

Supplemental Table. Identities and functional classes of the 213 proteins identified within purified nucleoli of HeLa cells.

Gel fragment in 1-DE	Id. in 2-DE	Protein name	DB entry	Accession number	MW	pI	Id. also by oth.	Dem. function	Hom. protein with dem. function	Funct. class
93		40 S Ribosomal protein S11	RS11_HUMAN	P04643	18	10.31	√	Yes		C1
100		40 S Ribosomal protein S14	RS14_HUMAN	P06366	16	10.07		Yes		C1
104		40 S Ribosomal protein S15a	RS1A_HUMAN	P39027	15	10.14		Yes		C1
61		40 S Ribosomal protein S3a	RS3A_HUMAN	P49241	30	9.75	√	Yes		C1
67		40 S Ribosomal protein S4, X isoform	RS4_HUMAN	P12750	29	10.16	√	Yes		C1
82		40 S Ribosomal protein S5	RS5_HUMAN	P46782	23	9.59	√	Yes		C1
62		60 S acidic Ribosomal protein PO	Q9UKD2	Q9UKD2	28	7.68	√	Yes		C1
72		60 S Ribosomal protein L10a	R10A_HUMAN	P53025	25	9.94	√	Yes		C1
93, 94		60 S Ribosomal protein L11	RL11_HUMAN	P39026	20	9.64	√	Yes		C1
93, 94		60 S Ribosomal protein L12	RL12_HUMAN	P30050	18	9.48	√	Yes		C1
74		60 S Ribosomal protein L14	RL14_HUMAN	P50914	23	10.94	√	Yes		C1
78, 79		60 S Ribosomal protein L15	RL15_HUMAN	P39030	24	11.62	√	Yes		C1
81		60 S Ribosomal protein L18	RL18_HUMAN	Q07020	22	11.73	√	Yes		C1
88		60 S Ribosomal protein L18a	RL1X_HUMAN	Q02543	21	10.72		Yes		C1
86, 87		60 S Ribosomal protein L21	RL21_HUMAN	P46778	18	10.49		Yes		C1
100, 101		60 S Ribosomal protein L22	RL22_HUMAN	P35268	15	9.22	√	Yes		C1
102, 103		60 S Ribosomal protein L23	RL23_HUMAN	P23131	15	10.51		Yes		C1
92, 93		60 S Ribosomal protein L23A	RL2B_HUMAN	P29316	18	10.44	√	Yes		C1
98		60 S Ribosomal protein L27	RL27_HUMAN	P08526	16	10.56	√	Yes		C1
97		60 S Ribosomal protein L27A	RL2A_HUMAN	P46776	16	11,00	√	Yes		C1

41, 42	60 S Ribosomal protein L3	RL3_HUMAN	P39023	46	10.19	√	Yes		C1
103, 104	60 S Ribosomal protein L30	RL30_HUMAN	P04645	13	9.65		Yes		C1
88	60 S Ribosomal protein L30 isolog	Q9UHA3	Q9UHA3	20	9.99		No	yeast 60 S ribosomal protein L4	C1
99, 100	60 S Ribosomal protein L31	RL31_HUMAN	P12947	14	10.54	√	Yes		C1
97	60 S Ribosomal protein L35	RL35_HUMAN	P42766	14	11.04		Yes		C1
104, 105	60 S Ribosomal protein L35a	R35A_HUMAN	P18077	12	10.91		Yes		C1
36	60 S Ribosomal protein L4	RL4_HUMAN	P36578	48	11.12	√	Yes		C1
57	60 S Ribosomal protein L6	RL6_HUMAN	Q02878	33	10.59	√	Yes		C1
66	60 S Ribosomal protein L7	RL7_HUMAN	P18124	29	10.66	√	Yes		C1
64, 65	60 S Ribosomal protein L7a	RL7A_HUMAN	P11518	30	10.61	√	Yes		C1
83, 84	60 S Ribosomal protein L9	RL9_HUMAN	P32969	22	9.96	√	Yes		C1
36	Ribosomal protein	G1432359	G1432359	48	11.07		No	human 60 S ribosomal protein L4	C1
