

Table S5. List of proteins that have similar levels in Dicer-deficient and control NSCs.							
Enriched Kegg pathway							
Term	Accession	Protein names	Genes	prot_score_WT	prot_score_KO	prot_matches_WT	prot_matches_KO
Ribosome	P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
	P62082	40S ribosomal protein S7	Rps7	104	126	9	14
	O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
	P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
	P62908	40S ribosomal protein S3	Rps3	778	762	39	44
	P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
	P62242	40S ribosomal protein S8	Rps8	479	372	18	19
	P62281	40S ribosomal protein S11	Rps11	166	132	27	28
	Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
	P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
	P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
	Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
	Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
	P14131	40S ribosomal protein S16	Rps16	160	126	19	16
	P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
	P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
	P62852	40S ribosomal protein S25	Rps25	101	100	15	12
	Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
	P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
	P63325	40S ribosomal protein S10	Rps10	468	168	42	33
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23	
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12	
P62264	40S ribosomal protein S14	Rps14	163	166	15	11	

	P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
	P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
	Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
	P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
	P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
	P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
	P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
	Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
	P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
	P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
	P62301	40S ribosomal protein S13	Rps13	77	100	23	14
	Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
	P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
	P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
	Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
	P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
	P97461	40S ribosomal protein S5	Rps5	89	33	32	18
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
Arginine and proline metabolism	Q60716	Prolyl 4-hydroxylase subunit alpha-2 (EC 1.14.11.2) (4-PH alpha-2) (Procollagen-proline,2-oxoglutarate-4-dioxygenase subunit alpha-2)	P4ha2	22	27	8	10
	Q6P8J7	Creatine kinase, sarcomeric mitochondrial (EC 2.7.3.2) (S-MtCK)	Ckmt2	50	66	26	26
	P30275	Creatine kinase, ubiquitous mitochondrial (EC 2.7.3.2) (U-MtCK) (Acidic-type mitochondrial creatine kinase) (Mia-CK)	Ckmt1	205	121	32	30
	Q04447	Creatine kinase B-type (EC 2.7.3.2) (Creatine kinase B chain) (B-CK)	Ckb (Ckbb)	9079	7277	434	406

	Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
	P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
	Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
Enriched Biological Processes by Gene Ontology							
Term	Accession	Protein names	Genes	prot_score_WT	prot_score_KO	prot_matches_WT	prot_matches_KO
metabolic process	P10639	Thioredoxin (Trx) (ATL-derived factor) (ADF)	Txn (Txn1)	169	914	22	42
	Q3TCT4	Ectonucleoside triphosphate diphosphohydrolase 7 (NTPDase 7) (EC 3.6.1.7) (Lysosomal apyrase-like protein 1)	Entpd7 (Kiaa4066) (Lalp1)	16	33	42	80
	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	Q9CXW3	Calcyclin-binding protein (CacyBP) (Siah-interacting protein)	Cacybp (Sip)	57	39	7	13
	P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22
	Q7TSG3	F-box only protein 5 (Early mitotic inhibitor 1)	Fbxo5 (Emi1)	15	27	5	9
	Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
	P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
Q64674	Spermidine synthase (SPDSY) (EC 2.5.1.16) (Putrescine aminopropyltransferase)	Srm	55	29	4	7	

P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
P17742	Peptidyl-prolyl cis-trans isomerase A (PPIase A) (Rotamase A) (EC 5.2.1.8) (Cyclophilin A) (Cyclosporin A-binding protein) (SP18)	Ppia	855	1549	38	66
Q8QZR5	Alanine aminotransferase 1 (ALT1) (EC 2.6.1.2) (Glutamic--pyruvic transaminase 1) (Glutamate pyruvate transaminase 1) (GPT 1) (Glutamic--alanine transaminase 1)	Gpt (Gpt1)	25	20	15	26
Q9Z1R2	Large proline-rich protein BAT3 (HLA-B-associated transcript 3)	Bat3	80	49	15	26
Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
Q9D009	Putative octanoyltransferase, mitochondrial (EC 2.3.1.181) (Octanoyl-[acyl-carrier-protein]-protein N-octanoyltransferase) (Lipoyl/octanoyl transferase) (Lipoate-protein ligase B)		38	42	11	19
Q8R1S0	Ubiquinone biosynthesis monooxygenase COQ6 (EC 1.14.13.-)	Coq6	42	92	10	17
Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recq1 (Recq1)	17	27	13	22
Q9ERK4	Exportin-2 (Exp2) (Importin-alpha re-exporter) (Chromosome segregation 1-like protein)	Cse1l (Xpo2)	42	153	26	44
P52480	Pyruvate kinase isozymes M1/M2 (EC 2.7.1.40) (Pyruvate kinase muscle isozyme)	Pkm2 (Pk3) (Pykm)	1954	3481	138	233
Q8CGP2	Histone H2B type 1-P	Hist1h2bp	436	999	46	77
P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
Q9WTL7	Acyl-protein thioesterase 2 (EC 3.1.2.-) (Lysophospholipase II) (Lysophospholipase 2) (mLyso II)	Lypla2	23	49	3	5

P62960	Nuclease-sensitive element-binding protein 1 (Y-box-binding protein 1) (Y-box transcription factor) (YB-1) (CCAAT-binding transcription factor I subunit A) (CBF-A) (Enhancer factor I subunit A) (EFI-A) (DNA-binding protein B) (DBPB)	Ybx1 (Msy-1) (Msy1) (Nsep1) (Yb1)	56	126	6	10
P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78
Q64475	Histone H2B type 1-B (h2B-143)	Hist1h2bb	436	999	46	75
P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13
Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
P19157	Glutathione S-transferase P 1 (Gst P1) (EC 2.5.1.18) (GST YF-YF) (GST-piB) (GST class-pi) (Preadipocyte growth factor)	Gstp1 (Gstpib)	473	572	10	16

Q8BGT5	Alanine aminotransferase 2 (ALT2) (EC 2.6.1.2) (Glutamic--pyruvic transaminase 2) (Glutamate pyruvate transaminase 2) (GPT 2) (Glutamic--alanine transaminase 2)	Gpt2 (Aat2)	25	20	15	24
Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
Q80Y17	Lethal(2) giant larvae protein homolog 1 (LLGL) (Mlgl) (Mgl-1)	Llgl1 (Llglh)	30	29	7	11
Q61990	Poly(rC)-binding protein 2 (Alpha-CP2) (Putative heterogeneous nuclear ribonucleoprotein X) (hnRNP X) (CTBP) (CBP)	Pcbp2 (Cbp) (HnrnpX) (Hnrpx)	29	194	7	11
P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23
P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
Q8K386	Ras-related protein Rab-15	Rab15	44	74	4	6
O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
Q9CQY5	Magnesium transporter protein 1 (MagT1) (Implantation-associated protein) (IAP)	Magt1 (Iag2)	26	22	8	12
P50247	Adenosylhomocysteinase (AdoHcyase) (EC 3.3.1.1) (S-adenosyl-L-homocysteine hydrolase) (Liver copper-binding protein) (CUBP)	Ahcy	90	106	10	15
Q99K85	Phosphoserine aminotransferase (PSAT) (EC 2.6.1.52) (Phosphohydroxythreonine aminotransferase) (Endometrial progesterone-induced protein) (EPIP)	Psat1 (Psa) (Psat)	162	541	16	24

P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwnk1)	56	36	18	27
P53657	Pyruvate kinase isozymes R/L (EC 2.7.1.40) (L PK)	Pklr	144	270	26	38
P97868	Retinoblastoma-binding protein 6 (p53-associated cellular protein of testis) (Proliferation potential-related protein) (Protein P2P-R)	Rbbp6 (P2pr) (Pact)	21	29	24	35
Q3THW5	Histone H2A.V (H2A.F/Z)	H2afv (H2av)	297	426	11	16
P99026	Proteasome subunit beta type-4 (Proteasome beta chain) (EC 3.4.25.1) (Macropain beta chain) (Multicatalytic endopeptidase complex beta chain) (Proteasome chain 3)	Psmb4 (Lmp3)	93	289	11	16
Q9QZ39	Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 1 (EC 2.4.99.3) (GalNAc alpha-2,6-sialyltransferase I) (ST6GalNAc I) (Sialyltransferase 7A)	St6galnac1 (Siat7a)	27	18	11	16
P60335	Poly(rC)-binding protein 1 (Alpha-CP1) (hnRNP-E1)	Pcbp1	56	350	9	13
P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
Q8BVI4	Dihydropteridine reductase (EC 1.5.1.34) (HDHPR) (Quinoid dihydropteridine reductase)	Qdpr (Dhpr)	144	277	7	10
O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
P12813	Nuclear receptor subfamily 4 group A member 1 (Orphan nuclear receptor HMR) (Nuclear hormone receptor NUR/77) (N10 nuclear protein)	Nr4a1 (Gfrp) (Hmr) (N10) (Nur77)	61	31	7	10

Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
P68510	14-3-3 protein eta	Ywhah	707	962	58	80
P70696	Histone H2B type 1-A (Histone H2B, testis) (Testis-specific histone H2B)	Hist1h2ba (Th2b)	146	378	37	51
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
P70338	Zinc finger protein Gfi-1 (Growth factor independent protein 1)	Gfi1 (Gfi-1)	45	39	17	23
Q61789	Laminin subunit alpha-3 (Nicein subunit alpha)	Lama3	26	26	37	50
Q6P8J2	Diamine acetyltransferase 2 (EC 2.3.1.57) (Spermidine/spermine N(1)-acetyltransferase 2) (Polyamine N-acetyltransferase 2)	Sat2 (Ssat2)	33	23	6	8
Q9EPL8	Importin-7 (Imp7) (Ran-binding protein 7) (RanBP7)	Ipo7 (Ranbp7)	25	121	9	12



Q9WTX2	Interferon-inducible double stranded RNA-dependent protein kinase activator A (Protein kinase, interferon-inducible double stranded RNA-dependent activator) (Protein activator of the interferon-induced protein kinase) (PKR-associated protein X) (PKR-associating protein X) (RAX)	Prkra (Rax)	28	39	9	12
Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
P70168	Importin subunit beta-1 (Karyopherin subunit beta-1) (Nuclear factor P97) (Pore targeting complex 97 kDa subunit) (PTAC97) (SCG)	Kpnb1 (Impnb)	48	17	13	17
Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
P63163	Small nuclear ribonucleoprotein-associated protein N (snRNP-N) (Sm protein N) (Sm-N) (SmN) (Sm-D) (Tissue-specific-splicing protein)	Snrpn (Smn)	38	17	7	9
Q7TQ07	DNA polymerase nu (EC 2.7.7.7)	Poln	20	39	14	18
Q61753	D-3-phosphoglycerate dehydrogenase (3-PGDH) (EC 1.1.1.95) (A10)	Phgdh	105	158	14	18

P05064	Fructose-bisphosphate aldolase A (EC 4.1.2.13) (Muscle-type aldolase) (Aldolase 1)	Aldoa (Aldo1)	211	567	36	46
Q07133	Histone H1t (Testicular H1 histone)	Hist1h1t (H1ft) (H1t)	46	72	54	69
Q923B1	Lariat debranching enzyme (EC 3.1.-.-)	Dbr1	28	29	15	19
P27661	Histone H2A.x (H2a/x)	H2afx (H2a.x) (H2ax) (Hist5-2ax)	301	426	15	19
Q62093	Splicing factor, arginine/serine-rich 2 (Splicing factor SC35) (SC-35) (Splicing component, 35 kDa) (Protein PR264) (Putative myelin regulatory factor 1) (MRF-1)	Sfrs2 (Pr264) (Sfrs10)	184	117	15	19
P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
Q60716	Prolyl 4-hydroxylase subunit alpha-2 (EC 1.14.11.2) (4-PH alpha-2) (Procollagen-proline,2-oxoglutarate-4-dioxygenase subunit alpha-2)	P4ha2	22	27	8	10
P17183	Gamma-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Neural enolase) (Neuron-specific enolase) (NSE) (Enolase 2)	Eno2 (Eno-2)	228	181	12	15
Q811J3	Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37

Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
Q61466	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 1 (SWI/SNF complex 60 kDa subunit) (60 kDa BRG-1/Brm-associated factor subunit A) (BRG1-associated factor 60A) (D15KZ1 protein)	Smarcd1 (Baf60a) (D15Kz1)	27	29	13	16
P59270	Galactosylgalactosylxylosylprotein 3-beta-glucuronosyltransferase 2 (EC 2.4.1.135) (Beta-1,3-glucuronyltransferase 2) (UDP-glucuronosyltransferase-S) (Glucuronosyltransferase-S) (GlcAT-S) (GlcAT-D)	B3gat2 (Glcats)	29	16	9	11
Q8VII8	Mineralocorticoid receptor (MR) (Nuclear receptor subfamily 3 group C member 2)	Nr3c2 (Mlr)	28	22	18	22
Q9R1P0	Proteasome subunit alpha type-4 (EC 3.4.25.1) (Proteasome component C9) (Macropain subunit C9) (Multicatalytic endopeptidase complex subunit C9) (Proteasome subunit L)	PsmA4	29	151	14	17
Q9CZY3	Ubiquitin-conjugating enzyme E2 variant 1 (UEV-1) (CROC-1)	Ube2v1 (Croc1)	83	163	166	201
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
Q9EQC4	Elongation of very long chain fatty acids protein 4	Elov14	25	18	5	6
O35618	Protein Mdm4 (p53-binding protein Mdm4) (Mdm2-like p53-binding protein) (Protein Mdmx) (Double minute 4 protein)	Mdm4 (Mdmx)	17	29	5	6

Q6PDM2	Splicing factor, arginine/serine-rich 1 (ASF/SF2)	Sfrs1	24	91	5	6
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q8BFY9	Transportin-1 (Importin beta-2) (Karyopherin beta-2)	Tnp1 (Kpnb2)	54	43	10	12
Q9QUR6	Prolyl endopeptidase (PE) (EC 3.4.21.26) (Post-proline cleaving enzyme)	Prep (Pep)	56	20	15	18
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
O08908	Phosphatidylinositol 3-kinase regulatory subunit beta (PI3-kinase p85 subunit beta) (PtdIns-3-kinase p85-beta)	Pik3r2	19	25	20	24
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
P54103	DnaJ homolog subfamily C member 2 (Zuotin-related factor 1) (Mouse Id associate 1) (MIDA1)	Dnajc2 (Mida1) (Zrf1)	23	27	11	13
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483

Q61171	Peroxiredoxin-2 (EC 1.11.1.15) (Thioredoxin peroxidase 1) (Thioredoxin-dependent peroxide reductase 1) (Thiol-specific antioxidant protein) (TSA)	Prdx2 (Tdpx1) (Tpx)	568	898	47	55
Q61122	NGFI-A-binding protein 1 (EGR-1-binding protein 1)	Nab1	30	25	6	7
Q6GSS7	Histone H2A type 2-A (H2A.2) (H2a-614) (H2a-615)	Hist2h2aa1; Hist2h2aa2	505	763	18	21
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
Q9JKP5	Muscleblind-like protein 1 (Triplet-expansion RNA-binding protein)	Mbnl1 (Exp) (Mbnl)	45	63	244	281
Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8
Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16
Q6A4J8	Ubiquitin carboxyl-terminal hydrolase 7 (EC 3.1.2.15) (Ubiquitin thioesterase 7) (Ubiquitin-specific-processing protease 7) (Deubiquitinating enzyme 7) (Herpesvirus-associated ubiquitin-specific protease) (mHAUSP)	Usp7 (Hausp)	27	18	14	16
P58660	Caspase recruitment domain-containing protein 10 (Bcl10-interacting MAGUK protein 1) (Bimp1)	Card10 (Bimp1)	33	23	15	17

P97820	Mitogen-activated protein kinase kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
Q921M3	Splicing factor 3B subunit 3 (Spliceosome-associated protein 130) (SAP 130) (Pre-mRNA splicing factor SF3b 130 kDa subunit) (SF3b130)	Sf3b3 (Kiaa0017)	16	34	24	27
Q9WUF3	CASP8-associated protein 2 (FLICE-associated huge protein)	Casp8ap2 (Flash)	28	16	26	29
Q64467	Glyceraldehyde-3-phosphate dehydrogenase, testis-specific (EC 1.2.1.12) (Spermatogenic glyceraldehyde-3-phosphate dehydrogenase) (Spermatogenic cell-specific glyceraldehyde 3-phosphate dehydrogenase 2) (GAPDH-2)	Gapdhs (Gapds) (Gapds)	75	781	26	29
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1al) (Stn)	1275	1549	258	285

Q62446	FK506-binding protein 3 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (25 kDa FKBP) (FKBP-25) (Rapamycin-selective 25 kDa immunophilin)	Fkbp3 (Fkbp25)	31	31	10	11
O55234	Proteasome subunit beta type-5 (EC 3.4.25.1) (Proteasome epsilon chain) (Macropain epsilon chain) (Multicatalytic endopeptidase complex epsilon chain) (Proteasome subunit X) (Proteasome chain 6)	Psmb5	168	227	10	11
Q93092	Transaldolase (EC 2.2.1.2)	Taldo1 (Tal) (Taldo)	20	93	10	11
Q9R0Q7	Prostaglandin E synthase 3 (EC 5.3.99.3) (Cytosolic prostaglandin E2 synthase) (cPGES) (Telomerase-binding protein p23) (Hsp90 co-chaperone) (Progesterone receptor complex p23) (Sid 3177)	Ptges3 (Sid3177) (Tebp)	124	239	10	11
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
Q8VC12	Probable urocanate hydratase (Urocanase) (EC 4.2.1.49) (Imidazolonepropionate hydrolase)	Uroc1	33	26	11	12
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q3THS6	S-adenosylmethionine synthetase isoform type 2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
P27546	Microtubule-associated protein 4 (MAP-4)	Map4 (Mtap4)	94	41	33	36

P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P70298	Homeobox protein cut-like 2 (Cut-like 2) (Homeobox protein Cux-2)	Cux2 (Cutl2)	30	22	12	13
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
P08113	Endoplasmic reticulum chaperone (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra-1) (Tra1)	221	298	25	27
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15



Q3TY86	Apoptosis-inducing factor 3 (EC 1.-.-.-) (Apoptosis-inducing factor-like protein)	Aifm3 (Aifl)	42	26	28	30
P70398	Probable ubiquitin carboxyl-terminal hydrolase FAF-X (EC 3.1.2.15) (Ubiquitin thioesterase FAF-X) (Ubiquitin-specific-processing protease FAF-X) (Deubiquitinating enzyme FAF-X) (Fat facets protein-related, X-linked) (Ubiquitin-specific protease 9, X chromosome) (Ubiquitin carboxyl-terminal hydrolase FAM) (Fat facets homolog)	Usp9x (Faf1) (Fam)	42	28	57	61
Q8BKX6	Serine/threonine-protein kinase SMG1 (SMG-1) (EC 2.7.11.1)	Smg1 (Kiaa0421)	33	27	30	32
P16858	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) (EC 1.2.1.12)	Gapdh (Gapd)	1514	1781	84	89
Q8VI56	Low-density lipoprotein receptor-related protein 4 (LDLR dan)	Lrp4 (Kiaa0816)	77	30	19	20
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
Q920R0	Alsin (Amyotrophic lateral sclerosis protein 2 homolog)	Als2	74	88	72	75
Q62504	Msx2-interacting protein (SPEN homolog) (SMART/HDAC1-associated repressor protein)	Spn (Kiaa0929) (Mint) (Sharp)	27	18	72	75
O35973	Period circadian protein homolog 1 (Circadian clock protein PERIOD 1) (Circadian pacemaker protein Rigui) (mPER1)	Per1 (Per) (Rigui)	29	21	27	28
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165
O54750	Cytochrome P450 2J6 (EC 1.14.14.1) (CYPIIJ6) (Arachidonic acid epoxygenase)	Cyp2j6	29	34	4	4

P62141	Serine/threonine-protein phosphatase PP1-beta catalytic subunit (PP-1B) (EC 3.1.3.16)	Ppp1cb	177	57	4	4
P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5
Q3TXZ1	Zinc finger protein 575	Znf575 (Zfp575)	30	25	5	5
Q8VCZ3	THAP domain-containing protein 7	Thap7	26	18	6	6
O88693	Ceramide glucosyltransferase (EC 2.4.1.80) (Glucosylceramide synthase) (GCS) (UDP-glucose:N-acylsphingosine D-glucosyltransferase) (UDP-glucose ceramide glucosyltransferase) (GLCT-1)	Ugcg	37	50	7	7
Q9R1P1	Proteasome subunit beta type-3 (EC 3.4.25.1) (Proteasome theta chain) (Proteasome chain 13) (Proteasome component C10-II)	Psmb3	87	135	7	7
Q8VC28	Aldo-keto reductase family 1 member C13 (EC 1.1.1.-)	Akr1c13	32	23	8	8
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
Q6P5F9	Exportin-1 (Exp1) (Chromosome region maintenance 1 protein homolog)	Xpo1 (Crm1)	19	43	9	9
Q9DAI4	Zinc finger and BTB domain-containing protein 43 (Zinc finger protein 297B)	Zbtb43 (Kiaa0414) (Zfp297b) (Znf297b)	23	51	9	9
Q9CQ60	6-phosphogluconolactonase (6PGL) (EC 3.1.1.31)	Pgls	148	41	11	11

O09061	Proteasome subunit beta type-1 (EC 3.4.25.1) (Proteasome component C5) (Macropain subunit C5) (Multicatalytic endopeptidase complex subunit C5) (Proteasome gamma chain)	Psmb1	84	94	11	11
Q80YV4	Pantothenate kinase 4 (EC 2.7.1.33) (Pantothenic acid kinase 4) (mPanK4)	Pank4	23	28	13	13
Q9DB77	Cytochrome b-c1 complex subunit 2, mitochondrial (Ubiquinol-cytochrome-c reductase complex core protein 2) (Core protein II) (Complex III subunit 2)	Uqcrc2	29	20	13	13
Q9JIF7	Coatomer subunit beta (Beta-coat protein) (Beta-COP)	Copb1 (Copb)	37	22	15	15
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q01098	Glutamate [NMDA] receptor subunit epsilon-3 (N-methyl D-aspartate receptor subtype 2C) (NMDAR2C) (NR2C)	Grin2c	18	33	15	15
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
P30681	High mobility group protein B2 (High mobility group protein 2) (HMG-2)	Hmgb2 (Hmg2)	94	222	24	24
Q80UK8	Integrator complex subunit 2 (Int2)	Ints2 (Kiaa1287)	16	27	24	24
Q6P8J7	Creatine kinase, sarcomeric mitochondrial (EC 2.7.3.2) (S-MtCK)	Ckmt2	50	66	26	26
Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
Q8K4E0	Alstrom syndrome protein 1 homolog	Alms1 (Kiaa0328)	29	30	86	86

P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (Csma) (Eif3) (Eif3s10)	199	166	58	56
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
P16406	Glutamyl aminopeptidase (EC 3.4.11.7) (EAP) (Aminopeptidase A) (APA) (BP-1/6C3 antigen) (CD antigen CD249)	Enpep	98	90	48	46
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S-)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21

Q6ZPK0	PHD finger protein 21A (BRAF35-HDAC complex protein BHC80) (mBHC80) (BHC80a)	Phf21a (Bhc80) (Kiaa1696) (Pfff1)	28	37	20	19
P54869	Hydroxymethylglutaryl-CoA synthase, mitochondrial (HMG-CoA synthase) (EC 2.3.3.10) (3-hydroxy-3-methylglutaryl coenzyme A synthase)	Hmgcs2	26	23	18	17
P03966	N-myc proto-oncogene protein	Mycn (Nmyc) (Nmyc1)	65	46	18	17
Q8BTI8	Serine/arginine repetitive matrix protein 2	Srrm2 (Kiaa0324)	78	70	92	86
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q9WTR0	Matrix metalloproteinase-16 (MMP-16) (EC 3.4.24.-) (Membrane-type matrix metalloproteinase 3) (MT-MMP 3) (MTMMP3) (Membrane-type-3 matrix metalloproteinase) (MT3-MMP) (MT3MMP)	Mmp16	17	36	11	10
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29

Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q9QZH3	Peptidyl-prolyl cis-trans isomerase E (PPIase E) (Rotamase E) (EC 5.2.1.8) (Cyclophilin E) (Cyclophilin-33)	Ppie (Cyp33)	28	35	10	9
Q925Q8	Dachshund homolog 2 (Dach2)	Dach2	22	30	9	8
P43277	Histone H1.3 (H1 VAR.4) (H1d)	Hist1h1d (H1f3)	78	99	18	16
Q68FD5	Clathrin heavy chain 1	Cltc	944	884	88	78
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
Q9DBJ1	Phosphoglycerate mutase 1 (EC 5.4.2.1) (EC 5.4.2.4) (EC 3.1.3.13) (Phosphoglycerate mutase isozyme B) (PGAM-B) (BPG-dependent PGAM 1)	Pgam1	612	746	35	31
Q8BG95	Protein phosphatase 1 regulatory subunit 12B (Myosin phosphatase-targeting subunit 2)	Ppp1r12b (Mypt2)	25	24	25	22
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
P70195	Proteasome subunit beta type-7 (EC 3.4.25.1) (Proteasome subunit Z) (Macropain chain Z) (Multicatalytic endopeptidase complex chain Z)	Psmb7 (Mmc14)	39	40	8	7
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55

Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q924C1	Exportin-5 (Exp5) (Ran-binding protein 21)	Xpo5 (Kiaa1291) (Ranbp21)	20	62	15	13
P21550	Beta-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Muscle-specific enolase) (MSE) (Skeletal muscle enolase) (Enolase 3)	Eno3 (Eno-3)	313	146	30	26
Q11011	Puromycin-sensitive aminopeptidase (PSA) (EC 3.4.11.-)	Npepps (Psa)	71	141	30	26
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
O54749	Cytochrome P450 2J5 (EC 1.14.14.1) (CYP11J5) (Arachidonic acid epoxygenase)	Cyp2j5	29	34	7	6
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPIase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
P97784	Cryptochrome-1	Cry1	52	42	21	18
Q9R194	Cryptochrome-2	Cry2 (Kiaa0658)	52	42	21	18
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18

P11881	Inositol 1,4,5-trisphosphate receptor type 1 (Type 1 inositol 1,4,5-trisphosphate receptor) (Type 1 InsP3 receptor) (IP3 receptor isoform 1) (InsP3R1) (Inositol 1,4,5-trisphosphate-binding protein P400) (Purkinje cell protein 1) (Protein PCD-6)	Itpr1 (Insp3r) (Pcd6) (Pcp1)	37	42	48	41
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
P46664	Adenylosuccinate synthetase isozyme 2 (AMPSase 2) (AdSS 2) (EC 6.3.4.4) (Adenylosuccinate synthetase, non-muscle isozyme) (Adenylosuccinate synthetase, acidic isozyme) (IMP--aspartate ligase 2)	Adss (Adss2)	36	66	12	10
Q99PP7	E3 ubiquitin-protein ligase TRIM33 (EC 6.3.2.-) (Tripartite motif-containing protein 33) (Transcription intermediary factor 1-gamma) (TIF1-gamma) (Ectodermin homolog)	Trim33 (Kiaa1113)	33	25	12	10



Q05816	Fatty acid-binding protein, epidermal (E-FABP) (Fatty acid-binding protein 5) (Psoriasis-associated fatty acid-binding protein homolog) (PA-FABP) (Keratinocyte lipid-binding protein)	Fabp5 (Fabpe) (Klbp) (Mal1)	331	206	18	15
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
Q64514	Tripeptidyl-peptidase 2 (EC 3.4.14.10) (Tripeptidyl-peptidase II) (TPP-II) (Tripeptidyl aminopeptidase)	Tpp2	54	76	24	20
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
P11531	Dystrophin	Dmd	25	16	66	55
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
P19096	Fatty acid synthase (EC 2.3.1.85) [Includes: [Acyl-carrier-protein] S-acetyltransferase (EC 2.3.1.38); [Acyl-carrier-protein] S-malonyltransferase (EC 2.3.1.39); 3-oxoacyl-[acyl-carrier-protein] synthase (EC 2.3.1.41); 3-oxoacyl-[acyl-carrier-protein] reductase (EC 1.1.1.100); 3-hydroxypalmitoyl-[acyl-carrier-protein] dehydratase (EC 4.2.1.61); Enoyl-[acyl-carrier-protein] reductase (EC 1.3.1.10); Oleoyl [acyl-carrier-protein] hydrolase (EC 3.1.2.14)]	Fasn	1869	1524	163	135
Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14

P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
Q6ZQ38	Cullin-associated NEDD8-dissociated protein 1 (Cullin-associated and neddylation-dissociated protein 1) (p120 CAND1)	Cand1 (D10Ert516e) (Kiaa0829)	221	246	33	27
P42227	Signal transducer and activator of transcription 3 (Acute-phase response factor)	Stat3 (Aprf)	16	28	33	27
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
Q62407	Striated muscle-specific serine/threonine protein kinase (EC 2.7.11.1) (Aortic preferentially expressed protein 1) (APEG-1)	Speg (Apeg1) (Kiaa1297)	26	20	31	25
P17182	Alpha-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Non-neural enolase) (NNE) (Enolase 1)	Eno1 (Eno-1)	976	802	62	50
Q924C6	Lysyl oxidase homolog 4 (EC 1.4.3.-) (Lysyl oxidase-like protein 4) (Lysyl oxidase-related protein C)	Loxl4 (Loxc)	15	28	5	4
Q5XJY5	Coatomer subunit delta (Delta-coat protein) (Delta-COP) (Archain)	Arcn1 (Copd)	61	45	10	8

P54923	[Protein ADP-ribosylarginine] hydrolase (ADP-ribosylarginine hydrolase) (EC 3.2.2.19) (ADP-ribose-L-arginine cleaving enzyme)	Adprh (Arh1)	20	41	15	12
P00342	L-lactate dehydrogenase C chain (LDH-C) (EC 1.1.1.27) (LDH testis subunit) (LDH-X)	Ldhc (Ldh-3) (Ldh3)	97	122	15	12
Q9Z2U0	Proteasome subunit alpha type-7 (EC 3.4.25.1) (Proteasome subunit RC6-1)	Psm7	121	253	15	12
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q99MD9	Nuclear autoantigenic sperm protein (NASP)	Nasp	365	293	34	27
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
Q80Z16	E3 ubiquitin-protein ligase LRSAM1 (EC 6.3.2.-) (Leucine-rich repeat and sterile alpha motif-containing protein 1) (Tsg101-associated ligase)	Lrsam1	19	35	19	15
Q80UN9	tRNA isopentenyltransferase, mitochondrial (IPTase) (EC 2.5.1.8) (Isopentenyl-diphosphate:tRNA isopentenyltransferase) (IPP transferase) (IPPT)	Trit1 (lpt)	31	24	19	15
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
Q6A078	Centrosomal protein of 290 kDa (Cep290) (Nephrocystin-6)	Cep290 (Kiaa0373) (Nphp6)	32	57	85	66

P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
P06151	L-lactate dehydrogenase A chain (LDH-A) (EC 1.1.1.27) (LDH muscle subunit) (LDH-M)	Ldha (Ldh-1) (Ldh1)	1033	421	74	57
Q9CZW4	Long-chain-fatty-acid--CoA ligase 3 (EC 6.2.1.3) (Long-chain acyl-CoA synthetase 3) (LACS 3)	Acs13 (Acs3) (Fac13)	41	37	13	10
P05063	Fructose-bisphosphate aldolase C (EC 4.1.2.13) (Brain-type aldolase) (Aldolase 3) (Zebrin II) (Scrapie-responsive protein 2)	Aldoc (Aldo3) (Scrg2)	35	51	13	10
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
P47856	Glucosamine--fructose-6-phosphate aminotransferase [isomerizing] 1 (EC 2.6.1.16) (Glutamine:fructose 6 phosphate amidotransferase 1) (GFAT 1) (GFAT1) (D-fructose-6-phosphate amidotransferase 1) (Hexosephosphate aminotransferase 1)	Gfpt1 (Gfpt)	17	29	17	13
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
P70670	Nascent polypeptide-associated complex subunit alpha, muscle-specific form (Alpha-NAC, muscle-specific form)	Naca (Gm1878)	22	130	29	22

P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
P25233	Necdin	Ndn	30	23	16	12
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
Q8K1F9	Lactase-like protein (Klotho/lactase-phlorizin hydrolase-related protein)	Lctl (Klph)	27	21	24	18
Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27
Q6P3Y5	Zinc finger protein 280C (Suppressor of hairy wing homolog 3)	Znf280c (Kiaa1584) (Suhw3) (Zfp280c)	87	142	43	32
P58681	Toll-like receptor 7	Tlr7	27	33	23	17
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8

P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
Q64237	Dopamine beta-hydroxylase (EC 1.14.17.1) (Dopamine beta-monooxygenase) [Cleaved into: Soluble dopamine beta-hydroxylase]	Dbh	44	23	7	5
Q9CQ65	S-methyl-5'-thioadenosine phosphorylase (EC 2.4.2.28) (5'-methylthioadenosine phosphorylase) (MTA phosphorylase) (MTAPase)	Mtap	48	36	7	5
Q99LG2	Transportin-2 (Karyopherin beta-2b)	Tnpo2	42	32	7	5
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptprn (Ptp35)	30	18	14	10
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
Q03172	Zinc finger protein 40 (Transcription factor alphaA-CRYBP1) (Alpha A-crystallin-binding protein I) (Alpha A-CRYBP1)	Hivep1 (Cryabp1) (Znf40)	25	24	21	15
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
P17751	Triosephosphate isomerase (TIM) (EC 5.3.1.1) (Triose-phosphate isomerase)	Tpi1 (Tpi)	706	519	35	25

Q920E5	Farnesyl pyrophosphate synthetase (FPP synthetase) (FPS) (Farnesyl diphosphate synthetase) (Cholesterol-regulated 39 kDa protein) (CR 39) [Includes: Dimethylallyltransferase (EC 2.5.1.1); Geranyltransferase (EC 2.5.1.10)]	Fdps	107	43	17	12
Q60692	Proteasome subunit beta type-6 (EC 3.4.25.1) (Proteasome delta chain) (Macropain delta chain) (Multicatalytic endopeptidase complex delta chain) (Proteasome subunit Y)	Psm6 (Lmp19)	33	89	17	12
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
Q7TQI3	Ubiquitin thioesterase OTUB1 (EC 3.1.2.-) (Otubain-1) (OTU domain-containing ubiquitin aldehyde-binding protein 1) (Ubiquitin-specific-processing protease OTUB1) (Deubiquitinating enzyme OTUB1)	Otub1	152	109	10	7
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q52KI8	Serine/arginine repetitive matrix protein 1 (Plenty-of-prolines 101)	Srrm1 (Pop101)	22	73	29	20
Q99PV0	Pre-mRNA-processing-splicing factor 8 (Splicing factor Prp8)	Prpf8 (Prp8)	28	29	51	35
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
Q80TP3	E3 ubiquitin-protein ligase UBR5 (EC 6.3.2.-) (E3 ubiquitin-protein ligase, HECT domain-containing 1) (Hyperplastic discs protein homolog)	Ubr5 (Edd) (Edd1) (Kiaa0896)	27	17	43	29
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2

Q8C9S8	Cysteine protease ATG4A (EC 3.4.22.-) (Autophagy-related protein 4 homolog A) (Autophagin-2) (Autophagy-related cysteine endopeptidase 2) (AUT-like 2 cysteine endopeptidase)	Atg4a (Apg4a) (Autl2)	26	21	6	4
Q99LD8	N(G),N(G)-dimethylarginine dimethylaminohydrolase 2 (Dimethylarginine dimethylaminohydrolase 2) (DDAH-2) (EC 3.5.3.18) (DDAHII) (Dimethylargininase-2)	Ddah2	103	92	9	6
P43275	Histone H1.1 (H1 VAR.3) (H1a)	Hist1h1a (H1f1)	28	90	9	6
Q9WV07	Epidermis-type lipoxygenase 3 (e-LOX-3) (EC 1.13.11.-)	Aloxe3	25	22	9	6
P61979	Heterogeneous nuclear ribonucleoprotein K (hnRNP K)	Hnrnpk (Hnrpk)	225	46	18	12
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
O88444	Adenylate cyclase type 1 (EC 4.6.1.1) (Adenylate cyclase type I) (ATP pyrophosphate-lyase 1) (Adenylyl cyclase 1) (Ca(2+)/calmodulin-activated adenylyl cyclase)	Adcy1	33	31	26	17
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
Q924W6	Tripartite motif-containing protein 66 (Transcriptional intermediary factor 1 delta)	Trim66 (Tif1d)	28	18	23	15
O70435	Proteasome subunit alpha type-3 (EC 3.4.25.1) (Proteasome component C8) (Macropain subunit C8) (Multicatalytic endopeptidase complex subunit C8) (Proteasome subunit K)	Psma3	95	76	14	9
P40142	Transketolase (TK) (EC 2.2.1.1) (P68)	Tkt	562	250	117	75
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7



Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
Q9QZ09	Putative homeodomain transcription factor 1	Phtf1 (Phtf)	29	24	8	5
Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (Ubpy)	29	23	24	15
P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
P16125	L-lactate dehydrogenase B chain (LDH-B) (EC 1.1.1.27) (LDH heart subunit) (LDH-H)	Ldhb (Ldh-2) (Ldh2)	315	214	34	21
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
O08709	Peroxiredoxin-6 (EC 1.11.1.15) (Antioxidant protein 2) (1-Cys peroxiredoxin) (1-Cys PRX) (Acidic calcium-independent phospholipase A2) (aiPLA2) (EC 3.1.1.-) (Non-selenium glutathione peroxidase) (NSGPx) (EC 1.11.1.7)	Prdx6 (Aop2) (Ltw4) (Prdx5)	56	29	5	3

Q88291	Zinc finger protein 326 (Zinc finger protein-associated with nuclear matrix of 75 kDa)	Znf326 (Zan75) (Zfp326)	41	55	5	3
Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
Q9EQZ6	Rap guanine nucleotide exchange factor 4 (cAMP-regulated guanine nucleotide exchange factor II) (cAMP-GEFII) (Exchange factor directly activated by cAMP 2) (Epac 2) (cAMP-dependent Rap1 guanine-nucleotide exchange factor)	Rapgef4 (Cgef2) (Epac2)	47	23	20	12
Q8R4K8	Pappalysin-1 (EC 3.4.24.79) (Pregnancy-associated plasma protein A) (PAPP-A) (Insulin-like growth factor-dependent IGF-binding protein 4 protease) (IGF-dependent IGFBP-4 protease) (IGFBP-4ase)	Pappa	41	43	25	15
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P09041	Phosphoglycerate kinase 2 (EC 2.7.2.3) (Phosphoglycerate kinase, testis specific)	Pgk2 (Pgk-2)	162	73	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70

P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
Q9JI78	Peptide-N(4)-(N-acetyl-beta-glucosaminy)asparagine amidase (PNGase) (mPNGase) (EC 3.5.1.52) (Peptide:N-glycanase) (N-glycanase 1)	Ngly1	29	32	19	11
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
P53762	Aryl hydrocarbon receptor nuclear translocator (ARNT protein) (Dioxin receptor, nuclear translocator) (Hypoxia-inducible factor 1 beta) (HIF-1 beta)	Arnt	25	22	7	4
P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4
P26043	Radixin (ESP10)	Rdx	127	106	23	13
P49722	Proteasome subunit alpha type-2 (EC 3.4.25.1) (Proteasome component C3) (Macropain subunit C3) (Multicatalytic endopeptidase complex subunit C3)	Psm2 (Lmpc3)	188	103	16	9
Q9R1X4	Protein timeless homolog (mTim)	Timeless (Tim1) (Timeless1)	22	25	16	9
P97461	40S ribosomal protein S5	Rps5	89	33	32	18
Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
Q64105	Sepiapterin reductase (SPR) (EC 1.1.1.153)	Spr	43	27	9	5

Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27
P17918	Proliferating cell nuclear antigen (PCNA) (Cyclin)	Pcna	273	207	20	11
O35664	Interferon-alpha/beta receptor beta chain (Interferon alpha/beta receptor 2) (IFN-alpha-REC) (Type I interferon receptor) (IFN-R)	Ifnar2	37	21	11	6
Q9WUJ8	Origin recognition complex subunit 6	Orc6l (Orc6)	59	37	13	7
Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
O88844	Isocitrate dehydrogenase [NADP] cytoplasmic (IDH) (EC 1.1.1.42) (Cytosolic NADP-isocitrate dehydrogenase) (Oxalosuccinate decarboxylase) (NADP(+)-specific ICDH) (IDP)	Idh1	155	163	15	8
Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
P11103	Poly [ADP-ribose] polymerase 1 (PARP-1) (EC 2.4.2.30) (ADPRT) (NAD(+) ADP-ribosyltransferase 1) (Poly[ADP-ribose] synthetase 1) (msPARP)	Parp1 (Adprp) (Adprt) (Adprt1)	21	26	17	9
Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwnk4)	23	33	29	15
P10649	Glutathione S-transferase Mu 1 (EC 2.5.1.18) (GST class-mu 1) (Glutathione S-transferase GT8.7) (pmGT10) (GST 1-1)	Gstm1	1081	522	61	31

biosynthetic process	P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22
	Q64674	Spermidine synthase (SPDSY) (EC 2.5.1.16) (Putrescine aminopropyltransferase)	Srm	55	29	4	7
	Q8QZR5	Alanine aminotransferase 1 (ALT1) (EC 2.6.1.2) (Glutamic--pyruvic transaminase 1) (Glutamate pyruvate transaminase 1) (GPT 1) (Glutamic--alanine transaminase 1)	Gpt (Gpt1)	25	20	15	26
	Q9D009	Putative octanoyltransferase, mitochondrial (EC 2.3.1.181) (Octanoyl-[acyl-carrier-protein]-protein N-octanoyltransferase) (Lipoyl/octanoyl transferase) (Lipoate-protein ligase B)		38	42	11	19
	Q8R1S0	Ubiquinone biosynthesis monooxygenase COQ6 (EC 1.14.13.-)	Coq6	42	92	10	17
	P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
	P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
	P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13
	Q8BGT5	Alanine aminotransferase 2 (ALT2) (EC 2.6.1.2) (Glutamic--pyruvic transaminase 2) (Glutamate pyruvate transaminase 2) (GPT 2) (Glutamic--alanine transaminase 2)	Gpt2 (Aat2)	25	20	15	24
	Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
	P62082	40S ribosomal protein S7	Rps7	104	126	9	14
P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38	

Q55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
Q99K85	Phosphoserine aminotransferase (PSAT) (EC 2.6.1.52) (Phosphohydroxythreonine aminotransferase) (Endometrial progesterone-induced protein) (EPIP)	Psat1 (Psa) (Psat)	162	541	16	24
Q3THW5	Histone H2A.V (H2A.F/Z)	H2afv (H2av)	297	426	11	16
Q9QZ39	Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 1 (EC 2.4.99.3) (GalNAc alpha-2,6-sialyltransferase I) (ST6GalNAc I) (Sialyltransferase 7A)	St6galnac1 (Siat7a)	27	18	11	16
Q8BVI4	Dihydropteridine reductase (EC 1.5.1.34) (HDHPR) (Quinoid dihydropteridine reductase)	Qdpr (Dhpr)	144	277	7	10
O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
Q61753	D-3-phosphoglycerate dehydrogenase (3-PGDH) (EC 1.1.1.95) (A10)	Phgdh	105	158	14	18
P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
Q811J3	Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16

P59270	Galactosylgalactosylxylosylprotein 3-beta-glucuronosyltransferase 2 (EC 2.4.1.135) (Beta-1,3-glucuronyltransferase 2) (UDP-glucuronosyltransferase-S) (Glucuronosyltransferase-S) (GlcAT-S) (GlcAT-D)	B3gat2 (Glcats)	29	16	9	11
Q9EQC4	Elongation of very long chain fatty acids protein 4	Elov14	25	18	5	6
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a1) (Stn)	1275	1549	258	285
Q9R0Q7	Prostaglandin E synthase 3 (EC 5.3.99.3) (Cytosolic prostaglandin E2 synthase) (cPGES) (Telomerase-binding protein p23) (Hsp90 co-chaperone) (Progesterone receptor complex p23) (Sid 3177)	Ptges3 (Sid3177) (Tebp)	124	239	10	11
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
Q3THS6	S-adenosylmethionine synthetase isoform type 2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12

Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
O88693	Ceramide glucosyltransferase (EC 2.4.1.80) (Glucosylceramide synthase) (GCS) (UDP-glucose:N-acylsphingosine D-glucosyltransferase) (UDP-glucose ceramide glucosyltransferase) (GLCT-1)	Ugcg	37	50	7	7
Q80YV4	Pantothenate kinase 4 (EC 2.7.1.33) (Pantothenic acid kinase 4) (mPanK4)	Pank4	23	28	13	13
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126



P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (Csma) (Eif3) (Eif3s10)	199	166	58	56
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
P54869	Hydroxymethylglutaryl-CoA synthase, mitochondrial (HMG-CoA synthase) (EC 2.3.3.10) (3-hydroxy-3-methylglutaryl coenzyme A synthase)	Hmgcs2	26	23	18	17
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18

P11881	Inositol 1,4,5-trisphosphate receptor type 1 (Type 1 inositol 1,4,5-trisphosphate receptor) (Type 1 InsP3 receptor) (IP3 receptor isoform 1) (InsP3R1) (Inositol 1,4,5-trisphosphate-binding protein P400) (Purkinje cell protein 1) (Protein PCD-6)	Itpr1 (Insp3r) (Pcd6) (Pcp1)	37	42	48	41
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P46664	Adenylosuccinate synthetase isozyme 2 (AMPSase 2) (AdSS 2) (EC 6.3.4.4) (Adenylosuccinate synthetase, non-muscle isozyme) (Adenylosuccinate synthetase, acidic isozyme) (IMP--aspartate ligase 2)	Adss (Adss2)	36	66	12	10
Q05816	Fatty acid-binding protein, epidermal (E-FABP) (Fatty acid-binding protein 5) (Psoriasis-associated fatty acid-binding protein homolog) (PA-FABP) (Keratinocyte lipid-binding protein)	Fabp5 (Fabpe) (Klbp) (Mal1)	331	206	18	15
P11531	Dystrophin	Dmd	25	16	66	55
P19096	Fatty acid synthase (EC 2.3.1.85) [Includes: [Acyl-carrier-protein] S-acetyltransferase (EC 2.3.1.38); [Acyl-carrier-protein] S-malonyltransferase (EC 2.3.1.39); 3-oxoacyl-[acyl-carrier-protein] synthase (EC 2.3.1.41); 3-oxoacyl-[acyl-carrier-protein] reductase (EC 1.1.1.100); 3-hydroxypalmitoyl-[acyl-carrier-protein] dehydratase (EC 4.2.1.61); Enoyl-[acyl-carrier-protein] reductase (EC 1.3.1.10); Oleoyl [acyl-carrier-protein] hydrolase (EC 3.1.2.14)]	Fasn	1869	1524	163	135
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12

Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
P47856	Glucosamine--fructose-6-phosphate aminotransferase [isomerizing] 1 (EC 2.6.1.16) (Glutamine:fructose 6 phosphate amidotransferase 1) (GFAT 1) (GFAT1) (D-fructose-6-phosphate amidotransferase 1) (Hexosephosphate aminotransferase 1)	Gfpt1 (Gfpt)	17	29	17	13
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
P58681	Toll-like receptor 7	Tlr7	27	33	23	17
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18

Q64237	Dopamine beta-hydroxylase (EC 1.14.17.1) (Dopamine beta-monooxygenase) [Cleaved into: Soluble dopamine beta-hydroxylase]	Dbh	44	23	7	5
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
P17751	Triosephosphate isomerase (TIM) (EC 5.3.1.1) (Triose-phosphate isomerase)	Tpi1 (Tpi)	706	519	35	25
Q920E5	Farnesyl pyrophosphate synthetase (FPP synthetase) (FPS) (Farnesyl diphosphate synthetase) (Cholesterol-regulated 39 kDa protein) (CR 39) [Includes: Dimethylallyltranstransferase (EC 2.5.1.1); Geranyltranstransferase (EC 2.5.1.10)]	Fdps	107	43	17	12
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q99LD8	N(G),N(G)-dimethylarginine dimethylaminohydrolase 2 (Dimethylarginine dimethylaminohydrolase 2) (DDAH-2) (EC 3.5.3.18) (DDAHII) (Dimethylargininase-2)	Ddah2	103	92	9	6
Q9WV07	Epidermis-type lipoxygenase 3 (e-LOX-3) (EC 1.13.11.-)	Aloxe3	25	22	9	6
O88444	Adenylate cyclase type 1 (EC 4.6.1.1) (Adenylate cyclase type I) (ATP pyrophosphate-lyase 1) (Adenylyl cyclase 1) (Ca(2+)/calmodulin-activated adenylyl cyclase)	Adcy1	33	31	26	17
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7

	Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
	P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
	P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
	P62301	40S ribosomal protein S13	Rps13	77	100	23	14
	Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
	Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
	P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
	P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
	P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
	Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
	P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
	P97461	40S ribosomal protein S5	Rps5	89	33	32	18
	P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
	Q64105	Sepiapterin reductase (SPR) (EC 1.1.1.153)	Spr	43	27	9	5
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
protein metabolic process	Q9CXW3	Calcyclin-binding protein (CacyBP) (Siah-interacting protein)	Cacybp (Sip)	57	39	7	13
	Q7TSG3	F-box only protein 5 (Early mitotic inhibitor 1)	Fbxo5 (Emi1)	15	27	5	9
	Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16

P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
P17742	Peptidyl-prolyl cis-trans isomerase A (PPIase A) (Rotamase A) (EC 5.2.1.8) (Cyclophilin A) (Cyclosporin A-binding protein) (SP18)	Ppia	855	1549	38	66
Q9Z1R2	Large proline-rich protein BAT3 (HLA-B-associated transcript 3)	Bat3	80	49	15	26
Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
Q9D009	Putative octanoyltransferase, mitochondrial (EC 2.3.1.181) (Octanoyl-[acyl-carrier-protein]-protein N-octanoyltransferase) (Lipoyl/octanoyl transferase) (Lipoate-protein ligase B)		38	42	11	19
Q9ERK4	Exportin-2 (Exp2) (Importin-alpha re-exporter) (Chromosome segregation 1-like protein)	Cse1l (Xpo2)	42	153	26	44
P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
Q80Y17	Lethal(2) giant larvae protein homolog 1 (LLGL) (Mlg1) (Mgl-1)	Llg1 (Llg1h)	30	29	7	11
P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23

O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwnk1)	56	36	18	27
P97868	Retinoblastoma-binding protein 6 (p53-associated cellular protein of testis) (Proliferation potential-related protein) (Protein P2P-R)	Rbbp6 (P2pr) (Pact)	21	29	24	35
P99026	Proteasome subunit beta type-4 (Proteasome beta chain) (EC 3.4.25.1) (Macropain beta chain) (Multicatalytic endopeptidase complex beta chain) (Proteasome chain 3)	Psmb4 (Lmp3)	93	289	11	16
Q9QZ39	Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 1 (EC 2.4.99.3) (GalNAc alpha-2,6-sialyltransferase I) (ST6GalNAc I) (Sialyltransferase 7A)	St6galnac1 (Siat7a)	27	18	11	16
P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84

P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
Q9EPL8	Importin-7 (Imp7) (Ran-binding protein 7) (RanBP7)	Ipo7 (Ranbp7)	25	121	9	12
Q9WTX2	Interferon-inducible double stranded RNA-dependent protein kinase activator A (Protein kinase, interferon-inducible double stranded RNA-dependent activator) (Protein activator of the interferon-induced protein kinase) (PKR-associated protein X) (PKR-associating protein X) (RAX)	Prkra (Rax)	28	39	9	12
Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53
P70168	Importin subunit beta-1 (Karyopherin subunit beta-1) (Nuclear factor P97) (Pore targeting complex 97 kDa subunit) (PTAC97) (SCG)	Kpnb1 (Impnb)	48	17	13	17
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
Q60716	Prolyl 4-hydroxylase subunit alpha-2 (EC 1.14.11.2) (4-PH alpha-2) (Procollagen-proline,2-oxoglutarate-4-dioxygenase subunit alpha-2)	P4ha2	22	27	8	10
Q811J3	Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176



Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
Q9R1P0	Proteasome subunit alpha type-4 (EC 3.4.25.1) (Proteasome component C9) (Macropain subunit C9) (Multicatalytic endopeptidase complex subunit C9) (Proteasome subunit L)	Psma4	29	151	14	17
Q9CZY3	Ubiquitin-conjugating enzyme E2 variant 1 (UEV-1) (CROC-1)	Ube2v1 (Croc1)	83	163	166	201
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
O35618	Protein Mdm4 (p53-binding protein Mdm4) (Mdm2-like p53-binding protein) (Protein Mdmx) (Double minute 4 protein)	Mdm4 (Mdmx)	17	29	5	6
P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q8BFY9	Transportin-1 (Importin beta-2) (Karyopherin beta-2)	Tnpo1 (Kpnb2)	54	43	10	12
Q9QUR6	Prolyl endopeptidase (PE) (EC 3.4.21.26) (Post-proline cleaving enzyme)	Prep (Pep)	56	20	15	18
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18

O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8
Q6A4J8	Ubiquitin carboxyl-terminal hydrolase 7 (EC 3.1.2.15) (Ubiquitin thioesterase 7) (Ubiquitin-specific-processing protease 7) (Deubiquitinating enzyme 7) (Herpesvirus-associated ubiquitin-specific protease) (mHAUSP)	Usp7 (Hausp)	27	18	14	16
P58660	Caspase recruitment domain-containing protein 10 (Bcl10-interacting MAGUK protein 1) (Bimp1)	Card10 (Bimp1)	33	23	15	17
P97820	Mitogen-activated protein kinase kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10

P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1al) (Strn)	1275	1549	258	285
Q62446	FK506-binding protein 3 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (25 kDa FKBP) (FKBP-25) (Rapamycin-selective 25 kDa immunophilin)	Fkbp3 (Fkbp25)	31	31	10	11
O55234	Proteasome subunit beta type-5 (EC 3.4.25.1) (Proteasome epsilon chain) (Macropain epsilon chain) (Multicatalytic endopeptidase complex epsilon chain) (Proteasome subunit X) (Proteasome chain 6)	Psmb5	168	227	10	11
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
P27546	Microtubule-associated protein 4 (MAP-4)	Map4 (Mtap4)	94	41	33	36
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13

Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
P08113	Endoplasmic (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra-1) (Tra1)	221	298	25	27
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
P70398	Probable ubiquitin carboxyl-terminal hydrolase FAF-X (EC 3.1.2.15) (Ubiquitin thioesterase FAF-X) (Ubiquitin-specific-processing protease FAF-X) (Deubiquitinating enzyme FAF-X) (Fat facets protein-related, X-linked) (Ubiquitin-specific protease 9, X chromosome) (Ubiquitin carboxyl-terminal hydrolase FAM) (Fat facets homolog)	Usp9x (Faf1) (Fam)	42	28	57	61
Q8BKX6	Serine/threonine-protein kinase SMG1 (SMG-1) (EC 2.7.11.1)	Smg1 (Kiaa0421)	33	27	30	32
Q8VI56	Low-density lipoprotein receptor-related protein 4 (LDLR dan)	Lrp4 (Kiaa0816)	77	30	19	20
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69

Q920R0	Alsin (Amyotrophic lateral sclerosis protein 2 homolog)	Als2	74	88	72	75
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165
P62141	Serine/threonine-protein phosphatase PP1-beta catalytic subunit (PP-1B) (EC 3.1.3.16)	Ppp1cb	177	57	4	4
P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5
Q9R1P1	Proteasome subunit beta type-3 (EC 3.4.25.1) (Proteasome theta chain) (Proteasome chain 13) (Proteasome component C10-II)	Psmb3	87	135	7	7
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q6P5F9	Exportin-1 (Exp1) (Chromosome region maintenance 1 protein homolog)	Xpo1 (Crm1)	19	43	9	9
O09061	Proteasome subunit beta type-1 (EC 3.4.25.1) (Proteasome component C5) (Macropain subunit C5) (Multicatalytic endopeptidase complex subunit C5) (Proteasome gamma chain)	Psmb1	84	94	11	11
Q9DB77	Cytochrome b-c1 complex subunit 2, mitochondrial (Ubiquinol-cytochrome-c reductase complex core protein 2) (Core protein II) (Complex III subunit 2)	Uqcrc2	29	20	13	13
Q9JIF7	Coatomer subunit beta (Beta-coat protein) (Beta-COP)	Copb1 (Copb)	37	22	15	15

Q01098	Glutamate [NMDA] receptor subunit epsilon-3 (N-methyl D-aspartate receptor subtype 2C) (NMDAR2C) (NR2C)	Grin2c	18	33	15	15
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (Csma) (Eif3) (Eif3s10)	199	166	58	56
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
P16406	Glutamyl aminopeptidase (EC 3.4.11.7) (EAP) (Aminopeptidase A) (APA) (BP-1/6C3 antigen) (CD antigen CD249)	Enpep	98	90	48	46
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14

Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q9WTR0	Matrix metalloproteinase-16 (MMP-16) (EC 3.4.24.-) (Membrane-type matrix metalloproteinase 3) (MT-MMP 3) (MTMMP3) (Membrane-type-3 matrix metalloproteinase) (MT3-MMP) (MT3MMP)	Mmp16	17	36	11	10
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
Q9QZH3	Peptidyl-prolyl cis-trans isomerase E (PPIase E) (Rotamase E) (EC 5.2.1.8) (Cyclophilin E) (Cyclophilin-33)	Ppie (Cyp33)	28	35	10	9
Q68FD5	Clathrin heavy chain 1	Cltc	944	884	88	78
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7

P70195	Proteasome subunit beta type-7 (EC 3.4.25.1) (Proteasome subunit Z) (Macropain chain Z) (Multicatalytic endopeptidase complex chain Z)	Psmb7 (Mmc14)	39	40	8	7
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q11011	Puromycin-sensitive aminopeptidase (PSA) (EC 3.4.11.-)	Npepps (Psa)	71	141	30	26
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPIase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
P97784	Cryptochrome-1	Cry1	52	42	21	18
Q9R194	Cryptochrome-2	Cry2 (Kiaa0658)	52	42	21	18
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40



Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
Q99PP7	E3 ubiquitin-protein ligase TRIM33 (EC 6.3.2.-) (Tripartite motif-containing protein 33) (Transcription intermediary factor 1-gamma) (TIF1-gamma) (Ectodermin homolog)	Trim33 (Kiaa1113)	33	25	12	10
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
Q64514	Tripeptidyl-peptidase 2 (EC 3.4.14.10) (Tripeptidyl-peptidase II) (TPP-II) (Tripeptidyl aminopeptidase)	Tpp2	54	76	24	20
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
P11531	Dystrophin	Dmd	25	16	66	55
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9

Q6ZQ38	Cullin-associated NEDD8-dissociated protein 1 (Cullin-associated and neddylation-dissociated protein 1) (p120 CAND1)	Cand1 (D10Ert516e) (Kiaa0829)	221	246	33	27
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
Q62407	Striated muscle-specific serine/threonine protein kinase (EC 2.7.11.1) (Aortic preferentially expressed protein 1) (APEG-1)	Speg (Apeg1) (Kiaa1297)	26	20	31	25
Q5XJY5	Coatamer subunit delta (Delta-coat protein) (Delta-COP) (Archain)	Arcn1 (Copd)	61	45	10	8
P54923	[Protein ADP-ribosylarginine] hydrolase (ADP-ribosylarginine hydrolase) (EC 3.2.2.19) (ADP-ribose-L-arginine cleaving enzyme)	Adprh (Arh1)	20	41	15	12
Q9Z2U0	Proteasome subunit alpha type-7 (EC 3.4.25.1) (Proteasome subunit RC6-1)	Psm7	121	253	15	12
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
Q80Z16	E3 ubiquitin-protein ligase LRSAM1 (EC 6.3.2.-) (Leucine-rich repeat and sterile alpha motif-containing protein 1) (Tsg101-associated ligase)	Lrsam1	19	35	19	15
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11

Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27
P58681	Toll-like receptor 7	Tlr7	27	33	23	17
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8

Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
Q99LG2	Transportin-2 (Karyopherin beta-2b)	Tnpo2	42	32	7	5
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptprn (Ptp35)	30	18	14	10
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
Q60692	Proteasome subunit beta type-6 (EC 3.4.25.1) (Proteasome delta chain) (Macropain delta chain) (Multicatalytic endopeptidase complex delta chain) (Proteasome subunit Y)	Psmb6 (Lmp19)	33	89	17	12
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
Q7TQI3	Ubiquitin thioesterase OTUB1 (EC 3.1.2.-) (Otubain-1) (OTU domain-containing ubiquitin aldehyde-binding protein 1) (Ubiquitin-specific-processing protease OTUB1) (Deubiquitinating enzyme OTUB1)	Otub1	152	109	10	7
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
Q80TP3	E3 ubiquitin-protein ligase UBR5 (EC 6.3.2.-) (E3 ubiquitin-protein ligase, HECT domain-containing 1) (Hyperplastic discs protein homolog)	Ubr5 (Edd) (Edd1) (Kiaa0896)	27	17	43	29

Q8C9S8	Cysteine protease ATG4A (EC 3.4.22.-) (Autophagy-related protein 4 homolog A) (Autophagin-2) (Autophagy-related cysteine endopeptidase 2) (AUT-like 2 cysteine endopeptidase)	Atg4a (Apg4a) (Autl2)	26	21	6	4
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
O70435	Proteasome subunit alpha type-3 (EC 3.4.25.1) (Proteasome component C8) (Macropain subunit C8) (Multicatalytic endopeptidase complex subunit C8) (Proteasome subunit K)	Psma3	95	76	14	9
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (UbpY)	29	23	24	15
P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
Q9EQZ6	Rap guanine nucleotide exchange factor 4 (cAMP-regulated guanine nucleotide exchange factor II) (cAMP-GEFII) (Exchange factor directly activated by cAMP 2) (Epac 2) (cAMP-dependent Rap1 guanine-nucleotide exchange factor)	Rapgef4 (Cgef2) (Epac2)	47	23	20	12

Q8R4K8	Pappalysin-1 (EC 3.4.24.79) (Pregnancy-associated plasma protein A) (PAPP-A) (Insulin-like growth factor-dependent IGF-binding protein 4 protease) (IGF-dependent IGFBP-4 protease) (IGFBP-4ase)	Pappa	41	43	25	15
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (Sl)	16	35	12	7
P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
Q9JI78	Peptide-N(4)-(N-acetyl-beta-glucosaminyl)asparagine amidase (PNGase) (mPNGase) (EC 3.5.1.52) (Peptide:N-glycanase) (N-glycanase 1)	Ngly1	29	32	19	11
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4

