

Supplemental data

Supplementary Table S1 Summary of all proteins identified as nucleosome partners.

Gene name	Protein name	Accession Number	M.W. (kDa)	Protein Grouping Ambiguity	DNA		H2A nuc.		H2A.Z nuc.		H2A.X nuc.	
					Unique peptides	Sequence coverage	Unique peptides	Sequence coverage	Unique peptides	Sequence coverage	Unique peptides	Sequence coverage
<i>AHNK</i>	Neuroblast differentiation-associated protein AHNAK	IP100021812	629		2	0.54	1	0.24	0	0	2	0.63
<i>DYNCH1</i>	Cytoplasmic dynein 1 heavy chain 1	IP100456969	532		13	3.3	0	0	0	0	0	0
<i>PRKDC</i>	Isoform 1 of DNA-dependent protein kinase catalytic subunit	IP100296337	469		5	1.4	3	1	6	2.1	17	5.6
<i>GCN1L1</i>	Translational activator GCN1	IP1000001159	293		3	1.3	0	0	1	0.37	0	0
<i>SPTAN1</i>	Isoform 3 of Spectrin alpha chain, brain	IP100843765	282		10	5.8	0	0	0	0	0	0
<i>SPTBN1</i>	Isoform Long of Spectrin beta chain, brain 1	IP1000005614	275		10	4.6	0	0	0	0	0	0
<i>DIDOI</i>	Isoform 4 of Death-inducer obliterator 1	IP100619921	244		0	0	0	0	2	2.1	0	0
<i>CHD3</i>	Isoform 1 of Chromodomain-helicase-DNA- binding protein 3	IP100373870	227	*	0	0	0	0	2	1.3	0	0
<i>MYH9</i>	Isoform 1 of Myosin-9	IP100019502	227		0	0	0	0	0	0	3	2.3
<i>CKAP5</i>	Isoform 1 of Cytoskeleton-associated protein 5	IP100028275	226		0	0	0	0	0	0	1	0.69
<i>CHD4</i>	Isoform 1 of Chromodomain-helicase-DNA- binding protein 4	IP100000846	218	*	3	2.6	1	0.89	5	3.6	4	3.3
<i>DNMT1</i>	Isoform 1 of DNA (cytosine-5)-methyl transferase 1	IP100031519	190		5	3.7	2	1.2	2	1.3	6	4.5
<i>EIF2AK4</i>	Isoform 1 of Eukaryotic translation initiation factor 2-alpha Kinase 4	IP100163851	187		0	0	1	0.49	0	0	0	0
<i>TOP2A</i>	Isoform 3 of DNA topoisomerase 2-alpha	IP100218753	179		0	0	0	0	0	0	3	1.5
<i>EIF4G1</i>	Eukaryotic translation initiation factor 4 gamma, 1 isoform 4	IP100386533	155		1	1.2	0	0	0	0	0	0
<i>MSH6</i>	Isoform GTBP-N of DNA mismatch repair protein Msh6	IP100384456	153		2	1.8	0	0	0	0	0	0
<i>SMC4</i>	Isoform 1 of Structural maintenance of chromosomes protein 4	IP100411559	147		2	2	0	0	0	0	0	0
<i>SF3B1</i>	Splicing factor 3B subunit 1	IP100026089	146		0	0	0	0	3	2.4	0	0
<i>STAG1</i>	Cohesin subunit SA-1	IP100025158	144		1	0.87	0	0	0	0	0	0
<i>SMC1A</i>	Structural maintenance of chromosomes protein 1A	IP100291939	143		1	0.73	0	0	0	0	3	2.6
<i>HDLBP</i>	Vigilin	IP100022228	141		0	0	0	0	0	0	1	0.95
<i>VARS</i>	Valyl-tRNA synthetase	IP100000873	140		2	2.1	0	0	0	0	0	0
<i>KIF4A</i>	Isoform 1 of Chromosome-associated kinesin KIF4A	IP100178150	140		1	0.73	0	0	0	0	3	1.9
<i>EIF5B</i>	Eukaryotic translation initiation factor 5B	IP100299254	139		0	0	1	1.7	0	0	6	9
<i>SMC2</i>	Isoform 1 of Structural maintenance of chromosomes protein 2	IP100007927	136		1	1.1	0	0	0	0	0	0