36, 37	similar to Ribosomal protein L4	Q9BSV5	Q9BSV5	38	11.03		No	human 60 S ribosomal protein L4	C1
12	Autoantigen NGP1	NGP1_HUMAN	Q13823	84	9.27	√	No	yeast Nog2p	C2
12	CDNA FLJ10377 fis, clone NT2RM2001989	Q9NW13	Q9NW13	86	9.29	√	No	yeast Nop4p	C2
15	CDNA FLJ12917 fis, clone NT2RP2004568	Q9H990	Q9H990	87	9.26	√	No	yeast Drs1p	C2
20	CDNA FLJ13633 fis, clone PLACE1011114	Q9H8H2	Q9H8H2	62	9.9		No	yeast Dbp7p	C2
36, 37	CDNA FLJ13970 fis, clone Y79AA1001533	Q9GZS1	Q9GZS1	47	9.1		No	murine PAF53	C2
12	DHM1-like protein (or Q9H0D6, Q9NXS6)	Q9UL53	Q9UL53	109	7.99		No	yeast Rat1p	C2
14	DNA Topoisomerase I	TOP1_HUMAN	P11387	91	9.33	√	Yes		C2
12	DNA-directed RNA polymerase I 135 Kda polypeptide	RPA2_HUMAN	Q9H9Y6	122	8.11		Yes		C2
	+ DNA-directed RNA polymerase I 16 kDa polypeptide	RPA9_HUMAN	Q9Y2S0	15	5.55		Yes		C2
47, 49	+ DNA-directed RNA polymerase I 40 kDa polypeptide	RPA5_HUMAN	O15160	39	5.31	√	Yes		C2
7, 9	DNA-directed RNA polymerase I largest subunit	RPA1_HUMAN	O95602	194	6.8	√	Yes		C2

31	Dyskerin	DKC1_HUMAN	O60832	58	9.46	√	Yes		C2
	+ Exosome complex exonuclease RRP41	RR41_HUMAN	Q9NPD3	26	6.07	√	Yes		C2
12	Exosome complex exonuclease RRP44	RR44_HUMAN	Q9Y2L1	105	6.82		Yes		C2
56, 57	Fibrillarin	FBRL_HUMAN	P22087	34	10.18	√	Yes		C2
33	+ Glutamate-rich WD repeat protein	GRWD_HUMAN	Q9BQ67	49	4.82	√	No	yeast Rrb1p	C2
90	HSPC180	Q9NZZ0	Q99ZZ0	15	8.41		No	yeast Nip7p	C2
37, 38	Hypothetical 50.6 Kda protein (or Q9H4E3)	Q9H0S4	Q9H0S4	51	9.18	√	No	yeast Rrp3p	C2
30	Hypothetical 50.7 kDa protein (or O43159)	Q9BVM6	Q9BVM6	51	9.51	√	No	yeast Rrp8p	C2
57	Hypothetical protein FLJ21087 [fragment]	U170_HUMAN	Q9H7B2	29	9.88		No	yeast Rpf2p	C2
12	Hypothetical protein KIAA0052 [fragment]	Y052_HUMAN	P42285	118	6.19	√	No	yeast Dob1p	C2
45, 46	Hypothetical protein KIAA0112 [fragment] (or Q9BUX8)	Y112_HUMAN	Q15050	44	10.82	√	No	yeast Rrs1p	C2
13	Hypothetical protein KIAA0124 [fragment] (or Q9BSA7, Q9BVM0)	Y124_HUMAN	Q14137	77	6.05	√	No	mouse Bop1	C2
15	Hypothetical protein KIAA0179	Y179_HUMAN	Q14684	82	9.81	√	No	human NNP-1	C2
12	Hypothetical protein KIAA0682	Y682_HUMAN	Q9Y4C8	107	6.17	√	No	yeast Mrd1p	C2
86	NHP2 Protein	Q9NX24	Q9NX24	17	8.48	√	Yes		C2
35, 36	NNP-1 protein	NNP1_HUMAN	P56182	53	9.39	√	No	yeast Rrp1p	C2
16	Nucleolar protein GU2	Q9BQ39	Q9BQ39	83	9.26	√	No	human nucleolar RNA helicase II	C2
26, 27	Nucleolar protein NOP5/NOP58	NOP5_HUMAN	Q9Y2X3	60	9.03	√	Yes		C2
23-25	Nucleolar protein Nop56	NO56_HUMAN	O00567	67	9.28	√	Yes		C2
48, 49	Nucleolar protein P40	Q99848	Q99848	35	10.1	√	No	yeast Ebp2p	C2
14-17, 23	Nucleolar RNA helicase II	DD21_HUMAN	Q9NR30	80	9.42	√	Yes		C2
