A A2⟶M2

Training: Kainate			Test: MCAO	
BN score	q−value	Feature	BN score	q−value
0.254871	0.011	**AP1F**	0.824317	0.001
0.0000464739	1.	AP1F HOXC	0.17675	0.006
0.0000259144	1.	AP1F PIT1	0.218585	0.006
0.000014982	1.	AP1F SATB	0.147317	0.009
1.31092×10^{-7}	1.	AP1F HNF1_HOXC	2.10775	<0.001
7.56606×10^{-12}	1.	AP1F E4FF HNF1_HOXC	0.0795164	0.021
2.85003×10^{-12}	1.	AP1F HNF1_SNAP PIT1	0.104155	0.014

B M2⟶A2

Training: MCAO			Test: Kainate	
BN score	q−value	module_set	BN score	q−value
2.10775	<0.001	AP1F HNF1_HOXC	1.31092×10^{-7}	1.
0.824317	0.001	**AP1F**	0.254871	0.011
0.218585	0.006	AP1F PIT1	0.0000259144	1.
0.17675	0.006	AP1F HOXC	0.0000464739	1.
0.147317	0.009	AP1F SATB	0.000014982	1.
0.104155	0.014	AP1F HNF1_SNAP PIT1	2.85003×10^{-12}	1.
0.0795164	0.021	AP1F E4FF HNF1_HOXC	7.56606×10^{-12}	1.
0.0457055	0.042	AP1F PIT1 RREB	$<2.8500\times10^{-12}$	1.
0.0417503	0.049	AP1F_AP1R	$<2.8503\times10^{-12}$	1.
0.0410351	0.049	SATB	$<2.8500\times10^{-12}$	1.

C A3⟶M3

Training: Kainate			Test: MCAO	
BN score	q−value	Feature	BN score	q−value
4.31078×10^{8}	<0.001	**EGRF LHXF**	0.229441	0.009
4.17003×10^{8}	<0.001	**LHXF ZBPF**	0.152447	0.013
1.5724×10^{8}	<0.001	EGRF_ZBPF LHXF	0.00195931	0.732
1.25018×10^{8}	<0.001	**LHXF ZF5F**	0.0788775	0.027
1.07687×10^{8}	<0.001	EGRF_ZF5F LHXF	0.000823212	0.985
9.51965×10^{7}	<0.001	EBOX LHXF	0.0130215	0.174
3.30419×10^{7}	<0.001	HOXF_OCT1 ZBPF	0.0000592705	1.
2.96533×10^{7}	<0.001	E2FF_EGRF LHXF	7.85364×10^{-6}	1.
2.64311×10^{7}	<0.001	**AHRR LHXF**	0.294314	0.007
2.38358×10^{7}	<0.001	AHRR CLOX	0.0062272	0.343

D M3⟶A3

Training: MCAO			Test: Kainate	
BN score	q−value	Feature	BN score	q−value
5140.02	<0.001	**AP1R**	0.673304	0.003
165.356	<0.001	**AP1R PARF**	432.564	<0.001
161.999	<0.001	**PARF**	448.265	<0.001
124.941	<0.001	**CREB**	22946.	<0.001
88.2873	<0.001	AP1R MEF2	0.0305232	0.09
64.3365	<0.001	**AHRR AP1R**	18.2066	<0.001
55.6683	<0.001	**AP1R ZF5F**	265.177	<0.001
44.5959	<0.001	**AP1R EGRF**	1.83339	0.001
37.2971	<0.001	**AHRR**	20839.1	<0.001
33.5465	<0.001	**AP1R E4FF**	0.12286	0.026

E Conditional probability table for {AP1F, SATB}

motifs		sign of M2		number of genes
SATB	AP1F	−	+	
0	1	0.38	0.62	287
1	0	0.68	0.32	123
0	0	0.55	0.45	753
1	1	0.57	0.43	105
All		0.52	0.48	1268

F Conditional probability table for {EGRF, LHXF}

motifs		sign of A3		number of genes
EGRF	LHXF	−	+	
0	1	0.5	0.5	96
1	0	0.48	0.52	381
0	0	0.57	0.43	328
1	1	0.21	0.79	234
All		0.45	0.55	1039