Supplementary Table S1 (Continued)

Gene name	Protein name	Accession Number	M.W. (kDa)	Protein Grouping Ambiguity	DNA		H2A nuc.		H2A.Z nuc.		H2A.X nuc.	
					Unique peptides	Sequence coverage	Unique peptides	Sequence coverage	Unique peptides	Sequence coverage	Unique peptides	Sequence coverage
<i>CAND1</i>	Isoform 1 of Cullin-associated NEDD8-dissociated protein 1	IP100100160	136		1	0.89	0	0	0	0	0	0
<i>SF3B3</i>	Isoform 1 of Splicing factor 3B subunit 3	IP100300371	136		0	0	0	0	2	2.1	2	2.4
<i>DDB1</i>	DNA damage-binding protein 1	IP100293464	127		0	0	0	0	0	0	1	1.6
<i>SMARCC2</i>	Isoform 2 of SWI/SNF complex subunit SMARCC2	IP100150057	125	*	0	0	0	0	0	0	2	3.2
<i>TCERG1</i>	Isoform 1 of Transcription elongation regulator 1	IP100247871	124		0	0	0	0	0	0	1	0.82
<i>ADNP</i>	Activity-dependent neuroprotector homeobox protein	IP100022215	124		0	0	0	0	1	1.7	0	0
<i>SMARCC1</i>	SWI/SNF complex subunit SMARCC1	IP100234252	123	*	1	0.81	0	0	2	2.2	1	1.4
<i>SUPT16H</i>	FACT complex subunit SPT16	IP100026970	120		0	0	0	0	0	0	8	8.5
<i>DDX46</i>	cDNA FLJ78679, highly similar to Homo sapiens DEAD (Asp-Glu-Ala-Asp) box polypeptide 46 (DDX46), mRNA	IP100329791	117		3	3.5	0	0	0	0	0	0
<i>PARP1</i>	Poly [ADP-ribose] polymerase 1	IP100449049	113		2	2.4	3	4	5	6.7	7	8.8
<i>GTF2I</i>	Isoform 1 of General transcription factor II-1	IP100054042	112		7	8.6	2	2.4	0	0	8	8.1
<i>PALLD</i>	Isoform 3 of Palladin	IP100855763	109		3	4.1	0	0	0	0	0	0
<i>EFTUD2</i>	116 kDa U5 small nuclear ribonucleoprotein component	IP100003519	109		0	0	2	3.2	4	8	0	0
<i>PRPF6</i>	Pre-mRNA-processing factor 6	IP100305068	107		0	0	0	0	2	3.1	1	1.3
<i>MSH2</i>	DNA mismatch repair protein Msh2	IP100017303	105		2	2.5	0	0	0	0	0	0
<i>DDX42</i>	Isoform 1 of ATP-dependent RNA helicase DDX42	IP100409671	103		2	2.5	0	0	0	0	0	0
<i>MAP4</i>	Isoform 2 of Microtubule-associated protein 4	IP100220113	103		1	1.7	0	0	2	3.2	1	1.7
<i>SND1</i>	Staphylococcal nuclease domain-containing protein 1	IP100140420	102		5	7.8	0	0	0	0	3	7
<i>CTNNA1</i>	Isoform 1 of Catenin alpha-1	IP100215948	100		3	4.6	0	0	0	0	0	0
<i>SF3B2</i>	Splicing factor 3B subunit 2	IP100221106	100		2	3.7	0	0	1	2	0	0
<i>DNM2</i>	Isoform 1 of Dynamin-2	IP100033022	98		4	6.7	0	0	0	0	0	0
<i>DDX23</i>	Probable ATP-dependent RNA helicase DDX23	IP100006725	96		0	0	0	0	1	1.5	0	0
<i>NACA</i>	Nascent polypeptide-associated complex alpha subunit isoform a	IP100797126	95		0	0	2	3.1	2	3.1	1	1.5
<i>EEF2</i>	Elongation factor 2	IP100186290	95		0	0	0	0	1	1	0	0
<i>ABCF1</i>	Isoform 2 of ATP-binding cassette sub-family F member 1	IP100013495	92		0	0	6	8.2	10	16	13	22
<i>TSR1</i>	Pre-rRNA-processing protein TSR1 homolog	IP100292894	92		0	0	0	0	4	5	4	5
<i>UHRF1</i>	Ubiquitin-like with PHD and ring finger domains 1 isoform 2	IP100797279	91		1	1.5	0	0	0	0	0	0