29	Nucleolar RNA-helicase	Q9NY93	Q9NY93	62	9.34	√	No	yeast Dbp9p	C2
14-17, 23, 28, 33, 34	Nucleolin	NUCL_HUMAN	P19338	76	4.59	√	Yes		C2
50-56, 58, 70, 84, 88, 93, 94	+ Nucleophosmin	NPM_HUMAN	P06748	33	4.64	√	Yes		C2
25	Pescadillo protein	O00541	O00541	68	6.93	√	No	yeast Nop7p	C2

14	Polymyositis/Scleroderma autoantigen 2	PMC2_HUMAN	Q01780	101	8.68	√	Yes		C2
12	Probable ATP-dependent RNA helicase DDX10	DD10_HUMAN	Q13206	101	8.72	√	No	yeast Dbp4p	C2
12-14, 16	Proliferating-cell nucleolar antigen P120	NOL1_HUMAN	P46087	94	9.21	√	Yes		C2
27, 28	Putative ATP-dependent RNA helicase ROK1 (or Q9Y482, Q9NVE0)	Q9Y2R4	Q9Y2R4	67	9.6	√	No	yeast Rok1p	C2
58	Putative dimethyladenosine transferase (or Q9UES1)	Q9UNQ2	Q9UNQ2	35	10.01		No	yeast Dim1p	C2
40	REV interacting protein RIP-1	Q13601	Q13601	33	9.81	√	No	yeast Krr1p	C2
41, 42	RNA binding protein	Q9BXY0	Q9BXY0	35	5.35	√	No	yeast Mak16p	C2
42	RNA processing factor 1 (or Q9H9Y2)	Q8WXZ8	Q8WXZ8	40	10.01	√	No	yeast Rpf1p	C2
4, 5, 7, 9	RRP5 protein homolog [fragment]	RRP5_HUMAN	Q14690	210	9.02	√	No	yeast Rrp5p	C2
47	Similar to RIKEN cDNA 1110064N10 gene	Q96DH1	Q96DH1	32	9.71		No	yeast Brix1p	C2
14	Similar to RIKEN cDNA 2410015A15 gene	Q9BRZ1	Q9BRZ1	82	9.94	√	No	yeast Dbp10p	C2
29	Suppressor of sterile four 1	Q9NQ55	Q9NQ55	53	10.13	√	No	yeast Ssf1p	C2
12, 13	U3 small nucleolar ribonucleoprotein MPP10	MP10_HUMAN	O00566	79	4.77	√	Yes		C2
32, 33	U3 snoRNP associated 55 kDa protein	O43818	O43818	52	7.97	√	Yes		C2
	+ Chromobox protein homolog 3	CBX3_HUMAN	Q13185	20	5.03	√	Yes		C3
50	Core histone macro-H2A.1	H2AY_HUMAN	O75367	39	9.8		Yes		C3
100-102	Histone H2/B f, d, l, n, r, q, s, a, j, e, h, c,	H2BF_HUMAN	P33778	14	10.32	√	Yes		C3
102-104	Histone H2A.e, g, o, m, a, l	H2AE_HUMAN	Q99878	14	10.88	√	Yes		C3
100	Histone H3/B, (or P16106, Q16695, P06351)	H3B_HUMAN	Q93081	15	11.26		Yes		C3
107, 108	Histone H4	H4_HUMAN	P02304	11	11.36	√	Yes		C3
31	54 Kda nuclear RNA- and DNA-binding protein	NR54_HUMAN	Q15233	54	9.01	√	Yes		C4
11	ATP-dependant RNA helicase A	DDX9_HUMAN	Q08211	141	6.35		Yes		C4
10, 11	CCAAT-box-binding transcription factor	CBF_HUMAN	Q03701	114	5.19	√	Yes		C4

15	Ded protein	Q9NY61	Q9NY61	63	4.83	✓	No	rat AATF	C4
	+ DNA-directed RNA polymerase II 23 kDa polypeptide	RPB5_HUMAN	P19388	25	5.53	✓	Yes		C4
18	Double-stranded RNA specific adenosine deaminase	Q9NS39	Q9NS39	81	10.19		No	human ADAR family	C4
44	Heterogeneous nuclear ribonucleoprotein D0	ROD_HUMAN	Q14103	38	7.61		Yes		C4
58, 59	Heterogeneous nuclear ribonucleoprotein A1	ROA1_HUMAN	P09651	39	9.26	✓	Yes		C4