	P26043	Radixin (ESP10)	Rdx	127	106	23	13
	P49722	Proteasome subunit alpha type-2 (EC 3.4.25.1) (Proteasome component C3) (Macropain subunit C3) (Multicatalytic endopeptidase complex subunit C3)	Psma2 (Lmpc3)	188	103	16	9
	P97461	40S ribosomal protein S5	Rps5	89	33	32	18
	Q8K219	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
	P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
	Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
	P11103	Poly [ADP-ribose] polymerase 1 (PARP-1) (EC 2.4.2.30) (ADPRT) (NAD(+) ADP-ribosyltransferase 1) (Poly[ADP-ribose] synthetase 1) (msPARP)	Parp1 (Adprp) (Adprt) (Adprt1)	21	26	17	9
	Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
	Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwk4)	23	33	29	15
cellular biosynthetic process	P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22
	Q64674	Spermidine synthase (SPDSY) (EC 2.5.1.16) (Putrescine aminopropyltransferase)	Srm	55	29	4	7

Q9D009	Putative octanoyltransferase, mitochondrial (EC 2.3.1.181) (Octanoyl-[acyl-carrier-protein]-protein N-octanoyltransferase) (Lipoyl/octanoyl transferase) (Lipoate-protein ligase B)		38	42	11	19
Q8R1S0	Ubiquinone biosynthesis monooxygenase COQ6 (EC 1.14.13.-)	Coq6	42	92	10	17
P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13
Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
Q99K85	Phosphoserine aminotransferase (PSAT) (EC 2.6.1.52) (Phosphohydroxythreonine aminotransferase) (Endometrial progesterone-induced protein) (EPIP)	Psat1 (Psa) (Psat)	162	541	16	24
Q8BVI4	Dihydropteridine reductase (EC 1.5.1.34) (HDHPR) (Quinoid dihydropteridine reductase)	Qdpr (Dhpr)	144	277	7	10
O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11



Q61753	D-3-phosphoglycerate dehydrogenase (3-PGDH) (EC 1.1.1.95) (A10)	Phgdh	105	158	14	18
P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
Q811J3	Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
Q9EQC4	Elongation of very long chain fatty acids protein 4	Elov14	25	18	5	6
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1al) (Stn)	1275	1549	258	285

Q9R0Q7	Prostaglandin E synthase 3 (EC 5.3.99.3) (Cytosolic prostaglandin E2 synthase) (cPGES) (Telomerase-binding protein p23) (Hsp90 co-chaperone) (Progesterone receptor complex p23) (Sid 3177)	Ptges3 (Sid3177) (Tebp)	124	239	10	11
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
Q3THS6	S-adenosylmethionine synthetase isoform type 2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
Q9Z104	SWI/SNF-related matrix-associated actin- dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2- associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
Q80YV4	Pantothenate kinase 4 (EC 2.7.1.33) (Pantothenic acid kinase 4) (mPanK4)	Pank4	23	28	13	13
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126

P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (Csma) (Eif3) (Eif3s10)	199	166	58	56
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P46664	Adenylosuccinate synthetase isozyme 2 (AMPSase 2) (AdSS 2) (EC 6.3.4.4) (Adenylosuccinate synthetase, non-muscle isozyme) (Adenylosuccinate synthetase, acidic isozyme) (IMP--aspartate ligase 2)	Adss (Adss2)	36	66	12	10
P11531	Dystrophin	Dmd	25	16	66	55

P19096	Fatty acid synthase (EC 2.3.1.85) [Includes: [Acyl-carrier-protein] S-acetyltransferase (EC 2.3.1.38); [Acyl-carrier-protein] S-malonyltransferase (EC 2.3.1.39); 3-oxoacyl-[acyl-carrier-protein] synthase (EC 2.3.1.41); 3-oxoacyl-[acyl-carrier-protein] reductase (EC 1.1.1.100); 3-hydroxypalmitoyl-[acyl-carrier-protein] dehydratase (EC 4.2.1.61); Enoyl-[acyl-carrier-protein] reductase (EC 1.3.1.10); Oleoyl [acyl-carrier-protein] hydrolase (EC 3.1.2.14)]	Fasn	1869	1524	163	135
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
P58681	Toll-like receptor 7	Tlr7	27	33	23	17

P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
Q64237	Dopamine beta-hydroxylase (EC 1.14.17.1) (Dopamine beta-monooxygenase) [Cleaved into: Soluble dopamine beta-hydroxylase]	Dbh	44	23	7	5
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
P17751	Triosephosphate isomerase (TIM) (EC 5.3.1.1) (Triose-phosphate isomerase)	Tpi1 (Tpi)	706	519	35	25
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q99LD8	N(G),N(G)-dimethylarginine dimethylaminohydrolase 2 (Dimethylarginine dimethylaminohydrolase 2) (DDAH-2) (EC 3.5.3.18) (DDAHII) (Dimethylargininase-2)	Ddah2	103	92	9	6
Q9WV07	Epidermis-type lipoxygenase 3 (e-LOX-3) (EC 1.13.11.-)	Aloxe3	25	22	9	6
O88444	Adenylate cyclase type 1 (EC 4.6.1.1) (Adenylate cyclase type I) (ATP pyrophosphate-lyase 1) (Adenylyl cyclase 1) (Ca(2+)/calmodulin-activated adenylyl cyclase)	Adcy1	33	31	26	17
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7

	Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
	P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
	P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
	P62301	40S ribosomal protein S13	Rps13	77	100	23	14
	Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
	Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
	P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
	P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
	P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
	Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
	P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
	P97461	40S ribosomal protein S5	Rps5	89	33	32	18
	P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
	Q64105	Sepiapterin reductase (SPR) (EC 1.1.1.153)	Spr	43	27	9	5
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
primary metabolic process	Q3TCT4	Ectonucleoside triphosphate diphosphohydrolase 7 (NTPDase 7) (EC 3.6.1.-) (Lysosomal apyrase-like protein 1)	Entpd7 (Kiaa4066) (Lalp1)	16	33	42	80
	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38

Q9CXW3	Calcyclin-binding protein (CacyBP) (Siah-interacting protein)	Cacybp (Sip)	57	39	7	13
P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22
Q7TSG3	F-box only protein 5 (Early mitotic inhibitor 1)	Fbxo5 (Emi1)	15	27	5	9
Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
Q64674	Spermidine synthase (SPDSY) (EC 2.5.1.16) (Putrescine aminopropyltransferase)	Srm	55	29	4	7
P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
P17742	Peptidyl-prolyl cis-trans isomerase A (PPIase A) (Rotamase A) (EC 5.2.1.8) (Cyclophilin A) (Cyclosporin A-binding protein) (SP18)	Ppia	855	1549	38	66
Q9Z1R2	Large proline-rich protein BAT3 (HLA-B-associated transcript 3)	Bat3	80	49	15	26
Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
Q9D009	Putative octanoyltransferase, mitochondrial (EC 2.3.1.181) (Octanoyl-[acyl-carrier-protein]-protein N-octanoyltransferase) (Lipoyl/octanoyl transferase) (Lipoate-protein ligase B)		38	42	11	19
Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
Q9ERK4	Exportin-2 (Exp2) (Importin-alpha re-exporter) (Chromosome segregation 1-like protein)	Cse1l (Xpo2)	42	153	26	44

P52480	Pyruvate kinase isozymes M1/M2 (EC 2.7.1.40) (Pyruvate kinase muscle isozyme)	Pkm2 (Pk3) (Pykm)	1954	3481	138	233
Q8CGP2	Histone H2B type 1-P	Hist1h2bp	436	999	46	77
P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
Q9WTL7	Acyl-protein thioesterase 2 (EC 3.1.2.-) (Lysophospholipase II) (Lysophospholipase 2) (mLyso II)	Lypla2	23	49	3	5
P62960	Nuclease-sensitive element-binding protein 1 (Y-box-binding protein 1) (Y-box transcription factor) (YB-1) (CCAAT-binding transcription factor I subunit A) (CBF-A) (Enhancer factor I subunit A) (EFI-A) (DNA-binding protein B) (DBPB)	Ybx1 (Msy-1) (Msy1) (Nsep1) (Yb1)	56	126	6	10
P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78
Q64475	Histone H2B type 1-B (h2B-143)	Hist1h2bb	436	999	46	75
P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13



Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
Q80Y17	Lethal(2) giant larvae protein homolog 1 (LLGL) (Mlgl) (Mgl-1)	Llgl1 (Llglh)	30	29	7	11
Q61990	Poly(rC)-binding protein 2 (Alpha-CP2) (Putative heterogeneous nuclear ribonucleoprotein X) (hnRNP X) (CTBP) (CBP)	Pcbp2 (Cbp) (HnrnpX) (Hnrpx)	29	194	7	11
P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23
P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
Q8K386	Ras-related protein Rab-15	Rab15	44	74	4	6
O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
P50247	Adenosylhomocysteinase (AdoHcyase) (EC 3.3.1.1) (S-adenosyl-L-homocysteine hydrolase) (Liver copper-binding protein) (CUBP)	Ahcy	90	106	10	15
Q99K85	Phosphoserine aminotransferase (PSAT) (EC 2.6.1.52) (Phosphohydroxythreonine aminotransferase) (Endometrial progesterone-induced protein) (EPIP)	Psat1 (Psa) (Psat)	162	541	16	24
P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwk1)	56	36	18	27

P53657	Pyruvate kinase isozymes R/L (EC 2.7.1.40) (L PK)	Pklr	144	270	26	38
P97868	Retinoblastoma-binding protein 6 (p53-associated cellular protein of testis) (Proliferation potential-related protein) (Protein P2P-R)	Rbbp6 (P2pr) (Pact)	21	29	24	35
Q3THW5	Histone H2A.V (H2A.F/Z)	H2afv (H2av)	297	426	11	16
P99026	Proteasome subunit beta type-4 (Proteasome beta chain) (EC 3.4.25.1) (Macropain beta chain) (Multicatalytic endopeptidase complex beta chain) (Proteasome chain 3)	Psmb4 (Lmp3)	93	289	11	16
Q9QZ39	Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 1 (EC 2.4.99.3) (GalNAc alpha-2,6-sialyltransferase I) (ST6GalNAc I) (Sialyltransferase 7A)	St6galnac1 (Siat7a)	27	18	11	16
P60335	Poly(rC)-binding protein 1 (Alpha-CP1) (hnRNP-E1)	Pcbp1	56	350	9	13
P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
P12813	Nuclear receptor subfamily 4 group A member 1 (Orphan nuclear receptor HMR) (Nuclear hormone receptor NUR/77) (N10 nuclear protein)	Nr4a1 (Gfrp) (Hmr) (N10) (Nur77)	61	31	7	10
Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
P68510	14-3-3 protein eta	Ywhah	707	962	58	80

P70696	Histone H2B type 1-A (Histone H2B, testis) (Testis-specific histone H2B)	Hist1h2ba (Th2b)	146	378	37	51
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
P70338	Zinc finger protein Gfi-1 (Growth factor independent protein 1)	Gfi1 (Gfi-1)	45	39	17	23
Q61789	Laminin subunit alpha-3 (Nicein subunit alpha)	Lama3	26	26	37	50
Q6P8J2	Diamine acetyltransferase 2 (EC 2.3.1.57) (Spermidine/spermine N(1)-acetyltransferase 2) (Polyamine N-acetyltransferase 2)	Sat2 (Ssat2)	33	23	6	8
Q9EPL8	Importin-7 (Imp7) (Ran-binding protein 7) (RanBP7)	Ipo7 (Ranbp7)	25	121	9	12
Q9WTX2	Interferon-inducible double stranded RNA-dependent protein kinase activator A (Protein kinase, interferon-inducible double stranded RNA-dependent activator) (Protein activator of the interferon-induced protein kinase) (PKR-associated protein X) (PKR-associating protein X) (RAX)	Prkra (Rax)	28	39	9	12

Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
P70168	Importin subunit beta-1 (Karyopherin subunit beta-1) (Nuclear factor P97) (Pore targeting complex 97 kDa subunit) (PTAC97) (SCG)	Kpnb1 (Impnb)	48	17	13	17
Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
P63163	Small nuclear ribonucleoprotein-associated protein N (snRNP-N) (Sm protein N) (Sm-N) (SmN) (Sm-D) (Tissue-specific-splicing protein)	Snrpn (Smn)	38	17	7	9
Q7TQ07	DNA polymerase nu (EC 2.7.7.7)	Poln	20	39	14	18
Q61753	D-3-phosphoglycerate dehydrogenase (3-PGDH) (EC 1.1.1.95) (A10)	Phgdh	105	158	14	18
P05064	Fructose-bisphosphate aldolase A (EC 4.1.2.13) (Muscle-type aldolase) (Aldolase 1)	Aldoa (Aldo1)	211	567	36	46
Q07133	Histone H1t (Testicular H1 histone)	Hist1h1t (H1ft) (H1t)	46	72	54	69
Q923B1	Lariat debranching enzyme (EC 3.1.-.-)	Dbr1	28	29	15	19

P27661	Histone H2A.x (H2a/x)	H2afx (H2a.x) (H2ax) (Hist5-2ax)	301	426	15	19
Q62093	Splicing factor, arginine/serine-rich 2 (Splicing factor SC35) (SC-35) (Splicing component, 35 kDa) (Protein PR264) (Putative myelin regulatory factor 1) (MRF-1)	Sfrs2 (Pr264) (Sfrs10)	184	117	15	19
P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
Q60716	Prolyl 4-hydroxylase subunit alpha-2 (EC 1.14.11.2) (4-PH alpha-2) (Procollagen-proline,2-oxoglutarate-4-dioxygenase subunit alpha-2)	P4ha2	22	27	8	10
P17183	Gamma-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Neural enolase) (Neuron-specific enolase) (NSE) (Enolase 2)	Eno2 (Eno-2)	228	181	12	15
Q811J3	Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16

Q61466	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 1 (SWI/SNF complex 60 kDa subunit) (60 kDa BRG-1/Brm-associated factor subunit A) (BRG1-associated factor 60A) (D15KZ1 protein)	Smarcd1 (Baf60a) (D15Kz1)	27	29	13	16
P59270	Galactosylgalactosylxylosylprotein 3-beta-glucuronosyltransferase 2 (EC 2.4.1.135) (Beta-1,3-glucuronyltransferase 2) (UDP-glucuronosyltransferase-S) (Glucuronosyltransferase-S) (GlcAT-S) (GlcAT-D)	B3gat2 (Glcats)	29	16	9	11
Q8VII8	Mineralocorticoid receptor (MR) (Nuclear receptor subfamily 3 group C member 2)	Nr3c2 (Mlr)	28	22	18	22
Q9R1P0	Proteasome subunit alpha type-4 (EC 3.4.25.1) (Proteasome component C9) (Macropain subunit C9) (Multicatalytic endopeptidase complex subunit C9) (Proteasome subunit L)	Psma4	29	151	14	17
Q9CZY3	Ubiquitin-conjugating enzyme E2 variant 1 (UEV-1) (CROC-1)	Ube2v1 (Croc1)	83	163	166	201
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
Q9EQC4	Elongation of very long chain fatty acids protein 4	Elovl4	25	18	5	6
O35618	Protein Mdm4 (p53-binding protein Mdm4) (Mdm2-like p53-binding protein) (Protein Mdmx) (Double minute 4 protein)	Mdm4 (Mdmx)	17	29	5	6
Q6PDM2	Splicing factor, arginine/serine-rich 1 (ASF/SF2)	Sfrs1	24	91	5	6

Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia- associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q8BFY9	Transportin-1 (Importin beta-2) (Karyopherin beta-2)	Tnp01 (Kpnb2)	54	43	10	12
Q9QUR6	Prolyl endopeptidase (PE) (EC 3.4.21.26) (Post-proline cleaving enzyme)	Prep (Pep)	56	20	15	18
P80315	T-complex protein 1 subunit delta (TCP-1- delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP- binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
P54103	DnaJ homolog subfamily C member 2 (Zuotin- related factor 1) (Mouse Id associate 1) (MIDA1)	Dnajc2 (Mida1) (Zrf1)	23	27	11	13
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
Q61122	NGFI-A-binding protein 1 (EGR-1-binding protein 1)	Nab1	30	25	6	7
Q6GSS7	Histone H2A type 2-A (H2A.2) (H2a-614) (H2a- 615)	Hist2h2aa1; Hist2h2aa2	505	763	18	21
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21

P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
Q9JKP5	Muscleblind-like protein 1 (Triplet-expansion RNA-binding protein)	Mbnl1 (Exp) (Mbnl)	45	63	244	281
Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8
Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16
Q6A4J8	Ubiquitin carboxyl-terminal hydrolase 7 (EC 3.1.2.15) (Ubiquitin thioesterase 7) (Ubiquitin-specific-processing protease 7) (Deubiquitinating enzyme 7) (Herpesvirus-associated ubiquitin-specific protease) (mHAUSP)	Usp7 (Hausp)	27	18	14	16
P58660	Caspase recruitment domain-containing protein 10 (Bcl10-interacting MAGUK protein 1) (Bimp1)	Card10 (Bimp1)	33	23	15	17
P97820	Mitogen-activated protein kinase kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
P62908	40S ribosomal protein S3	Rps3	778	762	39	44



Q921M3	Splicing factor 3B subunit 3 (Spliceosome-associated protein 130) (SAP 130) (Pre-mRNA splicing factor SF3b 130 kDa subunit) (SF3b130)	Sf3b3 (Kiaa0017)	16	34	24	27
Q9WUF3	CASP8-associated protein 2 (FLICE-associated huge protein)	Casp8ap2 (Flash)	28	16	26	29
Q64467	Glyceraldehyde-3-phosphate dehydrogenase, testis-specific (EC 1.2.1.12) (Spermatogenic glyceraldehyde-3-phosphate dehydrogenase) (Spermatogenic cell-specific glyceraldehyde 3-phosphate dehydrogenase 2) (GAPDH-2)	Gapdhs (Gapds) (Gapds)	75	781	26	29
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a) (Stn)	1275	1549	258	285
Q62446	FK506-binding protein 3 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (25 kDa FKBP) (FKBP-25) (Rapamycin-selective 25 kDa immunophilin)	Fkbp3 (Fkbp25)	31	31	10	11

O55234	Proteasome subunit beta type-5 (EC 3.4.25.1) (Proteasome epsilon chain) (Macropain epsilon chain) (Multicatalytic endopeptidase complex epsilon chain) (Proteasome subunit X) (Proteasome chain 6)	Psmb5	168	227	10	11
Q93092	Transaldolase (EC 2.2.1.2)	Taldo1 (Tal) (Taldo)	20	93	10	11
Q9R0Q7	Prostaglandin E synthase 3 (EC 5.3.99.3) (Cytosolic prostaglandin E2 synthase) (cPGES) (Telomerase-binding protein p23) (Hsp90 co-chaperone) (Progesterone receptor complex p23) (Sid 3177)	Ptges3 (Sid3177) (Tebp)	124	239	10	11
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
Q8VC12	Probable urocanate hydratase (Urocanase) (EC 4.2.1.49) (Imidazolonepropionate hydrolase)	Uroc1	33	26	11	12
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q3THS6	S-adenosylmethionine synthetase isoform type-2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
P27546	Microtubule-associated protein 4 (MAP-4)	Map4 (Mtap4)	94	41	33	36
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146

Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P70298	Homeobox protein cut-like 2 (Cut-like 2) (Homeobox protein Cux-2)	Cux2 (Cutl2)	30	22	12	13
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
P08113	Endoplasmic reticulum chaperone (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra1) (Tra1)	221	298	25	27
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15

P70398	Probable ubiquitin carboxyl-terminal hydrolase FAF-X (EC 3.1.2.15) (Ubiquitin thioesterase FAF-X) (Ubiquitin-specific-processing protease FAF-X) (Deubiquitinating enzyme FAF-X) (Fat facets protein-related, X-linked) (Ubiquitin-specific protease 9, X chromosome) (Ubiquitin carboxyl-terminal hydrolase FAM) (Fat facets homolog)	Usp9x (Fafl) (Fam)	42	28	57	61
Q8BXX6	Serine/threonine-protein kinase SMG1 (SMG-1) (EC 2.7.11.1)	Smg1 (Kiaa0421)	33	27	30	32
P16858	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) (EC 1.2.1.12)	Gapdh (Gapd)	1514	1781	84	89
Q8VI56	Low-density lipoprotein receptor-related protein 4 (LDLR dan)	Lrp4 (Kiaa0816)	77	30	19	20
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
Q920R0	Alsin (Amyotrophic lateral sclerosis protein 2 homolog)	Als2	74	88	72	75
Q62504	Msx2-interacting protein (SPEN homolog) (SMART/HDAC1-associated repressor protein)	Spn (Kiaa0929) (Mint) (Sharp)	27	18	72	75
O35973	Period circadian protein homolog 1 (Circadian clock protein PERIOD 1) (Circadian pacemaker protein Rigui) (mPER1)	Per1 (Per) (Rigui)	29	21	27	28
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165
P62141	Serine/threonine-protein phosphatase PP1-beta catalytic subunit (PP-1B) (EC 3.1.3.16)	Ppp1cb	177	57	4	4

P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5
Q3TXZ1	Zinc finger protein 575	Znf575 (Zfp575)	30	25	5	5
Q8VCZ3	THAP domain-containing protein 7	Thap7	26	18	6	6
O88693	Ceramide glucosyltransferase (EC 2.4.1.80) (Glucosylceramide synthase) (GCS) (UDP-glucose:N-acylsphingosine D-glucosyltransferase) (UDP-glucose ceramide glucosyltransferase) (GLCT-1)	Ugcg	37	50	7	7
Q9R1P1	Proteasome subunit beta type-3 (EC 3.4.25.1) (Proteasome theta chain) (Proteasome chain 13) (Proteasome component C10-II)	Psmb3	87	135	7	7
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
Q6P5F9	Exportin-1 (Exp1) (Chromosome region maintenance 1 protein homolog)	Xpo1 (Crm1)	19	43	9	9
Q9DAI4	Zinc finger and BTB domain-containing protein 43 (Zinc finger protein 297B)	Zbtb43 (Kiaa0414) (Zfp297b) (Znf297b)	23	51	9	9
Q9CQ60	6-phosphogluconolactonase (6PGL) (EC 3.1.1.31)	Pgls	148	41	11	11
O09061	Proteasome subunit beta type-1 (EC 3.4.25.1) (Proteasome component C5) (Macropain subunit C5) (Multicatalytic endopeptidase complex subunit C5) (Proteasome gamma chain)	Psmb1	84	94	11	11

Q9DB77	Cytochrome b-c1 complex subunit 2, mitochondrial (Ubiquinol-cytochrome-c reductase complex core protein 2) (Core protein II) (Complex III subunit 2)	Uqcrc2	29	20	13	13
Q9JIF7	Coatomer subunit beta (Beta-coat protein) (Beta-COP)	Copb1 (Copb)	37	22	15	15
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q01098	Glutamate [NMDA] receptor subunit epsilon-3 (N-methyl D-aspartate receptor subtype 2C) (NMDAR2C) (NR2C)	Grin2c	18	33	15	15
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
P30681	High mobility group protein B2 (High mobility group protein 2) (HMG-2)	Hmgb2 (Hmg2)	94	222	24	24
Q80UK8	Integrator complex subunit 2 (Int2)	Ints2 (Kiaa1287)	16	27	24	24
Q6P8J7	Creatine kinase, sarcomeric mitochondrial (EC 2.7.3.2) (S-MtCK)	Ckmt2	50	66	26	26
Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
Q8K4E0	Alstrom syndrome protein 1 homolog	Alms1 (Kiaa0328)	29	30	86	86
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55

P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (Csma) (Eif3) (Eif3s10)	199	166	58	56
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
P16406	Glutamyl aminopeptidase (EC 3.4.11.7) (EAP) (Aminopeptidase A) (APA) (BP-1/6C3 antigen) (CD antigen CD249)	Enpep	98	90	48	46
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
Q6ZPK0	PHD finger protein 21A (BRAF35-HDAC complex protein BHC80) (mBHC80) (BHC80a)	Phf21a (Bhc80) (Kiaa1696) (Pftf1)	28	37	20	19
P54869	Hydroxymethylglutaryl-CoA synthase, mitochondrial (HMG-CoA synthase) (EC 2.3.3.10) (3-hydroxy-3-methylglutaryl coenzyme A synthase)	Hmgcs2	26	23	18	17
P03966	N-myc proto-oncogene protein	Mycn (Nmyc) (Nmyc1)	65	46	18	17
Q8BTI8	Serine/arginine repetitive matrix protein 2	Srrm2 (Kiaa0324)	78	70	92	86

Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q9WTR0	Matrix metalloproteinase-16 (MMP-16) (EC 3.4.24.-) (Membrane-type matrix metalloproteinase 3) (MT-MMP 3) (MTMMP3) (Membrane-type-3 matrix metalloproteinase) (MT3-MMP) (MT3MMP)	Mmp16	17	36	11	10
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q9QZH3	Peptidyl-prolyl cis-trans isomerase E (PPlase E) (Rotamase E) (EC 5.2.1.8) (Cyclophilin E) (Cyclophilin-33)	Ppie (Cyp33)	28	35	10	9
Q925Q8	Dachshund homolog 2 (Dach2)	Dach2	22	30	9	8



P43277	Histone H1.3 (H1 VAR.4) (H1d)	Hist1h1d (H1f3)	78	99	18	16
Q68FD5	Clathrin heavy chain 1	Cltc	944	884	88	78
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
Q9DBJ1	Phosphoglycerate mutase 1 (EC 5.4.2.1) (EC 5.4.2.4) (EC 3.1.3.13) (Phosphoglycerate mutase isozyme B) (PGAM-B) (BPG-dependent PGAM 1)	Pgam1	612	746	35	31
Q8BG95	Protein phosphatase 1 regulatory subunit 12B (Myosin phosphatase-targeting subunit 2)	Ppp1r12b (Mypt2)	25	24	25	22
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
P70195	Proteasome subunit beta type-7 (EC 3.4.25.1) (Proteasome subunit Z) (Macropain chain Z) (Multicatalytic endopeptidase complex chain Z)	Psmb7 (Mmc14)	39	40	8	7
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q924C1	Exportin-5 (Exp5) (Ran-binding protein 21)	Xpo5 (Kiaa1291) (Ranbp21)	20	62	15	13
P21550	Beta-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Muscle-specific enolase) (MSE) (Skeletal muscle enolase) (Enolase 3)	Eno3 (Eno-3)	313	146	30	26
Q11011	Puromycin-sensitive aminopeptidase (PSA) (EC 3.4.11.-)	Npepps (Psa)	71	141	30	26
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32

Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPIase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
P97784	Cryptochrome-1	Cry1	52	42	21	18
Q9R194	Cryptochrome-2	Cry2 (Kiaa0658)	52	42	21	18
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
P46664	Adenylosuccinate synthetase isozyme 2 (AMPSase 2) (AdSS 2) (EC 6.3.4.4) (Adenylosuccinate synthetase, non-muscle isozyme) (Adenylosuccinate synthetase, acidic isozyme) (IMP--aspartate ligase 2)	Adss (Adss2)	36	66	12	10

Q99PP7	E3 ubiquitin-protein ligase TRIM33 (EC 6.3.2.-) (Tripartite motif-containing protein 33) (Transcription intermediary factor 1-gamma) (TIF1-gamma) (Ectodermin homolog)	Trim33 (Kiaa1113)	33	25	12	10
Q05816	Fatty acid-binding protein, epidermal (E-FABP) (Fatty acid-binding protein 5) (Psoriasis-associated fatty acid-binding protein homolog) (PA-FABP) (Keratinocyte lipid-binding protein)	Fabp5 (Fabpe) (Klbp) (Mal1)	331	206	18	15
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcpl)	29	66	18	15
Q64514	Tripeptidyl-peptidase 2 (EC 3.4.14.10) (Tripeptidyl-peptidase II) (TPP-II) (Tripeptidyl aminopeptidase)	Tpp2	54	76	24	20
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
P11531	Dystrophin	Dmd	25	16	66	55
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
P19096	Fatty acid synthase (EC 2.3.1.85) [Includes: [Acyl-carrier-protein] S-acetyltransferase (EC 2.3.1.38); [Acyl-carrier-protein] S-malonyltransferase (EC 2.3.1.39); 3-oxoacyl-[acyl-carrier-protein] synthase (EC 2.3.1.41); 3-oxoacyl-[acyl-carrier-protein] reductase (EC 1.1.1.100); 3-hydroxypalmitoyl-[acyl-carrier-protein] dehydratase (EC 4.2.1.61); Enoyl-[acyl-carrier-protein] reductase (EC 1.3.1.10); Oleoyl [acyl-carrier-protein] hydrolase (EC 3.1.2.14)]	Fasn	1869	1524	163	135

Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
Q6ZQ38	Cullin-associated NEDD8-dissociated protein 1 (Cullin-associated and neddylation-dissociated protein 1) (p120 CAND1)	Cand1 (D10Ert516e) (Kiaa0829)	221	246	33	27
P42227	Signal transducer and activator of transcription 3 (Acute-phase response factor)	Stat3 (Aprf)	16	28	33	27
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
Q62407	Striated muscle-specific serine/threonine protein kinase (EC 2.7.11.1) (Aortic preferentially expressed protein 1) (APEG-1)	Speg (Apeg1) (Kiaa1297)	26	20	31	25
P17182	Alpha-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Non-neural enolase) (NNE) (Enolase 1)	Eno1 (Eno-1)	976	802	62	50

Q5XJY5	Coatomer subunit delta (Delta-coat protein) (Delta-COP) (Archain)	Arcn1 (Copd)	61	45	10	8
P54923	[Protein ADP-ribosylarginine] hydrolase (ADP-ribosylarginine hydrolase) (EC 3.2.2.19) (ADP-ribose-L-arginine cleaving enzyme)	Adprh (Arh1)	20	41	15	12
P00342	L-lactate dehydrogenase C chain (LDH-C) (EC 1.1.1.27) (LDH testis subunit) (LDH-X)	Ldhc (Ldh-3) (Ldh3)	97	122	15	12
Q9Z2U0	Proteasome subunit alpha type-7 (EC 3.4.25.1) (Proteasome subunit RC6-1)	PsmA7	121	253	15	12
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q99MD9	Nuclear autoantigenic sperm protein (NASP)	Nasp	365	293	34	27
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
Q80Z16	E3 ubiquitin-protein ligase LRSAM1 (EC 6.3.2.-) (Leucine-rich repeat and sterile alpha motif-containing protein 1) (Tsg101-associated ligase)	Lrsam1	19	35	19	15
Q80UN9	tRNA isopentenyltransferase, mitochondrial (IPTase) (EC 2.5.1.8) (Isopentenyl-diphosphate:tRNA isopentenyltransferase) (IPP transferase) (IPPT)	Trit1 (Ipt)	31	24	19	15
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123

Q6A078	Centrosomal protein of 290 kDa (Cep290) (Nephrocystin-6)	Cep290 (Kiaa0373) (Nphp6)	32	57	85	66
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
P06151	L-lactate dehydrogenase A chain (LDH-A) (EC 1.1.1.27) (LDH muscle subunit) (LDH-M)	Ldha (Ldh-1) (Ldh1)	1033	421	74	57
Q9CZW4	Long-chain-fatty-acid--CoA ligase 3 (EC 6.2.1.3) (Long-chain acyl-CoA synthetase 3) (LACS 3)	Acsl3 (Acs3) (Fac13)	41	37	13	10
P05063	Fructose-bisphosphate aldolase C (EC 4.1.2.13) (Brain-type aldolase) (Aldolase 3) (Zebrin II) (Scrapie-responsive protein 2)	Aldoc (Aldo3) (Scrg2)	35	51	13	10
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
P47856	Glucosamine--fructose-6-phosphate aminotransferase [isomerizing] 1 (EC 2.6.1.16) (Glutamine:fructose 6 phosphate amidotransferase 1) (GFAT 1) (GFAT1) (D-fructose-6-phosphate amidotransferase 1) (Hexosephosphate aminotransferase 1)	Gfpt1 (Gfpt)	17	29	17	13
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35

P70670	Nascent polypeptide-associated complex subunit alpha, muscle-specific form (Alpha-NAC, muscle-specific form)	Naca (Gm1878)	22	130	29	22
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
P25233	Necdin	Ndn	30	23	16	12
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
Q8K1F9	Lactase-like protein (Klotho/lactase-phlorizin hydrolase-related protein)	Lctl (Klph)	27	21	24	18
Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27
Q6P3Y5	Zinc finger protein 280C (Suppressor of hairy wing homolog 3)	Znf280c (Kiaa1584) (Suhw3) (Zfp280c)	87	142	43	32
P58681	Toll-like receptor 7	Tlr7	27	33	23	17
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8

P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
Q64237	Dopamine beta-hydroxylase (EC 1.14.17.1) (Dopamine beta-monoxygenase) [Cleaved into: Soluble dopamine beta-hydroxylase]	Dbh	44	23	7	5
Q9CQ65	S-methyl-5'-thioadenosine phosphorylase (EC 2.4.2.28) (5'-methylthioadenosine phosphorylase) (MTA phosphorylase) (MTAPase)	Mtap	48	36	7	5
Q99LG2	Transportin-2 (Karyopherin beta-2b)	Tnpo2	42	32	7	5
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptprn (Ptp35)	30	18	14	10
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
Q03172	Zinc finger protein 40 (Transcription factor alphaA-CRYBP1) (Alpha A-crystallin-binding protein I) (Alpha A-CRYBP1)	Hivep1 (Cryabp1) (Znf40)	25	24	21	15
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
P17751	Triosephosphate isomerase (TIM) (EC 5.3.1.1) (Triose-phosphate isomerase)	Tpi1 (Tpi)	706	519	35	25



Q920E5	Farnesyl pyrophosphate synthetase (FPP synthetase) (FPS) (Farnesyl diphosphate synthetase) (Cholesterol-regulated 39 kDa protein) (CR 39) [Includes: Dimethylallyltransferase (EC 2.5.1.1); Geranyltransferase (EC 2.5.1.10)]	Fdps	107	43	17	12
Q60692	Proteasome subunit beta type-6 (EC 3.4.25.1) (Proteasome delta chain) (Macropain delta chain) (Multicatalytic endopeptidase complex delta chain) (Proteasome subunit Y)	Psmb6 (Lmp19)	33	89	17	12
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
Q7TQI3	Ubiquitin thioesterase OTUB1 (EC 3.1.2.-) (Otubain-1) (OTU domain-containing ubiquitin aldehyde-binding protein 1) (Ubiquitin-specific-processing protease OTUB1) (Deubiquitinating enzyme OTUB1)	Otub1	152	109	10	7
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q52KI8	Serine/arginine repetitive matrix protein 1 (Plenty-of-prolines 101)	Srrm1 (Pop101)	22	73	29	20
Q99PV0	Pre-mRNA-processing-splicing factor 8 (Splicing factor Prp8)	Prpf8 (Prp8)	28	29	51	35
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
Q80TP3	E3 ubiquitin-protein ligase UBR5 (EC 6.3.2.-) (E3 ubiquitin-protein ligase, HECT domain-containing 1) (Hyperplastic discs protein homolog)	Ubr5 (Edd) (Edd1) (Kiaa0896)	27	17	43	29
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2

Q8C9S8	Cysteine protease ATG4A (EC 3.4.22.-) (Autophagy-related protein 4 homolog A) (Autophagin-2) (Autophagy-related cysteine endopeptidase 2) (AUT-like 2 cysteine endopeptidase)	Atg4a (Apg4a) (Autl2)	26	21	6	4
Q99LD8	N(G),N(G)-dimethylarginine dimethylaminohydrolase 2 (Dimethylarginine dimethylaminohydrolase 2) (DDAH-2) (EC 3.5.3.18) (DDAHII) (Dimethylargininase-2)	Ddah2	103	92	9	6
P43275	Histone H1.1 (H1 VAR.3) (H1a)	Hist1h1a (H1f1)	28	90	9	6
Q9WV07	Epidermis-type lipoxygenase 3 (e-LOX-3) (EC 1.13.11.-)	Aloxe3	25	22	9	6
P61979	Heterogeneous nuclear ribonucleoprotein K (hnRNP K)	Hnrnpk (Hnrpk)	225	46	18	12
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
O88444	Adenylate cyclase type 1 (EC 4.6.1.1) (Adenylate cyclase type I) (ATP pyrophosphate-lyase 1) (Adenylyl cyclase 1) (Ca(2+)/calmodulin-activated adenylyl cyclase)	Adcy1	33	31	26	17
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
Q924W6	Tripartite motif-containing protein 66 (Transcriptional intermediary factor 1 delta)	Trim66 (Tif1d)	28	18	23	15
O70435	Proteasome subunit alpha type-3 (EC 3.4.25.1) (Proteasome component C8) (Macropain subunit C8) (Multicatalytic endopeptidase complex subunit C8) (Proteasome subunit K)	Psma3	95	76	14	9
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7

Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
Q9QZ09	Putative homeodomain transcription factor 1	Phtf1 (Phtf)	29	24	8	5
Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (Ubpy)	29	23	24	15
P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
P16125	L-lactate dehydrogenase B chain (LDH-B) (EC 1.1.1.27) (LDH heart subunit) (LDH-H)	Ldhb (Ldh-2) (Ldh2)	315	214	34	21
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
O08709	Peroxiredoxin-6 (EC 1.11.1.15) (Antioxidant protein 2) (1-Cys peroxiredoxin) (1-Cys PRX) (Acidic calcium-independent phospholipase A2) (aiPLA2) (EC 3.1.1.-) (Non-selenium glutathione peroxidase) (NSGPx) (EC 1.11.1.7)	Prdx6 (Aop2) (Ltw4) (Prdx5)	56	29	5	3

Q88291	Zinc finger protein 326 (Zinc finger protein-associated with nuclear matrix of 75 kDa)	Znf326 (Zan75) (Zfp326)	41	55	5	3
Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
Q9EQZ6	Rap guanine nucleotide exchange factor 4 (cAMP-regulated guanine nucleotide exchange factor II) (cAMP-GEFII) (Exchange factor directly activated by cAMP 2) (Epac 2) (cAMP-dependent Rap1 guanine-nucleotide exchange factor)	Rapgef4 (Cgef2) (Epac2)	47	23	20	12
Q8R4K8	Pappalysin-1 (EC 3.4.24.79) (Pregnancy-associated plasma protein A) (PAPP-A) (Insulin-like growth factor-dependent IGF-binding protein 4 protease) (IGF-dependent IGFBP-4 protease) (IGFBP-4ase)	Pappa	41	43	25	15
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P09041	Phosphoglycerate kinase 2 (EC 2.7.2.3) (Phosphoglycerate kinase, testis specific)	Pgk2 (Pgk-2)	162	73	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70

P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
Q9JI78	Peptide-N(4)-(N-acetyl-beta-glucosaminy)asparagine amidase (PNGase) (mPNGase) (EC 3.5.1.52) (Peptide:N-glycanase) (N-glycanase 1)	Ngly1	29	32	19	11
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
P53762	Aryl hydrocarbon receptor nuclear translocator (ARNT protein) (Dioxin receptor, nuclear translocator) (Hypoxia-inducible factor 1 beta) (HIF-1 beta)	Arnt	25	22	7	4
P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4
P26043	Radixin (ESP10)	Rdx	127	106	23	13
P49722	Proteasome subunit alpha type-2 (EC 3.4.25.1) (Proteasome component C3) (Macropain subunit C3) (Multicatalytic endopeptidase complex subunit C3)	Psm2 (Lmpc3)	188	103	16	9
Q9R1X4	Protein timeless homolog (mTim)	Timeless (Tim1) (Timeless1)	22	25	16	9
P97461	40S ribosomal protein S5	Rps5	89	33	32	18
Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5

	Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27
	P17918	Proliferating cell nuclear antigen (PCNA) (Cyclin)	Pcna	273	207	20	11
	O35664	Interferon-alpha/beta receptor beta chain (Interferon alpha/beta receptor 2) (IFN-alpha-REC) (Type I interferon receptor) (IFN-R)	Ifnar2	37	21	11	6
	Q9WUJ8	Origin recognition complex subunit 6	Orc6l (Orc6)	59	37	13	7
	Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
	O88844	Isocitrate dehydrogenase [NADP] cytoplasmic (IDH) (EC 1.1.1.42) (Cytosolic NADP-isocitrate dehydrogenase) (Oxalosuccinate decarboxylase) (NADP(+)-specific ICDH) (IDP)	Idh1	155	163	15	8
	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
	P11103	Poly [ADP-ribose] polymerase 1 (PARP-1) (EC 2.4.2.30) (ADPRT) (NAD(+) ADP-ribosyltransferase 1) (Poly[ADP-ribose] synthetase 1) (msPARP)	Parp1 (Adprp) (Adprt) (Adprt1)	21	26	17	9
	Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
	Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwnk4)	23	33	29	15
cellular metabolic process	Q3TCT4	Ectonucleoside triphosphate diphosphohydrolase 7 (NTPDase 7) (EC 3.6.1.-) (Lysosomal apyrase-like protein 1)	Entpd7 (Kiaa4066) (Lalp1)	16	33	42	80
	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38

Q9CXW3	Calcyclin-binding protein (CacyBP) (Siah-interacting protein)	Cacybp (Sip)	57	39	7	13
P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22
Q7TSG3	F-box only protein 5 (Early mitotic inhibitor 1)	Fbxo5 (Emi1)	15	27	5	9
Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
Q64674	Spermidine synthase (SPDSY) (EC 2.5.1.16) (Putrescine aminopropyltransferase)	Srm	55	29	4	7
P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
P17742	Peptidyl-prolyl cis-trans isomerase A (PPIase A) (Rotamase A) (EC 5.2.1.8) (Cyclophilin A) (Cyclosporin A-binding protein) (SP18)	Ppia	855	1549	38	66
Q9Z1R2	Large proline-rich protein BAT3 (HLA-B-associated transcript 3)	Bat3	80	49	15	26
Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
Q9D009	Putative octanoyltransferase, mitochondrial (EC 2.3.1.181) (Octanoyl-[acyl-carrier-protein]-protein N-octanoyltransferase) (Lipoyl/octanoyl transferase) (Lipoate-protein ligase B)		38	42	11	19
Q8R1S0	Ubiquinone biosynthesis monooxygenase COQ6 (EC 1.14.13.-)	Coq6	42	92	10	17
Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
Q9ERK4	Exportin-2 (Exp2) (Importin-alpha re-exporter) (Chromosome segregation 1-like protein)	Cse1l (Xpo2)	42	153	26	44

P52480	Pyruvate kinase isozymes M1/M2 (EC 2.7.1.40) (Pyruvate kinase muscle isozyme)	Pkm2 (Pk3) (Pykm)	1954	3481	138	233
Q8CGP2	Histone H2B type 1-P	Hist1h2bp	436	999	46	77
P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
Q9WTL7	Acyl-protein thioesterase 2 (EC 3.1.2.-) (Lysophospholipase II) (Lysophospholipase 2) (mLyso II)	Lypla2	23	49	3	5
P62960	Nuclease-sensitive element-binding protein 1 (Y-box-binding protein 1) (Y-box transcription factor) (YB-1) (CCAAT-binding transcription factor I subunit A) (CBF-A) (Enhancer factor I subunit A) (EFI-A) (DNA-binding protein B) (DBPB)	Ybx1 (Msy-1) (Msy1) (Nsep1) (Yb1)	56	126	6	10
P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78
Q64475	Histone H2B type 1-B (h2B-143)	Hist1h2bb	436	999	46	75
P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13



Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
P19157	Glutathione S-transferase P 1 (Gst P1) (EC 2.5.1.18) (GST YF-YF) (GST-piB) (GST class-pi) (Preadipocyte growth factor)	Gstp1 (Gstpib)	473	572	10	16
Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
Q61990	Poly(rC)-binding protein 2 (Alpha-CP2) (Putative heterogeneous nuclear ribonucleoprotein X) (hnRNP X) (CTBP) (CBP)	Pcbp2 (Cbp) (HnrnpX) (Hnrpx)	29	194	7	11
P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23
P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
Q8K386	Ras-related protein Rab-15	Rab15	44	74	4	6
O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
P50247	Adenosylhomocysteinase (AdoHcyase) (EC 3.3.1.1) (S-adenosyl-L-homocysteine hydrolase) (Liver copper-binding protein) (CUBP)	Ahcy	90	106	10	15
Q99K85	Phosphoserine aminotransferase (PSAT) (EC 2.6.1.52) (Phosphohydroxythreonine aminotransferase) (Endometrial progesterone-induced protein) (EPIP)	Psat1 (Psa) (Psat)	162	541	16	24
P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwk1)	56	36	18	27

P53657	Pyruvate kinase isozymes R/L (EC 2.7.1.40) (L PK)	Pklr	144	270	26	38
P97868	Retinoblastoma-binding protein 6 (p53-associated cellular protein of testis) (Proliferation potential-related protein) (Protein P2P-R)	Rbbp6 (P2pr) (Pact)	21	29	24	35
Q3THW5	Histone H2A.V (H2A.F/Z)	H2afv (H2av)	297	426	11	16
P99026	Proteasome subunit beta type-4 (Proteasome beta chain) (EC 3.4.25.1) (Macropain beta chain) (Multicatalytic endopeptidase complex beta chain) (Proteasome chain 3)	Psmb4 (Lmp3)	93	289	11	16
Q9QZ39	Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 1 (EC 2.4.99.3) (GalNAc alpha-2,6-sialyltransferase I) (ST6GalNAc I) (Sialyltransferase 7A)	St6galnac1 (Siat7a)	27	18	11	16
P60335	Poly(rC)-binding protein 1 (Alpha-CP1) (hnRNP-E1)	Pcbp1	56	350	9	13
P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
Q8BVI4	Dihydropteridine reductase (EC 1.5.1.34) (HDHPR) (Quinoid dihydropteridine reductase)	Qdpr (Dhpr)	144	277	7	10
O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
P12813	Nuclear receptor subfamily 4 group A member 1 (Orphan nuclear receptor HMR) (Nuclear hormone receptor NUR/77) (N10 nuclear protein)	Nr4a1 (Gfrp) (Hmr) (N10) (Nur77)	61	31	7	10

Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
P68510	14-3-3 protein eta	Ywhah	707	962	58	80
P70696	Histone H2B type 1-A (Histone H2B, testis) (Testis-specific histone H2B)	Hist1h2ba (Th2b)	146	378	37	51
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
P70338	Zinc finger protein Gfi-1 (Growth factor independent protein 1)	Gfi1 (Gfi-1)	45	39	17	23
Q61789	Laminin subunit alpha-3 (Nicein subunit alpha)	Lama3	26	26	37	50
Q6P8J2	Diamine acetyltransferase 2 (EC 2.3.1.57) (Spermidine/spermine N(1)-acetyltransferase 2) (Polyamine N-acetyltransferase 2)	Sat2 (Ssat2)	33	23	6	8
Q9EPL8	Importin-7 (Imp7) (Ran-binding protein 7) (RanBP7)	Ipo7 (Ranbp7)	25	121	9	12

Q9WTX2	Interferon-inducible double stranded RNA-dependent protein kinase activator A (Protein kinase, interferon-inducible double stranded RNA-dependent activator) (Protein activator of the interferon-induced protein kinase) (PKR-associated protein X) (PKR-associating protein X) (RAX)	Prkra (Rax)	28	39	9	12
Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
P70168	Importin subunit beta-1 (Karyopherin subunit beta-1) (Nuclear factor P97) (Pore targeting complex 97 kDa subunit) (PTAC97) (SCG)	Kpnb1 (Impnb)	48	17	13	17
Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
P63163	Small nuclear ribonucleoprotein-associated protein N (snRNP-N) (Sm protein N) (Sm-N) (SmN) (Sm-D) (Tissue-specific-splicing protein)	Snrpn (Smn)	38	17	7	9
Q7TQ07	DNA polymerase nu (EC 2.7.7.7)	Poln	20	39	14	18
Q61753	D-3-phosphoglycerate dehydrogenase (3-PGDH) (EC 1.1.1.95) (A10)	Phgdh	105	158	14	18

P05064	Fructose-bisphosphate aldolase A (EC 4.1.2.13) (Muscle-type aldolase) (Aldolase 1)	Aldoa (Aldo1)	211	567	36	46
Q07133	Histone H1t (Testicular H1 histone)	Hist1h1t (H1ft) (H1t)	46	72	54	69
Q923B1	Lariat debranching enzyme (EC 3.1.-.-)	Dbr1	28	29	15	19
P27661	Histone H2A.x (H2a/x)	H2afx (H2a.x) (H2ax) (Hist5-2ax)	301	426	15	19
Q62093	Splicing factor, arginine/serine-rich 2 (Splicing factor SC35) (SC-35) (Splicing component, 35 kDa) (Protein PR264) (Putative myelin regulatory factor 1) (MRF-1)	Sfrs2 (Pr264) (Sfrs10)	184	117	15	19
P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
Q60716	Prolyl 4-hydroxylase subunit alpha-2 (EC 1.14.11.2) (4-PH alpha-2) (Procollagen-proline,2-oxoglutarate-4-dioxygenase subunit alpha-2)	P4ha2	22	27	8	10
P17183	Gamma-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Neural enolase) (Neuron-specific enolase) (NSE) (Enolase 2)	Eno2 (Eno-2)	228	181	12	15
Q811J3	Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37

Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
Q61466	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 1 (SWI/SNF complex 60 kDa subunit) (60 kDa BRG-1/Brm-associated factor subunit A) (BRG1-associated factor 60A) (D15KZ1 protein)	Smarcd1 (Baf60a) (D15Kz1)	27	29	13	16
Q8VII8	Mineralocorticoid receptor (MR) (Nuclear receptor subfamily 3 group C member 2)	Nr3c2 (Mlr)	28	22	18	22
Q9R1P0	Proteasome subunit alpha type-4 (EC 3.4.25.1) (Proteasome component C9) (Macropain subunit C9) (Multicatalytic endopeptidase complex subunit C9) (Proteasome subunit L)	Psma4	29	151	14	17
Q9CZY3	Ubiquitin-conjugating enzyme E2 variant 1 (UEV-1) (CROC-1)	Ube2v1 (Croc1)	83	163	166	201
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
Q9EQC4	Elongation of very long chain fatty acids protein 4	Elovl4	25	18	5	6
O35618	Protein Mdm4 (p53-binding protein Mdm4) (Mdm2-like p53-binding protein) (Protein Mdmx) (Double minute 4 protein)	Mdm4 (Mdmx)	17	29	5	6
Q6PDM2	Splicing factor, arginine/serine-rich 1 (ASF/SF2)	Sfrs1	24	91	5	6
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12

P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q8BFY9	Transportin-1 (Importin beta-2) (Karyopherin beta-2)	Tnp1 (Kpnb2)	54	43	10	12
Q9QUR6	Prolyl endopeptidase (PE) (EC 3.4.21.26) (Post-proline cleaving enzyme)	Prep (Pep)	56	20	15	18
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
O08908	Phosphatidylinositol 3-kinase regulatory subunit beta (PI3-kinase p85 subunit beta) (PtdIns-3-kinase p85-beta)	Pik3r2	19	25	20	24
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
P54103	DnaJ homolog subfamily C member 2 (Zuotin-related factor 1) (Mouse Id associate 1) (MIDA1)	Dnajc2 (Mida1) (Zrf1)	23	27	11	13
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
Q61171	Peroxiredoxin-2 (EC 1.11.1.15) (Thioredoxin peroxidase 1) (Thioredoxin-dependent peroxide reductase 1) (Thiol-specific antioxidant protein) (TSA)	Prdx2 (Tdp1) (Tpx)	568	898	47	55
Q61122	NGFI-A-binding protein 1 (EGR-1-binding protein 1)	Nab1	30	25	6	7

Q6GSS7	Histone H2A type 2-A (H2A.2) (H2a-614) (H2a-615)	Hist2h2aa1; Hist2h2aa2	505	763	18	21
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
Q9JKP5	Muscleblind-like protein 1 (Triplet-expansion RNA-binding protein)	Mbnl1 (Exp) (Mbnl)	45	63	244	281
Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8
Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16
Q6A4J8	Ubiquitin carboxyl-terminal hydrolase 7 (EC 3.1.2.15) (Ubiquitin thioesterase 7) (Ubiquitin-specific-processing protease 7) (Deubiquitinating enzyme 7) (Herpesvirus-associated ubiquitin-specific protease) (mHAUSP)	Usp7 (Hausp)	27	18	14	16
P97820	Mitogen-activated protein kinase kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
P62908	40S ribosomal protein S3	Rps3	778	762	39	44



Q921M3	Splicing factor 3B subunit 3 (Spliceosome-associated protein 130) (SAP 130) (Pre-mRNA splicing factor SF3b 130 kDa subunit) (SF3b130)	Sf3b3 (Kiaa0017)	16	34	24	27
Q9WUF3	CASP8-associated protein 2 (FLICE-associated huge protein)	Casp8ap2 (Flash)	28	16	26	29
Q64467	Glyceraldehyde-3-phosphate dehydrogenase, testis-specific (EC 1.2.1.12) (Spermatogenic glyceraldehyde-3-phosphate dehydrogenase) (Spermatogenic cell-specific glyceraldehyde 3-phosphate dehydrogenase 2) (GAPDH-2)	Gapdhs (Gapds) (Gapds)	75	781	26	29
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a1) (Stn)	1275	1549	258	285
Q62446	FK506-binding protein 3 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (25 kDa FKBP) (FKBP-25) (Rapamycin-selective 25 kDa immunophilin)	Fkbp3 (Fkbp25)	31	31	10	11

O55234	Proteasome subunit beta type-5 (EC 3.4.25.1) (Proteasome epsilon chain) (Macropain epsilon chain) (Multicatalytic endopeptidase complex epsilon chain) (Proteasome subunit X) (Proteasome chain 6)	Psmb5	168	227	10	11
Q93092	Transaldolase (EC 2.2.1.2)	Taldo1 (Tal) (Taldo)	20	93	10	11
Q9R0Q7	Prostaglandin E synthase 3 (EC 5.3.99.3) (Cytosolic prostaglandin E2 synthase) (cPGES) (Telomerase-binding protein p23) (Hsp90 co-chaperone) (Progesterone receptor complex p23) (Sid 3177)	Ptges3 (Sid3177) (Tebp)	124	239	10	11
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
Q8VC12	Probable urocanate hydratase (Urocanase) (EC 4.2.1.49) (Imidazolonepropionate hydrolase)	Uroc1	33	26	11	12
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q3THS6	S-adenosylmethionine synthetase isoform type-2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
P27546	Microtubule-associated protein 4 (MAP-4)	Map4 (Mtap4)	94	41	33	36
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146

Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P70298	Homeobox protein cut-like 2 (Cut-like 2) (Homeobox protein Cux-2)	Cux2 (Cutl2)	30	22	12	13
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
P08113	Endoplasmic reticulum chaperone protein (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra1) (Tra1)	221	298	25	27
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15

P70398	Probable ubiquitin carboxyl-terminal hydrolase FAF-X (EC 3.1.2.15) (Ubiquitin thioesterase FAF-X) (Ubiquitin-specific-processing protease FAF-X) (Deubiquitinating enzyme FAF-X) (Fat facets protein-related, X-linked) (Ubiquitin-specific protease 9, X chromosome) (Ubiquitin carboxyl-terminal hydrolase FAM) (Fat facets homolog)	Usp9x (Fafl) (Fam)	42	28	57	61
Q8BXX6	Serine/threonine-protein kinase SMG1 (SMG-1) (EC 2.7.11.1)	Smg1 (Kiaa0421)	33	27	30	32
P16858	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) (EC 1.2.1.12)	Gapdh (Gapd)	1514	1781	84	89
Q8VI56	Low-density lipoprotein receptor-related protein 4 (LDLR dan)	Lrp4 (Kiaa0816)	77	30	19	20
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
Q920R0	Alsin (Amyotrophic lateral sclerosis protein 2 homolog)	Als2	74	88	72	75
Q62504	Msx2-interacting protein (SPEN homolog) (SMART/HDAC1-associated repressor protein)	Spn (Kiaa0929) (Mint) (Sharp)	27	18	72	75
O35973	Period circadian protein homolog 1 (Circadian clock protein PERIOD 1) (Circadian pacemaker protein Rigui) (mPER1)	Per1 (Per) (Rigui)	29	21	27	28
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165
P62141	Serine/threonine-protein phosphatase PP1-beta catalytic subunit (PP-1B) (EC 3.1.3.16)	Ppp1cb	177	57	4	4

P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5
Q3TXZ1	Zinc finger protein 575	Znf575 (Zfp575)	30	25	5	5
Q8VCZ3	THAP domain-containing protein 7	Thap7	26	18	6	6
O88693	Ceramide glucosyltransferase (EC 2.4.1.80) (Glucosylceramide synthase) (GCS) (UDP-glucose:N-acylsphingosine D-glucosyltransferase) (UDP-glucose ceramide glucosyltransferase) (GLCT-1)	Ugcg	37	50	7	7
Q9R1P1	Proteasome subunit beta type-3 (EC 3.4.25.1) (Proteasome theta chain) (Proteasome chain 13) (Proteasome component C10-II)	Psmb3	87	135	7	7
Q8VC28	Aldo-keto reductase family 1 member C13 (EC 1.1.1.-)	Akr1c13	32	23	8	8
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
Q6P5F9	Exportin-1 (Exp1) (Chromosome region maintenance 1 protein homolog)	Xpo1 (Crm1)	19	43	9	9
Q9DAI4	Zinc finger and BTB domain-containing protein 43 (Zinc finger protein 297B)	Zbtb43 (Kiaa0414) (Zfp297b) (Znf297b)	23	51	9	9
Q9CQ60	6-phosphogluconolactonase (6PGL) (EC 3.1.1.31)	Pgls	148	41	11	11

O09061	Proteasome subunit beta type-1 (EC 3.4.25.1) (Proteasome component C5) (Macropain subunit C5) (Multicatalytic endopeptidase complex subunit C5) (Proteasome gamma chain)	Psmb1	84	94	11	11
Q80YV4	Pantothenate kinase 4 (EC 2.7.1.33) (Pantothenic acid kinase 4) (mPanK4)	Pank4	23	28	13	13
Q9DB77	Cytochrome b-c1 complex subunit 2, mitochondrial (Ubiquinol-cytochrome-c reductase complex core protein 2) (Core protein II) (Complex III subunit 2)	Uqcrc2	29	20	13	13
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
P30681	High mobility group protein B2 (High mobility group protein 2) (HMG-2)	Hmgb2 (Hmg2)	94	222	24	24
Q80UK8	Integrator complex subunit 2 (Int2)	Ints2 (Kiaa1287)	16	27	24	24
Q6P8J7	Creatine kinase, sarcomeric mitochondrial (EC 2.7.3.2) (S-MtCK)	Ckmt2	50	66	26	26
Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
Q8K4E0	Alstrom syndrome protein 1 homolog	Alms1 (Kiaa0328)	29	30	86	86
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126

Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (Csma) (Eif3) (Eif3s10)	199	166	58	56
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
P16406	Glutamyl aminopeptidase (EC 3.4.11.7) (EAP) (Aminopeptidase A) (APA) (BP-1/6C3 antigen) (CD antigen CD249)	Enpep	98	90	48	46
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
Q6ZPK0	PHD finger protein 21A (BRAF35-HDAC complex protein BHC80) (mBHC80) (BHC80a)	Phf21a (Bhc80) (Kiaa1696) (Pftf1)	28	37	20	19
P54869	Hydroxymethylglutaryl-CoA synthase, mitochondrial (HMG-CoA synthase) (EC 2.3.3.10) (3-hydroxy-3-methylglutaryl coenzyme A synthase)	Hmgcs2	26	23	18	17
P03966	N-myc proto-oncogene protein	Mycn (Nmyc) (Nmyc1)	65	46	18	17

Q8BTI8	Serine/arginine repetitive matrix protein 2	Srrm2 (Kiaa0324)	78	70	92	86
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q9WTR0	Matrix metalloproteinase-16 (MMP-16) (EC 3.4.24.-) (Membrane-type matrix metalloproteinase 3) (MT-MMP 3) (MTMMP3) (Membrane-type-3 matrix metalloproteinase) (MT3-MMP) (MT3MMP)	Mmp16	17	36	11	10
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q9QZH3	Peptidyl-prolyl cis-trans isomerase E (PPIase E) (Rotamase E) (EC 5.2.1.8) (Cyclophilin E) (Cyclophilin-33)	Ppie (Cyp33)	28	35	10	9



Q925Q8	Dachshund homolog 2 (Dach2)	Dach2	22	30	9	8
P43277	Histone H1.3 (H1 VAR.4) (H1d)	Hist1h1d (H1f3)	78	99	18	16
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
Q9DBJ1	Phosphoglycerate mutase 1 (EC 5.4.2.1) (EC 5.4.2.4) (EC 3.1.3.13) (Phosphoglycerate mutase isozyme B) (PGAM-B) (BPG-dependent PGAM 1)	Pgam1	612	746	35	31
Q8BG95	Protein phosphatase 1 regulatory subunit 12B (Myosin phosphatase-targeting subunit 2)	Ppp1r12b (Mypt2)	25	24	25	22
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
P70195	Proteasome subunit beta type-7 (EC 3.4.25.1) (Proteasome subunit Z) (Macropain chain Z) (Multicatalytic endopeptidase complex chain Z)	Psmb7 (Mmc14)	39	40	8	7
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q924C1	Exportin-5 (Exp5) (Ran-binding protein 21)	Xpo5 (Kiaa1291) (Ranbp21)	20	62	15	13
P21550	Beta-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Muscle-specific enolase) (MSE) (Skeletal muscle enolase) (Enolase 3)	Eno3 (Eno-3)	313	146	30	26
Q11011	Puromycin-sensitive aminopeptidase (PSA) (EC 3.4.11.-)	Npepps (Psa)	71	141	30	26
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32

Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPIase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
P97784	Cryptochrome-1	Cry1	52	42	21	18
Q9R194	Cryptochrome-2	Cry2 (Kiaa0658)	52	42	21	18
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
P46664	Adenylosuccinate synthetase isozyme 2 (AMPSase 2) (AdSS 2) (EC 6.3.4.4) (Adenylosuccinate synthetase, non-muscle isozyme) (Adenylosuccinate synthetase, acidic isozyme) (IMP--aspartate ligase 2)	Adss (Adss2)	36	66	12	10

Q99PP7	E3 ubiquitin-protein ligase TRIM33 (EC 6.3.2.-) (Tripartite motif-containing protein 33) (Transcription intermediary factor 1-gamma) (TIF1-gamma) (Ectodermin homolog)	Trim33 (Kiaa1113)	33	25	12	10
Q05816	Fatty acid-binding protein, epidermal (E-FABP) (Fatty acid-binding protein 5) (Psoriasis-associated fatty acid-binding protein homolog) (PA-FABP) (Keratinocyte lipid-binding protein)	Fabp5 (Fabpe) (Klbp) (Mal1)	331	206	18	15
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
Q64514	Tripeptidyl-peptidase 2 (EC 3.4.14.10) (Tripeptidyl-peptidase II) (TPP-II) (Tripeptidyl aminopeptidase)	Tpp2	54	76	24	20
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
P11531	Dystrophin	Dmd	25	16	66	55
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
P19096	Fatty acid synthase (EC 2.3.1.85) [Includes: [Acyl-carrier-protein] S-acetyltransferase (EC 2.3.1.38); [Acyl-carrier-protein] S-malonyltransferase (EC 2.3.1.39); 3-oxoacyl-[acyl-carrier-protein] synthase (EC 2.3.1.41); 3-oxoacyl-[acyl-carrier-protein] reductase (EC 1.1.1.100); 3-hydroxypalmitoyl-[acyl-carrier-protein] dehydratase (EC 4.2.1.61); Enoyl-[acyl-carrier-protein] reductase (EC 1.3.1.10); Oleoyl [acyl-carrier-protein] hydrolase (EC 3.1.2.14)]	Fasn	1869	1524	163	135

Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
Q6ZQ38	Cullin-associated NEDD8-dissociated protein 1 (Cullin-associated and neddylation-dissociated protein 1) (p120 CAND1)	Cand1 (D10Erd516e) (Kiaa0829)	221	246	33	27
P42227	Signal transducer and activator of transcription 3 (Acute-phase response factor)	Stat3 (Aprf)	16	28	33	27
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
Q62407	Striated muscle-specific serine/threonine protein kinase (EC 2.7.11.1) (Aortic preferentially expressed protein 1) (APEG-1)	Speg (Apeg1) (Kiaa1297)	26	20	31	25
P17182	Alpha-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Non-neural enolase) (NNE) (Enolase 1)	Eno1 (Eno-1)	976	802	62	50

P54923	[Protein ADP-ribosylarginine] hydrolase (ADP-ribosylarginine hydrolase) (EC 3.2.2.19) (ADP-ribose-L-arginine cleaving enzyme)	Adprh (Arh1)	20	41	15	12
P00342	L-lactate dehydrogenase C chain (LDH-C) (EC 1.1.1.27) (LDH testis subunit) (LDH-X)	Ldhc (Ldh-3) (Ldh3)	97	122	15	12
Q9Z2U0	Proteasome subunit alpha type-7 (EC 3.4.25.1) (Proteasome subunit RC6-1)	Psm7	121	253	15	12
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q99MD9	Nuclear autoantigenic sperm protein (NASP)	Nasp	365	293	34	27
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
Q80Z16	E3 ubiquitin-protein ligase LRSAM1 (EC 6.3.2.-) (Leucine-rich repeat and sterile alpha motif-containing protein 1) (Tsg101-associated ligase)	Lrsam1	19	35	19	15
Q80UN9	tRNA isopentenyltransferase, mitochondrial (IPTase) (EC 2.5.1.8) (Isopentenyl-diphosphate:tRNA isopentenyltransferase) (IPP transferase) (IPPT)	Trit1 (lpt)	31	24	19	15
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
Q6A078	Centrosomal protein of 290 kDa (Cep290) (Nephrocystin-6)	Cep290 (Kiaa0373) (Nphp6)	32	57	85	66

P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
P06151	L-lactate dehydrogenase A chain (LDH-A) (EC 1.1.1.27) (LDH muscle subunit) (LDH-M)	Ldha (Ldh-1) (Ldh1)	1033	421	74	57
Q9CZW4	Long-chain-fatty-acid--CoA ligase 3 (EC 6.2.1.3) (Long-chain acyl-CoA synthetase 3) (LACS 3)	Acs13 (Acs3) (Fac13)	41	37	13	10
P05063	Fructose-bisphosphate aldolase C (EC 4.1.2.13) (Brain-type aldolase) (Aldolase 3) (Zebrin II) (Scrapie-responsive protein 2)	Aldoc (Aldo3) (Scrg2)	35	51	13	10
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
P47856	Glucosamine--fructose-6-phosphate aminotransferase [isomerizing] 1 (EC 2.6.1.16) (Glutamine:fructose 6 phosphate amidotransferase 1) (GFAT 1) (GFAT1) (D-fructose-6-phosphate amidotransferase 1) (Hexosephosphate aminotransferase 1)	Gfpt1 (Gfpt)	17	29	17	13
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
P70670	Nascent polypeptide-associated complex subunit alpha, muscle-specific form (Alpha-NAC, muscle-specific form)	Naca (Gm1878)	22	130	29	22

P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
P25233	Necdin	Ndn	30	23	16	12
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27
Q6P3Y5	Zinc finger protein 280C (Suppressor of hairy wing homolog 3)	Znf280c (Kiaa1584) (Suhw3) (Zfp280c)	87	142	43	32
P58681	Toll-like receptor 7	Tlr7	27	33	23	17
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8

P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
Q64237	Dopamine beta-hydroxylase (EC 1.14.17.1) (Dopamine beta-monooxygenase) [Cleaved into: Soluble dopamine beta-hydroxylase]	Dbh	44	23	7	5
Q9CQ65	S-methyl-5'-thioadenosine phosphorylase (EC 2.4.2.28) (5'-methylthioadenosine phosphorylase) (MTA phosphorylase) (MTAPase)	Mtap	48	36	7	5
Q99LG2	Transportin-2 (Karyopherin beta-2b)	Tnpo2	42	32	7	5
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptprn (Ptp35)	30	18	14	10
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
Q03172	Zinc finger protein 40 (Transcription factor alphaA-CRYBP1) (Alpha A-crystallin-binding protein I) (Alpha A-CRYBP1)	Hivep1 (Cryabp1) (Znf40)	25	24	21	15
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
P17751	Triosephosphate isomerase (TIM) (EC 5.3.1.1) (Triose-phosphate isomerase)	Tpi1 (Tpi)	706	519	35	25



Q920E5	Farnesyl pyrophosphate synthetase (FPP synthetase) (FPS) (Farnesyl diphosphate synthetase) (Cholesterol-regulated 39 kDa protein) (CR 39) [Includes: Dimethylallyltransferase (EC 2.5.1.1); Geranyltransferase (EC 2.5.1.10)]	Fdps	107	43	17	12
Q60692	Proteasome subunit beta type-6 (EC 3.4.25.1) (Proteasome delta chain) (Macropain delta chain) (Multicatalytic endopeptidase complex delta chain) (Proteasome subunit Y)	Psm6 (Lmp19)	33	89	17	12
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
Q7TQI3	Ubiquitin thioesterase OTUB1 (EC 3.1.2.-) (Otubain-1) (OTU domain-containing ubiquitin aldehyde-binding protein 1) (Ubiquitin-specific-processing protease OTUB1) (Deubiquitinating enzyme OTUB1)	Otub1	152	109	10	7
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q52KI8	Serine/arginine repetitive matrix protein 1 (Plenty-of-prolines 101)	Srrm1 (Pop101)	22	73	29	20
Q99PV0	Pre-mRNA-processing-splicing factor 8 (Splicing factor Prp8)	Prpf8 (Prp8)	28	29	51	35
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
Q80TP3	E3 ubiquitin-protein ligase UBR5 (EC 6.3.2.-) (E3 ubiquitin-protein ligase, HECT domain-containing 1) (Hyperplastic discs protein homolog)	Ubr5 (Edd) (Edd1) (Kiaa0896)	27	17	43	29
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2

Q8C9S8	Cysteine protease ATG4A (EC 3.4.22.-) (Autophagy-related protein 4 homolog A) (Autophagin-2) (Autophagy-related cysteine endopeptidase 2) (AUT-like 2 cysteine endopeptidase)	Atg4a (Apg4a) (Autl2)	26	21	6	4
Q99LD8	N(G),N(G)-dimethylarginine dimethylaminohydrolase 2 (Dimethylarginine dimethylaminohydrolase 2) (DDAH-2) (EC 3.5.3.18) (DDAHII) (Dimethylargininase-2)	Ddah2	103	92	9	6
P43275	Histone H1.1 (H1 VAR.3) (H1a)	Hist1h1a (H1f1)	28	90	9	6
Q9WV07	Epidermis-type lipoxygenase 3 (e-LOX-3) (EC 1.13.11.-)	Aloxe3	25	22	9	6
P61979	Heterogeneous nuclear ribonucleoprotein K (hnRNP K)	Hnrnpk (Hnrpk)	225	46	18	12
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
O88444	Adenylate cyclase type 1 (EC 4.6.1.1) (Adenylate cyclase type I) (ATP pyrophosphate-lyase 1) (Adenylyl cyclase 1) (Ca(2+)/calmodulin-activated adenylyl cyclase)	Adcy1	33	31	26	17
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
Q924W6	Tripartite motif-containing protein 66 (Transcriptional intermediary factor 1 delta)	Trim66 (Tif1d)	28	18	23	15
O70435	Proteasome subunit alpha type-3 (EC 3.4.25.1) (Proteasome component C8) (Macropain subunit C8) (Multicatalytic endopeptidase complex subunit C8) (Proteasome subunit K)	Psma3	95	76	14	9
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7

Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
Q9QZ09	Putative homeodomain transcription factor 1	Phtf1 (Phtf)	29	24	8	5
Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (Ubpy)	29	23	24	15
P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
P16125	L-lactate dehydrogenase B chain (LDH-B) (EC 1.1.1.27) (LDH heart subunit) (LDH-H)	Ldhb (Ldh-2) (Ldh2)	315	214	34	21
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
O88291	Zinc finger protein 326 (Zinc finger protein-associated with nuclear matrix of 75 kDa)	Znf326 (Zan75) (Zfp326)	41	55	5	3
Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6

Q9EQZ6	Rap guanine nucleotide exchange factor 4 (cAMP-regulated guanine nucleotide exchange factor II) (cAMP-GEFII) (Exchange factor directly activated by cAMP 2) (Epac 2) (cAMP-dependent Rap1 guanine-nucleotide exchange factor)	Rapgef4 (Cgef2) (Epac2)	47	23	20	12
Q8R4K8	Pappalysin-1 (EC 3.4.24.79) (Pregnancy-associated plasma protein A) (PAPP-A) (Insulin-like growth factor-dependent IGF-binding protein 4 protease) (IGF-dependent IGFBP-4 protease) (IGFBP-4ase)	Pappa	41	43	25	15
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P09041	Phosphoglycerate kinase 2 (EC 2.7.2.3) (Phosphoglycerate kinase, testis specific)	Pgk2 (Pgk-2)	162	73	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
P62900	60S ribosomal protein L31	Rpl31	124	62	12	7

Q9JI78	Peptide-N(4)-(N-acetyl-beta-glucosaminy)asparagine amidase (PNGase) (mPNGase) (EC 3.5.1.52) (Peptide:N-glycanase) (N-glycanase 1)	Ngly1	29	32	19	11
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
P53762	Aryl hydrocarbon receptor nuclear translocator (ARNT protein) (Dioxin receptor, nuclear translocator) (Hypoxia-inducible factor 1 beta) (HIF-1 beta)	Arnt	25	22	7	4
P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4
P26043	Radixin (ESP10)	Rdx	127	106	23	13
P49722	Proteasome subunit alpha type-2 (EC 3.4.25.1) (Proteasome component C3) (Macropain subunit C3) (Multicatalytic endopeptidase complex subunit C3)	Psm2 (Lmpc3)	188	103	16	9
Q9R1X4	Protein timeless homolog (mTim)	Timeless (Tim1) (Timeless1)	22	25	16	9
P97461	40S ribosomal protein S5	Rps5	89	33	32	18
Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
Q64105	Sepiapterin reductase (SPR) (EC 1.1.1.153)	Spr	43	27	9	5
Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27

	P17918	Proliferating cell nuclear antigen (PCNA) (Cyclin)	Pcna	273	207	20	11
	O35664	Interferon-alpha/beta receptor beta chain (Interferon alpha/beta receptor 2) (IFN-alpha-REC) (Type I interferon receptor) (IFN-R)	Ifnar2	37	21	11	6
	Q9WUJ8	Origin recognition complex subunit 6	Orc6l (Orc6)	59	37	13	7
	Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
	O88844	Isocitrate dehydrogenase [NADP] cytoplasmic (IDH) (EC 1.1.1.42) (Cytosolic NADP-isocitrate dehydrogenase) (Oxalosuccinate decarboxylase) (NADP(+)-specific ICDH) (IDP)	Idh1	155	163	15	8
	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
	P11103	Poly [ADP-ribose] polymerase 1 (PARP-1) (EC 2.4.2.30) (ADPRT) (NAD(+) ADP-ribosyltransferase 1) (Poly[ADP-ribose] synthetase 1) (msPARP)	Parp1 (Adprp) (Adprt) (Adprt1)	21	26	17	9
	Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
	Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwnk4)	23	33	29	15
macromolecule metabolic process	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	Q9CXW3	Calcyclin-binding protein (CacyBP) (Siah-interacting protein)	Cacybp (Sip)	57	39	7	13
	P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22
	Q7TSG3	F-box only protein 5 (Early mitotic inhibitor 1)	Fbxo5 (Emi1)	15	27	5	9

Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
P17742	Peptidyl-prolyl cis-trans isomerase A (PPIase A) (Rotamase A) (EC 5.2.1.8) (Cyclophilin A) (Cyclosporin A-binding protein) (SP18)	Ppia	855	1549	38	66
Q9Z1R2	Large proline-rich protein BAT3 (HLA-B-associated transcript 3)	Bat3	80	49	15	26
Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
Q9D009	Putative octanoyltransferase, mitochondrial (EC 2.3.1.181) (Octanoyl-[acyl-carrier-protein]-protein N-octanoyltransferase) (Lipoyl/octanoyl transferase) (Lipoate-protein ligase B)		38	42	11	19
Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
Q9ERK4	Exportin-2 (Exp2) (Importin-alpha re-exporter) (Chromosome segregation 1-like protein)	Cse1l (Xpo2)	42	153	26	44
P52480	Pyruvate kinase isozymes M1/M2 (EC 2.7.1.40) (Pyruvate kinase muscle isozyme)	Pkm2 (Pk3) (Pykm)	1954	3481	138	233
Q8CGP2	Histone H2B type 1-P	Hist1h2bp	436	999	46	77
P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
P62960	Nuclease-sensitive element-binding protein 1 (Y-box-binding protein 1) (Y-box transcription factor) (YB-1) (CCAAT-binding transcription factor I subunit A) (CBF-A) (Enhancer factor I subunit A) (EFI-A) (DNA-binding protein B) (DBPB)	Ybx1 (Msy-1) (Msy1) (Nsep1) (Yb1)	56	126	6	10
P35980	60S ribosomal protein L18	Rpl18	32	22	51	85

P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78
Q64475	Histone H2B type 1-B (h2B-143)	Hist1h2bb	436	999	46	75
Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
Q80Y17	Lethal(2) giant larvae protein homolog 1 (LLGL) (Mlg1) (Mgl-1)	Llg1 (Llg1h)	30	29	7	11
Q61990	Poly(rC)-binding protein 2 (Alpha-CP2) (Putative heterogeneous nuclear ribonucleoprotein X) (hnRNP X) (CTBP) (CBP)	Pcbp2 (Cbp) (HnrnpX) (Hnrpx)	29	194	7	11
P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23



P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
Q8K386	Ras-related protein Rab-15	Rab15	44	74	4	6
O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwnk1)	56	36	18	27
P53657	Pyruvate kinase isozymes R/L (EC 2.7.1.40) (L PK)	Pklr	144	270	26	38
P97868	Retinoblastoma-binding protein 6 (p53-associated cellular protein of testis) (Proliferation potential-related protein) (Protein P2P-R)	Rbbp6 (P2pr) (Pact)	21	29	24	35
Q3THW5	Histone H2A.V (H2A.F/Z)	H2afv (H2av)	297	426	11	16
P99026	Proteasome subunit beta type-4 (Proteasome beta chain) (EC 3.4.25.1) (Macropain beta chain) (Multicatalytic endopeptidase complex beta chain) (Proteasome chain 3)	Psmb4 (Lmp3)	93	289	11	16
Q9QZ39	Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 1 (EC 2.4.99.3) (GalNAc alpha-2,6-sialyltransferase I) (ST6GalNAc I) (Sialyltransferase 7A)	St6galnac1 (Siat7a)	27	18	11	16
P60335	Poly(rC)-binding protein 1 (Alpha-CP1) (hnRNP-E1)	Pcbp1	56	350	9	13
P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10

P12813	Nuclear receptor subfamily 4 group A member 1 (Orphan nuclear receptor HMR) (Nuclear hormone receptor NUR/77) (N10 nuclear protein)	Nr4a1 (Gfrp) (Hmr) (N10) (Nur77)	61	31	7	10
Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
P70696	Histone H2B type 1-A (Histone H2B, testis) (Testis-specific histone H2B)	Hist1h2ba (Th2b)	146	378	37	51
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
P70338	Zinc finger protein Gfi-1 (Growth factor independent protein 1)	Gfi1 (Gfi-1)	45	39	17	23
Q61789	Laminin subunit alpha-3 (Nicein subunit alpha)	Lama3	26	26	37	50
Q9EPL8	Importin-7 (Imp7) (Ran-binding protein 7) (RanBP7)	Ipo7 (Ranbp7)	25	121	9	12

Q9WTX2	Interferon-inducible double stranded RNA-dependent protein kinase activator A (Protein kinase, interferon-inducible double stranded RNA-dependent activator) (Protein activator of the interferon-induced protein kinase) (PKR-associated protein X) (PKR-associating protein X) (RAX)	Prkra (Rax)	28	39	9	12
Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
P70168	Importin subunit beta-1 (Karyopherin subunit beta-1) (Nuclear factor P97) (Pore targeting complex 97 kDa subunit) (PTAC97) (SCG)	Kpnb1 (Impnb)	48	17	13	17
Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
P63163	Small nuclear ribonucleoprotein-associated protein N (snRNP-N) (Sm protein N) (Sm-N) (SmN) (Sm-D) (Tissue-specific-splicing protein)	Snrpn (Smn)	38	17	7	9
Q7TQ07	DNA polymerase nu (EC 2.7.7.7)	Poln	20	39	14	18
P05064	Fructose-bisphosphate aldolase A (EC 4.1.2.13) (Muscle-type aldolase) (Aldolase 1)	Aldoa (Aldo1)	211	567	36	46

Q07133	Histone H1t (Testicular H1 histone)	Hist1h1t (H1ft) (H1t)	46	72	54	69
Q923B1	Lariat debranching enzyme (EC 3.1.-.-)	Dbr1	28	29	15	19
P27661	Histone H2A.x (H2a/x)	H2afx (H2a.x) (H2ax) (Hist5-2ax)	301	426	15	19
Q62093	Splicing factor, arginine/serine-rich 2 (Splicing factor SC35) (SC-35) (Splicing component, 35 kDa) (Protein PR264) (Putative myelin regulatory factor 1) (MRF-1)	Sfrs2 (Pr264) (Sfrs10)	184	117	15	19
P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
Q60716	Prolyl 4-hydroxylase subunit alpha-2 (EC 1.14.11.2) (4-PH alpha-2) (Procollagen-proline,2-oxoglutarate-4-dioxygenase subunit alpha-2)	P4ha2	22	27	8	10
P17183	Gamma-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Neural enolase) (Neuron-specific enolase) (NSE) (Enolase 2)	Eno2 (Eno-2)	228	181	12	15
Q811J3	Iron-responsive element-binding protein 2 (IRE BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16

Q61466	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 1 (SWI/SNF complex 60 kDa subunit) (60 kDa BRG-1/Brm-associated factor subunit A) (BRG1-associated factor 60A) (D15KZ1 protein)	Smarcd1 (Baf60a) (D15Kz1)	27	29	13	16
P59270	Galactosylgalactosylxylosylprotein 3-beta-glucuronosyltransferase 2 (EC 2.4.1.135) (Beta-1,3-glucuronyltransferase 2) (UDP-glucuronosyltransferase-S) (Glucuronosyltransferase-S) (GlcAT-S) (GlcAT-D)	B3gat2 (Glcats)	29	16	9	11
Q8VII8	Mineralocorticoid receptor (MR) (Nuclear receptor subfamily 3 group C member 2)	Nr3c2 (Mlr)	28	22	18	22
Q9R1P0	Proteasome subunit alpha type-4 (EC 3.4.25.1) (Proteasome component C9) (Macropain subunit C9) (Multicatalytic endopeptidase complex subunit C9) (Proteasome subunit L)	Psm4	29	151	14	17
Q9CZY3	Ubiquitin-conjugating enzyme E2 variant 1 (UEV-1) (CROC-1)	Ube2v1 (Croc1)	83	163	166	201
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
O35618	Protein Mdm4 (p53-binding protein Mdm4) (Mdm2-like p53-binding protein) (Protein Mdmx) (Double minute 4 protein)	Mdm4 (Mdmx)	17	29	5	6
Q6PDM2	Splicing factor, arginine/serine-rich 1 (ASF/SF2)	Sfrs1	24	91	5	6
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12

P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q8BFY9	Transportin-1 (Importin beta-2) (Karyopherin beta-2)	Tnp1 (Kpnb2)	54	43	10	12
Q9QUR6	Prolyl endopeptidase (PE) (EC 3.4.21.26) (Post-proline cleaving enzyme)	Prep (Pep)	56	20	15	18
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
P54103	DnaJ homolog subfamily C member 2 (Zuotin-related factor 1) (Mouse Id associate 1) (MIDA1)	Dnajc2 (Mida1) (Zrf1)	23	27	11	13
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
Q61122	NGFI-A-binding protein 1 (EGR-1-binding protein 1)	Nab1	30	25	6	7
Q6GSS7	Histone H2A type 2-A (H2A.2) (H2a-614) (H2a-615)	Hist2h2aa1; Hist2h2aa2	505	763	18	21
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
Q9JKP5	Muscleblind-like protein 1 (Triplet-expansion RNA-binding protein)	Mbnl1 (Exp) (Mbnl)	45	63	244	281
Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8

Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16
Q6A4J8	Ubiquitin carboxyl-terminal hydrolase 7 (EC 3.1.2.15) (Ubiquitin thioesterase 7) (Ubiquitin-specific-processing protease 7) (Deubiquitinating enzyme 7) (Herpesvirus-associated ubiquitin-specific protease) (mHAUSP)	Usp7 (Hausp)	27	18	14	16
P58660	Caspase recruitment domain-containing protein 10 (Bcl10-interacting MAGUK protein 1) (Bimp1)	Card10 (Bimp1)	33	23	15	17
P97820	Mitogen-activated protein kinase kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
Q921M3	Splicing factor 3B subunit 3 (Spliceosome-associated protein 130) (SAP 130) (Pre-mRNA splicing factor SF3b 130 kDa subunit) (SF3b130)	Sf3b3 (Kiaa0017)	16	34	24	27
Q9WUF3	CASP8-associated protein 2 (FLICE-associated huge protein)	Casp8ap2 (Flash)	28	16	26	29

Q64467	Glyceraldehyde-3-phosphate dehydrogenase, testis-specific (EC 1.2.1.12) (Spermatogenic glyceraldehyde-3-phosphate dehydrogenase) (Spermatogenic cell-specific glyceraldehyde 3-phosphate dehydrogenase 2) (GAPDH-2)	Gapdhs (Gapds) (Gapds)	75	781	26	29
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a1) (Stn)	1275	1549	258	285
Q62446	FK506-binding protein 3 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (25 kDa FKBP) (FKBP-25) (Rapamycin-selective 25 kDa immunophilin)	Fkbp3 (Fkbp25)	31	31	10	11
O55234	Proteasome subunit beta type-5 (EC 3.4.25.1) (Proteasome epsilon chain) (Macropain epsilon chain) (Multicatalytic endopeptidase complex epsilon chain) (Proteasome subunit X) (Proteasome chain 6)	Psmb5	168	227	10	11
Q93092	Transaldolase (EC 2.2.1.2)	Taldo1 (Tal) (Taldo)	20	93	10	11
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12



P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
P27546	Microtubule-associated protein 4 (MAP-4)	Map4 (Mtap4)	94	41	33	36
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P70298	Homeobox protein cut-like 2 (Cut-like 2) (Homeobox protein Cux-2)	Cux2 (Cutl2)	30	22	12	13
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
P08113	Endoplasmic reticulum chaperone protein (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra-1) (Tra1)	221	298	25	27

Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
P70398	Probable ubiquitin carboxyl-terminal hydrolase FAF-X (EC 3.1.2.15) (Ubiquitin thioesterase FAF-X) (Ubiquitin-specific-processing protease FAF-X) (Deubiquitinating enzyme FAF-X) (Fat facets protein-related, X-linked) (Ubiquitin-specific protease 9, X chromosome) (Ubiquitin carboxyl-terminal hydrolase FAM) (Fat facets homolog)	Usp9x (Faf1) (Fam)	42	28	57	61
Q8BKX6	Serine/threonine-protein kinase SMG1 (SMG-1) (EC 2.7.11.1)	Smg1 (Kiaa0421)	33	27	30	32
P16858	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) (EC 1.2.1.12)	Gapdh (Gapd)	1514	1781	84	89
Q8VI56	Low-density lipoprotein receptor-related protein 4 (LDLR dan)	Lrp4 (Kiaa0816)	77	30	19	20
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
Q920R0	Alsin (Amyotrophic lateral sclerosis protein 2 homolog)	Als2	74	88	72	75
Q62504	Msx2-interacting protein (SPEN homolog) (SMART/HDAC1-associated repressor protein)	Spn (Kiaa0929) (Mint) (Sharp)	27	18	72	75
O35973	Period circadian protein homolog 1 (Circadian clock protein PERIOD 1) (Circadian pacemaker protein Rigi) (mPER1)	Per1 (Per) (Rigi)	29	21	27	28

P62281	40S ribosomal protein S11	Rps11	166	132	27	28
Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165
P62141	Serine/threonine-protein phosphatase PP1-beta catalytic subunit (PP-1B) (EC 3.1.3.16)	Ppp1cb	177	57	4	4
P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5
Q3TXZ1	Zinc finger protein 575	Znf575 (Zfp575)	30	25	5	5
Q8VCZ3	THAP domain-containing protein 7	Thap7	26	18	6	6
Q9R1P1	Proteasome subunit beta type-3 (EC 3.4.25.1) (Proteasome theta chain) (Proteasome chain 13) (Proteasome component C10-II)	Psmb3	87	135	7	7
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
Q6P5F9	Exportin-1 (Exp1) (Chromosome region maintenance 1 protein homolog)	Xpo1 (Crm1)	19	43	9	9
Q9DAI4	Zinc finger and BTB domain-containing protein 43 (Zinc finger protein 297B)	Zbtb43 (Kiaa0414) (Zfp297b) (Znf297b)	23	51	9	9
Q9CQ60	6-phosphogluconolactonase (6PGL) (EC 3.1.1.31)	Pgls	148	41	11	11

O09061	Proteasome subunit beta type-1 (EC 3.4.25.1) (Proteasome component C5) (Macropain subunit C5) (Multicatalytic endopeptidase complex subunit C5) (Proteasome gamma chain)	Psmb1	84	94	11	11
Q9DB77	Cytochrome b-c1 complex subunit 2, mitochondrial (Ubiquinol-cytochrome-c reductase complex core protein 2) (Core protein II) (Complex III subunit 2)	Uqcrc2	29	20	13	13
Q9JIF7	Coatomer subunit beta (Beta-coat protein) (Beta-COP)	Copb1 (Copb)	37	22	15	15
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q01098	Glutamate [NMDA] receptor subunit epsilon-3 (N-methyl D-aspartate receptor subtype 2C) (NMDAR2C) (NR2C)	Grin2c	18	33	15	15
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
P30681	High mobility group protein B2 (High mobility group protein 2) (HMG-2)	Hmgb2 (Hmg2)	94	222	24	24
Q80UK8	Integrator complex subunit 2 (Int2)	Ints2 (Kiaa1287)	16	27	24	24
Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55

P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (Csma) (Eif3) (Eif3s10)	199	166	58	56
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
P16406	Glutamyl aminopeptidase (EC 3.4.11.7) (EAP) (Aminopeptidase A) (APA) (BP-1/6C3 antigen) (CD antigen CD249)	Enpep	98	90	48	46
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
Q6ZPK0	PHD finger protein 21A (BRAF35-HDAC complex protein BHC80) (mBHC80) (BHC80a)	Phf21a (Bhc80) (Kiaa1696) (Pftf1)	28	37	20	19
P03966	N-myc proto-oncogene protein	Mycn (Nmyc) (Nmyc1)	65	46	18	17
Q8BTI8	Serine/arginine repetitive matrix protein 2	Srrm2 (Kiaa0324)	78	70	92	86
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36

P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q9WTR0	Matrix metalloproteinase-16 (MMP-16) (EC 3.4.24.-) (Membrane-type matrix metalloproteinase 3) (MT-MMP 3) (MTMMP3) (Membrane-type-3 matrix metalloproteinase) (MT3-MMP) (MT3MMP)	Mmp16	17	36	11	10
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
Q9QZH3	Peptidyl-prolyl cis-trans isomerase E (PPIase E) (Rotamase E) (EC 5.2.1.8) (Cyclophilin E) (Cyclophilin-33)	Ppie (Cyp33)	28	35	10	9
Q925Q8	Dachshund homolog 2 (Dach2)	Dach2	22	30	9	8
P43277	Histone H1.3 (H1 VAR.4) (H1d)	Hist1h1d (H1f3)	78	99	18	16
Q68FD5	Clathrin heavy chain 1	Cltc	944	884	88	78
Q9DBJ1	Phosphoglycerate mutase 1 (EC 5.4.2.1) (EC 5.4.2.4) (EC 3.1.3.13) (Phosphoglycerate mutase isozyme B) (PGAM-B) (BPG-dependent PGAM 1)	Pgam1	612	746	35	31

Q8BG95	Protein phosphatase 1 regulatory subunit 12B (Myosin phosphatase-targeting subunit 2)	Ppp1r12b (Mypt2)	25	24	25	22
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
P70195	Proteasome subunit beta type-7 (EC 3.4.25.1) (Proteasome subunit Z) (Macropain chain Z) (Multicatalytic endopeptidase complex chain Z)	Psmb7 (Mmc14)	39	40	8	7
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
P21550	Beta-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Muscle-specific enolase) (MSE) (Skeletal muscle enolase) (Enolase 3)	Eno3 (Eno-3)	313	146	30	26
Q11011	Puromycin-sensitive aminopeptidase (PSA) (EC 3.4.11.-)	Npepps (Psa)	71	141	30	26
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPIase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
P97784	Cryptochrome-1	Cry1	52	42	21	18

Q9R194	Cryptochrome-2	Cry2 (Kiaa0658)	52	42	21	18
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
P11881	Inositol 1,4,5-trisphosphate receptor type 1 (Type 1 inositol 1,4,5-trisphosphate receptor) (Type 1 InsP3 receptor) (IP3 receptor isoform 1) (InsP3R1) (Inositol 1,4,5-trisphosphate-binding protein P400) (Purkinje cell protein 1) (Protein PCD-6)	Itpr1 (Insp3r) (Pcd6) (Pcp1)	37	42	48	41
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
Q99PP7	E3 ubiquitin-protein ligase TRIM33 (EC 6.3.2.-) (Tripartite motif-containing protein 33) (Transcription intermediary factor 1-gamma) (TIF1-gamma) (Ectodermin homolog)	Trim33 (Kiaa1113)	33	25	12	10
Q05816	Fatty acid-binding protein, epidermal (E-FABP) (Fatty acid-binding protein 5) (Psoriasis-associated fatty acid-binding protein homolog) (PA-FABP) (Keratinocyte lipid-binding protein)	Fabp5 (Fabpe) (Klbp) (Mal1)	331	206	18	15



P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
Q64514	Tripeptidyl-peptidase 2 (EC 3.4.14.10) (Tripeptidyl-peptidase II) (TPP-II) (Tripeptidyl aminopeptidase)	Tpp2	54	76	24	20
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
P11531	Dystrophin	Dmd	25	16	66	55
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
Q6ZQ38	Cullin-associated NEDD8-dissociated protein 1 (Cullin-associated and neddylation-dissociated protein 1) (p120 CAND1)	Cand1 (D10Erd516e) (Kiaa0829)	221	246	33	27
P42227	Signal transducer and activator of transcription 3 (Acute-phase response factor)	Stat3 (Aprf)	16	28	33	27
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
Q62407	Striated muscle-specific serine/threonine protein kinase (EC 2.7.11.1) (Aortic preferentially expressed protein 1) (APEG-1)	Speg (Apeg1) (Kiaa1297)	26	20	31	25

P17182	Alpha-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Non-neural enolase) (NNE) (Enolase 1)	Eno1 (Eno-1)	976	802	62	50
Q5XJY5	Coatomer subunit delta (Delta-coat protein) (Delta-COP) (Archain)	Arcn1 (Copd)	61	45	10	8
P54923	[Protein ADP-ribosylarginine] hydrolase (ADP-ribosylarginine hydrolase) (EC 3.2.2.19) (ADP-ribose-L-arginine cleaving enzyme)	Adprh (Arh1)	20	41	15	12
P00342	L-lactate dehydrogenase C chain (LDH-C) (EC 1.1.1.27) (LDH testis subunit) (LDH-X)	Ldhc (Ldh-3) (Ldh3)	97	122	15	12
Q9Z2U0	Proteasome subunit alpha type-7 (EC 3.4.25.1) (Proteasome subunit RC6-1)	PsmA7	121	253	15	12
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q99MD9	Nuclear autoantigenic sperm protein (NASP)	Nasp	365	293	34	27
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
Q80Z16	E3 ubiquitin-protein ligase LRSAM1 (EC 6.3.2.-) (Leucine-rich repeat and sterile alpha motif-containing protein 1) (Tsg101-associated ligase)	Lrsam1	19	35	19	15
Q80UN9	tRNA isopentenyltransferase, mitochondrial (IPTase) (EC 2.5.1.8) (Isopentenyl-diphosphate:tRNA isopentenyltransferase) (IPP transferase) (IPPT)	Trit1 (Ipt)	31	24	19	15
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123

Q6A078	Centrosomal protein of 290 kDa (Cep290) (Nephrocystin-6)	Cep290 (Kiaa0373) (Nphp6)	32	57	85	66
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
P06151	L-lactate dehydrogenase A chain (LDH-A) (EC 1.1.1.27) (LDH muscle subunit) (LDH-M)	Ldha (Ldh-1) (Ldh1)	1033	421	74	57
P05063	Fructose-bisphosphate aldolase C (EC 4.1.2.13) (Brain-type aldolase) (Aldolase 3) (Zebrin II) (Scrapie-responsive protein 2)	Aldoc (Aldo3) (Scrg2)	35	51	13	10
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
P47856	Glucosamine--fructose-6-phosphate aminotransferase [isomerizing] 1 (EC 2.6.1.16) (Glutamine:fructose 6 phosphate amidotransferase 1) (GFAT 1) (GFAT1) (D-fructose-6-phosphate amidotransferase 1) (Hexosephosphate aminotransferase 1)	Gfpt1 (Gfpt)	17	29	17	13
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
P70670	Nascent polypeptide-associated complex subunit alpha, muscle-specific form (Alpha-NAC, muscle-specific form)	Naca (Gm1878)	22	130	29	22

P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
P25233	Necdin	Ndn	30	23	16	12
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
Q8K1F9	Lactase-like protein (Klotho/lactase-phlorizin hydrolase-related protein)	Lctl (Klph)	27	21	24	18
Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27
Q6P3Y5	Zinc finger protein 280C (Suppressor of hairy wing homolog 3)	Znf280c (Kiaa1584) (Suhw3) (Zfp280c)	87	142	43	32
P58681	Toll-like receptor 7	Tlr7	27	33	23	17
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24

Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
Q99LG2	Transportin-2 (Karyopherin beta-2b)	Tnpo2	42	32	7	5
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptpn (Ptp35)	30	18	14	10
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
Q03172	Zinc finger protein 40 (Transcription factor alphaA-CRYBP1) (Alpha A-crystallin-binding protein I) (Alpha A-CRYBP1)	Hivep1 (Cryabp1) (Znf40)	25	24	21	15
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
P17751	Triosephosphate isomerase (TIM) (EC 5.3.1.1) (Triose-phosphate isomerase)	Tpi1 (Tpi)	706	519	35	25
Q60692	Proteasome subunit beta type-6 (EC 3.4.25.1) (Proteasome delta chain) (Macropain delta chain) (Multicatalytic endopeptidase complex delta chain) (Proteasome subunit Y)	Psm6 (Lmp19)	33	89	17	12
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
Q7TQI3	Ubiquitin thioesterase OTUB1 (EC 3.1.2.-) (Otubain-1) (OTU domain-containing ubiquitin aldehyde-binding protein 1) (Ubiquitin-specific-processing protease OTUB1) (Deubiquitinating enzyme OTUB1)	Otub1	152	109	10	7
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q52KI8	Serine/arginine repetitive matrix protein 1 (Plenty-of-prolines 101)	Srrm1 (Pop101)	22	73	29	20
Q99PV0	Pre-mRNA-processing-splicing factor 8 (Splicing factor Prp8)	Prpf8 (Prp8)	28	29	51	35
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60

Q80TP3	E3 ubiquitin-protein ligase UBR5 (EC 6.3.2.-) (E3 ubiquitin-protein ligase, HECT domain-containing 1) (Hyperplastic discs protein homolog)	Ubr5 (Edd) (Edd1) (Kiaa0896)	27	17	43	29
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2
Q8C9S8	Cysteine protease ATG4A (EC 3.4.22.-) (Autophagy-related protein 4 homolog A) (Autophagin-2) (Autophagy-related cysteine endopeptidase 2) (AUT-like 2 cysteine endopeptidase)	Atg4a (Apg4a) (Autl2)	26	21	6	4
P43275	Histone H1.1 (H1 VAR.3) (H1a)	Hist1h1a (H1f1)	28	90	9	6
P61979	Heterogeneous nuclear ribonucleoprotein K (hnRNP K)	Hnrnpk (Hnrpk)	225	46	18	12
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
Q924W6	Tripartite motif-containing protein 66 (Transcriptional intermediary factor 1 delta)	Trim66 (Tif1d)	28	18	23	15
O70435	Proteasome subunit alpha type-3 (EC 3.4.25.1) (Proteasome component C8) (Macropain subunit C8) (Multicatalytic endopeptidase complex subunit C8) (Proteasome subunit K)	Psma3	95	76	14	9
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q9QZ09	Putative homeodomain transcription factor 1	Phtf1 (Phtf)	29	24	8	5

Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (UbpY)	29	23	24	15
P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
P16125	L-lactate dehydrogenase B chain (LDH-B) (EC 1.1.1.27) (LDH heart subunit) (LDH-H)	Ldhb (Ldh-2) (Ldh2)	315	214	34	21
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
O88291	Zinc finger protein 326 (Zinc finger protein-associated with nuclear matrix of 75 kDa)	Znf326 (Zan75) (Zfp326)	41	55	5	3
Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
Q9EQZ6	Rap guanine nucleotide exchange factor 4 (cAMP-regulated guanine nucleotide exchange factor II) (cAMP-GEFII) (Exchange factor directly activated by cAMP 2) (Epac 2) (cAMP-dependent Rap1 guanine-nucleotide exchange factor)	Rapgef4 (Cgef2) (Epac2)	47	23	20	12
Q8R4K8	Pappalysin-1 (EC 3.4.24.79) (Pregnancy-associated plasma protein A) (PAPP-A) (Insulin-like growth factor-dependent IGF-binding protein 4 protease) (IGF-dependent IGFBP-4 protease) (IGFBP-4ase)	Pappa	41	43	25	15
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13

P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P09041	Phosphoglycerate kinase 2 (EC 2.7.2.3) (Phosphoglycerate kinase, testis specific)	Pgk2 (Pkg-2)	162	73	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
Q9JI78	Peptide-N(4)-(N-acetyl-beta-glucosaminy)asparagine amidase (PNGase) (mPNGase) (EC 3.5.1.52) (Peptide:N-glycanase) (N-glycanase 1)	Ngly1	29	32	19	11
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
P53762	Aryl hydrocarbon receptor nuclear translocator (ARNT protein) (Dioxin receptor, nuclear translocator) (Hypoxia-inducible factor 1 beta) (HIF-1 beta)	Arnt	25	22	7	4
P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4
P26043	Radixin (ESP10)	Rdx	127	106	23	13
P49722	Proteasome subunit alpha type-2 (EC 3.4.25.1) (Proteasome component C3) (Macropain subunit C3) (Multicatalytic endopeptidase complex subunit C3)	Psm2 (Lmpc3)	188	103	16	9



Q9R1X4	Protein timeless homolog (mTim)	Timeless (Tim1) (Timeless1)	22	25	16	9
P97461	40S ribosomal protein S5	Rps5	89	33	32	18
Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27
P17918	Proliferating cell nuclear antigen (PCNA) (Cyclin)	Pcna	273	207	20	11
O35664	Interferon-alpha/beta receptor beta chain (Interferon alpha/beta receptor 2) (IFN-alpha-REC) (Type I interferon receptor) (IFN-R)	Ifnar2	37	21	11	6
Q9WUJ8	Origin recognition complex subunit 6	Orc6l (Orc6)	59	37	13	7
Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
O88844	Isocitrate dehydrogenase [NADP] cytoplasmic (IDH) (EC 1.1.1.42) (Cytosolic NADP-isocitrate dehydrogenase) (Oxalosuccinate decarboxylase) (NADP(+)-specific ICDH) (IDP)	Idh1	155	163	15	8
Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
P11103	Poly [ADP-ribose] polymerase 1 (PARP-1) (EC 2.4.2.30) (ADPRT) (NAD(+)-ADP-ribosyltransferase 1) (Poly[ADP-ribose] synthetase 1) (msPARP)	Parp1 (Adprp) (Adprt) (Adprt1)	21	26	17	9
Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26

	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
	Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwnk4)	23	33	29	15
cellular protein metabolic process	Q9CXW3	Calcyclin-binding protein (CacyBP) (Siah-interacting protein)	Cacybp (Sip)	57	39	7	13
	Q7TSG3	F-box only protein 5 (Early mitotic inhibitor 1)	Fbxo5 (Emi1)	15	27	5	9
	Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
	P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
	P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
	P17742	Peptidyl-prolyl cis-trans isomerase A (PPIase A) (Rotamase A) (EC 5.2.1.8) (Cyclophilin A) (Cyclosporin A-binding protein) (SP18)	Ppia	855	1549	38	66
	Q9Z1R2	Large proline-rich protein BAT3 (HLA-B-associated transcript 3)	Bat3	80	49	15	26
	Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
	Q9D009	Putative octanoyltransferase, mitochondrial (EC 2.3.1.181) (Octanoyl-[acyl-carrier-protein]-protein N-octanoyltransferase) (Lipoyl/octanoyl transferase) (Lipoate-protein ligase B)		38	42	11	19
	Q9ERK4	Exportin-2 (Exp2) (Importin-alpha re-exporter) (Chromosome segregation 1-like protein)	Cse1l (Xpo2)	42	153	26	44
	P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
	P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21	

Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23
O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwnk1)	56	36	18	27
P97868	Retinoblastoma-binding protein 6 (p53-associated cellular protein of testis) (Proliferation potential-related protein) (Protein P2P-R)	Rbbp6 (P2pr) (Pact)	21	29	24	35
P99026	Proteasome subunit beta type-4 (Proteasome beta chain) (EC 3.4.25.1) (Macropain beta chain) (Multicatalytic endopeptidase complex beta chain) (Proteasome chain 3)	Psmb4 (Lmp3)	93	289	11	16
Q9QZ39	Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 1 (EC 2.4.99.3) (GalNAc alpha-2,6-sialyltransferase I) (ST6GalNAc I) (Sialyltransferase 7A)	St6galnac1 (Siat7a)	27	18	11	16
P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10

Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
Q9EPL8	Importin-7 (Imp7) (Ran-binding protein 7) (RanBP7)	Ipo7 (Ranbp7)	25	121	9	12
Q9WTX2	Interferon-inducible double stranded RNA-dependent protein kinase activator A (Protein kinase, interferon-inducible double stranded RNA-dependent activator) (Protein activator of the interferon-induced protein kinase) (PKR-associated protein X) (PKR-associating protein X) (RAX)	Prkra (Rax)	28	39	9	12
Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53
P70168	Importin subunit beta-1 (Karyopherin subunit beta-1) (Nuclear factor P97) (Pore targeting complex 97 kDa subunit) (PTAC97) (SCG)	Kpnb1 (Impnb)	48	17	13	17
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9

P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
Q60716	Prolyl 4-hydroxylase subunit alpha-2 (EC 1.14.11.2) (4-PH alpha-2) (Procollagen-proline,2-oxoglutarate-4-dioxygenase subunit alpha-2)	P4ha2	22	27	8	10
Q811J3	Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
Q9R1P0	Proteasome subunit alpha type-4 (EC 3.4.25.1) (Proteasome component C9) (Macropain subunit C9) (Multicatalytic endopeptidase complex subunit C9) (Proteasome subunit L)	Psma4	29	151	14	17
Q9CZY3	Ubiquitin-conjugating enzyme E2 variant 1 (UEV-1) (CROC-1)	Ube2v1 (Croc1)	83	163	166	201
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6

P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q8BFY9	Transportin-1 (Importin beta-2) (Karyopherin beta-2)	Tnp1 (Kpnb2)	54	43	10	12
Q9QUR6	Prolyl endopeptidase (PE) (EC 3.4.21.26) (Post-proline cleaving enzyme)	Prep (Pep)	56	20	15	18
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbn1 (Abp1) (Sh3p7)	24	39	7	8
Q6A4J8	Ubiquitin carboxyl-terminal hydrolase 7 (EC 3.1.2.15) (Ubiquitin thioesterase 7) (Ubiquitin-specific-processing protease 7) (Deubiquitinating enzyme 7) (Herpesvirus-associated ubiquitin-specific protease) (mHAUSP)	Usp7 (Hausp)	27	18	14	16
P97820	Mitogen-activated protein kinase kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44

P62908	40S ribosomal protein S3	Rps3	778	762	39	44
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a1) (Stn)	1275	1549	258	285
Q62446	FK506-binding protein 3 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (25 kDa FKBP) (FKBP-25) (Rapamycin-selective 25 kDa immunophilin)	Fkbp3 (Fkbp25)	31	31	10	11
O55234	Proteasome subunit beta type-5 (EC 3.4.25.1) (Proteasome epsilon chain) (Macropain epsilon chain) (Multicatalytic endopeptidase complex epsilon chain) (Proteasome subunit X) (Proteasome chain 6)	Psmb5	168	227	10	11
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Hars1)	20	41	22	24
P27546	Microtubule-associated protein 4 (MAP-4)	Map4 (Mtap4)	94	41	33	36
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146

Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
P08113	Endoplasmic (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra1) (Tra1)	221	298	25	27
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tc1)	29	66	14	15



P70398	Probable ubiquitin carboxyl-terminal hydrolase FAF-X (EC 3.1.2.15) (Ubiquitin thioesterase FAF-X) (Ubiquitin-specific-processing protease FAF-X) (Deubiquitinating enzyme FAF-X) (Fat facets protein-related, X-linked) (Ubiquitin-specific protease 9, X chromosome) (Ubiquitin carboxyl-terminal hydrolase FAM) (Fat facets homolog)	Usp9x (Faf1) (Fam)	42	28	57	61
Q8BKX6	Serine/threonine-protein kinase SMG1 (SMG-1) (EC 2.7.11.1)	Smg1 (Kiaa0421)	33	27	30	32
Q8VI56	Low-density lipoprotein receptor-related protein 4 (LDLR dan)	Lrp4 (Kiaa0816)	77	30	19	20
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
Q920R0	Als1n (Amyotrophic lateral sclerosis protein 2 homolog)	Als2	74	88	72	75
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165
P62141	Serine/threonine-protein phosphatase PP1-beta catalytic subunit (PP-1B) (EC 3.1.3.16)	Ppp1cb	177	57	4	4
P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5
Q9R1P1	Proteasome subunit beta type-3 (EC 3.4.25.1) (Proteasome theta chain) (Proteasome chain 13) (Proteasome component C10-II)	Psmb3	87	135	7	7

P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q6P5F9	Exportin-1 (Exp1) (Chromosome region maintenance 1 protein homolog)	Xpo1 (Crm1)	19	43	9	9
O09061	Proteasome subunit beta type-1 (EC 3.4.25.1) (Proteasome component C5) (Macropain subunit C5) (Multicatalytic endopeptidase complex subunit C5) (Proteasome gamma chain)	Psemb1	84	94	11	11
Q9DB77	Cytochrome b-c1 complex subunit 2, mitochondrial (Ubiquinol-cytochrome-c reductase complex core protein 2) (Core protein II) (Complex III subunit 2)	Uqcrc2	29	20	13	13
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (Csma) (Eif3) (Eif3s10)	199	166	58	56
P16406	Glutamyl aminopeptidase (EC 3.4.11.7) (EAP) (Aminopeptidase A) (APA) (BP-1/6C3 antigen) (CD antigen CD249)	Enpep	98	90	48	46

Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q9WTR0	Matrix metalloproteinase-16 (MMP-16) (EC 3.4.24.-) (Membrane-type matrix metalloproteinase 3) (MT-MMP 3) (MTMMP3) (Membrane-type-3 matrix metalloproteinase) (MT3-MMP) (MT3MMP)	Mmp16	17	36	11	10
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115

Q9QZH3	Peptidyl-prolyl cis-trans isomerase E (PPIase E) (Rotamase E) (EC 5.2.1.8) (Cyclophilin E) (Cyclophilin-33)	Ppie (Cyp33)	28	35	10	9
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
P70195	Proteasome subunit beta type-7 (EC 3.4.25.1) (Proteasome subunit Z) (Macropain chain Z) (Multicatalytic endopeptidase complex chain Z)	Psmb7 (Mmc14)	39	40	8	7
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q11011	Puromycin-sensitive aminopeptidase (PSA) (EC 3.4.11.-)	Npepps (Psa)	71	141	30	26
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
Q9JKK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPIase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
P97784	Cryptochrome-1	Cry1	52	42	21	18
Q9R194	Cryptochrome-2	Cry2 (Kiaa0658)	52	42	21	18
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40

Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
Q99PP7	E3 ubiquitin-protein ligase TRIM33 (EC 6.3.2.-) (Tripartite motif-containing protein 33) (Transcription intermediary factor 1-gamma) (TIF1-gamma) (Ectodermin homolog)	Trim33 (Kiaa1113)	33	25	12	10
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
Q64514	Tripeptidyl-peptidase 2 (EC 3.4.14.10) (Tripeptidyl-peptidase II) (TPP-II) (Tripeptidyl aminopeptidase)	Tpp2	54	76	24	20
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
P11531	Dystrophin	Dmd	25	16	66	55
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9

Q6ZQ38	Cullin-associated NEDD8-dissociated protein 1 (Cullin-associated and neddylation-dissociated protein 1) (p120 CAND1)	Cand1 (D10Ert516e) (Kiaa0829)	221	246	33	27
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
Q62407	Striated muscle-specific serine/threonine protein kinase (EC 2.7.11.1) (Aortic preferentially expressed protein 1) (APEG-1)	Speg (Apeg1) (Kiaa1297)	26	20	31	25
P54923	[Protein ADP-ribosylarginine] hydrolase (ADP-ribosylarginine hydrolase) (EC 3.2.2.19) (ADP-ribose-L-arginine cleaving enzyme)	Adprh (Arh1)	20	41	15	12
Q9Z2U0	Proteasome subunit alpha type-7 (EC 3.4.25.1) (Proteasome subunit RC6-1)	Psm7	121	253	15	12
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
Q80ZI6	E3 ubiquitin-protein ligase LRSAM1 (EC 6.3.2.-) (Leucine-rich repeat and sterile alpha motif-containing protein 1) (Tsg101-associated ligase)	Lrsam1	19	35	19	15
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123

P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27
P58681	Toll-like receptor 7	Tlr7	27	33	23	17
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24

Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
Q99LG2	Transportin-2 (Karyopherin beta-2b)	Tnpo2	42	32	7	5
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptprn (Ptp35)	30	18	14	10
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
Q60692	Proteasome subunit beta type-6 (EC 3.4.25.1) (Proteasome delta chain) (Macropain delta chain) (Multicatalytic endopeptidase complex delta chain) (Proteasome subunit Y)	Psmb6 (Lmp19)	33	89	17	12
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
Q7TQI3	Ubiquitin thioesterase OTUB1 (EC 3.1.2.-) (Otubain-1) (OTU domain-containing ubiquitin aldehyde-binding protein 1) (Ubiquitin-specific-processing protease OTUB1) (Deubiquitinating enzyme OTUB1)	Otub1	152	109	10	7
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
Q80TP3	E3 ubiquitin-protein ligase UBR5 (EC 6.3.2.-) (E3 ubiquitin-protein ligase, HECT domain-containing 1) (Hyperplastic discs protein homolog)	Ubr5 (Edd) (Edd1) (Kiaa0896)	27	17	43	29
Q8C9S8	Cysteine protease ATG4A (EC 3.4.22.-) (Autophagy-related protein 4 homolog A) (Autophagin-2) (Autophagy-related cysteine endopeptidase 2) (AUT-like 2 cysteine endopeptidase)	Atg4a (Apg4a) (Autl2)	26	21	6	4



Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
O70435	Proteasome subunit alpha type-3 (EC 3.4.25.1) (Proteasome component C8) (Macropain subunit C8) (Multicatalytic endopeptidase complex subunit C8) (Proteasome subunit K)	Psma3	95	76	14	9
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (UbpY)	29	23	24	15
P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
Q9EQZ6	Rap guanine nucleotide exchange factor 4 (cAMP-regulated guanine nucleotide exchange factor II) (cAMP-GEFII) (Exchange factor directly activated by cAMP 2) (Epac 2) (cAMP-dependent Rap1 guanine-nucleotide exchange factor)	Rapgef4 (Cgef2) (Epac2)	47	23	20	12
Q8R4K8	Pappalysin-1 (EC 3.4.24.79) (Pregnancy-associated plasma protein A) (PAPP-A) (Insulin-like growth factor-dependent IGF-binding protein 4 protease) (IGF-dependent IGFBP-4 protease) (IGFBP-4ase)	Pappa	41	43	25	15

Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
Q9JI78	Peptide-N(4)-(N-acetyl-beta-glucosaminyl)asparagine amidase (PNGase) (mPNGase) (EC 3.5.1.52) (Peptide:N-glycanase) (N-glycanase 1)	Ngly1	29	32	19	11
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4
P26043	Radixin (ESP10)	Rdx	127	106	23	13
P49722	Proteasome subunit alpha type-2 (EC 3.4.25.1) (Proteasome component C3) (Macropain subunit C3) (Multicatalytic endopeptidase complex subunit C3)	Psm2 (Lmpc3)	188	103	16	9

	P97461	40S ribosomal protein S5	Rps5	89	33	32	18
	Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
	P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
	Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
	P11103	Poly [ADP-ribose] polymerase 1 (PARP-1) (EC 2.4.2.30) (ADPRT) (NAD(+) ADP-ribosyltransferase 1) (Poly[ADP-ribose] synthetase 1) (msPARP)	Parp1 (Adprp) (Adprt) (Adprt1)	21	26	17	9
	Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
	Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwnk4)	23	33	29	15
cellular macromolecule metabolic process	Q9CXW3	Calcyclin-binding protein (CacyBP) (Siah-interacting protein)	Cacybp (Sip)	57	39	7	13
	Q7TSG3	F-box only protein 5 (Early mitotic inhibitor 1)	Fbxo5 (Emi1)	15	27	5	9
	Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
	P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
	P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
	P17742	Peptidyl-prolyl cis-trans isomerase A (PPIase A) (Rotamase A) (EC 5.2.1.8) (Cyclophilin A) (Cyclosporin A-binding protein) (SP18)	Ppia	855	1549	38	66
	Q9Z1R2	Large proline-rich protein BAT3 (HLA-B-associated transcript 3)	Bat3	80	49	15	26

Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
Q9D009	Putative octanoyltransferase, mitochondrial (EC 2.3.1.181) (Octanoyl-[acyl-carrier-protein]-protein N-octanoyltransferase) (Lipoyl/octanoyl transferase) (Lipoate-protein ligase B)		38	42	11	19
Q9ERK4	Exportin-2 (Exp2) (Importin-alpha re-exporter) (Chromosome segregation 1-like protein)	Cse1l (Xpo2)	42	153	26	44
P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23
O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwnk1)	56	36	18	27
P97868	Retinoblastoma-binding protein 6 (p53-associated cellular protein of testis) (Proliferation potential-related protein) (Protein P2P-R)	Rbbp6 (P2pr) (Pact)	21	29	24	35

P99026	Proteasome subunit beta type-4 (Proteasome beta chain) (EC 3.4.25.1) (Macropain beta chain) (Multicatalytic endopeptidase complex beta chain) (Proteasome chain 3)	Psmb4 (Lmp3)	93	289	11	16
Q9QZ39	Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 1 (EC 2.4.99.3) (GalNAc alpha-2,6-sialyltransferase I) (ST6GalNAc I) (Sialyltransferase 7A)	St6galnac1 (Siat7a)	27	18	11	16
P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
Q9EPL8	Importin-7 (Imp7) (Ran-binding protein 7) (RanBP7)	Ipo7 (Ranbp7)	25	121	9	12

Q9WTX2	Interferon-inducible double stranded RNA-dependent protein kinase activator A (Protein kinase, interferon-inducible double stranded RNA-dependent activator) (Protein activator of the interferon-induced protein kinase) (PKR-associated protein X) (PKR-associating protein X) (RAX)	Prkra (Rax)	28	39	9	12
Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53
P70168	Importin subunit beta-1 (Karyopherin subunit beta-1) (Nuclear factor P97) (Pore targeting complex 97 kDa subunit) (PTAC97) (SCG)	Kpnb1 (Impnb)	48	17	13	17
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
Q60716	Prolyl 4-hydroxylase subunit alpha-2 (EC 1.14.11.2) (4-PH alpha-2) (Procollagen-proline,2-oxoglutarate-4-dioxygenase subunit alpha-2)	P4ha2	22	27	8	10
Q811J3	Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16

Q9R1P0	Proteasome subunit alpha type-4 (EC 3.4.25.1) (Proteasome component C9) (Macropain subunit C9) (Multicatalytic endopeptidase complex subunit C9) (Proteasome subunit L)	Psma4	29	151	14	17
Q9CZY3	Ubiquitin-conjugating enzyme E2 variant 1 (UEV-1) (CROC-1)	Ube2v1 (Croc1)	83	163	166	201
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q8BFY9	Transportin-1 (Importin beta-2) (Karyopherin beta-2)	Tnp1 (Kpnb2)	54	43	10	12
Q9QUR6	Prolyl endopeptidase (PE) (EC 3.4.21.26) (Post-proline cleaving enzyme)	Prep (Pep)	56	20	15	18
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8

Q6A4J8	Ubiquitin carboxyl-terminal hydrolase 7 (EC 3.1.2.15) (Ubiquitin thioesterase 7) (Ubiquitin-specific-processing protease 7) (Deubiquitinating enzyme 7) (Herpesvirus-associated ubiquitin-specific protease) (mHAUSP)	Usp7 (Hausp)	27	18	14	16
P97820	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a1) (Stn)	1275	1549	258	285
Q62446	FK506-binding protein 3 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (25 kDa FKBP) (FKBP-25) (Rapamycin-selective 25 kDa immunophilin)	Fkbp3 (Fkbp25)	31	31	10	11



O55234	Proteasome subunit beta type-5 (EC 3.4.25.1) (Proteasome epsilon chain) (Macropain epsilon chain) (Multicatalytic endopeptidase complex epsilon chain) (Proteasome subunit X) (Proteasome chain 6)	Psmb5	168	227	10	11
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
P27546	Microtubule-associated protein 4 (MAP-4)	Map4 (Mtap4)	94	41	33	36
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330

P08113	Endoplasmic reticulum chaperone (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra1) (Tra1)	221	298	25	27
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
P70398	Probable ubiquitin carboxyl-terminal hydrolase FAF-X (EC 3.1.2.15) (Ubiquitin thioesterase FAF-X) (Ubiquitin-specific-processing protease FAF-X) (Deubiquitinating enzyme FAF-X) (Fat facets protein-related, X-linked) (Ubiquitin-specific protease 9, X chromosome) (Ubiquitin carboxyl-terminal hydrolase FAM) (Fat facets homolog)	Usp9x (Faf1) (Fam)	42	28	57	61
Q8BKX6	Serine/threonine-protein kinase SMG1 (SMG-1) (EC 2.7.11.1)	Smg1 (Kiaa0421)	33	27	30	32
Q8VI56	Low-density lipoprotein receptor-related protein 4 (LDLR dan)	Lrp4 (Kiaa0816)	77	30	19	20
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
Q920R0	Alsin (Amyotrophic lateral sclerosis protein 2 homolog)	Als2	74	88	72	75
P62281	40S ribosomal protein S11	Rps11	166	132	27	28

Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165
P62141	Serine/threonine-protein phosphatase PP1-beta catalytic subunit (PP-1B) (EC 3.1.3.16)	Ppp1cb	177	57	4	4
P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5
Q9R1P1	Proteasome subunit beta type-3 (EC 3.4.25.1) (Proteasome theta chain) (Proteasome chain 13) (Proteasome component C10-II)	Psemb3	87	135	7	7
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q6P5F9	Exportin-1 (Exp1) (Chromosome region maintenance 1 protein homolog)	Xpo1 (Crm1)	19	43	9	9
O09061	Proteasome subunit beta type-1 (EC 3.4.25.1) (Proteasome component C5) (Macropain subunit C5) (Multicatalytic endopeptidase complex subunit C5) (Proteasome gamma chain)	Psemb1	84	94	11	11
Q9DB77	Cytochrome b-c1 complex subunit 2, mitochondrial (Ubiquinol-cytochrome-c reductase complex core protein 2) (Core protein II) (Complex III subunit 2)	Uqcrc2	29	20	13	13
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Sptbn-2) (Sptnb2) (Sptb2)	56	54	48	48

P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (CsmA) (Eif3) (Eif3s10)	199	166	58	56
P16406	Glutamyl aminopeptidase (EC 3.4.11.7) (EAP) (Aminopeptidase A) (APA) (BP-1/6C3 antigen) (CD antigen CD249)	Enpep	98	90	48	46
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q9WTR0	Matrix metalloproteinase-16 (MMP-16) (EC 3.4.24.-) (Membrane-type matrix metalloproteinase 3) (MT-MMP 3) (MTMMP3) (Membrane-type-3 matrix metalloproteinase) (MT3-MMP) (MT3MMP)	Mmp16	17	36	11	10

Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
Q9QZH3	Peptidyl-prolyl cis-trans isomerase E (PPIase E) (Rotamase E) (EC 5.2.1.8) (Cyclophilin E) (Cyclophilin-33)	Ppie (Cyp33)	28	35	10	9
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
P70195	Proteasome subunit beta type-7 (EC 3.4.25.1) (Proteasome subunit Z) (Macropain chain Z) (Multicatalytic endopeptidase complex chain Z)	Psmb7 (Mmc14)	39	40	8	7
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q11011	Puromycin-sensitive aminopeptidase (PSA) (EC 3.4.11.-)	Npepps (Psa)	71	141	30	26
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPIase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6

P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
P97784	Cryptochrome-1	Cry1	52	42	21	18
Q9R194	Cryptochrome-2	Cry2 (Kiaa0658)	52	42	21	18
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
Q99PP7	E3 ubiquitin-protein ligase TRIM33 (EC 6.3.2.-) (Tripartite motif-containing protein 33) (Transcription intermediary factor 1-gamma) (TIF1-gamma) (Ectodermin homolog)	Trim33 (Kiaa1113)	33	25	12	10
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15

