OR6X1, OXSM, PAFAH2, PAK6, PFKFB4, PGM1, PI4KA, PIK3R1, PIP4K2C, PLA2G4A, PLCZ1, POLE4, POLR2E, PPAP2A, PRKACG, PRKCD, PTGFR, RASSF1, RBX1, SCD5, SCLY, SH2D1A, SHISA5, SLIT2, SOAT1, SOS2, SPI1, STX5, SULT1A4, TAS2R1, TAS2R38, TGDS, TKTL1, TRMT11, VAMP3, VEGFA, YWHAB, YWHAH, ALDH18A1, CSNK1A1L, SUV420H1, TNFRSF13C
Negative_14829	AGK, BTBD, CDA, CKB, CR2, F11, GH1, GK2, GNE, HGF, KDR, ME1, ME3, TK2, ACADL, ACADM, ACTA2, ACYP2, ADH4, ADRA1D, ALAS1, ALDH1B1, AMDHD1, ARPC5L, ASAH1, B4GALT3, CACNG7, CD14, CD34, CD72, CDH2, CDKN1A, CLTC, CNTNAP1, CNTNAP2, CPT2, CSF2RB, CTBP1, CTSS, CXCL10, CXCL16, CYP2A13, CYP3A43, DHDH, DUSP10, DUSP2, ENPP3, EPHB4, ERBB2, F2RL1, FGF5, FSHR, FZD10, GDF7, GNA14, GRAP2, GRIN2A, GSTA3, GSTM4, HRH2, IGSF5, IL10RA, IL1R2, IL5RA, INHBC, ITGA10, KIR2DL1, LEPR, LIPA, MAP3K3, MAPT, MCAT, MGAT4B, MGST2, MGST3, MICA, MTAP, MTHFD1L, MYH11, MYH8, MYLK3, NAMP1, NCAM2, NFYA, NKX6-1, NT5E, NUDT8, OR10G8, OR10H1, OR10H5, OR13C8, OR1L8, OR51B5, OR51Q1, OR52J3, OR52M1, OR8D2, ORC3L, P2RX5, PFKFB3, PGM3, PIAS2, PLCD4, PMVK, POLR1B, PON2, PRKCD, PSPH, PTPRJ, RAB23, RND1, RRM2B, RXRG, SELL, SEMA4A, SFRP4, SHMT1, ST3GAL5, STX1A, STX5, STX7, TBXA2R, TNFRSF9, TNFSF12, TSC2, TSHR, TUBB4, UBA7, UGT1A10, VDAC2, WHSC1, WNT2B, WNT4, HLA-DQB1, HSD17B10, ST6GALNAC4



Negative_14830	<p>ADK, ATM, CFI, CKM, CR2, CRH, EGF, FH, GLS, NF1, ABCC8, ACACB, ACP6, ADR A1B, AFMID, ALDH1A1, ALDH5A1, ALG6, ARPC5, ARSD, ATG3, ATP4A, ATP6V1 A, B3GALT6, B3GAT1, B3GNT2, B4GALT1, BACE1, BDH1, BNIP1, C5AR1, CARD 11, CAV2, CCL27, CCL7, CCND1, CDH1, CLTCL1, CSNK2B, CXCR5, CYP21A2, C YP3A43, DHRS4L2, DIAPH2, DOLPP1, DUSP7, EIF4E, ERBB4, EXT1, F2RL2, F GF1, FGF10, FGF20, FGFR4, FLT4, FRAP1, FZD3, GCNT2, GGT6, GLB1, GSTM1 , GZMA, HADHA, HEXA, HLA- DRA, HNF4A, HTR2C, ICAM2, IFNA8, IL20, ITGA4, JAM3, KIR2DL3, KLK3, LA LBA, LHCGR, LIPG, LIPT1, MAGI2, MCCC1, MCM3, MKNK2, MYL7, NAT6, NEFH, NFKB2, NMNAT2, NRAS, NUDT2, OCLN, OGDHL, OR2T11, OR2T5, OR4D11, OR4D 5, OR4K17, OR4N4, OR4Q3, OR51I1, OR52E4, OR52I1, OR52J3, OR5D14, OR5 H6, OR5M9, OR6N2, OR7A17, OR7A5, OR8K5, OSMR, OXSM, PAK3, PARVB, PFN2 , PIK3R4, PIPOX, PLTP, POLR1C, PON2, PPAP2B, PPP2CA, PRKAA2, PRSS3, R AB23, RAPGEF1, RRM2B, SARS, SDHA, SFRP4, SNW1, ST3GAL4, STX5, SUV39H 2, TAP2, TCIRG1, THBS2, TRADD, TSHR, UBE2L3, UCP1, WARS, WNT3A, WNT5B , XCL1, ATP6VOD2, HLA-DRB3</p>
Negative_14831	<p>C2, GGH, ILK, JUN, LYN, NGF, AADAC, ABL1, ACMSD, ADH1A, AMY2B, ASS1, BD H2, BDNF, CAPN2, CCR8, CLDN11, CLTCL1, CNGA4, CPT1C, CREB3L4, CRY2, C TBP2, CTNNA1, CTNNA2, DCXR, DHRS4L2, DHRS9, DNMT3A, DPYD, ECHS1, FUT 2, FUT4, GRIA1, GRLF1, HARS2, HNF4G, IDI2, IFNA8, IL20RB, IL23R, IL28 A, ITGA8, JAM3, KIR3DL1, LIPC, LTA4H, MAPK7, MCEE, MDM2, MEF2C, MGAT4 A, MTRM6, MYH2, MYL2, NCKAP1, NR4A1, NRG2, OCRL, OR10T2, OR13C4, OR2A 14, OR2M2, OR56A1, OR5J2, OR8J1, PAICS, PCK1, PCYT1A, PDXK, PHKA2, PO LR1C, POLR2E, POLR3K, PPARA, PTPMT1, RASGRF2, RASSF1, RBKS, SDC1, SD C4, SESN2, SFRP2, SNAP23, SOS2, SRD5A1, STMN1, STX2, TAS2R13, TNFSF1 2, TUBB3, UGCGL2, VAV3, VDAC2, WNT2, WNT8B, XIAP, ALDH18A1, ATP6V1C2 , CACNA2D4, PLA2G12B, SERPINA1, TNFRSF10D, TNFRSF13B</p>
Negative_14832	<p>ADC, APP, C8B, CD6, F7, MPI, PLG, PXN, TAT, TK2, TNF, ACAA1, ACOT12, ACP 2, ACSS1, ACVRL1, ADAM10, ADRB2, ALAS2, ALG12, ALOX5, ALPI, AMY2A, AR PC1B, ARSD, ATP6AP1, BCL2L1, BET1, BLNK, BMP7, BTRC, CACNG5, CACNG7, CALML3, CCL16, CD247, CD47, CDH5, CHRM1, CHST11, COL4A6, COL5A3, CRE B1, CREB5, CTSS, CYP11A1, CYP11B1, CYP2A13, DDX55, DMGDH, DPYS, E2F4 , ENTPD5, EPAS1, FBXW11, FDPS, FGF13, FUT2, FZD3, GARS, GP1BA, GP1BB, GRIN2C, GUCY2D, HADH, HMGCL, IFNA17, IL10RA, IL10RB, INPP5B, JAK1, J AK2, KLRC1, LAMA3, LARS, LEFTY1, LIPC, LRP5, MAD1L1, MAGI3, MAN2A1, M AP2K2, MGAT4A, MITF, MMP14, MMP2, MOV10L1, MTHFR, NANS, NFYB, NR1D1, OGDH, OR10C1, OR10K2, OR10T2, OR11H4, OR2C3, OR2S2, OR51B2, OR52D1, OR52H1, OR5J2, OR6C2, OR6C76, ORC5L, OXTR, PAICS, PAK3, PARVA, PCYT1 B, PDE4B, PGK2, PHKB, PIGP, PLD2, POLR2D, POLR2G, PPAP2C, PPP1R3D, PR KAA1, PTCRA, RBKS, RFX5, RND1, RPN2, SESN3, SGPP2, SPRY2, STEAP3, SYN J1, TBXAS1, TNFRSF9, TPK1, TUBB3, TYK2, UGDH, ULBP3, WNT8A, YARS, B4G ALNT1, PLA2G12A, TNFRSF12A</p>

Negative_14833	<p>ADA, CKB, F7, FH, HK2, IL4, AANAT, ABCC8, ACAD8, ADCY7, ADH6, AK3L1, AKR1C2, ALDH9A1, ALG11, AREG, ATG7, ATP5G3, B3GALT6, B3GNT2, BDH2, CAMK2D, CCKAR, CCNB1, CCND1, CDC7, CDKN2B, CEBPA, CHRNA7, CIITA, CKMT2, CLDN10, CLDN3, CMPK2, CNGB1, COL6A2, CRY2, CYP26B1, CYP2B6, DGUOK, DOLPP1, DVL3, FGF12, FGF3, GALNTL4, GNRH2, GSTM5, GUCY1A2, GUCY2C, H6PD, HAGH, HIBADH, HLA-</p> <p>F, HSD17B4, HSD17B7, JAG2, KIR2DL4, LCMT2, MAP3K5, MAPK14, MIOX, MPS T, MTHFS, NCF4, NFATC3, NKX2-</p> <p>2, NNMT, NOX1, NTRK1, OR1L4, OR4C16, OR4K17, OR4N4, OR51F2, OR52W1, OR5AP2, OR5T1, OR9A4, PFAS, PFN4, PGAP1, PIGL, PIK3C3, PLEKHA8, PLXNA2, PMVK, POLR1D, PRKACA, PTPMT1, PTPN7, PTPRM, RALB, RFNG, RHEB, RRM2B, RXRB, SAT1, SLC2A1, SMAD6, SNAP25, SPCS3, SPRED1, SPRED2, STMN1, SULT1E1, TAS2R3, TAS2R48, TM7SF2, TPMT, TSC1, UGT2B11, UGT2B28, UGT2B4, ZAP70, ZBTB16, AASDHPPT, CSGALNACT1, PAFAH1B1, TNFRSF10B, TNFRSF11A</p>
Negative_14834	<p>ADC, CAT, CFI, F11, FH, GPI, ID2, LSS, MOS, ACP6, ACVRL1, ACY3, ADRB3, AGRP, ALDH3A1, ALG10B, ALOX5, APOA2, ARNTL, ATP5C1, ATP5H, ATP6V1F, BCL10, BMP6, CCNB2, CD48, CD79A, CDK2, CLDN3, CSF1, CYP2C19, CYP2D6, DX51, DGKH, DMGDH, DUSP4, EPHA2, ERBB2, FARSB, FBXW11, FGFR1, FMO1, FMO2, GALNT12, GFAP, GNPDA1, HES1, HMGS1, IGFBP3, MAD2L2, MCM7, METTL6, MLLT4, MMP7, MS4A2, NAGK, NFX1, NLGN2, NT5C1A, NUDT2, ODC1, OR10P1, OR14C36, OR1D2, OR3A1, OR51T1, OR52E4, OR52E8, OR5M9, OR7A17, ORC5L, PARD3, PARD6A, PDE3B, PGAM2, PGM2, PIP4K2C, PLCB2, PNMT, POLD2, P OLR3D, PON3, PPP2R5E, PYCR1, PYCR2, PYGM, RBX1, RGS3, SETD2, SFRP4, SFRP5, SYNJ1, TAS2R49, TBL1Y, TOMM40, UGT2A1, UGT2B11, ATP6VOD1, ATP6V1C2, MAP3K7IP1, ST6GALNAC6, SUV420H1, TNFRSF10C</p>
Negative_14835	<p>C5, C8G, DUT, FGG, FUK, IL5, KMO, LSS, LYN, PDC, PXN, XDH, AASS, ALPP, ATP2A1, ATP5E, BCL10, C4BPB, CAV3, CCL17, CCL27, CD247, CD58, CDH2, CDKN1A, CDKN2A, CES1, CKMT2, CLCA4, CLTC, CNGA4, CPT2, CRHR1, CXCL9, CYP2D6, CYP2J2, CYP7A1, DDIT4, DHFR, DHRS3, DLL3, FASLG, FASN, GCNT3, GDF7, GJD2, GNA14, GNPDA1, GPLD1, GSTM3, IFNA13, IFNA21, IKBKG, INHBB, IRF9, ITGA6, ITGB6, LRP5, MAP2K6, MAPK12, MINPP1, MIOX, MLLT4, MYL9, NAE1, NAT5, NCKAP1, NFKBIA, NOTCH2, OR2T12, OR4C11, OR4D6, OR51B4, OR51V1, OR52A5, OR52W1, OR6N2, OR9A4, OR9G4, ORC6L, OXCT1, OXTR, P2RX4, PAK2, PANK2, PARD6B, PCYT2, PDGFC, PERP, PHPT1, PIAS1, PIK3C2B, PIP5K3, PLTP, PMM1, POLR3G, PPP1CA, PRKAR1B, PYGB, QARS, RBL2, RERE, RPS6KA5, RUNX1, SELP, SEPHS1, SHC2, SLC27A5, SNAI1, SOCS1, ST3GAL6, STAT3, STX10, STX3, SUCLA2, TCF7, THBD, VDAC2, WNT5B, WNT8B, WNT9A, ZBTB16, HLA-DPB1, HLA-DRB3, SERPINB5</p>
Negative_14836	<p>AK3, CEL, CFH, CS, F11, F3, FAS, LSS, ACADL, ACSL5, ACVR1C, ACY1, AGPAT3, ALG5, ANAPC1, APBB1, ARHGEF6, ATP2A2, ATP50, ATP6V1H, BACE2, BBOX1, CAPN2, CARD11, CAV2, CD46, CDKN1C, CDKN2C, CHKB, CNGA3, COL5A3, CTPS2, CXCL3, CYP2J2, CYSLTR1, DAD1, DHDH, DKK2, E2F5, EPHA4, EXTL1, F11R, FABP3, FCGR3B, FGF20, FUT5, FZR1, GNA01, GPD1L, GPD2, GRM5, GUSB, HCST, HPSE, HSD17B4, HSPB1, ICAM3, ICOS, ICOSLG, IDH3B, IL18RAP, INADL, ITGB6, L1CAM, LFNG, LM07, MAD1L1, MAP4K2, MAP4K3, MCM4, MFNG, MIC A, MMP2, NFATC2, NODAL, NR1D1, NUMB, ONECUT1, OR10S1, OR11H4, OR13C3, OR13H1, OR2A2, OR2F2, OR51G1, OR52H1, OR5P2, OR6C70, OR6N1, OR6X1, OR8B12, OR9G1, ORC1L, PAK7, PCNA, PCYT1A, PDE4B, PDPK1, PGAM1, PIGF, PLA1A, PLA2G2F, PLCG2, PLXNA3, PMM2, POLE4, POLR2L, POMC, PPID, PRKA A2, PRKAR1A, PRKAR2B, PRKG1, PSAT1, PTK2B, PTPRJ, RALGDS, RAPGEF2, SAT2, SELP, SEMA4D, SEMA4G, SESN1, SETD1A, SH2D1A, SOD1, SPRY3, SQLE, STX5, TCF7, TFDP1, TFPI, TGDS, TSHB, TYK2, UCK2, ULK3, VEGFA, WNT7A, ATP6V1G3, MAP3K7IP1, PHOSPHO1, SERPINE1</p>

Negative_14837	<p>ADK, CR2, KDR, ABLIM3, ACTN4, ADAM10, ADCY3, ALG3, ANAPC10, ANAPC2, A TP12A, AXIN2, B3GAT3, BAI1, BCL2L1, CACNB3, CACNG3, CCL19, CCR1, CCR 2, CDKN2D, CHKB, CHRM1, CHRM5, CLDN11, CLDN20, CLDN6, CLDN7, CMAS, CO Q7, CTBP1, CTNNB1, CYP19A1, CYP2F1, DDX23, DHCR24, DIAPH3, DUSP1, EC SIT, EPAS1, EPB41, ERBB2, EXTL1, FABP3, FARSB, FCGR3A, FGD1, FGF13, F GF8, FOXO3, FUT7, GALNT13, GLDC, GNAZ, GPX5, GRIA3, GYS1, HCST, HLA- G, HRAS, HSPB1, HTR6, IL10RB, IL1R1, INPP5E, KIR2DS5, KLRC3, LCMT2, L DHB, LEFTY1, LEPR, LTBR, MAPK3, MGAT1, MGAT3, NCOR2, NCR1, NOTCH1, NR G3, NRP1, OR10K2, OR10T2, OR13C8, OR13H1, OR14A16, OR2AT4, OR2F1, OR 4A5, OR4K14, OR52E6, OR6F1, OR8K5, OR9A4, OR9I1, OR9Q2, ORC2L, ORC3L , OSMR, PANK4, PARD3, PDE10A, PDGFRB, PDX1, PGAM1, PGAM2, PIK3CG, PLA 2G1B, PLOD2, PPP2R5C, PPP3R2, PTDSS2, PVRL2, RALGDS, RELB, RFNG, RFX AP, ROBO3, RPS6KA3, SENP2, SGPP2, SH2D2A, SHISA5, SOAT2, SPRED1, STK 36, STX3, TALDO1, TAS2R7, THBS3, THY1, TIAM2, TLR3, TNFRSF8, TOLLIP, TP53I3, WWP1, ATP6V1G1</p>
Negative_14838	<p>ADO, CGA, DBH, FGG, KHK, MOS, MVD, OSM, RPE, ACOT12, ANAPC5, APAF1, APL P1, ARPC5, ASMT, B4GALT6, CACNA1A, CACNG8, CCND1, CD22, CD48, CD79A, CDC20, CDC26, CLDN15, CLDN19, COL1A1, CRHR1, CSNK1E, CXCL6, CYP27A1 , CYP2A6, DARS2, DTX1, EIF4B, ENTPD3, FGF5, FOXA2, FPGS, FUT4, FZD9, G ALNT11, GJD2, GRAP2, GUSB, HPRT1, HTR2A, IFNA6, IL23R, KRAS, LARS, LD HAL6B, LGLL2, MAP2K5, MDM4, METTL2B, MGAT1, NAGS, NCAM1, NEFH, NFKB1 , NKX6- 1, NT5C2, OR1E1, OR1L8, OR2A4, OR51G1, OR51I2, OR52A1, OR52K1, OR52N 5, OR5D13, OR5K2, OR6C70, OR6X1, OR9A2, PANK1, PARVA, PCNA, PDCD1, PD E11A, PDE4D, PDE7A, PI4KB, PIK3R4, PLA2G4A, PLCB1, POLA2, POLE3, PRK AB1, PTPRF, PYCR2, RBKS, RBPJ, RELB, SEMA3F, SETD1B, SGPP2, SIAH1, SM PD2, SMPD4, SNAP23, SPRY3, SSH2, SULT2A1, TAS1R3, TRADD, TSHR, TYMP, UCK2, UROD, VAMP3, CACNA2D1</p>
Negative_14839	<p>AMT, APP, ATM, C4B, DBT, FES, GNE, HGF, IL4, JUN, MAX, ME2, NPY, OGT, AAD AT, ACSL4, ACTN4, ADCY4, AHCY, AKT1, AMDHD2, AMPD3, APOA2, APOC3, ARH GEF4, ARNT, ATP5G2, ATP6VOC, BAI1, BHMT, BMP8A, CACNG2, CADM3, CCL15 , CCL17, CCL19, CCND2, CCNH, CCR1, CD14, CD59, CD74, CERK, CHDH, CHKA, CISH, CLDN15, CLDN18, COX10, CPOX, CREB1, CTPS, CXCL13, CXCL16, CYP2 C19, DAPK1, DKK4, EFNB1, EPB41L1, EXOC7, EXT1, FABP1, FBP1, FGF19, FG F20, FGF3, GALK1, GBGT1, GGCX, GGT6, GGT7, GIT1, GJA1, GRIN2D, GSTK1, GUCY1B3, HCCS, HLA- DMA, HNF1A, IFIH1, IFNA2, IFT57, IL15, IL20RA, IL9R, IQGAP3, ITGA1, L LGL1, MAFA, MAP2K6, MAP3K11, MGST2, MIOX, MKNK2, MYH11, NCF2, NCOR1, NFASC, NME4, NRP1, OR10G4, OR13D1, OR13G1, OR1D5, OR1E2, OR1L1, OR2M 4, OR2T8, OR4C46, OR52K1, OR5D16, OR6F1, OR8D2, OR8H2, PDGFRB, PEMT, PIP4K2B, PLAUR, POLR1B, PORCN, PPAP2B, PPBP, PPP5C, RAB23, RAC3, RAS GRF1, RPS6KA3, SAT1, SEMA3A, SEMA4C, SLC2A1, SPRED1, ST3GAL4, ST8SI A5, TACR2, TAS1R3, TAS2R1, TGFB3, TGFB1, TSHR, UGP2, UGT2A3, WHSC1L 1, WNT10A, WNT8A, YWHAE, CSGALNACT2, PLA2G12A</p>

Negative_14840	BAX, CGN, CKB, DLD, GK2, MOS, RB1, ACOX1, ACOX3, ACP, ACSS3, AKR1C4, ALG10B, ARPC1A, ATP4B, ATP5G2, ATP5J2, B4GALT3, BMP4, BNIP1, CACNG5, CCL3, CDH5, CISH, CLDN18, CLDN6, COL5A2, CTS1L1, CYP17A1, CYP2A7, CYP2U1, DHRS4L2, DIAPH3, E2F2, EDNRA, ENTPD5, F13B, FARP2, FARSA, FCGR3B, FTCD, FUT1, GALNT8, GGT1, GLUL, GPX7, GSTA3, GSTT1, HHEX, HPSE2, IL18R1, INADL, ITGB8, ITPKA, MAN1A1, MAP3K13, MAP4K1, MAP4K2, MGST2, MLYCD, MYH10, NCF2, NEUROD1, NLGN3, NME2, OR11L1, OR1A1, OR1Q1, OR4A15, OR4C15, OR4K1, OR4S1, OR5T3, OR6A2, OR6F1, OR6M1, OR8D1, OR8H1, PAK6, PDHA2, PIAS3, PITX2, POLA2, POLE4, PPP2CA, PPP2R2B, PPP2R2D, PRKCE, PRODH, PTCH1, RASA2, RBPJ, RUNX1T1, SDC3, SDHC, SLC27A4, SMC1B, SMPD4, ST3GAL5, STX16, SUFU, TBL1XR1, TIAM2, TLN2, TLR4, TSTA3, ULBP3, UNC5C, UROS, VAMP2, VTI1B, WARS, WNT10A, YWHAQ, ATP6V1G1, MAPK8IP2, PAFAH1B1
Negative_14841	C8A, HPD, ID1, SYK, TXK, AADAT, ACADS, ACP5, ACSS2, ACTG1, ACTG2, ADAM10, ADH1B, AQP7, ARNT2, ARSD, ATP2A3, ATP5J, ATP6V1D, C9orf95, CACNA1A, CADM3, CCL3, CCNE2, CD8A, CDK5, CLDN22, CLOCK, CNTN2, CSAD, CYP2D6, CYP4F2, DGUOK, DHCR24, DUSP9, EDAR, EFNA3, EXT2, EXTL1, FMO1, FUT2, GAD1, GADD45G, GALK2, GRLF1, IFT57, IL23A, IL24, INPP5A, IQGAP1, IRAK3, KCNB1, KCNQ1, KLRK1, L1CAM, MDH2, MYD88, NEFH, NFKBIE, NRP1, NT5M, NTRK2, OR10Z1, OR11G2, OR13C8, OR1D5, OR2B2, OR2D2, OR3A2, OR4N4, OR4X2, OR51A2, OR51Q1, OR52R1, OR56A1, OR56B4, OR5B12, PDE8A, PDHA1, PEMT, PFN4, PGLS, PLA2G5, PLAU, PLCB2, PMVK, POLR1D, POLR2E, PPID, PPIR3B, PPP2R5A, PRKACB, PTTG1, RASA2, RDH10, RFWD2, RHEB, RPS6KA4, RUNX1, SEMA3F, SEMA4C, SEMA4F, SFRP2, SKIV2L2, SNAI2, SNW1, SORD, SPRY2, SRD5A2, STAT6, STEAP3, SULT1E1, SV2A, SYNJ2, TAS2R60, TCF7L1, TYROBP, ULBP2, YWHAQ, ZIC2, SUV420H1
Negative_14842	ADO, BID, F8, HGF, ILK, MUT, RPE, ABL1, ACSS3, ADORA2B, ALG10B, AMPD2, ARG1, ARPC4, B3GALT1, BCAT1, BTRC, C1QA, CACNB1, CAMK4, CAMKK2, CCL20, CDK5, CER1, CES1, CES2, CHST11, CMPK1, COL4A6, CXCL9, CYFIP2, CYP2B6, DAXX, DCTD, DHDH, DOT1L, DPYD, EDAR, EHMT1, EHMT2, ENTPD4, EPB41, EPHB6, ERBB4, F13B, FGF21, FGF8, FLT3LG, FRAP1, FUT1, G6PC, GCH1, GCLC, GNAQ, GNB1, GPT2, HES1, HIBCH, HNF1A, HSD11B1, HTRA2, IFNA16, IL1R1, INHBB, INPP5A, INPP5E, IPPK, IRAK3, ITGA8, KARS, LAMA4, LIAS, LIMK1, LTBR, MAP3K11, MAP3K14, MDM2, MPP5, NAMPT, NFAT5, NOD1, NRXN1, OLR1, OR10G8, OR13A1, OR13C4, OR2A12, OR2A2, OR2A42, OR2T11, OR2T3, OR4D5, OR4K14, OR4K2, OR5AN1, OR6C74, OR8K3, PDE10A, PFAS, PGAM1, PIGS, PIK3R1, PMVK, PPP1R3A, PRSS2, PYGB, PYGM, RPN1, RPS6KB2, SDC1, SMC1B, SNAI1, STX7, STX8, SUCLA2, TAS1R1, TAS2R14, TFDP1, TPI1, TSHB, UCK2, WNT11, XIAP, ATP6V1C2, CACNA2D3
Negative_14843	ADO, DCT, F8, GK2, HGD, ID1, MPI, UBB, AACS, ACADL, ACRYL, ACOX2, ACP6, ACP, ADCY5, ADSSL1, ALDOA, ALG8, ALPPL2, ATIC, ATP5G1, ATP6V1H, C1QC, CACNA1A, CACNB2, CCL27, CCL7, CD72, CD79B, CDC25A, CDKN1A, CDKN1B, CDKN2C, CLDN4, COL4A6, COL5A1, CSNK1D, CSNK1G1, CXCL11, CYP2A6, CYP2U1, DDX52, DDX56, DHRS4L2, DLL1, DTYMK, EHMT2, ENTPD3, EPB41L3, ERBB2, FOXO1, GAB1, GALNT10, GALNT12, GDF6, GLUD1, GLYCTK, GMPS, GRIA2, GSTO1, GSTO2, HMGCR, HRAS, IFNA16, IFNA4, IL17RA, IL6R, IMPA2, ITGAV, ITGB5, ITGB6, LRDD, MAGI2, MAML3, MAP3K14, MARS, MAT2B, MCCC1, MGAT4A, MIOX, MYH14, NAT1, NEFM, NFASC, NOTCH2, NTN1, OR10A3, OR51I1, OR52D1, OR52I2, OR52W1, OR6C74, OR6K6, OR9A2, PDE5A, PDGFC, PER1, PER2, PFN2, PKLR, PLAT, PMM2, PNLIP, PPP3R1, PRKCZ, PTPN5, PTPN6, RASGRP2, RFWD2, ROBO1, RRM2, SGPP2, SLC12A2, SLC25A6, SMC1A, SOCS4, SPRY1, SRGAP1, TACR2, TNFSF9, TRAF1, TRAF2, TSHR, UGT8, VANGL2, WWP1, YWHAB, YWHAZ, ALDH18A1, ATP6V1G2, CTNNBIP1, GABARAPL1

Negative_14844	C8B, F2, HGD, IL8, INS, ITK, PLN, ACSL3, ACTG2, AHCY, ALAS1, ALPL, ARRB1, ATP5L, AVPR1A, AVPR1B, B3GNT4, BBC3, CACNA1B, CACNG3, CCL19, CCNB1, CD244, CD38, CDC2, CDC42, CDK5, CDKN2B, CLCF1, CNDP1, CNTN1, COMP, CYP1A1, DDIT3, DDOST, DIAPH2, DUSP9, EDA2R, EGFR, EGLN1, EHMT2, ELK1, EPHX2, FADS2, FGF14, FOXA2, FPGS, GALNT12, GALNT6, GGT5, GGT6, GNB3, GNG3, HADHB, IL22RA1, IL2RG, IL6R, INPP1, IRF9, ITGA7, LAP3, MAGI2, MCM2, MYLK3, NEFH, NFAT5, NFYB, NOX1, NRXN3, NTSR1, OR14J1, OR1N1, OR2M5, OR4C11, OR4C6, OR4D5, OR4M2, OR51L1, OR5AN1, OR6C2, OR6C74, OR6S1, OR9A2, PARVG, PFKL, PGLS, PIGW, PLCB1, PLD1, POLR3G, PPP1R3D, PPP2CA, PRKCG, PRKCI, PTCH2, PTPN6, PVRL2, RAC2, RDH5, RFXAP, RND1, RPS6KA3, SDC3, SKIV2L2, SLC27A5, SLC2A4, SQLE, SSH3, ST3GAL3, STAM2, TAS2R50, TPH1, TUBB4, UGP2, ULK1, VAV1, YWHAB, ZAP70, ZFYVE16, ZMAT3, ATP6V0E1, MAPKAPK2, TNFRSF12A
Negative_14845	AMH, CEL, GLA, AASDH, ACTN4, ACYP2, ADCY4, ADSSL1, AKT3, ALDOA, ALG13, ATP5J, BCMO1, BRAF, C3AR1, CAMKK1, CAV1, CCL2, CD19, CD3E, CDC25A, CDH1, CHEK1, CHEK2, CHSY3, CLDN10, CLDN3, CMBL, CNTFR, COMT, COX10, CREB5, CSNK1D, CSNK2B, CYP3A4, CYP4F2, DKK2, DNMT3A, EGFR, ENTPD4, FADD, FADS2, FRAP1, FZD8, GANC, GLI1, GNA13, GNAO1, GNPDA2, GNRH1, GRLF1, GSTA2, GSTM1, HCCS, HSD17B3, HTR6, IDH3G, IFNA5, IFNA6, IKBKE, IL12B, IL15, IL22RA2, INPP4B, IPMK, ITGAL, ITGB1, JUND, LFNG, LRP6, MAP2K6, MAP2K7, MAPK3, MMP1, MMP2, MNX1, MYH13, MYL2, NEU3, NRXN2, NUDT12, OR10J5, OR11G2, OR1N1, OR1Q1, OR2A12, OR2D2, OR2L2, OR2M4, OR4C16, OR4D2, OR4F4, OR4K14, OR52I1, OR52J3, OR5B17, OR5K1, OR8A1, OR8B12, P2RX3, PECAM1, PGK1, PIAS1, PLCB4, PPA1, PPP1R1A, PPP1R3D, PPP2R2D, PRKACG, RFNG, RPE65, SEMA4C, SESN3, SFRP2, SHISA5, SIAH1, SLC2A2, SULT1A2, TALD01, TAS2R14, TFPI, TJP1, UGCG, UGCGL2, UGP2, VDAC1, WARS, WARS2, WNT11, WNT9A, XCL2, YWHAQ, ZFYVE9, CACNA2D3, HLA-DPB1, MAP3K7IP1, SERPINB5, TNFRSF12A
Negative_14846	C8A, CRH, GH2, GP9, HK1, ILK, ME3, MUT, MYC, OSM, PGP, PXN, WAS, ABL2, ACYL, ACO2, ACP2, ACVR1, ALDH1L1, ALDH3A1, ALG9, ALOX15, APPL1, ATP4B, ATP6V1D, BPNT1, CACNA1D, CACNA1H, CACNG5, CAMK2D, CAMK2G, CCL1, CCL22, CCL27, CCND2, CD80, CDH4, CLDN4, CLTCL1, CNTNAP1, COMP, CPT2, CYP27A1, CYP3A43, DDIT3, DGKD, DLL1, DMGDH, DOCK1, DUSP8, DUSP9, EPHB2, ETNK2, FABP4, FBXW11, FGF7, FOXA2, FPGS, GABARAP, GADD45A, GALK2, GMPR, GNA11, GRB2, GSTA5, GUCY1A3, HMBS, HMGCS2, HTR6, HYAL2, IL1R1, IMPDH2, INPP5B, INSR, IPPK, LDHA, LDHAL6B, LIPC, LLGL1, MAD1L1, MADCAM1, MARS2, MCCC1, MFNG, MKNK2, MS4A2, MYH2, MYH7B, MYL7, NRG2, NT5C, NT5M, OR2G6, OR2M3, OR2M4, OR4N5, OR4P4, OR51V1, OR52E2, OR5AC2, OR5P3, OR6C70, OR6C74, OR8B4, OR8H2, OR8K3, OR9Q1, OXCT2, P2RX6, PDE4A, PIPOX, PLCB2, PLIN, PLOD2, PNMT, PRKCG, PSME1, PTGES, PTPN6, RPE65, RPN2, SEMA3B, SETDB1, STAT1, TAS2R48, TGFB2, TIRAP, TSTA3, ULBP2, VAV2, WARS, WNT5A, YWHAG, ATP6V1C2, CTNNBIP1, HLA-DRB5, ST6GALNAC1

Negative_14847	ADC, AGL, AK5, BAX, BID, BTK, DDO, FH, MOS, NGF, RET, ACAA2, ACAD9, ACTG1, ANAPC1, ATP5A1, AXIN1, B3GALT5, B4GALT5, BBOX1, BET1, CACNA1B, CACNB4, CACNG3, CALML3, CAMK2A, CBR3, CCL20, CCL27, CCNH, CD36, CD82, CDH15, CDH3, CEBPA, CHKA, COMP, CSF2RB, CXCL11, CYP11B1, CYP4F3, DAXX, DDX50, DERL1, DOLPP1, DTX3, DUSP1, EGLN1, EPHA2, EXTL2, FDFT1, FGFR4, GAD2, GFPT1, GLI2, GNA15, GNAI2, GUCA1A, HTR4, IDH2, IL10, IL23R, MALT1, MAP3K11, MAP3K12, MAPK11, MCM5, MGAT3, MTMR1, NAT1, NCSTN, NEFH, OR10A5, OR10A6, OR10R2, OR1J1, OR2T3, OR2T33, OR2T34, OR51G1, OR5B3, OR5D14, OR8B4, P4HA2, PCNA, PDIA4, PGK1, PIGV, PIPOX, PLA2G4A, PLAUR, PLCD4, PPBP, PPP2R2B, PRKCD, PRKY, PTGES, PTPRF, RFNG, RXRG, SCLY, SDHC, SETD7, SKP1, SMPD1, SQLE, SRGAP3, TIAM2, TICAM1, TRPM5, TUBA3C, TUBB, UCKL1, UGCGL1, VTI1A, ZFYVE9, HLA-DQB1, PHOSPHO1, PLA2G12B, ST6GALNAC4
Negative_14848	CR2, MAX, ME1, PGF, ABLIM1, ACADL, ACTN4, ACYP1, ALPL, AMPD3, ARNT2, ATP4B, CACNA1G, CACNG1, CCKAR, CD80, CDC23, CDH1, CDK5, CDK6, CHRM1, CHSY1, CLCA2, COL5A3, COX10, CRHR1, CSDA, CTNND1, CXCR3, CXCR5, CYP26A1, CYP2C18, DDX18, DHCR7, DNMT3A, DRD5, DTX4, DVL3, E2F3, EPHB1, ERO1L, FGF9, GALNT5, GDE1, GLUL, GLYCTK, GMDS, HSPA8, HTRA2, ICOS, IGFBP3, IL21, ITGA6, ITGAX, KLRC1, LAMC1, MASP2, NARS2, NLGN3, NR4A1, NUDT5, OR1A1, OR1Q1, OR2A2, OR2G2, OR2W1, OR51E2, OR52I2, OR5AC2, OR5D13, OR5D14, OR5J2, OR6B3, OR7D2, OXCT2, PAK2, PDGFRA, PDPK1, PFKFB2, PGK2, PLAT, PLCB4, POLR2C, PPP2R5E, PRKACA, PRKCA, PROS1, PSEN1, PYGM, RAF1, RALB, SEMA4C, SHC3, SPCS1, STAM, TGDS, TGFB1, TICAM2, TRIP10, WBSCR17, WNT6, ATP6V1G2, B3GALNT1, ST6GALNAC4, TNFRSF18
Negative_14849	AMT, CBS, DBH, DCN, F5, IL6, LTB, OSM, OTC, PAH, AACS, ADCY8, ALDOA, ALDOA, AMD1, ANAPC1, B3GNT5, CALML6, CCL13, CCNA2, CD22, CDH4, CHEK1, CHRD, CLTB, CNGB1, CNTF, COX15, CREB5, CTPS2, DIAPH1, DIAPH2, DTX2, DVL3, ENTPD5, EPB41, ERO1L, G6PC2, GCNT4, GNRH1, GPX5, GRIN2D, GSTZ1, IARS2, IFNA21, IFNA5, IFNGR2, IL19, IL23R, INHBE, ITGAV, LCMT1, LRDD, MAPK1, MAPK13, MAPK7, MCM3, MDH1, MGAT4A, MGAT5B, MPZL1, MYH2, MYH4, NEU3, NGEF, NLGN2, NPR1, NR1D1, OR10Q1, OR2M7, OR2W1, OR51D1, OR6C75, OXCT2, PAK7, PARD3, PARD6G, PCYT2, PDE8A, PEMT, PER2, PGLS, PIK3CD, POLR1E, POLR2K, POLR3K, PPP3R1, PRDX6, PRIM1, PRKAG3, PSAT1, PTCH1, RAPGEF2, RCHY1, RPRM, SDC1, SELPLG, SETMAR, SGMS2, SPCS3, TFDP1, TLR4, TOMM40L, UPB1, VASP, VAV1, VDAC1, VEGFA, WNT8B, SERPINB5
Negative_14850	AK2, CAD, CRH, DLD, F3, GSN, ID2, IDS, PLG, SDS, ACAA1, ACPT, ACSM5, ADAM10, ADCY10, ADRA1B, ADRB1, AKT1, ALDH1B1, ALDOA, ALOX12B, B4GALT7, BMP4, BNIP1, CCKBR, CCL4, CD46, CD70, CD74, CD99, CDC20, CDC7, CHDH, CHEK2, CHPF, CHRD, CLDN17, CLDN2, CNGA4, COMP, COMT, CPOX, CYP2E1, CYP2J2, DAAM1, DARS, DGAT1, DHDDS, DVL1, ECSIT, EDNRB, EPHA2, EPHB4, EXTL2, FARSB, FGF12, FGF2, FGF20, FRAT2, GAL3ST1, GALNT12, GDF5, GLO1, GMPR2, GTSE1, HSD17B1, IDH1, IFNA21, IL13, IL23R, IL29, INPP1, INPP5A, INPPL1, IRS1, ITGA9, ITGAD, JAK3, KLRC3, LAMB3, LAMB4, LEFTY1, LIMK1, LMO7, MAN1A2, MGAM, OR1B1, OR1E1, OR4C12, OR4C15, OR51A7, OR51S1, OR5P3, OR5T3, OR8H2, OXCT1, PCYT1B, PEMT, PHGDH, PHKA2, PHKG1, PIK3CD, PIP5K1C, PLAUR, POLD2, POLR1C, PPOX, PPP3CB, PRKCD, PRKCG, PRKY, PTCH2, PTGES2, RPS6KA5, SCLY, SEMA3D, SETD1B, SMARCA5, SMC1A, SOCS1, SRGAP1, ST6GAL1, ST8SIA5, SUCLG2, SV2A, SYNJ1, TAP2, TAS2R38, TAS2R41, TBL1XR1, TBL1Y, TGFB1, TSTA3, TUBB2B, UBA1, ULK2, VDAC2, WARS, WNT16, XCL1, CACNA2D3, PDCD1LG2, PNLIPRP1, TNFRSF13C

Negative_14851	CAT, LCK, OSM, PTS, RPE, SI, SP1, TAT, ACACA, ACMSD, ACO2, ADCY5, AGTR1, AKR1C1, ALDH1A1, ALDH6A1, ALDOB, ALPPL2, APRT, ATP5G2, ATP5I, ATP5O, AXIN1, B3GALT2, BHMT, BMP7, CAMKK1, CCL14, CCL7, CCR6, CDC23, CDK4, CLDN14, CREBBP, CYP26A1, CYP7A1, DAG1, DDB2, DFFB, DGAT1, EFN1, ENTPD3, FBP2, FSHR, GLI3, GMPS, GPX7, GRIN2B, HLA-DRA, HMOX2, HPSE2, HSD17B8, HYAL2, IFNA5, ITGA11, ITGA4, JAK3, L1CAM, MCCC1, MPZL1, MYD88, NRAS, OR10P1, OR13G1, OR14J1, OR51G1, OR52N4, OR6B3, OR6K3, OR7C2, OR8B12, OR9Q1, P2RX4, PAICS, PDCD1, PDE3A, PDE3B, PDGFC, PER3, PGAM4, PGK1, PGM1, PIGK, PIK3CB, PIM1, PIP4K2C, PLOD2, PPP1R3C, PRKCQ, PTEN, PYGB, RAB23, RAS2, SEMA4G, SLC25A6, SMPD3, STX5, TAS2R3, TAS2R4, TCF7, THBS2, TJP1, TRAF3, UCKL1, WHSC1, ALDH18A1, ATP6VOA2, PRICKLE2, SLC25A31, ST6GALNAC1
Negative_14852	ATM, DCK, IL6, INS, JUP, LAT, MPZ, SYK, ADRA1D, APH1A, ATP2A1, ATP2A3, BCAT2, BET1L, CCL1, CCL17, CCL21, CCNB1, CD34, CD55, CISH, CLDN1, CLDN7, COL3A1, COQ7, CSNK1G1, CTNNA1, CYP26C1, CYP4F3, DERL1, DVL1, EDA2R, EDNRB, ENTPD5, G6PC, GALK2, GNAI2, GOSR2, GP1BB, GRIA2, GSTM3, GSTO2, GUK1, HSD17B4, HTR5A, IDH2, IKBKE, IRAK4, ITGAX, KIR2DS5, KLRC1, LAMA4, LAMC3, LMO7, MAP2K6, MAP3K7, MCCC1, MCEE, MCM5, NCOR1, NFE2L2, NNMT, NPR1, OR10Q1, OR1A2, OR1S2, OR2D2, OR2Y1, OR4C46, OR4D11, OR4F6, OR51D1, OR6C70, OR8H3, ORC5L, P4HA1, PAK7, PDE1A, PDE6G, PDE7A, PDGFD, PGS1, PHKG1, PLXNA3, POLR2B, POLR2F, PPAP2A, PPP2R5B, PRPS1, PRSS2, RFW2, RPS6KB1, RRM1, SCIN, SDC1, SDHB, SNAP23, SOCS5, SOCS7, SPCS1, STAM2, SULT1A4, UGT2B17, VDAC1, VDAC3, YARS2, CSGALNACT1
Negative_14853	BAX, EDA, F9, GCK, GHR, ID2, ID4, SCD, SRF, ACHE, ACTB, ACTN1, ACTN4, ADAM10, ADAM17, ADRA1D, AGXT, ALAS2, ALDH9A1, ALG10, ALOX12, ANAPC4, ATP5G1, ATP6V1F, B4GALT2, BMP4, BMP7, BMP8B, C1QC, CCL7, CCNG1, CD86, CDC25B, CHEK2, CHST12, CHUK, CLDN19, CLTC, CRKL, CSNK2B, CTNNA2, CTSG, CYP21A2, CYP3A43, CYP4A11, DHDDS, DKK1, DNMT3B, DVL1, ENTPD2, ERO1L, FTCD, GALT, GLI3, GLUD2, GNA13, GNAZ, GNMT, GNPDA1, GP1BA, GPAA1, GUCA1A, GUCY2C, HMOX2, IBSP, IFNA5, IL2RB, INPP5A, INSR, IRAK3, ITGB7, KIR3DL1, LCMT1, LIPT1, MAP3K13, MAP4K2, MAP4K3, MAPK3, MAPK8, MARS, MGAT4A, MLYCD, NCF4, NCOA4, NFKBIE, NFYA, NOS1, NUDT9, OR10AG1, OR10G9, OR12D3, OR14C36, OR11I1, OR2AG1, OR2M2, OR9Q2, P2RX1, PIGC, PKMYT1, PLA2G2A, PLA2G5, PLAT, PLCB1, PPBP, PPP3CB, PRKCI, PRSS2, PSME2, PTGES, RASA2, RDH10, SDC4, SPCS1, TAS2R40, TAS2R8, TLR4, TYK2, VNN1, XIAP, ATP6VOA2, C1GALT1C1, CSNK1A1L, MAP3K7IP2, PDCD1LG2
Negative_14854	BTK, C2, CD6, GNS, LPO, ME3, NPL, TNN, TYR, VCL, ABCC8, ACSL1, ACTA1, ADCY7, ADSS, AFMID, AGXT2, APOA5, AQP7, ARPC4, ASNS, ASPA, ATP2A2, BCKDHA, C4BPA, CARS, CASP7, CCKBR, CCNB2, CCND2, CCR9, CHAT, CHEK2, CLCA2, CLDN22, CSF3R, CTPS, CYP1A2, DDIT3, DGKB, DPYSL2, DTYMK, DUSP3, EGLN1, EI24, FABP4, FGF11, FGF19, GAL3ST1, GALM, GANAB, H6PD, IL10RA, IL23R, IL28B, ITGA6, LLGL1, MAP2K1, MAPK10, MCM2, MDM4, MGAM, MGAT3, MLYCD, NFATC4, NRG3, NT5C, OGDHL, OR10A5, OR10G3, OR10S1, OR12D3, OR13J1, OR11I1, OR1K1, OR2T2, OR8I2, PDE3B, PI4KB, PIGB, PIGN, PIP4K2C, PLA2G1B, PLCD1, PLXNB1, PLXNB3, POLA2, RALBP1, RAP1A, RASSF5, RDH8, SLIT2, SOX17, TACR1, TAS2R16, TAS2R42, TRAF5, TSC1, TYMS, UGT2B7, ATP6V1G3

Negative_14855	ATM, C4B, EZR, F9, PGP, PXN, AARS, AASDH, ACP2, ACSL6, ACSM1, ACY1, ADCY2, AKR1A1, ALDH1A2, ALDH5A1, ATP6V1D, B3GAT1, BAIAP2, BCL2L1, BTRC, C1QB, CACNG7, CCR5, CD28, CDC26, CDKN1C, CFL2, CLDN16, CSNK1D, CTNNA3, DDX47, ENAH, ENO1, ENTPD3, ENTPD6, F13B, FZD6, GAD2, GALM, GRIA2, GYS2, HNMT, IGFBP3, IL12B, IL23A, IRAK2, MAN1A1, MAP3K5, MAPK10, MDH1, METTL2B, NANP, NAT2, NFAT5, NFATC3, NFKB1, OR10H1, OR10J5, OR11H1, OR13G1, OR14I1, OR1F1, OR2A42, OR2AE1, OR2G2, OR2T6, OR2W1, OR4C46, OR4E2, OR51G1, OR51S1, P4HA3, PCK1, PDE4D, PDE7B, PIGQ, PIK3CG, PLA2G2F, POLD3, PRKCE, PRKG2, PRPS2, PVRL1, RALB, RAP1B, RBKS, RERE, RIPK1, SCIN, SDHD, SLC25A6, ST3GAL2, STX1B, TICAM1, TRHR, UMPS, GABARAPL1, MAP3K7IP2, ST6GALNAC6, TNFRSF17
Negative_14856	A2M, CD4, CTH, DBT, FH, GGH, IHH, IL3, MPL, SFN, TYR, XDH, ACTG2, AHCYL2, AKR1C4, ALDH1A3, ALDH3B2, AMD1, APRT, BCMO1, CANT1, CASP8, CCL1, CD36, CD44, CFL2, CHST11, CNTNAP1, COL1A2, COL4A2, CRHR1, CRLS1, CSF1, CTSB, CTSL1, DDOST, DDX52, DDX55, DHDH, DLST, DNMT3L, FCGR2B, FGD3, FLT1, GART, GMPR, GNAI2, GNG3, GSTA3, GSTO2, GUCY1B3, HA01, HGSNAT, HNMT, HSP90B1, HSPA8, IL13RA1, IL17B, IL5RA, INADL, INPP5E, KIR2DS4, LAMB1, LDHD, LIFR, LGL1, MAP3K5, MAPK11, MGAT5, MRAS, MTHFD1L, MYH6, MYH9, NANS, NAT6, NEFM, NEU4, NSD1, OR10G2, OR1E1, OR1L8, OR2V2, OR4A16, OR5T1, OR6C3, OR6C70, OR6Y1, OR8D1, OR8H1, OR8J3, PAX4, PDE4A, PDE8A, PDXP, PIK3C2B, PIP4K2A, PLA2G3, PLCB1, PNMT, PPP2CA, PPP2CB, PRIM2, PRSS2, PVRL4, RAPGEF1, SLC25A4, SLC2A4, SLIT2, SOCS4, SOCS5, SOS1, SSH3, STEAP3, STX8, SUCLG2, TBXAS1, TICAM1, TLR5, UGT2A3, ULBP3, UNC5D, VARS, WASF2, MAPK8IP1, TNFRSF10B
Negative_14857	ABO, CAD, DLD, F5, FGG, FUK, HPD, LPL, PGD, SDS, UBB, ACMSD, ACOX1, AFMD, AKT1, ALDOA, ALPP, ASMT, ATIC, B4GALT6, BAIAP2, CAMK2G, CD70, CD79B, CLDN15, CLDN7, CLOCK, CLTA, CSDA, CTNNA3, CYP2C19, DDOST, DDX41, D ERL1, DGKQ, DNMT3L, DPYS, DRD5, DUSP3, EDNRB, EFN2, EPB41L1, EPHA7, ERBB4, ERO1L, EXTL2, FARS2, FLOT1, FUT5, G6PC2, GALNTL1, GALNTL5, GCNT2, GGT7, GLS2, GPA1, GPX5, GSTM2, HAGH, HLA-F, IDH3A, IDUA, IGF1, IL17B, JAK1, KCNJ11, KCNQ1, KLKB1, KRAS, LCP2, LIPF, LRDD, MAML1, MAPK13, MCCC1, MGAT3, MMP9, MTAP, NEU2, NME2, NRXN2, NRXN3, NTRK2, NUDT9, OR1L1, OR2F2, OR2M3, OR4X1, OR52E4, OR5J2, OR5K2, OR6N1, OR8D2, P2RX2, PARD6A, PDE11A, PDE7B, PDGFRA, PDK1, PHKA2, PKM2, PLA2G2A, PMM1, PPP2R5B, PRKAB1, PRKAR1A, PRKCG, PTAFR, PTCH2, PTCRA, PVRL3, PYGB, RAD51, RDH12, RETSAT, RUVBL1, SCP2, SEMA3G, SEMA4A, SESN1, SESN3, SH2D1A, SIAH1, SKIV2L2, SLC27A1, SPI1, STK11, SULT1E1, TAS2R1, TAS2R41, TAS2R48, TAS2R8, TLR5, TNFSF11, TNFSF14, TRAF3, TUBA1A, UBE2L3, UXS1, ATP6V1E1, PNLIPRP2, TNFRSF1B, TNFRSF6B
Negative_14858	AK1, CFI, ME3, PGF, PXN, SYK, ADCY7, ADH5, ADRA1B, ADRB1, ALG8, AMD1, APOA2, B4GALT4, B4GALT7, BUB1B, CAMK2G, CASP6, CCL13, CCL2, CD70, CDC2, CDC23, CDH2, CDS1, COL5A2, CRKL, DARS, DEGS2, ENPP2, EPB41L1, FECH, FGF12, FGFR1, GAD1, GDF7, GNAI2, GNPAT, HSP90B1, ICAM2, IFNA2, IFT57, IL12RB1, IL28A, IL9R, IPPK, ITPKB, KLRC4, LGMN, LRP6, MAD1L1, MAP3K12, MAP3K2, MGAM, MGAT1, MPDZ, MYH7, NCAM2, NME6, OR11L1, OR13J1, OR2W1, OR3A3, OR4S1, OR51A4, OR51B2, OR51L1, OR52M1, OR5T3, OR6C6, OR6K6, OR7G3, OR8D1, OR8J3, P4HA2, PARS2, PCK2, PDHA1, PGM1, PIK3R1, POLR2I, PPBP, PPP5C, PTPRC, PYCR1, RASGRP1, ROBO1, RPS6, SDC3, SDHD, SELP, SESN1, SLC2A2, SPRY3, ST3GAL4, SULT2B1, TBL1Y, TNFRSF4, TUBA1C, UBE2L6, UGP2, UROC1, WNT9A, WWP2, YWHAH, ZAP70, ZMAT3, PAFAH1B3, PRICKLE2, ST6GALNAC1



Negative_14859	<p>BAX, CD6, CKB, DBI, DHH, F11, F5, GLA, HK2, IL4, JUN, MSN, TFG, AASS, ADO RA2A, ADORA2B, ADRBK2, AMDHD1, AQP7, ARPC1B, ATP5E, B3GAT2, C1QA, C1QB, CACNA1G, CASP7, CAV2, CLDN14, CLDN9, CTNNB1, CXCL10, CXXC4, DDHD1, DDX50, DGKD, DGUOK, DMGDH, DPYD, EDNRA, EIF4B, EPHB6, FCGR2B, FGF1, FGF13, FOXA2, FUT5, FZD10, GBGT1, GGCX, GLB1, GLG1, GLS2, GNPDA1, HLA-DOA, HLA-F, HSD11B1, HTR5A, IFNA13, IFNW1, IGF1R, IL15, IL17B, INHBC, IRF7, ITGAV, KAT2B, KCNJ11, KLRC4, LAMC1, LTC4S, MAN1A2, MAPK11, MAPK7, MARS2, MCEE, MGAT1, MGAT3, MMP7, MTMR1, MYD88, MYH15, MYH6, NFE2L2, NKX2-2, NME2, NOTCH3, OR13G1, OR2A5, OR2M7, OR4C6, OR4K2, OR51L1, OR51V1, OR5AS1, OR5AU1, OR5P3, OR7A5, OXCT2, OXTR, PAK7, PARVG, PFKM, PIGQ, PIP5K1C, PIP5K3, PLD1, POLD2, POLR2K, POLR2L, POLR3H, PPP2CA, PPP3CA, PRKAR2B, PRKCD, PTGIS, PYCR2, PYGB, RFX5, RFXAP, RPS6KB1, SC5DL, SDHB, ST3GAL3, STX16, STX2, SV2B, TAS2R8, THBS1, TNFSF12, TPH1, TSHB, TUBA1B, TUBB4, TXNDC12, TYRP1, UBA7, UGT2B28, UGT2B7, ULBP1, VANGL1, WBSR17, ZFYVE9, ATP6V1C2, MAP3K7IP1, TNFRSF10B</p>
Negative_14860	<p>AMH, CFI, DCK, EPO, FAH, IL8, LCT, NF1, NPL, TAT, ABLIM2, ACAA1, ACLY, ACSM3, ACVR1B, ANAPC10, ANAPC5, ARNT, ARNTL, ATP5G1, BAI1, BIRC3, BMP6, C1QB, CACNA1G, CAMK2B, CASK, CCL28, CD244, CDC26, CHSY3, CLDN22, COL4A6, CREBBP, CSNK2A2, CTF1, CTNNA3, CTSS, CXCL11, CYP2D6, E2F3, ENTPD1, ENTPD7, EPAS1, EXOC7, EXT2, FBP1, FUT5, FUT7, FUT8, GALNT8, GGCX, GLO1, GNG12, HADH, HDAC2, IDI2, IFNA17, IL17RB, IMPA1, INMT, KIR2DL1, LDHAL6A, LDHAL6B, LHCGR, LLGL1, LRRC4C, MCCC1, MGAM, MITF, MOV10L1, MPZL1, MYL2, NCF4, NCOR1, NEU1, NLGN2, NT5C2, OR10G8, OR1E1, OR1N2, OR2AG1, OR2B11, OR2T33, OR4C6, OR4F5, OR4L1, OR4P4, OR4X2, OR51F1, OR51S1, OR52B6, OR52E8, OR52I2, OR56A4, OR5B21, OR5M3, OR6C4, OR7D4, OR8I2, OR8U1, OR9G4, ORC4L, P4HA1, PAICS, PCK2, PFKM, PIGL, PLD1, POLE, PPT1, PRKAA2, PYCR1, RHOQ, SARS2, SHC1, SHISA5, SMAD3, SPAM1, ST3GAL5, STX10, TPMT, TSC1, TUBB4, UGT2A3, VKORC1, VNN1, XYLT2, YKT6, ATP6VOE1, B4GALNT1, GABARAPL2, ST6GALNAC6</p>
Negative_14861	<p>ADO, DDO, FYN, GH2, NF1, PAH, PLN, PTS, SI, VTN, ABAT, ACOX2, ACSL6, ACSM2A, AKR1C3, ALDH1A1, ALOX5, ARSB, ATP2A2, ATP5E, BIRC5, CACNA1G, CACNG2, CACNG7, CARD11, CCNB1, CCND3, CD22, CHPF, CLTC, CNTNAP2, CREB5, CXCL12, CXCL6, CYBB, CYP2A6, CYP4A11, DAG1, DCTD, DDHD1, DDX4, DDX51, DGAT2, DRD5, DTX3, DTYMK, ELK1, EPAS1, ERBB2, ESPL1, F13A1, FABP1, FARP2, FASLG, FCGR3A, FGF2, FLT3LG, FUT2, FZD10, GALNT8, GPAM, GRIA1, HMGCR, HPSE, HTR6, IFNW1, IL11RA, IL12RB1, KIR2DL3, MAPK7, MARS2, MASP1, MINPP1, MTFMT, NAT2, NFKBIB, NKD1, NME6, OR10Q1, OR14I1, OR2S2, OR52E4, OR52N2, OR56A4, OR5D18, PAICS, PARS2, PCYT1A, PDIA4, PFN2, PIP4K2C, PLXNB3, PMAIP1, PRSS1, PTCH2, PTPN11, RDH11, RRM1, RRM2B, SDC3, SH2D2A, SKIV2L2, SPRY2, SPTLC1, SUOX, SYNJ1, TGFB1, TRPC1, TYMP, UGCG, UNC5A, UXS1, VTI1A, WASF1, YOD1, ATP6V1G2, CSGALNACT2, MAPK8IP3, PAFAH1B1, PAFAH1B2, SLC25A31</p>

Negative_14862	<p>ADC, CD6, DCN, GK2, GPI, JUN, MYC, RET, RFK, SMO, TNN, TXK, ABLIM1, ACVR2A, ADAM17, AHCYL2, AKR1C1, ALDH2, ALG13, ALOX15B, AMPD2, ANAPC2, ANGPTL4, ATP4A, BMP8B, C4BPA, CACNA1E, CALML3, CAMK2A, CBLB, CBR3, CCL24, CCR7, CD244, CD8B, CHRM2, CHRNA7, CLCF1, CSNK1D, CTF1, CYP2S1, CYP4A22, CYP8B1, DGKG, DHODH, DRD2, ENTPD2, FARSA, GFPT1, GMDS, GNAS, HADHB, HEXA, HPSE, HSD3B1, HSPA1B, HTR2C, ICOSLG, IDH3B, IFNA2, IFNB1, IL17RA, IL1R2, IL25, IRS2, ITGA3, KIR3DL1, LAMC1, LCAT, LIPC, LRP5, MAP3K1, MAP3K14, MOV10L1, MTMR1, MYH15, NFAT5, NSD1, NT5C2, OR10H4, OR10Z1, OR13G1, OR1D2, OR1G1, OR4C16, OR4N4, OR51G1, OR52E8, OXTR, PAPSS2, PARD6B, PDE3A, PER1, PIK3CB, PIP4K2B, PLOD1, PPM1B, PRKCG, PRKG2, PTPN11, QPRT, RAP1B, RFNG, RFX5, RPS6KA4, SEMA4A, SEMA4G, SETD1A, SETD1B, SLIT1, SOCS3, SPTLC1, STAM2, STAT6, STX3, TAS2R9, THBD, THY1, TSLP, TUBA1C, TUBA4A, UGP2, VDAC3, WNT3A, WNT9A, ATP6V1B1, ST6GALNAC4, TNFRSF17</p>
Negative_14863	<p>DHH, GLS, GPI, SMS, TXK, TYR, AARS2, ABP1, ACAA2, ACSS2, ACY1, ADCY5, ADH4, ADRA1B, ANAPC11, B4GALT5, BAAT, C1QA, CAMK2G, CARS, CARS2, CCL14, CD34, CD44, CD46, CD79B, CFL1, CLCF1, CLDN5, CLTB, COL3A1, CREBBP, CSH1, CYP2A6, CYP4A11, CYP4F3, DGKB, DGKH, DOCK1, DTYMK, E2F4, EFNA3, EFNB3, ENAH, EPB41L2, EPHA4, FGF18, FZD3, GALNTL4, GALT, GLUL, GRIN2C, GRIN2D, GTSE1, GUCY2D, HAP1, IDH1, IFNA17, IL13RA2, IL1R1, INPP5B, LAMB3, LCAT, LEF1, LEPR, MAGI1, MDH2, MGAM, MGAT2, MGAT4B, MYL9, MYLK, NARS, NEGR1, NEU1, NEU4, NFKBIE, NKD2, NUDT2, ODC1, OR13C5, OR1L6, OR1S2, OR2Y1, OR4A15, OR4D11, OR4S1, OR52I2, ORC2L, OXSM, PANK4, PARD6A, PAX6, PDE4C, PDE8B, PDGFB, PFN4, PGK2, PIGF, PIGW, PIK3CD, PKMYT1, PLA2G2E, PPAP2C, PPP1CB, PPP1R3B, PPP2R5D, PRIM2, PRKACA, PRKACG, PSENE1, RDH11, ROCK1, RPRM, RPS6KA1, RPS6KB1, SELL, SPRED2, SPRY4, SRGAP2, SULT1A2, SUV39H1, TAS2R9, TIAM2, TLN1, TNFSF8, TP73, UPP1, VAV2, WNT8A, ZMAT3, ZNRD1, ATP6VOD1, CACNA2D2</p>
Negative_14864	<p>AK2, C4B, DBH, ID2, IL2, KIT, PLN, PXN, RET, ACAA2, ACADVL, ACSL3, ADCY3, ANPEP, ARRB2, ATP12A, B4GALT3, BCAT1, BMP7, BST1, CASP9, CCR10, CHAD, CHKB, CHRM3, CKS1B, CLDN22, CLDN7, CTLA4, CTSL1, CXCL13, CYP2E1, DDX54, DERA, DNMT3B, EFNA3, FGF11, FGFR4, FLT3LG, FOXO1, GALNT7, GNAI1, GNG13, GNRH1, GRIA2, HES1, HLA-DG, HSD11B2, HSD3B1, IL20, JAK2, KAT2B, KIR2DL2, KIR2DS4, KLRD1, LAMB1, LDHB, LEPR, LRP5, MAD2L1, MAPT, MFNG, MGAT4B, NAT2, NEU2, NGEF, NPR1, NUDT2, ODC1, OR11H1, OR11L1, OR13C8, OR1K1, OR1L4, OR2T10, OR4F17, OR4Q3, OR51A7, OR51B4, OR51I1, OR52E2, OR52H1, OR5H6, OR6C70, PDE4C, PHKG1, PHPT1, PIAS1, PIGL, PLA1A, PLA2G5, PLAUR, POLR2G, PPP1R1A, PRKAR2A, PRNP, RAB23, RALA, RARS2, RHOD, SDHD, SRGAP2, SSX2IP, STT3B, STX4, TNFRSF8, TRAF5, TRMT11, TSTA3, TUBA3C, TYMP, VANGL1, VASP, ATP6V1E1, KIR2DL5A, PPP1R12A, PRICKLE2</p>

Negative_14865	<p>CR1, DHH, HAL, OTC, PTS, SMO, SPN, TNF, VTN, AASS, ACSM3, ACVR1B, ADAM10, ADCY7, AKR1C3, ALAS2, ALDH1A2, ALG13, ALOX15, ANAPC4, ARPC3, ARPC5L, B4GALT1, BCAT2, CALML5, CCL3, CCR3, CD8A, CHRNA7, CKMT2, CLDN19, CLDN5, CRHR1, CSF2, CSH1, CSNK2B, CTLA4, CXCL6, CXCR4, CXCR5, CYFIP2, DLL4, DUSP2, ENTPD3, ENTPD5, EP300, EPOR, ETNK1, FASLG, FGF14, FSHB, FUT3, FUT5, GALK2, GBGT1, GCNT4, GJA1, GMPPA, GNAI2, GPAM, GRHPR, GSTA5, GSTM3, GUCY1A3, HES1, HMOX1, IMPA2, ITGAV, ITPK1, KIR2DL2, LIMK1, MAP3K8, MAP4K1, MAPK9, MMP7, MPST, MYL7, NAMPT, NCR3, NFATC4, NKX2-2, NKX3-1, NOD1, NUMBL, OR10R2, OR11A1, OR13C2, OR13C4, OR2L3, OR2S2, OR2T11, OR2T12, OR3A3, OR4K17, OR51L1, OR52E2, OR5F1, OR5M9, OR6C2, OR8B8, OR8D4, OR8K1, OR8U1, PARVA, PCYT2, PDE9A, PDGFRB, PIM2, PNLIP, POLA2, POLR2C, POLR2E, POLR3A, POLR3H, PPP2R1B, PRNP, PTCRA, PTGER3, PTGFR, RAB23, RAC2, RDH10, RPIA, RPS6KA3, SCP2, SEPHS1, SLIT1, SMC1B, STAT1, STK11, SUCLA2, TAS1R1, TAS2R60, TBL1Y, TNFRSF4, TRHR, TUBA1B, TUBB3, UGCGL1, XYLT1, ATP6V0A1, B4GALNT1, HLA-DPA1, ST6GALNAC3, TNFRSF10A, TNFRSF11B, TNFRSF12A, TNFRSF13B</p>
Negative_14866	<p>GDA, GHR, MYC, NNT, OGT, TK1, TK2, ACPT, ACTG2, ACVR1B, ADH1A, ADRB3, ALDH6A1, ALDOA, ALG10, ATP2A3, BDKRB1, BHMT, BMP8A, CACNG1, CADM3, CANG1, CD274, CD80, CDH4, CHRM5, CLDN14, CNGA4, CREB3L3, CTNNA1, CTSL1, CX3CL1, CX3CR1, CYP2C18, CYP2U1, CYSLTR1, DAPK3, DGKI, DHODH, DPYD, DVL1, EFNA5, ENTPD5, FGD3, FGF3, FOXO1, GADD45G, GALNT11, GCLM, GFP T2, GLG1, GLI2, GZMB, HCLS1, HCST, HDAC1, HLA-DOB, ICOS, IKBKE, IL12B, ISYNA1, ITGA5, ITGB1, ITGB8, ITPKA, KIR2DS4, LDHAL6A, MAN1C1, MAOA, MAPK10, METTL6, MICA, MYH10, NCOR2, NCSTN, NFAT5, NOX3, NR1D1, NUMBL, OR2D2, OR4A15, OR4K14, OR52N2, OR5J2, OR5P3, OR6C74, OR8H3, ORC5L, P2RX6, PANK3, PDE3A, PGAM2, PIGB, PIGV, PLA2G1B, PLCD4, POLR2J, PPP2R1B, PRKAA1, PSEN1, PTGER1, PTGS2, ROBO1, SH2D2A, SLC25A4, SMAD7, SPAM1, SPRED1, SPTLC2, SSX2IP, STX6, TAS2R9, TBL1Y, TGFB2, TSC1, TUBA8, UBE2L3, VANGL1, ATP6V1C1, CSGALNACT1, TNFRSF10A, TNFRSF12A</p>
Negative_14867	<p>AK3, GPI, IDS, IHH, IL2, INS, JUN, PXN, TKT, ACTA2, ADIPOR2, ADRB3, AKR1C4, ALDH3B2, AMD1, AMPD2, ATP4B, B3GNT5, BTRC, CACNA1B, CCL13, CCL22, CNDP1, CTSL1, CYP2C18, CYP2C19, DDIT3, DDX56, DLL3, DPM2, DTX3L, ENPP3, FGF10, FGFR3, FUT7, FZR1, GLI1, GLI2, GNAO1, GRHPR, GRIN2A, GRIN2D, GSTM4, HTR6, IL1R1, IL28A, IRF7, IRF9, IRS4, ITGA1, ITGA10, ITGAX, LARS2, LGMN, MAN1A2, MAN1B1, MAP2K6, MGST3, MKNK2, MYL5, NFYA, NSD1, OR10T2, OR10Z1, OR11H1, OR13A1, OR13J1, OR1I1, OR1L1, OR2G6, OR2T6, OR6Y1, OR7A17, OR8D4, OXTR, P2RX3, PAPSS2, PARVA, PDE6D, PECAM1, PGM2, PIGV, PLA2G2A, PLA2G2F, PLCB3, PLCZ1, POLE3, POLR2H, PON3, PPP1R1A, PPP1R3A, PPP2R2A, PPP2R2B, PRKCA, PRKCI, PTEN, PTPRZ1, RAC3, RAD51, RGS3, ROBO1, SC5DL, SDC3, STX7, SULT1A2, SV2B, TNFSF11, TUBA3E, UBA1, UBE2K, VANGL2, VAV1, WNT9A, XYLB, ZFYVE16, ZIC2, ATP6VOE1, KIR2DL5A, MAP3K7IP1, MAPKAPK2, SLC25A31, TNFRSF13C, TNFSF13B</p>

Negative_14868	ATM, BAD, C7, F12, F2, GLS, GNE, KDR, PGF, TNN, ACOX2, ACY3, ALG10B, AOC2, AREG, ASRGL1, ATP5E, ATP6V1D, BAIAP2, BNIP1, CACNG2, CAV3, CCNA2, CD22, CD72, CKS1B, CPOX, CREB3L1, CX3CR1, CXCL1, CYP27A1, CYP2A7, DLST, DUSP14, DUSP9, ERBB4, ETNK1, FBP1, FCGR3B, FGF12, FGF4, FLT1, FMO2, FRAT2, GADD45A, GNA11, GOT1, GRM5, GUCY1A3, HEMK1, HMBS, HSP90B1, HTR2C, ICOSLG, IDH3A, IL10, IL1R2, IL1RAP, IMPDH1, INHBE, ITGA7, KIR2DL3, KLRC2, LIPA, LYPLA1, MAP3K2, MAPK13, MDH2, NEU3, NKD2, NPAS2, NPR1, NRXN3, OR10A6, OR11A1, OR2A5, OR2B11, OR4S1, OR52E2, OR52K2, OR5A2, OR6Y1, OR7C2, OR8D4, PARD6B, PIGM, PIGQ, PIGT, PLCE1, PNLIP, PNM T, POMC, PON1, PPAP2C, PPCS, PPP3CC, PRKAA2, PSAT1, PSME1, PTGS2, RAC2, RRAS2, SHMT2, SMPD2, SPI1, SPTLC1, TLR3, TLR5, TUBB2A, UCK2, UPP1, VDAC2, WNT7B, WNT8A, ZMAT3, PAFAH1B1, PRICKLE2, TNFRSF11B
Negative_14869	C4B, F8, FAS, ID2, ME3, MTR, SHH, ACAD9, ACVRL1, ADCY3, ADSS, AKR1C3, ALG11, AMPD3, ARPC4, ARPC5L, ARSD, ARSE, CACNA1G, CD247, CD46, CD8A, CDC25C, CDH1, CHEK1, CHPF, CHSY3, CLDN17, CNGA3, CNGA4, COL5A3, CTSB, CUL1, DCTN1, DDB2, DDX18, DPYS, EFN1, EIF4E2, ENO3, ENPP6, ENTPD6, GALNT3, GARS, GRIN1, HLCS, HSD17B7, IFNGR2, IL13RA2, IL17B, IL18RAP, IRF3, ITGA6, ITGB1, JUND, KIR2DL3, LEFTY2, LIPC, LIPG, MAD1L1, MAGI2, MAGI3, MAPK13, MARS, MCM4, MGAT5B, MTMR2, MYH10, MYH11, NAGK, NARS2, NCK2, NCR2, NEFL, NTF3, OR11H4, OR2A4, OR4C13, OR4M1, OR4N4, OR4N5, OR52A5, OR5H2, OR5T2, OR6N2, OR8J1, PANK2, PARD3, PGAM2, PIGF, PIK3R3, PLA2G5, PLCB3, PLD1, PLXNB3, POLE2, POLR2A, POLR2H, PRKACB, PTSS2, PTGS2, PTPRC, RUVBL1, SDHA, SEMA3A, SEMA4B, SHMT1, SORD, SPCS1, SPRED1, ST3GAL6, STAM2, STX2, TAP2, TGFB1, TICAM2, TLR5, TNFSF12, TP53, TPH1, TRDMT1, TSHB, TUBA3E, ATP6V1E1, CTNBP1, HLA-DPA1
Negative_14870	ATM, CS, F5, FAH, GAA, GH2, GSR, JUP, MPI, AADAC, AARS, AASDH, ADH7, AGPAT1, AHCY, ALDH3A1, AMDHD2, ASPA, ATP2A1, ATP2A3, BIRC2, BTRC, C3AR1, CACNA1I, CANT1, CCL11, CDC20, CDC25B, CDKN2A, CLDN16, CNTF, COL5A3, COMP, CSAD, CYCS, CYP4F3, DDHD1, DDX56, DRD5, DTX2, EARS2, ENO3, ENPP1, EPHA1, FGFR2, FOXO3, FUT7, GADD45G, GAMT, GNAI3, GRAP2, GSTM3, GUCY2F, HLCS, HSD17B4, IKBKE, IL18, IL22, IL6ST, IRAK3, ITGAE, ITGAL, KLRC2, LIFR, MAP3K8, MPZL1, NEFL, OR2T5, OR2W1, OR4F15, OR4F4, OR4K1, OR4N2, OR4P4, OR52A5, OR52D1, OR56A1, OR5H2, OR6M1, OR7G2, PCK1, PDI A4, PDXP, PHKG2, PHPT1, PIGQ, PLA2G4A, POLE, PPP1CC, PPP3CA, PRSS1, PSPH, PTPRF, PTPRJ, RHOD, RPN2, SDC1, SEMA3G, SEMA4A, SETD8, SHC3, SMD1, SMC1A, SMPD3, SOX17, SPP1, SPRY4, STX3, SYNJ1, TACR2, TIAM2, TNFSF11, UGT2B28, UPRT, UROC1, UROD, YARS2, KIR2DL5A
Negative_14871	BCR, C8G, CGN, IL9, INS, KIT, LPL, MUT, SDS, TK1, ACSS2, ALG9, APOE, ARHGEF2, ARHGEF7, ATP6AP1, ATP6VOC, B4GALT4, BAIAP2, CCL11, CCL3, CCL5, CHRNA7, CLDN5, CLTB, CNGA4, COL4A2, COL6A1, COX15, CREB3, CTLA4, CXCR6, CYBA, CYP27A1, CYP8B1, DCTN1, DDHD1, DDX54, DPYSL2, DTX1, DUSP10, DUSP8, EDNRA, EGFR, EXTL3, FLAD1, FM03, GCAT, GMPR2, GNG13, GRIN2B, GSTA5, HDAC2, IDH3G, IFNA4, IKBKE, IL11, IL13RA2, IL17A, IL18RAP, IRF5, ITGAV, LIAS, LRAT, MAD1L1, MAN1A2, MAP2K2, MAP3K2, MARS, MYH3, NARS2, NOX1, NTF4, NUDT2, OR4S1, OR52B4, OR52L1, OR56B4, OR5D14, OR5K2, OR5T1, OR6C2, OR6C76, OR6Y1, PCCB, PCYT2, PDE7B, PFKL, PHGDH, PIAS4, PIGS, PIK3C2G, PIK3CG, PLCZ1, POLA2, PON3, PPAP2A, PPARA, PPID, PP1R3D, PPP2R5B, PPP3R1, PTGES2, RASGRF2, RND1, RPS6KA2, SELE, SELP, SGPP2, SKIV2L2, SLC25A4, SMAD2, SMPD3, SMURF1, SOCS3, SPI1, SPRY4, SRD5A1, ST3GAL5, STK3, TAS2R13, TAS2R41, TAS2R49, TIRAP, TLR3, TUBA4A, UROC1, VDAC1, VTI1B, WASF3, WBSR22, WWP1, XCL1, ZMAT3, TNFRSF13B

Negative_14872	<p>AUH, GK, HGF, KDR, MAG, PGP, AACS, ABAT, ACLY, ACOX3, ACP1, ACSL3, ACVR1, ACYP1, ADIPOR1, ADSS, AHCYL1, AMDHD1, ASS1, BMPR2, CACNA1S, CACNG8, CCR7, CDC45L, CDIPT, CLDN10, CLDN16, CREB5, CX3CR1, CYCS, DGAT2, DGKH, DGKI, DUSP5, ENTPD2, FABP3, FGD1, FSHR, FUT9, GALNT14, GBA3, GCLM, GGT7, GLG1, GNB3, GOSR2, GOT2, GP1BA, GPLD1, GSTA4, HLA-F, HMGCS2, HMOX2, HRH2, HSD17B2, IFNAR2, IKBKG, IL3RA, INADL, IRAK4, ITGA11, ITGAX, ITPA, JAK2, LAMA4, MBL2, MYH2, NEFH, NKX3-1, NME2, NPAS2, NRG1, NT5C, OR10C1, OR1C1, OR1J2, OR1J4, OR1L8, OR2B2, OR2L3, OR51B5, OR52J3, OR7A10, OR8H2, OR8K1, OR9Q2, OXSM, PDE7A, PFN4, PIAS4, PIGU, PIK3R5, PLA2G2F, PLA2G3, PLCE1, PNLIP, POLR2H, PRKA2, PTEN, PTTG1, RBPJL, RFXAP, RIPK1, RND1, RPSA, RRAS, SEMA3E, SEMA4F, SETD1B, SLC27A1, SMC1B, SOCS2, STX8, TUBA3E, TUBA4A, UGT2A3, ULBP2, VDAC3, HLA-DRB3, ST6GALNAC3</p>
Negative_14873	<p>AK3, CRK, F9, HK3, WAS, A4GALT, ABLIM2, ACADVL, ACHE, ACYP2, ADCY1, ADCY5, AK3L1, ALDH1A2, ALDH3A2, APOA5, ARPC3, B3GALT4, B4GALT3, BBOX1, BMP6, BMPR1B, CACNA1I, CCKAR, CCNB3, CD22, CD3E, CDC25A, CDC25C, CDC42, CDC7, CHAD, CHRNA7, CHST13, CLDN3, CLDN4, CLDN7, CNTF, COL1A2, COX10, CTLA4, CXCL3, CYFIP1, DAPK2, DDX56, DLL3, DTYMK, E2F5, EPB41, F2RL2, FCGR2B, FECH, GAD2, GADD45B, GALE, GALNTL2, GCNT4, GFPT1, GMPR, GUCY2C, HCCS, HLCS, HSD11B2, HSD17B3, HSD17B7, ICOS, IFIH1, IFNA17, IL17B, IL1R2, IRAK2, ITGAD, ITGB2, ITGB8, KLRC3, LIPF, LPAR1, MAD1L1, MAN1C1, MAOA, MAOB, MAPK7, MGAT4B, MINPP1, MTHFD1, NR1D1, NT5C2, OR2T5, OR4K1, OR51G1, OR51M1, OR5AS1, OR5M8, OR7G1, OR8G1, OR8K1, PAK4, PDHB, PDX1, PFN1, PHPT1, PIK3C2G, PIK3R1, PIP4K2B, PLK1, PMVK, PNP0, POLD3, PORCN, PRKCZ, RAC1, RALA, RELB, SARS, SELL, SEMA4D, SETD8, SFRP1, SGMS1, SHC2, SIPA1, SLC2A4, SLC33A1, SLC9A1, SMARCA2, SNAP25, SOCS7, SPRY1, ST3GAL3, STAM, STK4, SULT1E1, THBD, TOMM40, TPK1, TRAF6, TYMS, UGT2B10, WHSC1L1, XYLB, ATP6V1E1, CACNA2D2, HSP90AB1, KIR2DL5A, PPP1R12A, SERPINA5, SUV420H2, TNFRSF13C</p>
Negative_14874	<p>APP, CAD, DBI, F7, GNE, GSN, JUN, LPL, PGD, TPO, ACAT1, ACOT11, ACP2, ACVR2A, ADCY2, ADH1B, ADH4, ADH6, AGRN, AGTR1, ALG10B, AMDHD2, APOA5, APOC3, ARSA, ATP6VOB, AXIN2, B4GALT4, BACE1, CACNA1G, CACNA1S, CACNG5, CALML3, CAMK2A, CAV2, CCL19, CCNB3, CCR4, CD3E, CHIA, CREB1, CRHR1, CSF3R, CXCL16, CYCS, CYP11B2, CYP2D6, CYP2U1, DAPK3, DDX18, DRD2, DTX4, DUSP3, EFNB2, ENPP2, ERBB2, EXTL2, FGF1, FSHB, FUT6, FUT8, GALNT10, GDF6, GJD2, GSTO1, GSTZ1, HDAC2, HMGCS2, HNF1B, HTR5A, HTRA2, IFNA13, LDHA, MAN1B1, MCM2, MYH15, NAT5, NAT6, NCKAP1L, NFKB1, NMNAT1, NOX3, NRXN3, NTN1, OCLN, ONECUT1, OR1L4, OR2AT4, OR2G3, OR2T33, OR5AR1, OR6B3, OR6C1, OR6X1, OR7C1, OR8B12, OR8B4, OR8D2, OR8J1, OR8K1, OXCT2, PARD6G, PCYT1A, PDE1B, PFKFB4, PFKP, PIAS4, PLCB2, PLTP, POLD1, POLR2H, POMC, PPP2CB, PPP2R1B, PRKAR1B, PRKG1, PRKY, PROS1, PTPRM, RAC2, RASSF1, RASSF5, ROB01, SEMA3E, SLC25A6, SMAD1, SMC1A, SSH2, SUCLG1, TAS2R1, TAS2R4, TBL1Y, TJP3, TLR2, TLR4, TRAF5, TRHR, TUBA4A, VASP, WNT7A, ATP6VOA4, ATP6VOE1, CSNK1A1L, GABARAPL1, HLA-DQA2, HSP90AA1, HSP90AB1, SERPING1, SUV420H2</p>

Negative_14875	HDC, IVD, ACAA1, ACSM1, ACSM4, ACYP1, ADCY9, ADH4, ALG8, ANAPC1, AOC2, APAF1, ATG3, BMP2, CACNG4, CALML5, CALML6, CCL19, CD226, CD58, CLDN20, COL4A2, CTTN, CX3CL1, CXCL11, CYP2A7, DGKH, DRD2, DUSP16, DUSP5, ENPP6, FGF19, FMO1, FZD2, HSD17B3, IMPA2, IQGAP1, IRAK3, IRF7, JAK1, LEFTY1, LIPG, MAOA, MAP3K3, MCM6, MICA, MYH11, MYL7, MYLK2, NCAM2, NOTCH3, NRG4, OCRL, OLAH, OR10H2, OR11G2, OR2B2, OR2C1, OR2Y1, OR4M1, OR52H1, OR52I1, OR5AC2, OR5B21, OR8A1, OR9A2, OXCT1, PAICS, PARD6A, PCCA, PGK2, PIGX, PLCE1, PNLIP, POLR2B, PPAP2B, PRKAG3, PRKCA, PTGFR, PTTG1, RAP1A, ROCK1, ROCK2, SEMA3F, SFRP5, SLIT1, SPTAN1, THY1, TNXB, TUBA3C, TUBB1, TUBB4Q, TYRP1, VAV1, VTI1B, WNT2B, CSGALNACT2, EIF4EBP1, SERPINE1, TNFRSF11B
Negative_14876	AUH, BID, C1S, CBS, GH2, SPN, TEC, AANAT, ACO1, ALDH3B2, ALOX5, AMY2A, AQP7, AREG, ARG1, ARHGEF2, ATG3, B4GALT3, BCL2, CCL1, CCL14, CCR2, CCR3, CD79A, CFL1, CLTCL1, CNDP1, CNGA3, COL5A1, COMT, CYP3A43, CYSLTR1, DEGS1, DHX58, DUSP8, EHHADH, EHMT1, EPHB2, EPHX1, FARS2, FGFR4, FLT3LG, FOXO3, FPGS, FZD3, GALNTL4, GDF7, GRB2, GRIN1, GUCY2D, H6PD, HS17B8, IAPP, IFNA6, IL11, KARS, KIR2DS4, MAGI2, MAML2, MGST3, MYL2, NCOR2, NCR2, OLAH, OR14A16, OR4D5, PARVB, PDE6D, PDXP, PGLS, PGS1, PIAS2, PLD2, PNMT, POLR2B, POLR3G, PPP2R1B, PROS1, PSME3, PTK2, RAP1A, RCHY1, SDC3, SEMA3G, SETD1B, SFRP1, SPP1, SRD5A2, ST8SIA5, TAS1R3, THBS3, TNXB, UGCG, UROC1, USE1, VDAC2, WNT11, WNT5B, YES1, ATP6VOA2, ATP6V1B2, CACNA2D2, PPP1R12A, SERPING1, SUV420H1, TNFRSF10D
Negative_14877	AGL, FES, GK, HK2, IL2, KIT, SMS, SRF, TXK, AANAT, AASS, ADORA2A, ADRA1A, ALG12, ALG13, ALOX12, ALPI, AREG, ARPC1A, ATP2A1, ATP5B, ATP6V1D, B4GALT5, BUB1, C4BPB, CACNA1S, CACNG3, CCL15, CCR8, CDC45L, CHAD, CHKB, CNTF, COMT, CSF3R, CXCL3, CYFIP2, CYP2E1, CYP2S1, CYP3A5, CYP4F2, CYP4F3, DGKG, DHX58, DIAPH1, DNMT1, DNMT3L, EFNA3, EFNB2, EFNB3, ENTPD5, ENTPD6, FGF11, FUT7, GABARAP, GALT, GGT1, GLDC, GPAM, GRIN2C, GTSE1, ICAM2, IFNA8, IL6R, IL7R, IRS2, ITGB4, KIR2DL2, LLGL1, LYZL1, MAPK8, MGAT4B, MGAT5B, MLLT4, MMP2, NADSYN1, NCKAP1, NFKB1, NOX1, NRG1, OR10A2, OR10H5, OR1G1, OR4A15, OR4C16, OR4D11, OR51G1, OR51L1, OR51Q1, OR52N2, OR5R1, OR6Y1, P2RX1, PANK1, PGM3, PGS1, PLD1, PLIN, PLOD1, PMVK, POLR3H, PPARG, PPP2R5D, PTPN6, RBX1, RND1, RRM2B, SCIN, SEMA3E, STAT5B, TAS2R50, TBL1X, TGFB1, TLR3, TLR9, TNFRSF8, TSC1, TUBB2B, TYROBP, WARS2, WNT8A, ATP6V1C1
Negative_14878	ADO, AGK, C8B, FUK, GLS, HK1, ID1, LCK, PAH, PLG, PTS, TFG, ABAT, ACLY, ACSM3, ACVR1B, ADH6, AFMID, ALDH3B2, ALDOC, AMPD3, ATP2A1, ATP6VOB, B3GALT2, B3GALT6, B4GALT5, BAAT, BIRC5, C1QB, CAMKK1, CASP6, CASP7, CASP8, CCL13, CCNB2, CCR9, CFLAR, CHAT, CISH, CNGA4, CRLS1, CYP3A43, DX47, DDX52, DGKI, DHODH, DPAGT1, DVL3, EI24, ENO2, ENPP3, ENTPD1, EPB41, EPHA5, F13A1, FBXW11, FLT3, FOXA3, FSHR, GATM, GDF7, GFPT1, GLI3, GRIA3, HMGCL, HPRT1, HSPA8, HYAL2, ICAM3, IFNA14, IFNA21, IFNA8, IFIT57, IL11RA, IL1RAP, IL20RA, IRF3, KLRD1, LTC4S, MAML1, MAML3, MAP3K3, MAP3K5, MASP1, MEF2C, MGST2, MNX1, MTMR1, MTMR2, NCF4, NT5C2, NTN1, OR10C1, OR1B1, OR2A14, OR2AT4, OR2G6, OR4A16, OR4K13, OR4X1, OR51A4, OR52N5, OR5A2, OR5C1, OR6N1, OR8J3, PANK4, PDHA1, PFN4, PI4KB, PIGF, PPARA, PPM1D, PPP2R2D, PRKAB1, PRKACG, PRPS2, PSME1, PTPRR, QARS, RALBP1, RDH12, RELA, SEMA3F, SGMS2, SH3BP2, SLIT2, SMC1A, SV2B, TDO2, TGFB1, TOLLIP, UROC1, VAMP4, WASF2, WNT6, CACNA2D3, MAPKAPK5

Negative_14879	<p>GH1, GK, GSN, IL4, LCK, NF1, SPN, ZYX, AADAT, ABCC8, ABP1, ACSL3, ACVR1 C, ACY1, ADCY6, ADH7, AGRP, AGTR1, ARPC1B, B3GALT1, BACE1, BUB1, CAV1 , CCNG2, CD22, CDIPT, CDK7, CHRM2, CLDN2, CLTC, CMPK1, CSNK1G3, CYP27 A1, DDX18, DGKD, DGUOK, DOCK1, EFNA2, EFNA4, EGLN1, FADD, FGD3, FGF9, FTCD, GAB1, GALT, GMPPB, GNAI1, HAO2, HIBCH, HLA- DRA, HPSE, IDH3G, IL15, ITCH, KCNQ1, LTBP1, MCAT, MECR, MKNK2, MPDZ, N CF1, NCF2, NEFL, NEUROD1, NR1H3, NT5C3, OR10A2, OR10A5, OR13C2, OR2M 7, OR2T34, OR4C15, OR4F5, OR4M1, OR51E1, OR7G3, PAK3, PCK2, PDE11A, P DE1C, PDGFD, PDXK, PER2, PFKL, PGM1, PGS1, PIK3CB, POLR1B, PPCDC, PPP 1R1A, PRDX6, PRKAA2, PRKG1, PRKY, PSEN1, PTPN7, RALA, RASA1, RFXANK, RRM1, SARS2, SKP1, SOCS7, SPTLC2, STK11, STX8, TAS2R9, TMLHE, UBA1, U BE2L6, UCP1, ULK1, VEGFC, WBSCR17, WNT2B, YARS2, CSGALNACT2</p>
Negative_14880	<p>DUT, GK2, IL7, KDR, ACO2, AKR1C1, ALG10, ALG2, ALS2, AMPD3, AOC3, APBB 1, AQP7, ARG2, ARNT, ATG3, ATG7, B3GALT5, BAI1, BUB1, CACNA1S, CACNG2 , CASP7, CCL5, CCNE1, CCR5, CD40LG, CKS1B, CLDN20, CLOCK, CNTF, CSNK2 A1, CXCL3, CYFIP1, DDB2, DGKQ, DHRS4, DPYSL2, DUSP10, EFNB2, ENAH, EN TPD7, EPHB4, FGF6, GALM, GALNT2, GGT5, GRB2, GRIN2C, GSTM2, GUCY1B3, HDAC1, HLCS, HMGCS1, HMGCS2, HMOX1, HSD17B8, IBSP, IL12A, IL17RA, IL 1R2, IL6ST, IL8RB, ITGB5, ITPKB, LCP2, LDHD, LEFTY2, MAFA, MGAT5, NTF 4, OGDHL, OR11H6, OR1M1, OR2G2, OR4D5, OR4K13, OR51A7, OR51I1, OR5J2 , OR5M8, OR6K3, OR6S1, OR7A5, ORC3L, PCYT1A, PDGFC, PFAS, PGAM1, PIGU , PLCB2, PLCD4, POLR1D, PPA1, PPAR, PPP2CB, PRDX6, PRKAA1, PRKAG1, P RKCE, PRODH, PRPS1, PRSS1, PVRL3, RASA1, RDH12, RHOD, SC4MOL, SDHA, S KP2, SLIT1, SLIT2, SMAD1, SMAD2, SPAM1, SPRY4, ST3GAL5, SULT1E1, TJP 3, TMLHE, TUBA1C, UGT2B7, UROS, VAMP1, VDAC1, VKORC1, WARS, WNT1, WNT 5B, WNT8A, YES1, YWHAZ, ZFYVE9, ST6GALNAC5</p>
Negative_14881	<p>A2M, DCT, F2R, GP5, HAL, PXN, SRF, TH, TK1, TNF, ADH1A, ALOX15, ALOX15B , ALPPL2, AMHR2, B4GALT1, CACNA1E, CAMK2B, CASP10, CD40LG, CD46, CD9 9, CDK7, CMPK2, CPS1, CRLF2, CSDA, CYBA, CYFIP1, DDX51, DGKD, DNMT1, D PAGT1, EFNB1, EPB41L3, FABP3, FGF2, GATM, GJD2, GLB1, GNB1, GOT2, HMO X2, HTR2B, IFNA8, IFNAR1, IL1B, IRAK1, IRF3, IRS1, LAP3, MAML2, MAPK8 , MGAT5, MYH9, NCKAP1L, NT5C, OLAH, OR10A4, OR2T29, OR9G4, PARD6B, PD CD1, PDE1B, PDE6H, PHKB, PIAS4, PLA2G6, PLCD1, PNPO, POLR1D, PRKACB, PSEN2, PSME1, PYGL, RASGRP4, RASSF1, RBX1, SARS, SDC1, SELP, SHMT1, S PHK1, ST3GAL2, STX18, SYNJ1, TAS2R48, TBK1, TJP1, TNFSF4, TPI1, TUBA 1C, TYK2, UBE2L6, ULK2, WASF3, WNT5A, ATP6V1E2, TNFRSF13B, TNFRSF6B</p>
Negative_14882	<p>AK5, CGN, ITK, MIF, XDH, AADAT, ACHE, ACVRL1, ADRA1B, ALPL, ATP2A2, BT RC, CACNB2, CAMK2B, CCL23, CCNA1, CD40, CD58, CD74, CLDN16, COL6A2, C OQ7, COX15, CREB3L2, CTSL1, CTTN, CYBA, CYFIP2, CYP11A1, DDOST, DHFR , DLAT, DLL4, DUSP5, E2F2, FARSB, FGF13, FGF7, FLOT1, FLT3LG, FOXA2, G AD1, GMPS, GNAT3, GNB3, GRIA2, GSTM3, GSTO1, HLA- DRA, HNF1B, HSD3B7, IFNB1, IL12RB1, INPP4B, IRAK2, ISYNA1, ITGB4, IT GB6, LAMC2, LDHB, LIFR, MAD1L1, MALT1, MAP2K6, MCM4, NADK, NCAM2, NCO A4, NFKBIA, NKX6- 1, NRCAM, OR10H5, OR10J3, OR10K2, OR13A1, OR1L6, OR2B11, OR2G3, OR4K 14, OR51G1, OR5AU1, OR6N1, OR8H3, OXSM, P2RX5, PDE4D, PDIA4, PIK3C2B , PIP5K1A, PIP5K3, PKMYT1, PLAU, PLXNB2, PLXNB3, PMAIP1, POLE2, PPA2 , PPID, PPP1R3A, PRKACG, PRODH, PRSS2, RBL1, RFXANK, SARS, SCP2, SEMA 3G, SH2D2A, SOD1, SPAM1, SPRED2, ST3GAL6, STK11, STX16, STX2, TAS2R1 6, TBL1X, TCF7, TCF7L2, THBS1, TIAM2, TOMM40, TUBB3, TUBB4Q, UPP1, VE GFA, WASF2, WNT11, WNT5A, WNT6, WNT9B, HLA-DPB1, MAPK8IP2, MAPK8IP3</p>

Negative_14883	CBS, DAO, FAH, FUK, GSN, ID1, JUP, OTC, ACP6, ACYP1, ADIPOR2, ADRA1B, ALDH9A1, APBB1, ARAF, ATP5A1, ATP5B, ATP6VOC, AVPR1A, BRAF, BST1, CCL24, CCNA1, CCNB3, CCR7, CD79A, CDK4, CD01, CEBPA, CHRM5, CKMT2, CLDN19, CLOCK, COL4A1, CYP4F3, DAAM2, DAPK2, DGAT2L4, DHDH, DHX58, EIF4E2, EPHA8, FABP1, FADD, FBXW11, FGF3, FZD8, GALNT1, GNB3, HAGH, HDAC2, HIBCH, IL12RB1, IL12RB2, ITGAL, KAT2B, KNG1, LCMT1, LCMT2, LDHAL6A, LHCGR, LM07, MADCAM1, MAML2, MLYCD, MNX1, MTHFD1, NLGN1, NOS1, NSDHL, OR10R2, OR11H1, OR11H6, OR13H1, OR2L8, OR2M3, OR2M4, OR4C16, OR52A1, OR56A3, OR5L1, OR6Q1, OR8I2, PDE3A, PDE8A, PFKL, PHKG2, PIGO, PIP4K2C, PLCZ1, PLOD2, POLR2A, PPCS, PPP2CB, PROC, PTCH2, PTEN, PYGB, RDH12, RDH16, RETSAT, RPS6KA1, SELP, SEMA4D, SULT2A1, TGFB2, TLN1, TSNARE1, USE1, WBCSCR22, WNT10B, ZAP70, ZBTB16, C1GALT1C1, ST6GALNAC3
Negative_14884	A2M, BTK, C8G, CR1, FYN, HK3, MAX, ME2, NGF, OAT, SFN, ACTA1, ACTC1, ACTG2, ACTN1, ADH1B, ADRA1A, AHCYL1, AREG, ARPC5, ARRB2, ARSA, ASIP, ATF4, ATP6VOB, B3GALT2, B3GAT1, B4GALT5, C1QA, CACNB1, CCL8, CCR3, CDC27, CDH2, CDKN1C, CD01, CES2, COL3A1, CREB1, CSF1, CSF1R, CSNK1G3, CTSL1, CXCR4, DHDDS, DOCK1, DUSP16, ERBB3, FTCD, FZD4, GALK2, GALNT8, GC1, GFPT2, GPX5, GUK1, GYS1, HAAO, HARS, HRAS, IGF1, IGFBP3, IL11, IRS2, ITGA3, ITGA4, JAM3, LAMB1, LAMC2, LEFTY2, MAN1B1, MAP3K12, MCM5, MGAT1, MTHFD1, NAGA, NAT5, NOX3, OCLN, OR14I1, OR2D2, OR2L3, OR5T3, OR6C1, OR8H3, OR9A4, PCYT1A, PFKL, PHGDH, PLD1, PMAIP1, PNPO, POLD1, PPAP2C, PPOX, PPP1CC, PPP5C, PRIM1, PRKY, PROC, PTPN5, PTPRF, PYGL, RASGRP2, RASSF5, RHOD, RUNX1T1, SC5DL, SDC1, SDC2, SELP, SEMA3G, SEMA4G, SESN1, SGPP2, SPRY2, TIAM1, TIRAP, TLR2, TRAF2, TRPC1, TSHB, TUBA1A, TXNDC12, UBE2L3, UCK2, UGT2A1, UGT2B10, UPP2, WBCSCR22, SUV420H2
Negative_14885	AR, CAT, CFD, DAO, FN1, HYI, LTB, ME2, MOS, A4GALT, ACAA2, ACSS2, ADH4, ADH7, AHCYL2, AMPD2, AMY2B, AOC3, ARD1A, ARHGEF2, ATG7, B4GALT2, BMP7, BMPR1A, BTRC, CACNG6, CARD11, CBR3, CCNE2, CD40, CD47, CD01, CFTR, CKS1B, CLDN6, CREB3L4, CSAD, CYP17A1, DDX56, DFFA, DIAPH1, DIAPH3, DLST, DVL1, EDNRA, ENTPD3, FDPS, FGF7, GALNTL1, GARS, HCST, HEXB, HIF1A, HMGCL, HNF4A, HTR7, ICOS, IL10, IL12A, IL7R, IPMK, IRS2, JAK1, KAT2A, LICAM, MAML2, MAP3K3, MCM3, MDH2, MDM4, MICA, MINPP1, MYH6, NAGK, NFYC, NKX6-1, OLAH, OR10G2, OR1L8, OR2L3, OR2V2, OR4A16, OR4B1, OR5AC2, OR5T2, OR6B2, OR6C76, PER1, PHGDH, PIGT, PIK3C3, POLR1D, POLR2C, POLR2F, PPI1D, PPP1CA, PPP1CB, PPP2CB, PPP2R2D, PPP2R5B, PRKAR1B, PRSS3, RALBP1, RASGRP1, RDH8, RHOQ, RPN2, SCLY, SEMA3F, SGMS2, SGPP2, SMAD2, SPRY4, SULT2B1, TJP1, TPI1, TUBA8, UGDH, VEGFC, XYLT2, YWHAH, HLA-DQB1, KIR2DL5A, MAPKAPK3
Negative_14886	C8A, F8, GPI, ME3, ACADL, ACOX2, ACTN2, ALAS1, ANAPC2, AQP7, ARNTL, BBC3, BCAT2, C1QB, C3AR1, CACNG3, CCNA2, CHPF, CHRM2, CYP27A1, CYP2A6, CYP2F1, DCTD, DHCR7, DNMT1, DNMT3A, DUSP5, DUSP7, ENAH, ENPP2, ENPP6, FGF11, FGF13, FGF9, GALK2, GCAT, GFPT2, GNA14, GNAL, GNAZ, GPD1L, GPLD1, GSTM4, GSTZ1, IL4R, IMPA1, INPP5B, INSRR, IRS4, JAK3, KAT2A, LFN1, MARS, MKNK1, MRAS, MTAP, MYD88, MYL7, NADSYN1, NEGR1, NEU3, NME7, NMNAT1, NPR1, NRXN1, NT5C1B, OR10A5, OR11L1, OR2Z1, OR4K15, OR4N4, OR4P4, OR51G2, OR52J3, OR52R1, OR5AS1, OR5T3, OR6Q1, OR7C1, OR7D4, OR8B4, P2RX2, PDE3A, PFAS, PGM2, PIAS4, PIGS, PIGU, PIPOX, PKLR, PRKAR2A, PTPRM, RALBP1, RUNX1, SETD8, SGPP2, SNAP23, SOAT2, SOS2, STK3, TAS1R2, TXNDC12, VEGFA, XYLT2, ATP6V1B2, CACNA2D3, GABARAPL2, HLA-DRB4, HSP90AB1, SERPINE1, TNFRSF1B



Negative_14887	<p>BAD, CFH, F11, GCK, HGF, LPL, NPY, OGT, RET, SMO, TK2, VTN, ACO2, ACTB, A CTC1, AFMID, AKR1C2, AKT1, ALDH1A2, ALDH3A2, ALG11, AMY2A, ANAPC5, A POA2, ARHGEF7, ASPA, ATP6V1H, AVPR1A, AVPR1B, BPGM, C4BPA, CACNG8, C AMK2B, CAV1, CBLB, CCL22, CCL5, CDC42, CDS1, CLDN5, CREB1, CXXC4, CYP 3A5, DCXR, FARSA, FGF17, FLT3, FUT1, FZD8, G6PC, GADD45B, GDE1, GNPDA 1, GRIN1, GSTK1, GTSE1, HBEGF, HNF1A, HSPA2, HTR2C, IBSP, ICAM3, IL11 RA, IL15RA, IL1R2, IL20, IMPDH1, ITGA3, ITGAX, KLRC4, KLRK1, LARS2, L HCGR, LRP5, MADCAM1, MAOA, MCAT, MGST1, MYH1, NAMPT, NLGN1, NOTCH3, O R10C1, OR10G3, OR13C2, OR2B2, OR2B6, OR2T33, OR3A2, OR4K14, OR51F1, OR52H1, OR5AP2, OR7G2, OR8K5, ORC6L, P2RX4, P2RX5, PDE7B, PDXK, PGS1 , PHKG2, PIK3C2B, PIP4K2B, PLA2G2A, PLA2G2F, PLOD1, PLXNB2, POLA2, P OLR1C, PPP1R3A, PPP2R2A, PRKAB2, PRKAG2, PSME2, PTDSS2, RAPGEF3, RO CK2, SFRP4, SLC27A4, SLIT2, SMAD9, SORD, STAT5B, STK36, STX12, STX16 , TBXAS1, TICAM1, TSHR, TUBA4A, UGP2, UGT1A10, UNC5C, VCAM1, WIF1, AA SDHPPT, ATP6V1C1, HLA- DRB3, PAFAH1B3, SERPINE1, ST6GALNAC5, TNFRSF18</p>
Negative_14888	<p>GHR, IL7, LHB, TPR, ACTG1, ACTN2, ACVR2B, ADH6, AKR1B1, AKT3, ALDH3B2 , ALG3, ALPPL2, AMY2B, ARAF, CCL17, CD226, CD247, CDC42, CDK5, CHRM3, CLOCK, CMPK1, CNTNAP2, COQ7, CSAD, CXCL6, CYP2C8, CYP2C9, DHCR24, EF NB3, ENPP3, EPB41L3, EPHB4, EXTL2, FADD, FECH, FLOT1, FUT7, GBA3, GCN T3, GDF7, GMPS, GNAQ, GPD1, GSTA2, HSD11B2, IL3RA, IL9R, IMPA2, INPP5 A, ITGA1, JAK1, KDSR, KIR2DL2, LRDD, LRP5, MAP3K11, MAP3K8, MCM4, MLL T4, MYH6, MYL2, NCF2, NFYA, NT5C3, OR10G2, OR13F1, OR2T2, OR4C15, OR4 K5, OR4S1, OR51V1, OR52D1, OR52K1, OR5AP2, OR5B21, OR5L1, OR5T2, OR6 C1, OR7A5, OR8H3, ORC1L, P4HA1, PANK3, PDE4D, PDPK1, PDXP, PFKFB1, PG S1, PHGDH, PIAS3, PPAT, PPP2CA, PSME2, PTCH1, PTCRA, PTGS2, PTTG1, PY CRL, RASA1, RASGRF2, RASGRP3, RDH12, RPS6KA2, SEMA4B, SGMS2, SOCS2, SOS2, TACR1, TAS2R13, TNFRSF4, TPH1, TPM3, TRADD, TYRP1, UGT1A10, UN C5D, WNT16, ATP6V1B2, CACNA2D3, CTNNBIP1, PHOSPHO1, SERPINE1</p>
Negative_14889	<p>AK3, AMT, CBS, CDA, LIF, SYK, AACS, AADAT, ADAM17, ADCY5, ADH7, ADORA2 A, AKR1D1, ALDH3A2, ALDOB, ASIP, ATP6V1H, BET1, BST1, CACNB1, CADM3, CCL28, CCL5, CCNA2, CD28, CD70, CD82, CDC14B, CERK, CHUK, COX15, CREB 3L4, CSF2RA, CSNK1A1, CSNK2B, CTTN, CUL1, CXCL13, CXCR5, DHDH, DOCK1 , DOLPP1, DPM1, ECSIT, EDA2R, FOXA2, GALK1, GALNT14, GNAI1, GPT2, GRI N2B, GRLF1, GSTA2, GUK1, HRAS, HSD17B2, HTRA2, IARS2, IFNA14, IL1R1, IL21R, IL4R, INPP5B, ITGA4, ITGA7, LAMC2, MAT2B, MGAT3, MYH10, MYH15 , NCF1, NCOR2, NT5E, NTF4, OR10J1, OR11A1, OR1J1, OR1J4, OR2AG2, OR51 I1, OR6Y1, OR7A17, ORC5L, P4HA3, PDE3A, PIGL, PIK3CA, PIP5K3, PLOD2, PNPO, PON1, PON2, PPP3R1, PRDX6, RPS6KA4, SARS2, SEMA3C, SNAP23, SRG AP1, SUCLG2, TAS2R10, TAS2R41, TM7SF2, TRAF6, TUBA4A, TUBB6, ULK1, U PP2, VANGL2, B4GALNT1, HSP90AB1, PLA2G12A</p>

Negative_14890	AR, CDA, CFD, DBH, FAH, GGH, GH2, GK2, RET, TNC, VTN, ADSL, ADSS, ALDH3A2, AREG, ARPC4, ARRB1, ARSE, ATN1, ATP13A2, ATP6VOC, B3GNT4, BMP5, C4BPB, CACNA1A, CACNA1B, CACNG3, CCL15, CCNB2, CCNB3, CD48, CDC25B, CHRNA7, CLCA2, COL4A6, CPOX, CX3CR1, CYFIP2, CYP2C9, DAG1, DVL2, E2F1, EFN1, EPHX2, FABP1, FOXA2, GBE1, GBT1, GFAP, GIT1, GNG3, GPAA1, GRI1, HHIP, HIF1A, IFNA17, IFT57, IL1R1, IMPA1, IRAK2, IRAK4, ITGA3, ITGB6, KRAS, LARS, LDHA, LEPR, LGMN, LLGL2, LRAT, MAD2L1, MAPT, MGLL, MIOX, MTHFD2, MTHFR, MYH1, NMNAT3, NRG2, OR10G8, OR10P1, OR11A1, OR13G1, OR1L3, OR2A2, OR2B6, OR2C1, OR2F2, OR2H1, OR2L13, OR2M2, OR2M7, OR3A1, OR4N4, OR51G2, OR5L1, OR6C6, PAK2, PAPSS2, PARS2, PDE4D, PER3, PFN4, PGK1, PIAS2, PIGL, PIK3R5, PLA2G2F, PLA2G5, POLR2B, PON2, PPA2, PRSS2, PTAFR, PTPN5, PTPRZ1, RDH16, ROCK1, SDHB, SMAD5, SPP1, SPTAN1, SREBF1, ST3GAL5, TAS1R1, TBL1XR1, TGFB1, TLN2, TRPC1, TUBA3C, TUBA4A, UPP2, VARS, YWHA, PLA2G12B, TNFRSF10C
Negative_14891	CTH, DCT, GNS, ID4, ACAD8, ACAT2, ACOX2, ACSM5, ATF4, ATP5F1, BLVRB, BPGM, CACNA1C, CACNA1H, CCL1, CDS2, CLDN16, CNGA4, CSF2RA, CSH1, CSNK2B, CXCL6, CYBA, DCTD, DDIT4, DDX41, DHCR7, DLAT, DUSP4, DUSP5, DVL3, EDN1, ENPP6, EPHA2, FGF9, FM02, FTCD, FUT7, G6PC, GGCX, GIT1, GLB1, GLG1, GNA11, GSTA4, GSTM3, GSTM5, GUCY2F, HMBS, HMGCS1, IDH3A, IL13RA1, IL18, IL1RAP, IL20RA, IL22, ITGAM, ITGB5, JAG1, JAK1, LAMC3, LILRB3, LIMK1, MAP2K2, MAPT, MARS, MCCC1, MEF2C, MGST1, MMP14, MOV10L1, MPZL1, MTFMT, NFAT5, NR4A1, NT5E, NTN1, OR10A4, OR11L1, OR1C1, OR1E1, OR1L6, OR1M1, OR2D3, OR2H2, OR4C12, OR4F6, OR52J3, OR5L1, OR9K2, ORC5L, PER1, PER3, PIP5K1C, PLXNA1, PLXNA2, POLD1, PRDX6, PRPH, SDC1, SDC4, SEMA3E, SESN2, SSH1, ST3GAL2, SYNJ2, TIRAP, TUBB2A, UBE2L3, UCP1, ULBP1, VAV3, VEGFC, WASF2, WNT8A, XYLB, ATP6V1B2, EIF4EBP1, PAFAH1B3, PLA2G12A, SERPINA1
Negative_14892	AK7, C4B, DBT, F12, KIT, MPI, RET, ACAT2, ACMSD, ADIPOR2, AGTR1, ALDH1A2, ALDH3B2, ALDH7A1, ALG3, ALG5, ALPP, ARPC1B, ATP5B, ATP50, B4GALT3, CACNA1H, CCL16, CCNB1, CD40, CD72, CHPF, CLDN20, CLDN8, CNTN1, COL5A3, CPT1C, CSDA, CSF3, CSNK2A2, CYP17A1, CYP2U1, DERL1, DLL4, E2F5, ENPP3, ENTPD2, ERBB3, FASLG, FBP2, FGF12, FGF20, FGF8, FPGT, G6PD, GABARAP, GALC, GALE, GAMT, GDF6, GDF7, GLO1, GP1BB, GSTA4, GUCY2D, GUK1, HCLS1, HEXA, HNF4G, HSD17B7, IFNA17, IKBKKG, IMPA1, INMT, ISYNA1, JAK2, KIR2DL1, KITLG, LAMC3, LDHAL6A, LIPA, LIPG, MAML2, MAP2K3, MAP3K13, MAP3K7, MCCC1, MMP7, MYH13, NCF4, NMNAT3, NTNG1, OR10C1, OR10J3, OR11G2, OR1F1, OR2M5, OR2T2, OR4F17, OR51E2, OR51F2, OR51I2, OR5B3, PAK3, PANK4, PAX8, PDE5A, PFKL, PHKB, PIK3C2G, PLA2G10, PLA2G2F, POLE, PPM1D, PPP2R2C, PSENNEN, PTPRM, PYGM, RPSA, RXRA, SARS, SFRP4, SHC3, SHMT1, SHMT2, SPCS1, ST3GAL3, STEAP3, SULT2A1, TAP2, TOMM40L, TSC2, TUBA3E, ULBP2, UNC5A, VTI1A, WNT7B, WNT8A, XYLT2, YWHAZ, ATP6VOD2, ATP6V1B2, HLA-DRB4, HLA-DRB5, MAP3K7IP2, PRICKLE1, SUV420H1

Negative_14893	<p>AUH, BAX, C7, DAO, DCT, F3, F8, GDA, GP9, IL4, MVK, TFG, AARS, ADSSL1, AKT1, ARNTL, ATP5I, ATP6V1H, B3GALT6, BLNK, BMP8A, BMPR1B, CADM3, CASP7, CCDC6, CCL26, CCND3, CD19, CD40, CD79A, CERK, CHPF, CLCA2, CLDN3, CLTC, COX15, CSF2RB, CSF3R, CSH1, CUL1, CXCL5, CYP3A7, CYP8B1, DGKH, DGUOK, DTX4, DVL2, ENTPD8, EPOR, FADD, FPGT, FUT2, FZD6, GLI1, HARS, HGSNAT, IARS2, ICOS, IKBKG, IL1R2, IL20RB, ISYNA1, ITGAX, LAMA3, LCAT, LDHB, LGMN, MAML2, MAP2K6, MAP2K7, MAP3K5, MCM5, MPDZ, MYH4, NCF1, NKX2-</p> <p>2, NRG2, NT5E, OR11H6, OR1B1, OR1M1, OR2D3, OR2L3, OR2T1, OR2T6, OR4D2, OR4F5, OR4S2, OR51G2, OR51I2, OR51V1, OR52M1, OR52N2, OR52N4, OR5A2, OR8H3, PARD6G, PDE4B, PLCB4, PLCG2, PMM2, POLR3H, PPP2R2C, PPP5C, PSPH, PTPN7, RDH12, ROCK2, RRAS2, SAT1, SHC1, SKP2, SLC9A1, SMURF2, SORD, STAT2, SULT1A2, TGFBR1, TGFBR2, THBS3, TM7SF2, TP53, TPM3, TUBA1C, TYMP, WNT6, GABARAPL1, HSP90AB1, PPARGC1A, TNFRSF10D, TNFRSF18</p>
Negative_14894	<p>AR, CBS, CKB, DBH, DCC, EZR, GPT, HK1, NF1, STS, AADAC, AADAT, AASS, ABLIM1, ACLY, ACOT12, ACTN2, ACY3, ADORA2A, ADRA1D, AK3L1, ALDOC, ALOX15B, AMDHD1, ARD1A, ARG1, ARRB2, ATIC, AXIN2, B3GNT5, BACE2, C4BPB, CCNG2, CCR6, CFLAR, CHRM1, CLCA4, CLDN22, CNTNAP1, CSDA, CX3CL1, DDX55, DERL1, DHRS9, DIAPH2, DLAT, DLST, DNMT3B, DUSP5, E2F5, EPHA6, FDF1, FECH, FUT9, GADD45G, GALNT13, GNPAT, GNRH2, GSTM3, HADH, HPSE2, IGF1, IL29, ITGA2, ITGAE, ITPA, JAM3, KCNB1, LIPA, LIPC, MAD1L1, MAP3K3, METTL6, MTHFR, OR10V1, OR1S1, OR2T12, OR4A15, OR4F17, OR51B2, OR51I2, OR52N5, OR5AU1, OR6C75, OR8B4, OR8S1, OR9G1, PAK7, PAX6, PDCD1, PDE10A, PIAS4, PIK3R2, PIP4K2A, PLA2G2D, PLAT, POLR2C, PPM1B, PPP2R2B, PRKX, RELA, SARS, SCP2, SEMA4F, SESN3, SHC2, SHISA5, SIPA1, SMC1B, SPRY4, TAS2R41, TBL1Y, THBS3, TRIP10, TUBA4A, UGCGL2, UMPS, UPP1, WIF1, WNT16, YWHAQ, HSP90AA1, ST6GALNAC3, TNFRSF10A, TNFRSF17</p>
Negative_14895	<p>ADC, AK2, CFH, CGA, CR2, HPD, KIT, LCK, NPL, PLG, RPE, SCD, SI, ACAT2, ACSS2, AKT3, ALG1, ALG10, ALG2, ALG5, APOA2, ARHGEF1, ARSB, ATG12, ATP6V1D, B4GALT2, BCL10, BDH1, BLVRA, CACNA1D, CAPN2, CCND2, CD38, CD44, CD79B, CDH4, CES2, CRY2, CSNK1G1, CXCL10, CYP3A43, DDX18, DGKE, DGKZ, DUSP2, DUSP8, ECSIT, ENPP6, EPHX2, ERBB3, FCGR2B, FECH, FGF3, FMO4, GALNTL1, GIT1, GRIA2, HES1, HSD3B7, IL12RB2, IL15, IL22RA1, IL3RA, INPP5A, JAM2, KRAS, LDHB, LTB4R2, MBL2, METTL6, MTAP, NCF1, NCF2, NCR3, OR10H1, OR10J5, OR10T2, OR1I1, OR2W1, OR3A2, OR4A5, OR5I1, OR6N1, OR8D1, OXSM, P2RX2, PLXNB1, POLR2A, POLR2I, PRKX, PSPH, PVRL1, RAP1B, RHOQ, RPRM, RPS6KB2, SEMA3B, SNAI1, SORBS1, STAT1, TAS2R40, TBK1, TNFSF8, TSNARE1, USE1, CSNK1A1L, HLA-DPA1, HLA-DQA2, HLA-DRB5</p>
Negative_14896	<p>CAD, CKB, DAO, F11, IL9, LCK, MTR, PVR, TYR, WAS, ACADL, ACMSD, ACSM1, ACTA2, ACVRL1, AGPAT1, AGXT2, AK3L1, AKR1C2, ALDH1A3, ALDH2, ALDH5A1, ALDOA, ALG5, AMD1, ARPC1A, ARPC3, ASMT, ATP4A, ATP6AP1, BCKDHA, BCL10, BDH1, BMP8A, CCND3, CDC23, CFLAR, CHRM1, CNTN2, CSDA, CTNNA2, CYP11A1, CYP2C9, CYP2F1, DDX54, DERL1, DOT1L, EHMT2, ENTPD8, EPB41L2, EPHB3, ESAM, ESPL1, F13B, FGD3, FLOT1, FZR1, GALNTL1, GANAB, GFPT1, GGCX, GIT1, GLUD2, GNRHR, GSTO1, HAAO, HHEX, HNF4A, HSD17B1, ICOS, IL10RA, IL1B, IL29, INPP5A, ITGB5, ITPKB, LAMB1, LAMB4, LAMC2, LEFTY1, MAT1A, MAT2B, MMP7, MTHFD1, MYH1, NCAM2, NCF2, NKD2, NOS1, ONECUT1, OR10A5, OR10AG1, OR10H3, OR13G1, OR2A12, OR2T4, OR4K17, OR51B2, OR52N4, OR52W1, OR5P3, OR8H3, PAFAH2, PANK3, PHKA2, PIGB, PIGO, PIGX, PIP5K3, PLA2G2A, PLOD2, POLE2, PRKACA, PRKCI, PRPS2, RAPGEF1, RASGRF1, ROCK1, SDHC, SELPLG, SRGAP2, SRGAP3, SYNJ2, TAS2R1, TAS2R9, TNFSF11, TPH2, UNC5D, WNT16, WNT5B, XYL, YWHA, ZAP70, ATP6V1B1, MAPKAPK2, MAPKAPK5, PAFAH1B3, SUV420H2, TNFRSF10C, TNFRSF12A</p>

Negative_14897	<p>BAD, C4B, DBH, EDA, FH, HGF, ME3, SPN, ACTN2, ALAD, ALDH3B2, ALG11, ALG3, AMPD2, AOX1, APPL1, BDKRB1, BMP8A, C7orf16, CACNA1C, CARS2, CCL17, CCL24, CCL27, CCL5, CCR7, CDC14B, CDC6, CHST11, CLTA, COQ6, DFFB, DGAT2, EFNA1, EFNB2, ELK4, ENAH, ENTPD6, F13A1, FBP2, FCGR3B, FGF2, FOXA3, GALNT9, GIT1, GLS2, GMPPA, GMPPB, GNG12, GOSR2, GRIN2C, GRIN2D, GYS2, HADHB, HAGHL, HRH1, HSD11B1, HTR2A, IL12RB2, IL22, JAG2, LTB4R2, MAP2K2, MAPK12, MDH1, MLYCD, MYD88, NFAT5, NKX3-1, NMNAT2, NR5A2, NRP1, NUDT12, OCRL, OR10Z1, OR2T4, OR8H1, OR8K5, OR8U1, OR9I1, OXTR, PAFAH2, PAICS, PANK1, PCCB, PDIA4, PECAM1, PGK2, PIK3C2G, PIK3R2, PIP5K3, PLOD1, POLR3H, PRKCE, PRKCH, PTEN, RBX1, RDH5, SEMA3B, SENP2, SETD2, SKP2, SNAI1, SOS2, SPRY4, SSH2, STK11, TLR5, TM7SF2, TNFSF12, TRAF1, TSTA3, TUBB, TUBB2A, UGT2B7, VAV3, XCR1, ZBTB16, ZNRD1, AASDHPPT, ATP6V0A1, ATP6V1C1, ATP6V1G3, HLA-DPA1, MAPK8IP1</p>
Negative_14898	<p>ADO, DLD, EBP, FGB, GNE, OAT, ACACB, ACADSB, ACOT12, ADH6, ADSL, ADSS, ALDH1B1, ALDH3A1, ALG2, AOC3, APH1A, ARNT2, ARPC2, ASAH1, ATP5B, ATP5E, ATP5I, BAAT, BIRC3, CACNA1I, CACNB1, CAV1, CCL21, CCNE2, CERK, CHIA, CLDN18, COL3A1, CPT1B, CREB3L2, CXXC4, CYP7A1, DDX47, DDX51, DGA T2L4, DGKQ, DHRS9, EDN1, EFNA3, EGLN3, EHMT1, ELK1, ETNK2, FABP4, FADS2, FGF3, FGF4, FRAT2, GLS2, GNAO1, GNPDA1, GNRHR, GRB2, GRHR, HRAS, HSD17B1, IDUA, IFT57, IGFBP3, IL22RA1, INPP5A, ITGA5, KCNJ11, KIR2D S5, KRAS, LAMA3, MAGI1, MAOB, MASP2, MGST1, MITF, MLLT4, MYH13, MYH7B, NAGA, NARS, NAT2, NFKB2, NOTCH2, NT5C1A, OR10A3, OR13D1, OR1A1, OR1L8, OR2H1, OR4K17, OR4K5, OR51E2, OR5K1, OR5R1, OR6X1, ORC1L, P2RX6, PARVG, PDE5A, PDGFRB, PER3, PFN1, PIAS2, PIGF, PIPOX, PKMYT1, PLA2G4A, PLA2G5, PLXNA1, POLR3A, PPCS, PPP2R2D, PPP3CA, PPP5C, PRPS1, PTDS S2, PTPRF, RAC1, RFXAP, SEMA3F, SEPHS1, SGMS2, SOCS4, SPRY2, ST8SIA5, TCF7L1, TGDS, TP73, TUBA1B, TYK2, UBE2L3, ULBP3, XYLT2, YWHAZ, ATP6V1E1, KIR2DL5A, PNLIPRP1</p>
Negative_14899	<p>BAX, C1S, C8G, EDA, ME1, RFK, SFN, ACSL1, ACSS2, ALDH1B1, ALG10B, ALOX12, AMPD2, ARPC4, C3AR1, CAMK2G, CASP3, CAV2, CCL4, CD3E, CDH4, CHRM3, CLCF1, CLDN14, CMPK1, CNGA3, CREBBP, CTPS2, CYP2C9, CYP4F3, DDX4, DGKQ, DTX3, ENTPD3, EPHA2, EPHA7, FMO1, FOXA2, FOXO3, FZD10, G6PC, GAB1, GLG1, GNA14, GOT2, GRPR, GUCY2F, HAAO, HAGH, HHEX, HLA-G, HPSE2, HRH2, ICAM1, IL10, IL11RA, IL13RA2, IL3RA, IRAK2, LMO7, MAN1B1, MAPK1, NCAM1, NFKB1, NODAL, NOTCH1, NRCAM, ONECUT1, OR10C1, OR10G3, OR10X1, OR11G2, OR13C4, OR1E1, OR1J1, OR1J4, OR2B11, OR2B6, OR2M7, OR2T1, OR4F17, OR4K1, OR4K15, OR52B4, OR5AC2, OR5D18, OR5T2, OR7G1, OR9G1, PCCB, PCYT1B, PDE4D, PDGFRB, PEMT, PFKP, PGK1, PISD, PKMYT1, PLA1A, PLCB1, PLCD4, PLOD2, PLXNB1, POLA2, POLD1, PPAP2C, PRKAG2, PRKAR1B, PRKCG, PTK2, RASA1, RFNG, RRM2, SEMA4B, SETDB2, SGPP2, SH2D2A, SMAD1, SMARCA2, SRGAP1, STAT2, TAS2R4, TAS2R9, TKTL2, TRAF1, TRAF6, TUBB2B, UBE2L3, UNC5B, UROC1, VAMP1, WEE1, WIF1, WNT7A, YWHAZ, YWHAZ, ATP6VOD1, ATP6V1C2, EIF4EBP1, HLA-DQA2, MAPKAPK2, PRICKLE2, SERPINA1, ST6GALNAC3, TNFRSF10A, TNFRSF11B, TNFRSF13B</p>

Negative_14900	C8G, CFH, DLD, GH2, GPT, KDR, LPL, ME1, MIF, NF1, RDX, TNN, AACS, AASS, ABL2, ACADM, ACTN1, ACTN2, ACY3, ALDH5A1, ALOX15, ARHGEF2, ASIP, ATG12, ATP5B, ATP5D, ATP6VOB, AVPR1B, BAIAP2, BCL2, BIRC3, BLNK, BPGM, BST1, CACNA1S, CACNG4, CACNG6, CD80, CDC2, CDC25C, CDK4, CDKN2D, CHPT1, CLDN14, CMBL, COL6A1, COQ5, CREBBP, CSF2RB, CXCL13, CYP2B6, CYP3A7, DGKZ, DOLPP1, DUSP14, EFNA1, EPB41, ETS1, FADD, FASN, FGF18, FUT3, GALM, GAPDH, GLO1, GNAL, GPD2, GSTZ1, GTSE1, GUCA1A, GUK1, IL18, IL20, IL22RA2, IL3RA, IMPDH1, INPPL1, IRF3, ITGA6, ITGA7, ITGA8, ITGB7, LTBR2, LTBP1, MAP2K3, MGAT2, MPZL1, MTHFS, MYH4, NAGK, NCR3, NOD1, NOTCH1, NT5C1B, NUMBL, OR10AG1, OR10H3, OR10V1, OR13C5, OR1G1, OR4C12, OR4N4, OR4X1, OR5J2, OR6N1, P2RX6, PDX1, PIAS1, PIAS4, PIGN, PLA2G4A, PLCG1, PPAP2A, PPP2R5E, PTDSS2, RAPGEF3, SEMA4G, SLC2A4, SORD, SPRED1, SULT1E1, TAS2R13, TBL1XR1, TFPI, TNFRSF8, TRADD, TRAF3, TSTA3, TXNDC12, VAMP1, WARS2, WNT11, ZAP70, SERPINF2, TNFRSF10A
Negative_14901	A2M, ABO, CFD, CGA, CKM, DAO, RET, TK1, TPO, TPR, ACLY, ACOX3, ADRA1B, ALDH3B2, ALG12, ALG8, APOE, ARHGEF6, ARSA, C3AR1, CACNA1I, CADM3, CCL28, CCNH, CD59, CHAD, CHUK, CLDN14, CLDN18, COQ3, CTSL1, DEGS1, DHRS3, DOLPP1, E2F3, EFNA4, FCGR3A, GNA11, GRM1, GUSB, HLA-C, HLA-DRA, HLA-G, HSD17B2, HTR5A, IDI2, IL23R, LAMA4, LAP3, LARS, LCMT2, MAD2L1, MCA T, MECR, MGAT5, NCF1, NFATC2, OR10A2, OR10AD1, OR10X1, OR14J1, OR1J4, OR1N2, OR2M5, OR2T34, OR2Y1, OR4D5, OR4N4, OR52A1, OR52N2, OR5AK2, OR5T3, PDPK1, PER3, PGAM4, PGK1, PHGDH, PI4KA, PIAS1, PIK3CG, PITX2, PLA2G2A, PNLIP, POLR1A, POLR2E, POLR3H, PPP2R5D, PRKACG, PRKAR1A, PRNP, PTPRB, PTPRM, RALBP1, RUNX1, SCLY, SMAD3, SOAT1, SOAT2, SSH2, ST3GAL1, TNFSF10, TP53, TPK1, UPP2, PLA2G12B
Negative_14902	C8G, CTH, FST, JUP, LCT, LEP, NF1, NOG, SFN, SRF, UBB, ACPT, ADRA1A, ADRA1D, AKR1C1, ALDOC, ALPP, ANAPC1, ARPC2, ASIP, ATF2, ATP50, B4GALT5, BLVRA, BUB1, C4BPA, CACNG2, CCNA1, CCR8, CLDN17, CLDN2, COL4A1, CSF2RB, CSNK1E, CTNNA3, CYBB, DHDH, FLT4, FMO3, GALNT2, GALNTL2, GCLC, GFPT2, GMPR, GNA14, GNAQ, HAGH, HARS2, HIBADH, HLA-C, HLCS, HSD3B2, HSPA8, IFNK, IL13, INPP5B, IRAK1, ITGB1, LEFTY1, MAML1, MAML2, MAOA, MAP3K1, MCCC1, MLYCD, MRAS, MYL7, NFE2L2, NLGN2, NPR1, NSD1, OR11H6, OR2T12, OR2V2, OR4E2, OR4F4, OR52E2, OR52E4, OR5L1, OR6B3, PAX8, PDE9A, PLOD2, PPP3CB, PRKAR2B, PSEN1, PSEN2, PTGS2, QARS, SLC25A4, SMPD2, SRD5A1, TAS2R40, TNFSF18, TNXB, TSC1, TSHB, TUBA1C, UBE2L6, ATP6VOA4, EIF4EBP1, HSP90AA1, MAPK8IP3, SERPINF2, SERPING1, ST6GALNAC4
Negative_14903	GAA, IVD, JUN, KIT, PAH, PML, A4GALT, ACO2, ADH6, AKR1A1, ALG5, ATP12A, ATP6VOB, B3GALT1, B4GALT6, BCKDHB, BDH2, CADM1, CCNG2, CCNH, CD36, CD55, CDH5, CDK6, CDKN1C, CHIA, CHRM1, CHST11, CLDN4, CSNK1D, CYP2A7, DAPK2, DFFA, DFFB, DIAPH3, DVL2, E2F5, EI24, ENPP2, EPHA6, ERBB2, FASLG, FASN, FGF22, FLT1, FOXO3, GATM, GNAI3, GP1BA, GUCY2F, GUK1, HGSNAT, HIBCH, HMOX1, HSD17B7, IDH1, IFNW1, IL11RA, IL17RA, IL8RA, ITGA3, LAMC3, LRP6, LTC4S, MAP3K12, MAP3K2, MAPK12, MAT1A, MGAT1, MGAT4A, MGAT4B, MMP1, MPP5, NUDT2, OR10G2, OR2A12, OR2G2, OR2H2, OR4C16, OR4N4, OR51L1, OR51S1, OR52I2, OR52R1, OR5A2, OR5B21, OR6C1, OR6M1, PI4KB, PIGB, PIK3C2G, PIP5K1C, PMM2, POLR3G, PPP1R3B, PPP1R3D, PRKY, PTGES, PTPN5, PTPRM, PVRL3, RASGRF1, RRM2B, SAT1, SENP2, SLIT2, SPP1, SPRY1, SUCLG2, TCF7L1, TICAM1, TLR5, TRAF6, UBE2L3, UGT2A1, VAMP4, YKT6, ATP6V1B1, CACNA2D2, CSNK1A1L, HLA-DRB3, TNFRSF11A, TNFRSF14, TNFRSF6B

Negative_14904	CDA, DBT, EGF, FES, FGB, ITK, SCD, ACSS3, ADH7, ALG3, APH1A, ATG12, B4GALT6, BACE2, BCKDHB, BET1, BUB1B, CACNA1D, CAMKK1, CCL25, CCL28, CCR4, CD59, CDC6, CDK5, CLCA2, CLDN11, CSNK1A1, CSNK1G1, CSNK2A2, CXCL1, CXCL9, CYP11B2, CYP2E1, CYP2F1, DKK2, E2F4, EFNA1, ENTPD4, EXT2, ERTL3, FCER1G, FDFT1, FECH, FGF21, FSHB, FUT1, FZD3, FZD4, FZD8, GALNT13, GALNT2, GANC, GART, GNMT, GNPAT, HADHB, HPSE, HSPB1, HYAL2, IFNA8, IL6ST, INPP1, INPP4B, LRAT, MADCAM1, MAFA, MAP2K6, MAP3K14, MAPK3, MAT2B, MEF2C, MGAT5, MIOX, MKNK2, MNX1, MTHFD1, MYH9, NFASC, NQO1, ONECUT1, OR10A5, OR13F1, OR1G1, OR1Q1, OR4K13, OR4N4, OR51I1, OR51Q1, OR52E2, OR52I1, OR52J3, OR6C4, OR7C2, OR8D2, OR8H2, OR8J1, P2RX6, P4HA3, PAPSS1, PARVG, PCK1, PER3, PIGO, PIK3C2G, PLK1, PPCDC, PPP1R3B, PPP2R5A, PSME2, RCHY1, RDH16, RELB, RPS6KA1, RPS6KA3, SHC2, SHC4, SLC25A4, SMURF2, SOAT1, STX10, SUV39H2, SYNJ1, TAS2R16, TAS2R7, UROD, VEGFA, WHSC1L1, WNT3, WNT9A, WWP1, XYLT1, B4GALNT1, CACNA2D4, CSGALNACT1, CSGALNACT2, MAPK8IP2, MAPKAPK2, ST6GALNAC6, TNFRSF11B
Negative_14905	F2, IL4, IL6, LCT, MIF, SMO, SPN, ACVR2B, ADAM10, ALG1, APBB1, ASS1, AXIN2, BCKDHA, CACNA1C, CACNA1F, CASP10, CCL13, CCNE1, CD74, CDH1, CLDN19, CPS1, CYP2A13, DAD1, DDX19A, DUSP7, DVL3, ENTPD2, EPHA5, EPHX1, EPRS, FGF18, FIGF, FLT3, FMO1, FUT2, FUT9, GABARAP, GALNT3, GUCY2F, HTRA2, IFNA8, IL13RA2, IL1B, INMT, ITGAX, JAG2, KIR2DL3, KIR3DL3, LAMA3, LRP6, LTBP1, LYZL1, MAD2L1, MAFA, MAPK12, MARS2, MCEE, MDH1, MMP14, MTHFD2, MYD88, MYH7B, MYL7, MYLK2, NCK1, NEU3, NME6, NRXN3, NSD1, NT5C3, OR1C1, OR1L1, OR1L4, OR1L8, OR2A25, OR2A4, OR2D2, OR2K2, OR2T11, OR3A3, OR4D9, OR4F4, OR51A4, OR51L1, OR5B3, OR5D16, OR5H6, OR6M1, P2RX7, PDE6H, PEMT, PGK2, PIGL, PIGQ, PIK3C3, PIK3CB, PKLR, PKMYT1, PLCB4, POLR3D, PPCS, PPM1B, PPP1R3D, PRKACG, RAPGEF1, RENBP, RFXAP, RHEB, RPS6KA3, SAT2, SDHD, SGPP2, ST3GAL4, STK36, TBK1, TCF7L1, THBS2, TPH1, TUBB2B, TUBB3, UBE2K, UGCGL1, UROS, WASF2, WNT11, YOD1, YWHAH, ATP6V1C2, CTNNBIP1, PAFAH1B3, PDCD1LG2, PRICKLE2, SERPINA1
Negative_14906	DBH, DLD, EDA, F10, FES, HGF, IL2, ITK, ME1, PGF, ABLIM1, ACADS, ACPP, ACVR1B, ADRA1B, ADRB2, ALG8, APOC3, ATP6V1H, BIRC5, BST1, CANT1, CD40, CD58, CDH1, CDK6, CLOCK, CLTCL1, COQ6, CPT1B, CSF2RB, CXCL1, CYP11B2, CYP26B1, CYP2D6, DAAM2, DGAT2, DNMT3L, DUSP7, E2F5, EHMT2, ENTPD7, ENTPD8, FARS2, FASLG, FGF12, FGF2, FSHB, GALNTL5, HAAO, HLA-F, HTR6, HYAL1, IL10RA, IL1A, IMPA2, KIR2DS4, LIPC, LRP5, MGAM, MGAT5, MGST1, MMP7, MPST, MTHFR, NAT2, NCF4, NEFH, NFAT5, NOS3, OR1F1, OR1L1, OR2B6, OR2L2, OR2Z1, OR4K14, OR4M1, OR51B6, OR51Q1, OR5C1, OR7C2, OR9G1, PAK2, PIK3R4, POLE, POLR3K, PRKACB, PTDSS2, RAP1B, RFX5, RPSA, RUNX1T1, SEMA4F, SLC2A4, ST3GAL3, ST8SIA5, STK36, TAS2R60, TLN1, TLR9, UPP2, VEGFA, YWHAZ, ATP6VOE1, HSD17B12, MAP3K7IP2, MAPKAPK2, ST6GALNAC1

Negative_14907	<p>AK3, AK5, DCT, GGH, GK, KDR, MET, PGD, PRL, TYR, XDH, ACADSB, ACSL6, ACTB, AKR1A1, ALS2, ANAPC10, APOE, ASAH1, BMP5, C1QA, CACNA1E, CACNB3, CACNG1, CCNH, CCR4, CD247, CD28, CD72, CD80, CHPT1, CHRM2, COL1A1, COL2A1, CSNK1G2, CUL1, CXCL11, CYP11B1, CYP27A1, DAAM2, DHX58, DNMT3A, DNMT3L, DOT1L, DUSP8, EFNA5, EPB41, EPHA1, F11R, FASN, FGF10, FLOT2, FUT3, FUT5, GADD45G, GALK2, GALNS, GFPT2, GGPS1, GNRH2, GRIA1, GSTA5, HPSE, HSPA8, IDH1, IL13RA1, IL24, IRAK4, ITGAL, ITGB3, MAD1L1, MALT1, MAP3K7, MAP4K3, MAPK9, MDH2, MLLT4, MLYCD, NFYA, NME7, NRXN2, OR10G2, OR10K2, OR14I1, OR1J4, OR2A5, OR2G2, OR2V2, OR4C12, OR4C15, OR4F17, OR4K14, OR6C6, OR6K3, OR6N2, OR9A4, OXTR, PAPSS1, PARD6A, PDE4B, PLAU, PLD2, POLR1C, PPARG, PPP2R1A, PPP2R2D, PRKCQ, PROS1, PTTG1, PVRL1, RPS6KA4, RPS6KA6, SCD5, SDC2, SDC3, SETDB2, SFRP2, SHMT2, SLC25A6, SNAP25, SOCS3, SPP1, ST8SIA5, STX18, SUOX, TJP3, TLR4, TUBA4A, UGT2A1, UMPS, UPB1, VASP, WNT3A, WWP2, ZFYVE16, ALDH18A1, B4GALNT1, MAP3K7IP2, SERPIND1</p>
Negative_14908	<p>MTR, NOG, PRL, WAS, ACAT2, ACO2, ACTG2, ADH1A, AKR1A1, ARHGAP5, ARPC1B, ARRB2, ATP2A3, ATP5G2, ATP6V0B, AXIN2, B3GAT2, BUB1, CALML5, CCL21, CCL4, CDKN1B, CLDN20, CNTN2, COL1A2, COL4A2, CREB1, CSNK1E, CSNK2A2, DNMT1, DPYD, EDN1, EPHB3, EPHX1, EPOR, FCGR2B, FZD10, GADD45A, GALK1, GPD1, HMBS, HMGCR, HTR5A, IL5RA, IL6R, IMPA2, INPP1, IQGAP3, ITGB3, ITGB7, LGMN, MAP3K1, MCM5, MYH11, NANS, NEU2, OR10G8, OR10X1, OR2A2, OR2M5, OR4A16, OR4S2, OR4X1, OR5D16, OR5I1, OR5M8, OR6F1, OR7D2, OR7G3, OR8K1, PAICS, PDGFRB, PDX1, PER1, PER2, PFN1, PIP4K2A, PIP5K1A, PISD, PLCD3, POLR2A, PTCRA, PYGM, RASGRP2, RPS6KA1, SEMA4B, SFRP5, SPRED1, SUV39H2, SV2B, TAS2R1, TAS2R49, TUBB1, UGT8, VAV1, ATP6V1E1, PAFAH1B3, SERPINF2, ST6GALNAC6, TNFRSF17</p>
Negative_14909	<p>CGA, DAO, DHH, IL8, PGP, ACSL3, ACTA1, ACVR1, ADCY8, AKR1C1, ALAS2, ALOX5, ARG2, ARHGEF1, ARSA, B3GAT3, BLNK, CCR5, CDC23, CDKN1B, CFTR, CHSY1, CISH, CLDN5, CLTC, COL4A1, CRKL, CTF1, CTPS2, CYP2F1, CYP3A5, DCSD, DDX18, DGKI, DHRS4L2, DOCK1, DTX3, EIF4E2, ENPP6, EPHX2, FABP3, FGD1, FGF17, GALNT12, GART, GCAT, GIT1, GJA1, GLUD1, GNA13, GSTT1, H6PD, HADHA, HSD17B4, IL13, IL15, IL28B, INPP5A, ITGA7, KARS, LIFR, LIPT1, LYZL1, MAPK14, MICA, MKNK1, MTFMT, NEUROD1, NFASC, NT5C1B, NT5E, OR2C3, OR2D2, OR2M3, OR2T33, OR4B1, OR4D2, OR4K2, OR51B5, OR52A5, OR52N2, OR5AC2, OR5C1, OR5T1, OR8B8, P2RX7, PDCD1, PDE8A, PDK1, PDX1, PECAM1, PGK2, PIAS4, PIGO, PIGS, PNPO, POLR2F, PPP2R5A, PRKAB1, PRKAG1, PRKCA, PSME1, PTPN5, PVRL3, RARS, RBL2, RELA, RPS6KB1, SDHC, SEMA4D, SLC25A5, SMAD9, SPTLC2, STEAP3, TAS2R7, TAS2R9, UCK2, UGDH, UROS, WIF1, WNT16, WNT2B, YES1, ATP6V1G2, PHOSPHO1, PNLIPRP1, SERPINA5, TNFRSF10B</p>

Negative_14910	<p>AMH, BCR, BTK, CBL, GGH, GSS, IL5, KDR, RDX, SRM, TNC, ACADS, ACOT11, AC OX1, ACSM3, ADIPOQ, ADIPOR2, AHCY, ALG3, ALG9, ALPPL2, APBB1, ARRB1, ATF4, ATG3, ATP6AP1, BAAT, BCKDHA, BDH2, CACNA1G, CARS, CCL1, CCR9, C D38, CLDN7, CPT1B, CRLS1, CSNK1G1, CTNNB1, CXXC4, CYP2A7, DDHD1, DHC R24, DHFR, DLAT, DPM3, DRD1, ELK4, EPHB2, EPHX2, F2RL3, FGF12, FGF13, FZD2, GANAB, GCDH, GLI1, GLI3, GMPR2, HHIP, HLA- C, HSD17B3, HSPA2, ICAM2, ICAM3, IFNA2, IL10, IL17RA, IL17RB, INPP4A , IRF9, ITGA6, KIR2DL1, KIR2DL3, LYZL1, MAN2A1, MAP4K2, MCM2, MGST1, MNX1, MYD88, MYL9, NANP, NEUROG3, NFATC3, NFYB, OCLN, OR10A3, OR10K2 , OR13C5, OR1D2, OR1G1, OR2G6, OR2H1, OR4K5, OR4Q3, OR51D1, OR52A5, O R52B6, OR52E8, OR5L2, OR6B3, OR8H2, OR9K2, PECAM1, PFKP, PGM1, PIAS1 , PIAS2, PIP5K1A, PLA2G6, PLAU, POLD4, PRSS2, PSME2, PTK2, PTPN11, PY CR2, RDH5, SETD1B, SLC27A4, SLC27A5, SMAD6, SMPD4, SNAI2, SSH1, STT3 B, STX1A, STX1B, SULT1A4, TAS2R40, TNFSF11, TNFSF8, TNXB, TRAF1, TUB B4, UCK1, WNT2B, YES1, YWHAE, YWHAQ, ATP6V1C1, MAPKAPK3</p>
Negative_14911	<p>AK1, CBL, EDA, ILK, KMO, LPO, SP1, TNC, TXK, ACADS, ADH7, AGPAT2, ALG1, ARHGFE7, B3GALT4, B3GNT3, B3GNT5, CACNA1D, CADM1, CCND1, CCND3, CCR 1, CCR9, CD22, CDC7, CDH1, CLDN4, CLTCL1, CREB5, CXCL11, CYP26A1, DEG S2, DERL1, EARS2, EDN1, ENO1, ENTPD6, FGD1, FGF17, FGF4, FSHR, GAL3ST 1, GBE1, GCNT4, GMPR2, GSTA5, HAP1, HGSNAT, HTR5A, IFNA5, IL15RA, IL2 8A, INPPL1, IRF5, KAT2A, KLRC2, KLRC3, KRAS, LAMB3, LLGL2, MAP3K7, MA PK1, MCCC1, MPST, NME4, NOTCH1, NRP1, NTRK2, OR12D3, OR1K1, OR2M2, OR 2M5, OR5L1, OR5M8, OR6C74, OR7C2, OR8J3, PCYT1A, PGAM4, PHKG2, PKMYT 1, PLA2G2F, POLD3, POLR3G, PPAP2B, PPP2R5B, PRLR, PROC, PROS1, PSPH, PTPN5, RAD51, RPS6KB1, SC4MOL, SEMA3B, SFRP2, SHC3, SMAD9, TCF7L2, T JP1, TMLHE, TSTA3, VANGL2, WARS, YWHAQ, ATP6V0A4, CACNA2D4</p>
Negative_14912	<p>ADA, C4B, C5, C7, CD6, FH, GLS, LAT, MET, SCD, ACAA2, ACSM3, AGPAT3, AGR N, ALDH3B1, AMY2B, ANAPC5, ARHGAP5, ARPC5, ATP5G3, ATP5H, ATP6V1A, B 3GALT5, B3GNT2, BAAT, CASP10, CCL21, CCL23, CCL24, CCL4, CDC25A, CDK 4, CHR1, CLDN1, CLDN14, COASY, COL2A1, CXCR5, CYFIP1, CYFIP2, E2F1, E FNA5, ELK1, ENO2, ESAM, FGF3, FLOT2, FMO3, FUT3, GALE, GALNT5, GDF5, G DF6, GGT1, GLI3, GMPPA, GPAM, GYS1, HLA- C, HPSE2, HSD11B1, HSD17B2, HTR7, IL1R2, ITGA9, ITGAL, KAT2A, KIR3DL 3, KLRC1, LAMA4, MTHFD1, MTMR2, MTMR6, MYH4, NAT5, NEUROD1, NPAS2, NR 5A2, OPLAH, OR10K1, OR10T2, OR11H4, OR13C4, OR14A16, OR2B6, OR2T10, OR4M1, OR6F1, OR7G2, OR8H3, PCYT1B, PDE8B, PDXK, PFKFB1, PFKFB2, PIK 3R3, PIP4K2C, PIP5K1B, PLCB3, PLCD1, PLXNB1, POLR3K, PPP3CA, PRIM2, PRKCH, PVRL4, PYGM, RGS3, RHOQ, ROBO3, RPS6, RRAS2, RXRB, SETDB2, SGP P2, SH2D1B, SLIT1, SMPD1, SOCS7, SPHK2, TGFB2, THBS2, TKTL2, WASF3, W NT6, YWHAG, ZAP70, CACNA2D4, SERPINA5, ST6GALNAC3, TNFRSF11A</p>
Negative_14913	<p>AK7, CAD, CEL, CGA, DCK, GH2, ME2, SMS, TK2, ACTN4, AK3L1, AKR1B1, ANAP C5, ARHGAP5, ATP5E, ATP6V0C, BCAT1, BIRC5, C5AR1, CCL8, CCNE1, CCR1, CDC7, CDIPT, CDK5, CLDN16, CNTF, CTNNB1, CYP1A2, DAPK1, DDX47, DGAT2 L4, DNMT3A, ENTPD2, ENTPD5, FBP1, GADD45A, GANAB, GCAT, GDE1, GDF6, G STA3, HIBADH, HPSE, HRAS, HSD17B3, HTR7, IFT57, IL12B, IL13, IL18, IL 3RA, IMPDH2, INPP4A, LAMC3, LAP3, MCM5, MGAT1, MNX1, NAGK, NAMPT, NAR S, NCAM1, NTF4, OR10K2, OR1D2, OR2L8, OR2T33, OR3A3, OR4A5, OR4D11, O R4K15, OR51M1, OR51S1, OR56A3, OR5T2, OR7C1, OR7G3, PAK6, PARVB, PFN 2, PGAM2, PHKA1, PIK3CG, PIP5K1C, PIP5K3, PLA2G3, PLXNB2, PPP1CC, PP P2R5A, PRKAG3, PRPS1, PRPS2, PTK2, PYCRL, PYGM, QPRT, RAC3, RASA1, RA SA2, RELB, RRAS2, SCP2, SDC4, SDHB, SEMA7A, SETDB1, SHC4, SKP2, SMAD9 , ST3GAL2, SULT1A4, TALD01, TAS2R13, TAS2R14, THY1, TLR4, TP53I3, TP M3, UGCG1, UGP2, VAV2, VEGFA, VTI1A, WBSR22, WWP1, ATP6V1B2, HLA- DQB1, SERPINF2, SERPING1, TNFRSF12A</p>



Negative_14914	<p>AUH, C1S, DHH, GLA, HK2, OSM, PAH, SYK, AANAT, ACADL, ACSM2A, ADCY10, A DORA2A, ADRA1D, ATIC, ATP4B, BDKRB1, BMP5, CACNG6, CCL21, CD19, CD34 , CDC27, CDIPT, CHIT1, CLDN1, COL6A1, CPT2, CRLF2, CTPS, CYP26B1, CYP 2C18, DDX55, ECHS1, EFNB3, ENTPD4, ENTPD6, EPHB1, ETS1, F2RL2, FARS2 , GATM, GJA1, GNPDA1, GPD1, HLA- DOA, HMOX1, HSD11B1, HSPA8, IARS, ICOSLG, IL13RA1, IL15, IL28RA, INS RR, IRAK3, ITGA8, MAN1B1, MAP4K3, NAT5, NFATC4, NR1H3, NT5M, OCLN, OR 10T2, OR2G3, OR2V2, OR3A3, OR4F6, OR4M1, OR51A7, OR51Q1, OR6S1, PAX4 , PDE1C, PDE4C, PGAM2, PHKG2, PIK3C2A, PKM2, PNLIP, POLD4, POLR2K, PP P1CC, PPP2R2D, PRNP, PSEN1, RALA, RASSF5, RDH10, RPS6, SARS2, SDC2, S NAI2, SQLE, ST3GAL1, SYNJ2, TDO2, TFDP1, THTPA, TIAM1, ULBP3, WNT3, Y WHAE, ST6GALNAC1, TNFRSF10A</p>
Negative_14915	<p>AGL, F11, GGH, IL5, MET, NGF, PGD, TEC, TK2, TNN, ACTG2, ADCY3, ADRA1B, ADSSL1, AHCY, ALOX5, APLP1, ARD1A, ARG1, ARHGEF7, ARPC1A, ASAH1, ASR GL1, ATP5G3, ATP6V1H, B3GAT1, CBR3, CCNA1, CD226, CDC16, CHIT1, CKS1 B, COL1A1, COL4A4, CTF1, CTPS, CTSB, CTSS, CYCS, CYP4F2, DCTD, DHFR, D HRS9, DLL4, DMGDH, DPYS, EXTL3, F11R, FARSB, FGD1, FGF14, FLT4, FMO2, FUT7, GARS, GDF6, GGT1, GGT7, GIT1, GLG1, GMPPA, GNAI3, GNRH1, GRB2, G RHPR, GRIA2, HES1, HSD17B1, IGF1R, IL17RB, IL21, IL23R, IL24, INPP1, ITGA2B, ITGB3, ITGB6, KAT2B, KDSR, KLKB1, MAPK14, NCAM1, NCOR2, NFAS C, NFATC4, NOS1, NUDT5, OR10A5, OR10A7, OR11H4, OR11L1, OR12D3, OR14 C36, OR1J1, OR1L3, OR2B11, OR2V2, OR4K14, OR51A2, OR51Q1, OR5J2, OR5 K1, OR6Y1, OR7G1, PAK2, PAK7, PDE7A, PEMT, PIGC, PIGN, PIGO, PIGU, PIK 3R4, PLA2G10, PMAIP1, POLR2E, POMC, PPP1CB, PRKAA1, PRKAG1, PTGS1, P TPN11, RAP1A, RBPJ, RPN2, SCIN, SEMA4C, STAM, STAM2, STX8, SULT1E1, T LR3, TOLLIP, TYMP, UGCG1, UPRT, WWP1, ARHGEF12, PHOSPHO1</p>
Negative_14916	<p>CD6, DBT, FAH, GHR, JUN, PC, PGF, PVR, SFN, ACAD8, ACO2, ACP2, ADH4, ADR B3, ALDH3B2, ALG1, AMY2A, APRT, ATN1, B3GNT4, B4GALT5, BCMO1, BMP6, C ASP10, CAV2, CCL11, CD72, CNTN2, CSF1R, CSF2, CSNK1G2, CX3CR1, CXCL3 , CYP11A1, CYP2C8, DLL4, DUSP9, EFNA5, EFNB2, EIF4E2, ENTPD7, EPHA7, FADS2, FGF19, FMO4, FSHB, GADD45B, GALNT13, GFPT2, GRAP2, GSTO1, GUC A1C, GYS2, HAO2, HARS2, HEXA, HMGCS1, IFNA7, IL10RB, IL20, IL21, IL22 RA2, INADL, IRS2, ITGB6, KIR2DL3, LEFTY2, MAP2K3, MAP2K6, MAPK7, MTM R6, NFX1, NME6, NT5C3, NUDT8, OPLAH, OR13D1, OR2A4, OR52D1, OR56A3, P APSS2, PEMT, PIGA, PIGM, PISD, PITX2, PNPT1, POLR2F, PPAP2B, PPP1R3C , PPP2R5E, PRKG2, PYCRL, RAPGEF1, RARS2, RIPK1, RPE65, SC4MOL, SDHD, SEMA3C, SENP2, SKIV2L2, SLC33A1, SOS2, ST3GAL5, STAT1, STAT3, TAS2R 16, TPH1, TPK1, WEE1, WWP2, XYLT2, GABARAPL1, HLA-DRB3, MAP3K7IP1</p>
Negative_14917	<p>BCR, C3, C7, CSK, DDO, EGF, FAS, GP9, GSR, GSS, HK3, ID2, LEP, MPI, NPY, A ACS, ADRB2, AGPAT6, AGRP, ALAS1, APOA5, ARHGEF6, ASAH1, BCMO1, BDNF, BPNT1, CACNA1H, CACNG8, CARD11, CCDC6, CCNB1, CCNB2, CD59, CDK5, CDK N1C, CDKN2A, CES1, CSF2RA, CXCL16, CYBB, CYP2F1, DCTN1, DGKE, DLL1, E IF4E2, ENO2, EPRS, FECH, FZD5, G6PC2, GALNT11, GALNT6, GALNTL1, GALN TL2, GNAZ, GSTM2, GUCY1A2, HLA-C, HLA-F, HLA- G, HNF4A, HYAL1, IFNA2, IL15, IRAK2, LAMB2, LDHA, LIPA, LLGL1, MAGI3, MAML2, MAPK3, MAPK9, MAPT, MGAT3, MYH3, MYL2, NEUROG3, NRG4, OLAH, OR 11H4, OR4C6, OR6C74, OR6K6, OR6Q1, OR8H2, PARD6G, PARS2, PARVA, PDE1 1A, PDE4B, PDE4C, PGAM1, PHGDH, PHKG2, PIK3R1, PLCD3, PLEKHA8, PLXNB 2, PNMT, PPAT, PPOX, PRKAA2, PRKACA, PRKAG2, PRKCI, PRKG2, PRKX, PRLR , PRODH, PROS1, PRSS3, PSEN1, PTPMT1, PTPRR, PYGL, RPN1, RPS6KA5, SAT 1, SELPLG, SFRP2, SNAI1, ST3GAL2, TACR1, TFDP1, TJP1, TUBA1B, TUBB, V ANGL2, WARS, YES1, CTNNBIP1, PNLIPRP2, PRICKLE2</p>

Negative_14918	CTH, F5, KHK, OGT, ADH5, ADRB1, ALOX5, ANAPC7, APC2, ATP5D, ATP5G3, AXIN2, B3GALT5, B3GAT3, B4GALT3, BET1L, CARD11, CASP6, CAV3, CCL21, CCNG2, CISH, CLDN19, CPOX, CREB3L1, CREB3L2, CTBP1, CTBP2, CTPS2, CTSG, CTSS, CYP1A2, DDOST, DLL1, DLST, DUSP6, EGLN3, EHMT1, ENPP1, ENTPD5, FCGR3A, FGD3, GALT, GALNT8, GNAQ, GSTM2, HHEX, HMGCR, HPSE2, ICAM2, IL12A, IL28RA, IMPDH2, IRAK4, ITCH, ITGA8, LIPE, LRP6, MAPK13, MAPK9, MCCC2, MIOX, MMP14, MTHFD1, MTHFD2, MYH7B, MYLK3, NFYB, OLR1, OR10H2, OR13H1, OR2M5, OR51D1, OR5AS1, OR5D16, OR6Y1, OR7G1, OR8S1, PAK7, PDGFA, PFKP, PIGC, PLA2G2A, PLA2G2F, PLCB1, PPID, PPP2R2C, PRKAB2, PRKACA, PVRL2, PYGB, SCD5, SGMS1, SMC1B, SSH2, SULT2B1, TBK1, TLR9, TUBA3E, UGT1A10, UNC5A, WNT9A
Negative_14919	A2M, CP, DCN, HK2, LYN, MIF, PLG, VTN, ACAD9, ACAT2, ACMSD, ACSL3, ACSL6, ALG3, AMHR2, ANAPC7, APRT, ARHGAP5, ARSE, ASIP, ATN1, ATP5L, AVPR1B, B4GALT4, CACNG1, CACNG3, CASP6, CCL17, CD86, CER1, CHEK2, CHST11, CLDN2, CNTFR, COX10, CSF2RA, CTPS2, CTTN, CYP2A7, DDX4, DGKG, DLST, EHHADH, EPHA5, EPHB4, EPRS, FADS2, FGF11, FGF23, GLO1, GMPR2, GNA12, GNAL, GRIA1, HDAC1, HEXA, IDH3A, IDUA, IL17B, INHBE, IRAK3, KIR3DL1, KIR3DL3, KLRC2, LALBA, LIFR, LIPC, MAML2, MAOB, MAP3K1, MAPK13, MCM4, MCM5, MGAM, MPDZ, MYH9, MYL9, NCKAP1, NCR2, NOTCH1, NR5A2, NRP1, NT5C1A, OR13C4, OR14A16, OR1E2, OR2AG2, OR2L13, OR2W1, OR4F17, OR6C2, OR6K6, OR7A17, PDGFD, PLA2G3, PLEKHA8, PPA2, PRKACA, PRKACG, PROS1, PTGFR, PTPN7, PVRL1, RAPGEF1, RCHY1, ROCK1, RRAS, SEMA3A, SETD1A, SETD2, SGPP1, SLC27A4, SMAD1, SMC1B, SNAI2, SOCS3, SPRED2, SPTAN1, SRGAP3, STAM2, STAT1, STMN1, TACR1, TAS2R13, TAS2R16, TAS2R8, TGDS, TRPC1, TSHB, TUBB2A, TYMS, UAP1, UCK1, XYLT1, ATP6V0D1, ST6GALNAC5
Negative_14920	AMT, ATM, DCN, HGD, ID4, LSS, PML, ALG10, ALPP, ARHGAP5, ARPC4, ARSE, ATP5B, AXIN1, BST1, CCL15, CCL20, CCR5, CHPF, CLDN3, CNTF, CRY1, CSF1, CSNK2B, CTF1, CXCL9, CYP2C18, CYP2S1, CYP3A7, DAD1, DDX55, DERA, DPM2, EPHA6, EPHX2, EPRS, EXTL2, FARSA, FASLG, FGF6, FGF9, FSHB, FUT7, FUT8, G6PC, GALNT7, GARS, GBA3, GLUL, GLYCTK, GPAA1, GSTA3, GSTP1, GYS1, GZMB, HDAC1, HEXA, HTR6, HYAL1, IKBKE, IL22RA1, IL6R, JAG2, KAT2B, L1CAM, LEPR, LRDD, MAGI3, MAP2K7, MAPK11, MS4A2, NUMB, OR1N1, OR2A14, OR2AE1, OR2K2, OR4C6, OR4X2, OR7A5, OR8H3, OR9Q1, PHKB, PI4KA, PKM2, PMM1, POLR2K, PROC, PTPRM, RAPGEF4, RFWD2, RPN1, RRM2B, SARS, SDC4, SNAP23, SOCS7, STAM, SUOX, TAS1R2, TAS2R9, TNFSF4, TUBB3, TUBB4, ULK2, VAMP3, VARS, WHSC1L1, WNT3, WNT7A, ZFYVE9, ATP6V1G1, MAPK8IP1, PPARGC1A, ST6GALNAC3
Negative_14921	CFD, CS, GH1, IL3, LEP, LSS, PC, ABLIM3, ARG2, ARPC3, ATP6V1D, AXIN2, B3GNT2, BCL10, CADM1, CALML5, CAV1, CCR3, CDH15, CLDN9, COL1A1, CRB3, CTTN, CYP2C19, CYP2D6, DCTN1, DDX41, DDX54, DEGS1, DGKB, DVL1, ECHS1, EIF4E, FARSA, FGFR1, FLT3, FZD2, GALNT1, GALNTL5, GDF6, GLDC, GPD1L, GYS1, HARS, ICOSLG, IFNA5, IFNB1, IKBKB, IMPDH2, INSR, ISYNA1, ITGA2, ITGA9, ITGB2, ITPKB, KIR3DL2, LAMC1, MAP3K5, MAPK7, MAT2B, MECR, MYL5, NCOR1, NFX1, NRAS, OR1D5, OR4F17, OR51B4, OR51I1, OR52H1, OR52I1, OR5B3, OR5D14, OR6M1, P2RX5, PANK3, PDGFA, PDHA2, PGS1, PIGA, PLXNB1, PTPMT1, PTPRM, RASGRP1, RBX1, RRAS, RXRA, SDHC, SELE, SIGLEC1, SRD5A1, STAT2, SV2C, TBL1XR1, TRPC1, UCK1, UGT2B7, VANGL2, VTI1B, YWHAZ, SERPINB5

Negative_14922	C8A, CFI, CGN, HGF, IL4, LPL, ME2, NOG, ACTA2, ACTB, ADH6, AGMAT, AMPD2, ARNT2, ATP5B, AXIN2, BAAT, BAIAP2, BCL2L1, BDKRB2, CACNA1E, CACNB2, CASP8, CCR5, CD44, CDC20, CDC45L, CFLAR, CNGA4, COL5A1, CTNNA1, CYP26C1, CYP2D6, DGUOK, DHRS3, ENTPD3, FADD, FGF1, GALNT14, GALNT7, GAN C, GCLC, HIF1A, HSD17B3, HTR2C, IARS2, IFNA6, INHBC, INHBE, ITGB1, LF NG, LYPLA2, MAPK1, MASP1, MCM2, MTHFD1, NCKAP1, NME7, NTN1, OCLN, OR10A2, OR14J1, OR1Q1, OR2A12, OR2T4, OR2Y1, OR51D1, OR52N5, OR5F1, OR8H2, PCNA, PDE6G, PDHA1, PER2, PFKFB2, PLCB2, PLOD2, POLR2C, PON3, PPP2CB, PRIM2, PTCRA, RAP1A, RCHY1, SHC2, SLC27A1, SOCS7, SPCS3, TAS2R3, THBS2, TNFSF4, TPI1, TRPM5, UBE2K, UGCGL2, UROD, WNT3, WNT5B, WNT9A, ATP6V1B2, PAFAH1B2, TNFRSF10C, TNFRSF17
Negative_14923	ADC, AK5, DCC, FAH, FH, GLA, GPT, LCK, MVK, SRM, AACS, ACADVL, AHCYL2, AKR1C3, ALDOC, ARG1, ARHGEF2, ARRB2, BMP8A, BNIP1, C9orf95, CACNA1C, CACNA1F, CALML3, CAMK4, CAMKK1, CCR1, CD8B, CDH1, CDKN2B, CES1, CKS1B, CSNK1A1, CTNNA1, CXCL9, CYBB, DGKH, DHDH, E2F5, EDN1, EFNA5, ETS1, FGF18, FGF22, FMO3, GANC, GARS, GMPPB, GNAQ, HNF1B, IFNA2, IGSF5, IKBKG, IL1RAP, IL28A, IL9R, INMT, IRF9, ITGA4, ITGA9, MADCAM1, MFNG, MKNK1, MYH11, NEU4, NEUROD1, NOS1, NQO1, NRCAM, NT5C1B, NT5C3, NTN1, OGDH, OR10H4, OR13C3, OR1L6, OR2T6, OR4K15, OR4S1, OR4S2, OR51B4, OR51B5, OR51V1, OR52E6, OR52K1, OR5AS1, OR6B3, OR6C75, OR6Q1, OR6S1, OR7G1, OR9A4, OR9I1, P2RX3, PARD6A, PFAS, PFKFB1, PIAS1, POLE2, PON1, PPA2, PPP2R2A, PRDX6, PRKACA, PRKCZ, PRSS2, PTPN5, PTPN7, RPE65, SARDH, SHC2, SNAI1, SSH1, TCF7L2, TFPI, TP53I3, TPH1, TSHB, TUBB1, WNT10B, WNT16, WNT5A, WNT7A, YARS2, HLA-DQA2, HSP90AB1, SERPINE1, ST6GALNAC5
Negative_14924	BTD, C7, CP, KDR, NNT, OAT, PC, ABP1, ACAA1, ACADM, ACVR2B, ACY3, ADAM17, ALDH6A1, ALG2, ALPL, ALPP, APAF1, AQP7, ARPC3, BAIAP2, CACNA1A, CCL17, CCL26, CD274, CD38, CD40LG, CDH15, CES1, CHKA, CHST11, CISH, CLDN11, CREB3L2, CTBP2, DAPK3, EPHB4, FABP4, FPGS, FRAT2, GALNT11, GNB3, GRIA3, HLA-DOA, HNF1A, HNF4G, HSD17B3, HSPA8, INPP4B, IRAK3, ITPKB, KCNB1, LAMB2, MAP2K2, MAP3K12, MAP3K3, MAPK10, MAPK11, MAPK3, MDH1, MEF2C, MRAS, MYH10, MYH13, NAE1, NCKAP1L, NTRK1, OR10K1, OR2C3, OR2T2, OR2Y1, OR51I2, OR8A1, OR8G1, OR8H2, ORC3L, P2RX2, PARVG, PDE8B, PIGN, PIGS, PI3K, PIK3CA, PNPLA4, POLR1C, PPAP2C, PPP5C, PRDX6, PROC, PRSS3, PTCH2, PTDSS1, PTGDS, PTGFR, PTPN6, RAB5A, RAF1, RDH12, RPS6KA1, SEMA4A, SETD1B, SFRP2, STMN1, TACR2, TAS2R1, TBL1XR1, TRAF5, TRDMT1, TSC2, UGT1A10, UGT2A3, WIF1, YOD1, YWHAG, HLA-DRB4, HSP90AB1, KIR2DL5A
Negative_14925	C5, CBS, CFH, F2, FAH, GNS, IL3, IL6, LPO, RET, RPE, VTN, AADAC, ACVR2A, AGMAT, AKR1C1, ALDH1A1, ALDH3A2, ALOX15, ARPC5L, ARSD, ATP5B, ATP5E, ATP6V1A, AVPR1A, B3GALT2, B3GNT4, BAIAP2, BCL2, BIRC5, BLNK, C3orf10, CCL22, CCL24, CCL4, CCR7, CD86, CDH4, CDIPT, CDO1, CHPT1, CLDN15, CLDN4, CLDN8, CNGA3, CNTN2, CSNK1G3, CXCL9, CXCR6, CYP11A1, DAPK1, DDX5, DTX3, EFNA1, EIF4B, EPB41L2, EPHA3, ETS1, FCGR2B, FECH, FOXO3, GLB1, GPAM, GRAP2, GRIA3, GSTA2, GUSB, HADHA, HADHB, IBSP, IFNAR2, IL15RA, IL19, IL23A, INSR, JAK3, KITLG, LRRC4C, MAD2L1, MAN1B1, MYH15, MYH7, NFATC4, NFYA, NKD1, NOTCH1, OR13C2, OR13C4, OR1D2, OR1S2, OR2A4, OR2AT4, OR2T34, OR2T4, OR4N4, OR52I2, OR56A3, OR5AN1, OR5V1, OR6C6, OR6C70, OR6C74, OR7A5, OR8B4, OR8G1, OR8H1, PARVG, PDE11A, PDE3A, PECAM1, PERP, PIAS1, PIP4K2B, PLD1, PPP1R3D, PPP2R1A, PRKACA, PRLR, PSME2, PSME3, PYGB, RFWD2, RPSA, SEMA3F, SEMA4C, SESN3, SETMAR, SGPP2, SMAD3, SMARCA2, SORBS1, ST6GAL1, STAT6, STX5, STX6, TKTL2, TRAF1, TRAF2, TRPM5, ULK3, UMPS, VDAC1, XIAP, ZMAT3, KIR2DL5A, MAPK8IP1, ST6GALNAC1, TNFRSF13C

Negative_14926	<p>AMT, C4B, EDA, EGF, GHR, LCK, MSN, ACADS, ALDH1A3, ALDOA, ALG3, ALOX5, AMHR2, ASS1, ATP6V1H, B3GNT4, BRAF, CALML5, CAMK4, CD27, CDH2, CHIT1, CHRM1, COL2A1, COL5A2, CTBS, CTNNA1, CX3CR1, DGAT2, DIAPH3, DTX2, E2F2, EDA2R, EFN1, ENTPD4, EPHA7, FGF1, FGF18, FUT9, FZD9, GAD1, GLI1, GPD2, HSD3B2, ICAM2, IFNA8, IGF1R, IKBKG, IMPDH2, IRAK4, ITPA, KYNU, MAML2, MAT1A, MGST1, MICA, MLYCD, NAT2, NFX1, OCLN, OR10A3, OR10AG1, OR13D1, OR14I1, OR1Q1, OR5D14, OR6F1, OXCT1, PCK2, PCNA, PDE4D, PERP, PGAM2, PIGM, PLTP, PPCS, PPM1B, PPP1R3C, PPP2R2C, PVRL1, PYCRL, RHEB, SDHC, SEMA4C, SMAD2, SMARCA5, SPRY1, SQLE, SSH3, STMN1, SUFU, TAS2R3, TAS2R60, TKTL2, TRAF4, TYMS, WNT4, WNT7B, YWHAZ, ALDH18A1, HSD17B10</p>
Negative_14927	<p>CRH, EPO, GP9, ID3, KIT, LIF, MAX, PML, UBC, ACSM3, ALG8, ALPPL2, ALS2, AMPD2, AMY2A, ARNT, ARPC3, ATP5C1, BDNF, BUB3, C4BPA, CAMK2G, CARS, CCL5, CHIA, CHR1, CLDN19, CLDN6, CPT1C, CXXC4, DAG1, DDX41, DPYD, DRD5, E2F2, EFNA4, EP300, FGF2, FGFR2, FGFR3, FMO1, FTH1, GALM, GALNT8, GALNTL5, GGT5, HAP1, HCCS, HCLS1, HEMK1, HHIP, HSD3B2, HTR2B, HYAL1, IRF3, KIR3DL2, KLRC1, LFNG, MADCAM1, MAN2A1, MYH7B, NFKB1, NKX6-1, NPR2, NUMBL, OR10A6, OR10Q1, OR2K2, OR2M7, OR5L1, OR6B3, PANK2, PDGF, PFN4, PGK1, PNPLA3, POLR2E, PPARG, PPBP, PPP2R1B, PPP3CA, PRKAB1, PSME3, PTAFR, RARS2, RBL1, RHOA, RND1, RPS6KA1, RPS6KA6, SETD1B, SNAI1, TAS2R3, TNFRSF4, TNFRSF9, TRHR, TUBA1A, ULBP3, VARS, XCR1, YARS, ST6GALNAC3, TNFRSF10D</p>
Negative_14928	<p>C7, CBL, DBT, GH2, LCK, LIF, PGP, ACOT11, ACSS1, ACTN2, ACVRL1, ADH1B, ADH4, ADH6, ADRBK2, AGPAT1, ANGPTL4, ARHGEF2, ARSA, ATP5A1, ATP5C1, AXIN1, B4GALT7, BCL10, BDKRB2, BDNF, BRAF, CAV2, CCL2, CD40LG, CD74, CD80, CDKN2A, CDKN2D, CES2, CREB5, CSDA, CSF2RB, CYP11B1, CYP2J2, DFFA, DGKH, DNMT3B, DRD5, DTX3L, DUSP10, E2F1, E2F2, EFNA1, ESPL1, EXOC7, FARS1, FCGR3B, FOXA2, GCNT3, GPX7, GRIA2, GRIN1, HLA-G, HSP90B1, HTR2B, IFNA16, IL1R2, IRS2, ITGB5, LAMC1, LAMC2, LAMC3, MAP2K6, MAP3K6, MCM4, MNX1, MTAP, MTMR2, NAE1, NAT1, NEU4, NEUROD1, NTF5, NTF4, ONECUT1, OR10A3, OR1L3, OR2AT4, OR2L2, OR2M3, OR4C15, OR4F6, OR4K15, OR4X1, OR4X2, OR51E2, OR52E8, OR56A1, OR5B3, PAK2, PAX4, PAX6, PDE4C, PERP, PHKG1, PIP4K2A, PIP4K2C, PIP5K1B, PLA2G10, PLTP, PLXNA3, POLR2A, PPAP2A, PPM1A, PPP1R3B, PPP1R3D, PPP2R5C, PPP3R1, PPP3R2, PSME2, PTPN11, RAP1A, RELA, RFX5, RPS6KA3, SARDH, SCD5, SGMS1, SMAD6, SPRY3, STX8, SULT1A2, SV2B, TACR3, TAS1R2, TAS2R3, TAS2R49, THBS3, TLR2, TRPC1, UCP1, VAMP2, VAV2, WASF3, WIF1, WNT5B, ATP6VOE1, ATP6V1G1, CACNA2D3, CSGALNACT2, PNLIPRP2, TNFRSF10C</p>
Negative_14929	<p>A2M, F2, FGG, GNS, GP5, HDC, ILK, KIT, MOS, NNT, TH, UBB, UBC, WAS, ACAD8, AKT1, ALCAM, ALDH2, ARPC3, ATG7, ATP5I, B4GALT4, BDNF, BMP8A, C4BPB, CACNA1I, CACNA1S, CACNG5, CAMK4, CCR10, CCR2, CD38, CDS2, CLDN3, COL11A1, COL6A2, CRLF2, CXCL3, DFFA, DUSP6, ENPP2, EPHA5, EREG, FGD1, FGD3, FGF22, FGF7, FOXO1, FPGS, FRAT1, FZR1, GALNT5, GALNTL5, GAS1, GCNT3, GGT1, GLUL, GNAI1, GNMT, GNPDA1, GYS1, HIP1, HMGCL, HPSE, HRH2, HSD3B7, IL21, IL3RA, IL9R, INHBA, INPP1, IRF9, KLK3, LIPG, LIPT1, LMO7, LTBR, LYPLA1, MAP2K6, MDH2, MKNK2, NAGA, NFKB2, NGEF, NODAL, NOS1, NRXN2, OR14J1, OR4K2, OR52L1, OR5F1, OR5M8, OR6C70, OR8B12, OXSM, PDHB, PDIA4, PIGV, PIK3R5, POLA2, POLR2G, PPP2R2D, PRKACA, PRSS3, PTPRJ, RASGRF1, RPS6KA5, RXRG, SESN1, SLC25A6, SLIT2, STX2, SULT1E1, SUV39H1, TAS2R1, TGDS, THBD, TNFSF12, TRAF2, TRHR, TSC2, TUBB1, UAP1, UGT2A3, UXS1, VEGFB, XCL1, YWHAQ, ATP6V1C2, ATP6V1E1, B3GALNT1, C1GALT1C1, CACNA2D1</p>

Negative_14930	AK5, AR, CR1, F9, GH1, GNE, ID2, IL6, ME1, ME2, PGD, PLN, SYK, TNR, TXK, A ADAT, ABP1, ACMSD, ADIPOR2, ADRA1D, ALPP, AMY2B, ANAPC1, ATP5B, ATP5 J, B4GALT6, BACE2, C1QB, CALML6, CAMK2A, CARS, CASP9, CBLC, CCND3, CD 58, CDC14B, CDKN2B, CEBPA, CFL1, CSNK1G2, CTNND1, CUL1, CYP4F2, DOT1 L, EP300, F2RL1, F2RL3, FGD3, FGF12, FGFR2, FUT8, GALNT10, GALNT7, GA RT, GSTO1, HADHB, HIP1, HMBS, HSD17B1, HSD17B2, IFNG, IFNW1, IKBKG, I L12B, IL13RA2, IL17RB, IL2RA, KAT2B, KIR2DL1, KLRD1, LAMA3, LAP3, MA ML1, MAML3, MAPK3, MBL2, MCCC1, MGAT5B, MIOX, NAGK, NCF4, NEU1, NEURO G3, NKD1, NMNAT2, NPR1, OR1M1, OR2C3, OR2L13, OR2M5, OR2T6, OR2Z1, OR 51Q1, OR5D18, OR6C6, OR8H1, PCNA, PDPK1, PFN1, PGM3, PHGDH, PIAS4, PI K3CB, POMC, PPID, PRKAG2, PRLR, PRODH, PTCRA, PTPN7, PYGM, RPS6KB1, R UNX1T1, RXRB, SEMA3A, SEMA3C, SEMA7A, SGMS2, SIGLEC1, SMAD7, SMARCA 2, SREBF1, TAS2R16, TAS2R42, TMLHE, TNFSF10, TNFSF8, TPI1, TRAF6, TU BA8, TUBB2A, UGCG, UROC1, UROS, VTI1A, WARS2, WHSC1L1, WNT10A, WNT2B , YWHAQ, ARHGEF12, CSNK1A1L, TNFRSF11B, TNFRSF13C
Negative_14931	ADK, CAD, DBH, DBI, GSR, IL7, LCT, NLK, NPY, ACOX1, ACTC1, ACYP2, ALG13 , ANAPC7, ATP13A2, ATP4B, BDH1, BMPR1A, BNIP1, CACNA1E, CARS, CCL23, CCR9, CD22, CD48, CDC45L, CHRM5, CHSY1, CLDN19, CYP11B1, DUSP3, ESAM , FGF14, FZD7, G6PC, GMPS, GNAI2, GNG3, GRB2, GSTM2, GUCY2F, IDI1, IFN A21, IL6R, IPMK, ITGA7, LIPT1, LTBP1, MAN1A2, MCCC1, MECR, MGAT3, MGA T4A, NEFL, NFATC3, NFX1, NKX6-1, NOTCH3, NT5E, OGDHL, OR10H1, OR10K2, OR13C2, OR13D1, OR51V1, OR5A C2, OR5P3, OR6C6, OR6C74, PANK4, PCYT1A, PGAM2, PIGO, PIGX, PIK3CG, P IP4K2A, PLCZ1, PLOD2, PLXNB3, PPCDC, PRKAR1A, PRKCA, PTEN, PTGER1, P TGFR, RPS6, RPS6KB1, RRM1, SGMS2, SLC2A1, SNW1, SPHK2, STAM, TAS1R3, TAS2R8, TIAM1, TIAM2, TP73, TRAF1, VAMP1, WHSC1, ZFYVE9, PAFAH1B3
Negative_14932	ATM, BAD, F11, GHR, GP6, GSN, HDC, HGF, ID3, OAT, ACMSD, ACSM4, ACTG1, A LOX15, ALPP, BACE1, BCKDHA, CACNB3, CASP7, CCND2, CD8B, CDKN2B, CDKN 2D, CIITA, CLOCK, CLTC, COQ7, CREB3, CSNK1G1, CYP17A1, DDX23, DDX54, DEGS1, DHX58, DIAPH2, DNMT3A, EIF4E2, ELK1, ENTPD6, ERBB3, FARSA, GA DD45G, GALNTL4, GFPT1, GLUD2, GSTA1, GUSB, GZMB, IL10RA, IMPDH2, INP PL1, JAM3, KIR2DL1, LCAT, LRP6, MAD2L2, MAP4K3, MAPK7, MCM2, MECR, NA GLU, NAT1, NOX1, OR10Q1, OR1F1, OR1L3, OR2L2, OR2Y1, OR3A2, OR4D5, OR 5B12, OR5M8, OR6F1, OR6Y1, OXSM, PANK3, PIAS4, PLXNA2, POLR2G, POLR2 I, PON1, PPP1R1A, PRKCA, PSEN2, PTPN11, RASGRP1, RCHY1, RFNG, RPS6, R RAS2, SIPA1, STX1B, TAP2, TAS2R16, TUBB1, TUBB3, UCK2, UGT2B4, VAMP4 , VARS, YWHAE, YWHAZ, ATP6V1B2, GABARAPL2
Negative_14933	ADA, GK2, GP5, GPI, HGF, PAH, PC, AARS, ABL2, ACSL3, AKR1B10, AKR1C4, A LDH3A2, ALPP, AMY2B, ATP5E, ATP5H, B3GAT3, BPGM, BRAF, C3AR1, C7orf1 6, CACNA1H, CARD11, CASP7, CCL1, CD226, CHRM3, CLDN18, CNTNAP2, CREB 3L4, DAD1, DAXX, DGKQ, EHMT1, EPAS1, EPHX2, EXTL1, EXTL2, FBP2, FPGS, FRAP1, FUT2, FUT6, GALNT5, GATM, GGT5, GOT1, GRB2, GSTA3, GSTK1, GTSE 1, H6PD, HADHB, IFNG, IFNGR1, IFT57, ITGB2, KLRC1, LDHB, LIMK2, MAP2K 7, MAP3K1, MARS, MMP2, NCF4, NCKAP1, NFATC2, NFYC, NKX2-2, NSDHL, OR1L8, OR4D5, OR4K15, OR51B2, OR52D1, OR52I1, OR52K1, OR5B 3, OR5V1, OR6C6, OR7C1, P2RX6, PCK2, PFAS, PFKP, PIGX, PIK3R3, PPP2CA , PPP2CB, PPP3CB, PRPH2, PRSS2, PSME2, PYGB, RAP1B, RASGRP4, ROBO1, R RM2, SEMA3C, SEMA3D, SHC4, SLC25A6, SMPD1, SOCS1, ST8SIA5, STK3, SUV 39H1, TACR3, TAS2R3, TAS2R41, UBA1, VAMP4, VEGFC, WNT16, XCL2, YWHAZ , ZNRD1, HLA-DPA1

Negative_14934	C8B, CKB, CP, FH, GPT, ID3, KDR, MPI, MPZ, PML, AARS, ACADM, ADRA1D, ALD H2, ALDH3B2, ALDH4A1, ALG1, ANAPC7, ARHGEF4, B4GALT6, BCAT1, BMP5, C 9orf95, CARS, CASP8, CCR1, CCR4, CCR6, CD72, CDC25C, CDK4, CDKN2C, CF L1, CHSY1, CLDN3, COL6A1, CREB1, CRY2, CSF1R, CXCL13, CXCL3, CXCL5, C YCS, CYP11B2, CYP26A1, DDX19A, DDX47, EGLN1, EPB41L3, FCGR2B, FGF8, FGFR1, GALNT9, GDF6, GNB3, HSD17B8, HTR6, IFT57, IL18, IL6R, INSR, IT GA10, KLRC1, LDHC, LEFTY2, LHCGR, LTBR, MAN1B1, MAP3K14, MGAM, MPZL1 , MRAS, NAGS, NCK1, NLGN3, NR1D1, NRG3, NT5M, OR10G9, OR2AE1, OR2M3, O R2T10, OR4N4, OR51I2, OR56A1, OR5B3, OR6N2, OR8A1, OR8H1, PDE3B, PDH B, PDXK, PGAM4, PIGB, PIGH, PIGQ, POLR3A, PPP2R1A, PRKAR1B, PRKCZ, PR NP, PYCR1, RRM2B, SETD2, SHMT1, SKP2, SPTLC2, STAT5B, TACR1, TP53, UL BP3, VAMP1, VANGL1, VDAC1, WNT5B
Negative_14935	AK2, AK5, LPL, MAX, NF1, PAH, PGP, ABL1, ACVR2A, ADCY10, ADCY6, ADRB3, ALDH3B2, ANAPC4, ARHGEF1, ATP5A1, ATP5F1, CACNA1F, CAV1, CES1, CHPT 1, CHR1, CHST13, CLTA, CLTCL1, CSAD, CTPS2, CXCL3, CYP3A4, DEGS2, DNM T1, DTX4, E2F3, ENO1, ENO3, ENPP3, EP300, ERBB4, FCGR3A, FLOT1, FMO3, GCNT1, GLUD1, GMDS, GNAI1, GNPDA1, GOSR2, GRIN2D, GUCA1C, GZMB, HIF1 A, HMBS, HPRT1, HPSE, HSD17B2, HSPA2, HTR2A, HTR2B, HTR4, IFNAR1, IKB KG, IL1R1, IL23R, IL9R, INHBE, ITGA3, ITGA8, ITGB8, ITPA, JUND, KAT2B , LIPT1, LYZL1, MAFA, MYH7B, MYLK2, OR10H4, OR10Z1, OR12D3, OR1G1, OR 4C15, OR4D2, OR52L1, OR6C70, OR6T1, OR8B4, OR8K1, OR8K3, P2RX2, PDE4 C, PDPK1, PGM1, PI4KB, PITX2, PLCD3, PON3, PPP1CC, PPP3R2, PRKAG2, PR KCA, PRSS2, PTDSS2, RALA, RARS2, RHEB, RPSA, SDHC, SEMA4A, SKIV2L2, S MAD7, SPI1, ST8SIA5, TGDS, TUBA4A, KIR2DL5A, PRICKLE2
Negative_14936	BTD, DCC, F10, FGA, HYI, ACADM, ACAT1, ADRA1D, ADRB3, ADRBK2, AGMAT, A LG13, ALG2, ALPI, AOX1, APC2, ARG1, ARPC2, ATF4, ATP2A2, ATP5G2, ATP5 L, B3GALT6, BAI1, BPGM, C1GALT1, CCL1, CCL14, CCND3, CHRM3, CKMT2, CL DN6, CNTFR, COMP, CSH1, CTBP1, CTSS, CYBA, CYP2E1, CYP4F3, DCXR, DFFB , DLST, DRD1, EFNA2, ENAH, ENPP1, FGF13, FGF20, FLOT2, FOXO1, GABARAP , GALC, GBA3, GDE1, GMDS, GPLD1, GRB2, GUCY1A3, GYS1, HAAO, HES1, HMOX 2, HNF1A, HSD17B8, IL15RA, IL1A, IL8RA, IMPDH1, ISYNA1, ITGA2, JAG1, LALBA, LEF1, MAFA, MAN1A2, MARS, MGLL, MLYCD, MTAP, MYH1, NCF2, NOX1, NR1H3, NTN1, NTNG1, NUMB, OR14A16, OR1E2, OR2M5, OR2W1, OR51B4, OR52 E4, OR5AR1, OR5K1, OR6C6, OR8G1, OR8J3, OR8K1, OR9G4, PDHB, PGAP1, PH GDH, PHKA1, PIGX, PMM1, PNLIP, PPM1D, PPP1CB, PRKAB1, PSME1, PTPRB, P VRL3, RAPGEF2, RASSF1, RPE65, RRM1, RUNX1T1, SCIN, SDHD, SETD1B, SNA I1, SPHK1, SSH3, ST8SIA5, STAT5B, SYNJ1, TICAM2, TJP1, TSTA3, UBE2K, ULK1, UNC5C, WNT7A, HLA-DRB5, MAPK8IP2, PAFAH1B2, PNLIPRP1
Negative_14937	ADO, CD6, CKM, IL6, PXN, TAT, ABP1, ACOT11, ACPT, ACYP2, ADCY10, ADH7, AKT1, AKT2, ALDH1L1, ALDOC, ALG12, ALG9, APBB1, ARNTL, ASCC3, ATF2, A TP5A1, ATP5G1, ATP5H, BCL10, BMP6, CACNA1H, CACNG4, CARD11, CCNB2, C CR7, CD40LG, CDC45L, CDK7, CFL1, CHSY3, COL4A2, COL4A6, CREB1, CTSG, CYP1A1, CYP26A1, CYSLTR1, DDX19A, DDX54, ENTPD4, ENTPD5, EPHA2, EPH B6, ERBB2, FGD3, FRAP1, FZD7, G6PC2, GADD45G, GALNS, GALNT11, GALT, G LI2, GOT2, HA02, HCST, HTR5A, IRF3, ITCH, ITGB1, JAM2, KIR2DL4, LCMT2 , LEPR, MAP2K6, MARS2, MDM4, MGAT1, MS4A2, NAGK, NAT2, NEU4, NRXN2, NU DT2, OR10G7, OR13C2, OR1N2, OR2A14, OR2G3, OR2T8, OR56A1, OR5A1, OR5 B17, PAPSS2, PCYT1B, PDGFA, PDXP, PER1, PFKL, PIGB, PIGM, PIK3R5, PLC D1, PON1, PPARA, PPT1, PRKAG1, PTCRA, PYCR2, RAB23, RAC1, RAPGEF3, RA PGEF4, RFX5, RPN2, RRM2, SELL, SEMA4D, SEMA7A, SESN3, SHMT1, SOCS4, S PRY3, ST3GAL3, STAT2, STX1B, TAS2R10, TAS2R3, TAS2R42, TAS2R7, TNXB , TUBA4A, TUBB6, ULBP3, YWHAQ, HLA- DRB3, PLA2G12B, PNLIPRP1, TNFRSF17

Negative_14938	AGK, C3, EBP, EZR, FES, GP5, ID2, LTB, MOS, SMS, ZYX, ACACA, ACSL3, ALDH7A1, ALG1, ALG5, APOC3, ASCC3, ATP5B, B4GALT6, BBC3, BCKDHA, CALML6, CCL28, CD27, CD74, CDC27, CLDN3, CLDN9, COL2A1, CPT1C, CREB3, CREB5, CRHR1, CSNK2A1, CYP21A2, CYP2A13, CYP2A6, CYP2C8, CYP2S1, DAAM2, DC TN1, DGAT1, DGKZ, DPAGT1, EDA2R, EFNA3, ELK1, ENPP7, EPHX1, FABP3, FC GR2B, FLOT2, GALNT7, GALNT9, GRB2, GRIA2, GRIN2C, GSTA1, HTR2B, IARS, IFNA13, IL29, IMPDH1, IQGAP2, JAG2, JAK2, LFNG, LTB4R2, MAML2, MAP2K6, MAP2K7, MAPT, MARS2, MLLT4, NAGLU, NKD1, NRXN3, NSDHL, NTF4, OR10K2, OR13C5, OR13F1, OR1L4, OR2K2, OR2M3, OR4F17, OR4M2, OR51G1, OR52E4, OR52W1, OR5AP2, OR5D16, OR8B12, OR8D1, PDE4D, PDE8B, PFKFB1, PKM2, PLAU, PLOD1, PLXNB3, PMAIP1, POLR3A, PPP1CC, PPP2R1A, PPP2R5C, PTGER1, RPIA, RXRA, SARDH, SDHA, SEMA4A, SMAD5, SOD1, ST3GAL2, STAT5A, STK36, STX16, STX1A, TACR1, TAS2R14, TCIRG1, TGFA, TKTL1, TLN2, TRDM T1, UBE2K, ULBP1, VASP, VDAC1, WARS2, WEE1, XYLT2, ATP6V1G2, B3GALNT1, CTNNBIP1, HLA-DRB4, ST6GALNAC3
Negative_14939	C8B, CAD, CD2, CGN, F3, IHH, LPO, MAG, ACP1, ACSL5, AKR1B1, ALG11, ALG3, AMDHD2, ARD1A, ARG1, ATP5G2, BMP8A, CACNG1, CCL21, CCL27, CCL5, CDH3, CDK5, CLCA2, CRHR1, CYP2A13, DERA, DGKD, DNMT3B, ECHS1, EDN1, ENPP3, EPHA5, EPHX2, EREG, FGF17, FGF8, FLOT2, FZD1, GPD2, HAGH, HMGCS1, IFNA21, IGFBP3, IL4R, IL5RA, IL7R, ITGB5, ITPK1, JAK1, KLRK1, LEPR, LIMK1, LRRC4C, MAP2K5, MAP3K4, MAT1A, MEF2C, MGAT5, MGAT5B, MMP1, NCAM2, NFATC2, NFKBIB, OR10H1, OR10H4, OR13J1, OR1B1, OR1I1, OR1L1, OR1N1, OR2A25, OR2D2, OR51E2, OR5D18, OR6C3, PDE10A, PDE8A, PER2, PIP5K1A, PLCD4, PNLIP, PPP2R2C, PSAT1, PTGER1, PTGIS, PTGS1, PTGS2, RDH16, RPN2, RPS6KB2, SESN3, SLC12A2, SLC2A2, SOCS5, SPHK2, SSH3, SV2B, TACR1, TACR2, TCF7L2, TJP3, TOMM40, TUBB2A, UBA7, UGT2B10, UGT2B4, ULBP1, ULK1, VAMP4, VDAC3, WBSR17, YWHAH, HSP90AB1, MAPKAPK5, PNLIPRP1, SERPINF2, TNFRSF10A
Negative_14940	BAX, BTC, F11, FUK, GCK, GK, HDC, KDR, SYK, TNC, ABP1, AGPAT1, AGRN, AHCYL2, ALAS1, ALPL, ARSD, CACNA1H, CCR7, CHEK1, CNDP1, CSNK1E, CTLA4, CTPS2, CXCL5, CYP21A2, CYP2C19, DCTN1, DGKG, DUSP7, EDNRB, EPHA2, FZD10, G6PD, GALNTL2, GCLC, GFPT1, GMPR, GUCA1B, HDAC1, HLCS, ICAM1, ICAM2, IGF1, IGF1R, IL13, INADL, KLKB1, LIPE, LTBP1, MAFA, MAN1B1, MAN2A1, MCAT, MLYCD, MRAS, MYL2, NME6, NSDHL, NT5C1A, OR13C4, OR2A2, OR2T29, OR2T6, OR4D2, OR51F2, OR52A1, OR6C2, OR8G1, PER2, PERP, PHKB, POLR3B, PPCDC, PYGL, RPS6, SARS2, SAT2, SCP2, SEMA4A, SEMA7A, SMAD2, SOX17, SPRY1, SPTAN1, SSH2, ST3GAL2, STAT2, STX12, TLN1, TM7SF2, UGCGL2, VNN1, VTI1A, WHSC1, XCL1, ALDH18A1, ATP6V0D1, MAPKAPK2, TNFRSF18, TNFRSF6B
Negative_14941	BAD, C9, CBS, DBI, F3, GSR, HK1, LCT, RET, RPE, TNF, ABI2, ACOX3, ACSL1, ADCY2, ADRA1B, ALAS1, ALDH4A1, ALDOC, ANAPC11, ATP5B, B3GNT5, CACNA1A, CBR3, CCNA1, CD70, CD72, CKS1B, COL1A1, CSF2RB, CTLA4, CTPS, CYP17A1, DDHD1, DGAT1, DGKB, DHFR, DVL2, EARS2, EPHB2, ERBB3, FADS2, FSHR, GADD45A, GADD45B, GALNTL4, GLI3, GLUL, GNAI1, GNG13, GPX5, GRM5, GSTK1, HNF4G, HPRT1, IFNA2, IKBKE, IL13, IL17RA, IL21, IL22RA2, IL23A, IQGAP1, KLK3, LDHAL6A, LIMK1, MAD2L2, MAP2K7, MYH6, NCR1, NFAT5, NFATC2, NNMT, OR10A5, OR10K2, OR1D5, OR1Q1, OR2A2, OR2B6, OR4E2, OR4K13, OR51G1, OR5AN1, OR5D13, OR8S1, ORC1L, P4HA2, PAX6, PDHB, PDK1, PIK3CG, PLA1A, PLA2G2F, PPP2R2C, PRIM1, PRKAB2, PRSS2, PTDSS2, PTPN11, PYCRL, RASGRF1, RHOA, RPS6KA5, SDHA, SLC25A6, SPHK2, TLR2, TNFSF4, TRAF5, UNC5B, UNC5D, UPB1, WNT9A, ATP6V0A2, ATP6V1C2, HLA-DPA1, KIR2DL5A, MAPK8IP2, MAPKAPK2, PNLIPRP2, SLC25A31, TNFRSF10A, TNFRSF13C

Negative_14942	CAT, CDA, SCD, AASDH, ACSL1, ADH1B, AKR1C1, ALCAM, ALOX15, AMY2A, ARHGEF6, ARRB1, ASNS, BDKRB2, BDNF, BIRC2, BLVRB, BPGM, CD244, CD274, CD51, CLDN11, COL2A1, COQ5, CTNND1, CUL1, CXCL13, CYP11A1, CYP2J2, DDHD1, DPAGT1, DUSP9, FABP4, GALNT10, GALNT12, GBE1, GDF6, GGT1, GNA11, GNMT, HLCS, IDH1, IFIH1, IL18RAP, IL3RA, IL4R, ITGB4, KCNB1, KLRD1, MGST2, MLYCD, NLGN1, NT5C1A, NT5E, NUDT9, OR10T2, OR1L1, OR2G2, OR3A2, OR51S1, OR5AK2, OR5F1, OR5L2, OR6C1, OR8B12, OR8H3, OXCT2, P2RX6, PDCD1, PGK1, PGK2, PIGA, PLA2G2F, PLCD1, POLR2K, PPP1CC, PPP3R2, PRLR, PSENN, PTGES2, PYCRL, RASGRP4, RPSA, RRAS2, SAT1, SDC4, SEMA4B, SFRP4, SHMT1, SLC25A4, SLC2A1, SPTAN1, SREBF1, STEAP3, STX16, STX1B, STX6, TBXA2R, THBD, TJP1, TNFSF18, TPH2, TUBB2C, UGCGL2, WNT8B, HSP90AA1, PHOSPHO1, SERPINB5, ST6GALNAC1
Negative_14943	GNS, HK1, NF1, PTS, TNF, TNN, ACACB, ACO1, ACTG2, ADAM17, ALPL, ARPC5, ASRGL1, B3GALT6, B4GALT3, BBOX1, BMP8B, CACNA1C, CACNB2, CD19, CD79A, CDC45L, CDH1, CDKN2B, CLDN10, CMBL, COL2A1, CPT1A, CRY2, CSNK2B, CXCR5, CYP19A1, DAAM1, DKK4, DNMT3L, DPAGT1, DUSP8, DVL1, E2F5, ECSIT, EFNA4, FABP4, FADD, FZD4, GALNT11, GAMT, GLUD2, GPAM, GSTM4, GZMA, HSP90B1, HTR2C, HTRA2, IDH3A, ITGB7, LIPE, LTBR, MAD2L1, MAD2L2, MMP2, NGEF, NRCAM, NTRK1, OGDHL, OR10S1, OR2T29, OR2T3, OR2T33, OR3A1, OR4C6, OR4F6, OR4L1, OR4M2, OR52E4, OR52N2, OR5B17, OR6C75, OR6C76, OR8K3, OR9I1, PDE4B, PFKFB3, PGK2, PIK3CA, POLR1B, PPP2R1A, PTGDS, RALB, RBKS, RBPJ, SMURF1, SOD1, THBS4, TRAF2, TRAF4, TRPM5, TSTA3, TUBA8, TYRP1, ULBP3, USE1, YARS, YWHAH, ATP6V1B1, PHOSPHO1, ST6GALNAC5
Negative_14944	FST, MAG, AKR1D1, ALDH1A2, ALDH5A1, ALDOB, AMHR2, ANAPC10, ANPEP, ARHGEG7, ATP5G1, ATP6V1D, B3GNT4, CACNA1H, CACNG5, CBLB, CCL11, CCL2, CCR10, CCR2, CD14, CDC6, CHPT1, CHST12, CHUK, CLCA2, CNGB1, COMP, CRB3, CYBB, CYSLTR2, DDOST, EARS2, GALK2, GALNT6, GALNTL2, GMDS, GNAZ, GPAA1, HCST, HNMT, HSD17B2, IDI1, IFNK, ITGA8, LRP6, MAGI3, MAP3K8, MARS2, MTHFD1L, NAGK, NME4, NMNAT1, NNMT, NODAL, NR1D1, OR10H1, OR1E1, OR2M2, OR2T8, OR3A3, OR4A15, OR4N5, OR51B2, OR52H1, OR8S1, PDE2A, PDX1, PFKFB2, PIGH, PIP5K1A, PLA2G10, PLK1, PLXNB1, PPAR, PPP3C, PRKAG1, PTPN7, PTPRC, RCHY1, RHOA, ROBO1, ROBO3, RPRM, RUVBL1, SEMA3A, SEMA3G, SPRY3, TGFBR2, TIRAP, TLR9, TP53I3, UGT2B28, ULBP3, XYLTI1, ARHGEG12, ATP6V1G1, HLA-DQA2, SUV420H2
Negative_14945	ADO, AGK, CBS, DBI, GCK, IDS, IL4, MAG, ME2, PLG, PLN, ABAT, ABL1, ACLY, ACP6, ACSL5, ACSM5, AGXT2, ALG6, ARSB, BMP2, BMP7, BNIP1, CASP8, CBLB, CBLC, CCL20, CCL3, CCNB3, CD22, CD34, CHAD, CXXC4, CYP2C8, DHCR24, DPAGT1, DRD5, E2F3, ENTPD8, F2RL3, FLT1, GALNT6, GCDH, GCNT2, GNRH2, GOT2, GRIN2B, GUK1, GZMB, HTR4, HTR6, IFNA6, IL17B, IL22RA2, IL24, LIFR, LIMK1, LIPC, LTA4H, MAN1C1, MAP3K12, MASP1, NCAM2, NCOA4, NEFL, NT5C, OR10A3, OR14J1, OR1A2, OR1E1, OR1K1, OR2T5, OR4K14, OR4K15, OR51E1, OR51G1, OR52E2, OR52M1, OR5H2, OR5I1, OR6C2, OR6C70, OR7C1, PAK6, PANK2, PDE3B, PFKFB4, PGAM2, PIGO, PIK3C2G, PIK3CB, PLCG2, POLR2E, POLR2L, PPP1CA, PPP2R2C, PPP2R5C, PRIM1, PRKCH, PRPH2, PTGES2, RAF1, ROBO1, RPS6KA3, SCIN, SETDB1, SFRP2, SMPD2, SNAI1, SNAP23, SOAT2, SPTLC1, SULT1A1, TGFBR1, TKTL1, TNFSF11, TNFSF4, TUBB2A, UMPS, UXS1, VAMP2, VAV1, ATP6V0D1, CACNA2D4, PAFAH1B2, PDCD1LG2, TNFRSF10D



Negative_14946	<p>BTK, CS, F10, F7, GCK, HYI, MPL, NLK, ACAT2, ACOX3, ACTN2, ACY1, ADH6, A GPAT6, ALDH1B1, ALDH5A1, ALOX12B, ALPI, AMDHD1, APOA2, APRT, ARHGAP 5, ARRB1, ATG3, B3GNT2, BMP5, C4BPB, CAMK2A, CAMKK2, CCDC6, CCL20, CD 274, CD40, CD48, CD79A, CDC25C, CHST11, CHSY1, CLCF1, CLDN3, COQ3, CS F2, CSF3R, CTLA4, CYBB, CYP2C9, EPHA6, ESAM, EVI1, FABP1, FARS2, FGF1 0, FZD5, GALNTL1, GDF5, GGPS1, GNAZ, GNRH2, GRIN2C, GSTA1, HCLS1, HNF 1A, HTR7, IFIH1, IL20RB, IL6ST, INSR, LDHB, LDHD, LTB4R2, MAN1B1, MCE E, MICA, NCSTN, NFATC1, NFKBIA, NKX3-1, NT5E, OR51B6, OR51I2, OR52L1, OR5K2, OR6C3, ORC1L, P2RX2, PAICS, P ANK3, PDE3B, PDE7A, PDE9A, PHGDH, PHKA1, PIAS3, PIK3R2, PIM2, PLCD4, PPP2R1B, PRKCA, PRKCD, PRKX, PTGER3, PTK2, RAPGEF4, RARA, RASGRP4, R BX1, ROBO1, SEMA4B, SEMA7A, SESN2, SFRP4, SHC2, SLC25A6, SPRY4, STAT 4, TAS2R40, TBK1, TGFB1, TGFBR2, TLR5, TSTA3, TUBB2C, VAV2, XIAP, ZAP 70, ATP6V0A2, MAPKAPK5, SERPINF2, TNFRSF13C</p>
Negative_14947	<p>BID, GHR, IL8, MVD, MYC, RB1, RET, UBC, ACPP, ACSL4, ACYP1, ADAM10, ADC Y6, AGXT, AMDHD2, AOX1, APPL1, ARPC1A, ATG3, BMP8B, C3orf10, C4BPB, C D48, CD82, CDKN1B, CMBL, CNGB1, CREB3L1, CYP11A1, CYP2C19, CYSLTR2, DHDDS, DRD2, EDA2R, EPHB1, EPHX2, F2RL1, GAD1, GAMT, GCNT4, GNG13, GS TO2, GSTT1, HMBS, IDUA, IFNA2, IL21, IL2RG, INMT, ITGAX, JUND, KLRC1, LARS, LIPE, LTA4H, MAP3K11, NAMPT, NANS, NEU1, NFYC, NLGN3, NOS3, NSD 1, NT5C1A, OCRL, OR1C1, OR2A5, OR2AG1, OR2C3, OR2G6, OR52N5, OR56A1, OR5AU1, OR5B3, OR6T1, OR8K3, OR8S1, OR9K2, OXCT1, OXCT2, P2RX1, PAK4 , PFKP, PLA2G6, PPAP2A, PPP2R5C, PRKCH, PSPH, PVRL4, RALBP1, RASGRF2 , SEMA7A, SLC27A4, SLC2A4, SPCS1, TAS1R3, TAS2R40, TKTL1, TRMT11, UC K2, UGT2A1, UGT8, ULK2, WASF1, WNT1, XYLT1, ST6GALNAC1, TNFRSF10A, T NFRSF18</p>
Negative_14948	<p>AR, ID2, IL7, MUT, AADAC, ABLIM1, ACSM1, ACSS2, ADCY9, ADRBK2, AMPD3, AOX1, APC2, ATP2A3, ATP6V1A, B4GALT4, BDNF, C3orf10, CADM1, CD8A, CH D8, CHSY1, CLCA2, CLDN20, CNDP1, CNGB1, CPT1C, CSNK1G2, CYP21A2, DGK B, DGKZ, DHDH, DHRS3, DPYD, DUSP5, EIF4E, EPHA2, ERBB4, EXTL2, FASN, F GF21, FGF22, FGF23, FPGS, FSHB, FTCD, GAB1, GALNT5, GCH1, GNPDA1, GRB 2, HAAO, IDH3G, IFNG, IGF1R, IL12RB1, IL28RA, IMPA1, INPP5A, INSR, I RS1, ITGAM, ITGB6, ITGB7, LEFTY1, LEPR, LIMK1, MAN1A1, MAN1C1, MAP4K 3, MINPP1, NAT5, NCKAP1, OGDHL, OR10K1, OR1A2, OR2A42, OR2G6, OR2L2, OR51A4, OR51B4, OR51D1, OR51M1, OR52B4, OR52E2, OR6N2, PANK4, PCK2, PDE11A, PIGF, POLR2E, POLR2F, POLR3G, PON2, PRKAA1, PTGER3, PTGES, R AC3, RAF1, RASSF1, RASSF5, RHOQ, RIPK1, SFRP2, SH2D1B, SMAD9, SMARCA 2, SOCS7, SPRY1, SREBF1, ST3GAL5, STAT5A, SV2B, TALDO1, UCP1, UGT2A3 , YWHAQ, ATP6V0A1, EIF4EBP1, GABARAPL1, HLA- DPA1, MAPK8IP3, PAFAH1B1, TNFRSF11B</p>
Negative_14949	<p>AMT, CR1, EZR, GK, GSS, PAH, UBC, AKR1B10, ALDH3B1, ALOX15B, ANAPC1, A TP50, B3GALT5, BCL10, CCL22, CDC45L, CDKN1A, CERK, CLDN18, CLDN9, CO L5A1, CREB3, CYP19A1, CYP3A43, DAAM2, DIAPH3, DPM1, DRD2, EARS2, EPH A7, ETS1, F2RL3, FCGR3A, FLOT1, FUT8, FZD5, GADD45G, GANAB, GFPT2, GP 1BA, GRIN2C, HAGH, HES1, HIBADH, HLCS, IFNA8, IL20, IL5RA, ITGA2, ITG A2B, ITGA9, KCNQ1, MAGI3, MAPK14, MEF2C, METTL6, MGST1, MTMR6, MYH9, NEU3, NKX2-2, NMNAT1, ONECUT1, OR10K2, OR10Z1, OR2S2, OR2T6, OR4D2, OR4F5, OR4K 1, OR51T1, OR52M1, OR5J2, OR6C1, OR8D1, OR8H3, OR8I2, ORC5L, PAPSS2, PAX6, PFKP, PHPT1, PIGF, PIK3R4, PIP5K1B, PKLR, PLA1A, PLAUR, PLCD1, PLXNA2, PLXNB2, POLR2I, PPARG, PRKACA, PROS1, PSME1, PTPMT1, RAC3, R ALB, ROBO2, SEMA3E, SIAH1, SREBF1, TAS2R9, TGFB1, TICAM2, TJP2, TRP M5, TUBA3E, UGT8, ULK3, VAMP1, VKORC1, WNT4, ATP6V1B2, ATP6V1G1, B4G ALNT1, MAPKAPK2, PAFAH1B2, PPARGC1A, SERPINA1</p>

Negative_14950	BTC, C4B, CFI, CKM, F2R, GGH, LYN, OAT, PGF, RB1, A4GALT, ACLY, ACO1, AC P6, ACSL3, ACYP1, ADRB2, AGPAT6, ANAPC7, ASCC3, ATG12, ATP5A1, ATP5B , ATP5J2, ATP6V1F, B4GALT5, BBOX1, CASP6, CD40LG, CD70, CFL1, CHEK1, CHRM1, CLDN10, CMPK1, CREB3L1, CREB3L3, CSDA, CSF1, CTTN, CXCR4, CYB A, CYP1A1, CYP2E1, CYP3A4, CYP8B1, DBF4, DGKB, DHCR24, DRD1, DTX4, EI F4E, EPHX1, EXT1, FGF12, FGF23, FLT4, FZD9, GAL3ST1, GALNT8, GCNT1, G FAP, GJD2, GLS2, GNA11, GUCY2C, HADHB, IBSP, IL10RB, IL13, IL7R, LAMC 2, LLGL2, LMO7, MAP3K11, MAP3K14, MAPK10, NEU1, NKX2-2, OR10J5, OR10R2, OR1E2, OR1S1, OR2H2, OR2T8, OR4A16, OR4B1, OR4S1, OR51G1, OR5J2, OR6C1, OR6N1, OR7G1, OR8G1, PAK1, PARD6B, PDE1A, PDE3 B, PDE7B, PEMT, PGS1, PIAS1, PIGU, PLXNB2, PMVK, PNPLA3, POLR1C, PON3 , PPBP, PPM1B, PPP1CC, PPP2CB, PPP2R2B, PRKCD, PRKCI, PROS1, PSEN2, P TGER3, PTK2B, PTPN7, PYCR2, RAPGEF4, RRM2, SLC33A1, SOD1, SPHK2, SPR Y1, TAS2R1, TAS2R13, THTPA, TICAM2, TOMM40L, TPH1, TPM3, TRAF3, TSC2 , TUBB2C, UPRT, VCAM1, WNT7B, WNT8A, ATP6V1C1, HSP90AB1, TNFRSF10B, TNFSF13B
Negative_14951	C4B, CRK, F3, FN1, NNT, ACAT1, ACSM1, AGPAT3, AHCY, AREG, ASMT, ATP5J, BMP4, CACNA1G, CACNB4, CASP9, CCNA1, CCND1, CD274, CDKN2C, CES7, CFL 2, CHPF, CLDN8, CNGA3, COL4A2, COL4A6, COL6A1, CYP17A1, CYP2A6, DARS , DDIT4, DGKG, DLL4, ETNK1, F2RL3, FOXA3, GJA1, GNA11, GNA12, GRIA1, H AGH, HAP1, HRAS, IKBKG, IRS1, KCNJ11, KLK3, LIPC, LTBR, MAD1L1, MAP3K 4, MARS2, MASP1, MYH15, NAT1, NCF2, NCR3, OR10G9, OR10H3, OR14I1, OR1 J1, OR1L8, OR1S2, OR2C1, OR2H1, OR2M2, OR2T11, OR2T12, OR3A1, OR4C13 , OR51B5, OR5L2, P2RX2, PARD6B, PECAM1, PIP5K1C, PLA2G2A, PLA2G3, PL XNB2, POLA2, POLR2E, PPCDC, QPRT, RAC1, RDH12, RIPK1, SC4MOL, SESN1, SMC1A, SPRY3, STX16, TAS2R41, THBS2, THBS4, UGT2A1, UGT2A3, UGT2B28 , WNT7A, HLA-DPA1, HLA-DRB5
Negative_14952	AGK, DCT, GDA, GHR, IDS, INS, MVK, RB1, STS, SYK, TK2, TPR, AADAT, ABL2, ACADS, ACYP2, ADAM17, ADH6, AHCY, ALG12, ALOX12, ARNTL, ATP4B, ATP6V 1A, B3GALT1, B4GALT4, BNIP1, CADM3, CALML5, CCNB1, CD44, CDK5, CNTNA P1, COQ3, COQ6, CREB5, CSF1, CTBP2, CTSG, CYP11B1, CYP1A1, DAD1, DGKD , DHRS4, E2F3, EGLN1, EIF4B, EREG, FASN, FLT1, FRAT1, GFAP, GMPPA, GNR H2, GPAA1, HAGH, HNF4A, IGSF5, IL11, IL4R, ITGA8, ITGAV, KDSR, LAMC1, LEFTY2, LIPT1, MAD1L1, MADCAM1, MDH2, MGAT5, NODAL, NRG1, OR10G8, OR 10H3, OR1Q1, OR2B11, OR2F1, OR2M3, OR2S2, OR51S1, OR52A5, OR56A3, OR 5A1, OR5AK2, OR5AU1, OR5M8, P2RX5, PAK2, PANK1, PAX8, PDE4C, PDK1, PG K2, PGM3, PIAS4, PLCD3, PNLIP, PPCS, PPP1CA, PPP2R5A, PRKCE, PRSS1, P TCH1, PTGER1, QPRT, RASGRF1, RDH11, RDH8, RFNG, STAT4, TAS2R16, TBL1 X, TLR9, TUBB4Q, TUBB6, TYMS, UAP1, ULBP2, VTI1B, WNT4, TNFRSF14
Negative_14953	F2R, LAT, PTS, ACADS, ACADVL, ACOX3, ACVR1B, ADH7, AKR1B1, AMY2A, ARS E, BCL2L1, CACNB3, CCNB1, CDC25C, CDC42, CLDN4, CNTNAP1, CREB3L3, CS F2RA, CSNK1G3, CXCL1, CYP11B1, CYP2B6, CYP2C19, DAPK1, DARS2, DHDDS , DLL1, DLL4, DLST, DOT1L, DUSP8, DVL1, EFNA3, EP300, EPHB2, ERO1L, FD PS, FIGF, FLT4, GALM, GALNT10, GDF5, GLI1, GNG12, GRIN2B, GRIN2C, GST T1, HEXA, HSD17B3, IFNA10, IFNA13, IFNAR2, IFNB1, IFNGR2, IL12RB2, I L25, IPPK, ITGB2, LIPF, MAN2A1, MAP2K7, MLLT4, MPST, MS4A2, MTHFD1L, MTHFD2, MTHFR, MYL2, NCF1, NCR2, NFYA, NME4, NT5C, OR10A4, OR10A7, OR 13G1, OR2G2, OR2M4, OR2M7, OR2T4, OR2Y1, OR4A15, OR4F5, OR51B5, OR52 I1, OR56A3, OR5T1, OXTR, PARS2, PDE1C, PGAP1, PIAS1, PMM1, POLR2E, PR KCA, PRKCH, PROC, RAP1A, RASGRP4, ROBO3, ROCK2, RPS6KB1, SH2D1A, SUL T1E1, TAS2R42, TAS2R48, TAS2R50, TGFBR2, THBD, TLN2, TSNARE1, TUBB2 B, UAP1, UXS1, WARS, WWP1, ZAP70, ATP6V1B1, B3GALNT1, CSNK1A1L, MAPK APK5, PNLIPRP1, TNFRSF13B

Negative_14954	AK7, CBS, DAO, DCK, F9, FER, IL8, LIF, LTB, MVD, TAT, VTN, ACP2, ACPP, ACSS3, ADIPOR1, ALDH7A1, ARPC2, BAI1, BMP8B, CADM3, CARS2, CASP10, CCL28, CCNB3, CD36, CD38, CD40LG, CD86, CD01, CLDN6, CMPK1, COL6A2, COQ5, COX15, CREB3, CRY2, DFFA, DGKD, DHFR, DPM1, DPYS, DUSP2, EFNB3, EHHA, EIF4E, EP300, FGD1, FLOT2, FLT3, FM02, FUT3, GALC, GCNT3, GAAA1, GRM5, GSTM5, HSD17B3, HSPA2, ICAM2, IFNA21, INHBB, IPPK, IQGAP2, ITGB1, ITGB5, LAMB3, MAP3K3, MCCC1, MGAT5B, MMP7, MPST, MYH7, NLGN2, NT5C1, NT5C1B, OR10A2, OR10R2, OR1N1, OR2A4, OR2M7, OR2V2, OR2Z1, OR4C16, OR4F15, OR4X1, OR51I1, OR52K1, OR5A2, OR6C3, OR8H3, PDXP, PHKB, PIK3CG, PIM1, POLE2, PPA2, PRKCH, PRPH, PTCH2, PVRL3, QARS, RCHY1, RPS6KA1, RXRG, SEMA7A, SESN1, SLC9A1, TFPI, THBD, TLR4, TPH1, TRPM5, TUBB3, XCR1, ZBTB16, AASDHPPT
Negative_14955	CD6, F2, F3, FAH, ILK, LYN, MVK, RET, RFK, SHH, SRF, STS, A4GALT, ABLIM2, ACADM, ACSM2A, ACTN1, AGMAT, AGPAT1, AMY2B, APOE, ARPC2, BACE1, BACE2, BET1L, BMP5, BNIP1, CACNA1D, CACNG2, CD72, CD80, CDH2, CFLAR, CHST12, CHSY3, CLDN4, CLTA, CLTB, CNTN1, COASY, CREBBP, CSF2, CSNK2A2, CTSB, DDX50, DUSP3, DUSP7, ECHS1, EDAR, EDN1, EFNB2, FGF23, FOXA2, FZR1, GGT7, GIT1, GPX7, HEXB, HTR6, IARS2, IDUA, IL17B, IL7R, ITGB3, LIMK1, MADCAM1, MAP2K5, MAT2B, MGLL, NAMPT, NAT1, NCK1, NEUROD1, NOS3, NRG4, NRP1, OR10J1, OR11A1, OR1E2, OR1M1, OR2AT4, OR2T33, OR4F4, OR4K5, OR52E4, OR5K1, OR5P3, OR6B3, OR8K1, OR8S1, OR9I1, PARVB, PDCD1, PGAM1, PGAM2, PGAP1, PHKA2, PIGB, PIK3R2, PLA2G2D, PLCZ1, PLD2, POLR1E, PORCN, PPAP2A, PPAP2B, PPM1A, PRPH2, PTPRF, PVRL3, RASGRP1, RDH8, SESN1, SESN3, SETD1A, SETDB1, SMAD6, SPCS3, STAT2, STX4, TAS2R42, TBXA2R, TCIRG1, TGFB1, THY1, TICAM1, TLN1, TLR4, UBE2L6, WHSC1L1, WNT1, WNT3A
Negative_14956	APP, C8G, DCK, FAS, LIF, MUT, PGF, ACO1, ACOX1, ACPP, ADCY3, ADSS, AGMAT, AKT3, AMPD3, AMY2A, ARG1, ASRGL1, B4GALT6, BAI1, BCL2L1, BLVRB, CACNB3, CASP3, CD19, CD80, CDC20, CDC7, CDKN2A, CHAT, CHDH, CMAS, CNTNAP1, CPS1, CXCL6, DDX18, DGKI, DHRS9, DKK2, DUSP10, E2F2, EFNA1, ENTPD7, EPHA5, ETS1, EXT2, FARSA, FGF22, FGF23, FLOT2, FM01, FRAT1, FRAT2, FZD2, G6PC2, GUCA1B, GUCA1C, HLCS, ICAM3, IFNA6, IL25, JAG2, KITLG, LEF1, MAP3K6, MAP4K3, MITF, MYD88, MYH10, NAT1, NFX1, NLGN2, OR10A3, OR10A5, OR13C5, OR13C9, OR1B1, OR2AG1, OR2C1, OR2M2, OR2Z1, OR4F15, OR4F17, OR4N4, OR51Q1, OR52A1, OR56A3, OR5A2, OR8D2, P4HA3, PDE8A, PDHB, PDPK1, PDX1, PFN3, PIGN, PKM2, PLXNB3, POLD4, PPP3CA, PPP3CB, PRKCZ, PRODH, PRODH2, RAD51, ROCK1, SCP2, SLC9A1, SMAD1, SMARCA2, SOCS7, SPHK2, SSX2IP, ST8SIA5, TAP1, TAS2R48, TAS2R49, TBL1Y, TBXAS1, TFP1, TLR3, TNFSF8, TRAF4, TRDMT1, TRHR, TSHB, UBE2K, UXS1, WBSR22, WEE1, WNT10A, WNT3, ZIC2, CACNA2D2, SERPINC1, ST6GALNAC6
Negative_14957	AMH, DBI, GPT, A4GALT, ACSS1, ACTA1, ADCY1, ALG11, AMD1, ATP2A1, ATP6V1D, AXIN2, C4BPB, CASK, CCL15, CCR3, CD22, CD34, CHPT1, CRY2, CSDA, CYP2A7, CYP2E1, CYP2J2, DDX4, DGKA, ERBB2, EXTL1, F11R, FSHR, GALM, GGTT7, GNAI3, GNG12, GNG3, GRHPR, HLA-DOA, HLA-F, HSD3B1, HSD3B2, IAPP, IFNA5, INADL, INHBB, ISYNA1, ITGB1, JAM2, LDHAL6A, LTBR, MAP2K2, MPP5, MTFMT, NAT6, NCOA4, NRG1, OR13C4, OR13C8, OR1L8, OR2G2, OR2T4, OR2Y1, OR4N2, OR52E4, OR52N4, OR6B2, OR6S1, PANK3, PDE3A, PFKFB2, PIGU, PIGV, PNPLA4, POLR2A, POLR2G, POLR3A, POMC, PPM1D, PRKAG1, PRNP, PVRL4, RALBP1, RARS, RDH16, RFX5, RIPK1, RPS6KA2, SEPHS1, SLC25A5, SMAD2, SRD5A1, STAT5A, TRPM5, TUBAL3, UBE2L6, WASL, WNT7A, ZBTB16, GABARAPL1, SERPINA1, SERPINF2

Negative_14958	AMH, BAD, BTK, CGN, JUP, LPL, ACOX2, ADRB2, AKT1, ALOX12, ARHGAP5, BAIAP2, BDH2, BMP6, BMPR1A, C3orf10, CCL2, CCL3, CCL7, CCND1, CCR8, CD19, CD44, CDC16, CDKN1A, CD01, CEBPA, CHRNA7, CHUK, CLCA2, CLDN4, CREB3L4, CSF3, CTNNB1, CYP26B1, DDX19A, DEGS2, DHODH, DPM1, DRD5, EDA2R, EHMT2, EPHB3, FABP4, FBP2, FGF10, FZD4, GADD45B, GALNT14, GFAP, GPX5, GSTM4, GSTZ1, GUCY2F, GZMA, HAP1, HSD17B2, ICAM1, IDH3B, IGF1R, IMPA1, ITGA6, ITGB4, KLK3, LM07, MAPK13, MAPK8, MCM4, MDH1, NFE2L2, NKX3-1, NT5C, OR10A7, OR10V1, OR1F1, OR2AE1, OR2K2, OR2M7, OR4E2, OR4Q3, OR5B12, OR5T2, OR7A5, OR7G1, ORC4L, P2RX1, P2RX3, PAK4, PCYT1A, PDE4D, PDE8B, PFN1, PHKA1, PI4KA, PLTP, POLR3B, PON1, PPA2, PPP3R1, PSME3, PTGDS, PTGIS, PYGB, ROCK1, RRM2B, SELP, SEMA4D, SENP2, SESN3, SGPP1, SH2D1B, SLC25A6, SPRY1, SPTLC1, STAM, STX6, TCF7, TRDMT1, TUBB2B, UBE2K, UBE2L3, UCK1, UGT2A1, UPP1, WIF1, WNT10B, XYLB, YWHAH, ATP6V1B2, CACNA2D2, SERPINF2
Negative_14959	AK3, C6, CD6, F2R, F9, IDS, NGF, PGP, SHH, SRM, ACLY, ACTA1, ACTN4, ADRA1B, ALDH1A2, APC2, ARD1A, ARG2, B3GAT1, B3GAT3, BCMO1, BDH2, CCL27, CFLAR, CHEK2, CHR1, CLCF1, CLDN15, CTNNA1, CTSB, CX3CL1, CYP3A7, CYP4A11, DDX19A, DHRS3, DNMT3B, E2F2, EXTL1, EXTL3, FASN, FGFR1, FPGS, FTMT, FZR1, GAB1, GCNT2, GCNT3, GSTK1, GYS1, HADHA, ICAM1, ICOS, IDI2, IFNA6, IKBKB, IQGAP3, IRAK3, JAK3, LRP6, LTBR, MAD2L2, MAN1A1, MAP2K4, MAPK14, MAPK3, MTHFD1L, MYH11, NAE1, NCOR1, NMNAT2, NOX3, NT5C1A, NT5C1B, NUDT9, OR10A6, OR10Z1, OR13H1, OR14I1, OR2AE1, OR4F4, OR4F6, OR51V1, OR52N5, OR6K3, OR6M1, OR7C2, P4HA1, PFKL, PFN4, PIP5K1C, PLA2G2E, PLOD3, PNPO, POLR1D, POLR2I, PPP1CC, PRLR, PSPH, PTGES2, RAC2, RFXAP, RPS6KA1, SKP1, STEAP3, SULT1E1, SYNJ1, TJP3, TP53I3, WNT10B, WNT7A, YES1, HLA-DRB4, SERPINA5, TNFRSF11B
Negative_14960	CDA, DBT, GDA, IL9, PGF, SCD, ACAD8, ACADS, AFMID, AKR1B1, ALG9, ARSD, BMP4, BPNT1, CAMK4, CCL3, CDC2, CLDN5, COL6A1, CSF1R, CTLA4, CXCL9, CYP27A1, CYP2S1, CYSLTR1, DDX56, DGKG, DLL3, DNMT3A, DNMT3L, EI24, FGD3, FLT4, FMO2, FRAT1, FTCD, FUT1, GALNTL2, GAPDH, GPAM, GTSE1, HHIP, HPSE2, HTR4, IGF1R, IL20RB, IRAK4, ITGAX, LEFTY1, LTA4H, MAD2L1, MAP3K13, MCM6, MGAT2, MINPP1, MKNK1, MYH7, MYH8, NODAL, NRCAM, OLR1, OR13C9, OR13H1, OR1F1, OR2AE1, OR2L13, OR2T2, OR2T29, OR2T3, OR4C11, OR4F4, OR56A3, OR5D16, OR5M8, OR5M9, OR5P2, OR5T3, PAPSS2, PARVA, PCK2, PDGFB, PFN1, PGK1, PIP4K2B, PIPOX, PLCB3, POLR2E, PPP1CB, PPP2R5A, PRKCE, RAB5A, RAP1A, RERE, RFWD2, ROCK2, RPS6KA5, SH2D1B, SMPD1, SMPD3, ST6GAL1, TACR3, TGFB1, TNFRSF9, TRDMT1, TYMS, UCK2, UNC5A, UROC1, VAV2, WNT5A, YARS2, YKT6, B3GALNT1, HLA-DQB1
Negative_14961	AK5, GHR, GNS, NGF, SDS, WAS, ACHE, ACOX1, ACPT, ACTN4, ADRA1B, ALDH2, APRT, ARHGAP5, ASAH1, ASMT, ATN1, ATP13A2, BACE2, BUB3, C4BPB, CAMK2A, CBLB, CCR7, CD40LG, CD48, CEBPA, CFL2, CLTB, CREB1, CREB3L2, CREB3L4, CXCR5, DDOST, DLL3, DPM2, DRD1, EFNA3, EPHA6, ESPL1, EXT1, FOXA2, FZD5, GAD2, GMPR2, GNAT3, GPAA1, GPX5, HARS2, HMGCL, HTR2A, HYAL1, IL6R, INHBB, KAT2A, LAMB1, MAFA, MAP3K2, MAP3K8, MCM5, MGST1, MYH13, NCKAP1, NFYA, NUDT8, ONECUT1, OR10A2, OR13A1, OR14J1, OR2T34, OR51E2, OR8D2, OR8U1, ORC4L, PARVB, PAX4, PDE4C, PFN3, PLXNA1, POLR2B, PPAP2C, PPP1R3D, PRIM2, PRKACG, PRPH2, PTPN6, RPS6KA6, SARS2, SCLY, SEMA3D, SETDB2, SHMT2, SMAD5, SOCS7, STX12, STX3, TCF7L1, TLR9, TRAF6, TUBA4A, TUBB4, UAP1, XYLT2, ZBTB16, ATP6V1C2

Negative_14962	<p>AK1, C7, CFD, CFH, DBH, DDC, F7, GP6, PGF, TKT, ACP5, ADH6, ADSL, AHCY, ALDH1L1, ASMT, C1QB, C4BPA, CBR3, CCL11, CCL3, CCL8, CD38, CDK5, CDKN2C, CHRM2, CLDN6, CLOCK, COL1A1, COL4A1, CPT2, CSNK1G2, CSNK2A1, CYP26B1, CYP2C8, DCXR, DDX4, DDX52, DDX56, DHODH, DUSP8, ECHS1, EPHB4, EXT1, FARSB, FGF17, FGF9, FOSL1, GALNT14, GALNTL1, GCLC, GNA12, GRIN1, GUK1, HAP1, HIBADH, HIF1A, HMOX2, HTR2B, IGSF5, IL22RA2, LEFTY1, LTA4H, MASP1, MBL2, NCK1, NCOR2, NFKB1, NKX3-1, NPR1, NT5C1B, OGDH, OR10A3, OR10G9, OR11G2, OR1L1, OR2AG1, OR2T29, OR4D11, OR51A2, OR52K1, OR5D16, OR5R1, OR6Y1, OR8J1, OR8U1, P2RX2, P2RX3, PANK1, PIGN, PIK3R2, PLK1, PPP1R3B, PRKAA1, PRKG1, PTPRB, PTPRM, RAP1B, RASA2, RPS6, RRAS2, SCIN, SEMA3C, SEMA7A, SFRP1, SHMT1, SLC27A5, SMAD2, SMAD7, STK4, TAS2R3, TPMT, TRAF6, UBE2L6, UGT2A3, UGT8, VAMP4, ARHGEF12, GABARAPL1, HSD17B12</p>
Negative_14963	<p>A2M, ADA, C3, C9, EZR, HK2, HPD, PVR, ACTG1, AFMID, AGRN, ALG6, ATN1, ATP50, CARS2, CBR1, CCNA1, CCR1, CCR3, CCR6, CD14, CD3E, CD74, CDC7, CHUK, CLTC, CNDP1, COL4A1, COMT, CREB3, CREB3L1, DDX50, DGAT1, DGKB, DIAPH2, DPYD, EDA2R, ENTPD4, EPB41L2, F11R, FGF22, FGF4, FGFR3, FLT3LG, FPGT, GADD45G, GLI3, GSTA1, GSTO1, GUCY1A2, HARS, HES1, ICOS, IFNA14, IFNK, IFNW1, IKBKE, IL10RB, IL18R1, IL20RA, IL28B, IMPDH2, ITGB7, LDHAL6A, LIPC, MAP3K3, MAPK10, MEF2C, NEFM, NEU3, NFATC4, NFYA, NR1H3, NRG2, OR10A3, OR1N2, OR2T34, OR51G2, OR52I1, OR56A3, OR5M9, OR6K3, OR8B8, ORC4L, P2RX5, P4HA2, PAICS, PANK1, PCCB, PDE10A, PDHA1, PER1, PERP, PHGDH, PIGK, PIM2, PIP4K2A, PLA2G3, PLCB2, PLXNA2, PNMT, POLR1A, POLR2A, POLR3A, PPM1B, PRKAR1A, PRKAR1B, PTDSS1, PTGES2, RAB23, RPS6KA1, RRM2B, SC4MOL, SDC2, SEMA4D, SLC27A5, SLIT2, SMC1B, SOS2, SPRY1, SRD5A2, TICAM1, TNXB, TRDMT1, TRMT11, TUBA1C, UCKL1, WASF1, WHSC1L1, WNT4, WNT7B, ATP6VOE1, PAFAH1B2</p>
Negative_14964	<p>AGL, BTC, C7, IL6, JUN, KDR, PAH, TH, ABI2, ACAA1, ACTG1, ADAM17, ADRB1, ALG10B, ALOX12, ASS1, ATP6AP1, CACNG8, CCNH, CD28, CD44, CD46, CD82, CHPF, CISH, CMBL, CRB3, CSNK1D, CTNND1, CTPS, CYBA, CYP7A1, CYSLTR2, DHDH, DOT1L, E2F4, EGFR, FECH, FGF17, FGF18, FMO1, FMO3, FOXA2, GALC, GAMT, GANC, GAPDH, GAS1, GBA3, GJA1, GLB1, GLI1, GNA14, GNAS, GSK3B, GSTM4, GZMA, HMOX2, IDH3A, IFNA7, IKBKE, IMPA2, IRS1, IRS4, ITPKA, LAMB3, LIPC, MAP2K7, MARS, MS4A2, MTHFS, NAGS, NFYB, NMNAT2, NOTCH1, NUDT5, OR10A5, OR10H1, OR14A16, OR51A2, OR51B4, OR51D1, OR51V1, OR52I2, OR5D16, OR6K6, OR8J3, PAX4, PIAS3, PIGP, PMVK, PNPO, PON3, PRKCE, PRKCQ, PSPH, PTGIS, PTPRM, PYGB, RAP1B, RARA, RBKS, RFXANK, RPS6KA6, SCYLY, SELPLG, SLC9A1, SMAD5, SMAD7, SOX17, SPTAN1, SRD5A2, STAM2, SV2A, TCF7L2, TICAM2, TUBB, TUBB1, UGT2A1, UGT2B10, UPP2, WNT1, WNT9B, ZFYVE16, MAPKAPK3, PPP1R12A, TNFRSF14, TNFRSF1A</p>

Negative_14965	<p>F12, F8, F9, FH, GK, HPD, HYI, IDS, IL9, LHB, MAX, MVK, PML, PVR, TXK, ABC C8, ACLY, ADCY7, ADORA2A, AGRP, ALDH3B2, ALDOA, ALOX12, ATP2A1, B4GALT5, BDKRB2, BLNK, BPGM, CACNA1H, CACNG3, CCL19, CCND3, CD01, CDS1, CPT1A, CREB3, CREB3L1, CSF2, CTLA4, CXXC4, CYP4A22, DDIT3, DDOST, DKK4, DRD5, DUSP5, EFNA2, EPHX1, F2RL1, FGF10, GALNT8, GDE1, GGPS1, GLUD1, GNRH1, HEXA, HNF4G, IDH2, IDI2, IFNA14, IFNA17, IGF1R, IL15RA, IL1R1, IL8RA, IMPDH2, ITGAX, KCNJ11, KCNQ1, KIR2DL3, LAMA3, LAMB2, LRDD, MAML2, MAP3K13, MAP3K14, MAP3K7, MDM2, MGAM, MTMR6, NCR2, NPR2, NRCAM, ONECUT1, OR10H3, OR10J1, OR10K1, OR10Q1, OR2A14, OR2L3, OR2M3, OR2M7, OR4C16, OR4F15, OR4S2, OR56A1, OR56A3, OR5B3, OR8J1, OR8J3, ORC4L, ORC6L, PDGFB, PDX1, PLA2G6, PMVK, PPAP2C, PPP1R3B, PTCH1, PTGER3, RBL1, RPSA, SC4MOL, SEMA4F, SLIT2, SMAD6, SMARCA5, SNAI2, SRD5A2, TBK1, TLR9, TNFRSF8, TOMM40, TUBB6, TYRP1, UGT2B10, ULK1, UPP2, WARS, YWHAB, YWHAH, ATP6V0A2, ATP6V0D1, CACNA2D4, EIF4EBP1, SUV420H1, SUV420H2</p>
Negative_14966	<p>AK3, C4B, C8G, CGN, GBA, GNS, UBC, ABL1, ACADL, ACSL5, ACVR2B, ACYP2, ADCY9, ADH4, ADIPOR1, AGTR1, ALG3, ALG6, AMD1, APOE, ASIP, ATP5F1, C4BPA, CASP10, CAV1, CCNA2, CCNE2, CD14, CDK4, CDKN2D, CERK, CHST13, CLDN11, CLDN5, CSF2RB, CSNK1G2, CTBP2, CXCL9, CYP11B1, CYP2J2, CYP3A4, CYP3A7, CYSLTR2, DGKZ, DHCR7, DLL1, DLL4, DUSP2, DUSP3, ENAH, F11R, FARP2, FGF4, FTMT, GGT5, GNG13, GNMT, GRB2, GSTZ1, GUCY1A2, HIBCH, HPS E2, IL13RA2, IL1R2, INHBC, LAMA4, LAMB4, LILRB3, LIMK1, LTC4S, MAP4K2, MAP4K4, MGAM, MYH10, NAGS, NFKBIE, NME6, NPR1, NR1D1, NRXN1, NRXN2, OR10J3, OR1F1, OR2A5, OR2AT4, OR2H2, OR2L13, OR4D11, OR4S1, OR8K1, OR9Q1, P2RX7, PAX4, PDE1C, PIGL, PIGX, PIK3C3, PLA2G6, PLCG2, PLD1, PPP2R2C, PPP2R5B, PROS1, PTGER1, PTPMT1, RAB23, RND1, SARS, SGMS1, SMPD1, SMPD2, SNW1, SOCS3, SRD5A1, SRGAP3, SSSX2IP, SULT2A1, TAS2R4, TAS2R5, THTPA, TNFSF14, TOLLIP, TPK1, TPM3, TRAF6, TYRP1, UGCGL1, UGT2B10, VAMP3, VDAC3, WNT7A, PPARGC1A, TNFRSF6B</p>
Negative_14967	<p>ABO, AK5, DBI, FN1, HK1, ITK, NLK, RET, TKT, ACADS, ACSM5, AGPAT3, AGTR1, ALG11, ANAPC7, APOE, ATN1, ATP5J, ATP6V1H, B4GALT3, BCMO1, BDKRB1, CCL23, CCL8, CD72, CDK6, CHIA, CHRM2, CLOCK, CNTN1, COQ7, CXCL12, CXCR3, CYBB, CYP2D6, DAAM1, DDB2, DHRS4, DUSP14, EDNRA, EGLN1, ELK1, EPB41L2, F13A1, FCGR3B, FOXL1, GALK2, GGT6, GGT7, GLO1, GLUD1, GMPPB, GNPAT1, GNRH2, GSTA1, GSTO2, HCCS, HDAC2, HRH1, HSPA8, ICOS, IFNAR1, IGF1, IGF1R, IL17RB, IMPDH2, INPP4B, ITGA10, ITGB6, LEFTY2, LYPLA2, MAML1, MAML3, MMP7, MOV10L1, NCKAP1L, NEU3, NFATC3, NFKBIA, NMNAT1, NT5C2, OR10A4, OR10H4, OR13H1, OR1B1, OR1C1, OR2AT4, OR4K15, OR4M1, OR4S1, OR52I1, OR52J3, OR56A1, OR5A1, OR5C1, PCK1, PFKFB2, PFN1, PI3K, PIK3C2B, PLA2G4A, PLEKHA8, PLXNB3, POLR2A, PPP2R5A, PRKCQ, PRPS2, PSPH, RAC3, SDC4, SMURF2, SNAI2, SOAT1, SOAT2, SPRY3, SULT1E1, TAS2R9, TCIRG1, TIRAP, TLN2, TRIP10, TSHB, TUBA3E, TUBB3, UBA1, UNC5C, VTI1B, WASF2, WNT8A, XYLT1, CSGALNACT2, EIF4EBP1, PHOSPHO1, TNFRSF17</p>

Negative_14968	CD4, LYN, ME1, MSN, PC, PVR, ABLIM3, ACP1, ACSM2A, ACSS1, ACYP1, AGPAT1, ARSE, B3GALT5, BLNK, BUB3, CARS, CCR1, CD40, CD70, CDC26, CERK, CHR M1, CHST13, CLDN9, CNTF, CNTN2, COL1A2, CTBP2, CTNNB1, CYP26C1, CYSL TR2, DHFR, DUSP8, DUSP9, EHMT2, EXT2, F13B, F2RL2, FGF2, FOSL1, FOXO3, GALNT5, GCDH, GDE1, GFAP, GLG1, GPD1L, HDAC1, HNMT, HPSE2, IGFBP3, I L10, IL1R1, IL28A, ITGB1, ITGB8, LRRC4C, MGAM, MGAT2, NFE2L2, NME2, N OS1, NSD1, NT5C1B, OR10G2, OR10H2, OR2L13, OR2W1, OR4D2, OR51A7, OR5 6B4, OR6A2, OR9A4, PCK1, PGAP1, PIP5K1C, PLA2G2D, PLA2G3, POLR1B, PO LR3A, PPM1A, PRDX6, RAP1B, RAPGEF2, RARS2, RASA1, RHEB, RPRM, RPS6KB 1, RUVBL1, SEMA3F, SLC25A4, SOS1, SPRY4, STX16, TAS2R1, TNFSF14, TOM M40, TUBA8, VTI1A, WNT2B, XCL1, GABARAPL1, SUV420H2
Negative_14969	APP, BAD, CSK, F10, FGG, GSN, HPD, IL3, RPE, SPN, SYK, VTN, AARS2, ABL1, ACAD9, ACP1, ACP6, ACYP2, ADCY6, ADCY9, ADH7, ANPEP, ARHGEF4, ASMT, A TP5E, B4GALT5, BAI1, BUB1, CACNA1G, CALML6, CASP8, CBLB, CCDC6, CCL2 3, CCL25, CD55, CDC2, CDC45L, CDC6, CFL2, CHSY1, CIITA, CISH, CMPK1, C PT1C, CREB3L3, CXCL6, DAPK1, DNMT3B, E2F5, ENPP6, EPOR, ETS1, FBP2, F CER1G, FLT4, FMO2, GADD45B, GALK1, GAPDH, GCNT1, GNG13, GRIN2D, GSTA 5, GUCY2F, HBEGF, HSD3B1, HTR5A, IDI1, IL12RB1, INHBE, IPPK, ITPK1, K IR2DL3, LARS, LDHAL6B, LEFTY2, LIPC, LRDD, MAP2K7, MASP2, MAT2B, MIO X, MYL7, NRP1, NUDT5, OR10J5, OR2K2, OR2T10, OR4C11, OR4C13, OR51B4, OR51G2, OR52N1, OR52N5, OR56A1, OR5K1, OR6B3, P2RX3, PDE6G, PLCD4, P LXNA2, POLE3, POLR1E, POLR3K, PPP3CC, PRKG2, PSENEN, PTGES, RAC2, RA RA, RELB, RPS6KA5, SDC1, SDHD, SEMA3A, SSH3, STAT5A, SULT1E1, SUOX, T GFBR2, TNFSF8, TNFSF9, TSHR, TUBB1, TUBB2A, UBE2K, WNT7B, ATP6V1C1, B3GALNT1
Negative_14970	BCR, CAD, DBI, DCN, GNS, JUP, LIF, SMO, ACACA, ACHE, ACOT12, ADSS, AKR1 C3, ALDH1A1, ALDH7A1, ALPPL2, APOA5, ARHGEF2, ARPC1B, ARSD, ATP5C1, ATP5G1, BHMT, BLVRA, BNIP1, C3AR1, CACNG7, CALML6, CCL28, CD36, CEBP A, CHAD, CHEK2, CLDN1, CMPK1, CMPK2, COL4A4, COL4A6, CSF3R, CXCL10, C XCL2, CXCL9, DERA, DHRS4L2, DTYMK, DUSP8, EIF4E2, ENTPD3, ENTPD6, EP AS1, EPHA3, EPHA7, ERO1L, ESAM, EXTL3, FZD7, GAD1, GALNT12, GANC, GNA 12, GPAM, GUCA1A, IFNA4, IFNB1, IL10, IL24, IL7R, INADL, IPPK, ITPKB, KIR2DS5, KIR3DL3, LALBA, MADCAM1, MAN1C1, MAP2K1, MAT1A, MDM2, MMP7, MPST, MYH8, MYL2, NAT5, NCF1, NCKAP1, NSD1, OR1B1, OR1S2, OR2AT4, OR 2V2, OR3A1, OR4C6, OR4F4, OR51D1, OR52E8, OR5H6, OR5V1, OR6C4, OR7D2, PCNA, PDE8B, PECAM1, PFN4, PIK3C2A, PIM1, PLCG2, PLIN, PNMT, POLR1E, POLR3B, PPA2, PPAP2B, PRKAR1A, RALB, RELB, RETSAT, RHOD, RPE65, RRM 2, SOAT2, ST8SIA1, STK36, STX3, SYNJ1, TRMT11, TUBA4A, TUBA8, TUBB3, UBE2K, UGT2A1, ULBP2, UNC5A, VAMP2, VKORC1, WNT8B, XIAP, YARS2, YWHA E, ATP6V1G1, HLA-DQA2, KIR2DL5A
Negative_14971	ABO, BAD, DBI, DCC, FER, ID1, IL9, IVD, RFK, SMS, UBB, ACAT2, AGPAT6, AL DH6A1, AMPD3, ARG1, ARNT, ASMT, ATP5C1, AXIN2, CACNG2, CAV3, CCL25, C CL3, CCR6, CD28, CD40, CD74, CDH4, CDKN2B, CDKN2D, CER1, CES1, CLDN3, CNTN1, CPS1, CSDA, CUL1, CXCL12, CYP17A1, CYP2S1, CYP4A22, DAAM2, DD X19A, DDX47, DDX56, F11R, FGF19, FGFR1, GALK2, GALNT11, GBGT1, GFPT1, GOT1, GPT2, GSTM2, HADHA, HEMK1, HSD17B7, IGF1R, IL22RA1, INADL, IT GA6, ITGAM, ITGB2, LTB4R2, MAPK3, MGAT2, MMP14, MTHFS, MYH7B, NKD1, N KX2-2, NME2, NME7, NOS1, NRCAM, OGDHL, OR12D3, OR1C1, OR1L1, OR2B2, OR2H1, OR2M7, OR3A1, OR51D1, OR5B12, OR6M1, OR6X1, OR8B4, P2RX7, PAK3, PCK 1, PDE4D, PHKG2, PIGP, PIGV, PIM2, PIP4K2B, PLA1A, PLA2G2F, PLEKHA8, PLXNA3, PLXNB2, POLR2K, PORCN, PPAP2A, PPP1CB, PPP2R1B, PRIM2, PTK2, RHOQ, SETDB2, SKP2, SMPD1, SUFU, SULT1A4, SULT1E1, TKTL2, TLN1, TOL LIP, TPH2, UGP2, VARS, VDAC2, VTI1A

Negative_14972	<p>ADA, CR1, DAO, F11, FES, ID4, IL7, LCT, ME1, MVK, NF1, ACAD9, ADCY8, ALG11, ALG2, AMDHD1, ARG1, ASMT, ATP6VOB, BCAT2, BMPR2, CACNA1S, CCL21, CCL26, CD40, CD47, CDC42, CDH4, CDKN1C, CLDN16, CLOCK, COL4A1, COQ5, CPT1A, CSF3, CSNK1E, CTBP1, CTNNA1, CYP11B1, CYP26A1, CYP26C1, CYP27A1, DDX52, E2F3, ENTPD4, EXT1, FPGT, FUT4, FUT9, GALNT10, GBA3, GNAI2, GUSB, H6PD, HLA-DMA, HMGCL, HSD3B1, IFNA4, IL12B, IL1RAP, IL20RA, IL29, ITGA6, JAG1, KAT2B, LIFR, LTB4R2, MAML2, MCAT, MPST, MYH13, MYL2, NEU3, NFAT5, NFA3, NFKB1, NFYA, NMNAT1, NOS3, NR1D1, ODC1, OR10G2, OR11H1, OR1F1, OR2A4, OR2B6, OR2L8, OR51Q1, OR52N1, OR5C1, OR5V1, OR6Q1, OR7D2, OR8K5, ORC4L, P2RX7, P4HA3, PARD6A, PIAS2, PIM2, PLA2G1B, PLA2G6, PLCB1, POLR1A, POLR2K, PPAP2C, PPP1R3C, PRKAG3, PRKCQ, PTK2B, PTPRJ, PVRL2, ROCK1, RRAS2, SC4MOL, SDC2, SDHA, SETD7, SETDB2, SIPA1, SREBF1, SULF1, TCIRG1, TLR3, TLR5, TMLHE, TSC2, TUBA1A, UBE2K, UPB1, VAMP2, VEGF, WNT3A, ATP6V1E2, B4GALNT1, HSP90AB1, KIR2DL5A, ST6GALNAC5, TNFRSF10A, TNFRSF13B, TNFRSF14</p>
Negative_14973	<p>DCT, IDS, KMO, SMO, TNC, TPR, ABI2, ACOT12, ACTG1, ALG6, ALOX15, AMPD3, ANGPL4, AOC3, ARNT, ARPC5L, ASRGL1, ATP5L, B4GALT7, CACNA1D, CACNA1H, CALML6, CARS, CAV3, CCL5, CCR10, CCR3, CD22, CDC7, CDK6, CHST13, COL1A2, CRKL, CYP1A2, CYP2A7, CYP2E1, CYP3A7, DEGS1, DERL1, DFFB, DGKB, DGKH, DOCK1, EI24, ENTPD2, FGF18, FGFR1, FGFR3, GALNT13, HYAL1, ICAM1, IFNA14, IL22RA2, INHBB, INPP1, ISYNA1, KIR3DL1, LCP2, LIPC, LY8Z, MAP2K2, MAP3K12, MAP3K5, MEF2C, MLYCD, MYH7, MYL9, NEU3, NFKB2, NMNAT3, NODAL, OR13C5, OR13C9, OR2T10, OR2T12, OR52N1, OR7G3, P2RX5, PAK2, PARD6A, PCYT1A, PDHA1, PDXK, PEMT, PER2, PFKM, PHGDH, PIP5K1C, POLR1A, POLR2I, PPM1B, PRKACA, PRKACG, PVRL2, RASSF1, STX8, SV2A, TACR1, TAS2R42, TP53, TRAF4, TRPM5, TSC1, UGT8, VEGFA, VNN1, XYLB, ATP6VOA1, MAPK8IP2, PAFAH1B1</p>
Negative_14974	<p>ADA, AGK, C1S, C8B, HK1, ABCC8, ACOT11, ACY3, ADRA1B, ALDH1L1, ALDH5A1, ALG10, ALG5, ASNS, B3GALT6, BAAT, BCAR1, CACNA1H, CAV3, CD70, CDC42, CER1, CHRDL1, CISH, CNTN1, CNTNAP2, COQ5, CREB1, CTSL1, CXCR6, DVL3, EFNA5, FPGS, GALNTL4, GALT, GAPDH, GCNT1, GPAA1, GPD1, GPT2, GTSE1, HLA-DOB, HLA-DRA, IL23A, IMPA1, ITGAM, LAMB3, LIMK1, MCM3, MCM7, MGAT2, MTAP, NKD2, NLGN1, NT5C1A, NT5C2, OR13C8, OR2A14, OR2B11, OR4C15, OR51I1, OR51Q1, OR7G3, P2RX2, PAICS, PAPSS1, PDE4D, PHKA2, PIAS3, PIGC, PLXNB2, PNM1, RASGRF1, RASGRP2, RHOA, RND1, RPS6KA3, RPS6KA6, RRM2, SCLY, SLC27A1, SLIT1, SRGAP3, STX1B, SUOX, TAS2R42, TGFB3, TLR4, TNFSF11, TPM3, TSTA3, VDACC2, WHSC1, WNT7A, WNT8B, ATP6V1B1, CACNA2D1, PNLIPRP1, SUV420H2, TNFRSF10C</p>



Negative_14975	<p>C8G, F11, F2, FER, GCK, GHR, IL3, IL8, IVD, PDC, RB1, ACADM, ACP6, ACVR1 C, ADCY1, ADH6, AKR1C4, AKT2, AKT3, ALDH1A2, ALG10, ANAPC10, ANAPC4, ARPC1A, CARS, CBLC, CD28, CD86, CDC25B, CFL1, CHPT1, COL4A4, COQ7, CS NK1A1, CTBP2, CTSB, CXCL12, CYBA, CYP11B2, CYP2A7, CYP2J2, DAPK2, DF FA, DPAGT1, DPM3, DPYD, DTX3L, EIF4E, F13A1, FGF14, FGF2, FGF3, FZD2, GBGT1, GCNT3, GMPR2, GNAI2, HLA- DOB, HSD17B8, HTR2C, IARS, ICAM1, IDI1, IKBKB, ITGB6, ITPKA, KNG1, LC MT1, LIPT1, MAP2K2, MAP3K6, MAP4K1, MAPK10, MYH15, NME7, NMNAT1, NOD 1, NUMB, OR11A1, OR11H1, OR13C2, OR1K1, OR2M3, OR2T1, OR2T29, OR2T6, OR4F4, OR4K15, OR51A2, OR51G2, OR52A1, OR6C6, OR7A5, OR8A1, OR8S1, P ER3, PFN1, PFN3, PGAM4, PIP4K2B, PLA2G10, POLA2, POLE, PPP1R3D, PPP2 R2B, PSPH, PTGES, PTPN6, PVRL4, PYCR2, RASA1, RASSF5, RPIA, RPS6KB2, SDC4, SGPP1, SHC2, SMAD5, SRD5A1, ST3GAL5, STAT5A, STAT6, TAS2R48, T BL1Y, TFPI, THBS1, TIAM1, TUBB4Q, UGCGL1, UNC5A, UPB1, UPP1, VAMP1, V ANGL1, VEGFA, XCL1, YWHAB, B4GALNT1, HSP90AA1, MAP3K7IP2, MAPKAPK2 , PAFAH1B2, ST6GALNAC5, TNFRSF12A</p>
Negative_14976	<p>C8A, CDA, DBI, RPE, TXK, UBC, ACMSD, ACYP2, ADAM10, ADH6, ADH7, ADRB3, ALAS1, ALG2, ANAPC10, APBB1, ARG1, ATP5C1, CACNA1S, CAMK2G, CCD6, C D244, CNTN2, CYP2S1, CYP4A11, DDIT4, DDX19A, DGKD, DKK2, DLST, DOCK1 , EHMT1, ENTPD1, ENTPD5, EPHB6, EXTL3, F2RL1, FABP3, FASLG, FGF13, FS HR, FUT2, FUT3, GAD2, GALNTL2, GGT5, GMPPA, GMPR, GNG12, GNPAT1, GPL D1, HHIP, IL23A, IMPDH1, INPP4B, INPP5B, IRS4, ITGA5, ITGAE, ITGB6, I TPKB, JUND, KIR2DS5, KITLG, KLKB1, LAMB4, LARS, LHCGR, LPAR1, LRP5, M AN2A1, MAP4K1, MDH2, MMP7, MRAS, MTFMT, MTHFR, NAT1, NEU2, NEUROD1, N GEF, NR1H3, OR10A5, OR10H3, OR13C9, OR2H1, OR4N4, OR51D1, OR51G2, OR 52B4, OR52I1, OR52N1, OR5H6, OR5M8, OR5P2, OR6C2, OR8D2, OR8H2, ORC6 L, PAK3, PDE8B, PEMT, PIK3R1, PIP5K1B, PLXNB1, POLR2I, RPN2, RPS6KA2 , RPS6KA3, RXRB, SAT2, SDHC, SENP2, SOCS1, SOS1, SPAM1, STAT1, STAT3, STX10, TAS2R13, TCF7, THBS4, TLR5, UAP1, ULBP3, UNC5A, UPP2, VEGFB, W NT10A, XCL1, ZFYVE9, AASDHPPT, ATP6V0D1</p>
Negative_14977	<p>ADA, BAD, C7, CKM, DBI, DUT, F9, FES, HGF, IL9, MAG, NF1, NNT, VTN, ADH5, AKT3, ALDOB, APOA5, ATP12A, AVPR1B, BBC3, BLVRB, CCNB2, CD226, CD3E, CD8A, CDC25B, CHST13, COL1A2, COL6A1, COQ5, CREB5, CSDA, CTNNA3, DAP K3, DDIT3, DDX41, DFFB, DGKB, DNMT3B, DUSP16, DUSP2, EHHADH, ENPP7, E PHB4, EXOC7, FGF9, FGFR4, FOXO3, FTH1, GALNT3, GANAB, GNA13, GRB2, GS TT1, GUCY2C, HAAO, HSD11B2, HTRA2, IFIH1, IFNGR1, IL12B, IMPA2, IRAK 4, LDHAL6A, LDHAL6B, MALT1, MAP3K11, MMP14, NADSYN1, NARS, NCSTN, NF ATC1, NFATC3, OR1F1, OR1G1, OR1L8, OR2A42, OR2B2, OR4C12, OR4C13, OR 52K1, OR52N4, OR5P3, OR8B4, OR8S1, ORC3L, PANK1, PCYT1B, PDHA1, PERP , PHKG2, PIGM, PIK3R5, PIP5K1A, PIPOX, PLA2G1B, PLCB1, POLR2C, PPA2, PPP1CA, PRKCD, PRSS2, PSME3, RASGRF2, RDH5, SCIN, SDHB, SESN1, SETD2 , SGMS2, SHMT2, SOX17, SUCLG2, TAS1R1, TAS1R3, TGFB1, TLN1, TNFSF4, T RAF4, TUBA4A, UGCG, ULK2, VDAC3, YOD1, ATP6V1C2, HLA-DPA1, HLA- DRB5, PAFAH1B1, ST6GALNAC4, TNFRSF11A</p>

Negative_14978	C4B, DHH, F2R, HYI, ID3, KMO, LCK, LPO, PC, ACSL4, ADSS, AKT1, AMDHD1, A NGPTL4, ASCC3, ASPA, ATP6V1F, B4GALT5, BTRC, CACNA1E, CACNB4, CBLB, CCL20, CCL28, CCR7, CDKN2B, CES7, CHEK1, CHPT1, CKMT2, CLDN17, COL1A1, CRLS1, CRY2, CSNK1G2, CXCL3, CYP2C18, DGAT1, DGAT2, DLST, EDNRB, F2RL2, FARSA, FLT3, FOSL1, FUT2, FUT9, GALNT5, GSK3B, GUCY1B3, HADHA, HSD11B1, IKBKE, IL15, IL7R, IRF9, ITGA6, KRAS, LEFTY2, MAGI1, MAGI3, MAP3K4, MARS2, MCCC2, MCM4, MGST2, MINPP1, MTFMT, NNMT, NPR2, NRAS, NTN1, NUDT5, OR13C2, OR14A16, OR1K1, OR1L1, OR2B11, OR4C46, OR4N5, OR51E1, OR52E8, OR52W1, OR6C6, OXCT1, PDE3A, PDHA1, PIGX, PIK3R4, PMVK, POLD3, PPID, PPP2R2A, PRKAR1A, PROS1, PSME3, PTPRZ1, ROBO2, SETDB1, SHC3, SOCS5, TAS1R2, TAS2R49, TAS2R7, TBXAS1, TLR3, TNFRSF4, TRAF4, TUBA1A, TUBB1, UAP1, VCAM1, WHSC1L1, PAFAH1B3
Negative_14979	GNE, HYI, INS, OGT, SMS, VTN, ACADS, ACSL3, ACY3, ADH6, ADRA1D, ALDH1A3, ALOX12B, AMDHD1, ARPC1B, ATG3, ATP6V0B, B3GAT1, BCKDHB, BMPR2, CACNA1B, CASP9, CAV3, CDKN1B, CHAT, CHEK2, CHKA, CLDN22, COQ5, CSF3, CXCL1, CXCL9, CXXC4, CYP11B2, DFFA, DGKA, DRD5, EHHADH, EPHA2, ESAM, FGF4, GALNT12, GCLM, GCNT4, GLUD2, GMPR2, GOSR2, GRIA2, GSTM3, GSTM4, HNF1B, HSD11B2, IL11RA, IL6R, IQGAP2, IRAK1, KAT2B, KIR2DS5, MAD1L1, MAPK10, MCEE, MGST3, MYH2, MYL9, NFAT5, NOTCH1, NSD1, NT5C3, NTF4, NUDT8, NUDT9, OR10G3, OR1S1, OR2G2, OR2M7, OR2W1, OR4F5, OR4N4, OR4X2, OR56A4, OR6S1, PARD3, PARD6G, POLR2A, PSEN2, PTGS1, PTPN11, RAC1, RBL1, RPS6, SC5DL, SDC1, SEMA3E, SHMT2, SLC25A5, SOCS1, SOX17, SPRY2, TGF2, TPMT, TRPC1, TSTA3, TUBA3E, UBE2L3, WBSR17, YARS2, ZAP70, ZBTB16, CACNA2D1, HLA-DQA2, KIR2DL5A, MAP3K7IP2, PDCD1LG2, TNFRSF11B
Negative_14980	AK5, AUH, FOS, FUK, GP6, HGD, ITK, LPO, MAX, MSN, MTR, TNF, ABLIM1, ACP1, ACSM2A, ACSM5, ACVR1, ADSSL1, AGTR1, ARAF, ARG2, ASCC3, ATP5G2, AVPR1A, BDKRB2, BIRC2, BLNK, C1GALT1, CACNG8, CD40, CDO1, CLDN1, CLDN6, COMT, CREB3L1, CSDA, CTNNA2, CYP26B1, DTX3, EHMT1, FBP2, FGF2, GALT, GALNTL4, GAS1, GCLC, GMPPB, GNAL, GP1BA, HIBCH, HMOX1, IFNG, IFNGR2, IL15RA, IL17B, IL21, IL3RA, INPP5E, IPPK, ITGA10, ITGB8, LEFTY2, LIPA, LIPT1, MAOB, MAP3K11, MCM6, MDM4, MMP2, MYH13, NCAM1, NFASC, NOS1, NRP1, NRXN1, OR10A3, OR10K1, OR10S1, OR11A1, OR1D2, OR1L8, OR4C11, OR4K1, OR4L1, OR52I2, OR5AN1, OR8H2, OR8I2, OR8J3, PDE10A, PFKFB1, PGK2, PIGK, PIGV, PIK3CA, PLOD3, PNPLA3, POLE, POLE2, POLR2J, PPP2R5C, PTGS2, RASGRP4, RBL1, RELA, RFWD2, RHOD, RRM2, RUNX1, SCD5, SEMA3G, SETDB2, SH2D1B, SLC25A5, SLIT2, SOCS5, SPAM1, SPHK1, SPI1, SPRED1, TAS2R8, TRAF2, TUBB6, UCK2, WNT2B, YWHAG, ZFYVE16, ZIC2, ATP6V0E1
Negative_14981	AK5, CD6, F7, FAH, HK1, HK3, IDS, IL4, MET, ACADL, ACAT1, ADH1A, ADORA2B, AHCY, ALDOA, AMPD2, ATP5E, ATP5J, B4GALT6, BIRC3, C1QC, CACNA1A, CASP10, CBLC, CBR3, CCL7, CCR8, CD44, CD79A, CHAT, CHKA, CLDN6, CLOCK, CREB3, CRKL, CSNK1G3, CSNK2A2, CXCL5, CYFIP1, CYP11B2, CYP7A1, DBF4, DCXR, DGKD, DHCR7, DIAPH1, DOT1L, ENTPD8, EPB41L1, EXTL3, F2RL2, FASN, FDFT1, FGF23, FRAT2, GCLM, GGCX, GLI3, GNA11, GPAA1, GTSE1, HCCS, HHIP, HSD3B7, IFNA7, MGST3, MTHFD1L, NLGN3, NOX1, OR10H2, OR10S1, OR11H6, OR13G1, OR13H1, OR1N1, OR2AE1, OR2S2, OR2T10, OR2T3, OR51D1, OR51V1, OR52A5, OR52H1, OR7C2, OR8G1, PCNA, PCYT1A, PFAS, PFKP, PI4KA, PIAS2, PIGV, PLA2G1B, PLA2G2D, PLXNA2, PMVK, POLR2F, POLR2K, PRKACA, PRKAR1B, PRKCI, PTGS1, PTPN1, PTTG1, RCHY1, RPIA, RXRA, SARDH, SEMA4B, SKIV2L2, SLC2A2, SMAD5, SPHK2, SV2B, SV2C, TAS1R3, TAS2R38, TBXA2R, TLR5, TNFRSF9, TRAF2, TRAF4, TYK2, TYMS, UNC5A, VAV1, YWHAZ, CACNA2D1, CSGALNACT1, HSD17B12, KIR2DL5A

Negative_14982	CR2, GP5, IL7, LCK, ACADM, ACMSD, ADH4, ALG11, ALG5, ATP6V1D, BMPR1A, C1QB, CACNA1H, CACNG5, CDKN2A, CDS1, CER1, CKMT2, CLDN19, CLDN2, CSN K1G2, CTPS2, DARS2, DCXR, DIAPH2, DTYMK, EFNB2, ELK4, ENPP1, ENPP6, E PHA6, FGF5, FZD7, GADD45G, GALE, GIT1, GSTA5, HAO2, HDAC2, HSD11B1, I DI1, IGF1, IKBKG, IL18R1, IL3RA, ITGA6, ITGAD, ITGB2, JAK3, KAT2B, LE PR, MAP3K1, MAP4K1, MEF2C, METTL2B, MFNG, MYD88, NAT2, NKX3-1, NSD1, OCLN, OR10AG1, OR10X1, OR2L3, OR4A5, OR4D9, OR4K17, OR52I1, OR5B12, OR5R1, OR5T3, OR8B4, PARS2, PDE10A, PDHA2, PDK1, PHPT1, PIM1, PLA2G5, PNMT, PNPLA4, PPM1D, PRKAR1A, PRKCE, PROC, PRPS2, PTGES2, QARS, RARS, RFXAP, SLIT1, SPP1, TAS2R42, TRDMT1, TUBB2A, UGDH, UGT2B4, VAMP4, VTI1B, CSGALNACT1, PDCD1LG2, SERPING1
Negative_14983	ADK, F2, F2R, IL9, MYC, PML, AARS2, ACACA, ACOX2, ACTN4, ADCY5, ADIPOQ, ALDH1L1, APC2, ATN1, ATP5D, ATP6AP1, AXIN2, B3GALT1, BAI1, CAPN2, CARS2, CASP10, CCL14, CD247, CDC23, CHKA, CLDN16, CRHR1, CXCL2, CYP2J2, DCTD, DGUOK, EHMT2, EI24, ENPP2, EPHA1, FARSB, FGF11, FGF17, GALK1, GCH1, GNRH2, GPD1, HAGHL, HARS2, HLCS, HMGCS1, HNF4A, IFNA10, ITGA10, ITGAE, LARS, MBL2, MCAT, METTL6, NCR2, NFATC2, NFKBIE, NOTCH2, NOTCH3, OR10A3, OR10H2, OR2M5, OR4D11, OR4P4, OR52A5, OR52I1, OR52N5, OR5D18, OR7A17, OR8S1, OR9A4, ORC6L, OXSM, PIK3CB, PIK3R4, PIM2, PON1, PPP1CC, PPT1, PROC, PROS1, PSEN2, PTPRM, RPS6KB1, SEMA4G, SLC25A5, SMC1A, SPAM1, SUV39H2, SYNJ2, TCF7L1, TRDMT1, TUBB1, TUBB2C, UGT2B10, UMPS, VEGFA, WIF1, MAPKAPK5, TNFRSF11A
Negative_14984	F8, NLK, SCD, SFN, WAS, ACADM, ACADSB, ACOX3, ADH1A, ATF4, ATP5F1, B3GALT2, B3GAT3, B4GALT5, BBC3, BDKRB1, BLVRA, CACNG7, CBR1, CCL7, CD244, CD40, CD48, CMBL, CNTF, CNTN1, CREB1, CREB3L4, CREB5, CSNK1E, CTSS, CXCL6, CYFIP1, CYP3A5, DARS2, DDOST, DHODH, FZD3, GDE1, GMPR, GUCA1B, HCLS1, IFNA17, IL21R, IL2RA, IMPA2, IMPDH2, KLRK1, LAMB1, LILRB3, MADCAM1, MAPK11, MYH8, NAGLU, NCAM2, NMNAT3, NR1H3, NRCAM, NSD1, NTRK2, NUDT2, ONECUT1, OR10G4, OR10G7, OR10H2, OR10J1, OR2A42, OR2D3, OR2Z1, OR5AN1, OR5K2, OR9G4, ORC4L, P2RX4, P4HA3, PANK2, PARVG, PDE6D, PDE6H, PDGFA, PFAS, PGK1, PGLS, PHPT1, PIGP, PLOD1, PLTP, PPA1, PPP3CC, PRKAA1, PVRL3, RDH8, RELA, RPN2, SGPP2, SHMT1, SLC33A1, SMAD4, SMAD9, SORBS1, STAM2, SULT1A2, TAS2R16, TCF7L2, TNFSF8, TRAF5, TUBB2B, ULBP1, VAMP3, VKORC1, WNT5A, YKT6, TNFRSF10C, TNFSF13B
Negative_14985	ADA, BTC, BTK, C5, CRH, F12, GSN, HDC, ILK, MET, PAH, PXN, ABL2, ABLIM3, ACTN4, ADH7, ARHGEF4, BBOX1, BDH2, BIRC3, C5AR1, CACNB2, CALML6, CCL1, CCR8, CD22, CD40LG, CDC27, CDK2, CDKN2B, CHKA, CKMT2, CLDN8, COL1A1, COQ7, COX10, CRHR1, CSH1, CTSL1, CYP26A1, CYP2C19, DGAT2L4, DGKD, DGKI, DLL1, DUSP5, EDNRA, ELK1, EP300, ETNK1, FASLG, FMO3, FZD7, GADD45B, GALK1, GALNT12, GCNT3, GNG12, GPX7, HARS2, HDAC1, HRAS, HSD3B1, HTR4, IL12RB2, IL22RA2, IL4R, INPP5A, IQGAP1, ITGA2, ITGA5, ITGAD, ITGB4, MAP3K13, MAP3K14, MECR, MGAT1, MGAT4B, MKNK2, MLYCD, NCF4, NCSN, OCRL, OR10G7, OR10T2, OR11G2, OR4A15, OR4D11, OR4K2, OR4N2, OR51B2, OR52M1, OR5V1, OR8A1, OR9A2, OR9Q1, PDE10A, PDGFD, PDIA4, PERP, PGLS, PIK3R3, PIK3R4, PIP5K3, PLAT, PLD1, PNLIP, POLR2J, PPAP2C, PPP1CC, PPP3R1, PPP5C, PRKACB, PSAT1, PYGB, RAP1B, RAPGEF2, RELB, SAT2, SELL, SEMA3F, SLC9A1, SMAD9, SPCS1, SPHK2, STAT6, TAS2R13, TBK1, TBXA2R, TICAM1, TP53I3, TSHR, TUBA1C, WNT9B, ATP6VOD1, CACNA2D3, CSGALNACT1, TNFRSF10D

Negative_14986	<p>AK7, CGA, EDA, GBA, GCK, GDA, GP5, ID1, MPI, MVK, SPN, SYK, AACS, ABL1, A  CHE, ACTB, ADRA1D, ALDH3A1, ALOX5, AMPD3, ANAPC10, APRT, ARHGEF1, AR  NTL, ATP5B, BIRC2, BPGM, BST1, C1GALT1, CASP10, CASP8, CCL8, CD27, CE  S2, CLOCK, CNTFR, CREBBP, CSNK1A1, CYP3A4, CYP4A11, CYP4F3, DPYS, EF  NB2, EXT1, FABP4, FARP2, FDFT1, FLT3, FUT7, GADD45G, GALNT14, GALNT7  , GALNT8, GMPPB, GNAT3, GNRH1, GSTM4, HADHB, HMGCS1, HSD3B2, IFNA14,  IFNW1, IL28RA, IMPDH2, IRAK3, ITGA2, ITGA7, ITPKA, JAG1, KIR2DL1, KI  R2DL4, KIR2DS4, KIR3DL1, LAMC1, LARS2, LDHA, LIPG, LPAR1, MAP2K2, MC  CC2, MKNK1, NARS2, NAT6, NFATC4, NFE2L2, NFKBIB, NFX1, NOS3, OR1J2, O  R1N1, OR2M4, OR2T11, OR3A2, OR4M2, OR4X1, OR51G2, OR51V1, OR52E2, OR  52N2, OR52R1, OR7C1, OR8B8, OR8D2, ORC3L, PCK1, PCYT1B, PCYT2, PIGA,  PIGQ, PIK3C2G, PIP4K2B, PLA2G10, PNLIP, POLR2F, PPA2, PPAR, PPM1A,  PPP1CC, PRKAB1, PYCR2, RASGRP1, RFX5, SELE, SEMA3E, SEMA4D, SH2D1A,  SH2D2A, SLC27A5, SMPD3, SRD5A1, STX1A, SULT1A1, SUV39H2, SV2A, TAS1  R1, TP11, TUBB2C, TUBB3, UGCG, WASF1, WASL, ATP6V1B1, HSD17B10, PHOS  PHO1, SERPINE1</p>
Negative_14987	<p>FST, GAA, IL7, MPZ, TPR, UBC, ACADVL, ACOT12, ADCY8, ALDH2, AMHR2, ANA  PC1, APOA1, B4GALT3, BLVRB, CAMK4, CASP8, CCL2, CD274, CSNK1G1, CTTN  , CXCL9, CYP26C1, DGKI, DHX58, DOLPP1, ETS1, FMO1, GABARAP, GADD45B,  GAL3ST1, GALK2, GDF7, GGCX, GNAS, GNB3, GNMT, GNPAT, GRPR, HLA-  DOB, HSP90B1, IAPP, IL13RA1, ITGA3, ITPK1, LDHB, MAP3K4, MMP9, MTHFR  , MYH7B, NAGK, NCOA4, NEFL, NFATC2, NLGN3, OR10H4, OR1F1, OR1L3, OR1S  1, OR2L3, OR2T11, OR2V2, OR4C11, OR4C46, OR52E8, OR5M3, OR6C76, OR8D  2, OR8K5, OR8U1, OR9G4, ORC5L, OSMR, OXCT2, PIGC, PIGH, PLA2G2D, PLOD  2, POLD3, POLR1B, POLR3G, PPP2R5C, PRKACG, PROC, PSME2, PTGFR, PTPMT  1, RAF1, RBL1, RFNG, RFXANK, RHOQ, SDC3, SEMA4D, SETD1A, SGMS2, SH2D1  B, SHISA5, SMPD4, ST3GAL4, TAS2R5, THBD, TIAM2, TUBA1A, TXNDC12, UGD  H, UGT2B7, WASF3, CSGALNACT1, HLA-  DRB3, PNLIPRP2, SERPIND1, SERPINF2, TNFRSF13C, TNFRSF14, TNFRSF1A  , TNFSF13B</p>
Negative_14988	<p>CD4, GP9, IL8, MVD, PLN, SMS, SP1, SPN, ABLIM3, ACAD8, ACP6, ACY1, ADOR  A2A, AGPAT2, AKT3, ALDH7A1, ALOX5, APLP1, ARNT2, ARPC1A, ASRGL1, ATP  2A1, ATP5G3, B4GALT7, BPGM, CALML3, CBLC, CCL11, CCNE1, CD247, CD3E,  CD79A, CDC20, CDKN1C, CREB3L4, CRY2, CSNK1G2, CXCL3, DAPK2, DGKQ, DP  M1, DTX3, E2F1, EFNA4, FARP2, FGF17, FGF3, FMO3, GALNT5, GMDS, GPT2, G  STM3, GSTM5, HDAC2, HSD17B1, IDUA, IL24, IL6ST, IPMK, KIR2DL1, LEFTY  1, MAOA, MAP3K12, MAP3K7, MDH2, MIOX, MYH4, MYH7, NKD1, OR11H4, OR2B1  1, OR2M7, OR2T12, OR2T33, OR4D6, OR4N2, OR52N4, OR5A1, OR5C1, OR5D14  , OXCT1, PDE4C, PDGFB, PIGW, PLAT, PPAT, PRKACA, PRKAG1, PTPN5, RUNX1  , SELPLG, SOAT1, TAS2R42, TAS2R60, TYMP, UCKL1, UNC5A, UPP2, WNT6, ZF  YVE16, ZFYVE9, GABARAPL1, PLA2G12A, PLA2G12B</p>

Negative_14989	<p>CD6, DCK, ME1, PLG, TK1, ABCC8, ABL1, ACACB, ADCY2, ADSS, AGTR1, ALDOB, ATIC, BACE1, BLVRA, BMP6, BPGM, BPNT1, CAMKK2, CCNH, CD47, CLDN1, CLDN11, CLDN9, CLOCK, CNTN1, COQ6, CREBBP, CSF2RA, CTSB, CYP1A1, CYP2A7, CYP2B6, CYP2F1, DDOST, DLL1, DPAGT1, DRD2, DTX1, EDN1, EPHA7, EXTL1, EXTL3, FARS2, FGF21, FGF9, FTCD, FUT1, GALNT10, GALNT11, GALNT7, GALNTL5, GAPDH, GGT7, GRM5, GSTO2, GYS1, HLA-F, HLCS, HPRT1, HSD11B1, IGF1, ITGAE, ITPKB, JAK3, JAM2, KLRC3, LAMB2, LAMC1, LFNG, LIFR, LTBR, MAP3K11, MAPK9, MCM6, MFNG, MYH11, NCKAP1, NODAL, NQO1, NUMB, OCLN, OLAH, OR10A4, OR2M2, OR51B2, OR51B6, OR5F1, OR6C75, OR7D4, P2RX5, PAK3, PCK2, PFKFB2, PIGP, PMAIP1, PNLIP, POLE3, POMC, PPP2CB, PPP2R5C, PPP3R1, PRIM1, PTPRM, PYCR2, RALGDS, RASSF1, RPN1, RRAS2, SEMA3D, SEMA7A, SHC2, SIGLEC1, SLC9A1, SMARCA2, SNW1, SPRY2, ST3GAL6, ST8SIA1, STMN1, TAS2R3, TBL1X, TRAF1, UPRT, VANGL1, VKORC1, VTI1B, WASF3, WNT9A, WWP1, ARHGEF12, ATP6VOD1, MAPK8IP3, PNLIPRP2, TNFRSF14</p>
Negative_14990	<p>CD6, DCN, F9, PAH, PC, SMO, SPN, TNR, AARS, ACACA, ADAM17, ALAD, ALPI, ANAPC10, ARHGEF7, ATP5J2, B3GALT5, B4GALT2, CACNG8, CAMK2D, CASP7, CD8A, CDIPT, CHAT, CHPF, CSNK1G2, CTNND1, CTSB, DCTD, DEGS2, DNMT1, E2F4, FGF17, GAS1, GFAP, GNAI2, GNPAT, GPD1, HMBS, HSD17B8, HSPB1, IDH1, IL17B, IL2RG, IL3RA, IMPDH2, ITGA10, ITGA11, ITGA5, LAMA3, LEFTY1, LIMK1, LRP6, LYZL1, MAP3K4, MAT1A, MBL2, MCCC1, MGAT4B, MYH1, MYH15, NAGLU, OR14I1, OR1G1, OR1J4, OR2D3, OR2L8, OR2T33, OR51A4, OR52A5, OR52B6, OR52M1, OR56A4, OR5T1, OR9G1, OSMR, PCK2, PDGFD, PIGM, PIP5K3, PLEKHA8, POLR1D, POLR2F, POLR3K, PON3, PPAR, PRIM1, PSME1, PTCRA, PTGES, PTGES2, RHOA, ROBO1, RPS6KB1, SC5DL, SETD1A, SUFU, TCF7L1, TNFRSF9, XCR1, ATP6V1C1, HLA-DRB3, SERPINC1</p>
Negative_14991	<p>ADC, AUH, FN1, GCK, HPD, MIF, TYR, ACAD8, ACADS, ACAT1, ACMSD, ACSL3, APOA2, ARRB1, ASAH1, ATP4B, BIRC3, CASP6, CAV2, CBR1, CCL14, CCND2, CES7, CHRM5, CLDN20, CX3CL1, CYP3A43, DHRS3, DTX3, DUSP4, E2F1, EIF4E2, FCGR3A, FGF21, FLT3LG, FUT1, FZD6, GADD45A, GRIA2, GRIN1, GRIN2D, HTR6, IFNA7, IL18RAP, IL25, IL28A, INADL, KAT2B, MAP3K1, MAP3K3, MAPK8, MDM4, MECR, MOV10L1, MPZL1, MTHFS, NAGK, NFKBIE, NLGN2, NR1D1, NR4A1, OR10H4, OR13C4, OR1G1, OR2Y1, OR4C12, OR52E8, OR5C1, OR6A2, OR8K1, ORC6L, P4HA3, PDGFD, PGM1, PIK3R4, PIP4K2C, PPA2, PPCS, PPP1R3D, PPP2CB, PPP2R1B, PPP2R5C, PRKAB1, PTPRM, RAPGEF4, RASGRF2, RASSF5, RPS6KB1, SAT2, SETD2, SETD7, SHC3, SMPD4, SOS1, SPRY4, SRGAP1, ST8SIA1, STX16, TGFA, THBS4, TM7SF2, TNFSF12, TOMM40L, TPK1, UGT2A3, UGT2B17, UGT2B7, UNC5D, WNT11, ZMAT3, ATP6V1E2, CSGALNACT1, CTNBP1, MAP3K7IP1, MAP3K7IP2, SERPINE1</p>
Negative_14992	<p>A2M, GDA, GLS, ID1, KIT, MPL, NF1, PVR, SRM, SYK, AASDH, ACAD9, ACPP, ACSL1, ADH5, ADRA1A, ALDH7A1, AMHR2, ATG3, ATP2A3, BCAT2, BCL10, BET1L, C9orf95, CACNG1, CCL27, CCR3, CD8B, CKS1B, CLTC, COL5A3, CREB3L2, CSNK1G3, CYBA, CYP21A2, DHX58, DIAPH3, EPHX1, EPHX2, FGF12, FGF17, FMO1, GNG12, GRM1, HMGCS2, HSPA8, IDH2, IDH3B, IFNW1, IL2RG, IRAK4, ITGAM, KIR2DL2, LDHC, LIMK1, MAN1B1, MAP4K3, MARS2, MMP7, MNX1, MOV10L1, MYH14, NAGLU, NCK1, NEUROD1, NFKBIA, NKD1, NKX3-1, NPAS2, NRP1, OR10AG1, OR10C1, OR2A25, OR51S1, OR6C1, OR6N1, OR7D2, PARVG, PDE8A, PERP, PIK3C2B, PLD1, POLR1C, POLR3D, PON2, PPM1D, PRPH, RAPGEF1, RHOQ, ROBO3, RPS6KA6, RPS6KB1, SDC3, SLC25A4, SPRY1, STAT6, SULT1A2, TCF7L2, TOMM40, TYMP, WIF1, WNT5B, ZFYVE16, HLA-DPA1, TNFRSF11B</p>

Negative_14993	<p>DBT, DCN, GP9, IDS, IL6, JUP, PC, SCD, SP1, ACOX2, ADORA2A, ALDH4A1, ALDOB, ANAPC4, APBB1, ARHGEF6, B3GNT3, BCAT1, CACNB1, CACNG7, CCL22, CD55, CHAT, CHST13, COQ5, CRB3, CXCL12, DCTD, EFNA4, ENTPD5, EPHA4, ERBB3, EXTL1, F2RL1, F2RL3, FCGR3B, FGF9, FLAD1, FUT1, G6PD, GSTK1, HAGH, HLA-G, HYAL2, IFNA13, IL15, IL23A, IL2RA, INSR, ITGA7, LAMC1, LHCGR, LMO7, MAN1C1, NCK2, NFATC2, NFATC3, NFKB1A, OR1A1, OR1A2, OR11I1, OR1J2, OR1S2, OR2AE1, OR2T33, OR2V2, OR4C15, OR4D6, OR4F5, OR4N5, OR51L1, OR51S1, OR52A1, OR8D2, OR8H3, OR9Q1, P4HA1, PAK4, PGAM1, PIK3R4, PIPOX, PLTP, PNPT1, POLR1A, PPP3CA, PRKAA2, RAP1B, SCD5, SETD2, SHC2, SLC27A4, SLC27A5, SPCS1, ST3GAL5, ST8SIA5, STK11, SV2B, THBS4, XYLB, YWHAQ, SLC25A31</p>
Negative_14994	<p>AMH, GP6, GSN, OSM, PRL, A4GALT, ACOT12, ADAM10, ADCY1, AGMAT, AKR1C1, ARNT, ARSA, ATF2, CACNA1D, CACNA1E, CACNA1F, CACNA1G, CES1, CLDN22, CPOX, CREB3L2, CSNK1E, CXCR3, CYP2E1, DIAPH3, DKK4, DTX3, EFNA5, ENO1, ERBB3, ERBB4, EXTL2, FARS2, FARSB, FPGS, FUT6, GAB1, GALNT9, GMPR, GOSR2, GPD1L, GSTA4, HCCS, IFNA7, IL28A, INHBE, IRAK1, IRS2, MAML1, MAPK1, MPZL1, MYH9, NKX2-2, NOTCH2, OR10S1, OR10X1, OR51I1, OR56B4, OR5AS1, OR5M9, OR5R1, OR6F1, OR6N2, PDGFC, PHKB, PIGL, PLOD1, PORCN, PPP5C, PRKAA2, PRKAG1, PRODH2, PRSS1, PRSS2, PTK2, RALA, RASGRF1, RRAS2, RXRA, SEMA3C, SFRP2, SGPP1, SH2D1A, SORD, SV2A, SV2C, TAS1R2, TAS2R50, TIRAP, TYK2, VDAC3, VTI1B, WARS2, YWHAG, ATP6V1B1, CACNA2D1, MAPKAPK5, PPP1R12A, ST6GALNAC5</p>
Negative_14995	<p>ASL, C8B, FAS, GH1, LCT, ME2, MVD, OSM, TEC, ACMSD, ACOX1, ACTA2, AHCYL1, ALG2, ARPC1A, ARPC2, ARRB2, ASMT, ASRGL1, BUB3, CCND1, CD55, CD79A, CDK4, CHRM2, CREB3, CSF2RA, CYP2S1, DDX23, DUSP1, EGLN3, ENAH, ENO2, FASN, FOXO1, GALNT2, GALNTL4, GCH1, GLG1, GNG3, GUCY1A3, HES1, HIBCH, HLA-DRA, HNF4A, HSD11B1, IFNA13, IFNA21, IL8RB, IQGAP1, IRS1, KIR2DL4, LCAT, LDHB, MAP2K4, MAP3K13, NAT5, NCF4, NEU1, NOD1, NR5A2, OR10H5, OR10J5, OR10X1, OR14J1, OR1F1, OR1L1, OR2A5, OR6K2, OR7A5, OR9Q2, PAK4, PGLS, PGM1, PIK3C2A, PIP4K2B, PLXNB3, PRKG1, PTK2B, RAD51, RPS6KA3, SDHC, SEMA3G, SLC12A2, SOAT1, SOX17, SSH1, ST3GAL2, STAT2, TAS2R38, THBS4, THTPA, TNFRSF8, TPMT, TYROBP, VAV2, VEGFC, WASF2, WNT3, YWHA B, TNFRSF10B</p>
Negative_14996	<p>ADA, CKM, DCN, MAX, SMO, AARS2, ACAA2, ACSL3, ACVR1, ADORA2B, ADRA1A, ALDH5A1, ALDH6A1, ALG9, ANAPC7, AQP7, ARD1A, ARNT2, ARSE, ATP5A1, BA CE1, BBC3, BCKDHB, BMP7, CALML6, CD8A, CD99, CFTR, CHIT1, CMBL, CNTF, CREB3L1, CSF3R, CYFIP1, DDX4, DGKA, DLL4, DUSP10, FGF20, FMO5, GAD2, GALNT11, GART, GMPPA, GRIN2D, GSTM1, GSTP1, GUCY2F, HNF4A, HTR2B, IG F1R, IL1A, IL21, IL23A, IL28A, INPP1, ITGAX, JAK1, KIR3DL2, KLRC3, KLRC4, LAMC1, LCAT, LTBR, MAML3, MAN1A1, MAPK12, MASP1, MEF2C, MGAT4A, MICA, MLYCD, MYH6, NAGA, NAT5, NCF4, NEUROD1, NKX6-1, NTRK1, NUDT5, NUMB, OR10A2, OR10H3, OR2K2, OR4C12, OR4C15, OR4K17, OR51B4, OR51I2, OR51M1, OR5K2, OR6C3, PARS2, PGM2, PIK3CA, PLA2G3, PLXNA2, PPARG, PPM1A, PPP1CB, PPP2R5B, PRKCA, PSENEN, PTCRA, RAPGEF2, RARA, RDH8, RHOQ, RPS6KB1, RRM2B, SFRP5, SHC4, SHMT2, SOCS5, SOS1, STAM, SV2B, TACR1, TAS1R2, TAS2R13, TBXA2R, TGFB3, THY1, TKTL2, TUBB2B, ULK2, ULK3, UXS1, VARS, VDAC2, VEGFB, CTNNBIP1, ST6GALNAC6</p>

Negative_14997	BAX, CFD, HPD, IL3, PGF, PGP, PXN, SPN, VCL, WAS, ACO1, ADCY6, ADSSL1, A GPAT1, AHCYL2, AK3L1, ALDH5A1, ALPP, AMD1, AMPD3, ATP5H, ATP50, B3GN T2, BACE1, BUB3, C1QA, C7orf16, CACNB2, CADM3, CAPN2, CCL7, CD55, CHP T1, CKS1B, CLCA2, CLDN10, CLDN4, CREBBP, CSNK1A1, CYBA, CYP1B1, CYP3 A7, DLAT, DUSP1, DUSP16, EDNRB, EGFR, EHMT1, FGF5, FUT2, GADD45B, GAL NTL2, GCNT2, GDE1, GNAS, GNPAT1, GNRH2, GPLD1, GRIA2, GSTA5, HLCS, H SD3B1, HTR5A, IDI1, IFNA10, IGSF5, IL17B, INHBB, IQGAP2, KCNB1, KIR2 DL4, KLRK1, L1CAM, LCMT1, LLGL2, LRDD, MAP3K5, OR14I1, OR1J1, OR1L6, OR4D11, OR4L1, OR51B2, OR52B6, OR52E8, OR52I2, OR52N1, OR5M9, OR6B3 , OR6C6, OR6C70, OR6K6, OR6S1, ORC6L, OXCT1, P2RX2, PANK1, PDE2A, PDG FRA, PFAS, PFN3, PIAS3, PIP5K1B, PLA2G1B, PLAUR, POLR2A, PPARG, PPM1 A, PPP1R3D, PPP5C, PRKCQ, PSAT1, PSME1, PSPH, RAP1A, RRM1, SDC2, SEMA 3E, SEMA4D, SHC4, SMAD3, SOCS5, SRGAP1, ST8SIA5, TAS2R1, TAS2R10, TA S2R49, TAS2R5, TBK1, TBL1X, TXNDC12, UGT2A3, ULK3, VAV3, WBSR22, YE S1, ATP6V1B2, CACNA2D3, MAPKAPK3, MAPKAPK5, PNLIPRP1
Negative_14998	FER, GLA, GSS, LTB, NGF, ACAD8, ACSL5, ACSM3, ADCY5, ADCY7, AGXT, ARPC 5, ASPA, ATG7, ATP12A, BCL2L1, BMP8A, C9orf95, CAMK2D, CCL23, CD99, C DC23, CHRM5, CLDN18, CLDN7, COQ7, CPS1, CSNK1E, CXCR3, DDX23, DHRS3, DPYSL2, E2F2, E2F3, ECHS1, EDAR, EGLN1, EPHB6, FRAT1, GALM, GLO1, ICO S, IRF9, ITGAV, KARS, KDSR, L1CAM, LTB4R2, LYPLA2, MAN2A1, MAP4K3, MA RS2, MCM4, MINPP1, MMP9, MPDZ, MRAS, NCR3, NRG2, NRG3, NRXN1, OR10J1, OR13A1, OR1E2, OR2D3, OR2L2, OR3A1, OR4K14, OR4S2, OR51I1, OR5B3, OR 8A1, OXCT2, PARD6G, PDE3A, PDIA4, PFKL, PHGDH, PLCZ1, PLXNB1, PMAIP1 , POLR2D, PPM1B, PRKCA, PRKY, PSME3, PTDSS1, RALB, RDH11, SMARCA2, SO D1, SPTLC1, SULT1E1, TAS2R5, TICAM1, TNFSF14, TRIP10, UGT2B10, ULBP 2, ALDH18A1, ATP6V1B2
Negative_14999	AGK, AMH, DUT, FES, FYN, GLA, LEP, LYN, MVK, TPR, AKT3, ALAS2, AOX1, ATG 7, ATP5A1, ATP5I, B4GALT4, BCKDHB, BHMT, C3AR1, CCL13, CCL19, CDC14B , CDKN2A, CDS2, CIITA, CLDN2, CNGB1, CNTN1, CRLF2, CTNNA1, CTSG, CYP1 B1, DCXR, DDX56, DIAPH2, EFNA1, EGLN1, ENO1, EREG, FUT7, GADD45A, GLU D1, GNMT, GPT2, HSD17B7, HSD3B7, IGF1, IL17A, IL1RAP, IL22, IL22RA1, IL8RB, IRS1, IRS2, ITGA2B, KRAS, LDHA, LTC4S, LYPLA2, MAN1A1, MAPK9, MGST2, MTMR1, NANP, NKX2- 2, NT5C2, NTN1, OR10J3, OR10V1, OR12D3, OR1L8, OR2AE1, OR4E2, OR4N5, OR52A1, OR5A2, OR5AS1, OR5D13, OR6C74, OR6N2, P2RX1, PDGFA, PIAS3, P LA2G2E, PLTP, PLXNA3, POLE3, PPARA, PPOX, PPP2R2B, PRKACA, PRKCB, PR PS2, PTK2B, PYCR1, RDH8, RETSAT, SENP2, SHMT1, SLC2A4, SMAD5, TAS2R1 3, TAS2R42, TBL1XR1, TGFBP1, TOMM40L, TRAF3, TRAF5, TUBA4A, ULBP1, V DAC1, VDAC3, VNN1, WNT3, YWHAE, ZAP70, SERPINC1, TNFRSF13B
Negative_15000	ADK, GPI, JUP, KHK, AARS2, ACSS1, ADCY10, ADH1B, AFMID, AKR1B10, ALDH 7A1, ALG12, ANAPC7, ARPC1A, B3GALT5, BMP4, BMP7, BNIP1, BPGM, C1GALT 1, CCL11, CCL19, CCL25, CCL3, CDC2, CDH1, CDK7, CER1, CFL1, CHPT1, CMB L, CNTNAP1, CSNK2B, CTLA4, DDX52, DHRS4, EPHX1, ERBB4, FGD3, FGFR2, F LT1, FLT4, FMO5, FZD10, FZD6, GALNT13, GARS, GCNT1, GJA1, GLI3, HDAC2 , HLA- DMA, HPSE, HRH2, HYAL2, IGF1, IL3RA, IL7R, ITGA8, ITGB3, ITPKA, LPAR1 , MAP2K7, MAP3K8, MAPT, MDH1, MDH2, MNX1, MTHFD1, MTHFR, MYL2, NCOR1, NEFL, NEU3, NFYB, NLGN3, NRG1, OCLN, OR10G8, OR10X1, OR1B1, OR2V2, OR 4K5, OR4S2, OR5D13, OR5M9, OR8J3, OR8K3, OXSM, P2RX3, P2RX7, PAK1, PC K2, PIK3CD, PLCG2, PLXNC1, POLD1, PPAP2B, PPP2CA, PRDX6, PRKACB, PTP RC, PTPRR, RBKS, RDH10, RPS6, SEMA3G, SFRP5, SHC3, SLC33A1, SMARCA5, SOD1, SPHK2, TACR1, TRPC1, TUBB1, TYROBP, UBA1, UGT2B28, ULK1, UROS, WBSR22, WNT1, WNT10B, WNT11, ZMAT3, PAFAH1B2, PPP1R12A, ST6GALNAC 3, SUV420H1

Negative_15001	ADK, CD2, F3, F9, FOS, IL3, LTB, STS, ACAT2, ACSS1, ACSS3, ADCY3, AHCY, ALDH1A3, ALDH9A1, ALG10B, ATP4B, ATP5G1, ATP6V1A, BDH2, BDKRB2, BMP6, CACNG3, CCNB2, CD40LG, CDC25B, CDKN2D, CHAD, CHAT, CTSB, CUL1, CYBB, CYP26B1, CYP2C18, CYP2C8, DAXX, DGKB, DHRS9, ENO2, EPHB2, ESAM, FUT6, FZD7, G6PC2, GALNT13, GBA3, GNAI3, GNAO1, HLA-DOB, HMGCR, HMOX1, HSD17B2, IL22RA2, INPP1, ITGAX, JAG1, KIR2DL3, MCC2, MTMR2, MYH14, MYH8, NAGK, NLGN1, NPR2, NT5C2, OR10A5, OR10A6, OR10K1, OR13F1, OR51F1, OR51T1, OR52B4, OR56B4, OR5A2, OR8J3, ORC4L, PCNA, PDE10A, PDE7B, PGLS, PGS1, PIGV, PITX2, PLA2G6, PLOD1, POLD3, POLR3B, PPP1CA, PPP1R3A, PRKCI, PRKG1, PSEN2, PYGM, RGS3, ROCK2, RXRA, SEMA3B, SIGLEC1, SMAD3, SMARCA2, SPAM1, SQLE, TAS1R2, TAS2R41, TNFSF12, TP53, TUBB2A, B4GALNT1, GABARAPL1, MAPK8IP1, PPARGC1A, ST6GALNAC5
Negative_15002	CEL, CRK, F12, F2, FGG, HK3, HPD, KDR, OTC, SRC, TPR, ACOX1, ADCY5, AHCY, ALDOC, AOX1, ARHGEF1, ATP2A1, B3GALT1, B3GAT1, BCL2, BIRC5, BMP5, BRAF, C4BPA, CASP8, CBR1, CBR3, CCL16, CCL19, CCR6, CDC16, CDK7, CNDP1, CYP26A1, DDIT4, DHRS3, DKK2, DRD2, EFNA2, ENPP6, ENTPD2, EPB41, FGF20, GCNT2, GNG13, GNMT, GPX5, GSTO1, HAP1, HARS, HHIP, HSD11B2, HSD17B3, IARS2, IL17RA, IL21, JAK1, LMO7, MAD2L2, MAP3K11, MAP3K3, MGAT2, MGAT5B, MYH6, NRG3, NT5C, NTSR1, OR10G4, OR10Q1, OR10S1, OR11H4, OR1D2, OR2AE1, OR2T4, OR2Y1, OR4M2, OR4X1, OR52A5, OR52N2, OR52N5, OR5J2, OR5K2, OR6C74, OR8A1, ORC2L, P4HA3, PAK6, PER1, PIK3R4, PLCB3, PLXNB2, POLR2I, POLR3G, PPP1R3A, PPP2R5B, PRKCB, PVRL3, RENBP, RHOD, SETD8, SMARCA2, STX3, TAP1, TRMT11, TUBA1B, TUBB4, TYROBP, UBE2K, UGT2A3, UGT2B4, UPRT, VTI1A, ZBTB16, ATP6V1C1
Negative_15003	C8A, CD2, DLD, ID3, IHH, LCK, MAX, MPI, MVD, NF1, PXN, TP0, AACs, AC02, ADCY10, ADCY3, ADCY7, ALDH3B2, ALG13, ALOX15, AMY2A, ARD1A, ARHGEF1, ASCC3, BLNK, BUB1, CADM1, CARS, CCL2, CCR2, CD40LG, CHKB, CHRM3, CHSY1, CHUK, CKS1B, CLDN1, CLDN10, CNDP1, CNGA3, CNTNAP2, CPOX, CSNK1G1, CTBP2, CXXC4, CYP2S1, CYP8B1, DDX56, DGKZ, DNMT1, DTX3, DUSP14, DUSP16, DUSP6, DUSP7, EDAR, EDN1, FECH, FLOT2, FLT3, FZD3, FZD7, GALNT5, GAS1, GGCX, GGT7, GNA13, GPT2, GPX5, GRIN1, GRIN2D, HAGHL, HAO1, HSPA8, IFNW1, IKBKG, IL17B, IL8RB, KLRC4, L1CAM, LAMB1, LAMB4, LIAS, LILRB3, LLGL1, MAGI3, MAN1B1, MAT2B, MCCC2, MPST, MYH2, MYL7, MYLK2, NFATC1, NME2, NRG3, OR2G2, OR2H1, OR2T11, OR4D5, OR51G1, OR5AK2, OR5B12, OR5T2, OR6N1, PAX4, PDE4D, PDGFA, PDK1, PGAM1, PGM1, PIAS3, PIGM, PLCB2, PMVK, PNPT1, POLR2G, POLR3G, PPAT, PRKAB2, PRSS1, PTPN5, PTPN7, PVRL3, RAPGEF1, RFXANK, RPN2, SEMA4G, SESN3, SHMT2, SLC25A5, SPTLC2, STAM2, STK36, SUCLA2, TLN2, UGT2B11, UROC1, ATP6VOD1, CSGALNACT2, PDCD1LG2, SLC25A31, TNFRSF10A, TNFRSF10C, TNFRSF13C



Negative_15004	<p>AK3, CKM, EZR, FST, GNE, RDX, SRF, TYR, AASS, ADCY2, ADCY5, AHCYL1, B3GNT4, BPNT1, C1QC, CACNB4, CASP10, CASP7, CCDC6, CCKBR, CCL25, CCNB1, CD22, CD226, CDC45L, CDC7, CDH3, CHST13, CLDN11, CMAS, CSNK1G3, CXCL2, CXCR3, CYBB, CYP2F1, DTX3L, EHMT1, ENTPD7, FABP1, FGF17, FMO4, FUT2, FZD1, GAD2, GALNT13, GALNT2, GGCX, GLUL, GNAI3, GNPAT1, GNRHR, GSTM3, HSD17B8, HSP90B1, HTR5A, ICAM1, ICAM2, IDUA, IFT57, IL19, IL21, INADL, IRF9, ITGA2B, ITGA7, KAT2B, KLK3, KLRC4, LDHAL6A, LHCGR, LMO7, MAP3K14, MAP3K5, MAPK14, MAPK3, MDH2, MOV10L1, MTHFR, NAMPT, NEU4, NEUROG3, NODAL, NRG4, NUDT12, OR10G4, OR10X1, OR1L8, OR2C1, OR4C12, OR4L1, OR51G2, OR52A5, OR52H1, OR52L1, OR6C1, OR6K6, OR6N2, PARS2, PDE6G, PFKP, PIAS1, PIAS2, PIGC, PKMYT1, PPAP2B, PPBP, PPID, PRLR, PYCR2, QARS, RASGRP3, RPS6KA1, RPS6KA3, SARDH, SEMA7A, SESN3, SETMAR, SHMT1, SHMT2, SLC25A5, SMAD7, SMARCA2, SMURF1, SYNJ2, TAP1, TBL1X, TNFSF4, TRDMT1, TXNDC12, UCK1, UGCGL2, ULK3, WIF1, WNT5B, YWHAZ, AASDH, PPT, ATP6V0A1, ATP6V1C2, C1GALT1C1, CACNA2D2, CSGALNACT1, EIF4EBP1, HLA-DRB5, MAPK8IP2, TNFSF13B</p>
Negative_15005	<p>AK7, CS, FGA, GK, GK2, ID2, ID4, MSN, SPN, TAT, TH, AARS2, ABCC8, ACADM, ACPT, ACTG2, AGPAT4, ALDH1A2, ALPI, AMD1, ANAPC2, ARPC2, ARPC3, ARSD, ARSE, ASCC3, ATIC, B3GNT5, BLNK, CACNA1F, CACNG4, CARD11, CASP8, CCL3, CD46, CD58, CD99, CDC25A, CHDH, CHEK2, CHSY3, CLCA2, CLCF1, CMPK2, COASY, CRY1, CSDA, CTSB, CTTN, CXCR6, DAD1, DLAT, EDNRA, EHMT2, ESAM, EXOC7, FTH1, GALK1, GALM, GARS, GGPS1, GJA1, GLYCTK, GNG13, GNPAT1, GRIN2D, HADHB, HTR2B, IFNA13, IL10, IL17RA, IL18, IL20RA, INPP1, IPMK, JAG1, JAK2, KCNB1, KIR3DL1, MARS, MRAS, MYH4, MYL7, NAE1, NAT2, NAT5, NFATC3, OR13C9, OR13D1, OR13F1, OR1Q1, OR2T11, OR4C16, OR4F17, OR4F6, OR4P4, OR52A1, OR52W1, OR5P3, OR6C3, OR6K2, OR6Q1, OR8D2, PARS2, PAX4, PDHA1, PDHA2, PFKL, POMC, PRKAR2B, PRKG1, PRKX, PTCH2, PYCR2, RDH16, ROBO3, ROCK1, RUNX1T1, SESN3, SETD8, SLC2A4, SLC9A1, SOCS4, SQLE, ST3GAL2, STK4, TACR1, TJP2, TUBB4Q, TYROBP, UNC5D, WNT2B, XYL, ATP6V1B2, HSD17B10, KIR2DL5A, MAP3K7IP2, MAPKAPK2, PDCD1LG2, PNLIPRP2</p>
Negative_15006	<p>AGK, C8G, DCT, EGF, HK3, MPL, PC, SYK, ACP1, ACY1, ACYP2, ADRA1A, AGPAT3, AGXT2, AKR1C3, AMY2B, AVPR1A, BLVRA, BMP8A, CAV2, CCND2, CD247, CD58, CD80, CFL2, CLDN1, CMPK1, COL3A1, CSDA, CSNK1G1, CTBS, CXCL16, CXCL3, CXCL9, CYP2A13, DDIT4, DGAT2, DTX3L, DUSP14, EIF4B, FASN, FGF20, GADD45A, GALNT14, GALNT3, GJD2, GMPR, GPT2, HADHA, IL21R, INPPL1, IQGAP1, IRAK1, IRAK2, LAMB1, LYZL1, MAGI1, MAML1, MDM4, MYH7B, NEU1, NFATC4, NMNAT3, NTF3, OCLN, OR2G6, OR3A1, OR4C6, OR4F17, OR4Q3, OR52K2, OR5P2, OR5T2, OR8J3, P2RX3, PDE3A, PFKFB2, PGM3, PIAS4, PIP4K2A, PIP4K2C, PPAP2B, PPP2R1B, PRKAR1B, PSME3, PTDSS1, PTGES2, PTK2, RASA1, RIPK1, RRM2B, SESN3, SETD1A, SHC3, SKIV2L2, SLC27A4, SNAP23, SQLE, SRGAP3, TAS2R3, TFPI, THBS4, TLR3, TSHB, TUBB1, TUBB4, UXS1, VAV3, WNT8B, CACNA2D3, CSNK1A1L, PAFAH1B3, PLA2G12B, PRICKLE2, ST6GALNAC5, TNFRSF1B</p>

Negative_15007	<p>ADK, DUT, F7, GDA, GP5, HPD, LSS, PVR, VTN, WAS, ABLIM1, ACADL, ACADS, A CVRL1, ADH5, ADH6, ADH7, ADORA2B, AKR1C3, ALDH2, ARPC3, ARSA, ATP4A, B3GNT2, BDKRB1, BMP7, CACNA1C, CASP6, CCL14, CCL21, CCL7, CD44, CDS2 , CHSY1, CNGB1, COL1A2, CTLA4, CTNNA3, CXCL16, CYP2E1, DAG1, DHFR, E2 F4, EFNA2, EGLN3, ENTPD2, ESAM, FMO2, FZD1, GALK2, GALNT10, GALNTL5, GATM, GCNT4, GOT2, GSTT1, GUCA1A, HMGCL, HNF4A, HSPA2, IDI2, IGFBP3, IL15, IL7R, INPP5E, ITGA1, ITGA7, ITPA, JAM3, KLRD1, LIMK1, MAGI2, MA GI3, MAN2A1, MAOA, METTL6, MGAT5, MMP14, MYD88, MYH8, NCKAP1L, NKD2, NTN1, OR13C8, OR1I1, OR2A2, OR2G6, OR4C6, OR4N5, OR51E2, OR52E8, OR5 K2, OR5P2, OR5T2, OR6C2, OR6M1, OR7A5, OR8D1, OR8H1, PCYT1A, PDE7B, P ECAM1, PER2, PFN1, PHKG1, PHPT1, PI4KB, PIK3R5, PIM1, PPP1R1A, PPP2R 2D, PRIM1, PRIM2, PRKAB2, PTDSS1, PTEN, PTGER1, PTPRF, RAPGEF1, RRM1 , RRM2, SELP, SETMAR, SIAH1, SMAD6, SMURF2, STX3, SUCLA2, TACR1, TACR 3, TNFSF4, TRPM5, TYROBP, UGT2B11, ULK2, VTI1B, WIF1, WNT10A, XCL2, Y ARS2, ATP6V1E1, CACNA2D1, MAPKAPK2, ST6GALNAC3</p>
Negative_15008	<p>C5, F2, GK2, HAL, HDC, HYI, IDS, MUT, TKT, AADAT, ACOT12, ACP2, ACTB, AD CY3, ALDH9A1, ALG3, AMDHD1, AMPD1, ARG1, ATP5I, BCAR1, BCL2L1, BLVRB , CCL24, CD72, CDC25A, CLDN18, COL6A1, CTSG, CX3CL1, CYP1B1, DUSP7, E NTPD2, EPHA8, EPRS, FABP3, FBP2, FGF20, FSHB, GADD45A, GBGT1, GDF6, G LDC, GLUD2, GNA01, GRIA2, GRPR, GUCA1A, GUSB, HADHA, HCLS1, HPSE2, HS PB1, HTR6, IBSP, IDI1, INMT, ITGB3, KCNB1, LARS, LEFTY1, LEPR, LTB4R2 , MALT1, MAP2K6, MAP3K4, NAMPT, NAT6, NPAS2, NTSR1, NUDT2, OR10A2, OR 10AG1, OR10G9, OR10H4, OR2M4, OR51I1, OR52M1, OR5D18, OR5K2, OR9Q1, PECAM1, PFKL, PIGM, PLA2G2D, PLCZ1, POLD3, PPP1CA, PPP2CB, PPP2R5D, PRKAA1, PRKCE, PTPN11, RAC3, RAPGEF3, RHOD, SLC27A1, SRGAP3, ST3GAL 6, STX5, SYNJ2, TAS2R7, TCIRG1, TGFB3, THBS3, TJP3, TLR9, TRDMT1, TUB B1, TUBB2A, TUBB3, TYMS, UBA1, UXS1, VAV3, VTI1A, WBSCR17, ZBTB16, C1 GALT1C1, MAPK8IP3, PHOSPHO1, PLA2G12B</p>
Negative_15009	<p>CP, DDC, DUT, LIF, PGF, RPE, ACACA, ACSL4, ACY1, ADCY10, ADCY6, AHCY, A LAS2, ALDH3A1, AMY2A, AVPR1A, BBC3, CALML5, CAV3, CCL17, CD70, CDC27 , CLOCK, CNTFR, COL6A1, CSH1, CYP11A1, CYP2C19, DCTN1, DEGS1, DGAT1, DUSP6, EPHA2, EPHB4, FUT9, FZD10, GCLM, GDE1, GFPT2, GLG1, GLS2, GLUL , GNA13, GOT2, GPX7, GRM1, GSTA5, GSTT1, HLA- DOA, HTR2B, HTR5A, IFNA21, IL23R, IL6ST, ITGA4, LAMC1, LTC4S, MAN1A1 , MCM5, MGAM, MGAT5B, MPST, NANS, NFATC4, OR10H1, OR1C1, OR2A12, OR2K 2, OR2T4, OR4A15, OR51F1, OR5R1, OR6C6, OR8H1, PDE3B, PDE8A, PDHB, PF KFB1, PIK3C3, PLCE1, PNPLA3, POLR3H, PPP2CA, PPP3CB, PRKACG, PRKCA, PRNP, RFX5, RGS3, ROBO1, RXRG, SCIN, SDHC, SESN1, SETDB1, SHC1, SLIT2 , SMAD9, SMPD1, SMPD2, SRD5A2, ST3GAL3, STX2, SUCLG1, TOMM40L, TSHB, UNC5D, XCL1, ZAP70, ATP6V0A2, B4GALNT1, CSGALNACT1, HLA- DPA1, SERPINA5</p>

Negative_15010	C1S, C3, C7, C8A, CSK, EBP, FOS, GCK, IVD, NLK, SRC, TYR, ACAT1, ACTN4, A CVR2B, AGRP, ALDH3A1, ALG5, AMHR2, APOE, ATG12, ATP5A1, BPGM, BST1, C ARD11, CBR1, CCL13, CCR2, CHDH, CIITA, CKMT2, CLTB, COL4A6, CREB3L2, CTNNA3, CXCL10, DERA, DUSP14, DUSP5, EARS2, EFNA1, ELK4, EP300, FADS 2, FUT8, GNAI1, GP1BA, GSK3B, GSTA5, GUCY2D, HA01, HIBCH, HSD17B2, HS PA1B, IFIH1, IFNA16, IL20RA, IRAK1, IRAK4, JUND, LAP3, LTBP1, MNX1, M THFD1L, MYH7B, NCF1, NFAT5, NPAS2, OGDH, OR1L3, OR2T11, OR2T5, OR51B 6, OR51Q1, OR51T1, OR5D16, OR5H2, OR5M3, OR5T2, OR7A17, OR8H3, OR8J1 , PANK2, PAPSS1, PDE4C, PDE8A, PDE9A, PDGFA, PFN4, PGAM4, PIGW, PLA2G 10, PLD2, POLD3, POLR1D, POLR2I, POLR3G, PRKAB1, PRKACB, PTDSS2, PTG ER1, RBPJL, RPS6KA4, SLC2A1, SOX17, SPI1, SPRED2, SPRY4, SPTLC2, SSX 2IP, STAT1, SUOX, TAS2R4, TBK1, TGFBR2, THY1, TNFRSF8, TP53I3, TPK1, TSHB, TYK2, UGT2A3, UMPS, UNC5C, UPP2, UROC1, VAV3, VCAM1, ZMAT3, B4G ALNT1, MAPK8IP1, PAFAH1B3, TNFRSF13C
Negative_15011	CBL, CRK, DAO, F7, LAT, MOS, MUT, MVK, MYC, STS, ACADSB, ACVR1B, ADCY2, ADCY9, AGPAT1, AGPAT2, ALDH6A1, ANAPC2, ATG3, ATP5E, ATP5J2, AVPR1A , B3GALT4, B4GALT2, BACE1, BCKDHA, BDKRB2, BMP7, C4BPB, CARS, CCL28, CCL5, CD28, CD47, CDK6, CDKN1B, CFL2, CFTR, CHEK1, CHST11, CLDN15, CN TNAP1, COL6A2, COX15, CREB3, CRKL, CRY1, CYSLTR2, DDOST, DHODH, DPM1 , EDAR, EPB41L3, ERBB4, FGF6, FLT4, FZD5, GALT, GANC, GFAP, GGT1, GGT6 , GMPS, GNA15, GNAI1, GNAQ, GSTO1, GYS1, HAGH, HCCS, HMBS, HPSE, HSD3B 1, IDH3A, IL10RA, IL12B, IL13RA1, IRF7, KIR2DL1, LILRB3, LLGL1, MAP3 K2, MAP4K3, MGST2, MTMR2, NCF2, NFKB1B, NRAS, NRXN3, OR11G2, OR1K1, O R1N1, OR2AT4, OR2B2, OR4A15, OR4F6, OR51D1, OR5B3, OR6C2, OR6C70, OR 8D4, OR8U1, P2RX3, PARVG, PDE11A, PER3, PIGO, PLAU, PLD1, PMVK, POLR2 C, POMC, SEMA3C, SEMA4A, SKIV2L2, SLC27A5, SLIT1, SMAD6, SOAT1, SSH3 , TAS2R60, TBL1XR1, TNFRSF8, TRPM5, TYRP1, UBE2K, UBE2L3, ULK2, WNT6 , CACNA2D1, GABARAPL2, SERPINE1
Negative_15012	CEL, F5, FST, FUK, IL6, IL9, PML, AADAT, ACP6, ACVR1C, ACVR2A, ALAS1, A LDH3B1, ALOX15, AMD1, ARPC4, ATP4B, B3GALT6, B4GALT7, CCL22, CCNB3, CCNH, CDC14B, CLDN2, CXCL10, DAD1, DDX41, DGAT2, DGKA, DHDH, DTX3, DV L1, EGFR, FOXO1, FPGS, FZD1, G6PC2, G6PD, GLDC, GMPR, GPX5, GUCY2C, HL A- DOB, HPRT1, HTRA2, IFNA2, IL11, IL5RA, ITPK1, LTBP1, MAP4K3, MAPT, MG AT2, MYL7, NRXN1, NTF3, NUDT12, OCLN, OR10A6, OR1L6, OR4C11, OR51A4, OR52B4, OR56A1, OR56B4, OR5AK2, OR5H2, OR7C2, OR8B8, P4HA1, P4HA2, P APSS2, PARD6B, PCK1, PDE4A, PIP4K2C, PITX2, PKMYT1, POLD3, PON2, PRK ACA, PRPS1, PSME1, RALBP1, RPN2, RRAS2, SDHC, SETDB2, SPRY1, STAT1, S TX7, SUCLG1, TACR1, TAP2, TAS2R1, TAS2R40, TAS2R50, THBS2, TRAF5, TR IP10, TSHB, TUBA1A, UNC5B, UPB1, VARS, VEGFB, XYLT1, ZMAT3, ARHGEF12

Negative_15013	BCR, BTD, DHH, EPO, F2, HK3, ID1, ID2, IHH, JUP, OTC, TNF, ABAT, ACAD8, A CADVL, ACOX3, ALG10B, ALOX15B, ARG2, ARNTL, ATP5G3, ATP6V1H, B4GALT 3, BACE2, BBOX1, BCAT2, BCKDHA, CBLB, CCL26, CCNA2, CD46, CLDN11, COL 1A1, COL5A2, CREB3L1, CSF2RA, CSNK2A1, CXCL2, DDIT3, DDX23, DGKQ, DL L3, DTX2, E2F5, ENTPD2, EPHX1, EXTL3, FGD3, GALNT8, GCLM, GFAP, GGCX, GIT1, GLI2, GLYCTK, GNPAT, GNPAT1, GRIN1, GSTM4, GSTO1, GUCA1A, HDA C1, HRH1, HSD17B2, IFNB1, IL22, IL2RB, IMPDH2, IRS2, ITGA1, ITPKA, JA M2, KAT2A, KIR2DL2, KNG1, LARS2, LCAT, LTC4S, MAD2L2, MAGI1, MAP3K6, MCAT, MCM6, MGAT5B, MYH10, NFAT5, NR5A2, NRAS, NUDT8, ONECUT1, OR10T 2, OR11L1, OR1E1, OR2A42, OR4C15, OR4K14, OR4S1, OR51A7, OR52M1, OR6 X1, ORC1L, OXCT1, PANK1, PARD6A, PARS2, PCNA, PDE1A, PDE1C, PDE3A, PH KG2, PIGX, PIK3R2, PLA2G4A, PLA2G5, PNLIP, POLE4, PPA1, PPP2R2C, PPP 2R5D, PROS1, PRSS2, RAC1, RAPGEF1, RDH11, RENBP, RETSAT, RND1, RXRA, SLIT1, SMURF1, SNAI1, SSH1, SSH3, TAP1, TAS2R16, TAS2R4, TAS2R50, TI RAP, TP53, TSHB, TUBA8, WNT7B, XCL1, ATP6V1B1, ATP6V1G2, HLA-DRB3, MAPKAPK5, TNFRSF10C
Negative_15014	C9, CBL, CFH, DAO, DHH, EDA, ME3, OGT, RFK, TK1, UBC, ACSM5, ACTB, ACY3, ADH4, ADRA1D, AKR1B10, ALDH4A1, ALDH7A1, ALDH9A1, ALG13, ARG1, ATP2 A1, ATP5A1, B3GAT1, BMP7, BMP8A, CACNA1G, CACNG7, CCND3, CD38, CD3E, CD99, CER1, CFLAR, CHEK1, CHST13, CSH1, CSNK1D, CTSB, CYP4A11, DEGS2 , DHDH, DPM1, DPYSL2, DUSP16, E2F1, ENTPD1, ENTPD7, FBXW11, FDPS, FUT 2, FUT5, FUT9, GALK2, GCDH, GLG1, GLYCTK, GRIA1, GSTA1, IFNGR1, IL6ST , IMPA1, INMT, LIFR, LTA4H, MCAT, NAE1, NRG1, NTRK1, OR2AE1, OR2K2, OR 2L13, OR7A5, OR8G1, OR9A4, P2RX1, P2RX3, PDE4A, PI4KB, PIGB, PIM1, PL K1, POLR2E, PON3, PPP3R1, PRKX, PRNP, PROS1, RASGRP1, RHOA, ROCK2, SC LY, SLIT1, SUFU, SULT1E1, TGFB1, TNFSF10, TNFSF14, TNXB, TUBB4Q, UBA 1, VDAC3, ZBTB16, ST6GALNAC4
Negative_15015	AGK, GP9, IVD, LCK, RPE, SMS, ACACA, ACOX2, ACSM3, ADAM10, AOX1, ARAF, AREG, ATG12, ATP5E, ATP5I, BCL2, BLVRB, BST1, CALML6, CAMK2D, CAV1, C CL21, CCNH, CD46, CD59, CD99, CDC16, CHSY1, CNTFR, CRB3, CSH1, CSNK2A 2, CXCL1, CYP2F1, CYP3A5, DBF4, DOLPP1, DUSP14, DUSP7, DVL1, EDN1, ED NRB, EPHA5, F2RL2, FGF17, FLT1, FUT3, GALNTL1, GCNT2, GGT7, GLG1, GNR H1, GRM1, GSTA5, GTSE1, GUCA1A, HADHB, HES1, INPP4A, JAG1, KLRC2, LHC GR, LIPT1, MAD2L1, MCCC2, MDM2, MGST3, MICA, MTFMT, NANS, NTNG1, OR10 H4, OR10J1, OR10K1, OR13C2, OR13C3, OR13C9, OR13F1, OR1E2, OR1I1, OR 2C1, OR2L8, OR2T1, OR3A2, OR4A15, OR4K13, OR4L1, OR51G1, OR51I2, OR5 1Q1, OR5AK2, OR5H2, OR5P2, OR5T3, P2RX2, PDE3B, PDE6H, PFKFB2, PGM1, PHKB, PLCD4, PMVK, PNPT1, POLA2, POLE3, POLR1C, PPAT, PPOX, PPP1R3B, PPP2R5D, PPT1, PRKAB1, PSEN2, PTPRR, PYGM, RDH8, RELA, RIPK1, RPS6KA 3, SH2D1B, SKIV2L2, SLIT1, SMAD9, SMPD2, SQLE, SRD5A1, STX5, SYNJ2, T AS2R3, TPMT, TSC2, TYMS, VAV2, VDAC2, VTI1A, WBSCR17, WBSCR22, WNT7A , XCL1, ATP6V1G1, CACNA2D3, GABARAPL1, SERPINF2, ST6GALNAC5

Negative_15016	<p>ABO, C8G, FGB, GP6, TEC, TNR, AANAT, ABCC8, ACOT12, ACTC1, ACTG1, ACY3, ALDH3A2, ARHGEF7, ATF4, BACE1, BACE2, CACNA1I, CCL22, CCL4, CDC27, CDH15, CHSY1, CLDN19, CLDN8, CLTA, CYP2U1, DAAM1, DDX41, DHX58, E2F1, FARSB, FASN, FGF20, G6PD, GABARAP, GALK1, GCNT3, GSTK1, GUCY1A3, HG SNAT, HMBS, HPSE, HSD17B8, HSPA1B, IKBKB, IL10RA, IL12RB1, IMPA1, IN PP5A, ITGA4, ITPA, LAMC1, LEPR, LIMK1, LMO7, MAP4K4, MAPK1, MASP2, MY H13, MYH8, NKD2, NPAS2, NR1H3, NRP1, NRXN3, NT5C, NUDT8, OR10H4, OR10 J5, OR13C3, OR13C5, OR1I1, OR2A25, OR52I1, OR52R1, OR5B21, OR5D18, O R5R1, OR5T3, OR6Y1, OR8D4, P2RX1, PANK2, PDE3B, PDE6H, PEMT, PHGDH, P IGB, PIGL, PIK3C2A, PLA2G5, PLCB2, POLD3, POLR1E, PPP2R5B, PPP2R5D, PPP3CB, PPP3R1, PRKAG1, PTDSS2, PTPN5, PVRL3, RFNG, ROBO3, RPS6KA2, RRM1, RRM2B, SCLY, SLIT2, SMURF2, SNAI2, SOCS3, SPRY1, SPRY2, STAM2, SV2C, TAS2R10, TAS2R13, TBL1X, TGFB3, TJP1, TLN1, TUBA1A, UNC5A, XYL T2, ATP6V0A2, ATP6V0D2, ATP6V1C1, ATP6V1E2, HLA-DRB5, HSD17B10, MAP3K7IP1, TNFRSF10D</p>
Negative_15017	<p>AMH, F5, IL9, ME3, MOS, OGT, SMO, TFG, AARS2, ACAA2, ACOX2, ACTN2, ACYP 1, ADIPOR1, ALDH1A1, ALDH1A2, ALDOA, ALG10, ATP4B, ATP5G1, ATP5H, B3 GALT4, BCL10, BMPR1A, BUB3, C1QC, CASP8, CCDC6, CCL7, CDH4, CDK6, CHR M2, COL6A1, CSF1R, CSF2RB, CSNK2A2, CYP21A2, DGKI, DPYD, ENO2, F11R, FCGR2B, FUT4, GALNT8, GALT, GNG12, GPD1L, GSTP1, GSTT1, GUCA1C, HCLS 1, HIF1A, IFNAR2, IKBKB, IL10, IL11, IL17RA, KCNQ1, KIR2DS4, KLRK1, L AMC2, LCMT1, LIFR, LRRC4C, LTBR, LYZL1, MAGI1, MGST1, NADSYN1, NAT2, NFKBIA, NLGN3, NOTCH1, NT5C1B, OGDH, OR10T2, OR1F1, OR2G6, OR2M3, OR 2T34, OR5AK2, ORC4L, PAK6, PANK4, PEMT, PIGH, PIK3CB, PLCB2, PLCD4, P LEKHA8, PNPLA4, PPP1CA, PPP3CB, PRPH2, PTAFR, PTK2B, PYGM, RASSF5, S EMA3D, SEPHS1, SOCS2, SPCS3, SPI1, SRGAP2, ST3GAL3, TAS2R48, THY1, T LR3, TLR5, TPI1, ULBP3, WNT11, ZIC2, ATP6V1C1, PRICKLE2, TNFRSF10B</p>
Negative_15018	<p>ADK, AGK, AK1, CD4, DAO, FGB, GBA, IL2, MUT, TKT, AARS, ABAT, ADSSL1, AR AF, ASS1, ATP5G1, BCL2L1, BET1, BIRC3, BNIP1, CBR3, CCL4, CD58, CDC42, CES7, CHEK1, CHRM2, CLDN18, CLDN22, CSF3, CYCS, CYP2A6, CYP2C9, CYP 2D6, CYP2J2, DHFR, DUSP2, DVL1, EPHA6, F13A1, FABP1, FASLG, FPGS, GAL T, GGT6, GLI2, GMPPB, GP1BA, GPAM, HEXB, HLA-DOB, IFNA17, IL10RA, INHBA, KAT2A, LAMB3, LLGL2, LRDD, MDH1, MLLT4, N ANP, NNMT, NOTCH2, NSDHL, OR12D3, OR13C5, OR2B11, OR2C1, OR2L13, OR3 A2, OR4C11, OR4F5, OR51A7, OR51S1, OR6B2, OR6Q1, OR8U1, PANK1, PCYT1 A, PCYT1B, PDE6H, PDE7A, PDGFD, PIP4K2C, PLAU, PLXNB2, PYCR2, RALBP1, RASGRF2, RXRA, SEMA3D, SESN1, SETD1A, SNAP25, SPTAN1, TGFA, TRAF1, ULK2, UNC5B, UPP1, WNT7B, WNT8B, XCR1, ATP6V0A2, SLC25A31, ST6GALNA C5</p>
Negative_15019	<p>AGK, AK5, AR, F3, F7, GSN, HDC, HYI, IVD, PGD, ACTN4, ADRB3, AKR1B1, ANA PC1, ARHGEF2, AVPR1B, BLVRB, CCL16, CCL21, CCNB1, CCND3, CD28, CKS1B, COL1A1, COL2A1, COL5A2, CRLS1, CTBP2, DCXR, DDOST, DERL1, DGKE, DHC R24, FASN, FOXO3, FZD4, GAD1, GALNT1, GALNT6, GBA3, GCH1, GGT5, GJA1, HARS2, IL17RB, IL20RA, IRAK4, ITGB6, KLRD1, LAMB3, MAFA, MAP3K2, MAP T, MMP1, MTFMT, MYL5, NCR1, NMNAT3, NR4A1, NT5C1A, OR10V1, OR13J1, OR 2A2, OR2T2, OR2T29, OR4C16, OR4D1, OR52N2, OR7G2, OXCT2, P2RX1, PAK7, PAPSS1, PARS2, PARVB, PDE7B, PIP4K2B, PPAP2A, PPM1A, PPP1CB, PPP2R 2D, PRKAR1B, PTGER3, RARS2, RDH10, RRAS, SCP2, SLC2A4, SMURF2, SOD1, SOS1, SPTAN1, STAT1, STMN1, TLN2, TPI1, TRHR, TUBA3E, WNT3, WWP1, AAS DHPPT, CACNA2D2, TNFRSF18</p>

Negative_15020	A2M, CBS, CD4, DLD, GSS, KIT, PLG, AASS, AC01, ACTB, ADCY5, AGPAT3, AGP AT6, AREG, ARPC1B, BDNF, C7orf16, CCDC6, CD59, CNTNAP1, COL2A1, CSF1 , CSF3R, CTSL1, CXCL6, DAG1, DAPK2, DDX4, DGKH, ENO2, F13B, FABP4, FAR SB, FGD1, FPGS, FSHB, GALK1, GALM, GGT1, HARS2, HIP1, IGSF5, IL1R2, IL 28RA, IL3RA, INPP5A, IPMK, IRS4, ITGB4, JAK2, MAD2L1, MAN1A1, MAP2K5 , MCM5, MGAT4B, MMP1, NFATC2, NFX1, NPR1, NRG1, NT5C3, NTNG1, NUDT9, O R10G7, OR10H4, OR10P1, OR13C4, OR13C9, OR1F1, OR2T6, OR3A2, OR4F5, O R56A4, OR5D14, OR5D18, OR8G1, OR8H1, PDE1A, PFKFB4, PGK2, PHKG1, PIK 3R5, PLA2G10, POLR2C, POLR3H, PPM1D, PRKCI, RPS6KA1, RPS6KA5, SARDH , SGMS1, SOCS5, SPRY4, SSH1, TAS2R3, TAS2R7, THTPA, TNFRSF8, TNFSF14 , TSNARE1, UMPS, YARS, ZFYVE9, ATP6V1G1, CSGALNACT2, MAP3K7IP2, MAP KAPK3, TNFRSF14
Negative_15021	ABO, C3, F9, HGF, ID2, IL9, LIF, SP1, TNN, ABL1, ABLIM3, ACHE, ADIPOR2, ALAS1, AOX1, ASS1, ATP2A2, AVPR1B, B4GALT7, BBOX1, BCAT1, CACNA1D, C ACNB3, CACNG4, CCKBR, CCL2, CCL25, CD74, CLCA2, CLDN11, CLDN18, CLOC K, CTBS, CXCR4, CYP11A1, CYP2S1, DDX56, DERL1, DPM3, DRD1, EFNA2, ENP P6, ENTPD1, ENTPD3, EPHA4, F11R, FARSA, FBP1, FUT4, GALK1, GDE1, GMPR 2, GP1BA, GUK1, HSD17B8, HTR6, IFNA5, IFNGR2, IL13, IL1R2, IL7R, INPP 4A, IQGAP1, ITGA2B, ITGAV, ITPKA, MPZL1, MYH4, MYLK3, NAGK, NCK1, NUD T8, OCRL, OR10J3, OR1A2, OR51E2, OR52D1, OR52E2, OR52E8, OR52K1, OR5 2N5, OR5AP2, OR6Y1, OR7C2, PAK1, PAK6, PAX6, PDE2A, PDE9A, PFKFB4, PH KB, PIK3C2G, PIP4K2B, PIP5K3, PKM2, PLA2G2F, PLCG1, POLR3G, PTAFR, R ARA, RPS6KA4, SEMA4C, SETD1A, STK4, TAP2, TIAM2, TMLHE, TNFSF8, TYK2 , UGDH, UPP1, VANGL1, YOD1, CACNA2D4, TNFRSF13C
Negative_15022	C6, F7, F8, GNS, MOS, MYC, TEC, ACVR1C, ACY1, ACY3, ADH1A, ADH4, ADORA2 B, AGMAT, ALDOB, ALG2, ATG3, ATP4A, ATP6V1D, BIRC3, CACNA1H, CACNG4, CALML3, CALML5, CAMK2B, CAMKK2, CCKAR, CCKBR, CCL11, CD27, CDC27, CD KN2B, CMBL, CXXC4, DDOST, DUSP1, DUSP16, EDAR, EFNA3, ELK4, EPHA7, FC GR3B, GALK1, GFPT2, GLI2, GLUD1, GNAQ, GNRHR, GPD2, GSTO2, IGF1R, IKB KG, IL13RA1, IL20RA, IL28B, INHBC, IPMK, IRF7, ITGAX, LDHAL6A, LEFTY 1, LRP5, MAP2K1, MGAT4A, MPST, MTFMT, NAMPT, NEU3, NFATC1, NFATC2, NK D1, NKX2- 2, NME4, NRG4, NUDT8, OR10C1, OR2A5, OR2D2, OR2T29, OR3A1, OR4C12, OR 4F4, OR4S2, OR4X2, OR5AR1, OR5L1, OR7A5, PGM2, PHKA1, PIAS2, PIAS3, P IGH, PIGU, PIK3C3, PLCG1, POLD3, POLR2A, POLR2I, PORCN, PPP3R2, PRIM 2, PTDSS1, PTEN, RAD51, RASGRP1, RASGRP2, RELB, ST3GAL5, STAT4, STX7 , SV2C, TBL1XR1, TGFBR2, TIAM1, TLR3, TPI1, TUBB2C, UBE2L6, UGCGL2, V ANGL2, VARS, VAV1, ATP6V1C2, CSNK1A1L, EIF4EBP1, SERPINF2, TNFRSF1 1A

Negative_15023	BTK, CD4, CD6, F12, FGA, ID1, ID3, IL8, SRC, TPR, ACADSB, ACP5, ACSL3, AKR1B10, ALAS1, ALDH7A1, AMHR2, ATP5G1, AVPR1A, AXIN1, AXIN2, B3GNT2, BAIAP2, BCKDHB, BCMO1, BDH2, C1QC, CACNB2, CALML3, CCND1, CD34, CD55, CD79B, CD99, CDC27, CDKN2A, CDS1, CLDN4, CLDN8, CMAS, CNTNAP2, COL6A1, CYP2C18, DCXR, DDX41, DHRS3, DRD2, ENTPD6, EPOR, EPRS, ERBB2, EXOC7, F2RL3, FCGR2B, FGF21, FMO3, GABARAP, GALNTL5, GALT, GLB1, GNAI1, GNG12, GRIN2A, GSTA1, GYS1, HMGCL, HNF4G, HSD17B1, HTR7, IL12RB2, IL20RA, IL2RG, INHBC, ITGAL, JAK2, KYNU, LFNG, LIPF, MDM4, MIOX, MPP5, NAE1, NCF2, NEFM, NEU3, NEU4, NRAS, NRP1, NT5C3, OGDHL, OR10H5, OR10P1, OR10X1, OR11H4, OR11H6, OR13G1, OR2T8, OR4C15, OR51Q1, OR52K2, OR52R1, OR56A1, OR5B17, OR5B21, OR5C1, OR5F1, OR5K2, OR6B2, OR6C70, OR6C75, ORC6L, PANK1, PGLS, PIM1, PLK1, PNMT, PNPT1, POLE4, PPCDC, PPP1R3C, PPP2R1B, PPT1, PRKAA1, RBL2, RPIA, SEMA3E, SFRP4, SMAD4, SMAD5, SMPD1, SPAM1, STX10, SV2C, TJP3, TNFSF4, TSC2, TUBA1C, TYRP1, UGT2B4, ULBP1, XYLT1, YES1, YWHAE, ATP6VOA2, SERPINC1, SLC25A31, ST6GALNA C1, TNFRSF10B
Negative_15024	APP, BAX, C2, FAS, GDA, GP5, GSS, LCK, LPL, SP1, TXK, ACOX3, ACSL3, ADAM17, AGTR1, ALDH1L1, APOA5, APOC3, ARG2, ARSA, ASAH1, ATP5E, B4GALT4, BIRC3, CD14, CD82, CDC6, CFL1, COL4A1, CRHR1, CSDA, CTBP2, CYP19A1, CYP3A5, DARS, DERL1, DRD1, ETS1, FGF10, FUT4, FUT7, FZR1, GALNT6, GBT1, GRIA3, GRIN2A, GRM5, HMGCL, IL10, IL12A, IL23R, IL2RG, IRF5, LAMB1, LCP2, LIPF, LYPLA2, MAML3, MAN1C1, MAP2K5, MDH1, MGAT2, NADSYN1, NPOR2, OR1B1, OR2AG1, OR4K1, OR51Q1, OR5J2, OR5M3, OR6A2, OR7C2, OR8B4, OR8H3, OR8K3, P2RX7, PARD6A, PAX6, PDE1C, PDE7B, PHKA1, PHKA2, PHPT1, PIP5K1C, PLAT, PLXNB3, PPID, PPP2R5B, PPP2R5E, PPP3R1, PRIM1, PRKACB, PRNP, RAC1, RBPJ, RRM2, SEMA3B, SMAD5, SOAT2, SSH2, STAT6, SUOX, TACR3, TMLHE, TNFRSF4, TNFRSF9, TSC2, TUBA1C, TUBAL3, TUBB4Q, UMPS, YARS2, YKT6, PAFAH1B2, PRICKLE1, SUV420H1
Negative_15025	ADK, AK7, CDA, FH, GCK, GDA, HDC, HK3, HYI, SMO, ACAD9, ACO1, ACOX3, ACSM2A, ALDH6A1, ALG10, APLP1, ARD1A, ARPC4, ATP6AP1, AXIN1, BACE1, BMP7, BMP8A, CCDC6, CCL21, CDC25A, CDK6, CDKN2D, CES2, CLTC, CRY1, CYP2F1, CYP3A4, DCTN1, DDX23, DGKI, DHFR, DKK2, DOCK1, DUSP1, E2F4, EFNA5, ENTPD3, FGF1, FUT7, GALNT6, GGT5, GLDC, GLUL, GNB1, GNG12, GSK3B, GSTM5, GUCY1A3, IDH2, IFNA13, IL9R, IRF5, IRS1, KLK3, LDHC, LGMN, MAP3K8, MMP2, MYH3, NAT5, NFKBIB, NRCAM, OR10G9, OR13D1, OR2D2, OR52B6, OR5D13, P2RX2, PDHB, PDXK, PIK3C2B, POLR1D, POLR2H, PPP1CA, PTCRA, PTPN11, PYGM, RAC1, RALB, RASA1, RFNG, ROBO1, SEMA3A, SLC9A1, SNW1, SREBF1, STX2, TBL1Y, TBXA2R, WNT1, WNT2B, YKT6, ATP6V1E2, MAP3K7IP1, SERPING1, TNFRSF11B
Negative_15026	AK3, BTC, C6, CD4, CR1, EDA, GK, HDC, HGD, IL6, LEP, ME1, MTR, PAH, ABLIM3, ACP2, ACSL1, AKR1C3, ALG11, ANAPC10, ANAPC5, ARHGEF2, BCL10, BDNF, BMPR2, C1QA, CACNA1I, CACNB1, CACNG3, CAMK2D, CARD11, CASP8, CCKBR, CCNA1, CCR4, CD80, CDS1, CES2, CHAT, CHRM1, CHST12, CLOCK, CLTCL1, CREB3L3, CXCL16, DCTD, DDX50, DGKQ, DHFR, DNMT3L, DOT1L, DPAGT1, E2F1, EARS2, ECHS1, EDAR, EDNRB, EIF4E, ENPP2, ENTPD7, EPHA6, EPHB1, EPHB4, FGF3, FPGT, GALNTL4, GART, GNAQ, GNRH1, GOSR2, GP1BA, GSTM4, GUCY1A2, GUK1, HGSNAT, HMGCS2, HSD17B8, HTR2B, IFT57, IKBKB, IL18, IL20RA, IL20RB, IL28A, IMPA2, INSR, ITGA10, KAT2A, LDHB, LDHD, MAN1A2, MCM6, MDH2, NMNAT2, NOS3, OR10AD1, OR10AG1, OR10K1, OR2AE1, OR4F4, OR4F5, OR52W1, OR5A2, OR5AK2, OR8H1, PAK7, PAX4, PFN4, PIK3R2, PIP4K2B, PPARG, PPP2CB, PPP2R5C, PRKAB2, PSME2, RAP1A, RPRM, RPS6KA1, RPS6KA6, RRM1, SDHB, STMN1, SULT1E1, TBK1, TBL1Y, TGFB2, TGFB2, UAP1, UGCG1, VDAC2, WNT3A, ALDH18A1, HSP90AA1, SERPINC1

Negative_15027	<p>AR, C8A, DDC, HGD, MIF, SMS, TPR, UBB, ACTN4, ACVR2B, AGPAT3, AGPAT4, ALDH2, AMPD2, ANAPC5, ASCC3, ATP5G2, ATP6V1D, C9orf95, CACNA1H, CASP8, CAV2, CCL17, CCR5, CDC25A, CDC7, CDS2, CEBPA, CLDN16, CLDN9, CNDP1, CNTN1, CPS1, CSNK2A2, CTTN, CYP2C8, DDB2, DDX41, DNMT3L, EFNA5, FADD, GCNT4, GNAS, HLA-DOA, HNF1A, HSD3B2, HYAL2, IFNG, INHBB, LYPLA1, MAPK1, MCCC1, MCM2, MCM3, MCM7, MTFMT, NCR2, NEU3, NFATC1, NME7, NOS3, NSD1, OR10AG1, OR1S1, OR4K15, OR4S1, OR5AK2, OR6C75, OR8B12, OR9Q1, PDE4D, PDGFA, PDGFB, PDIA4, PDX1, PIGT, PIK3R3, PKLR, PLA2G3, PLCB2, PNLIP, POLR2B, PRKAG2, PTGDS, RASGRP3, RHEB, RIPK1, RPS6KB2, SDHA, SELP, SH2D2A, SIPA1, SLC9A1, STAT5A, SUV39H1, SUV39H2, TCIRG1, THTPA, TJP1, UROD, WBSCR22, WNT3A, WNT5B, WNT6, WWP1, HSD17B12, TNFSF13B</p>
Negative_15028	<p>DCC, GH1, ID4, IL4, PC, SYK, ACOX1, ADSSL1, AGPAT1, AGXT, AHCY, AKR1D1, ALG1, ARD1A, ASIP, ATP5I, B3GALT4, BET1L, BIRC5, BMP8A, CASP6, CBR3, CD79A, CDC20, CFL2, CFLAR, CHRNA7, CLDN19, CSNK1E, DAXX, DNMT3B, EDAR, EPB41L2, EPHA6, EPHB6, FABP3, FASLG, FGD3, FTMT, GCH1, GGT5, GLUD2, GLYCTK, GPX7, GRLF1, HEXA, HTR5A, IL28RA, IL9R, INHBC, INPP5A, KRAS, LDHD, LFNG, LIPT1, MGAT4B, MPDZ, NAGK, NEFM, NME2, NOD1, OR10G7, OR10H2, OR11G2, OR13G1, OR3A2, OR3A3, OR4C11, OR4N4, OR51B5, OR52N2, OR5A2, OR7A5, PANK4, PFN3, PI4KA, PIGC, PITX2, PLA2G6, PLCB4, POLE4, POLR2A, POLR2K, PPP1R3D, RFWD2, SCD5, SESN3, SETD1A, SFRP2, SMARCA5, SOCS1, TAS2R1, TAS2R5, TBXA2R, THBD, TRDMT1, UGT2B17, UGT2B7, WWP1, CACNA2D3, HLA-DPA1, TNFRSF1B</p>
Negative_15029	<p>AMT, CD4, DBT, DCT, EBP, GH1, HGF, ILK, SHH, SRM, TNF, AASS, ACOX2, ACOX3, ACSM2A, ASPA, B4GALT3, BAAT, CACNB3, CCR4, CD46, CD47, CD70, CHUK, CLDN17, COL4A2, CRLF2, CSF1R, CSF3R, CTBP1, CXCL12, DKK1, EFNA3, EFNB3, EPHB6, ETNK2, FASLG, FGFR1, FMO2, FUT6, FUT7, GALNT3, GGT7, GJA1, GLO1, GNPAT1, GNRHR, GUCY2D, HADH, HHIP, HRH1, HTR5A, IL12RB2, ITPKB, JAG1, KLK3, LARS, MAP4K1, MAPK7, MOV10L1, OR10H4, OR10R2, OR13A1, OR1S1, OR2F1, OR2H1, OR2L2, OR4K14, OR52N2, OR56A3, OR56A4, OR5A2, OR5F1, OR5P2, OR6C74, OR6C76, OR7A10, OR8H2, OXTR, PDE1A, PGAM2, PGM1, PHKG1, PIGM, PLCB3, PLCD3, PRODH2, PTDSS2, PTGES2, RARS, RASGRP4, RHOD, SARS, SELE, SEMA3G, SESN3, SPCS3, STK4, STX12, STX2, SUOX, SUV39H2, SV2B, TAS2R41, TGDS, THBS2, TNFRSF8, TNFSF11, TNFSF14, TRAF2, TRDMT1, TSHB, TUBB6, UGT2B28, VAMP3, WASL, WEE1, WNT3, XYLT1, AASDHPPT, HLA-DRB4, MAP3K7IP2, PLA2G12B, SERPIND1, TNFRSF1B</p>
Negative_15030	<p>AGK, C5, CD4, CD6, FOS, FYN, IL9, SRM, TXK, ACAT1, ACVR2A, ADSL, AGMAT, ALDH3A1, ALDH9A1, ALG8, ARPC1B, ATP6V1D, B4GALT5, CD55, CHIT1, CRB3, CSAD, CSNK1G1, CTBS, CXCL2, CXCL3, DTX3L, ELK4, ETNK1, FGF12, FUT6, GALNT12, GAS1, GGT6, GJD2, GLUD2, GNPAT, GSTM3, GSTM5, HARS2, HCCS, HGSNAT, HLA-C, HLA-F, HTR7, IL12A, IL12B, IL1B, INHBA, KAT2B, KLKB1, MEF2C, MTFMT, NAGK, NCF1, NFE2L2, NFYC, NKX6-1, NMNAT1, NT5C2, NUDT9, OR10J1, OR13H1, OR1Q1, OR2T4, OR4X1, OR5K2, OR6C3, OR8B12, OXSM, P2RX1, PANK4, PCK1, PDE4B, PDE8A, PDHA2, PFKFB1, PHKA2, PIK3CD, PKM2, PLA2G2F, PSAT1, PTEN, PTPMT1, RAD51, RASGRP3, RCHY1, RETSAT, RPS6KB2, SEMA3D, SH2D2A, SIAH1, SMURF1, SOCS3, SPI1, TAP1, TPH1, TUBA1A, UGT2A1, UGT2A3, UROD, HLA-DRB4, SERPINF2, TNFRSF1B</p>



Negative_15031	BCR, DBI, EPO, F9, FAH, IL7, IL9, UBC, ADAM10, AGPAT2, AGPAT3, ALAS2, ALCAM, ALDOC, ALOX12B, ALOX15, ANAPC11, ANGPTL4, APOE, ARG2, ATP13A2, ATP2A1, ATP4A, B3GALT5, B3GNT3, BPGM, C1QA, CCL4, CDC42, CDKN2A, CDKN2B, CHAD, CHSY3, CNTNAP1, COL5A3, CYFIP2, DOT1L, DPAGT1, DPYS, DUSP3, E2F4, EARS2, ENAH, F2RL1, FGFR1, FM04, GALNTL5, GNAI2, GP1BA, GP1BB, GPLD1, GRB2, GSTM5, HCLS1, IL17B, IL1R1, IL2RG, INHBC, INPP5A, JAK2, KAT2B, KIR2DS4, LAP3, LCP2, LEPR, LIFR, LIMK2, LLGL1, MAD2L2, MAFK, MAP2K1, MBL2, MYH9, MYL2, MYLK2, NAGLU, NEFM, NEU3, NLGN3, NRP1, NUDT8, OR10G3, OR10G7, OR10T2, OR1E1, OR1L4, OR52E8, OR52N1, OR56B4, OR5D16, OR6M1, ORC5L, PANK3, PDGFRB, PEMT, PFKM, PFN1, PKLR, PLA2G2F, PLCG2, PLIN, PLOD3, POLR2B, PRKX, PRNP, PRSS1, PTGER1, PYCR1, PYCR2, RARA, RASGRP4, RDH8, RXRB, SEMA3E, SETDB2, SIAH1, SKIV2L2, SLC25A4, SOAT2, STAM2, SULT1A2, SV2B, TACR1, TCF7L1, TLR5, TNFRSF8, TPK1, TRAF6, UNC5B, VAMP1, YES1, ZAP70, ARHGGEF12
Negative_15032	APP, BAD, C2, CD6, CGN, HYI, ID1, LTB, LYN, MVD, ACPP, ACSL6, ADAM17, ADCY4, ADCY7, ADH5, ADRBK2, AGPAT1, AGRN, AGTR1, AHCY, AKR1C4, ALDH2, ALOX15, ALPPL2, AOX1, APOA5, ARAF, B3GNT2, B3GNT4, BACE2, BCKDHB, BLVRA, BMP5, CACNG5, CASP10, CASP8, CCL19, CCL28, CCL3, CCR1, CDC26, CDK7, CDKN1B, CLCA2, CLDN17, CLDN2, CSF2, CSNK1D, CSNK2B, CTPS2, CUL1, CXCR5, DAXX, DCTN1, DRD5, EDNRA, EPRS, ERBB2, FBP2, FGF23, FOXO3, FTH1, FZD5, GOSR2, GRIA1, GSTM2, HLA-DOA, HMOX2, HSD3B1, IFNA21, IFNAR1, IL10, IL15RA, INHBC, INSR, KAT2A, LCMT1, LCMT2, MAN1A2, MAP3K12, MAP3K4, MAP4K4, MASP1, MCM7, MYH13, NAGS, NCK2, NTF4, NUDT12, OR10AD1, OR10J1, OR10T2, OR2F1, OR4C46, OR51F1, OR52E4, OR52I2, OR5AR1, OR6C2, OR6C3, OR6X1, ORC1L, PAPSS2, PDE1B, PDE8A, PGAP1, PIAS3, PIGW, PLOD2, PLXNB3, POLR2C, POLR3D, PPP2R5B, PRKAR1B, PRKAR2A, PSEN2, RAD51, RDH11, RFXANK, RND1, ROCK2, RPRM, RUNX1T1, RXRG, SFRP2, SHC3, SLC27A1, SOS2, SPRED1, STX4, TBL1X, TGD5, TGFA, TNFRSF8, TNFSF8, TRAF3, ULBP1, WNT5A, ZBTB16, ZNRD1, ATP6V0A1, ATP6V1B2, MAPKAPK5, PRICKLE1, SUV420H1
Negative_15033	ADO, AMT, ATM, BAD, CFI, CKB, CP, CR2, FAH, IL2, IL6, KHK, LTB, SRM, TPO, ACAA1, ACAA2, ACAT1, ADCY3, AKR1B1, ALDH3B1, ALG6, ALOX5, APOA2, ARNTL, ATF2, ATP4B, ATP5G2, B3GALT2, BIRC5, BMP7, BST1, CACNG5, CCNB1, CD58, CD01, CHD8, CNTN1, COL1A1, CSH1, CSNK2A1, CTNNA2, CTSB, CYFIP1, CYP2A6, CYP4F3, DDX4, DGKB, DGKI, DIAPH2, DUSP5, DUSP8, ENTPD8, ERO1L, ESAM, FABP4, FGF19, GALNTL1, GDF5, GLUD1, GNAO1, GP1BA, HBEGF, HADC1, HIBADH, HLA-DMA, HNMT, HPRT1, HSD11B2, ICAM1, IDI2, IL8RA, INADL, INHBA, IRF3, IRF7, JAG1, KLRK1, LDHC, MAP2K5, MDH2, MKNK2, MMP7, NODAL, NOTCH1, NR1H3, NRCAM, OR10R2, OR10V1, OR13C2, OR13H1, OR1L4, OR2T1, OR2T3, OR4F17, OR51I1, OR6C1, ORC3L, P2RX4, PARD6A, PAX6, PDE5A, PGK1, PHKA2, PIGV, PLEKHA8, PNLIP, PPAP2B, PPCS, PPOX, PRKCG, PRLR, PSME1, PTPN7, RAF1, RBPJ, RPS6KB1, SC4MOL, SEMA3A, SEMA3G, SEMA4F, SKP2, SLC33A1, SMA5, STK36, SULT2A1, TBL1XR1, TGFB3, THBS2, TNFSF14, TOMM40L, TXNDC12, VAV3, VCAM1, XYLT1, ZFYVE16, ALDH18A1, PNLIPRP2