28, 29	+ Heterogeneous nuclear ribonucleoprotein K	ROK_HUMAN	Q07244	51	5.39	✓	Yes		C4
57	Heterogeneous nuclear ribonucleoproteins A2/B1	ROA2_HUMAN	P22626	37	8.97	✓	Yes		C4
11	Leukophysin	Q12803	Q12803	24	10.13	✓	No	human ATP-dependent RNA helicase A	C4
105-107	NPH2-like protein 1	NHPX_HUMAN	P55769	14	8.72	✓	Yes		C4
33, 34	+ Nuclear matrix protein NMP200	Q9UMS4	Q9UMS4	55	6.14	✓	No	yeast Cwf8p	C4
20	Poly(A)-specific ribonuclease	O95453	O95453	73	5.86	✓	Yes		C4
33	Polypyrimidine tract binding protein	PTB_HUMAN	P26599	57	9.22		Yes		C4
27	Probable RNA-dependent helicase P68	DDX5_HUMAN	P17844	69	9.06	✓	Yes		C4
16, 17	Putative pre-mRNA splicing factor RNA helicase	DD15_HUMAN	O43143	91	7.12	✓	No	yeast Prp43p	C4
	+ Putative spliceosome associated protein	O75934	O75934	26	5.48		?		C4
89	Splicing factor, arginine/serine-rich 3 (or Q16629)	SFR3_HUMAN	P23152	19	11.64	✓	Yes		C4
13	Splicing factor, prolin and glutamin rich	SFPQ_HUMAN	P23246	76	9.45	✓	Yes		C4
48	Unknown	Q9BQ99	Q9BQ99	31	7.69		No	murine CArG binding factor A	C4
20	DEAD-box protein 3	DDX3_HUMAN	O00571	73	6.73	✓	No	yeast Ded1p	C5
41, 42	Elongation factor 1-alpha 1 (or Q05639, Q9NZS6)	EF11_HUMAN	P04720	50	9.1		Yes		C5
73	+ Eukariotic translation initiation factor 6	IF6_HUMAN	P56537	27	4.56	✓	Yes		C5
95, 96	Signal recognition particle 14 kDa protein	SR14_HUMAN	P37108	15	10.05	✓	Yes		C5
	+ 60 kDa heat shock protein, mitochondrial	CH60_HUMAN	P10809	61	5.7	✓	Yes		C6

	+	Heat shock 70 kDa protein 1	HS71_HUMAN	P08107	70	5.48	√	Yes	C6
	+	Heat shock cognate 71 kDa protein	HS7C_Human	P11142	71	5.37	√	Yes	C6
94		Peptidyl-prolyl cis-trans isomerase b [precursor]	CYPB_HUMAN	P23284	23	9.33	√	Yes	C6
	+	Protein disulfide isomerase A3	PDA3_HUMAN	P30101	57	5.98	√	Yes	C6
	+	Stress-70 protein, mitochondrial	GR75_HUMAN	P38646	74	5.97	√	Yes	C6
	+	T-complex protein 1, beta subunit	TCPB_HUMAN	P78371	57	6.01		Yes	C6
	+	T-complex protein 1, epsilon subunit	TCPE_HUMAN	P48643	60	5.45		Yes	C6
23	+	Actin, cytoplasmic 1	ACTB_HUMAN	P02570	42	5.29	√	Yes	C7
44, 45		Actin, cytoplasmic 2	ACTG_HUMAN	P02571	42	5.31		Yes	C7
	+	Keratin, type I cytoskeletal 10	K1CJ_HUMAN	P13645	60	5.13		Yes	C7
	+	Keratin, type I cytoskeletal 17 [Version 1]	K1CQ_HUMAN	Q04695	48	4.97		Yes	C7
	+	Keratin, type I cytoskeletal 18	K1CR_HUMAN	P05783	48	5.34		Yes	C7
	+	Keratin, type II cytoskeletal 1	K2C1_HUMAN	P04264	66	8.16		Yes	C7
33	+	Keratin, type II cytoskeletal 7	K2C7_HUMAN	P08729	51	5.41		Yes	C7
35	+	Keratin, type II cytoskeletal 8	K2C8_HUMAN	P05787	54	5.52	√	Yes	C7
	+	Lamin A/C	LAMA_HUMAN	P02545	74	6.57	√	Yes	C7