Supplementary Table S1 (Continued)

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					Unique peptides	Sequence coverage	Unique peptides	Sequence coverage	Unique peptides	Sequence coverage	Unique peptides	Sequence coverage
<i>DHX15</i>	Putative pre-mRNA-splicing factor ATP-dependent RNA helicase DHX15	IP100396435	91		1	1.4	0	0	0	0	0	0
<i>TOP1</i>	DNA topoisomerase 1	IP100413611	91		0	0	0	0	2	3	1	1.3
<i>CUL1</i>	Cullin-1	IP100014310	90		2	3.5	0	0	0	0	0	0
<i>HNRNP1U</i>	Isoform Short of Heterogeneous nuclear ribonucleoprotein U	IP100479217	89		0	0	0	0	2	6.2	5	12
<i>TRIM28</i>	Isoform 1 of Transcription intermediary factor 1-beta	IP100438229	89		0	0	0	0	0	0	1	2
<i>IFI16</i>	Isoform 1 of Gamma-interferon-inducible protein 16	IP100003443	88		0	0	0	0	0	0	2	3.2
<i>MLH1</i>	DNA mismatch repair protein MLH1	IP100029754	85		1	3.2	0	0	0	0	0	0
<i>Gtl1</i>	Isoform 1 of ARF GTPase-activating protein GIT1	IP100384861	84		1	1.8	0	0	0	0	0	0
<i>TARS</i>	Threonyl-tRNA synthetase, cytoplasmic	IP100329633	83		3	5.3	0	0	0	0	0	0
<i>NCAPH</i>	Condensin complex subunit 2	IP100299507	83		1	1.8	0	0	0	0	0	0
<i>XRCC5</i>	ATP-dependent DNA helicase 2 subunit 2	IP100220834	83		2	2.3	2	2.5	0	0	7	9.8
<i>HSP90AB1</i>	Heat shock protein HSP 90-beta	IP100414676	83	*	2	3.6	0	0	2	3.6	3	5.7
<i>CAST</i>	Isoform 5 of Calpastatin	IP100760715	81		2	3.6	0	0	0	0	0	0
<i>SSRP1</i>	FACT complex subunit SSRP1	IP100005154	81		0	0	0	0	0	0	7	12
<i>DAXX</i>	Isoform 1 of Death domain-associated protein 6	IP100170867	81		0	0	0	0	0	0	1	3.1
<i>ADRBK1</i>	Beta-adrenergic receptor kinase 1	IP100012497	80		0	0	0	0	0	0	2	3
<i>PRPF3</i>	Isoform 1 of U4/U6 small nuclear ribonucleo- protein Pp3	IP100005861	78		0	0	0	0	0	0	2	4.5
<i>SFPQ</i>	Isoform Long of Splicing factor, proline- and glutamine-rich	IP100010740	76		0	0	0	0	4	8.1	0	0
<i>KIF2C</i>	Isoform 2 of Kinesin-like protein KIF2C	IP100216113	76		1	1.9	2	3.6	0	0	0	0
<i>MTA2</i>	Metastasis-associated protein MTA2	IP100171798	75	*	5	12	3	5.4	0	0	10	22
<i>KIFC1</i>	Kinesin-like protein KIFC1	IP100306400	74		0	0	0	0	0	0	2	6.7
<i>LMNA</i>	Isoform A of Lamin-A/C	IP100021405	74		15	19	6	6.6	0	0	0	0
<i>KHSRP</i>	KH-type splicing regulatory protein	IP100479786	73	*	9	22	2	3.4	0	0	0	0
<i>RECQL</i>	ATP-dependent DNA helicase Q1	IP100178431	73		1	1.8	4	7.4	0	0	2	4.5
<i>ALB</i>	Putative uncharacterized protein ALB	IP100022434	72		3	3.8	2	3.8	0	0	3	2.4
<i>CD2AP</i>	CD2-associated protein	IP100412771	71		4	9.4	0	0	0	0	0	0
<i>HSPA8</i>	Isoform 1 of Heat shock cognate 71 kDa protein	IP100003865	71	*	9	18	4	8	0	0	5	11
<i>PABPC1</i>	Isoform 1 of Polyadenylate-binding protein 1	IP100008524	71		8	15	0	0	0	0	2	3.9
<i>EIF4B</i>	cDNA FLJ54492, highly similar to Eukaryotic translation initiation factor 4B	IP100012079	70	*	1	2.6	0	0	0	0	0	0
<i>XRCC6</i>	ATP-dependent DNA helicase 2 subunit 1	IP100644712	70		4	9.2	2	4.6	0	0	8	18