Negative_15034	<p>BCR, DBH, DBT, DCN, DHH, IVD, LCT, NPL, PXN, TPO, VCL, ADCY1, ADSL, AGMAT, ALG9, ALOX15, ANPEP, AOC2, ARNT2, AVPR1A, B3GAT1, BIRC5, CACNB4, CALML6, CCNE1, CCR7, CDK5, CDK7, CFTR, CHRM5, CLDN20, CLDN4, COL2A1, CQ7, CREB1, CXCL12, CYFIP2, CYP19A1, CYP2B6, DAAM1, DCTD, DGKD, DLL1, DLL4, EDA2R, EFNA1, EGFR, EIF4B, EPHA5, ERO1L, FGF22, GMPPB, GNAL, GP1BA, GSTA1, HSD11B1, HSD17B2, HSPA2, IGF1R, IL1R2, IL25, INHBB, IRS1, ITGB1, LIPG, LPAR1, MAP3K3, MAPK10, MAPT, MASP2, MFNG, NEUROD1, NKX3-</p> <p>1, NOTCH2, NOX3, OR10G7, OR1A2, OR2Y1, OR3A2, OR4A5, OR56A1, OR5K1, OR5V1, OR6C3, OR6T1, OR8S1, PAK4, PIK3CA, PIK3R5, PLA2G2F, PLA2G5, PLTP, POLR1A, PPARG, PPP2CA, PPP2R5C, PPP2R5D, PPP3CB, PROC, RALGDS, SELE, SHC3, SOCS7, SPHK1, ST3GAL4, STX5, TAP2, TAS1R3, TAS2R40, TCF7L1, TDO2, TIAM2, TNXB, TUBB2C, UGCGL2, UGT2B17, UNC5D, UPRT, UXS1, WNT5A, ATP6V0A2, ATP6V0D2, MAP3K7IP2, MAPKAPK3, PDCD1LG2, TNFRSF13C, TNFRSF18</p>
Negative_15035	<p>A2M, ATM, AUH, GH2, GNS, NNT, AARS2, ALDH3A1, ALG6, ALOX12B, ASPA, ATP12A, BACE2, BMP4, C1QB, CACNA1E, CARS2, CBR3, CCR5, CD14, CD8A, CDH1, CDH2, CDK4, CHST13, CHSY3, CMPK2, COQ6, CTF1, CYP2U1, DDX54, DGKA, DIAPH2, DOLPP1, DUSP4, EPHA2, ERBB2, FGFR4, GALNTL1, GNAI1, GNB1, GOSR2, GUCA1B, H6PD, HSD17B4, IDH3B, IFNA10, IL13RA1, IL15, IL1B, ITGA3, KIR2DL2, LAMB2, LILRB3, LIPG, MAP4K3, MYH13, MYLK3, NAGA, NAGLU, NCO R1, NFE2L2, NR1D1, NRG3, NT5E, NTN1, NUDT9, OR10G8, OR2A4, OR2T11, OR2T8, OR3A1, OR4C6, OR4D2, OR4K2, OR52I2, OR52K1, OR5K2, OR5M9, OR7A5, OR8U1, OSMR, PAK7, PDE8A, PDGFRA, PDPK1, PGM2, PIGU, PIM2, POLR2C, POLR2F, PPP1R3A, PSEN1, PYGM, RBPJ, SEMA3G, SMPD2, SMURF1, SSH3, ST3GAL5, STAT6, SV2B, THBS3, TIAM1, TUBAL3, TUBB2A, WIF1, WNT5A, WNT6, YKT6, ZBTB16, CSGALNACT2, HLA-DRB3, PPP1R12A, SERPINA5, TNFRSF10B, TNFRSF1B</p>
Negative_15036	<p>CFD, CRK, GAA, JUP, PDC, PML, SHH, TNC, ACAD8, ACOT12, ACOX1, ACP6, ACSM3, ACSS2, ACTN4, ACVR1, ADRB3, AKR1A1, ARPC1A, ASS1, ATP5F1, ATP5J2, ATP50, ATP6V1D, B3GALT4, B4GALT4, BCAT2, BDKRB1, BMP6, CASP10, CCNE2, CCR4, CD27, CD3E, CDC14A, CDC27, CLDN7, CNTN2, CRLF2, CSH1, DAD1, DHODH, DOT1L, DUSP16, ENTPD3, EPHB2, EPHB3, FGF12, FM01, G6PD, GAMT, GPX7, GSTM4, HAGH, HAO1, HIF1A, IAPP, IBSP, IL17B, IL1A, IQGAP2, ITGA1, ITGA5, LTBR, MAOA, MAP3K11, MCM2, MOV10L1, MYL7, NANP, NSD1, NTF4, OR10A4, OR10G9, OR10K1, OR10R2, OR1L6, OR2T6, OR51I1, OR56A4, OR5AK2, OR5L2, OR6C1, OR8H3, OR9G1, PCYT1B, PIGP, PIGS, PIP5K1A, PMAIP1, PMM2, POLD3, POLR1B, POLR2E, POLR3D, PRKX, QARS, RAC3, RASA2, RPS6KA4, RPS6KB2, SCD5, SDHD, SETD2, SHMT2, SMAD7, SPRY2, TAS2R8, TIRAP, TUBB2A, ULK2, UROC1, WASF2, WNT3, WNT5A, ALDH18A1, ATP6V0A1, ATP6V1E1, ST6GALNAC4, TNFRSF10C</p>
Negative_15037	<p>CKB, DLD, EGF, FER, GDA, GSS, HK2, MYC, ACLY, ACSL1, ACY3, ACYP1, ALG12, ALG5, ARHGEF2, ARHGEF7, ATG7, ATP5E, B3GALT1, BCAT1, BCL10, CACNA1D, CACNG4, CAPN2, CASP6, CCL28, CCR8, CDC25A, CFLAR, CKS1B, CRY1, CXCL12, CXCL13, CYP27A1, CYP4A22, CYP8B1, DAXX, DLL4, DTYMK, EDNRA, EFN B1, ESPL1, FASN, FTMT, FZD4, FZD9, GAD1, GALNT8, GALNTL5, GDF7, GPX5, GRIA2, GSTO2, GSTP1, GUCY1A2, HIBADH, HSD17B1, IGFBP3, IL12B, IMPDH1, INPP4A, KLK3, KLRK1, KRAS, LALBA, MGAT3, MTMR2, NAT2, NCR2, NEUROG3, NFYA, NOS1, NTRK1, OLAH, OR10A5, OR10A7, OR10G2, OR10J1, OR13F1, OR1G1, OR1L8, OR2T33, OR3A1, OR4N5, OR51B2, OR51G1, OR5A2, OR5B17, OR7G1, PLCG2, PLXNA2, PLXNB1, POLR3D, POLR3K, PPP2R5E, PPP3CB, PTDSS1, PTGDS, PTK2, RPE65, SC4MOL, SFRP2, SGPP1, SHC2, SMARCA5, ST3GAL3, STMN1, TFDP1, UCKL1, UGT2B28, WNT7B, ATP6V1E2, MAPK8IP2, PRICKLE1, TNFRSF10C</p>

Negative_15038	C2, CAD, CBL, CKB, F3, FN1, FST, ID2, LHB, LPL, SFN, UBC, ACADS, ARHGEF1, ARPC4, ARPC5L, AXIN2, B3GALT5, BCKDHA, BET1, CAMKK1, CAV2, CD59, CD79B, CDC6, COL4A2, COMT, CRHR1, CXCL5, CYP2C18, DGKH, DGKI, DUSP4, EHMT1, ENTPD2, FARP2, FGFR1, FGFR3, FPGT, FZD2, G6PC2, GLUL, GMPBB, GUCY1A2, HAP1, HMGCS1, HNF1A, HRH1, HSD17B1, HSD17B2, IAPP, IL13RA1, INSR, IRAK2, KIR3DL2, MAP3K13, MAT2B, MTMR2, MYH1, MYH4, MYL9, NAGA, NR P1, NT5C, NTF3, NTRK2, OR14J1, OR2B6, OR2C3, OR2T8, OR4Q3, OR4X2, OR51A4, OR51B5, OR5AR1, OR5D14, ORC1L, ORC4L, P4HA2, PDCD1, PIK3R1, PIP5K3, PLA1A, PMAIP1, PPP2R5A, PRKACB, PVRL4, RPSA, SDHD, SOCS2, SPTLC2, ST6GAL1, STX2, SYNJ1, TAS2R14, TAS2R38, TIAM1, TPM3, TSC2, TUBA4A, TXNDC12, UPP1, ZAP70, ZFYVE16
Negative_15039	AK1, F11, FAS, FER, FGG, GK2, KIT, MAX, NGF, VTN, ABL1, ACMSD, ACTA2, ADCY1, ADCY5, ADH4, ADRA1D, ADRBK2, AGRP, ALDH3A2, ALDH3B1, ALG12, ALG2, APC2, ASRGL1, ATP6VOC, B3GALT6, B3GNT5, B4GALT6, BDH2, C1QC, CARS2, CCNH, CD244, CDS2, CHAD, CHKB, CTSS, CXCL6, CYFIP2, CYP2E1, CYP4A11, DAPK1, DBF4, DIAPH3, DPM1, DPM3, DTX3, EPB41, ERO1L, GLS2, GPLD1, GPT2, GPX5, GRLF1, GRM1, GSTP1, HAP1, HMOX1, HPRT1, IL22RA2, INSR, IQGAP2, IRAK2, IRF9, LTBR, MINPP1, MMP7, MS4A2, MTMR2, NT5M, NTF3, NTF4, ONECUT1, OR10H1, OR13C2, OR1Q1, OR2T29, OR2T34, OR2V2, OR4D1, OR4D2, OR4E2, OR51S1, OR51V1, OR52D1, OR56A4, OR5B21, OR5K1, OR8D4, OR8J3, OR8S1, OR9A2, OR9K2, PAPSS2, PARVA, PAX6, PDE10A, PDGFRA, PFN3, PHKA1, PIAS3, PIGF, PIGL, PIP5K1A, PLA2G2D, PLCB1, PLCG1, PLXNA2, PMM1, PNLIP, PNMT, POLR2C, PPA1, PRKARIA, PRKG1, PTPRJ, PVRL1, PYCRL, RAC1, RAD51, RASGRP4, RBL1, RHOQ, RPS6KB2, SCIN, SEMA4F, SEMA4G, SESN3, SETDB2, SFRP5, SHC4, SHMT1, SLC2A2, SNAP25, SPHK2, SQLE, STX16, SULT2A1, TBL1Y, TKTL2, TSLP, WASL, ALDH18A1, PNLIPRP2, PPP1R12A, TNFRSF10D
Negative_15040	AMT, ATM, F11, FAS, FST, HK2, ID1, ID4, IHH, KHK, LPO, LSS, NGF, OTC, PDC, PGD, RDX, SDS, SP1, SRM, TK1, TPO, TPR, AADAC, ACACB, ACLY, ACSL4, AGPAT2, ARD1A, ATP2A1, ATP4B, ATP5F1, ATP5O, ATP6AP1, CACNA1H, CACNG8, CCND1, CD46, CD59, CDC25B, CDKN1C, CLOCK, COL5A3, CREBBP, CYP3A43, CYP4F2, DCXR, DDX47, DEGS2, DGKE, DHODH, DIAPH2, DUSP6, ENTPD7, EPHA6, ERBB3, ERBB4, ESAM, EXT1, FARP2, FIGF, FOXA2, FSHB, FTCD, FUT6, FZD9, GALNT7, GGT1, GSTA2, GUCY2C, HARS, HLA-DMA, HSD17B2, HSPA8, HTR4, ICOSLG, IFNA2, IL17RB, IL1R1, ITGA5, ITPA, JAG2, KRAS, KYNU, LCP2, LLGL1, MAPK14, MOV10L1, MYH11, MYH15, OR13G1, OR2K2, OR2T1, OR2T2, OR2V2, OR2W1, OR2Y1, OR4C46, OR51F1, OR5AN1, OR5M8, OR6T1, OR8D1, OR8K5, PIGK, PIK3CG, PIP4K2B, PIPOX, PLA2G2D, PLOD3, POLR1E, PORCN, PPP2R1B, PTCH2, PTDSS2, RAPGEF4, ROCK1, SDHC, SEMA3B, SEMA4B, SLIT2, SMAD7, SPTAN1, ST6GAL1, STAT6, STX1B, SULT1A1, TAS2R14, TAS2R38, TJP1, TJP2, TMLHE, TNFSF14, TP11, TUBA4A, UGT1A10, WWP1, CSGALNACT1, HLA-DPA1, HLA-DRB3, SLC25A31

Negative_15041	<p>ASL, CP, DBI, F3, GK2, HYI, MAX, ME3, OTC, RFK, SCD, SDS, SFN, TKT, ACACB, ACSL6, ADCY10, AGXT, AKR1C1, ALDH3B1, ALDH9A1, ALG9, ARHGEF1, BMP8A, BRAF, BTRC, CACNA1D, CASP7, CCL11, CCR7, CD58, CD99, CDH15, CFL2, CLTA, CLTB, COX10, CREB3L3, CSF1, CYP26B1, CYP2E1, DDX54, DDX56, DGKE, DHRS4, ENO2, ENPP7, EPHA4, EPHA6, EXTL3, F2RL2, FPGT, GAD1, GALNT12, GFPT1, GLB1, GLG1, GPAM, GPT2, GRM1, GSTM2, HMGCS1, IAPP, IKBKG, IL18, INPP1, IPPK, ITGA11, ITGA2, MAP3K12, MGAT2, MKNK2, NAE1, NEFH, NOS1, NR1H3, NRAS, OR13A1, OR1K1, OR2M4, OR3A2, OR4C13, OR4N4, OR51A2, OR5A1, OR5D16, OR5P2, OR6S1, OR6T1, OR8K5, ORC1L, P2RX1, PCCA, PCYT1B, PDE5A, PMM1, POLR1E, PPP1R3A, PPP2R1A, PRKCA, PRNP, PSENE1, RAB5A, RDH16, RHOQ, SDHD, SELP, SESN1, SESN2, SETD7, SHC4, SLC33A1, SMC1A, SOCS7, SREBF1, SUCLG2, SULT1A1, TAS2R1, TBL1Y, THTPA, TLN1, TRPM5, TSLP, UCKL1, ULK3, VDAC3, WASF2, XCR1, XYLB, ALDH18A1, HLA-DRB4, SERPINF2, TNFRSF14</p>
Negative_15042	<p>DLD, JUN, KDR, MAG, MYC, RDX, SMS, TPO, VTN, WAS, ACOX1, ACP2, ACVR2B, ADIPOR1, AGRP, AHCY, ALG12, ALOX12B, AMD1, ANAPC4, APLP1, ARSE, ATP2A2, ATP5J2, ATP6V1H, B4GALT2, BCL2, BMP2, BMPR1A, CACNA1E, CARS2, CASP6, CCR3, CD47, CHKB, CNGA3, CNTFR, CPT1A, CREB5, CTPS, CXCL1, CYP2U1, DARS, DDIT3, DEGS1, DEGS2, DGKA, DGKB, DUSP5, ENAH, ENTPD2, ENTPD8, EPHB6, EPOR, F13B, F2RL2, FGF21, FUT9, FZD10, G6PC2, GNAQ, GPLD1, GSTA1, HGSNAT, HLA-DMA, HNF1B, IDH3G, IGSF5, INHBE, IRF3, KCNB1, LEF1, MALT1, MAP2K5, MASP1, MCM3, MCM6, MGAM, MGAT2, MMP2, MMP9, NCKAP1L, NEFM, NT5E, NTNG1, OPLAH, OR2L3, OR4M2, OR51B2, OR5J2, OR6B3, OR6C6, OR6C74, OR6C75, OR8A1, OR8D2, OR8H2, ORC5L, OSMR, P2RX2, P2RX3, PARS2, PAX8, PDE4C, PDE6G, PDX1, PFN2, PFN3, PGAM1, PLA2G3, POLD1, PPP2R5A, PRKCB, PRKG2, PRODH, PRPH, RARS, RDH10, RELB, SCP2, SELL, SEMA4C, SFRP2, SKP1, SLC27A5, SPRY3, SPTLC1, SRGAP2, ST8SIA1, SUV39H2, TGFB1, TYK2, WNT8B, YKT6, YWHAZ, HLA-DQB1, HSP90AA1, ST6GALNAC3</p>
Negative_15043	<p>ADC, AK2, BTC, C1S, CS, JUN, MPI, OGT, XDH, ADCY1, ADCY7, ADSS, AGXT2, AKR1C2, AKT3, ALAD, ALDOA, ALG3, ALPL, ANAPC5, APOE, ARPC1B, ARSB, ASCC3, ATP5H, ATP5L, B3GNT4, BCKDHB, CACNB3, CD14, CDC20, CDK2, COL4A1, COL4A4, CREB5, CRHR1, CSNK1G3, CTPS, CTSL1, CYP4F2, DFFA, DUSP5, EFN A3, EXT2, F2RL2, FGF1, FGFR2, FRAP1, GAB1, GRAP2, GUCY1A2, HTR4, IL12RB1, IL18R1, IL22RA2, INSRR, IPMK, ITGAV, KLKB1, KYNU, LLGL2, MAOB, MAP4K1, MCM7, MYH13, NAGK, NANS, NCF2, NCKAP1, NCR2, NFKBIA, NME2, NOX3, NR1D1, NR1H3, ONECUT1, OR11L1, OR1J2, OR1L3, OR2H2, OR2T12, OR2T5, OR4F15, OR4X1, OR52I1, OR56A3, OR56A4, OR5M9, OR5V1, P2RX1, PAX4, PCCA, PCYT1B, PIK3CD, PIM1, PIP4K2A, PLCZ1, PLXNA2, PLXNA3, POLR3A, PARG, PRKCA, PRODH2, PSPH, PTAFR, PTDSS2, PTK2, RAP1B, RXRA, SEMA3G, SEMA4B, SOCS3, SOD1, STK11, TAS2R5, TIAM2, TJP2, TLR4, TOMM40L, TP53, TYRP1, UBE2L6, UMPS, UNC5C, VEGFB, WARS2, WASF1, ATP6V0D2, ATP6V1E2, MAPK8IP1, SUV420H1, TNFRSF1B</p>

Negative_15044	<p>AMT, C9, CBL, CR1, F8, FER, GLA, HPD, IL5, MAG, MTR, MYC, PGD, PRL, ABL1, ACLY, ACOX2, ACP1, ACPT, ADORA2A, ADRBK2, AHCYL2, ALG13, ALOX12, APC 2, AREG, ATP2A3, ATP4B, ATP5B, B3GAT2, B3GNT4, BMP4, C1QC, CD244, CDH 4, CDO1, CLDN17, CYP3A43, CYP4A11, CYP4F3, DAPK1, DDOST, DEGS1, DHRS 4, DHX58, DLL1, ECSIT, EPB41L2, F2RL1, FABP3, FLAD1, FZD1, GART, GLDC , GOT2, GPPA1, GRAP2, GRIN2A, GSTA4, GSTM5, GUCY1B3, GUCY2D, GUK1, HA GHL, HCLS1, HSPB1, IFNA21, MAGI3, MALT1, MAOB, MAP3K11, MAPK9, MMP2, MS4A2, NAGLU, NEU2, NFYA, NMNAT1, NT5C1A, OR10G8, OR10J1, OR13J1, OR 1S1, OR2G6, OR4E2, OR4N2, OR51V1, OR52K2, OR56A3, OR5V1, OR6C6, OR8K 1, OXCT2, PAK6, PHGDH, PIGO, PLCB2, PLXNB1, PNLIP, POLR2C, POLR2I, PP P1R1A, PRKAG2, PRKAG3, PTTG1, QARS, RASGRF1, RBX1, RFXAP, SH2D1A, SH 3BP2, SLC9A1, SNW1, SOAT2, SPRED2, ST3GAL2, STX3, TAS2R38, TAS2R41, TCF7L2, TOMM40L, TUBB1, TYMP, UGDH, UPB1, UROS, VAMP3, WNT2, ATP6VOE 1, ATP6V1B1, ATP6V1C1, PAFAH1B2, PPARGC1A</p>
Negative_15045	<p>C1S, C8G, CTH, DAO, HYI, IL9, ILK, ME2, ME3, MPI, SRM, ACAT1, ADH6, ALG6 , ALOX12B, APOA1, ARG2, ASAH1, ATG3, BIRC2, C1QA, CACNG1, CDC14B, CHR M1, CLDN10, CLDN2, CLDN20, CLTCL1, COL11A1, CREB3L2, CTSS, CXCL13, D HDDS, DHDH, DUSP5, EDNRA, EFNA4, ENO2, FGF23, FOXA2, FZR1, GALNTL1, G BE1, GLB1, GNRH2, GPD1L, GPX5, GSTM5, HES1, HIBCH, HNF1B, IKBKB, IL20 RA, IL20RB, IL28A, IL4R, IL7R, IMPA1, ITGA2, KIR2DL2, KIR2DS4, LCAT, MAML1, MAN2A1, MAP2K4, MASP1, MGAT2, MLYCD, MS4A2, MYH2, MYL2, NEFL, NEU1, NFKBIA, OR13G1, OR1E1, OR1J2, OR1Q1, OR2AE1, OR5P3, OR8K1, OR9 G1, ORC6L, PARVB, PDE3A, PHKB, PHKG1, PIGC, PIP4K2A, PKLR, PLA2G2E, P OLD4, POLR3G, PPP2CB, PRKCZ, PRKY, PTPRC, RASSF1, RBL1, RDH8, RPSA, S ELP, SELPLG, SIAH1, SOCS1, SPCS1, ST6GAL1, STMN1, STX12, STX5, TAS2R 38, TGDS, TNFSF4, VAV1, VDAC1, VDAC2, VDAC3, WNT10B, YES1, KIR2DL5A, PNLIPRP1, TNFRSF10B, TNFRSF11A, TNFRSF12A, TNFSF13B</p>
Negative_15046	<p>C7, F12, GPI, ID3, IL3, PDC, TAT, TNF, AACS, ACTN1, ACY1, AKR1B1, ALDH1 L1, ALDH3B1, ALDOC, ALPP, APOA2, ASCC3, ASMT, ATP5G3, BAI1, BPGM, CAC NA1F, CALML6, CCL19, CCL25, CLDN14, COQ7, CREB3L2, CSNK1A1, CTSB, CX 3CR1, CYP2C9, CYP3A43, DGAT2L4, DTX3, DUSP1, DUSP14, EIF4E2, EPHA5, EPRS, EXOC7, FGF8, FLOT1, FZD8, GALNT1, GOT1, GPAM, GSTP1, GSTT1, HAG H, HAO2, HTR5A, IBSP, IFNA21, IL20, IL21, INPPL1, IQGAP3, ITGA1, ITPA , LDHAL6B, LIFR, MAN1A1, MAP3K11, MAP3K13, MAP4K3, MICA, MTFMT, NTSR 1, OLR1, OR10K2, OR11L1, OR2A2, OR2B11, OR2T12, OR2Y1, OR2Z1, OR4C12 , OR51I2, OR52A5, OR5AC2, OR6T1, OR7A17, OR8H1, OR8J1, OR8K3, ORC5L, P2RX1, PANK2, PFKL, PIAS3, PIK3CG, PLCZ1, PRKAG1, PRKY, PSEN1, RAD51 , RARS2, RBL1, RDH16, SCD5, SEMA4F, SLC25A5, SNAP25, SUV39H1, TIAM2, TLR9, TOMM40L, TP73, UBE2K, VEGFC, WNT5A, ATP6VOA1, PAFAH1B3</p>
Negative_15047	<p>C4B, CFI, CKM, CR2, IL2, LEP, MET, MVD, OSM, AADAC, ACLY, ACSL4, ADRA1D , ALAD, ALDH1B1, ALPPL2, AMPD1, APOA2, ATG3, AVPR1A, BCKDHB, BCL10, B CMO1, C9orf95, CALML5, CAMK2A, CAMKK2, CAPN2, CASK, CASP10, CCKAR, C CL20, CCNB2, CD47, CDH1, CHRM2, CLDN10, CLTB, CSNK2A2, CTBP1, CYCS, C YP11A1, CYP19A1, CYP2C18, DHRS4, DIAPH1, DTYMK, DVL1, EDNRB, EPHX1, F13A1, FDFT1, FGF13, FGF6, FOXO3, FUT5, FZD10, FZD9, GALE, GAPDH, GNB 1, GNG3, GPT2, HIP1, HMBS, HMGCL, HRH2, HSD17B2, HTR2C, IL17RA, IL28A , ITGA11, LAMB3, MAFA, MAP2K7, MEF2C, MPP5, MYH4, NAGA, NARS, NEU4, NM NAT1, NT5M, NUDT5, NUDT8, OR10G4, OR2G2, OR4K14, OR4K2, OR51D1, OR5I 1, OR5J2, OR8K1, PCYT1A, PFN4, PGAM4, PIGU, PIK3C2G, PLIN, PLXNA3, PP A2, PROC, PRODH, PRODH2, PSPH, PTK2B, RAB5A, RFXANK, ROBO1, RPN2, SCI N, SDC4, SEMA3B, SEMA3D, SETD1A, SETD1B, SFRP1, SLC12A2, SMC1A, SMUR F1, SNAI2, SORD, ST3GAL4, TCIRG1, TRIP10, UCKL1, UGT8, VAV1, WNT3A, X YLT1, PNLIPRP1, SERPING1, TNFRSF18</p>

Negative_15048	ADC, C2, C7, CKM, FES, GSR, HDC, TPR, ACAA1, ACAD9, ACPT, ADAM10, ADH5, AKT1, ALOX12, AMDHD1, APOC3, ARHGEF6, ARNT, ASIP, ATP5C1, ATP6V1F, B3GALT4, BHMT, CACNB2, CASK, CASP3, CDK7, CHRM5, CLDN3, CLDN4, COL4A6, COQ5, CPOX, CSNK1G2, CSNK2B, CTPS2, CTSB, CTTN, CYFIP1, CYP3A4, CYP3A43, CYP8B1, DHODH, DNMT3B, ERBB4, F13B, F2RL3, FASLG, FLT4, GADD45G, GFAP, GRIA3, GSTM3, GUCA1A, HADH, HARS, HIP1, IDUA, IL15, IL1A, IRAK1, ITGA3, KARS, LMO7, MAP3K12, MAPK3, MAPK7, MDH1, MGAM, NADK, NCR1, NEUROD1, NQO1, NT5C1B, NT5E, OR13C4, OR13C8, OR2T10, OR4X1, OR5D13, OR6C1, ORC5L, OXCT2, PAPSS2, PDE3A, PECAM1, PEMT, PER2, PIK3CB, PLCD1, POLE4, POLR3A, PPM1D, PPOX, PPP1R3D, PPP2R2D, PPP5C, PRKAR2A, PTDSS1, RAC1, RELB, RHOQ, RPS6KA1, RRM1, RXRG, SCP2, SEMA3D, SESN1, SIGLEC1, SLC25A6, SOCS2, SPTAN1, STAT1, STK4, STX3, TAS2R48, TAS2R50, TCF7, TLR2, TLR9, TNFSF14, TUBB, UBE2L3, UGP2, VDAC3, WARS, WNT10B, ATP6V1E1, C1GALT1C1, HLA-DQA2, HLA-DRB4, PLA2G12B
Negative_15049	MPL, PGP, STS, ACSL1, ACSS2, ACVR1B, ACVR2A, ANPEP, BHMT, C3AR1, CACNG8, CCR10, CD46, CD47, CDC14A, CDC25A, CDH1, CDH2, CDK2, CHIT1, CHST13, CPT2, CXCL9, CXCR3, DPYS, E2F1, ENTPD4, FGF19, FMO2, FZD10, GALT, GCDH, GCNT4, GIT1, GNAO1, GRIN2A, HEXA, HSPA1B, HSPB1, ICAM3, IFNA16, IFNK, IL10RA, IRF3, ITGA3, ITGA5, ITGB6, JAG1, KIR2DL1, LAMA3, LEFTY1, LILRB3, MITF, MMP14, MMP2, MNX1, NCK2, NFATC2, NR5A2, NUMBL, OR12D3, OR13G1, OR1S1, OR2S2, OR2T6, OR51G1, OR52N2, OR56A1, OR5A2, OR6C74, ORC3L, ORC4L, P2RX1, PARD6B, PDE3B, PDGFC, PFKFB4, PHKG1, PIGN, POLR2H, POLR2I, POLR2L, POLR3K, PON2, PRKAR1B, PRKCE, PRODH2, RAPGEF3, RPS6KA4, SLC12A2, SLC27A4, SLC2A2, SOCS4, SORD, SPTLC2, SSX2IP, STAT5A, STX4, TAS2R5, TNFSF12, TSNARE1, UGT2A3, UGT2B7, ULBP1, HSP90A1, SERPINA1, ST6GALNAC4, TNFRSF13B
Negative_15050	FOS, GPI, HGF, LCK, NF1, PLG, TNC, ACSL5, ACTN1, ACVR2A, ALAS1, ALDH3B2, AMY2A, ANAPC1, BNIP1, CACNB3, CBLC, CD55, CD01, CHIA, CKMT2, COL4A4, COL6A1, COQ5, CYP2A6, CYP3A7, CYP4F3, DDX51, DHCR7, DIAPH2, DOT1L, DPYSL2, DUSP10, DUSP6, ENTPD3, ENTPD5, EPB41L1, EPHB1, EREG, FADD, FBXW11, FZD3, G6PC2, GAMT, GFPT1, GLI1, GLI3, GLUD2, GNAQ, GSTM1, HBEGF, IARS2, IFNA10, IL12RB1, IL17RB, INHBC, IQGAP2, ITGA5, ITGAL, LRP6, MAP2K2, MAPK8, MGST3, MTHFR, MYD88, NANS, NEU3, OR11H6, OR2T8, OR4S1, OR51B2, OR51F2, OR52I1, OR5AS1, OR5B12, OR5L2, OR7C2, OR8U1, OR9A4, PAFAH2, PHPT1, PI4KA, PIGB, PIGW, PIK3R2, PIM1, PISD, PKM2, PLA2G1B, PLD2, PLOD1, PLXNA1, PNPLA4, POLR1C, POLR2C, PORCN, PPBP, PPP2R2B, PPP2R2C, PRKCI, PRKG2, PTGER1, PTGFR, QPRT, RDH5, RPE65, SCD5, SEMA4F, SHC4, SHMT2, SMAD4, SOAT2, SPI1, ST3GAL4, STX8, SUV39H1, TFPI, TNFRSF9, TOLLIP, TYMP, TYMS, UGCG, UGP2, VDAC2, VKORC1, WHSC1, WNT10A, WNT7B, ZFYVE16, AASDHPPT, ATP6V1B1, CSGALNACT1, EIF4EBP1, PRICKLE1
Negative_15051	CAT, DAO, GCK, GP5, HYI, MIF, MYC, ACADVL, AC02, ACSS1, ADCY5, AGPAT3, AGTR1, AGXT2, AKR1C2, ANGPTL4, ARG1, ARPC1A, ARPC3, ATIC, ATP5J2, CACNA1A, CALML3, CCL15, CCND2, CCR5, CD82, CHRDL, CHSY3, CRKL, CTF1, CXC13, CXXC4, DLAT, DLST, DNMT3B, DUSP16, EPHB4, FMO3, FTCD, GCNT2, HEMK1, HTR4, IDUA, IFNA14, IFNAR1, IL19, INPP5E, KIR2DS4, LARS, LCAT, LGMN, LHCGR, LIPT1, MAFA, MAN1B1, MCM4, METTL6, MS4A2, MYH7B, NCAM1, NEFM, NEU1, NME6, NPR1, NT5C2, OR10H4, OR2A4, OR2B11, OR2S2, OR2T8, OR4K17, OR4P4, OR51M1, OR7A5, OR7D4, P2RX4, P2RX6, PCYT2, PDX1, PIAS4, PIP4K2B, PLA2G2A, PLCB4, PLD2, POLD1, PORCN, PPM1A, PPP1R1A, PPP2R5E, PPP3R2, PRKAG1, PRKAR2A, PSME1, PTCH1, PTK2, PTPRJ, PTPRZ1, PTTG1, RALA, RARS, RPN1, RRAS, SEMA3D, SEMA4F, SETMAR, SMC1B, SPRY4, STX18, STX1A, TBL1X, THY1, TUBB3, UGT2B11, VEGFC, WARS2, WNT7B, B4GALNT1, TNFRSF10C, TNFRSF13B

Negative_15052	GK2, GLA, HDC, LCT, LEP, MTR, PTS, SRM, ACAA1, ACVR1, ADRBK2, AGRP, AGT R1, APOE, ATP5G3, BCAT1, BDH1, BLVRA, CAV3, CCNB1, CD86, CD99, CDC25B , CDK2, CDKN2B, CES1, CNTN1, CRLF2, CTBS, CTSG, CYP2J2, DDHD1, DDX19A , DDX54, DDX55, DOLPP1, DVL3, EXTL3, FGF4, FLT3LG, GCLC, GLI3, GNPAT, GSTO2, HARS2, IDH3A, IGF1R, IL1RAP, IL23A, ITGA1, KDSR, KLRD1, LAMA3 , MAML3, MAP2K1, MAT2B, MINPP1, MYH4, NGEF, NMNAT2, NOX1, NR4A1, OR10 X1, OR11H1, OR1L1, OR2A14, OR2D2, OR2T1, OR4E2, OR4S2, OR51I1, OR5AU 1, OR6Q1, PDE11A, PDGFRA, PLA2G2A, PLXNB2, POLR2F, POLR3D, POLR3G, P PP1CA, PPP2R5A, PPP2R5E, RFXANK, RRAS, SARS, SCIN, SDC3, SESN1, SH2D 1A, SHC3, SLC27A4, SPHK1, THBD, THY1, TLR5, TOMM40L, TRHR, TUBB, TUBB 2A, VAV3, XIAP, HSD17B10, SERPINA5
Negative_15053	AMT, CKM, GNS, LSS, ACACA, ACADVL, ADAM10, ADCY6, ADH6, ALDH6A1, APOA 1, ARAF, ARPC5L, ARSA, ATP2A1, ATP4B, AXIN2, BDKRB1, CACNA1D, CAV2, C CL22, CCNG2, CD74, CHKB, CLDN1, CLDN15, CNGA3, COMP, CREB3L1, CTLA4, DRD2, DRD5, EFNA1, ERO1L, FADD, FGF8, GANC, GARS, GCLC, GMPPB, GRAP2, HARS, HTR4, IL13, IL20RB, JAK1, MADCAM1, MKNK2, MMP1, MNX1, NAGLU, NA MPT, NCOR1, NME2, NME6, NNMT, NQO1, ONECUT1, OR13C4, OR2T10, OR52E6, OR56A1, OR5B12, PAK1, PARS2, PDHA1, PIGC, PLAT, PLCG1, PMAIP1, POLR2 L, POLR3G, POLR3H, PPAP2C, PRKAB1, PRKAR2A, PTPN6, PTPRR, PVRL1, RAB 23, RCHY1, RFXAP, RGS3, SC5DL, SMURF2, SOCS2, SPTAN1, STX18, TFDP1, T P53, TRAF3, TRHR, TUBB1, UPRT, WNT7B, WNT8A, ATP6VOA4, HLA- DPA1, HSD17B10, SERPINF2, ST6GALNAC4
Negative_15054	AMH, DCK, F11, ITK, JUP, LPO, MAG, PGD, PVR, SYK, AADAC, ACVR1B, ADH1A, ADRA1B, AKT3, ALAS2, APOE, ATP2A1, ATP4B, ATP6V1D, B4GALT6, B4GALT7 , BAAT, BMP7, C7orf16, CCL27, CCNE2, CDK5, CFL2, CHD8, CLCF1, CLDN19, COQ5, CRKL, CYP2C9, CYP3A43, DPM3, ENAH, EPHA6, ERBB2, EXT2, F2RL1, F ARSA, FASLG, FGFR3, FM01, GAD1, GIT1, GLUD1, GNRH1, GPD2, GRIN1, GSTK 1, GSTO1, HMGCL, HMOX2, HRH1, ICOSLG, IFNA6, IGF1, IL18, IRAK1, IRF9, JAK3, KCNJ11, LCAT, LCP2, MAP4K2, MAPK1, MCAT, MCCC2, MRAS, MTFMT, NA T1, NCOA4, NCSTN, NOD1, NOS1, OR10AD1, OR10H2, OR10K1, OR10S1, OR10X 1, OR11L1, OR1J4, OR1S2, OR2A5, OR2G2, OR4A16, OR4K13, OR4L1, OR4S1, OR4X1, OR5H6, OR5M9, OR6N1, OR8U1, OR9I1, OR9K2, PAK1, PAPSS2, PDE11 A, PDGFD, PDGFRA, PGM3, PHKA2, PHPT1, PIAS1, PIGW, PIK3CA, PLCE1, PLD 1, PLK1, POLR2B, PPP2R5E, PPT1, PRKAR2A, PRKCE, PSME2, RASGRP2, RBL2 , RDH10, RRM2B, SCIN, SEMA3C, SESN2, SMPD2, SPI1, STMN1, TAS2R8, THBD , TKTL2, TPH1, TRAF4, TSHR, UGT2B11, VDAC3, WBSCR17, WNT6, YWHAQ, ZMA T3, B3GALNT1, CSGALNACT2, PLA2G12A, TNFRSF12A
Negative_15055	APP, BAX, C6, CGA, DDO, DHH, IL9, KIT, PLG, A4GALT, ABCC8, ACTG2, ALPP, ANAPC2, APRT, BCAT2, BPNT1, CBR3, CCL20, CCL21, CD247, CD72, CDC23, C DKN1C, CLDN19, CLDN8, COQ3, CTF1, CYP1B1, CYP3A4, CYP3A7, DARS2, DCT N1, DDIT4, DUSP5, E2F3, EP300, EPRS, F13A1, FCER1G, FOXA2, FPGT, GALN T6, GAMT, GANC, GLI1, GMDS, GNA13, GRIA3, GSTA5, GSTZ1, GUCY2D, GUCY2 F, HSPA2, IL1R2, IL6ST, IRS2, KAT2A, KIR2DL2, KLK3, LAP3, LRRC4C, MAM L2, MAP4K4, MITF, MTMR1, MYD88, MYH3, NAT1, NCR2, NFE2L2, NPR1, NTRK1 , ONECUT1, OR10R2, OR2C3, OR2M7, OR4D11, OR4N2, OR51I2, OR52K2, OR5B 17, OR5D13, OR9G4, PGAP1, PIK3CD, PIK3R5, PIP4K2B, PIP4K2C, PLXNB3, PPM1A, PPOX, PRKAR1A, PRSS3, PTPMT1, PTPN6, RFNG, RHOD, SARS2, SEMA4 G, SLC25A5, SLC27A1, STMN1, SYNJ1, TAS2R40, TAS2R42, TAS2R50, TGFA, TP53I3, TRADD, TSHR, TSLP, TUBB3, UGT1A10, VAMP2, VARS, WARS, WBSCR1 7, XCR1, ATP6V1E2, ST6GALNAC5

Negative_15056	<p>CFD, EZR, F2, F3, GP5, HGD, MVK, OTC, RET, SHH, SPN, ACVR1C, AGPAT4, AKT2, ALDOA, ALOX15, ANPEP, ARPC3, ATP5B, B4GALT3, BAI1, BCMO1, BIRC2, BLVRA, BLVRB, CALML5, CALML6, CAMKK1, CCKAR, CD14, CD22, CD274, CD58, CHAD, CHPF, COL5A3, CPT1A, CXCL5, CYP2E1, CYP4A11, DBF4, DCTD, DDIT3, DDOST, DKK1, DPM2, ECHS1, ENTPD3, EPHX2, EPRS, FABP3, FOXO1, FZD3, GFPT2, GNA13, GSTO1, HIF1A, HLA-DRA, HSD11B2, HTR7, IKBKB, IMPA2, INADL, IRAK1, LEFTY2, LRAT, MAP2K2, MCEE, MINPP1, NCR1, NKD2, NOTCH3, NUDT8, OR10S1, OR11H1, OR1B1, OR1N1, OR1Q1, OR2T10, OR4C16, OR4D9, OR4F6, OR4K17, OR4N5, OR5AN1, OR5B21, OR9K2, PANK4, PDE3A, PDE4C, PDE4D, PDE7A, PDE8B, PDXP, PIK3C2A, PKLR, PLCB3, PLXNB2, POLA2, POLE, POLR3G, PPARD, PPP2R5E, PRKCB, PTGES2, RAC1, RAP1B, RASGRP4, RBPJ, RRAS2, SCIN, SDHD, SETMAR, SMAD7, SOCS1, STAT5B, SUV39H2, TAS2R50, TCF7, TNFSF12, UGT2B28, VEGFA, VNN1, WBSCR17, XYLT2, YWHAH, ZBTB16, ZFYVE16, ZIC2, CSGALNACT1, HLA-DPBI, MAPKAPK5, SERPINF2, TNFRSF6B</p>
Negative_15057	<p>C2, EGF, GNE, GSN, LTB, MOS, NF1, NNT, TAT, ACAT1, ACTN4, ADCY8, ADIPOR1, AGPAT1, AGTR1, AKT3, ALDH1L1, ALG10B, ARPC1A, ATP5L, BAI1, BCL10, CAMK2B, CCL15, CDC14B, CDC25C, CHEK1, CLTC, COQ6, CPOX, CRB3, CRLF2, CRLS1, CSDA, DDX41, DGKQ, DUSP16, DUSP4, ENPP1, ENPP3, EPHA7, FASLG, FDFT1, FGFR2, FMO3, G6PC2, GNAQ, GNG12, GPAM, GRPR, GYS2, HEMK1, HMOX1, IDH3G, IDI1, IFNA8, IFNK, IKBKB, IL22RA1, IL7R, ITGB4, KIR3DL3, LIAS, LIPG, LMO7, LYZL1, MAGI3, MAML1, MAPK8, MARS2, MCEE, MCM4, MDM2, MGAT2, MMP1, NANP, NLGN3, NRG4, NT5C2, OR14A16, OR1A2, OR1Q1, OR2A42, OR2D2, OR4D1, OR4M2, OR51A7, OR51V1, OR52K1, OR56A3, OR5K2, OR6Y1, OR9A4, P2RX6, PANK2, PDGFC, PGM2, PHKA1, PIGX, PLA1A, PLCG1, PLXNA2, POLD4, PRKCE, PRPS2, PRSS2, PTCH1, PVRL4, RDH12, RHOA, RRAS, SDC3, SEMA3F, SEMA3G, SMPD3, SOCS2, SRGAP3, SSH1, SSH2, ST3GAL1, ST8SIA1, STAT3, STX6, TGFB1, TKTL2, TUBB6, TYK2, ULK3, VTI1B, ATP6V0A2, MAP3K7IP2, MAPKAPK3, PPARGC1A, TNFRSF10B</p>
Negative_15058	<p>AGK, AK7, CKM, FGG, GAA, GH2, HAL, MET, SCD, AASDH, ACOX1, ACVR2B, AGPAT4, AGRN, AKT1, ANAPC11, AOX1, ARRB1, ATP4B, AVPR1B, C4BPB, CACNA1E, CFLAR, CLDN16, CNTN1, COL4A6, COL6A1, CTNNA1, CTSL1, CXCL11, DGKE, DOT1L, DRD2, EHHADH, EPB41L3, FGFR2, FOXO3, GALNT6, GLI1, GLS2, GNPNT1, HSP90B1, IDH1, IL10RB, JAG1, JUND, LEFTY1, LRAT, MAPK11, MASP2, MCM5, MECR, MYL2, NCR1, NEU1, NFKBIA, NTNG1, OR10H1, OR11H4, OR2A14, OR4C46, OR4K1, OR52L1, OR52N5, OR52R1, OR5A1, OR6B2, OR7A5, OR8G1, OR8K5, OR9Q1, OXCT1, PAK2, PAX6, PDX1, PFKM, PGK2, PITX2, PKLR, PLA2G2D, PLA2G3, POLE4, POMC, PRKCG, PRNP, PSPH, PTCH2, PTPN11, PTPN6, RALA, RFX5, ROCK2, SCLY, SELE, SELPLG, SETD1A, SH3BP2, SIPA1, SNAP25, SPHK1, SREBF1, SRGAP1, ST3GAL3, SUCLG1, TAS1R2, TAS2R16, TAS2R3, TAS2R49, TAS2R5, TOLLIP, TRADD, VAMP1, VDAC3, VKORC1, WNT8B, WNT9B, XYLT2, ALDH18A1, PLA2G12A, SERPIND1, SLC25A31, TNFRSF17</p>



Negative_15059	AK7, CRK, F11, F2, FGB, LIF, ME3, ACSL1, AGPAT4, ALDH1A3, ALDH6A1, AMD HD2, AMPD2, ARSD, ASPA, ATP4A, B3GALT4, B3GNT2, BDKRB1, BMP8B, C7orf 16, CACNB3, CACNG4, CCL26, CCR3, CD244, CD79A, CD79B, CDKN1C, CLDN16, CLTA, CMAS, COL1A1, COL4A6, CSNK1G3, DDX19A, DDX4, DERA, DGAT2, DGK D, DIAPH1, DLL1, DNMT3A, DPAGT1, DRD2, DTX4, ECSIT, EPB41L3, EPHB1, FGF10, FLT3LG, FZD5, GAD2, GALNT9, GALNTL2, GAMT, GMPPA, HARS, HCCS, HSD17B7, IDH3A, IL15RA, IL7R, IQGAP2, IRAK1, ITGA6, KIR2DL1, LCP2, LDHD, LHCGR, LIPT1, MAP4K2, MTHFD1L, MYH4, MYL9, NAGA, NAMPT, NCOA4, NLGN2, NLGN3, NME6, NPR2, NTSR1, OCRL, OR10K2, OR14I1, OR1F1, OR4C16, OR4D1, OR4F15, OR56B4, OR5D16, OR6K6, OR6Y1, OR7D4, OR8B8, OR8D1, OR8J1, PANK3, PARVA, PDE4B, PER2, PERP, PFKP, PGAP1, PIGF, PIP5K1C, PLAUR, PLXNA3, PMAIP1, POLE, POLR1B, POLR2E, PPP2R5D, PTPN7, RAC3, RAPGEF3, RBL2, RBPJL, RELA, RERE, ROBO1, RPE65, RRAS2, SEMA4F, SFRP1, SH2D1B, SORD, SPRY2, SRGAP3, SSH2, STAT3, STMN1, TAS2R5, TAS2R9, TBXAS1, TLR4, TNFSF10, TRAF1, TRPC1, UGT2B4, VEGFB, WNT1, TNFRSF6B
Negative_15060	C8A, CBS, CFI, EZR, F2, FER, FH, NLK, ACAD8, ACADM, ACVR2B, ADRA1A, AKR1B1, ALDH6A1, APOA1, ATP12A, ATP5J2, BUB1, BUB3, CCL11, CCL25, CCR5, CDC20, CDK6, CDS2, CES7, CLDN11, CLTA, COASY, COL3A1, CPT2, CREB3L3, CRLS1, CSNK2B, CXCL16, CYP26C1, DMGDH, ECSIT, EFN1, EPB41, EPOR, FADS2, FARS2, FGF23, FGFR4, FUT9, GALNT12, GGT1, GNAO1, GNAT3, GYS1, HADH, HPRT1, HRH2, HSPA8, HTR6, IDH3A, IFNA13, IFNA14, IFNA5, IGF1, IL6R, INADL, ITGB4, ITPK1, KIR2DS5, KNG1, LAMA4, LDHAL6B, LLGL2, MAD1L1, MAD2L2, MGLL, NEFL, NEFM, NT5C1A, NTRK2, OLR1, OPLAH, OR10H2, OR13F1, OR1A2, OR1L8, OR1S2, OR2A14, OR2A42, OR2B11, OR2K2, OR2L3, OR2L8, OR4F6, OR4K13, OR51D1, OR6N2, OR8B4, OR8H2, OR8I2, OR8S1, PAK2, PAPS1, PARVA, PDHA2, PDHB, PEMT, PFAS, PIK3R4, PIP5K1A, PLAUR, POLR2L, PPAP2B, PPM1B, PPP2R5A, PPP2R5B, PTCH2, PTEN, PTGER3, RAP1B, RARS, RCHY1, RDH10, RPS6, SAT1, SCD5, SMC1B, SMPD2, SOCS3, TACR2, TBL1XR1, TNFSF11, TPK1, TUBA8, UPP2, UROC1, WNT5A, XYLT1, ARHGEF12, HSP90AA1, SLC25A31, ST6GALNAC1, ST6GALNAC5, TNFRSF18
Negative_15061	BTK, DUT, F2, F7, HAL, HGF, ID4, LPO, MAX, ME2, RB1, SP1, SYK, TFG, TNF, ADAM10, ALDH1B1, ALDH2, ALDH6A1, ANAPC4, BAIAP2, BIRC3, BMPR2, BUB3, CADM3, CCL21, CCR1, CCR2, CD28, CD38, CD40, CLDN15, CLDN17, COQ5, CPT2, CYFIP1, DCTD, DGKE, DGKG, DGKI, DHRS3, DLL1, DPM3, DVL3, E2F2, ECHS1, EGFR, ENTPD2, F11R, F13B, FABP1, FCGR3B, FGF9, FOXA3, FOXO3, FZD3, FZD8, GALNT1, GDF6, GLYCTK, GNA13, GP1BA, GSTM3, GUCY2D, HAP1, HHEX, HMGCL, HMOX2, IL12RB2, INHBE, IQGAP1, IQGAP3, IRS1, KLRK1, LAMB2, LDHAL6A, LEF1, LTC4S, MAD2L2, MAP2K4, MAP3K6, NAE1, NFATC1, NKX3-1, NRAS, NUDT12, ODC1, OR10A3, OR10AD1, OR13C8, OR1A2, OR2A12, OR2M4, OR4D11, OR7G3, OR8D2, OXSM, PAK3, PARD6G, PAX6, PDE6D, PDE8B, PFKP, PIGQ, PIGV, PLOD1, PMM1, POLR1C, POLR2G, POLR3B, POLR3D, PORCN, PTPRZ1, PYGM, RDH12, RHOD, RPRM, RRAS, SEMA3A, SEMA4B, SESN1, SIPA1, SLC12A2, SLC2A4, SRD5A2, SSH2, ST3GAL5, SV2A, TAS2R60, THTPA, TNFSF11, TOMM40L, TP73, TRAF4, TSHB, TUBA1C, TUBA3C, TUBB, UBA1, WHSC1, XYLB, A TP6VOA2, HLA-DPB1, HLA-DQB1, SERPIND1, ST6GALNAC5

Negative_15062	<p>CR2, FAH, FH, MVK, OAT, PRL, RET, TNF, ACAD8, ACADL, ACSL1, ACY3, ADCY9, AFMID, AKR1B1, ARG1, ARHGEF7, ARPC3, ATP5A1, BMP7, BMP8A, C3orf10, CADM1, CARD11, CCL25, CD74, CERK, CFL2, CTS1, CXCL12, CYP2D6, CYP2S1, DAPK1, DDX56, DEGS1, DHDDS, DKK2, ENO1, EPRS, EXTL3, F2RL2, FABP3, FGF1, GALK1, GALK2, GGPS1, GJA1, GNA11, GNPDA2, GYS2, GZMB, HCCS, HLA-</p> <p>F, HNF1B, IDH3B, IL12RB2, IRS4, ITGA3, ITGAD, LEF1, LRP6, MAPK9, MYL7, NARS2, NAT2, NEFL, NR4A1, OPLAH, OR13F1, OR14C36, OR1E2, OR1K1, OR1N2, OR2H1, OR2T1, OR2T34, OR4K2, OR4N5, OR4Q3, OR51A2, OR51T1, OR52J3, OR52L1, OR5M3, OR6A2, OR7D2, OR8K1, ORC4L, PDE3B, PDE6G, PDGFRB, PIGP, PIP4K2B, PIP4K2C, PLA2G2F, PLA2G5, PLCB4, POLR2C, POLR2E, PPARA, PRKAA2, PRKCE, PRKG2, PYCRL, RAB23, RDH12, SAT1, SDHC, SLC2A4, STT3B, STX7, SV2C, ULK1, ULK3, YKT6, ATP6V1G3, CSGALNACT2, HLA-DQB1, SERPINA5</p>
Negative_15063	<p>DCK, F8, GCK, HK3, KDR, LPL, NPY, TEC, AASDH, AKR1D1, APOA2, APRT, ARPC1B, ARPC2, ARPC4, AVPR1A, BCAT1, CCL15, CCL28, CD79A, CD86, CDKN2B, CES2, CTNNA1, CXCR6, CYP2J2, CYSLTR2, DAD1, DDOST, DDX47, DEGS2, DGKH, DGUOK, DLAT, DTX4, E2F4, ENTPD6, ENTPD8, EPOR, FMO4, FTMT, FUT5, FZD1, GNAQ, GOSR2, GPAA1, HTR2A, HTR5A, IFNA10, IFNGR1, IL10RB, IL17A, IL18RAP, IL1B, INHBB, INHBE, LEF1, MAML3, MAP2K7, MGAT3, MYH7, NEU4, NFYC, NT5M, ONECUT1, OR10AG1, OR13D1, OR2AG1, OR2C1, OR2H1, OR3A3, OR4C11, OR51E1, OR52B6, OR6C70, OR7D4, OR8K1, OR8K3, P2RX1, P2RX7, PFKFB4, PFN2, PI4KA, PIAS4, PIK3C2B, PIM1, PLA2G1B, PLA2G2E, PLD2, PPA1, PPP2R1A, PPP2R5E, PRKAA2, RASSF5, RIPK1, RRM1, RXRG, SCD5, SDHD, SEMA3D, SEMA3F, SETD8, SMC1A, SNAP25, SORD, SSH2, STK11, SV2C, TAP2, YWHAB, ATP6V0A4, PLA2G12B, SLC25A31, TNFRSF1A</p>
Negative_15064	<p>DHH, FGB, HAL, HGF, JUN, SMS, ACAT1, ADSL, AGPAT2, ALDH1A1, ALDH2, ALDH3A2, ALG6, ARHGEF6, ATG12, ATP2A1, ATP5F1, ATP6V1D, B3GNT3, B3GNT5, BCMO1, BST1, BUB3, C1QB, CCNA1, CCND3, CCR5, CDC14A, CDH5, CDK6, C11TA, CLDN8, COL5A3, COMT, COQ3, CREB3L2, CREB3L3, CSNK2A1, CXCL1, CYP1A1, CYP2A13, CYP3A4, DDX56, DHCR24, DUSP14, ENTPD1, EREG, FADD, FTD, FUT9, FZD5, GALNT11, GDF7, GJD2, GLUD1, GSTM3, GUCY2C, HRH1, HSPB1, IFNGR1, IL11, IL12A, IL19, IL4R, JAG1, JAM2, KIR3DL1, LIPA, LTA4H, MALT1, MALT1, MAP2K1, MAP4K1, MAPK12, MAPK13, MCM6, MECR, MYH7B, MYL7, NFKB2, NFYA, NRAS, OR10A2, OR11G2, OR1C1, OR2K2, OR4A5, OR4D9, OR51A2, OR56A1, OR5P2, P2RX3, PCNA, PGAM1, PIGF, PIK3CD, PIK3R5, PIM2, POLE3, POLR3B, PRKCG, PTGER1, PTGFR, RAC3, RBPJ, RXRG, SEMA3G, SEPHS1, SETD2, SGMS1, STX18, TCF7L2, TP73, TRAF6, TSC2, UGT2B17, UNC5A, VKORC1, VTI1B, WHSC1, AASDHPPT, ATP6VOD2, ATP6V1B1, SUV420H1</p>

Negative_15065	<p>A2M, BAX, C1S, CAT, GAA, GPT, ID2, LTB, NNT, OSM, RDX, ABLIM1, ACACA, ACACB, ALDH3A1, ALDH7A1, ALDH9A1, ALPL, ANPEP, APAF1, ARG2, ARPC1B, ASS1, ATP5J, B3GNT3, B4GALT5, BCKDHA, BCMO1, BRAF, CACNG5, CAMK2B, CASP6, CCKBR, CCL16, CCL3, CCL7, CCR1, CD86, CDC23, CERK, COL6A1, CPT1B, CRY1, CTBS, CTPS, CYP1A2, CYP2B6, DAPK2, DGKH, EDAR, ENTPD6, EPHB6, ESPL1, FGF11, GALNT6, GLS2, GSTM2, HADHA, IDH3G, IFNA8, IL12B, IL17RB, IL23R, IL25, IL8RB, INPP5E, ITGA5, ITGAD, ITGB3, LARS, LEPR, LRRC4C, MAT1A, MEF2C, MGAT1, MGAT4A, MIOX, MTMR1, MYH10, NCR1, NFKBIB, NUMBL, OR13D1, OR14J1, OR2A4, OR2T2, OR4A16, OR4A5, OR4F6, OR52W1, OR56A3, OR5A1, OR6A2, OR8B12, OR8H1, OR9A2, PAFAH2, PAK2, PAPSS1, PDE3B, PDE4A, PFKFB2, PHKG1, PIGU, PIK3C2A, PLCG1, PLEKHA8, PON1, PPOX, PPP2CB, PPP2R5B, PRKAA1, PRKCI, PRKG2, PROS1, PRSS2, PTGER1, PTPN5, PVRL3, PYGM, RAC2, RAPGEF4, RASSF1, RPS6KA1, SETDB1, SGPP1, SMAD5, SMPD1, SPCS1, STMN1, TAS2R9, TGFA, TJP3, TNFSF4, TP73, TRAF3, TSLP, TSTA3, TYROBP, UCP1, WBSR22, WNT8B, ATP6VOA4, C1GALT1C1, CSNK1A1L, MAP3K7IP1, MAPKAPK5, SERPINF2, SUV420H2</p>
Negative_15066	<p>CAD, CGN, DLD, GSN, GSS, IL4, IL9, MIF, MPL, MVD, OGT, SCD, SRF, AASDH, ACAD8, ACHE, ADRBK2, AKT3, ALDH1A1, ALDH6A1, ALDOB, ALG5, ALPL, ANAPC11, APH1A, APOA1, ARRB1, ASMT, ASRGL1, AVPR1B, B3GNT3, B4GALT3, C1QB, CD27, CDH4, CES2, CHDH, CHRM3, CHSY3, CLDN8, COL1A1, CPT1B, CSNK1G1, CXCL13, CXCL2, CYP11A1, DDX54, DGKE, DGKZ, DIAPH2, DOT1L, DRD5, ETNK2, FGF13, FGF2, FZD10, GALNTL2, GARS, GNAO1, GNG13, GRM1, GUCY1B3, HCST, HTR2C, HTR7, IL12RB1, INHBB, IQGAP1, ITGB3, KAT2A, KYNU, LDHC, LHCGR, LRRC4C, MAP3K14, MAP4K2, MASP1, METTL2B, MGAT1, MGST3, MYH9, NAGK, NCOR1, NFYA, NOD1, NT5C2, OR10G9, OR10K1, OR10K2, OR10P1, OR2H1, OR2M2, OR2T34, OR4M2, OR51E2, OR52R1, OR52W1, OR5AC2, OR6N2, OR7G1, OR8D4, OR8K3, ORC4L, PANK4, PCK1, PDE4D, PDXP, PIGS, PIK3CD, PIK3R2, PIP5K1A, PLA2G2A, PLA2G5, POLR3K, PRKACG, PRKCD, PSEN1, PTCH2, PTPN7, QARS, RETSAT, SGPP1, SIPA1, SORBS1, SREBF1, STAT4, TACR3, TAS2R5, TGFA, TJP1, TNFRSF8, TRAF3, TSC1, TSNARE1, TUBB1, UGT2B17, UGT8, WIF1, XCL1, YOD1, AASDHPPT, ALDH18A1, CACNA2D4, KIR2DL5A, PPARGC1A, SERPINE1, TNFRSF10C, TNFRSF1A</p>
Negative_15067	<p>EGF, F10, F11, F5, FER, ID3, IL9, MSN, NOG, TYR, VTN, ACO2, ACP5, ACPT, ACSM1, ACY3, ADCY6, ADRA1A, AK3L1, ALDH3A1, ANAPC7, ANGPTL4, ATP6V1H, BCKDHB, BMP2, BMPR2, BUB1B, CACNG8, CADM3, CASP10, CAV2, CBR1, CCL16, CCNA2, CCR1, CD247, CD46, CDIPT, CDK7, CHSY1, CHSY3, COL2A1, CSF3R, DAXX, DDIT4, DGKB, DIAPH1, DKK2, DLL1, DMGDH, DTX1, EFNA3, EPB41L2, EVI1, F2RL2, FCER1G, FDPS, FGF21, FUT8, FZD3, G6PC2, GALNTL1, GGT1, GMDS, GMPPB, GMPS, GRIA1, GSTM3, GUSB, HSPA8, IDUA, IFNAR1, IL11, IL19, IL2RA, IL4R, ITGA2B, KCNB1, KIR2DL1, LCAT, LTC4S, MADCAM1, MAN1C1, MASP1, MGAT4A, MLLT4, MTHFS, NEUROD1, NSDHL, OR1Q1, OR1S2, OR2L2, OR4K5, OR51F1, OR6C6, OR7G3, OR8B4, PIGU, PIM2, PIP4K2A, PLCD4, PPA1, PAP2C, PPCDC, PPP2R5C, PPP2R5D, PRKACA, PRKY, PRPH2, PSME2, RASGRP4, ROBO2, RPN1, SEMA3A, SEMA3B, SETD1B, SETMAR, SH3BP2, SLC2A4, SNAP23, SOCS4, SPRY4, SPTLC1, SRGAP3, ST3GAL2, SULT1A2, TAS1R1, TAS2R41, TAS2R9, TJP2, TLN2, TM7SF2, TNFSF10, UBA7, VANGL2, VASP, VEGFC, SERPINC1</p>

Negative_15068	AGK, C3, IL2, SYK, TNC, ACVR1, AFMID, AGXT, ALG3, APOE, ARSE, ATP6AP1, ATP6V1H, B3GAT2, BET1, BLVRA, BLVRB, C3AR1, CACNG2, CALML6, CCNB1, CD82, CDK2, CDKN1C, CHKA, CHR1, CIITA, CLCA2, CLTA, CNGB1, COL4A4, COQ6, CREB1, CSF2RB, CXCL6, DHRS3, DHRS4, DPYD, DTX1, EGLN3, FABP1, FMO1, FUT6, FZD2, FZD5, GADD45A, GALC, GALNT5, GNMT, GRIN2D, GSTM1, HCLS1, IDH3B, IGF1, IL22RA2, IL23A, IL8RA, INADL, IRS1, KIR3DL2, KLKB1, LAMA3, LAMB1, MAP4K4, MGLL, MGST2, MKNK2, MYL9, NAGK, NFYA, NRG1, NRG4, OR10S1, OR13C9, OR13D1, OR1F1, OR2F1, OR2M3, OR4A15, OR4C46, OR51E1, OR52D1, OR52E8, P2RX7, PCNA, PFKFB4, PIGN, PNLIP, PNPLA3, POLR2I, PPA2, PTDSS1, PTPRJ, PYCR2, QPRT, RFWD2, RUNX1, SDHA, SENP2, SLC2A2, SPCS1, SPRED1, STAM, SULT2A1, TAS2R48, TLN2, TRPC1, UGCG, VDAC3, WNT1, HSD17B10
Negative_15069	AMT, AUH, DCC, F10, IL3, IL5, KDR, MPL, RDX, SPN, TKT, UBC, ACAA2, ACPT, ACVRL1, ALG10B, ALG2, ARPC3, ATP50, B4GALT1, B4GALT6, BACE1, BBOX1, BLNK, CCL4, CDC25C, CDH4, CER1, COQ5, CREB5, CRLS1, CXCL6, CXCR3, CYP26A1, CYP4A22, DDX50, DGAT2L4, DGKD, DTX2, DTX4, EFNA4, EFN2B, ERBB2, ETNK1, ETNK2, FABP3, FGF2, G6PD, GMPS, GNA12, GNB3, GRAP2, GSTA1, GSTM5, GUCA1B, HAP1, HYAL1, IL28A, IRS1, KLRC3, LARS, MAP3K14, MAP4K2, MAP4K4, MMP2, NAT6, NCAM2, NEUROD1, NFASC, NLGN3, NNMT, NPR2, NRXN1, OR10AD1, OR11H1, OR1E1, OR4C12, OR4C16, OR4D1, OR4N2, OR52E2, OR52I2, OR52K2, OR6A2, OR8H2, OR8J3, OR8K1, P2RX7, PIGH, PIGW, PIK3CD, PIK3R2, PMM1, PNPLA3, POLR1C, PON2, PRKAB1, PRKG2, PSEN1, PTPRZ1, PYCR2, SDHD, SKIV2L2, SMAD3, SOCS3, ST3GAL4, TALDO1, TAS2R42, TAS2R48, TGF3, TIAM1, TIRAP, TUBA1B, TYROBP, UROC1, WIF1, ZFYVE16, ATP6V1B1, B4GALNT1, MAPKAPK3, PAFAH1B1, TNFRSF13C
Negative_15070	AK1, FOS, MPL, SYK, ABLIM1, ACP6, ACSS3, ADCY2, ADIPOR1, ADSSL1, AGPAT1, ALG13, ANGPTL4, ATN1, ATP5J2, ATP50, AVPR1A, B4GALT4, BCL2L1, BDKRB1, BIRC3, CACNG5, CASP8, CBR3, CD34, CD8A, CD99, CER1, CES2, CFL1, CKS1B, CLCF1, CMBL, COL1A2, CRY2, CYP27A1, CYP2E1, DGKB, DMGDH, DTX3L, DUSP6, ERBB3, F11R, FGF23, FLOT2, FLT1, FSHR, GALNT12, GNA15, GNRH1, GOSR2, GPLD1, GSTO2, HEXB, HPSE, HSD11B1, IARS, IKBKB, IL19, IL22RA1, IMPA2, IQGAP3, ITGB1, ITGB4, KYNU, LRDD, MAML1, MCEE, MDH2, MICA, MTMR1, MYLK3, NCAM1, OLAH, OR10H4, OR1L8, OR2AT4, OR2T11, OR52E4, OR5AK2, OR8A1, P4HA3, PARD3, PCYT2, PDE10A, PLTP, POLR2B, POMC, PPM1B, PPP2R2C, PPP2R2D, PSME2, PTPRJ, RAPGEF1, RAPGEF3, RETSAT, RFXAP, SDHD, SETDB2, SGPP2, SKIV2L2, SLC25A5, SLC27A1, SLC9A1, SMPD2, SOCS1, STAM, TAS2R4, TAS2R60, UGT2B28, UGT2B4, WASF2, ATP6V1B1, CACNA2D1, EIF4EBP1, MAP3K7IP2, SERPINA1, ST6GALNAC3, TNFRSF10B, TNFRSF17
Negative_15071	CEL, F5, F7, FGA, HGD, HK2, IL8, LPO, OGT, SRF, VCL, ABLIM3, ADCY2, ALDH3B2, ALG11, AMDHD1, AMY2B, APOE, ARHGAP5, ARRB2, BMP2, CACNG3, CCL15, CCL19, CD274, CD40, CDC25C, CLDN16, CNTN1, CNTNAP2, DGKA, DOCK1, DPAGT1, EFNA4, EGLN1, EXOC7, G6PD, GABARAP, GALT, GNAZ, GRB2, GSTP1, HAAO, HEXA, HLA-C, HRAS, HSD17B8, HTR2C, ICOSLG, IFNA13, IL20, IRS1, ITGA4, KDSR, LIPG, LTC4S, MAP3K12, MAP4K1, MMP2, NEFM, NFKB1, NT5C, OR10G3, OR10H1, OR10K2, OR11H4, OR13C8, OR1G1, OR1L3, OR2AT4, OR4K13, OR51F1, OR5R1, OR6C2, OR6C4, OR7G3, OR8K3, OR9A4, OR9Q2, ORC6L, PGM3, PHPT1, PIP5K1A, PSME2, PTCH1, RPS6KA1, SESN1, SETD8, SETMAR, SMAD1, SOCS2, ST8S1A1, STAT5A, STEAP3, STK3, STX1A, STX1B, SULT1E1, TCF7, TLN1, TUBB2A, UROD

Negative_15072	C8A, CKM, GAA, GCK, GDA, KIT, MIF, MUT, ACOT12, ACP, ADORA2A, ADRB2, AKR1B1, ALDOA, ALPP, ANAPC10, ARPC2, ATP6V1D, BCKDHA, BDH1, BPNT1, CALML6, CAMK2B, CARS, CBR1, CCL5, CCR3, CD3E, CDC14B, CHSY1, CHUK, CLDN2, CMAS, CMBL, COL1A1, CXCR4, CYP11A1, DAPK1, DPYD, DVL3, EPHA3, EPHA6, EPHB6, ESPL1, GSTM4, H6PD, HIP1, IL1R2, IL2RB, IRF3, JAG1, JAG2, KCNQ1, KDSR, KNG1, LCMT1, LYZL1, MAP2K6, MGAT5B, MTAP, NAGK, NARS, NFX1, NME2, NR4A1, NT5C1B, NTF3, OR11H4, OR1A2, OR2A2, OR2F2, OR2Y1, OR4K5, OR5AR1, OR5D14, OR5T1, OR5T3, OR5V1, OR7C1, PCK2, PDGFD, PDGFRA, PIGF, POLD4, POLR3B, PPP5C, QARS, RHEB, SETD1A, SLC2A4, SMARCA5, ST3GAL4, SULT2B1, TAS1R2, TAS2R5, TAS2R8, TBL1Y, TNFSF4, TOLLIP, TRAF6, TSHB, TUBB2C, ATP6VOA1, CSNK1A1L, PAFAH1B3
Negative_15073	BTC, CBS, CGN, F2, GSR, IL4, IL9, MET, MSN, SPN, SRC, AADAT, ACSM4, ACVR1B, ADAM17, AKR1C3, ARSB, ASNS, BCL2L1, BCMO1, CCND1, CD22, CDH4, CDK5, CER1, CFL2, CLDN16, CLDN18, CLDN8, COASY, COQ6, CXCL12, CXCR6, DNMT1, DPYD, DTX1, E2F4, EFNA3, ESAM, FLT3, FZD5, GLS2, GNAO1, GNRH1, GPX5, GSTO2, GUCY1A3, HAAO, HCCS, HHIP, HRAS, IFNGR2, IKBKE, IL19, INPP5A, ITGA3, ITGAE, LGMN, LPAR1, MGAT2, MPP5, NR4A1, OR10J3, OR13C4, OR2A5, OR2C3, OR2T12, OR2W1, OR4M2, OR51F1, OR51L1, OR56B4, OR5I1, OR6F1, OR8A1, OR9A4, PAX6, PFKFB2, PFKM, PLA1A, POLE2, PRKAA1, PRKACA, PRKAG3, PTGS2, RAB23, RELA, ROCK1, SDC3, SETDB1, SGPP2, SH2D1B, SMAD5, SNAP23, SORBS1, SSH2, STAM, SUCLG2, TACR1, TAS2R13, TAS2R40, TGFA, TRPC1, TUBA8, TYRP1, UCK1, UGT2B28, ULBP3, UNC5C, UROS, VARS, HSD17B10, MAPKAPK2, TNFRSF11B
Negative_15074	ADO, C3, CGA, DCK, EPO, HGF, ILK, JUP, SDS, TKT, AADAT, ABL2, ACMSD, ACSL1, ACSS1, ACTN4, ADCY5, ADH7, AKR1D1, ALDH1A3, ALDH3A1, ALDH3B2, ALOX15B, APLP1, ARPC5L, B3GALT5, B3GNT2, BCAT1, C1GALT1, CACNG3, CCL27, CCL3, CCR5, CD34, CDH4, CDKN1A, CDKN2B, CHIT1, CKMT2, CLCA4, COL11A1, COL6A2, CSNK1A1, CSNK1G3, CTLA4, CYP2U1, CYP3A5, CYP4A11, DHX58, EFN3, ENAH, ENTPD8, FM03, FRAP1, FZR1, GABARAP, GALNT6, GAMT, GPX5, GRHPR, GRLF1, HMGCR, HSD17B8, IFNA6, IGF1R, INPP5A, KLKB1, LIPA, LIPF, MAP2K2, MAP3K4, MAP4K3, MAPK13, MAPK8, MARS, MGAT1, MPP5, NEGR1, NEU3, NME6, NMNAT2, NUMBL, OGDHL, OR10K1, OR1L3, OR1S1, OR2M2, OR2T8, OR4D2, OR4D5, OR4K2, OR51F1, OR6C6, OR7A17, OR7C2, P2RX5, P2RX7, PDGFRB, PGS1, PHKG1, PLA2G2E, PLA2G4A, PLCG2, PLXNA1, POLR1C, PPP1CA, PPP1R1A, PRPH, PRSS2, PTGER1, PTGER3, RAC1, SEMA3C, SEMA3G, SEMA4A, SEMA7A, SKP1, SLC2A4, SLC33A1, SMAD2, STAT3, TAS2R3, TCIRG1, TGFA, UAP1, UBE2L3, UBE2L6, UGT2B17, WEE1, XYLT2, ZAP70, ZFYVE9, GABARAPL1, TNFRSF12A
Negative_15075	CP, F11, FOS, GCK, MAG, RPE, AADAC, AADAT, AARS2, ACADL, ACP2, ACVR2B, ADCY7, ADIPOR2, ALAS2, ALDH3A1, ALDOB, ALS2, APC2, APOA2, ATF2, ATP6V1F, B4GALT1, BIRC3, CACNA1I, CACNG3, CCL20, CDC26, CLDN10, CLDN14, CMAS, CNGB1, CNTNAP1, COX15, CSF1R, CTNNA1, CTPS, DARS2, DEGS2, DFFB, DUSP16, EIF4B, ELK4, ENTPD6, EXOC7, FASLG, FGD1, GALC, GALNT6, GALNTL1, GAPDH, GNAL, GUCY2D, HARS, HEXB, HIF1A, HMGCL, IFNG, INHBA, KIR2DL3, LAMC1, LIPA, MAFA, MAGI1, MBL2, NCR2, NEGR1, NPAS2, NSDHL, NT5C1A, OR10G3, OR10G4, OR11H6, OR1E1, OR1Q1, OR2AG1, OR2C3, OR2T8, OR3A3, OR4N4, OR52E8, OR52N5, OR5B21, OR6Y1, OR8G1, OR9A4, OR9Q2, PDE4C, PIGX, PLAUR, PNPT1, POLA2, POLR2C, POLR2L, PON2, PPM1B, PPP2CA, ROBO1, SHC1, SHMT2, SUV39H2, TGFB1, TGFB3, VDAC2, VTI1B, MAPKAPK2

Negative_15076	<p>AR, CAD, FGG, LAT, NPL, PC, AACS, AADAT, ACADVL, ACOT12, ACTN2, ACVRL1, ADCY3, AGMAT, AGXT2, ALG10, ALOX5, AMDHD1, AMHR2, ARNT2, ARNTL, ARSD, BAAT, BACE1, BACE2, CCNB3, CDH5, CDIPT, CHIA, CHRM2, CLTC, CNTNAP2, COL4A6, CPT2, CREB3L1, CSF1, CYP2B6, DGKA, DGKB, DHRS4, DKK4, DLL4, DOCK1, DUSP1, DUSP14, DUSP8, EFNA5, ENTPD3, EPB41L2, EPHA8, EPHB4, F DFT1, FGF3, FMO2, FZD8, GCH1, GNA15, GNG13, HCST, HEXB, HMGCL, HRH1, I FNA14, IL25, ITGB3, KLRC4, LAMC1, LIPG, LYZL1, MAP3K1, MAP3K5, MYH9, NAT6, NCK2, NEFM, NEU3, NFKBIB, NMNAT3, NOX1, NRG4, NRP1, NUMB, OCLN, OR11H4, OR1F1, OR1L8, OR1S2, OR2M5, OR2T3, OR4K14, OR4K15, OR5J2, OR 6F1, PANK4, PARD6A, PARS2, PDHB, PGAM2, PHKG2, POLR2J, PPCS, PRKAA1, PVRL4, RARS, RASGRP3, RBX1, RCHY1, RELB, RFWD2, RPS6KA4, RXRA, SEMA3 E, SOCS7, SPTAN1, STAT6, TAS2R48, TUBAL3, UMPS, VAV3, WNT8A, ZFYVE9, ATP6VOA4, PNLIPRP1, ST6GALNAC4, TNFRSF14</p>
Negative_15077	<p>CEL, CKM, FGB, GLA, GP6, IL6, LTB, MPL, MVK, SPN, AASDH, ACHE, ACTG1, AC Y3, ADH7, AGPAT1, ALG9, ALPI, AMD1, ANAPC5, ANGPTL4, ARRB2, ATP6V1D, B3GAT1, B4GALT5, B4GALT6, BBC3, BCAT2, CACNA1G, CADM1, CANT1, CARS, CCL19, CCR2, CD3E, CD79B, CD99, CDC26, CKS1B, CLDN2, CLDN7, CSF1R, CX CL12, CYBB, CYP2C19, DGKD, DHCR24, DMGDH, EFNA4, ENTPD3, EPB41, EPRS , FGF7, FOXO3, FZD8, GABARAP, GALNTL5, GJD2, GMPPB, GRIN1, GUCA1B, HM OX2, ICOS, IL12B, IL28A, INSRR, IRAK3, ITGA2, ITGA3, KLRC3, LTA4H, MA D1L1, MAFA, NARS, NEFH, NFKBIE, NGEF, NLGN1, NNMT, NT5C1A, NUDT8, OR1 OJ1, OR14J1, OR1A2, OR1D5, OR2D3, OR2M4, OR4A15, OR4P4, OR51B4, OR51 B6, OR52K2, OR5H2, OR6C2, OR6T1, OR8B12, OR9G1, PAK1, PECAM1, PFKFB4 , PIAS3, PIP4K2C, PLCB3, PPAP2C, PPP2R2A, PPP2R2C, PRIM2, PRKACG, RA F1, RAPGEF2, RBKS, RBL1, RGS3, SKP2, SLIT1, SLIT2, SMAD6, SMARCA2, SO AT1, SRGAP2, STAM2, STX16, STX5, SYNJ1, TAS1R1, TAS2R16, TRAF3, TRDM T1, TUBA8, UPRT, WHSC1L1, ZIC2, ATP6V1C2, HSD17B10, PPP1R12A, TNFRS F10C</p>
Negative_15078	<p>AK5, AMH, ASL, DHH, EZR, GAA, ID4, LTB, PML, PXN, SPN, ABI2, ABLIM3, ACS M1, ACTG2, ADCY2, ADCY8, ADRA1D, ALG10B, ALOX12, ANAPC2, ANAPC4, BDH 1, CACNA1A, CACNA1I, CCKBR, CCL11, CCL14, CCR2, CD38, CD79B, CD80, CD C25A, CLDN7, CNTN2, CREB3, CSDA, CTBS, CYP2A7, CYSLTR2, DOCK1, EPHB6 , EPHX2, EREG, FCGR3B, FGF19, FMO3, FPGT, FUT3, FUT4, GALNT6, GCLC, GN AO1, GNAS, GNB1, GPX7, GSTO2, GUCY1B3, HSPA1B, HTR7, HTRA2, ICOSLG, I FNA14, IL17A, IL2RG, KLRC1, KNG1, LAMC3, LCAT, LIPA, MAD1L1, MADCAM1 , MAN1C1, MAP3K7, MAP4K4, MGAT1, MTAP, MYH1, NFATC3, NLGN2, NOD1, NOT CH3, OR10A7, OR10R2, OR1L1, OR2A12, OR2F2, OR2T1, OR4D9, OR5L1, OR6S 1, OR7D4, OR8A1, P4HA2, PDE4B, PDE8A, PDK1, PDXK, PIK3R4, PKLR, PLA2G 2A, PLCZ1, PON1, PPP1R3B, PRKAA1, PROC, PTGES, PTGS1, PTPMT1, PTPN11 , RAB5A, RGS3, RPS6KA6, SAT1, SCIN, SESN3, SOCS2, SSH2, SUCLG2, SUFU, SYNJ1, SYNJ2, TAS2R7, TUBA1C, TXNDC12, UGT2B10, UPP1, WNT16, ZBTB16 , ZNRD1, EIF4EBP1, PPP1R12A</p>

Negative_15079	<p>GP5, IL8, OGT, SFN, SMO, SP1, TNN, A4GALT, ACLY, ACP5, ACSS1, ACSS3, ACTA1, ADRA1D, AFMID, AGXT2, ALG12, ARD1A, ARPC2, ASPA, ATP5J2, ATP5O, B3GALT5, C4BPA, CACNA1A, CAMK4, CARS, CAV1, CCL20, CCNB3, CCR7, CDC25B, CDK6, CHST12, CLDN19, CNGA3, CNTNAP2, CYFIP1, CYP26B1, DHDDS, DPYSL2, DTX1, DUSP2, ELK4, EPHA7, FARP2, FGF10, FGF23, FM02, FOXO3, FSHR, GAL3ST1, GANAB, GFAP, GMPS, GNPDA2, GRHPR, GSTM5, HTR5A, ICOSLG, IFNA6, IL19, IL7R, IL8RA, LDHC, LRAT, MECR, MYH13, MYH15, MYLK, NAT1, NCR2, NOTCH2, NPAS2, OR10AD1, OR13C4, OR14I1, OR1L4, OR2C1, OR2T11, OR2T12, OR4C12, OR4F17, OR5B12, OR7A5, ORC3L, PANK1, PAX4, PDE7A, PHKG1, PHKG2, PIGB, PIK3CB, PIP4K2B, PPARG, PPP2R2C, PPP2R5E, PRKACB, PRKACG, PRKAR1A, PRKAR2A, PRPH2, RAPGEF3, RARS, RASGRP2, RASGRP4, SDHD, SFRP1, SH2D1B, SSH2, STX3, SUV39H1, THBS1, TJP1, TP53, UPP1, WBSCR22, YWHAG, ATP6V0A4, ATP6V1G1, B4GALNT1, PAFAH1B3, PPARGC1A, TNFRSF6B</p>
Negative_15080	<p>C1S, C6, C8B, GPT, MAX, TNN, ACSL4, ACSS2, ACVR1, AGMAT, ALDH3B2, B3GAT1, BBC3, BLVRB, BMP5, BNIP1, C9orf95, CADM3, CAPN2, CASP7, CCR4, CD34, CDC14B, CDC25B, CDC26, CDKN2B, CFLAR, CHIA, CISH, COL5A1, CREB5, CSH1, CTBP2, CYP21A2, CYP3A4, DTX3L, DUSP14, E2F2, EARS2, EHHADH, ENTPD1, EPHA8, EPHB1, EPOR, EXT2, FDPS, FGF14, FGF2, FTMT, FUT9, GALE, GALM, GALNT1, GDF5, GGT1, GLUD2, GLUL, GMPPB, GNG12, GRLF1, GUCA1A, HEXB, HSP90B1, HSPA1B, IL10RB, INPP1, IPPK, LEFTY1, LHCGR, LIMK1, MAML1, MAPK10, MCM2, MYH10, MYH7B, NARS, NFASC, NFATC4, NMNAT3, NOTCH3, NR5A2, OR10A7, OR10H4, OR10T2, OR11H4, OR1L1, OR2AG2, OR2T11, OR2T5, OR52A1, OR56A3, OR5M8, OR6S1, OR6X1, OR7A5, OSMR, PFKM, PHKG1, PHPT1, PIGC, PIP5K1B, PLA2G10, PLK1, PLOD2, POLD3, POLR2H, POMC, PPOX, PPP1CA, PRIM1, PRKAG2, PRKG2, PRSS3, PTPN11, PTPN5, PYCR1, RASSF1, RELA, SAT1, SELPLG, SETDB2, SFRP1, SH2D2A, SH3BP2, SMAD7, SMPD1, SPHK2, SPRY1, SSH1, ST3GAL2, STK11, SV2A, TAS2R13, TGDS, TNFSF10, TRADD, TRAF2, TUBB4Q, UGT2A3, VDAC2, WASF2, CACNA2D1, CSNK1A1L, SUV420H1, TNFRSF11B, TNFRSF13B</p>
Negative_15081	<p>AGK, CGA, GPI, OAT, SCD, TNF, ACAA1, ACOX2, ADCY8, ADRB1, AMPD2, ARSA, ATP2A1, ATP6V0B, ATP6V0C, ATP6V1A, BNIP1, C3AR1, CAV1, CCL24, CCL28, CD226, CDH15, CLDN17, COQ7, COX15, CREBBP, CYP2J2, CYP3A5, DDX4, DGKA, EFN3, ENPP3, EPB41L1, FECH, GALNT13, GNAS, GNG12, GNPDA2, GOT1, GSTT1, GUK1, HLA-D, IDI1, IL1RAP, IL28RA, IL6R, INPP1, IRF9, ITPA, KIR3DL1, LAMA4, LIMK2, LYPLA1, MAP3K3, MCEE, MCM3, MNX1, MYL5, NAMPT, NCSTN, NFATC2, NQO1, NRIH3, OR10H2, OR1S2, OR2A12, OR2F2, OR2S2, OR4C11, OR4C15, OR5D13, OSMR, P2RX7, PER2, PHKA1, PIM1, PIM2, PIP5K1B, PLD2, PNPLA4, PNPT1, POLR1D, PPP5C, PRKG1, PTGES2, PTGIS, PTPN11, RDH12, RHOD, RPS6KA3, RRM2, SEMA7A, SENP2, SKIV2L2, SLC27A5, SMAD9, SNAP25, TAS2R16, TAS2R3, TAS2R48, TAS2R60, TBK1, TGFBR1, TP53I3, UCK1, UGT2B7, VAMP2, VAV1, VDAC2, WASF2, WHSC1L1, XCL1, ZFYVE9, ATP6V0D1, PAFAH1B3, PHOSPHO1</p>

Negative_15082	<p>CFD, CP, GGH, GK2, GPT, IL6, SFN, UBC, AADAC, ACADL, ACSL4, ACSS1, ADOR A2B, ALG5, ANAPC2, AOC3, APOE, AQP7, ARG2, ASPA, B3GALT1, B3GALT2, CA CNG1, CALML3, CAV1, CCNE2, CD22, CDC25B, CDC26, CHEK2, CLDN3, CNTNAP 1, COL4A2, CSNK1G2, CXCL6, CYP26B1, DAAM2, DHRS4L2, DIAPH2, DKK4, DP M3, DRD2, DVL1, ECSIT, EPHA5, EPHA6, FADS2, FGF13, FOXA3, FUT7, GAPDH , GJD2, GLI2, GNAS, GNPDA1, GOSR2, GRB2, HLA-  DOB, HSD17B2, IFNA5, IL24, IL6ST, IMPDH1, JAM3, KITLG, KLK3, LIFR, LR AT, MAD2L1, MAPK12, MGAT2, MYLK3, NFATC4, NOX3, NTSR1, OR10R2, OR1J2 , OR2B2, OR2L8, OR2T8, OR4D11, OR4L1, OR56A1, OR5I1, OR5M3, OR6C2, PA K1, PDE4A, PER1, PFKM, PGK1, PIGF, PIGP, PKLR, PLEKHA8, PMM2, PNPLA4, PPP1R3D, PRKAA1, PSEN1, PTGER3, PTPN11, RBKS, RDH10, SFRP2, SIAH1, S KP1, SMAD6, SMC1B, SNAP23, SORD, SRGAP2, TAS2R38, TJP3, TRHR, TYK2, U AP1, UGT2B17, USE1, WBCSR17, WIF1, WNT6, ATP6V1E1, SERPINB5, TNFRSF 18</p>
Negative_15083	<p>ADC, ADO, CDA, CEL, CKM, GSS, RB1, AADAC, ABLIM2, ABP1, ACOX1, ACSM3, A CYP1, ADIPOQ, ADRB2, ALPPL2, AMPD2, APOA2, ARHGEF7, ATP5A1, ATP5G3, BACE2, BCL2, BPNT1, CCL14, CCR2, CD48, CDK5, CHEK1, CLDN18, CNTF, CSF 1, CSNK1G1, CTSL1, CXCL13, DGKZ, E2F5, EDAR, EDNRA, EHHADH, ELK1, EPH A2, ERBB4, EXOC7, FGF1, FPGT, GJA1, GLG1, GLI3, GNA14, GNAT3, GRIN2D, HARS, HES1, HSD17B2, IDH2, IL10RB, IL20RB, IL4R, IMPDH2, INPP4A, ITP K1, KAT2A, KLRC1, LTB4R2, MAGI1, MAPK10, MAPK11, MASP2, MDM2, MMP9, N ARS, NARS2, NCR2, NCR3, NLGN2, NUDT9, ONECUT1, OR2T29, OR51A7, OR5AK 2, OR5K2, OR6K2, OR7D2, OR7G2, OR8K5, OR9A4, PISD, PLA2G5, PLAUR, PPP 2R5B, PRKAR2B, PTGS2, RAB5A, RASGRF1, SETD2, SKIV2L2, SPHK1, ST3GAL 1, ST8SIA1, TAS2R8, TBXA2R, TPH2, TRAF5, TUBA1C, TYMP, UGT2B11, VARS , WNT1, WNT4, XIAP, CACNA2D2, PLA2G12A, SERPINB5, SLC25A31, ST6GALN AC6</p>
Negative_15084	<p>ADO, AK2, DDC, F3, GGH, JUP, LYN, MOS, MVK, RDX, RFK, STS, TNN, ABCC8, AC AT1, ACOX2, ADIPOR2, ALDH3B2, ALG5, AMHR2, AMPD2, AMY2B, APOA5, ARHG AP5, ARPC4, ATG3, C7orf16, CACNA1G, CACNA1S, CANT1, CARS, CD70, CD72 , CDC26, CDK6, CHEK2, COL11A1, CTNNA1, CTPS2, CYP26A1, DAPK1, DDHD1, DDOST, DDX52, DGAT1, DGKB, DHCR24, DLL3, DPYS, EFNA5, ENO3, ENTPD6, E P300, FBXW11, FLT3LG, FRAP1, FUT1, GALNT6, GCNT2, GGT6, GLG1, GSTM5, HCLS1, HMBS, HSD17B1, HSD17B2, IFNA21, IL10RB, IL17RA, IL1RAP, IL21 R, IL22, KIR2DL3, KNG1, LAMB3, LTB4R2, MAN1A1, MAP2K1, MAP3K14, MAPK 3, MCM3, MGAT5B, NLGN1, OLAH, OR13C2, OR13C9, OR13G1, OR14J1, OR2L2, OR4D11, OR4F4, OR4P4, OR5AN1, OR5I1, OR5M8, OR6C3, OR6N2, OR7C2, PCK 1, PHKG2, PIGL, PIGM, PIK3C2B, PIPOX, POLD1, POLR2J, PPA1, PPP3R2, PR IM1, PRKCB, PRPS1, PTAFR, PTGFR, RHOD, RPS6KB2, RRM2, SC5DL, SENP2, S EPHS1, SIGLEC1, SKP2, SMAD3, SPP1, SPTLC1, STK36, STX1A, TAS1R1, TAS 2R41, TCIRG1, TFDP1, TIAM2, TLN1, TLR4, TSLP, TUBB2B, TUBB6, VAMP4, T NFRSF14</p>



Negative_15085	ASL, C8A, F11, GSR, ID1, IVD, MAX, ME1, MPZ, PRL, TEC, ACSM5, ACTB, ACVR1B, ADIPOQ, ADIPOR2, ALG12, ARNT2, ATG3, ATP13A2, B4GALT5, BAAT, BACE2, BCKDHB, C4BPA, CACNA1I, CACNB2, CAMKK2, CCNA1, CCNB1, CD86, CDC16, CDC26, CDC6, CHAD, CHDH, CMPK1, CNGA4, CPOX, CPT1A, CYP27A1, DGKD, EDNRB, EFNA1, EPHX2, F13B, FECH, FGF20, FLT3LG, FMO3, FMO5, GADD45G, GMPR, GMPS, GNAI2, GNRHR, GRB2, HPSE, HSPA1B, IDH3G, IFNB1, IKBKG, IL13RA2, IL17A, IL2RB, IRF5, KLKB1, KLRC3, MAP3K14, MAPK11, MAPK13, MAPK3, MASP2, MTHFR, NFX1, NPR2, OPLAH, OR10P1, OR1Q1, OR1S1, OR2A12, OR2A2, OR2AE1, OR4C46, OR4C6, OR4D9, OR4K15, OR4X1, OR51B5, OR52E2, OR52N4, OR5T2, OR5T3, OR6C6, OR7D4, OR8K1, PANK2, PDE1A, PDE1C, PIAS1, PIAS4, PIK3C2A, PLA1A, PLA2G2A, PLA2G2E, PLCB3, PLXNA2, POLE2, POLR1B, POLR1D, PPP2R2D, PRODH2, PRPS1, PTDSS1, PTGES2, PTPMT1, RAB23, RGS3, RHOA, SEMA3C, SETD7, SLC27A4, SMAD6, SOS1, ST8SIA5, STAT5A, STMN1, SUCLG1, TAS2R1, TAS2R13, TAS2R9, TBK1, TBL1Y, TGFB2, TRAF4, TUBB4Q, UCP1, WHSC1, WNT10A, WNT6, WNT7B, HSP90AA1
Negative_15086	ADA, ADC, ADO, CKB, FAH, GSS, LTB, MPZ, PGF, RET, XDH, ACMSD, ACO2, ACSM4, ACY1, ADH7, ALDH1L1, AMHR2, AMY2A, ANAPC4, AOC3, ATN1, ATP5L, ATP6V1D, BDNF, BMPR1B, CAPN2, CCNG1, CD79A, CDKN2D, CKMT2, CLDN15, CLDN16, CNGA3, CXCL10, CYP19A1, DGUOK, DLST, ELK1, EPHA2, EPHB1, FGF11, FLAD1, FSHB, FZD9, GJD2, GRIA3, GSTO1, HPRT1, HTR2B, IDUA, IL4R, IMPA2, IRAK3, KLRD1, LLGL2, MASP2, NFKBIE, NLGN2, OLR1, OR11H1, OR13C5, OR51Q1, OR52B6, OR5B17, OR6T1, OR6X1, OR7D4, OR8H1, PAPSS2, PDXP, PGAM2, PGK1, PIGO, PIP4K2A, PIP4K2C, POLR2G, POLR2H, PPAT, PPP5C, PRKAA2, PYCR1, RBL1, RDH5, RELA, ROCK1, SGPP1, SMURF2, SOCS5, SPRY4, ST3GAL5, TBL1XR1, TNFSF9, UGT2B11, ULBP3, UROD, WBSCR17, WNT8A, ZFYVE16, C1GALT1C1, MAPKAPK5, SERPINB5
Negative_15087	ID2, ILK, MOS, PAH, ACAD8, ACOX1, ACP1, ACP2, ACTG1, ADCY8, AGPAT6, ALDOB, AMDHD1, APOC3, ARAF, ARHGEF1, ARPC1B, ARPC2, ATG7, ATN1, ATP5J2, B4GALT3, B4GALT4, BIRC5, BMP4, BUB1B, CAMK2G, CARS, CASP10, CCKAR, CCL20, CCL5, CD99, CDC6, CEBPA, CHDH, CLDN18, CMPK2, COL4A1, CSH1, CTNNA3, CTSL1, CYP2A7, DAG1, DDX19A, DHODH, DUSP8, EARS2, ENO1, EPOR, F2RL1, F2RL2, GAMT, GAPDH, GGCX, GOT1, GRIA2, GSTT1, IL17B, KIR3DL1, LAMC3, LPAR1, MAN1B1, MAP3K5, NFAT5, NGEF, NTRK2, OGDHL, OR13G1, OR1A1, OR2B11, OR2T2, OR4E2, OR4K1, OR51A2, OR51T1, OR52L1, OR56A4, OR5H2, OR6C75, OR6T1, OR7A17, PAK2, PARD3, PDE9A, PER1, PIP4K2C, PLA2G1B, PLCB4, PLTP, POLE3, POLR1D, POLR3B, PPM1B, PPP1R3C, PRODH, PRSS2, RAPGEF4, ROCK1, RPN2, RPS6KA6, SAT2, SEMA3G, SEMA7A, SHISA5, SMPD4, SPP1, SSX2IP, SUCLG1, SUV39H2, TACR2, TAS2R10, TDO2, TGFB3, THTPA, TPH1, TUBAL3, UAP1, VAMP3, VEGFB, VEGFC, WNT8A, YWHAQ, ZIC2, MAPK8IP3, TNFRSF10D
Negative_15088	AGL, BTK, CP, EPO, FGG, GBA, IL9, PGP, ACVR1, ADCY1, AGPAT3, ALDH5A1, AMPD1, AMY2B, ARD1A, ASAH1, ASNS, ATP50, ATP6V1F, C4BPA, CASP8, CAV2, CCL19, CCL7, CD48, CDC27, CDC42, CDH2, CDKN2A, CIITA, CLCA4, CLDN6, COQ3, COQ7, CTSG, CYP3A7, DDX23, DDX55, DEGS1, DERA, DGKA, DLAT, DOCK1, DPYS, EHMT2, ENO1, EPHA2, FCGR3B, FSHB, FUT1, FUT2, FUT5, GABARAP, GALNT8, GCNT4, GDE1, GGT7, GLDC, GLYCTK, GSTZ1, GUCY2D, HYAL2, IAPP, IDH3A, IFNA21, IL17A, IL1R1, IL28B, IL2RA, IL4R, IQGAP2, ITGA2, KLRK1, LTBP1, MALT1, MAP2K2, MDM4, MGST1, MYD88, MYH3, MYL9, NCR2, NMNAT3, NOX3, NR4A1, OR10AD1, OR10AG1, OR13C5, OR1C1, OR2A12, OR2T1, OR4N4, OR51G2, OR51Q1, OR5B3, OR6B2, OR8S1, ORC6L, P2RX3, PDE7A, PDE8A, PFA, S, PIGC, PIP4K2B, PIP4K2C, POLR2J, POLR3K, PPP1R3C, PRDX6, PRSS3, PTSCRA, PTPN11, RAC3, RASSF5, SDHA, SELE, SMURF1, STX10, STX3, TAS2R60, TBL1X, TGFB2, THBS4, TP73, TRAF2, TYROBP, ULBP1, ULBP3, VNN1, WNT8B

Negative_15089	<p>ADK, C5, CD2, EZR, F7, GH2, IL9, LIF, ME2, MPL, TAT, ABLIM2, ACSM1, ACVR1B, ADCY1, ADRA1A, AFMID, ALAS2, ALDH9A1, AREG, ARPC1B, ATP12A, BDNF, BIRC3, C9orf95, CACNG4, CARD11, CAV3, CCL8, CCND3, CCNH, CD22, CD82, CDC16, CDKN1C, COL2A1, COMT, CRB3, CREB1, CUL1, CXCL9, CYP11B1, CYP19A1, CYP21A2, CYP2F1, CYP3A4, CYP4A22, DARS2, DDB2, DEGS2, DUSP2, ENTDP5, EP300, EXTL1, FADD, FGF5, GALK2, GALNTL5, GBA3, GFAP, GJA1, GLUD1, GMPR, HMOX1, HNF1A, IGF1, IL1A, IMPDH2, LHCGR, LYPLA1, MAP3K1, MCM4, MMP14, MYLK, NADSYN1, NARS2, NCR3, NFKBIB, NPR1, OR10AD1, OR10H4, OR10R2, OR1D2, OR2A42, OR4C16, OR4D1, OR4D9, OR4F4, OR51V1, OR52E2, OR52N4, OR52R1, OR5J2, OR5T1, OR5T2, OR6A2, OR6N1, P2RX2, P2RX4, P2RX5, PAPSS1, PCCA, PDXK, PEMT, PGAM1, PIM2, PLCB4, POLD4, POLR2F, POLR3D, PPARD, PTCH2, PTGS2, RASGRP4, RDH8, RPN2, RPS6KA6, SEMA3G, SGM2, SH2D1A, SH2D1B, SHMT1, SMAD1, SMC1B, SQLE, STT3B, SYNJ2, TAS2R16, TOLLIP, TRAF4, TRAF5, TSLP, TUBB3, UGT2A1, WNT2B, XCR1, YWHAH, ATP6VOD1, MAP3K7IP2, ST6GALNAC1, TNFRSF10B</p>
Negative_15090	<p>CRH, GPI, IL3, IL7, KMO, ME2, NNT, PGP, PML, XDH, ADCY6, ADORA2A, AKR1D1, ALDH3A1, ALDH3B1, ALG13, ALG8, ALPI, ANPEP, APBB1, APOA2, ARHGEF1, ATP6V1D, ATP6V1F, B4GALT4, BDNF, BUB3, CAV2, CBR1, CD58, CHAT, COMT, CSF1, CSF2, CSNK1G2, CTSL1, CYBB, CYFIP2, CYP2C9, CYP2S1, CYP7A1, DGKI, DHDH, DHFR, DHX58, DTX2, DUSP3, ENPP2, EPAS1, ERBB3, FGF19, FTMT, FUT3, GANC, GGT5, GLI3, GPD1, GRIA1, GSK3B, GSTA4, GSTM1, GUSB, HAAO, HLA-F, HSP90B1, IL2RB, IMPA2, INPPL1, ITGA2B, ITGAD, ITGB2, KYNU, LAMC3, LCMT1, LIPC, LRP5, MAP2K6, MAPK7, MAT2B, MGAT1, MYH11, NADK, NADSYN1, NCOR1, NFX1, NME6, NR5A2, NTRK1, NUDT5, OR1E2, OR2T3, OR52A5, OR5AU1, OR6C76, OR6K2, OR6S1, OR8B12, P4HA2, PAK1, PAPSS1, PAX8, PCCB, PCNA, PDE8B, PHKA1, PHPT1, PIP5K3, PITX2, PLAT, PLCG1, POLR2H, POLR3K, PP2R5B, PRSS3, PTPN5, RASA2, RBKS, RBL2, RPS6KA5, RRM2, SELP, SEMA4B, SH2D1B, SH2D2A, SLIT2, SNW1, SPRY2, ST3GAL2, ST8SIA1, TAS2R16, TAS2R8, TICAM2, TJP2, TNFSF4, UGT2B28, ULK3, VAMP4, VARS, VEGFB, WNT11, WNT5A, WNT8A, ATP6V1B1, C1GALT1C1, CSGALNACT1, HLA-DQB1</p>
Negative_15091	<p>AMT, CP, IHH, ILK, LCK, MIF, ALG6, AMDHD1, ASRGL1, ATP5G3, B3GAT3, B3GNT3, C7orf16, CCNA2, CDC27, CERK, CHEK2, CLTCL1, CSF1, CSNK2A1, DDOST, DGAT1, DHCR24, DLL4, DLST, ENPP3, ENPP6, ENTDP2, EPB41L3, EPHA8, ERBB4, EXT1, FABP1, FGF14, FGF20, FUT8, GAD1, GADD45B, GALNT1, GDF7, GNAT3, GNG3, GP1BB, GUCY2F, H6PD, HAP1, IFNK, IL12A, IL1B, IL25, IL2RB, ITGA11, KRAS, LIPE, LRP6, MAP3K1, MAT1A, MGST3, MS4A2, MYD88, NME4, NOTCH2, OR10R2, OR13C4, OR1D5, OR1L1, OR2H2, OR2L8, OR2V2, OR2Y1, OR4C13, OR4N4, OR56A4, OR5AC2, OR5AK2, OR5B21, OR5D16, OR6Q1, OR7G1, OR9G1, PARVB, PER3, PFKFB1, PIGO, PIK3CA, PIPOX, PLXNB2, PLXNC1, POLR1C, PPP2CB, PSAT1, PVRL3, RAPGEF2, RARS, SH3BP2, SMAD1, SQLE, ST3GAL2, STAT1, SULT1A1, TAS2R4, TAS2R41, TD02, TNFSF9, TRAF3, TRPM5, TUBA8, TUBB, VDAC1, WNT2B, WNT3, WNT6, XCL1, YWHAH, C1GALT1C1, MAPKAPK2, SUV420H2, TNFRSF10C, TNFRSF10D</p>

Negative_15092	CGA, CRH, EDA, F7, GGH, GSS, KMO, LTB, RDX, AASDH, ACACA, ACOX2, ACSL4, ACSS1, ACTG1, ACTN2, ACVR1, AGPAT4, AMHR2, APPL1, ARHGEF2, ATG7, ATP5H, B4GALT6, BCAR1, BET1, BLVRB, BMP4, BMPR2, CACNG5, CBLB, CCL14, CCL5, CD38, CDK2, CHRNA7, COL4A6, CREB1, CTLA4, DFFA, DGKQ, ECSIT, EDNRB, EGLN3, EHMT1, ENAH, EPOR, EXT1, FCGR3B, FLT3, FSHR, FZD8, GATM, GCNT2, GSTA3, HNF4A, HSD3B1, IFNA10, IFNGR1, IL11, IL21R, IL3RA, IL9R, ITGA3, ITGAD, JAM3, KIR2DL2, KLRC1, LDHD, MAP3K4, MAP4K4, MCM3, MGLL, NCOA4, NEFM, NRG1, NTNG1, OR10A5, OR13C3, OR1F1, OR1M1, OR2F1, OR2S2, OR4C12, OR6B3, OR6N2, OR8S1, OR8U1, OR9A2, OR9A4, PAX8, PDHA1, PDXK, PFN4, PGS1, PIK3R4, PLA2G6, PLCB4, PNPLA3, POLR2B, PPP1CC, PRKACA, PRKAG2, PRKCA, PRPH2, PTTG1, RAB5A, RDH16, RUNX1, SHMT1, SIAH1, SKP2, SLC27A4, SOD1, STAT3, TGFB2, THBS3, THTPA, TIAM2, TJP1, TM7SF2, TPST2, TRDMT1, TUBA1B, UXS1, VASP, YARS, YES1, AASDHPPT, ATP6V1B1, PLA2G12A, TNFRSF10D
Negative_15093	BTK, C3, C8G, DCC, DLD, LCT, LHB, SCD, SPN, AARS, ABLIM2, ABLIM3, ACOX2, ACOX3, ACP1, ACSL5, ACVRL1, ADH7, ADIPOR1, AKR1C4, AKT2, ATP6VOB, B3GAT1, BBC3, CACNA1B, CACNA1H, CACNB1, CBLC, CCL17, CCL26, CDKN2A, CHRM3, CLDN5, CNGB1, COL3A1, COL4A1, COX10, CREB3L4, CSF2RB, CTNND1, CYP1A1, CYP2A13, DAAM1, DGKG, DHRS9, DVL3, EFNA5, EGLN3, ERO1L, FCER1G, FGFR3, FOXO1, FZD6, GAB1, GALNS, GMPR2, GNAO1, GRIA1, GRLF1, GSTM3, GUCA1B, HSD3B2, HSPA8, ICOSLG, IDH3B, IDI2, IL13RA1, IL4R, IMPDH2, ITGA6, KITLG, KLKB1, LAMA4, LFNG, LRP6, MAOA, MAP2K1, MAP3K7, MCM2, MCM6, MKNK2, MYH3, NCAM2, NCOR1, NCR3, NEFM, NFKB1, NFKB2, NFYB, OR13C3, OR1J4, OR2T2, OR3A2, OR4C16, OR52L1, OR5B12, OR5H2, OR8D1, OXCT1, PDE4B, PDE6D, PIK3CG, PLA2G2F, PLA2G3, PLOD1, PPBP, PRKCI, PRKY, PRLR, PRNP, PYCR2, RBPJ, RPSA, RUNX1T1, SCD5, SEMA3B, SEMA4B, SEMA4C, SETD1A, SH2D1A, SPRED1, STX16, SUV39H1, TCF7L2, TGDS, THBS2, THTPA, TNFSF11, TUBA8, TUBB3, TYMP, UGCG, UGT2A1, WNT11, WNT4, WWP1, YKT6, PNLIPRP1, TNFRSF10D, TNFRSF12A
Negative_15094	BTD, CDA, CTH, DDO, F10, F8, FN1, MPZ, MSN, VTN, ACSM2A, ACSM4, ADH1A, ADRA1A, ADSL, AGPAT1, ALDH1B1, AOC3, ARNTL, ARPC2, ASMT, ATP6V1A, B3GAT1, B4GALT1, BMP8A, BUB3, CCL13, CCNB3, CCR1, CCR3, CD82, CHD8, COL5A1, COL6A2, CREB3, CXCR5, CYP2D6, DHRS4L2, DLL3, DPYSL2, DTX1, DUSP8, F13A1, FABP4, FBXW11, FCGR3A, FGF11, FUT6, FZD7, GALM, GANC, GNAI1, GNAS, GNG13, GNRHR, GOT1, GRAP2, GSTM5, GSTO1, HARS, HLA-DOB, IFNA2, IFNA8, IKBKB, IL29, INADL, ITCH, KDSR, L1CAM, LRDD, MAP3K4, METTL2B, MTMR1, NFKB2, NFX1, NODAL, NOS3, NRG4, NUMBL, OR13C3, OR1L8, OR2A14, OR2A4, OR2B6, OR2L3, OR2Z1, OR51A4, OR51E2, OR52N1, OR6C3, OR8A1, OR8U1, OR9A4, OXCT1, PCYT1B, PDGFB, PDGFRA, PGAM2, PGAP1, PIK3CA, PIP5K1A, PNPLA4, POLR2E, POLR2F, PSPH, RARS, RASA1, RBKS, RBPJ, RHOQ, SKIV2L2, SLC25A4, SLC33A1, SMC1B, SRGAP1, SSH2, ST3GAL1, STMN1, STX10, TBXAS1, TPMT, TUBA1A, UGT2B17, VAMP1, VDAC3, WNT3A, WNT5A, YWHAH, YWHAQ, ZFYVE16, ATP6V1E2, SLC25A31, ST6GALNAC1

Negative_15095	<p>AMH, FGA, GGH, HK2, IL3, AANAT, ABAT, ACADVL, ACAT1, ACTA1, AKR1C1, ANAPC7, ASPA, ATP5A1, B3GNT5, BCL2L1, BHMT, BNIP1, C4BPB, CBR1, CCL3, CD28, CHR1, CKMT2, CNGA4, COL5A2, COL6A2, CYP2S1, DOCK1, DTYMK, DUSP8, ENPP3, ENTPD1, FADS2, FGF2, FGFR4, FSHR, FUT2, FUT8, GDF7, GP1BB, GSTP1, HCCS, HLA-DOA, HRH2, HTR7, IGFBP3, IL12B, IRAK2, IRF5, ITGA5, ITGAL, KNG1, L1CAM, LCAT, LYPLA2, MAFA, MAP4K1, MAP4K4, METTL2B, MGST2, MMP14, MTAP, NFKB1, NGEF, NPR2, NT5M, OR10S1, OR10Z1, OR11H6, OR13C9, OR1S2, OR2A42, OR2Y1, OR3A2, OR3A3, OR4A16, OR4F5, OR51T1, OR52I1, OR5A2, OR5J2, OR5T1, OR6K6, OXTR, P2RX7, PCK1, PCK2, PDE10A, PDE1A, PDE1B, PER3, PFKM, PHKG2, PIGB, PIGH, PIM2, POLR1D, POLR3B, PPP3CA, PTPN7, RAF1, RASSF1, RHOD, ROBO2, SEMA7A, SETDB2, SKIV2L2, SMPD4, SPHK1, SSH2, STK3, TAP1, TAS2R1, THBS2, THBS4, TIAM1, TP53I3, UBE2L6, UGCGL1, ULBP2, VEGFC, WNT9B, CSGALNACT2, CSNK1A1L, CTNNBIP1, HLA-DRB4, TNFRSF10D</p>
Negative_15096	<p>F7, GH2, LPL, ME2, OGT, PML, RDX, AARS, ABP1, ACACB, ACSL5, ADCY1, ADORA2B, ALAS2, ALG10, ANAPC11, ANAPC5, ANPEP, ARHGAP5, ARPC1B, ATP6V1H, BCAR1, BLVRB, CCL1, CCND3, CCR2, CD27, CD72, CDK6, CMBL, CSNK2B, CTBP2, CTBS, DDIT3, DHCR7, DLL1, DTX3L, EIF4B, ENO2, EPHB4, FECH, GALC, GAPDH, GNAI2, GUCY2D, HMGCS1, HRH1, HSPA1B, HSPA2, IDUA, IFNA7, IL17A, IL20RB, IMPA2, INHBC, IQGAP3, ITGA3, ITGA6, ITGB4, JAK3, KLRC3, LEFTY1, LIPC, MLLT4, MTHFD2, NCF2, NEU2, NQO1, NT5C1B, OR10H2, OR11H6, OR13H1, OR4C15, OR4S2, OR51A7, OR52A5, OR52N4, OR7C1, P4HA2, PARVB, PDGFD, PDIA4, PDXK, PHKA1, PHKG1, PITX2, POLR1E, PPAP2B, PPP2R1A, PRKAB1, PRSS3, PSEN1, PTPN1, PTPRJ, PYGL, RAC1, RAC3, RAP1A, RASA2, RUNX1, SC5DL, SEMA3D, SETD7, SLC2A2, SMAD9, SOCS4, ST8SIA5, TAP1, TBK1, TBXA2R, TCF7L2, TUBA3C, TUBB2A, TYMP, UNC5C, XCL2, YOD1, ARHGEF12, TNFRSF10A, TNFRSF12A</p>
Negative_15097	<p>BTC, BTK, CSK, F11, GPI, SHH, VTN, ABAT, ACSM5, ACVR1B, ADH1B, ADH5, ADORA2B, ADRBK2, ALAS2, ANAPC10, ATP2A3, ATP4A, AVPR1A, AVPR1B, BMPR1B, BPNT1, BUB1B, CACNA1S, CAMKK2, CD3E, CHAD, CLDN11, CMBL, CNGB1, CSF2RA, CSNK1E, CTNNA1, CXCL10, CXCL13, CYP2C9, DEGS1, DGAT1, DHDDS, DHX58, DLL1, DPM2, DTX3L, DUSP1, DUSP9, EFNA3, EIF4E2, ENTPD4, F13A1, FABP3, FGF14, FUT8, GALNT8, GATM, GFPT2, GGT1, GRIN2B, GRIN2D, GUSB, IL12RB2, IL17B, IL17RA, IPMK, LAMB2, LCP2, LIPA, MAD1L1, MAPK10, MASP2, MCM5, MEF2C, MGAT4A, NKX2-2, NRCAM, NT5C1B, OR10G7, OR10X1, OR1A2, OR1L4, OR2C1, OR4A5, OR4M2, OR51E1, OR52A1, OR52W1, OR5T2, OR6B2, OR6X1, OR7A5, OXCT2, P2RX6, PAPPSS1, PARD6G, PDGFRA, PFKFB2, PIP4K2B, PLA2G2D, PLTP, PPP1CA, PPP2R2B, PRSS3, PTPRC, RAP1B, RBPJ, RFNG, RPIA, SDHD, SESN3, SFRP5, SGMS2, SIGLEC1, SOCS2, SPHK1, ST3GAL4, STAM2, STMN1, SULT1A2, TAS2R50, TBL1Y, TBXAS1, TGFA, TLR5, TNFRSF4, TRAF5, TRMT11, TSTA3, ULBP1, WHSC1, WNT10B, YWHAZ, CSGALNACT2, TNFRSF13C, TNFRSF1B</p>

Negative_15098	<p>ADO, SYK, AADAT, ACSL5, ACTG2, ADIPOR1, ADRA1A, AGPAT6, ALDH1A2, ALDH1B1, ALDH9A1, ALOX12B, APBB1, APPL1, ARD1A, ARNTL, ATP6V1A, BCL10, C1QC, CACNA1B, CADM3, CCNA2, CDH3, CDK2, CFL2, CHST12, CLCF1, CNGA4, COL4A1, COX10, CTLA4, CTNNB1, CYP27A1, CYP2D6, CYP2E1, CYP2U1, DCXR, DDHD1, DGUOK, DPM2, DPM3, DVL2, EDNRA, ENO3, EPB41, EPHA2, ERBB2, FAR2, FARS2, FARSB, FZD4, GAD2, GADD45B, GALM, GCNT4, GFPT1, GLUD1, GSTZ1, HA02, HAP1, HNF1B, HPSE, IL2RG, INMT, IRS1, ITGAL, KLRC3, LAMA3, LFNG, LPAR1, MAPK3, METTL2B, MKNK1, MTMR2, MYH1, NANS, NCSTN, NFYA, NKX6-1, NRXN2, OR10H4, OR10K2, OR10T2, OR13C3, OR1E2, OR4D1, PAFAH2, PDGFR, PIGT, PIK3R4, POLR3G, PPA1, PPARG, PPOX, PPP2CB, PRKG2, PRKY, PTAFR, PTCH1, PVRL1, RAC1, RENBP, RFXAP, ROCK2, SLC27A1, SMAD7, SMPD4, SOCS7, TACR1, TAP1, TAS2R7, TAS2R8, TBK1, TCIRG1, TGFBR1, TRADD, TSLP, VAMP4, VEGFC, WNT6, WNT8B, ARHGEF12, HLA-DPB1, MAP3K7IP1, MAPK8IP2, TNFRSF13C</p>
Negative_15099	<p>ASL, C8A, F12, IL7, LPL, MPZ, MTR, ABP1, ACY1, ALG3, ALG5, AMHR2, ANAPC10, AOX1, ARSE, ASRGL1, ATG12, ATP5C1, ATP5D, B4GALT1, BACE2, BPGM, BST1, CACNA1I, CALML5, CASP10, CCNA1, CCR2, CD79A, CDH15, CDKN1A, CEP350, CHIA, CHRNA7, CLCF1, CLDN3, CNTF, CSNK1G1, CSNK2A1, CYP11B1, CYP2C19, CYSLTR2, DDX19A, DDX41, DDX50, DGKA, DLAT, DTX3L, E2F3, EDNRB, EFN1, EIF4E, ENPP3, ENTPD6, EPHA2, EPHA7, FBXW11, FGD3, FRAT1, GALNT3, GALNTL2, GNRHR, GUK1, HDAC1, HLA-DRA, IL17B, IL1A, IL8RB, INSR, KDSR, KIR2DL1, LTB4R2, MAML3, MAN1A1, MAP3K4, MAP3K6, MPP5, MTFMT, MYH13, MYL9, NAMPT, NARS, NCAM1, NCOR2, NEUROD1, NKX6-1, NRXN3, OR10A4, OR10G9, OR10P1, OR2F2, OR2K2, OR2M5, OR2T3, OR4D6, OR52W1, OR5AS1, OR5D18, OR6B2, OR8K1, PANK4, PDXK, PGK2, PLA2G2A, PLCD1, PLK1, PNLIP, PPP2R2B, PPP2R5A, PTAFR, PTPN6, RAPGEF2, RARS2, RGS3, RPSA, SDHA, SESN1, ST3GAL5, ST8SIA1, STX4, SULT1E1, TAS2R5, THBS3, TLR9, TNFSF10, TPI1, TPMT, UGDH, UGT2B11, UGT2B28, VNN1, XYLT1, ZMAT3, CTNNBIP1, SLC25A31</p>
Negative_15100	<p>AMH, BTC, CKB, CRK, HK2, IL9, LCK, LEP, MVD, TFG, AHCY, AKR1A1, AKR1C1, AKR1C3, ALDOB, ALG10, APC2, ARSE, BCL2L1, BMP2, CACNG3, CCL14, CCL16, CCL21, CCL28, CD99, CHUK, CISH, CLTB, CNTNAP2, CTSS, CXCL6, CYP26B1, CYP26C1, CYP27A1, CYP2A6, DAAM2, DTX2, DUSP16, ENPP1, EPHB2, EXTL3, F2RL1, FCGR2B, FLAD1, FSHR, FUT7, FZD2, FZD8, GAMT, GARS, GFPT1, GGP1, GGT7, GSTA1, GSTM3, GUCY2C, HLA-DMA, HSD17B4, HSD3B7, IFT57, IL11RA, IL25, IRF3, KAT2A, KCNQ1, LAMC3, LRDD, MAPK10, MARS, MKNK1, MTAP, MYH4, NARS, NEU2, NFKB2, NLGN2, NME4, OR10A7, OR10H3, OR10J3, OR12D3, OR2L2, OR2M7, OR2T5, OR4D9, OR4K14, OR51A2, OR51V1, OR5J2, OR5T1, OR7C1, OR7G2, OR9K2, ORC1L, ORC3L, OXSM, PDE1B, PDX1, PDXK, PFKFB4, PISD, PLAU, PNPO, PRKAR1B, PRNP, PSAT1, PTAFR, PTPN6, RDH11, RFXANK, RHOA, RPIA, SARS2, SCLY, SGMS1, SLC25A4, SOX17, ST3GAL1, STX18, SYNJ2, TGFB1, TLR4, TMLHE, TNXB, TPMT, TRADD, TRIP10, ARHGEF12, C1GALT1C1, EIF4EBP1, HLA-DRB5, SERPINF2, SUV420H2</p>

Negative_15101	CD4, FUK, GAA, GK, IHH, MVD, OAT, ABL1, ACHE, ACSS1, ALG3, AMY2A, AMY2B, ARNTL, ATG12, ATP5L, BMP4, CACNA1E, CACNA1G, CAMK2B, CCL11, CD55, CD8A, CDC27, CDS2, CEBPA, CKMT2, CLDN17, CNTNAP2, CSF3R, CXCL1, CYP2B6, CYP2F1, CYP7A1, CYSLTR1, DDIT3, DLL3, DNMT1, DPAGT1, DPM2, EARS2, ENTPD8, ETNK2, FABP3, FBXW11, FCGR3B, FDFT1, FGFR1, FOXA2, GAD2, GUCY1A2, GZMA, HADHB, HBEGF, HMGCS1, HMGCS2, IFNA14, IFNAR2, IFNGR1, IL13, IL1R1, INADL, IQGAP1, ISYNA1, ITGA5, KCNB1, LCMT2, LFNG, LIFR, LRP6, MAPK10, MMP1, NCKAP1, NCKAP1L, OR10G9, OR4D2, OR4M2, OR4X1, OR52H1, OR52L1, OR6M1, OR8A1, OR8B12, OR9A4, OR9Q2, OXCT2, PAPSS2, PARD6G, PDE10A, PIGM, PITX2, PLK1, PRIM1, PRKCQ, QPRT, RAPGEF1, RDH8, RFWD2, RFXANK, RIPK1, SGMS2, SMAD2, SOCS3, SOD1, THTPA, UGT2B28, VDACC3, VEGFC, ATP6V1E2, ATP6V1G3, KIR2DL5A, PLA2G12A
Negative_15102	AMH, EPO, ID2, JUP, ACAT1, ACOX3, ACSL3, ADRB2, ALG5, APC2, ARPC1B, BAI1, BDH1, CACNA1H, CACNB4, CALML6, CANT1, CCNG2, CD244, CD247, CD82, CLCF1, CX3CR1, CYCS, CYP21A2, DDX55, DTX3L, EDA2R, EFNA2, EGLN1, ENO2, EPHA8, FGF20, FIGF, FZD9, GADD45A, GALNT8, GAPDH, GBE1, GGT5, GLS2, GNA12, GRB2, HLA-DOB, IFNA2, IFNA5, INPP5E, IRF3, ITGA5, ITGB6, KIR2DS4, LALBA, MADCAM1, MAML2, MAN1C1, MBL2, MIOX, MITF, MMP14, NCR2, OR12D3, OR13H1, OR1D5, OR1L1, OR1L3, OR2W1, OR4X2, OR52H1, OR5AP2, OR5T1, OR8H1, OR8J3, OR9G4, PARD6G, PGAP1, PIK3C2G, PNPO, PON2, PPAP2B, PPBP, PPP2R5D, PTCRA, PYGL, RUNX1T1, SETD1A, SMAD2, SOAT2, SOCS2, SOS1, SPRY4, SSH3, STX4, SUOX, TAS2R16, TPH2, TUBA8, TUBB2A, TUBB4Q, TYMS, UGT2B4, WHSC1L1, WNT4, CSGALNACT2, MAPK8IP2, PAFAH1B1, TNFRSF10C
Negative_15103	AK2, CD2, DAO, FH, FUK, RB1, RPE, ADAM17, ADRB3, AGPAT3, AOC3, APLP1, ARPC4, ATP5J, ATP6V1F, BACE2, BMPR2, C1QC, CACNG6, CADM1, CAV2, CBLB, CCKAR, CCKBR, CCL25, CCNA1, CCR10, CD34, CD82, CDC26, CDK7, CFTR, CLDN3, CSAD, CTNNA1, CYP1A1, CYP1A2, DDX51, DHODH, DHRS3, DLL3, DTX1, EPHA4, FGF22, GAB1, GALNT13, GALNT5, GSTA4, HIBADH, HMGCL, HSD17B4, HSPA2, IDI2, IFNA10, IFNGR2, IL15, IL17A, IL18, IL1R2, ITPA, JUND, KLRC2, LDHAL6B, LEF1, LEFTY1, MAGI1, MAML1, MAP2K3, MAP3K11, MCCC1, MINPP1, MTHFD1L, MTHFS, MYH10, NARS2, NCK1, NEU3, NFATC1, NFATC2, NLGN2, NT5C3, OR10A2, OR13C3, OR2D3, OR2L8, OR51M1, OR52N5, OR56A1, OR56A4, OR8I2, OR8S1, PCCA, PDCD1, PDE6G, PDE8A, PDGFRA, PER3, PGK1, PIM2, PLA2G1B, PMVK, PRKCB, PRKCD, PRODH2, PROS1, PTPRR, RALA, RND1, RPRM, RPS6KA6, SCLY, SETDB1, SETDB2, SGPP2, SH3BP2, SHC2, SKIV2L2, SOD1, SRD5A1, STAM2, TAS1R1, TBXA2R, TFDP1, TKTL2, TPMT, TRPC1, TUBB4, UGT2B10, YES1, ZFYVE9, PPARGC1A
Negative_15104	AR, DBI, F9, FH, IL8, MET, SMO, TH, ADAM10, ADCY1, ADH7, ADORA2A, AK3L1, ALAS2, AREG, ASAH1, ATP5I, B3GNT2, B3GNT4, BIRC5, C4BPA, CACNG8, CAMK2A, CARD11, CASK, CAV2, CCL25, CCL27, CD48, CMAS, COQ5, CYCS, CYP2A7, DAG1, DFFB, DGAT2, DPAGT1, DPM2, DPYD, DVL2, EFNA4, EIF4E, ETNK2, FARS2, FASLG, FGF14, GALM, GALNT11, GALNTL5, GBGT1, GCAT, GLB1, GNA14, GNPAT1, GPLD1, GSK3B, GZMA, H6PD, HMBS, HSD17B1, HSD17B4, IKBKB, IL2RB, IRAK4, ITGA9, JAK1, KCNB1, LAMB3, LAP3, LIAS, MAFA, MAP2K5, MAP3K11, MAPK11, MYH2, MYH8, NCK2, NLGN3, NMNAT2, OLAH, OR11G2, OR1L4, OR2S2, OR4D1, OR4X1, OR51S1, OR6C3, OR6C74, OR8D4, P2RX6, PDE3A, PDHA2, PGAP1, PHKG2, PIAS3, PIGC, PIK3C2A, PIM1, PLCD1, PPM1B, PPP2R5D, PPP2R5E, PRKACA, PRLR, PTPN7, PVRL2, PVRL4, RAP1A, RPN2, RXRB, SEMA3E, SGPP1, SH3BP2, SLC2A2, STX1A, TAS2R16, TICAM1, TLN2, TOMM40, TOMM40L, TRHR, TUBA3C, TUBA4A, TUBA8, TYK2, UGT2B7, UMPS, UPRT, VAV2, WBSCR17, ATP6V1G2, HSP90AB1, MAPK8IP3, PLA2G12A, PNLIPRP2

Negative_15105	<p>AGL, C6, C8A, C9, CAT, CGN, CP, EGF, HGF, PGP, AANAT, ACACB, ACP6, ACPT, ACSM5, AGXT2, AKR1C3, ALG13, ALG3, ANAPC10, AOC2, ATP12A, ATP6V0B, B3GAT2, B4GALT4, BAI1, BIRC3, BMP8A, BMPR1A, BRAF, C4BPB, CACNA1C, CACNA1F, CACNG3, CACNG5, CADM1, CD70, CLDN22, CLDN5, CNDP1, CNGA4, COL4A6, CSAD, CTSL1, CXCL2, CXCL5, CYBB, DDIT3, DDX56, DEGS2, ELK4, EPHA2, EXOC7, FABP3, FDPS, FGF20, FGF3, FMO3, FZD9, GLG1, GMPR, GNPAT1, GRIN2C, HAAO, IDI1, IFIH1, IFNA17, IL10, IMPA1, ITGA8, ITGB7, LAMC1, LCP2, LYPLA1, MAD1L1, MAML1, MAML2, MAP3K1, MAP3K14, MDM4, MTFMT, NKX2-2, NOX1, NSD1, NT5M, OR1E2, OR1S1, OR2M3, OR2T4, OR4C11, OR4K17, OR4M1, OR52A1, OR52K1, OR52R1, OR5AU1, OR5V1, PCK2, PER3, PIGX, PIP4K2A, PIP4K2C, PON3, PPP1R3A, PPP2R5B, PRKAG2, PRKG2, PTPRF, PYGB, PYGM, RBPJ, RBX1, SCIN, SDC4, SEMA3F, SHC1, SLC27A4, SLC9A1, SMURF1, SORD, TAS2R7, THBS2, TNFRSF8, TRPC1, TSNARE1, TUBAL3, TUBB1, UAP1, UCK2, UGCG, VAMP3, B4GALNT1, C1GALT1C1, TNFRSF1B</p>
Negative_15106	<p>AMT, BTC, C3, C6, F12, FAH, FAS, FH, GNE, IDS, IL2, KMO, MVK, TAT, ACTN2, ADRB2, AHCYL2, ALCAM, ALG13, AMPD3, ANAPC4, APOC3, APOE, APPL1, ARPC4, B3GNT4, BDH1, BDH2, BET1L, BUB3, C1QB, CCKBR, CCL27, CD86, CDC45L, CDK5, CDK6, CFL1, CHIT1, CMBL, CSF3, CTBS, CTNNA1, CYP27A1, DAPK1, DE RL1, DGKI, DKK2, DMGDH, DUSP3, EGLN3, EIF4E, EPOR, FARSA, FDPS, FGD3, FGF19, G6PC2, GAL3ST1, GALK2, GALNT8, GATM, GBE1, GMPPA, GMPS, GUCY2C, GZMA, HIF1A, IDH1, IFNA5, IL10, INSR, IRS2, LLGL2, LTC4S, MAN1A1, MAP3K13, MAP3K7, MCM6, NLGN2, NRG1, NT5C, ODC1, OR10G8, OR10P1, OR1J1, OR1S2, OR2C1, OR2M5, OR2T3, OR4B1, OR4M1, OR4Q3, OR51B6, OR6C74, OR6N2, OR8S1, ORC6L, PAFAH2, PARD3, PDHA1, PGK1, PGK2, PIK3R2, PPA2, PARG, PPP1R3C, PPP2R5E, PRKAA1, PRKCQ, PTPN7, PTPRB, RDH11, SEMA4D, SFRP2, SIGLEC1, SLC2A4, STAT4, STAT5B, STT3B, STX2, STX6, SV2C, TLR3, TOLLIP, TOMM40L, TRAF2, TRHR, TRPC1, TUBA3E, UBA1, UNC5C, VTI1B, WNT7B, WNT8A, WNT9A, WNT9B, YWHAQ, ATP6V1G2, ATP6V1G3, CACNA2D1, PHOSPHO1, TNFRSF18</p>
Negative_15107	<p>AMT, DBI, GDA, HK3, IDS, TEC, ABLIM1, ACHE, ALG2, ALG6, ARG1, ARSD, ATP5H, ATP5O, B3GNT5, BAI1, BET1, CACNA1S, CACNG6, CADM1, CAMK4, CES1, CKMT2, CLDN10, CLDN22, COQ3, CYP4F3, DLST, DNMT3L, DUSP5, EDAR, ENTPD1, ERO1L, FGF19, FGF21, FGF7, FLOT1, FLOT2, FUT1, GCNT4, GGCX, GLS2, GMPPA, GNA14, GNAI1, GNAI3, GP1BB, GSTK1, GSTM3, HARS2, HMGCS2, IFNA16, IFNW1, IL12A, INADL, IRAK2, IRAK3, ITGA10, ITGA4, KCNQ1, KIR3DL1, KLRC4, KRAS, LARS2, LCP2, LEPR, MAN1B1, MAN1C1, MAP2K4, MKNK2, NFATC3, NMNAT1, NPR1, NRAS, NRG2, NUDT12, OR10H4, OR2L2, OR4C46, OR4D11, OR4M2, OR51Q1, OR52N1, OR5A1, OXTR, PAFAH2, PDE4A, PER2, PIGA, PIK3R4, PIP5K1B, POLA2, POLR3G, POLR3K, PPP1CB, PPP1CC, PPP2R5E, PRIM1, PRKCZ, QARS, RALB, RASA1, RHOD, SEMA7A, SEPHS1, SFRP2, SLC12A2, SMAD9, SNW1, ST6GAL1, STAM, STK3, SULT1A1, SUV39H1, TCF7L1, TFDP1, TGFB1, TKTL2, TP73, UGCGL2, UGP2, UGT2A1, UROD, VAMP1, VANGL1, VARS, WASF2, YWHAB, ZFYVE9, ATP6V1C1, MAPKAPK2, PRICKLE1, SERPINE1, ST6GALNAC4</p>

Negative_15108	BAD, BID, FAS, ID4, KDR, LCT, MVK, MYC, PGF, SPN, ACP5, ACSM4, ADCY2, AD CY5, ADRBK2, AGPAT1, AGRN, ALDH1A1, ALDH3A2, ALG9, APRT, B3GALT4, BL VRB, CACNG4, CACNG5, CADM3, CAMKK2, CCND1, CCR6, CD8A, CERK, CHEK2, C LOCK, CSF3R, CXCL9, CXXC4, CYBA, CYP26B1, CYP26C1, CYP3A43, DARS, DA XX, DCTN1, DEGS2, DERA, DPYSL2, DUSP14, ETNK1, FGF21, FUT9, GALNS, GA LNT2, GALNT3, GALNT6, GALNT7, GALNT9, GCDH, GNAI2, GNPAT1, GSTA2, G STA4, GSTM3, GSTM5, GSTO1, GUCY1A3, HTR2C, ICAM3, IFNA14, IL28RA, IT GA5, KLRK1, MADCAM1, MAGI1, MAPK7, MAT2B, MCCC1, MICA, MTMR1, MYH8, M YL5, NCAM1, NCKAP1, NFKBIB, NKD1, NQO1, OGDH, OR10AG1, OR11H1, OR13D 1, OR1D5, OR1F1, OR2K2, OR4D2, OR4K2, OR51E1, OR52I1, OR52K2, OR5AK2 , OR5L2, OR6K2, OR6K3, OR7G2, P2RX2, P4HA2, PFKM, PGM3, PLD1, POLR1D, POLR3K, PPP1R1A, PPP2R1A, PPP3R2, PRKCQ, PRSS3, PTCRA, PTDSS2, RASS F5, RBL2, RDH10, RERE, RPS6KA6, RUNX1T1, SARS, SLC25A4, SLC2A2, SMAR CA5, SNAP23, SNW1, SOAT2, SOCS5, SPCS1, SPI1, SRD5A1, STX2, SUCLA2, T HBD, TP53, TRMT11, TYRP1, WNT10A, PPP1R12A, SERPINC1, SERPINE1
Negative_15109	AR, F12, FGA, GNE, ID1, KDR, SRF, ACP6, ACTG2, AGMAT, AGPAT4, ALG12, AM Y2A, APPL1, ASCC3, ATF4, ATP5J, B3GNT5, BAAT, BCKDHB, BIRC2, BMP8A, B MPR2, BPGM, BTRC, C7orf16, CAMK2A, CD274, CD47, CD99, CDH15, CD01, CE S1, CLDN2, COQ7, CYP19A1, CYP27A1, DDX4, DPM2, DRD5, DUSP7, EFNA5, EN PP2, EPHB6, FARP2, FCGR2B, FGF12, FGF17, FGF2, FLT3, FZD9, FZR1, GALN TL1, GALT, GFAP, GNAO1, GNB3, GNPAT, GOSR2, GRIN2B, GYS2, HDAC1, HMGC S2, HNF4G, IFNK, IL17RB, IL1R1, IL7R, ITGAV, KRAS, LLGL1, MAP3K8, MOV 10L1, MTMR1, MYL5, NCAM1, NFKBIA, NGEF, NOS1, NT5M, NTF3, NTRK1, OR10 A7, OR10G7, OR10Q1, OR11H6, OR1J4, OR1L1, OR4C11, OR4P4, OR51A4, OR5 AP2, OR5M3, OR6M1, OR6X1, OR8U1, OR9G4, PAK1, PDHA1, PDPK1, PFKFB1, P HKG1, PIK3CG, PLCD1, PLCE1, PLOD3, POLR2D, POLR2I, POLR3A, POLR3K, P PP1R3D, PPP5C, PRODH2, PSEN1, PTEN, PTPRF, QPRT, SETD2, SETDB2, SH2D 2A, SHC2, SMPD4, SORD, SPAM1, STMN1, STX8, TAS2R4, TKTL1, TSHR, TUBB4 Q, VAMP3, VANGL1, VAV2, CACNA2D4, HLA-DRB4, MAPK8IP3
Negative_15110	BAD, C3, CBL, CTH, FUK, GAA, VTN, ABAT, ABL1, ACTN1, ACY1, ALCAM, APC2, APOA5, ARPC5, ATP5B, AVPR1B, BUB3, C4BPA, CASP8, CCL8, COL2A1, CTNNA 3, CUL1, CXCL1, CXCR6, CYSLTR2, DAAM1, DGKZ, DHCR7, DHRS4, DMGDH, EFN B3, EHHADH, EPHB2, EPHB3, FADS2, FGFR2, GALNT5, GCLC, GFAP, GLI2, GLI 3, GMPR2, GRPR, GUCY2C, GUCY2D, HADHA, HRH1, HSD17B8, IL4R, INPP4B, I NPP5A, ITGB4, KIR3DL3, KLRC2, KNG1, LDHD, MAP3K12, MARS2, MYL9, NAGS , NKD2, NME2, NODAL, NT5E, NUMB, OR14C36, OR1J4, OR1K1, OR2L3, OR4K15 , OR4L1, OR51A4, OR51I1, OR51I2, OR5A1, OR5T2, OR7A17, P4HA2, PANK4, PLCB4, PLCD4, POLD1, POLE4, POLR1E, PPP1CC, PPP1R3B, PRKAA2, PSENE N , PSME2, PTDSS2, PTPRM, SH2D1A, SKIV2L2, SLC27A5, STK4, STX18, SUCLA 2, TAS2R8, TBK1, TDO2, TJP1, TP53I3, TSHR, VASP, VDAC2, WNT5B, XCR1, Y WHAB, ZIC2, ATP6VOA2, MAPK8IP3, SERPINA1, SERPIND1, ST6GALNAC3
Negative_15111	AGK, C8B, CFH, FN1, GP5, HGD, ID1, AANAT, ACAA1, ACSM3, ADH6, AGRP, AGT R1, ALDH3A1, ARD1A, ARSE, B3GALT4, BCMO1, CACNA1A, CACNA1B, CADM1, C CDC6, CCL13, CCNE2, CD80, CDC14B, CLDN22, COL4A2, CSNK1A1, CSNK2A2, CTSS, CYP21A2, DHODH, DLL3, DTX1, ECSIT, EHMT2, ENPP3, ENPP7, EPB41, EPB41L2, ERBB2, FGFR4, FM01, FZD9, GADD45G, GALK2, GALM, GALNT7, GAL NTL4, GFPT1, GMDS, GNAT3, GSTM5, ICAM1, IGFBP3, IL11RA, IQGAP3, ITGA E, ITGAM, ITGAX, LEFTY1, LIAS, MAD1L1, MAN1A2, MAP3K11, MAP4K1, MAT1 A, MECR, MGAT5B, MLYCD, MYH14, NAGLU, NCF2, NCF4, NFATC3, NTNG1, NUDT 2, OLAH, OR8D1, ORC3L, PANK1, PARD6G, PDIA4, PDXK, PFN4, PHKA2, PIK3C 2G, PLIN, PLOD3, POLE3, POLR1B, POLR2E, PPP1CB, PRPS1, PSEN2, PTDSS2 , PTGES, PTPN11, PTPRC, RPN2, RPS6KA5, SDC1, SGMS1, SMAD3, SNW1, TAS2 R50, TNFSF10, TRAF5, TRIP10, UGT2B10, UGT8, UNC5D, VDAC1, WASF1, WNT 9B, WWP2, YARS2, YOD1, HLA-DRB4, KIR2DL5A, MAPKAPK3, PRICKLE2



Negative_15112	EBP, GNE, STS, ACOX2, ACVR2A, ADH4, ALG3, ALOX5, AOC3, ATG3, AXIN1, CA CNG7, CADM3, CBR3, CCKBR, CCL19, CD34, CDC25B, CDH5, CDS2, CERK, CES7 , CHST13, CRLS1, CSDA, CYP4F2, CYSLTR1, DARS2, DHCR24, ENPP6, FUT4, G 6PC2, GMPR, GNRHR, GRHPR, GRIA1, GUCY2D, HSD17B7, IL12RB2, IL1RAP, I RAK3, IRS1, KLRC4, KYNU, LARS2, LPAR1, LRRC4C, MAN1C1, MAP3K11, MCCC 2, MGAT5, MGST1, MICA, MTFMT, MTMR2, MYH14, MYLK3, NAE1, NEFM, OR10G4 , OR10J5, OR10T2, OR11H4, OR14C36, OR1S1, OR4S1, OR5A1, OR5D13, OR5T 2, OR7G2, OR9A4, PDCD1, PFKFB1, PGAM1, PIK3R1, PNMT, POLA2, POLD3, PP M1B, PPP2CB, PRKAA1, PTGS1, PTPRZ1, RASGRF1, RPS6KA3, SCIN, SESN1, S GPP1, SIAH1, STAM2, SUCLG1, SV2B, SYNJ1, TIAM1, TPMT, TUBB6, UNC5B, U PP1, WARS2, WNT2, YARS, HSP90AA1, HSP90AB1, SERPINB5
Negative_15113	BTK, CD2, CD6, CKM, IL2, IL6, ME1, MUT, SCD, ACY1, ADIPOR1, AFMID, ALG1 3, ALPL, ANAPC4, ASS1, B3GNT3, B4GALT1, C1GALT1, CACNB4, CAMK2D, CBL B, CCNB1, CD99, CDC42, CHST13, CLDN11, COL4A4, CRB3, CRKL, CSNK2B, CX CL5, CYP2C9, DPYSL2, ELK4, ENAH, ENO3, ENPP3, ENPP6, EPB41L3, EPHA2, FABP4, FGF10, FGF20, FZR1, GAD2, GART, GLUL, GMPS, GOSR2, GRM5, GZMA, H6PD, HADH, HMBS, HNMT, HPSE, HSPB1, KIR2DS5, LYPLA2, MAP3K4, MMP9, M THFD1, MYH4, NAE1, NME7, NRG3, OCLN, OR10G7, OR10H1, OR2G2, OR2L3, OR 4F15, OR4X2, OR52E8, OR52N1, OR52N4, OR9I1, PCNA, PDE10A, PDE6G, PGK 1, PIAS3, PKMYT1, PMAIP1, POLR3H, PTGIS, RAP1A, RASA1, RASSF5, SEMA3 F, SETD1A, SKP1, SLIT1, SMARCA5, SPHK2, SSH2, STX1B, STX6, SUOX, TGFB 3, THBS2, TLR5, TNFSF12, TOMM40L, TRIP10, UGT1A10, WHSC1, WNT4, WWP1 , TNFRSF10B
Negative_15114	AK1, CBL, CR1, FOS, HK2, IVD, MYC, PXN, SP1, TXK, ACOT11, ACSM3, ACSS3, ACTN4, ADH1B, ADSL, AGMAT, ALDH1A1, APBB1, ARD1A, ATP4A, BACE2, BATA P2, C5AR1, CD34, CD59, CD86, CDH4, CER1, CLDN4, CLDN7, CLOCK, CMPK2, C TBP2, CYP21A2, CYP2E1, DERL1, DFFA, DLAT, DNMT3B, DTX3L, ENPP7, FCGR 2B, FGF3, FGF9, FZD8, FZR1, GALNT7, GANC, GCNT2, GFAP, GGT6, GNAT3, GO T1, GSTA5, GTSE1, HHEX, HMGCL, ICOS, IL8RA, KLRC2, LCMT2, LIPE, LTC4S , MCEE, MDH1, MECR, NCF2, NOTCH3, NOX3, NT5C2, OR1L1, OR2H2, OR2T2, OR 4A16, OR4F5, OR5R1, OR8B12, OR9Q2, PANK4, PARD6G, PDE1A, PI4KA, PIK3 C2G, PKMYT1, PLK1, POLR2C, PYGL, RAB5A, RAF1, RELA, RPIA, SETD7, ST3G AL4, STX7, SV2B, TACR3, TAS2R3, TAS2R50, UBA7, WNT2B, YWHAH, ZMAT3, P LA2G12A
Negative_15115	BAX, EZR, F12, GLA, HGF, IL5, MET, RPE, SFN, SRF, TNF, UBB, VCL, ABCC8, A CO1, ADORA2B, AGRP, ALDOA, ARG2, ARSA, ATP6V1H, CACNA1B, CACNG3, CAM K2B, CD226, CD274, CD8A, CDKN1B, CHDH, CHRM3, CIITA, CNGA4, COMT, COQ 7, CRB3, CRKL, CSF2RA, CYP1A2, CYP3A7, DDHD1, DDX19A, DDX51, DGKI, DH RS4, DPYSL2, DUSP3, ENTPD3, EP300, ESAM, EXT1, F2RL2, FECH, FGD1, GAL C, GALM, GALNT1, GANAB, GFPT1, GLG1, GLI1, GNG12, GNRHR, GSTM1, GUCY1 A3, HAP1, HDAC2, HPRT1, HTR2B, HTR6, IL10, IL15, IPPK, ITGB4, KRAS, LA MC3, LDHC, LHCGR, LYZL1, MAN2A1, MAP3K12, MAP3K13, MAP3K2, MAP4K4, M ARS2, MMP2, MMP9, NANP, NFKBIB, NKD2, NKX6- 1, NME2, NME4, OR2S2, OR2T1, OR4C12, OR4K1, OR52A1, OR5B3, OR7A5, OR7 D4, OR8J3, OR9K2, PDE4A, PDGFRB, PIGT, PIPOX, PLA2G6, POLR2D, POLR2E , PSME2, PTGES, RALA, RALBP1, RFNG, SEMA3D, SH2D1B, SHC2, SIPA1, ST6G AL1, STAT2, STX7, SYNJ2, TSC1, TUBA1C, TUBB6, UBA7, UCP1, UGDH, ULBP2 , VTI1A, WNT10B, ZMAT3, ATP6VOD2

Negative_15116	AUH, CAT, FAH, MAG, MVD, NPY, PXN, ACADM, ACAT1, ADRB3, ALDH3A1, ALDH3A2, ALDH4A1, ALG11, ALG2, AMDHD2, AOC3, ARPC2, ARRB1, ATP5C1, B3GNT2, BUB1, CALML3, CCL23, CCR6, CES7, CHEK1, CLCA4, CNTFR, CNTNAP1, CRLF2, CRY2, CXCL3, CXCR5, CYP1A1, CYP2E1, CYP2F1, DARS, DFFB, DGUOK, DLL4, DPM3, EFNA4, EGLN1, EI24, ENPP6, EPHB6, GALNT6, GCNT2, GGT1, HTR2C, IFNA13, IFNA2, IFNAR1, IFNW1, IKBKB, IL23A, IL6ST, INHBC, ITCH, ITGA1, ITGA11, ITGA5, JAK1, KLRC1, LEPR, LFNG, MAD1L1, MAPK11, MAPK13, MAPK3, MGAT1, MGAT5B, MGST2, MMP7, MPST, MYH14, NAGLU, NTN1, ONECUT1, OR10G7, OR10G9, OR1N1, OR2T29, OR4D11, OR4K1, OR51B6, OR5H2, OR5L2, OR8I2, OR9Q2, ORC1L, PAK4, PDE8B, PDXP, PIGV, PIK3C2G, PLA2G10, PLAU R, PLIN, POLR1C, PON2, PPM1B, PPP1CB, PTEN, PTPRF, PTPRM, RCHY1, RERE, RFNG, ROB01, RPSA, SELP, SEMA4C, SENP2, SESN1, SESN3, SFRP1, SGMS1, SHC4, SKIV2L2, STX10, TIAM2, TICAM1, TRHR, UBE2K, VARS, VASP, VEGFB, WEE1, WNT5A, XCR1, ALDH18A1, HSP90AB1, MAPKAPK2
Negative_15117	CRK, DDC, FGG, LCK, SCD, TNN, ACADS, ACAT2, ADSS, ANAPC11, ATP5I, C9orf95, CCL17, CCND1, CCR9, CD55, CD59, CD72, CDC25B, CDK2, CHRM3, CISH, CLTC, CLTCL1, COL1A2, COL2A1, COMT, CREB3L2, CSF2RB, CSNK1G1, CTBP2, CYP1B1, CYP2C9, DDB2, DGKD, EGLN1, ENTPD7, ERBB2, ERO1L, FBP1, FLOT2, FZR1, GCNT3, GFPT2, GGPS1, GIT1, GNPAT, GSTM1, GUCY2C, HSD3B2, HTR5A, ICOS, IFNA2, IL25, IL8RA, IMPDH2, INMT, ITGB7, KIR2DL4, KLRD1, KYNU, LM07, MAP2K2, MAP3K5, MAPK13, MCCC2, MEF2C, MKNK1, MMP2, MPDZ, NCR1, NFYA, NMNAT1, NNMT, NRP1, NRXN3, NUDT5, OR10P1, OR12D3, OR2A25, OR4F15, OR51F2, OR52A5, OR52E6, OR5B17, OR8K3, OR9K2, PARVG, PDXP, PIK3R3, PNMT, POLR2G, PTGS1, PTPRJ, RALBP1, RIPK1, RPRM, SDHD, SLC27A4, SMURF1, SPAM1, TAS2R41, TCF7L2, THTPA, TUBA1C, TUBB2C, UGT2B10, UGT2B7, ULK2, VASP, VTI1A, XYLT1, MAPKAPK2
Negative_15118	EPO, F5, F7, FOS, ID4, IL4, MSN, NOG, PC, PML, SHH, SMO, SRF, TAT, TEC, TNF, ABLIM3, ACVR1C, ADCY9, AGPAT1, AGPAT2, ARHGEF1, B4GALT2, CAPN2, CASK, CASP7, CAV3, CD55, CD79A, CD79B, CDK2, CHDH, CHEK1, CHEK2, COL5A1, CXCL11, CXCL5, CYP2C18, DGKH, DGKZ, DIAPH1, DIAPH3, EFNA3, ELK4, ENTPD4, EPAS1, FADD, FGF11, FGF21, GALK2, GFPT1, GMPR, GNPDA1, GYS1, HARS, HHIP, HLCS, ITPKA, KLRC1, MAD2L2, MMP1, NCK2, NCOR1, NCR1, NCR2, NMNAT1, NNMT, OR10A4, OR1N2, OR1S1, OR2AE1, OR2B2, OR2F2, OR2L3, OR4L1, OR51E1, OR52M1, OR52N4, OR8H1, OR9I1, ORC1L, PCCB, PDE8A, PIM1, PLA2G2F, PLAUR, PLCB3, PLXNB3, POLR1E, POLR3B, PON1, PPA2, PRKAB1, PRKG1, PROS1, PTDSS2, PVRL2, QARS, RAPGEF1, RPS6KA5, SIPA1, SREBF1, ST3GAL2, TRADD, TYMP, UROD, WNT10A, XIAP, YARS, CACNA2D4, CSNK1A1L, HLA-DRB5, PNLIPRP2, TNFRSF14
Negative_15119	C5, CEL, F11, F7, FES, KMO, MPI, TNR, ACAT2, ACO2, ACVR2A, ANAPC10, ARNT, ARSA, B3GALT2, BACE1, BCAR1, BIRC5, BMPR1A, CACNA1C, CACNG1, CCL15, CD79A, CD86, CDC14A, CDC45L, CLCA2, CLDN1, CLDN7, COL4A1, CXXC4, CYP27A1, CYP2C19, CYP8B1, DCTD, DNMT3B, DUSP1, EHHADH, FGF23, FUT6, FZD6, FZD9, GAB1, GMPS, GNPDA2, GRPR, GSTA4, HAAO, HMGCS1, HSD17B4, ICAM3, IFNA8, IL3RA, IL6R, ITGB1, ITPK1, JAK1, LEF1, MTHFR, MYH2, MYL2, NAGLU, NCAM1, NLGN2, NRP1, NRXN3, NUDT2, OGDHL, OR10A3, OR12D3, OR2A42, OR4C11, OR4D1, OR4F15, OR4K14, OR56B4, OR5A1, OR5M3, OR7G1, OR8J3, PARD3, PDE3A, PFKFB3, PFKP, PHPT1, PI4KA, PLXNA2, POLD1, PPAP2B, PP2CA, PRKCZ, PTK2, RAC3, RETSAT, SETDB1, SHMT1, SHMT2, SLC2A2, SLC9A1, SMC1A, SMURF1, SNAI2, SPHK2, SPRY4, ST8SIA1, STAT6, STX7, SV2B, SYNJ2, TAS1R1, TAS2R13, TAS2R7, THBD, TSHR, TUBB, TUBB3, TYMS, UCKL1, UCP1, UPP2, WNT6, XCL1, YWHAH

Negative_15120	AK7, CKB, CR1, FST, IL3, LPO, PGF, RDX, ABI2, ACSM2A, ACVR1B, ADCY6, AKR1A1, AKR1C3, ALOX15, ANAPC1, ASCC3, ATN1, ATP5H, AVPR1B, B3GALT1, B3GALT6, BCAR1, BLVRA, BMP2, BNIP1, BPGM, BUB1B, CAV2, CAV3, CCL2, CCL27, CCL8, CD3E, CFLAR, CHPT1, CLOCK, CLTCL1, COL5A3, CREB3L2, CRKL, CYBB, DAG1, DDX56, DGKD, DHDDS, FGD1, FLT3, FM01, FZD1, FZD2, GALNTL1, GANC, GARS, GGT7, GLUD2, GSTO1, GUCY1B3, HSD17B7, HSD3B1, HSPB1, IDH3G, IKBKE, IL12B, IL17A, IL22, INSRR, IQGAP3, JAK2, KLRC1, LEPR, LYPLA1, MAPK7, MAT2B, MBL2, MFNG, MICA, NODAL, NOX1, NPR2, NTF4, OR10AD1, OR13C2, OR13C5, OR1D2, OR1J1, OR2T8, OR4F5, OR4Q3, OR51V1, OR52H1, OR8G1, PDE4B, PDE4D, PFKFB3, PFN3, PGLS, PIGK, PIK3R2, PLA2G10, PLA2G6, PNPLA4, PPARG, PRIM1, PRKCD, PTPRB, RALBP1, RAPGEF3, RASA2, RBKS, RPS6KA3, SETDB2, SH3BP2, SLC25A5, SMPD3, SNAP25, SOCS2, ST3GAL5, STX1B, SULT1A1, TAP1, TGFB1, TLR3, TM7SF2, TMLHE, TNFSF18, TPH1, WWP2, XCR1, TNFRSF13B
Negative_15121	CFH, CRH, DBI, FGB, GH2, SRM, ACP1, ADCY9, AGPAT1, ALDH1A1, AMY2A, B3GALT5, B3GALT6, BMP5, BMP8B, C3orf10, CASP6, CAV2, CBR3, CCL25, CCL8, CES2, CLDN22, CMPK2, COL2A1, COL3A1, COL4A2, COL6A1, CYP7A1, DAXX, DFFB, DUSP10, EFNA3, EPHA1, EXTL1, FLAD1, FM05, GALNT3, GNPDA1, GPT2, GRM5, HCCS, HEXB, HLA-DRA, HMOX1, HPRT1, HPSE, IDI1, IL19, INHBA, ITGB7, KIR2DL4, MAN1C1, MAN2A1, MAP3K1, MAPK3, MAPT, MCM3, MDH1, NAE1, NNMT, NPAS2, NR1D1, OR13G1, OR13H1, OR13J1, OR2C1, OR2T1, OR4S1, OR51F1, OR5L2, OR7G2, OR8D2, OR8K5, P2RX6, PARD6B, PER1, PIK3C2G, PIM2, PIP4K2C, PLCE1, PLXNA1, POLR3D, POLR3K, PORCN, PRKCH, PTK2B, PVRL3, RDH8, SC4MOL, SELE, SETD1B, SLC33A1, SNAI2, SPRY4, STX12, STX1B, TAS2R38, TNFRSF4, TP53, TPST1, TPMT, TUBAL3, UCP1, ULK2, ATP6V1B1
Negative_15122	ATM, C8B, CRH, DBT, DHH, F9, GK, ILK, ME2, PLN, AADAC, ACOX3, ADAM10, AKR1C1, AMHR2, APOC3, ARHGEF4, ARSE, ATG3, ATP2A3, B3GALT2, BIRC5, BLVRB, CCR4, CLDN14, CX3CR1, DDX50, DGAT2, DGKI, DTYMK, EFNA1, FASLG, FCGR3A, FECH, FOXA2, GDF5, GLS2, GOT1, GP1BA, HGSNAT, HNF4A, IFT57, IL12B, IL24, IL9R, INPP5A, IRS1, ITGA5, KIR2DL3, LCMT2, LDHAL6B, LTC4S, MAOA, MGAT4A, MPDZ, NCR1, NEFL, NKX2-2, NPAS2, NT5C3, OR10G3, OR11L1, OR2M5, OR2T33, OR4C46, OR51T1, OR56B4, OR5H2, OR5P3, OR5R1, OR9A4, OR9K2, OR9Q2, PAPSS1, PFKFB1, PIK3CB, PLAUR, PRKAG2, PRKAR2B, PRPH2, PSME2, PTTG1, PYGB, RASSF1, SESN3, SHC3, SHMT2, SLC25A5, SLC27A5, SMAD9, SSH3, ST3GAL3, TM7SF2, TRPC1, TUBA8, ULBP3, ULK3, HLA-DPB1, PPP1R12A, SERPING1
Negative_15123	CAD, DDC, GLS, HAL, IHH, LAT, MVD, PLG, SRF, TKT, ABCC8, ACADSB, AHCYL2, ALAS2, APPL1, ARPC1A, ATG12, ATG7, B4GALT7, BDKRB2, BMP8A, CES1, CES7, CLOCK, CSNK2B, DAAM1, DKK2, DLL1, DNMT1, DPM2, EFNB2, FABP4, FBXW11, FCGR2B, FGF21, FGF22, FGF5, GALE, GALNT1, GGT5, GGT6, GJA1, GLYCTK, GNMT, GPD1, GRIN2B, GSTM1, GUCY2D, GUCY2F, HGSNAT, HIF1A, HNMT, IL23R, IMPDH1, IRS1, ITGAM, KIR3DL2, LAMB1, LIFR, MAN1C1, MFNG, MYL5, NAGS, NARS2, NME4, NME6, NRXN1, NUDT12, NUDT5, NUDT8, OR10G4, OR2L2, OR4F5, OR4L1, OR51I1, OR52I1, OR6B3, OR9Q1, PARVG, PCYT2, PLA2G1B, PLCD4, POLR1B, PPP1R3B, PPP2CB, PPP2R2C, PPP2R5D, PRKAB1, PRKAR1B, PRODH2, PYGL, RAF1, RELB, RHOA, SDHA, SENP2, SEPHS1, SESN2, SHC4, SIGLEC1, SKP1, SNAI1, SORD, SPHK2, SQLE, SV2B, THBS1, TOMM40L, TUBB4Q, UROC1, WARS2, WNT7A, ALDH18A1, HLA-DRB4, SLC25A31, SUV420H1, TNFRSF11A

Negative_15124	AMH, BID, CGN, CRH, DCT, FGG, HK3, ILK, MSN, SFN, SRF, TAT, TXK, AASS, ACY1, ADAM10, ALCAM, ALPP, AMPD1, AVPR1A, B4GALT1, BAIAP2, CAMK4, CCKAR, CD14, CD79B, CDH15, CDKN2A, CDKN2B, CHIT1, CLDN22, CLDN4, CREB3L1, CXCL16, CYP2D6, DAAM1, DAG1, DAPK1, DFFA, DOCK1, E2F3, E2F4, EGLN1, ENPP3, FADD, FMO5, GABARAP, GAPDH, GRIN2D, HADHB, HNF4A, HNMT, IFNGR1, IRF7, ITGA2, ITGAM, ITGAX, ITGB2, KLRC4, LIAS, MAN1A1, MAP3K4, MAP4K3, MYLK3, NADK, NAGK, OR10H5, OR10Q1, OR11H6, OR14A16, OR1J4, OR2M7, OR4K5, OR51E2, OR52E8, OR52L1, OR6B3, OR6K3, OR8D4, PAX6, PDXP, PHKA2, POLR3B, PPM1A, PPM1B, PRKCH, PTPRJ, RAB23, RHOQ, SLC9A1, SMC1B, SSH3, STAT1, TGFA, THY1, TUBA8, TUBB1, TYMS, UGP2, VEGFA, VEGFC, WNT8B, CACNA2D3, GABARAPL2, HSD17B10, PDCD1LG2, PLA2G12B, TNFRSF10B
Negative_15125	APP, DAO, DCN, DDC, SPN, AASS, ADCY4, ADCY6, ADH7, AHCY, ALAD, ALDH1B1, ALDH1L1, ALOX12, AQP7, ARPC1A, ATIC, ATP5E, ATP5G1, BMP4, BPNT1, CACNB4, CASP8, CCR2, CD74, CDKN2A, CHPF, CLCA4, CLTC, CNGA3, COL2A1, COMP, CTTN, CX3CL1, CYP26C1, CYP2D6, CYP3A7, DAAM1, DDOST, DLL1, DNMT3A, ECHS1, EPB41L3, FGF13, GAD1, GALC, GANAB, GMPR, GOSR2, GPAM, GUCY2D, HAGH, HBEGF, HNF4G, HSD17B4, HTR2C, IFNA14, KDSR, KIR2DS4, LHCGR, MAN2A1, MAP2K7, MAPK1, MCCC2, MDH1, NADSYN1, NAT5, NCF1, NCK2, NLGN3, NPAS2, OGDHL, OR10A5, OR1G1, OR1J2, OR2B6, OR2T34, OR4C12, OR4N2, PGAM2, PHKG2, PHPT1, PIGO, PIP4K2B, PLCB4, PLXNA2, POLA2, POLR2F, PON3, PTCH1, QPRT, RHEB, RPS6KB1, RUNX1, SARDH, SOCS2, SPHK2, STAT4, STAT5A, TAP2, TAS1R3, TAS2R4, TPK1, TUBA4A, VEGFB, YWHAQ, C1GALT1C1, MAPKAPK3
Negative_15126	ABO, ASL, BID, C9, CKB, CRK, GAA, PGF, SYK, TXK, ABI2, ABLIM1, ACP1, ACSL3, ACVR2A, ADCY4, ADH1B, ADORA2B, ADSL, AGPAT1, ALDH1A2, ALG10B, ARPC2, ATP2A2, ATP5A1, BMPR1B, CAMK2G, CD34, CD40, CHRM5, CHSY3, CLDN5, COL3A1, CSF1, CTNNA3, CXCL2, CYP27A1, CYP3A5, DAPK2, DDHD1, DHDDS, DUSP3, E2F1, E2F2, EFNA4, ETS1, F11R, FADS2, FOSL1, FRAT2, GALNT1, GCNT4, GNAO1, GRIN2C, GSTT1, HAGHL, HARS, HNF1B, HTR2C, IFIH1, IL6R, IQGAP1, IRS2, ITGA1, ITGA10, JAM2, LAP3, LIMK1, MAD2L1, MAP2K3, MCM5, METTL2B, MPDZ, MYH3, NT5M, OR13J1, OR1E2, OR1L6, OR2M2, OR2T4, OR5A2, OR9K2, ORC1L, PANK2, PDPK1, PDXP, PFN2, PHPT1, PIK3CB, PLA2G2D, PLCB3, PLCD1, PMVK, POLD1, POLE3, POLR2I, PPP2R5E, PRKAG2, RAB5A, RALB, RASGRP4, RDH12, RPE65, RPS6KA4, RRM2, SC4MOL, SDHA, SMURF2, SQLE, STAT3, TAS2R14, TJP1, TP53, TSNARE1, TYROBP, UGT2B11, VAMP1, YES1, ZNRD1, CSGALNACT1, PDCD1LG2, SERPINC1, TNFRSF18, TNFRSF6B
Negative_15127	C8B, IL3, NPY, RB1, ABL1, ACAA1, ACHE, ACSL4, ACSM3, ARHGEF6, ARPC5L, ASNS, ASRGL1, ATP5B, ATP5L, ATP6VOC, AVPR1A, BACE1, BAIAP2, C5AR1, CAMKK2, CASK, CASP9, CCDC6, CCR5, CES1, CIITA, COASY, CPT1B, CSF3, CTNNA3, CXCL6, DDOST, DDX23, DGKH, DIAPH2, DPYD, DVL2, E2F4, EFNA5, EHMT2, EI24, EP300, EPHA8, FSHR, FZD10, GANAB, GCDH, GCH1, GDE1, GGT5, GLB1, GRAP2, GRM1, GUCY1B3, HEXB, HMGCS1, HSD3B1, IARS2, IFIH1, IFNG, IL17RB, IL21, IRS4, ITPKA, ITPKB, KLRC1, MAP3K14, MAT2B, MCM7, MGAT4B, MPP5, MPST, MTHFD1, MYH1, MYH7, MYH8, MYLK3, NAMPT, NCF1, NCKAP1L, NEGR1, NKD1, OCLN, OR10A4, OR10A6, OR11H1, OR1N2, OR51E2, OR51F2, OR51Q1, OR52A1, OR52I1, OR52J3, OR5B17, OR5D13, OR5J2, OR5M9, OR8B8, OR8K1, OR9A2, OR9G4, PAK2, PANK3, PAPSS1, PFAS, PIAS3, PIM2, PLA2G1B, PLKHA8, POLR2B, PPA1, PPP1CB, PRKAA1, PRKAA2, PRKAR2A, PRKCH, PRKCQ, PROC, PTPN7, PTPRJ, PVRL4, RAB23, RASGRP1, RENBP, RRAS, SAT2, SEMA4D, SEMA4F, SESN1, SESN2, SETD8, SGMS2, SHC4, SIGLEC1, SMAD5, STX1A, TAS2R1, TNFSF12, TPH1, TRHR, TYK2, TYMS, UBA7, UCKL1, WASL, WNT6, HLA-DRB3, TNFRSF1B

Negative_15128	F8, FES, GDA, IL9, IVD, RDX, TYR, ACOT11, ACVR1, ACVR1B, ADCY3, AKR1C4, APOA5, ARHGEF4, ASIP, B3GALT1, BBOX1, BPNT1, CACNB4, CALML3, CAMK2A, CCNB2, CD59, CD79B, CD82, CEBPA, CLDN10, CLDN22, COL6A2, CYP26B1, CYP8B1, DAD1, DFFA, DPYSL2, EDNRA, FGF11, FGF17, FGF6, FZD2, FZD7, GCLC, GGT1, GGT5, GMPBP, GZMA, HES1, IFNA14, IGFBP3, IL11RA, ITGA5, KRAS, MAD2L2, MAN1A1, MYD88, NAGK, NAGLU, NFX1, NPAS2, NRG3, NT5C1A, OR11H1, OR13C2, OR1N1, OR2T11, OR4C11, OR4C16, OR4K13, OR4K15, OR4M1, OSMR, PANK1, PAX4, PDE1A, PDE8A, PDGFRA, PER2, PIAS2, PIGB, PIP5K3, PLA2G2A, PLCB3, PLOD2, POLR2J, POLR3B, PPARG, PPAT, PRKAG2, PTPRB, PTPRR, RAPGEF3, RPIA, RPS6KA3, SARS2, SAT1, SDC3, SEMA3B, SEMA4D, SETD1B, SPAM1, SRGAP1, STMN1, TACR2, TAS2R5, TBL1X, TCF7L2, TGFBR1, TPM3, TUBA3C, TUBB2B, TYROBP, ULBP1, VDACC2, YWHAZ, TNFRSF1A, TNFRSF1B
Negative_15129	FGG, FUK, LEP, NLK, OGT, TK1, ABL2, ACVR1C, ADRB2, ALDH5A1, ALG10B, ANGPTL4, ASCC3, ATP12A, C9orf95, CACNA1F, CCNA1, CCR2, CD79B, CD8B, CD C14A, CDKN2B, CNGA4, CTNNA2, CTTN, CXCL12, CYP1A2, CYP3A7, DGUOK, EDNRA, EFN3, EGLN3, EPHA7, FDFT1, FGF14, FIGF, FUT6, FZD7, GAL3ST1, GALNT1, GALNT9, GFAP, GGT7, GNRH2, GPD2, GSTO2, GSTT1, GYS1, HA01, HCST, HLA-C, HNMT, HTRA2, IDH3A, IL1A, IL25, IL2RB, ITGA11, ITGAD, ITGB1, KIR3DL3, LAMC2, LCMT1, LDHA, LDHB, MALT1, MAP2K3, MBL2, MIOX, NAE1, NAGK, NARS2, NCKAP1, NMNAT3, NT5C1A, OR10J3, OR10P1, OR13A1, OR1J4, OR4K1, OR51D1, OR51E1, OR52I2, OR52R1, OR5D16, OR5T2, OR6X1, OR8D1, PCNA, PDE4D, PDE6H, PLA2G3, PLIN, PPP3CA, PTPMT1, RAD51, RBPJL, RPS6KA2, SAT1, SDC3, SDHA, SHC2, SMAD3, ST3GAL5, TAS2R10, TLR2, TPMT, TUBB4Q, TYMP, UCK1, UCK2, UGCG, CACNA2D4, TNFRSF11A
Negative_15130	AUH, C4B, CSK, F12, HGF, INS, LPO, MPI, NOG, TK1, ACADM, ACADVL, ADAM17, ADCY8, AKR1C2, AKT1, ALG12, AOX1, APLP1, ATP6VOC, BMPR1A, CACNG1, CCL13, CCNA1, CDH5, CLDN14, CLDN3, CMAS, COASY, COQ3, COQ6, COQ7, CREB3L1, CTSS, CXCL5, EPHA3, FGF13, FTCD, FZD9, GALNT5, GALNT8, GALT, GLUD1, GNG3, GUCY1A3, HMGCR, HMOX2, HRAS, HRH2, HSPA1B, HYAL1, IFNGR1, IFNGR2, IL18RAP, IL1RAP, IL21R, IL6R, INPP5B, IRF3, JAK3, JAM3, KARS, LDHC, LIAS, LTBP1, MAD2L1, MAGI3, MAML3, MASP2, MCM4, MTHFD2, MYH7, MYL5, MYL9, NAT2, NGEF, NOTCH2, NRG2, NRXN3, ODC1, OR10J5, OR13A1, OR1B1, OR1D2, OR2H1, OR2T12, OR2T33, OR4E2, OR4P4, OR5B3, OR6B2, OR6X1, OR7G3, OR8B8, PANK1, PDE9A, PDGFA, PDGFD, PIGK, PIGX, PIK3C2A, PIM2, POLR3H, PPCS, PPP2R2D, PRKAG1, PROC, PRSS1, PSEN2, PSME3, PTPRJ, RARA, SH2D1B, SLC9A1, SMAD1, SRGAP1, STAM2, STX8, SULT1A4, TAS2R50, TAS2R8, TGDS, TMLHE, TP53, TRAF4, TUBAL3, TYK2, TYROBP, UCKL1, VEGFA, VNN1, WNT8B, XCL2, XYLB, HLA-DRB5, PDCD1LG2, TNFRSF11B
Negative_15131	ADK, CD4, CP, CRK, EBP, F10, GNE, ITK, SI, TK1, ACSS2, ACTB, ARNT2, ATP6V1D, CACNG2, CACNG8, CALML6, CAMK2A, CAMKK1, CCNB1, CD19, CDC23, CISH, COX15, CPT2, CTSB, CXCL16, CXCL3, CYP2A7, CYP2U1, EI24, EIF4E, EP300, EPHA1, EVI1, F13A1, FARP2, FGD3, FGF17, FGF6, FMO3, FZD10, FZD7, G6PC, GAMT, GCLC, GCNT1, GNA14, GNPDA1, GRIA3, GRPR, GSTM3, GSTT1, HSP90B1, HTR4, IFIH1, IGF1, IL11, IL13RA2, IL15RA, IRAK3, ITGA9, KIR2DL1, LAMC3, MAFA, MAPK11, MKNK1, MS4A2, MTHFS, NCK2, NPR2, NT5C, NTRK2, NUDT9, OR10A4, OR10H4, OR10J1, OR13H1, OR2T2, OR2T5, OR4B1, OR4D1, OR4F6, OR4K5, OR52L1, OR5L2, OR5M8, OR6K3, OR7A17, OR7G1, OR7G3, OR8B8, OR8G1, OR8H3, PDE2A, PFKFB3, PIGA, PIGF, PIGH, POLA1, POLR2A, PPAT, PPP3CC, PRKCB, PSME3, PTCH2, RAPGEF4, RASGRF1, RASGRP2, RASSF5, RETSAT, RPS6KA4, RXRA, SEMA3A, SETD7, SIAH1, SMAD1, SMPD1, SRD5A1, STMN1, SUV39H1, TAS1R3, TAS2R40, TAS2R50, TCF7, TGFA, THBS4, TNFSF14, TUBB, VEGFC, VKORC1, WNT2B, WNT7A, YES1, ST6GALNAC3

Negative_15132	BCR, FH, FN1, FYN, IDS, ITK, NOG, PLG, PLN, TKT, ACVR2B, ADH7, AKR1C4, A TP5A1, ATP5G2, ATP5J, B3GNT5, B4GALT4, CAMKK1, CASP6, CBLB, CCL19, C CL22, CCNE1, CD36, CD99, CLCA4, CREB5, CSNK1D, CXCL13, CXXC4, CYP2F1 , CYP4A22, DHODH, DOLPP1, DPYS, DTX2, E2F2, EFNB2, EHMT2, FGF18, FGF2 0, FIGF, FLAD1, FLOT1, FRAP1, FTMT, GCNT3, GNMT, GNPAT1, HADHA, HMGC R, HSPA2, IL25, IQGAP3, ITGB3, KLK3, LIFR, LIMK1, MAP3K1, MAP4K2, MCM 5, MTHFD2, NAMPT, NEUROG3, NFKB2, NRG2, OR10H4, OR2AG1, OR2M3, OR2T1 1, OR2T34, OR2T5, OR51B6, OR51V1, OR52B6, OR52E4, OR5K1, OR8H3, ORC4 L, P2RX2, PAK6, PDIA4, PER1, PFKM, PFN3, PGM3, PIK3CB, PLD2, POLD3, PP M1A, PPP2R2B, PRIM1, PTGFR, PYGB, RASGRF1, RPS6KA5, SHISA5, SNAP25, SORD, SRGAP1, ST3GAL3, STX16, SULT2B1, SV2C, TAS1R3, TXNDC12, UBA1, UMPS, VDAC3, WARS2, YWHAZ, ATP6V1G2, C1GALT1C1, HSP90AA1
Negative_15133	AK5, C6, CAT, CRH, DBI, EDA, F11, FGB, GLA, ABP1, ACAA2, AKR1C2, ATG12, ATG3, ATP5C1, B3GAT3, BCL10, CADM3, CALML3, CAPN2, CCL1, CCL17, CD24 7, CD38, CD58, CHIT1, CSF2RA, CYP2E1, CYP8B1, DAAM1, DDIT3, DDX23, DG KB, E2F5, EPHA3, EPHA7, FOSL1, FOXA2, FUT7, GATM, GNA14, GUSB, GYS1, I GF1, IGSF5, IRF9, ITGB3, LAMB1, LEF1, LEPR, MAPK3, MYH11, NCSTN, NEU1 , NFASC, NME6, NMNAT1, NMNAT2, NRG4, OCRL, OR13F1, OR13J1, OR14A16, O R2L2, OR4F15, OR4X2, OR51A7, OR52J3, OR52N5, OR9I1, P2RX1, P2RX2, PD GFC, PGAM1, PIK3C2B, PLTP, PLXNA1, PNMT, PPP5C, PTCH2, PTPN1, PVRL4, RALA, RASGRP1, RDH16, ROBO1, RRM1, SETD1B, SKP2, ST6GAL1, STX12, SUC LG1, TAS2R50, TLN1, TNXB, TSC2, ULBP3, UXS1, VAMP3, VAMP4, ATP6V1C2, MAPK8IP1
Negative_15134	DCN, FN1, GAA, GP5, NNT, PDC, VTN, ACOT12, ACVR2B, ARPC3, ARPC5, ATIC, ATP2A3, ATP5J, CACNG7, CCKAR, CCL5, CCNE2, CCR7, CD48, CDH3, CDKN1A, CHR1, CNTN2, COQ6, CPOX, CSF2, CSNK2A2, CX3CL1, CYP27A1, DGAT1, DKK4 , E2F3, EPB41, EPHX1, ETNK2, EXOC7, F11R, F2RL2, FGFR1, G6PC, GALNT10 , GPD1L, HES1, HIF1A, HTR2A, IL28A, IL2RB, ITGB8, LCMT1, LDHA, MAP2K1 , MCEE, MGAT5B, MYH3, NANS, NAT1, NKX3- 1, NRAS, NUMBL, OR1N2, OR2AE1, OR2AG2, OR4C15, OR51S1, OR51V1, OR52E 6, OR5AU1, OR5B21, OR5T3, OR7A10, P4HA2, PI4KB, PIM1, PLA2G2E, PLCB1 , PNPLA4, POLE4, POLR3B, POLR3H, PPA2, PPP2R5C, PRKAG2, PTAFR, RASGR P2, ROBO1, SEMA3F, SEMA4D, SOAT2, ST8SIA5, STAT3, SV2A, TAS2R5, TJP2 , TJP3, TKTL2, TNFRSF8, TYRP1, UGT1A10, VAMP2, VAV3, B3GALNT1, CTNNB IP1, HLA-DRB4, MAP3K7IP1, PNLIPRP2
Negative_15135	ADO, AK3, C7, C9, CBL, CDA, CFD, CRK, FH, HK3, SCD, ACADM, ACSM1, AGPAT1 , AKR1C1, ALOX15B, ASMT, ATG7, ATP5C1, ATP5H, ATP5O, BAAT, BIRC5, BST 1, CACNA1B, CCND3, CCR4, CES2, CFTR, CHUK, CLDN22, COQ3, CTNND1, CTSG , CYP11B2, CYP26A1, CYP2B6, CYP4A22, DGAT2, DNMT3B, DUSP3, EFNA3, EF NB2, ENO2, EPHB3, ESPL1, FADD, FMO3, FUT3, GALNT2, GALNT8, GANAB, GAR S, GAS1, GLO1, GNAT3, GNPDA1, GNRHR, GPLD1, GSTM2, HRH2, IL13RA2, ITG A1, KCNQ1, KIR3DL3, MAP3K5, MAP3K8, MDH1, MYL7, NCR2, NEFL, NGEF, NTF 4, OR13D1, OR1B1, OR1E1, OR4N4, OR52A1, OR5D16, OR7D2, OR8K5, PARD3, PCYT2, PDE1C, PGAM4, PIK3C2G, PIK3CG, PKLR, PMAIP1, POLD2, POLR3D, P PP1CC, PRKACG, PRKCI, PRSS1, PTGDS, PYCR2, RPS6KA2, RPS6KB1, SELE, S H2D1A, SHC4, SLC25A4, SLC2A4, SLC9A1, SPHK1, SPTLC1, SRD5A1, STX10, SV2A, TUBA1B, UCK2, WARS, WASF3, WNT8B, YES1, ZBTB16, MAPK8IP3, MAPK APK3, ST6GALNAC4, TNFRSF13B

Negative_15136	<p>ABO, AGK, CD4, CFD, F8, MTR, OTC, UBB, ABL1, ACP6, ADRBK2, AHCY, ALDH3A2, AMPD1, ARHGAP5, ARHGEF6, ATP5J2, BET1L, C4BPB, CACNG5, CADM1, CCL15, CCNG1, CCR3, CD226, CDC45L, CDC6, CDK5, CDKN1B, CHPF, CLDN19, CLTB, COL6A1, CREB3, CRKL, CYP4A11, CYSLTR1, DHCR7, DOLPP1, DPAGT1, DVL3, ELK4, ENPP7, FGF5, FOXO1, G6PD, GALNT3, GLB1, GNG3, GNRHR, GOSR2, GRHR, HLCS, HRAS, IFNA5, IL15RA, IL28A, INPP1, INPP5A, KIR2DL2, LAP3, LIAS, LIPC, LRAT, MAP3K3, MMP9, MYL7, NARS, NFKBIA, NOX3, NR1D1, NTNG1, OCRL, OR10K2, OR11H4, OR13C2, OR1B1, OR2A12, OR2AG2, OR2L8, OR2T12, OR2T2, OR4S2, OR51A4, OR51I2, OR51S1, OR52I2, OR52N5, OR5A2, OR5T1, OR6B2, OR6S1, OR7A17, OR8H2, OR8J1, OR9Q1, OXCT1, PARD3, PDE6D, PFKFB1, PGLS, PIGX, PIM1, PLCG2, POLR2K, POLR3A, POLR3H, PRLR, PRSS2, RAPGEF2, RAPGEF4, RELA, SAT2, SH2D1A, SHMT2, SMC1A, SMPD3, STAT2, STAT4, STX18, TACR3, TAS2R48, TRAF3, TSC1, WNT3A, WNT5A, SERPINE1</p>
Negative_15137	<p>ATM, C4B, F10, JUN, MVD, OSM, PVR, RDX, ABLIM1, ADAM17, ADIPOQ, ADRB3, ALG11, ANAPC2, ARD1A, ARHGEF4, ARPC1A, ARPC5, ATG12, BCKDHA, BDKRB2, C9orf95, CACNA1H, CAMK2B, CAV2, CD22, CD44, CDH1, CDK7, CES7, CHD8, COQ5, CPT1A, CTPS2, CTSL1, CYP19A1, CYSLTR1, DGKA, DHDH, DOT1L, DUSP4, EI24, EPHB6, ESAM, FADS2, FARSB, FSHB, FTH1, FTMT, FUT7, FZD9, GAD2, GADD45G, GALNT3, GNPAT, GSTM5, GUCA1B, GUCA1C, HARS2, HPRT1, HSPA8, IBSP, IDI2, IFNGR2, IL12B, IL1B, INADL, JAK3, KLRC2, LARS, LDHC, LIP1, LYPLA2, MAP2K2, MAPK13, NAT5, NFKB2, NMNAT3, NRG2, NTN1, OGDH, OR10G4, OR10Z1, OR13G1, OR2G6, OR51L1, OR56A4, OR5F1, OR6S1, OR7C1, PDE6G, PLA2G2A, PLCB4, PLEKHA8, PMM2, PNPT1, POLR3G, PPCS, PPP2R2A, PPT1, PRKAG2, PRKAR2B, PRKCB, PRODH2, PRPH, PSME1, PTGS2, RAB5A, RARA, RUNX1T1, RUVBL1, SEMA4G, SETDB2, SMAD3, SPCS3, STAT1, STX12, STX8, SUCLG2, TGFB2, TM7SF2, TNXB, TRAF1, TSHB, TUBB1, TYROBP, UGDH, UMPS, VASP, VAV2, VEGFB, VTI1B, WBCSR22, WNT6, WNT9A, YOD1, MAPKAPK3, PAFAH1B2, ST6GALNAC1, TNFRSF13B, TNFRSF1A</p>
Negative_15138	<p>CEL, EGF, HDC, LTB, MPI, NOG, PML, TH, ACAD8, ACSM4, ADH7, ADRA1B, ALAD, ALDH1A2, ALOX15B, ANAPC10, AQP7, ATP2A3, AVPR1A, BUB1, CADM1, CCL17, CCL8, CD55, CD80, CDC42, CDH15, CDKN2D, CER1, CHIA, CHRM3, CHST11, CLCA2, CPS1, CTPS2, CXXC4, CYP2C8, CYP2S1, DBF4, DCXR, DDHD1, DERA, DPYS, E2F3, ENTPD7, EPHB2, EPHX2, F2RL3, FBP2, GAD2, GBA3, GDF5, GGT5, GNA12, GNA14, GPT2, GRLF1, HCLS1, HDAC1, HLA-C, HSD3B2, IFNGR1, IL15RA, IL3RA, IRAK2, ITGA2, KDSR, MAGI3, MAML1, MDM2, NT5C3, NTF3, OCLN, OR10P1, OR1K1, OR4F4, OR4K1, OR51Q1, OR6C6, P2RX3, P2RX6, P4HA2, PDE6G, PDE7B, PDXK, PFKM, PGAM4, PLXNB1, POLD3, PDLR3H, PPP1CA, PPP1R3C, PRKAR1A, PTSS2, PTGER1, PTTG1, RAF1, RALA, RALB, RAP1A, RASGRP3, RPRM, SC4MOL, SGPP2, SKP1, SMARCA5, SNAI1, SORBS1, SRD5A1, SRD5A2, STAT5B, STX4, TAS2R10, TAS2R14, TBK1, TDO2, TRIP10, TXNDC12, UPB1, WNT9A, XYLB, ATP6VOE1, ATP6V1G2</p>

Negative_15139	AR, CD2, CFI, PGP, PML, SPN, UBC, VCL, ABLIM1, ACP5, AKR1C1, AKT1, ALAS1, ALDH6A1, ALOX15B, ALPL2, ALS2, ARRB1, ATP5G1, ATP6VOC, CADM1, CCL15, CCR1, CD58, COL5A1, COL5A2, COL5A3, CREB3L2, CXCR4, CYP11A1, CYP19A1, CYP2C19, CYP4A22, CYP4F2, DCTD, DDIT3, DDX41, DGKE, DPM3, DUSP14, E2F2, EGFR, EHMT1, ENAH, EP300, EXTL1, F13B, FARS2, FGF3, GLUD1, GMPPA, GMPPB, GNAI2, GNRHR, GRLF1, GSTK1, GUK1, GYS1, HPRT1, IL1R2, IL20RB, IL22, IL25, IL29, INSRR, ITCH, ITGA10, LDHA, LDHAL6A, LDHD, LEF1, LGMN, LIFR, LRP5, MAGI3, MAN1B1, MCEE, METTL6, MGAM, MYL7, NEU4, NME7, NTRK2, ODC1, OR10H1, OR10K2, OR14C36, OR2A2, OR2A4, OR2F1, OR4B1, OR4X2, OR51A2, OR51A7, OR52K1, OR5M3, OR9Q2, OXSM, PARVB, PFKFB3, PLOD1, POLR2C, PORCN, PPM1A, PPP1CC, PVRL1, SDC4, SEMA3D, SEMA4C, SMAD5, SNW1, SRGAP3, STX16, STX2, SULT1A2, TAS1R1, TLN1, TNFSF12, TRDMT1, TUBA3C, UGT1A10, VAMP4, VTI1B, CSGALNACT1, MAPK8IP2, SERPINA5, TNFRSF11A
Negative_15140	BCR, CGA, DLD, EPO, IL9, NOG, PVR, SDS, TK2, TNF, TPO, ACO2, ADCY7, ADORA2A, AHCYL2, ALDH3B2, ALG3, ARNT, ATIC, B3GALT6, B4GALT4, B4GALT6, BCL2, C3orf10, CADM3, CBR1, CCL4, CD14, CD48, CDH1, CDH2, CLDN19, COL6A2, CSH1, CTLA4, CTNNA1, CXCL2, CYSLTR2, DDIT3, DGKQ, DUSP3, EPHB6, FASLG, FOXO1, FZD3, GALNTL2, GNPAT, GOT2, GUCA1A, HAO1, HAP1, IFNA21, IL17A, IL23A, IL25, IL2RA, IL4R, INMT, KLK3, LAMC1, LPAR1, MTHFD2, MTR2, NRG1, NRXN3, OR10G7, OR10P1, OR13C2, OR1A2, OR2A12, OR2Z1, OR9Q1, P2RX5, P4HA1, PAFAH2, PAX4, PCYT2, PDGFA, PDPK1, PGK2, PISD, PLXNA1, POLR3A, PPA1, PPP2R2D, PPP3R2, PRDX6, PTGDS, PYCR2, RALA, RAPGEF3, RBPJ, RELA, ROBO1, SAT2, SGMS2, SLIT2, SPRED2, STAT5A, SULT1A2, TAS2R1, TCF7L1, THBS4, TNFSF9, TUBA4A, TUBA8, TUBB2B, ULK1, UROD, VCAM1, WASF1, WASL, WIF1, WNT5A, ATP6VOA2, PRICKLE2, SERPINA1, SERPINB5
Negative_15141	DBI, HDC, HGD, ID3, LAT, OTC, RFK, ACOT12, ADRB2, AKR1A1, ALG6, APOA5, ARPC5L, ATN1, ATP5O, B3GAT1, BCL10, CDC16, CDIPT, CDS1, CES7, CHEK2, CHRM1, CLDN4, COQ5, CREB1, CRLF2, CSF1R, CSNK1D, CTPS2, CYP4F3, DIAPH3, ENPP3, EPRS, FCGR3A, FUT4, FUT6, FZD1, GADD45A, GARS, GCNT1, GLUD2, GLUL, GNA11, GSTZ1, HEMK1, HLA-DOB, HPRT1, HSP90B1, IARS2, IL12B, IL20, IL21R, IL28RA, IRAK3, IRS4, ITGA7, ITGAV, MAPK10, MYD88, MYH1, NAGA, NAT5, NLGN2, NR1H3, NTRK1, OR10G8, OR10G9, OR2T4, OR4D9, OR4S1, OR8H2, PDE8A, PDHB, PI4KA, PIGW, PIP4K2B, PLAU, POLR2B, PPCDC, PPP2R1A, PRKAG1, SESN1, SETD2, SETD7, SLC2A1, SOX17, SUCLG1, SYNJ2, TAP2, THBD, TKTL1, TMLHE, TRDMT1, TUBA3C, TYRP1, UGCGL2, UGT2B10, ZFYVE16, ALDH18A1
Negative_15142	LPL, MET, PC, ACADVL, ACHE, ADCY2, AKR1A1, ALCAM, ALDOA, AMDHD2, APC2, APRT, ATP5C1, CAMK2A, CASP3, CASP7, CCL2, CCL21, CCL23, CCNE2, CHPF, COQ6, CYP1B1, CYP26C1, CYP2B6, CYP2C19, DGKI, DPAGT1, DUSP8, EPHA1, F13B, FCGR3A, FGF23, FGFR2, FLT4, FTMT, FUT6, GALT, GBE1, GMPR, GNAI3, GNB1, GNPDA2, HBEGF, HLA-DMA, HLA-G, IL13RA2, IL1R1, IL3RA, IMPA2, IRF9, ITGAE, KIR2DL3, KIR2DS5, LFNG, LLGL1, LRP5, MAML1, MAN1B1, MCM3, MDM4, METTL6, MTHFD1, NARS, NEFL, NEUROG3, NOTCH2, NRP1, NTNG1, NUDT9, ONECUT1, OR1L3, OR2A2, OR2L8, OR2T33, OR2T6, OR4K13, OR4K5, OR51B4, OR52R1, OR5AK2, OR6K3, OR6Q1, OR8U1, OR9Q2, PARD3, PDHA1, PDIA4, PECAM1, PFKP, PFN3, PHKG1, PIM2, PLIN, PPAP2A, PPP2R2A, PRKACA, PRLR, PRPS1, PTTG1, PVRL3, QARS, RASGRF2, RBKS, SDC2, SGMS1, SH2D2A, SLC27A4, SLC27A5, SLC9A1, SMARCA5, SNAIP2, SOD1, SSX2IP, ST8SIA5, THBS1, TIAM1, TICAM1, TNFSF14, TP53, TRPM5, UBE2L3, VDAC3, WHSC1, YARS, YES1, TNFRSF13C



Negative_15143	<p>BID, CBL, CTH, FGA, GP5, IL5, LYN, MIF, NGF, PAH, TK1, ACTA1, ADRB1, ALOX15B, ANAPC2, AOX1, APOC3, ATP5G3, BHMT, BMP8B, BTRC, CACNG2, CASK, CBR1, CCDC6, CCL1, CCL20, CD247, CHD8, CHIT1, CLDN22, CNTNAP2, CSNK1A1, CYP1A1, CYP26B1, DDX23, DEGS1, DHCR24, DLAT, DNMT3L, DUSP4, DUSP8, EGLN1, EIF4E2, EREG, ESPL1, FGF1, FGF13, FLT4, FRAT1, FTH1, FUT3, FUT6, GADD45G, GMPR, GUCA1B, HADHB, HAGHL, IAPP, IARS2, IKBKB, IL13RA2, IL23R, IL24, IRF9, ISYNA1, ITCH, ITGB6, ITGB7, KIR2DS5, LAMB3, LRP6, MAFA, MAN1A1, MARS2, MGST2, NAE1, NFKBIB, NOTCH1, OR13H1, OR13J1, OR2G2, OR4C15, OR4C6, OR4N5, OR5J2, OR6C4, OR6S1, OR8H2, PARD3, PCK2, PDE10A, PDE2A, PDE6D, PDE8A, PIAS3, PIGP, PKLR, PLXNC1, POLR1B, POLR2I, PPAP2A, PPP1CC, PPP2R2C, PRKACA, PRKAR2A, PTPRC, PYGM, RALB, RPN2, RXRA, SC4MOL, SCIN, SELL, SEMA4B, SESN2, SPTLC2, STX12, TAS1R2, TAS2R40, TAS2R48, TNXB, TPH1, UBA1, UGCGL2, VAV1, VNN1, CSGALNACT2, HS D17B12, SERPINB5, SERPINE1, TNFRSF14</p>
Negative_15144	<p>EPO, ID2, KDR, SDS, ABI2, ACACA, ACAD8, ACHE, AKT3, ANAPC4, ARHGEF1, ATIC, ATP5J, B3GNT4, BCKDHA, BRAF, CAMK2B, CCL20, CCL23, CCL5, CD3E, CDK2, CHKA, CISH, COL3A1, CREBBP, CTBP2, DKK2, DRD2, DUSP1, DUSP10, EFNB1, ENPP3, F2RL1, FUT9, FZD6, GALE, GALNT10, GALNT2, GALNT8, GJD2, GSTM1, GTSE1, GUCA1B, HDAC2, HLA-F, HLCS, IGF1, IL18RAP, IL2RA, ITGA2, ITGA5, JAM2, KIR2DL1, LLGL1, MALT1, MGST3, MMP7, MPZL1, NARS, NCF4, NKX3-1, NRP1, OR10A5, OR11G2, OR13C3, OR1B1, OR2T1, OR4D11, OR4K2, OR52N5, OR6K6, OR8K1, PAX6, PAX8, PLA2G10, POLE, POLE2, PRKCE, RASGRP2, RFX5, SARS, SDHC, SEMA3D, SEMA4B, SETD2, SLC2A2, SOCS4, SOS1, SSH1, ST3GAL2, ST3GAL6, STX16, SUV39H2, TAP2, TICAM1, TJP3, TNFSF9, TRAF5, TUBB1, GABARAPL1, PAFAH1B2, ST6GALNAC3</p>
Negative_15145	<p>BAX, CGN, FUK, FYN, GSN, ILK, MUT, PVR, RET, TPO, ACAT2, ADH5, AKT1, ALAD, ALDH4A1, APC2, APOC3, ARPC1A, ATP5F1, ATP5G3, B3GNT2, B4GALT1, BCL2, BCMO1, CACNG8, CARD11, CASP3, CCL14, CCL15, CCR7, CDC25A, CDKN2A, CDKN2C, CHEK2, CNGA4, COL2A1, CTF1, CXCL3, DDX47, DGUOK, DHRS3, DTX3L, DUSP5, DUSP8, EGLN3, EIF4E, EP300, EPB41L2, F13A1, F13B, FGFR4, FUT4, FZR1, GALNT7, GCAT, GDF7, GGCX, GNPDA2, GSTP1, GUCA1A, HBEGF, HLA-DOA, HMGS1, HSD11B1, HSPA1B, IFNGR2, IL13RA1, IMPDH2, ITGA7, KDSR, LGMN, LIPC, LIPG, LLGL1, MAN1A2, MAP3K3, MAP4K4, MAPK1, MDH1, MTMR1, MYH14, MYL5, MYLK, NAGK, NFATC1, ODC1, OR10A7, OR13C4, OR13G1, OR2G2, OR2M7, OR51B2, OR52N2, OR5B3, OR5K1, ORC4L, ORC5L, OXSM, PARD6B, PARVA, PAX4, PCCB, PDE1C, PDE9A, PFAS, PFKFB3, PGAM4, PIGA, PIGS, PLCB2, PLCE1, PLOD2, PLTP, POLR3K, PPAP2A, PPP1CA, PPP2R2C, PRKAA2, PRKCZ, PRLR, PTTG1, PVRL3, QPRT, RBL2, RFX5, RPE65, RPN2, RXRG, SEMA3B, STX16, SULT1A2, TGDS, TJP3, TNFSF10, ULK1, VANGL2, VAV2, VNN1, WARS, ZFYVE16, B3GALNT1, CACNA2D1, GABARAPL1, PLA2G12A, SERPING1, ST6GALNAC4</p>
Negative_15146	<p>CKM, DDO, ILK, ITK, PAH, SCD, TXK, ACTA1, ADH5, AGRN, ALG13, ALS2, AOC3, ARHGEF4, BAI1, BLNK, CAMK2B, CDKN2A, CDKN2D, CLDN9, CMBL, COL4A1, COQ6, CPOX, CREB3L2, CTBS, CXCL6, CXXC4, DAPK1, DDHD1, DEGS1, DGKA, DGKH, DGKQ, DHRS4, DIAPH2, EREG, EXTL3, FABP4, FCGR2B, FOXA2, G6PC, GALNT5, GCNT3, GNPDA1, GRLF1, IDH1, IFNK, ITGA9, KLRC3, LAP3, LYPLA1, MADCAM1, MAPK11, MCCC1, MCM2, MYH2, MYLK3, NFATC4, NFKBIB, NRCAM, NRG3, NRXN3, NT5C, OR10A4, OR10A6, OR10J3, OR1L1, OR4D6, OR4F17, OR51G1, OR52E4, OR6B3, OR6C76, PARD6G, PARVG, PGM1, PGS1, PIM2, PLCG2, PLD2, POLR2I, PPBP, PPCDC, PPP2R2D, PPP5C, PRPH2, PRSS2, PTPRM, RPS6KA6, SDHB, STAT2, STX5, TACR1, TAS2R38, TCF7L1, UPB1, UROC1, WBSR22, WNT1, ZNRD1, ATP6V0D1, GABARAPL2, PNLIPRP2</p>

Negative_15147	C4B, DCN, F10, F2, GDA, KDR, MIF, TYR, ACAA1, ADCY5, AGPAT3, ALAD, ALPL, APOE, AQP7, ATN1, ATP5G2, B4GALT1, BCAR1, BST1, CACNA1S, CAMK2D, CCL17, CCL28, CCR3, CCR5, CDC6, CDH15, CDK6, CDKN1B, CHRM2, CLDN18, CMPK2, CNTN2, CREB3L1, CTSL1, CXCL6, CYP19A1, CYP2A6, CYP3A43, CYP4A11, E2F2, EFNA4, EFNB2, FCGR3B, FECH, FGF19, FSHR, GJA1, GLS2, GSTA2, GSTM3, HADH, IFNA14, IL13, IL13RA2, ITGA5, LAMC3, LAP3, LARS2, LHCGR, MAP2K3, MAP4K1, MAPK3, MDH2, MMP7, NCSTN, NKX2-2, NRXN1, ODC1, OR10A3, OR1N2, OR2AT4, OR2M2, OR2T34, OR51E1, OR52K1, OR56A1, OR6F1, OR9K2, ORC1L, ORC6L, PCYT1B, PDE1B, PDXP, PER2, PFKFB4, PGM1, PHKA1, PIGQ, PIGV, PLA2G2E, POLR2A, PPM1B, PPP1R3D, PPP3CC, PRPS1, PTAFR, RAD51, RASA2, ROCK2, SAT2, SIGLEC1, SOCS4, ST6GAL1, TP53I3, TRAF4, TUBB6, ULK3, ATP6V1G1, MAPK8IP3, SERPINB5, ST6GALNAC5, TNFRSF10A
Negative_15148	CD6, ID2, IL3, ACVR1, AMPD2, ANGPTL4, ARNT, ARPC3, ASRGL1, BACE2, BBC3, BHMT, CACNB4, CCL7, CD70, CREB3, CREB3L2, CRY1, CSF1, CSNK1G3, DAD1, DIAPH1, DOLPP1, EFNA4, ENPP7, ENTPD5, ERBB2, FGF20, GALNT10, GCNT4, GNPDA2, GUCY2C, H6PD, HBEGF, HIF1A, HMGCS1, HNF1B, HSD17B3, HSD17B8, HTR5A, ICOS, ICOSLG, IL10RB, IL18R1, IL22RA2, ITGAL, LAMB3, LTBP1, MAOB, MGAT4B, MTMR1, MYH2, MYH4, MYL5, NEFM, OLR1, OR10R2, OR13J1, OR1B1, OR1E1, OR2D2, OR2T2, OR4K17, OR51A4, OR52K1, OR5F1, OR5R1, OR6K6, OR7C1, ORC2L, ORC4L, PFKFB4, PIP5K1B, PNPLA3, POLD2, POLR2I, POLR2L, PPAP2B, PPP2R5C, PRKCE, PTPRC, RARS2, ROBO3, SCD5, SDC2, SEMA4A, SHMT2, SLIT2, SMPD3, SOCS3, SOD1, SV2B, TAS2R5, TJP2, TOMM40, TRAF5, TRMT11, TUBB4, UGT2A3, ULK2, ARHGEF12, PDCD1LG2, PPARGC1A, PRICKLE2, ST6GALNAC6
Negative_15149	BTK, CFD, GAA, GK2, IVD, MUT, NLK, RFK, AACS, ACADM, ACSM3, ACSS3, ACTA1, ACVR1C, ADCY9, AGPAT4, AGXT2, ALG13, ATP5L, B3GNT4, CACNB1, CCL13, CD80, CFLAR, CHAD, CHDH, CLDN16, CSNK1E, CTBP2, CXCL1, CXCL13, CXCR4, CYP11B2, CYP19A1, DCTD, DFFB, DUSP10, EFNA1, EFNB2, ENO1, ENTPD8, EXTL1, FARSA, FGF4, FGF5, GALNT6, GPD2, GRIA3, GSK3B, H6PD, HCST, HSD11B2, HSPA2, ICAM3, IDH2, IRS1, ITGA2B, ITGAV, JAK3, L1CAM, LCMT2, LIFR, MAP2K2, MAPK8, NKX3-1, NOX3, OR10H4, OR11H6, OR2G3, OR51F1, OR52E6, OR52I1, OR56B4, OR6N2, OR7G1, OSMR, P2RX5, PAICS, PDE1A, PGAM2, PGK2, PIAS2, PIGV, PIP5K1A, PLCB1, PLEKHA8, PRKCZ, PRKY, PTPN6, PTPRB, RFX5, SELPLG, SH2D1B, SMAD6, SOS2, SPCS1, STEAP3, TJP1, TRHR, TRIP10, UCK1, UGP2, VEGFA, VTI1B, WBSCR22, AASDHPPT, MAPKAPK5, ST6GALNAC4, TNFRSF11A
Negative_15150	AK3, C6, GAA, HK2, JUP, WAS, ACAA2, ACTC1, ADAM17, AGPAT6, ALG1, ARHGA P5, ARHGEF2, B3GNT2, BAAT, BACE2, BDNF, BMP6, CAMK2D, CCNB3, CD40LG, CD79A, CDC7, CMPK2, CNGA3, COL1A1, CREB1, CREB3L1, CSDA, CSF1R, CX3CL1, CYP4F3, DDIT3, DEGS1, DGKB, DGKH, ECSIT, EFNA2, ELK4, EPHA6, EPHB1, EPHB3, ERO1L, FASLG, FGF8, FLOT1, GLI1, GNAI1, GNAZ, GNMT, GNRH1, GSTA5, HAP1, IDH3A, IL12B, IL13, IL13RA1, IL1B, IMPA1, IMPA2, INPP5E, INSRR, ITGB6, JAG1, KAT2A, KIR2DL4, LIPF, MAPK1, MAPK3, MAPK9, MGAT3, MRAS, MYH7, NEFM, NFASC, NLGN3, NRP1, OR10S1, OR1G1, OR2A12, OR2C3, OR2M5, OR2T1, OR4D5, OR4E2, OR52A1, OR52H1, OR52I1, OR9A4, PARS2, PDE4A, PDX1, PER3, PIGM, PIK3CA, PIP5K1A, PLIN, PLK1, PNPLA4, POLR2G, POLR2L, PPP2R1B, PTTG1, RASGRF2, RASGRP3, SLC27A1, TAS2R9, TOLLIP, TPM3, UGT2B11, UROD, WNT3, WNT7A, YES1, GABARAPL2, HSD17B10

Negative_15151	AK2, CD4, CR1, DUT, GDA, GLA, HYI, IDS, LCT, OGT, ACY3, ALDH3B2, ANAPC10, AOC2, ARD1A, B4GALT3, BBC3, BIRC3, CACNB4, CACNG8, CAMK2B, CAMK2D, CAPN2, CER1, CHEK1, CHPT1, CXCL6, CYP7A1, DAG1, DDIT3, DDX52, DGKD, DGUOK, ECSIT, EHMT2, EPB41L1, ERO1L, EXTL2, FGF3, FUT9, GALNT12, GALNTL4, GANAB, GAS1, GBA3, GJA1, GMDS, GSTM5, GUCA1C, HARS2, HCCS, HSP90B1, IL5RA, IL6ST, LPAR1, MAML2, MAP3K2, MAPK14, MAPK8, MARS2, MCM5, MEF2C, MMP2, MYH7B, NFYC, NKD1, NRXN3, OR1C1, OR1K1, OR1M1, OR2M7, OR2T6, OR2V2, OR51A4, OR51V1, OR52J3, OR5I1, OR7D4, OR8K3, OR9G4, PCYT2, PDGFB, PGAM2, PHKA1, PIK3C2A, PKLR, PLCB2, PLCB3, POLE2, POLE4, PPARG, PRKACG, PTPN6, PVRL4, QARS, RAC1, RASA2, RASSF5, RBPJL, RRM2B, RUNX1, SARS2, SC4MOL, SEMA3E, SETD7, SHMT1, SMPD1, SMURF1, SOS1, STAT1, STAT3, STX2, SUV39H1, TBK1, TGFB2, ULBP2, UPRT, XYLT2, ATP6V1G1
Negative_15152	AGL, APP, ATM, HAL, MVK, RFK, AADAT, ABLIM2, ACTN2, ADCY2, AHCYL1, ALDH3A2, ALG10B, AMPD3, APOA5, ARHGEF4, ARNT, B3GALT2, BAAT, BDNF, BLNK, BMP8B, BST1, C1GALT1, C3orf10, C5AR1, CACNA1B, CASP6, CCL22, CCL27, CCR10, CCR4, CCR5, CDC6, CES1, CES2, CISH, CLDN1, COQ7, CTTN, CXCL11, CXCL2, CYP1A1, CYP2A7, CYP3A5, CYSLTR2, DAPK2, DGKB, DGKZ, DHCR24, DUSP4, DVL3, ELK4, EPHX1, FARSB, FASN, FCGR3B, FGF22, FGF9, FGFR2, FM04, FRAT1, FUT7, FZD8, GAD2, GALK1, GLB1, HDAC2, HNMT, HPSE2, IFNB1, IKBKB, IL28RA, IL4R, IQGAP1, IQGAP2, ITGA6, JAG1, KLKB1, MAML3, MCAT, MYLK3, NOTCH3, OR13H1, OR14C36, OR1L3, OR52N2, OR5F1, ORC4L, P2RX5, PAK1, PDE10A, PDE3A, PDGFRB, PFKM, PIGX, PLA2G3, PLAUR, PLEKHA8, POLD3, POLR2G, POLR2I, PPCDC, PRPS1, RBPJ, SEMA3C, SEMA4G, SETD7, SHC3, SQLE, ST3GAL1, ST3GAL3, SULT1A1, TAS2R10, TAS2R3, TAS2R4, TCF7L2, TIAM1, TRDMT1, TRPC1, TRPM5, TUBB4, UBA1, ULK1, VDAC2, CACNA2D1, PHOSPHO1, PRICKLE2
Negative_15153	DUT, GP5, IL4, LSS, NOG, UBB, ACADS, ACADVL, ACVR2B, ADCY9, ADH5, AKR1C4, AKT1, ATP5H, CACNA1I, CACNG6, CD36, CDKN2A, CERK, CFL1, CLDN16, CLDN17, CNTNAP2, COQ6, CYP2C8, DEGS1, DKK4, DVL2, EPHB4, ESAM, FMO3, FZR1, GALNS, GALNTL4, GMPR2, GRIA2, GRM5, HADH, HNF1A, HSD3B2, HTR2C, ICOSLG, IFNW1, IL12A, IL29, INSR, ITGB5, KIR2DL4, KIR2DS5, KLRC2, LEFTY2, LIPC, MAN1C1, MPDZ, MPZL1, MTHFS, NCF2, NCKAP1L, NFAT5, NLGN3, NOTCH2, NTN1, NUMBL, OR14J1, OR3A3, OR4A5, OR4K2, OR5M8, OR5R1, OR6C70, OR9G1, OR9Q2, PDK1, PGAM1, PGAM2, PHKB, PIP4K2B, PIP5K1A, PLA2G2A, POLD1, POLD4, PON3, PPM1D, PPP2R2C, PTPMT1, RFXANK, RRAS2, SDHB, SETD7, SMAD7, SOS1, SQLE, STX1A, TAS2R3, TAS2R41, UGT2B7, ULK2, WHSC1L1, WNT4, WWP2, YWHAE, ZFYVE16, ATP6VOA4, C1GALT1C1, CTNNBIP1, GABARAPL2, HSD17B12, SERPINE1
Negative_15154	ADC, CBS, CKM, CRK, GP5, IL3, IL7, ILK, JUN, LTB, ME1, ABI2, ACACA, ADCY8, ALDH1A3, AMD1, AMY2B, ARSA, ATP6V1F, CALML5, CCL19, CCL5, CHIA, CHRM5, CKS1B, CLDN22, CRLF2, CSAD, CSF1, CTNNA2, CXCR4, CYFIP2, CYP2F1, CYP4F3, DGAT1, DGKH, DNMT3A, DUSP1, EDAR, ENPP2, EPHB3, FABP4, FZD8, GALE, GALK1, GLYCKT, GPD1, GSTA1, HAGH, HPSE, HTR4, IFNA13, IFT57, IL17RA, IPPK, IRF5, JAM2, LAMB1, LAMC3, LTB4R2, MGAT4A, MMP1, MMP9, NCAM2, NT5M, OR10Q1, OR1D5, OR1F1, OR1L4, OR2V2, OR4D9, OR4X1, OR5T1, OR9G4, P4HA2, PCYT1A, PLA2G2A, PLCB3, PRKAA1, PRKAR2B, PRKCZ, PSEN1, PSME3, PTGFR, RALB, RXRB, SEMA3G, SETDB1, SHMT1, STK3, SUV39H1, TJP3, TNFRSF9, TNXB, TUBB2C, ULK2, VDAC2, ZFYVE16, PPARGC1A, TNFSF13B

Negative_15155	AK5, F3, ITK, IVD, SRF, ACAD8, ACP2, ACPP, ACSS2, ACVR2A, ADCY4, ATP5C1, B3GAT2, BDH2, CCDC6, CCL23, CCNG2, CCR10, CHRM5, CLOCK, COL4A4, COL6A2, COMP, COMT, CSNK1D, CTPS2, CXCL1, CYP2A7, DCXR, DDX54, DPYS, DTYMK, EFN3, ELK4, EPHB6, EPHX1, EXT2, FGFR2, FZD5, GALNT3, GALNTL4, GATM, GMPPB, GRIN2A, ICAM2, IL11, IL13RA2, IL17RB, IL1RAP, MAP2K1, MIOX, MYL9, NCF4, NCKAP1L, NR1D1, NRCAM, NTF4, NUMB, NUMBL, OR10C1, OR13G1, OR1J4, OR2T4, OR4C15, OR4N5, OR51Q1, OR52I2, OR5D13, OR5M8, OR6C1, OR6K2, OR6Q1, PAK6, PCNA, PDE1C, PFN3, PHKA1, PIGX, PNLIP, POLR1C, PPOX, PPP1R3B, PPP2CB, PPP2R5E, PRKCB, PVRL4, RAB23, RAC1, RASGRP3, RERE, RHOQ, RRM2, SAT1, SLC27A4, SLIT2, SMPD4, SOCS3, STK36, TAS1R3, TAS2R1, TAS2R38, TBL1XR1, TPH1, TUBB2B, TUBB3, UCK1, UGCG, UGT8, XCL2, YWHAG, ATP6V1G3, CSGALNACT2, PPARGC1A
Negative_15156	AR, C2, FER, FUK, GP9, IHH, ME1, TKT, AARS2, ACAT1, ADCY7, ADCY9, AFMID, AGPAT4, AHCY, AKT1, ARPC4, ATP5I, ATP6VOC, BDKRB2, CACNA1A, CARS2, CCL24, CDC42, CDH1, CDH2, CDH3, CES2, CFL2, COASY, COL11A1, CREB3L4, CTSG, CYP4F2, DAAM1, DCXR, DHDH, E2F1, ENTPD4, EPHB4, FGF13, FGF7, FLT3LG, FRAT1, GALNT7, GBE1, GNAZ, GSTM3, GUSB, HDAC1, IFNB1, IKBK, IL13, IL13RA2, IL23A, INHBC, ISYNA1, JAG2, KCNQ1, KIR2DL1, KLRC2, LAMC1, LARS, LARS2, LGMN, LYZL1, MAPK14, MARS, MEF2C, MGAT5B, MGST1, MPZL1, MTHFS, NEU4, NFASC, NFE2L2, NMNAT1, NODAL, OR10G7, OR2F1, OR2T34, OR4B1, OR4D2, OR51I2, OR52R1, OR5L1, OR6A2, OR6B3, OR6C70, OR7D2, OR8U1, OR9I1, PCYT1B, PER2, PLOG2, PLXNA1, PMAIP1, PNPO, POLR1A, POLR2G, PPARG, PSEN1, PSEN2, PSME3, PTGS2, PTPN7, RBL2, RRAS, SDHC, SETDB1, SH2D2A, SORD, SPAM1, SPCS1, SPI1, SSH2, STAT5B, STK11, SULT2A1, TAS2R13, TCF7L2, THBD, TIAM1, TIRAP, TJP2, TMLHE, TRDMT1, UGCG, PPP1R12A, TNFSF13B
Negative_15157	AK3, ASL, BTB, DHH, F5, GAA, ILK, LPO, ME2, MVD, SDS, ACPP, ACY1, ADAM17, AGPAT2, AKR1A1, AKT1, ALDH1A2, ALDH3A1, ALDH6A1, ALDOB, ARHGAP7, ARSD, ATF2, ATIC, ATP5E, ATP5G3, B4GALT2, BBOX1, BCL10, BUB3, CAMK2D, CCL11, CCL3, CDC2, CLDN7, CREB1, CREB3L4, CSNK2A1, CTSL1, CX3CL1, CYP1A1, CYP1B1, CYP4A22, DDX19A, DERA, DERL1, DGKB, DHX58, DIAPH1, DPYSL2, DUSP3, DUSP6, E2F5, EFNA5, FGF11, FZD9, GALNT12, GNA12, GP1BA, GPR, HIBCH, HRH2, HSD17B4, HTR7, INPP4A, INPP5B, IRF7, IRS2, LDHAL6A, LEFTY2, LEPR, MAN1C1, MAP3K1, MAP3K5, MAP3K6, MCAT, MCEE, MGAT3, MGAT4B, MYH9, MYL2, NCAM1, NCAM2, NCOA4, NEFL, NFYA, NKD2, NQO1, NT5C3, NUDT2, NUDT5, OR10C1, OR10G7, OR10P1, OR1J1, OR2D3, OR2Z1, OR51A7, OR51G2, OR52I2, OR5L1, OR5M9, OR6Q1, OR7G3, OR8H1, P2RX2, P4HA2, PCYT1A, PFN3, PGK1, PIP5K1C, PLA2G2D, POLE3, PPP2CB, PPP2R2B, PRKACA, PRKLR, PRPS1, PRSS1, PTDSS1, PTTG1, RDH11, RERE, RHOA, RPN1, SCLY, SEMA3F, SPAM1, STAT6, SYNJ2, TBL1Y, TGFB2, THTPA, TPH1, TRAF4, WASF1, WNT6, HLA-DRB4, PRICKLE1, ST6GALNAC1, TNFRSF13C
Negative_15158	ADO, AK3, CD4, CFI, GBA, IL3, NNT, TNF, ABI2, ADCY2, ARPC2, ARPC4, ATP6V1D, B4GALT2, B4GALT4, B4GALT7, BIRC5, BMP6, CD8A, CDC14B, CDC27, CDH4, CHRM1, CHST11, CHST12, CLDN1, CNTN2, COL4A1, CREB3, CSF1R, CSF2RB, DHX58, DOT1L, DTX3, DUSP10, EHHADH, FABP4, FGF17, GALNT11, GLUD1, GMPPA, GPLD1, GRIA3, GSTO2, GUCA1A, HAO2, HNMT, IL12B, IL8RB, INHBC, ITGAL, ITGB6, ITPK1, KLRK1, MAN1B1, MAP3K4, MAPK13, MCM3, MGAT5B, MPST, MYL5, NRG4, NRXN2, NUDT12, NUDT5, ONECUT1, OR10J1, OR13G1, OR52D1, OR5A1, OR6N1, OR8D4, PCCA, POLA1, PPA1, PPCS, PPP2R1B, PPP3CA, PRKAR1B, PRKCG, RAPGEF1, RGS3, SARDH, SEPHS1, SETMAR, SORBS1, SPTLC2, ST3GAL6, TAS2R49, TAS2R8, TD02, TFDP1, TUBA1B, TUBB2C, ULBP3, WNT4, XCL2, EIF4EBP1, ST6GALNAC6, TNFRSF10C, TNFRSF1B

Negative_15159	<p>AK2, AMH, APP, BTC, C6, C7, CFI, CGA, F3, FER, GSR, IL4, KMO, ME1, PC, SCD, TPR, ACADL, ACVR1C, ADCY10, ADCY4, ADCY8, ADH1B, ADH6, ADRA1A, AGPAT1, ALDH1B1, ALG10, ALG2, ALG3, AMHR2, ATN1, ATP5H, ATP5J, B4GALT7, BDNF, C9orf95, CADM3, CALML6, CAV3, CCKBR, CCR1, CCR3, CD58, CD79A, CD C25C, CDC6, CDKN2C, CHRM3, CLTA, CNGB1, COMT, CSDA, CTPS, CTSS, CYP2C9, DDIT3, DPM3, DUSP5, DUSP7, EFNB2, EPB41L3, ERBB3, EXT1, FGF2, FRAT2, GALNTL5, GCH1, GNPDA2, GPAA1, HSD11B1, HSPB1, IGF1, IL10RA, IL18RAP, IL22RA1, IL9R, INPP4A, ITGA1, ITGB2, ITGB3, ITGB6, KAT2B, LAP3, LYPLA1, MAN1C1, MAPK13, MDH2, MPDZ, MYH15, NAE1, NCKAP1, NCOR2, NEU1, NFKB1, NOD1, OR4L1, OR52D1, OR52N1, OR56A4, OR5AK2, OR5B3, OR5T2, OR7A5, OR7G1, OR8G1, OR8H3, P4HA2, PDE10A, PFKM, PFN3, PIK3C2B, POLA1, POLD3, POLR2F, POLR3K, PRKACA, PRPH, RAPGEF3, RDH10, SEMA3B, SH2D1B, SMAD7, SNAI1, SORBS1, SOS1, SPTLC2, SULT1A4, TAS1R2, TAS2R16, TLN1, TNFRSF9, TNFSF8, TSTA3, UGT2B7, UNC5A, UPP2, YWHAE, KIR2DL5A, MAPKAPK5, PLA2G12B, SERPING1</p>
Negative_15160	<p>APP, BAD, BCR, C3, CAT, CR1, DCN, F2, GSS, MOS, WAS, ABI2, ACADM, ACSL1, ACVR1B, ACY3, ADIPOR1, ADORA2B, ALDH1A3, ALDH4A1, ANAPC11, BAI1, BCAT1, CAMK2A, CAMKK2, CCR5, CCR8, CD44, CD82, CDH4, CDK2, CER1, CLDN14, CLDN22, CLDN7, CLDN8, CLTCL1, COASY, COQ6, CSF1, CXCL11, DDOST, DEGS1, DKK1, EHHADH, ENAH, ENTPD4, EPHA5, EXT1, FCGR3A, FGF12, FOXA2, FTH1, FUT2, FZD1, GABARAP, GALNTL1, GCAT, GLDC, GLI3, GPX7, GSTM2, GUCY2C, HLA-DMA, IFNA6, IL11, IL12RB1, IL13RA2, ITGA4, KLRK1, LRP6, LYPLA2, MAP3K2, MAPK10, MMP14, MTHFD2, MTMR6, MYH7B, NARS2, NFKB1, OR1L1, OR1L4, OR51E1, OR52H1, OR56A1, OR5AP2, OR5J2, OR5T1, OR6S1, PHKA2, PIAS3, PIGC, PIGK, PIK3C2A, PLIN, POLA2, POLR2A, PTPRF, RUVBL1, SDHA, SSH2, STAT6, STK3, THBS2, TIAM2, TICAM2, TNXB, TOMM40L, TPH1, TRMT11, TUBA8, TXNDC12, UBE2L3, UGT2B10, UNC5B, VAMP1, WNT7B, ZNRD1, ST6GALNAC1, ST6GALNAC6, TNFRSF11B, TNFRSF1B</p>
Negative_15161	<p>BTC, GP5, ITK, LTB, ME2, PML, PXN, TNC, TXK, ACADS, ACSM4, AGRN, AKR1C3, ALAD, ALDH3A1, ALG6, APBB1, APPL1, ARHGEF4, ARNT2, ATP5G3, ATP5J, B3GAT1, CACNB2, CACNG2, CACNG4, CADM3, CAMK2A, CCKBR, CCL17, CCL8, CD3E, CD44, CDC26, CHAT, CHRM2, CLDN18, CLOCK, CREB1, CRY1, CX3CR1, CXCR3, CXCR6, CYP3A5, DDX4, DEGS1, DGUOK, EFNA5, EHMT2, ENPP2, ENTPD3, FARS2, FM05, FPGS, GCNT2, GPD2, GPT2, GPX7, GSTA1, GSTK1, GSTO2, IDH1, IDUA, IFNA21, IL13, IRF5, ITGA8, ITGAD, ITPKA, JAK3, KIR2DL2, KLRK1, LRRC4C, MAPK3, METTL2B, MICA, MTAP, MTMR2, NAGS, NAT2, NCAM1, NCK2, NFATC3, NLGN3, NTF3, NUDT12, OR10K2, OR2S2, OR2T3, OR3A3, OR4K15, OR51G2, OR52D1, OR5D14, OR7G1, PARVA, PARVB, PDGFA, PDGFB, PDHA1, PERP, PFN3, PHKA2, PIGL, POLA2, PPP1CA, PPP2R5D, PPP3CA, PRDX6, PRKAR1B, PRKCD, PTEN, PTPRM, PYGB, RAP1B, RBKS, RDH16, RELB, RFX5, RHEB, RHOQ, RPS6KA4, SCLY, SDHB, SEMA3E, SETD7, SHC1, SSX2IP, ST6GAL1, STK3, SV2A, TAS2R41, TAS2R48, TGFBI, TSC1, TSHR, ULK2, ULK3, UMPS, UROS, WNT5B, XYLT1, YARS2, ALDH18A1, ARHGEF12, HLA-DPB1, MAPKAPK3, SLC25A31, ST6GALNAC1</p>

Negative_15162	<p>C7, EZR, LTB, PGD, SRC, TKT, ACACB, ADH4, AGPAT2, AGRP, ALAD, ALDH9A1, ALG5, ALPL, AMPD3, AMY2B, ARG1, ASCC3, ATP5I, AXIN1, B3GALT2, B4GALT5, BACE2, BMPR1A, CACNA1F, CD27, CD46, CD79A, CFL1, CLDN8, CMPK1, CNTFR, CTNNA2, CXCL10, CYP2A13, CYP2U1, DCTN1, DIAPH3, DPYSL2, DTX3, DUSP6, E2F4, EI24, ENTPD8, EPHX1, FLOT2, FMO2, FUT3, FUT5, FZD5, GALM, GALNT8, GALNTL5, GANAB, GANC, GLS2, GNAI2, GSTM5, GUCA1C, HDAC1, HNF1A, HRH1, HSD17B8, HSD3B2, HTR7, IGF1, IL17A, IL18R1, IL2RA, INPP1, INPPL1, INSR, ITGA2, ITGB3, ITPKA, JAK1, KIR3DL1, KYNU, LAMA4, LFNG, MAP3K4, MAT1A, MCM5, MGLL, MTMR2, MYH1, MYH10, NCKAP1, NOD1, NODAL, NUDT9, OCRL, OR10A4, OR10A7, OR10Q1, OR13D1, OR1G1, OR2B6, OR2T33, OR2T8, OR4C13, OR51E2, OR52L1, OR52N4, OR56B4, OR5H2, OR5M9, OR8K1, PFKL, PGS1, PLOD1, PPA1, PPM1D, PPOX, PPP1CA, PRKCB, PRODH, PRPH, PVRL1, PVRL2, RAD51, RBL2, SELE, SELPLG, SEMA4F, TAS1R2, TAS2R60, TIAM1, TRAF5, TUBA1C, UAP1, UMPS, WWP1, ATP6V1E1, HLA-DPA1, HSD17B12, SERPINB5, TNFRSF10C</p>
Negative_15163	<p>ABO, AK7, AMT, BTC, CS, DAO, DUT, F9, GLA, HPD, MPL, ACP, ACSL1, ADORA2A, AFMID, AGRP, AHCY, AKT3, AQP7, ARG1, ATP5I, ATP6VOC, BCL2, CASP6, CCL3, CD34, CD40LG, CD59, CDC14A, CDK4, CDK6, CDKN2B, CES1, CLDN20, COL4A2, COL5A3, COX15, CRY1, CSF3R, CXCL10, CYP2C8, CYP4A22, DEGS1, DHCR24, DPYSL2, DTX3, DTYMK, E2F4, E2F5, EFNB2, EPHA3, F13A1, FARSB, FGF19, GALNT11, GNA13, GNAQ, GRM5, HDAC2, HEXA, HLA-C, HMBS, HSD17B7, HSD3B7, IFNA17, IFNA7, IFNB1, IL13RA2, IL28B, IL29, IL2RB, IRS1, ITGA2B, LALBA, LARS, LEFTY1, LFNG, MAD2L1, MAP2K5, MAP3K8, MAPK7, MLYCD, MTFMT, NCKAP1L, NPR2, NT5C2, ONECUT1, OR10H1, OR13C3, OR14I1, OR2A42, OR2B6, OR2F1, OR5T1, OR6Q1, OR8K1, PAK6, PDE6H, PFN3, PIK3R3, PIPOX, PLOD3, PMAIP1, POLA1, PRKAG1, RASGRP3, RBKS, RIPK1, SELE, SELP, SEMA3C, SETDB1, SLC2A2, SLC33A1, SPTAN1, STX1A, STX5, TRPC1, WNT5A, YARS2, ZAP70, ATP6V1B2, C1GALT1C1, MAPK8IP2</p>
Negative_15164	<p>AK3, BT, C4B, DBT, DDO, FUK, OGT, PGD, XDH, ACO1, ACSL6, ACSS2, AGXT2, AKR1A1, AKR1C4, ALDH3B1, ALDH7A1, ALOX12B, ANAPC1, ASS1, ATP4B, ATP6V1A, BCAT2, BMPR1A, C4BPB, CACNA1B, CACNG7, CCL22, CCNA1, CCND3, CD7, CDH15, CDIPT, CHKB, CHSY3, CLTC, CSF2, CTBP2, CUL1, CXCR6, CYP26A1, CYP2A13, CYP2B6, CYP2U1, CYP3A43, CYP3A5, DDIT4, DGKD, DKK2, DPM3, DPYS, DTX3L, DUSP10, ELK1, EPHA1, EPHA7, EXOC7, FARP2, FCGR3A, FGF21, FGFR4, FMO5, GALK2, GBT1, GDF6, GLI2, GNAI1, GRIN2C, GSTZ1, HTR2A, IFNAR1, IRAK1, ITCH, ITGAM, KITLG, LDHA, LDHC, LILRB3, LRAT, LRP5, LTBP1, MAP3K4, MAPK3, MAPK8, MGAM, MLYCD, MYL7, NFKBIA, NKD2, NT5M, NUB, OR11L1, OR2S2, OR4B1, OR4D1, OR51E1, OR51L1, OR5I1, OR6C74, OR6F1, OR8D2, P2RX4, PAX6, PDX1, PFKM, PIGQ, PIM2, PLAT, POLR1E, PPP1R3A, PPP2R2C, PRIM2, PRKCQ, PRLR, PROS1, PTCH1, RBPJ, RPS6, RPS6KB1, SDC1, SEMA3D, SEMA3G, SEPHS1, STT3B, TNFSF10, TPH2, TSLP, TUBA1A, UGT1A10, UGT2A3, UPP1, USE1, VARS, WNT9A, YWHAB, YWHAQ, ATP6VOD1, ST6GALNA6, TNFSF13B</p>

Negative_15165	F8, ID1, MVK, RB1, SPN, ACLY, ACSM5, ACTG2, ACVR1, ADRA1D, AGRP, ALDH5 A1, ALOX15B, APPL1, ATP5D, ATP6V1A, BMP8B, CACNB1, CASP8, CAV3, CCL2 6, CCL27, CCR1, CD82, CDC42, CNTNAP2, COL1A2, COL4A4, COMP, CPOX, CRE B3L4, CRHR1, CSF1, CSH1, CXCL3, CYBA, CYP2A7, DDHD1, DFFB, DGKI, DOT1 L, EGLN1, ENPP7, FCER1G, FCGR3A, FLT4, FM02, FRAP1, FUT2, GALNT10, GA LNT3, GBE1, GCNT4, GNA01, GRLF1, GSTA4, GUCY2F, HHEX, HMGR, ICAM1, I FNAR2, IGF1R, IL22RA1, ITGA2, JAG1, KAT2B, KCNJ11, LCAT, LRRC4C, MAP 2K4, MAPK9, MDM4, NFKB1A, NKD2, OGDH, OR10A5, OR10G3, OR14J1, OR1I1, OR2A5, OR52A5, OR52I2, OR52L1, OR5A2, OR5AR1, PDIA4, PGAP1, PGK1, PI GN, PLA2G1B, PLCB2, PLOD1, PPCS, PPID, PRKAG3, PSENEN, PTK2B, RASSF5 , RCHY1, SDC2, SKIV2L2, SMAD3, SMC1A, SPP1, ST8SIA1, STMN1, STX4, TAS 2R5, TBK1, TICAM2, TRAF1, TUBA4A, UGCG1, UGT1A10, UNC5D, UROD, VDAC 1, CSNK1A1L
Negative_15166	AMH, CR2, F2, FUK, GH1, ID1, ME1, ME2, PGD, TFG, TNN, UBC, ACLY, AFMID, A LDOA, ANAPC11, APRT, AREG, ARNT, ARPC5L, ARRB2, ATP5G2, CACNA1A, CCN D3, CD27, CDC25A, CLDN15, CREB3, CREBBP, CTNND1, CYP2B6, CYP2C18, DA AM1, DHCR24, DNMT3B, E2F2, ENAH, EPHB1, EPHB2, ERBB4, FDPS, FGF10, FR AP1, GADD45B, GMPPA, GNAQ, GNG13, GNG3, GZMB, HAGHL, HNF1A, IBSP, ICA M2, IKBKE, IL8RB, IL9R, INPP1, ITGA1, JAM3, L1CAM, LAMA4, LDHC, LIPE, MAP3K6, MAP4K1, MGAT5, MMP9, MYL2, NCAM2, NEFH, NFATC1, NGEF, NLGN1, NT5C1B, NUDT8, NUMBL, OLAH, OR13J1, OR2AG2, OR2S2, OR4D11, OR51A2, O R52K2, OR52N1, OR52N4, OR5A2, OR5B17, OR5D18, PAK3, PDGFD, PDPK1, PD XP, PGM1, PIK3R3, PLA2G2D, POLD1, POLR3H, PPAP2B, PPARD, PPBP, PRIM2 , PSENEN, PSPH, PYGL, RPRM, SFRP2, SIGLEC1, SOCS3, SSX2IP, STT3B, TAS 2R5, TAS2R7, TNXB, TUBA3C, WHSC1, WHSC1L1, YES1, ATP6V1B2
Negative_15167	AGL, GSR, MVD, OTC, PDC, RDX, ACOX2, ACP5, ACTG2, AGMAT, AKT2, ALOX15, ANAPC2, ANAPC5, APRT, ARPC1A, ASMT, BCM01, BUB1, BUB3, C7orf16, CACN G2, CAMKK2, CARS2, CCL23, CCL28, CCND1, CD247, CD79A, CDIPT, CDK4, CH UK, COMP, CRLS1, CSAD, CTBP1, CTNND1, CXCL6, DAAM1, DPYSL2, DUSP3, DU SP5, DUSP6, E2F2, EPHA5, EPHB4, EPHB6, EXTL2, F2RL2, FADD, FGF11, FRA P1, FTCD, FUT1, GALNS, GBE1, GFPT1, GGT5, GNA11, GNAI3, GOT2, GYS2, HS D17B4, IL13RA1, IL25, IRF7, ITGA4, ITGB8, JAK1, KIR2DL1, LIPA, LRDD, MAP3K13, MTHFD1, MTMR2, MYLK2, NCKAP1L, NR1H3, NT5C2, OR2M7, OR4D11 , OR51D1, OR51V1, OR5B12, OR5T2, OR6K3, OR7D2, OR8D2, PDE4C, PDE8B, P GAP1, PIAS1, PIGK, PLD1, PLEKHA8, POLE, POLR1B, PPAP2B, PPP1R1A, PRL R, PTCRA, PTPN5, QARS, RBL1, RDH16, RHEB, RRM2B, SENP2, SETD8, SIPA1, SKP2, SOAT1, SSH1, SSX2IP, ST3GAL3, STAT2, STAT3, STT3B, SULT2B1, TA S2R8, TBL1Y, TICAM2, TPH1, TUBB3, UGT2B28, UPRT, YWHAB, HLA- DRB3, PNLIPRP1, ST6GALNAC6, SUV420H1, TNFRSF1B
Negative_15168	CGA, HDC, ID2, INS, MTR, A4GALT, ACO1, ACPT, ACSL3, ACSM5, ADCY7, APOE , ARHGAP5, B3GAT2, BBOX1, CACNG4, CALML3, CD14, CDK4, CES7, CFL2, CNG A3, CRKL, CTBP2, CTNND1, DAAM1, DAAM2, DDX4, DGKH, DKK4, DMGDH, DUSP7 , EFN1, EGFR, EIF4B, ENO3, EREG, ESPL1, FABP4, FASN, FBP2, FM02, GADD 45G, GCNT1, GGCX, GLI3, GLUD1, GNRHR, GP1BB, GRIN2A, GSTA2, GZMB, HIB ADH, HSPA2, HSPA8, IFNA13, IL17A, IL1A, IMPA1, ITGB6, KIR2DL4, LEFTY 1, LMO7, MASP1, NFATC1, NLGN2, NOTCH2, NPR2, NRG4, OPLAH, OR1L1, OR1L 8, OR2G3, OR3A3, OR4C16, OR4C6, OR51F1, OR7C2, OR9K2, OSMR, P2RX2, PA NK1, PFN2, PGM3, PIK3R1, PLCG2, POLR2G, PPP2R2C, PPP3CC, PRKY, PROS1 , PSME1, PTK2B, PTPRB, PTPRR, RAPGEF4, RASGRP3, RPS6KA1, RPS6KA6, SH C4, SPTLC2, STX10, TAP1, TFDP1, THY1, TJP1, TLR2, TUBA3E, TYK2, UGT8, UXS1, WHSC1, WNT3A, WNT7A, XCL1, YES1, HLA-DQB1, TNFRSF12A

Negative_15169	BTC, C2, C8B, CP, GBA, IL2, MOS, NPL, SI, AARS, ACPT, ACTG2, ACVR2A, ADR B1, AK3L1, AKR1D1, ALG3, ANAPC7, AOC3, ARPC5, ATP5J2, CACNA1A, CACNB 2, CALML3, CAMK2G, CCL5, CCND1, CD47, CDKN2B, CES7, CHDH, CHEK2, CLDN 4, CPT2, CXCL5, CYP4F2, CYP4F3, DAAM1, DEGS1, DGKE, DIAPH1, DIAPH2, D OT1L, DRD2, EGLN3, ENPP1, EXT2, F13A1, FABP1, FABP4, FARS2, FM03, FOS L1, FUT3, FZD10, GALNT3, GALNT6, GANAB, GNB3, GRLF1, HA01, IFNA16, IF NA2, IL12A, INPP5E, ITGAD, ITGB3, ITGB5, ITPK1, KCNB1, KNG1, LAMB3, L AMB4, MAN1A2, MAP3K12, MAP4K2, MAP4K4, MECR, MGAT5B, MYLK3, NANS, NF ATC2, NGEF, NOS1, NQ01, OR13C2, OR14I1, OR1S2, OR2G2, OR2L8, OR4D2, O R4N2, OR5D14, OR5H6, OR8D4, P2RX5, PAK7, PCCB, PDCD1, PGAM2, PGLS, PI GF, PIK3CG, PLCB4, PLCD4, PLOD3, PMM2, POLD1, POLR2G, PPID, PPP1CB, P PP3CB, PTGER1, PTPN6, PTPRB, RAC1, RALB, RFXANK, RPS6KA6, SARDH, SDC 2, SEMA3A, SEMA4D, SHC4, SHISA5, SPRY3, STK11, SUCLG1, SUCLG2, TAS2R 42, TCF7L1, THBD, TIAM1, TM7SF2, TNFSF4, TUBA1C, WARS2, WNT5B, WNT9B , XCR1, B4GALNT1, TNFRSF17
Negative_15170	C1S, DCK, DCN, F3, F5, NOG, PAH, PML, RB1, AADAC, AASS, ACOX2, ACTA1, AC TN4, ALDH4A1, ALDOB, ALG11, ALG6, ALG8, ATP5E, CACNA1H, CASP3, CASP7 , CCL15, CCL22, CCNB1, CD34, CFL1, CFL2, CHDH, CHEK1, CKMT2, CPT1A, CS NK1G2, CXXC4, CYP8B1, DFFB, FSHR, GALNS, GALNT9, GBE1, GCH1, GCNT3, G NA11, GNA14, GPAA1, GSTA1, GUCY1A3, HADHA, HCCS, HES1, IFNA21, IL12R B1, IL13, IRS1, ITGB1, KLK3, KLRC3, MAP2K7, MAPK10, MCCC2, MCM2, NMNA T1, NMNAT2, NRCAM, OR10T2, OR1J2, OR2K2, OR2M7, OR2T29, OR51V1, OR52 D1, OR5H6, OR5I1, OR6F1, OR7G1, PGAM1, PHKG1, PIAS2, PLA2G1B, PLA2G2 A, PLCD4, POLE2, POLR3A, PPP3R1, PRIM1, PRKCA, PRKCG, PTPRB, QPRT, RP S6KA5, RXRG, SDC4, SH3BP2, SMPD4, SRGAP3, ST6GAL1, TAS2R4, TCF7L1, T HBD, TJP2, TRAF6, TRHR, TYMS, UGCG, VAMP2, WEE1, XYLB, KIR2DL5A, TNFR SF18
Negative_15171	C6, CD2, CGN, DBH, F5, FER, GAA, GHR, KIT, RPE, SMO, SYK, TNF, ACOT12, AC SM1, ACVRL1, ADH7, ADIPOQ, AK3L1, ATP5J, ATP6AP1, AVPR1B, B4GALT6, B AAT, BCM01, BUB1B, CALML6, CAV2, CD59, CD99, CDH5, CFTR, CHAD, CHRM1, CHST13, CHSY3, CLDN20, COL5A2, CTNNA2, CXCL16, CYFIP1, CYP2F1, DDIT 4, DHX58, DPM3, ENTPD6, EPHB6, ERBB4, F11R, FGF20, FLT4, GABARAP, GAD D45G, GALNT5, GALNT9, GAS1, GBA3, GJD2, GLG1, GNA13, GNAQ, GNAS, GRIN 2C, HCCS, HMGCL, IL11, IL12RB1, JAG1, JAM2, LARS2, LRP6, LTC4S, MALT1 , MDH2, MGLL, MLYCD, MPST, NCOR2, ONECUT1, OPLAH, OR10C1, OR13A1, OR2 T3, OR4D11, OR51B5, OR52L1, OR5D13, OR7G3, OR8H2, PAICS, PDHA1, PLA2 G2A, PON1, PPP2R5D, PPT1, PRKCI, RAPGEF3, SLC12A2, SNW1, SOCS3, STT3 B, STX5, THBS2, TKTL1, TMLHE, TOLLIP, UCK1, ZIC2, CSGALNACT2, GABARA PL1, HLA-DRB4
Negative_15172	BAD, CR2, LHB, SRF, TNF, TXK, ACSM5, ACTB, ACVR2B, ADCY9, ADORA2A, AGR P, AMPD3, ARPC1B, ATP6V1D, BACE1, BCL2, BDKRB2, BIRC2, BMPR2, CACNA1 F, CACNB2, CBR1, CCNB3, CCR3, CD226, CDKN1B, CHEK1, COL1A2, COL5A3, C YP2A13, DARS, DERA, DHFR, DKK4, DUSP1, DUSP2, EFN3, ENAH, EP300, EXT L1, FGF2, FGF7, FLAD1, FM02, FPGT, FUT6, FUT9, FZD9, GABARAP, GFPT1, G MPPA, GPLD1, HLA- F, IDH2, IDH3B, INHBC, INPP5B, ITGA2, JAG1, KCNQ1, LAMA3, LRRC4C, LTC 4S, MAN1A1, MAN1A2, MAP4K4, MAPK8, MAT2B, MCM2, MGAT1, MGAT4A, MGAT5 B, MTAP, NFATC3, NFYA, NME6, NMNAT1, NPAS2, NUDT9, OR10G7, OR2T12, OR 51A7, OR52N4, OR5D13, OR5T1, OR7G2, OR8J1, PDE2A, PDE4C, PDGFC, PMM1 , POLD3, POLE3, PRIM1, PRKACG, PTGER3, SAT1, SDHA, SDHC, SEMA3F, SMAR CA5, SNAP23, SORD, SOS1, SOS2, STAM, TGFB2, TLR9, TMLHE, TNFRSF8, TN FRSF9, TNFSF12, TP53I3, UGCGL1, UGT1A10, ULK3, UNC5A, VANGL2, WNT8A , YES1, ATP6V0E1, HLA-DRB3, SUV420H1



Negative_15173	<p>A2M, CRK, CS, DCK, DCN, FAH, FST, GAA, ID4, IDS, IL6, ILK, MVK, PGF, SHH, TFG, UBB, WAS, ACAA1, ACADS, ACSS3, ACTN4, AGPAT3, AGPAT4, AKR1B10, ALDH2, ALG10, ATG7, ATP6V0B, AVPR1B, BLNK, C3AR1, CAMK2G, CCL11, CCL13, CCNG2, CCR10, CD22, CD40, CDC23, CDC25A, CDH4, CSNK2B, CTNNB1, CTS S, CYP1A1, DDIT3, DDX4, DOT1L, DUSP1, E2F3, EPB41, EPHA3, EPHB6, FGF11, FGF23, FGFR2, FPGT, FUT5, GALNT5, GALNT9, GCLM, GLG1, GNAO1, GPT2, GSTO2, HLA-</p> <p>G, HMGCR, HSD17B4, IL13, INSRR, IRAK4, ITGA1, ITGAM, ITPK1, KLRK1, LDHAL6B, LRP5, MAML3, MAP3K7, MCM3, MGAT5B, MGLL, MYH13, MYH9, NAE1, NANS, NCK2, NFATC4, NKX6-</p> <p>1, NQO1, NRXN3, NT5C1B, OR10J1, OR10K1, OR10K2, OR13C9, OR14A16, OR51M1, OR52I2, OR5AR1, OR5K2, OR6C76, OR8H3, OR8K5, P2RX6, PAK2, PARD3, PCK2, PFKL, POLR3B, PPCS, PPM1A, PPP1R3A, PRLR, RALB, RASGRP1, RDH16, RPE65, RPIA, RPS6KB2, SELPLG, SEPHS1, SH3BP2, SLC9A1, SMAD5, SMPD2, SPHK1, STEAP3, STX16, STX4, TGFA, THBD, TIRAP, TNFRSF9, TNFSF4, TNXB, TSC2, TYMS, TYROBP, UCK1, VAMP1, ZMAT3, SERPINB5, TNFRSF1A</p>
Negative_15174	<p>AGL, AMT, DBT, NLK, PTS, RDX, SYK, TAT, VCL, ACSS1, ADCY2, ALDOA, ALOX5, ARHGEF7, ASS1, C1QB, C5AR1, CCL7, CCR10, CDH2, CERK, CFLAR, CFTR, CHIT1, CHUK, CISH, CLDN5, CSF2RB, CSNK1A1, CYP11A1, DDX50, DIAPH1, E2F1, E2F5, EFNA2, ERBB4, EXT2, FOXA3, FSHR, FUT2, GDF6, GNA13, GNAS, GRIA2, GSTO1, GZMA, HMGCS2, IAPP, IL22RA1, IL28RA, IL2RA, IMPDH1, IQGAP1, ISYNA1, ITGAX, ITPKA, KIR2DS5, KLRC4, LDHAL6A, MAD2L1, MAP3K4, MMP2, NKX3-</p> <p>1, NPR2, NUDT5, OR2G2, OR51S1, OR52A5, OR52D1, OR5B21, OR6B2, OR9A4, P4HA2, PER1, PER2, PIGU, PIP4K2A, PISD, PKMYT1, PLAUR, PNPLA3, POLR1C, POLR3G, PORCN, PRKAR1A, PRKCG, PRKCZ, PTGFR, RETSAT, RHOA, RPE65, RUNX1T1, SETD1B, SMPD4, SRGAP1, STAT6, STX7, SULT2B1, TFDP1, TFPI, TLR5, TNFSF18, TNFSF4, TRPM5, TUBA8, TUBB2C, TYROBP, UBA7, ULBP1, ULK1, VCAM1, WWP1, YES1, AASDHPPT, ARHGEF12, ATP6V1B2, CACNA2D1, CACNA2D4, TNFRSF10A, TNFRSF1A</p>
Negative_15175	<p>DCK, GP5, HGD, HK1, IL8, NGF, PML, ACP5, ADCY10, ALDH3A2, ALDOA, AMDHD2, APOA5, ARAF, ARNT, B3GAT1, BCKDHA, BMP8A, BNIP1, CACNA1A, CACNB1, CAMK2A, CASP8, CBR3, CCKAR, CCNB2, CDC25B, CDKN2C, CDKN2D, CD01, CES7, CHEK1, CLDN3, COQ5, COX15, CRKL, CXCR6, CYP11B1, CYP2C9, DDHD1, DDOST, DDX55, DGKA, DHRS4, DRD5, EFNA2, EIF4B, ENTPD7, ENTPD8, EPB41L3, EXTL2, F2RL3, FCGR2B, FGF23, FGF7, FOXO3, FZD9, GRIN2B, HIF1A, HIP1, HSD17B7, ICAM2, IDI2, IFNK, IRS4, JAK3, LCMT2, LGMN, LIPC, LTA4H, MGI1, MDH1, MICA, NAMPT, NCAM1, NCOR1, NCR3, NEFH, NME6, NME7, OR10H5, OR10T2, OR11L1, OR2AG1, OR2M3, OR2M4, OR2T4, OR3A1, OR4F5, OR51B6, OR5B3, OR5F1, OR6F1, OR8H2, P4HA3, PAK4, PANK4, PARD6A, PDE3B, PFN1, PGK2, PIGO, PIK3C2B, PLCB1, PLTP, POLD4, POLE, POLR3B, PPP1R3D, PRKCD, PRPS2, PTDSS1, RAPGEF2, RASSF1, RPS6KA1, SAT2, SELE, SLIT2, SPRY4, SQLE, STAT5B, STX12, STX1B, SUV39H2, TCF7L2, WNT9B, XCL2, XCR1, ZFYVE9, MAPK8IP3, SERPING1</p>

Negative_15176	AK3, DBT, GGH, IDS, IL3, IVD, SPN, TEC, ABLIM2, ACSS1, ACYP1, ADSSL1, A GXT, ALOX12, AMPD3, ANAPC1, ANAPC5, ANGPTL4, AOC3, ARRB1, ARSA, ATG3 , ATIC, ATP4B, B3GALT6, B4GALT7, BCL10, BLNK, CAMK2G, CASP6, CCNE1, C CNG2, CCR3, CD40, CD8B, CDC14B, CHRM5, CLCA4, CLDN14, CLDN22, DCTN1, DEGS2, DHODH, DTYMK, ECSIT, EDA2R, EFN3, EPB41L1, ETNK1, EXTL1, FGD 1, G6PC2, GAL3ST1, GALNT3, GCAT, GCNT4, GNRH2, GPT2, HSD11B2, IARS2, IDH3G, IFNK, IL1B, INHBB, IPMK, IRAK2, IRS2, KIR2DL3, KLRD1, LAMC3, L YPLA2, MAPK8, MAPT, MARS, METTL2B, NCAM2, NPR2, OPLAH, OR10K2, OR2H2 , OR2T33, OR5K2, OR6C74, PFKFB2, PFN4, PIAS1, PIM1, PIP4K2B, PLA2G10 , POLR3H, PRKAA1, PRKAB1, PRKCA, PTGS1, PTPRC, PYGL, RAPGEF3, RELA, R PIA, RUNX1T1, SMAD9, SNW1, SPRY2, SPTLC1, TFPI, TLR3, TRAF5, TYMS, WN T4, WNT7B, YKT6, ST6GALNAC6, TNFRSF13B
Negative_15177	CP, CRH, CTH, IL9, NNT, TH, AADAC, ABAT, ACTA1, ACTC1, ADCY2, ADH4, ADR A1D, AFMID, ALDOA, ALG12, ANAPC11, APOC3, B3GALT1, B3GALT6, BDH1, BM P8A, CACNA1G, CACNG6, CBR1, CCNB2, CCR2, CD27, CD47, CD79B, CES2, CLD N19, COL3A1, CSNK2A1, CTTN, CXCL5, DAG1, DGKD, DHODH, DLL3, DOT1L, DR D1, EFN1, ENO1, ENTPD5, FADD, FECH, FGF23, FGF7, GALK1, GNA01, GNAS, GP1BB, GPAA1, GRIN2C, GUCY2F, GZMA, GZMB, HCLS1, HIP1, HLA-DMA, HLA-G, HMGS2, IL10, IRAK4, ITGA6, LHCGR, LIMK1, LRP6, MAPK14, MICA, MITF , MLYCD, MYD88, MYH7B, NCOA4, OR10AG1, OR13J1, OR4S2, OR5K1, OR6K3, P 4HA2, PARS2, PDE2A, PDE4A, PDIA4, PFKM, PIGA, PIGT, PPA1, PRIM1, PTGE R1, PVRL3, RPRM, SDC1, SEMA3C, SOS2, TAS2R10, TAS2R5, TGDS, TGFBR1, T LN1, TNFSF14, TXNDC12, UBE2L3, UGT2B28, TNFRSF10A, TNFRSF1B
Negative_15178	AMH, EDA, HPD, LPO, ME3, NPY, PML, TPR, TYR, UBB, ACAA1, ACSL4, ACVR2B, ADRB3, AGPAT1, ALDOA, APPL1, ARHGEF6, ARSD, ATP4B, AVPR1A, BCKDHA, C ASP3, CCKAR, CD244, CD55, CDH1, CDK7, CLDN1, CLDN20, CNTN2, COL4A2, C OL4A6, CYP27A1, CYP8B1, DDIT3, DEGS2, DUSP14, FABP1, FUT4, FZR1, GAB ARAP, GGT6, GNA14, GNAZ, H6PD, HLA-DOA, HLA- DOB, HNF4A, HSD17B7, HYAL1, IARS2, IMPA1, INPP5B, IQGAP1, ITCH, KIR3 DL3, LIPT1, LRP5, MAFA, MAN1A2, MAN1C1, MGST2, MLYCD, MYH1, NEU3, NFE 2L2, NKD2, NMNAT3, NPAS2, NRCAM, OR10G4, OR10K1, OR10S1, OR10V1, OR1 OZ1, OR13F1, OR1M1, OR2AE1, OR4N4, OR52K1, OR5AC2, OR5K2, OR5T2, OR9 A2, ORC5L, PARD6B, PDHA1, PIGU, PIK3C2G, PLA2G4A, PLCB3, PMVK, PPARA , PRKACB, PRKACG, PRKCB, PRKCH, RUNX1T1, SCLY, SDHD, SEMA3C, SMC1B, S OCS3, SOX17, STK11, TAP1, TGFBR2, TLR2, TLR3, TLR4, TLR5, TNXB, TRAF1 , TRDMT1, USE1, WNT7A, WNT9B, YES1, YOD1, YWHAH, C1GALT1C1, HLA-DQB1, HLA-DRB5, ST6GALNAC5, TNFRSF10D, TNFRSF12A, TNFRSF13C
Negative_15179	AK2, CS, HK2, KHK, LSS, LYN, MTR, RDX, SFN, AADAT, ACAA1, ACOT12, ACSM5 , ADRB3, AHCYL2, AKT1, AMPD1, APBB1, APOA2, APOE, ARSB, ATP5L, AVPR1A , BAI1, CCL4, CD14, CD3E, CD55, CDC2, CHEK1, CHRM5, CLDN19, CLTCL1, CS F2RB, CXCR6, CYP2J2, CYP4A11, DDOST, DRD1, ENO3, EPHB2, FGF13, GABAR AP, GALK1, GDE1, GFPT1, GL01, GYS2, HDAC2, HSPA8, IFNA8, IKBKG, IL28R A, INPP5A, INPPL1, ITGA6, KIR2DL1, KIR3DL2, MAD2L2, MAN1C1, MAP2K2, MAP2K3, MAP2K7, MDH1, MDH2, MDM2, MFNG, MGST2, MIOX, MRAS, MYLK3, NMN AT2, OR10J5, OR10P1, OR4N4, OR6M1, OR6Y1, OR7A10, OR8J1, PAK3, PAX6, PCCB, PDK1, PDXK, PLCG2, POLR1C, PPP1CB, PPP3CB, RALA, RUNX1T1, RXRA , SDC3, SHC3, SHC4, SKP1, SLC25A4, SPHK2, SPRED1, STX12, TACR2, TAS2R 10, TAS2R42, TBL1X, TRAF6, TSHB, TUBA3C, UCKL1, UNC5B, UROC1, WNT5A, WNT9A, XIAP, YARS, ARHGEF12, CACNA2D2, HLA-DQB1, HSD17B10

Negative_15180	ADC, CRH, F12, GPT, MET, NOG, OSM, TNR, AADAT, ADCY8, ADH4, AHCYL1, AMY2B, ARHGEF2, ARRB1, AVPR1B, BMP4, BNIP1, BUB1, CACNA1G, CACNA1H, CACNG8, CALML5, CD40LG, CDC45L, CDK6, CDS1, CRY1, CYP19A1, CYP3A4, CYP7A1, DDX52, DDX55, DERL1, DUSP6, EGLN3, ELK1, EPOR, ERBB2, GALNT8, GLDC, GNAI2, GPT2, HAAO, HDAC2, HIBADH, HPRT1, IDUA, IL24, IMPA1, INHBA, INPP1, IRAK4, ITGA10, ITGA5, LDHC, LIPC, LIPT1, LRP5, LTBP1, MAD2L2, MAN1A1, MYH10, MYH6, MYH7B, NEU1, NEUROD1, NFX1, NFYC, NT5C2, OR10P1, OR10Z1, OR4A15, OR4B1, OR4C16, OR4K5, OR51T1, OR6K3, OR8A1, OR8S1, PARD3, PAX4, PDE4D, PFKM, PIM2, PIP4K2C, PLA2G1B, POLA1, PPARA, PRKACB, PRKCE, PRKCG, PTAFR, RASSF1, RDH11, SESN2, SH2D1A, SLIT2, STAT6, STX16, SV2A, TCF7L1, TLR3, TRDMT1, VCAM1, WNT8B, SERPIND1
Negative_15181	DBI, DDC, F11, F9, FST, IL7, KDR, PGF, SCD, AANAT, ACAT1, ADH1B, AOC3, ARAF, ARHGEF1, ARHGEF2, ASCC3, BUB1B, CACNA1I, CDC27, CDC7, CHRDL, CLCA4, CNGA3, CNTFR, CSF3R, CXCL11, CXCL3, CYP19A1, CYP2A6, DDX52, DGKH, DGKZ, DKK2, DMGDH, EDNRA, ENO1, ENO2, EPHA8, ESAM, FUT6, FUT7, GALNT2, GALNTL5, GFPT2, GLUD2, GOSR2, GSTA2, GSTO2, HAGH, HEMK1, HLA-G, IFNW1, IGF1, IRS1, ITGB2, KITLG, L1CAM, LAP3, MOV10L1, MPP5, MYH6, NCKAP1L, NCOR1, NFKBIA, OR2T1, OR2T33, OR4D5, OR4E2, OR4K5, OR4S2, OR5J2, OR8B4, OR8K5, PAICS, PDPK1, PGK2, PIGB, PIK3C2A, PLOD3, PPARG, PPAT, PRIM2, PRKAG2, PRKCG, PRKCH, PRKY, PRLR, PSME2, PTGER1, RAC1, RAC2, RARS2, RBKS, RHOA, SETD8, SFRP4, TGFBR2, TUBB1, UBE2K, VTI1B, XYLT1, KIR2DL5A, PDCD1LG2
Negative_15182	CFI, HYI, ID4, IHH, KIT, LEP, ME2, MTR, SMS, SRC, VTN, AASDH, ACP5, ADORA2B, AKR1B1, ALDH9A1, ALOX12, ARG1, B3GNT2, BLVRB, BMP2, C4BPB, C9orf95, CCNG1, CD244, CHST12, CNTF, CNTFR, COL5A3, CTTN, CYP26B1, CYP2E1, DDX18, DHRS4L2, DVL2, E2F5, FGF1, FGF21, FLT4, FUT3, GLI1, GRPR, HPSE, ICAM2, IDUA, IL17A, INHBE, INPP5A, IRF3, ITGAE, ITGAV, LEFTY1, LHCGR, LTBR, MAD1L1, MAML1, MAN1A1, MAPK14, MYH11, NCOA4, NCOR2, NCR2, NFYC, NLGN3, NSDHL, NUDT5, OGDH, OR1L3, OR2G6, OR2L8, OR2M3, OR4M2, OR6C76, OR6N1, OR8A1, OR8J3, PIGT, PLA1A, PLCB2, PRODH, PRODH2, RFXANK, RUVBL1, SDC1, SEMA4B, SKIV2L2, SLC33A1, SPRY4, STAT5A, STX12, SUCLA2, TGDS, TKTL1, TNXB, VAMP1, XCR1, XYLT1, CACNA2D2, GABARAPL1, GABARAPL2, PDCD1LG2, ST6GALNAC6
Negative_15183	CD2, EZR, HK3, IL7, ME2, MPI, PXN, ACSL6, ADCY5, ADH1A, AFMID, AHCY, ALDH1A3, ALDH3B1, ATG7, ATP13A2, BMP8B, BPGM, C4BPB, C9orf95, CACNB1, CCDC6, CCL23, CCL25, CCL28, CCL4, CCNG2, CD28, CD55, CDC16, CDH1, CHD8, CLDN20, CNGA3, CNTFR, CTPS2, CTSB, CTTN, CYP7A1, DUSP4, EPB41L1, ESAM, EXTL1, F13A1, FLT1, FRAT1, GADD45A, GALNT10, GDF5, GNG3, HDAC1, ICOSLG, IFNA2, IFNA5, IL1B, IL9R, IMPA1, IPPK, IQGAP3, ITCH, ITGA11, ITPKB, L1CAM, LRP5, LRRC4C, LYPLA2, MAML1, MAPK12, MDH1, MGST1, NCKA P1L, NOTCH3, NT5M, OR10Z1, OR11G2, OR14C36, OR2AE1, OR2M7, OR5AR1, OR5B3, OR5D16, OR6C75, OR6K2, OR8D1, PAK3, PARS2, PCYT2, PFKM, PIAS2, PIGB, PIK3C2G, PIK3CA, POLA2, POLE, PPP2R1A, PRKAA2, PRKX, PSME2, PTK2B, PTPMT1, RAF1, RUNX1, SDC1, SEMA3G, SEMA4A, SESN2, SIGLEC1, SPCS1, SPRY4, SPTLC1, ST3GAL1, TBK1, TUBA4A, TUBAL3, TYMS, UNC5C, VDAC2, ATP6V1G1, TNFRSF13C

Negative_15184	<p>ADA, AK3, F11, F3, FER, FOS, ID1, IHH, IL3, PC, TEC, ABLIM2, ACAT2, ACSL1, ACVRL1, ADH5, ADH6, AGPAT4, AKT1, ALDH2, ALDH4A1, ALG13, ALG3, AMDHD2, APAF1, APBB1, APRT, ATG7, ATN1, ATP2A3, B3GALT4, BRAF, BUB1B, CCNA1, CCND3, CCNE2, CCNG2, CD86, CHR1, CLDN10, CMBL, CNGA4, COASY, COQ5, CPT1A, CTBP2, CTLA4, CXCL6, CYP4F3, DNMT1, DRD5, EI24, EPHA4, EPHA5, EPHA6, EPHB1, ETNK2, FCGR3A, FUT1, FZD6, GALE, GALK2, GALNT10, GALNT13, GNAT3, GPAA1, HES1, HSPA2, ICOS, ICOSLG, IFNA6, IL18, IL1R2, IL20RB, IL25, IMPA2, INHBA, IRF3, ISYNA1, KIR2DL4, LRAT, MAP2K3, MYH15, NADK, NADSYN1, NME7, NR1H3, NR5A2, NRXN2, NT5E, OR10A2, OR10G7, OR1A2, OR1C1, OR1S1, OR2T11, OR2T2, OR4E2, OR5T1, OR6K6, PAK7, PANK2, PDHA2, PIAS3, PIGL, PIK3R2, PITX2, PLA2G2E, PNPT1, POLA1, POLD3, POLR2C, POLR2L, POMC, PRIM1, PRKAA2, PRKCE, RAPGEF3, RHOA, RPRM, SARS2, SCP2, SDHB, SETD2, SKP1, SMAD3, ST8SIA5, STX12, SULT1A4, TNFSF18, TPH2, UGT2B11, WASF2, WNT5B, XCL1, ZAP70, B4GALNT1, TNFRSF13B, TNFRSF6B</p>
Negative_15185	<p>ABO, ATM, C8B, C9, GK2, PRL, SMS, VTN, A4GALT, AFMID, AGXT, ANAPC2, ARG2, ASIP, ATP13A2, B4GALT6, BMP8B, CADM1, CADM3, CAV1, CD27, CHKA, CLDN16, CLDN19, CRLF2, CSF2RA, CTNNA1, CTTN, CYP1B1, CYP2A6, CYP2E1, CYP7A1, DAAM2, DUSP14, DUSP5, EGFR, EPHA7, EPHB2, FADS2, FUT4, FZD1, FZD4, GAL3ST1, GALT, GNAZ, GNMT, GPT2, GRHR, GUCY1A3, GUK1, HES1, HRAS, HTRA4, IAPP, IDI2, IL13, ITGA11, KAT2B, KCNJ11, LRP5, MAOA, MDH2, MEF2C, METTL2B, METTL6, MGAT5, MIOX, MPP5, MTHFS, NARS, NLGN3, NME2, NRP1, NRXN2, OGDHL, OR10Z1, OR2AE1, OR2L13, OR2M2, OR6X1, OR8B12, OR9G4, PAICS, PAX8, PPCS, PRKCD, PTDSS2, PTGDS, PTPN7, RBL2, RPN1, SCLY, SH2D1A, SNAI1, SNAP25, SPHK2, STT3B, SULT1A2, TAS2R4, TAS2R8, TMLHE, TNFSF9, TSNARE1, TUBB2B, ULK2, UROD, VTI1A, WNT2, XCL1, YES1, PAFAH1B3</p>
Negative_15186	<p>AGL, ATM, CD2, CFI, F10, F7, F8, FAH, GNE, GP6, HAL, IVD, PAH, UBB, ABP1, ACAT1, ACSM5, ADH7, ALG1, ANAPC1, ARRB1, B4GALT3, BCMO1, BMP2, BMPR2, BUB1, CACNA1A, CBR3, CCDC6, CCL11, CCNB1, CDKN2D, CHIA, CISH, COL2A1, COMP, CX3CL1, CYCS, CYP21A2, CYP26C1, CYP2A6, DAPK3, DGAT1, DHX58, DUSP2, EPHA8, FARS2, FM02, FPGT, FRAT2, GALNT3, GARS, GDF7, GLYCTK, GUK1, HARS2, HMGCR, HPSE2, HSD17B3, IGFBP3, IL7R, INHBE, LDHAL6A, MAP3K3, MAP3K4, MAP4K3, MMP9, NRG3, NTN1, OR2W1, OR4F6, OR4L1, OR4M2, OR51G1, OR52A1, ORC1L, PAPSS2, PAX4, PHPT1, PIK3CB, PLA2G2D, PLCB4, PLCE1, POLR2F, PPID, PPP5C, PRIM2, PTPN11, RAP1A, RARS, RDH12, RRAS2, SEMA3A, SESN3, SETD7, ST3GAL2, STX2, SUV39H2, TFP1, TPH1, TUBA3C, UK2, HLA-DRB5, TNFRSF1A</p>
Negative_15187	<p>BCR, C7, C8G, FAH, FOS, ID1, SRC, UBB, ABP1, ACADL, ACHE, ACO2, AKR1B1, ATP5G2, B3GALT5, B3GALT6, B3GAT1, B3GAT2, BUB1B, CACNB4, CACNG5, CALML5, CCL11, CCL14, CCR10, CD274, CD99, CDC45L, CHPT1, CKS1B, CLDN20, COMP, CPOX, CREB5, CYP11B1, CYP2B6, CYP4F2, DIAPH2, DKK2, DMGDH, DUSP16, E2F4, ERBB2, ERBB4, EREG, F2RL1, FBP1, FBP2, GAD2, GAL3ST1, GALNT14, GNAQ, GNAT3, GRM5, GYS1, GZMB, HADHB, HBEGF, HMOX1, HYAL2, IDH3G, IDI1, IFNA16, IL18RAP, IL20, L1CAM, LAMC2, LTBR, MAN1C1, MAP3K12, MAP3K6, MGLL, MTHFR, MYL5, NANS, OR10A6, OR10J5, OR10S1, OR10Z1, OR1C1, OR2F1, OR5AU1, OR5L1, OR6N1, OR8U1, P2RX3, P2RX5, P4HA2, PAFAH2, PANK3, PGK2, PHKG1, PIGB, PIGQ, PIK3CD, PLA2G2F, PLCB4, PLCD1, PLCD4, PLCG1, PPP1R3D, PRKAG3, PRKCE, PRKCZ, PROS1, PRPH2, PTGES2, PTGFR, RAPGEF3, RCHY1, RFXAP, SEMA3B, SHC2, STAM2, STK11, STMN1, TAS2R38, TAS2R7, TAS2R9, TBL1X, TCF7L2, TJP1, TUBAL3, TUBB3, UAP1, VAMP4, WASL, XCL2, YES1, AASDHPPT</p>

Negative_15188	APP, CEL, KHK, LAT, TYR, ACACB, ACOT12, ACP1, ACSS1, ADAM10, ADSL, ALD H2, ALG9, AMD1, APBB1, BET1L, BLVRA, CACNB2, CD14, CDC20, CKMT2, CNTN 2, COASY, COQ3, CPT2, CREB3L4, CXCL3, CYP2C18, CYSLTR2, DARS2, DHODH , EDNRA, ENTPD4, FGD3, FUT8, GBGT1, GFPT1, GNAZ, GUK1, HARS, HARS2, HB EGF, HIP1, IL22RA1, IL2RB, IPMK, JUND, KAT2A, LARS, LTC4S, MAP3K4, MA PK11, MCCC1, MGST1, MINPP1, MOV10L1, NCR1, NOTCH3, NUMBL, OR11H4, OR 2M3, OR2M5, OR4D5, OR52E8, OR52M1, OR5AU1, OR6K3, OR6T1, OR7A17, P2R X2, PARD6B, PER2, PGAM2, PHPT1, PIAS1, PIGT, PKMYT1, PLAUR, PLOD3, PO N2, PPP1R3D, PRIM1, PRKAA2, PRLR, PRPS2, PTPN11, SETD2, SIAH1, SPP1, SPRY4, ST3GAL1, STAM2, STAT5A, TAS2R48, TCF7L2, TPH1, TRAF4, TRDMT1 , UGDH, UGT2B11, WNT5A, WNT8A, XCL2, GABARAPL1, HLA-DRB3, PHOSPHO1, ST6GALNAC5
Negative_15189	AMH, C9, CDA, CR2, GLS, GP5, LEP, MUT, PGP, ABLIM1, ACAA1, ACTN1, ADCY4 , AMY2A, ANAPC4, ATP5I, ATP5J, B3GALT4, BAI1, BIRC2, BMP6, CACNB3, CC L23, CCNG2, CCNH, CDC26, CLDN7, COL11A1, CTS1, CXCR6, CYP1A2, DNMT3 B, DPYS, DUSP2, DVL3, EFNA3, EGLN1, ENPP6, ENTPD8, EPHA7, EXOC7, F2RL 1, FGD1, FLT4, FRAP1, GADD45A, GALNT5, GALNT8, GBGT1, GDE1, GNAO1, GN AT3, GSTA2, HARS2, HMBS, HSD11B2, IFNK, ITGAD, ITGB5, KCNJ11, L1CAM, LIPE, MAN1B1, NAMPT, NCR1, NOD1, NSDHL, OR1J2, OR2G2, OR2T29, OR4B1, OR4K5, OR4P4, OR4Q3, OR6Y1, OR8B8, OR8K5, P2RX7, PAK1, PCK1, PDE3A, P IK3R4, PLCG2, PMM2, PNLIP, PON1, PRDX6, PRKCG, PRKCZ, PRSS2, PTGS2, P TPN7, RASA2, RBPJL, RDH11, RDH16, RFXANK, SETDB2, SKP1, SOCS7, SPCS1 , SPHK2, SPRY2, SPTLC1, STAM, STX10, STX8, TACR2, TAS2R14, TGDS, THBS 3, TKTL1, TSC2, UGT2A3, UPRT, WNT10B, CSNK1A1L, CTNNBIP1
Negative_15190	C8B, CRK, CTH, DUT, GLA, GP5, HGD, KHK, LEP, MVK, NLK, TXK, UBC, ACACB, A CVR2A, ACVR2B, ADSSL1, AGPAT4, ALAD, ALOX15B, ARD1A, ARG2, ARPC1B, A TP12A, BMP6, BMPR1B, CACNA1G, CAPN2, CCNG2, CD36, CDKN2C, CHSY3, CMA S, COQ7, CSNK1D, CTPS, DUSP14, E2F4, EDN1, ENPP2, EREG, FGFR4, FOSL1, GDF7, GLDC, GLS2, GNB3, GRIN2C, GUCY1A3, GUCY2F, HAAO, HA01, HEXB, IF NA4, IL17A, IL17RA, IQGAP3, ITCH, ITGA3, LEFTY1, LRAT, MTAP, MYD88, N AT5, NAT6, NEU4, NNMT, NOD1, NR1H3, NUMB, OR10G4, OR10H5, OR1E1, OR2B 11, OR2Y1, OR4D11, OR52R1, OR5D14, OR5I1, OR8S1, OR9I1, P2RX1, PAK3, PDE1B, PDHA1, PER2, PFKFB3, PIGC, PIGN, PIGP, PIK3R5, PKLR, PKMYT1, P OLD2, PPID, PRKCZ, PTPRB, RFWD2, RPIA, SELP, SOCS2, SPRED1, SSH2, ST3 GAL4, SUV39H1, TAS1R1, TAS2R50, TAS2R9, THBS3, TRPC1, TUBA8, VARS, W ARS, WNT2B, WWP1, EIF4EBP1, PLA2G12A
Negative_15191	C9, CBL, CFI, CGA, CRK, ID1, IL5, IL6, MAX, ME2, MVK, RET, ABI2, ACO1, AD H4, ANAPC11, ANAPC4, ARPC1A, ARSB, ATP6V0C, B3GNT4, BCKDHA, BMP8A, C 5AR1, CAMKK1, CAV1, CCL3, CDS2, CHST11, CLCA4, CLDN6, CNGA4, COL1A2, CTS1, CYP17A1, CYP19A1, CYP8B1, DDX41, DEGS2, EGLN3, EIF4B, EPHA3, EPHA8, EVI1, EXT1, EXTL2, FDPS, FLOT2, FUT2, FZD5, FZD7, GDF6, GNAI2, GNPAT1, HEMK1, HLA-DOB, HSD3B1, ICAM1, IL13, IL1A, IRS1, ISYNA1, ITGAL, KLK3, LDHAL6A, L ILRB3, LTBR, MAFA, MAML2, MDH2, MPP5, MPZL1, MTMR6, NCOA4, NKX2- 2, NME4, NRCAM, NTNG1, OCLN, OR10A7, OR2M5, OR52A1, OR5AK2, OR5AR1, O R5I1, OR5K2, OR5L1, OR5M9, OR5P2, OR5R1, OR5T2, ORC4L, PAK4, PANK1, P ARVB, PCYT1A, PDE1B, PER1, PGK2, PIP5K1A, PKM2, PLXNA3, POLR2J, PON2 , PPP2R1A, PPT1, PRKACG, PRPH2, PTDSS1, RALGDS, RBL1, RFXANK, RHOD, R PS6KA3, RPS6KA5, RRM2B, RUVBL1, SETD7, SETDB2, SFRP2, SIGLEC1, SLC2 7A1, SNAI1, SPHK2, SPRY1, SRGAP1, TOMM40L, TUBB2A, UGT2A1, UMPS, UPP 1, UXS1, VAMP4, WEE1, ZNRD1

Negative_15192	AK7, DBH, DCN, GH2, GP6, HGD, ID3, ID4, TH, ABL2, ACPP, ADSS, ALDOA, AMP D1, ARG2, ARRB2, BMP8B, CASP9, CCR4, CD226, CD59, CDH15, CDKN2B, CDS1, CHRM2, COL4A6, CREB3L4, CSF2, CXCR4, DAAM1, DAD1, DAG1, DHODH, DHRS 9, ENTPD1, ERBB2, FGD1, FGF22, FOXA3, FZD2, GARS, HADH, IFNA7, IGF1, IL12RB2, IL18R1, IL18RAP, IL1A, IL22, IL2RG, INPP5A, IPPK, IRAK2, IRF 5, ISYNA1, MAD2L1, MAP3K7, MAP4K1, MAP4K2, MAPK7, MGAT3, MTHFD2, MYH 2, NADK, NARS2, NEFL, NEFM, NGEF, NKX2-2, NTN1, OPLAH, OR1E1, OR2T12, OR2T34, OR4N5, OR51B5, OR5AP2, OR6K2, P2RX4, PCK2, PCYT1B, PIAS3, PIP4K2B, PLAUR, PLCE1, PLXNA1, PLXNB2, P PP3CC, PTPRB, QPRT, RAPGEF2, RRAS, SELP, SEMA3G, SHC3, SMAD6, SRGAP1, SSX2IP, STAT5B, STX5, SUCLG1, SULT1A1, SYNJ1, TAS2R1, TAS2R40, THB S3, THBS4, TIAM1, TRAF4, TSC2, UGT2B10, VAMP2, VARS, WNT8A, CSGALNAC T2, PRICKLE2, TNFRSF13C
Negative_15193	AMH, C8A, FYN, GH1, HGF, IL5, SFN, ACACA, ACPP, ADORA2A, ADRBK2, AGRP, ALAD, ALDH3B2, AQP7, ATG7, B4GALT6, BBC3, BCAT1, BCL2L1, CACNA1B, CB LB, CCNG2, CD82, CDH4, CHPT1, CLCA4, CLTC, COQ6, CPT1C, CRY1, DGKD, DP M2, DUSP16, EIF4B, ELK1, ENTPD8, EPHA1, EPHA3, FDFT1, FLT3, FUT4, FUT 5, GALE, GALNT9, GMDS, GNAQ, GRIA2, GSTO2, HIP1, HMOX2, HPSE2, HSD3B7, ICOS, IFNA4, IL19, IL4R, INHBE, IRS4, ITGA10, KCNJ11, LIPA, MGLL, MG ST3, MYH2, NRG1, NUMBL, OLAH, ONECUT1, OR10H4, OR1B1, OR1S2, OR2AG1, OR4E2, OR4K17, OR51B2, OR6B3, OR6C75, OR8B4, P2RX5, P2RX6, PAICS, PD IA4, PFAS, PGK2, PIGA, PIGS, PIGX, PIK3CG, PLA2G2A, PLCG2, PLOD2, POL R1D, POLR2H, PRKAA1, PRKCE, RAB23, RHEB, RPS6KB2, SCP2, SDC4, SDHC, S LC25A6, SPAM1, SPI1, STX4, SUV39H1, TAS2R10, TAS2R7, TJP2, UGT2A3, U GT2B4, YWHAG, MAPKAPK5, ST6GALNAC3
Negative_15194	AK5, C6, CFI, F7, GP6, LEP, ME2, ACAT1, AKT1, ALG10, ARAF, BMP4, BMP8A, CACNG4, CACNG6, CAMK2A, CASP8, CCL4, CD274, CD44, CD55, CD59, CD82, C HRNA7, COMT, CPOX, CRY1, CRY2, CSNK1D, CTNND1, DDX18, DDX23, EHHADH, ENO1, ENTPD4, ENTPD6, EPHA8, GALC, GALK2, GALNTL5, GATM, GFPT1, GNA1 1, GRAP2, HLA-C, IFNA6, IFNAR2, IL13, ISYNA1, ITGB5, MAN1A1, MAP3K4, MCM3, MGAT5, M MP7, MYL5, NAGK, NCSTN, NRXN2, NTF4, NUMB, OR10G9, OR13C2, OR13C3, OR 3A1, OR7C1, OR8H1, PAK3, PER2, PLAT, PLCB3, PLCD3, PLCZ1, POLE, PPARG, PPP1R3C, PRKACA, PTPN5, RALBP1, RARS, RELA, ROBO3, RPS6KA2, RPS6KA 3, SEMA3E, SESN3, SETD7, SLC2A1, SPTLC1, SULT1E1, SUV39H2, SV2A, SV2 C, TALDO1, ULK3, VAMP3, VASP, VKORC1, YWHAG, YWHAZ, ATP6V1E2, CACNA2 D2, MAP3K7IP1
Negative_15195	C3, CTH, GP6, ID1, KHK, PTS, ABL2, ACOX2, AKT2, ALG13, ALG3, ALOX15B, A POA2, ARPC1B, ASRGL1, B3GALT2, BMP6, C1GALT1, CACNA1S, CACNB1, CALM L3, CASP3, CCL21, CCNH, CD244, CD38, CD40LG, CHST13, CLCA4, CNTNAP1, COL6A2, COQ5, CXCL3, CYP2D6, CYP2F1, CYP3A5, CYSLTR1, DGKG, DHDH, DT X4, EI24, EPHA1, ERBB2, FBP1, FLOT1, FRAP1, GAMT, GCH1, GJA1, GLI3, GL O1, GNG12, GRIN2A, GUCY2D, GZMA, HLA-C, IFNA13, IL18, IMPDH2, IQGAP1, KCNJ11, KIR3DL3, KRAS, LAMA3, LARS2, MAD1L1, MAN2A1, MASP1, MNX1, MOV10L1, MPZL1, MYH2, NCKAP1, NFATC1, NNMT, NTRK2, OCLN, OR10J3, OR10K1, OR13C5, OR2G2, OR2T33, OR2V2, OR5 B12, OR5H6, OR6Q1, P2RX2, PGAM1, PGK1, PI4KA, PIGC, PIGU, PIGX, PIK3C B, PIK3CD, PIK3R2, PIP4K2C, PLA2G2A, PLCB2, PLCG2, PLOD3, PLTP, PMM1, POLD3, POLE, PRKAB1, PRPH2, PYGL, RAC2, RBKS, RDH16, RRAS2, SEPHS1, SETD1B, SFRP5, SMAD2, SMARCA2, STX16, SULT2A1, TACR3, THBS3, TLR5, T OMM40, TP53, TUBA4A, VEGFA, XCR1, YOD1, ATP6V0D2, CSGALNACT2, PNLIP RP1, TNFRSF11A, TNFRSF18

Negative_15196	CR1, GBA, ME1, NPL, SMO, AASS, ACMSD, ACOX1, ADCY9, ADIPOQ, AHCYL2, ALDH9A1, AMHR2, APLP1, ARHGEF4, ATF2, ATP5G2, AXIN1, BRAF, CBR3, CCKAR, CCNG2, CD22, CD74, CDC27, CHEK1, CHIA, COL2A1, CSNK1E, CYP2D6, DAAM1, DAD1, DGKH, DIAPH1, DOLPP1, EDA2R, EDN1, ENAH, ENTPD6, ENTPD7, EPHB1, FLAD1, FMO2, FMO3, FUT8, GADD45B, GART, GGPS1, GNA14, GUCA1B, HES1, HMGCL, ICAM2, IDI2, IRAK1, JAK3, KIR2DL3, LAMC1, LAP3, LTBP1, MAPK1, MAPK9, MDM2, MGAT4A, MMP2, NEFL, NFKB2, NLGN2, NOX1, NPR2, OR10Z1, OR13C4, OR1S2, OR2F1, OR2G2, OR2T29, OR4F4, OR51B2, OR6C4, OR6K3, P2RX5, PDE1C, PDGFC, PIAS1, PIK3C2B, PLXNB2, PPARG, PYGB, RAD51, RAPGEF1, RAPGEF2, RHOA, SDHC, SEMA3C, SPTAN1, ST3GAL3, STAT5B, STAT6, STX12, TACR1, TJP1, TNFSF11, TNXB, TPMT, TUBB, TUBB3, UGCGL2, VARS, WHSC1, WNT10B, HLA-DRB5, TNFRSF13C
Negative_15197	AR, DCT, GAA, GGH, RET, SRM, TK2, TPO, ZYX, ACAD9, ACAT2, ACMSD, ACOX1, ACTN1, ACTN2, ALDH1A1, ALDOC, ARSD, ATP5C1, ATP6V1H, B3GAT3, C4BPB, CACNG1, CASP10, CASP3, CCL2, CCL4, CCNG1, CD79A, CDC45L, CHEK1, CHKB, CHST13, CLCA4, CLDN16, CNDP1, CPT2, DCTD, DHDDS, DHODH, DLL1, DOCK1, EHHADH, EIF4B, EXT1, FARSB, FASLG, FBP1, FLT1, FUT6, FZD2, GALK2, GCLC, GNAS, GOSR2, GOT1, GP1BB, GPX5, GSK3B, GSTM5, HADHA, HA01, HLA-G, HSD11B2, IDUA, IFNA17, IFNA5, IL22RA1, IRAK2, ITGA2B, KIR2DL3, KIR2DS4, LIPG, LTB4R2, MAGI1, MAOB, MAP2K5, MAPK1, MAPT, MARS, MPZL1, NLGN1, NLGN3, NOD1, NODAL, NR5A2, NT5C3, OR10S1, OR10T2, OR2B11, OR2C3, OR2F1, OR4B1, OR4M1, OR51D1, OR52K2, PAICS, PDE4C, PDE6G, PDE9A, PFAS, PHKB, POLD2, POLE, POLR2L, PPARA, PPP1R3B, PPP2R1A, PTCH1, PTPRM, PTTG1, RARS, RCHY1, RPIA, SEMA4A, SLC25A5, SUCLG1, TAS1R2, TCF7L2, TLR2, TLR9, TRAF2, TYMP, UBE2K, ULK3, UNC5B, VKORC1, WASF1, ATP6V1E1, HSD17B10, PAFAH1B1, SERPINC1, ST6GALNAC6
Negative_15198	DBH, EGF, GK2, INS, JUN, NNT, A4GALT, ACADS, ACSL5, ACSL6, ADAM10, ADRBK2, AGXT, AKR1B10, AKT2, ALDH3B2, ALPI, AOC2, APOA1, ARPC2, ATP5J2, ATP6VOB, BACE1, BCAT1, C5AR1, CCND1, CCNE1, CD79A, CDC45L, CHST13, CLDN10, CSF2RB, CTSL1, CXCL16, CYP26B1, CYP2C9, CYSLTR1, DEGS2, DGKH, DHRS9, DPYD, DVL2, EIF4E2, EPB41L1, EPHA6, EPHA7, EPHX2, ESAM, FABP1, FGF6, FIGF, FLOT2, GLB1, GNA01, HCLS1, HDAC2, HTRA2, IDH3A, IL28RA, INPP4A, IQGAP2, ITGA3, ITGAL, ITPKB, JAK3, KARS, KIR3DL1, LILRB3, LTB4R2, MAP2K4, MAPK3, MYH4, NADSYN1, NFE2L2, NOTCH3, NRXN3, NT5C1A, NUDT12, OR10H4, OR10J1, OR1C1, OR1L3, OR4B1, OR52E4, OR52W1, OR56A4, OR5AR1, OR5F1, OR5T2, OR6C75, OR8I2, OR8K5, PAPSS2, PARVG, PDE3A, PDGFA, PFN4, PLAT, PNPT1, POLD4, POLR2F, PON3, PPM1D, PPP2R5D, PRKCI, PSME2, PSPH, PYGM, RARS, RHEB, RUNX1T1, RUVBL1, SDC4, SELE, SESN3, SETD2, SFRP1, SPAM1, SPCS1, SPTAN1, STAT2, TBL1XR1, TBXA2R, TPM3, VKORC1, B4GALNT1, CTNNBIP1, MAP3K7IP2, PRICKLE1
Negative_15199	ADO, CFI, CP, CRH, DBT, DCK, GLS, GP9, IL2, IL6, ACVR2B, ADH7, ADRA1D, ADSS, ALDOB, AMY2B, ARSE, B3GALT5, BCL10, BMP4, CACNA1D, CADM3, CCL17, CD274, CDH1, CLCA4, CLDN2, COL5A3, CRLS1, CTBP2, CXCR5, CYP7A1, DDX50, DEGS2, DHRS4, DHRS4L2, DHX58, DKK1, DNMT1, DTX1, ENPP7, EPRS, FADS2, FLOT1, FOXA2, FZD5, GART, GDF7, GLO1, GRIN2D, GSK3B, GSTP1, HAO2, HLA-C, HTR5A, HTRA2, IFNA10, IL10RA, IL12RB2, IL18, IL18RAP, IL2RA, IMPA2, IQGAP1, IRF9, ITGA9, LAMB2, MAGI2, MAP2K1, MAP2K3, MAP2K5, MAPK13, MCCC1, MCEE, MGLL, NME6, NPR1, NRG1, NUDT8, OR10H4, OR1B1, OR2A42, OR2AE1, OR2M5, OR4A5, OR4K15, OR51G2, OR51I1, OR52M1, OR5A2, OR5AP2, OR5F1, OR6C6, OR8H2, OXCT1, P2RX4, P4HA2, PAPSS1, PCK1, PDHA2, PDX1, PFN4, PGM1, PGM3, PIGL, PLA2G2D, POLR1B, PPOX, PRKAA2, PRKG2, PRSS1, RASA1, RASGRF2, ROCK2, SEMA3F, SESN1, SKP1, ST3GAL5, TCIRG1, TKTL1, TNFRSF4, TRAF4, UGT2B10, ULK1, VEGFC, WWP2, PDCD1LG2, TNFRSF17

Negative_15200	ADO, C6, DBH, F2, F7, F8, HGD, MPI, MPZ, MVD, NF1, NPY, ABL1, ADCY7, AGPA T2, ALDH3B2, ANPEP, ARG1, ARPC4, ASCC3, ASIP, B4GALT7, BCL2L1, BMP2, CCL5, CD19, CD244, CD28, CDKN1A, CDKN2A, CES7, CIITA, CMAS, CNDP1, CO L4A1, CSH1, CSNK1E, CTNNA2, CTNNA3, CTSG, CXCR3, CXCR4, CYFIP2, DARS , EDAR, EGLN3, ENTPD7, EPHB3, EPHB6, F2RL1, FABP4, FDFT1, FM03, FZD8, GADD45G, GFAP, GNAQ, GNB3, GUCY2C, HADHA, HMBS, HMOX2, HPSE, HSPA1B, HSPB1, IDH1, IFIH1, IL9R, ITCH, ITGAV, ITPKA, ITPKB, JAK1, KLRC1, LAR S, LARS2, LPAR1, LRRC4C, MAML1, MDM2, MMP9, MYH9, NCOR2, OR10J1, OR13 C9, OR4E2, OR52E8, OR56B4, OR5AR1, OR5M9, OR5R1, OR8G1, OR8J3, ORC1L , P2RX7, PAK1, PDE2A, PDE4A, PDPK1, PDXP, PER3, PGM3, PHKA1, PIAS1, PL EKHA8, PPAP2C, PPAT, PRKCI, RASGRF1, RPRM, SARDH, SELPLG, SLC25A6, S MPD2, SMPD4, SOCS7, SUV39H2, SYNJ1, TAS2R49, TNFSF10, TRDMT1, TUBB, TYMS, UGCG1, USE1, VANGL1, CACNA2D2, ST6GALNAC1, TNFRSF12A
Negative_15201	BTC, FER, GPI, HDC, ID4, LEP, LSS, ME3, OTC, TK2, TNN, AANAT, ACO2, ACTN 2, ALDH3A1, AMPD1, AOC3, ARG1, ARPC4, B3GALT4, BLNK, BUB3, C7orf16, C ALML5, CALML6, CASP10, CCND2, CCR1, CD80, CDC6, CDH15, CDK4, CDKN1C, CDKN2C, CLTA, COQ5, CPT2, CYFIP1, CYP26C1, DGKE, DLST, DMGDH, DTX1, E GFR, EPHB1, FARSA, FGF22, FZD1, FZD10, GCNT2, GGT6, GJA1, GMPR2, GNA1 5, GRIA2, GSTZ1, HPSE, HTR7, IFNA14, IL11RA, INSR, KCNJ11, LIPE, LIPF , LRRC4C, LYPLA1, MAD2L2, MAPK11, NADSYN1, NARS2, NFASC, NTF4, OGDH, OR10H5, OR10K1, OR14I1, OR2G2, OR2G3, OR4D5, OR4S1, OR52E4, OR5D13, OR7A10, OR8H3, OXCT2, P4HA1, PARVG, PDE4C, PDXP, PGAP1, PHGDH, PI4KB , PLA2G1B, PLCG1, PLOD2, PLXNB1, POLR1D, POLR2F, PPBP, PPP3CA, PPP5C , PRKAG3, PRKAR2B, PSME3, PTCRA, PTPRJ, RXRB, SPRED1, SPTAN1, ST3GAL 5, TAS2R16, TBL1Y, TBXA2R, TFPI, TUBA1C, UGDH, VAMP1, WNT10B, HSD17B 10, PLA2G12A, ST6GALNAC3, TNFRSF10B, TNFSF13B
Negative_15202	AK1, AK2, BID, CD4, EPO, FN1, GDA, ID1, PXN, SPN, ACAT2, ACOT12, ACSL4, ACTA1, ACYP1, AKT1, ALDH3A2, ALOX15, ALPP, AMPD2, ARHGEF6, ARRB2, AT N1, B4GALT5, BET1L, BHMT, BTRC, CACNA1B, CCL13, CCR4, CD01, CHRM5, CL DN16, CLTA, COL5A3, CTSB, CTTN, CXCR6, CYP11A1, CYP4F2, CYP8B1, DGKH , DHCR7, DLL4, DPM2, DRD1, DTX1, ENPP3, EPHA1, EPHA4, EPHB1, FGD1, FUT 4, GLDC, GSTA3, HAGHL, HEXA, HMGCR, HSD17B4, IFNG, IFNK, IRS2, KCNB1, LMO7, MAFA, MAPK10, MPDZ, MYH7, MYH9, NCOR2, NFATC4, NLGN3, NOS3, NT5 C1A, NUDT2, OR10G9, OR1C1, OR1E1, OR1F1, OR2A42, OR2T11, OR2T3, OR2V 2, OR4D9, OR51F2, OR52H1, OR5D18, OR8A1, OR8J1, PAK1, PDXK, PFKFB3, P ORCN, PPT1, PRSS1, PTGER3, RALB, RAP1B, RBPJ, RDH5, SCD5, SESN2, SOX1 7, SUV39H1, TAS2R8, TRAF4, VDAC3, WNT2B, WNT4, XYLT1, YWHAB, ZFYVE16 , ATP6V0D2, ATP6V0E1, CSGALNACT2
Negative_15203	CBL, FH, FST, INS, PVR, ACPP, ADORA2A, ALDH3A2, ALG1, ALG10, ALOX12, A MD1, ANAPC4, ATP6AP1, B4GALT3, BAI1, BMPR1A, BUB1, C1QA, CACNA1F, CA CNB2, CASP3, CD58, CDH1, CLTCL1, CTSS, CYP21A2, CYP2C19, CYP4A11, CY P7A1, DLL3, DUSP2, EDAR, EP300, ESPL1, FUT2, GAD2, GALM, GLI2, GNP NAT 1, GRIA2, GRIN2D, HCLS1, HDAC2, HIBCH, HLA- G, IL11RA, IL13RA1, IL2RA, ITGA1, ITGA6, ITGA7, KIR3DL1, LDHAL6A, MA FA, MAPK8, MAPT, MAT2B, MCEE, MCM4, MINPP1, MLLT4, MTHFD1L, NUDT2, OR 11L1, OR1N2, OR2T5, OR4F4, OR51A4, OR7A5, P2RX2, PDGFD, PDXP, PFKL, P PA2, PRPS1, RBL2, RDH11, RRM2, SDC4, SESN1, SHC3, SMPD1, SOS1, SPTLC2 , SREBF1, STAT4, SULT2A1, SV2C, THBS4, TICAM1, TJP1, TLR2, TPM3, TRAF 4, TUBB2A, TYK2, TYMP, VCAM1, WNT6, YWHAB, MAPK8IP3



Negative_15204	F10, GSS, IHH, SMS, ACOT11, ACSS2, ACVR1B, ADCY3, ADSSL1, ALDH1L1, AL OX15B, ALS2, ARG1, ARHGEF4, ATP5F1, B4GALT2, BLVRA, BMP5, CACNB4, CC L28, CD48, CD86, CD8A, CHDH, CHIA, CLCA2, CMBL, CYP2D6, DAXX, DTX1, EP B41L2, F13A1, FGF13, FGF18, FMO4, GDF7, GJA1, GLI1, GNAO1, GOSR2, GPD 1, GRIA2, GUCY1B3, GZMA, HSD17B7, HSP90B1, IARS, IL10RA, IL15, IL15R A, IL25, IL6ST, IMPDH2, IRS4, ITGA6, ITGB4, LALBA, LIPA, MAD2L2, MAPK 11, MYL2, NCAM1, NT5C2, OR10C1, OR10S1, OR13C2, OR2T34, OR3A3, OR4A1 5, OR4K2, OR52N5, PAPSS1, PAPSS2, PER3, PGAM4, PHKG2, PI4KA, PLA2G5, PLIN, PPARA, PPP1CB, PTEN, PTGS2, PTPRZ1, RHOD, RPS6KA4, SC4MOL, SNA I1, SOCS2, STX10, TALDO1, TGFB3, UGT1A10, WASL, WNT7B, ATP6VOA4, ATP 6V1B1, CACNA2D2, CTNNBIP1, TNFRSF13B, TNFRSF14
Negative_15205	ADK, DDO, FES, GNS, HYI, NF1, RDX, ABLIM2, ADH5, ADRA1A, AGPAT4, ALDH3 A2, ALPL, AMDHD2, AMY2A, ARG1, ARSE, ATP5H, ATP5J2, B3GNT4, BHMT, CAC NA1S, CALML5, CCL7, CCNA1, CCND3, CCR10, CCR6, CD19, CD40LG, CDH5, CD IPT, CDK6, CDK7, CDS2, CHKA, CLDN16, CLDN5, CRLF2, CSAD, CYFIP1, DDHD 1, DDX55, DGKH, DHDH, DLST, DNMT3B, E2F2, EFNA1, EFNA3, ENPP1, FZD4, G CNT2, GOT2, GPX7, GUK1, GZMB, HAAO, HLA- DOA, HSD11B1, HSP90B1, IL10, IL12A, IL19, INPP4A, IQGAP1, IRF9, IRS1 , ITGA3, KLRD1, MCAT, NME2, NOS3, OCRL, OR10A2, OR1D2, OR2A2, OR2AG1, OR2F1, OR2F2, OR2G6, OR2T29, OR51V1, OR5AC2, OR5AS1, OR5H6, OR5J2, O R6C6, OR6Q1, OR8U1, OR9K2, PANK4, PARVA, PCYT1B, PDE9A, PER1, PFKFB3 , PIK3CD, PIK3CG, PIK3R1, PIK3R3, PIP5K1A, PIP5K3, PLEKHA8, PLOD2, P LTP, PLXNA2, POLR2K, PPAP2C, PPP1CC, PRIM2, PRPS2, RASGRP1, RBX1, RH OD, RPS6KA2, SEMA7A, SIGLEC1, SKIV2L2, SLC25A5, SLC25A6, SPRED2, SR D5A1, SSH2, STAT5B, TACR2, TBL1XR1, THBS1, TJP2, TLN2, TNFSF14, TOLL IP, TRPM5, TSLP, UBE2L6, VAMP1, VAMP3, WWP1, XIAP, XYLT1, HSD17B10, S T6GALNAC6, TNFRSF10C
Negative_15206	ADO, DDO, GK2, LPL, NF1, NPY, PGP, A4GALT, ADCY1, ALCAM, ALDH1L1, ALG8 , ARD1A, ARNT, ATG7, ATP12A, CCL19, CD3E, CDK4, CHPF, CLDN11, CNDP1, C OL5A3, CRHR1, CTBP2, CTBS, CXCR4, DPYSL2, DUSP8, EVI1, EXT2, EXTL2, F GF10, FGF14, FGF18, FRAP1, GALM, GALNS, GALNT11, GALNT6, GJD2, GLUL, GNB1, GOT2, GUSB, GZMA, HBEGF, HCCS, HNMT, HSD17B3, ICAM1, INPP5B, IR S4, KLRC1, LRP6, MAML1, MAN1C1, MAP3K1, MGAT2, MTHFD2, NAT2, NCF2, NK X2- 2, NSDHL, NTSR1, NUDT5, OR1A1, OR1Q1, OR2AT4, OR2T2, OR2T34, OR4F5, O R4K15, OR51B6, OR51F1, OR51V1, OR52N1, OR6C4, OR6C76, OXCT2, PFN2, P IAS2, PIGK, PIGW, PIP5K1B, PLTP, POLA1, POLR3H, PPP3CC, PRKAR2B, PTG S2, RAP1B, RASSF5, ROBO3, SEMA3G, SLC33A1, SOAT1, SUOX, THY1, TRIP10 , TRMT11, UGT2A3, UROC1, VAMP2, VARS, VEGFC, ZNRD1, CTNNBIP1, HLA- DQA2, MAPKAPK5, TNFRSF14
Negative_15207	C8A, C9, FYN, PDC, RFK, SRC, TKT, ACADL, ACADM, ACADSB, ADSS, AGPAT3, A KR1B1, ALDH3B1, AMY2A, ARPC1B, ASRGL1, ATG7, BIRC5, BMP8A, C1QC, CAC NA1G, CADM3, CCL20, CCR5, CDC42, CDKN2A, CFTR, CHRNA7, CLDN20, COL5A 1, CPT1C, CREB3L1, CREB5, CYP2U1, DAAM2, DDX47, DGKQ, DPAGT1, EFN3B, EXOC7, GAPDH, GBGT1, GLYCTK, HADHB, HLA- DRA, HSPA2, ICOS, IDH2, IL20, IL6R, IMPA1, ITGAL, KLRC1, MAN1A2, MAP2 K6, MAP3K11, MAP3K4, MAPK12, MYD88, MYH14, MYH7B, NCF4, NFAT5, NQO1, NRP1, OLR1, OR10A3, OR10A6, OR10G7, OR10J1, OR10T2, OR11A1, OR1L3, O R2M4, OR4D9, OR4M1, OR56A1, OR6C74, OR7A10, OR8A1, OR8U1, OR9K2, P2R X6, PANK2, PARD6G, PARVG, PDE11A, PIK3R2, PLCB4, PPA2, PPAP2B, PPP2R 5A, PPP3R1, PPP3R2, PRKCQ, PRLR, PTK2B, RARA, RASA1, SAT1, SELPLG, SE SN3, SHC4, SLC2A2, SSH1, STAT5A, STEAP3, TNFSF11, TP73, TRAF5, TSTA3 , VAMP3, WBSCR17, WIF1, XCR1, XYLT2, PLA2G12A, SERPIND1, TNFRSF10B

Negative_15208	HDC, HGD, TAT, ABLIM1, ACSM1, ACTA2, ADH1B, ALCAM, AMY2B, ANAPC1, ARH GEF2, ASCC3, ATIC, BCAR1, BCKDHA, BCL2, BMPR1B, BNIP1, CALML3, CARD1 1, CCNA1, CD40, CD59, CDK5, CDKN2A, CFLAR, CHRM1, CLDN8, COL3A1, CREB 5, CYP11B1, CYP2A13, CYP2D6, CYSLTR2, DAD1, DDOST, DDX4, DMGDH, DRD2 , ENPP6, EPHA2, EPHA5, FCGR3A, FGFR4, GALNT10, GDF6, GJA1, GMDS, GMPR 2, GNAL, GOSR2, GRIA2, GRIN1, GRLF1, GUCY2C, HARS2, HMGCS2, HNF4G, HS D11B2, ICOSLG, IFNA21, IL2RA, IMPA2, ITGAE, JAG1, KLRD1, KRAS, LCAT, LHCGR, LYZL1, MAFA, MAP2K7, MAP4K3, MCM3, MYH10, MYH7B, NEU2, NEUROD 1, NME7, OR10H2, OR10K1, OR2AT4, OR2D3, OR2M2, OR51B4, OR56A1, OR5B2 1, OR5K1, OR5T1, OR6B3, OR9K2, OR9Q1, PDGFC, PDX1, PER2, PGAM4, PIAS1 , PIP4K2B, PLA2G10, PLIN, POLR2K, PPAP2A, PPM1A, PSENE1, QPRT, RASGR P1, ROCK2, RRM2B, RXRB, SC5DL, SCD5, SFRP5, SMAD2, SMC1A, STAT3, TBL1 XR1, TCF7, TCIRG1, TICAM2, TP73, TRDMT1, TRHR, TUBA3C, UGT1A10, UNC5 B, XYLT2, YKT6, ATP6V1E1, B3GALNT1, HSD17B10, HSP90AA1, PRICKLE2, S ERPINB5
Negative_15209	APP, C4B, CAT, CBS, CD2, DCC, GBA, GSS, IL7, ACHE, ACSL4, ADRA1B, AHCY, AKR1C2, ANAPC10, ARSD, ATP5G1, BCL10, BDH2, C9orf95, CBLB, CCDC6, CC L20, CCND1, CCR10, CD38, CDC6, CDIPT, CES7, CFL1, CHRM1, CLDN16, COL2 A1, COL6A1, CRB3, CYP4A11, DDOST, DLST, DNMT3A, DUSP4, EDN1, EHHADH, ENAH, ENO1, ENPP3, EPHA2, FDPS, FMO4, G6PD, GADD45G, GAMT, GGCX, GLI2 , GUCA1A, GUCY2F, HAO2, IFNB1, LAMB2, MAPK14, MASP1, MNX1, MYH7, NCOR 2, NEFL, NFX1, NNMT, NOTCH2, NRG1, NRP1, OR10C1, OR13A1, OR13C9, OR13 H1, OR1I1, OR4F17, OR51D1, OR5V1, OR7C1, OR8H2, OR8H3, PARD6G, PDE5A , PER3, PERP, PIGC, PIGP, PIGT, PIK3C2G, PLCE1, PMVK, PRKAR1B, PTAFR, PTGER3, PTPRR, RBL2, RHOA, RPN2, SDC1, SDHD, SEMA4A, SETD1A, SOAT2, S PI1, SUCLA2, SUCLG2, TAS2R13, TAS2R3, TCF7L1, TGFA, THBS4, THTPA, TK TL1, TM7SF2, TNFSF10, UAP1, UGDH, ULK1, WNT5B, YARS, YARS2, YWHAH
Negative_15210	C4B, C8B, FAH, FES, FUK, GDA, ID2, JUP, RPE, TAT, AASS, ACSS3, ACY3, AKR 1A1, ALG8, ALOX15B, ARHGEF6, ATP5G2, BAI1, BCAT1, BCKDHB, BMP6, CADM 1, CAV3, CCL16, CCL8, CISH, CLDN18, CLTA, COL4A2, CTBS, DCTD, DRD2, DU SP1, EFNA5, ENTPD6, EPAS1, FGF19, FZD7, GAD2, GALK1, GCDH, GCNT2, GMP PA, GNRH1, GNRH2, GRIA2, GSTM4, GSTM5, HCST, HDAC1, HHIP, HSD17B2, IF NA21, IFNB1, IL17B, IL22RA1, INPP4A, INSRR, ITGA2, ITGA7, ITPKA, LAM B3, LCMT2, MAP3K1, MCM3, MGST1, NOTCH3, NRXN1, NT5C2, NT5M, NUDT5, NU DT8, OGDHL, OR12D3, OR4A16, OR52I2, OR5D16, OR5D18, OR5L2, OR5M9, OR 6C3, OR6C6, OR6K6, OR9K2, PDE7B, PFN1, PGM2, PIK3R4, PLAU, PLCB2, PLD 2, PLXNB3, PON2, PTEN, PTPN7, RASGRP4, RPIA, RPRM, RRM2, SCLY, SELP, S PTAN1, ST3GAL6, ST8SIA5, STX5, TAS2R7, TBK1, TIAM2, TKTL1, TNFRSF9, TPH2, UBA7, WEE1, WIF1, YWHAQ, CSGALNACT1, MAP3K7IP1
Negative_15211	C7, C8A, DCN, GCK, ID1, IVD, LPL, SRF, TYR, ABL2, ACSS3, ADH7, ALDOC, AL G1, ALOX12, ANAPC4, ARG2, ATG12, ATP5B, BDH2, BLVRB, BUB1, C1GALT1, C CKBR, CCNE2, CCR1, CDC25A, CHST11, CHUK, CNGA4, CNGB1, COL1A1, COMP, CSF1, CYBB, CYP26A1, DAG1, DDX47, DGAT2, DGKI, DNMT3L, EIF4E, EPB41, EPHB3, EPHX1, EXT1, F13A1, FECH, GDE1, GNAO1, GSTA3, HLA-C, HLA- DMA, HSD3B1, IDH3G, IFNA10, IFNA7, IMPA1, IPMK, IQGAP2, LDHC, LIMK1, LIPE, LIPT1, MDH1, MGST1, MYH3, MYL7, NEGR1, NEU3, NSDHL, OR10K2, OR2 T3, OR52N1, OR5D13, OR5D14, OR5H6, OR6C76, PANK2, PARD3, PAX4, PDE3B , PDPK1, PER3, PIGA, PIP5K1C, PLCB3, POLD1, POLD3, PON2, PPP3CB, PRKA A2, PSPH, PTAFR, PTK2B, PTPN11, PTTG1, RDH8, ROBO1, SDC3, SDHB, SMC1B , SNAI2, SNAP23, SNW1, STX16, TFDP1, TGFB2, TICAM1, TNFSF9, TRAF3, TU BB2B, UGT8, WEE1, WNT10A, XCR1, ARHGEF12, ATP6V1G2, B4GALNT1, HSP90 AB1, MAPK8IP1, PNLIPRP2

Negative_15212	CAD, DCN, F3, LEP, SMS, TFG, TKT, VTN, ADRB3, AHCY, ALG9, ATP12A, ATP6V0C, B3GAT2, B3GNT2, B3GNT3, B4GALT7, BCL10, BDH1, BIRC3, BMP8A, BST1, CCDC6, CCL2, CCL25, CCL27, CCL8, CD38, CD79B, CDK4, CFL2, CMPK2, COL2A1, CPT1B, CTPS2, CXCL1, CXCR6, CYP2C8, CYP3A7, DCTN1, DDX4, DERA, DKK2, DMGDH, DUSP4, DVL1, DVL3, E2F5, ENAH, ERBB2, F11R, FGFR4, FPGT, FUT2, GBT1, GNA15, GNG3, GP1BA, GRIA3, HADHA, HADHB, IMPA1, IRF5, ITGA5, ITGB7, ITGB8, KIR3DL1, LARS, LDHD, LIPC, LYPLA1, MAGI1, MAP4K1, MAP4K3, MCM3, MDM2, MDM4, MTAP, NCOR1, NCR1, NFATC4, NRG2, NT5C, OCRL, OR10A3, OR10P1, OR13C4, OR13H1, OR14A16, OR1L4, OR1L6, OR1L8, OR2T29, OR4F15, OR4M2, OR51D1, OR5P2, OR5T2, OR6K3, OR6T1, OR7C1, OXTR, PAVRVA, PCCA, PDE8A, PDGFC, PDGFD, PITX2, PLCB3, PLCZ1, POLD2, POLR2E, POLR2L, PPA1, PRKAR2A, PYCR2, RARS2, RELB, RPS6KA6, SDHB, SELPLG, SEMA3G, SFRP4, SIPA1, SLC27A1, SPI1, SPTLC2, STEAP3, STX1A, STX3, SV2C, TAS2R3, TBXA2R, TOMM40L, TYMP, VKORC1, XCL1, ATP6VOD1, PAFAH1B2, PAFAH1B3, PLA2G12A, PNLIPRP1, SERPINE1, SUV420H2, TNFRSF12A, TNFRSF6B
Negative_15213	AK2, AK7, CFH, HPD, LCT, PRL, SRM, TXK, ABI2, ACACA, ALDH3A2, ALDH7A1, ALG12, AMDHD2, ATP5D, ATP6V1D, B3GNT2, BCAT1, BCL2, CACNA1F, CACNB4, CCL1, CCND3, CCR1, CCR2, CDKN2B, CES7, COL5A2, CRY2, CSNK1E, CSNK1G2, DAXX, DDX23, DIAPH2, DPYS, E2F5, EDAR, ENO3, ESAM, FBP1, FLT1, FMO1, FOXO3, GGT5, GLI1, GLI2, GLI3, GNA15, GPD2, GRB2, HMOX1, HRAS, HSD17B8, IDUA, IFNA14, IFNAR1, IFNG, IL25, IMPDH2, KARS, KIR2DS4, MAPK8, MINPP1, MPP5, NAE1, NAT5, NCOR1, NFX1, NFYA, NPR1, NRAS, NT5C1B, NUDT2, OGDHL, OR10G4, OR10K2, OR13J1, OR1A1, OR2A2, OR2AG1, OR2B2, OR2C1, OR2F1, OR2T4, OR2W1, OR3A3, OR4C6, OR4S2, OR5C1, OR8A1, PAK7, PARVB, PCK1, PDE1C, PDE4C, PDE8A, PEMT, PFKP, PGAM4, PHKG1, PIK3CB, PLCB4, POLE, POLE2, PPAT, PPP3CA, PPP3CB, PRKAB2, PSME2, RAB5A, RBL1, RBL2, RFX5, RHOD, ROCK2, RPIA, SAT2, SCD5, SELP, SESN3, SPCS3, SPRY4, STAM, STK11, SYNJ2, TAS2R60, TAS2R9, TNFSF14, TNFSF4, ULBP3, VAMP2, WBSR17, WNT2, ATP6V1E1, HSP90AB1, KIR2DL5A, PRICKLE2, TNFRSF1A
Negative_15214	CBS, CD4, DHH, F5, FN1, GNS, PRL, TEC, TH, ACAA2, ACTC1, ADCY5, ADCY6, ADRA1A, AGMAT, ALDH5A1, AMD1, APOE, ARRB1, B4GALT5, BAI1, CADM1, CCR1, CHDH, CHPT1, CHSY1, CLDN22, CNTFR, CSDA, CSH1, CSNK1D, DDX4, DPM3, DTX1, EFN2, EIF4E2, ELK1, GALNT2, GGPS1, GJD2, GLI1, GNAQ, GRM5, IFNA5, IL18R1, ITPA, JAM2, LAMC1, LEFTY1, MAPK11, MAPK8, MPDZ, MTMR6, NME2, NME7, NMNAT2, NRG4, NT5C3, OR13C3, OR1N2, OR3A3, OR51A4, OR51I2, OR56A4, OR5T2, OR8D4, OR9G1, PAK7, PDGFRB, PFAS, PGAM2, PLTP, POLR1B, PPP3CA, PRKCG, PTCH1, RARS, RASGRP2, RFX5, RPN1, RXRG, SEMA3C, SEMA4G, SGMS1, SHC4, SLIT2, SRGAP2, STAM2, STK36, TBXAS1, THBD, TMLHE, TP53I3, TPH1, TRPM5, VASP, VDAC3, WARS, SERPINF2, ST6GALNAC3
Negative_15215	BAX, C3, C8G, CD4, CFH, DAO, FAH, GAA, GH2, ITK, NPY, SP1, WAS, ACO1, ACTN4, AGPAT6, ALG10, APOE, ARG1, ASCC3, B3GALT4, B3GAT1, B3GAT2, B3GNT2, B3GNT4, BCMO1, BMP5, BRAF, CCL17, CCL20, CHD8, CHUK, CLDN17, CREB3L4, CRKL, CSNK1D, CSNK1G2, CSNK2A1, CTSS, CYFIP1, CYP11B2, DGAT2L4, DNMT3L, DPYS, DUSP3, DUSP8, ECHS1, EHHADH, EPHA3, EPHA5, ERBB2, ETS1, F2RL3, FGF14, FMO5, FOXO3, FUT5, FZD9, GAD2, GALNT10, GAPDH, GCH1, GPAA1, GRIN2C, GSTM4, GSTO1, GUCY1A2, HEXB, HMBS, HMOX1, HSD17B3, HTR7, ICAM1, IDUA, ITGAV, JAK2, KLRK1, LEF1, LGMN, LIPA, MAGI2, MAPK1, NOTCH3, NSDHL, OR10AG1, OR2A14, OR4C6, OR4D1, OR4N5, OR4S2, OR51Q1, OR6C70, OR6X1, OR6Y1, OR8B8, P2RX5, P2RX7, PAK6, PGS1, PLAUR, PLOD3, PLXNB3, POLR3A, PPP3CC, PPP3R1, PRKCZ, PRPH, PTCH1, PTDSS1, RAPGEF3, RASA1, RDH8, RHOD, SAT2, SETD1A, SLC25A4, SLC25A6, SPRED2, SPTLC1, ST8SIA1, STMN1, TJP1, TRAF1, TYMP, UGT2B4, UNC5B, WNT1, WNT9A, XYLT2, ACNA2D3, MAPKAPK5, PLA2G12B

Negative_15216	AGK, AK7, CD6, DHH, DLD, EBP, F11, F7, LCT, LHB, MET, MPZ, UBB, ACOX1, ACYP1, AFMID, AKR1C4, ALDH2, ALOX15B, ANAPC2, APOA2, ARG1, ARG2, ATG3, BMP6, BST1, BUB1, CACNG3, CCL2, CCNG1, CCR3, CD22, CD34, CD36, CD70, CD74, CDH4, CDK7, CDS1, CLDN8, CNTN2, CRY2, CSNK2A2, CX3CL1, CXCL9, DMGDH, DPAGT1, EGFR, ERBB3, EXT1, FGD1, FGF20, FGF4, FGF7, FLT3, FTH1, FUT1, FZD2, G6PC2, GALNT10, GLYCTK, GNG12, GOT1, GSTM4, GTSE1, GUCY2D, HNF4A, HSD17B1, HSD3B7, IFNA14, IFNAR2, IKBKE, IL18RAP, IL19, IL1RAP, IMPA2, IRS1, KLRC4, LEPR, LRRC4C, MAD1L1, MAPK3, MTAP, MYH7, MYLK3, NCOR2, NFYC, NME4, NRG3, OGDH, OR10AD1, OR10G7, OR2T8, OR4Q3, OR51L1, OR5B17, OR5T2, OR7D4, OSMR, PAPSS1, PDE4C, PDHB, PERP, PFKFB3, PGAM2, PGAM4, PHKG1, PIK3CG, PLA2G3, PLXNA1, PPM1D, PPP1CA, PPP3CC, PRKACG, PRKAG1, PRKCZ, PTGES, PVRL1, RAC1, RALGDS, RBPJ, RPIA, RUVBL1, RXRB, SETDB2, SMARCA2, SNAI1, SNAI2, SRD5A1, SRGAP2, ST3GAL4, STAM2, STK11, TIRAP, TM7SF2, TP73, TUBAL3, TYRP1, UGT2B4, WASF1, YWHAZ, CACNA2D2, HLA-DRB3
Negative_15217	CD2, DCC, FOS, HPD, NNT, SPN, TPR, ACADS, ACOX1, ACSS2, ACTG2, ACTN1, ADCY5, ADH1A, AGPAT3, AKR1A1, AKR1C4, ALDH1A3, ATP2A2, ATP5F1, ATP5J, BNIP1, BTRC, CACNA1I, CALML5, CCNB3, CCR10, CCR2, CD244, CD274, CLDN20, CREB3, CRLS1, CSNK1G1, CYP2A13, DAXX, DDX52, EGFR, ENTPD7, FIGF, FPGS, FZD9, GAB1, GLDC, GSTA4, HEMK1, HSD11B2, HTR2C, ICOSLG, IL15RA, IL20RA, IL2RG, INPPL1, ITGA1, ITGA6, ITGB8, LARS, MAP3K5, MAP3K7, MAPK10, MYH9, NANS, NCK1, NEU4, NEUROD1, NKD1, NOTCH2, NRAS, OR1E1, OR2M4, OR4D1, OR51I1, OR52B4, OR5T3, OR6N2, OXSM, OXTR, PAFAH2, PECAM1, PEMT, PGM1, PIGO, PLD1, PLOD3, POLD4, PPP2R5D, PRKCD, PROS1, PSPH, PTPN11, RALA, RALGDS, RASGRF2, ST8SIA5, STX2, TAS2R4, TBL1X, TGFB2, TKTL1, TM7SF2, TNFRSF4, TPH2, UPP1, ZNRD1, CTNBP1, MAP3K7IP2, PDCD1LG2, PNLIPRP1
Negative_15218	ADA, ASL, CR2, CRH, TK2, ACADS, ACSL6, ACVR2A, AGXT, AKR1B1, ALDH1A2, ALOX5, ARG2, ARHGEF7, ASNS, ATP6V1F, B3GALT6, B4GALT1, BUB1B, C4BPB, CACNG2, CAMKK2, CCL3, CCL8, CD46, CDH3, CDK4, CDKN1C, CES1, CHAD, CREB3L2, CTPS, CXCL1, CYP2U1, DAD1, DDX51, DNMT3A, DPAGT1, DPYSL2, DUSP10, E2F5, ECHS1, ENAH, ENO3, FGD3, FGF10, FGF21, FLT3, FMO1, FMO4, GANC, GCNT4, GNAI2, GSTM1, HIBCH, HSD3B1, HSP90B1, IAPP, IL13RA1, INPP5A, IPMK, ITGB3, ITGB5, LAMC2, LDHB, MAGI1, MAN1A2, MAN1C1, MAP2K5, MAP3K12, MAPK13, MDM4, MYH13, NCK1, NCR2, NEFL, NFATC3, NOTCH2, NRG4, NRXN3, NT5C1A, OCRL, OR10G7, OR10K2, OR10S1, OR1D5, OR1F1, OR1K1, OR2A25, OR2AG1, OR2C3, OR2K2, OR4D6, OR51G2, OR51L1, OR52R1, OR5M9, OR6C74, OR6S1, OR6T1, OR7D2, OR9G4, OR9Q2, ORC2L, PARVG, PCCB, PFKP, PIGM, PIK3C2B, PLOD2, POLD2, POLD4, POLR3A, PRKAA1, PRSS2, PTPMT1, PTPN6, PYCRL, RAC1, RAD51, RHOD, RRM1, RXRA, SELE, SEMA4C, SEMA7A, SETDB2, SKIV2L2, SLC25A4, SNAP23, ST3GAL4, TJP2, TRPM5, TUBB4, UGP2, WASF3, WASL, WNT10B, YARS, AASDHPPT, ATP6V0D2, HLA-DQA2, KIR2DL5A, PHOSPHO1, PRICKLE1, TNFRSF1B
Negative_15219	AK2, CR1, EZR, IL5, JUP, MPL, SHH, TPO, UBB, ABLIM2, ACACA, ACTB, ACYP1, ACYP2, ADORA2B, ALDH6A1, ALS2, ANAPC1, ATP4A, BMP8B, CACNB1, CACNB3, CALML5, CAMK2B, CCL22, CCR1, CDC27, COL3A1, CSF1R, CTNBP1, CTSG, CYP26C1, DAAM2, DDX47, DGAT1, DGKI, DIAPH1, DKK2, ECSIT, EPOR, FARP2, FGF10, FGF20, FRAP1, FSHB, GALNT12, GNAQ, GSTM5, GSTO2, HIP1, IAPP, IL4R, INMT, IRAK4, ITGA1, KAT2A, LCP2, LDHAL6B, MBL2, MGST1, MGST3, MTHFD2, MYH13, NAT1, NAT5, NCF1, NNMT, NUMB, OGDHL, OR10G2, OR14J1, OR1B1, OR2K2, OR4M1, OR52D1, OR6Y1, OR8I2, OXCT1, P2RX5, PIGA, PLA2G3, PLCB2, PON3, PPBP, PTK2B, QPRT, RAF1, RALBP1, RDH10, SEMA3G, SETD8, STMN1, SUOX, TAS1R2, TAS2R10, TNFSF8, USE1, VDAC1, ATP6V0D2, SUV420H1

Negative_15220	<p>AR, CAD, CR2, CRH, CRK, CSK, HPD, PGP, ACAA1, ACSM1, ADRBK2, AGRN, ALG1, ALOX15, ALOX15B, ANGPL4, ARG2, ARHGEF6, ATF4, ATG12, B3GALT5, BST1, BTRC, CACNA1F, CACNG2, CARS2, CCL7, CD40, CD44, CD80, CDC23, CLCA4, CLDN22, CMBL, CPT2, CSNK2A2, CTNNA2, CXCL12, CYP11B2, DAAM2, DAG1, DDX23, DHCR7, EVI1, FABP1, FGF14, FGF23, FOXL1, GALNT12, GCNT2, GNA13, GSTO2, GZMB, HMBS, HSD11B1, HTR2C, HYAL1, IARS2, ICOS, IDH3B, IL17A, INHBA, INHBB, IRF3, IRF7, ITGA1, ITGA6, ITPKA, LEFTY1, LIPC, LLGL1, MAPK11, MIOX, MTHFD1L, MYL9, NAE1, NEUROD1, NFKB2, NMNAT2, NOTCH1, NT5C3, NTF3, NUDT12, NUDT8, OR14C36, OR2B2, OR4C11, OR4K15, OR4K2, OR51A7, OR51B5, OR51Q1, OR5J2, OR5P3, OR6K6, OR8K5, PAPSS1, PARD3, PD E3B, PDGFRA, PHKA1, PI4KB, PIGK, POLR3A, PON3, PPARD, PPP1CA, PPP2R2A, PRKCD, PRPS1, PTGER3, PTPRM, RHOA, RND1, ROCK1, RPS6, RPS6KA2, SHMT1, SLC9A1, TAS2R14, THY1, TICAM1, TICAM2, TSTA3, VAV3, WNT1, WWP2, ZFYVE9, CACNA2D1, CACNA2D2, HLA-DQA2, HLA-DRB3, MAP3K7IP1, PAFAH1B1, PRICKLE1, PRICKLE2</p>
Negative_15221	<p>AMT, C3, CBL, DAO, EBP, F12, F7, FAH, HAL, ITK, KDR, MYC, RET, ACADVL, AGRP, ALDH4A1, ATF2, B3GALT2, B3GAT3, BMPR1B, BUB1B, C5AR1, CACNA1E, CCL14, CCNH, CDH2, CDKN1B, CES1, CLCA4, CLDN14, CLDN7, CMBL, CREB3L1, CXCR5, DDB2, DDX54, DNMT1, EDN1, EFNA5, ELK4, ENTPD7, ENTPD8, EPRS, ERBB2, F13A1, FOXA3, GAD2, GALNT11, GALNT14, GALNTL5, GCNT3, GGPS1, GNAZ, GNRH1, GOT2, GZMA, HEMK1, HES1, HLA-C, HRAS, ICOS, IFIH1, IFNB1, IFNGR2, IL8RB, IMPDH1, INPP4A, ISYNA1, JAG1, KRAS, LCMT2, MAP3K13, MAPK8, MAPT, MCM5, MKNK2, MLYCD, MTHFD2, NAT6, NCAM1, NEFL, NKD2, NODAL, NUDT2, OR10C1, OR10J1, OR10Q1, OR1G1, OR2T6, OR4C11, OR51E2, OR51F2, OR52W1, OR5B12, OR6C6, OR6K6, OR7D2, OR8J3, OR8K5, ORC3L, OSMR, PGM3, PHKB, PIK3C2A, PLCZ1, PLEKHA8, POLR2J, PPBP, PPP3R2, PRIM2, PTPRR, PYCR1, PYGM, RALB, RAP1B, RDH8, SKP1, SLIT2, SMAD7, SPRY2, SULT1A2, SV2B, TACR2, TAS2R10, TNFSF18, TP53I3, UGCG, ULK3, VAMP4, WNT9B, YKT6, ZFYVE9, C1GALT1C1, ST6GALNAC3</p>
Negative_15222	<p>AUH, BTK, FER, GPT, GSR, IL4, OTC, SRF, TEC, TXK, ACADL, ACTN2, ACVRL1, ADRA1A, ADRBK2, AHCYL1, ALDH1L1, ATP4A, AVPR1B, BIRC5, BPNT1, BUB1, C1GALT1, CACNB2, CCL21, CCL22, CCL23, CCL5, CCND2, CDKN2A, COQ7, CRKL, CSH1, CSNK2B, CTNNA3, CXCL12, CYP1A1, DHFR, DKK1, DLL3, EHHADH, ENTPD8, FECH, FGF1, FGF2, GDF5, GJD2, GPT2, GRIA2, GRIA3, GSK3B, GUCY2F, HEXA, HLA-DMA, HRH2, IL13RA2, IRS4, ITGA5, ITGA7, KDSR, LARS, LDHD, LTA4H, MADCAM1, MGAT4A, MGAT5B, MS4A2, MYL5, NADK, NAGS, NEUROG3, NFKBIB, NOX1, NTN1, OR10A7, OR14I1, OR1G1, OR1M1, OR2G6, OR4C11, OR4C46, OR51B6, OR51D1, OR52A5, OR52E4, OR56A4, OR5F1, OR5H2, OR7C1, OR9G1, PAPSS2, PDXP, PFKFB4, PIGN, PIP4K2C, PIP5K1A, PKLR, POLD1, POLR2I, PRKCH, PRKG2, PRPS1, PRSS3, PTGER3, QARS, RAPGEF2, RASSF5, RPS6KB2, RRAS, SEMA3G, SFRP2, SH2D1A, SIGLEC1, SMURF1, ST8SIA5, STX1B, SV2C, TACR2, TAS2R1, TPH2, TSLP, UCKL1, UGT2B4, UROS, VDAC3, WIF1, WNT1, WNT5B, ZBTB16, ATP6VOA1, KIR2DL5A, PAFAH1B1, TNFRSF10D, TNFRSF13B</p>

Negative_15223	<p>CAD, CEL, CP, F10, F2R, FGG, IL7, LCK, PGF, PRL, SMO, SRC, SRM, VTN, ACP6, ACSS1, ACTN1, ADRBK2, ADSL, ADSSL1, AKR1C1, AQP7, ARPC1A, ARPC4, BMP4, CASP8, CCL5, CCR5, CLDN22, CNGA4, COASY, COQ5, COQ7, CRB3, CSF1, CSNK1A1, CTBP2, CXCR4, CYP2F1, CYP8B1, CYSLTR1, DDX41, DGKH, DHRS4, ECSIT, EPB41L1, EPHA8, FADD, FGD1, FGF19, FUT4, FZD2, GALNT12, GNRH1, GNRH2, GUCY1B3, HLA-DOA, HMOX2, HRH2, HYAL2, IFT57, IKBKE, IL15, IL6ST, INPP4A, ITGB7, JAM3, LAMC2, MAML2, MASP1, MDH1, MGAT5, MYH14, NAGK, NAT1, NCF1, NKD2, NOTCH3, OR10H4, OR12D3, OR1A1, OR2A5, OR2T33, OR4F4, OR4N2, OR5F1, OR5L1, OR6K2, OR8B8, OXCT1, P2RX5, PARD6G, PDE4A, PDHA2, PDXP, PECAM1, PIGC, PLAU, PLCB4, PLOD3, PON2, PPARG, PPAT, PPM1A, PPM1B, PPP1R3A, PPP2R2C, PPP2R5C, PSEN1, RAC3, RBPJL, RPS6KA1, RRAS, RXRG, SCP2, SELL, SEMA3A, SETD2, SFRP1, SGPP2, SNAP25, STAT1, STX3, SUOX, TAS1R2, TAS2R4, TGFB2, TNFSF10, TNXB, TP73, TUBB3, UGT2B7, ULBP3, UROC1, WNT2, WNT9A, ARHGEF12, PDCD1LG2, TNFRSF17, TNFRSF18</p>
Negative_15224	<p>BCR, C8B, C8G, CAD, LYN, OSM, PGD, RFK, SRF, TNR, ACSL1, ACSS3, ADH5, ADIPOR2, ADORA2B, AK3L1, AKT3, ALOX12, APOA2, APPL1, ATP5F1, B3GALT5, BMP2, BTRC, CACNB2, CARS, CAV3, CCL27, CCNA2, CCR4, CD40, CD47, CDK5, CER1, CHEK1, CKMT2, CLCA4, CLDN5, CNGA4, CNTFR, COASY, COL6A2, COQ7, CUL1, CYP1A2, CYP1B1, CYP26C1, DDIT4, DDX23, DDX4, DDX41, DGAT2L4, DGKA, EARS2, ECSIT, EI24, F2RL1, FGF8, FGFR1, FSHR, G6PD, GADD45G, GALE, GAS1, GBA3, GBE1, GFPT1, GMPS, GNAQ, GSTA1, GTSE1, HAGH, HEXB, IARS2, IFNA8, IL13RA1, IL22RA1, IMPDH1, INMT, ISYNA1, KIR2DS5, LRDD, LYL1, MINPP1, MYH7B, NFYB, NLGN3, NMNAT1, OR10H5, OR10K2, OR10V1, OR13F1, OR1L3, OR2A5, OR2C3, OR2K2, OR2T12, OR2T34, OR4C46, OR51A4, OR6N2, OR7A10, PAK6, PDE4C, PECAM1, PIGC, PLA2G2A, PLA2G4A, PLCB4, PLCD4, PLCE1, PLOD1, PLTP, POLA2, POLR2B, POLR2I, PPARG, PPM1B, PPP1R3A, PPP2CB, PRKACG, PTGDS, RAP1B, RARS2, RDH10, RIPK1, ROCK1, RXRA, SEMA4D, SHC1, SHC3, SHC4, SMAD7, SOX17, STT3B, STX7, TACR2, TAS2R1, TLN2, TUBA4A, TUBB4Q, UPRT, WNT16, HLA-DQA2, PDCD1LG2, PNLIPRP2, TNFRSF10B, TNFRSF18</p>
Negative_15225	<p>BTD, CGN, DBH, DBI, FGA, LAT, MSN, PC, PGD, RB1, RPE, TNF, ACADL, ACSL3, ACTC1, ADAM17, ADH1B, AGPAT1, AMD1, ATP6AP1, BMP6, CACNG3, CACNG5, CACNG6, CAMK2B, CAMKK1, CASP7, CCNB1, CD58, CD74, CDC25C, CLCA4, CLDN15, CLDN9, CNTF, COQ5, CRY2, CXCL12, CYP1A2, DAPK1, DARS, ENPP3, EPB41L2, F2RL1, FARSA, FGF21, FSHR, FZD5, GCH1, GCNT3, GDF5, GGT5, GLUD1, GLYCTK, GRAP2, HLA-DOA, HSPA1B, ICOSLG, IFNA16, IFNA4, IFNA6, IFNGR1, IFT57, IL18, IL18R1, IL20RA, IMPDH1, ITGA4, ITGA6, ITGAX, KAT2B, LAMB2, LHCGR, LILRB3, LLGL2, LTA4H, MAP3K14, MAP3K4, MAP4K2, MAPK7, MGLL, NAT5, NCF2, NEFL, OR10A4, OR10H5, OR10Q1, OR11A1, OR14J1, OR1A2, OR1S2, OR2A25, OR2A42, OR52N2, OR52W1, OR6C1, OR6C4, OR6S1, OR6T1, OR9Q2, P2RX1, PAK3, PAK7, PANK2, PCYT2, PDE3A, PDE3B, PDGFD, PDGFRB, PI4KB, PIGU, PIGW, PLA1A, PLA2G2A, PLCD3, PLOD1, POLD3, PRKAR2A, PROC, PROS1, PTPN5, PVR13, RAB23, RCHY1, ROBO1, RPS6KB2, SGMS1, SIGLEC1, SLC27A1, SPHK2, STK11, SV2A, TAP1, TNFRSF8, TNFSF8, UPP1, VDAC2, WNT5B, YWHAH, ZMAT3, CSGALNACT1, HLA-DRB5, MAPKAPK5</p>

Negative_15226	<p>AGK, BAD, C8B, DUT, EGF, FGG, HDC, JUN, ME3, MOS, NLK, TNN, WAS, ACTA2, ADH7, ADRA1B, AGRP, ALPL, ANGPTL4, ATP6V1D, BBOX1, BTRC, BUB1B, C3AR1, CACNB4, CAMK2A, CASP8, CCND3, CCR2, CCR4, CD19, CDC14B, CDH5, CDO1, CDS1, CXCL9, CYP2C9, DDX4, DDX56, DGKI, DHDH, DHODH, DLAT, DLL1, DPYS L2, DUSP4, EIF4E, FABP1, FZD1, FZD10, GALNT11, GALNT6, GBA3, GCNT2, GT1, GPD1L, GPD2, GRIN2C, GSTK1, GSTO1, GUCY1A2, HSD17B4, IDH1, IDUA, IFNA17, IFNAR2, IL18R1, IL19, IRS4, ITPKB, KYNU, LAMA3, LAMB1, LPAR1, MAN2A1, MAP2K1, MAP2K2, MAP4K2, MAP4K4, MAPK13, MKNK1, MNX1, MTHFD2, MYH7B, NANP, NCF2, NKX3-1, NUDT9, OR10H4, OR11H6, OR14C36, OR2F2, OR2T12, OR4B1, OR51F2, OR5A2, OR9G4, OSMR, OXTR, PANK2, PDE1B, PDGFD, PDK1, PER3, PFKFB2, PGM1, PGM3, PIGF, PMM2, POLD2, POLD4, POLR2L, PORCN, PPBP, PPP1CC, PPP2CA, PPP2R2B, PRDX6, PRKAG2, PRPH2, PRSS3, PTPRM, PYGM, RARA, RBL2, RELB, SELPLG, SPHK1, SPHK2, SPRY2, SULT1A2, TAS2R3, TBL1X, TKTL1, TLR9, TNFSF8, TRADD, TUBB6, TXNDC12, UAP1, UBA1, UCK2, WNT16, WNT2, YWHAH, ZNRD1, PLA2G12B, TNFRSF11B</p>
Negative_15227	<p>A2M, AK7, C4B, CGN, F12, FAS, ITK, MPI, PGD, SCD, SDS, SHH, ZYX, ACO1, ACP5, ACSL3, AGPAT4, ALOX15, AMD1, ANAPC11, ANPEP, ATP4B, ATP5F1, BCKDHB, BCL2L1, BMP2, BMP8B, C7orf16, CCL19, CDC25C, CES7, CHKA, CHRM1, CHUK, CLDN10, CLOCK, CNGA3, CNTNAP1, COQ6, CRY1, CTBS, CYBB, CYP3A7, DIT4, EDN1, EFNA5, EPHB1, FGD1, FGF13, FLT1, FMO1, FUT5, GADD45G, GAL3ST1, GALNT3, GLDC, GLS2, GMDS, GNAZ, GNPDA2, GNRHR, GUCA1B, GYS2, HRAS, HSPB1, IFNA16, IFNB1, INSR, IRS4, ITGB5, LAMB1, LEF1, LGMN, MALT1, MCAT, MCEE, MCM5, MGST2, MRAS, MTHFS, NFKBIB, NPR1, NR5A2, NTNG1, OR10J3, OR13C5, OR1N1, OR2H1, OR2L3, OR2T29, OR4C13, OR5AU1, OR5M8, OR7A10, OR8D1, PDE8A, PFKFB3, PFKFB4, PIGL, PIGO, PIK3CG, PLA2G2F, PLCZ1, PLOD2, PMM1, POLR3B, PPP2R2C, PRIM2, PRKCA, PRKCZ, PTCRA, PYGB, RAC1, RHOQ, SELPLG, SENP2, SFRP4, SGMS1, SHC1, SHISA5, SLIT1, SOD1, SPHK2, SPTAN1, STAT5B, STX16, TAS2R4, TAS2R48, TGFB3, TICAM2, TP53I3, TUBA1C, TUBA8, TYMP, VAV2, YWHAH, ZIC2, MAP3K7IP1, PHOSPHO1, ST6GALNAC1, ST6GALNAC6, SUV420H2, TNFRSF13C</p>
Negative_15228	<p>FES, GK, JUN, LHB, OSM, PLN, PML, TEC, ABLIM2, ACAD8, ACOX2, ACP5, ADCY7, ATP2A1, ATP5I, B4GALT1, BET1, BMPR1A, CD58, CD79B, CDC14B, CEBPA, CNDP1, CYBA, DBF4, DDB2, DGKA, DOT1L, EFNA3, EIF4E, FCGR3A, FGFR3, FLT1, FOXO1, FSHR, GDE1, GNRH2, GOT1, GPD2, HMGCS1, HSD3B2, IGFBP3, IL18RAP, IL22RA1, INHBE, INPP4A, ITGB2, ITGB3, JAK2, LALBA, LAP3, MAML2, MAOA, NCF4, NCR3, NEU1, NRXN1, NT5E, NTRK1, OR10AD1, OR1L6, OR1L8, OR2D3, OR2T34, OR3A2, OR4L1, OR51S1, OR52J3, OR5B17, OR5D16, OR6C1, OR6C4, OR7A10, PAPSS1, PDGFA, PDIA4, PDX1, PIP5K1A, PLCE1, PLXNC1, PPP1CA, PPP3R1, PRIM2, PRKAA1, PRKACG, PRSS2, RALGDS, RBX1, SH3BP2, SHC4, SLC27A1, SMARCA5, SPHK2, SSX2IP, STAM2, TAS2R4, TGFB2, TLN1, TNFRSF4, TNFSF14, TSLP, ULBP3, UPP2, WNT10B, PLA2G12A</p>
Negative_15229	<p>ASL, CGA, CS, EZR, FGA, GP6, IL8, KDR, MAG, MVK, PAH, ADH1B, ADH7, AGXT, ALG10, ALG13, ALOX5, ARPC1A, ARPC1B, ATP2A2, ATP6V1D, B4GALT2, BMP2, CACNG1, CASP9, CCNA1, CDC20, CDK4, CHPF, CSNK1D, CYBB, CYP3A4, DAPK1, DEGS1, DGKZ, DIAPH3, DLAT, EDA2R, EPB41L2, EPHA4, FASN, FLT1, FLT4, FRAT1, FZD9, GALNTL2, GFPT1, GNAT3, GSTO2, HADHB, HSD17B8, IARS2, IL11RA, IL12B, IL15, IL17A, IL19, IL2RA, LAMB4, LAMC2, LGMN, MAGI1, MGAT5, MGST3, MYH1, NME4, NR1H3, NRCAM, OR10H5, OR11A1, OR12D3, OR1C1, OR1J2, OR2H1, OR2S2, OR52L1, OR5T2, OR6C76, OR7D2, OR7G3, P2RX7, PAK7, PDE4B, PDE6D, PECAM1, PFAS, PFN4, PLA2G10, PLA2G3, PLCE1, POLR1B, POLR3D, PPARA, PPCS, PRKCB, PRKG1, PRKG2, PRPS2, RPS6KA6, SULT2B1, TAS2R7, TBL1X, TBL1Y, TNFSF4, TRAF2, TSHB, TSHR, TUBB4, VAMP1, VANGL1, ALDH18A1, ATP6V1E2, PRICKLE2, TNFRSF13B</p>

Negative_15230	BTK, CBS, GSS, RFK, SDS, TYR, AADAC, ABCC8, ACSL1, ACTA1, ACTN1, ADH5, AHCYL1, AKR1C2, ALDH9A1, ALG12, AMD1, ANAPC7, APLP1, ARG1, ATP5E, BE T1L, BIRC3, C1GALT1, CACNA1H, CAMK2G, CD58, CD82, CDC25C, CES2, CFL1 , CHAT, CHD8, CHRNA7, CREB5, CSF3R, CTBP1, CYP21A2, CYSLTR1, DBF4, DG AT2L4, DGKB, DHRS3, DLST, EDN1, EPB41, EPHA5, EXOC7, FECH, FGF18, FGF R4, FOXA3, GALNT10, GAS1, GCDH, GGCX, GGT1, GNA11, GPAA1, GZMB, HLA- DRA, IARS2, IFNA17, IGFBP3, IL20RA, IL28B, INPPL1, IRS4, KLRC2, LRP5 , LYZL1, MAP3K8, MASP1, MOV10L1, MTMR1, MTMR2, NCK2, NKX2-2, NKX6- 1, NRCAM, NTSR1, ODC1, OLR1, OR10G4, OR10Q1, OR1N2, OR2L8, OR4K1, OR5 1B4, OR51F1, OR52B6, OR6N1, OR8A1, OR8I2, PAX4, PDE7A, PDXP, PFKFB1, PIK3C2A, PIM2, PIP5K1A, PMAIP1, POLE2, POLR2J, PPAT, PPP2R1B, PRKCZ , PTCH1, RBPJ, RPN2, RPS6KA4, RPS6KB1, SARS, SDC3, SEMA3D, SMAD3, SOC S4, SOD1, SSH3, ST3GAL1, ST6GAL1, STAT5A, TAS2R42, TGFBR2, TIAM2, TY ROBP, VKORC1, C1GALT1C1, GABARAPL2, MAPK8IP2, PRICKLE1, SERPIND1
Negative_15231	ASL, F8, GHR, GP5, IL4, NNT, RET, RFK, ACOX1, ADORA2B, AGPAT2, ALDH7A1 , ALOX12B, AMDHD2, ATP4A, B3GALT6, CADM1, CCL26, CCL8, CCNG1, CD27, C D82, CDC25A, CDC7, CDH15, COQ7, CPT2, CXCL6, CYCS, CYP2A6, DGAT2L4, E ARS2, ECSIT, ENO3, EPHA1, F2RL3, FGF4, FLOT2, FSHR, GCNT1, GDF6, GFPT 2, GMPS, GNA11, HMOX2, HPSE2, HSD17B1, IDH3G, LAMA4, MAP2K2, MAPK14, MARS, MFNG, MLYCD, NEU4, NOX3, NR1D1, NRG2, OR10P1, OR12D3, OR13H1, O R1S2, OR4C12, OR5D18, OR6C3, OR6C76, OR6K3, OR8U1, PDE6G, PDHB, PIGK , PIGV, PKLR, PLA2G1B, PMVK, POLR2H, PPA1, PPP2R1B, PRODH, PTTG1, PYC R2, RASGRF2, RBL2, RFXANK, RUNX1, SDHB, SEMA4A, SEPHS1, SFRP2, SLC2A 1, SPHK1, SRGAP1, STAT5A, STX1A, SUV39H1, TACR2, TLN2, TLR9, TUBA8, U GT8, WNT2, WNT6, YWHAG, SERPINC1
Negative_15232	AK1, AR, CD2, GK, LEP, NNT, NPY, SDS, TK1, ABLIM2, ACAT2, ACSL1, ACTG2, ADCY4, ATP2A2, BLVRA, BNIP1, C4BPA, CAMKK1, CCNA2, CD79B, CDC2, CDC2 3, CDC25C, CDK4, CDS2, CNGA4, COL11A1, CRKL, CSNK1G3, CTSL1, DAPK2, D RD1, DUSP6, ENTPD5, FARS2, FASLG, FGF19, FGF22, FMO4, GALNT12, GCLM, GGPS1, GNA15, GNPAT1, GSTM2, GUCA1B, HBEGF, HLA- G, HSPA2, ICOS, IDH1, IFNAR2, IMPA2, IQGAP2, IRF5, ITCH, ITGA6, ITGAM , KLKB1, LCMT1, LEFTY1, MAP3K2, MGST1, MYH1, MYH9, NCOR1, NCR1, NEU1, OCRL, OR10P1, OR2A2, OR2M2, OR4K2, OR4N2, OR52N4, OR5A1, PCYT2, PHKA 1, PHKB, PIK3CB, PKM2, PLCB4, PLCG1, PPARA, PPP3CC, PPP3R1, PRIM1, PT GS1, RPS6, RXRB, SDC4, SEMA3E, SESN2, SIAH1, SOD1, SPCS1, ST8SIA1, ST AT4, SV2A, TAP1, TAS2R7, TBL1Y, TCIRG1, TSLP, UGT2B10, ULBP3, VEGFC, VKORC1, WNT4, ATP6VOD2, MAPKAPK5, SLC25A31
Negative_15233	DBH, FN1, ID1, LIF, LTB, PTS, SPN, ZYX, ABLIM1, ACACA, ACP1, ACTG2, ADH 1A, AKR1B10, ALOX15, AMPD2, APOA1, BCL2L1, CASK, CCR8, CIITA, CNDP1, COL5A2, CRY1, CSAD, CTPS, CX3CR1, CYP2D6, DAPK2, DAXX, DBF4, DGKG, E2 F1, ECSIT, EFNA3, EFNA5, EP300, EPHA5, FGF20, GBA3, GGCX, GGT6, GLO1, GNAL, GP1BA, GPAA1, GSTM4, HMOX2, HYAL2, IFNB1, IL10, IL15RA, IL28B, INPP5A, MAP3K5, MAPK14, MCM4, MCM7, MGAT5, MGAT5B, MOV10L1, MS4A2, N AE1, NEU1, NEUROD1, OR10A4, OR10H1, OR1E1, OR4S2, OR52W1, OR7A10, OR 7D2, OR8G1, OR8J3, OR9G1, PAK1, PFN1, PGAM1, PHKA2, PLA2G3, PLD2, PNM T, PRIM2, PRKAG3, PTPRF, RPS6KB1, SARS, SCD5, SETD1A, SIAH1, SLC2A2, SMPD1, SMURF1, SUV39H2, TACR1, TAS2R38, TAS2R8, TPK1, TUBA8, UGCGL2 , ULK2, WNT16, ZIC2, SLC25A31



Negative_15234	<p>F8, GBA, MIF, MTR, SFN, VTN, ABAT, ABLIM1, ACMSD, ACP6, ACSM4, ACVRL1, ADCY1, ADCY9, ADIPOR2, AKR1B10, ANAPC10, ARPC5L, ARRB1, ATP12A, BMP R1A, CACNA1D, CACNA1H, CACNB4, CADM1, CASP8, CAV3, CD40, CLDN16, CLD N17, CMPK1, COL5A3, COL6A1, CSNK1D, CTNND1, CYFIP1, CYP4A22, DGKG, D RD2, EFNB2, ENO1, EPHA4, FDPS, FGF12, FGFR1, GAD2, GADD45A, GFPT2, GL UD1, GRM5, GUCA1A, GUCY1B3, HADHA, HES1, HRH1, HSPB1, HYAL1, IL12A, I L1B, IL23R, INPP5A, INPPL1, IQGAP3, ITGA2, ITGA4, ITGAX, ITPKB, KCNJ 11, LAMB4, LGMN, MAP3K8, MMP1, MYL7, NAT6, NCR3, NFKBIE, NOTCH2, NOTC H3, OR13C9, OR13G1, OR1F1, OR1J1, OR2S2, OR2T12, OR2T8, OR4C46, OR4D 5, OR4K13, OR4X1, OR51G2, OR52B6, OR52K2, OR5J2, OR5M3, PAK7, PDE7B, PDGFRA, PFN3, PGAP1, PHGDH, PIK3R3, PLA2G2A, PLAUR, PLCD4, PNMT, PON 3, PPAP2C, PPP1CC, PPP3R2, PRKAB2, PRKACG, PRKAG2, PTGER1, PTPN1, PT PRB, RFNG, RHOQ, SETD1A, SETD8, SMAD9, SOCS1, SRGAP1, STX18, TAS1R1, TAS2R8, TDO2, THBS2, THBS4, TLR3, TPI1, TRHR, UGT1A10, VCAM1, WNT8A, YWHAE, PNLIPRP2, SLC25A31</p>
Negative_15235	<p>AGL, C1S, CDA, CTH, GK, HYI, ID4, PML, SRF, SRM, TK1, TNF, AANAT, ACAT2, AHCY, AKT3, ALG8, ANAPC7, ARHGEF1, ARHGEF6, ASS1, B3GALT2, BET1, BRA F, C1QC, CACNG2, CBLC, CCDC6, CCL25, CCL28, CCL3, CD226, CD244, CD8B, CDKN2D, CEBPA, COMP, CYP1A2, DDB2, DGAT1, DGKQ, DTX3L, DTX4, ENO3, EX T2, FASN, FGF2, GALNT10, GALNT6, GCNT2, GDF5, GNAT3, GUCY1A2, GUCY2F , GZMA, IL20, IL20RA, ITGA2B, LALBA, LAMB2, LAMB3, LAMC3, LCAT, LDHAL 6A, LTBP1, MLYCD, NAT6, NCF1, NOD1, OLR1, OR10G4, OR1E2, OR2A12, OR2A 2, OR2C1, OR2L3, OR2T34, OR4B1, OR4M2, OR6S1, OR7A10, PDE11A, PDGFD, PFN2, PHKA1, PHKA2, PHPT1, PIGV, PIK3R1, PIP4K2C, POLR2C, PPP2CB, PP P2R5C, SARDH, SFRP1, SH2D2A, SREBF1, SRGAP3, ST3GAL6, STK3, SULT1A2 , SUV39H2, TAS2R13, TAS2R16, TAS2R60, TBL1X, TBXAS1, TCF7L2, TGFA, T IAM1, TNFSF8, TP53, TYMP, TYRP1, UBE2L3, UGT2B7, ULK1, UROS, VASP, VE GFB, XIAP, ATP6V1G1, ATP6V1G3</p>
Negative_15236	<p>GGH, HGD, HK2, JUN, OGT, AADAT, ACAD8, ACADVL, ACYP1, ACYP2, AGMAT, AL DH3A1, ALDH3B2, ALDH4A1, ALOX15B, APRT, ARG1, ASPA, ATIC, ATP5J, ATP 5L, AVPR1B, AXIN1, BBC3, CACNA1F, CARS2, CCL24, CCR3, CDK5, CDKN1C, C ES1, CFLAR, CHST12, CLDN14, COL5A2, CXCL11, CYP2A6, DDX47, DERL1, DG KQ, DHCR24, ENTPD3, EPHA4, EPHA7, FGF3, FMO2, GAL3ST1, GALNT13, GALN T14, GAMT, GNPAT, GRIA1, GRIN2B, GRLF1, GSTT1, GUCY1A2, HA01, HA02, H IBADH, HSD11B1, HSD11B2, HSD3B7, IFNA5, IL10, ITGB7, LIFR, LYPLA1, M AN1C1, MGAT2, MKNK2, MYLK3, NEGR1, NFX1, NKX2- 2, NQO1, NRXN1, OLAH, OR13C8, OR14C36, OR2G3, OR2M7, OR2T2, OR4C11, O R51B5, OR51F1, OR51I2, OR51V1, OR5D13, OR5K1, ORC4L, PDCD1, PHKB, PI GP, PIK3R2, PIP4K2A, PLOD2, POLR3B, PRKAR1B, PRKCD, PRKCZ, PSEN2, QA RS, RASA2, RPS6KA1, RPS6KA4, SAT1, SETD7, SFRP2, SMAD5, SNW1, SPHK2, SRGAP2, STX3, SULT1A2, SUOX, SYNJ2, TACR3, TAS1R1, TCF7L2, WBSCR17, ATP6VOA2, HSD17B10, KIR2DL5A, MAP3K7IP2, TNFRSF17</p>

Negative_15237	BAX, CBS, DCT, FST, GCK, GH2, GLS, ME2, PGD, PRL, RDX, TEC, ACOX3, ADCY10, ADCY3, ADH7, ALDH7A1, ANAPC11, ANAPC4, ANAPC7, ARPC2, ATP2A3, ATP5L, BLNK, BMPR1A, C3AR1, CACNA1D, CACNG8, CALML6, CCL17, CCL8, CD244, CDH2, CDH4, CLDN15, CLDN3, CLDN5, CNGB1, COL2A1, COQ6, COX15, CREBBP, CSNK1G1, CXCL9, CXCR4, CYBA, CYP1B1, CYP26A1, CYP2J2, DERA, DLL1, DUSP14, DVL2, ENTPD6, EP300, EPB41L1, EPHA4, EPOR, ERBB4, EVI1, EXTL1, FOXA2, FUT4, G6PC2, GALE, GANC, GOSR2, GUCY2C, HAO2, HSD17B1, HSD3B7, HTR4, HTR6, IDH2, IL10, INPPL1, IRAK1, IRAK3, ITGAD, ITGB1, KIR2DL3, KITLG, KLRC4, LAMA4, LAMC2, LTBR, MAGI1, MCM4, METTL2B, MIOX, MYH13, OR10H2, OR10K2, OR1A2, OR2G2, OR3A3, OR4K5, OR56A1, OR7C1, OR8K1, PAX8, PDE1C, PDGFD, PEMT, PFKFB2, PFKM, PIGT, PIK3C3, PIM2, PIP4K2C, PLCB2, PLCE1, PLD2, PLXNB3, PMM1, PNMT, PPP5C, PRKAB2, PRKACG, PRKI, PRKCZ, PTCRA, RARS2, RDH5, RELB, RPE65, RPN2, SGPP2, SMPD4, SPRY3, SPRY4, SULT1A1, TFPI, TMLHE, TP73, TUBB1, UROC1, WNT5B, WNT6, ZMAT3, ATP6VOD1, HSD17B12, HSP90AA1, SLC25A31, TNFRSF10C
Negative_15238	A2M, DBH, DCC, DHH, EZR, FGG, GNE, IVD, LYN, MYC, PXN, SHH, ZYX, AASS, ABAT, ACSL3, ACSL6, ALCAM, APAF1, ARSB, ATG3, ATP2A2, ATP6V1H, C1QB, CADM3, CCNG1, CCR7, CD72, CRKL, CSF2, CSNK1G3, CTNNA3, CTSL1, DCXR, DDB2, DHODH, DPYSL2, DVL2, EIF4B, ENAH, G6PC2, GANAB, GCLM, GNMT, GSTK1, GSTM2, HADHA, HSD17B2, IL17B, IL21R, ITGA2, KIR2DS5, LIPF, LRRC4C, LTA4H, MAP2K4, MAP4K1, MAPK9, MASP1, MCEE, MYH14, NADSYN1, NANS, NEUROD1, NFATC2, NOS1, ONECUT1, OR10G3, OR1L6, OR2A5, OR2T29, OR2T3, OR2V2, OR4K1, OR52B4, OR52W1, OR9A2, PFKM, PIGC, PNLIP, POLE, POLR3K, PPOX, PSME1, PTPRC, PYCR2, PYGM, RAD51, RCHY1, RHOA, RUNX1T1, SDC2, SIPA1, SLC27A4, SPCS1, TAS2R42, TPM3, TRAF1, TUBA8, TUBB6, UGT2B17, WNT2B
Negative_15239	DAO, DCN, F7, HK1, KDR, MAX, OSM, ACP2, ACPP, ADAM10, ADCY4, ADCY9, ADOXA2B, ADSSL1, AGPAT3, AGTR1, AKR1C1, ALDH1A2, ALG6, AMY2A, APOA1, ARG2, ATG3, AVPR1B, CACNA1C, CAMK2A, CARD11, CAV1, CD274, CDC14B, CDIPT, CHPT1, CHSY3, CKMT2, CLDN5, CSNK2A1, CTF1, CTPS, CTSG, CXCL5, CYBA, DAPK2, DEGS1, DEGS2, DGKH, DOT1L, DVL1, E2F4, EFNA5, EFNB1, ENPP2, ENTPD8, EPHA8, ERO1L, FASN, FBXW11, FGF10, FOXA3, GSTO1, HIF1A, IL11RA, IL6R, IL6ST, IRAK2, ITGA7, ITPKB, LAMA4, MAN2A1, MASP1, MTAP, NCKA1, NOTCH3, NT5C2, NTNG1, OPLAH, OR10P1, OR11H6, OR2A14, OR2D2, OR2G2, OR4N4, OR51B5, OR52N5, OR5AC2, P2RX4, PAK7, PIK3R1, PIP4K2B, PIP5K1C, PLCB4, PLCG1, PLXNB2, POLR2B, POLR3H, PPP2R2A, PPP2R5B, PRKAR2B, PRKCA, PTAFR, PTPRM, PVRL4, RAF1, RDH10, RPS6KB1, SLC25A5, SLC2A1, SMAD5, SMARCA5, STX1A, SULT1A1, SULT1E1, TCF7L1, THBS4, TNFRSF9, TNFSF8, TYRP1, UCK1, VAMP1, VCAM1, CACNA2D2, CSNK1A1L
Negative_15240	ADA, CD6, F2R, FGB, GP9, HAL, MAG, ACMSD, ACSM5, ACTA2, ACTG2, AGRP, ALG5, AMD1, ANAPC7, B4GALT1, BET1L, CALML5, CAMKK1, CD226, CD3E, CDKN1B, CDO1, CHDH, CLDN4, CMPK1, COL4A1, COMT, COQ6, CPT1A, DARS2, DERA, DLL4, EGLN1, EP300, EPHB4, EREG, EXTL1, F2RL3, FARSB, FZD6, GADD45B, GALNT1, GPX7, GSTA3, GSTM4, GSTM5, GSTO1, HIBADH, ICOS, IFNB1, IFNGR2, IL11RA, IL7R, INHBE, JAM3, KARS, KLK3, LAMB2, MAML3, MAP4K3, MCM7, MGST3, MOV10L1, NR4A1, NUMB, ODC1, OLAH, OR10K2, OR13C9, OR1L6, OR2B1, OR4E2, OR4P4, OR8D2, P2RX2, PANK1, PARD3, PCCB, PIAS1, PLXNA2, PPM1A, PPT1, PRKAR1A, PRKAR2A, PTCRA, RAB23, RFX5, RPIA, RPSA, SEMA4G, SENP2, SPCS3, SYNJ2, TAS1R2, TAS2R1, TAS2R40, TICAM1, UAP1, UGT2B11, UGT2B7, UPRT, WHSC1L1, SUV420H2

