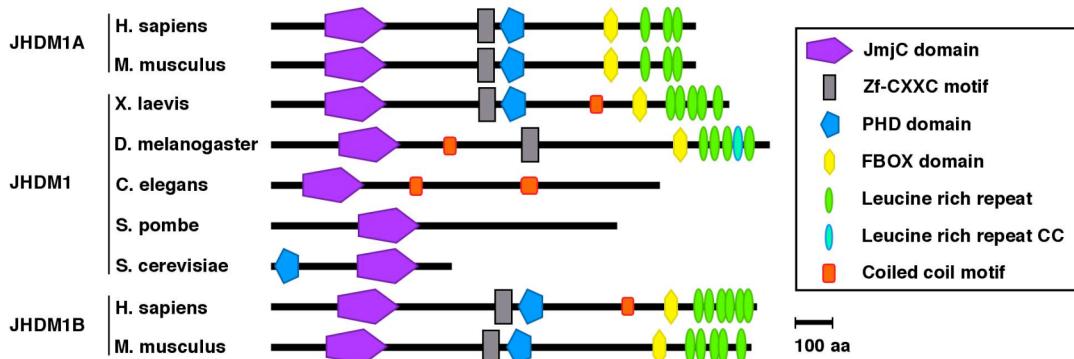


Supplementary Figure S3

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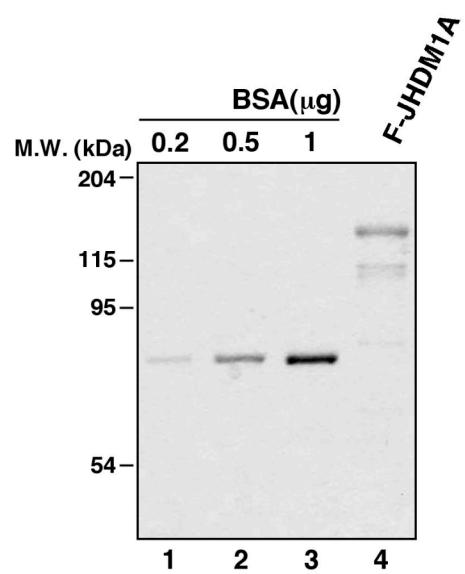