Q64514	Tripeptidyl-peptidase 2 (EC 3.4.14.10) (Tripeptidyl-peptidase II) (TPP-II) (Tripeptidyl aminopeptidase)	Tpp2	54	76	24	20
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
P11531	Dystrophin	Dmd	25	16	66	55
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
Q6ZQ38	Cullin-associated NEDD8-dissociated protein 1 (Cullin-associated and neddylation-dissociated protein 1) (p120 CAND1)	Cand1 (D10Ert516e) (Kiaa0829)	221	246	33	27
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
Q62407	Striated muscle-specific serine/threonine protein kinase (EC 2.7.11.1) (Aortic preferentially expressed protein 1) (APEG-1)	Speg (Apeg1) (Kiaa1297)	26	20	31	25
P54923	[Protein ADP-ribosylarginine] hydrolase (ADP-ribosylarginine hydrolase) (EC 3.2.2.19) (ADP-ribose-L-arginine cleaving enzyme)	Adprh (Arh1)	20	41	15	12
Q9Z2U0	Proteasome subunit alpha type-7 (EC 3.4.25.1) (Proteasome subunit RC6-1)	Psm7	121	253	15	12
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19

Q80Z16	E3 ubiquitin-protein ligase LRSAM1 (EC 6.3.2.-) (Leucine-rich repeat and sterile alpha motif-containing protein 1) (Tsg101-associated ligase)	Lrsam1	19	35	19	15
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27
P58681	Toll-like receptor 7	Tlr7	27	33	23	17
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19



P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
Q99LG2	Transportin-2 (Karyopherin beta-2b)	Tnpo2	42	32	7	5
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptprn (Ptp35)	30	18	14	10
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
Q60692	Proteasome subunit beta type-6 (EC 3.4.25.1) (Proteasome delta chain) (Macropain delta chain) (Multicatalytic endopeptidase complex delta chain) (Proteasome subunit Y)	Psmb6 (Lmp19)	33	89	17	12
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
Q7TQI3	Ubiquitin thioesterase OTUB1 (EC 3.1.2.-) (Otubain-1) (OTU domain-containing ubiquitin aldehyde-binding protein 1) (Ubiquitin-specific-processing protease OTUB1) (Deubiquitinating enzyme OTUB1)	Otub1	152	109	10	7
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59

P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
Q80TP3	E3 ubiquitin-protein ligase UBR5 (EC 6.3.2.-) (E3 ubiquitin-protein ligase, HECT domain-containing 1) (Hyperplastic discs protein homolog)	Ubr5 (Edd) (Edd1) (Kiaa0896)	27	17	43	29
Q8C9S8	Cysteine protease ATG4A (EC 3.4.22.-) (Autophagy-related protein 4 homolog A) (Autophagin-2) (Autophagy-related cysteine endopeptidase 2) (AUT-like 2 cysteine endopeptidase)	Atg4a (Apg4a) (Autl2)	26	21	6	4
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
O70435	Proteasome subunit alpha type-3 (EC 3.4.25.1) (Proteasome component C8) (Macropain subunit C8) (Multicatalytic endopeptidase complex subunit C8) (Proteasome subunit K)	Psma3	95	76	14	9
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (Ubpy)	29	23	24	15
P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6

Q9EQZ6	Rap guanine nucleotide exchange factor 4 (cAMP-regulated guanine nucleotide exchange factor II) (cAMP-GEFII) (Exchange factor directly activated by cAMP 2) (Epac 2) (cAMP-dependent Rap1 guanine-nucleotide exchange factor)	Rapgef4 (Cgef2) (Epac2)	47	23	20	12
Q8R4K8	Pappalysin-1 (EC 3.4.24.79) (Pregnancy-associated plasma protein A) (PAPP-A) (Insulin-like growth factor-dependent IGF-binding protein 4 protease) (IGF-dependent IGFBP-4 protease) (IGFBP-4ase)	Pappa	41	43	25	15
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
P62900	60S ribosomal protein L31	Rpl31	124	62	12	7

Q9JI78	Peptide-N(4)-(N-acetyl-beta-glucosaminy)asparagine amidase (PNGase) (mPNGase) (EC 3.5.1.52) (Peptide:N-glycanase) (N-glycanase 1)	Ngly1	29	32	19	11
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4
P26043	Radixin (ESP10)	Rdx	127	106	23	13
P49722	Proteasome subunit alpha type-2 (EC 3.4.25.1) (Proteasome component C3) (Macropain subunit C3) (Multicatalytic endopeptidase complex subunit C3)	Psma2 (Lmpc3)	188	103	16	9
P97461	40S ribosomal protein S5	Rps5	89	33	32	18
Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
P11103	Poly [ADP-ribose] polymerase 1 (PARP-1) (EC 2.4.2.30) (ADPRT) (NAD(+) ADP-ribosyltransferase 1) (Poly[ADP-ribose] synthetase 1) (msPARP)	Parp1 (Adprp) (Adprt) (Adprt1)	21	26	17	9
Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwnk4)	23	33	29	15

macromolecule biosynthetic process	P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22
	P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
	P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
	Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
	P62082	40S ribosomal protein S7	Rps7	104	126	9	14
	O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
	Q9QZ39	Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 1 (EC 2.4.99.3) (GalNAc alpha-2,6-sialyltransferase I) (ST6GalNAc I) (Sialyltransferase 7A)	St6galnac1 (Siat7a)	27	18	11	16
	O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10
	P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
	P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
	Q811J3	Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
	Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16	

P59270	Galactosylgalactosylxylosylprotein 3-beta-glucuronosyltransferase 2 (EC 2.4.1.135) (Beta-1,3-glucuronyltransferase 2) (UDP-glucuronosyltransferase-S) (Glucuronosyltransferase-S) (GlcAT-S) (GlcAT-D)	B3gat2 (Glcats)	29	16	9	11
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a1) (Stn)	1275	1549	258	285
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330

Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (CsmA) (Eif3) (Eif3s10)	199	166	58	56
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
P11881	Inositol 1,4,5-trisphosphate receptor type 1 (Type 1 inositol 1,4,5-trisphosphate receptor) (Type 1 InsP3 receptor) (IP3 receptor isoform 1) (InsP3R1) (Inositol 1,4,5-trisphosphate-binding protein P400) (Purkinje cell protein 1) (Protein PCD-6)	ltp1 (Insp3r) (Pcd6) (Pcp1)	37	42	48	41

Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
P47856	Glucosamine--fructose-6-phosphate aminotransferase [isomerizing] 1 (EC 2.6.1.16) (Glutamine:fructose 6 phosphate amidotransferase 1) (GFAT 1) (GFAT1) (D-fructose-6-phosphate amidotransferase 1) (Hexosephosphate aminotransferase 1)	Gfpt1 (Gfpt)	17	29	17	13
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
P58681	Toll-like receptor 7	Tlr7	27	33	23	17
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
P17751	Triosephosphate isomerase (TIM) (EC 5.3.1.1) (Triose-phosphate isomerase)	Tpi1 (Tpi)	706	519	35	25



	P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
	Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
	Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
	Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
	P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
	P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
	P62301	40S ribosomal protein S13	Rps13	77	100	23	14
	Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
	Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
	P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
	P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
	P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
	Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
	P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
	P97461	40S ribosomal protein S5	Rps5	89	33	32	18
	P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
organelle organization and biogenesis	P04104	Keratin, type II cytoskeletal 1 (Cytokeratin-1) (CK-1) (Keratin-1) (K1) (67 kDa cytokeratin) (Krt1 protein)	Krt1 (Krt2-1)	87	124	14	27
	Q7TSG3	F-box only protein 5 (Early mitotic inhibitor 1)	Fbxo5 (Emi1)	15	27	5	9
	Q61414	Keratin, type I cytoskeletal 15 (Cytokeratin-15) (CK-15) (Keratin-15) (K15)	Krt15 (Krt1-15)	37	46	4	7
	P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
	P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
	Q8CGP2	Histone H2B type 1-P	Hist1h2bp	436	999	46	77

P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78
Q922U2	Keratin, type II cytoskeletal 5 (Cytokeratin-5) (CK-5) (Keratin-5) (K5)	Krt5 (Krt2-5)	396	550	23	38
Q64475	Histone H2B type 1-B (h2B-143)	Hist1h2bb	436	999	46	75
Q80Y17	Lethal(2) giant larvae protein homolog 1 (LLGL) (Mlg1) (Mgl-1)	Llg1 (Llg1h)	30	29	7	11
P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
Q3THW5	Histone H2A.V (H2A.F/Z)	H2afv (H2av)	297	426	11	16
P07744	Keratin, type II cytoskeletal 4 (Cytokeratin-4) (CK-4) (Keratin-4) (K4) (Cytoskeletal 57 kDa keratin)	Krt4 (Krt2-4)	36	74	19	27
Q8VHX6	Filamin-C (Gamma-filamin) (Filamin-2) (FLN-C) (Actin-binding-like protein) (ABP-L) (ABP-280-like protein)	Flnc (Abpl) (Fln2)	33	115	18	25
P68510	14-3-3 protein eta	Ywhah	707	962	58	80
P70696	Histone H2B type 1-A (Histone H2B, testis) (Testis-specific histone H2B)	Hist1h2ba (Th2b)	146	378	37	51
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84

Q61937	Nucleophosmin (NPM) (Nucleolar phosphoprotein B23) (Numatrin) (Nucleolar protein NO38)	Npm1	92	66	11	15
Q99M73	Keratin, type II cuticular Hb4 (Type II hair keratin Hb4) (Keratin-84) (K84) (65 kDa type II keratin)	Krt84 (Krt2-16) (Krt84) (Krt84) (Krt84)	36	74	14	19
Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34
Q921C5	Protein bicaudal D homolog 2 (Bic-D 2)	Bicd2 (Kiaa0699)	31	23	26	34
Q61595	Kinectin	Ktn1	15	50	43	56
P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
Q07133	Histone H1t (Testicular H1 histone)	Hist1h1t (H1ft) (H1t)	46	72	54	69
P27661	Histone H2A.x (H2a/x)	H2afx (H2a.x) (H2ax) (Hist5-2ax)	301	426	15	19
P20152	Vimentin	Vim	1749	2397	125	157
Q8R2X8	Golgin-45 (Basic leucine zipper nuclear factor 1)	Blzf1	28	22	13	16
Q61466	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 1 (SWI/SNF complex 60 kDa subunit) (60 kDa BRG-1/Brm-associated factor subunit A) (BRG1-associated factor 60A) (D15KZ1 protein)	Smarcd1 (Baf60a) (D15Kz1)	27	29	13	16
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12

P05784	Keratin, type I cytoskeletal 18 (Cytokeratin-18) (CK-18) (Keratin-18) (K18) (Cytokeratin endo B) (Keratin D)	Krt18 (Kerd) (Krt1-18)	37	46	10	12
P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
Q61771	Kinesin-like protein KIF3B (Microtubule plus end-directed kinesin motor 3B)	Kif3b	30	51	16	19
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
Q9WUM4	Coronin-1C (Coronin-3)	Coro1c	42	28	18	21
Q6GSS7	Histone H2A type 2-A (H2A.2) (H2a-614) (H2a-615)	Hist2h2aa1; Hist2h2aa2	505	763	18	21
Q5SPW0	Vacuolar protein sorting-associated protein 54 (Tumor antigen SLP-8p homolog)	Vps54	36	28	13	15
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8
Q9Z2K1	Keratin, type I cytoskeletal 16 (Cytokeratin-16) (CK-16) (Keratin-16) (K16)	Krt16 (Krt1-16)	37	37	7	8
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
P40124	Adenylyl cyclase-associated protein 1 (CAP 1)	Cap1 (Cap)	22	43	8	9

P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29
P19001	Keratin, type I cytoskeletal 19 (Cytokeratin-19) (CK-19) (Keratin-19) (K19)	Krt19 (Krt1-19)	37	46	11	12
Q9QUI0	Transforming protein RhoA	Rhoa (Arha) (Arha2)	117	231	11	12
P27546	Microtubule-associated protein 4 (MAP-4)	Map4 (Mtap4)	94	41	33	36
Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P62242	40S ribosomal protein S8	Rps8	479	372	18	19
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
Q920R0	Alsin (Amyotrophic lateral sclerosis protein 2 homolog)	Als2	74	88	72	75
P26039	Talin-1	Tln1 (Tln)	123	161	41	42
Q8C0N1	Kinesin-like protein KIF2B	Kif2b	17	26	8	8
Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
Q61781	Keratin, type I cytoskeletal 14 (Cytokeratin-14) (CK-14) (Keratin-14) (K14)	Krt14 (Krt1-14)	38	37	10	10
Q9CQ60	6-phosphogluconolactonase (6PGL) (EC 3.1.1.31)	Pgls	148	41	11	11
P30681	High mobility group protein B2 (High mobility group protein 2) (HMG-2)	Hmgb2 (Hmg2)	94	222	24	24

Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
Q9QYX7	Protein piccolo (Aczonin) (Multidomain presynaptic cytomatrix protein) (Brain-derived HLMN protein)	Pclo (Acz)	101	117	114	114
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q9QXL1	Kinesin-like protein KIF21B (Kinesin-like protein KIF6)	Kif21b (Kif6)	22	45	26	25
Q61768	Kinesin-1 heavy chain (Ubiquitous kinesin heavy chain) (UKHC) (Conventional kinesin heavy chain)	Kif5b (Khcs) (Kns1)	102	303	43	41
Q6ZPK0	PHD finger protein 21A (BRAF35-HDAC complex protein BHC80) (mBHC80) (BHC80a)	Phf21a (Bhc80) (Kiaa1696) (Pff1)	28	37	20	19
P97412	Lysosomal-trafficking regulator (Beige protein) (CHS1 homolog)	Lyst (Bg) (Chs1)	46	27	33	31
Q9D6Z1	Nucleolar protein 5A (Nucleolar protein Nop56)	Nol5a (Nop56)	38	39	14	13
P08730	Keratin, type I cytoskeletal 13 (Cytokeratin-13) (CK-13) (Keratin-13) (K13) (47 kDa cytokeratin)	Krt13 (Krt1-13)	37	46	13	12
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
P03995	Glial fibrillary acidic protein (GFAP)	Gfap	63	90	22	20

Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P02535	Keratin, type I cytoskeletal 10 (Cytokeratin-10) (CK-10) (Keratin-10) (K10) (56 kDa cytokeratin) (Keratin, type I cytoskeletal 59 kDa)	Krt10 (Krt1-10)	252	152	19	17
Q922G7	Tektin-2 (Testicular tektin) (Tektin-t)	Tekt2	25	26	9	8
P43277	Histone H1.3 (H1 VAR.4) (H1d)	Hist1h1d (H1f3)	78	99	18	16
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
P33173	Kinesin-like protein KIF1A (Axonal transporter of synaptic vesicles)	Kif1a (Atsv) (Kif1)	45	108	25	22
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12

Q99MD9	Nuclear autoantigenic sperm protein (NASP)	Nasp	365	293	34	27
Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
Q7TMK6	Protein Hook homolog 2	Hook2	33	36	26	20
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
P08551	Neurofilament light polypeptide (NF-L) (Neurofilament triplet L protein) (68 kDa neurofilament protein)	Nefl (Nf68) (Nfl)	51	36	17	12



P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
Q8C9S8	Cysteine protease ATG4A (EC 3.4.22.-) (Autophagy-related protein 4 homolog A) (Autophagin-2) (Autophagy-related cysteine endopeptidase 2) (AUT-like 2 cysteine endopeptidase)	Atg4a (Apg4a) (Autl2)	26	21	6	4
P43275	Histone H1.1 (H1 VAR.3) (H1a)	Hist1h1a (H1f1)	28	90	9	6
Q62168	Keratin, type I cuticular Ha2 (Hair keratin, type I Ha2) (Keratin-32) (K32)	Krt32 (Hka2) (Krt1-2) (Krtha2)	39	36	9	6
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
P26040	Ezrin (p81) (Cytovillin) (Villin-2)	Ezr (Vil2)	127	106	27	16
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4
P26043	Radixin (ESP10)	Rdx	127	106	23	13

	P97461	40S ribosomal protein S5	Rps5	89	33	32	18
	Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27
	Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
	P11103	Poly [ADP-ribose] polymerase 1 (PARP-1) (EC 2.4.2.30) (ADPRT) (NAD(+) ADP-ribosyltransferase 1) (Poly[ADP-ribose] synthetase 1) (msPARP)	Parp1 (Adprp) (Adprt) (Adprt1)	21	26	17	9
	Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
translation	P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
	P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
	Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
	P62082	40S ribosomal protein S7	Rps7	104	126	9	14
	O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
	O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10
	P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
	P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184

Q811J3	Iron-responsive element-binding protein 2 (IRE BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a1) (Stn)	1275	1549	258	285
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15

P62281	40S ribosomal protein S11	Rps11	166	132	27	28
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (Csma) (Eif3) (Eif3s10)	199	166	58	56
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11

P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
P58681	Toll-like receptor 7	Tlr7	27	33	23	17
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27

	P97461	40S ribosomal protein S5	Rps5	89	33	32	18
	P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
gene expression	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
	P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
	P62960	Nuclease-sensitive element-binding protein 1 (Y-box-binding protein 1) (Y-box transcription factor) (YB-1) (CCAAT-binding transcription factor I subunit A) (CBF-A) (Enhancer factor I subunit A) (EFI-A) (DNA-binding protein B) (DBPB)	Ybx1 (Msy-1) (Msy1) (Nsep1) (Yb1)	56	126	6	10
	P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
	Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
	Q61990	Poly(rC)-binding protein 2 (Alpha-CP2) (Putative heterogeneous nuclear ribonucleoprotein X) (hnRNP X) (CTBP) (CBP)	Pcbp2 (Cbp) (HnrnpX) (Hnrpx)	29	194	7	11
	P62082	40S ribosomal protein S7	Rps7	104	126	9	14
	P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
	Q8K386	Ras-related protein Rab-15	Rab15	44	74	4	6
	O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
	P60335	Poly(rC)-binding protein 1 (Alpha-CP1) (hnRNP-E1)	Pcbp1	56	350	9	13
	O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10

P12813	Nuclear receptor subfamily 4 group A member 1 (Orphan nuclear receptor HMR) (Nuclear hormone receptor NUR/77) (N10 nuclear protein)	Nr4a1 (Gfrp) (Hmr) (N10) (Nur77)	61	31	7	10
P68510	14-3-3 protein eta	Ywhah	707	962	58	80
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
P70338	Zinc finger protein Gfi-1 (Growth factor independent protein 1)	Gfi1 (Gfi-1)	45	39	17	23
Q61789	Laminin subunit alpha-3 (Nicein subunit alpha)	Lama3	26	26	37	50
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34
Q923B1	Lariat debranching enzyme (EC 3.1.-.-)	Dbr1	28	29	15	19
Q62093	Splicing factor, arginine/serine-rich 2 (Splicing factor SC35) (SC-35) (Splicing component, 35 kDa) (Protein PR264) (Putative myelin regulatory factor 1) (MRF-1)	Sfrs2 (Pr264) (Sfrs10)	184	117	15	19
P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5

Q811J3	Iron-responsive element-binding protein 2 (IRE BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
Q8VII8	Mineralocorticoid receptor (MR) (Nuclear receptor subfamily 3 group C member 2)	Nr3c2 (Mlr)	28	22	18	22
O35618	Protein Mdm4 (p53-binding protein Mdm4) (Mdm2-like p53-binding protein) (Protein Mdmx) (Double minute 4 protein)	Mdm4 (Mdmx)	17	29	5	6
Q6PDM2	Splicing factor, arginine/serine-rich 1 (ASF/SF2)	Sfrs1	24	91	5	6
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
P54103	DnaJ homolog subfamily C member 2 (Zuotin-related factor 1) (Mouse Id associate 1) (MIDA1)	Dnajc2 (Mida1) (Zrf1)	23	27	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
Q61122	NGFI-A-binding protein 1 (EGR-1-binding protein 1)	Nab1	30	25	6	7
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
Q9JKP5	Muscleblind-like protein 1 (Triplet-expansion RNA-binding protein)	Mbnl1 (Exp) (Mbnl)	45	63	244	281



Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
Q921M3	Splicing factor 3B subunit 3 (Spliceosome-associated protein 130) (SAP 130) (Pre-mRNA splicing factor SF3b 130 kDa subunit) (SF3b130)	Sf3b3 (Kiaa0017)	16	34	24	27
Q9WUF3	CASP8-associated protein 2 (FLICE-associated huge protein)	Casp8ap2 (Flash)	28	16	26	29
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a1) (Stn)	1275	1549	258	285
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12

Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P70298	Homeobox protein cut-like 2 (Cut-like 2) (Homeobox protein Cux-2)	Cux2 (Cutl2)	30	22	12	13
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
Q62504	Msx2-interacting protein (SPEN homolog) (SMART/HDAC1-associated repressor protein)	Spen (Kiaa0929) (Mint) (Sharp)	27	18	72	75
O35973	Period circadian protein homolog 1 (Circadian clock protein PERIOD 1) (Circadian pacemaker protein Rigui) (mPER1)	Per1 (Per) (Rigui)	29	21	27	28
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165
Q3TXZ1	Zinc finger protein 575	Znf575 (Zfp575)	30	25	5	5
Q8VCZ3	THAP domain-containing protein 7	Thap7	26	18	6	6

Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
Q9DAI4	Zinc finger and BTB domain-containing protein 43 (Zinc finger protein 297B)	Zbtb43 (Kiaa0414) (Zfp297b) (Znf297b)	23	51	9	9
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
P30681	High mobility group protein B2 (High mobility group protein 2) (HMG-2)	Hmgb2 (Hmg2)	94	222	24	24
Q80UK8	Integrator complex subunit 2 (Int2)	Ints2 (Kiaa1287)	16	27	24	24
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (Csma) (Eif3) (Eif3s10)	199	166	58	56
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21

Q6ZPK0	PHD finger protein 21A (BRAF35-HDAC complex protein BHC80) (mBHC80) (BHC80a)	Phf21a (Bhc80) (Kiaa1696) (Pfff1)	28	37	20	19
P03966	N-myc proto-oncogene protein	Mycn (Nmyc) (Nmyc1)	65	46	18	17
Q8BTI8	Serine/arginine repetitive matrix protein 2	Srrm2 (Kiaa0324)	78	70	92	86
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q9QZH3	Peptidyl-prolyl cis-trans isomerase E (PPIase E) (Rotamase E) (EC 5.2.1.8) (Cyclophilin E) (Cyclophilin-33)	Ppie (Cyp33)	28	35	10	9
Q925Q8	Dachshund homolog 2 (Dach2)	Dach2	22	30	9	8
Q8BG95	Protein phosphatase 1 regulatory subunit 12B (Myosin phosphatase-targeting subunit 2)	Ppp1r12b (Mypt2)	25	24	25	22
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPIase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
P97784	Cryptochrome-1	Cry1	52	42	21	18
Q9R194	Cryptochrome-2	Cry2 (Kiaa0658)	52	42	21	18
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
P14131	40S ribosomal protein S16	Rps16	160	126	19	16

Q99PP7	E3 ubiquitin-protein ligase TRIM33 (EC 6.3.2.-) (Tripartite motif-containing protein 33) (Transcription intermediary factor 1-gamma) (TIF1-gamma) (Ectodermin homolog)	Trim33 (Kiaa1113)	33	25	12	10
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
Q6ZQ38	Cullin-associated NEDD8-dissociated protein 1 (Cullin-associated and neddylation-dissociated protein 1) (p120 CAND1)	Cand1 (D10Erd516e) (Kiaa0829)	221	246	33	27
P42227	Signal transducer and activator of transcription 3 (Acute-phase response factor)	Stat3 (Aprf)	16	28	33	27
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
Q80UN9	tRNA isopentenyltransferase, mitochondrial (IPTase) (EC 2.5.1.8) (Isopentenyl-diphosphate:tRNA isopentenyltransferase) (IPP transferase) (IPPT)	Trit1 (lpt)	31	24	19	15
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
Q6A078	Centrosomal protein of 290 kDa (Cep290) (Nephrocystin-6)	Cep290 (Kiaa0373) (Nphp6)	32	57	85	66
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16

Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
P70670	Nascent polypeptide-associated complex subunit alpha, muscle-specific form (Alpha-NAC, muscle-specific form)	Naca (Gm1878)	22	130	29	22
P25233	Necdin	Ndn	30	23	16	12
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
Q6P3Y5	Zinc finger protein 280C (Suppressor of hairy wing homolog 3)	Znf280c (Kiaa1584) (Suhw3) (Zfp280c)	87	142	43	32
P58681	Toll-like receptor 7	Tlr7	27	33	23	17
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
Q03172	Zinc finger protein 40 (Transcription factor alphaA-CRYBP1) (Alpha A-crystallin-binding protein I) (Alpha A-CRYBP1)	Hivep1 (Cryabp1) (Znf40)	25	24	21	15
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12

Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q52KI8	Serine/arginine repetitive matrix protein 1 (Plenty-of-prolines 101)	Srrm1 (Pop101)	22	73	29	20
Q99PV0	Pre-mRNA-processing-splicing factor 8 (Splicing factor Prp8)	Prpf8 (Prp8)	28	29	51	35
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2
P61979	Heterogeneous nuclear ribonucleoprotein K (hnRNP K)	Hnrnpk (Hnrpk)	225	46	18	12
Q924W6	Tripartite motif-containing protein 66 (Transcriptional intermediary factor 1 delta)	Trim66 (Tif1d)	28	18	23	15
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
Q9QZ09	Putative homeodomain transcription factor 1	Phtf1 (Phtf)	29	24	8	5
P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
O88291	Zinc finger protein 326 (Zinc finger protein-associated with nuclear matrix of 75 kDa)	Znf326 (Zan75) (Zfp326)	41	55	5	3
Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27

	P53762	Aryl hydrocarbon receptor nuclear translocator (ARNT protein) (Dioxin receptor, nuclear translocator) (Hypoxia-inducible factor 1 beta) (HIF-1 beta)	Arnt	25	22	7	4
	Q9R1X4	Protein timeless homolog (mTim)	Timeless (Tim1) (Timeless1)	22	25	16	9
	P97461	40S ribosomal protein S5	Rps5	89	33	32	18
	P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
	Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27
	O35664	Interferon-alpha/beta receptor beta chain (Interferon alpha/beta receptor 2) (IFN-alpha-REC) (Type I interferon receptor) (IFN-R)	Ifnar2	37	21	11	6
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
cytoskeleton organization and biogenesis	P04104	Keratin, type II cytoskeletal 1 (Cytokeratin-1) (CK-1) (Keratin-1) (K1) (67 kDa cytokeratin) (Krt1 protein)	Krt1 (Krt2-1)	87	124	14	27
	Q7TSG3	F-box only protein 5 (Early mitotic inhibitor 1)	Fbxo5 (Emi1)	15	27	5	9
	Q61414	Keratin, type I cytoskeletal 15 (Cytokeratin-15) (CK-15) (Keratin-15) (K15)	Krt15 (Krt1-15)	37	46	4	7
	P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
	P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
	Q922U2	Keratin, type II cytoskeletal 5 (Cytokeratin-5) (CK-5) (Keratin-5) (K5)	Krt5 (Krt2-5)	396	550	23	38
	Q80Y17	Lethal(2) giant larvae protein homolog 1 (LLGL) (Mlgl) (Mgl-1)	Llgl1 (Llglh)	30	29	7	11
	P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11



P07744	Keratin, type II cytoskeletal 4 (Cytokeratin-4) (CK-4) (Keratin-4) (K4) (Cytoskeletal 57 kDa keratin)	Krt4 (Krt2-4)	36	74	19	27
Q8VHX6	Filamin-C (Gamma-filamin) (Filamin-2) (FLN-C) (Actin-binding-like protein) (ABP-L) (ABP-280-like protein)	FlnC (Abpl) (Fln2)	33	115	18	25
P68510	14-3-3 protein eta	Ywhah	707	962	58	80
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
Q99M73	Keratin, type II cuticular Hb4 (Type II hair keratin Hb4) (Keratin-84) (K84) (65 kDa type II keratin)	Krt84 (Krt2-16) (Krt84) (Krt84)	36	74	14	19
Q921C5	Protein bicaudal D homolog 2 (Bic-D 2)	Bicd2 (Kiaa0699)	31	23	26	34
Q61595	Kinectin	Ktn1	15	50	43	56
P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
P20152	Vimentin	Vim	1749	2397	125	157
P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
P05784	Keratin, type I cytoskeletal 18 (Cytokeratin-18) (CK-18) (Keratin-18) (K18) (Cytokeratin endo B) (Keratin D)	Krt18 (Kerd) (Krt1-18)	37	46	10	12
P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
Q61771	Kinesin-like protein KIF3B (Microtubule plus end-directed kinesin motor 3B)	Kif3b	30	51	16	19
Q9WUM4	Coronin-1C (Coronin-3)	Coro1c	42	28	18	21
Q5SPW0	Vacuolar protein sorting-associated protein 54 (Tumor antigen SLP-8p homolog)	Vps54	36	28	13	15

Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbn1 (Abp1) (Sh3p7)	24	39	7	8
Q9Z2K1	Keratin, type I cytoskeletal 16 (Cytokeratin-16) (CK-16) (Keratin-16) (K16)	Krt16 (Krt1-16)	37	37	7	8
P40124	Adenylyl cyclase-associated protein 1 (CAP 1)	Cap1 (Cap)	22	43	8	9
P19001	Keratin, type I cytoskeletal 19 (Cytokeratin-19) (CK-19) (Keratin-19) (K19)	Krt19 (Krt1-19)	37	46	11	12
Q9QUI0	Transforming protein RhoA	Rhoa (Arha) (Arha2)	117	231	11	12
P27546	Microtubule-associated protein 4 (MAP-4)	Map4 (Mtap4)	94	41	33	36
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
P26039	Talin-1	Tln1 (Tln)	123	161	41	42
Q8C0N1	Kinesin-like protein KIF2B	Kif2b	17	26	8	8
Q61781	Keratin, type I cytoskeletal 14 (Cytokeratin-14) (CK-14) (Keratin-14) (K14)	Krt14 (Krt1-14)	38	37	10	10
Q9CQ60	6-phosphogluconolactonase (6PGL) (EC 3.1.1.31)	Pgls	148	41	11	11
Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
Q9QYX7	Protein piccolo (Aczonin) (Multidomain presynaptic cytomatrix protein) (Brain-derived HLMN protein)	Pclo (Acz)	101	117	114	114
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q9QXL1	Kinesin-like protein KIF21B (Kinesin-like protein KIF6)	Kif21b (Kif6)	22	45	26	25
Q61768	Kinesin-1 heavy chain (Ubiquitous kinesin heavy chain) (UKHC) (Conventional kinesin heavy chain)	Kif5b (Khcs) (Kns1)	102	303	43	41

P08730	Keratin, type I cytoskeletal 13 (Cytokeratin-13) (CK-13) (Keratin-13) (K13) (47 kDa cyokeratin)	Krt13 (Krt1-13)	37	46	13	12
P03995	Glial fibrillary acidic protein (GFAP)	Gfap	63	90	22	20
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P02535	Keratin, type I cytoskeletal 10 (Cytokeratin-10) (CK-10) (Keratin-10) (K10) (56 kDa cyokeratin) (Keratin, type I cytoskeletal 59 kDa)	Krt10 (Krt1-10)	252	152	19	17
Q922G7	Tektin-2 (Testicular tektin) (Tektin-t)	Tekt2	25	26	9	8
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
P33173	Kinesin-like protein KIF1A (Axonal transporter of synaptic vesicles)	Kif1a (Atsv) (Kif1)	45	108	25	22
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100

Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
Q7TMK6	Protein Hook homolog 2	Hook2	33	36	26	20
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
P08551	Neurofilament light polypeptide (NF-L) (Neurofilament triplet L protein) (68 kDa neurofilament protein)	Nefl (Nf68) (Nfl)	51	36	17	12
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
Q62168	Keratin, type I cuticular Ha2 (Hair keratin, type I Ha2) (Keratin-32) (K32)	Krt32 (Hka2) (Krt1-2) (Krtha2)	39	36	9	6
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
P26040	Ezrin (p81) (Cytovillin) (Villin-2)	Ezr (Vil2)	127	106	27	16
P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4
P26043	Radixin (ESP10)	Rdx	127	106	23	13
Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21

	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
actin filament-based process	P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
	P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
	Q80Y17	Lethal(2) giant larvae protein homolog 1 (LLGL) (Mgl) (Mgl-1)	Ligl1 (Llglh)	30	29	7	11
	P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
	Q8VHX6	Filamin-C (Gamma-filamin) (Filamin-2) (FLN-C) (Actin-binding-like protein) (ABP-L) (ABP-280-like protein)	FlnC (Abpl) (Fln2)	33	115	18	25
	P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
	P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
	Q9WUM4	Coronin-1C (Coronin-3)	Coro1c	42	28	18	21
	Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8
	P40124	Adenylyl cyclase-associated protein 1 (CAP 1)	Cap1 (Cap)	22	43	8	9
	P19001	Keratin, type I cytoskeletal 19 (Cytokeratin-19) (CK-19) (Keratin-19) (K19)	Krt19 (Krt1-19)	37	46	11	12
	Q9QUI0	Transforming protein RhoA	Rhoa (Arha) (Arha2)	117	231	11	12
	P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
	P26039	Talin-1	Tln1 (Tln)	123	161	41	42
	Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76	

	Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
	Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
	Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
	Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
	Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
	P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
	Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
	P26040	Ezrin (p81) (Cytovillin) (Villin-2)	Ezr (Vil2)	127	106	27	16
	P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4
	P26043	Radixin (ESP10)	Rdx	127	106	23	13
cellular component organization and biogenesis	P04104	Keratin, type II cytoskeletal 1 (Cytokeratin-1) (CK-1) (Keratin-1) (K1) (67 kDa cyokeratin) (Krt1 protein)	Krt1 (Krt2-1)	87	124	14	27
	Q8BTM8	Filamin-A (Alpha-filamin) (Filamin-1) (Endothelial actin-binding protein) (Actin-binding protein 280) (ABP-280) (Non-muscle filamin)	Flna (Fln) (Fln1)	254	1031	46	86
	Q7TSG3	F-box only protein 5 (Early mitotic inhibitor 1)	Fbxo5 (Emi1)	15	27	5	9

Q99N50	Synaptotagmin-like protein 2 (Exophilin-4)	Syt12 (Slp2)	26	77	10	18
Q61414	Keratin, type I cytoskeletal 15 (Cytokeratin-15) (CK-15) (Keratin-15) (K15)	Krt15 (Krt1-15)	37	46	4	7
P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
Q9ERK4	Exportin-2 (Exp2) (Importin-alpha re-exporter) (Chromosome segregation 1-like protein)	Cse1l (Xpo2)	42	153	26	44
Q8CGP2	Histone H2B type 1-P	Hist1h2bp	436	999	46	77
P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78
Q922U2	Keratin, type II cytoskeletal 5 (Cytokeratin-5) (CK-5) (Keratin-5) (K5)	Krt5 (Krt2-5)	396	550	23	38
Q64475	Histone H2B type 1-B (h2B-143)	Hist1h2bb	436	999	46	75
Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
Q80Y17	Lethal(2) giant larvae protein homolog 1 (LLGL) (Mgl) (Mgl-1)	Llg1 (Llg1h)	30	29	7	11
P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
P61982	14-3-3 protein gamma	Ywhag	653	841	53	79

Q3THW5	Histone H2A.V (H2A.F/Z)	H2afv (H2av)	297	426	11	16
P07744	Keratin, type II cytoskeletal 4 (Cytokeratin-4) (CK-4) (Keratin-4) (K4) (Cytoskeletal 57 kDa keratin)	Krt4 (Krt2-4)	36	74	19	27
Q8VHX6	Filamin-C (Gamma-filamin) (Filamin-2) (FLN-C) (Actin-binding-like protein) (ABP-L) (ABP-280-like protein)	Finc (Abpl) (Fln2)	33	115	18	25
P68510	14-3-3 protein eta	Ywhah	707	962	58	80
P70696	Histone H2B type 1-A (Histone H2B, testis) (Testis-specific histone H2B)	Hist1h2ba (Th2b)	146	378	37	51
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
Q61937	Nucleophosmin (NPM) (Nucleolar phosphoprotein B23) (Numatrin) (Nucleolar protein NO38)	Npm1	92	66	11	15
Q99M73	Keratin, type II cuticular Hb4 (Type II hair keratin Hb4) (Keratin-84) (K84) (65 kDa type II keratin)	Krt84 (Krt2-16) (Krt84) (Krt84)	36	74	14	19
Q61789	Laminin subunit alpha-3 (Nicein subunit alpha)	Lama3	26	26	37	50
Q9EPL8	Importin-7 (Imp7) (Ran-binding protein 7) (RanBP7)	Ipo7 (Ranbp7)	25	121	9	12
Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53
P35700	Peroxiredoxin-1 (EC 1.11.1.15) (Thioredoxin peroxidase 2) (Thioredoxin-dependent peroxide reductase 2) (Osteoblast-specific factor 3) (OSF-3) (Macrophage 23 kDa stress protein)	Prdx1 (Msp23) (Paga) (Tdp2)	836	1095	75	99
P70168	Importin subunit beta-1 (Karyopherin subunit beta-1) (Nuclear factor P97) (Pore targeting complex 97 kDa subunit) (PTAC97) (SCG)	Kpnb1 (Impnb)	48	17	13	17



Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34
Q921C5	Protein bicaudal D homolog 2 (Bic-D 2)	Bicd2 (Kiaa0699)	31	23	26	34
Q61595	Kinectin	Ktn1	15	50	43	56
P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
Q07133	Histone H1t (Testicular H1 histone)	Hist1h1t (H1ft) (H1t)	46	72	54	69
O70456	14-3-3 protein sigma (Stratifin)	Sfn (Mkrn3)	573	666	56	71
P27661	Histone H2A.x (H2a/x)	H2afx (H2a.x) (H2ax) (Hist5-2ax)	301	426	15	19
Q62093	Splicing factor, arginine/serine-rich 2 (Splicing factor SC35) (SC-35) (Splicing component, 35 kDa) (Protein PR264) (Putative myelin regulatory factor 1) (MRF-1)	Sfrs2 (Pr264) (Sfrs10)	184	117	15	19
P20152	Vimentin	Vim	1749	2397	125	157
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
P63101	14-3-3 protein zeta/delta (Protein kinase C inhibitor protein 1) (KCIP-1) (SEZ-2)	Ywhaz	1383	1947	96	120
Q8R2X8	Golgin-45 (Basic leucine zipper nuclear factor 1)	Blzf1	28	22	13	16
Q61466	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 1 (SWI/SNF complex 60 kDa subunit) (60 kDa BRG-1/Brm-associated factor subunit A) (BRG1-associated factor 60A) (D15KZ1 protein)	Smarcd1 (Baf60a) (D15Kz1)	27	29	13	16
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81

P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
Q6PDM2	Splicing factor, arginine/serine-rich 1 (ASF/SF2)	Sfrs1	24	91	5	6
Q8VHS2	Crumbs homolog 1	Crb1	23	28	10	12
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
P05784	Keratin, type I cytoskeletal 18 (Cytokeratin-18) (CK-18) (Keratin-18) (K18) (Cytokeratin endo B) (Keratin D)	Krt18 (Kerd) (Krt1-18)	37	46	10	12
P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q8BFY9	Transportin-1 (Importin beta-2) (Karyopherin beta-2)	Tnp1 (Kpnb2)	54	43	10	12
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
Q61771	Kinesin-like protein KIF3B (Microtubule plus end-directed kinesin motor 3B)	Kif3b	30	51	16	19
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
Q9WUM4	Coronin-1C (Coronin-3)	Coro1c	42	28	18	21
Q6GSS7	Histone H2A type 2-A (H2A.2) (H2a-614) (H2a-615)	Hist2h2aa1; Hist2h2aa2	505	763	18	21
Q5SPW0	Vacuolar protein sorting-associated protein 54 (Tumor antigen SLP-8p homolog)	Vps54	36	28	13	15
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
Q9JKP5	Muscleblind-like protein 1 (Triplet-expansion RNA-binding protein)	Mbnl1 (Exp) (Mbnl)	45	63	244	281

Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8
Q9Z2K1	Keratin, type I cytoskeletal 16 (Cytokeratin-16) (CK-16) (Keratin-16) (K16)	Krt16 (Krt1-16)	37	37	7	8
P58660	Caspase recruitment domain-containing protein 10 (Bcl10-interacting MAGUK protein 1) (Bimp1)	Card10 (Bimp1)	33	23	15	17
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
Q9CQV8	14-3-3 protein beta/alpha (Protein kinase C inhibitor protein 1) (KCIP-1)	Ywhab	983	971	71	80
P40124	Adenylyl cyclase-associated protein 1 (CAP 1)	Cap1 (Cap)	22	43	8	9
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
Q91ZT5	FYVE, RhoGEF and PH domain-containing protein 4 (Actin filament-binding protein frabin) (FGD1-related F-actin-binding protein)	Fgd4	29	19	10	11
P19001	Keratin, type I cytoskeletal 19 (Cytokeratin-19) (CK-19) (Keratin-19) (K19)	Krt19 (Krt1-19)	37	46	11	12
Q9QUI0	Transforming protein RhoA	Rhoa (Arha) (Arha2)	117	231	11	12
P27546	Microtubule-associated protein 4 (MAP-4)	Map4 (Mtap4)	94	41	33	36

Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P62242	40S ribosomal protein S8	Rps8	479	372	18	19
Q8VI56	Low-density lipoprotein receptor-related protein 4 (LDLR dan)	Lrp4 (Kiaa0816)	77	30	19	20
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
Q61820	GTP-binding nuclear protein Ran, testis-specific isoform	Rasl2-9	564	570	23	24
Q920R0	Alsin (Amyotrophic lateral sclerosis protein 2 homolog)	Als2	74	88	72	75
P26039	Talin-1	Tln1 (Tln)	123	161	41	42
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPlase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q8C0N1	Kinesin-like protein KIF2B	Kif2b	17	26	8	8

Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
Q9D289	Trafficking protein particle complex subunit 6B	Trappc6b	62	69	9	9
Q6P5F9	Exportin-1 (Exp1) (Chromosome region maintenance 1 protein homolog)	Xpo1 (Crm1)	19	43	9	9
Q61781	Keratin, type I cytoskeletal 14 (Cytokeratin-14) (CK-14) (Keratin-14) (K14)	Krt14 (Krt1-14)	38	37	10	10
Q9CQ60	6-phosphogluconolactonase (6PGL) (EC 3.1.1.31)	Pgls	148	41	11	11
Q9WV80	Sorting nexin-1	Snx1	23	49	11	11
Q9JIF7	Coatamer subunit beta (Beta-coat protein) (Beta-COP)	Copb1 (Copb)	37	22	15	15
P30681	High mobility group protein B2 (High mobility group protein 2) (HMG-2)	Hmgb2 (Hmg2)	94	222	24	24
Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
Q8K4E0	Alstrom syndrome protein 1 homolog	Alms1 (Kiaa0328)	29	30	86	86
Q9QYX7	Protein piccolo (Aczonin) (Multidomain presynaptic cytomatrix protein) (Brain-derived HLMN protein)	Pclo (Acz)	101	117	114	114
P68254	14-3-3 protein theta (14-3-3 protein tau)	Ywhaq	1104	994	92	91
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q9QXL1	Kinesin-like protein KIF21B (Kinesin-like protein KIF6)	Kif21b (Kif6)	22	45	26	25
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23

P07724	Serum albumin	Alb (Alb-1) (Alb1)	550	572	22	21
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
Q61768	Kinesin-1 heavy chain (Ubiquitous kinesin heavy chain) (UKHC) (Conventional kinesin heavy chain)	Kif5b (Khcs) (Kns1)	102	303	43	41
Q6ZPK0	PHD finger protein 21A (BRAF35-HDAC complex protein BHC80) (mBHC80) (BHC80a)	Phf21a (Bhc80) (Kiaa1696) (Pff1)	28	37	20	19
P62827	GTP-binding nuclear protein Ran (GTPase Ran) (Ras-related nuclear protein) (Ras-like protein TC4)	Ran (Rasl2-8)	756	656	38	36
P97412	Lysosomal-trafficking regulator (Beige protein) (CHS1 homolog)	Lyst (Bg) (Chs1)	46	27	33	31
Q99PF4	Cadherin-23 (Otocadherin)	Cdh23	29	32	29	27
Q9D6Z1	Nucleolar protein 5A (Nucleolar protein Nop56)	Nol5a (Nop56)	38	39	14	13
P08730	Keratin, type I cytoskeletal 13 (Cytokeratin-13) (CK-13) (Keratin-13) (K13) (47 kDa cyokeratin)	Krt13 (Krt1-13)	37	46	13	12
Q8R5G7	Centaurin-delta-3 (Cnt-d3) (Arf-GAP, Rho-GAP, ankyrin repeat and pleckstrin homology domain-containing protein 3) (Dual specificity Rho- and Arf-GTPase-activating protein 1)	Centd3 (Arap3) (Drag1) (Kiaa4097)	21	27	26	24
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51

P03995	Glial fibrillary acidic protein (GFAP)	Gfap	63	90	22	20
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P02535	Keratin, type I cytoskeletal 10 (Cytokeratin-10) (CK-10) (Keratin-10) (K10) (56 kDa cytokeratin) (Keratin, type I cytoskeletal 59 kDa)	Krt10 (Krt1-10)	252	152	19	17
Q922G7	Tektin-2 (Testicular tektin) (Tektin-t)	Tekt2	25	26	9	8
P43277	Histone H1.3 (H1 VAR.4) (H1d)	Hist1h1d (H1f3)	78	99	18	16
Q68FD5	Clathrin heavy chain 1	Cltc	944	884	88	78
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
P33173	Kinesin-like protein KIF1A (Axonal transporter of synaptic vesicles)	Kif1a (Atsv) (Kif1)	45	108	25	22
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
Q99PG2	Opioid growth factor receptor (OGFr) (Zeta-type opioid receptor)	Ogfr	38	24	8	7
Q8CJ27	Abnormal spindle-like microcephaly-associated protein homolog (Spindle and hydroxyurea checkpoint abnormal protein) (Calmodulin-binding protein Sha1) (Calmodulin binding protein 1)	Aspm (Calmbp1) (Sha1)	35	23	55	48
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q924C1	Exportin-5 (Exp5) (Ran-binding protein 21)	Xpo5 (Kiaa1291) (Ranbp21)	20	62	15	13
Q921E2	Ras-related protein Rab-31	Rab31	18	29	7	6

P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
Q9R194	Cryptochrome-2	Cry2 (Kiaa0658)	52	42	21	18
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
Q8R4U0	Stabilin-2 (Fasciclin, EGF-like, laminin-type EGF-like and link domain-containing scavenger receptor 2) (FEEL-2) [Cleaved into: Short form stabilin-2]	Stab2 (Feel2)	25	43	12	10
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
P62259	14-3-3 protein epsilon (14-3-3E)	Ywhae	1202	998	116	95
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
Q5XJY5	Coatomer subunit delta (Delta-coat protein) (Delta-COP) (Archain)	Arcn1 (Copd)	61	45	10	8
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q99MD9	Nuclear autoantigenic sperm protein (NASP)	Nasp	365	293	34	27
Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11



Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
Q6A078	Centrosomal protein of 290 kDa (Cep290) (Nephrocystin-6)	Cep290 (Kiaa0373) (Nphp6)	32	57	85	66
Q7TMK6	Protein Hook homolog 2	Hook2	33	36	26	20
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (Pkcζ)	29	15	8	6
P25233	Necdin	Ndn	30	23	16	12
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q99LG2	Transportin-2 (Karyopherin beta-2b)	Tnp2	42	32	7	5
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
P08551	Neurofilament light polypeptide (NF-L) (Neurofilament triplet L protein) (68 kDa neurofilament protein)	Nefl (Nf68) (Nfl)	51	36	17	12
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
P61294	Ras-related protein Rab-6B	Rab6b (D9Bwg0185e)	18	53	10	7

Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2
Q8C9S8	Cysteine protease ATG4A (EC 3.4.22.-) (Autophagy-related protein 4 homolog A) (Autophagin-2) (Autophagy-related cysteine endopeptidase 2) (AUT-like 2 cysteine endopeptidase)	Atg4a (Apg4a) (Autl2)	26	21	6	4
P43275	Histone H1.1 (H1 VAR.3) (H1a)	Hist1h1a (H1f1)	28	90	9	6
Q62168	Keratin, type I cuticular Ha2 (Hair keratin, type I Ha2) (Keratin-32) (K32)	Krt32 (Hka2) (Krt1-2) (Krtha2)	39	36	9	6
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
O35551	Rab GTPase-binding effector protein 1 (Rabaptin-5) (Rabaptin-5alpha)	Rabep1 (Rab5ep) (Rabpt5) (Rabpt5a)	33	26	26	16
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40

O35344	Importin subunit alpha-3 (Karyopherin subunit alpha-3) (Importin alpha Q2) (Qip2)	Kpna3 (Qip2)	24	28	10	6
Q9EQZ6	Rap guanine nucleotide exchange factor 4 (cAMP-regulated guanine nucleotide exchange factor II) (cAMP-GEFII) (Exchange factor directly activated by cAMP 2) (Epac 2) (cAMP-dependent Rap1 guanine-nucleotide exchange factor)	Rapgef4 (Cgef2) (Epac2)	47	23	20	12
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P26040	Ezrin (p81) (Cytovillin) (Villin-2)	Ezr (Vil2)	127	106	27	16
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4
P26043	Radixin (ESP10)	Rdx	127	106	23	13
P97461	40S ribosomal protein S5	Rps5	89	33	32	18
P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27
P17918	Proliferating cell nuclear antigen (PCNA) (Cyclin)	Pcna	273	207	20	11
Q9WV89	Syntaxin-binding protein 4 (Syntaxin 4-interacting protein) (Synip) (STX4-interacting protein)	Stxbp4	41	19	11	6
Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31

	P11103	Poly [ADP-ribose] polymerase 1 (PARP-1) (EC 2.4.2.30) (ADPRT) (NAD(+) ADP-ribosyltransferase 1) (Poly[ADP-ribose] synthetase 1) (msPARP)	Parp1 (Adprp) (Adprt) (Adprt1)	21	26	17	9
	Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
protein folding	P17742	Peptidyl-prolyl cis-trans isomerase A (PPIase A) (Rotamase A) (EC 5.2.1.8) (Cyclophilin A) (Cyclosporin A-binding protein) (SP18)	Ppia	855	1549	38	66
	Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53
	Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
	P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
	P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
	Q62446	FK506-binding protein 3 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (25 kDa FKBP) (FKBP-25) (Rapamycin-selective 25 kDa immunophilin)	Fkbp3 (Fkbp25)	31	31	10	11
	P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
	P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13

P08113	Endoplasmic reticulum chaperone protein (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra1) (Tra1)	221	298	25	27
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
Q9QZH3	Peptidyl-prolyl cis-trans isomerase E (PPIase E) (Rotamase E) (EC 5.2.1.8) (Cyclophilin E) (Cyclophilin-33)	Ppie (Cyp33)	28	35	10	9
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPIase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14

	P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
	Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
	Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
	P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
	P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
	P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
	P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
regulation of gene expression	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7

P62960	Nuclease-sensitive element-binding protein 1 (Y-box-binding protein 1) (Y-box transcription factor) (YB-1) (CCAAT-binding transcription factor I subunit A) (CBF-A) (Enhancer factor I subunit A) (EFI-A) (DNA-binding protein B) (DBPB)	Ybx1 (Msy-1) (Msy1) (Nsep1) (Yb1)	56	126	6	10
Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
Q8K386	Ras-related protein Rab-15	Rab15	44	74	4	6
P12813	Nuclear receptor subfamily 4 group A member 1 (Orphan nuclear receptor HMR) (Nuclear hormone receptor NUR/77) (N10 nuclear protein)	Nr4a1 (Gfrp) (Hmr) (N10) (Nur77)	61	31	7	10
P68510	14-3-3 protein eta	Ywhah	707	962	58	80
P70338	Zinc finger protein Gfi-1 (Growth factor independent protein 1)	Gfi1 (Gfi-1)	45	39	17	23
Q61789	Laminin subunit alpha-3 (Nicein subunit alpha)	Lama3	26	26	37	50
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34

P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
Q811J3	Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q8VII8	Mineralocorticoid receptor (MR) (Nuclear receptor subfamily 3 group C member 2)	Nr3c2 (Mlr)	28	22	18	22
O35618	Protein Mdm4 (p53-binding protein Mdm4) (Mdm2-like p53-binding protein) (Protein Mdmx) (Double minute 4 protein)	Mdm4 (Mdmx)	17	29	5	6
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
P54103	DnaJ homolog subfamily C member 2 (Zuotin-related factor 1) (Mouse Id associate 1) (MIDA1)	Dnajc2 (Mida1) (Zrf1)	23	27	11	13
Q61122	NGFI-A-binding protein 1 (EGR-1-binding protein 1)	Nab1	30	25	6	7
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44



Q9WUF3	CASP8-associated protein 2 (FLICE-associated huge protein)	Casp8ap2 (Flash)	28	16	26	29
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P70298	Homeobox protein cut-like 2 (Cut-like 2) (Homeobox protein Cux-2)	Cux2 (Cutl2)	30	22	12	13
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
Q62504	Msx2-interacting protein (SPEN homolog) (SMART/HDAC1-associated repressor protein)	Spen (Kiaa0929) (Mint) (Sharp)	27	18	72	75
O35973	Period circadian protein homolog 1 (Circadian clock protein PERIOD 1) (Circadian pacemaker protein Rigui) (mPER1)	Per1 (Per) (Rigui)	29	21	27	28
Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165
Q3TXZ1	Zinc finger protein 575	Znf575 (Zfp575)	30	25	5	5
Q8VCZ3	THAP domain-containing protein 7	Thap7	26	18	6	6

Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
Q9DAI4	Zinc finger and BTB domain-containing protein 43 (Zinc finger protein 297B)	Zbtb43 (Kiaa0414) (Zfp297b) (Znf297b)	23	51	9	9
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
P30681	High mobility group protein B2 (High mobility group protein 2) (HMG-2)	Hmgb2 (Hmg2)	94	222	24	24
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
Q6ZPK0	PHD finger protein 21A (BRAF35-HDAC complex protein BHC80) (mBHC80) (BHC80a)	Phf21a (Bhc80) (Kiaa1696) (Pftf1)	28	37	20	19
P03966	N-myc proto-oncogene protein	Mycn (Nmyc) (Nmyc1)	65	46	18	17
Q925Q8	Dachshund homolog 2 (Dach2)	Dach2	22	30	9	8
Q8BG95	Protein phosphatase 1 regulatory subunit 12B (Myosin phosphatase-targeting subunit 2)	Ppp1r12b (Mypt2)	25	24	25	22
P97784	Cryptochrome-1	Cry1	52	42	21	18
Q9R194	Cryptochrome-2	Cry2 (Kiaa0658)	52	42	21	18

Q99PP7	E3 ubiquitin-protein ligase TRIM33 (EC 6.3.2.-) (Tripartite motif-containing protein 33) (Transcription intermediary factor 1-gamma) (TIF1-gamma) (Ectodermin homolog)	Trim33 (Kiaa1113)	33	25	12	10
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
Q6ZQ38	Cullin-associated NEDD8-dissociated protein 1 (Cullin-associated and neddylation-dissociated protein 1) (p120 CAND1)	Cand1 (D10Ert516e) (Kiaa0829)	221	246	33	27
P42227	Signal transducer and activator of transcription 3 (Acute-phase response factor)	Stat3 (Aprf)	16	28	33	27
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
Q6A078	Centrosomal protein of 290 kDa (Cep290) (Nephrocystin-6)	Cep290 (Kiaa0373) (Nphp6)	32	57	85	66
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
P70670	Nascent polypeptide-associated complex subunit alpha, muscle-specific form (Alpha- NAC, muscle-specific form)	Naca (Gm1878)	22	130	29	22
P25233	Necdin	Ndn	30	23	16	12
Q6P3Y5	Zinc finger protein 280C (Suppressor of hairy wing homolog 3)	Znf280c (Kiaa1584) (Suhw3) (Zfp280c)	87	142	43	32
P58681	Toll-like receptor 7	Tlr7	27	33	23	17

Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q03172	Zinc finger protein 40 (Transcription factor alphaA-CRYBP1) (Alpha A-crystallin-binding protein I) (Alpha A-CRYBP1)	Hivep1 (Cryabp1) (Znf40)	25	24	21	15
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2
Q924W6	Tripartite motif-containing protein 66 (Transcriptional intermediary factor 1 delta)	Trim66 (Tif1d)	28	18	23	15
Q9QZ09	Putative homeodomain transcription factor 1	Phtf1 (Phtf)	29	24	8	5
O88291	Zinc finger protein 326 (Zinc finger protein-associated with nuclear matrix of 75 kDa)	Znf326 (Zan75) (Zfp326)	41	55	5	3
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P53762	Aryl hydrocarbon receptor nuclear translocator (ARNT protein) (Dioxin receptor, nuclear translocator) (Hypoxia-inducible factor 1 beta) (HIF-1 beta)	Arnt	25	22	7	4
Q9R1X4	Protein timeless homolog (mTim)	Timeless (Tim1) (Timeless1)	22	25	16	9
P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5

	Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27
	O35664	Interferon-alpha/beta receptor beta chain (Interferon alpha/beta receptor 2) (IFN-alpha-REC) (Type I interferon receptor) (IFN-R)	Ifnar2	37	21	11	6
regulation of metabolic process	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
	P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
	P62960	Nuclease-sensitive element-binding protein 1 (Y-box-binding protein 1) (Y-box transcription factor) (YB-1) (CCAAT-binding transcription factor I subunit A) (CBF-A) (Enhancer factor I subunit A) (EFI-A) (DNA-binding protein B) (DBPB)	Ybx1 (Msy-1) (Msy1) (Nsep1) (Yb1)	56	126	6	10
	Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
	P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
	P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
	Q8K386	Ras-related protein Rab-15	Rab15	44	74	4	6
	P12813	Nuclear receptor subfamily 4 group A member 1 (Orphan nuclear receptor HMR) (Nuclear hormone receptor NUR/77) (N10 nuclear protein)	Nr4a1 (Gfrp) (Hmr) (N10) (Nur77)	61	31	7	10
	P68510	14-3-3 protein eta	Ywhah	707	962	58	80
	P70338	Zinc finger protein Gfi-1 (Growth factor independent protein 1)	Gfi1 (Gfi-1)	45	39	17	23

Q61789	Laminin subunit alpha-3 (Nicein subunit alpha)	Lama3	26	26	37	50
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34
P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
Q811J3	Iron-responsive element-binding protein 2 (IRE BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q8VII8	Mineralocorticoid receptor (MR) (Nuclear receptor subfamily 3 group C member 2)	Nr3c2 (Mlr)	28	22	18	22
P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
O35618	Protein Mdm4 (p53-binding protein Mdm4) (Mdm2-like p53-binding protein) (Protein Mdmx) (Double minute 4 protein)	Mdm4 (Mdmx)	17	29	5	6
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
O08908	Phosphatidylinositol 3-kinase regulatory subunit beta (PI3-kinase p85 subunit beta) (PtdIns-3-kinase p85-beta)	Pik3r2	19	25	20	24

P54103	DnaJ homolog subfamily C member 2 (Zuotin-related factor 1) (Mouse Id associate 1) (MIDA1)	Dnajc2 (Mida1) (Zrf1)	23	27	11	13
Q61122	NGFI-A-binding protein 1 (EGR-1-binding protein 1)	Nab1	30	25	6	7
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8
Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
Q9WUF3	CASP8-associated protein 2 (FLICE-associated huge protein)	Casp8ap2 (Flash)	28	16	26	29
Q64467	Glyceraldehyde-3-phosphate dehydrogenase, testis-specific (EC 1.2.1.12) (Spermatogenic glyceraldehyde-3-phosphate dehydrogenase) (Spermatogenic cell-specific glyceraldehyde 3-phosphate dehydrogenase 2) (GAPDH-2)	Gapdhs (Gapds) (Gapds)	75	781	26	29
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29

P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
P27546	Microtubule-associated protein 4 (MAP-4)	Map4 (Mtap4)	94	41	33	36
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P70298	Homeobox protein cut-like 2 (Cut-like 2) (Homeobox protein Cux-2)	Cux2 (Cutl2)	30	22	12	13
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
Q62504	Msx2-interacting protein (SPEN homolog) (SMART/HDAC1-associated repressor protein)	Spen (Kiaa0929) (Mint) (Sharp)	27	18	72	75
O35973	Period circadian protein homolog 1 (Circadian clock protein PERIOD 1) (Circadian pacemaker protein Rigui) (mPER1)	Per1 (Per) (Rigui)	29	21	27	28
Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165



Q3TXZ1	Zinc finger protein 575	Znf575 (Zfp575)	30	25	5	5
Q8VCZ3	THAP domain-containing protein 7	Thap7	26	18	6	6
Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
Q9DAI4	Zinc finger and BTB domain-containing protein 43 (Zinc finger protein 297B)	Zbtb43 (Kiaa0414) (Zfp297b) (Znf297b)	23	51	9	9
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q01098	Glutamate [NMDA] receptor subunit epsilon-3 (N-methyl D-aspartate receptor subtype 2C) (NMDAR2C) (NR2C)	Grin2c	18	33	15	15
P30681	High mobility group protein B2 (High mobility group protein 2) (HMG-2)	Hmgb2 (Hmg2)	94	222	24	24
Q62261	Spectrin beta chain, brain 1 (Spectrin, non- erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I- interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN- containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23

Q6ZPK0	PHD finger protein 21A (BRAF35-HDAC complex protein BHC80) (mBHC80) (BHC80a)	Phf21a (Bhc80) (Kiaa1696) (Pftf1)	28	37	20	19
P03966	N-myc proto-oncogene protein	Mycn (Nmyc) (Nmyc1)	65	46	18	17
Q925Q8	Dachshund homolog 2 (Dach2)	Dach2	22	30	9	8
Q8BG95	Protein phosphatase 1 regulatory subunit 12B (Myosin phosphatase-targeting subunit 2)	Ppp1r12b (Mypt2)	25	24	25	22
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
P97784	Cryptochrome-1	Cry1	52	42	21	18
Q9R194	Cryptochrome-2	Cry2 (Kiaa0658)	52	42	21	18
Q99PP7	E3 ubiquitin-protein ligase TRIM33 (EC 6.3.2.-) (Tripartite motif-containing protein 33) (Transcription intermediary factor 1-gamma) (TIF1-gamma) (Ectodermin homolog)	Trim33 (Kiaa1113)	33	25	12	10
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
Q6ZQ38	Cullin-associated NEDD8-dissociated protein 1 (Cullin-associated and neddylation-dissociated protein 1) (p120 CAND1)	Cand1 (D10Ert516e) (Kiaa0829)	221	246	33	27
P42227	Signal transducer and activator of transcription 3 (Acute-phase response factor)	Stat3 (Aprf)	16	28	33	27
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
Q6A078	Centrosomal protein of 290 kDa (Cep290) (Nephrocystin-6)	Cep290 (Kiaa0373) (Nphp6)	32	57	85	66

Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
P70670	Nascent polypeptide-associated complex subunit alpha, muscle-specific form (Alpha-NAC, muscle-specific form)	Naca (Gm1878)	22	130	29	22
P25233	Necdin	Ndn	30	23	16	12
Q6P3Y5	Zinc finger protein 280C (Suppressor of hairy wing homolog 3)	Znf280c (Kiaa1584) (Suhw3) (Zfp280c)	87	142	43	32
P58681	Toll-like receptor 7	Tlr7	27	33	23	17
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q03172	Zinc finger protein 40 (Transcription factor alphaA-CRYBP1) (Alpha A-crystallin-binding protein I) (Alpha A-CRYBP1)	Hivep1 (Cryabp1) (Znf40)	25	24	21	15
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
Q924W6	Tripartite motif-containing protein 66 (Transcriptional intermediary factor 1 delta)	Trim66 (Tif1d)	28	18	23	15

Q9QZ09	Putative homeodomain transcription factor 1	Phtf1 (Phtf)	29	24	8	5	
O88291	Zinc finger protein 326 (Zinc finger protein-associated with nuclear matrix of 75 kDa)	Znf326 (Zan75) (Zfp326)	41	55	5	3	
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18	
P53762	Aryl hydrocarbon receptor nuclear translocator (ARNT protein) (Dioxin receptor, nuclear translocator) (Hypoxia-inducible factor 1 beta) (HIF-1 beta)	Arnt	25	22	7	4	
P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4	
P26043	Radixin (ESP10)	Rdx	127	106	23	13	
Q9R1X4	Protein timeless homolog (mTim)	Timeless (Tim1) (Timeless1)	22	25	16	9	
P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5	
Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27	
P17918	Proliferating cell nuclear antigen (PCNA) (Cyclin)	Pcna	273	207	20	11	
O35664	Interferon-alpha/beta receptor beta chain (Interferon alpha/beta receptor 2) (IFN-alpha-REC) (Type I interferon receptor) (IFN-R)	Ifnar2	37	21	11	6	
Enriched Molecular Function by Gene Ontology							
Term	Accession	Protein names	Genes	prot_score_WT	prot_score_KO	prot_matches_WT	prot_matches_KO

adenyl ribonucleotide binding	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	O88705	Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel 3 (Hyperpolarization-activated cation channel 3) (HAC-3)	Hcn3 (Hac3)	75	67	8	15
	Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
	Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
	Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
	P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13
	Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
	Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23
	P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwnk1)	56	36	18	27
	P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10	

Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
P70296	Phosphatidylethanolamine-binding protein 1 (PEBP-1) (HCNPPp) [Cleaved into: Hippocampal cholinergic neurostimulating peptide (HCNP)]	Pebp1 (Pbp) (Pebp)	532	730	25	33
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52

Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
Q61771	Kinesin-like protein KIF3B (Microtubule plus end-directed kinesin motor 3B)	Kif3b	30	51	16	19
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
P97820	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178

P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q3THS6	S-adenosylmethionine synthetase isoform type 2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
P08113	Endoplasmic reticulum chaperone protein (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra-1) (Tra1)	221	298	25	27
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5



P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q8C0N1	Kinesin-like protein KIF2B	Kif2b	17	26	8	8
Q80YV4	Pantothenate kinase 4 (EC 2.7.1.33) (Pantothenic acid kinase 4) (mPanK4)	Pank4	23	28	13	13
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
Q6P8J7	Creatine kinase, sarcomeric mitochondrial (EC 2.7.3.2) (S-MtCK)	Ckmt2	50	66	26	26
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q9QXL1	Kinesin-like protein KIF21B (Kinesin-like protein KIF6)	Kif21b (Kif6)	22	45	26	25
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43

Q61768	Kinesin-1 heavy chain (Ubiquitous kinesin heavy chain) (UKHC) (Conventional kinesin heavy chain)	Kif5b (Khcs) (Kns1)	102	303	43	41
P30275	Creatine kinase, ubiquitous mitochondrial (EC 2.7.3.2) (U-MtCK) (Acidic-type mitochondrial creatine kinase) (Mia-CK)	Ckmt1	205	121	32	30
Q04447	Creatine kinase B-type (EC 2.7.3.2) (Creatine kinase B chain) (B-CK)	Ckb (Ckbb)	9079	7277	434	406
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
P33173	Kinesin-like protein KIF1A (Axonal transporter of synaptic vesicles)	Kif1a (Atsv) (Kif1)	45	108	25	22
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55

Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44

Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
Q62407	Striated muscle-specific serine/threonine protein kinase (EC 2.7.11.1) (Aortic preferentially expressed protein 1) (APEG-1)	Speg (Apeg1) (Kiaa1297)	26	20	31	25
Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
Q80UN9	tRNA isopentenyltransferase, mitochondrial (IPTase) (EC 2.5.1.8) (Isopentenyl-diphosphate:tRNA isopentenyltransferase) (IPP transferase) (IPPT)	Trit1 (Ipt)	31	24	19	15
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17

Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27
P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24

Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2
P61164	Alpha-centractin (Centractin) (Centrosome-associated actin homolog) (Actin-RPV) (ARP1)	Actr1a (Ctrn1)	247	124	27	18
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q8C7H1	Methylmalonic aciduria type A homolog, mitochondrial	Mmaa	31	37	16	10
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
Q9Z0P5	Twinfilin-2 (Twinfilin-1-like protein) (A6-related protein) (mA6RP)	Twf2 (Ptk9I)	29	32	10	6
Q9QWK5	Baculoviral IAP repeat-containing protein 1a (Neuronal apoptosis inhibitory protein 1)	Naip1 (Birc1a) (Naip)	21	28	20	12

Q9EQZ6	Rap guanine nucleotide exchange factor 4 (cAMP-regulated guanine nucleotide exchange factor II) (cAMP-GEFII) (Exchange factor directly activated by cAMP 2) (Epac 2) (cAMP-dependent Rap1 guanine-nucleotide exchange factor)	Rapgef4 (Cgef2) (Epac2)	47	23	20	12
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P09041	Phosphoglycerate kinase 2 (EC 2.7.2.3) (Phosphoglycerate kinase, testis specific)	Pgk2 (Pkg-2)	162	73	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (Sl)	16	35	12	7
Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5

	Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27
	Q9WTU3	Sodium channel protein type 8 subunit alpha (Sodium channel protein type VIII subunit alpha) (Voltage-gated sodium channel subunit alpha Nav1.6)	Scn8a (Nbna1)	28	19	20	11
	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
	Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwnk4)	23	33	29	15
adenyl nucleotide binding	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	O88705	Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel 3 (Hyperpolarization-activated cation channel 3) (HAC-3)	Hcn3 (Hac3)	75	67	8	15
	Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
	Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
	Q8R1S0	Ubiquinone biosynthesis monooxygenase COQ6 (EC 1.14.13.-)	Coq6	42	92	10	17
	Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
	P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13



Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23
P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwnk1)	56	36	18	27
P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
P70296	Phosphatidylethanolamine-binding protein 1 (PEBP-1) (HCNPPp) [Cleaved into: Hippocampal cholinergic neurostimulating peptide (HCNP)]	Pebp1 (Pbp) (Pebp)	532	730	25	33

Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fanci)	25	18	13	17
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
Q61771	Kinesin-like protein KIF3B (Microtubule plus end-directed kinesin motor 3B)	Kif3b	30	51	16	19
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83

P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
P97820	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q3THS6	S-adenosylmethionine synthetase isoform type 2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13

P08113	Endoplasmic reticulum chaperone (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra1) (Tra1)	221	298	25	27
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
Q3TY86	Apoptosis-inducing factor 3 (EC 1.-.-.-) (Apoptosis-inducing factor-like protein)	Aifm3 (Aifl)	42	26	28	30
P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q8C0N1	Kinesin-like protein KIF2B	Kif2b	17	26	8	8
Q80YV4	Pantothenate kinase 4 (EC 2.7.1.33) (Pantothenic acid kinase 4) (mPanK4)	Pank4	23	28	13	13
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
Q6P8J7	Creatine kinase, sarcomeric mitochondrial (EC 2.7.3.2) (S-MtCK)	Ckmt2	50	66	26	26

P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q9QXL1	Kinesin-like protein KIF21B (Kinesin-like protein KIF6)	Kif21b (Kif6)	22	45	26	25
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
Q61768	Kinesin-1 heavy chain (Ubiquitous kinesin heavy chain) (UKHC) (Conventional kinesin heavy chain)	Kif5b (Khcs) (Kns1)	102	303	43	41
P30275	Creatine kinase, ubiquitous mitochondrial (EC 2.7.3.2) (U-MtCK) (Acidic-type mitochondrial creatine kinase) (Mia-CK)	Ckmt1	205	121	32	30
Q04447	Creatine kinase B-type (EC 2.7.3.2) (Creatine kinase B chain) (B-CK)	Ckb (Ckbb)	9079	7277	434	406
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51

Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
P33173	Kinesin-like protein KIF1A (Axonal transporter of synaptic vesicles)	Kif1a (Atsv) (Kif1)	45	108	25	22
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11

Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
Q62407	Striated muscle-specific serine/threonine protein kinase (EC 2.7.11.1) (Aortic preferentially expressed protein 1) (APEG-1)	Speg (Apeg1) (Kiaa1297)	26	20	31	25

Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
Q80UN9	tRNA isopentenyltransferase, mitochondrial (IPTase) (EC 2.5.1.8) (Isopentenyl-diphosphate:tRNA isopentenyltransferase) (IPP transferase) (IPPT)	Trit1 (lpt)	31	24	19	15
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6



Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27
P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2
P61164	Alpha-centractin (Centractin) (Centrosome-associated actin homolog) (Actin-RPV) (ARP1)	Actr1a (Ctrn1)	247	124	27	18
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18

Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q8C7H1	Methylmalonic aciduria type A homolog, mitochondrial	Mmaa	31	37	16	10
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
Q9Z0P5	Twinfilin-2 (Twinfilin-1-like protein) (A6-related protein) (mA6RP)	Twf2 (Ptk9l)	29	32	10	6
Q9QWK5	Baculoviral IAP repeat-containing protein 1a (Neuronal apoptosis inhibitory protein 1)	Naip1 (Birc1a) (Naip)	21	28	20	12
Q9EQZ6	Rap guanine nucleotide exchange factor 4 (cAMP-regulated guanine nucleotide exchange factor II) (cAMP-GEFII) (Exchange factor directly activated by cAMP 2) (Epac 2) (cAMP-dependent Rap1 guanine-nucleotide exchange factor)	Rapgef4 (Cgef2) (Epac2)	47	23	20	12
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13

	P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
	P09041	Phosphoglycerate kinase 2 (EC 2.7.2.3) (Phosphoglycerate kinase, testis specific)	Pgk2 (Pgk-2)	162	73	17	10
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (Sl)	16	35	12	7
	Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
	Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
	Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27
	Q9WTU3	Sodium channel protein type 8 subunit alpha (Sodium channel protein type VIII subunit alpha) (Voltage-gated sodium channel subunit alpha Nav1.6)	Scn8a (Nbna1)	28	19	20	11
	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
	Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwnk4)	23	33	29	15
ATP binding	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38

Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13
Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23
P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwnk1)	56	36	18	27
P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11

P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
P70296	Phosphatidylethanolamine-binding protein 1 (PEBP-1) (HCNPPp) [Cleaved into: Hippocampal cholinergic neurostimulating peptide (HCNP)]	Pebp1 (Pbp) (Pebp)	532	730	25	33
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81

Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
P80315	T-complex protein 1 subunit delta (TCP-1- delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
Q61771	Kinesin-like protein KIF3B (Microtubule plus end-directed kinesin motor 3B)	Kif3b	30	51	16	19
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
P97820	Mitogen-activated protein kinase kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck- interacting kinase)	Map4k4 (Nik)	65	54	15	17
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q3THS6	S-adenosylmethionine synthetase isoform type- 2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24

P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
P08113	Endoplasmic reticulum chaperone protein (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra-1) (Tra1)	221	298	25	27
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q8C0N1	Kinesin-like protein KIF2B	Kif2b	17	26	8	8
Q80YV4	Pantothenate kinase 4 (EC 2.7.1.33) (Pantothenic acid kinase 4) (mPanK4)	Pank4	23	28	13	13
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22

Q6P8J7	Creatine kinase, sarcomeric mitochondrial (EC 2.7.3.2) (S-MtCK)	Ckmt2	50	66	26	26
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q9QXL1	Kinesin-like protein KIF21B (Kinesin-like protein KIF6)	Kif21b (Kif6)	22	45	26	25
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
Q61768	Kinesin-1 heavy chain (Ubiquitous kinesin heavy chain) (UKHC) (Conventional kinesin heavy chain)	Kif5b (Khcs) (Kns1)	102	303	43	41
P30275	Creatine kinase, ubiquitous mitochondrial (EC 2.7.3.2) (U-MtCK) (Acidic-type mitochondrial creatine kinase) (Mia-CK)	Ckmt1	205	121	32	30
Q04447	Creatine kinase B-type (EC 2.7.3.2) (Creatine kinase B chain) (B-CK)	Ckb (Ckbb)	9079	7277	434	406
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51



Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
P33173	Kinesin-like protein KIF1A (Axonal transporter of synaptic vesicles)	Kif1a (Atsv) (Kif1)	45	108	25	22
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11

Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
Q62407	Striated muscle-specific serine/threonine protein kinase (EC 2.7.11.1) (Aortic preferentially expressed protein 1) (APEG-1)	Speg (Apeg1) (Kiaa1297)	26	20	31	25

Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
Q80UN9	tRNA isopentenyltransferase, mitochondrial (IPTase) (EC 2.5.1.8) (Isopentenyl-diphosphate:tRNA isopentenyltransferase) (IPP transferase) (IPPT)	Trit1 (lpt)	31	24	19	15
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6

Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27
P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2
P61164	Alpha-centractin (Centractin) (Centrosome-associated actin homolog) (Actin-RPV) (ARP1)	Actr1a (Ctrn1)	247	124	27	18
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18

Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q8C7H1	Methylmalonic aciduria type A homolog, mitochondrial	Mmaa	31	37	16	10
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
Q9Z0P5	Twinfilin-2 (Twinfilin-1-like protein) (A6-related protein) (mA6RP)	Twf2 (Ptk9l)	29	32	10	6
Q9QWK5	Baculoviral IAP repeat-containing protein 1a (Neuronal apoptosis inhibitory protein 1)	Naip1 (Birc1a) (Naip)	21	28	20	12
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P09041	Phosphoglycerate kinase 2 (EC 2.7.2.3) (Phosphoglycerate kinase, testis specific)	Pgk2 (Pgk-2)	162	73	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70

	P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
	Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
	Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
	Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27
	Q9WTU3	Sodium channel protein type 8 subunit alpha (Sodium channel protein type VIII subunit alpha) (Voltage-gated sodium channel subunit alpha Nav1.6)	Scn8a (Nbna1)	28	19	20	11
	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
	Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwnk4)	23	33	29	15
structural molecule activity	P04104	Keratin, type II cytoskeletal 1 (Cytokeratin-1) (CK-1) (Keratin-1) (K1) (67 kDa cyokeratin) (Krt1 protein)	Krt1 (Krt2-1)	87	124	14	27
	Q61414	Keratin, type I cytoskeletal 15 (Cytokeratin-15) (CK-15) (Keratin-15) (K15)	Krt15 (Krt1-15)	37	46	4	7
	P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
	Q922U2	Keratin, type II cytoskeletal 5 (Cytokeratin-5) (CK-5) (Keratin-5) (K5)	Krt5 (Krt2-5)	396	550	23	38
	P62082	40S ribosomal protein S7	Rps7	104	126	9	14
	O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6

P07744	Keratin, type II cytoskeletal 4 (Cytokeratin-4) (CK-4) (Keratin-4) (K4) (Cytoskeletal 57 kDa keratin)	Krt4 (Krt2-4)	36	74	19	27
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
Q99M73	Keratin, type II cuticular Hb4 (Type II hair keratin Hb4) (Keratin-84) (K84) (65 kDa type II keratin)	Krt84 (Krt2-16) (Krtthb4)	36	74	14	19
Q61789	Laminin subunit alpha-3 (Nicein subunit alpha)	Lama3	26	26	37	50
P20152	Vimentin	Vim	1749	2397	125	157
P31001	Desmin	Des	169	224	25	31
P05784	Keratin, type I cytoskeletal 18 (Cytokeratin-18) (CK-18) (Keratin-18) (K18) (Cytokeratin endo B) (Keratin D)	Krt18 (Kerd) (Krt1-18)	37	46	10	12
Q9Z2K1	Keratin, type I cytoskeletal 16 (Cytokeratin-16) (CK-16) (Keratin-16) (K16)	Krt16 (Krt1-16)	37	37	7	8
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
P19001	Keratin, type I cytoskeletal 19 (Cytokeratin-19) (CK-19) (Keratin-19) (K19)	Krt19 (Krt1-19)	37	46	11	12
P62242	40S ribosomal protein S8	Rps8	479	372	18	19
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
P26039	Talin-1	Tln1 (Tln)	123	161	41	42
Q8R0W0	Epiplakin	Eppk1	48	25	49	50
Q61781	Keratin, type I cytoskeletal 14 (Cytokeratin-14) (CK-14) (Keratin-14) (K14)	Krt14 (Krt1-14)	38	37	10	10
Q9CQ60	6-phosphogluconolactonase (6PGL) (EC 3.1.1.31)	Pgls	148	41	11	11

Q61092	Laminin subunit gamma-2 (Laminin 5 gamma 2 subunit) (Kalinin/nicein/epiligrin 100 kDa subunit) (Laminin B2t chain)	Lamc2	33	29	13	13
Q9JIF7	Coatomer subunit beta (Beta-coat protein) (Beta-COP)	Copb1 (Copb)	37	22	15	15
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
P03966	N-myc proto-oncogene protein	Mycn (Nmyc) (Nmyc1)	65	46	18	17
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
P08730	Keratin, type I cytoskeletal 13 (Cytokeratin-13) (CK-13) (Keratin-13) (K13) (47 kDa cyto keratin)	Krt13 (Krt1-13)	37	46	13	12
O35206	Collagen alpha-1(XV) chain [Cleaved into: Endostatin (Endostatin-XV)]	Col15a1	31	37	12	11
P03995	Glial fibrillary acidic protein (GFAP)	Gfap	63	90	22	20
P02535	Keratin, type I cytoskeletal 10 (Cytokeratin-10) (CK-10) (Keratin-10) (K10) (56 kDa cyto keratin) (Keratin, type I cytoskeletal 59 kDa)	Krt10 (Krt1-10)	252	152	19	17
Q922G7	Tektin-2 (Testicular tektin) (Tektin-t)	Tekt2	25	26	9	8
P26041	Moesin (Membrane-organizing extension spike protein)	Msn	136	127	44	39
Q68FD5	Clathrin heavy chain 1	Cltc	944	884	88	78
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P11531	Dystrophin	Dmd	25	16	66	55
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9



Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
Q5XJY5	Coatomer subunit delta (Delta-coat protein) (Delta-COP) (Archain)	Arcn1 (Copd)	61	45	10	8
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
P63325	40S ribosomal protein S10	Rps10	468	168	42	33
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20

P08551	Neurofilament light polypeptide (NF-L) (Neurofilament triplet L protein) (68 kDa neurofilament protein)	Nefl (Nf68) (Nfl)	51	36	17	12
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
Q62168	Keratin, type I cuticular Ha2 (Hair keratin, type I Ha2) (Keratin-32) (K32)	Krt32 (Hka2) (Krt1-2) (Krtha2)	39	36	9	6
P61164	Alpha-centractin (Centractin) (Centrosome-associated actin homolog) (Actin-RPV) (ARP1)	Actr1a (Ctrn1)	247	124	27	18
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
P26040	Ezrin (p81) (Cytovillin) (Villin-2)	Ezr (Vil2)	127	106	27	16
P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
P26043	Radixin (ESP10)	Rdx	127	106	23	13
P97461	40S ribosomal protein S5	Rps5	89	33	32	18
Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27

cytoskeletal protein binding	Q8BTM8	Filamin-A (Alpha-filamin) (Filamin-1) (Endothelial actin-binding protein) (Actin-binding protein 280) (ABP-280) (Non-muscle filamin)	Flna (Fln) (Fln1)	254	1031	46	86
	P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
	P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
	P61982	14-3-3 protein gamma	Ywhag	653	841	53	79
	Q8VHX6	Filamin-C (Gamma-filamin) (Filamin-2) (FLN-C) (Actin-binding-like protein) (ABP-L) (ABP-280-like protein)	FlnC (Abpl) (Fln2)	33	115	18	25
	P68510	14-3-3 protein eta	Ywhah	707	962	58	80
	Q8K298	Actin-binding protein anillin	Anln	16	28	17	23
	Q61595	Kinectin	Ktn1	15	50	43	56
	P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
	Q80X90	Filamin-B (FLN-B) (Beta-filamin) (Actin-binding like protein) (ABP-280-like protein)	Flnb	63	279	32	41
	P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
	P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
	Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
	Q9WUM4	Coronin-1C (Coronin-3)	Coro1c	42	28	18	21
	P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
	Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8
P40124	Adenylyl cyclase-associated protein 1 (CAP 1)	Cap1 (Cap)	22	43	8	9	
Q91X97	Neurocalcin-delta	Ncald (D15Ert412e)	85	82	8	9	

Q91ZT5	FYVE, RhoGEF and PH domain-containing protein 4 (Actin filament-binding protein frabin) (FGD1-related F-actin-binding protein)	Fgd4	29	19	10	11
P27546	Microtubule-associated protein 4 (MAP-4)	Map4 (Mtap4)	94	41	33	36
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
P26039	Talin-1	Tln1 (Tln)	123	161	41	42
Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
P45591	Cofilin-2 (Cofilin, muscle isoform)	Cfl2	528	431	39	38
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q61768	Kinesin-1 heavy chain (Ubiquitous kinesin heavy chain) (UKHC) (Conventional kinesin heavy chain)	Kif5b (Khcs) (Kns1)	102	303	43	41
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P26041	Moesin (Membrane-organizing extension spike protein)	Msn	136	127	44	39
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31

Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
Q8R4U0	Stabilin-2 (Fasciclin, EGF-like, laminin-type EGF-like and link domain-containing scavenger receptor 2) (FEEL-2) [Cleaved into: Short form stabilin-2]	Stab2 (Feel2)	25	43	12	10
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
P11531	Dystrophin	Dmd	25	16	66	55
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100
Q6A078	Centrosomal protein of 290 kDa (Cep290) (Nephrocystin-6)	Cep290 (Kiaa0373) (Nphp6)	32	57	85	66
Q7TMK6	Protein Hook homolog 2	Hook2	33	36	26	20
P97434	Myosin phosphatase Rho-interacting protein (Rho-interacting protein 3) (RIP3) (p116Rip)	Mrip (Kiaa0864) (Mrip) (Rhoip3)	35	23	25	19
P25233	Necdin	Ndn	30	23	16	12
Q8C9S8	Cysteine protease ATG4A (EC 3.4.22.-) (Autophagy-related protein 4 homolog A) (Autophagin-2) (Autophagy-related cysteine endopeptidase 2) (AUT-like 2 cysteine endopeptidase)	Atg4a (Apg4a) (Autl2)	26	21	6	4
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18

	Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
	Q9Z0P5	Twinfilin-2 (Twinfilin-1-like protein) (A6-related protein) (mA6RP)	Twf2 (Ptk9l)	29	32	10	6
	P26040	Ezrin (p81) (Cytovillin) (Villin-2)	Ezr (Vil2)	127	106	27	16
	P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4
	P26043	Radixin (ESP10)	Rdx	127	106	23	13
ATPase activity	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
	Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
	P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
	Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
	Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56

Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44

Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26



	Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
	Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
	P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	Q8K219	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
unfolded protein binding	P17742	Peptidyl-prolyl cis-trans isomerase A (PPIase A) (Rotamase A) (EC 5.2.1.8) (Cyclophilin A) (Cyclosporin A-binding protein) (SP18)	Ppia	855	1549	38	66
	Q61937	Nucleophosmin (NPM) (Nucleolar phosphoprotein B23) (Numatrin) (Nucleolar protein NO38)	Npm1	92	66	11	15
	P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
	P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13

Q9R0Q7	Prostaglandin E synthase 3 (EC 5.3.99.3) (Cytosolic prostaglandin E2 synthase) (cPGES) (Telomerase-binding protein p23) (Hsp90 co-chaperone) (Progesterone receptor complex p23) (Sid 3177)	Ptges3 (Sid3177) (Tebp)	124	239	10	11
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
P08113	Endoplasmic reticulum chaperone protein (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra-1) (Tra1)	221	298	25	27
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15

	P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
	P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
hydrolase activity, acting on acid anhydrides	Q3TCT4	Ectonucleoside triphosphate diphosphohydrolase 7 (NTPDase 7) (EC 3.6.1.-) (Lysosomal apyrase-like protein 1)	Entpd7 (Kiaa4066) (Lalp1)	16	33	42	80
	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	Q9Z1R2	Large proline-rich protein BAT3 (HLA-B-associated transcript 3)	Bat3	80	49	15	26
	Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
	Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
	P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
	Q9WVP9	Interferon-induced GTP-binding protein Mx2 (Myxovirus resistance protein 2)	Mx2	32	22	14	20
	P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84

P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
P63321	Ras-related protein Ral-A	Rala (Ral) (Rala)	25	22	30	39
Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21

P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a1) (Strn)	1275	1549	258	285
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q9QUI0	Transforming protein RhoA	Rhoa (Arha) (Arha2)	117	231	11	12
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
Q61820	GTP-binding nuclear protein Ran, testis-specific isoform	Rasl2-9	564	570	23	24
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
P62827	GTP-binding nuclear protein Ran (GTPase Ran) (Ras-related nuclear protein) (Ras-like protein TC4)	Ran (Rasl2-8)	756	656	38	36
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64

Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8

P61294	Ras-related protein Rab-6B	Rab6b (D9Bwg0185e)	18	53	10	7
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P68040	Guanine nucleotide-binding protein subunit beta-2-like 1 (Receptor of activated protein kinase C 1) (RACK1) (Receptor for activated C kinase) (p205) (12-3)	Gnb2l1 (Gnb2-rs1)	541	153	35	24
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
Q8C7H1	Methylmalonic aciduria type A homolog, mitochondrial	Mmaa	31	37	16	10
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIb) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40

	Q9QWK5	Baculoviral IAP repeat-containing protein 1a (Neuronal apoptosis inhibitory protein 1)	Naip1 (Birc1a) (Naip)	21	28	20	12
	P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
	Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
	Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
	Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
nucleoside-triphosphatase activity	Q3TCT4	Ectonucleoside triphosphate diphosphohydrolase 7 (NTPDase 7) (EC 3.6.1.-) (Lysosomal apyrase-like protein 1)	Entpd7 (Kiaa4066) (Lalp1)	16	33	42	80
	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
	Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
	P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
	Q9WVP9	Interferon-induced GTP-binding protein Mx2 (Myxovirus resistance protein 2)	Mx2	32	22	14	20
	P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84



P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
P63321	Ras-related protein Ral-A	Rala (Ral) (Rala)	25	22	30	39
Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21

P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a1) (Strn)	1275	1549	258	285
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q9QUI0	Transforming protein RhoA	Rhoa (Arha) (Arha2)	117	231	11	12
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
Q61820	GTP-binding nuclear protein Ran, testis-specific isoform	Rasl2-9	564	570	23	24
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
P62827	GTP-binding nuclear protein Ran (GTPase Ran) (Ras-related nuclear protein) (Ras-like protein TC4)	Ran (Rasl2-8)	756	656	38	36
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64

Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8

P61294	Ras-related protein Rab-6B	Rab6b (D9Bwg0185e)	18	53	10	7
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P68040	Guanine nucleotide-binding protein subunit beta-2-like 1 (Receptor of activated protein kinase C 1) (RACK1) (Receptor for activated C kinase) (p205) (12-3)	Gnb2l1 (Gnb2-rs1)	541	153	35	24
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
Q8C7H1	Methylmalonic aciduria type A homolog, mitochondrial	Mmaa	31	37	16	10
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIb) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40

	Q9QWK5	Baculoviral IAP repeat-containing protein 1a (Neuronal apoptosis inhibitory protein 1)	Naip1 (Birc1a) (Naip)	21	28	20	12
	P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
	Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
	Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
	Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
hydrolase activity, acting on acid anhydrides, in phosphorus-containing anhydrides	Q3TCT4	Ectonucleoside triphosphate diphosphohydrolase 7 (NTPDase 7) (EC 3.6.1.-) (Lysosomal apyrase-like protein 1)	Entpd7 (Kiaa4066) (Lalp1)	16	33	42	80
	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recq1 (Recq1)	17	27	13	22
	Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
	P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
	Q9WVP9	Interferon-induced GTP-binding protein Mx2 (Myxovirus resistance protein 2)	Mx2	32	22	14	20
	P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84

P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
P63321	Ras-related protein Ral-A	Rala (Ral) (Rala)	25	22	30	39
Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21

P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a1) (Strn)	1275	1549	258	285
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q9QUI0	Transforming protein RhoA	Rhoa (Arha) (Arha2)	117	231	11	12
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
Q61820	GTP-binding nuclear protein Ran, testis-specific isoform	Rasl2-9	564	570	23	24
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
P62827	GTP-binding nuclear protein Ran (GTPase Ran) (Ras-related nuclear protein) (Ras-like protein TC4)	Ran (Rasl2-8)	756	656	38	36
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64

Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8



P61294	Ras-related protein Rab-6B	Rab6b (D9Bwg0185e)	18	53	10	7
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P68040	Guanine nucleotide-binding protein subunit beta-2-like 1 (Receptor of activated protein kinase C 1) (RACK1) (Receptor for activated C kinase) (p205) (12-3)	Gnb2l1 (Gnb2-rs1)	541	153	35	24
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
Q8C7H1	Methylmalonic aciduria type A homolog, mitochondrial	Mmaa	31	37	16	10
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIb) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40

	Q9QWK5	Baculoviral IAP repeat-containing protein 1a (Neuronal apoptosis inhibitory protein 1)	Naip1 (Birc1a) (Naip)	21	28	20	12
	P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
	Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
	Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
	Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
pyrophosphatase activity	Q3TCT4	Ectonucleoside triphosphate diphosphohydrolase 7 (NTPDase 7) (EC 3.6.1.-) (Lysosomal apyrase-like protein 1)	Entpd7 (Kiaa4066) (Lalp1)	16	33	42	80
	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recq1 (Recq1)	17	27	13	22
	Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
	P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
	Q9WVP9	Interferon-induced GTP-binding protein Mx2 (Myxovirus resistance protein 2)	Mx2	32	22	14	20
	P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84

P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
P63321	Ras-related protein Ral-A	Rala (Ral) (Rala)	25	22	30	39
Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21

P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a1) (Strn)	1275	1549	258	285
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q9QUI0	Transforming protein RhoA	Rhoa (Arha) (Arha2)	117	231	11	12
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
Q61820	GTP-binding nuclear protein Ran, testis-specific isoform	Rasl2-9	564	570	23	24
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
P62827	GTP-binding nuclear protein Ran (GTPase Ran) (Ras-related nuclear protein) (Ras-like protein TC4)	Ran (Rasl2-8)	756	656	38	36
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64

Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8

P61294	Ras-related protein Rab-6B	Rab6b (D9Bwg0185e)	18	53	10	7
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P68040	Guanine nucleotide-binding protein subunit beta-2-like 1 (Receptor of activated protein kinase C 1) (RACK1) (Receptor for activated C kinase) (p205) (12-3)	Gnb2l1 (Gnb2-rs1)	541	153	35	24
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
Q8C7H1	Methylmalonic aciduria type A homolog, mitochondrial	Mmaa	31	37	16	10
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIb) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40

	Q9QWK5	Baculoviral IAP repeat-containing protein 1a (Neuronal apoptosis inhibitory protein 1)	Naip1 (Birc1a) (Naip)	21	28	20	12
	P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
	Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
	Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
	Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
structural constituent of cytoskeleton	P04104	Keratin, type II cytoskeletal 1 (Cytokeratin-1) (CK-1) (Keratin-1) (K1) (67 kDa cyto keratin) (Krt1 protein)	Krt1 (Krt2-1)	87	124	14	27
	Q61414	Keratin, type I cytoskeletal 15 (Cytokeratin-15) (CK-15) (Keratin-15) (K15)	Krt15 (Krt1-15)	37	46	4	7
	Q922U2	Keratin, type II cytoskeletal 5 (Cytokeratin-5) (CK-5) (Keratin-5) (K5)	Krt5 (Krt2-5)	396	550	23	38
	P07744	Keratin, type II cytoskeletal 4 (Cytokeratin-4) (CK-4) (Keratin-4) (K4) (Cytoskeletal 57 kDa keratin)	Krt4 (Krt2-4)	36	74	19	27
	P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
	Q99M73	Keratin, type II cuticular Hb4 (Type II hair keratin Hb4) (Keratin-84) (K84) (65 kDa type II keratin)	Krt84 (Krt2-16) (Krt84)	36	74	14	19
	P20152	Vimentin	Vim	1749	2397	125	157

P31001	Desmin	Des	169	224	25	31
P05784	Keratin, type I cytoskeletal 18 (Cytokeratin-18) (CK-18) (Keratin-18) (K18) (Cytokeratin endo B) (Keratin D)	Krt18 (Kerd) (Krt1-18)	37	46	10	12
Q9Z2K1	Keratin, type I cytoskeletal 16 (Cytokeratin-16) (CK-16) (Keratin-16) (K16)	Krt16 (Krt1-16)	37	37	7	8
P19001	Keratin, type I cytoskeletal 19 (Cytokeratin-19) (CK-19) (Keratin-19) (K19)	Krt19 (Krt1-19)	37	46	11	12
P26039	Talin-1	Tln1 (Tln)	123	161	41	42
Q61781	Keratin, type I cytoskeletal 14 (Cytokeratin-14) (CK-14) (Keratin-14) (K14)	Krt14 (Krt1-14)	38	37	10	10
P08730	Keratin, type I cytoskeletal 13 (Cytokeratin-13) (CK-13) (Keratin-13) (K13) (47 kDa cytokeratin)	Krt13 (Krt1-13)	37	46	13	12
P02535	Keratin, type I cytoskeletal 10 (Cytokeratin-10) (CK-10) (Keratin-10) (K10) (56 kDa cytokeratin) (Keratin, type I cytoskeletal 59 kDa)	Krt10 (Krt1-10)	252	152	19	17
Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
Q62168	Keratin, type I cuticular Ha2 (Hair keratin, type I Ha2) (Keratin-32) (K32)	Krt32 (Hka2) (Krt1-2) (Krtha2)	39	36	9	6
P61164	Alpha-centractin (Centractin) (Centrosome-associated actin homolog) (Actin-RPV) (ARP1)	Actr1a (Ctrn1)	247	124	27	18
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52



	Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
purine ribonucleotide binding	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	O88705	Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel 3 (Hyperpolarization-activated cation channel 3) (HAC-3)	Hcn3 (Hac3)	75	67	8	15
	Q62159	Rho-related GTP-binding protein RhoC (Silica-induced gene 61 protein) (SIG-61)	Rhoc (Arhc)	33	173	5	9
	Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
	Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
	Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
	P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13
	Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
	P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
	Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23
	Q8K386	Ras-related protein Rab-15	Rab15	44	74	4	6
P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwk1)	56	36	18	27	

P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
Q9WVP9	Interferon-induced GTP-binding protein Mx2 (Myxovirus resistance protein 2)	Mx2	32	22	14	20
Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
P70296	Phosphatidylethanolamine-binding protein 1 (PEBP-1) (HCNPPp) [Cleaved into: Hippocampal cholinergic neurostimulating peptide (HCNP)]	Pebp1 (Pbp) (Pebp)	532	730	25	33

Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fanci)	25	18	13	17
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
P63321	Ras-related protein Ral-A	Rala (Ral) (Rala)	25	22	30	39
Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25

Q61771	Kinesin-like protein KIF3B (Microtubule plus end-directed kinesin motor 3B)	Kif3b	30	51	16	19
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
P97820	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a1) (Stn)	1275	1549	258	285
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q3THS6	S-adenosylmethionine synthetase isoform type 2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12
Q9QUI0	Transforming protein RhoA	Rhoa (Arha) (Arha2)	117	231	11	12

Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
P08113	Endoplasmic reticulum chaperone protein (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra1) (Tra1)	221	298	25	27
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
Q61820	GTP-binding nuclear protein Ran, testis-specific isoform	Rasl2-9	564	570	23	24
P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5

P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q8C0N1	Kinesin-like protein KIF2B	Kif2b	17	26	8	8
Q80YV4	Pantothenate kinase 4 (EC 2.7.1.33) (Pantothenic acid kinase 4) (mPanK4)	Pank4	23	28	13	13
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
Q6P8J7	Creatine kinase, sarcomeric mitochondrial (EC 2.7.3.2) (S-MtCK)	Ckmt2	50	66	26	26
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q9QXL1	Kinesin-like protein KIF21B (Kinesin-like protein KIF6)	Kif21b (Kif6)	22	45	26	25
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43

Q61768	Kinesin-1 heavy chain (Ubiquitous kinesin heavy chain) (UKHC) (Conventional kinesin heavy chain)	Kif5b (Khcs) (Kns1)	102	303	43	41
P62827	GTP-binding nuclear protein Ran (GTPase Ran) (Ras-related nuclear protein) (Ras-like protein TC4)	Ran (Rasl2-8)	756	656	38	36
P30275	Creatine kinase, ubiquitous mitochondrial (EC 2.7.3.2) (U-MtCK) (Acidic-type mitochondrial creatine kinase) (Mia-CK)	Ckmt1	205	121	32	30
Q04447	Creatine kinase B-type (EC 2.7.3.2) (Creatine kinase B chain) (B-CK)	Ckb (Ckbb)	9079	7277	434	406
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
P33173	Kinesin-like protein KIF1A (Axonal transporter of synaptic vesicles)	Kif1a (Atsv) (Kif1)	45	108	25	22

Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
Q921E2	Ras-related protein Rab-31	Rab31	18	29	7	6
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
P46664	Adenylosuccinate synthetase isozyme 2 (AMPSase 2) (AdSS 2) (EC 6.3.4.4) (Adenylosuccinate synthetase, non-muscle isozyme) (Adenylosuccinate synthetase, acidic isozyme) (IMP--aspartate ligase 2)	Adss (Adss2)	36	66	12	10
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15



Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
Q921J2	GTP-binding protein Rheb (Ras homolog enriched in brain)	Rheb	21	44	31	25
Q62407	Striated muscle-specific serine/threonine protein kinase (EC 2.7.11.1) (Aortic preferentially expressed protein 1) (APEG-1)	Speg (Apeg1) (Kiaa1297)	26	20	31	25
Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
Q80UN9	tRNA isopentenyltransferase, mitochondrial (IPTase) (EC 2.5.1.8) (Isopentenyl-diphosphate:tRNA isopentenyltransferase) (IPP transferase) (IPPT)	Trit1 (Ipt)	31	24	19	15

Q8CIQ7	Dedicator of cytokinesis protein 3 (Modifier of cell adhesion) (Presenilin-binding protein) (PBP)	Dock3 (Moca)	80	56	33	26
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9

Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27
P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
P61294	Ras-related protein Rab-6B	Rab6b (D9Bwg0185e)	18	53	10	7
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2
P61164	Alpha-centractin (Centractin) (Centrosome-associated actin homolog) (Actin-RPV) (ARP1)	Actr1a (Ctrn1)	247	124	27	18
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18

Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q8C7H1	Methylmalonic aciduria type A homolog, mitochondrial	Mmaa	31	37	16	10
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
Q9Z0P5	Twinfilin-2 (Twinfilin-1-like protein) (A6-related protein) (mA6RP)	Twf2 (Ptk9l)	29	32	10	6
Q9QWK5	Baculoviral IAP repeat-containing protein 1a (Neuronal apoptosis inhibitory protein 1)	Naip1 (Birc1a) (Naip)	21	28	20	12
Q9EQZ6	Rap guanine nucleotide exchange factor 4 (cAMP-regulated guanine nucleotide exchange factor II) (cAMP-GEFII) (Exchange factor directly activated by cAMP 2) (Epac 2) (cAMP-dependent Rap1 guanine-nucleotide exchange factor)	Rapgef4 (Cgef2) (Epac2)	47	23	20	12
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13

P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P09041	Phosphoglycerate kinase 2 (EC 2.7.2.3) (Phosphoglycerate kinase, testis specific)	Pgk2 (Pgk-2)	162	73	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (Sl)	16	35	12	7
Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27
Q9WTU3	Sodium channel protein type 8 subunit alpha (Sodium channel protein type VIII subunit alpha) (Voltage-gated sodium channel subunit alpha Nav1.6)	Scn8a (Nbna1)	28	19	20	11
Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwnk4)	23	33	29	15

ribonucleotide binding	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	O88705	Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel 3 (Hyperpolarization-activated cation channel 3) (HAC-3)	Hcn3 (Hac3)	75	67	8	15
	Q62159	Rho-related GTP-binding protein RhoC (Silica-induced gene 61 protein) (SIG-61)	Rhoc (Arhc)	33	173	5	9
	Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
	Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
	Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
	P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13
	Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
	P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
	Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23
	Q8K386	Ras-related protein Rab-15	Rab15	44	74	4	6
	P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwnk1)	56	36	18	27
	P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13

Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
Q9WVP9	Interferon-induced GTP-binding protein Mx2 (Myxovirus resistance protein 2)	Mx2	32	22	14	20
Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
P70296	Phosphatidylethanolamine-binding protein 1 (PEBP-1) (HCNPpp) [Cleaved into: Hippocampal cholinergic neurostimulating peptide (HCNP)]	Pebp1 (Pbp) (Pebp)	532	730	25	33
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17

Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
P63321	Ras-related protein Ral-A	Rala (Ral) (Rala)	25	22	30	39
Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q61771	Kinesin-like protein KIF3B (Microtubule plus end-directed kinesin motor 3B)	Kif3b	30	51	16	19



Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
P97820	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1al) (Stn)	1275	1549	258	285
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q3THS6	S-adenosylmethionine synthetase isoform type 2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12
Q9QUI0	Transforming protein RhoA	Rhoa (Arha) (Arha2)	117	231	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24

P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
P08113	Endoplasmic (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra-1) (Tra1)	221	298	25	27
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tc1)	29	66	14	15
Q61820	GTP-binding nuclear protein Ran, testis-specific isoform	Rasl2-9	564	570	23	24
P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPlase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q8C0N1	Kinesin-like protein KIF2B	Kif2b	17	26	8	8

Q80YV4	Pantothenate kinase 4 (EC 2.7.1.33) (Pantothenic acid kinase 4) (mPanK4)	Pank4	23	28	13	13
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
Q6P8J7	Creatine kinase, sarcomeric mitochondrial (EC 2.7.3.2) (S-MtCK)	Ckmt2	50	66	26	26
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q9QXL1	Kinesin-like protein KIF21B (Kinesin-like protein KIF6)	Kif21b (Kif6)	22	45	26	25
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
Q61768	Kinesin-1 heavy chain (Ubiquitous kinesin heavy chain) (UKHC) (Conventional kinesin heavy chain)	Kif5b (Khcs) (Kns1)	102	303	43	41
P62827	GTP-binding nuclear protein Ran (GTPase Ran) (Ras-related nuclear protein) (Ras-like protein TC4)	Ran (Rasl2-8)	756	656	38	36

P30275	Creatine kinase, ubiquitous mitochondrial (EC 2.7.3.2) (U-MtCK) (Acidic-type mitochondrial creatine kinase) (Mia-CK)	Ckmt1	205	121	32	30
Q04447	Creatine kinase B-type (EC 2.7.3.2) (Creatine kinase B chain) (B-CK)	Ckb (Ckbb)	9079	7277	434	406
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
P33173	Kinesin-like protein KIF1A (Axonal transporter of synaptic vesicles)	Kif1a (Atsv) (Kif1)	45	108	25	22
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72

Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
Q921E2	Ras-related protein Rab-31	Rab31	18	29	7	6
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
P46664	Adenylosuccinate synthetase isozyme 2 (AMPSase 2) (AdSS 2) (EC 6.3.4.4) (Adenylosuccinate synthetase, non-muscle isozyme) (Adenylosuccinate synthetase, acidic isozyme) (IMP--aspartate ligase 2)	Adss (Adss2)	36	66	12	10
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44

Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
Q921J2	GTP-binding protein Rheb (Ras homolog enriched in brain)	Rheb	21	44	31	25
Q62407	Striated muscle-specific serine/threonine protein kinase (EC 2.7.11.1) (Aortic preferentially expressed protein 1) (APEG-1)	Speg (Apeg1) (Kiaa1297)	26	20	31	25
Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
Q80UN9	tRNA isopentenyltransferase, mitochondrial (IPTase) (EC 2.5.1.8) (Isopentenyl-diphosphate:tRNA isopentenyltransferase) (IPP transferase) (IPPT)	Trit1 (Ipt)	31	24	19	15
Q8CIQ7	Dedicator of cytokinesis protein 3 (Modifier of cell adhesion) (Presenilin-binding protein) (PBP)	Dock3 (Moca)	80	56	33	26

Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27

P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
P61294	Ras-related protein Rab-6B	Rab6b (D9Bwg0185e)	18	53	10	7
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2
P61164	Alpha-centractin (Centractin) (Centrosome-associated actin homolog) (Actin-RPV) (ARP1)	Actr1a (Ctrn1)	247	124	27	18
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26



Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q8C7H1	Methylmalonic aciduria type A homolog, mitochondrial	Mmaa	31	37	16	10
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
Q9Z0P5	Twinfilin-2 (Twinfilin-1-like protein) (A6-related protein) (mA6RP)	Twf2 (Ptk9I)	29	32	10	6
Q9QWK5	Baculoviral IAP repeat-containing protein 1a (Neuronal apoptosis inhibitory protein 1)	Naip1 (Birc1a) (Naip)	21	28	20	12
Q9EQZ6	Rap guanine nucleotide exchange factor 4 (cAMP-regulated guanine nucleotide exchange factor II) (cAMP-GEFII) (Exchange factor directly activated by cAMP 2) (Epac 2) (cAMP-dependent Rap1 guanine-nucleotide exchange factor)	Rapgef4 (Cgef2) (Epac2)	47	23	20	12
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10

	P09041	Phosphoglycerate kinase 2 (EC 2.7.2.3) (Phosphoglycerate kinase, testis specific)	Pgk2 (Pkg-2)	162	73	17	10
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
	Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
	Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
	Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27
	Q9WTU3	Sodium channel protein type 8 subunit alpha (Sodium channel protein type VIII subunit alpha) (Voltage-gated sodium channel subunit alpha Nav1.6)	Scn8a (Nbna1)	28	19	20	11
	Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
	Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
	Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwnk4)	23	33	29	15
nucleic acid binding	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38

Q8R3C6	Probable RNA-binding protein 19 (RNA-binding motif protein 19)	Rbm19	26	32	11	20
Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
Q8CGP2	Histone H2B type 1-P	Hist1h2bp	436	999	46	77
P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
P62960	Nuclease-sensitive element-binding protein 1 (Y-box-binding protein 1) (Y-box transcription factor) (YB-1) (CCAAT-binding transcription factor I subunit A) (CBF-A) (Enhancer factor I subunit A) (EFI-A) (DNA-binding protein B) (DBPB)	Ybx1 (Msy-1) (Msy1) (Nsep1) (Yb1)	56	126	6	10
P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78
Q64475	Histone H2B type 1-B (h2B-143)	Hist1h2bb	436	999	46	75
Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11

Q61990	Poly(rC)-binding protein 2 (Alpha-CP2) (Putative heterogeneous nuclear ribonucleoprotein X) (hnRNP X) (CTBP) (CBP)	Pcbp2 (Cbp) (HnrnpX) (Hnrpx)	29	194	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
Q8K386	Ras-related protein Rab-15	Rab15	44	74	4	6
O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
P97868	Retinoblastoma-binding protein 6 (p53-associated cellular protein of testis) (Proliferation potential-related protein) (Protein P2P-R)	Rbbp6 (P2pr) (Pact)	21	29	24	35
Q3THW5	Histone H2A.V (H2A.F/Z)	H2afv (H2av)	297	426	11	16
P60335	Poly(rC)-binding protein 1 (Alpha-CP1) (hnRNP-E1)	Pcbp1	56	350	9	13
O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10
P12813	Nuclear receptor subfamily 4 group A member 1 (Orphan nuclear receptor HMR) (Nuclear hormone receptor NUR/77) (N10 nuclear protein)	Nr4a1 (Gfrp) (Hmr) (N10) (Nur77)	61	31	7	10
P70696	Histone H2B type 1-A (Histone H2B, testis) (Testis-specific histone H2B)	Hist1h2ba (Th2b)	146	378	37	51
P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
Q61937	Nucleophosmin (NPM) (Nucleolar phosphoprotein B23) (Numatrin) (Nucleolar protein NO38)	Npm1	92	66	11	15
P70338	Zinc finger protein Gfi-1 (Growth factor independent protein 1)	Gfi1 (Gfi-1)	45	39	17	23

Q61789	Laminin subunit alpha-3 (Nicein subunit alpha)	Lama3	26	26	37	50
Q9WTX2	Interferon-inducible double stranded RNA-dependent protein kinase activator A (Protein kinase, interferon-inducible double stranded RNA-dependent activator) (Protein activator of the interferon-induced protein kinase) (PKR-associated protein X) (PKR-associating protein X) (RAX)	Prkra (Rax)	28	39	9	12
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
P63163	Small nuclear ribonucleoprotein-associated protein N (snRNP-N) (Sm protein N) (Sm-N) (SmN) (Sm-D) (Tissue-specific-splicing protein)	Snrpn (Smn)	38	17	7	9
Q7TQ07	DNA polymerase nu (EC 2.7.7.7)	Poln	20	39	14	18
Q07133	Histone H1t (Testicular H1 histone)	Hist1h1t (H1ft) (H1t)	46	72	54	69
Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
P27661	Histone H2A.x (H2a/x)	H2afx (H2a.x) (H2ax) (Hist5-2ax)	301	426	15	19
Q62093	Splicing factor, arginine/serine-rich 2 (Splicing factor SC35) (SC-35) (Splicing component, 35 kDa) (Protein PR264) (Putative myelin regulatory factor 1) (MRF-1)	Sfrs2 (Pr264) (Sfrs10)	184	117	15	19

P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
Q3UKC1	Tax1-binding protein 1 homolog	Tax1bp1	22	27	24	30
Q811J3	Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
Q8VII8	Mineralocorticoid receptor (MR) (Nuclear receptor subfamily 3 group C member 2)	Nr3c2 (Mlr)	28	22	18	22
Q6PDM2	Splicing factor, arginine/serine-rich 1 (ASF/SF2)	Sfrs1	24	91	5	6
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
P54103	DnaJ homolog subfamily C member 2 (Zuotin-related factor 1) (Mouse Id associate 1) (MIDA1)	Dnajc2 (Mida1) (Zrf1)	23	27	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
Q6GSS7	Histone H2A type 2-A (H2A.2) (H2a-614) (H2a-615)	Hist2h2aa1; Hist2h2aa2	505	763	18	21
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
Q9JKP5	Muscleblind-like protein 1 (Triplet-expansion RNA-binding protein)	Mbnl1 (Exp) (Mbnl)	45	63	244	281

Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
Q921M3	Splicing factor 3B subunit 3 (Spliceosome-associated protein 130) (SAP 130) (Pre-mRNA splicing factor SF3b 130 kDa subunit) (SF3b130)	Sf3b3 (Kiaa0017)	16	34	24	27
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a1) (Stn)	1275	1549	258	285
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
P70298	Homeobox protein cut-like 2 (Cut-like 2) (Homeobox protein Cux-2)	Cux2 (Cutl2)	30	22	12	13
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330

P08113	Endoplasmic reticulum chaperone (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra1) (Tra1)	221	298	25	27
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
Q62504	Msx2-interacting protein (SPEN homolog) (SMART/HDAC1-associated repressor protein)	Spen (Kiaa0929) (Mint) (Sharp)	27	18	72	75
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165
Q3TXZ1	Zinc finger protein 575	Znf575 (Zfp575)	30	25	5	5
Q8VCZ3	THAP domain-containing protein 7	Thap7	26	18	6	6
Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
Q99LX0	Protein DJ-1 (Parkinson disease protein 7 homolog)	Park7	53	178	9	9
Q6P5F9	Exportin-1 (Exp1) (Chromosome region maintenance 1 protein homolog)	Xpo1 (Crm1)	19	43	9	9
Q9DAI4	Zinc finger and BTB domain-containing protein 43 (Zinc finger protein 297B)	Zbtb43 (Kiaa0414) (Zfp297b) (Znf297b)	23	51	9	9
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15



P30681	High mobility group protein B2 (High mobility group protein 2) (HMG-2)	Hmgb2 (Hmg2)	94	222	24	24
Q8K4E0	Alstrom syndrome protein 1 homolog	Alms1 (Kiaa0328)	29	30	86	86
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (Csma) (Eif3) (Eif3s10)	199	166	58	56
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
P07724	Serum albumin	Alb (Alb-1) (Alb1)	550	572	22	21
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
Q6ZPK0	PHD finger protein 21A (BRAF35-HDAC complex protein BHC80) (mBHC80) (BHC80a)	Phf21a (Bhc80) (Kiaa1696) (Pftf1)	28	37	20	19
P03966	N-myc proto-oncogene protein	Mycn (Nmyc) (Nmyc1)	65	46	18	17
Q8CGC6	RNA-binding protein 28 (RNA-binding motif protein 28)	Rbm28	24	41	71	66
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36

Q9QZH3	Peptidyl-prolyl cis-trans isomerase E (PPIase E) (Rotamase E) (EC 5.2.1.8) (Cyclophilin E) (Cyclophilin-33)	Ppie (Cyp33)	28	35	10	9
Q925Q8	Dachshund homolog 2 (Dach2)	Dach2	22	30	9	8
P43277	Histone H1.3 (H1 VAR.4) (H1d)	Hist1h1d (H1f3)	78	99	18	16
Q9QXA7	Tripartite motif-containing protein 44 (Protein DIPB) (Protein Mc7)	Trim44 (Dipb)	28	23	18	16
Q8BG95	Protein phosphatase 1 regulatory subunit 12B (Myosin phosphatase-targeting subunit 2)	Ppp1r12b (Mypt2)	25	24	25	22
Q924C1	Exportin-5 (Exp5) (Ran-binding protein 21)	Xpo5 (Kiaa1291) (Ranbp21)	20	62	15	13
Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
Q99PP7	E3 ubiquitin-protein ligase TRIM33 (EC 6.3.2.-) (Tripartite motif-containing protein 33) (Transcription intermediary factor 1-gamma) (TIF1-gamma) (Ectodermin homolog)	Trim33 (Kiaa1113)	33	25	12	10
P09405	Nucleolin (Protein C23)	Ncl (Nuc)	775	872	78	65
P42227	Signal transducer and activator of transcription 3 (Acute-phase response factor)	Stat3 (Aprf)	16	28	33	27
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q80UN9	tRNA isopentenyltransferase, mitochondrial (IPTase) (EC 2.5.1.8) (Isopentenyl-diphosphate:tRNA isopentenyltransferase) (IPP transferase) (IPPT)	Trit1 (lpt)	31	24	19	15

P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
P70670	Nascent polypeptide-associated complex subunit alpha, muscle-specific form (Alpha-NAC, muscle-specific form)	Naca (Gm1878)	22	130	29	22
P25233	Necdin	Ndn	30	23	16	12
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
Q6P3Y5	Zinc finger protein 280C (Suppressor of hairy wing homolog 3)	Znf280c (Kiaa1584) (Suhw3) (Zfp280c)	87	142	43	32
Q4VGL6	Roquin (RING finger and C3H zinc finger protein 1) (Protein Sanroque)	Rc3h1 (Gm551) (Kiaa2025)	54	54	23	17
P58681	Toll-like receptor 7	Tlr7	27	33	23	17
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
Q03172	Zinc finger protein 40 (Transcription factor alphaA-CRYBP1) (Alpha A-crystallin-binding protein I) (Alpha A-CRYBP1)	Hivep1 (Cryabp1) (Znf40)	25	24	21	15
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12

Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q64707	U2 small nuclear ribonucleoprotein auxiliary factor 35 kDa subunit-related protein 1 (U2(RNU2) small nuclear RNA auxiliary factor 1-like 1) (CCCH type zinc finger, RNA-binding motif and serine/arginine rich protein 1) (SP2)	Zrsr1 (Sp2) (Sp2-7) (U2af1rs1) (U2af111)	34	22	13	9
Q52KI8	Serine/arginine repetitive matrix protein 1 (Plenty-of-prolines 101)	Srrm1 (Pop101)	22	73	29	20
Q99PV0	Pre-mRNA-processing-splicing factor 8 (Splicing factor Prp8)	Prpf8 (Prp8)	28	29	51	35
P43275	Histone H1.1 (H1 VAR.3) (H1a)	Hist1h1a (H1f1)	28	90	9	6
P61979	Heterogeneous nuclear ribonucleoprotein K (hnRNP K)	Hnrnpk (Hnrpk)	225	46	18	12
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
Q9QZ09	Putative homeodomain transcription factor 1	Phtf1 (Phtf)	29	24	8	5
Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (Ubpy)	29	23	24	15
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
O88291	Zinc finger protein 326 (Zinc finger protein-associated with nuclear matrix of 75 kDa)	Znf326 (Zan75) (Zfp326)	41	55	5	3
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11

	P53762	Aryl hydrocarbon receptor nuclear translocator (ARNT protein) (Dioxin receptor, nuclear translocator) (Hypoxia-inducible factor 1 beta) (HIF-1 beta)	Arnt	25	22	7	4
	Q9R1X4	Protein timeless homolog (mTim)	Timeless (Tim1) (Timeless1)	22	25	16	9
	Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
	P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
	Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27
	P17918	Proliferating cell nuclear antigen (PCNA) (Cyclin)	Pcna	273	207	20	11
	Q9WUJ8	Origin recognition complex subunit 6	Orc6l (Orc6)	59	37	13	7
	P11103	Poly [ADP-ribose] polymerase 1 (PARP-1) (EC 2.4.2.30) (ADPRT) (NAD(+) ADP-ribosyltransferase 1) (Poly[ADP-ribose] synthetase 1) (msPARP)	Parp1 (Adprp) (Adprt) (Adprt1)	21	26	17	9
purine nucleotide binding	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	O88705	Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel 3 (Hyperpolarization-activated cation channel 3) (HAC-3)	Hcn3 (Hac3)	75	67	8	15
	Q62159	Rho-related GTP-binding protein RhoC (Silica-induced gene 61 protein) (SIG-61)	Rhoc (Arhc)	33	173	5	9

Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
Q8R1S0	Ubiquinone biosynthesis monooxygenase COQ6 (EC 1.14.13.-)	Coq6	42	92	10	17
Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13
Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23
Q8K386	Ras-related protein Rab-15	Rab15	44	74	4	6
P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwnk1)	56	36	18	27
P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
Q9WVP9	Interferon-induced GTP-binding protein Mx2 (Myxovirus resistance protein 2)	Mx2	32	22	14	20

Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
P70296	Phosphatidylethanolamine-binding protein 1 (PEBP-1) (HCNPPp) [Cleaved into: Hippocampal cholinergic neurostimulating peptide (HCNP)]	Pebp1 (Pbp) (Pebp)	532	730	25	33
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
P63321	Ras-related protein Ral-A	Rala (Ral) (Rala)	25	22	30	39

Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q61771	Kinesin-like protein KIF3B (Microtubule plus end-directed kinesin motor 3B)	Kif3b	30	51	16	19
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483



P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
P97820	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a1) (Str)	1275	1549	258	285
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q3THS6	S-adenosylmethionine synthetase isoform type 2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12
Q9QUI0	Transforming protein RhoA	Rhoa (Arha) (Arha2)	117	231	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Hars1)	20	41	22	24
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13

P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
P08113	Endoplasmic (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra- 1) (Tra1)	221	298	25	27
Q9Z104	SWI/SNF-related matrix-associated actin- dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2- associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1- alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
Q3TY86	Apoptosis-inducing factor 3 (EC 1.-.-.-) (Apoptosis-inducing factor-like protein)	Aifm3 (Aifl)	42	26	28	30
Q61820	GTP-binding nuclear protein Ran, testis- specific isoform	Rasl2-9	564	570	23	24
P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl- prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q8C0N1	Kinesin-like protein KIF2B	Kif2b	17	26	8	8
Q80YV4	Pantothenate kinase 4 (EC 2.7.1.33) (Pantothenic acid kinase 4) (mPanK4)	Pank4	23	28	13	13
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15

Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
Q6P8J7	Creatine kinase, sarcomeric mitochondrial (EC 2.7.3.2) (S-MtCK)	Ckmt2	50	66	26	26
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q9QXL1	Kinesin-like protein KIF21B (Kinesin-like protein KIF6)	Kif21b (Kif6)	22	45	26	25
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S-)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
Q61768	Kinesin-1 heavy chain (Ubiquitous kinesin heavy chain) (UKHC) (Conventional kinesin heavy chain)	Kif5b (Khcs) (Kns1)	102	303	43	41
P62827	GTP-binding nuclear protein Ran (GTPase Ran) (Ras-related nuclear protein) (Ras-like protein TC4)	Ran (Rasl2-8)	756	656	38	36
P30275	Creatine kinase, ubiquitous mitochondrial (EC 2.7.3.2) (U-MtCK) (Acidic-type mitochondrial creatine kinase) (Mia-CK)	Ckmt1	205	121	32	30
Q04447	Creatine kinase B-type (EC 2.7.3.2) (Creatine kinase B chain) (B-CK)	Ckb (Ckbb)	9079	7277	434	406

P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
P33173	Kinesin-like protein KIF1A (Axonal transporter of synaptic vesicles)	Kif1a (Atsv) (Kif1)	45	108	25	22
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
Q921E2	Ras-related protein Rab-31	Rab31	18	29	7	6

O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
P46664	Adenylosuccinate synthetase isozyme 2 (AMPSase 2) (AdSS 2) (EC 6.3.4.4) (Adenylosuccinate synthetase, non-muscle isozyme) (Adenylosuccinate synthetase, acidic isozyme) (IMP--aspartate ligase 2)	Adss (Adss2)	36	66	12	10
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44

Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
Q921J2	GTP-binding protein Rheb (Ras homolog enriched in brain)	Rheb	21	44	31	25
Q62407	Striated muscle-specific serine/threonine protein kinase (EC 2.7.11.1) (Aortic preferentially expressed protein 1) (APEG-1)	Speg (Apeg1) (Kiaa1297)	26	20	31	25
Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
Q80UN9	tRNA isopentenyltransferase, mitochondrial (IPTase) (EC 2.5.1.8) (Isopentenyl-diphosphate:tRNA isopentenyltransferase) (IPP transferase) (IPPT)	Trit1 (lpt)	31	24	19	15
Q8CIQ7	Dedicator of cytokinesis protein 3 (Modifier of cell adhesion) (Presenilin-binding protein) (PBP)	Dock3 (Moca)	80	56	33	26

Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27

P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
P61294	Ras-related protein Rab-6B	Rab6b (D9Bwg0185e)	18	53	10	7
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2
P61164	Alpha-centractin (Centractin) (Centrosome-associated actin homolog) (Actin-RPV) (ARP1)	Actr1a (Ctrn1)	247	124	27	18
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26



Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q8C7H1	Methylmalonic aciduria type A homolog, mitochondrial	Mmaa	31	37	16	10
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
Q9Z0P5	Twinfilin-2 (Twinfilin-1-like protein) (A6-related protein) (mA6RP)	Twf2 (Ptk9I)	29	32	10	6
Q9QWK5	Baculoviral IAP repeat-containing protein 1a (Neuronal apoptosis inhibitory protein 1)	Naip1 (Birc1a) (Naip)	21	28	20	12
Q9EQZ6	Rap guanine nucleotide exchange factor 4 (cAMP-regulated guanine nucleotide exchange factor II) (cAMP-GEFII) (Exchange factor directly activated by cAMP 2) (Epac 2) (cAMP-dependent Rap1 guanine-nucleotide exchange factor)	Rapgef4 (Cgef2) (Epac2)	47	23	20	12
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10

P09041	Phosphoglycerate kinase 2 (EC 2.7.2.3) (Phosphoglycerate kinase, testis specific)	Pgk2 (Pgk-2)	162	73	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27
Q9WTU3	Sodium channel protein type 8 subunit alpha (Sodium channel protein type VIII subunit alpha) (Voltage-gated sodium channel subunit alpha Nav1.6)	Scn8a (Nbna1)	28	19	20	11
Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwnk4)	23	33	29	15

actin binding	Q8BTM8	Filamin-A (Alpha-filamin) (Filamin-1) (Endothelial actin-binding protein) (Actin-binding protein 280) (ABP-280) (Non-muscle filamin)	Flna (Fln) (Fln1)	254	1031	46	86
	P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
	P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
	P61982	14-3-3 protein gamma	Ywhag	653	841	53	79
	Q8VHX6	Filamin-C (Gamma-filamin) (Filamin-2) (FLN-C) (Actin-binding-like protein) (ABP-L) (ABP-280-like protein)	Flnc (Abpl) (Fln2)	33	115	18	25
	P68510	14-3-3 protein eta	Ywhah	707	962	58	80
	Q8K298	Actin-binding protein anillin	Anln	16	28	17	23
	P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
	Q80X90	Filamin-B (FLN-B) (Beta-filamin) (Actin-binding like protein) (ABP-280-like protein)	Flnb	63	279	32	41
	P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
	Q9WUM4	Coronin-1C (Coronin-3)	Coro1c	42	28	18	21
	Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8
	P40124	Adenylyl cyclase-associated protein 1 (CAP 1)	Cap1 (Cap)	22	43	8	9
	Q91X97	Neurocalcin-delta	Ncald (D15Ert412e)	85	82	8	9
Q91ZT5	FYVE, RhoGEF and PH domain-containing protein 4 (Actin filament-binding protein frabin) (FGD1-related F-actin-binding protein)	Fgd4	29	19	10	11	
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69	
P26039	Talin-1	Tln1 (Tln)	123	161	41	42	

Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
P45591	Cofilin-2 (Cofilin, muscle isoform)	Cfl2	528	431	39	38
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
Q8R4U0	Stabilin-2 (Fasciclin, EGF-like, laminin-type EGF-like and link domain-containing scavenger receptor 2) (FEEL-2) [Cleaved into: Short form stabilin-2]	Stab2 (Feel2)	25	43	12	10
P11531	Dystrophin	Dmd	25	16	66	55
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100

	P97434	Myosin phosphatase Rho-interacting protein (Rho-interacting protein 3) (RIP3) (p116Rip)	Mprip (Kiaa0864) (Mrip) (Rhoip3)	35	23	25	19
	Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
	P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18
	Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
	Q9Z0P5	Twinfilin-2 (Twinfilin-1-like protein) (A6-related protein) (mA6RP)	Twf2 (Ptk9l)	29	32	10	6
	P26040	Ezrin (p81) (Cytovillin) (Villin-2)	Ezr (Vil2)	127	106	27	16
	P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4
	P26043	Radixin (ESP10)	Rdx	127	106	23	13
ATPase activity, coupled	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
	Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
	P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22

Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44

Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40

	P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
nucleotide binding	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	O88705	Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel 3 (Hyperpolarization-activated cation channel 3) (HAC-3)	Hcn3 (Hac3)	75	67	8	15
	Q8R3C6	Probable RNA-binding protein 19 (RNA-binding motif protein 19)	Rbm19	26	32	11	20
	Q62159	Rho-related GTP-binding protein RhoC (Silica-induced gene 61 protein) (SIG-61)	Rhoc (Arhc)	33	173	5	9
	Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
	Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
	Q8R1S0	Ubiquinone biosynthesis monooxygenase COQ6 (EC 1.14.13.-)	Coq6	42	92	10	17
	Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
	P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13
	Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11



P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23
Q8K386	Ras-related protein Rab-15	Rab15	44	74	4	6
P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwk1)	56	36	18	27
P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
Q9WVP9	Interferon-induced GTP-binding protein Mx2 (Myxovirus resistance protein 2)	Mx2	32	22	14	20
Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11

P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
P70296	Phosphatidylethanolamine-binding protein 1 (PEBP-1) (HCNPPp) [Cleaved into: Hippocampal cholinergic neurostimulating peptide (HCNP)]	Pebp1 (Pbp) (Pebp)	532	730	25	33
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
P63321	Ras-related protein Ral-A	Rala (Ral) (Rala)	25	22	30	39
Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
Q62093	Splicing factor, arginine/serine-rich 2 (Splicing factor SC35) (SC-35) (Splicing component, 35 kDa) (Protein PR264) (Putative myelin regulatory factor 1) (MRF-1)	Sfrs2 (Pr264) (Sfrs10)	184	117	15	19
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37

Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
Q6PDM2	Splicing factor, arginine/serine-rich 1 (ASF/SF2)	Sfrs1	24	91	5	6
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q61771	Kinesin-like protein KIF3B (Microtubule plus end-directed kinesin motor 3B)	Kif3b	30	51	16	19
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21

P97820	Mitogen-activated protein kinase kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
Q9WUU9	80 kDa MCM3-associated protein (Protein GANP)	Mcm3ap (Ganp) (Map80)	48	32	17	19
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a) (Str)	1275	1549	258	285
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q3THS6	S-adenosylmethionine synthetase isoform type 2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12
Q9QUI0	Transforming protein RhoA	Rhoa (Arha) (Arha2)	117	231	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13

P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
P08113	Endoplasmic reticulum chaperone protein (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra-1) (Tra1)	221	298	25	27
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
Q3TY86	Apoptosis-inducing factor 3 (EC 1.-.-.-) (Apoptosis-inducing factor-like protein)	Aifm3 (Aifl)	42	26	28	30
Q61820	GTP-binding nuclear protein Ran, testis-specific isoform	Rasl2-9	564	570	23	24
Q62504	Msx2-interacting protein (SPEN homolog) (SMART/HDAC1-associated repressor protein)	Spen (Kiaa0929) (Mint) (Sharp)	27	18	72	75
P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q8C0N1	Kinesin-like protein KIF2B	Kif2b	17	26	8	8
Q80YV4	Pantothenate kinase 4 (EC 2.7.1.33) (Pantothenic acid kinase 4) (mPanK4)	Pank4	23	28	13	13

P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
Q6P8J7	Creatine kinase, sarcomeric mitochondrial (EC 2.7.3.2) (S-MtCK)	Ckmt2	50	66	26	26
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q9QXL1	Kinesin-like protein KIF21B (Kinesin-like protein KIF6)	Kif21b (Kif6)	22	45	26	25
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
Q61768	Kinesin-1 heavy chain (Ubiquitous kinesin heavy chain) (UKHC) (Conventional kinesin heavy chain)	Kif5b (Khcs) (Kns1)	102	303	43	41
P62827	GTP-binding nuclear protein Ran (GTPase Ran) (Ras-related nuclear protein) (Ras-like protein TC4)	Ran (Rasl2-8)	756	656	38	36
P30275	Creatine kinase, ubiquitous mitochondrial (EC 2.7.3.2) (U-MtCK) (Acidic-type mitochondrial creatine kinase) (Mia-CK)	Ckmt1	205	121	32	30

Q04447	Creatine kinase B-type (EC 2.7.3.2) (Creatine kinase B chain) (B-CK)	Ckb (Ckbb)	9079	7277	434	406
Q8CGC6	RNA-binding protein 28 (RNA-binding motif protein 28)	Rbm28	24	41	71	66
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q9QZH3	Peptidyl-prolyl cis-trans isomerase E (PPIase E) (Rotamase E) (EC 5.2.1.8) (Cyclophilin E) (Cyclophilin-33)	Ppie (Cyp33)	28	35	10	9
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
P33173	Kinesin-like protein KIF1A (Axonal transporter of synaptic vesicles)	Kif1a (Atsv) (Kif1)	45	108	25	22
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55

Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
Q921E2	Ras-related protein Rab-31	Rab31	18	29	7	6
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
P97784	Cryptochrome-1	Cry1	52	42	21	18
Q9R194	Cryptochrome-2	Cry2 (Kiaa0658)	52	42	21	18
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
P46664	Adenylosuccinate synthetase isozyme 2 (AMPSase 2) (AdSS 2) (EC 6.3.4.4) (Adenylosuccinate synthetase, non-muscle isozyme) (Adenylosuccinate synthetase, acidic isozyme) (IMP--aspartate ligase 2)	Adss (Adss2)	36	66	12	10
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
P09405	Nucleolin (Protein C23)	Ncl (Nuc)	775	872	78	65



Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
Q921J2	GTP-binding protein Rheb (Ras homolog enriched in brain)	Rheb	21	44	31	25
Q62407	Striated muscle-specific serine/threonine protein kinase (EC 2.7.11.1) (Aortic preferentially expressed protein 1) (APEG-1)	Speg (Apeg1) (Kiaa1297)	26	20	31	25
Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
Q80UN9	tRNA isopentenyltransferase, mitochondrial (IPTase) (EC 2.5.1.8) (Isopentenyl-diphosphate:tRNA isopentenyltransferase) (IPP transferase) (IPPT)	Trit1 (Ipt)	31	24	19	15

Q8CIQ7	Dedicator of cytokinesis protein 3 (Modifier of cell adhesion) (Presenilin-binding protein) (PBP)	Dock3 (Moca)	80	56	33	26
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9

P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27
P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
P61294	Ras-related protein Rab-6B	Rab6b (D9Bwg0185e)	18	53	10	7
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q64707	U2 small nuclear ribonucleoprotein auxiliary factor 35 kDa subunit-related protein 1 (U2(RNU2) small nuclear RNA auxiliary factor 1-like 1) (CCCH type zinc finger, RNA-binding motif and serine/arginine rich protein 1) (SP2)	Zrsr1 (Sp2) (Sp2-7) (U2af1rs1) (U2af111)	34	22	13	9
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2
P61164	Alpha-centractin (Centractin) (Centrosome-associated actin homolog) (Actin-RPV) (ARP1)	Actr1a (Ctrn1)	247	124	27	18

P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q8C7H1	Methylmalonic aciduria type A homolog, mitochondrial	Mmaa	31	37	16	10
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
Q9Z0P5	Twinfilin-2 (Twinfilin-1-like protein) (A6-related protein) (mA6RP)	Twf2 (Ptk9l)	29	32	10	6
Q9QWK5	Baculoviral IAP repeat-containing protein 1a (Neuronal apoptosis inhibitory protein 1)	Naip1 (Birc1a) (Naip)	21	28	20	12
Q9EQZ6	Rap guanine nucleotide exchange factor 4 (cAMP-regulated guanine nucleotide exchange factor II) (cAMP-GEFII) (Exchange factor directly activated by cAMP 2) (Epac 2) (cAMP-dependent Rap1 guanine-nucleotide exchange factor)	Rapgef4 (Cgef2) (Epac2)	47	23	20	12

P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P09041	Phosphoglycerate kinase 2 (EC 2.7.2.3) (Phosphoglycerate kinase, testis specific)	Pgk2 (Pkg-2)	162	73	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27
Q9WTU3	Sodium channel protein type 8 subunit alpha (Sodium channel protein type VIII subunit alpha) (Voltage-gated sodium channel subunit alpha Nav1.6)	Scn8a (Nbna1)	28	19	20	11

	Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
	Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
	Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwnk4)	23	33	29	15
structural constituent of ribosome	P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
	P62082	40S ribosomal protein S7	Rps7	104	126	9	14
	O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
	P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
	P62908	40S ribosomal protein S3	Rps3	778	762	39	44
	P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
	P62242	40S ribosomal protein S8	Rps8	479	372	18	19
	P62281	40S ribosomal protein S11	Rps11	166	132	27	28
	Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
	P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
	P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
	Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
	Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
	P14131	40S ribosomal protein S16	Rps16	160	126	19	16
	P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
	P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
	Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
	P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
	P63325	40S ribosomal protein S10	Rps10	468	168	42	33
	P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12	

	P62264	40S ribosomal protein S14	Rps14	163	166	15	11
	P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
	P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
	Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
	P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
	P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
	P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
	P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
	Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
	P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
	P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
	P62301	40S ribosomal protein S13	Rps13	77	100	23	14
	Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
	P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
	P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
	Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
	P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
	P97461	40S ribosomal protein S5	Rps5	89	33	32	18
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
endopeptidase activity	Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
	P99026	Proteasome subunit beta type-4 (Proteasome beta chain) (EC 3.4.25.1) (Macropain beta chain) (Multicatalytic endopeptidase complex beta chain) (Proteasome chain 3)	Psmb4 (Lmp3)	93	289	11	16

Q9R1P0	Proteasome subunit alpha type-4 (EC 3.4.25.1) (Proteasome component C9) (Macropain subunit C9) (Multicatalytic endopeptidase complex subunit C9) (Proteasome subunit L)	Psma4	29	151	14	17
Q9QUR6	Prolyl endopeptidase (PE) (EC 3.4.21.26) (Post-proline cleaving enzyme)	Prep (Pep)	56	20	15	18
Q6A4J8	Ubiquitin carboxyl-terminal hydrolase 7 (EC 3.1.2.15) (Ubiquitin thioesterase 7) (Ubiquitin-specific-processing protease 7) (Deubiquitinating enzyme 7) (Herpesvirus-associated ubiquitin-specific protease) (mHAUSP)	Usp7 (Hausp)	27	18	14	16
O55234	Proteasome subunit beta type-5 (EC 3.4.25.1) (Proteasome epsilon chain) (Macropain epsilon chain) (Multicatalytic endopeptidase complex epsilon chain) (Proteasome subunit X) (Proteasome chain 6)	Psmb5	168	227	10	11
Q9R1P1	Proteasome subunit beta type-3 (EC 3.4.25.1) (Proteasome theta chain) (Proteasome chain 13) (Proteasome component C10-II)	Psmb3	87	135	7	7
O09061	Proteasome subunit beta type-1 (EC 3.4.25.1) (Proteasome component C5) (Macropain subunit C5) (Multicatalytic endopeptidase complex subunit C5) (Proteasome gamma chain)	Psmb1	84	94	11	11
Q9DB77	Cytochrome b-c1 complex subunit 2, mitochondrial (Ubiquinol-cytochrome-c reductase complex core protein 2) (Core protein II) (Complex III subunit 2)	Uqcrc2	29	20	13	13



Q9WTR0	Matrix metalloproteinase-16 (MMP-16) (EC 3.4.24.-) (Membrane-type matrix metalloproteinase 3) (MT-MMP 3) (MTMMP3) (Membrane-type-3 matrix metalloproteinase) (MT3-MMP) (MT3MMP)	Mmp16	17	36	11	10
P70195	Proteasome subunit beta type-7 (EC 3.4.25.1) (Proteasome subunit Z) (Macropain chain Z) (Multicatalytic endopeptidase complex chain Z)	Psmb7 (Mmc14)	39	40	8	7
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q64514	Tripeptidyl-peptidase 2 (EC 3.4.14.10) (Tripeptidyl-peptidase II) (TPP-II) (Tripeptidyl aminopeptidase)	Tpp2	54	76	24	20
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q9Z2U0	Proteasome subunit alpha type-7 (EC 3.4.25.1) (Proteasome subunit RC6-1)	PsmA7	121	253	15	12
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
Q9D8V0	Minor histocompatibility antigen H13 (EC 3.4.23.-) (Signal peptide peptidase) (Presenilin-like protein 3)	Hm13 (H13) (Psl3)	23	29	28	21

	Q60692	Proteasome subunit beta type-6 (EC 3.4.25.1) (Proteasome delta chain) (Macropain delta chain) (Multicatalytic endopeptidase complex delta chain) (Proteasome subunit Y)	Psmb6 (Lmp19)	33	89	17	12
	Q8C9S8	Cysteine protease ATG4A (EC 3.4.22.-) (Autophagy-related protein 4 homolog A) (Autophagin-2) (Autophagy-related cysteine endopeptidase 2) (AUT-like 2 cysteine endopeptidase)	Atg4a (Apg4a) (Autl2)	26	21	6	4
	O70435	Proteasome subunit alpha type-3 (EC 3.4.25.1) (Proteasome component C8) (Macropain subunit C8) (Multicatalytic endopeptidase complex subunit C8) (Proteasome subunit K)	Psma3	95	76	14	9
	Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (Ubpy)	29	23	24	15
	Q8R4K8	Pappalysin-1 (EC 3.4.24.79) (Pregnancy-associated plasma protein A) (PAPP-A) (Insulin-like growth factor-dependent IGF-binding protein 4 protease) (IGF-dependent IGFBP-4 protease) (IGFBP-4ase)	Pappa	41	43	25	15
	P49722	Proteasome subunit alpha type-2 (EC 3.4.25.1) (Proteasome component C3) (Macropain subunit C3) (Multicatalytic endopeptidase complex subunit C3)	Psma2 (Lmpc3)	188	103	16	9
protein binding	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	O88705	Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel 3 (Hyperpolarization-activated cation channel 3) (HAC-3)	Hcn3 (Hac3)	75	67	8	15

Q8BTM8	Filamin-A (Alpha-filamin) (Filamin-1) (Endothelial actin-binding protein) (Actin-binding protein 280) (ABP-280) (Non-muscle filamin)	Flna (Fln) (Fln1)	254	1031	46	86
P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22
Q7TSG3	F-box only protein 5 (Early mitotic inhibitor 1)	Fbxo5 (Emi1)	15	27	5	9
Q62159	Rho-related GTP-binding protein RhoC (Silica-induced gene 61 protein) (SIG-61)	Rhoc (Arhc)	33	173	5	9
Q99N50	Synaptotagmin-like protein 2 (Exophilin-4)	Syt12 (Slp2)	26	77	10	18
Q61414	Keratin, type I cytoskeletal 15 (Cytokeratin-15) (CK-15) (Keratin-15) (K15)	Krt15 (Krt1-15)	37	46	4	7
P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
O35381	Acidic leucine-rich nuclear phosphoprotein 32 family member A (Potent heat-stable protein phosphatase 2A inhibitor I1PP2A) (Acidic nuclear phosphoprotein pp32) (Leucine-rich acidic nuclear protein)	Anp32a (Anp32) (Lanp)	36	112	8	14
P56198	Cell death activator CIDE-3 (Cell death-inducing DFFA-like effector protein C) (Fat-specific protein FSP27)	Cidec (Fsp27)	51	39	8	14
P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
P17742	Peptidyl-prolyl cis-trans isomerase A (PPIase A) (Rotamase A) (EC 5.2.1.8) (Cyclophilin A) (Cyclosporin A-binding protein) (SP18)	Ppia	855	1549	38	66
Q9Z1R2	Large proline-rich protein BAT3 (HLA-B-associated transcript 3)	Bat3	80	49	15	26
Q9D009	Putative octanoyltransferase, mitochondrial (EC 2.3.1.181) (Octanoyl-[acyl-carrier-protein]-protein N-octanoyltransferase) (Lipoyl/octanoyl transferase) (Lipoate-protein ligase B)		38	42	11	19

Q8BFQ9	Kelch domain-containing protein 5	Klhdc5 (Kiaa1340)	30	22	10	17
Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
Q9ERK4	Exportin-2 (Exp2) (Importin-alpha re-exporter) (Chromosome segregation 1-like protein)	Cse1l (Xpo2)	42	153	26	44
P62960	Nuclease-sensitive element-binding protein 1 (Y-box-binding protein 1) (Y-box transcription factor) (YB-1) (CCAAT-binding transcription factor I subunit A) (CBF-A) (Enhancer factor I subunit A) (EFI-A) (DNA-binding protein B) (DBPB)	Ybx1 (Msy-1) (Msy1) (Nsep1) (Yb1)	56	126	6	10
Q922U2	Keratin, type II cytoskeletal 5 (Cytokeratin-5) (CK-5) (Keratin-5) (K5)	Krt5 (Krt2-5)	396	550	23	38
Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF- 2A)	Eif2s1 (Eif2a)	27	177	7	11
Q80Y17	Lethal(2) giant larvae protein homolog 1 (LLGL) (Mlgl) (Mgl-1)	Llgl1 (Llglh)	30	29	7	11
Q61990	Poly(rC)-binding protein 2 (Alpha-CP2) (Putative heterogeneous nuclear ribonucleoprotein X) (hnRNP X) (CTBP) (CBP)	Pcbp2 (Cbp) (HnrnpX) (Hnrpx)	29	194	7	11
P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg- 1) (Hmg1)	153	405	25	38
Q8K386	Ras-related protein Rab-15	Rab15	44	74	4	6

Q7TN83	Synaptotagmin-16 (Synaptotagmin XIV-related protein) (Synaptotagmin 14-like protein)	Syt16 (Strep14) (Syt14l) (Syt14r)	20	38	6	9
P50247	Adenosylhomocysteinase (AdoHcyase) (EC 3.3.1.1) (S-adenosyl-L-homocysteine hydrolase) (Liver copper-binding protein) (CUBP)	Ahcy	90	106	10	15
P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwk1)	56	36	18	27
P61982	14-3-3 protein gamma	Ywhag	653	841	53	79
P97868	Retinoblastoma-binding protein 6 (p53-associated cellular protein of testis) (Proliferation potential-related protein) (Protein P2P-R)	Rbbp6 (P2pr) (Pact)	21	29	24	35
P60335	Poly(rC)-binding protein 1 (Alpha-CP1) (hnRNP-E1)	Pcbp1	56	350	9	13
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
P12813	Nuclear receptor subfamily 4 group A member 1 (Orphan nuclear receptor HMR) (Nuclear hormone receptor NUR/77) (N10 nuclear protein)	Nr4a1 (Gfrp) (Hmr) (N10) (Nur77)	61	31	7	10
P07744	Keratin, type II cytoskeletal 4 (Cytokeratin-4) (CK-4) (Keratin-4) (K4) (Cytoskeletal 57 kDa keratin)	Krt4 (Krt2-4)	36	74	19	27
Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
Q8VHX6	Filamin-C (Gamma-filamin) (Filamin-2) (FLN-C) (Actin-binding-like protein) (ABP-L) (ABP-280-like protein)	FlnC (Abpl) (Fln2)	33	115	18	25

P68510	14-3-3 protein eta	Ywhah	707	962	58	80
P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
Q61937	Nucleophosmin (NPM) (Nucleolar phosphoprotein B23) (Numatrin) (Nucleolar protein NO38)	Npm1	92	66	11	15
Q8K298	Actin-binding protein anillin	Anln	16	28	17	23
Q61789	Laminin subunit alpha-3 (Nicein subunit alpha)	Lama3	26	26	37	50
Q9EPL8	Importin-7 (Imp7) (Ran-binding protein 7) (RanBP7)	Ipo7 (Ranbp7)	25	121	9	12
Q9WTX2	Interferon-inducible double stranded RNA-dependent protein kinase activator A (Protein kinase, interferon-inducible double stranded RNA-dependent activator) (Protein activator of the interferon-induced protein kinase) (PKR-associated protein X) (PKR-associating protein X) (RAX)	Prkra (Rax)	28	39	9	12
Q640P2	Angiopoietin-related protein 1 (Angiopoietin-like 1)	Angptl1	55	41	21	28
Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53
P70168	Importin subunit beta-1 (Karyopherin subunit beta-1) (Nuclear factor P97) (Pore targeting complex 97 kDa subunit) (PTAC97) (SCG)	Kpnb1 (Impnb)	48	17	13	17
Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34

Q921C5	Protein bicaudal D homolog 2 (Bic-D 2)	Bicd2 (Kiaa0699)	31	23	26	34
Q61595	Kinectin	Ktn1	15	50	43	56
P63321	Ras-related protein Ral-A	Rala (Ral) (Rala)	25	22	30	39
Q8CIM1	Leucine-rich repeat-containing protein 45	Lrrc45	33	71	27	35
P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
Q80X90	Filamin-B (FLN-B) (Beta-filamin) (Actin-binding like protein) (ABP-280-like protein)	Flnb	63	279	32	41
Q91YK0	Leucine-rich repeat-containing protein 49 (Tubulin polyglutamylase complex subunit 4) (PGs4) (p79)	Lrrc49	27	27	18	23
Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
O70456	14-3-3 protein sigma (Stratifin)	Sfn (Mkrn3)	573	666	56	71
P27661	Histone H2A.x (H2a/x)	H2afx (H2a.x) (H2ax) (Hist5-2ax)	301	426	15	19
Q62093	Splicing factor, arginine/serine-rich 2 (Splicing factor SC35) (SC-35) (Splicing component, 35 kDa) (Protein PR264) (Putative myelin regulatory factor 1) (MRF-1)	Sfrs2 (Pr264) (Sfrs10)	184	117	15	19
P20152	Vimentin	Vim	1749	2397	125	157
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
Q60716	Prolyl 4-hydroxylase subunit alpha-2 (EC 1.14.11.2) (4-PH alpha-2) (Procollagen-proline,2-oxoglutarate-4-dioxygenase subunit alpha-2)	P4ha2	22	27	8	10
Q63ZW7	InaD-like protein (Inadl protein) (Pals1-associated tight junction protein) (Protein associated to tight junctions) (Channel-interacting PDZ domain-containing protein)	Inadl (Cipp) (Patj)	18	30	12	15
Q3UKC1	Tax1-binding protein 1 homolog	Tax1bp1	22	27	24	30

P63101	14-3-3 protein zeta/delta (Protein kinase C inhibitor protein 1) (KCIP-1) (SEZ-2)	Ywhaz	1383	1947	96	120
P31001	Desmin	Des	169	224	25	31
Q80Z38	SH3 and multiple ankyrin repeat domains protein 2 (Shank2) (Cortactin-binding protein 1) (CortBP1)	Shank2 (Cortbp1) (Kiaa1022)	41	57	21	26
Q8R2X8	Golgin-45 (Basic leucine zipper nuclear factor 1)	Blzf1	28	22	13	16
Q8VII8	Mineralocorticoid receptor (MR) (Nuclear receptor subfamily 3 group C member 2)	Nr3c2 (Mlr)	28	22	18	22
Q9CZY3	Ubiquitin-conjugating enzyme E2 variant 1 (UEV-1) (CROC-1)	Ube2v1 (Croc1)	83	163	166	201
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
O35618	Protein Mdm4 (p53-binding protein Mdm4) (Mdm2-like p53-binding protein) (Protein Mdmx) (Double minute 4 protein)	Mdm4 (Mdmx)	17	29	5	6
P05784	Keratin, type I cytoskeletal 18 (Cytokeratin-18) (CK-18) (Keratin-18) (K18) (Cytokeratin endo B) (Keratin D)	Krt18 (Kerd) (Krt1-18)	37	46	10	12
P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q8BFY9	Transportin-1 (Importin beta-2) (Karyopherin beta-2)	Tnpo1 (Kpnb2)	54	43	10	12
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
O08908	Phosphatidylinositol 3-kinase regulatory subunit beta (PI3-kinase p85 subunit beta) (PtdIns-3-kinase p85-beta)	Pik3r2	19	25	20	24
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36



Q9JKF1	Ras GTPase-activating-like protein IQGAP1	Iqgap1	19	81	21	25
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q61771	Kinesin-like protein KIF3B (Microtubule plus end-directed kinesin motor 3B)	Kif3b	30	51	16	19
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
P54103	DnaJ homolog subfamily C member 2 (Zuotin-related factor 1) (Mouse Id associate 1) (MIDA1)	Dnajc2 (Mida1) (Zrf1)	23	27	11	13
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q80XA6	RalBP1-associated Eps domain-containing protein 2 (RalBP1-interacting protein 2) (Partner of RalBP1)	Reps2 (Pob1)	33	31	6	7
P55821	Stathmin-2 (Superior cervical ganglion-10 protein) (Protein SCG10)	Stmn2 (Scg10) (Scgn10) (Stmb2)	74	73	6	7
Q9WUM4	Coronin-1C (Coronin-3)	Coro1c	42	28	18	21
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
Q5SPW0	Vacuolar protein sorting-associated protein 54 (Tumor antigen SLP-8p homolog)	Vps54	36	28	13	15
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8

Q9Z2K1	Keratin, type I cytoskeletal 16 (Cytokeratin-16) (CK-16) (Keratin-16) (K16)	Krt16 (Krt1-16)	37	37	7	8
Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16
P58660	Caspase recruitment domain-containing protein 10 (Bcl10-interacting MAGUK protein 1) (Bimp1)	Card10 (Bimp1)	33	23	15	17
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
Q9CQV8	14-3-3 protein beta/alpha (Protein kinase C inhibitor protein 1) (KCIP-1)	Ywhab	983	971	71	80
P40124	Adenylyl cyclase-associated protein 1 (CAP 1)	Cap1 (Cap)	22	43	8	9
Q91X97	Neurocalcin-delta	Ncald (D15Ert412e)	85	82	8	9
Q9WUF3	CASP8-associated protein 2 (FLICE-associated huge protein)	Casp8ap2 (Flash)	28	16	26	29
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
Q61599	Rho GDP-dissociation inhibitor 2 (Rho GDI 2) (Rho-GDI beta) (D4)	Arhgdib (Gdid4)	18	25	9	10

Q91ZT5	FYVE, RhoGEF and PH domain-containing protein 4 (Actin filament-binding protein frabin) (FGD1-related F-actin-binding protein)	Fgd4	29	19	10	11
O55234	Proteasome subunit beta type-5 (EC 3.4.25.1) (Proteasome epsilon chain) (Macropain epsilon chain) (Multicatalytic endopeptidase complex epsilon chain) (Proteasome subunit X) (Proteasome chain 6)	Psmb5	168	227	10	11
Q93092	Transaldolase (EC 2.2.1.2)	Taldo1 (Tal) (Taldo)	20	93	10	11
Q9R0Q7	Prostaglandin E synthase 3 (EC 5.3.99.3) (Cytosolic prostaglandin E2 synthase) (cPGES) (Telomerase-binding protein p23) (Hsp90 co-chaperone) (Progesterone receptor complex p23) (Sid 3177)	Ptges3 (Sid3177) (Tebp)	124	239	10	11
P19001	Keratin, type I cytoskeletal 19 (Cytokeratin-19) (CK-19) (Keratin-19) (K19)	Krt19 (Krt1-19)	37	46	11	12
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q3THS6	S-adenosylmethionine synthetase isoform type 2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12
Q9QUI0	Transforming protein RhoA	Rhoa (Arha) (Arha2)	117	231	11	12
P27546	Microtubule-associated protein 4 (MAP-4)	Map4 (Mtap4)	94	41	33	36
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146

Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
P08113	Endoplasmic (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra-1) (Tra1)	221	298	25	27
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
Q8BKX6	Serine/threonine-protein kinase SMG1 (SMG-1) (EC 2.7.11.1)	Smg1 (Kiaa0421)	33	27	30	32
Q76MZ3	Serine/threonine-protein phosphatase 2A 65 kDa regulatory subunit A alpha isoform (PP2A, subunit A, PR65-alpha isoform) (PP2A, subunit A, R1-alpha isoform)	Ppp2r1a	142	242	22	23
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69

Q61820	GTP-binding nuclear protein Ran, testis-specific isoform	Rasl2-9	564	570	23	24
Q920R0	Alsin (Amyotrophic lateral sclerosis protein 2 homolog)	Als2	74	88	72	75
Q62504	Msx2-interacting protein (SPEN homolog) (SMART/HDAC1-associated repressor protein)	Spn (Kiaa0929) (Mint) (Sharp)	27	18	72	75
O35973	Period circadian protein homolog 1 (Circadian clock protein PERIOD 1) (Circadian pacemaker protein Rigi) (mPER1)	Per1 (Per) (Rigi)	29	21	27	28
P26039	Talin-1	Tln1 (Tln)	123	161	41	42
Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165
P09586	Prolactin-3B1 (Chorionic somatomammotropin hormone 2) (Placental lactogen II) (PL-II)	Pr13b1 (Csh2) (PI-2) (PI2)	29	21	2	2
P62141	Serine/threonine-protein phosphatase PP1-beta catalytic subunit (PP-1B) (EC 3.1.3.16)	Ppp1cb	177	57	4	4
P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta11)	27	26	9	9
Q9DAI4	Zinc finger and BTB domain-containing protein 43 (Zinc finger protein 297B)	Zbtb43 (Kiaa0414) (Zfp297b) (Znf297b)	23	51	9	9

Q61781	Keratin, type I cytoskeletal 14 (Cytokeratin-14) (CK-14) (Keratin-14) (K14)	Krt14 (Krt1-14)	38	37	10	10
Q9WV80	Sorting nexin-1	Snx1	23	49	11	11
Q61092	Laminin subunit gamma-2 (Laminin 5 gamma 2 subunit) (Kalinin/nicein/epiligrin 100 kDa subunit) (Laminin B2t chain)	Lamc2	33	29	13	13
Q9DB77	Cytochrome b-c1 complex subunit 2, mitochondrial (Ubiquinol-cytochrome-c reductase complex core protein 2) (Core protein II) (Complex III subunit 2)	Uqcrc2	29	20	13	13
Q9JIF7	Coatomer subunit beta (Beta-coat protein) (Beta-COP)	Copb1 (Copb)	37	22	15	15
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcnd) (Mcmd3)	74	185	15	15
Q01098	Glutamate [NMDA] receptor subunit epsilon-3 (N-methyl D-aspartate receptor subtype 2C) (NMDAR2C) (NR2C)	Grin2c	18	33	15	15
O08788	Dynactin subunit 1 (150 kDa dynein-associated polypeptide) (DAP-150) (DP-150) (p150-glued)	Dctn1	64	70	19	19
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
Q8BSS9	Liprin-alpha-2 (Protein tyrosine phosphatase receptor type f polypeptide-interacting protein alpha-2) (PTPRF-interacting protein alpha-2)	Ppfia2	36	21	22	22
Q80UK8	Integrator complex subunit 2 (Int2)	Ints2 (Kiaa1287)	16	27	24	24
Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
Q9QYX7	Protein piccolo (Aczonin) (Multidomain presynaptic cytomatrix protein) (Brain-derived HLMN protein)	Pclo (Acz)	101	117	114	114

P68254	14-3-3 protein theta (14-3-3 protein tau)	Ywhaq	1104	994	92	91
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
P45591	Cofilin-2 (Cofilin, muscle isoform)	Cfl2	528	431	39	38
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
P07724	Serum albumin	Alb (Alb-1) (Alb1)	550	572	22	21
Q61768	Kinesin-1 heavy chain (Ubiquitous kinesin heavy chain) (UKHC) (Conventional kinesin heavy chain)	Kif5b (Khcs) (Kns1)	102	303	43	41
Q6ZPK0	PHD finger protein 21A (BRAF35-HDAC complex protein BHC80) (mBHC80) (BHC80a)	Phf21a (Bhc80) (Kiaa1696) (Pff1)	28	37	20	19
P62827	GTP-binding nuclear protein Ran (GTPase Ran) (Ras-related nuclear protein) (Ras-like protein TC4)	Ran (Rasl2-8)	756	656	38	36
P03966	N-myc proto-oncogene protein	Mycn (Nmyc) (Nmyc1)	65	46	18	17
Q99PF4	Cadherin-23 (Otocadherin)	Cdh23	29	32	29	27

Q6TXD4	Dynamin-binding protein (Scaffold protein Tuba)	Dnmbp (Kiaa1010)	32	21	13	12
P08730	Keratin, type I cytoskeletal 13 (Cytokeratin-13) (CK-13) (Keratin-13) (K13) (47 kDa cytokeratin)	Krt13 (Krt1-13)	37	46	13	12
Q8R5G7	Centaurin-delta-3 (Cnt-d3) (Arf-GAP, Rho-GAP, ankyrin repeat and pleckstrin homology domain-containing protein 3) (Dual specificity Rho- and Arf-GTPase-activating protein 1)	Centd3 (Arap3) (Drag1) (Kiaa4097)	21	27	26	24
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
O35206	Collagen alpha-1(XV) chain [Cleaved into: Endostatin (Endostatin-XV)]	Col15a1	31	37	12	11
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
P03995	Glia fibrillary acidic protein (GFAP)	Gfap	63	90	22	20
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115



P43406	Integrin alpha-V (Vitronectin receptor subunit alpha) (CD antigen CD51) [Cleaved into: Integrin alpha-V heavy chain; Integrin alpha-V light chain]	Itgav	23	35	19	17
P02535	Keratin, type I cytoskeletal 10 (Cytokeratin-10) (CK-10) (Keratin-10) (K10) (56 kDa cytokeratin) (Keratin, type I cytoskeletal 59 kDa)	Krt10 (Krt1-10)	252	152	19	17
Q925Q8	Dachshund homolog 2 (Dach2)	Dach2	22	30	9	8
Q9JIL4	PDZ domain-containing protein 1 (CFTR-associated protein of 70 kDa) (Na/Pi cotransporter C-terminal-associated protein) (NaPi-Cap1) (Sodium-hydrogen exchanger regulatory factor 3) (Na(+)/H(+) exchanger regulatory factor 3)	Pdzk1 (Cap70) (Nherf3)	29	39	9	8
P43277	Histone H1.3 (H1 VAR.4) (H1d)	Hist1h1d (H1f3)	78	99	18	16
P26041	Moesin (Membrane-organizing extension spike protein)	Msn	136	127	44	39
Q68FD5	Clathrin heavy chain 1	Cltc	944	884	88	78
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q8CJ27	Abnormal spindle-like microcephaly-associated protein homolog (Spindle and hydroxyurea checkpoint abnormal protein) (Calmodulin-binding protein Sha1) (Calmodulin binding protein 1)	Aspm (Calmbp1) (Sha1)	35	23	55	48
Q924C1	Exportin-5 (Exp5) (Ran-binding protein 21)	Xpo5 (Kiaa1291) (Ranbp21)	20	62	15	13

Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
Q63994	Myeloid cell surface antigen CD33 (Sialic acid-binding Ig-like lectin 3) (Siglec-3) (CD antigen CD33)	Cd33 (Siglec3)	34	34	7	6
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
P97784	Cryptochrome-1	Cry1	52	42	21	18
Q9R194	Cryptochrome-2	Cry2 (Kiaa0658)	52	42	21	18
P11881	Inositol 1,4,5-trisphosphate receptor type 1 (Type 1 inositol 1,4,5-trisphosphate receptor) (Type 1 InsP3 receptor) (IP3 receptor isoform 1) (InsP3R1) (Inositol 1,4,5-trisphosphate-binding protein P400) (Purkinje cell protein 1) (Protein PCD-6)	Itpr1 (Insp3r) (Pcd6) (Pcp1)	37	42	48	41
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
Q99PT1	Rho GDP-dissociation inhibitor 1 (Rho GDI 1) (Rho-GDI alpha) (GDI-1)	Arhgdia (C87222) (Gdi1)	923	675	37	31
Q9ES17	Interleukin-21 (IL-21)	Il21	22	25	6	5
Q8R4U0	Stabilin-2 (Fasciclin, EGF-like, laminin-type EGF-like and link domain-containing scavenger receptor 2) (FEEL-2) [Cleaved into: Short form stabilin-2]	Stab2 (Feel2)	25	43	12	10

Q99PP7	E3 ubiquitin-protein ligase TRIM33 (EC 6.3.2.-) (Tripartite motif-containing protein 33) (Transcription intermediary factor 1-gamma) (TIF1-gamma) (Ectodermin homolog)	Trim33 (Kiaa1113)	33	25	12	10
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
P11531	Dystrophin	Dmd	25	16	66	55
P09405	Nucleolin (Protein C23)	Ncl (Nuc)	775	872	78	65
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
O55103	Periaxin	Prx	19	30	28	23
P62259	14-3-3 protein epsilon (14-3-3E)	Ywhae	1202	998	116	95
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
Q6ZQ38	Cullin-associated NEDD8-dissociated protein 1 (Cullin-associated and neddylation-dissociated protein 1) (p120 CAND1)	Cand1 (D10Ert516e) (Kiaa0829)	221	246	33	27
P42227	Signal transducer and activator of transcription 3 (Acute-phase response factor)	Stat3 (Aprf)	16	28	33	27

Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
Q5XJY5	Coatomer subunit delta (Delta-coat protein) (Delta-COP) (Archain)	Arcn1 (Copd)	61	45	10	8
Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
Q99MD9	Nuclear autoantigenic sperm protein (NASP)	Nasp	365	293	34	27
Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100
Q80T14	Extracellular matrix protein FRAS1	Fras1 (Kiaa1500)	48	109	24	19
Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
Q80ZI6	E3 ubiquitin-protein ligase LRSAM1 (EC 6.3.2.-) (Leucine-rich repeat and sterile alpha motif-containing protein 1) (Tsg101-associated ligase)	Lrsam1	19	35	19	15
Q8CIQ7	Dedicator of cytokinesis protein 3 (Modifier of cell adhesion) (Presenilin-binding protein) (PBP)	Dock3 (Moca)	80	56	33	26
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123

Q6A078	Centrosomal protein of 290 kDa (Cep290) (Nephrocystin-6)	Cep290 (Kiaa0373) (Nphp6)	32	57	85	66
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
P06151	L-lactate dehydrogenase A chain (LDH-A) (EC 1.1.1.27) (LDH muscle subunit) (LDH-M)	Ldha (Ldh-1) (Ldh1)	1033	421	74	57
P05063	Fructose-bisphosphate aldolase C (EC 4.1.2.13) (Brain-type aldolase) (Aldolase 3) (Zebrin II) (Scrapie-responsive protein 2)	Aldoc (Aldo3) (Scrg2)	35	51	13	10
Q7TMK6	Protein Hook homolog 2	Hook2	33	36	26	20
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
P39447	Tight junction protein ZO-1 (Zonula occludens protein 1) (Zona occludens protein 1) (Tight junction protein 1)	Tjp1 (Zo1)	36	15	21	16
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
P97434	Myosin phosphatase Rho-interacting protein (Rho-interacting protein 3) (RIP3) (p116Rip)	Mrip (Kiaa0864) (Mrip) (Rhoip3)	35	23	25	19
P70670	Nascent polypeptide-associated complex subunit alpha, muscle-specific form (Alpha-NAC, muscle-specific form)	Naca (Gm1878)	22	130	29	22
Q9QYB1	Chloride intracellular channel protein 4 (mc3s5/mtCLIC)	Clic4	28	33	4	3
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6

Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (Pkcζ)	29	15	8	6
P25233	Necdin	Ndn	30	23	16	12
O54887	Testis-specific serine kinase substrate (Testis-specific kinase substrate) (STK22 substrate 1)	Stk22s1 (Tsk)	50	21	16	12
Q4VGL6	Roquin (RING finger and C3H zinc finger protein 1) (Protein Sanroque)	Rc3h1 (Gm551) (Kiaa2025)	54	54	23	17
P58681	Toll-like receptor 7	Tlr7	27	33	23	17
P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208
Q8VBX6	Multiple PDZ domain protein (Multi-PDZ domain protein 1)	Mpdz (Mupp1)	17	29	38	28
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
Q91Z67	SLIT-ROBO Rho GTPase-activating protein 2 (srGAP2) (Formin-binding protein 2) (Formin-binding protein 27) (FBP-27)	Srgap2 (Fbp27) (Fnbp2)	77	48	11	8
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptpn (Ptp35)	30	18	14	10

Q03172	Zinc finger protein 40 (Transcription factor alphaA-CRYBP1) (Alpha A-crystallin-binding protein I) (Alpha A-CRYBP1)	Hivep1 (Cryabp1) (Znf40)	25	24	21	15
P08551	Neurofilament light polypeptide (NF-L) (Neurofilament triplet L protein) (68 kDa neurofilament protein)	Nefl (Nf68) (Nfl)	51	36	17	12
Q52KI8	Serine/arginine repetitive matrix protein 1 (Plenty-of-prolines 101)	Srrm1 (Pop101)	22	73	29	20
Q99PV0	Pre-mRNA-processing-splicing factor 8 (Splicing factor Prp8)	Prpf8 (Prp8)	28	29	51	35
P68040	Guanine nucleotide-binding protein subunit beta-2-like 1 (Receptor of activated protein kinase C 1) (RACK1) (Receptor for activated C kinase) (p205) (12-3)	Gnb2l1 (Gnb2-rs1)	541	153	35	24
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
O88799	Zonadhesin	Zan	22	26	25	17
Q80TP3	E3 ubiquitin-protein ligase UBR5 (EC 6.3.2.-) (E3 ubiquitin-protein ligase, HECT domain-containing 1) (Hyperplastic discs protein homolog)	Ubr5 (Edd) (Edd1) (Kiaa0896)	27	17	43	29
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2
Q8C9S8	Cysteine protease ATG4A (EC 3.4.22.-) (Autophagy-related protein 4 homolog A) (Autophagin-2) (Autophagy-related cysteine endopeptidase 2) (AUT-like 2 cysteine endopeptidase)	Atg4a (Apg4a) (Autl2)	26	21	6	4
P61979	Heterogeneous nuclear ribonucleoprotein K (hnRNP K)	Hnrnpk (Hnrpk)	225	46	18	12
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
P61164	Alpha-centractin (Centractin) (Centrosome-associated actin homolog) (Actin-RPV) (ARP1)	Actr1a (Ctrn1)	247	124	27	18
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155

O88444	Adenylate cyclase type 1 (EC 4.6.1.1) (Adenylate cyclase type I) (ATP pyrophosphate-lyase 1) (Adenylyl cyclase 1) (Ca(2+)/calmodulin-activated adenylyl cyclase)	Adcy1	33	31	26	17
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
Q924W6	Tripartite motif-containing protein 66 (Transcriptional intermediary factor 1 delta)	Trim66 (Tif1d)	28	18	23	15
O70435	Proteasome subunit alpha type-3 (EC 3.4.25.1) (Proteasome component C8) (Macropain subunit C8) (Multicatalytic endopeptidase complex subunit C8) (Proteasome subunit K)	Psma3	95	76	14	9
P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (Ubpy)	29	23	24	15
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
Q68ED2	Metabotropic glutamate receptor 7 (mGluR7)	Grm7 (Gprc1g) (Mglur7)	37	33	13	8
O35551	Rab GTPase-binding effector protein 1 (Rabaptin-5) (Rabaptin-5alpha)	Rabep1 (Rab5ep) (Rabpt5) (Rabpt5a)	33	26	26	16



Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
O35344	Importin subunit alpha-3 (Karyopherin subunit alpha-3) (Importin alpha Q2) (Qip2)	Kpna3 (Qip2)	24	28	10	6
Q9Z0P5	Twinfilin-2 (Twinfilin-1-like protein) (A6-related protein) (mA6RP)	Twf2 (Ptk9I)	29	32	10	6
Q9EQZ6	Rap guanine nucleotide exchange factor 4 (cAMP-regulated guanine nucleotide exchange factor II) (cAMP-GEFII) (Exchange factor directly activated by cAMP 2) (Epac 2) (cAMP-dependent Rap1 guanine-nucleotide exchange factor)	Rapgef4 (Cgef2) (Epac2)	47	23	20	12
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P26040	Ezrin (p81) (Cytovillin) (Villin-2)	Ezr (Vil2)	127	106	27	16
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70

P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
Q9JI78	Peptide-N(4)-(N-acetyl-beta-glucosaminy)asparagine amidase (PNGase) (mPNGase) (EC 3.5.1.52) (Peptide:N-glycanase) (N-glycanase 1)	Ngly1	29	32	19	11
Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
P53762	Aryl hydrocarbon receptor nuclear translocator (ARNT protein) (Dioxin receptor, nuclear translocator) (Hypoxia-inducible factor 1 beta) (HIF-1 beta)	Arnt	25	22	7	4
P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4
P97287	Induced myeloid leukemia cell differentiation protein Mcl-1 homolog (Bcl-2-related protein EAT/mcl1)	Mcl1	26	30	7	4
P26043	Radixin (ESP10)	Rdx	127	106	23	13
Q9R1X4	Protein timeless homolog (mTim)	Timeless (Tim1) (Timeless1)	22	25	16	9
Q9Z1Q5	Chloride intracellular channel protein 1 (Nuclear chloride ion channel 27) (NCC27)	Clic1	137	139	9	5
P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
P17918	Proliferating cell nuclear antigen (PCNA) (Cyclin)	Pcna	273	207	20	11
O35664	Interferon-alpha/beta receptor beta chain (Interferon alpha/beta receptor 2) (IFN-alpha-REC) (Type I interferon receptor) (IFN-R)	Ifnar2	37	21	11	6
Q9WV89	Syntaxin-binding protein 4 (Syntaxin 4-interacting protein) (Synip) (STX4-interacting protein)	Stxbp4	41	19	11	6
Q9WUJ8	Origin recognition complex subunit 6	Orc6l (Orc6)	59	37	13	7

	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
	P11103	Poly [ADP-ribose] polymerase 1 (PARP-1) (EC 2.4.2.30) (ADPRT) (NAD(+) ADP-ribosyltransferase 1) (Poly[ADP-ribose] synthetase 1) (msPARP)	Parp1 (Adprp) (Adprt) (Adprt1)	21	26	17	9
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
	Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwk4)	23	33	29	15
binding	Q3TCT4	Ectonucleoside triphosphate diphosphohydrolase 7 (NTPDase 7) (EC 3.6.1.7) (Lysosomal apyrase-like protein 1)	Entpd7 (Kiaa4066) (Lalp1)	16	33	42	80
	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	O88705	Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel 3 (Hyperpolarization-activated cation channel 3) (HAC-3)	Hcn3 (Hac3)	75	67	8	15
	Q8BTM8	Filamin-A (Alpha-filamin) (Filamin-1) (Endothelial actin-binding protein) (Actin-binding protein 280) (ABP-280) (Non-muscle filamin)	Flna (Fln) (Fln1)	254	1031	46	86
	P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22
	Q8R3C6	Probable RNA-binding protein 19 (RNA-binding motif protein 19)	Rbm19	26	32	11	20
	Q7TSG3	F-box only protein 5 (Early mitotic inhibitor 1)	Fbxo5 (Emi1)	15	27	5	9
	Q62159	Rho-related GTP-binding protein RhoC (Silica-induced gene 61 protein) (SIG-61)	Rhoc (Arhc)	33	173	5	9
	Q99N50	Synaptotagmin-like protein 2 (Exophilin-4)	Syt12 (Slp2)	26	77	10	18

Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
P03987	Ig gamma-3 chain C region		30	34	4	7
Q61414	Keratin, type I cytoskeletal 15 (Cytokeratin-15) (CK-15) (Keratin-15) (K15)	Krt15 (Krt1-15)	37	46	4	7
P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
O35381	Acidic leucine-rich nuclear phosphoprotein 32 family member A (Potent heat-stable protein phosphatase 2A inhibitor I1PP2A) (Acidic nuclear phosphoprotein pp32) (Leucine-rich acidic nuclear protein)	Anp32a (Anp32) (Lanp)	36	112	8	14
P56198	Cell death activator CIDE-3 (Cell death-inducing DFFA-like effector protein C) (Fat-specific protein FSP27)	Cidec (Fsp27)	51	39	8	14
P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
P17742	Peptidyl-prolyl cis-trans isomerase A (PPIase A) (Rotamase A) (EC 5.2.1.8) (Cyclophilin A) (Cyclosporin A-binding protein) (SP18)	Ppia	855	1549	38	66
Q8QZR5	Alanine aminotransferase 1 (ALT1) (EC 2.6.1.2) (Glutamic--pyruvic transaminase 1) (Glutamate pyruvate transaminase 1) (GPT 1) (Glutamic--alanine transaminase 1)	Gpt (Gpt1)	25	20	15	26
Q9Z1R2	Large proline-rich protein BAT3 (HLA-B-associated transcript 3)	Bat3	80	49	15	26
Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
Q9D009	Putative octanoyltransferase, mitochondrial (EC 2.3.1.181) (Octanoyl-[acyl-carrier-protein]-protein N-octanoyltransferase) (Lipoyl/octanoyl transferase) (Lipoate-protein ligase B)		38	42	11	19
Q8R1S0	Ubiquinone biosynthesis monooxygenase COQ6 (EC 1.14.13.-)	Coq6	42	92	10	17

Q8BFQ9	Kelch domain-containing protein 5	Klhdc5 (Kiaa1340)	30	22	10	17
Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
Q9ERK4	Exportin-2 (Exp2) (Importin-alpha re-exporter) (Chromosome segregation 1-like protein)	Cse1l (Xpo2)	42	153	26	44
P52480	Pyruvate kinase isozymes M1/M2 (EC 2.7.1.40) (Pyruvate kinase muscle isozyme)	Pkm2 (Pk3) (Pykm)	1954	3481	138	233
Q8CGP2	Histone H2B type 1-P	Hist1h2bp	436	999	46	77
Q9Z309	Calcium and integrin-binding family member 2 (Kinase-interacting protein 2) (KIP 2)	Cib2 (Kip2)	31	17	3	5
P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
P62960	Nuclease-sensitive element-binding protein 1 (Y-box-binding protein 1) (Y-box transcription factor) (YB-1) (CCAAT-binding transcription factor I subunit A) (CBF-A) (Enhancer factor I subunit A) (EFI-A) (DNA-binding protein B) (DBPB)	Ybx1 (Msy-1) (Msy1) (Nsep1) (Yb1)	56	126	6	10
P63143	Voltage-gated potassium channel subunit beta- 1 (K(+)) channel subunit beta-1) (Kv-beta-1)	Kcnab1 (Kvb1)	29	76	12	20

P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78
Q922U2	Keratin, type II cytoskeletal 5 (Cytokeratin-5) (CK-5) (Keratin-5) (K5)	Krt5 (Krt2-5)	396	550	23	38
Q64475	Histone H2B type 1-B (h2B-143)	Hist1h2bb	436	999	46	75
P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13
Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
Q8BGT5	Alanine aminotransferase 2 (ALT2) (EC 2.6.1.2) (Glutamic--pyruvic transaminase 2) (Glutamate pyruvate transaminase 2) (GPT 2) (Glutamic--alanine transaminase 2)	Gpt2 (Aat2)	25	20	15	24
Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11

Q80Y17	Lethal(2) giant larvae protein homolog 1 (LLGL) (Mlgl) (Mgl-1)	Llg1 (Llg1h)	30	29	7	11
Q61990	Poly(rC)-binding protein 2 (Alpha-CP2) (Putative heterogeneous nuclear ribonucleoprotein X) (hnRNP X) (CTBP) (CBP)	Pcbp2 (Cbp) (HnrnpX) (Hnrpx)	29	194	7	11
P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
P14824	Annexin A6 (Annexin-6) (Annexin VI) (Lipocortin VI) (p68) (p70) (Protein III) (Chromobindin-20) (67 kDa calelectrin) (Calphobindin-II) (CPB-II)	Anxa6 (Anx6)	168	591	33	51
Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23
P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
Q8K386	Ras-related protein Rab-15	Rab15	44	74	4	6
O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
P16045	Galectin-1 (Lectin galactoside-binding soluble 1) (Beta-galactoside-binding lectin L-14-I) (Lactose-binding lectin 1) (S-Lac lectin 1) (Galaptin) (14 kDa lectin)	Lgals1 (Gbp)	79	85	6	9
Q7TN83	Synaptotagmin-16 (Synaptotagmin XIV-related protein) (Synaptotagmin 14-like protein)	Syt16 (Strep14) (Syt14l) (Syt14r)	20	38	6	9
Q8BUG5	Calcyphosin-2 (Calcyphosine-2)	Caps2	17	28	8	12
P50247	Adenosylhomocysteinase (AdoHcyase) (EC 3.3.1.1) (S-adenosyl-L-homocysteine hydrolase) (Liver copper-binding protein) (CUBP)	Ahcy	90	106	10	15

Q99K85	Phosphoserine aminotransferase (PSAT) (EC 2.6.1.52) (Phosphohydroxythreonine aminotransferase) (Endometrial progesterone-induced protein) (EPIP)	Psat1 (Psa) (Psat)	162	541	16	24
P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwnk1)	56	36	18	27
P61982	14-3-3 protein gamma	Ywhag	653	841	53	79
P53657	Pyruvate kinase isozymes R/L (EC 2.7.1.40) (L PK)	Pklr	144	270	26	38
P97868	Retinoblastoma-binding protein 6 (p53-associated cellular protein of testis) (Proliferation potential-related protein) (Protein P2P-R)	Rbbp6 (P2pr) (Pact)	21	29	24	35
Q3THW5	Histone H2A.V (H2A.F/Z)	H2afv (H2av)	297	426	11	16
P60335	Poly(rC)-binding protein 1 (Alpha-CP1) (hnRNP-E1)	Pcbp1	56	350	9	13
P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
P12813	Nuclear receptor subfamily 4 group A member 1 (Orphan nuclear receptor HMR) (Nuclear hormone receptor NUR/77) (N10 nuclear protein)	Nr4a1 (Gfrp) (Hmr) (N10) (Nur77)	61	31	7	10
Q9WVP9	Interferon-induced GTP-binding protein Mx2 (Myxovirus resistance protein 2)	Mx2	32	22	14	20
P07744	Keratin, type II cytoskeletal 4 (Cytokeratin-4) (CK-4) (Keratin-4) (K4) (Cytoskeletal 57 kDa keratin)	Krt4 (Krt2-4)	36	74	19	27



Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
Q8VHX6	Filamin-C (Gamma-filamin) (Filamin-2) (FLN-C) (Actin-binding-like protein) (ABP-L) (ABP-280-like protein)	Finc (Abpl) (Fln2)	33	115	18	25
P68510	14-3-3 protein eta	Ywhah	707	962	58	80
P70696	Histone H2B type 1-A (Histone H2B, testis) (Testis-specific histone H2B)	Hist1h2ba (Th2b)	146	378	37	51
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
Q61937	Nucleophosmin (NPM) (Nucleolar phosphoprotein B23) (Numatrin) (Nucleolar protein NO38)	Npm1	92	66	11	15
Q8K298	Actin-binding protein anillin	Anln	16	28	17	23
P70338	Zinc finger protein Gfi-1 (Growth factor independent protein 1)	Gfi1 (Gfi-1)	45	39	17	23
Q61789	Laminin subunit alpha-3 (Nicein subunit alpha)	Lama3	26	26	37	50
Q9EPL8	Importin-7 (Imp7) (Ran-binding protein 7) (RanBP7)	Ipo7 (Ranbp7)	25	121	9	12

Q9WTX2	Interferon-inducible double stranded RNA-dependent protein kinase activator A (Protein kinase, interferon-inducible double stranded RNA-dependent activator) (Protein activator of the interferon-induced protein kinase) (PKR-associated protein X) (PKR-associating protein X) (RAX)	Prkra (Rax)	28	39	9	12
Q640P2	Angiopoietin-related protein 1 (Angiopoietin-like 1)	Angptl1	55	41	21	28
Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53
P70296	Phosphatidylethanolamine-binding protein 1 (PEBP-1) (HCNPPp) [Cleaved into: Hippocampal cholinergic neurostimulating peptide (HCNP)]	Pebp1 (Pbp) (Pebp)	532	730	25	33
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
P70168	Importin subunit beta-1 (Karyopherin subunit beta-1) (Nuclear factor P97) (Pore targeting complex 97 kDa subunit) (PTAC97) (SCG)	Kpnb1 (Impnb)	48	17	13	17
Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBSR9)	Baz1b (Wbscr9)	43	17	26	34
Q921C5	Protein bicaudal D homolog 2 (Bic-D 2)	Bicd2 (Kiaa0699)	31	23	26	34
Q61595	Kinectin	Ktn1	15	50	43	56
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13

P63321	Ras-related protein Ral-A	Rala (Ral) (Rala)	25	22	30	39
Q8CIM1	Leucine-rich repeat-containing protein 45	Lrrc45	33	71	27	35
P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
P63163	Small nuclear ribonucleoprotein-associated protein N (snRNP-N) (Sm protein N) (Sm-N) (SmN) (Sm-D) (Tissue-specific-splicing protein)	Snrpn (Smn)	38	17	7	9
Q7TQ07	DNA polymerase nu (EC 2.7.7.7)	Poln	20	39	14	18
Q61753	D-3-phosphoglycerate dehydrogenase (3-PGDH) (EC 1.1.1.95) (A10)	Phgdh	105	158	14	18
Q80X90	Filamin-B (FLN-B) (Beta-filamin) (Actin-binding like protein) (ABP-280-like protein)	Flnb	63	279	32	41
Q91YK0	Leucine-rich repeat-containing protein 49 (Tubulin polyglutamylase complex subunit 4) (PGs4) (p79)	Lrrc49	27	27	18	23
Q07133	Histone H1t (Testicular H1 histone)	Hist1h1t (H1ft) (H1t)	46	72	54	69
Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
O70456	14-3-3 protein sigma (Stratifin)	Sfn (Mkrn3)	573	666	56	71
Q923B1	Lariat debranching enzyme (EC 3.1.-.-)	Dbr1	28	29	15	19
P27661	Histone H2A.x (H2a/x)	H2afx (H2a.x) (H2ax) (Hist5-2ax)	301	426	15	19
Q62093	Splicing factor, arginine/serine-rich 2 (Splicing factor SC35) (SC-35) (Splicing component, 35 kDa) (Protein PR264) (Putative myelin regulatory factor 1) (MRF-1)	Sfrs2 (Pr264) (Sfrs10)	184	117	15	19
P20152	Vimentin	Vim	1749	2397	125	157

P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
Q60716	Prolyl 4-hydroxylase subunit alpha-2 (EC 1.14.11.2) (4-PH alpha-2) (Procollagen-proline,2-oxoglutarate-4-dioxygenase subunit alpha-2)	P4ha2	22	27	8	10
P17183	Gamma-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Neural enolase) (Neuron-specific enolase) (NSE) (Enolase 2)	Eno2 (Eno-2)	228	181	12	15
Q63ZW7	InaD-like protein (Inadl protein) (Pals1-associated tight junction protein) (Protein associated to tight junctions) (Channel-interacting PDZ domain-containing protein)	Inadl (Cipp) (Patj)	18	30	12	15
Q3UKC1	Tax1-binding protein 1 homolog	Tax1bp1	22	27	24	30
P63101	14-3-3 protein zeta/delta (Protein kinase C inhibitor protein 1) (KCIP-1) (SEZ-2)	Ywhaz	1383	1947	96	120
P31001	Desmin	Des	169	224	25	31
Q811J3	Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q80Z38	SH3 and multiple ankyrin repeat domains protein 2 (Shank2) (Cortactin-binding protein 1) (CortBP1)	Shank2 (Cortbp1) (Kiaa1022)	41	57	21	26
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
Q8R2X8	Golgin-45 (Basic leucine zipper nuclear factor 1)	Blzf1	28	22	13	16
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16