Supplementary Table S1 (Continued)

Gene name	Protein name	Accession Number	M.W. (kDa)	Protein Grouping Ambiguity	DNA		H2A nuc.		H2A.Z nuc.		H2A.X nuc.	
					Unique peptides	Sequence coverage	Unique peptides	Sequence coverage	Unique peptides	Sequence coverage	Unique peptides	Sequence coverage
<i>HSPA1A</i>	Heat shock 70 kDa protein 1A/1B	IP100304925	70	*	6	13	2	6.1	0	0	3	8.4
<i>EZR</i>	Ezrin	IP100843975	69	*	3	13	0	0	0	0	0	0
<i>DDX5</i>	Probable ATP-dependent RNA helicase DDX5	IP100017617	69		0	0	5	9.4	0	0	0	0
<i>FUBP1</i>	Isoform 1 of Far upstream element-binding protein 1	IP100375441	68	*	12	22	6	14	0	0	0	0
<i>RPA1</i>	Replication protein A 70 kDa DNA-binding subunit	IP100020127	68		2	4.5	0	0	0	0	0	0
<i>DYNC1I2</i>	Isoform 2C of Cytoplasmic dynein 1 intermediate chain 2	IP100216348	68		2	5.7	0	0	0	0	0	0
<i>MSN</i>	Moesin	IP100219365	68		7	12	0	0	0	0	5	8.8
<i>GATAD2A</i>	Isoform 1 of Transcriptional repressor p66-alpha	IP100410330	68		3	7.7	1	2.1	0	0	4	12
<i>IK</i>	Protein Red	IP100011875	66		2	3.2	0	0	0	0	0	0
<i>NCL</i>	cDNA FLJ45706 fis, clone FEBRA2028457, highly similar to Nucleolin	IP100444262	66		0	0	1	2.3	0	0	3	8.6
<i>USP39</i>	U4/U6.U5 tri-snRNP-associated protein 2	IP100419844	65		0	0	2	5.7	0	0	0	0
<i>RFX5</i>	DNA-binding protein RFX5	IP100009303	65		0	0	2	5.5	0	0	0	0
<i>EEFSEC</i>	Selenocysteine-specific elongation factor	IP100028050	65		0	0	0	0	2	4.9	0	0
<i>GATAD2B</i>	Transcriptional repressor p66-beta	IP100103554	65		2	7.4	2	4.9	0	0	3	9.1
<i>PDLIM5</i>	PDZ and LIM domain protein 5	IP100007935	64		2	4.9	0	0	0	0	0	0
<i>PAK4</i>	Isoform 1 of Serine/threonine-protein kinase PAK 4	IP100014068	64		1	2.2	0	0	0	0	0	0
<i>CALD1</i>	Isoform 3 of Caldesmon	IP100218695	64		2	5.4	0	0	0	0	0	0
<i>ENAH</i>	Isoform 2 of Protein enabled homolog	IP100374054	64		2	7.7	0	0	0	0	0	0
<i>LRRC47</i>	Leucine-rich repeat-containing protein 47	IP100170935	63		1	2.1	0	0	0	0	1	3.1
<i>IRF2BP1</i>	Interferon regulatory factor 2-binding protein 1	IP100645608	62		2	5.5	0	0	0	0	0	0
<i>EHD4</i>	EH domain-containing protein 4	IP100005578	61		8	18	0	0	0	0	0	0
<i>IRF2BP2</i>	Isoform 1 of Interferon regulatory factor 2-binding protein 2	IP100376199	61		1	3.4	0	0	0	0	0	0
<i>CSTF2</i>	Isoform 1 of Cleavage stimulation factor subunit 2	IP100013256	61		2	4.3	0	0	0	0	0	0
<i>PUF60</i>	Isoform 1 of Poly(U)-binding-splicing factor PUF60	IP1000069750	60		2	4.5	7	17	4	17	7	24
<i>ZFP91</i>	Isoform 2 of Zinc finger protein 91 homolog	IP100172474	60		0	0	0	0	0	0	2	8.9
<i>WHSC1</i>	Wolf-Hirschhorn syndrome candidate 2 protein	IP100394679	59		1	2.6	0	0	0	0	0	0
<i>COMOIC</i>	Coronin-1C_i3 protein	IP100867509	59		1	1.9	4	13	0	0	0	0
<i>RBM39</i>	Isoform 1 of RNA-binding protein 39	IP100163505	59		4	8.1	6	15	6	15	9	19
<i>CPSF6</i>	Isoform 1 of Cleavage and polyadenylation specificity factor subunit 6	IP100012998	59		2	5.1	0	0	0	0	0	0