Negative_15241	AR, DUT, IL4, IL7, PAH, TK2, TPR, ABP1, ADCY3, ADSL, ALDH3A2, AMY2B, APC2, ARHGEF2, ARNT, ASIP, ATP5B, ATP5I, BAAT, BST1, CACNB3, CACNG2, CCR9, CDC2, CHUK, CSF3R, CYBA, CYP2B6, DAPK1, DDX56, DHFR, DHX58, DPM1, DUSP7, DUSP9, DVL2, EGLN3, EHMT1, ENTPD2, EPHA3, EXT2, F13A1, FMO1, FMO4, FUT7, GDF7, GLG1, GSTA2, GSTM2, GSTZ1, GUCA1C, GUCY1A2, HNF4G, HTR2B, HTR4, IFNA5, IGF1, IL1B, IL2RB, IMPA2, IMPDH2, JAG2, LHCGR, MAGI1, MAP2K2, MRAS, MTHFD2, MYH10, NCK1, NFATC3, NOS3, NRAS, NT5C, NT5E, NTRK1, OR10J1, OR10J5, OR1L6, OR2A25, OR2T8, OR51E1, OR51S1, OR5B12, OR6N1, OR9G4, PANK1, PDGFC, PFKFB4, PHPT1, PIP4K2A, PLA2G2D, POLE2, POLR2E, POLR2K, PPARA, PPARG, PPP1R3B, PRDX6, PRKCE, PSENE1, PTPRR, PVRL1, RAPGEF2, RPRM, SHC2, SHC3, SIGLEC1, SKP1, SNAP25, SPP1, ST3GAL1, ST3GAL6, STAM2, STX3, SULT2A1, TAP2, TAS2R49, TBXA2R, TFPI, TGFA, THBS2, TRHR, UGT1A10, VEGFB, VTI1A, WHSC1, HSD17B12, MAPK8IP2, PHOSPHO1, TNFRSF14
Negative_15242	AMT, ATM, BAD, BID, BTK, CGN, F11, FYN, GSR, KMO, PDC, PRL, PXN, SCD, TK1, AADAT, AARS, ACADL, ACSL3, ACVR1B, ADCY1, AKR1C3, ALG8, ALOX15B, AMPD1, B3GNT3, BACE1, BAI1, CACNA1I, CCR1, CD28, CD74, CDC2, CDC7, CLDN9, CLTA, CNTNAP1, COL3A1, COL5A3, CPT2, CSF1, CTSP2, DHCR24, DTYMK, EHMT2, EIF4E2, ETNK2, FCGR3A, FGD1, FLT1, GALC, GALNT6, GGT7, GNA13, GNPAT, GNRHR, GRIA3, GSTO2, HSD17B4, HSD3B2, HSPB1, IL17A, IL5RA, INP4A, KARS, KLRC3, LIMK1, MAN1B1, MAPK7, MEF2C, MYH10, NFATC3, OR1IH6, OR1L6, OR2A42, OR2F1, OR2G2, OR2T6, OR4K5, OR52H1, OR52I1, OR52N4, OR5F1, OR5P2, OR8B4, PAK1, PDE6H, PIP4K2A, PLA2G6, PLD1, PLEKHA8, PNPLA4, POLR3K, PPP2R1A, PPP2R2C, PTEN, PTGES, PTPN11, PTPN7, RAPGEF4, RASGRP4, RERE, RHOA, RPS6KA6, SELP, SEMA3F, SH3BP2, SMAD3, SPCS3, TNLN1, TNFSF8, TRPC1, TUBA4A, TUBB6, UGCGL2, UGT2B10, UGT2B11, WNT2B, ZNRD1, B3GALNT1, PAFAH1B2, PPARGC1A, SUV420H1
Negative_15243	CFI, CGN, PGF, AFMID, ALAS2, ANAPC5, ARHGEF6, ATG12, ATG7, BACE2, C1QB, C9orf95, CACNB2, CACNG3, CAMK4, CCL24, CCNB2, CDC20, CERK, CES2, CESE7, CHEK2, CHST13, CSNK1A1, CTBP2, CXXC4, CYP21A2, CYP26C1, CYP3A7, DAG1, DGKG, DIAPH3, EFN1, EI24, ENPP3, EP300, EPAS1, EPHA8, EXTL3, FADS2, FGF3, FRAT2, GBA3, GNAI3, GRIN2A, GSTM4, GSTM5, HSPA8, HTR6, IARS, IL11, INPP4B, ITPKB, KIR2DS5, LGL2, LRP5, MGAT3, MGAT5, MTHFD1L, MYH1, MYL9, NCF2, NMNAT2, NOX1, OR10J3, OR10X1, OR13C8, OR2F2, OR2T4, OR4F17, OR6S1, PDGFC, PGK1, PIK3C2A, PIK3C2B, POLR2J, PPAP2C, PPP2R5D, PRKCQ, PRKY, PROS1, PTPRB, RARS2, RDH11, RHOQ, ROBO3, RPS6KB1, RUVBL1, RXRA, SC4MOL, SETDB1, SLC12A2, SMPD3, TLR2, TLR9, TYMS, UBE2L3, VKORC1, WNT7B, YOD1, YWHAQ, TNFSF13B
Negative_15244	C8B, F3, FOS, HK2, HPD, MAX, ME1, MVK, RET, TAT, ABI2, ABLIM1, ACP2, ACTC1, ACTN1, AKR1B10, AKT2, ARPC5L, ATP5L, ATP6V0B, ATP6V0C, AXIN2, B4GALT4, BACE1, BNIP1, CACNA1H, CAMK2A, CARD11, CCL26, CCR5, CD8A, CD99, CDC45L, CES2, CKS1B, CLDN1, CLTCL1, COL5A2, CSF2RA, CXCR4, CYP26A1, CYP3A7, DERL1, DHFR, DPM2, DRD5, ECHS1, EFNA2, EPHB1, FZD10, GALNT8, GANC, GPLD1, HLA-DQA2, HMGCR, HSD11B2, IFNA16, IKBKG, IL15RA, INPP1, INPP5A, IRF5, ITGB5, KDSR, LAMB4, LAMC2, LARS, METTL6, MTHFD1L, NCOR1, NFKB2, NTNG1, OGDH, OR10G3, OR10J1, OR2AG1, OR2F1, OR4C46, OR4D11, OR51I1, OR5A2, OR5D13, OR6B3, OR6M1, OR7C1, OXCT2, OXTR, P4HA1, PANK2, PDE4A, PDE5A, PDGFA, PFN1, PIK3C2G, PIP4K2B, PLA2G1B, POMC, PPP1R1A, PPP2R5B, PRKCI, PRLR, PTPN6, PTPRF, RALA, RENBP, RRAS, SDC2, SDHB, SEPHS1, SGPP1, SIIPA1, SKP2, SOCS1, SOCS3, SRD5A2, STAT1, STAT3, SULT2B1, TAS2R4, TDO2, TP53I3, TPH2, TSLP, TUBA1A, TUBB, UCK1, UXS1, WWP2, YWHAG, ATP6V1G2, HLA-DQA2, MAPKAPK3, PLA2G12B, TNFRSF10D, TNFRSF18

Negative_15245	CP, CTH, DDC, F10, HPD, IL3, MPI, PRL, TNN, UBB, VTN, WAS, ACTB, ACVR2A, ACY1, ADCY7, ADRA1A, AGRP, AK3L1, ALG10B, ALG11, ALG12, ALG3, ALPP, A TG7, BPGM, CACNA1F, CACNA1G, CACNA1S, CALML3, CAMK2G, CCKBR, CCL28, CCNB1, CCR6, CD70, CDH1, CLDN19, CLTCL1, CNTNAP1, COL2A1, COL4A4, CO Q6, CSF2, CTF1, CTLA4, CYP11B1, CYP19A1, DHDDS, DTX3, E2F3, EPHB2, EP HB4, FCER1G, FOXA2, FPGS, GALNT7, GGT5, GNAI1, GYS2, HAGH, HLCS, HMGCS2, HNF1A, HPRT1, IDH2, ISYNA1, ITGA10, ITGAX, ITGB3, LAMB4, LRP6, MA P2K1, MAP3K7, MAPK11, MAT1A, MEF2C, MGAT3, MTHFD2, MYH15, NADK, NFKB IB, NLGN1, NOTCH3, NRCAM, OR10P1, OR2H2, OR2L13, OR2T8, OR4F6, OR4K5 , OR51A7, OR5T2, OR5T3, OR6C76, OR9Q2, P2RX2, PDE6G, PDXK, PER2, PGM1 , PIGP, PISD, PLD1, PLD2, PNPLA3, POLR2B, POLR3H, PPP3R1, PPT1, PRKAB 1, PRKAR1B, PRKCD, PRKCE, PRKY, PRODH, PTTG1, RAPGEF2, RDH16, RELB, R OBO3, RRM2, SDC4, SGPP2, SLC27A5, SPRY3, ST3GAL5, SULT1A4, TAP1, TAS 1R3, THTPA, YARS, ARHGEF12, ATP6V0D2, ATP6V1C1, HLA-DPA1, PRICKLE2
Negative_15246	APP, DHH, FES, HGF, ILK, PAH, ADAM10, ADH6, ADRA1A, AGPAT1, AGRP, ALDH 3A2, ALDH9A1, AMPD3, ARHGEF7, ASNS, ATG3, ATP5C1, B3GAT1, BAIAP2, BU B1B, CACNG4, CCND3, CD244, CD79B, CDC42, CLDN17, CLDN2, CSF2RB, CSNK 1G3, CTBP2, CTF1, CYP2C8, CYP2S1, DCTN1, DDX56, ECHS1, ENPP2, ENTPD2 , ENTPD8, FASN, FDPS, FSHR, GALNTL2, GBE1, GMPR2, GNPDA2, GNRH2, GUSB , HDAC1, HLCS, HMGCS2, HMOX2, ICAM2, IFNA7, IL21, INMT, IRS2, ITGA11, KIR3DL2, LAMA3, LCAT, LGMN, LPAR1, LYZL1, MAPK7, MCM4, MTHFD2, MTHFS , MYH6, MYL2, NCAM1, NCKAP1L, NCOR1, NCR2, NMNAT1, NUDT12, OR10X1, OR 13A1, OR2A14, OR2F2, OR2K2, OR2T12, OR4A5, OR4N4, OR51E2, OR5B3, OR5 M8, OR6N2, OR7G1, P2RX7, PARVG, PIGM, PMM1, POLA2, POLR2L, POLR3A, PO MC, PPAP2B, PPP3CA, PRDX6, PRKCE, PRKCZ, PRSS1, PTPRC, RAP1B, RETSAT , SCD5, SETD1A, SKP2, STK36, STX1B, TACR1, TAS1R2, TJP3, TKTL1, TPK1, TRIP10, TSC1, TSTA3, TUBA4A, TUBAL3, UBA1, UROS, WNT2, WNT6, PLA2G12 B, SERPIND1
Negative_15247	CP, DDC, DUT, F2R, FAS, GH2, LCK, TK2, VTN, ACAA1, ACAD9, ACP6, ADRA1B, APPL1, ARPC1A, ATP5F1, ATP6V1F, BDKRB2, BET1L, BIRC3, BLNK, CACNA1A , CACNA1F, CACNB2, CACNB3, CALML5, CCL13, CDK7, COL4A4, CPT1C, CRB3, CREB1, CSF1, CXCL10, DDX18, DHRS3, DLL4, DLST, ENTPD5, EPHA6, EXTL2, FUT9, GALE, GALNTL4, GGBT1, GPLD1, GRAP2, GSTA5, GUSB, HSD17B3, HTR2 B, ICOS, IKKB, IL10, IL12A, INHBE, INPPL1, ITGA2, JAK3, KARS, KIR2DL 2, KIR2DL3, LAMC3, LDHAL6B, LRP5, LTA4H, MAP3K2, MAPT, MYD88, NCKAP1 , NCKAP1L, NGEF, NR1D1, NRAS, ODC1, OR2C3, OR4D2, OR5AU1, OR5B21, OR5 F1, OR6C6, OR7D4, OR7G3, OR9Q2, PFN4, PIK3R1, PLOD3, POLR1C, PPM1B, P RKG1, PSEN2, PTGER1, RASA2, RDH12, RELB, RPS6KA4, RPS6KA6, SARS2, SO CS7, ST3GAL6, STX10, STX1A, SUCLA2, TACR1, TAS2R16, THBS4, TJP3, TML HE, TPM3, UCKL1, USE1, WBSCR17, WIF1, WNT7B, ATP6VOA4, SERPIND1, TNF RSF10B, TNFSF13B
Negative_15248	ADK, BTK, C1S, F7, GP9, INS, NGF, SI, TH, TNR, AARS2, ACVRL1, ACY3, ADCY 10, ALG1, ALG11, ANAPC2, BBC3, BMP5, BMP8A, C4BPB, CACNA1S, CAV1, CCL 24, CCR2, CD40LG, CD44, CLDN18, CLTCL1, COL4A6, COL6A2, CSNK2A2, CTS B, CYFIP1, DCTD, DFFB, DHDDS, DKK1, E2F4, EHMT2, EPHA2, ERBB2, FUT2, F ZD2, GLO1, GRIA3, HADH, HIBCH, HSD11B2, IFNB1, IFNGR2, IL7R, IMPDH2, LDHC, MCM2, MGAT2, MYH15, NQO1, OLAH, OR10S1, OR1A2, OR2A25, OR2C3, O R2K2, OR2V2, OR3A3, OR4F6, OR4K2, OR52E6, OR5M3, OR6B2, OR6K2, OR8D1 , PANK4, PDE11A, PGM1, PHKG1, PKM2, PLA2G3, PPP1R3C, PTDSS2, PTGIS, P TPN6, RARA, SHISA5, SMC1A, SMPD1, SOD1, SPRY3, STX12, SV2C, TUBA1A, T UBB4, TYMS, ULBP3, VAMP4, VANGL2, YOD1, MAP3K7IP1, ST6GALNAC4

Negative_15249	<p>CR1, DAO, F10, FN1, LCT, ADH5, ALDOB, ALG13, ARSB, ATP5C1, BAIAP2, BCM01, BMP8A, BUB3, CACNA1B, CBR3, CD79A, CDIPT, CLDN1, CRLF2, CTSS, CXCL2, CXCL3, CXCR4, CYSLTR2, DIAPH1, DMGDH, DOCK1, DUSP1, DUSP4, ENTPD7, F13A1, FARP2, FBXW11, FOXO1, FZD1, G6PC, GAMT, GMPR2, GNG13, GNRHR, GRB2, GRHR, GRIN2B, HRAS, HTR2B, ICAM2, IFNAR2, IKBKG, IL12RB1, IL23A, IL4R, IL6ST, ITGA2B, KIR3DL2, LDHAL6A, LGMN, MAML2, MAML3, MASP2, MCCC2, MCM7, MLYCD, MYH7, MYL7, NANS, NCOA4, NFKB2, OR10C1, OR10S1, OR2G3, OR2T5, OR4K2, OR51F2, OR52K2, OR5B12, OR5H2, OR5I1, PANK1, PFKP, PIGQ, PIGX, POLD4, PPP1R1A, PPP1R3C, PPP3CB, PPT1, PRLR, PRPS2, PTTG1, RALBP1, RAPGEF4, RDH12, SLC9A1, SNAI1, TAS2R60, TGFB3, TGFB3R1, TLN2, TNFRSF8, TNFSF12, TSC2, TUBA1A, VAMP3, WNT2, WNT7A, YWHAZ, ZFYVE16, ATP6V1G1, CACNA2D4, CSNK1A1L, PPARGC1A, ST6GALNAC5, SUV42OH1</p>
Negative_15250	<p>FUK, LAT, NLK, PVR, TH, AARS2, ACAD8, ACPT, ACTN2, ACVR2B, ADCY4, ADCY7, ADH4, AKR1C1, ALG6, ALG8, AOC2, APLP1, ARG2, ARHGEF2, ARPC5, ATP5L, ATP6V1F, B3GNT2, B4GALT6, BBC3, BCAT1, BCKDHB, CCND3, CD34, CD46, CDC7, CDKN2A, CISH, CLDN14, CPT1A, CREB3L2, CSF1R, CTBS, CTNNA1, CTSB, CXCL2, CYP11B1, CYP21A2, CYP2A13, CYP2C8, CYP4F2, DHFR, DUSP1, EFNB2, EPHA3, ETS1, FUT6, GAD2, GAMT, GANAB, GCNT1, GLG1, GNA14, GNAI2, GPD1L, HARS2, HHIP, HIF1A, HRAS, HTR2C, IFNGR1, IKBKB, IL12RB1, IL6R, ITGB1, ITGB2, KDSR, LAP3, LARS, METTL2B, MGAT4B, NCOR1, NEU3, NOS1, OR10A6, OR10AG1, OR11A1, OR14C36, OR2K2, OR4A15, OR4K15, OR4L1, OR52M1, OR5AP2, OR5B12, OR6C70, OR7D2, OR8J1, PARD6A, PARD6G, PDHA1, PIGO, PIGU, PIP5K1C, PKM2, PNPT1, PPP1R3A, PSEN1, PSME1, PTGS2, PTPN11, PTPRB, RAC3, RASGRP1, RUNX1, SDC2, SEPHS1, SIGLEC1, SMARCA5, SPP1, SPRED2, STAT4, TAS2R14, TAS2R40, TAS2R49, TLR3, TP53, TSHB, TUBB3, UGT2B4, UNC5C, VARS, WHSC1, WNT8A, HSP90AB1, PHOSPHO1, SERPINA1, TNFRSF13C</p>
Negative_15251	<p>AK7, BTK, C3, DAO, EBP, EPO, GK2, GLS, HK1, PGF, RB1, RDX, SMS, UBB, VTN, ABCC8, ABLIM3, ACACB, ACADL, ACAT1, ACHE, ACOX2, ACTN1, ACVR2B, ADH4, ADORA2B, AKT1, ALDH1A1, ALDH1B1, ALOX5, ANGPTL4, B3GALT2, B3GNT4, CACNB1, CACNG1, CADM3, CBR1, CCL28, CCNB3, CCND1, CCNG1, CD274, CLTA, CLTB, CSF3R, CXCL16, CYP2C8, CYSLTR2, DDX41, DGAT2L4, DIAPH2, EDN1, EFNA2, EFN2, EPHA6, F11R, FGF7, FLOT2, FUT9, GMPPA, GNAS, GNG13, GNM, GRIA1, GRIA2, GSTM3, HARS, HBEGF, HIBADH, HSD17B1, ICAM2, IDI1, IL1R2, IL28B, IMPDH2, IRAK3, ITGA6, ITPK1, LAMC2, MAPK8, MGST3, MTHFD2, MYD88, MYH9, NADSYN1, NAT6, NEGR1, NODAL, NRAS, NRXN3, OR10AG1, OR10Z1, OR11G2, OR11H4, OR1J2, OR1N1, OR2B11, OR2Y1, OR3A1, OR51B2, OR5F1, OR6K2, OR7A5, OR8K3, OR9I1, PAK3, PARVG, PFAS, PFN3, PIGK, PIP5K1A, PLCB4, PLCD4, PPP1R3C, PPP2R5D, PPP5C, PRKACB, PRKX, PTGER3, RARS2, ROBO1, RPE65, SEMA3G, SETDB1, SGMS1, SREBF1, ST8SIA5, STEAP3, SULT1A4, SV2C, SYNJ1, TACR3, TAS2R10, TAS2R7, TICAM2, TUBAL3, TYMS, ULK1, VAMP1, VARS, VEGFC, WNT7B, ZIC2, ATP6V1C2, C1GALT1C1, CSGALNACT2, TNFRSF12A</p>

Negative_15252	<p>BAX, CKB, F8, GP6, ITK, MPI, ABL2, ACO1, ACSL5, ACY1, ADCY5, ALG11, ALG2, ALOX5, ALPPL2, B3GNT5, BDH1, BDKRB1, BET1, BLVRB, C4BPA, CASP3, CA V2, CD19, CD36, CDC14B, CDKN2C, CEBPA, CHAT, CHRM2, CHRM3, COL1A1, CO X15, CREB3L1, CRLS1, CYP2A7, CYP2F1, DDX19A, DEGS1, DGKA, DHDDS, DNM T3L, DOT1L, DTX3L, EGLN1, EIF4B, EPHA4, EPHB2, EPHX1, ERBB4, FECH, FP GS, FUT8, G6PC, GALK1, GALM, GALNTL2, GAS1, GGCX, GNRHR, GRIN2C, GSTA 5, HAGHL, HLA-</p> <p>DRA, IDH3G, IFNA7, IFNG, IL11RA, IL9R, INPP1, IQGAP3, IRAK1, IRAK2, L ARS2, LCMT2, LIFR, LIPG, MAD2L1, MAP3K13, MAPT, MDM2, MTHFS, NCF1, NC F4, NKD1, NQO1, NRCAM, NRXN2, OR11H1, OR13G1, OR1A2, OR1S2, OR2G6, OR 2H2, OR4C11, OR4K14, OR51M1, OR56A3, OR5H6, OR5K2, OR8U1, P4HA2, PAK 1, PDE3B, PDGFB, PFKFB3, PHKA2, PIK3CB, PKMYT1, PLCB2, PLCD4, POLA2, PRKAA1, PRKCZ, PTGIS, PTTG1, RALBP1, RARA, RELA, RPS6KA2, RPS6KB2, S DC1, SFRP5, SKIV2L2, SMURF2, SPHK1, SPRED1, SRGAP1, STK11, STX5, TBL 1XR1, TNFRSF9, TP53I3, TPK1, TSTA3, ULK1, VAMP1, VT11B, WNT8B, XYLT1 , YKT6, CACNA2D4, PNLIPRP1</p>
Negative_15253	<p>BAD, C4B, C8A, CBS, FAS, GHR, KDR, PML, PTS, TAT, TFG, ACSL6, ACSM3, ACS M4, AGMAT, B4GALT3, CACNA1A, CANT1, CCKBR, CCL11, CD274, CDKN2B, CLD N20, CNTN2, CRKL, CSF3R, CYFIP2, CYP17A1, DERL1, DHCR24, DOCK1, DRD2 , EGFR, ENPP3, EXTL1, FDFT1, FGF22, FZD3, GALNT11, GLG1, GMPS, GNAT3, GPX5, GSTM2, GSTT1, HIP1, HMGCS2, HNF1A, HNF4G, HSD17B2, IDUA, INHBE , IRF3, ITPK1, KYNU, LALBA, LAMA3, LAP3, LEPR, NAGLU, NCF4, NFAT5, OR1 OR2, OR13C8, OR2T4, OR2T5, OR4D9, OR4K15, OR4S2, OR5M3, OR5M9, OR5T1 , OR5T3, OR6B3, OR8B4, OR8H3, PCYT1B, PDE4C, PDIA4, PIAS1, PIAS3, PIK 3CB, PMM2, PNMT, PPA1, PPBP, PTDSS1, PVRL1, PYCR1, QPRT, RAPGEF3, RAR A, RARS, RASGRF1, RASSF5, RFX5, SENP2, SOD1, SPTLC1, STX3, SUOX, TALD O1, TCF7L1, TFPI, TLR9, TRAF3, TUBB1, USE1, WARS, WNT2, WNT8B, WWP2, Y ARS, B3GALNT1, PDCD1LG2</p>
Negative_15254	<p>AK5, BAD, CFH, CR1, CRK, EGF, EZR, F12, GHR, ID2, RET, SMS, SPN, ACO2, AC OX1, ACTC1, ACVRL1, ADIPOR1, ALDH5A1, AMPD2, AMPD3, ANAPC4, APAF1, A RSE, ATP6V1A, BDH1, BLVRB, CACNB3, CALML3, CBLB, CCR7, CD8B, CES1, CH RM3, CLDN16, CYCS, DBF4, DTX1, DTX4, EFN3, EP300, EPHA3, FADS2, FASL G, FGF1, FIGF, FZD4, GALNTL2, GAMT, GCDH, GDF7, GGT7, GMPS, H6PD, IL10 , IL28A, INMT, ITPA, KCNJ11, LAMA3, MYH8, NAGS, NCOA4, NFKBIB, NR1H3, OR10A2, OR10AG1, OR13C9, OR2T33, OR51G1, OR52E2, OR52L1, OR7A5, OXC T2, P2RX1, P4HA2, PECAM1, PFN3, PGK2, PIAS3, PIGL, PIGX, PLA2G6, PMM1 , PPP2CA, PPP2CB, PRKCZ, PRKG1, PTCRA, RASA2, RBL1, RFNG, SNAP25, SOS 1, SUCLG1, SULT2A1, SV2C, TPI1, TUBB1, WNT11, XCL1, ARHGEF12, C1GALT 1C1</p>
Negative_15255	<p>A2M, BAX, DDC, GP9, HGD, IDS, PRL, TK1, ALCAM, ALDH5A1, ALDOC, APAF1, A SPA, B3GALT5, CACNA1G, CCNA1, CHUK, CLDN10, COQ5, CREB3, CSF1, CSF3R , CTBS, CTSG, CXCL11, CYP2F1, CYP2J2, CYP3A4, DRD5, ETNK2, F2RL2, FGF 5, FOSL1, FRAT1, G6PD, GALNTL1, GANAB, GDE1, GLB1, GNAZ, GNRHR, GPX7, GUSB, HADHA, HMGCL, HMGCR, HSP90B1, IDI2, IGF1, IL1B, IL1RAP, INPP4B , IRF7, IRS4, ITPA, KAT2A, LTB4R2, MAN1C1, MAPK14, METTL2B, MGST1, MI CA, MYD88, NEU3, NOTCH2, NSDHL, OR1M1, OR2A25, OR2T8, OR7A17, OR9Q1, PAK2, PAK6, PCNA, PDE4A, PDE7A, PFKL, PHKA2, PIGW, POLE, POLE4, PPID, PPP2R1B, PPP2R2A, PPP2R2C, PPP3CA, PRKX, RELB, RFNG, RND1, RPS6KA1, RPS6KA6, SELE, SEMA4D, SESN3, SLC2A4, SMC1B, TNFSF12, TXNDC12, HLA- DPB1, PAFAH1B1, TNFRSF17</p>

Negative_15256	AUH, CBL, CEL, F2, GK2, HK3, PAH, TH, ABLIM2, ACAA1, ACTG2, ACVR1C, ADCY6, AHCYL1, ATP6AP1, B3GAT1, B3GNT2, BCAT2, BCL10, BET1, CAMK2D, CAMKK2, CBL, CCKAR, CCNE1, CDC7, CMPK1, CTNNA2, DDX18, DDX4, DGKE, DIAPH3, DOCK1, E2F1, E2F3, EDAR, EPHA6, FUT2, GCAT, GNAQ, GRB2, GSTA2, GSTM2, GSTM3, GSTM4, GSTM5, HES1, HNF4A, HTR6, IL13, IMPDH1, IRF3, JAK1, KIR2DL1, LAMB3, LIPE, MAPK14, MCM2, MTMR1, MYH11, NAT1, NEGR1, NFKB1, NUDT12, OR10A2, OR10AG1, OR10H5, OR14C36, OR2A2, OR2A4, OR4D9, OR4F6, OR5D13, OR5L2, PANK3, PAX4, PDE1A, PIK3R5, PPP2R2D, PPP3CA, PRIM2, PRKAG3, PRKAR1A, PRPS2, PTPRB, SELP, SELPLG, SIPA1, SKP2, SMPD4, SORBS1, SORD, SPRY2, STX6, TAS2R4, UBA7, UROD, VARS, WNT5A, SERPINA1
Negative_15257	FN1, MET, MIF, RET, SRC, ABLIM2, ACAD8, ACYP2, AGPAT6, APOA1, APOE, ARHGAP5, ARHGEF1, ARHGEF4, ARPC4, ARPC5, ATF2, ATF4, ATG3, ATP6V1D, BRAF, CCKAR, CD28, CNTNAP1, COQ3, CRLS1, CSF1R, CTPS, CYFIP2, DGAT2, DIAPH1, DPYS, DUSP8, DUSP9, E2F2, E2F3, EFNB2, ENO1, ETNK2, FABP4, FADS2, FGF17, FGF22, FLT3LG, GALNS, GALNT2, GALNT7, GALNTL5, HADHB, HEXA, HSPA2, IFNA4, IFNA7, IFNA8, IL12B, IL1A, ITGAD, ITGAM, KIR2DS5, KLK3, LIPA, LIPF, LTA4H, LYPLA1, MAD1L1, MAML1, MAP4K4, MPST, MYH10, MYH2, NEFM, NFAT5, NFYB, NME2, NT5C3, OR10J1, OR10J3, OR11H6, OR1M1, OR4A5, OR4C13, OR4K17, OR4K5, OR6K6, OR6X1, OR8K3, P2RX6, PDE7B, PDK1, PFN3, PHPT1, PIGU, PIP4K2B, PKM2, PLD1, PMM1, POLA2, POLR1B, PPCS, PRKAA1, PRLR, PRPS1, PYCRL, RAPGEF1, ROCK1, SEMA4C, SETMAR, SLIT2, SMC1A, SMPD1, SULT1A4, SUV39H1, TAS2R60, TFDP1, TNFSF18, TNFSF9, TRAF2, TSLP, UBA7, UMPS, UROS, VAMP2, WASF1, WNT4, YES1, GABARAPL1, HLA-DPB1, HLA-DQA2, PLA2G12B
Negative_15258	CS, DHH, ID2, IL2, NNT, PDC, PML, SYK, VTN, AADAC, ACAT1, ACSM2A, ACVR1, ADCY2, ADIPOQ, AGPAT2, AMDHD2, AMPD1, APOA2, ARHGEF2, ARHGEF4, ARNT2, ARRB1, ARSD, B4GALT6, BMP8B, CARD11, CASP7, CASP8, CCL27, CCNA2, CCR2, CD27, CD70, CDK4, CERK, CLDN4, CMPK1, CPT1B, CXCL12, CXCL6, CXCR4, CYP1A2, CYP21A2, DDHD1, DDX50, E2F1, EDN1, EHMT2, EIF4B, ENO3, ENTPD4, EPHA6, FGD1, FGFR3, FRAP1, G6PC, GALNTL2, GCAT, GOT1, GRIA3, GSTM3, GUCY1A3, HADHB, HRAS, HTR7, IFNB1, IFNK, IL13, IL17RB, INSRR, IRF7, ITGB7, JAK2, KIR2DL1, KIR3DL3, LAMC3, LCMT1, LCMT2, LTC4S, MAP4K1, MAPK13, MARS2, MEF2C, MYH6, NCSTN, NFKB1, NRXN1, NTSR1, OLAH, OR10AG1, OR10J3, OR11H4, OR13A1, OR14A16, OR1J1, OR4C12, OR4M2, OR4X1, OR51A7, OR51B2, OR51G2, OR52E4, OR52I1, OR6C74, OR6C75, OR6K6, OR6N2, ORC4L, PDCD1, PDE8A, PDGFA, PDGFRA, PFN3, PLA2G6, POLE2, POMC, PPM1A, PPP2R1B, PPP2R2D, PPP3R1, PRIM1, PRKAR2B, PTCRA, PTPN11, RAB23, RDH10, ROCK1, SCP2, SORD, SPRY2, SSH1, ST3GAL3, SUCLA2, TCIRG1, TKTL2, TSHB, TUBA1C, UGT2B28, UPP2, WNT7B, ZBTB16, CSNK1A1L, PAFAH1B3
Negative_15259	BTK, EBP, FES, GP5, OTC, RET, TNN, TNR, WAS, AADAC, ACADS, ACOT11, AKR1C1, AKR1D1, ALDOA, ALOX15B, ALPI, ATP6V1A, B4GALT1, BET1L, CACNA1F, CALML5, CCL7, CCR2, CDK2, CER1, CMAS, CNGA4, COL5A1, CTNNA3, CTPS, CYP26A1, CYP2A7, DGAT2, DHX58, DIAPH1, DPM2, DUSP4, EHMT1, EI24, ENPP2, ENTPD3, ETNK1, FDPS, FGF19, FGF6, FLT3LG, FTH1, GABARAP, GALNT12, GAS1, GGT5, GNA11, GNAL, GNPAT, GNPDA1, GUK1, HAGH, HMGR, HSD11B1, HSD3B1, IARS2, IDH1, IFNAR1, IL1RAP, MADCAM1, MAGI3, MAOB, MAP2K4, MGA T5, MPDZ, MTMR6, NCR2, NFX1, NKX3-1, NMNAT1, NODAL, NSDHL, NTRK2, OR10C1, OR13A1, OR1F1, OR1N1, OR2M4, OR4K2, OR52E4, OR5M3, OR8S1, P2RX1, PCYT1A, PDGFD, PIGO, PIGU, PLK1, PLXNA1, PLXNA2, PNPLA4, PNPO, POLE4, POLR2G, POLR3G, PPCDC, PPP2R5E, PPP3R1, PRDX6, PROS1, PSENEN, PTGES, PTPN5, PYGL, RAB5A, RAF1, RASGRP4, RUNX1, SEMA3E, SEMA7A, SIPA1, SLC9A1, SMARCA2, SMPD1, SPRY4, ST6GAL1, STMN1, STT3B, TGFB2, TICAM1, TM7SF2, TP53I3, TPMT, UCKL1, UGT2B28, WNT3, WNT4, YOD1, HSP90AA1, MAP3K7IP1

Negative_15260	GAA, MIF, MSN, NNT, TNC, WAS, ABLIM1, ACP6, ACSM1, ADH5, ALG1, APRT, ARPC1B, ASRGL1, ATP12A, CCR10, CD38, CDC6, CDK5, CIITA, CLTA, CYP2A6, CYP2S1, DGAT2L4, DMGDH, DNMT3B, DUSP3, FOXA3, GALNT11, GALT, GBE1, GBGT1, GMPPB, GSTO1, IFIH1, IFNA14, IFT57, INPP5B, IPMK, IRS1, ITCH, KLRC3, LARS2, LPAR1, MAN1A2, MAP2K7, MAPK13, MCAT, MGAT2, NADSYN1, NANS, NEFM, NFATC2, NKX2-2, NRXN1, NSDHL, OR13C2, OR14C36, OR1K1, OR1L3, OR2K2, OR4C16, OR4D1, OR4D2, OR4M1, OR6C1, OR8K5, OR8U1, OSMR, PAX8, PER3, PIK3CB, PITX2, PMM1, POLR3A, PRKACB, PRNP, PRSS1, RDH12, RND1, SCD5, SDC2, SETD8, SGMS1, SGPP1, SMAD7, SRD5A1, ST3GAL1, ST3GAL2, STEAP3, TGFB1, TNFSF18, TRPM5, UGT1A10, VEGFB, WASL, AASDHPPT, ATP6VOA1, SERPINE1, TNFRSF10D
Negative_15261	AUH, CDA, FAH, FST, GDA, GNE, MET, MPI, SRF, TYR, ACSL1, ACSS3, ADH4, ADIPOR1, ALG6, ALOX15B, ARG2, ARPC4, ATG3, B4GALT6, BET1, BPNT1, CCNA1, CD28, CDC6, CDKN2B, CDS2, CHPT1, CHSY1, CHSY3, CKMT2, CKS1B, CLDN6, CMPK1, CTBP1, CYP4A22, CYP8B1, DBF4, DLL3, DPYS, DUSP2, E2F3, EFNB1, ENTPD5, EPHA4, EPHA5, FGF4, FLT3, FLT4, FUT3, GALNTL5, GGT7, GLDC, GSTM1, GYS2, HMGCR, HMGCS2, HNF1B, HSPA1B, HTR7, IBSP, IFNK, IL1R1, IRS2, LAMA4, MAP2K6, MEF2C, MGAT2, MPZL1, MRAS, MYL2, NCOR2, NCR1, NFX1, NLGN2, NQO1, NUDT9, OR12D3, OR1S2, OR4A5, OR4N5, OR51B4, OR51V1, OR8K1, ORC4L, P2RX4, PARVB, PGK1, PIGB, PIGK, PIP5K1A, PIPOX, PPP2R1A, PPP2R2A, PPP2R5A, PYCR1, RALA, RRM2, SEMA3E, SEMA7A, SSH2, ST3GAL1, STX1A, STX7, SULT1A2, TCIRG1, TGFA, THBD, TRADD, TRAF3, TUBA1A, ULK1, VANGL1, XYLT1, ZBTB16
Negative_15262	F9, GDA, ID2, INS, MPI, MYC, NF1, STS, AARS, ACSL6, ACTG2, ALDH6A1, ALOX12B, ARNT, BNIP1, CACNB2, CARS2, CCR8, CD48, CD80, CDC6, CDC7, CDH15, CEBPA, CES1, CFTR, CLCF1, CPT1A, CRKL, CXXC4, DAAM2, DEGS1, DEGS2, DUSP16, ENTPD1, EPHA7, ERBB4, ESPL1, FGFR1, GALNT13, GGCX, GMPPB, GNPDA1, GNRHR, GUCY1A2, IFNA14, IFNA7, IL20RA, IMPDH2, IPPK, ITCH, LTA4H, MAGI1, MAP2K7, MAPK14, MARS, MASP2, METTL2B, MITF, MKNK1, NEGR1, NRCAM, NT5M, NTNG1, NTRK1, OCRL, OR13G1, OR2D2, OR2M5, OR2M7, OR4Q3, OR52W1, OR8U1, OXCT2, PDIA4, PDXK, PIP5K3, PLA2G3, PLEKHA8, PNPLA3, POLE2, POLR3H, PPAP2B, PPM1D, PPP2R5D, PRKAB2, PTK2, PTPN6, RAPGEF1, RDH11, RDH12, RDH16, RDH8, RRM2, SIPA1, SORD, SPTLC1, SV2C, TAP2, TAS2R8, TLR5, TUBA3C, UGDH, WASF1, WNT5A, WWP1, CACNA2D2
Negative_15263	ADO, F10, GHR, GK2, GSR, PRL, ABAT, ACO1, ACPP, ACTB, ACVR2A, ADSL, ALDH7A1, ALG2, ALOX5, ARHGEF2, ARHGEF7, ARNT2, ATG7, ATP6V1F, BACE2, BCKDHA, BDH1, BLVRA, BLVRB, BNIP1, CCL16, CCL5, CDH5, CLDN6, CLTA, CNGA3, COL6A2, CPT1B, CTSG, CXCL11, DAPK3, DBF4, DFFA, DOLPP1, DTX3L, DTX4, E2F5, ENTPD5, EPB41, EPHA7, FMO3, FSHR, GALE, GALK2, GALM, GATM, GCNT1, GMPS, GP1BB, HMGCS1, HNF1B, IL12RB2, IL1RAP, IL22, IL23R, ITGA7, KLRC2, LALBA, LEPR, LTC4S, MAPK1, MAT2B, MEF2C, MGAM, MLLT4, MTHFD1L, MYL5, NCF4, NCK1, NMNAT1, NRP1, NT5E, ODC1, OR10J3, OR13G1, OR1S1, OR2W1, OR4B1, OR4E2, OR51B4, OR51I1, OR8K5, OR9G4, OXCT2, PIGA, PIPOX, PLA2G6, PLOD2, PMM2, POLR2I, POMC, PPARA, PPP2R5A, PPP3R2, PRKCG, PRKG1, PRPS1, PSME2, PTPN5, RAPGEF1, RASGRP2, RFXAP, RHOQ, SAT1, SETD8, SIAH1, SOCS3, TIAM1, TJP2, TRAF5, TSTA3, UGT2B4, HSP90AB1, MAPK8IP1, PDCD1LG2, PRICKLE1



Negative_15264	BTC, CFH, EDA, F5, FH, FST, GP9, ILK, ME1, MIF, OSM, RDX, RPE, TH, TNF, AA RS2, ABLIM2, ALAS1, ALDH3B1, ALG13, ANAPC7, ATP5A1, ATP5D, AXIN1, B4 GALT6, BMPR1B, C1GALT1, C4BPB, CACNA1C, CACNB1, CCL5, CCNH, CDC2, CD C27, CES1, CHST11, CISH, CLDN6, CMPK2, COQ7, CPS1, CREB3L3, CREB3L4, CRY1, CTSB, CXCL1, CXCL3, CYP3A7, CYP4F2, DDX19A, DFFA, DGKD, DHCR7, DHRS4L2, DTX4, DUSP10, E2F5, ECHS1, EDNRA, EPHB1, EXTL3, FBP2, FGF21 , FGF22, FPGT, GCNT3, GL01, GSTO1, H6PD, HAGH, HARS2, HSD17B4, IDI2, I L12RB2, IL20RA, IL21R, IMPA2, ITGA11, L1CAM, LIPG, MAP2K5, NFYA, NR1 D1, NR4A1, NUDT8, ONECUT1, OR10G3, OR10Q1, OR1F1, OR2M3, OR2T8, OR52 K1, OR52N2, OR56A4, OR56B4, OR5AC2, OR5C1, OR5D14, OR5J2, OR6C75, OR 8B12, PARVG, PHGDH, PLA2G2E, PLXNC1, PRKAG1, PRSS1, PTCRA, PTK2, RFX ANK, RHOQ, RND1, SEMA3A, SEMA4C, SESN1, SMAD5, SRGAP3, ST8SIA1, TAS2 R16, TNFRSF9, TNFSF9, UBA7, UCP1, UGT2A1, UPP1, ATP6V1E2, MAP3K7IP1 , SUV420H2
Negative_15265	BTD, F12, GK2, HAL, IL8, OGT, SP1, UBC, ACOT12, ACOX1, ACYP2, ADRB1, AK T1, ALDH6A1, ALPI, ALPPL2, ARPC3, ASAH1, ATP5D, ATP5H, ATP6V1F, BET1 L, BLVRA, CCL21, CCR3, CD19, CDC6, CER1, CHPT1, CLDN10, COL5A1, CPT1B , CSNK1G1, CYP1B1, DCTD, DHDDS, DUSP16, E2F4, EFN3, ENO3, ENTPD6, FG F10, FZD1, GALNT11, GALNT3, GALNTL1, GALNTL4, GGT7, GIT1, GRIN2C, GS TZ1, HCLS1, HMOX2, IL18RAP, IL20, IPMK, ITGA1, ITGA11, ITGAE, KLRC2, KLRC3, LEF1, LLGL1, LRP5, LTBP1, MAP2K4, MAPK13, MCM5, MYL5, NAT6, NE U4, NFKBIB, NKX6-1, OPLAH, OR13C2, OR2AE1, OR2D2, OR2T12, OR2Z1, OR4K14, OR51F2, OR52 E2, OR5AC2, PAK6, PCYT2, PDE1A, PDE4C, PDE4D, PHKA2, PIK3R1, PLCD3, P PAP2A, PRKACG, PRKAR2B, PTCH1, PTCH2, PYCR1, RALB, RAP1A, RASGRP2, R BPJL, RCHY1, RIPK1, RPIA, SMAD1, SOCS5, SOD1, SV2B, TAS2R50, TMLHE, T NFSF10, UBA1, ULBP2, UROC1, VARS, VTI1B, WASF2, WNT3, C1GALT1C1, CAC NA2D2, PNLIPRP2, SERPIND1, ST6GALNAC6, TNFRSF6B
Negative_15266	CDA, DCK, EPO, GGH, IL5, JUN, LCK, LSS, MTR, NNT, PRL, SMS, AARS, ABI2, A CHE, ACTC1, ADAM10, ADCY10, ADCY3, ADCY4, AMD1, ANGPTL4, B4GALT5, BS T1, BUB1, BUB3, CAMK4, CAV2, CCNE2, CCNG2, CD58, CD86, CHKB, CHR1, CHU K, CIITA, CLTC, CMPK2, CNTN1, CREB3L3, CXCL1, CXXC4, CYP1A1, CYP2D6, CYP2U1, CYP8B1, CYSLTR2, EPOR, F2RL1, FCGR2B, FMO4, GAD1, GBGT1, GIT 1, GNA15, GNAL, GPLD1, GSTK1, HDAC1, HIP1, HLA-DOA, ICOSLG, IDH3B, IFNA2, IGF3, IL15RA, IL28RA, IRF7, ITGB1, KARS , LIMK2, LRDD, MALT1, MAML1, MAP3K1, NADSYN1, NCF2, NCOR1, NEUROG3, N MNAT1, NR4A1, NUDT9, OR1A2, OR1Q1, OR2AG2, OR2Z1, OR51F2, OR52E4, OR 52R1, OR6B2, OR8J1, ORC6L, PAK4, PAK7, PDE4A, PDGFA, PDIA4, PFKFB2, P IP5K3, PLOD3, POLE, POLE2, PPP1R3D, PPP2R5B, PTCRA, PVRL3, RALA, RAL B, RAPGEF1, RBKS, RGS3, ROCK1, RRAS, SEMA3F, SKP1, SLC9A1, SMPD4, ST3 GAL4, STX6, STX8, SUFU, SUOX, SYNJ2, TFPI, TKTL2, TPH1, TSNARE1, TYMS , WASL, TNFRSF10D
Negative_15267	CAT, DBH, FAH, FGB, GLS, GSS, ID1, RFK, ACADM, ACADS, ADCY2, ADH4, ADH5 , ADRB1, AKR1C2, AKR1D1, ALDH5A1, ANAPC7, ARHGEF2, ATP5D, B3GALT1, B CKDHA, BPNT1, BTRC, CALML3, CANT1, CD27, CDC23, CES1, CHUK, CNTNAP1, COQ3, CSNK1G2, CYP26A1, DUSP3, EGLN3, ENPP7, ESAM, EXTL3, F11R, FGFR 4, FOSL1, FZD2, FZD9, GADD45A, GALNT13, GNB1, GSTA3, HIBADH, HRH1, HT R6, ITGA9, ITGAV, ITPK1, LEF1, LIPF, MAP3K12, MAT2B, MYH8, NADK, NANS , NFKB2, OR2A5, OR2Y1, OR51S1, OR52M1, OR5D18, OR6A2, OR6X1, OR8G1, P 2RX2, PDE6D, PDE6H, PFKFB1, PIK3CD, PLA2G4A, PLXNC1, PNLIP, POLR1B, POLR1D, PPM1A, PRKAG2, PRKCZ, PTPRF, RAPGEF2, RBPJL, RPIA, RRM2, SAR DH, SETMAR, SGPP2, SMPD1, TACR3, THBS4, TIRAP, TMLHE, TP53I3, TUBB6, YES1, AASDHPPT, TNFRSF10B

Negative_15268	<p>AGL, AK2, CKB, F3, GLS, IHH, INS, LHB, RB1, STS, TPO, ABLIM2, ACOX2, ACS M1, ADCY5, ADRBK2, ALG8, AMPD3, B3GALT4, BIRC2, BRAF, C1QB, C4BPA, C9orf95, CCL8, CDC25A, CDK2, CER1, CHEK1, CLDN4, CNTNAP1, CSF2RB, CTN, CYP3A43, DNMT3L, ELK4, ENTPD7, EPB41L2, EPHA4, EPHA8, ERBB3, FBP1, FCER1G, GART, GBGT1, GCLC, GCLM, GCNT4, GNG3, GNRHR, H6PD, HEXA, HIBADH, HMGS2, HNF1B, HPSE2, HSD17B1, HSD17B2, HYAL2, IFNA16, IL1RAP, IL3RA, INMT, ITGB6, KDSR, LDHB, MAD2L2, MAP2K5, MDM4, MECR, MITF, MTHFD1L, MTHFR, MYH10, MYH7B, NAE1, NFKB1, NKX6-1, NT5C1B, OR10A2, OR10AG1, OR10T2, OR13C9, OR2B11, OR2L13, OR4A16, OR4B1, OR4C46, OR4N5, OR51D1, OR52L1, OR5AK2, OR5AU1, OR5M3, OR6C4, OR6S1, P2RX4, PDE2A, PDGFD, PIAS4, PIM2, PLCD4, PLXNA1, POLR2H, PPP1CA, PTPN5, PTPRM, RAP1A, RASGRF2, RBPJ, RHOD, RPSA, SEMA3B, SEMA4G, SNAP23, SOCS1, SORD, SPAM1, STX5, TACR2, TAS2R4, TLR3, UNC5D, UPRT, VANG1, WNT11, ATP6V1C1, PAFAH1B3</p>
Negative_15269	<p>AK3, AK5, C7, C8B, CGA, F10, FST, GK, GLS, HK3, HYI, IDS, KHK, TNN, A4GALT, AASDH, ACAA1, ACP2, ACTN4, ADH1A, ADSSL1, AGXT, ALDH1A1, ALS2, AMDHD1, AMY2A, ANAPC4, ARRB2, ARSD, BCAT1, BLNK, BTRC, CACNA1G, CASP6, CASP7, CCNH, CEBPA, CKMT2, CNTN2, COASY, COL4A4, CTBS, CXCL2, CYP2A7, CYP4A22, DARS, DGKI, DOLPP1, DUSP6, EDN1, EDNRB, F2RL1, FGFR4, FLT3LG, G6PC, GADD45A, GALC, GART, GNAI2, GNPAT1, GNRHR, GPD1, GRAP2, GRIIN2D, GSTM3, HDAC1, HSPA8, IBSP, IGF1R, IMPA1, IRF5, ITGAX, KIR2DS4, KRAS, KYNU, LARS2, LGMN, LIPE, LYPLA1, MTMR6, NCK2, NCOA4, NFATC3, NKX3-1, NT5M, OR10A6, OR10Q1, OR2F1, OR2T3, OR2T6, OR4A16, OR4C15, OR4D11, OR51B2, OR51E1, OR51L1, OR5D16, OR5F1, OR6B3, PAK2, PARD6A, PARD6G, PCYT2, PDE8A, PDIA4, PFAS, PIGQ, PIK3R2, PIK3R4, PLD1, PMM1, PMVK, PNLIP, POLE, PRKCQ, PTK2B, PVRL2, RAB5A, RCHY1, RELA, RIPK1, ROCK2, RPS6KA5, RPS6KB1, RUNX1, SGMS2, SMAD7, SOAT2, SPRY1, SUCLG1, TAS2R13, TAS2R8, TFPI, TSTA3, UGT2B10, UGT2B17, UGT2B7, WEE1, ZAP70, AASDHPT, ATP6V1G3, PNLIPRP1, PPP1R12A, TNFRSF10C, TNFRSF17</p>
Negative_15270	<p>CAD, DLD, FER, FYN, IL4, LCT, MSN, SFN, SRC, AANAT, AARS, ACAA2, ACSL3, AKR1C1, ANAPC4, APOA5, ARAF, ARHGEF1, ATP5A1, ATP5O, BCAT1, CCDC6, CKBR, CCL27, CDKN2C, CHRM3, CNTFR, COL5A3, CTNNA3, CXCL1, DDX50, DFFB, DGAT2, DKK2, EFN3, FASN, FCGR3A, FGF2, FMO4, FPGT, GADD45B, GGCX, GLI1, GLYCTK, GNPDA2, GSK3B, HAGH, HLA-DOA, HSPA8, IARS2, IDH1, IL3RA, IL4R, IMPA2, JAG1, LDHD, LTB4R2, MECR, MMP9, MYH9, NADK, NARS, NCSTN, NFKBIA, NR1D1, OR10G4, OR10Z1, OR13C2, OR1A1, OR1C1, OR1S1, OR2B2, OR2G2, OR4A5, OR4F5, OR52K1, OR5V1, OR6B2, OR6N1, OR9G1, PAK1, PAX8, PFKFB2, PFN4, PIGA, PLOD1, POLA2, POLE3, POLR2J, PPP1R3C, PPP1R3D, PPP2CA, PRKCA, PRKCH, PRKG2, PTK2B, QARS, RARS, RASSF1, RENBP, ROBO2, RPS6KB1, RPS6KB2, SETD7, SMARCA2, SPRY4, ST3GAL3, SULT1A4, TAS2R14, TCF7L1, THBS2, TRMT11, TYK2, UGCGL2, ZFYVE16, B3GALNT1, PHOSPHO1, TNFRSF10B</p>

Negative_15271	BAD, CSK, DDC, FGB, GSR, ILK, TEC, ACPT, ADH5, ADH6, ALDH3B1, AOX1, APC2, ARPC4, B3GNT4, BCAR1, BCL2, BHMT, C3AR1, CAMK2D, CASK, CASP7, CCL27, CCR10, CD72, CDKN1A, CHD8, CLDN1, CLDN14, CLTCL1, CYP2A13, CYP7A1, DLL1, DRD5, EGLN1, EHMT1, ENTPD7, EPHA1, FTMT, GALC, GALNS, GLO1, GRIN2C, HDAC2, HSD17B3, IARS, IDH3B, IFNA17, IGF1, IL1B, IL21, IL7R, IQGAP1, IRF9, KCNJ11, KLRC1, KLRC2, KNG1, LLGL2, MAGI2, MAP4K3, MARS, MIOX, MPDZ, NAT1, NFATC1, NFATC3, NME6, NODAL, NQO1, NRG4, NTF3, OR10J5, OR10Z1, OR11H1, OR11H4, OR13H1, OR14I1, OR1D5, OR1L1, OR1S2, OR2T5, OR4L1, OR51A2, OR5R1, OR6C6, OR8K3, OXSM, P4HA3, PEMT, PER2, PGM2, PI4KA, PIGP, PKLR, POLR1C, POLR1E, PRKCG, PRPS1, PTPN11, RASGRF1, RASGRF2, RPS6KB2, SC5DL, SEMA3G, SETDB2, SH3BP2, SMPD3, SPAM1, ST3GAL3, ST8SIA1, STAT5A, SUOX, TAS2R16, TAS2R40, THBD, THBS3, TUBA3C, TYRP1, UBE2K, UGCG, WNT10A, WNT9B, TNFRSF13C, TNFRSF1B
Negative_15272	C1S, GH1, GNS, GPI, HK2, IL7, LIF, MPZ, SHH, SRF, TK1, XDH, A4GALT, ACP1, AGPAT3, ALPPL2, APAF1, ASMT, ATG3, ATP5G2, CAMK4, CBR3, CD14, CDC42, CHAD, CKMT2, CLDN17, CNDP1, CNTF, CSF2RA, CXCL13, CYP3A7, EPB41, EPHA4, FARS2, FBXW11, FCGR3A, FGF13, FGF2, FGF7, FUT3, FZD3, G6PC, GNAI3, GPLD1, GRIN2B, GUCY1A2, IDH3G, IFNA10, IL10RB, IL20RA, IL24, IL6R, INPP4B, ITGA8, ITGA9, ITGAX, LHCGR, LIPG, MADCAM1, MAP3K13, MAP3K3, MICA, MTHFD1L, MYLK, NEFL, NFE2L2, NFX1, NKD2, NLGN3, NRCAM, OGDHL, OR10H2, OR11G2, OR11H6, OR13J1, OR1E2, OR1S2, OR2T1, OR3A1, OR5K1, OR5K2, P2RX1, PIGC, PIGK, PIM2, PNLIP, POLE4, POLR3D, PPP2R5A, PRDX6, PTGS2, QARS, RBL1, RDH16, RPN1, RPS6KA2, RRAS2, RUNX1, SDC4, SHC2, SLC25A4, SMAD2, SOX17, STAT1, STK3, STMN1, THBD, TLN2, TSHB, UNC5D, UROS, VTI1A, WEE1, ATP6V1C2
Negative_15273	F2, GBA, GK2, GLS, ME3, NGF, NLK, NPY, TH, TK1, TNR, ACO1, ACOX2, ACTA1, AKR1B10, ALG5, ALG9, AOC3, ARG2, ATP5G2, ATP6VOB, BBOX1, BLVRB, CACNB1, CACNB4, CACNG7, CACNG8, CADM1, CALML5, CCR3, CD226, CES7, CHRNA7, CLTCL1, CTSB, CYP2D6, DDIT4, ENAH, ENTPD2, EPHA3, EPHB6, F13A1, FABP1, FADS2, FBXW11, FCGR3B, FLT1, FUT8, GADD45A, GALNT9, GMPA, GPD1L, GSTA2, GSTA5, GUCY1A3, GZMB, HSD17B4, ICOSLG, IFNAR2, IKBKG, IL12RB1, IL12RB2, IL22, IL3RA, IMPA1, INPP4B, IRF5, ITGAX, KLK3, LHCGR, LIPT1, MAP3K6, MAPK13, MCM7, MDM4, MGAT5, MKNK2, MPST, NANP, NCK1, NEU3, OR2A2, OR2D2, OR2G3, OR3A2, OR4C13, OR4D1, OR51A7, OR51G1, OR51I2, OR52N1, OR56A3, OR5K2, OR5T2, OR6N2, OR8K1, PARS2, PFAS, PFKFB3, PGLS, PIGQ, PIK3R3, PLA2G1B, PLOD2, PNMT, PNPLA3, PPP1R3A, PRLR, PRPH, PRSS1, PTK2, PYCRL, QPRT, RAP1B, RBPJL, RCHY1, RND1, SESN2, SH2D1A, SHC2, SLC27A4, SLC33A1, SMC1B, SOCS1, SPHK2, SRGAP1, SUCLA2, SULT1E1, TLR2, TSC1, TUBA1A, UGT1A10, VARS, WBSR22, WHSC1L1, XIAP, KIR2DL5A, PPP1R12A, PRICKLE1, SERPINA5, ST6GALNAC3, TNFRSF10B, TNFRSF1A
Negative_15274	ADA, ADK, NGF, OAT, TNC, ACAT1, ACOX1, ADIPOR1, ADRB2, AOC3, ASAH1, ATP2A3, ATP5G2, AVPR1A, AXIN2, BACE1, BBC3, BCL2L1, BDKRB2, BPNT1, CAMK2A, CAV2, CCKAR, CCNA2, CCR8, CD244, CD247, CD74, CD99, CFL1, CHIT1, CLDN17, CLDN20, CLDN9, CSF1R, CSNK1D, CTNNA1, CXCL3, CYP11A1, CYP21A2, CYP2A7, DHDDS, DUSP16, DUSP3, EPHB3, F2RL1, FSHR, FUT9, FZD1, G6PC, GAD2, GAL3ST1, GNA15, GNRH2, GPX7, GRIN2B, GRLF1, HDAC2, HTR7, ICO5, IFNW1, IGSF5, IL11RA, IL15RA, IL1R1, ITGA11, ITGA8, ITPKA, KYNU, LAMC3, LDHD, LEPR, LRDD, LYZL1, MAP3K1, METTL2B, NCK2, NCKAP1, NFATC4, NLGN3, NNMT, OR10J5, OR10S1, OR13D1, OR2G3, OR2M5, OR2T3, OR4K14, OR51A4, OR6N2, OR8H1, OR8S1, PAK3, PDGFRA, PFKFB4, PGK2, PIAS2, RFNG, SELE, SMAD1, SOD1, SPHK1, ST3GAL5, STX6, TAS1R1, TFPI, TGFBR2, TJP3, TMLHE, TUBB3, UGCG, USE1, VDAC3, VNN1, WNT2, YARS2, PAFAH1B2, ST6GALNAC6

Negative_15275	<p>EZR, F2, GK2, LCK, LIF, LPL, LSS, ACP6, ACSM5, AHCY, ALAD, ARPC1A, ATP2A2, ATP5L, B3GALT6, B4GALT3, B4GALT6, CCR4, CCR8, CD70, CHKA, CLDN10, CLDN17, CREB3L4, CTPS2, CYP11A1, CYP11B2, CYP21A2, CYP3A4, CYP4A11, DNMT3L, DUSP1, DUSP10, DUSP2, EIF4E2, EPB41L2, FGF4, FRAP1, FTCD, GNPDA1, GPD1L, GRIN2A, GSTM2, GUCY2F, HAGH, HEMK1, HLA-F, HMOX2, HTRA2, IL12RB1, IL13, IL21, IL3RA, ITGA1, KIR3DL3, LYPLA1, MAPK11, MARS, MCCC1, MGST1, MICA, NCKAP1, NKX2-2, NME2, NME4, NME7, NMNAT1, OR10R2, OR1L1, OR2A5, OR51A4, OR52I1, PAK1, PARVA, PER2, PGK1, PIGS, PIK3R5, PIP5K1C, PLIN, PRKACA, PRKAG2, PTCH2, RFNG, RHOQ, RPIA, RPN1, SDC4, SESN2, SREBF1, STX10, TAS1R1, TAS2R8, TBK1, WASL, WNT11, WNT5A, WWP1, ATP6V1E1, B4GALNT1, CACNA2D4, ST6GALNAC6</p>
Negative_15276	<p>C9, CTH, DHH, GBA, ME2, ACSS1, AGPAT6, AK3L1, AKR1A1, ALAS1, ALDH9A1, AOC2, ARG2, ARHGAP5, ARNTL, ATIC, B3GAT3, B4GALT1, B4GALT4, BAI1, BCL2L1, BCMO1, BLNK, BPNT1, BRAF, CACNB1, CAMK2G, CASP7, CCL11, CCL17, CCL21, CCL23, CCL7, CD8A, CIITA, CLDN5, COL5A3, CSF1R, CTNNA3, DDX51, DGUOK, DHDH, DIAPH2, DMGDH, EDAR, FCGR3A, FGF19, FPGS, FUT7, FZD7, G6PC, GAB1, GALNT1, GNA11, GPAM, HPSE, HSD17B7, HSPA8, IAPP, ICOSLG, IFNAR1, IGF1R, IL28RA, IMPDH2, ITGB8, LGMN, MAGI1, MAP3K3, MAT2B, MDH1, MDH2, MGAT3, MYH14, MYLK3, NAGK, NCF4, NCSTN, NFYC, NKX2-2, NME2, NT5E, ODC1, OGDH, OR1F1, OR1I1, OR2A14, OR2T29, OR4K2, OR51B2, OR51G2, OR51I2, OR52K2, OR5B3, OR7A10, OR9A2, ORC3L, PDE3B, PDE6G, PDGFC, PDHB, PFKFB3, PGAP1, PIAS2, PLCD1, PPAR, PPP2CA, PROS1, PSENEN, PTCH2, PTPN5, PTPRB, PTPRC, RCHY1, RPRM, RPS6, SEMA4C, SESN2, SETD2, SFRP1, SKIV2L2, SLC27A1, SMAD3, STX5, SUFU, SULT1A1, TCF7L2, TGFB2, THBD, TP53I3, UGT1A10, VDAC2, WNT2, CACNA2D4, HLA-DRB3, PNLIPRP1, SERPINB5</p>
Negative_15277	<p>AUH, C4B, CRH, EDA, GK, OGT, PRL, TEC, ACOX3, ACSS2, ACVR1C, ADH5, ADH6, ALDH1A1, ALG1, ARHGEF4, ASNS, CD14, CD8B, CDK5, CLOCK, CMAS, COL5A2, CXCL13, CXXC4, CYP11A1, CYP2U1, DFFA, DIAPH1, DUSP1, EDNRB, FGF6, FPGT, FTH1, GP1BB, GRIN2C, IDH3G, IDI1, IFNA16, INHBE, IRAK4, IRF7, ITPA, LIPT1, LTB4R2, MAP2K1, MAP3K14, MCM2, MIOX, MMP1, MS4A2, NARS2, NAT1, NCF2, NFATC4, NMNAT2, NPAS2, NR5A2, NRAS, NRXN1, OLAH, OR10H1, OR11A1, OR11H6, OR1E2, OR2A2, OR2AT4, OR2M3, OR2T11, OR51T1, OR52A5, OR5T3, OR7A10, PARVA, PDE11A, PDE4B, PDE7B, PHPT1, PIK3R4, PLCD4, PLXNB1, PPM1A, PSEN1, PSEN2, PSME1, PTDSS1, QARS, RAC2, RBL1, SCP2, SLC12A2, SOCS1, SOX17, SSH2, STAT2, TRADD, TRAF2, TRAF6, TUBA3E, UGP2, ULBP1, WNT5B, B3GALNT1, PPP1R12A</p>
Negative_15278	<p>AK5, C1S, CD4, FH, GSR, ID4, IL5, LCT, ME2, MPZ, NNT, PGD, TAT, TNN, ABCC8, ABL1, ACADL, ACAT2, ACVR1B, ACYP1, ADH1A, ADORA2A, ADRB2, AGPAT3, ALDH3A1, ALG8, ALOX15, BHMT, CACNA1A, CACNA1S, CANT1, CCL1, CCL22, CD22, CD79A, CDC25C, CIITA, CISH, CLDN1, COL1A1, CSNK2A2, CXXC4, CYP17A1, CYP2D6, DNMT3A, DUSP14, DUSP5, EDAR, EI24, ENTPD6, EXOC7, F11R, FABP3, FABP4, FGF3, FMO2, FOSL1, FOXA2, FUT6, GBGT1, GCNT4, GRIN2B, GSTO1, GSTZ1, HBEGF, HEXA, HSD17B8, HTR4, IBSP, IDUA, IFNA16, IL12RB1, IL15, IL18RAP, IRS2, KAT2B, L1CAM, LPAR1, LRAT, LRP6, MAN1C1, MAP2K1, MAT1A, MGAT2, MYL5, NADK, NAE1, NCKAP1L, NOS3, NRCAM, OR10H3, OR10T2, OR11H6, OR2D2, OR2H2, OR2M2, OR2T12, OR4K1, OR51D1, OR52N1, OR5D16, OR6C75, OR6K2, ORC1L, PAK2, PARVB, PCYT1B, PER3, PGK2, PHKA1, PIGS, PIK3R3, POLR3G, PPP2R1A, PPP3R2, RAPGEF2, RDH10, RIPK1, SHC3, SMAD4, SMAD5, SOAT1, SOCS2, ST3GAL1, ST8SIA1, STAT2, SUOX, SV2A, THBS3, TKTL2, TP53, TUBA3E, UGT1A10, ATP6V1B2, HLA-DPB1, MAPK8IP2, MAPKAPK3, SERPING1, TNFRSF11B</p>

Negative_15279	ADK, C9, GP6, TFG, AASS, ACSM1, AHCY, ALDH1B1, APOA5, ARPC2, B4GALT1, CACNB4, CACNG5, CCL15, CCL19, CD40, CDC25B, CDK6, CSNK1E, CTPS, CYP11A1, CYP19A1, CYP26B1, DERA, DGAT2L4, EDAR, EFNB3, EPHB1, F2RL3, FCGR3B, FLT3, G6PC, GLI1, GMDS, GNA11, GNA01, GSTM3, GUCY1B3, GZMA, HLA-F, IFNG, IRF7, IRF9, ITGAL, ITGB7, LAMA4, LILRB3, MAN1A2, MAN2A1, MAP3K8, MAP4K4, MAPK10, MBL2, MKNK1, MTMR2, MYD88, NCR2, NCR3, NEGR1, NR1H3, NUDT8, OR10A3, OR10H1, OR10H4, OR10T2, OR2G3, OR2H2, OR2M3, OR2T2, OR2T34, OR4C11, OR4D6, OR4M1, OR4P4, ORC5L, PARVA, PDE6G, PDGFA, PDXK, PGAM4, PIGC, PKLR, PNLIP, POLE4, POLR1C, POLR2A, POLR2G, POMC, PPM1D, PRKAG1, PRKX, PRSS2, PSEN1, PSENE1, PTGES, PYCRL, PYGM, RALGDS, RAP1A, RFXAP, RPS6KA4, RPS6KB2, SETDB1, SFRP1, SHC2, SPRED1, ST3GAL1, TAS1R1, TAS2R40, TBL1X, TPMT, TUBA1B, TYRP1, UBE2L6, UGCG, WARS2, WNT3, XCL2, YKT6, ATP6V0D2, SERPIND1, SERPINE1, TNFRSF17
Negative_15280	GSN, IL2, PRL, RDX, VTN, ACSM4, ACTG1, ACVR1, ACVR1B, ADSS, AGPAT4, AHCY, ALAS1, ALG8, ARSB, ATP5B, BAIAP2, C3AR1, CALML5, CASP8, CCL20, CCNE1, CD27, CD74, CD80, CDH5, CD01, CIITA, CKMT2, COQ3, CTBP2, CXCL1, CXXC4, CYP2J2, DKK4, DTX2, DTX3L, EFNA1, EPHB2, FGFR3, GFAP, GGPS1, GNAI3, GNAZ, GRPR, GUCA1C, GUCY2F, HADHA, HA01, HARS, HLA-DMA, HMGCL, HSD3B1, HTR5A, IDH3G, IDUA, IFNGR1, IL2RB, INPP1, ITGAV, KIR3DL2, LAMC1, LEPR, LIFR, LTBR, MGST2, NODAL, OR13D1, OR2B6, OR4D5, OR51B2, OR52E2, OR52I2, OR6K6, OR8B12, OR9G4, ORC4L, PAFAH2, PDXP, PFN3, POLE, POLE3, POLR2L, POLR3K, PRKAA2, PTGFR, RBPJL, RDH11, RIPK1, SDC1, SEMA3E, SEMA3F, SHC3, SMURF1, SPHK1, STAT2, STX16, TCF7L2, TDO2, TYRP1, UPP1, VDAC3, VTI1B, WNT11, ATP6V1E2, CACNA2D3, TNFRSF12A
Negative_15281	APP, C9, CS, DBH, DDC, FH, HPD, ID1, ILK, KIT, LIF, ME2, MPI, ABI2, ACSM2A, ALDH2, ALDH6A1, ALG8, ALOX15, AMPD2, ASMT, ASRGL1, ATP6V1D, B3GAT2, BCKDHB, BMP5, C3AR1, C7orf16, CCL4, CCND2, CHIT1, CKMT2, CREB3L1, CSH1, CSNK2A2, CTNNA2, DGAT2L4, DHRS9, DKK1, DKK2, DOT1L, DUSP14, EDN1, EFNA1, EPB41L3, EPHB4, FARSB, FGD1, FGF13, GALK1, GALNT11, GALNT8, GAMT, GAPDH, GGT1, GLUD2, GMPPA, GNG3, GNRH2, HSD3B2, IDH1, IFNA21, IGSF5, IL13, IL22, ITGA11, ITGAM, ITGB8, JAM3, KITLG, KLRD1, KNG1, LDHAL6A, LYPLA2, MCCC1, MGST2, MYL7, NCOA4, NKX2-2, NOX1, NSD1, NT5E, OGDHL, OR2B11, OR4F5, OR4K14, OR51D1, OR52B6, OR5H2, OR7C1, OR8I2, OR9A2, P2RX4, PARVG, PDE4A, PGS1, PI4KB, PIAS1, PIGT, PIK3CA, PIP4K2B, PIP5K3, PKMYT1, PLCD3, PLOD1, POLA2, POLR3B, PON3, PPM1A, PPP2R2A, PRKCE, PRKX, PRLR, PTDSS2, PVRL4, RBL2, RDH11, RFXAP, RRM1, RXRA, SARDH, SELE, SEMA4A, SFRP2, SLC2A1, SNAP23, SOCS5, STX16, STX18, STX1A, SULT2B1, TAP1, TCIRG1, TGDS, TJP1, TLN1, TNFRSF4, TPI1, TYROBP, UCKL1, WASF2, XCR1, XYLB, MAPK8IP2, PAFAH1B2, PAFAH1B3, TNFRSF17

Negative_15282	<p>AGL, FST, IL8, MPL, NPY, ABL1, ABP1, ACADL, ADAM17, AGPAT2, AGXT, ALDH7A1, ALG12, ALG13, AMD1, ARG2, ARRB2, ATP2A2, ATP5G3, ATP50, BDKRB2, CAMK2B, CAMK2D, CCNB2, CCR5, CD72, CDK7, CDKN1A, CFTR, CHPT1, CLDN22, CLDN8, CNTF, COL4A1, COL4A2, CSF2RB, CTTN, CXCL9, CYP2C9, CYP3A4, DCTN1, DDX18, DHX58, DLL1, DTYMK, DUSP10, E2F3, E2F4, ECHS1, EFNA3, EPB41L1, EPB41L3, EPHX1, FGF18, FGF6, FM02, FUT2, FUT4, FUT8, G6PD, GAD1, GNAQ, GNAT3, GRIA3, GSTT1, GTSE1, HAGH, IL12RB2, IMPA1, IMPDH2, IRF7, ITGB4, ITGB8, LDHB, LEFTY1, MAN1A1, MAN1B1, MCEE, MCM5, MPST, MTHFD1, NFYB, NKX2-2, NODAL, NT5C, OCRL, OR10H1, OR10T2, OR1L6, OR1N2, OR2A12, OR4L1, OR51A4, OR51B2, OR6B2, OR7D2, PAK2, PAPSS1, PCCA, PDE3B, PDGFD, PDPK1, PFN2, PIGV, PIK3C2A, PLA2G5, POLE, POLR2A, PPT1, PTCH1, PTGIS, PTGS2, RARA, RBX1, RFWD2, SEMA4F, SETD1A, SETDB2, SIGLEC1, SLC27A1, SLC2A1, SORD, SPAM1, SPRY3, SRGAP3, STAT4, SYNJ2, TBXA2R, TGFA, TMLHE, TRAF4, TUBA3C, TUBA3E, UBE2K, UPRT, VAV1, WNT2, WNT8B, ATP6VOA2, ST6GALNAC5, TNFRSF1A</p>
Negative_15283	<p>BCR, C2, CGA, DBT, GSN, JUP, ME1, NLK, OGT, SCD, TH, AACS, AASS, ACAD9, ACOX1, ACSL5, ADSL, AGTR1, ALDH1A2, ALG9, ALPP, AMY2B, ARRB2, ATIC, ATP2A3, B3GNT5, BDH2, C9orf95, CACNG1, CAMK4, CBLB, CCL27, CCR2, CD79A, CDK2, CHEK2, CHRM1, CHRM5, CLDN8, COL6A1, CPT1A, CPT2, CSF3, CYP2U1, DAPK1, DDX55, DPM3, DPYS, EGLN1, EHHADH, ENTPD4, FUT8, GALC, GALM, GALNT10, GALNT14, GALNTL5, GBA3, GCNT4, GLG1, GNAS, GNMT, GP1BA, GSK3B, GSTO2, GUCA1B, HIBADH, HPSE2, HSP90B1, IDI1, IL15, IL28A, IL4R, IRS4, ITGA11, ITGB7, KIR2DL4, KLRC1, LRRC4C, LYPLA1, MAN1A1, MAP4K3, MAT2B, MCM3, NFATC4, OR10A7, OR1B1, OR2C1, OR2K2, OR51L1, OR5M9, OR6B3, OR6C74, OR6M1, OR8H3, P4HA3, PAFAH2, PARVA, PAX4, PDE6G, PDE7B, PDE9A, PER2, PERP, PFKFB1, PHKA2, PIGH, PIGO, PMAIP1, PPARG, PRKACG, PRKG2, PRKX, PRLR, PYGM, QPRT, RDH8, RPS6KA2, SC4MOL, SESN3, SIAH1, SLC12A2, SMAD4, SPHK2, SSX2IP, ST3GAL6, STAT5B, STT3B, TAS2R1, TAS2R8, TJP3, TNFSF18, TRAF6, TUBA1B, VNN1, WNT10A, WNT2, WNT9B, YARS2, SERPINA5</p>
Negative_15284	<p>APP, CBL, CD2, DCK, EZR, FGG, FN1, IL5, KHK, OAT, PRL, PXN, SMO, SRF, TYR, ACADM, ACSS1, AGPAT2, AK3L1, ALDH3A1, ALDH4A1, ALPPL2, ARHGEF6, ATP2A3, B4GALT1, CCR9, CD28, CDC26, CHEK1, CHKA, CHRM3, CLOCK, CNTFR, COL2A1, COL3A1, COL4A6, COX15, CRB3, CTSG, CXCR6, CYP26C1, CYP2C19, DBF4, DDX41, DHCR7, DHDDS, DLAT, DTX1, ENPP6, FARP2, FGF13, FM01, GADD45B, GALC, GMPR2, GSTA2, GSTO2, GSTT1, GUCY1A2, GZMA, HIBCH, HLA-G, HMGCL, HTR7, IFNA14, IFNK, IL15, IL29, IL9R, INHBA, ITGA3, ITGA9, ITPKB, LAMB4, LCMT1, MAPK13, MCM3, MECR, MGAT1, NADK, NCOA4, NMNAT3, NUDT2, OR10X1, OR2A42, OR2B11, OR4M2, OR5I1, OR5P2, OR6C70, OR6S1, OR7G3, PARVG, PCYT1B, PDCD1, PDGFRA, PER2, PERP, PHPT1, PIGO, PIGV, PIK3R3, PIK3R5, PLCG2, POLR1A, PPM1B, PRPS1, PSEN2, PSME2, PTTG1, RAPGEF1, RFWD2, ROBO2, RPN2, RPSA, RRAS2, SGPP1, SOCS4, SOCS7, SOD1, ST3GAL4, STX3, SULT1A2, SV2A, TACR3, TAS2R13, TAS2R5, TGDS, THBS1, TNFSF10, TNFSF8, TYK2, UCK2, HLA-DPB1, PAFAH1B1, PAFAH1B2, PRICKLE1, TNFRSF13C</p>

Negative_15285	F8, FGB, FH, HAL, LPL, MVD, NGF, SI, AADAT, ACADL, ADCY6, ADRA1B, AKR1C1, ALG10, AOC3, ARPC5L, ASAH1, ATP13A2, ATP5E, B4GALT7, BBC3, BCL10, BTRC, C3AR1, CCL13, CD46, CHPF, CIITA, CLDN17, CRY1, CTNNA3, CTPS2, CYP26A1, DEGS1, DUSP5, DVL2, ELK1, ETS1, FARP2, FGF19, FOXA2, FZD8, FZD9, GALNT12, GDE1, GLB1, GLUD1, GNAL, GRIA1, GRIA3, HMBS, KCNB1, KLRD1, LAMB1, LIPG, LRAT, MAN1B1, MAOA, MAPK1, NCK2, NEU2, OR10K2, OR11H1, OR14A16, OR1J2, OR2A12, OR2B11, OR4D9, OR51B4, OR51L1, OR5I1, OR7D4, OXCT1, PDGFB, PER1, PHKG1, PIAS3, PLCB2, POLR2C, POLR3G, POMC, PPA2A, PPP1CC, PRKAR1A, PSEN1, PTPRJ, PYCR1, RALA, RASA2, RELA, SLC2A4, SOCS5, SPI1, ST3GAL4, STK3, STK4, STX10, TACR3, TAS2R4, TGFA, THY1, TNFSF11, TPH2, TRAF3, TRDMT1, TSLP, UGCGL2, YWHAZ, ZIC2, ATP6V1C1, MAPK8IP1, MAPKAPK3, SERPINC1
Negative_15286	ADA, EBP, F9, NPL, PVR, SHH, ACSS3, ACVR1B, ADIPOR1, AK3L1, AKR1B1, AKR1B10, APRT, ASIP, B3GNT4, B4GALT3, BCKDHA, BHMT, CCL20, CD38, CLTA, COL1A1, CREB1, CXCL5, DDIT4, DEGS2, DUSP3, EHMT1, ENO2, ENPP1, ESAM, FARSB, FPGS, FUT2, G6PC2, GALK1, GLI1, GNA13, GNG13, GRIA2, GSTO2, GZMA, HIP1, HTRA2, ICOSLG, IL12A, IL7R, IMPA2, INHBE, INPPL1, IPPK, KLRK4, KLRK1, LAP3, LIPF, MAP2K7, MAP3K4, MAP4K3, MCEE, MGST3, MYH6, MYLK3, NCOA4, NRP1, OR10X1, OR13F1, OR2D2, OR2T1, OR4N2, OR4X2, OR52N5, OR56A1, OR5F1, OR6C4, OR6Y1, OR8D2, PDE3A, PFN3, PKLR, PLCB1, PLK1, PMM2, POLR2C, POLR2K, PPP2CA, PPP2R2D, PPP3CB, PTGS2, PTPN7, RAB5A, RDH16, RRAS, RUNX1T1, SH2D1A, SSH1, ST3GAL5, STX1A, TACR2, TAS2R13, TBK1, TPH2, TRHR, UGCGL1, ATP6VOA4, PAFAH1B2, PDCD1LG2, TNFRSF13B
Negative_15287	CTH, GSN, KHK, LTB, PGP, PML, RDX, SMS, ACADVL, ADRA1A, AGPAT4, AKT2, ALG9, ALPP, AMPD1, ANAPC5, AOX1, ARPC1A, ATP5G3, ATP6V1A, AXIN1, B3GALT1, B3GAT1, BCMO1, BDH1, BTRC, CACNG2, CADM3, CASK, CCR8, CD19, CFTR, CLDN16, CLDN2, CLDN3, CMBL, CNTNAP2, CREB3L1, CTSB, CYP19A1, CYP2C8, CYP2S1, DAG1, DDX19A, DDX56, DEGS1, DKK1, DLL3, E2F5, ENO3, F11R, FGF8, FGF2, FLAD1, GCH1, GNAS, GRIN1, GSTA4, GUCY2F, HEMK1, HEXB, HIBCH, HLA-DRA, HNF4G, HSD11B1, HSD17B4, HTRA2, IL10RB, IL12RB2, IL1RAP, IL28A, ITGA2, ITGA3, ITGA4, ITGA6, ITGB4, KAT2B, KIR2DL1, LAMB2, LTBP1, MAP2K7, MAP3K7, MYD88, MYH11, NEUROD1, NFASC, NOX1, OR12D3, OR13H1, OR2B11, OR2T3, OR52N5, OR5P2, OR6C6, OR6M1, OR7D2, OR9Q2, PANK1, PCCA, PCK1, PDE1C, PFN2, PGM1, PLAUR, PLEKHA8, PLTP, POLR2D, POLR2H, POLR3K, PPCS, PPM1A, PPT1, PRKCI, PRODH2, PSME2, PTCH1, RAPGEF4, RASSF5, RPN1, SAT1, SDHC, SLC27A4, SOCS2, SPRY2, SRD5A2, ST3GAL6, TJP3, TLR5, TSNARE1, VAMP4, VAV1, VTI1A, WNT8A, WNT9B, XYLT1, YES1, CACNA2D2, CACNA2D3, HLA-DPB1, MAPKAPK3, ST6GALNAC3, ST6GALNAC6
Negative_15288	AK7, CDA, CP, OGT, PAH, PXN, TNC, WAS, ABAT, ACOX1, ACOX3, ACY3, ALDOB, ALG6, C3AR1, CACNB2, CBR1, CCL1, CHUK, CLDN17, CLDN4, CNGA3, CNGA4, COL4A2, COQ3, CXCL12, CYP2A13, DDX50, DPYD, DTX3L, DUSP5, EFNA2, ENPP7, EXTL1, FBP1, FGD1, FGF17, FMO4, GAL3ST1, GBE1, GLI1, GUCY2F, GZMA, HMOX1, HSD3B1, IDUA, IL17A, INHBB, IPMK, KAT2A, LDHAL6B, LHCGR, LTBR, MAP3K2, MCAT, MCM6, MYH9, NCOR1, NFATC4, NLGN1, NLGN2, NPAS2, NRAS, NRXN2, NT5C1A, NTF4, OR2D2, OR2H1, OR4K5, OR52H1, OR9I1, ORC4L, PDHB, PER2, PFKL, PGAM1, PGM3, PI4KB, PIM1, PLA2G2A, PON2, PTAFR, PTGS2, PYCRL, PYGB, RELA, RHEB, SMARCA5, SORD, SRD5A1, SSH2, TNFSF10, TRAF4, TSTA3, TUBA1C, TUBA8, WASF1, WNT8A, ATP6V1G2, C1GALT1C1, PLA2G12A, PLA2G12B, PRICKLE2

Negative_15289	C5, F9, FES, GDA, GGH, GH1, MET, SCD, SRC, VCL, AADAT, ABAT, ABL1, ABP1, ACADS, ACSS1, ACYP1, AGPAT4, AHCY, AK3L1, AMPD2, AQP7, ATP5F1, B3GNT3, BMP2, CACNA1H, CACNG7, CALML5, CALML6, CCKAR, CD47, CKS1B, CLDN15, CNGB1, CRKL, CSNK1D, CTSB, DIAPH1, DLST, DUSP5, EP300, EPHA4, F13A1, FGD3, FGF1, FGF11, FLOT2, GSK3B, GUCY2C, HLCS, HMBS, HNMT, HTRA2, IL15, IL7R, IMPA1, IMPDH1, INHBB, INMT, INPP4B, INPP5B, ITGA8, ITGB8, KAT2B, KIR2DL1, LEPR, MAD2L2, MCM2, MDH1, MECR, MGLL, MTHFS, MYH11, MYH13, MYLK, NCK1, NEU3, NPR1, NRG4, NUDT12, OR11H6, OR1D5, OR2L13, OR2L8, OR2M5, OR2T12, OR51B6, OR51F2, OR51I2, OR51T1, OR6K2, OR7D4, P2RX4, P2RX5, PDXK, PFAS, PHKG1, PIAS1, PIK3R5, PLA2G2D, PRIM2, PRKAR2B, PRSS3, SDHB, SESN2, STMN1, SULT2B1, TAS2R16, TSLP, UBA1, UCP1, ULBP3, USE1, VAMP2, VCAM1, WASL, WNT5B, WNT8B, ZFYVE9
Negative_15290	ABO, AK1, HK3, MPL, NGF, TYR, ACY3, ACYP2, ADRB1, AKT2, APOA2, APOE, ARSA, ATG7, ATP6V1F, B3GAT1, CACNA1E, CASP3, CCL3, CD47, CDC16, CDC25B, CDK6, CLCA4, CLDN17, CLTCL1, CNGA4, CTBS, DAAM1, DGKA, DGKB, DGKQ, DPM1, E2F2, E2F3, E2F5, EXTL1, FGF11, FGFR3, GAL3ST1, GJD2, GLI3, GNB1, GNG13, GNPDA1, GPAA1, HAGHL, IL18, IL2RG, ITGAD, ITPKA, JUND, KNG1, LARS, LCP2, LEF1, LGLL1, MAGI2, MDH2, MGAT5B, NAT6, NCOR1, NFATC2, NUDT5, OGDH, OR10V1, OR11A1, OR1L8, OR2M2, OR4C6, OR4F17, OR4N2, OR4N4, OR4X1, OR5AU1, OR6C75, OR7A17, OR8G1, OR9Q1, PDE6D, PGLS, PIGA, PLD1, PLOD2, POLR2L, PPARD, PPM1A, PPP2R5D, PTCH2, RARS2, RELA, RXRA, SARS, SCIN, SDC1, SELE, SGPP2, SH3BP2, SMPD4, SULT2A1, TAS2R13, TAS2R9, TCIRG1, TNXB, TOMM40, TUBAL3, TUBB3, WNT3, CACNA2D4, PAFAH1B1, SERPINF2, ST6GALNAC3
Negative_15291	AK3, ATM, BTD, C7, DCN, GP9, ID2, IL2, LHB, OGT, PTS, SCD, ACTB, ADIPOR2, AFMID, AGPAT2, AKR1C4, AKR1D1, ALDH2, AMDHD1, APOE, B3GNT3, B4GALT6, CACNA1G, CASP8, CBLC, CCL28, CCR3, CD40, CD58, CDC14B, CDC2, CHKA, CLCA4, CLDN14, CLDN5, CLDN8, CSNK1E, CYP1A2, CYP2C8, DIAPH3, DTX1, DUSP8, EIF4E, EPHA3, FADS2, FGF2, FGF20, FGF21, FMO1, GAL3ST1, GRIA1, GRIN2D, HGSNAT, HHIP, HNF4G, IDH3A, IDI1, IGSF5, IL10RA, IL18R1, IL1RAP, IL28RA, ITGB4, KYNU, LALBA, MAPK8, MCM6, MPDZ, MRAS, MTAP, MTFMT, MTHFD2, MYL5, NAGS, NAT5, NCKAP1, NKD2, NODAL, NRG2, NT5C1B, OR10AD1, OR13H1, OR2A12, OR2C3, OR3A2, OR4D6, OR5V1, OR6Y1, OR7D4, OXSM, PDE4D, PGM1, PHKG2, PIP4K2A, PLAU, PLTP, POLR3B, POMC, PPAP2C, PPP2R5D, PRKACA, PRKCE, PRNP, PRSS3, RALGDS, RBL1, ROCK2, SEMA3D, SEMA4G, SETD2, SGMS1, SMPD3, STT3B, STX3, TALDO1, TAS1R1, TAS2R1, TAS2R16, TIAM1, TUBB2B, UBE2L6, WBSR22, ZFYVE9, PHOSPHO1, PRICKLE2, TNFRSF1A
Negative_15292	ADO, AGL, ATM, C1S, F2R, GBA, KIT, LTB, MPZ, MTR, TNN, ACOX1, ACTA1, ALDH3A1, ALDH3B2, ALDH5A1, ALPP, AOC3, APLP1, ARPC3, ATP6AP1, ATP6V1A, ATP6V1D, B4GALT1, BBC3, BCMO1, BLNK, CAMK2B, CCL13, CCL21, CD44, CD48, CDC6, CDS1, CLDN19, CTPS, CYP26A1, CYP2B6, CYSLTR2, DIAPH1, DUSP6, EREG, FMO2, FUT4, GLUD1, GPX7, GSTM3, GYS1, HADHB, HPRT1, IDH1, IFNA10, IFT57, ITGA10, ITGA3, ITGA8, ITGB2, MAD2L2, MAGI2, MAP2K6, MAP2K7, METTL2B, MINPP1, MPDZ, NEU3, NRG3, NT5C2, OR10H3, OR10H4, OR11G2, OR13C4, OR1F1, OR2T2, OR2T5, OR4C13, OR4E2, OR51E1, OR51F1, OR52M1, OR6A2, PARD6G, PARVB, PDE4C, PDGFD, PFAS, PGAP1, PIK3R2, PLA2G10, PLA2G2E, PLCD1, PLXNA1, PMAIP1, PPP2CB, PRKCB, PRKCI, PRODH2, PTCRA, PTGER1, PTGES, RAP1B, RAPGEF4, RRAS2, SC4MOL, SDHB, SEMA4D, SFRP2, SFRP5, SMAD6, SNAP25, SOCS1, SPCS1, SUV39H1, SUV39H2, TAS2R10, TAS2R13, TICAM2, TLN1, TLR2, TRADD, TSHB, TUBA1C, TUBB, UBA7, USE1, WNT9A, ATP6VOA1, HSD17B12



Negative_15293	<p>HGF, TK2, ACADSB, ACOX2, ACSM3, ALG5, AMDHD2, ARPC4, ARRB1, B3GALT6, BACE1, BCAT1, BMPR2, CASP9, CCKBR, CCNB2, CCNE1, CD44, CD82, CDC14A, CDC25A, CFL2, CLDN3, COMT, COX15, CSDA, CSNK1G1, CTSG, CXCL12, DEGS2, DLL1, ERBB2, FGF23, FLT3LG, FOXO1, FTCD, GAB1, GALNT14, GALNT5, GCH1, GCNT1, GLDC, GRLF1, GSTO1, HSD17B1, HYAL2, IARS2, IFNA16, IRAK2, ITGB4, L1CAM, LALBA, MAP3K1, MAP3K8, MAPK11, MAPK3, MARS, MCM7, MDM4, MGST2, MMP1, MTHFD1, MTHFD2, MTMR2, NOS3, NOTCH2, NRXN2, NT5E, OR10G2, OR10J3, OR1J4, OR1L3, OR4K2, OR52M1, OR5AU1, OR6B3, OR9Q1, OXTR, P2RX6, PCK2, PCNA, PCYT1B, PDE6G, PFKFB2, PFKFB3, PLA2G10, PLCB2, PLK1, PLXNA2, POLR3H, PPM1B, PPP2CA, PRKCE, PRLR, PSME3, PTAFR, PTPRJ, SAT1, SMAD9, STK3, TAS2R1, TAS2R49, TBXA2R, TGFB2, TIRAP, TLR3, TNFSF14, TRAF5, TUBA4A, TUBB, TUBB2A, UGT2A1, UGT2B17, WARS, WHSC1L1, WNT16, PRICKLE2</p>
Negative_15294	<p>AK5, C8B, CGN, DDC, F5, IVD, AANAT, ACAD9, ACP1, ACSL1, ACTC1, ACVR1B, ADH6, ADORA2B, AFMID, AGPAT1, AGXT, ALAS2, ALOX12, APOA1, ARAF, ASPA, ATP12A, B4GALT4, BLVRB, CACNA1C, CAMK2A, CCL25, CD274, CD80, CDKN2D, CHIA, CHST12, CSNK1E, CYP26B1, CYP26C1, DAXX, DCTN1, DDX47, DERL1, DHDH, DUSP1, EARS2, EFNA3, ENPP3, EPHA4, EPHB6, F13A1, FGF13, G6PC2, GALNT10, GCAT, GCNT1, GFAP, GRIA3, GSTO1, GSTT1, HLA-DMA, HMGCR, HMGCS1, IKBKB, IL28RA, IL6R, INPP1, ISYNA1, ITGA11, ITGB7, JAK2, KYNU, LAMC1, LDHD, LLGL1, LYPLA1, LYZL1, MBL2, MGAT2, MIOX, MPDZ, MPP5, MS4A2, MTFMT, NANP, NCSTN, NEUROD1, NFKBIA, NKD1, NRG1, NTRK2, OR10G9, OR10P1, OR1L3, OR2M3, OR2T1, OR4N2, OR52K2, OR56A3, OR6C6, OR7G2, OR8H1, OR8K1, PARVB, PAX4, PHKA2, PIAS1, PIP4K2C, PPP2R2A, PRIM2, PRKAA1, PRKAB1, PRKAR1A, PTCRA, PTGER3, PYCRL, RALA, RHEB, RRM1, SAT2, SDHD, SEPHS1, SGPP2, SH2D1A, SH3BP2, SLC25A4, SLC27A1, SOCS1, SOCS7, SOS1, SPRED1, SRD5A1, ST3GAL1, ST8SIA5, STAT6, STX2, TACR3, TBK1, THY1, TOLLIP, TYMS, UGT1A10, VAMP2, VASP, ALDH18A1, ATP6VD1, CACNA2D1, PNLIPRP2, SERPINE1, SERPING1</p>
Negative_15295	<p>CEL, F12, GK2, GPT, GSR, RB1, TKT, TNF, TXK, AACS, ACADL, ACSM2A, ADIPOQ, ALG1, APBB1, ARHGEF1, ARHGEF7, ATF4, ATN1, AVPR1A, BCAT1, BLVRB, BPNT1, CACNA1E, CACNB1, CCL24, CD27, CDH5, CDK6, CDKN2B, CFL2, CKS1B, COL6A1, CRHR1, CSF2RA, CXCL13, DGAT1, DHRS4L2, DOLPP1, DPM2, ECHS1, EFNA5, ENTPD2, ESPL1, F2RL2, FABP3, FZR1, GARS, GART, GATM, GSTT1, HAP1, HLA-DMA, HNF1B, HSD11B1, IDH3B, IDI1, IDI2, IFNA16, IGSF5, IL20, IL9R, KNG1, LEFTY2, LIPC, MAP2K2, MAP2K6, MCAT, MYH15, NFKBIB, NLGN1, NTF4, NUMB, OR13C2, OR14I1, OR1S1, OR1S2, OR2C3, OR2F1, OR2M2, OR2T3, OR51D1, OR51V1, OR7G3, OR8H1, OR8K1, P2RX1, P2RX6, PDK1, PEMT, PFKL, PFN1, PFN2, PHKA2, PIGH, PIGT, PLCB2, PRKAA1, PTGER1, RAD51, RALBP1, RAPGEF2, RDH10, RFNG, RPRM, SELE, SKP2, SMC1B, SPHK2, SQLE, STT3B, TLN1, TNFRSF9, TOMM40L, TRAF1, TRHR, UBE2L6, UGT1A10, UGT2B4, ULBP2, XCR1, YWHAG, EIF4EBP1, SERPINC1, ST6GALNAC1</p>

Negative_15296	<p>AMH, CP, FGG, GSN, MET, AADAC, AARS2, AASS, ACO1, ALCAM, ALDH7A1, ALOX15, AOC3, B3GALT1, B3GALT5, B3GALT6, B3GNT3, BDKRB2, BDNF, BET1, BLNK, BMPR1B, CACNA1S, CCL11, CCL26, CCNA2, CD274, CDK2, CHRNA7, CHSY1, CLDN19, COL6A1, CRHR1, CSAD, CSH1, CTF1, CXCR6, CYP2C9, DDX56, DERL1, DGKQ, DUSP8, EFNA2, ENPP6, EXOC7, FMO4, GAD2, GGT5, GMPPB, GNPDA2, GPD1L, GRHPR, GRIA3, GRM5, GSTA5, ICAM3, IFNAR2, IQGAP1, ITGA3, ITGAL, KITLG, LCAT, MAML1, MAN1B1, MARS2, MCEE, MYH3, NAT1, NME6, NOTCH2, NR1D1, NT5C1A, OCRL, OR10G8, OR1J4, OR1M1, OR2L13, OR2T10, OR2T11, OR4K2, OR4X2, OR52E8, OR5K1, OR7A5, PARD6B, PFKM, PFN3, PGM2, PIK3CD, P OLR2D, PPAR, PPBP, PPCDC, PPM1D, PPOX, PPP2R5B, PRKCA, PTGER1, PTGS1, RARS, RASGRP1, RBL2, SHC2, SOAT2, SPTLC1, SRD5A2, ST3GAL5, STAT5B, SYNJ1, TPM3, TSC2, UCK1, WEE1, WNT10A, HLA-DRB5, PAFAH1B1, SERPINA5, TNFRSF13B, TNFRSF17</p>
Negative_15297	<p>BTC, C6, CFI, FGG, HGD, IDS, INS, PLG, RDX, TFG, AANAT, ACSS2, ACSS3, ACYP2, ADORA2A, AGPAT3, ANAPC2, APOC3, ARHGEF7, ARNT2, ARPC5L, ATP6V0B, BIRC3, C1GALT1, CALML5, CCR1, CHRM2, CHRNA7, CHST11, CLTB, CNTNAP2, COL4A4, CPT2, CSF1R, CSF3R, CYCS, DEGS1, DFFA, DKK2, DPM2, DPYSL2, DUSP16, DUSP8, EIF4B, EPB41L1, EXOC7, FASLG, FLAD1, FMO3, FZD1, FZD8, GAB1, GALNT11, GAS1, GCNT3, GMPR2, GNA01, GRLF1, GUCY1A3, HMOX1, HTRA2, IFNA14, IFNA2, IKBKG, IL12A, IL12RB1, IL22RA1, IL24, IRAK3, IRF7, ITGB5, ITPK1, JAK2, LAMC2, LIPA, LIPE, MAN2A1, MAP2K2, MCM5, MGAT2, MGLL, MINPP1, MITF, NAT5, NEFM, NEUROG3, NPAS2, OR11H1, OR13C8, OR13F1, OR2G2, OR2K2, OR2V2, OR6A2, OR6C3, OR6M1, PANK1, PCYT1A, PDE3B, PDE8A, PHKA1, PHKA2, PIK3C2B, PKM2, PLK1, PON2, PPARA, PPP2R5E, PRKACG, PTDSS1, PVRL2, PVRL4, RASGRP2, RFNG, RHOD, RUNX1T1, SFRP4, SH3BP2, SLC2A1, SMARCA2, SOAT1, STMN1, STX10, TACR2, TAS2R13, TAS2R50, TNFRSF9, TPM3, TRIP10, TUBA1B, UAP1, UBE2L6, UGT2A1, VTI1A, WNT2, WNT4, WNT5B, WNT9B, WWP1, ZNRD1, ATP6VOD1, ATP6V1G2, HLA-DRB5, MAPKAPK3, TNFRSF12A</p>
Negative_15298	<p>CBL, DAO, EPO, FYN, LPL, MUT, SPN, ACADSB, ACO1, ACSM1, AGMAT, AGPAT6, ALDH1A1, ALDOA, ALG11, ANAPC7, ATP6V1A, BET1, C5AR1, CALML5, CASP10, CCL20, CD82, CDC25C, CLDN2, CLDN6, COX10, CXCL13, CXXC4, DDOST, DDX55, DPYSL2, E2F4, ECSIT, ENPP6, EPHA8, ESPL1, FABP3, FGF5, FUT2, GABARAP, GAMT, GCLM, GNA15, GPT2, GRB2, GSTA1, HLA-DMA, IFNA7, IKBKG, IL11, IL29, IRAK4, KCNB1, KIR2DL4, LIPG, MEF2C, MGAT5, NMNAT2, NPAS2, OR10A7, OR10K1, OR1N1, OR1N2, OR2A42, OR2T6, OR4D2, OR4S1, OR4X1, OR51G1, OR51V1, OR6A2, OR6K6, OR8B4, P2RX1, PANK2, PARVG, PECAM1, PHKG1, PIGS, PIP5K1A, PIPOX, PKLR, PLA2G1B, POLD4, POLR2J, PRKAB2, RASGRP2, RFXANK, RFXAP, RPS6, RXRA, SELE, SGPP1, SLIT1, SMAD6, SMURF1, SRD5A1, ST3GAL1, STEAP3, STT3B, SULT2A1, TP53, TUBB2B, TUBB3, TUBB4Q, UBE2L6, XCL1, XIAP, YARS, YWHAQ, TNFRSF11B</p>
Negative_15299	<p>C8B, CRH, DDO, LT, MTR, NPL, PC, PTS, SFN, VCL, AADAC, ACADVL, ACP2, AMY2B, AREG, ARG1, ATP5D, CACNA1A, CACNB4, CBR3, CCL1, CCNB3, CCR2, CD22, CD247, CD274, CDC27, CLDN1, CLDN16, CLDN7, CNTN1, COL4A2, COQ5, CP T1A, CSF3R, CXCL12, DDX55, DGKA, DHCR24, DTX4, DUSP10, DUSP6, EIF4B, EPHA5, EPHB4, FADD, FBP1, FECH, FGF21, FGF8, FGF9, FOXO1, FPGT, FZD2, FZD7, FZR1, GAS1, GIT1, GNMT, GRIN2B, GSTK1, HLA-C, ICAM2, IL12RB1, IL1RAP, IL25, ITGAL, JAG1, JAM2, LRP6, MAOA, MCM7, MINPP1, MLYCD, MMP7, NCSTN, NKX3-1, NME4, NRG4, OR51B2, OR52E6, OR52E8, OR5AP2, PARD6G, PARS2, PDE5A, PDGFA, PDX1, PIGH, PIGL, PIK3C3, PON1, PPP1R3D, PPP2R5D, PRKCA, RAPGEF3, RBKS, RXRA, SCD5, SEMA3G, SEMA4C, SHC3, SOCS2, SORD, SRGAP1, STX2, TBL1XR1, TP53I3, TSHB, UGCG1, UNC5D, WARS, WIF1, YARS2, CACNA2D2, HLA-DQB1, MAPKAPK2, PNLIPRP1</p>

Negative_15300	<p>C5, CFH, GK2, GP5, INS, PLG, TAT, TEC, AADAC, AARS, ABI2, ACLY, ACOX2, A CSL5, ACSM5, AKR1D1, ALDOC, ALOX12B, ANAPC11, ATP13A2, ATP6V1A, B4G ALT2, B4GALT4, BCMO1, BET1L, BHMT, BMPR2, C1QB, CACNA1B, CCNA2, CD40 , CD86, CDH1, CDH2, CHAT, CHSY3, CLDN14, CLOCK, COL5A3, CPT1B, CREB3L 3, CSNK2B, CTBS, CYP11B2, CYP2A7, DKK2, DNMT3A, DUSP9, EGLN3, EIF4B, ENO3, ENTPD5, EPHB1, FADD, FGFR2, FUT8, GFAP, GLUD2, GNPAT1, GNRH1, GRHPR, GRPR, GSTO1, HARS, HGSNAT, HLA- DMA, HNF4G, IBSP, ICAM3, IL12RB1, IL17RA, IL1R1, IL21, INHBE, IQGAP2 , LAMB1, LAMB4, MALT1, MAP3K13, MAPK3, MKNK1, MYL7, NCKAP1L, NFATC2, NODAL, NRG4, NRXN1, NT5C2, OR10H2, OR10V1, OR14I1, OR1I1, OR1J4, OR2 T29, OR4L1, OR51G2, OR52W1, OR5H2, OR6S1, OR9A2, ORC5L, PDE3A, PDE4B , PDE6G, PER1, PHKG2, PIGH, PIP5K3, PLCB2, PLCE1, PLEKHA8, PMM1, PPP2 R5C, PRKACG, PRODH, PTPN5, PTPRB, RBKS, RPS6KA5, RRAS2, SDHC, SEMA3E , SEMA3G, SKP1, SLC27A1, SMAD5, SMARCA2, SOCS3, SOCS7, SOD1, SRD5A2, STAT6, TAS2R3, TLR5, TPH2, TPM3, TPMT, TUBB1, UMPS, WASF3, WNT16, WNT 5B, WNT7B, WNT8A, ZFYVE9, ZNRD1, ATP6VOD1, TNFRSF13C</p>
Negative_15301	<p>DCC, HPD, MOS, MPL, PXN, SCD, ACOT11, ACSM2A, ACTA2, ADRA1D, AKR1D1, A LDH5A1, ARPC2, ARPC5, ATF4, BNIP1, CACNB1, CASP10, CCL20, CD59, CD79 B, CDK2, CDS1, CHPT1, COQ7, CUL1, DUSP8, EARS2, ENTPD7, EPHB6, ERO1L, F11R, FLT3LG, FZD10, GAD2, GALNTL1, GNAS, GPLD1, GRAP2, GYS2, H6PD, I BSP, IDH3B, IDI1, IDI2, IFNAR1, IGF1, IRS4, KIR2DS5, KLK3, KLRC3, LAL BA, LTA4H, MAP2K4, MCM6, MFNG, MMP7, MYD88, NCKAP1L, NEFH, NEFL, NOX1 , NRAS, OR10G8, OR13D1, OR2G3, OR2T3, OR4A5, OR4K1, OR52H1, OXCT1, PA NK4, PDE6D, PDE8A, PIAS4, PORCN, PPARA, PRKCA, PRNP, RAF1, RASGRF2, R BKS, RBPJL, RPN1, SLC27A5, SPCS1, STAT3, TAS2R10, TAS2R13, TRAF5, WN T9A, XCR1, ATP6V0A1, ATP6V1C2, ATP6V1G1, HLA-DQB1, HLA- DRB5, ST6GALNAC1, TNFRSF10D, TNFRSF14</p>
Negative_15302	<p>CR2, LCT, PGP, AADAT, ABL1, ACTB, ADCY4, ADCY7, ADH1B, ANAPC4, APH1A, ARSB, ASPA, ATG7, CACNG4, CASP3, CCL11, CCL7, CCL8, CD28, CDC23, CDH1 , CHRM2, CKS1B, COL4A4, CPT1A, CTF1, CYP21A2, DBF4, DNMT3B, DOT1L, DT YMK, EHMT1, EPHA7, FADS2, FGD1, FOXA2, FUT7, FUT8, G6PD, GANAB, GCAT, GDE1, GSTO1, IGF1, IL7R, INHBE, ITGAD, ITGB6, JAG1, KCNQ1, KLRC2, LAM B2, LAMB3, MAT1A, MAT2B, MCM2, MINPP1, MLYCD, MTHFD1L, NADK, NAMPT, N AT2, NCF4, NFATC2, NFE2L2, NOTCH1, NPR1, NRG3, NT5C1A, OR12D3, OR51B 2, OR51S1, OR52K1, OR52N2, OR5V1, OR6Y1, OR7C1, OR9A2, PDE3B, PDE9A, PIGB, PIM1, PLIN, PMM2, POLE4, POLR2A, POLR2C, PPAP2C, PRKAG1, PRNP, PSENEN, PSME1, PYGB, SCLY, SCP2, SDC1, SIGLEC1, SLC25A6, SMAD3, SMPD 4, SNW1, SPTAN1, STAM, TFDP1, TGFB2, TUBA3E, UROS, VKORC1, VTI1A, WAS F2, ATP6VOD1, HLA-DQB1, MAPK8IP3, TNFRSF11B</p>
Negative_15303	<p>ADC, ATM, CAT, F2, GBA, GP6, INS, JUN, TFG, TPR, ABL1, ACAA2, ALAS1, ALO X15B, ANAPC4, ANAPC5, APRT, ARD1A, ARNTL, ARSD, ATP13A2, ATP4A, ATP5 I, AXIN1, BET1L, BMP7, CCNG1, CDKN1C, CLDN20, CREB5, CSF1, CTF1, CTNN A2, DAPK3, DFFB, DPM1, DRD5, E2F4, EPHX2, EXTL3, FGF3, FIGF, GARS, GGC X, GTSE1, GUSB, HDAC1, HSD17B7, IAPP, IFNA5, IFNA6, IL10RA, ITCH, KYN U, LDHA, LDHD, MAML2, MAN2A1, MAP3K2, METTL6, MLLT4, NFAT5, NFATC3, N FYB, NQO1, OR10A5, OR10G8, OR13G1, OR13H1, OR2T34, OR4E2, OR4K13, OR 4K5, OR52J3, OR5P2, OR6C1, OR6C2, PDE1B, PDE9A, PIGV, PIP4K2C, PLXNA 1, PPP1R3B, PPP2CB, PRDX6, PRKX, PSEN1, PTGES2, PTPN6, RARA, RASGRP4 , RRM1, SARDH, SEMA4D, SMAD1, SOCS5, STT3B, STX1B, SUV39H2, TJP2, TM7 SF2, TMLHE, TOMM40, TRADD, TRIP10, TSC2, TUBB4Q, UBE2L3, UGCG, WASL, ZNRD1, ATP6V1G3, HSP90AB1</p>

Negative_15304	<p>BTD, CGN, GP6, HPD, LHB, NOG, AACS, ACTA2, ACTC1, ADCY1, ADH4, ADRA1B, ADRA1D, AGRN, ALDH1A2, ALDH4A1, ALDH9A1, ANAPC5, ASPA, ATP5C1, BBC3, BCMO1, BUB1B, CCR5, CDC27, CLDN8, CLOCK, CMPK1, CNTFR, COL6A2, CREB3, CTBS, DDX54, DGUOK, DHCR24, DLL1, DUSP1, EPHX1, EXT2, EXTL1, EXTL2, GALC, GALNT13, GALNTL5, GCNT1, GNAS, GPAM, GPD2, GSK3B, HBEGF, HCLS1, HSD11B2, HSD3B1, HTR5A, IGSF5, INHBE, IRF9, KIR3DL2, LDHB, LPAR1, LYPLA1, MAGI2, MAT1A, MYH10, NKD1, NT5C3, NTRK2, OR10H2, OR10Q1, OR13C8, OR1S2, OR2F1, OR2L8, OR2V2, OR4C12, OR4P4, OR51E2, OR51L1, OR52N4, OR5B21, OR6B3, OR6C1, OR6C70, OR6T1, P2RX4, PDE8A, PFKL, PFKM, PFKP, PFN2, PIGC, PMM1, POLR3B, PPARA, PPP1R3D, PRKACB, PRKCI, PRSS1, PSPH, RAB5A, RELA, RFXANK, RPS6, SEMA3E, SEMA7A, SEPHS1, SFRP1, SLC12A2, SLC2A2, SOCS1, SOS2, SPHK1, SPRED2, STAT5B, SV2A, TNFRSF9, TXNDC12, VAMP2, WNT7A, YARS2, YWHAH, ATP6V1C1, GABARAPL2, HLA-DPB1, PLA2G12A, TNFRSF10A, TNFRSF1A</p>
Negative_15305	<p>ASL, DDO, FAS, LEP, OTC, PDC, RET, AACS, ACAD8, ACOT12, AGTR1, AKR1C1, AKT1, ALDH1L1, ALDH7A1, AMPD2, ASIP, BACE1, BIRC3, CACNA1A, CACNA1S, CACNB4, CASP8, CCNG1, CCR7, CDC7, CDH3, CHRM5, CLTB, COL5A1, CREB3L2, CXCL2, CYP19A1, CYP2J2, DAAM1, DGKI, DHRS4, DHRS9, DIAPH1, DTYMK, DVL1, ENTPD1, EPHA2, EPHA3, F11R, FADD, FBXW11, FGD1, FGF11, FOXA2, FZD10, GCNT4, GSTT1, HADHB, IL15RA, IL1R2, IL23A, IL24, IL4R, IL6ST, IL7R, IMPA1, INHBC, INPP4A, IRF9, ITGA11, ITGA2B, KDSR, LRP6, LYZL1, MAN2A1, MAP2K4, MASP1, MIOX, MYD88, MYH2, MYL5, NCK2, NPR1, NRXN1, NT5C1B, NTF3, NUDT2, OPLAH, OR10H5, OR2A5, OR2AE1, OR2AT4, OR2H2, OR2T3, OR4B1, OR4C12, OR4F4, OR51B2, OR52J3, OR52N1, OR5M3, OR5T2, OR6C76, OR6N1, OR6T1, OR8B12, PARD3, PAX8, PISD, PLCD4, PLOD3, POLD4, POLR1A, POLR2J, PRKAA2, PRKAR1B, PTPRF, PYGL, RAPGEF2, RPS6KA1, RUNX1, SARS, SELE, SNW1, SOCS4, STAT1, STAT2, TACR2, TBL1X, TCF7L1, TOMM40L, TSC1, UCK2, VAMP2, WNT10A, WWP1</p>
Negative_15306	<p>HDC, HPD, MAX, MOS, SFN, VTN, ABAT, ABI2, ACHE, ACSM2A, ACTG1, ACVR2B, ADCY7, AKT3, ALDH1A3, ALOX15B, ALPP, ARG2, ARRB1, BAI1, BPGM, CAMK2A, CD19, CDC7, CDIPT, CPT1C, CSH1, CXCL3, CXCR5, CYP2D6, DHRS4L2, DPM2, DPM3, E2F5, EPHA1, EXTL3, FABP4, FASLG, FCGR3B, FGF23, FGFR4, FPGT, GALNTL2, GCLM, GJD2, GLO1, GMPR, GMPS, GPD1L, GRIN2A, HMOX2, IFNG, IGSF5, IL28B, IL6ST, IL8RA, ITGA7, KIR2DS4, LAMA3, LAP3, MAGI3, MAP2K5, MASP2, MMP7, NARS2, NEU3, NGEF, NTRK1, OR10H3, OR14I1, OR1S1, OR2G6, OR2M4, OR4F5, OR4K17, OR4K5, OR52M1, OR5AK2, OR5J2, OR7C1, OR7G2, P2RX2, PCK1, PCYT1A, PDGFC, PECAM1, PIGU, PKMYT1, PLD2, PNPO, PNPT1, POLE4, POLR1D, PRKACG, PTK2B, PYCR2, RAPGEF4, ROBO3, SEMA3G, SEMA4C, SESN1, SLC27A1, SLIT1, SMARCA5, SPRY3, SSX2IP, STAM, TAS2R42, TAS2R9, TRAF5, TRIP10, TUBB2C, TUBB4, UPP1, WARS2, WHSC1L1, YWHAH, ZNRD1, ATP6VOA4, PLA2G12B, SERPINF2, TNFRSF10A, TNFRSF6B</p>

Negative_15307	<p>C3, DCC, F7, FAS, HDC, HYI, JUP, SI, STS, TKT, ABLIM2, ACSM4, ACVR1, ALD H1L1, ALDH7A1, AQP7, ARHGAP5, ATP5J, BDH2, BRAF, C4BPB, CACNA1E, CAC NB1, CASP9, CCL27, CCR3, CD244, CD36, CDH2, CD01, CLDN8, CSDA, CXCR4, CYP2A7, CYP2C19, CYP2S1, CYP3A43, DAAM1, DGAT2, DNMT3L, DOCK1, DTX2 , DUSP4, ENPP3, ETNK1, EXTL1, FDFT1, FGF23, FM03, FZD5, G6PC, GALNT13 , GALNTL2, GMPR, GMPR2, GRM1, GUK1, HLA- G, IFNA10, IL12RB1, IL25, IL28RA, IRAK3, ITPKB, LDHC, LDHD, MAN1C1, M APK10, MAPK13, MAT1A, MPP5, MYH6, MYL7, NAT1, NCSTN, NFASC, NFKBIB, N ME6, NR1D1, NRXN2, OR10AG1, OR10G7, OR10H1, OR11G2, OR1A1, OR1S1, OR 2A4, OR2G2, OR2T12, OR4D11, OR4D9, OR52A5, OR52N2, OR5D13, OR6N1, OR 7D4, OR8D1, OR8K3, OXCT1, PANK2, PGM1, PHKB, PIGM, PITX2, PLA1A, PLA2 G1B, PLA2G6, PLCB1, PNLIP, PPP2R2C, PRKAR2A, PRKCQ, PRKG2, PTPRJ, PV RL2, RFX5, RHOD, SARDH, SEMA3A, SEMA3D, SETD7, SMAD4, SMAD5, SOS2, ST X1A, STX4, STX5, SULT1A2, TAS2R16, TAS2R42, TKTL2, TMLHE, TPH2, TUBB 2C, UAP1, VANGL2, VDAC3, WASL, WNT5A, ATP6V1E1, SERPINC1</p>
Negative_15308	<p>C5, DHH, EBP, EGF, FER, GNS, GSR, ID3, SDS, ZYX, ABLIM2, ACADL, ADRB3, A DSS, AGPAT3, AGPAT6, AKR1C1, ALDH1A3, AMD1, AMY2A, ANAPC11, APOE, AR AF, BCL2, BDH1, BMPR1A, BMPR1B, C1QC, CCL27, CCR10, CD58, CD59, CD74, CLDN2, COX10, CPT1C, CREB3, CTNNA3, CYSLTR1, DDIT3, DDOST, ENTPD6, E PB41L3, EPHX2, FBXW11, FDFT1, FGFR3, FRAP1, FZD3, FZD6, GAB1, GALE, G GT6, GNAT3, GSTO2, GUCA1B, GUCY1A3, GUCY2F, GUK1, HCCS, HSD11B1, HSD 17B8, ICAM3, IFNAR1, IL13RA1, IL2RB, IL3RA, ITGA8, KAT2A, MALT1, MAN 1B1, MAP2K2, MAP3K1, MAP4K2, MCM6, MS4A2, MYL5, MYL9, NAGS, NMNAT3, N RXN3, NTNG1, ODC1, OR10H1, OR10P1, OR11A1, OR14C36, OR1J4, OR2M4, OR 2T1, OR4A15, OR4A5, OR4D9, OR5B21, OR5D18, OR5L2, OR6B3, OR6K2, OR8D 2, OR8H2, OR8J3, OR8U1, ORC1L, PAK4, PCNA, PDE7B, PDE8A, PGAM2, PHKA1 , PIGX, PIP4K2C, PNPO, POLD2, POLE4, POLR2B, PPM1D, PPP1CB, PRKACG, P RKCH, PTGS1, RDH8, RGS3, RPN1, RPN2, SDC3, SELP, ST8SIA1, STAM2, STK3 6, STX16, TAS1R1, TBL1X, TBL1XR1, TM7SF2, TPM3, TRPM5, TYMS, UGT2A1, VAMP1, WARS2, XYLT1, YOD1, YWHAE, ATP6V0E1, CACNA2D2, GABARAPL1, HS D17B12</p>
Negative_15309	<p>ASL, BAD, CDA, DAO, LEP, ME2, OGT, TPR, ACOT12, ADRA1A, ALCAM, ALG13, A LG5, AOC3, APOA1, APOC3, ASIP, AXIN2, B3GAT2, B4GALT1, BBC3, BDKRB1, BMPR2, CCNA2, CD58, CHST12, CLDN2, CMBL, CNTF, CNTFR, CNTN1, CNTN2, C OL2A1, CRY2, CTBP2, CYP11A1, DBF4, DEGS1, DHCR24, DKK2, DRD2, DTX3, D USP6, EDA2R, EPB41L3, EPHA5, F13A1, FDFT1, FGF19, FRAT2, FZD3, GAB1, GALM, GALNT1, GANAB, GDF6, GLS2, GLUD2, GNRH2, GSTM2, HSD11B1, HTR2B , IDH1, IFNA5, IL17RA, IL23A, INPPL1, IRF3, IRF7, ITPK1, JAG1, LCP2, L IAS, LTB4R2, MAP2K5, MGST3, MICA, NADSYN1, NCKAP1L, NFYC, OPLAH, OR1 0A7, OR10G8, OR10P1, OR2D2, OR2F2, OR2T2, OR4C15, OR4X2, OR5B21, OR5 P3, OR8B12, OR9Q2, OXSM, P4HA2, PAICS, PARD6A, PARD6B, PDHB, PGLS, PI 4KB, PIGO, PIP5K1C, PLOD1, PNPT1, POLR2H, PPA1, PPP1R3C, PPP2R1B, PP P3CA, PPP3R1, PPP5C, PRKY, PROC, PTPRC, PVRL1, PVRL4, QARS, RAC3, ROB 03, RXRG, SCLY, SDC4, SKP2, SLC33A1, SMURF2, STMN1, SULT1A1, TAS2R10 , TAS2R4, TBK1, THBS4, TUBA1A, TYROBP, WASF3, XYLT2, ATP6V1C1, KIR2D L5A, TNFRSF12A, TNFRSF6B</p>

Negative_15310	APP, CP, GLS, HGF, INS, IVD, SYK, ABCC8, ACSM5, ADIPOR2, AGPAT3, AHCYL2, ALOX12B, ANAPC7, ARHGEF7, ARPC5L, ATP5G3, B3GALT4, BNIP1, C3orf10, CBLB, CCNB1, CCR10, CD274, CFTR, CHDH, CMPK1, CNTN1, COQ7, CTBP1, CTF1, CTNND1, CXCL1, DAPK1, DUSP10, EHHADH, ELK4, ENTPD1, ESPL1, EVI1, FADD, FECH, FGF12, FM05, FOXA2, GALNT1, GGT7, GLUD1, GNA14, GNAL, GOSR2, HAO1, HSD17B1, HSPA1B, ICOS, IFT57, IMPA2, INSR, IRF5, ITGA2, LIPT1, LRP5, MAP3K3, MCM2, MCM7, MMP7, MYH15, MYH6, NARS, NOS1, NT5C2, OR10AG1, OR10C1, OR10H3, OR1D5, OR2B6, OR4D1, OR51B4, OR51T1, OR52E8, OR52K1, OR6C76, OR8S1, PDE1B, PEMT, PIK3R2, PLA2G2A, PLCB4, PPP2R2C, PRODH, PTGER3, PTPN6, RASGRF2, RXRB, SETMAR, SPTLC1, STAT1, TAS2R41, THBD, TLN1, TMLHE, TRPM5, UBE2K, UGCG, ULK2, UPB1, ZFYVE9, ATP6V1G2, HSD17B10, HSP90AA1, PLA2G12A, SLC25A31, TNFRSF14
Negative_15311	CEL, CKM, DBH, HK2, LTB, PVR, SYK, ACAA1, ACHE, ACYP1, AMHR2, B3GALT4, B4GALT4, BDKRB1, CACNA1E, CACNG8, CAV2, CBR3, CCL20, CD38, CD74, CDK5, COL6A1, CREB5, CSNK1E, CYP2F1, DERL1, DIAPH2, DTX1, DUSP7, EPHB4, ETS1, FABP3, FM02, FM03, FOSL1, FOXA2, FZD10, FZD3, GZMB, HAO2, HSD3B7, HSPA2, HTR6, HTR7, IL19, IL28RA, IRF3, KLRC4, LDHA, LEFTY1, LIPF, MAD2L1, MAN1A2, MAP2K1, MTHFD2, MYH1, MYH4, NARS, NFKB1, NME2, NME4, NR1D1, OR10A2, OR10G2, OR10H4, OR10J1, OR11H4, OR1C1, OR1L4, OR2A14, OR2A4, OR4C11, OR4E2, OR4F6, OR5L1, OR5T3, PARVA, PDE4A, PDHA1, PDXK, PIK3CA, PIP5K1C, PLA2G3, PLAU, PLCG1, PNMT, PPARA, PPP1R3C, PPP2R2C, PROC, PTGES2, RAB23, RASGRF1, RRM1, SLC25A4, SORD, TNFSF11, TP73, WARS2, WHSC1, CACNA2D3, TNFRSF10D
Negative_15312	CAD, CBL, CRK, DAO, DBH, F8, ILK, KHK, OSM, SRF, AARS, ABLIM1, ABP1, ACADSB, ACSL3, ACSM5, ACVR2A, ADSL, ADSSL1, ALDH4A1, ALOX15, APC2, APOC3, ARPC5, B3GNT5, BCAR1, CACNA1A, CCL5, CD86, CDC2, CLDN22, CNDP1, CNTRFR, COMP, COMT, CRB3, CSNK1G1, DLL4, EDN1, EFNA4, ENPP6, EPHB4, EPRS, FGF23, FOXA2, FZD2, GALK2, GALNT2, GFAP, GSTA4, GSTM4, HAAO, HARS, HMGCS1, HSD3B7, HTR4, IFNA2, IMPA2, ITGAV, KARS, KIR2DL1, LAMB2, LFNG, MAD1L1, MAP3K6, MAT2B, MCM4, MGAM, MGLL, MGST1, MRAS, MTHFR, NANS, NFYB, NFYC, NOTCH2, NRG2, NT5C, OR10C1, OR1L1, OR2B11, OR2H1, OR4D2, OR4K13, OR51D1, OR56A3, OR6Y1, OR8H1, OR9A2, PDE2A, PGK2, PIGT, PIP5K1A, PLTP, POLR2C, POLR3H, PPP2R2A, PPP2R5C, RAB5A, RASGRF2, RPS6KA2, SFRP5, SHC2, SIPA1, SLC27A4, SMPD4, SMURF1, SOCS7, STX3, TAS2R9, TJP2, TNFSF18, TP73, TRAF4, ULBP3, UPP1, VAMP1, VANGL1, WNT3A, ATP6VOD2, TNFRSF17
Negative_15313	CEL, CR1, IL5, LPL, TXK, AASS, ACPP, ACVR1, ADCY10, ADCY3, AKR1C4, ALAD, ALDH2, ALDH3B1, ALG9, AMDHD2, ATG3, ATP13A2, ATP5J, B4GALT2, BMP2, C1QB, CACNA1H, CACNG6, CASP8, CDH5, CHSY1, COMP, CREBBP, DDIT4, DDX18, DGAT1, DUSP1, DUSP7, EFNA1, EGLN1, ENTPD6, EPB41, EPHA8, EPHB6, F2RL1, FDPS, FOXA2, FTMT, FUT4, FZD9, GABARAP, GCLM, GCNT3, GLUL, GNA13, GNAL, GPD2, GRB2, GRM1, GSK3B, GSTO1, HAP1, HEXA, HMGCS2, HMOX1, HSD17B1, HTR6, IDH3B, IFNGR1, IL10RA, IL17RA, IL2RB, INSR, JAG2, KIR3DL3, LDHB, MAGI2, MAP3K2, MASP2, MEF2C, MTAP, MYLK2, NCOR1, NCR3, NFKBIA, NTF4, OCRL, OR10H5, OR13C3, OR1M1, OR4S1, OR51A7, OR52R1, OR5AU1, OR8I2, OR9A2, ORC1L, ORC3L, PAFAH2, PAX8, PDIA4, PDX1, PIGC, PIGH, PIGT, PIK3R5, PLIN, PMVK, POLR2H, PPP2R2A, PPP3CC, PTPN6, RASSF5, RDH16, RFXAP, RPE65, SEMA4A, SHMT1, SMPD3, SOCS4, SPCS3, SPHK2, ST3GAL4, ST3GAL5, STX8, SUCLG1, SV2B, TGFB3, TOLLIP, TOMM40L, TRMT11, TRPC1, TYROBP, VAMP2, VASP, CACNA2D3, CTNNBIP1, HLA-DPB1, HSD17B12, SERPINB5

Negative_15314	ADO, ASL, AUH, CKM, DCC, DUT, EDA, GDA, GK, IL2, JUP, LPO, ACSL6, ACVR1, AHCYL2, ALDH1A3, ALDH4A1, ALOX12B, ATP12A, B3GNT4, CAMK2G, CCL19, C CNG1, CD70, CDC25C, CDC26, CDKN2C, CERK, CHIA, CHRM1, CLCA2, CLDN14, COL6A2, CXCL6, CYP11B1, CYP2A7, DAAM1, DAPK3, EXTL2, FCER1G, FGF20, FSHR, FUT3, HIBADH, HSD17B2, ICAM1, IL13RA1, IL18RAP, IL22, ITGAV, I TGB5, ITPKB, KIR2DS4, KLRC2, KRAS, LFNG, LTB4R2, MCCC2, MYH1, NAGLU, NARS2, NAT2, NFKBIE, NME7, OR10H1, OR10S1, OR11H1, OR13C8, OR1C1, OR 1G1, OR2L13, OR2T8, OR4F5, OR51E2, OR51L1, OR52E6, OR52H1, OR5AS1, O R5I1, OR8H2, OR8J3, OR8K5, P2RX7, PARVB, PGM2, PIGM, POLE4, PRKAB1, P RKAR1A, RASGRP1, RIPK1, SEMA7A, SHMT2, SMC1A, STAT5A, SUFU, TLN1, TM LHE, TNFSF10, TPK1, UMPS, WWP1, YKT6, ZIC2, ZNRD1, ATP6V1G3, SERPINB 5
Negative_15315	BCR, CS, EPO, FOS, GNS, IL5, LEP, PLN, PXN, SHH, TNF, ABLIM1, ACOX2, ACY 1, ADCY1, AKR1B1, ALG2, ANAPC11, ATIC, ATP5G2, ATP5G3, B4GALT1, B4GA LT4, BAI1, C7orf16, CACNA1A, CACNA1E, CASP8, CD247, CD48, CD80, CEBP A, CLCA2, COX15, CSNK2A1, CSNK2B, CTSG, DERL1, DHRS3, DUSP16, DUSP9, EPB41, EPB41L2, EXOC7, FGF17, FLT3, FSHR, FZD8, GAD1, GALNT7, GALNTL 1, GBGT1, GLI3, GLUD1, GNAI2, GNPDA2, GOSR2, GPT2, GSTM1, GSTP1, HAP1 , HIBCH, HLA- DOB, HMGCL, HNF4G, HYAL1, IFNA13, IL10RA, IRAK1, LAP3, LIMK1, MAD2L1 , MARS, MCM7, NFYA, NSDHL, OR10AG1, OR10G2, OR10G8, OR2A14, OR51A2, O R51A4, OR51M1, OR52L1, OR8A1, OR8K1, PDE6G, PFKM, PGLS, PIGL, PIK3C2 G, PMM2, POLR2G, PPARG, PPP2R1B, PPP5C, PRKACA, PRKAR2A, PROC, PSEN1 , PTGER1, PYCR1, RAC2, RFX5, RPS6KA6, SCP2, SEMA3C, SHISA5, SOCS7, SS H1, SULT2A1, TNFRSF4, TPH1, TUBA8, TUBB2B, SERPINC1
Negative_15316	C7, C9, CBL, DBI, MPZ, MTR, MYC, SPN, TH, TK2, ACACB, ACP2, ACSL1, ACTA1 , ADCY2, ALDH3B2, ALDH6A1, ALG9, AMPD2, APH1A, APOC3, ARNTL, ARPC2, A SS1, BACE1, BPGM, C7orf16, CARS2, CCKBR, CCL13, CCND3, CCR3, CDC16, C DKN2C, CHDH, COQ7, CRLF2, CX3CL1, CXCL2, CYCS, CYP11A1, DDHD1, DDX18 , DGKQ, DKK1, DPAGT1, EFNA3, EFNB2, EFNB3, ENO1, EXTL3, FARP2, FGF20, FGF21, FGF23, FSHR, GALNT12, GALNTL4, GANAB, GRAP2, GRHPR, GRIA3, GS TM3, HEMK1, HMGCR, IARS, IFNA17, IGF1, IL13, IL20RA, IL22, IL22RA2, I L23R, IMPDH1, JAG1, JAK2, KIR2DL4, KRAS, LDHB, LIPT1, MAP3K12, MGAT5 , MGAT5B, MMP2, NAT1, NEU4, NFKBIE, NT5C2, NUMBL, OCLN, OPLAH, OR10G4 , OR1A2, OR2AG2, OR2H2, OR4C46, OR4M1, OR51E2, OR51M1, OR51S1, OR52N 5, OR5AN1, OR5D18, OR6B2, OR8J1, OXCT2, PDE10A, PDE4A, PDGFC, PGAM4, PGM2, PIGK, PIK3R4, PKMYT1, PLA2G3, POLA1, POLR2F, PON3, PRNP, PYGB, RAC1, RBPJ, RENBP, SESN3, SH2D1B, SLC25A4, SMC1B, SMURF1, STAM2, STX 18, THBS4, TIAM1, TJP1, TNFSF10, UGT2B17, UPRT, VEGFB, VKORC1, WEE1, WNT10B, WNT5A, WNT8B, WWP1, YES1, ATP6V1G1, MAPKAPK5
Negative_15317	FGG, PDC, RB1, RET, TK2, ACHE, ACOT11, ACY1, ADCY7, ADCY9, AGRN, ALG13 , ALG9, ASIP, ASNS, ATP6V0B, B4GALT5, BET1, BMP4, BRAF, CCDC6, CCL11, CCR7, CDC14B, CHAD, CLDN1, CNTNAP1, COL4A4, COQ7, CPT1A, CRY1, CTTN, CYP2S1, DCXR, DHDDS, DPYS, DUSP9, EFNB2, ENO1, EXOC7, FARSB, FGF13, F LT1, FLT3, FMO4, GAB1, GCLM, GLUD1, GSTA5, HTR5A, IFT57, IL12B, IL18R 1, IL22RA1, IL24, IL4R, IQGAP2, LHCGR, MTMR6, MYL5, NADSYN1, NRCAM, N T5M, OR12D3, OR14I1, OR2T5, OR8B12, PCCB, PLA2G3, PLXNB3, POLR1E, PP ARG, PPP3R1, PRKCQ, PRODH2, PTPRZ1, PYCR2, PYCRL, RAD51, RPS6KA6, SA RDH, SCIN, SEMA3D, SEMA4F, SETDB1, SKP2, SLC25A5, ST8SIA5, STAM, STA T1, SUCLA2, TNFRSF9, TSC1, TUBA3C, WNT4, ATP6V0A1, HSP90AA1, PHOSPH 01, TNFRSF14, TNFRSF17

Negative_15318	<p>CAT, DDC, FUK, SDS, TH, TNN, TXK, ACSM3, ADCY8, ADRA1B, ALCAM, ALDOB, ALG1, AMPD3, AMY2B, APRT, AQP7, ARNT2, ATP6AP1, BUB3, CACNA1D, CACNG5, CALML6, CBLB, CD247, CHKA, CHSY1, CLDN18, CLDN3, COX10, CPT2, CYBB, CYP2C8, CYP3A5, DDX18, DEGS1, DGAT2, DNMT3A, EPHB3, ERBB3, FBXW11, F OXA2, FUT6, GGT1, GYS1, HLA-</p> <p>DMA, HMOX1, HRAS, HSPA8, IFNA2, IGFBP3, IMPDH1, ISYNA1, LTB4R2, MAN1 B1, MAP2K5, MAP3K8, MAPK14, MAPT, NCSTN, NEU4, NFATC2, NFATC4, NME7, NOTCH1, NRXN3, OLR1, OR2D2, OR4C15, OR4K5, OR51A4, OR51B2, OR52K2, O R52W1, OR5D14, OR5T2, OR6C70, OR6K6, OR8H2, PAX8, PDE1B, PERP, PFN3, PLIN, PLK1, PLTP, POLD4, POLR3B, PPCS, PPID, PPP1R3B, PPP2R5D, PRDX6, PROS1, RHOQ, RPIA, SAT1, SHISA5, SOS1, SPRED2, SRD5A2, ST3GAL1, STX 4, SULT1E1, TFDP1, THBS2, TRAF2, TRAF3, TRAF4, TRPC1, TUBA4A, VAMP4, VANGL2, VTI1A, WNT2, ZAP70, ATP6V1E2, MAPKAPK5, PAFAH1B3</p>
Negative_15319	<p>CFD, CGA, CKB, DLD, EGF, GH2, GSN, GSR, ID3, LTB, ACADM, ALDH2, ALG10B, AMDHD1, APOA2, ASNS, ATG7, ATP4A, AVPR1B, BAIAP2, BCAT1, CACNA1B, CA CNG7, CASK, CDC16, COL11A1, CTBS, CTTN, CXCL10, CXCR6, CYBB, DDX23, D DX55, DPYS, DUSP1, ENPP6, EPHB6, F13A1, F2RL1, FOXO1, GAL3ST1, GNB1, GRAP2, GRIA1, GRIA2, HSD11B2, IFNA5, IFNA6, IL13, INPP5A, IPMK, KITL G, LALBA, LIMK1, LIPT1, MGAT3, MKNK1, NCK2, NCOR2, NFATC4, NKX2- 2, NOX1, NR5A2, NRG2, NT5C2, NUDT9, OR14I1, OR1A2, OR1K1, OR51T1, OR5 2E2, OR5A2, OR5D13, OR5F1, OR6B2, OR9I1, OR9K2, ORC5L, PAK4, PARD6B, PARVB, PGM2, PIGL, PIGU, PON3, PPAP2C, PPP2R1B, PTPN6, RALA, RELA, RF X5, SDC1, SDHA, SEMA3D, SLC2A4, ST6GAL1, STAT2, TAS1R3, THBS2, TJP2, TLR2, TUBA1A, TUBB3, XYLT1, AASDHPPT, GABARAPL1</p>
Negative_15320	<p>ADO, BAX, DAO, IHH, LPO, MAG, MSN, PXN, VCL, ABL2, ACADS, AGTR1, ATG3, A TP5B, AXIN2, BTRC, CACNB1, CACNG4, CARD11, CASP6, CCL1, CD44, CD72, C ES1, CLDN14, CLTC, COL1A1, COL5A2, COMP, CSF2RA, CSF2RB, CTTN, CYP2C 18, DAG1, DCTN1, DGAT2L4, DKK2, DPYD, ECSIT, EDA2R, EFN1, EFN3, ELK 1, FARSA, FGF12, FUT8, FZD4, GGCX, GGT7, GMPR2, GOT1, GYS1, HMGCR, HSD 17B7, IDH2, IGF1R, IL10RA, IL13RA2, IL1R2, IL1RAP, IQGAP1, JAG1, MAG I2, MAPK8, MICA, MMP1, MTHFR, NARS, NCF2, NFASC, NME7, OR10G3, OR10H4, OR13C3, OR1S1, OR2T8, OR4B1, OR51S1, OR5A2, OR6C4, PDE8A, PDPK1, PH KA2, PNPO, POLE2, POLR2F, POMC, PPA1, PRKACA, PTK2, PTPRZ1, PVRL3, PY CRL, RFX5, RPS6KB1, SORD, UGT8, UXS1, WASL, SERPINC1, TNFRSF14</p>
Negative_15321	<p>APP, DCT, F8, GCK, HPD, KIT, LEP, PAH, ABCC8, ACADVL, ALAS1, ALAS2, ALD H1A1, ALDH1B1, ALPI, AOC3, ARHGEF6, AXIN1, B4GALT1, BDH1, CCL13, CCR 1, CCR6, CD79B, CDK7, CFLAR, CHIA, CNGA3, CNGB1, CNTFR, COX10, CREBBP, CSAD, CSF2RB, CTLA4, CXCL6, CYBA, CYBB, DERA, DIAPH2, DLST, DPYSL2, DRD5, DUSP7, EDAR, EPB41, EPHA1, ETNK2, FABP1, FCGR2B, FDFT1, FGF10, FGF19, FOXA3, FUT4, FUT8, G6PC, GALNT3, GALNTL1, GAS1, GCDH, GNA13, G NB1, GOSR2, GSTA1, GSTT1, HMGCL, HSD17B8, HYAL1, IL28B, IMPDH2, ITGA 7, KIR2DS4, KIR2DS5, LARS, LCMT2, LIFR, MAN1A1, MAOA, MAP2K1, MICA, M YH15, MYH9, NCK1, NCR1, NMNAT1, NOD1, NT5C1B, OCLN, OR10G2, OR10G7, O R14C36, OR1A1, OR1A2, OR2AG1, OR2F2, OR2G3, OR2H2, OR4F5, OR51L1, OR 52A5, OR52J3, OR5R1, PARD6A, PDXP, PFKP, PNMT, POLR3B, PRKAR2A, PRKC I, PRKY, RCHY1, RFWD2, RFXAP, RRM1, SLC25A4, SMPD2, SPRY2, SRGAP2, ST 3GAL4, STEAP3, SUV39H2, SV2A, TBK1, TGFB2, TLR5, TRAF3, TUBAL3, UNC 5B, UNC5C, UPB1, ATP6V1B1, ATP6V1E2, ATP6V1G1, CACNA2D3, MAPK8IP1, SERPINA5</p>



Negative_15322	<p>AK2, CD2, FUK, MVK, MYC, PDC, SCD, SRF, ACPP, ACSM2A, ACYP1, AHCY, ALAS2, ALDH2, ALDH3B1, ALDH9A1, APOE, ARRB2, ATP6V0B, BMP7, CACNG3, CACNG6, CALML6, CCL20, CCL3, CES1, CES2, CHRM2, CHST12, CHUK, CLOCK, CSNK2A2, CSNK2B, CTNNA1, CTPS2, CXCL5, CXCR5, CYP2E1, DAD1, DDHD1, DHFR, DPM1, DUSP8, EHMT1, ELK4, EPAS1, EVI1, FBXW11, FGF12, FM02, FOXA2, FSHR, FZD2, GALT, GALK2, GLUD2, GNG3, GPX7, GRM5, GSTM5, HADHB, HARS, IFNA4, IFNGR2, IL12RB1, IL19, IL1A, IL1R1, INPP5E, IQGAP1, ITGAV, JAK1, KDSR, LAMB3, LFNG, LIPC, MAGI3, MAP2K7, MITF, MYL7, MYLK2, NAT1, NCSN, NFKBIE, NKD1, NRG4, OR10AG1, OR10K1, OR14A16, OR1L6, OR2M3, OR3A3, OR4F4, OR51T1, OR5K1, OR7G1, OR9I1, PDE7A, PDE7B, PIP4K2B, PLIN, PMVK, POLR1E, POLR2D, POLR3A, PPARG, PRKAG2, PRKCG, PRODH, PTAFR, PTCRA, RASA2, RASSF1, RUNX1T1, SCD5, SDHC, SEMA4C, SIGLEC1, SMAD2, SPI1, ST6GAL1, STAT3, STMN1, STX7, STX8, SUCLA2, TACR3, TAP2, TCIRG1, TGD5, TGFBR2, THBS1, TIRAP, TLR3, TUBA4A, UAP1, VTI1B, WARS, WASF3, WBSCR17, ZBTB16, HLA-DPA1, HLA-DRB5, SLC25A31, TNFRSF14</p>
Negative_15323	<p>APP, CD4, CDA, DDC, F3, IDS, IVD, JUN, KMO, TK2, AASS, ABCC8, ACADSB, ADH5, AKT2, ALG12, ALOX15B, ANAPC4, APBB1, APOA5, ARPC1A, ARPC5, ASPA, ATP4A, ATP6V1A, BMP5, C4BPB, CAMKK1, CBR3, CCL19, CCL8, CCR2, CCR6, CD22, CD47, CD01, CLDN1, CMBL, CNDP1, CPT1C, CSNK1A1, CXCL10, CXCL13, CXCR3, DDX18, DGAT1, DLL1, DPM2, DUSP10, DUSP3, EFNB2, ENO3, EPHA2, EXOC7, FABP4, FGF11, FGF14, FLAD1, FM03, GAD2, GANAB, GLI1, GMPPA, GNAI2, GNPDA2, GOT1, GP1BB, GPT2, GSTM2, GYS2, HADHA, HSD3B1, IARS, IL1RAP, INHBC, ISYNA1, JAG1, KIR2DS5, LCMT1, MADCAM1, MAP3K13, MOV10L1, MPST, NAGLU, NAT5, NFYC, NRG3, OR1E2, OR1K1, OR2T4, OR51F2, OR51V1, OR56A4, OR5A2, OR5AN1, OR5AP2, OR5T1, OR6B3, OR6F1, OR9A2, P2RX5, PAX8, PDHA2, PFKFB3, PIK3R4, PIP4K2B, PIP5K1B, PLCB3, POLR2C, POLR2D, PIP2A, PPT1, PRKAG1, PRKCG, PTPRF, RALA, RAPGEF3, RASA2, RFXAP, RND1, RRM1, SEMA4A, SIPA1, SKP1, SLC12A2, SORBS1, SPTAN1, STK4, SV2A, TAS2R60, TD02, TGFBR2, TLR9, WARS, YWHAH, ATP6V1E1, PAFAH1B2, PRICKLE2, TNFRSF10A, TNFRSF17</p>
Negative_15324	<p>APP, ASL, CD6, CR2, DHH, EDA, GLS, IL7, JUP, MVK, RET, SDS, TNC, ACSM1, ACSM4, ACY1, ADCY6, ADRB2, ADRBK2, ALCAM, ALDOA, AQP7, ARHGEF1, ARNTL, ASMT, ATP5L, BAIAP2, BCAT2, C3AR1, CCL14, CCL21, CCL23, CCL27, CD274, CDC2, CNTF, CPT2, CRY2, CSAD, CSDA, CSNK1G3, CTNNA2, CTTN, CYP19A1, CYP26C1, CYSLTR2, DDOST, DDX51, DHCR24, DRD5, DUSP2, DUSP4, E2F1, ENO2, ENPP6, EPHB1, EPHB4, FOSL1, FUT5, FUT7, FZD3, GART, GPD1, GPT2, GRIA1, GSTA2, GSTA5, GUCY1A3, GZMB, HMGCS1, HSPB1, HTR2B, IFNA2, IFNA5, IL25, IRF7, ITGA7, ITGAX, LDHC, LFNG, LTC4S, MAP3K5, MCM3, MGAT5, MTHFS, MYH6, NANP, NCAM1, NFKBIB, NKX3-1, OR10J1, OR11H6, OR13J1, OR14J1, OR1L1, OR2M3, OR2T5, OR4D6, OR4K14, OR4M1, OR4Q3, OR51G2, OR5J2, OR9Q1, PARS2, PDE10A, PDE6G, PEMT, PFAS, PHKG1, PIK3R4, PLA2G6, PLXNC1, PMVK, PON2, PPP1R3C, PPP2CA, PRPH, PTK2, RASGRP1, SH2D1A, SH2D1B, SMPD4, SMURF2, SOCS5, SOCS7, SUOX, TACR3, TAS2R42, TFPI, THBS4, TSHB, TUBB2A, WNT2, WNT6, XYLT1, YARS2, YWHAH, AASDHPPT, ATP6V0A1, CSNK1A1L, HLA-DRB5, MAPK8IP3, PLA2G12B</p>

Negative_15325	AGL, C8G, C9, CSK, GPI, HK3, IL4, MET, STS, TNF, TNN, ACSS1, ACSS2, ADCY8, ADH1A, ADIPOR1, AGPAT4, ALG9, ALPI, ALPL, APBB1, ATP6AP1, AVPR1B, BMPR1B, BNIP1, CACNA1E, CACNB2, CACNG1, CADM1, CCDC6, CD79B, CDC25B, CDH15, CDH2, CHKB, CNTNAP1, DLL1, EFN3, EIF4E2, EPB41L2, FCER1G, FGF2, FSHR, GALNT8, GNAI1, GNAI3, GPAM, GPD1, GZMA, HNF4G, ICAM2, IFNB1, IFNG, IL18RAP, IL1B, INHBC, IQGAP2, IQGAP3, ITGA6, ITGAL, LDHA, LTMK1, MAN1A1, MAT1A, MCCC2, MLLT4, MPDZ, MRAS, MTHFD2, NEU3, NKX2-2, NLGN3, OR10A5, OR13C2, OR1N1, OR2T3, OR4F5, OR52E4, OR52N1, OR52N5, OR8K3, PAICS, PAK6, PANK4, PCCB, PDE4B, PDE4D, PIAS4, PIGU, PIK3R5, PLCZ1, POLR2G, PON1, PRIM1, PRPH2, PTCH1, PTPRR, RAD51, RALGDS, RDH10, RETSAT, SENP2, SGMS2, SMAD4, SPAM1, SRD5A1, STK4, TAS2R16, TAS2R49, THTPA, TUBB3, WBSR17, XYLT1, HSD17B10, TNFRSF13B
Negative_15326	BAX, CS, CSK, DBI, DDO, F7, GSN, ID2, PML, RPE, ACPP, ADH6, ADRA1B, ADSSL1, AMPD1, ASAH1, ATP12A, BBC3, CCL1, CCL22, CCNG2, CFLAR, CNTNAP1, COL4A2, COL5A3, COQ7, CSF3, CSNK1G2, CTSS, CYP11A1, CYP17A1, CYP26A1, CYP8B1, DAAM2, DUSP4, EXTL3, F13A1, FGF18, FTH1, GALT, GCH1, GIT1, GJA1, GNAS, GNPDA2, GSK3B, GUCA1A, GYS1, HARS, HLA-DRA, HRH2, IL15RA, ITGAX, KIR2DS5, LEPR, LIMK1, MAN1A2, MAP2K5, MAP4K1, MYL7, NFKBIE, NFX1, NTRK2, OR10X1, OR14J1, OR2G6, OR2T33, OR2V2, OR4F4, OR4N5, OR51S1, OR5H2, OR5M3, OR6K3, OR7D4, OR8B4, P2RX3, PAK2, PAK6, PAK7, PAX8, PDE11A, PDGFA, PFN3, PHKA2, PIGU, PLAU, PMM2, PPAP2A, PPP2CB, PRKACG, PRSS3, RAB23, RAC2, RDH11, ROBO2, SCLY, SHMT2, STS1A1, STX18, SUV39H1, TAS2R41, TLN2, TLR3, TLR5, TPH2, TSHR, TUBA3C, TUBA3E, UMPS, ATP6VOD1, ATP6V1E2, KIR2DL5A, PPARGC1A, TNFRSF10B, TNFRSF10C
Negative_15327	ADA, AGL, C3, DLD, FAH, FST, FUK, ID2, LYN, PML, PTS, ACAT2, AGPAT3, ALDH1L1, ALDH2, ALDH3B2, ALS2, AMY2B, ARHGAP5, ARHGEF6, ARRB1, B3GALT4, B4GALT1, B4GALT7, BDH1, BHMT, C4BPB, CACNA1G, CCL14, CCL15, CCL8, CNA1, CD79B, CHST11, CHSY3, CTPS, CXCL9, CXCR3, CYP21A2, CYP26B1, DCN1, DNMT1, EPRS, ETNK1, EXT2, FGF12, GART, GDF6, GMPR2, GNAS, GOT2, GSTM4, IDUA, IFNA16, IFNB1, IFNGR2, IGFBP3, IKBKG, IL2RG, IL6R, INSR, JAG2, KIR2DS5, KLRC1, KLRD1, LEFTY2, LFNG, LIPE, LLGL2, LRP5, MAGI3, MAT1A, MEF2C, MGLL, MICA, MMP2, MYD88, MYL9, NCAM1, NCK1, NFATC2, NTN1, OR10G4, OR13H1, OR1J2, OR2L13, OR4D1, OR51E1, OR5A1, OR5AS1, ORC1L, PARD6G, PCCB, PFAS, PFKFB2, PGAP1, PIGS, PIK3C3, PIP4K2C, PNPLA4, PNPO, POLD3, POLR2G, PPAP2C, PPARA, PRKAR1B, PSME2, PTCH1, SEMA3A, SEMA4A, SFRP1, SFRP2, SHMT2, SLC2A2, SPRY3, SRGAP2, SSX2IP, TAS1R2, TAS1R3, TJP1, TLN1, TSHB, TUBB2C, VDAC1, VNN1, WBSR22, WNT1, WNT10B, YWHAZ, ZBTB16, HSD17B10, TNFRSF12A
Negative_15328	ABO, C5, CRK, DUT, GAA, HK3, IL8, KHK, SYK, TK2, ACOX3, ACP5, ACSM2A, ADIPOR2, AGPAT3, AK3L1, AREG, AVPR1A, B4GALT4, CAPN2, CCL26, CFLAR, CHIA, CLDN1, COL11A1, CREB3L4, CXCL5, CYBA, CYP3A43, DDX18, DEGS2, DGKE, DHCR7, DRD1, ENPP3, ENTPD2, ENTPD4, FCER1G, FCGR3B, FECH, FUT5, GABARAP, GALNT9, GNAS, GNG3, GRLF1, HIP1, HTR5A, IBSF, IL11RA, IL28A, IL18RB, ITPKA, KLKB1, LTBP1, MAGI1, MAN1A1, MAP3K8, MNX1, MYH4, NCAM2, NCR2, NKD1, NMNAT1, NPR1, NT5C3, OGDH, OR10A2, OR10C1, OR1C1, OR1G1, OR2H2, OR2W1, OR3A3, OR4F5, OR4X1, OR8G1, ORC1L, PDE4C, PDE6D, PDIA4, PLA2G4A, PLAT, PNLIP, PPA1, PPP1R3B, PTTG1, RAP1A, RAPGEF3, RPSA, SDHB, SHC2, SKP2, SMAD9, SNAP23, SRGAP1, SRGAP3, ST3GAL6, STAT2, STX12, TBXA2R, TUBA3C, ULBP1, ULBP2, VAMP4, VTI1A, WNT5A, MAPK8IP3, PAFAH1B3, SERPINA1

Negative_15329	C4B, CAD, CD2, CR2, DHH, F3, HK1, HK2, ME2, SRC, STS, TFG, UBB, AACS, AAN AT, ACAA2, ACSS2, ADRB1, ALDH4A1, ALG10B, ALG3, AOC3, APH1A, ARHGEF4 , ATG7, ATP5I, BCL2L1, CACNB3, CARS2, CAV2, CCL28, CD58, CDC20, CDC45 L, CER1, CHIA, CHST13, CLCF1, CLDN19, CNGA4, CSDA, CSNK1G3, CTNNA1, D HDH, DLAT, DUSP1, EIF4E2, F13A1, FARSB, FGF21, FLOT2, FM05, FPGT, FUT 3, FZD10, GADD45A, GALNT12, GDF6, GLI1, GP1BA, GRM1, IFNA5, IL21, IMP A1, ITGA1, ITGA2B, ITGAL, ITGAM, ITGB4, JAM3, LEF1, LRP5, MAPK13, MPD Z, NCOR2, NME6, NR1H3, NR5A2, NRXN3, NSDHL, NUMBL, OR10A4, OR10H5, OR 13H1, OR14C36, OR1D5, OR2W1, OR4C12, OR4N5, OR51D1, OR51M1, OR52B6, OR52I1, OR6M1, PANK2, PANK3, PARD6G, PARS2, PDE7A, PDE7B, PIM1, PLOD 2, PLXNB1, PLXNB2, PNPLA3, PNPT1, POLR1A, POMC, PPP1R3B, PPP1R3C, PP P2R2D, RALGDS, RPIA, RPS6KA3, RRM2, SEMA3A, SETD1B, SHMT1, SKP1, SLC 27A5, SLC2A4, SMARCA2, SOCS4, SPRY2, SUFU, TGFB2, TP53I3, UCK1, UCK2 , UGCG, UGT2A1, UNC5C, UROD, UXS1, VARS, WNT1, WNT9A, ATP6V1C2, ATP6V 1E1, PLA2G12B, PPP1R12A
Negative_15330	AK1, C8G, F7, FST, GHR, GNS, GSS, IDS, IL2, IL8, LEP, MVD, NGF, PRL, AASS , ABL2, ACP2, ACSL1, ADORA2B, ALG10, ALG6, AMHR2, AMY2B, APLP1, APPL1 , ARD1A, ARG2, ASPA, ATP5L, AXIN1, BCAT2, BCMO1, BMP5, C1QA, CACNG4, C AMK2A, CCL11, CDC45L, CDH2, CDH3, CFL2, CHAT, CHSY3, CLDN20, COMP, CR EB3, CREB3L2, CXCL16, DDX23, EIF4E, EXTL2, FCGR3A, FGF13, FGF14, FGF 6, FLT3LG, FM04, FUT3, G6PC, GAL3ST1, GALNTL4, GANAB, GFPT2, GSTM5, H EXA, HNF4G, HTR5A, IFNA17, IFNA2, IL13, INPP5A, IRAK2, ITGAV, ITGB4, JAG1, KAT2A, KIR2DS5, KIR3DL2, LDHC, LEFTY2, MAP3K8, MARS, MCM4, MGA T2, MGLL, NARS, NCR3, NEUROD1, NOD1, NOX1, NRXN3, NTNG1, OR10A2, OR10 H3, OR1J2, OR2K2, OR2M3, OR2T10, OR2Y1, OR3A1, OR4D1, OR4D11, OR4D2, OR4K17, OR51B4, OR51D1, OR51L1, OR52M1, OR56A3, OR8B4, P4HA3, PDE3A , PDGFB, PIGB, PIP4K2C, PLA2G2D, POLR3D, PPARG, PPP2R1A, PPP2R5A, PP T1, PROC, PTPN6, PTTG1, PVRL4, RENBP, SGMS1, SLC25A6, SMAD4, SRGAP1, STAM2, STAT2, STX3, TAS2R13, TAS2R38, TFPI, TRPM5, UMPS, UNC5B, UNC5 D, WNT8A, HLA-DRB4, TNFRSF10B, TNFRSF18
Negative_15331	ADO, AK3, CBS, EGF, F8, GCK, GHR, PC, PGF, RET, TXK, XDH, ACOX2, ACP2, AC Y1, ALAS2, ALDH3A2, ALG3, AMDHD2, ASMT, ATP2A3, ATP5D, BCL2, BRAF, CA LML6, CAMKK2, CD44, CD46, CDC25B, CDH2, CFL2, CHD8, CHEK1, CHKA, CNDP 1, CNTN1, COL4A4, CRKL, CSF3R, CXCL11, CXXC4, CYP11B2, DAPK2, DEGS2, DGKQ, DHRS3, DLL4, EHMT2, ENO2, ENTPD8, EPHA3, EPHX2, EXTL1, FOXA3, F PGT, GALNT12, GGT6, GNG13, GNPDA1, HARS, HLA- DOA, HSD11B2, IFNA8, IL13RA2, IL20RB, IL28RA, IL5RA, IL7R, IMPDH1, I TGA2, LIPT1, MAP3K13, MAP4K3, MCM7, MGLL, NAE1, NEUROD1, NLGN1, NME7 , NNMT, NR1H3, NTNG1, NUMBL, OR10A7, OR13C2, OR1L1, OR1S2, OR2T29, OR 4D2, OR4D9, OR4E2, OR5M9, OR6K6, ORC2L, PAPSS2, PCK1, PDE4B, PHKG1, P IAS3, PIGK, PLA2G2A, PMM2, POLE4, POLR2G, PPM1D, PRIM2, PRKG2, PRNP, PRPS2, PTGES, RASA2, RPSA, SETD1A, SFRP2, SMAD5, SNAI2, SNW1, TAS2R8 , TGFB1, THBS1, TP73, TUBB4Q, UNC5A, WBSR17, WHSC1, YARS, CTNBP1 , MAPK8IP3, PNLIPRP1

Negative_15332	FN1, GBA, KIT, RFK, SHH, TPR, ADCY3, ADCY9, AFMID, AGPAT3, AGXT2, AKR1 C4, ALDH5A1, ALPP, AMDHD1, ANAPC7, ASAH1, ASNS, ATP4A, B3GAT3, CALML 5, CCL23, CD19, CDK6, CFL1, CLDN9, CSAD, CSNK2B, DEGS2, DLAT, DPM2, EC SIT, EFNA5, EPHA8, EPHB4, EXT2, F2RL3, FGF4, FZD6, GADD45G, GALNT11, GALNTL4, GSTA3, HCLS1, HEMK1, HTR2A, IL15RA, IL1B, IL20RA, ITGAX, KL RK1, LCMT1, LILRB3, MAGI3, MAML3, MAN2A1, MMP14, MPST, MTMR1, MYH14, NOTCH2, NT5C, OR10J5, OR11H1, OR11I1, OR4C6, OR4E2, OR51G2, OR5D13, O R6C2, OR6K3, OR6Y1, PIK3C2A, PIPOX, PITX2, PLCB4, PPP1R3A, PRODH, QP RT, RAD51, RASA2, RXRA, SDHB, SEMA3A, SFRP1, SH3BP2, SHMT1, SLC2A2, S LC2A4, SNAI2, SOCS3, SREBF1, ST6GAL1, STK3, TAP1, TUBA3E, UGT8, UNC5 B, WBSR17, WNT4
Negative_15333	AGK, C2, DCT, F2R, FN1, NOG, NPL, PAH, TEC, TYR, ABL2, ACOX1, ACVR1C, AC Y1, AKR1B10, AKR1D1, ALAS1, ALOX12, APOA1, APOC3, ARSB, ATIC, BAIAP2 , CACNA1G, CACNB4, CCND2, CCND3, CEBPA, CLDN4, CNTNAP1, COL2A1, CSNK 2A2, CTSB, CTSG, DCXR, DHDH, FCER1G, GALK1, GCLC, GDF5, GNPDA1, GSTA5 , HAGH, HTR2B, IGF1R, IL1A, IRAK1, LARS2, LTBR, LTC4S, MAP2K2, MAP4K2 , MKNK1, MPZL1, MTHFS, NAGLU, NOS1, NRXN2, NT5M, OR13G1, OR2B2, OR4D5 , OR4F15, OR4N4, OR4Q3, OR4S2, OR5AR1, OR5B21, OR5K2, OR5V1, OR6C76, OR6S1, P2RX5, PAX6, PGAP1, PIGT, PIK3C2B, PIM2, PIP5K3, PLXNA2, PNMT , PNPLA3, PPAP2B, PPARG, PPP3CB, PRKCE, PTGES2, RASGRF2, RBPJ, RHOA, RXRG, SPRY2, STAT5B, STK11, STX1A, STX5, TACR3, TAS2R5, THBS2, TNFRS F4, TRHR, TRMT11, UBA1, WASL, WNT8A, B4GALNT1, HLA- DPB1, HSD17B12, TNFRSF1B
Negative_15334	CR2, EZR, F11, FAH, ID2, JUN, PGF, ACADVL, AGPAT4, ALOX5, ALPPL2, ATP5 I, ATP5L, BCAT1, BTRC, C4BPA, CCNG2, CD47, CD59, CD80, CDH15, CDS1, CN TNAP2, COL4A2, CREB1, CSNK1A1, CYP11B2, CYP1B1, CYP4A22, DAPK1, DDX 41, DDX50, DGKZ, DUSP2, EPHA1, FBP1, FGF19, FSHB, GALT, GART, GDF7, GL I2, GNA14, GSTM4, GUCY2C, HLA- DRA, IFNA10, IL12A, IL22, IL2RB, IMPDH1, INPP4A, IRF3, IRS4, ITGAX, K CNB1, LAMA3, LAMC3, LIAS, MAOB, MAP3K3, MTAP, MTHFR, NCKAP1, NMNAT2, NT5C1A, OR10J5, OR2C3, OR2Z1, OR4A5, OR4C12, OR4P4, OR52N5, OR56A3, PAK3, PIM2, PLXNA2, POLR1B, PRKG1, PROC, PTCRA, PTGIS, PTK2B, RARA, R OBO3, ROCK2, SFRP1, SLC25A5, SLC27A1, SOAT1, SQLE, SUOX, TFDP1, TYRP 1, UAP1, UGT1A10, WNT8B, XIAP, ATP6VOA4, EIF4EBP1, PNLIPRP2
Negative_15335	ADA, ADC, ADK, DLD, F2, HPD, IHH, MOS, MPI, TNC, ABLIM1, ACLY, ACOX1, AL AS1, ANPEP, APOA5, ARAF, ARPC3, ATP5B, BUB1B, CAMK2D, CCR8, CDK4, CHI A, CHST12, CLDN1, CNTFR, COL4A2, CREB5, CRLF2, CTNNA2, CTTN, CYP2D6, CYP3A43, CYP4A11, DAPK3, DDX50, DFFB, DGKH, DHODH, DTX3L, EIF4B, ENO 2, EVI1, FUT2, FZD10, GAB1, GCNT1, GGPS1, GNA12, GSTM2, HARS, HSPB1, I FNG, IL12B, IL1A, JAK3, KNG1, LAMB1, LAP3, LCMT1, MADCAM1, MAP3K13, N AE1, NCKAP1L, NFASC, NFE2L2, NGEF, NME7, NRCAM, NT5M, NUMB, OR11G2, O R13C4, OR1C1, OR2C3, OR2H1, OR2T33, OR4K14, OR4N5, OR5H6, OR5P2, OR5 P3, OR5V1, OR7C1, OR8S1, ORC4L, PER1, PFKFB1, PFN2, PGLS, PIK3C2B, PI P4K2A, PLD1, PLD2, PLXNB2, PNPO, POLR2C, PPAP2B, PPOX, PPP3CA, PTPRM , RALB, RDH11, SC4MOL, SEMA4G, SFRP4, SLIT1, SMURF1, SPCS1, SPHK2, SR GAP2, TAS2R60, TICAM2, TLR9, TUBB2A, UGCG, VCAM1, WNT2B, WNT4, WNT7B , ALDH18A1, B3GALNT1, TNFRSF11A

Negative_15336	<p>AMT, CBL, GLA, ILK, LEP, UBB, ACSL5, ACSS1, ACSS3, ACTN2, ADRB3, AKR1C4, ALG8, ATIC, ATP5F1, ATP5L, ATP50, BBC3, BMP6, BMP8A, CACNG7, CAMK2B, CAPN2, CARD11, CARS2, CCL25, CCNB3, CD36, CDC26, CDC7, CDH1, CLDN6, CLDN8, COMT, CXCR6, CYP11B2, CYP1A2, DAG1, DCTN1, DDB2, DGKH, DGUOK, ENTPD7, F13B, FARSA, FBP1, FDPS, FGF12, FZD1, FZD9, G6PC2, GMPR2, GPD2, GRB2, GRIA2, GRIN1, GSTA1, GUCA1C, GUCY1A2, HIP1, HLA-C, HSPA8, IAPP, IDH3A, IL9R, ITGB7, KLK3, LCAT, LCP2, LIPT1, LRP5, MAP2K4, MAPK1, MYL5, NAGK, NAGS, NFATC4, NKD1, NRG1, NT5C, NUDT9, OCLN, OCRL, OR2G3, OR2T12, OR2T34, OR4S2, OR51A7, OR52A1, OR52K2, OR6N2, OR8D4, ORC6L, OXSM, PANK3, PCK1, PDE1C, PDE4D, PDE6H, PDHA2, PGK1, PIGA, PIM1, PKMYT1, PLA2G2A, PPAR, PPM1A, PTCRA, RERE, RFXANK, RRM2, SC5DL, SELE, SEMA3D, SETD1A, SNAI2, SNAP25, SUV39H1, TAS2R50, TGFB2, TJP3, TKTL1, TLR5, TSC2, TUBA3C, WARS2, WASF3, WNT5A, YARS, C1GALT1C1, CACNA2D4, HLA-DPA1, MAP3K7IP1, MAPK8IP2, PLA2G12A, ST6GALNAC6, TNFRSF1A</p>
Negative_15337	<p>GNE, GSR, LHB, ME3, MSN, NLK, NPL, RDX, SFN, A4GALT, AACS, ACSL1, ADCY2, ADRB2, AGPAT1, ALDH1B1, ALG12, ANAPC2, ANPEP, ARRB1, ATP5B, ATP5G2, BDKRB1, C3AR1, CALML5, CASP9, CCR6, CD274, CD40, CD79A, CDC26, CDH5, CDKN1C, CHRM3, CHSY1, CLDN18, CLDN3, CPOX, CRB3, CREB3L2, CTF1, CYP1A2, CYP2U1, DAD1, DHRS3, DPAGT1, DPYSL2, DUSP1, ECSIT, EFNA1, EFNA3, EPB41L3, F13B, FBP1, FGF3, FGF8, FIGF, FSHB, FTCD, FTMT, FUT9, FZD8, GALNTL1, GBE1, GLUD1, GNA15, GNG13, GRB2, GRHPR, GRIA2, GRLF1, GSTM2, GSTO1, GUCY2D, HAGH, HAP1, HLA-DOB, HPSE, HSPA8, IDH2, IFNGR2, IL18R1, IL1A, IL20RA, IL21, IL24, INSRR, IQGAP1, IRS4, ITGB2, KIR3DL3, LAMB4, LARS, LFNG, MAPT, MIOX, MTMR6, NAGS, NCAM2, NCK2, NME7, NSD1, OR13C8, OR2C1, OR5D14, OR5V1, OR6Q1, OR8D2, PARVG, PAX8, PDE6D, PDGFD, PIGK, PIGX, PIK3C3, PIK3R3, PLAT, PLK1, POLE2, PPT1, PTPRZ1, QPRT, RRAS2, RRM2, SDHB, SEMA3A, SLC9A1, SPAM1, STAT1, STAT6, STMN1, TAS1R2, TGFB1, TIAM2, TSHB, UBE2K, UGT8, VDAC3, VTI1B, ZIC2, ATP6V1C1, SERPINC1</p>
Negative_15338	<p>AGK, C7, CRK, DDC, GLS, GP9, HK2, ILK, MAX, MSN, ACAA1, ACADVL, ACOX2, ACSM5, ACSS2, ADRA1D, ADSSL1, AKR1B10, ALDH3A1, ALDH4A1, ALPPL2, APRT, ARAF, ARHGEF7, ATP4A, ATP5A1, BUB1B, C1QA, CACNG1, CACNG7, CBR1, CDC14B, CLDN14, CLDN17, CLDN9, COL1A1, CSF3, CTNNA1, CTSG, CTTN, CXCL16, CYBA, CYP4F3, DDX18, DGKE, DHRS9, EDA2R, EFN1, EPHX1, FGF12, FGF18, FSHR, GAB1, GARS, GPD2, HAGH, HLCS, HPSE2, HRH1, IARS, IDUA, IL15, IL18, IL20, IRAK3, IRS2, KIR2DS5, KIR3DL3, KLRK1, LAMC1, LTB4R2, LYZL1, MAPK10, MGAT3, MICA, MYH9, MYL7, NRAS, NRXN3, OR14C36, OR1J2, OR2A5, OR2D2, OR2L13, OR4K14, OR4S1, OR52L1, OR6C76, OR9A4, P2RX7, PAX8, PDGFB, PFKM, PGAM1, PIGX, PLCD1, POLR1D, PON3, PORCN, PPA1, PPARA, PPIP1CA, PSPH, PTPN5, PTPRR, RHOA, SARS, SEMA4G, SGPP2, SNAI2, STAT4, TGFA, TLN1, TSC1, UBA1, UBE2K, UCK1, ULK3, UPRT, UROS, WIF1, YKT6, ZAP70, SLC25A31</p>

Negative_15339	CDA, DAO, GH2, GK, MAX, SMS, TAT, AARS2, ACSL6, ACTG1, ADRA1D, ALG3, AL OX15, ANAPC7, ARHGEF6, ATG3, ATP5G1, ATP6V1D, B4GALT7, BLNK, BMP2, C 7orf16, CADM3, CCL19, CCL26, CCNE1, CER1, CERK, CFTR, CLCF1, COMP, CR EB3L3, CTBP1, CX3CL1, CYP11B2, CYP2C8, DOLPP1, DTX3L, DUSP7, EFNA1, EPHA4, ESPL1, EXT2, FGFR1, FMO4, FUT6, FUT7, FZR1, GALNT7, GAS1, GBA3 , GGCX, GMPR, GNAQ, GNB1, GRAP2, GSTO2, HAGH, HLA- DMA, HMBS, HSD17B4, ICOSLG, IFNGR1, INMT, IRAK3, ITGA7, ITGAD, KCNJ1 1, KLRK1, LAMB2, LAMB4, LEPR, MAP2K3, MAP3K1, MGST3, MYH14, NAMPT, NC R2, NME4, NMNAT1, NOTCH2, NR1D1, NRP1, OLAH, OR10G7, OR13C3, OR11I1, O R1K1, OR2G3, OR2H1, OR4K14, OR4N4, OR51A2, OR51F2, OR52E4, OR5P2, OR 6A2, OR7A17, OR7C2, OR8H2, OR8J3, OR9A2, OR9G4, PANK1, PDGFRB, PDHB, PIGN, PIGT, PIGW, POLA1, PPP1CB, PPP2CA, PPP2R1A, PPP2R1B, PRKAR1B, PRKCA, PTEN, RHOA, SDC3, SEMA3F, SLC2A4, SNAP23, SPRED1, STAT4, STEA P3, SUCLA2, TAS2R49, TCF7, TLN1, TRHR, TXNDC12, UROC1, VDAC2, WARS, W HSC1L1, ATP6V1B1, ATP6V1E1, HLA-DRB3, TNFRSF11B
Negative_15340	AK2, BCR, FAS, HK3, ID2, IL3, IL5, KMO, LCT, MPZ, RB1, SYK, TNC, ACAA2, A CAT1, ACOX3, ACTA1, ADH6, ADORA2B, ALDH1L1, ANAPC11, APH1A, ATP2A3, ATP6AP1, BCAT1, BCL2, BCL2L1, BPGM, CALML3, CASK, CBLC, CD47, CDC20, CHIT1, CLCA2, CLDN6, CLDN8, CPOX, CPT1C, CSF1, CYP2C9, DAD1, DDHD1, D GKB, DGUOK, DHCR24, DIAPH2, DLL1, DNMT1, DNMT3B, DPAGT1, E2F3, ENPP1 , FABP3, FGF7, FUT7, GALC, GAPDH, GBGT1, GMDS, GMPPB, GOSR2, GSTA1, HC LS1, HSPA1B, IDI2, IFNAR1, IFNGR2, IL13RA1, IL23A, IL23R, IL25, IMPA 2, IRAK2, ITGA1, ITGA11, ITGA3, ITGA6, MAP2K1, MASP1, MCM5, MPZL1, NA DK, NAGS, NCAM1, NEU4, NMNAT3, NPR2, NTN1, NTRK2, ODC1, OR10AG1, OR14 I1, OR1A1, OR4F17, OR4M2, OR56A3, OR5M9, OR6F1, OR6K6, OR6X1, OR8G1, OR8I2, P2RX1, PCCA, PCYT1A, PGS1, PIGP, PIGQ, PLA2G1B, PLA2G2D, PLA2 G2E, POLA2, POLR2I, PPM1A, PPP1R3C, PPP2R2D, PRIM2, PRKAA2, PRKCA, P RKCB, PRSS1, PSPH, RAPGEF2, RARS, RBL1, RDH5, RFXANK, RND1, RPE65, SD HD, SHC3, SHC4, SMAD7, SNAP25, SORBS1, SPHK1, SPI1, ST3GAL6, ST6GAL1 , TAS2R10, TCF7L2, TRAF2, TYMS, ULBP1, UNC5C, HSD17B10
Negative_15341	ADO, AK7, C7, C9, CFH, CGN, DAO, F9, FGA, MET, RET, ACVRL1, ADIPOQ, ADSS , ALDH3A1, ALDH4A1, ALG10, ARPC5L, B3GALT6, BIRC2, CARS2, CCR1, CD59 , CDC25A, CDC26, COL1A2, CREB5, CREBBP, CSF2RB, CTBS, CTTN, CYP11B1, CYP2S1, DAAM2, DNMT3B, DNMT3L, DRD2, DUSP4, EDA2R, EI24, ESPL1, FBXW 11, FGD3, FGF14, FGF17, FGF18, FLT3, GRHPR, GSTP1, GUCA1A, HAGHL, HBE GF, HMBS, IL12RB1, IL3RA, IL6R, IMPDH2, ITPK1, JAK2, LCMT1, MAD2L2, M AP3K5, MAPK12, MASP2, MCAT, MYH7B, NTF3, OR10A5, OR10Z1, OR2M5, OR52 B4, OXCT1, PARVG, PDCD1, PDE1C, PIGA, PIP5K3, PLCB1, PMM1, PPAP2C, PP OX, PRKAA1, PRPS1, PSPH, PTPRM, PYCRL, RBL2, RPS6KA3, SCLY, SETDB2, S LC27A4, SMPD2, SPTLC1, STAT1, STK4, STT3B, TAS2R1, TAS2R14, THBS1, T ICAM2, TNFSF10, TPK1, TRIP10, YARS2, ZNRD1, ATP6VOE1, CSNK1A1L, HLA -DPA1, MAP3K7IP2, TNFRSF1A
Negative_15342	AK5, CP, IL8, MPI, UBB, ACSM3, ARAF, ARHGEF4, ATP4B, BMP7, CACNA1C, CA DM1, CBLC, CD38, CD40, CD47, CDC25C, CHRM5, CLDN9, CSF3R, CYP2C18, DD X52, DHRS9, DLST, DPM1, E2F5, ENAH, ENTPD4, EPB41L1, EPHX2, FASLG, FB P1, FLT3LG, GART, GCDH, GFPT1, GNAI1, GNRH2, GZMA, HLA- DMA, HMOX2, HSD17B8, IFNAR2, IL10, IL22RA2, IL3RA, IL8RB, INMT, INPP 5E, IRS1, ITGB8, KIR2DL2, KLK3, KLRC3, LIPE, LYZL1, MADCAM1, MAN1B1, MAP3K2, MCCC1, MKNK1, MS4A2, MTHFD2, MYH8, NAGLU, NCR2, NFKB2, NKD1, NME6, NOTCH3, NT5C1A, ONECUT1, OR10G9, OR1L1, OR2B6, OR2M3, OR2T29, OR56A1, OR5R1, OR6Q1, PANK2, PDE1C, PDHB, PITX2, PNMT, PPT1, PRKAR1B , PRKCH, QARS, RDH11, RDH5, RPS6KA3, SARDH, SLC27A5, SNW1, SSH2, ST8S IA5, STAT5B, TFPI, TMLHE, TNFSF11, TPH1, TUBB6, ATP6VOA2, ATP6VOD2, CTNNBIP1, HLA-DQB1

Negative_15343	<p>ADA, BTC, CAD, DBT, FOS, ID2, JUP, SMS, ACAT2, ACLY, ACSL6, ACTA1, ACYP2, ADH5, AGMAT, AGPAT4, AGTR1, AKR1D1, ALDH3A2, ALDH3B1, ALOX15, ALPL, APC2, APOA5, ARNT, ARPC5, ARRB1, ATP12A, B3GALT2, BDH1, BLVRA, CALML6, CCL14, CDC6, CDKN1C, CES1, CHIT1, CMAS, CMPK1, CNDP1, COL2A1, CPT1C, CRB3, CSF1, CYBB, CYP26A1, CYP3A43, DAPK1, DDX41, DDX51, DFFB, DGKE, DPYS, EDA2R, EPB41L2, F13A1, FCGR3A, GAD1, GALNT12, GCNT4, GNAI3, GNMT, GPLD1, GSTA1, GTSE1, HAO1, HEXA, HRH2, IFNA4, IFNK, IL11, IL1R1, IL20RA, ITGA9, KLRK1, LALBA, LARS, LEF1, LTB4R2, MAD2L1, MAP2K3, MAP3K12, MAPK11, MCM4, MGAT5B, MTFMT, NCOR2, NKX3-1, NR1H3, NRXN3, NUDT2, OR10A2, OR10G8, OR13D1, OR14C36, OR14I1, OR1E1, OR1I1, OR1L1, OR2A42, OR2C3, OR2V2, OR3A3, OR4F15, OR4K13, OR5AS1, OR8A1, OR8D1, P2RX5, PAPSS2, PARS2, PFAS, PIAS3, PIGF, PIGM, PIP5K1A, PISD, PLXNA1, POLA1, POLR1A, POLR3B, PPARA, PPM1A, PPP1CB, PPP2R2D, RAPGEF1, RELB, RPN2, RRAS2, SARDH, SENP2, SMAD4, TAS1R3, TAS2R5, TRAF6, TRHR, TSNARE1, YWHAB, ATP6V1G1, EIF4EBP1, PAFAH1B1, PPARGC1A</p>
Negative_15344	<p>ADK, CKM, EPO, GH2, GNS, OTC, RFK, SP1, ACSL4, ACSM1, ADAM17, ADCY7, ADSL, ALG13, ALG3, APRT, ARHGAP5, ATP5I, BMP4, BMP7, BPGM, CACNG1, CCNB1, CCNB2, CERK, CLDN16, CLDN6, CMBL, COL6A1, COQ3, CREB5, CTPS, CYP3A5, DLL1, DMGDH, ENPP2, FABP3, FLT3LG, FTMT, FUT1, GNAI3, GPD1L, GRHPR, GSTT1, HLA-DRA, HSD11B2, IFNA7, IL1R1, IL28A, IL28RA, MAP2K7, MCM6, MTHFD1, NEU2, NKD2, OR10G8, OR13C9, OR1K1, OR4C16, OR4D5, OR4F6, OR4K15, OR56B4, OR5B3, OR6C74, OR6K2, OR8H3, PLD1, POLR1B, POLR3G, PPP2R2B, PRKAG1, PSEN2, PVRL1, QARS, RARA, RASGRP3, RFNG, RFXAP, RHOD, ROBO2, RUNX1T1, SDC2, SLC27A4, SLC2A2, SLC33A1, SMAD6, SMAD7, SMPD3, SPHK2, STAT5B, SUFU, SUOX, SV2A, TAS2R13, TJP2, TUBB, UAP1, UPB1, VCAM1, ZFYVE9, ATP6VOD1, HSD17B10, TNFRSF10B</p>
Negative_15345	<p>AMT, C2, F7, GK2, KIT, PRL, ADCY3, ADCY4, ADSL, ADSS, ALDH3B1, ALG3, AP0C3, ARD1A, ARHGEF1, ATP5J, ATP6V1F, ATP6V1H, BBOX1, BCAR1, BCAT2, BMP8A, BUB3, C4BPA, CCL3, CCL7, CD226, CD34, CD55, CD74, CDC25C, CDH2, CHRNA7, CHSY3, CMPK2, CREB3, CUL1, CYP4F2, DFFA, DNMT3L, DUSP3, E2F5, EGLN3, EIF4E2, ENAH, ENO1, ENPP3, ENTPD8, ESAM, EXT1, FGF5, FGFR3, FMO2, FOXA2, G6PD, GALK2, GAMT, GNAI2, GNPDA1, GPAM, GPX7, GRAP2, HAGH, HPSE, HTR5A, ICAM1, IFNA5, IFNAR2, IL20RA, IL22RA1, IMPA1, ITGA6, ITGA7, ITGB8, ITPA, ITPK1, ITPKA, KITLG, MAFA, MAGI3, MAML3, MAN1A2, MAP3K11, MCM2, MECP, MGAT1, MMP1, MRAS, MYH2, NKD1, NKX2-2, NOTCH2, NPR1, NRG2, NTNG1, NUMB, OR10X1, OR1A2, OR3A1, OR4D9, OR51A4, OR52L1, OR56A1, OR5K2, OR5L2, OR5P3, OR8D1, PDX1, PER3, PIAS3, PIGK, PIGN, PKLR, PLXNA3, POLR3G, PPP1R3B, PRKCA, PRKG2, PSEN2, PTGER1, PTK2B, PYGL, RAPGEF1, RHOA, SDHA, SEMA4C, SHMT2, SOCS7, SOD1, SRGAP3, TGDS, TNFRSF4, TUBA1C, UBA1, UCKL1, HLA-DPB1, PAFAH1B1, PLA2G12A, PNLIPRP1, SERPINA1, TNFRSF11B</p>

Negative_15346	<p>BAX, CBL, DCT, F8, F9, FER, GSR, HGF, OAT, OSM, PGD, RDX, RET, SMO, SRF, S TS, TNC, AANAT, ACACA, ACSS2, ACVR1C, ADAM17, ADRA1B, AFMID, AKR1C4, AMPD2, ARHGEF2, ARHGEF4, ASRGL1, ATP2A1, ATP4A, ATP6V1F, B3GAT3, B4 GALT6, CACNA1C, CCNB3, CCND1, CCR9, CD244, CDH15, CDS1, CHEK1, CHRM3 , CKMT2, CLDN16, CREB3L4, CSH1, ENO3, EPHB6, EPOR, ESPL1, EXTL1, FADD , FCGR3A, FDPS, FGF9, FLT3, GALNS, GALNT13, GATM, GCDH, GSTZ1, GUCA1A , HARS, HIF1A, HPSE2, HSD11B2, HTR5A, IFNA13, IGFBP3, IL1R2, IMPA1, I NHBB, INPP4A, ISYNA1, ITGB6, KIR2DL3, LAP3, LILRB3, LM07, LYZL1, MAM L3, MARS2, MASP1, MGAT1, NANP, NKD2, NOS3, NPR1, NUDT8, OGDHL, OR11L1 , OR12D3, OR1L8, OR2A2, OR4A5, OR4K13, OR4L1, OR4Q3, OR51B4, OR51B6, OR52W1, OR5B21, OR6C3, OR6S1, OR8A1, PCCA, PDE4D, PDPK1, PGAM2, PIM2 , PIPOX, PISD, PLCD4, POLD3, POLR1E, PPP2CA, PPP2CB, PRKAA2, PRKAB2, PRKACB, PRKAG2, RASGRP2, RPN2, RRM1, SPCS3, SPI1, STMN1, SUOX, TRHR, TRPM5, TYMP, UGP2, VAV1, XCL2, HLA-DRB3</p>
Negative_15347	<p>GSN, HYI, MYC, RB1, RPE, WAS, ABI2, ACACB, ACSM2A, AGMAT, ALDH1L1, ARS D, ATP2A3, B4GALT7, BBC3, BET1L, CACNG1, CACNG8, CASP3, CCNB2, CCNG1 , CD40, CER1, CFL1, CLDN4, CSNK2A1, CYP2C19, DDIT3, DEGS1, DFFA, DPM1 , ENTPD1, FCGR2B, FGF19, GALNT8, GALNTL1, GDF7, GSTA4, GSTZ1, GYS2, H PSE2, IKBKG, IL13RA2, IL23R, IL2RG, ITGA2B, ITGA5, LAMC3, LHCGR, MAP K11, MICA, MKNK1, MTMR2, NCOR1, NCR1, NEUROD1, NMNAT1, NQO1, NRG2, OR 10G7, OR10G9, OR11L1, OR13A1, OR2S2, OR2T6, OR2Z1, OR4K1, OR4K13, OR 4X1, OR51E2, OR5B17, OR5C1, OR5D13, OR6K2, OR6Y1, OR7A5, OR7G1, ORC5 L, PDHA1, PHKA1, PIAS1, PLA2G2E, POLR1C, PVRL3, PYCR1, RAP1A, RCHY1, RHOD, RPRM, RXRA, SEMA3D, SEMA7A, SHMT2, SIPA1, SLC33A1, SMPD3, SNAI 2, SQLE, SRD5A2, SYNJ2, TAS2R3, TFPI, THTPA, TMLHE, UAP1, UGT2A1, VAV 1, WNT10A</p>
Negative_15348	<p>A2M, AMH, AUH, F10, FYN, GNS, MSN, MVD, PXN, SRC, TXK, AARS, ACP6, ACSS2 , AGMAT, ALG10, ALS2, AMDHD2, ARNT, ATP5D, B3GALT6, BACE1, BACE2, BBC 3, BBOX1, BCKDHB, BHMT, BMP4, C3AR1, C9orf95, CADM1, CALML6, CANT1, C CL16, CCL23, CCR3, CD19, CDC16, CDC25C, CDS2, CHUK, COL1A1, COL4A1, C OL5A3, COQ5, CRHR1, CSAD, CTSG, CXCL10, CYP1A2, CYP2C8, DAD1, DAPK1, DARS, DCXR, DDX54, DDX56, DGKB, EDNRA, ENO3, ENPP6, EPHA2, F2RL2, FCE R1G, FGF9, FMO4, FZD8, GALNT5, GNB3, GOT1, GPD2, GSTA3, GSTK1, GUCY1A 2, HMGCR, HSD3B7, IFNA10, IFNAR1, IL12B, IL17B, IRS1, ITGA3, ITGA5, J UND, KIR2DS5, KLRC2, KYNU, LHCGR, MAOA, MAP2K3, MAP3K3, MAP3K5, MGAT 5B, MGLL, MKNK1, MTHFD2, NAT5, NGEF, NKD1, NKX2- 2, OR10A6, OR10H2, OR10H3, OR10P1, OR13C8, OR13C9, OR14J1, OR2AE1, O R2B6, OR2F1, OR4D9, OR51B6, OR51E2, OR52K1, OR6C76, OR9K2, PAK7, PAR VG, PDCD1, PDE1C, PFN2, PI4KB, PKM2, PMM2, PNPLA4, PRODH, PRODH2, PRS S2, RPS6KB2, SEMA3D, SEMA7A, SFRP1, SH2D1A, SIGLEC1, SLC25A5, SOCS4 , SPI1, SSH1, TM7SF2, TRAF2, UGT2B17, UPB1, UROC1, VANGL2, VKORC1, VT I1A, HSD17B12, MAPK8IP2, TNFRSF10D</p>



Negative_15349	<p>AK3, DBH, F7, GLA, HK3, KHK, LAT, MVK, OTC, PRL, SHH, STS, ACTN2, ADRB2, ADSS, AGXT, ANAPC11, APPL1, ARPC5, ATP5G2, ATP5L, B3GAT1, B3GNT2, B4GALT1, BDKRB2, BMP4, CAMK2A, CCDC6, CCL15, CCR2, CCR4, CD274, CD58, CD8B, CHDH, CLDN7, CMBL, COQ5, CXCL3, CYP2C18, CYP2D6, CYP3A4, DDX54, DLST, DUSP16, FADS2, FGF17, FGF5, FRAT2, FSHR, GALNT3, GDE1, GLUD1, GNA11, GUCY1A3, HA01, HDAC1, HLA-C, HSPA2, IL13RA1, IL1RAP, IL22RA1, IL25, ITGA11, ITGAM, KIR2DL4, LT B4R2, MAD2L1, MCM2, MMP2, MS4A2, MYH2, NEUROG3, NPR1, NRG1, NT5E, NT5M, NUMB, NUMBL, OGDHL, OR10T2, OR10Z1, OR2B11, OR52N5, OR56B4, OR5B17, OR5H6, OR7D2, OR7G2, PANK4, PAX8, PFKL, PLXNB2, POLR3H, PPP5C, PTC H1, PTGES, PTPRF, PVRL3, RARS2, RDH10, SAT1, SDHB, SMURF2, SPI1, SULT2A1, TAS2R49, TPH2, VAMP4, VANGL1, VEGFC, WHSC1, WNT7A, WNT9B, XIAP, YARS2, YWHAQ, ST6GALNAC4</p>
Negative_15350	<p>ADC, C8A, CP, CRH, DCC, DDO, GPI, IHH, JUP, KMO, MAX, OGT, OTC, RB1, SCD, SFN, SYK, ACSM5, BAI1, BAIAP2, BDH1, C3AR1, C9orf95, CDH1, CDKN2C, CLDN8, CTNNA3, CYFIP2, CYP8B1, DAG1, DPM1, ECHS1, ENO1, ENTPD7, ENTPD8, EPHB4, F2RL3, FADS2, FDPS, FOXA2, GALNT10, GALNT9, GL01, GMPR2, GNAI2, GNPDA1, GOT2, GSTO2, HIP1, HLCS, ICAM1, IFNA2, IL13RA1, IL17B, IL23A, IL25, ITGA2B, LEFTY1, MAP2K3, MAPK8, MMP7, NFYC, NR5A2, NRP1, NTF4, OR10K1, OR2M5, OR4B1, OR4C6, OR4D5, OR4E2, OR51A2, OR52A1, OR52B4, OR5A2, OR5B21, OR5C1, OR6C4, OR7A5, OR8A1, OR8K5, PARVB, PARVG, PGM2, PIK3CD, PIK3R5, PLAT, PLD2, PON2, PON3, PPA2, PRKAG3, PRKCB, PRKCH, PTAFR, PTPN7, RARA, RBKS, RBPJ, RDH10, RFXAP, ROBO2, SEMA4F, SMAD9, SMC1B, STAT4, STMN1, SUCLG2, SV2B, TAS2R8, TUBB4, UBE2L3, UNC5D, VARS, VNN1, HSD17B12, SERPINF2</p>
Negative_15351	<p>CDA, DCK, EGF, FN1, FOS, HAL, IL3, LHB, LYN, PC, SMO, ACADM, ACAT1, AGPAT1, AMD1, ATP5B, B3GALT6, C3AR1, C3orf10, CALML5, CAMK2D, CBLC, CD14, CDH2, CDKN2B, CHEK1, COL4A4, CPT1B, CPT1C, CREBBP, CSF2RA, CSF2RB, CXCL1, CYP11B1, CYP2C8, DERL1, DTX2, ECSIT, EDN1, EFN3, ENTPD6, ESAM, FCER1G, FGF13, FGF17, FOXO1, FZD5, GALNT3, GALNT5, GALNTL1, GJA1, GOT1, GUCY1A2, HAP1, HDAC1, HDAC2, HPSE2, IDI1, IFNA5, IL12RB2, IL29, INHBA, INPP5B, LDHA, LDHAL6A, MADCAM1, MAP3K3, MAPK13, MGST3, MNX1, MOV10L1, MPP5, MYL7, NAT6, NR1D1, NRXN3, OR14J1, OR1G1, OR1J4, OR2C3, OR2Z1, OR3A1, OR4K2, OR51B2, OR52N1, OR5T2, OR6F1, OR8H1, OR8I2, OR9G4, P2RX5, P4HA1, PCNA, PCYT1A, PCYT2, PDCD1, PDK1, PFKFB1, PGLS, P HPT1, PIGP, PIGU, PIGV, PIK3R4, PIM2, PKM2, PLOD2, PNPO, POLA2, POLR1A, POLR2F, PPID, PRKCA, PTPRJ, RALA, RAP1A, RAPGEF1, SC5DL, SCD5, SFRP1, SHC1, SLC33A1, SOCS3, SOX17, SPHK2, SQLE, SSH3, SULT2B1, TAS2R1, TRMT11, UGCG1, UNC5B, WASL, WNT9B, ATP6VOD1, CSGALNACT2, HLA-DQB1, HLA-DRB4, HSP90AA1, TNFRSF13B, TNFSF13B</p>

Negative_15352	<p>AMT, BAX, CP, DLD, GAA, GH1, ID4, IL3, MSN, OAT, ACOX2, ACSL3, ADCY7, ALDH2, ALG6, AMPD2, APOA1, ARPC1A, ASAH1, ASMT, ATIC, ATP6V1D, B3GALT1, B4GALT1, CACNG8, CCL17, CCL20, CCNG2, CCR8, CDC14A, CHRM2, CHSY3, CIITA, CLTA, CMBL, CSF2RA, CSNK1G1, CYCS, CYFIP1, CYP2D6, CYP4A11, DDX55, DGKD, DGKE, DLL4, DNMT3A, DOCK1, DUSP1, EIF4E, EIF4E2, ENTPD1, EPHA7, F2RL3, FADD, FADS2, FPGS, FZD1, FZD6, GALNTL4, GMDS, GPAM, GPX7, GRAP2, GRIN2C, HAAO, HADHB, HSPA1B, HTR4, HTRA2, IFNA17, IFNG, IL10RA, IL20RB, IL22RA1, IL2RB, IL9R, INPP4A, ITGAE, JUND, KAT2B, KCNB1, KIR2DL4, LDHC, LIAS, LPAR1, LYPLA1, MAPK1, MYLK3, NLGN1, NLGN3, NRG2, NSDHL, OR10AD1, OR2A4, OR2L8, OR4D11, OR4X1, OR51L1, OR52E2, OR52E8, OR5J2, OR5P2, OR8H1, PAK3, PCK2, PCNA, PDE10A, PGK2, PIGF, PIGU, PIK3C3, PORCN, PPID, PRKCD, PRLR, PTDSS2, PTPRC, PTPRF, PVRL4, RAB23, RAPGEF3, ROCK2, RPS6KA4, RUVBL1, SARS, SEPHS1, SIAH1, SSH3, TAS2R9, TCIRG1, TLR4, TNFRSF4, TNFSF14, TRIP10, TXNDC12, UCKL1, WASF1, WEE1, WNT10A, YES1, ATP6VOA4, B3GALNT1, PAFAH1B2, PRICKLE2, SERPINE1, ST6GALNAC1</p>
Negative_15353	<p>ABO, AK1, APP, C4B, DCN, F2, F2R, F8, GNS, LEP, RFK, ACADL, ACOX3, ACSM4, ACYP2, ADCY1, ALG5, ALG9, APRT, ARRB1, BCAT2, BET1, BLNK, C3AR1, CACNG4, CCND3, CCR1, CCR9, CDC2, CDC26, CEBPA, CER1, CLDN1, CLDN6, CREB5, CSF3R, CSNK2A2, CYP2C19, DDX18, DERA, DHCR24, DHRS4L2, DIAPH2, ENO1, ENPP3, EPB41L2, EPHA7, FADS2, GALNTL2, GALNTL4, GCNT2, GMPR2, GNAI1, GRIA1, GUK1, HES1, HHEX, IFNA14, IKBKG, IL28RA, IL8RB, ITGA7, ITGB5, KIR3DL2, LDHD, LIPA, LIPC, MAP3K14, MAPK7, MYH8, NCOR1, NEFL, NEUROG3, NFKBIE, OR10A7, OR14J1, OR2B2, OR4D1, OR56A1, OR5L1, OR6K2, OR6K3, OR6M1, OR6Y1, OR8D2, ORC1L, OXCT1, P4HA1, PANK4, PAPSS2, PDE4D, PGM1, PHKA2, PHKG2, PIGU, PIK3C2A, PIK3C2B, PIP5K1C, PLCD4, PLEKHA8, PLIN, PMVK, POLA2, POLR3A, PPAT, PPP1R1A, PSME3, PTDSS2, RAPGEF4, RASGRP3, SCIN, SEMA3G, SLC33A1, SMARCA2, SOS1, SRD5A2, STX6, SULT1A1, TLR3, TNFSF10, TRHR, UGT2B4, UGT2B7, UNC5A, UNC5D, WNT11, YWHAQ, CSNK1A1L, SUV420H2</p>
Negative_15354	<p>AK5, CDA, F10, GLA, ID2, IDS, LSS, LYN, SP1, TNN, TXK, AARS2, ACAA1, ACAD8, ACVRL1, ADRB1, AFMID, AKR1B10, AKT2, ALG2, ARG1, ARNT, B4GALT1, CACNG8, CCNE1, CCNH, CD19, CD34, CD74, CD8A, CDC27, CDC6, CDH5, CLDN5, CTLA4, CXCL3, CYP26B1, DAPK2, DDOST, DPM3, DPYS, EFNA4, EFNB2, ENO2, EPB41L1, EPB41L2, FCGR3B, GAL3ST1, GALK2, GALNTL1, GCAT, GCLM, GNB1, GNB3, GSTZ1, GUCA1C, ICAM1, IFNA6, IKBKB, IL10RB, IL13, IL18R1, IL2RA2, IL6ST, JAK1, JUND, KAT2A, KIR3DL3, LRRC4C, LTB4R2, MGST1, MTMR2, MYH9, NAT6, NCK2, NKD1, NOX3, NUDT12, ONECUT1, OR10AD1, OR10J3, OR12D3, OR13H1, OR1K1, OR2T12, OR4A16, OR51B4, OR51Q1, OR5AC2, OR5D18, OR6K2, OR8D1, PDE4C, PDE6D, PGM1, PIAS1, PIGT, PIK3CB, PKM2, PLAT, PPP1R3A, PRKAB1, PSME1, RALGDS, SCD5, SELPLG, SEMA3G, SETD1B, SFRP4, SMAD2, SMARCA2, SMPD2, SRGAP3, SUFU, TAP2, TAS2R1, TAS2R3, TJP2, TOMM40L, TUBB, TYRP1, UGCGL2, UGT2B11, VANGL1, WNT11, WNT2B, YWHAH, MAPK8IP2, TNFSF13B</p>

Negative_15355	CKM, F2R, HPD, INS, LPO, NPY, RB1, VTN, ACADVL, ACSM2A, ALDH5A1, ALDH7A1, ARG1, ARPC2, BBC3, BCL10, BDNF, CACNB2, CACNG1, CCL5, CDK7, CES7, CHEK2, CHKB, CHRNA7, CHSY1, CLDN8, CNTN2, COL4A4, COL6A2, COX15, CREBBP, CX3CL1, CXCL1, CXCL12, CYFIP1, CYP2A7, CYP2C19, DFFB, DHX58, DUSP6, ENPP6, FCGR2B, FGFR1, FMO3, GDF5, GDF6, GGCX, GGT7, GPD1L, GZMA, HCLS1, HIP1, HSD17B8, HTR7, IL13RA1, IL13RA2, IL8RB, INPP1, INPPL1, INSRR, IQGAP2, ITGB3, ITPKB, JUND, LAMA4, MAP3K4, MCM2, MTHFS, MYL7, NAGA, NAT6, NEU4, NOX1, NRAS, NRG2, NT5C1B, OLAH, OR13C4, OR2M3, OR4D1, OR4X2, OR5A2, OR6C76, OR8B8, OXCT1, PDE4B, PDHA2, PERP, PIK3R5, PNPT1, POLA2, PPCS, PPP2R1B, PSPH, PTGIS, PTPMT1, RDH16, ROBO3, RPN2, RPS6KA3, SFRP1, SMPD2, TAS2R16, TAS2R42, TIRAP, TNFRSF4, TPM3, UNC5B, XYLT1, ARHGEF12, ATP6VOE1, MAPKAPK3, PAFAH1B2, TNFSF13B
Negative_15356	C7, CSK, F2R, FES, FGG, GLS, IL3, IL5, IL7, LHB, OTC, RET, SI, TFG, ACAA1, ACAD8, ACADVL, ACHE, ACSS2, ADCY2, ADCY8, AFMID, AKR1C4, ALPP, ARPC5L, ATP13A2, ATP6V1D, B4GALT5, BBC3, BCKDHB, CACNA1F, CACNB4, CCNB1, CCNG1, CD19, CD274, CD99, CLCA4, CXCL12, CYBA, CYP11A1, CYP3A43, CYP3A7, DDX4, DUSP16, EFNA3, EPAS1, EPHA7, FPGS, FTH1, FZD8, FZR1, GALNS, GALNT1, GALT, GNAZ, GNB3, GPX5, GUCY1A3, HHEX, HLA-DOB, HSD17B7, IFNB1, IKBKG, IL11RA, IL12B, IL1B, IL28RA, INPPL1, ITGAD, ITGAX, ITGB3, KLK3, KLRC3, LAMB3, LARS, LGMN, LYZL1, MBL2, MCAT, MCM4, MGST2, MMP1, MRAS, NAT5, NFATC4, NFKBIA, NRXN2, OR10A7, OR11L1, OR2H2, OR2T5, OR4D9, OR4N5, OR52I2, OR5AK2, OR5K1, OR6K2, OR8B4, P4HA3, PARD6B, PARVG, PCNA, PDGFC, PDX1, PGLS, PIAS3, PIGM, PLA2G3, PPARG, PPP2R5C, PRKAB1, PRKCG, PRKCZ, PSME1, PTTG1, PVRL2, RAB5A, RALA, RCHY1, RDH10, SMAD1, SOCS2, SSH1, ST3GAL4, STX12, STX3, SYNJ2, TAP1, TAS2R7, TCF7L1, TGFB1, THBS4, TIRAP, TPH2, TRAF6, TRIP10, TRMT11, ULBP3, VEGFB, WHSC1L1, ALDH18A1, CSNK1A1L, PHOSPHO1, TNFRSF11A, TNFRSF14, TNFRSF1B, TNFRSF6B
Negative_15357	AK2, CDA, FST, ABAT, ACSS2, AKT3, ARHGEF6, ARHGEF7, ARNTL, B4GALT5, BCAR1, BLNK, CCR8, CD14, CD40LG, CEBPA, CHR1, CHSY3, CKMT2, COL4A6, CREB3L3, CSF3R, CTBP1, CTLA4, CYP21A2, CYP4A22, DAG1, DBF4, DDX55, DMGDH, DUSP1, ENO2, EPHX1, ETNK1, FECH, FZD3, FZD8, GLI1, GMPPB, GNPAT, GRHRP, GSTO1, HAP1, HIBCH, HPSE2, HSD17B2, HSD3B2, HYAL2, ICAM1, IDH3B, IFNA7, IFNGR2, IRS2, LGMN, MAPK9, NAE1, NOD1, NT5C2, NTRK1, OR10A3, OR10H4, OR12D3, OR14J1, OR1J4, OR2G3, OR4E2, OR4Q3, OR51M1, OXTR, PARVA, PCCA, PCK2, PER3, PI4KA, PIAS3, PIGW, PIK3R1, PNLIP, PPP1CB, PPP1R3D, PRKCE, PTPRC, PVRL3, RDH12, ROBO2, RUVBL1, SDHB, SIPA1, SLC25A5, SLC2A1, SLC2A2, SMC1A, SPHK1, SPTLC2, SSH1, STAT6, STX2, STX3, TAS2R42, TBL1X, TNFRSF4, ULK1, UPP1, WBSR22, WHSC1L1, ALDH18A1, ATP6V1C1, HSD17B10, PAFAH1B1, PAFAH1B3

Negative_15358	<p>ADO, AGL, CD6, CGN, CP, DBT, FGG, GHR, GK2, KDR, MSN, AARS, ACSM5, ADCY6, ADRB3, AGRN, AKR1C2, AKR1C4, ALPP, AMDHD1, APBB1, AQP7, ARPC5L, ATF2, C3orf10, CACNA1I, CASK, CASP7, CCKBR, CCL23, CLDN14, CLDN16, CLDN20, CLOCK, COL4A4, CREB3L3, CYP4F3, CYSLTR1, DVL2, ENO1, EPAS1, FABP1, FGF10, FOXO3, FRAT1, GALNS, GALNTL2, GDE1, GDF6, GLG1, GNRH2, GPX5, GSTA2, GSTA3, HLA-DMA, HNF1B, HTR2C, ICAM3, IDH3A, IKBKB, IKBKG, IL17A, IL21R, INPP1, IRF5, ITGA3, ITGA5, ITGB4, KCNJ11, KLRC4, MAML2, MYH4, NFATC1, NFATC2, NLGN2, NRG2, NUDT5, NUMB, OR10A3, OR10AD1, OR13F1, OR1C1, OR1F1, OR2AE1, OR2C3, OR2L13, OR2L2, OR51B6, OR51E2, OR51G2, OR5K2, OR5R1, OR7G2, ORC6L, PDE3B, PDE7B, PDPK1, PIAS4, PIGP, PIK3CG, PIK3R4, PIK3R5, PLCB1, PLCB2, PNLIP, PORCN, PRDX6, PRKACG, PRODH, PSME3, PTDSS2, PTRM, RALB, RPRM, SDHA, SEMA4G, SLC25A6, SLC27A5, SMAD6, SNAP23, SNAP25, SPI1, SPP1, ST3GAL2, ST8SIA5, TACR1, TAS2R60, TJP3, TLR2, TOLLIP, TSNARE1, UGP2, UGT2B11, ULK2, WNT3A, WWP2, ZIC2, ALDH18A1, C1GALT1C1, HSP90AB1, MAP3K7IP1</p>
Negative_15359	<p>ABO, CFI, DBH, HDC, IL6, NLK, TKT, TNC, ACTB, ALAS1, APOA2, ARHGAP5, ARHGEF6, ATF4, B3GALT6, BAAT, BST1, C1QC, C4BPB, C9orf95, CACNB2, CANT1, CBLC, CEBPA, CHKA, CHKB, CSF3R, DARS, DARS2, DIAPH1, DPM2, DUSP4, EGLN3, EIF4B, EPB41L2, ESAM, FECH, FGF2, FSHR, FUT5, GALNT13, GALNT5, GPLD1, HHIP, HNF4A, HYAL1, INMT, ITGA6, ITGB3, KIR2DL1, KIR2DL2, KIR3DL1, LAMA4, LDHA, LEFTY2, MAP4K1, MGAT1, NAE1, NKD2, NR1H3, NR4A1, OR10J1, OR1N1, OR2AG2, OR2T5, OR4A5, OR7A10, P2RX1, PARD6A, PDPK1, PFKFB1, PGAM1, PGM1, PHKG1, PLA2G6, POLD1, PORCN, PRPS2, PTCH2, RALGDS, RASGRF2, SENP2, SEPHS1, SFRP2, SGMS1, SPCS3, SPHK1, STK3, TLR4, TRADD, TRPC1, TYMS, UPB1, WASL, WNT10B, WNT6, XYLT1, ATP6VOD1, PAFAH1B2, PLA2G12B</p>
Negative_15360	<p>A2M, C2, CFH, CGA, F12, FER, GK2, ITK, OGT, PC, PML, ACAD9, ADORA2A, ADRA1D, ADRB3, AKR1D1, ALAD, ALCAM, ALDH3A2, ANPEP, ARPC4, ATP6VOC, BDKRB2, CACNG2, CCND1, CCR2, CD58, CDC26, CDS2, COQ7, COX10, DERA, DGKH, EDAR, EFNA2, EFN2, ENPP2, EPHA1, FDFT1, GMPPB, GSTM3, GUCY1A3, GUSB, GYS1, HHIP, IAPP, IKBKB, IL1B, IL5RA, INHBC, INMT, KLRC3, LIPT1, MAOA, MAOB, MARS2, NAMPT, NCOR1, NMNAT1, OR1C1, OR2A4, OR2T11, OR4M1, OR51I1, OR56A1, OR5V1, OR6A2, P2RX6, P4HA2, P4HA3, PDE7B, PLCB4, PLIN, PLOD3, PNLIP, POLE4, POLR2D, PPAP2B, PPP1CB, RAP1A, RPS6KB2, RRAS2, SCIN, SMARCA2, SORD, SUFU, TGFA, TIRAP, TNFSF18, TRADD, TRAF5, TUBA4A, TUBAL3, TYRP1, UMPS, VCAM1, WNT5A, WNT8A, ATP6VOD1, HLA-DPA1</p>
Negative_15361	<p>CDA, CTH, FER, GK, LCK, RFK, SHH, ZYX, ABCC8, ACHE, ACY3, ADCY5, ADH4, ADH6, ADORA2B, ANAPC11, ARPC5L, ARRB2, ATP5G1, ATP5I, AVPR1B, B3GALT2, B3GAT1, B3GNT4, B3GNT5, B4GALT3, B4GALT7, BMPR2, C1QC, CACNA1A, CACNB1, CCND1, CCR3, CLDN9, CREB3, CSNK1A1, CTBS, CYSLTR1, DDX41, DDX54, DGAT2, DTX2, EFN1, ESPL1, F2RL1, FGF11, G6PC, GANAB, GNAI3, GRIN2D, GSTA2, GUCY2D, HARS, HLA-DFA, HTR7, ICOSLG, IL4R, INSRR, ITGAL, KDSR, KIR2DL2, LALBA, LILRB3, LIPG, LLGL2, MYLK3, NARS, NAT5, NAT6, NLGN3, NPAS2, OCRL, OR10H5, OR13C2, OR2A4, OR2A5, OR2B2, OR4K14, OR4K5, OR5B12, OR7C2, OR7G3, OR9A4, P2RX4, PDE4A, PDE7A, PDHA2, PFN1, PIGU, PIP4K2B, PIP4K2C, PRKACA, PSM E2, PTAFR, PTPN1, PTPN7, PYGB, RAPGEF1, RAPGEF2, RDH10, RND1, SELL, SEMA4G, SESN3, SMAD5, STX8, SULT1A2, TJP3, TRAF2, TSLP, TXNDC12, VAMP2, VNN1, ARHGEF12, ST6GALNAC5</p>

Negative_15362	C4B, CAD, CGN, EPO, FAH, GH1, HK2, IL5, MAX, MPZ, NGF, RET, RFK, TNR, ZYX, ACTA2, AKT3, ALDOC, ATP5G3, ATP6VOC, B3GNT5, BBC3, BCAR1, BCAT2, BDNF, BMP7, CACNG5, CCR9, CD3E, CDC6, CDIPT, CDS1, CHDH, CHIA, COASY, COQ7, CSF1, CYP26A1, DDX51, DDX55, DHDH, DTX3, DUSP10, ENTPD8, EPHA5, FMO3, FMO4, FTMT, FZD9, GCNT1, GMPPB, GNRH2, GRIN2D, HCCS, HSD17B8, ICAM1, IFNA4, IGSF5, IL10RA, IL13RA1, IL17A, INHBE, IRAK2, ITGB6, JAM2, LIAS, LRRC4C, MAGI3, MAP2K2, MGAM, MMP7, NT5E, OR10G9, OR10J5, OR14C36, OR1D5, OR2C1, OR2L8, OR2W1, OR4Q3, OR5AK2, OR6Y1, OR8K1, OR8U1, P2RX7, PANK4, PDE3A, PECAM1, PIK3R3, PIM1, PIP5K1A, PISD, PKLR, PLAT, PLCG1, PLD2, PMAIP1, POLA2, PPM1B, PPP1CB, PPP1CC, PRKCA, PSPH, PTDSS2, PTPRB, RAF1, RASGRP2, RPE65, SETD1A, SLC2A2, SMURF1, STAT1, SUCLG1, SULT1A1, SULT2A1, THBS4, TIRAP, TNFSF10, TNFSF12, TPM3, TSHB, TSTA3, TUBB1, UAP1, UGCG, UGT8, UPRT, VDAC1, VEGFA, WNT5B, ATP6VOA1, B4GALNT1, CACNA2D1, CSNK1A1L, HLA-DPA1, MAPKAPK5, TNFRSF14
Negative_15363	EZR, GH1, HK1, HK2, JUN, SHH, TH, AADAT, AARS, ACADM, ACOT11, ACPT, AKR1B10, ALDH3A1, ANPEP, APOE, ATG7, ATP6V1D, BBOX1, BCAT1, BCKDHB, C4BPB, CACNA1D, CASP10, CASP7, CCL15, CCL26, CD274, CDC42, COL1A2, CSNK1G1, CTPS2, CTSL1, CTSS, DKK1, DLST, DMGDH, DUSP16, EGLN3, ENO1, EPHA1, GALNTL1, GGT5, GLS2, GNA14, GNPDA1, GOT1, GSTM3, GYS1, HEMK1, HEXB, HSD11B2, HSD17B2, IDUA, IL4R, INHBA, INPP1, INPP4A, IPPK, ITGA2, LAP3, LIPA, LYPLA2, MAML2, MKNK1, MKNK2, NAGS, NEFH, NFKBIB, NOTCH3, OR2M3, OR2T4, OR4C15, OR4D2, OR5D16, OR5M9, OR5T2, OR8D1, PDE4A, PIK3R2, PIPOX, PLA2G2F, PLCG1, PNMT, POLR1E, POLR2I, PPARG, PPM1B, PPP2R1A, PPP2R2A, PPP2R5D, PRIM2, PRKAR2A, PTGES, RFX5, RPIA, SEMA7A, SFRP4, SGMS2, SPRY2, STEAP3, STX12, TBXA2R, TCIRG1, TPI1, TSHR, MAPKAPK5, ST6GALNAC4, TNFRSF13C
Negative_15364	CGN, GNS, KIT, RET, ACO2, ACOX3, ACSM5, ADAM17, ADIPOR2, ADSSL1, AKT1, ANAPC1, ANPEP, APOC3, ARSD, B4GALT4, C1GALT1, CACNG1, CCL19, CD99, CDC14B, CDC25C, CDK7, CFL2, CNTF, CPT1C, CSNK1G2, CTSL1, CXCL1, CYFIP1, CYP26C1, CYP27A1, CYP3A43, CYP4F3, DDX55, DHCR7, DHFR, DHRS9, DLST, EGFR, ELK1, ENPP6, EXT1, EXTL3, F2RL2, FTCD, GALK1, GALT, GRPR, GUCY1A3, HCLS1, HMGCL, IAPP, IDH3G, IFNB1, IL10RA, IL12RB2, IL29, IL9R, ITGB2, JAK2, LAMB3, LARS, LIPA, MAP2K4, MICA, MYH7B, NAGA, NCK2, NLGN1, NMNAT3, NT5C1B, OR10T2, OR1D5, OR1M1, OR2H2, OR2T11, OR4K14, OR5D18, OR5M9, OR6C76, OR6Y1, OR7A10, OR7D4, OR8A1, OR8D2, PDE7A, PFKFB2, PFKL, PIK3C2A, PIP5K1A, PPM1A, PRKAB2, PRKCA, PSPH, PTGER3, PTPMT1, RASGRP3, RBL2, RHEB, RXRG, SELE, SEMA4B, SETD1A, SHC2, SHMT2, SLC25A4, SLC2A2, SMAD9, SRGAP2, STAT5A, STK36, TD02, THBS3, TPH2, TRIP10, UGT2B7, ULBP1, ULBP2, VCAM1, WARS2, WNT3, WNT7A, ATP6V1E1
Negative_15365	CRH, EBP, EZR, FGG, GGH, MUT, RPE, TNR, ACYP1, ADRA1B, AHCYL2, ALDH7A1, ASMT, ATP6V1D, B3GALT4, BCKDHA, BMP4, CACNG6, CADM1, CALML5, CBLB, CCL13, CCNG1, CCR9, CER1, COL6A2, CYP11B1, CYP8B1, DAG1, DDX41, DEGS2, EDA2R, ENTPD5, EPHB6, FBP2, FGD3, GALNT1, GALNTL2, GGT5, GNAL, GRIA2, GSTK1, GSTZ1, GUCY1B3, GZMB, HADHB, HCLS1, HLA-F, HTRA2, IDH3G, IFNAR1, IL12RB1, IL18, IL22RA1, IL2RB, IL8RA, INHBC, INSR, IQGAP2, IRF7, KIR3DL3, LDHB, LTC4S, MAP2K3, MAP4K4, MAPK10, MAPK8, MCEE, MCM3, MDH2, MGAT2, MKNK2, MS4A2, MTAP, MTHFS, MYH7B, MYH8, NFASC, NME2, NOX1, NRG1, NUDT5, OR10H1, OR10H4, OR2A14, OR2A2, OR2B11, OR2W1, OR2Y1, OR3A2, OR4D11, OR5K2, OR6F1, OR9G1, PCYT1A, PIK3CB, PIP4K2A, PLOD3, POLR1E, PORCN, PPP2CA, PPP3CB, PRKAA1, PRKAB2, PTPN11, PYGM, RALA, RASGRF1, ROCK1, RPN2, SDC1, SLC25A5, SOCS7, STAT6, STX5, SULT1A1, TAS1R2, TUBB6, WBSR17, WNT2B, XYLT2, C1GALT1C1, SERPINE1

Negative_15366	BTK, DCT, F10, OGT, RB1, SPN, ACADSB, ADH7, ADSSL1, AFMID, AGPAT6, AGX T2, ALG11, ANAPC5, BCL2, BDH2, BMP5, CACNA1F, CCNA2, CD19, CD46, CDK5 , CDK7, CLDN17, COMT, CSAD, CXCL12, CXCL3, CYBB, DPM2, DRD5, EXTL2, FA RS2, FMO2, FOXA2, GALNT11, GDF5, GGPS1, GNRH2, GPD1L, GRAP2, GUCY2D, HA01, HARS2, HNF1A, HSPA1B, IL15RA, IL17A, IL2RB, MAP4K2, MTHFD1L, M YH6, NAGA, NFAT5, NFYA, NTN1, NUMBL, OR13D1, OR13J1, OR14J1, OR1J2, O R1N2, OR2L3, OR2W1, OR4D9, OR4N2, OR4S1, OR4X1, OR52W1, OR5AC2, OR7A 5, OR7D4, PAK4, PDE4B, PDE4C, PLEKHA8, PRKAB1, PTDSS2, PTGES2, RAP1B , RASGRP2, RUNX1T1, SETD1B, SMAD7, SMURF2, SSH2, STX5, SUV39H2, TAS1 R1, TBL1XR1, TGFA, THBD, TLR2, TOMM40L, TRAF5, WBSCR22, WHSC1L1, WNT 5A, HLA-DQB1, TNFRSF13B
Negative_15367	AK3, AK7, AMT, F7, ID4, KHK, NLK, PGD, PML, RFK, TK1, ABCC8, ACSL5, ADH5 , ALAS2, ALG3, ALG8, APOA1, ASPA, ATP2A2, BACE1, BHMT, CACNA1A, CCL26 , CCNA1, CDH4, CLDN15, CLDN4, COL11A1, COL2A1, COQ5, CPT1A, CSF3, CXC L9, DDX55, DERA, DHRS4, DKK4, DMGDH, DOLPP1, DUSP14, EFNA2, ENO1, ENT PD1, EPHA8, EPHX1, ERO1L, ETNK2, FARSB, FGF13, GALNT9, GGT5, GNAT3, G STA1, HARS, IFNA6, IL12A, IL2RA, INSR, IPPK, IRAK4, IRF7, IRF9, ITGAX , KIR3DL2, KNG1, LDHD, LHCGR, LIPA, LYPLA2, MAGI2, MAPK1, MFNG, MMP2, MMP7, NCSTN, NEUROD1, NKX6- 1, OR10T2, OR1J4, OR1N1, OR2AT4, OR2B6, OR51F1, OR5T1, P4HA1, PAK6, P ARVG, PDE1B, PDE4A, PGK1, PHGDH, PHKG1, PIK3C2A, PIK3R3, PITX2, PLA1 A, PLAUR, PLXNC1, POLR1E, POLR3K, PPM1D, PPP1CB, PRKACB, PRSS3, PTGE R1, PTPRM, RETSAT, SETDB2, SHC1, SOCS1, SREBF1, SSH2, STX1B, TAS2R42 , TAS2R7, TBXA2R, TBXAS1, TNFSF8, TPMT, TRAF1, TSLP, TYRP1, UNC5A, UP RT, VAMP2, VCAM1, WIF1, WNT3, WNT7A, ATP6V0A1, PAFAH1B1, TNFRSF6B
Negative_15368	CSK, DBH, EPO, F7, FAS, GH2, GSS, HGD, IL7, LTB, PTS, SHH, SPN, TP0, AADA C, ACAA1, ACOT11, ACOX2, ADCY4, ADRA1B, AGPAT6, ALDOC, APLP1, ATP6VO C, AVPR1B, BDH2, BMPR2, CAMK4, CASP9, CCR5, CD22, CD38, CD40, CD70, CD C14A, CDH15, CDH4, CDKN1B, CHST12, CLDN6, CLTA, CNTNAP2, COL5A3, COL 6A2, CTNND1, CTSL1, CXCL3, CYP11B1, CYP2C19, DCTN1, DNMT1, DNMT3L, D OLPP1, DUSP2, DUSP3, E2F2, EI24, EIF4E, ENPP2, ENTPD1, EXTL1, FADS2, FARSA, FCGR2B, FGF9, FGFR3, FOXO1, G6PC2, GAL3ST1, GGCX, GLDC, GOT2, GSTA2, GUCY1A2, GUK1, HMGCS1, HRAS, HRH1, HSPA1B, ICAM3, IL20RB, IL9 R, ITGB1, LTC4S, MDH2, MITF, MNX1, MYH1, NAGK, NEU4, NRP1, NT5E, OCLN, OGDH, OR10AG1, OR10H5, OR13D1, OR4B1, OR4E2, OR4K14, OR51G1, OR52E8 , OR5B21, OR5D16, OR6C76, PIAS1, PIK3CG, PIP4K2B, PLTP, POLR2H, PORC N, PPAP2A, PPP2R5A, PRIM2, PRKACG, PRKG2, PRSS1, PTGER1, PTGES2, PTK 2, RGS3, SELP, SELPLG, SIGLEC1, SOCS1, SOCS5, SPTAN1, SSX2IP, STAM, S TAT1, STAT4, SULT2A1, SV2A, TAS2R13, THBS1, TICAM1, TSNARE1, UBE2K, UCK2, UGT2B10, UGT2B28, VAMP2, VNN1, WNT9B, ARHGEF12, ATP6V1B1, HLA -DRB4, HSP90AA1, SERPINF2
Negative_15369	A2M, CAT, CR2, DDO, GH1, HAL, MYC, PC, PGP, PVR, SDS, SPN, TPR, TYR, ABI2 , ACSS2, ACY1, ADIPOR1, ADRB1, AHCYL1, AK3L1, AKT3, ALDH1A1, ANAPC7, ARG1, ARNTL, ASCC3, B4GALT7, BDKRB1, BDKRB2, BST1, CASP7, CCR7, CD8A , CDC25B, CFL1, CHIA, CHRM1, CLDN8, COQ3, CTSG, CYP21A2, CYP8B1, DDX2 3, DGAT2, DHRS4L2, DIAPH2, EIF4B, ERO1L, EXOC7, F2RL1, FARSA, FMO1, G ALNT11, GLG1, GNAL, GPD1, HHIP, HSP90B1, ICOS, IDH3A, IFNA21, IFNGR1 , IL10, IL13RA2, IL2RG, IQGAP1, JAG1, LAMC3, LDHAL6A, LIFR, MAPK1, MC CC1, MLLT4, MMP1, MMP2, MOV10L1, NEFH, NFATC1, NFYC, NOX3, NT5C1B, OR 10G4, OR2AE1, OR2W1, OR4D5, OR5M8, OR6B3, PAK7, PANK1, PCK2, PDE6H, P DHA1, PDHB, PFN1, PIM2, PIP5K3, PISD, PLCB1, PLXNB2, PPP1R3C, PPP2R1 A, PPP2R2B, PRKCB, RBL2, RCHY1, RXRG, SELE, SLC12A2, SLC2A4, SMARCA2 , TNFSF14, TOMM40L, TUBB1, TYK2, UGT8, VANGL2, VAV3, WASF2, WHSC1, HL A-DPB1

Negative_15370	AK2, ASL, F8, GGH, ID3, IL5, MVD, TFG, ACMSD, ACVR1B, ADSS, AKR1D1, ALD H3A1, AMDHD2, B3GALT1, B3GNT3, B4GALT5, BIRC5, CACNA1B, CCR1, CCR4, CD47, CD48, CD70, CDH2, CHIA, COL6A1, COMP, COQ6, CSNK1G3, CSNK2A1, C TPS2, CYFIP1, DCTD, DDX55, DHCR7, DLAT, DTYMK, ECSIT, ERBB4, F11R, G6 PD, GALE, GLI2, GNA13, GRIN1, GYS2, HEMK1, HIBCH, HMGS1, IDH3B, IFNA 17, INHBC, INPP4B, IRAK1, IRF3, IRF9, KIR3DL2, LAMC3, LPAR1, MAP3K12 , MAPK8, MFNG, MTFMT, NFYA, NLGN1, NOX3, NR5A2, NT5M, OR10A6, OR10G4, OR10J3, OR2G6, OR3A1, OR52B6, OR52R1, OR6C1, OR8S1, OR9G1, OXSM, PAK 6, PCYT1A, PDXK, PIAS4, PLA2G6, PLCE1, POLR1B, PRSS3, PSME2, RASA1, R DH10, RDH5, RPS6KA3, RRAS2, SDC3, SEMA7A, SETD1A, SLC9A1, SMC1B, SSH 1, STX5, STX8, SV2B, TAS2R16, TAS2R38, TLR5, TNXB, TPK1, TRHR, TRMT11 , TSC2, TUBA3E, TUBB1, UGCGL2, UGT2A3, UPP1, UROC1, VTI1B, XYLT2, HLA -DQB1, TNFRSF10A, TNFRSF13B
Negative_15371	C2, CEL, DBH, FES, GHR, GSN, IL7, LPL, LYN, SFN, AASS, ACADL, ACADSB, AC AT2, ACYP1, ADRB3, AHCY, ALDH1L1, ALDH2, ALDH7A1, ANGPTL4, ASNS, ATI C, ATP6V1H, BAI1, BCAT2, BCL2, BMPR2, CAMK2B, CARS, CCNG2, CD48, CHRN A7, CRKL, CYP11B1, CYP17A1, CYP21A2, CYP2B6, DDX52, DGKQ, DHCR7, DLL 3, DLL4, DPYD, ELK1, ENPP2, EPB41L3, EVI1, FADD, FCER1G, FGF14, FMO3, GALNS, GALNTL1, GCNT3, GJA1, GLI3, GLYCTK, GRB2, GRIA2, GZMA, HAO2, H ES1, HIP1, HLA- G, HSD17B3, HYAL1, IL17B, IL22RA2, IMPDH1, INPP5A, ITGB6, JAK1, KIR3 DL1, KIR3DL3, KITLG, LALBA, LDHB, MAML2, MAPK11, MAPK8, MLLT4, MMP7, MPDZ, MYH3, NFYC, NLGN1, NME7, NOX1, NPR1, NUDT2, OPLAH, OR2A14, OR2A E1, OR2D2, OR2G2, OR2M2, OR4F17, OR4K2, OR4N2, OR52M1, OR52W1, OR5L1 , OR5M9, OR5P2, OR6S1, OR6T1, OR7G1, PARVB, PLD1, PLOD2, PMM1, POLR1A , POLR3H, PPM1A, PRKCQ, PROC, PRODH, RALBP1, RASA2, RBPJL, RDH10, RRM 2, RRM2B, SEMA3A, SEMA4D, SIGLEC1, SPI1, STMN1, STX5, TLR5, TRAF4, UG T1A10, UNC5A, VAMP1, VAMP3, ZIC2, ATP6VOD1, TNFRSF10D
Negative_15372	CFI, CGN, DBH, DBT, HK3, MAX, AARS2, ACPP, ACSL1, ADAM10, ADORA2A, ALD H4A1, ALG10B, ALG2, ALOX15, ALPI, AOX1, ATG3, ATP2A2, B3GALT2, B4GAL T6, CACNA1D, CACNG2, CARD11, CCL3, CHD8, CLDN16, CNTFR, CNTN2, COQ5, CREB1, CTSG, CYBB, CYP11B2, DERL1, DIAPH3, DUSP10, DUSP3, EFN2, EFN B3, EHMT2, ELK4, F13A1, FCGR2B, FLT3, FZD5, G6PC, GAD2, GLG1, GPLD1, G RB2, GUCA1B, HSD17B2, HSPB1, HTR4, IDH2, IFNA2, KNG1, LAMA4, MAGI3, M AML3, MAN1A2, MFNG, MYH1, MYH15, MYH3, NADK, NEUROD1, NLGN1, NOTCH1, NOTCH2, NR1D1, NT5M, NUDT2, OR10V1, OR1A1, OR1N2, OR2L13, OR4D1, OR4 L1, OR5T2, OR6C3, OR6N2, OR9Q2, P2RX3, P2RX4, PANK2, PAPSS2, PDCD1, P IAS2, PIGH, PIK3C2G, PIP5K1B, PLOD2, POLD3, PPAP2B, PPM1B, PPP2R2A, PRKG1, PSME2, PTPN6, RALGDS, RAPGEF1, RND1, RPRM, RRAS, SC5DL, SDC2, SDHA, SEMA3B, SETDB2, SMC1A, ST3GAL1, SULT1A1, SUV39H1, TD02, TIAM1 , TSC1, UGT1A10, ULK1, ZNRD1, HLA-DRB4
Negative_15373	C8A, CD2, GH2, HAL, KHK, TKT, TPO, ADCY4, AGRP, AHCYL2, AKR1C3, APLP1, APOA2, ARHGEF4, ATP50, B3GNT5, BET1, BMP6, CCND1, CCR9, CD79A, CDC16 , CDH15, CDK6, CFLAR, CHIA, CHPT1, CLDN18, CLDN3, CNGB1, COQ3, CSF3R, CTPS, DDX23, DGKQ, DGUOK, DLL3, E2F5, FGF2, FGF20, FGFR2, FLOT2, FUT5 , GALK1, GMPS, H6PD, HSD17B1, HSD17B7, IFNG, IL18R1, IL23R, IMPA1, IN MT, JAG1, LPAR1, MYH15, NFATC2, NRXN1, NT5E, OR1G1, OR2T3, OR2T5, OR4 K2, OR51E2, OR5A2, OR7G3, OR8H3, P2RX7, PARD6A, PDE7B, PGAM1, PHKA2, PLA1A, POLR1A, PRKG2, PROS1, PTPRZ1, PYGM, RAPGEF2, RFNG, RFX5, RPE6 5, RPS6KA6, SELE, SEMA3D, SHMT1, SIPA1, SORBS1, SPTAN1, ST3GAL4, STE AP3, STX4, TLR2, TRAF4, TSHB, TUBA8, TUBAL3, TUBB2A, UGT2A1, VDAC1, W HSC1L1, WNT2, WNT4, ATP6VOA4, PNLIPRP1, ST6GALNAC3

Negative_15374	CDA, CFD, F12, FAH, GP5, LSS, NF1, AADAT, AASDH, ACLY, ACP2, ACP5, ACTA2, ADH1A, AKT2, ANAPC10, AVPR1B, B4GALT5, B4GALT7, BCAT1, BCKDHB, BET1, BPGM, C1QB, CACNA1A, CACNG6, CDS1, CNGA3, CREB5, CSNK2B, CTNNA1, CYP26C1, CYP2A13, DARS2, DDX55, DGKI, DGKQ, DOCK1, DUSP9, E2F2, EIF4E, FGF14, FLOT1, FTCD, FZR1, GABARAP, GAD1, GALM, GALNT12, GALNT6, GLYCTK, GMPR, GNA15, GNPDA2, GNPAT1, GOSR2, GOT2, GPD1L, GSTM1, GUCA1B, HEXA, HMOX2, HSD3B7, IFIH1, IFNAR2, KCNJ11, LAMB4, LCMT2, MAGI3, MAP3K6, MARS, MCM7, MNX1, MYH14, NCAM1, NEU2, NR1H3, NT5C, OR10A4, OR10G9, OR10K1, OR13D1, OR1C1, OR1K1, OR2H1, OR2M3, OR2T5, OR4D9, OR51B5, OR52E2, OR52E6, OR52N1, OR52W1, OR6C76, OR7D2, OR8K5, OXCT1, P2RX6, PAPSS2, PARD3, PDE4B, PDHB, PDXP, PFN3, PGK2, PIK3CA, PLAUR, PLCG1, PMVK, PRKAA2, PROC, PTEN, PTPRC, PTPRM, RAPGEF3, RASGRF2, RASGRP1, RDH8, ROCK2, RPS6KA4, RPS6KB1, SDC1, SEMA4A, SEMA4F, SMAD4, SPRED2, ST8SIA5, STAT1, STAT6, STK3, SV2A, SYNJ1, TALDO1, TRAF4, TSHB, TUBA3E, TUBB2A, UGT8, UMPS, VANGL2, VTI1B, WNT5B, ATP6V1C2, CSGALNACT1, PARGC1A, SERPINF2, ST6GALNAC6, TNFSF13B
Negative_15375	ADA, AK7, AUH, CDA, CKB, DCC, F9, KDR, MPZ, SRF, ABLIM2, AC01, ADCY8, AGRN, AGXT, AKT1, AMD1, ARPC4, ATG3, ATP5E, B3GNT3, BCKDHB, BDKRB1, BET1L, BLNK, BLVRB, BMP8A, CACNA1A, CACNG3, CASK, CCL16, CCNB3, CD40, CDH15, CFL2, CHEK1, CHIA, COL1A1, CPT1B, CX3CR1, DAAM2, DDX54, DHRS9, DIAPH2, DLST, EP300, EPHA6, F13B, FLOT2, FZD4, GAD2, GCNT4, GGPS1, GNPAT1, GSTZ1, HLA-DOB, HMGCL, IDH3A, KCNJ11, LAMB4, LYZL1, MAD2L1, MAOB, MAP4K3, MMP7, NEU2, NTRK2, NUDT5, OGDH, OR10G2, OR1L3, OR2AG1, OR2B11, OR2H2, OR2T33, OR51L1, OR51V1, OR6C75, OR6K3, PAPSS1, PCYT2, PGLS, PIP5K1A, PISD, PNPO, POLA2, POLR1E, PPCS, PPOX, PPP2CB, PPP2R5A, PPP5C, PRIM1, PROX, PTAFR, RELA, SCLY, SIPA1, TAS2R5, TAS2R9, TRIP10, TUBB1, WBSR17, WBSR22, WEE1, WNT7B, ATP6V1B1
Negative_15376	ADO, AGK, AMT, BCR, C7, HGF, LAT, PGD, TH, TK2, ACP2, ARHGEF7, ARNTL, ARPC5, ATP2A1, ATP5A1, BMP7, BMPR1A, C9orf95, CACNA1G, CCL17, CCL3, CD99, CDKN1C, CLCA4, CLTB, CMBL, CNTF, CPT1C, CRLS1, CXCL11, CYP21A2, CYP2C19, DAPK3, DNMT3B, DTX3L, DUSP7, ENTPD7, EPB41, ERBB2, ETK2, FM05, FTCD, FTH1, FZD6, G6PC2, GALNT14, GCAT, GRLF1, HNMT, HPSE, IL18R1, IL23A, INSR, ITGAX, KARS, LAMC1, LFNG, LYZL1, MAP2K1, MAPK3, MARS2, MGAT2, MGAT4B, NEFL, NKX3-1, NME7, NT5C1B, NT5M, OR10A3, OR10A7, OR1L1, OR1N1, OR2G6, OR5H6, OR8J1, OR9G4, PARVB, PDE10A, PIGF, PLXNB3, PLXNC1, POLR2D, POLR3G, PRKCZ, PRKX, RASGRP4, RHOD, RUVBL1, RXRA, SESN2, SLC25A5, SLC33A1, SLIT1, SREBF1, STX3, THBS2, UBE2L3, ULBP3, UROC1, XYLT1, YARS, ATP6V1C1
Negative_15377	C8A, C8G, CDA, CRK, CS, DBT, DCN, F2R, GH2, IDS, MET, MPI, OTC, PLG, ABL2, ACAA2, ACSM5, ACTB, ACYP1, ADAM10, ADCY3, ADIPOQ, ADRB3, AGPAT4, AH CYL1, AMHR2, AMY2B, APLP1, ATP13A2, BCAT1, BET1L, CACNA1C, CHRM1, CHSY3, CLDN14, CLOCK, CNTN2, COL4A2, CREB3L2, CREB3L3, CRY1, CSF1, CSH1, CTSG, CXCR4, CXCR5, DAAM1, DIAPH3, EDAR, EPB41L1, EPHB6, EPHX1, GAD1, GADD45B, GALNT11, GCLM, GCNT1, GGT6, GPT2, GRB2, GTSE1, HLA-DOA, HTR2C, IMPDH1, KITLG, KYNU, LAMB1, LDHAL6B, MAP3K11, MCCC1, MCM6, MGAT3, MGAT5B, MGST3, MOV10L1, MPP5, MPST, MYH2, NCF1, NEU4, NRAS, NRP1, OR10AD1, OR2A25, OR2A4, OR2L3, OR2T1, OR4F5, OR4Q3, OR51F2, OR51G1, OR52J3, OR5B3, OR5J2, OR6C1, PAICS, PCCA, PIGO, POLE4, PON1, PPBP, PPP2CB, PRKAB2, PSAT1, RASSF1, RASSF5, SEMA3D, SEMA4B, SEMA4G, SESN2, SGPP1, SNW1, ST3GAL5, ST6GAL1, STK36, SUCLG2, TAS2R48, TD02, TFP1, TJP2, TLR5, TM7SF2, TNXB, TUBB2C, TUBB6, ULK2, XCL1



Negative_15378	F7, FGG, FUK, GNE, GSS, MAX, TFG, AASS, ADCY9, AMD1, AMPD1, ARPC3, AVPR1A, B3GAT1, B4GALT5, BMPR1B, BRAF, CACNB3, CASP8, CAV3, CD244, CDC42, CDK7, CHST12, CLDN11, CNTN2, CNTNAP2, CTBS, CXCL12, CYP2J2, DARS, DIT4, DEGS1, DOCK1, DUSP14, DUSP6, EDA2R, EFNB3, ENTPD6, EPHA8, GMDS, GNA15, GPLD1, GRIN2B, GSTA5, HGSNAT, HTR5A, IFNAR2, IMPDH1, ITGA2B, ITGB4, LAMB3, MAP3K1, MGAM, NAGA, NEFH, NME7, OR13C4, OR13H1, OR1L8, OR4D11, OR4F15, OR4F4, OR51T1, OR51V1, OR56A1, OR56A4, PARD6G, PDE4B, PFKFB2, PGK1, PGM3, PIAS2, PIAS4, PIGN, PIK3C3, PLA2G2A, PLCZ1, P OLR1D, POLR1E, POLR2C, POLR2I, PPAR, PPP2CB, PTCH2, PTPMT1, PYCR2, REL, RERE, SESN2, SLC25A6, SMAD7, SREBF1, STK3, SULT1A2, THY1, TJP2, TLN2, TP53, TPH2, TUBB, VAV2, WIF1, CSGALNACT1, GABARAPL2, TNFRSF14
Negative_15379	CRH, DHH, F12, FGG, KMO, ACOT12, ACSS3, ADCY4, ADRB1, AKR1A1, ALAD, ALDH1A1, ALDH1L1, ANAPC4, ARSA, ATF4, ATP6V1H, B4GALT6, BMP5, CACNB1, CACNG1, CAMK2A, CARD11, CD226, CDC20, CFL2, CHKA, CHUK, CMBL, COL1A2, CSNK1G2, CTLA4, CXCL10, CYP3A5, DDX4, DGAT2L4, DHODH, EFNA5, ENTPD4, EPHA6, FABP4, FARS2, FM01, FOSL1, FPGT, FRAP1, FUT4, G6PC2, GAPDH, GARS, GGBT1, GCNT1, GJA1, GNRHR, GRIA2, GSTO2, GUCY2F, GZMB, HPSE2, IGF1, IL17RA, IL1R2, IQGAP2, ISYNA1, KLRC2, LARS2, LEFTY2, LIFR, LIMK1, MAPK13, MFNG, MGAT5B, MPST, NKD2, NMNAT3, NRXN2, NT5M, OR11G2, OR13F1, OR1E1, OR2A5, OR2T11, OR4D6, OR4N4, OR51A2, OR51A7, OR51G1, OR51L1, OR52A5, OR52K1, OR56A1, OR5B3, OR6N2, OR8S1, OR9I1, OR9Q1, P2RX2, PCCA, PCCB, PDGFD, PDK1, PIGQ, PIGT, PIGV, POLD2, PON1, PTGS1, PTPMT1, RARA, RASGRP1, REL, SEMA4A, SETDB1, SETMAR, SIAH1, SOS1, STAT5A, STAT6, SYNJ1, TAS2R10, TBXA2R, TCF7, TRAF2, TSC1, TUBB3, UCK1, VARS, WNT1, YWHAQ, SERPINC1, TNFRSF10D
Negative_15380	BCR, DAO, DLD, F3, FAH, FER, FUK, GSS, KIT, MAG, MYC, NF1, WAS, ACVR1B, ADIPOR2, ALDH1A3, ALDH9A1, ARPC2, ARPC3, ASRGL1, B4GALT7, BCKDHB, C1QC, CARD11, CCKBR, CCL17, CCL24, CD274, CDKN2D, CES7, CFL1, CNGA3, CRKL, CTBP1, CTBP2, DGKG, DGKI, DHDDS, E2F4, FGD3, FGF8, FTMT, FUT3, GNAI2, GNAS, GOSR2, GPD1, GSTA2, GSTM3, HAO2, HLA-DOB, IFNA4, IFNA5, IFNA7, IL12A, INSR, ITGAL, KCNJ11, LCMT1, LRP6, LTBR, MMP14, MYH2, MYL2, NAGLU, NCOR1, NEU2, NFE2L2, OGDH, OLR1, OR10K1, OR2F2, OR4N2, OR4P4, OR52E4, OR5B17, OR5F1, OR6F1, OR8D2, OR8S1, OXSM, PFKFB2, PGM2, PIP4K2C, PKLR, PLOD2, POLD2, POLR2D, PPP2R2A, PRKD, PRKCZ, PYGB, RAB23, RASGRP1, RBX1, RDH10, RPS6KA1, RPS6KA5, RUNX1T1, RXRA, SETD7, SKIV2L2, SSH3, ST8SIA5, STAT2, STAT4, TAS2R60, TNFSF14, TNFSF8, TRMT11, TSC2, UMPS
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Negative_15382	BTD, CEL, FGB, FUK, GAA, IVD, PGF, SRC, ACTC1, ADCY1, ADCY10, ALDH7A1, ATG12, ATP2A2, BMP2, CADM3, CARS2, CER1, CLDN14, CLDN16, COL5A3, CPT1C, CREB1, CSNK2A2, CYP2F1, DARS, EIF4E2, F2RL3, FBP1, FCGR3A, FGF22, FGF3, FTCD, FZD10, G6PD, GALNT10, GTSE1, HSD17B7, IARS2, ICAM3, IFNA21, IFNAR1, IL12RB2, IL17B, IRF7, IRF9, JAK2, KLRC4, LDHA, LIFR, LRA T, LTBP1, MCM5, MDH2, MTHFD2, MYD88, NLGN3, NNMT, NTRK1, OR13F1, OR2T3, OR2T33, OR52W1, ORC5L, PANK4, PAX6, PCK1, PCYT2, PDE4C, PFN1, PIGC, PIGH, PIK3C2A, PLEKHA8, POLD4, PPCDC, PRKAA1, PRKAA2, PRKY, PSME2, PTPN5, RASGRP4, RPS6KB2, SAT2, SC5DL, SDHC, SELE, SEMA3F, SEMA4B, SMAD2, SNAP25, SOD1, SUV39H2, TAS1R3, TAS2R13, TJP1, TRAF3, UBA1, VAV3, VEGFC, ZNRD1, B4GALNT1, SERPIND1, TNFRSF10B, TNFSF13B
Negative_15383	BAX, C5, F9, IL6, IL9, MPL, MTR, MVK, ACADSB, ACADVL, ADRB3, AGXT2, ARHGEF7, ATP12A, B3GAT1, B4GALT1, B4GALT6, BCKDHB, CACNG5, CACNG6, CAMKK1, CARD11, CD8A, CD8B, CER1, CES1, CHRM5, CHSY1, CKMT2, CLCA4, CLDN15, CLDN20, COMT, CSNK1D, CTSG, CXCL3, CXCL5, CYP2A13, CYSLTR2, DDX4, DDX52, DHRS3, DKK2, DPM1, DTX3, EPHX2, ERBB3, ETS1, FGF22, FMO1, FUT4, GALNT11, GALNT5, GZMA, H6PD, IFNA13, IFNB1, IFNGR2, IL15RA, ITGB3, KLRC1, LAMC1, LDHB, MADCAM1, MAN1B1, MAP3K12, MAT2B, MCM7, MGAT4A, NANS, NFKBIA, NKD1, NRG1, NRXN2, OR2M2, OR2M5, OR2T4, OR5R1, OR6A2, OR7D2, OR8J3, PCK1, PDE10A, PDE4D, PFKFB1, PGS1, PKMYT1, PLA2G3, PLOD3, PNPT1, POLE4, PPA2, PPM1D, PRKCI, PVRL2, SEMA3D, SFRP2, SIGLEC1, STK4, SULT1A2, SULT2A1, TCF7, TCIRG1, TOMM40L, TP73, UBA7, XCL2, TNFRSF17
Negative_15384	GLS, HK2, MYC, SPN, AGPAT2, AKR1C3, ALDH1A1, ALDH3B1, ANAPC7, B3GAT1, CCL16, CCL17, CCND2, CCR10, CD247, CD27, CD3E, CHSY1, CMAS, CNDP1, CSF3, CSNK1E, CSNK1G2, CSNK2A1, CTPS, CTSS, CX3CR1, CYP19A1, CYP1A1, CYP2J2, DBF4, DDX18, DKK2, ECSIT, EDNRA, EIF4E2, ELK4, ENPP2, ENTPD4, EPHB6, ESAM, EXT1, EXTL2, F13A1, FGF6, FMO1, GAB1, GALNTL1, GLS2, GRIN1, GRIN2C, GSTK1, HADH, ICOS, ITGB1, LAMB3, LCMT1, LDHB, LEFTY2, MAP2K2, MAP2K7, MECR, MRAS, MYH14, MYH3, NCSTN, NEUROG3, NFYA, NR1H3, NR4A1, OR2T6, OR4C46, OR6C3, OR6K3, OR7A5, OR8K5, PAK3, PDE4B, PDXP, PECAM1, PHKA2, PLOD3, PTEN, PVRL4, RAC3, RDH11, SCIN, SEMA4F, SEMA7A, SESN2, SGMS1, STT3B, SULT1E1, TACR2, TCF7L2, TD02, THTPA, TUBA4A, TUBB2B, TYMS, UROD, VAMP3, ATP6V1C2
Negative_15385	C9, CGN, FOS, ME3, MPZ, PAH, VCL, VTN, ABL2, ACADS, ACOT11, AGTR1, AKR1C3, ALDH3A1, ALDH7A1, ALDOC, AMDHD1, ANAPC2, BDH2, CACNA1E, CCL1, CCL14, CCL26, CCL7, CCR3, CD70, CDC14B, CDH15, CDS2, CHAD, CHPT1, CLDN17, CLTB, CNGB1, CTSG, CXCR4, CXCR5, CYCS, DARS, DBF4, DOT1L, DVL1, EGLN1, EI24, FMO1, FRAP1, GAD2, GAS1, GCNT3, GLI3, GLS2, GNG3, GSTO2, HAAO, HES1, IGF1R, IL11RA, IL13RA2, IL19, IL1RAP, IL29, IL5RA, IQGAP2, ITGAV, LIMK1, MAP4K3, MAPK10, MLYCD, MRAS, NCOR1, NEFH, NEU3, NNMT, NOX3, NR5A2, NT5E, OR10A2, OR3A2, OR3A3, OR4F5, OR4N4, OR52N2, OR52N5, OR56A4, OR5AK2, OR6C2, OR8B12, ORC4L, P4HA3, PAK1, PARD3, PDPK1, PFKFB4, PIAS3, PIP5K1C, POLR2G, PPARD, PRKAG1, PRKCB, RBPJ, RELA, RRM2, SELPLG, SEMA3G, SREBF1, TALDO1, TAP1, TAS2R4, TAS2R8, TLN2, TLR3, TOMM40L, TPMT, TUBB6, UCK1, UGCG1, UMPS, YOD1, CACNA2D1, TNFRSF14

Negative_15386	C5, CAT, CR2, HAL, HDC, HK2, ID2, ME1, MOS, PC, AGPAT2, AGPAT6, AGRN, AKR1B10, ALG11, ALOX12, ANAPC2, ARNT, ARSB, ARSD, ATP5G3, ATP6V1H, AVPR1A, B4GALT7, CCL3, CCR3, CD80, CDIPT, CER1, CERK, CHPF, CHSY1, CLCF1, CLOCK, CX3CL1, CXCL13, CYP27A1, CYP4A22, DDOST, DPM1, DUSP8, ELK4, ENTPD8, EPHA8, FGF10, FGF5, FLT1, FUT4, GLYCTK, GOT1, GSTA3, GSTM1, HADHA, IFNA7, IFNGR2, INSR, ITGA10, LIAS, LIPT1, MAN1B1, MTMR6, MYL9, NLGN2, NRCAM, NSDHL, OR10S1, OR13D1, OR1G1, OR2A42, OR4C6, OR4L1, OR52A1, OR6T1, OR7A10, P4HA3, PDE7B, PIK3CG, PLCB2, PLD1, PLXNC1, POLD3, POLR2C, PPAP2A, PPP1CA, PYCRL, RAC2, RAF1, RASGRP1, RDH12, RDH5, RRM1, SLC2A4, SMAD9, SOAT1, SPRY4, ST3GAL6, ST8SIA1, STX4, TBK1, THBD, TNFSF12, TSTA3, TUBB4, UCK2, UCKL1, UGT1A10, VEGFA, WHSC1, WNT8A, ATP6V1G3, SLC25A31, SUV420H2
Negative_15387	ADA, BTC, C2, DAO, FER, ID1, LEP, PLG, AARS, ACOX2, ACSS1, ACY3, ALDH3A1, APOA2, ARHGAP5, ARHGEF1, ATP12A, ATP4A, ATP5L, B3GAT1, BHMT, C3orf10, CCL28, CD8B, CDKN1B, CFTR, CLDN8, COL6A1, CYP4A11, CYP7A1, ECSIT, ENO1, ENTPD8, EPHB1, FGF11, FGF12, FGF2, FGF21, FOXA2, GGT5, GLI3, GNG12, GNG13, GNPAT, GTSE1, HA02, HCLS1, HDAC1, HYAL1, IL10RA, IL13RA1, IL15, INPP4B, ITGAM, ITPKA, KCNB1, LYPLA1, MAP3K1, MGLL, MMP9, MYH8, NCSTN, NEFH, NR4A1, NUDT5, NUDT8, OR10A3, OR2AG1, OR2T10, OR2T8, OR3A1, OR4K1, OR4M1, OR51B4, OR51F2, OR52H1, OR5AR1, OR5K2, OR5M3, OR6C70, OR7A10, OR9G4, PAPSS2, PAX6, PDE5A, PPA1, PPA2, PPOX, PRIM2, SENP2, SFRP2, SLIT2, SMPD3, SOCS7, ST3GAL2, ST8SIA5, TBL1X, THBS3, TIAM1, TPM3, ULBP3, VASP, WBSR17, ZNRD1
Negative_15388	A2M, ABO, BAD, CBL, DAO, F3, GSR, HK3, ADCY4, AHCYL2, AOC3, ARHGEF7, ANS, ATP5G3, B3GALT5, B3GNT5, BHMT, BMP8B, CBR3, CCND2, CCNG1, CCR9, CD36, CDKN1C, CFL2, COL3A1, COL5A2, CREB3, CSF2RA, CSF3, CXCL6, CYP27A1, CYP2F1, CYP8B1, DGKB, DGKE, DGKZ, DNMT3A, EDA2R, ENTPD5, FABP1, FARS2, GALNT10, GGT7, GNA12, GPD1, GRM5, GSTA3, HDAC2, HMOX1, HTR7, IARS2, IFNA7, IFNK, IL12A, IL12RB2, IL1B, IL20, IL20RB, ITGA7, LARS, LCP2, MAML2, MCM3, MINPP1, MS4A2, MTMR6, MYH10, NCR1, NOD1, NOX1, NT5E, OR10A2, OR10H5, OR12D3, OR2D3, OR2H2, OR2T34, OR2T6, OR3A3, OR52H1, OR56A1, OR5AU1, OR5C1, OR5J2, OR8J3, OR9A2, PAK7, PAPSS1, PARD3, PCYT1B, PCYT2, PDE1A, PECAM1, PIGU, PIK3CD, PIK3R2, POLR1B, POLR3A, PPA1, PRKACB, PRKACG, PRKCG, PTDSS1, PTGES2, PVRL1, RAPGEF3, RBL2, RFX5, SCD5, SLC25A6, SOX17, SPRED1, STK11, STX10, SV2A, TBK1, TUBA1A, ULBP2, VAMP3, VASP, WNT2, WNT2B, XYLT2, YES1, ZAP70, ATP6V1B2, B3GALNT1, CACNA2D3, CSGALNACT1, MAPK8IP3, MAPKAPK2, SERPIND1, TNFRSF10B
Negative_15389	AK3, AUH, BAX, CBS, CFD, CKB, CRH, CTH, EBP, FST, HK2, ID3, LAT, NOG, PDC, SHH, TAT, TNF, ACP1, ACP5, ACTA2, AGPAT2, AGPAT4, AK3L1, ALDOA, APBB1, ARHGEF2, ATP5B, ATP5G2, ATP5G3, BET1, BPNT1, CCL4, CD14, CDC14B, CDKN2C, CLDN14, CNGA4, CPT1B, CRB3, CYP26C1, CYP4A11, DBF4, DDX52, DDX55, E2F5, ENO2, ESAM, FECH, FGF22, FOXO3, FUT8, GALK1, GALNT8, GGT7, GNG3, GPD1, HES1, HMGCS1, HNF1B, HPSE2, HSD17B1, ICAM2, IDH1, IFNA21, IL2RB, IL8RA, ITGAX, ITGB6, LAMB2, LIPE, LTA4H, LTC4S, MAP3K1, MIOX, NCK1, NCR3, NFAT5, NFE2L2, NFKBIB, NFX1, NLGN2, NMNAT2, NOTCH2, NT5C1B, NTN1, OLR1, OR10Q1, OR11H1, OR12D3, OR1L3, OR1L4, OR1L6, OR1N2, OR2C1, OR2T34, OR4D11, OR4F5, OR4M2, OR52I1, OR8A1, PDE3B, PECAM1, PIGH, PLCB4, PLD1, PLK1, POLE, POLR2L, PPAP2B, PPP1R3B, PRKAR2B, PRK CZ, PRKG1, PTDSS1, PTPRC, PTTG1, PYGB, RERE, RPE65, RPRM, RPS6KB1, SCD5, SLC25A5, SMAD6, SOCS4, SPAM1, SRD5A2, TAP2, TAS2R4, TCIRG1, TIRAP, TLR2, TLR5, TLR9, TNFRSF9, TYRP1, UBE2K, VAV3, VTI1B, WNT1, WNT3A, CSNK1A1L, TNFRSF1A

Negative_15390	CD2, CFH, EDA, ILK, LIF, MPL, PML, ACADM, ALPL, AMY2B, APOA1, APOC3, AR EG, ARPC5, ASIP, ATP4A, ATP5L, ATP6V1F, B4GALT2, BAAT, BDNF, CCL13, C FTR, CHPT1, CLCA4, CLDN16, CLDN22, CLDN8, CMBL, COL6A1, COMP, CTNNA2 , CUL1, CXCR4, DDX51, DGKB, DKK1, DUSP4, EGFR, ENPP3, ERBB4, FASN, FGF 1, FGF22, GAD2, GADD45A, GALNT14, GLI3, GNG12, GSTT1, GUCY1B3, GUCY2 C, HAP1, HEXA, HPSE2, IL15RA, IL18RAP, IL1R2, INHBB, JAK1, JAM2, KAT2 B, KLRC3, MASP1, MPST, NAGK, NAT1, NAT5, NCF2, NEGR1, NMNAT2, NT5C2, O R10A6, OR13J1, OR4F5, OR4N2, OR5AP2, OR7D4, OR8S1, P2RX2, P2RX6, PHK A1, PIGP, PIGQ, PIGU, PIM2, PLA2G2D, PLCD4, PRKAA2, PRODH2, PTPMT1, P TPN1, PTPN5, SEMA4G, SETD7, SFRP2, SLC2A2, SMARCA2, SMPD3, SPTAN1, S TX8, SV2C, TICAM2, TLR4, TNFSF12, TRAF4, TRPC1, UGDH, ULK2, VTI1A, WB SCR17, WNT2, YARS2, YWHAZ, ZIC2, AASDHPPT, ATP6VOA4, HSP90AB1, PRIC KLE1
Negative_15391	CD2, CGA, FER, GAA, GH1, GK2, HK2, HYI, IL7, KHK, ME2, VCL, ACAT2, ACO2, ACTA2, ACTG1, ACTN1, ADCY2, ADIPOQ, AGRN, AHCYL1, AKR1B1, AKT3, ALG1 , ALOX12B, ALPI, ARHGEF6, AVPR1A, BIRC5, BRAF, C9orf95, CAV3, CBR1, C CL28, CCL4, CCNB3, CD55, CDC7, CDKN1A, CIITA, CLDN6, COQ6, CTPS2, CTS L1, CXCR3, DHODH, DHRS9, EARS2, EI24, EPHB6, ERBB4, FGF2, FRAP1, FTMT , FUT9, GALNTL5, GNAQ, GSK3B, GYS1, HLA- C, IKBKB, IL13RA1, IL1R2, IL23A, IL8RB, INHBA, ITGAD, ITGB7, KLRD1, L YZL1, MAGI2, MAN1A2, MAN1B1, MAPK13, MAPK9, MGST3, MPP5, MYD88, NEU3 , NFE2L2, NOD1, NR1H3, NR4A1, NT5C1A, OR11H1, OR13G1, OR2M4, OR6K3, O R8B4, OXTR, P2RX4, PDE4B, PERP, PFKL, PGM2, PGM3, PIK3R5, PPP1R1A, PR KCB, PRKCQ, PRODH, PVRL1, PYCR2, RASA1, RBPJL, RUNX1, SETD7, SOS2, SP RY2, SPTLC2, SRGAP3, STX1A, SUCLA2, SUCLG2, SULT1A1, SUOX, TAS2R60, TBL1XR1, TJPI, TUBA1C, TYMS, UGT2A3, UNC5A, WEE1, WNT1, ST6GALNAC6
Negative_15392	CR2, GHR, GSR, HYI, IL2, ME3, MPL, NGF, OGT, PAH, PGP, PLG, ACPP, ACTN4, ADRA1A, ADSS, AGRN, ALG10, ALG12, AMPD1, ANPEP, ATP4A, AVPR1A, B3GAT 3, B3GNT4, BCMO1, BNIP1, BUB3, CACNG7, CD58, CHRNA7, CLDN6, CNTN1, CO Q6, CSNK1G3, CYBB, CYP2U1, CYP3A43, DARS, DDX52, DHODH, DLL1, DPYSL2 , ENTPD8, EPAS1, FCER1G, FGF7, FGF8, FPGS, FUT9, GALM, GAMT, GNA13, GU CA1A, GYS1, HDAC1, HEMK1, IFNA8, IL21R, ITGA7, ITGB2, KCNB1, KIR2DL4 , LDHAL6A, LIFR, MAP3K3, MAP3K8, MAPK8, MASP1, MYH15, MYLK, MYLK3, NA GK, NANP, NKD1, NT5C3, OR10H4, OR13C4, OR1Q1, OR1S2, OR2G6, OR2M2, OR 2M5, OR51A7, OR52B6, OR52L1, OR5B3, OR8H2, OXSM, P4HA3, PDE7A, P14KB , PIK3C2B, PLA2G2D, PLXNC1, POLR2G, POLR2J, POLR2K, PPM1B, PPP1R3B, PRKCE, PRKY, PRPH, PRPS1, PSME2, PTGIS, RDH11, RGS3, SEMA4B, SGMS2, S LC33A1, SMPD2, STAM2, TAS2R9, TGFA, TGFB1, TIAM1, TLR2, TOLLIP, TSC1 , TUBB, TUBB6, WNT3, WNT6, YWHAG, AASDHPPT, ATP6VOA2, PNLIPRP1
Negative_15393	C3, EGF, F5, ID1, RPE, SPN, ACTB, ACTN4, ACVR1C, ADCY9, ALCAM, ARPC4, B 3GALT2, BUB3, CCR5, CCR7, CD72, CDC2, CDKN2A, CDKN2D, CHRM3, CLDN6, C MAS, COL4A6, CTNNA3, CXCL1, CXCL9, CYFIP2, CYP1B1, DDX41, DGAT1, DPM 3, EPHA5, EPOR, ERBB3, EXOC7, FBP2, FCGR3B, FGF10, FGF4, GADD45B, GAL NTL1, GALNTL2, GATM, GUCY2F, GZMB, HLA- DOA, HMOX1, IL13RA2, IL17B, IRAK2, ITGA11, KLRD1, L1CAM, LAMB1, MAP2 K3, MAP3K1, MAP3K2, MAP3K7, MAPK11, MAT1A, MCCC1, MMP2, NCAM1, NFYB, NKD1, NRG3, NT5C, OR1F1, OR2T12, OR4M1, OR51B2, OR52I1, OR7A17, OR8D 4, OR9Q1, P2RX3, PAICS, PGAM4, PHKB, PIM2, PPAP2A, PRKACB, PRSS1, PSM E2, PSME3, PTGER1, PTTG1, ROBO1, RPS6KA2, SESN3, SHMT1, SHMT2, SQLE, SRGAP3, STAT1, TAS2R4, TFPI, TPK1, TRAF5, ULK3, B3GALNT1, SERPIND1, TNFRSF13C, TNFRSF1B

Negative_15394	AK5, F2R, GSS, MTR, PGP, PTS, A4GALT, ACO2, ADSSL1, AK3L1, ALG2, ATP13A2, ATP2A3, ATP5F1, ATP5G1, B3GNT2, CAPN2, CCL2, CCR2, CCR7, CD19, CD38, CDC25B, CDC25C, CDC6, CDK6, CDKN2A, CHST12, CHSY3, CLCA2, CNTN2, COQ6, CPT2, CRLS1, CSNK1G1, CUL1, CYP4A22, DHDDS, DHRS3, DLL4, DMGDH, EFNA2, ENPP7, FABP4, FCGR3A, FGF11, FOXO1, GBE1, GMPPB, GRIA2, GTSE1, GUCA1C, GYS2, HLCS, IFT57, IL13RA2, IL28RA, IL4R, IMPA2, INHBE, IRF7, IRF9, KYNU, MAN1A2, MASP2, MDM4, MEF2C, MLYCD, MYL7, MYLK3, NCK2, NME2, NMNAT3, OGDHL, OR10A2, OR10G4, OR13D1, OR13J1, OR1I1, OR1S1, OR4C11, OR4X2, OR51B6, OR6F1, OR6M1, OR8D1, OR9G1, PAK1, PDE4A, PIGF, PLA2G2E, PLCG2, POLD1, PPP5C, PRDX6, PRIM1, PRKACA, RAD51, RAP1B, RASGRP2, RHOA, RPS6KA4, SC4MOL, SDHD, SETDB2, SFRP4, SHC4, SMAD7, SMPD4, SOAT2, SPRED2, STMN1, STX16, SV2A, TAS2R1, TFPI, TJP3, TUBA4A, TUBA8, UCK2, WBSCR17, CACNA2D3, HLA-DRB4, TNFRSF10C, TNFRSF18
Negative_15395	C6, F12, FGB, HGD, HPD, ID4, IL4, JUN, KIT, PLG, SCD, SI, SRF, TPO, UBC, ACOX2, ACVRL1, ADCY10, ALDH2, ALDH9A1, AOX1, ATP5J, BACE2, BCAT1, BET1L, CACNG7, CAMKK1, CBLC, CCL4, CCNG1, CD274, CD47, CD86, CHAT, CLCF1, CPT2, CSF1R, CXCL6, CXXC4, DDX51, DGKQ, DTX2, DVL3, E2F3, EPHB3, ETS1, FBP2, FGF23, FUT8, GALNTL1, GRIN2A, H6PD, HARS2, HCST, HGSNAT, HLA-DMA, HTR6, IFNAR1, IFNGR1, IL21R, IL24, IRS1, KLRK1, LARS, LFNG, MCCC2, MDM2, MYL5, NAGLU, NAT6, NCOR2, NMNAT3, NOD1, OR13J1, OR2A5, OR2G2, OR2M3, OR4C15, OR5AR1, OR8K5, PARS2, PFKFB2, PKLR, PLA2G2F, PLIN, POLR2H, PPM1A, PPP1R3B, PPP2R2D, PPP3R2, PRKAR1B, PRKCZ, PTGS1, RALA, RALGDS, RASGRP2, SGPP1, SLC27A4, SMAD2, ST8SIA1, STAT5A, STX1B, TACR1, TBL1X, TBXAS1, TNFRSF9, VAV1, WARS2, WNT5A, ZFYVE9, EIF4EBP1, HLA-DPB1, TNFRSF1B
Negative_15396	CDA, CEL, MAG, SPI, STS, TFG, TNF, ACLY, AKR1A1, AKT2, ALOX5, ALS2, APAF1, ATP5G1, ATP6VOC, ATP6V1H, AXIN1, BCAT1, BDH2, BST1, CAMK2B, CCL13, CCR9, CD40LG, CDC27, CHRM2, COL11A1, COL4A6, COX15, CTF1, CYP26B1, CYP3A7, DARS2, DTX1, DUSP2, EDA2R, EI24, EXTL2, FARS2, FASLG, GALNT5, GBGT1, GCAT, GGCX, GGT1, GLDC, GNA15, GNAI2, GNRH1, GNRHR, GSTM2, GSTO2, HDAC1, HRAS, HSP90B1, IDH3G, IFNA21, IL15, IL18, IL23R, IL6R, INPP5A, IRF9, ISYNA1, ITGB7, KRAS, MAGI2, MAP2K4, MAPK12, MGAT4A, MTHFS, NAT2, NCAM1, NCF2, NCR1, NFATC3, NT5E, OR13C3, OR13C9, OR1Q1, OR51I1, OR51I2, OR52I2, OR6C74, OR6C76, OR6N2, OR8B4, OR8B8, OR8K3, PAK2, PDE3B, PDHA1, PFN2, PGK1, PIK3C2G, PIK3R1, PLA1A, PLXNC1, PNMT, POLR2A, POLR3H, PRIM1, RAS, RRM2B, SARDH, SEMA3E, SEMA3G, SEMA4G, SPRY2, TAS1R2, TAS2R40, TAS2R8, THBD, TRAF4, TRPM5, TSLP, UCP1, ULK1, UNC5A, WASF1, CSNK1A1L, HLA-DPA1
Negative_15397	BAD, CR1, GP9, HK1, MAG, PAH, ADRBK2, AGXT2, AHCY, ALG6, ARRB2, BPNT1, C1QC, C4BPB, CACNG4, CASP9, CBR1, CCR1, CCR2, CD274, CD34, CD40LG, CLDN5, CLDN8, CNTN1, COL2A1, COL4A1, CREB5, CSDA, CSF3, CSNK1A1, CSNK2A1, CXCL3, CYP2A6, DDX4, DDX51, DDX55, DNMT3A, DUSP3, ETNK2, F11R, FRAT2, FUT8, GAL3ST1, GART, GNRHR, GSTA4, GSTT1, GUCY1A2, GUCY2C, HIP1, HNMT, HTR5A, ICAM1, IFNA16, IL18R1, IL1A, INHBA, IRF5, ITGA6, LIFR, MAGI3, MAP3K6, MAPK14, MAPK3, MCCC1, MCM3, MGST3, MLLT4, NAMPT, NEGR1, NEUROD1, NMNAT3, NRG1, NT5C, OR10A6, OR10G7, OR14I1, OR4K1, OR4K13, OR4K15, OR51B5, OR51I1, OR52E4, OR52R1, OR52W1, OR7C1, OR8B12, OR8J1, PDHB, PDX1, PGAM2, PIGA, PIGQ, PKM2, PLA2G2E, PLCB2, PLIN, POLR2G, POMC, PRKAR1A, PTK2B, PTPRM, PTPRZ1, PYCR2, RASGRP2, RELA, RFXAP, RPS6KB2, SLC27A5, ST3GAL5, STX16, STX7, TBL1XR1, TP73, TRPC1, TUBB4Q, UCK1, ULK1, UMPS, VTI1B, WBSCR17, CSNK1A1L, HLA-DQB1, MAPKAPK3, PPARGC1A, TNFRSF11A

Negative_15398	AR, DDO, LIF, PGD, STS, ACADVL, ADH6, AKR1C1, ALDOB, ARD1A, ATP12A, BB OX1, CAMK2A, CAPN2, CCND2, CCR3, CD80, CDH2, CIITA, CPT1C, CSDA, CYP2 C9, DAPK2, DIAPH1, DRD1, ENTPD3, EPHB6, FUT4, FZD10, FZD6, GAD2, GFAP , GIT1, GNAI3, GPD1, HCLS1, HEMK1, HRH2, HSPA1B, HSPB1, HYAL2, IL28RA , ITGA10, JAK2, LALBA, LARS, LLGL2, MCAT, MEF2C, MGAT4A, MTHFD1, NANP , NME7, NMNAT3, NPR2, NT5M, OR13C9, OR14C36, OR2B2, OR2C3, OR4F5, OR5 1M1, OR52E2, OR52N1, OR5K2, OR6B2, OR6C2, OR6C76, OR8H3, OR8K3, PANK 1, PAX8, PDE2A, PIGH, PLCB3, PLCD1, PLXNA2, PLXNB2, PLXNB3, PNPLA3, P RKCA, PRKCH, PRKCI, PRPS1, PSPH, PTK2B, RASGRP2, ROBO3, SETD1B, SMPD 3, SPAM1, STX12, STX8, SUOX, TLR4, TPK1, TUBA1A, TXNDC12, TYMS, UBE2L 6, TNFRSF10A
Negative_15399	ADC, AMH, AMT, BID, IL2, ITK, MVK, SP1, SRF, TFG, ACAT1, ACTA2, ADH1B, A LPPL2, APOA5, ARPC1B, ARRB2, ASCC3, ATP5H, B4GALT3, CCL7, CCNB2, CD2 8, CD38, CDKN1C, CKMT2, CMPK1, CNTF, COQ6, CTNNA1, CYP2U1, CYSLTR1, D DIT4, DGAT1, DHFR, DHRS3, DTYMK, EDA2R, EP300, FARSB, FCGR3A, FGF17, FMO3, FOXA2, FRAT2, FUT3, FZD3, GDF7, GRIA3, GRIN2D, HSD11B2, HSP90B 1, IGSF5, IKBKE, IL1RAP, IL20RB, IRF9, MAML2, MAN1A1, MCM5, MYH15, MY H3, MYH7, NAT5, NCKAP1, NEU2, NPR2, NTN1, NUDT5, OR10T2, OR13D1, OR1D 5, OR2H2, OR4C11, OR4K17, OR52I1, OR52J3, OR52N4, OR7A10, OR7A17, OR 9I1, PAK1, PANK4, PARD6B, PHKG1, PLAT, PLCG1, PLIN, POMC, PTGFR, PTPR F, RAB5A, RALGDS, RDH10, RFX5, RPS6KB2, SHC4, SOCS5, SOX17, SYNJ2, TI AM2, TICAM1, TNFSF9, TPM3, TRMT11, TUBB1, WASF1, WNT7B, PAFAH1B3, PP P1R12A, SUV420H2, TNFRSF17
Negative_15400	ADC, AMT, CBL, CD6, CRH, CS, GGH, NLK, SRF, WAS, ACADS, ACOX2, ACPD, ADA M10, ADCY4, ALDH2, ALOX15, ATP4A, ATP4B, ATP50, BAAT, BBC3, C1QC, CAM K2A, CCL3, CCNA1, CCR8, CD244, CHST11, CHSY1, CHSY3, COL1A1, COL6A2, CPOX, CYP3A7, DMGDH, DNMT3L, DTX2, DVL1, EDA2R, EGFR, EHMT2, EPB41L1 , EXTL1, F2RL1, F2RL3, FBXW11, FECH, FGD3, FOXO1, FOXO3, FUT1, GAPDH, GCH1, GCNT2, GFPT2, GNAT3, GUCY2C, HARS2, HHEX, HMGCR, IARS, ICAM2, I COSLG, IDH2, IFNG, IL11, IL21R, KAT2B, KLRC4, LIAS, LRP5, MAD2L2, MAN 1A1, MCCC1, MMP14, MYLK3, NANP, NFASC, NKD2, NPR2, NUDT2, OLR1, OR13A 1, OR14J1, OR1A2, OR1L8, OR2C3, OR4C46, OR4K13, OR51A2, OR51D1, OR52 N1, OR5A2, OR5F1, OR5M9, OR6K3, OR8A1, OR9K2, PER2, PIK3R2, PIP4K2B, PLCB1, PLIN, PLXNA2, POLD1, POLR2D, PPAP2A, PRSS1, PTGDS, PTGIS, RAS A2, SESN1, SETD8, SLC25A4, SLC25A6, SLIT1, SMAD5, SMPD4, SPRED1, TAS 2R49, TFDP1, TNFRSF9, TRDMT1, TUBA1C, TUBA3E, UGT1A10, UGT2B4, UNC5 C, VAMP1, WBSR22, WNT5B, XCL2, YWHAG
Negative_15401	AK7, ATM, C8A, CBL, EZR, ID3, NF1, ABL1, ABLIM2, ACMSD, ACOT12, ADCY1, ADCY6, ADH4, ADSL, AGPAT4, AGRN, ALAS2, ALPI, AMY2A, AOX1, ARPC5, ARR B1, ATP5I, B3GALT5, BCAT1, BDKRB1, BLVRA, BMP4, BMPR1B, CACNA1D, CAC NA1S, CACNG8, CASP6, CASP7, CAV1, CCND2, CD48, CD80, CDC25B, CHD8, CL DN14, CRB3, CREBBP, CSAD, CSNK1E, CTSL1, CXCR6, CXXC4, DDHD1, DLL4, D USP8, EGLN3, EI24, EXTL1, FARP2, FASLG, FGF10, FGF18, FGF23, FGFR1, F RAT1, GALNS, GALNT5, GCNT3, GLUD2, GPAM, GRPR, GZMB, HCST, HPSE2, IFI H1, IFNA10, IFNA13, IFNK, IL17B, IL2RG, INPP5B, IRAK2, ITGB1, KCNQ1, KLK3, LRP5, MAPK13, MCEE, MINPP1, MTHFD2, MYH3, NANP, NRG4, OR10A5, O R10Q1, OR11G2, OR1J2, OR1S2, OR2D3, OR2T10, OR2T33, OR2Z1, OR4C13, O R52B4, OR52N1, OR56B4, OR5AC2, OR5F1, OR5P3, OR6C4, OR6N2, OR6X1, OR 7G1, P2RX5, PDE1A, PDE3A, PDE8A, PDE9A, PDGFC, PDXP, PFAS, PIK3C3, PI M1, PLA2G10, PNPLA3, POLR2A, PPP1R3D, PPP2R1A, PRKCG, PRKX, PTPRM, R ELA, RPN1, SARDH, SLC12A2, SNAI1, SPAM1, ST3GAL1, TACR2, TAS2R10, TC F7L2, TJP2, UBA1, WNT5B, ATP6V1G3, MAP3K7IP2, TNFRSF18

Negative_15402	<p>ASL, C2, CKM, HAL, NGF, NPY, AASDH, ACAA2, ACP2, ACP5, ACVR1, ADCY8, AKR1A1, APLP1, ARD1A, ARPC4, ATP6V1H, BDKRB1, BDKRB2, BRAF, CACNA1F, CACNA1H, CBR3, CCL11, CHRM2, COL4A4, CREB3, CREB3L4, DAAM1, DBF4, DDX54, DNMT3B, DUSP10, EFNA1, ENTPD1, EXT1, F13A1, F2RL3, FGF23, FZD3, GALNT12, GGT7, GNA13, GNPDA2, GPD1, GRIN2C, GSTA1, GSTA4, GSTZ1, HGSNAT, HLA-</p> <p>C, HSP90B1, HTR5A, HTR6, IKBKB, IL21, IL25, IRAK3, LDHB, MAP3K11, MAP3K4, MAPK8, MDM4, MYH14, NCR2, NEFH, NUDT12, OR10K2, OR1A2, OR2H1, OR51B5, OR51D1, OR51E1, OR51M1, OR52A1, OR56A1, OR6C3, PANK1, PDE1B, PDIA4, PIP5K1A, PISD, PLA2G2D, PLIN, PLXNC1, POLR3H, PPARA, PPOX, PPP1R3A, PRKAB2, PRKACA, PTPN7, RASA1, SELP, SETDB2, SLC33A1, SLIT1, SNW1, SPHK2, SRGAP2, ST3GAL6, STAT2, STT3B, TLR3, TMLHE, TUBA1C, UBA1, UGCGL1, VAMP3, WASF2, ALDH18A1</p>
Negative_15403	<p>AK1, CS, LCK, MAX, PRL, TFG, TNF, TYR, ABL1, ACSS1, ACTC1, ACVR1B, ADIPOR2, ADSSL1, ALOX5, ANAPC1, ANAPC10, ATP4A, ATP5B, ATP5F1, B3GAT1, BDH2, BDKRB1, BET1L, BMP6, BMP8A, BNIP1, CACNA1I, CALML5, CAV3, CCND2, CD48, CD80, CHRM5, CLDN9, CNTN1, COL11A1, CREB3, CTBS, CTPS, CXCL2, DAG1, DDX55, DVL2, EHMT1, ENTPD5, ENTPD8, EPHA4, EPHB1, FGD1, FMO2, FUT1, FZD10, FZD7, GADD45A, GDE1, GNG12, GNPDA2, GSTT1, HGSNAT, HLA-G, HYAL2, IL6ST, INPP1, IPPK, JAM3, KLRD1, LGMN, LIMK1, LYPLA2, MAD2L2, MAN1B1, MTMR1, NCAM1, NCKAP1, NEFL, NFKBIA, NGEF, OR10Q1, OR10R2, OR13G1, OR1Q1, OR2A25, OR2AE1, OR2L2, OR4C6, OR4D11, OR4D5, OR4D9, OR4F15, OR4S2, OR52J3, OR7A17, PANK1, PCCA, PGAM2, PLCB2, PLXNB2, POLR3B, POLR3G, PPOX, PRKAA2, PRPS2, PSAT1, PTPN7, PTPRJ, RDH8, RPIA, RPSA, SC5DL, SDC2, SEMA3E, SETD2, SFRP5, SLIT1, SMPD4, SNW1, SOAT1, SPI1, SV2A, TKTL2, TNFRSF9, TPH1, TRAF3, TRHR, TSTA3, ATP6V1B2, MAPK8IP1, SERPING1, TNFRSF10A, TNFRSF10B</p>
Negative_15404	<p>C2, CAD, CS, DCK, GPI, IL7, ME1, MPL, NLK, NNT, OAT, PDC, SFN, TNC, AADAC, ACACA, ACSM3, ACSS2, ACTB, ACTN4, ADCY4, ADCY5, ALG6, APOA1, ATP6V1H, B4GALT4, BIRC5, BMP5, C3AR1, CACNG6, CALML5, CCL23, CCR9, CD44, CD99, CES1, CHST11, CSNK2A1, CTBP1, CXXC4, CYP27A1, CYSLTR2, DHCR24, DHRS4, DKK1, DNMT1, E2F3, EGLN1, EPHB2, FOSL1, GADD45A, GAL3ST1, GALNT9, GCNT4, GFPT2, GNAO1, GNRH1, GNRHR, GRIN1, HAGHL, HAO2, HMGCL, HNM1, HSPA1B, ICOS, IGSF5, IL10RA, IL13RA2, ITGA3, ITGA4, LDHD, LEFTY1, LIPC, LPAR1, LRP6, MAG11, MAOB, MAP2K5, MAP3K12, MAP3K3, MGAM, MGAT2, MMP14, MPZL1, MTHFD2, MYLK, NAGS, NCR1, NFYA, NLGN2, NPAS2, NRG1, NT5C, OPLAH, OR10S1, OR13C2, OR13C8, OR51A2, OR51Q1, OR56A3, OR56B4, OR5B12, OR5D13, OR5P2, OR6X1, OR8K1, OR9A4, PFAS, PGM1, PI4KA, PIGS, PIP5K3, PLA2G6, PLCD3, PLD2, POLR2J, PON3, PPA2, PVRL3, RFXANK, RPS6KA5, RRAS2, SAT1, SELPLG, SETD1A, SMAD5, SMPD3, SORD, SPAM1, SPTAN1, STAT5A, STX3, SUFU, TACR2, TBL1X, TOMM40L, TUBB4Q, TYROBP, UAP1, UBA1, WNT2B, HLA-</p> <p>DRB3, MAP3K7IP1, SERPINC1, SERPIND1, SUV420H2, TNFRSF13B, TNFRSF18</p>

Negative_15405	AMH, C8B, CEL, GBA, GP9, HGF, ILK, LCT, LTB, NOG, OAT, PC, SI, TPO, ACSS1, ADCY8, AKR1C3, ALDH4A1, ALDH7A1, AMY2A, ARG2, ARNT2, ARPC5, ATIC, B, CAT2, BMPR1B, BRAF, CACNA1B, CACNB1, CARS2, CAV2, CD28, CD79A, CDC23, CIITA, CISH, CNGA4, COL1A1, CRLS1, CYBB, CYP2A13, CYP2U1, CYP3A5, D, KK4, E2F4, EARS2, ETNK2, FGF4, FGFR3, GALNT7, GLG1, GYS2, IFNAR1, IRA, K1, IRAK4, IRS2, ITPKA, KAT2B, KIR3DL3, KLRK1, KYNU, LIPE, LTB4R2, MA, P2K7, MYH3, MYH7, NAT1, NCKAP1, NEU2, NOTCH3, NQO1, OR10A5, OR2G2, OR, 51I1, OR52N4, OR56A1, OR5AS1, OR6C3, OR9Q2, PARS2, PAX8, PDE4A, PFN3, PLA2G5, PPP1R3A, PPP3CA, RARS2, RASSF5, RHOD, SAT1, SEMA3F, SETD8, SKP2, SOCS5, SV2C, TAS2R14, TNFSF9, TRPC1, TUBA1C, ATP6V1G3, PRICKL, E2
Negative_15406	C7, C8G, C9, DHH, FGA, FN1, GCK, IL2, ME1, RDX, VTN, ACADS, ADRB1, ALDH1, L1, ALPPL2, AMY2B, ANAPC7, ARPC1A, ARPC3, B4GALT4, BBOX1, CAV1, CD59, CDC27, CLDN3, CLDN6, COL5A2, CSAD, CSF2RB, DLAT, EFN3, EGFR, ENO2, EPAS1, ERBB2, FASN, FUT6, GABARAP, GALNT7, GCNT1, GDE1, GNA15, GP1BA, HSD17B7, INHBE, IRS1, ITPK1, LAMB1, LAMB4, LAMC1, LIMK1, MCCC1, MCM, 4, MYH10, NAGS, NARS2, NMNAT1, NOX1, OR13C8, OR2AT4, OR2C3, OR4C12, O, R4D11, OR4D5, OR51T1, OR52N4, OR5AC2, OR5AU1, OR5P2, OR5T3, OR6C4, O, R8A1, ORC5L, P2RX7, PIGM, PIK3C2A, PIK3C2G, PIP5K1A, PLA2G2E, PLCB1, PNPO, POLD3, POLD4, PPM1B, PPP2R5B, PRKAB2, PROS1, PSENEN, PTGIS, P, TTG1, PYCR2, RASGRP1, RPSA, SARS2, SETDB1, SH2D1B, SIGLEC1, SMARCA5, SMC1B, SMURF2, SOAT1, SOCS1, STAT6, STX1A, TIAM1, TUBA1A, TUBB4Q, U, GT2B28, UNC5C, WNT7B, WNT8B, XIAP, YWHAZ, CSGALNACT2, MAPK8IP1, SER, PINA1, TNFRSF17
Negative_15407	AMH, F11, FAS, FGA, ID1, ABL1, ACOT11, ADAM10, ALDH5A1, ALDH6A1, ALPI, ARSB, ATP6V0B, BCL2L1, BIRC3, CACNA1E, CCL13, CCL17, CCL24, CCR5, C, D22, CDC2, CDC23, CDO1, CES7, CLDN9, CXCL2, CYP11B2, CYP1B1, CYP3A5, CYSLTR1, DHRS4, DLST, DNMT3A, EARS2, ENPP6, EPHB4, FGF1, FMO1, FZD1, FZD4, GAD1, GAMT, GLG1, GLI2, GOSR2, GRLF1, H6PD, HSD17B2, IFNA2, IL2, 9, IRF3, ITGAM, ITGB2, ITGB3, ITGB5, ITGB7, JAK2, KAT2A, KCNB1, KIR2D, S5, KLK3, MAML3, MAN1C1, MCM4, MGAM, MGAT4A, MLLT4, MTHFD2, MYH10, NC, F2, NCK2, NT5M, NUMBL, OR1J4, OR2W1, OR52M1, OR52R1, OR5AN1, OR5F1, O, R5L2, OR7A5, PANK4, PCYT1B, PIK3R2, PIM1, PRKAG2, PYCRL, RASGRF1, RF, XAP, RPS6KA5, RPSA, SGMS2, SGPP2, SH2D1B, SMAD1, SMURF2, SULT1A2, TA, S2R3, TLR5, UCKL1, USE1, WIF1, YWHAB, ZFYVE16
Negative_15408	A2M, BAD, CGA, CTH, GK2, GNE, KHK, LAT, LTB, MAG, MAX, NNT, PTS, PXN, STS, TNC, ABI2, ACAA1, ACOT11, ACP2, ACTA1, ACTN4, AHCYL2, ALDH1A1, ALDH, 3A1, ALDH4A1, ALDH5A1, ALPL, ATP13A2, ATP50, BCKDHB, BPNT1, BUB1, C9, orf95, CARD11, CCL20, CCL22, CCR3, CD28, CES1, CLDN11, CMBL, CNTF, CN, TNAP1, COL3A1, CTSS, DHRS4, DNMT1, DUSP2, EDAR, EIF4E2, ENPP1, ENTPD, 5, ETNK1, FCGR3B, FGF20, GALNT12, GALNT9, GALNTL4, GANC, GLO1, GNPNA, T1, GRAP2, GSTA1, HARS, IL10RB, IL24, IL28RA, IL4R, IL6ST, IMPDH2, IT, GB4, MAML3, MAOA, MCM4, MITF, MKNK1, MYH7, MYH8, MYL9, NARS2, NFAT5, N, RAS, NTF4, NUDT8, OR10J3, OR10Z1, OR11H6, OR4D1, OR4D9, OR4X1, OR51F, 2, OR51T1, OR52D1, OR5AN1, OR5B3, OR6B3, OR6C1, OR8B8, OR9A2, P4HA1, PDE3B, PIGA, PIM2, PIP4K2B, PLXNB2, PNMT, POLA2, POLR3D, PRDX6, PRKA, CA, PRKCH, PRKCQ, RAB5A, RDH11, RDH8, SARS, SAT2, SCLY, SOX17, ST3GAL, 5, STX10, TAS2R38, TSNARE1, TUBA1A, TXNDC12, ULBP3, WNT6, WNT8A, YKT, 6, ATP6V1C1, TNFRSF14



Negative_15409	AR, C1S, CR1, GLA, NNT, PAH, UBC, ACADL, ACADM, ACOT12, ACTG1, ANAPC2, ANAPC7, APH1A, APOE, ATP12A, ATP5E, B3GAT1, BLNK, BMPR1A, C1QB, CCL24, CCL3, CCR8, CD38, CHST12, CNTFR, CNTN1, CSNK1G1, CYP27A1, CYP2B6, DEGS1, DGKH, E2F3, E2F5, F2RL2, FDFT1, FGF10, GRAP2, GSTM5, IL10RA, IL13RA2, IL23R, KIR2DS5, LCP2, LDHD, MAPK11, MDM4, MECR, MITF, NAGS, NCAM2, NFATC2, ONECUT1, OR10A3, OR10J5, OR11G2, OR1K1, OR2T10, OR3A3, OR52R1, OR52W1, OR5B3, OR7A5, OR8D2, OR8J3, PIAS1, PIGB, PIGL, PIGT, PIGV, PIK3C2G, PIK3C3, PIK3CG, PITX2, PLA2G5, PLCD4, PMVK, PNLIP, PON2, PPAP2C, PPCS, PPP1CB, PPP2R1A, PRKAR1B, PRPH2, PRSS2, RALGDS, RAPGEF4, RARS2, RENBP, RHOA, ROBO1, RXRG, SGPP2, SMAD9, SOCS7, TALDO1, TBXA2R, TCF7L2, THBS2, TJP2, TKTL2, TOMM40, UGP2, VDAC1, WIF1, WNT4, WNT9A, ATP6V1E1, B3GALNT1, MAPK8IP2, ST6GALNAC6, TNFRSF11B
Negative_15410	AGL, C5, CFI, CRH, IL2, TPR, ACVR2B, ADRA1A, AGRP, ALAD, ALAS1, ARNTL, ARPC3, ARPC4, BHMT, CADM3, CD40, CDC20, CDC6, CDH2, COL1A2, COL5A1, COL6A2, COQ7, CREB3L1, CSF2, CSNK1G2, CYP1A2, CYP26B1, CYP2A13, DHX58, E2F3, EDAR, EPHA4, FGF22, FGFR2, FUT1, GAD1, GALM, GALNT2, GALNT6, GALNT8, GALNTL4, GAMT, GBE1, GDE1, GDF7, GJD2, GMDS, GNAI2, GPLD1, GSTA1, GSTM4, GUCY2C, HEXB, HIP1, HMGCR, HNF4G, HTR4, HYAL1, ICAM3, IL18RAP, IRAK4, ITGAX, JAK1, KLK3, LDHB, MAP3K13, MAP3K3, MAP3K7, MAPK12, MAPK7, METTL2B, MGAT4B, MTMR1, NAT6, NCAM1, NEFL, NME2, NPR1, NRG1, OGDHL, OR10T2, OR1L3, OR2M5, OR2Z1, OR4C16, OR5AC2, OR8B12, OR8J3, P4HA1, PAK3, PARD3, PARVB, PDGFD, PDGFRB, PFN1, PFN2, PLAUR, PMM1, POLR1E, PPP1R3D, PTCH2, RASA2, RDH16, RPRM, RPS6KA4, RUNX1, SLC27A1, SMAD4, SMAD5, SMPD1, STX3, SULT1A4, SULT2B1, TOMM40, TPH2, TUBB1, TYRP1, UAP1, UGT2A1, UGT2B11, VDAC1, YWHAG, AASDHPPT, CACNA2D4, PLA2G12B, TNFRSF11A
Negative_15411	ATM, C2, CAD, CD2, DDO, F2, F7, GGH, MVD, NF1, TNF, UBC, ACTG1, ADCY10, ADCY9, AGXT2, ALDH5A1, B4GALT2, CCND3, CDC2, CHEK2, CLCA4, COQ3, CPT1C, CSAD, CYBB, CYP1B1, CYP7A1, DKK4, DNMT3L, DRD2, DUSP7, ENO2, EPHA4, EPHA6, EPHX1, ESAM, FGF10, FLAD1, FMO5, FUT5, FZR1, GATM, GJD2, GNG12, GRIA1, HTR2C, IDI2, IL10, IL20RB, IL21R, ITGA6, ITPKA, LAMA4, LAMB1, LIPF, MAPK11, MCM5, MYH13, NT5C1A, NT5C1B, NUDT9, OLAH, OPLAH, OR10H1, OR4K5, OR51A4, OR51I1, OR5R1, OR7A10, OR8D1, PAX6, PDE1B, PGAP1, PHKB, PIGS, PIK3C2G, PIM2, PIP4K2C, POLR2C, POLR2F, POLR3D, PPP1R3C, PRODH, RASGRF1, RBL1, RPS6KA4, RRAS, SDC4, SENP2, SMC1A, SMPD4, SOBS1, SULT1A4, TAS2R13, TAS2R9, TGFBR1, TPM3, UCP1, UGT2B10, UGT2B28, ULK3, UPRT, VCAM1, VTI1B, WNT7B, ATP6V1E1, HLA-DRB3
Negative_15412	F5, FUK, OTC, SPN, AANAT, AKT2, ALPL, ANPEP, AQP7, ARPC5, ARSB, ATF2, ATP2A3, ATP5J2, BDKRB1, C1QC, C5AR1, CAMK2B, CAMK4, CASP8, CD28, CD70, CD79A, CD82, CDC25A, CDH5, CHD8, CHDH, CHRM2, COL5A2, CPT1A, CRKL, CSF2RB, CXCL9, CYP26B1, CYSLTR2, DDB2, DLAT, E2F5, EPHA5, EPOR, F11R, F2RL3, FABP3, FASN, FGF10, FGF8, FMO3, FUT4, GCAT, GMPPA, GMPPB, GSTT1, HAP1, HYAL1, IFNA4, IRS4, KCNQ1, KIR3DL1, LCMT2, MARS, MASP1, MCCC2, MEF2C, MYH13, MYLK2, NEUROG3, NUDT8, OR1E2, OR1L3, OR1L4, OR2S2, OR4N2, OR51L1, OR5C1, P4HA2, PDE2A, PDXP, PFN2, PIAS2, PIGK, PIM2, PIP4K2C, PKMYT1, PLA2G5, PLCB4, PLCG2, POLR2E, POLR2H, PPAR, PPM1A, PPP3R2, PPP5C, PRKAB1, PRKAR1B, PRODH, PRSS3, PTGER1, PYCR2, PYGL, RASGRP4, RDH10, RXRG, SARS, SCP2, SNAP25, ST8SIA5, SUOX, TLR4, TRAF1, UCKL1, VAMP1, VANGL1, VASP, WNT10B, ZMAT3, CACNA2D4, HLA-DPB1, HLA-DQB1, HSD17B10, PAFAH1B1, TNFRSF13B

Negative_15413	AGK, CBL, CGA, F7, FST, GNS, GP5, HK1, HYI, MOS, RB1, TKT, ACSM1, ACSM3, ACTA2, ALDH3B1, ALDH3B2, ALG1, AMDHD2, ARHGEF4, ATP5J2, BLVRB, BMP7, C7orf16, CACNA1C, CARD11, CBR3, CCKAR, CD19, CDIPT, CREB5, CRLF2, CTNNA1, CTPS2, CXCL3, CYP21A2, DAAM1, DDX52, DEGS1, DGKE, ENO1, FGF13, FOXA2, GADD45B, GAPDH, GLO1, GUCY1A3, GYS1, HPRT1, IAPP, ICOS, IKBK G, IL11RA, IL2RG, IL8RB, IRS2, ITCH, LCMT1, LCMT2, LIFR, MCAT, MMP9, MTFMT, MTHFD2, MYH3, NAT5, NCF1, NCOR1, NRG4, NTNG1, NTRK1, ONECUT1, OR1N2, OR2G3, OR2Z1, OR4C12, OR4K1, OR4K2, OR51B2, OR6C2, OR8U1, P2RX6, PAK7, PANK1, PECAM1, PFAS, PFKFB4, PLA1A, PLA2G2F, POLE4, PON2, PPBP, PPP3R1, PTDSS2, RAD51, ROB03, SETMAR, SHMT2, SLC12A2, SLC27A1, SMPD2, SOCS5, SOX17, STAM, STAT6, TACR2, TD02, TGFA, TNFRSF9, TUBB1, UGCL2, UGT2B10, UGT8, WNT5B, XYLB, ATP6V1E2, CSGALNACT1, HLA-DRB3, PAFAH1B2
Negative_15414	C8B, GNE, HYI, IL6, IL7, IVD, LCK, ACTA1, ACVR1B, ADRBK2, ALG9, AMDHD2, AXIN1, C5AR1, CAMK2G, CCL1, CCNA2, CDH2, CDKN2C, CHKB, CLDN14, COASY, CSF1R, CSH1, CTNNA1, CTSG, CTTN, CYP2J2, DDB2, DGUOK, DIAPH2, DPYD, DRD5, EDNRB, EFNA3, EPHA5, EPOR, FARP2, FGF21, FMO3, FMO4, FTMT, GALNT10, GALNTL4, GANC, GIT1, GLYCTK, GNA12, GNPAT, GRHPR, GRIN2A, GTSE1, HLA-C, IAPP, IL24, ITGA5, ITGB5, ITPKB, KDSR, LAMC3, MAP2K4, MYH8, NCF2, NFX1, NTF4, OLAH, OLR1, OR10A2, OR10H3, OR10X1, OR13G1, OR2A4, OR2D3, OR2W1, OR4F5, OR51A4, OR51E1, OR6S1, PANK1, PDGFC, PHKA2, PIK3R4, PIPOX, PLAU, PLCB2, PLEKHA8, PLXNC1, POLR2K, PON1, PRKAG3, PRKAR2A, PRPS2, PTK2B, PTPN1, RFW2, ROB01, RPS6KA5, SARS, SETDB1, SGMS2, SMURF2, ST8SIA5, STK4, TIAM1, TNFRSF4, TPH2, WWP1, ZMAT3, MAPKAPK5, PAFAH1B2, SUV420H1, TNFRSF6B
Negative_15415	AK2, CD6, CGN, CR1, GNE, IL4, SCD, SDS, ABAT, ABCC8, ACYP2, ALOX5, APLP1, B4GALT5, BLVRA, BMPR1B, C1GALT1, CADM3, CASP3, CD22, CD99, CDKN2A, CMPK2, CNGA3, COL4A4, CRHR1, CSDA, CXCR3, CYBA, CYP2A13, CYP2J2, DEGS2, DGKA, DHODH, DHRS3, DHX58, DPM1, ESPL1, ETNK2, FIGF, GLUL, GNB3, GPD2, GSTA3, HHEX, HLCS, HSD3B7, IBSP, IL20, IL2RB, ITCH, KARS, LARS2, LCP2, MAD1L1, MARS2, MYD88, MYH13, NADSYN1, NLGN2, ONECUT1, OR2K2, OR2M5, OR2T1, OR3A1, OR4D9, OR51B6, OR52R1, OR6C1, PAK4, PDGFB, PEMT, PIP5K1A, PLCD4, PLOD1, POLA1, POLR2J, PPA2, PPP1R3C, PPP1R3D, PPP2R5C, PRKCH, PROC, PRODH2, PYCR1, RIPK1, SCD5, SCIN, SEMA3D, SESN3, SMURF1, ST3GAL5, SUCLA2, SULT1A4, UCP1, VAV2, WNT6, WNT8B, ARHGEF12, CACNA2D2, PPARGC1A, TNFRSF17
Negative_15416	ADO, AK3, BCR, C5, CKM, GNE, GPI, IL2, KDR, LSS, LYN, PVR, SFN, AANAT, AARS, AASS, ABAT, ACSM4, ADRB1, ALDH4A1, ALG1, ALG5, ALPL, ANGPTL4, APH1A, ARPC1B, ATP2A2, ATP5G3, ATP6V1A, BCAR1, BCL10, BIRC3, BLVRB, BPN1, CAPN2, CCL14, CCL7, CFL1, CNTN2, CREB1, CREB3, CXCL10, DAD1, DGAT2, DHCR24, DHRS3, DLST, DNMT1, DUSP5, EFNA4, EIF4B, ENO2, ENTPD1, FADD, FGD3, FOXA3, GNG3, GRIA1, GSTA2, H6PD, HIBCH, HLCS, HSPA1B, HYAL1, ICOS, IFNAR1, IL1A, IL28RA, IL2RB, IL7R, INHBA, IRS4, KARS, KAT2A, LCAT, LDHC, LEFTY2, LIPA, LIPT1, LYPLA2, MASP2, MDM2, MEF2C, MTHFR, NAGS, NCOR1, NEFM, NEUROG3, OR11I1, OR1L8, OR2B2, OR2L13, OR51L1, OR52A1, OR52B6, OR56B4, OR5AC2, OR6C1, OR9I1, P2RX7, P4HA2, PAK7, PIGQ, PIGT, PIK3C3, PLA2G2F, PLXNB3, PRKG2, RAB5A, RASGRP3, RETSAT, RPN2, RPS6KB1, SDC2, SEMA3C, SMAD4, SPTLC2, STX10, SV2B, UCKL1, ULBP1, ARHGEF12, HLA-DRB4, MAPKAPK2, PNLIPRP1, ST6GALNAC1

Negative_15417	CD4, GSS, HGD, LSS, NF1, PGP, SCD, STS, SYK, TFG, TPR, WAS, ACADVL, ADCY9, AKR1B10, AMHR2, AREG, ATP6V1A, AVPR1B, CACNB3, CACNB4, CALML5, CCL26, CCL4, CDC23, CDKN1B, CFLAR, CLCA2, CNGB1, COL4A2, CREB3, CREB3L2, CTBS, CXCL10, DFFA, DPAGT1, DPYS, DUSP1, DUSP8, DUSP9, ENTPD1, EPHA4, EPHA5, FCGR2B, FGF12, FOXO3, G6PC2, GALM, GALNT8, GCNT3, GLS2, GNA11, GNRHR, HCCS, HPRT1, HSPA8, HTR2A, IFNAR2, IFNGR2, IL18, IL20RB, ITPKA, LDHC, LYZL1, MAGI1, MAN2A1, MAOA, MAP3K4, MCCC1, MRAS, NSD1, OR14J1, OR1N2, OR2AG2, OR4A16, OR4C15, OR51A4, OR51F1, OR52I1, OR8A1, OR8B8, OR9A4, OXCT1, PER3, PGAP1, PGK2, PHKG1, PIAS4, PIGW, PNPLA4, POLR2I, PON2, PPAP2B, PPP1CA, PVRL1, RAC1, SEMA3B, SH3BP2, SHC2, SPRY1, SULT2B1, TBL1Y, THBS2, TICAM2, TNFSF9, TXNDC12, UGCG, ULBP2, VAMP3, ALDH18A1, ATP6VOD1, C1GALT1C1
Negative_15418	C8B, CD6, DBH, F7, FGA, GH1, GPT, IL3, MYC, PRL, TPO, WAS, ADRBK2, ALG12, ALG8, ANAPC1, AQP7, ARPC1B, ARPC5, ATG12, ATP5C1, B3GALT4, BMP7, BPNT1, CCL26, CD55, CDC14A, CDC45L, CHIA, CNTN2, COMP, COQ3, COQ7, CREB3, CSNK1G1, CTLA4, CXCL13, CYP2A13, DUSP1, EFNA2, EFNA4, EGFR, EPHB6, FECH, FLT3, FUT3, GAMT, GCLM, GLYCTK, GNAI2, GNPDA1, GRHR, GRIN1, IARS2, IDH3G, IFNGR2, IL7R, IPMK, IRF9, IRS4, ISYNA1, KIR2DS4, LIPE, LRAT, LTBR, MAOA, MAP2K6, MDM2, MGLL, MITF, NARS2, NEUROG3, NME4, NUDT8, OGDH, OR1L6, OR2D3, OR2G2, OR2T10, OR51A7, PANK3, PCYT1A, PDGFRA, PDX1, PHKB, PIGS, POLE, POLE2, POLR2B, PON1, PTPRM, PVRL1, RAD51, ROB01, SDHB, SELPLG, SESN1, SREBF1, SUCLG1, TAS2R10, TBL1Y, TICAM1, TIRAP, TJP2, VAMP4, VAV3, VEGFC, WNT7B, ZAP70, ARHGEF12
Negative_15419	ATM, CGN, DCK, EGF, GCK, LAT, OAT, SRM, UBC, ADCY10, ADCY2, ADCY6, ADH1A, AKR1C3, ALDH1A2, ALDH3A2, ALG5, ALOX5, APOE, ARSE, ATP2A3, B3GALT4, BIRC2, BTRC, CACNA1F, CDC6, CDH15, CERK, CHIA, CNTF, CRKL, CXCR5, CYP2A6, CYP2F1, DDX19A, DFFA, DGKZ, DOT1L, EIF4E2, ESPL1, ETNK1, EXT1, FGF3, FOXA3, GGT7, GIT1, GMPS, GUCA1B, HADHB, HCST, HMGCR, HTR7, IFNA13, IFNA5, IL12RB2, IL22RA1, IQGAP1, ITPKA, JAK2, KCNB1, LDHAL6B, LEPR, MAML1, MAN1A1, MAPK8, MGAT5B, MYD88, NEU1, NSD1, OR10R2, OR2L3, OR2M3, OR2M4, OR56B4, OR7G3, OR9Q2, PER1, PFKFB3, PIAS1, PIK3C2B, PLAUR, PLOD3, PRKCB, PRKCH, PRPS1, RASGRF1, RASGRP1, RPN2, SEMA3D, SHMT1, SMAD9, SPAM1, SPP1, STAT1, STK11, STX12, SUCLG1, SUCLG2, TAS2R16, TAS2R3, TAS2R5, TLR2, TNFSF10, TSC2, UBA1, ULBP1, WNT7B, YWHAZ, AASDHPPT, ATP6VOA4, ST6GALNAC1, ST6GALNAC5, TNFRSF10C
Negative_15420	CD6, EDA, EZR, F2, MVD, RPE, SRF, ACTN1, ADCY9, AGTR1, AHCYL2, AKT3, ANAPC1, ANPEP, ARPC3, ATP4A, BCL2L1, C7orf16, CALML6, CD247, CD74, CDC6, COL4A6, CRLS1, CSNK1E, CTBS, CYP21A2, CYP4A11, DNMT3B, DTX1, DUSP1, DUSP4, E2F3, ESPL1, F2RL3, FGF4, FUT2, GALM, GALNT1, GALNTL4, GANAB, GCLC, GSTM4, HLA-DOB, HMOX2, HRH1, HSD11B1, HSD11B2, IDH1, IL20RA, IMPA2, ITGB8, JAM3, KARS, KAT2A, KIR3DL2, LALBA, LILRB3, LYPLA2, MAOB, MAT1A, MCM5, MGA T5B, MTHFD1, NKX6-1, OR10AD1, OR1Q1, OR2AG1, OR2F2, OR4A5, OR4C13, OR51E1, OR51Q1, OR52A5, OR8D2, OR9G1, OXCT1, PERP, PFKL, PHKB, POLD4, POLR1A, PPT1, PRKA A1, PRKCD, PVRL3, RAPGEF1, RERE, RXRA, SAT1, SHISA5, STX6, SV2B, TICA M2, TPH1, ULK2, UPP2, EIF4EBP1, PPP1R12A, ST6GALNAC6, TNFRSF17

Negative_15421	BAX, DCC, DCN, EDA, FN1, LPO, LTB, MOS, ACADL, ACADM, ACPT, ACVR1, ACY3, ADCY1, ADH1A, AGPAT2, ALOX12, APAF1, ARHGAP5, ATN1, ATP5I, B3GNT4, BCAR1, CAPN2, CCKAR, CCNA2, CDK7, CES1, CHKB, COL5A3, CSNK2A2, CXCL9, CYBA, CYSLTR2, DCXR, DDX41, E2F4, EDAR, EPHA7, EXTL1, GAD2, GALK2, GNG12, GNRHR, GOT2, GSTZ1, GUCY1A3, IL12B, IL13, INPP5A, INSR, KLRK1, LALBA, LGMN, MAP3K5, MCM5, MPDZ, NAGS, NFASC, NT5C1A, NTRK1, OR2AE1, OR2M4, OR2S2, OR2V2, OR4E2, OR4K14, OR52I2, OR5F1, OR8K3, OR9I1, PD E8A, PDGFB, PFN2, PIAS4, PIGC, POLR1D, PPP3R1, PRKACB, PRKCG, PSENE1, PTGS1, RBKS, RPS6KB1, SAT1, SH2D1A, SMAD6, SMC1B, ST6GAL1, STX7, TA S2R5, TBL1Y, TLR4, TSC1, TSNARE1, UGCG, UGP2, UMPS, USE1, SERPING1
Negative_15422	A2M, CRH, F2, FAH, GAA, IL6, LCK, MIF, PC, SYK, TAT, A4GALT, ABCC8, ABI2, ADCY8, ALDH3B1, AMPD3, ARPC3, ATP5L, B3GALT5, B3GNT5, BIRC3, BMP2, C1GALT1, C4BPA, CACNA1S, CACNG1, CADM1, CAMK2B, CCL7, CLCA4, CLTCL1, CNTF, CSNK1G3, CYP11A1, CYP7A1, CYSLTR1, DDIT4, DGKA, DGKB, DGKZ, D USP1, ENTPD1, F2RL2, FABP3, FMO2, FZD5, G6PD, GALNTL2, GDE1, GJA1, GN G13, HCST, HRH1, HSP90B1, ICOS, IMPDH1, INMT, IQGAP2, IRAK2, KIR2DL4, LHCGR, LIPF, MAD2L1, MAGI3, MAN1B1, MAP3K13, MAP3K4, MAPK13, MAPK3, MCM6, MEF2C, NCF1, NFKBIA, NFYA, NMNAT1, NRXN2, NT5M, OR10J3, OR11H 4, OR13C8, OR1M1, OR2A42, OR2F1, OR2T8, OR4F15, OR4K14, OR51G1, OR5A 2, OR6C3, OR6T1, OR8K1, OXTR, PDE10A, PDE4D, PDGFB, PFKFB1, PFKFB3, P FKP, PIGU, PITX2, POLD4, PPARG, PPP1CC, PPP2R1A, PRKCH, PRKCZ, PTGER 1, PTPRC, PYCR1, RAC1, RELA, RHOD, ROCK1, SKP2, SPI1, SRGAP3, STK4, ST MN1, TDO2, THY1, TM7SF2, TNFSF9, TOLLIP, TPH2, VEGFB
Negative_15423	C1S, CDA, CFH, CRH, DDO, F12, FAH, IL9, MPI, ACAA2, ACADM, ACSS1, ACSS2, ACVR1, ADRBK2, AKT1, ALDH3B1, AMPD2, AREG, ATP5G2, B3GALT1, BIRC2, BMP1A, BTRC, C4BPB, CACNG3, CACNG4, CACNG8, CAMKK1, CCL15, CCL22, C CR3, CDC14B, CFL1, COL1A2, CRKL, CSF2, CTPS2, CYP11B2, DAXX, DERA, DG KH, DHRS4, DTX1, DUSP14, EHMT1, ENPP2, EPB41L2, EPHA8, EXTL3, FARP2, FLT3, GBT1, GDF6, GNA12, GSTP1, HLA- DOB, IAPP, IL21, INHBB, IRAK3, ITGAL, KAT2A, MTHFD1, NEU1, NFE2L2, NR 1D1, NRG2, OR10P1, OR11H4, OR13C2, OR13D1, OR13H1, OR1C1, OR2T6, OR4 C46, OR4D2, OR4S1, OR51M1, OR56A4, OR5D16, OR5M8, OR6C1, OR7G1, OR8D 1, PANK3, PDK1, PER1, PIGL, PIK3R3, PIK3R4, PLIN, PMM1, PNPLA4, POLR1 B, PPP2R2D, PPP2R5D, PRKACA, PROS1, PSAT1, RAC2, RALA, RALGDS, RND1, RPS6KA5, SELP, SRD5A1, STAT6, STK3, STX12, STX4, SUCLA2, TGFB1, TUBA 1A, TXNDC12, UGT2A1, UGT2A3, UGT2B7, ULBP1, UROS, VAMP4, XYLB, ZFYVE 16, ATP6V0A1
Negative_15424	ADA, BTC, MIF, MYC, PLN, UBB, ABL2, ABLIM1, ADCY8, ALDH2, ALDOC, AMDHD 1, ARD1A, ARNT, ATP5G1, ATP6V1D, BDH1, BHMT, BLVRA, CACNA1C, CACNA1I, CBR1, CCR4, CD40, CD79A, CDC23, CHIT1, CHRNA7, CMPK1, CPT1C, CSNK1E, CSNK1G1, CUL1, DAG1, DCTD, DDX4, DGUOK, DNMT3L, ENTPD1, EPHA2, EPHB 2, EPOR, EREG, FGF19, FGF5, FGF6, FOXO1, FTH1, GAD1, GALNT6, GALNT8, G CLC, GCNT1, GLYCTK, GPD2, GUCA1B, GYS1, HSPA2, HTR6, IL13RA2, IL28B, IL6R, LIAS, MAP3K3, MAP4K1, MGLL, MTFMT, MTHFR, MTMR1, MYH10, MYH13, NCOR2, NFE2L2, NFKBIE, NOTCH1, NR1D1, NR1H3, OR10A2, OR10A6, OR10AG 1, OR10Z1, OR13C8, OR13J1, OR14A16, OR1L3, OR2AT4, OR4C11, OR4F5, OR 4K5, OR5D18, OR7A17, OR7G3, PCYT1A, PDE1B, PFAS, PFKP, PGAM1, PLAUR, POLR1E, PPP2R1B, PPP2R2D, PRPS1, PSEN1, PTK2B, RAP1B, RASSF1, RBX1, RDH8, RPRM, RXRA, SCLY, SDHC, SEMA7A, SESN2, SETD8, SHISA5, SLC25A4, SOCS1, SRGAP3, STX1B, STX4, TGFA, TLR2, TNFRSF4, TNFSF18, TP53, TUBA 4A, UBE2L3, UGDH, USE1, WHSC1L1, WNT1, WNT10A, WNT5B, ZAP70, ATP6VOD 1, C1GALT1C1, PLA2G12A, TNFRSF11A, TNFRSF11B

Negative_15425	C2, C9, CP, DDC, EZR, FOS, GH2, ID3, IDS, JUP, MPL, PVR, ACTB, ACY3, ADCY10, ADCY7, ADCY8, ADH4, AGPAT6, ALG1, CACNG8, CCL3, CD27, CD72, CDC25A, CDH2, CFLAR, CLDN14, CLTC, COL6A2, CREBBP, CYP26C1, DDOST, DDX18, DMGDH, DUSP14, ENTPD7, ER01L, ETS1, GANC, GOT1, GOT2, GPT2, GUCY1A2, GYS1, HEXB, HSD17B8, ICAM1, IL10, INMT, KARS, LAMA4, LAMC3, LIPF, MAP3K8, MAP4K3, MARS2, MGST1, MPP5, MYH7, NCAM1, NCAM2, NCKAP1L, NFATC4, NRCAM, OR10G4, OR1L6, OR2A25, OR2B2, OR2G2, OR4K13, OR5H2, OR7A10, PAFAH2, PANK3, PDE7A, PNMT, POLE2, PPA1, PRKAR1A, PROC, PTGDS, PTPN1, PTPRZ1, QPRT, RND1, RUNX1T1, SLC27A5, SOCS3, SOS2, TAS2R48, TAS2R9, TFDP1, THBS4, TKTL2, TLN2, TRPC1, UGCG, UNC5A, WNT9B, YARS, YWHAQ, A TP6VOE1, EIF4EBP1, PRICKLE1, SERPINC1, TNFRSF11A
Negative_15426	BCR, F3, HK1, HYI, LPL, MOS, MSN, AASDH, ABCC8, ABI2, ACAA1, ACACB, ACV R2B, ADCY1, ADCY6, ALAD, ALDH1L1, ALOX12, ALOX12B, AMD1, ARHGEF7, B4 GALT6, BCL2L1, CCR9, CD22, CHAT, CHUK, CLDN8, CNGA4, CNTNAP1, CRLS1, CSNK1G1, CSNK2A2, CXCL3, CYP8B1, DGKI, DHRS4L2, DUSP8, ESAM, FGF1, F OXO3, FZD1, FZR1, GFAP, GLDC, GMPR2, GNG13, GRIN2A, HAP1, HTR2B, HYAL1, IAPP, ICOS, IFNA5, IKKBK, IL11, IL18RAP, IL20, IL8RB, IRAK1, ISYNA1, ITGA11, ITGB8, KYNU, MAT2B, MNX1, MYL5, NARS, NEU2, OR1I1, OR2A12, OR2A25, OR2L2, OR4A15, OR4X1, OR52L1, OR5L1, OR6C2, OR6K6, PDE6D, PI GU, PIK3R3, PIK3R5, PKM2, PLA1A, PLXNB3, POLA2, POLD4, POLR2I, PPP3R2, PRKG2, RAF1, RBX1, RELA, RRM2B, SAT2, SETD1B, SUCLA2, SYNJ2, THTPA, TNFSF9, ULBP2, UROC1, XCL1, GABARAPL1, HLA-DQA2, MAP3K7IP1, PAFAH1B1, TNFRSF11B
Negative_15427	ATM, DDC, EGF, F2, F2R, GPI, GSR, IL8, KIT, MET, MOS, PXN, RFK, SRC, ZYX, AARS, ACAA2, ACACB, ACADVL, ACHE, ACP2, ACSL5, ACSM5, ADRB3, ALDOA, A MPD3, ARHGEF2, ARNT, ARPC3, ARSE, ATIC, ATP5E, BCAR1, BCAT1, BPGM, CA CNA1A, CASP3, CCR6, CD34, CD40LG, CD74, CHKB, CHR1, CLTA, CMPK2, COL1A1, COL4A4, CXCL10, CYP26C1, CYP3A5, CYP3A7, DHFR, EARS2, EDAR, EP300, GALK1, GJD2, GLDC, GMPPB, GNAI2, HADH, HADHB, HDAC2, HNMT, HTR4, IN PP5A, IRAK4, IRF3, IRF7, ITGA4, ITGA9, ITGAL, ITGB7, KARS, KIR3DL3, K LK3, LMO7, LRAT, MAP3K14, MAP3K8, MCCC1, MICA, NFATC2, NOTCH3, OR10H4, OR2C1, OR2M4, OR4D2, OR4F4, OR4N2, OR5I1, OR6S1, OR7G3, OR8J1, ORC6L, PAK1, PAX4, PCCA, PDHA2, PKMYT1, PON1, PPP3R1, PRKCI, PRKG1, PTGE S2, PTPRM, RAP1A, SIGLEC1, SLC2A4, SMPD2, SORBS1, STAM2, STAT1, TGFB R2, THBD, TUBA1B, TUBA3C, UBE2L3, UPP2, VEGFC, WASF2, YWHAQ, ATP6V1B1, HSD17B10, PAFAH1B2, PAFAH1B3, PLA2G12B, ST6GALNAC3
Negative_15428	AK7, BAX, C1S, CP, F8, FER, GP6, IL2, TKT, TNC, VTN, ACADM, ACSL5, ACTB, AKR1C2, ALG1, ALG3, ATG7, B4GALT1, BCKDHB, BDKRB2, CCL17, CCL5, CCNB3, CCNG2, CD247, CD72, CDK2, CLDN1, CLDN8, COL4A1, CTSG, CXCL13, CXCL3, CYP2F1, DCTN1, DDIT4, DDOST, DEGS2, DKK4, DRD1, EFN1, ENO3, ESAM, FASLG, FUT1, GCNT2, GDE1, GDF5, GNAI2, GOT1, GRM1, GSTA3, GUCA1A, GZMB, HBEGF, HIF1A, HTR4, HYAL2, ICAM1, IL11RA, IL22RA1, IL22RA2, INPP4A, INPPL1, ITGA8, ITGAD, ITGAM, ITGB7, JAM3, KCNB1, KITLG, LAMC3, LIMK2, LTBP1, MALT1, MDH1, MGAT2, MMP14, MNX1, MTFMT, NFATC2, NMNAT2, NT5C, NTF4, NTRK1, OR1J4, OR2A14, OR2C3, OR2T12, OR3A1, OR51A4, OR52D1, OR52M1, OR6M1, OR6N2, OXTR, PAX4, PDE8B, PDGFA, PHKG1, PIGC, PIGF, PLA2G6, PLCD1, PPA2, PPM1A, PPP3CA, PPP3CC, PRKAB2, PRKCB, PRSS3, PTDSS1, RAB23, RBKS, ROBO3, SEMA3A, SEMA3B, SETD7, ST3GAL2, STX18, STX1A, THBD, TIAM1, TUBB2B, UGCG1, UPB1, USE1, VAMP3, VTI1A, WNT5B, ATP6VOA1, CACNA2D4, HLA-DQA2, HSP90AA1, SERPINE1

Negative_15429	CGA, FH, FOS, GH1, ID1, KDR, ME3, PGF, ABLIM3, ACAA2, AGPAT3, ALDH3A1, ANAPC2, ASAH1, ATN1, B4GALT3, CACNA1F, CACNB2, CASP7, CBLB, CBR3, CCNB1, CCND1, CCR4, CD247, CD8B, CDIPT, CDKN2D, CFL1, CHEK2, CHRM1, CHSY1, CKS1B, CLDN18, COL1A1, CTPS2, CXCR5, CYBA, DEGS2, DHRS9, DLST, F11R, F13B, FPGS, GALC, GALNTL5, GLB1, GNB3, GNPDA1, GP1BA, GPD2, GUCA1B, GZMA, HAGH, HDAC1, HMOX1, HNF4G, HSD3B2, HTR2C, ICOS, IFNA6, IL11RA, IL12RB2, IL17A, IL24, ITGA11, KLKB1, KRAS, LARS2, LRP6, MAD1L1, MAT1A, MMP9, MPP5, MTMR6, MYH15, NAGA, NFATC2, NNMT, NPR1, NRG4, OR10H3, OR13C9, OR1C1, OR1M1, OR2T3, OR2T33, OR4F6, OR4N4, OR51B2, OR51E1, OR5D16, OR5L1, OR5R1, OR7G1, ORC5L, OXTR, PER2, PFAS, PFN3, PIGA, PIGN, PIGX, PLK1, POLD4, POLE3, PPM1D, PRKCA, PRSS2, RBL2, RPS6, SEMA7A, SPRY3, SRGAP1, TDO2, UROC1, VAMP4, VDAC1, WARS2, YWHAE, ATP6V1G3, SUV420H2, TNFRSF11A, TNFRSF1B
Negative_15430	AK1, CP, DLD, EGF, FH, LHB, PDC, PGP, AADAC, ACADVL, ACO1, AGRN, AK3L1, ALDH4A1, ANAPC4, ANGPL4, APPL1, ATP4B, ATP5G3, B3GALT1, BACE2, BMP2, BMP6, BUB1, C4BPA, CARS2, CD274, CD34, CDC25C, CHAT, CHRNA7, CLCA4, CLOCK, CLTA, CYP17A1, CYSLTR1, DKK4, DNMT3A, DUSP7, DVL1, E2F1, EFN A1, EHMT1, EREG, FDFT1, FGD3, FOXA3, FUT8, GALM, GALNT1, GCNT2, GGT1, GLI1, GNB3, GNG13, GOT2, GPD1L, GRIA3, GRIN1, GRM5, GSK3B, HARS, HMGC R, HNMT, HSD17B2, HSD3B7, HSPA8, IFNA13, IFNAR1, IL12RB2, IL1RAP, IL20, IL8RB, ITPKB, KCNJ11, KLRC2, KNG1, LAMC1, LIMK2, LIPF, LLGL1, MAD2L2, MCCC2, MDM2, MLYCD, NEU4, NUDT12, OR10C1, OR11L1, OR1E2, OR2M2, OR2M4, OR51E2, OR5T3, OR6Q1, ORC2L, OXSM, P2RX2, PAPSS2, PDPK1, PFKL, PFN2, PIK3CG, PLA2G2A, PLD1, POLR2D, POLR2G, POLR2H, POLR2L, POLR3A, PPA2, PPP2R2A, PPP3R1, PRKAB1, PRPS2, PTPRJ, PTPRM, PYGB, RAD51, RALGDS, RDH12, RPS6KA2, SLC27A1, TAS2R38, TAS2R60, TBXAS1, THBS1, TJP1, TNFSF18, UGT1A10, UGT2B11, UPP2, VAMP1, ZFYVE16, HLA-DRB5, MAPKAPK5, ST6GALNAC3, ST6GALNAC4
Negative_15431	DCN, FH, PXN, AADAC, ACAD9, ACYP2, ADCY1, AKR1C1, ALDH1A2, ALG5, ALG8, ANAPC4, ATG3, ATP2A1, ATP2A2, B3GALT1, BCMO1, C5AR1, CACNA1C, CACNA1G, CACNB4, CALML6, CBR1, CCKAR, CCNA2, CCNB2, CD22, CD40, CD74, CDH15, CKS1B, CRLF2, CTSB, CTSL1, CYBB, CYP3A5, CYP4F2, DHDDS, DTYMK, DVL2, E2F3, E2F5, ENTPD8, GAB1, GALNT5, GBE1, GCNT3, GNAI2, GNAO1, GUCA1A, GYS1, HIF1A, HMOX1, HPSE2, HRH1, HTR2A, IFNA7, IFNA8, IFNAR1, IKBKE, IL11, IL17RB, INHBC, INPP4A, KIR3DL2, LTA4H, MDH1, MGST1, MMP1, MOV10L1, MPZL1, MYH9, NADSYN1, NAT5, NKX2-2, OR10G3, OR10H2, OR13C8, OR13J1, OR1L3, OR2T12, OR4D1, OR4M2, OR51B2, OR51Q1, OR52J3, OR52R1, OR5V1, OR9G4, PCYT1B, PERP, PFN2, PHKA1, PIAS1, PLA1A, PNLIP, PNPLA4, PPARD, PPP1R3C, PRKAR1A, PRKCI, PSENEN, PTPN7, RARS, RDH12, RHOA, SC5DL, SLC27A5, ST3GAL4, STX18, TMLHE, TP K1, TRIP10, TUBA1A, UGT2B28, ULK2, UXS1, WHSC1L1, XYLT2, ATP6VOD1, GABARAPL1, MAPKAPK3, PLA2G12A, SERPINB5, ST6GALNAC5

Negative_15432	AK1, AR, BAX, BCR, BTK, CGA, CR2, F10, GDA, GGH, INS, SP1, TH, ABI2, ACSM3, ACTA2, AKT3, ALDH1A2, ALDH3B2, ALPPL2, ANAPC10, ASMT, ATG7, ATP12A, AVPR1B, AXIN1, AXIN2, BACE2, BCL10, BMP8B, CACNG1, CCL1, CDC23, CDC25C, CDH4, CLCF1, CLDN17, CLDN8, CMAS, CPS1, CREB3L2, CREB3L4, CYP2E1, CYP2U1, DAPK2, DDX51, DVL3, EHMT1, ENPP6, EPHA1, EPHX2, F13A1, FGFR3, FGFR4, FZD7, GALNT2, GCLC, GLS2, HCST, HDAC1, HTRA2, IFNA17, IL10, IL1R2, IL1RAP, ITGA5, ITGA7, JAM2, KIR3DL2, LDHC, LGMN, MAN1B1, MAN2A1, MASP1, MPP5, MS4A2, NARS2, OR10X1, OR11L1, OR13C5, OR1J1, OR2AG2, OR2M2, OR2T11, OR2V2, OR4D1, OR6A2, OR7C2, OR8K5, ORC1L, ORC5L, PAFAH2, PIGQ, PIP5K1C, PLA2G2D, PNLIP, PNMT, PPM1B, PTEN, PTPMT1, RALGDS, RASGRP2, RFWD2, SCP2, SEMA4C, SEMA4D, SFRP2, SLC25A6, SMARCA5, SORD, ST6GAL1, TAS2R14, TFDP1, TNFRSF4, TRAF1, UBE2L3, UGT2B4, UROC1, VASP, XCR1, ATP6V1G2, HLA-DQA2
Negative_15433	ADO, ASL, EDA, FES, LSS, LYN, MOS, PDC, SCD, SPN, SRC, TH, TKT, ACAD9, ACOT11, ACOT12, ACTC1, ACTG2, ACVR2B, ADH4, AGMAT, ALCAM, ALDH3B1, ALDH6A1, ALDH9A1, ALG10, AMY2B, ANPEP, ATP12A, ATP6V1F, B4GALT1, CAMK4, CAV1, CCL11, CCL2, CCR9, CD14, CDC14B, CDKN2C, CES2, CHKB, CKS1B, CLDN6, CPT1C, DNMT3B, EPAS1, ESPL1, ETNK1, FABP4, FGF18, FGF5, FLT3, FMO1, FMO3, FUT6, FUT9, GAB1, GCH1, GGT1, GJD2, GLO1, GNA15, GRAP2, GUCY2C, HMOX1, HNF1A, ICOS, IDH3A, IFNA13, IFNA21, IKBKG, IL10RB, IL1RAP, JAK3, KCNJ11, LAMA4, LAP3, LCP2, LEFTY1, LIAS, LMO7, LTB4R2, LYZL1, MAGI1, MAN1A1, MAP3K2, MAP3K4, MASP2, MPZL1, MTHFD2, MYH8, NARS, NCK2, NEU2, NFKB2, OR10G8, OR10S1, OR1L1, OR1N2, OR2K2, OR4D1, OR4F5, OR51D1, OR51I2, OR51M1, OR52E8, OR52N5, OR5AN1, OR5T2, PFAS, PIAS3, PIK3C2A, PIK3C3, PLA2G2E, PLCD4, PLIN, PNMT, PRKY, PTPRF, PYGB, RDH8, RPSA, SARS, SETDB2, SLC9A1, SMC1B, SMPD3, SMURF1, STK3, TALDO1, TGFB1, TXNDC12, UGDH, UNC5C, XCR1, ZFYVE9, ATP6V1E2, CACNA2D1, HLA-DQB1, MAP3K7IP2, MAPKAPK5, SERPINB5, TNFRSF1B
Negative_15434	A2M, ABO, AR, F2R, MSN, NOG, TK1, TNF, XDH, ACP2, ACSM2A, ALDH5A1, ANGPL4, ARHGEF2, ARPC4, CACNA1B, CAMKK2, CCR7, CD274, CD72, CD8B, CDC27, CDIPT, CDK6, CRKL, CRLF2, CRLS1, CUL1, CYP26A1, CYP27A1, DAG1, ENO3, EPHA2, EXTL1, EXTL3, FGF10, FGF13, FGF19, FGFR3, GCNT1, HMOX2, HNF4G, HSD17B8, IL18, INHBA, INPP5A, ITGA5, ITPA, KITLG, LARS2, LLGL2, MAPK10, MBL2, MCCC1, MDM2, MYL9, MYLK2, NFYB, NOS3, NT5C2, OR10G3, OR10T2, OR13C2, OR1S2, OR52H1, OR5B17, P2RX2, P2RX6, PANK1, PARD3, PARD6B, PDXP, PFKL, PGK2, PIGT, PIK3CG, PIM2, PKMYT1, PLA2G2A, PLA2G6, PLAT, PLCB3, PLOD1, PLXNC1, PMVK, POLR1B, POLR3G, PPAP2A, PRKAG1, PSME1, RPRM, RPS6KA3, RPS6KA4, RRAS, RUNX1, SESN2, SLC2A4, SLC9A1, SMPD1, SPRED1, SQLE, TAS1R2, TAS1R3, TAS2R3, TGFB3, TNFSF12, TNFSF9, TOMM40, TYRP1, UNC5D, WASF1, WBSR17, WNT11, WNT8A, B3GALNT1

Negative_15435	<p>CD4, DHH, IL4, PC, SMO, TAT, A4GALT, ACADL, ACSL5, ADIPOR2, ADRB3, AKR1A1, ALCAM, ALG12, AMY2A, ARSB, ATIC, ATP12A, ATP5B, ATP5G2, ATP5J, B3GAT1, BCKDHA, BET1, BNIP1, BPNT1, CACNG2, CBR3, CCND1, CD22, CD40LG, CD44, CD72, CDC2, CDKN1C, CDKN2D, CLOCK, COQ7, CTNNA1, CXCL2, CYBA, DAPK1, DARS, DDX23, DFFA, DGAT2L4, DGKD, DPAGT1, E2F2, EFNA2, EHMT2, ENTPD8, EPHA2, ESPL1, FABP1, FGF17, FLT4, FUT1, GALK2, GALNT3, GCLM, GGPS1, GJA1, GMPPA, GRIN2A, GRM1, HADHA, HES1, HMGCR, IFNA14, IL18RAP, IL22RA1, IL7R, ITGA5, ITGAX, JAG1, KIR2DL4, KIR3DL3, LAMB2, LRRC4C, MALT1, MAP2K1, MAP3K3, MGAT5B, MYH15, NAT1, NFKB1, NFKBIB, NMNAT2, NRG3, NRXN3, NUDT5, NUMBL, ONECUT1, OR10A6, OR10G4, OR11H6, OR14J1, OR1I1, OR1J1, OR2A42, OR2V2, OR5V1, OR6C70, OR6N2, PARD6B, PCCA, PDK1, PIAS3, PIGV, PLCB3, PLIN, POMC, PRPS2, PSME1, PTDSS2, RARS, RFNG, RPS6KB2, SDHA, SDHC, SEMA3D, SEMA3G, SHC2, SHC3, SLC25A5, SMURF2, SPHK2, ST3GAL4, STAT4, STX12, SUCLA2, THY1, TJP1, TJP3, TNFSF4, TSC2, XCL1, MAPK8IP1, TNFRSF1A</p>
Negative_15436	<p>CFD, EZR, ME1, NOG, ACADL, ACSL5, ALDOC, ARPC4, ARPC5L, ATG3, AXIN2, BMP7, BMPR1B, C4BPB, CACNG7, CAMK2D, CCDC6, CD40LG, CD8B, CDKN1B, CHEK1, CSNK2A1, CTNND1, CYP1A1, DCTN1, DDX51, DGKG, DHDDS, DNMT1, DUSP14, DUSP7, DVL3, E2F1, EPHA7, FDFT1, FGF19, FSHB, GALNT3, GANAB, GCNT1, GNAI3, HA02, HEMK1, HEXB, HLA-DOA, HNF1B, IFNA16, IL22RA2, IL2RB, IL9R, JUND, KCNB1, LDHAL6B, LRRC4C, MAFA, MAP3K2, MAP3K4, MAPT, MCM3, MKNK1, MTAP, MYH4, MYL7, NCR3, NFKBIE, NOX3, OR4K14, OR51I2, OR52E8, OR56A4, OR5P2, OR6K2, OR8H3, PCK1, PDCD1, PDGFRB, PFAS, PGM1, PIP5K3, PLXNA3, POLA2, POLR2A, PRKACB, PRKCE, RHOQ, SHISA5, SOCS7, SPRED1, SQLE, SUV39H1, TALDO1, TCIRG1, TDO2, TLR3, UGP2, ULBP3, UPP1, EIF4EBP1, MAPK8IP2, PAFAH1B1, TNFSF13B</p>
Negative_15437	<p>AR, ASL, BCR, CR1, DCN, GAA, OAT, PXN, AARS, ACP, ACSL1, ACSM3, ACTN4, ACVR2A, ACYP2, ADRA1B, AKR1B10, ALDH4A1, ALG5, ALG8, ALPI, ARNT, ASCC3, ATP5A1, ATP6V1D, B3GNT3, B4GALT4, BAI1, BAIAP2, BBOX1, CADM3, CCDC6, CCR10, CCR7, CD34, CDH1, CDH4, CNTNAP2, CREB3L4, CRY1, CYP26B1, CYP2A13, CYSLTR1, DAAM1, DARS2, DHODH, DRD1, DUSP3, DUSP5, DUSP8, EGFR, ENTPD2, EPHA5, ETNK2, ETS1, FGF1, FLT3, FOXA3, FZD8, GALNT11, GALNT12, GCNT3, GDE1, GGCX, GMPS, GNPAT, GRIN2A, HA02, HIF1A, HRH1, HTR4, IGFBP3, IL11RA, IL12RB2, IL13RA1, IL25, ITGAL, KIR2DL4, LARS2, LLGL1, LRP5, LRRC4C, MAP3K6, MAPK8, MYH3, MYL9, NAMPT, NEU4, NFYB, NTN1, OR10C1, OR10K2, OR14C36, OR1L1, OR2L13, OR4D2, OR4K13, OR9Q1, OXTR, PAX6, PDE4A, PDGFB, PIGN, PIK3C2B, PITX2, PLD2, PPP1CC, PPP3R1, PTDS2, PTGES, PTGIS, RBPJ, RBPJL, SARDH, SARS, SELP, SFRP4, SMAD2, SMAD3, SMAD9, STT3B, SULT1E1, THBS1, TOMM40L, TRPM5, TUBAL3, UGT2A3, ULK1, VAMP3, WNT3A, WNT8A, ARHGEF12, CACNA2D4, GABARAPL1, PPARGC1A, PRICKLE2, ST6GALNAC4</p>
Negative_15438	<p>CP, FN1, JUN, MET, PDC, ACSL5, ACTA1, ACVR2B, AKR1B10, ALDH3B2, AMPD3, AMY2B, ARPC3, ATP5G3, BBOX1, BCMO1, BDH1, BUB3, C9orf95, CACNG4, CACNG5, CASP9, CCNH, CDC14B, CDKN2D, CERK, CHEK2, CHRM2, CLTCL1, CNGA4, COL5A1, COMP, CSNK1G2, CUL1, CYP4A22, DDX19A, DFFB, DGKD, DUSP9, DVL3, ECHS1, EDA2R, EIF4E, EVI1, FABP4, FADS2, FARSA, FGF23, FZD8, GCNT1, GGPS1, GOT2, GPX5, IL18, INHBA, INPP5B, JAK3, LARS2, LCMT1, LDHAL6A, MAPK14, MYL7, NADK, NAT5, NTNG1, OR10K1, OR11H4, OR2M2, OR4C16, OR4K15, OR4L1, OR5T2, ORC1L, P4HA1, PARD6G, PER3, PFN2, PFN4, PGAM2, PIGF, PMAIP1, PPA1, PRKAR1B, RFXANK, RHOA, SEMA4D, SMPD4, STAM2, SV2B, SYNJ2, TACR2, TAS2R3, TBL1X, TNFRSF9, TOMM40, TOMM40L, TRDMT1, TYMS, UGT2A1, UGT8, WIF1, WNT9B, HLA-DRB4, MAP3K7IP1, PAFAH1B1, ST6GALNAC4</p>



Negative_15439	<p>AMT, BAD, CR1, CR2, F10, GBA, GCK, GGH, ID3, ITK, KDR, MAX, MVD, PC, PGP, PXN, WAS, AADAC, AANAT, ACAD8, ACO2, ACSL4, ADIPOR1, ALDH3A1, ALG12, ALOX12, ARNTL, ATP5G1, AXIN2, B3GALT2, BHMT, BLVRB, BUB1B, C7orf16, CCND2, CCNG1, CCR1, CCR4, CD28, CDH3, CLDN9, CNTN1, CTS1, CYP11B1, CYP26A1, CYP26C1, CYP2A6, CYP2C8, CYP3A4, DDX41, DUSP7, ECSIT, ERO1L, FABP1, FLT4, FRAT2, FUT6, GBT1, GJD2, GNRH1, GPX7, GTSE1, HCCS, HMGCS1, HPSE2, HRAS, HSD17B4, HSPA2, ICAM2, IFNA5, IFNK, INSRR, ISYNA1, LDHB, MAP3K14, MAPK12, MYH1, MYH15, NCK1, NME7, NPR1, NPR2, OR2G6, OR4A16, OR51A2, OR52H1, OR52L1, OR5AK2, OR6A2, OR6K3, OR7G1, PANK3, PAX8, PCYT2, PDE6G, PDGFD, PEMT, PGAP1, PIAS2, PIGW, PLA1A, PLA2G10, POLR2E, PPA1, PRKCQ, PTGDS, PYCR1, RRM2, SCP2, SELE, SGPP1, SMAD1, SNAP23, SOCS4, ST8SIA1, STX3, STX4, SULT2A1, TAS2R48, TICAM2, TKTL1, UGT2A1, UMPS, VASP, ZIC2, ZNRD1, ATP6VOD2, PAFAH1B2, ST6GALNAC3</p>
Negative_15440	<p>AMH, AUH, DBH, F11, F3, LHB, PGP, STS, TFG, A4GALT, ACTB, ACTN2, ACVR2A, ADH6, ADIPOQ, ALDH3A1, ALG10B, ALG3, ASS1, ATP6V1F, B4GALT3, BCAT2, BLVRB, BST1, CACNA1G, CACNG3, CADM1, CASP3, CCL7, CD36, CDC6, CDIPT, CDS1, CHIA, CISH, CLDN16, CLDN2, CNGA3, COL4A2, COL5A2, COL6A2, COQ6, CYP8B1, DDX50, DGKA, DHDDS, DKK4, DNMT3B, DTX3L, EGFR, ENTPD4, EPL1, FGF12, FOXA3, FZD1, FZD9, GANAB, GAPDH, GBE1, GCNT1, GMPR, GNAS, GNG12, HCLS1, HEXA, HHEX, HMGCS1, HSD11B1, HSD17B2, HSPA8, HTR2A, IL13, IL17RA, IL17RB, IL29, IL9R, IMPA1, INHBB, ITGA11, ITGA5, ITGAX, LARS, LIPC, MAGI1, MAPK12, MCCC2, MGST1, MINPP1, MMP9, NEU3, NKX6-1, OR10C1, OR1J4, OR1K1, OR1S1, OR2A4, OR4D11, OR52N1, OR6K6, OR7A17, ORC4L, P2RX2, PAFAH2, PAK2, PANK3, PDE4B, PDE7B, PDHB, PIPOX, PLA2G1B, PLCD3, POLE3, PPAT, PPCDC, PPP1R3B, PPP2CA, PTAFR, PTK2, RAB5A, RAF1, RASA1, RFXAP, RHOQ, SARS2, SESN1, SLC27A5, SMAD5, SPRY3, SPTLC2, SRD5A1, ST3GAL6, STAT2, STK4, SULT1A4, SYNJ2, TCF7L2, TLN2, TNFSF8, TOMM40L, TRAF3, UAP1, UGCG, UPP2, ATP6VOD1, CACNA2D3, ST6GALNAC3, ST6GALNAC4</p>
Negative_15441	<p>ADK, GAA, KDR, SHH, SP1, TXK, ABP1, ACADS, ACAT2, ACTA1, ADORA2A, ADSS, ALG13, ANGPTL4, APBB1, APOA1, ARAF, ARHGEF2, ARPC4, ASPA, ATP5E, ATP6AP1, AVPR1B, BCAT2, BTRC, C3orf10, CACNA1C, CACNB4, CCL16, CCL2, CCR10, CD14, CDKN2A, CLOCK, CMAS, COL1A2, CREB3L3, CXCR3, DDIT4, DDOST, DDX23, DGAT2, DGAT2L4, DGKH, DKK4, DNMT1, DPM3, EFN1, EHMT2, ENO3, ENPP1, EPB41L2, EPHB3, ERO1L, FGF1, FGF3, FZD5, GCNT1, GIT1, GMPPA, GNAZ, GPAM, GPD1, GPLD1, GRHR, HCST, HNMT, HRH2, IARS, IKBKB, IL11RA, IL12B, IL1RAP, IRS4, ITPK1, JAK1, KLRD1, LARS, LEF1, LTBR, MAP2K2, MAP4K2, MAPK13, MCM3, MLYCD, NPR1, NRG4, ONECUT1, OR10G3, OR10H4, OR10J1, OR1E1, OR1J1, OR2F1, OR2T3, OR51Q1, OR5AP2, OR5C1, OR5D16, OR5L1, OR5T2, OR8D1, OR8H2, OXSM, PAICS, PARD6A, PDIA4, PDXP, PGM2, PGM3, PIP5K1B, PLAT, POLR2E, POLR2K, PPAP2A, PPP1CA, PRKAR2B, PRPH2, PTGFR, QPRT, RARS2, RPE65, RPS6KA6, SDC2, SEMA4D, SENP2, SFRP2, SKP2, SNAP25, SPRED1, STK36, STX4, TFDP1, THBS4, TLR3, TNFSF10, TRMT11, UAP1, UBE2K, WNT3, WNT5A, XCR1, XIAP, YWHAQ, ATP6V0A4, HLA-DRB3, TNFRSF13B, TNFRSF13C</p>

Negative_15442	BAX, CS, DAO, EDA, FER, GPT, PVR, SI, TK2, AADAC, ACACB, ACOX1, ACSL1, A CTN1, ADH4, ADH6, ADIPOR1, ALG6, APPL1, ASMT, ASNS, ATP5L, BAAT, CACN B2, CAMK4, CASK, CASP3, CCL27, CCL5, CCR2, CLDN14, CLDN22, CLTC, CNDP 1, CNTN1, COL6A2, DHFR, DHX58, DPM2, DVL3, EHHADH, EPHA3, EXTL1, FGFR 3, FLAD1, FLOT2, FOXA2, FOXO3, GALT, GCDH, GCNT2, GDF5, GGT1, GLS2, GN A11, GNAT3, GOSR2, GPAM, GRIN2B, GRIN2C, HAGH, HAO2, ICOS, IL20, IMPA 2, IQGAP2, ITGA4, ITGB4, ITPK1, JAG2, KIR2DL2, KIR3DL2, KLKB1, LICAM , LAMB2, LIPE, LRP6, MALT1, MAP3K2, MGAT2, MICA, MYH11, NADSYN1, NAGL U, NCOR2, NEU2, OR14I1, OR1C1, OR1K1, OR2M3, OR2S2, OR4C11, OR4F17, P 4HA3, PDGFD, PIGW, PIK3CD, PLA2G3, PLD2, PPAR, PPP3R2, PRKAR1A, PRO DH2, PSME2, PTAFR, RASSF5, RBL2, RCHY1, SEMA3A, SEMA7A, SH3BP2, SNAI 2, ST6GAL1, STEAP3, STX3, STX8, TAS2R50, TGFB1, TIAM1, TIRAP, TLN1, T NFSF9, TPK1, TRAF4, TUBAL3, UGP2, UGT2B10, UGT2B4, UXS1, YKT6, ALDH1 8A1, MAPKAPK3, MAPKAPK5, SERPINF2, ST6GALNAC6, TNFRSF17
Negative_15443	ABO, BCR, C8B, DBI, GHR, HAL, MOS, A4GALT, ABCC8, ACO1, ACPP, ACSL5, AC SM4, AHCYL2, ALDH3B2, ANAPC10, BDH1, CACNA1F, CCL4, CCR5, CDS2, CHAT , COL1A2, CSF1R, CTBS, CTPS2, CTTN, DUSP2, E2F3, E2F5, EFNA4, EPHA2, E PHB6, FIGF, FLT3, FMO2, G6PC, G6PC2, GAS1, GNAT3, GNRHR, GRB2, GRIN1, HTR2A, IDUA, IFT57, IL1B, IL1R2, IL22, INSR, IQGAP1, LAMB1, LDHA, LI AS, LILRB3, MAP3K13, MAP4K4, MS4A2, NARS, NCF4, NKX6- 1, NLGN3, NOX1, NR1D1, NR5A2, NT5E, OCRL, OR10S1, OR13F1, OR1M1, OR2A 2, OR2AT4, OR2G6, OR2M5, OR52K1, OR56B4, OR5A2, OR5AC2, OR5AU1, OR5T 1, PAICS, PFN2, PHKB, PLCE1, PLXNA2, PMM1, POLR2C, POLR3H, PON2, PPP2 R2C, PRKAA2, PRKAB1, PRKCI, PVRL1, RASGRF1, RPS6KA3, SCLY, SDHA, SGM S1, SHC1, SORBS1, STX8, TAS2R1, TAS2R16, TBL1X, TNXB, TUBB1, UGDH, VA NGL2, VDAC3, WNT6, YARS, ZMAT3, ALDH18A1, B3GALNT1, CSNK1A1L, SERPI NA5
Negative_15444	DCT, GLS, LAT, PRL, SCD, TYR, ABI2, ACOT11, ACPP, AGMAT, AKR1A1, ALDOC , ARPC1A, ATP5J, AXIN1, AXIN2, B4GALT4, BCL2, CACNG4, CACNG7, CADM3, CCL22, CHEK2, CHSY1, CHUK, CIITA, CLDN18, COQ7, CREBBP, CSF3, CXCL9, DAAM1, DDX52, DHDH, DPM1, E2F2, EDAR, ENTPD6, ENTPD7, EPHA6, EXT2, F2 RL1, FGF5, GALK2, GALNT12, GMDS, GPD1, GRM5, HES1, HHEX, HMGCL, HMOX1 , ICAM2, IDH1, IL12RB1, IL17B, IL22RA1, ITPA, JUND, LEF1, LEFTY1, LTA 4H, LTBR, MCCC1, NEFL, NRG3, NT5C1A, OGDH, OR1F1, OR2A5, OR2F2, OR2H1 , OR4C13, OR4M2, OR51A2, OR52H1, OR5P2, OR6K6, OR6N2, PAFAH2, PAK1, P CK2, PDE11A, PDX1, PGM1, PIGH, PIP4K2C, PKM2, PMAIP1, PPARA, PPP2R2A , PPP2R2B, PRLR, PTPN6, PVRL3, RPS6KA3, RPS6KA5, SESN3, SKIV2L2, SLI T2, SMURF1, SOX17, SPP1, SPTLC2, SQLE, ST3GAL3, TUBA4A, UBA1, WARS, W BSCR22, WIF1, WNT16, WNT2, WNT8A, XYLT1, YWHAH, ZAP70, ATP6VOE1, C1G ALT1C1, HSD17B12, TNFRSF10A
Negative_15445	AUH, BTC, C1S, CKB, CTH, F5, HYI, KIT, MAG, PGD, RFK, TEC, UBC, AARS, ADS S, AGPAT2, AKR1D1, ALPI, AOX1, APOA5, ATP2A2, ATP6VOC, BMP7, CCNB2, C CND1, CCR2, CD36, CD38, CD59, CDC23, CDC27, CDIPT, CHIT1, COL5A1, COQ 7, CYP2J2, DAG1, DEGS1, DFFB, DUSP1, DVL2, ECSIT, EPAS1, FGF1, FGFR3, FMO2, GANAB, GAPDH, GLUL, GNA15, GSK3B, GUSB, HAGHL, HRAS, HTR6, HTR7 , IDH3B, IL10RA, IL18RAP, INADL, IQGAP2, IRAK4, KYNU, LALBA, LGL1, M AML1, MAN2A1, MAP3K6, MAP4K1, MGAT5, MTHFD2, MYL7, NR4A1, NRXN2, OR1 0J5, OR10R2, OR14I1, OR1L4, OR2A5, OR2L8, OR4C46, OR4F6, OR4K2, OR4S 1, OR51E2, OR51F1, OR52N5, OR56A4, OR6A2, OR6K3, P2RX1, PAK7, PARS2, PDE10A, PDPK1, POLA2, POLE2, POLR3B, POMC, PORCN, PPAR, PPOX, PRIM1 , PRKAR2B, PTAFR, SARS2, SHMT2, SLC33A1, SNW1, SOCS4, SPRY3, SPRY4, S SH1, TAS2R40, TAS2R42, TMLHE, TYRP1, UGCG, UGDH, ULK1, UNC5B, VKORC1 , WNT7A, YWHAB, ATP6VOA1, HSD17B12, MAPKAPK3

Negative_15446	<p>BAX, DCK, F7, FGA, FYN, GK, GNE, IL3, INS, LAT, MOS, NPL, PRL, ABL2, ACP6, ACSL1, ACSS1, ADCY10, ADCY2, ALDH6A1, ALG2, APLP1, APOE, ARHGEF6, A RPC1A, ARPC2, ASRGL1, ATP5F1, CACNB1, CACNB3, CAMK2G, CCR4, CCR8, CD 40LG, CD44, CDC25B, CDH1, CREBBP, CSF2RA, CTS1, CYP1A1, CYP2A7, DFF A, DMGDH, DNMT3B, DPYSL2, DTYMK, EHMT2, EPB41L3, FM01, FM04, FTH1, GA D2, GALM, GCNT4, GDF7, GMPR2, GNA12, GPAM, GUCY2C, HSD17B7, IFNA21, I GF1, IL21, IL23A, IL6R, IQGAP1, ITGB5, ITPA, JAM3, KCNB1, LCMT2, LTA4 H, MAPK9, MASP1, MMP7, MRAS, NADK, NAE1, NOX1, NPR1, NRXN1, NRXN2, OR1 3G1, OR1D5, OR1G1, OR1L8, OR2D2, OR51F1, OR52R1, OR5V1, OR6B2, OR8B4 , OR8J1, ORC3L, P2RX4, PARS2, PCYT2, PDE3A, PIGN, PIGO, PIGQ, PLA2G1B , PLA2G3, PNLIP, POLA1, POLD3, POLR3H, PPM1A, PPP2R2D, PRKACA, PRKAC G, PRKCD, PRKCG, PTPRC, RALA, RENBP, RFXANK, RIPK1, SCP2, SIGLEC1, SL IT1, SLIT2, SOCS2, SORBS1, SPI1, STX10, STX16, TALD01, TAS2R16, THY1 , TLR9, TOMM40L, TRAF3, TSC2, TUBA4A, UGCGL2, ULBP2, VAV3, WHSC1, WIF 1, WNT16, XCL1, AASDHPPT, ATP6VOA4, C1GALT1C1, ST6GALNAC4, TNFRSF1 0C, TNFSF13B</p>
Negative_15447	<p>AUH, CD6, CGA, DBI, F10, F2, FER, GAA, GPI, HK3, INS, ITK, MAX, STS, ACAC A, ACAD9, ACMSD, ACOX1, ACSS3, ADH4, AGRP, AKR1C3, AOC2, APOC3, ATP4B , ATP5B, ATP5D, BIRC3, BTRC, CANT1, CAPN2, CDC42, CLDN22, CLTB, CNGA4 , CTTN, CX3CL1, DCTN1, DGKQ, DHCR7, DHDH, DRD2, EFN1, F13A1, F2RL3, F ZD9, GALNT12, GP1BB, GUK1, GZMA, HTR6, IARS, IDUA, IFNA14, IFNA8, IKB KG, IL12B, IL23A, INADL, IRF3, ITGAL, ITGAV, KIR2DL3, LCMT1, LYPLA1, MAGI1, MKNK2, MMP9, MYL9, NEUROD1, NKD2, OR13C2, OR2M5, OR2T5, OR51F 2, OR52D1, OR52E4, OR52K1, OR52W1, OR5A1, OR5H2, OR5J2, OR6K6, OR6M 1, OR7G2, OR8I2, PARD6G, PDHB, PIGC, PIK3C2A, PLXNB1, POLR1E, PPAP2C , PPP1R3D, PTGES, PYCRL, RELA, RPE65, RXRA, SDHC, SEMA3G, SHMT1, SMAR CA2, SMPD4, STX16, TAS1R2, TP53, TRAF6, TUBB4, UCK2, ULK2, UROD, VEGF B, AASDHPPT, ATP6VOA1, ATP6V1C2</p>
Negative_15448	<p>AR, C1S, CFD, CKB, DBH, EPO, FN1, GLS, ITK, KDR, MSN, OSM, PC, SFN, TAT, T EC, TNN, WAS, ABLIM2, ACAT1, ACSM3, ACTG2, ACVR2B, AGTR1, AKR1C1, ALD H1A3, ATP2A2, ATP5J, ATP6VOB, BDNF, BLNK, CACNG1, CBR3, CCL15, CD44, CD70, CDC26, CHRM5, CHSY3, CLDN1, COL1A1, CREB3L2, CSF3R, CTBS, CTNN A1, CTTN, DDIT3, DHCR7, DLAT, ENPP3, ENTPD5, ERBB3, FABP4, FTH1, GAB1 , GALNT1, GALNTL2, GDF7, GJA1, GNMT, GNRH1, GUCY1A2, HAGHL, HSD17B4, IDI2, IL18RAP, IL8RA, IMPA2, INHBA, INPP5A, INPPL1, IRAK4, ITGAM, KC NQ1, KLK3, KRAS, LARS, MAML2, MAPK3, MAT2B, MCAT, MCCC2, MGAT4B, MYL2 , NAT2, NOTCH1, NRG2, NUDT5, NUDT8, OR10A5, OR10H5, OR11H4, OR12D3, O R2M7, OR2Z1, OR3A2, OR4A5, OR52B6, OR56A1, OR5L2, OR7C2, OR8S1, PAK7 , PARD3, PHKA2, PIPOX, PLA2G10, PLA2G3, PMM1, PORCN, PPAP2A, PPP2R5E , PSPH, PTGES2, PTPMT1, RBPJL, RDH16, RPS6KA3, RXRB, SDC2, SDHA, SELP LG, SETD1B, TAS2R14, TAS2R41, TBL1XR1, TGFB3, TRHR, TUBB1, UBE2L6, U GP2, VAMP2, WIF1, YWHAH, ATP6VOD1, ATP6VOD2, B3GALNT1, CACNA2D1, KI R2DL5A, PAFAH1B1, ST6GALNAC4, TNFRSF10B</p>

