PROTEOMICS

Supporting Information for Proteomics

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Unbiased proteomic screen for binding proteins to modified lysines on histone H3

Supplementary Table 1. Proteins identified to bind the beads control pull-down[1]

HGNC Symbol	GeneID	Description	Pep #[2]	xCorr[3]
ACACA	31	acetyl-Coenzyme A carboxylase alpha	132	470.33
CHD4	1108	chromodomain helicase DNA binding protein 4	55	284.29
CHD3	1107	chromodomain helicase DNA binding protein 3	29	140.27
MYH9	4627	myosin, heavy chain 9, non-muscle	19	100.2
TCOF1	6949	Treacher Collins-Franceschetti syndrome 1	19	90.22
ACTC1	70	actin, alpha, cardiac muscle 1	41	88.2
ACACB	32	acetyl-Coenzyme A carboxylase beta	22	80.2
ACTG1	71	actin, gamma 1	30	60.27
XRCC5	7520	X-ray repair complementing defective repair in Chinese hamster cells 5 (Ku autoantigen, 80kDa)	10	60.25
NPM1	4869	nucleophosmin (nucleolar phosphoprotein B23, numatrin)	43	50.3
TRIM28	10155	tripartite motif-containing 28	21	50.22
GATAD2A	54815	GATA zinc finger domain containing 2A	7	50.21
POLR1A	25885	polymerase (RNA) I polypeptide A, 194kDa	7	50.19
CD3EAP	10849	CD3e molecule, epsilon associated protein	6	40.24
GATAD2B	57459	GATA zinc finger domain containing 2B	5	40.2
POLR1C	9533	polymerase (RNA) I polypeptide C, 30kDa	6	40.2
SPTBN1	6711	spectrin, beta, non-erythrocytic 1	4	38.22
BASP1	10409	brain abundant, membrane attached signal protein 1	6	30.32
RBBP7	5931	retinoblastoma binding protein 7	4	30.23
UHRF1	29128	ubiquitin-like, containing PHD and RING finger domains, 1	7	30.19
NOLC1	9221	nucleolar and coiled-body phosphoprotein 1	3	30.17
SPTAN1	6709	spectrin, alpha, non-erythrocytic 1 (alpha-fodrin)	3	30.16
MYO1C	4641	myosin IC	4	30.15
YBX1	4904	Y box binding protein 1	4	20.25
RAI1	10743	retinoic acid induced 1	2	20.23
CORO1C	23603	coronin, actin binding protein, 1C	2	20.22
TPM3	7170	tropomyosin 3	2	20.2
ACACA	31	acetyl-Coenzyme A carboxylase alpha	6	20.2
PAF1	54623	Paf1, RNA polymerase II associated factor, homolog (S. cerevisiae)	5	20.19
CHAF1A	10036	chromatin assembly factor 1, subunit A (p150)	3	20.19
TUBB1	81027	tubulin, beta 1	2	20.18
EHMT2	10919	euchromatic histone-lysine N-methyltransferase 2	2	20.16
LMO7	4008	LIM domain 7	2	20.16
SRP68	6730	signal recognition particle 68kDa	4	20.15
SFPQ	6421	splicing factor proline/glutamine-rich (polypyrimidine tract binding protein associated)	5	20.14
POGZ	23126	pogo transposable element with ZNF domain	2	18.23
HNRNPU	3192	heterogeneous nuclear ribonucleoprotein U (scaffold attachment factor A)	2	18.14
CHAF1B	8208	chromatin assembly factor 1, subunit B (p60)	2	10.28
TUBB4	10382	tubulin, beta 4	2	10.28
TCOF1	6949	Treacher Collins-Franceschetti syndrome 1	2	10.27
HDAC2	3066	histone deacetylase 2	1	10.24
DDB1	1642	damage-specific DNA binding protein 1, 127kDa	1	10.24
RBBP4	5928	retinoblastoma binding protein 4	2	10.23
PRB1	5542	proline-rich protein BstNI subfamily 1	1	10.23
DDX21	9188	DEAD (Asp-Glu-Ala-Asp) box polypeptide 21	3	10.22
RP11-78J21.1	144983	heterogeneous nuclear ribonucleoprotein A1-like	2	10.19
TCEB3	6924	transcription elongation factor B (SIII), polypeptide 3 (110kDa, elongin A)	1	10.19
CSNK2A1	1457	casein kinase 2, alpha 1 polypeptide	2	10.18
DBN1	1627	drebrin 1	1	10.18
TCF20	6942	transcription factor 20 (AR1)	1	10.18
TUBB3	10381	tubulin, beta 3	2	10.18
SET	6418	SET translocation (myeloid leukemia-associated)	6	10.18
SMARCC2	6601	SWI/SNF related, matrix associated, actin dependent regulator of chromatin, subfamily c, member 2	1	10.18
MYO1B	4430	myosin IB	2	10.18
TWISTNB	221830	TWIST neighbor	1	10.18
TUBA3C	7278	tubulin, alpha 3c	1	10.17
DSG1	1828	desmoglein 1	4	10.17
MATR3	9782	matrin 3	1	10.17
HNRNPA1	3178	heterogeneous nuclear ribonucleoprotein A1	1	10.17
TUBB	203068	tubulin, beta	2	10.16
HNRPF	3185	heterogeneous nuclear ribonucleoprotein F	1	10.16
BAZ1B	9031	bromodomain adjacent to zinc finger domain, 1B	1	10.16
TARDBP	23435	TAR DNA binding protein	1	10.16
TMSL3	7117	thymosin-like 3	3	10.15
KPNA1	3836	karyopherin alpha 1 (importin alpha 5)	2	10.15
MYO1F	4542	myosin IF	1	10.15
HEATR1	55127	HEAT repeat containing 1	1	10.15
U2AF2	11338	U2 small nuclear RNA auxiliary factor 2	2	10.15
LOC653972	653972	similar to chromobox homolog 3	2	10.14
MTA2	9219	metastasis associated 1 family, member 2	2	10.14
KRT75	9119	keratin 75	2	10.14
MTA3	57504	metastasis associated 1 family, member 3	1	10.14
RPL5	6125	ribosomal protein L5	1	10.13
HNRNPR	10236	heterogeneous nuclear ribonucleoprotein R	1	10.13
EIF3EIP	51386	eukaryotic translation initiation factor 3, subunit E interacting protein	1	10.13
MBD5	55777	methyl-CpG binding domain protein 5	1	10.12
VIM	7431	vimentin	1	10.12
KPNA6	23633	karyopherin alpha 6 (importin alpha 7)	2	10.12
H1FOO	132243	H1 histone family, member O, oocyte-specific	1	10.12
MYO1E	4643	myosin IE	1	10.12
ITPR2	3709	inositol 1,4,5-triphosphate receptor, type 2	1	10.12
HAT1	8520	histone acetyltransferase 1	4	10.12
NRD1	4898	nardilysin (N-arginine dibasic convertase)	1	10.11
RPL27	6155	ribosomal protein L27	1	10.11

[1]The proteins highlighted in yellow are also listed in Table 1 because a signifcant increase in the number of peptides were detected in at lease one of the H3 pull-downs.
[1]Proteins not highlighted are nonspecific binding proteins.
[2]The total number of peptides for the indicated protein detected in the beads control pull-down.
[3]Proteins are listed in decreasing xCorr score.