b

		144	LYLQQPTNDTVGRKIV---	MDFLGFFNNWWINKQQ-----	GKRGWGQI-----	TSNL	LIGMEGNVTPAHYD--	#	*	*	
JHDM1A	H. sapiens	148	-FSHTILENVMQR	PSTDVDFIDWVDNMWPRHLKES-----	QTE	S	TNAILEMOPKVKQYCLMSVRGCYTDPHVDFG				216
	M. musculus	148	-FSHTILENVMQR	PSTDVDFIDWVDNMWPRHLKES-----	QTE	S	TNAILEMOPKVKQYCLMSVRGCYTDPHVDFG				216
	X. laevis	147	-FSHTILERVLKRPTIV	VDAIDWVDNMWPRHLKEQ-----	QKS	I	NVIAEMKPKVKQYCLMSVKGCYTDPHIDFG				215
	D. melanogaster	180	-FSHTIRUDRFLQSP	EPLVVRQIDWWDVVWPKQLKDA-----	ORE	C	NNLLGGMMPKVKQYCLMSVKNCYTDPHIDFG				248
JHDM1	C. elegans	93	-FSQ	PLEDLVKSPELVRQIDWVNQWPDALRQRWISFNGRDKKFYFNPHHTFPKV	NYC	CLMSV	ANCYTDPHIDFG				166
	S. pombe	243	-VSTL	QAYYVRKPNIVVRDIDLVNTVWP-----	PGSF	FALGE	-YPVHDYCLMSAENSYTEPHIEFG				301
	S. cerevisiae	245	-IEGLELE	--RPTAVRQNDLVLK1W5FNGHLE-----	KVNGEKA	EENDPKPKVKQYCLMSVKGCFTDHFIDFA					309
JHDM1B	H. sapiens	178	-FSHTI	LEHLVVKRPATVVDLVDWVDNMWPRHLKEK-----	QTE	ATNATA	EMKPKVKQYCLMSVKGCFTDHFIDFG				246
	M. musculus	147	-FSHTI	LEHLVVKRPATVVDLVDWVDNMWPRHLKEK-----	QTE	ATNALA	EMKPKVKQYCLMSVKGCFTDHFIDFG				215
		\$									
	FIH1	202	EQQNFFAQIKCYKRCILFPPDQFECIYPKPVHHPCDRSQ-----	VDFDNPDYERFPNFQNQNVGYETVVGPGDVLYIPM							275
JHDM1A	H. sapiens	217	GTSVWVHITHOGGVFWLIPPTAHN	-LELYENWLLSGKQSD	-IFLGD	-RVSDCORI	-ELKQGYTFVIPS				280
	M. musculus	217	GTSVWVHITHOGGVFWLIPPTAHN	-LELYENWLLSGKQSD	-IFLGD	-RVSDCORI	-ELKQGYTFVIPS				280
	X. laevis	216	GTSVWVHVFRCGGKFWLIPPTGHN	-LOLYEEWLLSGKQSD	-IFLGD	-RSEGCCORI	-ELKQGYTFVIPS				279
	D. melanogaster	249	GTSVWVHILRCSKVFWLIPPTDRN	-LOLYEKWVLSGKQAD	-IFFGD	-TVEKCARV	-YLTAGNTFFIPI				312
JHDM1	C. elegans	167	GTSVWVHVLRCSKVFWLIPPTETN	-FFI	QEFKTVNDN	-AEGFK	-SVEKCHVA	-IPEPGDMLIPS			229
	S. pombe	302	GSSAYV	MLDCKKTYLIPPTGTSKN	-WEAKTAWLTSNDSDKKGLPN	-MUDVCYCV	-EVHSQQTLVPS				366
	S. cerevisiae	310	GTSVWVNVISOKKELFPTTOSN	-IDKMEI	NSLKDONS	-VFLGD	-ILEDGTIAM	-EDDAGDLEMIPA			373
JHDM1B	H. sapiens	247	GTSVWVHVFRGGKIFFWLIPPTLHN	-LALYEEWLLSGKQSD	-IFLGD	-RVERCORI	-ELKQGYTFVIPS				310
	M. musculus	216	GTSVWVHVFRGGKIFFWLIPPTLHN	-LALYEEWLLSGKQSD	-IFLGD	-RVERCORI	-ELKQGYTFVIPS				279
		*									
	FIH1	276	YWPHI	--BSLLNGGITITVNFWYKGAPTPKRIEWPLK-	311						
JHDM1A	H. sapiens	281	GWIHAVVTPDQDLVFGG	-NFLHSFNIDPMOLKIIYIED	316						
	M. musculus	281	GWIHAVVTPDQDLVFGG	-NFLHSFNIDPMOLKIIYIED	316						
	X. laevis	280	GWIHAVVTPDQSLVFGG	-NLIHSFNIDPMOLRVEIED	315						
	D. melanogaster	313	GWIHAVVTPDQSLVFGG	-NFLHSFCHVKQDLKTPASVED	348						
JHDM1	C. elegans	230	GWIHAVVTPDQSLVFGG	-NFLHSFQSKCTDLRVEQVEN	265						
	S. pombe	367	GWIHAVVTPDQSLVFGG	-NFLTFLHYPOLSIYNELE	402						
	S. cerevisiae	374	GWIHAVVTPDQSLVFGG	-NFLTIRDETHLKKVIELEK	409						
JHDM1B	H. sapiens	311	GWIHAVVTPDQSLVFGG	-NLIHSFNVPMDRLIYIED	346						
	M. musculus	280	GWIHAVVTPDQSLVFGG	-NLIHSFNVPMDRLIYIED	315						