Negative_15449	<p>BAX, C5, DCK, EGF, FGA, FH, ILK, SFN, TEC, TKT, AACS, ABL1, ABLIM3, ABP1, ACADL, ACADM, ACADVL, ACOX1, ACVR2A, ACYP1, ACYP2, ADORA2A, ADRB1, ALDH1L1, ALDH3A2, ALDH3B2, ASIP, BCMO1, BRAF, C3orf10, CCR10, CCR5, CD34, CDC23, CDKN1B, CLDN7, CLTA, CNTF, CSF1, CTPS, CX3CL1, CXCR6, CYP11A1, DDX51, DEGS1, DGAT1, DGAT2L4, DTX3L, EPHA5, ETS1, FABP4, FGF11, FGF18, FUT1, G6PC, GNG12, GPT2, GSK3B, GUSB, HBEGF, HLA-F, HNF1A, HSD3B7, IDH3A, IL10RA, IL23R, IL28B, IL28RA, KCNB1, KIR2DS5, KIR3DL3, KLRD1, LCP2, LGMN, MAP3K8, MAP4K3, MAPK3, MCM4, METTL2B, MGLL, MKNK2, MLLT4, MTFMT, NFKBIA, NOD1, ONECUT1, OR10P1, OR14I1, OR1N2, OR2M2, OR4C6, OR51E2, OR7C1, OR8G1, OR8J1, P2RX6, PDE4B, PDE6G, PDE7A, PFKFB3, PFKL, PHKA1, PHPT1, PIAS3, PIGV, PLA2G2A, PLD1, PLOD3, PLXNB2, POLR2E, PRSS2, PYCR1, RAC3, RBKS, RBPJ, RFXANK, ROBO3, SESN2, SLC25A6, SMAD1, SPRED2, STEAP3, STX6, SULT1A4, SUOX, SUV39H1, TAS2R10, TAS2R40, TNFSF8, TPM3, TRAF2, TUBA8, VANGL1, VCAM1, VDAC3, WNT5A, WNT7B, XCL2, YARS, C1GALT1C1, CSGALNACT1, HSP90AA1, MAPKAPK2, TNFRSF12A, TNFRSF14</p>
Negative_15450	<p>AK2, BAD, ID3, IDS, LEP, LPL, PXN, ABI2, ACADS, ACSS2, ACTN2, ADCY4, AKR1C4, ATP5C1, ATP5E, ATP5F1, ATP6VOC, BST1, CACNB2, CD80, CD82, CDC16, CDK7, CER1, CHPT1, CHST13, CLDN14, CLDN5, CTF1, CYP2U1, CYP7A1, DDB2, DHDDS, DHRS9, ENTPD7, EPHA8, FBP2, FCGR3A, FZD10, GALNT1, GART, GCLC, GCLM, GNAI2, GNRH2, GUCY1B3, GUSB, HADHA, HLA-G, HSPB1, HTR2A, IFNA21, IL23R, ITGA1, KDSR, KIR2DL2, LAMB2, LAP3, LCM2, MAOA, MARS, MASP2, MINPP1, MYH9, NAT1, NAT2, NCOR1, NCOR2, OGDH, OLAH, OR10A6, OR10G4, OR10J1, OR10V1, OR11H6, OR11I1, OR1J1, OR2F1, OR4C6, OR52H1, OR5H6, OR5K2, OR7C1, OR8A1, OR8B12, ORC2L, ORC5L, OXTR, P2RX6, PAX6, PEMT, PGK1, PGS1, PIAS3, PIGO, PIP4K2A, PLCG1, PLXNA2, PLXNB1, PLXNB3, PPAT, PPM1A, PPP2R2A, PTAFR, PYGB, RASA2, RBKS, RBL1, RDH12, RPS6KB1, SESN1, SLIT2, SOAT2, SPRY1, SULT1E1, SUV39H2, TAS2R4, TAS2R48, TKTL2, TNFSF14, TNXB, TPI1, TRAF2, UGT2A1, ULK2, UPB1, GABARAPL1, PPARGC1A, SLC25A31, ST6GALNAC4</p>
Negative_15451	<p>BTC, CTH, DCK, FGB, IL8, ME1, OSM, STS, TH, TXK, ACY1, ADCY3, ADH5, AKR1A1, AKT3, ALDH6A1, ALDH7A1, ALOX12B, ALPL, ANAPC7, ANPEP, ATN1, ATP4A, B3GALT6, CCL28, CCR2, CD40, CFL2, CFTR, CHRM1, COL5A3, CREB3, CSNK1E, CYP2E1, DHX58, DUSP8, ENAH, EPHB4, EPHX2, FGF3, FPGT, GALNS, GANC, GARS, GDF5, GLS2, GNA13, GPAA1, GPAM, HIF1A, HLA-DMA, HMOX1, IL10RA, IL13, IL22, IL28B, IMPDH1, LAMC1, LIMK1, LMO7, LPAR1, LTC4S, MAP4K4, MAPK10, MAPK9, MCCC1, MS4A2, MYH2, NME2, NME4, NR1H3, NT5C1B, OCLN, ONECUT1, OR13G1, OR13J1, OR1A1, OR1S1, OR2AG2, OR4A16, OR4D6, OR4K17, OR51Q1, OR52H1, OR5T1, OR6B3, OR6C76, OR8H1, PAK2, PDE3A, PDE5A, PDXK, PFKFB1, PFN3, PIAS2, PIGX, PIK3CD, PLA1A, PPCDC, PTEN, PTPRC, RDH12, SDHB, SETD7, SOCS7, STAT2, STK36, SUFU, TACR1, TBL1XR1, TBXAS1, TICAM1, UGT2A1, VKORC1, VTI1B, WASF1, WIF1, YARS, YES1, MAPK8IP3, MAPKAPK5, TNFRSF13B, TNFRSF1A</p>

Negative_15452	CBL, DBI, EZR, F12, FST, PGF, UBB, ABLIM2, AKR1C1, ALDH2, ALG13, ARHGE F6, ARNTL, ARRB2, AVPR1A, BIRC5, BMP6, BTRC, C3AR1, CD3E, CDKN1A, CLOCK, CNGA4, COL1A1, COMT, CPT1A, CSF3, CTBS, CTSB, CYP3A5, DAG1, DNMT1, DOLPP1, DVL1, EGLN3, ELK4, EPHX2, EPOR, FCGR2B, FLAD1, FLT3LG, GBA3, GLG1, GNAT3, GRPR, HARS, HNF4A, IFIH1, IFNGR1, IGFBP3, IL6R, INPP5B, IRAK4, ITGA5, KRAS, LDHB, MAP4K4, NME6, NMNAT3, NOD1, NT5C3, OR10AD1, OR13C2, OR13C5, OR13G1, OR2AE1, OR2G3, OR2V2, OR4F6, OR4X2, OR52E6, OR52I1, OR52I2, OR5B17, OR8B12, OXCT2, PAPSS1, PDE4B, PDE7B, PER3, PFKFB3, PHKB, PIGU, PIGX, PIK3C2A, PIK3CB, PIP4K2A, PLA2G5, PLCG2, PPP2R2B, PPP3CA, PRKCH, PRLR, PSME1, PTPN11, PVRL4, RASSF5, RFWD2, RPE65, SGPP2, STX7, SULT2A1, SUV39H1, TACR2, TAS2R13, TGDS, TGFA, THBS2, TICAM2, TUBB4, UGT2A3, UROD, VAV3, WIF1, WNT11, XCL1, ATP6V1B2, ATP6V1E1, CSGALNACT2, MAPKAPK2, SERPINE1
Negative_15453	ADK, AK7, DCC, MIF, ACSL5, ACTG2, ACVR1B, ADSSL1, ALAS1, ALDH3A2, ALDH9A1, ALG8, ARSA, ATP6VOB, B3GALT2, BMP5, C5AR1, CACNB4, CCL16, CCL19, CCL23, CCL27, CCL3, CCNB3, CCR8, CD58, CD80, CDC23, CDC26, CDH15, CLDN16, CLDN20, CLOCK, COL4A1, COQ6, CXCL12, CYFIP1, CYP2C9, DAG1, DD X52, DEGS1, DHDDS, DNMT1, ENAH, ENTPD6, EXOC7, FGD1, FOSL1, FZD1, FZD2, GLYCTK, GNAS, GNB1, GRLF1, GSTA2, HTR7, IL2RG, INPPL1, IPMK, KLRK3, LTBP1, MAN2A1, MAP3K11, MAP4K4, MAT1A, MCAT, NAT6, NMNAT2, OR10A4, OR10G9, OR13C5, OR14J1, OR1B1, OR1L1, OR2D2, OR4D2, OR4F6, OR4P4, OR51I2, OR8B8, OR8H3, ORC3L, OXTR, P2RX2, PAPSS2, PCCA, PCK1, PCNA, PDGFB, PFN2, PFN4, PIGT, PIK3CD, PKLR, POLD3, POLR3H, PPM1A, PPP1R1A, PPP2R2B, PTPN11, RDH12, SCD5, SDC3, SELE, SESN1, SOAT2, SSH2, SULT1A1, SUV39H1, TAS1R3, TAS2R1, TGFBR1, THBD, TP73, TRMT11, TYMS, UAP1, WBS CR22, WNT1, WNT7B, ZMAT3, PPARGC1A, PRICKLE2, TNFRSF12A, TNFRSF1A
Negative_15454	AK7, AR, F8, GP6, HPD, LIF, PGF, SMO, ACSM2A, ACTA2, ACTN4, ADRB3, ALPPL2, AMD1, AMPD3, APOE, ARNTL, ASRGL1, ATP5G1, B3GALT6, BDKRB2, BIRC5, C1QC, CACNA1I, CACNB4, CD36, CDC42, CDKN2C, CHAT, COL4A6, CSNK1E, CTNNA3, CTPS2, DAXX, DGKA, DGKG, DKK4, DMGDH, DPYD, DUSP8, EHMT1, EIF4B, ELK1, EPHB1, EPOR, EREG, FARSA, FGF8, FIGF, FTH1, FZR1, G6PD, GCNT3, GFPT1, GGT5, GJA1, GRIA1, GUCY1B3, GUCY2F, GUSB, HMBS, HPSE, HSD17B1, HSPA8, IFNA10, IFNAR2, IL28RA, IL8RA, IMPA2, INMT, ITPA, LAMC3, LDHB, LILRB3, LLGL2, LTB4R2, MAP2K5, MAPK14, MS4A2, MYL2, NEUROG3, NQO1, NUMBL, OLR1, OR10H4, OR11H1, OR13J1, OR1E2, OR1L3, OR2W1, OR4X2, OR5AU1, OR5K2, OR6N2, OR8B8, OR8H1, OR8H3, OR8K1, PCYT1A, PCYT1B, PDE8A, PFKFB1, PFKM, PIAS4, PIGM, PLA2G2A, PLCE1, PLCG1, POLD4, PYCR1, RAF1, RASA1, RUNX1, SCIN, SMAD6, STT3B, SV2C, TAS2R3, THY1, TJP1, TNFSF10, TNFSF12, TPH2, TUBA1B, UNC5A, UPRT, VTI1B, WNT1, WNT7A, WNT8A, ATP6VOA4, C1GALT1C1, PAFAH1B3, SERPIND1
Negative_15455	AK2, EPO, FH, PGD, RFK, TFG, TKT, ACADL, ACSL4, ACSM1, ACTN2, ADCY9, AGXT2, ALDH2, ALG11, ANAPC7, ATIC, BAIAP2, BCKDHA, BCL2, BCMO1, BIRC3, BMP8A, CAMK2A, CCNB2, CCND1, CD47, CDH2, CDK7, CHRM2, CLDN19, CLTCL1, CSF3R, CTSS, DAPK3, DIAPH1, DPM2, EFNA2, EPHA3, EXTL2, FARSB, FDPS, FLT3LG, GALNTL5, GLDC, GNG3, GYS1, HPSE2, HRAS, IFNGR1, IFT57, IGSF5, IL17B, IL7R, ITGA1, KLRK1, LGMN, MAGI3, MCCC2, MTHFD1L, NFKBIA, NOTCH1, NR4A1, NUMBL, OR10G4, OR13C8, OR13H1, OR1D5, OR4N4, OR51G2, OR52E2, OR5D13, OR5H2, OR7C1, PDHA2, PGLS, PIGA, PLCB2, PON1, PRKY, PTPRC, RBPJL, RHEB, SETD8, SLIT1, SMAD6, STX1B, TAS2R50, TCF7L1, THBD, TJP3, TRHR, TUBB3, TYMS, TYROBP, UGDH, VEGFA, WASF3, WNT5B, ATP6V1C1, ATP6V1G2, EIF4EBP1

Negative_15456	AK7, C8B, CP, GNS, GSR, PGD, ACAT2, ACTG1, ADIPOQ, ADIPOR1, ADORA2B, A GXT2, AHCY, AKT3, AMHR2, AMPD3, APBB1, ARHGEF2, ARPC5, ATP50, BDKRB1 , BIRC2, CCL24, CCL25, CCR1, CCR10, CD8B, CDC26, CDC7, CRLS1, CSNK2B, CXXC4, CYBA, CYP2A13, DAPK3, DUSP4, EIF4B, EP300, FGF19, FGF20, FGF7 , FGF9, FMO2, FOXO3, FSHB, GAMT, GCLC, GGT7, GMDS, GNRH1, GSTO2, GSTZ1 , HADHB, HES1, IDH3G, IFNA13, IMPDH1, IQGAP2, KAT2B, KIR2DS5, LTBR, M AN1C1, MGST1, MYH8, NME2, NNMT, NR1D1, OR10H1, OR10Z1, OR13C5, OR1D2 , OR1E1, OR2AE1, OR2AG2, OR2L13, OR4A5, OR4K13, OR4K14, OR52E4, OR52 I2, OR8B8, OR8K3, ORC2L, PAK2, PANK4, PDE5A, PKM2, PLCD1, POLR2H, PPB P, PRKCQ, PVRL3, RALBP1, RAPGEF1, RARS, RASA1, RDH11, RHOA, RIPK1, SD HB, SEMA4F, SETD2, SQLE, STAT3, TP73, TPH1, TPM3, TSTA3, TUBB2B, UGT2 B10, ULK3, VKORC1, WNT9A, ARHGEF12, ATP6V1C2, CSNK1A1L, CTNNBIP1, H LA-DPA1, HLA-DRB4, MAPK8IP2, PRICKLE1, SERPINF2
Negative_15457	C4B, CDA, FGB, GP6, JUN, LPL, PC, XDH, AACS, ACOX3, ACSM2A, ACTA1, ACVR 2B, AHCYL1, ALDH1L1, ALDH4A1, ALDOA, ALG10, ALG10B, ASPA, B3GAT2, B3 GNT4, BAI1, BCL2, BST1, C1QC, CACNA1H, CACNG5, CALML5, CAMK2B, CCL13 , CCL3, CCNG1, CCR5, CCR8, CD247, CDC25B, CHDH, CLDN9, CPOX, CSF1R, CS F3R, CTNNA2, DDOST, DDX51, DERL1, DPAGT1, DRD1, DTX3L, DUSP5, ENPP6, FGD3, FUT3, FZD10, GCLM, GRB2, GRIA2, GTSE1, HLA- G, HPRT1, HSD3B2, HTR2A, HTR6, IL22RA2, ITPKA, JAM2, KCNB1, LDHAL6B, LEFTY2, LEPR, MAN1A1, MGST2, MMP1, MRAS, MTHFR, MTHFS, MTMR1, NKD1, N MNAT2, OR10G3, OR10P1, OR14J1, OR2A42, OR2A5, OR2B6, OR2M2, OR2T34, OR4C13, OR4M2, OR5I1, OR6K2, OR7D4, ORC3L, PANK1, PDE8B, PIK3C3, PIM 1, PLCD1, PLD2, PNPT1, POLR1B, POLR3D, PTGS2, PTK2B, PTPN5, RAB23, RE NBP, RPN2, RXRB, SC4MOL, SENP2, SFRP2, SMAD4, TAP2, TAS2R10, TAS2R8, TBXA2R, TJP2, TUBA4A, UBA7, UGT2B10, ULK1, UNC5C, WEE1, ATP6V0A1, MA PKAPK5, ST6GALNAC6
Negative_15458	AK2, AMH, C7, CR1, DCK, GP9, IDS, LSS, MAX, NF1, STS, TPR, TXK, ZYX, ACHE , ACVR2A, ADCY5, ADRA1A, AGMAT, ALDH2, ALDH3A2, ASIP, BAAT, BDH2, CCL 7, CCNA2, CCNE2, CD86, CFTR, CHSY1, CNTN1, CXCR3, CXCR4, CXCR5, CYP4A 22, DGAT1, DLAT, DTX4, EDAR, EHMT2, EPHA5, EPOR, FGF22, FLAD1, FMO4, G AD2, GANAB, GGT7, GLB1, GMDS, GNA15, GRIA1, GRIA2, HARS2, HLA- F, HSD3B2, HTRA2, IDUA, IL11RA, IL8RB, IPMK, IQGAP1, IRF7, ITCH, ITGA D, ITGAL, KIR2DL1, LEF1, MAP3K11, MAP3K13, MYH2, NAGK, NCK2, NCOR2, N FKB2, NME2, NMNAT3, OR10K1, OR2T5, OR4C16, OR4E2, OR52E6, OR52I2, OR 52J3, OR52R1, OR56B4, OR6C75, OR7G1, PAPSS1, PDE4C, PHPT1, PI4KB, PL CB2, PLCB3, PLTP, PLXNC1, POLR2E, POLR2K, PON1, PPP3CB, PRKAG1, PRKY , PTPRZ1, PYGL, RALB, RARA, RRM2B, RUNX1T1, SELPLG, SEMA4F, SGPP2, SM PD1, SOX17, SPRY4, SSH1, ST3GAL5, SUFU, SUV39H1, TACR1, TAS2R13, TDO 2, TFPI, THBS1, TMLHE, TNFRSF4, TUBA8, TYK2, ULBP1, UPP2, WWP2, ZMAT3 , EIF4EBP1, MAPK8IP2, PLA2G12B, SUV420H2
Negative_15459	AMT, CR2, F9, GBA, GH1, IL8, ILK, JUP, MOS, PVR, TPO, ABAT, ABP1, ACSL5, ALG8, AMDHD1, AOC2, ATP5L, CACNA1F, CACNG5, CACNG7, CAMK2B, CCL17, C CND2, CCNE2, CDC20, CHKA, CKMT2, CLDN5, CLOCK, COL4A4, COQ3, CREB1, C SF3, CTLA4, CXCL2, CYP27A1, DAAM2, DDOST, DDX4, DDX52, DFFA, DGKB, F1 3A1, FBP2, GLB1, GLUD1, GNAO1, GNB3, GRIA2, GTSE1, GUCY1A3, HHEX, IFT 57, IKBKB, IL17RB, IL21, IL29, IL7R, ITGAL, ITPKA, MTHFR, MYLK3, NEU1 , NFASC, NFATC2, NME7, NOTCH1, NOTCH3, NPAS2, NUMB, ODC1, OR10G7, OR1 0H4, OR11L1, OR1D2, OR2G2, OR4N4, OR51L1, OR6S1, P2RX4, PARD3, PARD6 G, PARVA, PDE11A, PHKG1, PNMT, POLA1, POLA2, POLE, POLE2, POLE3, POLR 1B, PRKAG1, PRKG2, PTGIS, PTPRM, RAPGEF2, RERE, RFX5, RIPK1, RPE65, R RM2B, SLC25A5, SLC2A2, SMAD9, SOD1, SRD5A2, SUV39H1, TAS2R16, TAS2R 5, TBL1XR1, TICAM2, TLN2, UBA7, UPP1, VAV2, YKT6, YWHAH, PDCD1LG2, TN FRSF1A

Negative_15460	<p>CFD, DDO, FAH, GNE, NPL, PGD, STS, ABCC8, ACAT1, ACSL1, ADIPOR2, AGMAT, ANAPC11, ANPEP, ARD1A, ARG1, ARHGAP5, ARPC1A, ARPC2, ARPC5L, ATP50, AVPR1B, B4GALT1, BCKDHB, BDNF, BTRC, CACNA1B, CAV1, CD34, CD80, CDH1, CDH4, CMPK1, COX10, CREB3, CREB5, CSDA, CTBP2, CYFIP1, DGKB, DGKG, DGKI, DKK2, DNMT3B, E2F1, EARS2, ENTPD1, ER01L, F2RL3, FDPS, FGFR2, FRAP1, GADD45A, GALC, GCDH, GCNT1, GFPT1, GLUD2, GNAL, HADHA, HMOX1, IARS2, IFNA13, IL17B, IL17RA, IL18, IL5RA, INPP4B, IRAK3, ITGA7, ITGAD, KIR2DS5, KLRC2, LCAT, MAP2K4, MBL2, MPST, MTFMT, MTMR2, NAE1, NODAL, NRIH3, OR10A2, OR10A5, OR4A5, OR4M1, OR51Q1, OR52A5, OR52I2, OR52J3, OR56A4, OR5AC2, OR5T1, OR5T2, OR6C1, OR8U1, P2RX5, PAX6, PCCA, PDX1, PFN1, PIGT, PLEKHA8, PLXNB3, PNMT, POLA1, PPID, PPP2R2A, PPP2R2B, PRKAA1, PRKCD, QPRT, RALA, RDH8, RELA, RUNX1T1, SCP2, SDC3, SMURF1, SOAT1, STK36, SULT1A2, TAS2R13, TGFB3, TNFRSF8, TPH1, TSC1, UBE2L3, ULK3, UPB1, USE1, WNT7A, WNT8B, XCL1, YWHAQ, HSD17B12, PRICKLE2, SERPIND1</p>
Negative_15461	<p>AMH, BAX, DCN, FOS, ID2, LSS, LYN, STS, ABCC8, ACAT2, AGMAT, ALCAM, ASS1, ATP2A2, BAIAP2, BCAT2, CAMKK1, CAPN2, CD79B, CERK, CHRM5, CLTB, CTNNB1, CYP21A2, CYP2A13, CYP4A11, CYP7A1, DLAT, DOT1L, FGF14, FZD5, GALNT7, GALNTL4, GARS, GNAT3, GNB3, GUCY2D, HHEX, IFIH1, IFNGR1, IMPDH2, KIR2DL2, KITLG, LAMC3, LDHAL6A, LLGL2, MAML2, MAP3K13, MASP1, MMP2, MYL7, NAMPT, NKD2, NME6, NR5A2, NRXN2, NRXN3, ONECUT1, OR10A3, OR10Q1, OR13F1, OR13J1, OR1B1, OR1N2, OR1S1, OR2A14, OR2M2, OR2T34, OR2Y1, OR4N2, OR52R1, OR5B21, OR5D16, OR7D2, OR8H2, ORC6L, PDE4C, PIGB, PIGW, PISD, PMM2, PRKAA2, PRKACB, PSEN1, PTEN, PTPN6, RERE, RPIA, RRAS2, RXRA, SARS, SENP2, SMPD1, SOS1, SPI1, SRGAP2, STK3, SULT1A1, TAS1R3, TCIRG1, TD02, TLR4, TRPC1, UBA7, UGT2B10, UPP1, YOD1, ZBTB16, ATP6V1G1, CACNA2D1, CSNK1A1L, TNFRSF14, TNFRSF17</p>
Negative_15462	<p>CAD, CD2, CS, DLD, SCD, SRC, SRM, ABAT, ACACB, ACTA2, ADCY2, ADCY6, AGPAT3, ALDH6A1, ALG2, ALG6, AMPD3, ATP6AP1, B3GALT6, B4GALT7, BCMO1, BDH2, BMPR1A, C5AR1, CACNG5, CACNG6, CALML5, CCL15, CD19, CHEK1, CLDN17, CLDN3, CNGA4, CSDA, CSNK1D, CXCL9, CYP2B6, DCTN1, DDHD1, DHCR7, DHRS4L2, DPYD, DTX1, DTYMK, ETNK2, FOXO1, GALNT9, GALNTL4, GANAB, GDF5, GIT1, GMPPA, GPT2, GPX5, GUK1, IDH1, IFNA10, IKBKG, IL5RA, INHBA, INPP5E, IRS1, ITGB7, LIFR, MAGI1, MAP2K4, MAP4K3, MIOX, MYL2, MYL5, NEU1, NEU2, NFKBIE, NKD2, NRP1, NRXN1, NTNG1, OR10G2, OR10P1, OR2B6, OR4A5, OR4X2, OR52N1, OR5B17, OR5T3, OR6C1, OR6C74, OR7C1, OR8H3, ORC1L, ORC6L, P4HA3, PDGFRB, PGAM1, PGM2, PHKB, PIK3C2G, PIK3CD, PIM2, PLA2G2E, PLAUR, PLEKHA8, POLR2E, POLR2I, PON1, PPP2CB, PRKAA2, PRKCI, PRKCQ, PTPN1, PTPN5, RFXAP, RUNX1, SEMA4C, SH2D2A, SIGLEC1, SPHK2, SSH1, SSH3, ST8SIA1, STAT2, STX1B, STX6, TGFB3, THBS1, TIAM2, TJP3, TLR3, TNFSF12, TNFSF9, TOMM40L, UBA1, UBE2L6, UCKL1, UGDH, UPP1, VEGFA, VTI1A, WBSCR17, WNT10B, YARS, MAP3K7IP1, MAPK8IP1, MAPK8IP3, TNFRSF13B</p>

Negative_15463	ADK, CS, FYN, GGH, GP6, PC, PGP, RB1, SRM, ACSM2A, ADCY3, AGPAT3, ALDH1A3, ALDH9A1, AMY2A, APOA1, APOA2, AREG, ARHGEF1, ARPC4, B3GAT2, BACE2, BIRC5, BRAF, C4BPA, CDH5, CLDN11, CLDN8, CLTC, CPT2, CREB3, CREB3L3, CTF1, CTSG, CXCL1, CYFIP2, CYP1B1, CYP3A4, DAAM1, DAAM2, DBF4, DGKE, DUSP3, ENTPD1, EPB41L2, EPB41L3, FGF17, FOXA3, G6PD, GADD45B, GALNTL2, GAPDH, GBE1, GCNT1, GLO1, GNAL, GPD1, GRIA2, GRIN2D, GRM5, GSTM1, HCCS, HEXB, HMBS, HMGCR, HSPA2, IDH3G, IFIH1, IFNA7, IL25, IRS1, IRS4, ITGA8, ITGAL, KCNB1, KYNU, LFNG, LIPT1, MAN1A1, MAOA, MAT1A, MGAT1, NAT2, NQO1, OPLAH, OR10Q1, OR13C4, OR13H1, OR1J1, OR4D5, OR4N4, OR4N5, OR51B6, OR51G2, OR5AC2, OR5C1, OR5J2, OR6C1, OR6K3, OR8D2, OR8U1, OR9Q2, PIGP, PIP4K2B, POLR1E, PON2, PPP2R5A, PSEN2, PSPH, PTPRF, QARS, SDC1, SEMA4D, STX1B, STX5, STX8, SUOX, TAS2R41, TLN2, TNFSF9, TPMT, TUBB4Q, VAMP4, WASF3, WNT1, EIF4EBP1, MAPKAPK5
Negative_15464	A2M, AGK, DCN, GPI, MET, OGT, PDC, PVR, ACSL6, ACTA2, ACYP1, ADRA1D, ALG10, AMD1, ANAPC11, ANGPTL4, ATP4B, ATP6V1F, BCL2L1, BUB1B, CARD11, CCND2, CCNG2, CCR10, CD58, CDK4, CDKN2B, CLDN9, CMPK1, CNTN2, CRB3, CSNK1A1, CYP2U1, DARS2, DDOST, DHCR7, DIAPH3, ENTPD1, EPOR, FLOT1, FLT4, FMO4, FUT4, GALK1, GCDH, GDF6, GMPPB, GNAI2, GUCA1C, IDI2, ITGA6, KLRC2, KLRD1, KYNU, LAMB1, LDHD, LIPC, MAGI1, MAP4K4, MITF, NEU4, NSD1, NUDT12, NUDT5, OGDH, OR1F1, OR1N2, OR2AG2, OR2Z1, OR4A5, OR4B1, OR51L1, OR52I1, OR52J3, OR9Q2, OXTR, PAK7, PDE6G, PDGFA, PDGFB, PDK1, PGAM1, PIGC, PLCB1, POLE2, POLR1C, PPP1CA, PSENEN, PTGER1, RAD51, RAGEF4, RFWD2, RGS3, RHOQ, SDC2, SEMA3G, SLC2A1, SMAD5, SOCS3, SQLE, STAT2, STK36, STX8, TGDS, TNFSF18, TUBB2B, TYROBP, GABARAPL1, SERPIND1
Negative_15465	ADK, ASL, CP, FH, PTS, SCD, ACSM1, ADRA1B, ALDOA, ALG5, ALOX12B, ALPP, APOE, ATP5E, ATP5F1, BAIAP2, BMPR1A, BUB1B, C1QC, CCL4, CCR9, CD27, CD40, CD58, CD86, CHST13, CHSY1, COL1A1, COL3A1, COL4A4, COL4A6, CREB5, CTBP2, CTF1, CTSB, CXCL3, CYP1B1, CYP2C9, DDIT4, DEGS2, DGAT1, DGKH, DHRS3, DPM2, ECHS1, EDA2R, EGLN1, EPHB6, EXTL3, FCGR2B, FGF22, FOXO3, GALE, GMPPB, HADH, HEMK1, HHIP, HSD3B2, IBSP, IL21R, IL24, JAG1, KLRK1, LIMK1, LTB4R2, MALT1, MAOB, MAP2K2, METTL2B, MKNK1, MTHFD1L, MYH1, NCR1, NFKBIE, NLGN3, NOS1, NOTCH3, NPR2, NT5M, OR11H4, OR13G1, OR2AG2, OR2H1, OR2T5, OR3A1, OR4K1, OR51B5, OR52I1, OR5C1, OR5M3, OR6B3, OR6C6, OR6Y1, OR8B4, PAPSS1, PDHA2, PGAM1, PI4KA, PKLR, PLXNA2, POLD1, POLD2, PRKCG, PROC, PTPRM, RBX1, RDH11, RHOA, RPS6KB2, SARS2, STAT2, SELP, SHC1, SMAD9, STAT1, SYNJ1, TLR4, TNFSF9, TSHR, UNC5C, WASF1, GABARAPL2, MAP3K7IP1, PLA2G12B
Negative_15466	C8A, C8G, FOS, ILK, MYC, OAT, TNF, ACP5, ACSL3, ACSM3, ADAM17, ADRA1A, ADRA1B, AHCY, ARPC5L, ATP4A, ATP5G2, B3GALT6, BAAT, CACNA1D, CACNG2, CAMKK1, CCNA1, CCR10, CD47, CD70, CDS1, CHUK, CLTA, CYP21A2, DDX47, DUSP1, ECSIT, EDA2R, ERBB3, FCGR2B, GALNT10, GCDH, GCLM, GP1BA, HLA-DMA, HSD17B3, HSP90B1, IBSP, IDUA, IFNA14, IFT57, KIR2DL1, KIR2DS4, LAMC1, LRDD, MAN1A2, MMP7, MYL9, NAT2, NCKAP1, NFKBIA, NT5E, OR10R2, OR10Z1, OR1D5, OR2L13, OR3A3, OR4Q3, OR4X2, OR52N1, OR8H3, PANK4, PFN3, PGAM4, PIGV, PIGW, PLA2G2A, POLR1D, PPP2R5B, PPP3R2, PRKCB, PRSS2, PTGS1, PTPN7, RALBP1, RHOD, SELE, SESN1, SESN3, SHC1, SMAD9, SMURF2, ST3GAL5, STX1B, TAS2R42, THBS1, THBS2, VDAC3, WARS, XCR1, CACNA2D2, CACNA2D3, HSD17B12, PAFAH1B2, TNFRSF14



Negative_15467	<p>ADC, APP, CRH, DDC, FUK, IL7, MTR, OSM, TNC, ZYX, ACO2, ACTB, ADH1B, ADSL, ANAPC1, AOX1, ATG7, ATP2A2, ATP5J, AVPR1A, BMP8A, BST1, CACNA1I, CACNG3, CCL14, CCL22, CCL5, CCR3, CCR6, CDS1, CHUK, CLCA4, CLDN1, COL11A1, COL1A2, COQ5, CSNK2B, CYP11A1, DAG1, DDX52, DHDDS, DIAPH1, DLL3, DUSP4, EPHA5, FDPS, GANC, GCDH, GLB1, GNAS, GRIN2C, GSTA4, GSTK1, GSTM2, GSTP1, HSP90B1, HSPB1, HTR2C, HYAL1, IFNA8, IL2RA, ISYNA1, LTA4H, MAD2L1, MMP9, MYH13, NARS, NFATC4, NPR2, NTF4, OR10T2, OR2B11, OR2F1, OR2T10, OR52E4, OR5AN1, OR5K1, OR6S1, OR7D2, PAK4, PDE1A, PDE1C, PER1, PIGL, PIGO, PIK3C2A, PPBP, RAPGEF2, RPS6KA5, RPS6KA6, RUVBL1, SARDH, SFRP4, SHC4, TIAM2, TJP3, TPM3, VAMP2, WARS, WARS2, WNT3A, XCL2, YARS, ATP6VOA1, HLA-DPB1, PAFAH1B2, PPARGC1A, ST6GALNAC1</p>
Negative_15468	<p>CBL, CFH, DBI, EBP, FGG, GAA, ME2, PC, SFN, ADCY3, ADRB3, ALDH1A1, ALPI, APOC3, ARD1A, ATP2A1, B3GAT2, BCL2, BMP5, BMP6, CACNA1F, CASP10, CASP8, CD244, CDC20, CDC45L, CDIPT, CEBPA, CES2, CHRM2, CHRNA7, CLDN15, CLDN8, CLDN9, CNTNAP1, COL1A1, COL5A1, COX10, CSNK1D, CTBS, CTNND1, CXCL11, CYP26A1, CYP27A1, DFFB, DHRS3, DLL4, DRD5, EDNRB, FOXA3, FTMT, FUT2, FUT9, GALNT12, GALNT2, GAS1, GGT6, GLYCK, GOT2, GRIN2C, GSTM3, GSTP1, HCCS, HIP1, HSPA8, HTRA2, HYAL1, ICAM2, IMPDH1, INSR, ITGA11, ITGB7, LEPR, LHCGR, MAD2L1, MAML3, MAN1B1, MCM3, MGAT5B, NCAM2, NFYB, NKX3-1, NOX3, NUDT9, OR10AD1, OR10G2, OR13J1, OR1B1, OR1D2, OR2A2, OR2B2, OR4A5, OR52D1, OR5D16, OR6C1, OR7D2, OR7G2, P2RX3, PARD6B, PECAM1, PER2, PER3, PGM2, POLE2, POLR1E, PPM1D, PPOX, PPP1R3B, PRKAG2, PRKCA, PRKCD, PRKCQ, PTK2, PTPRZ1, PYGL, RFNG, RPS6, SDC1, SH2D1B, SH2D2A, SHC4, SMC1B, STK3, SUCLA2, SUCLG1, SULT2B1, TGFB2, THBS3, THBS4, TRHR, TUBA4A, TUBB1, VAMP4, WNT9A, YWHAQ, HLA-DPB1, HLA-DRB3, SLC25A31</p>
Negative_15469	<p>CRI, CRH, F2R, FOS, GDA, GLA, ID4, LYN, UBB, ACADL, ADCY5, ADRB1, ADRBK2, AKR1C1, AKT2, ALAS1, ALDH3A1, ALDH3B1, ALOX15B, AMY2A, ARRB2, ASS1, ATG7, AVPR1A, B3GALT1, B3GNT4, BCL2L1, BMP7, CAMKK1, CAV1, CCND3, CCR7, CD244, CD55, CERK, CHIT1, CHRM1, CMPK1, COL5A3, CRB3, CSF1, CSF3R, CTBP1, CYP26C1, DAPK3, DARS, DDX56, DPYS, DPYSL2, EDN1, EFNA3, EGFR, EGLN1, ENAH, ENTPD2, FGD3, FGF22, FUT9, FZD4, FZD9, G6PD, GAB1, GGT7, GLI1, GNAL, GRIN2D, GUCY1B3, HSD17B1, HSD3B7, IDH3A, IFNA2, IRS2, ISYNA1, LCMT1, LTBP1, MAGI3, MYH3, MYL9, MYLK, NMNAT3, NOD1, NOTCH3, NRCAM, NRG2, NT5E, OR10G4, OR10H1, OR1L6, OR2A14, OR2B2, OR2M5, OR52D1, OR5D16, OR7G3, P2RX2, P2RX6, PARD6A, PCCA, PCK2, PDE3B, PDIA4, PDK1, PIAS3, PIGN, PLCD4, POLD1, POLE4, PPP2R2D, PRKACB, PSME3, PTDSS1, RAPGEF3, RBPJ, SEMA3A, SHMT1, SMAD6, SOD1, TAS2R49, TCIRG1, TKTL2, TSHR, TSNARE1, UGDH, ULBP2, WNT3A, WNT5A, WNT6, WNT7A, WNT9A, GABARAPL1, SERPINA1, SUV420H2</p>

Negative_15470	<p>A2M, AK5, ASL, ATM, C7, C8G, CBS, F9, GH2, IL8, MET, NNT, PDC, PGD, SDS, TAT, TXK, AACs, ACO1, AKT2, ALDH6A1, ALPI, AMPD1, ANAPC2, ANPEP, APH1A, ARSB, B3GALT2, C5AR1, CADM1, CAPN2, CCDC6, CCND2, CD274, CD34, CDC27, CDC7, CDH1, CD01, CLDN6, COL5A2, CTF1, DCTD, DNMT3B, EXTL3, FUT1, FZR1, GALK2, GAPDH, GCNT2, GLB1, GNPDA2, GPD1, HAGHL, HNF1B, HSD17B4, IDUA, IFNA14, IL12B, IL17RA, IL18, INHBA, IRS4, ITGA11, ITGB4, KIR2DL2, KLRK1, KRAS, LEFTY1, LHCGR, LPAR1, MAN2A1, MAP2K2, MAPK9, MGAT5B, MKNK1, NEU2, NEUROD1, NFAT5, NRAS, NT5C3, OR10G4, OR11H1, OR13J1, OR1N1, OR2T8, OR51A2, OR52B4, OR52J3, OR5A1, OR5P3, OR5R1, OR6B2, OR6B3, OR6C76, OR6Q1, OR7C1, OR8U1, PCCB, PCYT1A, PDE6G, PDE8A, PGM2, PIK3R3, PLA2G10, PLEKHA8, POLR1D, POLR3A, POLR3K, PPAP2A, PPAP2B, PPIID, PPP3CC, PRKCQ, PRKG2, PSEN1, PTPN7, PVRL2, RASGRP1, RASSF1, RPE65, RUVBL1, SCD5, SGMS1, SMPD4, SOX17, SPP1, SUCLA2, TAS2R60, TBL1XR1, TFDPI, TFPI, THBS1, TNFSF11, TUBB2B, VAMP4, WARS, WNT4, YWHAB, CTNNAIP1, PAFAH1B3, PLA2G12B, PRICKLE2, TNFRSF10B, TNFRSF12A</p>
Negative_15471	<p>AMH, CTH, F2R, GP9, KMO, TH, TNF, AARS2, AGPAT4, ALDH9A1, ASPA, ATG3, B3GALT2, B4GALT4, BUB1B, C4BPB, CAMK2A, CAMK2D, CBR1, CDC6, CDK6, CDKN2D, CHAD, CHRNA7, CLDN6, CRY1, CSF1R, CXCL6, CYP2C18, DDIT3, DDX54, DKK1, DOCK1, DOLPP1, DRD5, EFNB2, EGLN1, EI24, FBXW11, FMO3, FZD8, GALNT12, GANC, GFPT2, GGPS1, GNAL, GRIN1, GRIN2C, GTSE1, GYS1, HHIP, HLA-C, ICAM1, IFNA2, IL1B, IL23A, ISYNA1, ITCH, ITGAX, KIR3DL3, LILRB3, LGLL1, MAP3K3, MAPK14, MAPK7, MGAT4A, MGST2, MTHFD2, NAGA, NCK2, NFKB2, NFKBIE, NFYA, OR10H1, OR13D1, OR13F1, OR1K1, OR1L4, OR2C3, OR4C11, OR4F4, OR4X2, OR51B4, OR6C3, OR7A5, PAICS, PDE4B, PFN2, PIP4K2C, POLR3H, POMC, PPID, PPP1R3B, PPP2R2B, PPP2R5A, PPP3CA, PPP5C, PSAT1, RAPGEF3, RFX5, RHOA, ROBO2, RPS6KA5, RRAS2, SEMA3F, SETD1B, SFRP2, SMAD6, SPAM1, STK36, SULT1A2, TBL1XR1, TRAF1, TSNARE1, WASF1, WNT8B, XILB, YARS, ATP6V1E1, HLA-DPB1, MAPK8IP2, TNFRSF10A</p>
Negative_15472	<p>CAD, EDA, GP5, GSS, IL6, MPI, MPZ, TNC, WAS, ACAA2, ACPT, ADCY7, ALOX5, AOC3, ARPC5L, BUB1, CACNA1G, CALML5, CCL1, CCL8, CCND3, CCR3, CDKN2A, CDKN2B, CFTR, CHPT1, CLCF1, CMAS, CNTF, CTNNA1, CYP11A1, CYP11B1, CYP3A4, DDX19A, DFFB, DTX3L, EGFR, EPOR, FGF18, FLOT1, FSHR, GALNT14, GALNT9, GLI1, GLS2, GNAZ, GSTO1, GUCA1C, GUSB, HGSNAT, HLA-DMA, IL23A, INHBB, ITGAE, KIR2DL2, KLRC2, KLRC4, LEPR, LIPA, MAP2K3, MAP4K3, MGAT2, MTHFD1, MTHFR, NCK1, NCK2, NCR2, NEFH, NME7, NRXN1, NT5C2, OLR1, OR10AD1, OR10R2, OR13C5, OR1D5, OR1L3, OR1N2, OR3A1, OR4K2, OR51F1, OR51I1, OR5AN1, OR5C1, OR5T2, OR6K6, OR8D2, OR8D4, PCCA, PDE6D, PGM1, PIK3CG, PIK3R2, PLIN, POLE4, POLR3B, POMC, PPP1R3B, PPP3R1, PRKG2, PROS1, PRPH, PTPN7, SDHB, SEMA3G, SPTLC1, SSX2IP, SULT1A1, SYNJ2, TAS2R7, TGFB2, THY1, TLR5, TOMM40, VAV3, VDAC1, AASDHPPT, ATP6V0D2, MAPK8IP1, PAFAH1B2, TNFRSF12A, TNFRSF6B</p>

Negative_15473	ASL, DDC, EDA, GBA, GH2, VCL, AARS, ACAD9, ACO1, ACOX2, ACPT, ACVRL1, A DRA1D, AKT1, ALDH5A1, ALDH9A1, ALG10, ALPP, ARNT, ARPC1A, ASAH1, ASN S, ATP4B, BIRC5, BLVRA, BLVRB, CACNB1, CCL13, CD247, CDKN1B, CLOCK, C OL5A1, CXCL2, DDHD1, DLL4, DUSP5, DUSP7, EFN1B, EPHA6, ETNK2, FABP3, FOXA2, G6PC2, GALT, GALNTL5, GMPPB, GNPDA1, GNPDA2, GOT2, GSTM3, GUC Y2F, HAAO, HIF1A, HRH2, INPP4A, ITGA9, ITGAL, ITGB6, LAP3, LIPT1, MAD 2L1, MAP2K3, MAP2K4, MAP2K6, MAP3K3, MGAT5, NAGLU, NFKB2, NFYA, NPR2 , NSD1, NUDT8, OR10S1, OR14I1, OR2AG2, OR2AT4, OR2H2, OR2K2, OR3A2, O R4B1, OR4D11, OR4F6, OR51B4, OR52I2, OR9A2, PAK2, PDE10A, PDE8B, PHP T1, PIAS4, PIGX, PLOD1, PMAIP1, PMM1, POLR2H, POLR3G, PPP2R2A, PRKAB 2, PRKCZ, RAPGEF4, RBKS, RPS6KA1, RPS6KA3, RRAS, SFRP2, SKIV2L2, SMA D2, SMPD2, SPAM1, SRD5A2, SSSX2IP, ST3GAL5, STAM2, SYNJ1, TAS2R1, TAS 2R42, TBL1X, TFPI, TIAM1, TICAM1, TPH1, TRAF2, UGCG, ULK1, UROS, UXS1 , WIF1, WNT2, AASDHPPT, MAPK8IP2, MAPKAPK2, TNFRSF10B
Negative_15474	A2M, ADO, AK5, CBL, HAL, KIT, MAX, OAT, SCD, SMS, STS, A4GALT, AADAT, AC ADL, ACOX2, ACSM5, ACTA2, ACVR1, ACVRL1, ACY3, ADCY3, ADCY5, ADSS, AK R1C3, ALAD, ALDH2, ALG2, ASNS, ATP4B, B3GAT1, BAIAP2, BDH2, CAMKK1, C CNB2, CD38, CD48, CD8B, CFLAR, CHIA, CHST13, COQ5, CSNK1G3, DAD1, DAP K1, DARS, DCTN1, DGKD, DHCR7, DUSP3, DUSP5, ENAH, ERO1L, ESAM, FBP1, F CER1G, FGD3, FMO5, FOXO1, GALNT12, GALNTL4, GFPT2, GNA12, GRIN1, GUC A1B, GUSB, HHEX, HPRT1, HPSE, HSD3B2, HSPA8, IBSP, IDH3A, IL20RA, IL2 1R, IL4R, IRAK1, IRS2, KDSR, KLRK1, LIAS, LMO7, MAN1C1, MTHFS, MYH10, MYH8, NRG1, ONECUT1, OR10V1, OR13H1, OR1S2, OR2B2, OR2Y1, OR4F5, OR4 N2, OR52K2, OR52N2, OR5AK2, OR6C4, OR8D2, P2RX2, PCK1, PDE4B, PDE9A, PDPK1, PER1, PHKG2, PIK3CD, PLA2G4A, PLCB2, PLCD4, PPA2, PPP2CB, PPP 2R5C, PRKCQ, PSEN1, PTGFR, PTPMT1, PYGB, RALBP1, RGS3, RPS6KA2, SEMA 3A, SPHK1, STAT3, STX5, SULT1A2, TAS2R10, TD02, TFPI, TNFRSF9, TUBA1 C, UAP1, UCKL1, WNT2B, WNT5A, XYLT2, YWHAE, SERPINA5
Negative_15475	F2, F2R, GP6, IL6, KIT, MIF, MPI, MPZ, SMS, TNC, AASS, ACAD8, ACMSD, ACS L1, ADORA2B, ALDOB, ALG13, ALOX15, ALOX15B, AMPD1, AMY2B, AOC3, AOX1 , APPL1, ARHGAP5, ATP2A3, ATP6VOB, B3GNT3, BCKDHA, BCL10, BHMT, BLVR A, CACNB4, CACNG8, CAMK2D, CANT1, CASK, CBR3, CDC14B, CDC42, CES7, CH KA, CLDN1, CPT1C, CPT2, CXCL11, CYP2J2, DAAM2, DCTN1, DEGS1, DKK4, DU SP14, EFNA3, EIF4E, ENTPD2, ENTPD3, EPHA8, ESPL1, EXOC7, FRAP1, FZD5 , FZD9, GAD1, GART, GDF7, GGT1, GMPPB, GMPR2, GNA11, GNAQ, GSTA2, HAGH , HSD3B2, IARS2, IBSP, IDUA, IL12A, INPP1, INPPL1, ITPKA, ITPKB, KIR3 DL1, LAMC1, LARS2, LDHAL6A, LTC4S, MAD2L2, MCCC2, MCM4, MGAT5, MMP14 , MPDZ, MYL7, NAGK, NCOA4, NOTCH1, NR4A1, NTRK1, OR10Z1, OR1I1, OR1Q1 , OR4D1, OR5B3, OR6C70, OR7A17, OR7C2, OR8S1, PCYT1B, PDE1C, PFKP, PH KG1, PIGT, PLCB4, POLE2, POLR2H, PPP1CB, PPP5C, PRDX6, PRKACB, PTSS 2, RDH11, RRM2, RUNX1, SDC1, SEMA7A, SLC27A4, SPP1, STX4, TAS2R13, TH BD, TRMT11, TSC1, TSC2, TUBA3C, UCK2, UGT2B7, UROC1, WNT1, ZMAT3, CAC NA2D2, SERPIND1, ST6GALNAC5
Negative_15476	F2, F2R, FAS, LEP, NPL, OSM, TNC, VCL, ACSS3, ACVR1C, ALOX12B, BDH2, CA CNG4, CCR9, CD47, CD72, CDS1, CNGA4, COL6A2, CSF3, CTF1, CYSLTR1, DGA T2, DGKB, DHCR24, DIAPH3, DKK2, DUSP5, ENPP3, EREG, FGD3, FSHB, FTMT, GALNTL2, GAS1, GLUD1, GLUD2, GNPDA2, H6PD, HSD17B2, IGSF5, IQGAP3, I TGA2B, ITGA9, KLRC1, LMO7, LPAR1, MADCAM1, MAN1A1, MAP2K5, MKNK2, ML YCD, MTFMT, NCAM2, NFYA, NGEF, NMNAT3, NNMT, OR10AD1, OR13A1, OR1I1, OR1L4, OR2A42, OR4C12, OR4X1, OR51F1, OR51G1, OR52I2, OR5A1, OR8A1, OR8D1, OR8H1, P2RX6, PANK1, PDX1, PHGDH, PKM2, PLA2G2A, PLA2G6, PNMT , POLR1C, PON2, PRKCZ, RAC3, RBKS, RBL2, RFX5, RPIA, SGMS2, SLIT1, SPR ED1, SV2B, TACR2, TNFSF11, TSHB, TUBB4, UBE2L3, VARS, ZFYVE16, PRICK LE2, TNFRSF11A

Negative_15477	CRH, F8, FH, FST, LCK, MOS, RFK, ACADM, ACPP, ACTA2, ACVR1B, ACVR1C, ACY3, ADRBK2, ALG11, ALS2, ATIC, BMP8A, BMPR2, CACNA1F, CACNG8, CADM1, CCL27, CDC2, CDC42, CDKN2C, CKS1B, CLDN16, CLDN17, CLDN2, CNGB1, COQ3, CRLS1, CTNNB1, CYP11B2, CYP2U1, DDX51, DHDH, DHRS3, DHRS4L2, DVL2, ENPP1, EP300, EPHA6, EPHB2, F11R, F13A1, FECH, FLT4, FUT4, FUT7, FUT9, G6PC, GALNT2, GATM, GDE1, GNG12, GNRH1, GP1BB, GRIA3, GUCY2F, HEXA, HHEX, HMGCS2, HNMT, ICAM2, IL1B, INPP5A, INSR, IRS4, ITGA4, KIR2DL2, KLRC1, LDHB, LTA4H, LTB4R2, MAP2K5, MAP3K4, MASP1, MCM3, MDM2, METTL6, NFYA, NPR1, OR10A4, OR10G8, OR10H3, OR13J1, OR2L8, OR2W1, OR3A3, OR4M2, OR51G1, OR52W1, PARD6G, PDE4C, PDGFC, PHKB, PIM1, PLA1A, PLXNA3, POLR1C, POLR2K, PPAP2A, PPP1CC, PPP2R2D, PPP2R5D, PTGFR, PTPRB, SARDH, SEMA7A, SETD1B, SFRP5, SHISA5, SMAD5, SMPD1, SOS1, SREBF1, STAT5A, STEAP3, SULT1A4, SUV39H2, SYNJ1, TACR1, TAP2, TAS2R38, TCF7L1, TCF7L2, TRAF3, TUBB1, UMPS, UNC5C, VEGFC, WNT5A, WNT9B, ATP6V1E2, CSGALNACT1, MAPKAPK2, ST6GALNAC4
Negative_15478	AMT, AUH, DUT, GSS, ACOT11, ACP5, ADCY8, ADRB2, ADSSL1, AGXT2, AKT2, ALDH1A2, ALG10B, ALOX15B, ASMT, ATIC, ATP2A2, ATP5G2, ATP5J, B3GALT6, BCL2L1, CACNA1S, CACNB3, CCL14, CCL2, CCNE2, CD19, CD38, CDK2, CDK4, CHRNA7, CLDN7, CREB3L3, CSF2RA, CSF3R, CSNK1G2, CXCL11, CXCR5, CYP4A11, DDX18, EDNRB, EHHADH, FGD3, FGF14, FSHB, GMPPB, GRIA2, HEMK1, H PSE, IFNA21, IGFBP3, IL12A, IL18R1, IL1R2, IL22, INMT, INSRR, IRAK2, IRS2, ITGA10, ITGA3, ITGAL, JAK1, LALBA, LIPC, LRP5, LTBR, MAP2K5, MAP3K3, MAP3K4, MASP1, MRAS, NEFH, NFYA, NKD2, OR14I1, OR2B2, OR2K2, OR2T29, OR2W1, OR52B6, OR52E2, OR56B4, ORC5L, P4HA1, PANK1, PAX8, PCNA, PDE5A, PFN3, PHPT1, PIGQ, PIM1, PLA2G10, PLAT, PLTP, PPP3CA, PRKAA1, PRKAA2, PRKAR1B, PRKAR2A, PRKCB, PRKCI, PTCH2, PTPN1, PYCRL, PYGB, RHOQ, RRAS, SEMA4B, SH3BP2, SPTAN1, SULT2A1, TAS2R49, TAS2R50, THBS1, TRAF4, TUBB4Q, UAP1, UGCG, UGT2B4, UPP2, MAPK8IP1, PAFAH1B2
Negative_15479	AK1, F10, FES, GH2, GLA, GSS, SPN, SRC, SRF, ABCC8, AGXT2, ALG12, ALOX12, ANAPC2, APOA1, ARPC1B, ATN1, ATP4B, ATP6V1D, BET1, BMP8A, C3AR1, CACNA1G, CANT1, CCL4, CD55, CDC7, CHEK1, CLDN9, CREB3, CXCL1, CYP2B6, CYP2C19, DGAT2L4, DRD5, E2F3, E2F4, EXTL2, FGF21, FGF9, FSHR, FUT3, GARS, GNAO1, GNG12, GNG3, GNRH1, GRIA1, GRPR, GSK3B, GUCY1A2, HCST, HIBCH, HMGCR, IL12A, IL24, IQGAP2, IRAK4, ITGAV, ITPKB, JAM3, KIR3DL1, L1CAM, LRDD, LYZL1, MAPK1, MAPK3, MMP1, MTFMT, MTHFD1, NCR3, OR10Q1, OR12D3, OR14J1, OR2L3, OR51G1, OR52E8, OR52L1, OR6F1, OR6S1, OR7D2, OR7G3, OR8H3, OR8K5, OR9K2, PDE1C, PGM2, PHKG2, PI4KB, PIP4K2B, POLE2, PPP2R5C, PTCH2, PYGL, RASGRF2, SEMA3G, SHC3, SLIT1, SMURF1, SNAP25, ST8SIA1, STAT3, STX4, STX5, TAS2R40, TAS2R41, TBXA2R, TLR3, TNFSF10, TP73, TRAF1, TRPC1, TYMP, TYROBP, UCP1, UGDH, WNT7B, XYLT2, ATP6V1B1, CACNA2D2, HLA-DQA2, PHOSPHO1, TNFRSF1B
Negative_15480	AK1, C8G, CD6, EDA, F2, JUP, LPL, MIF, TXK, ACAD9, ACP2, ACSS1, AKR1D1, AKT2, BLVRB, BMP7, CCL28, CCL8, CCND1, CDH3, CDK7, CES7, CHIA, CHSY1, CLDN10, CLDN5, DPAGT1, DRD1, FCGR2B, FGF10, GAD1, GALNT8, GANAB, GNM T, GPX7, GSTM5, GSTO1, GUCY2C, HAGH, HIP1, HRH1, HSD11B1, IAPP, ICOS, IL17A, IL1A, INPPL1, ITGAE, KNG1, MAOB, MAP3K1, MCCC2, MITF, MPZL1, MTHFD1, NARS, NEU2, NFYB, NOTCH3, NR4A1, NR5A2, OR10H5, OR1D2, OR1I1, OR2A14, OR2A5, OR2W1, OR4D2, OR4F17, OR51Q1, OR51S1, OR52B4, OR6X1, PANK1, PDE2A, PGAP1, PGK2, PIGN, PIK3R1, PLTP, PMM2, POLR2E, PPP3R1, PRKX, PRPH2, PSENE1, PSME1, PVRL2, RPN1, RPS6KB2, SCLY, SMARCA2, SMURF2, SRGAP1, SUV39H2, TAS2R8, THBD, TRPM5, TUBA3C, UNC5B, VAMP3, VAMP4, WNT6, WNT7B

Negative_15481	BAX, BCR, NOG, SI, ABI2, ACADM, ADAM10, ADCY8, ADH6, ANAPC11, ARPC2, A RSD, ASNS, B3GALT5, C5AR1, CAPN2, CARS2, CCL19, CCR7, CCR9, CD79B, CD H2, CDH4, CFLAR, CHKB, CLDN3, COQ5, CXCL13, CYP26B1, DAPK3, DDX52, DO T1L, ECHS1, EGFR, EPHA5, F13A1, FGF14, FGF3, FLT1, FM05, G6PC, GALNT8 , GAMT, GANAB, GNPAT1, GPT2, GRM1, GUCY1B3, HEXB, HLA- F, HPRT1, HRAS, ICAM3, IFNGR1, IL1R1, IMPDH2, IQGAP1, IRS4, LDHAL6A, LDHAL6B, LPAR1, MAN1A1, MDM4, MEF2C, MMP9, NAE1, NCOA4, NEU2, NPR1, O R10H3, OR10Z1, OR14C36, OR2A12, OR2C3, OR4F17, OR4N5, OR4Q3, OR5AS1 , OR8A1, OR8H1, OR9A4, ORC5L, ORC6L, PARVG, PCCB, PCYT1B, PER1, PHGDH , PIAS4, PIP5K1A, PLOD3, PLXNA2, PLXNB1, PPM1D, PPP2CB, PPP2R5B, PRI M2, PRKAB1, PSENE1, PTCH2, PYGM, RARS, RASA2, RASGRP3, RPS6, SDC2, SE TD1A, STMN1, TGFB3, TMLHE, TNXB, TSNARE1, ULBP1, UPP1, ATP6V1E1, PLA 2G12B, SERPINF2, ST6GALNAC3, TNFRSF11B
Negative_15482	ADC, AUH, CTH, DHH, F12, MAX, MET, RDX, SCD, ALOX5, ASAH1, ASCC3, ATG7, ATP5I, ATP6V1H, AXIN2, B4GALT1, BMP6, BUB1B, CAV3, CCNB2, CD19, CD22 6, CFLAR, CHRNA7, CLDN15, CNDP1, CNTF, CREB3, CRLS1, CSNK1G2, CTSB, C XCR5, CYP4A11, DIAPH1, DKK4, DRD2, EIF4E, ENPP7, FDFT1, FZD4, GALNT1 4, GCAT, GGT7, GUCY1A3, HTR7, IDH1, IFNA8, IL10RB, IL13RA1, LCMT2, LI PG, LYZL1, MAD2L2, MAGI3, MAP4K4, MLYCD, MYH1, NOTCH2, NRXN1, NRXN2, NUDT8, OR13G1, OR1D5, OR1E1, OR1N2, OR2T8, OR52N2, OR5A2, OR8K3, OR9 A2, P2RX4, P4HA3, PCYT2, PDE7A, PDGFRA, PDHA1, PDK1, PGAM1, PGLS, PIK 3R1, PISD, PLCZ1, POLR2D, POLR3B, POLR3K, PPARG, PPBP, PPP1R3A, PPP1 R3B, PTCH2, PTPN7, RAB5A, RBPJ, RDH11, ROBO3, ROCK1, SDHC, SEPHS1, SE TD1B, SLC12A2, SLC2A1, SREBF1, ST3GAL2, ST8SIA1, STAT6, THY1, TNFRS F9, TRADD, TRDMT1, TSNARE1, UGCGL1, WIF1, XCL2, MAP3K7IP2, TNFRSF11 B
Negative_15483	C4B, C9, NPL, ALCY, ACSM4, ADH1A, AGXT2, ALDH3A1, ALDH5A1, ALDOB, ALG 8, ARHGEF1, ARSA, ATG12, AXIN2, BIRC3, C3AR1, C4BPA, C7orf16, CACNA1 S, CARD11, CASK, CBR3, CCL1, CDKN1B, CER1, CERK, CSF1, CXCR5, CYP2C19 , DUSP8, EGLN1, FARP2, FBP1, FLT4, FM02, FM03, FZD9, FZR1, GALNT1, GAP DH, GATM, GMPR2, GNA11, GUCA1C, HIBCH, IL17RA, IL22, INHBC, ITGB1, LC MT1, LMO7, MAOB, MTHFS, MYH7B, NADSYN1, NFAT5, NLGN3, NME6, NPR1, NRX N2, NT5C2, NTRK2, OR10A2, OR10T2, OR1D5, OR2T33, OR5F1, OR5M8, OR5T1 , OR9G1, OR9G4, PAK3, PDGFB, PFKFB1, PFKP, PGK1, PHKA2, PIGN, PIK3CB, PLXNA1, PNPLA4, PRPS1, PSEN1, PTPN11, RAC1, RAPGEF1, RARA, RPSA, SCI N, SELE, SEMA4A, SORD, SOS1, SOS2, SPTAN1, SUCLG2, TAS2R3, TNFRSF4, T NFSF9, TPK1, UGP2, ULBP2, UXS1, ZFYVE16, ATP6V1E1, KIR2DL5A, SLC25A 31, TNFRSF1A
Negative_15484	AK1, C8A, CEL, DBT, FAS, PTS, SP1, TPO, ACHE, ACOX2, ADH1B, APC2, ARSB, B3GALT2, C1QA, CBLB, CCL3, CDC23, CHAD, CHPF, CHRM5, COL1A1, COMP, CY FIP2, CYP1B1, CYP2B6, DDX54, DPYD, DUSP14, EIF4E2, ENO2, ENTPD7, ETN K1, FGF4, FGFR4, FLOT2, GAD1, GADD45B, GALM, GALNT11, GCNT3, GGT7, GM DS, HCLS1, HTR6, ICAM1, IL13, IL18RAP, IRF5, ITGA7, LAMB2, LIFR, MAD2 L1, MAD2L2, MAP3K5, MAPK13, MCCC2, MYL7, NAGLU, NANS, NCF2, NCR1, NCR 3, NMNAT3, NOX3, NSDHL, ONECUT1, OR1A2, OR4F15, OR4F4, OR4K2, OR4N2, OR4S2, OR52I1, OR5A2, OR5C1, OR6K6, OR8B12, OR8K1, PDCD1, PDE10A, PD E4B, PLAT, PRIM1, PRKAA1, PRNP, PTPRC, PVRL4, PYGB, RAC2, RAP1B, RASG RP3, RFNG, RFWD2, RHEB, SC5DL, SELP, SEMA3E, SHMT2, SLC27A4, SPRY1, S PTL2, ST8SIA1, STX4, TAS1R1, TBL1X, THTPA, TP53I3, TRAF4, UGT2B10, VEGFA, WNT8A, XCL1, ATP6V1B1, HSP90AB1

Negative_15485	C4B, CR2, EDA, GNE, MYC, PRL, PVR, XDH, ACACA, ACSL1, ADCY7, AMDHD2, AQ P7, ASS1, ATP5B, B3GALT5, B3GNT4, BCAT1, C1QC, CACNA1S, CCR4, CDH3, CDH5, CYBA, CYP2A13, CYP3A5, CYP4F3, DAAM1, DDIT3, DDX19A, EDAR, EFNB3, EGLN1, EHMT2, FMO2, FRAT1, FZD9, GALNT7, GLDC, GSTZ1, HLA-DOB, HSPA2, ICAM3, IFNA6, IFNG, IGSF5, IL10, IL13, ITGAM, JAM3, KIR2DL2, LLGL2, MTHFS, MYH6, NCOA4, NME4, NRXN3, NTRK1, NTRK2, OR13C8, OR14I1, OR5AK2, OR6B3, ORC6L, P4HA2, PDE8A, PFKFB4, PHKA1, PIGH, PIK3CB, PLCD1, POLR1D, POLR2C, POLR3B, PPP1R3C, PPP1R3D, PPP2CB, PPP2R2A, PPP2R5C, PPP3CA, PRKX, PROS1, PSME2, PSPH, PYGB, PYGM, ROBO2, SEMA3G, SPAM1, SPTAN1, ST3GAL3, TAS2R41, TMLHE, WHSC1L1, WNT10B, YARS, ATP6VOD1, ATP6V1C2, ATP6V1E1, HSD17B10, SERPINE1, TNFRSF10B
Negative_15486	ADO, CGN, SP1, ABLIM1, ABP1, ACSS1, ACVRL1, ADORA2A, ATG3, B3GALT2, B4GALT3, BCAT2, CAV3, CCNE2, CHDH, CHKB, CNTN1, CRLF2, CRY1, CSNK1G3, CTSP2, CXCL3, CYP1A2, CYP26B1, CYP4F3, DAG1, DDX19A, DHRS9, DTX2, EGLN1, ELK4, EPAS1, FLT1, FMO3, FOXO3, FUT7, GLG1, GUCY2C, HMGCL, HSD3B2, HTRA2, ICOSLG, IFNA2, IL15, IMPDH1, INHBA, INSRR, IPMK, ITGA2B, KLRD1, MAP3K7, MGAT1, MRAS, MYH10, NAE1, NCF2, NCK2, NEU2, NFATC3, NTF4, OR10Q1, OR10R2, OR4C6, OR51A4, OR52R1, OR6K2, P4HA1, PDHA1, PFKM, PFN1, PHPT1, PIGW, PIK3CD, POLE4, POLR1B, PPP3CC, PYCRL, RHEB, RPRM, RPS6KB2, RRAS, SEMA4C, SIGLEC1, SKP1, SMAD6, SMAD7, SNW1, SOS2, SPHK1, SRGAP1, STAT6, STX1A, STX1B, TCF7, TJP1, TLR3, TOMM40L, TUBAL3, WNT2B, WNT7A, YWHAB, HSD17B10
Negative_15487	CD2, EDA, HPD, NF1, OSM, SHH, ACP6, ADIPOR2, ADORA2A, AKR1A1, ALPP, AMPD1, ANAPC11, APH1A, ARPC1B, ARPC4, ARSD, B3GAT1, CACNB2, CACNG1, CASP10, CBR3, CCL25, CD70, CD99, CDK7, CIITA, CLDN20, CLDN8, COL4A2, CSNK1E, CTNNA3, CXCL1, DGUOK, DPM3, DUSP5, DUSP7, EXTL1, FLAD1, FRAP1, FTCD, FTH1, GALK1, GPD1, GSTA2, GYS1, HDAC1, IKBKE, IL1R1, IL1R2, IL20, IL21, INMT, INPP5A, ITGB3, KDSR, KITLG, LAMC2, LEPR, LFNG, MGAM, MLYCD, MYH8, NAGS, NEU3, NEUROG3, NFATC2, NMNAT2, NRP1, OR10H4, OR1S1, OR2AG2, OR2C3, OR56A3, OR5AP2, ORC5L, P2RX4, PDX1, PIK3C2G, PIK3CD, PLA2G3, PLCB1, PLCD3, PMM1, POLA1, POLA2, POLD1, POLR3D, PPM1D, PRKA A2, PRKAG1, PRNP, PRSS3, PTK2, PTPRR, RARS2, RASGRF2, RHOA, RPS6KA1, SEMA3A, SFRP5, SHC3, SHMT1, SMPD4, SOD1, STAM2, STAT5A, STX1A, STX8, TPI1, TRAF6, TRPM5, TUBA1C, UNC5C, WBSR22, WNT11, ZFYVE9, PAFAH1B2, ST6GALNAC4
Negative_15488	AUH, C4B, CGA, FAS, GDA, ME1, RET, ACVR1B, ADCY4, ADORA2B, ADSSL1, AGPAT3, AGXT2, AKR1B10, ALDH1B1, ALG1, ALOX12B, ARHGEF7, ARNT, ATG3, ATP5D, B3GALT2, B3GNT5, C9orf95, CAPN2, CD28, CD72, CDC25C, CHDH, CHKA, CMPK2, COX10, CPS1, CREB5, CTPS, CXCL10, CYP2A13, CYP2S1, DAPK2, DBF4, DDX55, DPYD, DUSP5, EPHA8, ERO1L, EXOC7, FABP4, FADD, FCGR3A, FDF T1, FLOT1, GAB1, GALNTL1, GALNTL5, GLDC, HADHB, HDAC2, HIF1A, HMOX2, HSD17B3, IDI1, IFNGR2, IGF1R, ITGAV, JAK3, LCAT, LMO7, LTBP1, MAOA, MAP3K14, MAP4K4, MAPK14, MAPK3, MCM6, MMP7, MYH3, MYL5, NCK2, NCR3, OR13C9, OR2A12, OR2A42, OR2B6, OR2D3, OR2M5, OR4C12, OR4D6, OR4D9, OR51F1, P4HA2, PARD6A, PCK1, PDGFB, PLD2, PLOD2, PMM1, POLR2E, PPP2R2A, PRKAR1A, PRPH, PTPN7, PYGL, RBL2, RBX1, RDH5, RUNX1T1, SENP2, SETMAR, SMAD5, SRD5A2, STK4, TGDS, THBS1, TPI1, TRADD, UMPS, VAMP3, VTI1B, WARS, WASF3, ATP6VOE1

Negative_15489	F9, FH, GLS, ITK, PDC, PLN, SFN, TNR, ACACA, ACSL4, ACSM5, ACTB, AGPAT4, ALDH1B1, ALDOA, ALG9, ARRB1, ATP6V1D, ATP6V1F, B4GALT1, B4GALT7, CACNG1, CASP8, CCL21, CCR10, CCR6, CD226, CD244, CDC27, CHKA, CHRM5, CNTN2, COL5A3, CRY1, CSF1R, CX3CL1, DARS, DBF4, DDX47, DEGS2, DHRS4L2, ENTPD8, EPHA3, EPHB4, EPHB6, ETNK1, FCGR3A, FGD1, FGF14, FGF4, FIGF, FMO4, FUT5, GMPPB, GMPR, GRHPR, GRM5, GUCY2C, GYS1, GZMA, HSD3B1, HYAL1, ITGA9, LAMC1, LAP3, MAPK1, MICA, MPZL1, NCOA4, NFATC1, NMNAT2, NRG1, OGDH, OR10A6, OR10J5, OR10Z1, OR13D1, OR1C1, OR2H1, OR2L3, OR2Z1, OR4A16, OR51A7, OR7G2, PDE6G, PDGFRA, PIGV, PNMT, POLD4, POLR2C, POLR2L, PPAP2B, PPARG, PPP1R1A, PPP2R2B, PPP3CB, PRPH, PSEN1, PTPN7, PYGM, RFXANK, ROBO1, ROBO2, SESN2, SLIT1, TAS2R5, TGFB1, TNXB, TP11, TPMT, TRAF6, TUBB, UGT2A1, VANGL1, WBSR22, ZNRD1, B4GALNT1, C1GALT1C1, HLA-DRB4, HLA-DRB5
Negative_15490	C9, F2, FOS, GHR, MPI, TNC, ACADL, ACPT, ACYP1, AKR1C2, ALG8, ALOX12, AMPD3, ANGPTL4, AOC3, APRT, ARSD, ATP4A, ATP5J2, ATP5L, CCL15, CCL2, CCL23, CD244, CD274, CD40, CDK2, CER1, CKMT2, CLDN4, CLDN7, CX3CL1, CYP2C19, DDX55, DHX58, DTX2, EHMT1, EIF4B, ENTPD7, EPHB2, FADS2, FECH, FGFR3, FGFR4, FUT5, GADD45B, GALNT9, GFPT2, GJA1, GMPR2, GUCY2D, HLA- G, HMOX2, HSPA2, IFNW1, IL4R, KIR2DL2, KIR2DL4, MAPK11, NARS, NT5C1A, OR10P1, OR1N1, OR2L8, OR2M5, OR4C16, OR4C6, OR4D11, OR4P4, OR4Q3, OR51E1, OR56A3, OR5H6, OR6M1, OR9K2, PFKFB3, PLA2G2A, PLXNB1, PPAP2A, PPCDC, PPP1R3B, PPP2R5C, PSME3, PTDSS2, PTPN6, RBKS, ROBO1, SC4MOL, SLC2A2, SMPD3, SPP1, SPTAN1, SSH2, STEAP3, TNFRSF9, TNFSF14, TSNARE1, TYMP, UCP1, VDACL1, VEGFB, WNT7B, XYL1, YES1, C1GALT1C1, SERPINB5
Negative_15491	ABO, CD6, DAO, F8, AARS2, ABL1, ACSM3, ACVR1B, ALG9, APAF1, APLP1, B3GALT5, BDH1, CACNA1S, CANT1, CCNH, CHEK2, CLCA2, CNTN1, COMP, COX15, DX18, DTX4, EPB41L3, EPHX1, FASN, FGF5, FGFR3, FLAD1, FZD10, GABARAP, GRLF1, GRPR, GSTA3, GSTO1, GUCY1A2, HSD17B8, IL1A, ITGA10, MARS, MPDZ, MYH7, NADK, NCK1, NEGR1, NKX3-1, NLGN1, NPAS2, NRG2, NRP1, NUDT2, OR10AD1, OR10V1, OR1N1, OR2G2, OR4A15, OR4K2, OR51I1, OR56A1, OR5T1, OR6F1, OR7G3, PAX6, PGLS, PHKA1, PIK3C2A, PKM2, PLCE1, PNLIP, PNPLA4, POLR2K, PON1, PPM1A, PPP1CB, PPP2R5C, PRKACA, PRKCB, PTDSS1, PTGES, PTPN7, PYGB, RALB, RPS6KA3, SFRP2, SGMS1, SMARCA5, SOD1, TBXA2R, TMLHE, TRIP10, TSC1, TSHB, ULBP1, USE1, VASP, VEGFB, WBSR22, YOD1, AASDHPPT, ATP6V1B2, GABARAPL1, HLA-DQA2, PRICKLE2, ST6GALNAC4, TNFRSF6B
Negative_15492	BAD, CGN, GBA, MIF, PVR, TXK, TYR, ACSM3, ACTC1, AMDHD2, B4GALT3, BPNT1, CCL26, CCNB3, CCND2, CDS1, CLDN11, CNTN1, CXCL9, CXCR5, CYP1A2, CYP2A7, CYP4A22, DDIT3, DPYSL2, EPB41L2, FARS2, FASN, FIGF, FLOT1, FLT1, G6PC2, GALNT1, GALNTL1, GALNTL5, GCAT, GCLC, GMPPB, GNRH1, GRIA1, GSTA2, HLA- C, IL1A, IL20RA, IL7R, IRAK3, ITGB7, KLRC2, KLRC3, LAMC3, LEFTY1, LIP1, MAGI3, MAP3K3, MYH7, NME2, NSDHL, OR10A7, OR10K2, OR1C1, OR2T1, OR2Y1, OR4K5, OR51A4, OR51B2, OR52D1, OR52E8, OR5AC2, OR5B12, OR5D13, OR5H2, OR5I1, OR5K1, OR5L2, OR8A1, OR8D2, ORC6L, P2RX1, PAK7, PCCA, PCK2, PEMT, PERP, PLCB1, PLCB3, PLCZ1, PPP1R3B, PRKACG, PRKCI, PTDSS1, SARS2, SETD2, SETD8, SLC25A5, SMAD5, SMARCA5, SMURF1, SPTAN1, STK36, TAS2R49, TGFB3, UBA1, ULK3, WNT2B, SUV420H2

Negative_15493	ADK, C7, GBA, HGF, HK2, MPL, AARS, ACP2, ACSM4, ACTN2, AGTR1, ALDH1A3, ALDH4A1, ALDOB, ALG2, ASIP, ATP2A2, BMPR1A, CAMK2D, CAV1, CCKAR, CCL13, CD80, CD99, CDKN2C, CFTR, CLDN6, CLTCL1, CSAD, CSDA, CXCL3, CYP2U1, CYSLTR1, DDX23, DHDH, DIAPH1, DKK4, E2F3, E2F4, E2F5, EPB41L1, FGF13, FGFR4, FLT1, FRAP1, GALE, GALT, GANC, GCNT2, GLG1, GNA13, GRLF1, HAGH, HRH1, IARS, IFNA6, IFNA8, IL13, IL25, IMPDH2, IRAK4, ITCH, ITGA8, ITGB4, KCNB1, LAMA3, LLGL1, LYZL1, MGAT4A, MTMR6, NFATC1, NFKB1, NRP1, NUMBL, OR10AD1, OR1Q1, OR2L3, OR4C16, OR4K1, OR4Q3, OR52B6, OR52E4, OR5D14, OR5H2, OR5P2, OR8S1, OR9G4, ORC1L, PCYT1B, PDE10A, PFKM, PGK1, PHKG1, PIAS3, PIGB, PIGP, PIK3R3, PIP4K2B, PIP4K2C, PLEKHA8, P OLR2G, PPP3CA, PRKCI, PTPRC, PTPRR, PVRL1, PYGM, RALBP1, RAPGEF1, RE LB, RND1, ROCK2, SC4MOL, SFRP1, SLC27A1, SLIT2, SPTLC2, STAT5B, TAP1, TGFB3, TNFRSF4, TOMM40, UCKL1, WASL, XCL1, YKT6, YWHAG, ATP6V1G1, H LA-DPA1
Negative_15494	HGF, HPD, LYN, RFK, ACSS1, ADRA1D, ADSL, ALG12, AMD1, AMPD2, ANAPC10, ARSB, AXIN1, BAI1, C7orf16, CACNG8, CADM1, CAMKK2, CCL3, CCND2, CD244, CDKN1A, CHPF, COL5A1, CSNK1E, CSNK1G2, CXCL12, CYP2D6, CYSLTR1, D IAPH3, DLST, DOCK1, EFNA5, EIF4B, ENTPD5, EPRS, FGFR2, FLT1, FMO1, FZ D7, G6PD, GALNT14, GALNT3, GSK3B, HDAC2, HLA-DRA, HSPA1B, IFNK, IL24, INPP1, IRF7, ITGB4, KIR2DL1, KLK3, LAMB4, LR DD, LRP6, MALT1, MAP3K5, MAPK9, NAT5, NCK1, NCKAP1, NOS3, NT5C2, NTNG 1, OR14J1, OR1L6, OR4C12, OR6F1, PANK4, PARD6A, PCK1, PCYT1B, PIGT, P OLE4, PPARD, PROS1, RAPGEF1, RASA1, RBKS, RDH5, RENBP, RGS3, SDC4, SE TD1B, SLC12A2, SMPD4, SPRY4, SPTLC2, TCF7L2, TDO2, TGFB2, THBD, TM7S F2, TNFSF12, TSC1, TUBA1C, UBE2L6, UGT2B10, WASF2, ZFYVE9, B4GALNT1, TNFRSF10C
Negative_15495	GHR, PLG, RET, TAT, ZYX, AARS, ACTN1, ACVR2A, ALDH1B1, ALDH3B1, ALDH3 B2, ALDOA, ALG10B, APOE, ARHGEF6, ARRB2, ATP13A2, ATP5B, ATP5L, CACN A1F, CACNA1H, CACNB1, CAMK2D, CDH15, CHKA, CHRM1, CLDN20, CREBBP, CR HR1, CYP1A1, CYP2A6, CYP7A1, DAAM1, DDX41, DLL4, EDA2R, EREG, ERO1L, F2RL1, FBXW11, FMO1, FMO3, GATM, GBA3, GPX5, GSTA1, GYS1, HEXB, HLCS, IFNA5, IRS1, ITGA3, ITGB1, KLKB1, LAMB1, LAMC3, LAP3, LDHC, LRAT, MAP 2K5, MAP3K7, MAPK14, MAPK7, MYL9, NCR2, NFATC1, OR10X1, OR10Z1, OR13 A1, OR13J1, OR2T4, OR4B1, OR52N4, OR5H6, OR6C3, OSMR, PDHA2, PGK1, PL CG2, POMC, PPP2R5B, RAD51, RCHY1, RHOD, SELL, SELPLG, SLC27A1, TNFRS F9, TP53, UGT1A10, VAV3, XCL1, XIAP, ATP6V0A1, HLA-DPB1, PLA2G12B, PNLIPRP2, PRICKLE2, SERPINC1, TNFRSF14
Negative_15496	CD4, CGA, CP, FER, OAT, PML, RDX, SRF, TPR, ABLIM1, ACTC1, ADCY4, ADH5, ATP6VOC, B3GNT3, BCAR1, BCAT2, BDH1, CACNG2, CCND3, CD14, CD99, CDC2 0, CDS2, CLDN7, CYP19A1, DAG1, DDX56, DGAT2L4, DUSP6, EIF4E, EPHA3, F GF19, FGF8, G6PC2, GNPAT, GOT2, GPD1, GRPR, GSTA1, GSTA2, HA01, HDAC1, HLA-DOA, HSD3B2, IL22RA2, IL29, INSRR, ITGA9, KAT2B, KCNB1, KRAS, LDHAL6 A, LHCGR, LIPA, MAP2K2, MBL2, MDM2, MMP2, MMP7, MYH11, MYH14, MYL7, NF KBIA, NMNAT2, NOTCH2, OR1G1, OR2T4, OR6K6, OR9G1, OR9Q2, ORC4L, PAPS S1, PARD3, PHPT1, PNPO, POLA2, POLE3, POLR1A, POLR3G, PPT1, PRKAB2, P RKACB, RALGDS, RND1, SETD7, SOCS1, STAT5A, STAT5B, TGFB3, TLR5, TUBB, UBA1, UGCGL2, UGT2B17, UPP1, UPRT, XCR1, ATP6V1B1, HLA-DPB1, PPARGC1A, SLC25A31, ST6GALNAC4



Negative_15497	CFI, CKM, F2R, GK2, IL2, OGT, UBB, ACSS1, ADIPOR1, ADRB1, ALDH1A1, AMP D1, APC2, ARNT, ATG3, ATP5A1, ATP6V1A, C1GALT1, C1QC, CCL26, CCR3, CC R4, CCR8, CFTR, CHRM5, CTBP1, CXCL13, DERL1, DGAT2L4, DLL3, DUSP8, EF NA4, EGFR, ENTPD2, EPOR, FGF17, FGF4, FLT3, FUT8, GALNT13, GMPS, GRIA 3, GRIN2B, GSK3B, GSTM3, IFNK, IL12A, IL22RA1, IL28RA, INPP4A, IRF9, KIR2DS5, KYNU, LAMC3, LMO7, MAP2K5, MMP1, MS4A2, MTHFD1L, MYH6, NCK1 , NEU4, NSDHL, OCRL, OR11A1, OR13G1, OR1L4, OR2T34, OR4F5, OR4K2, OR5 1G1, OR52R1, OR5D16, OR5P3, OR7A5, OR8U1, PAPSS1, PARS2, PARVA, PER2 , PFN3, PLA1A, PLD1, POLR2I, POLR2J, PPARA, PPCDC, PPM1D, PRKCD, RAPG EF1, RBPJ, RENBP, SDC4, SNAP25, SORD, SV2B, TAS2R50, TAS2R9, TGFB1, T GFB3, THBD, TIRAP, TPM3, TRMT11, UGT2A3, UGT2B17, UGT8, VEGFB, ST6GA LNAC4
Negative_15498	AK1, DCK, F2R, FAH, FGB, GHR, GNS, IL4, LAT, RB1, TNF, TXK, AADAT, ABL1, ABP1, ACADVL, ACVR1B, ADCY3, AGPAT1, AKR1D1, ALG6, ALPI, ALPP, ATG7, B3GALT5, BAAT, BDNF, BLVRA, BMP8A, CACNA1F, CASP6, CCL13, CCL3, CCR3 , CCR7, CD34, CD3E, CDKN1B, CHKB, CLDN14, CSF2, CXCL1, CXCL5, CYP3A5, CYP8B1, CYSLTR1, DDX18, DHCR24, DKK1, DKK2, DNMT3L, ECSIT, ESAM, F11 R, FGF1, FGF10, FRAP1, FZD5, GALNS, GGT5, GLI3, GLUL, GSK3B, GSTP1, HA O1, HEXB, HIF1A, HLA- DOB, HSD11B2, HTR7, HYAL2, IL1R1, IL28B, IRF9, ITGA9, ITPKB, JAK1, LC MT2, MCM7, MKNK1, MYD88, MYH3, MYH4, MYL5, MYL7, NOTCH3, NT5C1B, OR10 Z1, OR4K5, OR51F2, OR51G1, OR52E6, OR5AN1, OR5AS1, OR5V1, OR6K6, OR7 G3, OR8D1, PCYT1A, PCYT1B, PFKL, PIAS2, PIK3C2A, PIK3CB, PKMYT1, PLX NB3, POLR3A, PON1, PPP3CB, PRKAA2, PRKACA, PRKAR1B, PRODH2, PRSS3, R AC1, RBPJ, RBPJL, RDH16, RELB, RPS6KA1, RPS6KB1, RRM1, SDHB, SELL, SE MA3C, SFRP5, SGMS2, SKP2, SMAD2, SMAD6, SMARCA2, SMC1B, SMURF2, ST3G AL1, TACR2, TAP1, TP53I3, TRIP10, TYMS, UCKL1, UPB1, UPP1, WNT9B, WWP 2, ATP6V1B2, PAFAH1B3, PNLIPRP1, TNFRSF6B
Negative_15499	CAT, CFI, GP9, IL8, MSN, TNN, VTN, ABLIM1, ACVRL1, ADIPOR2, ADORA2A, A FMID, AKT2, ASS1, BET1, BLVRB, CCNB1, CDC42, CDKN2B, CD01, CFL1, CHRM 5, CLDN2, CLDN6, CMBL, COL4A1, COQ6, CPS1, CREB3L2, CRHR1, CSNK1G1, C YP11B1, CYP3A7, DHRS3, DOCK1, DTX3, EPB41L2, EPRS, ESAM, FGF17, FMO5 , FRAT2, GALNT14, GDF7, GOT1, GRIN2D, GTSE1, GUCY1A2, HAGH, HEXA, HLA - DOB, IFNA7, INADL, LARS, LMO7, LTA4H, LTB4R2, MAOA, MAP2K4, MPP5, NRA S, NTRK1, OR10V1, OR1D5, OR1L4, OR2H2, OR2K2, OR4C46, OR5AC2, OR5AS1 , OR5D18, OR6C70, OR6M1, P2RX1, PDX1, PIGO, PIK3C2B, PIK3C2G, PLXNA3 , PPARD, PPP1CC, PRKAG2, PRLR, PTGFR, PTPMT1, PVRL3, RPS6KA6, SC4MOL , SEPHS1, SPHK1, SPRY2, SPTLC2, STK11, TPH1, TSNARE1, UBE2L6, ULBP1, UPB1, HLA-DPA1, SERPING1, ST6GALNAC6
Negative_15500	CDA, CFH, CR2, DCK, F2, RFK, ACAD9, ACOX2, ACP6, ADH5, ADH6, ADIPOQ, AL AD, ALOX12B, ATP5G3, BMPR1B, CACNA1E, CASP8, CCL25, CCL27, CCNA2, CD 58, CDC25A, CFL2, CHIT1, CHPF, CLDN19, COL1A1, CSNK2A2, CXCL16, CXCL 6, CXCL9, CYCS, CYP11B2, CYP2C19, CYP2C8, CYP3A4, DDB2, DGAT2L4, DGK I, DGUOK, EPHB3, EXOC7, FADD, FARSA, FUT4, GALNTL2, GCAT, GCNT1, GPD2 , GPX7, GRIA3, GUCY2C, HCLS1, HMBS, IFNA14, IL18RAP, IL20RB, LAMB4, L FNG, MAFA, MAP4K4, MAPT, MGAT4A, MNX1, NFATC2, NPR1, NPR2, OR51M1, OR 52E4, OR5V1, OR6M1, OR8U1, PAPSS1, PARD6A, PARVG, PDE6H, PDE7B, PLCB 4, PLOD2, POLR2B, PPP1R3A, PRIM1, PRKCH, PTDSS2, RASSF5, SEMA4G, SEP HS1, SHC1, SPI1, ST8SIA5, STAT4, STAT5B, STX1A, SULT1A4, SYNJ2, TICA M1, TSC2, UCKL1, VEGFC, WNT11, C1GALT1C1, MAPKAPK5, PAFAH1B3, TNFRS F14

Negative_15501	<p>ADA, AK2, BAX, C4B, C8G, FYN, GHR, GNS, HK2, HK3, KDR, LCK, PGD, SFN, SPN, VTN, ACOX1, ACSM5, ACSS3, ADCY7, ADRB2, AGRP, ALDH9A1, ALG2, ALPP, A NPEP, ARSB, ATF4, ATP6V1H, BCMO1, BMPR2, C1GALT1, C3AR1, CCL2, CCR2, CD28, CD38, CDC25A, CNTN2, CTBS, CUL1, CXCL9, DDX18, DDX19A, DDX47, D DX52, EARS2, ECHS1, EDNRB, ENO1, EPB41, EPHA1, EPHB2, EPHB3, ESAM, FC ER1G, FCGR3A, FLT3LG, FZD10, GALNTL2, GBGT1, GJA1, GNA13, GNPAT1, G STA5, GSTK1, GSTM4, GUCA1B, GUCY2F, HPSE2, IFNA13, IFNA16, IL8RA, IM PDH1, LAMA3, LEFTY1, LEFTY2, MAPK11, NEFL, NFATC3, NFE2L2, NSDHL, NT 5C, NUDT8, NUDT9, OR10H5, OR12D3, OR1A2, OR2V2, OR2W1, OR51A7, OR5M3, OR6T1, PCCA, PDE6D, PDXP, PFKM, PHGDH, PIGA, PIGP, PIGU, PNPO, POLR2 B, PPARD, PPP3R2, PRODH2, PSME2, PSPH, PTGER3, RALGDS, RPN1, SEMA3D, SESN1, SOCS4, SPRY3, SYNJ2, TPM3, TUBA4A, TUBAL3, UGT2A1, WASF2, WNT 2, YARS2, AASDHPPT, CACNA2D4</p>
Negative_15502	<p>ADO, C6, CD6, EBP, GGH, ID4, PVR, TYR, VCL, ABLIM2, ABLIM3, ACMSD, ACY1, ADH6, AGPAT6, ANAPC11, ANAPC5, ARHGEF1, ATG3, ATP5E, B3GAT1, B3GNT 4, B4GALT5, BUB1, CAMK2B, CCL15, CCL23, CCNH, CCR7, CD22, CHPT1, CHRM 1, CLTA, COX15, CSNK1G1, DHCR7, DIAPH2, DUSP5, EFNA1, EFNA4, ENPP3, E NTPD4, FBXW11, FCGR2B, FLT3LG, FRAP1, GALNT3, GCNT2, GIT1, GNRH2, GP 1BA, GSTA3, GUCY1A3, HAGH, HLCS, HNF1B, HSD17B7, ICAM2, IDUA, IL11RA, ITGA1, ITGB6, LHCGR, LRRC4C, MDH2, MGAT2, MGAT4A, MMP1, MMP9, MPDZ, MYH10, MYH11, NAE1, NLGN1, NME4, NRXN2, NT5M, OR10X1, OR10Z1, OR13F1, OR1F1, OR1M1, OR1Q1, OR2B11, OR4D11, OR51I2, OR52D1, OR5C1, OR6S1, OR8B8, OR8G1, OR8K3, P2RX4, PDE1B, PFN3, PIGL, PIK3R2, PLTP, PLXNB1, PTPN6, RASGRF2, RUVBL1, SARDH, SH2D2A, SLC2A1, SNAI2, SREBF1, ST6GA L1, STAT4, STAT5B, STX5, TAP1, TIAM2, TLR9, TRAF5, TRDMT1, TSC2, UGT2 A1, VANGL1, VAV1, YWHAH, ATP6V0A1, ATP6V1E2, PDCD1LG2, SERPINA1</p>
Negative_15503	<p>CAT, CSK, KHK, LIF, OGT, PDC, RFK, SRC, TPO, ACSM2A, ACVR1, ADRA1B, ALG 2, ARNT, ATG3, B3GALT5, BMPR1B, CAMK2D, CAPN2, CCL28, CCNE1, CD27, CD 8A, CFL2, CHSY1, CLCF1, CLDN7, CMPK1, CNTF, CPT2, CTPS2, CXCL2, CYP3A 43, CYSLTR2, DAAM2, DLAT, DPM2, DPYS, DPYSL2, DUSP7, EDN1, EDNRB, ENA H, EXT1, FLAD1, FZD2, FZD4, GAD2, GALC, GGT6, GNA15, GOT1, GSTK1, GSTP 1, HIBCH, HIF1A, HLA-DRA, HNF1B, HSD17B8, IDI1, IDI2, IFIH1, IL10, IRAK2, IRS1, ITCH, ITGA X, KNG1, LCAT, LDHA, LRP5, MAD2L2, MAGI2, MAPK9, MARS2, MGAT2, MYD88, NARS, NAT1, NAT2, NAT6, NCR3, NCSTN, NOX1, NT5E, NTRK1, OCRL, OR10H5, OR2B11, OR2G2, OR2H2, OR2T33, OR3A3, OR4A15, OR4X1, OR5D16, PAK6, PA RD6B, PDE4A, PDGFA, PDXP, PFN4, PIAS2, PIGL, PLA1A, POLR2L, PPOX, PPP 1R3A, PRODH2, PSPH, PTPRM, ROBO1, RPS6KB1, SAT2, SCLY, SCP2, SETD1B, SMC1B, SOCS1, SPRY3, SRD5A2, SUFU, SUOX, TAS2R60, THTPA, TLR9, TNFSF 9, TP73, TRAF1, TUBA1B, TUBB4, TXNDC12, VAMP3, VNN1, SERPINC1, TNFSF 13B</p>

Negative_15504	<p>ADK, BAD, BTD, C7, CBS, CSK, CTH, EGF, GH1, GH2, GP6, LCK, SMS, ACY3, ALG 6, ALPI, AMD1, AREG, ASIP, ATP12A, ATP6V1F, B3GALT1, B4GALT2, BACE2, BCMO1, BMP7, CACNA1C, CASK, CD34, CD3E, CDC23, CDH3, COL4A4, COL5A2, COQ5, CRLS1, CXCL13, CYP26C1, CYP27A1, CYP2C8, CYP4F3, DARS2, DEGS1, DGKZ, DMGDH, DTX2, EGFR, EGLN3, ENPP6, EPAS1, EPHB2, ETS1, FCGR2B, FGF3, FLT4, FMO3, G6PC2, GALE, GALNT11, GPLD1, GSTP1, GYS2, HLA-DOB, HLA-F, HLCS, IFNA4, IFNW1, IL15RA, IL17A, IL1R1, IL22, IQGAP1, IRAK1, IRF3, LMO7, LTB4R2, MAP3K13, MPDZ, MPST, MYH4, MYL9, NAGK, NAGS, NAT2, NME2, NOS3, NOTCH3, NUDT9, OR10H3, OR13C8, OR1M1, OR2A25, OR2Y1, OR51I2, OR5H2, OR8K5, PIGS, PIGW, PIK3R5, PLA2G6, PLXNA3, PON3, PPT1, PRIM2, PVRL3, PYGM, RASA2, RUNX1, SEMA4C, SETD7, SHMT1, SMPD3, SPCS1, STX2, STX6, SULT1A4, SULT2B1, SV2C, SYNJ2, TAS2R16, TFPI, TIAM1, UCK2, UGDH, WASF2, CACNA2D2, CTNNBIP1</p>
Negative_15505	<p>CKB, CTH, DBI, EZR, FGB, FN1, IL5, LCK, MOS, SMS, TFG, VCL, AARS2, AASS, ACTA1, AGRP, AK3L1, AKR1C2, ALG13, AMD1, ARNT, ARPC1A, ATP5G2, ATP6V0C, B3GAT1, BMP4, BUB3, C1QA, CACNA1S, CARS, CARS2, CBLB, CCL3, CD19, CD48, CDC42, CDK2, CDK4, CDS1, CDS2, CES1, CNTNAP2, COMP, CRB3, CSF2RA, CXCL12, CYBA, CYP27A1, DDX4, DDX51, DHRS4, EARS2, EIF4E2, FARSB, FGF13, FMO5, FRAT2, FSHR, FZD2, FZD8, G6PC, G6PD, GCNT1, GLI2, GLO1, GLUD1, GPAA1, GSTM2, HADHA, HAGHL, HDAC1, HLA-G, IDH3A, IFNA17, IFNA8, IFNGR1, IFNK, IL8RB, INPPL1, ITGA2B, JAK2, KLRC3, LAMB3, LEF1, LIPA, MADCAM1, MAGI1, MAGI3, MEF2C, MYL2, NAT2, NEU1, NFATC2, NFKBIE, NMNAT3, OR10A4, OR1F1, OR2W1, OR4K15, OR7D4, ORC4L, OSMR, PAK4, PANK3, PHPT1, PIGH, PIPOX, PLA2G2D, PLA2G6, PLXNB1, PNPLA4, POLE3, POLR2A, PON3, PPM1D, PTGS2, RALGDS, STX12, STX5, TAP1, TAS2R7, TBXA2R, TFDP1, TKTL2, TNFSF10, TRADD, TUBA3E, TYK2, TYROBP, UBE2L3, UGT2A1, WBSCR17, WNT7B, YARS, ZAP70, ATP6VOE1, GABARAPL2, HLA-DPA1, MAPKAPK5, PDCD1LG2, SERPINB5, TNFRSF11A, TNFRSF17</p>
Negative_15506	<p>BCR, EZR, FOS, MAG, MPI, TNF, ACAA2, ACSM1, ADORA2B, ADRB3, AFMID, AKR1A1, AKR1C4, ALDH5A1, AMPD3, AOC2, ARPC4, B3GALT5, B3GAT1, CASK, CAV2, CCR6, CD3E, CD59, CDC45L, CHR1, CSF1R, CSF2, CSNK1D, CTPS2, CXCL5, CYP26A1, CYP2C19, CYP4F2, DDX19A, DGKD, DHDH, DHRS4, DOLPP1, ENO1, EPHB2, FABP3, FZD5, GADD45A, GCH1, GDE1, GLUD2, GNB3, GNPAT, GUCY1B3, GYS2, IDH3B, IFNA6, IFNG, IKBKB, IL12A, IL18, IL2RA, IL2RG, IMPDH2, ITGB1, JAM3, LIPG, LIPT1, MTHFD1L, NFYC, NKX2-2, NLGN1, NPR2, OR10A6, OR10A7, OR10J1, OR2A14, OR2G3, OR4N2, OR51B2, OR51F1, OR5AS1, OR5B3, OR7C1, PDX1, PDXK, PI4KA, PLA2G4A, PMM1, POLR2G, POLR3D, PPAP2C, PPID, PPOX, PRKCZ, PSPH, PVRL2, RARS2, RHEB, SDC4, SELL, SFRP2, SLC33A1, SMAD1, SOS2, SPP1, SPTAN1, SRGAP2, STX7, STX8, TGFB1, TNFSF4, TRAF3, TSLP, UCP1, UGT2A1, VAV1, VEGFA, WNT6, YWHA B, ATP6V0D1, CSNK1A1L, PDCD1LG2, PLA2G12B, SERPING1</p>

Negative_15507	<p>FAH, FYN, ITK, NOG, PVR, SP1, TKT, ACSS1, ADAM10, AGMAT, AKT1, ALDH7A1, APH1A, ATF4, ATP5G3, B3GNT5, CAV2, CCNB1, CD72, CD80, CD8A, CDH1, CDKN2B, CLDN9, COASY, COQ7, CREB3L1, CRHR1, CSH1, CSNK2B, CTF1, CYP11A1, DAXX, DDX19A, DKK1, DOT1L, DPAGT1, DUSP9, EGLN1, ENTPD5, ENTPD7, EPHA3, FABP3, FGF14, FOXA3, GALNTL1, GBA3, GLO1, GMPPB, GNB1, GSTP1, HADHA, HLA-</p> <p>DMA, HTR5A, IDH3A, IFNB1, IL18R1, IL20RA, ITGA2, ITGA6, LARS2, LDHAL6B, LTBR, MARS2, MGAM, MTMR2, MYH15, NEFL, NFKB1B, OGDH, ONECUT1, OR10A2, OR10AG1, OR10G4, OR10H5, OR1L8, OR2AG1, OR2H2, OR51I2, OR52K1, OR56A1, OR5T1, OR7A10, OR8B12, OR9I1, P2RX6, PDE6D, PIK3CD, PLAU, PLCD4, POLR2F, PPARG, PPP1R3D, PPP2R2D, PRKCI, PRKCQ, PROC, PTPRB, RALGDS, RELA, SARDH, SENP2, SESN2, SHMT1, SOX17, SPTLC2, SUCLG1, SUOX, TSC1, XYLB, YWHAZ, ZNRD1, B4GALNT1, CACNA2D2, GABARAPL2, PPARGC1A, SERPINB5</p>
Negative_15508	<p>CDA, CP, DCT, EDA, GGH, GP6, GP9, MAX, UBC, XDH, ACMSD, ACOX2, ACSM3, ADCY7, ADSL, AKR1B10, ALOX12B, ALOX5, ALPL, APPL1, ARSE, ASCC3, ATIC, BTRC, CACNG1, CARS, CCL2, CCR7, CDKN2A, CDKN2D, CES2, CNTFR, COASY, CSNK1A1, CSNK1G2, DGAT2, EHMT2, EREG, FGF13, GAB1, GALNS, GALNT11, GANC, GJA1, GNG12, GPD1, GRM5, GSTA3, GSTA5, HARS2, HEMK1, HES1, HIBCH, HSD3B7, ICAM1, IL13, IL23R, IL28A, IL3RA, IRF5, ITGB5, KIR2DL2, KIR2DS5, LARS, MAN1C1, MAP3K11, MASP1, MGST2, MINPP1, MTMR2, MYH11, MYLK, NCR1, NRG3, NSDHL, NT5C3, NTNG1, OR10A7, OR10H2, OR10H5, OR1F1, OR4B1, OR4C16, OR4X1, OR51D1, OR52E2, OR52E8, OR5D16, OR5P3, OR6S1, OR6T1, OR7D2, OR8S1, PAK3, PAK6, PANK1, PDE8B, PECAM1, PIAS3, PIP4K2A, PLA2G5, PLCB3, PLCG1, PPARA, PPP1CC, PRKAB1, RBPJ, RPIA, SELL, SEMA4C, SETMAR, SGMS1, SGPP1, SLC25A5, SOS1, SPP1, ST3GAL3, SULT2B1, THBS2, TNFSF4, TRHR, ULK2, XYLT2, ZMAT3, ATP6V0E1, ST6GALNAC1</p>
Negative_15509	<p>AUH, C8B, CFI, CRK, DAO, DHH, FES, FUK, IL4, KMO, MAX, NNT, AADAT, ACSM4, AKR1C1, ARPC5, BHMT, BMP8B, C9orf95, CAMK2G, CARS2, CBLC, CCNA1, CD36, CHSY3, CLDN10, CLDN2, CNTNAP2, COL4A1, COL5A3, COQ7, CRY2, CTNNA2, CXCR5, CYP1A2, CYP2A7, DAG1, DARS, DDX52, DGAT2, ENO2, ENTPD8, EPHA3, FGFR1, FGFR2, FZD7, G6PC, GALT, GCNT3, HEXB, HLA-</p> <p>DOB, HMGCS1, HSD17B3, IFNB1, INHBA, INSR, ITGA3, LIAS, MAP4K3, MAPK11, MS4A2, MYD88, MYH1, MYH7, MYH9, NFATC1, NT5C2, NT5C3, OR11H1, OR11H4, OR13C4, OR1E2, OR1G1, OR2W1, OR4A5, OR4D2, OR5M3, PCK1, PDE11A, PDIA4, PER3, PLCB3, PLIN, PLXNC1, PPM1A, PPM1B, PPP5C, PTPRZ1, RAB23, RALB, RDH12, RDH16, SEMA4D, SETDB2, SULT1A4, TSC1, TYK2, ULK3, UPP1, ATP6V1B1, ATP6V1C1, PPP1R12A, ST6GALNAC6</p>
Negative_15510	<p>ADA, AK3, CP, LPL, NF1, RFK, VCL, VTN, ACP1, ACTN4, ACVR1B, ACY3, ADH4, ANAPC2, ATP6VOC, B3GAT2, BAI1, BCAT1, BLVRB, BMP7, CACNA1E, CCKAR, CCL19, CCL24, CD22, CDC20, CDC27, CDC42, CFLAR, CLCA2, CLDN1, COL5A3, COQ5, CXCL11, CXCL12, CYP2C9, CYP3A43, DCTD, DHX58, DUSP1, EFNA1, EPHA3, FECH, FMO2, GBE1, GCNT4, GNAQ, GOT1, GOT2, HAGH, HSPA1B, IL19, IL23R, IL28A, IL6ST, IMPDH1, IPPK, ITGA2, ITPKA, LDHD, LMO7, LTBR, MAGI2, MAML3, MDH2, MGAT5B, MMP7, MPP5, NARS, NEGR1, NNMT, OR13H1, OR1J2, OR2A42, OR2AG2, OR2M5, OR2T33, OR4K1, OR4K14, OR9A4, PDE4A, PDE4C, PDE9A, PFKFB4, PHKA1, PIAS4, PIGA, PIK3R1, PLA2G1B, PLA2G2F, PLXNA1, PNPT1, POLE2, POLR2K, PON3, PPAP2A, PPP1R3A, PPP1R3C, PRKAB1, PSME2, RAC2, RAF1, RAPGEF3, RDH10, ROCK2, SCLY, SETD8, SOCS2, SPCS3, SREBF1, SRGAP2, SUCLG1, SULT1A1, SULT1A4, SULT1E1, SULT2A1, TACR3, TBXAS1, TCIRG1, THBS3, TLR3, TOMM40L, TUBB, WNT7A, XIAP, ATP6V1B1, ATP6V1E2</p>

Negative_15511	<p>CTH, FYN, GNS, HPD, MPL, OAT, OGT, PGD, SDS, ACAD8, ACADSB, ACO1, ACSS3, ACVR1, ADH5, AGPAT4, ALDOC, ARHGEF6, ATP6V1H, BDH2, BIRC2, BTRC, CAMK2B, CAMKK1, CCL16, CCND2, CCR9, CD79A, CHUK, CLTB, COL5A1, COQ7, CTNNA1, CYP2J2, DAXX, DDX23, DFFB, DTX3L, EPHA2, EPHA3, F2RL2, FGF5, FGF7, FOXA3, FSHR, FUT8, GALNTL4, GANAB, GCNT3, GLG1, GPLD1, HSPB1, IFNB1, IL12RB1, IL20, IL20RA, INPP5A, IPPK, ITGA2B, ITGB3, LAMB1, LCP2, MCCC2, MTAP, NAMPT, NEUROG3, NFYC, NOS3, NT5C3, OR10X1, OR1M1, OR2M4, OR2S2, OR2T12, OR52N1, OR5AK2, OR6N2, OR6Y1, OR8G1, OR8K5, PECAM1, PFKL, PIGM, PIGW, PIK3CD, PLCB3, PLD1, PMM1, POLR3D, PPP1R3D, PROS1, PTPRR, RALA, RAPGEF3, SARS2, SELPLG, SEMA4B, SESN1, SMPD3, SOX17, SPRED2, TAS2R40, TBL1X, TSC1, ULBP2, UNC5A, ARHGEF12, CACNA2D2, GABARAPL2, HLA-DPB1, PNLIPRP1, PRICKLE2, SUV420H1, TNFRSF10A</p>
Negative_15512	<p>AMH, C2, EPO, HGD, JUN, MAG, SHH, ACTG2, ACVRL1, ADRB1, AKR1A1, AKR1C1, ALDH1L1, ANPEP, ARNT, ASNS, ATF2, B4GALT7, BLVRA, CARS, CASK, CCL14, CD79A, CDC25A, CDO1, CFLAR, CYP2D6, DAG1, DDIT4, DDX41, DDX47, DHCR7, DHFR, DKK4, DNMT1, EHHADH, ENPP3, EPRS, F13A1, FASLG, GAPDH, GNA15, GRIN2A, HARS2, HES1, HSD17B1, HTR6, IGSF5, IL1R1, ITGAL, KLK3, LRP6, MAGI3, MAN1B1, MAPK9, MKNK2, MPST, MYL7, NFATC2, NKD1, NNMT, NT5M, NTN1, NUDT2, ODC1, OR1A1, OR4L1, OR51B6, OR51G1, OR52K2, P4HA3, PAK6, PDIA4, PEMT, PFKFB1, PFN2, PIGH, PIGS, PIK3C2G, PIK3R5, PKMYT1, PLA2G6, PLXNA1, PMAIP1, POLR2D, PRIM2, PRKCZ, PRPS2, PTCRA, PVRL2, QPRT, RASSF5, RBX1, RDH8, RPS6KA5, RXRA, SH2D2A, SLC25A5, SLC27A1, SMPD3, STEAP3, STK36, STX1A, STX4, TAS1R1, TGFB3, TGFB1, TOMM40L, TP73, TSHB, TUBA4A, TUBB2C, UBE2L3, VAV1, VNN1, YARS, ZBTB16, ZMAT3, CSNK1A1L, HLA-DQA2, TNFRSF10B, TNFRSF12A</p>
Negative_15513	<p>ADO, DCT, DDO, NPL, ACADVL, ACTB, ADIPOQ, AHCYL1, AKR1B10, APBB1, APC2, ARPC1B, ATN1, BHMT, CACNA1G, CARD11, CCL16, CCL22, CDIPT, CDKN1B, CHAD, CLDN18, CYP27A1, CYP2U1, DDB2, DDX18, DGUOK, DUSP2, EDN1, EVI1, FCGR3A, FLT4, FUT5, FUT7, GALNTL5, GALT, GNA01, GNPAT, GPLD1, GRPR, GUSB, GYS2, HEXA, IDH3B, IFNA4, IGFBP3, IKBKG, IL13RA1, IL1B, IL1RAP, IL22RA1, INPP5E, IRS4, KDSR, KIR3DL1, KIR3DL3, KNG1, LEPR, MAGI1, MAGI2, MBL2, MICA, MOV10L1, NFYA, NR1D1, NR1H3, OR13C4, OR2B2, OR4K15, OR51E1, OR5AR1, OR6C4, OR6C76, OR6K6, OR7C1, OR7G1, ORC3L, P4HA3, PFAH2, PDE3A, PDE4B, PDHB, PGM1, PI4KB, PLA2G2D, POLR2L, PPP1R3B, PRKAG1, PTGFR, RDH12, RFX5, SEMA4G, SMARCA2, SORBS1, SPHK2, SYNJ2, TAS1R3, TICAM1, TNFSF8, TUBA1C, ULK1, HLA-DPB1</p>
Negative_15514	<p>APP, C8G, CKB, CP, DCC, EPO, GGH, KIT, LIF, OSM, RB1, TPO, TYR, ADCY10, ADRA1A, AKT3, ARSE, ATN1, B3GAT3, B4GALT2, BIRC2, BMP8A, CACNB1, CARD11, CASP3, CD19, CD38, CD40, CD82, CDC45L, CLDN4, CLDN8, CMPK1, CPOX, CREB3, CTLA4, CYP3A7, CYP8B1, DAPK3, DGAT2, DVL2, FGF20, FZD3, GALNT13, GFPT2, GMPS, GNAQ, GNPAT1, GRLF1, GSTA3, GSTO1, GSTZ1, GUCY2D, IFNA8, INHBA, ITGAV, KCNB1, KIR3DL2, LAMB3, LRP5, MAP2K1, MAPK13, MPP5, NFE2L2, NRXN1, NT5C3, OGDHL, OR10A5, OR13A1, OR1J4, OR51A2, OR52E8, OR6C3, OR7D2, OR8H2, OR8U1, PHKB, PLA2G2F, PLOD3, POLR2L, PPP2R5A, PRKACB, PRKAG3, PRKAR2B, PRKCD, PTGS2, PTK2B, PTPMT1, PTPN7, RALGDS, RDH5, SDHC, SFRP5, SPHK1, STX1A, SUFU, TACR1, TAS2R42, TBL1XR1, TIAM2, ULK2, VEGFA, WASF1, WNT4, WNT7B, ZMAT3, HSD17B10, SUV420H2</p>

Negative_15515	A2M, ADO, AGL, AK1, CD4, DAO, GDA, ID1, IHH, JUN, KDR, ME2, MPZ, SRM, TK2 , AACCS, AASDH, ABL2, ACTG2, ADCY6, AKT1, AQP7, ATP50, B4GALT2, BAAT, B DH2, BHMT, C1QC, CCKAR, CCL11, CCNE2, CD226, CDH1, COL1A2, COL3A1, CR LF2, CYP26C1, DAAM2, DHODH, DPM1, DUSP5, ECHS1, ENO2, ENO3, ENTPD5, E PB41L1, EPHA5, FGF5, GAL3ST1, GLS2, GNAI1, GRIN1, GRIN2D, GSTM3, GTS E1, HGSNAT, IAPP, IKBKB, IL12A, IL12RB1, IL22, IL7R, INHBB, INPP5E, I TGAX, ITGB1, JAM3, KAT2A, LFNG, LRP6, MARS2, MGAT4B, MYH15, NARS, NT5 C, NUDT2, OGDH, OR10G9, OR1L3, OR2B6, OR2M3, OR2M7, OR2T12, OR2T3, OR 4K15, OR56A3, OR5D16, PAFAH2, PARS2, PDE4C, PDX1, PER2, POLR2D, POLR 3H, PPP2R1A, PPT1, PRDX6, PRKAA1, PYGL, RDH12, ROBO2, ROCK1, RXRB, SC 5DL, SDC1, SEMA4D, SESN3, SETD2, SMAD4, SNAI1, SPRY1, SPRY2, SSX2IP, STAT5B, SUCLG1, TALDO1, TCIRG1, TGFB3, TRAF5, TRHR, TUBAL3, TUBB6, U GT1A10, ULBP3, UROS, WNT10B, WNT11, XYLT2, ATP6VOE1, KIR2DL5A, PAFA H1B3, PPP1R12A, SERPIND1, TNFRSF10D, TNFRSF17, TNFRSF1B
Negative_15516	C8G, CD6, CTH, DCN, FYN, GHR, LEP, LSS, ACADSB, ACSM5, ACTA2, ACVR1B, A FMID, ALG2, ALOX12B, ATP5E, B4GALT5, BCL2L1, CACNG1, CCR4, CD40, CD8 6, CHIA, CLDN6, CMAS, CRY2, CTSL1, CXCL2, CYP17A1, DGKA, DKK1, EPHB1, EPRS, ERBB3, FGF19, FGF8, FTCD, FZD4, GAD2, GLI3, GNAI2, GSTM4, GUCY2 C, GUK1, GYS1, IGF1R, IGSF5, IL13RA2, IL28RA, JAG2, KIR3DL1, LYPLA2, MYH10, NAT5, NFYB, OR10K1, OR11H1, OR4B1, OR4K13, OR4Q3, OR51I1, OR5 1T1, OR5D14, OR7C1, OR9G1, PARD6B, PDE6G, PDXP, PER1, PGK2, PIGT, PLA 2G1B, PLCD1, PLCD4, PNLIP, PPP1R3A, PPT1, PRSS3, PTCH2, RALBP1, RBX1 , RHOA, RPS6KA4, RPS6KA5, SEMA4A, SKP1, SMAD7, SOCS4, SSH2, STX16, SU CLG2, SYNJ1, TAS2R49, TCF7L2, TNFSF14, TUBA1B, UCK2, UCGG, UGCGL2, U LK3, YARS, C1GALT1C1, HLA-DRB3, PAFAH1B3, TNFRSF10A
Negative_15517	C4B, CBL, CD4, CFI, EPO, GNS, IL8, MOS, PGF, STS, AADAT, ACPT, ACVR2A, A DCY7, ATG12, ATP5C1, BDKRB1, BMPR1A, C1QC, CALML5, CAMKK1, CASP6, CC L14, CCNG2, CD40, CD79B, CDKN2B, CLCF1, CYP2B6, CYP2U1, DFFA, DIAPH1 , DUSP4, EDAR, ENPP6, ESPL1, FGF1, FGF13, FUT5, GALNS, GALNT11, GRAP2 , GUCY2D, HIBADH, IL8RA, IRAK3, ITCH, JAG1, JAK2, KAT2A, KIR2DL4, LDH B, LDHC, LRP6, MMP9, MOV10L1, MYH15, MYLK3, NAT1, NAT6, NEFL, NFASC, N FKB1, NME6, NME7, NOTCH3, NPR2, NR1D1, OCLN, OR10A6, OR10X1, OR13C9, OR2D2, OR2T6, OR4D5, OR51I1, OR51S1, OR52A1, OR52J3, OR7A5, OR7G2, O R8U1, PHKG1, PIK3CG, PLCD4, PPA1, PSPH, PTCRA, PTPN1, PYCR1, RRAS2, S CP2, SLC25A4, SLC2A1, SOCS3, SREBF1, STMN1, TAS2R5, TRADD, TSHB, TUB B2C, UGT2B10, CACNA2D2, HLA-DRB4, PHOSPHO1, TNFRSF1B
Negative_15518	CD6, CFI, FST, HGD, KMO, LPO, PAH, ZYX, ADRA1B, AKT2, ANAPC1, APOA5, AR HGAP5, ATP5J2, BDKRB1, CCNE1, CD86, CDC2, CDC25C, CDC42, CHIA, CHRM1 , CSF3, CSH1, CSNK2B, CYP4F3, DPAGT1, DUSP2, EDN1, EFNA2, ENO3, ENTPD 8, EREG, FLAD1, FMO1, FPGS, FUT8, GALC, GALNT2, GCNT4, GLUD1, GPLD1, G STM5, GUCA1B, HSD17B8, ICAM3, IL13, IL15RA, IL6ST, INSR, KCNJ11, KLR C3, LAMA3, LAMC3, LCMT2, LTC4S, MAP4K2, MGAT5B, MINPP1, MPZL1, NEGR1 , NEUROD1, NR1D1, NT5C2, NUDT8, OR11H1, OR13C2, OR2A5, OR2D3, OR51D1 , OR5AN1, OR5AR1, OR8G1, OR9I1, PDE1C, PDE6D, PGM2, PIP4K2B, POLE2, P OLR1E, PPCS, PPT1, PRIM2, RAPGEF1, RDH10, RFWD2, RPS6KA4, SCD5, SIPA 1, SLC27A5, SMARCA2, SMPD4, SNAI2, SPCS3, ST8SIA5, STX8, TALDO1, TAS 2R3, TAS2R42, TNFRSF9, TYROBP, UROC1, WWP2, SERPINE1

Negative_15519	CR2, GCK, INS, LPO, ACADSB, ACHE, ACSL1, AGXT2, AKR1A1, AKT2, ALOX5, A REG, ATP4A, BDKRB1, BIRC5, BLNK, BRAF, C9orf95, CACNA1E, CACNG3, CAD M3, CALML3, CBR1, CCL2, CCL26, CCNB3, CD72, CD79A, CDKN1B, CHAD, CIIT A, CLDN2, CMAS, COL5A3, CRY2, CTNNA1, CYP19A1, CYP27A1, DDX23, DDX4, DKK2, DUSP10, DUSP5, E2F5, FCER1G, FGF9, FLOT1, FRAT2, G6PC2, GAD1, G ADD45G, GAL3ST1, GCLC, GLI3, GNA01, GSTM5, IFNA10, IFNA2, IFNA6, IL1 8, INPP5E, INSR, ITGB1, LEF1, LIPG, LTB4R2, MAGI2, MAPK14, MDH2, MPST , MRAS, MYH10, NCAM2, OR10A7, OR10H3, OR10J3, OR10K2, OR14I1, OR1S2, OR2T8, OR4C46, OR4F6, OR4N4, OR4Q3, OR51B5, OR56B4, OR5L2, OR5M3, OR 8K3, PCYT1B, PDE1A, PERP, PHKG1, PIGL, PLXNB1, POLR3D, PPT1, PRKAA2, PRKCH, PRKCZ, PSME1, PTPRZ1, RAP1A, RELB, SETD1B, SETD8, SLC27A5, ST 3GAL4, STT3B, SULT1A4, TAS2R41, TP73, TUBA8, TYK2, VANGL2, VAV1, SER PINF2
Negative_15520	ADO, CSK, DUT, GGH, LHB, RB1, ABI2, ACSM3, ACVR2B, ACYP2, ALG13, ALG8, ANAPC7, ANPEP, APRT, B3GALT2, BACE2, BAIAP2, C3AR1, CD19, CD70, COL3 A1, CPT1B, CRLF2, CSNK2A1, CTSS, CYP8B1, DDB2, DHODH, DHX58, DIAPH2, DUSP5, EFN1, ENTPD5, FABP4, FGF12, GFPT1, GNA12, GSTM4, GSTO2, HES1 , HNMT, IFNA6, IFNGR1, IL12RB2, IL21, ITGAX, ITGB4, ITPK1, LCP2, LDHA , MAP4K4, MMP1, MYLK, NFYC, NTF4, NUMB, OR10K2, OR2D2, OR4F15, OR51B2 , OR56A1, OR5T1, P2RX2, PAK1, PIAS3, PIK3CD, PLA2G2F, POLD1, POLR2F, PPBP, PPP1R3D, PRKAB2, PROS1, PSEN1, PTGS1, PTPMT1, RAC1, RAPGEF4, R ARS, RASGRP4, RETSAT, RFWD2, RPS6KB1, SEMA3E, SFRP2, SGPP1, SLC25A6 , SMPD1, SPTAN1, STAT2, STX3, TAS2R60, TGFB3, TUBB6, UMPS, VKORC1, WH SC1, ARHGEF12, ATP6VOE1, MAPK8IP1, SLC25A31, TNFRSF10D
Negative_15521	CP, MAX, SP1, TNN, AADAT, ABP1, ACAA1, ACAT1, ACSM4, ACTC1, ADH4, ADOR A2A, AGPAT2, ALDOC, ALG11, AMDHD1, AMPD2, AMY2B, ATP5C1, ATP50, ATP6 AP1, B4GALT2, BLNK, CAV3, CBLB, CCNB1, CDC26, CDH5, CHPT1, CLDN2, CLD N6, CNTFR, CXCR6, ENTPD8, EPOR, F11R, FECH, FGF13, FGF21, FGF8, FLOT2 , FOXO3, FZD1, FZD3, FZR1, GALNT14, GCH1, GDE1, GNG13, GNPDA1, GRLF1, GRPR, GSTO2, HCLS1, HHEX, HNMT, HPSE2, HTR2B, IDI2, IFT57, IL22RA2, I RF9, ITGAV, JAG2, KIR2DL1, MAP3K13, MAP3K2, MASP1, MFNG, MMP2, MYH6, NADSYN1, NEUROG3, NKD2, NME7, NTF4, NTN1, OR13C9, OR13F1, OR1F1, OR2 C3, OR2T33, OR2T6, OR2V2, OR51A4, OR52K2, OR5P3, OR5T1, OR6K3, OR7A1 0, ORC3L, OXTR, PAPSS1, PDXK, PFKL, PIK3C2B, POLE4, POLR3A, PPP2R2A, PPP2R2D, PPP3CB, PROS1, PTGDS, RPS6KA3, RUVBL1, SLC33A1, SMURF1, SO CS4, SOCS7, SPI1, SPRED1, ST3GAL1, STAM2, SUFU, SULT1A4, SV2C, TAS2R 48, THTPA, TNFSF12, TNFSF4, TRMT11, TUBB2C, ULK2, YWHAH, ZFYVE9, ARH GEF12, CSGALNACT2, KIR2DL5A
Negative_15522	AK3, AMT, C3, CRH, DAO, FST, LTB, ME2, RET, AARS, ACADS, ACPP, ACSL3, AC TG1, AGPAT1, ALAD, ALDH7A1, ANAPC4, ANAPC7, BUB3, CAV2, CCL16, CCL5, CCL7, CCNB3, CCNH, CCR10, CD244, CDC42, CDKN2A, CSF2RB, CTNNA1, CXCL 6, CXCR3, DAPK2, DDX50, DDX56, DLL1, DUSP4, DUSP7, EPB41L2, ESPL1, FG D1, FGF18, FGF20, FGF7, FOXO3, GAL3ST1, GBE1, GCNT1, GDF5, GLG1, GMPS , GNA12, GNB1, GRIN1, GRIN2A, GRIN2B, GSTO2, GZMB, HAO1, HHIP, HIP1, I FNA10, IL17RB, IQGAP1, IQGAP2, IRF9, ITGB3, JAK1, LAMC1, LEFTY2, MAP 2K4, MYL2, NAT2, NCKAP1L, NFASC, NFKB2, NOTCH2, NQO1, NUDT5, NUMB, OG DHL, OR1G1, OR2F2, OR2M4, OR4A16, OR4D11, OR4D2, OR4K5, OR51A4, OR51 D1, OR51G1, OR5P3, OR8K5, P2RX3, PDE4A, PDE7A, PDPK1, PIGQ, PIP5K1B, PLEKHA8, PLXNA3, PNPLA3, PPAP2A, PPP2CA, PPP2R1A, PRKCD, PRODH, PTK 2B, RENBP, RHOA, RUNX1T1, SEPHS1, SLIT2, SRGAP1, SSH2, STX12, STX6, T AS1R3, TAS2R8, TGFB2, TKTL1, TUBB2C, TYK2, UPRT, WNT4, WNT5B, ATP6V 1E2, CTNNBIP1, GABARAPL1, HSD17B10, SERPINE1

Negative_15523	<p>ADO, BTC, F12, F2R, IHH, LYN, NF1, ACAT1, ADCY10, AGPAT2, ALAS2, ALDH3 A2, ANAPC1, ASIP, ASRGL1, B3GALT4, B3GAT3, BHMT, BLVRA, BNIP1, CADM3 , CAMKK1, CCL15, CD40, CHIT1, CHSY3, CLDN19, COL4A1, COQ6, CREB1, CRK L, CSF3R, CTSB, DHCR24, DOLPP1, DUSP10, DVL3, ETS1, F13B, FGF17, FSHR , FUT8, GAL3ST1, GATM, GDF5, GMPPA, GNPAT, GNRHR, GPAA1, GPX5, GRM1, G STK1, GUCY2D, HSD3B2, HTR7, IDH1, IFT57, IL22RA2, ITGA9, NAMPT, NCK1 , NCR3, NEU2, NFYB, NRG3, NTNG1, OR11L1, OR1N2, OR4F15, OR8D2, OR8J3, ORC4L, P2RX3, P4HA2, PDXP, PIGC, PIP5K1C, PIPOX, PLAT, PMM1, POLD1, P OLE, POLR2K, PPAR, PRKCI, PRKG1, PRKG2, PSAT1, PSPH, PTPN11, PVRL3, RCHY1, RDH10, ROCK1, RUNX1, SC5DL, SLC12A2, SMAD9, STAT5A, SUCLG1, T AS2R50, TIAM2, TNFSF18, TOLLIP, TRAF5, TUBA1B, TUBB2C, ATP6V1G1, TN FRSF18, TNFSF13B</p>
Negative_15524	<p>F10, F2, F3, KHK, LCT, LPO, MPL, PGP, TXK, ACOT12, ACTA1, ACTN1, ACVR1B , ACVR1C, ACY1, ADCY3, ADCY5, AGXT, AHCY, ALS2, AMPD1, ASRGL1, ATP5A1 , ATP50, B3GALT4, B3GAT1, BCAT1, BMPR1B, BMPR2, BUB3, CACNA1F, CACNG 8, CARS2, CCL2, CCL23, CCNB1, CD74, CDC7, CES1, CTNND1, CUL1, CXCL13, CYP27A1, CYP2A7, CYSLTR1, DHDDS, DKK1, DPAGT1, DPYD, DUSP5, DUSP8, E 2F1, ENO2, FGD1, GDF6, GLS2, GNB1, GPD1L, GSTA5, HSD11B2, IFNK, IL10R B, IQGAP3, ITGA8, ITGAL, JAM2, LALBA, MAD2L1, MAD2L2, MAOB, MAPK7, MO V10L1, MTHFD1L, NCSTN, NFATC2, NME2, NRXN1, OR11L1, OR1J4, OR2G3, OR 2M3, OR2M5, OR2W1, OR3A2, OR4E2, OR4K14, OR4K15, OR5AK2, OR6C75, OR8 I2, OR8J1, OR9A2, ORC5L, PAK3, PCK1, PDPK1, PDX1, PFKFB2, PIGB, PIGP, PLEKHA8, POLE4, POMC, PPP1CB, PPP2CA, PRKAG2, PROC, PRODH, PRODH2, P TPN5, QARS, RAP1B, RAPGEF1, RBL1, RBPJ, RFX5, RPS6KA6, RUVBL1, SETMA R, SGPP1, SMPD4, SRD5A1, TIRAP, TLR2, UNC5C, UPP1, VANGL1, VNN1, VT11 B, AASDHPPT, ATP6V1B1, ATP6V1E1, ATP6V1G3, PDCD1LG2, SERPINA5, TNF RSF1B, TNFRSF6B</p>
Negative_15525	<p>ADA, C5, C8B, CGA, CR1, DCK, IL2, IL4, PGP, PVR, SDS, SP1, ABLIM2, ACSL1 , ADSSL1, AGXT, ALG3, ALG8, ANPEP, APH1A, APOA1, ARNT, ARPC3, ASIP, AT P5C1, ATP5H, B3GNT5, B4GALT7, BMPR1A, CACNA1A, CACNA1G, CACNG8, CAM K4, CCNG2, CCR2, CD46, CD70, CD80, CDC26, CDH5, CLOCK, CMBL, COL5A1, C OL6A1, CPOX, CRKL, CSAD, CSF3, CTPS, CXCL2, CYP2A7, DDX23, DGAT2, DGK D, DLST, DRD1, DVL2, DVL3, EDNRB, EPB41, FADS2, FGFR4, G6PC2, GADD45B , GALC, GALNTL1, GALNTL5, GJD2, GOT1, GPD1L, HSD3B2, IDH1, IDH3A, IMP DH2, INPP5E, INSR, IQGAP1, KIR2DL4, KLRC4, LDHAL6A, LIPA, LTA4H, LTB 4R2, MAML2, MAN1C1, MAPK1, METTL6, MGLL, MGST3, MNX1, NADSYN1, NCF1, NRXN2, OR10J5, OR10K1, OR12D3, OR13C5, OR13H1, OR1A2, OR2A4, OR2B6, OR2C1, OR2D2, OR2D3, OR4C6, OR4F15, OR51D1, OR52N2, OR5T1, OR5T3, OR 7A17, OR9Q2, P4HA3, PANK4, PCK1, PDE6H, PFN3, PIP4K2C, PLOD2, PRKX, P TCH2, PTPRB, PVRL2, RAC2, RAD51, RBPJL, RPN1, SEMA3F, SEMA4F, TGFB3, TP53, TYMS, VDAC3, YWHAB, ZMAT3, MAPK8IP3, PAFAH1B1, SERPINB5</p>



Negative_15526	GK2, IDS, IL2, MPZ, PC, SHH, TH, AACS, AASDH, ACVR2B, ACYP2, ADRA1A, AK3L1, ALDH1L1, AMY2A, ARAF, ARSD, ASNS, ATP50, BHMT, BNIP1, BTRC, BUB1, C3AR1, C4BPA, CACNA1C, CACNG5, CCNB1, CD14, CD99, CDC16, CFL1, CHIT1, CHPF, CKS1B, CLDN7, CMPK1, CTBS, CXCL9, DAG1, DGAT2, DGKA, DKK1, EFNA3, EHMT1, EIF4E, ENO2, EPHB3, FARSB, FLOT2, FOXA3, FTMT, FUT2, GAL3ST1, GALNT13, GCLM, GGCX, GNG12, GNMT, GP1BB, GSTM3, IARS2, IFNA10, IKBKG, IL24, IL8RB, INMT, INSR, ITGAD, ITGAV, JAG1, KCNB1, KCNJ11, L1CAM, METTL2B, MKNK2, MMP9, MRAS, MYH3, MYL7, NEFH, NEFL, NEUROG3, NODAL, NOX1, NT5C2, OLR1, OR10A7, OR10G2, OR10G3, OR13G1, OR1B1, OR2A14, OR2M2, OR2M7, OR4K1, OR51E1, OR6B2, OR6K2, OR7C1, OR9Q1, PCNA, PDE3B, PDHA2, PGAM2, PIGL, PIK3CG, PIK3R2, PIK3R3, PLA2G1, PMM2, PNPO, POLR2G, PORCN, PPOX, PPP2R2B, PRPS1, RALA, RARS2, RDH8, RRAS2, SAT1, SC4MO1, SEPHS1, SESN3, SLC2A2, SMURF2, SSH1, TAS1R2, TFPI, TKTL1, TNFRSF9, TRAF4, TSLP, TUBA1C, TUBA3C, UBE2K, VEGFB, WARS, ZFYVE16, SUV420H2
Negative_15527	AGK, BAD, BID, FAS, HGF, OAT, SMS, ACSS3, ACTB, ACYP2, ALDOC, APAF1, APOA1, ATP50, BMPR1A, CACNA1D, CACNA1H, CAMKK1, CCNA1, CD59, CDH2, CDK2, CFL2, CXCL16, DIAPH1, EFNA3, EFN2, EIF4E, ENPP7, EPHA3, EREG, FADS2, FGF12, FGF20, FZD10, GALNT6, GALNTL2, GCNT2, GSTM2, GUCY1A3, GYS2, IFNA13, IL12RB1, IL20, IMPDH2, INMT, KNG1, LAMC1, LPAR1, MADCAM1, MAGI3, MAN1A1, MGAT4A, NCAM1, NCSTN, NEUROG3, NOD1, NOTCH2, OGDHL, OR13C3, OR13G1, OR2A5, OR2G2, OR2M3, OR2T29, OR2T8, OR4B1, OR4C11, OR51T1, OR5C1, OR5D14, OR6K2, OR8B8, OR8J1, PARD3, PARVA, PDHA1, PFKFB4, PFN4, PHKA1, PIGS, PIP5K1C, PLA2G2A, PLCB2, POLD3, PSME1, PTK2B, RALGDS, SHC4, SHMT2, SPCS1, STX8, SULT1A4, TAS2R1, TUBA1A, UNC5B, UROC1, XCR1, XIAP, CSNK1A1L, GABARAPL1, PHOSPHO1
Negative_15528	C8A, CKM, FOS, LTB, MPL, NOG, RFK, SRF, TKT, TNC, ACP5, ADORA2B, ADRBK2, AHCYL1, ALDH6A1, ANAPC11, APAF1, ARD1A, ATG7, AVPR1A, BACE1, BDH2, CACNA1D, CACNB1, CASP3, CCL23, CD34, CDC25C, CDC27, CDC45L, CDIPT, CFTR, CMPK2, CNGA3, COL11A1, COL4A4, COQ3, CXCL16, DAAM2, DDX18, DDX41, DLL1, DPM1, DTX4, EGLN1, ENTPD3, ERO1L, ESAM, F2RL2, FCER1G, FCGR3B, GALNT6, GALNTL5, GNPDA1, GRIN2B, GRM5, GUCY2F, HARS2, HTR2B, IGSF5, IL17A, IRAK1, ITGB3, KIR3DL3, LFNG, LTB4R2, MAN1C1, MAP3K12, MAPK8, METTL2B, MGAT4B, MNX1, MPST, NFYB, NME7, NRG1, OR10AG1, OR1F1, OR1L1, OR2A4, OR4C12, OR4E2, OR51A4, OR6C6, P2RX2, PCYT1A, PDHB, PDX1, PLA2G2A, PLXNB2, PNPO, PNPT1, PPOX, PPP3CB, PSENN, RAPGEF1, RDH5, RPS6KA4, RPS6KA6, RUVBL1, SEMA3E, SEMA3G, SETMAR, SMURF1, SOAT2, STX6, SULT2B1, SV2A, TAS1R3, TGDS, TIRAP, TJP1, TNFSF12, TUBA3C, VNN1, YWHA, ATP6V0D2, B3GALNT1, HSD17B12, MAPK8IP3, MAPKAPK2
Negative_15529	AGL, AK1, BTC, CGA, CR1, EBP, FAH, FGG, GGH, IL5, LTB, RFK, TH, TNF, ACSL6, ACTC1, ACYP1, ADIPOR2, AGXT2, ALG9, ALOX5, AMD1, ARPC2, ATP6V1H, AVPR1B, BCKDHA, BMP8B, CALML6, CCL3, CD8B, CDC23, CDO1, CIITA, CPS1, CPT1B, CPT1C, CSF3, CTBS, CX3CL1, DGKQ, DHODH, DTX4, DUSP1, DUSP2, E2F1, EHMT2, ERBB2, FBXW11, FCGR3B, FGF21, FLOT2, FLT4, FUT3, FZD3, GABARAP, GAL3ST1, GALK1, GALNT2, GALNT3, GALNT8, GANAB, GARS, GCNT3, GGT5, GNA15, GNB3, GPLD1, GZMA, IFNA13, IFNA2, IFNGR1, IL29, INHBA, INSR, IRAK4, JAG2, KIR3DL3, MAD2L2, MAP2K2, MAP3K13, MCCC2, MICA, MYH8, NAGK, NMNAT1, NNMT, NR4A1, NUDT9, OGDH, OPLAH, OR10P1, OR13J1, OR1L4, OR51F1, OR52B6, OR5AK2, OR5B17, OR6K3, OR7A10, OR7G3, OR8H3, PARVA, PARVB, PCNA, PDHB, PER3, PIGQ, PIK3C2B, PLA2G10, PLA2G3, PLCB4, PLCG1, PLXNB2, PNPLA4, PPAP2B, PPP5C, PRKAA2, PTPN11, RAP1A, RARS2, RENBP, RPS6KB1, RXRG, SEMA4G, SETDB2, SKP2, SPAM1, SQLE, SREBF1, ST3GAL4, STX1A, SUCLA2, TBXAS1, TGDS, TNFSF11, TRIP10, TRMT11, UGT2B7, WASF3, WNT6, WNT8B, WWP1, ATP6V0E1, B3GALNT1, HLA-DQA2, MAPK8IP2, PAFAH1B1, PLA2G12B, TNFRSF6B

Negative_15530	<p>CBL, CD4, DBH, F8, FER, VCL, ACMSD, ACOT11, ACOX1, ADH1B, ADRA1B, AMD1, ANAPC10, ARPC5, ARSB, ATN1, ATP4A, ATP5H, B3GALT2, BMPR2, CACNA1C, CCNB2, CDS2, CFLAR, COL6A1, CSH1, CTBS, CYP11B1, CYP1A1, CYP27A1, CYP2E1, DDOST, DDX52, DIAPH2, DLL1, GALK2, GALNT13, GALNT3, GNA11, GNRHR, GRIA2, GUCA1B, GUCY2F, HEXA, HLA-DMA, HMGCL, HSPB1, HYAL1, IBSP, IDI1, JUND, LPAR1, MAD2L1, MAP4K1, MAP4K4, MGAT4A, MGLL, MMP7, MYH7, NAT1, NCF1, NLGN2, NT5C1B, OR10K2, OR11H1, OR2A4, OR4C15, OR4M1, OR6B2, OR6C6, OR8D1, PDE2A, PDHA2, PDK1, PER3, PFKFB4, PHGDH, PIGP, PIK3R4, PLA2G2F, PPP2R1B, PPP2R2A, PPP2R2C, PRPH, PTCH1, RAPGEF3, RFXAP, ROCK2, RPN1, SCLY, SEMA7A, SETD2, SKP2, SMAD1, SMURF2, SV2A, TGFB1, TKTL2, TLN1, TP53I3, TRADD, TRAF5, UGDH, ZFYVE16, SERPINF2</p>
Negative_15531	<p>AR, ASL, BCR, C6, CS, DBH, DDC, F12, F8, GK, GK2, IL6, OTC, PAH, VCL, ACSS3, ACTB, ADSL, ADSSL1, ALDH3B2, AMD1, ATP4B, ATP6VOB, ATP6VOC, ATP6V1A, B3GNT4, CACNA1G, CCL14, CCND1, CCR4, CD36, CD40, CD40LG, CHAT, CHKB, CHR1, CHST12, CLDN3, CLDN9, CREB1, CSF3R, DGAT2, DLST, DPAGT1, DUSP2, EGLN3, EHHADH, EP300, EPHA4, FMO2, FUT3, GALNT9, GGT1, GNAQ, GNAZ, GNG12, GPLD1, GZMA, HCCS, HLA-DRA, HMGCS1, HTR6, HYAL1, IL23R, IL28RA, IMPDH1, ITGB6, LCP2, LIPE, LRP5, MAN2A1, MCM2, MKNK2, MPDZ, MTMR2, MYH1, MYH4, NLGN3, ONECUT1, OR10A2, OR1A2, OR1L6, OR2L13, OR4D6, OR51L1, OR52E4, OR6C3, OR6M1, OR6N1, OR8H1, OR8I2, PANK4, PAX6, PFKFB2, PFKFB4, PIGT, PIP5K3, PLAUR, PLCG1, PLOD2, POLE2, PPA2, PPP3CA, PRKAR2A, PRKCH, PRKCZ, PRSS3, RENBP, RFNG, SCIN, SEMA3D, SH2D1B, SMAD9, SRGAP2, SULT2B1, TAS1R1, TAS2R16, TAS2R5, TRAF2, TRIP10, TUBAL3, TUBB2C, TUBB4, UGDH, UGP2, WASL, WNT9B, XCL2, YARS2, YWHAQ, ALDH18A1, MAPK8IP3, MAPKAPK3</p>
Negative_15532	<p>AK3, AUH, CD6, F2, FES, HAL, MPZ, AADAC, ACAT1, ACAT2, AKR1C4, ALDH5A1, ALDH7A1, ALS2, ANPEP, ATP5J2, BACE2, BBC3, BBOX1, C1QB, CCKAR, CCR1, CD48, CD79B, CSNK1D, CXCR4, CYP11A1, DARS2, DNMT1, DTYMK, GALNT13, GALNTL5, GFAP, GLI3, HMBS, HNF1B, HRH2, IFNA5, IFNA6, IL17RA, IPMK, ITGAL, JAM2, KRAS, LAMA3, LAMB2, LCAT, LYPLA2, MAP2K2, MDH1, MDH2, MICHA, MKNK2, MYL7, NCKAP1L, NPR1, NRXN2, NUDT12, OR10P1, OR13C5, OR2A5, OR2C1, OR2T34, OR2T6, OR4F6, OR51I2, OR51M1, OR5M8, OR9Q2, PDE6D, PIGM, PIK3CB, PITX2, PLAT, PLCD3, PLXNC1, POLD2, POLR2F, PPP3CB, PRKCA, PTEN, PVRL4, RAC2, SARS2, SFRP4, SGPP1, SGPP2, SMC1A, SOCS5, SPHK1, ST3GAL3, STAT2, TCF7, TPM3, TSC1, TYROBP, UBA1, VEGFC, WNT5A, WNT5B, YARS, ATP6V1G2, HLA-DPB1, HLA-DQA2, TNFRSF18</p>
Negative_15533	<p>CFH, CRH, DCN, EPO, F3, GK2, ME2, ME3, NPY, OTC, RFK, ACMSD, ACOT12, ACSL3, ALDH1L1, ALPI, ALPL, ANAPC4, ASPA, ATP2A3, AXIN2, BMPR1A, BPNT1, BTRC, CACNA1H, CCL8, CCNG1, CD22, CDC16, CDC6, CRY1, CXCR5, DDX23, DPYSL2, DUSP14, ECHS1, EPHA5, EPHB2, EPHX2, EXTL3, FCGR3B, FOSL1, FZD6, GARS, GLG1, GLO1, GNB1, GSTA2, HADH, HARS, HIBADH, HPRT1, HSPB1, HTR2A, HTR7, ICOS, IDH3G, IFNA4, IL10, INPP5B, ITGA3, ITGB4, ITGB6, JAK3, KIR2DS5, MCM3, MCM5, MCM7, MGAT2, MYH7, NANS, NARS, NFKBIB, NOS1, NR1D1, NUDT8, OLAH, OR10H1, OR11H6, OR13D1, OR1L8, OR2B11, OR2F2, OR2V2, OR4C16, OR4D9, OR51B6, OR51F1, OR52E4, OR52R1, OR5AP2, OR5M9, OR9Q2, ORC1L, PARVB, PCYT1B, PDE4D, PDE6D, PGAM2, PHKA1, PLA2G2E, PLA2G4A, PLCB1, PLCB3, PLCZ1, POLR1B, PPP1R1A, PPP2R2D, PRDX6, PRKY, PRPS2, PTGDS, RAD51, RAPGEF2, RDH8, RPN1, SARS2, SMURF2, SOCS2, STAM2, STT3B, STX7, SYNJ1, TACR2, TAS2R38, TGFA, THY1, UBE2K, YWHAH, MAP3K7IP1</p>

Negative_15534	<p>ABO, C9, CD2, CDA, EBP, FOS, IL5, MVD, SHH, ACSL6, ADCY2, ADIPOR2, ADRA1B, AK3L1, ALDH1B1, ALG11, ALG2, APPL1, ARNTL, ATP5L, B3GALT1, B4GALT4, CACNA1C, CALML5, CCL13, CCL21, CCR3, CD36, CD72, CDKN1A, CLCF1, CLDN17, CNGA3, CNTN1, CTSS, CYP2C19, DDX52, DEGS1, DGAT2, DHFR, DIAPH2, DOLPP1, EHMT1, ESPL1, FGF19, FZD4, GPD1L, GSTM4, H6PD, HARS2, HLA-DOB, HTRA2, ICOSLG, IKBKE, IRAK2, LAMB3, LILRB3, LIMK1, LRP6, MAN1C1, MAP3K5, MAPK7, MASP1, MAT2B, MCM2, MDH2, MGAT5B, MYH11, NADK, NAGS, NARS, NKD2, NRXN3, NT5C1B, NT5C3, OR10K2, OR2A25, OR2B11, OR2F2, OR4C13, OR4D9, OR4E2, OR51A7, OR52H1, OR5A1, OR5B3, OR6C2, OR6K3, OR9G4, PARVG, PDE4C, PDE4D, PDE8B, PDGFA, PDGFRB, PIGB, PIM2, POLR3A, PRKAG3, PSME3, PSPH, PTPRC, RAPGEF3, SEMA7A, SETD8, SKIV2L2, SLC2A1, SMAD9, SOS2, SPRED2, SSH1, TAP2, TAS2R10, THBS1, TNFRSF9, UGP2, ULBP3, USE1, WNT9B, ALDH18A1, ATP6V1G3, B4GALNT1, SERPINA1, SLC25A31, TNFRSF10A</p>
Negative_15535	<p>AK2, C3, C6, CBS, CDA, CR1, DBT, F8, GCK, GK, GP6, LTB, STS, ABLIM1, ACADL, ACADS, ACMSD, ACSL1, ACSM5, ACTN2, ADCY1, ADCY8, ADH7, ADRA1D, AGRP, AMY2B, ARHGEF4, ASNS, ATP2A3, ATP6V1F, BCKDHB, BET1, BMPR1A, BTRC, BUB3, CACNA1F, CACNB1, CACNG2, CACNG3, CAMKK2, CARS, CBR1, CCL25, CD8B, CDKN1C, CLDN9, CLTC, CLTCL1, COL4A4, CTBS, CYP26A1, CYP4A22, DHODH, DPYS, DTX2, EFN1, EXT2, FABP3, FUT8, FZD6, FZD7, GAD2, GMPPB, GNPD1, GPAM, GSTM1, GSTM2, HMGCS2, HMOX1, HNF1B, HNMT, HSD17B4, ICOSLG, IQGAP1, IQGAP2, ITGB8, JAK1, LILRB3, LIPG, MKNK1, MMP14, MPP5, MTHFD2, NANS, NEFL, NKX3-1, NR1H3, OR2A4, OR2A42, OR2H2, OR2L8, OR4S1, OR8B12, OR8J3, ORC1L, OSMR, PAPSS2, PDE10A, PHKB, PIGB, PIGT, PIK3C2G, PLCB1, POLE3, PPAP2C, PPARA, PPM1D, PPP2R2A, PPP3R1, PRKAA2, PTDSS2, PTGIS, PVRL1, RAC3, RBPJ, RDH5, RRM2, SEMA3D, SETD1B, SH2D1A, SIAH1, SLC9A1, SMAD1, SMURF2, SPRED2, ST3GAL1, TCIRG1, THBD, THTPA, TNFSF12, TNFSF14, TPMT, TUBB1, UGT2B11, VARS, VTI1A, ZFYVE16, B4GALNT1, HLA-DPB1, PHOSPHO1, SERPINA5</p>
Negative_15536	<p>C4B, CD6, CDA, CSK, F11, FER, GDA, INS, TNN, AADAT, ACSS3, ACYP1, AGMAT, ALOX15, ANAPC4, AQP7, ARRB2, B3GAT1, BMP8A, CACNA1E, CACNA1I, CCR7, CD38, CD70, CD72, CDH5, CHPT1, CHRNA7, CLDN3, CLDN6, CNTN2, CSNK1A1, CYP8B1, CYSLTR2, DAG1, DDOST, EFNA1, ENAH, FGF4, FGFR2, FZD3, GAD2, GALNT8, GALNTL2, GLI2, GNAI1, GPAM, GSTM2, GSTO2, HAO2, HNF1A, HSD17B4, HTR4, HTR5A, IL10RA, IL12A, IL8RA, IMPDH1, ITGAX, KIR3DL1, KYNU, LRP5, LRP6, LYZL1, MAD2L2, MAP3K1, MGST2, MGST3, MMP14, MPZL1, MYH8, NAT6, NFATC1, NGEF, NR1H3, NT5C2, NT5C3, OR1C1, OR2AG2, OR2AT4, OR2D3, OR2G6, OR51D1, OR52E2, OR56A3, OR7A17, PDE1A, PIGS, PIGU, PIK3CD, PIP4K2A, PPT1, PRPS1, PTGER3, PTPRJ, RDH8, RRAS2, RUNX1, SEPHS1, SFRP1, SPP1, ST3GAL1, SUFU, SULT2A1, SULT2B1, SV2B, TAS2R16, TAS2R3, TAS2R4, TAS2R7, TBL1XR1, THBD, TNFSF9, WIF1, WNT7A, YARS, ZMAT3, MAP3K7IP2, PPARGC1A</p>

Negative_15537	C4B, CKB, DCC, EBP, IDS, KHK, PGP, TYR, ACO2, ACTN2, ADRA1D, ALG11, ATN1, ATP5A1, ATP5G3, B3GALT2, B4GALT3, BMPR2, C4BPB, CACNA1S, CAMK2B, CBLB, CCL7, CCNG2, CCR8, CD86, CD8A, CDC42, CLDN2, CNGA3, CYBB, DGAT2L4, DIAPH2, DOT1L, DVL3, ENAH, ENTPD1, EPHX2, FARS2, FGF3, FGFR1, GALNTL2, GARS, GNRH1, H6PD, IFNA21, IFNA7, IL11RA, IL23R, INHBA, LAMA4, LAMC3, MADCAM1, MAFA, MDH1, NAE1, NAGLU, NCAM2, OR10AD1, OR1J2, OR1L4, OR2M2, OR2M4, OR2T29, OR4C15, OR4D2, OR52B4, OR52D1, OR52I1, OR52N2, OR6M1, OR6S1, OR8G1, P2RX1, PAK2, PIGB, PIGF, PIGT, PIGX, PIK3CB, PLCB1, PLCD4, PLOD1, PLTP, PPCDC, PPP1CB, PPP1R3C, PRKACG, PRODH, PSAT1, PTDSS2, PYGM, RARS2, RASGRP1, RBL1, RPN2, RUVBL1, SEMA3A, SESN1, SH3BP2, SMAD5, SOCS3, ST8SIA5, STAT1, SULT1E1, TAS1R2, TAS1R3, TNFSF11, TPMT, TUBB3, UGT2A3, HLA-DRB4, TNFRSF11B
Negative_15538	CFI, DBH, F2, FGB, GLA, GPT, HAL, ITK, LHB, MOS, MSN, MVK, SFN, WAS, AADAC, ACOX2, ADH4, ALDH1B1, ALG5, APAF1, APRT, ARNTL, ARPC3, ATG7, ATP5H, BAIAP2, CACNB4, CARS2, CCKBR, CDC16, CDC42, CDKN1C, CHRD, CSF2RB, CYP1B1, CYP26B1, DKK1, DLAT, DTYMK, ENTPD4, EPHB2, FGD3, FGF23, FMO1, FOXO1, FOXO3, FUT2, FUT3, GADD45A, GLB1, GNA12, GNAT3, GPD1L, GPT2, GPX5, GRIN1, GSTP1, HAGH, HAP1, HSD3B1, HSPB1, IFNA2, IFNGR2, IFNK, IL11RA, IL17A, IPMK, ISYNA1, ITGB3, JAG1, KLRC3, KYNU, LAMA4, LAMB3, LTBP1, MAOB, MDH1, NARS, NARS2, NFATC1, NKX3-1, NLGN1, NLGN2, NMNAT2, NRG4, OGDHL, OR10H5, OR13C9, OR1L4, OR2F1, OR2G6, OR2T11, OR2T6, OR2Z1, OR4K13, OR51F2, OR5B3, OR6A2, OR7C2, P2RX5, PCNA, PDE1B, PFKFB4, PIGV, PLA2G2E, PLCE1, PLD1, PNPT1, POLR2I, PPP1R3B, PPP2CA, PRKCH, PRKCZ, PRKG2, PSENN, PTGS2, RASGRP3, RHOD, SARS, SEMA4A, ST3GAL5, STAM, STAM2, STMN1, TAS2R14, TCIRG1, TUBA1B, UGCG, WNT5B, YOD1, ZNRD1, ATP6V1B1, ATP6V1G1, CACNA2D3, CACNA2D4, GABARAPL2, MAPKAPK5, SERPINF2, TNFRSF12A
Negative_15539	BCR, C6, C8B, FGB, GNS, HAL, SHH, SRM, ZYX, ABLIM3, ACAT1, ACP2, ACP6, ACSM1, ACVR2B, ADCY6, ADH7, AMPD1, ARHGEF7, ARNT, ATP5I, ATP6V0B, B3GALT6, B4GALT7, BAI1, BCKDHA, CAMKK1, CASP10, CASP8, CCL17, CCL8, CCNG1, CDKN2A, CHAT, CHKA, CHRD, CHST11, CLDN18, CREB3L2, CXCL9, CYP3A5, CYP4F2, CYP8B1, DCTN1, DDOST, DGKH, EPHA4, EPHB3, EPHB6, FTMT, FZD4, GALK2, GALNT11, GNA12, GNAS, HES1, HSD11B1, HSD17B7, HSPB1, IARS, IFNA4, IQGAP2, IRAK4, IRF5, ITGA9, KIR2DL1, LRAT, MAML3, MAP2K4, MAP3K5, MCM2, MYD88, MYH14, NARS2, NAT1, NKX3-1, NPR2, NT5C, OR10J5, OR1S2, OR2AE1, OR2AG1, OR2G6, OR2T12, OR4E2, OR4K2, OR51T1, OR52D1, OR52N1, OR8B12, OR9A2, P4HA2, PAK7, PCCB, PCNA, PCYT1B, PGAP1, PGM3, PIK3R1, PLA2G2F, PMAIP1, POLR2B, POLR2L, PON3, PPBP, PPP3CA, PRKCZ, PTK2B, PYCR1, RASGRP2, RASGRP4, RBPJL, RIPK1, RPE65, RPN1, RUVBL1, SEMA3F, SEMA7A, SETD7, SH2D2A, SH3BP2, SHMT2, SNAP23, SSX2IP, STK11, STX7, TAS1R1, TM7SF2, TNFSF11, TRADD, VDAC1, WNT2, WNT5B, B3GALNT1, HSP90AB1, PAFAH1B1, PRICKLE2, SERPINB5, ST6GALNAC4, ST6GALNAC6, SUV420H2

Negative_15540	ADC, C3, HPD, HYI, NPL, PRL, SMO, ACAD9, ACVR2B, ACVRL1, ACY3, ACYP1, AKR1B1, AKR1C2, ALDH1B1, ALG10, ALG9, ARHGEF6, ATP50, AXIN2, BDH2, BIRC3, C1QB, CACNA1D, CAPN2, CCR2, CD274, CDC23, CER1, CMPK2, CNGB1, CTNNB1, DVL1, E2F4, EPHB4, F2RL1, FADS2, FGF14, FGFR1, FIGF, GBA3, GLO1, GLYCK, GMPPB, GNB3, GNRHR, GYS1, HCST, HMGCS2, HSPA2, HSPA8, IL10, IL1B, IL22RA1, IRF9, ITGA7, ITGA9, ITPKA, KIR2DL4, LAMA3, LAMA4, LYP LA1, MCM4, MDH2, MGAT4B, MMP1, MTMR2, MTMR6, NANP, NAT6, OR10P1, OR1M1, OR2AE1, OR4D9, OR4F15, OR4F6, OR4K17, OR4X1, OR52B4, OR5J2, OR6C6, OR7D4, OR7G1, OR8G1, OR8H2, OR8J1, OR9Q2, ORC6L, P2RX4, PARVA, PAX8, PDE6H, PFKFB4, PLCE1, PPOX, PPP2R5C, PRKAA2, PRKCQ, PVRL4, RDH12, R UNX1, SARS, SH3BP2, SMAD2, SMAD6, SMARCA2, SOS1, SSX2IP, STK36, SULT1A4, TCF7L2, TOLLIP, TOMM40, TOMM40L, UBE2L6, ULBP1, WARS2, WWP2, ATP6V1G2, HSD17B10, HSP90AB1, ST6GALNAC1
Negative_15541	AK1, BID, GCK, NF1, STS, AARS2, ABI2, ACSL5, ACVR1B, ADCY8, ADIPOR2, ADRB1, ANAPC1, AOC2, ARHGEF6, ATP5L, B3GAT2, B3GNT3, BMP4, CASP6, CCL28, CCR8, CD3E, CD40, CD55, CD59, CD86, CDKN1A, CHST12, CNTNAP2, CREB1, CTSG, CTTN, CXCR3, DDX19A, DDX51, DGKQ, DHFR, DTX2, ECSIT, EHHADH, EXOC7, FGF17, FSHR, G6PC2, GALNT14, GNAI1, GRIN1, GSTA5, GUCA1B, GUCY2D, HAGHL, ICAM2, IL18, IPPK, JAK2, KARS, KLRC1, LCMT1, LEPR, MAP3K14, MAP3K8, MAPK7, NCAM2, NCK2, NPR2, NRG4, NT5E, NTNG1, OR10A2, OR14I1, OR1F1, OR2G6, OR2T11, OR8D1, OR8D2, OXCT1, PAICS, PANK4, PDE7A, PDE9A, PDIA4, PER1, PGM1, PIK3CB, PIP5K1A, PNPLA4, POLR2A, PPAP2B, PPP2R1B, PRKAB1, PTGS1, PVRL1, PVRL4, RALBP1, RBX1, ROBO3, SPCS3, STAT2, STAT3, STAT5B, TAS2R9, TCIRG1, TIAM1, TLN1, TPK1, TRAF4, TRPM5, TUBB1, TYMS, VDAC1, ATP6V0A2, ATP6V1E2, ATP6V1G1, HLA-DRB5, TNFRSF10B
Negative_15542	AK1, AK2, C6, CD4, F9, GSR, ID4, MTR, MVD, SMS, AADAT, ACAD9, ACOX2, ACSL1, ALDH3A2, ALG8, AMPD1, APOA2, ARG2, BDH1, BIRC5, BTRC, CARD11, CD274, CDC23, CDKN2C, CNTNAP1, CRLS1, CXCR3, CYFIP2, CYP26A1, CYP2A7, DAD1, DPAGT1, DPYS, DVL3, E2F3, EHMT1, ENTPD5, EPHB3, EPHB4, EXTL2, FGF2, GAD2, GALNT2, GANAB, GGPS1, GLDC, GNAZ, GP1BB, HAGH, HDAC2, HIBCH, HSD17B7, IFNAR1, IL22, IL2RB, ITGA1, ITGB5, KLRC2, MGAT4B, MGST3, MMP2, MTHFD2, MYH14, NAT1, NUDT5, NUMBL, OCRL, OR13C2, OR4K14, OR5C1, OR5M8, OR6K3, OR8H2, PDE10A, PIGF, PIGN, POLR1A, POLR1E, POLR2B, POLR3G, PRNP, PRPH, PTPN5, PYGL, PYGM, RBPJ, SETD8, SGMS1, SH2D1A, SH3BP2, SLC25A4, SLC33A1, SULT2A1, TCF7, TGFBR1, TLN2, TUBB2B, UBE2K, UGP2, UGT2B7, ULK2, UROC1, YARS, ATP6V1G2, PAFAH1B1
Negative_15543	DBH, F8, FYN, GHR, IL5, PML, ADCY4, AHCYL1, AKR1C1, AKT1, ALPP, AMY2A, ARHGEF4, ARNT, ATP4B, B3GNT2, B3GNT4, C5AR1, CACNA1D, CASP7, CCKAR, CCL23, CD34, CDH15, CDK7, CHUK, CMAS, CNTN1, COL1A1, CPT1C, CXCL6, CYP19A1, CYP2F1, DDX23, DHDDS, DTX3, EFN3, ELK4, EPHX2, ETNK2, F2RL3, FBP1, FGF21, FGF6, GCDH, GGPS1, GNAI1, GNB1, HPSE2, IDI2, IL13RA2, IL23A, LAMB4, LIPT1, MAD1L1, MADCAM1, MAP2K4, MAP3K3, MAP4K4, MAPK3, MAPK4, MTAP, MYH14, MYH15, NCF4, NCOA4, NFKB1, NMNAT2, NOD1, NQO1, OR10G4, OR10V1, OR11H1, OR1S1, OR2L3, OR4C13, OR4C16, OR4M1, OR51F2, OR52I1, OR5A1, OR8B12, OR8H3, PAFAH2, PDGFRB, PFKP, PGAM4, PIAS1, PIK3CG, PIP4K2C, PIPOX, POLR1D, POLR3K, PPM1D, PRKACA, PRKCQ, PTCRA, PTPRR, PYGM, RASGRP1, RELB, RENBP, SDC3, SGMS1, SHC3, SOS1, SPP1, SPRED1, SULT1A1, TACR2, TJP3, TKTL1, TNFSF11, TPI1, TUBB6, WNT9B, XCL1, XCL2, HLA-DRB5

Negative_15544	<p>CFD, DCK, ID2, LIF, NLK, TH, TNF, VTN, ACVR1, ALDH1A2, ARG2, ASMT, B3GA  LT6, B4GALT4, BET1L, CCL28, CD247, CDK6, CIITA, CNTNAP1, COASY, CPOX  , CREB3L3, CTNND1, CYP27A1, DDX47, DHFR, DNMT3B, DPAGT1, DRD5, DUSP1  , E2F4, ELK4, ETS1, F11R, FGF3, G6PC, GALT, GGCX, GGT6, GJA1, GPLD1, GR  LF1, GSTA5, HLA-  DOB, HSD11B1, HTR6, IDI1, IFNK, IL13RA1, IL20RB, IL21, ITGA4, LEFTY1  , LIPC, MAP3K12, MGST3, MTHFD1L, MYH8, NFKB2, NTRK1, NUDT2, OR10H2, O  R13G1, OR13J1, OR1J4, OR1L6, OR2AG2, OR4F15, OR4L1, OR52K1, OR52N1,  PAK7, PDE7A, PDGFD, PFKM, PHKG2, PIAS2, POLD1, POLD2, POLD4, PPM1B, P  POX, PPP2R2C, PPP3CB, PRKCQ, RAP1B, RARA, RBL2, RFXAP, ROBO3, SELPLG  , SENP2, SPAM1, SPCS3, SUCLA2, SULT1E1, TCF7L2, TGFB2, TRAF5, TUBB2B  , UCK2, VEGFA, XYLB, ATP6V1G1, HLA-DRB3, MAPK8IP2, TNFRSF13B</p>
Negative_15545	<p>C7, CSK, F7, GSN, MAX, MPI, MVD, NPL, SMO, SRM, ABAT, ABLIM2, ACLY, AKR1  C1, ALDH9A1, ALDOA, APLP1, BMP8B, BMPR1B, C1QC, C5AR1, C9orf95, CBLB  , CCL17, CCL2, CD99, CDH15, CDH2, CHIA, CHPT1, CKS1B, CLDN15, CMPK2, C  NTN1, COX15, CRY1, CSNK1A1, CTBS, CTSB, CTS1, CYCS, CYP1A2, DAG1, DA  PK2, DCTD, DDX47, DVL1, EFNA2, EFNA4, EGFR, F2RL2, FGF21, FZD10, GADD  45B, GFAP, GNMT, GRM5, GSTM5, GTSE1, HAP1, HCCS, HSD17B7, IFNA21, IFN  A5, INHBC, INPP5A, IRAK4, IRS2, KAT2B, LAMA4, LDHC, MADCAM1, MAP3K14  , MCM5, NAGA, NAMPT, NLGN1, NUDT9, OR10C1, OR10K1, OR10K2, OR10R2, OR  1E2, OR1J4, OR2A25, OR2C1, OR2G2, OR2K2, OR2Y1, OR4M2, OR5AC2, OR5D1  6, OR5F1, OR6K2, OR6N2, OR6S1, OR8K3, PAX8, PCYT1A, PIGC, PIGQ, POLR2  A, PPBP, PPP2R5A, PRKACB, PRSS1, PTCRA, QPRT, RAP1B, RASA1, RDH11, SA  RS, SC5DL, SEMA4D, SETD2, SMURF2, ST3GAL6, STX10, TAS2R5, TP53I3, TS  HB, TUBA3E, UCK2, UCKL1, UROD, VANGL2, VEGFA, WASF2, WHSC1L1, XCR1, Y  WHAZ, CTNBNIP1, TNFRSF6B</p>
Negative_15546	<p>AUH, DDO, FAH, GGH, GP5, KIT, ME3, MPZ, NPY, PRL, SRC, AADAC, ACAT1, ACS  L1, ACTC1, ADH1B, ADRB1, AKT2, ALDH3B1, AMDHD1, ARPC5, B3GAT2, CASP6  , CBR1, CCL14, CCL2, CCR1, CCR5, CDC23, CEBPA, CHRNA7, CLDN10, CMPK1,  COL3A1, CSNK1G2, CSNK2A2, CYP11A1, DDX47, DHFR, DPM2, EGLN3, ESAM, F  ABP3, G6PC2, GMPR, GSK3B, HADH, HBEGF, HLA-  C, HSD17B7, HTR5A, IARS2, IL22RA1, IL23R, IPPK, ITGA6, ITGB6, MAP2K5  , MAP3K14, MAPK13, MCM3, MYL7, NFKB2, NFKB1B, NKX3-  1, NR5A2, NUDT12, OR10G8, OR13C3, OR1I1, OR1J1, OR2D2, OR2T29, OR4B1  , OR4C11, OR4C6, OR4K14, OR52J3, OR5D18, OR5J2, OR6Y1, P4HA2, PAK6, P  DK1, PGK1, PGS1, PHKG2, PLCB2, PLXNA2, PLXNB1, PNPLA3, POLR3K, PPAP2  B, PPP2R1A, PRIM2, PROS1, RAB23, RAB5A, RRM2B, SELE, SPTLC2, STK11, S  ULT1A1, SULT1E1, TBL1XR1, TJP2, TJP3, TOMM40L, TUBA1A, TYMP, UNC5C,  VAV3, YWHAE, ZNRD1, B4GALNT1</p>
Negative_15547	<p>CBS, CTH, F2R, FH, GGH, HGF, HK3, IL9, AASDH, ABAT, ABL1, ACSM3, ACYP1,  ADRB1, AGRN, AKT3, ALG2, ALOX15B, AMPD1, ANGPTL4, ARPC1B, ARPC4, ATG  12, ATIC, AXIN1, BMPR1B, CACNA1F, CACNA1G, CACNB1, CCL24, CCR3, CDC4  5L, CSF3, CSNK1A1, DGKA, DGKH, DPYD, DVL3, E2F1, EDA2R, EDN1, G6PC2, G  ALNT9, GAPDH, GBA3, GCDH, GLB1, GMDS, GNRHR, GRIN2D, HA01, IL15RA, IL  21R, IL2RA, INADL, IRF5, LDHC, LYZL1, MAP2K5, MASP1, MGAT1, MGAT4A, M  GLL, MKNK1, MMP2, MTFMT, NCR2, NLGN2, NMNAT1, NTRK2, NTSR1, OR10A7, O  R10H2, OR1L3, OR2A25, OR2B11, OR2M4, OR2M7, OR4C12, OR4E2, OR4F15, O  R51E1, OR7A17, OR9I1, PDE10A, PDE8A, PFKM, PGLS, PIGO, PLA2G1B, PLA2  G2A, PLCG1, PNPLA3, PPP5C, PRKAG2, PTGER1, PVRL3, RBL1, RBX1, RXRA, S  DHA, SEMA3B, SEMA7A, SKP1, SLC12A2, STAT6, STX1A, STX1B, TAS2R13, TA  S2R49, TFDP1, TGDS, TGFB1, TM7SF2, TOLLIP, TRAF2, UBE2L6, WNT7B, ATP  6VOA1, ATP6V1E1, ATP6V1G2, C1GALT1C1, SERPINC1</p>

Negative_15548	CFD, CTH, GCK, GNS, IHH, IVD, LTB, RDX, AACS, ABI2, ACACA, ACOT11, ACOX3, AGRN, AHCYL1, AKR1C1, ALDH2, ANAPC10, ANAPC11, APLP1, ARSA, ASIP, ATP2A3, ATP5G3, B4GALT6, BAIAP2, BET1L, BPNT1, CACNA1D, CACNA1F, CALML3, CALML5, CCNA1, CCND1, CCNE1, CDC14B, CDC42, CHUK, CMPK2, CNGB1, COL3A1, CPT1B, CSF2RA, CSF2RB, CXCL13, CYP26B1, DCTN1, DFFB, DLL3, DLL4, DLST, DRD1, EFNA2, EPHB1, FGF11, FUT1, GANAB, GGPS1, GPT2, GUCY1B3, GYS1, GYS2, HTR2C, ICAM3, IFNA4, IKBKB, IKBKE, IL13RA2, IL1RAP, IL3RA, INADL, ITGA4, KIR2DL2, KLRC3, KLRC4, LCP2, LDHA, MBL2, MIOX, MMP1, MMP14, MTFMT, NTRK1, OR13C2, OR1F1, OR2D3, OR3A3, OR52H1, OR52L1, OR52W1, OR56A4, OR6K2, OR8B4, OR8J1, OR9Q1, PAK4, PAK7, PGM1, PHKB, PLCD4, POLR2H, PPP1CA, PPP2R5B, PRPH, PSME1, RAP1A, RPS6KA2, RRAS2, RRM2, SDHA, SETD1B, SMPD1, SMURF2, SSH3, STAT6, STX1B, TACR2, TAS2R13, TGFB1, TIAM1, TSHB, TUBB4, TYMS, VARS, WNT10B, WNT3, WNT7B, WWP2, MAP3K7IP1, MAPK8IP1, PAFAH1B2, PPARGC1A, SUV420H1, TNFRSF10D
Negative_15549	CR2, CRH, DHH, HPD, MTR, NPY, ACVR2A, AKR1C1, ARPC5, ARRB2, ATP5D, BAIAP2, CAMKK2, CAPN2, CASP6, CCND3, CCR10, CDC2, CDC45L, CHST12, CLCA2, CLDN11, CLDN8, CLTB, COASY, CREB5, CTBP1, CTLA4, CYFIP2, CYP26B1, CYP2A6, CYP2C19, DAPK1, DAPK2, DAXX, DDX56, DGKD, DHFR, EARS2, ENPP3, EPHB6, F2RL1, FGD3, FGF12, GALE, GALT, GLG1, GNA14, GRAP2, GRPR, GSTK1, HGSNAT, HMOX2, IDH1, IDI1, IGFBP3, IL20RA, IQGAP1, LAMA3, LIPC, LM07, LTA4H, MAP2K1, MITF, NAMPT, NCR2, NRG3, NRG4, NSD1, OR1B1, OR1C1, OR1M1, OR2A25, OR4C16, OR4C6, OR4D6, OR4P4, OR51A2, OR51E2, OR52K1, OR56A3, OXSM, PAK3, PAPSS1, PGM1, PHGDH, PIK3CB, PIP4K2B, POLR2H, PRKCE, PRKCZ, PTCRA, PVRL1, RRM1, SETDB2, SFRP5, SOCS7, SOD1, SOS1, SPTAN1, SPTLC2, SRD5A1, STK36, SULT1E1, TBL1XR1, TJP3, TLR5, TRAF1, TUBAL3, ULBP1, WNT3A, XYLB, ZIC2, ATP6V1C1
Negative_15550	AK5, C8A, ME1, MET, MPZ, PAH, TEC, TFG, ACVR1B, ADCY10, ADH1A, AK3L1, ALAS1, ALOX5, ANAPC2, APH1A, APOC3, ATP13A2, ATP2A1, ATP5G3, ATP6VOB, B3GAT2, BACE2, BET1, BIRC5, BUB1B, CADM1, CAMKK2, CD244, CD40LG, CD58, CDC2, CHIA, CHST12, CREB1, CSAD, CXCL12, CXCL16, DCXR, DHDDS, DHDH, DLST, DUSP16, EARS2, EFNA3, EVI1, FIGF, GALNT11, GPD2, GSK3B, GSTT1, HTR2B, IFNG, IKBKE, IL18RAP, IRAK2, IRAK3, JUND, LAP3, MAN1C1, MAP2K2, MAP3K14, MGAM, MGST2, MNX1, MYD88, MYL9, NADK, NKD2, NR1H3, NUDT8, NUMBL, OR11L1, OR1S2, OR2A25, OR4K13, OR4X2, OR52M1, OR5B21, OR8G1, P2RX7, PDE4A, PIGU, PIK3C2B, PLCB1, PMVK, POLR2C, POLR3H, POMC, PP2R2B, PPP2R5C, PTPRR, PTPRZ1, PTTG1, RASGRF2, RPE65, RPS6KA6, SESN1, SRD5A2, THBD, TPK1, TUBB2A, TXNDC12, TYRP1, UCK1, UCP1, WNT16, ATP6V1G2, PAFAH1B3, TNFRSF17, TNFRSF1B
Negative_15551	CR1, CRH, F2R, KMO, LAT, MUT, PAH, PGP, PML, TH, TK1, TNN, ACSL4, ACSS2, ACVR2A, ADCY5, AGRN, ALOX12, ARHGEF6, ATP5F1, AVPR1A, B3GAT2, B3GNT5, B4GALT2, BBC3, BCAR1, BDH1, BUB1, BUB1B, CACNB1, CASP7, CAV1, CCL19, CD55, CD70, CDC2, CDH1, CDKN2A, CDS2, CLDN7, COL4A1, COQ5, CPT1B, CTF1, CYP2C18, CYP2E1, DBF4, DGKD, DGKI, DHRS4, DPYS, DUSP2, EDNRA, ERBB2, FCER1G, FGF17, FGF3, FSHR, GADD45B, GALNS, GALNTL5, GAMT, GGCX, GNA13, GRHR, HSD17B4, HTRA2, IFNK, IL11, IL19, IL1R2, INADL, ITGB1, LCMT1, LIPT1, LYPLA1, MAOB, MASP2, MCM6, MINPP1, MYH3, NAGLU, NME2, NOD1, NT5C1B, NTF4, OGDH, ONECUT1, OR10V1, OR1Q1, OR2C3, OR2L8, OR2M4, OR4A5, OR4C15, OR4K13, OR4N4, OR51A7, OR7A17, OR8H2, OR9K2, ORC3L, PAK6, PDGFB, PDGFD, PDPK1, PFN1, PGK2, PHKA1, PHKB, PIAS3, PLD1, PPP2R2C, PPP3CC, PPT1, PRKAR2B, PRKX, PTPRM, QPRT, RASSF1, RENBP, RERE, RFXRA, SDC2, SLC25A5, SPCS1, SPRED2, SREBF1, SRGAP2, ST3GAL4, TDO2, TNFSF18, TRHR, TSC2, VDAC2, WIF1, WNT3, WNT4, HLA-DPA1

Negative_15552	C5, DCN, GLA, HGD, KDR, PLN, SFN, ALG11, ALG8, AOC3, AREG, ARHGEF7, B3GNT2, BMP8B, BMPR1A, CASK, CCL2, CCNB2, CD80, CDH1, CHR1, CLDN19, CLDN22, COL1A1, CSNK1A1, CTBS, DDX52, DIAPH1, DUSP9, E2F4, FTH1, FUT2, FUT8, GDF6, GIT1, GMDS, GPAA1, HIF1A, HMBS, HRH2, HSD3B1, IFNA2, IFNAR1, IL13RA2, IL22, IL23R, ITGB8, ITPKB, KIR2DS4, LAP3, LIPC, LIPG, MAP3K2, MAP3K8, NCK1, NFKBIA, OR10G8, OR13J1, OR1G1, OR51B2, OR51F1, OR51I1, OR5L1, OR8D2, OR8H2, OR8K1, PAK1, PDE6D, PLEKHA8, PLXNB1, PMM2, POLR2K, POLR3D, PPP2R5C, PRKAB2, PTGER1, PTPN7, RDH12, RGS3, RHOA, SETD1A, SMPD1, SRGAP3, ST3GAL2, SULT1A4, SV2C, TGFA, THBS3, TIAM1, TNFRSF9, TRAF5, TYK2, WHSC1L1, WNT3A, CACNA2D4, CSGALNACT1, PNLIPRP2, ST6GALNAC6, TNFRSF10A, TNFRSF10D
Negative_15553	C4B, CBL, CD2, CD6, DDO, FAH, NNT, NPL, OAT, PLN, TNF, AARS2, ACADSB, ACSL6, ACVR1, ADRA1A, ALDH6A1, ARG2, ATP13A2, B3GNT2, BCAR1, CACNA1D, CALML6, CAMK2G, CBR3, CD70, CDC25B, CFL1, CHD8, CLDN17, CLDN2, CNDP1, CNGA4, COQ6, CXCL11, CYP11B2, CYP2B6, CYP2E1, DAPK1, DAXX, DDHD1, DNMT3B, DPM2, DPYD, EFNA2, EGLN1, ENTPD4, EPHA5, ESPL1, FARP2, FRAP1, FZD1, GALNTL2, GMPPA, GNA12, GPD1L, HCLS1, HIBCH, HSD3B7, IARS2, IDI1, IL10RB, IL28A, IRAK1, ISYNA1, ITGA5, ITGAV, ITGB5, KCNQ1, KLRK1, LIPT1, MAP2K2, MAP3K13, MEF2C, MYH2, NAGLU, NEUROD1, NME6, NRG1, NT5M, NTF3, OR1S2, OR2M3, OR2T4, OR2T8, OR2V2, OR4Q3, OR4X1, OR51I1, OR52H1, OR52J3, OR6K2, ORC2L, PAPSS2, PARD6A, PFKP, PHKB, PHKG1, PIGS, PLCE1, POLD4, POLE2, POLR3K, PPM1B, PPOX, PPP2R2A, PPP2R5B, PRKAG2, PRKAR2A, PTGES, PTGFR, PTK2B, PYCR2, SDHC, SEMA3G, SETD8, SGMS2, SH2D2A, SMAD3, SPRY2, TACR1, TACR3, TAP1, TAS2R48, TGFB2, TIRAP, TNFSF10, TUBB6, WNT11, ATP6V1B2, ATP6V1E1, KIR2DL5A, PPARGC1A, TNFSF13B
Negative_15554	ADO, CKB, FAS, FGA, FGG, FH, OAT, PLN, PTS, TK2, VCL, ACSL5, ACSS2, ADH1A, ALAD, ALDH3A2, ANAPC10, APC2, APOA5, B4GALT6, BLNK, BMP4, BMP8A, CBR3, CCL17, CCL21, CD247, CD3E, CLDN22, COL5A1, CPT2, CYFIP1, CYP11A1, CYP17A1, CYP19A1, CYP2A7, DDHD1, DDIT4, DGKG, DHCR7, DHRS4L2, EPHA8, FARS2, FBP2, FZD2, GALNT14, GANC, GGT6, GLI3, GMPR, GNMT, GRIA1, GSTA1, HARS2, IDI1, IFNA5, IGF1, IL13RA1, IL20RA, IL23A, IL28A, IL4R, IL9R, INPPL1, IQGAP2, IRAK1, KAT2B, MAD2L2, MAML3, MAP3K4, MAP4K1, MAPK11, MMP7, MYH3, MYH4, NEU2, NFKBIB, NMNAT3, NPAS2, NTF4, ODC1, OGDH, OR11H1, OR2AE1, OR2B6, OR2T1, OR2T29, OR2V2, OR4D1, OR4L1, OR6B3, OR6C4, OR6K3, PARVG, PDE3B, PDGFRB, PGM1, PLA2G10, PLCB1, PLCG2, PLK1, PNMT, POLR2B, PON2, PPP2R2A, PRKAG1, RARS, RASSF5, RDH8, RPS6KB1, RUNX1T1, SARS2, SAT1, SEMA3A, SEMA3E, SEMA4B, SENP2, SGMS2, SIAH1, SNAI1, SOCS5, SPTLC1, SRGAP2, STAM2, SUCLA2, SUOX, SUV39H2, TAS2R14, TGFB1, TSLP, TUBB, UGT8, VAV2, WHSC1, WHSC1L1, WNT9B, ATP6V1E2, KIR2DL5A, ST6GALNAC4



Negative_15555	ADK, CD4, F12, FAH, FAS, FOS, FST, GHR, HK3, KDR, LEP, MET, NOG, PGD, VCL, ACSL3, ACSM2A, ACTC1, ADIPOR2, ADRA1B, AGPAT4, AKT2, ALDH3B1, ALG1, ALG9, ARNT, ARPC5, ARSD, ATF2, ATG12, ATN1, ATP5J2, B3GNT5, BDH2, BLVRB, BMP8B, BMPR2, CAMK2B, CASK, CCL13, CCL23, CDC25A, CDC27, CDKN2B, CMAS, COX10, CRKL, CSNK1A1, CTNNA2, CYP26C1, DDX51, DHRS3, DHRS9, DLL4, DPYS, EDNRB, ENPP7, EPHA5, FGF20, FZD5, GAS1, GBE1, GFPT1, GFPT2, GMPR2, GRAP2, GRM1, GSTO1, HA01, HTR2A, ICAM2, IDI2, IDUA, IL12RB2, INADL, INMT, ITGA10, ITGA5, ITGAE, JAK3, KIR3DL3, LIAS, LIPF, LPAR1, MAGI1, MAP3K1, MAP3K3, MYL9, NCSTN, NOTCH1, NPR1, NT5C1B, NTRK1, OR13H1, OR14J1, OR1J4, OR1L6, OR2A25, OR4C15, OR4F5, OR4M1, OR4S2, OR5L1, OR6N1, OR8A1, OR9G1, PAK3, PDE8B, PFKFB1, PGAM1, PHKB, PIAS2, PIGH, PIGU, POLR2D, POLR2E, PPM1B, PPP1CA, PRKAA2, PTPRJ, RAC3, RDH16, SEMA4A, SETD1B, SHC1, SLC27A1, SPAM1, SPHK2, SPRY3, STAT4, STAT6, TAS2R4, TP53, TRPM5, TUBA1C, CACNA2D1, HSD17B10, HSP90AA1, MAPK8IP2, TNFRSF12A
Negative_15556	C5, CD4, EP0, F5, FES, GK, ACY1, ACYP2, AGPAT3, AKR1C4, AKT2, ARHGEF7, ARPC1A, ARPC5, ASCC3, ATP5G3, B3GALT2, BAIAP2, BDNF, C4BPA, CCL23, CCR4, CD8B, CDC25B, CDK5, CDKN1A, CLDN11, CLDN18, CLDN8, CRHR1, CUL1, CYP1B1, DCTD, DDIT3, DHRS3, DOLPP1, EPHA1, EPHB2, FMO2, GALE, GALNT14, GALNT8, GNG3, HES1, HGSNAT, HNMT, HPSE, IFNA7, IFNK, IL22, IL24, IL28RA, IRS1, ITCH, ITGA8, MAPK1, NAT1, NEFH, NEGR1, NEUROD1, NFKBIB, NYFYB, NR1H3, NRXN1, OCRL, OR10A7, OR11H6, OR2F1, OR4C12, OR4P4, OXTR, PIGH, PLA2G5, PLIN, PLTP, POLR1D, POLR2D, PPP2R2C, PTDSS1, RDH12, RFXNG, ROBO1, RPS6KA6, RUNX1, SARDH, SC5DL, SMAD3, SOX17, SPCS1, STAT5B, STK3, STT3B, STX10, SULT2B1, TGFA, TGFB2, THBS1, TPH1, TRAF6, TUBB3, UGT1A10, VEGFA, VTI1A, WNT5A, XCL2, HLA-DQA2, HLA-DRB4, TNFRSF11A
Negative_15557	C7, F11, F5, FYN, HGD, MPL, NLK, TPO, AADAC, ACADS, ACP5, ACSS3, ADH6, AHCY, AKR1C1, AKR1C2, ALDH7A1, APC2, AREG, ARHGEF2, C5AR1, CACNA1C, CARS2, CCKAR, CCL5, CCND1, CD74, CDC42, CERK, CFTR, CHIA, CMPK2, CREB3L3, CTNNA3, CTPS, CTTN, CXCL6, CYP26A1, CYP2A6, CYP4A11, CYP8B1, DNMT3L, DUSP1, DVL1, ENO2, ENO3, ENPP3, EPHA7, FGF13, FGFR2, GCLM, GFPT1, GNPDA2, GPX5, GRHR, GRLF1, GSTO1, HAGH, HTR2A, IFNA8, IFNK, IL20, IL15RA, INADL, ITGA7, ITGB3, JAK3, KIR2DS5, LAP3, LTB4R2, MAP3K7, MDM2, MTHFD1L, MYL2, NMNAT3, NT5M, NTSR1, NUDT2, OCRL, OR10G3, OR1G1, OR2A25, OR4C15, OR51A4, OR5H2, OR5R1, P4HA3, PDGFA, PORCN, PPAT, PPP1R3B, PPP2R2C, PRPH, RPS6, SARS2, SEMA3D, SEMA4C, SENP2, SLC2A2, SNW1, SLC2A2, SULT2B1, TUBB2B, TUBB4Q, TUBB6, VTI1A, YWHAG, MAPKAPK2, PPARGC1A
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Negative_15559	F7, FST, FUK, HGF, LHB, NPY, TH, UBB, WAS, ABAT, ACY3, ADCY1, AKR1D1, ALDH5A1, ALG3, ANAPC11, APRT, ASMT, ASNS, ATP5E, ATP6V1A, B3GNT3, B4GALT1, CADM3, CCL11, CCR2, CDC14A, CFLAR, CHRM2, CHSY1, CMPK2, CNGA3, CSF3, CTNND1, CXCL5, CYSLTR1, DAAM2, DDHD1, DDX52, DDX55, DUSP4, EGLN3, EHHADH, ENO3, EREG, F13B, FARSB, FASLG, FGF14, FLOT2, FLT3, GALNT8, GALNTL2, GAPDH, GBA3, GNAI2, GRIN1, GUCA1A, HADHA, HHEX, HHIP, HLA-G, HSD17B8, IDI2, IL5RA, IL6R, IQGAP3, IRF9, ITPKB, JAG1, KLRC3, LAMC1, LCAT, LIPT1, LTC4S, MAFA, MAOB, MAP3K2, MAP4K1, MDH1, MECR, MGAT5, MPP5, MYH8, MYL9, NAGK, NFE2L2, NODAL, NRXN2, NTF4, NTRK1, NTSR1, OR10A2, OR10G8, OR10J1, OR1E1, OR1J1, OR1N1, OR2H2, OR2L2, OR2T29, OR51A2, OR5M3, OR5T3, OR7G1, OR8H1, PAK4, PAK7, PANK4, PCCA, PLA2G2A, PLCD1, POLR3D, POLR3G, PRPS1, PTAFR, PYCR2, QPRT, RGS3, SDC1, SEPHS1, SKIV2L2, SMARCA2, SOS2, SPRED1, STK3, STK4, SULT2A1, SYNJ1, TAS2R4, TCI1, TRG1, TNFSF14, TNFSF18, TP53, TRAF4, TRPC1, UGT2B11, UGT8, WNT7B, SERPIND1
Negative_15560	ADC, CEL, GBA, HPD, JUP, KDR, LEP, LPL, SHH, SP1, SRC, TNN, ACAD9, ACOX1, ACSL3, ACSM4, ACTC1, ACTG1, ACVRL1, ADH1B, ADIPOR1, ADIPOR2, ADRA1A, ALAS1, ALG11, APLP1, ASAH1, ATG7, ATP5I, B3GALT2, B3GNT2, B4GALT5, BMP4, CACNA1D, CASP7, CCND3, CD226, CD46, CDH4, CDKN2A, CRKL, CTSL1, CYBB, CYP2C8, DFFA, DKK2, DOCK1, DOLPP1, E2F5, EIF4B, EPHB4, FSHB, GADD45G, GGCX, GNAZ, GPD1L, GPT2, GRIN2D, GSTP1, HADHA, HA01, IAPP, IFNA6, IGFBP3, IL20RA, IL22RA1, IL23A, IL28B, ITGAM, ITGB5, ITPK1, JAK1, LIPA, MAD1L1, MAT1A, MITF, MYH14, NARS2, NAT1, NLGN3, NPR1, OR10A5, OR10G3, OR10G4, OR1A1, OR1E1, OR1L8, OR1N2, OR2C3, OR2H1, OR2K2, OR2W1, OR3A1, OR51E1, OR5T3, OR6B2, OR6M1, OR6Q1, OR6S1, OR8K3, PAK7, PCYT1A, PFKFB3, PIGB, PIGC, PIGV, PIK3C3, PLA2G4A, PLA2G5, PLCG1, POLR2B, PORCN, PRKCA, RAB23, RAC2, RALGDS, RASGRP3, RFXAP, SCP2, SDC3, SDHA, SEMA3G, SEMA4D, SGPP1, SHMT1, SMARCA5, SRD5A1, ST6GAL1, TAS2R5, TIRAP, TRDMT1, TRPM5, TUBAL3, UBA1, UNC5A, UPRT, VAMP2, VAV2, WHSC1, WNT1, ZFYVE16, GABARAPL1, GABARAPL2
Negative_15561	CFH, DDC, PLG, SMS, SRF, TPR, A4GALT, AARS, ACACB, ACSL4, ACTC1, ADRB2, AOC2, AOX1, ATP5E, B4GALT1, BCKDHA, BST1, CACNB1, CACNG3, CAMK4, CAV2, CCDC6, CCL4, CCL8, CCR6, CD80, CDC20, CDS1, CHAD, CHKB, CHRM2, CLDN10, CNGA4, CNTFR, COL4A6, CREBBP, DERA, DFFA, EGFR, ENTPD1, EPHA5, F2RL2, FGF7, GCNT1, GNA14, GNA15, GNB3, GNRHR, GSTM4, HRH2, IL23A, IL3RA, INPPL1, IRAK2, ITGB4, KLRC2, LIPA, LTBP1, MARS2, MCM7, NAT5, NCF2, NFASC, NLGN1, OR10A5, OR10K1, OR2AG2, OR2T1, OR2T3, OR4C12, OR4F15, OR4S1, OR51F2, OR52N1, OR52N4, OR5H2, PAFAH2, PAPSS1, PDGFRB, PIGB, PLCG1, PLOD2, PMAIP1, PMVK, POLE, POLE3, PPARA, PRKCI, PRSS1, PVRL4, RAD51, ROBO2, SDHD, SH2D2A, SKP2, SLC2A2, SMAD9, SSH2, STK36, SUCLA2, TAP2, TFDP1, TLN2, TNFRSF9, TOMM40, WNT2, XCL1, ZAP70, ATP6VOE1, HSD17B12, MAPK8IP1, TNFSF13B
Negative_15562	IL7, MIF, PLN, SRC, AARS, ACSL4, ALDH1L1, AMD1, APRT, ATP4A, ATP5G2, BDKRB1, BDKRB2, CASP3, CCKBR, CD79B, CDC45L, CDKN1C, CHPT1, CKMT2, CNTN1, COL5A1, CSF3R, CXCL2, CYP27A1, CYP2A6, DHRS3, EARS2, EPHA4, EXT2, F13B, F2RL1, F2RL3, FGF4, FZD1, GAMT, GBE1, GNAS, GP1BA, GRIA1, GRM5, HLA-F, HNF4A, HSD3B7, IRAK3, IRF9, ITGB4, ITPKB, LDHD, LIMK2, MDH1, MLYCD, MTFMT, MYL2, MYLK2, NCF2, NT5E, OR10H4, OR13G1, OR13J1, OR1D5, OR1L6, OR52A1, OR52D1, OR5I1, OR6C2, OR9A4, P4HA2, PFKFB3, PGK2, PIK3R2, PIP4K2A, PIP5K1C, PLXNC1, PPCDC, PRIM2, PRKCB, PTGDS, PYGB, RBKS, RDH8, RFWD2, RUNX1T1, SARS2, SCIN, SIAH1, SLC9A1, SMURF1, SNW1, SOD1, SPHK1, SULT1A2, SUV39H2, TAS2R5, TBXAS1, TPH2, TUBB3, TYMS, WNT11, ZBTB16, HSP90AA1, MAPKAPK3, SERPINE1, TNFRSF11A

Negative_15563	AGK, DDC, FGG, GP6, ID4, ILK, LAT, LCK, NOG, TEC, TKT, TNF, WAS, ACAA2, A CSS2, ACTA1, ADH1B, ALDH3B1, ARG1, ARNT, ARPC5, ARRB2, ASNS, ASS1, AT P5D, ATP5H, BET1, C1GALT1, CARD11, CCL21, CCL8, CD55, CER1, CES1, CHI T1, CNGA3, COQ6, CREB3L1, CTBP2, DGKI, DGKQ, DLAT, DUSP7, EFNA1, EFNA 5, ENPP6, EPAS1, ESAM, FARP2, FGF20, FGF6, FZD8, GADD45A, GADD45B, GA LNT8, GNB1, GRIA3, GSTA4, GUCY1A2, IDH3B, IL1RAP, IL20RB, IL22RA2, I L25, IL7R, INHBB, IRF7, ITGB3, JAK3, L1CAM, MAN1C1, MAP2K2, MS4A2, MY H14, NARS2, OR10G7, OR10G9, OR10R2, OR13G1, OR1K1, OR2H2, OR2K2, OR2 T4, OR52B6, OR52K1, OR5AC2, OR6N1, OR6Q1, OR8J3, ORC3L, PAFAH2, PDE1 A, PIAS2, PIAS4, PLA2G2E, PLCG1, PMVK, POLE, PRKCZ, PRPH, PTGIS, PTK2 B, PYCRL, RPN1, RPS6KA1, RRAS2, SLC25A5, SQLE, ST3GAL4, STX18, SUFU, TUBA3C, TUBA3E, UNC5C, UPP2, WASF2, WNT8A, XCR1, CACNA2D1, MAPK8IP1 , TNFRSF10A, TNFRSF10D, TNFRSF11B
Negative_15564	ADA, C8G, DCC, GH2, MIF, PGF, RFK, ACSS1, ADH4, AOC3, APBB1, ATP50, ATP 6V1H, B3GALT1, BIRC5, BMP8A, CAV3, CCNA2, CCNE1, CDC27, CDKN1B, CER1 , CHPT1, CLDN6, CPT1B, CTNNA3, CTSB, CXCL16, CYP19A1, DGKH, DLL3, DPY S, EPHX1, FGF9, FZR1, GANC, GCLC, GNA11, GNA01, GPAM, GPT2, GRIA3, GST Z1, HNF4G, IDI2, IFT57, IKBKB, IL12RB2, ITGB7, JAK2, KAT2B, KIR3DL2, LAMA4, LAMB2, LDHC, LIMK1, MAGI1, MBL2, MYH1, NAT2, NCKAP1, NFKBIB, N FX1, OR10T2, OR1I1, OR1L8, OR2A5, OR2T8, OR4A16, OR52J3, OR56A4, OR6 K2, OR6Y1, OR8B12, OR8D1, OR8I2, OR8J3, ORC6L, P2RX3, P2RX4, P2RX5, P DGFRB, PDX1, PFKP, PGK2, PIGT, PIK3C2A, PIK3C2B, PLOD3, POLR2K, PPAP 2A, PPAP2B, PPP2CB, PPP2R2D, PRKCD, RALGDS, RUNX1, SEMA3D, SEMA4A, S ETD1A, SETDB1, STAT3, STX1A, STX1B, SULT1A2, SV2C, TAS2R38, TAS2R8, TGDS, UGT2B11, WNT16, PAFAH1B1, SERPINA1
Negative_15565	AK2, FGB, GGH, LAT, MET, ACOT12, ACSM2A, ADSS, AFMID, AKR1C4, ALDH1L 1, ALDOC, APBB1, ATP50, B4GALT5, BPGM, CACNA1C, CADM3, CALML3, CAMK2G , CARS, CBLC, CCL19, CCL2, CCR4, CD38, CDC25A, CHST11, CRB3, CSF1R, CT F1, CX3CL1, CYP2C18, CYP2E1, CYP3A5, DAG1, DHRS4, DLAT, DNMT3A, EHMT 2, ENTPD6, GALC, GALK1, GL01, HNF4G, HSPA2, IFNA14, IFNA6, IFNGR1, IL 28A, IRAK3, ITGB6, KIR2DL2, LDHAL6B, LDHB, MCEE, MCM6, MGAT4B, NCK1, NFATC4, NLGN1, NPAS2, NUMBL, ODC1, OR10J5, OR13J1, OR51A2, OR51B4, O R52B6, OR6K6, OR6M1, PANK4, PDE4C, PDE4D, PECAM1, PGAP1, PIP5K1B, PL A2G2A, PLA2G2E, PLCG2, PLEKHA8, PPP3CC, PRPH2, PYCRL, RASA1, ROBO3, RUNX1, SCD5, SDC4, SH3BP2, SHC2, SMURF1, SPRED2, SRGAP3, TCIRG1, THB S4, TNFSF12, VDAC3, GABARAPL1, HLA-DQB1
Negative_15566	C3, CAD, HK2, MVD, OSM, RET, SP1, ABAT, ACMSD, ACPP, ACTC1, ADAM17, AHC YL1, ALG8, BDNF, CACNG1, CACNG4, CAMK4, CCL11, CDC16, CDH15, CHIT1, C HRM2, CLDN3, CLDN6, COL3A1, COQ5, CTSS, CYP3A5, DDX18, DDX54, DGAT2L 4, DGKG, DPM3, DUSP10, EPHX2, FARP2, FDPS, FGF19, FTMT, FZD1, GNG12, G NRHR, GPD1L, GRM1, IBSP, IFNA5, IL18, IL28A, ITGAV, KLRC2, KLRC4, KLR D1, LDHAL6A, LIPA, LIPE, LIPT1, MAPT, MKNK1, MPP5, MTHFD1L, MYH13, NC F2, NCKAP1L, NFKBIE, NR4A1, OR11H6, OR13A1, OR13C8, OR1L3, OR2F2, OR 2T3, OR4A5, OR4K15, OR4L1, OR51L1, OR52N5, OR5B17, OR5M8, OR6F1, OR6 K6, OR7A17, OR7G3, OR8D2, OR8D4, OR9Q2, P2RX1, P2RX6, PARVG, PAX6, PD E1A, PDE4A, PDE7A, PDIA4, PFAS, PFN2, PI4KB, PIGU, PIK3C2B, POLR2G, P PT1, PRKACA, PRKAG2, PRSS2, PTPRB, RAPGEF2, RASA2, RASGRP4, RERE, SE MA4D, SKP2, SNAI1, SPCS1, SREBF1, STAT5B, STX6, THBS3, TIRAP, TLN2, T UBB4Q, TUBB6, UGT2A1, ULBP3, UPP1, VEGFC, HLA- DRB5, HSP90AA1, KIR2DL5A

Negative_15567	AGK, ASL, C2, CBS, EBP, F2R, GSR, PGF, ACHE, ADH5, AGPAT4, ALDH6A1, ALG3, ALG5, ALOX15, ALOX15B, AOC3, ARNTL, BHMT, BMPR2, CACNB3, CACNG7, CACNG8, CCL11, CCNB1, CCNE1, CD244, CD48, CDKN2A, CLDN15, CLDN20, CLTA, CNDP1, DDIT4, DDX4, DNMT3L, DPM1, FGF7, FZD10, GALNT1, GP1BA, GPAA1, GPD1, GRHPR, HA02, HSD17B2, IDH3B, IL20, IL28B, IL4R, INHBC, INHBE, KITLG, KRAS, LLGL2, MAOA, MAP3K6, MAT1A, NCOR2, NCR3, NEU3, NFYB, NOX1, NRG1, NUMBL, OR10H1, OR10H3, OR13G1, OR1G1, OR2T12, OR4K17, OR4P4, OR52E4, OR52K1, OR7D4, PDPK1, PHKA1, PIGL, PIK3C2A, PIP4K2A, PLA2G2D, PLCG1, PLXNA3, PLXNB3, POLR1A, PPP1R3D, PPP2R5A, PPP3CC, PRDX6, RASGRF2, RELB, RENBP, RHEB, RPRM, RUNX1T1, SCIN, SETD1B, SLIT1, SOC1, SPCS3, SPHK1, STX18, TIRAP, TLR4, UGT2A1, VEGFC, WASF2, WWP2, XCL1, XCR1, ALDH18A1, C1GALT1C1, SUV420H2
Negative_15568	APP, ATM, F7, ME1, MIF, SI, TFG, ABP1, ACVR1B, ARHGEF4, ATP12A, B3GALT4, BDKRB2, BMP8A, CACNG5, CADM1, CASP3, CCL15, CCL20, CCNB2, CCNE1, CNE2, CLOCK, COMP, CSF2RB, CYFIP2, DHODH, DLST, DUSP6, EFNB1, EPB41, EPHA7, EPHB3, EPRS, FARS2, FASLG, FBP1, FGF7, GALT, GLYCTK, GRIN2C, GSTM2, HSD17B2, IAPP, IDH2, IFNA5, IL12RB1, IL18, IL9R, INHBE, JAK3, LAMB3, MAD2L2, MAP3K1, MASP2, MKNK1, MMP1, MYL5, NAT6, NEFH, NEUROD1, NLGN1, OR10AD1, OR10H4, OR11H1, OR13C4, OR1L8, OR2B6, OR4F4, OR4K14, OR5AU1, OR5B3, OR6C2, OR6C3, OR6Y1, OR7D4, OR8S1, P2RX3, P4HA3, PANK3, PDE8A, PFAS, PGAM2, PIGN, PIGS, PPP2R2A, PRKCH, PRODH, PTGER3, RAP1A, RDH11, SEMA3A, SEMA3E, SEMA4A, SH2D2A, TACR1, TAS2R38, TNFSF11, TSLP, UGCG, ATP6V1E1, TNFRSF1A
Negative_15569	ABO, FAH, FGA, GH1, GP6, IL7, ILK, PC, ABP1, ACHE, ACPP, ACSL3, ACSM2A, ACSS2, ADCY6, ADRB2, ALDH2, ALG1, ANGPTL4, ARHGAP5, ARNT2, ATG7, ATIC, BUB3, CACNA1G, CCNB2, CCNE1, CD72, CDK4, CDS1, CHRM3, CLTCL1, CNGA4, COL4A2, COL4A6, CPT1A, CTBP1, CTLA4, CTPS, CUL1, CXCL1, CYP11B2, CYP2A6, CYP3A4, CYP3A43, DGKG, DHODH, DPM3, DRD2, E2F5, EFNB1, FBP2, FDF1, GALNT5, GALNTL1, GDE1, GLB1, GSTK1, HIBCH, HNF4A, HSD17B8, HTR2B, IDUA, IFNA8, IL20RA, IL25, ITGA3, KIR2DL2, KIR3DL2, KITLG, LAP3, MAP2K7, MAP3K2, MAPK1, MAPK12, MYD88, NAT1, OR10J3, OR11L1, OR1L1, OR4M1, OR51B2, OR52A1, OR8D1, OXCT1, PDE6G, PDE7A, PDGFRB, PFKFB2, PIGQ, PPAT, PRKCQ, PTGES, RALA, RDH10, RFNG, ROCK1, RUVBL1, SESN3, SETDB2, SGPP2, SLC27A1, SMAD3, SNAP25, SPTLC1, SRD5A1, STK4, STX6, TAP1, TP53I3, TUBB1, UGT2B17, VEGFC, WNT16, WNT3A, XCL1, ZNRD1, CACNA2D4, HSP90AA1, MAPKAPK2
Negative_15570	C1S, CTH, FAS, FST, GGH, IL3, MIF, TNN, AADAC, AARS, ABLIM3, ACADL, ACSL6, ADH6, ALG9, ATN1, ATP13A2, ATP4B, ATP6AP1, B3GAT3, BDH2, BMP7, C1QB, CAMK2D, CCL2, CD74, CD80, CDH4, CNTNAP1, CRY1, CSF2, CXCR6, CYCS, DDX55, DGKB, DGKG, DGKQ, EFNA2, EFNA3, EFNA5, EPHA1, EPRS, F11R, FGF18, FGF21, GALE, GALM, GCNT1, GLS2, GNAQ, GNG12, GRIA3, HSD3B1, ICOS, IL15RA, IL25, IMPDH1, ITCH, ITGB8, JAM3, KCNB1, KIR2DL2, LLGL2, LRRRC4, MAOB, MAP3K12, MGAT5B, MGST2, NCK1, NCKAP1L, NKX6-1, NME6, NOS3, NOX3, NRG1, NT5C2, NTF3, NUDT2, NUMB, OR10V1, OR1C1, OR1K1, OR1L1, OR2D2, OR4C12, OR4D1, OR52R1, OR52W1, OR5D14, OR5I1, OR6B2, OR8D4, OR8H1, OR8I2, ORC1L, ORC6L, P2RX1, P2RX4, PDE6D, PDPK1, PDPK, PGM2, PIAS3, PIGH, PIK3R5, PNMT, POLR2C, PPAP2C, PRKAR2B, PROS1, PRSS2, PTPN7, RHOQ, SCD5, SDC1, SEMA4G, SH2D1A, SH2D2A, SMAD1, SMAD5, SMC1B, SMPD2, SPRY1, SSH1, ST8SIA5, STK4, STX5, TAS1R1, TJP1, TRAF1, TUBA3E, UGDH, UPP1, VEGFB, WASF2, WASF3, ATP6V1G1, CTNNBIP1, HLA-DQB1, MAP3K7IP1

Negative_15571	A2M, ADC, AMT, BID, BTC, CD6, EDA, FGG, ME3, OSM, ACOX1, ACSS1, ACTA2, A CTG1, ACTG2, AGMAT, AGPAT6, ANAPC2, ATP5G1, ATP6V1D, C1QC, C5AR1, CA CNG8, CD36, CHPT1, CLDN11, CLDN7, CREB3, CSNK1E, CTNNA3, CXCR4, CYFI P1, DAAM2, DAXX, DDX23, DFFA, DIAPH1, DIAPH3, DKK1, ENAH, EPB41L1, EP HB3, ETNK1, FLT3LG, FM02, FZD4, GART, GNA13, GPD2, GSTA4, GSTA5, HAP1 , HIP1, HNF1B, HSD3B7, HTR2B, IL10RB, IL20, IL6ST, IRF9, ITGAE, ITGAM , ITPKA, LAP3, LDHAL6A, LPAR1, LRP6, MALT1, MAML2, MAOB, MAP2K5, MAT2 B, MNX1, MTAP, MYH7B, NCF1, NPAS2, NUMB, OR13C4, OR13C5, OR4A16, OR52 E6, OR5A1, OR5J2, OR6S1, OR9A4, OR9K2, P2RX1, PDK1, PFN1, PGM1, PLEKH A8, PLOD3, PLTP, PNLIP, POLR1D, POLR3H, PPP1R3C, PPP2R5E, PRKACA, PR KCI, PRPH2, PSAT1, RDH11, RPS6KA4, RPS6KA5, RUNX1, SCIN, SETD1A, SNA I1, SOCS2, STAT1, STX2, TACR3, TAS2R10, TJP1, TNFRSF9, TPH1, TUBA1A, TUBA3C, UBA7, UGDH, VAV1, WWP1, ZFYVE9, ALDH18A1, ATP6V1B1, ATP6V1E 2, HSP90AA1, SERPINA5
Negative_15572	EDA, NNT, PDC, AASS, ADSL, ALDH3A1, ALG5, ARHGEF2, ATP5D, C4BPA, CACN A1A, CASP3, CCNH, CHRM5, CHST12, CLDN1, CLDN10, CLDN2, CLTB, CREBBP, CRY1, CSNK2B, CTNNA2, CXCL9, CYP11B2, CYP1A1, DDOST, DUSP1, E2F1, EN TPD5, ERBB2, FGF21, FUT4, GLYCTK, GNPDA1, GPT2, GSTP1, GSTT1, HADHB, IFNA10, IFNA16, IFNAR1, IL13, IL20, IL28B, ITGB2, ITGB5, KITLG, LIPG , MAP2K4, MAP3K14, MAPK14, MTMR2, MYD88, MYH1, NEU4, NR1D1, NRP1, NRX N2, OR1Q1, OR2F1, OR2M4, OR2T8, OR2Y1, OR52I1, OR8G1, OR9G4, ORC5L, P DE1B, PDE1C, PDE6H, PDGFA, PGK2, PIGF, PIGS, PIK3R2, PLCD1, PLXNB3, P OLD2, PPP1R3A, PRKAG3, PRKAR1B, PRKG1, PTPN6, PTPRJ, RAD51, RAPGEF3 , RFXAP, RRM2B, SEMA3F, SETDB2, SKP2, SOCS5, SREBF1, ST3GAL6, TIRAP, TNFRSF8, TNFSF4, TP53, TUBA1A, TNFRSF18, TNFRSF1B
Negative_15573	CAD, CBL, CTH, F2, HYI, IL3, INS, LEP, PML, RET, SMO, TFG, ADCY1, ADRB1, AKR1D1, ALDH2, ALG1, ATP13A2, ATP5H, B3GNT3, B4GALT1, CACNA1C, CCNE 2, CD27, CER1, CFTR, CKMT2, COL5A1, CPT2, CREB5, CSF2RB, CYP4A11, DAP K2, DERA, DHX58, DKK1, ENO3, ENTPD8, EPB41L1, EXT1, F2RL3, FCGR3A, FG F17, GCLM, GFPT2, GLUL, GMPR2, GNMT, GPAA1, GSTO1, GZMA, IDUA, INPP5B , ISYNA1, ITGB1, JUND, KIR2DL1, L1CAM, LALBA, LTBR, MAD1L1, MAD2L2, M ALT1, MCM4, MICA, MIOX, MPDZ, MTMR2, NAMPT, NAT1, NEUROG3, NOD1, NOTC H2, NR1H3, NR4A1, OLR1, ONECUT1, OR10AD1, OR10G3, OR10J3, OR11A1, OR 4A5, OR4C6, OR4M2, OR5AU1, OR5D16, OR6C4, OR6Y1, OSMR, PDGFA, PGAM1, PI4KB, PIGW, PLAUR, PNLIP, POLR2E, POLR2F, PSPH, PTPRM, PVRL1, PYGB, RAC1, RAPGEF2, RASGRP2, RERE, RXRG, SEMA4B, SKP1, SMAD5, SMAD7, SOCS 2, SORD, SOS1, SPP1, STK11, TACR2, TAS1R1, THBS2, TJP3, TLN2, TMLHE, T UBB2C, VEGFB, WNT2B, WNT3A, WNT6, YES1, ATP6V0A2, ATP6V0D2, ATP6V1B 2, PAFAH1B2, SERPINB5, ST6GALNAC1
Negative_15574	AUH, C4B, DLD, EBP, FGG, GSN, INS, LIF, ME2, ME3, MOS, MPZ, ACAT1, ACOT1 1, ACOX3, ACPP, ACSM1, ACTG2, ADCY6, ADIPOR2, ADRA1D, ADRB1, AKR1D1, ALDH3B2, ALG3, ALOX15, ALPL, APLP1, B4GALT2, B4GALT6, BCKDHA, BDKRB 1, BMPR2, BTRC, CACNA1S, CACNG6, CAMK4, CCL11, CCL24, CDC26, CFL2, CN TN1, COQ6, CYSLTR2, DLL4, EI24, ELK4, EPAS1, FARS2, FGF23, FGF8, FZD6 , GLDC, GMPA, GNG12, GPT2, GSTM3, HAAO, HEXA, HLCS, HSD11B1, IGF1R, I L17B, IL21R, IL6R, ITGA7, ITPA, LAMA3, MAN1C1, MAOB, MDM2, MGST1, MYH 13, NEFM, NFATC2, NKX3-1, NME7, NNMT, NRXN1, OR10A4, OR10G9, OR10H4, OR13C2, OR1B1, OR1I1, O R2T11, OR51B6, OR51D1, OR51Q1, OR52A1, OR52W1, OR5J2, OR5P2, OR6K3, OR7G2, OR8D1, OR8D2, OR8J3, ORC4L, PAK6, PARS2, PFKL, PGK2, PKLR, PLC G1, PLOD3, POLD3, PPARG, PPP2CA, PRKCD, RALBP1, RGS3, SAT1, SCD5, SEM A3G, SH3BP2, SHC4, SMARCA2, SOAT1, SPRED1, SPRY4, SSX2IP, STX7, TAS2 R14, TCIRG1, TYMS, UXS1, WNT11, PRICKLE2, TNFRSF1A

Negative_15575	<p>BID, CFD, DBT, GHR, NF1, SRM, TKT, ACPP, ACSL4, ALAD, AOX1, B4GALT6, BLNK, CACNG8, CARS, CCL16, CCL24, CD8A, CYCS, CYP11B1, CYP1A2, CYP2A13, DDIT3, DDX18, DNMT3B, ENAH, ENO2, EPB41L3, EPHA8, FGF18, FMO2, GADD45A, GALK2, GALNS, GNG3, GSK3B, GSTM1, HCCS, HSD3B2, HYAL1, IL19, IL7R, IL8RA, INPP4B, KAT2B, KIR2DL3, KIR3DL3, LARS2, LLGL1, LTBR, MAP2K1, MAP3K7, METTL6, NCR1, NEUROG3, NFATC3, NR4A1, NRG3, NT5M, OR13C8, OR13D1, OR2AT4, OR2G6, OR4C46, OR52N1, OR6C6, OR8K1, PCYT1B, PGAP1, PHKA2, PIGU, PKLR, PLCG2, PMM2, POLR2F, PPA2, PPP2CB, PPP2R1B, PRKACA, PRKG2, PTGDS, PVRL4, RAB5A, RELB, RHEB, RHOD, SCIN, SEMA3G, SETD1B, SGMS2, SIAH1, SLC2A1, SLIT1, SOD1, SPHK1, SSH1, STAT2, STK36, TBL1Y, TNFSF10, WASF2, CSNK1A1L, ST6GALNAC1, TNFRSF10C</p>
Negative_15576	<p>ASL, ATM, C1S, CR2, DHH, FAH, GAA, GLA, GPT, HGF, NGF, PTS, ACTA1, AGPAT4, ALDH6A1, AMPD2, APPL1, APRT, ARHGEF2, ARHGEF7, ARNT2, ASPA, B3GALT5, B4GALT7, BAAT, C3AR1, CACNA1E, CCL28, CCL5, CCNE2, CCR5, CD244, CD27, CD274, CD82, CDC20, CDC25A, CES1, CLTB, CSH1, CTBP1, CXCR5, CYP2C19, DDX4, DDX51, DFFB, DUSP14, EDN1, EGLN1, ENTPD4, FSHR, GADD45A, GALNT5, GALNT7, GLDC, GLUD1, GNA12, GPD1L, GSTO1, GUCY1A2, HMGCS2, HMOX1, HSD17B8, IL2RA, IL5RA, IPMK, JAG2, JAK1, MCCC2, MCM6, METTL2B, MTHFS, NADSYN1, NAT5, NCAM1, NOTCH1, OR13D1, OR1L1, OR4A16, OR4F17, OR51T1, OR51V1, OR56A3, OR5D16, OR6C1, OR6C75, OR7D2, P2RX6, PANK3, PDE4B, PDE8B, PFKFB4, PLAUR, POLE2, POLR3B, PPP1CC, PPP1R3A, PPP2CB, PPP2R2D, PRKACA, PRKAR1A, PRPH2, PSAT1, PSME3, PTAFR, PTPRC, RASSF1, RDH5, RELA, ROCK1, SDC1, SENP2, SH2D1A, SHC4, SIAH1, SLC12A2, SMPD3, STX18, SUOX, SUV39H1, TAS2R48, TBXA2R, TCIRG1, TNFSF10, TPK1, TSC2, TUBA1A, YES1, SERPINA1, TNFRSF11A</p>
Negative_15577	<p>ADO, AMT, BID, DUT, F7, GLA, GSR, IL8, LPL, MOS, AACS, ACTN2, ADIPOR1, ADRB2, AGPAT3, AGPAT4, AK3L1, ALDH3A1, ALDH7A1, ALG2, ALPL2, ATG12, ATP5C1, ATP5G3, ATP6VOB, BCL2, CADM3, CARD11, CCL20, CCL5, CD80, CES1, CES2, CREB3, CTNND1, CUL1, CYP26C1, DDIT4, DDX4, DGKG, DKK2, DNMT1, EFNA1, EGFR, EVI1, FMO2, GALNT9, GALNTL1, GALNTL4, GALNTL5, GGCX, GLG1, GLI2, GNA12, GNRH1, GSK3B, GZMA, HRAS, IBSP, IDH2, IL3RA, KAT2A, KCNJ11, LCMT1, MAN1A2, MAP2K6, MAP3K14, MAP3K2, MAPK8, MMP1, MTHFD1, MTHFS, MYD88, MYH1, NFAT5, NOS1, NPR2, OR10K2, OR14C36, OR1K1, OR1M1, OR2T5, OR4F6, OR4N5, OR51F1, OR51I1, OR52I2, OR56B4, OR7G3, OR8A1, OR8B4, ORC2L, OXSM, P4HA2, PDGFA, PFAS, PHKB, PHPT1, PIAS1, PIK3C2B, PKLR, PLA1A, PLXNA2, POLD1, PPP3CA, PRKACB, RAC1, RASGRP2, RFXAP, RPN2, RXRB, SEMA4B, SLC27A1, SMC1A, SMURF1, STK36, TACR2, TAS2R41, TAS2R8, TCF7L1, TMLHE, TNFSF9, TRAF3, TUBAL3, TYK2, UBE2L3, UCK1, WNT5A, WNT9B, XIAP</p>
Negative_15578	<p>BCR, CAD, CKB, DBH, DUT, FUK, GPI, MAX, RFK, TPO, ACAT1, ACPP, ACSL3, ACSS2, ADCY4, ADIPOR2, AMY2B, ARSA, ASRGL1, B3GAT2, BAAT, BCKDHA, BIRC5, BUB1, CACNA1A, CACNG3, CASK, CBLB, CCL13, CD19, CD55, CLCA4, CNTNAP2, CPT1A, CREB3L4, CSF2, CSH1, CSNK1G3, CTNBN1, CTSB, CX3CL1, DAPK2, DGAT1, E2F3, EPB41L3, ERBB4, EXTL1, FARSB, FDPS, FECH, FUT1, FZD7, GPD1, GRIA2, GSTM1, GSTO2, GZMB, HAGH, HARS, HIP1, HPSE2, HSPA8, IBSP, IL9R, IRAK1, IRAK3, ITGA10, ITGB3, JAG1, KLRC4, LIPA, LYPLA2, LYZL1, MYLK3, NCR2, NSD1, OR1J1, OR2AG1, OR2T29, OR2T3, OR2T33, OR2T4, OR4C11, OR4D6, OR4K13, OR4N4, OR4N5, OR4S2, OR5F1, OR6C6, OR6K3, OR8D4, PARVA, PDHA2, PGM2, PHGDH, PIGT, PIPOX, PLA2G2F, POLR2I, PPP1R3A, PPP3CC, PRODH, PTPN11, PTPRJ, PVRL4, QPRT, RARS, RASSF5, RCHY1, RPN2, RS6KA4, RUNX1T1, SARS, SDC2, SELL, SKP1, SMARCA2, SMURF1, SMURF2, TAP1, TAS2R16, TBL1X, TNFSF10, TRAF1, TYROBP, UBE2K, VEGFB, WNT2B, ATP6V1G1, CACNA2D3, MAPKAPK2</p>

Negative_15579	<p>ADK, ATM, AUH, FYN, IHH, MPI, SYK, ACO1, ADCY4, ADSSL1, ALG13, APBB1, A TG7, ATP13A2, ATP5H, B3GNT2, CACNA1B, CACNG5, CCNA2, CCNE2, CD27, CD C25C, CFL2, CLTB, COQ7, CSF2RB, CXCL11, CXCL12, DDX4, DLAT, DNMT1, DO T1L, ENO1, FBP1, FBP2, FDPS, FGF11, FMO3, GALNT1, GALNT11, GLI1, GOT1 , HLA-  DRA, IFNB1, IFNW1, IL13RA1, IL29, IL6ST, IRS1, ITPK1, LAMA3, LCAT, LI PE, LYZL1, MCM2, MCM6, MEF2C, MGAM, MYD88, NCF2, NRG1, OR10A7, OR2A12 , OR2L2, OR3A3, OR4K15, OR56A1, OR5J2, OR8K5, ORC1L, PDHA2, PFKM, PGM 3, PIP4K2C, PPAR, PRKAR2B, PSME1, RALGDS, RFXAP, RUVBL1, SETD1A, SL C2A2, SMAD6, SMPD2, SSX2IP, TACR2, TAS2R5, TAS2R50, TICAM1, TNFSF12 , TUBB2B, UBA7, UPB1, UROD, WNT5A, GABARAPL2, MAPK8IP2, PDCD1LG2, TN FRSF14, TNFRSF6B</p>
Negative_15580	<p>ATM, BTC, CD4, EDA, F12, FUK, GH1, MAX, MET, MUT, MVD, PDC, SFN, TH, TXK, AASS, ABAT, ABLIM3, ACOX3, ADCY8, AKR1C4, ALDH1B1, ALG2, AMY2B, ATP5 D, ATP5E, B3GAT3, BET1, BUB3, CACNA1C, CCL11, CCL13, CCL4, CD44, CHRM 5, CHSY1, COL2A1, COQ6, COX10, CSDA, CYP2J2, DAAM2, DDX18, DEGS2, DER L1, DKK4, DLAT, EPHA5, EPHB4, FADD, FBP1, FGF13, FLOT1, FRAT1, GALNT3 , GLDC, GLO1, GLUL, GNG13, GPD1, GRLF1, GSTA1, GSTO1, GSTP1, HMOX2, HS D17B1, IDH2, IFNA10, IFNB1, IKBKE, IL4R, IL7R, INADL, IRAK1, IRS2, IT GB1, KIR2DS4, LEFTY2, LLGL1, LTBR, MAN2A1, MAOB, MAP3K2, MAPK11, MCM 5, MMP2, MMP7, NCOR2, NFYA, NLGN3, OLAH, OR10H5, OR2T34, OR3A3, OR4A5 , OR4C12, OR4X2, OR51G1, OR51G2, OR52B6, OR9G1, OR9I1, OR9K2, PDE7B, PGAM4, PI4KA, PIGX, PITX2, PLAUR, PLIN, POLR3A, PRPH, PTCH2, RASA1, R PS6KA4, RXRG, SAT1, SELPLG, SEMA3B, SFRP5, SLC12A2, SMAD2, SNAI1, SO AT1, SOD1, STX10, SULT1E1, SUOX, TLN1, TRADD, ULBP3, VAMP3, VASP, WAR S, WNT9A, SERPINA5, TNFRSF6B</p>
Negative_15581	<p>AK3, AK5, C5, CD4, CFI, CRK, EPO, JUN, KIT, LEP, MET, NPY, STS, TPR, AADA C, ACVRL1, ACY1, ACYP2, ADCY4, ADCY8, AGPAT2, AMDHD1, AMDHD2, APC2, A RAF, ASPA, ATP12A, ATP5D, ATP5G1, B4GALT2, B4GALT3, CACNB2, CASK, CC R5, CDC14A, CDH3, CDIPT, CDKN2C, CHRM3, CLDN1, CLDN14, CLDN7, CMBL, C OMP, COQ7, CSNK1A1, CXCL16, CXCR4, DKK4, EFNA2, ENPP1, EPB41, EPHA2, FARS2, FDFT1, FDPS, FGF20, FGF5, FOSL1, FOXA3, FPGS, FSHR, FUT6, FZD1 0, G6PC, G6PD, GAMT, GANAB, GJA1, GNPDA1, GOT2, GUCY1A3, HAP1, HDAC1, HEXB, HSPA1B, IGF1R, IGFBP3, IL17RB, IL21R, IL22, INPP4B, IPPK, ITGA 11, KARS, LAMB4, LDHB, LHCGR, LMO7, MAP2K5, MBL2, MFNG, NFKB1, NFYC, N PR2, OLAH, OR13D1, OR1B1, OR4Q3, OR4X1, OR52I1, OR52L1, OR52N4, OR5A C2, OR5M9, OR7A17, OR7C2, OR8G1, OR8H1, PCNA, PCYT1B, PDE4A, PDE5A, P DK1, PIAS3, PIPOX, PLA2G2D, PLCB3, PMAIP1, PNPLA3, POLE2, PPAR, PRO DH2, PRSS1, PSAT1, PSEN1, PTPN11, PTPN5, RALBP1, RARS, RBL2, RDH10, R XRB, SAT1, SEMA3F, SH2D2A, SKIV2L2, SLC25A4, SLC25A5, SPCS1, SPRY3, SPTLC2, SSH1, STK3, STX4, SULT2B1, SV2B, TAS1R1, TAS2R8, TBL1X, TBXA S1, TGDS, TNFSF14, TNFSF9, TRHR, TUBB2A, TUBB4, TYROBP, UGT2A1, VEGF A, WNT8A, WWP2, XYLT2, YWHAB, ATP6VOE1, GABARAPL1, HLA-  DPA1, HSP90AA1, SLC25A31</p>





Negative_15585	DHH, FES, FUR, GSS, IL7, LIT, MET, OSM, PLEK, RBT, SPT, TH, TRK1, TRK1, ABL1, M1, ACSL6, ACSM1, ACSS1, ACTA1, ACTN2, ADCY3, ADRB3, AGPAT3, AGXT, AKR1C1, ALAD, ALDOA, ALG11, ANGPTL4, APBB1, APPL1, ARPC2, AVPR1B, B3GALT5, C9orf95, CADM3, CAMK2G, CCKBR, CCR3, CLDN20, COL11A1, CPT1A, CRHR1, CSAD, CYP27A1, DDIT4, DEGS1, DGKG, DTX3, DTYMK, DUSP9, EFNA3, EHMT1, EIF4E, ENTPD7, EPB41L2, EPHA8, EPRS, EXOC7, EXT1, EXTL3, FGF2, FIGF, FUT1, FUT2, FUT6, GALNT3, GBA3, GJA1, GNPAT, GNRHR, HLA-DRA, HNF4G, HSPA2, HTR4, IDI2, IFNA10, IGF1R, IL10RA, IL17B, IL2RG, ITGA11, ITGA5, ITGA6, JAG1, JAK3, LAMB1, LCMT1, LCMT2, LIFR, LLGL1, LTA4H, LTBP1, LTC4S, MAP3K2, MDH2, MKNK2, MTHFD2, NADSYN1, NCAM2, NEU4, NLGN1, NNMT, NRG1, OCRL, OGDH, OR10A6, OR1A2, OR1L4, OR1N2, OR1S1, OR2A2, OR2A42, OR2A5, OR2G3, OR2T10, OR2T33, OR2V2, OR4M1, OR4X1, OR51A4, OR51A7, OR5AK2, OR5B3, OR5D13, OR6C74, OR6N1, OR8S1, ORC4L, PDX1, PFN3, PI4KB, PIAS3, PIGL, PIGN, PITX2, PLCB4, PLXNA1, PNMT, POLR2E, PPP1R3C, PRKACA, PRKCZ, PTAFR, PTCH1, PYCR1, PYGM, RARA, RASA1, RBKS, RIPK1, RPRM, RUNX1, SEMA4C, SEMA4F, SEMA4G, SFRP4, SMAD7, SMPD1, SNAP23, SOD1, SPRED1, SREBF1, ST3GAL5, STAT1, STEAP3, TCF7L1, TGFA, THY1, TNFRSF8, TNFSF12, TUBB4, UGT2B28, UNC5C, VDAC2, WEE1, XCL1, ATP
Negative_15586	AZOP, AOK, AKT, AMT, PVAL, PDB, CRRP, DLD, GBR, HAL, FDT, FES, FIG, SKM, TRK1, XDH, ACOX1, ADCY8, ADRBK2, AGTR1, AGXT2, AK3L1, ALG9, ANAPC11, ARAF, ARHGEF7, ATIC, ATP5D, ATP5G2, ATP5O, AXIN1, B4GALT4, BDH2, BMPR1A, BNIP1, CACNA1E, CASP6, CDC25C, CLDN16, CMPK1, COL1A1, CSNK1A1, CXXC4, CYBA, CYP2A13, CYP2D6, CYP3A43, DCTD, DCXR, DHRS4L2, DIAPH2, DOLP1, EFNA5, EGFR, EHMT2, EP300, EPHA1, EVI1, FADD, FARSA, FGF1, FMO1, FRAT2, GALM, GALNTL1, GALNTL4, GCLM, GNA12, GNAS, GPX5, GRHR, GSTM4, HEMK1, HGSNAT, HLA-G, HNF4A, HNF4G, ICAM2, IDH3A, IFNAR1, IFNGR2, IL24, IL2RG, IL3RA, IL4R, INADL, IRAK2, IRAK4, IRF9, ITGA10, ITGA3, ITGA8, ITGAE, ITGB7, KCNB1, KLRC2, LIMK2, LLGL2, MADCAM1, MAP4K1, MAPT, MCEE, MMP14, MPZL1, MYLK3, NCF1, NFKBIB, NFKBIE, NME7, NMNAT3, OLAH, OR10G2, OR13C5, OR13G1, OR1D2, OR1S2, OR2A14, OR2B2, OR2L2, OR2S2, OR2T3, OR2Z1, OR51T1, OR5B21, OR5C1, OR5P2, OR5V1, OR6C1, OR7A17, OR7G2, OR9A4, PANK1, PCYT1B, PDE1C, PDE4B, PDE6D, PDPK1, PHKG2, PIGK, PIK3R2, PLA2G10, PLA2G1B, PLAUR, PLCZ1, PLXNA3, PNLIP, POLR2C, PPCS, PPP2R5A, PPP2R5E, PPP5C, PRIM1, PRKAG1, PRKAR1A, PRKCQ, PRKG1, PRPH2, PTGER3, PTGFR, PTPRM, PVRL1, PYGL, RASGRF1, RDH11, RDH5, RFXANK, RFXAP, RIPK1, SGMS1, SLC25A6, SNAP23, SOS1, SPRED2, ST6GAL1, STX1B, TBL1X, TFPI, TKTL2, TLN2, TMEM7, TSC2, TSNAD1, TUBA1C, UCCGL1, UCTP27, ATP5V1, CO
Negative_15587	C2, CEL, DDC, F8, GAA, GK2, GLA, GPT, HK3, NPL, RPE, TFG, TNN, XDH, ACO2, ACSM1, ACVR1B, ADH1B, ADRB3, AFMID, AKR1C4, AKR1D1, ALDOA, ALOX12, ALOX5, AOC2, ARPC1B, ASCC3, ATP5G1, B4GALT4, BAIAP2, BIRC3, BMP8B, C5AR1, CACNA1S, CCDC6, CCKBR, CCNB2, CDC23, CDKN2C, CHRM1, CHRM3, CKMT2, CLDN4, CNTFR, COL5A2, CPT1A, CSDA, CTPS2, CXCL13, CXCL2, CXCR5, CYP3A7, DDX4, DGUOK, DVL3, E2F5, EHMT2, EPB41L3, EPHX2, EPRS, FGFR2, FUT7, FZD3, GAL3ST1, GALNT12, GALNT9, GANC, GAPDH, GCNT4, GLI1, GNA14, GRIN2D, GUCA1B, HA01, HDAC2, HTR2B, IFNB1, IL20RA, IL28RA, IL8RB, INMT, INPP4A, ITGA6, ITGAE, ITGB3, KDSR, KIR2DL3, KNG1, LIPE, LRDD, LRP6, LTB4R2, MAP3K1, MAP4K1, MARS, MCCC1, MDM2, MYH3, NEUROD1, NFATC3, NRXN3, OR10V1, OR14J1, OR2B2, OR2M2, OR4C13, OR4K14, OR4M2, OR51B6, OR51F1, OR51I1, OR52E6, OR5AN1, OR5L1, OR9Q2, PCNA, PFKFB4, PIPOX, PPA2, PPAP2B, PPP2R5A, PPP3CB, PRKAR1B, PRKCG, PTGES2, PTGIS, RDH11, RPN1, SEMA3G, SEMA4D, SETD7, SETDB2, SHC4, SOCS3, SPRY3, SRD5A2, ST3GAL6, STK11, TNFRSF8, TPH2, TRAF6, USE1, UXS1, VAMP2, VDAC1, WNT7B, WNT9B, CSGALNACT2, HSD17B10, SERPINA5

Negative_15588	<p>AGL, AK2, AM1, CSA, C11, CGN, DCN, JUN, MAG, ME3, MOS, P13, SMS, T1R, ACO  T11, ACSL1, ACSM1, ACSM2A, ACTA1, ACVR1C, ACVRL1, ADCY2, ADH1B, ADSS  , AGPAT4, AK3L1, AKR1C1, ALDH2, ALDH3A2, ALG10B, ALG13, APOA1, ARPC3  , ATP6VOC, BDKRB2, BLVRB, C1GALT1, C5AR1, CACNA1E, CACNG6, CARS2, CA  SP7, CCL19, CCL7, CCNA1, CCNB3, CCND3, CCNG1, CCR6, CD14, CDIPT, CDKN  2B, CHSY1, CLDN9, CNDP1, CREB3L2, CSNK1G2, CSNK2A2, CYP2C18, CYP2U1  , DDX4, DHDDS, DHRS9, DPYS, E2F2, EFNA1, ENO3, FGF14, FOXO3, FUT2, GBE  1, GGT7, GNPAT, GOSR2, GRIA2, GRIN2A, GRIN2B, GSTA2, HEXB, HIF1A, HMG  CR, HRAS, HSD3B1, ICOSLG, IFNA5, IFNA6, IFNW1, IL10, IL20, IL23A, IL5  RA, IL8RB, INSR, ITGAM, ITPA, JAM2, KYNU, L1CAM, LAMB1, LAP3, LARS, M  ALT1, MAP2K1, MAP3K12, MAP4K4, MCM3, MYL5, NCAM1, NCR2, NEU3, NFATC1  , NFKB1E, NKD2, NOX1, NPR2, NT5C, NT5C3, NTF4, OR10J3, OR10V1, OR10Z1  , OR11A1, OR2M2, OR4M2, OR4S2, OR51G2, OR52E4, OR5A2, OR5B12, OR5I1,  OR6B3, OR6C75, OR8J3, P4HA2, PARVB, PDE1B, PDE2A, PDE8A, PDPK1, PFKF  B2, PGAM1, PHGDH, PHKG1, PIGK, POLE, POLR1A, POLR2B, POLR2H, PON1, PR  KAR2B, PRKCE, PSME3, PTCH1, RAC1, RENBP, RRM1, SEMA3A, SEMA3D, SEMA4  B, SESN3, SETD8, SKP1, SLC9A1, SORBS1, SQLE, SRGAP1, THBD, THBS2, TIC  AM1, TJP3, TP73, TRMT11, TUBA1A, TYMP, UPP1, WEE1, WNT2, WNT8A, YOD1,  XW1, C11, DDO, F2, FGF, K11, NTF3, TR, TNF, C5B, GAKS, ADSL, AGTR1, A</p>
Negative_15589	<p>LDH4A1, ALG6, ALPPL2, ANGPTL4, ARHGEF4, ATP5I, ATP5O, AXIN1, B4GALT  5, B4GALT6, BCMO1, BET1L, BIRC5, C3orf10, CBLC, CCDC6, CCL22, CCNH, C  CR3, CHD8, CLDN10, CLDN22, CMAS, COMP, COQ3, CREB3L2, DAD1, DGKH, DHR  S3, DIAPH2, DUSP2, ELK4, ENO2, ENTPD3, ENTPD6, ERBB4, EXTL2, FARP2, F  ARSA, FDPS, FGF22, GADD45G, GALNTL2, GART, GAS1, GLDC, GLS2, GNA11, G  NAO1, GRAP2, GRIN2D, H6PD, HAO2, HMBS, HMGCR, HMOX1, HNF4G, HRH1, HSD  17B2, IDH1, IFNA2, IFNA7, IL15RA, INHBB, INPP1, INPPL1, LEFTY1, LEPR  , LIAS, LIMK2, LTA4H, MAD2L2, MAP3K7, MCCC1, MGAT1, MGST2, MMP7, MTHF  D1L, MYL5, NADSYN1, NARS2, NAT5, NCKAP1L, NKX6-  1, NOS3, NT5E, NTF4, OR10S1, OR10X1, OR2A2, OR2S2, OR2T1, OR51B4, OR5  1G2, OR5D16, OR5F1, OR5K2, OR5V1, OR6C70, OR8H1, OR9A2, PANK2, PCK2,  PDE1B, PDE8A, PDHA1, PDPK1, PFAS, PHKG1, PHPT1, PIAS2, PIK3R1, PKLR,  POLD1, POLR2A, PRLR, PROS1, PSEN1, PTPN11, PTPRJ, RARS, RBL2, RELA, R  ETSAT, ROCK2, RPS6KA2, RUNX1, RUNX1T1, SDC2, SEMA3G, SEMA4D, SETD8,  SNW1, SORBS1, STAT2, STAT6, STX10, STX1A, TACR3, TFDP1, TGFB1, THTPA  , TLN1, TRHR, UPB1, UPP2, UPRT, VEGFA, VNN1, VTI1B, WASF1, WHSC1L1, WW  P2, XYLT2, ZMAT3, ATP6V1G1, B4GALNT1, CACNA2D3, MAPK8IP2, MAPKAPK2  PDK1, F2, GNA11, NTF3, TR, TNF, C5B, GAKS, ADSL, AGTR1, A</p>
Negative_15590	<p>A2M, BCR, C9, DDO, EGF, GSN, KDR, NF1, PML, PXN, RDX, TAT, TEC, ZYX, ACHE  , ACOT12, ACOX1, ACSM2A, ALDH1L1, ALDH4A1, APAF1, APOE, ARHGEF2, ATP  2A2, ATP4B, B3GNT5, B4GALT4, BACE1, BAIAP2, BMP1A, CALML6, CARD11,  CCNG2, CCR6, CD226, CD3E, CD82, CDC2, CDC25B, CDC27, CDKN1B, CDKN2B,  CHSY3, CLDN10, CLDN6, CMAS, COL4A2, COQ7, CPT1C, CSDA, CXCL5, CYP1B1  , CYP4A11, DAG1, DDX18, DDX23, DHCR7, DLST, DPM1, DPYS, DRD1, DTX3, EH  HADH, EHMT1, ENPP3, EPB41L2, EXTL3, F2RL2, FABP3, FGF13, FLT3LG, FMO  3, FZD6, GALE, GBE1, GGT5, GMDS, GNAI1, GSTO2, HPRT1, HSPA1B, IFNA4, I  FNA7, IFNA8, IFNGR2, IKBKB, IL15RA, IL17RA, IL23A, IL28RA, KIR2DL2,  LAP3, LDHB, LDHD, LTB4R2, MAD2L1, MAPK14, MECP, METTL2B, MGAT5B, MKN  K2, MLYCD, MMP2, NT5C, OR10H3, OR10H5, OR10S1, OR10Z1, OR13C4, OR13F  1, OR14C36, OR1L8, OR1S2, OR2H2, OR3A2, OR4D5, OR4F17, OR5A2, OR7C2,  OR8H3, OR8K3, OR9G4, ORC5L, PCCA, PCK1, PFN4, PI4KB, PIGB, PIGM, PIK3  CG, PIK3R1, PLK1, POLR2K, PPBP, PPP2R2D, PTPRJ, PVRL4, RPS6KA3, RRM1  , RUVBL1, SARDH, SEMA3C, SETD1A, SFRP2, SHC3, SIGLEC1, SLC2A1, SNAP2  3, SPP1, SPRY4, SREBF1, STK36, STX18, SULT2B1, TACR3, TAS2R4, TCIRG1  , TICAM1, TKTL2, TLR5, TOMM40, TRAF3, TSHR, TSNARE1, UCK2, UGT2B10, U  LK1, UNC5A, WASF2, WIF1, WNT10B, YWHAQ, ATP6V1G3, GABARAPL2</p>

Negative_15591	<p>AK5, CSK, DDC, F8, FAS, GDA, MIF, MYC, PML, PTS, AASS, ACACB, ACP1, ACPT, ADCY8, ADH1B, ADH6, AGPAT1, AGRP, ALDOC, ANAPC2, APLP1, APOA5, ARSB, ATP6VOB, ATP6VOC, AXIN2, B3GALT2, B3GAT1, B4GALT1, CACNG1, CAMKK2, CARD11, CAV2, CCL1, CCND3, CCNE1, CD244, CD3E, CD44, CDKN1B, CDKN2A, CHD8, CLTA, CLTB, CPOX, CSDA, CSNK1G3, CTBP1, CTNNA1, CYP19A1, CYP1A2, CYP2U1, CYP4A11, DDIT3, DHFR, DLL1, DUSP14, ERO1L, ETNK2, FGF18, FGF23, FGF6, FLOT2, FPGS, FZD5, GALK2, GIT1, GLDC, GNAI2, GRLF1, GUCA1C, HCST, HSD11B1, IFNA13, IFNA5, IFNAR1, IKKB, IL18R1, IL20RA, IL2RA1, IMPDH1, IMPDH2, IRAK3, KCNB1, LCMT1, LIPF, MCAT, MCEE, MKNK1, MOV10L1, MTHFD1, MYH14, MYL9, NADK, NAT5, NCOR2, NCR3, NEUROD1, NFATC2, NFYC, NMNAT2, NOX3, OGDH, OGDHL, OR10A3, OR10J1, OR10K2, OR11L1, OR1A2, OR1D5, OR2AE1, OR2C1, OR2H2, OR2L13, OR4C11, OR4C6, OR4K13, OR4S1, OR4X1, OR52H1, OR52L1, OR56A1, OR56A3, OR6C2, OR6K2, P2RX5, PCCB, PER1, PGK1, PGS1, PIK3CA, PPARG, PPID, PPP2R5C, PRKCI, PRPS1, PRSS2, PTCH1, PYCRL, RDH11, RERE, SELP, SEMA3A, SFRP1, SLC9A1, SMPD1, SNAI1, SPRED2, STX1A, STX6, TAS2R16, THBS4, TLR3, TUBA3C, TYMS, UBE2K, ULBP3, UNC5A, UNC5B, UROC1, WASF2, WEE1, XYLB, CACNA2D3, TNFRSF13B</p>
Negative_15592	<p>AK3, CBS, CDC, ID1, ID3, ITK, LEP, NFE, RET, ACADM, ACSL6, ACV1, ACV1Z, ADCY3, AFMID, AGRN, AGTR1, AHCY, ALDH7A1, ANAPC11, APOA2, ARRB2, ASCC3, ATP5J, ATP6V1F, AVPR1B, B3GNT5, BCL10, BDKRB1, BLNK, BMP5, BMP6, C5AR1, CACNA1A, CACNA1B, CASK, CAV3, CBLB, CBLC, CCDC6, CCL21, CCL8, CCNH, CCR5, CCR7, CD274, CD3E, CDC25C, CDH3, CDH4, CDIPT, CHRNA7, CISH, COL4A4, COMT, CTSB, CXCL11, CXCL5, CXCR5, CXXC4, CYP4A22, CYSLTR2, DDB2, DGAT1, DGKQ, DHCR7, DHRS4, DNMT3L, DPYD, DRD1, DTYMK, DUSP16, DUSP5, DUSP9, DVL3, EFNA2, EPB41, EPHA6, ERBB4, ESPL1, ETNK1, ETNK2, FCGR3B, FGD3, FGF13, FGF21, FZD10, FZD8, GJA1, GLB1, GMPR, GNA15, GPAM, GPD1, GPX5, GRIN2A, GRM5, GSTA3, GSTO1, GYS2, HNF4G, HRH2, HSD3B1, HYAL1, IL10RB, IRF9, IRS4, LAMC1, LCAT, LDHC, LFNG, MCM2, MLLT4, MMP1, MTHFR, MTHFS, MTMR1, MYL7, MYLK2, NAGLU, NEFH, NFKB2, NNMT, NOTCH1, NT5C1A, NT5M, OGDHL, OR1K1, OR1Q1, OR2AE1, OR2S2, OR2T10, OR2T8, OR4C12, OR4C46, OR4F6, OR4N2, OR51A4, OR52E2, OR52E6, OR6B2, OR6B3, OR6Q1, OR6X1, OR7A10, OR7A17, OR7D2, OR8G1, OR8H3, OR8J3, OR8U1, OR9G4, OR9Q2, PAK2, PDE4B, PDE6G, PGAP1, PGK1, PIGM, PIK3C2A, POLD2, POLR2E, POLR2H, PPA1, PPP1R3C, PRKCI, PROC, PTGES2, RAF1, RDH8, RPN1, SEMA3B, SETD7, SMAD3, SMPD4, SPP1, SRD5A1, STX16, STX1A, SUCLA2, SYNJ1, TCF7L2, TDR9, TRAF9, TSC1, UCTD11, UCTD7, ULK2, VEGFC, WNT5A, ATP</p>
Negative_15593	<p>C5, C8A, CAT, CEL, F10, INS, ITK, MIF, MPI, NF1, RET, SCD, ACSM5, ACSS1, ACSS2, ACY1, ADIPOQ, ADIPOR1, ADIPOR2, AGXT2, ALDH6A1, ANAPC5, ARG1, ATG12, ATP5H, B3GAT2, BMP2, CCDC6, CCL2, CCNA1, CCR3, CD226, CD38, CD46, CD80, CDC20, CDC26, CDH3, CDKN2D, CHD8, CLCA2, CNGA3, COL4A2, CP1A, CSNK2A2, CTBP2, CXCR4, CYCS, CYP2J2, DCXR, DHRS3, DKK4, DOT1L, DPM2, DUSP2, EFNA1, FGF11, FLOT1, FLT1, FLT3, FMO5, FRAP1, FUT1, GMPPA, GNA12, GNA15, GPD1L, GRIN2D, GSTM3, GSTM5, HAGH, HCLS1, HLA-DMA, HLA-G, HTR2B, IARS2, IDH3G, IDI1, IKKB, IL10RA, IL21R, INHBE, INPP4B, IRAK2, ITGA2B, ITGA5, ITGAM, KIR2DL1, KIR2DS4, KLKB1, KLRC2, KLRC4, KLRL1, LAMB1, LAMC1, LCP2, MAML2, MAP2K3, MAPK8, MGAT4A, MTMR6, NCF2, NME7, NOTCH3, NR5A2, NTN1, NUMB, ONECUT1, OR10A2, OR1L8, OR2B6, OR2T3, OR4N4, OR51A7, OR51B2, OR51E1, OR8S1, PAPSS2, PARVA, PARVB, PDE1A, PDE9A, PDGFB, PIGB, PIP5K1C, PLCB3, PLXNA1, PMVK, PNLIP, POLR1C, POLR2D, POLR2E, PORCN, PPM1B, PPP2CA, PPP2R2D, PSPH, RASGRF2, RDH5, RDH8, RERE, RRM2B, SCIN, SELP, SEMA3D, SETDB2, SFRP4, SLIT1, SPTAN1, SRFBF1, SYNJ1, TACR2, TAS1R3, TAS2R41, TAS2R48, TBL1X, THBS4, TNFSF14, TUBB3, ULBP1, ULBP2, WASF3, WEE1, WNT1, WNT16, WNT3A, WNT4, XCL2, YKT6, ATP6V1G1, ATP6V1G3, B4GALNT1, PDCD1LG2</p>

Negative_15594	<p>           BID, DAO, DLD, F3, HDC, HFD, JUF, KMO, LCT, LSS, LTB, NLR, ITG, ADH, ABC8, ABI2, ACMSD, ACOX1, ACPP, ACSS3, ADCY8, AHCYL2, ALG8, AMDHD1, ANAPC2, AOC3, ARAF, ARHGEF2, ARNT2, ARPC1A, ASPA, ASRGL1, ATP6AP1, B3GALT1, BBC3, BCL2, BUB1B, CACNA1G, CACNB4, CACNG3, CCDC6, CCL16, CCL21, CCNB1, CCNE1, CD274, CDC16, CDC23, CFL2, CLCA4, COL6A2, COMP, CXCL10, CXCR6, CYP11B2, DCTN1, DCXR, DDX51, DGKA, EI24, EIF4B, EPOR, ETNK2, EXTL1, F2RL1, FASLG, FGF18, FUT5, FZD10, GALNT9, GDF5, GMSD, GOSR2, GRPR, GSTA4, GSTO2, GUCY1A3, GUK1, HNF1B, IGF1R, IL11, IL18, IL21, IL22, IL23R, INSR, ITGA4, ITGA7, JAM3, LAP3, LIPA, LRRC4C, MASP1, MCCC1, MGAT3, MOV10L1, MRAS, NCKAP1, NEU1, NFYA, NKX6-1, NLGN2, NMNAT3, NRG3, NT5C2, OR10H2, OR11H1, OR1D5, OR2C1, OR2H1, OR2L2, OR2M5, OR2T4, OR51E2, OR52H1, OR5D18, OR8G1, ORC1L, P2RX2, PAK6, PARD3, PARVG, PDXK, PFKFB3, PGAP1, PGM2, PIK3R4, PKM2, PLA2G2D, PLOD3, POLE2, POLR2B, POLR2C, POLR2E, POMC, PPAP2A, PPP2R2D, PPP3R1, PRKAR2A, PSEN2, PTPRB, PTTG1, PVRL4, PYCR1, PYGM, RAB5A, RASA1, RDH12, RDH8, RHOQ, ROBO3, RPS6KA3, RXRG, SEMA3D, SLC27A1, SOCS3, SPRY2, STX4, STX5, SULT1E1, SYNJ2, TAS2R4, THY1, TPH1, UBE2L3, UGCG, UGT2B11, UGT2B17, UGT2B4, UXS1, VTI1B, WHSC1, WNT8A, YARS2, YKT6, YWHAZ, AASD         </p>
Negative_15595	<p>           PRRT1, TNF, IFT7, LIF, FMO1, FGD, SRP, NADAC, ABL1, ACT1N2, ALG12, AOC2, ANKGEF2, ATP5B, B3GNT4, BHMT, BMPR1B, C4BPB, CALML5, CASP9, CCL7, CD40LG, CDH3, CES2, CHAT, CISH, CKMT2, COX10, CPS1, CPT1B, CREB5, CSF2RA, CYP11B2, CYP2C19, CYP2E1, DDX50, DGKA, DGKG, DNMT3B, DOCK1, DVL3, EPHA4, ERBB3, ERBB4, EXT2, EXTL1, FBP2, FGF1, FGF7, FGF9, FLT3, FMO4, FZD2, GAD2, GALC, GALNT1, GALNT13, GALNT7, GAPDH, GBA3, GCNT1, GDF6, GPA1, GRIA2, GRIN2D, GUK1, HAO2, HHIP, HTR4, ICAM1, IDI1, IFNA13, IFNAR2, IFNGR1, IFT57, IL17A, IL24, IMPA1, ITGA6, ITGAD, JAK1, KIR2DS4, KLK3, KRAS, LAMA4, MAML2, MAML3, MAP3K14, MAT1A, MDM4, MICA, MMP7, MTAP, NARS2, NAT5, NEU1, NFASC, NFYC, NLGN1, NME4, NOS3, NPR1, NRG1, NTF4, OR13H1, OR14J1, OR1D2, OR1L1, OR1L4, OR2T33, OR4C13, OR4D2, OR4K13, OR51A7, OR5A1, OR5AS1, OR5AU1, OR5B3, OR5T1, OR6K6, OR8D2, OR8J1, OXCT2, P2RX5, PDCD1, PDE4B, PDPK1, PER2, PFN2, PGLS, PGS1, PIK3CG, PNMT, POLR1D, POLR2H, PRKCB, PRPS1, PTGFR, PTPRB, PTPRZ1, RARS, RCHY1, RELB, RHOD, ROBO2, RPN2, RRAS, RUVBL1, SARS, SDC1, SDHB, SELP, SENP2, SFRP5, SHC4, SNAP23, SNAP25, SNW1, SPHK1, SPRY2, SPTLC1, SSH3, ST3GAL2, TALDO1, TAS2R48, TCF7, TIAM2, TLN2, TM7SF2, TOLLIP, TUBB2A, TYMS, UGCG2, ULBP1, USE1, VARS, YARS, YWHAG, ATP6V1C1, GABARAPL2, MAP3K7I         </p>
Negative_15596	<p>           AUH, BTC, C1S, C4B, F11, F7, F8, HK1, ID1, KMO, LAT, LIF, ME2, MUT, NNT, SCD, SMS, XDH, ZYX, AARS, ACAD8, ADH6, ADSL, AGPAT3, AHCYL1, AKR1B10, AKT2, ALAS1, ALDH3B1, ALOX12B, ALOX15B, ANAPC10, APC2, APOA2, APOE, ATP13A2, AVPR1A, B3GALT5, BPGM, CACNA1A, CAMK2D, CARD11, CCNA1, CCNB2, CCR10, CDC27, CDH4, CD01, CHKA, CLDN10, CLDN18, CLTA, CLTC, CPOX, CSNK1D, CTNNA3, CTPS, CXCL9, CYP2A7, DAG1, DCXR, DDHD1, DDX18, DGKA, DHDDS, DHX58, DRD1, EHMT2, EPRS, FGD1, FGF23, FGF9, GLUD1, GNA15, GPX5, GRB2, GUCY1B3, HTR4, IARS, IDH1, IDH3G, IFNB1, IL21R, IL22RA1, IMPDH1, INPP4B, IRF9, IRS4, ITGA2, KIR3DL2, KLRC1, KRAS, LEFTY2, LMO7, LTBP1, LYZL1, MADCAM1, MAPK12, MDM4, METTL2B, MGAT5B, MLYCD, MYH9, MYLK2, NEGR1, NLGN1, NRAS, NRG4, NT5E, NTRK2, OR13C2, OR1D2, OR1E2, ORIM1, OR2M7, OR4C13, OR4D1, OR4F15, OR4P4, OR51B6, OR51E2, OR51F1, OR52B6, OR5C1, OR6C1, OR7A5, OR7D2, OR8D2, ORC5L, ORC6L, P4HA1, PCNA, PCYT2, PGK2, PHKA2, PIAS3, PLA2G2E, PLAU, POLA1, POLR2H, PON1, PPA2, PPP1R3D, PRKAB2, PRKG2, PRNP, PRSS2, QARS, RUNX1T1, SDHB, SEMA4D, SIAH1, SKIV2L2, SMARCA2, STX1A, TAS2R5, TBL1XR1, TBXAS1, TFPI, TRIP10, UGT2B17, VAMP2, VEGFC, ZFYVE9, ATP6V1E1, HLA-DQB1, MAPKAPK3, PNLIPRP1, TNFRSF10C, TNFRSF12A         </p>

Negative_15597	<p>ADA, AK3, APP, BAD, C7, CS, DAO, DDO, DUT, FYN, GLS, GNS, HDC, HYI, IL7, LPO, MIF, OGT, SRC, TNN, AADAC, ABAT, ACOX2, ADH1B, ADORA2B, ADRA1B, AKR1C3, ALG9, ALOX5, ANGPTL4, APBB1, ASNS, ATP2A2, ATP6V0C, B3GNT5, C9orf95, CACNA1G, CACNB2, CACNG5, CCL13, CD274, CDO1, CHRM3, CHSY1, CLDN7, CLTCL1, CNTF, CPOX, CREBBP, CSNK1G3, CTSL1, CXCL12, CYP2E1, DDX55, DGAT2L4, DIAPH1, DIAPH3, DRD1, DUSP10, ENTPD3, ESAM, F11R, FABP4, FCER1G, FMO4, FOXA2, FOXA3, FSHB, GAL3ST1, GALNTL1, GANAB, GFAP, GPD1, GUCY2C, GUSB, HLA-DOB, HSPA1B, HTRA2, IDH3G, IFNA17, IFNA8, IL7R, IL8RB, ITGAM, ITGB1, JAM3, LIFR, LRDD, LRP6, MAPK10, MDM2, MPDZ, MPZL1, NCAM2, NEUROD1, NUMBL, OR10G7, OR1C1, OR1N1, OR2L2, OR2T29, OR3A1, OR4D5, OR51G1, OR52H1, OR5R1, OR5T3, OR6X1, OR8B12, PAK3, PARD6A, PGAM1, PHKB, PIAS4, PIGN, PIGQ, PIK3C2G, PIP5K1A, PLA2G6, PLCD3, PLCD4, PLXNA2, POMC, PPAP2A, PPARA, PPP1R3B, PPP2R2D, PPP5C, PRKG2, PRODH2, PSME1, PTDSS2, PTEN, PTK2, QPRT, RAB23, RAB5A, RAC2, RASA2, RASGRP4, RCHY1, RFXAP, RRM1, SAT2, SDC2, SETMAR, SFRP4, SV2B, TAS2R10, TAS2R14, TAS2R4, TCIRG1, TGFB1, TLR4, TYROBP, UGDH, UGT2B11, UPRT, UROC1, USE1, VAMP4, VAV2, VCAM1, VEGFB, WARS, WASL, WIF1, XCL2, YOD1, ZNRD1, MAPKAPK5, ST6GALNAC4, TNFSF13B</p>
Negative_15598	<p>AK1, C3, C8A, F10, GPI, GSR, HGF, HK2, HK3, MPZ, PGD, PXN, SHH, TFG, ACOX2, ADCY1, ALDH3B2, ANAPC11, ARHGEF1, ASIP, ATF4, AXIN1, B4GALT4, BCMO1, C1GALT1, C1QC, CACNB1, CACNG1, CCL13, CD44, CDK5, CDS2, CHEK1, CHEK2, CHST12, CHST13, CMAS, CNTNAP2, COL11A1, COL6A2, CPT2, CSF2, CTNNA3, DBF4, DIAPH2, EFNA5, EIF4B, EIF4E, ERBB2, ESPL1, EXOC7, FARP2, FZD2, G6PC2, GAB1, GALC, GALNT1, GALNT11, GCLC, GDE1, GDF5, GDF6, GLO1, GNA15, GNPDA2, GSTM3, GUCY1A3, GUCY1B3, GUCY2D, GUSB, GYS1, HMGS1, HSPA1B, IL10, IL13RA2, IL23A, IL7R, IRAK3, ITGA6, JAK3, LFNG, MAN1B1, MAPK3, MCCC2, MGAT2, MPP5, MYH4, NEUROG3, NGEF, NKD1, NLGN2, NME6, NR1D1, NR1H3, NRG2, NT5C1B, NT5C2, OLR1, OR10AG1, OR10H4, OR13C3, OR13F1, OR13G1, OR1F1, OR1G1, OR2AT4, OR4A5, OR51B6, OR51E1, OR52E2, OR52H1, OR52R1, OR5M9, OR7A5, OR8D1, OR9G1, OXTR, PFKFB3, PIGS, POLD2, POLR1B, PPA2, PPP3CC, PRKCA, PRKCZ, PSEN2, PTGES2, PTPRR, PYGM, RAPGEF4, SELP, SESN2, SETD1A, SETD1B, SIPA1, SLC9A1, SLIT2, SMPD3, SREBF1, ST3GAL2, STX10, SV2B, TBL1X, TBXAS1, TUBA1A, WASF1, WASF2, WNT7B, XYLT1, YWHAB, ATP6VOD1, ATP6VOE1, MAPK8IP1, PAFAH1B1, ST6GALNAC3, TNFRSF11A</p>
Negative_15599	<p>ATM, BTD, C4B, C8A, CDA, CRK, DAO, FH, GAA, IL5, ILK, LEP, NPY, STS, ADRB1, ALDH5A1, ALG8, AMPD3, ANAPC10, ASCC3, ATP5B, ATP6AP1, B3GALT6, BACE1, BCAR1, BDH1, C4BPA, CACNA1H, CAPN2, CCL20, CCL8, CCR3, CD274, CD79B, CDC23, CDH5, CDO1, CHAT, CHKB, CLDN10, CLDN14, CNDP1, COMT, CRLS1, CXCL1, CYP7A1, DCXR, DDX56, DGAT1, DPYS, DRD5, DTX1, E2F1, EPHA8, F11R, FBXW11, FGF5, FGFR3, FIGF, FUT1, GALM, GALNTL2, GNG13, GRIA3, GUCY1B3, HARS2, HES1, HMBS, HNF1A, HNMT, HPSE2, HSD17B2, HSPA2, IFNW1, IGF1R, IL17B, IL5RA, INSRR, KIR2DL4, LALBA, LRP6, MAML3, MAP3K11, MAPK10, MAT1A, MCM2, MGLL, MYL2, NFKBIA, NME4, NRP1, NUDT8, OR10AD1, OR10Q1, OR10X1, OR13C5, OR1J4, OR1L3, OR1N1, OR2G3, OR2W1, OR3A1, OR4C46, OR4Q3, OR51A2, OR5F1, OR5M9, OR5R1, OR5T2, OR5V1, OR6M1, OR8S1, OSMR, OXTR, P4HA1, PARD6B, PAX4, PDE7B, PGM1, PI4KB, PIGM, PIGU, PLCD3, PLEKHA8, PLK1, POLR1C, POLR2G, PORCN, PPP2R1B, PPT1, PRKAA2, PRKG2, PRODH2, PROS1, PSAT1, PTPRM, PVRL1, RAB5A, RAPGEF2, RASGRP2, RASGRP4, RPIA, SETD7, SETDB2, SFRP2, SHC4, SLC25A4, SLC25A6, SRGAP1, SRGAP2, TLR3, TUBA1C, UGP2, UPP1, WASF1, WNT3, XIAP, XYLT1, ATP6VOA1, CACNA2D1, CACNA2D3, GABARAPL2, PAFAH1B1, PAFAH1B3, PPARGC1A, SERPINF2, TNFRSF10D</p>

Negative_15600	<p>C1S, DBH, EDA, F3, GH2, HK3, ID4, LCT, MAX, MOS, MUT, PGF, TEC, TNN, VCL, ABP1, ACOT12, ADCY7, ADH6, ADRB3, AKR1B1, ALCAM, ALDH1L1, ALG3, AMPD3, ARPC3, ASCC3, ASRGL1, ATP6AP1, B3GALT6, BTRC, CADM3, CCL28, CCL7, CCNB3, CD14, CDK4, CDK6, CISH, CLDN11, CLDN7, COMP, COQ5, COQ7, CTNNA1, CYP1A1, CYP21A2, CYP2U1, DCXR, DDX56, DOLPP1, DUSP10, DUSP8, EIF4B, ENPP7, EPB41L2, EPHB2, FABP3, FGF3, FTH1, FZD6, GALK1, GALNTL1, GG T7, GLI3, GLUD2, GNAI3, GP1BB, GRIN2A, GSTA4, GSTA5, HARS2, HDAC2, HHIP, HPSE, HRH2, HTRA2, IFNA14, IFNA6, IFT57, IL3RA, IRF9, KCNB1, LIAS, LIPT1, LM07, MAGI1, MAGI2, MCCC2, MMP2, MYH15, NAGA, NAGLU, NANS, NCK1, NMNAT2, NMNAT3, NRCAM, NRG2, NRG4, NUDT8, NUMBL, OR10H3, OR10X1, OR11L1, OR14A16, OR1C1, OR2M5, OR2T5, OR4F15, OR4F4, OR4F6, OR4L1, OR51D1, OR52H1, OR52R1, OR5AK2, OR6N2, P2RX4, P4HA2, PAK2, PAK4, PDE7A, PFN1, PHKG2, PIGV, POLR1A, POLR2G, PTGES2, PTPRB, RAC1, RALGDS, RAP1A, RASSF1, RDH8, SETD1B, SFRP4, SHISA5, SKP1, SMAD9, SNAP23, SORBS1, ST6GAL1, STX3, TAS2R38, TAS2R4, TAS2R41, TGDS, THTPA, TLR3, TNFRSF9, TRADD, TSNARE1, UCKL1, VCAM1, WNT10A, WNT16, WNT4, WNT8B, YWHAH, PLA2G12B, SERPINE1, TNFRSF11A</p>
Negative_15601	<p>ASL, GP6, IL7, INS, LIF, ME2, TNN, ACAA2, ACADVL, ACPP, ADCY3, ADH7, ALDH6A1, ALDOA, ANAPC2, AOC2, ARHGEF2, ARNT2, ATP2A1, ATP6VOB, ATP6V1F, ATP6V1H, AVPR1A, B3GALT5, B3GNT2, BAAT, BLVRB, BMP5, C1QA, C4BPB, CACNG4, CAMKK2, CANT1, CASP3, CASP9, CCL7, CCR5, CCR6, CD3E, CD80, CDC23, CDKN2B, CLDN1, CLDN11, CLDN3, CLDN5, CLDN8, COL5A2, COL6A2, CSNK1G1, CX3CR1, CYP1B1, DAAM1, DDOST, DGKD, DIAPH2, DNMT1, DOCK1, DPM3, DPYSL2, EDNRA, EFNA3, EIF4E, ENTPD3, EPAS1, EPHX1, EPOR, FABP4, FBXW11, FCER1G, FCGR3A, FTCD, FUT9, GALNS, GDF7, GLO1, GNAI3, GNPAT, GNPAT1, GSTT1, HA01, HEXB, HLA-DMA, HLA-DRA, HLA-D, HNF1A, IDH2, IFNA7, IFT57, IL19, IL25, IL8RB, INHBE, INPP5A, ITGA6, JAK1, LEFTY1, LPAR1, MAD2L2, MAML3, MAP3K14, MAP3K7, MAPK8, MECR, MPZL1, MS4A2, MTHFD2, NCF1, NCR2, NKX3-1, NME7, NPR1, NPR2, NTRK2, NUDT12, NUMB, OGDH, OR10K2, OR11I1, OR1L6, OR2A14, OR2T3, OR2Z1, OR51F2, OR51I2, OR52A1, OR5A1, OR5J2, OR5P3, OR6C6, OR7D4, OR8G1, OR9Q2, OXCT2, PAK1, PCYT1A, PER1, PGK2, PIGM, PIK3R5, PIP4K2C, POLR2C, POLR3B, POMC, PPP1R3B, PRKCA, PVRL3, RBPJL, RDH10, RFXANK, SEMA4D, SEMA7A, SGMS2, SOCS2, STK4, TAP2, TBL1XR1, TCIRG1, THBS2, TNFSF4, TRDMT1, TRPC1, TSHR, TUBB4Q, TYMS, UPRT, VDAC2, ATP6VOD2, HLA-DRB3, PAFAH1B2</p>
Negative_15602	<p>ABO, C4B, C6A, C6G, CAD, CEL, CFI, CKM, GGN, GPI, GSN, IL8, INS, AANAT1, ABL1, ABL2, ACADS, ACP1, ADCY6, ADH6, ADIPOQ, ADRB1, AGPAT3, ALDH1L1, ALDH4A1, ANGPTL4, ASPA, ASS1, ATP5D, B4GALT1, BCKDHB, CACNB3, CACNG3, CASK, CASP6, CCL17, CCNE2, CCR4, CDC16, CDC26, CDC42, CDIPT, CDKN2B, CLDN17, CLDN2, CLDN8, CLOCK, CMAS, COQ7, CTNNA2, CXCL6, CYBA, CYP17A1, CYP26B1, DEGS1, DFFA, DHFR, DLL4, DPAGT1, ENPP1, EPRS, EXTL3, F13B, FRAT2, FUT8, FZD10, FZD3, G6PC2, GALE, GCH1, GDF5, GJA1, GNAI1, GP1BB, GRIA1, GRIA3, GRIN1, GRIN2A, GSTA4, GSTZ1, HDAC1, HIP1, HLA-DOB, HSP90B1, IFNA2, IL17RB, IL18R1, IL19, IL1B, IL23A, IL23R, IL24, IL25, IL8RB, INPP5B, INSR, IRS1, ITGAE, KDSR, LEFTY1, LFNG, LIPA, LIP E, LIPG, LM07, LTBR, MARS2, MCEE, MCM3, MCM5, MGAT4A, MPP5, MRAS, MTMR1, MYH7, MYH8, MYL7, NAGK, NUDT9, OR2A12, OR2L3, OR2S2, OR2T1, OR2T11, OR2T8, OR4C15, OR4E2, OR51F1, OR52J3, OR52K2, OR5AR1, OR6C70, OR6X1, OR8B8, OR8H3, OR9I1, ORC3L, PARVG, PIAS2, PIGU, PIGX, PIP5K1A, PKMYT1, PLEKHA8, PNPLA3, POLR1B, POLR2L, PPP3CA, PRKAR1A, PRKCE, PRLR, PRODH2, PROS1, PTGES2, PTPN5, PTPRZ1, PVRL3, RAPGEF4, RBPJ, RBPJL, RDH16, RGS3, RPS6KB1, SAT1, SEMA3D, SMAD2, SMPD2, SOAT2, SORBS1, SPRY4, SRD5A2, SRGAP1, STMN1, STX1B, SULT2B1, TAS1R1, TAS2R38, THTPA, TI</p>

Negative_15603	<p>BAD, C9, CR2, CS, DCT, GH1, GSN, HPD, IL3, JUN, MSN, MVD, SDS, SRM, TNC, A CADVL, ACTN2, ADRB1, ADRB3, AKR1C1, AKT3, AMY2B, ATF4, ATP4A, B3GALT 1, BTRC, C1QC, CACNA1D, CADM3, CASP10, CCL15, CCL26, CD274, CDC20, CFTR, CHEK2, CHPF, CHSY3, CLCA4, COL1A2, COL3A1, COX15, CREB3L1, CSF2RB, CSH1, CTSG, CX3CR1, CYP2C18, DARS, DERL1, DHODH, DHX58, DIAPH3, DRD1, DUSP4, E2F1, EDAR, EGLN1, EPOR, F13B, FDPS, FGD3, FM05, FTCD, GAS1, GNPAT1, GRIA3, GSTA4, GSTM3, HBEGF, HCST, HTR7, IARS, ICAM2, IDI2, IFNA5, IFNA8, IL11RA, IL17RA, IL18R1, INADL, IRF9, ITGAM, ITGB1, ITGB2, ITGB8, ITPKA, KIR3DL1, LAMC2, LAP3, LIFR, MAML1, MAP3K4, MARS, ME TTL6, MYH4, MYH7B, NARS, NCSTN, NEFM, NEU1, NFKBIE, NOS1, NRG1, OLAH, OR13A1, OR2S2, OR4C15, OR4P4, OR51A2, OR51B5, OR51F1, OR56A4, OR5AC2, OR5I1, OR5J2, OR5M9, OR6F1, OR6N2, OR7G3, OR8S1, OR9A2, ORC4L, OXSM, P2RX6, PAX6, PCYT1A, PDE6D, PDGFB, PIGA, PIGK, PISD, PLCG2, POLE4, POLR3K, PON3, PORCN, PPP2CA, PPT1, PRKAA1, PRKACB, PRKACG, PTGS2, PYGB, RERE, RHOA, RPS6KA3, SDHD, SFRP1, SGMS2, SGPP2, SHC4, SMAD1, SPHK1, SQLE, TGFB3, TJP2, TKTL1, TNFSF12, TNFSF8, TP53I3, TUBA1B, ULK2, V KORC1, VTI1B, YES1, YOD1, HLA-DRB3, HLA-DRB4, ST6GALNAC6, SUV420H1, TNFRSF17, TNFRSF1B</p>
Negative_15604	<p>APP, C1H, F11, GCR, GK2, GSK, H11, LMB, MTC, PML, SHH, TK1, ACAD9, ACT1, ACSL6, ACTC1, ACVR1, ACYP1, ADCY2, ADSS, AFMID, AGPAT4, AGRN, ALDH1B1, ALDH1L1, ALG12, ALG13, ALG3, ALS2, ANAPC11, AOC3, APOE, ARHGAP5, A SNS, BDKRB1, BPGM, C1QA, C4BPB, CACNA1E, CADM3, CAMKK1, CASP3, CCNG1, CDH3, CDIPT, CES7, CHAD, CHD8, CHKA, CHR1, CNGA3, CNGB1, COL4A2, CSA D, CSNK1E, CSNK1G1, CTPS, CXCL11, CYP11B1, DAPK3, DFFB, DHFR, ECS1T, EFNA3, EIF4E, ENAH, EPB41L3, EPOR, F13B, FARSA, FCGR3A, FDPS, FECH, FLT3, FUT4, FZD7, GCDH, GCLC, GDE1, GGT5, GUCY2D, HA01, HMGCR, IGFBP3, IMPA1, INMT, ITGA4, ITGA5, KIR2DL1, KLRC4, LAMA3, LDHAL6B, LFNG, LIA S, MAML3, MAP3K14, MAPK10, MAPT, MARS2, MDH2, MECR, NEFH, NFKB2, NFX1, NFYC, NOTCH1, NOTCH2, NPR1, OCLN, OR2D2, OR2D3, OR2T5, OR4C16, OR4D6, OR4N4, OR51F1, OR52B4, OR5B21, OR6B3, OR6Y1, OR7G3, OR8D4, OR8J1, ORC5L, P4HA3, PARD6B, PDE1B, PDE8B, PHGDH, PHKG1, PIK3R1, PIPOX, PLD2, PLXNA2, POLR1B, POLR2D, POLR2F, POLR2H, PON3, PPP2CB, PRKACA, PRKACG, PRKCB, PRLR, PTPRM, RBKS, RERE, RFW2, RRAS, SAT2, SCIN, SDHB, SHC1, SLC12A2, SLC25A6, SLC2A4, SMPD2, SPHK2, SPTAN1, ST3GAL1, STX3, SULT1A2, SUV39H1, TAS1R1, TAS2R60, TAS2R8, THBD, THBS2, THBS3, TPMT, TRMT11, UGCG, UPB1, WIF1, YWHAB, CSGALNACT2, KIR2DL5A, MAP3K7IP2, M</p>
Negative_15605	<p>AK5, CFH, CR2, FUK, GPT, HAL, ID2, LYN, MVD, NNT, ACAA2, ACSS3, ACTG1, ADAMI7, ADCY3, ADORA2A, AGXT, ALG10B, ALG11, ATG7, BDNF, BMP8A, BRAF, BUB3, CACNA1S, CACNB3, CACNG3, CALML3, CARD11, CCL4, CCR4, CD36, CKS1B, CNTNAP1, COL6A1, CREB3L1, CRLF2, CXCL9, CYP11B2, CYP1A1, CYP2A7, DARS2, DGKZ, DKK4, DPYSL2, E2F3, E2F5, EFNA3, FCER1G, FUT5, FZD6, GALK2, GALNT13, GALNT5, GAS1, GBA3, GCAT, GDF6, GPLD1, GSTA3, GSTO2, GSTT1, HMBS, HMOX1, HSD11B1, IDH1, IDH3G, IFIH1, IGF1, IL10RA, IL23R, IL6R, IRAK3, IRF9, ITGA4, ITGA6, ITGAD, JAK2, LGMN, MAPK11, MAPK14, MAT1A, MGLL, MPZL1, MTAP, MTHFD1, MYH1, NARS2, NCR1, NFKBIB, NFX1, NR5A2, NRG1, NT5C1B, NT5C3, OGDHL, OR13D1, OR13G1, OR1L1, OR1L4, OR2A42, OR2M4, OR2M7, OR2T5, OR2Y1, OR4F15, OR4Q3, OR51A2, OR51B2, OR51D1, OR51G1, OR51I1, OR56B4, OR6C70, OR6M1, OXTR, P2RX1, PARD6G, PAX8, PDGFB, PIK3CG, PNMT, POLR2F, PPP2R2D, PRKAR2B, PTDSS1, PTPRB, PVRL4, RASGEF3, RND1, RRM2, RRM2B, SCP2, SGMS2, SIPA1, SMAD2, SPP1, STAM, STMN1, TAS2R60, TBXA2R, TOMM40, TPM3, TUBB4, UGT2A1, UGT2B11, UGT2B7, UNC5B, HLA-DQA2, HSD17B10, TNFRSF18</p>

Negative_15606	<p>AK1, AK2, C8A, CSK, DCC, EDA, FUK, IHH, IL3, LCK, MAX, MOS, OSM, TXK, AASDH, AKR1C2, AKR1D1, ALDOC, ANAPC11, ANAPC4, ARD1A, ASRGL1, ATG7, ATP5F1, ATP6V1A, B4GALT1, BCKDHA, BDKRB1, BMP6, CAMK4, CCL4, CCL8, CD79B, CFTR, CNTF, CREB3L3, CTNNA1, CTSL1, CX3CL1, CXCL10, CXCL3, CYP21A2, CYP2C9, DCTD, DDIT3, DHCR7, DHDH, DHRS4L2, DPYS, DRD5, ENPP2, ENTPD4, EPHA7, FARSB, FGF8, FLT1, FPGS, GAD1, GADD45B, GALK1, GGT1, GNA12, GNPDA1, GOSR2, GSTT1, HLA-DRA, HLCS, HSD17B2, HSD17B3, HSD17B8, IDH3G, IL1R2, IL22RA1, IL4R, INPP4A, INPPL1, IPMK, IRS2, ITGA2, ITPKB, KIR2DL1, LDHC, LYPLA1, MAP2K4, MAP2K6, MAP3K12, MGAT5B, MMP2, MYH2, MYH7B, MYH9, MYLK, NAGK, NANA1, NEGR1, NEU1, NFATC4, NLGN2, NOTCH2, NUMBL, OGDH, ONECUT1, OR1E2, OR1L3, OR2A4, OR2AG2, OR2F2, OR4C6, OR4D1, OR4K2, OR5J2, OR7A5, OR7G3, OR8H3, OR8I2, OSMR, P2RX7, PDE3A, PDE7A, PDE8B, PFN3, PIAS3, PIGP, PIK3C2G, PIK3R1, PIM2, PKMYT1, PNPLA4, PPCDC, PPID, PPP1R1A, PTAFR, QARS, RASGRP1, SAT1, SEMA3A, SENP2, SLC25A4, ST3GAL5, STAT4, STK4, TALDO1, TAS1R1, TAS2R49, TCF7L1, TKTL1, TNFRSF9, TRAF4, TYK2, UGT2B7, UMPS, VNN1, ATP6V1G3, HLA-DRB5, PLA2G12A, PNLIPRP2, PPARGC1A, TNFRSF10D</p>
Negative_15607	<p>AK5, ASL, BID, C4B, C7, F3, FH, GDA, GK2, ID4, KDR, LHB, MOS, MPZ, OGT, SDS, TNR, AASDH, ACVR2A, ADH1A, ADORA2A, ADORA2B, AGPAT2, ALAS2, ALDH1A1, AMDHD2, AMPD1, ANAPC2, ANGPTL4, APOA5, ARHGEF7, ARNT2, ARSB, ARSD, ATP2A1, ATP2A2, ATP5A1, ATP5C1, BUB3, CCDC6, CCL27, CD226, CDC25A, CDK4, CDKN1C, CHRM1, CHST11, CMPK2, COL5A2, COQ5, CYP1B1, CYP4A11, CYP4F3, DDX52, DGAT2L4, DGKB, DGKI, DHCR24, DLAT, DNMT1, EARS2, EDNRB, ENTPD6, EPAS1, EPHA2, ESAM, FGF18, FGF3, FSHR, FUT8, GABARAP, GSTA4, GSTM3, GUSB, HLA-DRA, HRH2, HSD3B1, HYAL1, IPPK, IRF9, ITGA8, ITGB1, KIR3DL2, LDHC, LGMN, LIPE, LIPT1, MAD2L1, MAP3K7, MAP3K8, MAP4K3, MCCC1, MCM4, MPST, MYH11, MYH6, MYL5, NCR1, NCR3, NFKB1, NT5M, NTNG1, NUMBL, OR10A6, OR11L1, OR1L1, OR1L3, OR1M1, OR2A14, OR2AG1, OR2AT4, OR2D3, OR4C12, OR4N5, OR51Q1, OR5M3, OR5T2, OR6K3, OR6M1, OR8B8, OR9G4, ORC6L, PAK6, PDHA2, PHKA2, PHKB, PLA2G3, PLCB1, PPAP2C, PPCS, PPM1A, PPP2R5D, PPT1, PRNP, PRPH2, PTPMT1, PTPRB, PYCR1, RHEB, RPS6KA6, SELL, SELPLG, SEMA3B, SEMA4C, SEMA4F, SMARCA2, SRD5A1, STAT2, STAT4, SUCLA2, TAS1R2, TAS2R40, TAS2R7, TBL1X, TJP2, TLN2, TPH1, TYRP1, UGT2A1, UXS1, VAMP4, VARS, VDAC3, WARS, WASF3, WNT7A, WWP1, XYLT2, YOD1, ZAP70, HSD17B12, PPARGC1A, SUV420H2</p>



Negative_15608	<p>AUH, CGA, CR2, GAA, HK2, NLK, SMO, ACAA1, AC11, ACTA2, ADH6, ADH7, AKK1  C1, AKT3, ALAS1, ALG10, ALPI, APLP1, ARNTL, ARSA, AXIN2, B4GALT6, BPG  M, CACNA1H, CACNG6, CAMK4, CCNB1, CCNB3, CCND2, CD244, CD82, CFL1, CH  AT, CLDN15, CLDN9, CNGA4, CNTFR, COQ3, COQ6, CTNND1, CXCL12, CYP11A1  , CYP17A1, CYSLTR1, DCTN1, DFFA, DGKH, DTX1, DTX3L, DUSP4, E2F3, EDNR  A, EFNA4, EHHADH, ENO3, EPHA5, ESPL1, F2RL1, FGD1, FGF1, FGF22, FGF4,  FGF8, FLOT2, FLT3, FOXO1, FZD5, GALNT8, GALNTL1, GAPDH, GBE1, GDE1, G  GPS1, GJA1, GLUL, GMPR2, GNG13, GNPDA1, GOT1, GRAP2, GRHPR, GSTA5, HA  GH, HA01, HES1, HNF4G, HRAS, HRH1, HSD17B3, HSD17B8, ICAM1, IDI1, IFN  A2, IKBKB, IL11, IL12RB2, IL17A, IL17RA, IL28RA, IL6R, IL6ST, IQGAP1  , ITGAX, ITGB2, KLRC3, KLRD1, LAMC3, LCAT, LEF1, LIAS, LTA4H, MAP4K1,  MAP4K4, MAPT, MCCC2, MGST3, MIOX, MMP7, MNX1, MYLK, NEFM, NME7, NRG3,  NT5C1A, OGDH, ONECUT1, OR10G8, OR14J1, OR4D5, OR4F6, OR4K17, OR4M1,  OR51L1, OR5B21, OR5B3, OR5D18, OR5V1, OR6C1, OR6C2, OR6C70, OR8H2, O  RC1L, ORC2L, PDE10A, PDHA2, PFKL, PFN2, PIK3R5, PIP5K1B, PLCD1, PLCG  2, POLR2K, PPP1R3D, PPP2R1A, PRPH, PRPS1, PRSS1, PRSS2, PTAFR, PTPN7  , RAPGEF3, RBX1, RFXAP, RHOD, ROBO1, SFRP2, SOCS5, SPRY2, SSH1, SSH3,  SULT2B1, TAS2R1, TBK1, TFDP1, THY1, TICAM2, TJP2, TLR9, TOMM40, TUBB  2A, TUBB2C, UBE2C, VAMP8, VCAM1, VEGFA, WDR33, WIP1, YFCL1, ZBTB16</p>
Negative_15609	<p>ABO, AK7, ATM, CBS, CGN, DBH, DCT, GSR, HAL, IL2, ILK, JUP, LEP, LTB, TNF  , TPO, VTN, ABI2, ABL2, ACSM3, ADCY6, ADH1A, AGPAT1, AGPAT6, AKR1C4, A  LAS1, ALDH1A3, ALDH3B2, ALDH4A1, ALPP, ANAPC2, ARSA, ATG7, ATIC, ATP  6V1A, BACE2, BAI1, BCAT2, BMPR2, C4BPA, CACNA1A, CACNA1D, CACNG7, CA  DM1, CAMK2D, CCL4, CCNB3, CES1, CHIT1, CLOCK, COL1A2, CSF3, CTLA4, CT  TN, CXCL1, CXCR3, CXXC4, CYP2C18, DAAM2, DDIT4, DDX54, DGAT2L4, DHDD  S, DHDH, DOLPP1, DUSP14, DVL3, EFN2, EGFR, ENPP2, ENPP7, ENTPD5, F2R  L2, FGF23, FOSL1, FZD6, G6PC2, GALNT14, GBE1, GLYCTK, GRIN1, GSTM2, H  6PD, HLA-  DMA, HMGCS1, ICOS, IFIH1, IFNA5, IKBKG, IL17B, IL6R, IMPA1, ITGA1, IT  GA2B, LDHAL6A, LEFTY2, LIPG, MADCAM1, MAN2A1, METTL2B, MGAT1, MGST2  , MS4A2, MYH15, MYLK2, NAE1, NAT6, NME7, OR10A5, OR1J1, OR1J4, OR3A3,  OR4A15, OR4D2, OR4E2, OR4M1, OR4X1, OR52E6, OR52L1, OR8A1, OR8H3, OR  8J3, OR9Q2, P2RX1, PAK4, PANK1, PARD6B, PDE5A, PDGFA, PHKB, PKLR, PLA  T, PLXNA2, PNPT1, POLR2C, POLR3D, POLR3G, PPARG, PPP3CC, PPP3R1, PRK  AB1, PRKCZ, PRPS2, RDH11, RHOQ, RPS6KA5, RRAS2, SCD5, SDC2, SELPLG, S  ETD2, SFRP2, SH3BP2, SHC2, SMAD6, SNAP25, SPHK2, SPRED1, STX18, TNFR  SF4, TOLLIP, TPH1, TRAF1, TSNARE1, UGT2B10, UGT2B28, VDAC3, VKORC1,  WARS, WNT10B, ATP6VOA2, ATP6V1E2, EIF4EBP1, GABARAPL2</p>

Negative_15610	<p>ADC, AGK, AMT, ASL, CS, CD2, CEL, DAO, DDC, GCR, GDA, GP1, IDS, IES, IIR, NF1, OAT, PLN, PVR, UBC, ACAA2, ACOX2, ACSM2A, ACSM3, ADIPOQ, ADORA2B, AGPAT3, AK3L1, AKR1B10, AKR1D1, ALAS2, AMHR2, ARNTL, ASMT, ATG7, ATP12A, ATP4B, ATP5J, BBC3, BCKDHB, BMPR1B, CARS, CCL13, CCL8, CCNE2, CD80, CDKN2A, CES7, CHIA, CHUK, CLDN3, CLTB, CNTN1, COL5A1, COMT, CSF2, CTTN, CUL1, CYP17A1, CYP1A1, DAPK1, DDX4, DGKE, DHCR7, EFNA4, ELK1, ENPP6, ENTPD4, EP300, F2RL3, FCER1G, FCGR3A, FUT7, FZD1, FZD4, FZD8, GALNT7, GALNTL1, GCNT2, GDF6, GMDS, GMPPA, GNA11, GNAL, GRB2, GUCA1B, GUCY2F, HLA-C, HRH2, IFNA6, IGFBP3, IL19, IL20RA, INMT, JAM2, KCNJ11, LIMK2, LYPLA1, MAP3K13, MAP3K8, MAPK10, MAPK3, MBL2, MCM5, MGLL, MLLT4, MPZL1, MYLK3, NCKAP1, NFKBIE, NKD1, NKX6-1, NODAL, NPAS2, NR5A2, NRXN3, NT5C1B, OR10G9, OR10J3, OR13C2, OR14C36, OR1L8, OR2F1, OR2L2, OR4A16, OR4C12, OR4K17, OR51F1, OR51T1, OR5B3, OR5D14, OR5I1, OR8B8, OSMR, OXCT2, P2RX6, PAK2, PARD6G, PAX8, PDE4C, PDE7B, PIK3CD, PKMYT1, PLCD1, PLD2, PLXNA2, POLR2B, POLR3A, PPCDC, PRKAG3, PRKCG, PSME1, PTCRA, PTPN11, RALB, RDH16, RFX5, RGS3, SDHA, SELE, SENP2, SESN3, SETD8, SLC12A2, SMAD7, SMC1B, SMPD4, SOCS3, SOS1, SPRY1, SPRY2, STMN1, SV2A, TCF7, TCIRG1, TJP3, TPK1, UGCGL2, UGT2A</p>
Negative_15611	<p>ACH, BTD, UB2, UR2, CKAP5, NCL2, VART2, GZK, Gnz2, TRGV, HPI, KMO, TLK, P, PRL, SYK, AASDH, ABLIM2, ACO2, ACP5, ACTN4, ADCY6, ALDH1A2, ALDH1B1, ALOX12B, ALOX15B, ASIP, ATF4, ATP4B, B3GALT1, BCAT1, CACNA1B, CACNG1, CAMK2G, CCL23, CCND2, CCR1, CCR7, CD58, CD74, CD8B, CHKA, CHST13, CLDN11, CNTNAP2, COL1A1, COL4A6, CSF1R, CSNK2A2, CTBP2, CUL1, CYBB, CYP2C18, CYP2F1, CYP3A43, CYP3A7, DFFA, DHRS4, DPAGT1, DTX4, ECSIT, EFNA2, ELK4, ENO3, ENTPD1, EPHA1, EPHA2, EPHB3, FABP4, FLT3, FZD10, GALNT12, GALNT9, GALT, GGBT1, GNG12, HAO2, HPSE2, IFNAR1, IKBKE, IL10RB, IL17B, IL20, IL2RA, IMPDH2, INPP4A, ITGA7, KIR2DL3, KLRC4, LAMC3, LIPT1, LYPLA1, MAML2, MAN1A1, MAN1C1, MAP3K3, MAPK7, MBL2, MCM6, MGA T4B, MLYCD, MYD88, MYH6, NADK, NARS2, NAT2, NCKAP1, NEFH, NFASC, NRXN3, OR14I1, OR1A2, OR1C1, OR1N2, OR1S2, OR2C3, OR2G2, OR2T33, OR2T4, OR2T6, OR4C13, OR4D6, OR4X2, OR51V1, OR5AU1, OR5H2, OR6A2, OR6B3, OR6K6, OR7D4, OR9Q2, P2RX2, PANK4, PDE6H, PDPK1, PFN3, PHKG2, PIGO, PIGU, PLCD4, POLE, POLR2I, POLR3B, PON1, PPAP2B, PPARA, PPM1D, PPP1R3D, PRKACA, PRKAR1B, PRKCG, PRKG1, PSME2, PTAFR, PTPRC, RRM2, RXRA, SCLY, SEMA3C, SEPHS1, SMPD4, SOCS1, SORBS1, SPI1, SRD5A2, TAS2R16, TAS2R4, TAS2R60, THBD, TNFSF4, TSHB, UAP1, UGP2, UGT2B17, WNT8B, XCL2, ATP6</p>



Negative_15615	<p>CD4, CPH, CGN, CF, CR2, CRK, DDO, DU1, IDS, IVD, FGF, FKI, ABA1, ACACB, ACADS, ACOT12, ACP6, ACY3, ADAM17, ADH7, AK3L1, ALDH3A1, ALDH4A1, ALG2, ATIC, ATP5F1, BCL10, BCL2L1, BIRC2, CAMK2G, CASP10, CCL27, CCND1, CCR6, CD34, CD38, CES1, CHAT, CHRM1, CHRM5, COL11A1, COQ6, CRLS1, CSF3, CTNNA1, CXCL16, CYSLTR1, DAG1, DDX19A, DDX23, DDX51, DHODH, DHRS4, DPYS, DTX2, EGLN3, ENTPD3, EPHB2, EPHX2, FABP3, FGF1, FGF9, FLT3, FOSL1, FUT1, FUT2, FUT7, G6PC, G6PD, GNA14, GNAI3, GP1BB, GRM5, HIP1, HSD17B1, IDH3A, INPP1, INPP5E, IRAK4, IRF3, IRS2, ITGB5, KCNB1, KCNQ1, LCMT2, LRAT, LTB4R2, MAGI1, MAP3K6, MAPK13, MGAT3, MGAT5, MTHFD1L, NATA1, NCR1, NFATC2, NRXN2, OR10J3, OR10X1, OR13D1, OR2C1, OR2T33, OR4B1, OR4C13, OR4C15, OR4K15, OR4N5, OR51D1, OR52N2, OR52R1, OR5AU1, OR5D13, OR5L2, OR6C2, OR6Q1, OR8H2, ORC2L, OXSM, P2RX7, PAK1, PAPSS1, PDE4B, PDE8B, PDGFRA, PFKL, PHKG2, PIGT, PIP4K2A, PIP5K3, PLA2G2A, PLCD3, PLXNB2, PMVK, POLD1, POLR2I, PPARG, PRKAA1, PRPS2, PSPH, PTCRA, PTGER1, RALGDS, RDH10, RENBP, ROBO2, SELPLG, SEMA3A, SESN3, SGPP1, SHMT2, SMURF2, SNAP25, SPCS1, SPRY4, STX16, SUCLG2, SUFU, SULT1A2, SV2B, SYNJ1, TAS2R40, TAS2R50, TAS2R9, TFDP1, TIRAP, TLR2, TUBA1B, TUBA3E, UPB1, UXS1, VDAC1, WNT8A, YARS2, ZBTB16, CACNA2D3, PLA2G12A, S</p>
Negative_15616	<p>ATG, CYP17, DDO, GFR, GSN, LCT, LIT, ME2, NNT, PDC, RADA, ABA1, ACADS, ACADVL, ACTB, ACTC1, ADORA2B, ADRA1B, ADRA1D, AGMAT, ALDOC, ALG11, ALOX12, ANPEP, ARHGAP5, ARPC1A, ASAH1, ASRGL1, ATF2, ATG7, ATP5I, ATP6V1F, B4GALT7, CACNB2, CACNG5, CADM3, CAPN2, CCL19, CCNB1, CCR5, CD28, CDC14B, CDKN1B, CDKN2A, CEBPA, CHRM1, CKS1B, CLCA2, CLCA4, CLDN16, CLTCL1, CRY1, CSF3, CSH1, DAXX, DHRS3, DHX58, DRD5, DTX3L, DUSP6, EDAR, EFN1, EIF4B, EXOC7, F2RL2, FADD, FADS2, FGFR4, FMO3, FOSL1, FRAP1, FUT8, GFPT2, GOT1, GPAA1, GPT2, GSTM1, GYS1, GZMA, HAO2, HES1, HMBS, HTR5A, IDH3G, IFNA4, IL10RB, IL1R2, IMPDH1, INPP5E, IQGAP1, ITGA7, ITGAD, ITGAL, ITGB2, KCNQ1, KIR2DL4, LCP2, LEFTY2, LEPR, LYZL1, MAP3K2, MAP3K4, MAP3K6, MAPK12, MDH1, MGST2, MYH6, NEU2, NEUROG3, NODAL, NRCAM, NRXN3, NT5C1A, OR13F1, OR1C1, OR1K1, OR1M1, OR2C3, OR4A5, OR4C15, OR4C46, OR4D1, OR4D2, OR4M2, OR51A4, OR52N5, OR6C3, OR7A10, OR7A5, OR8D1, OR9K2, PAK7, PARD6A, PARVB, PCK2, PDE4D, PGAM4, PHPT1, PIGH, PIGM, PIGX, PLA1A, PLA2G2A, PLA2G4A, PLA2G5, POLA2, POLR1B, POLR2F, PON3, PPM1B, PPP1CB, PPP2R2D, PRKAG3, PRODH, PTGFR, PTPMT1, PTPN6, PTRJ, RALB, RCHY1, RFX5, RGS3, ROCK2, RPE65, RPS6KA6, SARDH, SC5DL, SCLY, SLC2A4, SLIT1, SMPD2, SPRY2, ST3GAL2, SULT2B1, SYNJ1, SYNJ2, THY1, TICAM2, TIG, PLS, TGF2, JUP, MTR, VAMP, PLN, TRP, AHA2, RCLU, ACADVL, ACTN2, ADORA2B, AKR1D1, ALDOB, ALG12, APOA1, ARHGEF1, ARSB, ASCC3, ATG12, ATG7, ATP5G2, ATP6V1D, B3GALT1, B4GALT6, BAAT, BIRC3, BPNT1, C1QB, CACNG8, CD226, CD38, CD59, CDC20, CDH1, CD01, CEBPA, CLDN1, CLDN2, CLDN3, CLDN4, COL5A3, COL6A2, COMT, COQ7, CRLF2, CRY1, CTBP1, CTSG, CUL1, CYP3A5, CYSLTR2, DIAPH2, DKK2, DPAGT1, DRD2, DRD5, DTX3L, DUSP8, EGLN1, ENTPD7, EPB41L3, ETNK1, F2RL1, FDPS, FLT1, FRAT2, G6PC, GANC, GMDS, GNPAT1, GSTA5, GSTP1, GSTZ1, GUCY1A2, HADHA, HAP1, HBEGF, HEXB, HHIP, HMBS, HPRT1, HRAS, HSD17B2, IL17A, IL18, IL9R, INHBC, IRAK1, IRF9, ITGB1, JAM3, KCNB1, KLRC4, KYNU, LAMC2, LAMC3, LFNG, LIAS, LIPT1, LRRC4C, LTBP1, MAML2, MAP3K11, MCM7, MGAT3, MTHFD1L, NAMPT, NCOA4, NEUROG3, NFAT5, NFE2L2, NME6, NME7, NR5A2, NT5M, NTN1, NUDT5, OGDHL, OR10J3, OR1G1, OR2C3, OR2G3, OR2Z1, OR4B1, OR4K14, OR4N5, OR51I1, OR5L1, OR5P2, OR5T2, OR6C76, OR6M1, OR6N1, OR6T1, ORC6L, OXCT2, P2RX3, P2RX6, PARD6B, PAX6, PDE1A, PDE2A, PFKFB2, PHPT1, PIGV, PIM2, PLA2G4A, PLAUR, PLOD1, PLTP, POLE, POLR2B, POLR2K, POLR3H, PON2, PORCN, PPAP2C, PPID, PPT1, PRKAR2B, PTCRA, RAP1A, RAPGEF2, RARS, RBL2, RFX5, RHOD, SDC4, SEMA3F, SH3BP2, SNW1, SOCS5, SPTAN1, SRD5A2, SRGAP2, S</p>
Negative_15617	<p>ACTN2, ADORA2B, AKR1D1, ALDOB, ALG12, APOA1, ARHGEF1, ARSB, ASCC3, ATG12, ATG7, ATP5G2, ATP6V1D, B3GALT1, B4GALT6, BAAT, BIRC3, BPNT1, C1QB, CACNG8, CD226, CD38, CD59, CDC20, CDH1, CD01, CEBPA, CLDN1, CLDN2, CLDN3, CLDN4, COL5A3, COL6A2, COMT, COQ7, CRLF2, CRY1, CTBP1, CTSG, CUL1, CYP3A5, CYSLTR2, DIAPH2, DKK2, DPAGT1, DRD2, DRD5, DTX3L, DUSP8, EGLN1, ENTPD7, EPB41L3, ETNK1, F2RL1, FDPS, FLT1, FRAT2, G6PC, GANC, GMDS, GNPAT1, GSTA5, GSTP1, GSTZ1, GUCY1A2, HADHA, HAP1, HBEGF, HEXB, HHIP, HMBS, HPRT1, HRAS, HSD17B2, IL17A, IL18, IL9R, INHBC, IRAK1, IRF9, ITGB1, JAM3, KCNB1, KLRC4, KYNU, LAMC2, LAMC3, LFNG, LIAS, LIPT1, LRRC4C, LTBP1, MAML2, MAP3K11, MCM7, MGAT3, MTHFD1L, NAMPT, NCOA4, NEUROG3, NFAT5, NFE2L2, NME6, NME7, NR5A2, NT5M, NTN1, NUDT5, OGDHL, OR10J3, OR1G1, OR2C3, OR2G3, OR2Z1, OR4B1, OR4K14, OR4N5, OR51I1, OR5L1, OR5P2, OR5T2, OR6C76, OR6M1, OR6N1, OR6T1, ORC6L, OXCT2, P2RX3, P2RX6, PARD6B, PAX6, PDE1A, PDE2A, PFKFB2, PHPT1, PIGV, PIM2, PLA2G4A, PLAUR, PLOD1, PLTP, POLE, POLR2B, POLR2K, POLR3H, PON2, PORCN, PPAP2C, PPID, PPT1, PRKAR2B, PTCRA, RAP1A, RAPGEF2, RARS, RBL2, RFX5, RHOD, SDC4, SEMA3F, SH3BP2, SNW1, SOCS5, SPTAN1, SRD5A2, SRGAP2, S</p>

Negative_15618	<p>DCN, F8, FAH, FER, FHN, HGF, IL9, IVD, NGF, PLG, TFG, ACACA, ACMSD, ACO1  12, ADCY4, ADCY5, AGMAT, AGXT2, AHCY, AKR1B1, ALDH6A1, ALG2, ALOX12B  , AMPD2, ATP5G3, BBOX1, C1QA, CADM1, CAMK2D, CCL14, CD46, CD8A, CDC2,  CHEK2, CMAS, CNTN2, CNTNAP2, COL2A1, COL4A4, CREB3L3, CSF2RA, CTF1,  CYBA, CYFIP2, CYP19A1, CYP1B1, CYP21A2, CYP26A1, CYP2E1, DAPK2, DBF  4, DRD2, E2F1, EDNRA, EFNA2, EGLN1, ELK1, ENPP2, ENTPD6, FGFR3, FSHB,  FZD2, G6PC2, GALNTL5, GAMT, GANAB, GBE1, GCNT4, GGCX, GLI2, GMPR2, GN  B3, GRHPR, GRIA1, GRIN2B, GSTK1, HPSE, IAPP, ICOS, IFNA7, IL12A, IL29  , ITGAV, ITGB5, JAK1, KIR3DL3, LAMC2, LILRB3, LIPC, LIPE, LLGL2, LM07  , MAP2K2, MGST1, MLLT4, MPZL1, MTHFD2, MYH10, NADK, NCR3, NEU3, NFAT5  , NKX6-  1, NLGN2, NOTCH3, NUMBL, OR10A5, OR10AG1, OR10G3, OR10H4, OR10J3, OR  13C3, OR1L8, OR2A14, OR2B11, OR2K2, OR2L13, OR2T1, OR52A1, OR52E4, O  R5M8, OR6B2, OR6K3, OR7A10, OR8B8, OR9I1, OR9Q1, OSMR, PAFAH2, PAK7,  PARD6A, PCYT2, PDE6G, PDE7A, PDHA1, PER3, PFKL, PGAM1, PGM2, PIGU, PI  K3C2G, PIK3CD, PIP4K2B, PLXNA3, PLXNB2, POLR2D, PPAP2A, PPP2R2C, PR  KACA, PRKCG, PTAFR, PTGES2, PTPN11, RALGDS, RAPGEF1, RDH5, RPS6KB1,  SCD5, SDC4, SKP1, SLC25A4, SLIT1, SMARCA2, SOCS2, SOCS7, SRGAP2, ST3  GAL3, STAT2, STX5, TALD01, TGFA, TNFRSF4, TNFSF12, TP53I3, TPK1, TRP  M5, UCK1, UCKL1, UCCGL1, UCTOP11, VANGL2, VET1L1, VWHL17, ATP6V1G2, CA</p>
Negative_15619	<p>A2M, C2, C4B, C7, CSK, GDA, GK, GNS, ID1, MIF, OSM, SYK, ACSL3, ACSM5, AD  H4, AGMAT, AGPAT4, AKR1C2, ALDH2, ALDH4A1, AMY2A, APC2, ARHGEF2, ARN  T2, ARPC2, ARPC5, ASPA, ATF2, ATP5G3, B3GALT2, B3GALT4, BAIAP2, BBC3  , BDKRB1, BMP6, CALML6, CDK7, CER1, CLDN5, COL6A1, COQ7, CRB3, CSF1R,  CTPS2, CTSG, CXCL1, CXCL2, CYP4A11, DHRS4, DIAPH2, DIAPH3, DUSP1, E2  F3, EDNRB, EGFR, EHHADH, ENAH, ENO3, ENTPD4, EP300, EPHX1, ERBB4, FBP  2, FDFIT1, G6PD, GADD45A, GALNT7, GMPR, GNRH1, GPX5, GUCY2F, HARS2, HB  EGF, HHIP, HPSE2, HSPA1B, IFNA4, IL13RA1, INHBE, IPPK, IQGAP3, ITGA9  , KLK3, LAMB1, LARS, LDHD, LYPLA1, MCCC2, MGAT3, MKNK1, MYH15, MYL7, N  AGA, NCKAP1L, NMNAT3, NNMT, NRP1, NSD1, NT5M, OR10S1, OR13C8, OR13F1  , OR2A14, OR2A4, OR2B6, OR2T11, OR4D2, OR4S2, OR51Q1, OR52I2, OR52N1  , OR52N5, OR5T2, OR6K2, OR8U1, ORC6L, PARD3, PDE8B, PFN1, PGAP1, PIGW  , PIP4K2C, PLA2G3, PLAUR, PRSS3, PTPRR, PVRL2, PVRL4, RASGRP2, RIPK1  , ROBO3, RPS6KA4, RPSA, SEMA4B, SEPHS1, SIAH1, SKP2, SLC12A2, SLC2A2  , SPRED2, SQLE, STX8, SUCLG2, TCIRG1, THBS4, TNFSF8, TUBB1, TYMS, UGC  GL1, ULBP3, VEGFA, WHSC1L1, WNT1, WNT7B, YARS2, YWHAG, ATP6V1G2, ST6  GALNAC3, TNFRSF1B</p>

Negative_15620	<p>APP, DDO, F7, FGG, GH2, GNE, IL2, PRL, ACAT1, ACSM5, ACTC1, ACY1, ADRB1, ADRBK2, AKR1A1, AKR1B10, ANAPC10, APC2, APRT, AQP7, ARPC4, ARPC5L, ARSD, ATG3, ATP2A1, ATP5G1, CACNG4, CANT1, CARS, CASP8, CCL20, CIITA, COL4A1, COL4A4, COMT, COQ3, CRY1, CTNNA3, CTNNB1, CTNND1, CTSG, CTS L1, CYP3A43, DAPK3, DCTN1, DDX55, DNMT3A, DUSP1, EPB41L3, ETNK2, FAR S2, FGF9, FGFR4, FZD9, G6PD, GALK2, GALNT6, GNPAT1, GOT2, GSTA3, GST M1, HEXA, HLA-</p> <p>DOA, HSP90B1, HSPA1B, IAPP, IBSP, IDH2, IFNGR1, IL12A, IL13RA1, INHB A, ITGAD, KNG1, LAMA4, LEPR, LIFR, LYZL1, MAGI3, MAML3, MAN2A1, MAP2K 5, MAP3K3, MCEE, MICA, MMP2, MRAS, MYH1, MYH14, NFE2L2, NFKBIE, NME2, OR10A2, OR10A5, OR11H1, OR2AG2, OR2B6, OR2C3, OR2T2, OR2T6, OR4C6, O R4F4, OR4S1, OR4X1, OR52D1, OR52H1, OR56A3, OR56A4, OR6B3, OXSM, PDE 4D, PER1, PERP, PGAP1, PHKB, PIGK, PIGX, PIK3C2G, PLA2G2E, PLCG1, PLX NA2, PNPLA4, POLA2, POLR2E, POLR3B, POLR3G, PON3, PPAP2A, PPP1CC, PS ENEN, PTGES2, PTPRZ1, PYCRL, RAD51, RBL2, RENBP, RGS3, RPS6KA3, RPS6 KA5, RRM2, SAT2, SELE, SELL, SEMA3A, SEMA3B, SETD7, SLC2A4, SMAD3, ST EAP3, STK3, STK36, STX1A, STX1B, SULT1E1, TAS1R1, TBK1, TBL1Y, TGDS, THBD, TRIP10, WNT10A, WNT2B, WNT3A, WNT8B, XYLB, YWHAE, CACNA2D1, PA FAH1B3</p>
Negative_15621	<p>CGA, CRK, DBT, EGF, FGB, GK, SHH, VTN, AACS, AARS2, ACADL, ACSL5, ADL, AGPAT2, AHCYL2, AKR1C2, ALDH4A1, ALG10, AMY2B, ARPC1B, B3GNT4, CACN A1D, CACNA1F, CASK, CASP6, CCL14, CDC45L, CLDN19, CLDN5, CLOCK, COQ3, COQ5, CPS1, CRLF2, CTLA4, CXCL11, CXCL2, DDB2, DDX51, DOCK1, E2F5, E NPP2, EP300, EPB41L2, EPHA2, ETS1, EVI1, EXT1, F2RL2, FBP1, FOXA3, FU T5, FZD9, GFAP, GGPS1, GGT7, GLS2, GLUL, GNAI3, GNB1, GPX5, GRHR, GRI A1, GRIN2C, GSTA4, GSTM4, HPRT1, IDH2, IDI2, IFNA17, IFNGR2, IKBKG, I RF7, ITGA1, ITGAL, ITGAV, ITPA, JAG2, KCNB1, KCNQ1, KLK3, LTA4H, MAP3 K6, MAPK11, MAPK3, METTL2B, NAGLU, NCR3, OR10X1, OR1C1, OR2B2, OR2D3, OR2M4, OR2T12, OR2T2, OR3A3, OR4S2, OR51B6, OR51F1, OR51I2, OR5AP2, OR5H2, OR6Q1, OR6Y1, OR7A10, OR7D2, OR8U1, PCNA, PCYT1B, PDE1A, PDE 8A, PGM1, PGM2, PHGDH, PIGK, PIK3C3, PIK3CG, PLCG1, PLD2, PNPO, PPA1, PPAT, PPP5C, PRKAA1, PRKAR1A, PTCH1, PTDSS2, PTGES2, PVRL2, RAP1B, R DH5, RPS6KB1, RRM2B, SARS, SARS2, SEMA3E, SENP2, SESN2, SOCS7, STAM2, STX6, TFPI, TNFSF18, TRAF3, TUBAL3, UGT2B17, VDAC3, WBSR22, WIF1, WNT9A, YES1, ATP6V1G1, B3GALNT1, B4GALNT1, PAFAH1B2, PPP1R12A, PRI CKLE2, ST6GALNAC4, TNFRSF10B, TNFRSF11B, TNFRSF1B, TNFRSF6B</p>
Negative_15622	<p>ADC, AMH, AMT, DLD, F3, FAH, IL2, ME1, NPL, RET, TFG, AANAT, ACAT1, ACP5, ACSS3, ACTN1, ACTN4, ACVR1B, ADCY9, ALDH1L1, ALG10, ALG3, ALOX5, AP RT, ATG7, ATP5J, B3GAT3, B4GALT5, BLNK, C3orf10, CACNA1I, CCL15, CD7 9A, CDC14B, CDK6, CDKN1C, CNTN1, CNTNAP2, CPT2, CXCL1, CYFIP2, CYP2D 6, CYSLTR2, DCTD, DDOST, DDX23, DFFA, DGKA, DMGDH, DUSP1, EFNA1, EPB4 1, EPHA1, ERBB3, FABP4, FGF3, FGF4, GALNT10, GCLC, GDF6, GGT5, GMPPA, GNA13, HRH1, HSD17B7, HSD3B2, IARS, IFNAR1, IFNGR1, IL17RA, IL18RAP, IL1RAP, ITGA2, ITGA4, ITGAM, ITGB4, KLRC2, MAP3K2, MAP4K4, MAPK7, M ASP1, MYL9, NARS2, NEU2, NFASC, NFX1, NFYB, NFYC, NKX2-2, NRP1, NT5M, OR10H2, OR10H5, OR10J3, OR11H6, OR1A1, OR2B11, OR2D2, OR2F1, OR2T12, OR4D6, OR4K5, OR51F1, OR52A5, OR52E8, OR5AU1, OR5D14, OR5K2, P4HA3, PDE1C, PDE6D, PDGFRB, PDX1, PECAM1, PHPT1, PIGA, PIGB, PIK3CD, PIK3R2, PKM2, PLA2G5, PNPLA3, POLR2I, PPM1A, PPOX, PRIM1, P RKAR2B, PRPS1, PRPS2, PTK2B, PTTG1, PVRL2, RAF1, RBL2, RHOQ, ROBO2, R XRB, SC4MOL, SELL, SENP2, SGMS2, SKP2, SOCS3, SOS2, SSH3, SSX2IP, STX 10, STX5, SUV39H2, TGFBR1, THTPA, TNFRSF8, TNFSF10, TNXB, TRAF2, TUB B6, UGT2A3, UGT2B4, VANGL1, VTI1B, WHSC1, WNT3A, YWHAQ, ATP6V1G1, GA BARAPL1, PAFAH1B1, SUV420H2, TNFRSF17, TNFRSF18</p>

Negative_15623	<p>CBS, CD4, CGN, DLD, F2R, F7, LCT, PAH, TEC, VTN, XDH, AARS, AARS2, ABLIM1, ABLIM3, ACVR2B, ADSSL1, AKR1C1, ALDH7A1, ALG12, ATP6V1D, CALML3, CASP8, CAV2, CBLB, CCL21, CCNH, CCR2, CD79B, CDKN1A, CES1, CHIT1, CHKB, CHRM2, CLCA2, CLCA4, CLCF1, CLTCL1, COL4A4, COL6A1, COQ5, COQ6, CSNK1A1, CSNK2A2, CTSL1, DAAM2, DBF4, DDX52, DERL1, DNMT3A, E2F2, EFNB3, EGLN3, ENAH, FASN, FRAT1, FZD3, GAB1, GALNTL5, GAPDH, GCLC, GCNT4, GDE1, GFPT1, GNAS, GP1BA, GRIA2, GRM1, GSK3B, GUCY2C, HSP90B1, HTR2A, ICAM2, ICAM3, IDH3A, IFNA7, IFT57, IL15RA, IL9R, IRF9, ISYNA1, ITGB2, JAM2, JUND, KLRC2, LHCGR, LIPF, LLGL2, LPAR1, LRAT, MAFA, MAN1C1, MAPK8, MCCC1, MYL2, NANS, NAT2, NCF2, NCOR2, NEU2, NFYA, NRG2, NTN1, OR10G2, OR10G9, OR10H4, OR13C4, OR13G1, OR14A16, OR14C36, OR1J2, OR1S1, OR2AG1, OR4C11, OR4F17, OR4X1, OR51E2, OR52W1, OR5AP2, OR5I1, OR5K2, OR6C1, OR7A17, ORC3L, PARD6G, PARVB, PCYT1A, PDE5A, PDHB, PEMT, PFKL, PIGK, PIGU, PIGX, PKMYT1, PLA2G5, PLCB1, PLK1, PLXNA2, PLXNC1, PPM1, POLR2J, PPA2, PPP3CA, PPT1, PRKAA2, PSME3, PTPRM, RALGDS, SAT1, SCP2, SDC3, SDHB, SGMS2, SIAH1, SLC27A4, SLIT2, SMARCA5, SOAT1, STAT6, STX5, SYNJ2, TAP2, TIAM2, UCKL1, WARS, WARS2, WBSR22, YOD1, HSD17B10, KIR2DL5A, MAPK8IP1, TNFRSF13B</p>
Negative_15624	<p>ATF, AUI, BAP, CFI, CSK, EBF, GDA, ID4, SMO, SPIN, SRF, TFR, ACACB, ACHL, ACMSD, ADAM10, ADCY3, ADCY5, AKR1B10, AKR1C2, ALDH1L1, ALG9, ALOX5, ANAPC7, ARHGEF7, ARPC4, ARSD, ASPA, ATP2A3, ATP4A, ATP5C1, ATP5G2, B3GALT5, B3GNT4, BAAT, BCL2L1, BMPR1B, BST1, CADM3, CCL25, CCL4, CD226, CD3E, CD72, CDC23, CDK6, CFLAR, CHRM2, CLCF1, CLDN9, CREB3L4, CRY2, CYCS, DARS, DBF4, DDX23, DGAT2L4, DTYMK, DUSP1, ENPP7, ENTPD6, EPHB2, ESAM, ETNK2, FADS2, FARSA, FCGR3B, FGF1, FGFR1, FZD5, GALT, GALNT3, GALNTL2, GALT, GSTM2, HEXA, HMOX2, HPSE, HSD3B2, IL13RA2, IL1R2, IL22RA2, IL3RA, INPP5A, IRF3, ITGA2, ITGA8, ITPKB, KIR2DL3, KLRC2, KYN, LDHA, LDHB, LIAS, MAGI3, MAP3K12, MAP3K8, MAP4K2, MCM4, MEF2C, MGA, T5, MKNK2, MYH4, MYH9, MYL5, NANS, NAT6, NEU1, NEU3, NFKB2, NGEF, NKD2, NOD1, NR1D1, NRP1, ONECUT1, OR10A2, OR10H4, OR10J3, OR12D3, OR2A12, OR2A2, OR2A25, OR2S2, OR2T11, OR4C16, OR4M1, OR51A4, OR51B2, OR52I1, OR52K1, OR5A1, OR5B21, OR5L1, OR5V1, OR8H1, OR8I2, ORC1L, OSMR, OXTR, PDGFB, PDK1, PFKM, PIAS4, PIGX, PIK3R3, PIK3R4, PLCG1, PLTP, PNLP, POLR2K, PON2, PRIM1, PRKCD, PRKY, PRNP, PROC, QARS, RAB5A, RAPGEF3, ROCK2, RPS6KB1, SELL, SEMA3F, SETD2, SGPP1, SHISA5, SHMT2, SLC2A4, SLC33A1, SMAD7, SRD5A1, SRGAP2, SSH1, SSX2IP, STAM, STK3, TACR3, TAS</p>
Negative_15625	<p><del>CBS, CD4, CGN, DLD, F2R, F7, LCT, PAH, TEC, VTN, XDH, AARS, AARS2, ABLIM1, ABLIM3, ACVR2B, ADSSL1, AKR1C1, ALDH7A1, ALG12, ATP6V1D, CALML3, CASP8, CAV2, CBLB, CCL21, CCNH, CCR2, CD79B, CDKN1A, CES1, CHIT1, CHKB, CHRM2, CLCA2, CLCA4, CLCF1, CLTCL1, COL4A4, COL6A1, COQ5, COQ6, CSNK1A1, CSNK2A2, CTSL1, DAAM2, DBF4, DDX52, DERL1, DNMT3A, E2F2, EFNB3, EGLN3, ENAH, FASN, FRAT1, FZD3, GAB1, GALNTL5, GAPDH, GCLC, GCNT4, GDE1, GFPT1, GNAS, GP1BA, GRIA2, GRM1, GSK3B, GUCY2C, HSP90B1, HTR2A, ICAM2, ICAM3, IDH3A, IFNA7, IFT57, IL15RA, IL9R, IRF9, ISYNA1, ITGB2, JAM2, JUND, KLRC2, LHCGR, LIPF, LLGL2, LPAR1, LRAT, MAFA, MAN1C1, MAPK8, MCCC1, MYL2, NANS, NAT2, NCF2, NCOR2, NEU2, NFYA, NRG2, NTN1, OR10G2, OR10G9, OR10H4, OR13C4, OR13G1, OR14A16, OR14C36, OR1J2, OR1S1, OR2AG1, OR4C11, OR4F17, OR4X1, OR51E2, OR52W1, OR5AP2, OR5I1, OR5K2, OR6C1, OR7A17, ORC3L, PARD6G, PARVB, PCYT1A, PDE5A, PDHB, PEMT, PFKL, PIGK, PIGU, PIGX, PKMYT1, PLA2G5, PLCB1, PLK1, PLXNA2, PLXNC1, PPM1, POLR2J, PPA2, PPP3CA, PPT1, PRKAA2, PSME3, PTPRM, RALGDS, SAT1, SCP2, SDC3, SDHB, SGMS2, SIAH1, SLC27A4, SLIT2, SMARCA5, SOAT1, STAT6, STX5, SYNJ2, TAP2, TIAM2, UCKL1, WARS, WARS2, WBSR22, YOD1, HSD17B10, KIR2DL5A, MAPK8IP1, TNFRSF13B</del></p> <p>DCY1, ADCY4, AGMAT, AGPAT2, AKR1C2, ALDH1B1, ALDH3B1, ALDH6A1, ALG2, ALOX15B, ARSB, ASAH1, ATP5I, ATP6VOB, B3GNT3, BCKDHB, CACNG2, CAMK2A, CARS, CCL19, CCL2, CCL20, CCND1, CD38, CD3E, CD47, CD48, CDC14A, CDC23, CDK2, CES2, CHKB, CHRM1, CHRNA7, CLDN8, COASY, COX15, CSNK2A1, CYFIP2, CYP2F1, CYP3A5, DFFA, DVL2, ENPP7, ENTPD2, EPHA6, EPHB6, EPO, ERBB4, FGF6, FLOT1, FUT6, GABARAP, GAL3ST1, GALNT3, GBE1, GGT1, GLUL, GNAI2, GNRHR, GSTZ1, HCCS, HLA-F, HTR6, ICOS, IDUA, IFNA2, IFNA8, IL17A, IL18, IL18RAP, IL22RA1, IRS2, ITGA3, ITGAV, JAK2, LFNG, LTA4H, LYPLA2, MAP2K5, MAP3K11, MAP3K2, MAP3K6, MDH1, MDM4, MNX1, MTMR2, MTMR6, MYH8, NANS, NEFL, NFKBIA, NME4, NODAL, OR10H2, OR11A1, OR1A1, OR1L8, OR1S1, OR2F1, OR2H1, OR2M3, OR4A15, OR4K1, OR4N5, OR5M9, OR6C76, OR6N2, OR8J3, OR9G1, P2RX2, P2RX3, PAPSS2, PARD6A, PAX8, PDCD1, PER3, PHKG2, PIGK, PIGT, PKM2, PLA2G10, PLA2G2E, POLE2, PPARG, PPAT, PPP1R3D, PPP2R1A, PPP2R5B, PRKAB1, PRKCB, PRSS2, RAB23, RIPK1, RRM2, SC5DL, SCLY, SEMA4D, SEPHS1, SFRP5, SHC4, SHMT2, SMAD7, SMC1A, SOAT1, SQLE, SULT1E1, SUV39H2, TACR1, TAS2R4, TGDS, THBS2, TLN1, TRAF4, TUBA1A, TUBA4A, UBE2L3, UGT2B17, ULBP</p>





Negative_15629	<p>AGL, C9, DCK, F8, TK2, TNR, VCL, AACS, ACACB, ACSL6, ADCY6, AGPAT4, AGX T2, ARPC2, ASS1, BET1L, BHMT, C1QA, C3AR1, C4BPA, CACNB3, CASP7, CCL4 , CCNB1, CCND2, CDH3, CEBPA, CHIT1, CLDN4, CLDN5, CLDN9, CRLF2, CTNND 1, CYBB, CYCS, CYP21A2, CYP26B1, DDB2, DDX23, DEGS1, DGKG, DIAPH2, DL ST, DTX3L, DUSP7, DUSP9, ECSIT, EDNRB, EPHA4, F13A1, F13B, FGF12, FGF 23, FGF6, FRAT1, GALT, GFAP, GMPPA, GMPR2, GNAS, GPX5, HSD17B1, HSD17 B4, HSD3B2, IDH3A, IFIH1, IFNA10, IGF1, IL10RB, IL21, IL28A, IRF3, JA M2, LAMC2, LTA4H, LYPLA1, MAOB, MAPK12, MCAT, MS4A2, NCKAP1L, NEUROG 3, NRXN3, NTN1, OR10A6, OR10C1, OR10K1, OR10T2, OR10Z1, OR12D3, OR1C 1, OR2A14, OR3A3, OR4A16, OR4F17, OR4X1, OR51E1, OR52A5, OR52I1, OR5 2I2, OR52J3, OR6C74, OR7C1, OR8B12, OR9A2, P2RX7, PAK7, PARVA, PAX4, PDE1C, PFKFB3, PIGH, PIM1, POLD2, POLR1E, PON3, PPP1CB, PPP2R2B, PRK AA2, PRKACB, PYGB, RASGRP3, RELB, RENBP, RPS6KB2, SARS2, SC5DL, SCD5 , SEMA3G, SEMA4G, SHISA5, SLC2A4, SMURF2, SPHK2, ST3GAL3, STAM, STX1 8, SULT1A4, TAS2R16, TBXA2R, TCF7L2, TGFB1, THBS1, THTPA, TNXB, TRAF 5, TUBA1C, UBA1, WNT16, WNT4, WWP1, YWHAZ, ARHGEF12, TNFRSF10D</p>
Negative_15630	<p>A2M, AK1, AK5, BAX, BTK, C4B, C6, C8G, F7, GBA, GPT, GSR, ITK, LIF, NGF, O GT, RDX, SP1, AADAC, ACSL6, ACSM5, ACTN2, AKR1C1, AKT1, ARD1A, ARHGEF 7, ARNT, ATP2A3, ATP5E, AXIN1, BMP2, BPNT1, C7orf16, CACNA1I, CACNB3 , CAMK2G, CCL23, CCND3, CCNE2, CD55, CD80, CLDN22, CNTFR, CPT2, CSF1, CYFIP1, CYP17A1, CYP1A1, CYP2F1, DAPK1, DDX18, DDX23, DGAT2, DGKE, D HX58, DOCK1, EPHA5, EPHA6, EPHB3, FCGR2B, FGF20, FTCD, GAL3ST1, GALN T9, GJA1, GMPR, GOT1, GSK3B, GSTM2, GUCY2D, H6PD, HCLS1, HCST, HSD17B 7, HTRA2, IDI2, IL12B, IL15, ITGAE, KAT2B, KIR2DL2, KLRK1, LAMB1, LAM B4, LARS2, LRRC4C, MAML3, MASP1, MMP7, MPP5, MYH14, NAGK, NCK2, NT5C3 , NTRK2, OCLN, OLAH, ONECUT1, OR10G3, OR1L6, OR2L8, OR4C6, OR4D6, OR4 F5, OR52A5, OR52K2, OR5P3, OR7G3, OR8U1, P2RX6, P4HA2, PDE1C, PFKFB2 , PGK1, PHKG1, PIGO, PIGT, PIK3CG, PKLR, PLXNC1, POLR1D, PPID, PPM1A, PRKACB, PRLR, PRPH, PRPS1, PTGDS, RAB5A, RBL2, RCHY1, RDH11, RDH5, SC LY, SEMA3F, SH2D1A, SIGLEC1, SLC27A5, SMC1A, SNAP23, SPTLC1, SRGAP2 , STX1A, STX2, TGFB2, TGFB3, TYRP1, UBE2L6, UGT2A3, VCAM1, VEGFA, YWH AH, ATP6VOD1, ATP6V1B1, GABARAPL1, SERPINB5, SERPING1, TNFRSF18, T NFRSF1B</p>
Negative_15631	<p>CGN, CKB, DBH, DDC, GBA, GNE, GNS, GP5, LHB, PLN, PTS, SFN, SMS, SP1, TPR , ACAA2, ACVR1, ADH1A, ADH4, AGRN, AKR1A1, ALDH4A1, ALDOA, ANAPC2, AR PC2, ARPC4, ATP6AP1, BCL10, BIRC3, BMP8A, BST1, CACNA1D, CCL14, CCL2 5, CCNB3, CD34, CDC26, CHEK2, CHRM5, CHSY1, CIITA, CLDN4, CLDN9, CMBL , CRB3, CRLF2, CTPS, CTSB, CYP11B2, CYP17A1, CYSLTR2, DLL3, DLL4, ECS IT, ENTPD8, EPAS1, ERBB3, EREG, ETNK2, EXOC7, EXTL1, FOXO1, FPGT, FRA T1, FUT5, FZD1, FZD4, GDF6, GGT5, GJD2, GNPDA2, GSTM1, GUK1, GZMA, HCC S, HIBADH, HSPA8, IQGAP1, IRF9, ITGAD, ITGAX, KIR2DL1, MAP3K2, MCM2, MGST1, MLYCD, MNX1, MYH7B, MYL2, MYLK2, NCOR2, NCR2, NFKB1, NFKBIA, N LGN2, NPAS2, NR1H3, NT5C1B, OR10G2, OR12D3, OR14C36, OR1E1, OR1M1, O R4C11, OR52L1, OR5B21, OR5D13, OR5I1, OR8H3, PARVG, PDE3A, PDXK, PIA S4, PIGA, PIK3CB, PLA2G2F, PLXNA3, PLXNB3, POLR1B, PPAP2C, PPCS, PPP 2CB, PPP2R5B, PRKACG, PTGFR, PTPRJ, PTPRZ1, PTTG1, RDH10, RPS6, RXRB , SDHD, SEMA4F, SLC2A2, SMAD7, SOCS3, SPRY4, STX8, TACR3, TAS2R40, TA S2R60, TAS2R8, TPH1, TUBA1A, TUBB2A, TUBB4Q, UGT2B10, ZNRD1, CSNK1A 1L, KIR2DL5A, PFAH1B1, PLA2G12A</p>

Negative_15632	<p>ADC, CS, F10, ME2, PLG, PML, RPE, AANAT, ABAT, ACACB, ACMSD, ADCY9, ADH6, ALDH2, ALG3, ALOX15, APRT, ATIC, ATN1, ATP50, B3GNT2, BACE1, BLVRA, BMP5, BMPR2, CAMK4, CAV1, CBR3, CCKBR, CD86, CDC14B, CDC27, CDK2, CLDN14, CRB3, CTNNA3, CXCL2, CYP27A1, CYP2C8, CYP2U1, DGKQ, DHRS3, E2F5, EPB41, EPHX1, ERO1L, FGF21, FGF4, FGF7, FRAT1, GFAP, GNAS, HDAC1, HES1, HMOX2, HNF4A, HTR4, IFNA5, IL12RB1, IL17RA, IL4R, INHBE, INPP1, IRAK2, ITGB7, ITPKB, JAK2, LCMT2, LEFTY1, MAD2L1, MAML2, MAP2K6, MAP3K1, MAP3K12, MAP3K13, MAPK7, MAPK9, MCM2, MCM4, MGAT3, MGAT4B, MMP14, MMP7, MPZL1, NAT1, NCKAP1, NCR3, NEFM, NFYB, NME4, NODAL, NOTCH1, NRXN1, OGDH, OR10G3, OR10V1, OR11H6, OR1G1, OR1I1, OR2G2, OR2T34, OR3A3, OR4E2, OR4N4, OR51B5, OR51I1, OR52N4, OR5AP2, OR5M9, OR5R1, OR6C74, OR6T1, OR8K5, OXTR, P2RX6, PDE4B, PDGFD, PDHB, PFKFB2, PHKA2, PIGC, PIGQ, PIK3CG, POLD4, POLR3H, PPCDC, PPOX, PPP1CA, PRKAA2, PRKAB2, PTCH1, PTCRA, PTPN7, PYCRL, RASGRP3, RHOD, RND1, ROBO3, RRAS, SCIN, SRD5A1, SREBF1, ST6GAL1, STAM2, STAT4, STAT5B, STK36, STX1B, SUFU, TASS1R1, TICAM2, TLR9, TPH1, TUBAL3, UBE2K, VAMP2, VDAC3, WNT3A, ZBTB16, ZFYVE9, MAPKAPK3, PAFAH1B1, TNFSF13B</p>
Negative_15633	<p>C4B, DDO, FLT2, GSN, ID1, ITR, MTR, ACACA, ACOX3, ACVR2B, ACT11, AGLA13, ALDH1L1, ALG13, ALPL, ALS2, AMY2B, ATP5F1, ATP5G3, AVPR1B, B3GALT5, BET1L, BMP7, CACNA1A, CACNA1S, CACNG7, CALML3, CALML5, CAMK4, CARS, CCL2, CCL8, CCNG1, CCNH, CCR10, CCR6, CDC25B, CDH4, CES2, CHEK2, CHPF, CHRDL, CHST12, CIITA, CLDN2, CLDN4, CLDN8, CNTNAP2, CRHR1, CXXC4, CYP2A6, DARS2, DEGS1, DGAT1, DGKE, DHODH, DHRS4, DHRS4L2, DKK1, DKK4, DUSP9, DVL2, EDNRA, EGFR, EPHA8, ERBB4, ESPL1, F2RL1, FASN, FLOT1, FLOT2, FPGT, FSHR, FUT4, G6PC, G6PD, GALK2, GALNT5, GCLC, GLUL, GUCA1B, GUCY1A3, GYS1, HMGCR, HSD3B7, IFNAR2, IFNB1, IL1A, IL5RA, IL8RA, INMT, IRF3, KIR2DL4, KIR3DL3, LCMT1, LIAS, LIPC, LIPE, LIPT1, LRP5, MAP3K5, MAPK3, MGAT3, MTHFD2, MTR1, MYH13, NANS, NCF4, NEUROD1, NFKB1B, NRG3, NT5C, NT5M, NUMBL, OR13H1, OR1L8, OR2A5, OR2B2, OR2H1, OR2M7, OR2W1, OR3A2, OR4D5, OR51A4, OR51G2, OR51S1, OR51V1, OR52N1, OR56A3, OR5L2, OR5M8, OR5T1, OR8D1, OR9A4, P4HA2, PANK2, PARVG, PDE6D, PDPK1, PDXP, PER3, PFKFB1, PGK1, PIGK, PIK3CG, PIP4K2B, PLA2G2A, PLXNA3, PLXNC1, PMM1, PNPLA4, PNPT1, PRKAA1, PRLR, PRSS2, QPRT, RAC1, RARA, RASSF5, RFXD2, RFXANK, RHOD, RIPK1, RND1, SDHB, SHC2, SKIV2L2, SLC27A4, SLC9A1, ST3GAL5, STK36, STX12, STX2, STX4, TAP1, TAS2R4, TBXAS1, TM</p>
Negative_15634	<p>CGE, CD8, CF14, GB, GR2, IPR, LNT, RCAD, ACGL, AUBS7, KCVR1, HAO1, UGT, ADAM10, AKR1B10, ALDH4A1, ALG2, APPL1, ASMT, ASPA, ATP2A1, BUB1, C4BPA, C7orf16, CACNG3, CAMKK2, CARD11, CAV3, CCL13, CCL16, CCNE1, CD47, CD74, CDC26, CD01, CHEK1, CHIT1, CLDN10, CLDN9, CNTFR, CPT2, CREB1, CXCL1, CXCR3, CYCS, CYP26C1, CYP4A11, DHCR7, DHFR, DLST, DTX2, EFNA3, EIF4B, ENPP7, ENTPD7, EPHB6, EXT1, FGF1, FGF5, FLT1, FM01, FSHB, FZD7, G6PC2, GALNT12, GALNTL5, GCLM, GFPT1, GGT1, GNAS, GNAT3, GNG3, GNPDA2, GPD1, GRB2, GRIA3, GRIN2A, HAGH, HA01, HBEGF, HCLS1, HLCS, HSPA8, HYAL1, IARS, IDI2, IKBKB, IL1R2, IL21, IL9R, INHBA, INHBB, IQGAP1, IRF5, ITGB7, ITGB8, JAG2, KCNB1, KCNQ1, KIR2DL2, LCP2, LRRC4C, MDH2, MFRNG, MMP14, MYH6, MYL7, NAE1, NCR1, NKX6-1, NT5M, OR10G9, OR11G2, OR13C2, OR13G1, OR1C1, OR1I1, OR2A12, OR2A2, OR2B11, OR2T10, OR2T11, OR4F17, OR4K13, OR4K15, OR4K2, OR4L1, OR51B4, OR9I1, ORC6L, PAFAH2, PAK2, PANK4, PAPSS1, PARS2, PARVB, PAX4, PAX6, PCCB, PCYT1B, PDE4A, PDPK1, PDX1, PHKB, PI4KA, PIGN, PIGS, PIK3C3, PLCE1, PON2, PPP1R1A, PPP2R1A, PPP3CA, PPP3R1, PRPH2, PSME1, PTCRA, PTGES, PTGS2, PYCRL, PYGM, RASGRP1, RBL2, RHEB, RPN1, SKIV2L2, SLC2A1, SOCS2, SOCS3, SORBS1, SOX17, SPTLC1, SSH1, SULT1A1, TFDP1, TGDS,</p>

Negative_15635	<p>C9, CD2, GDA, K11, LTN, MAX, MET, OGI, PGI, RPE, TK1, AADAC, ACADSB, ACS S3, ACTA1, ACVRL1, ACY1, ADCY4, ADIPOQ, ADRB2, AGRP, AKR1C3, ALG3, AM Y2A, ARPC2, ASAH1, ASRGL1, ATF2, ATP6V0B, B4GALT2, BNIP1, CACNA1F, C ACNA1G, CCL17, CCNA2, CCR3, CDC20, CDC23, CDKN1C, CHAD, CLTA, CLTC, C NGB1, CNTN1, COL1A2, CPT1B, CRLS1, CSF1R, CSNK1E, CXCL5, CYBB, CYP1A 1, CYP26C1, CYP2A13, DAAM1, DHRS4, DKK2, DLAT, DPYD, DRD2, DTX2, DUSP 10, EDNRA, EHMT1, ENTPD2, ENTPD6, EPHA1, EPHB4, EXTL2, FGF5, FGFR2, F IGF, FLOT2, FLT3, FOXO1, FUT2, FZD1, FZD6, GAB1, GALE, GALNT11, GALT, GNAS, GSTK1, HCLS1, HDAC1, HIBCH, HLA-</p>
Negative_15636	<p>DMA, HNMT, HSP90B1, HSPA1B, IGSF5, IL2RA, IQGAP1, ITGA6, ITGB1, ITGB 8, KIR3DL2, KLRD1, LAMB4, LAMC1, LAMC2, LGMN, MAFA, MAGI2, MAML1, MAT 1A, MCCC1, MCM7, MGST1, MRAS, NFYA, NOX1, NR1H3, NRG1, NT5M, OR10A5, O R10J5, OR1C1, OR1L6, OR2T8, OR3A3, OR4C16, OR4C6, OR4N4, OR51E1, OR7 G2, OR8H1, PDGFC, PDGFRA, PFKFB1, PFKFB3, PFN1, PGAP1, PHPT1, PLA2G2 D, PLCD4, PLD2, PLOD1, PMM1, POLD2, POLR1C, POLR2E, PPCDC, PPCS, PPP1 R3A, PPP1R3D, PRPH2, PRSS2, PSPH, PTDSS1, PTPN11, PTPRZ1, PVRL1, PYG L, RBKS, RBL1, RDH11, RDH8, RXRA, SCLY, SHC1, SLC2A2, SMAD7, TAS2R48, TPH1, TPMT, TRAF2, TRAF4, TSNARE1, TUBB6, ULBP2, VDAC3, WNT3A, WNT7A</p> <p>ADG, BTA, CAT, C63, CDO, CUG, CRI, PT2, R10, TDS, TDS, KDK, ETSF, MC1, TLG , SCD, TNC, AASDH, ACADL, ACOT11, ACSM2A, ACTB, ADH1A, ADH4, AKT1, ANA PC11, APOA1, APRT, AREG, ARPC5L, ATG7, ATP12A, ATP5F1, ATP5G3, ATP5L , BHMT, BIRC2, BMP4, BMPR1A, BUB1, C7orf16, CACNA1G, CACNA1H, CACNG4 , CARS, CAV3, CCR3, CCR7, CCR9, CD247, CD36, CD3E, CD70, CDIPT, CHKB, C HRM3, CLDN7, CMBL, CNDP1, CSNK1G1, CTPS, CYP2C8, DCTD, DDB2, DDX47, D USP3, EFNA4, EPHA5, ERBB3, FASLG, FGF1, FGF9, FTCD, G6PD, GALK1, GALN S, GALNT10, GALNTL5, GCLM, GNB1, GNG13, GNG3, HMGCS2, ICOSLG, IDUA, I FNA21, IFNA8, IL17RB, IL19, IL20, IL21, IL23A, IL25, IMPA1, IPMK, JAK 3, L1CAM, LEPR, MAN1B1, MAP2K3, MARS, MARS2, METTL2B, MYH11, MYL7, NA DK, NAMPT, NKX6-</p> <p>1, NR5A2, ONECUT1, OR10A2, OR10G3, OR10H2, OR10J1, OR10P1, OR13C5, O R2A25, OR2A42, OR4C15, OR4D6, OR4F15, OR51G2, OR5B21, OR5T1, OR6B2, OR6T1, PAK7, PAX4, PCK2, PCYT1B, PECAM1, PHKB, PIGU, PIP4K2C, PIP5K1 A, PLA2G2F, PLCE1, PLCG1, PLD1, PMM1, PMM2, POLR3K, PPAP2B, PPP2CB, P TGER1, PYCR1, RAB23, RARA, RDH5, ROBO3, SDC2, SDC4, SEMA3F, SESN2, SF RP2, SKIV2L2, SLC25A5, SLC27A1, SMURF1, SPRED2, SPTLC2, STAM2, STEA P3, STX1A, TAS2R1, TAS2R48, TIAM1, TLR9, TM7SF2, TRAF3, TUBB2A, TUBB 4Q, TXNDC12, UGT2B4, WNT5B, YARS2, YOD1, HLA-</p> <p>DRB4, DAFNA1B1, DAFNA1B2, DRICKLE2, ST6GALNAG5, ST6GALNAG3</p>

Negative_15637	<p>C6, CBL, CBS, CRK, DCN, DHH, EZR, FUK, GP6, LPL, NOG, VTN, AASDH, ACADSB, ACOX3, ACSS3, ADRA1A, ADSL, ALDH4A1, ALPPL2, APC2, APOA2, ARPC1A, ATP5E, ATP5G1, ATP5G2, B3GALT1, B3GALT2, B4GALT6, BCL2, C1QA, CANT1, CARD11, CASK, CASP8, CBLC, CCL5, CCR4, CDC25C, CDH5, CHPT1, CHUK, CLCF1, CLDN2, COQ3, CPS1, CPT1A, CREB1, CRKL, CRLF2, CSH1, CTBS, CTNNA2, CXCL13, CYCS, CYP11A1, CYSLTR1, DDX54, DDX55, DVL2, E2F4, EFNB1, EPHA5, EPHB2, FADD, GALNTL4, GGT5, GGT7, GMPPB, GNRH1, GNRHR, GTSE1, GYS1, HAP1, HEXA, HLA-G, HNF1B, ICAM3, IDI1, IL17B, IL19, IRF7, JAK3, KCNQ1, KIR2DS4, LARS2, LTBR, MAN2A1, MAP4K3, MASP2, MDH2, MGAT3, MIOX, MMP14, MYH6, NANP, NCK1, NCK2, NFYB, NR5A2, NSD1, NSDHL, OR10A4, OR10S1, OR11H6, OR1C1, OR1J1, OR1L6, OR2M5, OR2S2, OR2T1, OR4N4, OR4X1, OR52A1, OR52N2, OR5A2, OR5B17, OR5D18, OR6C6, OR6C74, OR7A17, OR7A5, OR9A2, OR9Q2, PARD3, PDE4B, PDE5A, PIGM, PIP5K1A, PKLR, PLEKHA8, PLXNA1, PPCS, PPP2R2B, PPP2R2C, PPP2R5C, PPP3CC, PRKAR1B, PRKCD, PRKCZ, PTK2, PYGB, RBX1, RETSAT, ROB01, RPN1, RUNX1T1, SEPHS1, SFRP5, SH2D1B, SIAH1, SLC25A5, SMPD2, SNAI2, SQLE, SRGAP3, SUFU, SULT1A4, TAS2R3, TBXAS1, TRAF3, TUBB4, UGCG, UGT2A3, WBCSCR22, WNT3, XYLT2, ATP6V1B2, GABARAPL1, HLA-DPA1, PLA2G12B, SLC25A31, ST6GALNAC4</p>
Negative_15638	<p>CT, CSK, DBI, EDA, F9, FOS, KHK, LTN, MVD, PAN, PAK, VCL, WAS, ACO2, ACP3, ACP6, ADAM17, AKR1C3, ALS2, ARD1A, ARHGEF2, ARNT2, ARSB, ATF2, ATG12, BAI1, BCL2, BMP2, BUB3, CARD11, CCL1, CCL26, CCR7, CD40LG, CD82, CDH1, CDH15, CDH3, CDK4, CDKN1C, CFL2, CFTR, CHAD, CLDN15, CLTB, CLTCL1, CSH1, CSNK1G2, CTNNA2, CXCL12, CXCL16, CYP2D6, CYP3A4, DDX4, DEGS1, DPYS, EFNA4, ENPP6, EPAS1, EPHA1, FCGR3B, FECH, FGF1, FLOT2, FUT6, FZD1, FZD5, GALNT12, GGT7, GLYCTK, GNA13, GSTM1, GZMB, HLA-C, HLCS, HMGCL, HPRT1, HSPA1B, HYAL1, IARS2, IDUA, IFNA2, IL19, IL1RA, IL20RA, IL23A, IQGAP3, JAG2, LDHD, LIAS, LILRB3, LTBP1, LYPLA2, ME, TTL2B, MIOX, MYD88, MYH7B, NAE1, NAMPT, NANP, NAT2, NCKAP1L, NEFM, NRG3, NT5C2, NTF3, NTN1, OR10A5, OR10J3, OR14A16, OR1E1, OR2A12, OR2C3, OR2H1, OR2M2, OR2S2, OR4E2, OR4K14, OR4X1, OR52N5, OR5M8, OR5T3, OR6C1, OR6C74, OXCT2, P2RX2, P2RX3, PAX6, PDE8A, PFKP, PFN3, PIK3R2, PIK3R5, PIP4K2A, PLA2G2A, PLA2G2F, POLA1, PPP1R3C, PTPRC, PVRL4, PYGM, RAC2, RASSF5, SAT1, SCIN, SDC4, SELE, SELPLG, SEMA3A, SETDB2, SLC25A6, SMPD1, SOAT2, SOCS3, SPCS3, SPI1, SRGAP3, ST8SIA1, STX18, TAS2R3, TAS2R48, TCF7, TCF7L2, TIAM1, TICAM1, TJP3, TPI1, TSLP, UBE2K, VAMP1, VDAC2, WNT3A, WWP2, YKT6, ZFYVE16, ALDH18A1, CTNNBIP1, GABARAPL2, HLA-DPA1, MARKORF2, MARKORF3, SERPINC1, SERPINC1</p>

Negative_15639	<p>ABO, APT, BID, CD2, CGA, CRT, EGF, F10, IL9, JUP, MGS, OSM, PVR, UBB, VCL, ADAM10, ADCY5, ADCY9, AKR1B10, ALDH1A2, ALDH3B2, ALG12, AMDHD1, ANAPC2, AOC3, APOC3, APRT, ASRGL1, ATP6V1A, AVPR1B, B3GNT2, BCAR1, BCMO1, BDKRB2, BUB3, CACNA1D, CADM1, CALML3, CCL11, CDC16, CDC25C, CDK4, CDKN1B, CES1, CLDN9, CLTB, CPT1B, CRB3, CSF3R, CSNK1E, CYFIP1, CYP4F3, DDIT3, DDX4, DGAT1, DLL4, DPYD, DTX3L, DUSP3, DUSP7, E2F3, EFNA5, EHMT1, ENPP7, ESPL1, F13A1, F2RL2, FCER1G, FGF12, FGFR1, FGFR3, FLT4, FMO3, G6PC, GALK1, GALNT1, GALNT9, GLDC, GYS2, HCCS, HLA-DOA, HMGCS1, IARS, ICOS, IDH3B, IFIH1, IFNA13, IFNA5, IL22, INHBC, ITGA1, JAM3, KIR2DS5, LDHC, LRAT, MAD1L1, MAN1A1, MAP2K4, MAP3K14, MAP3K4, MAPK11, MCM2, MMP1, MOV10L1, MTMR2, MYH4, MYH6, MYL2, NCOR1, NCR2, NRG2, NUDT2, NUMB, OLAH, OR1E1, OR1L1, OR1N1, OR2A25, OR2D3, OR2G3, OR2M4, OR2T2, OR2T34, OR2T5, OR2T6, OR2W1, OR4B1, OR4P4, OR52A1, OR56A1, OR5A1, OR5K1, OR6N1, OR7A17, OR8J3, PAK6, PAX8, PCNA, PCYT2, PDE7B, PFN3, PHKA2, PHKG2, PIAS4, PIGC, PIK3C2B, PIP5K1C, PLA2G6, PLXNB1, PNMT, POLR2A, POLR2K, PPARG, PPP3CC, PRDX6, PRKAG3, PROS1, PTGS2, PYGL, RAB5A, RARA, RELA, RPS6KA1, RUNX1T1, SETD1B, SGPP2, SH2D1B, SMC1A, SNAI1, SNAP23, SOD1, SPTAN1, SUCLG1, SUOX, TAS2R60, TAS2R7, TB</p>
Negative_15640	<p>APP, AUH, BCR, C2, F9, FGA, GDA, GP6, ILK, MAG, RFK, SRC, SRF, TNF, VCL, ABLIM3, ACAD9, ACSL5, ACTA1, ADCY7, ADORA2A, ADRA1B, ADRB1, AHCY, AKR1D1, ALAS2, AMPD2, ANGPTL4, APLP1, ARRB2, ASRGL1, ATF2, AXIN2, B3GNT3, BCAT2, CARD11, CASP10, CCL5, CCND3, CD46, CDH5, CHIA, CHSY3, CKMT2, CLDN10, CSAD, CSNK2A2, CXCL1, CXCL3, CXCR5, CYBB, CYP1A2, CYP4F3, DX41, DGKD, DHCR24, DUSP6, E2F2, EDAR, EFNA1, EFN1, ENO3, ENPP7, ENTPD8, EPHB6, FGF14, FGF22, GADD45A, GALNT3, GALNT6, GDF5, GDF6, GDF7, GLS2, GNA11, GUCY2F, HADHB, HMBS, HSD17B2, HTR2C, ICOSLG, IDH1, IDH3A, IL17RB, IL6R, IMPA1, IRS4, ITCH, ITGA2B, KLKB1, LARS, LIPA, LLGL2, MAN1C1, MAOA, MAP3K14, MTFMT, MTHFR, MYL2, NCF4, NCR3, NKD1, NOX1, NOX3, NRXN3, NT5C3, NTRK1, OR11G2, OR11H6, OR14A16, OR1D5, OR2H2, OR2T1, OR2T10, OR4K15, OR4L1, OR4S2, OR51B6, OR5M3, OR6A2, OR8G1, OR9G4, P2RX4, PANK1, PAX8, PDXK, PFKFB3, PGAM1, PIGF, PIP4K2B, PLA2G2F, PLCB2, PLXNA2, PLXNB1, POLD3, POLE2, POMC, PPA2, PPP2CA, PPP2R1A, PPP3R1, PPP3R2, PRKCD, PRKCQ, PRLR, PRSS1, PTGES, RASA2, RASGRP2, RBL2, RDH12, SCLY, SEMA3B, SEMA3F, SEMA4B, SMPD4, SOAT2, SOCS7, SPRY2, SRGAP1, ST3GAL2, ST3GAL3, STAM, STK4, TBL1XR1, TNFSF18, TPI1, TPM3, UBA1, VAV2, XIAP, YWHAB, ATP6VOE1, CACNA2D4, SUV420H1</p>
Negative_15641	<p>CKD, DCC, FH, GSK, IVD, NGF, OAT, KDA, ADLTM1, ACTA2, AGMAT, AKR1D1, AKT1, ALDH1A3, ALDH1B1, ALDH3A2, ALDH7A1, AMDHD1, ARPC1A, ATG12, ATG3, ATP6AP1, BIRC5, C1QB, CAMK2A, CARS, CCL19, CCL22, CCL23, CCNG2, CCR8, CD40, CD8B, CDH1, CDH2, CDIPT, CER1, CLDN2, CSF1, CSF1R, CTNNA1, CTPS, CXCL6, CYP2D6, CYP4A22, DDX23, DDX4, DDX50, DGKH, DHRS4L2, DUSP10, EARS2, EGFR, EHMT1, ERBB4, F11R, FARP2, FGD3, FGF12, FIGF, FMO2, FUT6, FZD10, GALNT12, GALNT5, GALNT7, GALNTL2, GAS1, GFPT2, GNA11, GNAI2, GPD1, GRPR, GSTM4, GUCY2F, HAO1, HTR5A, IFNK, IKBKG, IL12A, IL17A, IRS2, ITGA3, ITGB5, KLRC3, L1CAM, LAMC3, LDHAL6B, LIPG, LLGL1, LMO7, LPAR1, LTBR, MAGI3, MAN2A1, MAP3K5, MCEE, MITF, MMP14, MMP2, NCK1, NCKAP1, NEU1, NFKB2, NNMT, NPAS2, NRAS, NT5C1A, OR10A3, OR10G9, OR10J5, OR10K2, OR10T2, OR13J1, OR1A1, OR1A2, OR2AG2, OR2D3, OR4K14, OR4K17, OR52R1, OR5C1, OR6A2, OR6B2, OR8D4, OR8G1, PAX8, PCNA, PDE6H, PDGFRA, PFKFB4, PIGN, PLA2G5, PLCD4, PLK1, PLXNA3, PMVK, PNPT1, POLR3A, PPP2R2A, PPP3R2, PRKAR1A, PRPH2, PSAT1, PSEN2, PTDSS1, PTGES2, RALB, RASSF1, RBKS, RDH12, RGS3, RPIA, RPS6KB1, SAT1, SDHD, SGMS1, SMAD4, SMURF1, ST8SIA5, STT3B, SUV39H2, TCF7, TLR5, TNFSF8, TRAF3, TUBB3, UCKL1, UGT8, ULK3, VDAC3, WNT10A, ARHGEF12, ATP6VOA1, B3GALNT1, CSGA</p>

Negative_15642	<p>ADU, BTD, CTS, CPT1, DED, EZK, GNS, GP9, LAT1, LCT1, MUI1, MVR, NOG, PAH, SDS, UBC, ACVRL1, ADSS, ADSSL1, AHCY, AKR1A1, ALG8, ALOX5, APBB1, APOA2, B3GNT5, BCAR1, BIRC5, CACNG6, CASK, CCL23, CCNG1, CCR5, CD38, CDH2, CES2, COQ3, CREBBP, CSF2RB, CSNK1G2, CYBB, CYP2B6, CYP2C19, DCTD, DEGS2, DGKH, DHRS3, DRD2, EFNA3, EGLN3, EHHADH, ENTPD2, ETNK2, F13A1, FABP1, FABP4, FCER1G, FGD3, FGF4, FTH1, FZD7, FZD9, GALM, GALNT10, GART, GBA3, GFAP, GFPT2, GGT5, GNA12, GNAS, GSTA1, GTSE1, HARS2, HLA-G, HLCS, HSD17B7, ICOS, IDH3A, IDI2, IL28B, IL2RA, IMPDH2, IPMK, IPPK, ITGA4, ITGAL, KDSR, KIR2DL1, KIR2DL2, KLRK1, LAMB2, LRP6, MAN1A1, MAP3K1, MAP4K1, MARS, MCCC2, MCM3, MCM6, MGST3, MINPP1, MMP9, MRAS, MYH7B, MYH9, NCKAP1L, NME6, NR1H3, NR4A1, NRCAM, NRG2, NRP1, NRXN2, OR1A1, OR2B2, OR4A16, OR4C16, OR4P4, OR51D1, OR51E2, OR52B6, OR5AR1, OR6T1, OR7A17, OR8B8, OR8H1, OR8K3, PANK2, PARD6G, PARS2, PDE8A, PDHB, PDXP, PFKP, PGAM2, PIGH, PIGK, PLA2G10, PLCB1, PLCG1, PNPLA4, POLD1, POLR1B, POLR1E, POLR2E, PPAP2B, PPOX, PPP2R2D, PRKACA, PRPH, PSPH, RAPGEF1, RBKS, RFXAP, RGS3, ROBO2, SARDH, SDC2, SEMA3D, SETD1A, SHC1, SLC25A6, SLC2A1, SMAD9, SNW1, SOAT2, SOX17, STEAP3, STX18, STX7, SYNJ1, THBS1, TLR2, TLR4, TNFSF4, TNXB, TP73, TPH1, TUBA3C, UBE2L6, UGCG</p>
Negative_15643	<p>AR, CD4, F2R, GLS, MET, NNT, STS, VCL, ABLIM2, ACPT, ACTG2, ADH6, ADORA2A, ALAS1, ALPL, ANAPC2, ANAPC5, AOC2, APOE, ARHGEF1, BAI1, BBOX1, BCAR1, BET1L, BLNK, CACNA1G, CBLC, CCDC6, CDC14A, CDK2, CHAT, CHUK, CLTA, CNTF, CRY1, CSNK1E, CTNNA2, CYP11B2, CYP26C1, DDOST, DDX50, DGKG, DNMT3L, DUSP6, E2F2, EDNRB, EIF4B, ENPP1, ENPP7, ENTPD3, ENTPD8, EXTL1, FCGR2B, FDPS, FECH, FOXA2, G6PD, GALK2, GALNT2, GGCX, GLUD2, GMPR, GRIA1, GRIA3, GSTO1, GYS2, H6PD, HCCS, HNF4A, HYAL2, ICAM1, IDI1, IFNA2, IL1A, IL20, IL20RA, INPP4A, LAMB3, LDHAL6A, LRAT, LYPLA2, MAGI2, MAPK14, MAPK8, MAT1A, METTL6, MGAT5, MLYCD, MMP14, MPST, MPZL1, MTHFD1, MYH14, NEFH, OGDHL, OPLAH, OR10J5, OR13D1, OR1J2, OR1J4, OR2AT4, OR2M2, OR4K2, OR51A4, OR52N4, OR5AR1, OR7G1, OR8B12, OR8D2, OXCT2, P2RX6, PDE11A, PLCB3, PLCE1, PLIN, POLA1, POLE3, POLR2I, PPAP2C, PPP1CA, PPP1R3C, PPP2CB, PTGER3, PTPN5, RALB, RAPGEF3, RARA, ROCK2, SDC2, SDC4, SEMA3F, SEMA3G, SLC27A1, SPI1, SPTLC1, ST3GAL1, ST3GAL5, STK36, STX16, SYNJ2, TAP1, TIRAP, TNFSF12, TP53, TPMT, TUBA3E, TUBB6, UPR1, VDAC2, WNT3A, MAPKAPK5, PPARGC1A, TNFRSF14, TNFSF13B</p>
Negative_15644	<p>AKR3, C9, CDO, CS, DAO, DDO, F2, F3, FGB, GK, GP9, ID2, KDK, KMO, PGD, PLEN, SCD, TK2, ABLIM1, ACSL5, ACSS2, ACVR2B, ADH1B, ADORA2B, AKR1C2, ALAS1, ALG10, ALG12, APRT, ARNT, ATP2A1, ATP4A, ATP5F1, BACE2, BHMT, BMP5, C1GALT1, C4BPB, CASK, CCL16, CCL25, CCND2, CD3E, CDH5, CEBPA, CES2, CFL1, CLDN11, CLDN17, CLDN8, CNTFR, CPS1, CPT1B, CREB3L4, CTNNA2, CYP2C9, DAPK3, DBF4, DDIT3, DDX51, DERL1, DFFB, DGKG, DGKH, DHDH, DKK4, DOLPP1, DRD1, E2F2, ECSIT, EFNA3, EPHA3, EPHA5, EVI1, FABP3, FADS2, FARSA, FCER1G, FDFT1, FDPS, FGF6, FUT2, FUT8, FZD7, GALC, GALK1, GALNT5, GCH1, GDE1, GLDC, GLUD1, GMDS, GNAI3, GNAL, GNPDA2, GNPAT1, GOSR2, GOT2, GUCY1A2, HDAC2, HHEX, HMGCS1, HSD17B7, HTR4, IFNA13, IMPA1, IMPDH1, INPP5A, IRAK4, IRS1, ITGA1, ITGA2B, ITGAD, ITGAL, KIR3DL2, KLRC1, KLRC4, KNG1, LIPC, MAP3K12, MAP4K4, MCM4, MMP14, MYL2, NAGK, NFA1C4, NQO1, NUDT12, OCRL, OR10AG1, OR14C36, OR1E2, OR1J4, OR1L3, OR1L6, OR1N2, OR2L2, OR2T29, OR4C13, OR4D2, OR4N4, OR4P4, OR51B4, OR52M1, OR5AU1, OR5M3, OR6N1, OR6T1, OR7G1, OXCT1, P2RX6, PARD6A, PCK1, PDE7A, PDHA1, PFKFB4, PFKM, PFN4, PI4KB, PIK3CD, PIP5K3, PKM2, PLAT, POLD1, PPP2R2C, PRPH2, PTAFR, PTGES2, PTPN7, RBPJL, RFXANK, RND1, SELP, SMPD4, SOCS4, SPRY1, STAM, SUFU, SUV39H1, TAS2R5, TGFB1, THTPA, TOMM</p>