P51880	Fatty acid-binding protein, brain (B-FABP) (Fatty acid-binding protein 7) (Brain lipid-binding protein) (BLBP)	Fabp7 (Blbp)	933	856	31	38
P59270	Galactosylgalactosylxylosylprotein 3-beta-glucuronosyltransferase 2 (EC 2.4.1.135) (Beta-1,3-glucuronyltransferase 2) (UDP-glucuronosyltransferase-S) (Glucuronosyltransferase-S) (GlcAT-S) (GlcAT-D)	B3gat2 (Glcats)	29	16	9	11
Q8VII8	Mineralocorticoid receptor (MR) (Nuclear receptor subfamily 3 group C member 2)	Nr3c2 (Mlr)	28	22	18	22
Q9CZY3	Ubiquitin-conjugating enzyme E2 variant 1 (UEV-1) (CROC-1)	Ube2v1 (Croc1)	83	163	166	201
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
O35618	Protein Mdm4 (p53-binding protein Mdm4) (Mdm2-like p53-binding protein) (Protein Mdmx) (Double minute 4 protein)	Mdm4 (Mdmx)	17	29	5	6
Q6PDM2	Splicing factor, arginine/serine-rich 1 (ASF/SF2)	Sfrs1	24	91	5	6
Q8VHS2	Crumbs homolog 1	Crb1	23	28	10	12
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
P05784	Keratin, type I cytoskeletal 18 (Cytokeratin-18) (CK-18) (Keratin-18) (K18) (Cytokeratin endo B) (Keratin D)	Krt18 (Kerd) (Krt1-18)	37	46	10	12

P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q8BFY9	Transportin-1 (Importin beta-2) (Karyopherin beta-2)	Tnp01 (Kpnb2)	54	43	10	12
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
O08908	Phosphatidylinositol 3-kinase regulatory subunit beta (PI3-kinase p85 subunit beta) (PtdIns-3-kinase p85-beta)	Pik3r2	19	25	20	24
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
Q9JKF1	Ras GTPase-activating-like protein IQGAP1	Iqgap1	19	81	21	25
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q61771	Kinesin-like protein KIF3B (Microtubule plus end-directed kinesin motor 3B)	Kif3b	30	51	16	19
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
P54103	DnaJ homolog subfamily C member 2 (Zuotin-related factor 1) (Mouse Id associate 1) (MIDA1)	Dnajc2 (Mida1) (Zrf1)	23	27	11	13
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
Q61171	Peroxiredoxin-2 (EC 1.11.1.15) (Thioredoxin peroxidase 1) (Thioredoxin-dependent peroxide reductase 1) (Thiol-specific antioxidant protein) (TSA)	Prdx2 (Tdp1) (Tpx)	568	898	47	55

Q80XA6	RalBP1-associated Eps domain-containing protein 2 (RalBP1-interacting protein 2) (Partner of RalBP1)	Reps2 (Pob1)	33	31	6	7
P55821	Stathmin-2 (Superior cervical ganglion-10 protein) (Protein SCG10)	Stmn2 (Scg10) (Scgn10) (Stmb2)	74	73	6	7
Q9WUM4	Coronin-1C (Coronin-3)	Coro1c	42	28	18	21
Q6GSS7	Histone H2A type 2-A (H2A.2) (H2a-614) (H2a-615)	Hist2h2aa1; Hist2h2aa2	505	763	18	21
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
Q5SPW0	Vacuolar protein sorting-associated protein 54 (Tumor antigen SLP-8p homolog)	Vps54	36	28	13	15
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
Q9JKP5	Muscleblind-like protein 1 (Triplet-expansion RNA-binding protein)	Mbnl1 (Exp) (Mbnl)	45	63	244	281
Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8
Q9Z2K1	Keratin, type I cytoskeletal 16 (Cytokeratin-16) (CK-16) (Keratin-16) (K16)	Krt16 (Krt1-16)	37	37	7	8
Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16
P58660	Caspase recruitment domain-containing protein 10 (Bcl10-interacting MAGUK protein 1) (Bimp1)	Card10 (Bimp1)	33	23	15	17

P97820	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
Q9CQV8	14-3-3 protein beta/alpha (Protein kinase C inhibitor protein 1) (KCIP-1)	Ywhab	983	971	71	80
P40124	Adenylyl cyclase-associated protein 1 (CAP 1)	Cap1 (Cap)	22	43	8	9
Q91X97	Neurocalcin-delta	Ncald (D15Ert412e)	85	82	8	9
Q921M3	Splicing factor 3B subunit 3 (Spliceosome-associated protein 130) (SAP 130) (Pre-mRNA splicing factor SF3b 130 kDa subunit) (SF3b130)	Sf3b3 (Kiaa0017)	16	34	24	27
Q9WUU9	80 kDa MCM3-associated protein (Protein GANP)	Mcm3ap (Ganp) (Map80)	48	32	17	19
Q9WUF3	CASP8-associated protein 2 (FLICE-associated huge protein)	Casp8ap2 (Flash)	28	16	26	29
Q64467	Glyceraldehyde-3-phosphate dehydrogenase, testis-specific (EC 1.2.1.12) (Spermatogenic glyceraldehyde-3-phosphate dehydrogenase) (Spermatogenic cell-specific glyceraldehyde 3-phosphate dehydrogenase 2) (GAPDH-2)	Gapdhs (Gapds)	75	781	26	29
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29



P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
Q61599	Rho GDP-dissociation inhibitor 2 (Rho GDI 2) (Rho-GDI beta) (D4)	Arhgdib (Gdid4)	18	25	9	10
Q60864	Stress-induced-phosphoprotein 1 (STI1) (mSTI1) (Hsc70/Hsp90-organizing protein) (Hop)	Stip1	257	245	19	21
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1al) (Stn)	1275	1549	258	285
Q91ZT5	FYVE, RhoGEF and PH domain-containing protein 4 (Actin filament-binding protein frabin) (FGD1-related F-actin-binding protein)	Fgd4	29	19	10	11
O55234	Proteasome subunit beta type-5 (EC 3.4.25.1) (Proteasome epsilon chain) (Macropain epsilon chain) (Multicatalytic endopeptidase complex epsilon chain) (Proteasome subunit X) (Proteasome chain 6)	Psmb5	168	227	10	11
Q93092	Transaldolase (EC 2.2.1.2)	Taldo1 (Tal) (Taldo)	20	93	10	11
Q9R0Q7	Prostaglandin E synthase 3 (EC 5.3.99.3) (Cytosolic prostaglandin E2 synthase) (cPGES) (Telomerase-binding protein p23) (Hsp90 co-chaperone) (Progesterone receptor complex p23) (Sid 3177)	Ptges3 (Sid3177) (Tebp)	124	239	10	11
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
P19001	Keratin, type I cytoskeletal 19 (Cytokeratin-19) (CK-19) (Keratin-19) (K19)	Krt19 (Krt1-19)	37	46	11	12
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12

Q3THS6	S-adenosylmethionine synthetase isoform type 2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12
Q9QUI0	Transforming protein RhoA	Rhoa (Arha) (Arha2)	117	231	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
P27546	Microtubule-associated protein 4 (MAP-4)	Map4 (Mtap4)	94	41	33	36
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P70298	Homeobox protein cut-like 2 (Cut-like 2) (Homeobox protein Cux-2)	Cux2 (Cutl2)	30	22	12	13
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
P08113	Endoplasmic reticulum chaperone protein 90 kDa beta member 1 (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra-1) (Tra1)	221	298	25	27

Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
Q3TY86	Apoptosis-inducing factor 3 (EC 1.-.-.) (Apoptosis-inducing factor-like protein)	Aifm3 (Aifl)	42	26	28	30
P70398	Probable ubiquitin carboxyl-terminal hydrolase FAF-X (EC 3.1.2.15) (Ubiquitin thioesterase FAF-X) (Ubiquitin-specific-processing protease FAF-X) (Deubiquitinating enzyme FAF-X) (Fat facets protein-related, X-linked) (Ubiquitin-specific protease 9, X chromosome) (Ubiquitin carboxyl-terminal hydrolase FAM) (Fat facets homolog)	Usp9x (Faf1) (Fam)	42	28	57	61
Q8BKX6	Serine/threonine-protein kinase SMG1 (SMG-1) (EC 2.7.11.1)	Smg1 (Kiaa0421)	33	27	30	32
P16858	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) (EC 1.2.1.12)	Gapdh (Gapd)	1514	1781	84	89
Q8VI56	Low-density lipoprotein receptor-related protein 4 (LDLR dan)	Lrp4 (Kiaa0816)	77	30	19	20
Q76MZ3	Serine/threonine-protein phosphatase 2A 65 kDa regulatory subunit A alpha isoform (PP2A, subunit A, PR65-alpha isoform) (PP2A, subunit A, R1-alpha isoform)	Ppp2r1a	142	242	22	23
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
Q61820	GTP-binding nuclear protein Ran, testis-specific isoform	Rasl2-9	564	570	23	24

Q920R0	Alsin (Amyotrophic lateral sclerosis protein 2 homolog)	Als2	74	88	72	75
Q62504	Msx2-interacting protein (SPEN homolog) (SMART/HDAC1-associated repressor protein)	Spen (Kiaa0929) (Mint) (Sharp)	27	18	72	75
O35973	Period circadian protein homolog 1 (Circadian clock protein PERIOD 1) (Circadian pacemaker protein Rigi) (mPER1)	Per1 (Per) (Rigi)	29	21	27	28
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
P26039	Talin-1	Tln1 (Tln)	123	161	41	42
Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165
P09586	Prolactin-3B1 (Chorionic somatomammotropin hormone 2) (Placental lactogen II) (PL-II)	Pr13b1 (Csh2) (PI-2) (PI2)	29	21	2	2
O54750	Cytochrome P450 2J6 (EC 1.14.14.1) (CYP11J6) (Arachidonic acid epoxygenase)	Cyp2j6	29	34	4	4
P62141	Serine/threonine-protein phosphatase PP1-beta catalytic subunit (PP-1B) (EC 3.1.3.16)	Ppp1cb	177	57	4	4
Q60865	Caprin-1 (Cytoplasmic activation- and proliferation-associated protein 1) (GPI-anchored membrane protein 1) (GPI-anchored protein p137) (p137GPI) (Membrane component chromosome 11 surface marker 1)	Caprin1 (Gpiap) (Gpiap1) (Gpip137) (M11s1) (G5E5)	20	26	5	5
P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5
Q3TXZ1	Zinc finger protein 575	Znf575 (Zfp575)	30	25	5	5
Q8VCZ3	THAP domain-containing protein 7	Thap7	26	18	6	6

P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q8C0N1	Kinesin-like protein KIF2B	Kif2b	17	26	8	8
Q7TNP2	Serine/threonine-protein phosphatase 2A 65 kDa regulatory subunit A beta isoform (PP2A, subunit A, PR65-beta isoform) (PP2A, subunit A, R1-beta isoform)	Ppp2r1b	26	22	9	9
Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
Q99LX0	Protein DJ-1 (Parkinson disease protein 7 homolog)	Park7	53	178	9	9
Q6P5F9	Exportin-1 (Exp1) (Chromosome region maintenance 1 protein homolog)	Xpo1 (Crm1)	19	43	9	9
Q9DAI4	Zinc finger and BTB domain-containing protein 43 (Zinc finger protein 297B)	Zbtb43 (Kiaa0414) (Zfp297b) (Znf297b)	23	51	9	9
Q61781	Keratin, type I cytoskeletal 14 (Cytokeratin-14) (CK-14) (Keratin-14) (K14)	Krt14 (Krt1-14)	38	37	10	10
Q9WV80	Sorting nexin-1	Snx1	23	49	11	11
Q61092	Laminin subunit gamma-2 (Laminin 5 gamma 2 subunit) (Kalinin/nicein/epiligrin 100 kDa subunit) (Laminin B2t chain)	Lamc2	33	29	13	13
Q80YV4	Pantothenate kinase 4 (EC 2.7.1.33) (Pantothenic acid kinase 4) (mPanK4)	Pank4	23	28	13	13
Q9DB77	Cytochrome b-c1 complex subunit 2, mitochondrial (Ubiquinol-cytochrome-c reductase complex core protein 2) (Core protein II) (Complex III subunit 2)	Uqcrc2	29	20	13	13
Q9JIF7	Coatomer subunit beta (Beta-coat protein) (Beta-COP)	Copb1 (Copb)	37	22	15	15

P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q01098	Glutamate [NMDA] receptor subunit epsilon-3 (N-methyl D-aspartate receptor subtype 2C) (NMDAR2C) (NR2C)	Grin2c	18	33	15	15
O08788	Dynactin subunit 1 (150 kDa dynein-associated polypeptide) (DAP-150) (DP-150) (p150-glued)	Dctn1	64	70	19	19
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
Q8BSS9	Liprin-alpha-2 (Protein tyrosine phosphatase receptor type f polypeptide-interacting protein alpha-2) (PTPRF-interacting protein alpha-2)	Ppfia2	36	21	22	22
P30681	High mobility group protein B2 (High mobility group protein 2) (HMG-2)	Hmgb2 (Hmg2)	94	222	24	24
Q80UK8	Integrator complex subunit 2 (Int2)	Ints2 (Kiaa1287)	16	27	24	24
Q6P8J7	Creatine kinase, sarcomeric mitochondrial (EC 2.7.3.2) (S-MtCK)	Ckmt2	50	66	26	26
Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
Q8K4E0	Alstrom syndrome protein 1 homolog	Alms1 (Kiaa0328)	29	30	86	86
Q9QYX7	Protein piccolo (Aczonin) (Multidomain presynaptic cytomatrix protein) (Brain-derived HLMN protein)	Pclo (Acz)	101	117	114	114
P68254	14-3-3 protein theta (14-3-3 protein tau)	Ywhaq	1104	994	92	91
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126

Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
P45591	Cofilin-2 (Cofilin, muscle isoform)	Cfl2	528	431	39	38
P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (Csma) (Eif3) (Eif3s10)	199	166	58	56
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
Q9QXL1	Kinesin-like protein KIF21B (Kinesin-like protein KIF6)	Kif21b (Kif6)	22	45	26	25
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
P16406	Glutamyl aminopeptidase (EC 3.4.11.7) (EAP) (Aminopeptidase A) (APA) (BP-1/6C3 antigen) (CD antigen CD249)	Enpep	98	90	48	46
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
P07724	Serum albumin	Alb (Alb-1) (Alb1)	550	572	22	21
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
Q61768	Kinesin-1 heavy chain (Ubiquitous kinesin heavy chain) (UKHC) (Conventional kinesin heavy chain)	Kif5b (Khcs) (Kns1)	102	303	43	41

Q6ZPK0	PHD finger protein 21A (BRAF35-HDAC complex protein BHC80) (mBHC80) (BHC80a)	Phf21a (Bhc80) (Kiaa1696) (Pfff1)	28	37	20	19
P62827	GTP-binding nuclear protein Ran (GTPase Ran) (Ras-related nuclear protein) (Ras-like protein TC4)	Ran (Rasl2-8)	756	656	38	36
P03966	N-myc proto-oncogene protein	Mycn (Nmyc) (Nmyc1)	65	46	18	17
P30275	Creatine kinase, ubiquitous mitochondrial (EC 2.7.3.2) (U-MtCK) (Acidic-type mitochondrial creatine kinase) (Mia-CK)	Ckmt1	205	121	32	30
Q04447	Creatine kinase B-type (EC 2.7.3.2) (Creatine kinase B chain) (B-CK)	Ckb (Ckbb)	9079	7277	434	406
Q99PF4	Cadherin-23 (Otocadherin)	Cdh23	29	32	29	27
Q8CGC6	RNA-binding protein 28 (RNA-binding motif protein 28)	Rbm28	24	41	71	66
Q6TXD4	Dynamin-binding protein (Scaffold protein Tuba)	Dnmbp (Kiaa1010)	32	21	13	12
P08730	Keratin, type I cytoskeletal 13 (Cytokeratin-13) (CK-13) (Keratin-13) (K13) (47 kDa cytokeratin)	Krt13 (Krt1-13)	37	46	13	12
Q8R5G7	Centaurin-delta-3 (Cnt-d3) (Arf-GAP, Rho-GAP, ankyrin repeat and pleckstrin homology domain-containing protein 3) (Dual specificity Rho- and Arf-GTPase-activating protein 1)	Centd3 (Arap3) (Drag1) (Kiaa4097)	21	27	26	24
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
O35206	Collagen alpha-1(XV) chain [Cleaved into: Endostatin (Endostatin-XV)]	Col15a1	31	37	12	11



P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q9WTR0	Matrix metalloproteinase-16 (MMP-16) (EC 3.4.24.-) (Membrane-type matrix metalloproteinase 3) (MT-MMP 3) (MTMMP3) (Membrane-type-3 matrix metalloproteinase) (MT3-MMP) (MT3MMP)	Mmp16	17	36	11	10
P03995	Glial fibrillary acidic protein (GFAP)	Gfap	63	90	22	20
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q9QZH3	Peptidyl-prolyl cis-trans isomerase E (PPIase E) (Rotamase E) (EC 5.2.1.8) (Cyclophilin E) (Cyclophilin-33)	Ppie (Cyp33)	28	35	10	9
P43406	Integrin alpha-V (Vitronectin receptor subunit alpha) (CD antigen CD51) [Cleaved into: Integrin alpha-V heavy chain; Integrin alpha-V light chain]	Itgav	23	35	19	17

P02535	Keratin, type I cytoskeletal 10 (Cytokeratin-10) (CK-10) (Keratin-10) (K10) (56 kDa cyto keratin) (Keratin, type I cytoskeletal 59 kDa)	Krt10 (Krt1-10)	252	152	19	17
Q925Q8	Dachshund homolog 2 (Dach2)	Dach2	22	30	9	8
Q9JIL4	PDZ domain-containing protein 1 (CFTR-associated protein of 70 kDa) (Na/Pi cotransporter C-terminal-associated protein) (NaPi-Cap1) (Sodium-hydrogen exchanger regulatory factor 3) (Na(+)/H(+) exchanger regulatory factor 3)	Pdzk1 (Cap70) (Nherf3)	29	39	9	8
P43277	Histone H1.3 (H1 VAR.4) (H1d)	Hist1h1d (H1f3)	78	99	18	16
Q9QXA7	Tripartite motif-containing protein 44 (Protein DIPB) (Protein Mc7)	Trim44 (Dipb)	28	23	18	16
P26041	Moesin (Membrane-organizing extension spike protein)	Msn	136	127	44	39
Q68FD5	Clathrin heavy chain 1	Cltc	944	884	88	78
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
P33173	Kinesin-like protein KIF1A (Axonal transporter of synaptic vesicles)	Kif1a (Atsv) (Kif1)	45	108	25	22
Q8BG95	Protein phosphatase 1 regulatory subunit 12B (Myosin phosphatase-targeting subunit 2)	Ppp1r12b (Mypt2)	25	24	25	22
Q61147	Ceruloplasmin (EC 1.16.3.1) (Ferroxidase)	Cp	24	27	41	36
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55

Q8CJ27	Abnormal spindle-like microcephaly-associated protein homolog (Spindle and hydroxyurea checkpoint abnormal protein) (Calmodulin-binding protein Sha1) (Calmodulin binding protein 1)	Aspm (Calmbp1) (Sha1)	35	23	55	48
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q924C1	Exportin-5 (Exp5) (Ran-binding protein 21)	Xpo5 (Kiaa1291) (Ranbp21)	20	62	15	13
P21550	Beta-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Muscle-specific enolase) (MSE) (Skeletal muscle enolase) (Enolase 3)	Eno3 (Eno-3)	313	146	30	26
Q11011	Puromycin-sensitive aminopeptidase (PSA) (EC 3.4.11.-)	Npepps (Psa)	71	141	30	26
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
Q63994	Myeloid cell surface antigen CD33 (Sialic acid-binding Ig-like lectin 3) (Siglec-3) (CD antigen CD33)	Cd33 (Siglec3)	34	34	7	6
O54749	Cytochrome P450 2J5 (EC 1.14.14.1) (CYPIIJ5) (Arachidonic acid epoxygenase)	Cyp2j5	29	34	7	6
Q921E2	Ras-related protein Rab-31	Rab31	18	29	7	6
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
P97784	Cryptochrome-1	Cry1	52	42	21	18

Q9R194	Cryptochrome-2	Cry2 (Kiaa0658)	52	42	21	18
P11881	Inositol 1,4,5-trisphosphate receptor type 1 (Type 1 inositol 1,4,5-trisphosphate receptor) (Type 1 InsP3 receptor) (IP3 receptor isoform 1) (InsP3R1) (Inositol 1,4,5-trisphosphate-binding protein P400) (Purkinje cell protein 1) (Protein PCD-6)	Itpr1 (Insp3r) (Pcd6) (Pcp1)	37	42	48	41
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
Q80TB8	Probable oxidoreductase KIAA1576 (EC 1.-.-.-)	Kiaa1576	25	14	25	21
Q99PT1	Rho GDP-dissociation inhibitor 1 (Rho GDI 1) (Rho-GDI alpha) (GDI-1)	Arhgdia (C87222) (Gdi1)	923	675	37	31
Q9ES17	Interleukin-21 (IL-21)	Il21	22	25	6	5
P46664	Adenylosuccinate synthetase isozyme 2 (AMPSase 2) (AdSS 2) (EC 6.3.4.4) (Adenylosuccinate synthetase, non-muscle isozyme) (Adenylosuccinate synthetase, acidic isozyme) (IMP--aspartate ligase 2)	Adss (Adss2)	36	66	12	10

Q8R4U0	Stabilin-2 (Fasciclin, EGF-like, laminin-type EGF-like and link domain-containing scavenger receptor 2) (FEEL-2) [Cleaved into: Short form stabilin-2]	Stab2 (Feel2)	25	43	12	10
Q99PP7	E3 ubiquitin-protein ligase TRIM33 (EC 6.3.2.-) (Tripartite motif-containing protein 33) (Transcription intermediary factor 1-gamma) (TIF1-gamma) (Ectodermin homolog)	Trim33 (Kiaa1113)	33	25	12	10
Q05816	Fatty acid-binding protein, epidermal (E-FABP) (Fatty acid-binding protein 5) (Psoriasis-associated fatty acid-binding protein homolog) (PA-FABP) (Keratinocyte lipid-binding protein)	Fabp5 (Fabpe) (Klbp) (Mal1)	331	206	18	15
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcpl)	29	66	18	15
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
P11531	Dystrophin	Dmd	25	16	66	55
P09405	Nucleolin (Protein C23)	Ncl (Nuc)	775	872	78	65
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44

P19096	Fatty acid synthase (EC 2.3.1.85) [Includes: [Acyl-carrier-protein] S-acetyltransferase (EC 2.3.1.38); [Acyl-carrier-protein] S-malonyltransferase (EC 2.3.1.39); 3-oxoacyl-[acyl-carrier-protein] synthase (EC 2.3.1.41); 3-oxoacyl-[acyl-carrier-protein] reductase (EC 1.1.1.100); 3-hydroxypalmitoyl-[acyl-carrier-protein] dehydratase (EC 4.2.1.61); Enoyl-[acyl-carrier-protein] reductase (EC 1.3.1.10); Oleoyl [acyl-carrier-protein] hydrolase (EC 3.1.2.14)]	Fasn	1869	1524	163	135
Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
O55103	Periaxin	Prx	19	30	28	23
P62259	14-3-3 protein epsilon (14-3-3E)	Ywhae	1202	998	116	95
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
Q6ZQ38	Cullin-associated NEDD8-dissociated protein 1 (Cullin-associated and neddylation-dissociated protein 1) (p120 CAND1)	Cand1 (D10Ert516e) (Kiaa0829)	221	246	33	27
P42227	Signal transducer and activator of transcription 3 (Acute-phase response factor)	Stat3 (Aprf)	16	28	33	27
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17

Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
Q921J2	GTP-binding protein Rheb (Ras homolog enriched in brain)	Rheb	21	44	31	25
Q62407	Striated muscle-specific serine/threonine protein kinase (EC 2.7.11.1) (Aortic preferentially expressed protein 1) (APEG-1)	Speg (Apeg1) (Kiaa1297)	26	20	31	25
P17182	Alpha-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Non-neural enolase) (NNE) (Enolase 1)	Eno1 (Eno-1)	976	802	62	50
Q924C6	Lysyl oxidase homolog 4 (EC 1.4.3.-) (Lysyl oxidase-like protein 4) (Lysyl oxidase-related protein C)	Loxl4 (Loxc)	15	28	5	4
Q5XJY5	Coatomer subunit delta (Delta-coat protein) (Delta-COP) (Archain)	Arcn1 (Copd)	61	45	10	8
P54923	[Protein ADP-ribosylarginine] hydrolase (ADP-ribosylarginine hydrolase) (EC 3.2.2.19) (ADP-ribose-L-arginine cleaving enzyme)	Adprh (Arh1)	20	41	15	12
Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
Q99MD9	Nuclear autoantigenic sperm protein (NASP)	Nasp	365	293	34	27
Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100
Q80T14	Extracellular matrix protein FRAS1	Fras1 (Kiaa1500)	48	109	24	19

Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
Q80Z16	E3 ubiquitin-protein ligase LRSAM1 (EC 6.3.2.-) (Leucine-rich repeat and sterile alpha motif-containing protein 1) (Tsg101-associated ligase)	Lrsam1	19	35	19	15
Q80UN9	tRNA isopentenyltransferase, mitochondrial (IPTase) (EC 2.5.1.8) (Isopentenyl-diphosphate:tRNA isopentenyltransferase) (IPP transferase) (IPPT)	Trit1 (Ipt)	31	24	19	15
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q8CIQ7	Dedicator of cytokinesis protein 3 (Modifier of cell adhesion) (Presenilin-binding protein) (PBP)	Dock3 (Moca)	80	56	33	26
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
Q6A078	Centrosomal protein of 290 kDa (Cep290) (Nephrocystin-6)	Cep290 (Kiaa0373) (Nphp6)	32	57	85	66
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
P06151	L-lactate dehydrogenase A chain (LDH-A) (EC 1.1.1.27) (LDH muscle subunit) (LDH-M)	Ldha (Ldh-1) (Ldh1)	1033	421	74	57
Q9CZW4	Long-chain-fatty-acid--CoA ligase 3 (EC 6.2.1.3) (Long-chain acyl-CoA synthetase 3) (LACS 3)	Acs13 (Acs3) (Fac13)	41	37	13	10



P05063	Fructose-bisphosphate aldolase C (EC 4.1.2.13) (Brain-type aldolase) (Aldolase 3) (Zebrin II) (Scrapie-responsive protein 2)	Aldoc (Aldo3) (Scrg2)	35	51	13	10
P62748	Hippocalcin-like protein 1 (Visinin-like protein 3) (VILIP-3) (Neural visinin-like protein 3) (NVL-3) (NVP-3)	Hpcal1	59	97	13	10
Q7TMK6	Protein Hook homolog 2	Hook2	33	36	26	20
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
P47856	Glucosamine--fructose-6-phosphate aminotransferase [isomerizing] 1 (EC 2.6.1.16) (Glutamine:fructose 6 phosphate amidotransferase 1) (GFAT 1) (GFAT1) (D-fructose-6-phosphate amidotransferase 1) (Hexosephosphate aminotransferase 1)	Gfpt1 (Gfpt)	17	29	17	13
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
P39447	Tight junction protein ZO-1 (Zonula occludens protein 1) (Zona occludens protein 1) (Tight junction protein 1)	Tjp1 (Zo1)	36	15	21	16
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
P97434	Myosin phosphatase Rho-interacting protein (Rho-interacting protein 3) (RIP3) (p116Rip)	Mrip (Kiaa0864) (Mrip) (Rhoip3)	35	23	25	19

P70670	Nascent polypeptide-associated complex subunit alpha, muscle-specific form (Alpha-NAC, muscle-specific form)	Naca (Gm1878)	22	130	29	22
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
Q9QYB1	Chloride intracellular channel protein 4 (mc3s5/mtCLIC)	Clic4	28	33	4	3
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
P25233	Necdin	Ndn	30	23	16	12
Q3TXS7	26S proteasome non-ATPase regulatory subunit 1 (26S proteasome regulatory subunit RPN2) (26S proteasome regulatory subunit S1)	Psmc1	100	89	16	12
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
O54887	Testis-specific serine kinase substrate (Testis-specific kinase substrate) (STK22 substrate 1)	Stk22s1 (Tsks)	50	21	16	12
Q8K1F9	Lactase-like protein (Klotho/lactase-phlorizin hydrolase-related protein)	Lct1 (Klph)	27	21	24	18
Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27

Q6P3Y5	Zinc finger protein 280C (Suppressor of hairy wing homolog 3)	Znf280c (Kiaa1584) (Suhw3) (Zfp280c)	87	142	43	32
Q4VGL6	Roquin (RING finger and C3H zinc finger protein 1) (Protein Sanroque)	Rc3h1 (Gm551) (Kiaa2025)	54	54	23	17
P58681	Toll-like receptor 7	Tlr7	27	33	23	17
P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208
Q8VBX6	Multiple PDZ domain protein (Multi-PDZ domain protein 1)	Mpdz (Mupp1)	17	29	38	28
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
Q91Z67	SLIT-ROBO Rho GTPase-activating protein 2 (srGAP2) (Formin-binding protein 2) (Formin-binding protein 27) (FBP-27)	Srgap2 (Fbp27) (Fnbp2)	77	48	11	8
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13

Q64237	Dopamine beta-hydroxylase (EC 1.14.17.1) (Dopamine beta-monoxygenase) [Cleaved into: Soluble dopamine beta-hydroxylase]	Dbh	44	23	7	5
Q99LG2	Transportin-2 (Karyopherin beta-2b)	Tnpo2	42	32	7	5
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptprn (Ptp35)	30	18	14	10
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
Q03172	Zinc finger protein 40 (Transcription factor alphaA-CRYBP1) (Alpha A-crystallin-binding protein I) (Alpha A-CRYBP1)	Hivep1 (Cryabp1) (Znf40)	25	24	21	15
P08551	Neurofilament light polypeptide (NF-L) (Neurofilament triplet L protein) (68 kDa neurofilament protein)	Nefl (Nf68) (Nfl)	51	36	17	12
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
P61294	Ras-related protein Rab-6B	Rab6b (D9Bwg0185e)	18	53	10	7
Q6ZQ12	Ninein-like protein	Nlp (Kiaa0980)	15	34	23	16
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q64707	U2 small nuclear ribonucleoprotein auxiliary factor 35 kDa subunit-related protein 1 (U2(RNU2) small nuclear RNA auxiliary factor 1-like 1) (CCCH type zinc finger, RNA-binding motif and serine/arginine rich protein 1) (SP2)	Zrsr1 (Sp2) (Sp2-7) (U2af1rs1) (U2af111)	34	22	13	9
Q52KI8	Serine/arginine repetitive matrix protein 1 (Plenty-of-prolines 101)	Srrm1 (Pop101)	22	73	29	20
Q8CD91	SPARC-related modular calcium-binding protein 2 (Secreted modular calcium-binding protein 2) (SMOC-2)	Smoc2	29	16	16	11
Q99PV0	Pre-mRNA-processing-splicing factor 8 (Splicing factor Prp8)	Prpf8 (Prp8)	28	29	51	35

Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P68040	Guanine nucleotide-binding protein subunit beta-2-like 1 (Receptor of activated protein kinase C 1) (RACK1) (Receptor for activated C kinase) (p205) (12-3)	Gnb2l1 (Gnb2-rs1)	541	153	35	24
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
O88799	Zonadhesin	Zan	22	26	25	17
Q80TP3	E3 ubiquitin-protein ligase UBR5 (EC 6.3.2.-) (E3 ubiquitin-protein ligase, HECT domain-containing 1) (Hyperplastic discs protein homolog)	Ubr5 (Edd) (Edd1) (Kiaa0896)	27	17	43	29
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2
Q8C9S8	Cysteine protease ATG4A (EC 3.4.22.-) (Autophagy-related protein 4 homolog A) (Autophagin-2) (Autophagy-related cysteine endopeptidase 2) (AUT-like 2 cysteine endopeptidase)	Atg4a (Apg4a) (Autl2)	26	21	6	4
P29391	Ferritin light chain 1 (Ferritin L subunit 1)	Ftl1 (Ftl) (Ftl-1)	150	159	6	4
P43275	Histone H1.1 (H1 VAR.3) (H1a)	Hist1h1a (H1f1)	28	90	9	6
Q9WV07	Epidermis-type lipoxygenase 3 (e-LOX-3) (EC 1.13.11.-)	Aloxe3	25	22	9	6
P61979	Heterogeneous nuclear ribonucleoprotein K (hnRNP K)	Hnrnpk (Hnrpk)	225	46	18	12
Q9Z0T6	Polycystic kidney disease and receptor for egg jelly-related protein (PKD and REJ homolog)	Pkdrej	32	32	18	12
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
P61164	Alpha-centractin (Centractin) (Centrosome-associated actin homolog) (Actin-RPV) (ARP1)	Actr1a (Ctrn1)	247	124	27	18
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155

O88444	Adenylate cyclase type 1 (EC 4.6.1.1) (Adenylate cyclase type I) (ATP pyrophosphate-lyase 1) (Adenylyl cyclase 1) (Ca(2+)/calmodulin-activated adenylyl cyclase)	Adcy1	33	31	26	17
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
Q924W6	Tripartite motif-containing protein 66 (Transcriptional intermediary factor 1 delta)	Trim66 (Tif1d)	28	18	23	15
O70435	Proteasome subunit alpha type-3 (EC 3.4.25.1) (Proteasome component C8) (Macropain subunit C8) (Multicatalytic endopeptidase complex subunit C8) (Proteasome subunit K)	Psma3	95	76	14	9
P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18
P40142	Transketolase (TK) (EC 2.2.1.1) (P68)	Tkt	562	250	117	75
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/Pi cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
Q9QZ09	Putative homeodomain transcription factor 1	Phtf1 (Phtf)	29	24	8	5
Q8C7H1	Methylmalonic aciduria type A homolog, mitochondrial	Mmaa	31	37	16	10

Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (Ubpy)	29	23	24	15
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
Q68ED2	Metabotropic glutamate receptor 7 (mGluR7)	Grm7 (Gprc1g) (Mglur7)	37	33	13	8
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
O35551	Rab GTPase-binding effector protein 1 (Rabaptin-5) (Rabaptin-5alpha)	Rabep1 (Rab5ep) (Rabpt5) (Rabpt5a)	33	26	26	16
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
O88291	Zinc finger protein 326 (Zinc finger protein-associated with nuclear matrix of 75 kDa)	Znf326 (Zan75) (Zfp326)	41	55	5	3
O35344	Importin subunit alpha-3 (Karyopherin subunit alpha-3) (Importin alpha Q2) (Qip2)	Kpna3 (Qip2)	24	28	10	6
Q9Z0P5	Twinfilin-2 (Twinfilin-1-like protein) (A6-related protein) (mA6RP)	Twf2 (Ptk9I)	29	32	10	6
Q9QWK5	Baculoviral IAP repeat-containing protein 1a (Neuronal apoptosis inhibitory protein 1)	Naip1 (Birc1a) (Naip)	21	28	20	12

Q9EQZ6	Rap guanine nucleotide exchange factor 4 (cAMP-regulated guanine nucleotide exchange factor II) (cAMP-GEFII) (Exchange factor directly activated by cAMP 2) (Epac 2) (cAMP-dependent Rap1 guanine-nucleotide exchange factor)	Rapgef4 (Cgef2) (Epac2)	47	23	20	12
Q8R4K8	Pappalysin-1 (EC 3.4.24.79) (Pregnancy-associated plasma protein A) (PAPP-A) (Insulin-like growth factor-dependent IGF-binding protein 4 protease) (IGF-dependent IGFBP-4 protease) (IGFBP-4ase)	Pappa	41	43	25	15
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P26040	Ezrin (p81) (Cytovillin) (Villin-2)	Ezr (Vil2)	127	106	27	16
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P09041	Phosphoglycerate kinase 2 (EC 2.7.2.3) (Phosphoglycerate kinase, testis specific)	Pgk2 (Pgk-2)	162	73	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7



Q9JI78	Peptide-N(4)-(N-acetyl-beta-glucosaminy)asparagine amidase (PNGase) (mPNGase) (EC 3.5.1.52) (Peptide:N-glycanase) (N-glycanase 1)	Ngly1	29	32	19	11
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
P53762	Aryl hydrocarbon receptor nuclear translocator (ARNT protein) (Dioxin receptor, nuclear translocator) (Hypoxia-inducible factor 1 beta) (HIF-1 beta)	Arnt	25	22	7	4
P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4
P97287	Induced myeloid leukemia cell differentiation protein Mcl-1 homolog (Bcl-2-related protein EAT/mcl1)	Mcl1	26	30	7	4
Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
P26043	Radixin (ESP10)	Rdx	127	106	23	13
Q9R1X4	Protein timeless homolog (mTim)	Timeless (Tim1) (Timeless1)	22	25	16	9
Q9Z1Q5	Chloride intracellular channel protein 1 (Nuclear chloride ion channel 27) (NCC27)	Clic1	137	139	9	5
Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27

	P17918	Proliferating cell nuclear antigen (PCNA) (Cyclin)	Pcna	273	207	20	11
	Q9WTU3	Sodium channel protein type 8 subunit alpha (Sodium channel protein type VIII subunit alpha) (Voltage-gated sodium channel subunit alpha Nav1.6)	Scn8a (Nbna1)	28	19	20	11
	O35664	Interferon-alpha/beta receptor beta chain (Interferon alpha/beta receptor 2) (IFN-alpha-REC) (Type I interferon receptor) (IFN-R)	Ifnar2	37	21	11	6
	Q9WV89	Syntaxin-binding protein 4 (Syntaxin 4-interacting protein) (Synip) (STX4-interacting protein)	Stxbp4	41	19	11	6
	Q9WUJ8	Origin recognition complex subunit 6	Orc6l (Orc6)	59	37	13	7
	Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
	O88844	Isocitrate dehydrogenase [NADP] cytoplasmic (IDH) (EC 1.1.1.42) (Cytosolic NADP-isocitrate dehydrogenase) (Oxalosuccinate decarboxylase) (NADP(+)-specific ICDH) (IDP)	Idh1	155	163	15	8
	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
	P11103	Poly [ADP-ribose] polymerase 1 (PARP-1) (EC 2.4.2.30) (ADPRT) (NAD(+) ADP-ribosyltransferase 1) (Poly[ADP-ribose] synthetase 1) (msPARP)	Parp1 (Adprp) (Adprt) (Adprt1)	21	26	17	9
	Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
	Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwnk4)	23	33	29	15
tubulin binding	P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12

Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36	
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30	
Q91X97	Neurocalcin-delta	Ncald (D15Ert412e)	85	82	8	9	
Q61768	Kinesin-1 heavy chain (Ubiquitous kinesin heavy chain) (UKHC) (Conventional kinesin heavy chain)	Kif5b (Khcs) (Kns1)	102	303	43	41	
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31	
Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100	
Q6A078	Centrosomal protein of 290 kDa (Cep290) (Nephrocystin-6)	Cep290 (Kiaa0373) (Nphp6)	32	57	85	66	
Q7TMK6	Protein Hook homolog 2	Hook2	33	36	26	20	
P25233	Necdin	Ndn	30	23	16	12	
Q8C9S8	Cysteine protease ATG4A (EC 3.4.22.-) (Autophagy-related protein 4 homolog A) (Autophagin-2) (Autophagy-related cysteine endopeptidase 2) (AUT-like 2 cysteine endopeptidase)	Atg4a (Apg4a) (Autl2)	26	21	6	4	
Enriched Biological Processes by Panther							
Term	Accession	Protein names	Genes	prot_score_WT	prot_score_KO	prot_matches_WT	prot_matches_KO
mRNA transcription regulation	Q3TCT4	Ectonucleoside triphosphate diphosphohydrolase 7 (NTPDase 7) (EC 3.6.1.-) (Lysosomal apyrase-like protein 1)	Entpd7 (Kiaa4066) (Lalp1)	16	33	42	80
	O88705	Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel 3 (Hyperpolarization-activated cation channel 3) (HAC-3)	Hcn3 (Hac3)	75	67	8	15

Q99N50	Synaptotagmin-like protein 2 (Exophilin-4)	Sytl2 (Slp2)	26	77	10	18
P56716	Oxygen-regulated protein 1 (Retinitis pigmentosa RP1 protein homolog)	Rp1 (Orp1) (Rp1h)	31	49	58	104
Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
P03987	Ig gamma-3 chain C region		30	34	4	7
P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
Q64674	Spermidine synthase (SPDSY) (EC 2.5.1.16) (Putrescine aminopropyltransferase)	Srm	55	29	4	7
P56198	Cell death activator CIDE-3 (Cell death-inducing DFFA-like effector protein C) (Fat-specific protein FSP27)	Cidec (Fsp27)	51	39	8	14
P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
Q9Z1R2	Large proline-rich protein BAT3 (HLA-B-associated transcript 3)	Bat3	80	49	15	26
Q9D009	Putative octanoyltransferase, mitochondrial (EC 2.3.1.181) (Octanoyl-[acyl-carrier-protein]-protein N-octanoyltransferase) (Lipoyl/octanoyl transferase) (Lipoate-protein ligase B)		38	42	11	19
Q8R1S0	Ubiquinone biosynthesis monooxygenase COQ6 (EC 1.14.13.-)	Coq6	42	92	10	17
Q8BFQ9	Kelch domain-containing protein 5	Klhdc5 (Kiaa1340)	30	22	10	17
Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
P52480	Pyruvate kinase isozymes M1/M2 (EC 2.7.1.40) (Pyruvate kinase muscle isozyme)	Pkm2 (Pk3) (Pykm)	1954	3481	138	233
Q8CGP2	Histone H2B type 1-P	Hist1h2bp	436	999	46	77
Q9Z309	Calcium and integrin-binding family member 2 (Kinase-interacting protein 2) (KIP 2)	Cib2 (Kip2)	31	17	3	5
P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5

P62960	Nuclease-sensitive element-binding protein 1 (Y-box-binding protein 1) (Y-box transcription factor) (YB-1) (CCAAT-binding transcription factor I subunit A) (CBF-A) (Enhancer factor I subunit A) (EFI-A) (DNA-binding protein B) (DBPB)	Ybx1 (Msy-1) (Msy1) (Nsep1) (Yb1)	56	126	6	10
P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78
Q64475	Histone H2B type 1-B (h2B-143)	Hist1h2bb	436	999	46	75
P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13
Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
Q8VDM4	26S proteasome non-ATPase regulatory subunit 2 (26S proteasome regulatory subunit RPN1) (26S proteasome regulatory subunit S2) (26S proteasome subunit p97)	Psm2	113	157	18	29
P19157	Glutathione S-transferase P 1 (Gst P1) (EC 2.5.1.18) (GST YF-YF) (GST-piB) (GST class-pi) (Preadipocyte growth factor)	Gstp1 (GstpiB)	473	572	10	16

Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
Q61990	Poly(rC)-binding protein 2 (Alpha-CP2) (Putative heterogeneous nuclear ribonucleoprotein X) (hnRNP X) (CTBP) (CBP)	Pcbp2 (Cbp) (HnrnpX) (Hnrpx)	29	194	7	11
Q9D8W5	26S proteasome non-ATPase regulatory subunit 12 (26S proteasome regulatory subunit p55)	Psmd12	67	78	7	11
P14824	Annexin A6 (Annexin-6) (Annexin VI) (Lipocortin VI) (p68) (p70) (Protein III) (Chromobindin-20) (67 kDa calelectrin) (Calphobindin-II) (CPB-II)	Anxa6 (Anx6)	168	591	33	51
P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
Q60695	Ral guanine nucleotide dissociation stimulator-like 1 (RalGDS-like 1)	Rgl1 (Rgl)	26	15	4	6
O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
Q7TN83	Synaptotagmin-16 (Synaptotagmin XIV-related protein) (Synaptotagmin 14-like protein)	Syt16 (Strep14) (Syt14l) (Syt14r)	20	38	6	9
Q8BUG5	Calcyphosin-2 (Calcyphosine-2)	Caps2	17	28	8	12
P50247	Adenosylhomocysteinase (AdoHcyase) (EC 3.3.1.1) (S-adenosyl-L-homocysteine hydrolase) (Liver copper-binding protein) (CUBP)	Ahcy	90	106	10	15
P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwnk1)	56	36	18	27
P61982	14-3-3 protein gamma	Ywhag	653	841	53	79
Q60952	Centrosome-associated protein CEP250 (Centrosomal protein 2) (Centrosomal Nek2-associated protein 1) (C-Nap1) (Intranuclear matrix protein)	Cep250 (Cep2) (Inmp)	21	42	90	132

P53657	Pyruvate kinase isozymes R/L (EC 2.7.1.40) (L PK)	Pklr	144	270	26	38
Q3THW5	Histone H2A.V (H2A.F/Z)	H2afv (H2av)	297	426	11	16
P99026	Proteasome subunit beta type-4 (Proteasome beta chain) (EC 3.4.25.1) (Macropain beta chain) (Multicatalytic endopeptidase complex beta chain) (Proteasome chain 3)	Psmb4 (Lmp3)	93	289	11	16
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
P12813	Nuclear receptor subfamily 4 group A member 1 (Orphan nuclear receptor HMR) (Nuclear hormone receptor NUR/77) (N10 nuclear protein)	Nr4a1 (Gfrp) (Hmr) (N10) (Nur77)	61	31	7	10
O35711	Liprin-beta-2 (Protein tyrosine phosphatase receptor type f polypeptide-interacting protein-binding protein 2) (PTPRF-interacting protein-binding protein 2) (Coiled-coil-like protein 1)	Ppfibp2 (Cclp1)	108	79	14	20
P70696	Histone H2B type 1-A (Histone H2B, testis) (Testis-specific histone H2B)	Hist1h2ba (Th2b)	146	378	37	51
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11

P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
Q61937	Nucleophosmin (NPM) (Nucleolar phosphoprotein B23) (Numatrin) (Nucleolar protein NO38)	Npm1	92	66	11	15
O08807	Peroxiredoxin-4 (EC 1.11.1.15) (Prx-IV) (Thioredoxin peroxidase AO372) (Thioredoxin-dependent peroxide reductase A0372) (Antioxidant enzyme AOE372)	Prdx4	273	421	25	34
P70338	Zinc finger protein Gfi-1 (Growth factor independent protein 1)	Gfi1 (Gfi-1)	45	39	17	23
Q61789	Laminin subunit alpha-3 (Nicein subunit alpha)	Lama3	26	26	37	50
Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53
P35700	Peroxiredoxin-1 (EC 1.11.1.15) (Thioredoxin peroxidase 2) (Thioredoxin-dependent peroxide reductase 2) (Osteoblast-specific factor 3) (OSF-3) (Macrophage 23 kDa stress protein)	Prdx1 (Msp23) (Paga) (Tdp2)	836	1095	75	99
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
P70168	Importin subunit beta-1 (Karyopherin subunit beta-1) (Nuclear factor P97) (Pore targeting complex 97 kDa subunit) (PTAC97) (SCG)	Kpnb1 (Impnb)	48	17	13	17



Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
P63321	Ras-related protein Ral-A	Rala (Ral) (Rala)	25	22	30	39
Q8CIM1	Leucine-rich repeat-containing protein 45	Lrrc45	33	71	27	35
Q7TQ07	DNA polymerase nu (EC 2.7.7.7)	Poln	20	39	14	18
Q07133	Histone H1t (Testicular H1 histone)	Hist1h1t (H1ft) (H1t)	46	72	54	69
P27661	Histone H2A.x (H2a/x)	H2afx (H2a.x) (H2ax) (Hist5-2ax)	301	426	15	19
P61028	Ras-related protein Rab-8B	Rab8b	17	59	4	5
Q80X50	Ubiquitin-associated protein 2-like	Ubp2l	63	54	4	5
Q60716	Prolyl 4-hydroxylase subunit alpha-2 (EC 1.14.11.2) (4-PH alpha-2) (Procollagen-proline,2-oxoglutarate-4-dioxygenase subunit alpha-2)	P4ha2	22	27	8	10
Q63ZW7	InaD-like protein (Inadl protein) (Pals1-associated tight junction protein) (Protein associated to tight junctions) (Channel-interacting PDZ domain-containing protein)	Inadl (Cipp) (Patj)	18	30	12	15
P31001	Desmin	Des	169	224	25	31
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8R2X8	Golgin-45 (Basic leucine zipper nuclear factor 1)	Blzf1	28	22	13	16
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16

Q61466	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 1 (SWI/SNF complex 60 kDa subunit) (60 kDa BRG-1/Brm-associated factor subunit A) (BRG1-associated factor 60A) (D15KZ1 protein)	Smarcd1 (Baf60a) (D15Kz1)	27	29	13	16
P59270	Galactosylgalactosylxylosylprotein 3-beta-glucuronosyltransferase 2 (EC 2.4.1.135) (Beta-1,3-glucuronyltransferase 2) (UDP-glucuronosyltransferase-S) (Glucuronosyltransferase-S) (GlcAT-S) (GlcAT-D)	B3gat2 (Glcats)	29	16	9	11
Q8VII8	Mineralocorticoid receptor (MR) (Nuclear receptor subfamily 3 group C member 2)	Nr3c2 (Mlr)	28	22	18	22
Q9R1P0	Proteasome subunit alpha type-4 (EC 3.4.25.1) (Proteasome component C9) (Macropain subunit C9) (Multicatalytic endopeptidase complex subunit C9) (Proteasome subunit L)	Psma4	29	151	14	17
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
O35618	Protein Mdm4 (p53-binding protein Mdm4) (Mdm2-like p53-binding protein) (Protein Mdmx) (Double minute 4 protein)	Mdm4 (Mdmx)	17	29	5	6
Q8VHS2	Crumbs homolog 1	Crb1	23	28	10	12
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
Q8BFY9	Transportin-1 (Importin beta-2) (Karyopherin beta-2)	Tnp1 (Kpnb2)	54	43	10	12
Q9QUR6	Prolyl endopeptidase (PE) (EC 3.4.21.26) (Post-proline cleaving enzyme)	Prep (Pep)	56	20	15	18
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18

O08908	Phosphatidylinositol 3-kinase regulatory subunit beta (PI3-kinase p85 subunit beta) (PtdIns-3-kinase p85-beta)	Pik3r2	19	25	20	24
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
Q61771	Kinesin-like protein KIF3B (Microtubule plus end-directed kinesin motor 3B)	Kif3b	30	51	16	19
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q61171	Peroxiredoxin-2 (EC 1.11.1.15) (Thioredoxin peroxidase 1) (Thioredoxin-dependent peroxide reductase 1) (Thiol-specific antioxidant protein) (TSA)	Prdx2 (Tdp1) (Tpx)	568	898	47	55
Q61122	NGFI-A-binding protein 1 (EGR-1-binding protein 1)	Nab1	30	25	6	7
Q80XA6	RalBP1-associated Eps domain-containing protein 2 (RalBP1-interacting protein 2) (Partner of RalBP1)	Reps2 (Pob1)	33	31	6	7
Q9WUM4	Coronin-1C (Coronin-3)	Coro1c	42	28	18	21
Q6GSS7	Histone H2A type 2-A (H2A.2) (H2a-614) (H2a-615)	Hist2h2aa1; Hist2h2aa2	505	763	18	21
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbn1 (Abp1) (Sh3p7)	24	39	7	8
Q9Z2K1	Keratin, type I cytoskeletal 16 (Cytokeratin-16) (CK-16) (Keratin-16) (K16)	Krt16 (Krt1-16)	37	37	7	8

Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16
Q6A4J8	Ubiquitin carboxyl-terminal hydrolase 7 (EC 3.1.2.15) (Ubiquitin thioesterase 7) (Ubiquitin-specific-processing protease 7) (Deubiquitinating enzyme 7) (Herpesvirus-associated ubiquitin-specific protease) (mHAUSP)	Usp7 (Hausp)	27	18	14	16
P97820	Mitogen-activated protein kinase kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
P40124	Adenylyl cyclase-associated protein 1 (CAP 1)	Cap1 (Cap)	22	43	8	9
Q91X97	Neurocalcin-delta	Ncald (D15Ert412e)	85	82	8	9
Q64311	Protein N-terminal asparagine amidohydrolase (EC 3.5.1.-) (Protein NH2-terminal asparagine deamidase) (PNAD) (N-terminal Asn amidase) (NTN-amidase) (Protein NH2-terminal asparagine amidohydrolase) (PNAA)	Ntan1	20	26	8	9

Q9WUU9	80 kDa MCM3-associated protein (Protein GANP)	Mcm3ap (Ganp) (Map80)	48	32	17	19
Q64467	Glyceraldehyde-3-phosphate dehydrogenase, testis-specific (EC 1.2.1.12) (Spermatogenic glyceraldehyde-3-phosphate dehydrogenase) (Spermatogenic cell-specific glyceraldehyde 3-phosphate dehydrogenase 2) (GAPDH-2)	Gapdhs (Gapds) (Gapds)	75	781	26	29
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29
Q60864	Stress-induced-phosphoprotein 1 (STI1) (mSTI1) (Hsc70/Hsp90-organizing protein) (Hop)	Stip1	257	245	19	21
Q91ZT5	FYVE, RhoGEF and PH domain-containing protein 4 (Actin filament-binding protein frabin) (FGD1-related F-actin-binding protein)	Fgd4	29	19	10	11
O55234	Proteasome subunit beta type-5 (EC 3.4.25.1) (Proteasome epsilon chain) (Macropain epsilon chain) (Multicatalytic endopeptidase complex epsilon chain) (Proteasome subunit X) (Proteasome chain 6)	Psmb5	168	227	10	11
Q9R0Q7	Prostaglandin E synthase 3 (EC 5.3.99.3) (Cytosolic prostaglandin E2 synthase) (cPGES) (Telomerase-binding protein p23) (Hsp90 co-chaperone) (Progesterone receptor complex p23) (Sid 3177)	Ptges3 (Sid3177) (Tebp)	124	239	10	11
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12

Q3THS6	S-adenosylmethionine synthetase isoform type 2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
P08113	Endoplasmic reticulum chaperone protein (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra1) (Tra1)	221	298	25	27
Q8CH62	Oral cancer overexpressed protein 1 homolog	Oraov1	37	31	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
Q3TY86	Apoptosis-inducing factor 3 (EC 1.-.-.-) (Apoptosis-inducing factor-like protein)	Aifm3 (Aifl)	42	26	28	30

P70398	Probable ubiquitin carboxyl-terminal hydrolase FAF-X (EC 3.1.2.15) (Ubiquitin thioesterase FAF-X) (Ubiquitin-specific-processing protease FAF-X) (Deubiquitinating enzyme FAF-X) (Fat facets protein-related, X-linked) (Ubiquitin-specific protease 9, X chromosome) (Ubiquitin carboxyl-terminal hydrolase FAM) (Fat facets homolog)	Usp9x (Faf1) (Fam)	42	28	57	61
Q8BKX6	Serine/threonine-protein kinase SMG1 (SMG-1) (EC 2.7.11.1)	Smg1 (Kiaa0421)	33	27	30	32
P16858	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) (EC 1.2.1.12)	Gapdh (Gapd)	1514	1781	84	89
P62242	40S ribosomal protein S8	Rps8	479	372	18	19
Q76MZ3	Serine/threonine-protein phosphatase 2A 65 kDa regulatory subunit A alpha isoform (PP2A, subunit A, PR65-alpha isoform) (PP2A, subunit A, R1-alpha isoform)	Ppp2r1a	142	242	22	23
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
Q61820	GTP-binding nuclear protein Ran, testis-specific isoform	Rasl2-9	564	570	23	24
Q62504	Msx2-interacting protein (SPEN homolog) (SMART/HDAC1-associated repressor protein)	Spn (Kiaa0929) (Mint) (Sharp)	27	18	72	75
Q6P4S8	Integrator complex subunit 1 (Int1)	Ints1	25	33	26	27
O35973	Period circadian protein homolog 1 (Circadian clock protein PERIOD 1) (Circadian pacemaker protein Rigui) (mPER1)	Per1 (Per) (Rigui)	29	21	27	28
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
Q8CGM2	Retinitis pigmentosa 1-like 1 protein (Retinitis pigmentosa 1-like protein 1)	Rp11 (Rp1hl1)	30	21	58	60
P26039	Talin-1	Tln1 (Tln)	123	161	41	42

Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165
P09586	Prolactin-3B1 (Chorionic somatomammotropin hormone 2) (Placental lactogen II) (PL-II)	Prl3b1 (Csh2) (PI-2) (PI2)	29	21	2	2
P26350	Prothymosin alpha [Cleaved into: Thymosin alpha]	Ptma	34	120	2	2
P62141	Serine/threonine-protein phosphatase PP1-beta catalytic subunit (PP-1B) (EC 3.1.3.16)	Ppp1cb	177	57	4	4
Q60865	Caprin-1 (Cytoplasmic activation- and proliferation-associated protein 1) (GPI-anchored membrane protein 1) (GPI-anchored protein p137) (p137GPI) (Membrane component chromosome 11 surface marker 1)	Caprin1 (Gpiap) (Gpiap1) (Gpip137) (M11s1) (G5E5)	20	26	5	5
P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5
Q3TXZ1	Zinc finger protein 575	Znf575 (Zfp575)	30	25	5	5
Q8VCZ3	THAP domain-containing protein 7	Thap7	26	18	6	6
Q9R1P1	Proteasome subunit beta type-3 (EC 3.4.25.1) (Proteasome theta chain) (Proteasome chain 13) (Proteasome component C10-II)	Psmb3	87	135	7	7
Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
Q6P5F9	Exportin-1 (Exp1) (Chromosome region maintenance 1 protein homolog)	Xpo1 (Crm1)	19	43	9	9
Q9DAI4	Zinc finger and BTB domain-containing protein 43 (Zinc finger protein 297B)	Zbtb43 (Kiaa0414) (Zfp297b) (Znf297b)	23	51	9	9



O54951	Semaphorin-6B (Semaphorin VIB) (Sema VIB) (Semaphorin-N) (Sema N)	Sema6b (Seman)	34	25	10	10
Q9CQ60	6-phosphogluconolactonase (6PGL) (EC 3.1.1.31)	Pgls	148	41	11	11
O09061	Proteasome subunit beta type-1 (EC 3.4.25.1) (Proteasome component C5) (Macropain subunit C5) (Multicatalytic endopeptidase complex subunit C5) (Proteasome gamma chain)	Psmb1	84	94	11	11
Q61092	Laminin subunit gamma-2 (Laminin 5 gamma 2 subunit) (Kalinin/nicein/epiligrin 100 kDa subunit) (Laminin B2t chain)	Lamc2	33	29	13	13
Q80YV4	Pantothenate kinase 4 (EC 2.7.1.33) (Pantothenic acid kinase 4) (mPanK4)	Pank4	23	28	13	13
Q9DB77	Cytochrome b-c1 complex subunit 2, mitochondrial (Ubiquinol-cytochrome-c reductase complex core protein 2) (Core protein II) (Complex III subunit 2)	Uqcrc2	29	20	13	13
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q01098	Glutamate [NMDA] receptor subunit epsilon-3 (N-methyl D-aspartate receptor subtype 2C) (NMDAR2C) (NR2C)	Grin2c	18	33	15	15
O08788	Dynactin subunit 1 (150 kDa dynein-associated polypeptide) (DAP-150) (DP-150) (p150-glued)	Dctn1	64	70	19	19
Q8BSS9	Liprin-alpha-2 (Protein tyrosine phosphatase receptor type f polypeptide-interacting protein alpha-2) (PTPRF-interacting protein alpha-2)	Ppfia2	36	21	22	22
Q80UK8	Integrator complex subunit 2 (Int2)	Ints2 (Kiaa1287)	16	27	24	24
Q6P8J7	Creatine kinase, sarcomeric mitochondrial (EC 2.7.3.2) (S-MtCK)	Ckmt2	50	66	26	26

Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
Q9QYX7	Protein piccolo (Aczonin) (Multidomain presynaptic cytomatrix protein) (Brain-derived HLMN protein)	Pclo (Acz)	101	117	114	114
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (Csm) (Eif3) (Eif3s10)	199	166	58	56
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
P16406	Glutamyl aminopeptidase (EC 3.4.11.7) (EAP) (Aminopeptidase A) (APA) (BP-1/6C3 antigen) (CD antigen CD249)	Enpep	98	90	48	46
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21

P62827	GTP-binding nuclear protein Ran (GTPase Ran) (Ras-related nuclear protein) (Ras-like protein TC4)	Ran (Rasl2-8)	756	656	38	36
P54869	Hydroxymethylglutaryl-CoA synthase, mitochondrial (HMG-CoA synthase) (EC 2.3.3.10) (3-hydroxy-3-methylglutaryl coenzyme A synthase)	Hmgcs2	26	23	18	17
P03966	N-myc proto-oncogene protein	Mycn (Nmyc) (Nmyc1)	65	46	18	17
Q04447	Creatine kinase B-type (EC 2.7.3.2) (Creatine kinase B chain) (B-CK)	Ckb (Ckbb)	9079	7277	434	406
Q8BTI8	Serine/arginine repetitive matrix protein 2	Srrm2 (Kiaa0324)	78	70	92	86
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q99PF4	Cadherin-23 (Otocadherin)	Cdh23	29	32	29	27
Q9D6Z1	Nucleolar protein 5A (Nucleolar protein Nop56)	Nol5a (Nop56)	38	39	14	13
Q8R5G7	Centaurin-delta-3 (Cnt-d3) (Arf-GAP, Rho-GAP, ankyrin repeat and pleckstrin homology domain-containing protein 3) (Dual specificity Rho- and Arf-GTPase-activating protein 1)	Centd3 (Arap3) (Drag1) (Kiaa4097)	21	27	26	24
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
O35206	Collagen alpha-1(XV) chain [Cleaved into: Endostatin (Endostatin-XV)]	Col15a1	31	37	12	11
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51

Q9WTR0	Matrix metalloproteinase-16 (MMP-16) (EC 3.4.24.-) (Membrane-type matrix metalloproteinase 3) (MT-MMP 3) (MTMMP3) (Membrane-type-3 matrix metalloproteinase) (MT3-MMP) (MT3MMP)	Mmp16	17	36	11	10
P03995	Glial fibrillary acidic protein (GFAP)	Gfap	63	90	22	20
Q8R4U7	Leucine zipper protein 1 (Leucine zipper motif-containing protein)	Luzp1 (Luzp)	31	32	22	20
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q91VX2	Ubiquitin-associated protein 2 (Protein lingerer homolog 1) (MLig-1)	Ubap2 (Lig1)	60	41	10	9
P43406	Integrin alpha-V (Vitronectin receptor subunit alpha) (CD antigen CD51) [Cleaved into: Integrin alpha-V heavy chain; Integrin alpha-V light chain]	Itgav	23	35	19	17
Q925Q8	Dachshund homolog 2 (Dach2)	Dach2	22	30	9	8
Q9JIL4	PDZ domain-containing protein 1 (CFTR-associated protein of 70 kDa) (Na/Pi cotransporter C-terminal-associated protein) (NaPi-Cap1) (Sodium-hydrogen exchanger regulatory factor 3) (Na(+)/H(+) exchanger regulatory factor 3)	Pdzk1 (Cap70) (Nherf3)	29	39	9	8
P43277	Histone H1.3 (H1 VAR.4) (H1d)	Hist1h1d (H1f3)	78	99	18	16