33, 34		Tubulin alpha-1 chain, brain-specific	TBA1_HUMAN	P04687	50	5.02	√	Yes	C7
32, 33	+	Vimentin	VIME_HUMAN	P08670	54	5.06		Yes	C7
18		ATP-dependant DNA helicase II, 80 kDa subunit	KU86_HUMAN	P13010	83	5.55		Yes	C8
25		ATP-dependent DNA helicase II, 70 kDa subunit	KU70_HUMAN	P12956	70	6.23	√	Yes	C8
1, 3, 4		DNA dependent protein kinase catalytic subunit	PRKD_HUMAN	P78527	469	6.78	√	Yes	C8
45		NF45 protein	Q12905	Q12905	45	8.26	√	Yes	C8
16, 17		NF90 protein	Q12906	Q12906	73	6.05		Yes	C8

48, 49	Actin-like protein 2	ARP2_HUMAN	O15142	45	6.29	√	Yes		C9
34	Bystin	BYST_HUMAN	Q13895	35	9.71	√	Yes		C9
23	+ Calgizzarin (or Q9UDP3 or O60417)	S111_HUMAN	P31949	12	6.56		Yes		C9
23	Calgranulin A	S108_HUMAN	P05109	11	6.51		Yes		C9
23	Calgranulin B	S109_HUMAN	P06702	13	5.71		Yes		C9
54	Casein kinase II, alpha' chain	KC22_HUMAN	P19784	41	8.65		Yes		C9
11	CDNA FLJ10809 fis, clone NT2RP4000927 (or Q9H9C5, Q9P275)	Q9NVC8	Q9NVC8	103	9.7		No	murine DUB-2A	C9
23	Fatty acid-binding protein, epidermal	FABE_HUMAN	Q01469	15	6.6		Yes		C9
33, 34	Importin alpha-2 subunit	IMA2_HUMAN	P52292	58	5.25	√	Yes		C9
	+ Peroxiredoxin 2	PDX2_HUMAN	P32119	22	5.66		Yes		C9
	+ Placental calcium-binding protein	S104_HUMAN	P26447	12	5.85		Yes		C9
13	Poly [ADP-ribose] polymerase-1	PPOL_HUMAN	P09874	113	8.99	√	Yes		C9
23	Squamous cell carcinoma antigen 1	SCC1_HUMAN	P29508	45	6.35		Yes		C9
84	Ubiquitin	UBIQ_HUMAN	P02248	9	6.56	√	Yes		C9
18-20	ATP-dependent RNA helicase DDX18 (or Q9BQB7)	DD18_HUMAN	Q9NVP1	75	9.52	√	No		C10
12	ATP-dependent RNA helicase DDX24	DD24_HUMAN	Q9GZR7	96	9.14		No		C10
45	CDNA : FLJ21730 fis, clone COLF1557	Q9H6X8	Q9H6X8	28	8.96	√	No		C10
38	CDNA FLJ10458 fis, clone NT2RP1001457	Q9NVX2	Q9NVX2	53	6.92		No		C10
48	CDNA FLJ12671 fis, clone NT2RM4002323	Q9H9L3	Q9H9L3	39	9.94		No		C10
32	CDNA FLJ12787 fis, clone NT2RP2001943	Q9H9F8	Q9H9F8	32	9.7		No		C10
13	CDNA FLJ12820 fis, clone NT2RP2002736	Q9H9D8	Q9H9D8	49	9.06		No		C10
18, 19	CDNA FLJ13640 fis, clone PLACE1011221	Q9H8H0	Q9H8H0	81	5.74	√	No		C10
9, 10, 33	CDNA FLJ20062 fis, clone COL01508 (or Q9BWM4)	Q9NXT6	Q9NXT6	66	5.69		No		C10

15	CDNA FLJ20287 fis, clone HEP04390	Q9NXF1	Q9NXF1	106	9.45		No	C10
43, 44	CDNA FLJ20624 fis, clone KAT04557	Q9NWT1	Q9NWT1	44	9.22		No	C10
17	CDNA FLJ23323 fis, clone HEP12456	Q9H5L4	Q9H5L4	38	8.91	√	No	C10
15	DJ475B7.2 (or Q9H9V5)	Q9Y4W2	Q9Y4W2	81	4.62		No	C10
4	DRIM Protein	O75691	O75691	318	7.07	√	No	C10
	+ ERYTHROCYTE CYTOSOLIC PROTEIN OF 54 kDa, ECP-54	Q9Y265	Q9Y265	50	6.02		No	C10
56	EST : gi14067717 (or 12314418, 4437541)						No	C10
9	EST gi14378542 (or 15017735)						No	C10