Negative_15645	<p>ABO, BID, DHH, F11, FGA, GH2, HR2, INS, IAT, UBB, UBC, WAS, AASDH, ACMSD, AC01, ACOX2, ACP5, ACSS1, ACTC1, ACTN4, ADH1B, AGRP, AKR1B1, AKT1, ALDH1A3, ALG11, ALPL, ANAPC7, APH1A, APRT, ARD1A, AREG, ASIP, ASRGL1, ATP4A, ATP5H, B3GALT6, BACE2, BCAT1, BCKDHB, BDKRB1, BMP2, C1QC, CACNA1H, CACNA1I, CACNG4, CASP8, CCKAR, CCL1, CD34, CDC7, CDK5, CHD8, CHPT1, CISH, CLDN15, CLDN2, COL5A2, CPT1C, CSF2, CTS1L1, CTTN, CYBB, CYP2C8, CYP3A43, CYSLTR1, DDIT3, DTX2, EHMT1, ENO1, FUT8, GAL3ST1, GAMT, GFAP, GJA1, GLS2, GLUL, GMPPB, GRAP2, GRHPR, GRM1, GSK3B, HADHA, HBEF, HLA-DMA, HMOX1, HTRA2, IAPP, ICAM2, IFNA17, IL8RA, IL8RB, IMPDH2, ITGA2, ITGA6, ITGB4, ITGB5, KARS, KCNQ1, KLRC1, LALBA, LAMC3, LGMN, LRRC4C, LTB4R2, LTBP1, MAP2K1, MAP3K3, MAPK8, MAPT, MASP1, MCCC1, MGAT1, MGA T5B, MMP7, MTHFD1L, MTMR6, MYH9, NCOA4, NFATC3, NOD1, NOS3, NR1D1, NRXN1, NRXN2, NUMB, OCLN, OR11G2, OR2F1, OR2Y1, OR3A3, OR4C11, OR4C12, OR4L1, OR51B2, OR51I2, OR56A1, OR5D14, OXSM, PCCB, PDE6D, PFKL, PGM1, PIK3R2, PIK3R4, PKM2, PLCE1, PLXNA2, POLR1D, PRPS1, PSEN2, RARA, RASSF1, RBPJ, RDH16, RPS6KA6, RRAS2, SARDH, SLC25A4, SMAD9, SMPD4, SNAI1, SPHK2, SSH2, ST6GAL1, STAT1, SUCLG2, TMLHE, TRAF6, TYK2, UGT2A1, ULBP3, UMPS, UPRT, VDAC1, WHSC1L1, WNT3A, WNT9B, XIAP, YWHAG, ZFYVE1</p>
Negative_15646	<p>AZM, PEAKP31, NLG1, PRH, PLZ, KMO1, LNB, ECF, PDC, TNDS, ACRD9, ACL1, ACSM5, ADCY9, AGMAT, AGXT, AKR1B10, ALDH3B1, ALDH9A1, ALG1, ALG12, AMPD2, ANPEP, APLP1, ARPC4, AXIN1, B3GAT1, BDKRB2, C1QB, C1QC, C9orf95, CACNG6, CACNG8, CALML3, CAMK2A, CAMK2D, CAV1, CCDC6, CCL17, CCL4, CCNG2, CDC20, CDC27, CDC7, CDIPT, CHKB, CHRNA7, CLDN10, CLDN11, COL11A1, COL5A1, COL5A2, COMT, CPOX, CRKL, CRY2, CSNK2A1, CSNK2A2, CTBP2, CYBA, CYFIP2, CYP1A1, CYP26C1, CYP4F2, CYSLTR1, DAD1, DVL1, EHHADH, ENAH, ENPP3, EPHA7, EXTL3, FASN, FCER1G, FMO2, FSHB, GALNT1, GALNT10, GALNT11, GALNTL2, GDE1, GJA1, GNPDA1, GP1BB, GPX5, GRHPR, GRLF1, GUCY1A2, GUCY2F, HCST, HYAL1, ICAM3, ICOS, IKBKB, IL15RA, IL1A, INPP5E, INSR, ITGAV, KIR2DL1, KLRD1, LARS, MAFA, MALT1, MAP3K12, MFNG, MGST2, MTHFR, MYLK2, NEFH, NLGN3, NMNAT2, NRG1, NRP1, NT5C1A, NUMBL, OR2A4, OR2G2, OR2M4, OR2T5, OR2Y1, OR4K5, OR52K2, OR5AN1, OR5AP2, OR5T3, OR7A10, OR8D4, OR8K5, PANK2, PANK3, PCYT1B, PDE10A, PDE1C, PFKP, PIAS2, PIK3R5, PIP4K2C, PLA2G2A, PLCB2, PLXNB2, POLD2, PPA1, PRKAR2B, PROS1, PTDS2, PTGER3, PTPN6, PVRL2, RAB5A, RBPJ, RHOD, SCP2, SHISA5, SI PA1, SLC9A1, SMAD3, SMURF2, SNAI2, STAT3, STX12, SUCLG1, TACR2, TBK1, TFDP1, THBD, TUBB6, TYMP, TYMS, TYRP1, UBA7, UCK1, UGT2B10, UPRT, UR</p>
Negative_15647	<p>ABO, BCR, BID, C8G, CKB, CKM, CR1, DCT, GBA, ID3, TNC, ABL1, ABLIM1, ACP1, ACSM3, ADCY5, ADRA1A, AGPAT2, ALDH1A2, ALG5, ALG8, APLP1, APOE, ARHGEF4, ARPC1B, ATP5D, ATP6AP1, B4GALT5, BET1L, BMP8A, CACNG1, CADM3, CANT1, CD14, CD44, CDC25A, CDH5, CHPT1, CHRM3, CHRM5, CMPK1, CNDP1, CNTNAP2, CTBP2, CXCR3, CXCR6, CYP21A2, DIAPH2, DLL1, EPHA7, EPOR, ETNK2, ETS1, FARP2, FARS2, FLT4, FPGT, FRAT2, GAD1, GAL3ST1, GALNT1, GCH1, GMDS, GPD1, GPLD1, GRIN2A, IFNA2, IKBKE, IL24, IL9R, IMPA1, INSR, ITPK1, ITPKA, JAG1, KIR2DL4, LCP2, LEF1, MAN1C1, MAOB, MAP4K2, MAPT, MCM2, MGAM, MITF, MYH4, MYL7, NAGA, NEFH, NFX1, NUMBL, OCLN, OGDHL, OR10K2, OR1N2, OR2A4, OR2G2, OR2H2, OR2T4, OR4F17, OR4S1, OR51F2, OR51M1, OR5H6, OR5L1, OR6C4, OR6C6, OR7A17, PAK6, PCK1, PDE10A, PDE3B, PDE8A, PDXP, PFKFB3, PIK3CB, PLK1, PLOD1, PLXNA1, POLD2, POLR1B, POLR2A, POLR2D, POLR3D, PRKACG, PROS1, PSENEN, PTGFR, RASA1, RDH16, ROBO2, RPS6KA2, RUNX1, RXRB, SDC3, SHC4, SMPD2, SNAI2, SPP1, STX7, TLR3, TRAF4, UGCG1, ULK2, ULK3, UROC1, VAMP3, WARS, WASF1, WASF2, WNT2, ZFYVE16, ATP6V1G2, HLA-DRB3, MAP3K7IP1, MAP3K7IP2, PPARGC1A, TNFRSF10D, TNFSF13B</p>

Negative_15648	<p>EDA, GAA, GHI, GSN, HGD, HK2, IL8, UG1, FGF, RFR, SKM, UBC, ADH, AARS2, ACO1, ACOX1, ADCY9, ADORA2A, AGMAT, AMD1, AOC3, B3GALT6, B3GNT2, BCL2L1, BMP8A, BMPR1B, CACNA1G, CACNG8, CAV2, CCL16, CCL26, CCNE1, CD74, CDC16, CDC6, CHEK1, CHSY3, CLDN18, CMBL, CRB3, CREB3L1, CRLF2, CSNK2A2, CYP2C19, CYP2C8, DDIT4, DDX18, DDX55, DLL3, DNMT3B, DVL3, E2F2, EIF4E, FABP3, FARSA, FGF17, FGF4, FLOT1, GALNS, GALNTL5, GDF6, GLS2, GNA14, GRIA2, GRIN1, GSTM4, GSTM5, HBEGF, HLCS, HPSE2, IDUA, IGFBP3, IL15, IL17B, IL23R, INMT, IRS4, ITGA2B, KIR2DL3, KLRC2, LLGL2, LRDD, MAML1, MAP3K1, MAP3K5, MAP4K2, MAP4K3, MAPK11, MASP1, MGST1, MGST2, MMP7, MOV10L1, MTMR1, MYL7, NAGLU, NAGS, NANS, NEGR1, NEU4, NFKBIA, NKX3-</p> <p>1, NME2, OPLAH, OR11G2, OR11H1, OR12D3, OR3A3, OR4C11, OR4C6, OR4N4, OR51L1, OR52N1, OR5D13, OR5D18, OR5H2, OR5I1, OR6K3, OR7G3, OR9G1, OR9G4, ORC2L, ORC5L, P2RX1, PAPSS1, PCNA, PDE3B, PDHB, PDXP, PER2, PFKFB2, PHKB, PIGA, PLA2G6, PLTP, PNPLA3, PPCDC, PPP2CB, PPP2R5D, PRDX6, PRIM2, PRKAG1, PRKX, PRKY, PSME1, PSME3, PTPMT1, PTPN11, PTPRZ1, PYCRL, RAC1, RASA2, RBL1, RDH16, ROCK2, SENP2, SGMS2, SHC2, SIGLEC1, SIIPA1, SMAD1, SMPD4, SNAP25, SOAT1, STAM, STX1B, TALDO1, TAP1, TAS2R7, TCIRG1, TJP3, TKTL1, TLR5, TMLHE, TSHR, TUBB, TYMP, UBE2L6, UGCGL2, UGT2B11, VANGL1, VEGFA, VEGFB, VEGFC, VEGFD, VEGFE, VEGFG, VEGGL1, VEGGL2, VEGGL3, VEGGL4, VEGGL5, VEGGL6, VEGGL7, VEGGL8, VEGGL9, VEGGL10, VEGGL11, VEGGL12, VEGGL13, VEGGL14, VEGGL15, VEGGL16, VEGGL17, VEGGL18, VEGGL19, VEGGL20, VEGGL21, VEGGL22, VEGGL23, VEGGL24, VEGGL25, VEGGL26, VEGGL27, VEGGL28, VEGGL29, VEGGL30, VEGGL31, VEGGL32, VEGGL33, VEGGL34, VEGGL35, VEGGL36, VEGGL37, VEGGL38, VEGGL39, VEGGL40, VEGGL41, VEGGL42, VEGGL43, VEGGL44, VEGGL45, VEGGL46, VEGGL47, VEGGL48, VEGGL49, VEGGL50, VEGGL51, VEGGL52, VEGGL53, VEGGL54, VEGGL55, VEGGL56, VEGGL57, VEGGL58, VEGGL59, VEGGL60, VEGGL61, VEGGL62, VEGGL63, VEGGL64, VEGGL65, VEGGL66, VEGGL67, VEGGL68, VEGGL69, VEGGL70, VEGGL71, VEGGL72, VEGGL73, VEGGL74, VEGGL75, VEGGL76, VEGGL77, VEGGL78, VEGGL79, VEGGL80, VEGGL81, VEGGL82, VEGGL83, VEGGL84, VEGGL85, VEGGL86, VEGGL87, VEGGL88, VEGGL89, VEGGL90, VEGGL91, VEGGL92, VEGGL93, VEGGL94, VEGGL95, VEGGL96, VEGGL97, VEGGL98, VEGGL99, VEGGL100</p>
Negative_15649	<p>AK7, CGN, DUT, FES, GBA, GSN, IL9, MPI, PDC, PVR, SRM, ZYX, ACAD9, ACP2, ACSS1, ADH6, ADRB3, AGPAT6, AKR1A1, AKR1D1, ALDH7A1, ARD1A, ASCC3, ATP2A1, ATP5E, BMP6, BTRC, CACNG8, CASK, CCL5, CCL8, CCNE2, CD247, CD36, CDC25A, CDC26, CDK6, CLDN2, CMAS, COL5A1, CSF1R, CSNK1G1, CYP19A1, CYP26C1, CYP2C9, DAAM1, DAAM2, DDOST, DHRS4, DVL3, EDNRB, ENO3, EPHA6, EPHB6, ESPL1, FZD10, GANAB, GATM, GCNT2, GGT6, GLYCTK, GP1BA, GPT2, GSTK1, GSTM5, HAGH, HARS2, HES1, HLA-</p> <p>DRA, HSD17B8, HTR2B, IDI2, IFNA6, IFNGR1, IL12RB1, IRF7, ITGA11, LAMA4, LAMC2, LLGL2, MAD1L1, MAP2K7, MAP3K1, MAPK3, MGAT1, NAT5, NEFL, NFKBIA, NLGN3, NOTCH3, NR1D1, NRG2, NT5C1A, OR11H6, OR2AE1, OR2F1, OR4M1, OR4N5, OR51I1, OR51M1, OR51Q1, OR51T1, OR5F1, OR5L2, OR5T2, OR7A10, OR7A17, PCCA, PDCD1, PFKFB4, PIGO, PLA2G2F, PMAIP1, POLA2, POLR1A, POLR2D, PPAT, PPP1R3A, PPP2R5B, PRKAB1, PRKAG1, PRNP, PRSS1, PVR11, PYGB, RAP1A, RDH5, RGS3, SARDH, SEMA3G, SLC27A1, SORBS1, SOX17, SPHK1, STAT6, STX8, SULT2A1, TAP1, TKTL1, TLR2, TPM3, TSLP, TUBB3, UCG, VEGFB, YWHAE, ZFYVE16, HSD17B10, PAFAH1B2, SERPINF2</p>
Negative_15650	<p>CD2, CFI, F10, F8, F9, FAH, FGB, GLS, ID2, IL3, IL9, KDR, LAT, TPO, ABI2, ACADL, ACYP2, ADH1A, ADH1B, ADRBK2, AGPAT6, ALDH2, ALOX5, ARHGAP6, ATG3, ATP6V1H, B3GAT2, BCL2L1, BIRC5, BMPR2, BST1, C1QB, CARS, CCL8, CND2, CDC45L, CDKN2B, CFL2, CHRNA7, COL6A2, CPT1C, CTBP1, CTNNA2, CYSLTR2, DDIT4, DUSP16, DUSP5, EPAS1, EPHB6, EPRS, ETS1, EXOC7, EXTL3, FASN, FECH, FGD1, FZD2, FZD5, GABARAP, GADD45A, GALK1, GALK2, GALNT2, GNRHR, GPAA1, GYS2, HCST, HLA-</p> <p>DRA, HTR2A, HYAL2, IL11RA, IL8RA, IMPA1, INPP5E, ITGAD, ITGAL, ITGB1, ITGB8, JAK1, JAK3, KIR2DL4, L1CAM, LAP3, LTBP1, MAG11, MASP2, MCCC1, MGAT5, MMP2, NADK, NAGK, NODAL, NOS3, NR1D1, NT5C1B, NUDT5, NUDT9, OR10G4, OR11L1, OR51B6, OR51Q1, OR6C70, OR7G3, OR9G4, OXCT2, PCYT2, PGAM1, PGAM4, PIAS3, PIM2, PKLR, PLCD3, PLOD2, PNLIP, PNMT, POLR1A, POLR2H, PPID, PPP2R5C, PTDSS2, PTGFR, PVRL3, RASGRP3, RASSF5, RHOQ, ROCK2, SELPLG, SEPHS1, SFRP2, SMPD2, SNAP25, SOCS5, SPHK2, SPRED2, SSX2IP, STAM2, STX4, SULT1A1, TACR2, TALDO1, TGDS, TJP1, TLN2, TPK1, TSTA3, TYMP, UGT2B10, WNT16, WNT5B, CSGALNACT2, HLA-</p> <p>DRB4, PAFAH1B1, SERPINB5, ST6GALNAC4</p>



Negative_15651	<p>BCR, CGA, CKB, EPO, F11, FER, GH1, GK, GSN, HK2, ILK, MIZ, MUI, NGF, AAKS  2, ABCC8, ACAA1, ACADS, ACP2, ACSL4, ACVR2A, AGPAT4, ALDH1B1, ALDH3B  1, AMD1, AMPD2, AMPD3, ANGPTL4, ARPC1A, ATP5D, ATP5I, B3GALT5, CACNG  6, CADM1, CANT1, CCL1, CCL21, CCNA1, CCNB2, CCR1, CDC14B, CDC25A, CDC  25C, CDKN1B, CFL2, CHD8, CHIA, CKS1B, CLDN9, CNGA3, CNGA4, CSNK1G2, C  TLA4, CYP11A1, CYP2C9, CYP2U1, DAPK2, DAXX, DGAT2, DKK4, DNMT3B, DPM  1, DUSP2, E2F1, E2F5, EFN3, EHHADH, EPAS1, EPHB6, EXT1, FGF21, FGF9,  FRAT1, GALNT1, GALNTL2, GALT, GBT1, GCH1, GOT1, GPT2, GRIA3, GSTA5,  GSTO1, GUCY2F, HRH2, IDH1, IDI1, IL10RB, IL15, IL1B, IL22RA1, IL28RA  , IL29, IRAK2, ITGB1, KIR2DL2, LTA4H, MAGI2, MYH11, MYH7B, MYH9, NMNA  T2, NOTCH2, NPR2, NUDT2, NUDT8, OR10A4, OR10H1, OR10H4, OR4F4, OR4K2  , OR51L1, OR51S1, OR52N2, OR5AR1, OR5B12, OR5I1, OR6K6, P2RX5, P2RX6  , PAPSS2, PDE11A, PDE2A, PDE8B, PDIA4, PEMT, PIGA, PIK3CG, PIP4K2A, P  IPOX, PLAUR, PLCB2, PLXNA3, PNPLA3, PPARG, PPP1R3B, PPP2R2A, PPP2R5  E, PRPS2, PTGIS, RARS, RASSF5, RPS6KA5, RUNX1T1, SARS, SDHA, SEMA4C,  SETD1B, SGPP1, SIPA1, SMURF2, SOCS1, SPTAN1, SSH3, ST8SIA5, STAT5A,  STK36, STX10, STX6, TAS2R14, TGDS, THBS3, TLN1, TNFRSF8, TNXB, TSC1,  TUBAL3, TUBB, UBA1, UCK1, VCAM1, VDAC1, WSCR17, XIAP, YARS, YWHAZ, B  CGALNT1, HSD17B10, HSD90A1, MAPK7IP3, ST6GALNAC5, TNFRSF10A</p>
Negative_15652	<p>BTK, CEL, CGN, DAO, FN1, IDS, NF1, PRL, TNR, AANAT, AASS, ACAT1, ACSL1,  ACVRL1, ADSS, ADSSL1, AKR1B10, AKR1C3, ALDH1A3, ALDOB, ALG2, ANAPC1  0, APRT, ARD1A, ATP4A, B3GALT5, B4GALT1, BBOX1, CAMK2D, CARD11, CCL2  3, CCNG1, CDC2, CLDN1, CLTB, CNTFR, CSNK1D, CSNK2A1, CSNK2A2, CTTN, C  X3CR1, CYP19A1, CYP2C8, CYP7A1, DGKG, DGKH, DHFR, DHODH, DLL3, EGLN3  , EIF4E, ENPP6, FLOT1, FLT3, FOSL1, FUT1, FUT5, FZD8, G6PC, GJA1, GNPA  T, GPD2, GRIN2C, GSK3B, GUCA1B, GUCY1A2, IL10RB, IL12RB2, IRAK4, ITG  A9, ITGAD, JAG1, JAG2, JUND, KIR2DL1, LAMB1, LDHB, MAP2K7, MAT1A, MFN  G, MMP14, MTMR1, MYD88, MYH7, MYLK, NAGS, NLGN1, NPR2, NR1D1, OCRL, OR  10G3, OR10H3, OR10J3, OR2A42, OR2D2, OR2D3, OR2T33, OR4C15, OR4K2, O  R4N2, OR51T1, OR56A1, OR9A4, ORC4L, PDE4B, PDGFB, PDHB, PFN2, PGS1, P  HKG1, PIAS1, PIK3C2G, PIK3CD, PITX2, PLCG2, PLOD3, PPP1R3C, PRKACA,  PRKAR1B, PRKAR2A, PSPH, PTCH2, PYCRL, RAC3, RAF1, RASGRP4, RENBP, RF  WD2, RPIA, SEMA3C, SESN1, SH2D1A, SMAD2, SMPD4, SPCS3, TAS2R13, TBL1  Y, TBXAS1, THBS3, TLR2, TOLLIP, TPM3, TRPM5, TYMS, UCP1, WHSC1, WNT3,  WNT9B, ATP6VOD2, ATP6V1E2, ST6GALNAC3</p>
Negative_15653	<p>APP, F11, GBA, GH2, GK, INS, LPL, LYN, ME2, NOG, TH, TXK, ADCY10, AFMID,  AGPAT4, AMPD1, AMPD2, ANPEP, APPL1, ATP2A1, ATP5D, ATP5H, ATP5J, B4G  ALT7, BDKRB1, BNIP1, BUB1, CACNA1G, CAMK2B, CAV3, CCR8, CES2, CKMT2,  CLCA4, CLTCL1, CMPK1, CNTNAP2, CPT2, CREB1, CSF1R, CTNNA3, CX3CL1, C  XCL2, CYP3A7, CYSLTR2, DAD1, DCXR, DGKI, DPYS, DRD2, DRD5, DTYMK, DUS  P10, E2F5, EDAR, EGLN1, EHHADH, ENTPD3, FASLG, FLT1, FOXA2, FZD3, FZD  5, FZD9, GNAO1, GRIN1, GYS1, HA01, HEXA, HLA-DOA, HLA-DOB, HLA-  F, HMGCS2, HNMT, HSD17B2, HSPA2, ICAM3, IDH3A, IFNA10, IFNA14, IL12R  B1, IL15, IL17B, IL23R, INHBA, INHBE, INMT, IRAK3, LAMC3, LAP3, MAP3K  1, MAP3K7, MAPK7, MARS2, NCOR2, NME6, NTNG1, OCLN, OGDH, OR10R2, OR1A  1, OR1L1, OR2A14, OR2B11, OR2C1, OR4D2, OR4K15, OR51F1, OR52M1, OR56  A1, OR5A1, OR5AR1, OR5H2, OR6C6, OR6K2, OR6N1, OR6X1, OR6Y1, OXCT1, P  2RX5, PAPSS2, PDGFC, PGAM1, PGAM2, PIAS3, PIK3R3, PKM2, PLCD4, PLOD2  , PLXNB1, PNPT1, POLR2I, POLR3D, PPBP, PRKACG, PRKCA, PRODH, PRODH2,  PTPRZ1, RUNX1T1, SARS2, SEMA3B, SEMA4C, SEMA4G, SPRY3, STAT6, SUCLA  2, SUCLG1, SULT1A2, TAS1R2, THTPA, TLR4, TOLLIP, TOMM40, TYK2, UNC5D  , ZFYVE16, ATP6VOD1, CACNA2D1, CSGALNACT2, HLA-  DQB1, PAFAH1B3, PRICKLE1, TNFRSF10D, TNFRSF6B</p>

Negative_15654	<p>AKT1, CBL, EBF1, F1N1, G9, KIT1, LTN, MIF, PRL, RDX, RET1, TRK1, TNF, TFR, WAS, AADAT, ABCC8, ACSL1, AFMID, AKR1A1, AKR1C1, ALDH5A1, ARSD, ATG12, B3GALT6, BMP2, CACNB4, CACNG4, CARD11, CASP6, CCL14, CCR6, CDC25A, CD6, CDH2, CKS1B, CLDN4, CLOCK, CNTN1, COL11A1, CPOX, CRLF2, CTSB, CXC L9, CYP26A1, DFFB, DKK1, E2F2, EDN1, EHMT1, EPB41, ESAM, EXTL2, FGD3, FGF14, FGF8, FGFR3, FLAD1, FUT2, FUT3, FUT4, FZD8, GALC, GALNT1, GALN T8, GALT, GGT1, GIT1, GLI3, GNB1, GNG13, GNMT, GOSR2, GRIA1, GSTM3, GU CY1B3, HLA- DOA, HMGR, IDI1, IFNA21, IFNB1, IL10RB, IL12RB2, IL17A, IL28A, LAMB 3, LCP2, LDHC, LIMK2, MAML3, MAP2K2, MAP4K4, METTL6, MGAT5B, MLYCD, M PST, MTAP, MYH7, MYL9, NARS, NFASC, NKD1, NKX6- 1, NRP1, NRXN2, NUMBL, OR10X1, OR11H4, OR13C4, OR13F1, OR1J2, OR1S2, OR2H2, OR2K2, OR2T12, OR4L1, OR52E8, OR52L1, OR56A3, OR5AU1, OR5C1, OR5H2, OR5P3, OR8B4, OR8H3, P4HA3, PANK4, PAPSS2, PARD3, PARD6B, PAR VA, PCCB, PDGFC, PFKM, PIGT, PIK3C2A, PLAT, PMAIP1, POLR2K, POMC, PPA T, PRKAR1B, PRKCD, PRSS1, RALB, RBPJ, RERE, ROCK1, RXRA, SELE, SEMA4C , SETMAR, SLC27A1, SOS1, SPAM1, STAM, STAT1, TAS2R10, TAS2R14, TCF7, TCIRG1, TGFA, TGFBR1, THBS1, THBS3, TIAM1, TICAM2, TMLHE, UROC1, WEE 1, WNT8B, XYLB, CACNA2D2, HSP90AA1, HSP90AB1, MAPKAPK2, ST6GALNAC6</p>
Negative_15655	<p>ATM, CR2, DBT, IL6, IL7, IVD, LCT, ME3, PAH, TEC, VTN, ZYX, AADAC, ABAT, ACMSD, ACSM3, ACVR2B, AGMAT, AHCYL1, ALDH1A3, ALG10, ALG6, ALG8, ALG 9, ARG2, ATP12A, ATP5B, ATP5I, ATP6VOB, ATP6VOC, AVPR1A, B3GAT3, CAN T1, CARD11, CAV2, CD34, CDC26, CDC45L, CDKN2B, COL4A4, COL5A2, COL6A 1, COX15, CSNK2B, CX3CR1, CXCL10, CYP3A7, DDX54, DGAT1, DHCR24, DLAT , DPM3, DUSP7, EFNA4, EFNB2, EHHADH, ENPP2, ENTPD2, EPHB4, ERBB2, FAB P1, FSHR, GADD45B, GALNT7, GCNT2, GDF7, GGPS1, GGT6, GIT1, GLI1, GMPP A, GMPR2, GNA12, GNAQ, GNB1, GPT2, GYS2, HLCS, HNF4A, HSD17B4, HTR2A, HTR7, ICOSLG, IDH3A, IDH3G, IFNA17, IKBKG, IL19, ITGA7, ITGAV, JAG2, KRAS, LCMT2, LIAS, LIFR, LIPG, LRDD, MAP2K5, MAP3K14, MARS, MARS2, MA SP1, MDM4, MECR, MGAT4B, NEFH, NEUROD1, NFATC1, NFATC4, NFYB, NODAL, OCRL, ODC1, OR10G8, OR10J1, OR10K2, OR11A1, OR2D2, OR2Z1, OR4D6, OR4 K2, OR51B6, OR51E2, OR6C3, OR6C75, OR7G2, OR8D2, P2RX6, PAK1, PAK2, P ARVB, PDE3B, PDE7A, PIGS, PIGX, PLCD4, PNLIP, POLR1A, POLR3B, PPCS, P PP2CA, PPP2CB, PPP2R5D, PPT1, PRKCH, PTK2B, PYGL, RASGRP1, RFNG, RPN 2, RXRA, SCD5, SEMA4B, SEMA4G, SGPP1, SPP1, SPRED2, SSSX2IP, STX5, TAP 1, TGFA, TJP3, TKTL1, TLN2, TNXB, TXNDC12, UAP1, UCP1, UGT1A10, ULK1, UROC1, WBSR17, ARHGEF12, ATP6V1B1, ATP6V1G1, TNFRSF18</p>

Negative_15656	<p>ATM, CR2, CRK, F9, FGB, FST1, GSK, HK1, IL9, LSS, ME1, ME2, MET, MVR, NFL, PGD, VTN, AADAT, AASS, ACHE, ACSL5, ACSM1, ACSM4, ADCY7, ADRB1, AKR1B1, AKT3, ANAPC4, APLP1, ASCC3, ATP13A2, ATP5G2, B3GNT5, B4GALT1, BUB1B, C7orf16, CACNA1F, CACNB1, CACNB2, CACNG1, CANT1, CCL13, CCL20, CD14, CD244, CES1, CES2, CHST12, CKS1B, COL6A1, CSF1, CSNK1G1, CXCL2, CYFIP1, CYP26C1, CYP2A6, DDX56, DVL2, EFNA1, EHMT2, EIF4E, ENTPD3, ENTDP5, FGF2, FUT6, GAL3ST1, GCLM, GGT7, GPX7, GRM1, GUCA1B, HGSNAT, HLA-F, HMBS, HMGCL, HRH1, HSPB1, HTR7, IDI1, IFNA21, IL22RA1, IL24, INPP4B, ITGA7, KITLG, LIFR, LRRC4C, MAGI1, MAN1A2, MGAT1, MGLL, MKNK1, MYH7B, MYL7, MYLK, NCAM1, NCF1, NCK2, NEUROG3, NMNAT1, NT5E, OLAH, OR13C4, OR1F1, OR4F4, OR4M1, OR52J3, OR5B12, OR5J2, OR5K1, OR6C75, OR7D4, OR8A1, OR8B12, OR8G1, OR9Q1, PARVA, PARVG, PHKA2, PIAS4, PIGB, PLA2G1B, PLAU, PLCB1, PLCB4, PLXNB2, POLR2G, POLR3K, PON1, PPBP, PPP2R5E, PRKACB, PRKAR1A, PRKAR2B, PRKCE, PSENEN, PTEN, PTGES2, RARA, RARS, RASGRP1, RPS6, RUVBL1, RXRG, SDC1, SEPHS1, SMAD1, SOAT1, SOCS5, STX10, STX1A, SUOX, SV2C, TGFB3, TNFRSF4, TNFSF12, TNFSF14, TNFSF4, TP53, TRMT11, UGT2A1, ULBP2, VEGFA, VKORC1, WASF2, WNT9B, XYLT2, ZMAT3, ATP6VOA2, ATP6V1G2, CSGALNACT1, GABARAPL1, HLA-</p>
Negative_15657	<p>RR3, ATM, CAD, DBP, EBF, F10, HFD, INS, JUN, MES, PGR, PPS, RPK, SMS, TH, WAS, ACP6, ACYP1, ADSSL1, AGXT, ALDH3A1, ALG10, ALG9, ALOX15, ARG2, ARHGEF2, ARHGEF7, B3GNT2, BCL2, BIRC5, BPNT1, C1GALT1, CACNA1A, CACNB4, CACNG5, CARD11, CASK, CCL22, CD274, CDC25A, CDIPT, CDKN2A, CHIA, CHRM3, CKS1B, CLCF1, CLDN7, CSF2RB, CTLA4, CXCL2, CYFIP1, CYP11B1, CYP7A1, DDHD1, DDOST, DGKB, DGKQ, DHRS9, DPYS, DUSP10, E2F3, EPHB1, ERBB4, FARSA, FCGR2B, FDFT1, FGFR3, FMO2, FSHR, FUT4, FUT8, GALNT10, GB E1, GLO1, GMPPB, GRM1, GSTK1, GTSE1, GUCA1C, HCST, HLA-DOB, HMGCS1, HSD17B1, HTR2A, HTR4, IFNA21, IFNGR2, IGSF5, IL15, IL1B, IL22RA1, IL28RA, IL8RB, INPP4B, INSR, IRS4, ITGA9, ITGAV, ITPA, KIR2DS5, KIR3DL3, KLRC1, LAMC2, LIPF, LTA4H, MAD1L1, MAPK3, MIOX, MTHFD2, MTHFR, MYH1, MYLK, NAMPT, NAT5, NAT6, NCKAP1, NFATC4, NFKBIA, NME6, NRXN3, NUMBL, ONECUT1, OR10G2, OR10G8, OR10J5, OR13C2, OR13D1, OR2B11, OR2T1, OR52E6, OR5AC2, OR5B3, OR5D14, OR6C1, OR6C74, OR6K6, P2RX5, PAFAH2, PCCA, PDCD1, PDE1A, PDE7A, PDX1, PER1, PFN3, PGLS, PHKA1, PIK3CG, PKMYT1, PLA2G10, PLAG1, PLD2, POLR1D, POLR2C, PPP2R1B, PRKG2, PTGFR, PTK2, RAD51, RAPGEF3, RFX5, RGS3, RPIA, SARS2, SETDB1, SHC4, SHMT1, SLC27A1, SLC2A4, SMURF2, SRGAP1, SULT2B1, TAP2, TLN2, TOMM40, TRAF2, TRAF3, TCTA2, VEGFC, VWHL17, CACNA2D1, CACNA2D2, HSD17B10, I</p>



Negative_15660	<p>AMH, CAD, CEL, DDO, DHH, FST, HK2, IDS, IL2, MUT, SI, TPO, AASDH, ACADVL, ACO2, ACSM2A, ACSM4, ACY3, ACYP1, ADH6, ADRB3, ALG11, ALG13, AOC2, APC2, ARPC1A, ARPC1B, ASIP, ATP13A2, BET1L, BIRC5, BMPR2, BUB3, CACNG3, CADM1, CBLC, CBR3, CCL1, CCND1, CCR9, CD40LG, CD72, CD8A, CDK2, CDS1, CHEK2, CHRM2, CHSY1, CLDN3, CLTA, COASY, COMP, CPT1B, CRB3, CREB5, CSDA, CSNK1E, CTBP1, CXCL11, CYFIP1, CYP3A43, CYP4A22, CYP7A1, DAG1, DARS, DGAT1, DGKA, DLL4, E2F2, ENTPD3, EPHA8, FGF8, FGFR2, FUT1, FUT6, FZD3, FZD5, GAD2, GALNT12, GFPT2, GJA1, GNA12, GRIA3, HDAC1, HPRT1, HPSE, HTR2B, IDH2, IL10RB, IL12RB2, IL22RA2, IL8RA, INHBE, ITGA11, ITGA4, ITGB2, ITGB6, LFNG, LPAR1, LRP6, MAGI2, MAPK3, MCM3, MDM4, MEF2C, MS4A2, MYH4, MYL7, NFKB1, NOTCH1, NTN1, NTRK2, OR10AG1, OR10H1, OR2H1, OR4P4, OR51F2, OR52H1, OR52R1, OR5AU1, OR5M9, OR5P2, OR8B4, OR8D4, OR8H2, OR8J1, ORC3L, OXCT1, P2RX6, PDIA4, PHKA1, PIGW, PIK3C2B, POLD4, POLR2F, POLR2H, POLR2I, PPP1R1A, PPP2R5A, PPP2R5E, PRKAR1A, PSME1, PTGS2, PTPRM, PVRL3, PYGL, RASGRP3, RDH12, RFWD2, RHOQ, SAT1, SCD5, SELL, SEMA3G, SENP2, SETDB1, ST3GAL6, STX1A, SUCLG1, SYNJ2, TACR1, TAS2R10, TBK1, TBL1XR1, TCF7, TGFB3, TRAF5, UGT2B17, UPRT, VTI1B, WNT10B, WNT4, ZBTB16, B3GALNT1, TNFRSF10B</p>
Negative_15661	<p>ADK, ANK, APT, BTK, DB1, GFI1, LHB, LTN, NDA, SMS, SP1, TEC, TH, ABL2, ADLIM2, ACADM, ACADS, ACAT1, ACO1, ACOT12, ACTG2, ADH6, ADRA1B, ADSS, ALAS1, AMY2B, ARD1A, ARHGAP5, ATIC, ATP5C1, B3GALT2, B3GNT3, BCMO1, CAR2, CASP3, CCKAR, CCL20, CCNG1, CD22, CD34, CDIPT, CLDN17, CNGA3, COL5A1, COQ6, CPT2, CSNK2A1, CTF1, CYP11A1, CYP2U1, CYP4F3, DBF4, DDB2, DLL1, DPYD, DRD1, DTX1, DTYMK, DUSP5, DVL1, ECHS1, EDN1, ENPP7, EPB4, EPHA6, EPHB6, FBP1, FGF5, FLAD1, FM03, FOXO1, FUT2, FZD9, G6PC, GALNT13, GALNT14, GALNT8, GCNT2, GDF7, GGT1, GLUD2, GNPAT1, GNRHR, GPAM, GPLD1, GSTM5, GUCY2F, HIP1, HMGCS1, HPSE2, HRH1, HSD17B8, IFNAR1, IL12RB2, IL17B, IL1B, IL22, IL2RA, ITPA, JUND, KLRC4, KNG1, LARS, LDHC, LFNG, LILRB3, MAN2A1, MAPK8, MAPK9, MCAT, METTL2B, MGAT4B, MGST1, NAE1, NCF1, NCOR1, NKX3-1, NUDT9, NUMBL, ONECUT1, OR1I1, OR1L3, OR1S1, OR2AE1, OR4A5, OR4D5, OR51A4, OR51G2, OR5AU1, OR6C2, OR6C74, OR7D2, OR8D4, OR8K5, OR9G4, OR9Q1, OR9Q2, OXCT2, PANK4, PCK2, PDE7B, PDE8A, PDGFB, PFAS, PIGH, PIGW, PIK3C2G, PLAT, PLXNB2, PNPLA3, PPARG, PPM1B, PPP2R2B, PPP3R1, PRKCA, PRKCH, PTAFR, PTGES, PTPN6, PYGL, QPRT, RASGRP2, ROBO1, SELPLG, SEMA4A, SETDB1, SH2D1A, SHC4, SMURF1, SPTAN1, SRD5A2, SRGAP3, SULT1A1, SULT1A4, TAGORC9, THY1, TRAF3, TRIP, TRPA4, TNFRSF10, ULK2, WACF9</p>

Negative_15662	<p>AMH, BAX, BTC, CAB, C6B, F8, FAN, GLS, GP3, ID4, IHH, IVD, KHK, MET, MFL, OTC, PLN, SDS, XDH, ZYX, ABL2, ACACA, ACADVL, ACP2, ACTN1, ADH1B, ADRA1D, ADRB1, AGPAT1, AHCYL2, ALDH1A1, ALDH1A3, AMPD2, ANAPC7, AOX1, APOE, APPL1, APRT, ASMT, ATP2A1, ATP5C1, ATP5G1, ATP5I, ATP6V1F, AXIN1, B3GALT1, BLVRB, BMP8B, BST1, CACNA1E, CACNA1F, CACNB2, CAMK2D, CASP10, CASP6, CBLC, CCL2, CCL27, CCR8, CD46, CDC45L, CDH2, CES1, CHDH, CISH, CNGA3, COL1A1, COL4A4, COMT, CSF2RA, CSF2RB, CTNNA3, CXCL6, CYBB, CYP2A6, CYP2U1, CYP4A11, DDX47, DGKQ, DKK4, DUSP7, EGLN3, ELK1, ENTPD3, ERBB4, FBP1, FLAD1, FLT3LG, GALNTL2, GAS1, GFPT1, GLI2, GMPPA, GYS1, GZMB, HES1, HLA-C, HNF4G, HSD3B1, IFNA2, IL12A, IL1A, IL23R, IL28A, IL6ST, IL7R, INHBA, ITGA7, LAMC1, LCMT2, LEFTY1, LLGL2, MAP2K4, MAP3K1, MAP3K12, MAP3K4, MCM5, MGAT3, MGST1, MPDZ, MTFMT, MTHFD1L, MYH2, MYH7B, NAGK, NCF4, NCSTN, NEFH, NEFL, NFATC2, NFKBIA, NFX1, NGEF, NR1D1, NR5A2, NRAS, NRG1, NSDHL, NUDT5, OR12D3, OR14J1, OR1K1, OR2H1, OR2L2, OR2T6, OR4C12, OR4K14, OR7D2, OR8U1, ORC1L, OXTR, P2RX6, PAK7, PARD6A, PARS2, PDE2A, PDGFC, PDHA1, PERP, PGAM2, PIGV, PIK3C2G, PLCD4, PLCE1, POLD3, POLR2F, PPP2R1A, PRIM1, PROC, PRSS1, PVRL4, RDH12, RFXAP, SELL, SGPP2, SH3BP2, SLC27A5, SOAT2, STX8, TAS1R1, TGFB3, THBS3, TSC2, TUBA8, VDAC2, VEGFB, WEE1, WNT11, XCL9, XCR1, XTCY1C1, MAPK4K5, TNFRSF10A, TN</p>
Negative_15663	<p>AGK, CSK, F2R, GAA, GDA, IDS, IL5, LPO, MAX, MET, MVD, PGP, PML, TH, ACAD8, ACADL, ACHE, ACTA1, ACTB, ACTC1, ADCY2, ADRBK2, ARPC5L, ASIP, ATP6V1F, BCKDHA, BMP2, BMP6, BST1, C4BPB, CAMK2B, CAMK2D, CASK, CCKAR, CCL14, CCL22, CFLAR, CHD8, CHEK1, CKS1B, CNGA3, COL2A1, COL5A2, CSNK1G1, CTPS2, CYP2F1, CYP3A5, DAPK2, DBF4, DDX47, DDX56, DGKB, DHRS4L2, DKK1, DOLPP1, DOT1L, DUSP9, E2F1, ENTPD2, EPHA3, EPHA7, ETS1, EXTL2, FGF3, FOXO1, FRAT2, FZD6, GCDH, GJD2, GMDS, GPX5, GSTT1, HMGCR, HSP90B1, HTR4, IL13RA2, INHBC, ITPKB, KIR2DL1, KLRK1, LAMA3, LAMC2, LDHD, LIFR, LIPA, LLGL1, LRDD, LRP6, MAD2L1, MAP4K2, MAPK11, MAPK9, MASP2, MKNK2, MMP7, NFYA, NOTCH2, NPR1, NT5C2, NTNG1, NUMB, OR10R2, OR1L8, OR2B6, OR2M4, OR2T34, OR4M2, OR51B2, OR5A1, OR5R1, OR8J3, OXCT2, P4HA3, PDE4A, PFKFB4, PGS1, PIGK, PIGQ, PIM2, PIP5K1B, PKM2, POLA2, POLE4, POLR2F, POLR2K, POLR2L, PPM1A, PRKAB1, PRKAG2, PRSS2, PTDSS2, PYGM, RDH10, RFW2, SARS, SAT2, SCLY, SDHA, SELP, SHC1, SLC27A1, SOS1, STAT4, THBS2, TICAM2, TM7SF2, TNFRSF8, UGCGL1, UGT2B17, UPP1, XYLB, XYLT2, HSP90AB1, PAFAH1B1, PLA2G12B, TNFRSF1A</p>
Negative_15664	<p>ADA, ADC, C3, EZR, ITK, OAT, TH, ZYX, AADAT, ABL1, ACACA, ACVR1B, ACVR2B, ALAD, ALG9, ANAPC2, ARHGEF7, ARPC2, ASNS, BBC3, BDKRB2, BLVRB, BMP8B, C5AR1, CACNA1I, CACNG1, CASP3, CASP9, CAV1, CCL23, CCL27, CCND1, CD27, CD28, CD38, CDC14B, CFTR, CHR1, CLDN17, CLDN20, CNGB1, CNTNAP2, COL1A1, CSF3, CXCL11, CYP2C18, CYP4F2, DCTD, DDB2, DGKD, DGKG, DGKH, DLAT, DLL3, DPYSL2, DUSP1, EGLN1, ERBB2, FGD1, FGF11, FUT2, GBE1, GDF6, GJA1, GNA11, GNAS, GP1BA, GSTM2, HMGS1, HNF4A, HSD17B3, HTR6, HTRA2, IDH3G, IFNA16, IFNW1, IGFBP3, IGSF5, IL1A, IL8RB, INHBC, INSR, ITGA2, ITGAV, LAMA3, LGMN, MAN1A1, MAN1A2, MCM4, MDH1, MGAT2, MGAT5B, MMP1, MYLK, NCAM1, NFKB2, NTNG1, NUDT9, OR2B6, OR2D2, OR2Y1, OR4C16, OR4D1, OR4D9, OR4M2, OR4S1, OR51B4, OR51B6, OR51F2, OR51G2, OR52K1, OR5H2, OR6C3, OR6M1, OR8D2, OR8H1, OR9G1, OR9Q1, PAK3, PFN3, PGK1, PGK2, PIK3C3, PIK3CG, PKLR, PLA2G10, PLCB4, PLCD3, PLCZ1, PLXNB2, POLR2A, POLR2J, PRIM1, PRKAB1, PRKAR1A, PRKAR1B, PRPS1, PSEN2, PSENEN, PTGS1, PVRL1, RALB, RASA1, RASGRF1, SDC1, SEMA3G, SEMA4D, SLC9A1, SOS3, ST3GAL3, STAM2, SUV39H1, SV2C, TAS2R10, TGFB3, TLR4, TSHB, UCK2, UROD, WARS, WNT7A, ZAP70, ZMAT3, TNFRSF11B, TNFRSF1B, TNFSF13B</p>

Negative_15665	<p>AGK, AK1, BTD, C9, EBP, FGB, GPT, HGF, JUP, ME1, NF1, PXN, SP1, ABL1, ACA D9, ACAT1, ACPP, AGXT, AKT1, ALAD, ALDH7A1, ALG1, ANAPC1, ARD1A, ARPC 1A, ARPC5, ASRGL1, B4GALT5, BDH1, BRAF, C3orf10, CACNG5, CBLC, CCL22 , CCL27, CCL5, CD36, CD86, CD8B, CDC42, CFTR, CLCA4, CMPK1, COQ5, CSNK 2A2, CTSG, CXCL12, CXCL6, CYFIP1, CYP2A7, DAAM1, DAD1, DCTN1, DHRS3, DUSP6, EFNA4, EHHADH, EIF4E, ELK4, EPB41L1, EPHX2, ERBB3, EXTL3, FGF 17, FZR1, GAD1, GALNT8, GDF7, GGT6, GNB1, GSTP1, HIF1A, HLA- F, HSPB1, IL12B, IL15, IL1A, IL21, IL24, INHBC, IRAK2, IRF3, ITGA3, IT PKB, KIR3DL2, LPAR1, LRAT, LYPLA2, MAP2K2, MAP3K6, MAPK9, MARS2, MCM 7, NAT2, NAT6, NCAM1, NCK2, NEGR1, NFYC, NME7, NOX3, NT5C3, NUDT9, OR1 0AD1, OR1J1, OR2A25, OR2C3, OR2G2, OR2Y1, OR4C15, OR52E6, OR56B4, OR 5L2, OR7G1, OR8I2, OR9I1, OR9Q2, ORC6L, P2RX5, PFN1, PGM2, PIP5K1C, P LA2G5, POLR2H, POLR3A, PPID, PPP2R1A, PPP2R1B, PPP2R5B, PPP3CB, PRO C, RERE, RPN1, RXRB, SEMA7A, SESN2, SORBS1, SPHK2, SPRED1, SSX2IP, ST 3GAL5, ST3GAL6, STAT5A, TOMM40, TRAF2, TUBA4A, UGT2A1, VAMP4, VAV2, VEGFB, WWP1, YES1, HLA-DPA1, HLA- DRB3, MAPKAPK3, TNFRSF13B, TNFSF13B</p>
Negative_15666	<p>CAT, DDO, GPI, ID2, INS, ITK, ME3, MOS, PC, SFN, TXK, ADCY6, ADH5, ADRA1 A, ADRB2, ALDH3B1, AMDHD2, AREG, ARG2, ARPC4, ATP6V1D, BLVRA, CACNA1 F, CALML6, CCKBR, CCL8, CDC2, CDH2, CDS2, CLDN20, CLTCL1, COASY, CTNN D1, CYP2A6, CYP3A5, DAG1, DAPK1, DGAT2, DIAPH3, DKK1, DNMT1, EDNRB, E HHADH, ENPP1, EPAS1, FADS2, FSHR, FUT4, FZD8, GAB1, GADD45A, GALNT14 , GALNTL5, GGT5, GLDC, GNA12, GSTT1, HADHB, HARS, HIF1A, HLA-C, HLA- DMA, HLA- DOB, HMGCS2, HNMT, HPSE2, HRH1, HSD17B2, HSPB1, IDH3B, IFNA5, IFNG, I KBKG, IL17RA, IL22RA2, IQGAP2, IRF5, ISYNA1, ITGA9, ITPKA, LAMA4, LE FTY2, LEPR, LIFR, LTC4S, MAN1A2, MAP2K3, MAPK8, MBL2, MOV10L1, MTMR6 , MYH10, MYH9, NCR3, NFATC3, NOX3, OR10G2, OR10H1, OR10H2, OR10H4, OR 10V1, OR1B1, OR2D3, OR2F1, OR2T1, OR2T10, OR4F6, OR4M1, OR51D1, OR51 F1, OR51G2, OR52M1, OR5A1, OR6S1, OR6Y1, OR7A10, OR8J3, OR9Q1, ORC5L , PAK1, PCK1, PDE4C, PDE6H, PDE7B, PFN1, PFN4, PIGA, PIGK, PIGQ, PIK3C 2B, PIK3CD, PIK3R5, PKMYT1, PLCB1, PLK1, PNLIP, POLR2E, POLR2K, PPP2 R2B, PRSS2, PTGDS, PTPRR, PVRL2, RAC3, RAPGEF2, ROBO1, SDC1, SETDB1, SLIT1, SMPD1, SOCS2, SOS2, SPI1, STAM, STT3B, SULT1A1, SULT1E1, THY1 , TYROBP, WNT4, XCL1, YWHAE, ATP6VOA2, MAPKAPK5, PRICKLE1, SERPINF2 , TNFRSF17, TNFRSF1B</p>
Negative_15667	<p>DCC, F8, FGG, GGN, GNZ, IDS, IL2, IL3, IL6, IL9, ILK, LMB, LSS, NOG, PGI , PXN, ACOX3, ACTG1, ADAM10, ADCY7, ADCY8, ADIPOR2, ADRA1B, ADRB1, AGP AT2, ALDH2, ALG10B, AMDHD2, ANAPC2, ARHGEF2, ARPC2, ASIP, ATP12A, BC AT2, BCL2, BIRC3, BMPR1B, BRAF, CACNA1E, CACNA1F, CARS, CAV3, CCL1, C CL16, CCL26, CCND2, CCR7, CD55, CDC2, CDIPT, CDK5, CDKN1A, CFL2, CHEK 1, CLDN4, CLDN5, COQ5, CPT1C, CREB3L1, CRHR1, CSF1, CTNNA1, CX3CL1, C YP3A5, DAAM1, DAPK3, DGKG, ECSIT, EDN1, EDNRA, ESAM, FBXW11, FGF4, GA LNT7, GLI1, GNB3, GNG13, GUCA1B, HTR2C, IFIH1, IKBKG, IL12B, IL13RA2 , IL1B, IL2RG, IRS1, ITGA4, LARS2, LCMT2, LDHC, LIPF, LMO7, LTBR, MAP3 K3, MAP4K2, MAPK8, MCM4, MDM4, MGAT4A, MICA, MTHFD1, MTMR6, MYD88, MY L7, NAMPT, NEU1, NGEF, NME2, NMNAT2, NOX1, NRG4, NTSR1, OLR1, OR10H4, OR1C1, OR2H2, OR2M5, OR2T12, OR2T33, OR4X1, OR51L1, OR52N2, OR6C1, O R6C6, OR7D4, P2RX1, PDGFRB, PHKA2, PIGQ, PIGW, PIP4K2A, PIP4K2B, PLA U, PLCD4, PLXNA1, PMM2, PNPLA3, POLE3, POLR1C, PPP2R1A, PPP3CB, PRKA CG, PROC, PTGS2, RAP1B, RARA, RBL2, RBPJL, RFWD2, RHOD, RHOQ, RND1, RO BO2, RRM2, RXRG, SETDB1, SMAD2, SMC1B, SOCS7, SORD, SOX17, SPCS3, STK 11, SV2A, TBL1X, TFP1, TGFBR1, THY1, TKTL2, TLN1, TSHB, TSNARE1, TUBB 6, TYROBP, UBA7, UGCG1, UGT2B11, VEGFC, WNT16, WNT2, ZFYVE9, ATP6V1 B1, HLA-DPB1, PRICKLE1, GPR109A, GPR109B, GPR109C, GPR109D, GPR109E, TNFRSF10A</p>

Negative_15668	<p>AK7, C4B, CBS, CF, CR2, F11, FER, GDA, MEL1, ME1, MF1, PGI, TAK, UBC, ADH, ABI2, ACPT, ACSL3, ACVRL1, ACYP2, ADAM17, ADH4, AGPAT3, AKR1C3, ALDH7A1, ALG12, ANAPC10, ANAPC5, ANGPTL4, APOC3, ARHGEF4, ARPC1B, ATP5J, ATP6VOB, ATP6VOC, B3GAT3, BUB3, C1QA, C1QB, C3orf10, CACNG6, CALML3, CCL15, CCL8, CCR4, CD22, CD274, CDC7, CLDN10, CLTB, COL2A1, COMP, C0Q7, CSF3, CTBP2, CXCL13, CYBB, CYP2C8, CYP4A11, DCTD, DDX52, DGKB, DUSP3, E2F3, ECHS1, EDNRA, ENPP7, ETNK1, EVI1, FABP4, FCGR3B, FDFT1, FGD3, FGF21, FGFR2, FUT5, FZD4, GALM, GALNTL1, GNAS, GNRH1, GNRH2, GPT2, GPX7, GRIN2D, GSTA2, H6PD, HAAO, HRH1, ICOS, IDH3A, IFNA13, IL11RA, IL20, INHBE, IRAK4, JAK2, KLRC4, KNG1, LAMA3, LDHD, LIPA, MIOX, MYH13, MYH2, NADK, NEU1, NEU2, NOX1, NUDT12, NUDT8, OR10G3, OR10H5, OR10R2, OR1J1, OR2L8, OR4C15, OR4D1, OR4K1, OR52K2, OR6B2, OR6T1, PARS2, PDE11A, PDE1B, PFKM, PHKB, PIK3C3, PIK3CG, PIM2, PLA2G2D, PLA2G2F, PLA2G6, PLAU, PLIN, POLR3K, PON3, PPAR, PPP2R5B, PPP3CC, PPP3R1, PRKA1, PRSS2, PRSS3, PSAT1, PTPRR, PVRL1, PYGB, RFNG, RFXAP, RPE65, RRM2B, SELE, SELL, SETD8, SIGLEC1, SLC33A1, SMAD3, SMPD1, SMURF1, ST3GAL1, SYNJ1, TACR3, TAS2R48, TAS2R7, TAS2R8, TFPI, THBD, THBS4, TLR5, TNFRSF8, TNXB, TPH1, TPI1, TPMT, TSHR, TSLP, VKORC1, WASF1, WNT5B, XYLT</p>
Negative_15669	<p>ADAM, HA2, R1Q, BARR, CRT, DDC1, LZK, F12, G12, LCT, MVR, OTC, PC, PGD, ACAA1, ACOX3, ACSM2A, AK3L1, ALDH4A1, AMDHD1, ARG1, ARG2, BBC3, BBOX1, BDH2, BPNT1, CACNA1I, CACNG8, CASK, CBR3, CCNH, CD55, CES1, CHAT, CISH, CKS1B, CNTFR, COL4A2, COMP, COX10, CSNK2A1, CSNK2A2, CTNNA1, CXCL11, CYBA, CYP17A1, CYP2A7, CYP2C19, CYP3A7, DGAT2L4, DIAPH3, DOT1L, DRD1, DUSP2, DVL2, EFNA5, EGLN3, EI24, ENTPD3, EPHX2, EXOC7, FGFR1, FUT6, FUT8, G6PC, G6PC2, GABARAP, GALNTL2, GCNT4, GFPT1, GLG1, GLI1, GLI3, GNG3, GNRH1, GSTK1, GSTM4, GUCY2C, GUCY2D, GYS1, H6PD, HA01, HLA-C, HNMT, HTR2B, IFIH1, IL4R, INPP1, ITGB5, LAMA3, LDHB, LIPE, LIPT1, LYZL1, MAML3, MAPK3, MASP2, MDM2, MMP14, MYL9, NAGK, NFATC3, NME6, NSDHL, NT5E, OR10A3, OR10G3, OR13G1, OR1L1, OR2A4, OR2AG1, OR2S2, OR2T1, OR4C12, OR4F15, OR4L1, OR51E1, OR52B4, OR52I2, OR56A4, OR5AK2, OR5C1, OR5J2, OR6C3, OR6C76, OR7C1, OR8B12, OR8J1, OR8K3, ORC3L, ORC5L, PARD6B, PDE10A, PDE3A, PDE8A, PDXK, PIAS3, PIGK, PIGW, PKM2, PLCB1, PLCZ1, PLTP, PNLIP, POLR2I, PPM1D, PRODH, PSAT1, PTGES2, PTPN6, RALB, RASGRP2, RASGRP3, RBPJ, RPSA, RUNX1T1, SEMA3B, SFRP1, SH2D1A, SHC3, SIPA1, SLC25A4, SLC2A1, SMURF1, SOCS4, SPCS1, SPHK1, TACR1, TACR2, TALDO1, TAS1R3, TCF7L2, TGFB1, TLN2, TPM3, TRPM5, TSNARE1, TUBA1B, UG</p>
Negative_15670	<p>TRP7, Y1D, C6A, UMY1, DHA, POS, R1C, VUC, ADETM2, ALAT2, AUSA4, ACBS2, ADCY1, ADCY6, ADRB2, ADRB3, AKT3, ALDH5A1, ANAPC4, ASAH1, B3GAT3, B3GN T5, BAIAP2, BMPR2, C4BPA, CACNA1G, CACNG1, CACNG5, CCL8, CCNA1, CCNG1, CCR2, CD28, CD46, CD72, CD86, CDC20, CHIT1, COL11A1, COL1A2, CREB5, CTNNA1, CYP17A1, CYP3A43, CYP4A11, CYSLTR2, DAAMI, DTX3L, E2F3, EGLN3, ENTPD3, EPHA4, EPHA7, EPHB6, F13B, FABP1, FCGR2B, FGD3, FGF3, FLOT2, FLT4, FM04, FOSL1, FPGS, FSHB, FZR1, GADD45B, GALNT12, GALNT8, GATM, GGCX, GNAQ, GNPAT, GSTM2, GUCA1B, HADHA, HA01, HCST, HLCS, HMGCL, HPSE, HPSE2, HSP90B1, HTR2C, IL10, IL20RB, IL28RA, IMPDH1, ITGA6, ITPK1, LAMB3, LRDD, MADCAM1, MAT2B, MCCC2, MGST1, MITF, MKNK1, MTAP, MYH7, NAGA, NEU4, NEUROD1, NGEF, NNMT, NPR2, NR1H3, NSDHL, OR10J1, OR14J1, OR1D2, OR1L4, OR1N1, OR2A5, OR2AG1, OR2AG2, OR2B2, OR2G3, OR2M4, OR2T2, OR2Y1, OR3A2, OR4D5, OR51B6, OR51I2, OR52B6, OR52R1, OR56B4, OR5H2, OR6C70, OR6C76, OR6K2, OR8B8, OR8K5, OR9Q2, P2RX7, PAFAH2, PAK6, PARS2, PARVG, POLR2L, PPA1, PPM1B, PPP2R5E, PRIM1, PRKAB2, PRKAG1, PTPN7, PYCR2, RALGDS, RASA2, RBPJ, RFNG, ROBO1, ROCK1, SDHA, SDHB, SELPLG, SEMA3E, SIGLEC1, SPTAN1, SRGAP1, SSH1, SSH3, ST6GAL1, STAT5A, TAS1R1, TBK1, TLR2, TPI1, TRAF5, UGCG2, UGP2, ULBP1, UNC5A, VAV2</p>



Negative_15671	<p>A2M, CBL, F2R, HGD, KMO, RDX, A4GALT, ACP2, ACTC1, ADCY4, ALDH3B1, ALG5, APAF1, APOC3, ARG1, ARPC1A, ATG7, B3GALT5, B3GNT5, BCL10, CACNA1F, CACNB1, CAMK2G, CAMKK2, CANT1, CAV1, CCL28, CCNA1, CCNH, CD27, CD274, CD48, CDC42, CDH1, CDH15, CDK4, CFLAR, CHAT, CLTC, CLTCL1, CNGA3, CNGA4, COL6A1, CREB5, CYP2S1, CYP4F2, DDOST, DDX4, ENO2, EPHB1, FGD1, FMO5, FTMT, GFPT2, GGT1, GGT5, GNA15, GNAO1, HAP1, HGSNAT, HLA-DOB, HSD17B4, ICAM1, IGFBP3, IL12A, IL23A, IL29, IL6ST, IL8RA, IRF3, ITGA5, KARS, KLRC4, LIPG, MAOA, MAT1A, MMP2, MPP5, MRAS, MS4A2, MTMR2, NFYB, NOTCH2, NR4A1, NRG1, OR10K2, OR10X1, OR12D3, OR13C3, OR14J1, OR2K2, OR2L8, OR2V2, OR4E2, OR4K2, OR51I2, OR52E8, OR5F1, OR6X1, OR9Q1, PANK4, PDE6G, PDE6H, PDGFB, PDIA4, PIK3C2A, PIK3R4, PLXNA2, POLR3D, PON2, PPAT, PPM1A, PPM1B, PPP1CA, PRKAA1, PRKAR2A, PRKCA, PRSS3, PTGDS, PTPN6, PTPRZ1, RAP1B, RRM2, SEMA4B, SHISA5, SIGLEC1, SKIV2L2, SLC27A5, SLC2A1, SMAD3, SMAD6, STX1B, TACR1, TAS2R1, TAS2R16, TAS2R50, TBL1X, TKTL1, TLN2, TSTA3, TXNDC12, UAP1, WNT7A, XYLT1, YWHAQ, AASDHPPT, HLA-DRB5, SERPINA1, TNFRSF10C, TNFRSF6B</p>
Negative_15672	<p>AK3, DAD, CDO, CFI, CKB, GHZ, IDZ, MEO, MYC, OTC, PVR, TMM, AAC3, AASDH, ABP1, ACACA, ACADS, ACO2, ACPT, ACTB, ACTN2, ADCY6, ADRB3, AFMID, ALDH1A1, ALDOA, ALDOB, ALG2, ALG6, AMDHD1, AMPD3, AREG, ARPC4, ATP5L, ATP6V1D, B3GAT3, B4GALT6, B4GALT7, CADM3, CARS, CCR10, CD72, CDC25A, CERK, CLDN10, CLDN22, CLDN6, CMPK2, CNTN1, COL2A1, CTNNA3, CYP11A1, CYP19A1, CYP2A7, CYP2D6, CYP4F3, DAD1, DAPK3, DDX4, DDX54, DIAPH2, E2F2, EDA2R, EFNA2, EGFR, FCGR3B, FGF11, FGF4, FGF5, FMO1, FPGS, FRAP1, FSHR, FZD10, GALNT3, GALNT5, GART, GAS1, GCLC, GFPT2, GNAS, GNRH2, HAGHL, HBEGF, HLCS, HSD3B2, HTR2A, IFNA17, IFNA5, IFNAR1, IFNW1, IL17RB, IL1R1, IL1R2, IL1RAP, JAM3, LAMA3, LAMC2, LAMC3, LIMK2, LIPA, LLGL1, LRDD, MAD2L1, MAML1, MAN1A1, MAN1C1, MAP2K3, MCEE, MFNG, MKNK1, NFE2L2, NME2, NOD1, OGDH, OR10A5, OR10A7, OR1N2, OR2A25, OR2AG1, OR2B2, OR2C3, OR2F1, OR2T12, OR2T33, OR4C6, OR4D1, OR4D9, OR4F6, OR4Q3, OR51Q1, OR52E2, OR52N1, OR52N5, OR5K1, OR6C6, OR7A17, OR8B4, P2RX2, P4HA1, PDE1A, PDE1C, PDE3A, PDGFB, PFKM, PIGL, PIGP, PLA2G10, PLA2G2A, PLA2G2E, PLAUR, PLCB3, POLA2, PPP1R1A, PPP2R1B, PRKAR2B, PRKX, PRSS3, PTPMT1, PTPN11, PYGM, RALB, RDH5, RERE, SEPHS1, SLIT1, SMAD3, SMPD4, SNAP25, SPAM1, SULT2A1, SYNJ2, TAS2R50, TBL1X, TBXA2R, TGDS, TGFB</p>
Negative_15673	<p>CI, TUBB, DBY, EDA, FER, PPI, GRE, H11, K11, KMO, MYC, NPT, OGY, RBT, IFU, WAS, ACADSB, ACP2, ACSM1, ACTB, ADH5, ADIPOR2, ADSS, AGPAT2, AKT1, ALG13, ALG9, ALS2, AMY2A, ANAPC10, ANPEP, APPL1, ARG1, ARPC5, ATP5H, B4GALT3, B4GALT6, BIRC2, BUB1, BUB3, CACNG4, CACNG6, CADM1, CBR1, CCL17, CCL19, CCL4, CCR4, CDC45L, CKS1B, CLDN19, COL4A4, COL5A3, CXCL2, CXCR5, CYCS, CYP3A7, DDX41, DFFB, DIAPH2, DLL1, DOLPP1, EARS2, ELK4, EPHA8, FARP2, FCGR2B, FZD7, GALC, GALNT6, GALNTL4, GCAT, GCNT4, GP1BA, GPD1L, GRHR, GRIN2A, GUCY2D, GZMB, HAGH, HPSE, ICAM1, IDI1, IFNA7, IFT57, IKBKB, IL15RA, IL21, IRAK3, ITGA9, KIR3DL2, LTB4R2, MAP4K2, MAP4K4, MASP2, MDM2, MPZL1, MTMR1, MYH15, MYH7B, MYH9, NARS, NEU1, NRAS, NRXN3, NTRK1, OCRL, OGDH, OR10AG1, OR13C4, OR14A16, OR2AG2, OR2D3, OR2H2, OR2M2, OR2T10, OR2T8, OR4K5, OR51A7, OR51F1, OR52W1, OR5B17, OR5C1, OR5D18, OR5J2, OR5M8, OR5T1, OR8H2, OR8H3, OR8J3, ORC5L, OXSM, PAFAH2, PAK6, PDE1A, PFN3, PIGL, PIM1, PLA2G2F, PLIN, PLK1, PMVK, PNLIP, POLR2B, POLR2F, PPA2, PPP2R1A, PPP2R5C, PRIM1, PRODH, PRSS2, PTGES2, PTGFR, PVRL3, RASGRP2, RDH11, RELA, RPN1, RPS6KA5, SCLY, SDHB, SEMA3E, SEMA3F, SFRP5, SGMS2, SLC27A1, SOCS1, SORD, SSH3, ST6GAL1, STX4, STX6, SULT1A4, SUV39H1, SYNJ2, TAS2R3, TLN1, TLR3, TUBA4A, TUB</p>

Negative_15674	<p>AUH, CBL, CFH, CP, CRH, EGF, F11, FST, GCK, HK1, HPD, IL9, LTB, MIF, MOS, NLK, PDC, PGP, ABLIM2, ACAD8, ACLY, ACTN1, ADAM10, APPL1, ARD1A, ASAH1, ATP13A2, ATP2A2, ATP5G2, ATP5L, B3GAT3, BCMO1, BDNF, BRAF, CCL1, CCL25, CCL26, CD14, CD46, CDIPT, CHDH, CHPF, CHST13, CLDN10, CLDN11, CLDN18, CNTNAP2, COQ3, CPT1A, CTBP1, CXCL2, CYP3A43, CYP3A7, CYP8B1, CYSLTR1, DDHD1, DTX1, E2F3, EFNA3, ENTPD3, EPHX2, ETS1, F2RL2, FGF14, GADD45A, GADD45G, GALNT7, GCNT3, GLG1, GLI2, GLYCTK, GNAI1, GSTA5, GSTP1, HCST, HLA-</p> <p>F, HMGCR, HSD17B1, ICOSLG, IFNAR2, IFNK, IL13RA1, IL24, IL25, INSR, IRAK2, IRS4, KLKB1, LDHA, LHCGR, LRAT, MAD2L1, MAOA, MAPK8, MAPK9, MINPP1, MYH11, MYH4, NANS, NEFH, NEFM, NEU3, NFKBIB, OR10J5, OR10R2, OR2AT4, OR2C3, OR2H1, OR2H2, OR2W1, OR51A2, OR52R1, OR5M3, OR6C74, OR8K5, OR9Q2, ORC1L, ORC4L, PDE8B, PDX1, PLCB2, PLCD1, POLE2, POLR1A, POLR3D, PPAP2B, PPP2R2A, PPP2R5C, PPP3CB, PPP5C, PROC, PRSS2, PTCRA, PTGIS, RDH5, RELB, RPN1, SLIT1, SMAD7, SOS2, ST3GAL5, TBL1Y, TGFB3, TJP2, TNFSF10, TSLP, TUBB2A, UCKL1, UGCGL1, UGT2B7, ULBP2, ULBP3, VNN1, VTI1B, WBSR22, XIAP, HSP90AA1, MAPK8IP3, PNLIPRP1, SERPINA5, SLC25A31, ST6GALNAC1</p>
Negative_15675	<p>CP, DAO, GCK, GHR, HGD, IL4, ILK, KDR, MPZ, NGF, PGP, RET, SMO, AADAT, ACP6, ACP6, ACVR1, ACVR1B, ACYP1, ADCY1, ADRA1D, ADRB3, AGPAT1, AGXT2, AKR1C3, ALDH3B1, ALDOA, ANAPC7, ATP6AP1, BACE1, BAI1, BCAR1, C1GALT1, CACNB1, CACNG5, CAMKK1, CAV3, CCR9, CDC25B, CDH5, CDKN2B, CES7, CXCR3, CXXC4, CYFIP2, CYP19A1, CYP4A22, DDX47, DDX52, DGKE, DGKQ, DIAPH2, DRD2, DVL3, EFNA3, EPB41L3, EPRS, FMO1, FMO2, GLS2, GLUL, GNAO1, HES1, HRH1, HSD3B1, HTR7, IDUA, IFNA16, IFNA5, IL10, IL17A, IL19, IL1R2, IMPA1, IRF5, KCNQ1, KITLG, LRP5, MAN1A2, MAOB, MAP2K2, MAP3K2, MICHA, MLLT4, MPDZ, MTHFR, MYH15, NANS, NAT2, NMNAT2, OR10H5, OR13C9, OR1L1, OR1L6, OR1M1, OR2B2, OR2L8, OR2M7, OR2T29, OR2T4, OR3A1, OR4A5, OR4C13, OR51A2, OR51E2, OR51F1, OR52L1, OR5D18, OR5F1, OR5P2, OR5T1, OR6T1, OR9G1, PANK1, PDE3A, PDE4C, PDE7A, PFKFB1, PFKM, PGM1, PI4KB, PIK3CG, PKMYT1, PLCB4, PLD2, POLA2, POLD2, PPARG, PPP2CB, PRKACB, PRKAG1, QARS, RASGRP1, RBKS, RCHY1, RHOD, RPN2, RPS6KA5, RUNX1T1, SEMA4D, SHC3, SMARCA2, SPRY4, SSH3, ST3GAL5, STX1A, SUOX, TAS2R13, TP53I3, TYK2, XYLT2, YARS2, C1GALT1C1, TNFRSF10B, TNFRSF1B</p>
Negative_15676	<p>ABO, AGL, APT, BTK, CD2, CKB, DCR, EGF, GAA, GNS, GTF3, IL4, LTB, LTB, MIF, PVR, RPE, SDS, TYR, AARS2, ACACA, ACHE, ACP2, ADRB1, AGPAT1, AKR1D1, ALDH1L1, ALDOB, ALPL, ANAPC1, ARHGAP5, ARNT, ARPC4, ARRB1, ATP5E, ATP5G3, B3GALT4, C1GALT1, C4BPA, CACNG6, CANT1, CCL25, CCL27, CCL7, CCND3, CCR5, CD244, CDC25A, CDK2, CHEK2, CHSY3, CLDN3, CLDN9, CNDP1, CNGA3, COQ7, CSDA, CSH1, CTPS, CX3CL1, CXCL16, CXCR3, CYP1A1, CYP26C1, CYP2B6, DDX19A, DFFA, DUSP2, ENTPD8, EPB41L2, EPB41L3, FABP4, FASLG, FECH, FPGS, FZD8, GALNT12, GALNT13, GFAP, GGPS1, GLUD1, GNRH2, GPX7, GRHPR, GSTA1, GSTP1, HEMK1, HSD11B2, ICOSLG, IL13, IL20, IL4R, IMPDH2, INMT, IRAK1, ITGAL, LIPC, LIPG, MDM2, MGAT2, MICA, MTMR1, MTMR6, MYH15, MYH4, MYH6, NAGLU, NAT1, NCF2, NEU4, NEUROD1, NKX3-1, OCLN, OR10A7, OR10H3, OR10V1, OR13C3, OR14J1, OR1A2, OR1B1, OR1E2, OR1L4, OR1N1, OR1Q1, OR51D1, OR52B4, OR52B6, OR52D1, OR52E6, OR5AC2, OR5H6, OR5K1, OR5M8, OR5T2, OR6C75, OR9Q2, ORC2L, ORC5L, PAK7, PDCD1, PDGFB, PDXP, PECAM1, PFKFB2, PIGS, PIGW, PIP4K2C, PLXNA1, PLXNA3, PMM1, POLA1, POMC, PPM1A, PPP2CB, PPP2R5C, PRKCG, PYGM, RAB23, RARA, RARS, ROBO2, RPS6KA4, RRM1, SEMA7A, SETD7, SMC1A, SNAI1, SNAI2, SOAT1, SPCS3, SPTLC1, ST3GAL5, STX8, SULT1A4, TJP2, TRAF1, TRDMT1, TUBB1, UCKL1, UCKR1, UCKR2, UCKR3, UCKR4, UCKR5, UCKR6, UCKR7, UCKR8, UCKR9, UCKR10, UCKR11, UCKR12, UCKR13, UCKR14, UCKR15, UCKR16, UCKR17, UCKR18, UCKR19, UCKR20, UCKR21, UCKR22, UCKR23, UCKR24, UCKR25, UCKR26, UCKR27, UCKR28, UCKR29, UCKR30, UCKR31, UCKR32, UCKR33, UCKR34, UCKR35, UCKR36, UCKR37, UCKR38, UCKR39, UCKR40, UCKR41, UCKR42, UCKR43, UCKR44, UCKR45, UCKR46, UCKR47, UCKR48, UCKR49, UCKR50, UCKR51, UCKR52, UCKR53, UCKR54, UCKR55, UCKR56, UCKR57, UCKR58, UCKR59, UCKR60, UCKR61, UCKR62, UCKR63, UCKR64, UCKR65, UCKR66, UCKR67, UCKR68, UCKR69, UCKR70, UCKR71, UCKR72, UCKR73, UCKR74, UCKR75, UCKR76, UCKR77, UCKR78, UCKR79, UCKR80, UCKR81, UCKR82, UCKR83, UCKR84, UCKR85, UCKR86, UCKR87, UCKR88, UCKR89, UCKR90, UCKR91, UCKR92, UCKR93, UCKR94, UCKR95, UCKR96, UCKR97, UCKR98, UCKR99, UCKR100</p>

Negative_15677	<p>CSG, DAO, F3, HAL, NOG, SMS, TPO, ABL2, ABLTMS, ACAD9, ACSL1, ACTA1, ACVR1B, AGXT2, ALG10, ALPP, ANPEP, ARNT, ASIP, ASMT, ATN1, ATP2A1, B3GALT4, BAI1, BDKRB1, BIRC5, BMP8A, BUB1, CACNA1G, CAMK2D, CASP9, CCL25, CD27, CD46, CD55, CDC23, CDC25C, CDKN1A, CDS2, CNGA3, CNTF, CNTFR, COL2A1, COQ7, CRY1, CSNK1D, CTSL1, CXCL10, CXXC4, CYFIP2, CYP11B1, CYP19A1, DAAM1, DDB2, DDX50, DDX55, DGKI, DHCR24, DHX58, DMGDH, DNMT3A, DUSP1, DUSP16, E2F3, EI24, EPAS1, EPHB4, EPOR, EXTL3, FADS2, FASLG, FGD3, FGF5, FOSL1, FRAT2, GALNT7, GALNTL5, GBA3, GCLM, GGT7, GLO1, GUL, GNA11, GRM5, GYS2, HA01, HLA-</p> <p>DOA, HSD11B1, HSD17B3, IFNG, IL10, IL12B, IL1R1, IL22RA1, IL23R, IL28RA, IL2RG, IL3RA, IL4R, INPP4A, IRF7, IRF9, ITGA10, LRRC4C, MAP4K1, MCM4, METTL6, MIOX, MTMR1, NAMPT, NFX1, NKD1, NPAS2, NSDHL, OCLN, OR2A12, OR2G2, OR2K2, OR2T29, OR4A5, OR4D11, OR4F15, OR51T1, OR52J3, OR52L1, OR5AK2, OR5B21, OR5M8, OR5T1, OR6C74, OR6C75, OR7A10, ORC5L, P4HA2, P4HA3, PAK2, PDE8B, PDPK1, PEMT, PER1, PFAS, PGAM2, PIGF, PLCB2, PLK1, PMAIP1, PPM1A, PPP2CB, PSEN2, PSME2, PTEN, PTGDS, PTPN11, PTPRR, PVRL4, RARS, RERE, RPN1, RPS6KA2, RUNX1T1, SETD7, SIGLEC1, SMPD4, SORD, SPAM1, SPI1, ST3GAL1, STAT5A, STAT6, TAP2, TCF7L1, TGFB2, TOM</p>
Negative_15678	<p>A2M, BID, BTB, C2, C9, F10, FGA, GSR, NLK, OSM, PGD, UBB, ACADM, ACSL4, ADORA2B, AKT3, ALDH1A3, ALDH3A1, ALDOB, ALPL, AMHR2, ARHGEF7, ARSA, ATP2A1, ATP5A1, ATP6VOC, B3GALT6, B4GALT1, BCMO1, BLNK, BLVRB, C4BPA, C5AR1, C9orf95, CAMKK2, CASP7, CCL27, CCL4, CD48, CDC23, CDC45L, CHRM5, CNTF, COQ5, CTBS, CYP2C8, CYP2S1, CYP3A4, DDX47, DERL1, DNMT3A, DTX2, DVL3, EHHADH, EIF4E2, ENPP2, EPHA6, EPHA8, EXTL3, F2RL2, FASLG, FGFR2, FPGT, GCDH, GCNT2, GGCX, GLG1, GLYCTK, GNAI3, GNAL, GP1BA, GSTA1, GSTM2, HES1, HLA-</p> <p>DOA, HTR2C, IL11, IL13RA1, IL17B, IL18RAP, INHBB, ITGA10, JUND, KIR2DL4, LAMB3, LAMC2, LARS2, LDHB, MAP2K4, MAP3K11, MAP3K12, MMP9, MOV10L1, MPDZ, MPZL1, MTHFD2, MYH10, MYH7, NADK, NCAM2, NCOA4, NEU4, NFASC, NR4A1, NT5C3, OR10A3, OR10J5, OR2L3, OR2Z1, OR4X2, OR51B4, OR52B6, OR52L1, OR52N5, OR5D14, OR5K2, OR5M9, OR6C74, OR6F1, OR6S1, OR7D4, OR8D4, OR8H3, PANK1, PANK2, PAPSS1, PDE4A, POLR3B, PPM1D, PPP2CB, PRKCH, PTCH1, PTGIS, PYGM, RARA, RASGRP1, RASGRP2, RDH10, SAT1, SDHC, SEMA3D, SFRP1, SLC33A1, SLIT1, SMAD9, SNW1, SOS2, STX5, TNFSF4, TPH1, TPI1, UCK2, ULK3, VAMP1, WASF1, XCL1, XYLT1, ATP6VOD1, ATP6VOD2, CACNA2D3, GABARAPL1, KIR2DL5A, SERPINB5, TNFRSF1B</p>
Negative_15679	<p>CKM, EGF, F11, GH2, IDS, ITK, LIT, NF1, PVR, ST, ACO2, ACVR1B, ACVR1C, ACVR2A, ADH5, ADRA1A, AGPAT2, AK3L1, ALAD, ALG2, ALG6, APAF1, ATF2, ATP5J2, ATP6VOC, BHMT, BIRC5, BMPR2, CACNG2, CALML6, CCL13, CCNH, CD44, CD79B, CDH4, CDH5, CDS1, CEBPA, CES2, CHRM1, CHST11, CKS1B, CLDN10, CLDN19, CLOCK, COL4A1, CSF1, CSH1, CYP1B1, CYP3A43, DDX18, DDX41, DD X51, DGKH, DGKI, DOLPP1, EFNA3, EHMT1, EIF4B, EPHB2, ERBB3, ERO1L, FCGR3B, FGF1, FMO3, FRAP1, G6PD, GALNT14, GALNTL2, GAMT, GBGT1, GCDH, GFAP, GNA14, GNAS, GPD1, GRM5, GSK3B, GSTA3, GUCY2F, GYS2, GZMA, HNF4A, HSPA2, IDH3B, IFNA13, IL10, IL18, IL28B, INPP5A, IPMK, JAK3, KLRC4, LIPA, MAD2L2, MAML1, MAN1C1, MAP3K11, MAP4K4, MMP2, MTMR1, MYH3, NADK, NCOA4, NCR2, NEGR1, NFASC, NFYB, NGEF, NQO1, NRXN2, NT5E, OCLN, OLR1, ONECUT1, OR10AD1, OR10G9, OR10V1, OR10X1, OR14T1, OR1C1, OR1E1, OR1L4, OR1M1, OR1N1, OR2D3, OR2M2, OR2T8, OR3A2, OR52N5, OR6F1, OR6K3, OR7A10, OR8D4, OR8K1, OR9G1, OXCT1, P2RX7, PAPSS1, PCCA, PCK1, PDE5A, PDE9A, PER2, PIGN, PIK3C2A, PLA2G2A, PLCD3, PLOD2, PLXNA1, PNMT, P OLR1B, POLR1D, POLR3B, PPID, PRKACA, PRKCZ, PRODH2, PYCR1, RAC1, RASGRP2, RBPJL, ROBO1, RPIA, RPS6, RRAS, RUVBL1, SARDH, SDHD, SELE, SEMA3C, SH2D1A, SH3BP2, SHC2, SREBF1, SRGAP3, ST8SIA1, STAT1, TAP1, TAS1</p>

Negative_15680	<p>AK1, EPO, FH, GGH, HK3, IL2, NGF, NPY, TNR, AANAT, ACO2, AKR1C2, ANAPC5, AOC2, ARG1, ASIP, ATF2, ATF4, ATP5I, BAI1, BMP4, CACNG8, CADM1, CAV1, CBLB, CCL3, CCR5, CCR6, CD244, CD28, CD40, CDC25B, CDKN1A, CFL2, CHD8, CHEK2, CHST11, CLDN3, COL11A1, COL4A1, COL5A1, CPT1A, CSF3R, CTNNA1, CYP11A1, CYP19A1, CYP26B1, CYP27A1, DDIT4, DERA, DHCR24, DHRS3, DKK4, DMGDH, DUSP8, DUSP9, EPB41, FGF19, GALNT11, GALNT8, GMPPB, GMP S, GNB1, GRIN1, GRIN2A, GSTK1, GUCY2C, HCST, HIBADH, HLA-DOB, HPSE, HSD17B1, HSPA8, IDI2, IFNAR1, IL22RA1, IL29, INHBA, INPPL1, IPMK, IPPK, IQGAP1, KLRD1, LEPR, LIAS, LIMK1, LMO7, MCM6, MGAT2, MPZL1, MYH11, MYH15, NCAM1, NKX3-1, NRG1, NT5C1B, NT5C3, NTN1, OR10G7, OR11A1, OR1C1, OR1J2, OR1L6, OR2F1, OR4A15, OR52J3, OR5C1, OR5L1, OR5M8, OR5P3, OR9Q1, OXTR, PARS2, PCCA, PCK1, PDE11A, PDE1A, PDE7A, PFKFB1, PGAM2, PNLIP, POLA2, POLR1A, POLR2G, PPA1, PPAP2B, PPP2R2B, PPP3CA, PRKAB2, PRKAR1B, PRKCA, PRKCI, PRKY, PYGL, RASGRF1, RRM1, SCIN, SDHB, SEMA3A, SEMA3G, SESN3, SETD1B, SETD2, SMC1A, SMPD3, SRD5A1, SSX2IP, STX1A, SULT1A1, TAS2R16, TAS2R41, TAS2R7, TAS2R8, TFDP1, TICAM2, TPMT, TRAF4, TYK2, VEGFC, VTI1A, WNT4, ZNRD1, ATP6VOA1</p>
Negative_15681	<p>C6, CFH, F2, F8, GHR, GNE, GPT, HGF, IHH, MPI, TFG, ACSM3, ADRB2, AGPAT3, AHCYL1, ALDH1A1, ALG12, ALG9, ALPPL2, APOC3, AREG, ARPC3, ARPC5L, ASAH1, ATP5G3, ATP5I, AXIN2, B3GAT2, CACNB4, CARS, CCL3, CCR6, CDC25C, CHEK2, CHR1, CHST13, CLCA4, CREB3L2, CSAD, CSF2RB, CSNK2A2, CTNNA2, CTNNA3, CYP26C1, CYP2J2, DDIT3, DHX58, DTX2, E2F1, E2F5, EIF4B, ELK4, EPHA7, ETNK1, ETS1, EXOC7, FARSB, FGF7, FLT1, FPGT, G6PD, GADD45B, GALNT2, GAS1, GBGT1, GCAT, GDF7, GNA13, GNRHR, GRIA1, GRIN2A, HADHA, HMGCR, HMGCS1, HSD11B2, HSPB1, IARS, IDH3G, IFNA10, IFNA17, IFNA7, IL2RA, INPPL1, IQGAP3, IRAK1, KLRK1, LARS, LFNG, LIAS, LYPLA1, MAN1A1, MAP2K5, MARS2, MDH1, MGLL, MMP2, MYH14, NAMPT, NCF2, NCSTN, NFAT5, NGEF, NLGN3, NRXN1, NUDT8, OR10A6, OR10J3, OR13C9, OR1E2, OR1L3, OR2A14, OR2T2, OR4C6, OR51A7, OR51S1, OR52M1, OR56B4, OR5T3, OR6C70, OR7A5, OR9Q1, OR9Q2, PAK1, PCK1, PFKFB3, PFKP, PFN2, PIK3R5, PNPO, PPID, PPP2R5B, PRKACA, PRKCQ, PRSS3, PSME1, RAC2, RAD51, RASGRP2, RPS6KB2, SEMA4C, SEPHS1, SETD8, SHMT1, SMAD6, SNAI1, SOAT2, SPRY2, SREBF1, ST3GAL4, STAM2, STAT1, STX1A, TAS1R2, TAS2R1, TIAM1, TIAM2, TUBA1C, UBA7, UGT2A3, UROC1, VANGL2, VCAM1, WNT3, XIAP, YOD1, ZFYVE9, ZMAT3, ARHGEF12, ATP6VOE1, HLA-DQB1, HLA-DRB5, TNFRSF12A</p>
Negative_15682	<p>AGL, AK3, APT, ATM, CEN, CKM, CK1, CMT, DLD, F7, GDA, GFI1, HKS, IL3, PDC, SMS, SRF, XDH, ACVR1B, ADCY10, AGPAT3, AKR1B1, AKR1B10, AKR1D1, ALCAM, ALDH1A1, ALDH3A2, ANAPC7, ARRB1, ARSA, ASMT, ASS1, ATG7, BACE2, CACNG7, CAMK2D, CBR1, CCNB3, CDKN2A, CHKB, CLDN15, COL1A1, COL2A1, COL5A2, COX15, CPOX, CRB3, CSDA, CTTN, CYP17A1, CYP2A13, DCXR, DGKB, DHD, DS, DLL1, DMGDH, DOCK1, DTX3L, DUSP1, DUSP7, EFNA4, EGFR, ENPP3, ENTPD8, EVI1, F2RL2, FARP2, FCGR2B, FCGR3B, FLT3, G6PC, GAL3ST1, GALK2, GALNT2, GALNT6, GCH1, GFPT1, GNM1, GPAM, GSTM1, HEXB, HRH1, HSD3B7, HYAL1, IL25, INPP4A, IPPK, IRAK3, KCNB1, KNG1, LDHA, LEF1, LTA4H, LYPLA2, MAP2K2, MAP3K3, MAP3K5, MAP4K3, MAPK12, MDH1, MGAT3, MYD88, NAT2, NCOR1, NMNAT1, NRXN2, ODC1, OLAH, OR11L1, OR13C3, OR1L8, OR1M1, OR2A12, OR2G3, OR4C11, OR51B6, OR51T1, OR52E2, OR52N5, OR56A3, OR5M3, OR6M1, OR6Q1, OR6T1, OR7A5, OR7G1, OR8D1, OR9A4, PAK2, PARD3, PDE5A, PDE7A, PDGFB, PEMT, PFKP, PFN4, PGM3, PIGQ, PISD, PLXNB3, POLR1A, POLR3B, PPARA, PPP2R2D, PRIM2, PRKAB1, PRKACG, PTK2B, RDH10, RFX5, RPS6KA4, SCLY, SCP2, SDC1, SEMA4C, SHC3, SLC27A4, SMPD3, SNW1, SOS2, ST8SIA5, SULT1A2, SULT2B1, SV2A, THBD, TNXB, TOMM40L, TP73, TPI1, TRPM5, TUBA3E, TUBB2A, TUBB2C, UGT1A10, UGT8, VAMP2, VANGL1, VDAC3, WASF3, WAC</p>

Negative_15683	<p>ASL, CDA, GFI1, GSK, HK2, IL9, ITR, SRC, TH, ABL2, ACP1, ACSL4, ADC16, ADORA2B, AKR1C1, ALDH9A1, ALPI, ANAPC5, ARPC4, ASMT, ASPA, B3GAT3, B3GNT4, BBOX1, BCKDHB, BDH1, BMP5, BMP8B, C1QA, CACNB1, CACNG2, CCL20, CCL24, CCL8, CCR8, CDC2, CDC25A, CDC45L, CDKN1A, CDKN2C, COL3A1, COL6A2, CSF3, CTF1, CTNNB1, CXCL1, CXCL9, CYP19A1, CYP2U1, DAAM1, DDB2, DDX47, DMGDH, DNMT3A, DOCK1, DPYS, DRD5, DUSP8, DUSP9, EARS2, FARSB, FGD1, FGF9, FZD5, GADD45B, GALNT6, GART, GJA1, GLO1, GMDS, GNAZ, GNRH1, HBEGF, HIBCH, HLA-DMA, IFNG, IGF1R, IL13RA1, IL4R, ITGA11, JAK1, KCNB1, LALBA, LCMT1, LEPR, LIAS, MAD1L1, MAPK13, MYLK3, NCOA4, NCOR2, NFAT5, NFATC2, NFKBIA, NFYA, NME4, NSD1, NTF4, OR10A3, OR10S1, OR13C5, OR1L6, OR1S2, OR2C1, OR2M5, OR2T10, OR51F1, OR52E8, OR5AK2, OR5B21, OR5D13, OR6B2, OR7G3, P4HA1, P4HA2, PAK1, PAK2, PDE2A, PER3, PGK2, PGS1, PLCB1, PLCD3, PLD1, PLXNB3, PNLIP, PNPLA3, PNPT1, POLR2D, POMC, PPARG, PPCDC, PPP1R3C, PPP2R5D, PRIM2, PRKAG3, PRKAR2B, PSME1, PTGFR, PTK2, PTPRB, RDH11, RDH16, RPS6KA3, RRAS, SDC3, SFRP4, SGMS2, SMAD1, SPHK2, SRGAP3, SSH3, TAS2R10, TAS2R13, TAS2R14, TGFB1, TM7SF2, TNFSF14, TNXB, TUBA1B, TUBA1C, ULBP3, UMPS, UNC5A, USE1, VASP, WASF3, WNT8A, WNT9A, ATP6V0E1, ATP6V1C1, C1GALT1C1, CACNA2D4, HLA-DPA1, MAPKAPK5, PAFAH1B1, PNLIPR3, TNFRSF14</p>
Negative_15684	<p>CD6, CR2, EZR, GDA, GLS, GNS, LIF, MET, PGP, TNN, ACSM3, APH1A, APOA2, ARNTL, ATG3, B3GALT5, BMP8A, C1GALT1, CACNA1F, CAPN2, CAV2, CAV3, CCL19, CCL23, CCL26, CCL28, CCNG1, CD46, CER1, CLDN17, CLTB, CNGA4, CNTN2, COL1A1, COL6A2, CRB3, CRLS1, CSF2RB, CYCS, CYP1A1, CYP2U1, DARS2, DGKZ, DLL1, DPYS, DUSP3, EARS2, EGFR, ENTPD2, ENTPD6, FARSB, FGF22, FGFR4, FZD8, GANAB, GMPPA, GNA15, GNAS, GP1BB, GUK1, HAGHL, HAP1, HBEGF, HDAC1, HIF1A, HSD17B7, IAPP, IARS, IDI2, IKBKG, INPP4B, ITGA2, JAG1, JUND, KIR2DL1, KIR3DL1, KIR3DL3, KLRC2, LAMB2, LAMB4, MAP4K2, MAT2B, MICA, MRAS, MYH10, NAE1, NCAM1, NFYB, NME7, NT5C3, OR11L1, OR1M1, OR2T10, OR4B1, OR4X2, OR52A1, OR52N5, OR5B17, OR5M9, OR7C1, OR9Q2, PCK2, PCYT1A, PDE3A, PFKM, PGM3, PHPT1, PIAS4, PIK3R3, PLD2, PLEKHA8, POLR1B, POLR1E, POLR2C, POLR3H, PON1, PPAP2C, PPARG, PPP2R5A, PPP5C, PRKACB, PRLR, PTPRC, PTPRF, PTPRJ, PTPRZ1, PVRL4, RAF1, RBL1, RELB, RRM2B, SC4MOL, SDHC, SEMA3F, SH3BP2, SMC1B, SNAP23, SOCS1, SOCS3, SOCS5, SOX17, SPRY3, SSSX2IP, ST3GAL3, STAT3, STAT6, STX1B, SULT1A4, SULT2B1, TAP2, TAS2R3, TBL1Y, TBXA2R, THTPA, TSC2, TSNARE1, TUBA3E, TUBB4, TUBB4Q, UGT2B28, VCAM1, WNT2B, WNT9B, XCR1, ATP6V1E1, HLA-DPA1</p>
Negative_15685	<p>BDP, CO, DCK, GFI3, HAL, HGD, HGF, ID3, LCT, MAX, MIF, MTR, PGP, SHH, SMS, SRF, SYK, AARS, ABL1, ACAA2, ACADL, ACADM, ACADSB, AHCYL2, AMDHD2, AMY2A, ARRB1, B3GNT5, B4GALT4, B4GALT7, BACE2, BDH2, CACNA1E, CACNG2, CAMKK2, CDC14B, CDC25A, CDH1, CDK6, CER1, CHRNA7, CLOCK, CMPK2, CRLF2, CTPS2, CTTN, CXCR5, CYP3A43, DAD1, DAPK1, DKK1, DUSP6, E2F5, EGFR, ELK1, EPHX2, FGD3, FGF1, FGF13, FGF18, FGF3, FGFR1, FGFR2, FPGT, FUT3, FZD4, GARS, GLI3, GSTK1, GSTM4, GUCY1A2, GUCY2C, HAAO, HARS, HMGCL, HMOX2, HTR5A, IDH3B, IL11, IL28B, INSRR, IQGAP2, ITGA10, ITGA11, ITGA6, JAG1, KIR3DL3, KRAS, LIPG, LRAT, MADCAM1, MAN1B1, MAN2A1, MAP3K6, MAPT, MASP1, MAT1A, METTL2B, MGAT1, MTHFS, NAGS, NAT1, NCF1, NFYB, NGEF, NLGN3, NRAS, NRG4, NTN1, OGDH, OR10A3, OR10G8, OR10G9, OR13C8, OR1A1, OR1L6, OR2H2, OR2L3, OR2S2, OR3A1, OR3A2, OR4C6, OR4D11, OR4E2, OR4X2, ORC3L, PAK4, PARD3, PCK1, PDE4B, PDK1, PHKA1, PHKB, PHPT1, PIAS3, PIGA, PIGP, PIP5K1C, PLXNB1, POLD2, POLR1D, POLR2E, PPAT, PPP1CB, PPP2R5C, PRSS3, RAC3, RALGDS, RHOQ, RPS6KA6, RUNX1T1, SEMA3A, SEMA4G, SOCS1, SOCS2, SOCS4, SPI1, SUV39H2, TBL1Y, TGDS, TGFB1, THBS1, TKT2, TMLHE, TNFRSF8, TNFSF12, TOMM40, TP53I3, TRADD, TSC1, TUBA3E, TUBB2B, TYMS, UGT1A10, VAMP3, WASF2, XCR1, YWHAG, ATP6V1B2, ATP6V1E1, HLA-DPA1, PNLIPR3, TNFRSF14</p>

Negative_15686	<p>AK2, CFI, CSK, DCN, EDA, F8, GNE, GPI, ID2, INS, LIF, PC, RPE, AARS2, ABI2, ABP1, ACO1, ACOX1, ACSM1, ACTN2, ACVR1, AHCYL2, ALDH4A1, ALDH5A1, ALG13, ANAPC1, ARPC1B, ASIP, BCAT1, BDKRB1, BST1, C3AR1, CACNG3, CALML3, CAMK2A, CAMKK1, CASP10, CCKBR, CCL16, CCL4, CDC25A, CDS1, CES2, CFTR, CHD8, CKMT2, CLDN19, COL1A1, COQ5, CXCR3, CXCR6, CYP1A2, DAPK3, DARS2, DGAT1, DHFR, ECHS1, ENPP7, ENTPD2, F13A1, FBXW11, FGF18, FLT3, FSHB, FUT6, FZD8, GLI3, GMPS, GNA14, GNG13, GNRHR, GSTP1, HSD17B8, HTR2A, ICOS, IFNA14, IL13RA1, IL21R, IL6R, INHBC, KCNJ11, KLKB1, LAMB3, LIMK2, LYPLA1, MAD2L2, MAP4K3, MAPK11, NAT5, NAT6, NCR1, NCSTN, NRG4, NRP1, NRXN3, NT5C1B, OLAH, OR10A3, OR10H2, OR1B1, OR1J1, OR2A25, OR2B11, OR4A16, OR51L1, OR52M1, OR6Y1, OR7G2, OR8J3, OR9G1, ORC1L, ORC2L, P2RX5, PARD6A, PDE1C, PECAM1, PFKM, PGS1, PHKB, PIGF, PIGL, PIK3R1, PIP5K1A, PLK1, POLR2F, POLR3G, PPP2CB, PPP2R2D, PPP3CC, PPT1, PRKCB, PRKCH, PRSS3, PYGB, RARA, RBPJ, RFXANK, ROBO1, ROCK1, RPS6KA4, RXRA, SEMA4A, SFRP5, SPRED2, SPTAN1, SQLE, SULT1A4, TFDP1, TSHR, TUBB1, TUBB2A, UBE2L6, VASP, WBSR22, XCL2, ATP6V1G3, B4GALNT1, HSD17B12, PLA2G12B, SERPIND1</p>
Negative_15687	<p>C8A, DDC, F7, INS, MIF, MYC, OAT, SRF, AADAC, AASS, ACVR2A, ADRA1A, ADSL, ALCAM, ALG10, ALG12, ALG13, ALG8, ALG9, ARPC5, ASMT, ASS1, B3GAT2, BAIAP2, BCAT2, BDH1, BMP4, CADM3, CANT1, CAV1, CCL26, CCL3, CCNE1, CCR4, CD99, CDC20, CDC6, CDK5, CDK6, CERK, CES2, CFLAR, CHST13, CLDN11, CLDN9, CSH1, CXXC4, DDX51, DDX54, DKK2, DNMT1, DPM1, DUSP2, DUSP5, EVI1, F11R, FCGR2B, GAD1, GALK2, GALNT11, GALNT14, GALNTL2, GFAP, GNAI1, GPD1L, GSTK1, GSTT1, GYS1, GYS2, HHEX, HLA-DOB, HMGCS2, IARS2, IL15RA, IL18RAP, IL1R2, IL22RA2, IL23R, INMT, IRAK1, IRAK3, ITGA4, ITGAV, JAM3, KIR3DL2, KIR3DL3, LEPR, LFNG, MAP3K5, MCM6, MGST3, MLLT4, MYH7, MYLK, NEU1, NEU4, NFKBIE, NOS3, NT5C1B, NTF3, OCRL, OR11A1, OR2A5, OR3A1, OR3A2, OR4D6, OR4K13, OR51E1, OR51I1, OR5AP2, OR5AS1, OR5M8, OR7D2, OR8A1, OR9A2, OR9K2, ORC5L, PAICS, PAR3, PDGFD, PFKFB1, PFN1, PGAM2, PIAS1, PIGH, PIK3CD, PIK3R5, PIM2, PLXNA2, POLR1C, PPP1CB, PROS1, PTCH2, PTTG1, RDH10, RELA, RRAS, RUNX1T1, SDC3, SDHC, SLC27A4, SNAI1, SORBS1, SPTLC2, STAT2, STX1B, STX8, SUGL1, TAS2R10, TFPI, TLR9, TPI1, TPK1, UGT2B28, ULK1, UNC5D, UPRT, WNT3, WNT8B, WWP2, YKT6, YWHAH, ATP6VOA2, ATP6VOD2, PNLIPRP2, SERPINC1, TNFRSF10A</p>
Negative_15688	<p>BTC, CO, CAT, CTH, GAA, HGD, IL9, KDR, MTC, PC, SRF, TNC, VCL, VTN, ACHL, ACSM3, ADCY4, ADCY6, AFMID, ALDH3A2, ALDH3B2, ALG1, ALG3, ALG9, ALOX5, ALPI, ANAPC11, ATP6V1H, BCL2L1, C3AR1, CAMKK2, CBR3, CCL21, CCNB3, CCNH, CCR6, CD244, CD46, CES2, CES7, CHD8, CLDN1, CNTNAP1, COL11A1, COL5A1, CREBBP, CSNK2A1, CTPS, CXCR3, CYP1A2, CYP26B1, CYP3A4, CYP7A1, DDHD1, DGKG, DKK1, DLL3, DLL4, DPYS, DUSP14, EFN2, EHHADH, ENO2, ETNK2, ETS1, F13B, FGF17, FLOT2, FLT3LG, FUT1, FUT6, G6PC, G6PC2, GLYCTK, GMPPB, GNA13, GNAQ, GP1BA, GPD1, GRIA3, HIF1A, HLA-DRA, HMBS, HMOX1, HPSE, HSD11B1, HSD3B1, IARS2, ICAM2, IGSF5, IL15RA, IL20RB, KAT2A, KIR2DL1, KIR3DL1, KLRD1, LCMT2, LDHA, LDHD, LRP5, LYZL1, MAGI3, MAML3, METTL6, MMP2, MYL5, MYLK2, NEUROD1, NFAT5, NMNAT3, NOTCH1, NPR2, NRG1, NSDHL, OR13H1, OR14A16, OR1B1, OR1E1, OR51B2, OR52A1, OR52A5, OR5AN1, OR5D14, OR5M8, OR6C75, OR7A17, OR8H3, PAK7, PANK2, PCK1, PDE7A, PDHA1, PFKFB2, PFN1, PHKG2, PIK3C3, PISD, PLXNB2, PNPT1, PPAT, PPP2CB, PPP2R2A, PRIM2, PRKACA, PRKAR1B, PRODH2, PRPH, PVRL4, RARS, RPS6KB1, RUNX1T1, SDC4, SELPLG, SEMA3G, SGMS1, SGPP1, SHC3, SHC4, SMURF2, SNAI2, ST3GAL3, STAM, STAM2, SULT1A1, TGFB3, TIAM1, TJP3, TSC1, TUBB4Q, ULK1, VAMP3, VDAC2, B3GALNT1, C1GALT1C1, MAPK</p>

Negative_15689	<p>ABO, CO, CD2, DBH, F2R, F8, GGH, GNS, HIK1, PDC, PLEN, RDA, TAT, TNK, ADH, A4GALT, ACADS, ACADSB, ACSL1, ACSS2, ACTA2, ADAM17, ADRA1B, ADSSL1, AKT3, ALDH1L1, ALDH2, ALG1, AMY2B, APOC3, APOE, ARAF, ARPC1B, ARSE, B3GNT2, BDH1, BMPR1A, CACNG8, CBR3, CCNB2, CCR9, CD28, CD38, CD59, CDC42, CDC45L, CDH4, CER1, CHKA, CHRM1, CLDN8, CNGB1, CREBBP, CSNK1D, CXC L12, CYP4F3, DAAM2, DDX47, DEGS1, DEGS2, DIAPH1, DTX4, EGLN1, ERBB4, ERO1L, ESPL1, EXOC7, EXTL3, FABP4, FBP2, FGF8, FOXA2, FOXA3, FOXO1, F TMT, FUT2, FUT9, FZD7, GAD1, GALNTL2, GARS, GLI2, GNPAT1, GPX5, GRIN 2D, GSTA2, HAAO, HAO2, HCCS, HLA-</p> <p>F, HPSE2, HRH1, HSD11B1, HTR2A, HTR4, IDUA, IL17RB, ITGB1, KAT2A, KCN J11, LAP3, LARS, LLGL1, MAN1B1, MAP3K13, MGAT1, MGAT4B, MGLL, MTHFD2 , NCKAP1, NEUROD1, NFE2L2, NOX3, NRXN1, NSD1, OCLN, OR10A2, OR1N2, OR 2AT4, OR2F2, OR4F6, OR4K13, OR4K2, OR4P4, OR51G2, OR51M1, OR52A1, OR 52L1, OR5A1, OR6B3, OR9K2, P2RX2, PCCB, PDE8B, PER3, PFKM, PGAM1, PGM 2, PGS1, PIK3C2G, PIK3CA, PIP5K1C, PLA2G3, PLCB3, PLXNB1, PLXNB3, PO LR2A, POLR3H, PPID, PPM1B, PPP1R3D, PRKAA1, PRKAR1A, PRKAR2A, PRKY, PTCH1, PTGER3, PTGS2, PTK2B, PTPRJ, PTPRZ1, RAC3, RALGDS, RASGRF1, R PS6KA4, RRM2B, SDHC, SESN1, SMURF1, SPHK2, SPI1, SPRY2, SPRY4, STX2, <del>RUK, PAUL, CAT, CRM, DB1, DNF, F2R, GCR, GL3, TD1, TEM, ITR, JCI, MPP2, MVD</del></p>
Negative_15690	<p>, MVK, OAT, PRL, RB1, TEC, ACTB, ACYP1, AGMAT, AKR1A1, AKR1C1, AKT1, AL DH5A1, ALDH6A1, ALDOB, ALPI, ANAPC7, ANGPTL4, AOC2, ARHGEF1, ATP5G2 , ATP5I, AXIN1, B4GALT3, BAAT, BDNF, BMP5, BMP8A, BMPR1B, BRAF, CACNA 1F, CASP10, CCL1, CCL15, CCNA2, CD247, CHEK1, CKMT2, CLDN19, CNDP1, C OL6A1, CPT1A, CRY1, CSF1R, CYP26B1, DAPK2, DBF4, DHCR24, DHODH, DLST , DNMT1, DUSP10, EFNA4, ENPP3, ENTPD1, FABP3, FMO3, FUT1, GALE, GALT, GMPR2, GNAI1, GRIN1, GRIN2A, GSTA1, HAO2, HLA-</p> <p>C, HSP90B1, ICOS, IFNA21, IL2RB, IMPA1, INMT, IQGAP2, ITGA2B, ITGB3, JAK3, KLRC1, LAP3, LPAR1, MAN1B1, MAP2K3, MAP3K8, MAP4K2, MAPK7, MCC C1, MITF, MNX1, MPDZ, MTMR1, MYH9, MYLK, NANP, NAT1, NCR1, NCR2, NKX3- 1, NQO1, NRXN3, OPLAH, OR10AG1, OR10G3, OR10H5, OR10K2, OR13C4, OR2B 11, OR2T11, OR2T3, OR2T5, OR2Z1, OR4F15, OR4F17, OR4K1, OR4M1, OR4X2 , OR51V1, OR52E6, OR56A3, OR5AP2, OR5D16, OR5H2, OR5K2, OR7C2, OR8U1 , OR9G1, OR9Q1, OXTR, PANK1, PARD6A, PAX4, PCNA, PCYT1A, PDE7B, PDGFR A, PFKFB4, PGAM2, PIGB, PIGM, PIK3CA, PIPOX, PKLR, PLTP, PPCDC, PPT1, PRKCB, PSME1, PVRL2, RAC2, RAPGEF2, RBPJ, RND1, RRM2, RUNX1, RUNX1T1 , SEMA4F, SEMA7A, SESN2, SETD7, SKP1, SRGAP2, STT3B, SUCLG2, TAS2R7, <del>TC1DC1, TRAF4, TRPM5, TUBA9, TYK2, UCCCL9, ULK3, VNN1, WJSC111, WNT4</del></p>
Negative_15691	<p>DBH, EGF, F10, F2R, GGH, PRL, TXK, VCL, ACAA1, ACADSB, ACAT1, ACSS3, AC TC1, ACY3, ADCY1, AKR1C4, ALPP, ALPPL2, ALS2, AMD1, ANAPC1, ANGPTL4, AOC2, APAF1, APH1A, ARPC2, ATP5B, ATP5D, ATP5J, C4BPB, CACNA1S, CACN B4, CACNG4, CADM1, CALML5, CBLC, CCL15, CCL16, CCL22, CCNB3, CD27, CD 46, CD47, CDC25C, CDKN1A, CES7, CKMT2, CLDN16, CRHR1, CTSS, CXCL6, CY P11B1, CYP1B1, CYP21A2, CYP4A11, DAXX, DDX51, DDX56, DGKH, DNMT3B, D USP3, DUSP8, EFNA1, EI24, ENTPD1, ENTPD4, FGF1, FGF22, FMO2, FSHB, FU T7, FZD4, GALM, GALNT7, GGT7, GLI1, GNPAT, GSTA5, HAAO, HADH, HIBCH, H PSE2, IFNA6, IL10, IL20RA, IL22RA2, IL23R, IL25, IL5RA, IPMK, IQGAP1 , IQGAP2, ITPKA, KYNU, LAMC2, LCAT, LTBR, MADCAM1, MAPK13, MCEE, MECR , MGAT1, MGST2, MKNK2, MPP5, NCOR2, NKX6-</p> <p>1, NRCAM, OR1C1, OR1Q1, OR2B2, OR2T6, OR4C11, OR4F6, OR4K1, OR51D1, O R52I1, OR5AR1, OR6C3, OR6C74, OR7G1, PARD3, PCYT1B, PER2, PGAM4, PHK A2, PIAS4, PIGK, PLA2G10, PLA2G3, PLAUR, PLCB4, PLCE1, POLR2J, PPOX, PROC, PYCRL, RAC1, RAP1B, RAPGEF3, RDH11, RDH12, RDH16, RGS3, RPE65, SAT2, SCP2, SDHA, SEPHS1, SESN3, SETD8, SMAD2, SMC1B, SMURF1, SOCS3, SOCS7, SPRY2, SSH3, TAS2R14, TAS2R40, TFPI, TP53, TP53I3, USE1, WBSC R17, WNT16, ZBTB16, HLA-DQA2, ST6GALNAC3, TNFRSF11A</p>

Negative_15692	<p>BTC, CD4, CEL, CRH, DLD, F2, GK, GP5, GSS, IL5, OSM, SCD, TYR, A4GALT, ABCC8, ACAD9, ACY3, ADCY3, AMDHD2, ATP5G2, ATP6V1F, B3GAT2, B4GALT2, B4GALT3, B4GALT7, BRAF, CCL7, CCNE1, CCR9, CD27, CD74, CDH4, CER1, CHRM2, CLDN14, CLDN18, COQ7, CREB3L4, CTSG, CYP26B1, CYP2B6, CYP4F2, DDX52, DHCR24, DTX1, E2F2, ENO1, ENO2, FGF12, FRAT1, FUT5, GADD45B, GALK2, GALNT3, GBA3, GCNT4, GFPT1, GNB3, GNPAT1, GOT2, GPX5, GSK3B, GSTM3, GTSE1, GUCA1C, HDAC1, HRH2, ICAM1, IFNA13, IFNG, IL17B, IL18R1, IL2RB, KARS, LYPLA2, MAP2K7, MAP3K14, MAPK3, MAPK8, MCEE, MDM2, MPDZ, MPZL1, MYH7, NAGK, NOX1, NTF4, NUDT9, OGDHL, OR10A6, OR10AD1, OR10P1, OR11H1, OR12D3, OR13J1, OR2G3, OR4A5, OR4D2, OR52I2, OR9K2, ORC5L, P2RX7, PCYT1A, PCYT2, PFAS, PFN1, PIAS1, PIGW, PLAT, PLCB1, PLK1, PNP, LA4, POLR2H, PON1, PPAP2B, PPP1CA, PPP2R1B, PRKG2, PRSS3, PSME3, PTDSS1, PTPN11, RALGDS, RASGRP1, RDH12, RHOQ, RPN2, SAT2, SDHD, SELL, SEMA3A, SEMA3D, SEMA3G, SETD1A, SETD2, SH2D1A, SHC2, SLC25A5, SLIT2, SNAP25, SPRY1, SPRY4, SRD5A2, ST3GAL4, STAM, STK36, STX18, SUCLG1, SULT1A1, TAS1R2, TAS2R41, THBS1, TNFSF9, TOMM40, TPM3, TPMT, TRAF6, TYMP, VAMP2, VDAC1, VEGFA, WNT16, CACNA2D3, HLA-DPA1, SLC25A31</p>
Negative_15693	<p>BTC, DBT, FGB, HDC, HYI, ILK, INS, PC, PRL, SHH, TNR, TXK, ACSL3, ACYP1, ADRA1A, ADSSL1, ALCAM, ALG8, ANAPC5, APOA1, ATP5J2, ATP6V1D, B4GALT5, BAIAP2, BUB3, CACNA1E, CCL15, CCNA1, CCNG1, CCNH, CCR10, CCR5, CDC25A, CLDN1, CNTN1, COL4A4, COL6A2, COQ7, CREB3L3, CREB3L4, CSF3R, CSNK1A1, CSNK1E, CYFIP1, CYP11B1, DAAM2, DERL1, E2F5, EIF4B, ELK1, ENTPD2, EPB41, EPHA1, EPHX1, EPRS, FADS2, FARSB, FBXW11, FGF13, FGFR2, GAB1, GALNTL4, GATM, GCLM, GMDS, GNPAT, GOT2, GRIA1, GUCA1A, GZMA, HCLS1, HDAC2, HEMK1, HLA-DRA, HNF4G, IDI1, IFNB1, IL28A, INPP5E, INSRR, JAG1, JAG2, LAMB2, MALT1, MASP2, MDH1, MDM2, MTHFD1L, MYL2, NAGS, NAT6, NCOA4, NFATC2, NGEF, NOS3, OR10G8, OR13A1, OR1E1, OR2G3, OR2L2, OR2S2, OR4D6, OR51G1, OR52M1, OR5B21, OR6C4, OR8K1, PDE8B, PIM1, PITX2, PLAU, PNPO, PON1, PPA1, PPP1R3B, PPP2R1A, PPP2R5A, PRKAR1B, PRKAR2B, PRKCQ, PTPN7, RAPGEF1, RARA, RARS, RASSF1, ROCK2, RPS6KA2, RPS6KA3, SETD1B, SMAD5, SMARCA2, STAT6, SUCLG1, TACR3, TAS2R16, TAS2R3, TAS2R41, TAS2R9, TBL1Y, TBXAS1, TJP1, TNFSF18, TRAF4, TSHR, TUBB2B, UBA7, WNT16, WNT9B, YARS, ATP6V1C2, ATP6V1G1, GABARAPL2, SERPIND1, ST6GALNAC6, SUV420H1</p>
Negative_15694	<p>ADA, C2, CD4, EBF, F2R, GDA, ID4, IHH, OSM, PVR, TNC, TXK, ACACB, ACP2, ACTN2, ADAM17, AKT2, ALG8, AREG, ARHGEF6, ARPC3, ARPC4, ATP12A, ATP2A1, ATP5C1, B3GNT2, BLVRB, BNIP1, C3AR1, CACNG1, CAMK2B, CARS2, CBR1, CCL24, CD34, CD3E, CDC45L, CDH15, CHST12, CLDN17, CLTCL1, COL4A2, CSNK2A1, CTSB, CYP1A2, CYP26B1, CYP2S1, DAPK1, DDOST, DHCR24, DHRS9, DPM2, DPYS, DVL1, EFNA1, EFNB1, ENO2, ENPP7, FCGR2B, FGF4, FGF6, FOXA2, FUT7, FZD9, GALNT11, GCNT4, GLDC, GMPS, GNRHR, GSTK1, GSTM1, GSTP1, GUCY2D, GUK1, HAP1, HMBS, HSP90B1, HTR4, HTR7, IL20RB, IL6ST, INHBE, INMT, INPPL1, ITCH, ITGA7, ITGAL, ITGB8, LCP2, LDHC, LIMK1, LRP5, MAML1, MAML3, MAP2K6, MAP3K5, MAPK9, MARS, MASP2, MECP, MGAT4A, MYH10, NCAM1, NFKBIB, NOTCH2, NR1H3, NUDT8, OR10H4, OR13A1, OR13D1, OR1L1, OR2A5, OR2B2, OR2T33, OR2T8, OR4A15, OR4B1, OR4P4, OR51E2, OR51G1, OR52L1, OR5A1, OR6C76, OR6N2, OR8H3, P2RX6, P4HA3, PDGFD, PER2, PHKG2, PLXNC1, POLR2B, PPM1A, PPP2R1B, PPP2R5D, PRKY, PRPS2, PSAT1, PSME1, PTGER1, QPRT, RAB5A, RAPGEF2, RASGRP3, RERE, RHEB, RPS6, RRAS, RUNX1T1, SAT1, SESN3, SLC9A1, SMAD6, SMPD1, SMPD4, SORBS1, SPAM1, SPRY4, SPTLC2, SSX2IP, STAT5B, STK36, SULT1A1, TAS2R4, TAS2R50, TGDS, TRDMT1, TSHR, TUBA4A, UBA1, UGCG, UGT2B10, WNT10A, WNT4, WNT7A, XCR1, ATP6V1C1, TNFSF18P</p>



Negative_15695	<p>APF, BAX, CTS, C2, CA1, DBI, EPO, FAN, K11, OAT, PAH, REL1, SMO, TFG, VIN, ACSL4, ADAM10, ADSS, ALDH1A2, ALG2, ALG6, ALPP, ALS2, APPL1, ARG1, ARG2, ARNT, ARPC1B, ATG3, B4GALT3, B4GALT4, BDH2, BDNF, CACNA1A, CACNG7, CADM3, CAPN2, CCNB2, CCNE2, CDC2, CD01, CHAT, CHRM3, CKMT2, CLDN19, CLDN22, CLTA, CRB3, CSF2, CSF3R, CTPS, CYP26C1, CYP2D6, DARS2, DDX47, DDX55, DEGS1, DGKZ, DKK2, DLST, DNMT3A, DNMT3L, DRD5, DVL2, EARS2, EFN2, EGFR, EHHADH, EPHA7, FGD1, FGD3, FGF21, FUT2, FUT9, GALC, GALE, GALNT3, GALNTL2, GLG1, GLI2, GMPPB, GPX7, GRB2, GRIN1, GSK3B, GSTK1, GSTM5, GYS2, HAGH, HCLS1, HLA-</p> <p>DOA, HMOX1, HNF1A, HSD17B2, HSP90B1, HTR2C, HTR5A, ICAM1, ICOS, IDUA, IL1A, IL22, IL28RA, INADL, LALBA, LAMC2, LAMC3, LTBR, MAML3, MAPK12, MAPK9, MAPT, MARS2, MGST1, MGST2, MITF, MTAP, MTFMT, MYLK, NCOR2, NEU1, NFYC, NR1D1, NRP1, OR10C1, OR10K1, OR1C1, OR1J1, OR2M2, OR2S2, OR2T11, OR2T34, OR4C13, OR4F17, OR4F5, OR4K17, OR51A2, OR52E6, OR52J3, OR5AK2, OR5I1, OR6C2, OR8D2, OR8K5, OR9A4, P4HA2, PANK3, PCCA, PDE11A, PDGFRA, PEMT, PFKM, PGAM4, PIGH, PIGV, PLA2G1B, PLA2G2D, PLCD1, PLXNC1, PPOX, PRODH2, PRSS3, RAD51, RBPJL, RHOD, ROBO1, RPS6KA3, RRM1, RUNX1T1, SCD5, SFRP5, STT3B, SYNJ1, TGFB3, TP53, TUBA4A, TUBB2B, TYR1, UGT1A10, UGT2A3, UNG2, VAMP4, VDAC2, WAC2, ZFYVE16, ZFYVE16</p>
Negative_15696	<p>AK2, AMH, CBS, EBP, FER, FGG, GNS, LHB, PXN, SFN, SP1, ABCC8, ACOT11, ACOX3, ACP2, ACSL1, ACTC1, AKR1B1, AKR1D1, ALG12, AMDHD1, APLP1, BIRC3, BMPR2, C7orf16, CACNA1H, CACNB4, CALML3, CASP7, CCKBR, CCL17, CCL4, CCR5, CCR6, CD244, CD44, CHD8, CHDH, CHST11, CMPK2, CSF1, CTNNA1, CTNND1, CTS1, CXCL1, CYP17A1, CYP1A1, CYSLTR2, DAAM1, DAG1, DCTD, DDB2, DGAT2L4, DPYSL2, DTX4, DUSP8, E2F3, E2F4, EDNRA, ENPP2, ENPP7, EPHA7, FADS2, FARP2, FBP2, FGF13, FLT3, GALNT3, GGT1, GLS2, GNB1, GOT2, HADHB, HMGCL, HNF4A, HPSE, HSD17B1, HSD3B1, HSPA2, IDH1, IFNA14, IFNAR2, IFNGR2, IL17RB, IL18, IL19, IL22RA2, INMT, INPP4A, ITPA, JAK2, KCNQ1, KDSR, KIR2DL1, KIR3DL1, KLK3, KRAS, LALBA, LDHA, LIPG, MAP3K12, MAP4K1, MAP4K2, MAPK14, MAT2B, MBL2, MCEE, MTHFS, MYH10, NARS, NCAM2, NEU4, NMNAT3, NR1H3, OR10J5, OR11H1, OR1A1, OR2A42, OR2AE1, OR2T1, OR2T4, OR51T1, OR52I1, OR52K1, OR5T3, OR6K3, OR6N1, OR7D2, PARS2, PDHA1, PDXK, PGM2, PIGB, PIGL, PIGT, PIPOX, PLA2G2D, PLAU, PLCZ1, POLR1B, POLR2K, PPARA, PPM1B, PRKCH, PTPRZ1, RAC2, RBX1, REL, RFWD2, RFX5, RFXAP, SAT1, SESN3, SFRP1, SMURF1, SRGAP1, ST8SIA5, STX10, SV2C, TBXAS1, TRPM5, TYROBP, UAP1, USE1, VEGFC, XYLT2, YES1, ATP6V1C2, ATP6V1E2, EIF4EBP1, PLA2G12B, ST6GALNAC1, ST6GALNAC5</p>
Negative_15697	<p>AK2, AUH, C4B, C8G, CRH, DDO, GAA, GPT, ME1, RB1, ACMSD, ACTN2, ADCY1, ALDH5A1, ALDH7A1, ANAPC10, ANAPC11, AOC3, APAF1, ASCC3, ASRGL1, ATP2A1, ATP5L, B4GALT4, BUB1, C5AR1, CACNA1E, CCL25, CCR8, CD44, CD47, CD58, CD79B, CDC25A, CLDN14, CLDN15, COL4A4, CPOX, CX3CR1, CYP21A2, CYP26C1, CYP2A6, CYP3A7, DHDDS, DLL3, DPYS, DUSP16, EARS2, ECHS1, EFNA1, EIF4B, ENTPD3, EPB41L1, ERO1L, FARS2, FZD10, GAMT, GAS1, GBGT1, GCAT, GGT1, GLUL, GPD1L, GPLD1, GRIA1, GRPR, GSTA3, GUCA1B, GUCY2D, HIBCH, HIP1, HNF1A, HRH1, HSD11B1, HSD3B7, HSPA8, IL17RB, IL19, INPP4A, IRAK4, IRF3, ITGAM, KCNQ1, LAMB1, LDHA, LYPLA1, MAP3K12, MAP3K13, MDM4, MICA, MMP14, MTHFD2, MTMR6, NAT1, NEFL, NMNAT3, NPR1, NR1D1, OR10T2, OR11H1, OR13C5, OR2A25, OR2M4, OR2T34, OR4F17, OR5A2, OR5D13, OR5K1, OR5T1, OR8S1, OR8U1, OXCT2, P2RX6, PDCD1, PDE10A, PDIA4, PIGB, PIK3C2A, PIP4K2C, PKLR, PLEKHA8, POLR3D, PPAT, PPP2R1B, PPP2R2D, PPT1, PRKACG, PTGES2, RAP1A, RDH5, RND1, ROCK1, RPS6KB1, SELE, SELP, SHC1, SHC4, SNAP25, SRGAP3, ST3GAL3, TAS2R5, TGFA, TICAM1, TKTL2, TNFSF9, TUBAL3, TUBB4Q, UGT1A10, UGT2A3, ZFYVE16, ATP6V1G3, GABARAPL1, KIR2DL5A</p>

Negative_15698	<p>C5B, C6H, DBH, F3, KDK, NOG, PGP, RFR, S1N, TNR, TPO, TTR, UBB, ABLT1M1, A  CADVL, ACLY, ACOX3, ACY3, ADCY8, ADSL, AFMID, AGPAT2, AKR1C1, ALAS2,  AMHR2, APOC3, ATP5E, ATP5L, ATP6VOB, BAIAP2, BBC3, BBOX1, BIRC3, C3o  rf10, CARS2, CASK, CDK2, CHST13, CHSY1, CLDN18, CLDN19, DEGS1, DHDDS  , DMGDH, EDNRA, ENPP3, F13B, FARSB, FUT5, FUT8, FZD8, GADD45A, GALNT1  1, GALNT13, GALNT3, GAS1, GIT1, GLS2, GNA14, GRIA3, GSTA3, GSTA5, HCC  S, HES1, HEXA, HIBCH, HLA-  DRA, HMGCS1, HNMT, HPSE2, IBSP, IFNA10, IFNA6, IL10RA, IL21, IL3RA, K  IR3DL2, KIR3DL3, LARS2, LCMT1, LDHAL6A, LDHC, LIFR, LILRB3, LRRC4C,  LTC4S, MAGI1, MAPK12, MCM3, MGAT1, MICA, MINPP1, MITF, MYH14, NCK1, N  CR3, NEFM, NFKBIA, OR10G8, OR13G1, OR14C36, OR1L8, OR2AG1, OR2M4, OR  5B12, OR5V1, OR6N2, OR7D2, OR8H3, OR9K2, PDE6G, PDE7A, PDGFA, PEMT, P  FKFB1, PFKFB3, PGAM2, PHGDH, PIGC, PIGL, PIGV, POLD3, PPAP2A, PPID, P  PP1R3B, PPP2R2C, PPP2R5A, PPP5C, PRKAR1B, PRKCH, PROC, PTPMT1, PTPR  J, PTPRZ1, RBKS, RGS3, RPS6KA2, RPS6KA4, RPS6KA6, RXRA, SCLY, SEMA3A  , SEMA3G, SHC3, SLC25A4, SLC27A4, SMAD5, SOCS5, SOX17, STAT5A, STX3,  SUOX, TAP2, TAS2R41, TAS2R48, TBXA2R, TD02, TFDP1, TJP2, TJP3, TLR5,  TRAF4, TYROBP, VDACL1, ZAP70, ATP6VOA2, ATP6VOD1, CACNA2D4, HLA-</p>
Negative_15699	<p>RAP1, CASK, F8, F9, GFB, THB, TNS, TTR, CAT, MET, NF1, PLN, TAT, TKZ, ACVIZ  B, ADCY6, ADRB2, ADSS, AHCY, ALCAM, ALDH1L1, ALDH2, ALDH4A1, ALG13, A  LPP, AMPD2, ARHGEF7, ASAH1, ATG12, ATP5A1, ATP5D, ATP5O, B3GALT6, B3  GAT3, B3GNT5, B4GALT2, BMPR2, C4BPA, CACNA1D, CACNA1F, CACNG7, CALM  L5, CALML6, CANT1, CAV2, CCL15, CCL20, CCL27, CDC14A, COQ5, CRB3, CRY  2, CSH1, CXXC4, CYP11B1, CYP2C9, CYP3A5, DBF4, DDB2, DDX54, DGKE, DHR  S3, DLL4, DLST, DNMT3A, DTX4, DUSP2, DUSP6, DVL1, EFNA1, EFNA5, EHHAD  H, ENPP1, EPHB1, EXT1, FASLG, FCGR3A, FECH, FGF4, FTH1, FZD4, FZR1, GA  NAB, GDF5, GFPT1, GNAI2, GOT2, GPD1L, GRIN1, GRIN2A, HMOX1, HMOX2, HP  SE, HRH2, HTR7, IFT57, IGF1R, IL10RA, IL11, IL1R2, IL20RB, IL28B, IL7  R, IMPDH1, INMT, LDHA, LIPC, MAP2K1, MCM7, MGAT5, MGAT5B, MITF, MMP1,  MMP7, MTMR1, NAGS, NEU1, NKD1, NT5C1A, NTRK2, OR10J5, OR11L1, OR1L1,  OR1N1, OR2B11, OR2C3, OR2K2, OR2M3, OR2T5, OR2T6, OR4S2, OR51G2, OR5  2E6, OR5D14, OR5I1, OR7C2, OR8H2, OR8S1, P2RX7, PANK3, PARD6G, PDE1B  , PDE4A, PDE7B, PDGFRA, PER2, PGAM2, PIGV, PLCB1, PMAIP1, POLR3K, PRK  Y, PTGFR, PTPRF, PTPRZ1, RAPGEF1, RAPGEF3, RAPGEF4, RARS, RASSF5, RP  S6KA4, RUNX1, SEMA4B, SEPHS1, SESN2, SLC9A1, SMAD4, SMURF2, SNAI1, S  OCS3, SPP1, SULT2A1, TAS2R13, TOLLIP, TPK1, TRHR, TUBB2A, UGDH, UGT2  A2, UGT9, VCAM1, VET1A, WAPCS, WNT5A, XLR4, MAPKADK9, PRICKLE4</p>
Negative_15700	<p>BAX, CRH, DBH, FAH, HAL, HK2, LEP, LHB, OTC, ABL2, ACACA, ACAT1, ACTG1,  ACTN4, ALDH1A2, ALDH1B1, ALDH4A1, AMDHD2, ANAPC5, ARG2, ARSA, ATP2A  3, ATP5F1, ATP5I, ATP5O, B3GNT4, BCMO1, BMP4, BUB1, CALML3, CASK, CCR  6, CHIT1, CHSY1, CHUK, CLCA2, CLDN11, CLDN18, CLTB, CMAS, CMPK1, COL1  A1, COL6A1, CSF3R, CSNK1D, DDX51, DGAT2L4, DKK1, DNMT1, DOLPP1, EFNA  4, ENO1, EPB41L2, EPHA1, EPHB4, ESAM, FGD1, FRAT1, FZD10, FZD7, G6PC,  GALNT9, GBA3, GFPT2, GGT1, GGT6, GNPAT1, GNRH2, GSTP1, HADHB, HCCS,  HLA-DOA, HLA-  DOB, ICOSLG, IFNA5, IFNA7, IL17A, IL20RA, IL22RA1, ITPK1, JAG1, KIR3  DL1, KNG1, LAMC2, LDHD, LRP6, MAP3K8, MAPK12, MAPK9, MMP7, MS4A2, MTH  FR, MYL5, NCAM1, NEUROG3, NFATC3, NFKB1, NPAS2, NT5C2, OR10H2, OR1L1  , OR1S2, OR2F1, OR2L8, OR4E2, OR51G1, OR51L1, OR52A1, OR5AP2, OR5T2,  OR6C1, OR6Q1, OR8I2, OR9I1, P2RX4, P4HA1, PANK1, PCK1, PDHA2, PI4KB,  PIGT, PIP5K1B, PKM2, PLOD1, PLXNB1, PNLIP, POLR3K, PPA1, PPBP, PPP1C  C, PPT1, PRKCH, PRKG1, PROS1, PTPRJ, RBKS, RFXANK, RPS6KB1, SIAH1, SP  RED1, SRGAP1, TALDO1, TAS2R49, TAS2R5, THBS3, TLR9, TRADD, UROS, WAS  F2, XYLT2, EIF4EBP1, GABARAPL2, MAP3K7IP2, PAFAH1B1, PPARGC1A</p>

Negative_15701	<p>AGL, CPH, CR2, HGD, H11, MOS, PEG, UBC, ACADS, ACOX3, ACTB, ADH9, ADK1  , AGPAT3, ANAPC10, ARNT2, ARSA, ATP2A3, ATP5F1, BAI1, BDKRB1, BDKRB2  , BPNT1, CACNA1I, CAMKK2, CASP3, CAV1, CAV2, CCR7, CD80, CD8B, CDK2, C  DKN1C, CLDN5, CLDN9, COQ3, COQ7, CREB1, CSF2RB, CSNK2B, CTSS, CYP3A4  3, CYSLTR1, DAG1, DDX56, DGAT2L4, DGKA, DGKH, DHDDS, DOT1L, DTX2, DUS  P2, E2F1, EARS2, ELK1, EPHA5, EXT2, FASLG, FCGR3A, FGF5, GALC, GGT5, G  LB1, GLUD2, GLUL, GNAI1, GNAT3, GRIN2B, GRIN2C, GSTA1, GSTA5, GSTM5,  HAP1, HMOX1, HPSE, IL10RA, IL1B, IL2RG, INPP1, INPP5A, INSRR, IRAK4,  ITGA3, ITGA9, KLRC2, KLRC3, KYNU, LDHA, LDHAL6B, LDHD, MAP2K5, MAP2K  6, MAP3K11, MAPK13, MAPK3, MTMR1, MYH7, NADSYN1, NAE1, NCF1, NEFL, NF  ASC, NFAT5, NFKBIE, NKX2-2, NKX3-  1, NMNAT1, NSD1, NTRK2, OR10A7, OR10H4, OR13C5, OR1C1, OR1E2, OR2B11  , OR2T4, OR3A2, OR4A15, OR4C15, OR4C16, OR4M1, OR5D16, OR6A2, OR6B2,  OR6B3, OR6C3, OR8H2, OR9K2, ORC3L, PARD6G, PDGFD, PIAS2, PIGQ, PIK3C  3, POLR3D, PRKACG, PRKAR1B, PSME2, PTDSS2, PTPRJ, RALGDS, RBKS, RBL1  , RGS3, RPN2, RPSA, SCLY, SELL, SEMA4G, SIPA1, SMAD6, SOCS7, SOS2, SPR  Y1, SREBF1, ST6GAL1, STAT5B, STX8, TAS2R60, TBK1, TBL1X, TICAM2, TLN  1, TOMM40, TPH2, TUBA4A, UPB1, WASL, WHSC1, WNT8A, ZIC2, ATP6V0A1, TN  FRSF10A, TNFRSF10, TNFRSF1A</p>
Negative_15702	<p>C6, DBH, DDC, F2R, IL4, IL9, RET, TNF, TPO, A4GALT, ACSL4, AKR1B1, ALG1  3, ALG5, ARPC3, ATG3, ATP5G3, B3GAT1, B3GAT2, B4GALT5, BCAR1, BET1, C  ACNA1B, CACNG2, CAMK2B, CCL13, CD34, CES7, CHIA, CHST11, CHUK, CLDN1  , CLDN16, COL3A1, COL4A2, CRY1, CYSLTR1, DDX55, ENAH, FADS2, FGD1, FG  F10, FGF4, FZD10, FZD7, GALK2, GALNT6, GALNT7, GCNT2, GCNT3, GGT1, G  LI1, GMPS, GNA14, GPLD1, GRM5, HHIP, HMGS2, IDH3A, IFNA5, IFNA6, IL1  7A, ITGA6, ITGB3, KARS, KCN11, LDHAL6A, LIMK2, MAML2, MAN1C1, MAOA,  MAP4K3, MAPK7, MCM2, MCM3, MINPP1, NAGS, NEU4, NMNAT1, NR4A1, NRG4, N  UDT12, OR10H3, OR10H4, OR10J5, OR10P1, OR10R2, OR11A1, OR13A1, OR1A  2, OR2C3, OR2D2, OR2M4, OR2T10, OR2T6, OR4F4, OR4F6, OR4K13, OR51F1,  OR51I1, OR52I1, OR5I1, OR6K6, OR8D4, OR8G1, OR8H2, OR8H3, OXCT1, PAN  K4, PDE7A, PDX1, PER1, PIGH, PIGU, PIK3C2G, PIK3R5, PLA2G3, POLR1C, P  PARA, PRKCQ, PRODH2, PRSS3, PTPRF, RASGRP2, RASGRP4, RFXANK, SCIN, S  DHC, SEMA3B, SEMA3E, SETDB2, SMAD7, SNAI1, SPTLC1, ST8SIA5, STK36, S  TX2, TACR2, TAS1R2, TIRAP, TKTL2, TNFRSF4, TNFSF10, TRAF5, TRPM5, TY  K2, VAMP4, WNT8B, HLA-  DRB3, MAP3K7IP1, MAPK8IP2, PHOSPHO1, PLA2G12B, TNFRSF13B</p>
Negative_15703	<p>AMH, CAD, DCK, DLD, FGG, GBA, GH2, GPT, LPO, ME1, ACADSB, ACSM2A, ACVR1  C, ADCY3, ADCY4, ADH1A, ALDH3A2, ALDOA, ALDOB, ALG10B, ALOX12, ALPPL  2, AMDHD2, ANAPC10, ANAPC2, ARG2, ARRB2, ATG7, ATP2A3, B3GALT1, B4GA  LT2, BCAT2, CASP9, CCL7, CCR7, CD3E, CD47, CDC25B, CDKN2B, CLOCK, CLT  A, CSF2RA, CTSB, CXCR6, CYP27A1, CYP2B6, DARS2, DHRS4L2, DLL4, DPM2,  DTX3, EDAR, ENAH, ENPP1, EPB41L3, ESAM, ETS1, FASLG, FSHB, GATM, GDF7  , GFPT1, GGCX, GNAZ, GOT2, GPX7, GUK1, HLA-  C, HRAS, HSPA8, IBSP, IL10, IL11RA, IL15, IL18, IL18RAP, IL5RA, IL6ST  , IL8RB, IRS1, ITGA10, JUND, LAMC2, LDHAL6B, MAD1L1, MAPK12, MAPK7, M  YD88, NAT1, NCSTN, NLGN3, NME4, NME7, NODAL, NR4A1, NSDHL, NTNG1, OCR  L, OR10A6, OR10G9, OR10X1, OR11H6, OR1J4, OR1L3, OR2G2, OR2T11, OR51  Q1, OR5AU1, OR5D18, OR7A5, OR8B4, OR8H2, OR9I1, OR9Q1, OSMR, PCK2, PD  E4B, PIGN, PIGT, PIP4K2C, PLCE1, PLOD1, POLR1C, POLR2F, PON3, PPP1CA  , PRKACG, PTPRZ1, PVRL1, PVRL2, RHEB, RRAS, RRM2B, SETD1A, SETMAR, SL  C2A4, SPI1, ST3GAL5, STEAP3, STX12, STX4, SULT2A1, TACR2, TAS2R38, T  AS2R41, TAS2R48, TCF7L2, TKTL2, TNFSF18, TUBB4Q, UGT2B28, ULBP2, UP  P2, VASP, VAV2, VEGFC, VNN1, WASL, YWHAQ, ZNRD1, ATP6V0D2, CSGALNACT  2, SERPING1, TNFRSF1A</p>

Negative_15704	<p>BTD, CBS, EZR, FST, GP9, ILK, RET, RPE, TFG, AARS, ABLIM2, ACAA1, ACSL1, ACVR1C, ACY1, ADCY9, ADIPOR2, ADORA2B, AKR1C2, AKT1, ALG1, ALPP, AMPD3, ARHGEF4, ATP5G1, ATP6V1D, BAAT, BACE1, BACE2, BDH1, BMP8A, CACNA1S, CCL8, CD247, CHEK1, CIITA, CREB1, CSF1R, CSF2, CXCL16, CXCL6, CYBB, CYP26C1, CYP2A6, DDB2, DDX41, DDX50, DFFB, DGKH, DKK1, DNMT1, E2F1, E2F3, EFNB2, EGLN1, FARSB, FDFT1, FLT3, FLT3LG, FUT3, FZD3, FZD9, GAD2, GALM, GALNT5, GRB2, GRIN2A, IFNA13, IFNGR1, IL11RA, IL29, INPP4B, ITPKB, JAM3, KCNQ1, KIR2DL2, KLRC4, KYNU, MAD2L1, MAFA, MAGI2, MS4A2, MTHFD1, MTMR6, MYL9, NCF4, NCK1, NEUROD1, NEUROG3, NTF3, NTRK2, NUDT5, OCLN, OR10A4, OR10Q1, OR13C4, OR1A1, OR2AG2, OR2D3, OR2M5, OR4C46, OR51A7, OR6N1, OR6Y1, OR8G1, OR9Q1, P2RX1, P2RX2, PARVG, PCK2, PDE11A, PDE2A, PLCG1, PMM1, POLA2, POLR3A, PPP1R1A, PPP1R3A, PPP3R2, PRKACA, PRKACG, RALB, RASGRP1, RASSF5, RELB, RIPK1, RPS6KA3, SMAD5, SOX17, ST3GAL5, STAT5A, SUFU, TAS2R3, TAS2R7, TICAM1, TKTL2, TLR4, TNFSF11, TOLLIP, TRDMT1, TSTA3, UGCG, UGT8, USE1, WBCSCR17, WWP1, ZBTB16, CACNA2D4, CSGALNACT1, CSNK1A1L, GABARAPL1, HLA-DPA1, TNFRSF10D</p>
Negative_15705	<p>CBL, CFD, CRK, CSK, EBP, F8, FAS, FN1, HAL, SP1, ABLIM1, ACAT2, ACMSD, ACOT11, ACOX3, ACSL5, ADRB3, ADSS, AKR1A1, AKR1D1, ALDH1A2, ALG3, ALPI, ALPP, APOA5, ATP5F1, ATP50, ATP6VOC, ATP6V1F, BHMT, BPNT1, CACNA1H, CACNG3, CAMKK1, CAPN2, CASP10, CCNB1, CD79B, CDC25A, CDC25B, CDH5, CDK5, CHPF, CHPT1, CHST13, CLDN7, COQ6, CREB1, CSF1R, CTBP2, CTF1, CYFIP1, CYP1A2, CYP2C9, CYSLTR2, DDIT4, DDX41, DHRS3, ECSIT, FBP2, FDFT1, FGF21, GCNT2, GGT1, GLDC, GNA13, GNAL, GRM5, GUCA1B, HCST, HMOX2, HTR6, HYAL1, IDI2, IL13RA2, IL2RA, ITGA6, ITGAE, JAG1, JAM2, KLRD1, LAMA3, LDHAL6A, LDHB, LIMK2, MAP4K4, MDM4, METTL2B, MKNK2, MMP1, MMP14, NCF1, NCOA4, NEFM, NEUROD1, NTF4, OR10X1, OR13A1, OR13C9, OR13J1, OR2M2, OR2T33, OR3A3, OR4C15, OR4C6, OR51A2, OR6K6, ORC6L, OXCT2, PAK3, PARVA, PCK2, PDE6D, PHGDH, PIGL, PIGO, PIK3CA, PIK3R4, PLA2G1B, PLA2G4A, PMAIP1, POLE2, POLR2B, PORCN, PPBP, PPCDC, PPP3CB, PRKAR2B, PRKY, PRLR, QARS, RPS6KA3, RPS6KA5, SCD5, SDC1, SELPLG, SEMA3C, SEMA7A, SESN1, SETMAR, SH2D1B, SH3BP2, SHMT1, SKP2, SOCS3, SORBS1, SORD, SPP1, SRD5A2, ST3GAL6, TAS1R3, TAS2R50, TGDS, TJP1, TJP2, TNFSF10, TNFSF4, TSHR, TUBA8, TUBB1, TYMP, WASL, WNT9A, XCL1, ATP6VOA2, ATP6V1C1, GABARAPL1, PPP1R12A, SERPINB5, ST6GALNAC1</p>
Negative_15706	<p>APP, BTK, CBL, CDA, EDA, GBA, HK1, ME1, ME2, MVD, RDX, TNF, TPR, ZYX, ABL1, ACHE, ACP5, ACSS3, ACTA1, ADCY10, ADH1A, ADRB2, ALOX12, ALPP, ALS2, ARHGEF1, ARNTL, ARPC1A, ARPC5L, ASAH1, ATG12, ATP4A, ATP5D, ATP5L, AVPR1A, B3GALT4, B3GNT4, BRAF, CASP10, CCR8, CLCA4, CMPK1, COQ5, CPT1B, CYP1B1, DFFA, DLL4, E2F4, EFNB3, EGLN3, ENTPD2, EPHA1, FARP2, FARS2, FGF13, GAD1, GADD45B, GCNT1, GDE1, GMPR, GNB3, GRLF1, HARS2, HIBADH, HMBS, HMGCS2, HNF1B, HNF4A, HPRT1, HSD17B4, HSD3B1, HSD3B2, HTR7, IFNA16, IFNW1, IFT57, IL11, ITGB8, KCNJ11, KLK3, KLKB1, KLRC3, KRAS, LAMB2, LIPT1, MAML3, MAN1A1, MAP2K6, MCCC2, MCM5, MTFMT, MYH11, MYL2, MYL7, MYLK2, NCAM2, NCOR2, NFE2L2, NFKB2, NFYA, NGEF, NOX1, NRAS, NRG2, NUMBL, OCRL, OGDH, OR10P1, OR11H1, OR13J1, OR1D2, OR2G3, OR2T33, OR2Z1, OR4D11, OR4D2, OR4F17, OR4S2, OR51B2, OR51I1, OR52D1, OR52I1, OR52I2, OR52L1, OR52N5, OR56A3, OR56B4, OR5H6, OR6K6, OR8D1, OR9A2, OR9G1, PAK6, PAPSS1, PDE8B, PDGFRA, PECAM1, PFKFB4, PIGQ, PIK3C2A, PIK3CG, PIP5K3, PLA2G2D, PLXNB2, POLA2, PPBP, PPCDC, PPID, PRSS1, PTCH2, PTCRA, PTDSS2, PTGER3, PTPN6, PTPN7, PTPRJ, RAD51, RASGRP1, RHOA, RRM2B, SLC25A5, SPRED1, STEAP3, TACR1, TBL1X, TGFB2, TJP1, TNFSF11, TNXB, UGT8, VAV2, WNT8B, YWHAE, ATP6V1B2, C1GALT1C1, TNFRSF1B</p>

<p>Negative_15707</p>	<p>AK3, ATM, CS, F7, GDA, GSK, GSS, HK1, HK2, PAH, RPK, SRC, AAKS, ADCC6, ACOT11, ADH5, AGRN, AKR1B10, ALDH5A1, ALG2, ALOX5, ALPL, AMPD1, ANAPC1, ARSB, ATP2A1, AVPR1A, B3GAT1, B3GAT3, B3GNT5, C1QC, CALML3, CALML5, CAMKK2, CASP6, CASP9, CCL21, CD34, CD55, CDC16, CDH15, CDS2, CHDH, CLDN1, CLOCK, COL5A3, COL6A1, CREB1, CRHR1, CSF3R, CTNNA2, CTNNA3, CXCL10, CYP11B1, CYP11B2, CYP4A22, DHRS9, DIAPH2, DPYS, DTYMK, DVL3, ELK4, ENPP7, ENTPD2, EPHA1, EPHA4, FECH, FGF1, FMO1, FOSL1, FZD6, GALNT11, GALNT14, GLI1, GLUL, GNAI3, GOT1, GUCY1B3, GUCY2D, GYS2, HA01, HAP1, HIP1, HLA-F, HRH2, HTR4, IFNAR1, IFNB1, IL18RAP, IL22RA2, INPP5A, INSR, IRAK2, ISYNA1, ITGA1, ITGAX, KIR2DL1, LAMC1, LCMT1, LEFTY1, LRRC4C, LTA4H, MAD2L2, MAN1A1, MAOA, MAPK9, MCEE, MLYCD, MRAS, MYH10, MYLK, NAMPT, NANS, NEU3, NKX2-2, NME4, NPR2, OR2A25, OR2T10, OR2T8, OR4L1, OR4P4, OR52A1, OR52A5, OR5M3, OR6Y1, OR7D2, OR7D4, OR7G1, OR9G4, OR9Q1, ORC3L, ORC5L, P2RX5, P4HA1, PANK3, PDE10A, PDHA2, PI4KB, PIGF, PIP4K2B, PIPOX, PLCG1, PMM1, POLR1C, PPAP2B, PRDX6, PRKAA1, PRPH2, PSME3, PTGS1, PTPN11, PYGL, RARS2, RDH16, RGS3, RPSA, RXRB, SC4MOL, SELE, SGPP1, SIPA1, SLC25A5, SOS1, SPRY2, SPRY3, SRGAP1, ST3GAL4, STEAP3, SULT1A1, SUV39H1, TAS2RR3, TAGLN, U3, U8L, TBB1, DCN, LZK, TPTO, FAP, GR2, GIK, MLC, KRBY, KANSZ, ACADS, ACSL1, ACVR2B, ALDH3A1, ALG13, ALG6, ALG9, AMPD2, AMY2B, ANAPC7, AREG, ARSD, ASRGL1, ATP5J, ATP5O, B4GALT5, BACE2, BAI1, BCL10, BNIP1, CACNA1D, CACNG3, CACNG8, CASK, CCL21, CCL27, CCL4, CCL8, CCNG2, CD79B, CDS1, CHRM5, CLDN14, CLDN4, CNGB1, CNTN2, CNTNAP1, CREB3L1, CXCL12, CXCL2, CXCL3, CXCR5, CYP21A2, DDX47, DDX50, DMGDH, DOLPP1, ENTPD5, ENTPD6, ERBB3, ERBB4, FGF11, FGF4, FIGF, FLOT1, FLT3, FMO4, FZD10, GAB1, GAD2, GBE1, GCNT1, GCNT3, GGPS1, GLG1, GMPPA, GNG13, GPLD1, GSTA2, GSTO2, GTSE1, HNF4G, IARS, ICOSLG, IDH3B, IFNA7, IFNB1, IFNGR2, IFNK, IL10, IL15, IL17RB, IL8RB, ITGB1, KIR3DL2, KLK3, KLRK1, LTA4H, MAPK8, MDM2, MGAT3, MOV10L1, MYH11, MYH15, NADSYN1, NAGA, NCAM2, NCKAP1, NCR3, NEUROG3, NQO1, NRCAM, NTF3, OCRL, ODC1, OR10G7, OR10J3, OR13C2, OR2M2, OR4D9, OR52E8, OR56A3, OR6K6, OR6S1, OR8D2, P2RX5, PAX4, PDIA4, PGK2, PHKB, PIAS3, PIGX, PIK3R4, PKM2, PLCB3, PLXNA3, POLD1, POLR2D, POLR2I, PPID, PPP1CB, PPP2R1A, PRKAA1, PRKAG1, PRKCG, PRKG2, PTPN1, PTTG1, RAPGEF4, RARA, RHOD, RPRM, SCIN, SENP2, SLC25A6, SMARCA2, SOCS1, SOCS3, SPRY4, TALDO1, TAS2R3, TICAM2, TPH1, TRAF4, TSNARE1, TUBB4, UCK1, VAV3, WNT2, YWHAE, YWHAZ, ATP6VOE1, ATP6V1B2, MAPKAPK3, CEPDING1, CEPDING1</p>
<p>Negative_15708</p>	<p>AK3, ATM, CS, F7, GDA, GSK, GSS, HK1, HK2, PAH, RPK, SRC, AAKS, ADCC6, ACOT11, ADH5, AGRN, AKR1B10, ALDH5A1, ALG2, ALOX5, ALPL, AMPD1, ANAPC1, ARSB, ATP2A1, AVPR1A, B3GAT1, B3GAT3, B3GNT5, C1QC, CALML3, CALML5, CAMKK2, CASP6, CASP9, CCL21, CD34, CD55, CDC16, CDH15, CDS2, CHDH, CLDN1, CLOCK, COL5A3, COL6A1, CREB1, CRHR1, CSF3R, CTNNA2, CTNNA3, CXCL10, CYP11B1, CYP11B2, CYP4A22, DHRS9, DIAPH2, DPYS, DTYMK, DVL3, ELK4, ENPP7, ENTPD2, EPHA1, EPHA4, FECH, FGF1, FMO1, FOSL1, FZD6, GALNT11, GALNT14, GLI1, GLUL, GNAI3, GOT1, GUCY1B3, GUCY2D, GYS2, HA01, HAP1, HIP1, HLA-F, HRH2, HTR4, IFNAR1, IFNB1, IL18RAP, IL22RA2, INPP5A, INSR, IRAK2, ISYNA1, ITGA1, ITGAX, KIR2DL1, LAMC1, LCMT1, LEFTY1, LRRC4C, LTA4H, MAD2L2, MAN1A1, MAOA, MAPK9, MCEE, MLYCD, MRAS, MYH10, MYLK, NAMPT, NANS, NEU3, NKX2-2, NME4, NPR2, OR2A25, OR2T10, OR2T8, OR4L1, OR4P4, OR52A1, OR52A5, OR5M3, OR6Y1, OR7D2, OR7D4, OR7G1, OR9G4, OR9Q1, ORC3L, ORC5L, P2RX5, P4HA1, PANK3, PDE10A, PDHA2, PI4KB, PIGF, PIP4K2B, PIPOX, PLCG1, PMM1, POLR1C, PPAP2B, PRDX6, PRKAA1, PRPH2, PSME3, PTGS1, PTPN11, PYGL, RARS2, RDH16, RGS3, RPSA, RXRB, SC4MOL, SELE, SGPP1, SIPA1, SLC25A5, SOS1, SPRY2, SPRY3, SRGAP1, ST3GAL4, STEAP3, SULT1A1, SUV39H1, TAS2RR3, TAGLN, U3, U8L, TBB1, DCN, LZK, TPTO, FAP, GR2, GIK, MLC, KRBY, KANSZ, ACADS, ACSL1, ACVR2B, ALDH3A1, ALG13, ALG6, ALG9, AMPD2, AMY2B, ANAPC7, AREG, ARSD, ASRGL1, ATP5J, ATP5O, B4GALT5, BACE2, BAI1, BCL10, BNIP1, CACNA1D, CACNG3, CACNG8, CASK, CCL21, CCL27, CCL4, CCL8, CCNG2, CD79B, CDS1, CHRM5, CLDN14, CLDN4, CNGB1, CNTN2, CNTNAP1, CREB3L1, CXCL12, CXCL2, CXCL3, CXCR5, CYP21A2, DDX47, DDX50, DMGDH, DOLPP1, ENTPD5, ENTPD6, ERBB3, ERBB4, FGF11, FGF4, FIGF, FLOT1, FLT3, FMO4, FZD10, GAB1, GAD2, GBE1, GCNT1, GCNT3, GGPS1, GLG1, GMPPA, GNG13, GPLD1, GSTA2, GSTO2, GTSE1, HNF4G, IARS, ICOSLG, IDH3B, IFNA7, IFNB1, IFNGR2, IFNK, IL10, IL15, IL17RB, IL8RB, ITGB1, KIR3DL2, KLK3, KLRK1, LTA4H, MAPK8, MDM2, MGAT3, MOV10L1, MYH11, MYH15, NADSYN1, NAGA, NCAM2, NCKAP1, NCR3, NEUROG3, NQO1, NRCAM, NTF3, OCRL, ODC1, OR10G7, OR10J3, OR13C2, OR2M2, OR4D9, OR52E8, OR56A3, OR6K6, OR6S1, OR8D2, P2RX5, PAX4, PDIA4, PGK2, PHKB, PIAS3, PIGX, PIK3R4, PKM2, PLCB3, PLXNA3, POLD1, POLR2D, POLR2I, PPID, PPP1CB, PPP2R1A, PRKAA1, PRKAG1, PRKCG, PRKG2, PTPN1, PTTG1, RAPGEF4, RARA, RHOD, RPRM, SCIN, SENP2, SLC25A6, SMARCA2, SOCS1, SOCS3, SPRY4, TALDO1, TAS2R3, TICAM2, TPH1, TRAF4, TSNARE1, TUBB4, UCK1, VAV3, WNT2, YWHAE, YWHAZ, ATP6VOE1, ATP6V1B2, MAPKAPK3, CEPDING1, CEPDING1</p>

<p>Negative_15709</p>	<p>C4B, C8G, CRI1, DBI, DCN, EZR, FZR, FAS, FOS, FST1, FTH, HKS, NNT, NFL, SRC, AACS, AADAT, ACHE, ACTG1, ACVR1C, ACYP1, ADH4, ADRA1B, AGPAT2, AKR1C3, AKR1C4, ALDH2, ALDH4A1, AMHR2, ATP50, B3GAT2, B4GALT5, BMP8B, BNIP1, CACNA1G, CACNG6, CACNG8, CALML5, CCL22, CCNB1, CD27, CD58, CDC23, CDC25B, CDC45L, CDK4, CDKN2C, CDS2, CHKA, CHRNA7, CREB3L4, CSNK2A1, CTSB, CTTN, CXCL10, CYP1A1, CYP2C8, CYP4A22, DGKZ, DHCR7, DIAPH1, EFN3, ENO1, EPHA6, FGF13, FMO4, FZD3, FZD6, GDF5, GGPS1, GGT5, GLI3, GMDS, GNAI1, GPT2, GRAP2, GRHR, GSTM2, GUCY2C, HARS2, HHIP, HLA-C, HLA-G, HNF1A, HSD17B3, HSPB1, ICOSLG, IDH3A, IFNA21, IKBKG, IL12RB2, IL1RAP, IL20RA, IL21R, IL28A, IL29, IL2RA, IL5RA, ITGAL, ITGAX, KLRC1, KIF14, LAMB2, LDHA, LIPT1, LMO7, MAD2L2, MAML2, MAP3K2, MYH9, NAMPT, NARS, NAT6, NFATC3, NFKBIE, NME6, OR10G9, OR13C2, OR2A14, OR2G6, OR2S2, OR4N5, OR4S1, OR51B4, OR52I1, OR6X1, OR8B8, OR8K5, PANK1, PDE11A, PDH, PDXP, PIK3R3, PIP5K3, PKMYT1, PNPLA4, POLR1A, POLR2C, POLR2D, POLR2I, POLR2J, PPP1CB, PRKAG1, PRKAG3, PRKCE, PRKCG, PRKCZ, PRLR, PTDSS1, PTGS1, PTPN11, PTPN7, PVRL2, RDH11, RHOQ, RXRG, SAT2, SEPHS1, SHC1, SHC3, SKP1, SLC2A2, SLC9A1, SMAD6, TAS2R5, TGFB1, TRAF2, TUBB6, TYK2, UGP2, UNC5A, WIF1, XCR1, YWHAB, YWHA, ATP6V1B1, C1GALT1C1, HSD17B10</p>
<p>Negative_15710</p>	<p>AK5, BTC, CD2, FGA, HK2, LPL, MAG, MVD, RPE, SMS, AASS, ACAA1, ACTN4, ADCY2, ADH1A, ADH7, ADRB1, AHCYL2, ALDH1L1, ALPP, AMPD1, ARG1, ARHGAP5, ATP2A2, ATP5L, B3GNT5, BMP2, BMP8A, BRAF, CACNB3, CACNG6, CCL11, CCL22, CCNB2, CCNG1, CCR3, CCR4, CCR5, CCR6, CD28, CD47, CD74, CHKA, CLDN14, CLDN15, CLDN4, COL11A1, COL5A3, CPT1A, CPT1C, CTSG, CYFIP2, CYP1B1, CYP2C18, CYP2C9, DIAPH3, DRD1, DTX3L, EARS2, EHHADH, ENTPD3, F13B, FARSB, FGF23, FGF3, FRAP1, FTCD, FZD10, FZD7, GALE, GFAP, GLI2, GLYCTK, GNA14, GNAT3, GRIN1, GRIN2C, GSTA5, GSTM5, GSTZ1, GYS1, HMGCS1, HRAS, IFNK, IL10, INADL, INPP5A, IRAK2, ITGA3, ITGA4, ITPA, LCP2, LDHA, LEPR, LFNG, LHCGR, MAN1B1, MAP2K3, MAP2K7, MAP3K3, MEF2C, METTL2B, MFNG, NAMPT, NCAM1, NCAM2, NLGN2, NTF3, OR10A7, OR10J1, OR11H4, OR2AG1, OR4A16, OR4D5, OR4F17, OR4N2, OR5V1, OR6C2, OR8B4, OR9A4, OR9G1, P4HA3, PDCD1, PGM3, PLCB3, POLR1B, POLR2D, POLR2H, PPA1, PPCS, PRKAB2, PRKCD, PRKX, PRODH, PSME3, RALA, RASGRP2, RHOQ, ROB3, RPE65, SD C3, SELE, SLC2A1, SMAD5, SMPD2, SNW1, SPP1, STAT1, TAS2R10, TAS2R16, TAS2R40, TBL1XR1, TGFB3, TJP3, TKTL1, TOMM40L, UGP2, ULK3, UPP1, WNT5B, WNT9B, C1GALT1C1, HLA-DPA1, HSD17B10, SERPINA5, SLC25A31, TNFRSF13B</p>



Negative_15714	<p>AK7, BCR, C7, CRH, CS, CTH, F5, GK, MTR, NPY, RDX, TK2, TNF, TXK, ACHE, AC TC1, ACYP2, ADCY6, AKR1D1, ALDH3B1, AMHR2, ANAPC5, AREG, ASRGL1, ATI C, BIRC2, BMP8A, BUB1, CACNA1A, CACNA1F, CACNB4, CALML3, CASP6, CCKB R, CCL13, CCL19, CCL4, CCL8, CCND1, CD47, CDC25A, CHRM1, COL4A6, COL6 A1, COQ5, CSF2RA, CYFIP1, CYP2F1, CYP3A4, CYP4A11, DAPK1, DDX54, DGA T1, DTX4, EIF4B, ENPP3, EXT2, FABP3, FGFR1, FGFR2, FMO5, FZD1, FZD10, GAS1, GDF7, GJA1, GNPDA2, GP1BB, GPLD1, GSK3B, GSTA3, GUCY1A3, HAO1, HHEX, HIP1, HTR2A, IARS2, IFNAR1, IL22RA1, ITGA8, ITPA, ITPKA, LIMK2 , LRDD, MAP2K4, MAP3K2, MAPK3, METTL2B, MGAT3, MTHFS, MTMR6, NCF4, NC R1, NFYC, NMNAT2, NPAS2, NR1D1, NRXN1, NTF3, NTSR1, OR13A1, OR13C2, O R13C3, OR1G1, OR1J2, OR2A2, OR2AG1, OR2AT4, OR2B2, OR2T29, OR2T5, OR 52A1, OR5A1, OR5P2, OR6C2, OR9Q1, P2RX7, P4HA2, PAK4, PCYT1A, PDE6G, PFKFB1, PFKFB2, PIK3C3, PLA2G2F, PLCE1, PLEKHA8, PLXNB2, PMAIP1, PO LA1, PPP2R1B, PPP2R5A, PPP5C, PRKAR1A, PRKX, PTPN6, PYGB, RAC1, RBX1 , RFNG, RPS6KB1, SELL, SESN2, SESN3, SNAI1, SORBS1, SPRY4, SUV39H2, T AP2, TAS2R50, TFPI, THY1, ULBP1, ULK2, VANGL1, WNT5A, WNT6, ATP6VOA2 , ATP6V1G3, HSD17B12, PNLIPRP1</p>
Negative_15715	<p>ADC, AGL, CGN, F2R, F3, FAS, FGG, GP5, GP9, ID2, KMO, NPY, OSM, PTS, ADIP OQ, ADIPOR2, AGXT2, AKR1A1, AKR1C3, ALG13, AOC2, ATP5F1, B4GALT3, BC L2L1, BUB3, CACNA1C, CACNG1, CCL15, CD86, CDH15, CDK6, CDKN1B, CEBPA , CFL1, CHRM5, CLDN7, COX15, CPT1C, CTNNA3, CXCL1, CYP19A1, CYP1A1, C YP4A11, DDX18, DLAT, DOT1L, DTX1, DUSP7, ENO1, ESPL1, FARP2, FARSA2, F IGF, FLOT2, FMO3, FUT2, FUT3, GABARAP, GIT1, GNMT, GNPAT1, GNRH2, GU CY1A2, H6PD, HTR5A, IAPP, ICOS, IDH2, IDH3A, IFNA10, IFNA4, IL13RA2, IL17A, IL20RB, INPP5B, ITGA1, KARS, KCNQ1, KIR3DL1, LARS2, LEPR, MAP 3K4, MAT1A, MBL2, MCM3, MGAM, MPZL1, MRAS, MYH7B, NAGLU, NCAM1, NEGR1 , NFKB1B, NFYA, NFYC, NT5C3, OGDH, OR10AD1, OR10G7, OR12D3, OR13A1, O R13C3, OR13C5, OR13J1, OR1J4, OR1Q1, OR2G3, OR2H1, OR2L2, OR2L3, OR2 T4, OR4C15, OR4F5, OR51E1, OR51G2, OR51L1, OR52A5, OR6C4, OR6C75, OR 6T1, OR7D4, OXCT2, PAK4, PARD3, PARD6A, PARVB, PCYT1A, PDE4B, PDE6D, PDGFD, PEMT, PFAS, PIP5K3, PMM1, PMM2, POLR2L, POLR3B, PPP2R2A, PPP2 R5C, PPP3CC, PPP5C, PRKCI, PTK2B, PTPN1, RASGRP1, RPS6, RUNX1, RUNX1 T1, SEMA4F, SLC2A1, SPCS3, STAT1, TAS2R8, TBXA2R, TNFSF18, TRPC1, TU BA4A, UGT1A10, VAV3, ZNRD1, ATP6VOD1, ATP6V0E1, CTNNBIP1, HLA- DQA2, HLA-DRB4, HSD17B12, PAFAH1B3, PRICKLE1, TNFRSF11A</p>
Negative_15716	<p>CFI, CRK, FES, GK2, GP5, GSS, MAX, ME3, MPZ, MVK, SI, TPO, ACADVL, ADCY6 , ALDH3A1, ALDH3B1, ALG10B, APOC3, AQP7, ARAF, ARHGEF2, ARHGEF7, ARP C4, ATP5G1, BMP8A, C1QA, C4BPA, CACNA1I, CCL2, CCNE1, CCR4, CD82, CDC 14A, CDKN2B, CDS1, CLDN1, CLDN19, COL11A1, CSF1R, CSF2RB, CYP4F2, DD IT3, DDX4, DHRS4L2, DTX1, E2F5, EIF4B, EIF4E, ENO1, EPHA6, EPHA7, EPH B2, EPHB6, FABP1, FTCD, FTH1, GADD45A, GALNT14, GCLC, GCNT3, GNA15, G RIA3, HCLS1, HLA- C, HSD17B4, HTR2A, IARS2, ICOSLG, IFNA14, IL13RA1, IL1A, IL20RA, IL8 RA, IRF7, IRF9, JAK3, KARS, KIR3DL1, KLRK1, LAMC1, LDHAL6A, LIPA, LLG L2, MAP3K11, MAPK14, MITF, MYH15, MYH6, MYL9, NEU4, NPR2, OR10H3, OR1 OX1, OR11G2, OR2AE1, OR2G3, OR4A15, OR4D1, OR4D11, OR51A2, OR51B5, O R51D1, OR51F2, OR51I2, OR52N4, OR6B2, OR6X1, OR7G3, OR9K2, PAICS, PE RP, PGAM1, PIK3R2, PLCE1, PNLIP, POLD1, PPA1, PPM1A, PPP1R3D, PPP2CA , PPP3CA, PRKG1, PRKG2, PRSS2, PSAT1, PSENN, PTK2, PVRL4, RBKS, RBX1 , RUNX1, RXRA, SFRP2, SH2D1B, SLC2A2, SPHK2, SPP1, SRGAP2, STAT2, STA T5A, TAS2R13, TAS2R49, TD02, THY1, TNFSF18, TRDMT1, TUBA8, UCK2, VTI 1B, WIF1, WNT10B, ATP6V0A1, ATP6V1E2, B3GALNT1, CSGALNACT1, MAPKAP K2, PLA2G12B, SLC25A31, TNFRSF1A</p>



Negative_15717	<p>AZM, AMH, AMT, CR1, CRK, EGF, F5, FAS, GK, ID4, IDS, IHH, IL9, IGF, IGFN, S  PN, TEC, ACSL5, ACVR1, AKR1C3, ALG11, ALG12, AMDHD2, APOC3, APRT, ARR  B1, ATIC, ATP4B, B3GALT5, B3GALT6, B3GNT3, B4GALT3, B4GALT6, BCAT2,  BIRC3, BMP6, CACNA1C, CCR10, CD247, CD34, CD36, CHAD, CHAT, CLDN2, CN  TF, COX10, CPOX, CRB3, CREB3L3, CSH1, CSNK1G2, CTS1, CXCR4, CYP2A6,  CYP2C19, CYP7A1, CYP8B1, DARS2, DDOST, DEGS2, DHODH, DIAPH2, DNMT3B  , DRD1, DTX1, DTX3L, DUSP4, ECSIT, EGFR, EPHA4, EVI1, EXT2, FARSA, FCE  R1G, FGF4, FLT1, FUT3, FUT4, GADD45G, GALNT3, GMPR2, GSTA2, GSTO2, HM  GCL, HMGCS2, HRH1, HSD17B1, IFNA17, IFNA5, IL12A, IL15RA, IL23R, IL2  8RA, IL8RA, IRAK1, ITGB3, JAM2, KCNB1, KCNQ1, LAP3, LDHA, LEFTY1, LIP  G, MALT1, MAN1B1, MCM6, MECR, MEF2C, MGLL, MGST3, MYH1, MYH8, MYH9, NA  E1, NCR2, NFATC1, NFKB2, NRAS, NSDHL, OR13D1, OR13F1, OR1N2, OR2A2, O  R2D2, OR2T2, OR3A3, OR4C16, OR4F6, OR4K14, OR4Q3, OR51A4, OR52B6, OR  5AK2, OR5F1, OR7G2, OR8D2, PAK2, PARD6B, PCK2, PDHB, PGAM4, PGK2, PGM  3, PIK3C2B, PITX2, PLA2G2D, PNPLA3, PON2, PPP2CA, PPP3R1, PRODH2, PT  EN, PTK2B, PTPMT1, RALGDS, RCHY1, RFXAP, SC4MOL, SCD5, SDHA, SELPLG,  SEMA3E, SFRP1, SHC3, SHISA5, SKIV2L2, SLC2A4, SMAD1, SMPD2, SNAP25,  SOCS4, SORD, SPTLC2, SQLE, SREBF1, SSH2, ST3GAL1, SULT1A4, TBL1Y, TB  XAC1, TCF7, TCFE1, TETAD, TRK1, UCC, VTI1A, CCCALNACT9, HLA-DPB1, U</p>
Negative_15718	<p>BTC, C7, CP, DBT, GDA, HK3, JUN, LCK, TNC, UBB, AANAT, ABL2, ACAD8, ACAD  L, ACOT11, ACTB, ACTC1, ACVR1B, ADORA2A, ADSL, AKR1C1, ALDH1A3, ALG6  , ARPC4, ATP5I, B3GALT5, C3AR1, CACNG3, CALML6, CARS, CAV3, CCL25, CD  C27, CER1, CHD8, CLDN22, CLTB, CNTNAP1, COMT, CTS1, CTSS, CX3CR1, DG  AT2L4, DVL3, EFNB3, ENTPD2, ENTPD3, EP300, FGD3, FGF8, FPGT, FSHR, GG  PS1, GLB1, GNA12, GNAL, GOT2, GPT2, GRM1, GSTA5, GUCA1A, HA01, HAP1, H  CCS, HRAS, HSPA2, IFNA6, IFT57, IL13, IL13RA2, IL23A, IL8RB, INPP5B,  KIR2DS4, LAP3, LARS, MARS, MAT1A, MGST2, MIOX, MKNK2, MPST, MTAP, MYL  K3, NADSYN1, NAE1, NAGK, NCOR2, NKD1, OLAH, OR1C1, OR1F1, OR1L6, OR1S  2, OR4F15, OR51B4, OR56A4, OR5AS1, OR5B12, OR5H6, OR6C2, OR6K3, OR6N  1, OR8B12, OR9Q2, PDE2A, PEMT, PIGB, PIGK, PIGS, PIK3CB, PLA2G10, PLA  2G6, PMM2, POLD2, POLR3D, PPT1, PSAT1, PYCR2, RAC3, RAPGEF2, RASGRF2  , RFWD2, RFXANK, RHOA, RPE65, RRM2, RXRG, SC4MOL, SFRP4, SHC2, SLC25A  5, SPRED1, TAS1R3, TAS2R38, TAS2R50, TCF7L2, TNFSF11, TPI1, TSC1, TU  BB2B, UBE2K, UBE2L3, VAV3, WASL, XCL2, YWHAH, ZFYVE16, ATP6V1G1, ATP  6V1G2, CACNA2D1, EIF4EBP1, HLA-DPA1, HLA-  DRB3, PAFAH1B2, PAFAH1B3, PRICKLE1</p>
Negative_15719	<p>COA, CDO, CRB, DB1, GH2, JUN, ME1, SKM, STR, AAC3, AB12, ACADVL, ACOT11  , ACSL5, ACSL6, ALDH1A2, ALG13, ALG3, ALOX15, AOX1, APC2, ASIP, ATIC,  ATP6V1A, B3GALT2, B3GALT5, B3GAT2, BACE1, BMP7, BMPR1A, CACNA1C, CA  CNG6, CALML5, CASP10, CASP8, CAV2, CCL14, CCL22, CCL27, CCR3, CDC2, C  LDN11, COL11A1, COMP, CPS1, CRHR1, CSF3R, CTPS, CYP2C9, DDX50, DHCR7  , DHDH, DKK1, DPAGT1, DPM3, DTX1, E2F3, EIF4E, ENO1, FARS2, FARSA, FGF  4, FGF7, FM02, FZD4, GAB1, GALNT5, GCNT4, GFAP, GLUD1, GLUD2, GPT2, GS  TA4, GUSB, HIF1A, HSD11B1, IFNA14, IFNAR2, IL8RB, INADL, INPP5A, ITG  AD, ITGAM, ITGB1, ITGB5, JAM2, LARS, LCMT2, LEFTY2, LIPT1, MAD1L1, MA  GI3, MAML2, MAP2K2, MAP3K12, MCCC2, MGAT4A, MINPP1, MPDZ, MTHFD2, MY  LK2, NEU1, NFYA, NLGN3, NT5C3, OR10AG1, OR10T2, OR2AG2, OR2G6, OR2M5  , OR4F4, OR4F6, OR51A2, OR52I2, OR56A1, OR6N1, OR8K1, PANK2, PDE5A, P  DE6H, PDE7B, PDGFA, PDHA1, PFKM, PGS1, PHPT1, PIGO, PLA2G2A, PMAIP1,  POLR2G, POLR3D, PPP1R3C, PPP2R1B, PPP3CA, PRKCH, PRKCZ, PRKG1, PROD  H2, PRSS2, PRSS3, PTK2, PTPN6, PVRL2, PVRL3, RBKS, RBX1, RND1, RRM2B,  SLC27A5, SOCS1, SPRED2, STAM, STX3, TAS2R1, TAS2R3, TBL1XR1, TBL1Y,  TGFB1, TIAM2, TJP3, TNFSF18, TPM3, UBE2L3, UGT2A1, UGT2B11, UNC5B, V  AMP1, VAMP4, VEGFC, WNT10B, WNT2, WNT8A, WNT9B, ZFYVE16, CSGALNACT1</p>

Negative_15720	<p>AK2, C4B, CBS, CD6, F12, F7, FES, FH, LYN, PAH, RDX, UBC, A4GALT, ACAA2, ACPT, ACTG2, ACVR1C, ADCY4, ADCY9, ADH1A, ADIPOQ, AHCY, ALG10B, ALPI, AQP7, AREG, ARNT2, ARPC3, ATP5G3, AXIN2, CAMK2A, CANT1, CAPN2, CBR3, CCR5, CCR7, CD244, CDC16, CDK4, CFLAR, CHIT1, CHR1, CKS1B, COMP, CRK, CSDA, CXCR5, CYBA, DDX23, DDX41, DLL3, DNMT3L, DUSP1, DUSP5, DUSP7, ENPP2, ENTPD6, ENTPD7, EPHB6, EPOR, ERBB3, FGF21, FGF3, FMO5, FUT6, FZD2, GADD45G, GALNT8, GBE1, GLI3, GMPPA, GNMT, GNRH2, GRIN2C, GSTO1, GUCA1B, HARS, HEXA, HLCS, HTR7, IFNA2, IFNAR1, IFNGR2, IL24, IL25, IL7R, IL8RB, INADL, IRS1, LCP2, LDHAL6A, LTB4R2, LYPLA1, MAML3, MAP2K6, MAP2K7, MASP1, MCM6, MKNK1, MNX1, MYH3, MYL2, NCF1, NKX3-1, NMNAT1, OR10G8, OR13C5, OR13D1, OR1D2, OR1G1, OR1S2, OR2A42, OR2T11, OR2T3, OR4D9, OR4S2, OR52K1, OR52N2, OR5B21, OR5P2, OR8A1, PANK4, PARD6B, PARVG, PFN2, PGK2, PHKG1, PIPOX, PLCZ1, PNMT, POLE2, POLR2A, POLR2J, POLR3D, PON2, PRNP, PTGS2, PTK2, RGS3, RHOD, SCIN, SEMA4A, SEMA4G, SGPP1, SMAD6, SMPD2, SOCS5, SRGAP2, SULT1A4, TACR3, TAS2R40, TGFB1, TKTL2, TM7SF2, TP53I3, TXNDC12, UBA7, USE1, VAV2, VTI1B, WNT8A, ZMAT3, MAPKAPK3, TNFRSF10D</p>
Negative_15721	<p>ADC, ADO, C4B, CAT, CD4, CR2, CRH, C11, DDI, F10, F2K, F8, GK, GNS, GSK, H, DC, MTR, RET, SHH, SRM, TKT, TNF, UBC, ACADVL, ACOX3, ACTN1, ACVR2A, ADH4, ADH7, ADIPOR1, ADORA2B, ADRA1D, AKR1C2, AKT2, ALAS2, ARNTL, ATP5G2, B3GALT5, BACE2, BLVRB, BMPR2, BNIP1, CACNA1B, CACNB4, CALML5, CAMKK1, CANT1, CCL21, CCL22, CCL7, CCND3, CD59, CD8A, CDC25C, CES1, CMBL, COQ3, COX15, CSF2, CTBP1, CXCL1, CYP2F1, DAG1, DAPK2, DHDDS, DUSP1, EARS2, ECHS1, EHMT1, EHMT2, ENPP7, ETNK2, F2RL1, FABP3, FGF19, FGF3, FLT3, GGCX, GMPBB, GNAZ, GNRH1, GPD2, GRB2, GRIA3, GZMB, HLA-C, HLA-DOB, HLA-G, HNF4G, HTR2B, HYAL1, ICOS, IGF1, IL11, IL7R, INMT, INSRR, ITGB2, ITPKA, KIR2DL3, KYNU, LDHAL6B, LHCGR, MAD1L1, MAML3, MAN2A1, MAP4K2, MPZL1, MTHFD1, MTMR6, NKX2-2, OR10H1, OR10R2, OR13A1, OR13F1, OR2V2, OR4C15, OR51B4, OR52N5, OR5J2, OR5L1, OR5L2, OR5P2, OR8U1, OR9G1, P4HA3, PDCD1, PDE10A, PECAM1, PFKFB3, PGK2, PIM2, PITX2, PLA2G6, PLK1, PLXNA1, PNPO, POLR1D, POLR2D, PORCN, PPAP2C, PPP1CB, PPP1R3A, PPP1R3C, PRKAR1A, PRKCE, PRPH, PRPS1, PTCH1, PTDSS1, PTPRR, PYCRL, RAB23, RAPGEF4, RETSAT, RIPK1, RRM2B, SARDH, SAT1, SCLY, SDC1, SELE, SELPLG, SEMA3C, SKP1, SLC12A2, SMAD3, SMPD2, SOS1, SPAM1, SPHK1, SPI1, STMN1, SULT1E1, SUOX, SUV39H2, TAGLN, TAF9B, TCF7L1, TCF7L2, TCF7L3, TCF7L4, TCF7L5, TCF7L6, TCF7L7, TCF7L8, TCF7L9, TCF7L10, TCF7L11, TCF7L12, TCF7L13, TCF7L14, TCF7L15, TCF7L16, TCF7L17, TCF7L18, TCF7L19, TCF7L20, TCF7L21, TCF7L22, TCF7L23, TCF7L24, TCF7L25, TCF7L26, TCF7L27, TCF7L28, TCF7L29, TCF7L30, TCF7L31, TCF7L32, TCF7L33, TCF7L34, TCF7L35, TCF7L36, TCF7L37, TCF7L38, TCF7L39, TCF7L40, TCF7L41, TCF7L42, TCF7L43, TCF7L44, TCF7L45, TCF7L46, TCF7L47, TCF7L48, TCF7L49, TCF7L50, TCF7L51, TCF7L52, TCF7L53, TCF7L54, TCF7L55, TCF7L56, TCF7L57, TCF7L58, TCF7L59, TCF7L60, TCF7L61, TCF7L62, TCF7L63, TCF7L64, TCF7L65, TCF7L66, TCF7L67, TCF7L68, TCF7L69, TCF7L70, TCF7L71, TCF7L72, TCF7L73, TCF7L74, TCF7L75, TCF7L76, TCF7L77, TCF7L78, TCF7L79, TCF7L80, TCF7L81, TCF7L82, TCF7L83, TCF7L84, TCF7L85, TCF7L86, TCF7L87, TCF7L88, TCF7L89, TCF7L90, TCF7L91, TCF7L92, TCF7L93, TCF7L94, TCF7L95, TCF7L96, TCF7L97, TCF7L98, TCF7L99, TCF7L100</p>
Negative_15722	<p>ADG, AR1, ARB, C11, P4S, GEA, HK3, TLU, NNT, SCS, BRP, HARS2, ACADVL, AC SM3, ACTG2, ADCY8, ADORA2B, ADRA1A, AGPAT3, ALDH4A1, ALOX12B, APOA1, ARPC3, ATP5G3, BET1, BMP8A, CACNA1A, CCL11, CCL16, CCL8, CCNH, CCR10, CD34, CD44, CD70, CDIPT, CDK4, CDK6, CES7, CHAT, CHRM2, CHST13, CLTA, CMBL, CREB1, CRY2, CSNK2B, CXCL1, CXCL11, CXCL13, CXCL5, CXCR6, CYP1B1, CYP2A7, DCXR, DERA, DHRS4, DHX58, DNMT3L, DRD5, DTX3L, EFN2B, EIL24, ENTPD6, EPHA6, EXT1, F2RL1, FARSB, FGF20, FGFR4, FMO3, FOXA2, FUT1, GAD2, GALT, GALM, GALNT6, GCH1, GUCA1A, GUCA1B, GZMA, HCCS, HSD3B1, HYAL2, IARS, ICOSLG, IFNGR1, IL10RA, IL12RB2, IL17RA, IL22, INPP4A, ITGB2, ITGB5, KIR3DL1, KIR3DL3, KLRD1, KRAS, MAML3, MAP2K4, MAPK12, MAPK9, MDM2, MGAT3, MGAT4B, MGST3, MS4A2, MTHFD1, NADSYN1, NARS, NEFH, NODAL, NOS3, OR10A2, OR10X1, OR11A1, OR13F1, OR1D2, OR1E2, OR1J4, OR2F2, OR2G6, OR2K2, OR2L2, OR2T8, OR2V2, OR3A2, OR4A5, OR4C13, OR4F15, OR4X2, OR51B2, OR51G1, OR52I1, OR5AR1, OR6Q1, P2RX4, P4HA1, PAFH2, PARVA, PARVG, PAX8, PDE4C, PDE5A, PFAS, PFN3, PIAS4, PIK3CA, PKLR, PLA2G2F, PLTP, PNLIP, PNPT1, POLA1, POLD1, PPA1, PPAP2B, PPCS, PPM1D, PPP2R5A, PRKAB2, PRKAR2B, PRKCQ, PVRL4, RPS6KA1, RRAS2, RXRA, SC5DL, SCP2, SETDB2, SFRP4, SHC4, SHMT2, SLIT1, SLIT2, SMPD1, SRD5A1, SCS, SCS2, SCS3, SCS4, SCS5, SCS6, SCS7, SCS8, SCS9, SCS10, SCS11, SCS12, SCS13, SCS14, SCS15, SCS16, SCS17, SCS18, SCS19, SCS20, SCS21, SCS22, SCS23, SCS24, SCS25, SCS26, SCS27, SCS28, SCS29, SCS30, SCS31, SCS32, SCS33, SCS34, SCS35, SCS36, SCS37, SCS38, SCS39, SCS40, SCS41, SCS42, SCS43, SCS44, SCS45, SCS46, SCS47, SCS48, SCS49, SCS50, SCS51, SCS52, SCS53, SCS54, SCS55, SCS56, SCS57, SCS58, SCS59, SCS60, SCS61, SCS62, SCS63, SCS64, SCS65, SCS66, SCS67, SCS68, SCS69, SCS70, SCS71, SCS72, SCS73, SCS74, SCS75, SCS76, SCS77, SCS78, SCS79, SCS80, SCS81, SCS82, SCS83, SCS84, SCS85, SCS86, SCS87, SCS88, SCS89, SCS90, SCS91, SCS92, SCS93, SCS94, SCS95, SCS96, SCS97, SCS98, SCS99, SCS100</p>



Negative\_15726

ADK, CPH, FZ, FN1, GSS, HGF, IHH, IL3, OSM, TR2, TTR, ACMSD, ACOX1, ACTO  
, ADCY4, ADH5, AGPAT3, AHCY, ALS2, ARHGEF4, ASPA, ATP2A2, ATP4B, AVPR  
1A, AXIN1, B3GNT3, BMP6, BMP8B, CACNB3, CCDC6, CCR7, CD22, CD80, CDC2  
, CDH1, CDS2, CFTR, CLDN3, CNGA4, CNTFR, COL4A6, COQ5, CSH1, CSNK1G1,  
CTNNB1, CUL1, CYP4F2, DAPK2, DGKH, DOT1L, EDNRA, EFNA4, EHMT2, ENO2,  
EPOR, ER01L, FARS2, FARSA, FASN, FGF9, FGFR3, FLT3, FZD1, FZD7, GAL3S  
T1, GALNT3, GFPT2, GNRH1, GRB2, HADHA, HMGCS1, IDH1, IL4R, IL5RA, IL6  
ST, IL9R, IMPDH1, IRF9, ITGA4, KLRC1, LIMK2, LIPA, LLGL2, LRAT, LRRC4  
C, LTA4H, MARS2, MFNG, MPST, MYH14, MYH2, MYLK, NPAS2, NRG3, NT5C, OR1  
0G3, OR2AG2, OR2G3, OR2T10, OR4A15, OR4K2, OR4M2, OR51A7, OR52D1, OR  
52N2, OR5D16, OR5R1, OR6F1, OR6X1, OR8K1, PCNA, PDE10A, PDE4C, PER2,  
PFKP, PGM1, PI4KB, PIAS1, PIPOX, PKLR, PLA2G4A, PLA2G6, PLXNB2, PMM2  
, PNPT1, POLR2A, POLR2L, POLR3A, PPM1B, PRIM1, PRKAB2, PRKCB, PRPS1,  
PTCRA, PTGER1, PTPRZ1, PYCR1, RFXAP, RUNX1T1, SARS, SETDB1, SFRP4, S  
HC3, SPRY1, STAT3, STK3, SULT1E1, TAP1, TAS2R14, TAS2R38, TAS2R5, TB  
K1, TGFBR1, TLR4, TNFRSF4, TNFSF12, TNFSF9, TRIP10, TSLP, TYRP1, UPR  
T, WARS, WARS2, ATP6VOA2, CSNK1A1L, HLA-DPA1, HLA-

Negative\_15727

ADK, DDI, DCKP, HFD, IDS, IDS, LHB, MIZ, MUI, MVD, MVK, NOG, PEG, SRF, TEC  
, AARS2, ACTA2, ACTN1, ADH1B, ADORA2A, ADRA1D, ADRB3, ADRBK2, ALDOC,  
ALG12, ALOX12B, ANPEP, AOC2, APLP1, ARNT, ASCC3, ASPA, ATG7, ATP5D, A  
VPR1A, B3GALT2, B3GAT2, BDH1, BET1, CACNA1A, CCL27, CCL28, CCL4, CCN  
D3, CCNG2, CES2, CHIT1, CREB3L1, CRY1, CTPS, CX3CR1, CXXC4, CYP3A7, C  
YP4F3, DGKZ, DIAPH1, DMGDH, DVL3, E2F5, ECHS1, EFNA2, EGLN3, EHMT1, E  
LK4, ENTPD8, EP300, EPHA7, EPHB6, FCGR2B, FRAP1, FUT8, G6PD, GALNT9,  
GCLC, GCNT3, GFPT2, GGT6, GJD2, GLG1, GNG13, GNRHR, GOT1, GP1BB, GPD1  
, GPD2, GRPR, HAGH, HCLS1, HPRT1, ICOSLG, IFNAR1, IL17B, IL22, INPP4B  
, IQGAP1, KIR2DL2, KIR2DL3, KIR2DL4, LAMA4, LCMT2, LDHA, LTBP1, MAD2  
L1, MAGI2, MAOB, MAP2K4, MCM2, MGAT2, MGLL, MYH4, NAE1, NAGK, NLGN3, N  
ME2, NT5E, NTNG1, OR11G2, OR1J4, OR1L1, OR2AE1, OR2B2, OR4C15, OR4E2  
, OR4K1, OR4K13, OR4L1, OR51T1, OR52A5, OR52E2, OR5AP2, OR5AU1, OR6K  
6, OR7G3, OR8B12, OR8H1, P2RX3, PARVA, PGAM1, PGAP1, PHPT1, PIGA, PLC  
D3, PMAIP1, POLD3, POLR1C, POLR2D, POLR2F, PON1, PPAP2C, PPP1CA, PPP  
2CA, PPP2CB, PPP3CA, PTPN1, PTTG1, RAP1A, RAPGEF4, RBL2, RDH16, RERE  
, RPRM, RRAS2, RUNX1T1, SELL, SETD1B, SETDB1, SETDB2, SGPP2, SHC4, SR  
EBF1, STX4, SULT1A2, TAS2R48, THTPA, TIAM1, TIAM2, TIRAP, TRADD, TRA

Negative_15728	<p>AK2, CO, DUT, FAS, GDA, IDS, TVD, LSS, NNT, TK1, ADA1, ACHE, ADRB1, ADRB3, ALDH1A3, ALDOB, ALG10, ALG13, AMPD2, AMPD3, APLP1, ARG2, ARHGEF2, ARPC1A, AVPR1B, AXIN2, B4GALT5, BDH2, C1QB, C4BPB, CACNB4, CALML3, CCL16, CCL28, CD48, CDC26, CDH5, CDS2, CHSY1, CLDN17, CNTNAP2, COL4A6, COL5A3, CREB3, CSF1R, CSF2RB, CTLA4, CTNNA1, CXCL13, CYCS, CYP1B1, CYP2C8, CYP2J2, EFNB1, ENTPD1, ENTPD3, FASN, FCGR3B, FM02, FPGS, FUT7, FUT9, GALT, GART, GATM, GCAT, GCLC, GGPS1, GGT7, GMPR2, GOSR2, GOT2, GSTO1, GSTO2, HLA-F, HPSE, HSD3B2, HTR6, IARS2, IDH2, IDH3A, IDI2, IFNGR2, IL11, IL11RA, IL12RB2, IL20RB, IL23R, IMPA2, ITGA2B, ITGB5, KIR2DL3, KIR2DS4, KIR2DS5, LAMA4, LRP6, MCAT, MGAM, MGLL, MYH2, MYLK, NAGA, NFAT5, NKX6-1, NOTCH2, NT5C2, NTN1, OR10A6, OR10A7, OR10H1, OR10H4, OR10H5, OR10J3, OR1J2, OR1S1, OR2L13, OR2T6, OR3A1, OR3A2, OR3A3, OR4D1, OR51A2, OR51V1, OR5AR1, OR5M8, OR6B3, OR8B12, OR8H2, OXCT2, PCYT2, PDE7A, PDIA4, PFKL, PGK2, PGM3, PHKA1, PI4KB, PLCD3, POLR3B, PPAP2B, PPARD, PRKAG1, PRKCA, PTCRA, PTGER1, PTK2, RHEB, SELP, SEMA4C, SH2D1A, SKIV2L2, SKP1, SLC12A2, SMPD3, SV2C, TACR1, TAS1R3, TAS2R38, TCF7, TJP3, TNFSF10, TSC1, TSC2, TUBA3C, UGP2, UPB1, UROC1, VEGFA, WNT10A, WNT11, WNT2, WNT6, WWP1, YARS2, ARHGEF12, CSGALNACT1, HLA-</p>
Negative_15729	<p>C2, C4B, CUGN, CUL1, DBP, FER, FGF, GNE, LSS, MIF, MTR, PLN, RPE, TK2, TPO, ACACA, ACSL6, ACSM4, ACTC1, ADAM17, ADORA2A, ADRA1D, ALDH1A2, ALDH2, ALDH3B2, ALDH7A1, ALG1, ALG6, ALOX5, AMDHD1, ANAPC10, ANAPC2, ANAPC7, ARD1A, ATP4B, B3GALT2, B3GNT2, BDKRB1, CACNG5, CAPN2, CCND3, CCNE1, CCR7, CD58, CDK7, CDS1, CHST11, CKMT2, CLDN19, CNGA4, COL5A1, CREBBP, CTBS, CTLA4, CTNNA3, CTSB, CXCL9, CYP2S1, CYSLTR1, DERL1, DGKB, DLL1, DPM2, DUSP14, DUSP16, E2F4, EFNA2, ENPP1, EXT2, FPGS, FRAP1, GLYCTK, GMPR2, GNA12, GRIA1, HAO2, HNF4A, IFNA7, IFNAR1, IFNAR2, IL15RA, IL24, INPP5B, IRAK2, ITGAE, KCNJ11, KCNQ1, LDHC, MAD1L1, MADCAM1, MAP2K3, MAP4K2, MAP4K3, MAPK3, MAPK8, MYL9, NAGLU, NAMPT, NFATC3, NME4, NOTCH2, NOTCH3, NR1D1, NT5C1A, NUDT9, OR10A4, OR10A6, OR10G2, OR10S1, OR11G2, OR13C3, OR1J4, OR2A14, OR2D3, OR2T2, OR4C11, OR4K1, OR51B6, OR51E2, OR51V1, OR52A5, OR52E4, OR52E6, OR52J3, OR5D18, OR5J2, OR5R1, OR5T1, OR7A10, OR8B4, OR8U1, ORC2L, ORC6L, P2RX1, P2RX5, PDE1B, PFKFB3, PGK2, PHKB, PI4KB, PIGO, PIGP, PIK3C2A, PIP5K1C, PITX2, PLXNB2, PMM2, POLR2E, PON1, PPAP2C, PRDX6, PRKCI, PRKX, PTPRF, PVRL2, PYGM, RAC3, RPS6KA1, RRAS2, SDC3, SELE, SESN2, SGPP2, SLC25A5, SMARCA2, SNAP23, SOCS4, SOCS5, SREBF1, STAT2, STAT6, STX5, SYNJ2, TAS2R16, TACR7, TACR8, TIRAP, TIRAP, TNFSF4, TNFSF9, TOMM40L, UGT2, UNG2,</p>
Negative_15730	<p>A2M, ABO, ADO, C2, CFI, F12, FST, NNT, PLN, ACACB, ACTA1, ACTC1, ACVR1, ADAM17, ADCY10, ADH1A, ADRA1A, ADRBK2, AGRN, AKR1C1, AKR1C4, ALCAM, ALDOB, APLP1, APOA5, BCAT2, BDH1, BDKRB2, BIRC5, BMP8A, BMPR1A, C1QB, C4BPB, CALML5, CAMK2G, CCL22, CDC45L, CDIPT, CDK6, CLDN3, CMPK2, CNGA3, COL5A1, CRLS1, CSDA, CSF2RB, CTSL1, CYBB, CYFIP1, CYP2B6, CYP2F1, DAD1, DKK4, DUSP1, EDAR, EDN1, ENO3, EPHA1, EPHA7, ETS1, F2RL3, FBP2, FGF20, FLOT1, FLT1, FOSL1, FZR1, GALNT5, GCAT, GLG1, GNB1, GUCY2C, HADH, HLCS, HNMT, HSD17B2, IFNA16, IKBKE, IL15, IL19, IL4R, IRS1, ITGA10, JAK1, KLRD1, LDHAL6A, MAP3K1, MAP3K11, MGAM, MGLL, MRAS, MS4A2, MTFMT, MTR2, NFATC4, NT5C1A, OCRL, OR10G2, OR10X1, OR12D3, OR13C4, OR1F1, OR1S1, OR2T34, OR4A16, OR4C12, OR4C46, OR4Q3, OR51B2, OR51B6, OR51F1, OR51G2, OR52D1, OR5H6, OR6K3, OR9Q1, OXTR, P2RX5, P2RX6, P4HA3, PCYT2, PEMT, PER3, PFKFB4, PIAS1, PIGB, PLA2G2E, PLXNB1, POLR3B, PPAP2C, PPCS, PTAFR, PTCH2, PTDSS2, PTPN7, ROCK1, SDC1, SEMA4D, SETD8, SFRP2, SKP2, SPRY2, SPTLC2, SRD5A1, SRGAP3, STX16, SULT1E1, TICA M1, TPM3, TRAF1, TRAF5, TUBA3C, TYK2, UBE2L6, UCK1, UGCG2, UGT1A10, UGT2A3, ULK1, UPP2, WNT5B, XYLT2, HSP90AB1, MAPK8IP1, SERPINE1</p>

Negative_15731	<p>           BTC, C8B, CR2, DDO, EGF, FES, GH1, GP3, GSK, GSS, JUN, KDR, LCK, NGF, SHH            , ACTN2, ADAM10, ADRA1A, ADRB3, AGTR1, AKR1C3, ALPI, ARHGEF2, ARHGEF            6, ARNT2, ASIP, ATP2A2, ATP4A, B4GALT4, BCL10, CAMKK1, CCL26, CCNB3,            CD79B, CD86, CDC27, CDC7, CD01, CER1, CHIA, CKS1B, CLTC, CNTNAP2, CSF            3, CSNK2A1, CXCL2, CXCL6, CXCR6, CYP2S1, CYP3A7, DDX23, DDX47, DDX56            , DGKZ, DHFR, ELK4, ENPP1, ETNK1, F2RL2, FARP2, FBXW11, FGF23, FM03, G            AB1, GAD1, GADD45B, GANC, GBGT1, GCAT, GCDH, GDE1, GLUD1, GMPS, GNG13            , GP1BA, GRIA3, GRIN2C, GSTA2, GSTA5, GSTO2, GUCY2D, GUK1, HA01, HA02            , HARS, HLA-            DMA, HRAS, HTR2A, ICAM1, IL5RA, IMPA2, INHBA, INPP5B, IQGAP2, ITGA10            , ITGB6, KCNB1, KIR2DL1, KITLG, KLRD1, LEPR, LLGL1, MAD2L1, MAGI3, MA            N1C1, MCM2, MGAT5B, MICA, MPST, MTMR6, NAGA, NAT1, NCR1, NCR2, NGEF, N            LGN3, NOD1, NT5C2, NT5E, NTN1, NUMB, OR10A2, OR13C5, OR14I1, OR1N2, O            R2B11, OR2T11, OR4K14, OR51F2, OR51V1, OR52L1, OR5L1, OR6C74, OR7G2            , OR8G1, OR8K5, P2RX1, PARD6A, PARVB, PCYT2, PDE4A, PDGFA, PDGFD, PGK            1, PIGA, PIGB, PIGQ, PIGS, PIGU, PIK3CB, PKLR, PLCB4, PLXNB2, PNPO, PO            LR2E, PPA1, PPAP2A, PPP1CA, PPP2R5B, PPP3CA, PTCRA, PTGFR, RAPGEF2,            RASGRF2, RDH11, RDH5, RETSAT, RFWD2, RHOQ, ROB03, SARS2, SAT1, SCP2,            SFRP1, SIPA1, SMAD1, SMAD2, SMC1A, SNAI2, SOCS2, SPAM1, SPRY2, STX18            TALDO1, TACORCO, TBYAC1, TBAF2, TUBA9, TUBB, TUBB2B, UCTD009, UBOC         </p>
Negative_15732	<p>           A2M, ADA, C3, C7, CBL, F11, GNE, ID1, ID4, IL9, ILK, NF1, OGT, RDX, ABL1,            ACP6, ACSL1, ACSS1, ACTN4, ACVRL1, ADSS, AKR1C2, ALAD, ALDH9A1, ALG1            0, ANAPC11, ARNT, ASRGL1, ATG7, ATP2A1, ATP50, B3GAT2, B3GAT3, CACNA            1S, CACNB1, CARS2, CCL23, CD40, CDC42, CDH5, CLDN7, DAPK1, DDIT3, DDX            19A, DDX56, DTX4, E2F5, EARS2, EFNA2, EGLN3, ENTPD4, EPHB3, EXT1, F11            R, FGF10, FGF9, FLT3, FM03, FOXO3, FPGT, GALNT3, GANC, GGT5, GNA12, GN            A14, GRAP2, HAGHL, HCLS1, HEMK1, HES1, HMOX2, HSPA1B, HSPA2, IDH2, IL            10RB, IL12RB1, IL17RA, IL19, IL25, IL28RA, IQGAP1, KCNB1, KDSR, KIR2            DL4, KNG1, LDHD, LIPC, MAPK1, MARS2, MCM6, MEF2C, METTL6, MRAS, MYH13            , NFKB2, NRG4, NRXN1, NSD1, OR10A5, OR10J5, OR10P1, OR10X1, OR11L1, O            R1C1, OR2H2, OR2M5, OR4D9, OR4K1, OR4K17, OR51B2, OR51F1, OR52B6, OR            52R1, OR5A2, OR5AC2, OR5M9, OR6C76, OR7A10, OR7G1, OR9G4, OR9Q2, ORC            4L, ORC5L, OXCT1, P2RX3, PDE11A, PER1, PIGS, PIK3C2B, PIK3C3, PIP5K1            B, PLA2G2E, PLCD4, PLCG1, PLXNB2, PNLIP, POLR3H, PPA2, PPP2R2D, PRIM            2, PTGER1, RFNG, RFXAP, RHOD, RPS6KA1, RPS6KB1, RUNX1, SEMA4F, SH2D2            A, SIGLEC1, SLC33A1, SLIT1, SMPD2, SOCS3, SOCS5, SPRY3, SPTLC1, STX1            B, SUCLG1, TAP2, TGFA, THBS4, TICAM2, TOMM40L, TRADD, VNN1, WNT11, WW            P1, B4GALNT1, EIF4EBP1, HLA-DQA2, TNFRSF17         </p>
Negative_15733	<p>           AK2, CAT, CBL, F9, GLA, IL9, LCT, LSS, NPL, PTS, XDH, AARS, AASDH, ACOX1            , ADCY8, ADH1A, ADSS, ALDH3A2, AMPD2, ARAF, ARNT, ASCC3, ATP50, B3GAL            T4, BCL2, BMP4, BMPR1B, CACNB2, CACNG4, CALML5, CBR1, CBR3, CCL26, CD            74, CDC42, CDH1, CDK4, CHST13, CISH, COL4A1, CRY1, CSH1, CSNK2B, CXCL            13, DDOST, DDX18, DDX4, DDX54, DHDH, DHX58, DRD1, DTX3, DUSP4, EDNRA,            EHMT2, EPHB4, F2RL1, FASN, FGF13, FGF7, FUT3, FZD9, GADD45G, GALNT8,            GATM, GNAL, GRIN2B, GUCY2C, HHIP, HRH1, HTRA2, IL10RB, IL12A, INPP5B            , INPP5E, IRF7, KCNB1, LDHD, LEFTY1, LTA4H, MAD2L1, MAN1A2, MAP3K6, M            ARS2, MGAT1, MGST1, MMP9, MYH4, MYL2, MYLK2, NCOR2, NEU1, NFKB1, NGEF            , NMNAT1, NOS1, NOX1, OCRL, OR10C1, OR10G9, OR2T10, OR3A3, OR4D6, OR4            X2, OR5T1, OR6A2, OR8A1, OR9G1, OR9Q1, OR9Q2, OXSM, PAK6, PCNA, PGK1,            PIK3CD, PIK3R5, PIP5K1A, PLA2G6, PLCB2, PMAIP1, PNPLA4, POLR3A, PPM            1B, PPP2CB, PRIM2, PRNP, PSME1, PTPN1, PTPRM, PTPRZ1, RBL2, RHEB, ROC            K1, RPS6, SCLY, SDC4, SDHC, SELL, SFRP1, SMAD3, SMPD3, SPRY1, SPRY3, S            PRY4, SRGAP2, SSH2, ST3GAL5, STMN1, STX6, SULT1A4, TNFRSF9, TNFSF4,            TUBB2B, UXS1, VDAC2, WASF1, WASF2, WNT3, ALDH18A1, B4GALNT1, HLA-            DQA2, PLA2G12B, PNLIPRP1, SERPINC1         </p>

Negative_15734	<p>AK7, EPO, FOS, GDA, GPI, INS, MET, MTR, TH, UBC, ABAT, ABLIM1, ACAD8, ACAT2, ACLY, ACOT12, AKR1D1, AMPD2, AOX1, ARSA, ATP5B, ATP5C1, ATP5O, AVPR1A, BDH2, BMP8A, CACNB4, CAPN2, CAV2, CBLC, CCL11, CCL22, CCNE1, CD34, CD36, CDH4, CDKN1A, CDKN1B, CFL1, CHRM1, CHRM5, CKMT2, COL4A4, CSDA, CSF1, CSNK1A1, CSNK2A1, CTPS, CYP11B2, CYP19A1, CYP2C18, DAD1, DAG1, DCTD, DDX41, DGKA, DGKD, DGKE, DIAPH3, DKK1, DTX3, DUSP2, DUSP4, ENPP1, EPHA2, ERBB2, FECH, FUT4, FZD8, FZR1, GALE, GCLM, GCNT1, GNAT3, GNRHR, GOSR2, GOT2, GPX5, GRLF1, GSTZ1, GUSB, HARS, HES1, HHIP, HLA-DMA, HLA-</p> <p>DOA, HYAL1, ICAM1, IFNA2, IFNAR2, IFNGR2, IGSF5, IL25, IL2RB, IMPDH2, INPP5A, INPP5E, ITGB3, ITPKA, LAMB1, LIPG, MAD1L1, MADCAM1, MAN1A1, MAN1A2, MAT2B, MCCC2, MGAT4A, MTMR2, MYH15, MYLK3, NADK, NRXN3, NTRK2, ODC1, OR10G3, OR10S1, OR11A1, OR11I1, OR2AG1, OR2AG2, OR2H1, OR2T34, OR4A5, OR4M1, OR51L1, OR51S1, OR52K2, OR52W1, OR5H2, P2RX1, P2RX2, P2RX5, PAX8, PEMT, PER2, PFN4, PIAS3, PIGB, PIP4K2C, PLXNC1, PMAIP1, POLR2J, PROC, PSME3, PVRL1, PVRL4, PYCR2, RBPJL, RDH16, SEMA3B, SEMA4B, SETD1A, SH2D1B, SLC25A5, SRGAP3, SSH1, STK11, STX8, SUFU, TAS2R13, TAS2R42, TAS2R50, TJP3, TPH2, TPI1, TPMT, TSC1, TYRP1, ULBP1, ULBP2, XCL2, YWHAB, SLC25A31, SUV420H2</p>
Negative_15735	<p>CTC3, C8A, DDC, GGH, GFG, GFI1, ILE6, INS, LHB, SHH, SPT1, UBB, ACO2, ACSL4, ADCY4, ADRA1B, ALG6, AMD1, AMHR2, ATF2, ATP6AP1, AXIN1, B3GALT5, B3GNT2, B4GALT5, BACE2, BMP2, BUB1B, CAMK4, CARS2, CASP7, CCL13, CCL27, CD99, CDC16, CDC27, CFLAR, CLDN22, CLDN8, CMAS, COL4A2, CRLF2, CRLS1, CTPS, CTSS, CYCS, CYP2A6, CYP2E1, CYP3A4, DAAM2, DFFB, DGAT2L4, DGUOK, DOT1L, DPAGT1, EFN3, ENTPD8, EPB41L2, EPHA5, EREG, EXTL2, F2RL2, FDPS, FRAP1, FSHB, FUT7, GANAB, GARS, GLI1, GNA11, GNRH2, GTSE1, GUCY1B, GUK1, GZMA, HHEX, HLCS, HSPA1B, IAPP, IFNA7, IFNGR2, IL12B, IL18, IL18RAP, IPPK, IRS4, ITGAE, JAK3, KARS, KIR2DL1, KLRK1, LDHC, LFNG, LIMK2, MALT1, MAP3K11, MDM4, MEF2C, MGLL, MPP5, NAE1, NAGA, NCKAP1L, NEFL, NEU3, NOD1, NRAS, NRCAM, NT5C, NT5C3, NTSR1, OR10AG1, OR10S1, OR12D3, OR13A1, OR13C2, OR14I1, OR1J4, OR1L3, OR1S1, OR2D2, OR2F2, OR2T4, OR2T5, OR51Q1, OR52L1, OR5AR1, OR5D18, OR6C2, OR8H2, OR8K1, OR9A2, PAICS, PANK3, PCCB, PDE10A, PDE1A, PDGFD, PEMT, PFAS, PGM3, PIGS, PLCB3, POLR1E, POLR2D, POLR2J, POLR3B, POLR3H, PRKG2, PRPS2, RAPGEF2, RASSF1, RGS3, RHOD, RND1, SARDH, SDHA, SEMA3A, SETD8, SGMS1, SHC2, SLC27A4, SMAD1, SMAD7, SPAM1, SPTLC1, ST3GAL2, STK3, STX1A, SV2C, SYNJ2, TAS2R48, TIAM1, TNFRSF9, TOMM40, TP73, TRPC1, TUBB2A, TUBB4Q, UBE2K, UCCCL1, ULK1, ULK2, VAMP2, VAMP3, VAMP4, VAMP5, VAMP6, VAMP7, VAMP8, VAMP9, VAMP10, VAMP11, VAMP12, VAMP13, VAMP14, VAMP15, VAMP16, VAMP17, VAMP18, VAMP19, VAMP20, VAMP21, VAMP22, VAMP23, VAMP24, VAMP25, VAMP26, VAMP27, VAMP28, VAMP29, VAMP30, VAMP31, VAMP32, VAMP33, VAMP34, VAMP35, VAMP36, VAMP37, VAMP38, VAMP39, VAMP40, VAMP41, VAMP42, VAMP43, VAMP44, VAMP45, VAMP46, VAMP47, VAMP48, VAMP49, VAMP50, VAMP51, VAMP52, VAMP53, VAMP54, VAMP55, VAMP56, VAMP57, VAMP58, VAMP59, VAMP60, VAMP61, VAMP62, VAMP63, VAMP64, VAMP65, VAMP66, VAMP67, VAMP68, VAMP69, VAMP70, VAMP71, VAMP72, VAMP73, VAMP74, VAMP75, VAMP76, VAMP77, VAMP78, VAMP79, VAMP80, VAMP81, VAMP82, VAMP83, VAMP84, VAMP85, VAMP86, VAMP87, VAMP88, VAMP89, VAMP90, VAMP91, VAMP92, VAMP93, VAMP94, VAMP95, VAMP96, VAMP97, VAMP98, VAMP99, VAMP100</p>
Negative_15736	<p>CBS, EPO, FOS, HK3, IL2, JUN, NNT, RDX, SHH, TYR, ABLIM2, ABLIM3, ACSM3, ACTA2, AGMAT, ALAS1, ALDH1L1, ALG10B, APOA1, ASIP, ATP5L, BAI1, BMP4, CACNA1F, CAMK2A, CAV1, CAV2, CCND3, CD274, CHIT1, CHR1, CHST13, CMAS, COL1A2, COL4A6, COL6A1, COX15, CPOX, CRKL, CSNK1D, CSNK1G3, CUL1, DCTD, DKK2, DPYD, ELK4, ENO3, EPHB2, F2RL1, FGD1, FGF17, FOXO1, FTH1, FUT3, FUT9, GALK1, GALNT5, GFAP, GFPT2, GNA14, GNPAT, GPX7, GRIN1, GUCY2C, HEMK1, HMGCS2, HTR2C, ICAM2, ICAM3, IFNW1, IMPA2, INHBA, IRF7, ITGAE, ITPA, JAK1, KRAS, LARS2, LIPE, MAP2K7, MAP4K1, MAP4K3, MARS, MAT1A, MBL2, MICA, MMP2, MPST, MS4A2, MTHFR, MYH7B, NAGK, NCK2, NFKB1A, NFKBIE, NFYA, NME6, NRP1, NUDT5, OR13F1, OR1S1, OR2B6, OR2F2, OR2Y1, OR3A1, OR3A3, OR4D1, OR51B4, OR52E8, OR56A3, OR5AS1, OR5AU1, OR5D14, OR5M9, OR8A1, P2RX7, PAPSS2, PCNA, PFN3, PHKG1, PIGH, PIK3C2G, PLOD2, POLR3K, PRDX6, PRKAR2A, PRKCH, PROC, PRSS1, PTCH1, PYGB, RASA1, RBL2, RDH8, RELA, RPIA, SCLY, SELPLG, SEMA3G, SHISA5, SLC25A6, SLC33A1, SLC33A2, SLC33A3, SLC33A4, SLC33A5, SLC33A6, SLC33A7, SLC33A8, SLC33A9, SLC33A10, SLC33A11, SLC33A12, SLC33A13, SLC33A14, SLC33A15, SLC33A16, SLC33A17, SLC33A18, SLC33A19, SLC33A20, SLC33A21, SLC33A22, SLC33A23, SLC33A24, SLC33A25, SLC33A26, SLC33A27, SLC33A28, SLC33A29, SLC33A30, SLC33A31, SLC33A32, SLC33A33, SLC33A34, SLC33A35, SLC33A36, SLC33A37, SLC33A38, SLC33A39, SLC33A40, SLC33A41, SLC33A42, SLC33A43, SLC33A44, SLC33A45, SLC33A46, SLC33A47, SLC33A48, SLC33A49, SLC33A50, SLC33A51, SLC33A52, SLC33A53, SLC33A54, SLC33A55, SLC33A56, SLC33A57, SLC33A58, SLC33A59, SLC33A60, SLC33A61, SLC33A62, SLC33A63, SLC33A64, SLC33A65, SLC33A66, SLC33A67, SLC33A68, SLC33A69, SLC33A70, SLC33A71, SLC33A72, SLC33A73, SLC33A74, SLC33A75, SLC33A76, SLC33A77, SLC33A78, SLC33A79, SLC33A80, SLC33A81, SLC33A82, SLC33A83, SLC33A84, SLC33A85, SLC33A86, SLC33A87, SLC33A88, SLC33A89, SLC33A90, SLC33A91, SLC33A92, SLC33A93, SLC33A94, SLC33A95, SLC33A96, SLC33A97, SLC33A98, SLC33A99, SLC33A100</p> <p>UV420H1</p>

Negative_15737	<p>AGL, AR, C6, CD4, CFI, DCC, FH, GSS, HK1, IL8, ME1, NGF, PVR, SRM, ACMSD, ADH1B, ADRA1A, AGXT, ALDH4A1, ALG2, ALOX5, ALPPL2, AMY2B, ANAPC5, AR G2, ASAH1, ATP4B, ATP6V0B, B3GALT5, BBC3, C9orf95, CACNB4, CANT1, CC KAR, CCL11, CCL27, CCNG1, CCR10, CD14, CD19, CD59, CDC26, CDC42, CDK7 , CER1, CHD8, CLDN20, CPT1A, CREB1, CRY2, CXCL3, CYFIP1, DAAM1, DAAM2 , DDHD1, DDIT4, DFFA, DGAT1, EGFR, EHHADH, EHMT1, EXT2, EXTL2, EXTL3, FBP1, FGF6, FGF8, FLT4, GFPT1, GOSR2, GRAP2, GRIA1, GSTA3, GUCA1A, GU CY2C, HBEGF, HLA- DMA, HMGCR, HNF4G, HTR4, IARS, IDI1, IDI2, IFNA6, IL10, IL11RA, IL19, IRF5, ITGA4, ITGA5, ITGAE, ITGB6, KIR3DL2, LAMC2, LYPLA1, MAD1L1, MA N1C1, MAP2K7, MAP3K6, MAP4K1, MASP1, MGAT3, MYH9, NKD1, NPR2, NRXN3, NUMBL, OR10A7, OR1L1, OR2B6, OR2T6, OR2Z1, OR3A1, OR4C6, OR4F6, OR52 A5, OR52R1, OR5D16, OR5K1, OR8D1, OR8S1, OR9G1, PAFAH2, PANK1, PDE1A , PGM3, PGS1, PI4KA, PIGX, PLCB3, PLCD4, PLEKHA8, PLOD2, PMM2, PNPO, P OLR2J, POLR3G, PPP2R5A, PPP2R5C, PRKCG, PRKCQ, PTEN, RAP1B, RASA2, R ASSF1, RBKS, RFX5, RHOA, SAT2, SKP1, SMURF2, SOCS2, SSH1, STX6, SULT1 A1, TAS2R60, TCF7L2, TGFB2, THBS4, TICAM1, TOMM40, ULBP1, USE1, VAMP 4, VDAC2, WBSCR17, WNT11, WWP1, YOD1, ATP6V0A2, MAP3K7IP2, MAPKAPK5 , PDCD1LG2, PPARGC1A, SUV420H1, SUV420H2, TNFRSF6B</p>
Negative_15738	<p>CBS, DCN, FH, FUK, FYN, GLA, IL3, MPI, MVK, TK1, AANAT, AARS, ACACB, ACO 1, ACP1, ACTA2, ACTB, ACTN1, AGMAT, ALDH3A1, ALDH3A2, ALDH3B2, ALDH4 A1, ASCC3, B3GAT1, BCAT2, BCL2, BDH2, BET1L, CACNG5, CAMK2G, CCL4, CC NA1, CCNA2, CCR8, CHRM3, CLTB, COL3A1, CPS1, CRY2, CSF1, CSF3, CXCR4, DERA, DLL4, DNMT1, DPM1, DUSP7, EFN1, ELK4, ENTPD7, FGF14, FGF23, FG F4, FLOT1, FTH1, FZD1, GALNT3, GALNT9, GCLC, GNAZ, GNG13, GPLD1, GRIA 2, GSTZ1, H6PD, HIF1A, HMGCS1, HPSE, HSPB1, IDH1, IDI1, IKBKB, IL10RA , IL13, IL22RA1, IL2RA, IMPDH1, KAT2B, LIPE, LLGL1, LRP5, LRP6, LTBP1 , MAP2K3, MBL2, MCM5, MECR, MYH13, MYL9, NAGK, NCOA4, NEFL, NOS1, NR5A 2, NRP1, OR10H2, OR1B1, OR1E1, OR1I1, OR2A42, OR2C1, OR2H2, OR2T8, OR 4D5, OR4K5, OR4N2, OR51E2, OR6C6, OR6F1, OR6S1, OR8A1, PDIA4, PFKL, P HKG1, PIGB, PIK3C2A, PLTP, POLA1, PPAP2B, PPP1R3A, PRKY, PRODH, PRPH 2, PTPMT1, QARS, QPRT, RASGRP4, ROBO1, SC4MOL, SDC1, SEMA3B, SEMA3F, SFRP1, SLIT2, SMC1B, SNAI1, SNAI2, SREBF1, ST3GAL5, STAM, TAS2R14, T AS2R4, TGFBR2, TNFSF10, TP73, TUBA3C, UGCG1, UGT2B11, WASF3, WNT2, WNT6, XYLT2, ZFYVE9, MAPK8IP1</p>
Negative_15739	<p>ADA, BID, DCT, F11, HPD, IVD, LSS, LTB, MIF, SDS, TNN, TPO, UBB, ACAD9, A CSL3, ACSM3, ACTA1, ADRA1D, AHCYL1, ALDH3A1, ALG1, ALOX15, AMD1, ARH GAP5, ARSB, ATP5G3, ATP6V1F, B4GALT3, B4GALT5, BUB1, CACNG3, CARS, C DKN2A, CERK, CHSY1, CLDN11, CLDN3, CLDN4, COL6A1, COMP, COQ3, CSF1, C SF3R, CTSG, CXCL6, CXCR3, CYP17A1, CYP2F1, CYP3A5, DAPK2, DARS, DDX5 5, DEGS1, DRD2, DUSP3, E2F3, ENTPD3, F11R, FGF18, FGF4, FGF5, FGFR2, F LT1, FOXO1, GDF6, GNA15, GPD2, HAAO, HADH, HAGHL, IFNA16, IFNA6, IFNA 7, IGFBP3, IL10, IL11RA, IL12B, IL13RA1, IL8RA, INPP4B, INSR, ITGA3 , ITGA4, ITPA, KNG1, LAMA3, LEF1, LEFTY1, MASP2, MGAT4B, MMP9, NEGR1, NRG2, NRXN1, NUMBL, OPLAH, OR10V1, OR10Z1, OR2W1, OR4X1, OR52K1, OR5 2L1, OR5A2, OR5AP2, OR5L2, OR5M3, OR5T3, OR6B3, OR6C70, OR6X1, OR8B4 , OR9I1, ORC4L, PDE4D, PDGFRA, PFKM, PFN1, PGS1, PIGO, PNPLA3, POLR2K , PPP5C, PSEN2, PTPN11, RAB5A, RAC1, RARA, SEMA4A, SESN1, SH2D1A, SOC S5, SPCS1, SPRY1, ST3GAL6, STAT6, SULT1E1, TBXAS1, TGFA, TJP1, TLN1, TSTA3, UCK1, WARS, WBSCR22, WNT8B, ATP6V1E1, HLA- DRB3, PAFAH1B2, TNFRSF12A, TNFRSF1B</p>



Negative_15740	<p>CGN, CRR, DBT, DDO, DU1, GDA, HGD, NGF, STN, ACOX3, ADCY3, ADSSEL1, AGFA  T2, AKR1A1, AKT3, ALOX15, AMD1, APLP1, ARSE, ATIC, ATN1, B3GALT5, B3G  AT1, BCAR1, BIRC2, BLVRA, BUB1B, C3orf10, C4BPA, CACNG4, CAMK4, CBLC  , CD22, CDC2, CDH3, CDKN2D, CHAD, CHD8, CHEK1, CLDN16, CNTN2, COL2A1,  COMT, CREB3L1, CREB5, CREBBP, CTBS, CTNNB1, CYP4A11, CYP8B1, DAPK2,  DGUOK, DUSP3, EI24, ENTPD4, ESPL1, EXTL1, FABP1, FADS2, FARS2, FGF3,  FGF6, FM01, FSHR, FUT3, FUT5, FUT9, GALK2, GGCX, GLI2, GMDS, GNB1, GNB  3, GRB2, GRIN2D, HEMK1, HGSNAT, IFNA14, IL12B, IL12RB2, IL18, IL1B, I  L22RA1, IL29, INHBB, ITGA10, ITGA7, LCMT2, LRAT, MAP2K6, MAP3K4, MAP  3K7, MITF, MTFMT, MYH10, MYL5, NAGK, NAT6, NCK1, NCOR1, NMNAT3, NOX1,  NOX3, NTRK2, NUDT2, OR10C1, OR10G3, OR10Q1, OR2AT4, OR2B6, OR2Y1, OR  4A5, OR4K13, OR4P4, OR51D1, OR51F2, OR6K6, OR6M1, OR7A17, OXSM, P2RX  5, P2RX6, P4HA2, PCYT1A, PDGFB, PDXK, PFKP, PFN1, PIGM, PLA2G1B, PLA2  G6, PLCG2, PLIN, PLK1, PLOD3, PPP1R3D, PRKG1, PRKX, PRODH2, PRPS1, PR  SS1, PRSS3, PTPN6, RALB, RDH11, ROBO3, RPS6KB2, RRAS2, SDC2, SELL, SE  LPLG, SETDB1, SETMAR, SFRP2, SHISA5, SHMT1, SOCS7, SPCS3, SPRY2, ST3  GAL1, ST3GAL3, STAT2, STX4, TAS2R38, TAS2R60, TGFB3, TPM3, TUBB2A, T  UBB2C, UGDH, VANGL2, VDAC1, YWHAZ, CSGALNACT2, SERPING1, ST6GALNAC</p>
Negative_15741	<p>ADO, AK3, BAX, C4B, C8B, DBT, DHH, F12, HK3, INS, RDX, SDS, TK2, ACSS2, A  DCY4, ADIPOR2, AGPAT1, AGPAT2, ALG10, ALOX5, AMDHD1, ANAPC5, APAF1,  ARHGEF4, ARRB2, ARSA, BET1, C7orf16, CACNG5, CCL28, CCR5, CD19, CD40  LG, CDC45L, CDKN2B, CFTR, CHIA, CHRM5, CHRNA7, CLDN4, CLOCK, CLTA, CL  TC, COQ5, CSF2RB, CSF3R, CYP26B1, DAPK3, DDHD1, DDX56, DNMT3A, DPM2,  EGLN3, EPB41L3, EPHB6, EVI1, FABP1, FASN, FGF14, G6PD, GAD2, GALC, GA  LNT10, GBA3, GCNT3, GLI2, GNA11, GRIN2C, GUCY1A3, HAP1, HCST, HTR2C,  IAPP, IFNA14, IFNW1, ITGB7, ITPKB, JAG2, JAM2, KLRD1, LDHAL6A, LGLL2  , LRP5, MAD2L1, MAP4K4, MARS2, MCM2, MGAT4A, MNX1, MTHFD2, MYLK, NFAT  C3, NRG2, NTF4, NTSR1, OR10J1, OR11G2, OR13C2, OR13C8, OR1G1, OR1L1,  OR2D3, OR4C11, OR4C13, OR4D6, OR4F4, OR4S2, OR51F1, OR51G1, OR51I1,  OR52I2, OR52L1, OR52N2, OR5M8, OR8B12, OR8J3, P2RX3, PAK2, PANK3, PA  RVG, PCK2, PDE3A, PDE6G, PDE6H, PDE8B, PDXP, PIGA, PIGB, PIGC, PIK3C2  A, PIM2, PIP4K2C, POLR2K, POLR3A, PPP2R2B, PSENE1, RAB23, RAB5A, RAS  GRF2, RHEB, RPRM, RPSA, RRM2, SETD1B, SGMS1, SKIV2L2, SOCS2, SOS2, SO  X17, SPRY1, SUCLA2, TAS1R1, TAS2R7, TGFB1, TLR9, TNFSF4, TRMT11, TU  BAL3, TUBB4, TYK2, TYRP1, UMPS, VEGFB, WASF1, YARS2, YOD1, ZBTB16, AT  P6V1E2, SERPING1, TNFRSF13C</p>
Negative_15742	<p>ABO, AMT, DBT, DLD, FES, GAA, IL4, IVD, KIT, LAT, LCT, TAT, TK1, ADAM17,  ADCY9, AGPAT3, AGTR1, AHCY, AKT3, ALPI, ANAPC11, ARHGEF1, ARHGEF7, A  XIN2, B3GAT3, B4GALT3, BACE2, BLNK, BMPR2, C1QC, CBR1, CCL21, CCND2,  CD48, CD72, CD79A, CDC25B, CDH3, CDKN1B, CES7, CHIT1, CHST11, CLDN1,  CRLF2, CSNK2A1, CXCL11, CYBA, CYP2A6, CYP2U1, CYP4A22, DDOST, DDX56  , DFFA, DGKA, DHCR24, DUSP6, EFNA2, EFNB3, EPHA1, FGF23, FOXA2, FOXO1  , FSHB, FZD10, GFAP, GLUD2, GPD1L, HAGH, HIF1A, HNF4A, HSD3B1, IDH3G,  IGF1R, IL1A, IL20RB, IL28B, ITGA11, ITPA, JAG1, JAK1, KRAS, LAMB1, LA  MB3, LEFTY2, LIAS, LIMK2, MAGI3, MAP3K11, MAP3K2, MMP9, MTHFD2, MYH6  , NCR2, NCR3, NFX1, NKX2-  2, NLGN1, NRP1, NSD1, OLR1, OR10A3, OR10A4, OR10H5, OR10J1, OR1A2, OR  2W1, OR2Z1, OR4F4, OR51E1, OR51M1, OR52E4, OR56A1, OR5B17, PCYT1B, P  DPK1, PIGM, PIK3R1, PIK3R5, PKMYT1, PLXNC1, POLA2, PPAP2C, PPAR, PP  ID, PRKAG1, PRKCE, PRKG1, PTGES2, RELB, RRM2B, SEMA3E, SEMA3F, SETD1  A, SH2D1B, SLC2A1, SNW1, SOCS1, STX2, STX3, TACR1, TAS2R50, TAS2R8, T  JP3, TOMM40L, TUBB1, TUBB2B, UAP1, UGT2B10, WNT11, WNT5A, WNT7B, WWP  1, XIAP, ZMAT3, CACNA2D1, MAPK8IP1, PRICKLE1, TNFRSF18</p>

Negative_15743	<p>ADK, AK1, C8G, CP, EBP, GLA, ID1, LPL, PAH, PGF, PVR, SMO, TEC, TNN, WAS, ACSL4, ACVR2B, ALDH3B2, ALG12, APPL1, ARAF, ARPC1A, B3GAT1, BCAR1, B HMT, BRAF, C1GALT1, C3orf10, CARD11, CCKAR, CCL17, CCNA1, CD27, CD70 , CDC2, CDH15, CD01, CHKA, CHRM5, CKMT2, CLDN18, CNGA4, COQ6, COX10, C XCL1, CXXC4, CYP2C18, DDOST, DDX19A, DEGS1, DTX3, EFNA4, EGFR, EHHAD H, EPB41L3, EPHA6, ESAM, EXT1, F2RL2, FASN, FDPS, FGF3, FGF9, FLT3, FO XA3, FRAT2, FTMT, FZD3, GNA13, GPT2, GUCA1C, GUCY1A2, H6PD, HIBCH, HM OX2, HTR6, IFNA8, IL9R, IQGAP1, IRAK2, ITGA10, ITGAV, ITPK1, KIR3DL1 , KITLG, LEFTY1, LIAS, LIPF, LTBP1, LTBR, MAP2K1, MAPK13, MDM4, MGAT3 , MICA, MTFMT, MTHFD1, NCOR1, NLGN2, NME7, NUDT12, NUDT2, NUMB, OLR1, OR11H4, OR2F2, OR2T3, OR2T5, OR4N5, OR51M1, OR52B4, OR52D1, OR6B2, O R6Q1, OR8J1, OXSM, PDE1B, PIK3C2B, PIK3R1, PIK3R4, POLD3, POLR1E, PP A2, PPM1D, PPP2R5E, PRKACG, PRKCA, PRKCD, PRKX, PRLR, PRSS3, RAC3, RO BO3, RXRA, SETDB1, SH2D2A, SKIV2L2, SMARCA2, SOS2, SPHK1, ST6GAL1, S TX1A, STX4, SV2C, TACR3, TAS2R13, TBK1, TIAM2, TJP3, TPI1, TRMT11, TU BA3C, TUBA8, UCK2, ULK1, VAMP3, VARS, VTI1A, WWP2, XYLB, CTNNBIP1, SE RPINE1, TNFRSF14</p>
Negative_15744	<p>ADC, AGK, C8G, CDA, CRK, IVD, KIT, OGT, RB1, RPE, SHH, SMS, SP1, UBB, A4G ALT, ACAA2, ACSL3, ACTC1, ADCY7, ARD1A, ARHGEF4, ARHGEF6, ARSA, ATG3 , ATP5A1, BDH1, BIRC5, BNIP1, CANT1, CCL8, CCNG1, CD70, CD99, CDH1, CH PF, CHRM5, CNGA3, CNGA4, COL1A2, CPT1B, CXXC4, CYP11A1, CYP26C1, CYP 2A7, CYP2D6, CYP7A1, DCTD, DDX41, DLL4, DVL2, EDA2R, ERBB4, FGD1, FGF 23, FZD8, GAL3ST1, GALNT13, GALNT8, GANC, GBE1, GDF5, GJD2, GNPAT, GP 1BA, GP1BB, GSTA5, HEMK1, HSPA8, HSPB1, IDI1, IFNB1, IL17RB, IL24, IL 2RA, ITGAM, JAG1, JAK3, KAT2A, KCNB1, KLRC2, KLRD1, LCMT1, LIPG, LMO7 , LRP6, MAGI2, MAN1A2, MAP2K1, MAPK8, MCM3, MGAT4A, NEFH, NEU1, NFASC , NFYB, NLGN3, NME4, NMNAT1, NOD1, NT5E, OLAH, OR10X1, OR11H1, OR14J1 , OR1A2, OR1N1, OR2AG1, OR2F2, OR2L3, OR2V2, OR3A2, OR4D2, OR4N4, OR5 2A1, OR5A2, OR5M8, OR6Q1, OR7C2, OR9Q2, PDE4C, PIGN, PIK3C2A, PIK3C3 , PLA2G6, PLCB2, PLCG2, PLXNB1, POLD3, POLR1B, PPP1R3A, PPP3CB, PRIM 1, PRKACB, PTGIS, RAC2, RBX1, RERE, RGS3, SARS2, SEMA3C, SEMA7A, SETD 1B, SFRP1, SGMS1, SKP2, SLC25A6, SMC1A, SMPD1, STAT6, SULT1A1, TAP1, TGFB3, TKTL2, TPMT, TUBA8, UGT2B17, VTI1B, WARS2, HSP90AB1, MAPK8IP 3, ST6GALNAC4</p>
Negative_15745	<p>GLA, LTN, MYC, PGP, SPN, AARS2, ABLIM2, ACL1, ACMSD, ACTO, ADORA2A, AD RB1, AGRP, AHCYL2, AKR1C1, AKR1C3, ALG10, AMDHD1, ANGPTL4, ATP5B, B3 GALT1, B3GNT3, BAAT, BAIAP2, BRAF, CACNB2, CACNG8, CAV1, CCDC6, CCL1 4, CCL20, CD22, CD28, CD59, CD79B, CD8B, CER1, CHKA, CLDN7, CLDN9, CMA S, CNTNAP2, CSDA, CSNK1E, CTNNA1, CTNNB1, CYP11B2, CYP4A22, DUSP10, E2F1, E2F2, EDA2R, EI24, ENPP1, EVI1, F11R, FGF11, FSHR, GALNT8, GATM , GBA3, GGPS1, GJA1, GLDC, GMPR2, GNPAT1, GPD1L, GPX7, GRM1, GSTP1, H BEGF, HGSNAT, HNF4G, HRH1, HTR2A, HTR6, IFNA5, IGF1, IL6R, IL7R, INHB E, IRS2, ITGAM, JAM2, KLK3, LAMA4, LCMT1, LTBP1, LYZL1, MALT1, MCM4, M FNG, MGAM, MGST1, MYD88, MYH11, MYH3, MYH7, MYL5, NARS2, NEFL, NEU3, N FAT5, NFKBIE, NLGN3, NOTCH1, NT5C3, NUMBL, OR10A4, OR11H1, OR1A2, OR 2L2, OR2L8, OR2T11, OR2T12, OR4C12, OR4D1, OR4F4, OR4K17, OR51S1, OR 52B6, OR52R1, OR5AC2, OR5AR1, OR5AU1, OR5B12, OR5B3, OR5T1, OR8D4, P 2RX4, P2RX7, P4HA2, PANK4, PDE4C, PDGFA, PDHA1, PGS1, PIGM, PIK3R3, P ISD, POLD1, POLR1A, POLR2C, POLR3G, POMC, PPID, PRKACB, PRKACG, PRKA G2, PRKAR1A, PRKX, PROC, PTGFR, PVRL2, PYCR1, RAP1A, RARA, RASGRP1, R FNG, ROBO2, RRAS, SEMA4F, SETDB1, SFRP2, SH3BP2, SLC12A2, SLIT2, SPI 1, STX1B, TAS2R42, TAS2R48, TBL1XR1, TCF7L2, TGFB3, TIAM2, TJP3, TP7</p>

Negative_15746	<p>CFH, F10, F11, GBA, GSS, HYI, ME1, MSN, NOG, PDC, PML, SPN, SRC, TEC, TH, TKT, ACAA2, ACSL5, ACVR1B, AKR1C1, ALDH1L1, ALDH7A1, ALG11, ALS2, AQP7, ATG3, ATP4B, BMPR1A, CASP9, CAV3, CBR3, CCNB3, CD82, CDC26, CDK4, CDK6, CDKN2D, CES7, CHST13, CMAS, COL6A2, CREB3L4, CSF3, CSF3R, CTBP2, CYP2S1, CYP3A4, DUSP7, EFNB3, EIF4E, ELK1, ENPP7, ENTPD3, EP300, EPHB1, EPHB3, EXTL2, F11R, FARSB, FECH, FGF20, FGF3, FGF9, G6PC2, GAL3ST1, GALNT12, GANAB, GCNT2, GJD2, GMPR2, GNRH2, GRIN2C, GUCA1B, GUCY1A2, GUCY2F, HADHA, HEMK1, HNF1B, HPRT1, HPSE, IGSF5, IL20, IRAK1, IRF9, KITLG, KRAS, LAMA4, LIAS, LRDD, LYZL1, MAD2L2, MAFA, MAN1A1, MAN1B1, MAPK13, MASP2, MTHFR, MYH13, MYH8, NFE2L2, NFX1, OR11L1, OR13A1, OR1D2, OR1S1, OR2A42, OR2L13, OR4K15, OR52A1, OR5AP2, OR5B3, OR5P2, OR5R1, OR5T3, OR7D2, OR8D2, P2RX6, PDGFB, PDXP, PFN3, PFN4, PLA2G10, PLA2G2E, PLXNB1, POLE4, POLR2F, PPAP2B, PRKCA, PRKCQ, PRPS1, PSEN1, PTCRA, PTEN, PTGER1, PTGES2, PTGS2, PTPMT1, PVRL1, RAC1, RASGRF1, RFX5, RXRG, SAT2, SELPLG, SEMA4D, SETDB2, SETMAR, SGMS1, SLC9A1, SMC1A, SMURF1, SNW1, SOX17, SPTLC1, ST8SIA5, STT3B, SULT2A1, TAS1R2, TGDS, TUBA8, VDAC3, WASF2, WNT2B, WNT5B, XCR1, ZMAT3, ATP6V0A1, ATP6V1C2, PDCD1LG2, PLA2G12B</p>
Negative_15747	<p>C2, CD2, DRG, GAA, ID1, LIL, LSS, MTC, NPT, PAH, STS, TAT, TPO, ADCY10, ADIPOR2, ADRA1B, AHCYL2, ALAD, ALDH2, ALDOC, ALPL, APAF1, ARHGEF7, ARPC3, ARPC5L, ATP6V1H, BACE1, BBC3, BIRC5, C7orf16, CACNB2, CALML3, CAMK2G, CASK, CCL22, CCL3, CD14, CD40LG, CDC26, CDK7, CD01, CER1, CHEK2, CHST11, CHSY1, CISH, CLCA2, CLCF1, CLDN7, CNDP1, COMT, CPT1B, CSNK1E, CSNK1G3, CTPS, CTTN, CYP2A6, CYP2E1, CYP7A1, DGUOK, E2F1, EFNA1, EFNA3, EFNB1, ENAH, EPHA1, EPHB1, FADS2, FGF10, FGF23, FMO4, FOXA2, GALNS, GALNTL5, GCNT1, GNB1, GOSR2, GPT2, GPX7, GRHPR, GSK3B, GUCY1A2, HDAC1, HLA-F, HNF4G, HSD17B8, IFNA10, IFNA14, IFNA21, IL20, IL2RA, IL8RB, IMPA2, INPP4B, ITGAX, ITGB7, JUND, KDSR, KIR2DL3, KLRK1, LALBA, MAD2L2, MC4R, METTL2B, MGAT2, MPST, MTFMT, MYH11, NAGLU, NEU1, NFKBIE, NKX6-1, NME2, NMNAT2, NOTCH2, NRAS, NRXN1, OR10A5, OR10K1, OR10T2, OR11G2, OR1J1, OR2AT4, OR2L3, OR2M5, OR2T1, OR2T3, OR4C15, OR4F17, OR4F4, OR4P4, OR51I1, OR52E8, OR52K2, OR5L2, OR5R1, OR5V1, OR8I2, OR9G4, PAFAH2, PARD6A, PIAS4, PIGM, PLTP, PPM1B, PPP1CA, PTGER1, PTGS2, RALBP1, RAPGEF1, RBKS, RDH16, SC4MOL, SDC4, SDHC, SEMA3D, SEMA4C, SH3BP2, SHMT1, SMAD3, SNAI1, STAT1, STX10, STX3, THBS4, TOLLIP, TYMP, UBE2K, UNC5A, UPP2, UXS1, VDAC3, VTI1A, WNT11, WNT8B, WWP1, ATP6V0E1, C1GALT1C1, PLA2G12A, SERPIND1, TNFRSF11A, TNFRSF17, TNFRSF12B</p>

Negative_15748	<p>DCC, FGA, GLS, GSN, IL5, IVD, OAT, OSM, TEC, AADAC, AADAT, ACADVL, ACAT1, ACSL1, ACSM5, ACVR1, ACVRL1, AGXT, ALDH1A3, ASPA, ATP6V1A, AVPR1B, B3GAT1, BACE1, CCL1, CCL19, CCL7, CCNG1, CCR8, CD38, CD58, CHST12, CLCA4, CMPK2, CNGB1, CPT1C, CPT2, CREB3L1, CRKL, CSF3, CSNK1G2, CXCL9, CYP2A13, CYP2J2, CYP3A7, CYP4A11, DAAM2, DDX23, DNMT3L, DPAGT1, DUSP14, ENTPD4, EPAS1, EPHA2, EPHA7, FGFR1, FZD8, GALNT1, GDF7, GLG1, GNAO1, GNG12, GOT2, GPX5, HCCS, HIBADH, HIP1, HLA-DMA, HNF4A, HSPA1B, IFNW1, IL12RB1, IL13RA2, IRS4, ITGB1, ITPKB, KAT2A, KIR2DS5, LDHAL6A, LEF1, LIPE, LTC4S, MAP3K4, MAP3K5, MAP4K1, MAPK12, MAPT, MEF2C, MGST2, MYH9, MYL2, NARS, NCOA4, NCR3, NFX1, NKD2, NOS1, NPAS2, NPR1, NTF4, OCRL, OR10G2, OR12D3, OR11I1, OR2D2, OR2G6, OR2T29, OR2T6, OR4D9, OR51Q1, OR52N2, OR5AC2, OR6C70, OR6T1, OR6X1, OR8D2, ORC4L, PARD6B, PARVB, PARVG, PCK2, PDGFB, PDHB, PLA2G1B, PLA2G2D, PLXNA3, PNPLA4, POLE3, PPBP, PSEN1, PTGER1, PTGES, PYGM, RALA, RELASARS2, SDHB, SEMA3E, SEMA4F, SIGLEC1, SOD1, ST3GAL2, ST6GAL1, STAM, STX18, STX7, SULT1A2, SV2A, TAS2R38, TD02, TRDMT1, TUBA3C, TUBA8, TYROBP, UGP2, UNC5C, VAMP3, VDAC3, VKORC1, WEE1, WNT1, WNT9A, XCR1, ZFYVE16, ATP6V1G2, TNFRSF11B</p>
Negative_15749	<p>CRI1, DHH, EDA, F7, FAS, FGB, GH2, GPT, HDC, JUN, ME1, PC, AASDH, ABLIM2, ACAT2, ACVRL1, AGPAT1, ALG2, ALPP, ALS2, AMPD1, ANAPC7, APC2, ARNT2, ARSD, ATP5H, AXIN2, BUB3, CACNG2, CARD11, CCNE2, CCNG1, CCR1, CCR9, CD3E, CDC14A, CHAT, CHPF, CLCF1, CLDN8, CLTA, CNTFR, COL5A3, COQ6, CRY1, CSF1R, CTSB, CXCL10, CXCR4, CYP17A1, CYP2C8, CYP8B1, DAAM2, DAPK3, DBF4, DGKH, DHODH, DHRS9, DIAPH1, DLAT, EGFR, EIF4E, ENPP2, ENTPD8, EPHB3, FARSB, FGF23, FLOT2, FMO3, FTH1, GABARAP, GALC, GFPT1, GUCY1B3, HAO1, HGSNAT, HRH2, HSD17B7, HYAL1, IFNA21, IL10RA, IL15RA, IL25, IL28A, INMT, INSR, INSRR, ITGA7, KIR2DL1, LALBA, LDHD, MAP3K6, MTMR1, MYH14, MYH7B, NCK2, NCOR2, NMNAT3, NNMT, NR1D1, OCRL, OLR1, OR13C3, OR1L8, OR2L13, OR2M3, OR2T34, OR2T6, OR2Z1, OR4L1, OR4M1, OR4X2, OR51E2, OR5AN1, OR6M1, OR8B4, OR8B8, OR8K3, ORC2L, PANK2, PARVG, PCYT1A, PIGQ, PIM1, PLCB3, PLCB4, PNPT1, POLR2K, PPAR, PPP2R5A, PSAT1, PSEN1, PTK2B, PTPN1, PVRL2, RDH10, RELA, RFXANK, RHOD, SCIN, SEMA3D, SEMA4D, SHC4, SLIT1, SLIT2, SMAD1, SMAD2, SMPD2, SMPD3, SMURF1, SOCS3, SORD, SOS1, SPHK1, SRGAP3, SSX2IP, STX4, SULT1A4, SUV39H2, SV2A, TAS2R48, TLR5, TNFRSF8, TNFRSF9, VAMP2, XYLT1, XYLT2, YES1, YWHAQ, ZFYVE9, ZNRD1, CSGALNACT2, SUV420H2, TNFRSF10C</p>
Negative_15750	<p>CSA, CS, CMT, CCL, CGN, DDI, FZK, FOS, GHR, HHR, LSS, MSN, MUI, PFS, RPL, TPR, WAS, AACS, ABLIM3, ACADSB, ACP2, ACTG1, ADCY6, ADIPOQ, AKR1C3, ALG13, AMDHD1, ANAPC1, AQP7, ATIC, ATP4B, ATP5E, B4GALT4, B4GALT5, BCAR1, BUB1, CACNA1G, CAMK2G, CASP6, CCL4, CCR3, CD22, CES2, CFL2, CHST13, COQ5, CREB3, CRLF2, CSF3, CTNNA1, CTTN, CYCS, CYP3A5, DEGS1, DGKZ, DHODH, DHRS3, DPM2, DUSP2, DVL1, EDNRA, EHHADH, EPHA6, EPHX1, EPOR, EREG, F13A1, FCGR3A, FGF14, FGF18, FMO2, FSHR, G6PD, GALE, GALK1, GARS, GP1BA, GSTA3, HCST, HIBADH, HYAL2, IL15RA, IL18R1, IL19, IL1R1, IL23R, IMPA1, INHBB, INPP5B, IQGAP2, IRAK1, IRAK3, ITCH, ITGB5, KIR2DL4, KIR3DL1, LAMB3, LARS, LDHAL6B, MAN1A1, MAN2A1, MS4A2, MYD88, MYH7, MYH7B, NARS, NAT2, NAT5, NAT6, NCF4, NR1H3, NRG3, NT5E, OR10A3, OR10G3, OR11G2, OR4A16, OR4F5, OR4X2, OR51D1, OR51I2, OR52N1, OR56A3, OR5D18, OR5M9, OR5P3, OR6C2, OR6N1, OR7D2, OR8B12, OR9A4, P2RX5, PAK3, PCNA, PGK1, PIAS1, PIGO, PIM2, PLCD1, PLCE1, PLOD1, PLXNB3, PMM2, PPA1, PPAP2C, PPAT, PPM1D, PPP1R3D, PTEN, PTPN7, PYGM, RAP1A, RASGRP1, RASGRP2, RBL1, RETSAT, SCIN, SELPLG, SEMA3G, SMAD2, SMAD6, SOCS5, SPCS1, SPRY1, STX8, TACR3, TAP1, TD02, THBS4, TIAM1, TLR9, TMLHE, TPMT, TSC1, TUBA1A, UGT2B7, ULK1, VAMP1, VNN1, WNT6, WNT8B, ATP6VOD2, ATP6V1D1, ATP6V1E9, ATP6V1G9, HSD17B19, MAP3K19B</p>

Negative_15751	<p>AGK, AMH, ASL, BAD, CD4, CDO, DDO, EPO, F2K, F3, F3, GHZ, HGD, IL7, ST1, A  CAA1, ACAT1, ACHE, ADAM10, AGRP, ALDH1B1, AOC2, ARSB, ATF4, ATP6VOB,  AXIN2, B3GALT1, B3GALT4, B3GNT4, B4GALT2, CADM3, CAV3, CBR3, CCL22,  CD38, CD40, CD47, CFL1, CHEK2, CLDN20, CLTB, CNTNAP1, CRB3, CREB3L3,  CSNK1E, CTSG, CXCL16, CXCR4, CYP4A11, DAPK1, E2F5, EARS2, EDN1, EFNA  5, ENTPD4, ENTPD7, EPB41L1, EXOC7, EXT1, FGF5, FLT3LG, FM04, FOXA3, F  PGS, FSHR, GAB1, GCLC, GDE1, GDF7, GGT1, GLUD1, GMPS, GNG3, GSTA3, GST  O2, GUCA1C, GYS1, GYS2, HTR6, IL11, IL8RB, IMPA1, INHBC, IRS1, ITGAX,  L1CAM, LDHB, MAP2K6, MAPK7, MDM4, MMP1, MPDZ, MYH7B, MYL5, NARS2, NCO  A4, NEU4, NME4, NOS3, NRG1, NRXN1, OR10A2, OR10G9, OR10Z1, OR1A1, OR1  E1, OR1E2, OR1I1, OR2L13, OR2T1, OR2T5, OR51A7, OR51V1, OR52D1, OR52  E4, OR52K1, OR56A3, OR5D18, OR6C70, OR6C75, OR6T1, OR6Y1, OR7A10, OR  8D4, ORC1L, PAFAH2, PARD3, PDE11A, PDGFD, PHKA1, PI4KB, PIGL, PIK3C3  , PLCB1, PLCB4, PLCG1, PLXNA1, PMAIP1, PNPLA3, POLD4, POLR1C, POLR2D  , PPA2, PPP1R3A, PPP2R2B, PRNP, PTEN, RBL2, RDH11, RDH8, ROBO3, RPS6K  A1, RPSA, SCD5, SEMA3C, SEPHS1, SESN3, SHC1, SLC27A1, SPRY3, SPTAN1,  STX1A, SUCLG1, SULT2A1, TAS2R42, TAS2R5, TBL1Y, THTPA, TLR9, TUBAL3  , UGT2B7, VAV3, VDACC2, VTI1B, WARS, WNT5A, XYLT2, YARS2, YOD1, ZFYVE1  C, ATP6V1C1, ATP6V1C9, ATP6V1C9, KIR2DL5A, PRICKLE2</p>
Negative_15752	<p>AK1, GK, GP9, JUP, KIT, LHB, OTC, PGF, TH, ABLIM2, ACOX1, ACPP, ACSL5, A  CSS3, ACY3, AKR1B1, AKR1D1, ALG1, ALG2, ALOX12B, ALOX15, AMPD1, AOC2  , ARD1A, ATF2, ATG7, ATIC, ATP5G2, ATP6VOB, ATP6VOC, BAAT, BET1, C3or  f10, CACNB4, CCNB2, CCNG1, CCR5, CHD8, CHRM3, CHRNA7, CNTNAP1, CNTNA  P2, COL2A1, COL6A1, COMT, CXCL13, CYFIP1, CYP26A1, DAAM2, DAG1, DDX4  , DDX47, DHRS4L2, DOCK1, DTX3L, DTYMK, EIF4E, EPHX1, EXOC7, FABP3, FM  O3, FZD10, GAB1, GALNTL5, GNPAT, GSTM5, H6PD, HADHB, HCLS1, HGSNAT, H  MGCS2, IFNAR2, IL1R1, IRAK1, ITGAL, KIR2DL4, KLKB1, LEFTY1, LIAS, MA  GI2, MAOB, MAPK1, MAT2B, MTMR2, MYH7B, NAGA, NANS, NARS, NAT2, NCF1, N  EFH, NOX1, NPR1, NRCAM, NRXN1, OR10A5, OR10H2, OR10T2, OR1D2, OR1L6,  OR2H2, OR4D5, OR4K17, OR51D1, OR52R1, OR56A1, OR5B21, OR6C2, OR8A1,  OR8S1, PAK3, PDE3B, PDE6H, PGAM4, PI4KA, PIGP, PIGX, PIM2, PKMYT1, PN  LIP, POLR2F, PPA2, PPARA, PPP1R3C, PPP3CC, PPP3R2, PRKAR2B, PTAFR, P  TPRR, RARS2, ROBO3, RPS6KA4, SDHA, SEMA4C, SFRP2, SNAI1, SOCS4, SPHK  1, ST3GAL3, TGFA, TNXB, TRMT11, TSHR, TUBA8, TUBB2B, TYMP, UAP1, VEGF  A, WHSC1, WNT3, WNT5B, ATP6VOE1, PRICKLE2, ST6GALNAC1</p>
Negative_15753	<p>ADA, ASL, ATM, C8G, F2K, FES, NER, OTC, FVK, TH, TNN, A4GAL1, ADP1, ACAD  S, ACADSB, ACAT1, ACTA2, ADH5, ADH7, AKR1C3, ALDH2, ALDH3B1, ALDH4A1  , ALG13, ALPPL2, ALS2, AMPD2, ANPEP, APOA2, ARHGEF6, ARSB, ATP5J, BET  1, BMPR1B, C1QB, CACNB3, CACNG6, CANT1, CASK, CCNG1, CCR6, CERK, CES1  , CHPF, CHRNA7, CHST12, CLDN2, CNTN2, COL4A4, CPT2, CREB3L4, CTF1, CT  SB, CXCL1, CYP27A1, CYP2S1, DFFA, DGAT1, DHCR24, DHRS9, DRD1, DRD5, D  USP14, E2F5, EGLN1, ENO3, ENTPD6, EPHA2, FCGR3B, FGF17, FIGF, FOXO1,  FSHB, FZD2, FZD5, G6PD, GALK1, GALK2, GALNT11, GALNT8, GGPS1, GNA12,  GUCA1C, GUK1, HIP1, HLA-  F, HMGCS1, HPRT1, HSPA1B, IDH2, IDUA, IFNG, IL1R1, IL20RA, IPPK, IRAK  1, IRS1, ITGA1, ITGB1, JUND, KAT2A, KIR2DL2, KLRC2, KLRC3, LAMB4, LEP  R, LMO7, MAD2L1, MAP4K4, MEF2C, MGST3, MMP7, MPP5, MTMR1, MYH10, NEU3  , NFKB2, NME4, NR1D1, NUDT8, NUMB, OR10G2, OR13G1, OR1Q1, OR4A16, OR4  F15, OR51I2, OR52N2, OR5B21, OR5B3, OR5L2, OR6C74, OR8K1, PAICS, PDE  10A, PEMT, PGS1, PI4KA, PIGP, PIK3R1, PIK3R3, PIP4K2A, PIPOX, PKLR, P  OLR1C, PON1, PPP2R5E, PRKAB1, PTGDS, QARS, RAD51, RELA, RFXANK, RPS6  KA6, SEMA3A, SEMA4F, SGPP2, SOCS5, SRD5A1, SSH2, STK3, STX12, SUCLG1  , TAS2R3, TCF7L2, TLR5, TNFSF8, TOMM40, TPH2, TPMT, TUBA1B, TUBB, TUB  B3, TUBD9, UCTP27, ULDPP9, UNC5C, UBE2E, WACD9, WNT9, WNT4, WNT5A, ZNF1</p>

Negative_15754	<p>CBL, CRH, F9, FAH, FES, GP5, ID1, ID4, IL5, LAT, PC, TK1, AC01, ACTN4, AD  CY3, AKR1C2, ALCAM, ALDOA, ALG8, ALPPL2, AOC3, APC2, APOA5, ARHGAP5,  BMP8A, CACNB4, CALML5, CALML6, CANT1, CASK, CBR3, CCNB3, CCR3, CD3E,  CDC42, CES1, CHAD, CHKA, CLDN6, CNTNAP1, CXCL16, CYP1B1, CYP7A1, DAR  S, DDX19A, DDX41, DDX50, DDX56, DHCR7, DKK2, DRD5, DUSP2, DUSP8, ECHS  1, EFN2, EIF4B, ENPP2, ENTPD3, EPHX2, ESAM, ETS1, FZD4, GALNT14, GCN  T3, GNA15, GNG3, GPLD1, GRIN2B, GRIN2C, GUCY1A2, GYS2, HAP1, HGSNAT,  HSD17B3, HTR6, ICAM1, IFNW1, IL10, IL13, INHBC, INPP4B, IQGAP3, ITGB  6, JAG1, KNG1, LALBA, LAMA4, LARS2, LIAS, MAML1, MAP2K1, MGST3, MYH13  , MYH9, MYL5, NCAM2, NCKAP1L, NEFH, NFATC1, NOTCH2, NRG1, NT5C1B, OR1  OH3, OR2T2, OR4C13, OR4M2, OR4X1, OR51Q1, OR56B4, OR5M3, OR6C70, OR6  F1, OR7A10, OR7A17, OR8A1, PAPSS1, PARD6A, PDE1A, PDE6G, PFKFB4, PFK  L, PLCB2, PLXNC1, PPP2CA, PPP2R1B, PPP2R2C, PRKAR2B, PTDSS1, PTGIS,  PTPN7, SDHC, SEMA3G, SETDB1, SETMAR, SKIV2L2, SLC2A1, SPP1, SPRY1, T  GFB2, TIAM2, TKTL1, TUBA1A, UGT1A10, UGT2B10, WNT7B, C1GALT1C1, HSP  90AA1, ST6GALNAC3, ST6GALNAC4, TNFRSF6B</p>
Negative_15755	<p>ATM, BTD, CD2, CFB, CFI, CKN, CSK, DMT, GIZ, GHR, ILK, LAT, MET, MIF, NFI  , PML, ACADM, ACPP, ADCY3, ALAD, ALAS1, APH1A, APLP1, ATP2A3, BCAR1, B  LNK, BMP4, C9orf95, CACNA1C, CACNA1G, CAMK2G, CARD11, CARS, CARS2, C  CL21, CD19, CD40, CD59, CDK7, CER1, CHAT, CLDN17, CMAS, COL6A2, COQ7,  CRLF2, CSF1R, CSNK1D, CTBP2, CTBS, CTF1, CXCL16, CXCL3, CYP11B2, CYP  4F2, DDX54, DGKI, DHCR7, DHRS4, DIAPH1, DNMT3B, DPYSL2, DUSP6, EFNA5  , ENTPD5, ENTPD7, EPHA2, EPHB1, EPHX2, F11R, FABP3, FASLG, FLOT1, FOX  A3, FUT5, GALT, GALE, GALNT12, GALNT3, GDE1, GFAP, GNAT3, GNG13, GYS1  , HEXA, HLA-  G, HNF4A, HTR2C, HTRA2, HYAL2, IGF1, IL12RB1, IL15RA, IL17RA, IL1B, I  TGB2, ITGB8, JUND, LLGL2, MCCC2, MMP7, MTR1, MYH8, MYL2, MYLK, NCKAP  1L, NEUROD1, NR1H3, NUDT9, OR10G7, OR10H3, OR10Q1, OR14A16, OR11I1, O  R2M4, OR51F2, OR5D14, OR5T3, OR6F1, OR9A4, OXCT2, OXTR, PARVB, PCNA,  PDE1A, PDE5A, PDGFD, PDHA2, PDIA4, PERP, PFKFB4, PFKP, PFN1, PLA1A, P  MAIP1, PNPO, POLD3, POLR2F, PPAP2B, PPP3CB, PRKAG1, PRKCA, PRODH2, P  RPS2, PSEN1, PTPRR, PTPRZ1, QARS, RASGRF1, RASSF1, RBPJ, RBPJL, RDH8  , RHOA, RPS6KA5, SARS, SESN3, SGMS1, SHC1, SHC4, SMURF2, SOAT1, SOCS1  , SPRED1, SPTLC2, ST3GAL1, ST6GAL1, STX10, SYNJ1, TACR1, TAS2R14, TA  S2R3, TGFB1, TLR2, TUBB1, TUBB2A, UGT2A1, UGT2B10, UGT2B11, UGT2B7,  UMS, USP, DBP1, EBF, FGF, G, Y, AGD, HT1, LHM, MVD, P, R7, TMR, WKS, XDA, PCKL</p>
Negative_15756	<p>8, ACTA2, ACTN1, ADAM10, ADCY9, ADIPOQ, ADIPOR2, ALG13, ALG5, ANAPC2  , ASAH1, ATP5J2, B3GALT6, BAIAP2, BLVRB, C1GALT1, C3orf10, CACNG7, C  AMKK1, CASP7, CASP8, CAV1, CAV3, CCKBR, CCL11, CCL3, CCNB3, CD14, CD4  OLG, CD44, CD48, CDO1, CHEK1, CLCF1, CLDN19, CMPK1, CNGB1, CNTN1, CNT  N2, COX15, CSF3R, CTSG, CXCR4, CYP26A1, CYP3A7, DARS, DDX4, DEGS2, DH  CR7, EDNRA, ENO1, EREG, FABP3, FARSB, FLAD1, FMO3, FZR1, G6PC2, GALNS  , GALNT12, GLYCTK, GMDS, GMPPA, GMPPB, GNAQ, GNAZ, GP1BA, GPAM, GPD2,  GRM1, GSTA4, GSTM1, HAAO, HADHA, HEMK1, HMGCS2, HRAS, HSD3B7, ICAM2,  IDH1, IDH2, IFNA4, IFNA6, IFNW1, IKBKE, IL3RA, INADL, IRS1, ITGA8, KR  AS, LHCGR, LIMK2, LLGL1, MAN1A2, MAP2K1, MAP3K14, MAP4K4, MCCC2, MDM  4, MPZL1, MYH7B, NKX6-  1, NOX3, NSDHL, NTSR1, OR10R2, OR2AG1, OR2H1, OR2H2, OR2T12, OR4C11,  OR4N2, OR51L1, OR51T1, OR52E6, OR6C6, OR6C75, OR7G2, OR8J3, P2RX3, P  AK6, PANK1, PDE1B, PDE6H, PDHA1, PFN4, PIK3C2A, PIK3R1, PIK3R5, PLA2  G6, PLCZ1, PLXNB1, POLA1, POLR1E, POLR3G, PPP2R2B, PRKAA2, PRKAG1, P  RKCB, PRPS1, PRPS2, PSME1, PTCH1, PTDSS2, PYCR2, QARS, QPRT, RAC1, RA  C2, RASA1, RDH12, RETSAT, RFNG, ROBO2, SFRP5, SHC2, SMAD2, SPCS3, ST3  GAL5, STAM2, STAT6, STX5, SV2C, TGDS, THY1, TLN1, TPI1, TYMS, TYRP1, U  GT2A1, UGT2B10, UGT2B11, UGT2B7, UMS, USP, DBP1, EBF, FGF, G, Y, AGD, HT1, LHM, MVD, P, R7, TMR, WKS, XDA, PCKL</p>



Negative_15760	AK7, ACC, DDO, F3, FH, HAL, HGF, ILO, LAI, MFI, TK1, TNC, AASS, ACADL, AC SM4, ACY1, AFMID, AGMAT, AHCYL1, ALG2, ANAPC10, ANGPTL4, AQP7, ARAF, ARD1A, ARG2, ATF4, ATP5A1, B3GNT2, BIRC2, CAMK4, CARS2, CAV2, CCL24, CCL28, CCR9, CD19, CD226, CD244, CD40LG, CDC42, CDH5, CDKN2B, CDKN2C , CDKN2D, CHRM2, CLDN8, CPT1A, CREB1, CXCR5, CYBA, CYFIP2, CYP1A2, CYP26A1, CYP2B6, CYP3A5, DAG1, DCTD, DDX55, DGKA, DOCK1, DOT1L, DPM2, DRD5, DTX3L, DUSP1, ENO1, EPHA5, EPHB4, ESAM, EXT2, FCGR3A, FPGT, GAD2 , GALNT5, GALNT9, GDF7, GMPS, GNAQ, GOT1, GUCY1B3, GUCY2F, HAGHL, HCS T, HMOX2, HNMT, HSD3B2, HSP90B1, ICAM3, IFNA17, IFNW1, IMPDH1, INMT, INPP5B, ISYNA1, ITGA2, ITGA2B, ITGB3, KAT2A, KCNB1, LAMB3, LIAS, LTC 4S, MAD2L2, MAGI2, MAN1A1, MAN1A2, MAP2K4, MAP3K4, MCAT, MNX1, MTHFD 1L, MTMR6, MYL5, NEU2, NFYB, NKD1, NOTCH2, NPAS2, NPR2, NRG3, NRXN2, NSD1, NTF4, OGDH, OPLAH, OR13C8, OR13H1, OR1F1, OR1Q1, OR2AG1, OR2M2, OR4D1, OR52I2, OR5B17, OR5D13, OR5T2, OR6B2, OR8J3, OR9G4, ORC4L, P2 RX1, PAFAH2, PARD6B, PARVG, PAX8, PCCB, PDE11A, PDE5A, PDXP, PER3, PG AP1, PIGU, PIGX, PIK3R1, PLA2G5, PLCE1, PLEKHA8, PLK1, POLR1B, PON3, PPP1CA, PPP3CB, PPP3R1, PRIM2, PRKCQ, PRKX, PRNP, PRSS3, PTGER3, RAP GEF2, RDH10, RPRM, RPS6KB1, RXRG, SELL, SMPD3, SSH3, STAT5B, SV2B, TA
Negative_15761	AR1, ARHGEF7, ARPC1A, ASPA, ATP5E, ATP5G3, ATP6V1D, B4GALT2, B4GALT3, BDH1, BLNK, B PNT1, CACNB3, CAMKK2, CAPN2, CCL11, CCL27, CCNG2, CD14, CD27, CD28, C DC23, CDKN1C, CHRNA7, CIITA, CLTA, CNGB1, CRY2, CUL1, CXCL16, CXCL5, CXCR3, DDX51, DGKH, DGKI, DGUOK, DHDDS, DNMT3B, DNMT3L, DTX4, E2F3, E PHA8, F13A1, FGF10, FGF9, FMO4, FTH1, FZD9, GDF6, GGT7, GNA13, GNAL, G NPDA2, GNRH2, GPT2, GRLF1, HCLS1, HCST, HMOX2, HSPA2, ICOSLG, IFNA16 , IFNA8, IL1B, ITGA5, ITGAV, ITGB3, ITGB6, LAMC3, LLGL1, LLGL2, LTC4S , MALT1, MAML1, MAN1B1, MAN2A1, MAP2K6, MAP3K5, MAP4K3, MAP4K4, MARS , MARS2, MCCC1, METTL2B, MFNG, MLYCD, MOV10L1, MYH7, NARS, NAT2, NCKA P1, NCR2, NEGR1, NFATC2, NFKBIE, NME7, OR10G3, OR10K1, OR1L6, OR2L2, OR2T4, OR4C46, OR4F15, OR4N4, OR51I2, OR51Q1, OR51T1, OR5A2, OR5AK2 , OR5D18, OR7C1, OR8K5, P4HA2, PANK2, PDE11A, PDE3B, PDE5A, PDGFRA, P FKFB2, PIAS2, PIP4K2C, PKM2, PLA2G2F, PLCD3, POLR2G, POLR2K, PPP2CB , PRKAA2, PRKCA, PSAT1, PSME2, PVRL4, RAB5A, RAP1A, RFXANK, RRAS, SCL Y, SDC1, SEMA4A, SEMA4B, SENP2, SGMS2, SHMT2, SLC25A4, SLC25A6, SLC2 A1, SMAD3, SMARCA2, SOD1, SOX17, ST3GAL2, STEAP3, SV2C, TAS2R10, TH
Negative_15762	BCR, CS, DDO, F3, HK2, JUP, KDR, KMO, MET, MTR, MUT, NGF, ACOT12, ACTA1, ACTN1, AGXT2, ALAS2, ALOX15, ALPP, AOX1, AQP7, ARNTL, ARPC4, ARPC5, A RPC5L, ATP12A, ATP5G2, ATP6VOB, AVPR1B, B3GALT4, B3GALT5, B4GALT6, BCAR1, BLNK, C1QC, CACNA1F, CARD11, CCND1, CD82, CD86, CDH4, CDK6, CF TR, CHRM5, CLDN1, CLDN19, COASY, CRY1, CSDA, CSF1R, CTNNA1, CTPS, CYP 11B1, CYP17A1, CYP2F1, DDHD1, DGAT1, DPM3, E2F3, EGLN1, ENO1, EPHA2, FGF6, FIGF, FOXA2, GALC, GALNT14, GCNT1, GLI1, GMDS, GNA14, GNPAT, GP X7, HDAC2, HLCS, HSD17B2, ICOS, IFNA2, IFNA6, IL1RAP, IRS4, LAMA3, ML YCD, MTMR1, NEGR1, NEUROD1, NFYC, OR10V1, OR10Z1, OR13C9, OR14J1, OR 2H2, OR2T2, OR4C6, OR4D6, OR4L1, OR51I1, OR52E8, OR52J3, OR56A1, OR5 D18, OR7A17, OR8J3, OR8K1, OR8S1, OR9I1, P2RX4, PANK2, PARVA, PAX4, P CNA, PDGFD, PFKFB3, PIAS1, PKLR, PLXNA2, PLXNB3, PMM1, POLD4, POLR3B , PPP2R2D, PPP5C, PRKACG, PRKCG, PSME1, PYGB, RELA, RIPK1, RPN1, RRAS , SEMA3C, SEMA7A, SFRP1, SLC12A2, SMC1B, STX4, SV2B, TAS2R1, TAS2R40 , TCIRG1, TNFRSF8, TOMM40L, TP73, TPMT, TUBB6, TXNDC12, VAMP2, VAMP4 , VEGFA, WNT8A, WWP1, YOD1, ZFYVE9, ATP6VOE1, CTNNBIP1, GABARAPL2, M APK8IP3, PAFAH1B1, TNFRSF13B, TNFRSF6B



Negative_15763	<p>A2M, ASL, FOS, LEP, MSN, NOG, NPL, NPY, PDC, PLG, ABLIM2, ACTB, ACTC1, A CVR1, ACYP1, ADCY5, ADIPOQ, AKR1C1, AQP7, ARHGEF7, ARRB2, ARSB, AVPR 1A, BMPR2, CACNA1F, CALML6, CBR1, CCKBR, CCNH, CCR9, CD19, CD40LG, CD H2, CLCF1, CLDN9, CNTN1, COL4A6, COL5A1, COMP, CTSB, CXCL16, CYP1A2, CYP3A7, CYP4A11, DNMT1, DOLPP1, DTX3, DUSP4, DUSP6, EARS2, EDN1, EDN RB, ENTPD1, ENTPD5, EP300, EXOC7, FZD10, G6PC, G6PD, GADD45G, GALM, G ATM, GMPR2, GNPDA1, GSTM5, HARS2, HCLS1, HCST, HHIP, HLA- F, HMBS, IFNA16, IFNA17, IFNA21, IFNA6, IL9R, INPPL1, IPPK, IRF9, KIR 2DS4, KLKB1, KLRC3, LCMT2, LIPG, MMP1, MTHFD1, MYLK, NFATC3, NR4A1, N TF4, OR1E2, OR1L4, OR1L6, OR1N2, OR2L3, OR2T4, OR4F17, OR4P4, OR4S2, OR5D18, OR6C70, OR6N2, OR7A17, OR7C2, PAPSS2, PARS2, PDE6G, PDHB, PE RP, PIGK, PIM1, PKM2, PMVK, POLR2D, POLR3K, PPBP, PPP2R5E, PPP3R1, PR KCZ, PRODH2, PROS1, PTPRF, RAF1, RALBP1, RPRM, RXRG, SEMA4G, SEPHS1, SETDB1, SHC1, SMAD9, SNAI1, SNAP25, SRGAP2, TAS2R42, TAS2R49, TBXA2 R, TCF7, TIRAP, TUBA3E, TUBB4Q, UGT2B10, UNC5A, WNT4, ARHGEF12, ATP6 V1B2, ATP6V1G1, HSP90AA1, MAPKAPK5, PLA2G12A</p>
Negative_15764	<p>APP, CS, DCK, DCN, GGH, GH1, GK, ID1, JUN, LCK, NF1, PAH, PRL, PXN, SDS, S RC, TK2, A4GALT, AADAT, AASS, ACPP, ACSL4, ACTC1, ACTN4, ADAM10, ADCY 2, ADH5, ALG13, AREG, ARPC2, ATIC, ATP13A2, ATP5D, ATP5F1, CACNA1A, C ANT1, CASP6, CBLC, CCKBR, CD44, CLDN17, CLDN5, CLDN6, COL5A2, CRLF2, CXCL10, CXCR5, CXCR6, CXXC4, DDX47, DGAT2, DGUOK, DIAPH2, DNMT3A, DP YS, DTX3, DUSP1, DUSP14, EFNA4, ENTPD1, EPHB1, FCGR3A, FLOT1, G6PD, G CH1, GCNT1, GCNT2, GGT5, GIT1, GLI2, GNA15, GPD1, GRIN2B, GSTA3, GZMB , HLA- DRA, HMGCS1, HNF1A, HSD17B8, ICOS, IFNK, IL17RB, IL20, INHBE, INSR, I QGAP1, IRAK3, IRF5, ITGA5, ITGB1, JAM3, KCNJ11, KIR3DL1, KITLG, LTBR , MAN1A1, MAOB, MAP2K4, MAPK8, MAT1A, METTL6, NANS, NAT1, NAT2, NAT6, NCAM1, NFATC3, NGEF, OR10P1, OR10Q1, OR1A2, OR1L6, OR2M7, OR2T4, OR4 C6, OR4D1, OR4X1, OR52A5, OR52I1, OR5AP2, OR7A10, OXCT1, OXCT2, P4HA 2, PDE6D, PDGFB, PHKG1, PIP4K2A, PIP5K1A, PLCB2, PLCB4, PLK1, POLD2, POLR1B, PPID, PPP2CA, PPP2CB, PRKACA, PTK2B, RPS6KA5, SEMA3F, SEMA4 F, SETD7, SPHK1, ST3GAL1, STT3B, TIAM1, TJP2, TLR5, TNXB, TYK2, UGT2B 28, VANGL1, XYLT1, ZAP70, ZFYVE9, ATP6V0A4, CTNNBIP1, HLA- DPB1, PHOSPHO1</p>
Negative_15765	<p>A2M, AGL, BTK, C3, CD2, DDC, F12, H11, LHB, LPL, MSN, NNT, TPO, AASS, ACA T1, ACOT12, ACPT, ACSL4, ADCY2, ADSS, ALDH1A2, ALG1, AOC2, AOC3, ARG2 , ARHGEF1, ARHGEF2, ARPC2, ATP5D, ATP6V1F, BAI1, BMP8A, BNIP1, C1QA, C3orf10, C9orf95, CACNA1I, CAMKK2, CAPN2, CCDC6, CCL4, CCNA2, CCNB3 , CCR7, CCR8, CD27, CDC45L, CDH2, CDKN1A, CDKN1C, CDKN2A, CD01, CFLAR , CHRM1, CISH, CNGB1, COQ6, CRKL, CSNK1D, CTNNA2, CXCL12, CXCR5, CYP2 7A1, DARS2, DCTN1, DDX18, DDX51, DIAPH2, DOLPP1, DUSP2, DUSP6, DUSP8 , E2F5, ENTPD7, EP300, ETS1, EXTL1, FGF17, FLT4, FMO3, FMO4, FOXO1, GA D1, GALNT3, GCNT2, GNAI3, GNAL, GNG13, GNMT, GSTT1, HARS2, HES1, HIF1 A, HTR4, IL10RA, IL11RA, IL18R1, IL1RAP, IL2RG, IMPA2, INHBA, ITGA1, ITGA7, ITPKA, LAMA4, LAMC3, LARS, LDHB, LIPA, LIPE, MAP3K11, MCM3, MD H1, MLLT4, NCR2, NEFH, NEFM, NSDHL, NT5C1B, NTF4, OR10A2, OR10A3, OR1 OG8, OR1C1, OR1J1, OR1J4, OR1Q1, OR2AT4, OR2F1, OR2F2, OR2G3, OR2K2, OR2M2, OR2T5, OR4D5, OR4D6, OR51E1, OR5M8, OR7A5, OR8I2, OR8J3, OR9A 2, OXTR, PCCA, PCYT1B, PDE1C, PDGFC, PER3, PFKFB2, PFKL, PIGO, PLAT, P LCD1, PNPO, POLD2, POLR2J, PPP1R3D, PPP2R2C, PRKAA1, PRKAG1, PRPS1, PTPRB, PTPRR, RARS2, RBPJ, SDC2, SELL, SEMA3A, SETD1B, SFRP4, SMAD5, STEAP3, SUCLG1, SUOX, TAS2R49, THBS4, TLR4, TM7SF2, TNFRSF9, TXNDC1</p>

Negative_15766	<p>CSG, CTH, EDA, GCR, HIK1, MVD, UBB, A4GALT, ADP1, ACSS2, ADKBS, AKR1B10, ANAPC11, APOA2, ARPC2, ARSB, ATN1, ATP5H, ATP5J, BET1, BHMT, CACNG3, CAMK4, CAPN2, CCL2, CCNE1, CCNH, CCR6, CD36, CD47, CD59, CDK4, CDK6, CHPT1, CLDN6, COASY, COL11A1, COL1A2, CRB3, CRKL, CTBP2, CTF1, CTLA4, CTNNA3, CYP2J2, CYP2U1, DARS, DDX23, DDX41, DDX55, DMGDH, DOCK1, DOT1L, EFN3, ENO3, EPHA4, EPHA5, EPRS, F2RL1, FLT3LG, FZD7, FZD9, GALN3, GALNT2, GLDC, GMDS, GMPPB, GNA15, GRLF1, GSTO2, GZMB, HHEX, HLAG, HRAS, ICOSLG, IFNA2, IFNGR1, IL19, IL20RA, IL9R, INSR, ITGB3, KAT2A, KIR3DL3, KRAS, LAMB4, LAMC1, LARS, LCMT1, LIMK2, LIPF, MAD2L2, MAL2, MAP2K1, MAP3K3, MAPK13, MAPK9, MINPP1, NAT6, NCK2, NLGN1, NLGN2, NOTCH3, NT5C2, NTN1, OR10H1, OR10H4, OR10Q1, OR2AE1, OR2D2, OR2H2, OR2T11, OR4A16, OR4C12, OR51V1, OR52N4, OR52R1, OR5AU1, OR5K1, OR5P2, OR5V1, OR6C3, OR7A10, OR8U1, PARD6G, PDE6D, PDE7B, PDHA1, PFKFB2, PFKFB3, PGAM1, PIGL, PIPOX, PLCB4, PLCD1, PLIN, POLR2H, POLR2J, PPA1, PPARA, PPARG, PPM1A, PPM1B, PPP1R3C, PPP5C, PRLR, PRNP, PSME2, PTGDS, PTGER3, PTGES2, PTPN5, RDH11, RPS6KA1, SCIN, SEMA3B, SLC27A1, SLC27A4, SMPD2, SPAM1, SRD5A2, SRGAP1, ST3GAL1, STX10, STX16, STX1A, STX2, TAP1, TAS2R16, TAS2R8, TBK1, TICAM2, TLN2, TPM3, TSNARE1, TUBA8, UBE2C, UBR1, UBR2, MD2, MZ, STR, TEC, TA, TGN, ADI, TACS, RBLIM2, RCO11</p>
Negative_15767	<p>1, ACSM2A, ACSS3, ADCY4, ADH1B, ADORA2B, ADSS, AK3L1, ALAS1, ALDH1A2, ALDH3B2, ALDOA, AOX1, APPL1, ARHGEF6, ARPC2, B4GALT7, BET1L, BMP5, CACNG3, CCR5, CD34, CHST12, CLDN7, CLOCK, CNDP1, CNTN2, CRB3, CREBBP, CRLF2, CTBP2, CTSB, CTSS, CXCL11, CXCL5, CXCR6, DAXX, DDX52, DEGS1, DGKB, DHRS3, DLL1, DRD1, EIF4B, ENTPD5, EPOR, ERO1L, ESAM, FCGR3A, FGD3, FGF2, FMO4, FTMT, GALNS, GALNT14, GALNT5, GLUD2, GMPPB, GMPR, GNA1, GNAO1, GPX5, GSTM4, GUCY2F, HEXB, HMOX2, HRH2, IDH3A, IL15, IL24, IQGAP3, ITGA11, ITGA6, ITGAV, JAK2, KDSR, KIR2DS4, KIR3DL2, KLRD1, LIPI, LLGL2, MAP2K6, MARS2, MECP2, MFNG, MINPP1, MMP14, MNX1, MYH11, MYH14, MYH7B, NADK, NAMPT, NAT5, NCF2, NEFH, NEFM, NFKB1B, NOD1, OR10J3, OR10Z1, OR1E1, OR2A4, OR2G3, OR2M7, OR2T33, OR2T5, OR4N5, OR51A4, OR51B6, OR51F1, OR51Q1, OR52N1, OR5B17, OR5D16, OR5D18, OR5L1, OR6A2, OR6M1, OR9G4, PAK7, PANK4, PAX4, PDE4B, PDE8A, PHKB, PIK3C2A, PIK3R3, PIK3R4, PLA1A, PLA2G1B, PLAU, PLK1, PMM2, POLR2F, POLR2I, POLR3G, PPID, PPP3CA, PRKAG3, PRKCG, PROC, PTPN11, PTPRB, RAF1, RDH10, RDH5, RPS6, RRAS2, SDHD, SELP, SESN2, SETD2, SFRP1, SHISA5, SIAH1, SLC2A4, SOX17, SREBF1, TACR3, TD02, TRAF6, UGT2B10, VKORC1, WNT10B, YWHAB, ZMAP1, ADCY1B1, CACNA1B4, HSD17B10, B4GALT7, B4GALT8, TNERCF11</p>
Negative_15768	<p>AK1, C4B, C6, C9, EDA, F11, GP6, MAX, ME3, OAT, PAH, SCD, TYR, UBC, VTN, AACA, ACPT, ACSL5, ACSM2A, ADCY2, ADCY8, ADH6, AHCYL2, ALG8, AMDHD2, ARNT, ATP2A1, BAAT, BET1L, BMP7, BTRC, C4BPA, C7orf16, CCL15, CCL25, CCNB1, CD14, CDKN2A, CES2, CHEK1, CHRM2, CLDN4, CNTFR, CPT1A, CSF1, CSF2, CTPS, CXCL13, CYCS, CYP1A2, CYP4F3, DDB2, DDX18, DGAT2, DGKE, DHX58, DRD2, EIF4B, ENPP3, FGFR3, GNA15, GNAS, GPX5, GSTA3, GSTT1, HADHB, HSD11B2, HTR2A, HTR2B, HTR2C, IFNA5, IFNAR1, IL22RA1, IL28RA, IQGAP2, KCNQ1, MAGI2, MAP2K1, MAP3K2, MAP4K4, MCM4, MMP2, MNX1, NADK, NDSYN1, NAGLU, NANP, NAT5, NRG3, NT5C1B, OR10G4, OR10T2, OR11H6, OR2C3, OR4D9, OR51A2, OR51L1, OR52A1, OR5L2, ORC6L, PAK3, PAPS1, PDE2A, PDE9A, PDHA2, PGM3, PIGP, PIK3C3, PIP4K2C, PLA2G6, POLR1C, POLR2E, POLR2J, POLR3K, PRPS2, PTK2, QPRT, RAP1B, RASGRP1, RASSF1, SDC3, SELE, SELPLG, SEMA4G, SESN1, SESN3, SGMS1, SH2D2A, SLC2A4, SNAP25, SOAT2, SPHK1, SPTAN1, SREBF1, SSX2IP, STAT1, STMN1, STX16, STX18, SULT1E1, SYNJ2, TCF7L1, TCF7L2, TLR3, TMLHE, TRAF2, TSC1, TSNARE1, TUBA1C, TXNDC12, UCK1, UGDH, USE1, VANGL1, VDAC1, WNT2B, XYLT1, YWHAQ, YWHAZ, ZAP70, ATP6V1G3, CACNA2D4</p>

Negative_15769	<p>ABO, ASL, CP, DCN, GH1, ID3, IL5, LHB, LPL, MOS, WAS, ACTN2, ACVR1, ADH5, ADRB3, AGPAT3, AKT2, ALDH1A3, ALDH3A1, ALG1, AMD1, AMHR2, ATP5E, ATP5J, B3GALT1, BET1, BET1L, BIRC2, C1QC, CACNG3, CACNG7, CAMK2A, CANT1, CD48, CDIPT, CDKN2C, CHDH, CLDN20, COL4A6, CSAD, CTBP2, CXCL11, CXCR5, CYP11B2, CYP26C1, CYP2E1, DDX18, DEGS2, DPM2, E2F2, EFNA1, EIF4E2, EPHA5, EPHA6, ERBB3, EXTL3, FADS2, FGFR1, FIGF, FUT3, FZD1, GALM, GALNTL2, GBA3, GFPT2, GNAQ, GNPAT, GPD2, GRIA2, GUCY2D, HAO2, HARS, HLA-</p> <p>G, IFNA8, INPP5E, IRAK1, ITGB8, KIR2DS4, KLRC2, LAMA3, LEFTY2, LHCGR, LPAR1, MAD2L2, MAP2K4, MMP1, MTAP, NCF2, NFATC1, NKD1, NRCAM, NUDT5, OR10K1, OR10R2, OR10T2, OR14J1, OR1N1, OR2G6, OR51L1, OR52B6, OR52E6, OR52R1, OR5AU1, OR5C1, OR5F1, OR8D4, OR9I1, P2RX5, P4HA2, PCK2, PDGFB, PER1, PGK2, PIGA, PLAUR, PLCZ1, PLXNB1, PLXNB3, PNMT, POLE, POLR1A, PPP1CC, PRKAB2, PTCRA, PTGS2, RDH12, RELA, RXRB, SENP2, SMAD2, SNAI1, SNAI2, SOCS4, SRGAP1, SSH1, THBS4, TNFRSF9, TUBB3, UGCG, UGDH, ULBP3, VAV3, VEGFB, WASF2, XYLT1, ATP6V0A2, ATP6V1B2, EIF4EBP1, HSD17B12, TNFRSF10C</p>
Negative_15770	<p>BTD, C1S, CBL, DC1, F2, FUR, GDA, GLS, FVK, ST, ABL2, ABLIM2, ACADL, ACT2, ACTB, ADSS, ADSSL1, ALG10, ALG13, ANAPC1, APC2, APPL1, AQP7, ATN1, ATP5E, ATP6V0C, B3GNT2, BCKDHB, BCMO1, C1GALT1, C5AR1, CCL27, CCND2, CCNG2, CD14, CD226, CDH2, CHDH, CNGA4, CNTNAP2, COL6A2, COQ7, CPT1B, CREB3L4, CSDA, CTBS, CTLA4, CTNNA1, CTNNA2, CTPS, CXCL10, CYBB, CYFIP2, CYP2A7, CYP2C9, CYP2E1, DDX54, DEGS2, DHRS4L2, DIAPH3, DLAT, EGLN1, EGLN3, ENPP6, EPB41L1, ERBB2, ERO1L, F2RL1, FGF12, FGF20, FZD6, GALM, GALT, GAPDH, GAS1, GCLM, GGPS1, GLG1, GNB1, GNG12, GNPAT1, GRIA1, GUCY1A3, GUCY2C, HBEGF, HCLS1, HEXA, HSD17B3, HTR5A, HTR6, IFNA5, IFNA6, IFNK, IL11, IL13RA1, IL18RAP, IL21, INADL, INPP4A, ITGA11, ITGB3, KIR3DL1, KNG1, LCMT2, LDHB, LHCGR, LPAR1, MADCAM1, MAP2K1, MAPK13, MGST2, MLYCD, MYH4, MYL2, MYLK2, NRG3, NSD1, NT5E, NUDT8, OR10A2, OR13G1, OR2F2, OR2M5, OR2V2, OR4C16, OR4K5, OR4M1, OR4X1, OR51E1, OR52A1, OR56A4, OR5A1, OR5B12, OR5B17, OR5D14, OR5L2, OR5V1, OR6C74, OR6N2, OR8K3, OR9Q2, PAICS, PARD6B, PDGFD, PIAS4, PIGC, PLCZ1, PLOD3, PMM2, PNMT, PNPLA4, POLE2, POLR2B, POLR2J, PPARG, PPP2R2B, PPP2R5B, PPP3CB, PRKCI, PROS1, PSME2, PTGFR, PTPN6, PYCRL, QPRT, RAB23, RDH10, RGS3, RPN2, RPS6KB2, RPSA, SEMA3F, SGPP1, SH3BP2, SOX17, SPRY2, SSU3, CTR, ALA, DCD, P10, TRS, GNZ, LCT, MAG, MPP, MZP, OGY, PC, KCC, SD, JS</p> <p>, IFNA5, IFNA6, IFNK, IL11, IL13RA1, IL18RAP, IL21, INADL, INPP4A, ITGA11, ITGB3, KIR3DL1, KNG1, LCMT2, LDHB, LHCGR, LPAR1, MADCAM1, MAP2K1, MAPK13, MGST2, MLYCD, MYH4, MYL2, MYLK2, NRG3, NSD1, NT5E, NUDT8, OR10A2, OR13G1, OR2F2, OR2M5, OR2V2, OR4C16, OR4K5, OR4M1, OR4X1, OR51E1, OR52A1, OR56A4, OR5A1, OR5B12, OR5B17, OR5D14, OR5L2, OR5V1, OR6C74, OR6N2, OR8K3, OR9Q2, PAICS, PARD6B, PDGFD, PIAS4, PIGC, PLCZ1, PLOD3, PMM2, PNMT, PNPLA4, POLE2, POLR2B, POLR2J, PPARG, PPP2R2B, PPP2R5B, PPP3CB, PRKCI, PROS1, PSME2, PTGFR, PTPN6, PYCRL, QPRT, RAB23, RDH10, RGS3, RPN2, RPS6KB2, RPSA, SEMA3F, SGPP1, SH3BP2, SOX17, SPRY2, SSU3, CTR, ALA, DCD, P10, TRS, GNZ, LCT, MAG, MPP, MZP, OGY, PC, KCC, SD, JS</p>
Negative_15771	<p>RF, UBC, ABLIM3, ACHE, ACO1, ADAM17, AGPAT1, AHCY, AKR1C4, AKT2, ALG3, AOC2, AOC3, ARHGEF7, ARNTL, ATP5J, ATP6V1H, C1QB, CACNG6, CASP7, CCL14, CCR5, CD19, CD82, CDC25B, CDH15, CD01, CER1, CFL1, CHD8, CNTF, COL3A1, CPT1B, CPT2, CREB1, CREB3, CRKL, CSH1, CSNK1G1, CSNK1G2, CTNNA3, CXCL16, CXCL6, CYBB, CYP21A2, CYP4F3, CYP7A1, DAPK2, DAPK3, DDIT3, DDX50, DHFR, DNMT3B, DOLPP1, DPM1, DUSP7, ENTPD5, EPHA6, EPHX2, ERBB4, ETS1, FRAT2, FUT2, G6PC, GALNT13, GALNTL5, GAPDH, GCH1, GLI3, GLO1, GNAI3, GPX7, GRIN1, HLA-</p> <p>G, HTR2C, ICOS, IDUA, IFNGR1, IL15RA, IL1A, IL1R2, IL20, IL22, INHBB, IPPK, IQGAP2, IRF7, ITGA7, ITGAX, ITGB8, KCNQ1, LDHAL6A, LIPG, MAP2K1, MAPK10, MFNG, MGAT3, MGAT5B, MGST3, NCF1, NEGR1, NEUROG3, NKD1, NLGN3, NOTCH2, NT5C2, NUDT5, OR10G2, OR10G7, OR11G2, OR13C2, OR2B11, OR2L3, OR2V2, OR4C6, OR4F17, OR4M2, OR51I1, OR51M1, OR52D1, OR52L1, OR5A1, OR5T1, OR6B2, OR6C1, OR6C70, OR6M1, OR6T1, OR7G2, OR8J3, PAICS, PAK1, PCYT1B, PDE4C, PDE4D, PDE5A, PGAP1, PIAS4, PIGO, PLA2G10, PLA2G5, PMM1, PMM2, POLR1E, PPM1B, PPP1CC, PPP1R1A, PPP2R5A, PRKCE, PSAT1, PTGDS, PTGER1, PTGER3, PTPRC, PYGL, RDH11, RPN2, RPS6KA1, SCP2, S</p>

Negative_15772	<p>AMT, BIC, C8B, C9, DDO, GSS, H11, ID1, IL7, INS, MFZ, MIR, PDC, TPO, AANAT, ABAT, ABI2, ACACB, ACAD8, ACSL3, ACSL5, ACSM3, ACSS1, ACVRL1, ADRB1, ADRBK2, AK3L1, ALDH3A1, ALG10B, ALG13, AMD1, AMPD2, ANAPC11, APOC3, ARPC1A, ARPC5L, ATP2A1, ATP5D, BET1, BIRC5, BMP6, BMP7, CACNA1H, CACNB2, CAV3, CCL13, CD28, CD47, CD82, CD99, CDC45L, CDH5, CHAD, CHKA, CHR1, CLDN1, CNTNAP1, COL5A1, COL6A1, COQ3, CSF2RB, CSH1, CTSS, CX3CL1, CXCL2, CYBA, CYP2A7, CYP2F1, CYP2J2, CYP2U1, DDX50, DHRS9, DIAPH1, DLST, DOLPP1, DTX3L, DUSP1, DUSP10, DUSP16, ENAH, ENO3, ESAM, F13B, FABP1, FADS2, FASN, FTMT, FUT4, FUT9, GAB1, GALNT12, GALNTL5, GATM, GCLC, GCNT2, GGT6, GGT7, GLUL, GNAI1, GNG3, GNRHR, GPD1L, GPLD1, GRIN2A, GRIN2B, HMGCS2, HNF1A, HRH1, HSD3B2, HTR2A, IARS2, IKBKE, IL12A, IL17RB, IL21R, IL3RA, INHBA, INSR, ITCH, ITGB2, ITPKB, JAK2, KITLG, LEFTY1, MFNG, MYLK2, NCR3, NFKBIA, NPR2, NT5M, NUDT5, NUMB, OPLAH, OR10A4, OR1F1, OR1J4, OR1L1, OR2M5, OR2T2, OR2W1, OR4K14, OR51E1, OR52R1, OR52W1, OR5AK2, OR5H2, OR6B2, OR6C3, OR6Y1, OR8B12, OR8J3, OR9I1, OXTR, PCYT1B, PDE8B, PDXP, PEMT, PGAM1, PIM1, PIP4K2B, PIP4K2C, PLA2G2F, PLA2G3, PLA2G6, PLOD1, PMVK, PPAP2A, PPCDC, PPP1R3D, PRKAA1, PRKCB, PTPN11, PTPRJ, PTPRR, PVRL3, QPRT, RARA, RBL1, RBPJL, ROBO1, RPN</p>
Negative_15773	<p><del>AMP, BDNF, PDE, GGF, PIG1, CTB, MFZ, ABC, K, E, IAT, ABCB, ACAD6, ACADS,</del>  ACTB, ADCY8, AKR1C4, AKR1D1, AKT1, ALOX12B, AMHR2, AMPD1, ANGPTL4, AOX1, ARG1, ASIP, ASS1, B3GAT2, BAI1, BIRC3, CACNG5, CAMK2A, CCL7, CD19, CD22, CD44, CD55, CDKN1A, CFL1, CLTC, CSNK1G2, CSNK2A1, CTLA4, CYP3A5, CYP8B1, DAD1, DAPK1, DCTN1, DDX41, DDX52, DHDH, DHRS4, DHRS4L2, DNMT3L, DRD1, DTX1, EFNA4, EFNB1, EPHB2, FARP2, FDFT1, FGF19, FGF21, FUT1, FUT3, FZD6, GALM, GALNT7, GALNT8, GCLM, GCNT2, GCNT4, GFPT2, GIT1, GNG13, GNPAT, GPD1, GRB2, GSTM4, HADHA, HADHB, HAGH, HIBCH, HPSE2, IFNA13, IFNG, IFNGR1, IL12A, IL17B, IL1A, IL24, IL25, IMPA1, INSR, IQGAP1, ISYNA1, ITGA2, ITGA4, KIR2DL2, LALBA, LAMA4, LRAT, LTC4S, MAN1A1, MAN1A2, MAP2K5, MAP2K6, MAP3K2, MAP3K4, MAPK7, MARS2, MGAT3, MGAT4B, MTHFR, MTHFS, NADK, NCF2, NCKAP1, NCKAP1L, NEFL, NEUROD1, NFATC4, NOX3, NR5A2, NSD1, OPLAH, OR10Q1, OR10S1, OR10V1, OR13C4, OR14J1, OR2A4, OR2W1, OR4K14, OR52B6, OR52M1, OR52N2, OR52W1, OR5AN1, OR5B17, OR5I1, OR6C1, OR6C76, OR6F1, OR7A5, OR8A1, OR8K5, ORC4L, OSMR, PAICS, PAPSS1, PCYT1B, PDE3A, PDE6H, PDHA2, PDHB, PER2, PFAS, PFN2, PGAP1, PIGU, PIGV, PIK3C2B, PIM1, PIP5K1B, PIP5K3, PLCB3, PLCD4, PLTP, PNPLA3, POLD3, POLE, PPAP2B, PPARG, PPCS, PPM1A, PPP1CB, PPP1CC, PPP</p>
Negative_15774	<p><del>AGA, CS, CB, CD, CGR, D, E, ENF, F, G, GR, I, J, K, L, M, N, O, P, Q, R, S, T, U, V, W, X, Y, Z,</del>  , SRC, TPO, VCL, AANAT, ABLIM1, ACSL4, ACVR2A, ACY1, ACY3, ADCY6, ADH1B, ADH7, ADRA1B, ADRB3, AHCYL1, AHCYL2, AKR1B10, ALDH1A1, ALDH2, ALG2, ALOX15B, ANAPC2, APAF1, APC2, APOA1, APOC3, ARPC3, ARPC5, ATP5F1, ATP5G3, ATP5O, ATP6VOB, AXIN2, B3GNT4, BAI1, BCAT2, BMP4, BMP5, BMPR1A, BPNT1, CAMK2G, CARS, CCL16, CCL24, CCL3, CCNG2, CD14, CD38, CDC16, CDC20, CDIPT, CFTR, CHST11, CIITA, CLTB, CNTNAP2, COASY, COL1A2, CSDA, CSF2RA, CTLA4, CXCL3, CXCL5, CYP2A6, DAPK2, DDIT4, DDX47, DEGS1, DIAPH1, EFNA1, EPHA3, EPHB1, ERO1L, EXT2, FARSB, FCGR3A, FGF10, FGFR3, FZD8, G6PC, GALNT12, GDF7, GIT1, GNAI1, GPLD1, GRIN2B, GSTA2, GSTA5, GSTM4, GUK1, HADHB, HA01, HHIP, HIF1A, HLA-DMA, HMGCS1, HTR5A, HTR6, IDI1, IL12A, IL18R1, IL22, IL23A, IL3RA, IL6R, INHBC, IRF3, ITGAL, JAK2, KCNB1, KIR2DL3, LDHB, LIPF, LRP6, MAP3K11, MCM6, MGAT2, MGAT3, MMP14, MS4A2, MYH2, MYL9, NAGA, NEGR1, NFASC, NFAT5, NFKB1, NKD2, NMNAT2, NNMT, NOTCH3, NR1H3, NUMB, OR10A4, OR10AD1, OR10C1, OR10R2, OR11L1, OR13C8, OR1F1, OR1M1, OR4K14, OR51B4, OR51B5, OR51F2, OR52N2, OR56A1, OR6B2, OR6Q1, OR7G3, OR8D1, OR8H1, OR8J3, ORC6L, OXTR, PAK3, PDE3B, PDE4B, PDGFB, PDK1, PFN3, PHKA2, PIGB, P</p>

Negative_15775	<p>ADC, CEL, DCN, EDA, EPO, F9, GCR, GSS, IDS, KMO, LAT, LCT, UBC, WAS, A4GA  LT, ABCC8, ABLIM1, ACAD9, ALDH1A3, ALDH4A1, ALDH5A1, ALDH6A1, ALG1,  ALG10B, ARAF, ARNT, ASIP, ASPA, ATF2, ATP5G3, B4GALT6, BACE1, BCL2, B  DKRB2, BET1L, BMP2, BMP4, BRAF, C3AR1, CACNA1B, CACNG5, CARD11, CASP  7, CCL16, CCL28, CD8A, CDK7, CDKN1B, CEBPA, CHIA, CHPT1, CHR1, CHRM1,  CLDN16, CLDN9, COL4A1, CSNK1D, CTNNA3, CTTN, CYSLTR1, DARS2, DDIT3,  DERA, DKK4, DLST, DOCK1, DOT1L, EFNB3, EIF4E2, ENO3, ENPP3, EPHA5, EP  HA6, ERO1L, ETS1, EXT1, F2RL2, FCGR3B, FGF2, FMO2, FMO3, FMO5, FRAT1,  FUT8, GALK2, GCNT4, GDF5, GFAP, GGPS1, GLS2, GMPR2, GNA15, GNAZ, GSTA  1, GSTA2, GSTA3, GSTT1, HEXB, HLA-DOA, HLA-DRA, HLA-  F, HSD11B1, HSD17B3, HSPB1, HTR5A, IARS2, IFNA8, IFNB1, IL19, IL28B,  IMPDH2, IRAK3, ISYNA1, ITGA2B, ITGA5, ITGAL, ITGAM, ITGB2, ITPA, KLR  C2, LAMA4, LAMB3, LCAT, LCP2, LRRC4C, MAD2L1, MAOA, MAP2K3, MAP3K2, M  AP3K5, MASP1, MITF, MLYCD, MMP14, MPST, MYH4, MYH9, NCAM1, NCF1, NCF2  , NFKB1B, NKD1, NME6, NOD1, NOTCH2, NOX3, NTRK2, OR10A5, OR10Q1, OR10  S1, OR1Q1, OR2A4, OR2M2, OR2T1, OR2T10, OR2T4, OR2T5, OR4D11, OR4D2,  OR4D6, OR4K5, OR51B6, OR51G2, OR51T1, OR52E2, OR5L1, OR6C2, OR6T1, O  R9A4, OXCT1, P2RX3, PARD3, PARVG, PDE1A, PDE7A, PDHA1, PDIA4, PEMT, P  CAS, PEK, PCK, PGN2, PIGF, PIS, RMO, ESS, OGT, PCF, PC, PEG, PRL, PRR, XADP  M1, ACOT12, ACOX2, ACSL3, ACY3, ADAM17, ADCY4, ADH1A, ADRB3, AFMID, A  LDH3B2, ALG3, ALPL, ARNT, ARRB2, ATP2A1, B3GALT5, B3GAT3, BBC3, BBOX  1, BCAT1, BLVRB, BMP8A, BRAF, CACNA1I, CACNB4, CAMK2G, CARD11, CARS,  CCL11, CCL22, CCL5, CCR4, CCR5, CDS2, CER1, CHST11, CIITA, CLDN4, CNT  N2, COL4A6, CPT1C, CRHR1, CSNK1G1, CXCL5, DAPK1, DAPK3, DDX23, DOT1L  , DUSP16, ECHS1, EFNA2, EIF4E, ENPP2, ENTPD2, EPB41L2, EPHX1, FCER1G  , FGF7, FGF8, G6PC, GALNT6, GCH1, GGT7, GL01, GLUD1, GLYCTK, GPX5, GRI  N2C, GSTZ1, GYS2, HLA-  DOB, HSD3B2, IFNA4, IFNA5, IL12RB1, IL13RA1, IL22RA1, IRAK1, ITCH, I  TGAD, ITGAV, JAM2, JAM3, LDHD, LEFTY1, LEFTY2, LRAT, LTA4H, LTBP1, LT  BR, MAN1B1, MAP3K13, MAP4K1, MASP2, MEF2C, MGAT1, MTHFD1L, MYH1, NAT  1, NEU1, NFATC1, NPAS2, NRCAM, NTF3, NTRK2, OLAH, OR10A5, OR10AG1, OR  11G2, OR13C3, OR1B1, OR1F1, OR2M7, OR2T33, OR2T34, OR3A1, OR4A15, OR  4D6, OR4D9, OR4F5, OR4N5, OR51M1, OR5H6, OR5I1, OR6C70, OR6Q1, PAK3,  PARD6B, PCK1, PDE8B, PFAS, PFN1, PGAM2, PGAP1, PIGF, PIGU, PIM1, PIP4  K2A, PKMYT1, PLA2G10, PLOD3, PPA1, PPCS, PPP1R3C, PPP1R3D, PRKACG, P  RKCQ, PSEN1, PTGS1, PTTG1, RAD51, RASGRP4, RBKS, RBPJ, RCHY1, RRM2, R  UNX1, RXRB, SDHB, SELL, SELPLG, SESN2, SETD2, SOCS1, SOD1, SOX17, SPR  YQ, SREB1, STK2, STT3B, TAGLN2, TICAM1, TLN2, TNFRSF4, TRAF, TRAF1, T</p>
Negative_15776	<p>ADC, CEL, DCN, EDA, EPO, F9, GCR, GSS, IDS, KMO, LAT, LCT, UBC, WAS, A4GA  LT, ABCC8, ABLIM1, ACAD9, ALDH1A3, ALDH4A1, ALDH5A1, ALDH6A1, ALG1,  ALG10B, ARAF, ARNT, ASIP, ASPA, ATF2, ATP5G3, B4GALT6, BACE1, BCL2, B  DKRB2, BET1L, BMP2, BMP4, BRAF, C3AR1, CACNA1B, CACNG5, CARD11, CASP  7, CCL16, CCL28, CD8A, CDK7, CDKN1B, CEBPA, CHIA, CHPT1, CHR1, CHRM1,  CLDN16, CLDN9, COL4A1, CSNK1D, CTNNA3, CTTN, CYSLTR1, DARS2, DDIT3,  DERA, DKK4, DLST, DOCK1, DOT1L, EFNB3, EIF4E2, ENO3, ENPP3, EPHA5, EP  HA6, ERO1L, ETS1, EXT1, F2RL2, FCGR3B, FGF2, FMO2, FMO3, FMO5, FRAT1,  FUT8, GALK2, GCNT4, GDF5, GFAP, GGPS1, GLS2, GMPR2, GNA15, GNAZ, GSTA  1, GSTA2, GSTA3, GSTT1, HEXB, HLA-DOA, HLA-DRA, HLA-  F, HSD11B1, HSD17B3, HSPB1, HTR5A, IARS2, IFNA8, IFNB1, IL19, IL28B,  IMPDH2, IRAK3, ISYNA1, ITGA2B, ITGA5, ITGAL, ITGAM, ITGB2, ITPA, KLR  C2, LAMA4, LAMB3, LCAT, LCP2, LRRC4C, MAD2L1, MAOA, MAP2K3, MAP3K2, M  AP3K5, MASP1, MITF, MLYCD, MMP14, MPST, MYH4, MYH9, NCAM1, NCF1, NCF2  , NFKB1B, NKD1, NME6, NOD1, NOTCH2, NOX3, NTRK2, OR10A5, OR10Q1, OR10  S1, OR1Q1, OR2A4, OR2M2, OR2T1, OR2T10, OR2T4, OR2T5, OR4D11, OR4D2,  OR4D6, OR4K5, OR51B6, OR51G2, OR51T1, OR52E2, OR5L1, OR6C2, OR6T1, O  R9A4, OXCT1, P2RX3, PARD3, PARVG, PDE1A, PDE7A, PDHA1, PDIA4, PEMT, P  CAS, PEK, PCK, PGN2, PIGF, PIS, RMO, ESS, OGT, PCF, PC, PEG, PRL, PRR, XADP  M1, ACOT12, ACOX2, ACSL3, ACY3, ADAM17, ADCY4, ADH1A, ADRB3, AFMID, A  LDH3B2, ALG3, ALPL, ARNT, ARRB2, ATP2A1, B3GALT5, B3GAT3, BBC3, BBOX  1, BCAT1, BLVRB, BMP8A, BRAF, CACNA1I, CACNB4, CAMK2G, CARD11, CARS,  CCL11, CCL22, CCL5, CCR4, CCR5, CDS2, CER1, CHST11, CIITA, CLDN4, CNT  N2, COL4A6, CPT1C, CRHR1, CSNK1G1, CXCL5, DAPK1, DAPK3, DDX23, DOT1L  , DUSP16, ECHS1, EFNA2, EIF4E, ENPP2, ENTPD2, EPB41L2, EPHX1, FCER1G  , FGF7, FGF8, G6PC, GALNT6, GCH1, GGT7, GL01, GLUD1, GLYCTK, GPX5, GRI  N2C, GSTZ1, GYS2, HLA-  DOB, HSD3B2, IFNA4, IFNA5, IL12RB1, IL13RA1, IL22RA1, IRAK1, ITCH, I  TGAD, ITGAV, JAM2, JAM3, LDHD, LEFTY1, LEFTY2, LRAT, LTA4H, LTBP1, LT  BR, MAN1B1, MAP3K13, MAP4K1, MASP2, MEF2C, MGAT1, MTHFD1L, MYH1, NAT  1, NEU1, NFATC1, NPAS2, NRCAM, NTF3, NTRK2, OLAH, OR10A5, OR10AG1, OR  11G2, OR13C3, OR1B1, OR1F1, OR2M7, OR2T33, OR2T34, OR3A1, OR4A15, OR  4D6, OR4D9, OR4F5, OR4N5, OR51M1, OR5H6, OR5I1, OR6C70, OR6Q1, PAK3,  PARD6B, PCK1, PDE8B, PFAS, PFN1, PGAM2, PGAP1, PIGF, PIGU, PIM1, PIP4  K2A, PKMYT1, PLA2G10, PLOD3, PPA1, PPCS, PPP1R3C, PPP1R3D, PRKACG, P  RKCQ, PSEN1, PTGS1, PTTG1, RAD51, RASGRP4, RBKS, RBPJ, RCHY1, RRM2, R  UNX1, RXRB, SDHB, SELL, SELPLG, SESN2, SETD2, SOCS1, SOD1, SOX17, SPR  YQ, SREB1, STK2, STT3B, TAGLN2, TICAM1, TLN2, TNFRSF4, TRAF, TRAF1, T</p>

Negative_15777	<p>AGK, BCR, C2, C8A, CCR1, CRK, CS, DCR, DDC, FES, FGA, HDC, HGD, JUF, LSS, M  VK, PDC, RB1, TEC, TK2, UBB, ACADL, ACAT2, ACOX3, ACY3, ADIPOR1, ADSS,  ALDH1A1, ALG5, AMPD1, ANAPC10, ANAPC7, AOC2, ARRB2, ATP5I, ATP5J, B3  GALT6, B4GALT4, BBC3, BCAR1, BCKDHA, BCL2, BCL2L1, BTRC, C1QC, CACNG  8, CAMK2D, CCL23, CCL7, CCND3, CCNE2, CCR3, CDC25C, CDK2, CHAT, CHRNA  7, CHSY1, CLDN19, CLDN22, COL5A3, CSNK2A2, CYP1A2, CYP2S1, CYP8B1, D  DIT3, DDX52, DGAT2, DHCR7, DIAPH2, DVL1, E2F1, EFN2, EI24, ELK4, EP3  00, ESAM, ETNK2, FCGR3A, FGF23, FUT9, FZD4, FZD5, GAMT, GCDH, GIT1, GL  B1, GLG1, GLUL, GNB1, GRIN2C, GSTA3, GSTO1, GSTT1, GYS1, HES1, HLA-  DOA, HLA-  G, HNF1A, HSD17B7, HSD17B8, HTR5A, HYAL1, IDI1, IL2RB, IPPK, IRF3, IR  S2, KARS, KIR2DL4, KLRK1, LAMA3, LIPA, LIPC, MAD2L1, MAN1A1, MAN1B1,  MAP2K6, MAP4K3, MARS2, MCM6, METTL2B, MTHFD2, MYH7B, MYL7, MYLK2, NC  F4, NCR2, NFASC, NFKB2, NFX1, NKX3-  1, NLGN2, NPAS2, NTF3, OCRL, OR10A6, OR10G2, OR11G2, OR2A14, OR2L8, O  R2M3, OR4D11, OR4F6, OR51B5, OR52A5, OR5B3, OR5D13, OR5M8, OR5M9, OR  5P3, OR5T3, OR6A2, OR6B2, OR6C3, OR7C2, OR8A1, OR8D1, OR9I1, OR9Q2, O  RC5L, P2RX5, PARVA, PDE8A, PGAM4, PGK1, PI4KA, PIGL, PIK3C2G, PLCD4,  PLCG2, POLR1A, POLR2F, POLR2G, POLR3A, POLR3H, PPAT, PRIM2, PRPS1, P  CR2, PTF1, GLR1, PL2, PL3, PL7, MET, SMO, SIRT1, SKI, ARNT, RBP2, RUP9, R  CSS1, ADRA1D, ADRB3, AKR1C1, ALDH1A1, ALDH5A1, ALDH6A1, ALG10B, ALG  6, ALOX5, APOE, ARNTL, ATG12, ATIC, B3GALT4, B4GALT7, BAI1, BCAR1, BC  L10, BMPR2, BUB1, C4BPB, CASP10, CBR3, CCKAR, CCL25, CCL4, CCNA2, CCR  9, CD40, CD80, CDK6, CDKN2C, CHDH, CHRM5, CLDN4, CLDN7, CLDN9, CLTC, C  OL4A6, CPS1, CTBP2, CXCL12, CXCR3, CYP26A1, DDX23, DGKD, DGKI, DGKQ,  DHODH, DHRS3, DKK2, DLL3, EFNA1, ENAH, ENTPD8, EPAS1, EPB41L1, EPHA5  , FDFT1, FGF13, FGF6, FGF8, FLT4, FMO4, FPGS, FSHR, FTH1, FUT7, FUT8, G  ALNT1, GANC, GCNT4, GLUD1, GOT1, GRM1, GSTM1, GZMA, HA01, HEMK1, HLA-  DMA, HMBS, HNMT, HSD17B8, IL12RB2, IL8RA, INHBC, INHBE, INPPL1, IRAK  1, IRF3, ITPKA, KIR3DL1, KRAS, LAMB1, LIMK2, LIPC, LTA4H, MADCAM1, MA  N2A1, MAP3K11, MAP4K1, MAPK3, MKNK1, MPP5, MRAS, MTMR6, MYD88, MYH11  , MYH7B, NARS2, NAT1, NCF2, NCR2, NEFL, NFKB1, NNMT, NRCAM, NT5E, NTF4  , OR10G7, OR11G2, OR14A16, OR1A2, OR1L1, OR2A25, OR2T12, OR4B1, OR4M  2, OR4N4, OR4S1, OR4S2, OR51A4, OR51F1, OR52A5, OR52E4, OR52L1, OR56  B4, OR5B12, OR6A2, OR7A5, OR8B8, OR8H2, OR9A4, P2RX6, PCNA, PER2, PER  3, PHKB, PIM2, PIP5K1C, PLCD3, PMAIP1, PMM1, POLE, POLE3, POLR1B, POL  R2D, POLR2F, PPM1B, PRKCB, PRPS1, PSEN1, PSME3, PTPRF, PVRL2, PYCRL,  RACGAP2, ROR1, RUVBL1, SCDB1, SLC97A4, SMAD2, SMAD4, SMAD5, SLC12, C7</p>
Negative_15778	<p>CR2, PTF1, GLR1, PL2, PL3, PL7, MET, SMO, SIRT1, SKI, ARNT, RBP2, RUP9, R  CSS1, ADRA1D, ADRB3, AKR1C1, ALDH1A1, ALDH5A1, ALDH6A1, ALG10B, ALG  6, ALOX5, APOE, ARNTL, ATG12, ATIC, B3GALT4, B4GALT7, BAI1, BCAR1, BC  L10, BMPR2, BUB1, C4BPB, CASP10, CBR3, CCKAR, CCL25, CCL4, CCNA2, CCR  9, CD40, CD80, CDK6, CDKN2C, CHDH, CHRM5, CLDN4, CLDN7, CLDN9, CLTC, C  OL4A6, CPS1, CTBP2, CXCL12, CXCR3, CYP26A1, DDX23, DGKD, DGKI, DGKQ,  DHODH, DHRS3, DKK2, DLL3, EFNA1, ENAH, ENTPD8, EPAS1, EPB41L1, EPHA5  , FDFT1, FGF13, FGF6, FGF8, FLT4, FMO4, FPGS, FSHR, FTH1, FUT7, FUT8, G  ALNT1, GANC, GCNT4, GLUD1, GOT1, GRM1, GSTM1, GZMA, HA01, HEMK1, HLA-  DMA, HMBS, HNMT, HSD17B8, IL12RB2, IL8RA, INHBC, INHBE, INPPL1, IRAK  1, IRF3, ITPKA, KIR3DL1, KRAS, LAMB1, LIMK2, LIPC, LTA4H, MADCAM1, MA  N2A1, MAP3K11, MAP4K1, MAPK3, MKNK1, MPP5, MRAS, MTMR6, MYD88, MYH11  , MYH7B, NARS2, NAT1, NCF2, NCR2, NEFL, NFKB1, NNMT, NRCAM, NT5E, NTF4  , OR10G7, OR11G2, OR14A16, OR1A2, OR1L1, OR2A25, OR2T12, OR4B1, OR4M  2, OR4N4, OR4S1, OR4S2, OR51A4, OR51F1, OR52A5, OR52E4, OR52L1, OR56  B4, OR5B12, OR6A2, OR7A5, OR8B8, OR8H2, OR9A4, P2RX6, PCNA, PER2, PER  3, PHKB, PIM2, PIP5K1C, PLCD3, PMAIP1, PMM1, POLE, POLE3, POLR1B, POL  R2D, POLR2F, PPM1B, PRKCB, PRPS1, PSEN1, PSME3, PTPRF, PVRL2, PYCRL,  RACGAP2, ROR1, RUVBL1, SCDB1, SLC97A4, SMAD2, SMAD4, SMAD5, SLC12, C7</p>

Negative_15779	AZM, ADC, ASL, C7, CD2, CDA, EDA, FGB, FGG, GLS, GP1, MLP, MPZ, MUI, NOG, SRF, STS, TNC, ABLIM1, ACOX3, ACSL5, AGPAT6, AGRN, ALCAM, ALDH1A1, ALDH3A1, ALG10, AMDHD1, AMPD2, AMY2B, ARHGEF1, ARHGEF6, ARPC5, ASIP, ATP6V1A, BAIAP2, BDKRB1, CACNA1A, CARS2, CASP3, CCL15, CCL20, CCL3, CCL5, CD247, CD40LG, CDC2, CDC25C, CDKN1C, CLDN20, CNTFR, COL1A1, COL1A2, COQ7, COX10, CREB3L3, CTPS2, CTSG, CYP11B2, CYP2C9, CYP3A4, CYP3A5, DCTD, DDX41, DDX50, DFFB, DLST, DNMT1, DPYD, DUSP3, DVL2, EGFR, ENO3, ENTPD4, ENTPD8, EPAS1, EPHA3, EPHA4, EPHA8, EPHX2, EPOR, ERBB4, EVI1, EXTL3, FARSA, FDPS, FGF13, FGF22, FMO3, FUT3, FUT8, G6PD, GADD45B, GALNT12, GANAB, GDF5, GLI2, GNA14, GOT2, GSTA4, GSTZ1, GUCY1B3, H6PD, HAGH, HMGS1, HTR2A, HYAL1, IAPP, IFNB1, IKBK, IL11RA, IL12RB2, IL1A, IL25, IMPDH2, ITGA10, ITGA7, ITGAD, ITGB8, JAK1, JUND, KARS, KAT2A, KIR2DL2, KIR2DS4, KIR2DS5, KIR3DL1, KLRC2, KLRC4, LEPR, LFNG, LIPC, LIPT1, LRAT, MAP2K2, MAPK9, MCAT, METTL6, MGST2, MYLK2, MYLK3, NANP, NARS2, NCF2, NEU3, NFKBIB, NOTCH1, NTRK1, OCLN, OR13C3, OR1L8, OR1N1, OR2B11, OR2D2, OR2G3, OR2K2, OR2T11, OR4C11, OR4K13, OR52N4, OR5A2, OR5AS1, OR5AU1, OR5I1, OR5T3, OR6A2, OR7A17, OR8H1, ORC3L, ORC5L, ORC6L, OXCT1, OXSM, P2RX3, P4HA1, P4HA2, PAPSS2, PARD6A, PDE1A, RBO, ADC, RSL, CSRP, CDE, PAR, PLM, LBS, KMO, LAT, PAR, ST, SMO, H, P, U, L, ZYX, AADAT, ANAT, ACAT1, ACTG2, ACTN1, ADAM10, ADCY9, ADIPOQ, ADORA2B, AGTR1, ALCAM, APRT, ARG1, ASPA, ATP5A1, B3GALT6, B4GALT2, BCAT2, BMPR1B, BPGM, CACNB4, CALML3, CBR1, CCL27, CDC25C, CDC27, CHPT1, CLDN6, CMBL, CNTF, CNTNAP2, COX10, CRB3, CREB3L4, CSNK1G2, CXCL9, CYP2A6, CYP2C19, CYP2E1, DAPK2, DDX55, DGKI, DNMT3B, DTX1, E2F4, EGFR, ENPP1, ENTPD2, ENTPD6, EXTL3, F13A1, FBP2, FZD3, GBE1, GFAP, GFPT1, GGCX, GPT2, GSTA2, GSTT1, GZMA, HAAO, HADH, HIBADH, HNF1A, HSD17B7, IDH3A, IFNA5, IL17A, IL8RA, INPP4A, INPP5E, ITGB3, JAG1, JUND, LAP3, LEFTY2, LTA4H, MAP2K3, MAP3K2, MAP3K8, MAPK10, MAPK13, MAPK14, MARS, MARS2, MECR, MTHFS, MYH14, NAMPT, NANP, NCR3, NEFL, NEU1, NEU3, NFE2L2, NFKB2, NME6, NPAS2, NSD1, OR10A2, OR11H1, OR11H6, OR14J1, OR1A2, OR1D5, OR1J1, OR2A2, OR2F1, OR2G3, OR2H2, OR2M4, OR2T29, OR2T34, OR4C15, OR4F4, OR51A4, OR51E2, OR52E8, OR52K1, OR52N2, OR52R1, OR6C76, OR6K6, OR7C1, OR8A1, OR8H2, OR9A4, PARVA, PAX8, PDE6D, PDE7B, PDGFRA, PGM1, PGM3, PHGDH, PIGL, PIGQ, PIK3C2G, PIK3R1, PIK3R3, PIPOX, PLAT, PLCZ1, POLR2D, POLR2K, PPP2R2A, PPP2R5D, PRKAG2, PRKCA, PROC, PRODH, PSE, PTGIS, PTK2, PTPRZ1, PVRL4, PYGL, RASGRP2, RBL2, RBPJL, RND1, RO
Negative_15780	RBO, ADC, RSL, CSRP, CDE, PAR, PLM, LBS, KMO, LAT, PAR, ST, SMO, H, P, U, L, ZYX, AADAT, ANAT, ACAT1, ACTG2, ACTN1, ADAM10, ADCY9, ADIPOQ, ADORA2B, AGTR1, ALCAM, APRT, ARG1, ASPA, ATP5A1, B3GALT6, B4GALT2, BCAT2, BMPR1B, BPGM, CACNB4, CALML3, CBR1, CCL27, CDC25C, CDC27, CHPT1, CLDN6, CMBL, CNTF, CNTNAP2, COX10, CRB3, CREB3L4, CSNK1G2, CXCL9, CYP2A6, CYP2C19, CYP2E1, DAPK2, DDX55, DGKI, DNMT3B, DTX1, E2F4, EGFR, ENPP1, ENTPD2, ENTPD6, EXTL3, F13A1, FBP2, FZD3, GBE1, GFAP, GFPT1, GGCX, GPT2, GSTA2, GSTT1, GZMA, HAAO, HADH, HIBADH, HNF1A, HSD17B7, IDH3A, IFNA5, IL17A, IL8RA, INPP4A, INPP5E, ITGB3, JAG1, JUND, LAP3, LEFTY2, LTA4H, MAP2K3, MAP3K2, MAP3K8, MAPK10, MAPK13, MAPK14, MARS, MARS2, MECR, MTHFS, MYH14, NAMPT, NANP, NCR3, NEFL, NEU1, NEU3, NFE2L2, NFKB2, NME6, NPAS2, NSD1, OR10A2, OR11H1, OR11H6, OR14J1, OR1A2, OR1D5, OR1J1, OR2A2, OR2F1, OR2G3, OR2H2, OR2M4, OR2T29, OR2T34, OR4C15, OR4F4, OR51A4, OR51E2, OR52E8, OR52K1, OR52N2, OR52R1, OR6C76, OR6K6, OR7C1, OR8A1, OR8H2, OR9A4, PARVA, PAX8, PDE6D, PDE7B, PDGFRA, PGM1, PGM3, PHGDH, PIGL, PIGQ, PIK3C2G, PIK3R1, PIK3R3, PIPOX, PLAT, PLCZ1, POLR2D, POLR2K, PPP2R2A, PPP2R5D, PRKAG2, PRKCA, PROC, PRODH, PSE, PTGIS, PTK2, PTPRZ1, PVRL4, PYGL, RASGRP2, RBL2, RBPJL, RND1, RO

Negative_15781	<p>C2, C4B, DDC, EDA, F10, F7, F8, FGB, GK, HK1, HPD, ME2, NF1, PEG, SCD, ACH  E, ACOX2, ACTN2, ACVR1C, ACYP2, ADCY10, ADRBK2, AHCYL1, ANPEP, APBB1  , ARPC3, ARPC5, ARRB1, ARSE, ATP12A, ATP6VOC, B3GAT3, BLVRB, BMP7, BM  PR1A, BST1, BUB3, C5AR1, CACNA1S, CAMKK2, CCL23, CCL7, CCL8, CCR10, C  D274, CD79B, CDC6, CDH4, CDK7, CES2, CFTR, CHRM3, CKS1B, CLTB, CREB3,  CRKL, CRY2, CSF1R, CSNK1A1, CSNK1E, CYBB, CYP2B6, CYP2E1, CYP4A11, D  DX51, DDX55, DFFA, DGKH, DHDH, DNMT1, DNMT3L, DOLPP1, DPM1, EDAR, EGL  N1, EHMT1, EIF4E, EPHA3, EXTL3, FGF7, FGF8, FGFR1, FLT1, FLT4, FMO4, F  OXO1, FOXO3, FUT1, FUT6, FZD2, GADD45G, GALK1, GGT7, GNA13, GPT2, GRA  P2, GRIN2C, GSK3B, GSTA3, HAAO, HDAC1, HEXB, HMGCR, HPRT1, HSD17B3, I  DUA, IFNA14, IGSF5, IKBKE, IKBKG, IL20, IL22RA2, IL6ST, IMPDH2, INPP  5B, IRAK4, IRS4, ITGAL, LAMB4, LARS, LCAT, LCMT2, LDHD, LEPR, LIAS, LI  PC, LTBR, MAP3K6, MAPK12, MCAT, MECR, MTFMT, MYH1, NANS, NAT2, NEGR1,  NFKBIE, NKD2, NKX2-  2, NR5A2, NRG2, NT5C2, NTNG1, ODC1, OR10A6, OR10G8, OR10H5, OR13C2, O  R1E1, OR1J1, OR2A12, OR2T1, OR2T3, OR2T8, OR4D2, OR4N2, OR51E2, OR51  Q1, OR56A1, OR5J2, OR5T3, OR6A2, OR6C74, OR6Q1, OR7A5, OR8K3, ORC2L,  PAK3, PAK7, PDE11A, PDE3B, PDE4C, PDGFC, PDGFD, PDHB, PDIA4, PGK2, PH  KA1, PIGA, PKLR, PKMYT1, PLA2G10, PLA2G2A, PLCB1, PLCG1, PLEKHA8, PL  XDR, AR9, ARA, C2, CD1F, GSR, GSS, HRP2, ILS, ILS, LPO, MAX, MF2, PERN, Snp, S  RM, VTN, ABP1, ACTB, ADCY1, ADCY4, AKR1B1, AKR1B10, ALDOB, AMDHD2, AN  APC7, APAF1, ARAF, ARHGEF2, ARNT2, ARPC1A, ARRB2, ASMT, BIRC5, BMP6,  C1QC, C3orf10, CASP10, CBR1, CCL11, CCL25, CCNH, CD38, CD58, CDK5, CD  K6, CHRNA7, CLCA4, COL11A1, COL5A3, COMT, CSF3R, CSNK1G3, CYP2E1, DD  X4, DGKG, DGKI, DHCR7, DLAT, DNMT3A, DPM1, DUSP3, DVL3, ECSIT, EFNA4,  EHMT2, EI24, EIF4E2, ENTPD7, EPB41L1, EPB41L2, ERO1L, ESPL1, ETNK1,  ETNK2, F2RL3, FABP1, FABP4, FCER1G, FCGR2B, FECH, FGFR3, FIGF, FOXA3  , FUT3, GGT1, GJA1, GLI1, GLUD2, GMPPB, GNRH2, GSTA1, GSTM3, GSTP1, GU  CA1B, GUCY2D, HADH, HAO2, HLA-</p>
Negative_15782	<p>C, HSD17B8, HSPA1B, HTR7, HTRA2, IGF1, IL13, IL17RA, IL18, IL21R, IRF  5, IRS4, ITGA2B, ITGAL, JUND, KIR3DL3, LARS, LEPR, MAGI3, MAP2K1, MAP  K8, MASP1, MGAT4B, MGAT5B, MMP2, MRAS, MYD88, MYH4, MYH8, NADSYN1, NC  AM1, NCOR2, NFATC2, NKX6-  1, NMNAT2, NT5C1B, NTF4, NUDT2, NUDT8, ONECUT1, OR10H1, OR10P1, OR10  R2, OR10S1, OR11G2, OR14I1, OR1L4, OR1N2, OR2D2, OR4B1, OR4D5, OR4F4  , OR4X1, OR51A2, OR51G1, OR51M1, OR52A5, OR52E8, OR52K2, OR56A4, OR5  AN1, OR5D14, OR6C74, OR6M1, OR6N2, OR7D4, OXCT2, P2RX3, PAK6, PANK3,  PAX8, PDE10A, PDE8B, PDE9A, PDGFD, PDK1, PECAM1, PFN3, PIGM, PIK3C2A  PDEK1B, PDEK1C, PLCB1, DNMT, DNDC, DOLP1, DON2, DRAT, PPP1CC, PP</p>



<p>Negative_15783</p>	<p>DAO, DBI, DDC, F3, FAN, FER, HDC, IL4, LHB, LTN, NF1, SMO, AASDH, ACACA, ACADM, ACMSD, ACOX2, ACP5, ACSM4, ACTA1, ACTC1, ADH7, ADRA1A, ADRA1B, AGPAT4, ALDH3B2, ALG13, ALG3, AMPD1, ANAPC5, APOE, ATP2A1, ATP5J, A TP6AP1, B3GALT1, BCAR1, BNIP1, C1QB, CACNG5, CACNG8, CARS2, CBLC, CC L28, CCND2, CCNH, CD27, CD47, CDC2, CDH4, CDK2, CHD8, CHRM5, CLDN7, CL TC, CNTF, COQ7, CPOX, CTSG, CXCL5, CYP11A1, DAD1, DERA, DFFA, DGKQ, DO T1L, DPYD, DPYSL2, DTYMK, DUSP4, EDNRB, EIF4E2, EP300, EPHA3, EPHX2, F2RL1, FARSB, FCGR3A, FGF18, FMO1, FPGS, FZD10, FZD5, GALNTL2, GCAT, GCNT4, GFPT1, GGPS1, GNMT, GNRH1, GUCA1A, GUCY1A3, GUSB, GYS1, HIP1, HLA-</p> <p>DOB, HMOX2, HSD3B1, HYAL2, ICOSLG, IFT57, IL17A, IL21, INHBE, INPP5B, ITGB4, JUND, KIR2DL4, KITLG, KRAS, LIFR, LIMK2, LTBP1, MAGI1, MAP2K 2, MAP2K6, MAP3K2, MAP3K5, MAP3K7, MAP3K8, MAP4K4, MCCC2, MCEE, MITF, MLYCD, NAT1, NCSTN, NEU4, NFATC2, NFE2L2, NMNAT2, NMNAT3, NNMT, NOS 1, NOX3, NUDT12, OGDHL, OLR1, OR10A4, OR10G8, OR10H2, OR10P1, OR10X1, OR11H1, OR13G1, OR13H1, OR2B6, OR2L8, OR2M4, OR2T33, OR4K13, OR51B 5, OR51I2, OR51L1, OR52D1, OR52E2, OR52K1, OR52N4, OR5AC2, OR5AK2, O R5AR1, OR7G2, OR8B12, OR8B8, ORC1L, OXSM, PAK1, PDE4A, PDE8A, PDGFD, PFN1, PFN4, PGAM2, PGM1, PHGDH, PIGH, PIGT, PLCB3, PMM1, POLR3K, PPA2</p>
<p>Negative_15784</p>	<p>C2, C14, CRP, DBI, F3, FAN, FER, HDC, IL4, LHB, LTN, NF1, SMO, AASDH, ACACA, ACADM, ACMSD, ACOX2, ACP5, ACSM4, ACTA1, ACTC1, ADH7, ADRA1A, ADRA1B, AGPAT4, ALDH3B2, ALG13, ALG3, AMPD1, ANAPC5, APOE, ATP2A1, ATP5J, A TP6AP1, B3GALT1, BCAR1, BNIP1, C1QB, CACNG5, CACNG8, CARS2, CBLC, CC L28, CCND2, CCNH, CD27, CD47, CDC2, CDH4, CDK2, CHD8, CHRM5, CLDN7, CL TC, CNTF, COQ7, CPOX, CTSG, CXCL5, CYP11A1, DAD1, DERA, DFFA, DGKQ, DO T1L, DPYD, DPYSL2, DTYMK, DUSP4, EDNRB, EIF4E2, EP300, EPHA3, EPHX2, F2RL1, FARSB, FCGR3A, FGF18, FMO1, FPGS, FZD10, FZD5, GALNTL2, GCAT, GCNT4, GFPT1, GGPS1, GNMT, GNRH1, GUCA1A, GUCY1A3, GUSB, GYS1, HIP1, HLA-</p> <p>DVL, ACOX3, ACP2, ACSM3, ACSS3, ACTA1, ACTA2, ADCY2, ADH7, AGPAT3, AK T1, ALDH3B2, ALDH5A1, ALDOB, ALG11, AMDHD1, APOE, ARHGEF1, ARPC3, AS IP, ATF2, ATP5I, ATP6V1F, AXIN2, B3GNT2, B4GALT6, BMP5, CACNB2, CACN G2, CAMK2B, CCL20, CCND3, CCNE2, CD72, CDC14A, CDH3, CDKN2D, CFL1, CH IT1, CLDN10, CLDN7, CLTB, CMPK2, COQ3, CRB3, CRKL, CRLF2, CSNK1G2, CT NNB1, CTSB, CXCL1, CYBA, CYBB, CYP17A1, CYP26A1, CYP2C8, CYP2S1, CYP 3A5, CYP3A7, CYSLTR2, DDHD1, DDIT3, DDX4, DDX51, DDX54, DHFR, DPM1, E FNA1, EIF4E, EIF4E2, ENO3, EPHB1, ERBB2, EREG, ETNK2, ETS1, F2RL1, FG F6, FOSL1, FTH1, GAD1, GAD2, GALNT2, GALNT8, GNB1, GNPAT, GP1BB, HADH, HBEGF, HIF1A, IARS, IL10RB, IL19, IL28A, IL6R, IL8RA, IMPDH2, INADL, ITGAE, ITGAM, ITGB8, KCNJ11, KIR2DL2, LAMB2, LARS2, LLGL1, LLGL2, L TC4S, MAGI2, MALT1, MAP2K3, MAP3K2, MAPK3, MCM7, MPP5, MS4A2, MTHFR, MYH1, NAE1, NAGLU, NARS, NAT1, NFKBIA, NNMT, NOS3, NOX1, NTF3, NTF4, N UDT8, NUMB, OR10K1, OR10P1, OR11H1, OR13D1, OR1D2, OR1J4, OR1L3, OR1 N1, OR2D2, OR2T11, OR2T5, OR2Z1, OR4A16, OR51A4, OR51B6, OR52W1, OR5 D13, OR5L1, OR5P3, OR5T3, OR6B3, OR6K2, OR7C1, OR9Q2, ORC3L, PAX4, PD E6H, PDE7A, PDPK1, PFN3, PIAS3, PIGF, PLCG1, PNPT1, PPID, PPM1A, PPP2</p>

Negative_15785	<p>DDC, DDO, EGF, GDA, ID4, IL3, IL6, PDC, SFT1, STR, ACADL, ACSL3, ACSM2A, ADCY10, AHCY, ALAS2, ALPL2, ARNT2, ARPC1B, ARPC3, ARRB2, ASRGL1, ATG3, ATP2A1, B4GALT1, B4GALT6, BET1L, BLNK, BMP7, BUB3, C1QC, C7orf16, CACNB1, CASP6, CBR3, CCL20, CCNA2, CCNB1, CD58, CDH3, CDK6, CDK7, CE BPA, CER1, CFL2, CHST12, CHUK, CLCF1, CLDN20, CNTF, COL1A2, CPT1C, CP T2, CREB3L2, CREB3L3, CSNK2B, CYP2C8, DDX19A, DFFB, DGKB, DHDH, DLL1, ELK4, EPHB1, ESPL1, FCER1G, FGF13, FSHB, FTH1, FZD6, GAPDH, GCNT4, G FPT1, GGCX, GGT6, GNA14, GNAQ, GNB3, GPX7, GSTM4, GSTO1, HCLS1, HLA- F, HNMT, HPSE, ICOSLG, IFNA6, IFNGR1, IFNW1, IL10, IL15, IL17A, IL18R AP, IL8RB, INPP1, INPPL1, IRS2, ITCH, ITGB4, ITPKA, KCNJ11, KIR2DS4, LCAT, LIMK2, LRDD, MADCAM1, MAPK13, MDM4, MGST3, MINPP1, MMP7, MTMR2, MYH9, NADK, NAGS, NCAM1, NCK2, NCR3, NFATC3, NME2, NMNAT1, ONECUT1, OR10G2, OR10J5, OR10K2, OR10S1, OR10V1, OR11G2, OR11H4, OR1A2, OR1N 2, OR2F1, OR2V2, OR3A3, OR4F4, OR4N2, OR51A4, OR51I1, OR52D1, OR56A1, OR8H1, OR8H2, OR8S1, OR9G4, PAX8, PCNA, PDE4B, PDGFD, PFKFB2, PGAM1, PGS1, PHKA1, PHKB, PLXNA2, POLE2, PPM1A, PPP3CA, PRKCA, PRKCE, PRPS 1, PSME2, PTCH2, PTGES, PTGS1, PTGS2, RALGDS, RARS2, RUVBL1, SEMA3B, SEMA4C, SETD7, SETDB1, SETDB2, SHC4, SLC12A2, SLC27A4, SLC2A2, SPRY</p>
Negative_15786	<p>ADG, AAT, ACP, ACP6, ACPT, ACTA1, ACTC1, ACVR2B, ACVRL1, ADRB1, AGPA T1, AGPAT4, AGPAT6, AKR1A1, ALDH1A1, ALDH1L1, ALG6, AMDHD2, AMPD1, A MY2A, APOA2, APOE, ASS1, ATF4, ATG3, ATP13A2, B3GAT2, BACE2, BCL2L1, BLVRA, BUB3, C1GALT1, CACNA1E, CACNG8, CCL14, CCL21, CCL26, CCL5, CC NA1, CCR1, CD3E, CD44, CD48, CD8A, CDC25B, CDH3, CDK6, CHD8, CISH, CLD N14, CLDN4, CLDN5, CMPK2, CNTNAP2, COL4A2, COL5A3, COQ3, CPT1C, CSDA, CSF1, CSF3, CSNK2B, CTBP1, CTF1, CTPS, CTSF, CTTN, CXCL12, CYP2A7, C YP2C9, CYP2E1, CYP8B1, DCTD, DHCR7, DRD2, EARS2, EIF4E2, ENTPD2, EPH B3, EREG, EXTL2, FGF18, FGF9, FMO4, FOXA3, FSHB, G6PD, GAL3ST1, GALNT 13, GALNT7, GALNTL1, GALNTL4, GALT, GFPT1, GNA11, GNAI1, GNAT3, GPX5, GRIA2, GRLF1, HAO1, HBEGF, HEMK1, HRH2, HSPA2, IAPP, IFNG, IFT57, IK BKE, IL12RB2, IL13RA1, IL15RA, IL17B, IL21, IL4R, INHBC, IRF7, ITGA1, ITGA10, ITGA5, ITGB6, KIR3DL1, LAMB2, LLGL2, MAGI3, MAML3, MAN1A2, MAP3K3, MAPK1, MAPK7, MCM7, MITF, MMP7, MYH10, MYL2, NAE1, NCAM1, NFA TC2, NFATC4, NFKB1B, NME6, NMNAT1, NOD1, NODAL, NPR1, NRG1, NT5M, OCR L, OLAH, OR10A4, OR13F1, OR14A16, OR14I1, OR1L4, OR2H1, OR4C15, OR51 E2, OR52M1, OR52W1, OR5AR1, OR5K2, OR6B2, OR6K6, OR6Q1, OR6S1, OR7D4</p>
Negative_15787	<p>ADG, AUR, RMY, C2, CDA, CEE, CDT, DLD, PFS, PUS, GDA, GLS, INS, MBS, MYL, PVR, TNN, WAS, ACOX3, ACTA1, ACY1, ADRB3, AGRN, ALDOA, ARG1, ARHGEF6, ATF4, ATN1, ATP6V1F, BCAT2, BCL2, BMP4, CACNG2, CARS, CASP8, CCDC6, C CNB3, CCR5, CD40LG, CDC25B, CLDN1, CNTF, CNTNAP1, COL6A2, CREB3L1, C REB5, CREBBP, CSF2, CTBP2, CTNNB1, CYBA, CYP11B2, CYP17A1, CYP27A1, DHCR24, DHDH, DHODH, DLL4, DPYS, E2F4, EARS2, ENO1, ENPP2, ETNK2, FAD S2, FGF19, FRAP1, FTH1, FZD9, GBGT1, GNA11, GNAO1, GNG3, GNPDA2, GOT2, GPLD1, GSTO2, HAAO, HARS2, HES1, HEXA, HPSE, HSPA2, IGSF5, IL1ORB, I L2ORB, IRAK1, ITGA11, ITPA, JAK2, KLRC2, LAMC3, LDHC, LEPR, LIMK2, LR AT, LTBP1, MAP3K7, MAPK13, MASP2, MICA, MPZL1, MYH7, NEFH, NEGR1, NMN AT2, NOD1, NR5A2, NUDT9, OR10G3, OR10G7, OR10G8, OR1L3, OR1M1, OR2F1, OR3A2, OR4A15, OR4A5, OR4E2, OR51A2, OR51E1, OR51L1, OR52J3, OR52K 1, OR52N4, OR5AU1, OR5B21, OR5D18, OR8J3, OR9A2, OR9G1, P2RX4, P2RX7, PAFAH2, PDE1B, PDE4C, PDGFRB, PFKFB1, PFKM, PGAM4, PHKG1, PHPT1, PI GK, PIK3CG, PLAUR, PLXNA3, POLR2C, PPA1, PPARG, PPAT, PPM1D, PPP3CB, PRKAG3, PTEN, PYGL, RAP1B, RFW2, RHOD, RPS6KA6, SEMA4B, SEMA4C, SES N1, SH3BP2, SHMT2, SIPA1, SLIT2, SMAD9, SMPD1, SMPD4, SNAP25, SOCS4, SORBS1, SRD5A1, SSH1, ST3GAL1, ST3GAL2, ST6GAL1, STAM2, STX12, SYNJ</p>

Negative_15788	ABO, AMH, BAX, CC, DCC, FGA, FOS, ILK, FTS, FXN, IRL, AASS, ACADM, ACOT1, 2, ACOX2, ACY1, AGXT2, ALAS1, ALDH3A1, ANAPC11, AOC2, ARPC5L, ATP5G3, B3GNT5, BCAT2, BDH2, BDNF, BMP8A, C1QA, C1QC, CACNA1E, CACNA1F, CACNG3, CALML6, CCL14, CCL16, CCL2, CCL22, CCL23, CCR10, CCR7, CD28, CD72, CD86, CDH1, CDK4, CER1, CHAT, CHR1, CHRM2, CLDN4, CLDN8, CNBP1, COL6A2, COQ6, CSF3, CSNK1D, CTSL1, CTSS, CXCL11, CXCR3, CYBA, CYP21A2, DAPK2, DERL1, DHODH, DHRS4L2, DIAPH2, DRD1, DUSP8, ENTPD5, EPHA5, EPHX1, FGF17, FGF19, FGF9, FUT1, GAMT, GANAB, GBA3, GLB1, GMPR, GNAL, GNA13, GNG12, GNPDA1, GNPDA2, GRHR, GRM1, GSTT1, GZMB, HAGH, HDAC2, HLA -
Negative_15789	DOA, HMGCS1, HNF1A, HSD11B2, HSD17B7, HSD17B8, HSPA8, IDH1, IFNA13, IL21R, IL7R, IL9R, INPP5E, IRS1, ITGA2, ITGB6, ITGB8, ITPA, KLRD1, LALBA, LDHC, MAD2L1, MAP2K3, MAP2K5, MAP3K1, MAPK11, MCM2, MCM6, METTL2B, MGLL, MGST1, MIOX, MYH1, MYH15, MYH8, MYH9, NNMT, NR1H3, NRXN1, NSDHL, NT5C1B, NUDT2, OR10G7, OR13G1, OR1D5, OR1L1, OR2AG2, OR2B2, OR2T33, OR4A5, OR51M1, OR51S1, OR52D1, OR52E6, OR5AP2, OR5F1, OR5P3, OR6B3, OR8H1, OR8K5, ORC1L, P2RX5, PARS2, PAX6, PDE1B, PDE4C, PDX1, PECAM1, PGM1, PHKA2, PIGT, PIGV, PIK3R4, PLCD1, PLTP, PPA1, PPM1B, PPP1R1A, PPP1R3A, PPP2R5A, PPP2R5C, PPP3CB, PRKAG3, PTSS2, RAB23, RHOD, <del>RRM1, BTK, EDAR, E2F3, FBN1, GAZ, GATA, GFG9, K11, PKRX, PFS, SDB, TTR, VCL,</del> AANAT, ACSL3, ACSM4, ACVR2B, ADCY3, ADRA1B, AGXT2, ALCAM, ALG10B, ALG12, ALG3, ALOX15B, ANAPC11, ANGPL4, APPL1, ARNT, ARSA, ASPA, ATP2A3, ATP4B, BCAR1, BDH2, CACNA1E, CCL16, CCL5, CCR10, CHEK2, CLDN11, COL2A1, CSNK1E, CXCL12, CXCL5, CYSLTR2, DHFR, DHRS3, DLST, EFNA2, EHHA1, ENTDP3, ENTDP4, EPHA2, F13A1, F2RL1, FCER1G, FLOT1, FMO3, FRAT2, FUT3, FZR1, GALNT7, GDF7, GMDS, GPAA1, GUCA1C, GUCY2D, GUSB, GZMA, HHX, HMBS, HNF4A, HSPA2, HTR2B, HYAL1, IDUA, IFT57, IL17A, IL2RB, INPP1L, IPMK, ITPK1, JAG1, KDSR, LAMC1, LARS, LDHD, MAP3K2, MASP1, MCM2, MGS2, MMP14, MPP5, MTHFD2, MYLK3, NARS2, NCF1, NEU1, NEU3, NEUROG3, NYFYB, NOD1, NOS1, NR1D1, NSD1, NUDT5, OGDH, OR10A3, OR10A6, OR10J3, OR10P1, OR10S1, OR1L6, OR1Q1, OR2D2, OR2M4, OR2T8, OR51A2, OR52A1, OR52A5, OR5A1, OR5AS1, OR5D13, OR6C2, OR6C76, OR6F1, OR9G1, OR9Q1, ORC1L, P2RX5, PDE11A, PDE2A, PDIA4, PEMT, PFN4, PIGB, PIP4K2C, PLCD4, PLCG1, PMM2, PNPO, POLD3, POLR1D, POLR2D, POLR3B, PPP1CA, PPP1R3B, PPP2R5B, PPP2R5D, PRKAB1, PRKACB, PRPH, PYGL, RAPGEF2, RCHY1, RENBP, RERE, RPIA, RPS6KB2, RRM1, SC4MOL, SDC2, SDHB, SEMA4A, SEMA7A, SETD1A, SETD1B, SGPP2, SH2D2A, SLC25A6, SPTLC2, SRD5A2, STAM, STAT4, STX8, TA CR1, TAGLN2, TAGLN3, TAGLN4, TCEZ1, TCEZ2, TICAM1, TIR1, TLR4, TLR5,

Negative_15790	<p>AMT, BCR, BTK, CAD, CGA, EDA, F8, HKS, LEP, OTC, PVR, S1, TK2, A4GAL1, AC  OX3, ACY1, ADCY10, ADCY3, ADCY8, ADCY9, ADH5, ADRA1A, AGPAT2, AKR1B1  , AKT1, ALG6, ALOX15B, AMDHD1, AMY2A, ARG2, ARHGEF4, ATG12, ATN1, ATP  5F1, ATP6V1F, BBC3, BCAR1, BLNK, CACNA1D, CACNB3, CACNG8, CADM3, CCL  15, CCL17, CCL19, CCR3, CDC14B, CDC26, CDC6, CDKN2D, CHIT1, CHRM5, CH  SY1, CLDN19, CLDN2, CLDN5, CSF2RA, CSF3, CSNK1G2, CTF1, CTNND1, CTTN  , CXCL3, CXCL9, CYP4A11, DDX47, DGUOK, DLL1, DUSP1, DUSP5, E2F3, EDAR  , EDN1, EFNA2, ENPP2, ENTPD7, FECH, FPGS, GALK2, GALNT3, GART, GCNT2,  GCNT3, GLG1, GNA11, GPD1, GPD2, GRM1, GSTA5, GUCA1C, GUCY1A3, HMBS, H  PSE, HSD17B8, IFNA14, IFNA4, IL23A, IL25, IPMK, IRF5, ITGAE, ITGB1, J  AK1, KNG1, LDHAL6B, LFNG, LMO7, MAGI1, MAP3K8, MASP2, MAT1A, METTL6,  MGAT3, MNX1, MYH7B, MYLK2, NAGK, NEU4, NFKBIE, NRCAM, NUDT8, OR10T2,  OR11H6, OR1D5, OR1J2, OR1J4, OR2A4, OR2AG2, OR2G2, OR2G6, OR2T11, OR  4F17, OR4K17, OR4S1, OR52B4, OR52L1, OR52N2, OR52W1, OR6B3, OR6C75,  OR7C1, OR7C2, OR8I2, OR8K1, OR9G4, OR9I1, OR9Q1, OSMR, OXCT2, OXTR, P  2RX4, PAK2, PDGFD, PHKA2, PIGK, PIGT, PLCB3, POLE3, PPID, PPP1R3C, PP  P2CB, PPP2R2B, PRODH, RASGRP2, RBX1, RDH8, ROCK2, RPS6KA6, RPSA, SES  N1, SHISA5, SLC25A4, SLC2A2, SOAT1, SOCS1, SOCS7, SRD5A2, ST3GAL3, S</p>
Negative_15791	<p>ACAD8, AC01, ACTA2, ACVR1B, ACYP1, ADH7, ADIPOR1, ADORA2A, ADRB3, AG  XT, ALDH9A1, APBB1, APLP1, ARG2, ARPC5L, ASRGL1, ASS1, ATG12, ATP5A1  , ATP5H, ATP6V1F, ATP6V1H, B3GNT2, B3GNT5, BIRC3, BMP5, BMP8A, BST1,  C1QB, C1QC, CALML6, CAMK2A, CARD11, CASK, CBLC, CCKBR, CCNA1, CCND2,  CD40LG, CD44, CDC20, CDC25A, CDK2, CDK7, CES2, CHR1, CLDN10, CLDN9, C  NTN1, CNTNAP2, CRLF2, CTLA4, CTNNA3, CTTN, CX3CR1, CXCL1, CXCL16, CY  FIP2, CYP2C9, DCTN1, DDIT3, DDX23, DDX47, DDX52, DDX54, DGUOK, DHCR2  4, DUSP5, E2F5, EARS2, ECHS1, EFNA3, FARS2, FCGR3A, FGF1, FGF21, FGF2  2, FGFR2, FOSL1, FRAP1, FUT4, GAPDH, GAS1, GBA3, GRB2, GRPR, GSTM4, GS  TM5, GSTP1, GUCY1A2, GUCY1A3, GZMA, GZMB, HADH, HDAC2, HMGCL, HNMT, H  PSE, HRH1, HRH2, HTRA2, ICAM3, IL1B, IL1R2, IL6ST, IL9R, IRAK3, IRAK4  , KIR2DL2, LDHB, LDHC, LRP5, MAML1, MAP2K3, MAP2K6, MAP2K7, MAP3K6, M  AP4K1, MCM6, MGLL, MGST1, MLLT4, MTFMT, NCF1, NCKAP1, NCOA4, NEUROD1  , NFATC3, NFKBIA, NR5A2, NRAS, NRCAM, NRG1, NUMB, OR10A5, OR10C1, OR1  OG2, OR13A1, OR1E1, OR1J2, OR1L3, OR1L8, OR2A14, OR2G3, OR2L3, OR2T1  , OR2T33, OR4D1, OR51A7, OR5J2, OR5K2, OR6F1, OR7A5, OR8B4, OR9Q1, OX  CT1, P2RX1, PAICS, PANK1, PAX6, PAX8, PCK1, PCYT2, PER3, PGAM4, PLCB1  C2, CBL, CYP11A3, GATA1, ID2, IL2, JON, ME1, NRP1, PGP, PPM5R, PPP2R2, RYR1</p>
Negative_15792	<p>ACADSB, ACVR2A, ADCY3, ADH1A, ADSL, AGRP, AGXT, AKR1D1, ALDH1A2, A  LDH1B1, ALDH1L1, ALDH2, ALG6, ALG9, AMPD2, ARPC5, ATF2, ATP6VOC, B4G  ALT6, B4GALT7, BCAR1, BUB3, C1GALT1, C3AR1, C4BPA, CACNA1S, CAMKK2,  CARS2, CCL27, CCNE2, CCR5, CCR6, CD48, CD55, CD58, CD59, CDC27, CDC42  , CFLAR, CHAD, CHAT, CLDN15, CLDN18, CLDN6, CMBL, COL2A1, COQ6, COX15  , CPT2, CRB3, CRY2, CSF2RA, CSNK1D, CSNK2A1, CXCL10, CXCL2, CXCR4, CY  P26A1, CYP2A13, CYP2U1, CYP4A11, DHFR, DKK1, DKK2, DMGDH, DNMT3A, DU  SP7, E2F4, EFN1, EGFR, ENPP2, EPHA6, EPHA7, EPHB2, EPOR, FDFT1, FLT3  LG, FOSL1, GALE, GAPDH, GARS, GJD2, GLYCTK, GNA01, GNAT3, GRIN2A, HAG  H, HAP1, ICOS, IDH3A, IGSF5, IL12B, IL15, IL1R1, IL7R, IMPA1, IMPA2, I  NHBB, INPP5A, ITCH, ITGA11, ITGAL, ITGB6, ITPK1, KDSR, KLRC2, KLRK1,  LTBR, LYPLA1, MAGI2, MARS2, MASP2, MCCC2, MCM2, MEF2C, MFNG, MGAT3, M  GAT4A, MGAT5, MGLL, MYH4, MYH8, NAGK, NCAM1, NEGR1, NFYB, NKD2, NMNAT  2, NODAL, NOS1, NRCAM, NRXN3, NT5C1A, NTN1, OLR1, OR2H1, OR2L2, OR2T3  , OR4K13, OR51A7, OR51B4, OR51E1, OR52D1, OR52E6, OR52M1, OR5A1, OR5  AC2, OR5AS1, OR5B17, OR5J2, OR7A17, OXCT1, P2RX3, PARVG, PAX6, PDE2A  , PDE8A, PDHA1, PER3, PERP, PFKFB4, PHKB, PI4KB, PIGF, PKLR, PLCB3, PM</p>