Supplementary Table S1 (Continued)

Gene name	Protein name	Accession Number	M.W. (kDa)	Protein Grouping Ambiguity	DNA		H2A nuc.		H2A.Z nuc.		H2A.X nuc.	
					Unique peptides	Sequence coverage	Unique peptides	Sequence coverage	Unique peptides	Sequence coverage	Unique peptides	Sequence coverage
<i>PKM2</i>	Isoform M2 of Pyruvate kinase isozymes M1/M2	IP100479186	58		3	6.8	0	0	0	0	0	0
<i>GTF2F1</i>	General transcription factor IIF subunit 1	IP100017450	58		2	7.5	0	0	0	0	0	0
<i>CCT4</i>	T-complex protein 1 subunit delta	IP100302927	58		2	6.1	0	0	0	0	0	0
<i>API5</i>	Isoform 2 of Apoptosis inhibitor 5	IP100554742	57		4	8.1	0	0	0	0	0	0
<i>DYNC1L1</i>	Cytoplasmic dynein 1 light intermediate chain 1	IP100007675	57		3	13	0	0	0	0	0	0
<i>ARFGAP2</i>	ADP-ribosylation factor GTPase-activating protein 2	IP100297322	57		2	4	0	0	0	0	0	0
<i>PTBP1</i>	Isoform 1 of Polypyrimidine tract-binding protein 1	IP100179964	57		11	33	5	15	0	0	2	5.8
<i>RCC2</i>	Protein RCC2	IP100465044	56		13	14	2	5.4	0	0	0	0
<i>EEF1G</i>	cDNA FLJ56389, highly similar to Elongation factor 1-gamma	IP100000875	56		14	21	0	0	0	0	2	4.5
<i>HDAC1</i>	Histone deacetylase 1	IP100013774	55		0	0	0	0	0	0	1	2.5
<i>PRPF19</i>	Pre-mRNA-processing factor 19	IP100004968	55		1	2.2	6	24	0	0	6	23
<i>MLKL</i>	Isoform 1 of Mixed lineage kinase domain-like protein	IP100180781	54		0	0	2	5.3	0	0	0	0
<i>NONO</i>	Non-POU domain-containing octamer-binding protein	IP100304596	54		3	9.6	12	45	0	0	2	6.2
<i>U2AF2</i>	Isoform 1 of Splicing factor U2AF 65 kDa subunit	IP100031556	54		2	8.4	5	25	5	19	4	12
<i>CPSF7</i>	Isoform 1 of Cleavage and polyadenylation specificity factor subunit 7	IP100550821	52		1	2.8	0	0	0	0	0	0
<i>SERPINE1</i>	SERPINE1 mRNA binding protein 1, isoform CRA_d	IP100410693	51		2	8.6	0	0	0	0	0	0
<i>POLD2</i>	DNA polymerase delta subunit 2	IP100025616	51		2	6.6	0	0	0	0	0	0
<i>ZNF207</i>	Isoform 1 of Zinc finger protein 207	IP100013457	51		0	0	1	2.7	0	0	0	0
<i>EIF2S3</i>	Eukaryotic translation initiation factor 2 subunit 3	IP100297982	51		6	22	10	28	6	21	10	29
<i>HNRNPK</i>	Isoform 1 of Heterogeneous nuclear ribonucleoprotein K	IP100216049	51		10	28	3	10	0	0	0	0
<i>SEPT7</i>	51 kDa protein	IP100033025	51		0	0	5	16	0	0	2	9.2
<i>RUVBL2</i>	RuvB-like 2	IP100009104	51		3	7.3	0	0	0	0	1	2.4
<i>DDX47</i>	Probable ATP-dependent RNA helicase DDX47	IP100023972	51		0	0	2	5.3	2	5.3	2	6.8
<i>TUBB2C</i>	Tubulin beta-2C chain	IP100007752	50	*	1	35	4	53	0	0	0	0
<i>SEPT8</i>	Isoform 2 of Septin-8	IP100022082	50		0	0	2	7.2	0	0	0	0
<i>EEF1A1</i>	Elongation factor 1-alpha 1	IP100396485	50		14	29	11	42	6	20	7	27
<i>RUVBL1</i>	Isoform 1 of RuvB-like 1	IP100021187	50		0	0	2	6.1	0	0	1	3.1