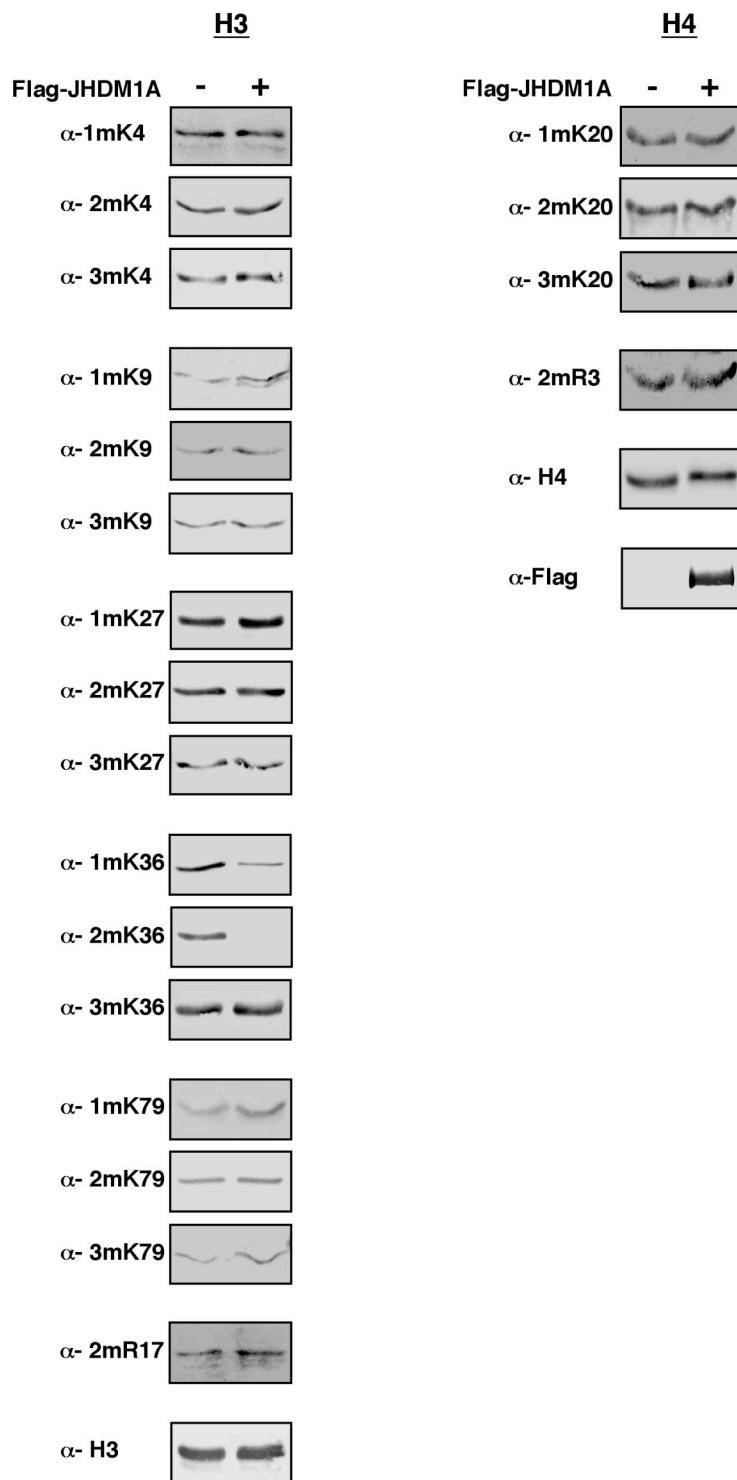
Supplementary Figure S4

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Supplementary Figure S5

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a

F-JHDM1	Time (min)	peptide (%)		
		Dimethyl	Monomethyl	no methyl
enzyme:substrate (1:80)	0	100	0	0
	5	100	0	0
	15	91.6	8.4	0
	60	84.7	15.3	0
	180	82.5	17.5	0
enzyme:substrate (1:40)	0	100	0	0
	5	94	6	0
	15	89.2	10.8	0
	60	78.1	17.9	4
	180	62.3	29.7	8
enzyme:substrate (1:20)	0	100	0	0
	5	84.8	15.2	0
	15	84.1	15.9	0
	60	62.8	29.7	7.5
	180	46.1	36.7	17.2

b