Negative_15793	<p> CC, CEL, CF, DCR, FGG, FNI, IL7, PDC, FVK, SDS, STR, AADA1, ABLIM3, ADF1  , ACAD8, ACP5, ACSM2A, ADH1A, ADH5, AGRP, AHCY, AKR1A1, AKR1C1, ALDH3  B2, ALG5, ALPPL2, AMY2B, ANGPTL4, APOA1, ATG7, ATP5E, B4GALT7, BAAT,  BCL2, CACNA1A, CARD11, CASP10, CCDC6, CCL28, CD38, CD40LG, CD70, CD8  2, CDC26, CDH15, CDH3, CDK2, CDK6, CDKN2C, CES1, CHRNA7, CISH, CLDN16  , CLDN6, CMAS, CMBL, CNGA3, COL5A2, CSNK1A1, CSNK1D, CSNK2A2, CTSL1,  CYP2C19, CYP3A5, CYSLTR2, DDX47, DNMT3A, DTX2, EFNA4, EFNB1, EGLN1,  EHHADH, EPB41L1, EPHA5, EPHA7, EVI1, EXTL2, F13A1, FASN, FCGR2B, FGF  4, FGF5, GALC, GALNT7, GALNTL1, GCH1, GDF5, GLUL, GNA15, GNAQ, GNRH1,  GRB2, GRIN2D, GUCA1B, GUCY1B3, HEMK1, HES1, HIP1, HMBS, HNF4G, HRAS,  HSP90B1, HTR6, IFNA8, IFNAR2, IFNGR1, IL1R1, IL2ORA, IL22RA1, IL6R,  IL7R, IMPDH2, INADL, INHBA, IRAK1, IRS1, IRS4, ITCH, ITGA11, ITGA3, I  TGB1, ITGB2, KCNJ11, KIR2DL4, LAMC1, LCP2, LRDD, LTB4R2, MAN2A1, MAP  2K7, MAP3K3, MAP3K4, MAP3K8, MAPK13, MFNG, MITF, MKNK1, MMP14, MPZL1  , MTHFD1L, NAT5, NCOR2, NRP1, NUDT8, OLR1, OR10AD1, OR10G3, OR10P1, O  R10R2, OR11G2, OR13C5, OR14J1, OR1A2, OR1S2, OR2Y1, OR4D9, OR4F4, OR  4S1, OR52I1, OR52N1, OR56A1, OR5T2, OR6N1, OR6N2, OR7C1, OR8D4, OR8H  1, OR8H2, P2RX4, PAK3, PDGFA, PDHB, PFN3, PGK2, PHPT1, PIGB, PIP4K2B,  RBOA, RAI1, RAMP, RAMP3, RASA, RBL1, RBL2, RBL3, RBL4, RBL5, RBL6, RBL7,  PDC, RDX, SRC, TAT, ABLIM2, ACADSB, ACP2, ADCY8, ADRB2, ADRB3, ADSL, A  LDH4A1, ALDH9A1, ALG6, ALOX12, AMDHD2, ANAPC10, APOC3, ATP2A2, BBOX  1, BLVRB, C1QB, CACNA1C, CASP6, CCDC6, CCL24, CCR2, CD19, CD99, CDC20  , CDC27, CDC42, CDH5, CFL2, CHKA, CLCA2, CLDN10, CLDN18, CLDN20, CLDN  6, CREB3L2, CSF1, CSNK1G1, CTBP2, CTPS2, CXCL1, CXCL12, CXCL6, CYP1A  2, CYP2J2, CYP4A11, CYP4F2, DERL1, DTX3, E2F1, EHHADH, ENPP1, EPHA3,  EPHA4, EPHX1, FBXW11, FGF10, FGF11, FGF13, FGF19, FGF8, FPGS, FRAP1,  GALNTL4, GBA3, GMPPA, GMPR2, GNAS, GP1BA, GRIA1, GSTA3, GSTZ1, HLA-  DOB, HSD17B1, HSPA1B, IARS, IDH1, IL11, IL17B, IL6R, IMPDH1, IRAK1, I  TGA8, ITGA9, ITGAD, ITGAV, KLRD1, LARS, LFNG, MAML3, MAN1A1, MTHFD1L  , MYH10, MYH7B, MYH9, NARS2, NCAM1, NFASC, NFATC4, NFX1, NKX6-  1, OCRL, OR10G7, OR10H5, OR10J5, OR10P1, OR10T2, OR13C8, OR13J1, OR1  A2, OR1B1, OR4A15, OR4A5, OR4C11, OR4F5, OR52E8, OR52N1, OR5AC2, OR5  D14, OR5J2, OR5P3, OR6C3, OR7A5, OR7G2, OR8H3, PAK1, PARVA, PAX8, PDE  6D, PGS1, PHKG2, PIGF, PIGS, PIGT, PIK3CB, PLAUR, PLCB4, POLR2C, POLR  2D, POLR3D, PPP1R3C, PRKAG2, PRKAG3, PRKCA, PRKCD, PRLR, PRPH, PRSS2  , PSAT1, PTAFR, RAC1, RAD51, RAF1, RARS2, RASGRP2, RPSA, RUVBL1, SEMA  </p>
Negative_15794	<p> ADA, ARRY, ARY, C4B, C5, C9, CSK, CUB1, CUB2, CUB3, CUB4, CUB5, CUB6, CUB7,  8, LSS, LYN, ME3, SHH, ZYX, ABP1, ACACA, ACVR1B, ACY1, ADH6, ADORA2A, A  HCY, AK3L1, AKT1, ALAD, ALDH1B1, AMDHD1, ANAPC4, ANGPTL4, ANPEP, APO  E, ARD1A, ARHGEF2, ARNT, ARNT2, ARNTL, ASCC3, ATP2A3, ATP50, B3GALT5  , B3GNT4, B4GALT4, B4GALT6, BDH1, BMPR1A, BMPR2, C3AR1, CACNA1C, CAC  NB1, CBLB, CCNA1, CCNG1, CD38, CD59, CD70, CDK4, CDKN1A, CHKB, CHUK, C  LCA2, CLDN16, CLDN20, CLDN4, CNTN2, COL5A3, CREB3, CREB5, CREBBP, CS  F2, CXCR6, CYP2S1, DDX50, DLAT, DTX1, DTX3, DUSP1, DVL3, EFNB2, EGLN3  , ENO3, ENTPD1, ENTPD6, ENTPD8, EPHX1, ESAM, EXTL1, F2RL1, F2RL3, FBP  1, FCGR3B, FDPS, FGF1, FIGF, FLT3LG, FM03, FOXA3, FOXO3, FZD1, FZD9, G  AD2, GALNT8, GCAT, GDF5, GLUD1, GNG13, GPD2, GRIN1, GSK3B, GSTA5, GUC  A1A, HLCS, IGF1R, IL17RB, IL1R2, IL20, IL21R, IMPA2, INHBA, ITGA10, J  AK3, KCNJ11, KIR2DL1, KITLG, KLKB1, KLRC3, LAMB2, LHCGR, MAP2K2, MAP  K1, MCM7, MFNG, MGAT5B, MINPP1, MLYCD, MOV10L1, NAGK, NCF4, NCOR2, NC  R1, NEFM, NLGN1, NLGN3, NME6, NPAS2, NRG1, NTF4, NTRK1, NUMBL, OPLAH,  OR10H4, OR10J1, OR10Q1, OR11A1, OR1G1, OR2L8, OR2T6, OR51B2, OR51E2  , OR51F2, OR51G1, OR52B4, OR52R1, OR56A1, OR5P3, OR6C3, OR6C4, OR8D4  , OR9K2, OSMR, P4HA1, PAK4, PANK3, PARD6A, PDE11A, PDE7A, PDE7B, PDGF  </p>
Negative_15795	<p> 1, DNMT, PEGAN1, PEYB9, PHC9B, PLAC1, PLK9CB, PLK9CC, PLK9D, PLK1  </p>

Negative_15796	<p> <del>ABO, AMH, BTC, C2, C3, CFD, DB1, FAS, FTH, GPO, GSS, HAL, HMK, MAG, PDC, S</del>  <del>HH, TPO, AACs, ACTA1, ACTN1, ACY3, AGPAT2, AGXT2, AK3L1, ALAS2, ALDH3</del>  <del>A2, ALDH9A1, ALG9, ANAPC11, AOC3, APOA5, ATP5B, ATP5D, ATP5J2, ATP5O</del>  <del>, B3GALT1, BDKRB1, BET1, BIRC2, BLVRB, BMP8B, BMPR1B, C3AR1, CACNA1B</del>  <del>, CACNG8, CAMKK2, CASP7, CBLB, CCL19, CCL28, CD3E, CD80, CD99, CDC6, C</del>  <del>DS1, CFTR, CHEK2, CHR1, CHRM5, CHST13, CLCA4, CLDN16, CLDN22, CLTA, C</del>  <del>OL4A1, COL5A2, COL5A3, COQ7, CREBBP, CSNK2A1, CSNK2B, CTLA4, CTPS2,</del>  <del>CTSB, CXCL10, CXCL13, CYP1A2, DCTD, DDIT4, DDOST, DDX4, DDX50, DDX56</del>  <del>, DLL3, DMGDH, DNMT3B, DTX1, ENPP6, EPHA5, EPHB6, ESPL1, F2RL2, FGF11</del>  <del>, FMO5, FOXO1, FTCD, FTH1, FUT6, GALNT13, GAS1, GCAT, GCLM, GCNT3, GLY</del>  <del>CTK, GMPR, GNA13, GNA14, GNAO1, GNAS, GNPDA1, GPD1L, GPX7, GSTK1, GST</del>  <del>M5, HADH, HCLS1, HLA-DMA, HLA-DRA, HLA-</del>  <del>F, HLCS, HNF4G, HNMT, HSD17B8, HTR7, IFNA14, IL13RA1, IL19, IL25, ITG</del>  <del>A1, ITGAM, ITGB3, JAK2, KIR2DL4, KLRC2, KLRC3, LALBA, MALT1, MAP2K7,</del>  <del>MAP4K1, MCCC1, MNX1, MOV10L1, MS4A2, MTHFR, MTHFS, MYH14, NCSTN, NEU</del>  <del>4, NFATC2, NODAL, NOX1, NRG4, NRXN1, NRXN2, NUMBL, OGDH, OLAH, OR10Z1</del>  <del>, OR14I1, OR2AE1, OR2B2, OR2C1, OR2T4, OR2W1, OR4C46, OR4P4, OR51A2,</del>  <del>OR51A4, OR51S1, OR5AP2, OR5K1, OR6K2, OR6K3, OR6K6, OR7C1, OR7C2, OR</del>  <del>KP, CD4, P8, P51, GDR, HAL, SYK, LDC, NK2, PAK, TRC, AMC, FRL2, CAUM, SD,</del> </p>
Negative_15797	<p> <del>ACO2, ACVR1C, ACYP2, ADH7, ALG13, AMY2B, ARG2, ARSD, ATP2A1, ATP5L, B</del>  <del>CKDHA, CACNA1B, CACNA1H, CASP8, CCND1, CD36, CD46, CD55, CDC6, CDH15</del>  <del>, CDKN1C, CDKN2C, CDS2, CLDN18, CLDN2, CMPK2, CNTN2, CNTNAP2, COL4A4</del>  <del>, COQ6, COX15, CPOX, CPT1A, CPT1C, CSF1, CSF1R, CXCL16, DAAM2, DAG1, D</del>  <del>ARS, DDOST, DDX18, DEGS2, DERA, DHDDS, DHRS3, DKK2, DOLPP1, DRD1, DVL</del>  <del>1, E2F2, EARS2, EFN3, ENTPD4, EPHA4, ESPL1, FABP4, FECH, FMO4, FOXA2</del>  <del>, FUT4, GALK1, GALK2, GALNTL2, GARS, GART, GCNT1, GFAP, GLB1, GMPS, GN</del>  <del>AL, GNPAT, GOSR2, H6PD, HARS, HIBADH, HPRT1, HSD11B1, HTR2A, IDH3B, I</del>  <del>FNA5, IFNAR2, IGSF5, IL11RA, IL12RB2, IL17A, IL17B, IL20RA, IL25, IL</del>  <del>8RA, INHBE, INPP4B, IRAK1, ITGA10, ITGA7, KIR2DS4, KLK3, KLKB1, LIPE</del>  <del>, LMO7, LRP5, MAGI2, MAP3K1, MAP3K5, MAP4K2, MECR, MFNG, MMP1, MTFMT,</del>  <del>MYLK, MYLK3, NADSYN1, NAGA, NEU2, NFATC1, NOX1, NOX3, NUDT9, OGDHL, O</del>  <del>R10AD1, OR10C1, OR10V1, OR10X1, OR11A1, OR13D1, OR14J1, OR1F1, OR2L</del>  <del>3, OR2T1, OR2T29, OR2T6, OR4B1, OR4E2, OR4N2, OR4S1, OR51L1, OR52N2,</del>  <del>OR5AS1, OR6C75, OR7G2, OR8B4, P2RX1, P2RX3, PCCB, PDE5A, PDGFRA, PDG</del>  <del>FRB, PDX1, PERP, PGM1, PHGDH, PIK3R5, PIP5K1B, PLA2G2E, PLAU, PLCB2,</del>  <del>PLCD4, PNPO, PNPT1, POLR2H, PPP2R2B, PRKAB1, PRKCA, PSENER, PTCH2, P</del>  <del>AK7, C8A, C11B, GDC1, LPO, P9, GDS, GNL, GSN, HPI1, IL7, JCR, MVD, PHL, ROG,</del> </p>
Negative_15798	<p> <del>VTN, XDH, ACO2, AC SL4, ACSS1, ACSS3, ACVRL1, ADCY3, ADCY4, ADCY7, AKR</del>  <del>1B1, ANAPC4, ATF2, ATF4, ATP2A1, ATP5H, B3GNT5, BCAT2, BDH2, CACNA1G</del>  <del>, CAMK2G, CARD11, CBLB, CCL22, CCL26, CCL3, CCNE1, CCR6, CD22, CD40, C</del>  <del>D8A, CDC42, CDKN2D, CFLAR, CHRM3, CLDN19, CLTC, CNGA4, COL6A1, CSF3R</del>  <del>, CYBB, CYP2C8, CYP2J2, DAG1, DAPK2, DDOST, DDX4, DDX56, DGAT2L4, DKK</del>  <del>4, DRD1, DUSP14, E2F4, ECSIT, EDAR, EFNA4, ELK1, ENPP3, ENTPD7, EPB41</del>  <del>L1, EPRS, ESAM, FABP4, FGD3, FGF10, FGF18, FGF19, FGF2, FLOT1, FLOT2,</del>  <del>FLT1, FTH1, FUT1, GAB1, GABARAP, GALK2, GALNT10, GALNT12, GLYCTK, GS</del>  <del>TZ1, GUCA1A, HCCS, HEXA, HMGCS2, HNF4G, HYAL1, IDH3A, IFNA2, IFNA5, I</del>  <del>GFBP3, IL17A, IL18R1, IL1A, ITGA1, ITGAV, JAM3, LALBA, LAMC3, LEPR, L</del>  <del>GMN, MALT1, MAP3K11, MCAT, MOV10L1, MTHFR, NAGS, NAT2, NCAM2, NCKAP1</del>  <del>L, NEGR1, NKD1, NME6, NMNAT1, NPR1, OPLAH, OR10A6, OR10J5, OR10K2, OR</del>  <del>1I1, OR1J2, OR2B6, OR3A3, OR52H1, OR6C2, OR8B4, OR9I1, PAK2, PARVG, P</del>  <del>EMT, PER3, PIGB, PIGF, PIGW, PIGX, PIK3R3, PLA2G2A, PLA2G2D, PLAU, PL</del>  <del>CG1, PLXNA1, PNPO, PNPT1, POLD2, POLR1E, PPARG, PPID, PPM1A, PPP1R3A</del>  <del>, PPP2R1A, PPP2R5D, PRKACA, PSPH, PTDSS1, PTDSS2, PYCR1, RAF1, RIPK1</del>  <del>, SNW1, SORBS1, SPRED1, SRGAP3, STMN1, SULT1E1, TACR2, TACR3, TAS2R1</del>  <del>TACR19, TAGOR9, TPI1, VLDL1, TGF1, TGF1, TNFRSF11, TNFRSF19, TRHO, TRMF,</del> </p>

Negative_15799	<p>BTG, C2, C8G, CR2, DCR, IL2, ME1, ME2, MET, NF1, PML, PRL, SKI, TNK, ACAD L, ACTG1, ACTN4, ACY3, ADAM17, ADH7, ADIPOR1, ADRA1B, ADSL, AKT2, ALA S1, ALDH1A1, AMPD2, APOA1, ARHGEF6, ARPC3, ARSB, ASNS, B3GNT5, CALML 6, CCL1, CCL7, CCNB2, CDH1, CHEK2, CLDN14, CLTC, CNTN1, COQ3, COX10, C PT1C, CSNK1A1, CSNK2A1, CX3CR1, CYFIP2, CYP11B1, CYP2F1, DDIT3, DDX 50, DDX51, DDX56, DGAT2L4, DGKD, DGKE, DGKH, DHCR7, DPYD, DPYSL2, EDA 2R, ELK4, ENO1, EPB41, EPHA1, EPHA4, EPHA5, EPOR, EXT2, FBP1, FGF18, F GF5, FLOT2, FMO5, FSHB, FTMT, FUT8, FZD1, GADD45G, GALNT7, GALNTL1, G LO1, GMPR2, GNRH2, GRM1, GSTM3, HGSNAT, HMOX2, HNF4G, HNMT, HSD17B1, HTR4, HTR5A, IL18R1, IL19, IL6ST, INPP4B, INSR, IQGAP1, ITGB4, LAMB1 , LAMB2, LAMB3, LRAT, LRP5, LRP6, LTBR, LYZL1, MAML3, MAN1C1, MAOB, MA P2K1, MAP3K3, MARS, MCEE, MGAM, MMP1, MMP7, MOV10L1, MTMR2, MYH10, MY H2, MYH7B, NANS, NEFL, NME6, NQO1, NTN1, NTNG1, OLAH, OLR1, OR10A3, OR 13H1, OR2A25, OR2S2, OR2T10, OR4C15, OR4E2, OR51A7, OR51F1, OR51G1, OR52I2, OR52N4, OR56B4, OR5AN1, OR5I1, OR5K1, OR5L1, OR6B3, OR6K2, O R6S1, OR6T1, OR8B12, OR8B4, OR8K5, ORC6L, OXCT2, P2RX4, PAK6, PDE6H, PDGFA, PDPK1, PIGM, PIK3CA, PIP5K1B, PIP5K3, PIPOX, POLE4, PPARG, PP OX, PPP1R3B, PPP3R2, PRKAA1, PTGFR, PTTG1, RAP1A, RASA1, RASGRP2, RB</p>
Negative_15800	<p><del>ADG, PAM1, C5, C6, PCSR, DED, TGA, PNT, PTN, CCN, CUG2, GKZ, GSK, IES, KGR,</del>  LCT, LSS, ME2, MET, MVD, MVK, NLK, PTS, PVR, RFK, TEC, XDH, ZYX, AADAC, A BI2, ACAA1, ACP5, ACSM1, ACTA2, ACYP1, ADRA1D, ADSL, ADSS, AK3L1, AKR 1C3, AKR1C4, ALDH1L1, ALG6, ALG8, ANAPC11, ATP2A2, ATP5E, ATP5I, ATP 6V1D, ATP6V1F, B3GNT2, B4GALT6, BACE1, BDH1, BMP7, BMP8A, C3AR1, CAC NA1E, CCL14, CCL20, CCND2, CCNE2, CD44, CD72, CD82, CDK5, CLCA4, CLDN 4, COQ7, CSDA, CSNK1A1, CX3CL1, CYP26A1, CYP27A1, CYP2C8, DDB2, DLL1 , DOCK1, DPM2, DVL3, EFNB2, ETNK2, FADS2, FGF22, FMO3, FRAP1, FUT8, FU T9, GALC, GALNT3, GANAB, GCNT2, GLB1, GNA13, GNPDA1, GNRH2, GPT2, GRI A3, HEXA, HIBADH, HLA-DOB, HLA-  DRA, HRAS, HSPA2, HTRA2, ICAM2, IFNA13, IL18R1, IL23A, IMPDH1, IMPDH 2, ITGA10, ITGA6, JUND, KIR2DS5, LAMC3, LARS, LFNG, LTBP1, MAGI3, MAT 2B, MLYCD, MPZL1, MTHFD1, MYH7B, NAGS, NCOR1, NFATC2, NFYA, NME7, NMN AT1, NOS1, NOX3, NPR1, OLR1, OR10Q1, OR13A1, OR2C1, OR2G6, OR2S2, OR4 C6, OR52E2, OR52H1, OR5D13, OR5M9, OR5P3, OR8H3, PARVG, PCYT1A, PDE3 A, PDHA2, PGM1, PIK3CG, PIK3R3, PIK3R5, PIM2, PIP4K2A, PLCZ1, PLOD1, POLD1, POLE, POLE2, POLR1C, POLR1E, PORCN, PPARG, PPP2CA, PPP2R2B, P RKCG, PRK CZ, PTPRF, RARA, RASA1, RBL2, RCHY1, RHOD, RHOQ, SELE, SEMA3</p>
Negative_15801	<p><del>RDC, AR3, CEE, CKA, CDD, F1G, FTA1, FMS, FNT, FTR, GDR, GP1, GPC, GR2, UAI</del>  , SP1, TK1, VTN, ACAA1, ACADVL, ACOT11, ACOX2, ACSM3, ACTA2, ACVR1B, A CVR2B, ADAM10, ADH7, ADORA2B, AGPAT2, AGTR1, ALDH1A3, ALDH2, AMD1, A NAPC10, ANAPC11, ANAPC2, ANGPTL4, APOC3, ARHGEF1, ARHGEF4, ARSB, AT G3, ATP2A1, ATP5J2, BMP8B, BMPR1B, BNIP1, CACNB1, CAMK4, CCNB3, CCR2 , CD14, CD247, CD27, CD38, CD55, CD8B, CDC14A, CDC20, CDC25C, CDH4, CD K7, CDKN1B, CFL2, CHST12, CHUK, CISH, CNGA4, CNTN2, COL11A1, COL4A4, COL6A2, CPT1B, CRKL, CSF1, CSNK2B, CTF1, CTSS, CUL1, CXCL9, CXCR4, CY P1B1, CYP2F1, DAXX, DDX4, DGAT2, DHDH, DHRS4L2, DNMT1, EGLN3, ENTPD3 , EPB41L3, ETS1, F13A1, FGF1, FGF19, FGF2, FGF20, FGF7, FTMT, FZD9, GC DH, GFPT2, GLI1, GLUD2, GMPPA, GNG13, GNG3, GPAM, GPLD1, GRHR, GRIN1 , GRIN2D, GSTO1, GUCY2C, HAO2, HCLS1, HEXB, IAPP, IDI2, IFNA10, IFNK, IL13RA1, IL1A, IL28B, IL8RA, INHBB, ITGA11, ITGA8, JAG2, KIR2DS4, KI R2DS5, LAMA4, LDHC, LIPC, LIPF, MAGI1, MAP2K4, MAP3K1, MAP4K3, MCM7, MDM4, MGAM, MMP2, NAT5, NCR3, NFKBIA, NKX6-  1, NODAL, NOTCH3, OR10K1, OR2B11, OR2L2, OR2L8, OR2T33, OR3A3, OR4L1 , OR51A4, OR51B6, OR51L1, OR51S1, OR5K1, OR6C4, OR6K6, OR6M1, OR8H1, OR8K3, PAPSS1, PCCB, PDE10A, PDE1A, PDE1C, PDXP, PFKFB2, PGM2, PIGN,</p>

Negative_15802	<p>ADC, AGL, BCR, BTC, C6A, F1Z, GP9, HKZ, LCK, PAH, PDC, SPN, TNC, ACAT1, ACOX2, ACOX3, ACSL4, ACTN1, ADCY10, ADCY4, ADCY6, AGPAT4, AGXT2, AHCY, AKT3, ALDH1A1, ALDH1A2, ALDH4A1, ALG12, ALG13, AMDHD1, AMDHD2, AMPD1, AMY2B, ANGPTL4, ARD1A, ARNT2, ARPC1A, ATP5G1, ATP5H, ATP6V1D, B3GNT3, B4GALT4, B4GALT7, BAAT, BLVRA, BPNT1, CACNA1S, CACNB1, CASP10, CASP7, CD226, CD34, CD59, CD74, CDC25A, CDK5, CDKN1A, CDKN1C, CDO1, CDS2, CER1, CREB3L3, CSNK1D, CSNK1G1, CTNND1, CYP19A1, CYP2D6, CYP4A11, CYP4A22, DAXX, DDHD1, DGAT1, DGKB, DIAPH2, DLL3, DNMT1, DTX2, DVL3, ENO3, ENPP7, EPHA3, EPHB1, EPHB3, EXOC7, F13B, FECH, FOSL1, FTCD, FUT5, GADD45G, GALK1, GALNT14, GBE1, GFAP, GLUD2, GNA15, GNRHR, GPX5, GRIA3, GSTM1, GSTZ1, GYS1, HAGH, HCLS1, HDAC2, HEMK1, HMGCL, HNMT, HSD11B2, HSPA1B, IARS, IFIH1, IFNA5, IFNA7, IL10, IL11RA, IL13RA1, IL1B, IL28B, IL2RA, INPP1, IQGAP1, IRAK1, ITGA11, ITGA7, ITGAV, KCNJ11, KDSR, KIR3DL3, KLRC4, L1CAM, LAMB2, LCP2, LLGL1, LYPLA2, MAD2L1, MAP3K11, MAP3K6, MAP3K8, MAP4K2, MAP4K4, MGAT2, MMP14, MPST, MRAS, MYH15, NAE1, NCF2, NCOR2, NCR2, NFATC1, NFE2L2, NFKB1, NFKB2, NME4, NME7, NOX3, NPR1, NSDHL, NUDT5, OCRL, OR10G9, OR10Q1, OR10X1, OR11H6, OR1D5, OR1F1, OR1N2, OR2M7, OR4F4, OR4N4, OR4Q3, OR51A7, OR52N4, OR5C1, APP, BCR, CD4, CDAPV1, DDC, DUY, P12, P7, P1A5, RDC, TDS, IL4, ERB, M, P, MUT, NOG, OSM, PVR, RB1, ACAD9, ACSM5, ACVR1B, ADCY7, ADRB1, AGPAT4, AGXT, AKR1D1, AKT3, ALOX15B, ALPI, APC2, APOA1, ASRGL1, ATP5L, BMP8B, BMPR2, C1QC, CACNG4, CCL7, CCND2, CD14, CD247, CD82, CDC14B, CDH2, CD01, CEBPA, CHDH, CHRNA7, CMPK2, COASY, COL1A2, COL4A6, COL5A2, COQ7, CSAD, CTBP1, CTNNB1, CTNND1, CTPS, CTTN, CXCL1, CXCL5, CYCS, CYP1A2, CYP1B1, CYSLTR1, DAAM1, DCXR, DDX4, DFFA, DGUOK, DHFR, DIAPH2, DIAPH3, DPM1, DPYS, EIF4E, ENPP6, ENTPD2, ENTPD3, ERBB2, ERBB3, ESAM, ETNK2, F13A1, FABP1, FASLG, FGF17, FGF2, FOXO3, FZD4, G6PC2, GATM, GCDH, GTG6, GJD2, GLI1, GNAI3, GNAQ, GNPAT, GNRHR, GSK3B, GSTM5, HEMK1, HEXB, HLA-C, HMGCS1, HSPB1, IDH3B, IDI2, IFNA16, IFNA2, IFNA21, IFNW1, IL17B, IL1R2, IL25, IMPA1, IRF5, ITGA9, ITGAD, ITGAV, KAT2B, KIR3DL1, KRAS, LAMB2, LAMC1, LIFR, MAP3K4, MAP4K2, MAP4K3, MAPK10, MAPK3, MECP, MMP14, MYH11, NADK, NCSTN, NFKBIA, NFYA, NRCAM, NT5C1B, NUDT9, OLAH, OR10G4, OR10H1, OR10H3, OR10K2, OR10V1, OR14I1, OR1L8, OR2A25, OR2B2, OR2T1, OR2T5, OR3A3, OR4K1, OR4K14, OR4N4, OR4Q3, OR51B5, OR52A5, OR5A2, OR5D14, OR5J2, OR5P2, OSMR, PANK2, PARD3, PAX6, PCK2, PDE7A, PER1, PFKFB1, PGM2, PIGQ, PIGV, PIK3CG, PISD, PLCB4, PLEKHA8, PLOD3, PLXN</p>
Negative_15803	<p>AD, BDNF, CD4, CDAPV1, DDC, DUY, P12, P7, P1A5, RDC, TDS, IL4, ERB, M, P, MUT, NOG, OSM, PVR, RB1, ACAD9, ACSM5, ACVR1B, ADCY7, ADRB1, AGPAT4, AGXT, AKR1D1, AKT3, ALOX15B, ALPI, APC2, APOA1, ASRGL1, ATP5L, BMP8B, BMPR2, C1QC, CACNG4, CCL7, CCND2, CD14, CD247, CD82, CDC14B, CDH2, CD01, CEBPA, CHDH, CHRNA7, CMPK2, COASY, COL1A2, COL4A6, COL5A2, COQ7, CSAD, CTBP1, CTNNB1, CTNND1, CTPS, CTTN, CXCL1, CXCL5, CYCS, CYP1A2, CYP1B1, CYSLTR1, DAAM1, DCXR, DDX4, DFFA, DGUOK, DHFR, DIAPH2, DIAPH3, DPM1, DPYS, EIF4E, ENPP6, ENTPD2, ENTPD3, ERBB2, ERBB3, ESAM, ETNK2, F13A1, FABP1, FASLG, FGF17, FGF2, FOXO3, FZD4, G6PC2, GATM, GCDH, GTG6, GJD2, GLI1, GNAI3, GNAQ, GNPAT, GNRHR, GSK3B, GSTM5, HEMK1, HEXB, HLA-C, HMGCS1, HSPB1, IDH3B, IDI2, IFNA16, IFNA2, IFNA21, IFNW1, IL17B, IL1R2, IL25, IMPA1, IRF5, ITGA9, ITGAD, ITGAV, KAT2B, KIR3DL1, KRAS, LAMB2, LAMC1, LIFR, MAP3K4, MAP4K2, MAP4K3, MAPK10, MAPK3, MECP, MMP14, MYH11, NADK, NCSTN, NFKBIA, NFYA, NRCAM, NT5C1B, NUDT9, OLAH, OR10G4, OR10H1, OR10H3, OR10K2, OR10V1, OR14I1, OR1L8, OR2A25, OR2B2, OR2T1, OR2T5, OR3A3, OR4K1, OR4K14, OR4N4, OR4Q3, OR51B5, OR52A5, OR5A2, OR5D14, OR5J2, OR5P2, OSMR, PANK2, PARD3, PAX6, PCK2, PDE7A, PER1, PFKFB1, PGM2, PIGQ, PIGV, PIK3CG, PISD, PLCB4, PLEKHA8, PLOD3, PLXN</p>



Negative_15804	<p>ADK, APT, BTK, CPT1, CS, DHH, FAS, GFI1, IL8, KDR, LAT, LCT, LEP, ME2, NGF, PDC, RDX, SP1, SRM, XDH, AARS, ACACA, ACOX2, ACSL5, ACSS1, ACTA1, ACVR1, ACVR1C, ADSSL1, ALG1, ALOX12B, ALOX15, AMY2A, ARD1A, ARG2, ATG12, ATG7, ATP6V0B, ATP6V1D, B4GALT1, B4GALT6, BCAR1, BMP8B, BUB1, CACNA1D, CACNA1F, CACNB2, CALML6, CAV2, CCL1, CCL20, CCL25, CCR7, CD22, CD44, CD58, CDH15, CDK4, CDK5, CER1, CES7, CHAD, CHEK1, CHIA, CLDN3, CLTB, COX10, COX15, CREB1, CXCR5, CYP7A1, CYSLTR1, DEGS1, DFFB, DGUOK, DIAPH3, EFNA5, EGLN3, EHHADH, EIF4E2, ENPP2, ENPP6, ERBB4, ETNK1, EXTL3, FMO5, FOXA3, FUT9, GALNTL1, GAS1, GGT7, GLI1, GLI3, GMPPB, GNA14, GNRH1, GRIA1, HAAO, HAGH, HAGHL, HBEGF, HES1, HNF1A, HTR6, IL15RA, IL17RB, IL21R, IL28A, IL2RB, INADL, IRF7, ITGA3, ITGA5, ITGAL, KLRK1, LAMA3, LCP2, LDHAL6B, LEF1, LFNG, LHCGR, LYPLA2, MAP3K13, MAP3K5, MAP3K6, MAPK1, MCCC2, MCM7, MGAT5, MGLL, MPST, MS4A2, MTHFR, MYH7, MYLK2, NARS, NCF4, NCKAP1L, NEFH, NFKB2, NLGN2, NOD1, NOX3, NUMBL, OGDHL, OR10A3, OR13C4, OR1E1, OR1L1, OR1N2, OR2A14, OR2AG1, OR2B2, OR2L2, OR2S2, OR2T1, OR2T29, OR2T8, OR3A2, OR4A16, OR4C11, OR4K14, OR4M1, OR51G2, OR51Q1, OR52I2, OR52N1, OR5B12, OR5M9, OR8K1, OR8K5, OXSM, PAK7, PANK2, PARD6G, PDE11A, PDGFA, PGAP1, PGK1, PGLS, PHKA2, PIAS3, PIGX</p>
Negative_15805	<p>ADU, AHS, BFK1, C2, CCL5, CPH, CPT, CTRK, PDB1, EPC6, FOS, GRI1, GEA, HHR, EPI, PMAG, NNT, PLG, RET, SHH, UBC, ABI2, ACOT12, ACSL6, ACSS1, ACTA2, ACYP1, ADCY1, ADH1A, ADRB3, ADRBK2, AGPAT4, AHCY, ALDH2, ANAPC11, ANAPC5, APOE, APPL1, AREG, ARG1, ARHGEF4, ARSA, ARSD, B4GALT2, BMP2, CASK, CASP10, CASP8, CCL27, CCL7, CCR6, CD8B, CHDH, CHSY1, CHSY3, CLDN15, CLDN16, COL1A1, CPS1, CPT1A, CTSS, CTTN, CX3CL1, CYBB, CYP11A1, CYP1A1, DHD1, DGAT1, DIAPH3, DPM1, EDNRA, ELK4, EPHA2, ETS1, FGD1, FUT5, FZD7, GALNT9, GJA1, GLB1, GNG13, GNG3, GNPAT, GPAA1, GSTA2, GSTM1, GSTM2, H6PD, HA01, HMGCL, HMOX1, HRAS, HTR2B, HTRA2, IFNB1, IFNGR2, IGSF5, IL18, IL6R, INHBA, INPP4A, ITGAE, ITGB3, JUND, KCNQ1, KLK3, LALBA, LAMB1, LCMT2, MAN1A2, MAP3K5, MAP4K4, MAT2B, MITF, MLLT4, MMP7, MTFMT, MTHFD1, MTHFD2, MTMR2, MYL5, NFYA, NOD1, NR1D1, NRG2, OCRL, OPLAH, OR10AG1, OR13C3, OR1B1, OR2A42, OR2B2, OR2V2, OR2Y1, OR4Q3, OR4S2, OR51E1, OR5AC2, OR5C1, OR5R1, P2RX7, PAFAH2, PFAS, PFKL, PGAP1, PGLS, PI4KB, PIGM, PIGQ, PIK3CB, PIK3R2, PLCD4, PLCG1, PLTP, PLXNA1, PNLIP, POLR1C, POLR3D, PPA1, PPP2R2D, PRKCI, PVRL4, RAP1B, RAPGEF2, RBL2, RDH10, RFXAP, SCLY, SDHD, SEMA3E, SETD8, SH2D1A, SHC3, SHC4, SMC1A, SOCS5, SPCS1, SPCS3, SPI1, SPRY1, SPTAN1, SRGAP1, ST3GAL5, STX10, STX7, S</p>

Negative_15806	<p>AK3, ACH, BTK, DDC, F8, HAL, KIT1, NF1, OAT1, TEC, TNK, ACACB, ACVR2A, ADCY2, AFMID, AGPAT4, AKR1D1, ALDH1B1, ALG9, ALPP, APRT, ARHGEF1, ARNT, ARNT2, ASPA, ATP5C1, B4GALT4, BAAT, BCAT1, BCAT2, BCMO1, BMP2, BMPR2, BRAF, CALML6, CCL15, CCR10, CDK4, CLCF1, CNTNAP1, COL4A6, CPOX, CRLS1, CSAD, CX3CL1, CXCL12, CXCL3, CYP1A1, CYP27A1, CYP3A43, DAPK1, DD X54, DGAT2, DGKE, DLAT, DUSP16, E2F4, EGLN3, ENTPD3, ENTPD7, ESAM, FASLG, FASN, FGF17, FGF4, FTH1, FZD5, GALNT9, GALNTL1, GCLM, GLB1, GMPS, GNG13, GRAP2, GYS1, HA01, HBEGF, HSPA1B, ICOS, IFNA4, IFNAR1, IL15, IL22, IL28A, IL29, INHBC, INPP1, INPP5A, IRAK1, JAG2, KCNB1, KRAS, LAMB1, LDHAL6A, LDHB, LDHC, LRRC4C, MAFA, MAP3K11, MAP3K3, MCAT, MCM7, MDH1, MDH2, MDM2, MRAS, MYLK3, NAE1, NARS2, NAT5, NEFH, NFATC2, NFE2L2, NKX2-2, NRAS, NT5C2, OR10G2, OR10G7, OR10Q1, OR13A1, OR2T3, OR4C16, OR4D2, OR4F4, OR4K13, OR4N5, OR51B6, OR52D1, OR52N5, OR5A1, OR5AR1, OR8K3, PANK3, PARVG, PAX6, PDE10A, PDHA1, PGM1, PGS1, PHPT1, PLCZ1, PMAIP1, PMM2, POLR1B, POLR2D, POLR2E, POLR2G, POLR2H, PPA1, PPAP2A, PPP2R5C, PRKACA, PRKAG1, PRKAG2, PRKAG3, PRKCB, PRKCD, PRPS2, PSEN1, RCHY1, RDH10, RERE, RHOA, RPS6KB2, RRM1, SEMA4F, SEMA4G, SFRP1, SHISA5, SHMT1, SKP2, SMAD2, SOAT1, SOAT2, SRGAP2, STAT1, STMN1, STX7, SUFU, SV2</p>
Negative_15807	<p><del>61C, NID, TAG1, TALK, TBP1, TCF2R, TSS, TK2, TP4, TP5, TP4, TL8, TVD, TCR</del>  , LYN, SFN, STS, TH, TK2, TYR, ACADL, ACADVL, ACO1, ADRB3, AKR1C4, ALOX15, ATP12A, ATP2A2, ATP5A1, B4GALT5, BCL10, BDH2, BDNF, BET1L, BMP6, BUB1B, C1QC, CACNA1C, CACNG5, CADM1, CALML5, CCDC6, CD14, CD48, CD55, CD80, CDC6, CHIA, CLDN15, CNTF, CPOX, CREB3L2, CREB3L4, CSAD, CTNNA2, CTSS, CYP2C19, DAG1, DCTD, DCXR, DGKI, DHCR24, DIAPH2, DLL1, DRD5, DUSP1, EPHB1, EXTL3, FGF11, FLT1, FTH1, FZD3, FZD4, GADD45A, GALNT9, GANAB, GCH1, GDF7, GGT1, GJA1, GMPR2, GNAI1, GTSE1, GUCY2F, HCST, HPR T1, HSD11B2, HSD17B7, IBSP, ICAM2, IFNA16, IFNA6, IFNK, IL10, IL1A, IL21R, IL22RA2, IL28A, IMPA2, IRAK1, ITPA, MALT1, MAP2K4, MAPT, MCAT, MDH1, MECR, MGAM, MGST1, MINPP1, MYD88, NAT5, NAT6, NCF1, NCF2, NFATC4, NKD1, NLGN2, OR10J3, OR13A1, OR1C1, OR1F1, OR1J2, OR1L1, OR2A25, OR2T1, OR2T29, OR2T33, OR2T8, OR4C12, OR4D5, OR4F6, OR4S1, OR51E1, OR52H1, OR52R1, OR56B4, OR5D18, OR5T2, OR6A2, OR6B2, OR8S1, OR9A2, OR9Q2, PAK6, PDHA1, PDIA4, PECAM1, PER1, PFKFB4, PHKA2, PIAS1, PIGP, PIGS, PLD1, PLK1, PLXNC1, PMAIP1, PMM1, PPA1, PPAT, PRKCA, PRSS1, PVRL2, PYCRL, PYGB, RBKS, RPS6KA5, RRM1, RXRA, RXRB, SARDH, SDHB, SEMA4B, SEMA7A, SETD8, SLC27A5, SMAD5, SMARCA5, SMPD1, SOS1, SOS2, SPAM1, SPHK</p>

Negative_15808	<p>ADH, CAD, CTH, DCC, DCK, F9, FUR, GGH, GK, HKS, ILS, PC, SFN, ACACA, ACADSB, AC02, ACOT11, ACP1, ACSM3, ACSM5, ACSS1, ACTG1, ADCY4, ADH1B, ADH6, ADRB1, ADSSL1, AGXT2, AKR1B1, ALDH2, ALG2, AMPD2, ANPEP, AOC2, APP1, ARPC1B, ARPC3, ATF2, ATIC, ATP4B, B3GALT5, B3GAT1, B3GNT5, BAAT, BACE1, BIRC3, BMP1B, CACNG8, CADM3, CAMK2A, CCL1, CCL2, CCL21, CCL7, CD74, CD99, CDC2, CDH3, CERK, CLDN17, CLDN9, CRY2, CSAD, CSF2RB, CTBP2, CTTN, CXCL12, CYP1A1, CYP2C19, CYP2C9, DAPK2, DAXX, DDX55, DNMT3L, DPYS, EIF4B, ENTPD5, EPAS1, EPHB4, ESPL1, F11R, FGFR4, FLOT2, FLT4, FOXA2, FZD6, GALNT10, GALNT3, GALNT8, GDF5, GLO1, GNG3, GRIA2, GSTA3, GSTO2, GUCY1A3, GUCY2F, HPSE, HRAS, HRH1, HSD17B1, HSPA1B, HTRA2, IDI1, IFNA5, IL15, IL17RA, IL1B, IL23A, IMPDH1, INHBE, IRS1, ITGA6, ITGAM, ITGB4, KIR2DL2, KLRC3, LAMA4, LIPE, LLGL2, LRP5, MAD2L1, MAN1B1, MAOB, MAP4K2, MGAM, MGAT3, MMP2, MPZL1, MTHFD1L, NEUROG3, NFATC1, NOS3, NOX1, NR5A2, OR10Q1, OR1E1, OR1J4, OR1N2, OR2F2, OR2H1, OR2T3, OR2T4, OR4K17, OR4Q3, OR5AC2, OR5L2, OR6C76, OR7C2, OR7D4, PARD6G, PDGFA, PFKFB3, PHKG2, PIGF, PIGH, PIGW, PIK3R1, PIK3R2, PIP4K2B, PLAT, PLCD1, PLIN, PLXNC1, POLR2H, PPOX, PPP2CA, PPP3CC, PPP5C, PRKAB2, PRKAG1, PRKAR1B, PRLR, PRPH2, PTGER3, PTPRC, PVRL2, RAF1, RDH11, RDH8, <del>ADPR, ADR, AKR1, AKR1C6, CPD, CPT1, CMT2, CMT3, CMT4, CMT5, CMT6, CMT7, CMT8, CMT9, CMT10, CMT11, GDNF, GPC9, GSR, G5S, H</del></p>
Negative_15809	<p>K1, ID1, ILK, KDR, LAT, LCK, MPL, RB1, RET, STS, UBC, ABAT, ABLIM2, ACAD8, ACP6, ACSL5, ACSS1, ADAM10, AGPAT4, AGTR1, ALAS2, ALDH1A2, ALPPL2, AMD1, APBB1, ARPC1B, ATP4B, ATP5B, ATP5G2, ATP5G3, B3GALT4, B4GALT3, BDKRB1, BIRC5, BMP6, BPGM, C3orf10, CALML5, CAMK4, CASK, CBLC, CCL17, CCL3, CCL5, CCR9, CD38, CD3E, CD48, CD70, CDH2, CHIT1, CIITA, CLOCK, CPS1, CREB3L4, CTNNA2, CXCL16, CYP21A2, CYP3A7, CYP4F2, DEGS1, DHCR7, DKK1, DMGDH, DRD2, DUSP16, E2F2, E2F5, ENPP3, EPHB1, EPHB4, F13B, FADD, FARSB, FCER1G, FGF1, FGF4, FIGF, FLOT2, FOSL1, FPGT, FZD5, GALK1, GALNT7, GALNT9, GATM, GBA3, GBGT1, GLB1, GRLF1, GSK3B, GUCY1A2, GUK1, HGSNAT, HNF4A, HRH1, IAPP, IARS, IDUA, IFNA13, IFT57, IL12RB1, IL18RAP, IL22, IPPK, IRAK4, IRF7, ITGA1, ITGA3, ITGAL, ITGAX, KAT2A, KIR3DL1, KIR3DL3, LIAS, MAOA, MAP4K2, MAPK8, MDH1, MTHFS, MYH4, MYH9, NCAM1, NCKAP1L, NCR2, NKX3-1, NKX6-1, NME2, NOTCH1, NT5C3, NUDT12, OR10AD1, OR10G8, OR10J5, OR11G2, OR14J1, OR2D2, OR2T4, OR4C11, OR4C12, OR4D2, OR4D5, OR4F15, OR4K2, OR4L1, OR4N4, OR4N5, OR52K1, OR52N1, OR52W1, OR5D13, OR5T1, OR6C6, OR6F1, OR6S1, OR8D2, OR8G1, P2RX3, P2RX4, PANK4, PARD6G, PAX6, PAX8, PFKFB3, <del>AD, AC3, CU, CAD, CTH, CKC, CP, DB1, DCR, DCN, DC1, GGN, HKS, LSS, LTB, ME</del></p>
Negative_15810	<p>2, MET, MUT, NOG, PGF, PGP, RFK, AADAT, ABCC8, ACADM, ACADSB, AC02, AC0X2, ACPP, ACTC1, ACY3, ADIPOR1, ADRB2, AGPAT1, AGRP, ALDH7A1, ALG8, ALG9, ALPPL2, APC2, AQP7, ARG2, ARPC4, ATG12, ATP2A2, ATP5C1, ATP5E, ATP5H, ATP5J, BAIAP2, BIRC3, BMP7, BUB1B, BUB3, C3AR1, C9orf95, CCDC6, CCL1, CCL4, CCL5, CCNB2, CD46, CD55, CD79B, CDC23, CDH3, CDH5, CDKN2D, CHST13, CLTA, CMBL, CNTNAP1, COMP, COMT, COX10, CSNK1G2, CXCL10, CYBA, CYCS, CYP1B1, CYP2A6, CYP2S1, CYSLTR2, DDIT4, DGKG, DGKZ, DMGDH, DNMT3L, DUSP3, ENO2, EPB41, ERBB2, ERBB3, ETNK2, FGF20, FGF8, FLOT1, FMO3, FOXA2, GALNT3, GALNT6, GART, GJD2, GLI1, GNB1, GNB3, GPD1L, GRIN2B, GSTO1, GYS1, HADHB, HEXB, IDH3A, IFNA21, IFNA6, IKBKB, IL19, IL28B, IL2RA, IRAK2, ISYNA1, ITGA10, ITGA9, ITGAV, KLK3, LAMB3, LDHA, LDHD, LRP6, LYPLA1, MCM5, MGAT4B, MTAP, MYH13, MYH3, MYH7B, NAMPT, NCF2, NCK1, NCOR1, NFATC2, NGEF, NOS3, NSDHL, NUDT5, OR10V1, OR1D2, OR2AG2, OR3A1, OR4A15, OR51B2, OR52B4, OR52B6, OR52N1, OR5AP2, OR5AR1, OR5M8, OR6C76, OR9A4, OR9G1, ORC1L, P4HA3, PAK6, PANK4, PARD6B, PDCD1, PDXP, PER2, PFN1, PGAM4, PHKA2, PIGB, PIK3C3, PIK3R1, PIK3R2, PLA2G2E, POLD1, PON1, PPA2, PPAP2A, PPAP2C, PPCS, PRIM1, PRKAB1, PRKCA, PR</p>



Negative_15814	<p>BTC, BTD, C1S, CAT, CF, CRT, DCN, FAN, GLS, MVR, STS, ACOX1, ACS1, ADH1A, ADH6, AHCYL1, AKR1C3, ALOX15B, ATG12, ATP5D, ATP5E, ATP5L, C5AR1, CARS2, CCL21, CCL23, CCL4, CCR2, CD44, CD58, CDC14A, CDC25A, CDKN1C, CD01, CFTR, CLDN19, COL5A3, COMP, CREB3L3, CREBBP, CSF3, CTNNA1, CXC L3, CXCR3, CYBA, DARS2, DDX54, DDX56, DGKZ, DHDH, DHRS4, ENO1, ENPP6, ENTPD7, EPB41L1, ESAM, ETNK1, F13A1, FABP1, FABP4, FARSA, FGF14, FUT 6, GALE, GALNT10, GALNTL4, GALT, GAPDH, GBGT1, GOT2, GPT2, GSTA4, HAD HA, HAP1, HBEGF, HHEX, HLA-</p> <p>G, HMOX1, HNF4G, HPSE, HSD11B2, HSP90B1, HSPA1B, HSPA8, HTR7, HTRA2, IDH1, IFNA4, IL10, INMT, INPP4B, IRS4, KLRD1, LAMC1, LEFTY2, LRAT, LR P5, MAGI1, MAOB, MAP3K11, MAP3K5, MGAT4A, MYH3, NAGLU, NARS, NEFL, NL GN1, NOS1, NR1H3, NT5C3, ODC1, ONECUT1, OR10S1, OR10X1, OR11A1, OR11 G2, OR13C4, OR2A5, OR2B11, OR2L3, OR2Y1, OR4C15, OR4D6, OR4K15, OR4K 17, OR51E2, OR51I2, OR51Q1, OR51S1, OR52E6, OR52E8, OR52J3, OR5AU1, OR5D13, OR5L1, OR6A2, OR6K6, OR6Y1, OR8B8, P2RX7, PAK2, PFN2, PGM1, P GM2, PIK3C2B, PIP4K2B, PLOD2, PLOD3, POLE, POLR3A, POLR3B, POLR3D, P ORCN, PPBP, PPCDC, PPP1R3A, PPP2R1A, PPP2R5A, PPP3CC, PRIM1, PRKAB2 , PRKAR2B, PRPS1, RAF1, RARS, RASSF1, RBKS, RDH8, RRM2B, RXRA, SARDH, AGK, AKT, AMT, CRL1, CRM, CSK, CYR2, FGF, GLA, GGP, GR, GDS, IC9, K17, MPT, OTC, SRC, SYK, TFG, ABP1, ACP1, ACSS2, ADCY7, ADH5, ADH7, ADIPOR2, ADR A1D, ADRB3, AFMID, AGPAT1, AGPAT2, ALDH1A2, ALDH1A3, ALDH1L1, ALG6, ALOX12B, APAF1, APOE, B3GALT5, CAMK2D, CAPN2, CARD11, CCL24, CCL4, C CL7, CCND2, CD14, CD19, CD99, CDC14A, CDK2, CHRM5, CLDN5, COQ5, CRLS1 , CRY1, CRY2, CSF2RB, CYBA, CYP21A2, CYSLTR1, CYSLTR2, DCXR, DFFA, DG KB, DGKH, DTX4, EIF4B, EP300, EPHA5, EPHB6, ESPL1, FGF14, FGF19, FGF3 , FGF4, FGF8, FPGS, FSHR, FUT2, FUT8, GALNT3, GALNT7, GCNT3, GLB1, GNA 11, GNAI3, GNG3, GNPAT1, GPD2, GRIN2A, GSTA4, GUCY2F, HAP1, HSPA2, H TR5A, HTR6, IBSP, IFIH1, IFNA14, IFNAR2, IL13RA2, ITGA1, ITGA2, ITGA 3, ITGB4, ITPA, KAT2A, LAP3, LCMT1, LIPA, MAD2L1, MAP2K4, MAP3K11, MG LL, MYL2, NFKB2, NRP1, OGDHL, OR10A3, OR10H4, OR10K1, OR11H1, OR13C3 , OR2C1, OR4F17, OR4F5, OR51E2, OR51M1, OR52A1, OR52E4, OR52E6, OR52 H1, OR52K1, OR52R1, OR5AC2, OR5B17, OR5M9, OR5T1, OR5V1, OR6C76, OR8 B12, OR8J1, P2RX5, PAX8, PDHA2, PFKL, PFN1, PGM1, PIGQ, PIK3C2A, PIK3 R3, PLA2G10, PLA2G2F, PLAU, PLCB2, PLCG1, PMM1, POLR1E, POLR2I, POLR 2L, PRKAA2, PSME3, PTEN, PTPMT1, PTPN7, PTPRJ, PVRL1, RAP1B, RASGRP2 , RBPJ, RERE, RETSAT, RPRM, RPS6KA2, RUVBL1, SARDH, SARS, SESN3, SLC2 4A, C1AD, C1E, CR2, CUN1, DCC, F6A, GR, HGF, IGF1, IL6, MUR, MYC, N, C1NG1, SMS, TK2, TNF, VCL, AANAT, ABCC8, ACAA2, ACSL5, ACTN2, ACY1, ADH1A, AD IPOQ, AKR1C1, AKR1C2, AKR1C3, ALAD, ALDH1A2, ALDH3A2, ALG5, AMY2B, A NGPTL4, APOE, ARAF, ARHGEF2, ARHGEF4, ATP2A3, ATP5G3, ATP5I, AXIN1, B4GALT6, BDKRB2, BDNF, BMPR1B, C1GALT1, CACNG7, CACNG8, CAMK2D, CAS P9, CBR1, CBR3, CCL17, CCL23, CD3E, CD40LG, CLDN16, CLTCL1, COL11A1, COL4A6, COL6A1, COL6A2, CPT2, CYBB, CYFIP1, DDX56, DHRS4, DHRS9, DNM T1, DNMT3B, DOT1L, ENO3, ENPP6, EPHA1, EXT2, FCGR3A, FGF20, FPGT, GAB 1, GALNT10, GALNTL1, GJD2, GLB1, GNAZ, GP1BB, GPT2, GSTA5, GSTT1, GUS B, GZMA, HAP1, HSD17B3, IARS2, IFNA7, IFNGR1, IKBKB, IL1R1, IL22RA1, IMPDH2, INADL, IQGAP3, IRAK4, ITGA2B, ITGA3, JAM3, KCNJ11, LDHD, LEF TY1, LHCGR, LIPF, LTC4S, MAD2L2, MAP3K4, MKNK2, NADSYN1, NARS, NCF4, NCR1, NFKB2, NFYA, NKX2-2, NKX6-</p> <p>1, NLGN3, NQO1, NTRK2, NUDT12, OPLAH, OR10K2, OR1J4, OR1N1, OR2AG2, O R2T29, OR4D1, OR4K5, OR4N4, OR4N5, OR51I1, OR51M1, OR5AC2, OR5D13, O R5H2, OR5P2, OR5T1, OR6C70, OR7A17, PANK1, PAPSS1, PARD3, PARS2, PFN 3, PGM1, PHKG1, PIAS1, PIK3R5, PKM2, PLCD3, PLD2, PNMT, PNPT1, POLE, P OLR1D, POLR2L, PPOX, PPP1CA, PPP1CC, PPP3R2, PRIM2, PRKAA1, PRKACG, PRKAR2A, PRKCL, PRDC1, DCMB1, PTPN22, PTPN7, PVRL1, POU1, POU2, POU3, PRKAR2B, PRPS1, RAF1, RARS, RASSF1, RBKS, RDH8, RRM2B, RXRA, SARDH, AGK, AKT, AMT, CRL1, CRM, CSK, CYR2, FGF, GLA, GGP, GR, GDS, IC9, K17, MPT, OTC, SRC, SYK, TFG, ABP1, ACP1, ACSS2, ADCY7, ADH5, ADH7, ADIPOR2, ADR A1D, ADRB3, AFMID, AGPAT1, AGPAT2, ALDH1A2, ALDH1A3, ALDH1L1, ALG6, ALOX12B, APAF1, APOE, B3GALT5, CAMK2D, CAPN2, CARD11, CCL24, CCL4, C CL7, CCND2, CD14, CD19, CD99, CDC14A, CDK2, CHRM5, CLDN5, COQ5, CRLS1 , CRY1, CRY2, CSF2RB, CYBA, CYP21A2, CYSLTR1, CYSLTR2, DCXR, DFFA, DG KB, DGKH, DTX4, EIF4B, EP300, EPHA5, EPHB6, ESPL1, FGF14, FGF19, FGF3 , FGF4, FGF8, FPGS, FSHR, FUT2, FUT8, GALNT3, GALNT7, GCNT3, GLB1, GNA 11, GNAI3, GNG3, GNPAT1, GPD2, GRIN2A, GSTA4, GUCY2F, HAP1, HSPA2, H TR5A, HTR6, IBSP, IFIH1, IFNA14, IFNAR2, IL13RA2, ITGA1, ITGA2, ITGA 3, ITGB4, ITPA, KAT2A, LAP3, LCMT1, LIPA, MAD2L1, MAP2K4, MAP3K11, MG LL, MYL2, NFKB2, NRP1, OGDHL, OR10A3, OR10H4, OR10K1, OR11H1, OR13C3 , OR2C1, OR4F17, OR4F5, OR51E2, OR51M1, OR52A1, OR52E4, OR52E6, OR52 H1, OR52K1, OR52R1, OR5AC2, OR5B17, OR5M9, OR5T1, OR5V1, OR6C76, OR8 B12, OR8J1, P2RX5, PAX8, PDHA2, PFKL, PFN1, PGM1, PIGQ, PIK3C2A, PIK3 R3, PLA2G10, PLA2G2F, PLAU, PLCB2, PLCG1, PMM1, POLR1E, POLR2I, POLR 2L, PRKAA2, 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<p>1, NLGN3, NQO1, NTRK2, NUDT12, OPLAH, OR10K2, OR1J4, OR1N1, OR2AG2, O R2T29, OR4D1, OR4K5, OR4N4, OR4N5, OR51I1, OR51M1, OR5AC2, OR5D13, O R5H2, OR5P2, OR5T1, OR6C70, OR7A17, PANK1, PAPSS1, PARD3, PARS2, PFN 3, PGM1, PHKG1, PIAS1, PIK3R5, PKM2, PLCD3, PLD2, PNMT, PNPT1, POLE, P OLR1D, POLR2L, PPOX, PPP1CA, PPP1CC, PPP3R2, PRIM2, PRKAA1, PRKACG, PRKAR2A, PRKCL, PRDC1, DCMB1, PTPN22, PTPN7, PVRL1, POU1, POU2, POU3, PRKAR2B, PRPS1, RAF1, RARS, RASSF1, RBKS, RDH8, RRM2B, RXRA, SARDH, AGK, AKT, AMT, CRL1, CRM, CSK, CYR2, FGF, GLA, GGP, GR, GDS, IC9, K17, MPT, OTC, SRC, SYK, TFG, ABP1, ACP1, ACSS2, ADCY7, ADH5, ADH7, ADIPOR2, ADR A1D, ADRB3, AFMID, AGPAT1, AGPAT2, ALDH1A2, ALDH1A3, ALDH1L1, ALG6, ALOX12B, APAF1, APOE, B3GALT5, CAMK2D, CAPN2, CARD11, CCL24, CCL4, C CL7, CCND2, CD14, CD19, CD99, CDC14A, CDK2, CHRM5, CLDN5, COQ5, CRLS1 , CRY1, CRY2, CSF2RB, CYBA, CYP21A2, CYSLTR1, CYSLTR2, DCXR, DFFA, DG KB, DGKH, DTX4, EIF4B, EP300, EPHA5, EPHB6, ESPL1, FGF14, FGF19, FGF3 , FGF4, FGF8, FPGS, FSHR, FUT2, FUT8, GALNT3, GALNT7, GCNT3, GLB1, GNA 11, GNAI3, GNG3, GNPAT1, GPD2, GRIN2A, GSTA4, GUCY2F, HAP1, HSPA2, H TR5A, HTR6, IBSP, IFIH1, IFNA14, IFNAR2, IL13RA2, ITGA1, ITGA2, ITGA 3, ITGB4, ITPA, KAT2A, LAP3, LCMT1, LIPA, MAD2L1, MAP2K4, MAP3K11, MG LL, MYL2, NFKB2, NRP1, OGDHL, OR10A3, OR10H4, OR10K1, OR11H1, OR13C3 , OR2C1, OR4F17, OR4F5, OR51E2, OR51M1, OR52A1, OR52E4, OR52E6, OR52 H1, OR52K1, OR52R1, OR5AC2, OR5B17, OR5M9, OR5T1, OR5V1, OR6C76, OR8 B12, OR8J1, P2RX5, PAX8, PDHA2, PFKL, PFN1, PGM1, PIGQ, PIK3C2A, PIK3 R3, PLA2G10, PLA2G2F, PLAU, PLCB2, PLCG1, PMM1, POLR1E, POLR2I, POLR 2L, PRKAA2, PSME3, PTEN, PTPMT1, PTPN7, PTPRJ, PVRL1, RAP1B, RASGRP2 , RBPJ, RERE, RETSAT, RPRM, RPS6KA2, RUVBL1, SARDH, SARS, SESN3, SLC2 4A, C1AD, C1E, CR2, CUN1, DCC, F6A, GR, HGF, IGF1, IL6, MUR, MYC, N, C1NG1, SMS, TK2, TNF, VCL, AANAT, ABCC8, ACAA2, ACSL5, ACTN2, ACY1, ADH1A, AD IPOQ, AKR1C1, AKR1C2, AKR1C3, ALAD, ALDH1A2, ALDH3A2, ALG5, AMY2B, A NGPTL4, APOE, ARAF, ARHGEF2, ARHGEF4, ATP2A3, ATP5G3, ATP5I, AXIN1, B4GALT6, BDKRB2, BDNF, BMPR1B, C1GALT1, CACNG7, CACNG8, CAMK2D, CAS P9, CBR1, CBR3, CCL17, CCL23, CD3E, CD40LG, CLDN16, CLTCL1, COL11A1, COL4A6, COL6A1, COL6A2, CPT2, CYBB, CYFIP1, DDX56, DHRS4, DHRS9, DNM T1, DNMT3B, DOT1L, ENO3, ENPP6, EPHA1, EXT2, FCGR3A, FGF20, FPGT, GAB 1, GALNT10, GALNTL1, GJD2, GLB1, GNAZ, GP1BB, GPT2, GSTA5, GSTT1, GUS B, GZMA, HAP1, HSD17B3, IARS2, IFNA7, IFNGR1, IKBKB, IL1R1, IL22RA1, IMPDH2, INADL, IQGAP3, IRAK4, ITGA2B, ITGA3, JAM3, KCNJ11, LDHD, LEF TY1, LHCGR, LIPF, LTC4S, MAD2L2, MAP3K4, MKNK2, NADSYN1, NARS, NCF4, NCR1, NFKB2, NFYA, NKX2-2, NKX6-</p>
Negative_15815	
Negative_15816	

Negative\_15817 C9, F12, F5, FAF, GK, ID2, IL4, JUN, KHK, MUC1, OGI, PAN, S1, TNF, ACPG, AC  
TA1, ADRA1D, ADRB3, AFMID, AGRN, ALDH6A1, ALG5, ALOX5, AMPD1, APAF1,  
ARHGEF1, ARHGEF2, ASMT, ASPA, B4GALT3, BCAT1, BIRC3, BLNK, BMP6, BPN  
T1, C9orf95, CACNB1, CACNG1, CACNG2, CACNG6, CAMK4, CANT1, CASP9, CC  
L26, CCNA2, CCNB1, CCND1, CCNE1, CCR2, CD274, CD36, CD46, CDC25A, CDK  
N1B, CDKN2B, CDKN2D, CES1, CHKA, CHRM2, CHST11, CHST12, CLDN16, CMPK  
1, COL2A1, CRKL, CSF1, CSF2RA, CTSC, CXCL13, CYFIP1, DBF4, DHODH, DKK  
2, DLAT, DLL1, DNMT3L, DRD5, DUSP4, DUSP8, EFNA5, EPRS, FGF1, FGF10, F  
GF13, FGF9, FLT1, FSHB, FUT3, FZD2, GALNT1, GALNTL1, GART, GAS1, GGT1  
, GNAS, GNRH1, GRLF1, GUCA1B, GZMB, HAP1, HEXB, HMOX2, HPSE2, HTR2A, H  
TR7, IDH3A, IDUA, IFNA2, IFNGR1, IL17RA, IL18RAP, IL1R1, IL22RA1, IM  
PA2, IRF5, ITGAX, ITPKB, JAG2, JAK2, KDSR, LAMC1, LYPLA1, MAD2L1, MAG  
I1, MALT1, MAML1, MAN1C1, MAOB, MAP3K1, MAT1A, MCM6, MINPP1, MKNK2, M  
OV10L1, MRAS, MTHFS, MTMR1, MYLK3, NCF4, NEU4, NFATC1, NPAS2, NRCAM,  
NTRK2, NUDT2, OR10Z1, OR13A1, OR13C9, OR2B11, OR4A15, OR4F15, OR51B  
6, OR5A1, OR5F1, OR5P2, OR6C70, OR6Q1, OR6T1, OR7A10, OR8B8, OR9A2, O  
R9A4, OR9Q2, P4HA1, P4HA2, PCNA, PDGFRB, PDPK1, PGM1, PIGA, PIGB, PIK  
3CG, PIM1, PLCD3, PLK1, PLTP, PLXNA1, PLXNA2, PMVK, PNMT, PNPLA4, POL

Negative\_15818 AGL, PAK3, R10M, B16, C7, CCA, EGF, P1, PDR, 1D9, 1D2, M1, R1, N1, P1, G1, P  
RL, SCD, SPN, TK2, TNC, XDH, ACVR1B, ADAM10, ADCY6, AKT1, ALDH3B2, AMD  
1, ANAPC2, ASIP, BCAT1, CACNA1F, CACNA1H, CACNG6, CARS2, CAV3, CCL13  
, CD55, CDC26, CDKN1B, CHAT, CLDN20, CNGA4, COL6A2, CPOX, CREB1, CTSP  
2, CTSG, CTTN, CX3CR1, CYP11B1, DFFB, DHCR24, DIAPH2, DNMT3B, DPAGT1  
, DTX2, DTX3, DUSP4, EFN1, EGLN1, ENO3, ENPP2, ENPP3, EPHB1, F2RL2, F  
ARSA, FGF13, FLOT1, FLOT2, FMO3, FUT1, GALNT11, GCNT4, GLI3, GNA11, G  
NAL, GNAS, GNB1, GNRH1, GRIA2, GSTM2, GYS1, H6PD, HADHA, HEMK1, HLCS,  
HPSE, HSD11B2, HTR2C, ICOSLG, IDH1, IL2RB, IL2RG, IMPA1, ITCH, ITGA5  
, ITGAL, ITGB6, KIR2DS4, LAMC2, LDHC, LRAT, MAD2L1, MADCAM1, MAN1A1,  
MAP3K6, MAPK14, MAT2B, MGAT4A, MGAT4B, MINPP1, MMP1, MYL2, NAGA, NCA  
M2, NEU2, NFE2L2, NLGN1, NOS1, NQO1, NT5C1B, NTNG1, OPLAH, OR10H1, OR  
10Z1, OR13H1, OR2G2, OR2M2, OR51A4, OR51G1, OR51L1, OR52E4, OR5AP2,  
OR5R1, OR6C70, OR7C1, OR8H3, OR8K1, PAFAH2, PAK4, PAPSS1, PAPSS2, PA  
RD6A, PDE4B, PDE6H, PDGFD, PDXP, PFKFB3, PFN4, PHGDH, PIGC, PIGM, PIK  
3R5, PIM1, PLCB4, PLCG1, PLXNA1, POLE3, POLR3K, PPP2R2A, PPP3CB, PPP  
3R2, PRKAB2, PRLR, PTGS2, PTPRB, PTPRF, PVRL4, PYCR2, QPRT, RBPJ, RBX  
1, RDH10, RFXANK, RHOA, RUNX1T1, SDC1, SEPHS1, SFRP5, SH3BP2, SKIV2L

Negative\_15819 AK3, CD2, DLD, F15, GNA1, ILK, ECT, EFC, ME1, MO3, N1, S1, V1, TA, GACT,  
ACADSB, ACLY, ACP2, ACTA2, ACTB, ACVR1, ACVR1C, ADH1A, ADIPOR1, ADOR  
A2A, ADORA2B, AGRN, AHCYL2, AKR1D1, ALG6, ALOX15, APOA1, ATP5C1, ATP  
6AP1, ATP6VOC, AXIN2, B3GAT1, B4GALT4, C1QC, C7orf16, CACNA1S, CACN  
G6, CANT1, CAV2, CCKAR, CCL22, CCNB2, CCNE2, CD55, CD99, CDC45L, CDH5  
, CDIPT, CDK7, CDKN2C, CIITA, CLDN4, COQ5, CSF1, CSF2RA, CSNK1G1, CTF  
1, CTNNA2, CTSC, CXCR3, CYFIP2, CYP11A1, CYP2D6, CYP2F1, CYP8B1, DAG  
1, DAPK2, DHRS3, DNMT3A, EFNA3, EGLN1, ELK1, ENTPD2, EPB41L3, EPHA7,  
F2RL1, FARSA, FGF12, FGF6, FRAT2, GAB1, GALC, GALK1, GALM, GDF6, GDF7  
, GIT1, GMPR2, GNG12, GNPAT, GNPAT1, GSTM1, GUCA1A, HARS, HDAC2, HRA  
S, HTR2A, IFNA2, IGF1, IKBKG, IL11, IL17RA, IRS4, ITCH, ITGA4, ITGAE,  
JAM2, JAM3, LAMB3, LCAT, LEF1, LTB4R2, LTBP1, MAML2, MTMR1, MYH2, MYH  
3, NADSYN1, NARS, NCK1, NCOR1, NFkB2, NKX3-  
1, NOX3, NRXN3, NTRK2, OR1F1, OR1I1, OR2A5, OR2V2, OR2W1, OR4D1, OR4F  
4, OR4K2, OR4M2, OR52D1, OR52E6, OR56A1, OR5J2, OR5M3, OR6C4, OR6Y1,  
OR7A10, OR7C2, OR7G3, PAFAH2, PAX6, PDGFD, PDIA4, PEMT, PFN1, PGAP1,  
PGM2, PIGX, PIK3R5, PLA2G3, PLIN, PNPT1, POLD2, POLD3, POLR2K, PPP1R  
3B, PPP2R2D, PRKAG3, PRKCI, PROC, PSME1, PSME3, PTEN, RAPGEF3, RASGR

Negative_15820	<p>BAX, CAT, DBI, DC1, EGF, F3, GLA, GF1, IL2, OTC, SPN, TNN, ABLIM1, ACADS, ACOX1, ACSS2, ACVR1C, ACYP1, ADIPOR2, AHCYL1, ANGPTL4, ARSE, ASPA, ATP2A2, ATP5B, BAAT, BCAT1, BDH1, BMPR1B, BUB3, CACNA1C, CASK, CCL27, CCNG2, CDC6, CDKN1A, CDKN1B, CDKN2B, CHEK2, CHRNA7, CLDN6, COL5A2, CREB5, CRHR1, CXCL12, CXCL2, CXCR5, CYP2C18, CYP2D6, CYP2F1, DAG1, DLL4, DNMT1, DUSP14, ENTPD5, EPB41L2, EPRS, EREG, ERO1L, EXT2, FABP1, FCGR2B, FGF11, FGF7, FGFR1, FRAT2, FUT2, GALNS, GALNT5, GART, GCNT2, GLI2, GL01, GLUD1, GMPPB, GNRH1, GSTA1, GSTA2, GSTP1, GSTZ1, GUCY2C, GUK1, HADHA, HES1, HMBS, HMGCS1, HSD3B7, IL22RA1, IL6ST, JAK3, KIR2DL3, KITLG, KNG1, LCAT, LCMT1, LIAS, LRP5, METTL6, MLLT4, MMP7, MYH4, MYH7, MYH9, NADSYN1, NARS2, NAT5, NAT6, NCAM1, NFKB1, NFYB, NLGN2, NR4A1, NRXN2, NTNG1, OCRL, OR10A3, OR10A6, OR10AD1, OR10G3, OR10H2, OR10Q1, OR10R2, OR10V1, OR11L1, OR13A1, OR14I1, OR11I1, OR2A4, OR2H1, OR4D9, OR4P4, OR51G1, OR52A1, OR52E2, OR52E6, OR5A1, OR5AN1, OR5V1, OR7C1, OR8B12, OR8H2, OR8K3, OR9G1, OR9G4, OXSM, P4HA2, PAK4, PCCB, PDE2A, PFAS, PHGDH, PIGN, PIGW, PIK3R1, PLA2G2A, PLA2G2D, PLK1, PLXNB2, POLR1D, POLR2F, POLR3A, PPAP2B, PPARA, PPID, PPOX, PPP2R5B, PPP3CB, PRNP, PRPH2, PTGER3, PTGS2, PYCR1, QPRT, RDH12, RFNG, RFX5, ROBO3, RP</p>
Negative_15821	<p><del>ARZ, AR7, BAX, CE2, DAO, GUA, GNR, USA, TCF, LCR, CYB, PSM, CYC, PVR, CSF7, F</del>  NN, VCL, A4GALT, ABL2, ABLIM1, ACAD9, ACO2, ACP6, ACTN1, ACVR1, ADCY10, ADCY3, ADH1A, AGPAT1, AGXT, AKR1B10, ALAD, ALDH1B1, ALG3, AMPD2, ARNT2, ARNTL, ARPC5L, BMPR1B, CACNA1I, CBLC, CCL2, CCL26, CCNA2, CCR10, CD14, CD247, CD3E, CD59, CD79B, CD8B, CDC14B, CDH1, CERK, CFL2, CHPF, CHST11, CISH, CLDN20, COL2A1, COL5A2, COQ7, CREB1, CREB3, CRHR1, CTSB, CTSL1, CYSLTR2, DAPK3, DARS, DPM1, DPYS, DTX4, EDAR, EI24, ENO2, ENO3, ENTPD3, ENTPD6, EPHB2, FARSA, FGD1, FGF12, FGF14, FOXA3, FRAT2, FUT3, GAB1, GAD2, GALK1, GALNT12, GGPS1, GJA1, GLYCTK, GNB3, GNG13, GNPDA2, GOT1, GPD1, GPD1L, GPLD1, HAP1, HSD11B2, ICOS, IDH1, IDH3B, IFNG, IL17A, IL17RB, IL20, IMPDH1, INHBE, IQGAP3, ITGB5, ITGB6, JUND, KIR2DL1, KLKB1, KLRC1, LAMB4, LCMT1, LFNG, LGMN, LIMK1, LRP5, LTBR, LYPLA1, MAGI2, MAPK12, MCM4, MGST2, MYH13, MYH9, NAMPT, NCAM2, NCKAP1L, NFATC1, NKX2-2, NQO1, NR4A1, NT5E, NTF3, NUDT2, ODC1, OR10A4, OR10AG1, OR10K1, OR13C3, OR13J1, OR2A5, OR2F1, OR2T33, OR4N2, OR4X2, OR51A7, OR51T1, OR5A1, OR5H2, OR5R1, OR6N1, OR6N2, OR7C2, OR8B4, OR9Q2, PAK3, PDE7B, PERP, PLA2G10, PLK1, POLE, POLE2, POLE4, POLR1D, PPM1D, PPP3CA, PRSS1, PYGM, RAC2, RAF1, RALBP1, RAP1B, RASGRP1, RBKS, SEMA3A, SEMA3B, SEMA3E, SGM6, SMC1A, SNAI2, SODS5, SRI1, SDRY1, STAT2, TBL1YB1, TIAM1, TLI</p>

Negative_15822	<p>AKT7, CBL, CR2, CS, DBH, DBI, DUT, EDA, F3, F3T, LPL, NLK, OSM, RET, TEC, A  C01, ACP5, ACPT, ACSL3, ACTA1, ADCY10, AGPAT6, AGRN, ALAS1, ALDH1A1,  ALDH1L1, ALDH3A1, ALDH3B1, ALDH9A1, ALG12, AMY2B, ARHGEF7, ASRGL1,  ATP2A2, ATP6V1H, AXIN1, B3GNT2, B4GALT3, BBOX1, BET1L, BIRC3, BPGM,  C3orf10, C4BPB, CASP9, CCL28, CCND1, CD247, CD58, CFLAR, CLDN1, CLOC  K, CLTA, CLTB, CMAS, CNTNAP1, COL3A1, COQ3, CRB3, CREB3L4, CSNK2A1, C  SNK2A2, CYP11A1, CYP11B1, CYP1B1, CYP26C1, CYP3A4, DAAM2, DBF4, DDB  2, DDX23, DDX54, DHDDS, DLL4, DTX3, DUSP2, EHMT2, ENO3, ENPP2, EPAS1,  ERBB4, FGF10, FGF20, FGF5, FUT4, GALT, GANAB, GARS, GAS1, GBE1, GGCX,  GMPR, GMPS, GNB1, GP1BB, GSTT1, GUSB, HHEX, HLA-  DOA, HSD17B4, IFNK, IKBKG, IL11, IL19, IL8RB, IMPA1, INSR, ITCH, ITG  AM, JUND, KAT2A, L1CAM, LAMA3, LLGL1, LLGL2, LRAT, LRDD, LTB4R2, LYZL  1, MADCAM1, MAP3K12, MAP3K14, MAP3K2, MAP3K4, MAT2B, MNX1, MOV10L1,  MTHFD1L, MYH13, MYH2, NAGLU, NANS, NCF2, NCK2, NCKAP1, NCR1, NRAS, NR  G4, NRXN3, NSD1, NT5C2, OLAH, ONECUT1, OPLAH, OR10G2, OR10J5, OR13D1  , OR1L6, OR2A14, OR4C12, OR4D6, OR4D9, OR4L1, OR4M2, OR4N2, OR51A2, O  R51M1, OR52B4, OR52I2, OR52R1, OR5D13, OR6B2, OR6B3, OR6C1, OR6C4, O  R8B4, ORC6L, OXCT2, PAX6, PCNA, PDE7A, PDHA1, PFKFB3, PFKM, PGAP1, PG  AD, PUG, PUS, PZ, PZ7, PZ8, PZ9, PZ10, PZ11, PZ12, PZ13, PZ14, PZ15, PZ16, PZ17, PZ18, PZ19, PZ20, PZ21, PZ22, PZ23, PZ24, PZ25, PZ26, PZ27, PZ28, PZ29, PZ30, PZ31, PZ32, PZ33, PZ34, PZ35, PZ36, PZ37, PZ38, PZ39, PZ40, PZ41, PZ42, PZ43, PZ44, PZ45, PZ46, PZ47, PZ48, PZ49, PZ50, PZ51, PZ52, PZ53, PZ54, PZ55, PZ56, PZ57, PZ58, PZ59, PZ60, PZ61, PZ62, PZ63, PZ64, PZ65, PZ66, PZ67, PZ68, PZ69, PZ70, PZ71, PZ72, PZ73, PZ74, PZ75, PZ76, PZ77, PZ78, PZ79, PZ80, PZ81, PZ82, PZ83, PZ84, PZ85, PZ86, PZ87, PZ88, PZ89, PZ90, PZ91, PZ92, PZ93, PZ94, PZ95, PZ96, PZ97, PZ98, PZ99, PZ100</p>
Negative_15823	<p>AAAT, AADAT, AASS, ACACA, ACSM3, ACSS1, ACTB, ACYP2, AGRN, AGRP, AMDHD2, A  MY2A, APH1A, APOE, ARNTL, B3GALT6, BIRC2, BMP6, BMP8B, CAPN2, CASP10  , CBR3, CCL15, CCL21, CCL27, CCNA1, CCNG1, CCNH, CD99, CDH1, CLDN2, CL  DN6, CNTF, CNTN1, CREBBP, CSF3R, CTPS, CTSL1, CXCR5, CYFIP1, CYP1B1,  CYSLTR1, DDX55, DERL1, DGKE, DGKI, DUSP14, DUSP6, DVL2, EDNRA, EGLN1  , ENO1, ENPP7, EPHA3, EPHB3, FARP2, FOXA3, FRAT1, FZD5, FZD6, GAB1, GA  LE, GARS, GLDC, GLG1, GLUD2, GNA12, GNG3, GRB2, GRM5, GSK3B, GZMB, HAD  HA, HNF1A, HSD11B2, HSPA8, HTRA5, HTRA2, HYAL1, ICAM2, IDH1, IDI1, IF  NA5, IFNA8, IKBKG, IL12B, IL1B, IL1RAP, IL25, INPP5A, INPPL1, ITGA10  , KDSR, KNG1, LAMB1, LAMB4, LDHA, LPAR1, MAPK3, MGAT3, MICA, MMP14, MP  ST, MMR1, MYH2, MYL2, NAT6, NCSTN, NFATC1, NLGN3, NT5C1A, NTF4, NTRK  2, OR10A7, OR10Z1, OR13F1, OR1N2, OR2AG1, OR2H2, OR2M3, OR2T33, OR3A  2, OR4A16, OR4D1, OR4E2, OR4F4, OR4S1, OR52J3, OR52L1, OR5AP2, OR5D1  4, OR6A2, OXCT1, P2RX6, PDE2A, PDE3A, PDHA2, PGAM4, PHGDH, PHKA2, PIK  3R3, PIK3R5, PIPOX, PLA2G4A, PLXNC1, POLR2H, POLR2L, POLR3K, PPA2, P  PP2R1B, PPP3CA, PRKCA, PRPS1, PRSS1, PVRL4, RALGDS, RENBP, ROBO3, SE  LP, SFRP5, SKP1, SLIT2, SMAD1, SOCS1, SRGAP1, SRGAP3, ST8SIA5, STAM,  STAT3, SUT1, CRT, DC1P1Z, GNSP1D, TIES, TET, HNS, RHR, LTB, ME1, TMR2, U  AT, SCD, SHH, TK2, TPR, UBC, ACACA, ACAD8, ACAT2, ACOT11, ACSS3, ACTA1  , AKR1B10, AKR1C3, AKR1C4, AKT3, ALDH1L1, ALDH6A1, ALDOC, ALG12, ALG  2, ALOX15, AMDHD2, APOA2, APOE, ARSA, ASPA, ATP2A3, ATP5H, ATP5L, BMP  7, CACNA1S, CACNB2, CACNB4, CCL13, CD59, CD86, CD8B, CDC16, CDC7, CDK  N2C, CER1, CFTR, CHAD, CHSY3, CKMT2, CLDN5, CNGB1, COL1A1, CREB1, CRH  R1, CSNK1D, CXCL16, CXCL9, CYP11B2, CYP4F2, DAAM1, DBF4, DDIT4, DERL  1, DKK2, DOLPP1, DRD5, DUSP7, E2F2, E2F3, EDN1, ELK1, ELK4, ENTPD4, EP  HA1, EPHA8, EXT1, F2RL2, FADS2, FARS2, FARSB, FGF20, FLAD1, FMO1, FMO  2, FRAT1, FUT1, FZD5, GALNT7, GBGT1, GNG3, GNPDA2, GP1BB, GRIN2C, GUC  A1B, GUCA1C, GUCY2F, HCST, HNF4G, HPSE, HSPA8, IFNGR1, IL15, IL18RAP  , IL23A, INPPL1, IPPK, ITGAM, JUND, KDSR, KIR2DL3, KLRK1, L1CAM, LARS  , LARS2, LCMT2, LEPR, LPAR1, MAP3K2, MAP4K3, MAPK9, MTFMT, MYH13, NAG  LU, NEU2, NFATC4, NME4, NODAL, NOTCH2, NOTCH3, NOX3, NT5C2, NT5M, NUM  B, OR10K2, OR1J1, OR1L8, OR2B11, OR2L13, OR2M4, OR2T1, OR4K14, OR4N5  , OR4P4, OR4Q3, OR52E2, OR52J3, OR52R1, OR5A1, OR5AR1, OR5C1, OR5K1,  OR5R1, OR5T2, OR7A5, OR8B12, ORC4L, P2RX4, PDE10A, PDE5A, PDE6G, PDE  7B, PDGFC, PEMT, PFAS, PFKM, PGK1, PIGP, PIGV, PLAT, PLCB2, PLCB3, PLC  B4, PLCB6, PLCB7, PLCB8, PLCB9, PLCB10, PRR12B, PRKCA, PRND, PRPC, PTPN22, PTPN23, PTPN24, PTPN25, PTPN26, PTPN27, PTPN28, PTPN29, PTPN30, PTPN31, PTPN32, PTPN33, PTPN34, PTPN35, PTPN36, PTPN37, PTPN38, PTPN39, PTPN40, PTPN41, PTPN42, PTPN43, PTPN44, PTPN45, PTPN46, PTPN47, PTPN48, PTPN49, PTPN50, PTPN51, PTPN52, PTPN53, PTPN54, PTPN55, PTPN56, PTPN57, PTPN58, PTPN59, PTPN60, PTPN61, PTPN62, PTPN63, PTPN64, PTPN65, PTPN66, PTPN67, PTPN68, PTPN69, PTPN70, PTPN71, PTPN72, PTPN73, PTPN74, PTPN75, PTPN76, PTPN77, PTPN78, PTPN79, PTPN80, PTPN81, PTPN82, PTPN83, PTPN84, PTPN85, PTPN86, PTPN87, PTPN88, PTPN89, PTPN90, PTPN91, PTPN92, PTPN93, PTPN94, PTPN95, PTPN96, PTPN97, PTPN98, PTPN99, PTPN100</p>
Negative_15824	<p>AAAT, AADAT, AASS, ACACA, ACSM3, ACSS1, ACTB, ACYP2, AGRN, AGRP, AMDHD2, A  MY2A, APH1A, APOE, ARNTL, B3GALT6, BIRC2, BMP6, BMP8B, CAPN2, CASP10  , CBR3, CCL15, CCL21, CCL27, CCNA1, CCNG1, CCNH, CD99, CDH1, CLDN2, CL  DN6, CNTF, CNTN1, CREBBP, CSF3R, CTPS, CTSL1, CXCR5, CYFIP1, CYP1B1,  CYSLTR1, DDX55, DERL1, DGKE, DGKI, DUSP14, DUSP6, DVL2, EDNRA, EGLN1  , ENO1, ENPP7, EPHA3, EPHB3, FARP2, FOXA3, FRAT1, FZD5, FZD6, GAB1, GA  LE, GARS, GLDC, GLG1, GLUD2, GNA12, GNG3, GRB2, GRM5, GSK3B, GZMB, HAD  HA, HNF1A, HSD11B2, HSPA8, HTRA5, HTRA2, HYAL1, ICAM2, IDH1, IDI1, IF  NA5, IFNA8, IKBKG, IL12B, IL1B, IL1RAP, IL25, INPP5A, INPPL1, ITGA10  , KDSR, KNG1, LAMB1, LAMB4, LDHA, LPAR1, MAPK3, MGAT3, MICA, MMP14, MP  ST, MMR1, MYH2, MYL2, NAT6, NCSTN, NFATC1, NLGN3, NT5C1A, NTF4, NTRK  2, OR10A7, OR10Z1, OR13F1, OR1N2, OR2AG1, OR2H2, OR2M3, OR2T33, OR3A  2, OR4A16, OR4D1, OR4E2, OR4F4, OR4S1, OR52J3, OR52L1, OR5AP2, OR5D1  4, OR6A2, OXCT1, P2RX6, PDE2A, PDE3A, PDHA2, PGAM4, PHGDH, PHKA2, PIK  3R3, PIK3R5, PIPOX, PLA2G4A, PLXNC1, POLR2H, POLR2L, POLR3K, PPA2, P  PP2R1B, PPP3CA, PRKCA, PRPS1, PRSS1, PVRL4, RALGDS, RENBP, ROBO3, SE  LP, SFRP5, SKP1, SLIT2, SMAD1, SOCS1, SRGAP1, SRGAP3, ST8SIA5, STAM,  STAT3, SUT1, CRT, DC1P1Z, GNSP1D, TIES, TET, HNS, RHR, LTB, ME1, TMR2, U  AT, SCD, SHH, TK2, TPR, UBC, ACACA, ACAD8, ACAT2, ACOT11, ACSS3, ACTA1  , AKR1B10, AKR1C3, AKR1C4, AKT3, ALDH1L1, ALDH6A1, ALDOC, ALG12, ALG  2, ALOX15, AMDHD2, APOA2, APOE, ARSA, ASPA, ATP2A3, ATP5H, ATP5L, BMP  7, CACNA1S, CACNB2, CACNB4, CCL13, CD59, CD86, CD8B, CDC16, CDC7, CDK  N2C, CER1, CFTR, CHAD, CHSY3, CKMT2, CLDN5, CNGB1, COL1A1, CREB1, CRH  R1, CSNK1D, CXCL16, CXCL9, CYP11B2, CYP4F2, DAAM1, DBF4, DDIT4, DERL  1, DKK2, DOLPP1, DRD5, DUSP7, E2F2, E2F3, EDN1, ELK1, ELK4, ENTPD4, EP  HA1, EPHA8, EXT1, F2RL2, FADS2, FARS2, FARSB, FGF20, FLAD1, FMO1, FMO  2, FRAT1, FUT1, FZD5, GALNT7, GBGT1, GNG3, GNPDA2, GP1BB, GRIN2C, GUC  A1B, GUCA1C, GUCY2F, HCST, HNF4G, HPSE, HSPA8, IFNGR1, IL15, IL18RAP  , IL23A, INPPL1, IPPK, ITGAM, JUND, KDSR, KIR2DL3, KLRK1, L1CAM, LARS  , LARS2, LCMT2, LEPR, LPAR1, MAP3K2, MAP4K3, MAPK9, MTFMT, MYH13, NAG  LU, NEU2, NFATC4, NME4, NODAL, NOTCH2, NOTCH3, NOX3, NT5C2, NT5M, NUM  B, OR10K2, OR1J1, OR1L8, OR2B11, OR2L13, OR2M4, OR2T1, OR4K14, OR4N5  , OR4P4, OR4Q3, OR52E2, OR52J3, OR52R1, OR5A1, OR5AR1, OR5C1, OR5K1,  OR5R1, OR5T2, OR7A5, OR8B12, ORC4L, P2RX4, PDE10A, PDE5A, PDE6G, PDE  7B, PDGFC, PEMT, PFAS, PFKM, PGK1, PIGP, PIGV, PLAT, PLCB2, PLCB3, PLC  B4, PLCB6, PLCB7, PLCB8, PLCB9, PLCB10, PRR12B, PRKCA, PRND, PRPC, PTPN22, PTPN23, PTPN24, PTPN25, PTPN26, PTPN27, PTPN28, PTPN29, PTPN30, PTPN31, PTPN32, PTPN33, PTPN34, PTPN35, PTPN36, PTPN37, PTPN38, PTPN39, PTPN40, PTPN41, PTPN42, PTPN43, PTPN44, PTPN45, PTPN46, PTPN47, PTPN48, PTPN49, PTPN50, PTPN51, PTPN52, PTPN53, PTPN54, PTPN55, PTPN56, PTPN57, PTPN58, PTPN59, PTPN60, PTPN61, PTPN62, PTPN63, PTPN64, PTPN65, PTPN66, PTPN67, PTPN68, PTPN69, PTPN70, PTPN71, PTPN72, PTPN73, PTPN74, PTPN75, PTPN76, PTPN77, PTPN78, PTPN79, PTPN80, PTPN81, PTPN82, PTPN83, PTPN84, PTPN85, PTPN86, PTPN87, PTPN88, PTPN89, PTPN90, PTPN91, PTPN92, PTPN93, PTPN94, PTPN95, PTPN96, PTPN97, PTPN98, PTPN99, PTPN100</p>



Negative_15825	<p>ADC, C2, CBL, CD2, CDA, F3, FER, EIF, EFN, UGT, RBT, INN, IFR, UBC, A4GAL  T, AANAT, ABL1, ACACA, ACAT1, ACAT2, ACSL1, ACSL3, ACTN1, ADCY10, ADH  1A, ADH4, AKR1C2, ALAS2, ALDH6A1, ALOX15B, ANAPC11, ASPA, ATP6AP1, B  DH1, BDKRB1, BRAF, BST1, BTRC, C3AR1, CACNB2, CCL13, CCL16, CCL19, CC  L7, CCNG2, CD3E, CDC25B, CDKN1B, CEBPA, CKMT2, CLTB, CLTC, COL3A1, CO  L5A1, CSDA, CSNK2A1, CTNNA2, CXCL1, CXCL12, CXCL6, CXCL9, CYP4F3, DF  FB, DHRS4L2, DHRS9, DOT1L, DUSP14, E2F2, EFN3, ENO2, ENPP6, EPB41L2  , ESAM, F13A1, FABP1, FCER1G, FGF10, FGF23, FGF4, FIGF, FLT3LG, FUT1,  G6PC, GAL3ST1, GNA15, GNAO1, GNAQ, GNG3, GPLD1, HIBCH, HLA-</p>
Negative_15826	<p>F, HYAL1, ICAM1, IFNA6, IFNW1, IL1R2, IL23A, IL28A, IL7R, IRAK3, IRF3  , IRF9, ITGAV, ITGB4, LARS, LEFTY2, LRRC4C, LYPLA1, MAML1, MAP4K1, MA  PK3, MAPK7, MASP2, MBL2, MDM2, MGAT2, MGAT4A, MTMR2, MYH9, NAGK, NFAT  5, NFATC4, NFE2L2, NFKBIA, NKD2, NME2, NRCAM, NRG2, NSD1, NTSR1, OR10  G4, OR10H5, OR10Z1, OR13H1, OR1L6, OR2G3, OR2L2, OR2L3, OR2T1, OR4K1  5, OR4L1, OR4P4, OR4S2, OR51S1, OR52K2, OR52L1, OR5A2, OR5D14, OR5F1  , OR5L1, OR7A17, OR9G1, OR9I1, OXCT2, P2RX1, PAK1, PANK3, PARS2, PAX4  , PCCA, PCNA, PDE1C, PDE6D, PDE9A, PGAP1, PHPT1, PIK3C3, PIK3R5, PISD  , PKM2, PLCD1, POLE, POLR1E, POLR3K, PPP1R1A, PPP2R2A, PPP2R5C, PRKA  RA1, BDNF, BDNF, CCR1, CR2, DBP, DDC, DDT, GEA, GEB, GLS, IL9, MDT, PDE1, R, PNF,  AADAT, ACAD8, ACAT1, ACY3, ADAM17, ADCY1, ADH6, ADRA1B, ADRA1D, AGRN  , AKR1C1, ALDH1A2, ALDH3A2, ALG1, ALG10, AMD1, ANAPC4, ASS1, ATP4A, A  TP5C1, ATP6V1F, AVPR1B, AXIN2, B4GALT4, BAAT, BDH1, BMP6, BMP8A, CAC  NA1G, CAV3, CCL27, CCND1, CCND2, CD47, CD72, CDC23, 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Negative_15827	<p>AMT, AN, DLD, F8, FER, F11N, GDA, HGF, ID4, IL4, ME1, MF2, NFK, TPO, AAC3, ACTA2, ACVR1, AGRP, AKT2, ALDH1L1, ALDH2, ALDH3A1, ALG1, ALG13, AMPD 2, ANAPC4, APOC3, ASMT, ASNS, ATP4B, ATP5D, ATP6VOB, B4GALT5, B4GALT 7, BCKDHB, BET1L, BMP5, BMP7, BUB3, CADM1, CASK, CASP7, CCL15, CCNG1, CDC20, CDS2, CHRM3, CKMT2, CMPK2, CNGA4, CNGB1, COQ5, COX10, CPS1, CR B3, CREBBP, CRKL, CRY2, CSF2RA, CXCL1, CYP17A1, CYP2A13, CYP2C19, CY P2S1, DAAM1, DDX50, DUSP14, ENPP6, ENTPD2, EPHA5, EPHB1, ETNK1, FGF1 4, FGF20, FGF23, FGF3, FGF5, FLOT1, FUT5, FUT9, GALM, GALNT2, GALNT7, GALNTL5, GART, GGT5, GGT6, GLI2, GMPPA, GMPR, GNA12, GUCY1B3, GUSB, H A01, HBEGF, HDAC2, HLA-</p>
Negative_15828	<p>DRA, HSD17B4, HSD17B8, IARS, IDI1, IGF1R, IL18, IL20RB, IL23R, IL2RA , INADL, IPPK, JAG2, KAT2A, KCNB1, LAMA4, LDHAL6A, LIPA, LIPC, LPAR1, LTBR, MAML1, MAML2, MAOA, MAPK11, MCCC2, MDM4, MKNK1, MMP1, NADK, NEF L, NFKB2, NOS3, NRAS, NT5C, OR10K1, OR10K2, OR12D3, OR1J4, OR2A2, OR2 G6, OR2K2, OR4C13, OR4C15, OR4K2, OR51M1, OR52B6, OR52J3, OR52W1, OR 5C1, OR6B2, OR6C75, OR6K6, OR7C2, ORC6L, P4HA1, PAFAH2, PANK2, PDGFD , PDIA4, PFKP, PIGC, PKLR, PLAUR, PNPLA3, POLD2, POLD3, POLR1E, POLR2 D, POLR2G, POLR2K, POLR3K, PPA2, PPCDC, PPP2R2A, PRKAG2, PTCH2, PTGE S, RALB, RDH5, RHOD, SCD5, SEMA3B, SEMA4A, SMARCA5, SMC1B, SOCS4, SPT AC1, SPC4, SPC7, SPC9, SPC9L, SPC9X, SPC9Y, SPC9Z, SPC9AA, SPC9AB, SPC9AC, ACOT12, ACOX1, ACOX3, ACSL6, ACVR2A, ADAM17, ADCY10, ADIPOQ, ADORA2 B, ADRA1B, ADSS, AKR1C1, ALCAM, ALDH5A1, ALG6, AMDHD1, AMDHD2, ANAPC 11, ATP13A2, ATP2A3, ATP4B, ATP5G3, ATP5L, B3GAT1, B3GAT3, B4GALT4, BAIAP2, BCAT2, BHMT, BUB3, C9orf95, CACNA1D, CACNA1F, CACNG3, CALML 3, 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Negative_15833	<p>ADA, CS, CFI, LHB, MFI, OTC, PDC, FVR, RPE, SCD, TNC, VCL, ZTA, ADF1, ACS  M5, ACTA1, ACVR2B, ACY1, ADCY4, ADCY9, ADH1A, ADH7, AGPAT6, AGRP, AKR  1C3, AKT1, ALG6, ALPP, AOX1, APAF1, APC2, ARPC1A, ASCC3, ASPA, ATP5G2  , C1QC, C9orf95, CAMK4, CCL14, CCL15, CCL26, CCL28, CDKN2D, CHRM1, CH  RM5, CIITA, COL11A1, CSNK1D, CYBB, CYP11B1, CYP17A1, CYP21A2, CYP2C  9, DAPK2, DFFB, DGAT2, DGKQ, DHRS4L2, DUSP14, EDAR, EDNRB, EFNA3, EFN  B1, EHHADH, ENPP6, ENTPD6, EPB41L3, EPHB1, ETNK2, FGF13, FGF8, FMO2,  FMO4, FTCD, FTMT, FZD8, FZD9, GAL3ST1, GATM, GFPT2, GLB1, GLUD1, GLYC  TK, GMPR, GNB3, GNRHR, GPT2, GUCA1C, GUCY1A2, GUCY2C, HAGH, HAO2, HAP  1, HDAC1, HLA-</p>
Negative_15834	<p>F, HMGR, HTR2C, IFNGR2, IL22RA1, IL28B, IL2RB, INPP1, INPP5E, ISYNA  1, ITGB4, JUND, KIR3DL1, LIPE, LIPT1, LRAT, MAP2K6, MAP3K14, MAP4K3,  MAT1A, MCM3, MGAM, MGAT3, MMP1, MTHFR, MTMR6, MYH7, MYL9, NAGK, NCK1,  NCKAP1, NFKBIA, NFYB, NOTCH2, NPAS2, NR4A1, NRCAM, NRG1, OLAH, OR10G  3, OR10P1, OR10Q1, OR10V1, OR13G1, OR2L8, OR2T4, OR4A16, OR4E2, OR4K  1, OR4K15, OR51B4, OR51F1, OR52B4, OR5A2, OR5L2, OR5P3, OR6F1, OR8B1  2, OR8H2, ORC1L, ORC2L, ORC3L, P2RX2, PANK4, PCCA, PCNA, PDE10A, PDE5  A, PDX1, PFN2, PGM2, PGM3, PHKA2, PIAS3, PIGP, PIGV, PLCB4, PLXNA3, PO  LE, PPP1R3B, PPP2R2A, PPP2R2C, PRKAR1A, PRKCI, PRPS1, PTPMT1, PYCR1  , AANAT, ABAT, ABLIM1, ACAA2, ACADSB, AC01, ACOT12, ACSL1, ACSL4, ACS  L5, ADAM10, ADRBK2, ADSSL1, AFMID, AHCYL1, AKR1C2, AKR1C4, ALAD, ALG  1, AOX1, ARSA, ASMT, B4GALT3, BAAT, BCKDHB, BIRC3, BMP2, BMP8A, BMPR1  B, BMPR2, C1GALT1, C4BPB, CAMK2B, CCNB2, CCNH, CCR7, CDH5, CHDH, CHIA  , CHRM5, CLCA2, CLCA4, CLDN1, CLTCL1, CNTFR, COL2A1, CUL1, CXCL12, 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Negative_15835	<p>ADA, AMH, CAD, DHH, F12, F3, F9, FH, GK, GLS, GP9, HDC, ID2, ILK, LAT, UBB, ABLIM3, AGRP, AKT2, AOX1, APRT, ARHGEF4, ATP12A, ATP5G3, B3GAT2, BBOX1, BDH2, BMP8B, CACNA1C, CACNA1D, CACNA1H, CACNG8, CCL23, CCNE2, CD22, CD244, CD47, CD55, CDC14A, CDH15, CHAT, CHDH, CHKB, CHSY3, CISH, CKMT2, CLDN14, CLDN17, COL4A2, CSH1, CSNK1D, CTNND1, CYP21A2, CYP26C1, CYP3A43, CYP3A7, CYP4F3, DCTN1, DDIT4, DDX56, DFFB, DNMT1, DTYMK, DUSP3, DVL1, ECHS1, EDN1, EDNRA, ENTPD3, ENTPD4, EPHB1, ESPL1, FABP1, FADS2, FGD1, FGF20, FGF23, FLT1, FOXA3, FRAT2, GALK2, GDF6, GGT5, GJA1, GJD2, GLS2, GLUD2, GMPPA, GNRH2, GOT1, GOT2, GRB2, GRIA2, GSK3B, GSTA1, HES1, HEXB, HTR6, IDH2, IDH3B, IDI2, IFNA16, IFNA6, IFNA7, IL11, IL13, IL15, IL28RA, IL4R, INPP4B, ITGB1, JAK1, JAM3, KIR2DL2, KIR2DL3, LAMB2, LAMC1, LCMT2, LDHB, LRP6, LTBR, MAGI2, MAP2K6, MAP3K5, MCC1, MDM2, MGAT2, MINPP1, MLYCD, MPZL1, MRAS, MTHFS, MYH15, NOS1, NRG3, OLAH, OR10AD1, OR10H1, OR10J3, OR10K2, OR13H1, OR1A2, OR1L1, OR2A4, OR2B6, OR2K2, OR2T29, OR2T33, OR3A2, OR4K14, OR4K17, OR4N2, OR4S2, OR51E1, OR51E2, OR51V1, OR52N5, OR5A1, OR5L2, OR5M3, OR6C1, OR6M1, OR8B12, OR8D2, OR8I2, PARD6B, PARD6G, PI4KB, PIGM, PIP4K2B, PKMYT1, PLA2G2D, PLCD1, PMVK, PPARA, PPID, PPM1A, PPM1B, PRKAB1, PRKAG1, PR</p>
Negative_15836	<p>RR, S1D, CS, CDR, CSR, PPK1, PGP105, PVAR, GORPT, L2, PK1, OTC, PEP, POK, PSRM, TAT, TKT, UBC, AARS, ABL2, ACAD9, ACP2, ADORA2B, ADSS, AGMAT, AGPAT4, AHCY, AKT1, ALAS2, ALDH5A1, ALS2, ANPEP, AQP7, ARNTL, ATP4A, B3GAT3, B4GALT4, B4GALT7, CACNB2, CANT1, CCL26, CCL3, CCL7, CD14, CD40, CD40LG, CDC6, CFL1, CHRM5, CKMT2, CLCA4, CLDN15, CLDN4, COL6A2, COQ7, CSNK1E, CTNNA1, CTPS2, CXCL13, CXCL16, CYP3A4, DAPK2, DAPK3, DCTN1, DDIT3, DDX56, DEGS2, DFFA, DGKB, DGKE, DKK4, DPM1, DPYD, ELK1, ENTPD8, EP300, EPAS1, EPHX2, ERBB3, EXTL2, F13B, F2RL1, FABP3, FCGR3A, FGF17, FGF19, FGF21, FMO4, FOXA3, FOXO1, GALC, GALNT6, GALNT8, GCDH, GLUD1, GLUD2, GNA12, GNPAT, GNPDA2, GPAA1, GRB2, GRIA3, GRIN2D, GSK3B, GSTA1, GSTM3, GUCY2C, HAGHL, HLA-C, HSD3B1, HYAL2, IDH3A, IFNA2, IGFBP3, IL18R1, IL20, IL21R, IL25, IMPDH1, INHBA, INHBC, INPP5B, ITGAD, ITGAM, ITGB4, ITGB7, ITGB8, KAT2B, KIR2DL1, LAMB4, LCMT1, LDHAL6B, LDHC, LRP5, MAP3K1, MAP3K13, MAP3K7, MCM5, MGST2, MTMR6, MYL7, NFYB, NOS3, NOX3, NTSR1, NUDT12, NUDT8, OCLN, OR1J1, OR1L6, OR2A2, OR2A4, OR2L8, OR2T12, OR2T3, OR2T5, OR4C6, OR4D11, OR4K2, OR51F2, OR51G2, OR5AC2, OR5D16, OR5J2, OR5P2, OR6K6, OR7D2, OR7G2, OR8B12, OR8S1, OXCT1, P2RX7, PDE10A, PDPK1, PEMT, PERP</p>
Negative_15837	<p>ADC, ADA, AYM, U, B, C55, CP, DCA, DIC, EDA, F5, GUR, GUA, GGR, HXK1, IL2, IL7, JUP, KIT, MVK, NF1, PLN, ACHE, ACP1, ACVR1B, ACVR1C, ADAM17, ADCY3, ADCY5, ADCY7, AHCYL1, AKR1B10, ALDH1B1, ALOX15, ATG3, ATP5H, B4GALT5, BAAT, BACE1, BCL2L1, BMPR1A, C3orf10, CACNG4, CAMK4, CARS, CAV1, CCL24, CCNA2, CCNH, CD28, CD79A, CD8B, CD99, CDC23, CDC27, CHEK1, CHST11, CLDN18, CLDN4, CLDN6, CLDN7, CNTF, CNTFR, CNTN2, CREB3L1, CYP11A1, CYP11B1, CYP26A1, CYP27A1, DDIT3, DEGS1, DIAPH1, DNMT3L, ECSIT, EDNRA, EFNA3, ELK4, ENTPD7, EPHA4, EPHA5, EPHB4, ERBB4, F2RL1, FARSA, FGF22, FGF3, FGF5, FPGT, FUT9, FZD6, GALNT14, GATM, GDF5, GGT6, GIT1, GNPDA1, GUCY1A2, HA02, HARS, HLA-DRA, HMGCS2, HNMT, HTR2A, IDH3G, IFNA17, IL12B, IL4R, IL6ST, INSRR, IQGAP2, IRF7, JAG1, KCNJ11, KIR2DL1, KIR2DL4, KITLG, KLRC3, KNG1, LAP3, LARS, LIMK2, MAD2L2, MAP3K3, MAPK10, MAPK8, MGAT2, MYH7, NAGA, NARS, NFASC, NFATC1, NME6, NTF3, NTSR1, OCLN, OCRL, OGDHL, OR10A4, OR10Q1, OR11H4, OR1J2, OR2L3, OR2M3, OR3A2, OR4D5, OR51A4, OR52A5, OR52I1, OR52N1, OR5H2, OR7G1, OR9A4, P2RX3, PARD6G, PDE6H, PDX1, PDXK, PEMT, PIGW, PIP5K1A, PLXNB1, PMM2, PMVK, POLE, POLE3, POLR1A, POMC, PON2, PPA2, PPP2CA, PPP2R2C, PPP2R5E, PRKAG2, PRKAR1B, PVRL2, PYCR1, PYCR</p>

Negative_15838	<p>AMH, AMT, BTK, CAT, DB1, F10, GBA, GFC, GSS, LTF, MES, NLK, PDC, PKL, PPS, SDS, AARS, ABL1, ACSM3, ACTA1, ACTB, ACVR1B, ADCY5, ADSS, AKR1A1, AKR1B1, AKT2, ALAD, ALAS1, ALDH4A1, ALDH5A1, AOC3, APRT, ATP5G3, ATP5J, ATP6V1F, BCAR1, BIRC3, CACNA1I, CASP8, CCL13, CCL25, CCL27, CD59, CDH15, CES1, CHAT, CHEK2, CNDP1, CNGA3, COL4A4, CRY2, CSDA, CXCL13, CXCL9, CYP1A1, CYP27A1, CYP2U1, CYP4A11, DAAM1, DAPK3, DDX18, DDX4, DDX55, DGKD, DGKG, DHRS4L2, DIAPH1, DPAGT1, DUSP7, EDA2R, EHMT2, EPB41, EPRS, FGF19, FTMT, GALNT11, GARS, GCLC, GLO1, GOSR2, GPAA1, GPD2, GRIA3, GUCY2D, HAGHL, HBEGF, HCCS, HLA-F, HMBS, HSD17B2, HYAL2, IDI2, IFNA10, IL17A, IL17B, IL23R, IL29, IRF7, ITGA11, ITGA3, KCNQ1, KITLG, KRAS, LAMB3, LCAT, LIAS, LRDD, MAGI3, MAML2, MAP2K6, MAPK12, MAPT, MOV10L1, NADSYN1, NAT2, NEU4, NFKB2, NFKBIA, NOS3, NSDHL, NTN1, OR10AG1, OR10H1, OR10R2, OR13C5, OR14I1, OR2T10, OR2T8, OR4K14, OR51B5, OR51B6, OR51S1, OR5L2, OR5P2, OR5T3, OR6B2, OR6C1, OR6C4, OR8D1, OR8H3, P2RX5, PDE1B, PDGFB, PFKP, PLA2G6, PLCB2, PLCD1, POLD2, POLR1D, POLR2C, PPAP2C, PPP1R3A, PRKCB, PRKG2, PRKX, PSENE1, PTK2B, PTPMT1, PYGB, RASA2, RENBP, RFNG, RHOA, RPE65, RPN1, RUNX1, SDC1, SDC2, SDC4, SDHD, SESN1, SETD8, SETMAR, SFRP1, SFRP2</p>
Negative_15839	<p><del>AGK, ARSE, CBS, CD2, CDA1, DDI1, P63, SIRT1, GSK3, GSK3, ICS, ICS, LPL</del>  AGK, ARSE, CBS, CD2, CDA1, DDI1, P63, SIRT1, GSK3, GSK3, ICS, ICS, LPL, ME2, SMO, TNN, ABAT, ABL2, ABLIM1, ACLY, ACO1, ACSL4, ACTN1, ADRBK2, AGXT, AHCY, AKT2, ALDH2, ALDH4A1, ALG11, ASCC3, ATG7, ATP5F1, B3GAT2, BCAT2, BLNK, BMPR2, BPNT1, CACNA1A, CACNB2, CACNG1, CACNG4, CACNG7, CAMKK2, CBR1, CCL28, CCNE2, CCR6, CD46, CD8A, CDC16, CHIT1, CLDN17, CLDN2, CLDN9, CLTCL1, COL1A1, CSNK1D, CSNK1G1, CSNK1G2, CTBP2, CTNNA3, CXCL1, CXCL2, CYP1A1, CYSLTR1, DAG1, DAPK1, DDX41, DDX54, DDX55, DFFA, DGKQ, DHRS9, DTX1, DTX3L, DTYMK, DUSP1, EDNRB, EFN1, EPAS1, FARSA, FBP2, FGF1, FZD1, GAMT, GCNT1, GCNT2, GJA1, GMDS, GNA13, GNPAT, GOT2, GSTK1, GUCA1C, GUCY2C, HAP1, HLCS, HNF4G, HRH1, ICAM3, IFNA6, IFNB1, IL11, IL17A, IL18RAP, IL19, IL1R1, IMPDH2, INPP4B, IRAK1, ITGA2, ITGA9, ITGAL, JAG2, KYNU, LAMC1, LAP3, LEFTY1, LLGL1, LYPLA2, MAP2K7, MAPK10, MAPK14, MAPK3, MARS, MCM7, MGAT4A, MKNK1, MPST, MS4A2, MYH14, MYH3, NARS2, NAT6, NCK1, NEU2, NFATC2, NFKBIB, NFYC, NME2, NME6, NMNAT3, NTN1, OLAH, OR10AG1, OR10R2, OR11L1, OR13C4, OR1A2, OR2AG1, OR2C1, OR2D3, OR2T10, OR4B1, OR4K2, OR4K5, OR51I2, OR51V1, OR52I2, OR5AC2, OR5AR1, OR5I1, OR5P3, OR6M1, OR8J1, OR9K2, ORC4L, PAFAH2, PAK4, PARD6A, PDE4A, PDHA2, PDIA4, PDPK1, PFKFB3, PGM3, PIGQ, PLAT, PLAU, C5, C9, C6, C8A, CDA, GGA, GAT, GP3, HAT, INS, KDA, LCT, ETF, MRP, ML1, MPY</p>
Negative_15840	<p><del>C5, C9, C6, C8A, CDA, GGA, GAT, GP3, HAT, INS, KDA, LCT, ETF, MRP, ML1, MPY</del>  , NLK, OGT, PLN, TNF, XDH, ABAT, ABLIM1, ACMSD, ACOX2, ACP5, ACPP, ACSL3, ADH7, ALDOB, ALG1, ALG8, ALOX5, ALPL, AOC2, APOC3, APPL1, ARHGEF1, ARPC2, ATP4A, B3GALT1, B3GALT6, B3GAT3, B3GNT5, BCAT1, BCL10, BIRC2, BMP7, BMPR1A, BRAF, C3orf10, CACNA1B, CACNA1F, CACNB2, CACNB3, CAMK4, CCL14, CCL22, CCNA1, CD28, CDC20, CDIPT, CDK5, CHRM2, CHST13, CNGB1, CNTN2, COL2A1, CPS1, CRLF2, CTNNA3, CTPS, CTPS2, CTSL1, CUL1, CXC16, CXCR6, CYP2A7, CYP2C8, CYP3A5, DHCR7, DIAPH1, DPAGT1, DPYD, DPYSL2, DRD5, DUSP14, EFN3, ENTPD6, EPHB6, FGF7, FZD10, GFAP, GMPBB, GP1BB, GRIN2B, GRLF1, GSTA4, HADHA, HES1, HHIP, HLA-DOB, HNF4G, HPSE, HSD17B7, IBSP, IFIH1, IFNG, IFNGR1, IFNGR2, IGF1, IGFBP3, IL17RA, IL1A, IL28A, IL6ST, INHBA, IRAK1, ITGB3, LALBA, LARS, LMO7, LPAR1, LRAT, LRDD, MAN2A1, MAPK3, MAT2B, MGAM, MTAP, MTHFD1, MYL2, MYL7, MYL9, NADSYN1, NAGA, NCAM2, NCKAP1L, NEGR1, NMNAT1, NOS1, NTSR1, OCRL, OR10A7, OR10H3, OR11G2, OR13C4, OR13H1, OR14A16, OR14J1, OR1L3, OR2AG1, OR2T12, OR2T8, OR4K5, OR51A4, OR51F1, OR51F2, OR51S1, OR51V1, OR56A1, OR56A3, OR56A4, OR56B4, OR5B12, OR5R1, OR6C3, OR6K2, OXCT1, P2RX4, PAK7, PARD6G, PARVG, PAX6, PDIA4, PEMT, PGAP1, PGS1</p>

Negative_15841	<p>ADA, AGL, BAD, CAB, C9, GDA, GK, GK2, GNS, GPT, HFD, ID2, KHK, MES, MUI, S  HH, TKT, UBC, AADAT, ABLIM1, ABLIM2, ACAT2, ACO1, ACSM1, ACYP1, ADH7,  ADSSL1, AHCY, ALG8, ALS2, ANAPC1, APC2, ARHGEF2, ARPC1B, ARSE, ATG12  , ATG7, ATP4B, B4GALT7, BCKDHA, BET1, BHMT, BMP8A, C1QA, CAMK2D, CAMK  K1, CASP8, CCL28, CCR3, CD40LG, CD55, CHRM1, CLDN8, CNGA4, COASY, COQ  3, CSAD, CSF2RA, CSNK2B, CXCR5, CYP1A1, CYP3A43, DAAM1, DAXX, DDIT3,  DEGS2, DGUOK, DHDH, DHRS9, DNMT3B, DPM1, DUSP9, EFN1, ELK1, EP300, E  PHA3, ETS1, EXT2, FARP2, FGF3, FGF4, FLOT1, FLT4, FPGS, GADD45A, GALK  2, GALNT13, GARS, GART, GLDC, GNA11, GNA14, GPX5, GRIN1, GSTA1, GSTO1  , GSTP1, GSTZ1, HNF4G, HSD11B1, HSPA1B, HTR6, HTR7, ICAM3, IFNA4, IFN  A7, IFT57, IL12B, IL1R1, IL7R, IRF9, IRS2, ITGA8, ITGAD, ITPKA, JAG1,  KCNJ11, MAD2L1, MPST, MTHFS, MYH1, MYH7B, NAT6, NCR1, NCR2, NCR3, NEU  3, NFYB, NFYC, NOS3, NOTCH3, NOX1, NPR1, NTF4, NUDT12, NUMB, OR10AD1,  OR11H1, OR13C8, OR14A16, OR1E1, OR1J2, OR1N1, OR2A25, OR2AE1, OR2G2  , OR2T10, OR2T5, OR2V2, OR3A1, OR4F4, OR51A2, OR52B4, OR52I1, OR52K2  , OR52N1, OR56B4, OR5H6, OR5P3, OR6C2, OR6T1, OR7G2, OR8B4, OR9K2, OS  MR, PAK2, PANK4, PARD6A, PARD6B, PCCA, PCYT1A, PDE7A, PDPK1, PFN1, PI  4KB, PIGN, PIGW, PIK3R2, PLA2G2E, PLA2G6, PLAUR, PNLIP, POLA1, PON2,  RR3, PAR, CD4, DRG, DB1, DEL, PYZ1, GB, MK, PTP, SLS, TAT, RCOA1, PAF2, R  PP, ACSL3, ACVR1B, ACVRL1, ACYP2, ADCY3, ADRB1, AGPAT1, AGPAT4, AKR1  D1, ALDH1A3, ALG1, ALG12, ALG9, ALOX12, ARD1A, ASNS, BDKRB2, BET1, BM  P4, BPGM, C5AR1, CACNA1E, CACNA1F, CCKAR, CCL20, CCL4, CCL7, CCNA1, C  CNA2, CCNE2, CCR7, CDC26, CDC7, CDK4, CDKN2C, CDS1, CHAT, CHRM5, CLDN  15, COL6A1, CREB5, CTNNA1, CYP27A1, CYP2C9, CYP4F3, DDIT3, DDX19A, D  PAGT1, DUSP14, EIF4E2, EPB41L1, EPHX2, ERBB3, FBP2, FGF22, FIGF, FMO  4, FSHB, FZD3, GALNT8, GAPDH, GATM, GCNT4, GGT1, GNA12, GNB3, GOSR2, G  STM3, GUCY2F, HCST, HSD17B1, HSP90B1, IAPP, IDH3G, IDI1, IDUA, IFNA2  1, IFNK, IFNW1, IL12B, IL13RA2, IL20, IL22RA2, IL23A, IL25, IL2RG, IN  PP4B, IRAK3, ITGA11, ITGB6, KIR2DL3, KIR3DL3, KNG1, LAMB4, LHCGR, LI  PG, LMO7, MAP4K2, MAPK1, MCM2, MDH1, MGAM, MTAP, MTHFD2, MYH1, MYH6, N  AT6, NCAM1, NKX2-</p>
Negative_15842	<p>2, NME4, NMNAT3, NOX3, NUDT2, NUDT5, ONECUT1, OR10A6, OR11A1, OR1A2,  OR2B11, OR2D2, OR2F2, OR2L8, OR51A2, OR51F2, OR52D1, OR52E8, OR52L1  , OR5A2, OR5M9, OR5P2, OR6C75, OR6C76, OR6M1, OR6X1, OR9A4, PDE3B, PD  E6D, PDE6G, PDE8A, PGM1, PGS1, PIAS2, PIAS4, PIGK, PIGP, PIK3R5, PLA2  G2E, PLXNC1, POLR1B, POLR1C, POLR2E, POLR2K, PORCN, PPA1, PPAR, PPA  T, PPP1CC, PPP1R1A, PPP3R2, PPP5C, PRKAG1, PRKCQ, PRKCZ, PTDSS1, PTP  MT1, PAB5A, PAB5C, PETSAT, PHOD, PORO2, PYP6, SAT9, SC5DL, SDC1, SNA1, C</p>



<p>Negative_15843</p>	<p>BAX, BCR, CR2, CRK, F8, F9, FES, GBA, GFI1, KDR, LEL, MEL, MTK, NPT1, RPL1, S  HH, SPN, AARS2, ABAT, ACOT11, ACSL3, ACTN2, ADCY1, ADSSL1, AGPAT2, AG  PAT4, ALAS1, ALDH4A1, ANAPC5, ARAF, ARG1, ARHGEF1, ARSD, ASPA, B3GAL  T1, BACE2, BCKDHA, BIRC5, CACNA1S, CACNG3, CACNG5, CACNG7, CAMK2A, C  AMKK2, CAPN2, CD36, CHEK1, CHSY3, CIITA, CKMT2, CLTCL1, CNTF, COASY,  COL5A2, CPT1A, CSDA, CTBP1, CTTN, CUL1, CYP2C18, CYP2U1, CYP3A43, DA  PK2, DCTD, DDHD1, DDIT4, DDX55, DGAT2, DGKG, DGKZ, DHDDS, DHDH, DKK1,  DPYS, DTX3, DUSP10, DUSP16, DUSP5, EGFR, ENTPD4, EPHX2, ESPL1, FARSB  , FASLG, FDFT1, FECH, FGF17, FGF7, FLT3, FOXA3, FUT6, GAD2, GALNT8, GB  GT1, GCDH, GCH1, GDF7, GGCX, GLDC, GNB3, GPLD1, GSTA2, GSTM3, GSTP1, G  UCA1B, HCCS, HLA-</p>
<p>Negative_15844</p>	<p>DMA, HMGCR, HMGCS1, HNF1A, HNMT, HRAS, IDH3A, IFNK, IL15, IL18, IL19,  IL20, IL5RA, IL7R, INPP4A, INPPL1, IRF5, ITGAL, KAT2A, KCNJ11, LICAM  , LAMB2, LCP2, LPAR1, LRP6, MAP2K1, MAP3K14, MAPK8, MARS, MCM3, METTL  2B, MLYCD, MMP1, MYL7, MYLK3, NLGN1, ODC1, OR10A2, OR10A4, OR10A6, OR  10H1, OR10H4, OR2AE1, OR2F1, OR2G3, OR2G6, OR2W1, OR4K14, OR51B4, OR  51E1, OR5H2, OR5T1, OR6Q1, OR7D4, OR8I2, OR9A2, ORC1L, P2RX3, PAK4, P  AX6, PDE3B, PDE4A, PDHA1, PDPK1, PFN3, PGAM2, PGAM4, PIGV, PIM2, PIPO  X, PLA2G1B, PNPLA3, PPP2R2C, PPP3CC, PRKAR1A, PRKCI, PROC, PSME2, PT  CEB, CAB, EBF, FTS, GPC, PLE, PLES, MPZ, NOG, PPS, PAB1, RALG, UBC, RACGAP, AC  TG1, ACTG2, ACVR1, ACY1, ADCY2, ADSL, AGMAT, AKR1B1, ALDH2, ALG12, AN  PEP, ARAF, ARHGEF2, ATF4, ATP6V1A, B3GALT4, BIRC3, BMPR1A, BUB1B, C1  QA, C9orf95, CACNA1G, CACNG4, CACNG5, CADM3, CCNG1, CD226, CDC25B, C  DK7, CES7, CHEK1, CHST13, CLCA4, CLDN10, CMPK2, COASY, COL5A1, CRY1,  CTSG, CXCL10, CYP2E1, CYP3A5, DAD1, DDX50, DDX51, DHDDS, DNMT1, DNMT  3L, DOLPP1, DPAGT1, DPM3, DTYMK, DUSP9, E2F4, EARS2, ECSIT, EDN1, EFN  B2, EGFR, EIF4E2, ENPP3, ENTPD7, EPHA6, EPHB6, ESPL1, FCER1G, FGFR1,  FGFR4, FIGF, FMO3, GALNT8, GCAT, GLUD2, GMPPB, GMPR2, GNPAT1, GPD1L  , GRIA3, GRIN2A, GSTO1, HAAO, HDAC1, HSP90B1, IARS, IFNAR1, IL13RA2,  INHBC, INPP5B, IRS4, ITGA1, ITGA10, ITGAV, KLRC1, LCP2, LFNG, LGMN, L  IAS, LIMK1, LIPA, LMO7, LRRC4C, MAFA, MAP3K7, MAPK1, MAPK11, MDM4, ME  TTL2B, MGST3, MICA, MIOX, MLYCD, MYH10, NCF2, NFATC2, NRG3, NSDHL, NU  DT8, OR10AD1, OR11H1, OR1B1, OR2AG1, OR4D1, OR4K14, OR4M2, OR4S1, OR  51E1, OR51E2, OR51I2, OR52H1, OR52L1, OR52N2, OR5AC2, OR5B21, OR5K2  , OR5M8, OR6B2, OR7G2, OR9A2, OR9G1, PAICS, PCYT2, PDE4A, PDE7A, PDGF  B, PDK1, PER1, PFKFB2, PFKFB3, PFN4, PGAM4, PIGH, PIGN, PIGX, PIK3CD,  PIP4K2B, PIPOX, PLIN, POLA1, POLD1, PPAP2C, PPP2R5B, PPP3CB, PPT1, P  PKA2, PRKAR2B, PRSS1, PTEN, PTPN, RYR2, RASGEF2, RBBP1, RBBP4, RBE1,</p>

<p>Negative_15845</p>	<p>ASL, C2, CGA, F3, FGG, FH, GNE, THH, MAG, ME3, MSN, PGT, SPT, TK1, ACAA2, ACADS, ACADSB, ACSL3, ACTA2, ACVR2A, ADIPOQ, ADIPOR1, ADRA1B, ADSL, AGMAT, AK3L1, AKR1B1, ALPP, AMDHD2, AMY2B, ANAPC2, APOC3, ARHGEF2, ARHGEF6, ATG3, BCL2L1, BET1L, BIRC5, BMP5, CACNA1E, CACNG1, CAMK2B, C ASP9, CCL11, CCL13, CCL16, CCNB2, CCND1, CCR7, CD47, CDC14B, CDC25B, CDC45L, CDH15, CLDN15, CLDN20, CLTC, CNTF, COL4A2, CREB1, CRY1, CRY2, CTPS, CXCL9, CXCR4, CYP4A11, CYP4F3, DAAM2, DDOST, DDX18, DERL1, DF FB, DGAT2L4, DIAPH3, DUSP16, DUSP9, EARS2, ENTPD1, EXT1, FABP3, FGFR 3, FLAD1, GAD1, GALT, GALE, GBE1, GCNT3, GGT1, GLI2, GMPR, GNA11, GNAT 3, GRAP2, GRIN1, GSTA2, GSTA5, GSTK1, H6PD, HLCS, HNMT, ICOS, IFNA17, IFNA5, IFNA6, IL11, IL12B, IL13RA1, IL17A, IL20RB, IL22RA2, IMPDH2, INMT, IPPK, IRAK2, ITPKA, KCNB1, KIR2DS4, KLRK1, KYNU, LAMA4, LTB4R2, MAP2K3, MAP3K13, MGAT1, MGAT3, MMP1, MTHFS, MYH14, NAE1, NCF1, NCOR 2, NRG1, NSDHL, OLR1, OR10A3, OR10AG1, OR10H4, OR11L1, OR1K1, OR1N1, OR2A4, OR2M2, OR2T1, OR2T34, OR3A1, OR4A15, OR4A5, OR4K14, OR4Q3, OR 51A2, OR52H1, OR52M1, OR5M9, OR6C70, OR6K6, OR8K3, PARD6B, PCCB, PDE 3A, PDGFC, PFKFB3, PFKFB4, PFKL, PGAM4, PGM1, PHKG1, PIPOX, PLCD3, PN PLA4, POMC, PON1, PPAP2C, PPP2R1A, PPP2R2C, PRKAA1, PRKAG1, PRKAR1B</p>
<p>Negative_15846</p>	<p>AR3, BDNF, C22C3, PC6, EPC, F3, FGG, FOS, PTK, TEL, PLN, ME3, MO3, O3M, PRT, TK1, ACADS, ACP5, ACSM1, ACYP1, ADH7, ADRA1B, ADRB2, AGRN, ALDH6A1, ALG12, AMDHD2, ANAPC11, APLP1, ATIC, ATP4B, ATP5J, B3GNT2, BAAT, BAC E2, BLVRA, BMP5, BST1, C1GALT1, CACNA1A, CAMK4, CASP10, CCNE1, CCR8, CD14, CD40LG, CDC16, CDH4, CDIPT, CERK, CHIA, CHRM1, CKS1B, CLDN11, C LDN17, CLDN6, CLTB, CLTC, COL1A1, COL5A2, CPT1B, CSNK1A1, CSNK2B, CX CL1, CXCL10, CYP27A1, CYP3A4, DCXR, DDIT4, DIAPH1, DUSP1, ECHS1, EFN A4, EPHA5, EPHB2, ESAM, FARSB, FDPS, FM05, FUT6, FUT7, FZD10, G6PC, GA LE, GALNT6, GANC, GCLM, GCNT2, GLB1, GNA01, GNAS, HCST, HHIP, HSD17B2, HSPA8, HTR2C, HYAL1, HYAL2, IDH3A, IL11, IL24, IL8RB, ITGA2, ITGA9, ITGAD, JAK3, KAT2B, KCNJ11, KIR2DL3, KLRD1, LAMA4, LARS2, LHCGR, LTC 4S, MCEE, MCM6, MDH2, METTL2B, MMP2, MTHFS, MYH14, NAT2, NEFL, NEUROD 1, NKX6-1, NPR1, NRP1, NT5E, OR10G2, OR12D3, OR13G1, OR2A4, OR2AE1, OR4A15, O R4F4, OR52A1, OR52B4, OR52H1, OR5H6, OR5R1, OR5T1, OR6C4, PAK7, PAPS S2, PARS2, PCYT2, PDE2A, PDHA1, PFKP, PIGW, PIK3CD, PLCD4, PLTP, POLR 2C, POLR3G, PPP2R1A, PRKACB, PRKY, PRPH2, PTGES, PTPRZ1, RAC3, RAD51, RASA2, RBPJL, RDH8, RFWD2, RPN2, RPS6, RRAS2, SCD5, SELE, SEMA4C, SF RP1, SGPP1, SKP2, SLC12A2, SMAD5, SMARCA2, SMC1B, SMPD1, SOCS1, ST3G AL2, STAM2, STEAP2, STY2, SULF1A2, SUOY, TAGLN, TAGLN4, TBXA2R, TGF</p>

Negative_15847	<p>ATF, BCR, DBI, DBI, F11, FAS, F11, GFI, HGF, IDS, IL3, MLI, MIP, NLR, NNT, NOG, RPE, UBC, ZYX, ABP1, ACAD9, ACAT1, ACP5, ACSL6, ACVR1, ADRA1A, ALG9, ASMT, ATP4A, ATP5E, B4GALT2, B4GALT6, B4GALT7, BACE2, BDKRB1, B PNT1, C3AR1, C3orf10, C4BPB, CACNA1S, CAMK2B, CCL3, CD19, CD79A, CD7 9B, CD8A, CDC14B, CDC25C, CHEK1, CHRM5, CKS1B, CLDN17, CMPK2, CNGA3, COL4A4, COMP, CRY2, CSAD, CTNNA2, CX3CL1, CXCL13, CYP11A1, CYP2C19, CYP2U1, CYP3A4, DARS, DBF4, DCXR, DDX19A, DHCR7, DLST, DRD2, DTX2, DU SP2, E2F2, EIF4E, ENPP3, EPHA3, FARSB, FGF6, FIGF, FPGT, GADD45B, GAL NS, GALNT11, GALNTL5, GATM, GBA3, GFAP, GLI2, GLS2, GNA11, GSTA3, GST M3, GUCY1A3, HA02, HGSNAT, HIF1A, HLA-</p> <p>DMA, HMGCR, HMOX2, HSD17B8, HSD3B2, IDH3A, IGF1R, IL17RB, IL19, IL1R AP, IL2RB, IL6ST, INMT, ITGA2, ITGAV, KCNB1, KDSR, KIR2DL1, KYNU, LAM B3, LDHAL6B, LTC4S, MAP2K6, MAPK1, MAPK8, MCAT, METTL2B, MGST3, MOV1 OL1, MPST, MYH4, MYL9, NAGLU, NFATC3, NFKB2, NFKBIE, NKX2-</p> <p>2, NR1D1, NRXN1, OPLAH, OR10AD1, OR10G2, OR10J5, OR13A1, OR1L3, OR1L 6, OR1S1, OR2T12, OR4F4, OR4L1, OR4N4, OR51D1, OR51G2, OR52K1, OR52L 1, OR5A1, OR5AN1, OR5B17, OR5B3, OR5I1, OR5K1, OR5P3, OR6F1, OR6N2, O R8D1, P4HA3, PARD3, PARVG, PCCB, PDE1A, PFKFB1, PI4KA, PIK3C2A, PIK3</p>
Negative_15848	<p>RA3, PCGA, CGN, BDO, GDA, GDS, PVLD, PLIP, MEB1, MES, MTR, MVD, NER, PRPT, USM , PC, SRF, TAT, ABLIM2, ACHE, ACOX3, ACSL1, ACSS3, ACTN4, ACVR2A, ADH1 A, ADRA1B, AGXT, AKR1C4, AKT1, ALAD, ALDH1A2, ALDH7A1, ALDOA, AMPD3, ANAPC5, APAF1, ARPC2, ASNS, ATP5A1, ATP5B, B4GALT7, C1QA, CASP9, CAV 2, CCL2, CCNG1, CCR10, CCR5, CD14, CD22, CDH15, CDK6, CFL2, CHSY3, CMA S, CNGA4, COL5A3, COMP, COQ3, CPS1, CRKL, CSNK2A1, CTSG, CYCS, DDX50, DGKI, DHRS9, E2F3, EARS2, EDAR, EFNA2, ENTPD4, EPHA5, EPHX1, FADD, FA SLG, FGF1, FMO3, FMO4, FZD2, G6PC, GALT, GBE1, GCLC, GGT7, GIT1, GJA1 , GLI2, GNA15, GNAQ, GNAS, HIBADH, HLA-C, HLA-</p> <p>G, HSPB1, HTR2A, ICAM2, IL11RA, IL12RB2, IL1R1, IL22RA2, IL6ST, IL8R A, INHBB, ITGAX, ITPA, KIR3DL3, L1CAM, LCAT, LCP2, MADCAM1, MAOB, MAP 3K1, MAP3K5, MAPT, MCEE, MGST1, MGST3, MTHFD1L, MYD88, MYH14, MYL5, N COR2, NOS3, NRP1, NUDT12, NUDT8, ODC1, OR10A5, OR10K2, OR10T2, OR11A 1, OR13C9, OR2A12, OR2L8, OR2T29, OR4C12, OR4D1, OR51V1, OR52A1, OR5 2B4, OR52E6, OR52K1, OR52N5, OR52W1, OR56A4, OR5AR1, OR5AS1, OR5M8, OR5T3, OR5V1, OR7A10, ORC5L, OXTR, P4HA1, PAX8, PDE9A, PFKP, PGAP1, P HKG1, PIGA, PIGO, PLCD1, POLE3, POLR2C, POLR2J, POLR3A, PPP2R5E, PRK AR1B, PRKCQ, PRKCZ, PTGS1, PTPMT1, PVRL3, RASGRF1, RASSF5, RBPJ, RFN</p>

Negative\_15849

ANKK1, FAIM2, GIL2, ILC6, KIF1A, LMO1, MIF, MVD, NLK, OAT1, PAF1, PVK, SPN, ABA1, ACAD8, ACLY, ACOT11, ACOX1, ACSL1, ADH4, ADORA2B, AGMAT, AGRN, ALDH6A1, AOC2, APOE, AREG, ARPC1A, ARSB, ARSD, ATP5E, ATP5J, ATP6V1H, AXIN1, B3GAT3, B3GNT3, BCMO1, BMPR1A, CAMK4, CASP6, CASP8, CBR1, CBR3, CCL2, CCL25, CCND1, CD36, CD44, CDK4, CDKN2B, CHST12, CHUK, CIITA, CLDN10, CLDN15, CLTCL1, CNTN2, COASY, COL5A3, CTTN, CXCR5, CYP21A2, CYP26B1, CYP2E1, CYP2S1, DAXX, DGAT1, DGKE, DHFR, DHRS4, DMGDH, DNMT1, DUSP2, DVL3, ECHS1, EDA2R, ERBB4, FABP1, FARSA, FGF13, FLT3, FOXA3, FRAT2, FZD1, GALNT13, GALNT9, GALNTL1, GCNT2, GLI2, GLO1, GMPR, GNA15, GNA1, GP1BA, GP1BB, GPAM, GPD2, GSK3B, GSTO1, GUCA1B, HDAC2, HEXB, HIP1, HLA-C, HLA-DMA, HMGCS2, HMOX2, HPSE2, HSD11B1, HYAL1, IDH3G, IDI1, IDI2, IGF1, IKBKG, IL28A, IL6R, IL8RA, INPP5A, IRAK1, ITGA4, ITGB4, ITPK1, KIR2DL3, LEF1, LFNG, LGMN, LPAR1, MAGI2, MAP2K6, MAP3K12, MAP4K2, MARS2, MAT1A, MCAT, MCEE, MMP14, MYH13, MYH14, MYL9, NADK, NAE1, NAGLU, NOX3, NRP1, NUDT9, OCRL, OR10S1, OR13A1, OR1G1, OR2A4, OR2AG2, OR2L3, OR2M2, OR2T3, OR2V2, OR2W1, OR4C12, OR4C16, OR4C46, OR51B5, OR52A1, OR52K1, OR5F1, OR6F1, OR8D4, OR8S1, ORC6L, PAFAH2, PAX6, PCYT1B, PDE2A, PDGFRB, PDHB, PER2, PHKG2, PIGH, PIP5K1C, PISD, PKLR, PLA2G5, PLCD1, PLDB1, PLIP2, PLIP3, PLIP4, PPH, PPK1, PQLS, PLD2, PVD, PLEKHA7, PP2C, PRK, TRPV4, PABP1, ACADS, ACOT11, ACYP2, AGMAT, ALG13, ALG8, ANAPC11, ANGPTL4, APOC3, ARAF, ARPC1A, ARPC3, ATP5H, ATP5I, BMPR2, BRAF, CACNA1H, CAMK2B, CAMK4, CARS2, CD48, CD74, CD99, CDC16, CDC25C, CDC27, CEBPA, CHDH, CHIA, COASY, COL4A4, COMP, CRY2, CSF2RA, CSH1, CXXC4, CYP2C8, CYP3A7, CYSLTR1, CYSLTR2, DAXX, DCTD, DDX18, DGKE, DGKG, DGKQ, DHDDS, DLST, DNMT1, DPYD, DUSP4, E2F4, ECSIT, ENTPD8, EPB41L1, ERBB3, FARSA, FCGR3A, FGF18, FRAT2, FTMT, FZD3, FZR1, GALNS, GANC, GLG1, GLS2, GMDS, GNPDA2, GPLD1, GRIN2D, GZMA, H6PD, HLA-G, HSD3B7, ICAM2, IFNG, IFNW1, IRAK3, KIR2DS5, KLRC2, KLRD1, KRAS, LM07, LPAR1, LRP5, LTBP1, LYPLA2, MAP2K6, MASP2, MCM7, MPZL1, NAE1, NAGLU, NAT6, NEFM, NMNAT2, NOS1, NRG2, NRP1, OR10A4, OR10A6, OR10S1, OR1OZ1, OR14A16, OR14I1, OR1B1, OR1C1, OR1D2, OR1J4, OR2A25, OR2A4, OR2C1, OR2T4, OR4A15, OR4C6, OR4L1, OR51A2, OR51D1, OR52B4, OR52B6, OR52E6, OR5H6, OR5R1, OR6B3, OR6C76, OR6K6, OR8D1, ORC6L, OXCT2, P2RX1, PAK1, PAPSS1, PCK1, PDCD1, PDE1B, PDE5A, PDGFRB, PDHA1, PECAM1, PFN2, PGAM2, PIGV, PIK3R4, PIP5K1B, PKLR, PLCB3, PLCD1, PLCG1, PLXNB2, POLR1E, POLR2B, POLR2F, POLR2K, POLR3D, PORCN, PPA1, PPARG, PPP2R2B, P

Negative\_15850

DR3CB, DBT1, DRKACB, DRKGCZ, DRPRH9, DVL1, DCAF9, DCAF3, DCAF4, DCU1, DE

Negative_15851	<p>ASL, C8G, CD2, CPH, CP, DCC, DHH, GLS, IL9, LCT, LIT, ME2, NLR, NOG, OTC, PGD, PLN, VCL, ABL2, ABP1, ACOT12, ACSM1, ACTA1, ADH1B, ADH7, ADSS, AGPAT4, AK3L1, ALG13, ALG2, ANPEP, AOC3, APBB1, ARSE, ATP50, B4GALT5, BAI1, BDH2, BDKRB1, BIRC2, BMPR1B, BMPR2, BRAF, CAMK2G, CBR3, CCKAR, CCL28, CCL3, CCL5, CCNE2, CD28, CD40, CD46, CD70, CD74, CDC6, CDH1, CDH3, CHEK1, CHRM2, CHRM5, CLDN18, CLDN22, CSNK1D, CTSB, CTSL1, CXCL2, CYP11B2, CYP1A2, CYP2C18, DAD1, DAPK3, DDX18, DDX51, DFFB, DGAT2, DUSP10, E2F5, EI24, ELK1, ENTPD8, EPHB2, FADS2, FBXW11, FGF10, FGF17, FGF2, FGF21, FGF6, FLOT2, FM05, FUT8, FZD9, G6PC, GADD45B, GALE, GARS, GFAP, GJA1, GLO1, GMPPA, GNAZ, GRIN2B, GUCA1A, HIF1A, HSD17B8, HTR4, ICAM3, IFNA16, IKBKE, IL11RA, IL17A, IL18R1, IL20, IL22, ITGAV, ITGB7, KLK3, LAMA3, LDHAL6B, LIPE, MAN1A2, MAT1A, MCM3, METTL2B, MTHFD1, MYLK3, NAT2, NME4, NPR2, NQ01, NRXN1, OCLN, OR10A6, OR10A7, OR13C4, OR13C5, OR1L3, OR1S2, OR2H1, OR2T8, OR2Y1, OR4A15, OR4C46, OR4F4, OR4P4, OR52H1, OR52I2, OR5AR1, OR5B3, OR5J2, OR5L2, OR6T1, PAPSS1, PARD6B, PARVB, PDE1B, PDE8B, PHGDH, PIGL, PIGN, PIP4K2B, PLA1A, PLA2G2F, POLE, POLR2C, POLR2F, PPP2R2D, PPP2R5C, PPP3CA, PSAT1, PTGS1, PYCR1, RDH16, RFX5, RFXAP, RGS3, RPSA, SDHA, SH2D2A, SIAH1, SKIV2L2, SMAD7, <del>ATC, TCD, C8G, CBL, T8, PGL, GDA, GAA, T10T, 10T, TJUR, K11, TMAG, MVT, PGL, TPGP, SRM, XDH, ACADL, ACLY, ADH7, AGPAT1, ALDH1B1, APH1A, ARG1, ATP5J, B3GALT2, B4GALT3, BBC3, BCAR1, BMP7, BMPR1A, C3AR1, CACNA1A, CAMK2A, CARS, CCL11, CD244, CDC14A, CDC14B, CDC26, CDH5, CDKN2C, CERK, CHKA, CHRM2, CLDN5, CLDN9, CLTB, COL1A1, COL6A2, CSF2, CSH1, CTBS, CTNNA3, CTSS, CX3CR1, CYP2D6, CYP2E1, CYP2F1, CYP2U1, CYP4F2, DDX19A, DDX56, DGKZ, E2F2, ENO2, ENTPD5, EP300, EXTL1, F2RL2, FASLG, FGF7, FLT1, FTCD, FUT1, FZD10, FZD4, GADD45B, GALNT2, GALNT7, GNAI2, GPD2, GPX5, GPX7, GRIN1, GSTA5, GSTK1, GTSE1, GUK1, GZMA, HAGHL, HAP1, HPRT1, HRH2, HSD17B4, HSPA1B, IARS2, ICOS, IDH3G, IFNAR2, IFNGR1, IFT57, IL10, IL18RAP, IL20, INHBA, INSR, ITGA6, ITGB2, ITGB8, LALBA, LIPA, LRAT, MAFK, MAN1A2, MCEE, MGAT3, MGAT5B, MKNK1, MMP9, MPST, MPZL1, MYH10, NAMPT, NANP, NCR2, NEFM, NFATC3, NFKBIA, NKD2, NME6, NOTCH3, NRXN1, NT5C2, NT5M, OR10A3, OR11A1, OR13F1, OR1L4, OR2C1, OR2F1, OR4C16, OR4M2, OR51F2, OR51I2, OR52W1, OR5B21, OR5M8, OR5P2, OR5T3, OR5V1, OR6C4, OR6C75, OR6X1, OR7C1, OXCT2, P4HA2, PARD6G, PCCA, PDE3B, PDE4A, PDE6D, PEMT, PIGT, PIK3R3, PIP4K2A, PIP4K2C, PLA2G5, PLCB1, PLCB4, PLEKH A8, PLIN, PLOD1, PLOD2, PLTP, PMM2, POLE4, POLR2H, POLR2L, PPP2CB, PR</del></p>
Negative_15852	<p><del>ATC, TCD, C8G, CBL, T8, PGL, GDA, GAA, T10T, 10T, TJUR, K11, TMAG, MVT, PGL, TPGP, SRM, XDH, ACADL, ACLY, ADH7, AGPAT1, ALDH1B1, APH1A, ARG1, ATP5J, B3GALT2, B4GALT3, BBC3, BCAR1, BMP7, BMPR1A, C3AR1, CACNA1A, CAMK2A, CARS, CCL11, CD244, CDC14A, CDC14B, CDC26, CDH5, CDKN2C, CERK, CHKA, CHRM2, CLDN5, CLDN9, CLTB, COL1A1, COL6A2, CSF2, CSH1, CTBS, CTNNA3, CTSS, CX3CR1, CYP2D6, CYP2E1, CYP2F1, CYP2U1, CYP4F2, DDX19A, DDX56, DGKZ, E2F2, ENO2, ENTPD5, EP300, EXTL1, F2RL2, FASLG, FGF7, FLT1, FTCD, FUT1, FZD10, FZD4, GADD45B, GALNT2, GALNT7, GNAI2, GPD2, GPX5, GPX7, GRIN1, GSTA5, GSTK1, GTSE1, GUK1, GZMA, HAGHL, HAP1, HPRT1, HRH2, HSD17B4, HSPA1B, IARS2, ICOS, IDH3G, IFNAR2, IFNGR1, IFT57, IL10, IL18RAP, IL20, INHBA, INSR, ITGA6, ITGB2, ITGB8, LALBA, LIPA, LRAT, MAFK, MAN1A2, MCEE, MGAT3, MGAT5B, MKNK1, MMP9, MPST, MPZL1, MYH10, NAMPT, NANP, NCR2, NEFM, NFATC3, NFKBIA, NKD2, NME6, NOTCH3, NRXN1, NT5C2, NT5M, OR10A3, OR11A1, OR13F1, OR1L4, OR2C1, OR2F1, OR4C16, OR4M2, OR51F2, OR51I2, OR52W1, OR5B21, OR5M8, OR5P2, OR5T3, OR5V1, OR6C4, OR6C75, OR6X1, OR7C1, OXCT2, P4HA2, PARD6G, PCCA, PDE3B, PDE4A, PDE6D, PEMT, PIGT, PIK3R3, PIP4K2A, PIP4K2C, PLA2G5, PLCB1, PLCB4, PLEKH A8, PLIN, PLOD1, PLOD2, PLTP, PMM2, POLE4, POLR2H, POLR2L, PPP2CB, PR</del></p>

ADG, CAD, F10, F7, GF3, GF9, IL3, LTB, OSM, ST1, TH, ADH, AARS, ABL1, ACHL  
 , ACOX3, ACTG1, ACTN2, ACY1, ADIPOR2, AFMID, AGXT2, AKR1A1, AKT3, ALD  
 H5A1, ALG12, ALG13, ALOX5, AMD1, APC2, APOE, ARPC5, ATN1, ATP12A, ATP  
 13A2, ATP5J2, ATP6V1D, BAAT, BCMO1, BDH2, BDNF, BUB3, CACNA1B, CACNG  
 4, CANT1, CARS, CCR2, CCR4, CD99, CDC20, CDH4, CDH5, CLDN15, COQ7, CSA  
 D, CSNK1A1, CX3CL1, CX3CR1, CXCL1, CXXC4, CYBB, CYP26A1, CYP2C8, CYP  
 2C9, CYP2D6, CYSLTR1, DAAM1, DDOST, DDX47, DEGS2, DFFB, DGKB, DNMT3A  
 , DOLPP1, DPM3, DTX3, EGFR, F13B, FECH, FGD3, FGFR1, FUT9, FZD7, GALNT  
 5, GALNTL4, GATM, GMPPB, GMPR2, GNAT3, GPAA1, GPD1, GPX7, GUCA1A, HLA

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-  
 DMA, HTR4, IDI1, IL18RAP, IL8RA, IMPA1, IRAK4, ITCH, ITGA10, ITGA2B,  
 ITGA6, KARS, KAT2B, KIR2DL4, KLRK1, LAMA3, LDHAL6A, LIMK2, LRAT, LTB  
 R, MAP2K2, MAP3K11, MAT1A, MAT2B, MCM3, MGST2, MMP14, MYH1, MYL2, MYL  
 5, NEU4, NFKB2, NKD2, NLGN3, NOD1, NQO1, NRAS, NRXN2, NTF4, NTRK1, NUD  
 T2, OR10H1, OR10R2, OR13D1, OR1A2, OR1B1, OR2A42, OR2S2, OR2T34, OR2  
 Y1, OR3A1, OR4K13, OR4N5, OR51D1, OR52D1, OR6T1, OR7A5, OR7D2, PAK4,  
 PAK7, PCK1, PCYT2, PDCD1, PDE1C, PDE5A, PFN1, PIGQ, PIGU, PKLR, PLXNB  
 1, PNPLA4, POLD2, POLD3, POLR2D, POLR2G, POLR2J, POLR3A, POLR3K, PRK  
 AA2, PRKACG, PRKCI, PRSS1, PSEN2, PTCH1, PTPN5, QARS, RAB5A, RAPGEF2

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ATM, BAP, BAX, CCM1, DC, EFM1, GSK, ILE2, JGFC, LINC, MPE, OGT, OSM, SMO, SRM,  
 AADAT, AARS, AASDH, ABLIM2, ABLIM3, ACADM, ACP1, ACVRL1, AGPAT3, AGP  
 AT4, AHCYL1, AKR1C3, AKR1C4, ALDH1L1, ALDH2, AOX1, ARAF, ARG1, ARHGE  
 F4, ARRB2, ASAH1, ASRGL1, ATP5A1, ATP5L, B4GALT1, BAI1, BCAT2, BMPR1  
 B, C1QC, C5AR1, CACNA1H, CACNG4, CASP3, CCL24, CD226, CD3E, CD47, CD7  
 9B, CDH4, CDKN2B, CFL2, CHD8, CHDH, CHPF, CHST11, CNTNAP1, CPT1A, CRE  
 B1, CSF1R, CYP11A1, CYP2F1, DDIT3, DDX19A, DDX4, DGAT2, DGKG, DHRS3,  
 DLAT, DNMT3L, DTX3L, DVL3, EFNA1, EFNA4, EPAS1, FABP3, FASN, FGF14, F  
 GF5, FOXO1, GALNT14, GART, GCNT2, GGCX, GGPS1, GMPPA, GNMT, GRIN2A, G  
 STA4, GTSE1, GUCY2D, GUCY2F, HARS, HLA-  
 DOB, HPSE, HRH1, HSP90B1, IFNA13, IFNA7, IFNAR1, IFNW1, IL22RA2, IL2  
 4, IL28B, INPP4A, IRF7, ITGA4, ITGA5, ITGAD, ITGAV, LTBR, MAML1, MGAT  
 1, MMP7, MYL5, NEFL, NEU2, NOTCH3, NT5C, NT5C1A, NTSR1, NUMB, OLR1, OR  
 10A4, OR10G9, OR10J5, OR11A1, OR1A2, OR1D2, OR1L8, OR2F2, OR2G3, OR2  
 L8, OR2T3, OR2T5, OR3A1, OR4C6, OR4D2, OR4K1, OR4X1, OR51G2, OR52B6,  
 OR52H1, OR5L2, OR6A2, OR7A5, OR9Q1, ORC5L, P2RX4, P4HA1, PDE1A, PDE7  
 A, PDGFC, PDGFD, PDK1, PIAS4, PIGA, PIGB, PIGO, PIGT, PIK3C2A, PITX2,  
 PLA2G1B, PLA2G3, PLCE1, PLOD2, PLXNA3, POLR2D, POLR2I, PON1, PPP2R5

Negative_15855	<p>AMH, CPH, FZ, F9, FOS, FHN, GGH, GK, GPO, HDC, HK1, LPO, LTN, MTC, PGD, AA RS, ACADS, ACO2, ACTA2, ACTG1, ADH1B, ADRA1A, ADRA1B, ADSL, ALDH1A2, ALG5, APBB1, APOA2, APOE, APRT, ARPC5, ATG12, ATP5F1, ATP5G3, AVPR1B , BACE1, BBC3, BCAR1, BCAT2, BCKDHB, BDNF, BMPR1B, C1QC, C9orf95, CAC NA1A, CADM3, CAMKK1, CASP9, CCL2, CD27, CD38, CD40, CD70, CDC14A, CER 1, CES1, CLDN3, CSF1, CSF2RA, CTTN, CYP2E1, CYP2F1, CYP7A1, DFFB, DLL 4, DMGDH, DRD2, DTX4, DVL3, EFNA2, EHHADH, ENTPD5, EPB41, EPHB3, FARS 2, FGF9, FLOT1, FMO3, FUT7, FZD7, GALNT2, GANC, GART, GBA3, GBE1, GCNT 4, GFAP, GLI1, GNAI2, GNAS, GNB1, GRIA2, GSK3B, GSTO2, GZMB, HIP1, HLA -</p> <p>G, HSD3B7, HTR2C, IGSF5, IL3RA, ITGAE, ITGAL, KDSR, LALBA, LAMA4, LCM T2, LDHAL6B, LDHB, LEFTY1, LEFTY2, LMO7, MAML1, MAN1A1, MAP2K2, MAP2 K4, MAPK11, MAPK3, MBL2, MGLL, MGST3, MLLT4, MPST, MTMR2, MYL5, NAGK, NAGS, NEU2, NLGN3, NODAL, NR1D1, NUDT9, OCLN, OPLAH, OR10H5, OR10K1, OR13C8, OR2AG1, OR2C3, OR2M5, OR2Z1, OR4C13, OR4F6, OR4K13, OR4K14, OR4K2, OR4N2, OR4P4, OR51B6, OR51G1, OR52D1, OR5D16, OR5K1, OR5L1, O R5M8, OR6B3, OR6C2, OR6K2, OR6M1, OR7G2, OR8B12, OR8J3, ORC1L, PAK6, PIGX, PIP5K1A, PLA2G6, PLCD1, PLCG2, PLEKHA8, PLXNC1, PNPO, POLE2, P OLRIC, PPCS, PPP1R3B, PPP2R1A, PPP3CC, PPP3R1, PRKAG3, PRKAR1B, PRL</p>
Negative_15856	<p>R, PTC5, U3, UCC, UGG, UAZ, UEA, U19, UG1, UAC, UR3, UTK, UPT, U19, U5U5, U HH, SRF, TH, TK2, TKT, TXK, UBC, ABLIM2, ACACB, ACSL1, ACSM4, ADCY8, AL DH3A1, ALDH4A1, AMDHD2, ANPEP, ARG1, ARHGAP5, ARNT2, ARPC3, ATF4, AT P12A, ATP5H, AVPR1B, B3GALT5, BBC3, BET1, BIRC5, CACNA1D, CACNA1I, C ACNG5, CASK, CASP9, CCDC6, CCND1, CD48, CDC7, CDK7, CFL1, CHEK1, CHRM 2, CHSY1, CLDN5, COASY, COMP, CPT1B, CPT1C, CSDA, CSNK1G1, CSNK2A2, C TNND1, CXCR6, CYP1A1, CYP26A1, CYP2A6, CYP2C19, CYP7A1, DAPK3, DGKA , DGUOK, DMGDH, DUSP9, EFNA3, EIF4B, ENO2, ENO3, ENPP2, ENTPD5, EPHA3 , EPHB4, EPOR, EPRS, ERO1L, F11R, F13A1, FBP1, FCER1G, FGF11, FGF12, F GF23, FLAD1, GAL3ST1, GALNT9, GLUD2, GNA14, GNAI1, GSK3B, HHIP, HMBS , ICAM2, IDI2, IGFBP3, IL18R1, IL8RB, ISYNA1, ITCH, ITGA11, ITPKA, IT PKB, JAG1, LAMB3, LAMC2, LAMC3, LIPE, LTC4S, LYPLA2, MAD2L1, MAPK8, M AT2B, MCCC1, MCEE, MIOX, MTMR2, MYH15, NAT5, NEU1, NFYC, NNMT, NRP1, N TRK2, OLR1, OR10H5, OR10K2, OR10V1, OR13A1, OR1K1, OR1Q1, OR2A42, OR 2L8, OR2Y1, OR4C13, OR4C6, OR4K1, OR4M2, OR4N4, OR4S1, OR51A2, OR52R 1, OR5AR1, OR5T2, OR6Q1, OR6T1, ORC3L, P2RX1, P2RX2, P4HA1, P4HA2, PA K1, PAK6, PCCB, PDE1C, PDGFB, PDGFD, PDXK, PGAM4, PGM1, PIGT, PIP4K2C , PKLR, PLA2G5, PLCD3, POLR2G, PPAP2B, PPP1R3A, PPP2R5A, PPP2R5C, PP P2R1, PRRV6, PRKAG3, PRKCG, PRKCG1, PRKCG5, PRKRI, PRKRD1, PRKL, QARS</p>

Negative_15857	<p>AMH, AML1, C9, CRH, CSK, PTK, GCR, GGN, GSK, IHH, ITR, LSS, MET, SMS, SKM, TYR, ABL1, ACHE, ACSS3, AGXT, AKR1B10, ALDH6A1, ALG11, AMPD1, AMPD2, ANAPC5, ANGPTL4, AREG, ARG2, ARNT2, ATF2, ATP12A, ATP5J2, ATP6V1F, A XIN1, B3GNT4, B4GALT3, BCAT2, BTRC, C9orf95, CACNA1E, CCKBR, CCL11, CCL19, CCL3, CDC25B, CDKN1A, CDKN2C, CFL2, CLDN5, CMBL, COL3A1, CREB 3L2, CSF3, CSNK1D, CXCL2, CYP2C18, DEGS1, DGAT2L4, DGKZ, DHCR7, DLAT , DNMT3L, DPYSL2, DTX1, DUSP14, DUSP6, DVL2, ENO2, ENPP6, EPB41L1, EX T1, EXTL3, F13B, FGF14, FGF2, FGF20, FGF6, FPGT, GAL3ST1, GALNT13, GA LNTL1, GANAB, GNA01, GNG3, GOSR2, GRM1, GSTA5, HSPA2, HSPA8, HTR4, IL 3RA, IL8RA, IL8RB, ITGA6, ITGB7, ITPK1, KARS, KIR3DL2, KLKB1, LAMA3, LAMC1, LIPT1, LYPLA1, MADCAM1, MCEE, MMP9, MS4A2, MTMR1, MTMR2, MYH1 , MYLK, NAGK, NAGS, NCK2, NCSTN, NFATC4, NFKB1, NOD1, NR5A2, NUDT12, N UDT9, OR10T2, OR11H6, OR13G1, OR14C36, OR1N2, OR2A25, OR2A4, OR2A5, OR2B11, OR2G3, OR2G6, OR2M2, OR2T6, OR4A16, OR4A5, OR4N5, OR51A2, OR 51A7, OR52E6, OR52N1, OR5M3, OR5P2, OR6B3, ORC5L, OXCT2, P4HA1, PAK6 , PARD6B, PCYT1B, PDE4C, PDGFC, PFKFB1, PGK2, PIGC, PIPOX, PLA2G10, P LA2G2A, PLOD2, PMM1, POLR1D, PPAP2C, PPP1CC, PPP1R3B, PPP2R1B, PRKC B, PRKCE, PRODH, PSME3, PTCH1, PTEN, RAPGEF2, RASA2, RDH11, RDH12, RH</p>
Negative_15858	<p>ET, PGC, UAL, DBP, TNS1, ACP, FGA, UFI3, JCN, ELN, CLPD, MSN, NGF, CFR2, ST, TA T, WAS, A4GALT, ABLIM1, ABLIM3, ACSL4, ACSL5, ACSM1, ACY3, ADCY5, ADH 1B, ADRA1B, AGPAT4, AGXT2, AKR1A1, AKR1C3, ALDH5A1, ALG10, ALG2, AMP D1, ARPC5, ATP5D, B4GALT3, B4GALT7, BAI1, BDH1, BMPR1B, CACNA1C, CAC NAI1S, CASP8, CBR3, CCL27, CCL5, CCND2, CCR4, CD46, CDC6, CDK4, CHRM1, CHRNA7, CLDN16, CLDN22, CLDN6, CMAS, CNGA4, CNGB1, COL1A1, COX15, CS NK1A1, CTSG, CXCL11, CXCR6, CYCS, CYP2F1, CYP4F3, DAD1, DDX47, DPM2, DTX3L, EDN1, EGFR, EIF24, EIF4B, ERBB4, FADD, FARS2, FCGR2B, FGF2, FGF 21, FGF22, FUT9, FZR1, GALNT1, GALNT5, GALNT8, GCAT, GMPR, GNA11, GNA 13, GNAL, GNAS, GNAT3, GOT2, GRB2, GSTZ1, HAO2, HGSNAT, HTR2B, HTR5A, HTRA2, ICAM2, IDUA, IFNA13, IFNGR1, IFNGR2, IGSF5, IKBKG, IL11, IL13 , IL21, IL7R, INADL, INPP5A, IRF5, ITGA1, ITGA3, KNG1, KYNU, LHCGR, LI MK1, MAD1L1, MAGI1, MAP3K2, MAP3K8, MAPK9, MDH2, MRAS, MYH6, MYLK2, N AE1, NAGLU, NAT2, NCR2, NFATC4, NFYB, NOS3, NR1H3, NR4A1, NRCAM, NT5C , OR11H4, OR11H6, OR13C9, OR13H1, OR1L1, OR2A25, OR2T12, OR51E1, OR5 2E4, OR52I2, OR52K1, OR56A3, OR5L1, OR6S1, OR8B12, OR9G1, ORC1L, OXC T2, PAK1, PDE1C, PDE2A, PDGFRA, PDHA1, PI4KA, PIGV, PIK3CD, PIK3R5, P LCB4, POLD1, POLD4, POLR1B, POLR2G, POLR3K, PPARG, PPP2R2B, PPP2R5D</p>
Negative_15859	<p>AR2, CAD, C1G, DEK, LDA, GAA, GBR1, GRI, GFI3, HNF1B, ITR, MET, NGG, PDC, TIR , AADAC, ABAT, ACOX1, ACP2, ACSM5, ACVR1, ADORA2B, ALG1, ALG3, AMPD2, AMPD3, ANAPC11, ANAPC2, ANPEP, AOC3, APBB1, ARG2, ARHGEF6, ARHGEF7, ARRB2, ASPA, ATN1, ATP6V1F, BMP8A, BUB1, CACNA1D, CACNB4, CACNG1, CA SP8, CCKBR, CCL4, CCR5, CD14, CDC45L, CDH4, CDK7, CDKN1A, CHRM3, CHSY 1, CLDN16, CLOCK, CLTC, CNTNAP2, COL2A1, COL6A2, COMT, COX10, CPT1B, CTPS2, CXCR6, CYP2C8, DDX18, DDX19A, DDX4, DFFB, DHFR, DLAT, DRD2, DT X2, DTX3L, DTX4, DUSP3, DUSP6, EFNB2, EHMT2, ENPP1, EPB41, EPHA7, F2R L2, FABP1, FARSB, FGF20, FLOT1, FOXO1, FSHR, GADD45B, GALE, GDE1, GFA P, GNAI3, GP1BB, GRAP2, GRIN2B, GZMB, HADH, HEMK1, HEXB, HNMT, HSD3B2 , HTR2C, IDH3B, IFNA16, IFNA8, IL17A, IL18, IL18RAP, IL22RA2, IL2RG, IL3RA, IL4R, IL6R, INHBB, INMT, ITGA1, ITGAD, ITGAV, ITPK1, JAM3, KLK B1, LCMT2, LCP2, LDHAL6A, LDHC, LRP6, MAN1A1, MAOA, MAP2K4, MAP4K3, M APK13, MCEE, MCM3, MDH2, MGAT5B, MKNK1, MLLT4, MNX1, MYD88, MYH15, NA DK, NCOR2, NFATC3, NFE2L2, NOTCH2, NTSR1, NUDT12, OR10V1, OR11G2, OR 11H6, OR1E1, OR2B11, OR2D2, OR4C12, OR4D11, OR4M1, OR4N5, OR4X1, OR5 1G1, OR51M1, OR52I2, OR5M8, OR7A10, OR8I2, P2RX1, PARD6B, PDE2A, PDE 6D, PDE7B, PDHA2, PERP, PGS1, PIGK, PIK3C2G, PIK3R3, PIP5K3, PKMYT1, P</p>



Negative_15860	<p>F3, GIZ, HFD, IL7, JUF, MIZ, OAT, FEN, FML, FRL, FTS, STR, TAT, WAS, ADL1, ACOT12, ACOX2, ACOX3, ACSL4, ACSM1, ACTN2, ACY1, ADCY8, ADH6, ADRA1A, ADSL, ADSS, AKR1C2, ALDH9A1, ALG10, AMY2B, ARRB2, ASAH1, ATG12, ATN1, ATP50, ATP6V1F, AXIN1, B3GALT5, C1QA, C7orf16, CACNA1S, CACNG5, CAMK2G, CASK, CCL21, CCND2, CD22, CD58, CD70, CD8B, CDC14B, CDC23, CD C42, CDC7, CFTR, CHKA, CHST12, COL6A1, CREB1, CXCL13, CXCL3, CXCR5, C YBA, CYP1A1, CYP26C1, DARS2, DCTD, DDX19A, DKK1, DPAGT1, DPYD, DPYS, EGFR, ESPL1, ETNK1, FABP1, FDFT1, FGF22, FGF23, FLT4, FM05, FOXO1, FU T5, GALK1, GCNT4, GJD2, GLDC, GLG1, GNA12, GUCY1A2, GUSB, HADHB, HES1, HHEX, HIBCH, HLA-DOB, HMGCR, HSD17B1, HSD3B7, HTR6, HYAL2, IFNGR2, IFNW1, IL12B, IL1R AP, IRAK1, IRAK3, ITGB7, LILRB3, LTA4H, MAML3, MAP2K2, MAP3K12, MAP4 K3, MAPT, MCCC2, MLYCD, MTMR1, MYH13, NADSYN1, NAGLU, NAGS, NAT2, NFK BIE, NFX1, NRG1, NRXN1, NT5E, NT5M, NUDT2, OR10H3, OR10J1, OR1Q1, OR2 AE1, OR2D2, OR2G3, OR2H1, OR2H2, OR4F15, OR4F6, OR51A4, OR51B4, OR51 B5, OR51B6, OR52E4, OR52H1, OR52N1, OR5AR1, OR5J2, OR6K2, OR8G1, P2R X2, P2RX5, PAK6, PAK7, PCK2, PCNA, PCYT1A, PDE3A, PDE6H, PERP, PFN2, P GAP1, PIGB, PITX2, PKM2, PMM1, POLR2F, PPT1, PRKCA, PTPMT1, PYCR1, RA F1, RGS3, RHOQ, RIPK1, RND1, RRAS2, SAT2, SCIN, SDHB, SEMA3F, SEMA4C, <del>SDA, ADG, CRT3, CUB, CUF, EZR, FTA, GMA, GCR, GHR, GLX, GNS, MVD, MTC, PLG,</del> SCD, VTN, ZYX, AARS2, ACACB, ACADL, ACTN2, AKR1D1, ALCAM, AMPD3, ANAP C5, APBB1, ARSB, ATN1, BAAT, BBOX1, BCKDHA, BET1L, BIRC5, C9orf95, CA MK4, CARS2, CCL1, CCL15, CCL25, CCNA1, CCNH, CD40, CDC20, CFTR, CHIA, CHRM1, CHRM2, CKS1B, CLDN15, CLDN6, CLOCK, COL4A4, COL5A2, COQ5, CRE B3L3, CTBP2, CXCL2, CXXC4, CYP11B2, DAAM1, DARS, DBF4, DDX52, DEGS2, DLL1, DRD1, E2F2, EDN1, ENTPD4, EPHB2, ERBB2, F13B, F2RL1, FABP3, FGF 12, FGF21, FOXO1, FTH1, FZD5, GALNT10, GCNT4, GLUD2, GMPA, GNG12, GP AA1, GRIN2A, GSTA5, GUCA1A, GUCY1A2, HIP1, HLCS, HNF1A, HSD17B3, HTR A2, ICAM1, IDH1, IFIH1, IFNAR2, IGF1, IGFBP3, IL10RA, IL25, IL28RA, I L2RA, IL5RA, INHBC, INPPL1, IRF3, IRS4, ITGA10, ITGA2B, ITGB1, ITGB3, KIR2DS4, KLK3, LCMT1, LCP2, LEF1, LIPG, LRDD, MAN1A2, MAPK14, MAPT, MCM2, MCM3, MRAS, MTHFD2, NCF1, NFASC, NFX1, NOS1, NOTCH1, NR1H3, NRA S, OR10AD1, OR10C1, OR10K2, OR10X1, OR12D3, OR13F1, OR1K1, OR1L4, OR 1L6, OR2H2, OR2L8, OR3A3, OR4F15, OR4M2, OR51I1, OR52D1, OR52L1, OR5 2N4, OR5C1, OR6K2, OR6Y1, OR7C1, OR7C2, OR8B4, OR8J1, P4HA1, PARD3, P DE2A, PDGFRA, PDHA2, PER1, PI4KB, PIGF, PIGO, PIK3R3, PKLR, PLA2G5, P LCB1, PLXNA2, POLR1D, PPAT, PPP1CC, PRKACA, PTCH2, PTGFR, PTPN11, PT <del>DN, DFBP, DFFCAT, DEY5, DFCCKA5, DDM9, DUVBL1, SAT3, SDHA, SDIB, SEF</del></p>
Negative_15861	<p><del>SDA, ADG, CRT3, CUB, CUF, EZR, FTA, GMA, GCR, GHR, GLX, GNS, MVD, MTC, PLG,</del> SCD, VTN, ZYX, AARS2, ACACB, ACADL, ACTN2, AKR1D1, ALCAM, AMPD3, ANAP C5, APBB1, ARSB, ATN1, BAAT, BBOX1, BCKDHA, BET1L, BIRC5, C9orf95, CA MK4, CARS2, CCL1, CCL15, CCL25, CCNA1, CCNH, CD40, CDC20, CFTR, CHIA, CHRM1, CHRM2, CKS1B, CLDN15, CLDN6, CLOCK, COL4A4, COL5A2, COQ5, CRE B3L3, CTBP2, CXCL2, CXXC4, CYP11B2, DAAM1, DARS, DBF4, DDX52, DEGS2, DLL1, DRD1, E2F2, EDN1, ENTPD4, EPHB2, ERBB2, F13B, F2RL1, FABP3, FGF 12, FGF21, FOXO1, FTH1, FZD5, GALNT10, GCNT4, GLUD2, GMPA, GNG12, GP AA1, GRIN2A, GSTA5, GUCA1A, GUCY1A2, HIP1, HLCS, HNF1A, HSD17B3, HTR A2, ICAM1, IDH1, IFIH1, IFNAR2, IGF1, IGFBP3, IL10RA, IL25, IL28RA, I L2RA, IL5RA, INHBC, INPPL1, IRF3, IRS4, ITGA10, ITGA2B, ITGB1, ITGB3, KIR2DS4, KLK3, LCMT1, LCP2, LEF1, LIPG, LRDD, MAN1A2, MAPK14, MAPT, MCM2, MCM3, MRAS, MTHFD2, NCF1, NFASC, NFX1, NOS1, NOTCH1, NR1H3, NRA S, OR10AD1, OR10C1, OR10K2, OR10X1, OR12D3, OR13F1, OR1K1, OR1L4, OR 1L6, OR2H2, OR2L8, OR3A3, OR4F15, OR4M2, OR51I1, OR52D1, OR52L1, OR5 2N4, OR5C1, OR6K2, OR6Y1, OR7C1, OR7C2, OR8B4, OR8J1, P4HA1, PARD3, P DE2A, PDGFRA, PDHA2, PER1, PI4KB, PIGF, PIGO, PIK3R3, PKLR, PLA2G5, P LCB1, PLXNA2, POLR1D, PPAT, PPP1CC, PRKACA, PTCH2, PTGFR, PTPN11, PT <del>DN, DFBP, DFFCAT, DEY5, DFCCKA5, DDM9, DUVBL1, SAT3, SDHA, SDIB, SEF</del></p>

Negative_15862	<p>CD4, DB1, DCC, HDC, JUN, ME2, OAT, OGI, PAH, RPE, SRC, AADAC, ACOT12, ACSS1, ACTB, ACVR2A, ADAM10, ADCY9, ADORA2B, AKR1A1, AKR1C1, ALAS1, ALAS2, ALCAM, ALDH1A2, ALDH6A1, ALG10, ANPEP, APBB1, ARHGEF6, ARNT, ARPC5, ASRGL1, ATP2A1, ATP4A, ATP6AP1, ATP6V1A, B3GNT2, B4GALT4, BACE2, BMP6, BMP8B, C4BPB, CACNB3, CACNG7, CASK, CCL21, CCL22, CCL25, CCL7, CD19, CD22, CD79A, CDC2, CHIA, CHST12, CLDN14, CLDN18, CLDN20, CLDN22, CMBL, COL1A2, CPT1A, CREB3L4, CRLF2, CRLS1, CSF2RA, CSF3, CSNK1A1, CTSG, CXCL13, CYP11B2, CYP2C19, CYP2J2, CYP4A11, DDB2, DGKB, DGKH, DHFR, DIAPH1, DIAPH2, DPAGT1, EFNA4, EI24, ENO3, ENTPD6, EPHA1, ETNK1, FARP2, FBP2, FGF5, FSHB, FTMT, GARS, GBA3, GCNT4, GLDC, GLUD2, GNA13, GPX7, GRIN1, GUK1, HCCS, HEMK1, HEXB, HLCS, HSPA2, HSPB1, HTR6, IFNA13, IFNW1, IL10, IL12B, IL18, IL1A, IL20, IL22RA1, IRAK2, ITGB4, ITGB7, KIR2DS5, LAMA4, MAGI3, MAML1, MAOA, MAOB, MAP3K14, MAP3K4, MAPT, MCM4, MDM4, MINPP1, MOV10L1, MTHFS, MYH15, MYL5, NCAM1, NEU1, NME7, NSDHL, NT5C1B, OR10A7, OR10AD1, OR10H4, OR11A1, OR11L1, OR13G1, OR1L8, OR1N2, OR2AG1, OR2L8, OR3A3, OR51E2, OR51Q1, OR51V1, OR52H1, OR52N1, OR5C1, OR5D14, OR5I1, OR5K1, OR5R1, OR6C2, OR6C74, OR7A10, OR7C1, OR7D2, OR8U1, PARD3, PDE7B, PEMT, PER3, PFN4, PGAM2, PGM2, PGM3, P</p>
Negative_15863	<p><del>H2M, ADC, C6B, C6G, C5, DDT, DDB, F8, GAK, GGN, GAT, G2, GNS, G1, G7, K, MO, LEP, MUT, PC, PGF, PVR, SHH, TEC, TH, TK1, TPO, ACADSB, ACAT1, ACSM2A, ACTA1, ADCY1, ADRA1D, AGPAT6, AKT1, ALAD, ALG1, ALG8, AMDHD1, ANAPC7, AOX1, ARSA, ATN1, B3GNT2, BAI1, BLNK, C4BPA, CACNG7, CACNG8, CALML6, CAMK4, CAV1, CCL11, CCL20, CCL25, CD55, CD82, CDC27, CDKN1C, CIITA, CLDN6, CLDN9, COL2A1, CPT1B, CREB3L1, CRLF2, CSNK1G2, CXCL11, CXCR4, CYBB, CYP19A1, CYP2C19, CYP7A1, DAG1, DDX56, DIAPH2, DIAPH3, DTX3, DUSP16, EDAR, EFN1, EIF4E2, ENTPD3, EPHA5, EPHA6, EPHB1, EPRS, F11R, FADS2, FCGR3A, FGF14, FGF21, FGFR1, FLT4, FOSL1, FPGT, GAD1, GAD2, GALNT1, GALNT6, GALNTL1, GCLC, GGCX, GGT7, GNB3, GNRH2, GNRHR, GPX7, GSTZ1, GUCA1A, GUCA1C, GYS2, HARS2, HGSNAT, HMGCR, HTR2B, IBSP, ICOS, IFNA2, IL22RA2, IL28B, INMT, ITGB8, ITPKB, LDHD, LRDD, LRRC4C, LTC4S, LYPLA2, MAD1L1, MAD2L2, MAML3, MAN1C1, MAN2A1, MAP3K3, MAPK12, M</del></p>
Negative_15864	<p><del>AKA, BAP, BAX, BID, CTS, C2, CBS, CPO, CRM, D61, PPG1, A, B, D19, G, R, GSS,</del>  IL2, IL4, ILK, MOS, TK1, TNF, WAS, ABL2, ACACA, ACTN1, ADH5, ADH6, ADRBK2, AFMID, AGPAT3, AHCY, AKR1C3, ALDH9A1, ALDOA, AMPD2, ANAPC2, ANAPC7, APLP1, APOC3, APPL1, APRT, ARHGEF2, ATP5A1, ATP5F1, ATP5G3, B3GALTL1, BCMO1, BRAF, CACNA1H, CACNG3, CACNG7, CADM1, CADM3, CASP10, CCKBR, CCL11, CCL5, CCND1, CCNG2, CCR2, CCR9, CD244, CD44, CD82, CDIPT, CDK6, CDKN2A, CDKN2B, CDKN2D, CERK, CHEK1, CHKB, CHST13, CIITA, CISH, CREB3, CRHR1, CRLS1, CSF2RB, CUL1, CX3CR1, CXCR5, CYCS, CYP11B2, CYP2A13, CYP4A11, CYP4F2, CYP7A1, DDB2, DVL3, E2F3, EDN1, EPB41L1, EPB41L3, EPHA8, FABP3, FASLG, FECH, FGFR2, FOXO1, GALNT3, GALNT6, GLUL, GNA14, GNAI1, GNAI3, GP1BB, GSTM1, GSTM4, GSTZ1, GYS1, HADHB, HCCS, HEXA, HMOX2, HSD17B8, HTR2C, IBSP, IFNA17, IGF1R, IL18, IL23R, IL25, INMT, ITGB5, ITPKB, KDSR, KIR2DL1, LEFTY2, LPAR1, LYZL1, MAP2K1, MAP2K3, MECR, METTL2B, MGAT1, MGAT4A, MGAT4B, MKNK1, MPST, MTHFD1, MTHFR, MYH3, NAGS, NOTCH2, NR1H3, NR4A1, NTF3, NUMBL, OR10C1, OR13A1, OR1J1, ORIS1, OR2G2, OR2T29, OR2V2, OR51E2, OR5A1, OR5K2, OR6B2, OR8H1, OR8H2, P4HA1, PAK6, PCCA, PCYT2, PDE7A, PDGFRA, PDIA4, PIGN, PIM1, PLA2G10, PLA2G3, PLCD1, PLCZ1, PLOD3, POLA2, POLE2, POLR1A, PPAT, PRKCB,</p>

Negative_15865	<p>ABO, AGK, BID, BTD, C4B, CGN, CS, DB1, FAN, GDA, GF1, HDC, IDS, K11, MIT, MOS, NNT, PDC, PLN, XDH, ABLIM1, ACOT12, ADRB2, ADSS, AFMID, AGMAT, AKR1B1, ALDH4A1, ANAPC4, ARHGEF7, ARSD, ATN1, AVPR1B, B3GNT4, B4GALT2, BCAT1, BCMO1, BDH1, BET1L, BIRC2, BTRC, C7orf16, CADM1, CASP3, CCL16, CCNA2, CCND1, CCND3, CCNE1, CCR7, CD226, CD79B, CDC26, CDH2, CDH4, CFTR, CHIA, CLDN10, CLDN8, CLDN9, CLTA, CLTC, COMT, CTPS, CXCR4, CYCS, CYP11B1, CYP26A1, CYP3A5, CYSLTR1, DAXX, DDX19A, DDX54, DDX55, DERL1, DFFB, DHRS9, DIAPH2, DMGDH, DPM3, DUSP10, DUSP4, DUSP5, EDAR, EGLN1, EHHADH, ELK1, ENTPD4, EPB41, EPHA5, EPHB1, EPHB3, ERBB3, ESAM, EXT1, F13B, FARSA, FBXW11, FGF2, FLOT2, FOSL1, FRAT2, FUT2, FZD5, GAD1, GAD2, GALM, GALNT1, GALNT5, GALNT9, GJA1, GLG1, GLO1, GNA13, GRM1, GSTM4, GUCA1A, GZMA, HAO2, HES1, HSD11B1, IBSP, IL10RA, IL18R1, IL1R2, IL2RA, IL2RB, IL4R, INPP1, IQGAP2, IRAK3, ITGA5, ITGA6, ITPK1, KCNJ11, LGMN, LHCGR, LILRB3, LIPG, LRP5, MALT1, MAP2K5, MAP3K3, MCM4, MCM7, MDH2, MGAM, MGST3, MYH13, MYH7, NCF2, NFAT5, NFYB, NGEF, NLGN1, NMNAT1, NOX3, NSD1, ONECUT1, OR10K1, OR10Z1, OR13C3, OR1D2, OR2A4, OR2A5, OR2F2, OR4C11, OR4C16, OR4C46, OR4D11, OR4E2, OR4K1, OR4K15, OR4S2, OR51A4, OR5AK2, OR5B17, OR6B3, OR6C76, OR6K2, ORC5L, P4HA1, PAICS, RAB2, RAB20, PRKAA1, PRKCF, RGS, RGS8, RGS9, RGS3, RHM1, R3, RGS, RUGP, RND1, RND3, RNF1, OSM, PXN, TXK, ACACA, ACSS2, ADCY5, ADRA1D, ADSSL1, AKR1C1, ALDH5A1, ALG1, ALG2, ALOX5, ALPI, ALS2, AMPD1, ARD1A, ARNT, ARNT2, ARPC5L, ARSE, ATP6AP1, B3GAT1, B3GNT2, B3GNT4, BBC3, BCAR1, BCKDHB, BHMT, BMP4, CACNB1, CALML3, CAPN2, CASP10, CAV2, CBLC, CCL14, CCL17, CCL5, CCL8, CCR2, CCR8, CD19, CD59, CD01, CES1, CFLAR, CHEK1, CHEK2, CLDN11, CNDP1, COL4A4, COMP, CREBBP, CTBS, CTSG, CYP2A6, CYP2D6, CYP2F1, CYP3A7, DGUOK, DHDDS, DHDH, DTX3, DUSP5, DVL1, EDA2R, ENPP6, EPB41, EPHA2, EPHX2, ERO1L, ETS1, FABP4, FASN, FGF12, FGF2, FLOT2, FOXA2, FSHR, FUT7, FZD9, GALT, GCLC, GGT7, GLB1, GLYCK, GMPPB, GMPR2, GNAZ, GNB1, GNG3, GRIA2, GRIN1, GRM1, GUCA1B, GYS1, GYS2, GZMA, HADHB, HBEGF, HEXA, HGSNAT, HLCS, HMGCL, HSD11B2, HSD3B7, HTR2C, HTRA2, IFNA6, IL10, IL15, IL17RB, IL1B, IL8RA, IL8RB, INHBE, ITGB3, LAMC2, LDHC, LEFTY1, LEFTY2, LILRB3, LLGL1, LYPLA2, LYZL1, MAP2K3, MASP1, MGLL, MGST2, MNX1, MYH13, MYH6, MYL5, MYLK2, NAGLU, NCAM2, NCKAP1L, NEUROG3, NFKB2, NFKBIB, NKX6-1, NLGN2, NR1D1, NRXN1, NT5M, NTNG1, NUDT12, NUDT8, OR10G9, OR10H2, OR10H3, OR10R2, OR13C2, OR2A42, OR2C1, OR2M3, OR3A2, OR4D11, OR4F4, OR51B6, OR51I2, OR51L1, OR51M1, OR51Q1, OR52E4, OR52E8, OR52J3, OR52K1, OR52N4, OR52N5, OR52L1, OR5K1, OR5T9, OR6C6, OR6C75, OR6K2, OR6N9</p>
Negative_15866	<p>1, OSM, PXN, TXK, ACACA, ACSS2, ADCY5, ADRA1D, ADSSL1, AKR1C1, ALDH5A1, ALG1, ALG2, ALOX5, ALPI, ALS2, AMPD1, ARD1A, ARNT, ARNT2, ARPC5L, ARSE, ATP6AP1, B3GAT1, B3GNT2, B3GNT4, BBC3, BCAR1, BCKDHB, BHMT, BMP4, CACNB1, CALML3, CAPN2, CASP10, CAV2, CBLC, CCL14, CCL17, CCL5, CCL8, CCR2, CCR8, CD19, CD59, CD01, CES1, CFLAR, CHEK1, CHEK2, CLDN11, CNDP1, COL4A4, COMP, CREBBP, CTBS, CTSG, CYP2A6, CYP2D6, CYP2F1, CYP3A7, DGUOK, DHDDS, DHDH, DTX3, DUSP5, DVL1, EDA2R, ENPP6, EPB41, EPHA2, EPHX2, ERO1L, ETS1, FABP4, FASN, FGF12, FGF2, FLOT2, FOXA2, FSHR, FUT7, FZD9, GALT, GCLC, GGT7, GLB1, GLYCK, GMPPB, GMPR2, GNAZ, GNB1, GNG3, GRIA2, GRIN1, GRM1, GUCA1B, GYS1, GYS2, GZMA, HADHB, HBEGF, HEXA, HGSNAT, HLCS, HMGCL, HSD11B2, HSD3B7, HTR2C, HTRA2, IFNA6, IL10, IL15, IL17RB, IL1B, IL8RA, IL8RB, INHBE, ITGB3, LAMC2, LDHC, LEFTY1, LEFTY2, LILRB3, LLGL1, LYPLA2, LYZL1, MAP2K3, MASP1, MGLL, MGST2, MNX1, MYH13, MYH6, MYL5, MYLK2, NAGLU, NCAM2, NCKAP1L, NEUROG3, NFKB2, NFKBIB, NKX6-1, NLGN2, NR1D1, NRXN1, NT5M, NTNG1, NUDT12, NUDT8, OR10G9, OR10H2, OR10H3, OR10R2, OR13C2, OR2A42, OR2C1, OR2M3, OR3A2, OR4D11, OR4F4, OR51B6, OR51I2, OR51L1, OR51M1, OR51Q1, OR52E4, OR52E8, OR52J3, OR52K1, OR52N4, OR52N5, OR52L1, OR5K1, OR5T9, OR6C6, OR6C75, OR6K2, OR6N9</p>

Negative_15867	<p>           AFP, BLC, C4B, C8G, CGN, CKM, EPO, FGB, GF9, ILS, ILK, KDR, LPO, ME2, MPT            , RB1, SRF, AC01, ACOT11, ACSM3, ACVRL1, AKR1A1, AKR1B10, ALDH1L1, AL            G8, ALG9, ALPP, ALPPL2, APOE, AREG, ARHGEF7, ARPC5, ATP2A1, ATP5C1, A            TP5I, ATP5J2, ATP6VOC, B3GALT4, B3GALT6, B3GNT3, B4GALT5, BACE1, BD            NF, BIRC2, BMP6, BRAF, CACNA1H, CADM3, CALML3, CASP7, CAV1, CCL2, CCL            20, CCL25, CCNB1, CCND3, CCR5, CD19, CD226, CD244, CD247, CD38, CD99,            CDC7, CDH1, CDK6, CDK7, CFLAR, CHIA, CLTB, CLTC, CPS1, CRLF2, CSF2RA,            CSNK2A1, CTBS, CTNNA3, CTNNB1, CTPS2, CXCR6, CYBA, CYFIP2, CYP19A1,            CYP2D6, CYP2U1, CYP3A7, CYP8B1, DAPK1, DARS, DAXX, DCTD, DDIT4, DDX5            1, DDX56, DFFA, DGAT1, DHDH, DHRS9, DIAPH2, DLL1, DLL4, DRD1, DTYMK, D            USP5, EFNA1, EGFR, ENTPD7, EPHA2, EPHA6, EPHA8, EPHB4, EXTL2, FARSB,            FGF17, FGFR4, FMO5, FUT6, FZD1, FZD2, FZD8, GALK2, GALNT14, GCDH, GCL            C, GDF7, GNMT, GRIN1, GRIN2D, GUCY1A3, HA01, HCCS, HEMK1, HSD17B1, HS            PA2, HTR6, IGF1, IL11RA, IL12RB1, IL22RA2, IQGAP2, IRS2, ITGAD, ITGA            V, ITGB4, LAMA4, LAMC3, LAP3, LEFTY1, LIPT1, MAFA, MAN2A1, MAP3K12, M            DH2, METTL6, MGAT4A, MGST3, MMP14, NAGK, NAT1, NCKAP1, NEFM, NFE2L2,            NFKBIA, NFX1, NMNAT1, NNMT, NOX3, NRG4, NUDT9, OLR1, OR10G4, OR10K1,            OR10Q1, OR11A1, OR13C8, OR1G1, OR1I1, OR1L6, OR2A14, OR2B6, OR2K2, O            RA3, FAM9, BRA, C4B, CDA, CKB, CR2, CMA, DCY1, EDAR, E2F2, FOS, GBA, GBS, hCD            3         </p>
Negative_15868	<p>           , ID2, ID4, IDS, KIT, MAX, MVK, OAT, PDC, PGP, SRC, AACs, AASS, ABL2, ACA            A2, ACACA, ACAT1, ACPP, ACTN2, ACY3, ADCY4, AKR1B10, AKR1C4, AKT3, AL            DH1A2, ALDH3A1, ALDH5A1, ALDH6A1, ALOX5, AMD1, ANAPC1, AOC2, APPL1,            ARG1, ARPC3, ARSE, ATP12A, ATP2A3, ATP6V1H, B3GAT3, B4GALT5, BAIAP2            , BCAT1, BLNK, BMP7, CALML3, CAMK2D, CANT1, CAV2, CCL1, CCL17, CCL22,            CCL4, CCNE1, CD40LG, CD55, CD72, CDC14A, CDK4, CHAT, CHRM2, CHRM3, CL            TCL1, CNDP1, COL11A1, CTLA4, CTNND1, CYP4F3, DARS2, DDX54, DGKH, DHD            H, DHX58, DIAPH2, DKK4, DRD2, DUSP5, DVL3, EFNA1, EHMT2, EIF4B, EPB41            L2, EPHA3, EPHX1, EPOR, EXT2, F13A1, FABP4, FCGR2B, FGFR1, FRAT1, FUT            9, FZD1, G6PC2, GALC, GALNT13, GDF7, GFPT1, GMPR, GNAI2, GNB3, GNPAT,            GPD1, GPLD1, GRM1, GSTA4, GZMA, H6PD, HADHA, HADHB, HHIP, HLA-            DOB, HLA-            G, HNF1B, HNMT, HTR2B, IFNA16, IFNA17, IFNA4, IGF1, IL12RB1, IL17B, I            L1A, IL20, IL20RA, IL22RA1, IL24, IL25, INHBA, IRS4, ITGA6, ITGAX, KC            NB1, KIR3DL1, KITLG, LEPR, LIPA, LIPF, MAP2K1, MAP2K5, MAP4K3, MAPK1            3, MCM3, MGST3, MITF, MNX1, MTHFR, MTHFS, MYH3, NAE1, NCAM1, NCR2, NCS            TN, NEFL, NEGR1, NFATC4, NME2, NME6, NNMT, NQ01, NR1H3, NRG2, NRXN2, N            T5C, NT5C1A, NUDT8, NUDT9, OCLN, OR10AD1, OR10H1, OR10R2, OR10X1, OR            10C5, OR1A9, OR1D5, OR1G1, OR1L2, OR1M1, OR2A19, OR2A69, OR2M9, OR2D         </p>



Negative_15872	<p>CSB, CGA, DCN, F8, FER, FUK, GBA, GK2, HK2, IDS, ILO, KDR, KMO, MET, MVR, NPL, PC, SHH, SPN, UBC, ACP6, ACSL4, ACVR1C, ADCY4, ADH4, ADIPOQ, ADRA1A, ADRB2, AGPAT1, AGRP, AGXT2, AKR1B10, AKR1D1, ALDH3B1, ANAPC4, APC2, ARHGEF1, ARSB, ASAH1, ATG7, ATP5G1, ATP5J2, ATP5L, ATP6V1A, AXIN2, B3GNT5, B4GALT1, BDNF, BMPR1B, CACNA1F, CACNG5, CASK, CCL16, CCL2, CCL25, CCL27, CCNB3, CCR1, CD244, CDC14A, CDC25C, CHAT, CHIT1, CHPF, CHUK, CLCF1, CLDN17, CLDN7, CLTC, CNTFR, CNTNAP1, COQ6, COQ7, CTNNA3, CYBB, CYP17A1, CYP27A1, CYP2C8, DDX23, DDX47, DDX55, DERA, DGKB, DKK2, DPAGT1, DUSP14, DUSP9, EFNA5, EFNB2, EGFR, ENTPD5, F13A1, FASLG, FBXW11, FGF21, FIGF, FLT1, FMO3, FSHB, FUT1, FUT4, FUT7, FZD3, FZD9, GADD45B, GALT, GDF5, GNAI3, GPAM, GRIN2D, GRLF1, GUCA1A, GUCY1B3, GUSB, HDAC1, HES1, HLA-F, HSD17B2, HTR2A, IARS2, IFNA13, IFNA17, IFNA7, IFNGR2, IL11, IL13RA1, IL5RA, INPP4A, ITGA8, ITGAL, ITGB6, ITGB7, ITPKB, KCNQ1, LAMA4, LAMB2, LAP3, LEFTY2, LIAS, LIPG, LPAR1, LRP5, MAD2L1, MAP2K2, MAP3K11, MAP3K12, MASP2, MGAT1, MMP1, MTAP, MYH8, NCAM1, NCOR1, NEFL, NEU2, NEU4, NFX1, NKX2-2, NME4, NTNG1, OR10A4, OR10G9, OR10H3, OR11H4, OR1A1, OR1D5, OR4L1, OR51B6, OR51D1, OR51S1, OR52B6, OR52N2, OR5L1, OR5M9, OR5P3, OR5T1, ADC, AKT, ACP, CBR, CAD, CCR, CRM, ELA, GHI, PDC, PDE, RBT, PAX, TNC, ABL1, ABL2, ACADM, ACOT11, ACOX2, ACPP, ACSM2A, ACTG1, ACVR1B, ACYP2, ADCY1, ADH6, ADORA2A, AKR1C3, ALDH3B1, ALG12, ALOX12, ALPP, AMPD1, APAF1, APH1A, APLP1, ARNT, ARPC1A, ARRB2, ATP5I, ATP6AP1, BACE2, BPGM, BPNT1, C1GALT1, CACNA1B, CACNA1C, CACNG1, CANT1, CASP8, CAV1, CBLB, CKAR, CCNA1, CCNE2, CD226, CD40, CD58, CD82, CHRM1, CLDN8, CPT1C, CREB3, CRHR1, CXCR3, CYP26A1, DBF4, DDB2, DDHD1, DGKB, DGKD, DHDDS, DHX58, DKK4, DNMT3L, DPYD, DTX3L, DUSP1, DUSP6, E2F2, E2F4, EFNB1, ENTPD1, EPHA2, EPHX1, EPHX2, ESAM, EVI1, F11R, FABP4, FGF4, FGFR4, FLOT2, FUT8, FUT9, GALE, GALNT1, GALNT11, GALNT2, GATM, GGT7, GJD2, GLB1, GLUD2, GLYCTK, GNA13, GNA15, GNG3, GOSR2, GOT2, GP1BA, GRHPR, GRIA2, GSTO2, GTSE1, HAO1, HSD17B4, HSD17B7, HSPB1, IFNA21, IFNGR1, IFNW1, IL17RB, IL18R1, IL20RB, IL22RA2, IRF7, ITPKA, JAG1, KARS, KITLG, LALBA, LCMT2, MAFA, MAGI1, MAN1B1, MAP2K7, MAP3K14, MAP3K6, MAPK7, MAPK8, MFRNG, MICA, MIOX, MMP7, MPP5, MTHFR, MTHFS, MYH7B, NCF1, NCSTN, NEFH, NFATC1, NLGN1, NME2, NME6, NME7, NRP1, NT5C1A, NT5C2, OGDHL, OR10G7, OR10H3, OR10J1, OR10P1, OR11H6, OR13J1, OR1I1, OR1L1, OR2D3, OR2L3, OR2T10, OR2T5, OR2T6, OR2Z1, OR4C46, OR4D6, OR4M2, OR4N2, OR51F1, OR51F2, OR51H1, OR51M1, OR51P2, OR5K1, OR6G1, OR6Y1, OR7A10, OR7C1, OR8A1</p>
Negative_15873	<p>ADC, AKT, ACP, CBR, CAD, CCR, CRM, ELA, GHI, PDC, PDE, RBT, PAX, TNC, ABL1, ABL2, ACADM, ACOT11, ACOX2, ACPP, ACSM2A, ACTG1, ACVR1B, ACYP2, ADCY1, ADH6, ADORA2A, AKR1C3, ALDH3B1, ALG12, ALOX12, ALPP, AMPD1, APAF1, APH1A, APLP1, ARNT, ARPC1A, ARRB2, ATP5I, ATP6AP1, BACE2, BPGM, BPNT1, C1GALT1, CACNA1B, CACNA1C, CACNG1, CANT1, CASP8, CAV1, CBLB, CKAR, CCNA1, CCNE2, CD226, CD40, CD58, CD82, CHRM1, CLDN8, CPT1C, CREB3, CRHR1, CXCR3, CYP26A1, DBF4, DDB2, DDHD1, DGKB, DGKD, DHDDS, DHX58, DKK4, DNMT3L, DPYD, DTX3L, DUSP1, DUSP6, E2F2, E2F4, EFNB1, ENTPD1, EPHA2, EPHX1, EPHX2, ESAM, EVI1, F11R, FABP4, FGF4, FGFR4, FLOT2, FUT8, FUT9, GALE, GALNT1, GALNT11, GALNT2, GATM, GGT7, GJD2, GLB1, GLUD2, GLYCTK, GNA13, GNA15, GNG3, GOSR2, GOT2, GP1BA, GRHPR, GRIA2, GSTO2, GTSE1, HAO1, HSD17B4, HSD17B7, HSPB1, IFNA21, IFNGR1, IFNW1, IL17RB, IL18R1, IL20RB, IL22RA2, IRF7, ITPKA, JAG1, KARS, KITLG, LALBA, LCMT2, MAFA, MAGI1, MAN1B1, MAP2K7, MAP3K14, MAP3K6, MAPK7, MAPK8, MFRNG, MICA, MIOX, MMP7, MPP5, MTHFR, MTHFS, MYH7B, NCF1, NCSTN, NEFH, NFATC1, NLGN1, NME2, NME6, NME7, NRP1, NT5C1A, NT5C2, OGDHL, OR10G7, OR10H3, OR10J1, OR10P1, OR11H6, OR13J1, OR1I1, OR1L1, OR2D3, OR2L3, OR2T10, OR2T5, OR2T6, OR2Z1, OR4C46, OR4D6, OR4M2, OR4N2, OR51F1, OR51F2, OR51H1, OR51M1, OR51P2, OR5K1, OR6G1, OR6Y1, OR7A10, OR7C1, OR8A1</p>

Negative_15874	<p>AK1, AK2, CBL, CEL, CHN, DDC, EPO, F11, FES, GF9, ID4, IVD, JUP, LSS, OTC, PDC, SYK, TNF, TYR, UBC, ABI2, ACAD9, ACAT1, ACO2, ACP1, ACTN1, ACY1, ADRB1, AFMID, AGPAT3, AHCY, AKR1C4, ALDH3B1, ALG6, ALG8, ALOX5, ALPP L2, ANAPC7, APOA5, ARHGEF6, ARPC1B, ARRB1, ARSE, ASCC3, ASRGL1, ASS1, AVPR1B, B3GNT3, B4GALT7, BACE2, BCAT1, C5AR1, CACNA1A, CALML3, CAS K, CASP3, CAV3, CBR1, CCL2, CCL3, CCNB1, CCR3, CD27, CD59, CD72, CD8A, CHAT, CHSY1, COL11A1, COL2A1, CSF2RA, CSNK1D, CTNNA1, CTNNB1, CYP17 A1, CYP1A1, CYP26B1, CYP2E1, CYP3A43, DAAM1, DBF4, DDB2, DDX41, DDX5 6, DGKA, DGKB, DHRS9, DNMT3L, DPM3, DPYS, DUSP2, ENTPD1, EPHA2, EPHA7, EVI1, FDPS, FGF1, FGF14, FGF20, FMO4, FUT9, FZD2, FZD6, FZR1, GAD1, G ALNT13, GALNT9, GCNT2, GLG1, GLI1, GPD1L, GPX7, GRM1, GSTT1, GUCA1C, GZMA, HCST, HHEX, HMOX1, HSD11B2, HSD17B4, HSD3B2, HSPA2, HTR6, IARS 2, IFNA17, IFNGR1, IL17RA, IL22, IL28B, IMPA1, INADL, INMT, INPP1, IP PK, IRAK2, IRAK3, ITGA7, JAK2, KCNQ1, KIR2DS4, LDHA, LDHAL6A, LIMK1, MAGI3, MAML1, MAN1A2, MAOB, MAP3K2, MCM6, METTL6, MGLL, MICA, MPST, M TMR2, MYH3, NAGA, NAT6, NCR1, NEUROD1, NPR1, NR1H3, NR5A2, NRCAM, NRG 3, NRG4, NTNG1, NUMBL, OGDHL, OR10A2, OR10C1, OR10J1, OR10Q1, OR10T2, OR14I1, OR1S1, OR2A12, OR2AG1, OR2AT4, OR2Y1, OR4C12, OR4D9, OR4K1</p>
Negative_15875	<p><del>ADAP, AK1, AMF, AON, C5, C1, DCT, DLL, G2, G1, G3, G5, ADC, LSS, OR21, MAP, M</del>  VK, RB1, RFK, SCD, ACADL, ACTG2, ADH7, ADSS, ADSSL1, AGPAT1, ALDH1A2, ALDH7A1, ALG5, AMY2B, ANAPC5, ARNTL, ARSB, ATP4A, B3GALT6, B4GALT1, B4GALT6, BBC3, BDH2, C1GALT1, C4BPB, C7orf16, CACNA1C, CACNA1I, CAL ML5, CAMK2B, CAMK4, CARS2, CCL25, CCL5, CCND1, CD34, CD58, CDC7, CDK7, CDKN2A, CHST11, CHSY3, CLDN18, CLDN20, CLDN8, CLTB, CNGB1, COL1A2, COL4A1, COX10, CPS1, CREB3L3, CREBBP, CRLF2, CSH1, CTBP2, CTNND1, CT SS, CYP1B1, CYP2A7, CYP2U1, CYP3A43, DAPK3, DHODH, DKK2, DUSP5, DUSP 9, EFNA1, EGLN1, EGLN3, ENTPD5, ENTPD7, EPOR, EXT1, FABP4, FGF21, FLA D1, FLOT1, FLT1, FLT3LG, FOXO1, FUT5, FZD6, FZR1, GALK1, GALNT8, GATM, GDF5, GMPPB, GNAI2, GNG3, GPX7, HADHB, HAO2, HES1, HGSNAT, HMBS, HSP 90B1, IDH3B, IFNA17, IFNA21, IFNA5, IFNAR1, IGSF5, IL12RB1, IL1R2, I L5RA, IL8RB, IMPA1, INMT, IQGAP1, ITGA5, LAMC3, LCMT1, LIPA, LIPG, MA D1L1, MAN1A1, MAP2K6, MAP4K4, MCCC2, MDM2, MGAT5, MICA, MKNK1, MYD88, MYH15, NAGS, NAT2, NCSTN, NFATC2, NKX3-1, NLGN1, NPR2, NRXN1, NSD1, NT5C2, NT5C3, OR10G9, OR10Q1, OR13C5, OR 13C9, OR2B11, OR2M3, OR3A1, OR4C16, OR4K15, OR51G2, OR51I2, OR51L1, OR52B4, OR5AN1, OR6C75, OR6N2, OR6Q1, OR7G2, OR7G3, OR9K2, ORC4L, PA</p>
Negative_15876	<p><del>ARG2, BAX, C1S, DAG, DGG, EPO, FGA, PPH, H1P, IER, ESS, LTB, KET, STM, PKC,</del>  ACMSD, ACVR2A, ADCY5, ADCY7, ADORA2B, AKR1B10, ALDH2, ALDH7A1, ALDH 9A1, ALDOA, ALG9, AMPD2, APOC3, ATP2A1, ATP5F1, B3GALT1, B3GAT2, BAA T, BCAR1, BDH1, BDKRB1, BMP7, BMPR1A, C7orf16, CACNG2, CACNG7, CAMK2 B, CAMKK1, CCL11, CCL19, CCL21, CCND1, CCNH, CD247, CDH3, CES7, CHPF, CHRM1, CKS1B, CLCA2, CLDN1, CLOCK, CMPK1, COL1A1, CPOX, CREB3L4, CSN K1A1, CXCL10, CYP1B1, DARS, DDX50, DEGS1, DEGS2, DFFA, DGAT2, DLL4, D PM1, DUSP10, DUSP2, E2F3, EFNA4, EGLN1, EPOR, ERBB2, EXTL3, FECH, FGF 14, FGF2, FZD8, G6PD, GADD45B, GADD45G, GANAB, GFAP, GFPT1, GP1BA, GP AM, GRIN2D, GSK3B, GSTK1, GUCA1A, GYS1, HBEGF, HRAS, HRH2, HSPA1B, IF NA14, IFNB1, IL10, IL22RA1, IL3RA, INHBC, INPPL1, ITGA11, ITGA9, ITG AV, ITGB6, JAG2, KAT2B, KLKB1, KLRC1, LAMA3, LAMB1, LARS2, LHCGR, LIM K1, LRDD, MAP4K3, MCAT, METTL6, MMP2, MYH3, MYH7B, NAGA, NCK2, NCR2, N EFH, NKD2, NLGN2, NOS3, NOX1, NPR1, NPR2, NQO1, NRG1, NRG2, OLR1, OR10 A5, OR10AD1, OR10C1, OR10K1, OR13C3, OR14C36, OR1L4, OR1M1, OR2A5, O R2B11, OR2D3, OR2G2, OR2G3, OR2L13, OR2M7, OR2V2, OR2Y1, OR3A1, OR4C 46, OR51E2, OR52I2, OR5AR1, OR5I1, OR6C70, OR6F1, OR6X1, OR8D2, OR8I 2, OR9A4, OR9I1, OR9Q2, ORC5L, OXCT2, PAICS, PARS2, PAX4, PCYT2, PDE1</p>

Negative_15877	<p>ADU, AK3, BAD, BID, CO, CBS, CP, FTO, FGA, GBA, GHR, GSS, ID2, K11, LTB, M  PL, PML, SP1, TH, WAS, ABP1, ACMSD, ACP1, ACSL3, ACSL4, ACVR1C, ACVR2A  , ADAM17, ADRB3, AK3L1, AKT1, ALDOC, ALG12, APPL1, ATP2A2, ATP4A, ATP  5A1, ATP5L, ATP6VOB, AXIN2, BACE1, BCL10, BMPR1A, C3orf10, CACNA1E,  CACNA1I, CACNG5, CASP9, CBLC, CCKBR, CCL4, CCND1, CCR4, CCR5, CD19, C  D34, CD58, CDC25A, CDC25C, CDC42, CDC45L, CDKN2D, CHEK1, CHIA, CHPF,  CHRM3, CHST11, CHSY3, CLDN14, CMPK2, CPT1B, CREB3, CRKL, CSF2, CTSB,  CXCL5, CXCR4, CYFIP1, CYP1A1, CYP21A2, CYP26A1, CYP2A13, CYP2A6, CY  P2B6, DAPK3, DDX50, DGKG, DHRS4, DKK2, DLL1, DTX3L, DVL1, E2F3, E2F4,  EHMT2, ENPP6, EP300, EPHB2, EXT1, F13A1, FCGR3A, FGF5, FM03, GALNT12  , GALNT5, GALNTL5, GART, GBA3, GCLC, GDF7, GNAI3, GNRH2, GRIN2C, GUCA  1C, GUK1, GZMB, HCLS1, HIF1A, HIP1, HLA-  DRA, HMGCS1, HNF4A, HYAL2, IAPP, IFNA10, IFNGR1, IKBKG, IL25, IL2RG,  IL4R, INPP4B, ITGB5, KIR2DL3, KLRC2, LAMC2, LCMT1, LCMT2, LIPF, LMO7  , LYPLA1, MAOB, MAP3K12, MAP4K3, MARS2, MBL2, MITF, MTHFD1L, MTHFS, M  TMR6, MYH13, MYH9, NAGA, NAT1, NCKAP1, NCOA4, NCR2, NFATC1, NFATC4, N  FKB2, NODAL, NTF4, OLAH, OLR1, OR10A4, OR10G7, OR10H1, OR10H3, OR13C  2, OR2AG1, OR2T12, OR2T3, OR2Y1, OR4A15, OR4C13, OR4K15, OR51A4, OR5</p>
Negative_15878	<p><del>ADA, ADC, AK2, BAF, B1C, C13, CDR, DHA, F2, FRA, GRT, HGD, HAZ, IIR, TLO,</del>  IVD, LPO, LYN, MAG, ME3, MIF, NGF, PTS, SMO, ZYX, ACHE, ACSL6, ACVR1C, A  CVR2A, ACVR2B, ACVRL1, ADAM10, ADCY2, ADSL, AGPAT2, AGXT2, AK3L1, AL  AD, ALDH1A2, ALDH1A3, ALDH1B1, ALDH3A2, ALDOA, ALDOC, ALG10, ALPL, A  MDHD2, ANAPC11, ANAPC4, AQP7, ARAF, ARHGEF7, ARPC1B, ASMT, ATF4, ATG  12, ATP13A2, ATP6AP1, ATP6V1F, ATP6V1H, AXIN2, B3GALT2, B3GALT5, B4  GALT7, BNIP1, BTRC, CACNB2, CAMK2G, CCL3, CCR4, CD274, CD34, CD36, CD  40LG, CD8A, CDKN1C, CDKN2B, CERK, CHAT, CISH, CLCA2, CNGA3, CNTNAP2,  COL1A2, CPOX, CREB3L3, CRY1, CSF1, CTBP2, CTBS, CTNND1, CXCR4, CYFIP  2, CYP26A1, CYP4F2, DDB2, DGAT2L4, DGKE, DRD1, DRD2, DUSP1, EARS2, EG  LN1, EHMT1, EIF4E, ELK4, ENPP1, ENTPD1, ENTPD3, ENTPD5, ENTPD8, EPHA  8, EXOC7, EXTL2, F2RL1, FABP1, FABP3, FARS2, FBXW11, FLT3, FOSL1, FUT  3, FUT4, FZD9, GADD45G, GALNT7, GANC, GATM, GCNT1, GLG1, GLS2, GNA11,  GPAA1, GPAM, GPX7, GRIN1, GSTA5, HIBADH, HLA-DOB, HLA-F, HLA-  G, HPSE2, IKBKE, IL24, IL29, IL2RG, IMPDH2, IRF5, IRF7, ITGAM, JAK3, K  ARS, KCNQ1, KLKB1, KLRC4, LEFTY1, LIAS, LIPT1, LLGL2, LTC4S, MAP3K3,  MAPK1, MAPK14, MASP2, MAT2B, NARS, NARS2, NCAM1, NEU4, NFATC4, NFX1,  NGEF, NLGN3, NME4, NOTCH2, NOX3, NRXN1, OR10A7, OR10G2, OR10G3, OR10</p>
Negative_15879	<p><del>ADU, A10, CCR, GGH, GR, GLH, GP3, HK2, ID3, IL6, E1E, MOR, OTC, PEG, S1, S</del>  RM, A4GALT, AACS, ABI2, ABP1, ACADS, ACADSB, ACO2, ACP1, ACSM5, ACTC1  , ACTN2, ADRA1D, AGRP, AKR1C1, AKR1D1, ALOX12, ALOX15, ANAPC2, ANPEP  , APBB1, APH1A, APOA5, APPL1, ARSB, ASIP, ATP5J2, ATP5L, AVPR1A, B3GA  LT5, BCL2, BHMT, BMP4, BPGM, BTRC, C1QC, C3AR1, C3orf10, C9orf95, CAC  NA1H, CACNB3, CACNG3, CACNG5, CAMK2A, CAMK2D, CASP10, CBLB, CCL15, C  CL24, CCNA1, CCNG2, CCR5, CCR6, CCR9, CD244, CDC26, CDH15, CDK6, CFLA  R, CHAD, CHEK1, CHRNA7, CHST11, CHST12, CLCA4, CLTA, COL1A1, COL4A6,  COL6A1, COMP, CPS1, CSNK1E, CTS1, CYP26B1, CYP2A6, CYP3A43, CYP7A1  , DCXR, DHRS4, DKK1, DLL3, DOCK1, DPYD, E2F4, EARS2, EFNA1, EFNA4, EHH  ADH, EPHA7, EPHX1, ERBB3, F13B, FADD, FARS2, FGF14, FGF5, FOXO1, FUT2  , FZD3, FZD9, GAL3ST1, GALNT2, GALNT8, GALNTL2, GCLM, GDF7, GMPR, GNA  I3, GNAO1, GNG12, GNRH2, GPLD1, GRIA1, GRIN2A, GRM1, GUCY1A2, HBEGF,  HCLS1, HNF1A, HSD17B4, IDH3B, IFIH1, IFNA4, IGSF5, IKBKG, IL18, IL18  R1, IL23A, IL7R, IL8RB, INHBA, IRS4, ITGA11, ITGA6, KAT2A, KIR2DS5, K  LRK1, KNG1, LALBA, LAMB4, LRP5, MADCAM1, MAGI1, MAP2K3, MAPK7, MARS2  , MASP1, MGLL, MTHFD1L, MYH7, MYLK3, NANS, NARS2, NAT2, NCAM2, NCSTN,  NEUROG3, NFKBIE, NGEF, NKX3-</p>





Negative_15883	<p>           APT, C3, C7, CD2, CFI, CRB, CRT, EBF, EZR, F2R, FGA, FSI, GHI, ID4, IHH, I            NS, JUN, LIF, MVK, MYC, PGD, PLG, PXN, TK2, TPO, ABL2, ACACA, ACSL3, ADC            Y6, ADIPOR1, ADORA2B, AGXT2, AKR1C2, AKR1C3, ALAS2, ALG1, ALG11, ALO            X12, AMDHD2, ANAPC1, ARAF, ARHGEF7, ATG12, ATP6V1F, AXIN1, B3GALT6,            B4GALT5, BAIAP2, BCMO1, BDKRB2, BLVRA, BUB3, CACNA1S, CACNG2, CACNG            4, CACNG8, CADM3, CASP3, CCKAR, CCL2, CCL7, CD27, CDC42, CDH15, CDIPT            , CDKN2D, CERK, CES7, CFL1, CFTR, CHDH, CHEK2, CHPF, CHRM1, CLCA2, CLC            F1, CLDN2, CLDN6, COASY, COL3A1, COL4A6, COQ5, COX10, COX15, CSF3, CT            LA4, CTNNA2, CTSG, CUL1, CXCL16, CYP17A1, CYP26A1, CYP4F3, DARS2, DA            XX, DDX55, DFFA, DGKH, DGKQ, DLL4, DVL2, EGFR, EPHA1, EPHB1, EPHB4, ER            BB3, F2RL3, FCGR3A, FGF22, FGFR3, FLT3, GAB1, GAD2, GALNT14, GALNT3,            GALNT7, GANC, GCNT2, GGT1, GLS2, GNPDA1, GOT2, GPD1, GSK3B, GSTA4, GU            CY1A2, GYS2, HAAO, HMGCS1, HTR5A, IFNA7, IFNK, IL22RA1, IL23R, IL6R,            INPP5E, INPPL1, IRAK1, IRF9, IRS1, ITGA10, ITGA9, LAMA3, LLGL1, LRP6            , MAOB, MAP3K13, MAP3K14, MAP3K2, MAP4K3, MAPK13, MCCC1, MKNK1, MMP9            , MYH1, MYH2, NAGA, NAT1, NEUROG3, OR10G7, OR10J5, OR13C2, OR13C3, OR            1K1, OR1L8, OR1N2, OR2A12, OR2AG1, OR2B2, OR2F1, OR2G6, OR2M4, OR2M5            , OR2T10, OR4C16, OR51A4, OR51F2, OR51G1, OR51V1, OR52B6, OR52I1, OR         </p>
Negative_15884	<p>           CFB, CTF, DDT, EZR, GAA, GK, GRS3, HPC, IVD, NCF1, OSM, P14, SPK5, ZPA, KDC            8, ACADL, ACMSD, ACO1, ACSL6, ACTG2, ACYP2, ADCY2, ADRA1B, AFMID, AGX            T2, AKR1C1, AKR1C3, AKR1C4, ALDH4A1, ALDH9A1, ALDOA, ALDOC, AMD1, AM            PD2, AOC3, APLP1, ARNT2, ARRB1, B3GNT2, B4GALT1, B4GALT5, BCL2L1, BE            T1, BIRC5, C1QC, CACNG1, CCL21, CCL27, CCL28, CCNA1, CCNH, CCR7, CD19            , CD44, CD55, CD8B, CDC25B, CDK4, CDKN2D, CFTR, CHAT, CHPF, CHUK, CKS1            B, CLCA4, CLDN22, CLTA, COL4A2, CSF2RB, CTLA4, CTPS, CXCL1, CXCR3, DA            D1, DAG1, DHDDS, DHRS4L2, DOCK1, DUSP9, EGFR, EP300, EPB41L1, EPB41L            2, EPHA1, EPHA5, EPHB2, ETNK2, FASN, FGF8, FUT8, GAL3ST1, GALK2, GALN            T12, GCNT2, GFPT2, GLYCTK, GMPR, GNRH1, GP1BB, GRIN2C, GRLF1, GUCY2C            , GUK1, HA01, HCCS, HLA-            C, HPRT1, HSD17B1, HSD17B2, HSD3B7, IDH3A, IGF1, IL12A, IL13RA2, IL1            7A, IL21R, IL7R, IL8RA, IMPA2, IMPDH2, INHBA, INMT, INPP4A, INPP5A, I            NPP5B, IRS2, ITGA11, ITGB2, KIR2DS5, KLRC3, LIPG, LRAT, LRP6, MAML2,            MARS, MCCC1, MCM6, MFNG, MGAM, MMP7, MPST, MYH6, MYL5, NADK, NAE1, NCS            TN, NEUROG3, NFAT5, NME2, NMNAT3, NRG4, NSD1, NTF4, OGDHL, OR10S1, OR            11H4, OR14I1, OR1L3, OR1L4, OR1L8, OR1S2, OR2H1, OR2S2, OR4A15, OR4A            5, OR4D5, OR4D6, OR4E2, OR4K13, OR4K14, OR4M1, OR4X2, OR51G1, OR51M1            , OR52H1, OR56B4, OR5L2, OR6A2, OR6C6, OR6C75, OR7A5, OR9G1, OR9Q1, O         </p>

<p>Negative_15885</p>	<p>AK3, C2, CAT, CSR, DB1, DDO, GNE, HK2, ILK, INS, ITR, LPO, MVR, PML, PPK, ACACB, ACAD9, ACO2, ACP5, ACPP, ACSL3, ACSS1, ADCY8, AKR1B10, AKR1C1, ALDH1A2, ALDH3A1, ALDH3B2, ALG2, ALPL, AMD1, AMY2A, APAF1, ARNTL, A TP12A, ATP2A2, ATP5E, B3GALT2, B3GAT2, B3GNT4, B3GNT5, BCAT1, BCAT2, BDNF, BET1, BLVRA, BLVRB, BST1, C3AR1, CACNA1B, CACNG8, CALML3, CAM KK2, CAPN2, CASP7, CAV3, CCL26, CCL7, CD40, CD59, CDC25B, CDH3, CDH4, CDKN2B, CDKN2D, CES1, CES7, CHAT, CHPT1, CHRM3, CKMT2, CLDN16, CLDN6, CLOCK, CNTNAP2, COL11A1, COL1A2, COL2A1, COMT, COX10, CREB3L3, CRL F2, CTNNA1, CTNNA2, CTPS2, CUL1, CXCL10, CYCS, CYP21A2, CYP2A13, DAA M1, DGKZ, DLAT, DPYD, DRD5, DUSP16, ECSIT, EDNRA, EFNA3, EFNB3, ENO3, ENPP2, ENPP7, EPB41L3, EPHA2, EPHA3, EPHA7, EPHX2, ETNK2, FABP4, FAD D, FGD1, FGF11, FGF19, FGF7, FGFR3, FOSL1, FSHR, GAD1, GAL3ST1, GALK2, GALT, GARS, GCH1, GCLM, GJD2, GLUD1, GLYCTK, GOT1, GRB2, GSTA4, GSTM 4, GUCY2C, HHEX, HLA- DMA, HTR2C, IFNA7, IFNG, IFNGR1, IFNW1, IGF1, IGSF5, IL10RB, IL1RAP, IL21R, IL8RB, IPMK, IRS1, ITGA5, ITGAL, ITGAV, JAK3, KLRD1, LIPA, MAD CAM1, MAP2K4, MAPT, MDM2, MGAT3, MGST2, MMP9, MRAS, MYLK, NCAM1, NCF1, NCOR2, NKX6- 1, NME4, NOS3, NUMB, OLAH, OPLAH, OR10G4, OR10G7, OR10Z1, OR13C4, OR1 RJA, AR1FC, CBL, CBLB, CBLN, CCR4, CCR9, CCR2, CCR9, CD3E, HK2, IL17, ITRAP1, N3, MA2, ME1, MOS, NF1, PRL, RPE, AASDH, ABI2, ABLIM2, ACSL1, ACSS2, ACTA2, ADC Y5, ADCY7, ADIPOQ, ADRBK2, AFMID, ALDH3A1, ALDH3B2, ALPP, ARPC3, ASA H1, ATP6V1F, B3GNT5, BCL2L1, BDKRB1, CACNA1S, CACNG4, CAMK2B, CAMK2 D, CASP10, CASP3, CBLC, CCKBR, CCR1, CCR2, CCR9, CD79B, CDC6, CDKN1B, CDKN1C, CHPT1, CLDN7, COL4A1, COL5A2, COMP, CREB3, CREBBP, CYP11B1, CYP2A13, CYP2J2, DDX52, DFFA, DTX4, DVL1, DVL2, EFNA4, EFNB1, EFNB2, ELK1, ENTPD3, EPHA5, EPHA6, EPHA8, EPHB3, ESAM, EXTL3, F11R, FABP4, F ASLG, FBP2, FLT1, FTH1, FZD3, GALNT3, GALNT6, GALNT8, GALNTL2, GANAB, GAPDH, GAS1, GCNT1, GDF7, GGT7, GLYCTK, GOT2, GPD1, GPT2, GRB2, GRPR, GSTP1, GUCA1C, GUCY1A2, H6PD, HAGH, HBEGF, HIBADH, HLA- C, HMBS, HNF4G, HSPA2, HYAL2, IARS, IFNA14, IFNA6, IFT57, IL20, IL9R, IRAK3, ITGAM, ITGB5, ITPA, KIR2DS4, KNG1, LAMB2, LEFTY1, LFNG, LGMN, LRRC4C, MADCAM1, MAGI1, MAOA, MAP3K7, MAP4K1, MDH2, MDM4, MOV10L1, M TMR2, MYH3, MYH7B, MYLK2, NAGA, NCOA4, NEFM, NEU1, NFAT5, NOD1, NOX3, NR1D1, NRXN1, NRXN2, NT5C, NT5C1B, NTF4, OGDHL, OR10A6, OR10H5, OR10 Q1, OR10S1, OR10X1, OR11G2, OR13A1, OR13D1, OR14I1, OR1A2, OR1F1, OR 1G1, OR1L8, OR2A42, OR2C3, OR2G6, OR2H1, OR2L13, OR2T1, OR2T10, OR2T 4, OR4A5, OR4A15, OR4A6, OR4A5, OR4A9, OR4A9, OR50E9, OR50E9, OR50E9, OR50E9</p>
<p>Negative_15886</p>	<p>AK3, C2, CAT, CSR, DB1, DDO, GNE, HK2, ILK, INS, ITR, LPO, MVR, PML, PPK, ACACB, ACAD9, ACO2, ACP5, ACPP, ACSL3, ACSS1, ADCY8, AKR1B10, AKR1C1, ALDH1A2, ALDH3A1, ALDH3B2, ALG2, ALPL, AMD1, AMY2A, APAF1, ARNTL, A TP12A, ATP2A2, ATP5E, B3GALT2, B3GAT2, B3GNT4, B3GNT5, BCAT1, BCAT2, BDNF, BET1, BLVRA, BLVRB, BST1, C3AR1, CACNA1B, CACNG8, CALML3, CAM KK2, CAPN2, CASP7, CAV3, CCL26, CCL7, CD40, CD59, CDC25B, CDH3, CDH4, CDKN2B, CDKN2D, CES1, CES7, CHAT, CHPT1, CHRM3, CKMT2, CLDN16, CLDN6, CLOCK, CNTNAP2, COL11A1, COL1A2, COL2A1, COMT, COX10, CREB3L3, CRL F2, CTNNA1, CTNNA2, CTPS2, CUL1, CXCL10, CYCS, CYP21A2, CYP2A13, DAA M1, DGKZ, DLAT, DPYD, DRD5, DUSP16, ECSIT, EDNRA, EFNA3, EFNB3, ENO3, ENPP2, ENPP7, EPB41L3, EPHA2, EPHA3, EPHA7, EPHX2, ETNK2, FABP4, FAD D, FGD1, FGF11, FGF19, FGF7, FGFR3, FOSL1, FSHR, GAD1, GAL3ST1, GALK2, GALT, GARS, GCH1, GCLM, GJD2, GLUD1, GLYCTK, GOT1, GRB2, GSTA4, GSTM 4, GUCY2C, HHEX, HLA- DMA, HTR2C, IFNA7, IFNG, IFNGR1, IFNW1, IGF1, IGSF5, IL10RB, IL1RAP, IL21R, IL8RB, IPMK, IRS1, ITGA5, ITGAL, ITGAV, JAK3, KLRD1, LIPA, MAD CAM1, MAP2K4, MAPT, MDM2, MGAT3, MGST2, MMP9, MRAS, MYLK, NCAM1, NCF1, NCOR2, NKX6- 1, NME4, NOS3, NUMB, OLAH, OPLAH, OR10G4, OR10G7, OR10Z1, OR13C4, OR1 RJA, AR1FC, CBL, CBLB, CBLN, CCR4, CCR9, CCR2, CCR9, CD3E, HK2, IL17, ITRAP1, N3, MA2, ME1, MOS, NF1, PRL, RPE, AASDH, ABI2, ABLIM2, ACSL1, ACSS2, ACTA2, ADC Y5, ADCY7, ADIPOQ, ADRBK2, AFMID, ALDH3A1, ALDH3B2, ALPP, ARPC3, ASA H1, ATP6V1F, B3GNT5, BCL2L1, BDKRB1, CACNA1S, CACNG4, CAMK2B, CAMK2 D, CASP10, CASP3, CBLC, CCKBR, CCR1, CCR2, CCR9, CD79B, CDC6, CDKN1B, CDKN1C, CHPT1, CLDN7, COL4A1, COL5A2, COMP, CREB3, CREBBP, CYP11B1, CYP2A13, CYP2J2, DDX52, DFFA, DTX4, DVL1, DVL2, EFNA4, EFNB1, EFNB2, ELK1, ENTPD3, EPHA5, EPHA6, EPHA8, EPHB3, ESAM, EXTL3, F11R, FABP4, F ASLG, FBP2, FLT1, FTH1, FZD3, GALNT3, GALNT6, GALNT8, GALNTL2, GANAB, GAPDH, GAS1, GCNT1, GDF7, GGT7, GLYCTK, GOT2, GPD1, GPT2, GRB2, GRPR, GSTP1, GUCA1C, GUCY1A2, H6PD, HAGH, HBEGF, HIBADH, HLA- C, HMBS, HNF4G, HSPA2, HYAL2, IARS, IFNA14, IFNA6, IFT57, IL20, IL9R, IRAK3, ITGAM, ITGB5, ITPA, KIR2DS4, KNG1, LAMB2, LEFTY1, LFNG, LGMN, LRRC4C, MADCAM1, MAGI1, MAOA, MAP3K7, MAP4K1, MDH2, MDM4, MOV10L1, M TMR2, MYH3, MYH7B, MYLK2, NAGA, NCOA4, NEFM, NEU1, NFAT5, NOD1, NOX3, NR1D1, NRXN1, NRXN2, NT5C, NT5C1B, NTF4, OGDHL, OR10A6, OR10H5, OR10 Q1, OR10S1, OR10X1, OR11G2, OR13A1, OR13D1, OR14I1, OR1A2, OR1F1, OR 1G1, OR1L8, OR2A42, OR2C3, OR2G6, OR2H1, OR2L13, OR2T1, OR2T10, OR2T 4, OR4A5, OR4A15, OR4A6, OR4A5, OR4A9, OR4A9, OR50E9, OR50E9, OR50E9, OR50E9</p>

Negative_15887	<p>CZ, CEL, CSK, CTH, GGH, GNS, H11, LEL, LTN, MET, MSN, NGP, SPT, SRC, TAT, TH, TNR, ACADL, ACTA1, ACTG2, ACTN1, ACVR2B, ACVRL1, ADCY10, ADCY3, A DIPOR1, AGPAT6, AKR1C1, ALDH1B1, AMDHD1, ANAPC7, AOC3, APLP1, APOA1 , APOA5, ARHGAP5, ATIC, ATP4A, ATP5J, ATP5J2, ATP5L, B4GALT2, BPGM, B UB1, BUB1B, BUB3, CASP7, CAV3, CCL14, CCL8, CD27, CD55, CD70, CDH4, CD KN1C, CERK, CES1, CHAT, CHRM1, CKMT2, CLDN2, CLOCK, CMBL, CNTF, CNTN1 , COL6A1, CSNK1G2, CTF1, CTLA4, CTTN, CXCL11, CXCL5, CXXC4, CYP19A1, CYP2C9, CYP2F1, CYP3A5, CYSLTR1, DAAM1, DARS, DCTD, DDB2, DDX19A, DD X51, DEGS2, DGKG, DPM2, DRD2, DUSP14, ENO1, ENTPD2, EPHB2, EPHB4, ERB B3, EVI1, F11R, F13B, FASN, FGF12, FGF3, FGF4, FGF8, GALE, GALK2, GALN TL4, GJD2, GLUD2, GNAQ, GPD2, GPT2, GRIN1, GSK3B, GSTA1, GSTM3, GSTZ1 , GUCY2F, HHEX, HIP1, HLA- DOA, HSD17B8, HSP90B1, HSPA2, IAPP, ICAM3, ICOSLG, IFNAR1, IFNB1, IL 10RA, IL12RB2, IL2ORB, IL28RA, INHBA, ITGAX, ITGB5, KLRC1, LAMA4, LI PA, LIPE, LTBP1, LYPLA1, MAFA, MAGI1, MAP2K2, MAP3K6, MAP4K3, MASP1, MCM2, MGAT1, MGAT3, MKNK2, MTHFD1, NCF2, NEFH, NFYC, NLGN3, NODAL, NR 1D1, NRG4, NUMBL, OLAH, OR10A7, OR10V1, OR11H6, OR13A1, OR13C3, OR1C 1, OR2A4, OR2A42, OR2A5, OR2T33, OR2T5, OR4C16, OR4K5, OR4L1, OR52A1</p>
Negative_15888	<p><del>ADD, AUC, ADK, AKT, CD5A, CTRP, CTH, CES, F8, GCR, TPO, EYL, ORG, MLE3, PGD,</del> SRM, XDH, A4GALT, AASS, ABL1, ABL2, ACPT, ACTG2, ADCY10, ADSS, AFMID, AGRP, AKR1A1, ALPPL2, ANAPC10, ASCC3, ASIP, ASPA, ATP2A2, AVPR1A, B3 GALT4, B3GNT4, BCAR1, BDH2, BST1, BTRC, CACNG3, CACNG4, CAMK2A, CAMK 2B, CANT1, CARS, CCKBR, CCL22, CCL23, CCNB3, CCNE1, CD34, CD55, CDC26 , CDH3, CDH4, CHPF, CLDN17, COQ7, CPT1A, CSF2RB, CYFIP1, CYP11B1, CYP 2D6, CYP2F1, CYP3A7, CYP4F3, DHDDS, DKK1, DLAT, DTX2, DUSP16, DUSP7, EFNA5, EHMT1, ENTPD1, EP300, ETS1, FLAD1, FLOT2, FUT4, FZD7, GALNTL1 , GANAB, GDF7, GGT1, GLO1, GNAO1, GNAQ, GNAZ, GPLD1, GRPR, GUCA1A, GUC A1B, HAAO, HADHB, HAGH, HBEGF, HLA- DOA, HNF1A, IDH3A, IFNA7, IFNA8, IGF1R, IL1B, IL28RA, IL6R, IL7R, INP P5B, IRF3, ISYNA1, ITGB4, ITGB7, ITPKA, KIR2DS5, KNG1, L1CAM, LAMB3, LAMC3, LMO7, LTB4R2, MAOB, MAP2K3, MAP2K4, MCM3, MYH8, MYLK2, NAMPT, NAT2, NCF4, NEU4, NEUROD1, NFATC1, NLGN2, NMNAT1, OLR1, OR13C4, OR13 J1, OR1B1, OR1E2, OR1J2, OR1J4, OR2M4, OR3A1, OR4C12, OR4M2, OR51B6, OR52I1, OR5AN1, OR5B3, OR5D13, OR5H6, OR6C2, OR6C3, OR6X1, OR7A17, O R7G2, OSMR, OXSM, P2RX5, P2RX7, PAK6, PAK7, PAX8, PCYT2, PDE4A, PDXP, PFN3, PHKG1, PHKG2, PHPT1, PIAS3, PIGF, PIGK, PIK3C3, PIK3R5, PLA2G1</p>
Negative_15889	<p><del>ADP, AUK, BCR, C3, CD, CPL, CTH, PLBT, DCK, DCP, DUY, EZK, F9, FDR, HD, IR</del> 3, ID1, IL4, KIT, ME1, ME3, MIF, MYC, RB1, SRF, SYK, TAT, AARS, ACAD8, AC MSD, ACSM3, AKR1B10, ALDH9A1, ALG2, ALG8, ALOX12B, ALOX5, AMPD1, ANP EP, AOC3, APAF1, ARAF, ARHGEF6, B4GALT3, B4GALT5, BHMT, BMP8B, BTRC, C5AR1, CACNA1D, CAV3, CCDC6, CCL22, CCNG2, CD226, CD244, CD274, CD47 , CDC25B, CES1, CHPF, CLDN10, CLTA, COL3A1, COQ5, CPT1A, CPT1B, CXCL1 2, CXCL13, CXCL3, CXXC4, CYFIP1, CYP3A5, CYP4A22, DDX41, DEGS2, DHRS 3, DPYD, DTX2, EDN1, EFNB1, EPHB4, ERBB3, ETS1, FABP1, FDFT1, FGF6, FP GT, FRAT1, FSHB, FZD5, FZD8, GAL3ST1, GALK2, GALNT1, GALNT8, GANAB, G ART, GBE1, GCNT1, GLB1, GLUL, GNPAT1, GOSR2, GOT1, GP1BB, GSTO2, GUC Y1A2, GUCY2D, GYS1, GYS2, HA01, HMOX2, HNF4G, HPRT1, HSD17B1, HSD17B 3, HSPB1, HTR2B, IARS, IDH2, IDH3A, IDI1, IFNA8, IFNAR1, IKBKE, IL10, IL20RA, IL21, IL23A, IMPA1, KCNJ11, KIR2DL1, KIR2DL3, KLRD1, LAMA3, LAMB2, LDHC, LEFTY2, LGMN, LIPE, LIPG, MAP2K2, MAP4K3, MAP4K4, MAPK1 4, MCAT, MCCC1, MDH1, MKNK2, MTMR2, MYH2, MYL2, NAT5, NCAM1, NCKAP1, N EFM, NFASC, NFATC4, NFYB, NRP1, NRXN1, NRXN2, OR10G4, OR13C5, OR13H1 , OR1A2, OR1B1, OR1C1, OR1N2, OR1S1, OR2A4, OR2AG2, OR2B2, OR2D2, OR2 G2, OR2T2, OR2Z1, OR4C46, OR4N2, OR4N4, OR51A4, OR51I1, OR52N4, OR52 B1, OR52B, OR6C8, OR6C9, OR6C6, OR6K6, OR6M1, OR6P18, OR6P19, OR6P14, OR6P15, P</p>

Negative_15890	<p>ATF, ASL, BAX, C6, CPD, CPT1, CRB, CSR, DHH, GP9, HGD, HHH, IL6, IL8, LIT, LYN, MAX, MPL, MVD, NF1, NLK, NNT, OAT, AADAT, ABAT, ABLIM1, ACTG2, ACY P2, ADAM10, ADSSL1, AGPAT6, AHCY, AKR1B10, ALCAM, ALDH1A3, ALDH3B1, ALDH3B2, ALDOB, ALOX12, ALPP, ALPPL2, AOX1, APC2, APH1A, ARAF, ARHGE F6, ARPC2, ARRB1, ATP4B, ATP5G2, ATP5J2, ATP5L, ATP6V1H, AVPR1B, BCA T1, CACNA1G, CCNB1, CCND2, CCNE2, CD40, CD58, CD79B, CDC25A, CES1, CF L2, CHIT1, CHST13, CLCA4, CNGA3, CNTFR, COL6A1, CPS1, CREB5, CSAD, CY FIP1, CYP3A4, CYP3A7, CYP8B1, CYSLTR2, DAAM1, DAPK3, DCXR, DDIT3, DD X50, DDX52, DDX54, DFFB, DGAT2, DGUOK, DHCR7, DHDH, DLAT, DLST, DNMT3 A, DOLPP1, DPYS, DUSP5, E2F3, EGFR, ELK1, ELK4, ENPP1, EPHB3, EPHX2, F ARP2, FBXW11, FGF11, FLAD1, FLOT1, FOSL1, FRAP1, FUT1, FZD4, GALM, GA LNT1, GCLC, GCNT3, GDE1, GFPT2, GJA1, GL01, GMPA, GNAL, GNB1, GNG13, GNPAT, GOT1, GP1BB, GRHRP, GRLF1, GSTA3, GSTM4, GYS1, H6PD, HAAO, HLA</p> <p>-</p> <p>C, HLCS, HMOX2, HSD11B1, HSD17B4, HTR2A, HTR5A, HTR6, IAPP, ICOS, IFN AR1, IFNB1, IKBKE, IL10RB, IL1A, IL1RAP, IL28A, IL8RB, IMPA1, INPP4B , INPP5A, IQGAP1, IRAK3, IRS1, ITGA6, ITGAX, ITPKA, JAM3, KIR2DL4, KL RC1, KYNU, LDHD, LGMN, LIFR, LIMK2, LIPA, LIPE, MAP3K8, MAPK14, MDH2, MGST2, MMP14, MYLK, NCK1, NCKAP1L, NEFM, NFATC3, NFKB2, NLGN2, NOTCH</p>
Negative_15891	<p><del>COA, CP1, DBY, DCC, P11, TFA5, YST, hnt, H1, C1N3, ORA, MSN, CR1, R1, OAT</del></p> <p>, OTC, PC, TK2, TKT, AADAC, AARS2, ACP1, ACY3, ADCY8, ADCY9, ADRA1B, AD RB3, AGMAT, AGXT, AKR1C3, ALCAM, ALDH1A3, ALDH2, ALOX15, AMHR2, ANAP C4, ANPEP, APC2, APOA1, ARHGEF2, ARSB, ASPA, ATP5B, ATP5E, ATP6V1D, A VPR1B, AXIN1, B3GAT2, BCAT1, BDH1, BLVRA, C9orf95, CACNA1E, CANT1, C ASP8, CBLB, CBLC, CBR3, CCDC6, CCL8, CCND2, CCR9, CD74, CDS2, CFL1, CH AT, CHRM3, CLDN11, CLDN4, CLDN5, COL6A1, CPS1, CREB3L1, CRLF2, CSNK1 G1, CTBP2, CTLA4, CXCL10, CXCL11, CXCL9, CYP2E1, CYP4A22, DAAM2, DDI T4, DDX19A, DDX47, DDX56, DGKZ, DHCR7, DOLPP1, DRD5, DVL2, DVL3, E2F4 , ECSIT, EIF4E2, ENO1, EPAS1, EPB41, EPHA2, EPHA5, EPHB2, ERBB2, F13A 1, FARS2, FARSA, FCGR2B, FDFT1, FMO5, FUT3, G6PC, G6PD, GABARAP, GALN T5, GFPT1, GGCX, GNA15, GNG12, GNMT, GOT2, GRIA3, GRIN2D, GSTA3, HADH B, HAGHL, HLA-</p> <p>DOA, IFIH1, IFNA10, IFNA7, IFNW1, IL17RB, IL22RA2, IL28B, IL29, IL9R , INADL, INHBE, IRAK1, ISYNA1, ITGA10, ITGA9, ITGB7, KIR2DL3, KIR2DS 4, L1CAM, LAMC1, LCMT1, LEFTY2, LHCGR, LIAS, LYPLA2, MADCAM1, MAN1B1 , MAP3K6, MAPK14, MAT2B, MBL2, MCCC2, MCM5, MMP9, MPDZ, MTAP, MTMR2, M YL5, MYL9, NCAM1, NEFM, NFAT5, NFE2L2, NKD2, NKX3-1, NKX6-</p> <p>1, NRG1, NT5C1B, OCRL, ONECUT1, OR10A4, OR10J3, OR10K2, OR11G2, OR11 H1, OR1B1, OR9A5, OR9E8, OR9G8, OR9M7, OR9T18, OR9T24, OR4B1, OR4K5-</p>

<p>Negative_15892</p>	<p>BCR, C2, C8B, CGN, CSK, DAO, GR2, GFC, H11, LPL, SFN, SRC, TK1, VTN, ACADSB, ACAT1, ACOT11, ACOX3, ACSL6, ACSM3, ACY1, ACYP2, ADCY10, ADCY8, ADH1B, AGPAT1, AKR1A1, ALDH3A2, ALDH3B2, ARAF, ARPC5L, ATIC, ATP2A1, ATP4B, ATP6VOB, B3GAT3, B4GALT2, BACE1, BLNK, BMP4, CACNA1S, CACNG4, CAMK2B, CAMK2G, CAMKK1, CCKAR, CCL4, CCL5, CCNB1, CD14, CD247, CD44, CD70, CDC14B, CDC25A, CDC25C, CDC26, CDH1, CDK5, CDKN2D, CEBPA, CHAT, CHRM2, CHSY1, CNTF, COL2A1, COQ3, COQ5, COQ7, COX10, CRKL, CRY1, CSH1, CTBP1, CTNND1, CTSG, CUL1, CXCL6, CXCR5, CYFIP1, CYP26B1, CYP2E1, CYP2F1, CYP4F3, DAD1, DCTD, DDX23, DEGS2, DERL1, DHODH, DIAPH2, DTX3L, EDA2R, EDN1, EGLN3, ENTPD2, ENTPD8, EXT2, FABP4, FGF19, FGF21, FGF8, FLAD1, FLOT2, FOXA3, FZD10, FZR1, GALNT13, GAMT, GCH1, GDF5, GDF7, GLUD1, GNAL, GNPAT, GNRH1, GSTO1, GSTT1, GSTZ1, GUSB, HAAO, HHIP, HIF1A, HPRT1, HPSE2, HSD3B2, HTR2A, HTR6, HTRA2, ICAM3, IFNAR2, IFNG, IL10, IL1R1, IL8RB, INMT, IRF7, ITGA2, LCMT2, LDHA, LFNG, LILRB3, LIMK1, LIMK2, LMO7, MAP2K3, MAP2K5, MAP3K8, MAPK3, MAPK8, MAT1A, MEF2C, MGAT2, MITF, MKNK1, MMP1, MRAS, MYL5, MYL7, NCF1, NFE2L2, NFKB2, NKX2-2, NR4A1, NTF3, NUDT5, OR10H1, OR10H4, OR13C8, OR13D1, OR1E2, OR2AG2, OR2AT4, OR2G6, OR4C12, OR4S1, OR51M1, OR52A1, OR52E2, OR56A1, OR5A</p>
<p>Negative_15893</p>	<p>B1C, C4B, C6G, CKA1, DBT, ELZ, FFA3, GRK7, GTP, GSA, TP8, VEG, RDA, RPB, S1N, SYK, TPO, TXK, A4GALT, ABLIM1, ACAT2, ACHE, ACOT12, ACOX3, ACSL1, ACSS3, ACTB, ADCY6, ADORA2B, AGRN, AHCY, ALDH1A3, ALDOC, ALOX12, ALPP, AMPD3, ARG2, ARNT2, ARPC1B, ARSE, ASPA, ATG3, ATP5B, ATP5D, ATP5G3, AVPR1A, B3GALT4, B3GALT5, B3GAT1, B4GALT6, BDH2, BDKRB1, BMP4, C3AR1, C4BPB, CACNA1F, CACNG8, CCNA2, CD247, CD86, CD8A, CDH2, CD01, CHAT, CHDH, CHST11, CLDN16, CNTF, COL1A1, CPT1A, CPT2, CTPS, CYP2C19, CYP2D6, CYP3A7, CYSLTR2, DAD1, DAPK1, DDOST, DDX41, DGAT1, DGKB, DHODH, DUSP10, DVL3, EPHB4, F13A1, FABP3, FADD, FARSA, FASLG, FBP1, FCGR3B, F</p>
<p>Negative_15894</p>	<p>AR2, PRK3, ACP, ADA, C2, CGA, PDCD3, E2K, P10, PTT1, TGA, KRK, MMR, NPI, ZYX, AACs, ACADM, ACLA, ACP2, ACP6, ACSL5, ACSL6, ACYP1, ADCY10, ADH1A, ADIPOR2, AGPAT3, AKT1, ALCAM, ALDH3B2, ALG10, AOC3, APAF1, ARHGEF6, ARPC1A, ASS1, ATIC, ATP5D, ATP6VOB, ATP6V1A, B3GALT1, B3GAT2, B4GALT1, B4GALT6, BBOX1, BCKDHB, BDH2, BMP8B, BMPR2, BTRC, C4BPB, C7orf16, CACNA1F, CACNB3, CACNG2, CACNG6, CAMK2A, CAMKK2, CBR3, CCL15, CCL16, CCL17, CCNB1, CCR4, CD40LG, CD82, CDC14A, CDC45L, CDK5, CDKN2C, CHAT, CLDN20, CLDN7, CLTA, CMPK1, CNTFR, COL6A2, CREB3, CREB3L1, CRLS1, CTBP2, CTLA4, CTNNA1, CX3CR1, CXCL9, CYP26B1, CYP2C19, CYP2J2, CYP3A4, DDX19A, DDX23, DHDH, DHRS3, DLAT, DLST, DNMT1, EFNA3, EFNB1, EHMT1, ENPP6, ENTPD7, EPHB1, EXTL1, F11R, F13A1, FASLG, FBXW11, FGD3, FGF2, FGF20, FGF21, FGF8, FLT4, FRAT2, GALNT12, GALNT13, GALNT2, GAPDH, GFPT2, GGPS1, GJA1, GLB1, GLDC, GLUD1, GMPR2, GOSR2, GPLD1, GRIN2A, GUCA1A, GUCA1C, GZMA, GZMB, H6PD, HAAO, HARS, HCCS, HEXA, HGSNAT, HLA-DOA, HSPA8, HTR2C, HYAL2, IARS, IDI2, IFNA2, IFNA4, IL18R1, IL3RA,INHBA, ITGA1, ITGA7, ITGB5, ITPK1, JAM3, KRAS, LAMC1, LAMC3, LIPE, LIPF, MAPK8, MAPK9, MBL2, MCM2, MGAT5, MGAT5B, MGLL, MTHFD1, MTHFD2, NAGS, NCK1, NCKAP1, NCR1, NEU3, NEUROD1, NME4, NR4A1, NT5M, OR10AG1, OR10</p>

Negative_15895	<p>ADR, AK2, BCR, CSB, CEL, CGA, DB1, DHH, DLD, F2, FNT1, GSS, HAL, ITR, MAX, NNT, PGP, PTS, SDS, TPO, ACP5, ACSM3, ACVR1C, ADCY9, ADH5, ADRA1B, ADSL1, AGMAT, AHCYL2, ALG5, ALOX5, AMD1, AMY2B, ANGPTL4, APOE, ARAF, ARG2, ARHGAP5, ARHGEF1, ASCC3, ATP2A2, ATP5J2, AVPR1B, B4GALT2, BDNF, BMP8A, BMPR1A, C4BPB, C7orf16, CADM3, CASP10, CAV3, CCL1, CCNA2, CCNB1, CCR4, CDH4, CER1, CES7, CHD8, CHPT1, CHST13, CKS1B, CLDN22, COL4A2, CSNK1A1, CSNK1G2, CXCL12, CXCL9, CYP19A1, CYP27A1, CYP2D6, DAPK1, DDX41, DDX47, DGKI, DPM3, DRD5, DTX4, DUSP2, EHMT2, ENO1, EP300, EVI1, EXOC7, EXTL2, F2RL2, FABP3, FADD, FARP2, FGF1, FGF19, FGF9, FTH1, FTM, FUT2, G6PC2, GAL3ST1, GALK1, GALNT11, GALNT12, GALNT2, GALNT5, GMPPA, GMPR2, GMPS, GNA13, GNB1, GOT1, GRIN1, GRIN2A, GRIN2B, GRPR, GSK3B, GSTA4, GSTT1, GUCY1A2, GZMA, H6PD, HAGH, HCCS, HCST, HLA-DMA, HLA-DOB, HMGCS2, HNF1B, HPRT1, HSD3B2, HSD3B7, IARS2, ICOSLG, IDH2, IDH3G, IFNA17, IFNB1, IGSF5, IKBKB, IL20, IL6ST, INADL, INHBB, IPPK, ITGA7, ITGAL, JAK3, KLKB1, KLRC1, KLRD1, LCMT1, LCMT2, LDHB, LPAR1, MALT1, MAPK3, MCAT, METTL6, MGST3, MTHFD2, MTMR6, MYH13, MYH9, MYL7, NCAM1, NCF1, NCK1, NCR3, NEUROD1, NEUROG3, NFASC, NFKB1, NFYC, NOX3, NPR2, NR1D1, NR1H3, NTNG1, NUDT12, OR10AG1, OR10G4, OR13C4, OR1L6, OR1Q1, AMP, BAD, CS, CSB, CUL2, CRT1, DAD, DDC, PGG, FST, UH1, G5A, HKT, IL17, ITR,</p>
Negative_15896	<p>LIF, NOG, TEC, WAS, AADAT, ABAT, ABLIM1, ACAD8, ACADS, ACTG1, ACY3, AH CY, AKR1C1, ALDH1A2, ALG11, ALG2, ALS2, AMY2A, APLP1, APRT, ARPC4, ARRB2, ASPA, ATP6V1D, BAI1, BCKDHB, BCL2, BMP7, BPNT1, BUB3, C1QA, C3AR1, CAMKK1, CASK, CCL16, CCNG2, CD36, CHDH, CHST12, CLDN14, CLDN3, CLTCL1, COL5A1, COL5A3, CREB3L2, CSNK2B, CTNNA1, CTSS, CYBB, CYP1A1, CYP2C18, DDX19A, DOT1L, DRD2, DTX3L, DUSP2, DUSP9, EDAR, EI24, EPHB6, FCGR2B, FGF1, FGF18, FGF5, FGF6, FGF9, FM03, FPGT, FTH1, FZD10, FZD7, FZR1, GALNT1, GALNT6, GBE1, GCNT4, GDE1, GNA14, GNAS, GNAZ, GOSR2, GPD1, GRAP2, GSTM1, GSTP1, GUCA1B, HMGCS1, HMOX2, HNF4A, HRH1, HSD17B4, HSD17B8, HSP90B1, HTR2C, IFNAR1, IL11, IL15RA, IL2RA, IL2RB, IL6ST, IL8RA, INHBE, IRAK1, IRS4, ITGA10, ITGA2B, ITGAD, ITGAV, ITGB6, KCNB1, KLRK1, LDHD, LEPR, MAD2L1, MAN1A1, MAP3K1, MAP4K4, MAPK9, MARS, MARS2, MGAM, MTFMT, MYD88, MYH13, NAT1, NCF4, NCR3, NCSTN, NFAT5, NFKB2, NME7, NOTCH1, NRG4, OR10A2, OR10G7, OR10H1, OR10J5, OR10V1, OR13F1, OR1E1, OR2A25, OR2AG2, OR2F1, OR2L8, OR4F15, OR4F5, OR4K1, OR4K14, OR4M1, OR4P4, OR51G1, OR51V1, OR5AP2, OR5B21, OR5D16, OR6B3, OR6C75, OR8B8, ORC4L, P2RX3, P2RX4, PAK1, PAK7, PARD6B, PAX8, PCK2, PDE4A, PDI1, PDI4, PEK1, PCAD1, PIAS1, PIAS4, PI3K, PI3L, PKM1, PIAS3, PIAS4,</p>

Negative_15897	<p>           BTK, CDA, CKH, DB1, DLD, GP9, GP1, HGD, HGF, IDS, IHH, IL4, NNT, OAT, PDC            , PXN, RB1, RDX, SDS, AACs, AADAC, AASDH, AASS, ABI2, ACAA1, ACAD8, ACP            6, ACVR2A, ACY1, ADCY1, ADCY9, ADH1B, ADIPOR1, AGMAT, AKR1A1, ALDH2,            ALPI, AOC3, APH1A, APLP1, ARD1A, ARHGEF1, ARHGEF6, ATP2A3, ATP5J, AT            P6V1F, B3GALT6, BIRC2, BIRC5, BLVRA, BUB1B, CACNA1D, CACNB1, CACNG7            , CASP10, CASP6, CCDC6, CCL3, CCL7, CCNA1, CD247, CD82, CDC25A, CDC45            L, CDK4, CDK7, CFLAR, CLDN7, CLTCL1, CMBL, CMPK1, CNTN2, COL4A2, COQ6            , CSF1, CSF2RA, CSNK1A1, CSNK2B, CTNNA2, CTNNA3, CTSS, CX3CR1, CXCL1            0, CXXC4, CYP11B2, CYP17A1, CYP4A11, CYP4A22, CYP4F2, CYSLTR2, DARS            , DBF4, DCXR, DGAT2, DHDH, DPM2, DUSP1, DUSP2, DUSP6, EARS2, ENO1, EPH            A2, EPRS, ERBB3, FABP4, FDFT1, FUT2, FZD4, GALNT6, GGT5, GLUL, GSTM5,            GSTT1, HAGH, HNF1A, HPRT1, HYAL1, HYAL2, ICAM1, IDI1, IFNB1, IFNGR2,            IFNW1, IGSF5, IL13, IL20RA, IL28RA, IMPA2, INPP5E, ITGA3, ITGAM, JAG            1, KIR2DS5, KIR3DL3, KLKB1, KYNU, LEFTY1, MAD2L2, MAPK12, MAPK9, MAR            S2, MBL2, MGAT5, MS4A2, MTFMT, MTHFD1, MYH10, MYH3, NFASC, NFATC1, NF            KBIA, NFYC, NKX2-            2, NME6, NOD1, NRXN1, NTF4, OLAH, OR11H4, OR11L1, OR13C5, OR13H1, OR1            3J1, OR14I1, OR14J1, OR1B1, OR1F1, OR1K1, OR2A4, OR2A42, OR2B2, OR2M            2, OR2T3, OR2W1, OR2Y1, OR3A3, OR4A15, OR4D9, OR4E2, OR51V1, OR52E2,  <del>ARH1, B1, C5, F2, P35, GR, G5, G, P, G2, CCK, EC1, EPL, MPT, NG1, OR1, NO</del> </p>
Negative_15898	<p> <del>ARH1, B1, C5, F2, P35, GR, G5, G, P, G2, CCK, EC1, EPL, MPT, NG1, OR1, NO</del>            G, NPL, OSM, PC, SHH, TFG, ACADL, ACTG1, ACVR2A, ADCY10, ADCY3, ADCY5,            ADSL, ALAS2, ALDH1B1, ALDH3B1, ALDH9A1, ANAPC1, APOC3, AQP7, ARG2, A            RPC1A, ATG12, ATP4B, ATP5F1, B3GALT1, B3GAT1, BACE1, BIRC3, BIRC5, B            NIP1, BUB1, CACNA1F, CACNA1H, CALML3, CALML6, CARS, CCKAR, CCNA1, CD            247, CD28, CD40LG, CDC42, CDKN2C, CD01, CDS2, CEBPA, CER1, CHEK2, CHP            F, CHUK, CLDN11, CLDN19, CLDN20, CLDN8, CMPK1, CNTN2, CPT1A, CREB1, C            RLS1, CSNK1E, CSNK1G1, CTPS2, CTSS, CXCL3, CXCR6, CYFIP2, CYP11B2, C            YP17A1, CYP2E1, CYP3A7, DARS, DGKE, DMGDH, DTYMK, E2F4, EFNB1, ELK1,            ENAH, ENPP3, EPHX1, EPHX2, EXT2, EXTL1, F2RL3, FECH, FGF12, FGFR2, FL            AD1, FMO4, FZD4, GALC, GALNS, GALNT1, GALNT6, GBE1, GCH1, GFPT2, GLB1            , GLI2, GLUD1, GPD1L, GRIN2A, GRIN2C, GRPR, GSTT1, GSTZ1, GUCY1A3, GU            CY2D, GUSB, HEXA, HNF1B, HSD3B7, IDH1, IDH2, IFNA14, IL10RA, IL1R1, I            L28RA, IL29, IL7R, INPP5A, IPMK, ITGAD, ITGAX, JAM3, KLK3, LIMK1, LIP            G, LTBP1, LTC4S, MAFA, MAP2K4, MAP4K2, MAT1A, MBL2, MDH1, MGAT3, MGST            1, MYH8, NANP, NEU1, NKD1, NOD1, NPAS2, NPR2, NR1H3, NR5A2, NT5C1B, NT            5C3, NTF4, NTN1, OCLN, OR10H2, OR10H4, OR10V1, OR14I1, OR1E1, OR1K1,            OR1N1, OR2A14, OR2L3, OR2M7, OR2V2, OR4C11, OR51F2, OR52E8, OR56A3,  <del>OR5E8, OR6C6, OR6C74, OR7D8, OR8C1, PABPC6, PABVA, PEN1, PCAD1, PCY1</del> </p>



<p>Negative_15899</p>	<p>AK3, ASL, CO, CPH, DC1, FAH, PES, GNS, HGD, ID2, IHH, K11, LCT, PAN, S1, SRC, XDH, AASDH, ABLIM1, ACACB, ACAD8, ACSL6, ACTA1, ACTC1, ACTG2, ACVR2A, ADH7, ADORA2A, AGPAT2, AGRN, ALDH1L1, ALDH5A1, ALDH7A1, ALDH9A1, ALG3, ALG5, ALPP, APOA5, AQP7, ARD1A, ARG2, ARNT2, ATF2, ATP2A1, ATP2A3, ATP5B, ATP5C1, ATP5I, B3GAT3, BBOX1, BDNF, BET1, BMP8B, BUB1, C1QB, CADM1, CAMKK1, CAMKK2, CASP6, CBLB, CCL13, CCL27, CCL28, CD40LG, CDC16, CDC25B, CDH5, CHEK2, CHRM5, CHSY1, CHSY3, CLDN19, CLOCK, CMA5, CNDP1, CNTNAP2, COL11A1, COL2A1, COL3A1, COQ5, CSNK1A1, CSNK1D, CSNK1E, CYFIP2, CYP11A1, CYP26A1, CYP4A22, CYP4F2, CYP4F3, DARS2, DDOST, DDX51, DDX54, DDX55, DFFA, DIAPH1, EARS2, EFNA4, ENPP2, EPHB1, EREG, EXOC7, F13A1, F13B, FBP1, FBXW11, FCGR3A, FRAP1, FUT6, FZD3, FZD6, GAD2, GALM, GDF6, GLG1, GLI1, GLI3, GNA15, GRIN2C, GRM5, GSTA1, GSTM5, GUCA1A, HADH, HARS, HCLS1, HLA-F, HMGCS1, HPRT1, HSD17B8, IFNA2, IL18, IL25, IL2RA, IL2RB, IL5RA, INPP5B, IRF9, ITGA7, ITGAL, ITGB4, ITGB8, JAK1, KIR2DS4, KLKB1, KLRD1, KLRK1, LAMC1, LEF1, LLGL1, LRP5, LTA4H, MAML3, MAN1A2, MAN1B1, MAOA, MAP3K12, MAP4K2, MAPK9, MCEE, MCM6, MGST2, MTAP, NCF4, NCK1, NCOA4, NFASC, NFKB2, NLGN3, NOS1, NOS3, OGDH, OR10G4, OR10G9, OR10H4, OR11A1</p>
<p>Negative_15900</p>	<p>ADR1, CD4, CPD, CUB, CDAY, CR2, DBR, DPT, F3, GDS, G, O, PK2, RT1, LPO, TFC, VCL, AASS, ABL2, ACLY, ACSS1, ACVR2A, ADCY5, ADRB1, AGPAT1, AHCYL1, AK3L1, AKR1B1, ALAS1, ALDH4A1, ALG2, AMDHD1, AMHR2, ANGPTL4, APOA1, APOA5, ARG1, ARNTL, ARSA, ARSD, ATP2A1, ATP6AP1, AVPR1A, B3GALT6, BCAT1, BET1, BMP7, BMPR1B, BMPR2, BPNT1, C9orf95, CACNG5, CANT1, CBLB, CBR3, CCL4, CCL7, CD274, CD99, CDH5, CDK2, CDK4, CHDH, CLCA2, CLDN16, CNDP1, COASY, COL1A2, COQ5, COX10, CRY1, CSF2RB, CSNK1E, CTBS, CTSS, CXCR5, CXCR6, CYP2S1, DAAM2, DARS2, DDX23, DEGS1, DERA, DNMT3B, DOT1L, DPAGT1, DTX1, DTX3, ECSIT, EHHADH, EIF4E2, ENTPD7, EPB41L2, EPHA3, EPHA6, EPHX1, FARS2, FCGR3A, FGF23, FM02, FOXA2, FPGS, FTCD, GALNT1, GALNT3, GALNT9, GALNTL5, GANAB, GGT6, GNAT3, GNPDA2, GNRH1, GNRH2, GOT2, GPD1, GPLD1, GRAP2, GSTZ1, HDAC1, HES1, HIP1, HNF1A, HNF1B, HNMT, HSD17B2, HTR2B, IFNA16, IGF1R, IL22RA1, IL29, IL8RA, INPP1, IRS2, ISYNA1, ITGA1, ITGAE, JAG2, JAM3, LDHC, LEFTY1, LIFR, LILRB3, LRP6, LTC4S, LYPLA2, MAN1A2, MAP2K2, MCM3, METTL2B, MMP14, MTHFR, MYH10, NCR1, NEFH, NEU1, NFKBIE, NKX2-2, NME7, NOD1, NODAL, NPR1, NRXN2, OGDH, OR10A7, OR10G9, OR10J1, OR10Q1, OR11H1, OR13C8, OR1N1, OR2A2, OR4A15, OR4C12, OR4K14, OR51B2, OR51B4, OR5AK9, OR5E19, OR5E1L, OR7C9, OR9C1, OR9C1L, OR9C4, OR9K5, OR9C1, OVCF</p>

Negative_15901	<p>BTD, C3, CRT1, DDC, GAA, HKS, ID2, KHK, LPO, MET, NFL, PGT, PVK, A4GAL1, AADAC, AARS, ACAT1, ACOX2, ADCY7, ADCY8, AGPAT4, AGXT, AHCYL2, AK3L1, ALCAM, ALDH4A1, ALDH9A1, ALOX12, ALPI, AMPD3, ANAPC11, ANAPC2, ARHG EF1, ARNT2, ASCC3, ATG7, ATP2A3, ATP5E, ATP5I, ATP6V1D, BDKRB2, C5AR 1, CACNA1C, CACNA1I, CACNB3, CAMK2B, CAPN2, CBLC, CBR3, CCL19, CD226 , CD36, CD82, CD8A, CER1, CHDH, CLCA2, CLCF1, CLDN16, CLDN8, CLDN9, CO Q6, COX10, CPT1A, CRKL, CTPS2, CXCR6, CXXC4, CYP1B1, CYP3A4, CYP7A1, DFFA, DGKB, DHDDS, DLST, DMGDH, DNMT3A, DRD1, DRD2, DTX1, DTX4, DVL2, E2F1, E2F3, EARS2, EDAR, EIF4E, ENTPD6, F2RL1, FARSa, FBP1, FGF3, FGF R1, FLT1, FMO2, FOXO1, FPGT, FZD2, FZD9, GCLM, GNRH1, GP1BB, GRM5, GST A5, GSTM2, GSTO1, GSTP1, GSTT1, GTSE1, GUCA1B, GUK1, HADH, HCST, HEXB , HLA-F, HLA-G, HSPSE2, HSP90B1, HSPB1, HTR2C, IBSF, ICAM2, IFNA13, IFNA14, IFNA21 , IFNGR2, IL17B, IL17RA, IL20, IL2RG, IL6R, IL9R, IMPA1, INPP4A, INPP 4B, INPP5E, ITGA9, ITGAD, ITPA, JAG2, KIR2DS5, KLRC2, KLRC4, L1CAM, L ALBA, LAMA4, LAMB4, LDHD, LGMN, MAFA, MAGI3, MAP3K14, MAP4K1, MASP1, MBL2, MCM3, MDH1, MDM2, MEF2C, MGST3, MLLT4, MTMR6, NADK, NAT2, NFE2L 2, NFKB1, NFYC, NRXN2, NT5C1A, NT5M, OCRL, OGDHL, OR10A3, OR10AG1, OR 10H2, OR10K2, OR13A1, OR13F1, OR13G1, OR13J1, OR14C36, OR1J4, OR1S1</p>
Negative_15902	<p>ABO, ADC, APM, CRM, CSF1B1, PLAS, GDR, GGN, GNS, IL9, GPPT4, GPT, HGL, PFS, IL3, IL8, ITK, JUN, LAT, LSS, ME2, MSN, RDX, SCD, TAT, TEC, TFG, TYR, AAD AT, ACACB, ACLY, ACOX2, ACTA2, ACTN4, ACVR1, ADAM10, ADCY1, ADIPOR1, AGTR1, ALAD, AMHR2, AMPD2, ANAPC1, ANAPC10, ANAPC2, ANGPTL4, APOC3, APRT, ARPC3, ARPC4, ATG12, ATP6V1D, AVPR1B, B3GALT4, BCAT2, BLVRA, B MP4, BUB1, CACNA1A, CACNA1E, CACNA1G, CACNB1, CACNG5, CALML3, CASK, CCKBR, CCNE1, CCR3, CCR8, CD244, CD58, CDC14B, CDC16, CDC25C, CDK2, C DS2, CES7, CFL2, CHKB, CHPF, CHRM5, CHUK, CKS1B, CLDN10, COL2A1, COL4 A2, CPOX, CREB3L1, CREB5, CSNK1E, CTLA4, CX3CL1, CXCL3, CYP11B2, CYP 17A1, CYP26C1, CYP2A7, CYP2C18, CYP8B1, CYSLTR2, DARS, DEGS1, DERL1 , DGKI, DHRS4, DHX58, DKK2, DLL1, DPAGT1, DTX2, DUSP1, ELK1, ELK4, EPH A5, EPHB1, FARP2, FGF12, FGFR4, FLT3LG, FRAP1, FZD1, G6PC, GAL3ST1, G ALNS, GALNT2, GALNT3, GANAB, GCNT1, GFPT1, GJD2, GLUD1, GMPPA, GNA15 , GNAI3, GNB3, GNPAT, GOSR2, GRIA3, GSTA3, HARS2, HIP1, HSD17B2, HSD3 B7, HTR6, HTR7, ICAM2, IFNK, IL12A, IL13RA1, IL1A, IL28B, IL2RA, IL7R , INHBB, INHBC, INPPL1, IRF5, ITGA10, ITGB2, ITGB3, ITPK1, KCNB1, KIR 2DL3, LDHA, LEF1, LIPA, LTC4S, MAML3, MAN1A2, MAP2K2, MAP3K5, MAP4K3 , MAPK3, MAPK9, MASP1, MGLL, MTMR1, MYD88, MYH2, MYH3, NEU1, NFASC, NF</p>

Negative_15903	<p>AGK, AGL, DDC, EBF, FER, FOS, FST1, GBA, GHR, GLA, GPI, ILO, JUP, LPL, MTC, SCD, SHH, ACADVL, ACSS2, ACTN1, ADCY2, ADCY7, ADRA1B, ADRBK2, AGRP, AKR1C4, AKT3, ALDH2, ALDH3B1, ALDH7A1, ANAPC2, APOC3, ASIP, ATP6V1F, BCAT2, BET1L, BMP2, BMP6, C1QA, C4BPB, CACNB1, CALML3, CAV2, CCR9, CD27, CD48, CDH2, CDH5, CES2, CFLAR, CFTR, CHDH, CHRM5, CHST11, CHST12, CHUK, CKMT2, CLDN16, CLDN6, CMBL, CNTNAP1, COL5A2, COMP, CRB3, CRLF2, CTPS2, CXCR4, CYP17A1, CYP1A1, CYP4F2, CYP7A1, DBF4, DDX47, DEGS1, DFFB, DGKG, DGKH, DLST, DPM1, DTX3, DUSP6, E2F1, EARS2, EFNB2, ENO1, ENPP3, FABP3, FDFT1, FLT4, FOXO1, FPGT, FUT4, FZD9, GALNT12, GBE1, GCNT2, GDE1, GGT6, GNAQ, GPD1L, GPD2, GSTK1, GSTZ1, GUCA1A, GUCA1B, HARS2, HHEX, HPRT1, HTR2A, ICAM1, IDH3B, IFNA10, IL10, IL12B, IL15, IL17RB, IL1B, IL2ORB, IL2RB, IMPDH1, INSRR, IRS2, ITGB3, KRAS, LAMB1, LEF1, LIMK2, LMO7, MAD1L1, MAD2L2, MAP2K4, MAPK3, MCM5, MDM4, METTL2B, MKNK1, MPP5, MYH15, NADK, NAGK, NCF1, NFAT5, NFATC3, NFATC4, NFYB, NME4, NQO1, NR5A2, NT5C3, NTF4, OR10G2, OR10K2, OR10S1, OR13C2, OR13F1, OR14I1, OR1F1, OR1M1, OR1Q1, OR2AG2, OR2G3, OR2S2, OR2T10, OR51M1, OR52A5, OR52B4, OR52N4, OR56A1, OR5AU1, OR5D14, OR6C1, ORC4L, OXTR, PCCB, PDE11A, PDE3B, PDGFA, PER3, PIAS2, PIGV, PIP5K1C, PLCD1, PLXNB3, AR2, CoB, CGAC, CS, CSRT, DDT, F1Z, F8, GLS, GNEP, KPT, ETC, MVR, CR1, PDSM, P1K1, TNN, TYR, VTN, A4GALT, ACACB, ACAD8, ACADL, ACADSB, ACO2, ACP1, ACP2, ACSS1, ADSSL1, AKR1B10, AKR1C3, AKR1D1, ALDH3A1, ALG12, ALG8, APOA2, AQP7, ARG1, ARHGEF6, ASS1, ATP5C1, ATP5J2, B3GALT2, B3GAT1, B4GALT1, BCAR1, BDKRB1, BMP8B, BUB1, C1QA, C4BPA, CACNA1C, CACNB1, CACNG6, CAMK2A, CBR1, CCL2, CCL4, CCNE1, CCNG2, CD40LG, CDC27, CDIPT, CDK6, CDKN2C, CFLAR, CHEK2, CHKB, CLCF1, CLDN17, CLDN8, CREBBP, CSNK1E, CSNK2B, CTBP2, CTSG, CTSL1, CXCL12, CXCR4, CYBA, CYP2U1, CYP4A11, CYP4A22, DARS, DCXR, DDIT4, DDX18, DDX41, DERL1, DGAT1, DGAT2, DGAT2L4, DGKG, DGKI, DGKZ, DHRS3, DHRS4, DLL4, DPM3, DUSP6, DUSP9, DVL3, EFNB1, EFNB3, EGLN3, ENTPD1, ENTPD7, EPB41L1, FADD, FGF14, FGF4, FIGF, FMO2, FRAP1, FSHB, FZD5, GALNT10, GALNT12, GCNT4, GFAP, GGCX, GPD2, GRB2, GRHR, GSTA3, GYS1, HAAO, HAGHL, HCCS, HDAC1, HLA-C, HPRT1, HSD3B2, HTR2A, IAPP, IFNA10, IFNW1, IL13RA1, IL15RA, IL21RC, IL2RG, IL8RA, IQGAP2, IRAK1, ITCH, ITGAD, ITPA, JAG1, KNG1, LALBA, LIPA, LTC4S, LYZL1, MALT1, MAN1C1, MAP3K1, MCCC1, MDH2, MDM2, MGAT5B, MGLL, MGST3, MICA, MNX1, NADK, NAT2, NFYC, NOTCH1, NRG3, NT5C2, NUMBL, OR10A7, OR13C2, OR13C8, OR1B1, OR1I1, OR2A12, OR2AG1, OR2B11, OR2F1, OR2K9, OR2L9, OR2M9, OR2T9, OR2T6, OR2W1, OR2A1, OR4K12, OR4M1, OR5</p>
Negative_15904	<p>AR2, CoB, CGAC, CS, CSRT, DDT, F1Z, F8, GLS, GNEP, KPT, ETC, MVR, CR1, PDSM, P1K1, TNN, TYR, VTN, A4GALT, ACACB, ACAD8, ACADL, ACADSB, ACO2, ACP1, ACP2, ACSS1, ADSSL1, AKR1B10, AKR1C3, AKR1D1, ALDH3A1, ALG12, ALG8, APOA2, AQP7, ARG1, ARHGEF6, ASS1, ATP5C1, ATP5J2, B3GALT2, B3GAT1, B4GALT1, BCAR1, BDKRB1, BMP8B, BUB1, C1QA, C4BPA, CACNA1C, CACNB1, CACNG6, CAMK2A, CBR1, CCL2, CCL4, CCNE1, CCNG2, CD40LG, CDC27, CDIPT, CDK6, CDKN2C, CFLAR, CHEK2, CHKB, CLCF1, CLDN17, CLDN8, CREBBP, CSNK1E, CSNK2B, CTBP2, CTSG, CTSL1, CXCL12, CXCR4, CYBA, CYP2U1, CYP4A11, CYP4A22, DARS, DCXR, DDIT4, DDX18, DDX41, DERL1, DGAT1, DGAT2, DGAT2L4, DGKG, DGKI, DGKZ, DHRS3, DHRS4, DLL4, DPM3, DUSP6, DUSP9, DVL3, EFNB1, EFNB3, EGLN3, ENTPD1, ENTPD7, EPB41L1, FADD, FGF14, FGF4, FIGF, FMO2, FRAP1, FSHB, FZD5, GALNT10, GALNT12, GCNT4, GFAP, GGCX, GPD2, GRB2, GRHR, GSTA3, GYS1, HAAO, HAGHL, HCCS, HDAC1, HLA-C, HPRT1, HSD3B2, HTR2A, IAPP, IFNA10, IFNW1, IL13RA1, IL15RA, IL21RC, IL2RG, IL8RA, IQGAP2, IRAK1, ITCH, ITGAD, ITPA, JAG1, KNG1, LALBA, LIPA, LTC4S, LYZL1, MALT1, MAN1C1, MAP3K1, MCCC1, MDH2, MDM2, MGAT5B, MGLL, MGST3, MICA, MNX1, NADK, NAT2, NFYC, NOTCH1, NRG3, NT5C2, NUMBL, OR10A7, OR13C2, OR13C8, OR1B1, OR1I1, OR2A12, OR2AG1, OR2B11, OR2F1, OR2K9, OR2L9, OR2M9, OR2T9, OR2T6, OR2W1, OR2A1, OR4K12, OR4M1, OR5</p>

Negative_15905	<p>AK1, AM1, APT, CTS, C2, C3, CRK, DBH, DCR, EDA, FAH, ID1, IL2, LTF, MAX, M  E3, MVD, MYC, NNT, PAH, PLN, RET, SDS, SPN, VCL, ZYX, AACs, AASDH, ABLIM  2, ACAT2, ACSL1, ACSL5, ACSS1, ACTC1, ACTN2, ACVR2B, ADAM10, ADCY10,  ADCY4, ADORA2A, ADSSL1, AKR1A1, AKR1C1, ALDH2, ALG8, ALOX12B, AMPD1  , AMPD2, AMY2B, APOC3, ARPC1A, ARPC5, ARPC5L, ASCC3, ATG7, ATP5I, ATP  5J2, ATP6AP1, B4GALT2, BAAT, BBOX1, BCL10, BLVRB, BMPR1A, CACNA1D, C  ALML5, CAMK2D, CCDC6, CCL26, CCL27, CCNB2, CCNB3, CD274, CD01, CFL1,  CKMT2, CLDN22, CLDN5, CLDN6, CLDN8, CLDN9, COL1A2, CPT1A, CREB3L1, C  REB3L2, CSNK1G2, CUL1, CYFIP2, CYP17A1, CYP1A1, CYP26B1, CYP2B6, CY  P2D6, CYP3A4, CYP4A11, CYP7A1, DDHD1, DDX23, DFFB, DGAT2, DGAT2L4, D  GKE, DHX58, DPM2, DTYMK, DUSP9, E2F2, E2F3, EDA2R, EPB41L2, EPOR, ETN  K1, FGF20, FGF21, FOSL1, FOXA3, FPGT, FZD5, GAD1, GADD45B, GALE, GALN  T5, GALNT9, GATM, GBGT1, GLS2, GLUD2, GLUL, GLYCTK, GMPPB, GNAQ, GNRH  1, GPD2, GPX7, GRIN2A, GSTM2, GSTM3, GSTM5, GSTO2, GZMA, GZMB, HAAO, H  EXA, HIP1, HLA-</p> <p>G, IDH3A, IFNA7, IFNAR2, IFNB1, IL11, IL12RB2, IL13, IL1R2, IL21R, IL  28A, IMPA2, IMPDH2, INHBE, INMT, IQGAP2, IRF7, IRS2, ITGA2, ITGA3, IT  GA5, ITGAM, ITGB3, ITGB7, KIR2DL2, LAMA4, LIPE, MAP4K1, MAPK9, MCEE,  METTL6, MGAT2, MGAT4A, MGAT4B, MGAT5, MKNK1, MNX1, MPST, MTHFD2, MYH</p>
Negative_15906	<p>AK1, AM1, APT, CTS, C2, C3, CRK, DBH, DCR, EDA, FAH, ID1, IL2, LTF, MAX, M  E3, MVD, MYC, NNT, PAH, PLN, RET, SDS, SPN, VCL, ZYX, AACs, AASDH, ABLIM  2, ACAT2, ACSL1, ACSL5, ACSS1, ACTC1, ACTN2, ACVR2B, ADAM10, ADCY10,  ADCY4, ADORA2A, ADSSL1, AKR1A1, AKR1C1, ALDH2, ALG8, ALOX12B, AMPD1  , AMPD2, AMY2B, APOC3, ARPC1A, ARPC5, ARPC5L, ASCC3, ATG7, ATP5I, ATP  5J2, ATP6AP1, B4GALT2, BAAT, BBOX1, BCL10, BLVRB, BMPR1A, CACNA1D, C  ALML5, CAMK2D, CCDC6, CCL26, CCL27, CCNB2, CCNB3, CD274, CD01, CFL1,  CKMT2, CLDN22, CLDN5, CLDN6, CLDN8, CLDN9, COL1A2, CPT1A, CREB3L1, C  REB3L2, CSNK1G2, CUL1, CYFIP2, CYP17A1, CYP1A1, CYP26B1, CYP2B6, CY  P2D6, CYP3A4, CYP4A11, CYP7A1, DDHD1, DDX23, DFFB, DGAT2, DGAT2L4, D  GKE, DHX58, DPM2, DTYMK, DUSP9, E2F2, E2F3, EDA2R, EPB41L2, EPOR, ETN  K1, FGF20, FGF21, FOSL1, FOXA3, FPGT, FZD5, GAD1, GADD45B, GALE, GALN  T5, GALNT9, GATM, GBGT1, GLS2, GLUD2, GLUL, GLYCTK, GMPPB, GNAQ, GNRH  1, GPD2, GPX7, GRIN2A, GSTM2, GSTM3, GSTM5, GSTO2, GZMA, GZMB, HAAO, H  EXA, HIP1, HLA-</p> <p>G, IDH3A, IFNA7, IFNAR2, IFNB1, IL11, IL12RB2, IL13, IL1R2, IL21R, IL  28A, IMPA2, IMPDH2, INHBE, INMT, IQGAP2, IRF7, IRS2, ITGA2, ITGA3, IT  GA5, ITGAM, ITGB3, ITGB7, KIR2DL2, LAMA4, LIPE, MAP4K1, MAPK9, MCEE,  METTL6, MGAT2, MGAT4A, MGAT4B, MGAT5, MKNK1, MNX1, MPST, MTHFD2, MYH</p> <p>AK1, AM1, APT, CTS, C2, C3, CRK, DBH, DCR, EDA, FAH, ID1, IL2, LTF, MAX, M  E3, MVD, MYC, NNT, PAH, PLN, RET, SDS, SPN, VCL, ZYX, AACs, AASDH, ABLIM  2, ACAT2, ACSL1, ACSL5, ACSS1, ACTC1, ACTN2, ACVR2B, ADAM10, ADCY10,  ADCY4, ADORA2A, ADSSL1, AKR1A1, AKR1C1, ALDH2, ALG8, ALOX12B, AMPD1  , AMPD2, AMY2B, APOC3, ARPC1A, ARPC5, ARPC5L, ASCC3, ATG7, ATP5I, ATP  5J2, ATP6AP1, B4GALT2, BAAT, BBOX1, BCL10, BLVRB, BMPR1A, CACNA1D, C  ALML5, CAMK2D, CCDC6, CCL26, CCL27, CCNB2, CCNB3, CD274, CD01, CFL1,  CKMT2, CLDN22, CLDN5, CLDN6, CLDN8, CLDN9, COL1A2, CPT1A, CREB3L1, C  REB3L2, CSNK1G2, CUL1, CYFIP2, CYP17A1, CYP1A1, CYP26B1, CYP2B6, CY  P2D6, CYP3A4, CYP4A11, CYP7A1, DDHD1, DDX23, DFFB, DGAT2, DGAT2L4, D  GKE, DHX58, DPM2, DTYMK, DUSP9, E2F2, E2F3, EDA2R, EPB41L2, EPOR, ETN  K1, FGF20, FGF21, FOSL1, FOXA3, FPGT, FZD5, GAD1, GADD45B, GALE, GALN  T5, GALNT9, GATM, GBGT1, GLS2, GLUD2, GLUL, GLYCTK, GMPPB, GNAQ, GNRH  1, GPD2, GPX7, GRIN2A, GSTM2, GSTM3, GSTM5, GSTO2, GZMA, GZMB, HAAO, H  EXA, HIP1, HLA-</p> <p>G, IDH3A, IFNA7, IFNAR2, IFNB1, IL11, IL12RB2, IL13, IL1R2, IL21R, IL  28A, IMPA2, IMPDH2, INHBE, INMT, IQGAP2, IRF7, IRS2, ITGA2, ITGA3, IT  GA5, ITGAM, ITGB3, ITGB7, KIR2DL2, LAMA4, LIPE, MAP4K1, MAPK9, MCEE,  METTL6, MGAT2, MGAT4A, MGAT4B, MGAT5, MKNK1, MNX1, MPST, MTHFD2, MYH</p> <p>AK1, AM1, APT, CTS, C2, C3, CRK, DBH, DCR, EDA, FAH, ID1, IL2, LTF, MAX, M  E3, MVD, MYC, NNT, PAH, PLN, RET, SDS, SPN, VCL, ZYX, AACs, AASDH, ABLIM  2, ACAT2, ACSL1, ACSL5, ACSS1, ACTC1, ACTN2, ACVR2B, ADAM10, ADCY10,  ADCY4, ADORA2A, ADSSL1, AKR1A1, AKR1C1, ALDH2, ALG8, ALOX12B, AMPD1  , AMPD2, AMY2B, APOC3, ARPC1A, ARPC5, ARPC5L, ASCC3, ATG7, ATP5I, ATP  5J2, ATP6AP1, B4GALT2, BAAT, BBOX1, BCL10, BLVRB, BMPR1A, CACNA1D, C  ALML5, CAMK2D, CCDC6, CCL26, CCL27, CCNB2, CCNB3, CD274, CD01, CFL1,  CKMT2, CLDN22, CLDN5, CLDN6, CLDN8, CLDN9, COL1A2, CPT1A, CREB3L1, C  REB3L2, CSNK1G2, CUL1, CYFIP2, CYP17A1, CYP1A1, CYP26B1, CYP2B6, CY  P2D6, CYP3A4, CYP4A11, CYP7A1, DDHD1, DDX23, DFFB, DGAT2, DGAT2L4, D  GKE, DHX58, DPM2, DTYMK, DUSP9, E2F2, E2F3, EDA2R, EPB41L2, EPOR, ETN  K1, FGF20, FGF21, FOSL1, FOXA3, FPGT, FZD5, GAD1, GADD45B, GALE, GALN  T5, GALNT9, GATM, GBGT1, GLS2, GLUD2, GLUL, GLYCTK, GMPPB, GNAQ, GNRH  1, GPD2, GPX7, GRIN2A, GSTM2, GSTM3, GSTM5, GSTO2, GZMA, GZMB, HAAO, H  EXA, HIP1, HLA-</p> <p>G, IDH3A, IFNA7, IFNAR2, IFNB1, IL11, IL12RB2, IL13, IL1R2, IL21R, IL  28A, IMPA2, IMPDH2, INHBE, INMT, IQGAP2, IRF7, IRS2, ITGA2, ITGA3, IT  GA5, ITGAM, ITGB3, ITGB7, KIR2DL2, LAMA4, LIPE, MAP4K1, MAPK9, MCEE,  METTL6, MGAT2, MGAT4A, MGAT4B, MGAT5, MKNK1, MNX1, MPST, MTHFD2, MYH</p> <p>AK1, AM1, APT, CTS, C2, C3, CRK, DBH, DCR, EDA, FAH, ID1, IL2, LTF, MAX, M  E3, MVD, MYC, NNT, PAH, PLN, RET, SDS, SPN, VCL, ZYX, AACs, AASDH, ABLIM  2, ACAT2, ACSL1, ACSL5, ACSS1, ACTC1, ACTN2, ACVR2B, ADAM10, ADCY10,  ADCY4, ADORA2A, ADSSL1, AKR1A1, AKR1C1, ALDH2, ALG8, ALOX12B, AMPD1  , AMPD2, AMY2B, APOC3, ARPC1A, ARPC5, ARPC5L, ASCC3, ATG7, ATP5I, ATP  5J2, ATP6AP1, B4GALT2, BAAT, BBOX1, BCL10, BLVRB, BMPR1A, CACNA1D, C  ALML5, CAMK2D, CCDC6, CCL26, CCL27, CCNB2, CCNB3, CD274, CD01, CFL1,  CKMT2, CLDN22, CLDN5, CLDN6, CLDN8, CLDN9, COL1A2, CPT1A, CREB3L1, C  REB3L2, CSNK1G2, CUL1, CYFIP2, CYP17A1, CYP1A1, CYP26B1, CYP2B6, CY  P2D6, CYP3A4, CYP4A11, CYP7A1, DDHD1, DDX23, DFFB, DGAT2, DGAT2L4, D  GKE, DHX58, DPM2, DTYMK, DUSP9, E2F2, E2F3, EDA2R, EPB41L2, EPOR, ETN  K1, FGF20, FGF21, FOSL1, FOXA3, FPGT, FZD5, GAD1, GADD45B, GALE, GALN  T5, GALNT9, GATM, GBGT1, GLS2, GLUD2, GLUL, GLYCTK, GMPPB, GNAQ, GNRH  1, GPD2, GPX7, GRIN2A, GSTM2, GSTM3, GSTM5, GSTO2, GZMA, GZMB, HAAO, H  EXA, HIP1, HLA-</p> <p>G, IDH3A, IFNA7, IFNAR2, IFNB1, IL11, IL12RB2, IL13, IL1R2, IL21R, IL  28A, IMPA2, IMPDH2, INHBE, INMT, IQGAP2, IRF7, IRS2, ITGA2, ITGA3, IT  GA5, ITGAM, ITGB3, ITGB7, KIR2DL2, LAMA4, LIPE, MAP4K1, MAPK9, MCEE,  METTL6, MGAT2, MGAT4A, MGAT4B, MGAT5, MKNK1, MNX1, MPST, MTHFD2, MYH</p>

Negative_15907	<p>AZM, BIC, C4B, C7, C1H, DCN, F12, FH, GH2, GK2, GLA, GP1, GSK, HGD, HK1, H YI, ILK, INS, MET, OAT, OSM, PGD, RDX, TKT, AARS2, ABLIM1, ACAA2, ACAD8 , ACLY, AC01, AC02, ACOT11, ACPP, ACVR1C, ACYP1, ADCY8, AHCY, AHCYL2, AK3L1, AKR1C1, ALAS2, ALDH4A1, ALDH7A1, ALG2, APC2, ARHGEF6, ASIP, A TN1, ATP5G2, ATP6V0B, AXIN2, BCL10, BET1L, BMPR1A, BRAF, BUB1B, CACN A1B, CAMK2A, CARS, CCKAR, CCL19, CCR2, CD14, CD19, CD55, CDIPT, CDK5, CDKN1B, CES1, CHD8, CHRD, CHRM3, CNTNAP2, COL1A1, CREB3L2, CREB5, CR Y1, CSNK2A2, CYP11B1, CYP2S1, CYP3A7, CYP4A11, CYSLTR2, DDB2, DDOST , DDX51, DGKH, DHFR, DNMT1, DNMT3L, DTX3, DVL2, EDNRA, EFNA5, EGLN3, E NAH, EPB41L3, EPHA5, ERBB3, ERO1L, ESPL1, EXOC7, EXT2, F11R, FARSB, F LT3, FLT4, FOXO1, FTH1, FUT4, FUT9, FZD3, FZD6, GADD45G, GALE, GALNT1 , GALNT5, GALNTL5, GANAB, GART, GCNT3, GFPT2, GIT1, GLS2, GNA11, GNAI 3, GNG12, GRIA1, GRIN1, GRLF1, GSTA4, GSTM2, GSTO1, GSTZ1, GUCA1C, GU SB, HCLS1, HPSE, HSD11B2, IDH3A, IDI1, IFNA13, IFNG, IKBKB, IL1R2, IL 6ST, IMPA2, INHBC, ITGA9, JUND, KAT2B, KCNB1, KIR2DL2, LIPE, MAPK13, MCM2, MDH2, MGLL, NADK, NEU4, NME2, NR1H3, NRAS, NRP1, NTF4, NUDT9, OR 10H3, OR10J1, OR13C3, OR13H1, OR1K1, OR1L1, OR1S2, OR2A4, OR2C3, OR2 T3, OR4C6, OR4L1, OR51E2, OR51I1, OR52H1, OR5D16, OR6B2, OR7G1, OR8B</p>
Negative_15908	<p>AK3, PCUA, CR0, C4B, C7, C1H, DCN, F12, FH, GH2, GK2, GLA, GP1, GSK, HGD, HK1, H YI, ILK, INS, MET, OAT, OSM, PGD, RDX, TKT, AARS2, ABLIM1, ACAA2, ACAD8 , ACLY, AC01, AC02, ACOT11, ACPP, ACVR1C, ACYP1, ADCY8, AHCY, AHCYL2, AK3L1, AKR1C1, ALAS2, ALDH4A1, ALDH7A1, ALG2, APC2, ARHGEF6, ASIP, A TN1, ATP5G2, ATP6V0B, AXIN2, BCL10, BET1L, BMPR1A, BRAF, BUB1B, CACN A1B, CAMK2A, CARS, CCKAR, CCL19, CCR2, CD14, CD19, CD55, CDIPT, CDK5, CDKN1B, CES1, CHD8, CHRD, CHRM3, CNTNAP2, COL1A1, CREB3L2, CREB5, CR Y1, CSNK2A2, CYP11B1, CYP2S1, CYP3A7, CYP4A11, CYSLTR2, DDB2, DDOST , DDX51, DGKH, DHFR, DNMT1, DNMT3L, DTX3, DVL2, EDNRA, EFNA5, EGLN3, E NAH, EPB41L3, EPHA5, ERBB3, ERO1L, ESPL1, EXOC7, EXT2, F11R, FARSB, F LT3, FLT4, FOXO1, FTH1, FUT4, FUT9, FZD3, FZD6, GADD45G, GALE, GALNT1 , GALNT5, GALNTL5, GANAB, GART, GCNT3, GFPT2, GIT1, GLS2, GNA11, GNAI 3, GNG12, GRIA1, GRIN1, GRLF1, GSTA4, GSTM2, GSTO1, GSTZ1, GUCA1C, GU SB, HCLS1, HPSE, HSD11B2, IDH3A, IDI1, IFNA13, IFNG, IKBKB, IL1R2, IL 6ST, IMPA2, INHBC, ITGA9, JUND, KAT2B, KCNB1, KIR2DL2, LIPE, MAPK13, MCM2, MDH2, MGLL, NADK, NEU4, NME2, NR1H3, NRAS, NRP1, NTF4, NUDT9, OR 10H3, OR10J1, OR13C3, OR13H1, OR1K1, OR1L1, OR1S2, OR2A4, OR2C3, OR2 T3, OR4C6, OR4L1, OR51E2, OR51I1, OR52H1, OR5D16, OR6B2, OR7G1, OR8B</p>
Negative_15909	<p>AKT2, API, C31, C2, C2L, C3A, C5, C6, C7, C1H, DCN, F12, FH, GH2, GK2, GLA, GP1, GSK, HGD, HK1, H YI, ILK, INS, MET, OAT, OSM, PGD, RDX, TKT, AARS2, ABLIM1, ACAA2, ACAD8 , ACLY, AC01, AC02, ACOT11, ACPP, ACVR1C, ACYP1, ADCY8, AHCY, AHCYL2, AK3L1, AKR1C1, ALAS2, ALDH4A1, ALDH7A1, ALG2, APC2, ARHGEF6, ASIP, A TN1, ATP5G2, ATP6V0B, AXIN2, BCL10, BET1L, BMPR1A, BRAF, BUB1B, CACN A1B, CAMK2A, CARS, CCKAR, CCL19, CCR2, CD14, CD19, CD55, CDIPT, CDK5, CDKN1B, CES1, CHD8, CHRD, CHRM3, CNTNAP2, COL1A1, CREB3L2, CREB5, CR Y1, CSNK2A2, CYP11B1, CYP2S1, CYP3A7, CYP4A11, CYSLTR2, DDB2, DDOST , DDX51, DGKH, DHFR, DNMT1, DNMT3L, DTX3, DVL2, EDNRA, EFNA5, EGLN3, E NAH, EPB41L3, EPHA5, ERBB3, ERO1L, ESPL1, EXOC7, EXT2, F11R, FARSB, F LT3, FLT4, FOXO1, FTH1, FUT4, FUT9, FZD3, FZD6, GADD45G, GALE, GALNT1 , GALNT5, GALNTL5, GANAB, GART, GCNT3, GFPT2, GIT1, GLS2, GNA11, GNAI 3, GNG12, GRIA1, GRIN1, GRLF1, GSTA4, GSTM2, GSTO1, GSTZ1, GUCA1C, GU SB, HCLS1, HPSE, HSD11B2, IDH3A, IDI1, IFNA13, IFNG, IKBKB, IL1R2, IL 6ST, IMPA2, INHBC, ITGA9, JUND, KAT2B, KCNB1, KIR2DL2, LIPE, MAPK13, MCM2, MDH2, MGLL, NADK, NEU4, NME2, NR1H3, NRAS, NRP1, NTF4, NUDT9, OR 10H3, OR10J1, OR13C3, OR13H1, OR1K1, OR1L1, OR1S2, OR2A4, OR2C3, OR2 T3, OR4C6, OR4L1, OR51E2, OR51I1, OR52H1, OR5D16, OR6B2, OR7G1, OR8B</p>

Negative_15910	<p>ADC, BCR, BID, C7, CA1, CBS, CKM, CMT, CSK, DDC, DDO, DHH, EGF, F2R, GGN, GNS, HGF, LSS, MVD, NNT, SMS, TYR, VCL, AADAC, ABLIM1, ABLIM2, ACTA1, A CTG2, AHCYL1, ALDH3A1, ALDH3A2, ALDOB, ALOX12, ALPP, ALS2, ARNT2, AR PC5L, ARSA, ARSD, ATN1, ATP5C1, ATP6V0B, ATP6V1A, AXIN2, BBC3, BCKDH B, BET1, BPNT1, BTRC, BUB1B, C1QA, C3orf10, C4BPA, C4BPB, CACNB1, CAN T1, CASP7, CBLB, CCKAR, CCKBR, CCL2, CCL24, CCL26, CCNB2, CD3E, CD46, CD72, CD86, CDC25C, CDK5, CDK6, CDKN2B, CES7, CFTR, CHEK1, CLDN17, CM AS, CNTFR, COMP, COQ5, CREBBP, CXCL10, CYP11A1, CYP19A1, CYP3A4, CYS LTR1, DAG1, DDB2, DDOST, DDX51, DGAT2, DGKB, DOT1L, DRD5, DTX1, DUSP1 , DUSP16, DUSP5, DUSP6, ECSIT, EFNA4, ENO2, ENPP1, EPB41, EPHA2, EPHA 7, ESAM, ETS1, F2RL3, FARP2, FBP2, FGF17, FGF2, FGF3, FOXA2, FPGS, FZD 3, FZD4, GABARAP, GALNT12, GAMT, GCNT2, GFAP, GGT6, GLO1, GNB3, GNG12 , GNG3, GNPAT, GOSR2, GOT2, GP1BA, GPD1L, GSTA2, HAO2, HCLS1, HEXA, HI P1, HMGS1, HNF4A, HSP90B1, HSPB1, HTR2C, IARS, IFNA13, IFNA14, IL10 RB, IL11, IL1R1, IL6ST, IL8RB, INHBA, INPPL1, IRAK3, ITGA7, ITGB5, IT GB8, KRAS, LAMB1, LCMT1, LRAT, LTC4S, LYZL1, MAPT, MCAT, METTL2B, MGA T5, MLYCD, MYL9, NAT1, NFKBIE, NNMT, NRG2, NTNG1, OPLAH, OR10P1, OR13 C8, OR13J1, OR14I1, OR14J1, OR1D5, OR1N2, OR2A14, OR2A2, OR2F1, OR2L AK3, PCY7, C8orf34, CRM1, CTRP, CCL2, DDR, DDC, EGF, FGF, FUS, GP6, GSNP, GSK,</p>
Negative_15911	<p>HGD, ID2, ID3, JUN, MPI, MPZ, OTC, RDX, RFK, STS, UBC, ABCC8, ACADSB, AC HE, ACO2, ACPT, ACSM4, ACSS2, ACVR1B, ACVRL1, ADH7, ADIPOQ, ADIPOR1, ADRA1A, AFMID, AKR1C1, ALAD, ALDH1A2, ALDH4A1, ALDH6A1, ALG2, ALG3, ALS2, ANAPC1, APOA2, ATF4, ATIC, ATP2A2, ATP5B, ATP6V1D, B3GALT1, B3 GAT3, B4GALT3, BBOX1, BCAR1, BCL2L1, BDNF, BIRC2, BMP5, BMP7, BMP8B, BUB1B, CALML6, CAMK2B, CCL4, CCNE1, CCNH, CD40, CD47, CD72, CD79B, CD 86, CDC16, CDC26, CDC45L, CEBPA, CHUK, CLDN17, CLDN5, CLDN8, CNDP1, C OL4A4, COQ3, CPT1B, CTNNA1, CTSB, CTSS, CXCL12, CYBA, CYP11B1, CYP2C 18, CYP2F1, DCTN1, DDIT4, DKK2, DLL4, DPAGT1, DPYSL2, DTX4, EFNA4, EF NB2, ENPP2, ENTPD5, ENTPD6, EPHA8, EPHB6, F2RL1, FADS2, FDFT1, FGF13 , FGF4, FGF7, FIGF, FLT1, FLT3, GALK2, GALNT1, GALNT11, GALNTL2, GFPT 1, GFPT2, GGT5, GNG12, GP1BA, GPD1L, GRAP2, GRIN2A, GSTA3, GSTM3, GST Z1, HEMK1, HLA- DMA, HNF4A, HNMT, ICAM3, ICOSLG, IFNGR1, IKBKB, IL15RA, IL17B, IL24, IL25, IL29, IMPA1, IMPDH1, INPP5B, ITGA1, ITGB7, ITPA, JAK3, JAM3, KY NU, LAP3, LARS, LCAT, MAGI2, MAP3K6, MAP4K1, MAPK10, MBL2, MTHFR, MYD 88, MYL9, NCSTN, NEFM, NEU3, NOTCH1, NUMB, OGDHL, OR2G2, OR2L3, OR2M2 , OR2Y1, OR52R1, OR5AP2, OR5J2, OR6B2, OR6C2, OR6F1, OR7D2, OR8B12, O YCT9, R4HA2, RAK2, RCVT9, RFE8A, RFE8A, RFE8B, RFX2, RFX4, RFX5, RFX6,</p>

Negative_15912	<p>ADC, AKS, CKM, DAO, EDA, F7, GDA, GF1, GSN, HKS, IL3, KDK, MVR, NLR, PGT, PLN, SMS, SPN, TFG, AASDH, AASS, ACAD9, ACOT12, ACSL5, ACSM5, ACTA2, A CTB, ADCY3, ADORA2B, AGRN, AHCY, ALDH1A1, ALG11, AMHR2, APOC3, ARHGE F4, ARSE, ASIP, ATIC, ATP5I, AVPR1A, AVPR1B, B3GNT3, BAI1, BDNF, C4BP B, CASP8, CCL23, CCL26, CCL28, CCNB2, CCNE1, CCR8, CD274, CD74, CD82, CDC14B, CDC25B, CDC42, CDIPT, CDK2, CDKN1A, CD01, CFL1, CFTR, CHD8, C HRM5, CHRNA7, CHST11, CHST13, CHSY1, CKMT2, CLCF1, CLDN9, CLTCL1, CM AS, CMBL, COL1A1, COL1A2, COL5A1, COL6A1, COQ5, COQ6, COX10, CSAD, CS F2, CSF3R, CSNK2B, CYCS, CYP27A1, DAAM1, DAPK3, DDB2, DGKI, DGKQ, DHO DH, DLL3, DPM3, DTX3L, DUSP9, E2F4, EARS2, EDNRB, EFNA1, ENPP2, ENTPD 4, ENTPD6, EPB41L1, EPB41L2, EPHA4, EPHA7, EPHB3, EPHB4, EPRS, ETS1, EXT1, FGF11, FGF17, FGF20, GALNT7, GAPDH, GCAT, GJA1, GLG1, GLO1, GLU D2, GNAS, GNMT, GPAM, GPLD1, GRPR, GSTA1, GSTZ1, GUCY1A2, GUCY2F, HSP A1B, HYAL2, IDH1, IDI2, IFNA10, IFNA17, IL10, IL17RB, IL1RAP, IL21R, IL22RA1, IL5RA, IL7R, INHBE, INPP5E, IRS2, ITGA6, ITGAD, ITGB2, JAK3 , KIR2DL3, KIR2DS4, LAMC3, LCMT1, LIMK1, LTBP1, MAP3K11, MAP3K7, MGA M, MGAT5B, MGST1, MIOX, MYH1, MYH3, NCAM2, NCOA4, NFX1, NGEF, NOX1, NR G1, NT5E, NTRK1, NUDT9, OR10AG1, OR10H2, OR10H4, OR11L1, OR1F1, OR1I C3B, PDB1, DEDD, F1R, PCR, GP3C, IL7, PDL1, OGT, P1A, PFD, SRC, V1R, PARS, RC AA2, ACAD8, ACP, ACY3, ADH1A, ADH5, AGPAT2, AGRN, AKR1B10, AKT1, ALD H5A1, ALDH9A1, ALG1, ALG13, ALG2, AMHR2, AMY2B, APAF1, ARG2, ARHGAP5 , ARHGEF4, ARPC3, ARSD, ASRGL1, ATF4, ATP12A, ATP5G2, ATP5J2, ATP6V1 F, AVPR1A, B4GALT5, B4GALT6, BAIAP2, BCL2L1, BCMO1, BLNK, BMP8A, BMP R2, BNIP1, CACNA1F, CCL3, CCL5, CD79A, CDC25A, CDC26, CDH5, CDKN2A, C HAT, CLCA2, CLDN20, CNGB1, CPS1, CREBBP, CSNK1A1, CSNK1G1, CTBP2, CX CR3, CYP17A1, DDX51, DGKH, DGKI, DHDDS, DHODH, DNMT3B, DVL1, EHHADH, EIF4E2, ENPP3, EPHB1, ERBB3, ETNK2, FARS2, FCER1G, FLOT1, FTH1, FTMT , FUT7, GABARAP, GAD2, GART, GGT1, GGT6, GIT1, GLO1, GLUD2, GLYCTK, GM PPB, GNA14, GNA01, GNMT, GNPDA1, GNPAT1, GPLD1, GRIN2B, HADH, HAP1, HEMK1, HEXB, HHIP, HLA-C, HLA-DMA, HLA-DRA, HNF4A, HSP90B1, HSPA1B, HSPA2, HYAL1, ICOS, IDH3G, IKBKG, IL18R AP, IRAK3, ITGA3, ITGAL, ITGB6, JAK3, KDSR, KLRC3, KRAS, LDHD, LEPR, L IMK2, LIPG, LRDD, MAN1A1, MAN1A2, MAN1C1, MAP3K3, MAPK14, MAPK9, MAT 2B, MKNK2, MPST, MTHFD1L, MTMR2, MYH10, MYH6, MYL9, NARS, NAT5, NCAM2 , NLGN2, NR5A2, NTF3, OCRL, OR13D1, OR13G1, OR13J1, OR1F1, OR2T5, OR5 1B2, OR5A2, OR5AK2, OR5AS1, OR5D13, OR6C2, OR6C75, OR6Y1, OR7A17, OR RDR, DB1, FAS, PGA, TEB, LTA, USM, TNK, V1N, PARG, PPARA, PPARB, PDEL T M1, ACOX3, ACSS3, ADCY3, ADORA2B, ADRB1, AGRN, AKT2, ALG5, ANAPC10, A NAPC2, AOC2, ARHGEF1, ARPC1A, ARPC4, ASPA, B3GALT5, B3GAT3, CACNB2, CADM3, CARS2, CCL11, CCL13, CCL19, CCL2, CCNG1, CD247, CD44, CDH1, CD H15, CD01, CDS1, CHKA, CHSY1, CKMT2, CLDN10, CLDN2, CLDN20, CMBL, CNG B1, CNTNAP2, COMP, CREB3L4, CSF2, CTBP1, CX3CL1, CYFIP1, CYP11B1, CY P17A1, CYP2B6, CYP2C18, DAPK2, DDHD1, DDOST, DDX55, DDX56, DHDDS, DH ODH, DKK1, DPAGT1, DUSP1, DVL3, ECHS1, EDN1, EGLN3, EHHADH, ELK1, ENT PD3, ENTPD4, EPHA1, EPHA2, EPHB2, EXTL3, FARS2, FGD3, FGF1, FGF21, FG F4, FGFR1, FLOT2, FLT3, FSHR, GADD45A, GALK1, GCNT3, GNAS, GNB1, GNPN AT1, GSK3B, GUCA1C, HGSNAT, HNF4G, HRH1, IAPP, ICAM1, IDH1, IFNAR2, I L17RA, IL21, IL3RA, INMT, INPP5B, IQGAP3, IRS4, ITGA9, LAMB4, LDHC, L IPG, LTA4H, LTB4R2, LTBP1, LTC4S, MAN1A2, MAP3K1, MLLT4, MMP9, MTFMT , MTHFD1L, MTMR1, MYH11, MYH9, NAE1, NAMPT, NCF2, NCOR1, NCR3, NLGN2, NME6, NOS1, NRXN1, NSD1, OR10AD1, OR10H1, OR10H2, OR10H4, OR10J1, OR 11H6, OR12D3, OR13A1, OR13H1, OR14C36, OR1A2, OR1F1, OR1J4, OR1L3, O R2A5, OR2D3, OR2F1, OR2T1, OR2T3, OR2T5, OR4K14, OR4N5, OR4P4, OR51A 4, OR51S1, OR52N4, OR5A2, OR5C1, OR5H2, OR5J2, OR5M9, OR6N2, OR6Q1, O R6R2, OR6U9, OR6Q9, OR6F1, PAF1H9, PCNA, PCYT1B, PCYT9, PEK1, PCNA</p>
Negative_15913	<p>AA2, ACAD8, ACP, ACY3, ADH1A, ADH5, AGPAT2, AGRN, AKR1B10, AKT1, ALD H5A1, ALDH9A1, ALG1, ALG13, ALG2, AMHR2, AMY2B, APAF1, ARG2, ARHGAP5 , ARHGEF4, ARPC3, ARSD, ASRGL1, ATF4, ATP12A, ATP5G2, ATP5J2, ATP6V1 F, AVPR1A, B4GALT5, B4GALT6, BAIAP2, BCL2L1, BCMO1, BLNK, BMP8A, BMP R2, BNIP1, CACNA1F, CCL3, CCL5, CD79A, CDC25A, CDC26, CDH5, CDKN2A, C HAT, CLCA2, CLDN20, CNGB1, CPS1, CREBBP, CSNK1A1, CSNK1G1, CTBP2, CX CR3, CYP17A1, DDX51, DGKH, DGKI, DHDDS, DHODH, DNMT3B, DVL1, EHHADH, EIF4E2, ENPP3, EPHB1, ERBB3, ETNK2, FARS2, FCER1G, FLOT1, FTH1, FTMT , FUT7, GABARAP, GAD2, GART, GGT1, GGT6, GIT1, GLO1, GLUD2, GLYCTK, GM PPB, GNA14, GNA01, GNMT, GNPDA1, GNPAT1, GPLD1, GRIN2B, HADH, HAP1, HEMK1, HEXB, HHIP, HLA-C, HLA-DMA, HLA-DRA, HNF4A, HSP90B1, HSPA1B, HSPA2, HYAL1, ICOS, IDH3G, IKBKG, IL18R AP, IRAK3, ITGA3, ITGAL, ITGB6, JAK3, KDSR, KLRC3, KRAS, LDHD, LEPR, L IMK2, LIPG, LRDD, MAN1A1, MAN1A2, MAN1C1, MAP3K3, MAPK14, MAPK9, MAT 2B, MKNK2, MPST, MTHFD1L, MTMR2, MYH10, MYH6, MYL9, NARS, NAT5, NCAM2 , NLGN2, NR5A2, NTF3, OCRL, OR13D1, OR13G1, OR13J1, OR1F1, OR2T5, OR5 1B2, OR5A2, OR5AK2, OR5AS1, OR5D13, OR6C2, OR6C75, OR6Y1, OR7A17, OR RDR, DB1, FAS, PGA, TEB, LTA, USM, TNK, V1N, PARG, PPARA, PPARB, PDEL T M1, ACOX3, ACSS3, ADCY3, ADORA2B, ADRB1, AGRN, AKT2, ALG5, ANAPC10, A NAPC2, AOC2, ARHGEF1, ARPC1A, ARPC4, ASPA, B3GALT5, B3GAT3, CACNB2, CADM3, CARS2, CCL11, CCL13, CCL19, CCL2, CCNG1, CD247, CD44, CDH1, CD H15, CD01, CDS1, CHKA, CHSY1, CKMT2, CLDN10, CLDN2, CLDN20, CMBL, CNG B1, CNTNAP2, COMP, CREB3L4, CSF2, CTBP1, CX3CL1, CYFIP1, CYP11B1, CY P17A1, CYP2B6, CYP2C18, DAPK2, DDHD1, DDOST, DDX55, DDX56, DHDDS, DH ODH, DKK1, DPAGT1, DUSP1, DVL3, ECHS1, EDN1, EGLN3, EHHADH, ELK1, ENT PD3, ENTPD4, EPHA1, EPHA2, EPHB2, EXTL3, FARS2, FGD3, FGF1, FGF21, FG F4, FGFR1, FLOT2, FLT3, FSHR, GADD45A, GALK1, GCNT3, GNAS, GNB1, GNPN AT1, GSK3B, GUCA1C, HGSNAT, HNF4G, HRH1, IAPP, ICAM1, IDH1, IFNAR2, I L17RA, IL21, IL3RA, INMT, INPP5B, IQGAP3, IRS4, ITGA9, LAMB4, LDHC, L IPG, LTA4H, LTB4R2, LTBP1, LTC4S, MAN1A2, MAP3K1, MLLT4, MMP9, MTFMT , MTHFD1L, MTMR1, MYH11, MYH9, NAE1, NAMPT, NCF2, NCOR1, NCR3, NLGN2, NME6, NOS1, NRXN1, NSD1, OR10AD1, OR10H1, OR10H2, OR10H4, OR10J1, OR 11H6, OR12D3, OR13A1, OR13H1, OR14C36, OR1A2, OR1F1, OR1J4, OR1L3, O R2A5, OR2D3, OR2F1, OR2T1, OR2T3, OR2T5, OR4K14, OR4N5, OR4P4, OR51A 4, OR51S1, OR52N4, OR5A2, OR5C1, OR5H2, OR5J2, OR5M9, OR6N2, OR6Q1, O R6R2, OR6U9, OR6Q9, OR6F1, PAF1H9, PCNA, PCYT1B, PCYT9, PEK1, PCNA</p>
Negative_15914	<p>M1, ACOX3, ACSS3, ADCY3, ADORA2B, ADRB1, AGRN, AKT2, ALG5, ANAPC10, A NAPC2, AOC2, ARHGEF1, ARPC1A, ARPC4, ASPA, B3GALT5, B3GAT3, CACNB2, CADM3, CARS2, CCL11, CCL13, CCL19, CCL2, CCNG1, CD247, CD44, CDH1, CD H15, CD01, CDS1, CHKA, CHSY1, CKMT2, CLDN10, CLDN2, CLDN20, CMBL, CNG B1, CNTNAP2, COMP, CREB3L4, CSF2, CTBP1, CX3CL1, CYFIP1, CYP11B1, CY P17A1, CYP2B6, CYP2C18, DAPK2, DDHD1, DDOST, DDX55, DDX56, DHDDS, DH ODH, DKK1, DPAGT1, DUSP1, DVL3, ECHS1, EDN1, EGLN3, EHHADH, ELK1, ENT PD3, ENTPD4, EPHA1, EPHA2, EPHB2, EXTL3, FARS2, FGD3, FGF1, FGF21, FG F4, FGFR1, FLOT2, FLT3, FSHR, GADD45A, GALK1, GCNT3, GNAS, GNB1, GNPN AT1, GSK3B, GUCA1C, HGSNAT, HNF4G, HRH1, IAPP, ICAM1, IDH1, IFNAR2, I L17RA, IL21, IL3RA, INMT, INPP5B, IQGAP3, IRS4, ITGA9, LAMB4, LDHC, L IPG, LTA4H, LTB4R2, LTBP1, LTC4S, MAN1A2, MAP3K1, MLLT4, MMP9, MTFMT , MTHFD1L, MTMR1, MYH11, MYH9, NAE1, NAMPT, NCF2, NCOR1, NCR3, NLGN2, NME6, NOS1, NRXN1, NSD1, OR10AD1, OR10H1, OR10H2, OR10H4, OR10J1, OR 11H6, OR12D3, OR13A1, OR13H1, OR14C36, OR1A2, OR1F1, OR1J4, OR1L3, O R2A5, OR2D3, OR2F1, OR2T1, OR2T3, OR2T5, OR4K14, OR4N5, OR4P4, OR51A 4, OR51S1, OR52N4, OR5A2, OR5C1, OR5H2, OR5J2, OR5M9, OR6N2, OR6Q1, O R6R2, OR6U9, OR6Q9, OR6F1, PAF1H9, PCNA, PCYT1B, PCYT9, PEK1, PCNA</p>

Negative_15915	<p>AMH, CKM, CKN, CTH, EGF, FZK, GGH, GSN, HGF, HK2, IL6, ITR, K11, MFL, MUI, PLG, PLN, SDS, SI, SYK, TK2, UBB, VCL, ZYX, AASDH, ACADSB, ACPT, ACSM2A, ADCY1, ADCY7, ADCY8, ADIPOQ, AHCYL1, ALAS1, ALDH7A1, ALOX12B, ALOX15, APLP1, AREG, ARG1, ARPC2, ARPC5, ASS1, ATIC, ATP5D, B3GALT2, BAI1, BCAR1, BDH2, BDKRB2, BET1, BIRC3, C1QC, C3orf10, CACNA1A, CACNA1B, CAMK2A, CCND2, CCR5, CD14, CD38, CD46, CD86, CDK7, CDKN1A, CDKN2D, CHIA, CHRM3, CHUK, CLCF1, CLDN11, CLDN22, CLDN7, CLTA, CMPK1, COL2A1, COL4A4, COL5A3, CPT1A, CREB5, CRLF2, CSF2RA, CTF1, CXCL6, CYP26A1, CYP2F1, DCTD, DGKD, DKK1, DMGDH, DOLPP1, DPYSL2, DUSP3, DVL2, E2F4, EFNA2, EFN3, EGLN3, EIF4B, ELK1, EPB41, EPHA7, EPHB2, FABP3, FADD, FARP2, FASN, FGF21, FGF23, FLT1, FMO1, FMO2, FPGS, FSHB, FSHR, FTH1, FUT1, FUT9, FZD3, G6PC, GAD1, GALNT3, GALNT4, GDF7, GFPT1, GGT1, GNA14, GRIN2A, GRM5, GSTM1, GSTO1, GUCA1A, GZMB, HLA-DOB, HMBS, HSP90B1, HTR2A, IDH3A, IGFBP3, IL10RA, IL12A, IL12RB2, IL17A, IL19, IL1R1, IL1R2, IL28B, IL5RA, IMPDH1, IRF3, ITGA10, ITGB2, ITGB7, ITPA, KIR2DL2, KLRK1, LARS2, LEFTY1, MAOB, MAP2K5, MAP2K6, MAP3K14, MECR, MGAT4B, MKNK1, MMP9, MYH13, MYH3, MYH7, NAGA, NAGLU, NCF1, NFKB2, NFYB, NKX3-</p>
Negative_15916	<p>AK, CSD, CYP, C11, CDC, ELI, E10, FZK, FES, GRR, GR3, GP6, HFD, HR1F, IDS, IL2, INS, JUN, KDR, MAX, ME1, ME3, MVK, SPN, XDH, AASDH, ACP2, ACSL4, ACTG1, ACTN1, ACVR2A, ALDH6A1, ALDH9A1, ALG6, ALOX12B, AMY2A, ARPC2, ARRB2, ASPA, ATP5G1, B3GALT2, B4GALT1, BDKRB2, BMP6, CACNG3, CACNG4, CAMK2A, CAMK2D, CAMKK1, CANT1, CASP7, CCL14, CCL16, CCR6, CD27, CD59, CDH15, CDK7, CHUK, CLCF1, CLDN22, CLDN8, CNTNAP2, CTF1, CTNND1, CUL1, CXCL6, CYFIP2, CYP2C9, CYSLTR2, DAPK1, DARS, DDX52, DGAT2L4, DGUOK, DHRS4L2, DKK2, DLL4, DOT1L, DPYSL2, DRD5, DTX4, DUSP9, EARS2, EFNA1, ENTPD4, EPB41L1, EPHA3, EPHA7, EPHA8, ERBB2, ERBB4, EVI1, FARSB, FASLG, FBP1, FDFT1, FGF21, FGF9, FZD2, GADD45B, GALNT14, GALNT9, GALNTL2, GANC, GAPDH, GAS1, GCLC, GLI1, GMPS, GNG3, GP1BA, GSTM3, GSTZ1, GZMB, HCST, HGSNAT, HLCS, HNF4G, HTR4, HTR6, IDI2, IFNW1, IKBKG, IL1R1, IL29, INPP5B, INPPL1, INSRR, IRAK4, ITGA6, ITGA8, JAM3, KIR2DS5, KRAS, LALBA, LAMB3, LCP2, LIMK1, LRAT, LRRC4C, MAP2K5, MAT1A, MGLL, MKNK2, MOV10L1, MTMR6, MYH11, MYH6, NAT6, NEU4, NFKB1, NFKBIB, NKX2-2, NOX1, NQO1, NR1D1, OR10A2, OR10A7, OR2A12, OR2AT4, OR2F1, OR2M5, OR2M7, OR2T5, OR4B1, OR4F5, OR52K1, OR5A1, OR5AR1, OR5C1, OR5J2, OR5M3, OR5P2, OR5R1, OR5T1, OR6B3, OR6C2, OR6C70, OR6N2, OR8H1, P4HA3, PDAD1, PAX7, CBP2, CBP, DBP, DCR, DM1, GSN, HFE, HK1, HNF1B, HNF1A, HNF1B, HNF1C, HNF1D, HNF1E, HNF1F, HNF1G, HNF1H, HNF1I, HNF1J, HNF1K, HNF1L, HNF1M, HNF1N, HNF1O, HNF1P, HNF1Q, HNF1R, HNF1S, HNF1T, HNF1U, HNF1V, HNF1W, HNF1X, HNF1Y, HNF1Z, HNF2, HNF3, HNF4, HNF5, HNF6, HNF7, HNF8, HNF9, HNF10, HNF11, HNF12, HNF13, HNF14, HNF15, HNF16, HNF17, HNF18, HNF19, HNF20, HNF21, HNF22, HNF23, HNF24, HNF25, HNF26, HNF27, HNF28, HNF29, HNF30, HNF31, HNF32, HNF33, HNF34, HNF35, HNF36, HNF37, HNF38, HNF39, HNF40, HNF41, HNF42, HNF43, HNF44, HNF45, HNF46, HNF47, HNF48, HNF49, HNF50, HNF51, HNF52, HNF53, HNF54, HNF55, HNF56, HNF57, HNF58, HNF59, HNF60, HNF61, HNF62, HNF63, HNF64, HNF65, HNF66, HNF67, HNF68, HNF69, HNF70, HNF71, HNF72, HNF73, HNF74, HNF75, HNF76, HNF77, HNF78, HNF79, HNF80, HNF81, HNF82, HNF83, HNF84, HNF85, HNF86, HNF87, HNF88, HNF89, HNF90, HNF91, HNF92, HNF93, HNF94, HNF95, HNF96, HNF97, HNF98, HNF99, HNF100</p>
Negative_15917	<p>ACADSB, ACAT1, ACSM2A, ACOT11, ACOT12, ADCY8, AGPAT2, AGPAT6, AKT3, ALAD, ALDH3B1, ALDH3B2, ALOX12B, AMDHD2, AMHR2, ANAPC7, ATG12, ATP2A2, ATP5D, B3GALT1, BAIAP2, BCKDHA, BDKRB2, BMP6, BMPR1B, BPNT1, BRAF, CACNA1I, CACNG7, CAPN2, CCKBR, CCL23, CCR4, CD55, CD58, CD82, CDK2, CDK5, CDKN2D, CERK, CFLAR, CHDH, CHEK2, CHST12, CLDN11, CNTFR, CNTN2, COL4A4, CREB1, CREB3L2, CSF2RA, CSH1, CSNK1G1, CSNK1G3, CXCL9, CYFIP1, CYP11B2, CYP2A6, CYP2A7, CYP2B6, DAAM2, DAG1, DGAT2L4, DGKG, DHFR, DKK2, DRD2, DTX1, DTYMK, DUSP7, E2F4, EDAR, EIF4E2, ENPP2, ENPP3, ENTPD2, EPB41, EPHA2, EPHX1, EPRS, EXT1, EXTL3, FGF21, FOXO3, FTCD, G6PC2, GAB1, GADD45A, GADD45B, GALC, GBE1, GNA12, GNAO1, GNMT, GPX7, GRIA2, GRIN2B, GRIN2D, GYS1, HEMK1, HIP1, HSD3B7, HTR4, IFNG, IL17RB, IL1RAP, IL8RA, INPP5B, IPMK, IQGAP1, IRF3, IRS1, ITCH, ITGA3, ITGB2, ITGB6, JAK3, KARS, KIR3DL3, LIPE, LTBP1, MAP2K2, MAP4K1, MASP2, MDH1, MDH2, MGAT5B, MMP9, MTFMT, MTHFD1L, MTMR2, MYH10, MYH7B, NARS2, NCAM2, NCR1, NFASC, NME6, NRAS, NRG3, NSD1, OGDHL, ONECUT1, OPLAH, OR10A5, OR10H2, OR1A2, OR1E1, OR1F1, OR1J1, OR1L1, OR2G2, OR2H2, OR2L3, OR2M3, OR2T1, OR4A5, OR4C15, OR4D5, OR4K13, OR4K5, OR51Q1, OR51S1, OR51V1, OR51W1, OR51X1, OR51Y1, OR51Z1, OR52A1, OR52A2, OR52A3, OR52A4, OR52A5, OR52A6, OR52A7, OR52A8, OR52A9, OR52A10, OR52A11, OR52A12, OR52A13, OR52A14, OR52A15, OR52A16, OR52A17, OR52A18, OR52A19, OR52A20, OR52A21, OR52A22, OR52A23, OR52A24, OR52A25, OR52A26, OR52A27, OR52A28, OR52A29, OR52A30, OR52A31, OR52A32, OR52A33, OR52A34, OR52A35, OR52A36, OR52A37, OR52A38, OR52A39, OR52A40, OR52A41, OR52A42, OR52A43, OR52A44, OR52A45, OR52A46, OR52A47, OR52A48, OR52A49, OR52A50, OR52A51, OR52A52, OR52A53, OR52A54, OR52A55, OR52A56, OR52A57, OR52A58, OR52A59, OR52A60, OR52A61, OR52A62, OR52A63, OR52A64, OR52A65, OR52A66, OR52A67, OR52A68, OR52A69, OR52A70, OR52A71, OR52A72, OR52A73, OR52A74, OR52A75, OR52A76, OR52A77, OR52A78, OR52A79, OR52A80, OR52A81, OR52A82, OR52A83, OR52A84, OR52A85, OR52A86, OR52A87, OR52A88, OR52A89, OR52A90, OR52A91, OR52A92, OR52A93, OR52A94, OR52A95, OR52A96, OR52A97, OR52A98, OR52A99, OR52A100</p>





Negative_15921	<p>ADR, C8G, C9, CR2, DC1, F9, GK, GLA, GSS, HK2, KHR, K11, M01, MVD, MTC, OG  T, PTS, SHH, SI, TPR, VCL, VTN, XDH, AADAT, AARS, ABAT, ABL2, ACPT, ACSM  3, ACSS1, ACTB, ACY1, ADCY1, AGTR1, ALDH1L1, ALDH3A1, ALDOA, ALG3, AL  G5, ALOX12, AMD1, ANAPC5, APRT, ARHGEF1, ARHGEF2, ARNT, ARPC5, ARSE,  ATF2, ATP5G1, ATP6VOC, B3GNT2, B4GALT4, BBC3, BBOX1, BCL2, BMP2, C1G  ALT1, CACNG8, CADM1, CAPN2, CAV2, CAV3, CCL13, CCL21, CCL26, CCL3, CC  L5, CCNB3, CCR10, CCR7, CD55, CDKN2A, CES2, CFL2, CHAD, CHUK, COL4A2,  COQ7, COX15, CREB3L2, CREB3L3, CRY2, CYP2B6, CYP2C9, CYP2J2, CYP4A1  1, DAAM2, DAG1, DAPK2, DDX4, DGKG, DGKQ, DHRS9, DIAPH1, DIAPH2, DRD1,  DRD5, DTX2, E2F3, EDN1, EFNA2, ENTPD1, ENTPD4, EPAS1, EXTL3, FABP4, F  GF17, FGF20, FGF3, FGFR4, FLAD1, FMO4, FTH1, FUT2, GADD45G, GALNS, GA  LNT2, GCDH, GGT6, GLDC, GMPPA, GMP5, GNAS, GNAZ, GNB3, GNRH2, GRM1, GS  TA3, GSTZ1, GUCA1A, GYS2, HADHA, HLA-</p> <p>DOB, HMGCR, HMGCS1, HSD3B2, IFNA13, IKBKE, IL12RB1, IL12RB2, IL20RB  , IL6R, IQGAP1, IRF3, ITGAD, ITGB2, KITLG, LCP2, LTC4S, MAN1A1, MAN2A  1, MAP2K3, MAP3K11, MCM6, MFNG, MGAT2, MGAT5, MKNK2, MMP7, MPDZ, MPZL  1, MRAS, MTMR6, MYD88, NCKAP1, NCOA4, NEU1, NFATC1, NKX6-</p> <p>1, NME4, NMNAT2, NOTCH1, NRAS, NSD1, NT5E, NT5M, NTRK2, OR10A3, OR10G  A2, OR10G7, OR10H5, OR2D2, OR2Y1, OR4C11, OR4F4, OR4K14, OR4S1, OR51A7,  OR51B4, OR52A1, OR52N2, OR5AC2, OR5B21, OR5C1, OR6T1, OR7C2, OR7D2, OSMR,  PAX8, PCK1, PFKFB4, PFKL, PF</p>
Negative_15922	<p>ADR, C8G, C9, CR2, DC1, F9, GK, GLA, GSS, HK2, KHR, K11, M01, MVD, MTC, OG  T, PTS, SHH, SI, TPR, VCL, VTN, XDH, AADAT, AARS, ABAT, ABL2, ACPT, ACSM  3, ACSS1, ACTB, ACY1, ADCY1, AGTR1, ALDH1L1, ALDH3A1, ALDOA, ALG3, AL  G5, ALOX12, AMD1, ANAPC5, APRT, ARHGEF1, ARHGEF2, ARNT, ARPC5, ARSE,  ATF2, ATP5G1, ATP6VOC, B3GNT2, B4GALT4, BBC3, BBOX1, BCL2, BMP2, C1G  ALT1, CACNG8, CADM1, CAPN2, CAV2, CAV3, CCL13, CCL21, CCL26, CCL3, CC  L5, CCNB3, CCR10, CCR7, CD55, CDKN2A, CES2, CFL2, CHAD, CHUK, COL4A2,  COQ7, COX15, CREB3L2, CREB3L3, CRY2, CYP2B6, CYP2C9, CYP2J2, CYP4A1  1, DAAM2, DAG1, DAPK2, DDX4, DGKG, DGKQ, DHRS9, DIAPH1, DIAPH2, DRD1,  DRD5, DTX2, E2F3, EDN1, EFNA2, ENTPD1, ENTPD4, EPAS1, EXTL3, FABP4, F  GF17, FGF20, FGF3, FGFR4, FLAD1, FMO4, FTH1, FUT2, GADD45G, GALNS, GA  LNT2, GCDH, GGT6, GLDC, GMPPA, GMP5, GNAS, GNAZ, GNB3, GNRH2, GRM1, GS  TA3, GSTZ1, GUCA1A, GYS2, HADHA, HLA-</p> <p>DOB, HMGCR, HMGCS1, HSD3B2, IFNA13, IKBKE, IL12RB1, IL12RB2, IL20RB  , IL6R, IQGAP1, IRF3, ITGAD, ITGB2, KITLG, LCP2, LTC4S, MAN1A1, MAN2A  1, MAP2K3, MAP3K11, MCM6, MFNG, MGAT2, MGAT5, MKNK2, MMP7, MPDZ, MPZL  1, MRAS, MTMR6, MYD88, NCKAP1, NCOA4, NEU1, NFATC1, NKX6-</p> <p>1, NME4, NMNAT2, NOTCH1, NRAS, NSD1, NT5E, NT5M, NTRK2, OR10A3, OR10G  A2, OR10G7, OR10H5, OR2D2, OR2Y1, OR4C11, OR4F4, OR4K14, OR4S1, OR51A7,  OR51B4, OR52A1, OR52N2, OR5AC2, OR5B21, OR5C1, OR6T1, OR7C2, OR7D2, OSMR,  PAX8, PCK1, PFKFB4, PFKL, PF</p>

Negative_15923	<p>ABO, C9, GK2, ILE, ITR, JUN, KDR, KMO, LCT, LPL, LTN, MET, MES, MVA, NF1, RET, SHH, TNF, TPO, TPR, UBC, ZYX, ACACA, ACADL, ACP1, ACSL1, ACY1, ADCY6, ADH5, ADRA1A, ADRB3, AGPAT2, AGRP, AKR1C2, ALDH2, ALDH3A1, ALDH4A1, ALG1, ALG10B, ALOX15B, ALPL, AMY2B, ANAPC10, ANAPC4, AOC3, APOA5, ARPC1A, ARRB2, ARSD, ATP12A, ATP4B, B3GAT3, B3GNT3, B3GNT4, B4GALT6, BET1L, BUB1, C1QA, C1QB, CACNA1C, CACNG1, CALML5, CAMK2G, CASK, CAV1, CBLB, CBLC, CCL11, CCL15, CCL23, CCL4, CD44, CD82, CDC45L, CDC6, CDK4, CDK5, CDS1, CHAT, CHD8, CHEK1, CHST11, CLCA2, CMPK2, COMT, COQ7, CPT1B, CREBBP, CSNK2A1, CTF1, CXCR4, CYCS, CYP2S1, DAPK1, DAPK2, DCTN1, DDHD1, DDX4, DERA, DGKD, DGKE, DGKI, DPAGT1, DRD5, DUSP10, DUSP9, DVL1, E2F1, EDN1, EFNA2, EGLN1, EPB41L2, FADD, FGF19, FGF2, FRAP1, FUT8, GAD1, GAL3ST1, GALNTL1, GART, GATM, GCH1, GCNT3, GCNT4, GFAP, GLI2, GLI3, GMDS, GNAI3, GNAI1, GNG12, GNPAT, GNRH1, GPX7, GRAP2, GRIN1, GRIN2D, GSTA3, GSTZ1, GUCY1A3, HADHA, HEMK1, HES1, HGSNAT, HHEX, HLA-</p> <p>F, HMGCL, HMOX2, HSD3B2, IDH1, IDI2, IFNA17, IFNA7, IFNW1, IL15, IL1R1, IL28A, IMPA1, INHBA, INHBB, IQGAP2, IQGAP3, ITGA10, ITGAE, JAG2, JAK1, KCNB1, LCP2, LFNG, LIFR, MAPK7, MAPK8, MASP2, MCAT, MCM3, MCM4, MCM7, MECP, MMP9, MRAS, MS4A2, NAGS, NEU3, NEUROG3, NFATC3, NME2, NMNAR, NUP, NUCN, BTK, CCL, CAL, UDA, LOC7, LCP, P7, GR2, HK2, PZ, TEO, TET, F19, JUP, LHB, MPZ, PGF, PLG, RPE, TNC, ABI2, ACO2, ACTG2, ACTN4, ADCY5, ADCY6, ADORA2A, ADSSL1, AGXT2, AKR1D1, ALDH1B1, ANAPC10, ATG7, ATP5B, ATP5I, B3GAT1, BAI1, BCKDHA, BDH2, BET1, BMP5, BMPR2, C5AR1, CACNA1D, CACNG1, CACNG8, CALML5, CCN1, CCR8, CDC14A, CDC14B, CDH2, CFTR, CHAD, CHAT, CHRDL, CLDN10, CLOCK, CLTB, CLTC, CNBP1, COL5A1, CRB3, CSF1R, CSF3R, CSNK1E, CTSG, CXCL10, CXCR6, CYP11B2, DBF4, DLL4, DPAGT1, DTYMK, EARS2, EDAR, EHMT1, F13A1, F13B, F2RL2, FABP1, FABP4, FGF12, FGF19, FIGF, FMO3, FOXO3, FRAT2, FUT1, FZD6, FZD9, FZR1, GALNT6, GALNTL4, GANAB, GFAP, GNAI2, GNAI3, GSTM1, GSTO2, GUCY1A3, HDAC1, HES1, HLA-DOB, HLA-</p> <p>F, HSPA1B, HSPB1, HYAL1, IARS, IFNA8, IGF1, IL12B, IL28A, IMPA2, IMPDH2, INADL, IRF5, ITPK1, LARS2, LCP2, LDHD, LEFTY1, LIAS, LRP5, LTC4S, MAP2K3, MAP3K6, MAPK3, MDH2, MICA, MITF, MKNK1, MMP7, MS4A2, MTHFD1, MTMR1, NAGK, NAMPT, NMNAT1, NOTCH2, NOTCH3, NPAS2, NR1D1, NRG2, NSDHL, NT5C2, NUDT2, NUDT9, OR10A4, OR10AG1, OR10G2, OR10H2, OR10J3, OR1OK1, OR1OX1, OR13J1, OR1G1, OR1L3, OR2G6, OR2M5, OR4A15, OR4D1, OR4M1, OR51A7, OR52E6, OR52I2, OR56A1, OR6C4, OR6N2, OR8D1, OR8H3, OR9K2, OR9Q1, OXCT2, PAPSS1, PARD6B, PARD6G, PDE4B, PDE7A, PEMT, PFN4, PGA</p>
Negative_15924	<p>AR, NUP, NUCN, BTK, CCL, CAL, UDA, LOC7, LCP, P7, GR2, HK2, PZ, TEO, TET, F19, JUP, LHB, MPZ, PGF, PLG, RPE, TNC, ABI2, ACO2, ACTG2, ACTN4, ADCY5, ADCY6, ADORA2A, ADSSL1, AGXT2, AKR1D1, ALDH1B1, ANAPC10, ATG7, ATP5B, ATP5I, B3GAT1, BAI1, BCKDHA, BDH2, BET1, BMP5, BMPR2, C5AR1, CACNA1D, CACNG1, CACNG8, CALML5, CCN1, CCR8, CDC14A, CDC14B, CDH2, CFTR, CHAD, CHAT, CHRDL, CLDN10, CLOCK, CLTB, CLTC, CNBP1, COL5A1, CRB3, CSF1R, CSF3R, CSNK1E, CTSG, CXCL10, CXCR6, CYP11B2, DBF4, DLL4, DPAGT1, DTYMK, EARS2, EDAR, EHMT1, F13A1, F13B, F2RL2, FABP1, FABP4, FGF12, FGF19, FIGF, FMO3, FOXO3, FRAT2, FUT1, FZD6, FZD9, FZR1, GALNT6, GALNTL4, GANAB, GFAP, GNAI2, GNAI3, GSTM1, GSTO2, GUCY1A3, HDAC1, HES1, HLA-DOB, HLA-</p> <p>F, HSPA1B, HSPB1, HYAL1, IARS, IFNA8, IGF1, IL12B, IL28A, IMPA2, IMPDH2, INADL, IRF5, ITPK1, LARS2, LCP2, LDHD, LEFTY1, LIAS, LRP5, LTC4S, MAP2K3, MAP3K6, MAPK3, MDH2, MICA, MITF, MKNK1, MMP7, MS4A2, MTHFD1, MTMR1, NAGK, NAMPT, NMNAT1, NOTCH2, NOTCH3, NPAS2, NR1D1, NRG2, NSDHL, NT5C2, NUDT2, NUDT9, OR10A4, OR10AG1, OR10G2, OR10H2, OR10J3, OR1OK1, OR1OX1, OR13J1, OR1G1, OR1L3, OR2G6, OR2M5, OR4A15, OR4D1, OR4M1, OR51A7, OR52E6, OR52I2, OR56A1, OR6C4, OR6N2, OR8D1, OR8H3, OR9K2, OR9Q1, OXCT2, PAPSS1, PARD6B, PARD6G, PDE4B, PDE7A, PEMT, PFN4, PGA</p>



Negative_15927	<p>F11, F2R, F9, GNE, GF9, HGD, HPD, IDS, IL4, JUN, KDR, MEL, MIF, MVR, UGT, TAT, TPR, ACOX1, ACP5, ACSM2A, ACTN4, ACVR1B, ADSSL1, AGRP, AKR1A1, A KR1C1, AKT3, ALDH2, ALDOA, ALDOC, ANAPC5, ANGPTL4, APAF1, ARPC4, ASR GL1, ATP5C1, ATP5F1, AVPR1A, B3GALT5, B3GAT2, B4GALT3, BCL2L1, BCMO 1, BDNF, BIRC3, CACNA1G, CACNG6, CAV2, CCKAR, CCKBR, CCL25, CCNA2, CD 55, CD70, CDC14B, CES7, CLDN19, CNGA3, COL11A1, CTBS, CX3CR1, CXCL11 , CXCL16, CYBA, CYP1A2, CYP26A1, CYP2S1, CYP7A1, DDX54, DDX56, DEGS2 , DGKB, DGKQ, DNMT1, DPYD, DRD2, DUSP4, DVL2, EFNA4, EHMT1, ENPP3, ENT PD8, EPHA5, FGF2, FMO3, FRAP1, FTMT, GALNT11, GGT6, GIT1, GNA13, GNMT , GRIN1, GRM5, GSTA3, GUCA1C, GZMA, HADHA, HLA- F, HMGR, HSD17B3, HSD17B7, HSD17B8, HTRA2, HYAL1, IL12A, IL1B, IL21 , IL6ST, INHBB, INPP5A, IRF3, ITGA2B, ITGB6, ITPK1, ITPKA, KAT2A, LAM A4, LIPF, LYPLA2, LYZL1, MAPK12, MARS2, MCM6, MGAT5B, MGLL, MNX1, MYH 7B, MYL7, NAGS, NAT1, NCAM2, NCR3, NFASC, NOD1, NOTCH1, NRG4, NTRK2, O GDH, OGDHL, OR10A3, OR10P1, OR10Z1, OR13C4, OR1A2, OR1J1, OR1J2, OR1 L1, OR1M1, OR2AE1, OR2AG1, OR2B6, OR2F1, OR4K2, OR4N2, OR4N4, OR51D1 , OR52J3, OR5F1, OR5K2, OR6F1, OR6K2, OR7A5, OR8D1, OR8D2, ORC6L, OXT R, P2RX4, P2RX6, PARS2, PARVA, PCYT1B, PDE4A, PDE4C, PDE5A, PDE6G, PD R7C, RDC, RAR, RAR, CD4, CLE, CPM, PDL1, PIG, PIR, PLY, PTK, TEL, ETT, MPZ, C</p>
Negative_15928	<p>GT, TFG, TYR, VTN, AARS2, ACSL6, ACSM5, ACVR1C, ADAM17, ADCY6, ADH1B, ADH7, AKR1C2, ALDH1A2, AMPD3, APC2, ARHGEF4, ARSB, ASIP, ASNS, ATP13 A2, ATP5C1, ATP6AP1, ATP6V0B, B4GALT5, BCMO1, BET1, BMPR1A, BMPR1B, BUB1B, C3AR1, C9orf95, CACNG3, CARD11, CARS, CCL14, CCL26, CCNE1, CC R4, CD55, CD8B, CES1, CHD8, CHEK1, CHIA, CHKB, CHR1, CHRM1, CHST13, CL DN18, CMAS, COL2A1, CSF2RA, CSF3, CTBS, CTTN, CXCL10, CYP26C1, CYP2F 1, CYP4A11, DAG1, DAPK3, DCTN1, DDX19A, DFFA, DGKA, DGKI, DHCR7, DHDD S, DHDH, DHODH, DIAPH1, DPM1, EFNA1, EIF4E2, ENAH, EPHB1, F11R, FCGR3 B, FDPS, FGF19, FGF21, FLT4, FMO3, FPGS, GALNS, GBE1, GCAT, GFAP, GJA1 , GMPS, GNG13, GNPAT, GNPDA1, GPT2, GRHR, GRIN2A, GSTA1, GSTA3, GSTA 4, HIF1A, HSD17B4, HSD3B1, HTR7, IFNAR1, IFNG, IL3RA, IL6R, IL6ST, IL 7R, IL8RA, INADL, IRAK1, IRF3, IRF9, IRS1, KLRC4, LAMA3, LIAS, LIPA, M AFA, MAP3K1, MAP3K5, MAPK11, MAPK12, MAPK14, MAPK3, MINPP1, MTHFD1L , MTHFD2, MYL7, MYL9, NCAM1, NCF1, NCKAP1, NEU1, NEU2, NEUROD1, NFASC , NFATC1, NFKBIA, NFYC, NKX6- 1, NME7, NMNAT2, NPR1, NRG1, NTN1, OR10H3, OR10P1, OR11H6, OR1A1, OR1 I1, OR1K1, OR1Q1, OR2A12, OR2B11, OR2M3, OR2T2, OR2T8, OR4B1, OR4C12</p>
Negative_15929	<p>A2M, AK7, BTK, C3, DBP1, DCC, DCN, DAF, GOR, GRS, GF1, Hk2, ICA1, MIP, NPT, ABCC8, ACSL4, ACTB, ACTC1, ACY3, ADCY9, ADH1A, AGPAT4, AKR1C3, ALG13 , ALG5, ALPL2, AMPD3, AMY2B, ANAPC7, APC2, APPL1, ARG1, ARHGEF7, ARS E, ATP4A, ATP5E, ATP5H, AVPR1A, B3GNT4, B3GNT5, BBOX1, BCMO1, BET1, B LVRB, BUB1B, C9orf95, CACNA1S, CAMKK1, CAV3, CCKAR, CCL24, CD3E, CD4 7, CDK5, CDK6, CES2, CFL2, CHAD, CHAT, CISH, CLCA2, CLDN10, CLDN7, CMP K1, COL6A1, CSF1, CTNNB1, CTPS2, CYP11B1, CYP26C1, CYSLTR1, DCTD, DC TN1, DDX41, DDX52, DKK4, DOCK1, DOLPP1, DUSP14, DUSP16, E2F3, EGFR, E IF4E2, ENO1, ENTPD6, EPHA3, EPHA5, ESPL1, ETNK1, F2RL2, FADD, FBXW11 , FGF22, FOXA3, FOXO1, FZD5, FZD7, GALE, GANC, GCDH, GGT5, GLO1, GMSD, GRAP2, GRIN1, GYS2, HAAO, HARS, HDAC2, HMOX1, HPRT1, HSD11B2, HSD17B 8, HSD3B2, HSPB1, HYAL2, IBSP, IFNG, IGF1, IL10RB, IL1B, IL28A, IL28B , IL2RG, IL3RA, IMPA2, IRS1, ITGB6, KDSR, KIR2DL2, KIR2DL4, KIR3DL1, KYNU, LCAT, LDHAL6A, LIPA, LRDD, LTA4H, MAFA, MAP4K2, MCM2, MDM4, MMP 14, MPP5, MYD88, MYL2, NAE1, NAGA, NARS, NCK1, NKX2- 2, NPAS2, NR1H3, NR5A2, NRXN2, NT5C2, NTSR1, OR10C1, OR10G4, OR10H1, OR10J3, OR12D3, OR13J1, OR2A5, OR2S2, OR4F5, OR4K15, OR51B4, OR52A5 , OR52J3, OR52N4, OR5B3, OR5V1, OR6B3, OR8J1, ORC2L, ORC4L, OXCT2, PA</p>



Negative_15933	ADO, DAO, DBI, DDI, FGG, HKT, IL7, KHK, MOS, RPE, SMO, SMP, TK1, UBC, ACA CB, ACAT1, ACP5, ACSL3, ACSL4, ACSM4, ACVR1, ADH1A, ADIPOR2, AGPAT6, AHCY, ALDOB, ALG10, ALOX12B, ANAPC1, ANGPTL4, APPL1, ARNT, ARPC1A, A RRB1, ARSE, ATP5J2, ATP50, ATP6AP1, ATP6V0B, B3GNT4, BCL10, BDNF, BM PR2, CACNA1S, CACNG3, CAPN2, CBLB, CBLC, CCL16, CCL23, CCL27, CCNG1, CCR3, CD14, CD40, CD58, CD72, CDH2, CHEK2, CLDN1, CLDN2, CLDN7, CLTB, CLTCL1, COL4A4, COQ6, CRB3, CREB3L2, CSF1R, CSNK1E, CTLA4, CTNNA1, C TSG, CXCL12, CXCL6, CYP17A1, CYP26A1, CYP7A1, CYSLTR2, DDX54, DERA, DGAT2, DGKE, DLL1, DLST, DPYD, DTX3L, DUSP9, EARS2, EFNA2, EFNA5, EGF R, ENPP7, EXT2, F2RL1, FGFR2, FOSL1, FOXO1, FRAT1, FUT9, GAD1, GALC, G ALK1, GALNS, GALNT12, GALNTL1, GALNTL2, GALNTL5, GAMT, GBA3, GBGT1, GCDH, GCNT3, GGT1, GLUD2, GMPR, GNA12, GNAI1, GNG12, GOT1, GRM1, GSTA 2, GSTA4, GSTA5, GSTK1, HCST, HEXA, HIBADH, HLA- C, HSD3B2, HTR2C, HTR6, IAPP, ICOSLG, IDH1, IDH3A, IDH3B, IFNA2, IGF1 R, IL13, IL18, IL6R, INPP5A, INPPL1, IRF3, IRS4, ITGA2, ITGA4, JAG1, J AK3, KAT2A, KAT2B, LDHB, LIPA, LPAR1, LTB4R2, LYPLA1, LYZL1, MAGI1, M AGI3, MAN1B1, MAPK11, MCAT, MEF2C, MGAM, MGST3, MICA, MKNK1, MPP5, MR AS, MTFMT, MTMR1, MYH2, NCF1, NEFL, NFAT5, NFYB, NRG4, NTN1, NUDT5, OC BTL, CBL3, C1D, C19orf7, C9orf71, C5orf103, C6orf103, C17orf6, C13orf116, TNC, VTN, AADAC, AANAT, ACSM4, ACSS1, ADCY6, ADRA1D, AGPAT3, ALDH1A3 , ALDH2, ALG2, ALPP, ALPPL2, APOA2, AQP7, ARPC4, ARPC5L, ATG7, ATIC, A TP5J2, ATP6V1H, BCAT1, BDH2, BET1L, BMPR1A, BRAF, CACNG4, CACNG7, CA MK2A, CAPN2, CASP9, CCL20, CCL5, CCR10, CD59, CDIPT, CFL2, CKMT2, CNG B1, COL1A2, COL4A2, COQ3, COQ6, CREB1, CSF1, CSNK2A1, CTS1, CUL1, CX CL11, CYBA, CYP2A7, CYP3A7, DAD1, DDX4, DDX47, DDX52, DGKZ, DTX3, DTX 3L, E2F4, EFNB2, EHHADH, ELK4, EPB41L1, EXTL2, F13A1, FGFR1, FGFR3, F LOT2, FMO3, G6PC2, GADD45G, GALE, GALNT8, GALNTL1, GFPT2, GJA1, GMDS , GNAS, GNPDA1, GOSR2, GRM5, GSTM5, GUCA1A, GUCA1B, HCLS1, HHEX, HLA- C, HLCS, HTR5A, IAPP, IARS2, IDH2, IDH3G, IDUA, IFNA13, IFNG, IFNGR2, IL15RA, INPP1, IRF7, ITGA1, ITGA11, ITGA2, ITGA3, ITGA7, KCNB1, KLRC 1, LCMT1, LDHAL6B, LIMK2, LIPA, LLGL2, LYPLA2, MAD1L1, MAN1B1, MAPT, MCM2, MCM3, MCM4, MCM5, MDM2, MEF2C, METTL2B, MGAT1, MTHFD1L, MTHFR, MYH14, MYH6, MYLK, MYLK3, NADSYN1, NCAM2, NCK2, NCKAP1, NOTCH2, NR1D 1, NRG2, NUDT2, NUDT5, OR10A4, OR10A5, OR1A1, OR1D5, OR1F1, OR1S2, OR 2V2, OR4F6, OR4S1, OR51E1, OR51T1, OR52K1, OR56A1, OR5I1, OR5V1, OR6 A2, OR6Q1, OR7C1, OR7G3, OR8J1, OXSM, PARVG, PDE1B, PDE4A, PDGFB, PDG FDR, PYS, C7orf82, C8orf139, C9orf74, C10orf107, C11orf118, C12orf57, C13orf116, MPL, MPL, MTR, MUT, OGT, PC, PGP, RPE, SHH, TK2, TNN, A4GALT, ABI2, ACAD 9, ACSL6, ACTB, ACVR1C, ADCY1, AKR1B10, ALOX15, AMY2B, APOC3, ARPC2, ARSA, ASAH1, ATP2A3, ATP6V1D, ATP6V1F, BCAT1, BCL2L1, BIRC2, BUB1B, C4BPB, CACNA1E, CACNG6, CACNG7, CALML5, CAMK2G, CASP9, CAV3, CCNA2, CDC25A, CDK5, CLDN7, CMAS, CREB1, CSAD, CSDA, CSF2, CTBP1, CTBS, CXCL 5, CYP1A2, CYP1B1, CYP2C9, CYP4F2, DCTD, DEGS2, DHCR7, DHX58, DKK1, D OLPP1, DPM2, DPYD, DRD1, DRD2, DRD5, ECSIT, EGFR, ERBB3, EVI1, FARSA, FBP1, FBXW11, FGF8, FLT1, FOXO1, FTMT, FZD10, GAB1, GADD45G, GALK1, G ALM, GALNT1, GALNT11, GALNT13, GALNT5, GALNT9, GALNTL4, GBGT1, GNB3 , GNPAT1, GRHPR, GRIA3, GSTM4, GSTO2, GUCA1B, HDAC1, HIP1, HSD11B2, HSD17B4, HTR2A, IAPP, IARS2, IDI2, IFNAR2, IFNGR1, IGF1, IL28RA, IL8 RA, IMPDH2, INPP5E, INPPL1, JAG2, JAK1, KCNB1, KLKB1, LARS2, LMO7, LR RC4C, MAGI1, MAP2K5, MAP3K3, MAPK13, MAPK7, MARS2, MCM2, MCM4, MEF2C , NCF1, NGEF, NMNAT2, NTF3, OR10A7, OR10G7, OR10H3, OR10K2, OR10Z1, O R13A1, OR1D5, OR1L1, OR1M1, OR2A25, OR2AT4, OR2L3, OR2M5, OR2T33, OR 4C13, OR4D5, OR4E2, OR4N4, OR4S1, OR51B4, OR51E1, OR51F1, OR52A1, OR 52N2, OR5B3, OR5K1, OR6C75, OR8B4, OR8H2, PCNA, PDE5A, PDE9A, PDXP, P CALM, PLAG1, PLAGL1, PLAGL2, PLAGL3, PLAGL4, PLAGL5, PLAGL6, PLAGL7, PLAGL8, PLAGL9, PLAGL10, PLAGL11, PLAGL12, PLAGL13, PLAGL14, PLAGL15, PLAGL16, PLAGL17, PLAGL18, PLAGL19, PLAGL20, PLAGL21, PLAGL22, PLAGL23, PLAGL24, PLAGL25, PLAGL26, PLAGL27, PLAGL28, PLAGL29, PLAGL30, PLAGL31, PLAGL32, PLAGL33, PLAGL34, PLAGL35, PLAGL36, PLAGL37, PLAGL38, PLAGL39, PLAGL40, PLAGL41, PLAGL42, PLAGL43, PLAGL44, PLAGL45, PLAGL46, PLAGL47, PLAGL48, PLAGL49, PLAGL50, PLAGL51, PLAGL52, PLAGL53, PLAGL54, PLAGL55, PLAGL56, PLAGL57, PLAGL58, PLAGL59, PLAGL60, PLAGL61, PLAGL62, PLAGL63, PLAGL64, PLAGL65, PLAGL66, PLAGL67, PLAGL68, PLAGL69, PLAGL70, PLAGL71, PLAGL72, PLAGL73, PLAGL74, PLAGL75, PLAGL76, PLAGL77, PLAGL78, PLAGL79, PLAGL80, PLAGL81, PLAGL82, PLAGL83, PLAGL84, PLAGL85, PLAGL86, PLAGL87, PLAGL88, PLAGL89, PLAGL90, PLAGL91, PLAGL92, PLAGL93, PLAGL94, PLAGL95, PLAGL96, PLAGL97, PLAGL98, PLAGL99, PLAGL100
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<p>Negative_15936</p>	<p>BTK, CD2, CTH, DCR, DCN, F12, F2, F2R, F7, F9, FGA, GK2, IL4, ME1, MIF, MUC  T, PTS, STS, UBB, ACPP, ACVR2B, ACY3, ADCY8, ADH7, ADRB1, ADRBK2, ADSL  , AGPAT4, AKR1C4, ALDH7A1, ALG10, ALG10B, ALG8, ALOX15, ALOX5, AMPD2  , ANAPC11, AOC3, AOX1, APC2, AQP7, ARPC2, ARPC4, ASRGL1, ATF4, ATIC, B  3GALT1, B3GAT2, B4GALT2, BAI1, BBOX1, BCKDHA, BIRC3, BMP6, C9orf95,  CACNB3, CARS2, CCL13, CCL20, CCL28, CCL8, CCNA2, CCNB2, CCND2, CCR2,  CD247, CD72, CDC25B, CDC25C, CDC7, CDKN2B, CERK, CHAD, CHEK1, CHRDL1, C  LDN14, CLDN15, CMPK1, CNTFR, COL4A1, CPT1C, CREB3L4, CSNK2A1, CTTN,  CYP1A1, CYP3A4, DAAM1, DAAM2, DAPK3, DDOST, DGKH, DKK1, DLST, DPYD, D  TX3, DUSP16, DUSP5, EFNA2, EGLN1, ENTPD2, EPB41, ESPL1, EVI1, F13A1,  F2RL1, FGF14, FGF3, FGF4, FGFR2, FLT4, FUT4, GALM, GBA3, GCDH, GDF6, G  GT5, GGT6, GJA1, GLUD2, GLUL, GNPDA2, GNRHR, GRIN1, GRIN2A, GRM5, HLC  S, HNF4A, HNMT, HPSE, HTR6, IDH3G, IFNGR1, IGSF5, IKBKB, IL22, IL22RA  2, IL2RA, IL9R, INHBB, IRF3, IRF7, IRF9, IRS2, ITGA10, ITGB2, JUND, KI  R3DL1, LAP3, LCAT, LDHD, MAGI2, MAGI3, MAP2K6, MAP3K7, MAP3K8, MCEE,  METTL2B, MNX1, MOV10L1, MYH11, NAGLU, NARS, NCR1, NEU2, NFASC, NFX1,  NKX2-  2, NT5C2, NUDT5, OCRL, OGDHL, OR10A6, OR10P1, OR11H4, OR13C8, OR1A2,  OR1E2, OR1J2, OR1L4, OR1Q1, OR2A5, OR2AT4, OR2B6, OR2M3, OR2M4, OR4F  A5L, B1B1, CAP1, CBL, CBS1, CCR5, DB1, PES, PGB, PFR, UAA, GEX1, I03, IL2, TE6</p>
<p>Negative_15937</p>	<p>, LTB, ME1, ME2, MYC, TK1, VCL, AACS, ACAA2, ACOT11, ACPP, ACSL3, ACTA2  , ADCY7, AGPAT2, AGPAT3, ALDH1A3, ALDH3B2, ALDH4A1, ALDOB, ALG5, AMD  1, AOC3, APOA2, APRT, ATG3, ATIC, ATP2A1, ATP50, B3GAT3, B4GALT4, B4G  ALT7, BAAT, BHMT, BMP6, BPNT1, BUB3, CACNA1B, CASP7, CCL15, CCL22, CC  L27, CD274, CDC2, CDC20, CHPT1, CHRM5, CHST12, CLCA4, CNGA3, COL5A1,  COL5A2, CREB3L2, CSNK1E, CSNK1G3, CTSB, CUL1, CXCL1, CXCL10, CXCR6,  CYP11A1, CYP2D6, CYP2E1, CYP2U1, DAXX, DBF4, DGKI, DHDH, DNMT3B, DTX  3L, DTYMK, EIF4B, EPHA2, EPHB1, F2RL1, FARSA, FCGR2B, FGFR4, FLOT1, F  MO2, FUT9, G6PD, GABARAP, GALNT5, GALNT9, GALT, GFPT2, GGT1, GMDS, GM  PS, GNAL, GNAQ, GNAS, GNPDA1, GPAM, GSTM1, GUCY1B3, HES1, HGSNAT, HMB  S, HRH1, HSD3B7, HSPB1, HTR2B, IFIH1, IFNA2, IKBKG, IL11, IL28B, IL3R  A, INPPL1, ITGA5, ITGA7, ITGB1, JAM3, KIR2DS5, KIR3DL1, LCMT2, LEF1,  MAML3, MGAM, MGAT4B, MMP1, MTMR1, MYH1, MYH15, MYH9, NCAM2, NME4, NOD  1, NSD1, NT5C, NT5C1A, NT5C2, NTF4, OLAH, OR10J3, OR10K1, OR10Q1, OR1  OR2, OR13C3, OR1E1, OR1L8, OR2A12, OR2T5, OR4F17, OR4N5, OR51E2, OR5  6B4, OR5H6, OR5I1, OR6C74, OR6Y1, OR7D4, OR7G2, OR8B4, P2RX2, PAK7, P  ARVB, PDE10A, PDE1A, PDE3B, PDGFD, PDHB, PDXK, PFKL, PGM2, PIAS2, PIP  479C, PLAC8, PLAL, PLCD4, POLR1A, POLR2A, PPP1CC, PPP1R1A, PPP1R2C</p>