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					Unique peptides	Sequence coverage	Unique peptides	Sequence coverage	Unique peptides	Sequence coverage	Unique peptides	Sequence coverage
<i>EIF5</i>	Eukaryotic translation initiation factor 5	IP100022648	49		0	0	2	5.8	0	0	3	8.1
<i>PACSN3</i>	Protein kinase C and casein kinase substrate in neurons 3, isoform CRA_b	IP100329572	49		0	0	0	0	0	0	2	7.1
<i>RPL4</i>	60S ribosomal protein L4	IP100003918	48		0	0	2	6.6	0	0	0	0
<i>CSTF1</i>	Cleavage stimulation factor subunit 1	IP100011528	48		0	0	2	5.8	0	0	0	0
<i>TUBB</i>	Tubulin, beta	IP100645452	48	*	18	43	17	60	5	16	11	35
<i>RCC1</i>	Regulator of chromosome condensation 1 isoform a	IP100001661	48		7	20	4	13	0	0	10	38
<i>RBBP4</i>	Histone-binding protein RBBP4	IP100328319	48		0	0	0	0	0	0	3	11
<i>ACTL6A</i>	Isoform 1 of Actin-like protein 6A	IP100003627	47		3	12	0	0	0	0	1	3
<i>WIPF2</i>	Isoform 1 of WAS/WASL-interacting protein family member 2	IP100435947	46		2	9.3	0	0	0	0	0	0
<i>TUBA1B</i>	cDNA FLJ60097, highly similar to Tubulin alpha-ubiquitous chain	IP100792677	46		7	25	11	41	5	19	7	26
<i>HNRNPF</i>	Heterogeneous nuclear ribonucleoprotein F	IP100003881	46	*	0	0	2	8.2	0	0	0	0
<i>EIF4A1</i>	Eukaryotic initiation factor 4A-1	IP100025491	46		1	2.5	0	0	0	0	0	0
<i>VRK1</i>	Serine/threonine-protein kinase VRK1	IP100019640	45		0	0	3	14	0	0	0	0
<i>TARDBP</i>	TDP43	IP100025815	45		2	5	0	0	0	0	0	0
<i>PA2G4</i>	Proliferation-associated protein 2G4	IP100299000	44		1	4.6	0	0	0	0	0	0
<i>DEK</i>	Protein DEK	IP100020021	43		0	0	1	2.7	0	0	0	0
<i>DAZAP1</i>	Protein 1 of DAZ-associated protein 1	IP100165230	43		0	0	2	7.6	0	0	0	0
<i>FEN1</i>	Flap endonuclease 1	IP100026215	43		3	8.2	6	24	0	0	4	18
<i>ACTB</i>	Actin, cytoplasmic 1	IP100021439	42		2	7.7	0	0	0	0	0	0
<i>ACTG1</i>	Actin, cytoplasmic 2	IP100021440	42		8	38	17	59	11	42	10	49
<i>SEPT2</i>	Isoform 1 of Septin-2	IP100014177	41		2	8.6	10	36	0	0	4	16
<i>DRG1</i>	Developmentally-regulated GTP-binding protein 1	IP100031836	41		0	0	0	0	2	7.1	0	0
<i>ANXA2</i>	Isoform 2 of Annexin A2	IP100418169	40		9	31	3	9.8	3	9.8	0	0
<i>HNRNPA1</i>	Isoform A1-B of Heterogeneous nuclear ribonucleoprotein A1	IP100215965	39		6	20	2	8.1	0	0	0	0
<i>HNRNPD</i>	Isoform 1 of Heterogeneous nuclear ribonucleoprotein D0	IP100028888	38		5	9.3	1	3.9	0	0	0	0
<i>C20orf43</i>	Putative uncharacterized protein C20orf43	IP100218962	38		0	0	3	13	0	0	0	0
<i>EIF2S2</i>	Eukaryotic translation initiation factor 2 subunit 2	IP100021728	38		1	3.3	4	12	2	6.3	4	14
<i>PCBP2</i>	poly(rC) binding protein 2 isoform b	IP100012066	38	*	7	34	2	15	3	19	0	0
<i>TUBA1C</i>	TUBA1C protein	IP100166768	37		2	8.6	0	0	0	0	0	0
<i>HNRNPA2B1</i>	Isoform B1 of Heterogeneous nuclear ribonu- cleoproteins A2/B1	IP100396378	37		4	17	1	4.2	0	0	0	0
<i>WDR5</i>	WD repeat-containing protein 5	IP100005492	37		2	8.7	0	0	0	0	0	0