26	Glioma tumor suppressor candidate region gene 2 protein	GSR2_HUMAN	Q9NZM5	54	10.36	√	No	C10
27, 28	Hepatocellular carcinoma-associated antigen 66	HC66_HUMAN	Q9NYH9	70	7.19		No	C10
58, 59	Heterogeneous nuclear ribonucleoprotein A0	ROA0_HUMAN	Q13151	31	9.34		No	C10
45	Heterogeneous nuclear ribonucleoprotein G	ROG_HUMAN	P38159	42	10.02	√	No	C10
12	Hypothetical 115.7 kDa protein (or Q9C0F4, Q9NVF2, Q9HA61)	Q9H0A0	Q9H0A0	116	8.5		No	C10
9	Hypothetical 140.5 kDa protein [fragment]	Q9BQG0	Q9BQG0	141	9.36		No	C10
60, 61	Hypothetical 30.1 KDa protein	O95478	O95478	30	10.28	√	No	C10
42, 43	Hypothetical 43.6 Kda protein	Q9NX58	Q9NX58	44	9.59	√	No	C10
45	Hypothetical 43.8 Kda Protein [fragment]	Q9UG11	Q9UG11	44	8.58	√	No	C10
	+ Hypothetical 49.3 kDa protein	Q9H0U9	Q9H0U9	49	5.36		No	C10
29	Hypothetical 58.5 kDa protein	Q9BVI4	Q9BVI4	58	7.08		No	C10
23	Hypothetical 59.6 kDa protein (fragment)	Q9BWK6	Q9BWK6	60	9.2		No	C10
1, 2, 14	Hypothetical 80.4 Kda protein (or Q9H9V8, Q9H9U5)	Q9UIX2	Q9UIX2	80	5.59		No	C10
14	Hypothetical 84.9 kDa protein DKFZp564C186 (or Q9BTN6, Q9H9J5)	YU20_HUMAN	Q9Y3T9	85	5.34	√	No	C10
84	Hypothetical protein CGI-117	CGB7_HUMAN	Q9Y3C1	21	9.94	√	No	C10
25	Hypothetical protein KIAA0020	Y020_HUMAN	Q15397	58	8.96	√	No	C10
6, 7, 8	Hypothetical protein KIAA0539 [fragment]	Y539_HUMAN	O60287	252	5.97	√	No	C10

36, 37		Hypothetical RNA-binding protein KIAA0117 [fragment] (or Q9H5A1)	Y117_HUMAN	P42696	26	9.75		No	C10
26		Hypothetical WD-repeat protein CGI-48	CG48_Human	Q9Y5J1	43	8.97	√	No	C10
14		ITBA4 protein [fragment]	IBA4_HUMAN	O15226	27	9.45		No	C10
20, 21		KIAA0007 Protein [fragment] (or Q92577)	Q15061	Q15061	76	5.46	√	No	C10
56		KIAA0116 Protein [fragment]	Q15024	Q15024	32	5.08	√	No	C10
9		KIAA0690 protein [fragment]	Q9Y4C7	Q9Y4C7	135	9.00	√	No	C10
33		KIAA1470 Protein [fragment]	Q9P258	Q9P258	60	8.97		No	C10
15		Nuclear vcp-like protein NVLP.2	O15381	O15381	95	6.11		No	C10
22		Nucleolar GTP-binding protein 1	NOG1_Human	Q9BZE4	74	9.52	√	No	C10
54		Nucleolar phosphoprotein Nopp34	Q9BYG3	Q9BYG3	34	9.88		No	C10
12		Nucleolar RNA-associated protein alpha	Q8TEZ1	Q8TEZ1	128	7.42		No	C10
58		OPA-interacting protein OIP2 [fragment]	O43480	O43480	29	4.98	√	No	C10
25-28		PBK1 protein	O76021	O76021	58	10.12	√	No	C10
1, 12-14		Periodic tryptophan protein 2 homolog	PWP2_HUMAN	Q15269	102	5.81	√	No	C10
43	+	Proliferation-associated protein 2G4	P2G4_HUMAN	Q9UQ80	44	6.13	√	No	C10
7		Protein BAP28	BP28_HUNAN	Q9H583	242	6.13	√	No	C10
26, 27		Putative nucleotide binding protein, estradiol-induced	Q9BVP2	Q9BVP2	62	9.2	√	No	C10