Negative_15938	<p>ABO, ADA, ADC, BTC, DTK, C9, CS, DBH, PAH, P1N, GGH, GP3, HAL, HT1, IL2, N OG, TNN, TPO, ACAA2, ACSL1, ACVR1B, ADCY10, ADCY2, ALAD, ALG9, ALOX5, ANAPC2, APOA2, ASRGL1, ATP2A3, ATP4A, ATP5J2, ATP6VOB, AVPR1A, B3GA LT6, BMP4, BMPR1A, C1QC, C4BPB, C5AR1, CACNG6, CALML5, CARS, CAV1, CC L27, CCNA1, CCNH, CDC45L, CDH5, CFLAR, CIITA, CLCA4, CLDN18, CLDN5, C LDN6, CMPK1, CNTN1, COL4A2, COL5A1, COX10, CREB5, CSAD, CSF3R, CSNK1 G2, CTSS, CXCL6, CXCL9, CXCR3, CYP21A2, CYP26C1, CYP2A6, CYSLTR2, DA PK3, DDOST, DDX23, DEGS1, DGKB, DGKE, DGKI, DHCR7, DPM2, DTX2, DTX4, D USP1, EARS2, ENPP1, ENPP6, ENPP7, EPB41, EPHA7, FBP2, FCGR2B, FECH, F GF12, FGF7, FLT3LG, FMO2, FPGS, FRAP1, FUT3, FUT5, GALK1, GDF7, GLI1, GLUD1, GNAQ, GNAS, GNB1, GNMT, GOSR2, GRM5, GUCY1B3, HDAC1, HIBADH, H IBCH, HMOX1, HSD3B2, HTR2B, IFNA6, IL17A, IL25, IL2RG, INSR, IQGAP1, IRS1, ITGA3, ITGAL, ITGAV, ITGB7, ITPK1, JAG2, KDSR, KIR2DL4, LFNG, L IAS, LRRC4C, MAGI1, MAN1A2, MAN1B1, MAOB, MAP3K6, MAP4K2, MAPK3, MCM 4, MDH1, MDM2, METTL2B, MGST2, MPST, MTHFD1L, MTMR1, MTMR2, NCF4, NCS TN, NEU2, NMNAT2, NODAL, NOS3, NPR2, NT5M, NTRK2, NUDT9, NUMBL, OR10A G1, OR10S1, OR1J2, OR1L3, OR1M1, OR1S2, OR2AG2, OR2B11, OR2B6, OR2T1 0, OR2T8, OR4C13, OR4K17, OR4S2, OR51A4, OR51Q1, OR52J3, OR52R1, OR5 ASL, <del>ORXPC3, CRKPT3, GUK, GCH2, GKA, GR5, HKT, ICS, RDR, E, OMA, MA2, G</del> VD, NNT, RB1, TAT, TKT, TPO, VCL, AARS, AASDH, ACAD9, ACPT, ACYP1, ACYP 2, ADCY8, ADIPOR1, AGXT, AHCYL1, AKR1B1, ALDH1A2, ALDH1L1, ALG1, ALG 6, ALOX12, ALOX5, ALPPL2, ANAPC2, AREG, ATP5E, ATP5H, ATP5J2, ATP5L, ATP6VOC, BACE2, BCAR1, BIRC2, BIRC5, BMP4, CCL25, CCND3, CD86, CDC26 , CDC6, CEBPA, CHEK2, CHR1, CLDN22, COASY, COL6A1, CPOX, CRHR1, CRY2, CTBS, CXCL10, CXCL13, CXCR6, CYP11B1, CYP11B2, CYP1B1, CYP2C9, CYP3 A43, DBF4, DCXR, DDX54, DEGS2, DHRS4L2, DHRS9, DTX3, DUSP4, DVL3, E2F 4, EDNRB, EGFR, EGLN1, ENTPD7, FBXW11, FCGR3A, FGFR2, FGFR3, FLOT1, F LT1, FMO1, FMO2, FPGT, FTCD, FUT6, FZD10, GAB1, GALC, GALNT11, GALNTL 2, GDF6, GLDC, GLS2, GNAT3, GOT1, GPD1, GPD1L, GRHPR, GRIA3, GSTT1, GS TZ1, HBEGF, HEXB, HLA- DRA, HSD11B1, HTR7, IDH1, IDH3G, IL10RA, IL13RA2, IL17RB, IL1B, IL1R 1, IL1RAP, IL4R, IMPA1, ITGA11, ITGA6, ITGAX, ITGB3, KIR3DL1, KLRC4, LARS, LHCGR, LMO7, LTC4S, MAD2L2, MAFA, MAN1B1, MAOA, MAP3K7, MAPK8, MASP1, MMP1, NARS2, NAT1, NAT2, NAT5, NFASC, NFATC2, NFYC, NLGN3, NPR 1, NPR2, NUDT2, OGDH, ONECUT1, OR10G8, OR10G9, OR10P1, OR10S1, OR14J 1, OR1J2, OR1J4, OR2A42, OR2AT4, OR2C1, OR2D2, OR2F1, OR2T12, OR2T5, OR4C13, OR4C16, OR4D6, OR4K5, OR4N2, OR4X2, OR51B5, OR51F1, OR51M1, <del>OR5A1, OR5B1, OR5C1, OR5D1, OR5E1, OR5F1, OR5G1, OR5H1, OR5I1, OR5J1</del></p>
Negative_15939	



Negative_15943	<p>ADC, ADK, AK7, BAD, CKM, CS, EDA, F12, FGG, GP9, ID4, IL2, IL3, LCT1, LPO, MAG, ME3, MPZ, OAT, PLG, RDX, SFN, SP1, VTN, AARS2, ACADL, ACADS, ACOX1, ACSL5, ACSL6, ACSM4, ACTB, ADH1A, ADH4, ADRB2, AGPAT2, ALDH1A1, AMPD1, APOA2, APOE, AREG, ATG12, ATN1, ATP12A, ATP6V1D, B3GNT3, B4GALT5, BMP4, BMPR2, BUB1, CACNA1B, CCL1, CCL3, CCNA1, CCR5, CD19, CD226, CD27, CD38, CD3E, CD80, CDS1, CHRM1, CHST13, CLDN11, CMBL, CNDP1, CREB1, CSAD, CSF2, CTBP2, CTNND1, CYFIP2, CYP19A1, CYP27A1, DCTD, DDX18, D EGS1, DHFR, DLL1, DPM2, DPYD, DRD5, DUSP8, E2F3, E2F5, EDNRB, ENO1, EN TPD1, EPRS, FASN, FCER1G, FCGR3B, FGF2, FGF6, FGF9, FGFR2, FGFR3, FLT 3, FLT3LG, FTCD, FTMT, FUT8, G6PC2, GADD45G, GALNT12, GALNT6, GALNT8 , GANC, GBBT1, GDE1, GDF7, GGCX, GJA1, GLI1, GLI3, GLS2, GNPDA1, GRB2, GRIN1, GRM1, HAAO, HLA-DRA, HLA-F, HSD17B2, IARS2, IDH3G, IFT57, IL10RA, IL17A, IL20RA, IL8RA, IL8RB , IRAK2, ITGA1, ITGB2, ITGB4, JAG2, KAT2A, KLK3, LALBA, LAMB4, LILRB3 , LIPT1, LMO7, MAML3, MAP3K3, MAP3K4, MAP3K6, MAPK1, MAPK13, MAPK8, M GAT5, MGAT5B, MGST2, MINPP1, MIOX, MKNK2, MNX1, MTHFD2, MYH2, NCF4, N FKB1, NKD2, NLGN3, NME2, NME4, NUDT9, OR10G8, OR10H4, OR10K1, OR10R2 , OR11H1, OR2A12, OR2A2, OR2AE1, OR2D3, OR2G3, OR2T11, OR2T6, OR4C12</p>
Negative_15944	<p>FTD, G6, GDA, GLS, GGD, GRB1, ID3, ID4, NPE, PGP, PTF, HCLSF, ACSL4, ACSL 6, ACSM4, ACVRL1, ADCY10, ADCY4, ADH1B, ADIPOQ, ADSS, AGPAT1, AKR1D1 , ALAD, ALG3, ALPPL2, AMDHD2, ANPEP, AREG, ARRB2, ATP12A, ATP13A2, AT P5G3, AVPR1A, AXIN2, B3GAT1, BCAR1, BCAT1, BDKRB1, BLNK, BLVRA, BLVR B, BMP8A, BMPR2, BRAF, C1QB, C1QC, CAMK2A, CAMK4, CASP3, CCL7, CCL8, C CR10, CCR4, CCR6, CD22, CD3E, CD8A, CDC2, CDC25B, CDC25C, CDH5, CDK2, CDK4, CDKN2D, CHDH, CHST12, CLCA2, CLDN17, CLTB, CMAS, CMPK1, COL5A2 , CPT1A, CREB3L1, CREB3L4, CRKL, CSF3R, CXCL11, CYP1A2, CYP26C1, CYS LTR2, DBF4, DDIT3, DDX47, DHRS9, DNMT3B, DPM3, EGLN3, EHHADH, EIF4E, ENTPD8, EPB41L3, EPOR, EXTL2, FBXW11, FGF18, FGF2, FGFR1, FGFR2, FGF R4, FUT5, FUT6, FUT7, GALNT7, GALNT9, GANC, GLG1, GLI1, GNA15, GNAI3, GNMT, GNPAT1, GNRHR, GOT2, GP1BB, GPLD1, GRB2, GRM1, GSTK1, GSTM1, G STM2, GUCA1B, GUCY1A3, GUSB, HADHA, HMGS1, HNMT, HSPA8, HYAL2, IDH1 , IFNA4, IFNAR1, IFNW1, IFT57, IKBKG, IL18, IL21R, IL4R, INMT, INPP4A , INSR, ITGA1, ITGA2, ITGB4, KIR3DL1, KLK3, KLRC1, LAMC3, LGMN, LRDD , LTB4R2, MAML1, MAP3K11, MAP3K13, MAP3K7, MAPK7, MCM2, MDH2, MTHFD1 , MTHFD2, MYH11, MYH3, MYH4, MYH6, NAGK, NAT1, NCOA4, NCOR1, NFKBIA, N LGN3, NRCAM, NSDHL, NTSR1, ODC1, OGDH, OR10AD1, OR10G9, OR10J3, OR10 R1, OR10R2, OR10R3, OR10R4, OR10R5, OR10R6, OR10R7, OR10R8, OR10R9, OR10R10, OR10R11, OR10R12, OR10R13, OR10R14, OR10R15, OR10R16, OR10R17, OR10R18, OR10R19, OR10R20, OR10R21, OR10R22, OR10R23, OR10R24, OR10R25, OR10R26, OR10R27, OR10R28, OR10R29, OR10R30, OR10R31, OR10R32, OR10R33, OR10R34, OR10R35, OR10R36, OR10R37, OR10R38, OR10R39, OR10R40, OR10R41, OR10R42, OR10R43, OR10R44, OR10R45, OR10R46, OR10R47, OR10R48, OR10R49, OR10R50, OR10R51, OR10R52, OR10R53, OR10R54, OR10R55, OR10R56, OR10R57, OR10R58, OR10R59, OR10R60, OR10R61, OR10R62, OR10R63, OR10R64, OR10R65, OR10R66, OR10R67, OR10R68, OR10R69, OR10R70, OR10R71, OR10R72, OR10R73, OR10R74, OR10R75, OR10R76, OR10R77, OR10R78, OR10R79, OR10R80, OR10R81, OR10R82, 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OR10R184, OR10R185, OR10R186, OR10R187, OR10R188, OR10R189, OR10R190, OR10R191, OR10R192, OR10R193, OR10R194, OR10R195, OR10R196, OR10R197, OR10R198, OR10R199, OR10R200, OR10R201, OR10R202, OR10R203, OR10R204, OR10R205, OR10R206, OR10R207, OR10R208, OR10R209, OR10R210, OR10R211, OR10R212, OR10R213, OR10R214, OR10R215, OR10R216, OR10R217, OR10R218, OR10R219, OR10R220, OR10R221, OR10R222, OR10R223, OR10R224, OR10R225, OR10R226, OR10R227, OR10R228, OR10R229, OR10R230, OR10R231, OR10R232, OR10R233, OR10R234, OR10R235, OR10R236, OR10R237, OR10R238, OR10R239, OR10R240, OR10R241, OR10R242, OR10R243, OR10R244, OR10R245, OR10R246, OR10R247, OR10R248, OR10R249, OR10R250, OR10R251, OR10R252, OR10R253, OR10R254, OR10R255, OR10R256, OR10R257, OR10R258, OR10R259, OR10R260, OR10R261, OR10R262, OR10R263, OR10R264, OR10R265, OR10R266, OR10R267, OR10R268, OR10R269, OR10R270, OR10R271, OR10R272, OR10R273, OR10R274, OR10R275, OR10R276, OR10R277, OR10R278, OR10R279, OR10R280, OR10R281, OR10R282, OR10R283, 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OR10R384, OR10R385, OR10R386, OR10R387, OR10R388, OR10R389, OR10R390, OR10R391, OR10R392, OR10R393, OR10R394, OR10R395, OR10R396, OR10R397, OR10R398, OR10R399, OR10R400, OR10R401, OR10R402, OR10R403, OR10R404, OR10R405, OR10R406, OR10R407, OR10R408, OR10R409, OR10R410, OR10R411, OR10R412, OR10R413, OR10R414, OR10R415, OR10R416, OR10R417, OR10R418, OR10R419, OR10R420, OR10R421, OR10R422, OR10R423, OR10R424, OR10R425, OR10R426, OR10R427, OR10R428, OR10R429, OR10R430, OR10R431, OR10R432, OR10R433, OR10R434, OR10R435, OR10R436, OR10R437, OR10R438, OR10R439, OR10R440, OR10R441, OR10R442, OR10R443, OR10R444, OR10R445, OR10R446, OR10R447, OR10R448, OR10R449, OR10R450, OR10R451, OR10R452, OR10R453, OR10R454, OR10R455, OR10R456, OR10R457, OR10R458, OR10R459, OR10R460, OR10R461, OR10R462, OR10R463, OR10R464, OR10R465, OR10R466, OR10R467, OR10R468, OR10R469, OR10R470, OR10R471, OR10R472, OR10R473, OR10R474, OR10R475, OR10R476, OR10R477, OR10R478, OR10R479, OR10R480, OR10R481, OR10R482, OR10R483, 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Negative_15946	<p>BAD, CAT, CDA, FAH, FUK, FYN, GCR, GSN, GSS, HGD, HK2, ME2, MFL, OAT, SDS, TKT, TXK, ACADL, ACPT, ACSM2A, ACTA2, ACTB, ADAM10, ADCY7, ADH1B, AGXT, AKR1C3, ALDH3B1, ALG3, ANAPC2, ANAPC4, APOA2, APPL1, APRT, ARHGEF6, ASS1, ATP6V1D, B3GALT1, B3GAT1, B4GALT7, BBOX1, BDH2, BDKRB2, BMPR1A, BUB3, CACNA1D, CCL2, CCL4, CCNA1, CCNB3, CCR6, CD28, CDC25A, CDKN1B, CHDH, CHST13, CLCA2, CLDN14, CNGA3, CNTNAP2, COL1A1, COX15, CPRT1B, CSF1, CTSB, CX3CL1, CXCL10, CXCL6, CYP27A1, CYP2E1, CYP4A11, CYP8B1, DDHD1, DDX55, DFFA, DGAT2L4, DGKQ, DPAGT1, DUSP2, DUSP5, ECSIT, ENAH, ENTPD8, EPAS1, EPHX1, ETNK2, FCGR3A, FGF14, FGF22, FGF8, FUT8, FUT9, GADD45B, GADD45G, GALE, GALNT10, GBE1, GCLC, GLG1, GMPR2, GNA15, GNG12, GNG3, GNPDA1, GNPDA2, GP1BA, GPAA1, GPAM, GSTP1, HMGCR, HTR2A, HTR4, IFNAR2, IKBKB, IL1B, IL23A, IL2RB, IL2RG, IQGAP2, IRAK3, ITGA11, ITGA2B, ITGA3, ITGB4, KNG1, LDHA, LRP6, MAP2K7, MAP3K7, MCM4, MDH1, MGAT3, MMP9, MTHFD1L, MYD88, MYH13, MYH9, MYLK2, NCKAP1L, NCOR1, NCOR2, NCR3, NKX3-1, NMNAT1, NMNAT2, NPR1, NRAS, NT5C1B, NT5E, OR10A3, OR10A5, OR10Q1, OR10X1, OR13C3, OR1F1, OR1L1, OR1L6, OR2A2, OR2A42, OR2G6, OR2L2, OR2M5, OR2Y1, OR4D5, OR4F5, OR4K15, OR4P4, OR4S1, OR51E2, OR51Q1, OR52B4, OR52E4, OR5D16, OR5P3, OR5V1, OR6X1, OR7A17, OR8J1, OR9Q2, OXCT1</p>
Negative_15947	<p><del>ADA, AGK, PAK3, RAR, RPTC, CUBB, CBY, DLD, F11, PP5, PUK, GDA, GGR, GR2, GLE, HGF, IL2, IL3, LHB, MET, MVK, OTC, PML, RFK, ZYX, ABL2, ACAA2, ACADL, ACHE, ACO2, ACOT12, ACPP, ACSM4, ACSS3, ACTB, ADCY4, ADCY9, ADH1A, ADH4, ALAD, ALDH1A1, ALDH1L1, ALDH3B2, ALG11, ALG2, ALG3, ALG9, AMHR2, ANAPC10, ANAPC11, ANGPTL4, AREG, ARHGEF6, ATP5J2, AXIN1, AXIN2, B4GALT1, B4GALT2, BET1, BLNK, BMP8B, C1GALT1, C1QB, CACNB4, CBLB, CCL27, CCL8, CD14, CD247, CD27, CD58, CD99, CDC23, CDC6, CD01, CLDN10, CLDN18, CLDN7, CNTN1, COL1A1, COL4A1, COL5A1, CREB1, CSF1, CSNK2A1, CTNNA3, CTPS, CTSB, CYP2C18, DAPK2, DAXX, DBF4, DDB2, DDHD1, DDX23, DDX52, D ERL1, DIAPH1, DIAPH2, DKK1, DRD1, DUSP4, E2F3, E2F5, ECHS1, EGLN3, ENPP7, EPB41, EPHA4, EPHB2, EPOR, FECH, FGF10, FGFR4, FUT2, FUT5, FUT8, FZD1, GAD2, GCDH, GCLC, GCNT1, GLUD2, GRIN2C, GUCY2D, HES1, HLA-DRA, HLCS, HSD17B4, HSPA1B, HYAL2, ICOSLG, IDH2, IFNA13, IFNA17, IFNA2, IL11RA, IL12RB1, IL18R1, IL18RAP, IL28RA, IMPDH2, INHBA, INPP5A, INPP5E, ITGA1, ITGB1, ITPKA, KLKB1, LALBA, LAMB2, LTA4H, MAP3K12, MAP4K1, MAPK10, MASP2, MAT1A, MDH1, MFNG, MGAT3, MMP1, MTHFD1L, MTMR1, MYH2, MYL7, NAT2, NEFL, NFAT5, NFATC1, NMNAT3, NRG2, NRG3, NSD1, NTN1, NTRK2, NUDT12, NUDT2, OGDH, OGDHL, ONECUT1, OR10G8, OR10K2, OR11A1, OR12C2, OR13J1, OR2A4, OR2C1, OR2E1, OR2T2, OR2T5, OR2T6, OR51G1</del></p>

Negative_15948	<p>CBS, CPH, CRT, CRH, EPO, FGB, FYN, GPO, IVD, ME2, ME3, MSN, NPL, S1, SIM, TYR, VTN, ABAT, ACAD9, ACADL, ACTN2, ADCY6, ADH6, ADRA1B, AGRP, ALDH6A1, ALPPL2, AMY2B, ANAPC1, ANAPC4, ANPEP, AQP7, ASCC3, ATIC, ATP2A2, BAIAP2, BCAT1, BCAT2, BIRC5, BUB3, CACNG7, CALML6, CAMK2B, CAPN2, CAV3, CCND2, CCNG1, CD34, CD40LG, CDK2, CDK5, CHAT, CHPF, CLDN1, CLDN19, CLDN7, CREBBP, CTF1, CTSL1, CYP26C1, CYP2C9, CYSLTR1, DAAM2, DAPK2, DDX23, DDX50, DFFA, DGAT2, DGAT2L4, DGKE, DGKH, DGUOK, DHCR24, DHDDS, DHODH, DKK2, DPYD, DTYMK, EARS2, EFNA5, EGLN3, ENAH, EPB41L3, EPHB6, ERBB3, ER01L, ETS1, EXT2, FASN, FGD1, FGFR2, FOXA3, FZD9, GAD2, GALC, GALNT7, GDF7, GLUD2, GLUL, GMPS, GNA11, GNA12, GNRH2, GRIN2D, GSTM5, GSTO2, GYS2, HARS, HHIP, HMGCL, HSD17B3, IDI1, IGF1R, IL15RA, IL23R, INHBB, IPMK, IRS2, ITGAV, JAK1, KIR2DL4, KLRC3, LAMB3, LDHA, LGMN, LIPG, LTBR, MAML2, MAP2K3, MCEE, MGAT3, MITF, MMP14, MMP2, MYL9, NADK, NAT1, NAT5, NAT6, NEFM, NEUROD1, NKX3-1, NMNAT2, NOS1, NT5C2, NTNG1, OGDHL, OR10T2, OR13C9, OR2A14, OR2B11, OR2T1, OR2V2, OR4E2, OR4S2, OR4X2, OR51G1, OR52B6, OR52L1, OR52N1, OR5R1, OR6Q1, OR7A17, OR8A1, OR8B8, ORC1L, P2RX7, PDE7A, PDHA2, PDHB, PEMT, PER2, PERP, PFKM, PFN4, PGLS, PGS1, PIGT, PIK3CA, PIK3R1, PITXAD, PNL1, CD8, DDIT2, P2K, PPER, PPAR, PGG, PNY, PDS, PPS1, PCCR, GHR, CDAL, IHH, LPO, MUT, OAT, PGD, PVR, SMS, TKT, TNF, VCL, AACs, AANAT, ABLIM2, ACACB, ACHE, ACSL4, ACVR1B, ADCY1, ADH6, ADORA2A, ADRBK2, AGPAT1, AGPAT4, AGXT2, ALDH5A1, APH1A, APOA2, APOE, ARD1A, ARNT2, ARPC4, ARPC5L, ASIP, ASNS, ATP4B, BACE2, BCAT2, BLVRB, BMP4, C1GALT1, CACNG3, CACNG8, CADM1, CALML3, CAMK2B, CAMKK2, CARS, CASP10, CASP6, CCKBR, CCL24, CCL4, CD14, CD70, CD79B, CD99, CDC16, CDH1, CDKN1A, CDKN2D, CDS1, CHIA, CHST13, CLDN17, CLDN8, CLDN9, CNTN1, COL2A1, CRKL, CRY2, CSF2RA, CSNK1A1, CTLA4, CTNNA3, CX3CL1, CXCL10, CXCL5, CXCL9, CXCR5, CYP2A13, CYP2A7, CYP2C8, CYP2C9, CYP4A11, DAD1, DARS2, DDX55, DGKH, DHRS4L2, DIAPH3, DNMT3A, DPYSL2, DTX3L, DUSP6, E2F3, ECSIT, EHHADH, ELK1, ENAH, ENPP2, EPB41L2, EPHA1, F2RL1, FADD, FARSA, FDPS, FGFR2, FGFR3, FRAT2, GALM, GGT7, GLI2, GLUL, GNA14, GNG3, GNPAT, GPD1, GSTA4, GSTK1, GSTM1, GSTM3, GZMB, HAAO, HAO1, HARS2, HEMK1, HLA-DRA, HRAS, HSD17B4, HTR5A, ICAM3, ICOS, IFNA13, IFNA14, IFNA21, IFNAR2, IFNGR2, IL10, IL10RA, IL13RA1, IL13RA2, IL15RA, IL3RA, IL4R, IL6R, IL9R, ITGA8, ITGAD, KYNU, LAMA4, LPAR1, LRP6, LRRC4C, LTB4R2, MAD1L1, MAFA, MAN1A2, MAP2K2, MAP2K4, MAPK8, MAT2B, MCM6, MDH1, MLLT4, MTMR1, MANK, NAT6, NCOA4, NCR1, NEY1, NGR1, NTN1, OLHL, ONECUT1, OR10A6</p>
Negative_15949	<p>ADD, XCL1, CD8, DDIT2, P2K, PPER, PPAR, PGG, PNY, PDS, PPS1, PCCR, GHR, CDAL, IHH, LPO, MUT, OAT, PGD, PVR, SMS, TKT, TNF, VCL, AACs, AANAT, ABLIM2, ACACB, ACHE, ACSL4, ACVR1B, ADCY1, ADH6, ADORA2A, ADRBK2, AGPAT1, AGPAT4, AGXT2, ALDH5A1, APH1A, APOA2, APOE, ARD1A, ARNT2, ARPC4, ARPC5L, ASIP, ASNS, ATP4B, BACE2, BCAT2, BLVRB, BMP4, C1GALT1, CACNG3, CACNG8, CADM1, CALML3, CAMK2B, CAMKK2, CARS, CASP10, CASP6, CCKBR, CCL24, CCL4, CD14, CD70, CD79B, CD99, CDC16, CDH1, CDKN1A, CDKN2D, CDS1, CHIA, CHST13, CLDN17, CLDN8, CLDN9, CNTN1, COL2A1, CRKL, CRY2, CSF2RA, CSNK1A1, CTLA4, CTNNA3, CX3CL1, CXCL10, CXCL5, CXCL9, CXCR5, CYP2A13, CYP2A7, CYP2C8, CYP2C9, CYP4A11, DAD1, DARS2, DDX55, DGKH, DHRS4L2, DIAPH3, DNMT3A, DPYSL2, DTX3L, DUSP6, E2F3, ECSIT, EHHADH, ELK1, ENAH, ENPP2, EPB41L2, EPHA1, F2RL1, FADD, FARSA, FDPS, FGFR2, FGFR3, FRAT2, GALM, GGT7, GLI2, GLUL, GNA14, GNG3, GNPAT, GPD1, GSTA4, GSTK1, GSTM1, GSTM3, GZMB, HAAO, HAO1, HARS2, HEMK1, HLA-DRA, HRAS, HSD17B4, HTR5A, ICAM3, ICOS, IFNA13, IFNA14, IFNA21, IFNAR2, IFNGR2, IL10, IL10RA, IL13RA1, IL13RA2, IL15RA, IL3RA, IL4R, IL6R, IL9R, ITGA8, ITGAD, KYNU, LAMA4, LPAR1, LRP6, LRRC4C, LTB4R2, MAD1L1, MAFA, MAN1A2, MAP2K2, MAP2K4, MAPK8, MAT2B, MCM6, MDH1, MLLT4, MTMR1, MANK, NAT6, NCOA4, NCR1, NEY1, NGR1, NTN1, OLHL, ONECUT1, OR10A6</p>

Negative_15950	<p>ADC, ADK, CBS, CD4, CNK, DC1, F11, F3, FGG, HGF, IHH, LTN, PC, P1S, SMO, TXK, ACAD9, ACP2, ACSL4, ACSM3, ADCY5, ADCY6, ADORA2A, AGPAT1, AGRP, AHCYL2, ALCAM, ALDH4A1, ALDOB, ALG10B, APH1A, ARNT2, ARPC4, ASIP, ATP12A, ATP2A3, ATP5E, ATP5G2, B3GNT3, B4GALT3, B4GALT4, BCL2L1, C4BPA, CCL1, CCL4, CCL7, CCR3, CD244, CD247, CD3E, CD44, CD55, CD86, CDC14B, CDC25B, CDH3, CDH5, CDK4, CDKN2B, CES7, CFL1, CHD8, CLCF1, CLDN16, CLDN18, CMPK2, CNTFR, COL4A2, COL5A2, CPOX, CREB1, CXCL11, CYP1A2, CYP4F2, DAPK3, DARS, DAXX, DDB2, DDX54, DGKZ, DPM3, DVL2, E2F4, ECHS1, EDNRB, EFNB2, ENPP3, EPB41L2, EPHA1, EPHA3, EPHB1, EXOC7, F2RL1, FARSB, FGF21, FGF6, FM03, FSHR, FUT3, FZD5, GAD2, GALNT10, GALNT13, GALNT3, GART, GGT1, GGT6, GLG1, GMPR2, GNAT3, GNB1, GPAA1, GRB2, GSTA4, GUCY2C, GUK1, GUSB, GYS2, HADHA, HBEGF, HCCS, HGSNAT, HIBADH, HLA-C, HLA-G, HTR6, ICAM1, ICOS, IDH1, IDUA, IFNA13, IGSF5, IL12RB1, IL18, IL28A, IL28B, IL4R, IQGAP1, IRAK3, ITGB8, ITPA, ITPKA, LAMA3, MAFA, MAGI2, MAOA, MAP2K2, MAP3K4, METTL2B, MGAT3, MGAT4B, MGAT5, MIOX, MRAS, MTHFS, MYH13, NCKAP1L, NCOR1, NEU1, NFATC1, NFATC2, NFATC4, NSD1, NT5C, NTF4, OCRL, OR2A14, OR2A42, OR2AT4, OR2B6, OR2V2, OR2W1, OR2Z1, OR4D5, OR4F5, OR4F6, OR4X2, OR51A4, OR51B5, OR51G1, OR51I1, OR51T1, OR5L</p>
Negative_15951	<p><del>AK2, BARD, BRX, F3, F6, H1, O, EYB, RPT, PC, PROR, STR, TR, PPK2, RAG1, PAK3</del>  , ABCC8, ACACA, ACHE, ACMSD, ACVR1B, ADSS, AGPAT4, ALDOA, APRT, ARHGEF6, ARPC1A, ARPC5L, ASCC3, ATF2, ATP12A, ATP2A2, ATP5G2, ATP5I, AVPR1B, B3GALT1, BACE1, BMP6, BTRC, C1QC, CACNA1S, CALML3, CCL16, CCNA2, CCNE2, CD226, CD34, CD3E, CD46, CD8B, CDC45L, CDIPT, CDK6, CD01, CHRM1, CLDN14, CLDN16, CLDN18, CLDN6, CLDN7, COL1A2, COL3A1, COL4A6, CREB1, CRLF2, CSNK1D, CYP19A1, CYP1A2, DARS2, DCTN1, DCXR, DDHD1, DDX4, DEGS2, DGKI, DKK2, DLL3, DOT1L, DTX2, DUSP9, EFNA5, EFNB3, ENTPD2, ENTPD3, EPHA1, ERO1L, ETNK1, F13B, FABP4, FPGS, FSHR, FUT2, FZD3, GALNT1, GALNT9, GALT, GBT1, GCLM, GCNT2, GFAP, GNAL, GNG12, GNG3, GNMT, GPX7, GRM1, GSTM3, GUCY1A2, GYS1, HA01, HDAC2, HIF1A, HLA-DOA, HMOX2, HNF4A, IDH3A, IFNA17, IFNB1, IFNG, IGSF5, IL4R, IL8RA, IL8RB, IRAK2, IRS1, ITCH, ITGA11, ITGA5, ITPA, LAMB4, LCAT, LDHA, LILRB3, LTC4S, MAPK13, MAPK3, MCM2, MDH2, MICA, MPDZ, MYH1, MYL5, NAE1, NANS, NCKAP1L, NCR1, NCR3, NEU4, NNMT, NOX3, NPR2, NRG2, NRXN2, OR10G4, OR10H3, OR10R2, OR11L1, OR14C36, OR1L4, OR1N2, OR1S2, OR2A4, OR2B2, OR2H2, OR4N4, OR4X1, OR51B5, OR51T1, OR52I2, OR52J3, OR52L1, OR52N2, OR5M8, OR6B3, OR6Q1, OR7C2, OR7D2, OR8D2, OR8I2, OR8J3, P2RX1, P2RX6</p>

Negative_15952	<p>ADU, BID, C2, DDC, DDO, F8, F9, GGH, ILS, JUN, LEL, PAN, SDS, SRC, TMT, TIO, VCL, ZYX, AADAC, AASS, ABL1, ABLIM1, ACACA, ACPT, ACSM2A, ADH4, AGXT, AK3L1, AKR1B1, ALDH1L1, ALDH3A2, ALOX12B, AMHR2, ANAPC11, ANAPC7, APC2, APRT, ARHGEF2, ARNTL, ATP12A, ATP2A1, ATP6VOC, B3GALT4, B3GN T4, B4GALT5, BCL10, BCMO1, BDKRB2, BMP8A, BMP8B, BNIP1, BRAF, CACNA1A, CACNG2, CACNG7, CBLB, CBR3, CCL14, CCND2, CCNG1, CCR9, CD40, CD72, CDKN2B, CEBPA, CHAT, CKMT2, CNGA4, CNTF, COASY, COL1A2, COQ5, COQ6, CPT1B, CRB3, CSF1, CSF3, CSF3R, CSNK2A2, CTSB, CXCL1, CXCL5, CYP2E1, CYP2U1, CYP4A11, CYP8B1, DAPK2, DBF4, DDX19A, DERA, DGKB, DGKI, DHDDS, DIAPH3, DOCK1, DPAGT1, DVL3, E2F5, EHMT2, ELK4, EPHA8, EPHB2, F2RL1, F2RL3, FARSA, FASN, FDPS, FGF18, FGFR2, FOXO3, GAD1, GCNT2, GGT7, GLB1, GLG1, GLUD1, GRAP2, GRHRP, GUCY2C, HADHB, HEXA, HLA-DOA, HPSE2, ICOSLG, IDH3G, IDI2, IFNA16, IFNA8, IGFBP3, IL18, IL22RA1, IL28RA, INSR, IRS1, ISYNA1, ITGA2B, ITGAE, ITGAM, KIR3DL3, KITLG, KLKB1, KLRK1, LAMB1, LEFTY2, LEPR, LIAS, LRRC4C, LYZL1, MAGI2, MAML3, MAPT, MASP2, MCCC1, MGAT4B, MGAT5B, NADSYN1, NCOR2, NEU2, NEU3, NF X1, NGEF, NLGN1, NLGN3, NME7, NR1H3, NRP1, NT5C3, NTRK1, NTRK2, OGDHL, OR10A2, OR10AD1, OR10V1, OR13C4, OR13C8, OR1D2, OR1G1, OR1J1, OR1L</p>
Negative_15953	<p>ADP, C2, CPH, F10, FOS, G02, G11, G33, I12, RMD, MAG, MEZ, MY1, MTR, MVD, NNT, RFK, AADAT, AARS2, ACSL1, ACSM2A, ACTA1, ADCY6, ADIPOR1, ADRA1A, ADRA1B, ADRB1, AGPAT2, AGRN, ALDH1A3, ALDH5A1, ALDH6A1, ALDH9A1, ALDOC, ALOX15B, ALPL, ALS2, APOA2, ARG1, ARHGEF1, ARNTL, ATP5B, ATP5G1, ATP6V1D, AVPR1A, B3GALT1, BCAT1, BCAT2, BHMT, BMP8A, BUB3, CACNA1G, CACNG4, CACNG5, CASK, CASP8, CASP9, CAV3, CCL22, CCND3, CCNE2, CCNG1, CCR6, CDC25B, CDC26, CDC45L, CDKN2A, CHRM1, CLCA4, CLTCL1, CMPK1, COX15, CSNK1G1, CSNK1G3, CSNK2A2, CTPS2, CUL1, CX3CR1, CYBB, CYP8B1, CYSLTR2, DDB2, DERL1, DGKD, DHRS3, DUSP10, DUSP14, DUSP2, ECHS1, ECSIT, ENPP3, ENPP7, ENTPD2, ENTPD6, ENTPD8, EPHA6, EPRS, ERBB2, F2RL1, FARSA, FGF2, FGF4, FMO4, FRAT1, FTCD, FUT5, FZD9, GADD45B, GALNT9, GALNTL1, GANC, GBGT1, GMPA, GRIA3, GSTA3, GSTM2, GSTO1, HCCS, HLA-DOA, HLA-DRA, HMGCL, HMGCS1, HNMT, HRH1, HSD17B4, IARS2, ICAM2, IDH1, IDH3G, IDI2, IFNK, IGFBP3, IL10, IL10RB, IL1R2, IL20RA, IL21, IL24, IRF7, ITGA2B, ITGB2, ITGB7, LDHD, LRP5, LRP6, LTA4H, LTB4R2, MAD2L1, MAD2L2, MAFA, MAP4K1, MAP4K4, MAPK13, MAPK7, MAPK9, MDH2, MGAT4B, MLYCD, MTAP, MTHFD1L, MTMR2, MYH4, NARS, NCF1, NCK2, NEFM, NLGN3, NRP1, NSDHL, NT5C1B, NUDT8, OGDH, OR10A6, OR10G2, OR11G2, OR13C9, OR13D1, OR11I1, OR</p>











Negative_15964	<p>ATM, ACH, CAT, CRB, CKM, CS, DAO, F3, GHI, HGD, IEG, IL9, KIT, MAX, MOS, M  SN, MUT, PC, RB1, RDX, SDS, SFN, TEC, TK2, ABLIM3, ACACA, ACADS, ACADVL  , ACOX3, ACSL5, ACSM4, ADCY7, ADH1A, ADORA2B, ADRB2, AGPAT1, AKR1D1,  AKT3, ALDH1A3, ALDH3B2, ALG1, AMD1, ANPEP, ARG2, ARHGEF2, ASS1, ATP2  A1, ATP5J2, ATP6V0C, B3GALT4, BAAT, BBOX1, BCL2L1, BIRC5, BLNK, BMP7  , BMPR1B, BNIP1, BPNT1, BUB3, C7orf16, CACNA1C, CAV2, CCL14, CCL21, C  CL23, CCL28, CCND2, CCNE2, CCR3, CD36, CD40, CD74, CD79B, CDK2, CDKN1  C, CDS2, CHIT1, CHPT1, CHRM5, CHSY1, CLDN19, CMPK1, CNGA3, CNGA4, COL  1A1, COL1A2, COL5A2, COL6A1, COL6A2, CSF1R, CSF2RA, CSF3R, CSNK1E, C  TNNA1, CXCL1, CYP11B2, CYP17A1, CYP26C1, CYP2C19, DAPK2, DCXR, DDOS  T, DDX41, DDX54, DHDDS, DHRS3, DUSP10, DUSP7, E2F3, EDNRA, ENO2, ENTP  D4, EPHA5, EPHA8, EPHB2, EXOC7, FGF19, FGF22, FGF8, FRAP1, FSHB, FUT5  , FUT7, GADD45B, GADD45G, GAS1, GBE1, GCLC, GCNT4, GDF5, GGT5, GGT7, G  LI3, GNAI3, GNAI1, GNRH1, GUCA1B, H6PD, HAAO, HADHB, HBEGF, HCST, HLA  -</p> <p>DOA, HLCS, HMGCL, HMGCR, HNF4A, HRH1, HSD11B1, HSD17B1, HSPB1, IFNA1  7, IFNA2, IKBKG, IL11RA, IL18, IL1R2, IL23A, IL3RA, IMPA1, INPP5A, IN  PP5B, IRS2, ISYNA1, ITGA8, ITPA, JAG1, JAM3, JUND, KIR2DL3, KIR2DL4,  KLK3, KLRD1, LALBA, LAMB2, LAMB3, LFNG, LIFR, LLGL2, LYPLA2, MAD2L1,  </p>
Negative_15965	<p><del>MA1, AMY, APP, C8B, CKB, CVD, CA2, CAR, EBI, FTT, F3, F8, F7, GAT, G13, HG</del>  D, HK2, ID3, IL5, IL9, ILK, KHK, LCT, LSS, LYN, MIF, NGF, OAT, RPE, SCD, S  PN, SRF, STS, TNC, AACs, AASDH, ABL2, ACADVL, ACSM4, ACTG2, ACVR1, ACV  R2B, ADH7, AGPAT6, AGXT2, AKT1, AKT3, ALAS1, ALCAM, ALDH3B1, ALDH6A1  , AOC3, APOA1, APOC3, ARNT2, ARNTL, ARPC1A, ARPC5L, ATP5I, ATP6AP1, A  TP6V1F, AXIN1, B3GAT2, B3GNT2, BACE2, BBC3, BCMO1, BIRC2, BPGM, C4BP  B, CACNA1S, CACNB3, CACNB4, CACNG3, CACNG7, CADM1, CADM3, CCL28, CCR  3, CD244, CD3E, CD44, CD79A, CD99, CDC27, CDC42, CHIT1, CHPT1, CLDN14  , CLDN16, CMAS, CNGA4, COL6A1, CREB5, CXCR3, CYP1B1, CYP2A6, CYP2C8,  CYP4F2, CYSLTR1, DAPK3, DCTN1, DFFA, DHRS9, DMGDH, DOCK1, DPYS, DVL3  , E2F4, EPHB2, EPHB3, EPHX2, EPRS, ERBB4, EREG, ETS1, EVI1, F11R, F2RL  1, FASLG, FBXW11, FCGR3A, FGF19, FLT1, FRAT2, FTH1, FUT6, FZD6, GAL3S  T1, GALT, GAMT, GMPS, GNAO1, GNB1, GNG3, GP1BB, GSTA2, GSTM4, GSTP1, G  STT1, GUCA1C, GUCY1A3, GUSB, HCCS, HCST, HGSNAT, HSD17B8, HSD3B2, HS  PA8, IARS, ICAM2, IDH1, IFNA21, IL12RB1, IL17A, IL17RB, IL21R, INHBB  , IQGAP3, ITGA1, ITGA8, KCNQ1, KIR2DL1, KLRC4, LAMA4, LDHAL6B, LEFTY  2, LIPF, LLGL1, LMO7, MAP3K11, MAP3K13, MAP3K6, MAP3K7, MAPK13, MAT2  B, MBL2, MDH1, MDM4, MLYCD, MPDZ, MTR1, MYH14, MYH4, MYH7, MYH7B, MYL  5, NACA, NAT6, NCF4, NLGN2, NME8, NMT1, NR4A1, NRYN1, NTF5G1B, NTFM, NIT</p>











Negative_15976	AK5, CBS, DDC, EZR, F11, FUK, GGH, GHI, GK, GP3, GSK, HDC, HPD, IES, ILO, IL7, KHK, LCK, MPL, MVD, PAH, PDC, RDX, SMO, SP1, STS, TFG, TKT, TNR, AAS S, ACAA2, ACADSB, ACSS1, ACTG2, ADH1B, ADIPOR1, ADRA1A, ADSS, AGXT, A KR1D1, ALDH3B1, ALDOC, ALG1, ALG2, ALOX15B, AMPD1, AMY2B, ANAPC1, AP OA2, ARHGEF4, ATN1, ATP4A, ATP5F1, ATP5G1, ATP5G3, ATP6V1D, AXIN2, B 4GALT7, BBOX1, BHMT, BPNT1, BUB1, BUB1B, C5AR1, CACNA1D, CASP7, CCDC 6, CCL27, CCR6, CD40, CD44, CFTR, CHPT1, CHRM3, CHST13, CHSY3, CLDN7, CNGA4, COASY, COL1A1, CPS1, CREB3, CRLS1, CSDA, CXCL6, CYP17A1, CYP2 6A1, CYP27A1, CYP2C19, DAAM2, DAG1, DDX55, DGKI, DHFR, DHRS4, DHRS9, DLL4, DPAGT1, DPM1, DUSP16, ECHS1, EFNA3, EHHADH, ELK1, ENPP3, ENTPD 8, EPB41L2, EPHA6, EREG, F2RL2, F2RL3, FABP1, FARS2, FECH, FGF19, FGF 4, FGFR2, FGFR3, FRAP1, FSHR, FUT3, FUT9, FZD8, GALNS, GALNT12, GALNT 6, GALNT8, GCDH, GCNT2, GFAP, GLI3, GNA13, GNAO1, GOSR2, GRM5, GRPR, G UCA1C, HAAO, HADHB, HMGL, HNMT, HPSE2, HRAS, HSPA8, HTR2A, HTR7, IDH 2, IDI2, IFNA21, IL17RB, IL18R1, IL1RAP, IL22, IL22RA2, IL28B, IL2RG , INPP4A, INSR, IRAK3, ITGA7, ITGA9, ITGAE, JAG1, JAK3, KCNB1, KIR3DL 2, KLKB1, KYNU, LAMA4, LDHA, LDHD, LGMN, LIPG, LYPLA2, LYZL1, MAML3, M AP3K12, MCAT, MIOX, MPP5, MS4A2, MTHFD2, MYD88, MYH1, MYH4, MYL7, NAN
Negative_15977	Rm, C6A, CS, C11, DHA, EFC, F2N, FAS, FGA, FGB, FGC, GK, GP3, G11, TRH, L PL, LTB, NOG, PXN, SYK, TNC, TNN, TPR, ABAT, ACSS1, ACVR1C, ADCY5, ADCY 6, ADH7, AKT2, ALDH1L1, ALDH3B2, ALG9, ALOX12, ALOX15B, ALPP, ANAPC7 , ARHGEF4, ARPC1A, ASRGL1, ATP5A1, ATP50, B3GALT2, B3GNT3, B3GNT5, B 4GALT6, BDKRB2, BIRC2, CACNA1H, CACNB1, CACNG7, CARS, CCL11, CCL13, CCL22, CCL4, CCND3, CD40, CD46, CD55, CD59, CD86, CD99, CDH2, CDKN2C, CEBPA, CFLAR, CHPF, CLCA2, CLDN14, CLDN7, CLTC, CMPK2, COL2A1, COL4A 1, CREB3L2, CSF3, CSNK1A1, CSNK1D, CTBS, CTSS, CXCL13, CXCL16, CYP17 A1, CYP2E1, DAD1, DAPK2, DBF4, DDB2, DDX50, DDX51, DERA, DFFA, DGKE, D LL1, DOT1L, DUSP10, E2F4, EDNRB, EFNA2, EFNA5, EFN1, EGLN3, ENO1, EN O3, ENTPD1, ENTPD4, EP300, EPHA4, ETNK1, EXT2, FASN, FGF6, FGFR2, FLA D1, FLT1, FMO3, FSHR, FUT3, FZD3, FZD5, FZD6, FZD9, GALNT11, GALNT13, GALNT7, GFPT2, GLB1, GNA13, GPD1, GSTM1, GSTM2, GUCY1A2, HAAO, HARS2 , HCLS1, HEMK1, HIF1A, HIP1, HLA- DMA, HSD11B2, HSD17B7, HTR7, ICAM3, ICOSLG, IFNA8, IL17RB, IL1A, IL1 RAP, IL21, IL21R, IL28B, IL28RA, INMT, IRAK2, IRF3, IRF7, ITGA5, ITGB 2, KCNB1, LAP3, LCMT1, LHCGR, LRRC4C, LYZL1, MAN1C1, MAP2K3, MAP3K6, MARS, MCCC2, MDH2, MGAT1, MGAT3, MLLT4, MTMR1, MYH11, MYH15, NADSYN1
Negative_15978	ADC, CD2, CF1, DC1, F2Z, FUS, PST1, NTF, NTK2, NTK3, N7, TYR, KTY, KMO, ECK , MAX, ME2, ME3, PAH, PGD, PRL, SDS, SFN, SRC, TFG, WAS, A4GALT, AARS2, A ASS, ACADL, ACADS, ACPP, ACSL4, ACSL6, ACTC1, ACTN1, ACVR2A, ADCY10, ADCY3, ADRB1, ADSSL1, ALDH3B2, ALG11, ALG3, ALG5, ALOX15, AMD1, AMPD 2, ANAPC10, ANAPC7, AQP7, ARSB, ARSD, ATP5C1, ATP6VOC, ATP6V1D, BBOX 1, BLVRB, BMPR1A, BST1, CACNA1D, CACNA1F, CACNG1, CACNG2, CADM1, CAL ML3, CASK, CAV2, CCL2, CCL8, CD19, CD47, CD79A, CDC2, CDK6, CHAD, CHIT 1, CHSY1, CKMT2, CLDN1, CLDN7, CLDN9, CNGA3, CNGB1, COL4A1, COL4A6, C OL5A1, COL5A2, COMP, COX15, CPOX, CREBBP, CRLS1, CSAD, CSF1R, CSF3, C SNK2A1, CTBP2, CTPS, CXCL9, CYP11B2, CYP2C18, CYP2C9, CYP2D6, CYP4A 22, CYSLTR1, DDHD1, DDX19A, DDX4, DDX47, DFFB, DGKQ, DHRS4L2, DUSP9, DVL1, E2F2, ELK4, ENTPD5, EPHA4, EPHA5, EPHA7, EPHB6, EPHX1, EXTL1, F ADS2, FCGR3A, FGF19, FGF20, FGF3, FOXA2, FZD4, FZD7, FZD8, G6PC, GAB1 , GALNT9, GAMT, GLUL, GMPR2, GNA15, GNAO1, GNB1, GNG12, GOSR2, GPD1L, GPT2, GRAP2, GRIN2A, GRM1, GSTM4, GSTM5, GUCY1A2, HADHB, HGSNAT, HPS E2, HSPA1B, IBSP, IDH3G, IDUA, IFNA13, IFNA5, IFNAR2, IFNGR1, IKKB, IL13, IL29, IL6R, INADL, IQGAP2, ITGA8, ITPA, ITPKB, KLRC2, LAMC3, LC AT, LDHD, LHCGR, LIMK1, MAN1B1, MAN2A1, MAP2K1, MAPK1, MAT1A, MCCC1, MDM1, MGGT1, MPP5, MSL19, MYH10, NANC, NADP, NCAM2, NCF4, NFBM, NFKB1,

Negative_15979	<p>ADA, AK, CTH, DBH, DC1, EPO, F12, GSN, INS, KDR, MAG, MIR, NTF1, PGF, RDA, SMS, SPN, TFG, TKT, TYR, VTN, XDH, AACCS, AANAT, ACADSB, ACLY, ACOT12, A CPP, ACSL4, ADCY6, ADH5, ADIPOR1, ADORA2B, ADRA1A, AGPAT4, AGXT, AKR 1B1, AKR1C3, ANAPC5, APAF1, APLP1, APOA5, AQP7, ARG1, ARRB1, ATIC, AT P5C1, ATP5I, ATP6VOC, B3GALT6, B3GNT2, B3GNT5, B4GALT6, BAIAP2, BCL 2, BLNK, BMP6, BUB3, CACNG1, CAV1, CCKAR, CCKBR, CCL16, CCL19, CCL27, CCNE2, CCR1, CCR4, CDC23, CDC45L, CDH4, CDK6, CHDH, CLDN10, CLDN17, C LDN22, CMBL, CNTFR, CNTN2, COL6A2, CREB3L2, CRY2, CSF3R, CSNK2B, CTS G, CXCL16, CXCL3, CXXC4, CYCS, CYP1A1, CYP2C8, CYP2F1, CYP4F3, DDX55 , DGAT2, DGKI, DGKQ, DHRS9, DLL1, DPAGT1, DTYMK, DUSP6, ECSIT, EFNA3, EI24, ENO3, ENTPD4, ENTPD6, ENTPD8, EP300, EPB41L2, EPHB1, ERBB3, FC ER1G, FCGR3B, FGF14, FGF22, FGF3, FLOT1, FPGT, FUT3, FZD5, FZD6, FZD7 , GAL3ST1, GALNT10, GGT6, GNPDA2, GP1BA, GSTM2, GUCY2C, GUCY2F, HDAC 1, HLA-DOA, HLA- DOB, HSD17B3, HTR2C, IL12RB1, IL13RA2, IL15RA, IL20, IL7R, IL8RB, IL 9R, IPMK, IRAK4, IRS1, IRS4, ITGB8, KCNB1, KRAS, LAMB4, LFNG, LIAS, LL GL1, LTC4S, MAGI1, MAPK7, MAPK8, MCM7, MGST2, MKNK2, MOV10L1, MTFMT, MTHFD1, MTHFS, MYH7B, NAGA, NCAM2, NEU3, NFATC1, NFATC4, NFKB2, NFX1 , NKX2-</p>
Negative_15980	<p>AGN, AK7, NATC1, ANIP, CPD, DDY1, F7, NTES, Gln, Hm, NTE3, LCK, MTA, OR10, P13, SHH, SP1, TNR, AARS2, ABL1, ACAA1, ACOX3, ACTA2, ACTC1, ACTN4, ACVR1C , ACVR2A, ACVR2B, ADCY2, ADCY9, AGMAT, AGPAT4, AKR1B1, AKR1C3, ALDH1 A3, ALDOB, ALPP, ANAPC10, AOX1, ARHGAP5, ARPC5L, ATG3, ATN1, ATP5G3, ATP5H, ATP6V1A, AVPR1B, B4GALT4, B4GALT7, BUB3, CACNA1S, CACNG3, CA CNG4, CARS2, CCL14, CCL5, CCNB1, CCND3, CCR5, CCR6, CCR8, CD40, CD55, CD79A, CD80, CD8A, CDC23, CDC26, CDC27, CFL1, CHPT1, CISH, CNTNAP2, C OL4A2, COQ3, COQ5, CPT2, CREB5, CRKL, CXCL12, CXCL6, CXCL9, CXCR6, CY P27A1, CYP4F3, CYP8B1, DDB2, DDX41, DERA, DGKB, DKK1, DNMT3B, DOT1L, DTX1, DUSP14, DUSP3, DVL3, E2F1, E2F2, EDNRA, EFNA1, EHMT1, ENTPD2, E NTPD4, EP300, EPHA3, EPHA4, EXT1, FARP2, FBP1, FDPS, FGF1, FGF20, FGF R4, FMO4, FOSL1, FRAT2, GALNTL5, GAS1, GATM, GCH1, GGT7, GLI3, GLUD2, GNAI1, GNAL, GNPDA2, GNRH1, GPD1L, GPLD1, GRIA3, GSTM5, GUCY1A2, GUK 1, HADHA, HARS, HBEGF, HHEX, HMBS, HRH2, HTR2A, IARS2, ICAM2, ICAM3, I DH2, IFNA17, IFNA6, IFNA8, IFNW1, IKBKG, IL12RB1, IL18RAP, IL23R, IN PP4B, INPP5E, IRAK2, IRS4, ITGA2, ITGAL, ITGB2, ITGB8, KIR2DL4, KLRC 2, LAMA3, LCMT1, LDHAL6A, LMO7, LTA4H, MAD1L1, MAD2L2, MADCAM1, MALT 1, MAN1A2, MAN1B1, MAP3K6, MASP2, MBL2, MCM4, MDH1, MFNG, MTHFR, MTMR 9, MYH5, MYH9, NAF1, NCAM1, NCK1, NCKAD1, NCOB2, NFEEM, NEAT5, NEAT6,</p>

Negative_15981	ABO, ADA, BAX, CTS, CTK1, CR2, FGA, FN1, GGH, GLS, GPO, ID1, IL2, IIR, LPO, LSS, MPL, MVD, MYC, NF1, NOG, OGT, OSM, OTC, RPE, SMO, STS, TH, AADAC, ABLIM1, ABLIM2, ACTA2, ACVR2A, ADIPOR1, ADRA1D, ADSSL1, AGPAT4, AGXT, AK3L1, ALAD, ALDH3B1, AMDHD1, AMPD2, AMY2A, AOC3, APBB1, ARSE, ASAH1, ASSC3, ASS1, ATP2A1, ATP5B, ATP5H, ATP6V1D, B3GNT5, B4GALT6, BCAR1, BDKRB1, BMP6, BMPR2, BPGM, CACNA1G, CACNB2, CACNG6, CCL11, CCL19, CCND3, CCR1, CCR4, CCR8, CD44, CD48, CD55, CD86, CDC42, CDH2, CDK4, CDKN1B, CDS1, CEBPA, CES2, CHAT, CHKB, CHPT1, CHUK, CLDN20, CNTN1, CNTN2, COL4A1, CPS1, CRB3, CREB5, CRKL, CTBP2, CTNNA1, CTPS2, CTSB, CX3CR1, CYCS, CYP2A6, CYP2C8, CYP3A7, CYP4F3, CYSLTR1, DAAM1, DDIT3, DDX23, DGKH, DLL4, DVL2, ECHS1, EDAR, ENTPD8, EPHA2, EREG, F13B, FADS2, FARRSA, FARSB, FBP2, FGF20, FGF9, FIGF, FPGS, FUT8, FZD5, GAD1, GALE, GALNT2, GALNT5, GBE1, GDF6, GJD2, GLUL, GNAT3, GNRH1, GOSR2, GPD1, GPX7, GSTZ1, GUCY2D, GUSB, GZMB, HCCS, HCST, HEXA, HGSNAT, HSD17B7, HTR6, HTRA2, IARS, IFNA5, IFNW1, IKBKE, IL13RA2, IL1B, IL20RA, IL21R, IL8RA, IL8RB, IMPA1, INPP5B, IRF9, ITGA10, ITGA5, ITGB1, JAK3, KAT2B, KDSR, KIR2DL4, KLRC4, KLRK1, LAMC3, LCMT1, LDHB, LDHC, LEFTY2, LHCGR, LIPC, MADCAM1, MAGI2, MAN1A2, MAOA, MAP3K1, MAP3K5, MAP3K6, MAPK10, MCC
Negative_15982	ARR1, BAX, C9, CFB, CMC, CTK1, DUT, E2F1, E2F2, E2F3, GATA1, GDF9, GRS3, IGF1, IGF2, JUN, KDR, MIF, OSM, PAH, PLN, RET, SRC, TNC, TNN, TPO, TPR, ABL1, ABL2, ACP1, ACSL3, ACTA1, ACTN1, ADCY10, ADH1A, ADORA2A, ALDH1L1, ALDH3A1, ALDH3B2, ALDH4A1, ALDH7A1, ALG12, ALOX15B, AMHR2, ANAPC1, APH1A, APPL1, ARSD, ATP13A2, ATP2A2, ATP5A1, ATP5F1, ATP5J2, B3GAT2, B3GNT3, B4GALT2, B4GALT7, BACE1, BIRC2, C1QB, CACNA1F, CALML6, CASP10, CCNA2, CCND3, CCNG1, CD14, CD274, CD28, CD47, CD82, CDC2, CDC25C, CDKN2B, CDS2, CES1, CES7, CHAT, CHPT1, CHRM5, CKS1B, CLCA4, CLDN1, CLDN4, CMAS, CNDP1, CNTN1, COL5A3, CREB3L3, CSNK1A1, CTF1, CTNNA2, CTPS, CXCL6, CYP2C18, CYP2D6, CYP3A43, DAAM1, DAPK2, DARS, DDB2, DDX18, DDX19A, DGAT2L4, DHDDS, DHFR, DHRS4L2, DLST, DOLPP1, DPYS, DTX3, ENTPD3, EPAS1, ETNK1, ETNK2, F2RL3, FARS2, FARSB, FBXW11, FCGR3A, FMO1, FTH1, FTM, FUT5, GAD2, GADD45A, GAS1, GCDH, GGT6, GGT7, GNA13, GNPDA2, GNRH1, GNRH2, GPD1L, GRIN1, HDAC2, HES1, HIF1A, HIP1, HSD17B7, HSPA1B, HTR2C, IKBKE, IL10, IL10RB, IL13RA2, IL20, IL28B, INHBA, INMT, ITGAX, ITGB6, ITPK1, JAM2, KIR2DL4, LGMN, LILRB3, LIPT1, LYPLA2, MAP3K3, MAP3K5, MAP4K3, MAPK11, MAPK13, MAT2B, MCM3, MCM5, MGAT3, MTHFD1, MYL5, MYL7, NAGA, NEUROG3, NFATC3, NFKB2, NLGN3, NOX3, NRCAM, NT5C1A, NT5E, NHR3, NRX1, NUDT5, CBL, CBLB, CD4, CD6, CFP, CFB, CLC1, CFP, CFB, CFP, CFB, CFP, CFP, CFP, I, ILK, INS, KHK, MAX, MUT, PLN, RET, SCD, STS, TNC, VCL, ABCC8, ABL2, AC
Negative_15983	AA2, ACSM1, ACSM3, ACTA2, ACTN2, ADRA1D, ADRB3, ADSL, ADSS, AGPAT6, AGXT, ALDH1A2, ALDH3A2, ALPI, AOC2, AOC3, ARNT, ARSB, ARSE, ASMT, ATP5E, ATP5L, ATP6VOB, ATP6V1D, ATP6V1F, AVPR1B, BBC3, BCKDHB, BMP6, BMPR2, BUB3, CACNA1I, CACNG4, CACNG7, CAV2, CBLB, CCNB1, CCND2, CCNE1, CCR5, CD22, CD44, CDC25C, CDKN2B, CDS2, CHRM2, CHST11, CLDN18, CLDN2, CLDN9, CLOCK, CLTA, CLTB, COQ7, CPT1B, CSAD, CTNND1, CYP2A6, CYP2A7, CYP2E1, CYSLTR1, DAPK1, DAPK2, DDB2, DHX58, DIAPH1, DLST, DPM3, DUSP3, DUSP4, DUSP5, DVL1, E2F2, EDN1, EFNA4, EFNB1, EGFR, ENO2, ENTPD3, EPHA2, EPHA5, EPHB1, EPHB4, EPRS, EREG, F2RL3, FLOT1, FLT3, FLT3LG, FOXA2, GAD2, GALK1, GALNT14, GCDH, GDE1, GLI3, GNG12, GP1BB, GSTK1, GSTM1, GUCA1B, HAAO, HCST, HES1, HGSNAT, HRH1, HSD3B1, HSPB1, IDH1, IL17B, IL18, IL19, IL1R1, IL20RB, IL22, IL22RA2, IL7R, IMPA2, INHBB, INPPL1, IPMK, IQGAP3, IRS2, ITGA10, ITGA4, JAM3, KCNB1, KIR3DL3, LAMB1, LIPG, LIPT1, LRRC4C, LTA4H, LYZL1, MAML3, MAN2A1, MAOB, MAP3K12, MASP1, MICA, MS4A2, MYD88, NCAM2, NCF4, NCOA4, NEU2, NFATC1, NLGN1, NME7, NOTCH1, NRG4, NT5C1A, NT5M, ODC1, OR10Q1, OR13D1, OR13H1, OR14A16, O

Negative_15984	<p>BCR, BIC, C8G, CAT, CD2, CD4, DDC, DED, F11, FGG, GCR, GHR, GP6, HDC, HK1, IDS, IL8, LCK, LIF, LPO, MVD, RB1, TPO, TXK, UBC, AACS, ACADS, ACOT11, ADH1A, ADORA2A, AGPAT2, AGXT, AKR1B10, AKR1C2, AKT2, AKT3, ALDH1A2, ALDH3A1, ALG8, ALOX12, AMPD1, APRT, AREG, ATF2, ATN1, ATP5B, ATP5G2, B3GAT2, B4GALT3, B4GALT4, B4GALT6, BAAT, BCL10, BLNK, C1QA, C3orf10, CACNA1F, CACNA1G, CACNG8, CALML5, CAMK4, CBR1, CCKBR, CCL2, CCL24, CCNA2, CCR8, CD274, CD8B, CDC23, CDC7, CDIPT, CDK5, CDK6, CDKN1A, CDKN1B, CEBPA, CHR1, CLCA2, CLDN1, CLDN17, CLDN2, CLDN6, CNTN2, COL5A3, COQ3, CPS1, CRB3, CREB1, CREB3L1, CREB3L2, CSF2RB, CSH1, CSNK2B, CTB P2, CTLA4, CTSS, CX3CR1, CXCR6, CYP19A1, CYP27A1, CYP2A7, CYP2B6, CYP3A4, CYP3A5, CYP4A11, CYP4A22, DAAM2, DDB2, DDHD1, DDX19A, DGKD, DGKH, DHCR24, DHODH, DKK1, DLAT, DLST, E2F3, EFNA4, EFN3, EGLN1, ENO3, ENPP6, ENTPD4, ENTPD7, EPHB6, FGF19, FGFR1, FGFR2, FIGF, FLOT2, FMO1, FOSL1, FRAP1, FUT5, GALC, GALE, GALNTL2, GCLC, GGT6, GNB1, GSTA5, GSTM1, GUCY1B3, GUCY2D, HA02, HBEGF, HEMK1, HHEX, HLA-G, HMGCR, HSPA2, IARS, IARS2, IDI1, IKBKB, IL13, IL2RB, IL2RG, IL4R, IL5RA, INMT, INSRR, IRF7, ITGA7, ITGAE, ITGAX, JAG1, JAM3, KIR2DL2, KLC2, KLRK1, LAMB1, LILRB3, LIPE, LIPG, LRP6, MAD1L1, MAD2L1, MAD2L2, <del>MADR, CAM1, BID, CD4, CDA, CMB, DCR, DCT, BU1, P2RY10, MDR4, IL9F, JUN, KLF</del></p>
Negative_15985	<p>, SCD, SI, SPN, SYK, TAT, WAS, A4GALT, AASDH, ABLIM3, ACAT1, ACLY, ACOT12, ACP1, ACSS3, ACTN2, ACVR2A, ADH4, ADORA2A, ADRA1A, AFMID, AGPAT3, AKR1C2, AKT2, ALAS1, ALDH3A2, ALG10B, ALOX12B, ANAPC1, ANAPC2, ANAPC7, ARAF, ARNT, ARNT2, ASCC3, ASRGL1, ATF2, ATP5B, ATP5G3, AXIN2, B3GNT4, BCL2, BDH1, BIRC5, BLNK, BMPR2, CACNA1D, CACNB2, CACNB3, CACNB4, CACNG4, CALML6, CAMK4, CAMKK2, CBLB, CBR1, CCL14, CCL26, CCNE1, CD19, CD244, CD28, CD36, CD40, CD74, CDC27, CDC45L, CDKN1C, CHEK2, CHST12, CISH, CLDN10, CLDN16, CLDN17, COL2A1, COL3A1, CRB3, CREB3L4, CRHR1, CRY2, CSNK1E, CSNK1G3, CSNK2B, CX3CR1, CXCL11, CYCS, CYP17A1, CYP2A7, CYP2S1, CYP4A22, DAPK3, DCXR, DDIT3, DDX41, DDX55, DDX56, DFFA, DIAPH3, DKK1, DLL3, DOLPP1, DPM3, DPYD, DPYS, DTYMK, EIF4E, ENAH, ENO2, ENPP3, ENTPD3, EPHA1, EPHB3, EPHB4, F2RL2, FASLG, FBXW11, FCGR3A, FGD3, FGFR3, FLT3LG, FMO3, FPGT, GAD2, GALNTL4, GCLM, GFPT1, GLI1, GLI3, GLO1, GOT1, GP1BA, GPAA1, GPX7, GRIN1, GSTM2, GUCY2C, H6PD, HDAC2, HEMK1, HMGCS2, HSPA8, HTR4, IDI1, IFNA7, IFNAR2, IFNGR2, IGF1R, IL10RA, IL15, IL1B, IL29, IL7R, IMPA2, INHBA, INHBE, INMT, IPPK, IQGAP1, ISYNA1, ITGA1, ITGA11, ITGB6, ITPA, ITPKA, JAG1, KCNB1, KIR2DL1, KL</p>

Negative_15986	<p>AK2, BAX, BID, CD2, CD4, CSK, DHH, DLD, EBI, F2, F9, FOS, GAA, GP9, HGD, I  D3, ITK, ME1, MET, MYC, OTC, PC, PGD, PGF, SHH, TAT, TNN, UBB, AARS, ACAT  2, ACOX1, ACP2, ACP6, ACVR1C, ADCY1, ADRB2, AGPAT3, AKR1D1, ALDH3A2,  ALDH3B1, ALDH5A1, ALDH6A1, ALG1, AOC3, APBB1, APC2, ARD1A, ARHGAP5,  ARHGEF2, ARSD, ATF2, ATF4, ATN1, ATP2A1, ATP5F1, ATP50, B3GALT4, B3G  ALT6, BCKDHA, CACNB2, CACNB3, CBLB, CBR1, CCKBR, CCL24, CCL27, CCL3,  CCNA2, CCNB2, CCR2, CCR7, CD274, CD72, CD82, CDC14A, CDC23, CDC6, CDK  7, CFL1, CFLAR, CHEK2, CHKB, CHST12, CLDN18, CLDN2, CLDN8, CLOCK, CMB  L, CNGA4, CNTFR, COL11A1, COL5A2, COL6A1, COL6A2, COMT, CPS1, CPT1C,  CRKL, CRLS1, CSF2RA, CSNK1G1, CSNK2A2, CTNNA1, CTTN, CXCL6, CYP2C18  , DAPK2, DFFA, DFFB, DGKZ, DHDDS, DHRS3, DHRS9, DPM2, DUSP5, ECSIT, ED  A2R, EFN1, EGLN1, ENO3, ENPP3, ENTPD5, EP300, EPHA5, EPHX2, F2RL3, F  ABP1, FARS2, FBXW11, FCER1G, FGF11, FGF14, FGF8, FOSL1, FPGS, FSHR, F  TCD, FUT4, FZD3, G6PC2, GADD45B, GCNT2, GGT1, GMPS, GRIN2A, GTSE1, GU  CY2D, HLA-  C, HMGCS2, HNF1B, IGSF5, IKBKB, IL11, IL12A, IL12RB1, IL13RA2, IL15,  IL17RB, IL1A, IL21, IL25, IL28RA, IL2RA, IL2RB, IL2RG, IL3RA, IL7R, I  L8RA, INPP5A, INPPL1, IPMK, IQGAP3, ITGA2, ITGAE, ITGAL, KIR2DS5, KI  TLG, LALBA, LAMA3, LAMB4, LEPR, LIMK2, LIPF, LRP5, MAP4K1, MAPK12, ME  TTL, PRK, AGL, AK2, AIP, ROR, C85, UCA, CKB, CA1, UK2, CNA, F51, NLA, NFB</p>
Negative_15987	<p>, GP9, GSS, HK1, HYI, INS, ITK, LAT, MYC, OGT, PC, PVR, TNN, TNR, XDH, ABL  IM2, ACAD8, ACHE, ACLY, ACMSD, ACSM4, ADAM10, ADIPOQ, ADRBK2, AFMID,  AGXT, AK3L1, AKR1D1, ALDH1B1, ALDH3A1, ALDH4A1, ALG10B, ALOX12B, AL  PI, AMY2B, ARHGAP5, ARHGEF7, ARPC1A, ARPC3, ARSE, ASNS, ATF4, ATG7, A  TP5G2, B3GALT1, BACE1, BBC3, BPGM, BUB1B, C3AR1, C3orf10, C5AR1, CAC  NA1E, CACNB4, CALML6, CARD11, CAV1, CCL25, CCNB1, CCR8, CD22, CDKN2B  , CD01, CHKA, CISH, CLDN10, CLDN15, CLDN19, CLDN5, CLTC, CMBL, CNGB1,  COL4A4, COL5A2, COL6A2, COMT, COQ3, CREB3L1, CREB5, CSF3R, CSNK1D, C  SNK1G3, CSNK2A2, CTBS, CXCL1, CXCL16, CXCL2, CXCL6, CXCR6, CYBB, CYP  2C18, CYP4F3, DCXR, DDX54, DNMT3L, DTX1, DTX2, DVL3, E2F2, EARS2, ENO  1, EPAS1, EPHB2, EPHB3, ERBB2, FADD, FGF14, FGF20, FGF22, FGF6, FGFR4  , FLT3LG, FOXA3, FPGT, FTMT, FUT3, FUT9, FZD10, FZD6, GADD45A, GALNT1  0, GALNT11, GAS1, GDF5, GFAP, GJA1, GLUL, GMPR, GNA15, GNG3, GNPAT1,  GPA1, GPD2, GPX5, GRIA3, GRLF1, GSTZ1, HEXB, HHEX, HLA-DMA, HLA-  DOB, HMGCS1, HMOX1, HSD17B4, HSD3B1, HSPA8, ICAM3, IDH1, IDH2, IFIH1  , IFNA16, IFNG, IL1R2, IL22RA2, IMPA1, INHBB, INSR, INSR, IRF3, ISYN  A1, ITGA2, ITGA6, ITGAD, KARS, LCMT2, LEFTY2, LIFR, MAD1L1, MAD2L1, M  AM1, MAOB, MARK1, MARK7, MARCK, MCFE, MCM6, MCM7, MZL1, MTHFR1, M</p>



Negative_15991	AGK, ATM, BAD, CFD, DCK, F2R, FGB, FH, GHZ, GHR, GK2, HDC, HK1, IHH, IL2, LCT, LPL, MSN, MTR, MVD, NGF, NPY, SCD, TK1, TNF, TYR, UBB, ZYX, AARS, ACADS, ACADSB, ACSM2A, ACSS2, ACVR1, ACVR1B, ACY1, ADSL, AGRN, AHCY, AKR1A1, AKR1C1, AKT3, ALDH1A1, ALDH1A3, ALDH4A1, ALDOB, ALG5, AOC3, APH1A, AREG, ARNTL, ARPC5, ARRB2, ATG12, ATG3, ATP12A, ATP2A2, ATP5E, ATP6V0B, B3GALT2, B3GALT6, BACE2, BCL2, BMP7, BUB1B, C9orf95, CACNA1D, CACNA1G, CACNA1I, CACNB2, CACNG5, CADM1, CALML3, CAMK2G, CCDC6, CNE2, CCR9, CD46, CD58, CD59, CD86, CDC25B, CDC27, CDK6, CES1, CFL1, CHEK1, CHIT1, CHPF, CHRM2, CHRM5, CLDN5, CMPK2, CNGA3, CNTN2, COASY, COL3A1, COL4A6, CPT2, CREB3L2, CREB5, CRY2, CSF2RA, CXXC4, CYP2D6, CYP2U1, CYP3A7, CYSLTR1, DDX4, DGKB, DGKQ, DHCR7, DHFR, DIAPH3, DPYSL2, DUSP10, E2F3, EFNA3, EP300, EPB41, EPHA8, EPHX1, ERBB2, EXTL1, F13A1, FABP4, FARSA, FGF11, FGF13, FGF2, FGFR3, FLOT2, FRAT2, FUT7, FUT9, FZR1, G6PC2, GALM, GARS, GCAT, GFPT2, GGT7, GJD2, GLUD1, GNAO1, GRIA1, GRIN2B, GSTA3, GUCA1B, GZMB, HDAC1, HEXA, HGSNAT, HIP1, HLA-DMA, HLA-F, HNMT, HSD17B2, HTR7, HTRA2, ICAM3, IDUA, IFNG, IL19, IL28RA, IL6ST, IMPDH2, INADL, ITGA1, ITGA6, ITGA8, ITGAD, ITGAL, ITPKA, KAT2B, KIR2DL2, LAMB1, LDHB, LIFR, LIPE, LTBP1, LYPLA1, MAGI1, MAP2K2, MAP3K14
Negative_15992	AZM, ABO, AKR, BAK, BCL, CDA, FYT, TFG, VGF3, HK1, FIK, FL1, MXR, OSM, UIC, PLG, SHH, SRM, TAT, TNC, TNF, AACS, ABCC8, ACO1, ACSL4, ACSM2A, ACSS2, AGRN, AKR1C3, AKR1D1, AKT1, ALAD, ALDH1A1, ALG13, ALG3, AOC2, ARHGEF7, ARPC3, ATP2A1, ATP5G1, ATP5L, ATP6V1A, AVPR1A, B3GALT5, B4GALT1, B4GALT4, BCAR1, BCMO1, BMP5, BUB3, C1GALT1, C1QC, C7orf16, CACNG3, CACNG7, CBR3, CCL4, CCL5, CD226, CD40LG, CES1, CHRM5, CHRNA7, CKS1B, CLDN20, CLTB, COL5A3, COQ6, CREB1, CRY2, CSNK1A1, CTSG, CXCL10, CXCL12, CXCL3, CXCR3, CXCR4, CXCR5, CXCR6, CYP2B6, CYP7A1, CYSLTR1, CYSLTR2, DAD1, DDHD1, DFFB, DHRS4L2, DIAPH1, DNMT1, DTX3, DTYMK, DUSP7, ECSIT, EFNA5, ENO2, ENPP3, EPHA1, EPHA4, EPHA7, ERBB3, EXTL1, FECH, FGF10, FRAT2, FTH1, FUT3, G6PC2, GALT, GALNT11, GALNT3, GALNT9, GALNTL5, GCAT, GLI2, GMPR, GMPR2, GNAL, GNG3, GNRH1, GPLD1, GPT2, GRAP2, GSTA3, GSTM3, GSTT1, GSTZ1, GUK1, HLA-G, HPRT1, HSD17B3, HSD17B8, IDH3G, IDI1, IDI2, IFNAR2, IKBKG, IL12A, IL12RB2, IL13RA2, IL19, IL1B, IMPA2, INHBB, INPP5A, INPPL1, IPPK, IRS2, ITGA1, ITGA8, ITGAL, ITGB1, ITPA, JAK1, JAM3, KCN11, KLKB1, LIPF, MAFA, MAGI3, MAPK8, MCCC1, MCCC2, MGAT3, MIOX, MMP7, MPZL1, MYH11, MYH3, MYH8, MYLK3, NARS2, NCAM1, NCR2, NEU3, NFATC4, NME4, NMNAT3, NOS2, NOV2, NDR2, NR4A1, NT5G2, OR10C2, OR11A1, OR11L1, OR12H1, OR12C, OT

<p>Negative_15993</p>	<p>ADA, ADC, APT, BTD, CPD, CPH, CRH, DDC, DHH, EGF, FES, HAL, HKS, JUF, KLT, KMO, LYN, MVD, RET, SMS, STS, TNC, AADAC, ABI2, ACADL, ACADSB, ACOT11, ADCY6, ADRB2, ADRBK2, AGTR1, AHCYL1, AKR1C4, AKT1, ALAD, ALDH3B2, ALDH7A1, ALG10B, ALG8, ANAPC1, APLP1, ARD1A, ARHGAP5, ARHGEF4, ASAH1, ASNS, ATN1, ATP4A, ATP5C1, ATP5D, B3GALT6, B3GNT3, B4GALT6, B4GALT7, BAAT, BDNF, BLNK, C1GALT1, CACNG4, CACNG7, CCL23, CCL3, CCR5, CD247, CD70, CD86, CDC14B, CDC16, CDC25B, CDC27, CDK2, CFL2, CHKA, CLCF1, CLDN11, CLDN9, CLTC, CMPK1, CNGA4, COL11A1, COL4A6, COQ7, CPT2, CRKL, CX3CL1, CX3CR1, CXCL10, CXCR5, CYP17A1, CYP1B1, CYP26A1, CYP2A6, CYP2A7, CYP2C9, CYP3A43, CYP3A5, DDX56, DGKG, DHCR7, DHDDS, DHFR, DHDH, DHRS4, DKK1, DMGDH, DOCK1, DTX3, DTYMK, DUSP9, EDA2R, EFN1, EIF4E2, ELK4, EPAS1, EPOR, EREG, ETNK2, EXOC7, F2RL1, FABP4, FADS2, FDPS, FGF10, FLT3, FPGS, FTCD, FUT3, FUT8, GADD45G, GBGT1, GCNT2, GCNT3, GDF7, GGT6, GGT7, GNAO1, GNB1, GNRHR, GRIN2C, GSTM2, GSTO1, GUCY1B3, HCN1, HHEX, HLA-DMA, HNF1B, HSD3B7, HSPA2, HTR2B, HYAL1, IBSP, IDI1, IKBKB, IL12RB2, IL15, IL17B, IL18R1, IL1A, IL20, IL28A, IL28RA, IL2RG, IL6ST, IL9R, IMPA2, IMPDH2, INPP1, IPMK, ITCH, ITGA4, ITGAV, ITGB4, KARS, KCNQ1, KIR2DL2, KIR2DL3, KIR2DS4, KIR2DS5, KLRD1, LCMT1, LCP2, LDHAL6B, LIPG</p>
<p>Negative_15994</p>	<p>AKT3, CCR, CXCR, CSK, DAP1, DCN, DC1, F3, G1, G6P9, GP1, H2A, HNS, IAT1, MIF, MOS, MVK, NGF, NLK, TEC, TH, ACAA2, ACACB, ACADSB, ACADVL, ACAT1, ACOX1, ACSS1, ACSS2, ACTN4, ADH5, ADIPOR2, ADSSL1, AGRP, AGTR1, AGXT2, AKR1D1, AKT3, ALDH1L1, ALDH4A1, ALG3, ALPPL2, ANAPC11, ANAPC4, ANPTL4, ANPEP, ARHGEF2, ARHGEF7, ARSB, ASIP, ATF4, ATG3, ATP12A, ATP2A3, ATP5B, ATP6V1A, B3GALT1, B3GALT4, B3GAT2, B4GALT2, B4GALT7, BACE2, BCL2, BIRC5, BLNK, BUB1B, C4BPA, CADM3, CASP8, CCKBR, CCL19, CD28, CD3E, CD72, CD74, CD79A, CD8A, CDC20, CDC6, CDKN1B, CHRM3, CLCA2, CLDN17, CLTB, CMBL, CNBP1, COL4A2, CPOX, CSF3R, CSNK2A2, CTBP1, CTPS, CXCL1, CXCL16, CXCR6, CYP26B1, CYP26C1, CYP27A1, CYP2F1, CYP3A43, CYP4F3, DARS, DERA, DGKG, DGKI, DPAGT1, DPYD, ECHS1, EDA2R, ENO2, ENTPD4, EPB41L1, ERO1L, ETS1, F13A1, F2RL3, FABP3, FCGR2B, FCGR3B, FDPS, FGF10, FMO2, FMO3, FOSL1, FOXA2, FRAT1, FUT8, G6PC, GABARAP, GALNT6, GCDH, GGPS1, GLS2, GLUD1, GNA11, GNAI1, GPD1, GRIA2, GUK1, GYS2, HLA-F, HMBS, HNMT, ICAM2, IFIH1, IFNA6, IFNK, IGSF5, IL18R1, IL18RAP, IL28B, IL4R, INHBB, INHBE, INSR, IPPK, ITGA10, KITLG, KLK3, KLRC1, LALBA, LAMB1, LAMC2, LARS, LILRB3, LIPC, MAN1C1, MAP3K11, MAP3K5, MAP3K6, MAPK13, MAPK8, MARS, MASP1, MCEE, MCM6, MDM4, MMP9, MOV10L1, MTFMT, MYH9, MYH6, MYLK, MYLK2, NAE1, NAT9, NAT6, NCF1, NCF4, NCK2, NCK2, NFKB1</p>



Negative_15995	<p>ABO, AKS, CAT, CPD, CKM, CI, CSR, DCN, DCT, GH2, HK1, KDR, LFO, LTB, OAI, PLG, RPE, SMS, TFG, TPR, VTN, ABL1, ACACA, ACSL5, ACSM1, ACTN1, ACVR1, ADAM10, ADCY3, ADCY8, ADH1B, ADIPOR1, ADORA2B, AGPAT3, AGPAT6, AHCY L2, AKR1B1, AKR1C1, AKR1C3, AKT2, ALCAM, ALOX5, APLP1, AQP7, ARG2, AR PC5, ASIP, ASNS, ATF4, ATP2A2, ATP5B, B3GALT2, B3GALT4, BCL10, BIRC5 , BRAF, C1GALT1, C9orf95, CACNG7, CALML5, CASP9, CAV3, CCL1, CCL4, CC L5, CCND3, CCNG1, CCNH, CD70, CD80, CDH2, CDK2, CDKN2C, CD01, CKS1B, C LCA2, CLDN9, CLTCL1, CNTN1, COQ7, CPOX, CRHR1, CSDA, CTBP1, CXCL9, CX CR4, CXCR5, CYFIP1, CYP2C18, CYP4A22, DAPK1, DARS2, DAXX, DDX47, DDX 51, DEGS1, DGKE, DGKG, DIAPH2, DNMT1, DOCK1, DTX3, DTX3L, EFNA2, ELK4 , ENPP1, ENTPD5, ENTPD8, EPHX2, EXT2, F13B, FADS2, FASLG, FGD3, FGF23 , FGF9, FLOT1, FMO4, FSHB, FSHR, FZD5, FZD8, GALT, GCLC, GCNT2, GNG12, GP1BB, GPD1, GPD1L, GRAP2, GRIA2, GRIN1, HEXB, HLA- DOA, HMGCS1, HNF4G, HSD17B3, HSD17B4, HSD17B7, HTR2A, IDI1, IDI2, IF NA10, IFNA17, IGSF5, IL12B, IL12RB2, IL1B, IL28B, INHBB, IRF3, ITPKA , KAT2B, KCNJ11, KIR2DL3, KLRC3, KYNU, LIAS, LIFR, LIPA, LIPC, LIPF, L TC4S, MAN1A1, MAP2K5, MAP2K7, MAPK12, MAPK8, MASP2, MCAT, MCM5, MTHF R, NANP, NFATC2, NFX1, NKX3-</p>
Negative_15996	<p><del>ADC, DAK1, CAB, CR1, GAA, GH2, GNL, HGF, HMG, HNK1, IDS, KDR, LFO, LYNDL1, NLK</del>  , NNT, PML, TFG, TPR, AANAT, ACADSB, ACSL1, ACSL3, ACSS1, ACTB, ACTC1, ACTG1, ACTN2, ADCY4, ADH5, ADORA2B, AFMID, AGPAT2, AGXT2, AHCYL1, AK T2, ALDH1B1, ALDH4A1, ALG10, ALPP, ALPPL2, AMPD3, APOA1, APPL1, ARHG EF1, ARPC3, ARRB1, B3GALT4, B3GNT4, BAAT, BET1L, BMPR1A, BUB3, C1QC, C3AR1, C4BPA, CACNA1H, CACNA1S, CACNG7, CALML6, CAV3, CCL2, CCL8, CC NB3, CCR7, CD274, CD58, CD82, CD86, CDC20, CDH15, CDK2, CDKN2C, CDS2, CHRM5, CKS1B, CLDN3, CMPK1, CNGB1, COL5A3, COQ3, CPOX, CPS1, CREB3L1 , CREBBP, CRHR1, CSH1, CTBP2, CTF1, CYP1B1, CYP21A2, CYP27A1, CYP2B6 , CYP2E1, DAD1, DAG1, DBF4, DCTN1, DEGS2, DGAT2, DGKB, DHFR, DLL4, DNM T3B, DPM2, DUSP2, DUSP6, EDN1, ENTPD8, EPHA1, EPHB1, FCGR3B, FDFT1, F DPS, FGD1, FGF19, FLOT2, FSHR, FUT1, GALNT5, GAPDH, GDE1, GIT1, GNAO1 , GNAZ, GNPAT, GNRH2, GOT1, GPAA1, GPD1L, GSTM3, HAO2, HDAC1, HES1, HE XB, HHIP, HIBCH, HMGCL, HMGCR, HNF4A, HRH1, HRH2, HSD17B7, HTR5A, IFN A16, IGSF5, IL12B, IL17B, IL18RAP, IL20RB, IL28B, IL2RA, IL2RG, IMPD H2, INPP4A, ITGA2, ITGA2B, JAG2, JAK1, KCNJ11, KLK3, KLRC2, KRAS, LAM A4, LAMB1, LCAT, LDHD, MALT1, MAOA, MAP2K1, MAP2K4, MAP2K6, MAP3K2, M APK1, MAPK7, MASP1, MASP2, MBL2, MCCC1, MCM2, MGAT5, MGST3, MTHFS, MY H10, MYH9, NCKAD1, NFATC4, NFE2L3, NFE4, NUPR1, NUPR2, OCLN, OR10A7, O</p>

<p>Negative_15997</p>	<p>ADU, C4B, CGA, CKM, DB1, DB1, FAH, FN1, FPN, GLA, GP3, GSS, IL7, LVD, JUI  , LAT, PDC, PGD, PGP, PLG, RET, AARS2, ABLIM1, ACMSD, ACOX3, ACP5, ACVR  2A, ADH7, ADRB2, AGRP, AKR1B1, ALOX12, ALOX5, AMDHD1, AMHR2, AMPD3, A  OX1, ASMT, ATP5C1, ATP5I, ATP6AP1, ATP6V1F, ATP6V1H, B3GALT5, BAIAP  2, BCAR1, BCL10, BET1, BRAF, BST1, BUB1B, C3orf10, C4BPA, CACNA1E, CA  CNA1I, CADM3, CARD11, CCL1, CCL27, CCNB1, CD22, CD28, CD48, CDC27, CD  C7, CDH4, CDIPT, CDK4, CFL2, CHRM3, CLDN8, CLTA, CNTNAP1, COQ5, CRY2,  CSF2RB, CSNK2B, CX3CL1, CXCR4, CYP11B2, CYP27A1, CYP4A22, DAAM1, DA  RS, DDX18, DERL1, DFFB, DHFR, DHX58, DNMT3A, DRD5, E2F2, EFNB3, EHMT1  , EPHA1, EPHB2, ETNK1, F11R, FABP1, FABP4, FARSB, FDFT1, FDPS, FGD3, F  GF17, FGF7, FOXO3, FRAT1, GALE, GALNT2, GANAB, GAPDH, GART, GCDH, GLI  2, GNAI1, GNAO1, GNB1, GOT1, GP1BA, GRM5, GRPR, GSTA1, GSTK1, GSTO2, H  ADHA, HAGH, HLA-  DOA, HNF1B, HRH1, HTRA2, ICOS, ICOSLG, IL12RB1, IL12RB2, IL18, IL1B,  IL23A, IL25, IL7R, IMPA1, INMT, INPP5A, IRS4, ITGA4, ITGB8, JAM3, KAR  S, KDSR, KLK3, KLRK1, L1CAM, LEFTY2, LHCGR, LIPC, LLGL2, LTB4R2, LYPL  A2, LYZL1, MAML2, MAP4K4, MAPK10, MCAT, MCM5, MGAT5, MIOX, MITF, MNX1  , MS4A2, MYH13, MYL9, MYLK, NAE1, NAGK, NANP, NAT5, NCOR2, NCSTN, NKX6  -</p>
<p>Negative_15998</p>	<p><del>ADAM, GNB, NSY, U, NCRI, UKZF, US, DUK, YPTG, TER, PG7, GCA, GDA, GHA, CBF, CRM</del>  O, MAG, MET, MOS, MPI, MVD, NNT, PDC, PLG, PML, SPN, ZYX, ACOT12, ACOX2,  ACSL3, ACSL6, ACSM1, ACSS2, ACSS3, ACTG2, ACY3, ADH1A, ADH1B, AGTR1,  AGXT, AHCYL1, AKR1D1, ALDH1B1, ALDH2, ALOX5, AMDHD1, APOC3, APRT, AQ  P7, ARHGEF1, ARHGEF6, ARNTL, ARPC1B, ARRB1, ASNS, ATP5L, B3GNT4, BCA  T2, BET1, BET1L, BIRC2, BMPR1B, BRAF, BTRC, C1GALT1, C3orf10, C4BPA,  CACNG3, CACNG8, CADM1, CARS2, CASK, CASP6, CASP7, CAV2, CCL1, CCL13,  CCL19, CCL23, CCL26, CCNA1, CCR4, CCR5, CD19, CD226, CD44, CD47, CD48  , CD82, CD99, CDC20, CDK2, CDK5, CDKN2C, CHDH, CHR1, CKS1B, CLDN16, CL  DN17, CLDN22, CMPK2, CNTF, COQ6, COQ7, CSAD, CSF2, CSH1, CSNK1D, CSNK  1G3, CTBP2, CYP1A1, CYP1A2, CYP26B1, CYP2B6, DARS2, DGAT1, DGKQ, DLL  1, DOCK1, DPAGT1, DPYD, DUSP4, DUSP6, DVL3, E2F4, EFNB2, ELK4, ENTPD5  , ENTPD7, EPB41, EPB41L2, EPHA5, ERBB3, ETNK1, ETS1, EXTL3, FBP1, FGF  13, FGF14, FLOT1, FUT5, GALNS, GART, GGT1, GMDS, GNA14, GNAQ, GNB1, GP  D1L, GPD2, GPT2, GPX5, GUCA1B, HAAO, HA01, HHEX, HHIP, HMGCL, HNF4G, H  SD11B2, HSD17B4, HSD17B8, HTR2B, HTR2C, IFNA17, IFNA21, IL15RA, IL2  8A, IL8RB, INSR, IQGAP3, IRAK4, IRF7, ITGA3, ITGA8, ITGA9, ITGB7, LC  AT, LIAS, LIPF, LRDD, LRP6, LTBP1, MAD1L1, MAD2L2, MAML1, MAOB, MAP2K  1, MAP3K4, MAP3K7, MAP4K4, MAPK9, MCM9, MMR7, NAGL, NCE4, NCFE, NLGN</p>

<p>Negative_15999</p>	<p>AK3, ATM, CC, C8A, C9, CD6, CGA, DB1, DED, DUT, HK3, PAN, SDS, STS, TMT, TPO, XDH, ZYX, ABLIM3, ACAT1, ACP1, ACP5, ACPT, ACSL3, ACSL5, ACSS2, ACTG1, ADCY10, ADH1B, ADH5, ADH7, ADIPOR1, ADIPOR2, ADRA1D, ADSSL1, AGXT, AK3L1, AKT1, ALDH1A1, ALDH1A2, ALG2, ALG8, ALPL, AMD1, AMDHD1, AMDHD2, ANAPC7, APRT, ARD1A, ARHGAP5, ARHGEF2, ARHGEF6, ARSE, ASAH1, ATP2A1, ATP5G3, ATP5H, ATP5I, ATP5O, ATP6V0B, AVPR1B, B3GNT3, B4GALT1, B4GALT6, BBC3, BCKDHA, BNIP1, C5AR1, CACNA1F, CACNB1, CACNG4, CAMK2A, CARD11, CASP10, CCL15, CCL25, CCR3, CD247, CD38, CD58, CDC25B, CDC42, CDKN1B, CHST13, COL1A2, COL4A6, COL5A2, COL6A2, COQ6, COQ7, CRLS1, CSF1R, CSF2RA, CTNND1, CTPS2, CTTN, CYP11A1, CYP2U1, CYP4A22, DARS2, DCTD, DDX23, DDX47, DDX50, DDX55, DEGS2, DFFA, DGKD, DGKI, DGKZ, DHRS9, DLL4, EP300, EPHA6, EPHX1, ERBB4, EXT1, FABP3, FARP2, FARSA, FGF14, FGF17, FGF22, FGF3, FGF5, FMO5, FZD4, GALNS, GALNT1, GALT, GCH1, GGPS1, GLUD1, GNA12, GNAO1, GNAS, GNB1, GNPDA1, GNRHR, GSTM5, GTSE1, GUCA1A, HIP1, HLA-F, HMGCL, HSD3B7, HTR7, IDH1, IDI2, IFNA14, IFNW1, IFT57, IL12RB2, IL1A, IL28B, IQGAP1, ITGA4, ITGA5, ITGA6, ITGB4, LEPR, LIPE, LIPF, MAGI1, MAP2K3, MAPK13, MAPK7, MCEE, MCM4, MCM5, MGAT2, MGAT4A, MMP9, MTAP, MTFMT, MTMR1, MYH10, MYH2, MYL5, NEUROG3, NFASC, NFATC4, NFKBIB, NKRD, R1M, BCR, C13, CBL, CFP, CRR3, CDC, DAF, GBR, GGT, GR1, GNL, GY1, HCT, HYI, ITK, LEP, ME1, MOS, NNT, PAH, PGF, RB1, SYK, TPR, A4GALT, AACS, ABL1, ACADS, ACRYL, ACP6, ACPT, ACSL1, ACSL3, ADCY6, ADH1A, ADH1B, ADH7, ADIPOR1, ADORA2A, ADRA1B, AFMID, AGPAT2, AKR1A1, AKR1C2, AKT1, ALCAM, ALDH6A1, ALDOC, ALOX12B, ALPI, AMD1, AOX1, ARD1A, ARG2, ARNTL, ARSE, ATP12A, ATP5A1, ATP5B, ATP5D, ATP5E, B3GNT2, B3GNT3, BBC3, BET1L, BMP5, BMP6, BST1, C1QC, C9orf95, CACNB4, CALML5, CASP6, CCL21, CCNA2, CCND1, CCNH, CD74, CD80, CDC16, CDC6, CDH15, CDH3, CDKN1A, CDKN1B, CHD8, CHEK1, CHPT1, CHST13, CHSY3, CLDN10, CLDN3, CMPK1, CNDP1, COASY, COX10, CPT1A, CPT1B, CREB3, CREBBP, CRKL, CRLF2, CRY1, CRY2, CXXC4, CYP26B1, CYP2A13, CYP2S1, CYP8B1, DAAM2, DARS, DDHD1, DDIT4, DDX18, DEGS2, DGKQ, DHCR7, DHRS3, DIAPH3, DLL1, DOLPP1, E2F5, EDNRA, EGFR, FASLG, FBP2, FECH, FGF18, FGF21, FIGF, FLOT1, FUT9, FZD7, GADD45A, GADD45G, GALNT10, GALNT11, GALNT13, GAMT, GAPDH, GGT7, GMPR, GNA11, GNA12, GNA13, GNAI1, GNB3, GNMT, GRIN2D, GSTA2, GUCA1A, GYS1, HAGH, HAGHL, HBEGF, HHEX, HHIP, HIBADH, HLA-DRA, HMGCL, HSPA1B, HTR2B, IARS, IDH1, IKKB, IL10RA, IL15, IL18R1, IL20, IL29, INMT, IQGAP3, IRAK1, ITPKB, JAK3, KARS, KLK3, LMO7, MAD1L1, MAN1C1, MAP2K1, MAPK3, MAPK7, MCCC1, MEOX, MITE, MPO, MTHFR, MYL7</p>
<p>Negative_16000</p>	<p>AK3, ATM, CC, C8A, C9, CD6, CGA, DB1, DED, DUT, HK3, PAN, SDS, STS, TMT, TPO, XDH, ZYX, ABLIM3, ACAT1, ACP1, ACP5, ACPT, ACSL3, ACSL5, ACSS2, ACTG1, ADCY10, ADH1B, ADH5, ADH7, ADIPOR1, ADIPOR2, ADRA1D, ADSSL1, AGXT, AK3L1, AKT1, ALDH1A1, ALDH1A2, ALG2, ALG8, ALPL, AMD1, AMDHD1, AMDHD2, ANAPC7, APRT, ARD1A, ARHGAP5, ARHGEF2, ARHGEF6, ARSE, ASAH1, ATP2A1, ATP5G3, ATP5H, ATP5I, ATP5O, ATP6V0B, AVPR1B, B3GNT3, B4GALT1, B4GALT6, BBC3, BCKDHA, BNIP1, C5AR1, CACNA1F, CACNB1, CACNG4, CAMK2A, CARD11, CASP10, CCL15, CCL25, CCR3, CD247, CD38, CD58, CDC25B, CDC42, CDKN1B, CHST13, COL1A2, COL4A6, COL5A2, COL6A2, COQ6, COQ7, CRLS1, CSF1R, CSF2RA, CTNND1, CTPS2, CTTN, CYP11A1, CYP2U1, CYP4A22, DARS2, DCTD, DDX23, DDX47, DDX50, DDX55, DEGS2, DFFA, DGKD, DGKI, DGKZ, DHRS9, DLL4, EP300, EPHA6, EPHX1, ERBB4, EXT1, FABP3, FARP2, FARSA, FGF14, FGF17, FGF22, FGF3, FGF5, FMO5, FZD4, GALNS, GALNT1, GALT, GCH1, GGPS1, GLUD1, GNA12, GNAO1, GNAS, GNB1, GNPDA1, GNRHR, GSTM5, GTSE1, GUCA1A, HIP1, HLA-F, HMGCL, HSD3B7, HTR7, IDH1, IDI2, IFNA14, IFNW1, IFT57, IL12RB2, IL1A, IL28B, IQGAP1, ITGA4, ITGA5, ITGA6, ITGB4, LEPR, LIPE, LIPF, MAGI1, MAP2K3, MAPK13, MAPK7, MCEE, MCM4, MCM5, MGAT2, MGAT4A, MMP9, MTAP, MTFMT, MTMR1, MYH10, MYH2, MYL5, NEUROG3, NFASC, NFATC4, NFKBIB, NKRD, R1M, BCR, C13, CBL, CFP, CRR3, CDC, DAF, GBR, GGT, GR1, GNL, GY1, HCT, HYI, ITK, LEP, ME1, MOS, NNT, PAH, PGF, RB1, SYK, TPR, A4GALT, AACS, ABL1, ACADS, ACRYL, ACP6, ACPT, ACSL1, ACSL3, ADCY6, ADH1A, ADH1B, ADH7, ADIPOR1, ADORA2A, ADRA1B, AFMID, AGPAT2, AKR1A1, AKR1C2, AKT1, ALCAM, ALDH6A1, ALDOC, ALOX12B, ALPI, AMD1, AOX1, ARD1A, ARG2, ARNTL, ARSE, ATP12A, ATP5A1, ATP5B, ATP5D, ATP5E, B3GNT2, B3GNT3, BBC3, BET1L, BMP5, BMP6, BST1, C1QC, C9orf95, CACNB4, CALML5, CASP6, CCL21, CCNA2, CCND1, CCNH, CD74, CD80, CDC16, CDC6, CDH15, CDH3, CDKN1A, CDKN1B, CHD8, CHEK1, CHPT1, CHST13, CHSY3, CLDN10, CLDN3, CMPK1, CNDP1, COASY, COX10, CPT1A, CPT1B, CREB3, CREBBP, CRKL, CRLF2, CRY1, CRY2, CXXC4, CYP26B1, CYP2A13, CYP2S1, CYP8B1, DAAM2, DARS, DDHD1, DDIT4, DDX18, DEGS2, DGKQ, DHCR7, DHRS3, DIAPH3, DLL1, DOLPP1, E2F5, EDNRA, EGFR, FASLG, FBP2, FECH, FGF18, FGF21, FIGF, FLOT1, FUT9, FZD7, GADD45A, GADD45G, GALNT10, GALNT11, GALNT13, GAMT, GAPDH, GGT7, GMPR, GNA11, GNA12, GNA13, GNAI1, GNB3, GNMT, GRIN2D, GSTA2, GUCA1A, GYS1, HAGH, HAGHL, HBEGF, HHEX, HHIP, HIBADH, HLA-DRA, HMGCL, HSPA1B, HTR2B, IARS, IDH1, IKKB, IL10RA, IL15, IL18R1, IL20, IL29, INMT, IQGAP3, IRAK1, ITPKB, JAK3, KARS, KLK3, LMO7, MAD1L1, MAN1C1, MAP2K1, MAPK3, MAPK7, MCCC1, MEOX, MITE, MPO, MTHFR, MYL7</p>

Negative_16001	<p>ABO, C4B, C6, CD4, CELF, CFI, CGA, DCC, EDA, F11, F7, FGA, FUK, GAA, GGH, G K, GNE, GNS, IL5, MSN, MTR, RET, SP1, SRC, TNN, WAS, ACADM, ACAT1, ACOT1 1, ACOX2, ACSL6, ACSM2A, ACSS3, ACTG2, ACTN4, ACY1, ADCY1, ADCY5, ADR B2, AGPAT2, AHCYL2, AKT3, ALAS2, ALDH5A1, ALOX12B, ALPP, AMHR2, ANAP C11, APOA1, ARAF, ARG2, ARHGAP5, ARHGEF6, ARNT, ARRB1, ARSD, ASNS, AT P5H, ATP5I, ATP6VOC, B3GALT5, B3GALT6, B4GALT3, BCL10, BCL2L1, BDH2 , BLVRB, BMP4, BMPR2, BUB1B, CACNB3, CACNB4, CANT1, CASK, CASP10, CCN B1, CCNB3, CD40LG, CD58, CD74, CD86, CDC25A, CDH2, CDH5, CEBPA, CES7, CFL1, CHIA, CHIT1, CHPF, CHRM3, CLCA2, CLDN19, CLTB, COQ5, COQ7, CPOX , CSF1, CTNND1, CTTN, CYFIP1, CYP2D6, CYP2F1, DDIT4, DDX55, DFFA, DGK E, DNMT1, DPM2, E2F5, EPHB3, EXT1, FABP3, FBXW11, FGF20, FLAD1, FOXO1 , FOXO3, FRAP1, FTMT, FUT7, G6PD, GADD45B, GALC, GAPDH, GBA3, GBGT1, G CNT4, GMDS, GNAI1, GNAZ, GNB3, GNPDA2, GOT2, GPX5, GSTA4, GSTK1, GSTM 1, GSTT1, GSTZ1, GUCA1A, GUCY2F, GUK1, HAAO, HAP1, HBEGF, HCCS, HLCS, HMBS, HPSE, HSD17B2, HSD3B1, HSPA1B, HSPB1, HTRA2, IARS, ICOSLG, IFN AR1, IKBKB, IL11, IL12B, IL13RA1, IL20RA, IL21, IL24, IMPDH2, INHBE, INSR, IRAK2, IRF7, ITGAM, ITGAX, ITGB2, ITGB7, ITPKA, KCNJ11, KIR2DS 5, LDHAL6A, LIFR, LIPF, LTB4R2, LYPLA2, MAML2, MAML3, MAP2K2, MAP3K1</p>
Negative_16002	<p>AIM, BKL2, CS, CSK, UPI, CKM, Ddn, CFB, F8, FAS, FGA, FGB, FGG, Gnz, Gna, I L2, JUP, LEP, ME1, ME2, MPZ, OGT, OTC, PDC, PGP, PVR, RFK, SYK, TYR, WAS, AARS, ACO1, ACOX3, ACSL5, ACSM4, ADCY2, ADIPOQ, AHCYL1, AKR1C4, ALDH 2, AMPD1, AMY2B, ANAPC7, AOX1, ARAF, ARPC2, ATG3, ATP13A2, ATP5E, ATP 5J, ATP6V1A, BCKDHA, BET1, BET1L, BIRC3, BMPR1B, BMPR2, BUB1, C1GALT 1, CACNA1F, CACNG3, CAMK2B, CBR3, CCL19, CCL20, CCL21, CCR7, CCR8, CD 19, CD226, CD70, CDC14A, CDC6, CHPF, CHST13, CKMT2, CLDN10, CLDN17, C LDN19, CLDN20, CLDN5, CLOCK, COL4A2, CSNK2A2, CTLA4, CTNNA3, CTNND1 , CTPS, CXCL13, CYP2C8, CYP2F1, DDOST, DDX18, DDX19A, DDX41, DEGS2, D GKG, DGKQ, DGUOK, DLL1, DMGDH, DPM2, DUSP2, DUSP6, EARS2, ECSIT, EFN B1, EIF4E2, ENAH, ENTPD8, EPB41, EPHB3, ETS1, FABP3, FGF12, FGF5, FZD7 , GAB1, GABARAP, GALNS, GALNTL4, GALNTL5, GCLC, GCLM, GDF5, GFPT2, GI T1, GNA11, GNAI1, GNAI2, GNAS, GNG12, GNRH1, GPX5, GRB2, GSTM2, GSTM4 , HAGHL, HA02, HARS2, HGSNAT, HLA- G, HMGS2, IAPP, IDH3G, IFNB1, IFNGR2, IGF1R, IGFBP3, IL1A, IL1RAP, I L21R, IL22RA2, IL4R, INSR, IPMK, IPPK, ITGA2B, ITGA4, ITGA6, ITGAE, ITGB4, ITGB6, ITGB8, KNG1, LAMC3, LCMT2, LEF1, LLGL2, MAD1L1, MAN1C1 , MAP2K2, MAP3K2, MAPK9, MCCC1, MCCC2, MCM5, MDH2, METTL2B, MKNK2, MM</p>
Negative_16003	<p>AGL, ABE, CD2, F8, FGA, GDA, GGH, GNG2, GRI1, HRS, IDS, IES, JUNC, R1, P1B, ME3, NOG, PAH, PVR, RDX, RFK, SHH, TKT, TPR, AADAC, ACHE, ACSL3, ACSM5, ACTB, ACVRL1, ADCY7, ADH4, ADH7, ADRB1, ADSSL1, AKR1D1, ALDH1B1, ANA PC2, ASMT, ASRGL1, B3GALT5, B4GALT1, BAI1, BHMT, BIRC3, BLVRB, BPNT1 , BTRC, CACNB4, CACNG4, CACNG5, CACNG6, CARS2, CCL21, CCL22, CCND2, C CNH, CCR9, CD226, CD3E, CD40, CD46, CD74, CD80, CDC2, CDC25C, CDH15, C DH2, CDK4, CDKN2A, CDKN2D, CDS2, CERK, CFTR, CHDH, CHUK, CLDN1, CMBL, CMPK1, CNTNAP2, COL11A1, COQ5, CPT1C, CREBBP, CSF2, CSNK1E, CSNK2B, CUL1, CYP19A1, CYP1A1, CYP26B1, CYP2A7, CYP3A43, CYP4A22, DAPK1, DD IT4, DDX51, DDX54, DEGS2, DHDDS, DIAPH2, DMGDH, DNMT3B, DOT1L, DUSP1 4, EPHX1, F2RL2, FBP2, FCGR3B, FGD3, FGF14, FM05, FTH1, FZD3, FZD9, GA LK2, GALNT3, GALNT7, GANC, GAPDH, GATM, GBA3, GBE1, GBGT1, GFPT1, GLS 2, GMPR, GNA11, GPAA1, GRB2, GRIA3, GRIN2C, GUCA1A, HIP1, HMOX1, HNF4 A, HSD11B2, HYAL1, ICAM1, IDH2, IDH3B, IGF1, IKBKE, IKBKG, IL11RA, IL 17B, IL21, IL23R, IL29, IL9R, IQGAP1, ITGB5, ITGB7, ITPA, KARS, LAMA4 , LAMC3, LILRB3, LTBP1, LTC4S, LYZL1, MAD2L2, MAG12, MAN1B1, MAN1C1, MAT2B, MCM2, MTAP, MTHFD2, NFASC, NFATC3, NME2, NME4, NOX3, NR1H3, ON ECUT1, OR10T2, OR13C2, OR13D1, OR1A2, OR2A14, OR2A2, OR2A4, OR2A5, O</p>



Negative_16006	<p>CS, CO, CRT, CRH, FZK, GPO, HAL, IDS, ILS, MSN, OSM, SDS, TEC, A4GAL1, ADL2, ACADL, ACSL5, ACSM5, ACVR2A, ACY1, ADH1A, ADH7, AFMID, AGPAT2, AGPAT4, AGRN, AGXT, ALDH7A1, ALDOA, ALG10B, ALG3, ALG5, ALS2, AMD1, AMPD1, ANAPC11, ANAPC5, ARHGEF6, ARPC1A, ATN1, ATP2A1, ATP2A3, ATP4B, ATP5B, ATP6VOB, ATP6V1F, B3GNT4, B4GALT7, BDH2, BET1L, BIRC3, BLVRA, CACNB1, CALML5, CAMKK1, CAMKK2, CANT1, CARS2, CCL17, CCNA1, CCR4, CCR5, CD19, CD244, CD28, CD72, CD74, CD82, CDS2, CFL1, CHD8, CHEK1, CHST12, CKMT2, CLDN3, COL6A1, CPOX, CRY1, CTNND1, CTSB, CXCL3, CXCL6, CYP3A7, DDX54, DEGS2, DFFA, DHDH, DPM2, DPYD, DTYMK, EHMT1, ENTPD2, ENTPD7, EPHA7, ERBB4, ESAM, ETNK2, ETS1, FABP4, FADS2, FARSB, FCGR2B, FCGR3B, FGF9, FOXA2, FOXO1, FOXO3, FRAT1, FUT5, FUT7, FZD1, FZD6, GAB1, GADD45B, GALNT12, GALNT3, GALNT8, GALT, GCLM, GFPT2, GLB1, GLG1, GNPD A2, GOSR2, GOT2, GRIN2A, GSTM5, GUCY1B3, HADHA, HAP1, HCST, HEMK1, ICAM3, IFNA7, IFNAR2, IL13, IL18RAP, IL20, IL3RA, INPP5A, IQGAP3, IRS4, ISYNA1, ITGB4, ITPKA, KIR3DL2, KIR3DL3, LAMB1, LEFTY1, LEPR, LGMN, LILRB3, MAD1L1, MADCAM1, MAGI1, MAGI3, MAP2K2, MAP3K12, MAP3K13, MAP3K14, MAPK14, MAPK7, MECR, MGAT5B, MMP2, MPP5, MYH9, NADSYN1, NCAM2, NCR2, NFATC2, NFE2L2, NKD2, NKX2-</p>
Negative_16007	<p><del>ADU, AAS, C4B, C5A, CD4, CSR, DCN, PDL1, GDR, GNS, HAT, HGD, ILZ, RMO, CS</del>  , ME2, MPL, MVD, NF1, OSM, PLG, RET, TH, TK1, AARS2, ACAA2, ACADL, ACO2, ACPP, ACSS2, ACTG1, ACVR1, ACVR1B, ACY1, ADCY1, ADCY10, AFMID, AKR1C4, ALDH3B2, ALDH5A1, ALDOC, ALG9, ALOX15, ALOX5, APBB1, AQP7, ATF2, ATN1, ATP5E, ATP5L, B3GALT2, B4GALT4, BACE1, BDKRB1, BDKRB2, BIRC3, BUB1, BUB3, CACNA1E, CAMK2D, CARD11, CASP9, CCL26, CCNA1, CCR9, CD14, CD22, CD247, CD28, CD44, CD79B, CD8B, CDIPT, CDS2, CFLAR, CHUK, CLDN10, CLDN11, CLDN9, CNTF, COX10, CREB3, CREB3L1, CRY1, CSNK1G2, CTNNA2, CUL1, CX3CR1, CXCR4, CXCR5, CYP11A1, CYP1A2, CYP3A4, DAPK3, DDX4, DX55, DDX56, DFFB, DGKE, DHRS3, DIAPH2, DLL1, DLL3, DMGDH, DUSP16, E2F4, EFN1, EGLN3, EIF4E, ELK4, ENO1, ENO3, ENTPD3, ENTPD5, EPB41L3, EPHA4, EPHA8, EPHX2, FADD, FARSA, FBP1, FCER1G, FOXA3, FRAP1, FUT3, FZD6, FZD8, GALNT1, GALNT10, GALNT11, GALNT13, GALNT2, GALNT7, GALNT8, GALNTL2, GAS1, GBE1, GDF5, GLUD2, GMDS, GNAI1, GNAZ, GRM1, GSTP1, GUK1, GYS2, GZMB, HMOX1, HSD11B1, HTR4, HYAL1, IGSF5, IL13RA2, IL17B, IL22, IL22RA1, IL2RG, IMPA1, INMT, INPP4A, IRAK2, IRF3, IRF5, ISYNA1, ITGAL, ITGB5, KIR2DL2, L1CAM, LALBA, LIPA, MAML1, MAP2K1, MAP2K6, MAP3K13, MAP3K2, MAP3K5, MAP3K7, MAP4K3, MAPK14, MAPK8, MAPK9, MBL2, M</p>
Negative_16008	<p><del>AMB, AKS, C2, C8B, C9, CRM, CS, DCN, F3, F5, F6, F8, G12, Y5, Y9, I13</del>  , KMO, MOS, MTR, NGF, OTC, RET, SMS, TH, TKT, UBB, AADAC, ABLIM2, ACACB, ACO1, ACOT11, ACP1, ACSM4, ACTN4, ACVR1, ACVR1B, ADAM17, ADCY6, ADCY8, ADH6, ADRA1D, AKR1B1, ALDH3B1, ALG10, ALOX12, ANAPC10, ANAPC7, ARG2, ARSE, ATP2A1, ATP5J2, ATP6VOB, ATP6V1H, AXIN2, B3GALT1, B3GNT2, B4GALT3, B4GALT4, BAAT, BBC3, BCKDHA, BST1, BUB3, CACNA1G, CACNG3, CAMK2D, CARS2, CAV1, CCKBR, CCL15, CCL20, CCNA2, CCNB3, CCND1, CCR3, CD70, CD74, CD8A, CDC14A, CD01, CFL2, CHKB, CLDN11, CLDN14, CLDN5, CLTC, CMAS, CNGA3, COMP, COQ5, CPT2, CREB3L2, CSAD, CSF2, CTNNA2, CX3CL1, CXCL12, CXCL16, CYP2C8, CYP2F1, DDIT3, DDIT4, DDOST, DDX52, DKK1, DKK2, DLL3, DOCK1, DPM2, DRD2, DTX4, E2F2, E2F4, EDA2R, EDNRA, EGFR, EIF4E, ENPP7, EP300, ERO1L, ETNK2, F13B, FGF11, FGF21, FGF22, FGF3, FGF R3, FRAT2, FUT7, G6PD, GABARAP, GADD45A, GALNT8, GALNT9, GANAB, GFPT2, GGT6, GLI2, GMPS, GNA14, GNAI3, GP1BB, GPLD1, GRIA3, GRM5, H6PD, HEMK1, HHEX, HHIP, HIP1, HSD17B8, HSP90B1, HTR2A, IAPP, IDH3A, IFNA13, IFNA21, IFNA4, IFNAR1, IFNW1, IGFBP3, IL13, IL17A, IL19, IL20, IL24, IL7R, INPP4A, IPPK, IRAK4, ITGA10, ITGA8, ITGAV, ITGB2, ITPK1, KCNJ11, KIR2DL4, KIR3DL2, KLRC1, KNG1, L1CAM, LAMB4, LIPE, LIPG, LRP6, MAD</p>

Negative_16009	<p>ADG, APT, BID, CTS, C8G, CGN, DCR, EPO, EZR, FYN, HK2, KHK, LAT, ME2, OSM, PC, PTS, SDS, SFN, SRF, SYK, TK1, TNN, TNR, VCL, ZYX, AARS2, ABLIM2, ACADSB, ACAT2, ACHE, ACVR2B, ADCY3, ADSSL1, AGPAT1, AKR1C1, AKT2, ALOX12B, ALOX15B, ANAPC10, ANPEP, AREG, ARPC3, ARRB2, ATP5C1, AXIN1, B3GAT3, BDKRB2, BDNF, BET1, BIRC5, BMP8A, BPGM, BPNT1, BRAF, BUB1, BUB3, C1QC, C4BPB, CACNA1E, CACNA1I, CACNB1, CACNG3, CALML3, CCL23, CCL25, CCND1, CCNE1, CCNG1, CD22, CD28, CD36, CD44, CD79B, CDC25A, CDK6, CDKN2D, CES2, CHSY1, CLDN14, CLDN16, CLDN2, CLDN20, CLDN7, CMBL, CNGA4, CNGB1, COL5A2, COL6A1, CSF2RB, CTF1, CTLA4, CTNNA1, CTNND1, CXCL2, CXCL3, CYP27A1, CYP2C18, CYP2U1, CYP3A4, DARS, DARS2, DDX18, DDX23, DDX50, DDX52, DHFR, DIAPH1, DMGDH, DOCK1, DRD2, DUSP7, E2F3, EDNRB, EFN3, EPHA3, EPHB6, EXTL2, F13A1, FCER1G, FGD1, FGD3, FGF1, FGF3, FGF R1, FMO5, FUT6, FUT7, GALNS, GALNT10, GALNT8, GCAT, GCLC, GFAP, GMPPA, GMPS, GNAI3, GNG12, GNRH2, GOT2, GPD1L, GPD2, HADH, HAGHL, HA02, HIBADH, HLA-</p> <p>F, HSD11B1, HSD11B2, IARS, ICAM1, IFNA4, IFNGR2, IGSF5, IL12RB1, IL1R1, IL20RB, IL21, IL6ST, IMPDH2, INHBA, INPP5A, IRF3, ITGA1, ITGA4, ITPKA, KLRC1, KLRC3, KLRC4, KLRK1, L1CAM, LDHAL6B, LDHC, LEPR, LIAS, LIPT1, MADCAM1, MAGI3, MAOB, MAP3K7, MAT2B, MCM2, MCM4, MDM2, MDM4, ME</p>
Negative_16010	<p><del>ADG, APT, BID, CTS, C8G, CGN, DCR, EPO, EZR, FYN, HK2, KHK, LAT, ME2, OSM, PC, PTS, SDS, SFN, SRF, SYK, TK1, TNN, TNR, VCL, ZYX, AARS2, ABLIM2, ACADSB, ACAT2, ACHE, ACVR2B, ADCY3, ADSSL1, AGPAT1, AKR1C1, AKT2, ALOX12B, ALOX15B, ANAPC10, ANPEP, AREG, ARPC3, ARRB2, ATP5C1, AXIN1, B3GAT3, BDKRB2, BDNF, BET1, BIRC5, BMP8A, BPGM, BPNT1, BRAF, BUB1, BUB3, C1QC, C4BPB, CACNA1E, CACNA1I, CACNB1, CACNG3, CALML3, CCL23, CCL25, CCND1, CCNE1, CCNG1, CD22, CD28, CD36, CD44, CD79B, CDC25A, CDK6, CDKN2D, CES2, CHSY1, CLDN14, CLDN16, CLDN2, CLDN20, CLDN7, CMBL, CNGA4, CNGB1, COL5A2, COL6A1, CSF2RB, CTF1, CTLA4, CTNNA1, CTNND1, CXCL2, CXCL3, CYP27A1, CYP2C18, CYP2U1, CYP3A4, DARS, DARS2, DDX18, DDX23, DDX50, DDX52, DHFR, DIAPH1, DMGDH, DOCK1, DRD2, DUSP7, E2F3, EDNRB, EFN3, EPHA3, EPHB6, EXTL2, F13A1, FCER1G, FGD1, FGD3, FGF1, FGF3, FGF R1, FMO5, FUT6, FUT7, GALNS, GALNT10, GALNT8, GCAT, GCLC, GFAP, GMPPA, GMPS, GNAI3, GNG12, GNRH2, GOT2, GPD1L, GPD2, HADH, HAGHL, HA02, HIBADH, HLA-</del></p> <p>IL5, IL7, LCT, LEP, MAG, MUT, PDC, PGD, RPE, SFN, TFG, TK2, TPO, ZYX, AAS S, ABL1, ABLIM1, ACACB, ACAD8, ACADL, ACSL1, ACSM4, ACSS1, ACTN2, AKR1B10, ALDH3A1, ALDH4A1, ALDOB, ALG6, ALOX15, ALPI, AMDHD2, AMHR2, AMY2B, ANGPTL4, AOC2, ARPC3, ATP5C1, ATP5J2, AXIN2, BAIAP2, BIRC5, BMP7, BPGM, C7orf16, CACNA1D, CACNA1G, CACNB4, CAMKK1, CARS2, CAV3, CBR1, CCL1, CCL11, CCL17, CCL2, CCL7, CCNB3, CCND3, CD36, CD44, CD70, CDC14A, CDKN2C, CERK, CFL1, CHAT, CHPF, CHST13, CLDN16, CLDN20, CLDN6, CLDN9, COL3A1, COL5A3, CPOX, CPS1, CPT1A, CPT1C, CPT2, CREB3, CRY2, CSAD, CSH1, CSNK2B, CTSB, CYCS, CYP17A1, CYP26A1, CYP2U1, CYP4F2, CYP7A1, DGAT2, DGKZ, DHCR7, DHRS3, DLL3, DPM1, DPM2, DUSP4, DUSP5, EFN3, EFN3, EHMT2, EIF4B, ENPP1, ENPP2, ENPP3, EPB41L1, EVI1, FGF20, FLT1, FUT9, FZD10, GBE1, GCNT3, GGPS1, GNAQ, GNPAT, GNPDA1, GOT1, GRAP2, GRIN2B, GSK3B, GSTA2, GSTA3, GSTA5, GSTK1, GSTM4, GSTT1, GUCA1B, GUCY2D, HDAC2, HLCS, HMOX2, HPSE, HTR2C, IDH1, IFNA16, IFNA17, IFNA2, IL11, IL12A, IL15RA, IL28B, IL3RA, IL6ST, IL9R, INPP4B, INSR, ITGA1, ITGA2B, ITGA6, ITGAL, ITGAM, ITGB1, ITPKB, KDSR, KIR2DS4, KLKB1, KLRC4, LAMB4, LAMC1, LARS2, LDHB, LEPR, LHCGR, LIPC, MAN1B1, MAP2K2, MAP3K1</p>







Negative_16016	<p>BAD, BIC, C8A, CD2, EGF, FUR, FYN, GNL, IL2, IL3, IL6, KIT, KMO, ME1, NGF, PAH, PC, PML, RFK, RPE, SCD, SDS, SMS, SPN, SRC, TNF, A4GALT, AARS2, AA SS, ABCC8, ACADM, ACAT1, ACO2, ACSL5, ADRA1A, AGPAT2, AGPAT4, AGXT, AHCYL1, ALDH1L1, ALG10, ALOX12B, AMD1, ARHGEF1, ATP5A1, ATP5G2, B3GN T5, B4GALT1, B4GALT6, BET1L, BMP5, C1GALT1, CACNA1E, CACNA1F, CCKBR, CCL17, CCL28, CCNA2, CCNE1, CCNE2, CCNG1, CCR5, CCR9, CD38, CD8B, CD C16, CDC25C, CDH4, CDIPT, CDKN2C, CEBPA, CHD8, CHEK2, CHR1, CHRM3, CL DN19, CLDN6, CNGA3, COL4A4, CREB3L3, CREB5, CRKL, CSF2, CSNK1E, CSNK 1G1, CSNK2A2, CTF1, CTNNB1, CYFIP2, CYP1B1, CYP2S1, DGKB, DGKI, DHDD S, DHRS3, DKK2, DLL1, DLL3, DMGDH, DUSP6, DVL3, EFNA5, EFNB1, ENO3, EN TPD7, EPHX1, EXOC7, F11R, F13A1, FARP2, FARSB, FBP1, FDPS, FGF13, FGF R2, FLAD1, FLT4, FMO1, FMO4, FPGT, FSHB, FZD9, GABARAP, GALE, GALNS, G ALNT12, GARS, GCDH, GCNT4, GFPT2, GJA1, GLG1, GLUD2, GNA11, GNAZ, GNM T, GNPAT1, GRIN2B, GRPR, GSTM5, GSTP1, GUCY2F, GYS2, HEMK1, HEXA, HI BADH, HLA-DOA, HLA- DRA, HRH2, HSD11B1, HSPA2, HTR7, ICOSLG, IFNA14, IFNA16, IKBKG, IL11 , IL17A, IL22RA1, IL28B, IMPA2, IRS2, ITGAX, JAG1, KLRC1, KLRC3, LAMB 3, LAMC1, LRP6, LTB4R2, MAD2L2, MAN1C1, MAOA, MAPK8, MGAT2, MGLL, MGS T1, MLYCD, MOV10L1, MPZL1, MTMR1, MYH10, MYH8, MYLK3, NCOR2, NEUROD1</p>
Negative_16017	<p><del>ADA, AML, C5, CAD, CBL, CNB, DDO, FBY, GR2, HAL, KMO, LIP, LPA, M1, PAF, PGF, RET, RPE, SMS, SRF, TNR, UBB, AADAC, AANAT, ABAT, ACAA2, ACACA, AC ADM, ACMSD, ACO1, ACPT, ACTG1, ACTN4, ACVR1C, ACYP2, ADCY5, ADH1A, AD IPOR1, ADRB1, AGPAT6, AGRP, AKR1B10, ALAS1, ALDH3B1, ALDOB, ALOX12B , ALPL, ANAPC5, AOC3, APAF1, APC2, ARG1, ARPC4, ASMT, ATF4, ATP6V1H, B 3GAT1, B4GALT4, B4GALT7, BBC3, BCAR1, BCKDHB, BDKRB1, BET1L, BLVRB, BMP6, BRAF, BUB1B, C3orf10, C4BPB, CACNB1, CCDC6, CCL11, CCNB3, CD24 7, CD34, CD47, CD79B, CD8B, CDC14B, CDIPT, CDKN2D, CHPF, CISH, CKMT2, CLDN1, CLDN22, CLDN9, CLTA, CNGB1, CNTFR, COX10, CPOX, CREBBP, CRLS1 , CTBP2, CTBS, CTPS, CUL1, CXCR6, CYBB, CYP11A1, CYP17A1, CYP1A1, CYP 2A7, CYP2C19, CYP4F2, DAG1, DARS2, DCTN1, DDB2, DDX4, DERA, DGKH, DHR S4, DPYS, DRD1, DTX2, DUSP1, E2F2, EDN1, EFNB1, EIF4B, EP300, EPHA1, E PHA6, EXTL3, FGF17, FLT4, FMO3, FUT5, FUT8, FZD5, FZD9, G6PC2, GALNT1 4, GALNT5, GAPDH, GARS, GLI2, GMPPA, GMPS, GNAI1, GNAQ, GNG13, GOSR2, GOT2, GSTP1, GUCY1B3, GUSB, HIF1A, HIP1, HPSE, HSD17B3, HSD3B1, HSPA 2, HTR6, IAPP, IARS2, IL11RA, IL13RA1, IL21R, IL22, IL22RA1, IL6ST, I NADL, INPP4A, IRF9, ITGA2, ITGB1, ITGB3, JAG1, JAM2, KIR2DS4, KIR3DL 3, KLK3, LAMB4, LIPE, LTB4R2, MADCAM1, MAGI1, MAOB, MAP2K4, MAP3K6, M ADK1, MAPK12, MAPK9, MCCC2, MCMC, MEF2C, MGAT4A, MLLT4, MMP9, MRZ1</del></p>





Negative_16022	<p>AK3, AK, ASL, ATM, C9, CCR, F10, FGB, GH2, GHR, GNS, GP1, MES, MTC, PGD, PML, PXN, TFG, TK1, TYR, VTN, ABLIM1, ABP1, ACAD8, ACAT2, ACOX3, ACP6, ACSL4, ACYP1, ACYP2, ADCY7, ADH5, ADORA2B, AGRN, AKR1A1, AKR1B10, ALAD, ALAS2, ALDH3B2, ALG5, ALPI, ALPL, AMD1, AMPD2, ANAPC1, AOC2, AOC3, APOC3, ARD1A, ARHGEF4, ARSA, ARSD, ATP2A1, BCKDHA, BMPR2, CACNA1G, CANT1, CBLB, CCKAR, CCL15, CCL2, CCL3, CCL7, CCR2, CCR7, CD38, CD44, CDC2, CDC45L, CDS1, CHPF, CHPT1, CHRM1, CLCF1, CLDN14, CLDN3, COL1A1, COL4A1, CRB3, CSF1R, CSF2RA, CSF3, CTNNA1, CTNND1, CXCL16, CYP1A2, DAPK1, DDX50, DGKE, DGKI, DGKQ, DGUOK, DHFR, DHODH, DHRS3, DLL3, DLST, DNMT3A, DOCK1, DRD1, DTX4, DTYMK, ECSIT, ENPP7, ENTPD4, EPB41L1, EPHB6, EPOR, ETNK2, EXT2, FADD, FCGR2B, FGF13, FGF23, FGF8, FLOT2, FLT3LG, FMO5, FOSL1, G6PC, G6PD, GAD1, GALC, GALNT1, GALNT8, GALNT9, GLUD2, GNG12, GNPAT1, GNRH2, GRIN2C, GSTK1, GSTP1, GUSB, HDAC1, HEXB, HIBADH, HSD3B1, ICOSLG, IDUA, IFIH1, IFNA16, IFNA17, IFNAR2, IKBKG, IL10RA, IL12A, IL13, IL18R1, INSRR, IQGAP1, IRAK4, IRF7, ITGAL, ITGAV, KAT2B, KCNQ1, KIR2DL3, KLK3, LDHB, LEFTY2, LILRB3, LRRC4C, MAD1L1, MAD2L2, MAGI2, MAML2, MAP2K5, MAP3K6, MAP4K4, MAPK13, MCCC1, METTL6, MGAM, MYH14, MYH8, MYLK, NCOR1, NEFL, NEU2, NFKB2, NRG3, NRG4, OR10AD1, AR3, AHTM, CRUAF1, CD11, CCG, DC1, F2, G12, TEP, KAR, M12, NPT, UGT, PAM, P</p>
Negative_16023	<p>XN, TH, TXK, VCL, AACS, AARS, AARS2, ABAT, ACOT12, ACSS2, ACY1, ADCY3, ADRB1, ADSS, AFMID, AGXT, ALDH6A1, ALG1, ALG10, ALG11, ALG13, APC2, APOC3, AQP7, ARD1A, ARHGEF1, ARNT2, ARPC5L, ASS1, ATN1, ATP5C1, B3GNT3, B3GNT4, BAIAP2, BCL2L1, BDH2, BTRC, CACNA1D, CACNA1I, CACNB4, CADM1, CAMKK1, CAPN2, CCDC6, CCL16, CCNB1, CCND1, CCNG2, CD274, CD40, CD82, CD8A, CDC14A, CDC27, CDKN1C, CDKN2A, CDKN2C, CES7, CHAT, CHEK2, CHKA, CHKB, CLDN20, COL1A1, COQ3, CREB3L2, CREB5, CRHR1, CRY2, CSNK1D, CSNK1E, CSNK1G2, CTBP1, DCXR, DFFA, DGKG, DKK4, DOT1L, DPYS, DRD2, DUSP5, DUSP9, DVL2, E2F5, ENPP3, EPHA1, EPHB3, FGF10, FGF23, FGFR3, FUT2, FUT4, GAB1, GABARAP, GAL3ST1, GALK1, GALM, GALNT10, GALNTL5, GDE1, GNMT, GPD1, GRAP2, GRM1, GRM5, GTSE1, HCCS, HCLS1, HCST, HIBCH, HLA-C, HLA-F, HNF1A, HPSE2, HSD17B1, HSD17B4, HTR2B, ICAM1, IDH2, IDUA, IFNA2, IFNA21, IFNA7, IFNAR2, IFNK, IGSF5, IL11RA, IL18RAP, IL25, IL2RB, INPPL1, IRAK1, IRS4, ITPK1, KDSR, KLRK1, LAMA3, LAMB3, LAMC1, LAP3, LIMK1, MADCAM1, MAGI2, MAML1, MAP3K11, MAPK10, MAPK3, MCCC2, MCM3, MGAM, MGAT4A, MKNK2, MLLT4, MPST, MRAS, MYLK, NADSYN1, NAGK, NAMPT, NCKAP1, NCKAP1L, NEGR1, NGEF, NMNAT2, NNMT, NQO1, NR4A1, NRG1, NRG3, NRXN1, NTF5, ONECUT1, OR10A1, OR10Z1, OR12A1, OR14C2, OR1D5, OR1J1, OR8D</p>

Negative_16024	<p>ADK, AGL, AMH, AMT, BTD, CBS, CR2, CS, CSK, DBI, DCN, DED, EDA, FTO, FZ, F  AH, KMO, MPZ, MVK, NF1, PC, PLG, PML, SI, TAT, TPR, ACADS, ACTN1, ACTN2,  ACTN4, ACYP2, ADH4, ADRA1B, AFMID, ALDH1A1, ALDH1A3, ALDH1L1, ALG12  , AMPD2, AMY2A, AMY2B, ANPEP, ARD1A, ARNT2, ASRGL1, ATP5B, ATP5G2, AT  P5J2, AVPR1A, B3GNT2, BDH1, BDH2, BHMT, BLNK, BMP7, BUB1B, CACNA1C, C  ACNA1D, CACNA1S, CACNB3, CACNG2, CACNG4, CADM3, CAMK2G, CASP3, CCKB  R, CCL21, CCND2, CCR3, CCR4, CCR5, CCR9, CD40, CD70, CDC16, CDK2, CDS1  , CHEK1, CHIT1, CHRM2, CHRNA7, CLCF1, CLDN1, CLDN19, CLTC, CNTF, COL4  A1, COQ7, COX15, CPT2, CSNK2A2, CTBP1, CTBP2, CTNNB1, CTTN, CX3CR1, C  XCL10, CYFIP2, CYP11B2, CYP26C1, CYP2B6, CYP2D6, DAD1, DARS, DFFA, D  GKA, DGKB, DHCR7, DIAPH1, DNMT3L, DPYS, EDA2R, EP300, EPHA6, EPHA8, E  TNK1, FABP3, FCGR2B, FECH, FGF11, FGF13, FGFR2, FMO1, FPGT, FRAP1, FU  T1, FUT4, FUT5, FZD1, FZD6, FZD7, GALNT12, GALNT2, GBE1, GCNT3, GFAP,  GLS2, GNA13, GNA14, GNAI2, GNAO1, GP1BB, GSTA5, GSTP1, HAGHL, HAP1, H  CCS, HLA-</p> <p>DRA, HMGCL, HMOX1, HNF4A, HSD17B4, ICAM2, IDH3A, IFNA6, IFNG, IL1A, I  L22, IL29, IMPDH2, KIR2DS5, KLRC4, LAMA4, LAMC2, LAMC3, LCMT1, LDHA,  LEFTY1, MAP2K1, MAP3K1, MAPK1, MAPK3, MAPK9, MCM5, MGAT2, MGST2, MLY  CD, MNX1, MPST, MTHFD2, MYH4, MYLK, NARS, NAT1, NEFL, NEU2, NFAT5, NFA  TK2, NID1, DBI, PLK4, P7, PGR, PGG, PMA1, PGR, GRY, GLA, TFF1, YLU, LSS, MAA, ME</p>
Negative_16025	<p>2, MYC, STS, TXK, XDH, ABLIM3, ACADL, ACAT1, ACOX3, ACY1, ACY3, ADCY8,  ADIPOR2, ADSL, AGPAT1, AGPAT2, AGPAT3, AGPAT6, AGXT, ALDH3A2, ALDH6  A1, ALDOA, ALOX15, APLP1, ARSD, ATG3, ATP13A2, ATP2A3, ATP5G1, BAAT,  BAI1, BDNF, BET1L, BMPR2, BPNT1, CACNA1B, CACNA1D, CACNG3, CACNG7, C  BLB, CCL13, CCNA1, CCNB2, CCR2, CCR6, CD58, CD86, CDC25B, CDK2, CDKN1  C, CDS2, CFL2, CHD8, CHIA, CHRM5, CHSY1, CLDN14, CLDN20, CLTA, COMP, C  POX, CPT2, CREB3, CSF2RA, CTBP1, CTNNA3, CTPS2, CTTN, CXCR3, CYP2B6,  CYP2D6, DAAM2, DAXX, DBF4, DDIT3, DGAT1, DGAT2L4, DGKD, DHODH, DIAPH  3, DUSP16, DVL1, ENPP1, ENPP6, EP300, EPHA7, EPOR, F11R, FARP2, FARSA2  , FDFT1, FDPS, FLOT2, FUT1, FUT9, GAL3ST1, GANC, GBA3, GJA1, GLG1, GNA  12, GNA14, GNAO1, GNB3, GNPAT, GOT2, GPD1, GPLD1, GPT2, GSTA4, GSTM5,  GSTO2, GUCA1C, HAO2, HCLS1, HMGCL, HPSE2, HRH2, HSD3B2, HYAL2, ICAM2  , IFNA16, IFNA4, IL10, IL12A, IL12RB2, IL19, IL1R1, IL20RA, IL22, IL2  2RA2, IL28A, INPP4A, IPPK, IRAK4, IRF7, IRS2, ITGA10, ITGA11, ITGAD,  ITGB5, ITPA, JAG1, KIR2DL1, KIR2DL3, KIR3DL2, KLRC1, KLRD1, LAMB4, L  EPR, LTA4H, LYZL1, MADCAM1, MALT1, MAP2K4, MAP3K12, MAP3K7, MAP4K3,  MAPK13, MCCC2, MDM4, METTL6, MGAT5, MIOX, MPST, MYH13, MYH7B, NANP, N  ARSA, NAT5, NEU2, NFATC2, NEY1, NEY4, NID2, NID3, NID4, NID5, NID6, NID7, NID8, NID9, NID10, NID11, NID12, NID13, NID14, NID15, NID16, NID17, NID18, NID19, NID20, NID21, NID22, NID23, NID24, NID25, NID26, NID27, NID28, NID29, NID30, NID31, NID32, NID33, NID34, NID35, NID36, NID37, NID38, NID39, NID40, NID41, NID42, NID43, NID44, NID45, NID46, NID47, NID48, NID49, NID50, NID51, NID52, NID53, NID54, NID55, NID56, NID57, NID58, NID59, NID60, NID61, NID62, NID63, NID64, NID65, NID66, NID67, NID68, NID69, NID70, NID71, NID72, NID73, NID74, NID75, NID76, NID77, NID78, NID79, NID80, NID81, NID82, NID83, NID84, NID85, NID86, NID87, NID88, NID89, NID90, NID91, NID92, NID93, NID94, NID95, NID96, NID97, NID98, NID99, NID100</p>







Negative_16031	<p>AGK, BAP, CD4, CS, DB1, DB1, EBF, EGF, GFI1, HAL, HK1, IHH, IL8, KMO, LPL, MPL, MTR, PLN, PTS, SMS, TNN, UBC, A4GALT, ABL2, ACAA2, ACADL, ACADVL, ACHE, ACSL3, ACSL4, ACVR1, ACYP1, ADCY5, ADCY6, ADH1B, ADRA1A, ALAS2, ALDH6A1, AMY2A, ARHGEF4, ARHGEF7, ARSA, ARSD, ASNS, ATG12, ATN1, ATP13A2, ATP5A1, ATP5F1, BACE1, BDH2, BIRC3, BMP8B, BMPR2, C1QB, CACNA1C, CACNA1D, CACNA1F, CACNA1H, CAMK2A, CAMK2D, CASP3, CASP9, CCL20, CCL3, CD28, CD38, CD40LG, CDC2, CDO1, CER1, CHRM3, CLDN17, CLDN5, CNGA3, CNTF, CNTN1, COL11A1, COL4A1, COQ7, COX15, CPT1C, CREB3L4, CSF1, CSF1R, CSF3, CTBP1, CTPS2, CX3CL1, CXCL6, CXCL9, CYP27A1, CYP3A4, CYP4A22, DDOST, DDX51, DERA, DGAT2, DGKH, DHFR, DHRS4, DKK1, DLL4, DTX2, E2F1, E2F5, EFNA4, EHMT2, ELK4, ENPP6, ENPP7, EPB41, EPHB1, ERBB3, ERBB4, FABP1, FARS2, FARSB, FBP2, FCGR3A, FGF11, FGF12, FGF23, FGFR2, FUT6, FZD10, FZD6, GADD45A, GALM, GALNT3, GALNT9, GGT6, GLG1, GMPR, GNA14, GNG13, GPT2, GPX5, GRIN2D, GSTA1, GUCY1B3, GUCY2C, GYS1, HADH, HCST, HDAC1, HIF1A, HLA-DMA, HMGCS1, HYAL2, IARS2, IFNGR2, IL12RB2, IL1R2, IL8RA, IL8RB, INMT, INPP5E, IPPK, IRF3, IRS2, ITGA6, ITGAM, JAM2, KIR3DL2, KLRC3, LCP2, LEFTY1, LIMK1, LIPE, LRP5, LYPLA1, MAML2, MAP3K11, MAP3K3, MAP3K6, MDR1, AGL, BCL2L1, C3, C6, CUB, Ctn, CUGA, CN1T, CSNK, DBP, EGF, F3, GBR, GPT, GR2, GP5, GP9, IDS, IL2, INS, KMO, LCK, LPL, MAX, MOS, MSN, MTR, MVK, RPE, SDS, A4GALT, AACS, ACAT2, ACOT11, ACSM4, ACSS2, ACTB, ACVR2A, ACYP1, ACYP2, ADCY2, ADCY5, ADCY8, AKR1C2, ALG10B, ALG5, ALPPL2, AMDHD1, AMY2A, AMY2B, ANAPC2, ANPEP, APH1A, ARAF, ARG2, ARHGEF2, ARHGEF6, ARNT, ARPC5, ASS1, ATP13A2, ATP4B, ATP5G3, AXIN2, B3GALT4, B4GALT2, B4GALT3, BCKDHB, BCMO1, BET1, BHMT, BIRC3, BLNK, BMP2, BNIP1, C3AR1, CACNA1B, CACNG6, CACNG7, CAMK2A, CANT1, CAV3, CCL17, CCND3, CD14, CD36, CD72, CDK4, CDKN2A, CHDH, CHKB, CHRM1, CHRM5, CHSY1, CLDN11, CLDN15, CLDN9, CLTCL1, COASY, COL3A1, COL6A2, CRLF2, CTNNA1, CTSL1, CXCR5, CYP11B1, CYP11B2, CYP2F1, CYP4A22, CYSLTR2, DAPK1, DDX47, DDX52, DGAT1, DGKA, DHRS9, DIAPH3, DKK4, EDNRA, EFNA2, ENO1, ENTPD2, ENTPD4, EPHA1, EPOR, FADS2, FCGR3B, FGF11, FGF12, FGF17, FMO3, FZD10, FZD9, GAD1, GAL3ST1, GALNT13, GALNT8, GCAT, GCNT3, GFAP, GFPT1, GGCX, GMPPA, GMPR2, GNG12, GPD2, GRB2, GRIN2A, GSTM4, GUCY2F, GZMA, GZMB, HHIP, HIBCH, HIF1A, HLA-DOB, HLCS, HMOX1, HNF4A, HPSE2, HSD17B3, HSPA1B, HSPB1, HTR7, ICOS, IFNA10, IFNA6, IFNAR1, IL10RB, IL6ST, IL8RB, IQGAP1, IRAK4, ITGAD, ITGAL, JAG2, KIR2DL4, LAMC3, LIFR, LLGL1, LTB4R2, MAD1L1, MAD2L2, MALT1, MAP3K7, MAP3K7, MAP3K11, MAP3K19, MCCC1, MDH9, MFCB, MGAM, MGCST9, MMT</p>
Negative_16032	<p>MDR1, AGL, BCL2L1, C3, C6, CUB, Ctn, CUGA, CN1T, CSNK, DBP, EGF, F3, GBR, GPT, GR2, GP5, GP9, IDS, IL2, INS, KMO, LCK, LPL, MAX, MOS, MSN, MTR, MVK, RPE, SDS, A4GALT, AACS, ACAT2, ACOT11, ACSM4, ACSS2, ACTB, ACVR2A, ACYP1, ACYP2, ADCY2, ADCY5, ADCY8, AKR1C2, ALG10B, ALG5, ALPPL2, AMDHD1, AMY2A, AMY2B, ANAPC2, ANPEP, APH1A, ARAF, ARG2, ARHGEF2, ARHGEF6, ARNT, ARPC5, ASS1, ATP13A2, ATP4B, ATP5G3, AXIN2, B3GALT4, B4GALT2, B4GALT3, BCKDHB, BCMO1, BET1, BHMT, BIRC3, BLNK, BMP2, BNIP1, C3AR1, CACNA1B, CACNG6, CACNG7, CAMK2A, CANT1, CAV3, CCL17, CCND3, CD14, CD36, CD72, CDK4, CDKN2A, CHDH, CHKB, CHRM1, CHRM5, CHSY1, CLDN11, CLDN15, CLDN9, CLTCL1, COASY, COL3A1, COL6A2, CRLF2, CTNNA1, CTSL1, CXCR5, CYP11B1, CYP11B2, CYP2F1, CYP4A22, CYSLTR2, DAPK1, DDX47, DDX52, DGAT1, DGKA, DHRS9, DIAPH3, DKK4, EDNRA, EFNA2, ENO1, ENTPD2, ENTPD4, EPHA1, EPOR, FADS2, FCGR3B, FGF11, FGF12, FGF17, FMO3, FZD10, FZD9, GAD1, GAL3ST1, GALNT13, GALNT8, GCAT, GCNT3, GFAP, GFPT1, GGCX, GMPPA, GMPR2, GNG12, GPD2, GRB2, GRIN2A, GSTM4, GUCY2F, GZMA, GZMB, HHIP, HIBCH, HIF1A, HLA-DOB, HLCS, HMOX1, HNF4A, HPSE2, HSD17B3, HSPA1B, HSPB1, HTR7, ICOS, IFNA10, IFNA6, IFNAR1, IL10RB, IL6ST, IL8RB, IQGAP1, IRAK4, ITGAD, ITGAL, JAG2, KIR2DL4, LAMC3, LIFR, LLGL1, LTB4R2, MAD1L1, MAD2L2, MALT1, MAP3K7, MAP3K7, MAP3K11, MAP3K19, MCCC1, MDH9, MFCB, MGAM, MGCST9, MMT</p>

Negative_16033	<p>AK3, C6B, CBS, C1H, F2K, F9, F11N, GLA, ID4, IHH, ILS, IL9, LAT, ME2, MVD, NPY, PDC, PTS, RFK, TYR, WAS, ZYX, ACAD8, ACOX1, ACSL6, ACYP2, ADCY9, A DIPOR2, AGTR1, ALDH1A3, ALDH1B1, ALDH3A2, ALG10B, ALG12, ALG9, ALPP , ANAPC7, APOA5, ARNTL, ARRB2, ASMT, ASRGL1, ATF4, ATIC, ATP6VOC, ATP 6V1F, ATP6V1H, AXIN1, B3GALT5, B3GAT2, B4GALT5, BCKDHB, BCMO1, BDH2 , BET1, BLVRA, C4BPA, CACNA1C, CACNG3, CAMK4, CARS, CASP8, CBLC, CCDC 6, CCL22, CCL24, CCL3, CD79B, CDC25B, CDC27, CES2, CHEK1, CKS1B, CNGA 4, CNTN1, COASY, COL2A1, COL4A1, COL6A1, COQ5, CPT1B, CREB5, CRLF2, C SNK2A2, CSNK2B, CTPS2, CTSL1, CXCL1, CXXC4, CYP4F2, CYSLTR1, CYSLTR 2, DAPK2, DDIT4, DGKZ, DHCR24, DHRS4, DNMT3B, DOT1L, DPAGT1, DVL3, E2 F4, EFNA5, EIF4E2, EPHA8, ETNK1, ETNK2, F13B, FGF6, FLOT1, FLT4, FOXO 3, FPGT, FTCD, FUT2, FUT4, FUT6, G6PC2, GBA3, GLB1, GNA14, GNAI1, GNAT 3, GNG13, GNPAT, GRIN2C, GRLF1, GRM5, GSTM1, GSTM2, GSTZ1, GUCY1B3, G ZMB, HCST, HMGCR, HNF1B, HNF4A, HPSE, HTR5A, HTRA2, IAPP, ICOS, IDI1, IDI2, IDUA, IFNA14, IFNAR2, IKBKE, IKBKG, IL12RB2, IL1A, IL21, IL22R A1, IL2RA, IL6R, IL8RA, IMPDH2, IRF7, ITGB2, KAT2B, KIR2DL4, KLRC1, K LRC4, LEFTY2, LILRB3, LLGL1, LRRC4C, LTC4S, MAN1B1, MAN1C1, MAP3K13 , MCCC2, MCM4, MCM5, MDH2, MEF2C, MKNK2, MLYCD, MMP1, MPDZ, NCAM1, NCO</p>
Negative_16034	<p>A2M, APO1, ADR, C4B, C3, C5, CAM2, C1PC3, DBP, DCT, DDO, N7, TDS, TLR9, TLR, KDR, LHB, MAG, ME2, OGT, SYK, TK2, WAS, AADAT, ABLIM1, ACAA1, ACO2, ACP 1, ADAM17, ADCY10, ADCY3, ADIPOQ, ADSS, ALCAM, ALG11, ALG12, ALOX5, A LPP, ANAPC10, ANAPC2, APOE, APPL1, ARHGAP5, ARHGEF7, ARSB, ASS1, ATI C, ATP12A, ATP2A1, ATP5C1, ATP5J, B3GALT5, B4GALT2, BMP5, BPNT1, C1Q B, C1QC, C4BPB, CACNA1E, CADM1, CAV3, CBLB, CBR3, CCDC6, CCKAR, CCL28 , CCL3, CCL4, CCNH, CD19, CD226, CD247, CDK2, CDS1, CHIT1, CMBL, CNTF, CNTFR, COL3A1, COL4A4, COL6A1, CPT1B, CRB3, CSAD, CSF2, CSNK1G1, CTN NA2, CTSG, CTTN, CX3CL1, CYP2E1, CYP2U1, CYSLTR2, DARS, DCTN1, DDIT4 , DDX23, DDX55, DIAPH3, DLST, DOT1L, DUSP1, DUSP4, E2F1, EARS2, EIF4E 2, ELK1, ENTPD8, EPB41L1, ERBB2, EXT2, FADS2, FASN, FGF10, FGF13, FGF 21, FGFR1, FM05, FZD4, FZD5, G6PD, GALNT1, GALNT13, GALNTL2, GBGT1, G CNT3, GDF5, GDF6, GGT1, GIT1, GNG13, GPLD1, GPX5, GUCY2C, GUCY2F, HAR S, HBEGF, HHIP, HLA- DOA, HMGCL, HTR2B, HTR2C, HTR4, IDH3G, IDI2, IFNB1, IFT57, IL10, IL11 RA, IL18, IL18RAP, IL21, IL28A, IL2RB, INHBC, IRS2, ITGA3, ITGB5, KCN J11, KIR2DS5, KLRC3, LAMB1, LDHD, LIPA, LPAR1, LRP6, LYPLA1, MAD1L1, MAD2L2, MAN2A1, MAP2K4, MAP3K6, MAT1A, MEF2C, METTL6, MGST1, MIOX, M PST, MS4A2, MTHFD2, MYL9, NAE1, NAGS, NANP, NAT2, NCAM2, NCF2, NCK1, N</p>

Negative_16035	<p>AMT, BCR, CD4, CEL, DCC, DCK, DED, F10, FAN, FGG, GCR, GDA, GHI, HKS, ID4, IL5, IL7, LHB, MET, MPI, PC, PGF, SDS, SFN, SMO, TEC, TXK, AACS, ACAT1, ACSM4, ACSS3, ACTA1, ACTN2, AGPAT6, AGXT, AKT1, ALDH4A1, ALPP, AMDHD2, AMPD1, APOA2, APRT, AQP7, ARAF, ARHGAP5, ARSB, ASRGL1, ATIC, ATP12A, ATP4B, ATP5J, ATP5J2, B4GALT1, BCAT1, BDNF, C1QC, CACNB2, CACNG1, CACNG3, CAMKK2, CASP10, CCL1, CCL16, CCL20, CCNA2, CCNB2, CCNE1, CD14, CD244, CD40, CD80, CD82, CDC7, CDO1, CFL2, CFTR, CHRM3, CKMT2, CLDN10, CLDN6, CLTA, CLTB, CMPK2, COL3A1, CSAD, CSF2RB, CSF3, CSNK1D, CSNK2B, CTLA4, CTNNA1, CTPS2, CXXC4, CYBB, CYP2A13, CYP2A7, CYP2J2, CYP4A11, CYP4A22, DAPK3, DBF4, DDX47, DHRS9, DIAPH1, DNMT1, DOLPP1, E2F4, EIF4E, ENAH, ENTPD4, EPRS, EXTL2, FARS2, FBXW11, FDPS, FGF11, FLAD1, FLOT2, FTH1, G6PC, GABARAP, GALNT10, GALT, GBE1, GCNT3, GJD2, GLB1, GLO1, GMPA, GNG3, GOSR2, GPX5, GSTA3, GSTA4, GSTM1, GUCY2C, GYS1, HADHA, HA01, HBEGF, HLA-DOB, HMOX1, HMOX2, HSD11B2, HSD17B1, HSD17B3, IBSF, ICOS, IDI1, IFNAR2, IFNGR2, IGSF5, IL22RA1, IL8RA, INHBE, INPP4B, IQGAP3, ITGA3, ITGB6, KIR2DS5, KIR3DL3, KITLG, KLKB1, LAMB2, LCP2, LILRB3, LIPE, LRDD, LTA4H, LTC4S, LYPLA1, MAN1A2, MAP4K3, MGAT2, MGAT4B, MMP1, MRAS, MYH15, MYH2, NAGS, NARS2, NAT2, NAT5, NCAM2, NCF2, NCR3, NEFH, NEUROG3, N</p>
Negative_16036	<p><del>AZM, AKR2, BND, C0, CTF, CKB, EGF, F2, F8, FER, FFR, GCR, GDA, GHI, GLA, GNS, GP9, HK1, ID3, LYN, MET, NF1, PLG, PLN, SHH, SMS, SPN, VTN, AASS, ABL1, ACACA, ACVR1B, ADCY9, ADH1A, ADORA2A, AGRP, AKR1B1, AKT3, ALDH7A1, ALG8, ANPEP, APOE, ARD1A, ARNTL, ARPC1A, ARRB1, ASPA, ATP2A3, ATP5C1, ATP5E, ATP5G1, ATP6VOB, ATP6V1A, B4GALT2, B4GALT3, B4GALT4, B4GALT5, BAI1, BBOX1, BCL10, CACNA1B, CACNA1E, CACNA1I, CARS2, CASP3, CCKBR, CCL1, CCL26, CCNG2, CD226, CD46, CD79B, CDKN1B, CEBPA, CKMT2, CLDN11, CLDN14, CLDN15, CLDN17, CLDN18, CLDN19, CMAS, CMBL, CNDP1, COL1A1, COL1A1, COL1A2, COL4A2, CRY1, CSNK1G2, CTNNA1, CTPS, CTSG, CYP11B2, CYP26B1, DDIT3, DERL1, DGAT2, DGUOK, DHCR7, DLL4, DNMT3L, DTX3, DUSP2, DUSP9, DVL1, ECHS1, EDN1, EFNA2, EHMT1, ENPP1, ENPP6, ENTPD8, EPHA7, EPHB6, EXT1, FADD, FGD3, FGF13, FGF8, FLT3LG, FOXA2, FPGS, FRA1, FZD9, G6PD, GAD1, GALNT2, GALNT6, GCAT, GCNT4, GIT1, GNAZ, GNG12, GNPAT1, GPAM, GPD2, GRIN2C, GSTA3, GSTA4, GUCY1A3, HLA-G, HMGS1, HSD17B1, HTR4, IKBKB, IL23A, IL25, IL7R, INPP5A, INSRR, IQGAP3, ISYNA1, ITGA4, ITGA5, ITGAL, ITGB3, JAK3, KITLG, KLK3, KLRK1, LCMT2, LGMN, LILRB3, LIMK2, LIPA, LIPT1, MAGI2, MAGI3, MAP3K1, MAP3K14, MAPK10, MAPK11, MBL2, MDM4, MGAT2, MGST3, MIOX, MKNK1, MLLT4, MLYC</del></p>

Negative_16037	<p>AGK, AGL, AK, BCR, C6A, C6B, CEL, CKM, DCN, DUT, FZ, FZK, FGG, FH, GF3, GI  I, ILK, LTB, MIF, NLK, PGF, PLG, PLN, PVR, SDS, SRM, TEC, TNC, TPO, TPR, A  CAD8, ACADL, ACTG1, ADH5, ADRBK2, AHCY, AKR1C1, AKR1C2, ALDH1A2, ALD  H3A2, ALDH5A1, ALG9, ANAPC4, ANAPC7, AOC3, APH1A, ARG1, ARHGAP5, ARH  GEF7, ARRB2, ATP5G1, ATP5G2, ATP5J, AVPR1B, BCAT1, BCAT2, BMP8A, CAC  NA1H, CACNB4, CACNG3, CAMK2G, CAPN2, CAV1, CBLB, CCR1, CCR10, CCR3, C  D226, CD47, CD48, CD58, CDC2, CDK4, CDK7, CHIA, CHKB, CHST12, CHST13,  CHUK, CLCF1, CLDN18, CLDN6, CLDN7, CLTC, COMT, CPS1, CREBBP, CRKL, CR  Y1, CSNK1G1, CTNNA1, CTNNA1, CTSL1, CXCR6, CYP11B1, CYP26A1, CYP26C  1, CYP2J2, CYP4F3, DAAM1, DAPK2, DARS, DAXX, DDB2, DDX4, DGKD, DIAPH2  , DNMT3B, DPYD, DPYSL2, DTX3L, DUSP8, EDN1, EI24, EIF4B, ELK1, ENO2, E  NTPD7, ENTPD8, FGF12, FGF3, FGF6, FGFR3, FLT3, FMO1, FRAT2, FUT6, G6P  C2, G6PD, GADD45A, GART, GATM, GJA1, GJD2, GLI3, GMPR2, GNA14, GNG12,  GRB2, GRHR, GRM5, HADHA, HBEGF, HLA-DOA, HLA-  DRA, HSD17B3, HTR5A, IARS2, IDI1, IGF1R, IGSF5, IL10RB, IL12RB1, IL1  2RB2, IL17A, IL21R, IL22, INPP1, INPP5A, IRF5, IRF9, ITGB4, KIR2DS5,  LCMT2, LEPR, LIMK2, MAGI3, MAN1B1, MAP2K1, MAP2K6, MAPK8, MCM3, MGAT  5B, MKNK2, MLYCD, MTHFS, MYH13, MYH3, MYH6, NCF1, NCK1, NCOA4, NCSTN,  OSG1, CSK, BCR, EBF1, EDN, ESR, FGF1, FGF3, FGF6, FGF7, GJA1, NAE, NNT, TRK2, NTP, TNS</p>
Negative_16038	<p>, LAT, LHB, LPO, NNT, OAT, PLN, SMO, TFG, TPO, TYR, ACADS, ACHE, ACMSD, A  CPP, ACSL4, ACSL5, ACTN4, ADCY5, ADCY7, ADCY8, ADSSL1, AGPAT1, AGXT,  AGXT2, AK3L1, AKR1A1, ALG6, ALOX12, ALOX15B, ALPP, AMY2A, ANAPC1, AN  APC2, AOX1, ARD1A, ARG2, ARHGEF1, ARPC3, ATP6V1A, BCL2L1, BMP2, BMP8  B, CACNA1E, CADM3, CARS, CBLB, CCL19, CCL2, CCL21, CCL28, CCL3, CCL7,  CCNB1, CCND3, CCR9, CD48, CD72, CD82, CDH15, CDH2, CDKN2D, CHKB, CHRM  3, CHRNA7, CLDN16, CLOCK, CNTF, COL11A1, COL2A1, COL3A1, CPT1C, CRB3  , CRKL, CSF2RB, CSNK1G3, CTF1, CTNNA2, CTSL1, CX3CR1, CXCR6, CYP27A1  , CYP2B6, CYP2C9, CYP3A5, CYP7A1, DARS2, DHODH, DNMT1, DNMT3A, DTX1,  DTX3, EARS2, EDNRB, ENPP2, ENTPD1, EPHA6, EPHB6, EPOR, ESPL1, FADD, F  BP1, FCER1G, FCGR3B, FGF14, FGF20, FGF5, FGFR1, FOXA2, FUT9, FZD5, FZ  D7, FZD8, GAL3ST1, GALK1, GALM, GALNS, GALNT14, GBE1, GCNT2, GNA11, G  NAI2, GNRH1, GRIN2B, GRLF1, GRM1, GSTM4, GSTM5, GUCA1A, GYS1, HAO2, H  LA-  G, HNF1A, HSD3B2, HSPA1B, IARS2, ICAM2, ICAM3, IDH2, IDUA, IFNB1, IFN  K, IKBKE, IL10, IL13, IL13RA1, IL17A, IL19, IL1B, IL21R, IL22RA2, IL3  RA, IL8RB, INHBB, INSR, IPMK, IRF3, IRS4, KIR3DL1, KIR3DL2, KLRK1, LI  PF, LRP5, MAD2L2, MAP4K2, MCM4, MCM5, MGAT3, MLYCD, MMP9, MTFMT, MTMR  3, MYH13, MYH13, NAGLU, NAT1, NAT5, NCAM9, NEEM, NEFG, NEK2, NEK3, NEK4, N</p>

Negative_16039	<p>C3, DDI1, GK, GFI1, LCI1, LTN, MIF, MLE, NFI1, NFI2, PIS, RDI1, SMS, STS, UBB, A  ASDH, ABL1, ABLIM1, ACADSB, ACP6, ACSL3, ACSM1, ACSM5, ACYP1, ADRA1B  , AGXT, ALDOB, ANAPC1, APOA1, ARHGAP5, ARNT2, ARPC1A, ATP5H, B3GALT5  , B4GALT2, BAI1, BAIAP2, BCAT2, BMP4, C1QB, C4BPA, CACNA1F, CACNB2, C  ACNB3, CADM1, CCL1, CCL7, CCNA1, CCR6, CD40, CD44, CD58, CD80, CDC26,  CDC6, CDS2, CES2, CHDH, CHKA, CKS1B, CLCA2, CLDN8, CMPK2, CNTNAP1, CO  L5A3, COQ3, CREB5, CRHR1, CRKL, CRY1, CSH1, CSNK1G1, CXCL12, CXCR3, C  YFIP1, CYP11A1, CYP2C8, CYP2U1, CYP3A5, CYP4F2, DAAM2, DCTD, DDIT3,  DGKQ, DPM1, DRD2, DTX4, DUSP16, DVL1, DVL2, E2F1, ECSIT, EDAR, ELK1, E  PAS1, EPB41L2, EXTL1, FGD1, FGF23, FMO4, FOXA2, FRAP1, FTCD, FUT3, FZ  D7, FZD9, GALNS, GALNT5, GALNTL5, GGT7, GLI1, GNA13, GNG3, GNPDA1, GP  AM, GPD2, GRHPR, GSK3B, GSTM4, GUCY2D, HLA-  F, HNF1B, HNMT, HRH1, HSPA8, HTR5A, HTR7, IARS2, IDH3A, IDUA, IFNA17,  IL13RA1, IL22RA2, IL24, IL2RA, IMPA2, IMPDH1, INHBE, INPP5A, IRAK4,  ITGA3, LAMC1, LIFR, LRDD, LRRC4C, LYZL1, MAD2L1, MAN1C1, MAP2K5, MAP  K13, MAPT, MDH1, MGAM, MGST1, MIF, MKNK2, MS4A2, MYH9, MYL5, NADSYN1  , NAT1, NAT6, NCKAP1, NCOA4, NEFL, NFATC2, NLGN1, NMNAT3, NOTCH2, OGD  H, OR10A3, OR10H3, OR10J1, OR10K1, OR11L1, OR13C9, OR11I1, OR1S1, OR2</p>
Negative_16040	<p><del>ADA, ARI1, ARI2, C5, CAD, CA1, CP2, FZK, PT1, GDA, GHT2, GSR, HCF, TLE2, TL4, KT</del>  T, LEP, LIF, MET, MPI, MVK, SDS, SRM, TEC, TPO, UBB, AANAT, ABL2, ABLIM1  , ACP6, ACPP, ACTC1, ACVR2B, ADAM17, ADCY7, ADH1A, ADH1B, ADH5, ADORA  2A, ADRBK2, ADSL, AGPAT2, AGRP, AGTR1, AHCYL2, AK3L1, ALG6, ALG9, ALO  X5, ALS2, AMPD3, APOE, ARHGEF7, ARPC1B, ASNS, ASRGL1, ATF4, ATP5G1, A  TP5G3, ATP6VOC, B4GALT5, B4GALT6, BACE1, BAI1, BDKRB1, BET1L, BLNK,  BMPR1B, BPNT1, BRAF, C1QA, CAMK2D, CCDC6, CCNB2, CCNE1, CCNE2, CCR3,  CCR5, CD34, CD55, CD59, CDC45L, CDK5, CDKN1A, CES7, CHAT, CHIT1, CKS1  B, CLDN16, CLDN7, CMAS, CNGB1, CNTNAP1, COL1A2, COL6A1, COQ3, COQ7, C  PT1B, CSH1, CTBP2, CTTN, CYBB, CYCS, CYP11A1, CYP27A1, CYP2B6, CYP2E  1, CYP3A5, CYP4F3, DDB2, DDHD1, DDIT3, DDIT4, DDX18, DDX50, DERA, DFF  B, DIAPH3, DKK2, DMGDH, DNMT1, DUSP14, EARS2, EDNRA, EDNRB, EFNA1, EG  LN1, EGLN3, ENO3, EPB41L1, EPB41L2, EPHB4, EXTL2, FADD, FADS2, FDPS,  FGF10, FGF20, FGFR2, FUT4, FUT8, FZD10, FZD8, G6PC2, GADD45B, GARS, G  ATM, GCNT2, GCNT4, GGCX, GNAI3, GNG12, GPLD1, GRAP2, GRM1, GSTA5, HAA  O, HADHA, HAGH, HCLS1, HEMK1, HIF1A, HIP1, HLA-  DOA, HLCS, HMOX2, HPRT1, HSD17B3, HSD3B1, HSP90B1, HSPA1B, HSPB1, HT  R2C, IARS2, IDH1, IDH2, IFIH1, IL10RA, IL12RB1, IL13, IL15, IL1RAP, I  </p>
Negative_16041	<p><del>AGC, AN3, BAI, C2, PC3, CB7, CAT, CD6, CGA, LDM, ZAPP, YFG, FN1, GNA, GNS</del>  , GP9, GSS, HY1, IL3, ITK, JUN, KIT, KMO, LEP, MIF, MPL, NPY, PRL, PTS, RD  X, RET, TH, XDH, ABI2, ABL1, ACAT2, ACHE, ADCY8, ADH1B, ADIPOQ, AGPAT3  , AKR1C3, AKR1C4, ALAS1, ALDH1A2, ALDH1L1, ALG11, ALG13, AMPD1, ANGP  TL4, AREG, ARNTL, ARPC1B, ASPA, ATP5B, ATP6V1F, B3GNT2, B4GALT6, BDH  2, BDKRB2, BMP2, BMP7, BMPR1A, BRAF, BTRC, C7orf16, CACNA1E, CACNG5,  CADM3, CAPN2, CARS, CASP7, CAV1, CCKAR, CCL15, CCR1, CD34, CDC26, CDH  15, CFTR, CHKB, CISH, CLCA2, CLDN10, CLDN9, CLOCK, CMPK1, COL4A6, COX  10, CRLS1, CSF3, CTPS2, CXCL11, CYFIP1, CYP11A1, CYP2E1, CYP2F1, CYP  2J2, DDX54, DGKD, DKK2, DLAT, DUSP1, DUSP14, DUSP4, EFNA4, EGFR, EHHA  DH, EHMT2, EIF4B, ENO3, EPHA3, EPHA6, ERBB2, EXOC7, EXT2, F2RL1, FARS  B, FGF20, FGF6, FUT3, FUT8, FZD4, FZR1, GALNT11, GALNT12, GANAB, GAPD  H, GATM, GCLM, GCNT1, GLI2, GLUD1, GLUD2, GLYCTK, GNA12, GPT2, GRIA1,  GSTA5, GSTP1, GSTT1, GUCA1A, GUCY2F, GUK1, HAGH, HA01, HLA-  DMA, HSPA2, HSPA8, HTRA2, IAPP, ICAM2, ICOS, ICOSLG, IFNGR2, IFT57, I  L10RB, IL18, IL1R2, IL22RA1, IL24, IL29, IL2RB, IL6ST, ITGA2B, ITGAD  , ITGB3, ITGB8, JAM2, KYNU, LALBA, LARS, LCP2, LDHAL6A, LDHAL6B, LEF1  , LIPT1, LPAR1, LRAT, LRP6, LTB4R2, LTC4S, MAN1A1, MAN2A1, MAP2K7, MA</p>

Negative_16042	<p>ADA, AK3, C8G, CAD, CD2, CDA, CGN, FAS, GGH, GP1, IL3, IL9, KHK, LHB, MAX, ME2, OGT, PDC, SDS, SRC, TNF, TNN, ZYX, ABAT, ABLIM1, ACAT2, ACLY, ACTA2, ACYP2, ADAM17, AGPAT1, AKR1A1, AKR1C1, ALDH1A2, ALDH3A1, ALDH3B1, ALG3, ALG8, ALPPL2, APOA1, AREG, ARG1, ARHGAP5, ARHGEF7, ARRB2, ARSA, ATG12, ATG3, ATP4A, ATP5F1, ATP5J2, ATP6V1F, B3GALT4, BCKDHA, BCKDHB, BDH1, BMP8B, BMPR2, BUB1B, C1GALT1, C1QA, C1QB, CACNA1F, CACNA1S, CACNB1, CACNG1, CACNG5, CACNG6, CAMK2A, CAMKK2, CCL19, CCL23, CCL5, CCNE2, CD274, CD36, CD79A, CD86, CDC6, CDK6, CDKN1B, CDKN2C, CHEK2, CHKB, CHRM5, CLDN18, CLOCK, CNGA3, COL2A1, COL4A1, COL5A2, COQ7, CREB3L4, CRLF2, CSF1R, CSF3R, CSNK1D, CSNK2A2, CTF1, CTPS2, CX3CR1, CXCL12, CXCR5, CYP2F1, CYP4A22, DCTD, DDB2, DDIT4, DDX50, DEGS1, DGKI, DGKQ, DLL1, DLL3, DLL4, DVL2, EDNRB, ENPP7, ENTPD5, EPHA1, EPHA8, FARRSA, FGF17, FGF23, FLOT1, FMO5, FZD6, G6PC, G6PC2, GALM, GALNT13, GALNT14, GANAB, GAPDH, GCNT2, GDF5, GLI2, GLYCTK, GMPR2, GNAI3, GNAZ, GN G13, GP1BA, GPD1, GPT2, GPX5, GRB2, GRHR, GRLF1, GSTM1, GSTZ1, GZMB, H6PD, HCST, HGSNAT, HHEX, HIBCH, HLA-DOB, HMGCS2, HPRT1, HSD11B2, HSD17B4, HSD3B7, HSP90B1, HSPB1, ICAM2, IDH2, IFNA16, IFNAR1, IL10RA, IL15RA, IL17A, IL1R1, IL22RA2, IL28A</p>
Negative_16043	<p>AKR1B1, ALG3, ALPPL2, APOA1, AREG, ARG1, ARHGAP5, ARHGEF7, ARRB2, ARSA, ATG12, ATG3, ATP4A, ATP5F1, ATP5J2, ATP6V1F, B3GALT4, BCKDHA, BCKDHB, BDH1, BMP8B, BMPR2, BUB1B, C1GALT1, C1QA, C1QB, CACNA1F, CACNA1S, CACNB1, CACNG1, CACNG5, CACNG6, CAMK2A, CAMKK2, CCL19, CCL23, CCL5, CCNE2, CD274, CD36, CD79A, CD86, CDC6, CDK6, CDKN1B, CDKN2C, CHEK2, CHKB, CHRM5, CLDN18, CLOCK, CNGA3, COL2A1, COL4A1, COL5A2, COQ7, CREB3L4, CRLF2, CSF1R, CSF3R, CSNK1D, CSNK2A2, CTF1, CTPS2, CX3CR1, CXCL12, CXCR5, CYP2F1, CYP4A22, DCTD, DDB2, DDIT4, DDX50, DEGS1, DGKI, DGKQ, DLL1, DLL3, DLL4, DVL2, EDNRB, ENPP7, ENTPD5, EPHA1, EPHA8, FARRSA, FGF17, FGF23, FLOT1, FMO5, FZD6, G6PC, G6PC2, GALM, GALNT13, GALNT14, GANAB, GAPDH, GCNT2, GDF5, GLI2, GLYCTK, GMPR2, GNAI3, GNAZ, GN G13, GP1BA, GPD1, GPT2, GPX5, GRB2, GRHR, GRLF1, GSTM1, GSTZ1, GZMB, H6PD, HCST, HGSNAT, HHEX, HIBCH, HLA-DOB, HMGCS2, HPRT1, HSD11B2, HSD17B4, HSD3B7, HSP90B1, HSPB1, ICAM2, IDH2, IFNA16, IFNAR1, IL10RA, IL15RA, IL17A, IL1R1, IL22RA2, IL28A</p>
Negative_16044	<p>AKR1B1, ALG3, ALPPL2, APOA1, AREG, ARG1, ARHGAP5, ARHGEF7, ARRB2, ARSA, ATG12, ATG3, ATP4A, ATP5F1, ATP5J2, ATP6V1F, B3GALT4, BCKDHA, BCKDHB, BDH1, BMP8B, BMPR2, BUB1B, C1GALT1, C1QA, C1QB, CACNA1F, CACNA1S, CACNB1, CACNG1, CACNG5, CACNG6, CAMK2A, CAMKK2, CCL19, CCL23, CCL5, CCNE2, CD274, CD36, CD79A, CD86, CDC6, CDK6, CDKN1B, CDKN2C, CHEK2, CHKB, CHRM5, CLDN18, CLOCK, CNGA3, COL2A1, COL4A1, COL5A2, COQ7, CREB3L4, CRLF2, CSF1R, CSF3R, CSNK1D, CSNK2A2, CTF1, CTPS2, CX3CR1, CXCL12, CXCR5, CYP2F1, CYP4A22, DCTD, DDB2, DDIT4, DDX50, DEGS1, DGKI, DGKQ, DLL1, DLL3, DLL4, DVL2, EDNRB, ENPP7, ENTPD5, EPHA1, EPHA8, FARRSA, FGF17, FGF23, FLOT1, FMO5, FZD6, G6PC, G6PC2, GALM, GALNT13, GALNT14, GANAB, GAPDH, GCNT2, GDF5, GLI2, GLYCTK, GMPR2, GNAI3, GNAZ, GN G13, GP1BA, GPD1, GPT2, GPX5, GRB2, GRHR, GRLF1, GSTM1, GSTZ1, GZMB, H6PD, HCST, HGSNAT, HHEX, HIBCH, HLA-DOB, HMGCS2, HPRT1, HSD11B2, HSD17B4, HSD3B7, HSP90B1, HSPB1, ICAM2, IDH2, IFNA16, IFNAR1, IL10RA, IL15RA, IL17A, IL1R1, IL22RA2, IL28A</p>











Negative_16061	CS, ILK, AKR1C2, CDH15, CYBB, DUSP6, EPOR, FASN, FBP1, GSTM3, GUSB, HS D11B1, IL22RA1, IQGAP3, IRF3, MECR, NPR1, NT5E, OR10A5, OR52N1, OR9A2, PDE1B, RUNX1T1, SEMA4B, SFRP1, SLC27A4, UXS1
Negative_16062	CKB, CRK, F5, ADRB3, CERK, ITGA2B, NEU3, OR1L6, PLAT
Negative_16063	AMH, CGN, PLN, RET, AKR1D1, ALCAM, APAF1, BAI1, CTNNB1, CYCS, CYP2B6, DFFA, DUSP10, EXOC7, GALNT1, HIP1, IL8RA, LIPE, LIPG, MALT1, NFE2L2, OR2A14, OR4S2, PPA2, PRKACG, PTGS2, PTPRR, SEMA4G, SMARCA2, SPTLC1, TAP1, TAS2R9, TBL1Y, THBD, HLA-DRB5
Negative_16064	OR2A2, TAS2R48, UGT8
Negative_16065	AADAT, AASS, ACP6, BCAT2, CCKAR, CD40, CD40LG, CDH15, CDS1, CHKA, CMBL, DGAT1, FIGF, GGT6, GNA15, GNAT3, GSTT1, GUCA1A, GUCA1B, HAAO, HSP90B1, IBSP, INADL, LAMA3, MDH1, MYL9, OR10G2, OR1L1, OR51A7, PIGF, PIGN, PLA2G2E, PLK1, PPP1R3C, PTAFR, PYCR1, SDHC, SGPP1, SHC4, SIPA1, SOCS1, TDO2, TUBA3E, VEGFC, WNT3A
Negative_16066	DCK, MPL, TFG, ABLIM3, C3orf10, CCND2, CHIA, CRB3, DAXX, EPHB2, GSTA3, IDH2, IPPK, MGAT2, OR10T2, P2RX1, PFN1, PKM2, PLA2G5, PTPN1, PVRL1, TAS2R1, TNFSF14, TRAF3, TUBA3E, CACNA2D3, PPARGC1A, TNFRSF1B
Negative_16067	C2, GK, ABCC8, CAV2, CDC25C, CDC26, CHDH, CTNNA1, DAAM1, DGAT1, FGD3, FLT1, GPX5, GRIN2B, HTR6, INHBC, MTAP, MYLK3, NT5C1A, OR11H4, OR2AT4, P4HA3, PAICS, PCK1, PTPN1, TGFA, CACNA2D2
Negative_16068	BTD, F5, ALDH1L1, ALG1, ATG3, ATP6VOB, CACNA1F, CALML5, CD8B, CHIA, COASY, COX10, CYP2A6, DKK1, ELK1, FGF1, FGF13, HTR7, IL17A, IL22RA1, IL29, MADCAM1, MYH9, NPR2, OR10AG1, OR10K2, OR2S2, OR2T6, OR51B6, PIAS4, PIK3C3, POLR3K, PTPRB, SPRY2, ST3GAL4, WNT10B, TNFRSF1B
Negative_16069	ACSL6, CD74, CLTC, FGFR3, IGF1, IL17A, NEFH, OR1L8, PCYT1A, PON2
Negative_16070	GHR, MET, AHCY, AHCYL1, ASIP, ATP5D, B3GNT5, CREB3, CTNNB1, CYP4F3, DMGDH, EGFR, ENPP1, EXTL2, FGD3, HCCS, HLA-G, NNMT, NRG4, OR4B1, OR4K14, OR56A3, P2RX3, PCYT2, PLEKHA8, RBL2, RETSAT, RND1, SDC4, SEMA4C, STK11, TRPM5
Negative_16071	CFI, EPO, F2, IL4, LAT, ADCY7, ADORA2A, BDKRB1, CDKN1A, EFNA4, ENTPD1, GGT7, GNG12, GRIN2D, MPDZ, TMLHE, UGT2B10
Negative_16072	FH, AACS, ABI2, ADH5, ALOX12, APPL1, ATP5G3, ATP5J2, BCKDHA, CRLS1, DFFB, EHMT1, ELK1, EXT2, FPGT, HRH2, HSD17B4, ITPA, LCP2, MGAT5, MYH8, NANP, OLR1, POLR1C, POLR2G, PPP2R1A, PTCH1, PTEN, ROB01, SEMA3D, SH3BP2, SIPA1, SMAD3, SMARCA2, ST6GAL1, STAT2, STAT6, TGFB1, TNFRSF8, TUBA4A, UGT2A1, UGT2B7, GABARAPL2
Negative_16073	LCK, NPL, SRC, ACSL4, CDK7, CLDN18, DERL1, DGAT2, DIAPH3, GUSB, HAGH, IL13RA2, MCM4, OR8D1, PDHA1, PPP2R5A, ROCK1, SIPA1, TLR3, TLR9, TSLP, ALDH18A1
Negative_16074	AOC3, ATP2A1, C9orf95, CSDA, CSF2, CYP8B1, DHCR7, ENPP2, GLB1, IQGAP1, ITGA2B, KLRC1, LAMC2, MAN1A1, NAMPT, NEFM, OR1K1, OR2F2, OR9Q2, PIK3CG, PORCN, PRPS1, SCIN, ST3GAL1, TNXB, TUBB, UROS, WASF1
Negative_16075	AUH, CEL, CKB, ACLY, AMY2B, ARSD, ASMT, CYSLTR1, DEGS1, DHDDS, FABP4, GNRHR, GRIN1, INPP4A, LEFTY1, NFATC1, OR4M2, PDHB, PLAUR, PLCB1, POLA1, PROS1, RIPK1, SDHD, TAS2R8, THY1
Negative_16076	ADC, ADK, GLS, IL3, OGT, TK1, AASS, AHCYL1, AKR1C1, APRT, BUB1B, CD58, CRY2, DAPK2, DBF4, DDX54, DVL3, EDN1, EIF4E2, FGF13, GMPS, GRPR, HLA-DOB, HNF1A, KIR3DL3, NARS, OR10Q1, OR13J1, OR1K1, OR51E2, OR8A1, OR9I1, PFKFB1, PGM3, SCIN, SDC1, SDHD, SLC27A4, SUFU, MAPK8IP3, TNFRSF1B
Negative_16077	AKR1C3, DPM3, FARSA, GLYCTK, POLR3B, TUBA1A
Negative_16078	CXCL2, PDE10A, PLD2

Negative_16079	CSK, GLS, OGT, ACO2, ACTA1, APBB1, AREG, ARHGEF2, ARSA, ARSE, BIRC2, BMP7, CDC20, CDC25B, CDKN2C, CRKL, CYCS, ECHS1, FGF3, GCH1, HCST, HNF4G, IL5RA, ITGA3, MAN1B1, MICA, MIOX, NCR1, NRG3, NUDT8, OR10G7, OR1L4, OR2AG2, OR4A16, OR51A7, PDX1, PFN4, PHGDH, PSEN1, RCHY1, TAS2R48, TJP2, VAV2, WASF1
Negative_16080	CGA, FGA, FGB, AARS, AASS, ACY1, ALDH1B1, ALDOA, ALG10B, ARD1A, ATP5C1, CD14, CLTCL1, CMBL, CYBA, CYP2C9, CYSLTR1, DGKE, DUSP2, EFNB2, EPAS1, FDPS, GAL3ST1, GALM, GUCY2F, HADH, HARS2, IDUA, IGSF5, IL20RA, IQGAP2, KLRC4, LPAR1, LTC4S, MAP2K3, NME7, OR2A4, OR2B11, P2RX4, P2RX5, PYCRL, ROCK1, SEMA4D, SHMT1, SNW1, ULBP2, ZIC2, B3GALNT1, MAPK8IP2
Negative_16081	AKT1, MYH7B, PGLS, PPOX, SAT1, VEGFB, SERPINA1
Negative_16082	ATM, DCK, GH2, HDC, HK3, LTB, ACPP, AGPAT4, BCMO1, CACNA1C, CDKN2A, CLDN8, CSNK1G2, FGFR4, FUT7, GADD45G, GNPDA2, GRIA1, GRIN1, KCNQ1, LRP6, MAD1L1, MTHFS, NOX3, NTRK1, OR10A7, OR5D18, OR6T1, PDE4D, PDHA2, PFKP, PFN3, PLCG1, PTGIS, RAB23, RASA2, SETDB1, SNAP25, SSH3, SV2A, WNT16, ATP6V1B2
Negative_16083	AGPAT4, AK3L1, ARHGEF7, BCMO1, BMPR1B, CD55, DDX56, DGKH, DNMT1, DUSP10, DUSP7, GALNT13, GZMA, HGSNAT, HIBADH, IFNA5, IPMK, ITGA8, JAG1, LIPG, MAML3, MAN1B1, PANK2, PGK1, PLA2G2E, SDC4, TICAM1, WNT7A, HSD17B12
Negative_16084	HGD, IL6, ADCY2, ALDOC, ANGPTL4, CADM3, CDC25A, CDH1, CXCR6, CYP2U1, DHRS3, DLL3, DNMT3L, ERO1L, FUT7, HCST, HTR2B, IARS2, IFNA2, IFNK, ITC1, ITGB8, MAGI2, MMP9, MPST, NMNAT1, ONECUT1, OR10AG1, OR1S2, OR8J1, PAPSS1, PDE8A, PLA1A, PRKAA2, ROCK1, SOS1, SQLE, STX1A, TNFRSF9, TNFSF18, UGT2A1, VTI1A, TNFRSF1A
Negative_16085	AMH, BTC, F5, STS, ADSSL1, ATG7, ATP2A3, CCR1, CDK2, DHDDS, FGF1, GALE, IFNB1, MAP4K4, MYH13, NCAM1, OR10G9, OR13C3, OR4C13, OR8A1, PCYT1A, PER2, SDHC, ST3GAL5, SULT1A4, TAS2R41, TLR3, TMLHE, TUBA3C
Negative_16086	HYI, SRC, ACSL4, ACVR2B, AMDHD2, ATP12A, B3GAT1, B3GAT3, CACNA1E, CACNG8, CLDN8, DKK4, FGF9, GAPDH, GGT1, GLUD2, HHIP, HTR2C, KLRC3, LIMK2, OR10Q1, OR4K2, OR51T1, OR8B8, OR8H1, PDXK, POLR1A, RBPJL, SHC4, SOCS4, STX10, TRAF5, TUBB, XYLB
Negative_16087	ABO, PLG, ACAD9, AKR1B10, ALDOB, ALOX15B, APOA2, B3GNT2, BMP2, CSF3, CTF1, CYFIP2, DPM3, DUSP5, GDF7, GNA11, GRIN2C, HAO1, IL12A, INPP5E, IQGAP2, ITGA3, MGAT1, NFKBIA, NR1H3, OR4D1, PDHA1, PIP4K2B, POLA1, P OLR1D, POLR2L, PRKAR1A, RBKS, RBL2, SLC25A4, SOCS1, STX6, STX7, YWHA B, HLA-DRB5
Negative_16088	ACADM, ADH5, ARNT, CCL26, CDKN1A, CDS1, COL4A2, CSNK2B, CYP2C8, DLL3, DTX2, EHMT1, EPHA8, EPHB6, GDE1, GGT5, GNB1, GUCA1A, HAAO, IFNA21, MAP3K13, MTHFR, MYD88, NAT6, OR2L2, OR6C76, PIM2, PLTP, RHOD, RPS6KA4, TRHR, WASF1, WNT10A
Negative_16089	LEP, AMY2B, BDKRB1, FCGR3B, GADD45G, GZMA, MYH1, NEFL, OR1L8, OR51I1, PHGDH, SETDB2, ST8SIA1
Negative_16090	ADA, OGT, ACYP1, ACYP2, ALDOB, C3AR1, C4BPA, CAMK2B, CCL20, CER1, CNGA3, DGAT2L4, DVL1, ENTPD5, FZD8, FZR1, IL19, INPP4A, ITPA, NR4A1, OR10Q1, OR11G2, OR11H1, OR12D3, OR5M9, OR8K5, PIK3R4, PKM2, PLOD2, POLE, PPM1B, PPP2R2A, PRIM2, PSEN2, ROCK1, SMC1B, TPH2, TRHR, TSNARE1
Negative_16091	FUK, TYR, ALPPL2, BDKRB2, BRAF, CD40, MAP3K3, MTHFD2, NFATC2, PLCD1, PLCG1, PPARG, TGFB3, TOMM40
Negative_16092	CAD, F12, HDC, ACY1, ANPEP, ARPC5L, B3GALT2, B4GALT2, BAI1, CACNA1A, CYP1B1, F2RL3, HGSNAT, HIP1, HSD3B1, MCM2, OR10G7, OR1F1, OR52B6, PIGN, PRODH2, RPIA, ZIC2
Negative_16093	CDC7, FBXW11, GSTM3, HAO2, NME4, OR4N4, PIGX, PIK3C2B, PNPLA3, WNT4, HSD17B10

Negative_16094	ABLIM1, ABLIM3, CPT2, CREB5, CYP3A4, DPYD, EPB41, EPHA7, EXTL3, GMDS, GUCY2D, HBEGF, HIP1, IARS2, JAG1, LHCGR, MAN2A1, MYH8, NUMB, PLCG1, RAC1, SOS2, TKTL1, ST6GALNAC3
Negative_16095	C8A, CAD, CGN, FAS, ABLIM2, ACPT, ACSL6, ACTA1, ANAPC7, ARSA, BDKRB1, CAMK2A, CD27, CYP27A1, DUSP9, EPRS, FLOT2, FZD10, GAMT, GFPT1, GGPS1, GRIN2C, ICOS, JAK2, LEPR, MYL7, OR4K15, OR56A1, PAICS, PFKM, PHPT1, PIP4K2C, PKM2, PLD1, PTCH2, PTDSS1, PTPN6, RAP1A, RRAS2, STAT3, TAS2R42, VEGFB
Negative_16096	DLD, AACs, ACADL, APOA2, CBR1, CXCL10, DERL1, FTMT, GDF5, IDH3B, IL7R, MDM4, MMP14, NADK, OR1J2, OR2B2, OR51B2, OR56B4, OR6S1, PRKAG3, PTH1, RAC2, RXRB, SEMA4A
Negative_16097	FER, FST, CD82, CER1, CERK, CHSY1, CYFIP1, DAD1, DDX19A, DUSP5, FGF17, FUT6, GALNTL2, GGPS1, GUSB, HIF1A, IFNA16, INHBC, ITGB3, MAGI1, MGA5B, MYLK2, NRG2, OR3A2, OR4C11, OR8D1, PAPSS2, PDHA1, PIGC, PIGS, PIGX, PPAP2A, SCD5, SLC27A5, TPH2, TRAF6, XCL1
Negative_16098	HYI, BHMT, CDO1, CYP27A1, FGF17, IL2RB, RND1, SH3BP2, STAT5B
Negative_16099	LAT, ACO2, ACVR1C, AKR1C1, C4BPA, C7orf16, CCR4, DUSP16, ECHS1, FLAD1, GLI2, GNB3, HRAS, ITGB8, JAG1, KIR2DS4, LYPLA2, MYH7, OR2V2, OXCT2, PFN3, PHKG2, PRKARIA, SARDH, SLC33A1, SPRY2, STT3B, SYNJ2, WNT16
Negative_16100	C4B, AGPAT6, ALDH3B2, ALG1, ALPPL2, ANAPC5, CACNA1D, CCR3, CDKN1C, CDKN2C, CKMT2, CNTFR, CYP2F1, DKK1, FCER1G, FUT4, GALNT7, GJA1, GMPPA, GNPAT1, GSTM4, IGSF5, IL20RA, LRDD, MYL7, OR4X1, OR5T2, OR8D2, PAFAH2, PCK2, PDE3B, PDGFRB, PIK3R5, PLD2, PON2, PTPN1, RCHY1, RPN2, TRIP10, WNT10A, YKT6
Negative_16101	NF1, ABI2, ALG5, ARPC5, CAMKK2, CCR3, CD55, CHR1, CMPK2, CNBP1, CXXC4, CYP2C19, DDX18, DNMT1, GCNT1, H6PD, LRP6, MAP3K2, MAPK13, MIOX, MMP1, MTHFS, NKD2, OR14A16, OR1N1, OR2B6, PGM2, PKM2, PLCB4, POMC, PPP2CB, ROCK1, TCIRG1, TFDPI, WHSC1, ATP6VOA4, HSP90AA1
Negative_16102	GLS, HPD, PTS, ACSS1, AKR1A1, ALOX12, APH1A, CCNB2, CREB1, EPHA5, FUT2, GAD2, GATM, GCNT1, HARS, IBSP, IKBKE, LCP2, LIMK1, LIPG, MAN1B1, MAP3K5, MOV10L1, NANS, OR10H3, OR1D2, OR4K14, OR5M3, OR7C1, PIP5K3, PLCB1, PPP1R3A, PRLR, ROBO3, SGPP2, SSH1, STAM2, THBS2, TJP2, TPH2, TSLP, ZFYVE9, ATP6V1C1, PHOSPHO1
Negative_16103	CD79B, ETNK2, SPRY2, XYL1B
Negative_16104	CAT, STS, ANGPTL4, BTRC, CXCR3, DIAPH2, EGFR, ENPP6, ERBB3, GZMB, LIPG, MGAT4A, NOS3, OR1L6, OR5AK2, OR7A5, P4HA3, PPP2CA, RBL1, RPS6KB2, STAT1, UPP2, ATP6V1C2
Negative_16105	CD2, GAA, ADCY5, ADCY6, ALG13, APBB1, BCKDHB, CACNA1G, CDS2, CHEK1, CLDN18, DARS, DCTD, DGKD, DUSP4, ESPL1, GALNT12, GGT6, GSTA1, GSTM1, IFNA13, IL17RB, IRF3, LAMB4, LYZL1, MAD1L1, MAPK12, OR1E1, OR2T4, PHKG2, PIAS1, PORCN, PRKCD, PTGS1, RDH8, RERE, ST3GAL3, ST8SIA1, VAMP2, TNFRSF6B
Negative_16106	ASL, CBS, CR2, SCD, ACSM5, AGXT, ALG9, AMDHD1, CD19, CD46, CD47, CD8B, CDK2, ENTPD4, GFAP, GNAI1, IFT57, INPP5E, KRAS, MYH7, OR1L1, OR2K2, OR5D16, OR6C74, OR7G1, PDX1, PFKFB1, PIAS2, PPP2R2B, QARS, RPIA, SHC1, SREBF1, SV2B, TNFRSF9, ZNRD1
Negative_16107	MUT, MVK, UBB, ABI2, AHCYL1, ARHGEF2, ATP13A2, C1GALT1, CACNA1G, CACNB4, CIITA, CREBBP, DCXR, DDX4, DHRS4L2, EFNA2, GRM1, HYAL2, IRF7, LEFTY1, LIAS, MCM3, MKNK2, MYH9, NMNAT2, NUDT5, OR10G7, OR1K1, OR1L4, OR4D2, OR5P3, ORC1L, PDE7B, PFKFB2, PIGP, PIGU, PLA2G5, PMM2, POLA2, PTKGER1, PTK2B, RRM2, TAS2R16, TNFRSF4, TUBA4A, UGT2B10, UGT8, SUV420H1, TNFRSF17
Negative_16108	MSN, ABP1, ADORA2B, ALDH1A2, CCR2, CTPS2, GALM, GMPR, GNAI3, HPSE2, NMT, NSDHL, OR10A2, OR3A2, PIGW, PLA2G2D, POLR2F, SEMA3E, UPP2

Negative_16109	OAT, ABLIM2, AOC2, ATP5L, CALML5, CFTR, CLDN20, ENPP2, EPB41, FTH1, GALE, GNA13, GPD2, IFNA14, IFNW1, MAPK9, MLYCD, MYD88, NEUROD1, NFKB1A, OGDH, OR10A2, OR1D5, OR4C46, OR4L1, OR6Q1, OR9Q2, PAK4, PDCD1, PLA1A, PLCZ1, POLD1, POLE, POLR1C, POLR2G, PPP5C, RAPGEF1, SDHC, ST3GAL2, TIRAP, TMLHE, UGT2A3, VAV1
Negative_16110	C9, ANAPC11, B4GALT1, CD19, CDC2, CYP27A1, CYP8B1, DAAM2, ENO3, ENTPD6, FZD3, GNPAT1, HSD3B7, IL6R, ITPA, MAGI2, MDM2, MYD88, NCF2, NME6, NT5C3, OR2T33, OR2Z1, OR52J3, OR5AP2, PDE6G, PIK3R1, PNPLA3, PRKAA1, SEPHS1, SMURF1, TGFB2, TIAM2, TUBB2A, HSP90AA1, PAFAH1B2
Negative_16111	DBH, SMS, ACTN1, AQP7, CLCF1, CTSG, ETNK2, GBT1, GNB3, GTSE1, KAT2B, MYH15, NPR1, NTF3, OR6Q1, PRKACG, TRAF6
Negative_16112	C5, FES, TPO, ACACA, ACSL4, ACSM5, AGPAT1, ATP2A1, BIRC5, CDKN2C, CHRD, CREB3L1, CTS1L, DHRS3, DTYMK, ENPP1, FGF3, GALNTL2, GNPDA1, GPD2, GPT2, GUCY2F, IDI1, IL28A, MAP3K2, MCM4, MDH2, NCF2, OR1A2, OR4A16, OR4F15, OR4P4, PGM2, PIK3C2A, PKLR, PPP1R3A, PPP3CC, PRDX6, PYCR2, QARS, RDH8, SESN1, TAP1, TAS2R7, VARS, WASL
Negative_16113	BAX, DCC, NF1, ADH5, ANPEP, B3GALT5, CD8B, COL5A3, CRLF2, CYP2C18, DLL1, ESPL1, EXTL2, FUT2, GSTA4, HNF4A, HSD17B1, IFNGR2, KIR2DL4, MGAT4A, NCAM2, NFATC2, NFKB1A, NT5C1A, OR9Q2, PDK1, PLCZ1, POLR2C, RAD51, UBE2K, MAPK8IP1
Negative_16114	BAD, IHH, ACP6, AKR1C4, ATP5J2, DDX52, GOT1, HSD11B1, ITGB1, MAP3K3, MGAT1, NT5C1A, OR4F15, OR5AS1, TSC2, ULBP3, YWHAE, TNFRSF11B
Negative_16115	AMHR2, ARRB1, BAAT, IFNA17, KIR2DL2, OR51I2, OR8B4, RBPJL, SORD, SREBF1, TAP2
Negative_16116	AK1, AMH, PRL, ACACA, ADRA1A, ALDOC, B4GALT5, BIRC3, CDC20, CDKN2D, CREB5, CSNK1E, CXCR3, ENPP7, EREG, F11R, F13B, FABP1, FGF5, GALNT1, HSPA8, IL2RA, INPP5A, ITGA1, MAPK14, MCAT, MMP14, NEU1, NSDHL, NTN1, OR11H4, OR2A12, PDE6D, PRKCD, RALBP1, RDH11, ROCK2, SGPP1, THY1, PAFAH1B3, ST6GALNAC6
Negative_16117	ASL, F8, ACO1, ACTG1, ALOX5, AOC2, APH1A, APOA5, ARG2, CAMKK1, CDK6, CEBA, CKMT2, ENO3, EPHA1, GGT5, HNF4G, IL10RB, IRF7, JUND, LAMC3, LIMK1, MAP2K4, MAP2K6, NCK2, NME4, OR11H1, OR51M1, OR7G2, OR8J1, PHKA1, PRKAB1, PRKAB2, RASGRF1, RASGRF2, RDH16, ROBO1, STX1B, TPH2, XYL, A TP6VOE1, HSP90AB1
Negative_16118	ARSB, CASP8, MAML1, MYD88
Negative_16119	HGD, IL3, IL5, LPL, AHCY, APAF1, ARHGAP5, BDNF, CCL4, CCNA1, DCTD, DDI3, DHDDS, EXTL2, FARP2, GALK2, GLYCTK, GTSE1, IL22RA2, IL6R, LIAS, LIMK1, MAP3K14, NCOR1, NLGN2, OR14A16, OR1L8, PPP1R3B, SHC1, SNAI2, TYROBP, UBE2L6, UXS1, ATP6VOA4
Negative_16120	CEL, AANAT, ATP12A, CDKN2D, CLDN22, COL4A6, CSNK1A1, CXXC4, CYP11B2, DERA, EXTL3, FABP1, FASN, HRH1, IL6R, INHBB, ITGA8, JAK3, MCM3, NR5A2, NSDHL, OR10C1, OR10T2, OR51A2, OR5AC2, PTGER3, PTPRC, SHC4, SPCS1, TAS2R13, TUBB, TUBB6
Negative_16121	FGFR4, OR1F1, OR2L13, TICAM1
Negative_16122	ACAD8, ADSL, CHIT1, METTL2B, NARS2, OR4F17, OR5B3, PKMYT1
Negative_16123	PANK3, PORCN, USE1
Negative_16124	HMGCS2, HSD17B4, IRS2, MAPK9, PANK2, SLC25A5, SPRY1, ATP6V1G2
Negative_16125	DCC, FOS, GH2, GLS, IL8, MSN, XDH, ACADS, ARRB1, ASPA, BLVRA, CACNA1D, CASP8, CCL27, CCR9, CD19, CMPK1, CSNK2A1, EPB41L3, ERO1L, ESAM, INPP4A, ITGAD, KIR3DL2, MTHFD2, NEU3, NEUROG3, NFX1, OR4F15, OR8D2, ORC1L, PAK7, PDE6H, PDE8B, POLR1A, PPA2, PRIM1, RUNX1, SELP, SETD8, STX10, TPH1, SERPINF2, SLC25A31
Negative_16126	GSS, UBB, ACP6, CYP4A11, DGAT1, FUT7, LYPLA1, MYLK, PAK3, PIK3R4, PRPS1, RPS6KA1, TAS2R50, TNFRSF10B

Negative_16127	AK7, KIT, ALDH2, ASAH1, ATP5D, CCND2, CCNE2, CSNK1D, CSNK1E, CYCS, CY P2U1, DUSP8, EHMT1, FGD1, HNF1A, IFNG, MAP3K5, OR10A3, OR2H2, OR2T3, PAICS, PFKFB2, PRKY, RPS6KB1, ST3GAL1, TRAF5, ZNRD1
Negative_16128	OAT, AARS, ACSM5, ADRBK2, APC2, CACNA1S, CD28, CD36, CSNK2A2, DHRS4, DIAPH3, DTX3L, EPB41L2, GCAT, GGPS1, GLS2, GMPR, IDH1, IL17RA, ITGA1 1, ITGAM, KAT2A, KITLG, LILRB3, MAP2K4, MYH2, NANP, NCAM2, NCOA4, OR5 1G1, OR6K2, ORC4L, PFKFB1, PFKP, PGM3, PLCD1, TJP3, TNFSF12, WIF1
Negative_16129	CKB, FES, ANAPC1, FTMT, GCAT, NEU4, OR2B6, OR4N4, OR5D16, OR5M8, POLR 2B, SPRED1, WBSR17
Negative_16130	AK2, GHR, HYI, PAH, ALCAM, CBLB, CCL7, CDC6, CES2, CYP1A1, CYP1B1, GDF 6, ITGAV, LAMA3, OR10A3, PNMT, WHSC1L1
Negative_16131	ATM, DHH, PGD, PLG, ADCY6, AKR1C2, ARSD, BAI1, BIRC3, CCL5, CD34, CER1 , CLCA4, CYFIP2, GCNT3, IL28A, IRAK3, MGAT2, MYH2, NKX6- 1, NTN1, OR10A3, OR13C5, OR2C1, OR4C12, OR4D2, OR52J3, OR52W1, PDX1, POLR2F, POMC, QPRT, RAPGEF2, SC5DL, SELL, SKIV2L2, SPRY3, SQLE, SSH1 , STX16, WNT9A, HSD17B12, TNFRSF13C, TNFRSF14
Negative_16132	DAO, FH, IDS, TXK, AMY2B, CCL2, CD40, CXCL11, CYP21A2, CYP2E1, DDIT4, FUT6, HMGS2, INHBE, NME2, OR10A2, OR10A6, OR1L1, OR1L4, OR2D3, P2RX 5, PARD6A, PRODH2, RDH11, RHOQ, ST8SIA5, TNFSF11, TOLLIP, WNT5B, ATP 6V1G2
Negative_16133	IL7, LHB, ATP5F1, BCL2L1, DMGDH, EIF4E, ERBB3, MAFA, MFNG, NCAM1, NLG N1, OR10H1, OR52E2, OR6K6, PHKG1, PIGT, PNPO, PPCDC, PPP2R1B, RAP1A, RDH5, SLC27A4, SPRY2, PLA2G12A
Negative_16134	PTS, APRT, WNT2B
Negative_16135	C8A, ACTN2, ACTN4, AXIN1, EFNA5, ENTPD4, GANC, MAP3K6, OR1E2, PDE11A
Negative_16136	TNC, XDH, ACPT, ADRA1A, BET1, DUSP16, FTH1, GPAM, IFNB1, IL10RB, IL21 R, INPP5E, IQGAP3, ITPKB, JUND, KRAS, LIPC, LRP5, LTBR, MAP2K6, MAPT, NPR1, NPR2, OR13C2, OR52E6, OR5T3, PIGA, POLR1D, POLR3G, RGS3, SCP2, SORBS1, TYMS, VCAM1, VDAC3, WNT16, XCL2, YARS, B4GALNT1, HSP90AA1
Negative_16137	CD2, GDA, GP5, MIF, AKR1D1, BLVRB, CYP2U1, EPHA8, EPOR, FLT4, GATM, OR 2H1, OR52H1, PAK4, PLK1, POLE3, PYCRL, SNAP23, VCAM1
Negative_16138	ADAM10, CLTCL1, ENO1, HLA- DMA, LTBP1, NCF2, OR5V1, OR6Y1, P2RX7, PTGIS, TICAM1, VAV1
Negative_16139	FYN, VCL, AKR1C2, ASIP, BCKDHA, GARS, HSD3B2, IFNA5, POLR2H, RARS, SD HB
Negative_16140	C7orf16, CAMK2A, CD22, CDC14A, CDH15, CDK4, PAX8, PIK3C3, RHOD, TIAM 2, PDCD1LG2
Negative_16141	CD4, ACACA, ALDOA, AMY2B, ANAPC2, ANAPC4, APH1A, BMP8B, CACNB4, CDC6 , CDH1, CDIPT, CHST12, CTSL1, CTTN, CXCL3, DDX54, DGKG, DIAPH2, DLAT, EPHB1, FLT3, GOT1, HDAC2, IL12A, IL20, MYL7, MYLK3, NCK1, OR6M1, PARS 2, PDE11A, PDIA4, PGAM1, PHKB, PRIM2, TALDO1, TSNARE1, UGT2B10, ULK2 , XIAP
Negative_16142	C8A, F2R, IL6, UBB, ACOX2, ACVR1C, AKR1C4, ANAPC2, ATP5F1, AVPR1A, AV PR1B, C9orf95, CACNA1C, CSNK1G2, CXCR3, DGKE, DHX58, DOT1L, EFNA3, F UT3, G6PC2, HA01, HGSNAT, IFNW1, INADL, ITGB4, JUND, MAN1C1, NCSTN, N R1H3, OR2A25, OR8H3, PLA2G3, POLE3, POLR2C, POLR2K, PRKCQ, RBPJL, SH ISA5, SNAI1, TAS2R50, TCF7L2, TOMM40, UXS1
Negative_16143	EFNA1, GLI2, HEMK1, IDH3A, NCF2, NUDT2, OR10R2, OR11H4, OR2H2, PER1, PIGT, PLAUR, PRKX, SDHD, SPRY1
Negative_16144	IL9, ITK, LSS, MIF, TEC, AKR1B1, ARHGEF7, CASP7, CCNG2, CDC25B, CD01, COQ7, DKK4, FDPS, FGF7, GGT6, HAGHL, IDI2, IL22RA2, KAT2B, MICA, NCOR 1, NLGN1, OR13C4, OR51E1, PER2, RRM2B, SCP2, SLC27A5, SREBF1, STK36, THY1, TUBB4, PLA2G12A, TNFRSF10D, TNFRSF1B

Negative_16145	DCK, VTN, B3GAT3, B4GALT1, CANT1, CARD11, CCR6, CDH1, CYP2A7, CYP2C18, DDX52, DNMT3L, FCGR2B, FOXA3, HMGCL, IL18, IL20, IL2RA, MNX1, NPAS2, NT5C, OR2A14, OR8B12, PARD3, ROBO2, SIPA1, SNAI2, TPM3
Negative_16146	CR1, FAS, FGG, GSN, LSS, PRL, RPE, ABAT, ABCC8, ACSM5, ARNTL, ASPA, CDC14A, CFL2, CHDH, CSNK1G2, DRD2, DUSP7, ECSIT, EDNRB, FM04, FZD2, FZD8, GALK1, GALNT12, GALNTL5, GUCY2F, IL25, IRAK1, MCM7, NADSYN1, OR10A1, OR1D2, OR1I1, OR2Z1, OR9A2, PLCE1, POLR2G, PRKCZ, PYCRL, SOCS2, TAP2, TAS1R2, TAS2R14, THBD, ZBTB16, HSP90AB1, PPARGC1A, TNFRSF10A
Negative_16147	ACVR1C, ALDOC, ATP5J2, CADM1, CANT1, CXCL11, DIAPH1, EGLN1, EXT2, GALNTL1, GSTM1, HIBADH, HSD17B8, HSP90B1, IDH3B, IFNA16, IFNA17, ITGAX, KRAS, MASP2, MKNK1, MYLK2, NFKB2, NRAS, OR10J3, OR2AT4, OR2L2, OR4C46, OR4K5, OR5A2, OR6C70, OR6K3, OR7A17, PDE7A, POLR2B, POLR3G, PPP2R1A, SLC27A5, TUBB6, VAV1, XCL1, HLA-DRB5, MAPK8IP1
Negative_16148	EDA2R, EPHA8, MDM2, PIGC, STX5, WARS
Negative_16149	GBA, ACVR1, ACY1, AKR1C1, ALOX15, AMDHD1, APPL1, ARRB1, ARSE, CACNB3, CREB3, DOCK1, DRD1, FDPS, IL7R, ITGAE, MAML1, MKNK1, MNX1, MYL7, MYL9, NKD2, OR2B6, OR4K14, OR8B12, PIK3C3, PPA2, PRKAG1, RAPGEF4, SUFU, WNT2B
Negative_16150	ALOX12, ALOX15B, ANAPC4, ARHGEF6, DDX41, E2F2, ECHS1, FM02, MADCAM1, MAN1C1, OR4N2, OR8J1, PLXNA1, PRKAR2B, SDHC, SPCS1
Negative_16151	CAT, CKM, KIT, MIF, NPY, AACS, ALOX15, ASMT, ATP4B, CYP11B1, ESPL1, HNT, HTR6, MAP2K3, MAP4K1, MYLK3, NOX1, OR10G4, OR51T1, PHKG1, PRKAG3, PRSS2, RFX5, RPRM, SEMA3E, THBS4, TJP2, TJP3, ULK1, WHSC1L1, TNFRSF17
Negative_16152	ASL, ATP12A, CDC25B, EPHB2, INHBC, KAT2B, MYLK3, OR2A25, PLXNA3, SDC4, TAS2R10, UBE2K
Negative_16153	AHCYL2, APOE, ARPC1A, BTRC, CSF2RB, DDB2, IGF1, MMP7, NCR3, NEU4, NFYC, NT5C, OR4C15, PDGFRB, PLAUR, SHC2, SORBS1, STX18, TBL1XR1, TNFRSF17, TNFRSF1B
Negative_16154	CRH, F3, HK1, ACACB, ASMT, DLL1, FCGR3B, FZD6, GALNT10, GMDS, HAAO, OR10G3, OR10T2, OR2K2, RARA, TAS2R13, TNFRSF13C
Negative_16155	IL7, CACNA1A, CACNA1H, CANT1, CTSG, FGF13, KLRC4, NOTCH1, OR2T4, OR5AN1, OR5P2, PPBP, PRPS2, SGPP2, SIPA1, UCKL1
Negative_16156	ADSSL1, ARD1A, AREG, ATP50, B3GNT4, BLNK, C1QC, CASP3, CLDN15, CREBBP, CSDA, CTPS2, CYFIP2, CYP17A1, DERA, ENTPD6, FLT3LG, FUT3, GGPS1, IL6ST, INPP5A, KRAS, OR2AG2, OR2G3, OR2T34, OR4A15, PGAM4, PIGU, PIK3R1, PMM2, RARS, SARS, SCIN, SMARCA2, STAT1, WBSCR22, ARHGEF12, ATP6V1B1, CACNA2D4
Negative_16157	C4B, ABAT, ALDH1A3, AMY2A, BRAF, CASP8, CD59, CDS2, CER1, CNTFR, CSNK1D, CSNK1G3, DDIT4, EPHB3, EPHX1, FLT3, FZD10, GAB1, GBE1, HADHB, HADC2, IQGAP1, IRF7, ITGB6, LALBA, MITF, MTHFD1, NFYA, NRCAM, OR12D3, OR1L1, OR2K2, OR2L2, OR4C12, OR4D5, OR4F15, OR5L2, OR9G1, PPP1CB, RBKS, RPIA, RUVBL1, SHMT1, SV2A, TJP1, TUBB1, YARS2, ATP6VOA4
Negative_16158	AGL, ID3, ACVR1C, ADH6, ALAS1, ANGPTL4, APRT, B3GALT6, CAMK2G, CCL25, COL6A2, COMT, CYP2A13, DGKB, DHRS4L2, DRD2, ETS1, FBP2, GADD45A, GNDA2, HPSE2, HTRA2, IL12RB2, INHBC, LEFTY1, MPP5, NEFL, NFKB1, OR2T29, OR4N4, OR5AC2, OR6A2, OR8D1, POLR2J, PTPMT1, PTPRM, RPS6KA6, SMARCA2, SMC1A, STAT4, THBS4, TUBB4, UCK2, UGT1A10, WARS2, WNT6
Negative_16159	ARG1, C5AR1, CD28, CDC20, DDB2, DDOST, FOXO3, FZD1, GSTA5, GUCY1A3, IFNG, OR2V2, OR51M1, PDXK, PIGF, PIK3CA, PON2, PPP2CA, RASSF1, SMURF1, THBS4, TUBA3E, YWHAB, CACNA2D4
Negative_16160	ID4, ATP5G2, CX3CL1, DDX18, DHRS3, DLAT, EPB41L3, GAL3ST1, GBGT1, GN13, ITGA8, MRAS, NEU4, OR10J3, OR52R1, OR8H1, PLCD1, RPS6KA3, RXRB, SETDB2, SLC2A2



Negative_16161	F10, ABL2, AGPAT4, ALDH1A2, CPOX, DHDH, DHRS4L2, DOLPP1, ECSIT, EFNA3, FBP1, FSHR, GALNTL5, GDF7, GNB1, LDHC, MAP3K4, NAE1, NRXN3, NT5C, OR10A2, OR10J5, OR2C1, OR7G3, PIK3R3, RELB, SORBS1, UGT8, VTI1B, PHOSPHO1
Negative_16162	C8G, IL9, LIF, ADH1B, ALAS2, ALPL, AQP7, AVPR1B, B3GNT4, CLOCK, COX15, CYP11B1, DUSP9, GLO1, GNAT3, GRAP2, HSD11B1, HSD3B7, IL11, LDHD, MAD2L1, MAP2K7, MAPK14, MAT2B, MTHFS, MYH10, NRG4, OR1D2, OR8U1, PDE3B, PDE8A, PDK1, PLXNA1, POLR1B, POLR2B, POLR2D, PSME1, RAPGEF3, RPS6KA6, SOD1, STX12, SV2C, UNC5D, WNT9A, ATP6V1E2
Negative_16163	GAA, AASS, ADCY8, ADRA1B, ALDH1A1, ALG13, ALPL, ARHGEF1, DFFA, DKK4, FOXO1, GAD2, GALNT12, GANC, GPLD1, HSD17B1, HYAL1, KNG1, LLGL1, NCOR1, NLGN3, NUDT9, OCLN, OLR1, OR10G3, OR2T12, OR4D6, OR4K13, OR6A2, PLCB2, RAC3, RPIA, SEMA4B, SUCLG1, ULBP1, SERPINA5
Negative_16164	GHR, IL4, MAG, NNT, ATP5J2, CDC45L, GALNT7, GLO1, GNRH1, HCLS1, HNF1B, IGF1R, NANS, NMNAT1, NR5A2, NUDT9, ODC1, OR2M3, PDGFC, PIK3CG, PLCB2, PLCG2, RFXAP, SENP2, TBL1XR1, TNFSF10, UPB1, ATP6V1C2
Negative_16165	ACAD9, ALDH3A2, CAPN2, CXCL16, CYBB, DAPK3, EVI1, GALM, GLI1, IFIH1, INPP5A, IQGAP2, MCM6, MGST1, OR2S2, OR4K14, OR52W1, PIGH, PRODH2, PTDSS1
Negative_16166	C4B, CAD, ACVRL1, AOX1, CAMK2D, CCL19, CD38, CNTF, CSNK1A1, CYP1A1, DX50, DERA, DGKG, DTX4, EVI1, FGD1, GSTM5, HPSE, IGSF5, INHBC, INPP5A, ITGB6, KIR2DS4, LAP3, LCMT1, LTBR, MAP3K7, MGAT5, MYL9, OR2B2, OR2G2, OR51B4, OR8D1, P2RX3, PAK4, PDE4D, PFKP, PIP4K2A, PON3, PPP3R2, PYGB, RIPK1, RND1, SV2B, WNT11, ATP6VOA2, HLA-DQB1, MAP3K7IP2, TNFRSF12A
Negative_16167	ADO, DHH, GLS, LIF, LYN, AADAC, AASS, ADH1A, AGPAT3, APPL1, COL3A1, CYP2C18, ETS1, FMO2, GSTM5, HMOX2, IFNGR2, IQGAP1, ITPA, MAP2K1, MGAT2, OR4A16, P2RX1, PDE11A, PHKA1, POLR2F, RDH5, RPS6KA5, TRAF6, ATP6V1G1
Negative_16168	CD2, GPI, HYI, ALDH1L1, ALOX15, CBLB, CCR2, CLCA4, CSNK1G3, CXCL1, CYP2D6, DAAM1, DEGS1, EDA2R, F11R, FZD10, GCH1, GSTO1, LAMA4, MGLL, MIOX, NFASC, NMNAT3, OR6K6, PARVA, PDE6H, PLCB4, PLXNA3, POLR1D, PRKG2, PTPN7, PTPRB, RARS2, RHEB, SELL, SETD7, TRAF4, ATP6V1G1
Negative_16169	ATP5I, CALML6, CXCL16, MAGI2, PIGQ, TUBB1, ST6GALNAC4
Negative_16170	LPO, CXCL11, EPHB3, GALNT11, GSTM5, IFNA4, IL15, IL21R, ITGB1, NCKAP1, NRG1, OPLAH, OR5V1, SEMA3D, TRPM5
Negative_16171	AANAT, AKR1B10, ALDH4A1, ARHGEF1, EXTL1, GNA13, GOT1, INADL, ITPKA, NRG2, OR1S1, OR5D14, PANK3, PITX2, PLEKHA8, STAT5A, YWHAH, ATP6V1E1
Negative_16172	ADC, F3, ACAT1, ACVR1, ACVR2A, B4GALT1, BRAF, CD46, CES7, CYFIP2, EIF4B, F2RL2, FABP4, FBP2, FGF3, FIGF, GNAL, IKBKE, ITGA2B, KAT2A, LIPA, LPAR1, MALT1, MAPK7, MCM5, NMNAT2, NTN1, OR4K14, OR8I2, PDE3A, PRKCD, PRKY, PTGES, RBL2, SH2D1B, SRGAP1, TACR3, TICAM1, TLN1, TP73, UGT8, ZAP70, PPP1R12A
Negative_16173	FES, INS, LCT, UBB, ALOX12, ARPC3, ASCC3, ATP2A2, BPGM, CACNG3, CACNG6, CAMK2B, CD46, CHST11, COL11A1, CSNK1A1, DDX18, DGKG, DOT1L, EIF4E2, EPB41L1, EPHA3, FGFR2, FUT2, GCLC, GIT1, GNRH1, HBEGF, IL1B, MPZL1, OR2T12, OR2V2, OR4N2, OR5K1, OR6C1, PHGDH, PLOD2, PPP2R5A, PRKCQ, PPS2, PYCRL, SRD5A2, ST3GAL1, WARS2, ATP6VOA1
Negative_16174	AUH, MAX, BMPR2, CD48, COL6A2, DGUOK, FABP3, GALNTL5, HLA-DOA, ITGAV, ITGB7, ODC1, RPN2, SUCLA2, TKTL2, PPARGC1A
Negative_16175	SMS, B3GAT1, CCL2, GCNT4, GLO1, OR5A1, PIK3R4, SPCS3, ST3GAL6, TGFB3, ATP6VOD1, PRICKLE1
Negative_16176	GHR, A4GALT, ANAPC5, ARHGEF6, BMP7, CCNB2, CRKL, DHDH, MAML1, MTMR1, NUDT9, PCK2, PFKFB2, PNPT1, SETDB2, TAS1R2

Negative_16177	GH1, ARHGAP5, ARHGEF7, B3GALT1, CDC25A, COL3A1, CRKL, CYP7A1, DDX19A, ENTPD4, GALNT13, GDF7, GNAO1, IFNW1, IL12RB1, IL20RB, MAPT, NODAL, OR1B1, OR2L3, OR2T34, OR6C70, OR8K3, PIGH, PIGP, POLD4, PRPS2, STEAP3, TAS2R16, UGT1A10, UGT2B10, WEE1, YKT6
Negative_16178	CALML3, DPYS, DUSP8, EPHB3, GRIA3, JUND, MAP2K2, MTHFS, OR8G1, SETDB1
Negative_16179	GK2, CX3CR1, DUSP10, ECSIT, GSTM1, ITGA9, ITGB3, MGAT2, OR52R1, PIGB, SEMA4C, SETD2, HLA-DPB1
Negative_16180	CD01, CYP26A1, GALNT8, GMPPB, IL21, IRF5, MAP3K5, OR6C6, TAS2R60, TRAF1, PPP1R12A
Negative_16181	BAX, GP9, RFK, ADRA1B, ALPI, BMPR1B, BTRC, CNTNAP1, CSNK1G2, DDHD1, E2F2, G6PC2, GABARAP, IL2RG, NADK, NCR1, PERP, PIGB, PRKCZ, TGFB1, TOMM40L
Negative_16182	MIF, ALDH3A1, APOC3, ATF4, CAMK2G, CCL2, CCNA2, CD74, CDK7, CHRDL, COL5A2, EFN3B, FADS2, GAL3ST1, GALC, GNPDA2, HLA-DRA, IKBKB, ITGB3, MBL2, MTHFD1L, NT5M, ODC1, OR4C46, PNMT, PPAP2C, PP2R5D, PTCH2, RRAS, SMURF1, TUBA1B, TUBB2A, XCR1, ZAP70
Negative_16183	BCR, FST, ACSL3, ADRB2, ANAPC1, BAI1, CD47, CHRNA7, COL2A1, DARS, DHFR, DKK2, ENTPD5, FASN, G6PD, IRF5, ITCH, JAK3, MGAM, MYH3, NADSYN1, NOX1, OR10AG1, OR10G3, OR2L8, OR8I2, PAK7, PIK3R1, PNLIP, PRKAG2, PRKCH, PRSS3, PVRL1, RBPJL, RDH8, SFRP1, SMPD2, WBSCR22, ATP6V0D1
Negative_16184	EPO, TK1, B3GALT2, CCL22, CEBPA, CFTR, CSNK2A1, DGKH, GALNT14, GCDH, IL13RA1, NSD1, OR4C6, OR7C2, PANK1, PPP3R1, PRPS1, RHOQ, SDC1, SUL1A2, TGFB2, TOMM40L
Negative_16185	FAH, LTB, ATP5G1, CHPT1, CSNK1A1, G6PC2, GNAI2, GPT2, HADHA, HMOX1, HMOX2, IFNW1, ITGB1, JAM3, MAOA, MAP2K4, MYH11, NNMT, NTF4, OR2T1, OR5D18, OR6F1, OR8H3, PARD6G, PARVA, PDGFB, PFKFB4, PIGL, PLOD1, PPAT, PTCH1, RERE, RHEB, SEMA3F, SETDB2, SKP1, SLC25A4, VAV3, MAPKAPK5
Negative_16186	ITK, TPR, ALAS2, ALDH2, AOX1, ARSD, B3GAT2, BST1, CACNG2, CCKBR, COL4A1, COL5A3, DARS2, ERO1L, FGF2, GAD2, GCNT2, GSTO1, IGF1R, IL1R1, LFN1, NUMB, OR10A2, OR5A1, OR5AK2, PDE7B, PIK3C2G, TFDP1, VASP, CTNBP1
Negative_16187	RB1, TAT, TNFR, C3AR1, CCR5, CD27, CLTC, DGAT1, ECHS1, EPHB4, FADS2, GJA1, GLS2, GLYCK, HARS, HSD17B7, INSR, NAE1, NEU2, NQO1, OR10AD1, OR4N2, OR5B3, PFKFB4, PPCS, PRODH2, RXRB, SAT1, SEMA4G, SHC1, SOCS4, ZMAT3
Negative_16188	SI, ACVR1B, ACYP1, ADORA2A, ATP6AP1, CCL17, CDC14A, CDH1, CHRM5, CHST12, CLDN11, CLTCL1, CTPS2, HSD17B7, IFNW1, MAP3K2, MAPK11, MTMR6, MYH6, OR52R1, OR8G1, OXSM, PDK1, PIGH, PIGX, PLIN, PPARD, RHOA, SEMA3B, SOD1, STX8, TAS2R10, TFPI, YARS2, KIR2DL5A, TNFRSF10A
Negative_16189	F10, ME2, NLK, TK2, ACO2, ACSL5, B4GALT2, C9orf95, CLDN9, CREB3L3, CTSS, DKK4, DVL1, GJD2, HSPB1, IL17A, IL2RG, IL5RA, LM07, MLLT4, OR13C3, OR3A3, OR51D1, OR5B3, OR6B2, PFKFB2, PLCB3, SDHD, SHISA5, SPTLC2, STAM2, TAS2R16, TSNARE1, VEGFC, WEE1, WNT5B, ATP6V1B2, SERPINC1
Negative_16190	EPHA4, EXTL1, FLOT1, GLI2, IL13RA1, LAMA4, MAP2K2, PGLS, SRGAP2, SSH1, STEAP3, TP53I3, XYLT1, YOD1
Negative_16191	PML, ACS2, APOE, ARHGAP5, CMPK1, DCTN1, DGAT2L4, E2F2, EXOC7, FGF22, GMPR, KIR2DL4, L1CAM, LDHAL6B, MYH14, OR51T1, OR6C3, PIAS3, PIGT, PPCS, RAB5A, RAC2, RPS6KA3, SEMA4D, TGFB1, TJP1, TUBB2C, ATP6VOE1
Negative_16192	CCND3, CCNH, CD8A, DNMT3B, MAPK3, PIP5K1A, SMURF1
Negative_16193	HK3, PGF, TPR, ACHE, COL5A1, ETNK2, FRAP1, GAS1, IFNA2, IL18R1, OR52B4, PARD6A, PON1, PPP2R2A, THBS4, TUBB2A, ULK3, YOD1, ST6GALNAC1, SUV420H2

Negative_16194	IHH, ADSSL1, BAAT, LIPT1, NGEF, OR11H4, PCNA, PGM2, PHGDH, POLR2I, RASGRP4, WHSC1L1
Negative_16195	AUH, GLA, TK2, ACSM1, AGRN, CFL2, CNTF, DOCK1, EARS2, ENTPD7, EPRS, EXT1, FGF20, GCDH, GLI3, GLUD1, MMP7, OR12D3, PIGW, TAP2, TM7SF2, TNFSF4, TUBA4A, UGDH, WNT5A
Negative_16196	HK3, IL2, OTC, TFG, ALDOC, AMY2A, ASRGL1, CX3CR1, DERL1, EDN1, EXTL2, FZD7, GALNTL1, GART, GNAI1, GSTA3, GUCA1B, HIF1A, ICOS, IFNA10, IL20RB, ITGB1, LILRB3, OR5V1, OR9A2, PFKP, RPS6KA6, SEMA3F, SPHK2, SSH2, TKTL2, UNC5B, UPP1, UROC1, VCAM1, WASF2, TNFRSF13B
Negative_16197	HK1, NPY, ACTC1, ACVRL1, AHCY, ALG6, ALG8, ARD1A, ASS1, ATP6VOC, AVPR1B, CACNB4, CCNA2, CD72, CLDN9, E2F4, ENTPD2, HNF1B, ITGA10, ITGA2, ITGA5, ITGAL, NAGK, NAT5, OR10H2, OR4K15, OR51F2, OR52I2, PDE3A, PDE4C, PIAS2, PIK3C3, PLCB2, PLXNC1, PPP1R3A, PTGER1, SLC25A5, SORD, ULBP2, ATP6V0E1
Negative_16198	DDC, ASCC3, ATP5F1, BCAT1, CYP2A7, DLL1, DNMT3B, DPYSL2, E2F2, FMO3, FPGT, GJD2, GLI1, HHEX, METTL6, NRG1, ODC1, OR1A2, OXTR, PDPK1, PIGM, PPAP2B, PRKCQ, SEMA4F, SOS2, UCP1, HSD17B12, ST6GALNAC3
Negative_16199	CRH, DUT, ACAA2, ACP6, ADSSL1, AK3L1, AOX1, CCL13, CLOCK, COL4A2, CSDA, CYP2C8, FZD8, GCLM, GNMT, GRHPR, HNF4G, MDM2, MMP14, NEGR1, NLGN3, OR2M7, OR2Z1, PKM2, POLR1D, PPP2R2D, PRKCQ, PTGES2, PTPN11, STAT6, UCK2, ATP6V0D2, CSNK1A1L, HLA-DPA1
Negative_16200	F9, GNE, BMP4, BUB1, CCL11, CD3E, CNGA3, CPT1C, CXCL5, CYP2A13, DDX55, DHCR7, DVL1, FARP2, GCAT, GDE1, HMGCL, IL12A, KIR3DL2, KLRC1, LAMB3, LDHAL6A, LEPR, MAP2K2, MGAT1, NEU4, NR1H3, OR1K1, OR52J3, OR5T2, OR9A4, PAK6, PDHB, PIGM, SDC3, SETD7, TGFBR2, TSHR, VDAC2, WNT16, ST6GALNAC4
Negative_16201	KDR, SFN, B3GNT3, COL6A1, CPT1C, PIGW, WNT16
Negative_16202	ADO, HK2, STS, TNC, ALG13, APBB1, ARPC5, CCL21, CCL27, CDK5, CHEK2, CLCF1, COL3A1, CYP17A1, DDX51, DFFB, EIF4E2, ENTPD7, FCGR3B, FGFR3, GC H1, GLUD1, HIP1, IL15, IL8RA, INHBB, LIPC, MAOB, MGAT4A, NPR1, OR2Y1, OR5D13, OR6X1, PANK3, PLIN, PRKARIA, PRKCA, PVRL4, SOX17, TACR3, ZBTB16, TNFRSF13C
Negative_16203	GPT, PC, BCAT2, BDH2, CCL8, CD19, CLDN11, CNTN1, COL1A1, DPM1, F13A1, FGF6, FZD10, GAPDH, IL10, LIPG, MAPK11, NOS1, NOTCH3, NRCAM, OR4P4, OR52N2, OR5P3, P2RX5, PIK3CB, PIK3R4, PLAUR, PLCB4, PPP3R2, SEMA3B, SEMA3D, SGPP1, STAT1, WNT3, CACNA2D2, TNFRSF10D
Negative_16204	AK5, FGB, GSS, MAG, ACO2, ALPPL2, ARNT2, ATP2A2, ATP6V1A, BCL10, BUB1B, C4BPB, CACNG3, CCL17, CCL23, CD80, CHAD, CHPF, CPT1A, CXCL1, DDX50, DERL1, DPYD, EPHB6, EPHX1, GALNT13, GALNTL5, GAMT, GRAP2, IL23R, IRAK2, LIPE, MASP1, MGAT4B, OR2AE1, OR2AG2, OR4D9, PIP5K1B, PPAP2B, PPP1R1A, PRKCB, RASGRP1, SHISA5, SHMT2, SSH3, ST3GAL4, STAM2, TGFBR2, TYMP
Negative_16205	ID2, LPL, ME3, RB1, TPO, ABLIM1, ACPT, ACSS1, AGPAT1, ATP6V1D, CASK, CLDN11, CYFIP2, DHRS9, DUSP6, ENO2, GCNT2, GFAP, GRAP2, IFNG, IFNGR1, INPPL1, LAMB3, LEPR, LIPE, MAN1C1, NAT5, NCK1, NSDHL, OR11A1, OR2L3, OR51B5, OR5M9, OR5T2, OR6C2, PDE4B, PFAS, PPCDC, PRKCE, PRKG2, PTGS2, PTPN5, SELPLG, SETD2, SRD5A1, ST3GAL3, TAS2R48, UNC5C, WNT2
Negative_16206	MVD, ADCY1, AGXT, CHDH, CHPF, COX15, CYSLTR1, ELK1, ENTPD3, FGF18, GRIN2B, IL22, MAPK10, NUDT5, OR2Z1, POLR3D, RUVBL1, SH2D1A, SLC25A4, TAS2R49, MAPK8IP1
Negative_16207	ASL, GK, GSN, ACAD9, CCDC6, FOXO1, FZD10, GRLF1, HPSE, HTRA2, KIR2DL2, MYD88, NKX6-1, NMNAT2, OR52E4, OXSM, PCYT1A, PFN2, PRKCH, RUNX1, SSH2, STK36, TUBB, TUBB1, UGCG, WNT10A

Negative_16208	CFH, MUT, PLN, SMS, ATP6V1D, BACE2, CANT1, CASP3, CDC25A, CLDN8, COL1A1, CYP2B6, DAPK2, ECHS1, FIGF, HIF1A, IFNW1, IL10, LIMK1, MAN1C1, NADK, NFE2L2, NKX6-1, NME2, OR2G6, OR2T11, OR5B17, OR5H6, OR5P2, OR6C3, PDGFRB, PMVK, POLR2H, PPP2R5D, PRKAB1, PRKCG, PTPMT1, RPS6KA6, SC4MOL, SDHD, SEMA3F, SOCS7, SPRY4, STX8, YWHAG, TNFRSF10B
Negative_16209	DAO, F5, CHRM1, COL1A1, CYP26C1, FGF23, GRIN2B, IDH2, IL13RA2, KIR3DL2, LAMB3, LARS, LIAS, NOTCH2, NRP1, NTSR1, OR51B2, ORC2L, PAK6, PPAP2B, SFRP5, SMAD2, SULT2B1, TGFB1, TLN1, TUBB4, TNFRSF12A
Negative_16210	BTC, GP6, TXK, ABLIM1, AMY2A, BACE2, BIRC2, CACNA1G, CACNG6, CCL23, CCNE2, CHKA, CLTCL1, COMP, CREB3L2, CXCL6, CYP2A6, CYP3A43, DAAM1, FUT7, GAPDH, GCNT1, GNAO1, GOT2, HLA-DMA, IRF5, KIR2DS4, MAPK13, MYLK2, NME6, OR4C11, OR4N2, OR52I2, OR5P3, PCYT1A, PIK3R5, PRKAR2A, SKP2, ST3GAL5, TAS2R41, TNFSF10, WNT5A, ATP6V1E1
Negative_16211	CCL25, GTSE1, NFKBIB, PVRL4, ZNRD1
Negative_16212	ATM, HK2, IVD, XDH, ABAT, CARS2, CPT2, CXCL5, CXCR6, EXTL3, FGF8, GSTM1, LAMC2, LYPLA2, MCM3, MPZL1, MTMR2, MYH13, OR52R1, PIK3R1, RPS6KA5, SERPINA5
Negative_16213	CEL, ABL1, ARHGEF6, ARSD, CDC25C, CSF3, CYP27A1, FZD5, GMDS, IL21, IL6R, JUND, LFNG, MAD1L1, OR10X1, OR51A4, OR5T1, OR6Q1, PLXNA1, RENBP, SCP2, TAS2R10, TUBA1A, VTI1A, SERPINC1
Negative_16214	CRH, KHK, UBC, APOE, CLDN16, CLDN3, COL1A1, CSNK1A1, CTNNA1, DUSP14, EPHB1, FARSB, GAL3ST1, GBE1, HHEX, IRS1, ITGA5, KRAS, LEFTY2, MARS2, MCCC1, MYL5, NANS, NUDT9, OR2D2, OR2K2, OR5D13, OR5D16, OR5D18, OR5F1, PLD1, PON1, PRPH2, PTSS2, PTPN7, ST3GAL3, TAS2R7, TAS2R9, TPI1, UGCGL1, UROC1, SERPINF2
Negative_16215	F10, GDA, NGF, ACO1, AGPAT3, ATF2, CARS, CD55, CDC25A, CLDN8, COL4A4, DIAPH2, DTX3, FABP3, GFPT2, GNB3, GNPDA2, LDHD, MRAS, NFKBIA, NTRK2, OLAH, OR11H6, OR9I1, P4HA1, PARD6A, PDE4C, PFN3, RALB, RASGRP2, RRM2B, SEMA3G, TAS2R16, TGFB2, THBS1, TKTL1, TSLP, WNT8A, WNT8B
Negative_16216	CKM, SI, ADH4, AKR1C3, ALAS1, ATP5C1, B3GNT5, CCNG2, CD79B, CRKL, CXC L3, DUSP7, ELK4, ENPP3, FCER1G, FGF17, FUT4, GAMT, GNRH2, IBSP, IGF1, IL13RA1, IL1A, INPP1, LARS2, MOV10L1, MYH11, NKX3-1, NUDT5, NUMBL, OR10A2, OR5AR1, PHKG1, PIGB, POLD4, POMC, PORCN, RHOA, SELL, TUBB1
Negative_16217	CGA, BCKDHA, CHSY3, DAAM2, DKK4, NTNG1, PPP2R1A, SDHD
Negative_16218	C2, ALG13, CTNND1, DEGS2, DKK1, LTBP1, MAP2K5, NCKAP1L, NME2, OR10S1, PRKCG, STX18, SYNJ1, TYMP, YWHAH, TNFRSF13B
Negative_16219	ABO, CDA, DCC, EPO, F7, F8, AGPAT1, ALG6, ARNTL, CLDN11, CLDN20, CSNK1G2, DAD1, ECHS1, GABARAP, GUCA1C, HIP1, IL11RA, IL17RB, KLRC1, MAP2K5, MAP3K4, OR10A6, OR13C3, OR56A1, PDE3A, PDE8A, PGK1, PLOD3, POLD1, PPP2R2A, PRKAA2, SEMA3E, SEMA3F, SKP2, TAS2R10, TGFB1, THBD, TIAM2, UROS, ZFYVE9, PLA2G12A
Negative_16220	RB1, AGRN, CCND1, CCNG1, CSF2RA, F2RL2, FARS2, FM01, IFNA2, IRAK1, OR5D18, PDX1, PNPLA3, POLA2, PPP2R5B, SFRP5, TGFB1, TNFRSF6B
Negative_16221	CBS, MPL, MYC, TK2, AGXT2, ALDH7A1, B4GALT4, CACNB3, CD27, CHRDL, DCXR, DLST, DNMT3B, E2F2, EI24, FGF13, GSGT1, GJA1, GLB1, MDM4, MYH6, NCAM2, NRXN2, OR10AD1, OR10Z1, PAK7, PAX8, PDE7B, PDE9A, PEMT, PMM2, PORCN, PPP2R5A, RFXAP, ROBO1, RPE65, SULT1A4, TNFRSF4, UGCGL2, WNT1
Negative_16222	DUSP5, FLAD1, PDE7B
Negative_16223	LCT, ME3, ACMSD, ADH7, ALDH6A1, ALG2, ATG12, CD44, CHRDL, CNGB1, GGCX, IDI2, KARS, NODAL, NTNG1, OGDH, OR5T1, PGK1, PIK3CG, PLA1A, RRAS, SEMA4C, SEMA4F, TUBB2A, ATP6V1G2

Negative_16224	DLD, LEP, ADRB1, ATP13A2, B3GALT1, FGF1, FLOT1, LIAS, OR4Q3, OR6B2, S TAM2, STAT5A, WNT8B, CACNA2D4, TNFRSF12A
Negative_16225	C5, F5, GLA, ACY3, ALAD, AXIN2, CAMKK1, DCXR, DVL3, EFNB2, FMO5, GALNT 10, GRPR, IDH3A, IL18RAP, MAPK11, MGAT5, OR10H1, OR4Q3, PARD3, PGAM4 , POLR1A, PRKACA, SMC1B
Negative_16226	LCT, NGF, PVR, ALDH5A1, AMY2A, CCL3, CLDN5, CTBP2, CYP3A43, DDX52, DH CR24, EDNRA, GRHPR, GRPR, ICAM2, IL1A, ITGA11, KIR2DS4, LEF1, MASP1, MCM7, MICA, NCOR1, NKX6- 1, OR10A6, OR13A1, OR52K2, OR5T2, OR6K6, PARVA, PLTP, PRODH, PSME1, P SPH, RARS2, RPRM, SH2D2A, SPHK1, STAT6, ULK1, VAV2, CSNK1A1L
Negative_16227	CRH, DBI, EDA, IL5, TAT, AADAC, AADAT, ACP2, CACNG6, CARS, CBR3, CCL1, CD40, CTSS, CYP3A43, DDX52, EGLN1, ESAM, GLUD2, GNB3, HEXB, HSD17B4, IL12A, IL1B, IRF7, KYNU, LFNG, MAP4K4, NAGS, NAT2, NRG4, NTNG1, OR10A 6, OR1D2, OR2L3, OR5J2, PAPSS1, PFN3, PLTP, PNPLA3, POLR2E, PPCS, TLR 9, TUBA3C, TUBAL3, XCL2, YWHAQ
Negative_16228	HDC, SHH, ACADS, ACP1, BUB1, CD80, EIF4E2, FCGR3A, GALNT10, GALNTL1, IFNA21, IL29, ITGB7, ITPKB, LRP6, LTC4S, MAGI3, MAP3K11, MAPK13, MCM 3, MGAT3, MGST1, NAGA, NAGK, NME6, OR2L8, OR4C15, OR7G1, PLA1A, PLAT, PLCZ1, PLOD3, POLD3, RALB, SFRP4, SSH3, SUCLA2, TUBA1C, UGT2B4, WNT3
Negative_16229	AR, HK1, LTB, NPL, TNC, TNF, ALS2, AMDHD1, BCAT2, CCL17, CD82, CMPK1, C REB3, CXXC4, DGKB, EARS2, FMO3, FSHB, GAS1, GYS2, MYH4, NFASC, ODC1, O R8U1, PCCA, PPAP2B, PPCDC, PPP3CA, PYCR1, SETD8, SOCS1, UPP2, UROD, P NLIPRP2
Negative_16230	PRL, ACSL6, ASPA, CACNA1I, CREB3L2, CUL1, DOLPP1, HTR2B, IAPP, IFNA1 6, MAP2K4, MNX1, NAMPT, NT5C2, OR1F1, OR2G3, OR52B4, OR5AS1, OR5J2, P GAP1, PRKACB, PRLR, RBKS, SEMA3B, SETD2, TAS2R1, TBL1XR1, VDAC2, YWH AQ
Negative_16231	PVR, TNN, ADRA1D, APOA5, BET1L, CACNG2, CAV3, COASY, CSF1, CYP26A1, F UT1, GADD45A, GAPDH, GLS2, HSD17B2, IRF7, ITGB1, KCNB1, KLRC1, MCM7, NEU1, OR10G2, OR1J4, OR2K2, OR2L3, OR6N1, PAK1, PIGF, PLEKHA8, PRNP, RBPJ, ROCK2, SEMA4G, ST3GAL3, STX7, TAS2R14, THY1, TNFRSF4, TUBAL3, UCK2, UGDH, YKT6, PRICKLE2
Negative_16232	LPO, SRC, TK2, VTN, ACO1, ADRA1D, APRT, ATIC, CASP9, CCKAR, CD79A, CD9 9, CLCA4, COL4A4, CPT1A, CPT1C, FARSA, GALM, GGPS1, GGT6, GRIA1, HEMK 1, HMOX1, IFNW1, ITGAX, MAD2L2, MAPK12, MLLT4, NAGLU, NCR2, NFATC3, N NMT, OR10AD1, OR14C36, OR2T8, OR5D13, PAX8, PNPLA4, RELB, RFXAP, SMA D2, SPHK1, SSH3, TJP3, TUBA1C, HSP90AA1
Negative_16233	AMT, GNS, ACSM1, AOC2, ARPC4, ATP5G3, ATP5J, BCAT2, CADM3, CD44, CHST 13, DFFB, EPRS, FARP2, FGF19, GUCY2F, HDAC1, HLA- DRA, HPSE, LDHAL6A, MGAT4B, MTHFS, NFATC4, NME6, NR1D1, NT5C2, OR10H 2, OR4D1, OR5M9, OR6K3, OR6N2, OR7D4, PIGK, PLAUR, PMM1, POLR2H, PPP5 C, PRKCI, SEMA3A, SMAD2, SPHK1, SPTLC2, SSH1, STX16, TACR1, TLR9, TRA F1, TUBB4, WNT9B
Negative_16234	ASMT, B3GNT3, CCL25, CD28, DUSP9, GDF7, IFNA14, MGST3, NADK, OR5AK2, PCCA, RHEB, TCF7, UXS1
Negative_16235	IL4, SPN, AARS, ACSM5, ARG1, ATP5G1, CCR4, CDC6, CDH4, CHAD, CYP1B1, D GAT2L4, ENPP3, EXT1, FARSB, FGF18, FUT2, GCNT1, GSTA2, GUCA1A, HMBS, ITGAD, JAK3, JAM2, MAD2L2, MAP4K2, MAP4K3, MMP9, NKX2- 2, OR14I1, OR4C12, OR4X1, PAK4, PANK2, PIAS4, PIK3C2A, PIK3C2B, PIP5 K1B, PRKAR1A, PRODH, PVRL1, QPRT, RHOD, STX7, TGFB2, THTPA, TUBA4A, ALDH18A1

Negative_16236	ADK, AMH, DUT, F3, TEC, ZYX, ABP1, ADCY7, ASRGL1, ATP5J2, CD44, CLDN3, CNTFR, CYP1A2, DCTN1, F2RL1, GNA11, HBEGF, HLA-DOA, IFNA7, ITGA4, KIR3DL2, MGST2, NFYC, NRXN1, NTSR1, NUMB, OR2S2, OR51I2, OR6C70, OR8J3, OR8K3, ORC4L, PPID, RFXAP, SETD8, SOS1, ST8SIA1, TGFA, VEGFB, HLA-DPB1, PAFAH1B3, TNFRSF10C
Negative_16237	F12, JUP, SRM, ADRBK2, ALG2, ATP5F1, B3GALT4, BDKRB2, BIRC3, CMPK1, COL3A1, CPT1B, CSNK1A1, CTNND1, DDX23, ERO1L, FMO1, FTCD, GLB1, GLS2, HLA-DOB, ISYNA1, KIR3DL1, LRP5, MIOX, NOS3, NT5C1B, OR52H1, OR5D13, OR6C2, OR8D2, OR9A4, PLOD3, PRNP, RASA1, RDH10, RDH12, SAT2, SHMT2, TBK1, TCIRG1, TNFSF4, UAP1, WHSC1L1, ATP6VOD1, ATP6V1C2, PNLIPRP1, ST6GALNAC4, TNFRSF10A
Negative_16238	CRH, PML, ADSSL1, BAIAP2, CCL15, CD36, CERK, CHKB, CLCA2, CLDN2, CLDN5, CNGB1, COX10, DPM1, EREG, GLB1, GNG3, GSTA1, GUCA1B, IBSP, IL6ST, MYH7B, NAGS, NFKB1, NKD1, OR51T1, OR52B6, OR52I1, OR5AN1, OR5B12, OR6F1, OR7D2, OR8H1, OR9G1, PDE4C, PFKL, PLEKHA8, PPP2R5A, ROBO2, SRGAP3, STX16, SULT1A1, SYNJ1, UBE2K, VTI1B, YWHAQ, MAP3K7IP1
Negative_16239	ADK, C9, IDS, PTS, ACADL, ACVRL1, ALDH1A2, AMHR2, CD36, CTBP2, ENTPD5, ENTPD7, EPHB2, FCGR3A, GRIN2A, GSTA2, IDH3B, IFNA21, IL22RA2, INPP1, LAMB1, LARS2, NAGK, NCOA4, NCR3, NLGN2, NRXN3, OR4F17, OR5D13, PAR6B, PDE4C, PFAS, PFKFB2, PFKM, PIAS4, PLCB2, POLA1, PRIM2, PTPMT1, RAB5A, SEMA3E, SETDB1, SHC1, SMPD1, TRAF1, ULBP1, CACNA2D2, ST6GALNAC3
Negative_16240	ADAM17, ASCC3, ATG3, CBLB, CD79B, CLDN2, DPAGT1, ELK1, EPHA1, GGCX, GGT7, GRIN2B, IL10RA, LAMB4, MNX1, NTN1, OR13C3, OR13F1, OR2H2, OR4C12, OR7A10, ORC2L, PCK2, PDE1C, PIGB, RUNX1T1, RXRB, SELP, SEMA4D, SLC25A4, SLC2A2, XYLB
Negative_16241	HGD, MAX, TK1, ACO2, CALML5, CDH2, CHST13, CNGA4, COL4A1, CRY1, CSNK1E, CYP2S1, DARS2, ETNK2, GDF7, IGFBP3, IL21R, IL8RA, IRS1, KIR2DS5, LAMB3, LCP2, MAP3K6, METTL6, MGAM, OR2B2, OR2V2, OR4D9, OR51B2, OR52I1, OR5A2, PDE8B, PFKP, PGM1, PIP5K1B, PKMYT1, PLXNB3, PPP3CA, PRKCG, PRKCH, SEMA3C, THY1, TLR9, UMPS, WASF1, YWHAH, TNFRSF14
Negative_16242	AKR1C3, BCKDHA, COX15, CXCL1, DFFA, EIF4E, INPP5E, MCM2, MTHFR, NCKA1P1L, OR1D2, OR4K13, OR7G3, OR8K3, POLE4, PRKAA1, XCR1, YWHAB, TNFRSF1B
Negative_16243	EBP, F7, GSS, ACADVL, ACOX1, ACVR2B, ADCY5, AFMID, AKT1, ALDH9A1, ALG11, ANAPC2, CCL22, CDC14B, CTSG, FRAT2, GCLC, GPLD1, GUCA1A, HEXB, IL28RA, IQGAP2, MAGI3, METTL6, NUDT2, OR10K2, OR11G2, OR2H2, OR2T29, OR5AC2, OR7D2, PDK1, PGS1, PIGS, PIP5K1C, PPP5C, SMC1B, SOCS1, STMN1, SUCLA2, SV2B, ULBP2, MAPK8IP3
Negative_16244	CADM1, DUSP8, ERBB4, GCLC, GOT1, HSD17B4, HTR2B, MASP2, MCM2, OR8B12, PARVA, PKMYT1, POLR2F
Negative_16245	F10, GNE, OAT, AHCYL1, ALOX15, ARRB2, BCAT1, CCND1, CHPF, CTTN, IFNA16, IRAK2, KIR2DL2, MAPK8, MGAT4B, OLAH, OR10A4, OR1F1, OR2A25, OR2D3, OR2T10, OR5M9, ORC5L, PANK4, PDGFRB, PGK2, PIK3R1, PITX2, PON3, PPI D, PSME3, RASGRP1, SFRP1, STK4, TFDP1, UGP2, WASF3, WASL, WNT2, SERPIND1
Negative_16246	CR1, ACADSB, ALDH3A2, AXIN1, CBR3, CCL25, CD79B, CSDA, CTBS, FLT3LG, FZD7, HEXB, HNMT, IL23A, LCP2, LIPC, MAP2K4, MAP3K12, MECR, OR51F1, PAK7, PECAM1, PPP3R1, PSAT1, RDH16, RPRM, SELL, SMC1A, SMPD1, SNAI1, SRGAP2, ST3GAL6, TKTL1, TNFRSF4, WHSC1, ZIC2
Negative_16247	CD40, CLCA4, CLDN16, CLDN9, DLST, GUCY1B3, HGSNAT, IL11RA, IL12B, IL15RA, NOX3, OR9Q1, PLXNB2, RUNX1, TBL1X, TRADD, TRMT11, ST6GALNAC6

Negative_16248	AK1, C6, DCK, OAT, AGTR1, APOE, CDC14B, CES1, DDX41, DGKG, DPAGT1, FGF R1, FUT3, GNPAT1, GRIN2C, IFNGR1, IL19, INHBA, MAP2K1, METTL2B, MTH FD1L, NUDT2, OR1A2, OR2G3, OR5D14, PER1, PIAS1, PIK3R5, PNLIP, POLD4 , SEMA4F, SHC1, SLC25A5, TIAM2, UROS, WHSC1, ATP6V1E2
Negative_16249	PAH, RPE, ABL1, ACSM2A, ARNTL, ARPC5L, B3GALT6, BMP8A, CCL21, CCL28, CYP4A11, DDB2, EFNB1, GZMA, IL13, OR1F1, OR52N4, OR5A2, OR8U1, PIK3R 4, PPP1R1A, PPP1R3B, RASGRF1, RRAS, SNAI1, SPTAN1, STAT6, SV2B, TGFB 1, TSC2, ZNRD1, CSNK1A1L
Negative_16250	ASPA, BCL2L1, BMP5, CCNA2, CSDA, CSF2RB, CYP26C1, DUSP1, FADS2, FZD1 , FZD6, GALNTL1, GPD1L, GRIA1, GRM1, GRPR, HEMK1, HNF4A, INSR, IRAK1, NEFH, NME6, OR8J3, PDE8A, PPP2R2D, SLC2A2, UGT2B17, VCAM1, WNT8B, SE RPIND1
Negative_16251	DAO, FAH, PLG, UBC, ACLY, ALDH3B2, ALPL, ARD1A, B3GALT1, B4GALT6, BHM T, C9orf95, CD226, CLTA, CSF2RA, CUL1, CYP17A1, EFNB3, EI24, GNAI3, G STM5, HIP1, IL13, IMPA1, INSR, IRAK2, ITGAE, ITGB1, ITGB8, LAMC2, LR P6, MAP3K5, OR13C4, OR14C36, OR1N1, OR2A4, OR2T4, PDE7A, PIGQ, PPP3C A, QARS, SETD7, TAS2R50, TYMS, UGT2B10, SUV420H2
Negative_16252	C5, FAS, HAL, SPN, ACACA, ACVR2B, ADCY9, ADRB3, AGPAT6, ALG10, ASRGL1 , CAMKK1, CDH3, CHUK, CLDN16, DAXX, DDX23, DOT1L, FARS2, FGF4, FMO1, I FNG, IGSF5, IL8RB, ITGB3, JAM3, KLRC1, MGLL, NCF1, OR52J3, OR6C74, OR 6Y1, PANK2, POLR2A, PPAP2A, PRKAA2, RASGRP4, RRM1, SDHD, SSX2IP, STK 4, TGFB2, TPH2, ATP6VOD2, HSD17B10, SERPIND1, TNFRSF13B
Negative_16253	ADCY7, CAMKK1, GALK2, OR10V1, THBS2, GABARAPL1
Negative_16254	KIT, GALNTL1, HPRT1, LHCGR, OR1L8, RHOA, VAMP4
Negative_16255	IL5, ACTG1, ACVR1B, AOC2, ATP5C1, ATP5F1, B3GNT2, BMP7, C1QA, CCL16, CNTNAP2, CPS1, DDX54, GGT1, H6PD, ICAM1, IL11, MAML2, NAT5, NRG1, NRG 4, NT5C2, OR13H1, OR4Q3, OR51B2, OR51E2, OR6C75, OXSM, PIK3R4, PLA1A , PPP1CB, PRPS2, TAS2R4, TGFB2, THTPA, UROD, WARS, WARS2, ATP6V1G3
Negative_16256	AK5, BAD, FES, GGH, KHK, PAH, AANAT, ACSS2, ARRB2, BNIP1, CHIA, COQ5, C YP21A2, CYP26B1, CYP2C18, DDX56, EPB41L3, FARSA, GJA1, GMPR2, HMBS, INHBB, ITGB3, KARS, MAN1B1, NT5C1A, OR2T5, OR4D9, OR52L1, OR56A4, OR 5T3, OR6K3, OR8D4, PDE4B, PIK3C2B, RUVBL1, SLC27A5, SLC9A1, SPAM1, S SH3, SULT1A1, SULT1A4, TBXAS1, TGFA, UBE2K, ATP6V1B1, TNFRSF10D
Negative_16257	ADA, BTK, FGA, GK, ASIP, CREB3L4, DGKE, EDA2R, EFNA2, FLT1, FUT1, GADD 45A, GNAI3, HAGHL, HMGCR, IL28A, ITGB6, LAMB2, MAD2L2, NAGS, NEFL, OR 4D11, PRKAG1, PRKAR1B, SRGAP1, TIAM1, TUBA4A, USE1, ATP6VOD2, MAP3K 7IP1
Negative_16258	DBT, GAA, ACAA1, AKR1C4, ALPL, BIRC5, CACNA1H, CACNG4, CD48, CHKB, DH DDS, DIAPH3, EPAS1, FARS2, FLT1, GUCY1A2, HMGCS1, HNF4A, HTRA2, INPP 5B, IRAK2, LDHAL6B, MAP2K3, MDH2, NCAM1, NQO1, NTF3, NTRK2, OR11A1, O R6C74, PCNA, PFKL, PIGK, PKLR, PLA1A, PPP3CB, RARA, UGT2B11, WEE1
Negative_16259	F11, TAT, ALOX15, IL13RA1, IL21, OR56B4, OXCT2, PIGV, SOS1, TAP2, MAP K8IP3
Negative_16260	APAF1, ATP5G1, CCKBR, CDC26, CDK5, CHR1, COL1A2, CRKL, ERBB2, F13B, F GD3, GNPAT, KAT2A, LAMB4, LDHC, MYH7B, MYL9, NLGN2, OR10V1, OR2T34, O R4F17, OR51D1, OR5K2, OR6C74, PPP1R3D, PRKAR1B, RXRG, SESN1, TYRP1, UROS, TNFRSF6B
Negative_16261	BCR, CDA, EZR, GP5, TYR, ACTA2, AMHR2, ATP5C1, CCR1, CHRM2, CXCR6, CYP 2B6, CYP7A1, DAXX, DKK4, DUSP14, FLT3LG, GFPT1, GRIA1, HHIP, HLA- F, HRAS, IL20RA, ITGB5, KIR2DS5, LARS2, MAPT, MYH13, MYH7, OR1A2, OR2 A12, OR51I1, OR52N2, P2RX4, PDE8A, PDGFB, PIM1, PIP5K3, PLAUR, POLR2 D, PPARA, RALGDS, STX18

Negative_16262	CRK, GH1, ID4, APH1A, CTNND1, DUSP9, ENPP2, FGFR3, H6PD, HSD3B2, IFNB1, IL1R1, LDHC, MAP3K2, RDH12, SRGAP3, STAT5A, ATP6V1B2, ATP6V1C1, SGALNACT1
Negative_16263	AUH, GAA, LTB, ALG3, BIRC3, BMPR1B, CPT1C, CXCR5, CYP3A4, DPAGT1, FGD1, FGF9, IFNA10, IFNA2, IL17RB, NEFH, OR1S1, OR5T1, PDCD1, PLA2G2D, PLIN, POLR1C, SH2D1B, SLC25A4, STX1B, TACR1
Negative_16264	APP, C9, FGG, TYR, ARHGEF2, CCND3, CHAD, CLDN19, DHRS4L2, EFNA1, GGT7, HCCS, KIR2DL2, KIR3DL2, NRG2, PHPT1, PLXNA1, RASGRP3, RBPJ, ROCK1, SOS1, TRMT11, WASF3
Negative_16265	B4GALT4, CARD11, FUT4, GMPS, HRH1, ITGA11, NR1D1, OR9K2, TNFSF9
Negative_16266	CTH, AARS2, CDC25A, EPB41, GALNT12, ITGB7, NCOR1, NOTCH2, OR10H5, TRAF4, UGT2A1
Negative_16267	BTK, CKB, F3, AKR1D1, ALG12, APBB1, AXIN1, CDC27, DUSP3, HNF4A, NUMBL, PKM2, POLR2B, RRS2, TNFSF9
Negative_16268	PC, ACAD9, ATP13A2, CCR10, CYP21A2, GNG13, HSPA8, OR5K2, PPP2R1A, RPS6KA2, TUBAL3
Negative_16269	F11, IL5, SMS, ADORA2A, ALG12, ATF4, ATN1, BCAT2, C7orf16, CACNA1A, CHDH, CYP2D6, DKK4, DUSP10, DUSP5, FCGR2B, FGF6, GADD45B, GADD45G, GALNT8, GBA3, GLS2, GSTO1, HAAO, IL13RA1, IL1R2, IMPDH2, LFNG, MAPK12, MDH1, MYH3, OR4K13, OR51S1, OR6C4, PDE2A, PKM2, PLA1A, RDH10, SCD5, SEMA3B, SPAM1, SUV39H2, TSNARE1, VDAC3, C1GALT1C1, MAPK8IP2, SERPIN A5, TNFRSF10A
Negative_16270	ADO, CR1, ANAPC10, ARPC4, BACE1, CLTC, GLG1, HSD17B2, IFNGR2, KIR3DL1, L1CAM, MTHFD2, NEFM, OR2L2, PPAP2B, KIR2DL5A, TNFRSF14
Negative_16271	F12, PML, RB1, ACSS1, CACNG5, CLDN14, COQ5, CTTN, ENTPD5, NCF1, NFKB1, OR51A4, PLA2G2A, SRGAP2, TGFB1, TNFSF9, UPRT, YKT6, ATP6V1C1
Negative_16272	DHH, GP6, ALG12, ARNTL, ATIC, ATP6V1H, CCNE2, CD79B, CDH4, CDS1, COL1A1, COL4A6, DGKH, DUSP16, FOXA2, FTH1, IL22, KAT2B, LGLL1, NSDHL, OR7A5, PDE5A, PFKFB1, PIP5K1C, PRKCQ, RBL2, STAT4, VAMP1
Negative_16273	CBS, KHK, KIT, AMDHD1, AMDHD2, CALML6, CHKB, CYP2J2, FMO3, FUT8, GBE1, GLG1, IL11RA, ITGA6, MAML2, OR4F5, OR4K5, OR51A2, ORC3L, P2RX1, PER3, PFKP, PIGC, PIGU, PLAT, PYGB, SMARCA2, TBK1, B3GALNT1
Negative_16274	CGA, LHB, ALDH7A1, ALG1, B3GAT2, CCR9, CHPF, CHSY3, CYP17A1, DDX47, DPM3, FMO1, FMO3, GNAI1, HLCS, OR2V2, OR4N5, OXCT2, PDE6H, POLR2E, SHMT2, TLR9, VCAM1
Negative_16275	FAS, GBA, GDA, ACOX1, ACTN2, ANAPC10, BAAT, CALML6, CD86, CREB5, CTF1, HMGCL, HNF4G, IDH3G, IRS1, MAP2K1, MAPK1, MGAM, MOV10L1, NT5C1A, OR10A2, OR2A2, PDCD1, PFKL, PIGH, PLCG2, POLD2, RBKS, SH2D1A, SSH3, STK11, TYMP, WNT2, ALDH18A1, ARHGEF12
Negative_16276	PGD, ACAA2, ACADL, ACP6, ALAD, AOX1, APAF1, BBC3, CKMT2, CNDP1, CYP11A1, DUSP1, EPRS, ETS1, F2RL3, FGF11, GFPT1, GLB1, GPX5, GUCA1B, IFNAR1, IFNAR2, IL2RB, IRF5, LGMN, MAPK9, MMP2, MRAS, MYH4, NFYB, NMNAT1, NT5C2, OR1Q1, OR5AS1, PARVA, PDGFA, PRPS2, RCHY1, SMAD2, STK36, STT3B, TACR2, TBXA2R, TPM3, WASF1, WNT2B, WNT6
Negative_16277	CALML6, CHDH, CLTB, CNTNAP1, DGKG, GRIN1, MYH4, RRAS, ZAP70, TNFRSF10A
Negative_16278	GNS, ABLIM3, ACSM1, BCAR1, DDX52, ENTPD6, FUT3, LIPG, TSC2, XCR1
Negative_16279	OAT, ABP1, ADCY4, EPHA5, HSPA8, MADCAM1, NCF2, PPM1D, TOMM40
Negative_16280	ALOX5, HLCS, TGFB2, SERPINA5
Negative_16281	ABAT, ACADM, CCR2, DCXR, DNMT3L, FUT7, GALNTL5, IL6R, ITPA, MCCC1, OR10P1, OR1N2, OR2L2, PANK2, PLXNB2, SETD1A, STX7, TRAF4
Negative_16282	INS, ADSL, ATP13A2, ATP5B, ATP5G2, CPT1A, CTNNA1, EPHA2, HTR2A, IGF1, IL6R, KLRK1, LCAT, LTC4S, MGAT1, MMP1, OR4F5, PLCG1, SARS, SMPD3, SRD5A1, SRGAP2, UGT2A1, YWHAH, ATP6VOA4



Negative_16283	FAS, ACOX2, BNIP1, CD34, FGD3, IFNA10, MASP1, PIGF
Negative_16284	HDC, BUB1, CBLB, CXCL13, CYP11A1, DHODH, GCLM, GNRH2, IDH3G, IFNA5, ITPA, KCNB1, KLKB1, KLRC3, LLGL2, MAD2L1, MAP4K3, MYD88, OR6N1, OR8S1, PIGQ, PIK3CD, PIP4K2A, POLR2D, PPAP2A, PYGB, RCHY1, SH2D2A, TSC1, VAMP2
Negative_16285	ID1, APOA2, CACNG5, CDKN2C, CLDN7, DTX1, HSD17B3, NCK2, OR2A4, OR5B17, OR5F1, OR8H3, PVRL2, RFX5, SELPLG, SNAI2, SULT2A1, TIAM2, WNT6
Negative_16286	PLG, CHUK, OR2C1, PERP, PLA2G1B, PPOX
Negative_16287	GCK, ADRA1D, AKR1B10, ATP6V0B, CCL5, EIF4E2, FADS2, FDPS, GALK2, HMB S, IL18RAP, LFNG, MAP3K8, OR1J4, OR2W1, OXCT1, P4HA1, PDE4A, PHKA2, PLXNA2, PPM1A, PRKCZ, SARS2, SGPP2, MAPK8IP1
Negative_16288	AK3, AK5, C3, CD2, F7, FN1, INS, TEC, ACADL, ACAT1, ACP2, ACTN1, ADH7, AGRP, ALG1, ARD1A, AREG, ARHGEF4, ATP4A, B4GALT5, BAI1, BMP2, C3orf10, C4BPA, CACNA1D, CCNA2, CD01, CHD8, CIITA, CYP11B2, CYP2U1, CYP8B1, DAPK1, DDX54, DNMT3A, EGFR, EGLN3, FGF4, FGF8, FMO2, G6PD, GAD1, GCNT1, GNRHR, HSD17B3, IFNA17, ITGB4, LAMA4, LIPA, MAP3K13, MGAT3, MLYCD, NAGS, NCK2, NCR2, NKX2-2, NKX3-1, NT5E, OR10A5, OR12D3, OR13C8, OR14C36, OR1N1, OR2H1, OR51A2, OR52N1, OR7A5, OR8S1, OR9G4, ORC4L, PARD3, PDE4D, PDE6G, PIGH, POLR2E, POLR3K, PTPN1, RXRG, SETD8, SLC25A6, SLC27A1, TACR2, TAS2R3, THBD, TRDMT1, UNC5D, VDAC3, WARS2, WNT8B, MAPKAPK3, TNFSF13B
Negative_16289	AK1, C1S, HGF, LPL, LYN, ME1, OAT, OGT, SRC, VTN, ABAT, ABLIM3, ACOT12, AHCYL2, APLP1, ARNT, ASS1, BMP6, C1QC, CAMKK1, CD22, CDH1, CDK5, CLDN22, CNDP1, CRHR1, CRY2, CTNND1, CX3CR1, CXCL16, CYP3A5, DDB2, DUSP6, EXOC7, F13A1, FUT7, FZD3, GAL3ST1, GLI1, GNAL, GNB1, GPD2, GSTO1, GUSB, HSD3B7, HTR2B, HYAL2, ICOS, IGSF5, IL1R2, IL6R, INPP5E, ITGA7, ITGA9, JAG2, KDSR, LIPE, LTB4R2, LYZL1, MAD2L2, MAP2K5, NCF4, NCKAP1, NF X1, NUDT8, OR2A42, OR2L13, OR2T29, OR56A1, PCYT1B, PDE6H, PHKG1, PIAS3, PIGX, PIK3C2A, PLA2G2D, PLD2, PLOD2, PMM1, PRKCB, RAPGEF2, RIPK1, RPS6KA6, SEMA3F, SLC25A6, SULT2A1, TJP3, TKTL1, TLR2, TRPC1, WNT16, CSGALNACT1, HLA-DQB1, PLA2G12A, SUV420H1
Negative_16290	CAT, CKM, GAA, ACLY, ACSL1, ACSL4, ACSM4, ACVR1B, ACVR1C, ACVR2A, AKR1B1, ALDH1B1, ALS2, AMY2A, APC2, ARSA, ATF4, ATP5E, BAAT, BCMO1, CACNG1, CAV3, CCL17, CCL22, CCNE1, CDC26, CES2, CNTF, CYP2J2, DAPK3, DOT1L, ELK4, EXOC7, FUT1, FUT4, GALNT7, GCDH, GFPT1, GMPR2, GUCY1A2, GUCY1B3, HNMT, IL28B, IPPK, IRAK1, L1CAM, LDHAL6B, LEF1, LFNG, LRRC4C, MARS2, MICA, MPST, NARS, NFATC2, NFKBIE, NPAS2, NRCAM, NRXN1, NRXN3, OR11H1, OR1N2, OR2C1, OR2T34, OR2T6, OR3A3, OR52J3, OR5AS1, OR5F1, OR5H6, OR5K1, OR6B2, PDE1A, PDE7A, PDGFC, PLA2G3, PLCG2, POLE2, POLE4, PRKCD, PSME3, RALB, RAPGEF2, SIPA1, SLC27A1, SLC27A4, SMURF1, ST3GAL3, TUBB3, UBE2K, UGT2B28, VAMP3, WASF2, WIF1, WNT2B, YARS, ZAP70, CSNK1A1L, MAPK8IP1
Negative_16291	CGN, AASS, ADIPOQ, AKR1C4, AKR1D1, ALG8, AMPD1, ATG3, B4GALT1, BACE1, CACNG7, CCL19, CCNH, CD8B, CHAT, CNTFR, CSF3R, CXCL10, CYFIP2, CYP4F2, DAG1, DHRS4, DPAGT1, DUSP16, ECHS1, EPHX1, ERBB3, FARSA, GALE, GUCY2D, HCCS, IGF1, INADL, ITGB4, LDHD, LFNG, LTBR, LYPLA2, MAP2K1, MAP3K5, MCEE, NANP, NARS, NCAM1, NFAT5, NOD1, OR2T29, OR4C11, OR4K17, OR6Q1, OR6Y1, OR7G2, OXSM, PARD3, PIK3CA, PIK3CD, PMVK, PNPT1, PPP2R2B, PPP3R1, PRKCQ, PSME3, PTEN, PTPRR, RDH10, RND1, RPN2, SELP, SEMA3C, SHC3, SMPD2, SSX2IP, STX12, TNXB, TRAF6, UBE2K, UBE2L3, UGCGL2, UNC5B, ATP6V0A2, ATP6V0D1, EIF4EBP1, MAP3K7IP1, ST6GALNAC6, TNFRSF1A

Negative_16292	CP, FAH, PGD, ACOT11, ACP2, ADCY2, ALDH6A1, ALG1, ATP4A, ATP6VOC, ATP6V1F, AXIN1, BPNT1, CASP9, CAV2, CDC7, CPT1C, CSF1, DGUOK, EDA2R, EFN A3, EPHX1, FGF4, HMGCL, IBSP, IDH3B, IFT57, ITGA5, LIPE, LRP6, MGAM, M MP9, NFX1, OR4F5, OR4F6, OR52B4, OR52N4, OR8D2, PDK1, PGS1, PLCD1, PL D2, PPA1, PRKCG, RASA1, SDC4, SMAD4, SMAD6, SPRY2, STX8, TALDO1, TAS2 R48, TNFRSF9, VNN1, WNT8A, PAFAH1B2
Negative_16293	HDC, IL4, JUP, PLN, AARS2, ACAD9, ACTN4, ADIPOR2, ADSL, ALG2, ARNTL, A TP6VOC, ATP6V1D, B4GALT7, BCL2L1, BMPR1B, CARD11, CAV2, CCL27, CCNB 1, CCR1, CDKN1C, CHPT1, CLDN2, CNDP1, CPS1, CREB1, CSNK1G2, CXCR3, DL AT, DRD2, ENO1, EPB41L1, FBP1, FGD3, FGF17, FUT7, FZD2, GAL3ST1, GALN T11, GANAB, GLS2, GNPDA1, GSTA3, GSTM4, HLA- G, HRH2, HSD17B4, IL12RB2, IL25, IL2RG, JAK2, KLKB1, LDHC, NAGA, NME6 , OR10A4, OR14J1, OR1N1, OR2T33, OR51A4, OR51G1, OR52B4, OR52N5, OR5 2W1, OR56A1, OR5I1, OR6B2, OR6C70, PARS2, PDE6H, PDXK, PFN3, PIGH, PI GP, PIP4K2A, PLCZ1, PVRL1, RFXAP, RIPK1, RPE65, RPS6KA6, RUNX1, RXRB , SEMA3G, SLC2A4, ST6GAL1, TICAM1, TUBA3C, TUBB2A, TYMS, WNT6, YWHAE , ZMAT3, ATP6V1G3, MAPK8IP1, TNFRSF13C, TNFSF13B
Negative_16294	CGN, NPL, PGF, AKR1C3, ALDH9A1, B3GALT4, B4GALT7, CASP7, CCL1, CCL24 , CDC16, CDC2, CHIT1, CNTN2, CYP4F3, DFFB, EARS2, EPHA1, F2RL2, FABP1 , FGF21, FLAD1, GADD45A, GALNT6, GMPR, GNPDA2, GP1BB, GPD2, GSTM5, HA GH, IL22, IL9R, NFE2L2, NLGN1, NOTCH3, NR5A2, NT5M, OCRL, OR10AD1, OR 2S2, OR5L2, OR8B12, OXSM, PDGFRB, PFKFB1, PFN1, PI4KB, PLD2, PLTP, PT GFR, SLIT1, SMPD4, SPP1, TAS2R16, TBL1XR1, TOLLIP, TOMM40, TPI1, WNT 3, XIAP, ZMAT3, SERPINA1, ST6GALNAC6
Negative_16295	BAD, CBS, CDA, CP, GNE, ID3, IL6, KIT, SRF, ACMSD, ACSM1, ADCY8, AHCYL1 , AMY2A, ASS1, C3orf10, CALML3, CAMK2D, CAMKK2, CHKB, CLDN16, COQ3, C REB3L4, CX3CR1, DBF4, DCTD, DDX51, DOT1L, EFNA3, ENPP2, ENTPD3, EPHB 4, ERBB3, FPGT, FUT9, GAB1, GNAI1, GNPAT, HCST, IMPA2, INPP4B, IRS1, I TGAD, LTB4R2, MAP2K7, MAP3K7, MGAT5, MYL5, NARS2, NEU2, NFASC, OGDHL , OR10J5, OR10Z1, OR2AE1, OR2C3, OR2T29, OR4D1, OR4D5, OR52N5, OR7G2 , OR9A2, OXCT2, OXSM, PAK3, PDE2A, PDE4A, PGM3, PPP2R2D, PRKAB1, PRKA CB, PRKAG2, PRKCH, PRODH, PTK2B, PTPN11, RAC2, RBPJ, SC4MOL, SCD5, SE MA4C, SETD2, SMAD4, SMPD1, SMPD4, SOS2, TAS1R1, THBS4, TOMM40, TPH2, TRAF5, TRMT11, UNC5A, UROC1, WNT7A, YARS, YARS2, ZBTB16
Negative_16296	AK1, GAA, ACADS, ACP6, ACTA1, ADSSL1, ALDH6A1, ALDH7A1, ATP5L, B4GAL T5, BMP6, BTRC, CACNA1B, CAV3, CCR2, CHRM3, CYP26A1, CYP3A4, DGAT1, D HRS3, EIF4E, EP300, EVI1, FGFR1, FMO2, FTMT, GALNT5, GGT7, GSTA1, HLA - DOA, IFNA14, IL12A, IL12RB2, IL13RA2, IL20RB, LRDD, MAP3K14, MPP5, N ME2, OR10A4, OR10S1, OR4A16, OR4X1, OR52N4, OR5I1, OR8S1, PANK3, PHK A1, PITX2, PLAUR, POLR2E, POLR3H, PPP2R2D, PRPS2, SEMA4F, SFRP1, TP5 3I3, TSHR, TUBB3, UGT1A10, VDAC3, PAFAH1B1, PDCD1LG2, TNFRSF17
Negative_16297	CGN, SRM, TK1, ACAT1, AKR1C1, AMPD1, ARHGEF6, ARHGEF7, ASRGL1, BAAT, BCKDHA, BIRC2, CACNA1H, CACNB2, CALML5, CNTFR, CSNK1G2, CXCL2, CXCL 5, CYP2A13, CYP3A7, CYP8B1, DAXX, DDIT4, DUSP8, E2F5, ECSIT, ENPP7, E XTL1, FSHR, FUT9, GALE, GMPPB, GNB3, GSTM3, HDAC1, HDAC2, HSD3B1, LCA T, LCMT1, LMO7, LRP5, MAP3K1, MYH10, NAGLU, NEUROD1, NFE2L2, NTF3, OR 2AT4, OR2W1, OR51B4, OR51F2, OR52R1, OR5AC2, OR5M9, OR6C4, ORC5L, P4 HA3, PCYT2, PDE1B, PFAS, PLA2G2F, PLXNA1, POLR2E, PRKAA2, PRKX, PRNP , PTCH1, PTPRF, PTTG1, RFXAP, RPN1, RPS6KA3, SIPA1, SLC25A5, SMAD9, S OCS1, SPCS1, ST3GAL5, TGFBR2, THBS1, TICAM2, WNT9A, ATP6VOD2, ATP6V 1B2, HSP90AA1

Negative_16298	C5, DDO, ID1, MPL, SFN, AANAT, ABCC8, ACTN2, AGRN, ASS1, B3GAT1, BAAT, BMP7, C3orf10, CBR1, CCR5, CCR7, CDC7, CD01, CISH, CYP7A1, DIAPH3, DO LPP1, DUSP10, EFNA1, ENTPD5, ENTPD7, EPOR, FLT1, FTH1, FZR1, GALNTL4 , GFAP, GLI3, GMPBB, GNMT, GOT2, HPSE, IFNA10, IKBKG, IL15, IL17A, IL4 R, KCNQ1, L1CAM, LEFTY2, LYPLA1, MS4A2, MYH14, MYL7, NAGS, NRG4, NTNG 1, OR2D2, OR51B6, OR5R1, OR6C4, PAK2, PDE4B, PER2, PGLS, PIAS1, PIGK, PLXNB3, PNPLA4, POLE, PPAP2A, PRDX6, PRKX, PTPN5, RAD51, RXRA, RXRB, SOCS1, TPK1, TSC2, WHSC1L1
Negative_16299	ADA, DCC, F2R, HK1, ABL1, ACTG1, AHCY, ALDH3A1, ALG6, ALS2, AOC2, AOC3 , ATP5B, BLNK, CCKAR, CCL11, CDK7, CHKB, CLDN16, COQ3, CYP1A1, DFFB, F ABP4, GAL3ST1, GGT1, GRIA1, GUK1, IMPDH1, INPP5E, ITPA, LRP6, MDM2, M THFR, MYLK2, NEGR1, NFKB2, NRP1, NTRK2, OCRL, OR1J1, OR4D1, OR5F1, OR 7G1, OR8D2, PLXNB3, POLR1A, PVRL4, PYCR1, SCP2, SELE, SETD1B, ST3GAL 1, STX18, TGDS, TPH1, UPB1
Negative_16300	CD6, FGB, KHK, LEP, LPL, ACADSB, ACVR2B, ADH5, AGXT, APOA1, CDC14B, CN TNAP1, CYP26C1, CYP3A7, CYSLTR2, DAAM1, DAXX, DGKB, DPYS, GP1BB, GPX 7, GSTM1, HRAS, ICAM1, IFNA13, IFNA2, INHBA, IRF5, ITGAL, KLRD1, MTHF R, MYL7, NKD1, NOTCH2, OR2A12, OR2T8, OR4A16, OR51E2, OR7D2, OXSM, P2 RX6, PDGFD, PRKCZ, PSME3, RPS6KA6, SMPD4, TAS2R10, TAS2R38, TCIRG1, THTPA, TOMM40L, UGT2B7, B4GALNT1, HLA-DRB3, HSD17B10
Negative_16301	ASL, CFD, GP5, HK2, MOS, MPI, TXK, ACAA2, ACHE, ACTG2, ACVR2B, AMY2B, A TP5J2, C5AR1, C9orf95, CACNA1H, CACNG7, CAMK2D, CDC7, CDKN2C, CSDA, CTTN, CYP1B1, DAPK3, DLL1, EDAR, EFNB3, FGF22, FUT5, FUT6, GALNT10, G NA11, GNAS, GPX5, GRHPR, HPRT1, IL13RA2, INMT, ITGB5, ITPK1, ITPKA, J AM3, LALBA, LDHAL6A, MAN2A1, MARS2, MYH1, MYH2, NFATC2, NFYC, NRG2, O R10AD1, OR10C1, OR10G4, OR10H2, OR10T2, OR1F1, OR2AE1, OR2C1, OR2T8 , OR4C13, OR51A4, OR51A7, OR51E1, OR5AR1, OR5M8, OR6C6, ORC6L, P4HA2 , PAK4, PDE10A, PGS1, PIM1, PLCB3, POLR2G, PPOX, PPP1CB, PPP1R3B, PRI M2, PRKAG3, PSME2, PTDSS1, PTDSS2, PVRL1, PYGL, RPE65, SAT1, STAT5A, TGFA, THBS1, TSLP, UGT2B4, UNC5B, VEGFC
Negative_16302	CKM, GP5, MYC, ACAA1, ACVR1, AHCYL1, ARD1A, CAMK2B, CASP6, CDC25A, CD K4, CLDN16, CX3CR1, DERL1, DLAT, ELK1, ENTPD5, ESPL1, FBP1, FLT1, GNB 3, HLA- F, HSD17B2, IL13RA1, INHBB, IQGAP3, ITGAL, LALBA, MCCC1, NEUROD1, NF YA, OR2AE1, OR4D5, OR51B4, OR6Y1, PARVG, PIGM, PLCZ1, POLR2D, PPP1CA , PPT1, RRAS, SAT2, SDHA, SDHC, SIPA1, SSH3, STX2, TAS2R41, THTPA, TSH R, TUBA3C, TUBB2B, ULK1, ATP6VOD2, PAFAH1B1
Negative_16303	DCN, FGB, STS, ACLY, ACSM1, ADRB1, ADRB2, ALG1, ARPC2, ARPC4, B3GALT6 , BUB3, C4BPB, CACNA1H, CADM3, CAMK2D, CCR9, CDS2, CER1, CHPT1, CHRM1 , CLDN5, CSF1R, CTNNA2, CYP2B6, DEGS2, F2RL1, FDFT1, FGFR4, GALNS, GR IA3, GSTA5, HRH2, IFNGR2, IL13RA2, IL15RA, IL5RA, INHBC, INPPL1, ITG AE, NKD2, OR2A42, OR2AG2, OR2H2, OR4C12, OR5B3, OR6C6, OR9Q2, P2RX3, P2RX6, PARD6G, PDE4B, PDIA4, PER2, PKM2, PLA2G1B, PLCG1, PRDX6, PRKC H, PTPN11, SESN1, SLIT2, SNAP23, STX1B, SV2B, TCIRG1, TP53, TPK1, TST A3, TUBA1A, UCP1, UNC5D, UPRT, WASF1
Negative_16304	CAD, CP, F2, ME3, PGP, PML, ACADSB, ADIPOR2, ALOX12B, C1QC, CACNG3, CA SK, CBLC, CCL3, CHSY3, CKMT2, CLDN10, CLTB, CRKL, DHX58, DTYMK, F11R, FARSA, FPGS, GAD2, GLS2, GNAL, GSTA4, HADHB, IFNGR2, ITGA11, KIR2DL3 , KLRC2, LARS2, MAD1L1, MARS, MEF2C, MGAT4B, NCOA4, NOS3, NRXN3, OR10 A2, OR14A16, OR6S1, OR7D2, OR8G1, PAX6, PIK3R5, PLA2G2D, PLXNA1, PTP N5, RASA2, RPRM, SDC4, SMARCA5, SRGAP1, ST3GAL2, STX18, TGFBR1, TIRA P, TSLP, USE1, YWHAG, TNFRSF13C

Negative_16305	AGK, AK1, C2, PML, SRC, TNN, A4GALT, AGPAT4, AKR1B10, ALDH1A3, AMPD3, APC2, APOA1, AQP7, ARSE, ATP5J, BCL2L1, C3AR1, CACNB2, CAV2, CCR9, CDK5, CHPT1, CLDN4, CLDN7, CMPK2, CSNK2A1, CTBP2, DMGDH, EFNA1, ENPP1, EPHB2, GDE1, GPD1L, GRIA1, GUCA1C, HAP1, HPSE, HTR2A, IL17A, IL1RAP, IMPA2, INHBA, ITGA10, ITGB5, JAM3, MAP4K2, NKD1, NRXN3, NT5C3, NTF4, OR10G4, OR10S1, OR10X1, OR13C9, OR2L2, OR4A16, OR52A1, OR52N2, OR6C75, PDK1, PLA1A, PLCE1, POLA1, POLD1, POLR1B, PRKAB2, PTPRB, RHOQ, RPIA, SEMA3B, SEMA3D, SETDB2, SHC1, SLC25A4, STAT4, STMN1, STX1A, SUV39H2, TNFRSF4, TNFSF9, TOMM40, TRAF4, TSNARE1, TUBA3C, VDAC3, ARHGEF12, GABARAPL1, SERPINE1
Negative_16306	C6, IL2, SDS, ABP1, ADH7, AKR1B10, AKR1C1, ALDOC, ALG13, ALG2, APC2, ATP5E, B3GALT4, BLVRB, BNIP1, BPGM, CASP9, CCNE1, CD247, CDH1, CDO1, CMPK2, COL1A2, COL4A4, CREB3L2, CTSG, DGUOK, DVL3, ENTPD4, FARS2, FGF20, FGFR1, FRAT2, G6PC, GALNT11, GBGT1, GGCX, GGT7, GNA12, GNA13, GPD2, HPRT1, HSD17B3, IKKBK, INPP4A, IRS4, JAK3, LTC4S, MAD1L1, MAP3K14, MAP3K6, MAP3K7, MAPK3, MTFMT, NT5C1A, OR10G3, OR1J2, OR2F1, OR2T10, OR4K17, OR52E8, OR52L1, OR6K2, OXSM, PAK3, PDGFRA, PLCE1, PLXNA1, POLE, POLE2, POLR1A, PPP2R5D, PYGB, RALA, RALB, SEMA4F, SEPHS1, SGPP1, TNFSF8, TOLLIP, TPH1, TSC1, WASL, WNT5B, ALDH18A1, HLA-DPB1, HSP90AA1
Negative_16307	RET, SMS, ACVR2A, AGPAT4, ATP4A, ATP5J2, B3GALT5, BAAT, CCKBR, CCR4, CDKN1A, CFTR, CX3CL1, CYFIP2, DBF4, DDX23, DGKA, DKK1, DRD5, DTX3, E2F2, EPHB6, FGF21, FZD10, GNA14, HCCS, HHEX, HMGCS2, IL12A, IL1RAP, KCNB1, KITLG, MAD2L1, MAP3K5, MYLK, NGEF, NMNAT3, NOTCH1, NR1D1, ODC1, OR10H1, OR1A1, OR1J1, OR2L13, OR51A2, OR51G1, OR52J3, OR7C2, P4HA1, PAK6, PIK3CB, PIP5K3, PPA2, PPARA, PRKCI, PRKY, PTPRB, SLC25A5, SSH3, SUFU, TAS2R1, THBD, TUBA1B, TUBAL3, TYMP, TYRP1, UBA1, UCK1, WNT8B, ZNRD1, B4GALNT1, HSD17B12, SLC25A31
Negative_16308	BAD, BID, FAS, TEC, ABLIM1, ACTN1, ADCY8, AGXT2, ARHGEF2, ATP5G2, BIRC2, BPNT1, CACNG2, CASK, COX15, CREB3, CSNK1G1, CTNNB1, CXCL2, DDX18, DHRS9, DOT1L, DUSP8, EFNA3, FGF14, FM01, GALNT5, GOT2, GPAM, HEXA, HSD3B2, IL10, IL17RB, IL21, IMPDH2, KITLG, KLRC1, KRAS, LRDD, MAP2K4, MAP2K5, MMP1, MYH15, NCOR1, ODC1, OR2M5, OR4D5, OR51A2, OR52K1, OR5T2, OR6M1, OR7C2, OR8A1, OR9A2, OR9G4, OXCT2, PDE5A, PLCB3, POLE2, PON2, PPBP, PPP2R2A, PPP2R5B, PSEN2, PTGIS, RDH16, SEMA3E, SLC25A5, ST3GAL6, SV2C, TACR1, TAS2R7, TLR9, TM7SF2, TNFRSF8, TUBB4Q, UGCG, UGP2, VDAC3, WASF2, HLA-DPA1, PAFAH1B2, PPP1R12A, TNFRSF11B
Negative_16309	CKB, HDC, LYN, AASDH, ACSM3, ADCY5, ADH6, AHCY, AMPD2, ASPA, CACNG4, CADM3, CD22, CDIPT, CHRNA7, CSF2RA, CTPS, CYP4A11, DHCR24, DTX2, FBP2, FGF19, GALNT8, GALNTL2, GCAT, GLDC, GLS2, IRS4, JAG1, KCNJ11, LALBA, MMP7, MNX1, NEGR1, OR2D3, OR3A3, OR5AS1, PARD6A, PFKP, PLCD4, PRKAA2, PRODH2, RFXANK, SFRP2, SPAM1, SRGAP3, SULT1E1, TAS2R14, TCF7L1, TLN1, VAMP1, VAMP3, WNT16, B4GALNT1, PPP1R12A, SERPING1, SUV420H1
Negative_16310	F11, FGB, HK1, IL3, LCK, SYK, XDH, ABL2, ACSM3, ACVRL1, AKR1C4, ALDH1A3, ATN1, ATP2A1, BDH1, CACNA1B, CCL13, CCNH, CDK7, CHIT1, CHPT1, COQ5, CPT1C, CXCL10, DDB2, DDIT4, DRD1, DTX2, ENTPD2, FPGS, GNAZ, IL1B, MARS2, MYH2, NRCAM, NTF4, ONECUT1, OR10Q1, OR10X1, OR13F1, OR13H1, OR4A15, OR4E2, OR4N5, OR52E8, OR52N1, OR6N2, OR7D2, OR9I1, P2RX2, PCYT1A, PDE4B, PGK1, PIAS2, POLD4, POLR1A, POLR3B, PPP1R3B, PPP3R2, PRKAR2A, PRODH, PTCH2, PTTG1, RXRB, SARS2, SHC1, SMAD1, SPRY3, SUCLA2, TJP1, TNFSF12, TUBB2B, TUBB6, TYK2, WNT8A, HLA-DQA2, HLA-DRB5, HSD17B12, SERPINE1, TNFRSF18, TNFRSF1B

Negative_16311	CBL, FUK, GP9, OSM, ACSS2, ACTG2, AKR1B1, ALAS1, ARPC3, BNIP1, CACNA1S, CACNG4, CCDC6, CD59, CDC42, CES2, CFLAR, CLCA4, CLCF1, CSF1, FGD1, FUT9, GALK1, GCLM, GNRH2, HMGCS1, HSD3B7, HSPA1B, IL20RB, ITGB7, JAM2, KIR2DL1, KIR2DS4, KLRC4, MAPK13, MDM4, MTAP, NAGK, NCOR2, NME2, NUDT8, OR10G4, OR1D2, OR1N1, OR51A7, OR52D1, OR5AR1, PAPSS1, PFKFB3, PGM2, PIGH, POMC, PPP2R5E, PRKX, PSPH, PTCRA, RFNG, SLC27A4, SMAD1, SRGAP1, SRGAP2, STX7, TLN2, HLA-DRB3, PAFAH1B2
Negative_16312	BAX, CD6, JUN, PGP, TPR, ABI2, ACTG1, ADSSL1, AHCYL1, ALG12, B3GALT5, B3GAT2, B4GALT7, C1GALT1, CCNE2, CD14, CD247, CD40, CHKB, CHPF, CLCA2, CLDN3, DDB2, DEGS1, DEGS2, DLL4, DUSP5, ENO1, ENO2, EPB41L3, F2RL2, FBP2, FGF5, FZD8, GALT, GIT1, GLUD1, GNAS, GRIA2, HMBS, HSD17B8, IBS P, IDI1, IFNW1, IL1R2, IL28B, IMPDH1, INHBA, KIR2DL1, KLRC1, LYPLA2, MAN2A1, MASP2, MYLK3, NEFL, NMNAT2, NT5C3, OR4L1, OR51B6, OR5K1, PDE3A, PDE8A, PIK3C2G, PIP5K3, PLA2G4A, PLCD4, POLE4, POLR2K, PPBP, PRKAB2, PRKACA, PRKAG3, PRPH, PVRL2, RASA1, SFRP1, SH2D1A, SHC2, SOCS1, SOS1, SPRY1, STAT2, TAS1R3, TBL1X, TRAF4, TUBA4A, TUBB1, TUBB2C, UGT2B7, USE1, WIF1, WNT7B, ZIC2, CSGALNACT1, MAPK8IP1, MAPKAPK5, TNFRSF18
Negative_16313	C1S, EDA, ACSM5, ACSS2, AHCY, AOC3, ARNT2, ARPC2, ATP5G1, BMP8A, CCL15, CD80, CD82, CHIA, CHST13, CLTCL1, CNTN2, CNTNAP1, COL1A2, CSNK1A1, CYP3A4, DAG1, DARS2, DDX50, DHFR, DPYD, E2F1, EFNBI, ENTPD3, EPHB1, FZD6, GNAT3, GOT1, HMGCR, HSD17B4, HYAL2, IFNA6, IL11RA, IL17B, IL1R2, IL22, IL2RB, ITPK1, LAMC3, LARS2, LIPG, MAD1L1, MAP2K5, MAP2K6, MTHFD2, NAT6, NKD1, OR10A2, OR1D2, OR2T5, OR51L1, OR52D1, OR52R1, OR5AR1, OR6M1, OR9G4, P2RX2, PAFAH2, PFN1, PISD, PPAR, PRKAA2, PSEN2, PTGS2, PTK2, PTPN11, RFXANK, RPSA, STX5, TICAM1, TRAF1, TUBA3E, TUBAL3, TUBB6, VAMP2, PAFAH1B3, PRICKLE1
Negative_16314	F3, ID2, IL6, IL8, ABC8, ACACA, ACSS1, ACYP2, ADSS, ALOX12B, ALOX15B, ARSA, B3GNT5, C1QC, CALML6, CAMK2B, CCL16, CD59, CDH15, CFLAR, CMAS, CPT1A, DAAM1, DNMT3B, E2F3, EIF4E2, EPHB6, EREG, FUT1, FZD9, GALM, GALNT8, GCNT2, GMPS, GNRH2, GSTO2, HLA-DMA, HRH1, IBSP, INHBC, JAM2, KLRC4, MMP1, MS4A2, MTHFS, MYLK3, NANS, NAT5, OPLAH, OR10A3, OR2T6, OR4D9, OR5D13, OR9A4, OR9G4, PCYT1B, PDE2A, PDE6D, PECAM1, PHGDH, PIGV, PNPLA3, POLD4, PPA1, PPP2R5D, PTPRJ, RAC3, RASA2, ROCK1, SCLY, SDC1, SMURF1, SOCS3, SPRED2, STX6, TACR1, THY1, TPM3, UCK1, UGT2B7, UGT8, WASF3, MAPK8IP2, PAFAH1B2, TNFRSF18
Negative_16315	AGK, ASL, HAL, HPD, SYK, ALDH1B1, ALDH6A1, APRT, ATF4, CACNA1C, CASP8, CD226, CDC23, CNTNAP1, CSNK1G3, CYP11A1, CYP3A4, DOLPP1, EFNBI, EPHX2, GGCX, GRIN2B, GRPR, HSD3B1, IARS2, IFNA14, INPP1, LCMT2, MCM4, MDM2, MYL5, NEU1, NEUROG3, OR2A2, OR2B11, OR51S1, OR52B6, PAX8, PCYT2, PER2, PHKA2, PIP4K2B, PLTP, PTCH1, RARS, RASGRF1, SPP1, SUCLG2, TACR2, TBL1X, TNFSF4, UBE2L6, CACNA2D2, CSGALNACT1
Negative_16316	AMH, IL4, LSS, MAX, SRC, AADAC, ACYP2, ADH4, APBB1, ATP13A2, AVPR1B, CD59, CDKN2A, CSNK1A1, CTNNA2, CXCL12, CYP19A1, CYP2E1, DDX55, F2RL2, GABARAP, GNB3, GUCA1A, H6PD, HLA-G, HSPA1B, IDI1, IL10RB, IL8RB, INPP1, LAMC2, LIPE, MAP4K4, MLYCD, NADSYN1, NFKBIE, NFYA, NODAL, OR2D3, OR2K2, OR6B3, PAK6, PGS1, RAP1B, SLC2A2, SMAD7, SUFU, TKTL1, TUBB2B, ULK2, ULK3, WNT10A, SUV420H2

Negative_16317	AUH, ID3, MVD, RET, ACP6, ATN1, B3GALT4, B4GALT1, CACNA1A, CAMK4, CD59, CD82, CHIT1, CHRM3, CISH, COL6A2, CXCL16, DAPK1, DGKH, DLL3, EDAR, ENTPD8, FABP3, FARSA, GCLM, GFAP, GUSB, HPRT1, HTR2B, LYPLA1, MAGI1, MS4A2, NODAL, OR10C1, OR2A2, OR2D3, OR4P4, OR52J3, OR9Q2, PARD6G, PIK3R4, PLA2G1B, POLA1, PRKAA1, PTAFR, PTGFR, PVRL1, RGS3, RPS6KA5, SD C4, SRD5A1, ST3GAL2, TCF7L2, TRHR, TUBB4Q, TYK2, TYMS, UXS1, VANGL1, VKORC1, XCL1, CTNNBIP1, HLA-DQA2, PLA2G12A
Negative_16318	GH2, HK1, KMO, ALDH4A1, AMPD3, APAF1, APOA5, ATP6V1A, B3GAT3, BET1L, BIRC3, BUB3, CASP6, CCL20, CD36, CDC6, CLDN3, CSNK2B, CTSS, CXCL3, DGKG, DGKZ, DNMT1, FABP3, FCGR3A, FZD9, GALK2, GDF6, GNA11, HDAC1, HHEX, ITGA7, ITGB3, MADCAM1, MAP3K8, MGAT3, MYH13, NCR1, NFE2L2, NOS1, OR11A1, OR13G1, OR1E1, OR1G1, OR2A12, OR2A14, OR2C3, OR4D9, OR4K2, OR52E2, OR52N2, OR56A3, OR6C6, OR8K3, ORC6L, PDX1, PGS1, PLA2G2E, PLA2G6, PLXNB2, POLR1E, POLR2E, POLR3A, PPP3CC, PRPH2, PRSS2, PTGFR, RAC2, RENBP, SELP, SFRP1, SIAH1, SMAD6, SOS1, STX2, TBXA2R, HSD17B12
Negative_16319	F5, ACAA2, AGPAT3, ALDH1B1, CCL2, CCL3, CDIPT, CDKN1C, CDKN2A, CHSY3, COL5A2, CSAD, CYCS, CYP2C19, DAPK2, DOCK1, EFNA3, EIF4E, ENPP6, EPHB6, FARP2, GOSR2, GRHR, HAAO, IL18, IL20RB, MICA, NTN1, OR10G7, OR10J5, OR11G2, OR6K6, PDGFB, PIGO, POLR1B, PON3, PPP2R5D, PPP3R2, PRKY, RRM2B, SPP1, STX8, TAS2R42, TNFSF4, UGT2B28, UNC5C, VTI1A, ZAP70, ATP6V1C1, GABARAPL1, PNLIPRP2, TNFRSF11B
Negative_16320	C6, CBS, CRH, FAH, GPI, GPT, GSN, GSS, IL9, PDC, TYR, ABI2, ACAA1, AKT1, ALG8, ATP2A1, BDNF, C9orf95, CACNB2, CADM1, CADM3, CARS2, CASP3, CCNE2, CCNG2, CDC26, CDK4, CDKN2B, CDO1, CLTCL1, CMBL, CNTN1, CRB3, CTBS, DDIT3, DFFB, DHCR7, DLAT, DLL1, E2F2, ENPP3, EXT2, GALNT6, GALNTL5, GLUL, HMGCR, HSD11B1, IGF1, IMPA1, ITGA2, LAMB2, LTA4H, MAP2K5, MAP3K11, MAP3K12, MAP4K1, NCKAP1L, NSD1, NT5M, OR10G4, OR2F1, OR2T34, OR2Z1, OR4C46, OR4K14, OR51I1, OR8H1, PFN1, PIK3R1, PLA2G10, PPP3CC, PRPH, PTCRA, PTPRB, PTPRZ1, RAP1B, RASGRF1, RRM1, SARS2, SEMA3F, SETDB2, SHMT1, STAT4, TAS2R48, TGFBR2, TP73, VAMP3, ZFYVE9, CSGALNACT1, TNFRSF10B, TNFRSF11B
Negative_16321	C2, CP, DAO, GAA, GPT, NOG, AADAT, AARS2, ACMSD, ACPP, ACTN1, ADIPOR1, AKR1B1, ALDH3B1, APOA5, APRT, ATP4B, B3GNT4, BDKRB1, BST1, CACNB1, CACNG1, CAV2, CD80, CDH5, CHKA, COL4A1, CREB3, CRKL, CTPS, CYP4A22, DD X55, DPYSL2, DUSP3, EGLN3, EIF4B, EPAS1, EREG, EVI1, FGF19, FMO2, GALNT8, GALNT9, GPLD1, GRIN2A, GRPR, HLA-G, HMOX1, HNF1A, HTR4, ICAM2, IGSF5, IL10RB, IL24, IMPDH2, ITGA11, ITGAV, KIR3DL1, LAMC2, LEF1, LPAR1, LRRC4C, MITF, MYL7, NCAM1, NGEF, NME4, NRG2, NUDT8, OR1K1, OR1S2, OR2G3, OR56B4, OR5AP2, OR6C76, OR6K3, OXCT1, PDE4C, PGM3, PIGT, PIK3C2B, PLA2G3, PRDX6, PRKAR1B, PTGDS, PT PN11, RBPJ, SEMA4B, SFRP1, SKP2, SMAD9, STX8, TAS2R41, TBL1Y, YARS, GABARAPL2
Negative_16322	C7, CAT, CFI, FGA, MET, MVK, PLN, SDS, SRC, ACAA2, ACTA2, ADCY8, ALPI, ANGPL4, ATP2A1, ATP5J, B3GNT5, BAIAP2, CACNG7, CD226, CDC25B, CLDN5, CLDN7, CNTF, CRB3, CREB3L2, CTSG, CXCR6, DDIT3, ENTPD5, EPHB6, FGF3, GLI3, GRIA3, GSTM3, HCCS, HMGCL, HPRT1, HRAS, IFNA14, IGF1R, IL17A, IL1RAP, IL23A, IL28A, IRF3, ITGB5, ITGB6, LAP3, LDHAL6A, LIPF, MAP4K2, MCM4, MYH7B, NAMPT, NOS3, NT5M, OR10A4, OR10H4, OR12D3, OR1C1, OR2AE1, OR2G3, OR4K15, OR6B2, OR8B12, OSMR, P2RX1, PCNA, PDE2A, PI4KA, PIK3R4, PTGER3, RALBP1, SMAD2, SRD5A2, ST3GAL3, TDO2, TUBB2B, TYK2, UAP1, UGT2B17, ULBP2, VDAC3, WARS, WNT2B, YOD1, YWHAE, SERPIND1, TNFRSF14

Negative_16323	IDS, OGT, TNF, ADSS, AHCYL2, AKR1C3, ALDH1A2, ALDH1A3, ALDH3B1, APH1A, ASNS, B3GALT5, BLVRB, CDC26, CDK7, CHR1, CHRM1, CXCL5, CYP3A7, CYP8B1, DHRS4L2, DTX2, E2F4, F13B, FCER1G, FECH, FGF1, FGFR4, FSHR, FTMT, GBA3, GFAP, GGT1, GJD2, GNAT3, GNPDA1, HLA-C, HSD17B8, IL3RA, INHBC, IRS4, ITGB7, JAG1, JAK2, JUND, KAT2B, KIR2DS5, LAMB4, LRP5, MAD2L1, MAP2K5, MAP4K1, MAP4K2, MIOX, NT5M, OR1L4, OR51D1, OR5F1, OR8H1, OR9G1, PAICS, PARD3, PARVA, PDE1C, PDHA1, PGAM4, PIGC, PIP4K2A, PIP4K2C, PPP2R5C, PRKACB, PRKG1, PSME1, PTPN6, PYCR1, RALA, RETSAT, SARS, SDC1, SEMA3E, SENP2, SH2D1B, SLC2A1, SMAD4, SORD, SPTAN1, STAT5B, STK36, TICAM2, TSNARE1, TUBB2B, UBE2L3, VASP, VEGFC, XIAP, PNLIPRP1, TNFRSF1A
Negative_16324	ADC, C1S, C2, DBI, DDO, FGB, HK3, NLK, PLN, SP1, TNC, TNF, ACSM1, AHCYL1, APBB1, ARNT, BCAR1, BMP7, CACNA1D, CALML6, CAMKK1, CBR3, CCNB3, CDH3, CHST11, COL5A2, CRB3, CSDA, CTNNA2, CYFIP2, CYP26A1, CYP2A6, CYP2D6, CYP3A7, DAPK1, DCXR, DDHD1, DDX52, DHRS4, DPM1, GAMT, GARS, GPD2, GRIN2C, GSTA4, GUK1, H6PD, HIP1, HSPA1B, IFNAR2, IFNG, ITGA1, KNG1, LARS2, MADCAM1, MMP2, MPST, MYL7, NCR3, NRG4, OR13A1, OR1L3, OR4C6, OR52I2, OR8A1, OR8K3, OR9Q1, PGK1, PHGDH, PIGP, PLA2G2A, PLCB3, PPP2R2D, PTSS1, RELB, RENBP, RGS3, RRAS, SCP2, STAT3, SULT1A2, TCF7L2, TLN2, TRAF6, UBA7, VANGL2
Negative_16325	CBL, EZR, FUK, GNS, HYI, TK1, ACP5, ACPP, ADIPOR2, ADSL, ALDOA, ALOX12B, APOC3, AREG, ASNS, ASS1, ATP5F1, CACNA1I, CASK, CCNB2, COQ5, DDX54, DUSP8, EPB41L3, EPHB3, EXOC7, FGF2, GCAT, GCNT4, GDF6, GSTM5, HMGCS1, IFNA14, IL21R, JAM3, KIR2DL3, LRP6, MARS2, NFE2L2, NFYC, NMNAT3, OR1N2, OR9Q1, PIGQ, PIGX, PLA2G5, PLCB2, PSEN1, SDC3, SETD2, SMARCA2, ST3GAL4, STX1B, TRAF1, XCL1
Negative_16326	BTC, DAO, GGH, IL3, IL7, VTN, ABCC8, ADCY1, ADH1B, AKR1B1, ALDH1A1, ARSE, ATP2A2, ATP5I, CALML6, CAMK2B, CD22, CD8B, CDC45L, CES1, CFL1, COL5A3, DAPK3, DFFB, DGKH, DGKI, DHFR, DPAGT1, DTX4, DUSP2, EPHA4, FLT4, FMO5, GART, GCLM, GRIN2D, HTR6, IL10RA, IQGAP2, IRAK2, JAM3, KIR3DL3, KLRK1, LIFR, LLGL2, LTB4R2, MGST2, NCSTN, NFATC2, NODAL, NTF3, OR13C4, OR2M7, OR2T33, OR4A16, OR4C15, OR4K15, OR4Q3, OR52J3, OR52K1, OR5AU1, OR5B12, ORC1L, PDE9A, PIAS3, POLR3H, PON3, PPP1R3A, PPP5C, PRKAG2, PTAFR, PTPMT1, PTPRF, RAB5A, RASSF1, RERE, SAT2, SFRP2, SFRP5, SGPP1, SHC1, SMAD3, SPRY3, ST6GAL1, STX4, SUCLG1, SUCLG2, TAP1, TM7SF2, UGT1A10, UGT8, UMPS, VEGFB, WARS2, ATP6V0A1, CACNA2D1
Negative_16327	DHH, HGD, MPZ, SP1, ACPT, ACVR1C, AKT3, ALG12, ASIP, ATP5G2, AVPR1B, CD22, CDC16, CDH3, CDK6, CHAD, CNTFR, CREB3L4, CREB5, CREBBP, CSNK1G2, CYP2J2, DDX19A, DGKI, DHODH, DPM2, DUSP5, EIF4E, EPHB6, HMOX1, HSD17B8, IKBKE, IL18RAP, IL25, IL28B, INPPL1, IQGAP1, ITGA9, ITGAM, ITGB5, KIR2DL1, LIAS, LIPF, LIPT1, LRDD, MAD2L1, MAP4K2, MAPK9, MCM5, MDM4, MMP7, NRP1, OR2B2, OR2T2, OR51E2, OR52I1, OR6A2, PIK3CB, PLAU, PLOD3, PRKCE, PRODH2, PRSS2, PSME3, PTPRJ, RRM2, SLC33A1, SOCS2, SPRED2, VAMP4, WBSCR17, WNT1, WNT8A, ATP6V1C1
Negative_16328	FGA, GSS, MVK, NPY, PC, PTS, SDS, TXK, ABAT, ACADS, ACSM2A, ACSM4, ADH1B, ALG1, ALG5, ARAF, ARSA, CD99, CHRNA7, CREB3L2, CSF2, CSNK2B, CTSL1, CYP7A1, DCTN1, DUSP7, ENPP3, ENTPD1, EPB41L2, FABP1, FARSA, FGF1, FRAP1, FZD1, FZD10, GBE1, GLDC, GNA13, GRB2, GRLF1, HEMK1, HPSE, HRH2, HSD3B7, IFNA21, IQGAP3, IRF9, ITGA7, KIR2DL4, KYNU, LCMT2, LDHA, MAPK14, MGAT4B, MOV10L1, MTHFR, NSDHL, OGDH, OPLAH, OR1F1, OR2D3, OR51E1, OR5D16, OR6N1, OR8K3, PCCA, PGM2, PHKB, PIK3R3, POLA1, PPP1CB, PRKCD, PSENE1, PSME2, RASA1, SC5DL, SDC2, SELL, SH2D1B, SIAH1, SLIT2, SPCS1, SPHK1, SPRED2, STK4, STX18, SULT1A2, TAS2R50, TNFRSF9, TYK2, ULBP3, UROC1, WHSC1, ZBTB16, ZMAT3, PAFAH1B2

Negative_16329	CAD, CD4, CFD, LSS, ME1, SHH, ACAD9, ACTN4, ACYP2, B3GALT6, CAMK2A, CA V1, CCL15, CD28, CD38, CDC14B, CNTNAP1, CSH1, DDX4, DHCR24, EPB41L3, EPHA2, EPHB3, EPOR, FZD5, GSTA3, HMBS, HSPA2, IRF5, ITGAM, LGMN, MMP1 4, OR2Z1, OR5L2, OR8H2, OR8K1, PDE4B, PECAM1, PFN3, PFN4, PIGW, PIK3C D, PIM2, PLA1A, PPP2R1A, PTPRM, PYCR1, RASSF1, SEMA4D, SMAD7, SRD5A2 , ST8SIA5, TAS2R42, TUBB1, TXNDC12, VTI1B, WNT3
Negative_16330	AMT, BAD, CGA, EPO, F9, HK1, SFN, TK1, AARS2, AGXT, AHCY, ALDH1A3, ALDH 2, ARNTL, ATP5G1, BTRC, CHDH, CHIT1, CKS1B, CNGB1, COX10, CRY1, CSH1, CSNK1G1, CYP7A1, DAXX, DGKE, DHDDS, DHRS3, DVL1, EVI1, FM02, FOXA2, F ZD5, FZD9, GNAL, GNAZ, GNG12, GRIA3, IL11, IL12RB2, IL6ST, ITGA3, KLR C1, KLRK1, LIMK2, MAML2, MAPK3, MAT1A, MTHFR, NAGS, NARS, NNMT, OR10H 3, OR2C1, OR2W1, OR4L1, OR4P4, OR52I2, OR5AC2, OR6K6, OR8D2, PDE11A, PHKA1, PIGA, PIGV, PLA2G3, POLR1B, PPP2R2C, PTPN1, PTPRC, RAC2, RARS , RASGRP3, RBKS, SDC4, SEMA7A, SLC27A5, SOS2, ST8SIA1, TCIRG1, TPI1, TRPM5, UNC5A, ATP6VOA2, TNFRSF10A
Negative_16331	GSS, HK2, MUT, PDC, AANAT, ACHE, ACSL3, ADH6, ALG9, AMD1, ANPEP, CACNG 3, CASP9, CDC14A, COASY, CYBB, EFN1, FASLG, FLOT2, GPX5, IFNA4, IL13 RA2, IL29, ITPK1, JAG1, KLRD1, LYPLA1, MAP3K8, MITF, MTMR1, NAGK, NAR S, NFASC, NGEF, NMNAT1, NRAS, OR13C8, OR13H1, OR2C3, OR2F1, OR4K17, O R4L1, OR4S2, OR5B21, OR5K2, OR5L1, OR6C75, OR7D2, OR8D1, OR9I1, PIK3 R1, PLD2, PLOD1, PYCRL, RPN2, RRM1, SEMA3F, SEPHS1, SESN1, SMAD7, SMA D9, TBXA2R, TUBB6, UROC1, WARS2, HLA-DQA2
Negative_16332	BAD, IDS, PDC, ACP6, ACTA2, ADRBK2, AGPAT4, AKR1C2, ANAPC7, AQP7, CCL 2, CCNE2, CD40LG, CD86, CRLF2, CXCL5, CYP4A11, CYSLTR1, DRD5, ESAM, F BP2, FZD9, GALNT1, GLI2, GNPAT, MCM5, NCR3, NKD1, ONECUT1, OR10J1, OR 2C3, OR8H2, P2RX7, PFN2, PIGX, PLXNB2, POLA1, POLR3D, RDH5, SDHC, SHM T2, SSH2, ST3GAL4, ST3GAL6, STAM2, TIRAP, TKTL1, TUBA8, VANGL2, HLA-DPA1, SERPINA1
Negative_16333	AK5, IL4, MET, OAT, PC, RET, SFN, ACO2, AKT3, AMHR2, ANAPC10, ANAPC4, A VPR1A, CACNB3, CASP7, CBLC, CDC25C, CES1, CLCA4, CLDN5, CMPK1, CPT2, CREB3L1, CTBS, CXCL3, DLL4, DPYS, FUT3, FUT9, FZD2, GCDH, GSTO1, GUCY 2C, HLA- DOA, HTR6, HYAL1, IARS, IDUA, IFNA14, IFNA17, IL28RA, IRF7, LEFTY1, L IPE, MADCAM1, MAN1B1, MAP4K2, MARS2, MMP14, MPZL1, NFATC3, NT5M, OR1 1H1, OR1A1, OR5B17, OR5T2, PANK1, PDGFA, PFKM, PGS1, PPP1CC, PRDX6, P TPN1, PYGL, RAD51, RENBP, RRM2B, SLC33A1, STT3B, TNFSF4, TNFSF8, UG T8, VAV3, VKORC1, ALDH18A1, HSD17B10, PPARGC1A
Negative_16334	BTK, CAD, ACPT, ACSS2, ADH6, ALG1, ANGPTL4, APPL1, ARG1, ARPC2, ATP2A 1, ATP6V1H, B4GALT7, BCL10, BUB3, CACNA1D, CACNA1H, CACNG7, CADM3, C CNB2, CD74, CDK5, CSNK1E, CTNNA2, DAD1, DTX1, E2F1, EFN3, FUT5, FZD8 , GFPT1, GLI3, GMPR, GNRHR, GSK3B, GUCA1B, HMOX1, HTRA2, KIR2DL2, LFN G, LIPT1, MNX1, MYH7, MYL2, NCR1, NEU3, NFASC, NFKBIB, ODC1, OR11H4, O R1I1, OR2B6, OR2M4, OR2T1, OR2W1, OR4P4, OR52E2, OR52N1, OR6B3, P4HA 3, PARD6A, PDE6G, PDHA2, PPP2R5B, PRKX, PSAT1, RARS2, SARDH, SEMA3F, SHC1, SPRED1, SPRY4, SPTLC1, STK3, TAP2, TAS2R13, TAS2R8, TLR9, TNFS F10, TSNARE1, UPP2, UXS1, WHSC1, WNT8B, XCL1, YWHAB, CTNNBIP1
Negative_16335	F7, GSN, IL6, KIT, ADRA1B, AKR1C4, ALG2, ATP5I, BAAT, CARS, CCNH, CDC4 2, CDKN2D, CKMT2, COL4A6, COQ5, CSNK2A1, CXCR3, CXCR6, DAPK3, DDIT3, DDX18, EFN3, FARS2, FGF1, FM01, GUCA1B, HSD17B4, HSD17B8, HSPA8, ID UA, IFNA14, IL17A, ITGA9, ITGB4, KLKB1, KLRC3, LDHA, LIPF, LTB4R2, MC CC1, NCKAP1L, NRG4, NTNG1, NTSR1, OR2AE1, OR4F15, OR4F17, OR52H1, OR 52N4, OR5I1, P4HA2, PHKA2, PIGC, PIK3C2B, PPP2R5A, PTGER3, RPS6KB1, SCLY, SDC2, SMAD1, TAS2R42, TAS2R9, B3GALNT1, C1GALT1C1, PLA2G12B, PRICKLE1, ST6GALNAC5, TNFRSF14



Negative_16336	GSS, IL9, NOG, NPL, AACs, AANAT, ABL2, ACSS2, ALDH1L1, ATP5F1, ATP5G2, B3GALT6, BBOX1, BMP6, BPGM, C5AR1, CASP6, CDC25B, CREB3L2, FARP2, FGF13, FOXO3, GALNT7, GGT6, GNAO1, GNPAT, GRIN1, HADH, HCLS1, HYAL2, IFNA5, IL1R2, IMPA1, INPP1, IRAK1, LAMB4, MAD2L1, MAPK1, MAT2B, MYH10, NCK1, NCOA4, NMNAT1, NRG2, NT5M, OR13J1, OR14J1, OR1A2, OR2M7, OR51F1, OR56A4, OR5F1, OR5M9, OR9I1, PDGFC, PER1, PFKM, PLCB4, PNPLA4, POLE3, PROC, PSME1, PSPH, QARS, RALBP1, RASA2, RASSF1, SAT1, SELE, SEMA4B, SMAD3, SPRY1, SSH2, SUOX, SUV39H2, TKTL2, ULBP3, VTI1A, WNT3A, MAP3K7IP1
Negative_16337	BAD, C3, DCN, GSS, SFN, ALDH2, AOC3, ASMT, ATP6V1H, C5AR1, CLTCL1, COX10, CXCL10, CYBA, CYP26A1, CYP2F1, DLL4, EGLN1, EXTL1, FARSB, FGF18, FOXO1, FTH1, GADD45B, GALK1, GALT, GAS1, GMPT2, HMGCL, ICOSLG, IFNA17, LRRC4C, MAML1, MAN1B1, MDH1, MGAT4A, OR13C3, OR1L6, OR9A2, PCYT1B, PIGB, PLA2G4A, PPP1R3C, PSEN1, PYCR1, RIPK1, RPN2, SMAD9, THBD, TJP3, TUBA1C, TUBA3C, UGCG1, VDAC1, ZAP70, ZIC2
Negative_16338	ASL, ME3, ACYP1, ADRA1D, ADSSL1, ALPPL2, ARPC2, B4GALT3, BAAT, BDH2, BET1L, COL1A1, CSF2RB, CSF3R, CYP2A6, DDIT4, DDX18, EPB41L2, FTMT, GAD1, GNA14, GNAI1, GP1BA, H6PD, HEXB, HTR4, IL6R, LAMA3, LAMC2, MASP1, MCM6, MTHFD2, MTHFR, MYLK3, NADSYN1, NARS2, OR5P2, OR9K2, PARD6A, PAGAM1, PLA2G2D, POLR2A, POLR3A, RERE, SKP1, SLC2A2, SOD1, TYROBP, WNT11, WNT16, TNFRSF13C
Negative_16339	CBL, CFI, DHH, OTC, ALDH9A1, ARNTL, B4GALT5, BLVRA, BMP5, CCR6, CDO1, CERK, CHPF, CHST12, CSNK1A1, CTNNA2, CTPS2, DDB2, DEGS2, DGKZ, DRD1, E2F5, FBP1, GP1BB, GUCY1A2, GYS1, HDAC2, HSD17B8, IQGAP2, IRAK2, LARS2, LEFTY1, LIAS, NT5C3, NUDT2, OR10A4, OR1F1, OR2D3, OR4D1, OR52I1, OR5J2, ORC1L, PAK2, PAX4, PDE1A, PDE3A, PDPK1, PIK3CG, PIP5K1A, PLOD2, POLR1D, ROCK2, SARDH, SETD2, SHC3, SHISA5, SLC9A1, TACR2, TLR5, ULK2, WNT8A, WWP1, ZIC2, PPARGC1A
Negative_16340	GK, GK2, LCT, LEP, MPZ, TPO, ACYP2, ALCAM, ATN1, ATP5B, B3GAT2, CACNG5, CCL26, CDK7, CNGA3, COQ3, CPT1B, CREB1, DGAT2, DTX4, DUSP6, EPB41L1, ESPL1, FTMT, GALNTL2, GANC, GARS, GPX7, GUCY1A3, GYS1, HSD17B7, IDI2, IFNA4, IMPA2, LARS, LRRC4C, LYZL1, MAML2, MAP3K6, MASP1, MMP14, MYH4, OR10T2, OR13C2, OR2A14, OR2D2, OR2K2, OR2M5, OR4C16, OR51D1, OR5D13, OR5H2, OR6C74, OR8H2, PANK3, PAX8, PDE1A, PDHA1, PHKA1, PI4KA, PIGF, PIGU, PKM2, PLCD1, PPM1A, PRIM1, PTEN, RALA, RPS6KA3, SEMA7A, STAT4, SULT2A1, TGFB1, TMLHE, TUBB2C, XCL1, ATP6VOA4, HLA-DRB5, PPP1R12A
Negative_16341	ADA, C1S, CD2, GP5, ACP6, ACSM3, ACTN1, ALDOB, ARHGEF7, ARNT, B4GALT4, B4GALT7, BCAT1, BCL2L1, C3orf10, CACNA1D, CD80, CDC20, CLCA2, CLDN5, CPT1B, DGKI, DPYSL2, DRD2, DUSP3, FLOT1, FOXA2, GALNT12, GALNTL5, GBE1, GCNT1, GLB1, GLI1, GNA15, GSTT1, GSTZ1, HLA-DOA, HNF1B, HSD17B2, HSD17B8, IL10, IL24, INMT, ITPA, KIR2DL4, KIR3DL1, LAMB1, LDHAL6B, MALT1, MAP3K14, MTAP, MTHFR, MYH7B, NADK, NOD1, NOTCH1, NRXN2, NUMB, OR13C2, OR1D2, OR4C11, OR52N4, OR5AS1, OR6C3, PDE10A, PDE7A, PDE8A, PGS1, PIP4K2C, PLA2G2A, PLCD3, POLR1C, POLR1D, POLR3B, PPBP, PRKACB, PTGS1, PYCR1, RFXAP, RPE65, RPSA, SC4MOL, SMAD6, SNAI2, SOCS4, STAM2, STAT4, SUV39H2, TAS2R14, TAS2R9, VAV2, XCR1, YOD1

Negative_16342	AK3, CKM, F10, F7, KIT, MPL, MTR, SMS, TYR, ACVR1, ACYP1, ADRA1D, AKR1C2, ARPC2, ATP5H, B3GALT4, CCL24, CCNA2, CCNB3, CD55, CERK, CFLAR, CMPK1, CNGA3, COL6A1, CREBBP, CSNK2A2, CX3CL1, CXCL1, DHCR7, DHDH, DRD1, EDN1, EGLN3, ENO2, FLAD1, FTMT, GALNTL5, GLI2, GNPDA2, HCST, HPSE2, IDH3G, IL13RA2, INMT, IPMK, LRP5, MAP4K3, METTL2B, MKNK1, NR1D1, NTN1, OR1L3, OR2G6, OR2T29, OR4C15, OR4D2, OR51G1, OR5B17, OR5D13, OR5R1, OR6C1, OR6C6, P2RX5, PDE2A, PDGFD, PDHA2, PDIA4, PIAS4, PLA2G5, PLIN, PPBP, PPCS, PPP1CC, PRKAG1, PRKAG3, RAP1A, RDH12, RPN2, RPS6KA6, SDC1, SEMA3A, SHC4, SMAD9, ST3GAL2, SYNJ2, TAS2R4, TYK2, UROS, WNT1, WNT10B, XCL2
Negative_16343	CRK, EBP, ACTN1, ASMT, CACNA1G, CEBPA, CREB1, CYSLTR2, DBF4, DDB2, EPHA2, EPHA4, FGF19, GATM, HSPA1B, ICAM2, IFNA17, IFNGR2, IL1R2, ITGAX, LIAS, LTA4H, MAN2A1, NAMPT, OR10C1, OR13C4, OR52B4, OR5F1, OR7A10, PAFAH2, PGLS, PPP2R2B, PRKCQ, PRKG1, PRPH2, RND1, SEMA3B, SENP2, SH2D1B, SMARCA5, STEAP3, THBS2, TP53I3, TUBB2A, UNC5D, WASF2, WEE1, WHSC1L1, WNT9A, ATP6V1C2
Negative_16344	APP, CP, HGD, LCT, LEP, SRM, ABI2, ACOT12, ACSM3, ALDH3B2, ARG1, B3GNT4, CASP6, CCL3, CCL5, CDK7, CDKN2D, CLDN6, CNTFR, CREB5, CRLS1, CSNK1A1, CSNK2B, CXCL16, CYP26A1, CYP2D6, CYP3A5, DTX1, EHMT2, EPHX2, FGF14, FOSL1, GALNTL1, GRAP2, GRIN2B, HLA-F, HPSE2, HYAL2, IL28B, IMPA2, KIR2DL3, LDHAL6B, MGST3, MKNK2, MTMR1, NADK, NLGN1, NRG1, OR10G9, OR4C15, OR4F4, OR51A2, OR51B6, OR6C70, OR7D2, OR8D2, OR8I2, PCCA, PCYT2, PDCD1, PECAM1, PIGS, PIK3CG, PMM1, PPP2R5A, PPP3R1, PTK2B, PYCR1, RAP1A, SPHK2, SPRY4, SSH2, STK4, TAS2R4, TFDP1, TRAF2, TUBAL3, VDAC1, YWHAB, SUV420H1
Negative_16345	BCR, C9, FST, HGD, PLG, RFK, UBC, ACACA, ALPPL2, CBLB, CD3E, CD8B, CDH4, CDKN2D, CLDN8, CTNNA1, CXCR6, DDX55, DDX56, DGKA, EPB41L1, EPHB1, FGF20, FGF3, FLT3LG, FZD5, GCDH, GDF5, GNAI1, GOSR2, GPX7, GSTA1, HMOX1, HSD17B7, HSD3B7, HTR2A, IL10RB, IRF5, KLRC4, LEPR, LFNG, LIMK2, MPDZ, MPZL1, MYH2, NLGN2, ODC1, OR10G3, OR12D3, OR4N5, OR5V1, OR7A10, PAPSS2, PDE4A, PIGQ, PIP4K2C, PLXNB1, PNMT, PPP3CA, PRKAA1, RALA, SH2D2A, SMAD7, SMC1A, STX8, TJP1, TNFRSF4, TSTA3, WNT16, XCL1, XIAP, CTNNA1, PAFAH1B3, SERPINA1, SERPINE1
Negative_16346	CGA, F7, JUP, LTB, MPL, SHH, ACADM, ACLY, ACP1, ADH7, BCL2, BUB1B, CBLB, CCL2, CCNE2, CCR1, CCR10, CD8B, CDC16, CYP21A2, CYP2C18, DUSP16, ERBB3, FGF20, GALNTL5, GCLM, GLI2, GP1BB, HLA-F, HPRT1, HTR2A, IRF9, IRS4, KLRC3, LTBP1, MASP2, MYL9, NOTCH2, NR1H3, NUDT9, OR10S1, OR10V1, OR1A1, OR52I1, OR8G1, ORC2L, P2RX5, PGAM2, PGAM4, PHKA2, PNPLA4, PRKAR2A, PRKCI, PTCH1, SMAD6, STX18, TACR1, TGFBR2, THBS4, TIRAP, TNFSF11, TNXB, TPI1, USE1, ATP6V1C2, TNFRSF12A
Negative_16347	FAH, LYN, TKT, TYR, ACADS, ACAT2, ACSL1, ACSM2A, ADH1B, AHCYL2, AMPD3, B3GALT1, CACNG4, CANT1, CASP8, CASP9, CCL20, CD70, CD79B, CDC7, CDK7, CHKB, CLCF1, CSNK1G1, CTLA4, DDX51, E2F1, EFNA4, FASN, FCER1G, FZD10, FZD4, GOSR2, GSTZ1, IFNA13, IKBKG, IL29, IMPDH1, KARS, MAP2K4, MAP3K3, MAP4K2, MAPK9, MTHFR, NCKAP1, NCR3, OR10A3, OR10AG1, OR1L6, OR4K14, OR52I1, ORC5L, PAK7, PCCB, PDE5A, PGM3, PIK3C2B, PIPOX, PLCZ1, PRIM1, PRKCD, PRKCG, PRKCZ, PRPS2, PTPN5, RDH5, RGS3, RHOA, ROBO3, ROCK2, SELE, SELPLG, SUCLA2, TACR1, THY1, TKTL2, TLR3, TSNARE1, VCAM1, VKORC1, ARHGEF12, CACNA2D3

Negative_16348	C3, C6, EGF, GK, GP6, AARS2, ACTG2, ACVR1C, ACVRL1, ACYP1, ALOX15, ATP5J2, BLVRB, CACNA1C, CACNB1, CASP10, CCNA1, CD3E, CD86, CDKN1C, CLDN15, CRKL, CYP11B1, DDIT3, DDX19A, DGKB, DUSP6, FMO2, FZR1, GADD45B, GALNT7, GAMT, GATM, GDF5, GGT7, GLB1, HPSE2, HSPA1B, IDI1, IL22RA2, IL23A, IL25, IRF3, IRS1, KCNB1, LAP3, LIMK1, MAP2K3, MAP4K4, MOV10L1, NAGS, NARS, NOD1, NUDT2, OR12D3, OR4K14, OR52N1, OR52N4, OR5B12, OR5D18, OR5P3, PAX4, PDE3A, PITX2, PLCB3, PLXNB1, PLXNB3, PNPT1, PORCN, PPP3R2, PSENN, PTK2, PTK2B, RPN2, RPS6, RPS6KB1, RRM1, RXRB, SARS, SD C2, SEMA3F, SLC25A4, SOS2, SPRY3, STK4, SULT1E1, TACR1, THBS4, TP53I3, VANGL2, WNT1, ZAP70, ATP6V0D1, HSD17B10, MAPK8IP3, SERPINC1, TNFRSF1B
Negative_16349	ATM, CBS, GH2, WAS, AASDH, ABCC8, ALDOC, ALG2, AMDHD1, B3GALT6, BMP6, BUB1, CAMKK1, CCL21, CDH15, CDK6, CDS1, CLOCK, CNTF, CXCL10, DDX52, EFNA4, EHHADH, F2RL1, FLT4, FOSL1, FUT2, GBT1, GP1BA, GRM5, HCCS, HIBADH, HLA-C, HNF1A, HSD17B1, IRAK3, ITGAE, MAPK11, MMP9, MYH13, MYH9, NCKAP1, NEU1, OR10G8, OR11G2, OR2B11, OR2M7, OR4K5, OR6K3, OR9A4, PER2, PGK1, PIP4K2C, PLCB4, PLD1, PNMT, POLD2, POLE4, POLR2F, PPARG, PPT1, PRKACB, PRSS3, PYGL, RASGRP4, SHC1, SMAD2, SPRED1, ST3GAL1, ST3GAL5, TGFB R1, TRAF3, VAV3, WARS, WNT9B, ATP6VOA1, HSP90AB1, SERPINC1
Negative_16350	CFH, F10, SMO, TH, ABLIM3, ABP1, ACADM, ACVR2B, ACY3, ADAM10, ADRB1, ADSS, AKR1D1, ALDH3B2, ATP5I, BCL2L1, BST1, CACNG1, CACNG6, CAMK2G, CASP10, CBR3, CDC14B, CFLAR, COMT, CPT1B, CX3CL1, EFNA2, EREG, EXTL3, FGF4, FLOT1, FLT3LG, FZD8, GAMT, GNPAT1, GNRHR, GOT2, GSTA3, GSTO1, GUCA1A, HNF1A, HNF4G, IL18, IL18R1, IQGAP3, IRS1, ITGA11, ITGB4, ITGB5, JAG1, MARS, MPZL1, MYH3, NFKB1, OR10G8, OR10S1, OR13F1, OR5D13, OR5J2, PER2, PNPO, POLR1B, PPP1R1A, PRKAR2A, PRKCD, PTPRR, RAC3, RASGRF1, RRAS, SDC4, SDHB, SOCS3, TAS2R7, TRPM5, UBE2L6, WHSC1, HLA-DRB5, TNFRSF1A
Negative_16351	AK5, LSS, ACADM, ACY1, ADORA2A, ALG10B, ATP5D, BCL10, BET1L, CCDC6, CCR1, CCR2, CD48, CD58, CD99, CLDN16, COL3A1, CREB1, CSF2RA, CTBP1, CYP2C19, DDIT3, DDX18, DERA, DTX2, DTX4, EFNB3, EPHA4, ERBB3, ESAM, EXT1, FLT3LG, FUT6, GAD1, GALNT12, GCLC, GRB2, HNF1A, HTRA2, IL12B, MADCAM1, MAP3K13, MAPK12, OR4C15, OR4K2, OR51S1, OR52B4, OR6N1, OR8B12, PDE6D, PFN4, PI4KA, PITX2, PMM2, POLD3, POMC, PRKAG2, PRKAG3, PRKCH, PTGDS, PTGES2, RALB, RPS6KA6, SRGAP1, STAT5A, TAS2R9, VANGL1, ZIC2, MAPK8IP2, SERPINA5, TNFRSF18
Negative_16352	AGL, C1S, DBI, VTN, AACS, ACSM1, ADH4, B4GALT4, BDKRB2, CAMK2G, CCL14, CCL19, CCL5, CDC25A, CKS1B, COMP, CYP2E1, DAG1, DGKB, DPYSL2, DUSP14, EP300, GNA12, GSK3B, HCST, IARS, IL9R, ITPK1, LAMB2, LCMT1, MAGI1, MAOB, MASP1, MGAT5B, MITF, MPST, MRAS, MYH4, NCK1, NEGR1, NFATC2, NKD2, NRG3, OCLN, OR11H1, OR2A14, OR4N4, OR56A3, OR56B4, OR5AU1, OR6A2, OR6F1, OR8D4, OSMR, PFN2, POLR3G, PPM1B, PPP2R2C, PSME2, RASGRP3, SARS, SESN1, SGPP2, SKIV2L2, SOS1, SRD5A2, STK4, STX5, SV2A, SYNJ1, TAS1R2, TNFSF14, UGT2A3, ULBP1, VTI1A, YWHAG, ATP6VOA1, C1GALT1C1, MAPKAPK2

Negative_16353	<p>AGL, AK3, CBS, DCC, GP6, IL5, PVR, TPO, ACAD9, ANAPC10, ARHGEF2, ATP4A, B3GNT3, B4GALT7, BCL2, BCMO1, BPGM, CCNA2, CCND1, CDK6, CLCF1, CNTNAP1, CTNNA3, CYP26B1, CYP2C18, DHFR, EGLN1, EPOR, FARSB, FCER1G, FGF23, GP1BB, GUCY2C, HLA-C, HMGCR, IDH2, IL13, IL18R1, IL3RA, KAT2A, LFNG, LILRB3, LTC4S, MAGI1, MDM4, MEF2C, METTL2B, MINPP1, MIOX, MMP1, MPDZ, NCK2, NCR2, NEU3, NFKBIA, NRXN1, OGDHL, OR2G3, OR2T6, OR4K14, OR5K2, OR6C4, OR7G1, PFN3, PHKA1, PISD, PLA1A, PMM2, PORCN, PRKAR2B, PRKCZ, PTK2, RRAS, RRM2, SCIN, SDC3, SH2D2A, SMC1A, SMPD4, SRGAP3, STX1A, TAS1R3, TCIRG1, TGFA, TICAM1, TNFSF14, UGT2B4, ULBP2, YWHAQ, SERPINA1, ST6GALNAC6</p>
Negative_16354	<p>ADK, CEL, DBI, HK3, ILK, LCT, NLK, TAT, ACAA1, ACO2, ACPT, AKR1C1, ALCAM, AMD1, ATP5H, ATP5I, BDH1, CACNG4, CAMKK2, CCKBR, CCND3, CDC26, CHST12, CNTNAP1, CXCL5, DGKH, ECSIT, EPB41L3, F2RL2, FARSB, GSTT1, IL21, IL21R, IL4R, KIR2DL2, LEF1, LILRB3, LIPE, LIPF, LLGL2, MAML3, MAP3K11, MLYCD, MTHFD2, NCR1, OR13C3, OR1B1, OR1L3, OR4A5, OR52B6, OR52E8, OR5I1, PAK3, PDPK1, PFKFB4, PIGP, PLIN, PPP2R5E, PTPN1, SIAH1, SOCS5, SPRY3, TAS2R14, TBL1XR1, TLR9, TP53I3, TUBA1C, TUBA8, TYK2, UGCG, VAV3, WNT3A, WNT7B, ATP6V1C2, MAPKAPK2</p>
Negative_16355	<p>AR, CD4, HGF, MPL, OTC, ADCY6, ADRA1A, AGPAT4, ALDH1L1, APLP1, ATP5D, C1QA, CALML6, CCL13, CCR4, CHAT, CHIT1, CLDN1, CYFIP1, DMGDH, EPHB1, ETNK1, FGF13, FUT1, GLB1, GPX7, GSTO2, HEMK1, HLA-G, HNMT, HTR2C, IDI1, IL24, ITGB5, LAMB1, MAP2K1, MECR, MS4A2, NGEF, NRXN2, OLAH, OR1L6, OR1M1, OR2A42, OR4C11, OR4C15, OR51M1, OR7A17, OR8J3, PARVB, PDE8A, PDIA4, PIP5K1B, PIP5K1C, PLOD1, POLR2K, PPAP2C, PRIM2, PRPH2, PTPRB, RAD51, RASGRP3, RHOQ, ROB02, SDC4, SMPD2, SPP1, SPRY1, TAS2R49, TGDS, TNFSF10, TNFSF11, TRAF2, VAV3, YARS, ATP6V1C1, CACNA2D1, MAP3K7IP1, TNFRSF1B</p>
Negative_16356	<p>FAS, GLA, HPD, MPI, TAT, TNF, ADCY3, ALG10, ALG9, CASP6, CCR8, CDKN1B, CLTA, CTNNA1, CXCR3, CYP3A43, DGAT1, ENPP7, EPAS1, ETS1, FCGR2B, FDF1, FGF22, FZD8, GANC, GRIN2B, HIBADH, HSD3B7, IL9R, ITGAM, LRRC4C, MAPK1, NKD1, OR2T4, OR51B4, OR51Q1, OR6M1, PCK2, PHKA1, PKMYT1, PLOD2, POLR2E, PRKG1, PTPMT1, SETD2, SLC25A5, SMAD3, STAM2, STMN1, TAS2R5, TGFBR1, YARS2, YWHAG</p>
Negative_16357	<p>AK3, C5, CFI, EPO, PLG, SI, TFG, VTN, ACACB, ACOT11, ADCY2, AKR1C4, ATG7, ATP50, BBC3, BCL2L1, CCL25, CD8A, CDS2, CLCF1, CLTA, CNDP1, COL1A2, CREB3, CSF1, CSF3R, DUSP7, ENTPD5, ER01L, GJA1, GLDC, GNA01, GSTT1, GUCY2C, HSD17B7, HSD17B8, HSD3B2, IFNA6, IFT57, IL23A, LDHAL6B, LEF1, LILRB3, LIPF, MASP1, MEF2C, MPP5, MTMR2, NUDT2, OR11G2, OR11H4, OR13D1, OR2F2, OR3A1, OR3A3, OR51I1, OR5AP2, OR5D18, OR5L2, OR6F1, OR8H1, OR8K5, OR9G1, PDGFA, PIGF, PLD1, POLD4, POLR2D, PPP1R1A, PRLR, PTGES, RAP1B, RAPGEF1, RXRG, SLC27A4, SMAD6, SRD5A2, TAP2, THBD, THBS4, VAMP3, MAPKAPK3, TNFRSF13C</p>
Negative_16358	<p>A2M, AUH, GP5, HK2, ITK, RPE, SCD, ACOT12, ACOX1, ACPT, ACSL5, ACSM4, ACTA1, ADSL, AHCYL2, AREG, ATP12A, ATP5A1, B4GALT1, BET1L, C1QA, CACNG3, CAMK2D, CASP3, CDC2, CDC25A, CHAD, CNTN1, CSF2RA, CTNNA1, CTNNA3, CXCR5, CYFIP2, CYP1A1, DNMT1, EARS2, EDA2R, ENPP1, ENPP2, EP300, ER01L, EVI1, F2RL2, GCNT2, GCNT4, GUCA1C, HAA0, HAO2, HARS, HMGCS1, ICA M3, IL4R, INMT, IRAK1, IRAK3, ITGA2B, KLK3, LAMA4, LCP2, LDHAL6A, LYP LA1, LYZL1, MADCAM1, MAPT, NAT2, NPAS2, NR5A2, NT5C1B, ODC1, OR11G2, OR14I1, OR4X2, OR51G2, OR5I1, OR9Q2, OXCT2, PHKA2, PIK3C3, PIPOX, PNPO, POLR2L, PPCDC, PPP5C, PRKACG, RHOQ, SEMA7A, SETD1B, ST8SIA1, STX1A, STX3, TAS2R49, TJP2, TLR9, TPH2, TYROBP, TYRP1, WNT4, HSP90AA1</p>

Negative_16359	C3, CDA, DCN, EZR, FN1, MAG, MSN, MVK, OTC, SRM, TPR, ACTN4, ALDH3A1, ALS2, ARAF, ARNT2, ARPC1B, ATP6AP1, BCKDHA, C1QA, CD80, CDK5, CLDN11, CLTA, COL1A1, CRHR1, CSNK2B, CTBP1, CYP26A1, CYP2C18, CYP2C9, DDX52, E2F3, EGFR, ERO1L, EXT2, FGF2, G6PC2, GALM, GNAI1, HLA-DRA, HLCS, HTRA2, IFIH1, IFNB1, IL21R, ITCH, ITGAE, LDHAL6B, MAP2K4, MS4A2, MYH2, MYL9, NADSYN1, NANP, NFYB, NODAL, NOS1, OR10AG1, OR4K14, OR4K17, OR4Q3, OR4S1, OR4X2, OR51B6, OR51M1, OR52A1, OXSM, PDK1, PHKA1, PHKG1, PHKG2, PIK3CD, PLA2G3, PMM1, POLR2D, PPARD, PPARG, PRDX6, PRKCE, PROC, PTPN5, RAPGEF3, RARS, RASGRP3, RETSAT, RPSA, SC5DL, SELPLG, SGMS1, SMAD3, SPCS1, STAT2, SUFU, TGFBR2, THBS1, TRPC1, UROS, VAMP3
Negative_16360	ADO, F7, FES, GP5, AGRN, AKR1C3, ARHGEF6, ATP5J2, ATP6V1H, B4GALT4, BC3, CCNB1, CD48, CDC16, CLDN4, CXCL10, DUSP2, EPHA2, EPHA4, GATM, GFAP, GNAI2, HAGHL, IGF1R, IL18R1, IL1A, ITGAX, ITPKB, KARS, LARS, MAP3K6, NAGS, NME4, NSDHL, NT5C1B, OLAH, OR11L1, OR1A1, OR2A2, OR52N5, OR5AR1, OR8J1, PCCB, PFKL, PHKG2, PLA2G10, PLCB1, PLCD3, PLOD2, PON1, PP2R5E, PPP5C, PRIM1, RAP1B, RPN1, STAT1, SUOX, TOMM40, B3GALNT1, TNFRSF10B
Negative_16361	C5, C7, NLK, AARS2, ACTA2, ACTN4, ADRB3, ATP6VOC, CASP7, CD59, CDC14A, CDKN2A, CHEK1, CLCF1, CRB3, CSF3R, CTPS2, CTSL1, CTTN, CUL1, CYP11B1, CYP2A6, DERL1, DLL1, DPM1, DUSP3, EFNB2, EHHADH, ERBB3, EXT1, F11R, FARSB, FLAD1, GALNT12, GALNT6, GATM, GLG1, GLS2, GNAO1, GNPDA1, INPP4B, IRAK4, IRF7, ITGA3, ITGAX, KLRD1, LDHAL6B, MAP2K2, MGAT1, NKX2-2, NMNAT2, OR10A6, OR2AG2, OR51I1, OR52E8, OR5C1, OR7A17, OR8J1, OXTR, PDHA1, PIGA, PLCD3, POLD1, PPP3R2, PRKAB2, PYCRL, RAPGEF1, RAPGEF4, RASGRF1, RDH12, RXRG, SFRP5, SGPP2, SLC27A1, SMAD4, SMPD3, SOS1, SULT2B1, TCF7, TGFBI, TSTA3, TUBB4Q, VAMP4, ATP6VOA1, ATP6VOA4, ATP6VOD2, HLA-DPA1, PNLIPRP2, TNFRSF10D
Negative_16362	CGA, EBP, ME1, MOS, PC, UBB, ACSL5, ADSSL1, AKR1C2, ALDH1A3, ALDH7A1, ANGPTL4, ARPC3, B3GALT4, BRAF, C5AR1, CAV1, CCR10, CCR2, CHPT1, CHRM1, CMAS, CMPK1, CSAD, CSDA, CTNND1, CYP2A7, CYP4F2, DDX55, DFFA, DVL2, ENPP6, EPHA3, ERBB2, ETS1, GGCX, GGT6, GNPAT, GRM5, GSTM1, GUCY2D, HEX, HIBADH, HSD3B2, IARS2, IFNA8, IL3RA, INHBC, IRF5, IRS2, MAP3K2, MGAT2, MTMR1, MYH8, NCOR1, NEFH, NRG4, OR2A25, OR52A1, OR5C1, OR6K2, OR6N2, PCNA, PECAM1, PGM1, PIGF, PIM2, PIP4K2A, PLA2G5, PLA2G6, PLCZ1, PLTP, PMM2, PON1, PTGER3, PTGES, RPS6KB2, SEMA7A, SOS2, SPCS3, SPRED1, STX3, SULT1E1, SYNJ2, TJP1, TLN1, TNFSF14, TP53, TRDMT1, TUBB, TUBB2B, TUBB2C, UGCG, UGT2A1, ATP6V1C1, PRICKLE2, TNFRSF12A
Negative_16363	AK7, CRK, FN1, GH2, GHR, LPO, MVD, OAT, STS, TFG, ACADSB, ACO2, ACSL6, ACSM1, ACVR1B, ADSL, AMD1, B3GALT2, CACNA1B, CBLC, CCL21, CD34, CMPK1, CSF2, CSF3R, CSNK1E, CYP17A1, DAAM1, DAD1, DKK1, ECHS1, EPB41L3, EXOC7, FGD3, FLAD1, G6PC, GLG1, GLI2, GSTP1, HADH, HLA-C, ICOS, IDH1, IFNA7, IFNAR2, IL10RB, INHBA, LRAT, MAOB, MAPK7, MMP2, MYH10, NCR1, OR2T10, OR2T29, OR4F17, OR4F6, OR4M2, OR4N4, OR6X1, OR8D1, PAK2, PDXP, PFN3, PLD1, PRKAA1, PRKCD, PSAT1, PTK2B, RAP1A, RASA2, RBL1, ROCK1, RPS6KA4, SHISA5, SLC27A4, SOAT2, SPP1, ST6GAL1, STAT5B, TAP1, TAS2R40, TAS2R48, TBL1XR1, TCF7, TRADD, WASL, CSGALNACT1, SERPINB5