Supplementary Table S1 (Continued)

Gene name	Protein name	Accession Number	M.W. (kDa)	Protein Grouping Ambiguity	DNA		H2A nuc.		H2A.Z nuc.		H2A.X nuc.	
					Unique peptides	Sequence coverage	Unique peptides	Sequence coverage	Unique peptides	Sequence coverage	Unique peptides	Sequence coverage
<i>BUB3</i>	Isoform 1 of Mitotic checkpoint protein BUB3	IP100013468	37		6	18	8	31	11	38	7	32
<i>PCBP1</i>	Poly(rC)-binding protein 1	IP100016610	37	*	14	34	6	24	6	24	5	18
<i>GAPDH</i>	Glyceraldehyde-3-phosphate dehydrogenase	IP100219018	36		1	4.5	0	0	0	0	0	0
<i>EIF2S1</i>	Eukaryotic translation initiation factor 2 subunit 1	IP100219678	36		6	22	15	60	10	42	8	30
<i>APEX1</i>	DNA-(apurinic or apyrimidinic site) lyase	IP100215911	36		6	29	3	14	2	11	0	0
<i>CDK1</i>	Putative uncharacterized protein	IP100026689	35		1	2.6	3	10	3	9.9	0	0
	DKFZp686L2022											
<i>RPL5</i>	60S ribosomal protein L5	IP100000494	34		0	0	2	10	0	0	0	0
<i>RPLP0</i>	60S acidic ribosomal protein P0	IP100008530	34		0	0	7	37	2	6.9	0	0
<i>CAPZA1</i>	F-actin-capping protein subunit alpha-1	IP100005969	33		0	0	1	3.5	0	0	0	0
<i>STOM</i>	Erythrocyte band 7 integral membrane protein	IP100219682	32		0	0	2	11	0	0	0	0
<i>EEF1D</i>	Isoform 1 of Elongation factor 1-delta	IP100023048	31		5	27	0	0	0	0	0	0
<i>RPS2</i>	31 kDa protein	IP100943304	31		0	0	0	0	1	3.7	0	0
<i>RPS4X</i>	40S ribosomal protein S4, X isoform	IP100217030	30		0	0	3	15	0	0	0	0
<i>RPL7A</i>	60S ribosomal protein L7a	IP100299573	30		0	0	2	10	0	0	0	0
<i>NPM1</i>	Isoform 2 of Nucleophosmin	IP100220740	29		0	0	1	7.9	0	0	0	0
<i>CUTC</i>	Copper homeostasis protein cutC homolog	IP100300408	29		0	0	1	6.6	0	0	0	0
<i>SNRPA1</i>	U2 small nuclear ribonucleoprotein A'	IP100297477	28		0	0	2	11	0	0	0	0