	+	Putative S100 calcium-binding protein MGC17528	S11Z_Human	Q96FQ6	14	6.28		No	C10
45		Retinoic acid repressible protein	Q9UMY1	Q9UMY1	29	9.68	√	No	C10
20		Similar to hypothetical protein FLJ14075 (or Q9H7Y7)	Q9BSC4	Q9BSC4	80	8.64	√	No	C10
12		Similar to KIAA0266 gene product	Q9BVJ6	Q9BVJ6	88	7.67		No	C10
	+	Unknown	Q9BQ04	Q9BQ04	40	6.28		No	C10
36-38		WD-repeat protein 12	WDRC_Human	Q9GZL7	48	5.57	√	No	C10
14		WD-repeat protein 3 (or Q9H141)	WDR3_HUMAN	Q9UNX4	106	6.2	√	No	C10
16, 17		WD-repeat protein SAZD	TBL3_HUMAN	Q12788	56	8.39	√	No	C10

39	WUGSC:H_DJ0978E18.1 protein	O95020	O95020	37	6.53		No	C10
33	XPMC2H	Q9GZR2	Q9GZR2	47	9.79	√	No	C10

Proteins were extracted from purified nucleoli, separated either by 1-DE or by 2-DE, identified after mass spectrometry analyses and finally ordered according to the deduced functional classes in which they belong. Several data are given in the table for each identified protein. Gel fragment in 1-DE : number of the 1-D gel fragment containing the corresponding protein ; position of this gel fragment is indicated in Figure 3. Id. in 2-DE (Identification in 2-DE) : + indicates that the corresponding protein has been identified after separation by 2-DE (see Figure 4). Protein name, DB (database) entry and accession number : name, database entry and accession number of the corresponding protein found in SWISS-PROT, TrEMBL or GenBank databases. MW (molecular weight) and pI (isoelectric point) correspond to theoretical molecular weight and isoelectric point of the protein calculated using the Compute pI/Mw software (www.expasy.org). Id. (identified) also by oth. (others) : √ indicates that the corresponding protein was also found in the study of Andersen and colleagues (Andersen et al., 2002, Curr Biol, 12, 1-11). Dem. function (demonstrated function) : Yes or No indicate whether the protein has been shown or not to be involved in a biological process ; these data were obtained from an extensive bibliographic analysis, the corresponding references are not given in the table due to their very high number. Hom. (homologous) protein with dem. (demonstrated) function : the name of an homologous protein previously shown to be involved in a biological process is given. Funct. (functional) class : name of the deduced functional class for the corresponding protein ; C1, ribosomal proteins ; C2, ribosome biogenesis ; C3, chromatin structure ; C4, mRNA metabolism ; C5, translation factors ; C6, chaperones ; C7, fibrous proteins ; C8, DNA-PK complex ; C9, others ; C10, unpredictable function.