Negative_16364	AK7, C1S, CD6, DCT, MAG, ME3, TK2, ACADVL, ACOX1, ACTA1, ACVR2A, AGRN, AKR1B10, ALOX12, APH1A, ARAF, B3GALT4, BDNF, CCL21, CCND2, CD34, CDK N2D, CIITA, CNTN1, CPT1A, CTF1, CXCR5, CYP11B2, DDX56, DERA, DTX3, DV L1, EIF4E, ENTPD7, ENTPD8, EPB41L3, FADS2, FGF23, FOXO1, FSHR, FUT7, GAPDH, GCH1, GLI3, GLUL, GMPA, GRIA1, GSTM5, GSTP1, GZMB, HIBADH, HS D17B4, IDH2, IL15, IL1R2, IL20RA, IMPA2, INADL, IQGAP3, ITGAV, LIPA, LRRC4C, MAN1A1, MCCC1, MIOX, MTHFD2, MTMR2, NAT1, NEU4, NKD2, NOX1, O R13G1, OR1D5, OR2F2, OR2M4, OR4C16, OR4D9, OR4N4, OR51B5, OR6C75, OR 9I1, P2RX5, PDE11A, PDE6D, PGLS, PIGP, PLA2G3, PLD2, PMAIP1, PPP5C, R ALB, RELA, RND1, SETDB1, SIGLEC1, SLC2A2, SPTAN1, TBL1XR1, TBXAS1, T CF7L1, TPK1, TUBB2C, UBA1, UGDH, WEE1, XYLT2, ZFYVE9, KIR2DL5A, MAPK APK2, PRICKLE2
Negative_16365	AMH, BCR, GK, IL3, LPL, LPO, ACSM2A, ACSM4, ACTA1, ACYP1, AKR1C3, ALDH 2, ALDH3B1, AMPD1, ARHGEF7, ATN1, ATP2A1, C1QA, CACNA1F, CACNA1I, CA CNG4, CCL19, CCL3, CDS1, CHAT, CPS1, CXCL10, CYP1B1, CYP2S1, CYP2U1, DAAM2, DBF4, DDIT4, DDX51, DGKG, DNMT3A, DUSP1, ENAH, EPHA3, FARSB, F CGR3B, FGF14, FLAD1, FM02, FOXA3, GALK1, GALNT7, GAMT, GDE1, GUCY2C, HIF1A, HTR7, IFNA4, IL15, IL20RB, INSRR, IRAK3, ITCH, ITGAM, KIR2DS5 , LIMK2, MAN1A2, MAPK13, MAPT, MBL2, OR3A1, OR4K5, OR4X1, OR51A2, OR5 2E8, OR5B17, OR6C1, OR6Y1, OR8D4, OR8H3, PAK1, PCCA, PDE9A, PDK1, PER 3, PGAP1, PHGDH, PIGC, PIK3C2G, PIP5K3, PLA2G1B, PLCG2, PPP1CA, PPP2 R2D, PPP2R5D, PRIM1, PRKG2, PTPRB, RDH8, SC4MOL, SEMA3C, SGPP1, SLC3 3A1, SULT1A1, TBL1X, THBS4, VKORC1, VTI1A, WNT3A, ZIC2, MAPK8IP2, PA FAH1B3, PHOSPHO1, SLC25A31, TNFRSF18
Negative_16366	AMT, CTH, EDA, GPI, SCD, TNF, ACADM, ACO1, ACOT12, ACP2, ACSM5, ACTN4, ADCY1, ADSL, ALAD, ALPP, ANAPC11, ARPC1B, ARSB, B4GALT1, CACNA1E, CA SP9, CCDC6, CCNG2, CD274, CD40LG, CD86, CDC20, CHIT1, CHPF, CHSY3, CR Y2, CSAD, CXCL2, CYFIP1, CYP19A1, CYP8B1, DAAM1, DDIT4, DHRS4L2, DPM 3, EDAR, EFNA5, EFNB1, ENTPD6, FBP2, FGF12, FGF5, FTH1, GBE1, GCNT2, G LI1, GMPA, GSK3B, GSTA4, HGSNAT, HHEX, HLA- DOB, HMGCS1, HSPA2, IFNA6, IFNB1, IL17A, IL17RA, IL9R, INPP5A, INSRR , ITGA2B, ITGAV, KIR2DL1, KIR2DL2, LAMA3, LHCGR, LRP5, MAP2K3, MDH2, MGAT4A, MYD88, MYH2, NANS, NFATC2, NMNAT1, NRXN1, NSD1, NT5C, OR10A7 , OR13C2, OR14I1, OR1Q1, OR2AG2, OR2G6, OR2M4, OR2T4, OR2T6, OR4M1, O R4N4, OR51B4, OR51B5, OR51E1, OR5D13, OR6C70, OR7D2, OR8B4, OR9Q1, O RC4L, PDE8B, PDGFB, PEMT, PHGDH, PI4KB, PIGM, PLA2G2E, POLR2B, POLR3 B, PPP3CB, RBL2, RPE65, RXRB, SETMAR, SHMT1, SLIT1, SMAD5, SPCS1, SPP 1, SPRY3, SSH1, STAM2, STX3, SULT1A1, TALD01, TAS2R42, TGFBR2, TJP1, TNFSF12, TRAF5, UBE2L3, UGT8, VDAC1, WARS2
Negative_16367	AK7, AMT, FN1, GAA, GH1, NF1, OGT, PML, RPE, TEC, TYR, ACO2, ACSM4, ACTN 4, ADCY8, ADH4, AGRP, APAF1, ATG12, ATP2A3, B3GAT3, B4GALT5, BCMO1, C 1GALT1, CAMK2G, CCL22, CCR10, CD74, CDK6, CES2, CREB3L4, CTPS2, CXCR 4, DDX19A, DEGS1, DLL3, DTX3L, DUSP6, EDNRB, EFNB3, EI24, EIF4B, EPB4 1L3, EPHB6, FGF1, FRAT1, GADD45G, GALNS, GAPDH, GCNT2, HLA- DOB, HSPA8, IARS, IFT57, IL11RA, IL18, IRS2, ITGA8, ITGAL, JAK1, LDHA L6A, MAN1A1, MAP4K2, MGAM, MYL2, NADK, NANP, NCSTN, NFATC4, NPAS2, NR XN1, NT5M, OR10R2, OR2H1, OR4K14, OR51E1, OR51I2, OR52M1, OR5B17, OR 6T1, OR8D1, PAK6, PLA2G2A, PLAU, PPAR, PPCDC, PPP2CA, PPP3CB, PRKAC A, PRKY, PTGDS, PYCR1, RPS6KB1, SELE, SELL, SEMA3G, SETD7, SFRP1, SOC S4, SRGAP2, SRGAP3, STK11, TAP2, TAS2R8, TD02, TP53I3, TPM3, TRDMT1, VANGL1, VARS, VEGFB, CSGALNACT1, PPARGC1A, PRICKLE2, ST6GALNAC4, T NFRSF12A

Negative_16368	<p>AGL, BID, CSK, F5, GP6, JUP, ME2, MTR, PAH, SCD, SFN, STS, ZYX, ACADVL, A  CAT2, ACSL1, ADH1A, ALAS2, ALDH7A1, ALG12, ANGPTL4, B4GALT7, BHMT, C  ACNA1I, CACNB3, CACNB4, CALML6, CBLB, CCL13, CCL8, CCNB2, CCR5, CD8A  , CDC45L, COX15, CTLA4, CXCL2, CXCL3, CYP26C1, CYP3A5, DARS2, DDX4, D  GUOK, DRD2, DVL3, ENTPD2, EPHB1, FGF3, FGF8, FRAP1, FUT3, FUT6, FUT9,  GART, GGPS1, GGT6, GLDC, GLUD2, GNAL, GNAT3, HARS2, HLA-  DOA, HLCS, HTR2B, IFIH1, IL12A, IL13RA2, IL6ST, IRF5, ITGA1, ITGA4, I  TGA9, ITPKA, KCNB1, KCNQ1, LEFTY2, LILRB3, LRAT, LRDD, MAN1C1, MASP2  , MCM4, MDM2, MGAT4A, MICA, MTHFS, MYL2, NQO1, NRG4, NSDHL, OR10A2, OR  11H1, OR13G1, OR1C1, OR1E1, OR2AG1, OR2C1, OR51S1, OR52E4, OR52L1, O  R52N5, OR5L2, OR5T3, OR7C2, OR7G3, OR8H2, PARD6B, PAX8, PCYT1B, PDE6  G, PIAS4, PIM2, PIP4K2C, PLIN, PLOD2, PLXNC1, PPM1D, PRKCG, PRKCQ, PR  PH2, PTAFR, PTGIS, RAPGEF4, RARA, RDH8, SC5DL, SDC1, SEMA4D, SEMA7A,  SFRP1, SLC9A1, SMAD1, SOCS7, SPRY4, TAS2R14, TAS2R42, TUBA8, UCKL1,  UGCG, VAV3, VDAC3, WNT9B, PLA2G12A, SERPINA1, SERPINB5, ST6GALNAC4</p>
Negative_16369	<p>AR, C2, C3, CEL, CTH, DCT, FGG, ITK, MPL, TPR, UBB, UBC, AADAC, AADAT, AB  L2, ACOX2, ACSM1, ACSS2, ADRB3, ALOX12B, ASNS, B3GALT5, B3GNT5, B4GA  LT1, BBC3, BDKRB2, CCL14, CDIPT, CLDN14, CREB1, CTPS, CTPS2, CYP4F3,  DDX47, DDX50, DGAT2, DIAPH2, DUSP5, ENAH, EPB41L2, EPOR, F2RL1, FARS  A, FGD3, FZD1, FZD8, GCLC, GFPT1, GPD1, GTSE1, HARS2, HCST, HLA-  DRA, HSPB1, IDI1, IFNK, IL21, IL7R, INPP5A, IRF9, ITGB4, LLGL2, MAP2K  4, MDM4, MMP2, MTFMT, NCOA4, NRXN1, OCRL, OLR1, OR10H5, OR10K2, OR13C  8, OR1L3, OR2D3, OR2G6, OR2T29, OR3A3, OR4F5, OR4K14, OR51B2, OR51E2  , OR52I1, OR6C1, OR6C3, OR6X1, OR7C1, PAK6, PDHA1, PDX1, PGM1, PHKA2,  PIK3R4, PLXNB1, PON1, PORCN, PPP1R3A, PPP3R2, PPP5C, PRSS3, PTCH2, P  TGFR, PTPRR, RALBP1, RASGRP4, RENBP, RPS6KB1, RRAS, SESN3, SGPP2, SK  IV2L2, SMPD1, SMURF1, STAT6, STX5, SUCLA2, TP53, TPM3, TUBB2C, TYK2,  UROD, VARS, WNT3A, XYLT2, YWHAZ, MAP3K7IP1, MAPKAPK3, PLA2G12A, TNF  RSF11A</p>
Negative_16370	<p>ADA, CBS, GBA, GHR, GNE, IHH, JUP, LAT, LYN, TYR, UBC, ABL2, ACSS2, ACVR  L1, ADCY4, ADRA1A, AGPAT4, AKR1D1, ALDH3A2, ANAPC2, ANAPC5, ARD1A, A  RG2, ATP6AP1, BDKRB1, BMP8B, BPGM, C4BPB, CARD11, CARS2, CASP9, CAV1  , CCL21, CD46, CDC7, CFLAR, CHRM3, CHSY1, CIITA, CLCF1, CLDN10, CLDN4  , CLDN9, CSNK1G3, CTNNB1, CXCL6, CYP2S1, CYP4F2, DAPK2, DDX55, DNMT1  , DRD1, DTYMK, EFNA5, EXTL1, FABP1, FGF1, FGF3, FOSL1, FRAT2, FZD2, FZ  D7, GALT, GAS1, GCNT2, GLS2, GPAA1, GRAP2, HAAO, HADHB, HIBCH, HLA-  DMA, HLA-  DOA, IBSP, IDH3A, IGFBP3, IL10RB, ITGB2, MAP3K6, MAPK13, MAPK9, MARS  2, MDH1, MTMR2, NARS, NCOA4, NCR1, NCR3, NEU1, NMNAT1, NTN1, NTNG1, NU  DT8, OCLN, OR10G4, OR10H1, OR13C3, OR13C9, OR1J2, OR2AG1, OR2AT4, OR  2G2, OR2M2, OR51B5, OR51F2, OR5AN1, OR5AR1, OR6C3, PARD6A, PARVB, PA  X4, PER2, PFKFB3, PIGW, PIK3C2G, PIK3R2, PLA2G2E, PLCG2, PLCZ1, PLD2  , POLA2, POLR2G, PPBP, PPP1R1A, PPP2R5A, PRSS3, RRAS, ST6GAL1, STAT6  , STX1B, THBS3, TM7SF2, TNFSF10, TRADD, TSC1, TSLP, TSTA3, TUBB1, UGD  H, UGP2, VAMP3, WEE1, ATP6V0A1, PLA2G12B, TNFRSF14</p>

Negative_16371	AK5, C3, C8B, CEL, CR2, F8, GAA, GK2, HK3, HY1, ID4, PDC, PGF, SI, TK2, AA DAT, AANAT, ABL2, ACPP, ACSL1, ACSM1, ACSS3, ACTG2, ADORA2A, ALDH2, A NAPC11, ANPEP, AOC3, APC2, ARNT2, ARNTL, ARPC2, ASPA, B4GALT5, BLVRA , CACNG5, CAMK2B, CAMKK2, CARS, CCR1, CD01, CHRM3, CLDN18, CLDN5, CMB L, CNTNAP2, COL1A2, COL4A6, CREB3L1, CSF1R, CSF2RA, CTNND1, CTSL1, D FFB, DGKB, DGKG, DGKZ, DHFR, DHRS4, DUSP14, DVL3, EPHX1, FADS2, FRAT2 , GALNTL1, GPX5, GRLF1, HTR5A, IL22RA2, IL28A, KIR2DL2, LEFTY2, MAT2 B, MYH4, MYL5, MYLK2, NADSYN1, NAT2, NCOR2, OR10G7, OR13C3, OR5H2, OR 5T1, OR7A17, ORC5L, PDE4A, PIAS3, PIP5K1B, PLCB3, PNPO, PNPT1, POLE3 , POLR1E, POLR3G, PPCDC, PPCS, PRNP, PRODH2, PTGS1, PTPN11, SFRP1, SL C25A4, SLC27A5, SLC2A4, SLIT2, SOAT1, SORBS1, SPI1, SPRY1, STK11, ST X2, THBS4, TJP1, TLR5, TNFRSF9, TRAF6, UGT1A10, ULK1, UNC5A, WARS, WA SF3, WNT2, WNT5B, YARS, YWHAB, ZFYVE9, ATP6V1E1, CACNA2D4, SERPINE1
Negative_16372	AK2, ASL, EZR, F7, GCK, ILK, LSS, PGP, TAT, A4GALT, ACHE, ADH6, AGRP, AK T1, ALDH5A1, ALG1, ALPP, AMPD1, APPL1, ATP4A, BCL2, C4BPA, CCR1, CD27 , CDC14B, CDC25C, CDK2, CLTC, COQ6, CREB3L1, CYP17A1, CYP8B1, DDX23, DOCK1, DUSP3, DUSP7, ERBB2, F11R, F13B, FDPS, FGF5, FM02, FUT3, G6PC, GAB1, GFAP, GZMB, HARS, HGSNAT, HMGS2, HSD17B3, ICAM1, ICOSLG, IFNA R2, IL11, IL1R2, LAMA3, LAP3, MAN2A1, MAP3K5, MAPT, MARS2, MYH7B, MYH 8, MYL7, NCKAP1, NFATC3, NUDT5, OGDH, OR10G8, OR10H3, OR13J1, OR2G3, OR4C16, OR8D1, OR9I1, ORC2L, OXSM, PEMT, PIK3R1, PIK3R5, PLIN, POLD1 , PPP1R3C, RBL1, RFXANK, RPN1, SEMA4F, SMAD6, SOD1, ST3GAL4, STX10, S ULT1A1, TAS2R38, TAS2R4, TNFRSF8, TSLP, UBA7, UCK2, UGT2B11, UGT2B7 , UNC5C, UPP2, WASF1, ATP6V1B2, GABARAPL1, HLA-DRB3
Negative_16373	C2, CS, GBA, GDA, GSN, HK3, LAT, NPY, ACAD9, ACVR2B, ALCAM, ALDH3B2, AL DOC, ALS2, AMHR2, AMPD3, ANAPC5, AQP7, ATP5J2, AXIN1, BCL10, BDH1, BI RC5, CASP3, CCL23, CD01, CHEK1, CHPF, CNTF, COL11A1, COL1A1, COL5A1, COMP, CRY1, CXCL1, CXCL3, CYP1A2, CYP21A2, CYP2B6, DDHD1, DUSP4, EFN A2, ENTPD6, EPAS1, F13A1, FCER1G, FUT5, GLDC, GNPAT, GOT2, GSTT1, GUC Y2F, GYS1, HMOX1, IARS, IFNA4, IKBKB, IL1R2, IL23R, IRF7, LDHA, LIMK2 , LIPA, LIPC, MAGI1, MAN1C1, MAP4K3, MAPK7, MEF2C, MGAT4B, NCF4, NFAT C1, NFKB1, NFYC, NME4, NME6, NTF4, NUDT8, OR10G9, OR10K2, OR14C36, OR 2A42, OR2C3, OR2K2, OR4M2, OR52B6, OR52E6, OR5D16, OR5K1, OR6C70, OR 6Y1, PARD6G, PIGW, PIK3R3, PKLR, PLA2G2D, PLOD2, PNMT, POLR2F, POLR3 H, PPP2R2D, PPP3CB, PRKAB1, PRKCQ, PROC, PRPS1, PSME2, PTCRA, PYGM, Q ARS, RBL1, RELA, RPS6, RRM2, SH3BP2, SLIT2, ST3GAL3, TAS2R8, TOMM40L , TUBA3C, TUBB4, TUBB6, UGDH, UGT2B28, UROC1, VAMP2, VANGL1, VANGL2, VDAC3, WWP2, YOD1, CACNA2D1, MAPKAPK5, PPARGC1A
Negative_16374	ATM, C4B, C8B, CR1, CRK, DBT, EGF, EPO, GH1, INS, LCT, ME2, NF1, PC, PGP, RET, TEC, ACACB, ACMSD, ACSM1, ADCY2, ADCY9, APRT, ARRB1, ATP5E, ATP5 L, ATP6V1D, BAIAP2, BCAT2, BMP8B, BUB3, C1QB, C3AR1, CAMK2D, CASP8, C CL11, CCL27, CD46, CD70, CD79A, CLCA4, CMAS, CNTNAP2, COL5A2, CRY2, C XCL16, CYP17A1, CYSLTR1, DDIT4, DDX56, DGAT2, DGKH, ECSIT, EFNB2, F2 RL3, FARS2, FBP1, FECH, FGF6, FSHB, FZD4, GLB1, GNAS, GOSR2, GPAM, GRL F1, GUCY1A3, GUSB, HARS2, HLA- G, IFNAR2, IFNG, IL21, ITPKB, LIPF, MDM2, MINPP1, MIOX, MPDZ, MYH10, N AE1, NANS, OR10A6, OR10S1, OR2T33, OR2Y1, OR4K2, OR51G1, OR52K2, OR5 AK2, OR6T1, PDE2A, PDHA2, PECAM1, PFN2, PGAM1, PIK3C2G, PIK3CD, PKMY T1, POLE3, PPP3CC, PTGES, PTGS1, PTPN11, PTPRB, RASA2, RBX1, RPRM, RP S6KB1, SLC25A5, SLC27A1, ST8SIA5, TGFB2, THBS2, TKTL1, TNFSF10, TNF SF18, TUBB6, UGT2B28, UPP2, UROC1, VKORC1, WNT3A, WNT8A, YWHAB, YWHA Q, ZMAT3, ATP6V1E1, ATP6V1G1, PNLIPRP2, PRICKLE2, TNFRSF10C



Negative_16375	<p>CD2, GCK, JUP, MIF, MSN, NPL, RPE, TNF, AARS2, ACADVL, ACOT12, ALDOC, ALOX15, AMDHD2, APLP1, CBLC, CCL13, CCL22, CCL28, CCNE1, CD58, CDC25C, CDH15, CDK5, CFL1, CISH, COL4A4, CRY1, CSNK1D, CSNK1G3, CXCL10, CXCR5, CYP2B6, DHCR7, DUSP8, ECHS1, EPB41L3, ERBB2, ERBB4, ESPL1, FOXA3, GALNT10, GMPR2, HLA-F, HTR6, IFT57, IRAK3, ITGA4, ITGB2, KIR2DL3, KLRK1, LAMB1, LDHD, MAP4K3, NAT6, NRXN2, NT5C, OR1A1, OR1L4, OR1S1, OR2C1, OR4X1, OR52I1, OR52K2, PAPSS1, PDE3A, PDE8A, PFKFB1, PGLS, PI4KA, PLA2G10, POLD4, POLR1D, PPM1A, PPP1CA, PPP3CA, PRKCB, PRSS2, PTSS1, RND1, RXRA, SCP2, SDC3, SELE, SELL, SELPLG, SGPP1, SIAH1, SLC2A4, SMAD7, SMPD4, SNW1, SOD1, SOX17, STX7, TM7SF2, TRAF4, UGDH, WBSR22, CACNA2D3, HLA-DRB3, SERPINB5, TNFRSF10B, TNFRSF1A</p>
Negative_16376	<p>ADC, BID, FN1, NPL, ACMSD, AGMAT, AGRN, AKR1D1, AMPD2, ANAPC10, ARNTL, ASNS, ATP6V0B, BBC3, BBOX1, BCAT2, BCL10, BHMT, C1QB, CACNG6, CARS2, CCR4, CD244, CD72, CD99, CDC45L, CDKN1B, CHST13, CLDN10, CNGB1, COL3A1, CTF1, CTNNA2, CXCL12, CYP3A4, DDX41, DDX50, DIAPH2, DKK4, DOCK1, E2F5, EFNA2, FGF3, FLOT1, GADD45G, GALNT1, GALNT10, GALNT6, GANC, GATM, GCH1, GCNT4, GLYCTK, GNPAT, HYAL1, IL2RB, IRAK2, ITCH, LEF1, LHCGR, LLGL2, LYZL1, MAN2A1, MAP4K4, MASP2, MDH1, MDH2, MGAT4A, NARS2, NCAM1, NCK2, NEUROG3, NOTCH1, NUDT5, NUMBL, OR10A7, OR14A16, OR14I1, OR1C1, OR1J4, OR2AT4, OR2M3, OR52J3, OR52N1, OR56A4, OR6B3, OR8J3, OSMR, PAFAH2, PCCB, PDE4C, PFKFB1, PIAS1, PLCB3, POLD3, POLE3, POLR3A, PORCN, PPARA, PPP1CC, PPP2R2B, PRDX6, PRIM2, PRKAG3, PRKCZ, PROC, PSAT1, RFNG, RRAS, SELL, SESN1, SLIT2, SNAP25, SOAT2, SRGAP1, ST8SIA5, SUV39H1, TACR3, TLR2, TNFSF10, TNXB, UCKL1, UROC1, WNT16, WNT2, YES1, ZAP70, ATP6V1B2, HLA-DPA1, PPP1R12A</p>
Negative_16377	<p>CFI, CS, DDO, F10, FGA, GDA, ILK, OTC, PAH, TPR, WAS, ACAD8, ACPT, ACVR1B, ACVR2B, ALPL, AMY2A, ARHGEF2, AXIN2, B4GALT3, BMP2, BMP4, CACNA1A, CCL26, CD34, CDC45L, CDKN1A, CDKN2C, CHST11, CKS1B, CNTN2, COL5A2, CXCL1, CXCR4, CYP11B1, ENTPD2, EPB41L1, ETNK2, FGF22, FGFR3, FIGF, GCH1, GGT7, GSTA4, GUCY2C, HEXA, HLA-DOA, HRAS, IFNW1, IGFBP3, IL13RA1, INHBC, ITGA9, ITGAD, KIR3DL1, KLKB1, KLRC2, LGMN, MAP3K8, MCM7, MLLT4, MYH3, NRCAM, NT5C3, OLAH, OR10A4, OR10A7, OR10H5, OR13C9, OR2A2, OR2A4, OR2F1, OR2H2, OR2K2, OR2S2, OR4K17, OR52A5, OR52B4, OR52N2, OR5AP2, OR5AR1, PARVB, PDE8A, PFKFB4, PLTP, POLD2, POLR1D, PORCN, PPAP2B, PPM1B, PTEN, PTTG1, RAD51, RELA, RPS6KA6, RRAS2, SC5DL, SDC3, SEMA4G, SEPHS1, SIGLEC1, SLC27A4, SMPD1, SNW1, SPTAN1, SRGAP1, SRGAP3, STAT1, STX3, SV2A, TACR3, THBS4, TOMM40, TUBA1A, UROS, VAV1, YWHAG, ZMAT3, ATP6V1G2, PRICKLE2</p>
Negative_16378	<p>BTD, DUT, HYI, ITK, NGF, PML, TH, ACO2, ACP6, ACSM5, ADH1B, ADRA1B, AGPAT1, AKT1, ALDH3A1, ALG2, ATP5A1, AVPR1B, B4GALT5, BLVRB, BMP4, C1GALT1, CACNA1S, CACNG7, CAMK2A, CCL5, CD74, CDH1, CES1, CHKB, CIITA, CLDN7, COL5A3, COMT, CREB3L1, CSAD, CSF3, CSNK1G2, CXCL13, CYP27A1, CYP2A6, CYP2U1, CYP3A5, DDX51, DGAT2, DLST, DUSP10, DVL2, ECSIT, EGLN3, EPHB6, FBXW11, FGF2, FLT3, G6PC, GAPDH, GBGT1, GJD2, GNAQ, GRPR, HADHA, HAO2, HES1, HPRT1, HPSE, HSD11B1, HSPA1B, IAPP, IFNA14, IL12RB1, IL28RA, LCP2, MDH2, MINPP1, MPP5, MYD88, NEU4, NKX6-1, NR1H3, NRCAM, OR10H5, OR10K2, OR13G1, OR1A1, OR51A4, OR51B2, OR52E4, OR8J3, PAK7, PFKP, PIK3R2, PLCD3, PLOD3, PMVK, POLR3B, PPARA, PPP2R5B, PPP3CC, PRKAB1, PRODH, PYGM, RASA2, RFWD2, SEMA3E, SEPHS1, SETMAR, SIPA1, SOAT1, STX2, TAP1, TBXA2R, TCF7L1, THBS2, TICAM2, TM7SF2, TRAF1, TUBB6, UGT2A1, UPRT, WNT16, WNT5A, YKT6, MAPKAPK2, ST6GALNA5, TNFRSF10B, TNFRSF18</p>

Negative_16379	<p>AGK, CAT, CKM, F2, GP6, GPT, IL5, LIF, MTR, ACYP1, ATIC, ATP50, CACNA1F, CACNG3, CCR5, CDC42, CDH5, CDKN2C, CLDN7, CMAS, CNTNAP2, COL5A2, COX15, CXCL12, CYP26A1, CYP3A4, DPYD, DVL3, ELK1, EREG, FABP4, FARP2, FARS2, FGF1, FGF9, FZD4, GADD45B, GALNS, GALNT10, GATM, GGT7, GOSR2, G RPR, GSTM2, GUCY1B3, GZMA, HA02, HLA-DRA, HMGCS2, HTR2C, IGSF5, IL17A, IL2RA, INPP5E, IPMK, ITGB2, ITPKA, LEFTY2, MAGI3, MBL2, MCM4, MMP1, NAGA, NEFL, NMNAT1, NUDT5, OR10A5, OR10AG1, OR10X1, OR11H6, OR2A42, OR2AE1, OR2T33, OR4D2, OR4L1, OR52I2, OR7A10, ORC6L, PANK1, PAPSS2, PDE3B, PFN3, POLE, POLR2B, POLR3G, PPP1R3C, PRPH, PVRL4, RASGRP3, RBL2, SMPD3, SPRY3, STX18, SULT1E1, TIAM1, TLR9, TNFRSF4, TNFSF18, TSNARE1, UNC5C, VANGL2, WNT5B, YES1, TNFRSF1A</p>
Negative_16380	<p>AK5, CS, DBT, FOS, FUK, FYN, GDA, HYI, IL4, LEP, MAG, MPL, PGD, PRL, SRM, TNR, ADCY2, ADIPOR1, ADIPOR2, ADRB1, AHCYL2, AKT1, ARHGAP5, ARHGEF1, ARPC1A, ARSD, ATP6VOB, B3GAT2, BMP6, CACNA1C, CACNG4, CAMKK1, CASP10, CCL21, CD38, CHR1, CISH, COASY, CREB3L3, CRLF2, CSF1, CYP7A1, DAG1, DDX41, DNMT3A, EDA2R, ELK4, ENO1, EXTL3, F2RL3, FABP1, FASN, FBP2, FGFR1, FZD2, GADD45B, GGT7, GNA15, GSTM1, HMGCR, HMOX2, HPRT1, HRH2, IL24, IL2RB, INPP5E, IPPK, IQGAP3, IRS4, ITGA7, ITGA9, ITGAD, ITGAX, ITPK1, JAM3, KAT2A, LHCGR, LYPLA1, MBL2, MCM3, MGAT4B, MYH11, MYH8, NFASC, NFATC3, NME7, NPR2, NRXN3, NUMB, OR14I1, OR1L6, OR2A5, OR2T1, OR51B4, OR51F1, OR52K1, OR5AS1, OR6C2, OR6K2, OXCT1, PARVA, PDE4D, PDE7A, PIAS1, PLA2G2E, PLOD2, PLXNA1, PRKG2, PYGB, RARS2, SAT2, SCD5, SMURF2, SPCS3, SPRY1, ST3GAL2, STK3, STX18, SULT1A2, TAS2R40, TGFB2, TKTL1, TOMM40, TSC2, UGT2B17, UPRT, VDAC1, VTI1B, WEE1, CSGALNACT1, SERPINC1</p>
Negative_16381	<p>AUH, C4B, C6, CRK, FGA, IVD, PLG, TNF, ABLIM1, ACY1, AGPAT3, ALG9, ARPC3, ATP12A, ATP5J2, BCL2, BDH2, CBLB, CD27, CD34, CDH4, CHEK1, CHKB, CSNK2B, CTSS, DTYMK, EGLN1, ENTPD4, EPHA5, EPOR, ERO1L, F2RL2, FGF22, FUT1, GAD1, GALE, GMPS, GNA01, GTSE1, GUCY1A3, HADHB, HES1, HNF1B, IDH3B, IGSF5, INHBB, ITGB6, LEPR, LLGL2, MDM4, MTHFD1L, MYLK, NADK, NFATC1, NFKBIE, NMNAT1, OCRL, OR2A25, OR2F2, OR4D5, OR4D6, OR4D9, OR51A7, OR5AS1, OR5R1, OR6T1, PEMT, PGAP1, PORCN, PPA2, PRKAG3, PRKAR1A, PRNP, PTEN, RAB5A, RHEB, SELPLG, SEMA3E, SH2D1A, SMAD9, SMARCA2, SMC1A, SMPD1, SSH3, STX18, SULT2A1, TGFB2, THTPA, TNFRSF4, TNFSF11, TSHB, TUBB6, TYRP1, VAV3, WHSC1L1, WNT11, XYLT1, ZFYVE9, ATP6V1G3, HSP90AA1, SERPINB5, TNFRSF13B</p>
Negative_16382	<p>A2M, ADC, AK3, CRH, GH2, HGF, JUP, MVD, OGT, PTS, TH, TKT, ACSS2, ADAM10, ADH4, ADRA1D, ALDH7A1, ALOX12, AOC2, ATP50, ATP6V1H, CCL23, CCR10, CDC45L, CDK4, CDKN2A, CHD8, CLDN4, COQ7, CRKL, CTNNA1, CTSL1, CYP11B1, DGKG, DHDDS, DHRS9, DTX2, DUSP5, EGLN1, EP300, EXOC7, FGD1, FSHR, FUT1, FZR1, GALNT1, GALNT13, GDE1, GUSB, HIBCH, HIF1A, HNF1A, HRAS, IDUA, IL11RA, IL24, INPP1, KIR2DL2, LCAT, MAOB, MGAT5B, MYH11, MYLK, NEU3, NNMT, OR10K2, OR12D3, OR2A14, OR2T4, OR4C12, OR4D1, OR4F15, OR52B4, OR5T1, OR5V1, OR6C6, OR7A17, OR8J3, PDE10A, PDE2A, PLA1A, PLA2G2A, PLK1, PMM1, PORCN, PRKAB1, PRKAR2A, PRKCA, PRKCZ, PRKG1, PTTG1, PVRL3, RPS6KB1, SETD1A, SH2D1A, SOS2, SPTAN1, SV2B, THBS4, TNFRSF8, TUBB4, TYROBP, YKT6, ZMAT3, MAPK8IP1, SERPIND1</p>

Negative_16383	ADO, AK5, BID, C8G, CDA, CR1, GCK, HGF, MVK, NNT, OSM, SRC, ACADVL, ACSL4, ACSL5, ACVR2A, ACVR2B, ADCY10, ADH1B, ADORA2B, AGXT, ALPI, AMDHD1, AMPD3, B3GAT1, B3GNT3, BCAT2, BDNF, CACNA1S, CARS2, CCL14, CCNE1, CD34, CD70, CD74, CDKN1B, CDKN2A, CEBPA, CHKA, CHRM3, COMP, CRLS1, CXC L10, CYP11B1, DAPK2, DGKG, ECHS1, ENTPD1, FABP4, FASN, FGF21, GALNT1, GALNT3, GALNT7, GCNT2, GCNT3, GJD2, GNAO1, GP1BA, GRIA3, GRIN2C, HE MK1, HSD17B8, HTR2C, IFNA13, IRF9, ITGA2B, JAG1, LYPLA2, MAPK7, MEF2 C, MMP9, MPST, MTFMT, MYH4, NCAM2, NEU1, NFYC, OCRL, OR10P1, OR13D1, O R1F1, OR2A4, OR4F5, OR4K17, OR4X1, OR51L1, OR51V1, OR52B4, OR5B21, O R6K2, OR7A17, P4HA1, PARD3, PARVG, PI4KA, PIGM, PIK3R3, PLK1, PPP2R2 A, PPP5C, PROC, PTGS2, RARS2, RASGRF1, ROCK1, ROCK2, SAT1, SESN3, SKI V2L2, SOS2, SPCS1, ST6GAL1, TGFB1, TGFB2, UCKL1, VANGL1, WNT5B, WNT7 A, HSD17B12, MAP3K7IP1, PRICKLE2, ST6GALNAC5, ST6GALNAC6
Negative_16384	ADC, AGL, AK2, BAX, C7, CKB, F11, GGH, GP5, GP6, KDR, LCT, MOS, PC, SPN, A BCC8, ACADL, AGPAT4, AKR1A1, AKR1B10, ALDH1A3, ALG1, ALOX12, ALOX15 B, AOX1, ARRB1, ASCC3, ATIC, ATP13A2, ATP5G2, AVPR1A, B4GALT2, BDH2, BPGM, CACNA1D, CALML3, CD34, CD36, CD47, CER1, CHEK2, CHRM3, CHSY1, C LCF1, COQ5, COQ6, CXCR6, CYP2E1, DERA, DGKA, DHODH, DKK4, DNMT3A, DRD 2, E2F3, EI24, ENPP7, ENTPD7, EPHB2, EPHX1, EXT1, FGF14, FGF4, FGF7, F GFR1, FGFR4, FSHR, GALNTL1, GARS, GGBT1, GIT1, GMPR2, GOT1, GPX7, GRP R, HSD17B1, IFNA7, IL9R, ITGA9, JAM3, KIR2DL4, LDHA, LLGL2, MAP2K4, M AP4K2, MAP4K4, MLLT4, MMP9, MRAS, MYLK2, NAGA, NAGS, NCF1, NCKAP1, NC R1, NFASC, NFKBIE, NFX1, NKD1, NT5C1A, ONECUT1, OR10A4, OR2C1, OR4C1 2, OR4C13, OR4F4, OR4K15, OR4N5, OR51A7, OR51Q1, OR52H1, OR52J3, OR5 2W1, OR56B4, OR5J2, OR6C3, OR6F1, OR6N1, OR7D2, ORC4L, PARD6A, PDGFD , PECAM1, PFAS, PFKL, PGK2, PIK3C3, PLCB3, PNPO, POLR2F, PPM1A, PPP2R 5C, PRKAG2, RAP1B, RAPGEF3, RARS2, RASGRP1, RBX1, RDH10, RDH5, RFXAN K, SC4MOL, SC5DL, SETD7, SIGLEC1, SLIT1, SLIT2, SOCS4, SPHK1, SPHK2, SPRY2, ST8SIA1, STAT4, STX18, STX3, SULT1E1, SV2B, TAS2R7, TFDP1, TI CAM2, TOMM40L, TPM3, TSC1, TSTA3, TUBA8, TUBB3, VDAC3, YKT6, ATP6VOD 2, MAP3K7IP1, MAPK8IP3, PLA2G12B
Negative_16385	ADK, DHH, FST, GP9, IL3, ME1, ME2, MPZ, NGF, NPL, OSM, PXN, VTN, ACAA1, A CSL5, ADAM10, ADIPOR1, ADRA1A, ADRB3, AGMAT, AKR1A1, AMPD2, AMPD3, A QP7, AREG, ARHGEF4, ARHGEF7, B3GNT5, BDH1, BLVRA, CAMKK2, CASP3, CCL 24, CCR2, CD40, CES1, CIITA, CLDN5, CNDP1, CNTNAP2, CREB3, CTPS2, CYP 8B1, DAG1, DDX23, DLL1, EFN3, ESAM, ETNK1, FGF10, FGF12, FUT7, GALNT 7, GALNTL4, GGT6, GNPDA2, GNPDA1, GNRH1, GRM1, GZMB, HBEGF, HLA- G, HTR5A, IL18RAP, IL4R, IL6R, INPPL1, ITGA1, ITGB2, KCNQ1, LDHAL6A, LIFR, LIPT1, MAN1B1, MAP3K13, MAP3K8, MAPK9, MCM7, MYH11, NADSYN1, N COA4, NKX3-1, NRG4, NRXN1, NTRK1, OGDH, OPLAH, OR11H4, OR1L6, OR2L2, OR2T34, OR4 C11, OR4F15, OR4N4, OR51I2, OR51M1, OR5M8, OR6Y1, OR7D4, OR9G1, OR9K 2, OR9Q2, ORC5L, PARD6G, PAX8, PDE10A, PDE8B, PDIA4, PERP, PGAM4, PGM 3, PHGDH, PHKG2, PIGH, PLA2G3, PNPLA3, PNPLA4, PNPT1, POLR2H, POLR2J , PPP1R3D, PRKACA, PRKCE, PTGER3, PTGES2, PTGFR, PTPN7, PTPRJ, RAP1A , RASGRF2, RASGRP3, RDH16, SEMA4B, SEMA4G, SMAD9, SMPD3, SOCS4, SORD , SSSX2IP, ST3GAL3, THBD, THBS2, TOMM40, TUBB3, TUBB4, UBE2K, UGT2A1, ULBP1, UNC5C, WASL, XCL2, ATP6V1G2, HLA-DRB3, ST6GALNAC1

Negative_16386	<p>AK1, BAX, C8G, EDA, EZR, F5, GCK, GLA, GSR, HK3, ID3, INS, KMO, LCK, NNT, OGT, RFK, SYK, AADAC, ABL1, ACADL, ACADS, ACSM3, ACTA1, ACVR1B, ADH1B, ADH6, ALPI, ARSA, ASRGL1, ATN1, ATP6V0B, ATP6VOC, ATP6V1H, AVPR1A, CACNB2, CADM3, CD79A, CDK6, CRY2, CSAD, CSF3, CSNK1G1, CSNK1G2, CTNN A2, CTSG, CYP8B1, DDX51, DDX54, DERA, DHFR, DLL4, DTX2, DTX3L, DUSP5, EDNRB, ENTPD6, EPHA5, F13A1, FABP3, FARSB, FGF11, FM01, FM02, GADD45 A, GAMT, GJD2, GLI1, GSTM2, HSP90B1, HYAL1, IDH2, IFNA10, IFNG, INPP5 A, INSR, ITGA6, ITGAX, KAT2A, KLRK1, KNG1, LPAR1, MAD2L2, MAP3K4, MAP 4K4, MCAT, NAE1, NAGS, NARS, NCR2, NFYC, NLGN1, NT5E, NTRK2, NUDT2, NU MB, OR10G4, OR11A1, OR1S2, OR2AG1, OR2T1, OR2T29, OR3A2, OR4F4, OR4N 4, OR6K3, OR8H3, P2RX5, PANK2, PAPSS2, PCCB, PCYT1A, PDE8B, PER2, PFN 4, PIGK, PIGL, PIGS, PIM1, PIM2, PLAU, POLR3D, POLR3K, PPCDC, PPP2CB, PPP2R2D, PRKAG1, PRKG2, PRPS1, PTGER1, PTPN5, PTPN6, RDH12, RIPK1, R PE65, SETMAR, SH3BP2, SHC2, SHMT2, SKP2, SPTLC1, STAM, STX1B, TACR3, TBK1, TBXA2R, TNFSF18, TPMT, TUBA8, TYMP, UAP1, UGT2B10, VEGFA, VKOR C1, VTI1A, WARS2, WNT8B, WNT9B, YARS2, ATP6V1B2</p>
Negative_16387	<p>BID, BTD, BTK, C7, DAO, DBT, F2, GBA, ID1, STS, TNN, AADAC, AANAT, ABP1, ACOT11, ACTA1, ACVR1, ALDH1A2, ALG11, ALG12, ALG6, APRT, ARPC2, ATP5 D, ATP6V1H, BAI1, BMP5, CACNA1F, CACNG6, CAPN2, CBLB, CCL27, CCND1, C D40, CDC26, CDC42, CFTR, CHRNA7, CHUK, CLDN9, CNGB1, CTBP2, CYP3A43, CYSLTR2, DARS, DEGS1, DUSP10, ECSIT, EHMT2, ENPP3, ENTPD5, EPB41, EP HB3, EPHB4, F11R, F13B, FGF10, FOSL1, FUT9, FZD6, GALK1, GANAB, GANC, GLUD2, GPD1L, GSTZ1, GUCY2F, GYS1, HADHB, HEXA, HGSNAT, HMOX2, HNF1B, HSD3B7, HTR2B, IAPP, IDH1, IL17RB, IL18R1, IL1R1, IL29, ITGA2B, ITP KA, KIR2DL4, LCP2, LIPG, LTA4H, MAOB, MAP3K2, MAP3K7, MAP3K8, MAPK14, MEF2C, MLLT4, MLYCD, MTHFD2, MTHFS, NKX6-1, NMNAT1, NT5M, OR10AD1, OR10G4, OR14J1, OR56A3, OR7C1, OR7G1, OR9G 4, ORC5L, P2RX2, P2RX4, PAFAH2, PAK3, PDE8A, PFKP, PLCB1, PLOD1, PPBP, PPID, PPM1A, PRIM2, PRKAB1, PTPRR, RALA, RBX1, RHOQ, ROBO2, RPS6KA5, RRM2, SELE, SEMA3C, SEMA3E, SEMA7A, SHC1, SMAD5, SPTLC1, SRD5A2, ST 3GAL1, STAM2, STAT5B, STT3B, STX1A, SULT1A4, TACR2, TKTL1, TNFSF9, T P73, TP11, UBA1, UCK1, ULBP1, UPP1, VKORC1, ATP6V0A1, HLA-DRB5, HSP90AB1</p>
Negative_16388	<p>A2M, A3L, C8A, DDC, DED, DUT, F11N, GFC, LIT, MAG, MFL, NOG, PML, UBB, AAV S, ACADL, ACPT, ACSL6, ADCY7, AGPAT2, AHCY, ALG10B, ARNT, ASRGL1, ATP 2A1, ATP5F1, B4GALT1, BACE2, BCMO1, CADM1, CALML5, CARS2, CASP7, CCL 22, CD70, CD79B, CDC2, CDC27, CDK2, CD01, CLDN10, CLDN20, CLDN9, CNTN 2, COL3A1, COL5A1, CRB3, CTNNA1, CXCL6, CXCR6, CYP27A1, CYP3A7, DCTD, DDX41, DDX51, DHDH, DKK1, DOLPP1, DTYMK, EFNB1, ENPP1, EPHA3, FASLG, FGF11, FGF19, FGFR1, FLOT2, FOXO1, FOXO3, FUT6, FZD10, FZD5, GFPT1, GLI2, GMDS, GNAQ, GNPAT, GNRH1, GNRHR, GPAM, GRIN2D, GRM1, HAGH, HIBC H, HPSE2, HSPA8, IARS, IARS2, IKBKE, IL1RAP, IL2ORB, IL25, IL2RA, INH BA, ISYNA1, JAG1, KARS, KIR3DL1, LALBA, LARS, LFNG, LLGL1, MAPK12, MA PK7, MCAT, MFNG, MGAT3, MGST2, MIOX, MMP14, MMP2, MYD88, MYH1, MYH6, M YL7, MYLK, MYLK3, NCAM1, NFKBIA, NME6, NMNAT1, NRP1, NUDT12, OGDHL, O R10A3, OR10G3, OR10G9, OR14C36, OR1I1, OR2G6, OR2K2, OR2T12, OR2T34, OR4K13, OR4M1, OR4N4, OR52N5, OR6Q1, OR8B8, OR9Q1, P2RX5, PAK4, PAN K4, PAX4, PCYT2, PDE4B, PDE4D, PFKFB4, PGM1, PGS1, PHKG2, PIGO, PIP4K 2A, PLCB3, PLK1, PLOD1, PMM2, POLD1, PRKCA, PRSS3, PSME2, PTGES2, PTP RJ, QARS, RAC2, RBL2, RBX1, SEMA3C, SEMA4B, SEMA4D, SETMAR, SIGLEC1, SLC25A4, SMAD2, SMC1B, SMPD1, SNAP25, SOAT2, SPRY3, SPTLC2, STAM, ST</p>



Negative_16392	ADC, AK, C8B, CBL, CEL, CRM, CP, CRH, DCT, EPO, F12, FGA, GBA, HGD, HK2, ID3, ID4, IVD, KHK, LSS, MPI, NPL, OGT, OSM, PAH, RB1, SFN, SI, SYK, TXK, VCL, AARS2, ACADL, ACADM, ACLY, ACMSD, ACSL4, ACSL6, ADRA1B, AGPAT6, AGTR1, AKR1B10, AKR1D1, ALDH3A1, ALPL, ALS2, AMDHD2, ANAPC1, ANAPC5, ANGPTL4, ANPEP, APH1A, ARHGEF2, ARRB2, ASAH1, ASCC3, ASNS, ATP6VOB, ATP6VID, B3GALT2, B3GNT3, BBC3, BCAT2, BDH1, BDKRB1, BET1L, BLVRA, BPGM, BST1, C3AR1, C4BPA, CACNA1C, CACNA1F, CACNA1S, CACNG7, CALML5, CAMK2A, CAMK2D, CAV2, CBR3, CCDC6, CCL19, CCNB2, CCNB3, CCND2, CCNE2, CCR5, CD99, CDC25B, CDH3, CDIPT, CDKN2B, CES2, CHIA, CHRM3, CNGA3, COL3A1, COL5A2, CPT1B, CSNK1D, CXCR4, CYP27A1, CYP2C9, CYP3A43, CYP4F2, DAPK2, DBF4, DDB2, DDX55, DGAT2L4, DGKB, DGKG, DHFR, DKK1, DOCK1, DPM1, DTX2, EGLN3, EI24, EIF4B, EPHA8, EPHB3, EPHX1, EREG, F2RL1, FABP4, FARSB, FLT4, FOXO3, FUT7, G6PC, GADD45G, GALNT12, GCNT3, GDF7, GG CX, GIT1, GLUD1, GMPR, GNAL, GNG13, GPD1L, GRM5, GSTK1, GSTO2, GSTZ1, HADH, HEXB, HHIP, HIBCH, HNF4A, HPSE, HPSE2, HSPA8, HTR6, IAPP, IBSP, IDH3B, IFNA10, IFNA16, IFNGR1, IGFBP3, IKBKE, IL15RA, IL17RB, IL1RAP, INPP5A, IQGAP1, IQGAP2, ISYNA1, ITGA7, ITGAM, JAM3, JUND, KCNQ1, KIR3DL1, LARS, LDHD, MAP3K5, MAP3K6, MAPK8, MDM2, MMP1, MMP2, MNX1, MS
Negative_16393	ADO, AKT1, AKT2, AKT3, AKSC, AHH, B1D, B1C, CD4, CERN, DAO, F12, GBA, ID4, IL3, ILK, LCK, LTB, ME2, MIF, MOS, MTR, NPL, RPE, SCD, SHH, SI, TYR, UBB, AARS2, ABLIM1, ABP1, ACACB, ACAD8, ACADS, ACOT11, ACTC1, ACTG1, ADCY1, ADORA2A, ADRB3, AGMAT, AGPAT3, ALCAM, ALDH3A1, ALDH3A2, ALDH4A1, ALG1, AMY2A, APOA2, AQP7, ARAF, AREG, ARPC1B, ARPC3, ARPC4, ARSE, ASPA, ATG12, ATG3, ATP2A1, ATP50, AVPR1A, B3GALT1, B4GALT2, B4GALT6, BAIAP2, BCL10, BCL2, BCMO1, BUB1, C3AR1, CACNB4, CALML3, CCL15, CCL25, CCNB2, CCNB3, CD59, CD79B, CD82, CDKN1B, CHDH, CHKB, CKS1B, CLCF1, CLDN3, CNTNAP2, COL4A4, CREB3L3, CSF2RA, CSF2RB, CSNK1G3, CSNK2B, CTF1, C TSL1, CYFIP1, CYP2A7, CYP2E1, CYP2S1, CYP3A7, DCTN1, DDOST, DDX52, DERA, DHCR7, DHDDS, DNMT3B, E2F5, EARS2, EFNB2, EFNB3, ENPP3, EPHB1, EPRS, FGF10, FGF19, FGF20, FGF6, FGFR1, FIGF, FPGS, FZD4, FZD7, GABARA P, GADD45A, GALK1, GART, GCH1, GCNT4, GDF5, GDF6, GFAP, GLG1, GLI3, GMPA, GMPR2, GNA11, GNAI3, GNAS, GNG3, GOT2, GPAM, GSTM5, GTSE1, GYS1, GZMB, HAO2, HCCS, HGSNAT, HLA-DOB, HMOX1, HRH2, HSPA1B, HYAL1, IDH3B, IDUA, IFNA4, IL13RA1, IL17RA, IL28B, INHBA, INHBE, IQGAP2, IRAK2, IRF5, IRS4, ITGA2, ITGB2, ITPA, KAT2B, LAMA4, LAMB2, LDHC, LIPC, LTBP1, MAD2L1, MAN1C1, MAP2K1, MAP3K12, MAP4K1, MAPK10, MAPK11, MCCC1, MCM6, MKNK1, MYOCD, PRPS1, PRPS2, PRPS3
Negative_16394	ADO, ACTA1, DEGS2, EPHA3, EPHB4, EPHX2, EPOR, EREG, FTH1, GAD1, HTR6, IGF1R, KIR2DL4, NCR3, NME7, NOTCH1, OR10S1, OR2T33, OR56B4, OR7A10, OR8G1, PDGFC, PLCZ1, PROC, PRPS2, PTAFR, SGPP2, STMN1, VDAC3, ATP6VOA1, MAPKAPK2
Negative_16395	DCC, IDS, VTN, ACTN2, AKR1B10, CACNA1A, CHIA, DAAM2, FUT5, GCLM, GNAZ, ITPA, NEU4, NTF3, OR10A3, PAPSS1, PARD3, PLOD1, RGS3, SCLY, SHC1, TNFRSF4, TP53
Negative_16396	DAO, CACNA1D, HMGCS2, LAMB4, OR56A3, PRKCQ, SLC25A5
Negative_16397	IL5, LHB, PGD, ADCY3, ALDH1A3, ATP13A2, BUB3, CD244, CYFIP2, EPHX2, FCER1G, FGD1, FGF4, FZD9, HSD17B7, IL6R, ITGAV, LEFTY1, LIPG, MAN1C1, MPDZ, PGM1, PGM3, PIGM, PLD1, PPP3CC, TBXAS1, TKTL2, TPH2, YWHAQ, PPP1R12A
Negative_16398	HK2, MOS, TKT, TNN, B3GALT4, B3GAT3, CASP7, CDH1, CYFIP1, EFNA5, EXTL1, FCGR3B, FGF20, GSTA5, GUK1, HSD3B7, ITGB4, MCM6, MYH3, NOD1, OR10H1, OR1C1, OR1E1, OR4C11, OR56A3, PPA1, PRKAA1, PRKAB2, RDH5, SLC27A1, SLC2A4, SMPD2, STK36, THBS1, SERPINC1
Negative_16399	TNR, ATP5A1, CNGB1, CX3CL1, DEGS1, DNMT3B, EFNB2, FMO2, GUCY1B3, JAG2, LARS2, NUMB, PCCB, PGAM1, PLA2G1B, PLOD2, PRDX6, PRPS1, RFXANK

Negative_16400	FER, MVD, PAH, ACTC1, ADCY4, ADCY8, CBR3, CLDN16, CPT1A, DDOST, DDX56, DKK1, EFNB1, EPHA8, FCGR3A, GLS2, GSTM1, GZMB, HADHA, IL13RA2, KIR2DS4, KLRK1, LAMB4, LGMN, MAGI1, NUDT2, OR13A1, OR1I1, OR4D11, OR4X2, OR6K2, OR8B4, OXCT1, PIK3R4, PPM1A, PRKAG3, SELP, SPHK2, SUCLG1, TAS1R2, TAS1R3, THY1, TUBA1C, ZIC2, AASDHPPT, SERPIND1
Negative_16401	MTR, ACAT2, ADCY2, ATP5D, BMPR1A, CACNA1E, CD38, CYP2A7, DDIT4, EXTL1, FCER1G, FGD3, FZD5, ITGAM, MAPK8, NR4A1, OR10V1, OR4F17, OR52D1, OR8J3, PLD1, PPA1, PSEN2, SKP1, TACR3, VNN1, CTNNBIP1
Negative_16402	APAF1, APOA1, CARD11, CCDC6, CSF3R, CYP4F2, DAPK1, FLOT1, GSTM1, IL22, KLRK1, LARS, NGEF, OR7A17, PFN3, PIGL, POLR2E, PPCS, RAF1, SEMA3C, SUL1A4, TAS1R1, TCF7L1, TRMT11, XIAP, TNFRSF6B
Negative_16403	LPL, ADORA2A, ATP6V1H, B3GALT1, CLTCL1, CNGA4, DTX3L, IL23R, IRF5, NEU2, OR4M1, RDH12, SEMA4F, STAT5A, THBS4
Negative_16404	AGL, CBS, FUK, ACSS1, ALAS2, ASAH1, ATP2A2, CD14, CD44, CLDN17, CYP1A1, DDX23, DNMT1, EFNA4, ENPP7, EPOR, EXTL1, FLT1, GFPT1, GRIA1, HAO1, HTR2A, IFNA4, LEFTY2, MTHFD2, NCR2, OR10A2, OR1L6, OR2L3, OR51M1, OR5B12, OR5M3, OR6C1, ORC3L, PLA2G2E, PLCB2, PTCH1, TAS1R2, ULK2, ATP6VOA2, CACNA2D3
Negative_16405	BID, BPNT1, CACNA1D, CXCL16, ENPP7, EPHA1, FUT4, GMPS, GRIN2C, IBSP, IL22, IL2RA, LLGL2, MAPK13, MTFMT, MTHFR, NOS3, OR56A1, PAK2, PIGU, PLCZ1, POLR3B, PTPN6, RAPGEF4, TUBA8, TUBB1, TNFRSF12A
Negative_16406	EGF, LTB, ACAT2, ADCY10, CCL26, CCNB3, CLDN1, DGAT2L4, DVL1, FBP1, IFNK, ITGAE, LAMA4, MCCC2, NEU3, NKD1, NLGN1, NT5C2, OR10H4, OR1L4, OR2A42, OR2AE1, OR2Z1, OR4K1, OR51F2, OR5AK2, OR5V1, OR9G4, PDE1C, PIAS2, PPAP2C, PPP1R1A, RBL1, ROBO1, SEMA4C, THBD, TUBA1B, B4GALNT1, HSD17B10, TNFRSF18
Negative_16407	MOS, OSM, WAS, AASDH, B3GALT2, B4GALT1, CDKN2A, CLDN19, DDX50, ENTPD3, F2RL1, GALNTL4, GNA13, HIF1A, IL12RB2, NAE1, NKD1, OR1J1, OR2M4, OR9I1, PLOD1, PLXNB1, SDHC, SH3BP2, STX6, TOLLIP, TUBB2B
Negative_16408	ADK, CFH, DAO, F9, MUT, ADCY5, ADH1A, ALDH1L1, CARS2, CD14, CD79A, CTBS, CYP2A7, DGKH, DUSP10, DUSP16, DUSP5, DVL2, FGF21, GALM, GNAI1, GSTA2, HADHA, IDH1, IFNK, LDHD, LFNG, LTA4H, MASP1, OR10G8, OR51G2, PAX4, PIM1, RND1, TKTL2, TLR9, TNFRSF17
Negative_16409	FUK, GH1, SPN, ACSM4, CACNB1, CACNB2, CCDC6, CCR4, CDK2, CKS1B, EHHADH, FADS2, GALNT12, GRIA1, HCLS1, HIF1A, HMGCS1, HMGCS2, IL3RA, ITPA, KCNB1, MAP2K6, MAPK8, MTHFR, MYH2, NTF4, OR10A5, OR1C1, OR1J2, OR2T10, OR52L1, OR5AK2, PDE8A, PIGM, PIK3CA, PIP5K3, PLCG1, POLE, SHC1, SKIV2L2, SV2B, TJP1, TKTL1, TUBA3C, UROC1, HLA-DPA1
Negative_16410	CALML6, CDKN1B, EFNA3, OR2T4
Negative_16411	ME3, ACOX3, ADORA2B, AKR1C2, ALDH9A1, ATP5F1, B3GAT3, BAIAP2, BMP8A, CXCL3, CYP1B1, DHRS4L2, HADHB, IDH1, IRS1, KLRC4, MAN1A1, MAP3K4, NKX6-1, OR1Q1, OR2B6, OR2H1, OR7G3, PDE1A, PECAM1, PGAM4, PIGX, PPP2CB, PPT1, RHEB, SLC2A4, SV2C, SYNJ1, TAP1, UGCGL1, WNT7B
Negative_16412	CAT, CDA, LEP, PTS, B3GNT4, BLVRB, CLDN20, COASY, COL4A2, CTNNA2, EFN A1, FGF13, GALE, GBA3, GCNT3, GSTM4, HSD17B3, IL12RB1, IL2RB, IPPK, LRDD, MYH9, NOX1, NTF3, OR14C36, OR2T2, OR4K13, OR4N4, OR56A1, PDE3B, PIP4K2A, PTGFR, QARS, SPHK2, STK3, TP73, TUBA8, TUBB2A
Negative_16413	AR, C8B, CTH, IL9, ALDH1A1, ALOX5, BCL10, CACNB4, CDC25C, FOXO1, GALT, GRIN2C, GSTT1, HAP1, IDI2, IL20, NRXN1, OR10C1, OR3A1, OR4K5, OR51Q1, OR7G2, OR8D1, ORC4L, PER3, PIAS4, SPRY4, UGCGL1, YWHAZ, ATP6V1B2
Negative_16414	FMO3, GSK3B, HLA-F, NPAS2, NTSR1, OR1I1, OR1L1, OR1Q1, OR52M1, P2RX4, POLD4, POLE4, STX5, TNFRSF12A

Negative_16415	PC, AASDH, ACP6, ALDH7A1, ASRGL1, CCR3, CDC16, CDH2, CNGB1, COL4A6, DRD1, EFN2, EIF4E2, FARS2, FBP1, GLI3, GNAI2, GRIN2C, GUCY1B3, HAO1, HNF1B, OR6C6, OR7G1, PIK3R5, PPP3CC, PRNP, RASSF5, SLC9A1, ST3GAL5, TGFB1, WNT9A, XCL1, YARS
Negative_16416	ADA, C8G, IL8, AGPAT2, AMD1, CCKAR, COMP, DAPK2, EPHA2, GYS1, OR10J5, OR10K2, OR1L6, OR51T1, OR6B3, PARD6A, PDE2A, PPARA, RAPGEF2, RHOQ, SETDB1, SMPD4
Negative_16417	AGK, FH, GPT, IL4, ARRB2, ATP6AP1, B3GALT6, CASP10, CCL24, CFLAR, CYP2A6, EPHA6, FGF1, FLT4, GALC, HBEGF, HSPA8, ITGAX, KNG1, MAP3K14, MAPK1, MGST2, MTFMT, NT5C1A, OR2A25, OR2L8, OR51G2, PKMYT1, POLD4, POLR3D, PPP1R3C, PRNP, PTGS1, RAC3, RASGRP2, RPIA, RPS6KB2, SLC33A1, ST3GAL3, STAT5B, TAS1R3, TLN2, ULK1
Negative_16418	CKM, PDC, ALG5, ALPL, ANAPC4, ARSD, ATP50, BDH2, BMP5, CAV2, CES1, CXCL11, DHRS4, GALE, GAMT, HSD11B2, IFNA16, IMPDH1, IRAK3, MAP2K1, MAPK1, NADSYN1, OR13F1, OR3A1, OR52A5, OR5AK2, OR5P2, PDGFD, PIGT, PIPOX, PLAT, PNPLA4, PPM1B, PPP1R3C, RND1, RRM1, SEMA4A, TPH2, USE1, WNT5A, CACNA2D2, GABARAPL2, PRICKLE2
Negative_16419	ADIPOR1, ALOX12, ALOX5, ATP5J, BCL2, CALML5, CD36, CFLAR, CLDN14, CREB3L1, CXCL9, CYP19A1, DPYD, ECSIT, EGFR, EPHA6, GALNT6, GBT1, GCLM, HCLS1, KIR2DS4, KLKB1, LDHB, LHCGR, LIPC, LMO7, MAP2K3, MPST, NCF1, NRXN2, NT5C2, OGDHL, OR1B1, OR2T34, OR2W1, OR6A2, OR8B4, PIK3CG, PKMYT1, RDH8, SLC9A1, SMAD2, SMAD7, SPCS1, TAS2R42, TUBB2A, TUBB3, UCKL1, HLA-DQB1
Negative_16420	IHH, ACAT2, BTRC, CDC6, CKS1B, CNTF, CREBBP, DRD1, GAPDH, GBA3, GIT1, GSTM1, ITGA11, JAK2, MOV10L1, NCOA4, ONECUT1, OR10C1, OR10S1, OR2T2, OR4K2, OR4M1, OR6C2, OR8G1, P2RX7, PFKFB3, PGAP1, PLXNC1, PPARA, PRKAA2, PRNP, PTPN11, SETD1A, SMARCA5, STK36, TGFB3, VAV3, XCL1, PDCD1LG2, PHOSPHO1
Negative_16421	DCK, ID3, IVD, AKT3, APAF1, ARPC1A, B3GALT5, BIRC2, CACNB3, CREB3, CRKL, CX3CL1, CYP3A7, DTX4, FRAT2, GCLM, GMPS, GNPAT, GSTO1, GZMB, HNF1A, MAPK12, NAGS, NEUROG3, NUDT2, OR10G2, OR1A1, OR4N5, OR51A4, OR51G2, OR9Q1, OXCT2, PI4KB, PTGS2, RFXAP, RPS6KB1, RUNX1, SHC1, SLC9A1, SPHK1, SRD5A1, TNFSF18, UGT2A1, WNT16, WNT3A
Negative_16422	AARS2, ACSM1, C3AR1, OR5D13, SGMS2, TNFRSF14
Negative_16423	C3AR1, PIP5K1A, UGCGL2
Negative_16424	C4B, ACACA, ADCY2, ADIPOQ, CCL11, CD34, DDX54, DTX3, DTX4, ELK1, HAGHL, HEMK1, INPP5B, ITGB1, JAM2, LIAS, MAPK13, MAT2B, MPDZ, MTFMT, OR5A1, OR6C75, OR6K2, OR7G1, OXTR, PDE2A, PHGDH, PIGO, PYCR2, RALA, RRM1, SETDB2, SH2D1B, SKP1, STAT2
Negative_16425	CCL20, FUT6, ITGAE, OR2B6, OR5T3, PEMT, PPA1, PPP1CB, GABARAPL2
Negative_16426	ME3, TNC, BACE2, C1QA, CASP8, CCNB1, CLDN7, COQ7, CRKL, CYP2A7, CYP2C9, CYP3A5, CYSLTR2, DAD1, DVL3, GALK1, GNPAT1, HLA-DRA, IFNA10, INHBE, MAPT, MTHFD1, MYH6, OR1B1, OR2T2, OR4C16, OR5D16, PDE4B, PDGFA, PIK3R5, PRKAA2, RALA, RAPGEF1, SESN2, SLIT1, STX2, TGFB3, TJP2, UGT2B10, WHSC1, WNT7A
Negative_16427	F11, FAH, FUK, ACAA2, ACTB, ACVR1C, ADCY6, AGRP, ATP5E, BLNK, CCNB1, CNTNAP1, DAPK3, DHRS4, ENTPD4, EPHA6, GNPAT, GZMA, HLA-DRA, HNF4G, ITGB3, MMP9, NCOR1, OR11H4, OR2V2, PANK2, PIGK, POLE3, POLR3D, PPP2R1B, PPP2R5E, PTK2B, RAP1A, TACR1, TRADD, UGP2, UNC5D, WARS, EIF4EBP1, KIR2DL5A
Negative_16428	F11, JUN, SFN, SMO, CACNA1F, CREBBP, GAD2, OR13H1, OR8A1, PARS2, PIP5K1C, POLE4, POLR2L, POLR3B, SESN1, UGP2



Negative_16429	C8G, F10, FOS, ACTN2, ARG1, C4BPA, CACNB2, CCNG2, CD226, CD3E, CD99, C HD8, CPT1C, CSF1R, CSF2, CYP21A2, DERL1, DGKB, DUSP3, EI24, FGF9, IDI 2, IFNA16, IL10RA, ITGA8, KLRD1, MAD2L1, MTHFD1L, MYH11, NRXN3, NT5M , OR1M1, OR52H1, PAK2, RASA1, RDH10, SETDB1, STX5, TICAM1, TOMM40L, U GCGL1, UNC5B, YES1, ZMAT3
Negative_16430	MVD, CX3CR1, METTL6, OR4D5, RBKS, RPRM, RRAS2, SLC25A5
Negative_16431	LAT, ADCY3, ARPC5L, ATG12, CD46, CDKN2D, COL1A1, DEGS1, DUSP5, HRAS, IKBKE, LDHD, MAP4K2, NFYC, PLXNB3, RBL1, SPRED2, SSH3, TJP2, VAMP1
Negative_16432	CS, LTB, AARS, ABLIM2, ACOX3, AGPAT1, AGRN, ALDH1A3, ALG6, AMPD3, BBO X1, CAV2, CREBBP, CYP11B2, CYP2F1, EDAR, GNAI2, HPRT1, HSD17B4, IKBK E, LDHAL6B, MYH8, MYL5, NCKAP1, NT5C1A, OR2T11, OR51B4, OR52W1, OR6X 1, OR8H3, PCYT1B, PDE3B, PIGV, PLOD3, POLR2K, POLR3G, PPP1R1A, PPP2R 2D, PRKACB, RBPJL, RPS6KB1, STK11, SUCLA2, TJP1, TUBB1, TUBB4, UGDH, VCAM1, SERPINC1
Negative_16433	ADC, ACSL5, ACTN2, ATP5E, CHST11, EXOC7, FOXO1, FZD4, FZD7, HADHB, HI F1A, ITGAE, MARS, OR14I1, OR4K17, PDE8A, PLCE1, PMM2, SNW1, SYNJ1, WN T4, CTNNBIP1
Negative_16434	CFI, CGN, FOS, MVD, RFK, ACPP, ADRA1A, ARHGEF6, CCKAR, CCR8, CD72, DUS P1, EPHA7, EXT1, FGF2, G6PD, GSTA4, HPSE, HSD11B2, HSD3B2, IFNA10, IL 10, IPMK, LLGL1, MARS2, MDH2, MYH14, NCOA4, NFATC2, NRG2, OR10AG1, OR 52E2, OR5L2, OR8J3, PDHA2, PPAP2A, PTPRB, RALGDS, RFX5, RPS6KA3, SDC 4, TJP3, TRAF3, UNC5D, TNFRSF10B
Negative_16435	C3, F12, AARS, ADCY4, ADH5, ADORA2A, ADRA1D, ALDOA, ALG3, CNGB1, CNTF R, CXCL5, CXCR4, DGKA, DGUOK, EFN3, F2RL2, FASLG, GDF6, GMPR, GMPS, G NAQ, IFNA14, IL23R, ITGAE, MAP3K14, MMP9, NAGLU, NEFH, OCRL, OR10G4, OR6S1, PCCB, PRKAA2, PSEN2, RFX5, SC4MOL, UGCG, SUV420H1
Negative_16436	AK1, BAD, AADAC, ACLY, CLDN11, DDB2, GPT2, MYH10, PFKFB4, SPTLC2, TLR 9
Negative_16437	ABO, LYN, SFN, SPN, ACTG2, ADH5, ALOX15B, BACE1, CDC2, CNTF, DDX23, IL 19, INPP5E, KIR2DL2, KIR3DL2, MAP3K3, NEU4, NKX2- 2, NTRK1, OR2Y1, OR8B4, PDE9A, RALGDS, RASGRP1, ROBO1, ST8SIA5, TAS2 R3, TLR2, TNFRSF4, TUBB4, UCP1, VEGFB
Negative_16438	AK1, GSR, NLK, SYK, UBC, ACSM1, ALDH5A1, ALPPL2, B3GALT1, B4GALT1, C1 QB, CCNG1, CCR6, CD28, CD46, CDC25A, CTNNA1, DAPK2, DDX55, DUSP10, DU SP3, EPHA1, ETNK2, FABP4, FLOT2, HTR5A, IFNA7, IL1B, MAFA, MDM2, NRXN 2, OR4D1, PHKA1, PLA2G6, PON3, RDH5, RFDW2, SIPA1, SMAD7, SPRY2, SRGA P3, TLR9, TSTA3, PAFAH1B3
Negative_16439	APOA1, CD19, OR10P1, RAC1
Negative_16440	PGD, TXK, ACSM4, ARHGEF2, ARPC5L, CACNA1A, CAMKK2, COL4A2, CSAD, E2F 3, EFNA1, GNAQ, GNPDA2, HLA- DRA, ITGB1, OR1C1, OR1E2, PIK3R5, TUBB2C, ATP6V1G1, CACNA2D1
Negative_16441	LTB, ACLY, B3GALT4, CREB3L2, CYP2F1, DHRS3, EPB41, GUCY2F, HSPA1B, I L12B, LIPC, MTMR6, NFYB, OR1B1, OR1D5, OR4A16, PIGW, SARDH, UGCG2, Y KT6, B3GALNT1
Negative_16442	AK3, MAX, ADCY8, BCL2L1, BST1, CXCR5, CYP2J2, IL1R2, INPP5E, LAMB2, M BL2, MYH15, MYL9, NARS2, OR13C3, RASGRF2, RASGRP1, SHC3, SPRY3, GABA RAPL2, SERPINF2
Negative_16443	ID2, ACMSD, CAMKK1, CCL28, CDC45L, CYCS, DAAM2, DCTN1, DOT1L, DUSP2, ENPP3, GDF6, IL12A, LAMB4, NAMPT, NEUROD1, OR4D5, PLA2G2D, PLXNA3, P OLR2D, PPAP2B, PRKAB2, PRKACA, PRKAR1B, PTPRJ, RDH8, SETD1B, TNFSF1 4, TUBB2B, VASP
Negative_16444	GLS, ALDH4A1, ALOX15, ATP2A3, CPT2, CYBA, ELK4, FABP4, HADHB, IL8RB, IMPA1, ITGA6, NLGN3, NT5M, OR2L3, OR52R1, OR6B2, P2RX6, PGK2, PRKACB , PRODH2, YARS2, TNFRSF6B

Negative_16445	CD4, CGN, FAS, PRL, ALDH4A1, ANAPC1, APOA1, ASS1, C5AR1, CPT1C, CXCL2, DKK4, EFNA5, FZD10, NAGA, OR52E2, OR52W1, OR5M8, OR7D4, PDE2A, PON1, PYCR1, RELA, RPSA, TAS2R16, TRMT11, UPRT, VAV3, VEGFB, ZFYVE16, ATP6V1G3
Negative_16446	IL9, ADCY1, AKR1C4, ATP2A2, BAAT, CLDN9, FM01, GNAZ, IL10, IL2RG, IMPDH2, NME7, OR1L6, OR1N1, OR4F15, OR6C2, PLXNA3, PPOX, RDH10, ROBO3, S EPHS1, ST8SIA1, TUBB1, UGP2, HSD17B12, PLA2G12B
Negative_16447	EZR, CSNK1G3, GLUL, PIGL, SEMA3D, STX18
Negative_16448	ADH4, CSNK2B, DTX1, KNG1, PIK3C2G, TYMP
Negative_16449	F5, SMO, CCDC6, CSF2, DFFA, HAGH, IL15, LRRC4C, MAOB, NCF4, OR10AD1, O R2K2, OR2Z1, PHPT1, PPARG, RAB23, RAP1B, SC5DL, ATP6V1B1, SERPINC1, SERPINE1
Negative_16450	FES, MPZ, VCL, ABCC8, ALOX15, ASCC3, ATP5I, BMPR2, CPS1, CYP27A1, DHF R, DTX1, EFNA5, GALNT1, GCLC, GFAP, GNA12, GSTA3, HLA- F, HNF1A, IFNK, IRS4, NFE2L2, NUDT5, OR2M5, OR5B12, OR5D13, OR5R1, OR 8B4, PIGT, SOCS3, TAP2, TNFRSF18
Negative_16451	HPD, AK3L1, ANAPC4, ATP2A1, DNMT3L, DVL2, ENO3, GALNS, GLB1, GLI1, IF NW1, IL6ST, LARS2, MYL2, OR5B21, RRM1, SDHB, TKTL2, TUBA1C, TUBB3
Negative_16452	OGT, ARRB2, ATF4, CACNG4, DGKB, ENPP7, FZD1, IL11, LCMT2, MAD1L1, OR1 3G1, OR2L13, OR2M3, PFKFB1, RPS6KA5, SPP1, TRAF6, YWHAQ
Negative_16453	IL9, ALPP, APLP1, ARRB2, ATIC, CSNK2B, CYBA, CYP2E1, ENTPD4, HSD17B8 , ITGA2B, MAP3K4, MGST1, OR2AG1, PAK2, POLR2I, POLR2J, POLR3K, PTPRB , SIGLEC1, SYNJ2, TACR2, TBL1XR1, TDO2, TUBA8, UROC1, VAMP1, ST6GALN AC4
Negative_16454	GLO1, HLCS, ORC2L, PAK1, PPP1CA, PYCR1, STX8
Negative_16455	CD2, HK2, MPZ, ACP5, ACTN2, AGPAT2, AKT3, ALDH9A1, ATP5G1, B3GNT4, CD 3E, CDK5, CLDN11, COQ3, CREB3, F11R, FABP1, GMPPA, GNPAT1, HSD17B1, IQGAP3, ITGAD, LAMA4, LAMB1, LPAR1, MAD1L1, MAP3K4, MCM3, MCM5, MGAT 1, MMP7, OR13J1, OR2K2, OR52K2, OR52R1, OR6K6, OR9A2, P2RX2, PDPK1, P OLE4, PTGDS, RRM1, SCLY, SETD7, SMC1A, SULT1A4, YOD1, TNFRSF10B
Negative_16456	AK1, DCN, MAG, ATP2A1, B4GALT3, CALML6, CCNB2, CD226, CDKN1B, CLDN22 , CSF2RA, CYP2A13, DAD1, DGKB, DGUOK, GANC, GNAI3, GNAQ, GNMT, GSTM2, H6PD, HNF1B, IKBKG, IL2RB, LFNG, MECR, MTMR1, OR7A10, SH3BP2, WNT8A, PLA2G12A
Negative_16457	BAD, ADCY10, ARPC4, ARRB1, CUL1, CYP11B2, CYP2D6, DDOST, E2F4, IDH3G , IFNA7, LAMA4, LIMK1, NFASC, NT5C2, OR10J3, OR2A14, OR51B5, OR52J3, OR5AR1, PGM2, ROCK1, TP73, WNT9A, AASDHPPT, ATP6VOE1, TNFRSF12A
Negative_16458	ATP5J, FGF2, KIR2DL2, PDGFD, TRAF2
Negative_16459	EBP, AACS, CAV3, CCND1, DNMT1, HSD17B4, IL28A, KIR2DL4, NNMT, OR6S1, PDE7A, PFKFB3, PHGDH, PLIN, PTDSS1, RDH16, SGMS1, SPCS3
Negative_16460	ATM, GDA, JUP, ADAM17, APPL1, BDH2, COMP, CYP2S1, DGKG, DVL3, EFNB1, H EMK1, IQGAP1, LAMB3, NMNAT2, OCRL, OGDHL, OR1B1, OR6B2, OR9Q1, ORC1L , PDE6G, PDE8A, PRKACA, RIPK1, THY1
Negative_16461	EGF, IL5, PTS, TXK, VTN, ABL2, ACADVL, ALG1, BIRC2, CHRM5, CNDP1, CRHR 1, DDIT4, DDX18, DGKH, EIF4B, ENO3, FGF1, GRIN1, GRIN2C, HCCS, HLA- DOB, HSD17B8, HTR2A, KCNJ11, LIAS, MMP14, NFKBIB, NGEF, NLGN1, OR3A1 , ORC1L, PDE10A, PIGP, PRKCB, PTGIS, RPS6KA5, SDHB, SEMA4C, SMAD9, SP RED2, SQLE, SRD5A1, SSH1, SUCLG2, TGFA, HLA-DPA1
Negative_16462	ADC, EGF, ADCY3, ADCY8, AGPAT2, ALPP, AMY2B, APBB1, ARNT2, CACNG8, CC L3, CD44, CD82, CLDN11, CNTNAP2, DAXX, DERA, DGKB, DLL3, DOLPP1, DUSP 16, ENAH, GAD2, GFPT2, HLA- DOB, HSD17B2, IL18R1, ITGAE, NCF4, NCKAP1, OR10H2, OR1L8, PDE4A, PIP 4K2C, POLR2H, RALB, SOD1, SORBS1, TLR3, USE1, WNT6, XCR1, ZNRD1

Negative_16463	CFH, NGF, PLG, TH, ABAT, ACP6, ACTG2, AQP7, BCL10, C1QA, CASP7, CCL11, CD244, DFFB, DHX58, DPYSL2, EIF4E, EPHA3, FARSB, FOXO3, GART, GCDH, G CNT4, GLG1, GPAM, GUCA1A, HLCS, KCNQ1, MAP2K2, MAPK12, MTMR2, NCK2, N FYB, NME6, NOX1, OR4S2, PIK3R5, PIM2, PKMYT1, PSPH, SKP1, SPI1, TAS2R 48, TPH1, VAV1, CACNA2D4, PPP1R12A, TNFRSF18, TNFSF13B
Negative_16464	AUH, OGT, PTS, SRF, ALDH3A2, ARAF, FGF9, GARS, INPP4B, IRAK3, LAMB1, N ADSYN1, ORC5L, OSMR, PGAM1, PRKAR1B, ROCK2, TIRAP, TRIP10, SUV420H1
Negative_16465	ADK, DBT, IL2, XDH, ACTG1, ARNT2, ATP5L, BET1L, CYP2A13, CYP2D6, EFNA 1, EPHA5, IL3RA, IL7R, NAT6, NODAL, OR52H1, OR5D14, PARD6A, PHKG1, PO LE, POLR2E, SEMA4G
Negative_16466	LPL, BACE2, BIRC5, CCL20, COMP, GJD2, GRIN2D, IL28A, IL8RB, LCP2, LPA R1, NANP, NT5C3, PPP2R5A, TRADD
Negative_16467	C8G, FAS, HK2, ACSS1, ALAS1, BMP6, CACNG7, CDS1, CLDN8, CSF2RB, CTNNA 2, CX3CR1, GALNTL2, GPX7, GRIN2B, IL1R1, ITGB4, ITPKA, KDSR, MAN2A1, MEF2C, NFATC4, NLGN1, NRG4, OR10A2, OR9G4, PFKP, PLOD3, PTK2B, RDH16 , SEMA4B, THBS4
Negative_16468	ME1, CAV2, CCR8, FOXA3, IFNA17, IL2RG, LGMN, OR2T4, OR51M1, PAICS, PL XNB3, SC4MOL, SEMA4C, SESN3, TAS1R2, ULK3
Negative_16469	ADCY6, ADCY9, AHCYL1, AKR1D1, AMY2A, BIRC3, C4BPA, CDH1, CPOX, CYP1A 2, DRD1, DUSP14, FGF18, FTCD, GRIN2A, KCNJ11, KIR3DL1, MLYCD, MTMR6, OR13A1, PIP5K3, PRKAB1, SEMA3B, SOCS1
Negative_16470	UBB, ACSL4, CSF1, CYP2A13, EPHB1, FGF10, HCST, IKBKB, IL28A, ITGB1, K LRC4, LAMB4, MAP3K6, OR5A2, OR5F1, OR8J3, PDX1, PGLS, PLXNA2, SLC25A 4, TJP1, TNFRSF1A
Negative_16471	DDC, F2, GSN, AANAT, ACSL4, ACSM3, AGPAT3, APOA5, ASPA, CFL1, CHR1, CS DA, CYCS, DDX47, FGF1, FOXO1, GALT, HAO2, HEXB, HLA- G, IFNGR2, IL2RA, IMPDH2, LCP2, LDHAL6A, NR5A2, OR4X1, OR5M8, OR6C75 , OR9G1, PDE4B, PDE6G, PECAM1, PEMT, PIGH, PLAUR, POLR2I, PPCDC, PRKA R1A, RDH12, SORD, STX18, SUFU, TAS2R9, TRAF2, WNT1
Negative_16472	C9, CKB, DCC, GP5, MET, OGT, ACVR2B, ADCY5, ADH7, ADRA1A, ALPL, ANAPC4 , ATP5L, BACE2, BIRC3, BST1, CDH15, CDK7, CHPF, COL11A1, DGKZ, FRAP1, GALNT3, IL13RA1, IL7R, KIR3DL3, LLGL1, MCM2, MTMR6, NAMPT, OR2A2, OR 4A15, OR4K15, OR4K2, OR51B2, OR52H1, PARVB, PCNA, PDGFB, PDHA2, PIGV , PTPRC, RPS6KA2, SEMA3G, SEPHS1, TGFB3, TJP2, WNT3A, ATP6V1G2
Negative_16473	ATP2A1, ATP6AP1, BBC3, BCL10, CCL23, CLDN15, CNTNAP1, ERBB4, EXT1, F ZD6, NEFH, PFKFB1, PTGER3, PYGB, RXRA
Negative_16474	MAT2B, MCAT, SULT1A1, TAS2R7
Negative_16475	CAT, HYI, OTC, PTS, ADCY6, AMPD1, ARPC3, CARS2, CXCL2, CXCR5, DGKI, GN PDA1, IQGAP1, SELP, SRGAP3, UCKL1, UPP2, WWP1, SERPINE1, TNFRSF10A
Negative_16476	SRM, ACVR2A, ATP5D, B3GALT1, C1QC, C3AR1, CACNG3, CD27, CLTA, CNTF, C NTNAP2, CTSB, DEGS1, DHRS9, GLDC, IL15RA, IL28A, MGAT5, MYH2, OR10J5 , OR13G1, OR2A2, OR2C3, OR4K17, OR51S1, OR6C2, OR8H3, OXCT2, PCYT1A, PERP, PLA2G5, PLCD1, PRPS2, RRM1, SEMA3G, SHMT1, STX6, CACNA2D1, MAP KAPK3
Negative_16477	ABLIM1, ARPC5, ATP5A1, ATP5E, CNTNAP1, CYCS, ERBB2, HNF4G, ITGA3, MA P4K1, MCCC1, OR10H1, OR2G6, POLR2K, PTAFR, RALA, TSC2, XCL2, PNLIPRP 2
Negative_16478	GP9, AARS2, ACTN1, ASS1, ATP5F1, BMP5, C4BPB, CCNB1, CD22, CDC42, CES 2, COASY, COL6A2, CXCL9, CYP27A1, CYP2C9, EFNA1, EGLN3, EPHA6, FGF2, FZD3, GALNT5, GGT7, GNB1, HLA- DOA, IKBKB, IL22RA2, KAT2B, LTA4H, NFKBIB, NTN1, OR4E2, OR5B3, P2RX1 , PAFAH2, PAK6, PCK2, PERP, PLCG2, PPID, SEMA4D, SESN3, SGPP1, SOCS7, SPHK2, SPTLC2, STAT2, VARS

Negative_16479	ME2, ACAA2, APOE, CARD11, CMBL, DCXR, GNG12, KITLG, MCM5, NOTCH3, PIG L, POMC, PPP1R3D, PRKX, PTK2B, RASGRP4, SHC3, SMARCA5, SOAT2, STX7, T AS2R1, CACNA2D4, SERPIND1
Negative_16480	MVD, BMP2, CCL5, CCR5, DERA, ENTPD5, F13A1, FARP2, GLB1, GNRHR, GSTM1 , IFNA4, IFNAR2, MGLL, MYL7, NFX1, NOX1, OR2F1, OR4C13, OR52N2, OR5A2 , OR5K1, PIK3C2A, PMVK, POLR2D, PPOX, PRIM1, PRKAA1, PRKG1, RARS2, RG S3, SPRY3, ST8SIA5, TNXB
Negative_16481	CD01, DGKD, LTC4S, SGPP1, TNFRSF9
Negative_16482	CR2, MOS, ABLIM3, ADSSL1, ALPP, ATP5H, BCAT2, BTRC, CCR6, CCR9, CDH1, CYP2E1, DDX51, DFFB, DGKA, DGKD, DLAT, FPGT, GALNT2, GJD2, GLI2, GPAM , HEMK1, HMGCL, IL9R, IMPA2, MGLL, NFKBIA, OR5AR1, PANK1, PDGFRB, PIK 3R1, PLAUR, PLXNB3, RASGRP3, ROBO1, SPRY4, SV2A, TGFB3, TIAM1
Negative_16483	C8B, CDA, GPT, LAT, LEP, AADAT, ACSL1, ARPC5L, BBC3, C3AR1, CHRD, CIIT A, CKMT2, COL4A2, CPT1A, CRHR1, CSNK1A1, CYP2U1, CYP8B1, EGLN1, GALM , GALNS, GDF7, GZMB, HGSNAT, ITGA6, JAK1, KLKB1, MAP3K13, MGST3, MRAS , MS4A2, MTHFD1, MYL9, NFATC2, OR2B6, OR8I2, PDCD1, PIGO, PIP4K2B, PL CB3, PPP2R5B, PRKCA, PYGB, PYGM, SARS, TUBA3C, YOD1, SERPINB5
Negative_16484	GNS, NGF, AANAT, AARS, ABL2, ACVR1, ACVRL1, ALG12, AMY2B, ARSE, ATP4A , CACNG7, CFTR, CHEK1, CSDA, CSNK2B, DAPK3, DLL1, EFNA1, ETNK1, GMPs, GRIN1, IL19, NADK, NFKBIA, OR11H1, OR14C36, OR1A1, OR2T12, OR4K1, OR 4S2, OR51A4, OR51I1, OR52E2, OR56B4, PDGFB, PER1, PIAS1, PIGU, PNPLA 4, POLR2G, PPP2R5A, RASA1, RUNX1T1, TAS2R48, TD02, TFPI, MAPKAPK5, P AFAH1B3
Negative_16485	ID3, TAT, TNC, ACTG1, ADSS, ALDH2, BNIP1, CYP11B1, CYP4A11, DDX47, DU SP7, DUSP9, E2F5, EDNRB, ENTPD2, FGF22, GAL3ST1, GALNT9, GNA12, GNPN AT1, GSTM4, GUCA1B, HPRT1, INPP5A, JAK2, LDHC, LIPA, LRDD, MAPK10, MG AT1, NR4A1, NRP1, OR10T2, OR2M5, OR4N4, OR51T1, OR56B4, OR6M1, PFAS, PLXNA1, PPP1R3D, PTPRJ, RASGRP2, SNAP23, UGCGL2, ULK1, UPB1, ZIC2
Negative_16486	AR, CKM, HYI, STS, ACO2, ADCY9, ADH1B, ALAS2, ATP5C1, ATP6V1D, AXIN2, B3GAT3, BBC3, CCND1, CHRM3, CLDN5, COMT, CSF2RA, CYP3A7, DBF4, DDX19 A, EIF4E2, ETS1, EVI1, FBXW11, GLG1, GNMT, GRIN2A, GSTA1, INHBA, IRF3 , MAN1A2, MEF2C, NAGS, OR10G9, OR11A1, OR2W1, OR4K1, OR5I1, OXCT1, SC D5, SDHA, TNFRSF4, UCKL1, WEE1, SUV420H2
Negative_16487	CGN, GCK, GSN, TPR, ACAD8, AOC3, CNTFR, CNTNAP1, FGFR4, FZD1, HNF4A, H SD17B3, IL29, MTHFS, MYH9, OR10H1, OR1K1, OR4K15, OR4M1, OR5D16, OR6 A2, OR6C3, OR8B4, OR8D1, PLAUR, PSEN1, SCP2, TMLHE, UCK2, WNT7A, WWP2 , XCL2, ZNRD1, MAPK8IP1
Negative_16488	ADC, CBS, TK1, ACADVL, ALDH1A2, APAF1, C5AR1, CCNG1, CDC25A, CLDN1, C TF1, CYFIP1, CYP3A7, FBP2, GBE1, GCNT2, GRM1, IARS2, IL28A, NEFH, NUD T2, OR2A2, OR2B2, OR4K15, OR5I1, OR6F1, OR9Q1, PIP5K3, PSENEN, PTPN1 , RXRA, SARDH, SPTLC1, SSH2, TD02, TLR2, TUBB, ATP6V1G3, HLA-DQB1
Negative_16489	IL4, LCK, LTB, ADSS, ADSSL1, ALG5, ASNS, C3AR1, C5AR1, CCL25, CTNNA3, EFN1, EXTL2, FABP3, FARSA, FGF10, FRAT2, GIT1, GPX7, GRB2, HNF1B, IL 28B, ITGAE, LCAT, MAP3K6, MAPK3, NKD1, NKX3- 1, NR4A1, OR10Z1, OR1D5, OR2B6, OR2T33, OR52A5, OR9Q2, PCYT2, PDE11A , PIK3C2A, PON3, PRKACA, PRKCQ, SARS2, SHMT2, SLIT1, SPCS1, SRGAP2, S SH2, TAS2R1, WASF2
Negative_16490	BTK, GDA, PLG, TK1, AKR1C3, ALG1, ATP5D, CD28, CSNK1G2, EXTL3, FCGR3A , GANAB, OR2L3, OR9G1, PTGER3, SLC25A5, B3GALNT1, PRICKLE1
Negative_16491	ME1, ALDH9A1, DPYSL2, FABP1, GARS, LIPE, OR13H1, OR1I1, OR5AC2, SERP INA1

Negative_16492	AK3, TPR, ADRB1, AGPAT4, ATP5F1, B3GNT5, CASP6, CDH5, CDKN1A, CSF2RB, FPGT, FRAP1, GALNTL4, HLA-C, IL17B, IL19, LRP5, MAP4K2, METTL6, MYH4, OR2H1, OR6K6, P2RX1, PDHA1, POLE2, PPP1R1A, PPP1R3C, PTCH1, PTK2, RPIA, SLC25A6, STAT4, STAT5A, TRAF3, VAV2
Negative_16493	C1S, EGF, GBA, MAG, RDX, TNF, AARS2, ABAT, ABL2, ALAS2, CCL7, CER1, COQ5, CPOX, CYFIP1, CYP19A1, DHCR24, DUSP14, GGT6, GGT7, GUK1, GZMB, HLA-DOB, IL20RB, IL8RB, LRRC4C, MAD2L1, MAP2K4, MARS, MGAT4A, MINPP1, NLGN2, NT5E, OR2M4, OR9K2, PDE3B, PDGFRA, PHGDH, PLA2G3, PPAT, SRD5A2, THBS2, XIAP, SERPINA1
Negative_16494	LPL, LTB, NOG, ABL2, ACSM5, ACVRL1, AMDHD2, B4GALT4, BMP8B, CCL2, CCL27, CDIPT, CFLAR, CLDN17, CREB3L3, CTNNA3, EFN1, FZD6, FZR1, GALNT13, H6PD, HA02, IDI2, LIMK2, LTBR, MAOB, MGAT1, MLYCD, MPZL1, MYH10, NRXN1, NUDT12, OR6C2, PCNA, PLA2G3, PMVK, RPN2, SETDB1, ST6GAL1, SUV39H1, TAS2R49, TLR4
Negative_16495	HGF, HK1, ACAA1, ACSM2A, ACVRL1, ATP5J, CACNG1, CFTR, CSAD, DHDDS, EIF4B, FARSB, FCGR3A, HSD17B3, IL20, IRS1, ITPKB, JAM2, KIR2DL1, KLRD1, NCOR1, NFKB2, NKD2, NLGN1, OR2M4, SLC2A1, SLC33A1, ATP6VOA2
Negative_16496	GNE, PRL, ACAA2, CACNA1S, CDK7, CES7, CHST11, DGKG, ETS1, FTH1, FZD6, GUCA1B, HIP1, IFNA21, IL22RA2, NFATC1, OCRL, OR2T6, PARD6A, PIAS1, POLR2H, POLR3A, PYCR1, RPS6KB1, SGMS2, ST6GAL1, UBE2L6, WASF3, XYLT1
Negative_16497	GSN, ATP5H, ATP6VOB, CD19, CERK, ELK4, ESPL1, GRPR, GSTM4, OR2S2, OR6C75, PIGO, PTGIS, PTGS1, SDC4, PLA2G12B
Negative_16498	CR2, DCT, GBA, ADRB3, CCL5, CHKA, CHST12, CLDN14, CTBP2, CXCL2, CXXC4, CYP11B2, DHODH, EFNA4, HSD11B2, IFNA14, IQGAP3, MKNK1, OR10R2, OR2G3, OR2T8, POLR1C, POLR2D, PPP2R2C, RUNX1, SARS, SMC1A, SSX2IP, SUCLG1, TDO2, TGFBR1, TICAM1, UROC1, YKT6, GABARAPL2
Negative_16499	TEC, ACADM, ACYP2, ATP2A1, CACNG5, CBR3, CDS2, CFTR, CTSS, DHRS4L2, FGF19, IARS2, ICOS, LPAR1, NME4, OR13H1, OR2T33, OR4C16, PDE7B, POLD1, POLR2K, PRKAR1B, PTGS2, RAB5A, TSC2, UCP1, UPP2, WNT2B
Negative_16500	ALDOC, BIRC2, C9orf95, CDC25C, FZD7, OR56A4, PAX6, PRKACG
Negative_16501	ACYP2, ATP6V0C, B3GALT4, CACNA1S, CD72, CREB3, CYP2C8, ENPP1, FGF18, GLI1, GNAS, GPD1L, HAGH, HRH1, HSD17B7, IL8RA, INPP5E, ITGA8, JAM2, MAD2L2, MAN2A1, OR11G2, OR2M7, PANK3, PDE5A, POLR1C, RBPJ, SLC33A1, SPAM1, STAT3, TAS2R49, TGDS, TRAF1, TUBA8, WNT8B
Negative_16502	C5AR1, CD19, CD8A, COL2A1, CYP3A7, GAMT, MAP2K5, OR2T2, OR4S1, OR51A4, OR5L2, P4HA1, PMAIP1, PON1, PTCH2, SGMS2, SLC25A6, TNFSF10, TUBB2A, YARS, GABARAPL1
Negative_16503	DUT, ID2, ACSM5, ALDH2, ATP5J2, B3GALT1, B4GALT6, CCL24, CCR4, CDC42, CYCS, CYP1B1, DTX3L, EDN1, GDF5, GFAP, GMPR2, GPX7, GSTM4, HSPB1, IL1RAP, IL2RG, IPPK, ITGA8, MAD2L1, MAN2A1, MGAT5, NMNAT3, NOX3, OR4F17, OR51I2, OR5F1, OR8B8, PGAM2, PHGDH, PLCG1, POLR2I, PPA2, SETMAR, SMARCA5, SOCS7, SPTLC2, TYROBP, YWHAZ
Negative_16504	CP, HPD, ALOX15, CARS2, CUL1, EPHB2, F13B, GAMT, GNG3, MGAT1, MMP9, OR12D3, OR52E6, OR8B8, ORC5L, PLTP, RBPJ, SLC33A1, SMURF2, TBXA2R, TUBA1C, CSGALNACT1
Negative_16505	BACE2, CNTN1, MAOB, NTF4
Negative_16506	LEP, ATP6V1H, BCL10, CACNB4, CCL19, CCR1, CDKN2A, CHST12, CXCL12, CXCR3, DUSP3, ENTPD1, GRPR, GUCA1A, HMGCL, MAP3K11, MAP3K2, MCCC1, MGA T5, NRXN2, OR6M1, PDHA1, PIK3R1, PPP2R5D, PSEN1, RAD51, SEMA4F, TFDP1, TICAM2, ULK2, WARS, WBSR17

Negative_16507	PML, STS, ABLIM3, ARSB, ASNS, CANT1, CCL13, CHKA, CREB1, CX3CL1, CXCL12, GALNTL4, GBE1, GUCY2C, LAMB1, OR13D1, PFKFB1, RDH16, RPN2, SRD5A1, HLA-DRB3
Negative_16508	BAX, BTK, CTH, FUK, GDA, SYK, ARHGEF4, CDH1, CLDN11, CLDN22, CYFIP1, D HCR24, DUSP10, FZD6, IGSF5, MAGI2, PGAM2, PHKG2, PIP5K1B, PKMYT1, RA RS2, SAT1, SEMA3A, SREBF1, SRGAP1, TAS2R8, TICAM1, ZIC2, CACNA2D3
Negative_16509	ID3, PLN, CMPK1, CNTNAP1, CSNK1G2, EPB41L3, EREG, GRB2, IFNB1, MGST3 , NAT5, OR1J2, OR2T34, OR52N4, PLA2G1B, PMM1, POLA1, PRKAG1, RPS6KA6 , SCIN, TCIRG1, THBS3, TNFSF12, TRIP10, UGT2B28
Negative_16510	C6, C7, CSK, IHH, MAG, SMO, ACP5, ACY1, ADH1A, ADIPOQ, ALG10, ALG8, ARD 1A, CCKBR, CCL24, CCL4, CD72, CD74, CHUK, CLDN17, COL2A1, COL5A2, CRE B3L2, CTBP2, CYP2C19, DIAPH3, DPYS, FASLG, FGFR2, GALNT10, GLUD2, GN AI3, GUCY2C, IL21, KIR2DL2, LAMB3, MAD2L1, MAPK8, MINPP1, NFASC, OR1 0C1, OR10G7, OR14J1, OR1J1, OR2D3, OR4X1, OR5I1, OR5L1, OR8B4, PDE10 A, PDE4B, PDGFD, PI4KA, PIGC, PIGW, PLCB3, PLCE1, PPP5C, PRNP, PSPH, R BL2, RFWD2, RFXANK, RHOQ, ROCK2, SEMA3F, SEMA4B, THBD, TRAF1, UPP2, Z NRD1
Negative_16511	ADK, AUH, BTC, OSM, SDS, XDH, AARS, AARS2, ACVR1, ANAPC5, ATP13A2, B3G ALT2, BDKRB1, CACNG1, CARD11, CDC20, CRY1, CSF1, CYP1A2, DGKH, DPAGT 1, DTX2, ENAH, G6PC, GPD2, GSTM5, ITGAL, ITGAV, LAMC1, LTBP1, MARS, MC CC2, MKNK1, NTF3, OR10J5, OR12D3, OR51B2, PDIA4, PFKFB3, PLCZ1, PLXN C1, PMVK, PRKAB1, RFX5, SENP2, SPHK1, TAS2R4, TGFB2, TRAF6, ZNRD1, TN FRSF11B
Negative_16512	APP, C9, CEL, RPE, ZYX, ACADVL, ACP1, ADH4, ADRB3, AGPAT4, AGXT2, ALOX 15B, CASP10, CCL7, CD14, CD22, CES1, CFLAR, CLDN14, CNTF, CYP11B2, DG KQ, DUSP2, FGFR3, GGT6, GPD1, GRIA2, GRIN1, GTSE1, GUCY1A3, HCLS1, HY AL2, IFNA6, IL12B, IQGAP1, KYNU, LAMB3, MAD2L2, MAN1B1, MNX1, MPZL1, NADSYN1, NAT1, NR5A2, OR10T2, OR1N2, OR2A14, OR2S2, OR2T1, OR5B3, PA ICS, PANK1, PFAS, PIAS1, PIGT, PLK1, PTTG1, RPS6KA5, RPS6KA6, SELL, S FRP2, SHC4, SMPD1, SMPD2, SPP1, SREBF1, WIF1, WNT8B, HSD17B10, TNFRS F17
Negative_16513	C7, FER, GCK, GGH, GK, HAL, HYI, IDS, STS, ACAT1, ACP1, ACY3, ARPC1B, AR SB, ATP13A2, BPGM, C9orf95, CAPN2, CBR3, CD19, CD40LG, CD47, CDH2, CD K2, CES1, CLDN16, CLDN18, CNDP1, CSF3R, CXCL6, DKK1, FCGR3A, FGF2, FG FR4, GMPPA, GNG13, H6PD, HAP1, HIBADH, IARS, IFNA6, IKBKE, JAK1, KLKB 1, MAP4K4, MRAS, NARS2, NMNAT1, OR13G1, OR5AR1, OR5J2, OR5P3, OR8D4, OR9G1, PGLS, PITX2, PLXNA2, PMM1, POLE2, PPP1R1A, PTDSS2, PYCR1, RAS A1, RBPJ, RPE65, RUNX1, SDC4, SHMT1, SMAD3, ST3GAL3, SV2B, TACR3, TAS 1R1, TGFA, TRAF1, TRAF3, UNC5A, WASF2, WNT8A, WNT9A, WNT9B, WWP1, WWP 2, YWHAE, HLA-DQA2, SERPINE1
Negative_16514	ADA, BAD, BTK, CD6, FGA, GH1, VTN, ACLY, AKR1D1, ANAPC7, BPGM, C3AR1, C D70, CDC16, CMPK1, COL4A2, CPT1C, CRY2, CXCL12, CXCL13, DKK4, EI24, E NPP1, ENPP2, FABP4, FRAT1, GMPPB, GNA11, GNAT3, GSTK1, GSTM5, HAAO, H BEGF, HTR5A, IL17RA, IL18RAP, IL20RA, IL6ST, IRF3, ITGAV, MCM5, NADS YN1, NME4, NRXN1, OPLAH, OR1L6, OR4C6, OR4F17, OR51B2, OR52L1, OR6T1 , OXCT1, P2RX4, P4HA1, PDE6H, PGK1, PHKA1, PIGU, PIK3R2, PLCD3, POLR3 B, SIAH1, SULT1A1, TAS2R1, THY1, TM7SF2, UBA7, UGT2B17, VAMP4, EIF4E BP1, HLA-DRB4

Negative_16515	AK2, CTH, DCT, GPI, SDS, ABL1, ACSL6, ALDH1L1, ANAPC7, APPL1, ARD1A, A TP5A1, ATP5J2, B4GALT2, BMP5, BMPR2, CADM3, CCL13, CCL7, CCL8, CCNA2 , CDC26, CEBPA, CES1, COL5A2, COQ3, CPT2, CRB3, CREB3L3, CRKL, CSAD, C XCR5, CYP4F2, DLL1, DTX2, EFNB3, ENTPD3, EPHA6, EPRS, ETNK2, FGF2, FU T3, GIT1, GSTM3, GSTZ1, HDAC1, HMOX1, HSD17B3, HSD3B7, HSPB1, HYAL2, IDUA, IFNA4, IFNA6, IL10RA, IL1B, IL22RA1, IMPA1, INHBC, INPP5E, INS RR, ITGB2, JAM2, KIR3DL3, KLRC1, LRP6, MAP4K2, MICA, MMP7, NME7, OGDH L, OR10H2, OR1L3, OR2M4, OR2S2, OR4C46, OR9Q1, P2RX5, PDE10A, PFN1, P LCB1, POLR2I, PPM1A, PPM1B, PRKCA, SSH1, ST3GAL5, ST6GAL1, STX12, TU BA1C, ULBP3, UNC5D, VTI1A, WNT6, YKT6, ALDH18A1, MAPK8IP1
Negative_16516	C3, GLA, KIT, ACTA1, ALOX12B, CAMK2G, CAV2, CCL13, CD59, CREB3L4, CXC L3, CYP2C8, DDHD1, EFNA1, EXTL1, FUT7, GSTA4, GSTK1, HARS, HLA- DOA, HSD17B4, HTR4, IFNA7, IL19, IL22RA1, ITGAD, KLRC3, LIPE, LYZL1, MAP4K1, MGAT4B, MMP9, NCF4, NKD1, NME6, NNMT, NTRK2, OR10Q1, OR11H1, OR2C1, OR4C12, OR4C16, OR52R1, PIAS4, PLA2G2E, PVRL1, RAP1B, SC5DL, SNAP25, ST3GAL5, STAM, STK3, SUFU, TAS1R1, TAS2R42, TRPC1, TUBB2C, U GT2A3, UGT8, YWHAE, ATP6V0A4, ATP6VOD2, MAPKAPK3, PRICKLE1, TNFRSF 13C
Negative_16517	C8B, CKM, GLS, OSM, SPN, SYK, ADCY5, ADCY8, ADH5, ALDH3A2, ASPA, BPNT1 , CARD11, CDIPT, CLDN15, COQ3, CREB5, CSF2RA, CSNK2A1, CXCL9, CYP21A 2, DGKZ, DHRS4, DIAPH1, DRD2, DUSP7, ENPP6, ENTPD7, FBXW11, FGF18, FG F7, FOXA2, GADD45B, GBE1, GPAA1, HNF1B, HPRT1, IL13RA2, IL29, INHBE, IRF9, ITGB2, LILRB3, MAGI3, MKNK1, NAGS, NGEF, NME4, NME6, OR4K13, OR 4Q3, OR52E8, OR5AK2, OR6C4, PAPSS1, PERP, PGM1, PIAS1, PIGH, PLAUR, P OLR1C, POLR3G, PRIM1, PRKAR1B, PSPH, PTGS1, RAP1A, SCP2, SFRP5, SRGA P1, SULT1A2, TFDP1, THBS4, TPM3, TRMT11, ULK3, WNT3, HLA- DRB4, MAPKAPK2
Negative_16518	CRH, F10, HGD, TNC, ACSM2A, ADCY1, ADCY7, AKR1C3, BCAT2, BCL10, CCL20 , CD48, CHSY3, CLDN20, CNDP1, COL4A4, COMP, DDX51, EPHB1, FOSL1, FZR1 , GLDC, GNAT3, GUCY2D, IDH1, IKBKE, INADL, LDHD, LTA4H, LYZL1, MAML1, MAOA, MAOB, MYH4, NAMPT, OR10T2, OR1S1, OR2L13, OR52K2, OR56B4, OR6T 1, OR8H1, PAFAH2, PCCB, PDXK, PPM1B, PPP3R1, PRODH, RASSF5, SELE, SET D7, SYNJ1, TRAF5, TSLP, WNT6, YES1, ATP6V1G1, MAPK8IP1
Negative_16519	C2, CFH, FOS, GGH, MIF, RET, ALOX15, AMD1, ATP5G3, BMPR1B, CACNB3, CAS P3, CCL16, CD19, CHIT1, CRHR1, CSF2, CTNNA2, CYP11A1, DUSP3, EHMT1, E NPP2, ENTPD6, EPRS, ERBB3, FGF10, GCNT3, GIT1, GLYCTK, GUCY1B3, IFIH 1, IL1A, INMT, IRS1, LYZL1, MASP2, NARS, NME2, OR1S2, OR2A2, OR2B11, O R2M7, OR6K3, OR6Q1, PANK2, PFKFB1, PFKFB2, PLOD3, RCHY1, RDH16, SIPA 1, SRGAP2, STAT6, SV2A, TAS2R7, UBA1, WASF1, WWP2, SERPINC1
Negative_16520	AR, CDA, CR1, DDO, DUT, EDA, F11, GBA, LCT, PGF, WAS, ACSM4, ACSS1, ADCY 6, APAF1, ATP5G1, B4GALT4, BMP4, CACNA1E, CD40, CPT1A, DDX50, FGF11, FGF18, FLOT1, FRAP1, FUT4, GCAT, GP1BA, GSTM4, GUCY2D, GUCY2F, HLA- DOB, HRH1, HYAL2, IFNA21, IL24, ITPA, MNX1, MTHFD1L, MTMR6, MYH10, NF X1, NFYB, OR10A2, OR13F1, OR2B6, OR2L2, OR2Y1, OR4K13, PPAP2A, PPP1C C, PPP2R5D, PTCH1, PYCR2, SARS2, SDC3, SKP2, TJP2, TOMM40, TRPM5, TUB A1C, ULBP1, WEE1, WNT5B, XCL1, ZFYVE9, CSGALNACT2

Negative_16521	BCR, C8A, CP, HPD, MIF, OAT, SDS, TPR, AASDH, ACAT2, ACOX2, ACVR1C, ADCY10, ADRBK2, AKR1C2, ALCAM, ALDH5A1, AMHR2, AMPD2, AREG, ARNTL, B3GALT5, B3GAT1, C1QA, CACNA1A, CAMK2A, CCL28, CCL4, CCNG2, CREB5, CX3CR1, CYCS, DDB2, DHFR, DUSP10, EHMT2, ENPP3, ERO1L, FBP2, FGF12, FGF23, FGF3, FGF5, GAS1, GMPR2, GNMT, HRH1, IL1R2, ITGA5, ITGAV, LAMC2, LDHAL6B, MAP2K7, MAP3K13, MINPP1, NFX1, NRCAM, NT5C2, NT5M, OR10X1, OR1L4, OR2C3, OR7A5, OR7C2, OR8A1, OR8K3, OXCT1, P4HA2, PGAM1, PLCB4, PNLA3, POLR1D, PPAR, PPP2R5B, PPP2R5D, PPP3CC, PRLR, PTGIS, RAC3, RBL1, RPS6, SEMA3C, SKIV2L2, SLC2A4, SLIT1, TAS1R2, TGFB2, TPK1, TPM3, TSLP, ULBP3, UPRT, WNT11, ZAP70, ARHGEF12, ATP6V1B1, C1GALT1C1, TNFSF13B
Negative_16522	CGA, CS, DBT, FOS, FYN, GSN, HK3, ME2, SRM, ACP2, ADORA2B, AOC3, AQP7, CACNG2, CHST11, CYP4A11, DHCR7, DTX3, E2F4, EP300, EPHB1, EREG, EXOC7, FGFR2, FOXA3, FTH1, GATM, GCNT4, GGT6, GNA12, GNAI3, GNG13, GNRHR, GUCY2F, GUK1, H6PD, IDH3A, IDI2, IFNK, IL20RB, IL23A, IL2RB, ITCH, KAT2A, KIR3DL3, LRP5, MICA, MOV10L1, MYH10, NARS2, NFKB1, NFYB, NRG2, OR10A3, OR2AG2, OR52A5, OR52L1, OR5C1, OR5H2, OR6Y1, PDE4A, PFKL, PGAM2, PHKA1, PIGB, PIGT, PIK3CD, POLR2B, PRKAG3, RENBP, RPS6KB1, SLC25A6, SMAD4, SNAI2, SQLE, TCF7, THBS1, TIAM2, TICAM1, TLR5, TNFRSF4, TRIP10, UGP2, UGT2B7, ULK3, UNC5C, WBSR17, WNT9B, YKT6, ATP6V1B1, HLA-DPA1
Negative_16523	FOS, ID3, ALDH1A2, ASMT, ATN1, ATP5E, BDH2, CAMK2D, CCR4, CDKN2A, CHKB, CLDN17, COL5A2, CYP8B1, DLL1, EHHADH, FLT1, FMO1, GAS1, GUCA1A, HTR4, ITGB8, LIMK1, LIPC, MAPK14, MTHFD1, NCF2, NFASC, NTNG1, OR1L4, OR1S1, OR2D3, OR2M7, OR4X1, OR51B6, OR5K2, OR7C2, PAFAH2, PDE8A, PIGN, PLA2G6, PLCB1, PNPO, POLR2K, PPP2CA, PTK2B, THBS2, TUBB2A, UGT2B17, UNC5C, PDCD1LG2
Negative_16524	DCC, LCK, TK2, ALDH1A3, ALG12, ALOX12B, ALOX15, APLP1, AVPR1A, B3GNT2, BCMO1, CACNA1H, CACNA1I, CALML3, CLCA4, CLDN11, CNTN2, CX3CR1, CXCR6, DOCK1, ENO1, ETS1, FARP2, FGF7, FSHB, GMPR2, GNA11, IPMK, KIR3DL3, KNG1, LAMC2, MAP3K14, MAPK3, MFNG, NAGK, OR10A6, OR2T12, OR4K15, OR7D2, PDE4A, PDE7A, PIGN, PLA2G2D, PPM1D, PRNP, PSME1, PTGES2, PTK2, RASSF1, SHMT1, TAS2R16, THBS2, TUBA1A, TUBB4Q, UGT2A3, UGT8, ATP6V1B1, HLA-DRB4
Negative_16525	F10, FOS, KMO, RET, ACADL, ACSM2A, ACSM5, ADCY10, AKR1D1, ANAPC5, APC2, ARHGEF1, ARPC1A, ARRB2, ATP13A2, B3GALT4, BDKRB2, BET1L, BMP8B, CASP10, CDC25B, CDS2, CHEK2, CHIT1, CLDN17, CXCR4, CYP2C8, CYP4A11, DNMT3A, DPM2, DUSP6, E2F2, EFNA3, FMO1, FMO2, FMO3, FSHB, GNPDA1, GRLF1, H6PD, HMGCL, ICAM3, IFNGR1, IL1B, LDHAL6A, LEFTY1, MALT1, MCEE, MC5, MGAT4A, MTHFD1, NANP, NUDT9, OPLAH, OR10Z1, OR11H6, OR14A16, OR1L6, OR2A5, OR2T29, OR4F5, OR52N2, OR5D16, PAK7, PDGFA, PDGFC, PLA2G10, PLA2G5, PLCB1, PMAIP1, POLR1E, POLR2F, PPP3CA, PRKAA1, PRKACB, PYGB, RBX1, RDH10, RHEB, RUVBL1, SDHB, SEMA3E, SETDB2, SHMT2, ST3GAL5, STX4, STX6, TCIRG1, TPK1, TRMT11, UGT2A3, UGT2B11, ULBP3, XYLT1, MAP3K7IP1, SERPINE1



Negative_16526	BAD, CBL, FH, FOS, IL4, IL7, IL8, MPZ, RET, TPO, ACADVL, AC01, ACSM2A, A CSS2, ADCY8, ALDH3A2, ALG11, ALPP, APBB1, ASMT, AXIN1, B3GALT5, B3GN T4, CCR6, CCR7, CNTFR, CPT1B, CSNK1G2, CTNNA2, CYP26C1, CYP2A7, CYP3 A5, DLAT, DTYMK, EDA2R, EXTL1, FGF3, GCLM, GLUL, GPD2, GSTA2, HDAC1, H LA- F, HSD3B1, IL13RA2, IL17RB, IRAK1, LALBA, LMO7, MAPK9, MKNK1, MYL7, N CKAP1, NEU2, NOS3, OR14A16, OR2T12, OR5M9, OR8S1, PDE6H, PGAP1, PIGN , PIK3R5, PLA1A, PLOD3, PNPLA3, POLE3, PPARA, PPT1, PRKCQ, PRLR, PTGS 2, PTPRJ, RAD51, RAPGEF2, RPS6KA4, RRM1, SELP, SGMS2, SORD, STX1B, SU V39H1, SYNJ2, TAS2R10, TM7SF2, TYK2, UMPS, WASF2, C1GALT1C1, CACNA2 D2, CTNNBIP1, MAP3K7IP2, SERPINF2, TNFRSF13B
Negative_16527	HGF, NPL, SYK, TNC, ACSS3, ATF4, BIRC2, CACNA1A, CD46, CHRM3, CNTNAP1 , CXCL1, CYP2F1, DKK2, DNMT3A, EPHA8, F2RL1, FUT3, GALNT11, GANC, GRI N2B, GUCY2D, GUSB, IL22RA1, IL24, IL9R, IRF7, JAM2, L1CAM, MAPK13, MI TF, MNX1, NARS2, NTRK1, OLR1, OR10G9, OR10Z1, OR1L8, OR5AR1, OR5M9, O R6C74, PGAM1, PTAFR, PTPN1, PVRL2, RALB, RDH10, SEMA3B, SPRY3, STAT5 B, TFPI, VAMP1, WWP1, ATP6V0D1, ATP6V1B1, HSD17B10, PLA2G12B, TNFRS F14
Negative_16528	CBL, FUK, GH1, GLA, NLK, SMO, ACAT2, ADH5, AGPAT6, AKR1B1, ALDH3A2, AP OA2, APRT, ARAF, B3GALT2, BACE1, BLVRB, BPGM, CAMK2G, CDH15, CEBPA, C HSY3, CLDN11, CPT2, CYP26B1, DAPK1, DPYD, DUSP6, E2F1, EDNRA, EFN1, ENPP3, EPHA8, FGF4, FRAT2, FUT1, GADD45B, GATM, GDE1, HEXB, HNF4A, IF NA16, ITGA11, KIR2DL3, KIR2DS4, KLRC4, MAPK3, NAGK, NCF4, NCOR2, NOT CH1, OR2D3, OR2M2, OR2W1, OR4M2, OR5D14, OR5H6, PAK1, PDE4C, PDE8B, P GAM2, PIGA, PIGX, PLAUR, PLIN, POLD1, PPP2R5E, PRNP, SELP, SEMA4D, SL IT1, SPRY3, STMN1, STX4, THY1, TNFSF4, TUBA4A, UBE2K, ATP6V1G2, GABA RAPL1, KIR2DL5A, PLA2G12B, ST6GALNAC4, SUV420H2, TNFRSF10A, TNFRS F13B
Negative_16529	AK1, C1S, CD6, CGA, DDO, F11, FES, HYI, INS, TK1, ACOX3, ADAM10, ADCY5, ARHGGEF6, ARRB1, C4BPA, CACNA1I, CANT1, CLDN19, COASY, CREB5, CSF2RB , DDX19A, ECHS1, ENTPD5, ENTPD7, FGF4, FZD1, FZD6, GMPS, GNG12, HIP1, HTR7, IFNB1, IL23A, INHBC, INPP5A, JAG2, LAMB4, MAP3K12, MAP4K2, MTF MT, MYH3, MYH8, NT5C1B, OR2T12, OR4F15, OR51M1, OR56B4, OR5C1, OR5P2 , OR5R1, OR8U1, PAK1, PDPK1, PHKG2, PIGQ, PIM1, POLR2G, PPP1CB, PRKCZ , PTGES, RFWD2, SMAD3, SOCS1, SORD, SPAM1, STAT3, STEAP3, TALDO1, TAP 1, TGFB1, TUBA3C, UBE2K, UGT2B10, UPRT, VKORC1, ATP6V1B1, SERPINC1
Negative_16530	ACPT, ACVRL1, ADCY1, BMPR1B, BNIP1, CACNA1D, CCL16, CCL19, CPOX, CSN K1G1, CSNK1G2, CTSG, CXCL10, CXCR3, DDX55, DTX3, DVL2, FCGR3B, FLAD1 , GALNT9, GARS, GNAL, GPT2, HES1, HRAS, HYAL2, IDH3B, IL12RB1, IL1A, J AM3, KLK3, LCMT2, LIPC, LTA4H, MYLK, OR1B1, OR2AG2, OR2L13, OR2T34, O R4A16, OR4N4, OR51V1, OR6C3, PDE3A, PRKCI, RARS2, SKP1, TAS2R48, TRD MT1, UBA7, UGCGL1, UPP2, WNT8B, ZNRD1, TNFRSF10D
Negative_16531	AK2, C7, C8A, CAD, GLA, GSR, MUT, ZYX, ACTN4, ADRB1, ALG12, ARAF, BAI1, CADM3, CAMK2D, CASP10, CHRM3, CLDN9, CRKL, CYP2B6, CYP2C18, CYP4F3, DKK1, EGFR, ENO2, EXOC7, FTH1, GAD1, GOT2, HARS2, HIP1, HNF4G, IL2RA, IRF3, ITGB3, ITGB4, KLRC1, LPAR1, LRP5, LTBP1, MBL2, MLLT4, MMP1, NEU ROD1, NTN1, OR13H1, OR2A12, OR52I1, OR5I1, OR7A10, PDHA1, PIK3CD, PN PLA4, PPARA, PSPH, RALGDS, RDH16, RPIA, SH2D2A, SLC25A4, SNAI1, SPAM 1, SPTLC1, TAS2R14, TUBB2A, TYROBP, UBE2L3, ULBP2, YWHAZ, ATP6V1G1, PAFAH1B3

Negative_16532	CBS, GDA, XDH, AGPAT3, ALDH1A3, BMP2, CACNB2, CALML6, CCNG1, CCR9, CD36, CD47, CLDN7, CRLS1, CSDA, CSF2RA, CXCR5, DDX18, DUSP9, FCGR2B, FGFR4, FMO2, GNAT3, HCST, HMGCL, IL11RA, IL12B, JAK3, LARS, LIPE, MAP2K6, MASP2, NOX1, NRP1, OR13D1, OR2G6, OR2M3, OR4K2, OR5AP2, OR5P3, OR6C6, OR7C1, PDPK1, PHKG1, PIK3R2, PIK3R5, PLA1A, PLOD2, PTPN5, ROBO1, RPS6KA6, SEMA4A, SEPHS1, SIPA1, SMARCA2, SPTAN1, TAS2R5, TFPI, TGDS, THBS3, TJP3, TNXB, ULBP2, UROC1, ST6GALNAC6
Negative_16533	ABO, BTB, CFI, LCK, PXN, RPE, ABLIM2, ADCY10, AKR1C4, ALDH1A2, AMPD3, ANAPC1, ANAPC10, ATP6V1H, BMPR1B, CACNG3, CCL2, CCR2, CLDN19, CNTNAP2, COL6A1, CRB3, CREB3L1, CSF2RB, CXCR5, CYP4A22, DHODH, DLL4, EDAR, FGF21, GDF7, HSD3B1, HYAL2, ICOSLG, IL15RA, IL22RA2, IL28RA, LEFTY2, MAGI3, MGAT1, MOV10L1, MPST, MYH4, NRXN1, NUDT2, OR10H3, OR1K1, OR4A16, OR51T1, OR5K1, OR8D4, PAX4, PCK2, PIAS1, PIGC, PIM2, POLR2I, PP2R5C, PPT1, PTPMT1, RPS6KA3, RPS6KA6, SDC1, SFRP4, TAS2R49, TICAM1, WNT7A, YWHAZ, MAP3K7IP2, MAPK8IP1, PRICKLE1, TNFRSF18
Negative_16534	CTH, FGB, GK, ABCC8, ABI2, ACP5, BDKRB1, CARS2, CD226, CDC14A, CDKN2A, DDB2, DGKI, EPHB3, ERBB3, ER01L, FGD1, FMO5, GLO1, GNPDA2, GUK1, HMOX2, HYAL2, IFNA4, IFNAR1, IL13RA2, INHBB, ISYNA1, ITGA7, JUND, LCMT2, MAPT, MGAT4B, NFKBIA, ONECUT1, OR2A14, OR5D18, OR7A10, ORC5L, PDE6G, PMM2, POLR1A, POLR3A, PPA1, PTTG1, PVRL1, RASGRP3, RDH11, RXRA, SELL, SMAD7, SRD5A1, STX10, TAS2R50, TPH1, TRADD, TSHR, UCKL1, WHSC1L1
Negative_16535	AUH, C3, F12, FN1, GAA, GLA, SI, TEC, ACTB, ALPPL2, APOA1, ASAH1, BNIP1, CACNA1G, CIITA, CLDN17, COL2A1, CYP2U1, DGKD, DIAPH1, DUSP8, E2F5, EIF4E2, FECH, FGFR1, FMO3, FOSL1, FOXO1, GPT2, IFNA21, IFNA7, IL12A, IL1R1, IL9R, INPP5B, IRAK2, ITGAV, ITGB3, ITGB7, KIR2DL1, KYNU, LTC4S, MAN1A2, MGAM, MMP14, MYLK3, NAT6, NFATC1, NFATC2, NT5C1B, NUDT2, OR10A2, OR10H1, OR2G6, OR4X1, OR51B2, OR52B6, OR5K2, OR5M3, OR6M1, OR7G2, OR8B12, OR8H3, PAX4, PDHA2, PFKP, PISD, PLA2G10, POLR1A, PPBP, PRKCB, RPS6KA6, SELE, SHC4, SMURF1, SOAT2, SRGAP2, ST3GAL3, TAS1R3, TAS2R14, TPM3, TRMT11, TUBB, UGT2A1, UMPS, VNN1, WARS2, WNT5A, YWHAH, AASDHPPT, HLA-DRB4, SLC25A31
Negative_16536	HK3, LPO, SRC, ACVR2A, ADRBK2, AKR1A1, AKT1, B3GAT1, BUB1B, CCL20, CD2, CHSY1, CLDN4, CXCL9, CYP4F3, DDX51, DPM1, FASN, GNPAT, GPX7, GZMB, HADHA, HRH1, HSD11B1, HSD17B7, IL10, IL12RB1, IL13RA1, ISYNA1, MAP2K6, MASP1, MGAT1, MGST3, NOX1, OR10H5, OR2AG2, OR2G3, OR4D6, OR52B4, OR5I1, OR6M1, OR8H2, PDGFRA, PIGF, POLR3G, PRKX, PRSS1, TOMM40L, TS2, VAV1, WNT8A
Negative_16537	BID, F3, IL3, TEC, TNF, AACs, ADH6, ALDH3B1, APLP1, ARSA, ATP50, BLNK, CAV3, CD274, CD28, CMBL, CYP11B2, E2F4, EPB41, EXTL3, FIGF, FOXO1, GUCY1A2, IARS, IDH3B, IL29, IL6R, LAMC1, MAOA, NAGK, NFATC1, NFYA, NR5A2, OR11I1, OR51I1, OR52E8, OR5B17, OR6C75, OR7D2, PARD3, PCCA, PIP4K2B, PLCG1, PLD1, PTTG1, RPSA, SETD1B, SMAD5, TFPI, TKTL1, TNFSF4, ULBP3, WHSC1, B4GALNT1, PNLIPRP1
Negative_16538	F5, FN1, IL5, LCK, OSM, UBC, VTN, ACAT1, ACHE, ACOT11, ADRB3, ALCAM, ALDH3B2, ALOX5, AMDHD1, ASS1, ATP5G3, ATP5J2, BDKRB2, BMP8A, CBLB, CBR3, CHRM3, CLTB, CREB3, CXCR3, DUSP9, EFNA3, EIF4E, ETNK1, FARP2, FGF11, FLOT2, FPGS, FZD6, GALM, GALNTL5, GMPS, GNAL, GSTM3, GSTO1, GTSE1, HMGCS1, HRAS, HTR2C, IFNA5, IL10, IL13RA1, INPP1, IQGAP2, IRF7, KARS, LTB4R2, MAP4K4, MGAT2, MICA, MYL5, NAGLU, NCOR2, NFKBIE, OR14C36, OR1A1, OR1J2, OR2D2, OR51B2, OR52K1, OR5J2, PDGFD, PFN4, PGM2, PLCB3, POLE3, PPID, PPP2R5D, PRKCB, PRPS1, PTEN, PTPN7, PYCR2, RALB, RFWD2, RXRA, SEMA4D, SESN3, STX6, TAS2R1, WNT9B, XCR1, YWHAG, ATP6VOD1, HSD17B10, PDCD1LG2

Negative_16539	ABO, AMT, BTC, FGG, GH2, HK1, ME1, MPL, TPR, ADAM10, ADCY3, AHCYL1, AMD1, ASS1, CACNA1F, CACNG2, CALML5, CCR5, CCR6, CD226, CD79B, CDK4, CDK7, CDKN2D, CLDN9, COL2A1, CPT1C, CYP2A13, CYP2C19, DDIT4, EPHB1, EREG, FUT5, GALNS, GALNT9, IFNA8, IFNAR2, IL10, KDSR, KIR2DL2, KLRC1, LAMC1, LTB4R2, LYPLA2, MAP2K5, MGST1, NAT1, NFATC1, NME2, NMNAT3, OR10X1, OR13C3, OR13D1, OR1L6, OR2C3, OR4D2, PDE3A, PGLS, PHGDH, POLE, PP1R3A, PRKAG1, PRPH2, PTCH1, PTPRZ1, RBL1, RELA, SETD2, SLC25A4, SLC2A1, SPCS1, TPH2, UGT2B4, VAV1, WEE1, HLA-DPB1
Negative_16540	AK2, FOS, RFK, TNR, ACADS, ALDH6A1, ALG10, ALG9, ANAPC7, ASS1, CASP6, CBR3, CCR5, CD99, CDC23, CHD8, CLDN19, CNTN2, CSNK1G1, CYP19A1, DHDDS, DPYD, ENO1, ENPP3, FGF20, FZD2, GRPR, HAAO, HEMK1, IL2RB, MAP2K5, MAPK14, MDH2, MGAT4B, OR2A12, OR2L3, OR4F17, OR4K2, OR52B6, PANK2, PIGB, PLIN, PON1, PPID, PRKG1, PRKX, PYGB, RIPK1, RUVBL1, SH2D1A, SMURF1, ST3GAL3, ST8SIA5, SULT1E1, TFDP1, TFPI, TJP2, TUBB4, TUBB6, VASP, ATP6VOE1, ATP6V1G3, HLA-DRB5, PAFAH1B2, TNFRSF18
Negative_16541	GDA, LTB, TPO, ZYX, ACSS1, AKR1C2, ALDH1A1, ARG2, BACE1, BAI1, BCAR1, CALML5, CDC14B, CREB1, CXCR6, DDHD1, EARS2, ELK1, F2RL3, FOXA2, GNAZ, GNPDA1, GSTM5, GUCA1B, HAO1, HLA-DOA, HMOX1, HNMT, IFNA4, IL6ST, LDHAL6B, LIPF, LYZL1, MDH1, NUDT5, OR10J5, OR1N2, OR8H2, OR8K1, PDHA2, PEMT, PFN3, PLA2G2F, POLR2I, RPE65, RPIA, SDC4, SEMA4A, SHC1, ST3GAL2, TACR1, TAS2R42, THTPA, TNFSF9, TOMM40, TUBA3C, ZNRD1, GABARAPL2, HLA-DPA1
Negative_16542	CR1, F10, GK, HDC, HK2, ID3, KMO, LEP, PDC, PLN, ACAA2, ACAD9, ACP1, ADOA2B, ALDH1A1, ALG2, ARRB1, ASNS, BAI1, BMP4, BMP8A, BMPR1A, CCL28, CD34, CD40LG, CHST13, CMBL, CTTN, CXCR6, DEGS1, DEGS2, DGUOK, DHRS9, DNMT3B, EGLN1, EHHADH, FGF8, FLT1, GADD45B, GANC, GBE1, GLUD1, GRIN1, GYS1, HLA-DMA, HTR2C, HYAL1, IDUA, IL1B, ITGA9, ITPK1, ITPKB, LCMT2, MAN1A1, MCEE, METTL2B, MOV10L1, NAGS, NKD1, NRG4, OR2T8, OR4F15, OR5B12, OR5F1, OR5L1, OR5T1, PDE3B, PDGFRA, PIGW, PON3, PPP3CA, PRIM1, PSME3, PVRL4, PYCR1, RAC2, RALBP1, RHOD, SFRP4, TP73, TRAF1, TUBA1C, TUBA3E, UNC5B, VAMP1, VAMP2, VANGL2, VCAM1, ZAP70, ATP6V1E2
Negative_16543	CD6, FGA, XDH, ACOX2, ACP5, ACVR1C, ADCY9, ADIPOR1, AVPR1B, C1GALT1, CACNA1A, CDC16, CPOX, CRHR1, CYP2U1, DARS, DGKG, DPM1, EFNA1, FLT1, GCLM, GNPDA2, IL20, IL28A, INHBA, ITGB1, LAMB4, LEFTY1, MGAM, NAGLU, NFKB1, NKD1, NRG4, NT5E, OR1L4, OR4F5, OR8D2, OR8J1, ORC6L, PAX4, PDIA4, PIGQ, PIK3C2A, PLAU, PLCB1, PMM1, PNPO, PTGES2, RALA, SPI1, WNT2, GABARAPL2, MAPK8IP2, SERPINA1, SERPINC1
Negative_16544	CGA, F11, TK2, ALDH2, AMHR2, ARSD, ATF2, ATP4A, CCL23, CD79A, CDC42, CDIPT, CDK5, CDKN2C, CHEK1, CLDN4, CLTA, DAD1, DAG1, DAPK3, DAXX, DDX18, EFN3, ENPP1, FLT3LG, FUT9, GNA11, HARS, HHIP, HSD17B4, IDI2, IDUA, INPP4A, IRS2, ITGB2, ITGB3, MAOB, MGST2, MPST, NAGS, NANS, NLGN1, NOTCH2, NT5M, OR13C9, OR51G2, OR52K1, OR5B3, OR9K2, OXCT1, PDGFC, PIGH, PIGW, PIK3C3, PORCN, PPOX, PPP2R5A, PRKAB2, PRNP, RELA, RHEB, SEMA3C, SMURF2, SOCS2, SOX17, SULT1A4, SV2C, TRAF4, WNT7B, ZBTB16, HLA-DRB4
Negative_16545	BTC, CEL, CP, CR2, GPT, GSN, ACSL3, ACSM1, AMPD3, ATP12A, B3GAT2, B3GN T4, B4GALT2, BLVRB, CD47, CDKN2A, CDKN2B, CTSG, DEGS1, DTYMK, ENO2, EPHB2, FCER1G, FPGS, FUT2, FZD8, G6PC2, ICAM3, INPP5B, KIR2DS5, LIPA, MAP2K2, NNMT, OR13A1, OR13C5, OR2T34, OR51E2, OR6C2, P2RX5, PLCG2, PLXNB2, PNPLA4, PRKY, RPS6KA4, RPS6KB2, SMC1A, STAM, SUCLG2, TICAM1, UGCGL2, UGT8, ULK2, B4GALNT1, HLA-DQB1, PLA2G12A, ST6GALNAC5

Negative_16546	C7, PGF, SDS, AARS2, ACSL4, AKR1B1, ALPP, B3GALT2, BMP5, CAMKK1, CD34, CREB1, CTSS, CXCL16, CYP4F2, DBF4, DDX52, DGKD, DUSP6, EXT2, FGF5, GAL3ST1, GALNS, GNG12, GP1BA, GSTK1, HSD17B4, IKBKG, IL17B, ITGB2, KDSR, MPST, MS4A2, NRG1, OR5C1, OR8K5, P2RX6, PDE8A, PDIA4, PIGC, POLD2, POLE3, POLR3B, PRPS2, RFXAP, SGPP1, SHC4, SMURF1, TBXAS1, TKTL2, UNC5B, UROC1, UROS, HLA-DRB5, MAP3K7IP2
Negative_16547	AK5, CD6, GSR, ID2, ME2, TNC, ABI2, ACVR2A, ADIPOR2, AGPAT2, ALDH9A1, ALPL, ANAPC11, APOA1, ATP4B, ATP5C1, ATP6AP1, ATP6VOB, B4GALT1, BMP8A, CBLC, CCL15, CFL1, CFL2, CHSY3, CSNK2B, CX3CR1, DDOST, DGKI, DMGDH, ENPP1, ETNK2, ETS1, FASLG, FGF11, FGF12, FLT3, FMO1, GALM, GNAS, HGSNAT, HMGCR, IDH2, IFNAR2, INPPL1, KIR2DL2, LAMC3, LDHAL6A, LIPC, LIPF, MAFA, MAGI3, MAN2A1, MAOB, MITF, NEU4, NRCAM, OGDHL, OR10G8, OR3A2, OR4C12, OR51B4, OR52I2, OR5AC2, PDE1C, PDE8A, PHKG2, PIK3CG, PLOD1, PPA1, PPCS, PPM1D, PPP1R3A, PRDX6, PRKAA2, PRKAR2A, RAB23, RDH11, RPS6KA4, SMAD1, SMARCA2, SNAP23, SQLE, ST3GAL2, STX6, SUCLG2, TAS2R3, TAS2R8, TBL1Y, TICAM2, TNFRSF9, TSLP, VAMP4, WNT3A, PPARGC1A, SERPIND1, TNFRSF1A
Negative_16548	C5, CBS, DLD, F10, F11, FAH, FST, IL3, MVD, OSM, SI, ACAA2, ACADVL, ACSM5, ACVRL1, AKR1B1, ALG1, ALG6, AMDHD1, AMY2A, AMY2B, ANAPC5, APRT, ARG1, ASCC3, ATP6V1D, B3GALT4, BDKRB2, BHMT, CACNA1D, CACNB3, CDKN2B, CES1, CHKB, CLCA4, COL4A1, COQ3, COX10, CXCL9, CYP2A13, EDN1, EGLN3, EI24, EPHA2, FARS2, FMO2, FMO5, FUT5, FZD8, G6PC2, GALNT11, GALNT7, GALNTL1, GBTG1, GSTP1, HARS, HES1, HLA-DRA, HSD17B2, ICOS, IDH1, IDH2, IDUA, IFNA10, IFNA13, IFNA16, IGSF5, IL17RA, IL3RA, ITGA2B, ITPKA, MDM4, MGST3, MINPP1, MIOX, MYH10, NCOA4, NCR1, NCSTN, NSD1, OR2L8, OR3A2, OR4F5, OR52B6, OR5M8, P2RX3, PAPS2, PARVG, PCYT2, PDE10A, PDE1C, PDHA2, PFKFB3, PIAS2, PIGF, PIGV, PIM1, PKLR, PLCB2, PLXNA2, PNPT1, POLR2E, PPP2R5C, PRDX6, PRKACA, PRKAR1B, PRKCB, PRNP, PRPH, PSAT1, PYCR2, RASGRF1, RIPK1, RPS6KA2, RPS6KB1, RXRB, SEMA3G, SOS1, SPI1, ST8SIA1, STAT4, STAT5A, STX8, SUCLA2, TAS2R13, TGFB1, THBS4, TKTL2, TLR4, TP53, TRHR, TSTA3, UGT2B10, ULBP3, WARS2, XYLB, YARS, ZAP70, ALDH18A1, HLA-DQA2, HSP90AA1
Negative_16549	C8A, F7, F9, KHK, MOS, SMS, ACP5, ACTN1, AGPAT4, AGTR1, ALDH1A1, ALG8, ARSD, ATP13A2, ATP2A3, ATP5J, BDKRB2, C1QC, C7orf16, CACNG2, CACNG3, CCL1, CCL14, CD79B, CHRM3, CHUK, CNGB1, CREB3L1, CXCR4, DDX47, DDX52, ENTPD3, EPHA4, FARS2, FGF19, FTMT, FZD4, FZD6, GALNT11, GART, GIT1, GJD2, GLUL, GRPR, HAGHL, IDH1, IFNA6, IFNB1, IL11RA, IL20, INPP4B, IPPK, ISYNA1, ITGA7, ITGB2, KIR2DL2, KLRC4, LAMB1, LTA4H, MCM4, MGAT5B, MITF, NAE1, NANS, NAT1, NEUROD1, NFKBIA, NQO1, NT5M, OR10G4, OR10H3, OR10J5, OR2AE1, OR2V2, OR2Z1, OR4X1, OR51L1, OR6C4, PAX6, PCNA, PDHA2, PDX1, PFKL, PIGX, PKMYT1, PLAUR, PMVK, POLE3, POLR2I, PON1, PPT1, PRNP, PRSS1, PTK2, PTTG1, RAP1A, RAPGEF3, RARA, RELB, ROCK2, SEMA3A, SETD1B, SPHK2, STX12, STX18, SUCLA2, SULT1A2, TFPI, TLR4, UGCGL2, UGP2, VARS, VEGFC, WNT5A, XIAP, ZNRD1

Negative_16550	C9, CGN, CP, IL8, MOS, NNT, OAT, PRL, AARS2, ACSM4, ADCY10, ADRA1A, AGP AT4, AHCYL2, AMDHD1, APOE, ATP5B, ATP6V1A, B4GALT4, BCL10, BDNF, CAC NA1H, CACNA1I, CACNB1, CAMK2G, CARS, CCL3, CD40, CD46, CD55, CD8A, CD H3, CFL1, CHST11, CLDN2, CLDN5, CNTNAP2, CTLA4, CXCL1, CYP17A1, CYP2 C8, DGKE, DUSP2, EIF4B, EPHB2, ERBB4, FGF19, FGF6, FTH1, FZD7, FZD8, G ADD45A, GALNT2, GALNTL1, GLI2, GNA12, HAGH, HAGHL, HLA- DRA, IDH3B, IFNA7, IL12A, IL23A, IRF9, ITGB5, JAG1, KIR2DL4, LAMB2, L IPF, MAN1C1, MAP3K11, MAPK10, MARS, MGAT4B, NFYA, NPAS2, NPR1, NTNG1 , OR10R2, OR10S1, OR1N1, OR2T10, OR4A16, OR4C46, OR4M1, OR51B6, OR5B 21, OR6C3, OXSM, PARD6G, PIM2, PLA2G5, POLA2, PPP1CC, PPP2R5B, PRPS2 , PTGES, QPRT, SEMA4C, SHMT1, SLC25A4, SRGAP2, TCF7L1, TGDS, TPMT, UG T2B4, UPB1, XYLT1, YOD1, ATP6V0A4, ATP6V1E2, CACNA2D4, PPARGC1A
Negative_16551	CFI, CR2, DCC, ID4, KIT, RDX, ACADL, ACPT, ACSM2A, ACSS2, ADCY5, AK3L1 , ALPPL2, AOX1, C1GALT1, CD36, CD8B, CLTA, COL1A1, CPT1B, CREB3L1, CT BP1, CYP1A2, DAPK1, DGKH, DGKZ, DHDDS, EARS2, ENPP7, EPHA8, EPOR, ERB B3, ETNK2, FCGR3B, FIGF, FZD10, GAD1, GALM, GALNT1, GATM, GCLC, GGT5, GNA15, GSTA4, GUCA1A, HIBADH, HIBCH, HTR7, IDI2, IFNA21, IFNAR1, IL1 RAP, ITGAM, LALBA, LDHD, LIPF, MAGI3, MAP2K4, MAP2K6, MAP2K7, MAP3K5 , MASP2, MGAT1, MLYCD, NAGS, NAT6, NCAM1, NFATC3, NFX1, NLGN3, NPR2, O R1A2, OR1K1, OR2A42, OR2D2, OR4C16, OR4D6, OR4M2, OR51A4, OR52A1, OR 5P2, OR6C74, P4HA3, PANK4, PCK2, PDHA2, PER2, PFN4, PIGL, PIGV, PIPOX , PLCD4, PMM2, POLD4, POLE4, POLR1B, POLR1C, PPARG, PPCS, PPP1R3C, PR KACB, PRKCB, PRKCQ, PSEN2, PTGES2, PTK2B, PTPRC, RASSF5, RPS6KB1, SE MA3C, SETD1B, SETD7, SLC27A1, SPCS3, SPTLC2, STK3, TAS2R60, THBS2, T RAF6, ULBP1, UPP1, VNN1, HLA-DRB3
Negative_16552	CGN, F9, IL2, LIF, LSS, PRL, STS, TEC, AASS, ABP1, ADIPOR1, ALG6, AMY2B , ARPC4, ARRB2, ARSA, B3GNT2, C4BPA, CAV1, CCL13, CCL22, CCL25, CCR3, CDC26, CDC45L, CDIPT, CHRM1, CLDN17, CLDN4, CMBL, CRLS1, CSNK1G3, CX CL10, CXCR4, CYP1A1, CYP26A1, CYP7A1, DCTD, DDX19A, DHCR24, DTX1, DU SP10, DUSP5, ENAH, ENPP7, ENTPD5, FGF2, FTH1, FUT2, GALE, GANAB, GATM , GJD2, GP1BB, GPX7, GZMA, HNF1A, HPSE, IAPP, IFNA6, IL12RB2, IL28RA, ISYNA1, ITGAD, LAMB1, LIMK1, MAML2, MAP3K8, MBL2, MGLL, MMP9, MYL7, M YLK, NANP, NANS, NCF4, NFKBIA, NR1D1, NRG1, NRG4, NT5C1A, NT5C3, NT5E , NTRK2, NUMBL, OPLAH, OR10A7, OR1E2, OR1L3, OR2A4, OR4S2, OR51B5, OR 52D1, OR5AP2, OR5AR1, OR5AU1, OR8H1, PCCA, PDGFRA, PFKP, PIGN, PIGX, PITX2, PNPLA3, POLR2C, PPA1, PPP1CA, PRKACG, PTGES, PTK2B, PTPN6, PV RL2, RARS2, RGS3, RPRM, SETD1B, SH2D2A, SPRY4, STK11, STX4, SYNJ2, TA S2R40, TCF7L2, UGDH, YWHAQ, MAPK8IP2, PNLIPRP2
Negative_16553	CFI, CKB, EGF, EZR, FH, GDA, GP6, ID4, IDS, IL3, IL8, MUT, OTC, SHH, TXK, AASDH, ACADVL, ACO2, ACOX1, ACP6, ACSL5, ACSM5, AK3L1, AKT1, ALG8, AP C2, ARG1, ARHGEF4, ATP5G2, ATP5H, B3GALT4, BBC3, BCL10, C1GALT1, CAC NB3, CASP7, CAV2, CCDC6, CCL7, CD40LG, CDC14B, CDIPT, CDKN1A, CHKA, C MBL, CNTNAP2, CSF2RB, CUL1, CXCR4, CYP3A43, DAPK1, DDIT4, DDX19A, ED A2R, EFNA4, ENO3, ETNK2, F2RL2, FMO3, FTH1, GMPS, HPSE2, HSD17B2, HSD 17B3, HSD17B4, ICAM3, IL15, INPP4B, ITGA1, ITGA2B, ITGAV, LAMB1, LDH D, MAN1A2, MCM4, MDM2, MGAT5, MNX1, NT5C, OR10A2, OR10G2, OR10Q1, OR1 K1, OR51V1, OR52A1, OR5L1, OR5M8, OR5R1, PAK3, PARVB, PER2, PGAM2, PI GB, PIGO, POLR1D, POLR3K, PPA2, PPP2R5D, PTPN1, PTPN7, RAPGEF2, RASS F5, RDH8, RFNG, RRM1, RUVBL1, SDC2, SELE, SFRP5, SGPP2, SMAD5, SMAD9, SPCS3, ST3GAL4, STAM, STAM2, STX7, SYNJ1, TAS2R4, TGFB3, THTPA, TM7S F2, TPI1, TRAF6, VDAC3, ATP6V0A4, GABARAPL2, SERPINE1, SUV420H1, TN FRSF10C

Negative_16554	BAX, C5, CFI, DCN, HAL, LCK, MTR, SMS, TPO, ACSM5, ACSS3, ACTN1, ADSL, A LDOC, ATP13A2, ATP5J2, AVPR1B, AXIN2, B4GALT1, B4GALT2, BCKDHB, BIR C3, BNIP1, BPGM, CAMK2B, CBR3, CCR4, CD14, CD247, CD8A, CLDN18, COL1A 2, CREB3L4, CRY2, CYP17A1, CYP26C1, CYP2B6, CYP3A7, CYP4A11, DDHD1, DGAT2, DGKE, DGKZ, E2F3, ERBB4, FABP1, FARSB, FCGR3A, FLT3, FSHR, GAL NT14, GCAT, GOT2, GPX5, HA01, HMGCL, IL29, INPP4A, ITGA3, LAMB4, MAP4 K2, MCEE, MGLL, MKNK1, MMP1, MOV10L1, MYH4, MYL7, NARS, NRAS, NTNG1, O NECUT1, OR11H1, OR1F1, OR2A14, OR2A25, OR2B11, OR2K2, OR2T29, OR5L2 , OR8J3, PAK2, PARD6G, PARVA, PARVB, PDE4B, PIGS, PLA2G2D, PLTP, PPP1 CC, PPP2R2D, PPP2R5B, PRKCQ, PTPMT1, RBKS, SETD2, SGPP2, SH3BP2, SMA RCA5, SMPD3, SOAT2, SOCS2, SPAM1, ST8SIA1, STAT1, TAS2R41, THBS1, UG T2B10, WHSC1L1, WNT10A, WNT8A, YWHAB, ATP6V1B2, TNFRSF14
Negative_16555	BTC, DCT, GCK, ABL2, AGXT, ALG12, AOC2, AQP7, BMP2, CACNA1C, CAMKK2, C ANT1, CARS2, CASP3, CASP6, CCL14, CCNA2, CCR9, CD47, CDC16, CDC25C, C DS2, CHRM1, CHRM3, CHST11, CLDN19, COL5A3, COQ3, CSNK1D, CSNK1G2, CT NNA3, CYP11A1, CYP11B2, DTX2, EGLN3, ENTPD5, EPHA1, GALT, GFAP, GGT1 , GNRHR, GPD1, GRIA2, GSTA2, HA01, HCST, HMGCL, HSD11B1, IDH3B, IFNAR 1, IFNB1, IL29, ITGAM, LRRC4C, MAOB, MAPK3, MGAT4B, MKNK2, MTMR2, MYD 88, MYH10, NCOA4, NCOR2, NCR2, NEFH, NME7, NT5E, OR10A5, OR10Q1, OR2T 5, OR4F15, OR4N2, P2RX7, PCNA, PDE10A, PDE4C, PIAS2, PIK3C3, PLAU, PL OD1, PON3, PPP3R2, PRSS3, PTAFR, RPS6KA4, RRAS2, SDHA, SELPLG, SETDB 2, SLC25A4, SOCS7, SOS2, SREBF1, SRGAP1, ST3GAL1, SULT2A1, TACR2, TA CR3, TAS2R14, TRMT11, TSTA3, UGCG, AASDHPPT, ATP6V1C1, MAPKAPK3, ST 6GALNAC3, ST6GALNAC4
Negative_16556	F3, F5, GBA, GP9, HAL, IL6, MAG, SFN, TFG, AADAC, ACADVL, ACOT11, ACVR2 A, ADRA1B, ALDH3B1, ALDOC, ALG3, ALPL, ANAPC1, ATP6AP1, B3GAT1, BDNF , BMP8A, CCL27, CCND2, CD3E, CD82, CES7, CHST13, COQ3, CSNK1G2, CYCS, DDX18, DGAT1, DGKI, DHRS4, DLL1, ECSIT, EFNB3, EIF4E2, ENTPD5, EREG, ETNK2, EXT2, FASLG, FGF14, FLT4, FMO4, FMO5, FOXA3, GADD45A, GALNT1, GAPDH, GNAI3, GOT1, HHEX, HNF1A, HNMT, HSD3B2, HSPB1, HTR4, IDH3B, IF NB1, IFNGR1, IL1R1, IL20, IL28A, IL8RA, ITGB8, KARS, KNG1, LAMA3, LAR S, MAOB, MAP2K2, MAPK13, MAPK7, MECR, MPP5, MPZL1, MYH15, NAT2, NAT5, OLAH, OR10A3, OR10A5, OR10T2, OR12D3, OR1A1, OR4N5, OR51T1, OR52B6, OR52E8, OR52M1, OR5D18, OR5L2, OR8S1, ORC4L, ORC6L, P2RX6, P4HA1, PD GFD, PDGFRA, PGK1, PGM3, PHKG2, PIP4K2A, PSAT1, PTTG1, PYCR2, RALGDS , RDH8, RHEB, ROBO2, ROCK2, RPS6, SDC3, SDC4, SEMA3F, SFRP5, SHC1, SLI T1, SMPD1, SPTLC2, STK3, STX12, TCF7L2, TGFA, TICAM2, TNFSF12, TSNAR E1, UBE2L3, UBE2L6, UNC5B, WNT2, WNT6, WNT9B, HLA-DPA1
Negative_16557	ABO, CR1, FH, FST, LPO, NPL, PLG, RFK, ACAD8, ACOT11, ACP1, ACTA1, ACTN 2, ADCY2, AHCY, ANAPC2, APAF1, ARPC1B, AVPR1A, B3GNT4, CAMK4, CASP9, CCNA1, CCND3, CDH2, CNTN1, COL4A2, COL5A1, COMP, COQ7, CPT2, CXCL13, CXCL2, CXCL9, DFFB, EPHB4, FABP3, FZD8, GALNT14, GALNTL5, GBA3, GBE1 , GNA11, GNRHR, GSTM3, HIBCH, HSP90B1, HTR5A, HYAL1, ICAM2, IPMK, IRF 9, ITCH, LDHAL6A, LIFR, LTB4R2, LYPLA2, MAT2B, MBL2, MYH6, NFATC1, NN MT, NUDT9, NUMBL, OR11H6, OR2A12, OR4A5, OR52E4, OR5A2, OR6C2, OR6C3 , OR7G2, OR8H2, P4HA3, PCYT1A, PDGFRA, PGAP1, PIGL, PIK3CB, PIK3R1, P LA2G10, PPARG, PPID, PPM1A, PRPH, RASSF5, RFXANK, ROBO2, RPE65, RPS6 KA2, SOCS1, SPRY4, STAT4, STX12, SYNJ2, THY1, TRIP10, TSHB, UBE2L6, U GP2, UGT2B10, ULK1, UPP2, WNT2, WNT3, ZIC2, ATP6VOD1, B3GALNT1, MAP3 K7IP2, ST6GALNAC5, TNFRSF13C

Negative_16558	<p>A2M, AUH, CD2, CRH, F10, GDA, GSN, HDC, IL2, TFG, TK1, A4GALT, AACS, ABI2, ACPT, ACSM5, ADORA2A, ADSL, AKR1B1, ALDOB, ANAPC10, ATP2A3, ATP5G1, ATP50, BET1, BIRC3, BLVRB, BTRC, CACNA1G, CACNG8, CAV1, CCL22, CD55, CDC23, CDH3, CES7, CHIA, CHPF, CHRM1, CLCA2, CREB3, CSF3R, CSH1, CTGF1, CTNNA3, CTTN, CXCL13, CYP3A43, DCTD, DDIT4, DHODH, DTYMK, EARS2, EPAS1, EPB41, FADS2, FGF17, FZD10, FZD2, GALNTL5, GALT, GCNT4, GGCX, GLI2, GLO1, GNAL, GNB3, GPD1, GSK3B, GSTM3, GUSB, HDAC2, HMGCS2, HNF4A, HSPA1B, HTR6, HYAL1, ICAM3, IDI1, IFNA14, IFNW1, IL17RB, IL4R, IL7R, IL9R, IRAK2, JAG2, JUND, LARS2, LCMT2, LTA4H, MFNG, MGAM, MGAT4A, MYH10, MYH7, NAT5, NEFH, NFKBIE, NTN1, OGDH, OR10A6, OR10G8, OR10H4, OR13G1, OR2G3, OR2M4, OR2T3, OR4E2, OR5AP2, OR6B2, OR6C1, OR6N2, ORC1L, PAK2, PARD6B, PFKFB3, PFKFB4, PGM2, PIGB, PIGH, PIGX, PIP4K2A, PLOD2, PLXNA1, PNPT1, POLR2H, PPP2R5C, PPP3R1, PPT1, PRDX6, PRKAR1B, PRKCA, PRKCI, PTPN5, RERE, RGS3, RPE65, SARS, SDHD, SEMA3D, SETDB2, SOCS2, SORBS1, SPRY3, SRGAP1, SSH1, SSH2, ST3GAL3, ST3GAL4, STT3B, STX12, STX2, SUV39H2, TAS1R2, TBK1, TBXAS1, TIAM1, TIAM2, TICAM2, TUBA3E, UROS, VEGFC, VTI1B, XCR1, XYLT2, GABARAPL1, MAPK8IP1</p>
Negative_16559	<p>BID, CD6, CFD, CRK, FAS, ID3, IL6, JUP, LSS, PGF, STS, TNN, WAS, ACTN1, ACVR1, ACVR2A, ADCY6, ADIPOR1, APOA1, ASS1, ATN1, ATP5E, ATP5G2, B3GALT6, BAI1, BMP5, CACNG4, CACNG6, CCL1, CCNA1, CCR6, CD58, CDH5, CHD8, CHR1, CHR2, CHR3, CHST12, CLDN16, CNTF, CPT1A, CSDA, CSNK1A1, CSNK1G1, CTF1, CYP2A6, CYSLTR1, DDOST, DDX50, DHCR7, DLL1, ECSIT, EPAS1, ERBB3, FGD3, FLAD1, FLOT2, FLT1, FZD2, FZD4, GALNS, GALNT14, GANAB, GLG1, GNA15, GRB2, GRIN2B, GRM5, GSTO1, GUCY2C, HLA-DRA, HLA-F, HNMT, IL11RA, IL13RA1, IL1RAP, JUND, KAT2B, KIR3DL3, LLGL1, LTBP1, MAP2K3, MAP2K5, MAP4K2, MAPK1, MAPK12, MASP2, MYD88, NCAM2, NFATC4, NFYB, NME7, NMNAT3, NRXN2, NT5M, NTRK2, NUMBL, ONECUT1, OR10C1, OR10G4, OR2AE1, OR2C1, OR2C3, OR2L13, OR2L3, OR2M5, OR2Y1, OR52A5, OR5AP2, OR5K2, OR6C6, OR7G3, OR8B12, OR8G1, OR8S1, ORC1L, P2RX7, PARVG, PDE6G, PDXK, PFKL, PIAS2, PIGF, PIK3CD, PIM1, PIP5K3, PLA2G2D, PLCB2, PLEKHA8, PLOD2, PLXNB1, POLR3D, PRIM2, PRKCD, PSAT1, PTGIS, PTK2B, TPMT1, PTTG1, RASGRP1, RASSF5, RUVBL1, SRD5A1, STX16, STX18, SUCLA2, SULT1A2, SUOX, TAS2R9, TCF7, TGFB1, THTPA, THY1, TJP2, TNFSF10, TNFSF12, TSLP, TUBB1, TYMP, UROD, UXS1, VARS, VDAC2, VEGFC, WNT5A, XCR1, ZIC2, B4GALNT1, MAPK8IP3, SERPIND1, ST6GALNAC5, SUV420H1</p>
Negative_16560	<p>A2M, AKT, BAD, F12, F2, FNT, GCR, GSN, GSS, MVD, MYK, PGD, PML, RBT, RPK, RPE, TXK, WAS, ZYX, AACS, ABL1, ACO1, ACSM2A, ADCY2, ADCY4, AGTR1, ALDO, ALG10, ALOX15B, ALOX5, APRT, AQP7, AREG, ARNTL, ARPC4, ARPC5, ARSD, ATF4, ATP12A, ATP2A2, B4GALT4, BACE1, BDNF, BIRC2, BMP6, BMPR1A, BTRC, C4BPA, CACNA1G, CASP10, CCL13, CCL28, CCNB2, CCR2, CD14, CDC7, CDKN2C, CHRM1, CMAS, CNDP1, CNTNAP1, COL1A1, CSAD, CSF2RA, CSF3, CTNNA2, CTNND1, CYP3A4, CYP4A11, DDIT3, DDX4, DGKD, DMGDH, DUSP1, E2F3, ECSIT, EDNRA, ENO3, ENTPD4, EP300, ERBB3, ESPL1, ETNK1, FBP1, FBXW11, FCGR3B, FDPS, FGF6, FMO1, GANC, GBA3, GCLM, GCNT3, GLI2, GNA11, GNPDA2, GPAA1, GPT2, GRLF1, GSTA3, GSTM5, HAAO, HMGCR, HSD11B1, HTR4, IDI1, IL12A, IL1R2, IL28RA, INMT, IRS1, KIR2DS5, KIR3DL1, KNG1, LALBA, LDHC, MAP2K1, MAP2K4, MAPT, MCCC2, MCM4, MTHFS, MTMR2, MTMR6, MYH6, NCR2, NMNAT3, NOX1, NRAS, NRXN2, NT5E, NT5M, NTRK2, OPLAH, OR11H6, OR13C8, OR1D5, OR1K1, OR1Q1, OR2G6, OR2T34, OR2T5, OR4D5, OR51A2, OR51A7, OR51G1, OR51I1, OR52B6, OR52L1, OR52M1, OR6K3, OR6K6, OR8K5, PDE1B, PDE3A, PDE5A, PHKA1, PIGA, PIGK, PIP5K3, PIPOX, PLA2G1B, PLCD3, PLTP, PNPO, POLE4, POLR1E, PPAP2B, PPAT, PPP1R3D, PPP3CA, PPP3R2, PRODH2, PTPRF, RAD51, RAPGEF2, RASGRP3, RDH16, RDH8, SEMA3B, SEMA3G, SEMA7</p>





Negative_16566	CS, GP9, HAL, PC, UBB, ACO1, ACO2, AMPD1, DLAT, DLST, EXT1, IDH2, IFNA6, IL18, OGDH, OR10P1, OR2AG1, PCK1, PCK2, PDE8B, SDHC, SDHD, SELL, SPI1, STX4, SUCLA2, SUCLG1, SUCLG2, YOD1, ATP6V1G2
Negative_16567	GPI, LTB, ALDOC, COL6A1, CYP26A1, DHDDS, FBP2, GUSB, H6PD, MAP3K12, MTMR2, NFASC, NTN1, OR4B1, PCK2, PFKL, PFKM, PFKP, PGM1, PPP2R5E, PRPS1, RBKS, TALDO1, TKTL1, TKTL2
Negative_16568	DBI, MPI, TKT, AGMAT, ALAD, ALDOB, BDNF, CAMK2G, CD40LG, CPT1C, FBP1, G6PD, H6PD, ITGA11, PFKM, PFKP, PGLS, PGM1, PON3, PRDX6, PRPS1, RDH10, RPIA, TKTL1, TKTL2
Negative_16569	C7, RPE, AKR1B1, GPT2, IL15, IL20, OR4C12, PLXNA3, SMAD9, UCK2, UGDH, UGT2A3, UGT2B10, UGT2B11, UGT2B17, UGT2B7
Negative_16570	CSF2RA, CTSB, OR3A1, OR51B2, PIGK, PIP5K3, PLK1, TOMM40L, UGT1A10, UGT2A3, UGT2B10, UGT2B17, UGT2B28, UGT2B4, UGT2B7, XYLB
Negative_16571	FAS, FUK, GSN, HK3, MPI, ADSL, AKR1B1, ALDH1A2, C1QA, CLTA, CLTCL1, CYP1A1, EXTL1, FBP1, FBP2, FECH, FGF23, FPGT, FZD1, GMDS, GMPPB, MTMR2, MYH10, OR10A2, OR10X1, OR2T12, PEMT, PFKFB1, PFKFB3, PFKM, PFKP, SORD, TACR1, TPI1, UGCGL1, UGCGL2
Negative_16572	AGL, DDO, GCK, HK1, HK3, LCK, MPI, AKR1B1, CACNA1B, CD38, FPGT, GMPPA, HEMK1, HMOX2, KIR2DL2, KLRK1, LRAT, MAGI2, MTMR1, MTMR2, MTMR6, NANS, OR13C8, OR1N2, OR52M1, PFKFB2, PFKL, PFKM, PFKP, PGM2, PMM1, PRKCB, TCF7L1, TSTA3, UGCGL1, ZIC2
Negative_16573	GAA, GCK, HK3, LCT, AKR1B1, CACNG8, CTNNA3, EPHB4, EPHX2, G6PC, G6PC2, GALE, GLB1, LALBA, LRDD, MKNK1, MTFMT, NRXN1, OR10Z1, OR5M8, PDGFA, PGM3, UGP2
Negative_16574	GAA, GLA, HK1, HK3, AKR1B1, APOC3, B3GNT2, CD48, CTNNB1, ELK4, G6PC2, GALE, GALK1, GALK2, GALT, GANC, GGT6, LALBA, PGM1, PHPT1, PPP2R1B, PRODH, RAP1A
Negative_16575	ACACA, FASN, MCAT, PDE3A, PRODH, SRD5A2
Negative_16576	ACACA, FASN, GLI2, INHBE, ITGA2B, OLAH
Negative_16577	AOC3, GALNT11, HADH, HADHA, HADHB, HSD17B4, MECR, OR2H1, VAV2
Negative_16578	ACAA2, CPOX, ECHS1, HADHB, IL11RA, INPP1, PPT1, TLN1, HSD17B10
Negative_16579	GHR, AASS, ACAA2, ACADL, ACADVL, ACAT1, ACAT2, ACSL1, ACSL3, ACSL6, ADH6, ADH7, ALDH1A3, ALDH1B1, ALDH2, ALDH3A1, ALDH9A1, ARPC1B, ARPC2, BMPR2, CDS2, CPT1B, CPT1C, CPT2, CYP4A11, DGAT2L4, FUT2, GCDH, GRIA3, GUCY2D, HSD17B4, MAPK13, MTAP, NTNG1, OR1L3, PAX4, PLOD3, POLR2F, PPARA, SPTLC1, STAT6, TP53I3, HSD17B10
Negative_16580	CBS, CD6, ACADL, ACADS, ACADSB, ACAT2, ACOX3, ACSL4, ACSL6, ACTG2, ADH1B, ADH4, ADH6, AGXT, ALDH1B1, ALDH2, ALDH7A1, ATP5G1, CCL1, CCL22, CHD8, CPT1A, CPT1B, CPT1C, CPT2, CYP4A11, ECHS1, EHHADH, HADH, IFNA16, INPP4A, METTL6, OR8B4, PCYT1B, PIGP, RPSA, TALDO1, TAS2R14, TUBB2B, ZMAT3, CSGALNACT2, HSD17B10
Negative_16581	ACAT1, ATP5A1, BDH2, CXCL12, DDOST, HMGCL, HMGCS1, OXCT1, POLR3G
Negative_16582	C8G, BDH1, BDH2, CAV3, HMGCL, HMGCS2, LTBP1, OR8H1, OXCT2
Negative_16583	LSS, MVD, AVPR1B, CLDN17, FDFT1, FDPS, GGCX, GGT5, GNAS, HMGCR, IDI1, IDI2, MYH2, NPAS2, NSDHL, OR52N4, PNPLA4, QARS, RBKS, SC4MOL, SQLE, STX5
Negative_16584	EBP, LSS, OTC, ACSM1, CD14, CD36, DHCR7, FDFT1, FDPS, FGFR2, GAD1, GBA3, GGPS1, HMGCR, HNF1A, IDI2, IPPK, NQO1, OR52D1, OR5AC2, SC5DL, VKORC1
Negative_16585	CEL, MSN, ACAA1, ADH1A, ADRB1, AKR1B10, AKR1C4, ALDH1A3, ALDH3A1, ALDH3A2, ALDH9A1, BAAT, CD40, CEBPA, CSAD, CSF3R, CYP27A1, FCGR2B, GALC, HSD3B7, LIPA, MASP1, OR4D2, PCCA, RUNX1T1, SOAT1, SRD5A1, SRD5A2, STAT4, UPB1, VKORC1

Negative_16586	JUN, ACAA1, ACVR1C, ADH1B, ADH5, ADH7, AFMID, AKR1C4, AKR1D1, ALDH1A3, ALDH1B1, ALDH3A1, ALDH9A1, CD82, CLDN18, CTSB, CYP27A1, HADHB, HS D3B7, ITGAM, LIPA, MASP2, OR2A42, OR52N2, OR8D4, OXSM, PDHB, PNLIP, S LC27A5, SOAT2, SQLE
Negative_16587	COQ5, COQ6, GALNTL1, PIK3R2
Negative_16588	C1S, ACAD9, COQ6, COQ7
Negative_16589	AKR1C4, AKR1D1, CYP11A1, CYP11B1, CYP17A1, GRIN2A, HSD11B1, LEF1, O R52K2, PIK3R3, PRPS1
Negative_16590	HK1, AKR1D1, CYP11A1, CYP11B2, CYP21A2, HSD11B1, HSD3B2, MICA, PNPO , POLR2H, RPS6
Negative_16591	AKR1C4, AKR1D1, APOA1, ARSD, CYP11B2, CYP19A1, CYP26B1, EPHA6, GANC , HSD11B2, HSD17B1, HSD17B2, HSD17B3, HSD3B2, IFNA16, ISYNA1, METTL 6, NFATC4, NOX1, OR52B6, OR5B21, PHPT1, PLXNB2, POLR2C, RAB23, SKP1, SRD5A2, SULT2A1, TAS2R50, TRMT11, UGT2B10, UGT2B11, UGT2B28, UGT2B 4, UGT2B7, ULK3, VAMP1, WBSCR22, PLA2G12A
Negative_16592	IL7, STS, ACTB, ARSD, ARSE, CACNG8, CCND1, COL11A1, CYP11B2, CYP19A1 , DUSP10, HEMK1, HSD11B2, HSD17B2, HSD17B7, HSD17B8, HSD3B1, HSD3B2 , ITGAE, JAG1, LCMT1, LDHB, MAOB, MGST2, OR1C1, OR9G1, POLR2E, PPM1A, PTPN6, SIGLEC1, SULT1E1, SULT2A1, UGT2B11, UGT2B17, UGT2B4, UGT2B7 , WBSCR22, XIAP
Negative_16593	ADA, ALG5, AMPD1, ATP4A, ATP4B, ATP5C1, ATP5E, ATP5F1, ATP5G2, ATP5G 3, ATP5H, ATP5I, ATP5L, ATP6AP1, ATP6V1A, ATP6V1D, ATP6V1F, CDC25B, CNGA3, CYP2J2, IFNGR2, IL1R2, IRAK2, KCNB1, MAGI3, MTHFD1L, MYL2, OR 14I1, OR4K15, PARVB, PFAS, POLR2H, PPA1, RPS6, TCIRG1, UNC5D, YWHAE, ATP6V0A1, ATP6V0A2, ATP6V0A4, ATP6V0D1, ATP6V1G2, ATP6V1G3
Negative_16594	BTC, HGF, XDH, AC02, ALPL2, ATP4A, ATP4B, ATP5A1, ATP5B, ATP5C1, ATP 5D, ATP5E, ATP5F1, ATP5G2, ATP5I, ATP5J2, ATP6AP1, ATP6V0B, ATP6V0C , ATP6V1D, ATP6V1F, ATP6V1H, C4BPA, CHPT1, DAPK3, DRD2, GADD45B, HYA L1, OR2B2, RGS3, SH2D1A, SLC25A6, SSH3, TAS2R41, VDAC3, WNT3A, ALDH1 8A1, ATP6V0A1, ATP6V0E1, ATP6V1C2, ATP6V1E1, ATP6V1E2, ATP6V1G1
Negative_16595	ASL, CR1, OTC, PRL, SMS, ALDH1B1, ALDH2, ALDH9A1, AMD1, ARG1, CACNA1F , CSNK2B, EPB41L2, GATM, H6PD, HTR7, KITLG, MAOA, MAOB, MASP2, NAGS, O DC1, OR10H2, OR6C76, RAC2, RAPGEF2, SAT2, SEPHS1
Negative_16596	ABO, CKM, OTC, SMS, SRM, ABP1, ALDH1A3, ALDH1B1, ALDH2, ALDH3A1, ALDH 9A1, AMD1, ARG1, C1QA, CD28, DPYSL2, E2F4, IL17B, NLGN2, ODC1, OR2F2, PDXK, PLAUR, PPP2R2C, SAT1, SPTAN1, WNT4, ALDH18A1
Negative_16597	ADA, ADK, AK1, AK2, AK5, AK7, DCK, GDA, LEP, AASS, ADCY1, ADCY6, ADCY7, ADCY8, ADCY9, ADSL, ADSSL1, AGPAT6, AHCYL2, AK3L1, ALDH1A2, ALOX15, AMPD3, APBB1, APRT, ATIC, ATP13A2, ATP5L, CACNG8, CADM1, CAMKK2, CAP N2, CCR10, CD55, CDS1, CHSY3, CSNK1A1, CYP11B2, DARS, DARS2, DGUOK, D IAPH3, ECHS1, EHMT2, ELK4, ENTPD1, ENTPD3, ENTPD4, ENTPD5, ENTPD8, F GF1, GALNT8, GART, GATM, GMPR, GMPR2, GMPS, GUCY1A3, GUCY2D, HARS, HP RT1, IFNGR2, IL23R, IL25, IL2RB, IRS2, ITGA8, ITPA, KCNB1, KLRC3, LAM B1, LEF1, MAFA, MAN1C1, MAP2K5, MAPK11, MAPK12, MDH1, MGAT4A, NCAM2, NME2, NPR1, NPR2, NT5C1A, NT5C2, NT5C3, NT5E, NT5M, NUDT9, OR2A12, OR 4K13, OR9A2, OR9A4, PAICS, PARD6B, PDE10A, PDE11A, PDE1A, PDE1B, PDE 2A, PDE4C, PDE4D, PDE6D, PDE6H, PDE7A, PDE9A, PFAS, PIGC, PIM1, PKM2, PLCB1, PLCE1, PNPT1, POLA2, POLD1, POLD2, POLE4, POLR1A, POLR2H, POL R2J, POLR2K, POLR2L, PPAT, PRIM2, PRKCI, PRPS1, RBL1, RENBP, RRM2, RR M2B, SOCS1, SSH2, TAS2R48, TNFRSF9, TYMP, VAV2, WASF3, CSGALNACT2, H LA-DPB1, SERPINF2, SUV420H1

Negative_16598	AK1, AK2, AK5, DCK, FYN, GDA, SI, ACYP2, ADCY10, ADCY2, ADCY3, ADCY5, ADCY7, ADCY8, ADSS, AK3L1, ALOX12, AMPD1, AMPD2, AQP7, ARRB2, B4GALT2, BPGM, CCR7, CD34, CD55, CDC25B, CDKN2D, CSNK1G2, CYP3A4, DAAM2, DGUOK, DIAPH2, DRD2, ENTPD1, ENTPD5, ENTPD8, EPHB3, FGF17, FRAT2, FSHB, FSHR, FZD2, G6PD, GALNTL5, GART, GMPR, GMPR2, GRIN2C, GSTT1, GUCY1A2, GUCY2C, GUCY2F, HPRT1, HSD17B8, ICOSLG, IL10RA, IMPDH1, ITGA1, ITPA, KLRC1, MAPK9, MCM7, MS4A2, NME2, NME6, NOTCH2, NPR1, NPR2, NT5C, NT5C1B, NT5E, NTSR1, NUDT9, OR10G8, OR13C4, OR1D2, OR1J1, OR2T5, OR51E2, OR51S1, OR52R1, OR56A1, OR7C1, OR9G4, PAPSS2, PARVB, PDE10A, PDE11A, PDE1B, PDE3B, PDE4A, PDE4B, PDE4D, PDE6D, PDE6H, PDE7B, PDE9A, PDGFC, PDIA4, PDPK1, PER2, PHPT1, PIK3C2A, PIP4K2A, PKLR, PKM2, PLOD2, PNPT1, POLA1, POLD2, POLD3, POLE, POLE2, POLR1D, POLR1E, POLR2A, POLR2C, POLR2F, POLR2G, POLR2I, POLR3A, POLR3G, POLR3K, PRIM1, PRIM2, PRPS1, PTGS2, RRM1, RRM2, RRM2B, RXRB, SPRY1, TAS2R14, TSNAE1, UMPS, UNC5B, WNT3A, PAFAH1B1
Negative_16599	ACTG2, CES2, CYP1A2, CYP2A13, CYP2A6, CYP2A7, RHEB
Negative_16600	CYP2A13, CYP2A7, GOSR2, NAT1, NAT2, NCKAP1, TNFRSF6B
Negative_16601	AGK, CRH, DCK, GPI, IL7, TK2, TNF, ADRB3, ALDH5A1, ALDH6A1, B3GNT2, CACNG7, CCL27, CCR3, CDKN1B, CER1, CHEK1, CHIA, CHSY3, CMPK2, CTPS2, CYBA, DCTD, DPYD, ENTPD3, ENTPD5, ENTPD6, ENTPD8, F11R, FECH, FGF21, ITGA9, LAMA3, LAMC2, MARS, MKNK1, NEU2, NME6, NME7, NOX1, NT5C, NT5C1A, NT5C1B, NT5C3, NT5M, NUDT2, OR13H1, OR1M1, OR4K13, OR8D4, PAPSS2, PNPT1, POLA1, POLD1, POLD4, POLE, POLE3, POLE4, POLR1B, POLR1D, POLR2A, POLR2C, POLR2D, POLR2E, POLR2F, POLR2I, POLR2J, POLR2L, POLR3A, POLR3B, POLR3G, POLR3K, PRKACG, PTDSS2, RDH8, RRM1, SH3BP2, SPTLC1, TBL1X, UCK2, UPP1, UPRT, WASF1, CACNA2D4
Negative_16602	CAD, DCK, GNE, HGD, TNF, ACP2, BCAT1, C1QA, CANT1, CCDC6, CCL17, CCNG1, CMPK1, COMT, DCTD, DCXR, DHODH, DPYD, ENTPD1, ENTPD3, ENTPD5, ENTPD6, ENTPD8, FBP2, FGF23, GUCA1B, IFNA21, IL13RA1, IRF5, ITPA, JAK2, KCNQ1, MAPK14, NME6, NPR1, NT5C1B, NT5C2, NT5E, NT5M, NUDT2, OR1L4, OR1Q1, OR4L1, OR5D16, OR6C1, OR7D2, OR8B8, OXTR, PFN2, POLA2, POLD1, POLD2, POLD3, POLE, POLE2, POLR1A, POLR1B, POLR1C, POLR2C, POLR2D, POLR2F, POLR2G, POLR2H, POLR2I, POLR3B, POLR3G, POLR3K, PPP2R2C, PRIM1, PRKCQ, PTK2, PVRL3, RRM1, SLC27A1, SLC9A1, SRGAP2, TBXAS1, TICAM2, TRAF2, TYMP, UBA1, UMPS, UPB1, UPP1, UPRT
Negative_16603	CAD, ABLIM2, ACSL5, CCR10, DIAPH1, EPRS, F13B, GAD1, GFPT2, GLS2, GLUD1, GLUL, GOT1, GOT2, GPT2, KLRC4, MMP1, MTHFS, NADSYN1, OR52M1, PPAT, PRKCB, PRKG2, VANGL2
Negative_16604	CAD, ABAT, ALDH5A1, CPS1, EARS2, EPRS, FARSB, GFPT1, GLUD1, GOT2, IL22RA2, NADSYN1, NRXN2, ODC1, OR13C9, OR2B2, OR4K1, OR6M1, OR6S1, PIP5K1A, PPAT, QARS, RASGRF2, SHC2
Negative_16605	ASL, DDO, F7, GAA, PC, ABAT, ACY3, ADSSL1, AGXT, ALDH5A1, ASPA, CTNNA3, DVL2, GAD1, GAD2, GALNT12, GOT1, GPT2, HSPA1B, NARS, NARS2, NFATC1, NFYA, OR5M8, RFWD2, SMAD6, SUV420H2
Negative_16606	AK1, ASL, DDO, GPT, IHH, ABLIM1, ACY3, ADSS, AGXT, APLP1, ASPA, ASRGL1, DARS, DUSP4, GAD1, GAD2, GOT1, GOT2, HARS, KIR2DS5, KLRD1, MTHFD2, NARS, PIK3C3, PSME2, TSC1, ULK1
Negative_16607	AMT, CBS, DAO, GSN, SDS, TEC, ALS2, AOC3, ARPC5L, ATP5J, BHMT, CHKB, CLDN7, EPB41L3, FDPS, GAMT, GATM, GLDC, GMPPA, GNMT, HRH1, HSD3B7, MAOB, OR9I1, PGAM4, PIPOX, PISD, PLCZ1, PLXNA1, PSAT1, PSPH, RASGRF1, SARAH, SARS, SARS2, SEMA4D, SHC4, STT3B, TAS2R14

Negative_16608	CTH, LTB, SDS, ADH4, AGXT, AGXT2, ALAS2, ANAPC11, AOC2, AOC3, ASMT, BHMT, CHDH, CHKB, DMGDH, FUT7, FZD4, GNMT, GPX7, GRIA3, HSD3B7, INSR, LR P5, MAOB, MAP3K11, OR10AD1, OR56A1, PEMT, PHGDH, PISD, PRKAA1, PSPH, SARS2, SHMT2, SOAT2, STK4, TBL1Y, ATP6V0A1, PPP1R12A
Negative_16609	CGA, CTH, EDA, MTR, SRM, TAT, AHCYL1, AMD1, ARRB1, BHMT, CHAT, DDX4, DE RA, DNMT1, DNMT3L, HAO2, IPMK, MAT1A, MAT2B, ORC3L, SH2D1B
Negative_16610	CTH, MTR, SRM, AHCY, AHCYL2, BCL2L1, CYP8B1, DNMT1, DNMT3A, DRD5, FZD 9, GJA1, MARS, MAT1A, MAT2B, NKX2-2, OR1L1, OR51Q1, OR7G1, PI4KA, TRDMT1
Negative_16611	AKR1C3, BCAT1, CARS, EI24, GOT1, HLA-DMA, LDHAL6A, LDHAL6B, LDHC, MPST, NRCAM, SHMT2
Negative_16612	ACTB, CARS2, GMPPA, GOT1, GOT2, LDHAL6A, LDHAL6B, LIFR, MPST, OR4E2, PDHA2, PIM2
Negative_16613	AUH, DLD, MUT, ACAA1, ACADM, ACADS, ALDH1B1, ALDH2, ALDH3A1, ALDH3A2, ALDH6A1, ALDH7A1, AMPD2, AMPD3, BCAT1, BCKDHB, CACNB4, CDC14B, CYP 21A2, DAPK3, ECHS1, EHHADH, FMO1, GLI3, HADH, HIBADH, HIBCH, HMGCL, L AMC3, MCEE, MYH6, OR10K2, OR51A4, OR51B4, PAK2, PCCA, PRSS2, PTAFR, P VRL2, RAF1, TPK1, VAV3, VCAM1, AASDHPPT, HSD17B10, MAPKAPK3
Negative_16614	AUH, DBT, EPO, GP5, MUT, TNN, ACAA1, ACAA2, ACAD8, ACADM, ACADSB, ACAT 2, ADORA2B, ALDH2, ALDH3A2, AOX1, BCKDHA, CACNA1S, CBLB, CDH2, CHRM3, DUSP5, ECHS1, EGFR, FARSB, HADHB, HIBCH, HMGCS1, INPPL1, MCEE, OGDH, OR2A25, OR6M1, OXCT1, OXCT2, PCCA, PCCB, PCYT1B, PPP1R3C, RERE, RHO A, SMARCA2, SPHK1, ST3GAL6, UNC5B, HSD17B10
Negative_16615	BCAT1, DTX4, ENTPD6, IARS, IARS2, LARS2, SEMA3C
Negative_16616	ACSS3, BCAT1, DDX41, IARS, IARS2, IQGAP3, VARS
Negative_16617	C6, CS, AASDH, AASS, ALDH1B1, ALDH2, ALDH9A1, ALOX15, B3GALT5, BBOX1, CAMK2D, CRY2, DARS2, DLST, EHHADH, EHMT1, EHMT2, FTCD, HADH, HSD17B 4, IL10RA, IL11, MAGI1, NCK2, NOS3, NR1H3, NSD1, PANK3, PDE6H, PIK3R4, PLOD1, PRKG1, PSEN1, RARS, RPN1, SENP2, SETD1A, SETD2, SETD8, SETDB 2, SPCS1, SUV39H2, TACR3, TMLHE, AASDHPPT, HSD17B10, SUV420H1
Negative_16618	TPO, AASDH, ACAT1, ADORA2B, ALDH1A3, ALDH2, ALDH3A1, ALDH3A2, AOC3, AVPRIA, CCNB3, CTTN, CXCL10, CXCR5, DGKG, DNMT3A, DOT1L, ECHS1, EHHA DH, EHMT1, EHMT2, EPHA7, GRIN2B, GUCY2C, L1CAM, NFX1, NRXN2, NUMB, OGDH, OR51D1, PDE3B, PGAM1, PLOD1, PLOD3, SETD1B, SETD7, SETD8, SNW1, S PCS1, SUV39H1, TMLHE, WHSC1, WHSC1L1, WNT4, CSNK1A1L, HSD17B10, SUV 420H1
Negative_16619	CD4, CKB, CKM, ID4, LTB, PTS, ALDH4A1, ARG1, ASS1, CCR5, CKMT2, EPRS, F CGR3B, GALNTL2, GAMT, GATM, GLUD1, MAP2K4, MAPK7, NFAT5, OR4A16, OR4 N5, P4HA1, P4HA2, PCK2, PRODH, PYCR1, PYCRL, RARS2, SNW1, SPRY4, TDO2
Negative_16620	AK1, ASL, C2, OTC, ALDH4A1, ARG1, ARG2, ASS1, B3GNT2, CD01, CKMT2, CLD N6, ETNK1, GAMT, GLUD1, GOT1, IGF1R, LAMC1, LAP3, LTC4S, MAML2, MGAT4 A, P4HA1, P4HA2, PRODH, PYCR2, RARS2, SAT1, SLC12A2, TACR2, USE1, WNT 6
Negative_16621	DDC, HAL, HGD, PLN, ACP6, ALDH1A3, ALDH1B1, ALDH3A1, ALDH3A2, ALDH3B 2, ALDH7A1, AMDHD1, BAIAP2, CASP3, CTNNA3, CYP4A22, FTCD, HARS2, HEM K1, HNMT, KAT2A, LCMT2, NMNAT3, PNPT1, PPID, STAT5B, STX8, TRAF2, TRM T11
Negative_16622	HAL, MVK, ABP1, ALDH1A3, ALDH2, ALDH3B1, ATP2A1, BCAT2, COL1A2, DDX2 3, DUSP3, EDN1, ENTPD7, FSHR, FTCD, HARS2, HEMK1, HNMT, IL22RA1, MAOA, MAOB, METTL2B, METTL6, OR2T11, POLR2C, POLR2K, SUCLG1, UROC1, WBSC R22
Negative_16623	AGL, DDC, FAH, HGD, HPD, ME3, MIF, TAT, TPO, ADH1A, ADH1B, ADH7, ALDH3B 1, AOC2, C4BPA, CHKA, ESPL1, FARSB, GOT1, GOT2, GSTZ1, IL20, IMPA1, KL RK1, MAOA, OR3A1, ORC6L, PDE4C, ULBP3, SERPIND1, SLC25A31

Negative_16624	DCT, DDC, F10, FAH, ME1, ACADL, ADH1A, ADH4, ADH6, ADH7, ALDH1A3, ALDH3A1, ALDH3B2, AOC2, AOC3, DDX52, EPRS, GOT2, GSTZ1, MAOB, MYH15, OR7C2, PDHA2, PLCD4, PNMT, PPCDC, RPRM, STK3, TJP1, TUBA1B, ULBP1
Negative_16625	HPD, KIT, LPO, MIF, TAT, ACTC1, ALDH1A3, AOC2, BCL2L1, CD8A, GOT1, HEXB, HSD17B7, MAOA, RAPGEF4, TACR1
Negative_16626	AK2, DDC, HPD, LPO, TAT, ALDH3B1, ALDH3B2, AOC2, CACNB2, CACNG4, GNA12, MAOB, MAP2K5, MARS, NAMPT, HLA-DPB1
Negative_16627	DDO, HDC, ACP1, ACP5, ACPT, ALPI, ALPP, ALPPL2, CYP3A43, CYP3A7, DDX54, OR14C36, OR5D18, PON2, PPP2R5B, SUCLG1, ULBP1
Negative_16628	DCC, IL7, ACP6, ACPP, ACPT, ALPI, ALPPL2, AREG, CYP3A5, FZD8, GSTA1, PON1, PON2, PON3, SESN3, TBXA2R, VAMP3
Negative_16629	C8G, DDC, JUP, AANAT, ABP1, ACAA1, ACAT1, AFMID, ALDH1B1, ALDH3A2, ALDH7A1, AOX1, ASMT, CCL17, CDIPT, COL4A1, CYP1A2, ECHS1, FGFR2, GCH1, GGPS1, HAAO, HADH, HEMK1, KYNU, LCMT1, LCMT2, LEFTY2, MAOB, METTL6, OGDHL, OR4S1, OR51G2, PTGER3, RFXAP, SDHC, SMC1B, SPTLC1, TDO2, TNFRSF8, TPH1, TRAF3, TYMS, UNC5C, UPB1, VNN1, WARS, WBSCR22, HSD17B12
Negative_16630	CAT, DDC, KMO, LCK, LIF, AADAT, AANAT, ACAT1, ACAT2, ADCY4, ADCY6, ALDH2, ALDH3A1, ALDH7A1, ALDH9A1, CASP6, CCNA2, CD14, DLST, ECHS1, GCDH, HAAO, HADHA, IL23A, LCMT1, LCMT2, LDHB, MDH1, METTL2B, METTL6, NFX1, OR2B11, OR52E4, PAX4, PLA2G2D, POLR1C, RAPGEF4, ROB01, SDC1, STX7, TPH1, TPH2, TRAF6, TRMT11, TSC1, WARS, WARS2, WBSCR22, CACNA2D2
Negative_16631	ACSS3, CYP4F3, FARS2, FARSA, GOT1, GOT2, IGFBP3, PYGM, YARS
Negative_16632	PAH, CD48, FARSA, GOT1, GOT2, NADK, OR4B1, PNPT1, YARS
Negative_16633	SYK, ABAT, ACADM, ALDH1A3, ALDH2, ALDH3A1, ALDH3A2, ALDH7A1, ALDH9A1, CCNG1, CNDP1, COL4A1, GAD1, GAD2, IL17RB, IMPDH1, LDHB, OR52M1, OXSM, PAPSS2, PCCA
Negative_16634	DBH, SDS, ACADM, ALDH1A3, ALDH1B1, ALDH3A1, ALDH7A1, CYP2A6, DHRS3, DPYD, EHHADH, GAD1, GAD2, HADHA, MGST2, OR2K2, OR3A1, PTPN6, TNFRSF8, UPB1, VAV2
Negative_16635	SFN, CD01, ETNK1, GAD1, GGT1, GGT5, GGT7, MCM2, MYH4, OXTR
Negative_16636	CD01, CSAD, EFNB2, FBXW11, GAD1, GGT1, GGT6, HTR2A, NFATC2, OR6B2
Negative_16637	CD48, CHPT1, PCYT1A
Negative_16638	NF1, CHPT1, PCYT1B
Negative_16639	CBS, CTH, AHCYL1, ALDH1L1, CCL4, DDX41, ENPP6, LAMB3, LCMT2, MARS2, MAT1A, METTL6, MGST1, NT5C3, OR1L1, PAPSS1, SCLY, SEPHS1, SLC33A1, TUBB2B
Negative_16640	CBS, ADAM17, AHCY, AHCYL1, AHCYL2, DHDDS, HEMK1, KARS, METTL2B, METTL6, OR2A12, OR2A14, OR51B5, OR51I2, OR7A5, PAPSS1, PAPSS2, SC5DL, SCLY, TIAM1
Negative_16641	GLUD1, GLUD2, PFKFB1, SMAD9
Negative_16642	ADA, GLS2, GLUD2, GNG13
Negative_16643	GSR, KMO, SRM, ANPEP, CDC42, CNTN2, DUSP10, GADD45G, GCLC, GCLM, GPX5, GSTA3, GSTA4, GSTM3, GSTM4, GSTM5, GSTO1, GSTP1, IBSP, IL20RA, LAP3, MGST1, MGST2, MPDZ, MYH6, ODC1, OPLAH, OR10J1, OR4P4, PAK6, PARD6G, PSENEN, RRM1, WNT1, ZFYVE16
Negative_16644	GSR, ID4, LYN, SMS, SRM, ACPP, ADH7, C1GALT1, CACNG2, CYP2A6, FGF10, GDF6, GGT5, GGT6, GGT7, GPX5, GPX7, GSTA3, GSTK1, GSTM1, GSTM3, GSTO1, GSTO2, GSTT1, GSTZ1, MAP3K14, MGST2, NOTCH3, NUDT9, OPLAH, OR5B3, PDE4C, RPS6KA6, UBA1, CACNA2D1
Negative_16645	HK1, SI, ACSL3, AKT2, ALDH1A1, AMY2B, AXIN2, CISH, DGKA, DUSP8, FOXO3, G6PC, G6PC2, GBA3, GUSB, GYS1, ITGA5, LTBP1, MGAM, NFATC2, NME2, OR10G3, PDIA4, PGM1, PGM3, PIAS2, PIK3C3, PYGL, RGS3, SMPD4, ST6GAL1, UGP2, UGT2A3, UGT2B10, UGT2B11, UGT2B17, UGT2B28, UGT2B7, UXS1, TNFRSF12A

Negative_16646	AGL, GAA, GBA, HDC, HK1, HK2, SI, ACP5, APBB1, ATP6VOC, BACE1, BCMO1, C D36, DHRS4, ENPP3, FGF9, GANC, GYS1, GYS2, IL4R, MAFA, MALT1, MAP2K4, MAP4K2, MGAM, OR1Q1, OR4M1, OR9Q1, PDPK1, PGM1, PGM3, PYGL, SIAH1, SR D5A1, UGDH, UGT1A10, UGT2A3, UGT2B10, UGT2B11, UGT2B28
Negative_16647	JUP, ACOX1, ALG1, ALG10, ALG11, ALG13, ALG2, ALG6, ALG8, ALG9, AMDHD2 , ATP6V1D, B4GALT2, CASP9, CCKBR, CHSY3, CLCA4, CLTC, CRY1, DAD1, DHD DS, DPAGT1, DPM2, ENPP7, GTSE1, IL29, MAN1A1, MAN1A2, MAN1C1, MGAT1, MGAT3, MGAT4A, NCK1, OR14I1, PIGT, PLD1, ST6GAL1, STT3B, TRAF1, B4GA LNT1, C1GALT1C1
Negative_16648	IHH, KHK, ADORA2A, ALG1, ALG10B, ALG11, ALG12, ALG2, ALG3, ALG6, ALG8 , ALG9, ANAPC4, B4GALT3, CHRM2, CTNNA3, CYP17A1, CYP2A13, CYP4F3, DA D1, DPAGT1, DPM1, DPM2, GANAB, IL29, LAMB1, MAN1C1, MGAT1, MGAT4A, MG AT5, OCLN, OR10G9, OR2C3, PGM2, PIGS, RHEB, RPN1, SC4MOL, SSH1, STT3B , TUBA3E
Negative_16649	JUN, ADCY8, ATP6VOC, AVPR1A, C1GALT1, CD244, DGUOK, GALNT10, GALNT1 1, GALNT2, GALNT8, GALNT9, GALNTL1, GALNTL2, GALNTL4, GCLC, GCNT3, G CNT4, HSD17B2, PYCRL, ST3GAL2, TICAM1, TP73, TUBB1, VASP, C1GALT1C1 , PNLIPRP1, ST6GALNAC1
Negative_16650	GCK, OGT, SHH, DDB2, DUSP10, GALNT1, GALNT10, GALNT11, GALNT13, GALN T3, GALNT5, GALNT8, GALNTL4, GALNTL5, GCNT1, GCNT4, KLRC4, MAPK14, M YH1, PIGB, PMVK, PRIM2, ST3GAL2, TICAM2, UPB1, UROS, VAV2, C1GALT1C1
Negative_16651	CHIT1, GALE, GALT, PTCH1, UGP2, UPRT
Negative_16652	BMP4, GALE, GALT, PNPT1, UGP2, PAFAH1B2
Negative_16653	C3, HK3, IL8, ACAT2, CMAS, CTBS, EPHB4, GFPT2, GNPDA2, GNPDA1, GSTM5 , HEXA, HEXB, LEF1, MTR6, NAGK, NANP, NANS, OR2A12, OR4K13, ORC4L, PH PT1, PPT1, RENBP, TLN1, ATP6V1C1, PHOSPHO1
Negative_16654	GNE, HK2, HK3, NPL, ADCY1, AMDHD2, ARPC3, BPNT1, CHIA, CMBL, DDX51, FG F7, GNPDA1, GNPDA2, GNPDA1, HEXB, IARS2, MECR, NAGK, NANP, NANS, PDC D1, RFXANK, SMAD9, ST3GAL3, UAP1
Negative_16655	GNS, LCT, ACSM2A, C1QC, CCND3, CERK, CTLA4, DPM3, GLB1, HEXA, HEXB, HG SNAT, HPSE, HYAL1, IL8RA, SPAM1, SERPINB5
Negative_16656	GNS, LCT, ANAPC10, APPL1, BLVRA, CAMK2D, GALNS, GLB1, GLO1, GUSB, HEX A, HGSNAT, HPSE2, IDUA, IL12B, STX16, HLA-DQA2
Negative_16657	HDC, ACSM1, B3GALT6, B3GAT2, CHSY1, CHSY3, CSNK2B, NPR1, NTNG1, OR52 E2, XYLT2, CSGALNACT2
Negative_16658	B3GAT1, B3GAT3, CHSY1, CHSY3, EPHA5, LTB4R2, NEFH, NEFM, ST3GAL1, TY RP1, XYLT1, CSGALNACT1
Negative_16659	BBOX1, EXT2, EXTL1, EXTL2, HPSE2
Negative_16660	CLTA, EXT1, EXT2, EXTL1, PFN2
Negative_16661	AGK, CEL, GK, ID2, LCK, LPL, NOG, AGPAT3, AGPAT4, AKR1A1, AKR1B1, ALDH 2, ALDH3A1, ALDH7A1, ARSD, BDKRB1, CHPT1, COL5A2, DGAT2, DGKB, DGKE, DGKH, DUSP8, F2RL1, GLYCTK, GUCA1B, LIPC, NAGK, NFATC3, OR10H1, OR8K 1, P4HA1, PDE7B, PLXNB1, PNLIP, PNPLA3, PPAP2A, PPAP2B, PPAP2C, PRSS 1, RPS6, SH2D2A, SUOX, TIRAP, PNLIPRP1
Negative_16662	AGK, DCT, DLD, GK, ID4, ILK, AGPAT2, AGPAT3, AGPAT4, AGPAT6, AKR1A1, A LDH1A3, ALDH1B1, ALDH9A1, CACNG5, CALML3, CDKN1B, CLDN7, DGAT2L4, D GKA, DGKD, DGKE, DGKI, DGKQ, DGKZ, FRAT2, GALNS, GLYCTK, GNA11, GPAM, LIPA, LIPF, LRAT, MGLL, NARS2, OR2L2, OR51T1, PCNA, PIP4K2A, PPAP2B, PPAT, RDH8, RUNX1, SKP2, TAS2R7

Negative_16663	ACPP, ACVR2A, ASNS, BCKDHB, CHPT1, CLDN7, CYSLTR1, DGAT2, GALNTL5, G RIN2D, GRM5, IMPA1, INPP1, INPP4A, INPP5E, INPPL1, IPMK, ITPK1, ITPK A, ITPKB, MAP2K2, MYLK2, NTRK2, OR14A16, PI4KA, PI4KB, PIK3C3, PIK3C A, PIK3CD, PIP4K2B, PIP4K2C, PIP5K1C, PLCB1, PLCB4, PLCD3, PLCD4, PP P3R1, PTPMT1, RRAS, SMPD1, SYNJ1, SYNJ2, TGFBR2, TNFSF9, TRAF5, TRPC 1, SERPINA5
Negative_16664	CKB, MOS, PC, APBB1, BCL2, CARS2, CHRM3, CREB3L1, GNA15, HSD17B1, IL2 1, IL28RA, INPP1, INPP5E, INPPL1, IPMK, IPPK, ITPK1, ITPKA, LIPC, MAR S, MIOX, OCRL, OR14I1, OR2G6, OR2T4, OR5M8, PARD6A, PAX6, PI4KB, PIK3 C3, PIK3CB, PIK3CG, PIP5K1A, PIP5K1C, PLCB4, PLCD3, PLCE1, PLCG1, PL CG2, PLCZ1, PPBP, PTEN, SH3BP2, SYNJ1, SYNJ2, UGT2A1
Negative_16665	APOC3, C1QB, CLDN6, CNTF, CYP2S1, GPLD1, GPX5, ITGAM, OR2A2, PIGC, PI GK, PIGM, PIGN, PIGP, PIGQ, PIGT, PIGU, PIGV, PIGW, PLCD1, SDHB, SPTLC 1
Negative_16666	CD2, RDX, AGPAT4, CAMK2A, CLTB, CX3CL1, DPM2, FGF19, GNAT3, GPAA1, GP LD1, MAPK12, OR13C2, PIGH, PIGK, PIGL, PIGM, PIGN, PIGP, PIGU, PIGW, S KIV2L2
Negative_16667	BID, CGA, GCK, RPE, AACS, ACHE, AGPAT1, AGPAT4, ALDOA, ALG1, AVPR1A, C BR1, CDIPT, CDS2, CHAT, CHKB, CHPT1, CLDN10, DGKA, DGKB, DGKD, DGKE, D GKH, DGKI, DGKZ, ETNK1, FOXA2, GALC, GOT2, GPAM, GPD1L, GPD2, ICOSLG, IL17A, LYPLA2, MGAT3, MKNK2, MYD88, NAT5, NAT6, NUMB, OR4F5, OR4S2, P CYT1A, PGS1, PLA2G2D, PLA2G4A, PLA2G6, PLD1, PNPLA3, PTDSS2, SNAP25 , STX1A, STX2, STX5, TLR2, TLR5, TRPM5, WARS2, ATP6VOA1, CSGALNACT2, PHOSPHO1, PLA2G12A, PLA2G12B
Negative_16668	ZYX, ADH1B, AGPAT1, AGPAT3, AGPAT4, ARD1A, ATP2A3, CDS1, CHAT, CRLS1 , CSF3R, DGKG, EFNA2, ETNK1, ETNK2, FDPS, GDE1, GMPPA, GNPAT, GP1BA, G STA2, HAGH, HHEX, IRAK3, KLK3, LCAT, LYPLA1, LYPLA2, MAP2K4, MTMR2, N AT5, NCSTN, NKX3- 1, OR13G1, OR4E2, OR4F6, OR5K1, OR8G1, PCYT1A, PCYT2, PEMT, PISD, PLA 2G10, PLA2G2A, PLA2G2E, PLA2G3, PLA2G5, PLD1, PNPLA3, PPAP2A, PPAP2 C, PPP1CC, PTDSS1, SLIT2, TAS2R8, TLR9, USE1, PHOSPHO1, PLA2G12A, PL A2G12B, SERPINB5, ST6GALNAC3, TNFRSF11A
Negative_16669	ACHE, AGPAT1, AGPAT2, AGPAT3, AGPAT4, AGPAT6, ALPL, CCL28, CHPT1, CL CF1, EPHA7, FGF6, GNMT, GRB2, NCOA4, NFYB, PDE7A, PLA2G10, PLA2G1B, P LA2G2E, PLA2G2F, PLA2G4A, PLD2, PPARG, SEPHS1, UPB1, PAFAH1B3, PLA2 G12A, PLA2G12B
Negative_16670	AGPAT2, AGPAT4, AGPAT6, ANAPC5, BCL2, CCKBR, CHPT1, CLDN10, DUSP16, EPHA4, GUCY1A2, IFNG, MAP2K7, OR2AT4, OR52M1, P2RX3, PLA2G10, PLA2G 1B, PLA2G2D, PLA2G2E, PLA2G2F, PLA2G3, PLD1, PLD2, PPAP2A, SEMA3F, Z IC2, PAFAH1B2, PLA2G12B
Negative_16671	ITK, NLK, ACHE, AKR1C3, ALOX12, ALOX5, AMY2A, APH1A, ARPC2, ATP2A2, C BR3, CTPS2, CYP2B6, CYP2C8, CYP2E1, CYP2U1, CYP4A11, CYP4F2, CYP4F3 , EGFR, GALNT11, GGT5, GGT6, GNA12, GYS1, IFNAR1, IGF1, ISYNA1, LTA4H , NCAM1, OR9G1, PLA2G10, PLA2G2D, PLA2G2E, PLA2G2F, PMM2, PTGDS, PTG ES, PTGES2, PTGIS, PTGS2, PVRL2, RFXANK, RHOA, SKIV2L2, TBXAS1, TIRA P, TNFRSF17
Negative_16672	DDO, NPL, TNR, ALG10B, ALOX12B, ALOX5, ANAPC2, APOA2, AQP7, ATP5G2, C BR1, CCL26, CRY2, CYP2B6, CYP2C18, CYP2C19, CYP2C9, CYP2J2, CYP2U1, CYP4F2, EPHX2, FIGF, FLT3, GGT1, GPX5, HLA- G, INMT, ITGB1, LTA4H, MCAT, MLYCD, OR5I1, PAPSS1, PIGW, PLA2G1B, PLA 2G2A, PLA2G2D, PLA2G2E, PLA2G4A, PRKAG1, PTGDS, PTGES, PTGES2, PTGS 2, SAT1, SEMA3D, SLC27A5, TBXAS1

Negative_16673	AKR1B10, ALOX5, BAIAP2, CDC2, CYP2C18, CYP2C8, CYP2C9, CYP2E1, CYP3A4, CYP3A43, CYP3A5, FLT4, OR52D1, PIGQ, PIP5K3, PLA2G10, PLA2G2E, PLA2G2F, PLA2G3, PLA2G6, STK4, PLA2G12B, ST6GALNAC6
Negative_16674	ABO, SMO, ALOX15, ALOX5, ATP5G2, C4BPA, CDC45L, CYP2C18, CYP2C8, CYP2C9, CYP2J2, CYP3A4, CYP3A43, CYP3A5, CYP3A7, GLUD1, INPP5A, MAP3K11, MAP3K2, MDH2, OR52N1, OXCT2, PLA2G2A, PLA2G2E, PLA2G3
Negative_16675	OR1D2, OR1G1, OR4D5, OR4K14, PLA2G1B, PLA2G2A, PLA2G2D, PLA2G2F, PLA2G5, PLA2G6, PLXNB3, PPP1CB, PLA2G12B
Negative_16676	APOE, AXIN1, FADS2, GPX7, GSTA1, HSPA2, PLA2G2D, PLA2G2E, PLA2G2F, PLA2G4A, PLA2G5, WNT9B, PLA2G12B
Negative_16677	GBA, IL4, LCT, NLK, ALDOB, ASAH1, B4GALT6, BCMO1, BET1, CSNK1D, DKK4, EPB41, FGF14, GLB1, ITGB7, KDSR, NEU1, NEU2, NEU3, NEU4, NODAL, OR2G3, OR2Y1, OR51I1, OR8D2, PMVK, PON1, PPAP2A, PPAP2C, SGPP1, SGPP2, SPHK2, SPTLC1, SPTLC2, UGCG, UGT8, YES1
Negative_16678	GBA, GLA, LCT, VTN, ARSA, CCR5, CD59, CDC25A, DARS2, ENPP7, GAL3ST1, GAS1, GLB1, HARS2, HTR2A, IPMK, KDSR, NEU3, NEU4, NRAS, OR13C9, OR51I1, PPAP2A, PPAP2B, PPAP2C, PRKAG3, RCHY1, SCIN, SGMS2, SGPP2, SMPD1, SMPD2, SMPD3, SPTLC2, STAM2, TUBA1B, PRICKLE1
Negative_16679	B3GALT1, B3GALT2, B3GALT5, CPT1C, CYP11B1, FUT1, OR51Q1, ST3GAL4, TGF2, B4GALNT1
Negative_16680	B3GALT1, B3GALT2, B3GALT5, FUT2, OR4N4, PTK2, SCD5, SEMA3G, SIGLEC1, ST3GAL3
Negative_16681	ABO, AMDHD2, B3GNT2, B3GNT4, B3GNT5, B4GALT3, B4GALT4, CDC14B, CYP21A2, EDNRB, FLT3, FUT3, FUT9, GCNT2, KLKB1, OR51T1, PRSS3, SMPD2, ST3GAL6, STK3
Negative_16682	AARS, ACP6, B3GNT4, B4GALT2, B4GALT3, B4GALT4, EVI1, FUT3, FUT4, FUT9, GCNT2, GDF5, ITGAE, OR4K17, OR5B17, POLR2H, SSX2IP, ST3GAL6, ST8SIA1
Negative_16683	F3, A4GALT, B3GALT5, DTX1, FUT1, FUT2, GBGT1, GDE1, LYPLA2, OR8H2, ST3GAL1, TCF7L1, B3GALNT1
Negative_16684	SI, A4GALT, AKR1B10, B3GALT5, DKK2, FUT1, GBGT1, HEXB, OR2T3, ST3GAL1, SUCLG2, TUBA3E, B3GALNT1
Negative_16685	LCT, AACS, B3GALT4, CTPS2, NR1H3, SLC2A1, SLC33A1, ST3GAL2, ST3GAL5, ST8SIA1, STK11, TAS2R13, UROC1, SERPINA5, ST6GALNAC3, ST6GALNAC6
Negative_16686	C8A, B3GALT4, CNTNAP2, F2RL3, GLB1, OR4L1, PDE6D, PRKAR1A, RAF1, SLC33A1, ST3GAL1, ST3GAL5, ST8SIA1, TYMP, ST6GALNAC4, ST6GALNAC6
Negative_16687	ME1, ME2, ME3, TAT, ACACA, ACACB, ACAT1, ACOT12, ACSS1, ACSS2, ACTC1, ACYP2, AHCY, ALAS2, ALDH1B1, ALDH2, ALDH3A2, ALDH7A1, ALG10, ALS2, ATP5J, CAMK2G, CASP6, CREB3L2, DDX52, DKK4, DLAT, ENTPD5, FUT5, HAGHL, ITGA10, MAP3K1, MAP3K6, MDH1, OR10Q1, PCK1, PDHA2, PDHB, PKLR, PLXNB1, SEMA4A, YKT6
Negative_16688	CDA, DLD, JUP, ME1, ME3, NPL, PC, ACACA, ACAT1, ACYP2, AKR1B1, AKR1D1, ALDH1A3, ALDH1B1, ALDH3A1, BET1, CNGA3, CNTF, DKK2, DLAT, EPB41L1, FCER1G, GAD1, GRHPR, HAGH, HAGHL, IDH1, JAG2, LDHB, LDHC, LDHD, MAML3, MYH2, OR2AG1, OR4Q3, PCK1, PDHB, PKLR, RHOQ, RXRA, TNFSF18, VDAC1
Negative_16689	F13B, NAT5, PNPLA3, PPP2R5E
Negative_16690	FH, ARD1A, HMGCL, NAT5
Negative_16691	AKR1B10, EPHX2, TIAM1
Negative_16692	AKR1B10, CACNA1C, EPHX2
Negative_16693	CS, IHH, PGP, ACO1, AFMID, CREB3L1, EIF4E2, FGF20, HAO1, HES1, MDH2, MTHFD1, MTHFD2, OR9G1, SLC33A1
Negative_16694	HYI, ACO1, ACO2, AFMID, CLDN16, DVL1, GLYCTK, HAO1, HAO2, LILRB3, MAGI2, MDH2, MGST3, OR2Z1, SPCS1
Negative_16695	BMP4, ECHS1, EHHADH, GCDH, IL28B, IPMK, NAT5, NFKBIE



Negative_16696	CD247, GALM, GALNT9, HADHA, LIFR, NAT5, NAT6, PNPLA3
Negative_16697	MUT, ACAT1, ACSS1, ACSS2, ACSS3, EHHADH, ENPP1, ESPL1, FGF4, GSTZ1, HADHA, HSPA2, MLYCD, NRG3, OR2M2, OR52B4, PCCA, PCCB, PCYT2, RBL1, SUC LG1
Negative_16698	MTR, ACACB, ACADM, ACAT1, ACAT2, ACSS3, ALDH6A1, ATP5J, B3GAT3, CACN A1H, CHSY1, ECHS1, H6PD, MCEE, MLYCD, PCCB, RFWD2, SARDH, STX1B, SUCL G2, UPB1
Negative_16699	ADH1A, ADH1B, ADH5, ALDH1A3, ALDH3A1, ALDH3A2, ALDH7A1, AVPR1B, DKK 4, F11R, HARS2, PORCN, PTGS1
Negative_16700	FAH, ADH4, ADH5, ADH6, ALDH1A3, ALDH3A1, ALDH3A2, ALDH7A1, CPT1A, FD FT1, GRB2, RGS3, TAS2R50
Negative_16701	FAH, GSTZ1, PDE6H
Negative_16702	FAH, GSTZ1, ITGA5
Negative_16703	ABAT, ACADS, ACAT2, ACSM2A, ACVR2B, AKR1C4, AOC3, ARPC5, BDH2, CHIA, DMGDH, EHHADH, GAD1, HADH, HADHA, HMGCL, HMGCS2, HSPA8, IL11, OR10Z1 , OR2M5, OXCT1, PRKACG, ATP6V1G3, HSD17B10
Negative_16704	GH1, ACADS, ACAT1, ACSM4, ACSM5, BCMO1, BDH2, CTPS2, EHHADH, EPAS1, G MPPA, HADH, HADHA, HMGCL, HMGCS1, HMGCS2, HSD17B4, IKBKB, NT5C1A, PA K7, PDE4C, SLC27A5, SRGAP1, TAS2R16, ZMAT3, HSD17B10
Negative_16705	ARG1, ATIC, COMP, DCXR, KLRK1, MTHFD1, MTHFD2, MTHFR, MTHFS, PPM1A, P VRL4, SHMT1, SHMT2, SLC27A5, SUV39H2, TYMS
Negative_16706	AMT, DHFR, DIAPH3, EPHA6, FUT5, GART, IFNA16, ITGA3, MTFMT, MTHFD1L, MTHFR, OR1Q1, PRPS2, SHMT2, TYMS, UGT2B7
Negative_16707	MTHFR, OR8D4, SHMT2
Negative_16708	ARG1, MTHFR, SHMT1
Negative_16709	ACO2, ACSS1, ADAM17, CD226, GLO1, IDH1, MDH1, MDH2, POLR3H, QARS
Negative_16710	ADC, FH, GH2, ACO2, ACSS1, ACSS2, HSD11B1, IDH2, MAPT, TBL1X
Negative_16711	BNIP1, MTMR1, MTMR2, PARVG, SOD1, THTPA
Negative_16712	CYBA, HLA-DOA, IL13, MTMR1, PHPT1, THTPA
Negative_16713	C8B, DDO, ACP1, ACP2, ACPP, ACPT, ENPP1, OR5V1, ST6GAL1, TIAM2
Negative_16714	RFK, ACP1, ACPP, ACPT, CSH1, EARS2, ENPP3, FZD3, OR5P3, UGP2
Negative_16715	AOX1, NRXN1, PDXP, ARHGEF12
Negative_16716	IL20, PDXK, PDXP, SNAP23
Negative_16717	NNT, AMDHD2, BST1, CD38, DUSP6, EFNA1, EFNA4, FLOT1, FLT1, NADSYN1, N AMPT, NANP, NMNAT1, NMNAT3, NT5C3, NT5E, NT5M, NTRK1, NUDT12, OR2D2, OR5A1, QPRT, UCP1
Negative_16718	NNT, AOX1, C9orf95, CD38, DTX1, ENPP1, FCGR2B, FUT3, GRIN2C, GSTA5, M ASP1, NADK, NLGN2, NMNAT1, NMNAT2, NNMT, NT5C1A, NT5C1B, NUDT12, OR1 3C8, P2RX2, PHKA2, UXS1
Negative_16719	ACSL3, CLDN6, COASY, CXCL1, DPYD, ENPP1, FCGR3A, PANK1, PANK2, PIK3C 2A, PPCDC, PPCS, PSME2
Negative_16720	COASY, DPYD, KLRC3, OR51F1, OR52N4, PANK1, PANK2, PANK3, RARA, SOD1, STX10, UPB1, VNN1
Negative_16721	BTD, CYP11B2, PPP1CB, SPCS3
Negative_16722	BTD, CCL8, HLCS, PLCE1
Negative_16723	GGH, ID4, LIF, PTS, ACSM1, ALCAM, ALPPL2, ASCC3, ATP13A2, COMP, DDX18 , DDX23, DDX47, DDX50, DDX52, DDX54, DHFR, DHX58, FPGS, GCNT1, IFNA5, IQGAP3, MAP2K6, MMP7, MOV10L1, NUDT5, OR51E1, TAS2R41, TRDMT1, VKOR C1, WWP2, TNFRSF10D
Negative_16724	AGL, AMT, GGH, ALPI, CDC14B, CYP2C19, CYP2U1, DDX18, DDX19A, DDX23, D DX41, DDX47, DDX51, DDX54, DDX55, DDX56, DHX58, ENTPD7, FPGS, GNAO1, GRIN2C, OR1E2, OR4D1, PI4KB, POLR2J, PTPRM, SMARCA2, SMARCA5, SMC1B , STK3, TAS2R60, TGFB1

Negative_16725	ACSM1, ADH1A, ADH1B, ADH4, ADH6, ALDH1A1, ALDH1A2, ALOX15, BMP7, CLDN14, CNGA3, COL5A2, CYP1A1, CYP1A2, CYP26A1, CYP26B1, CYP2A13, CYP2C18, CYP2C9, CYP3A43, DGAT1, DGAT2, DGAT2L4, DHRS3, DHRS4, DHRS9, EFNB1, ENTPD7, FIGF, FLAD1, GADD45G, HTR2B, IFNA10, IL20RB, LIPG, OGDH, OR2D2, OR6Y1, PDE1A, PLXNA2, RDH10, RDH12, RDH8, SEMA3B, SLC27A5, TXNDC12, UGT1A10, UGT2A3, UGT2B10, UGT2B11, UGT2B17, UGT2B4, UROC1, SERPINF2
Negative_16726	OSM, ACADS, ACOT12, ADH1A, ADH1B, ADH4, ADH5, ADH6, B3GNT3, BCMO1, CAMK2A, CLDN4, COL4A1, CREBBP, CSNK2A1, CYP26A1, CYP2A13, CYP2A7, CYP2B6, CYP2C8, CYP2C9, CYP3A5, CYP3A7, CYP4A11, DDX54, DGAT2, DGAT2L4, DHRS4, DHRS4L2, DHRS9, GJD2, HA01, HMBS, IRS4, KIR2DL4, LRAT, MAT2B, OR2A5, OR2M4, OR52B4, OR5H6, PIGN, PLCB1, PSAT1, RDH16, RDH5, RFX5, SDC4, STX2, UGT2A3, UGT2B10, UGT2B11, UGT2B7, WASF1
Negative_16727	BTK, C8G, CP, RFK, ALAD, ALAS1, ALAS2, BLVRA, C1QC, C9orf95, CADM1, CMAS, CPOX, EHMT2, FTH1, GUSB, HMOX1, HMOX2, INPP5B, NQO1, OR4K5, OR5T2, UGT2A1, UGT2A3, UGT2B11, UGT2B28, UGT2B4, YARS, HLA-DQA2
Negative_16728	ADRA1B, ALAD, ALAS1, ALAS2, B3GALT5, BACE2, CMAS, CPOX, CXCR6, CYP4F3, DUSP2, FECH, GALNT1, HMOX1, HMOX2, HNF4G, KNG1, MAPK3, PDE9A, PLAUR, PPOX, TNFSF18, UGT1A10, UGT2A3, UGT2B10, UGT2B17, UGT2B4, UROD, UROS
Negative_16729	CSNK1G3, GGPS1, IDI2, KIR3DL1, MAD2L1, SQLE
Negative_16730	DUSP9, EPHX1, FDFT1, FDPS, GAD1, GGPS1
Negative_16731	ALPI, ARD1A, GLUD1, NAT5, OR52N5, PNPLA3, YOD1, C1GALT1C1
Negative_16732	AASDH, ACOT11, ARD1A, CD226, CYP2C19, HLCS, NAT6, OR2T12
Negative_16733	ADA, AMT, DHH, GLS, AGPAT4, ASNS, CPS1, GLUD1, GLUL, RPS6KB1, TGFA
Negative_16734	AMT, GLS, ASRGL1, CXCL16, F2RL2, GAL3ST1, GLS2, GLUD2, GLUL, NEGR1, SNW1
Negative_16735	F10, BPNT1, CASP7, CHST13, CUL1, PAPSS1, SMAD3, SPP1, SULT1A1, SULT1A2, SULT1A4, SULT2B1, TSHR
Negative_16736	UBC, BPNT1, CD44, CDH1, CHST11, CHST12, CLDN16, FLOT1, OR52I1, SULT1A1, SULT1A2, SULT1E1, SUOX
Negative_16737	BACE1, ECHS1, EHHADH, LDHB, SETMAR, HSD17B10
Negative_16738	B3GALT2, BUB1, HADH, HADHA, HSD17B4, KLRC3
Negative_16739	DDC, TAT, AASS, ACSL1, GOT2
Negative_16740	TAT, TYR, G6PC2, GOT1, OR5B17
Negative_16741	AADAC, DDHD1, EPHB6, IRAK4, LIPA, PRDX6, CACNA2D4
Negative_16742	AADAC, CHAT, DDHD1, DFFB, OR52M1, PLA1A, PRDX6
Negative_16743	CCKAR, MARS2, MTFMT
Negative_16744	GLYCTK, MARS2, MTFMT
Negative_16745	FES, ME3, PDC, ADH1A, ADH5, ADH6, AKR1C2, AKR1C4, ALDH3A1, ALDH3B2, ALG10B, ALPL, BDKRB2, CPOX, CSNK2A2, CYBB, CYP1A1, CYP1B1, CYP2C9, CYP2F1, CYP2S1, CYP3A43, EHMT2, EPHA5, EPHX1, FM01, GCNT4, GGT1, GNAT3, GSTA3, GSTA4, GSTA5, GSTM1, GSTM4, GSTO2, GSTP1, GSTT1, GSTZ1, IL12RB1, IL20RB, ITGAL, KIR2DL1, MGST1, MGST2, OR2T3, OR4K1, ORC3L, PIK3C3, PIK3R1, PON2, PPP2R5A, PSENNEN, PTDSS2, RRM2, UGT2A1, UGT2B11, UGT2B17, UGT2B28, UGT2B4
Negative_16746	ADH1B, AKR1C1, AKR1C3, AKR1C4, ALDH1A3, CD226, CYP1A1, CYP1A2, CYP2C18, CYP2C19, CYP2C8, CYP2F1, CYP3A4, CYP3A43, CYP3A5, DHDH, EP300, FDFT1, GDF7, GNA14, GSTA1, GSTA3, GSTA5, GSTM1, GSTM3, GSTM4, GSTO1, GSTP1, GSTT1, GSTZ1, ICOSLG, LTB4R2, LTBP1, MGST2, MTMR1, OCLN, OR10S1, OR1L4, OR6B2, P2RX1, PANK2, PGK2, PLA2G2E, POLE4, PVRL3, RPS6KA2, RRAS2, SMURF2, SPTLC1, TRDMT1, UGT2A3, UGT2B10, UGT2B28, UGT2B4, WNT11, CSGALNACT2, MAPK8IP1, SERPINC1, TNFRSF17

Negative_16747	KDR, A4GALT, ADH1A, ADH4, ADH7, ALDH3B1, AOX1, COL1A1, CSF1R, CXCR4, CYP1A2, CYP2A6, CYP2A7, CYP2C8, CYP2C9, CYP2E1, CYP3A43, CYP3A5, DD X18, DDX51, ECSIT, FMO1, FMO3, FMO4, GSTA2, GSTA3, GSTA4, GSTK1, GSTM 4, GSTM5, GSTP1, GSTT1, GSTZ1, HBEGF, IL2RB, MAOA, MAOB, MDH2, MGST3, MITF, MYH3, OR10H5, OR10V1, OR52I2, OR5AP2, OR5T3, OR8J3, PARD6G, PD E1B, PPT1, SELPLG, SMC1B, TLR2, UBE2K, UGT2B11, UGT2B17, UGT2B28, WE E1, ATP6V0D1, ATP6V1C2
Negative_16748	GHR, ACSM4, ACSM5, ADH4, ADH7, ALDH3B1, ALDH3B2, ARSA, CPT1C, CX3CL1 , CYP2A7, CYP2C18, CYP2C8, CYP2E1, CYP3A43, CYP3A5, DRD1, EGFR, ETS1 , FMO2, FMO3, FMO5, GALNT9, GGT1, GNMT, GSTA3, GSTA4, GSTA5, GSTK1, GS TM2, GSTM3, GSTO1, GSTT1, GSTZ1, HSD17B7, HSD3B7, KRAS, MGST1, MGST2 , MGST3, OR10A7, OR10K2, OR51V1, ORC2L, POLR1D, PYGB, RAC3, RHOA, SDC 1, SMURF1, SULT1A2, SYNJ2, TFPI, TNFSF4, TUBB4, UGT2A1, UGT2A3, UGT2 B11, UGT2B28, UGT2B4, UGT2B7
Negative_16749	MPI, PML, AKR1C1, ANAPC5, CACNA1H, CCR7, CES2, CES7, CYP2A13, CYP2A6 , CYP3A4, CYP3A43, CYP3A5, CYP3A7, DERL1, DLL4, DPYD, DPYS, DUSP16, F 11R, FZR1, GUSB, HMGCS1, HPRT1, IMPDH1, KITLG, LEFTY2, MAP3K7, MPP5, PIK3CG, PLCD3, RXRA, UGT2A1, UGT2A3, UGT2B10, UGT2B11, UGT2B28, UGT 2B4, UMPS, UPB1, UPP1
Negative_16750	CDA, SCD, TK2, ACVR1B, ADORA2B, CCND2, CES1, CYP3A43, DPYD, DPYS, EDA R, FUT4, FUT5, HPRT1, IBSP, IMPDH1, LIPA, MDM2, METTL6, MYL5, NKD2, OR 10T2, OR2G2, OR2T10, OR4C12, OR5T3, PRKACA, RPS6KA3, TBXAS1, TPMT, U CKL1, UGT2A1, UGT2A3, UGT2B10, UGT2B11, UGT2B17, UGT2B28, UGT2B4, U GT2B7, UPP1, UPP2
Negative_16751	CD2, DBI, IL2, SCD, UBC, ACAA1, ACOX1, ACOX2, ACSL1, ACSL4, ACSL5, ADR B3, AMPD3, APOA1, APOA2, APOA5, AQP7, ATN1, B3GALT2, CCNG2, CD36, CD5 5, CD8A, CHIT1, CLDN2, CPT1A, CPT1C, CYP27A1, CYP4A11, CYP7A1, CYP8B 1, DAPK1, FABP4, FDFT1, FGF21, GALNT7, GFPT1, HMGCS2, HMOX2, HNF1A, I FNA10, IL28RA, NR1H3, OLR1, OR10P1, OR51D1, PCK1, PCK2, PDHA2, PDXK, PIGB, PLIN, PLTP, RPS6KA4, RXRB, SCD5, SDC3, SLC2A2, TAS2R7, TPH1, UB E2K, UCP1
Negative_16752	CP, DBI, GK2, GNS, ILK, LPL, ABLIM2, ACADL, ACADM, ACOX1, ACOX2, ACOX3 , ACSL5, ADIPOQ, ANGPTL4, APOA1, APOA5, APOC3, CD247, CPT1A, CPT1B, C PT1C, FABP3, FABP4, FASLG, FLT1, FOXO1, INSR, LDHB, LLGL1, MMP1, MYL2 , NR1H3, OLR1, OR11H6, OR5P2, PAPSS1, PCK1, PCK2, PDE1C, PIGQ, PIK3CA , PLA2G2F, PLIN, PPARG, PPAT, PPM1D, PPP3R1, PTPMT1, PTPN5, RAD51, RX RG, SCP2, SELL, SLC27A1, SLC2A4, STK11, SUCLA2, TUBA8, UCP1, WNT2B

Negative_16753	<p>AGK, AKS, AMH, CD4, EDA, EGF, FAS, FOS, HAL, INS, MAX, MEL, MTC, NF1, NGF, SRF, TNF, A4GALT, ACVR1B, ACVR1C, ACYP2, ADRA1A, AK3L1, AKR1B10, AKT1, AKT2, AKT3, ALAD, ANGPTL4, ARG2, ARHGEF7, ATF2, ATP13A2, ATP2A3, ATP4A, ATP5C1, BACE2, BCAT2, BLNK, BMP2, CACNA1A, CACNA1G, CACNA1H, CACNB1, CACNB2, CACNB3, CACNB4, CACNG1, CACNG3, CACNG4, CACNG6, CACNG7, CCR10, CD274, CD48, CDC25B, CDC42, CDC7, CDH3, CDIPT, CDKN2B, CE BPA, CFLAR, CHUK, CPT1A, CREB3, CRKL, CTNNA3, CXXC4, DCXR, DDIT3, DFF A, DHODH, DLL4, DTX3, DTX3L, DUSP1, DUSP10, DUSP16, DUSP3, DUSP6, EGF R, EHMT1, ELK4, ERO1L, EVI1, EXTL3, FARSA, FASLG, FGF10, FGF11, FGF12, FGF17, FGF18, FGF19, FGF2, FGF23, FGF3, FGF4, FGF7, FGF9, FGFR2, FGF R3, GADD45A, GRB2, GSTK1, HADHA, HLA- DOB, HPSE2, HRAS, HSPA2, HSPB1, IFNA17, IKBKB, IL10RB, IL1R1, IL1R2, IL20, IQGAP3, IRAK3, ISYNA1, JAG2, KCNB1, KRAS, LAMC3, MAML1, MAP2K1, MAP2K4, MAP2K5, MAP3K1, MAP3K11, MAP3K14, MAP3K2, MAP3K3, MAP3K5, MAP4K1, MAP4K2, MAPK1, MAPK10, MAPK11, MAPK13, MAPK3, MAPK7, MEF2C, MGAT5B, MKNK1, MPST, MTAP, MYH4, NAT1, NCF2, NFATC4, NFX1, NMNAT2, NR AS, NTF3, NTRK2, OR10G7, OR11H1, OR13C5, OR1S1, OR2M5, OR2T6, OR52M1, OR5M3, PAK2, PDE8B, PDGFA, PDGFB, PDGFRA, PFKM, PHKG2, PIGB, PIGO, P</p>
Negative_16754	<p><del>CKR, DCU, ECT, HDC, TGL, JUN, RGA, MAX, MCS, MTC, RFP, NGF, RGF, IRI, RGE</del>  IM2, ACSL6, ACVR1B, ACY1, ADCY10, ADH7, ADORA2A, AKT1, AKT2, AOX1, AR NTL, ARRB1, ATF4, B3GAT2, BCMO1, BHMT, BMP6, CACNA1C, CACNA1D, CACNA 1F, CACNA1H, CACNA1I, CACNA1S, CACNB2, CACNB3, CACNG5, CACNG8, CASP 3, CCR1, CDC42, CERK, CHRM2, CHRNA7, CHUK, CLCA4, CRKL, CSNK2A1, DDIT 3, DHDDS, DLL4, DPAGT1, DRD2, DUSP16, DUSP2, DUSP3, DUSP5, DUSP6, DUS P9, EARS2, ELK1, ELK4, EVI1, FASLG, FCER1G, FGF10, FGF11, FGF18, FGF1 9, FGF2, FGF20, FGF21, FGF22, FGF3, FGF5, FGF6, FGF8, FGF9, FGFR1, FGF R2, FGFR4, FLT3LG, GADD45A, GADD45B, GADD45G, GGT6, GNA12, GNA13, GN AI2, GNAI3, GNRH2, GOT1, GRAP2, GRB2, GSTA2, GUCY2C, HSPA1B, HSPA8, I CAM3, IFNA14, IKBKB, IKBKG, IL12B, IL18R1, IL1A, INPP4B, ITGA7, JUND, KLRK1, LAMC2, LIPE, MAD1L1, MAP2K1, MAP2K5, MAP2K7, MAP3K11, MAP3K 13, MAP3K14, MAP3K2, MAP3K8, MAP4K1, MAP4K2, MAP4K3, MAP4K4, MAPK10, MAPK13, MAPK3, MAPK7, MAPK8, MAPK9, MAPT, MARS, MCM5, MEF2C, NARS, N ARS2, NFKB1, NFX1, NR4A1, NTF3, NTRK1, NTRK2, NUMBL, OR10H1, OR1L3, O R1S2, OR2T4, OR2T6, OR4X1, OR51F2, OR6N1, OR8H1, OXSM, PAK2, PAX8, PD GFA, PDGFC, PDXP, PFN4, PHGDH, PHKB, PIGH, PKMYT1, PLA2G1B, PLA2G2A, PLA2G3, PLA2G4A, PLA2G6, PLEKHA8, POLE3, POLR2A, PPM1A, PPM1B, PPP2 B1A, PPP2R2C, PPP2R, PPP2R1, PPP2R2, PRKACA, PRKCB, PRKCC, PRKY, PR</p>
Negative_16755	<p>BID, CBL, EGF, FAH, GK, ME3, MYC, SMO, SRC, WAS, AANAT, ABL1, ABL2, ACOT 11, AKT1, AKT2, AKT3, APRT, ARAF, ARRB2, ASCC3, ATP5H, B4GALT1, CACNA 1S, CAMK2A, CAMK2D, CBLB, CBLC, CD22, CDKN1A, CDKN1B, CMPK1, CXCR4, C YFIP1, DDX55, DGUOK, DHFR, ERBB2, ERBB3, ERBB4, ETS1, FGF12, FRAP1, G ANC, GJD2, GRB2, HBEGF, HRAS, KAT2A, LDHB, MAP2K1, MAP2K2, MAPK3, MAP K9, MTAP, NCK1, NRG2, NRG3, OR1J1, OR1L3, OR6C75, OR6Q1, PAK1, PAK2, P AK6, PARD3, PDE4C, PIK3R2, PIK3R3, PIK3R4, PLA2G2E, PLCG2, PRKCA, PR KCB, PRKCG, PTK2, PYGL, RAF1, RARA, RPS6KB1, SEMA4C, SHC3, SMPD1, SV2 A, TAS2R10, TSHR, EIF4EBP1</p>
Negative_16756	<p>BAD, CBL, CD4, CKM, DDC, JUN, PGD, PML, SRM, ABL2, ADORA2B, AGPAT1, AKR 1B1, AKT2, ARAF, BRAF, BUB1, C5AR1, C7orf16, CACNA1D, CAMK2A, CAMK2B, CBLC, CHAD, CRKL, CTNNB1, CYP2J2, DGKA, DHRS4, DNMT3A, EGFR, ELK1, E RBB2, FABP4, GAB1, GGCX, GSK3B, HARS, HRAS, IGFBP3, IL10, KRAS, MAPK3, MAPK8, MAPK9, MDM4, NAGS, NCK1, NCK2, NOD1, NRAS, NRG3, NRG4, OR11A1, OR13F1, OR4B1, OR7D2, PAK2, PAK7, PANK1, PGAM4, PIGS, PIK3CA, PIK3C B, PIK3CD, PIK3CG, PIK3R1, PIK3R2, PLCG1, PLCG2, PORCN, PSME2, RAF1, RPS6KB2, SHC3, SHC4, SOS1, SOS2, SPTLC1, STAT5A, STAT5B, SULT1A2, TA S2R5, TCF7L2, UCP1, UGCG, VASP</p>

Negative_16757	AK3, F2R, SYK, ACTG1, ADCY1, ADCY2, ADCY3, ADCY4, ADCY7, ADCY9, ADH4, ADORA2B, ADRA1A, ADRA1B, ADRB1, AGTR1, ATP2A1, ATP2A2, AVPR1B, BMP5, CACNG7, CALML3, CCKBR, CCL22, CCNA1, CDKN1A, CDKN2C, CFL1, CHPF, CHRM1, CHRM3, CKS1B, CLDN10, CLDN14, CREB1, CYSLTR1, CYSLTR2, DEGS2, DGUOK, DLL4, DRD1, EDNRA, EDNRB, EFNB3, EPHA5, ERBB4, FADS2, FGF14, FGF23, FOXA3, GADD45G, GNAQ, GNPDA2, GRM5, HPSE2, HRH1, HSPA1B, HTR2A, HTR2C, HTR4, HTR5A, HTR7, IARS2, IFNK, IL8RB, IRF5, IRF9, KIR3DL1, KLRC4, KLRD1, LRAT, MAGI3, MGAT5B, MYLK2, MYLK3, NOS1, NTSR1, OR11A1, OR1E2, OR2M7, OR4D6, OR4F4, ORC6L, OXTR, PDE1A, PDE4D, PDGFRB, PHKA1, PHKB, PLCB1, PLCB2, PLCB4, PLCD1, PLCD3, PLCE1, PLCG1, PLXNA1, PPP3CA, PPP3CB, PPP3R1, PPP3R2, PRKACG, PRKCA, PRKX, PRKY, PTGER1, PTGER3, PTGIS, RASSF1, RDH8, SESN3, STAT1, TACR2, TACR3, TRHR, USE1, YARS2, SUV420H1
Negative_16758	C7, DLD, F2R, GH1, PLN, ACADM, ADCY2, ADCY7, ADCY8, ADORA2B, ADRA1B, ADRA1D, ADSSL1, AGTR1, ARHGEF7, AVPR1B, BCAR1, BDKRB1, BDKRB2, CALML3, CALML5, CALML6, CAMK2B, CAMK2D, CCKAR, CCKBR, CCNA2, CDC2, CDO1, CHIA, CHRM1, CHRM5, DAXX, DDB2, DDHD1, DGAT1, E2F2, EDNRA, EDNRB, ERBB2, ERBB3, ERBB4, GALNT11, GJA1, GNA14, GNAQ, GNAS, GNG12, GPX7, GRM1, GRM5, GUCY2F, HRH2, HTR2A, HTR2C, HTR5A, HTR7, IL9R, L1CAM, LCAT, MGA T5B, MGST1, MTHFD1, MYH11, MYL7, MYLK, MYLK3, NLGN3, NRG4, NTSR1, OR1OAG1, OR1D5, OR5D18, OR7G3, OR8B8, OR8J3, P2RX2, PDE1A, PDE1B, PDGFR A, PDGFRB, PFAS, PHKA1, PHKB, PHKG2, PLA2G4A, PLCB3, PLCD3, PLCE1, PLCG2, PLCZ1, PNLIP, PPM1B, PPP3CB, PPP3CC, PPP3R1, PRKACB, PRKCA, PRKCB, PRKY, PTAFR, PTGFR, PYCR1, RAC2, RPS6KA2, SEMA3B, SMAD9, SMURF1, SPTLC1, STX3, TBXA2R, THY1, TRHR, WNT16, YWHAG, YWHAQ, HSP90AB1, MAPKAPK2, PLA2G12A
Negative_16759	AMH, ASL, CMT, DAO, EPO, FAS, GHR, HAL, IL2, IL3, IL3, IGF, IGF1, IGF2, IGF1, PRL, SCD, STS, TNF, TPO, AARS2, ACSL6, ACSS1, ACVR2A, ACVR2B, ACVRL1, ADCY9, AGPAT4, ALDH5A1, ANAPC4, ATP5G1, ATP6V1F, BCL10, BMP2, BMP7, BMPR1A, BUB3, CCL11, CCL15, CCL16, CCL17, CCL19, CCL2, CCL20, CCL27, CCL28, CCL3, CCL7, CCL8, CCR1, CCR10, CCR2, CCR3, CCR5, CCR6, CCR8, CD27, CD40, CDC14A, CFL1, CLCF1, CLDN1, CLDN20, CLDN3, CNDP1, CRHR1, CSF1, CSF3, CSH1, CTBS, CTNNA1, CUL1, CXCL12, CXCL16, CXCL5, CXCL6, CXCR3, CXCR4, DHCR7, EDAR, EFNA4, EGFR, ENO3, EPB41, EPOR, FASLG, FIGF, FLT1, FLT3, FLT3LG, FLT4, FOXA2, FUT1, GAD1, GADD45B, GALNT12, GALNT3, GCNT1, GCNT2, GCNT3, GRAP2, GSTM3, GSTM5, HADHA, HSPA1B, HTR2C, ICAM2, IFNA10, IFNA13, IFNA14, IFNA16, IFNA17, IFNA2, IFNA21, IFNA4, IFNAR2, IFNB1, IFNG, IFNGR2, IFNK, IFNW1, IL10RA, IL10RB, IL11RA, IL12B, IL12RB1, IL13, IL17A, IL17B, IL17RA, IL18, IL18R1, IL1A, IL1B, IL1R1, IL20, IL21, IL21R, IL22, IL22RA1, IL22RA2, IL23A, IL23R, IL24, IL28RA, IL29, IL2RB, IL2RG, IL3RA, IL6R, IL6ST, IL8RA, IL8RB, INHBA, INHBC, INHBE, ITGA6, ITGA9, LIPC, MAP4K1, MTHFD2, NCR1, NEUROD1, NPR1, NUDT12, NUDT2, NUDT9, OPLAH, OR10A3, OR13C2, OR14A16, OR14I1, OR1L6, OR2S2, OR2T3, OR4D2, OR5AR1, OR6C4, OR7D4, OR8S1, ORC2L, PAK4, PDG

Negative_16760	AMH, BTK, DBT, DCN, EPO, FAS, GH1, GH2, GHR, GP1, HRS, IL2, IL3, IL6, IL7, IL8, IL9, LTB, ME3, MET, NPY, OAT, OGT, PAH, PTS, TNF, TXK, ZYX, AARS2, ABL2, ACADS, ACMSD, ACVR2B, ADCY10, AKR1C1, AKR1C4, ALDH1L1, ALG5, A MHR2, AMPD3, AMY2B, ATP13A2, B3GAT3, B4GALT1, BMP2, BMP7, BMPR1A, BM PR1B, CALML5, CASP7, CCL13, CCL14, CCL16, CCL2, CCL20, CCL24, CCL25, CCL28, CCL3, CCL7, CCR10, CCR2, CCR3, CCR6, CCR8, CD14, CD40, CD40LG, CHKB, CLCA2, CLOCK, CNTFR, COL5A2, COQ3, CRLF2, CSF1, CSF2, CTF1, CTN NA1, CX3CL1, CX3CR1, CXCL1, CXCL11, CXCL12, CXCL13, CXCL2, CXCL3, CX CL5, CXCL6, CXCL9, CXCR5, CYP3A4, CYP3A5, DAPK3, DDX4, DGKG, EDAR, EH MT1, EPB41L2, EPHX1, FGF10, FTCD, GCAT, GCNT4, GDE1, GDF6, GFPT2, GMD S, HAGHL, IFNA13, IFNA2, IFNA21, IFNA4, IFNA5, IFNA6, IFNA7, IFNA8, I FNAR2, IFNG, IFNW1, IL10, IL10RA, IL10RB, IL11, IL12A, IL12B, IL12RB 1, IL12RB2, IL15RA, IL17A, IL18R1, IL18RAP, IL1A, IL1R1, IL1R2, IL1R AP, IL20, IL20RA, IL21, IL22, IL23R, IL25, IL28A, IL28B, IL28RA, IL2R B, IL2RG, IL4R, IL5RA, IL6ST, IL7R, IL8RB, IMPA1, INHBA, ITGAL, KITLG , KYNU, LEPR, LTBR, MAGI2, MAP4K4, MCM5, MGAT4B, MMP14, MYLK2, NCOR2, NEU1, NFE2L2, NRXN3, NUDT5, OR10H1, OR10K2, OR11I1, OR2A2, OR2C3, OR2 T6, OR4A16, OR4K15, OR51A2, OR51I2, OR5A1, OR6A2, OR8U1, PCCA, PCYT2
Negative_16761	ADK, KIT, PML, SFN, ADRA1A, ARSA, CALML5, CALML6, CCND1, CCR5, CEBPA, CYP26C1, DCXR, DGKA, DGKB, DGKG, DGKH, EPAS1, IKBKE, IL22RA1, INPP1, INPP4A, INPP5A, INPPL1, IRAK4, ITGAX, ITPKA, ITPKB, LEFTY1, MEF2C, N COR2, OR2G2, OR5J2, OR7C2, OR8K5, PIK3C2A, PIK3C2G, PIK3C3, PIK3CB, PIK3CG, PIK3R1, PIK3R2, PIK3R5, PIP4K2B, PIP5K1B, PLCB1, PLCB3, PLC B4, PLCD4, PLCG1, PLCG2, POLR2F, PPCDC, PTEN, PTPMT1, SENP2, SFRP2, S YNJ1, SYNJ2, TCF7, TUBB2B, UROC1, TNFRSF14
Negative_16762	ANAPC11, ATIC, BMP6, CACNA1A, CALML3, CALML6, CCR3, CD274, CDIPT, CD S1, CDS2, DGKA, DGKD, DGKE, DGKG, DGKZ, FLOT2, IMPA2, INPP1, INPP4B, I NPP5B, INPP5E, ITPKB, JAK1, LYPLA1, MAD1L1, MAP4K1, NKX2- 2, NRG2, OR1J4, OR4X1, OR5A1, OR6N2, OSMR, OXTR, PI4KA, PIK3C3, PIK3C A, PIK3CD, PIK3R1, PIK3R2, PIK3R5, PIP4K2A, PIP4K2B, PIP4K2C, PIP5K 3, PLCB1, PLCB2, PLCD3, PLCG1, PRKAB2, PSPH, PTPMT1, RDH12, RHOQ, SHC 4, TCF7, THBS1, TUBB2C, VARS, AASDHPPT, ATP6VOD1, TNFRSF14
Negative_16763	F2R, GH1, GP9, PLG, ASIP, ASMT, CSH1, CTSG, F2RL1, FSHR, GPD1, IL21R, L EPR, METTL2B, OR3A1, OR51I2, OR52N4, ORC1L, PARD3, PRLR, PRSS1, PRSS 2, PRSS3, SOX17, TSHR, TNFRSF11A
Negative_16764	CBS, GH1, GH2, LCT, LEP, PRL, CSNK1A1, CTSG, DRD2, F2RL2, F2RL3, GRM5, GZMA, HDAC2, HTR2A, KLRC1, LEPR, LTB4R2, MAT2B, PARD3, PPP2R1A, PRLR , PRSS2, PRSS3, RDH5, TSHB, TNFRSF13B
Negative_16765	ATM, C4B, C8G, FYN, MPI, ABL1, ACACA, ACTC1, ADH4, ANAPC1, ANAPC11, AN APC2, ANAPC4, ANAPC7, APRT, ATP5G2, BUB1, CCL2, CCL23, CCL3, CCNB2, C CND1, CCND2, CCND3, CCNH, CDC14A, CDC16, CDC25A, CDC25C, CDC26, CDK2 , CDKN2B, CDKN2C, CDKN2D, CHEK1, CHEK2, CLDN1, CSNK2A2, CTNNA2, CXCL 12, DPM3, DTX3L, E2F1, E2F2, EFN2, ENTDP8, EPB41, EPHX2, ESPL1, EXTL 2, F13B, FMO5, GJA1, GNPAT, GRIN2A, GSK3B, HDAC2, HLA- G, HSPB1, MAD1L1, MAD2L1, MAD2L2, MCM2, MCM3, MCM4, MCM5, MCM6, MECR, NFYC, NOTCH2, NUMB, OR2AE1, OR4D6, OR5B17, OR6C2, OR8U1, ORC2L, ORC4 L, ORC5L, P4HA1, PARVB, PCNA, PDE6H, PLA2G6, PLK1, POLR3K, PTTG1, RAS A2, RASGRF1, RBL1, RBL2, RBPJ, SKP1, SMAD2, SMAD3, SMAD4, SMC1A, SMC1 B, TGFB1, TGFB2, TGFB3, TP53I3, TRPC1, TUBA3E, UBE2K, WEE1, YWHAH, AT P6V1B2, ST6GALNAC4

Negative_16766	ASL, GPT, INS, SFN, ABL1, ACTN4, ADORA2B, ANAPC1, ANAPC11, ANAPC2, ANAPC5, ANAPC7, BUB1, CCNA1, CCNB1, CCNB2, CCNB3, CCND1, CCND3, CCNE1, CCNE2, CD28, CDC14A, CDC20, CDC23, CDC26, CDC7, CDK6, CDKN1A, CDKN1C, CDKN2C, CDKN2D, CLCA2, COASY, CRB3, CRHR1, CTS1, CUL1, CXCL3, DBF4, DVL1, E2F3, EPHB2, ESPL1, FZR1, GADD45A, GADD45B, GCNT4, GRIA3, GSK3B, GUCA1C, HDAC1, HRH1, IDH3A, IFNA13, INHBB, KIR2DS4, KLRK1, LEFTY2, MAD1L1, MAD2L1, MAD2L2, MAP3K7, MCM3, MCM4, MCM6, MCM7, MDM2, MLYCD, MYD88, NME2, OLR1, OR4K17, OR5A1, OR6B2, OR8H1, ORC2L, ORC6L, PARD6G, PFKL, POLR1D, PRKAR2A, PTTG1, SCD5, SELE, SKP2, SMAD4, SMC1B, SMURF1, SOAT2, SPRY3, ST3GAL6, STAT5A, SUV39H1, SYNJ1, TGFB1, TGFB2, TLN1, UGT2A1, WEE1, WHSC1L1, YWHAE, YWHAG, YWHAQ, ATP6VOA1, ATP6V1B1, ATP6V1G1
Negative_16767	ATM, BAX, FAS, ID1, ME2, SFN, ACO2, ADH6, ALOX15, ATP5G1, CARS, CASP8, CCNG1, CD82, CDC2, CDK2, CDK4, CDK6, CDKN2A, CHEK2, CYP1B1, DDX56, DUSP6, EI24, EXOC7, FARSB, FSHB, GADD45A, GADD45G, GALNT13, GALNTL5, GPX5, GRIA1, GTSE1, HDAC2, HLA-G, HMGCS2, IGFBP3, LRDD, MDM4, MGAT2, NEFL, NSDHL, OR11A1, OR6N1, OR8B12, PCNA, PERP, PMAIP1, POLR2A, PPM1D, RAF1, RCHY1, RPRM, SESN1, SESN2, SULT2A1, THBS1, TP53, TP53I3, TP73, ZMAT3, ATP6V1G3, SERPINE1, ST6GALNAC1, TNFRSF10B
Negative_16768	BAX, CAD, DDC, LSS, SFN, ACYP1, ATP13A2, ATP2A1, BBC3, CCL7, CCNB1, CCNB3, CCND1, CCND2, CCND3, CCNE2, CCNG1, CCNG2, CDK4, CDKN1A, CHEK1, CHEK2, CSNK1G2, CYCS, DDB2, DPM1, ECHS1, EDA2R, EI24, FGF5, GADD45A, GDE1, GPT2, GTSE1, IGFBP3, IL13, IL20, ITPKB, LRDD, MAT2B, MDM2, MDM4, NAT5, NEU2, NT5C2, OR10J1, OR7A17, OSMR, PCYT2, PERP, PFKFB2, PMAIP1, PPM1D, PTGDS, RDH11, RFDW2, RRM2, SESN1, SESN3, SHISA5, SLC27A5, STAT6, TIAM1, TP73, ZMAT3, CSNK1A1L
Negative_16769	BET1L, EPRS, NCR1, NGEF, OR52K1, PFKFB1, POMC, PPP3CC, RASSF1, SNAP25, STX10, STX12, STX16, STX1A, STX2, STX3, STX5, STX6, TSNARE1, UBA7, UGT2A1, ULBP1, UPP1, VAMP1, VAMP4
Negative_16770	FAH, ATP2A3, CD47, EFNA2, FZD5, GALNT11, GGT5, GMPPB, GOSR2, LAMA4, OR13C8, POLR2D, SNAP25, STX10, STX12, STX16, STX3, STX4, STX7, STX8, TSNARE1, VAMP1, VAMP4, VTI1B, ATP6VOA1
Negative_16771	IL3, AKR1A1, ATG12, ATG3, ATG7, PIK3C3, RELB, UPRT
Negative_16772	ATG3, ATG7, IRS4, PIK3R4, RFXANK, SEMA3A, UBE2K, GABARAPL1
Negative_16773	GLS, PGF, ADRB2, AKT1, ALPP, ARHGAP5, ARHGEF2, BRAF, CLDN15, CREB3L2, DDIT4, DEGS2, EFNA3, EIF4E, FMO5, FUT6, FZD7, HIF1A, IRS1, JAM2, MAPK1, MCM5, OR13H1, OR4N2, PDPK1, PIK3CB, PIK3CD, PIK3CG, PIK3R1, PIK3R2, PRKAA1, PRKAA2, PYGL, RPS6, RPS6KA3, RPS6KB1, SHMT2, SMAD3, TBL1XR1, ULK1, VEGFB, VEGFC, EIF4EBP1, ST6GALNAC3
Negative_16774	CFH, HAL, AKT2, ARPC5L, B4GALT2, BRAF, CCL11, CD59, CHPT1, DAPK1, DDI4, GSTM5, HIF1A, LILRB3, MAPK1, MAPK7, NFKBIE, PIK3CG, PIK3R1, PIK3R2, PIK3R5, PRKAA2, PRKCG, PSME1, RPS6, RPS6KA2, RPS6KA3, RPS6KB1, RPS6KB2, SOCS5, TAP2, TAS2R7, TLR4, TOMM40, TSC2, TUBB1, ULK1, ULK2, ULK3, VEGFA, VEGFC, XYLB, EIF4EBP1
Negative_16775	ATM, BAD, BAX, CDA, FAS, GP9, GPI, IL3, JUP, LPL, SCD, ADCY1, AKT1, AKT2, AKT3, AREG, BIRC3, CAMKK2, CASP10, CSF1, CXCL1, DTX3L, EDN1, FECH, GJA1, GUK1, HDAC2, HHIP, IKBKB, IKBKG, IL18RAP, IL1A, IL1B, IRAK1, IRAK3, IRAK4, KLRD1, LIPA, MAD2L2, MAP3K14, MGAM, MYD88, NAGK, NFKBIA, NTRK1, NTSR1, OR6B2, OR6C76, OR8B4, OR9G4, PCYT2, PIK3CA, PIK3CD, PIK3CG, PIK3R2, PIK3R3, PPBP, PPP3R2, PRKACB, PRKACG, PRKAR1B, PRKAR2B, PRKX, PROC, RAB23, RASSF5, RIPK1, SFRP2, SUFU, TIRAP, TNFSF10, TP53, TRAF2, UCK1, WARS, YES1, TNFRSF10B, TNFRSF10C, TNFRSF10D, TNFRSF1A

Negative_16776	ATM, BAD, BAX, BID, DDO, FAS, NGF, OSM, ACAT1, ADCY9, AKT3, BCL2L1, BIRC2, BIRC3, CACNA1A, CASP6, CASP7, CASP8, CFL2, CFLAR, CHUK, COL3A1, CQ7, CYP2U1, DDHD1, DFFA, DTX3L, FADD, FASLG, FZD6, GALNT8, GALNTL2, GRAP2, HCLS1, HSD17B8, IFT57, IL1A, IL1RAP, IL23R, IL3RA, IRAK2, IRAK4, LRP5, MAP3K14, OR13C5, OR1L3, OR2T12, OR52D1, OR52E2, OR9A2, PAR6B, PCNA, PCYT1A, PDE6H, PIGF, PIK3CA, PIK3CB, PIK3CD, PIK3R2, PIK3R5, PLD2, PPP3CC, PRKAR1A, PRKAR1B, PRKAR2A, PRKAR2B, PRKX, PRKY, PSME2, RELA, RIPK1, SDHD, TRAF2, TSLP, UGT2B17, ZAP70, TNFRSF10B, TNFRSF11A, TNFRSF1A
Negative_16777	C6, MYC, NLK, SYK, AADAT, ACHE, ACTN1, ADCY1, ADRA1B, ALDH4A1, ALG12, ALG6, ALPL, APC2, AREG, ASMT, AXIN1, CACNG2, CAMK2A, CAMK2G, CCNA1, CCNB1, CCND2, CCND3, CLDN4, CNGB1, CREBBP, CSF3R, CSNK1E, CSNK2B, CTBP2, CXCL12, CYP2C18, DKK1, DUSP10, DVL1, DVL2, EDN1, FGD1, FOSL1, FZD1, FZD10, FZD2, FZD6, GRIN2C, HHIP, HSD17B8, IFNA4, INHBC, ITGAM, LILRB3, LRP5, LRP6, MAP3K11, MAP3K7, MAPK10, MAPK8, MAPK9, MARS, MAT1A, MOV10L1, MPST, NCF2, NFAT5, NFATC2, NFKB2, NKD2, NT5C1A, OR10G4, OR2M7, OR4N4, OR52I2, OR5J2, OR6C6, OR8A1, OR8D1, OR8J3, PDK1, PFKL, PHKA2, PLCB2, PLCB4, PLD1, PORCN, PPAP2B, PPP2CA, PPP2R1A, PPP2R2B, PPP2R2D, PPP2R5B, PPP2R5D, PPP3CA, PPP3CB, PPP3R1, PPP3R2, PRKACA, PRKACG, PRKCA, PRKCB, PRKX, PRKY, RAC2, RASA2, ROCK2, SDHD, SENP2, SFRP1, SFRP5, SMURF1, SOX17, STAT6, TAS2R14, TAS2R50, TBL1X, TBL1XR1, TBL1Y, TCF7, TCF7L1, TCF7L2, TP53, TPH1, TUBB4, UROS, VANGL1, VAV1, WHSC1, WIF1, WNT10B, WNT16, WNT2, WNT2B, WNT3, WNT5B, WNT6, WNT7A, WNT7B, WNT8A, ATP6V0A2, CSNK1A1L, SUV420H2
Negative_16778	FOS, JUN, MPI, OTC, RFK, ACAD8, ACHE, ACTN2, ACVR1C, ACY1, ARNT2, ARPC5, ATG3, ATP6V0B, AXIN1, BMP6, BRAF, BTRC, CAMK2A, CAMK2B, CASK, CASP10, CCND1, CCND2, CD14, CHAT, CSNK1E, CSNK1G2, CSNK2A1, CTBP1, CTBP2, CXCL9, DAAM1, DAAM2, DARS, DDX41, DHDDS, DKK1, DKK4, DVL1, DVL2, DVL3, ENTPD2, ENTPD6, EP300, EPB41L3, EPHA4, EPHB3, F2RL2, FABP4, FBXW1, FRAT1, FZD1, FZD2, FZD3, FZD4, FZD7, FZD9, G6PD, GAD2, GADD45G, GNA14, GNB3, GOSR2, GSK3B, IL10, IQGAP1, ITGA2B, ITGA6, LAMC2, MAPK10, MAPK9, MYL7, NFATC1, NFATC2, NFATC3, NRG1, OLAH, OR10G9, OR14I1, OR2Z1, OR51E1, OR51G1, PANK1, PDE3B, PKM2, PLA1A, PLCB1, PLCB2, PLCB4, PNPLA3, PORCN, PPP2R5A, PPP2R5D, PPP2R5E, PPP3CC, PPP3R2, PRKACB, PRKAG1, PRKCB, PRKY, PSEN1, PSME3, PTGES2, RAC3, ROCK2, RUVBL1, RXRB, SEMA3A, SENP2, SFRP4, SFRP5, SIAH1, SMAD4, SRGAP2, ST3GAL2, TBL1X, TCF7, UPB1, VANGL1, VKORC1, VTI1A, WARS2, WHSC1L1, WNT1, WNT11, WNT16, WNT2B, WNT3, WNT3A, WNT4, WNT5B, WNT6, WNT7A, WNT8A, CTNNBIP1, HLA-DQB1, PHOSPHO1, PRICKLE1, PRICKLE2, ST6GALNAC1, SUV420H1
Negative_16779	LTB, ADCY1, ALDH5A1, APH1A, APOC3, CPT1C, CREBBP, CTBP1, CTBS, CXCL10, CYSLTR2, DLL3, DLL4, DTX1, DTX4, DVL2, DVL3, EFN1, HDAC1, HDAC2, HES1, HIF1A, IL22, JAG1, KAT2A, MAML2, MTMR6, NANS, NCOR2, NCSTN, NMNAT3, NOTCH2, NUMBL, OR4N2, OR4X1, OR6C74, OR8G1, PIP5K1B, POLR1A, PSEN1, PSENE1, RFNG, SDHD, SOD1
Negative_16780	AK5, CFI, GPT, ID3, TYR, ADAM17, APRT, CACNG8, CREBBP, CTBP1, CTBP2, DHRS9, DLL4, DTX2, DTX3, DVL2, DVL3, EP300, GABARAP, GARS, HCCS, HMOX1, JAG1, KAT2A, LFNG, MAML3, MAP3K13, NOTCH1, NOTCH2, NOTCH3, NUMB, ODCC1, OR13G1, OR1J2, OR5A2, PIPOX, PISD, PSEN1, PTCRA, RBPJ, RBPJL, RUVBL1, STX1B, UGT2B7



Negative_16781	BCR, BTK, DHH, F8, IHH, SMO, ACSL5, ACSM2A, ADCY5, ADH1A, B3GAT3, BMP4, BMP5, BMP6, BMP8B, CSF3, CSNK1D, CSNK1G1, DHDDS, DUSP4, EGLN1, FBXW11, GAS1, GSK3B, GUCY1A3, HDAC1, ITGA2B, JAM3, MAP3K12, NPAS2, OR13G1, OR2A12, OR2L2, OR6C74, PGS1, PLA2G5, PRKACB, PTCH1, SOCS5, STK36, SUFU, SV2B, TAS2R10, WNT1, WNT10A, WNT10B, WNT2, WNT3, WNT3A, WNT5A, WNT6, WNT7A, WNT8B, WNT9A, WNT9B, ZIC2
Negative_16782	APP, EDA, IHH, KHK, NLK, PTS, SHH, A4GALT, ALOX5, ASAH1, BDH2, BMP8A, BMP8B, BTRC, CD274, CSNK1A1, CSNK1D, CSNK1G3, FZD1, GAS1, GLI2, GPD2, IL13, NAT2, NEFH, NFYA, NSD1, OR8K5, PEMT, PFN1, PIGX, PPP2R2A, PRKACA, PRKACB, PRKACG, PRKY, PTCH1, PTCH2, RAB23, SELE, STK36, UXS1, WNT11, WNT16, WNT2, WNT2B, WNT5A, WNT6, WNT7A, WNT7B, WNT8A, WNT9B, AASDH, PPT, ATP6V1E1, PNLIPRP1
Negative_16783	AMH, DUT, ID1, ID2, ID3, NOG, SP1, ACP2, ACVR1, ACVR1B, ACVR2A, ACVRL1, ADRB2, AMHR2, APAF1, ARPC5, BHMT, BMP5, BMP7, BMP8A, CACNA1F, CACNG4, CARD11, CASP8, CD27, CD79A, CDKN2B, CFL1, CSAD, DBF4, E2F3, E2F4, F13A1, FRAP1, GDF6, HCCS, HLA-G, IFNG, IMPDH1, INHBA, INHBE, KCNB1, LEFTY1, LEFTY2, LIMK1, MAPK1, MAPK3, MCM3, NFYC, NKD2, OR2F2, PAK1, PDPK1, PGAM1, PIAS2, PLXNA2, PPP2CB, PRKCB, PRKCQ, RASSF5, RBL1, RBL2, RBX1, RHOA, ROCK1, ROCK2, SKP1, SMAD3, SMAD4, SMURF1, SMURF2, SPTAN1, TAS1R1, TFDP1, TGFB1, TGFB3, TGFB2, THBS2, THBS4, TIAM2, TLN2, VASP, WEE1, YWHAH, ZFYVE9, TNFRSF17
Negative_16784	AK2, FES, FST, GH2, ID3, ID4, TYR, ACSL4, ACVR1, ACVR1B, ACVR2B, ACVRL1, AMHR2, ASAH1, B3GNT5, BMP2, BMP5, BMP8B, BMPR1B, CCL11, CD36, CDH1, CDKN1A, CDKN2B, CNTFR, CREBBP, DUSP6, E2F5, EP300, EPHA6, EPHA7, GADPH, GDE1, GDF6, GDF7, HTR2B, IDH3B, IFNG, IL22, INHBA, INHBB, INHBC, ITGA6, KCNJ11, KIR2DL3, LEFTY1, LEFTY2, NFKB2, NKD2, NODAL, NOX1, NUMB, OR10K2, OR5H6, OR6M1, P2RX1, PGAM1, PITX2, PPA2, PPP2CB, PPP2R1B, PPP2R2D, PRPS1, PYCR2, RBL2, RBX1, RDH12, RDH8, ROCK2, RPS6KB2, SAT1, SKP1, SMAD1, SMAD3, SMAD4, SMAD6, SMAD9, SMURF1, SMURF2, TFDP1, TGFB1, TGFB3, UBA7, ULBP2, UROS, YWHAH
Negative_16785	BAD, DCC, FYN, NPL, PGP, TKT, ABLIM1, ABLIM2, ALDH4A1, ANAPC2, APPL1, ARHGEF2, ARNT, B4GALT5, BLNK, BST1, CACNG6, CBLC, CCR5, CDKN2A, CFL1, CFL2, CHRM5, CLTB, CXCL12, CYFIP1, CYP2F1, DDIT4, DGKA, EDNRB, EFNA1, EFN1, EFN3, EPHA2, EPHA5, EPHA8, EPHB1, EPHB2, EPHB3, EPHB4, EPHB6, FCGR3B, FOXA3, GNAI2, GNAI3, GRAP2, HEXB, HRAS, HTRA2, IL11, INPP5E, LFNG, LIMK1, LIPE, LRRC4C, MAPK1, MAPK3, MDH1, MTAP, NAE1, NCK1, NFASC, NFAT5, NFATC1, NFATC4, NR4A1, NRP1, NTNG1, ODC1, OR6C75, OR6N1, P4HA2, PAK1, PIK3CB, PLTP, PLXNA2, PLXNB2, POLD1, POLR2A, PPP3CA, PPP3CB, PPP3CC, PTGER3, PTK2, RGS3, RHOA, RHOD, RND1, ROBO2, ROCK2, SAT1, SEMA3A, SEMA3B, SEMA3C, SEMA3G, SEMA4B, SEMA4C, SEMA4D, SEMA4F, SEMA7A, SRGAP1, SRGAP2, SRGAP3, ST6GAL1, TAS2R3, TAS2R40, TGFB2, UNC5A, UNC5B, UNC5C, UNC5D, ATP6V1G2, KIR2DL5A

Negative_16786	CAD, FES, GBA, GK2, ME3, TNR, AARS, ABL1, ABLIM1, ABLIM3, ALAD, ALDH2, ALDH4A1, ANAPC2, ATP6V1D, CBLC, CDK5, CDKN2D, CFL2, CLDN10, CLDN18, COQ6, COX15, CTSB, CX3CR1, CXXC4, DAAM1, DHDDS, DPYSL2, EFNA1, EFNA2, EFNA3, EFNA5, EFNB1, EFNB2, EFNB3, EPHA2, EPHA3, EPHA5, EPHB1, EPHB3, EPHB4, FRAT2, FZD10, FZR1, GLDC, GNAI1, GSK3B, HSPA2, IARS2, IFNA8, KARS, KIR3DL1, LARS, LIMK1, MAPK1, MYH8, NCK2, NFAT5, NFATC4, NOS1, NR1D1, NRAS, NTN1, NTNG1, OR2T33, OR4M2, OR51F1, OR52A1, OR56A4, OR8D4, OSMR, PAK2, PAK7, PCYT1B, PIK3C2G, PKLR, PLXNA1, PLXNA2, PLXNA3, PLXNB1, PPP1R3C, PPP3R1, PPP3R2, PRDX6, PRPH, PTK2, RAC1, RGS3, RND1, ROBO1, ROCK1, ROCK2, SEMA3A, SEMA3B, SEMA3F, SEMA3G, SEMA4C, SEMA4D, SEMA4G, SETD1B, SETD7, SLIT1, SOAT1, SOCS4, SRGAP2, SRGAP3, SULT1A2, TUBA1B, UNC5A, UNC5B, UNC5C, VASP, WNT5B, YKT6, PPP1R12A
Negative_16787	BAD, BAX, GNE, IL5, KDR, PXN, ALDOC, ARSA, BIRC5, CCNG2, EDNRA, ENTPD5, EPHA2, F13A1, FOSL1, GLUL, GOT2, GSTA3, HRAS, HSPB1, IL12A, KRAS, LYPLA2, MAP2K1, MAPK1, MAPK11, MAPK13, MAPK3, NFATC1, NFATC2, NFX1, NOS3, NRAS, OLR1, OR1S1, OR52H1, PHKA1, PIK3CA, PIK3CB, PIK3CD, PIK3CG, PLA2G2D, PLA2G3, PLA2G5, PLCG2, PLK1, POLR2B, PPARG, PPP3CC, PPP3R2, PRKCA, PRKCB, PRKCG, PTGS2, RAC2, RAC3, RASGRF2, RCHY1, SHC2, SIGLEC1, SNAI2, SPHK1, SPHK2, ST8SIA1, TAS2R42, VEGFA, YWHAQ, CACNA2D1, CSNK1A1L
Negative_16788	ADO, AGL, CR1, DCC, KDR, SRC, ACOX2, AKT2, AQP7, C7orf16, CACNG4, CDK6, CEBPA, CNGA4, CRHR1, CYP2J2, DRD5, GJD2, GNPAT, HMOX1, IL11, ITGAM, KRAS, MAP2K1, MAP2K2, MAPK1, MAPK11, MAPK13, MAPK14, MYLK3, NFAT5, NUDT12, OR11H1, OR7A10, OR8S1, PCYT2, PDE4D, PIK3CB, PIK3CD, PIK3R3, PIK3R5, PLA2G10, PLA2G1B, PLA2G2A, PLA2G2E, PLA2G4A, PLA2G6, PLAU, POLD4, POLE4, PPP3CA, PPP3CB, PPP3CC, PRKCB, PRKCG, PTPN7, RAC1, RAC2, RAC3, RAF1, RASGRF1, RDH12, SHC2, SV2C, TUBB4, VEGFA, WBSR22, MAPKAPK2, MAPKAPK3, PLA2G12B
Negative_16789	BAD, C3, CRK, FAS, FTLN, HGF, ID3, ILEO, ILK, MET, MYC, PAX, RET, SMO, SRC, TNC, TNN, VCL, VTN, ACADSB, ACO2, ACTB, ACTN2, ACTN4, ADORA2A, ADRA1D, AKR1A1, AKT1, AKT3, AMY2B, ARHGAP5, ARHGEF1, ATP5C1, BCAR1, BCL2, BIRC2, BMP8A, BRAF, CACNA1S, CAV1, CAV2, CCND1, CCND2, CCND3, CD48, CDK7, CDKN1C, CHKA, CLDN3, COL11A1, COL1A1, COL2A1, COL4A1, COL4A2, COL4A6, COL5A2, COL6A1, CPT1C, CTNNB1, CUL1, DARS, DDB2, DIAPH1, DKK4, DMGDH, EDNRA, EGFR, ENPP2, ENTPD1, ERBB2, FABP1, FGF6, FLT1, FPGS, FRAP1, FZD8, GALNT13, GMPR2, GNAI1, GNB1, GRB2, GRLF1, HSD17B4, HSPB1, IBSP, IGF1R, IL10RB, ITGA1, ITGA10, ITGA11, ITGA2, ITGA2B, ITGA3, ITGA4, ITGA6, ITGA7, ITGB2, ITGB3, ITGB5, ITGB6, ITPK1, KIR2DL3, KLRC3, LAMA3, LAMA4, LAMB2, LAMB4, LAMC1, LAMC2, MAPK1, MTHFD1, MTHFS, MYLK, NAT1, NEFH, OR10G4, OR10G7, OR1Q1, OR4C16, OR4D1, OR51E2, OR51I2, OR52E2, OR5H6, OR6C74, OR8S1, PAK3, PARVA, PDGFD, PDPK1, PFKFB4, PIK3CA, PIK3CB, PIK3CG, PIK3R1, PIK3R3, PIP5K1C, PITX2, PKM2, PLA1A, PLXNA2, PNPLA3, POLR2L, PPP1CA, PPP1CB, PRKCA, PRKCB, PRKCG, PTGER1, PTGS2, PTK2, RAC1, RAP1A, RAP1B, RASGRP2, ROCK1, RPS6KA5, RUNX1T1, SEMA4D, SHC2, SHC3, SOS2, SPCS3, SPHK1, SUV39H1, SV2A, THBS3, THBS4, TNXB, TRAF2, TSHB, UAP1, VANGL1, VASP, VAV2, VEGFA, VEGFB, XIAP, ALDH18A1, ATP6V1C9, IL4, PPP1, IL4, PPP1

Negative_16790	<p>           CRK, DBI, EGF, FAN, F11N, GSK, HGD, IL9, ILK, KDR, PAH, TNC, TNN, VCL, VTN            , ACOT11, ACTG1, ACTN2, ACTN4, ACVR1, ADH1B, AKR1C2, AKR1D1, AKT1, AK            T2, AKT3, ARHGAP5, ATP5C1, B3GALT2, B4GALT5, BCL2, BDH2, CAPN2, CAV1            , CAV2, CCND2, CD14, CDC16, CDC7, CHAD, CLDN18, CNTFR, CNTNAP1, COL11            A1, COL4A1, COL4A2, COL4A4, COL5A1, COL5A2, COL5A3, COL6A1, COMP, CR            HR1, CRKL, CSNK1E, CYP17A1, DGKA, DHRS9, DUSP1, DUSP9, EGFR, EPB41L2            , EPHA1, FARP2, FARSA, FIGF, FLT1, FLT4, FZD8, GDE1, GOT1, GSK3B, GSTO            1, GUCY2F, HCST, HRAS, HTR2A, IBSP, IFNA5, IL10, IL1R1, INPP5A, IRAK4            , IRF5, ITGA10, ITGA2, ITGA4, ITGA6, ITGA9, ITGB5, ITGB6, ITGB7, LAMA            3, LAMA4, LAMB4, LAMC2, LAMC3, LRDD, MAPK1, MAPK3, MCCC2, MYL7, MYL9,            NARS2, NOTCH1, NRXN1, NUDT12, NUMBL, OR10H4, OR12D3, OR2A12, OR4K14            , OR51B4, OR5P2, OR5T3, OR6Y1, PAK2, PAK3, PAK4, PAK7, PARVB, PARVG, P            DE9A, PDGFA, PDGFB, PDGFD, PDGFRA, PDPK1, PFN3, PHKA2, PIGV, PIK3CD,            PIK3CG, PIK3R2, PIK3R3, PIP4K2B, PIP5K1C, PLTP, PNLIP, PPARA, PPID,            PPP1CB, PPP3R1, PRKCA, PRKCE, PRPS2, PRSS1, PTDSS1, RAC2, RAF1, RAP1            A, RAP1B, RAPGEF4, RDH12, RHOA, ROCK1, SETD1A, SHC2, SHC4, SOS2, SPCS            1, TBK1, TFDPI1, THBS1, THBS2, TLN2, TNXB, TSHR, TUBA4A, UCP1, UGCG, VA            V2, VAV3, VEGFA, VEGFB, WASL, XCL2, XIAP, MAP3K7IP2, PPP1R12A, TNFRS            F10C         </p>
Negative_16791	<p>           CKB, F11, FN1, TNN, VTN, ACADVL, ACAT1, AVPR1A, BMP8A, CCL19, CHAD, CH            EK2, CLDN20, CNTF, CNTN1, COL11A1, COL1A1, COL2A1, COL3A1, COL4A1, C            OL4A2, COL4A4, COL4A6, COL5A1, COL6A1, DAG1, ENPP2, IBSP, IL4R, ITGA            2, ITGA2B, ITGA3, ITGA4, ITGA7, ITGA9, ITGAV, ITGB5, ITGB7, ITGB8, LA            MA3, LAMA4, LAMB2, LAMC1, LIFR, OR10H1, OR51A2, OR51F1, PGS1, PPP2CB            , PPP2R5C, PRKY, PSPH, RDH5, SDC3, SEMA4D, SETD2, SNW1, SPRED1, SUCLG            1, SULT1A4, SULT2A1, SV2A, SV2C, THBS1, THBS3, TNFSF4, TYRP1, XCR1, A            RHGEF12, TNFRSF6B         </p>
Negative_16792	<p>           AMT, GLS, GPI, TNC, TNR, VTN, ACACB, AGRN, ALDOB, ARG1, CCNH, CD44, CD4            7, COL3A1, COL4A1, COL4A2, COL5A1, COL5A3, COMP, CPT1A, CRY1, CYP3A7            , FMO5, ITGA1, ITGA10, ITGA11, ITGA2B, ITGA6, ITGA7, ITGA9, ITGB1, IT            GB3, ITGB4, ITGB7, ITGB8, KIR3DL3, LAMA3, LAMA4, LAMB1, LAMB2, LAMB3            , LAMB4, LAMC3, MAP2K3, MGAT4B, OR1N2, OR51A2, PIGC, PMM1, POLR1C, PO            LR1D, PRKCE, PYCR2, RARS, RBL1, RENBP, SDC4, SLC27A5, SNAI1, SV2A, SV            2C, TCF7L1, THBS1, TLN1, SERPIND1, TNFRSF13C, TNFRSF17         </p>
Negative_16793	<p>           BAX, CD2, CD4, MAG, ME3, PAH, ABLIM1, ACACA, ACADM, ALCAM, ARHGEF2, BM            P7, CALML6, CARS2, CD22, CD226, CD274, CD28, CD34, CD40, CD58, CD86, C            DH15, CDH3, CLDN1, CLDN11, CLDN17, CLDN19, CLDN20, CLDN22, CLDN3, CL            DN4, CLDN5, CLDN6, CLDN8, CLDN9, CNTN1, CNTN2, CNTNAP1, CNTNAP2, COL            3A1, CXCL3, CYP1A2, DTX2, F11R, GCNT1, GNPDA1, GRIN2C, HLA-DRA, HLA-            G, IARS, ICAM2, ICAM3, ICOS, IDH1, IL20RB, ITGA4, ITGAM, ITGB1, ITGB2            , ITGB8, KRAS, LAMB4, LDHAL6B, MAPK12, MLLT4, MPZL1, MYLK, NFASC, NLG            N1, NLGN3, NQO1, NRCAM, NRXN2, OCLN, OR10A5, OR51A7, OR5C1, OXCT2, PA            X4, PDCD1, PGAM2, PI4KA, PIK3C2B, PLCZ1, PMM2, PRNP, PVRL2, PVRL3, PY            CR2, RAPGEF3, RPS6KB1, SDHB, SELPLG, SFRP1, SGPP2, SIGLEC1, STK11, S            TX3, TFPI, TPH2, TSHR, UGT2A3, VCAM1, WARS2, HLA-DPA1, HLA-            DPB1, HLA-DQA2, HLA-DRB3, HLA-DRB4         </p>

Negative_16794	CD4, CD6, MPZ, AADAT, BACE1, BMP2, C7orf16, CADM3, CD274, CD28, CD40L G, CD86, CD8B, CD99, CDC2, CDH1, CDH3, CDH5, CDK6, CES7, CHDH, CHRDN1, CLDN11, CLDN14, CLDN15, CLDN16, CLDN17, CLDN18, CLDN19, CLDN2, CLDN20, CLDN22, CLDN3, CLDN5, CLDN6, CNTN1, CNTN2, CTLA4, CXCL12, CYP11B2, CYP2C18, CYP2D6, CYP4A22, DCTN1, DGKG, EPHA5, EPOR, EREG, ESAM, FARP2, FARSB, FLOT2, GALNT3, GAPDH, GLG1, HLA-C, HLA-DMA, HLA-DRA, HLA-F, HSD17B2, HSD17B8, ICAM2, ICOS, ITGA4, ITGB1, ITGB7, JAG2, KIR2DS4, KLRK1, L1CAM, MAP4K1, MYLK, NARS, NAT1, NCAM2, NLGN1, NLGN2, NLGN3, NR5A2, NRXN1, NRXN2, NTN1, OR1D2, OR4F5, OR51A4, OR5D18, OR5P3, OR6C74, ORC6L, PCYT1A, PDCD1, PFKFB4, PTPRM, RHOQ, RUNX1T1, SELL, SELP, SEMA3A, SEMA4D, SLC9A1, SMARCA5, TUBB2C, UGT2B4, VCAM1, WNT10B, HLA-DPA1, HLA-DPB1, HLA-DQB1, MAPK8IP3, PDCD1LG2
Negative_16795	C7, FYN, ID2, SCD, SRC, TNC, TPO, VCL, WAS, ACTB, ACTC1, ACTG1, ACTN1, ACTN2, ACTN4, ACVR1B, ALDH9A1, BAIAP2, CDC42, CDH1, CHIT1, CLDN18, CLDN20, CSF2RB, CSNK2A1, CSNK2B, CTNNA2, CYP2A13, DHCR24, ENO2, FGF18, GFPT1, GLG1, HES1, HSD3B2, IARS2, IGF1R, IL23A, ITGA1, ITGA4, MAML3, MAPK3, OR13C8, OR4C15, OR4M1, OR52E8, PARD3, PECAM1, POLR2K, PRPS2, PTPN1, PTPN6, PTPRF, PTPRM, PVRL1, PVRL2, RAC1, RAC2, RAC3, RHOA, SNAI1, SORBS1, SSSX2IP, STMN1, STX12, TAS2R4, TCF7L1, TCF7L2, TGFB1, TGFB2, CACNA2D1
Negative_16796	FST, FYN, GSR, MET, NLK, VCL, WAS, ACP1, ACSM5, ACTB, ACTG1, ACTN2, ACTN4, ACVR1C, ADCY9, ADORA2B, ALDH3B2, AVPR1A, B3GALT5, CACNA1B, CACNB1, CDH1, CFL1, CLOCK, CSNK2A1, CSNK2B, CTNNA3, DHRS4, DHRS9, EGFR, FBP1, FGFR1, FUT6, FZD1, GSTA5, GSTM5, IGF1R, IQGAP1, LEF1, LGMN, MAP3K14, MAP3K7, MAPK3, MGAT1, MMP9, NRAS, OR4F17, OR51L1, ORC5L, P2RX1, PRKCH, PTPN6, PTPRB, PVRL4, RAC2, SELL, SETDB1, SMAD3, SMAD4, SNAI1, SNAI2, SOS2, SPCS3, SSSX2IP, TCF7, TCF7L2, TGDS, TGFB1, WASF1, WASF3, ATP6V1E2
Negative_16797	ADC, CTH, GH2, SCD, SRM, ACSS1, ACTB, ACTN2, ACTN4, ADSSL1, AFMID, AKR1C4, AKT1, AKT2, AREG, B3GALT1, B4GALT4, BCL10, BMP8B, CDK4, CHST13, CLDN10, CLDN11, CLDN15, CLDN17, CLDN18, CLDN2, CLDN20, CLDN22, CLDN4, CLDN6, COL6A2, CRB3, CSNK2A1, CTNNA2, CTNNA3, CTTN, DBF4, EFNA2, EHHADH, EPB41L1, EPB41L2, EPB41L3, ESAM, F11R, FABP3, FUT2, HCLS1, HLCSS, IGSF5, IMPA1, IMPA2, INADL, INMT, JAM2, JAM3, LLGL2, MAGI2, MAGI3, MAP3K12, MLLT4, MTHFR, MYH1, MYH13, MYH15, MYH3, MYH4, MYH6, MYH8, MYH9, MYL5, NRAS, NTF4, OLAH, OR2D2, OR51G1, OR52A5, OR5I1, OR6K3, PDCD1, PDHA1, PIK3C2G, PIK3R1, PLCD1, PLXNB2, POLE3, POLR2C, PPP2CB, PPP2R1B, PPP2R2B, PPP2R2C, PPP2R2D, PRKAG2, PRKCD, PRKCG, PRKCQ, PRKCZ, PROS1, PTEN, PTGER1, RRAS2, SDC3, SPTAN1, SV2C, TGFB1, TJP2, WNT8A, ATP6V1C2, B3GALNT1
Negative_16798	CGN, FH, GBA, ACTN2, ACTN4, AKT1, AKT2, AKT3, ATP6AP1, B3GALT4, CCNA2, CDC45L, CDK4, CHRM1, CLDN11, CLDN14, CLDN16, CLDN17, CLDN19, CLDN4, CLDN7, CLDN8, CLDN9, CPT2, CSNK2A1, CSNK2A2, CTNNA3, CTTN, CYP2D6, DGAT2L4, DKK1, EFNA3, EPB41L3, EXT2, GALNT12, GALNT5, GGT6, GNA11, GSTK1, HCLS1, IGSF5, IL12A, IL13, IL15, IRF9, ISYNA1, JAK2, KRAS, LDHA, LDHAL6B, LFNG, LLGL1, LLGL2, LTBR, MAGI2, MAGI3, MAPK3, MLLT4, MMP9, MPDZ, MYH15, MYH2, MYH4, MYH6, MYH9, MYL7, MYL9, NANP, NFYC, NSDHL, OCLN, OR1L3, OR3A3, OR51F1, OR6C2, OR6K2, OR9A4, PAK4, PARD6B, PDCD1, PDHB, PIP4K2B, PPP2CA, PPP2R1A, PPP2R1B, PPP2R2A, PPP2R2C, PPP2R2D, PRKCA, PRKCB, PRKCG, PRKCH, PRKCI, PRKCZ, RASGRP2, RHEB, RHOA, RRAS, RRAS2, SEMA4A, SGPP1, SNAI1, SPTAN1, SUOX, TAS2R49, TCIRG1, TJP1, TJP3, TRAF5, TNFRSF10C

Negative_16799	EGF, SRC, ADCY3, ADCY6, ADCY7, ADCY8, ADCY9, ADRB1, AREG, B4GALT4, BB OX1, CCR4, CSNK1D, CX3CL1, DDX23, DRD1, DUSP8, EGFR, EIF4B, EXTL1, FG F6, FOXO3, FUT8, GJD2, GNAI1, GNAI2, GNAI3, GNAQ, GNAS, GRM5, GUCY1A3 , GUCY1B3, GUCY2F, HMGCR, HMOX1, HTR2A, HTR2B, HTR2C, IL17RA, ITGA9, MAP2K1, MAP2K2, MAPK10, MAPK3, MAPK7, MKNK1, MMP2, NAGK, NFATC4, NME 6, NPR1, NPR2, NRAS, OR4F4, OR52D1, OR5I1, OR7G3, P2RX3, PDE1C, PDGFD , PDGFRB, PIK3C3, PLCB1, PLCB2, PLCB4, PLD2, POLR2H, PRKACG, PRKCG, P RKX, RAF1, SAT1, SAT2, SC4MOL, SOD1, SOS2, SULT1A4, SUV39H1, TAS1R3, TRPM5, TUBA1B, TUBAL3, TUBB1, TUBB4, TUBB4Q, UBA7, ULBP1, UNC5C, ZAP 70, ARHGEF12
Negative_16800	DCT, EGF, NPY, SRC, TK1, TPR, AADAC, ACAA2, ADCY1, ADCY2, ADCY3, ADCY7 , ADCY8, ADCY9, ADRB1, CCL17, CD74, CDC2, CLDN4, CREB5, CRKL, CSNK1D, CTLA4, DGKH, DNMT1, DRD2, EGFR, ENAH, GBA3, GNAI1, GRB2, GRM1, GRM5, G STA4, GUCY1A3, GUCY1B3, GUCY2C, HAGH, HNMT, HRAS, HSD17B3, HTR2A, HT R2B, HTR2C, JAG2, KRAS, LIPA, LPAR1, MAN1A1, MAN1B1, MAP2K2, MAP3K2, MAPK3, MDH2, MYL2, NPR2, OR13C4, OR13C9, OR51L1, OR5I1, OR7D2, PDGFC , PDGFD, PLCB3, PLCB4, POLR2A, POLR2K, POLR3B, PRKACA, PRKACB, PRKAC G, PRKX, PRKY, PRLR, RASGRF2, RPS6, SOS1, SOS2, TAS1R1, TAS2R5, TPI1, TUBA3C, TUBA3E, TUBA8, TUBAL3, TUBB1, VTI1A, WBSCR17, PDCD1LG2, PLA 2G12B
Negative_16801	C1S, C4B, C6, C8A, CR1, CR2, DDO, F12, F2R, F3, F8, FGG, GLS, RB1, SRF, AB AT, ADCY9, BDKRB1, BDKRB2, C1QA, C1QB, C3AR1, C4BPA, C4BPB, C5AR1, CD 55, CDS2, COL3A1, DGKZ, E2F4, GNA14, GNAO1, HAAO, IL28B, KLKB1, KNG1, MAPK3, MASP1, MASP2, MBL2, NFYB, OR10A3, OR13C8, OR1M1, OR2L3, OR5A1 , OR8B12, P2RX1, PDXK, PLAT, PLAUR, POLR2K, PRODH, SGPP2, TAS2R4, TFP I, THBD, YWHAZ, ATP6V1B2, SERPINA5, SERPINC1, SERPINE1, SLC25A31
Negative_16802	C1S, C2, C5, C7, C8G, CFD, CFH, CFI, CR2, F12, F3, F7, F8, FGA, FGB, HGD, P LG, ACOT12, ACTN2, ATP12A, ATP6V1A, B3GALT5, BDKRB2, C3AR1, C5AR1, C ACNB1, CALML3, CCL15, CD46, CYP1A2, CYP2U1, DCTN1, F13A1, F13B, GRIN 1, HSD11B2, IRF3, KLKB1, KNG1, MASP1, MBL2, OR10A5, OR2D3, OR4C12, OR 51B6, OR8K3, PCYT1B, PGS1, PLAU, PPARA, PPT1, PROC, PROS1, RPS6KA1, S EMA3B, SMAD5, STAM2, TFPI, THY1, EIF4EBP1, SERPINC1, SERPIND1
Negative_16803	AK7, CD4, SMS, SRM, STS, ARSB, AVPR1A, BCKDHA, BLVRA, CCKBR, CD8A, CTS B, CTSL1, CTSS, CYP11B1, DEGS2, DTX1, FUT4, GMPS, GUK1, HAAO, HLA- DMA, HLA-DOB, HLA-F, HLA- G, IFNA10, IFNA2, IFNA21, IFNA7, IFNA8, KAT2A, KIR2DL1, KIR2DL2, KIR 2DL3, KLRC1, KLRC2, KLRC3, LEF1, MAP3K2, NFYC, OR2G6, OR51E1, OR52N4 , PLCB3, PNPO, PRKY, PSME1, PSME2, PSME3, RASSF5, RFX5, RFXAP, SDHB, A ASDHPPT, HLA-DPA1, HLA-DPB1, HLA-DQA2, HLA-DRB3, PLA2G12A
Negative_16804	CD4, IL5, ACP1, ACY3, ACYP2, ADCY7, ADIPOQ, APLP1, ASCC3, CCL5, CD74, CD8A, CD8B, CDC42, CHEK1, CIITA, CNGA4, CTSL1, CTSS, EPHB3, GJA1, GUK 1, HLA-DOB, HLA-F, HLA- G, IFNA13, IFNA14, IFNA16, IFNA2, IFNA21, IFNA6, IFNA7, KIR2DL1, KIR 2DL2, KIR2DL3, KIR3DL2, KLRD1, LGMN, MAP2K5, NFYA, OR2H2, OR2L13, OR 51L1, OR7A17, PIGN, PLAT, PRKAA1, PRKCQ, PSME1, PSME2, RFXANK, SSH3, SV2C, TRAF2, XYLT1, HLA-DPA1, HLA-DQA2, HLA-DRB3, TNFRSF6B
Negative_16805	TNC, TNF, ACSL4, ADRB2, BLVRB, CACNA1S, CASP10, CASP8, CHAT, CHST13, CHUK, CLDN8, CXCL10, DBF4, DHCR7, DHRS4, GCLC, HSD17B8, IFNA13, IFNA 17, IFNA21, IFNA5, IFNB1, IKBKB, IKBKE, IRAK1, IRAK4, KLRC1, MAP3K7, MAP4K4, MEF2C, MYD88, NFKB1, NFKBIA, OR51L1, PARVA, PDXK, PRKCB, PSE N1, PTPN11, RAC1, TICAM1, TIRAP, TLR2, TLR3, TOLLIP, TRAF3, TRAF6, PP P1R12A

Negative_16806	GAA, GP5, GPT, TNF, AGRN, ATP5F1, CD14, CD40, CD80, CRY1, CSF3, CTF1, CXCL10, DAAM2, HRH2, IFNA10, IFNA16, IFNA2, IFNA21, IFNA7, IFNA8, IFNB1, IRAK4, IRF3, IRF5, IRF7, ITGA8, MDM4, NFKBIA, NRG2, OR10K1, OR13C5, OR2AG1, OR51S1, OR5D14, OR6F1, PPARD, RAC1, RASGRF1, RDH10, RIPK1, RUVBL1, TICAM1, TLR3, TLR4, TLR5, TLR9, TRAF6, VAV1
Negative_16807	GHR, GP6, KDR, MYC, AADAT, ACTB, AKT3, AQP7, BCMO1, BMPR2, CBLB, CBLC, CCND3, CHD8, CHDH, CLDN10, CNTFR, CPS1, CREB5, CREBBP, CRLF2, CSF2RB, CSF3R, DGKE, DPYD, DTX4, EIF4E2, EP300, EXT1, GJD2, GNA13, GPD1L, GPD2, IFNAR2, IL10RA, IL10RB, IL12RB1, IL13RA2, IL15RA, IL21R, IL22RA1, IL22RA2, IL23R, IL28RA, IL2RA, IL2RB, IL6R, IL6ST, ITPKA, JAK1, JAK3, KCNQ1, KIR2DS5, LIMK2, MAT1A, NOS1, NQO1, NRCAM, OR13C8, OR2A2, OR4A5, P2RX4, PARVA, PIAS1, PIAS2, PIAS3, PIGQ, PIK3CA, PIK3CD, PIK3R1, PIK3R3, PORCN, PPP3R2, PRKAG1, PRLR, PTPN6, RFXAP, SC5DL, SOCS2, SOCS4, SOCS5, SOS1, SPRED1, ST8SIA5, STAM2, STAT1, STAT2, STAT3, STAT4, STAT5B, STAT6, TAS2R13, TYK2, UGCGL2, UXS1, VAV1, VDAC3, XYLB, CTN, NBIP1
Negative_16808	ADC, CGA, EPO, ZYX, AKT1, AKT2, BBOX1, BST1, CACNB4, CBLB, CCR3, CDH5, CISH, CLCA4, COL4A2, CRLF2, CSF2RA, CSF2RB, CSF3R, CTSB, DTX3, EP300, GALNT1, GRB2, IFNAR2, IFNGR1, IFNGR2, IL10RA, IL10RB, IL12RB1, IL12RB2, IL13RA1, IL15RA, IL22RA1, IL23R, IL28RA, IL2RA, IL3RA, IL6R, IL7R, IL9R, IQGAP3, IRF9, JAK1, JAK2, KIR2DL2, L1CAM, LEPR, MAP2K4, MAP3K1, NEU2, NKX2-2, OR10A6, OR13D1, OR1C1, OR1L4, OR4E2, OR51M1, OR56A3, OR56A4, OR5H6, PAK1, PGAP1, PIAS1, PIAS2, PIAS3, PIAS4, PIGQ, PIGV, PIK3CB, PIK3CD, PIK3CG, PIK3R1, PIK3R5, PLA2G2F, PLOD1, PNMT, PPP5C, PTCRA, PTPN11, PTPRF, RAB5A, RALGDS, RASA1, SOCS3, SOCS4, SOCS5, SOS2, SPRED1, SPRY3, SPRY4, STAM, STAT2, STAT4, SUFU, SYNJ1, PRICKLE1, SERPIND1
Negative_16809	AK2, DBH, FYN, GSN, IVD, ME3, TNF, ACVR1B, ADIPOR1, APAF1, APOA1, ARAF, ATG3, ATP5H, BIRC2, BMP8B, CASP3, CCL8, CD48, CES7, CLDN19, CMBL, COL3A1, CSF1, CSF1R, CSF2, CYP11B2, DCTD, DDX50, DERA, FCER1G, FCGR3A, FCGR3B, GALM, GRAP2, GRM5, GZMB, HCST, HES1, HIF1A, HLA-C, HMGCR, HRAS, HSD17B3, ICAM1, IFNA10, IFNA14, IFNA17, IFNA7, IFNA8, IFNAR2, IFNGR1, IL15, IL1R1, INSR, IRS4, KIR2DL1, KIR2DS4, KIR2DS5, KIR3DL2, KLRC1, KLRC2, KLRD1, KRAS, LAMC1, LCP2, LDHAL6A, LHCGR, MAP2K1, MAP2K2, MCM7, NCR1, NCR3, NFAT5, NFATC1, NFATC2, NFATC4, NRAS, NT5C2, OR1J4, OR2C3, OR52N5, OSMR, PHKB, PIK3CA, PIK3CB, PIK3CD, PIK3R5, PLCG1, PLCG2, PLXNA2, PPP3CA, PPP3CB, PPP3R2, PRKCA, PRKCB, PRKCE, PTGS1, PTK2B, PTPN11, RAC1, RAF1, RDH8, ROBO1, SDC4, SH2D1A, SHC2, SOS2, SYNJ2, TAS2R42, TJP3, TNFSF10, TSC1, ULBP1, ULK1, UNC5B, VAV2, VEGFB, ZNRD1, TNFRSF10A, TNFRSF10C, TNFRSF10D
Negative_16810	BAD, F8, FAS, GAA, GK2, ID1, LCK, SYK, ACSS1, ACVR1B, ACYP1, ARAF, ARRB1, BCL10, BET1L, CAMK2A, CASP3, CBR3, CCL24, CD247, CDC6, CER1, CHEK1, CLDN6, CREBBP, CRLF2, CTNBN1, CUL1, ELK1, EPHB2, EXOC7, EXTL3, FCER1G, FCGR3A, FRAT1, GANAB, GLDC, GRB2, GSTT1, GZMB, HCST, HLA-G, HNF4G, HRAS, HTR4, ICAM1, IFNA14, IFNA2, IFNA21, IFNA5, IFNA7, IFNA8, IFNGR1, IFNGR2, IL11, IL1RAP, IL2RA, IMPDH2, IRF7, ITGA8, KIR2DL2, KIR2DL4, KIR3DL2, KLRC1, LTBP1, MAP2K2, MAPK3, NCR1, NCR3, NEU3, NFATC1, NFATC3, NFATC4, NKX3-1, NRAS, OR10A7, OR10C1, OR2B11, OR2Z1, OR52E4, OR5F1, P2RX5, PAPSS2, PDPK1, PGLS, PIK3CA, PIK3CB, PIK3CD, PIK3CG, PIK3R1, PIK3R5, PLA2G3, PPP3CB, PPP3CC, PPP3R2, PRKACG, PRKCA, PRKCB, PRKCG, PTK2B, PTPN6, RAC2, RAF1, RUVBL1, SH2D1A, SHC1, SHC2, SOS1, SOS2, SPTAN1, TAS1R2, TJP2, TNFSF10, TYROBP, ULBP1, ULBP3, UROD, VAV1, VAV2, WASF2, ATP6V1G2, TNFRSF10A, TNFRSF10D

Negative_16811	<p>CD4, DBI, FOS, FYN, ITK, LAT, LCK, MPL, NNT, PLN, AKT1, AKT2, AKT3, ALG1 OB, ALG8, BBC3, BCL10, CBLC, CD8A, CD8B, CDC27, CHRM3, CREB3L1, CTLA4 , DDX52, DIAPH1, DNMT3A, DUSP9, ETNK1, FZD4, GALNT9, GALT, GRAP2, GTS E1, GUCY1A2, HLA-</p> <p>F, HRAS, ICOS, IFNG, ITGAX, KRAS, LCP2, LIPE, MAP2K6, MAP3K14, MMP7, M YL2, NCK1, NEFH, NFATC1, NFKB1, NFKB1B, NFKBIE, NRAS, OR13J1, OR2M2, OR3A2, OR6C6, PDCD1, PDK1, PIK3CA, PIK3CG, PIK3R1, PIK3R3, PPAP2A, P PP2R5C, PPP3CB, PPP3R2, PRKCQ, PTPN6, RASGRP1, RHOA, SOS1, SUV39H1, TPMT, VAV2, VAV3, VEGFA, YWHAE, AASDHPPT, ATP6V1G3, PAFAH1B2</p>
Negative_16812	<p>AMT, CBL, GLS, LAT, LCK, TEC, ABI2, BACE2, BCL10, CACNA1A, CACNA1E, CA NT1, CARD11, CBLB, CD247, CD28, CD3E, CD40LG, CD8A, CD8B, CDK7, CHUK, COX15, CPT1C, CTLA4, CYP2A6, CYP2A7, DDX4, DDX54, GCNT2, GFPT1, GNAS , GNPDA1, GSTA5, HLA-</p> <p>F, HRAS, IFNW1, IKBKB, IKBKE, IKBKG, IL2RG, KITLG, MAP3K14, MAP3K8, N FAT5, NFATC1, NFATC2, NFATC3, NFATC4, NFKB1, NFKB1A, NFKB1B, NKD2, N RAS, OR10G8, OR13J1, OR2B11, OR4F5, OR5B17, OR5T3, PAK7, PIK3CB, PIK 3CD, PIK3R1, PIK3R3, PLCG1, POLR1C, PPAP2B, PPP5C, RASGRP1, RELA, SL C27A4, SOS2, SUFU, TAS2R10, UBE2L6, VAV1, VAV2, VEGFC, ZAP70, B4GALN T1</p>
Negative_16813	<p>ASL, BTK, HAL, JUN, SYK, AADAT, ADH7, ADORA2A, AKT3, ALOX5, ARHGFEF6, A SS1, BCL10, CCL21, CD19, CD72, GSK3B, HMGCS2, HRAS, HRH2, ICOSLG, INH BB, KITLG, LILRB3, NAGS, NFAT5, NFATC1, NFATC3, NFATC4, OR10G2, OR10 G9, OR10J5, OR8K1, P2RX2, PANK1, PDE2A, PDE6D, PIK3CA, PIK3CB, PIK3C D, PIK3CG, PIK3R2, PIK3R3, PIK3R5, PLCG2, PPP3CB, PPP3CC, PPP3R2, PR KAG1, PRKCB, PTPN6, RAC1, RBKS, RGS3, SETD1A, TPK1, VAV3</p>
Negative_16814	<p>F2R, IL5, PGD, ADIPOR1, AKT1, AKT2, ALG8, ANPEP, BCL10, CARD11, CCNG2 , CD22, CD72, CD79A, CD79B, CHUK, CPT2, CSF2RB, CYFIP2, F2RL3, GJA1, G SK3B, HTR7, IFNA17, IKBKB, IKBKG, MAN2A1, NFATC1, NFATC3, NFATC4, NF KB1, NFKB1B, NFKBIE, OR51I2, OR8D1, PAK3, PFKM, PIK3CB, PIK3CD, PIK3 CG, PIK3R3, PLCG2, PON2, PPP3CA, PPP3R1, PPP3R2, PRKACG, PRKCB, RAC3 , RASGRP3, RELA, RFWD2, SHMT1, TAS1R1, TRPM5, ZFYVE16, MAP3K7IP2</p>
Negative_16815	<p>BTK, DCC, GNS, NLK, UBC, AKT1, AKT3, CCR1, CDS2, CERK, CXCR4, DNMT3L, D USP14, DUSP16, FCER1G, FGF9, GNAZ, GRIN2A, HEXB, HRAS, KITLG, MAD2L2 , MAP2K1, MAP2K3, MAP2K6, MAPK12, MAPK3, MAPK9, MYH15, NRAS, NT5C1B, OGDHL, OR3A1, OR56B4, OR5B17, PIK3CB, PIK3CD, PIK3CG, PIK3R1, PIK3R 2, PIK3R3, PLA2G1B, PLA2G2A, PLA2G2E, PLA2G3, PLA2G4A, PLA2G5, PLA2 G6, PRDX6, PRKCA, PRKCB, PRKCE, PTGER3, PTPN6, PYCRL, RAC2, RAC3, RAF 1, ST3GAL4, STX12, TAS2R48, VAV1, VAV2, ATP6V0D2, CTNNBIP1</p>
Negative_16816	<p>F12, GNE, GPT, LIF, SYK, AKT1, AKT2, AKT3, AMDHD2, ATP6V1D, CX3CL1, CY P1A2, DCTD, DGKZ, DLL4, EHMT1, EXTL1, FZD8, GFPT2, HEXA, IL1R2, INPPL 1, LRP6, MAP2K1, MAP2K3, MAP2K7, MAPK1, MAPK11, MAPK12, MAPK13, MAPK 14, MAPK3, MAPK9, MCM2, MS4A2, MYH2, NFE2L2, NRAS, OR2K2, OR52A1, PDK 1, PIGM, PIK3CB, PIK3CD, PIK3R3, PLA2G1B, PLA2G2A, PLA2G2F, PLA2G4A , PLCG1, PLTP, PRKCA, PRKCB, PRKCD, RAC3, SOS1, SOS2, TOMM40L, VAV1, V AV2, ALDH18A1, HLA-DRB4, ST6GALNAC3</p>

Negative_16817	CKB, DBI, ID4, ITK, MPL, PXN, ACTB, ACVR2B, AGMAT, CACNA1D, CACNG7, CD99, CDC23, CDC42, CDH3, CDH5, CDIPT, CLDN11, CLDN15, CLDN16, CLDN17, CLDN20, CLDN22, CLDN5, CLDN6, CLDN7, CLDN8, CTNNB1, CTNND1, CXCR4, CYBA, CYBB, DGAT2, DGKQ, DUSP1, EFNA3, EFNB1, ENO1, F11R, FGF9, GNA11, GNAI1, GNAI3, GPD2, GRLF1, GSTM4, HTRA2, JAM2, JAM3, LAMB3, LLGL1, MGI2, MAPK11, MAPK12, MAPK13, MAPK14, MCM4, MMP2, MMP9, MYL7, NCF1, NCF2, OCLN, OR13G1, OR1D2, OR1G1, OR2C3, OR2D3, OR4K2, OR5A1, OR6X1, OR8J3, P4HA1, PAX4, PIK3CA, PIK3CB, PIK3CG, PIK3R2, PLCG1, POLR3D, PRDX6, PRKCA, PRKCG, PRPH, RAC2, RAPGEF3, RHOA, ROBO2, SIPA1, SLC2A4, SRGAP2, SUFU, TAP1, TAS2R41, THY1, TNFRSF4, UBE2L6, VAV1, VAV3, VCAM1
Negative_16818	BTC, CFI, EZR, LEP, OSM, STS, TXK, ACAT2, ACTB, ACTG1, ACVR1B, APOA2, ARHGEF4, ARSA, ASAH1, ATP2A2, ATP6V1A, ATP6V1H, C7orf16, CD247, CD28, CDH5, CLDN10, CLDN17, CLDN18, CLDN19, CLDN3, CLDN4, CLDN5, CLDN7, CTNNA3, CTNND1, CXCL12, CXCR4, CYBA, CYP2B6, DUSP2, E2F1, ESAM, F11R, F2RL1, GJD2, GRLF1, HRAS, HSD17B4, INPP5A, ITGA4, ITGAX, ITGB1, JAM3, MAD2L1, MAOA, MAPK12, MAPK14, MGAT5, MMP2, MMP9, MYD88, MYL5, MYL7, MYL9, NCF2, NOX1, NQO1, OCLN, OR13C3, OR1L3, OR4F17, OR6C75, OR8B8, PANK2, PERP, PIK3CB, PIK3CD, PLCG2, PPP2R5C, PRKCA, PRKCG, PRKY, PTDS2, PTK2, PVRL3, RAC1, RAC2, RAP1A, RAPGEF3, RAPGEF4, RHOA, ROCK2, SIPA1, SMAD6, SRD5A2, SULT1A4, TAS2R13, THY1, VAV1, VAV2, VAV3, VDAC1, WNT5A, ATP6V0A1, C1GALT1C1
Negative_16819	CRY2, CSNK1D, FOXA3, HPRT1, NPAS2, NR1D1, OR10H2, PCYT1B, PER1, PER2, PPCDC
Negative_16820	BCKDHB, CLOCK, CRY2, CSNK1E, FTH1, GUCY2C, NPAS2, NR1D1, PDE8B, PER2, PISD
Negative_16821	APP, F5, GHR, ACSL3, ADCY8, ALS2, AQP7, ARAF, ATF4, ATP13A2, BRAF, CACNA1C, CAMK2A, CAMK2G, CAMK4, CBLC, CHIT1, CREBBP, CYP2A6, CYP2C8, DGKB, DTX3L, EP300, GARS, GDE1, GRIA1, GRIA2, GRIN2A, GRIN2C, GRIN2D, GRM1, IARS, IDH3A, KRAS, LALBA, MAPK3, MGAT1, NRAS, OR4A16, PARVA, PHKA1, PIP5K1B, POLA2, POLE4, PPP1CA, PPP1CB, PPP3CA, PPP3CB, PPP3R2, PRKACA, PRKACG, PRKCA, PRKCE, RAB5A, RAP1A, RAP1B, RAPGEF3, RPS6KA6, SMAD6, SPRED2, ST3GAL3, TJP2, PPP1R12A
Negative_16822	FGB, MAX, UBC, ADCY1, ADCY8, AKR1B1, BRAF, CACNA1C, CALML5, CALML6, CAMK2D, CAMK4, CCNE2, CLDN10, CNTFR, CYP2C18, CYP3A5, EPHA4, GRHPR, GRIA2, GRIN1, GRM1, GRM5, ICOSLG, IFNA16, IL6R, ITGA6, LLGL1, LTBP1, MAP2K2, NTF4, OR13H1, OR1E1, OR1E2, OR1L3, OR2K2, OR8B12, PIAS4, PLA2G2D, PLCB2, PLCB3, PLCB4, PPP1CB, PPP1CC, PPP1R1A, PPP3CA, PPP3CB, PPP3CC, PPP3R2, PRKACB, PRKCA, PRKCB, PRKY, PSENEN, RAP1A, RPS6KA2, RPS6KA3, RPS6KA6, SPRY2, SPRY4, TAS2R16, TRAF4, PPP1R12A
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Negative_16825	<p>AGK, BTD, C2, GLS, IL6, OTC, PVR, STS, TAT, ABT2, ACACA, ACL1, ACOX1, ADAM10, ADIPOQ, ADRBK2, ADSS, ALDH3B2, ALG8, ALOX5, AMY2B, APOA5, APOE, ARNTL, ARPC4, ATP2A1, ATP5A1, B3GAT3, BCKDHA, BCL2L1, C4BPA, C9orf95, CADM1, CALML3, CALML6, CAMK2D, CAMK2G, CASP10, CASP6, CCL22, CCL7, CCL8, CCNG2, CCR2, CD22, CD38, CD59, CD79A, CD80, CDC6, CDK6, CFL2, CHSY3, CKMT2, CLCA4, CNGA3, COL1A2, COL4A6, CREB3L4, CRHR1, CRLS1, CTF1, CTLA4, CTPS, CYP2A6, CYP7A1, DHRS3, DTX1, DUSP9, E2F3, EGLN1, EPOR, FGF4, FGF5, FOSL1, FOXO3, FPGS, FUT9, GALNT12, GALNT7, GALNTL1, GATM, GDF7, GIT1, GMPR2, GNAS, GRHR, GRLF1, GSTK1, GUCA1B, GUCA1C, HA01, HCCS, HIBADH, HMGCS1, HPRT1, HSP90B1, IFNA16, IKBKB, IKBKG, IL22RA2, IL7R, KIR2DL4, KLRC2, MDM4, MYH15, NADK, NARS2, NAT5, NEUROG3, NKX3-1, NOTCH3, NPR1, NT5E, NUDT8, ODC1, OGDH, OR10A5, OR10C1, OR10G3, OR10G8, OR10G9, OR10H1, OR10H2, OR10H3, OR10H4, OR10J1, OR10J3, OR10J5, OR10P1, OR10Q1, OR10S1, OR10V1, OR10X1, OR11H1, OR11H4, OR11H6, OR11L1, OR13A1, 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OR2A173, OR2A174, OR2A175, OR2A176, OR2A177, OR2A178, OR2A179, OR2A180, OR2A181, OR2A182, OR2A183, OR2A184, OR2A185, OR2A186, OR2A187, OR2A188, OR2A189, OR2A190, OR2A191, OR2A192, OR2A193, OR2A194, OR2A195, OR2A196, OR2A197, OR2A198, OR2A199, OR2A200, OR2A201, OR2A202, OR2A203, OR2A204, OR2A205, OR2A206, OR2A207, OR2A208, OR2A209, OR2A210, OR2A211, OR2A212, OR2A213, OR2A214, OR2A215, OR2A216, OR2A217, OR2A218, OR2A219, OR2A220, OR2A221, OR2A222, OR2A223, OR2A224, OR2A225, OR2A226, OR2A227, OR2A228, OR2A229, OR2A230, OR2A231, OR2A232, OR2A233, OR2A234, OR2A235, OR2A236, OR2A237, OR2A238, OR2A239, OR2A240, OR2A241, OR2A242, OR2A243, OR2A244, OR2A245, OR2A246, OR2A247, OR2A248, OR2A249, OR2A250, OR2A251, OR2A252, OR2A253, OR2A254, OR2A255, OR2A256, OR2A257, OR2A258, OR2A259, OR2A260, OR2A261, OR2A262, OR2A263, OR2A264, OR2A265, OR2A266, OR2A267, OR2A268, OR2A269, OR2A270, OR2A271, OR2A272, OR2A273, OR2A274, OR2A275, OR2A276, OR2A277, OR2A278, OR2A279, OR2A280, OR2A281, OR2A282, OR2A283, 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OR2A728, OR2A729, OR2A730, OR2A731, OR2A732, OR2A733, OR2A734, OR2A735, OR2A736, OR2A737, OR2A738, OR2A739, OR2A740, OR2A741, OR2A742, OR2A743, OR2A744, OR2A745, OR2A746, OR2A747, OR2A748, OR2A749, OR2A750, OR2A751, OR2A752, OR2A753, OR2A754, OR2A755, OR2A756, OR2A757, OR2A758, OR2A759, OR2A760, OR2A761, OR2A762, OR2A763, OR2A764, OR2A765, OR2A766, OR2A767, OR2A768, OR2A769, OR2A770, OR2A771, OR2A772, OR2A773, OR2A774, OR2A775, OR2A776, OR2A777, OR2A778, OR2A779, OR2A780, OR2A781, OR2A782, OR2A783, OR2A784, OR2A785, OR2A786, OR2A787, OR2A788, OR2A789, OR2A790, OR2A791, OR2A792, OR2A793, OR2A794, OR2A795, OR2A796, OR2A797, OR2A798, OR2A799, OR2A800, OR2A801, OR2A802, OR2A803, OR2A804, OR2A805, OR2A806, OR2A807, OR2A808, OR2A809, OR2A810, OR2A811, OR2A812, OR2A813, OR2A814, OR2A815, OR2A816, OR2A817, OR2A818, OR2A819, OR2A820, OR2A821, OR2A822, OR2A823, OR2A824, OR2A825, OR2A826, OR2A827, OR2A828, OR2A829, OR2A830, OR2A831, OR2A832, OR2A833, OR2A834, OR2A835, OR2A836, OR2A837, OR2A838, 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Negative_16829	<p>FES, IL3, LEP, PLN, RDX, VCL, ACSL3, ACSS3, ACTB, ACTG1, ACTN1, ADH5, A DRA1D, AGMAT, AGPAT3, ALCAM, ALDH5A1, ALDH7A1, ALDOB, ARAF, ARHGEF6 , ARHGEF7, ARPC1A, ARPC3, ARPC4, ARPC5L, ATP5G3, BACE1, BCAR1, BDKRB 1, BRAF, C3orf10, CADM3, CALML5, CCL26, CCL28, CD14, CD86, CFL1, CHIA , CHRM2, CHUK, COL6A1, CRKL, CYFIP2, DGUOK, DHODH, DIAPH3, DOCK1, EFN B2, EGFR, ENTPD6, ERBB2, EXTL1, FARSB, FGD1, FGD3, FGFR3, FGFR4, FIGF , GALNTL5, GBGT1, GNA12, GNA13, GNG3, GRLF1, HAGHL, HSD17B1, HSD3B7, HSPA8, IDH2, IFNA5, IKBKE, IL1R1, INPPL1, INSR, IQGAP2, IQGAP3, ITG A1, ITGA10, ITGA11, ITGA2B, ITGA4, ITGA5, ITGA8, ITGA9, ITGAL, ITGAV , ITGB1, ITGB3, ITGB6, ITGB7, ITGB8, KLRC3, KNG1, KRAS, LIMK2, LIPF, M AP2K1, MGAT5B, MOV10L1, MPDZ, MYH10, MYH9, MYLK2, MYLK3, NAE1, NCKAP 1, NCKAP1L, NKD1, NME7, NRAS, NRXN3, NT5E, NUDT5, OCRL, OR11A1, OR4F1 5, OR51Q1, OR52N1, PAK3, PAK4, PDE8B, PDGFRA, PDGFRB, PFN4, PHKG2, PI GA, PIK3CB, PIK3CD, PIK3R1, PIK3R2, PIK3R5, PIP4K2C, PIP5K1B, PIP5K 3, POLR3G, PPP1CB, PPP1CC, PPP2R1A, PPP2R5D, PRKACB, PTK2, QARS, RAC 3, RAF1, RDH12, RHOA, ROCK1, RRAS, RRM2B, SHC2, SLC9A1, SOS1, STT3B, S TX10, TGFB2, TIAM2, TNFSF14, VAV1, VAV2, VAV3, VEGFA, WASF1, WASL, Z IC2, ZNRD1, ARHGEF12, MAPKAPK3, PPP1R12A, TNFRSF13B</p>
Negative_16830	<p>ABO, AGL, AK3, APP, CFI, CRK, EZR, MOS, MSN, RDX, UBC, VCL, WAS, ABL1, AC TB, ACTG1, ACTN2, ACTN4, ADCY7, ADH7, ADORA2A, AKR1B10, ALDH1A3, ALD OA, APC2, ARAF, ARHGEF7, ARPC1A, ARPC5L, ATF2, ATP6V1H, BCMO1, BDKRB 2, BMP7, BRAF, C3orf10, CASP8, CAV3, CCL17, CCL26, CD40, CDC42, CDS2, CFL1, CFL2, CHRM1, CHRM2, CHRM3, CRLS1, CTPS, CYP1A2, CYP4A11, DAAM2 , DIAPH3, ENAH, FGD1, GNA13, GNAS, GNG12, GNPDA2, GPD1, GSTA3, GUSB, H RAS, ICAM1, ICOS, IDH3A, IDH3G, IKBKG, IL2RG, IMPDH2, INSR, IPPK, IQ GAP1, IQGAP3, ITGA1, ITGA10, ITGA11, ITGA2, ITGA2B, ITGA5, ITGA9, IT GAD, ITGAL, ITGAM, ITGB1, ITGB2, ITGB4, ITGB5, ITGB6, ITGB7, ITGB8, I TPKB, KLRC2, LIMK1, MAP2K1, MAPK8, MOV10L1, MYH14, MYL2, MYL7, MYL9, MYLK3, NAT1, NME6, NOS3, NRCAM, OR10A6, OR14A16, OR2B2, OR2B6, OR2T5 , OR4C16, OR52K1, OR5AN1, OR6T1, OR7A5, OR8B12, PAK1, PAK3, PAK4, PAK 6, PAK7, PARD3, PDE2A, PDGFRB, PIK3CB, PIK3CD, PIK3CG, PIK3R1, PIK3R 2, PIK3R3, PIK3R5, PIP4K2B, PIP5K1C, PLTP, POLA1, POLR2B, POLR2K, PP AP2A, PPP1CB, PPP1CC, PRKACA, PRKX, PTCH2, PTGFR, RAC1, RAF1, ROCK2, RPS6KB1, RRAS, RXRG, SDC3, SHC2, SLC9A1, SNW1, SOS1, SSH2, STAT1, TIA M1, UGCG1, UXS1, VAV3, WASF1, WASF2, WIF1, WWP1, ARHGEF12, ATP6V1B2 , PPP1R12A, SERPIND1</p>
Negative_16831	<p>BAD, C4B, CBL, CRK, INS, PRL, ACACA, ACACB, ACHE, ACPT, ACY1, ADRA1A, A GPAT2, AKT2, ALDH7A1, ARHGEF4, ATP5G1, CAMK2D, CCL27, CDK6, CLDN8, C OL4A1, COX10, CREB3, CXCL10, CXCR3, CYP1A2, CYP7A1, ECSIT, EDA2R, EI F4E, EIF4E2, ELK1, EPHA2, FBP1, FCGR2B, FLAD1, FUT4, G6PC2, GAL3ST1, GNAO1, GRB2, GRM5, GUCY1A2, GYS2, HNF1A, HRAS, IFNA7, IKBKB, INSR, IR S1, IRS4, KLKB1, KNG1, KRAS, LIPE, LRDD, MAP2K2, MAPK10, MAPK9, MGST2 , MKNK2, MPST, NEFH, NEFL, NFKBIB, NRXN1, OR10V1, OR6Y1, OR9A2, ORC1L , PCK1, PCK2, PDE3B, PDPK1, PDXP, PHKA1, PIK3CA, PIK3R2, PIK3R3, PPP1 CA, PPP1CB, PPP1CC, PPP1R3C, PRKAB2, PRKACA, PRKACB, PRKACG, PRKAG1 , PRKAG3, PRKAR2A, PRKAR2B, PRKCH, PRKX, PRKY, PSAT1, PTPRF, PYGB, PY GL, RAF1, RAPGEF1, RHEB, RHOQ, RND1, RPS6, RPS6KB2, SFRP4, SHC3, SHC4 , SLC25A6, SLC2A4, SOCS1, SOCS3, SOS1, SPHK1, SREBF1, TRIP10, TSHR, T UBA1A, TUBB4Q, VANGL1, YOD1, ATP6VOD2, ATP6V1B1, EIF4EBP1, PPP1R12 A, TNFRSF10A, TNFRSF13B</p>

Negative_16832	BAD, CBL, CD4, CRK, GDA, HAL, INS, ME1, RB1, AANAT, ACACB, ADCY7, AMPD2, ARSB, ATP6V1F, BRAF, CALML3, CALML5, CALML6, CANT1, CASK, CASP8, CBLB, CBLC, CCDC6, CCL21, CDC25A, CDKN1B, CHPT1, CNTNAP1, COMP, CRKL, CTF1, CYFIP1, CYP1B1, DDHD1, DIAPH3, DPYD, DUSP3, DUSP4, DUSP9, EDN1, EIF4E, EIF4E2, EXOC7, FASN, FBP2, FLOT1, FOXO1, G6PC, G6PC2, GANC, GLUD2, GRB2, HRAS, HTR2A, IKBKB, IL17A, INSR, IRS2, ITGA10, ITGB1, LIPE, LTB4R2, MAP3K12, MAPK1, MAPK3, MAPK8, MAPK9, MYL5, OR1M1, OR2C1, OR2T29, OR4N2, OR51B2, OR6M1, OR7G1, OR8U1, OXCT2, P2RX5, PDCD1, PDE3A, PDGFB, PFKL, PFKP, PHKA1, PHKG2, PIK3CB, PIK3CD, PIK3R1, PIK3R3, PIK3R5, PKLR, PKM2, PPP1CA, PPP1R3D, PRKAA2, PRKAB1, PRKACB, PRKACG, PRKAR1A, PRKAR1B, PRKAR2A, PRKAR2B, PRKCI, PSME2, PYGL, RAPGEF1, RARS, RBPJ, RHOQ, RPS6, RPS6KB1, RPS6KB2, SCD5, SCP2, SELPLG, SHC4, SNAI2, SOCS3, SOCS4, STX5, TLN1, TRIP10, TSC1, MAPK8IP2, PPARGC1A
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Negative_16834	AK7, DCN, GLS, IL2, JUN, SYK, ACVR2B, ADCY1, ADCY2, ADCY3, ADCY6, ADCY7, ADCY8, ADRBK2, ANAPC7, B3GALT2, CALML3, CALML5, CALML6, CAMK2B, CD8B, CDKN2D, CES1, CLTA, CREB3L3, CTSL1, CXCL10, DAXX, EGFR, EPB41L2, EVI1, GALNT11, GALNT9, GNA11, GNA14, GNAQ, GNAS, GNRH1, GNRHR, GRB2, GRM5, HRAS, ICOS, IFNA14, INPP5B, ITGAM, KRAS, MAP2K3, MAP2K4, MAP2K6, MAP2K7, MAP3K3, MAPK12, MAPK13, MAPK3, MAPK7, MAPK8, MAPK9, MCM7, MMP2, MMP9, NUMBL, OR2AE1, OR2B11, OR52N1, OR8K1, OR8K3, PLA2G2E, PLA2G2E, PLCD4, PLD1, PLD2, PRKACB, PRKCA, PRKX, PTCRA, PTK2B, SOS2, STX6, TBL1Y, TCIRG1, PLA2G12A, PLA2G12B
Negative_16835	CR2, DCT, LSS, NGF, TYR, ACP5, ADCY1, ADCY2, ADCY3, ADCY4, ADCY5, ADCY8, ADCY9, ALDH4A1, AMY2A, ASNS, CALML5, CAMK2A, CAMK2B, CAMK2G, CFLAR, CREB1, CREB3L3, CREB3L4, CTF1, CXCR5, CYCS, DHDDS, DUSP1, DVL3, EDN1, EDNRB, EFNA3, ELK1, ENTPD4, EP300, EPHA3, FABP1, FZD3, FZD5, FZD6, FZD7, FZD8, FZD9, GALNT3, GALNT6, GNAI2, GNAI3, GNAO1, GSK3B, GSTT1, GUCY2D, HRAS, IDH2, IL11RA, IL2RB, KRAS, LEF1, MAPK1, MAPK3, MARS, NEGR1, NUDT5, OR4A15, OR51E2, PLCB1, PLCB2, PLCB3, PLCB4, PPP2CB, PPP2R5C, PRKACA, PRKCB, PRKY, RDH5, RELA, SDC4, SETD2, STAT6, STX10, STX1B, TAP2, TCF7L2, TYRP1, WNT1, WNT10A, WNT11, WNT2, WNT2B, WNT3A, WNT4, WNT5B, WNT9A, AASDHPPT, SERPINF2
Negative_16836	DCT, DDO, KIT, PDC, PXN, TYR, ADCY3, ADCY6, ADCY7, ADCY8, ALDH2, APC2, APH1A, B3GALT6, CACNG4, CALML5, CALML6, CAMK2B, CAMK2D, CCNE2, CDC16, CNDP1, CREB1, CREB3, CREB3L4, CTBP2, CTNNB1, CYBA, DAPK3, DIAPH3, DKK2, DLL3, DVL1, DVL2, DVL3, EDN1, EP300, FZD10, FZD2, FZD3, FZD9, GALK2, GNA14, GNAI2, GNAI3, GSK3B, H6PD, HNF1A, HSD17B4, IDI1, KITLG, MAP2K1, MAPK3, MGAT1, MYH7, MYL5, NCF4, NCOR1, NEGR1, NOX3, NRAS, OR1J4, OR51B5, OR5R1, OR8D2, PDE4C, PLCB3, PLCB4, PNPT1, PRKACA, PRKACB, PRKY, RHOQ, SARDH, SEMA4F, SMAD1, SPTAN1, SRD5A2, TCF7L1, TCF7L2, TYRP1, UGCG, UNC5B, UXS1, WNT10A, WNT16, WNT3A, WNT4, WNT7A, WNT8A, WNT8B, WNT9A, WNT9B

Negative_16837	CAT, CBS, EGF, FH, MIF, NPY, ACACB, ACSL1, ACSL4, ACSS2, ADCY1, ADH5, A DIPOQ, ADIPOR2, APHA, ATP6V1A, C3AR1, CAMKK2, CBLC, CDC25A, CPT1A, CPT1B, CREB3L1, DEGS1, FGF3, FLT3LG, G6PC, G6PC2, HNF4G, IKBKB, IRS2 , IRS4, JAK2, LDHC, LEPR, MAPK8, MGAT5, NFKB1, NFKBIA, NFKBIE, OR1A2, OR1N1, OR4F5, PIK3CG, PPARA, PRKAA1, PRKAB1, PRKAB2, PRKAG2, PRKAG3 , PRKCQ, RXRA, SC4MOL, SMPD1, SOCS3, STAT3, STK11, SUFU, TBK1, TRADD
Negative_16838	ATM, C1S, DHH, LEP, NPY, TNF, ACSL3, ACSL4, ACSL5, ADIPOQ, ADIPOR1, AD IPOR2, AGRP, AKR1C4, BAI1, C9orf95, CAMKK1, CAMKK2, CPT1C, CTSS, CXC L16, DAAM2, DTX2, EFNA4, EHMT1, G6PC2, GNG13, GUCA1C, IKBKG, IRS4, IT PA, LEPR, MAPK10, NFKB1, NFKBIA, OR4C16, OR4K15, OR4N2, OR52E2, OR6Q 1, P2RX4, PDE1B, PPARA, PPCDC, PPP2R1B, PRKAA1, PRKAA2, PRKAB2, PRKG 1, PTPN11, RAD51, SCLY, SOCS3, STAT3, TAS2R16, UBE2L3, PPARGC1A, SER PINF2, TNFRSF1A, TNFRSF1B
Negative_16839	INS, NPY, ABCC8, ADIPOQ, ADIPOR2, CACNA1A, CACNA1B, CACNA1D, CACNA1 G, CAMKK2, CREB3L3, CYFIP2, CYP2A7, FRAP1, HTR2B, IRS1, IRS4, MAFA, M APK3, MAPK8, MTRM1, NLGN2, OR10C1, OR5T3, P4HA3, PIK3CB, PIK3R1, PIK 3R3, PLCB4, PNPO, PPA2, PSPH, PYGL, RFWD2, SLC2A4, SMPD4, SOCS1, SOCS 2, SOCS4, TP53I3
Negative_16840	ABCC8, ALAS2, ALDH3B1, ATP2A2, BACE2, C3orf10, CACNA1B, CACNA1D, CA CNA1E, CDC26, COL2A1, DPAGT1, DTX3, FRAP1, GOSR2, IL17RA, IL18R1, IL 3RA, IRS1, IRS2, ITGAV, KCNJ11, MAPK8, MAPK9, MGST2, NADK, OR10G3, OR 11H4, PDE4A, PDX1, PIGM, PIK3CA, PIK3CG, PIK3R3, PRKCD, PRKCE, PRKCZ , SLC2A4, SOCS1, SOCS2
Negative_16841	CD28, CD80, CD86, IL10, PPP2R2A
Negative_16842	FAS, CD28, CD80, STX1A, TAS2R10
Negative_16843	INS, ALG12, BAI1, CCR8, ENTPD4, FOXA2, GGT5, HES1, HHEX, HNF1A, HNF1B , KCNB1, KLRC4, MAFA, MNX1, NEU3, NEUROD1, NEUROG3, NR5A2, OR6K6, PAX 4, SPTLC1, TSC2
Negative_16844	INS, MVD, AMPD1, DLL1, EFNB3, EVI1, FOXA3, GNPAT, HES1, HHEX, HNF1A, H NF1B, HNF4A, IAPP, LIPC, MAFA, NKX2- 2, NPR2, NR5A2, OR1J1, PDGFB, PKLR, PPP1R1A
Negative_16845	ILK, APOE, BACE1, GAPDH, GSK3B, LEFTY1, NAE1, PYCRL, SULT2A1
Negative_16846	CKB, APOE, BACE1, BACE2, GSK3B, IL15, MAPT, OR5K2, PRODH2
Negative_16847	ACP2, ACTN2, AHCYL2, CASP3, CTBS, GALK1, HTRA2, NT5E, PDE3B, PTPN6, R ND1, SLC25A5, SLC25A6, UBA1, UBA7, UBE2L3, VDAC1, SLC25A31
Negative_16848	UBB, ADCY6, BMP5, CYCS, DUSP9, HTRA2, JAK2, LARS2, MMP14, OCRL, PGAM2 , PPID, PPP1CC, SLC25A4, SLC25A6, UBA1, UBE2L6, VDAC3
Negative_16849	BAD, PTS, TNF, ADH7, BCL2, CASP9, CLCF1, CYCS, DAXX, DERL1, IL4R, IRAK 3, KCNQ1, MAP2K3, MAP3K5, MAPK12, MAPK13, MTFMT, NEFH, OR4C11, PIGN, POLR2E, PPP3CB, PPP3CC, RAB5A, RERE, SOD1, SREBF1, TAS2R8, TGFA, TNF SF12, TOMM40L, TPMT, UPP2, PLA2G12B, TNFRSF1A
Negative_16850	BAX, ALS2, BCL2, CASP3, CLOCK, DERL1, DIAPH3, IL20RA, ITGA8, ITGAD, L CAT, MAP2K5, MAP2K6, MAP3K5, MAPK11, MAPK12, NRXN1, OR3A3, OR5T3, OR 8D4, PITX2, PPP3CA, PPP3CB, PPP3R1, PPP3R2, PRDX6, PTPN6, RAB5A, RAC 1, RFX5, SOD1, TAS2R3, TOMM40, UPP1, TNFRSF1B
Negative_16851	C1GALT1, CASP8, HAP1, HIP1, OR4F4, SUV420H2
Negative_16852	CASP3, CHKB, DCTN1, HIP1, HTR5A, OR11A1
Negative_16853	BAIAP2, CSAD, DAAM2, FCGR3A, GAPDH, INSR, ITCH, MAGI1, MAGI2, P2RX6, PYGB
Negative_16854	ATN1, DAD1, EXT2, FTCD, INSR, ITCH, MAGI1, MAGI2, RASSF5, RERE, SKP2
Negative_16855	DDO, AMPD1, FECH, GFAP, LAMC1, NFE2L2, PRNP
Negative_16856	LTB, APLP1, ATP2A3, CPT2, NFE2L2, PRNP, RPSA

Negative_16857	GSR, ACTA2, ACTG2, ADCY3, ADCY9, CD40LG, CDKN1C, CFTR, FGD3, GNA11, GNAS, IL11, ITCH, LCMT2, OR2S2, PLA2G4A, PRKACA, PRKCA, PRKCB, PRKCG, PRKX, RXRG, SLC12A2, ST3GAL6
Negative_16858	LIF, ACMSD, ACTA1, ACTB, ACTC1, ACTG2, ADCY3, CACNB2, FGF13, GNAS, KCNQ1, OR1D2, PDE3A, PDIA4, PIP4K2C, PPP1R3D, PRKACA, PRKACG, PRKX, RAB23, SLC12A2, VAMP3, WNT1, MAPK8IP1
Negative_16859	JUN, LYN, PLN, SRC, ADAM17, ADCY5, ADCY9, ADIPOQ, AMDHD1, BCL2L1, BMP7, CCL5, CHUK, CLDN15, CXCL1, EGFR, F11R, FGF10, HBEGF, IGSF5, IKBKG, IL8RA, IL8RB, ITGB4, JAM2, JAM3, MAP2K4, MAPK10, MAPK9, MCM2, NLGN3, OR8D1, ROBO2, STAM2, STX12, VAMP2, ZBTB16
Negative_16860	IL8, JUN, SRC, ALG10B, ANAPC7, ASRGL1, ATP5D, ATP5L, CCL22, CMPK2, CXCL1, DUSP4, ENPP7, GIT1, HADH, IGSF5, IKBKB, IKBKG, IL17RB, IL8RA, JAM2, JAM3, MAP2K4, MAP3K14, MAPK10, MAPK11, MAPK12, MAPK8, NT5C1B, OR1S2, OR4E2, PIGO, PMAIP1, PTPRZ1, SLC27A1, TJP1, YWHAE
Negative_16861	WAS, ACSS1, ACTG1, ARHGEF2, ARPC5, DGUOK, GANC, GGT5, GSTK1, IL20RB, PFKFB3, PRNP, RHOA, ROCK2, SLC9A1, SPRY1, STT3B, SULT1A4, TLR4, TUBA1A, TUBA1C, TUBA4A, TUBB2A, TUBB2C, TUBB3, TUBB4Q, TYMS, WASL, TNFRSF17
Negative_16862	WAS, ACTB, ACTG1, ADAM10, ALOX12, ARPC5, BMP8B, CACNG3, CAMK2A, CYP7A1, IRF7, ITGAD, KIR3DL3, OR52N1, PANK2, RHOA, ROCK1, SMAD7, TGFB3, TUBA1A, TUBA1C, TUBA3C, TUBAL3, TUBB, TUBB2A, TUBB2C, TUBB3, TUBB6, UPR
Negative_16863	VCL, ACTB, ADCY8, ARHGEF2, ARPC5L, CD79A, CHD8, DCTD, IFNA14, MMP2, NANS, OR4E2, OR52E2, PAX8, POLR2I, RHOA, ROCK2, TLR4, TUBA1A, TUBA1B, TUBA3C, TUBB2A, TUBB2B, TUBB3, TUBB4Q, TUBB6, WASL, SERPINB5
Negative_16864	GP9, ACHE, ACTB, ACTG1, ARPC5L, ATP5J2, CASK, CD14, CRKL, DDX41, DUSP3, GADD45A, HRH2, PDE11A, PIGK, PLD1, SMPD2, SPRED2, TLR4, TUBA1A, TUBA1C, TUBA3C, TUBB2A, TUBB2B, TUBB2C, TUBB4, TUBB4Q, TUBB6, WASL
Negative_16865	DCC, FOS, IL2, JUN, ACVR1B, AGPAT6, AKT1, AKT2, AKT3, ALDH5A1, APPL1, ARAF, BCL2, BIRC5, BRAF, CCND1, CDC14A, CHEK1, CLDN4, COQ6, DPYSL2, EI24, GCLC, HLA-DMA, IL10RB, IMPA2, ITGB6, KRAS, LEF1, MAP3K1, MAPK10, MAPK8, NEFH, NFKB1, OR2AG2, PIK3CD, PIK3CG, PLAUR, POLR2J, PRKAB2, RAC1, RARA, SEMA3F, SMAD2, SMAD3, TCF7, TCF7L1, TGFB2, TNFSF10, CSGALNACT2
Negative_16866	ASL, BAX, CSK, HAL, MYC, OGT, TK2, ACVR1C, AKT1, ALAS2, ARAF, ATF2, BCAT1, BCL2, BRAF, CACNB2, CASP3, CASP9, CCND1, CTNNB1, FGF23, GAD1, GBA3, GSK3B, ICAM3, MAP2K1, MAPK9, MIOX, OR8G1, OXSM, PIK3CD, PIK3CG, PIK3R1, PIK3R2, PIK3R5, RAC1, RALGDS, SEMA4C, SMAD3, SMAD4, SMAD7, SPI1, STAM, STK4, SV2A, TBXA2R, TCF7L2, TGFB1, WBSR17
Negative_16867	CRK, HGF, IL7, JUN, LIF, MAX, MPZ, PGF, AKT1, AKT2, ALDOC, ARNT, CASK, CCL23, CDC42, CLDN3, CRKL, DHRS4L2, EFNA4, EPAS1, FIGF, GMPS, GRB2, GSTP1, GUCY2F, GZMB, HIF1A, LAMB2, MAPK1, MAPK3, MCCC2, NEU1, NT5C1B, OR2B2, PAK3, PDE11A, PEMT, PIGS, PIK3CA, PIK3CB, PIK3R1, PIK3R5, PMM1, POLR3G, PTPN11, RAC1, RAF1, RAP1A, RAPGEF1, SMAD2, STAT3, TGFA, TGFBI, TGFB2, TRHR, VEGFA, VEGFB, YWHAH, TNFRSF13B
Negative_16868	JUN, MPI, AKR1D1, AKT2, AKT3, AMY2A, ARPC3, BCAT2, BRAF, CCR1, CES7, CKMT2, CREBBP, CYP4F3, DDIT3, DPAGT1, EGLN3, EP300, EPAS1, FIGF, GAPDH, GMPPB, GRB2, IRF9, L1CAM, MAP2K1, MAPK1, MYLK2, NCF1, OR2D3, OR52K1, PAK3, PAK6, PAK7, PIK3CB, PIK3CD, PIK3CG, PIK3R1, PIK3R5, PLAT, PTPN11, RAF1, RAPGEF1, SDC2, SEMA3F, SLC2A1, SOS2, STX1B, TGFA, TGFB1, TGFB3, TNFSF4, TRHR, TUBAL3, UNC5C, VEGFA, VEGFC, ZAP70

Negative_16869	PGF, RB1, ACVR1B, ACVR1C, AGPAT3, AKT2, AKT3, ANAPC10, ARPC3, B3GNT4, BBOX1, BCL2L1, BRAF, CACNA1C, CACNB3, CDK4, CDK6, CHUK, CTNNA2, DGKB, DIAPH2, E2F1, E2F3, ERBB2, ERBB3, FIGF, GART, HMGCL, HPSE2, HSD11B1, IKBKB, IKBKG, JAK1, KCNQ1, LALBA, MAPK1, MAPK3, MPZL1, NEGR1, NKX3-1, NME2, OR2D2, OR9A2, PGS1, PIGB, PIK3C2A, PIK3R1, PIK3R2, PIK3R3, PLA2G3, RAC1, RAC2, RAC3, RALGDS, ROCK2, SEMA3D, SEMA4F, SGMS2, SIAH1, SMAD2, SMAD3, STAT1, TGFB1, TGFB3, TGFBRI, TP53I3, VEGFA, VEGFB, YARS
Negative_16870	CFI, EGF, F2, MET, PGF, RB1, ACO2, ADCY10, AKT1, AKT2, AKT3, APOA5, ARAF, ARHGEF6, BCL2L1, CASP9, CBR3, CCND1, CDK4, CDK6, CFTR, CHUK, CREB1, CXCL5, DDX52, DUSP6, E2F2, E2F3, EGFR, FIGF, GCH1, IKBKG, IL4R, INPP4B, JAK1, KRAS, MAPK1, MAPK3, MAPK9, NFKBIA, NODAL, OR10A2, OR10G3, OR2L3, OR51V1, OR56A1, PIGL, PIK3CA, PIK3CD, PIK3R5, PIP5K3, POLR1B, PPP3CC, PTAFR, RAC1, RAC3, RALGDS, RFNG, SMAD2, SMAD3, STAT1, SUCLG2, TDO2, TGFBRI, TUBB2B, ULBP1, VEGFC, WWP2, B3GALNT1
Negative_16871	AGK, BAD, EGF, ID1, MSN, MYC, AKT2, AKT3, ALDH3A1, APC2, ARAF, AXIN1, BRAF, CANT1, CDC25C, CTNNB1, DAAM1, EGFR, FGFR1, GNB1, GPD1, GRB2, GSTM4, JAG1, MAPK3, MGAT3, NRAS, NTNG1, PDPK1, PIK3CA, PIK3CD, PIK3R2, PIK3R3, PON3, PTPN1, RAF1, RAPGEF2, RASSF5, RDH10, SELPLG, SOS1, SUV39H1, TCF7L1
Negative_16872	BAD, ABLIM2, ACADS, AKT3, ARAF, AXIN1, AXIN2, C3AR1, CASP9, CSNK1G2, CTBS, CTNNA1, CTNNA2, FOXO3, FUT2, GNAZ, HRAS, ITGB4, KRAS, LAMB2, LCMT2, LEF1, MAP2K1, MAPK1, MAPK3, MDH2, NRAS, NRG2, NT5C, OR2A5, OR5AR1, PIK3CA, PIK3CG, PIK3R1, PIK3R3, PIK3R5, POLR1A, RAF1, SFRP2, SOS1, TCF7, TLR5, ARHGEF12
Negative_16873	CAD, RB1, ACSL3, AGPAT3, AKT1, AKT3, B3GNT5, BRAF, CALML3, CALML5, CALML6, CAMK2A, CAMK2D, CDK4, CDKN2A, CDKN2C, CHST12, COL5A1, CSF1, CXCL16, E2F1, E2F2, E2F3, FCER1G, FMO2, FSHB, GAS1, HNF4G, IGF1, IGF1R, IKBKE, KRAS, LAMC2, MAPK10, MAPK12, MFNG, NRAS, NRG4, OR8H3, OR9Q1, PDGFRB, PGM1, PIK3C2B, PIK3CB, PIK3CD, PIK3R1, PIK3R2, PIK3R3, PLCG2, PRKCB, RAF1, RDH16, SH2D1B, SHC1, SHC2, SOS2, TP53, VANGL2, XYLB, ATP6V1C2, SUV420H1
Negative_16874	CKM, FST, RB1, AGRP, AKT1, AKT2, AKT3, ALDH3B1, ARG1, CALML3, CALML5, CALML6, CAMK2B, CAMK2D, CBR1, CDK4, CLCA4, CYP4A11, E2F1, E2F2, EXTL3, HAAO, HRAS, IDUA, IGF1R, KRAS, MAPK1, MAPK14, MDM2, MPZL1, NAT5, NMNAT2, NRAS, OR7G2, OR8H3, OR8K1, PAK2, PARD6G, PARVA, PDGFA, PDGFRA, PIK3CD, PIK3CG, PIK3R3, PITX2, PLCG1, PNPLA3, PRKCA, PRKCB, RAF1, RPE65, SEPHS1, SGPP1, SHC1, SHC2, SHC3, SOS2, STAT3, TP53, TNFRSF10C, TNFRSF17
Negative_16875	AR, BCR, CFH, GSR, INS, MPI, AKT1, ASAH1, BRAF, CASP9, CBR1, CCL11, CD8B, CREB1, CREB3, CREB3L1, CREB3L2, CREB3L4, CREB5, CREBBP, CTBP1, CTNNB1, E2F2, EFNA1, EP300, FGF2, FGFR1, FGFR2, FOXO1, FRAP1, GLS2, GLUT, GNA13, GPAM, GRB2, GRIN2D, GSK3B, HRAS, IKBKB, IKBKG, IL29, INSR, IQGAP1, ITGB7, KRAS, LCAT, LEF1, LIMK2, MAP2K2, MAP2K3, MDM2, NFE2L2, NFKBIA, NKX3-1, NRAS, NRG3, OR10J5, OR5D14, OR8B4, PCCB, PDGFC, PDGFD, PDGFRA, PGM2, PIK3CB, POLD2, POLD4, PRKCQ, PTPN1, RUNX1, SMARCA5, SOS1, SOS2, ST3GAL2, TAS2R3, TCF7, TCF7L2, TGFA, TP53, TRAF2, TRDMT1, UGT2A1, WNT10A, YWHAE, YWHAQ, HSP90AA1

Negative_16876	BAD, EGF, EZR, GH1, INS, JUP, ACSM1, ACY3, AKR1C1, AKR1C3, AKT1, AKT3, ARAF, ATP2A3, BCL2, BHMT, BRAF, CASP9, CCL28, CDC2, CDKN1A, CHUK, CLD N16, CLTCL1, CREB3, CREB3L1, CREB3L2, CREB3L4, CREB5, CRHR1, CTNNB1, DDX54, DGKZ, E2F1, EPB41L1, FGF17, FOXO1, FRAP1, GALNS, GSTP1, HLA-DOB, HRAS, IGF1, IGF1R, INSR, INSR, ITPK1, LEF1, MAP2K1, MAPK1, NEU1, NFKB1, NKX3-1, OR10H2, OR13D1, OR2L13, OXTR, PDGFB, PDGFD, PDGFRB, PER3, PFKM, PGK1, PIK3CD, PIK3CG, PIK3R1, PIK3R3, PLA2G2E, PRSS2, PSENE1, PVRL1, RDH16, RELA, SMAD4, SMARCA5, SOS1, SOS2, SPI1, SRGAP3, TCF7, TCF7L1, TCF7L2, TGFA, HSP90AB1, PPARGC1A
Negative_16877	MYC, RDX, RET, TFG, COL6A1, CTNNB1, CXCL1, EPHA5, GSTM5, HARS, IDH1, MAP2K1, MAP2K5, MAPK3, MBL2, NCOA4, OR4K5, OR9I1, P2RX2, PAX8, PIK3R3, PPARG, RXRB, RXRG, TCF7L1, TCF7L2, TIAM1, TPM3
Negative_16878	TFG, CACNB1, CAV1, CCDC6, CCND1, CCR2, CTNNB1, CYP1B1, DDIT3, ENO2, GYS2, HRAS, JAG2, MAP2K1, MAPK1, MAPK3, NCOA4, NTRK1, OR2T3, RXRA, RXRG, TAS1R1, TCF7, TCF7L1, UPP1, ZAP70, B3GALNT1, SERPIND1
Negative_16879	AMH, ATP5L, B3GNT3, BMP2, CHPF, CNGB1, CTNNB1, DDHD1, DVL2, ERBB3, ETNK1, FZD1, FZD10, FZD4, FZD5, FZD6, FZD8, FZD9, GALNS, GALNT2, GLI2, GLI3, GSK3B, HLCS, ITGB6, MAP3K14, OR1K1, OR51S1, PIAS2, ROCK2, RRAS2, SIAH1, SNAP25, STK3, SULT2A1, TRPM5, WNT1, WNT10B, WNT2, WNT2B, WNT3A, WNT4, WNT6, WNT7A, WNT7B, WNT8B, WNT9B
Negative_16880	ADK, DDO, LPL, VTN, ADH4, CCNE1, DDIT4, DVL1, FGFR3, FUT4, FZD1, FZD2, FZD3, FZD5, GLI1, GLI2, GLI3, HHIP, IGF1R, IQGAP3, KITLG, LEF1, NFATC4, OR2M5, OR6C1, PANK3, PFKFB2, PIP4K2C, SEMA3A, TCF7, TCF7L1, TCF7L2, VKORC1, WNT1, WNT10A, WNT10B, WNT16, WNT2, WNT2B, WNT3, WNT4, WNT6, WNT7B, WNT9A, ATP6V1C2, HLA-DPB1, ST6GALNAC3
Negative_16881	GK2, GSR, AGPAT6, AKR1C1, AKT2, ARAF, BCL10, BRAF, CDC2, CDK6, CDKN1A, COL2A1, DOLPP1, E2F1, E2F2, EGFR, ENTPD1, FGF11, FGF12, FGF13, FGF17, FGF18, FGF19, FGF2, FGF20, FGF4, FGF5, FGF6, FGF8, FGF9, FGFR1, HNM T, HRAS, IGF1R, IL20, IL6R, INPP5B, KRAS, LCMT2, MAP2K2, MDM2, MYH7B, NAT2, NFYC, NRAS, NRXN3, OR1M1, OR52K1, OR5R1, OR9A4, PDGFA, PDGFB, PDGFD, PDXP, PFKFB1, PIK3CG, PIPOX, PLA1A, PPP1R3D, PRKAR1A, RAF1, RASA1, SC5DL, SESN3, SETDB2, TP53, ATP6V1G3
Negative_16882	BAD, EGF, HGF, ID3, MET, RB1, RFK, SRF, AKT1, AKT2, AKT3, ARNT2, ARRB1, BLVRA, BRAF, BTRC, CDK4, CDKN2A, COL5A2, CYP2S1, DHFR, DHRS9, DKK1, FGF1, FGF11, FGF12, FGF18, FGF19, FGF2, FGF23, FGF6, FGF9, FPGS, GALNTL5, GARS, GGPS1, GNAO1, GPD1, HRAS, HSD3B1, IGF1, IGF1R, INPP1, MAML3, MAP2K2, MAPK1, MDM2, NCF1, NOS3, NRAS, OR51G2, OR6K3, PDGFB, PDGFC, PDGFD, PIK3CD, PIK3R3, PITX2, PLCZ1, RAF1, SEMA3F, STK11, TGFA, THBS3, TP53, UPB1, ZFYVE9
Negative_16883	CRH, EGF, HYI, CCND1, CD44, CDKN1A, CLDN19, DAPK1, DAPK2, DAPK3, DHRS4, DHRS4L2, E2F1, EGFR, HRAS, MAP2K1, MAPK1, MAPK3, MDM2, OR10H5, OR2S2, OR4D6, OR51B5, PPP2R5C, RAF1, RBX1, RPS6KA5, TP53, WNT3A
Negative_16884	HAL, ACADM, ACSL5, ARAF, BCL2, BRAF, CHRM5, CLTA, DAPK2, DAPK3, DUSP5, E2F1, EGFR, ENTPD7, ERBB2, HRAS, MADCAM1, MAP2K1, MAPK1, MAPK3, MDM2, NRAS, OR14J1, OR52E2, OR52N2, OR6C3, RAF1, RPS6KA5, SETD7
Negative_16885	ASL, BAD, BCR, CBL, CRK, F9, MYC, NOG, RET, ACSS2, ACVR1B, ACVR1C, AKR1B10, AKT1, ARAF, ATP5G1, BCL2L1, BRAF, CBLB, CBLC, CDK4, CDK6, CHST12, CHUK, COL5A2, CTBP1, CTBP2, DARS, DPYSL2, E2F1, ENTPD7, GCAT, HLA-DOA, HMGS1, HRAS, HTR7, ICOSLG, IFNA5, IKBKB, IL22, IRAK2, LIPA, LLGL1, MAPK1, NEU4, NFATC2, NFKBIA, NKX6-1, OR13F1, OR5T1, PERP, PFKFB3, PIGN, PIK3CA, PIK3CB, PIK3CD, PIK3CG, PIK3R1, PIK3R2, PIK3R5, POLD3, RELA, RUNX1, SHC1, SHC4, SLC25A6, SOS2, SPCS3, SUV39H2, TGFB1, TP53, TYK2, TNFRSF10A

Negative_16886	BAD, CRK, LTB, MYC, ABL1, ACTC1, ACVR1B, ADCY7, AKT2, ANAPC11, ARAF, A SIP, ATG12, BRAF, CBL, CCL26, CCND1, CCR2, CD3E, CDKN2A, CFL2, CLDN9, CRKL, CSF2RA, CTBP1, CYFIP1, CYFIP2, E2F1, E2F2, EVI1, GALNT10, HDA C2, HTR6, IKBKB, IKBKG, ITGAM, KLK3, MAP2K1, MAP2K2, MAP3K6, MAPK3, M DM2, NAMPT, NFKBIA, NFYB, NOTCH3, NRAS, OR5H2, PDE1B, PDE9A, PIGH, PI K3CB, PLEKHA8, PRKAA1, RELA, SHC1, SHC2, SHC3, SMAD3, SMAD4, SMURF2, SOS2, STAT5A, TAS2R14, TGFB3, TGFB3, TNXB, TP53, TRAF5, TSTA3, ULBP 2, UMPS, UPRT
Negative_16887	BAD, IVD, SYK, AKT1, AKT3, ASNS, B3GAT2, BRAF, CEBPA, ENTPD3, ETNK1, F LT3, FRAP1, FZR1, GCH1, GGCX, GUCY2C, IGF1R, IKBKB, IKBKG, MAP2K1, MA P2K2, MAPK1, MAPK3, MMP14, NRAS, NRG1, NUDT8, OR10H2, OR2M4, OR5K2, P IGW, PIK3CA, PIK3R2, PIK3R5, PIM1, PIM2, PPAR, PPP2R2C, PRPH, RAF1, RARA, RELA, RPS6KB1, RUNX1T1, SESN1, SMPD3, SORBS1, TCF7L1, TCF7L2, UAP1, UGDH, ZBTB16, EIF4EBP1, PAFAH1B3
Negative_16888	AGL, BAD, BCR, CS, JUP, MYC, PRL, SI, BRAF, CD82, CDK4, CREB3L3, DHODH, FLAD1, FLT3, GSTO2, IL4R, IL9R, INMT, IRAK4, LAP3, LEF1, MAP2K1, MAP2 K2, MAPK1, MAPK3, NRAS, OR4A5, OR51B5, OXCT2, PGAM1, PIK3CA, PIK3CD, PIK3CG, PIK3R1, PIK3R2, PIK3R5, PIM2, PLA2G1B, RAF1, RELA, RPS6KB1, RUNX1T1, SMAD5, SOS2, SPI1, ST3GAL5, STAT5A, STAT5B, TCF7, TCF7L2, T GFB2, THTPA, WBSR22, EIF4EBP1, PNLIPRP1, PNLIPRP2
Negative_16889	FN1, RB1, ACACA, ACSM3, ACSM4, AKT2, BCL2L1, BDKRB1, BIRC2, BIRC3, BM P8B, CASK, CASP9, CCND1, CDK2, CDKN1B, CDKN2B, CHRM3, CLDN10, COL4A1, COL4A4, CPT1B, DLL1, E2F2, E2F3, EPHA5, GABARAP, ICOSLG, IDI2, IKBK B, ITGA2, ITGAL, ITGAV, ITGB1, KIR3DL2, LAMB1, LAMB2, LAMB4, LAMC3, N COA4, NFKB1, OR13J1, OR4D9, OR51S1, OR52B4, PARD6A, PIAS1, PIAS3, PI AS4, PIK3CD, PIK3CG, PIK3R3, PIK3R5, PLOD1, PRKACB, PRODH2, PTK2, PT PMT1, RELA, SCLY, SCP2, SKP2, SLC12A2, TAS2R60, TLR3, TRADD, TRAF1, T RAF3, TRAF6, TRDMT1, TUBB2B, WNT8A, YARS, PRICKLE1
Negative_16890	FN1, FST, PVR, RB1, ACVRL1, AKT1, AKT2, ALOX12B, APAF1, ATF4, ATP2A2, ATP6V1D, BIRC2, BIRC3, CACNB2, CASP9, CCND1, CD44, CDH15, CDK2, CDK4, CDKN2B, CHUK, CKS1B, COL4A2, COL4A4, COL4A6, CYP2C8, CYP4A22, DAAM 1, E2F3, GALNT14, GJA1, HADHB, IFNGR1, ITGA2, ITGB1, LAMA3, LAMB1, LA MC2, MCEE, MYH1, NOS3, NSD1, OR51F1, OR8G1, PAK4, PIAS2, PIAS3, PIGL, PIGU, PIK3CB, PIK3CG, PIK3R2, PIK3R3, PIK3R5, PLCD3, PLXNA3, PPAP2C, PRNP, PTGS2, RAP1B, RAPGEF2, SEMA3B, SGMS2, SKIV2L2, SKP2, SLC27A5, STX18, TRAF1, TRAF2, TRAF3, TRAF4, XIAP
Negative_16891	BAD, CKB, TH, AARS2, AKT1, AKT2, ARAF, ARHGAP5, ASPA, ASRGL1, BMP8A, B RAF, C7orf16, CASP9, CBLB, CDK6, CDKN2A, E2F2, E2F3, EGFR, FGD1, GRB2, HLA- DOB, IMPA1, ITGA2, KRAS, MAPK3, NRAS, OR10S1, OR2S2, OR3A2, PIK3CA, P IK3R2, PIK3R5, PLCE1, PLCG2, PPAP2C, PRKCA, PRKCB, PRKCG, QARS, SEMA 4B, SOS1, SOS2, STAT1, TAS2R4, CSNK1A1L
Negative_16892	AGK, C9, EGF, MIF, AKT2, AKT3, ARAF, BRAF, CASP9, CCND1, CDKN2A, CHD8, CHUK, DDIT3, DDX47, E2F1, ENTPD2, ERBB2, GUCY1A2, HRAS, IFNW1, INHBC, MAP2K2, MAP3K11, MAPK3, MBL2, METTL6, MYH2, PDPK1, PFN1, PIK3CB, PI K3CD, PIK3CG, PIK3R3, PLCG1, PPAP2A, PRKCA, RAF1, SOS2, STAT4, STK4, TGFA, TRAF1, TUBA4A, ATP6V1C1, HSP90AB1, SERPINB5
Negative_16893	CD40LG, CD80, CD86, DTX3L, FASLG, HADH, TUBA1A
Negative_16894	FAS, ACMSD, CD28, CD40LG, CD80, CTTN, OR56A1
Negative_16895	CKB, C1QA, C1QB, C1QC, CD28, CD40LG, CD80, CLDN10, GCNT3, OR6C74, SPR Y1, WASL
Negative_16896	C1S, C3, C1QB, CD28, CD80, CD86, FLT4, GMPR2, OR1Q1, OR5R1, POLR2D, SO S1
Negative_16897	FAS, ALG11, CD80, CD86, FASLG, ISYNA1, SRD5A2



Negative_16898	FAS, CD40LG, CD86, FASLG, PAK6, UNC5A, WNT16
Negative_16899	CD80, CDKN2D, FASLG, FUT7, FZD4, GRIA3, HLA-C, HLA-G, KIR2DL2, KIR3DL1, KLRD1, KNG1, PFKFB4, RPS6KA1, STAT1, KIR2DL5A
Negative_16900	FAS, CD28, CD80, CD86, DKK4, GRHPR, HLA-C, HLA-G, IL10RB, KIR2DL2, KLRD1, NFATC3, OR2C1, STAT2, TSHB, TNFRSF13B