<i>U2AF1</i>	Splicing factor U2AF 35 kDa subunit	IP100005613	28		4	27	3	23	4	27	1	7.5
<i>RPS3</i>	40S ribosomal protein S3	IP100011253	27		3	14	6	35	8	44	5	27
<i>EMG1</i>	Probable ribosome biogenesis protein NEP1	IP100025347	27		0	0	0	0	2	10	0	0
<i>CCDC124</i>	Coiled-coil domain-containing protein 124	IP100060627	26		0	0	0	0	2	10	0	0
<i>NUDT21</i>	Cleavage and polyadenylation specificity factor subunit 5	IP100646917	26		0	0	0	0	2	12	0	0
<i>EEF1B2</i>	Elongation factor 1-beta	IP100178440	25		2	12	0	0	0	0	0	0
<i>SNRPB</i>	Isoform SM-B' of Small nuclear ribonucleoprotein-associated proteins B and B'	IP100027285	25		0	0	0	0	2	12	0	0
<i>PP1B</i>	Peptidyl-prolyl cis-trans isomerase B	IP100646304	24		0	0	3	17	5	26	0	0
<i>RAN</i>	GTP-binding nuclear protein Ran	IP100643041	24		0	0	0	0	2	11	0	0
<i>HSPB1</i>	Heat shock protein beta-1	IP100025512	23		0	0	1	8.3	0	0	0	0
<i>RPS5</i>	40S ribosomal protein S5	IP100008433	23		0	0	0	0	2	14	0	0
<i>RPS7</i>	40S ribosomal protein S7	IP100013415	22		0	0	0	0	2	14	0	0

Supplementary Table S2 Partners unique to DNA.

Partner	MW (kDa)	Unique peptides
DYNC1H1	532	13
SPTAN1	282	10
SPTBN1	275	10
MSH6	153	2
SMC4	147	2
VAR5	140	2
DDX46	117	3
PALLD	109	3
MSH2	105	2
DDX42	103	2
CTNNA1	100	3
DNM2	98	4
CUL1	90	2
TARS	83	3
CAST	81	2
CD2AP	71	4
EZR	69	3
RPA1	68	2
DYNC1I2	68	2
IK	66	2
PDLIM5	64	2
CALD1	64	2
ENAH	64	2
IRF2BP1	62	2
EHD4	61	8
CSTF2	61	2
CPSF6	59	2
PKM2	58	3
GTF2F1	58	2
CCT4	58	2
API5	57	4
DYNC1LI1	57	3
ARFGAP2	57	2
SERPINE1	51	2
POLD2	51	2
WIPF2	46	2
TARDBP	45	2
ACTB	42	2
TUBA1C	37	2
WDR5	37	2
EEF1D	31	5
EEF1B2	25	2

The proteins listed in this table were identified (by at least two unique peptides) as partners for the biotinylated DNA preparation; they were not detected in the H2A-, H2A.Z- or H2A.X-containing nucleosomes.