Q9QXA7	Tripartite motif-containing protein 44 (Protein DIPB) (Protein Mc7)	Trim44 (Dipb)	28	23	18	16
Q68FD5	Clathrin heavy chain 1	Cltc	944	884	88	78
P33173	Kinesin-like protein KIF1A (Axonal transporter of synaptic vesicles)	Kif1a (Atsv) (Kif1)	45	108	25	22
Q99PG2	Opioid growth factor receptor (OGFr) (Zeta-type opioid receptor)	Ogfr	38	24	8	7
P70195	Proteasome subunit beta type-7 (EC 3.4.25.1) (Proteasome subunit Z) (Macropain chain Z) (Multicatalytic endopeptidase complex chain Z)	Psmb7 (Mmc14)	39	40	8	7
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q11011	Puromycin-sensitive aminopeptidase (PSA) (EC 3.4.11.-)	Npepps (Psa)	71	141	30	26
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
Q63994	Myeloid cell surface antigen CD33 (Sialic acid-binding Ig-like lectin 3) (Siglec-3) (CD antigen CD33)	Cd33 (Siglec3)	34	34	7	6
O54749	Cytochrome P450 2J5 (EC 1.14.14.1) (CYP11J5) (Arachidonic acid epoxygenase)	Cyp2j5	29	34	7	6
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPIase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6
Q9CYF5	Williams-Beuren syndrome chromosomal region 16 protein homolog	Wbscr16	38	28	7	6
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12

P11881	Inositol 1,4,5-trisphosphate receptor type 1 (Type 1 inositol 1,4,5-trisphosphate receptor) (Type 1 InsP3 receptor) (IP3 receptor isoform 1) (InsP3R1) (Inositol 1,4,5-trisphosphate-binding protein P400) (Purkinje cell protein 1) (Protein PCD-6)	Itpr1 (Insp3r) (Pcd6) (Pcp1)	37	42	48	41
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
Q91VW5	Golgin subfamily A member 4 (tGolgin-1)	Golga4	41	60	46	39
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
Q9R0L6	Pericentriolar material 1 protein (PCM-1) (mPCM-1)	Pcm1	24	30	19	16
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
Q9ES17	Interleukin-21 (IL-21)	Il21	22	25	6	5
Q99PP7	E3 ubiquitin-protein ligase TRIM33 (EC 6.3.2.-) (Tripartite motif-containing protein 33) (Transcription intermediary factor 1-gamma) (TIF1-gamma) (Ectodermin homolog)	Trim33 (Kiaa1113)	33	25	12	10
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
Q64514	Tripeptidyl-peptidase 2 (EC 3.4.14.10) (Tripeptidyl-peptidase II) (TPP-II) (Tripeptidyl aminopeptidase)	Tpp2	54	76	24	20
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
P11531	Dystrophin	Dmd	25	16	66	55
P09405	Nucleolin (Protein C23)	Ncl (Nuc)	775	872	78	65

Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
P62259	14-3-3 protein epsilon (14-3-3E)	Ywhae	1202	998	116	95
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
P42227	Signal transducer and activator of transcription 3 (Acute-phase response factor)	Stat3 (Aprf)	16	28	33	27
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
P17182	Alpha-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Non-neural enolase) (NNE) (Enolase 1)	Eno1 (Eno-1)	976	802	62	50
P00342	L-lactate dehydrogenase C chain (LDH-C) (EC 1.1.1.27) (LDH testis subunit) (LDH-X)	Ldhc (Ldh-3) (Ldh3)	97	122	15	12
Q9Z2U0	Proteasome subunit alpha type-7 (EC 3.4.25.1) (Proteasome subunit RC6-1)	PsmA7	121	253	15	12
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
P62852	40S ribosomal protein S25	Rps25	101	100	15	12
Q99MD9	Nuclear autoantigenic sperm protein (NASP)	Nasp	365	293	34	27

Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100
Q80T14	Extracellular matrix protein FRAS1	Fras1 (Kiaa1500)	48	109	24	19
Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
Q8CIQ7	Dedicator of cytokinesis protein 3 (Modifier of cell adhesion) (Presenilin-binding protein) (PBP)	Dock3 (Moca)	80	56	33	26
P63325	40S ribosomal protein S10	Rps10	468	168	42	33
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
Q6A078	Centrosomal protein of 290 kDa (Cep290) (Nephrocystin-6)	Cep290 (Kiaa0373) (Nphp6)	32	57	85	66
Q8VHK5	Membrane protein MLC1	Mlc1	35	25	22	17
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
P06151	L-lactate dehydrogenase A chain (LDH-A) (EC 1.1.1.27) (LDH muscle subunit) (LDH-M)	Ldha (Ldh-1) (Ldh1)	1033	421	74	57
Q9CZW4	Long-chain-fatty-acid--CoA ligase 3 (EC 6.2.1.3) (Long-chain acyl-CoA synthetase 3) (LACS 3)	Acsl3 (Acs3) (FacI3)	41	37	13	10
P62748	Hippocalcin-like protein 1 (Visinin-like protein 3) (VILIP-3) (Neural visinin-like protein 3) (NVL-3) (NVP-3)	Hpcal1	59	97	13	10
Q7TMK6	Protein Hook homolog 2	Hook2	33	36	26	20
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23



Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
P47856	Glucosamine--fructose-6-phosphate aminotransferase [isomerizing] 1 (EC 2.6.1.16) (Glutamine:fructose 6 phosphate amidotransferase 1) (GFAT 1) (GFAT1) (D-fructose-6-phosphate amidotransferase 1) (Hexosephosphate aminotransferase 1)	Gfpt1 (Gfpt)	17	29	17	13
Q8BHS8	Syntabulin (Syntaxin-1-binding protein) (Golgi-localized syntaphilin-related protein) (m-Golsyn)	Sybu (Golsyn) (Kiaa1472)	32	19	17	13
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
P39447	Tight junction protein ZO-1 (Zonula occludens protein 1) (Zona occludens protein 1) (Tight junction protein 1)	Tjp1 (Zo1)	36	15	21	16
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
P97434	Myosin phosphatase Rho-interacting protein (Rho-interacting protein 3) (RIP3) (p116Rip)	Mrip (Kiaa0864) (Mrip) (Rhoip3)	35	23	25	19
P70670	Nascent polypeptide-associated complex subunit alpha, muscle-specific form (Alpha-NAC, muscle-specific form)	Naca (Gm1878)	22	130	29	22
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
P58043	Sestrin-2	Sesn2 (Sest2)	21	34	4	3
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6

Q9DBG5	Mannose-6-phosphate receptor-binding protein 1 (Cargo selection protein TIP47)	M6prbp1 (Tip47)	25	22	8	6
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
O54887	Testis-specific serine kinase substrate (Testis-specific kinase substrate) (STK22 substrate 1)	Stk22s1 (Tsks)	50	21	16	12
Q8K1F9	Lactase-like protein (Klotho/lactase-phlorizin hydrolase-related protein)	Lctl (Klph)	27	21	24	18
Q8R5F3	Uncharacterized protein C6orf130 homolog		64	29	31	23
P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
Q91Z67	SLIT-ROBO Rho GTPase-activating protein 2 (srGAP2) (Formin-binding protein 2) (Formin-binding protein 27) (FBP-27)	Srgap2 (Fbp27) (Fnbp2)	77	48	11	8
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q9CQ65	S-methyl-5'-thioadenosine phosphorylase (EC 2.4.2.28) (5'-methylthioadenosine phosphorylase) (MTA phosphorylase) (MTAPase)	Mtap	48	36	7	5
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptpn (Ptp35)	30	18	14	10
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20

Q920E5	Farnesyl pyrophosphate synthetase (FPP synthetase) (FPS) (Farnesyl diphosphate synthetase) (Cholesterol-regulated 39 kDa protein) (CR 39) [Includes: Dimethylallyltransferase (EC 2.5.1.1); Geranyltransferase (EC 2.5.1.10)]	Fdps	107	43	17	12
Q60692	Proteasome subunit beta type-6 (EC 3.4.25.1) (Proteasome delta chain) (Macropain delta chain) (Multicatalytic endopeptidase complex delta chain) (Proteasome subunit Y)	Psmb6 (Lmp19)	33	89	17	12
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
P61294	Ras-related protein Rab-6B	Rab6b (D9Bwg0185e)	18	53	10	7
Q52KI8	Serine/arginine repetitive matrix protein 1 (Plenty-of-prolines 101)	Srrm1 (Pop101)	22	73	29	20
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
Q6PHN9	Ras-related protein Rab-35	Rab35	17	59	3	2
Q8C9S8	Cysteine protease ATG4A (EC 3.4.22.-) (Autophagy-related protein 4 homolog A) (Autophagin-2) (Autophagy-related cysteine endopeptidase 2) (AUT-like 2 cysteine endopeptidase)	Atg4a (Apg4a) (Autl2)	26	21	6	4
P29391	Ferritin light chain 1 (Ferritin L subunit 1)	Ftl1 (Ftl) (Ftl-1)	150	159	6	4
Q99LD8	N(G),N(G)-dimethylarginine dimethylaminohydrolase 2 (Dimethylarginine dimethylaminohydrolase 2) (DDAH-2) (EC 3.5.3.18) (DDAHII) (Dimethylargininase-2)	Ddah2	103	92	9	6
P43275	Histone H1.1 (H1 VAR.3) (H1a)	Hist1h1a (H1f1)	28	90	9	6

Q62168	Keratin, type I cuticular Ha2 (Hair keratin, type I Ha2) (Keratin-32) (K32)	Krt32 (Hka2) (Krt1-2) (Krtha2)	39	36	9	6
P61979	Heterogeneous nuclear ribonucleoprotein K (hnRNP K)	Hnrnpk (Hnrpk)	225	46	18	12
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
P68372	Tubulin beta-2C chain	Tubb2c	1300	891	78	51
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
Q924W6	Tripartite motif-containing protein 66 (Transcriptional intermediary factor 1 delta)	Trim66 (Tif1d)	28	18	23	15
O70435	Proteasome subunit alpha type-3 (EC 3.4.25.1) (Proteasome component C8) (Macropain subunit C8) (Multicatalytic endopeptidase complex subunit C8) (Proteasome subunit K)	Psma3	95	76	14	9
P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/Pi cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
Q9QZ09	Putative homeodomain transcription factor 1	Phtf1 (Phtf)	29	24	8	5

Q8C7H1	Methylmalonic aciduria type A homolog, mitochondrial	Mmaa	31	37	16	10
Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (Ubpy)	29	23	24	15
P16125	L-lactate dehydrogenase B chain (LDH-B) (EC 1.1.1.27) (LDH heart subunit) (LDH-H)	Ldhb (Ldh-2) (Ldh2)	315	214	34	21
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
Q3UXZ6	Protein FAM81A	Fam81a	22	27	13	8
O35551	Rab GTPase-binding effector protein 1 (Rabaptin-5) (Rabaptin-5alpha)	Rabep1 (Rab5ep) (Rabpt5) (Rabpt5a)	33	26	26	16
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIb) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
O08709	Peroxiredoxin-6 (EC 1.11.1.15) (Antioxidant protein 2) (1-Cys peroxiredoxin) (1-Cys PRX) (Acidic calcium-independent phospholipase A2) (aiPLA2) (EC 3.1.1.-) (Non-selenium glutathione peroxidase) (NSGPx) (EC 1.11.1.7)	Prdx6 (Aop2) (Ltw4) (Prdx5)	56	29	5	3
O88291	Zinc finger protein 326 (Zinc finger protein-associated with nuclear matrix of 75 kDa)	Znf326 (Zan75) (Zfp326)	41	55	5	3
Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
Q9Z0P5	Twinfilin-2 (Twinfilin-1-like protein) (A6-related protein) (mA6RP)	Twf2 (Ptk9l)	29	32	10	6

Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P26040	Ezrin (p81) (Cytovillin) (Villin-2)	Ezr (Vil2)	127	106	27	16
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P09041	Phosphoglycerate kinase 2 (EC 2.7.2.3) (Phosphoglycerate kinase, testis specific)	Pgk2 (Pkg-2)	162	73	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
Q9JI78	Peptide-N(4)-(N-acetyl-beta-glucosaminyl)asparagine amidase (PNGase) (mPNGase) (EC 3.5.1.52) (Peptide:N-glycanase) (N-glycanase 1)	Ngly1	29	32	19	11
P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
P53762	Aryl hydrocarbon receptor nuclear translocator (ARNT protein) (Dioxin receptor, nuclear translocator) (Hypoxia-inducible factor 1 beta) (HIF-1 beta)	Arnt	25	22	7	4
Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
Q8K2A7	Integrator complex subunit 10 (Int10)	Ints10	32	47	21	12
P26043	Radixin (ESP10)	Rdx	127	106	23	13

P49722	Proteasome subunit alpha type-2 (EC 3.4.25.1) (Proteasome component C3) (Macropain subunit C3) (Multicatalytic endopeptidase complex subunit C3)	Psma2 (Lmpc3)	188	103	16	9
Q9R1X4	Protein timeless homolog (mTim)	Timeless (Tim1) (Timeless1)	22	25	16	9
Q9Z1Q5	Chloride intracellular channel protein 1 (Nuclear chloride ion channel 27) (NCC27)	Clic1	137	139	9	5
P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
Q64105	Sepiapterin reductase (SPR) (EC 1.1.1.153)	Spr	43	27	9	5
Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27
P17918	Proliferating cell nuclear antigen (PCNA) (Cyclin)	Pcna	273	207	20	11
O35664	Interferon-alpha/beta receptor beta chain (Interferon alpha/beta receptor 2) (IFN-alpha-REC) (Type I interferon receptor) (IFN-R)	Ifnar2	37	21	11	6
Q9D6F9	Tubulin beta-4 chain	Tubb4	888	493	58	31
O88844	Isocitrate dehydrogenase [NADP] cytoplasmic (IDH) (EC 1.1.1.42) (Cytosolic NADP-isocitrate dehydrogenase) (Oxalosuccinate decarboxylase) (NADP(+)-specific ICDH) (IDP)	Idh1	155	163	15	8
Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27

	Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwnk4)	23	33	29	15
	P10649	Glutathione S-transferase Mu 1 (EC 2.5.1.18) (GST class-mu 1) (Glutathione S-transferase GT8.7) (pmGT10) (GST 1-1)	Gstm1	1081	522	61	31
Gametogenesis	Q8BGQ1	Uncharacterized protein C14orf133 homolog		23	28	5	9
	Q8BFQ9	Kelch domain-containing protein 5	Klhdc5 (Kiaa1340)	30	22	10	17
	Q3UDW8	Heparan-alpha-glucosaminide N-acetyltransferase (EC 2.3.1.78) (Transmembrane protein 76)	Hgsnat (D8Ert354e) (Tmem76)	34	22	6	9
	P70168	Importin subunit beta-1 (Karyopherin subunit beta-1) (Nuclear factor P97) (Pore targeting complex 97 kDa subunit) (PTAC97) (SCG)	Kpnb1 (Impnb)	48	17	13	17
	Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
	P51880	Fatty acid-binding protein, brain (B-FABP) (Fatty acid-binding protein 7) (Brain lipid-binding protein) (BLBP)	Fabp7 (Blbp)	933	856	31	38
	P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
	Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
	P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
	Q5SPW0	Vacuolar protein sorting-associated protein 54 (Tumor antigen SLP-8p homolog)	Vps54	36	28	13	15
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29	



P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
Q8VI56	Low-density lipoprotein receptor-related protein 4 (LDLR dan)	Lrp4 (Kiaa0816)	77	30	19	20
P62141	Serine/threonine-protein phosphatase PP1-beta catalytic subunit (PP-1B) (EC 3.1.3.16)	Ppp1cb	177	57	4	4
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
P03966	N-myc proto-oncogene protein	Mycn (Nmyc) (Nmyc1)	65	46	18	17
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q63994	Myeloid cell surface antigen CD33 (Sialic acid-binding Ig-like lectin 3) (Siglec-3) (CD antigen CD33)	Cd33 (Siglec3)	34	34	7	6
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14

	Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
	Q9QYB1	Chloride intracellular channel protein 4 (mc3s5/mtCLIC)	Clic4	28	33	4	3
	P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
	P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
	Q80TP3	E3 ubiquitin-protein ligase UBR5 (EC 6.3.2.-) (E3 ubiquitin-protein ligase, HECT domain-containing 1) (Hyperplastic discs protein homolog)	Ubr5 (Edd) (Edd1) (Kiaa0896)	27	17	43	29
	P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
	P40142	Transketolase (TK) (EC 2.2.1.1) (P68)	Tkt	562	250	117	75
	Q8BGR5	Protein FAM53B	Fam53b	47	41	19	12
	Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
	P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
Other metabolism	Q9CXW3	Calcyclin-binding protein (CacyBP) (Siah-interacting protein)	Cacybp (Sip)	57	39	7	13
	P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22
	P56716	Oxygen-regulated protein 1 (Retinitis pigmentosa RP1 protein homolog)	Rp1 (Orp1) (Rp1h)	31	49	58	104

Q8K2P1	Uncharacterized protein C9orf150 homolog	D4Bwg0951e	21	32	51	91
Q64674	Spermidine synthase (SPDSY) (EC 2.5.1.16) (Putrescine aminopropyltransferase)	Srm	55	29	4	7
O35381	Acidic leucine-rich nuclear phosphoprotein 32 family member A (Potent heat-stable protein phosphatase 2A inhibitor I1PP2A) (Acidic nuclear phosphoprotein pp32) (Leucine-rich acidic nuclear protein)	Anp32a (Anp32) (Lanp)	36	112	8	14
Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
Q8R1S0	Ubiquinone biosynthesis monooxygenase COQ6 (EC 1.14.13.-)	Coq6	42	92	10	17
Q8BFQ9	Kelch domain-containing protein 5	Klhdc5 (Kiaa1340)	30	22	10	17
Q9ERK4	Exportin-2 (Exp2) (Importin-alpha re-exporter) (Chromosome segregation 1-like protein)	Cse1l (Xpo2)	42	153	26	44
Q8CGP2	Histone H2B type 1-P	Hist1h2bp	436	999	46	77
P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78

Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
Q8VDM4	26S proteasome non-ATPase regulatory subunit 2 (26S proteasome regulatory subunit RPN1) (26S proteasome regulatory subunit S2) (26S proteasome subunit p97)	Psmc2	113	157	18	29
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
Q9D1H6	Protein HRPAP20 (Hormone-regulated proliferation-associated protein of 20 kDa homolog)	Hrpap20	70	38	6	9
Q8BUG5	Calcyphosin-2 (Calcyphosine-2)	Caps2	17	28	8	12
P50247	Adenosylhomocysteinase (AdoHcyase) (EC 3.3.1.1) (S-adenosyl-L-homocysteine hydrolase) (Liver copper-binding protein) (CUBP)	Ahcy	90	106	10	15
Q99K85	Phosphoserine aminotransferase (PSAT) (EC 2.6.1.52) (Phosphohydroxythreonine aminotransferase) (Endometrial progesterone-induced protein) (EPIP)	Psat1 (Psa) (Psat)	162	541	16	24
Q9QZ39	Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 1 (EC 2.4.99.3) (GalNAc alpha-2,6-sialyltransferase I) (ST6GalNAc I) (Sialyltransferase 7A)	St6galnac1 (Siat7a)	27	18	11	16
P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
P68510	14-3-3 protein eta	Ywhah	707	962	58	80
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84

P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
Q61937	Nucleophosmin (NPM) (Nucleolar phosphoprotein B23) (Numatrin) (Nucleolar protein NO38)	Npm1	92	66	11	15
Q99M73	Keratin, type II cuticular Hb4 (Type II hair keratin Hb4) (Keratin-84) (K84) (65 kDa type II keratin)	Krt84 (Krt2-16) (Krtthb4)	36	74	14	19
Q8K298	Actin-binding protein anillin	Anln	16	28	17	23
Q6P8J2	Diamine acetyltransferase 2 (EC 2.3.1.57) (Spermidine/spermine N(1)-acetyltransferase 2) (Polyamine N-acetyltransferase 2)	Sat2 (Ssat2)	33	23	6	8
P70296	Phosphatidylethanolamine-binding protein 1 (PEBP-1) (HCNPPp) [Cleaved into: Hippocampal cholinergic neurostimulating peptide (HCNP)]	Pebp1 (Pbp) (Pebp)	532	730	25	33
P70168	Importin subunit beta-1 (Karyopherin subunit beta-1) (Nuclear factor P97) (Pore targeting complex 97 kDa subunit) (PTAC97) (SCG)	Kpnb1 (Impnb)	48	17	13	17
P20152	Vimentin	Vim	1749	2397	125	157
P17183	Gamma-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Neural enolase) (Neuron-specific enolase) (NSE) (Enolase 2)	Eno2 (Eno-2)	228	181	12	15
P31001	Desmin	Des	169	224	25	31
Q811J3	Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176

P59270	Galactosylgalactosylxylosylprotein 3-beta-glucuronosyltransferase 2 (EC 2.4.1.135) (Beta-1,3-glucuronyltransferase 2) (UDP-glucuronosyltransferase-S) (Glucuronosyltransferase-S) (GlcAT-S) (GlcAT-D)	B3gat2 (Glcats)	29	16	9	11
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P05784	Keratin, type I cytoskeletal 18 (Cytokeratin-18) (CK-18) (Keratin-18) (K18) (Cytokeratin endo B) (Keratin D)	Krt18 (Kerd) (Krt1-18)	37	46	10	12
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q61122	NGFI-A-binding protein 1 (EGR-1-binding protein 1)	Nab1	30	25	6	7
Q80XA6	RalBP1-associated Eps domain-containing protein 2 (RalBP1-interacting protein 2) (Partner of RalBP1)	Reps2 (Pob1)	33	31	6	7
Q9WUM4	Coronin-1C (Coronin-3)	Coro1c	42	28	18	21
Q6GSS7	Histone H2A type 2-A (H2A.2) (H2a-614) (H2a-615)	Hist2h2aa1; Hist2h2aa2	505	763	18	21
Q5SPW0	Vacuolar protein sorting-associated protein 54 (Tumor antigen SLP-8p homolog)	Vps54	36	28	13	15
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16

P97820	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
Q64467	Glyceraldehyde-3-phosphate dehydrogenase, testis-specific (EC 1.2.1.12) (Spermatogenic glyceraldehyde-3-phosphate dehydrogenase) (Spermatogenic cell-specific glyceraldehyde 3-phosphate dehydrogenase 2) (GAPDH-2)	Gapdhs (Gapds) (Gapds)	75	781	26	29
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
Q9R0Q7	Prostaglandin E synthase 3 (EC 5.3.99.3) (Cytosolic prostaglandin E2 synthase) (cPGES) (Telomerase-binding protein p23) (Hsp90 co-chaperone) (Progesterone receptor complex p23) (Sid 3177)	Ptges3 (Sid3177) (Tebp)	124	239	10	11
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q9QUI0	Transforming protein RhoA	Rhoa (Arha) (Arha2)	117	231	11	12
Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50

P70298	Homeobox protein cut-like 2 (Cut-like 2) (Homeobox protein Cux-2)	Cux2 (Cutl2)	30	22	12	13
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
P62242	40S ribosomal protein S8	Rps8	479	372	18	19
P26350	Prothymosin alpha [Cleaved into: Thymosin alpha]	Ptma	34	120	2	2
Q8VC28	Aldo-keto reductase family 1 member C13 (EC 1.1.1.-)	Akr1c13	32	23	8	8
Q7TNP2	Serine/threonine-protein phosphatase 2A 65 kDa regulatory subunit A beta isoform (PP2A, subunit A, PR65-beta isoform) (PP2A, subunit A, R1-beta isoform)	Ppp2r1b	26	22	9	9
Q61781	Keratin, type I cytoskeletal 14 (Cytokeratin-14) (CK-14) (Keratin-14) (K14)	Krt14 (Krt1-14)	38	37	10	10
Q8BSS9	Liprin-alpha-2 (Protein tyrosine phosphatase receptor type f polypeptide-interacting protein alpha-2) (PTPRF-interacting protein alpha-2)	Ppfia2	36	21	22	22
Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
P68254	14-3-3 protein theta (14-3-3 protein tau)	Ywhaq	1104	994	92	91
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55



P16406	Glutamyl aminopeptidase (EC 3.4.11.7) (EAP) (Aminopeptidase A) (APA) (BP-1/6C3 antigen) (CD antigen CD249)	Enpep	98	90	48	46
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q68FD5	Clathrin heavy chain 1	Cltc	944	884	88	78
Q9DBJ1	Phosphoglycerate mutase 1 (EC 5.4.2.1) (EC 5.4.2.4) (EC 3.1.3.13) (Phosphoglycerate mutase isozyme B) (PGAM-B) (BPG-dependent PGAM 1)	Pgam1	612	746	35	31
Q8CJ27	Abnormal spindle-like microcephaly-associated protein homolog (Spindle and hydroxyurea checkpoint abnormal protein) (Calmodulin-binding protein Sha1) (Calmodulin binding protein 1)	Aspm (Calmbp1) (Sha1)	35	23	55	48
Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPIase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11

Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
Q80TB8	Probable oxidoreductase KIAA1576 (EC 1.-.-.-)	Kiaa1576	25	14	25	21
P46664	Adenylosuccinate synthetase isozyme 2 (AMPSase 2) (AdSS 2) (EC 6.3.4.4) (Adenylosuccinate synthetase, non-muscle isozyme) (Adenylosuccinate synthetase, acidic isozyme) (IMP--aspartate ligase 2)	Adss (Adss2)	36	66	12	10
Q05816	Fatty acid-binding protein, epidermal (E-FABP) (Fatty acid-binding protein 5) (Psoriasis-associated fatty acid-binding protein homolog) (PA-FABP) (Keratinocyte lipid-binding protein)	Fabp5 (Fabpe) (Klbp) (Mal1)	331	206	18	15
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21

Q9Z1M8	Protein Red (Protein RER) (IK factor) (Cytokine IK)	Ik (Red) (Rer)	29	23	10	8
P62852	40S ribosomal protein S25	Rps25	101	100	15	12
Q99MD9	Nuclear autoantigenic sperm protein (NASP)	Nasp	365	293	34	27
Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q6A078	Centrosomal protein of 290 kDa (Cep290) (Nephrocystin-6)	Cep290 (Kiaa0373) (Nphp6)	32	57	85	66
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
P47856	Glucosamine--fructose-6-phosphate aminotransferase [isomerizing] 1 (EC 2.6.1.16) (Glutamine:fructose 6 phosphate amidotransferase 1) (GFAT 1) (GFAT1) (D-fructose-6-phosphate amidotransferase 1) (Hexosephosphate aminotransferase 1)	Gfpt1 (Gfpt)	17	29	17	13
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
P70670	Nascent polypeptide-associated complex subunit alpha, muscle-specific form (Alpha-NAC, muscle-specific form)	Naca (Gm1878)	22	130	29	22
P58043	Sestrin-2	Sesn2 (Sest2)	21	34	4	3

Q9DBG5	Mannose-6-phosphate receptor-binding protein 1 (Cargo selection protein TIP47)	M6prbp1 (Tip47)	25	22	8	6
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
Q80TS7	Dendrin	Ddn (Gm748) (Kiaa0749)	31	24	11	8
Q91Z67	SLIT-ROBO Rho GTPase-activating protein 2 (srGAP2) (Formin-binding protein 2) (Formin-binding protein 27) (FBP-27)	Srgap2 (Fbp27) (Fnbp2)	77	48	11	8
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
Q64237	Dopamine beta-hydroxylase (EC 1.14.17.1) (Dopamine beta-monooxygenase) [Cleaved into: Soluble dopamine beta-hydroxylase]	Dbh	44	23	7	5
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
P17751	Triosephosphate isomerase (TIM) (EC 5.3.1.1) (Triose-phosphate isomerase)	Tpi1 (Tpi)	706	519	35	25
Q7TQI3	Ubiquitin thioesterase OTUB1 (EC 3.1.2.-) (Otubain-1) (OTU domain-containing ubiquitin aldehyde-binding protein 1) (Ubiquitin-specific-processing protease OTUB1) (Deubiquitinating enzyme OTUB1)	Otub1	152	109	10	7

Q6ZQ12	Ninein-like protein	Nlp (Kiaa0980)	15	34	23	16
P61979	Heterogeneous nuclear ribonucleoprotein K (hnRNP K)	Hnrnpk (Hnrpk)	225	46	18	12
O88444	Adenylate cyclase type 1 (EC 4.6.1.1) (Adenylate cyclase type I) (ATP pyrophosphate-lyase 1) (Adenylyl cyclase 1) (Ca(2+)/calmodulin-activated adenylyl cyclase)	Adcy1	33	31	26	17
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
Q7TMM9	Tubulin beta-2A chain	Tubb2a (Tubb2)	1422	775	83	52
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (UbpY)	29	23	24	15
P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
O88291	Zinc finger protein 326 (Zinc finger protein-associated with nuclear matrix of 75 kDa)	Znf326 (Zan75) (Zfp326)	41	55	5	3
Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
Q9QWK5	Baculoviral IAP repeat-containing protein 1a (Neuronal apoptosis inhibitory protein 1)	Naip1 (Birc1a) (Naip)	21	28	20	12

	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
	P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
	Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
	P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
	Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
	Q9D8N3	Transmembrane protein 86A	Tmem86a	38	27	30	17
	P97461	40S ribosomal protein S5	Rps5	89	33	32	18
	Q64105	Sepiapterin reductase (SPR) (EC 1.1.1.153)	Spr	43	27	9	5
	P11103	Poly [ADP-ribose] polymerase 1 (PARP-1) (EC 2.4.2.30) (ADPRT) (NAD(+) ADP-ribosyltransferase 1) (Poly[ADP-ribose] synthetase 1) (msPARP)	Parp1 (Adprp) (Adprt) (Adprt1)	21	26	17	9
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
	Q9ERD7	Tubulin beta-3 chain	Tubb3	780	383	52	27
Protein biosynthesis	P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22
	Q99N50	Synaptotagmin-like protein 2 (Exophilin-4)	Syt12 (Slp2)	26	77	10	18
	P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
	P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
	Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
	P62082	40S ribosomal protein S7	Rps7	104	126	9	14
	O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
	Q8BUG5	Calcyphosin-2 (Calcyphosine-2)	Caps2	17	28	8	12
	P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13

O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
Q6P8J2	Diamine acetyltransferase 2 (EC 2.3.1.57) (Spermidine/spermine N(1)-acetyltransferase 2) (Polyamine N-acetyltransferase 2)	Sat2 (Ssat2)	33	23	6	8
O70456	14-3-3 protein sigma (Stratifin)	Sfn (Mkrn3)	573	666	56	71
Q63ZW7	InaD-like protein (Inadl protein) (Pals1-associated tight junction protein) (Protein associated to tight junctions) (Channel-interacting PDZ domain-containing protein)	Inadl (Cipp) (Patj)	18	30	12	15
Q8R2X8	Golgin-45 (Basic leucine zipper nuclear factor 1)	Blzf1	28	22	13	16
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
P51880	Fatty acid-binding protein, brain (B-FABP) (Fatty acid-binding protein 7) (Brain lipid-binding protein) (BLBP)	Fabp7 (Blbp)	933	856	31	38
Q8VII8	Mineralocorticoid receptor (MR) (Nuclear receptor subfamily 3 group C member 2)	Nr3c2 (Mlr)	28	22	18	22
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25

Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
Q80XA6	RalBP1-associated Eps domain-containing protein 2 (RalBP1-interacting protein 2) (Partner of RalBP1)	Reps2 (Pob1)	33	31	6	7
Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16
P97820	Mitogen-activated protein kinase kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
P08113	Endoplasmic reticulum chaperone protein (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra-1) (Tra1)	221	298	25	27
P16858	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) (EC 1.2.1.12)	Gapdh (Gapd)	1514	1781	84	89
P62242	40S ribosomal protein S8	Rps8	479	372	18	19
P62281	40S ribosomal protein S11	Rps11	166	132	27	28



Q9DB77	Cytochrome b-c1 complex subunit 2, mitochondrial (Ubiquinol-cytochrome-c reductase complex core protein 2) (Core protein II) (Complex III subunit 2)	Uqcrc2	29	20	13	13
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
Q9QYX7	Protein piccolo (Aczonin) (Multidomain presynaptic cytomatrix protein) (Brain-derived HLMN protein)	Pclo (Acz)	101	117	114	114
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (CsmA) (Eif3) (Eif3s10)	199	166	58	56
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
P30275	Creatine kinase, ubiquitous mitochondrial (EC 2.7.3.2) (U-MtCK) (Acidic-type mitochondrial creatine kinase) (Mia-CK)	Ckmt1	205	121	32	30
Q8BTI8	Serine/arginine repetitive matrix protein 2	Srrm2 (Kiaa0324)	78	70	92	86
Q99PF4	Cadherin-23 (Otocadherin)	Cdh23	29	32	29	27
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51

Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q68FD5	Clathrin heavy chain 1	Cltc	944	884	88	78
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
O54749	Cytochrome P450 2J5 (EC 1.14.14.1) (CYP11J5) (Arachidonic acid epoxygenase)	Cyp2j5	29	34	7	6
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPIase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
Q80TB8	Probable oxidoreductase KIAA1576 (EC 1.-.-.-)	Kiaa1576	25	14	25	21
Q9ES17	Interleukin-21 (IL-21)	Il21	22	25	6	5
P46664	Adenylosuccinate synthetase isozyme 2 (AMPSase 2) (AdSS 2) (EC 6.3.4.4) (Adenylosuccinate synthetase, non-muscle isozyme) (Adenylosuccinate synthetase, acidic isozyme) (IMP--aspartate ligase 2)	Adss (Adss2)	36	66	12	10
Q99PP7	E3 ubiquitin-protein ligase TRIM33 (EC 6.3.2.-) (Tripartite motif-containing protein 33) (Transcription intermediary factor 1-gamma) (TIF1-gamma) (Ectodermin homolog)	Trim33 (Kiaa1113)	33	25	12	10

Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
P19096	Fatty acid synthase (EC 2.3.1.85) [Includes: [Acyl-carrier-protein] S-acetyltransferase (EC 2.3.1.38); [Acyl-carrier-protein] S-malonyltransferase (EC 2.3.1.39); 3-oxoacyl-[acyl-carrier-protein] synthase (EC 2.3.1.41); 3-oxoacyl-[acyl-carrier-protein] reductase (EC 1.1.1.100); 3-hydroxypalmitoyl-[acyl-carrier-protein] dehydratase (EC 4.2.1.61); Enoyl-[acyl-carrier-protein] reductase (EC 1.3.1.10); Oleoyl [acyl-carrier-protein] hydrolase (EC 3.1.2.14)]	Fasn	1869	1524	163	135
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
P62852	40S ribosomal protein S25	Rps25	101	100	15	12
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
P63325	40S ribosomal protein S10	Rps10	468	168	42	33
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
P97434	Myosin phosphatase Rho-interacting protein (Rho-interacting protein 3) (RIP3) (p116Rip)	Mrip (Kiaa0864) (Mrip) (Rhoip3)	35	23	25	19
P70670	Nascent polypeptide-associated complex subunit alpha, muscle-specific form (Alpha-NAC, muscle-specific form)	Naca (Gm1878)	22	130	29	22
Q9QYB1	Chloride intracellular channel protein 4 (mc3s5/mtCLIC)	Clic4	28	33	4	3

Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208
Q8CDN8	Coiled-coil domain-containing protein 38	Ccdc38	45	95	15	11
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
P40142	Transketolase (TK) (EC 2.2.1.1) (P68)	Tkt	562	250	117	75
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/Pi cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
O35551	Rab GTPase-binding effector protein 1 (Rabaptin-5) (Rabaptin-5alpha)	Rabep1 (Rab5ep) (Rabpt5) (Rabpt5a)	33	26	26	16

	P62301	40S ribosomal protein S13	Rps13	77	100	23	14
	O35344	Importin subunit alpha-3 (Karyopherin subunit alpha-3) (Importin alpha Q2) (Qip2)	Kpna3 (Qip2)	24	28	10	6
	Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
	Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
	P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
	P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
	P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
	Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
	P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
	Q8K2A7	Integrator complex subunit 10 (Int10)	Ints10	32	47	21	12
	P97461	40S ribosomal protein S5	Rps5	89	33	32	18
	P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
	O35664	Interferon-alpha/beta receptor beta chain (Interferon alpha/beta receptor 2) (IFN-alpha-REC) (Type I interferon receptor) (IFN-R)	Ifnar2	37	21	11	6
	Q9WUJ8	Origin recognition complex subunit 6	Orc6l (Orc6)	59	37	13	7
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
Ion transport	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38

O88705	Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel 3 (Hyperpolarization-activated cation channel 3) (HAC-3)	Hcn3 (Hac3)	75	67	8	15
P63143	Voltage-gated potassium channel subunit beta-1 (K(+)-channel subunit beta-1) (Kv-beta-1)	Kcnab1 (Kvb1)	29	76	12	20
Q62522	Zona pellucida-binding protein 1 (Sp38)	Zpbp (Zbp1)	38	42	8	12
Q9QZ39	Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 1 (EC 2.4.99.3) (GalNAc alpha-2,6-sialyltransferase I) (ST6GalNAc I) (Sialyltransferase 7A)	St6galnac1 (Siat7a)	27	18	11	16
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
P20152	Vimentin	Vim	1749	2397	125	157
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
Q9WUM4	Coronin-1C (Coronin-3)	Coro1c	42	28	18	21
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
Q9CQV8	14-3-3 protein beta/alpha (Protein kinase C inhibitor protein 1) (KCIP-1)	Ywhab	983	971	71	80

P40124	Adenylyl cyclase-associated protein 1 (CAP 1)	Cap1 (Cap)	22	43	8	9
Q9WUU9	80 kDa MCM3-associated protein (Protein GANP)	Mcm3ap (Ganp) (Map80)	48	32	17	19
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29
Q62446	FK506-binding protein 3 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (25 kDa FKBP) (FKBP-25) (Rapamycin-selective 25 kDa immunophilin)	Fkbp3 (Fkbp25)	31	31	10	11
Q9ET77	Junctophilin-3 (Junctophilin type 3) (JP-3)	Jph3 (Jp3)	37	31	20	22
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
P70298	Homeobox protein cut-like 2 (Cut-like 2) (Homeobox protein Cux-2)	Cux2 (Cutl2)	30	22	12	13
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15

O35973	Period circadian protein homolog 1 (Circadian clock protein PERIOD 1) (Circadian pacemaker protein Rigui) (mPER1)	Per1 (Per) (Rigui)	29	21	27	28
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPlase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q99LX0	Protein DJ-1 (Parkinson disease protein 7 homolog)	Park7	53	178	9	9
Q9D289	Trafficking protein particle complex subunit 6B	Trappc6b	62	69	9	9
Q9WV80	Sorting nexin-1	Snx1	23	49	11	11
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q8BSS9	Liprin-alpha-2 (Protein tyrosine phosphatase receptor type f polypeptide-interacting protein alpha-2) (PTPRF-interacting protein alpha-2)	Ppfia2	36	21	22	22
Q6P8J7	Creatine kinase, sarcomeric mitochondrial (EC 2.7.3.2) (S-MtCK)	Ckmt2	50	66	26	26
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
Q9QXL1	Kinesin-like protein KIF21B (Kinesin-like protein KIF6)	Kif21b (Kif6)	22	45	26	25
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
P30275	Creatine kinase, ubiquitous mitochondrial (EC 2.7.3.2) (U-MtCK) (Acidic-type mitochondrial creatine kinase) (Mia-CK)	Ckmt1	205	121	32	30



Q04447	Creatine kinase B-type (EC 2.7.3.2) (Creatine kinase B chain) (B-CK)	Ckb (Ckbb)	9079	7277	434	406
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
Q9R0L6	Pericentriolar material 1 protein (PCM-1) (mPCM-1)	Pcm1	24	30	19	16
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21

P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
P11531	Dystrophin	Dmd	25	16	66	55
Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
P54923	[Protein ADP-ribosylarginine] hydrolase (ADP-ribosylarginine hydrolase) (EC 3.2.2.19) (ADP-ribose-L-arginine cleaving enzyme)	Adprh (Arh1)	20	41	15	12
Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
Q8VHK5	Membrane protein MLC1	Mlc1	35	25	22	17
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
P97434	Myosin phosphatase Rho-interacting protein (Rho-interacting protein 3) (RIP3) (p116Rip)	Mrip (Kiaa0864) (Mrip) (Rhoip3)	35	23	25	19

P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
Q4VGL6	Roquin (RING finger and C3H zinc finger protein 1) (Protein Sanroque)	Rc3h1 (Gm551) (Kiaa2025)	54	54	23	17
P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
Q91Z67	SLIT-ROBO Rho GTPase-activating protein 2 (srGAP2) (Formin-binding protein 2) (Formin-binding protein 27) (FBP-27)	Srgap2 (Fbp27) (Fnbp2)	77	48	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptprn (Ptp35)	30	18	14	10
Q8CD91	SPARC-related modular calcium-binding protein 2 (Secreted modular calcium-binding protein 2) (SMOC-2)	Smoc2	29	16	16	11
P61979	Heterogeneous nuclear ribonucleoprotein K (hnRNP K)	Hnrnpk (Hnrpk)	225	46	18	12
Q9Z0T6	Polycystic kidney disease and receptor for egg jelly-related protein (PKD and REJ homolog)	Pkdrej	32	32	18	12
P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26

	Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
	O35551	Rab GTPase-binding effector protein 1 (Rabaptin-5) (Rabaptin-5alpha)	Rabep1 (Rab5ep) (Rabpt5) (Rabpt5a)	33	26	26	16
	P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
	P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
	Q9WTU3	Sodium channel protein type 8 subunit alpha (Sodium channel protein type VIII subunit alpha) (Voltage-gated sodium channel subunit alpha Nav1.6)	Scn8a (Nbna1)	28	19	20	11
	O35664	Interferon-alpha/beta receptor beta chain (Interferon alpha/beta receptor 2) (IFN-alpha-REC) (Type I interferon receptor) (IFN-R)	Ifnar2	37	21	11	6
	Q9WUJ8	Origin recognition complex subunit 6	Orc6l (Orc6)	59	37	13	7
Induction of apoptosis	P56198	Cell death activator CIDE-3 (Cell death-inducing DFFA-like effector protein C) (Fat-specific protein FSP27)	Cidec (Fsp27)	51	39	8	14
	Q80X90	Filamin-B (FLN-B) (Beta-filamin) (Actin-binding like protein) (ABP-280-like protein)	Flnb	63	279	32	41
	Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52

	Q61771	Kinesin-like protein KIF3B (Microtubule plus end-directed kinesin motor 3B)	Kif3b	30	51	16	19
	Q6P4S8	Integrator complex subunit 1 (Int1)	Ints1	25	33	26	27
	Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
	Q11011	Puromycin-sensitive aminopeptidase (PSA) (EC 3.4.11.-)	Npepps (Psa)	71	141	30	26
	P11881	Inositol 1,4,5-trisphosphate receptor type 1 (Type 1 inositol 1,4,5-trisphosphate receptor) (Type 1 InsP3 receptor) (IP3 receptor isoform 1) (InsP3R1) (Inositol 1,4,5-trisphosphate-binding protein P400) (Purkinje cell protein 1) (Protein PCD-6)	Itpr1 (Insp3r) (Pcd6) (Pcp1)	37	42	48	41
	Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100
	Q8BX70	Vacuolar protein sorting-associated protein 13C	Vps13c (Kiaa3021)	25	17	53	38
	P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
	Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
Protein folding	P17742	Peptidyl-prolyl cis-trans isomerase A (PPIase A) (Rotamase A) (EC 5.2.1.8) (Cyclophilin A) (Cyclosporin A-binding protein) (SP18)	Ppia	855	1549	38	66

Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
Q8BFQ9	Kelch domain-containing protein 5	Klhdc5 (Kiaa1340)	30	22	10	17
Q3UDW8	Heparan-alpha-glucosaminide N-acetyltransferase (EC 2.3.1.78) (Transmembrane protein 76)	Hgsnat (D8Ert354e) (Tmem76)	34	22	6	9
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
Q80X50	Ubiquitin-associated protein 2-like	Ubap2l	63	54	4	5
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
P54103	DnaJ homolog subfamily C member 2 (Zuotin-related factor 1) (Mouse Id associate 1) (MIDA1)	Dnajc2 (Mida1) (Zrf1)	23	27	11	13
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29
Q91ZT5	FYVE, RhoGEF and PH domain-containing protein 4 (Actin filament-binding protein frabin) (FGD1-related F-actin-binding protein)	Fgd4	29	19	10	11
Q62446	FK506-binding protein 3 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (25 kDa FKBP) (FKBP-25) (Rapamycin-selective 25 kDa immunophilin)	Fkbp3 (Fkbp25)	31	31	10	11

P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P54869	Hydroxymethylglutaryl-CoA synthase, mitochondrial (HMG-CoA synthase) (EC 2.3.3.10) (3-hydroxy-3-methylglutaryl coenzyme A synthase)	Hmgcs2	26	23	18	17
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
O54749	Cytochrome P450 2J5 (EC 1.14.14.1) (CYPIIJ5) (Arachidonic acid epoxygenase)	Cyp2j5	29	34	7	6
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208

	Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
	Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
	P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
Cell structure and motility	Q8BTM8	Filamin-A (Alpha-filamin) (Filamin-1) (Endothelial actin-binding protein) (Actin-binding protein 280) (ABP-280) (Non-muscle filamin)	Flna (Fln) (Fln1)	254	1031	46	86
	P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22
	Q9CQE1	Protein NipSnap homolog 3A (NipSnap3A) (NipSnap-related protein)	Nipsnap3a (Nipsnap3b)	15	25	16	29
	Q61414	Keratin, type I cytoskeletal 15 (Cytokeratin-15) (CK-15) (Keratin-15) (K15)	Krt15 (Krt1-15)	37	46	4	7
	P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
	P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
	Q8CCP0	Serologically defined colon cancer antigen 1 homolog	Sdccag1	37	31	21	33



P14824	Annexin A6 (Annexin-6) (Annexin VI) (Lipocortin VI) (p68) (p70) (Protein III) (Chromobindin-20) (67 kDa calelectrin) (Calphobindin-II) (CPB-II)	Anxa6 (Anx6)	168	591	33	51
P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
P12813	Nuclear receptor subfamily 4 group A member 1 (Orphan nuclear receptor HMR) (Nuclear hormone receptor NUR/77) (N10 nuclear protein)	Nr4a1 (Gfrp) (Hmr) (N10) (Nur77)	61	31	7	10
Q8VHX6	Filamin-C (Gamma-filamin) (Filamin-2) (FLN-C) (Actin-binding-like protein) (ABP-L) (ABP-280-like protein)	Finc (Abpl) (Fln2)	33	115	18	25
Q61937	Nucleophosmin (NPM) (Nucleolar phosphoprotein B23) (Numatrin) (Nucleolar protein NO38)	Npm1	92	66	11	15
Q61595	Kinectin	Ktn1	15	50	43	56
P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
Q80X90	Filamin-B (FLN-B) (Beta-filamin) (Actin-binding-like protein) (ABP-280-like protein)	Flnb	63	279	32	41
Q91YK0	Leucine-rich repeat-containing protein 49 (Tubulin polyglutamylase complex subunit 4) (PGs4) (p79)	Lrrc49	27	27	18	23
Q63ZW7	InaD-like protein (Inadl protein) (Pals1-associated tight junction protein) (Protein associated to tight junctions) (Channel-interacting PDZ domain-containing protein)	Inadl (Cipp) (Patj)	18	30	12	15
Q3UKC1	Tax1-binding protein 1 homolog	Tax1bp1	22	27	24	30
Q80Z38	SH3 and multiple ankyrin repeat domains protein 2 (Shank2) (Cortactin-binding protein 1) (CortBP1)	Shank2 (Cortbp1) (Kiaa1022)	41	57	21	26
P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6

P05784	Keratin, type I cytoskeletal 18 (Cytokeratin-18) (CK-18) (Keratin-18) (K18) (Cytokeratin endo B) (Keratin D)	Krt18 (Kerd) (Krt1-18)	37	46	10	12
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36
Q9JKF1	Ras GTPase-activating-like protein IQGAP1	Iqgap1	19	81	21	25
Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8
Q9Z2K1	Keratin, type I cytoskeletal 16 (Cytokeratin-16) (CK-16) (Keratin-16) (K16)	Krt16 (Krt1-16)	37	37	7	8
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
P19001	Keratin, type I cytoskeletal 19 (Cytokeratin-19) (CK-19) (Keratin-19) (K19)	Krt19 (Krt1-19)	37	46	11	12
Q9QUI0	Transforming protein RhoA	Rhoa (Arha) (Arha2)	117	231	11	12
P27546	Microtubule-associated protein 4 (MAP-4)	Map4 (Mtap4)	94	41	33	36
Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
Q8CGM2	Retinitis pigmentosa 1-like 1 protein (Retinitis pigmentosa 1-like protein 1)	Rp111 (Rp1hl1)	30	21	58	60
P26039	Talin-1	Tln1 (Tln)	123	161	41	42
Q8R0W0	Epiplakin	Eppk1	48	25	49	50
Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
Q6P5F9	Exportin-1 (Exp1) (Chromosome region maintenance 1 protein homolog)	Xpo1 (Crm1)	19	43	9	9
Q61781	Keratin, type I cytoskeletal 14 (Cytokeratin-14) (CK-14) (Keratin-14) (K14)	Krt14 (Krt1-14)	38	37	10	10

Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P45591	Cofilin-2 (Cofilin, muscle isoform)	Cfl2	528	431	39	38
Q9QXL1	Kinesin-like protein KIF21B (Kinesin-like protein KIF6)	Kif21b (Kif6)	22	45	26	25
Q61768	Kinesin-1 heavy chain (Ubiquitous kinesin heavy chain) (UKHC) (Conventional kinesin heavy chain)	Kif5b (Khcs) (Kns1)	102	303	43	41
P08730	Keratin, type I cytoskeletal 13 (Cytokeratin-13) (CK-13) (Keratin-13) (K13) (47 kDa cyto keratin)	Krt13 (Krt1-13)	37	46	13	12
O35206	Collagen alpha-1(XV) chain [Cleaved into: Endostatin (Endostatin-XV)]	Col15a1	31	37	12	11
P03995	Glial fibrillary acidic protein (GFAP)	Gfap	63	90	22	20
P43406	Integrin alpha-V (Vitronectin receptor subunit alpha) (CD antigen CD51) [Cleaved into: Integrin alpha-V heavy chain; Integrin alpha-V light chain]	Itgav	23	35	19	17
P02535	Keratin, type I cytoskeletal 10 (Cytokeratin-10) (CK-10) (Keratin-10) (K10) (56 kDa cyto keratin) (Keratin, type I cytoskeletal 59 kDa)	Krt10 (Krt1-10)	252	152	19	17
Q922G7	Tektin-2 (Testicular tektin) (Tektin-t)	Tekt2	25	26	9	8
P26041	Moesin (Membrane-organizing extension spike protein)	Msn	136	127	44	39
P33173	Kinesin-like protein KIF1A (Axonal transporter of synaptic vesicles)	Kif1a (Atsv) (Kif1)	45	108	25	22
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7

Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q9CYF5	Williams-Beuren syndrome chromosomal region 16 protein homolog	Wbscr16	38	28	7	6
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
Q9ES17	Interleukin-21 (IL-21)	Il21	22	25	6	5
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
P19096	Fatty acid synthase (EC 2.3.1.85) [Includes: [Acyl-carrier-protein] S-acetyltransferase (EC 2.3.1.38); [Acyl-carrier-protein] S-malonyltransferase (EC 2.3.1.39); 3-oxoacyl-[acyl-carrier-protein] synthase (EC 2.3.1.41); 3-oxoacyl-[acyl-carrier-protein] reductase (EC 1.1.1.100); 3-hydroxypalmitoyl-[acyl-carrier-protein] dehydratase (EC 4.2.1.61); Enoyl-[acyl-carrier-protein] reductase (EC 1.3.1.10); Oleoyl [acyl-carrier-protein] hydrolase (EC 3.1.2.14)]	Fasn	1869	1524	163	135
O55103	Periaxin	Prx	19	30	28	23
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11

Q80W68	Kin of IRRE-like protein 1 (Kin of irregular chiasm-like protein 1) (Nephrin-like protein 1)	Kirrel (Kirrel1) (Neph1)	32	38	22	17
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
P39447	Tight junction protein ZO-1 (Zonula occludens protein 1) (Zona occludens protein 1) (Tight junction protein 1)	Tjp1 (Zo1)	36	15	21	16
P97434	Myosin phosphatase Rho-interacting protein (Rho-interacting protein 3) (RIP3) (p116Rip)	Mrip (Kiaa0864) (Mrip) (Rhoip3)	35	23	25	19
Q3TXS7	26S proteasome non-ATPase regulatory subunit 1 (26S proteasome regulatory subunit RPN2) (26S proteasome regulatory subunit S1)	Psm1	100	89	16	12
P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptprn (Ptp35)	30	18	14	10
Q03172	Zinc finger protein 40 (Transcription factor alphaA-CRYBP1) (Alpha A-crystallin-binding protein I) (Alpha A-CRYBP1)	Hivep1 (Cryabp1) (Znf40)	25	24	21	15
P08551	Neurofilament light polypeptide (NF-L) (Neurofilament triplet L protein) (68 kDa neurofilament protein)	Nefl (Nf68) (Nfl)	51	36	17	12
Q6ZQ12	Ninein-like protein	Nlp (Kiaa0980)	15	34	23	16
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q9CWF2	Tubulin beta-2B chain	Tubb2b	1435	825	86	59
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60

Q62168	Keratin, type I cuticular Ha2 (Hair keratin, type I Ha2) (Keratin-32) (K32)	Krt32 (Hka2) (Krt1-2) (Krtha2)	39	36	9	6
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
Q8K1N2	Pleckstrin homology-like domain family B member 2 (Protein LL5-beta)	Phldb2 (LI5b)	31	31	48	32
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
P40142	Transketolase (TK) (EC 2.2.1.1) (P68)	Tkt	562	250	117	75
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (UbpY)	29	23	24	15
Q9Z0P5	Twinfilin-2 (Twinfilin-1-like protein) (A6-related protein) (mA6RP)	Twf2 (Ptk9I)	29	32	10	6
Q9QWK5	Baculoviral IAP repeat-containing protein 1a (Neuronal apoptosis inhibitory protein 1)	Naip1 (Birc1a) (Naip)	21	28	20	12
P26040	Ezrin (p81) (Cytovillin) (Villin-2)	Ezr (Vil2)	127	106	27	16
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4

	P26043	Radixin (ESP10)	Rdx	127	106	23	13
	Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
Exocytosis	Q99N50	Synaptotagmin-like protein 2 (Exophilin-4)	Syt12 (Slp2)	26	77	10	18
	P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
	P14824	Annexin A6 (Annexin-6) (Annexin VI) (Lipocortin VI) (p68) (p70) (Protein III) (Chromobindin-20) (67 kDa calelectrin) (Calphobindin-II) (CPB-II)	Anxa6 (Anx6)	168	591	33	51
	Q7TN83	Synaptotagmin-16 (Synaptotagmin XIV-related protein) (Synaptotagmin 14-like protein)	Syt16 (Strep14) (Syt14l) (Syt14r)	20	38	6	9
	Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34
	P63101	14-3-3 protein zeta/delta (Protein kinase C inhibitor protein 1) (KCIP-1) (SEZ-2)	Ywhaz	1383	1947	96	120
	P31001	Desmin	Des	169	224	25	31
	O35618	Protein Mdm4 (p53-binding protein Mdm4) (Mdm2-like p53-binding protein) (Protein Mdmx) (Double minute 4 protein)	Mdm4 (Mdmx)	17	29	5	6
	P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
	P08113	Endoplasmic reticulum chaperone protein (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra-1) (Tra1)	221	298	25	27

	P70398	Probable ubiquitin carboxyl-terminal hydrolase FAF-X (EC 3.1.2.15) (Ubiquitin thioesterase FAF-X) (Ubiquitin-specific-processing protease FAF-X) (Deubiquitinating enzyme FAF-X) (Fat facets protein-related, X-linked) (Ubiquitin-specific protease 9, X chromosome) (Ubiquitin carboxyl-terminal hydrolase FAM) (Fat facets homolog)	Usp9x (FafI) (Fam)	42	28	57	61
	Q9JIF7	Coatomer subunit beta (Beta-coat protein) (Beta-COP)	Copb1 (Copb)	37	22	15	15
	Q8R4U7	Leucine zipper protein 1 (Leucine zipper motif-containing protein)	Luzp1 (Luzp)	31	32	22	20
	Q9QXA7	Tripartite motif-containing protein 44 (Protein DIPB) (Protein Mc7)	Trim44 (Dipb)	28	23	18	16
	Q921E2	Ras-related protein Rab-31	Rab31	18	29	7	6
	O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
	Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
	Q5XJY5	Coatomer subunit delta (Delta-coat protein) (Delta-COP) (Archain)	Arcn1 (Copd)	61	45	10	8
	Q6A078	Centrosomal protein of 290 kDa (Cep290) (Nephrocystin-6)	Cep290 (Kiaa0373) (Nphp6)	32	57	85	66
	Q8BHS8	Syntabulin (Syntaxin-1-binding protein) (Golgi-localized syntaphilin-related protein) (m-Golsyn)	Sybu (Golsyn) (Kiaa1472)	32	19	17	13
	Q3UXZ6	Protein FAM81A	Fam81a	22	27	13	8
	Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
Spermatogen	Q8BGQ1	Uncharacterized protein C14orf133 homolog		23	28	5	9



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Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
P03987	Ig gamma-3 chain C region		30	34	4	7
P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
Q8BFQ9	Kelch domain-containing protein 5	Klhdc5 (Kiaa1340)	30	22	10	17
P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78
P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
Q3UDW8	Heparan-alpha-glucosaminide N-acetyltransferase (EC 2.3.1.78) (Transmembrane protein 76)	Hgsnat (D8Ert354e) (Tmem76)	34	22	6	9
Q9D1H6	Protein HRPAP20 (Hormone-regulated proliferation-associated protein of 20 kDa homolog)	Hrpap20	70	38	6	9
Q62522	Zona pellucida-binding protein 1 (Sp38)	Zpbp (Zbbp1)	38	42	8	12
Q61937	Nucleophosmin (NPM) (Nucleolar phosphoprotein B23) (Numatrin) (Nucleolar protein NO38)	Npm1	92	66	11	15

P70168	Importin subunit beta-1 (Karyopherin subunit beta-1) (Nuclear factor P97) (Pore targeting complex 97 kDa subunit) (PTAC97) (SCG)	Kpnb1 (Impnb)	48	17	13	17
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
P51880	Fatty acid-binding protein, brain (B-FABP) (Fatty acid-binding protein 7) (Brain lipid-binding protein) (BLBP)	Fabp7 (Blbp)	933	856	31	38
Q9CZY3	Ubiquitin-conjugating enzyme E2 variant 1 (UEV-1) (CROC-1)	Ube2v1 (Croc1)	83	163	166	201
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
Q61771	Kinesin-like protein KIF3B (Microtubule plus end-directed kinesin motor 3B)	Kif3b	30	51	16	19
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q9Z2K1	Keratin, type I cytoskeletal 16 (Cytokeratin-16) (CK-16) (Keratin-16) (K16)	Krt16 (Krt1-16)	37	37	7	8
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29

P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
P62242	40S ribosomal protein S8	Rps8	479	372	18	19
O35973	Period circadian protein homolog 1 (Circadian clock protein PERIOD 1) (Circadian pacemaker protein Rigi) (mPER1)	Per1 (Per) (Rigi)	29	21	27	28
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
P03966	N-myc proto-oncogene protein	Mycn (Nmyc) (Nmyc1)	65	46	18	17
Q61147	Ceruloplasmin (EC 1.16.3.1) (Ferroxidase)	Cp	24	27	41	36
Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
O54749	Cytochrome P450 2J5 (EC 1.14.14.1) (CYPIIJ5) (Arachidonic acid epoxygenase)	Cyp2j5	29	34	7	6
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
P09405	Nucleolin (Protein C23)	Ncl (Nuc)	775	872	78	65
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19

Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
Q9QYB1	Chloride intracellular channel protein 4 (mc3s5/mtCLIC)	Clic4	28	33	4	3
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
P99024	Tubulin beta-5 chain	Tubb5	1377	976	88	60
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
Q924W6	Tripartite motif-containing protein 66 (Transcriptional intermediary factor 1 delta)	Trim66 (Tif1d)	28	18	23	15
Q8BGR5	Protein FAM53B	Fam53b	47	41	19	12
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
P26043	Radixin (ESP10)	Rdx	127	106	23	13
O35664	Interferon-alpha/beta receptor beta chain (Interferon alpha/beta receptor 2) (IFN-alpha-REC) (Type I interferon receptor) (IFN-R)	Ifnar2	37	21	11	6
Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8

	Q922F4	Tubulin beta-6 chain	Tubb6	583	382	40	21
Protein metabolism and modification	Q9CXW3	Calcyclin-binding protein (CacyBP) (Siah-interacting protein)	Cacybp (Sip)	57	39	7	13
	Q99N50	Synaptotagmin-like protein 2 (Exophilin-4)	Syt12 (Slp2)	26	77	10	18
	Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
	Q61414	Keratin, type I cytoskeletal 15 (Cytokeratin-15) (CK-15) (Keratin-15) (K15)	Krt15 (Krt1-15)	37	46	4	7
	P17742	Peptidyl-prolyl cis-trans isomerase A (PPIase A) (Rotamase A) (EC 5.2.1.8) (Cyclophilin A) (Cyclosporin A-binding protein) (SP18)	Ppia	855	1549	38	66
	Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
	Q9D009	Putative octanoyltransferase, mitochondrial (EC 2.3.1.181) (Octanoyl-[acyl-carrier-protein]-protein N-octanoyltransferase) (Lipoyl/octanoyl transferase) (Lipoate-protein ligase B)		38	42	11	19
	P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
	P35175	Stefin-3	Stfa3 (Stf-3) (Stf3)	25	27	6	10
	P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
	Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
	Q8VDM4	26S proteasome non-ATPase regulatory subunit 2 (26S proteasome regulatory subunit RPN1) (26S proteasome regulatory subunit S2) (26S proteasome subunit p97)	Psm2	113	157	18	29
	Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11

Q61990	Poly(rC)-binding protein 2 (Alpha-CP2) (Putative heterogeneous nuclear ribonucleoprotein X) (hnRNP X) (CTBP) (CBP)	Pcbp2 (Cbp) (HnrnpX) (Hnrpx)	29	194	7	11
Q9D8W5	26S proteasome non-ATPase regulatory subunit 12 (26S proteasome regulatory subunit p55)	Psmc12	67	78	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23
O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
Q9CQY5	Magnesium transporter protein 1 (MagT1) (Implantation-associated protein) (IAP)	Magt1 (Iag2)	26	22	8	12
P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwnk1)	56	36	18	27
P99026	Proteasome subunit beta type-4 (Proteasome beta chain) (EC 3.4.25.1) (Macropain beta chain) (Multicatalytic endopeptidase complex beta chain) (Proteasome chain 3)	Psmc4 (Lmp3)	93	289	11	16
P60335	Poly(rC)-binding protein 1 (Alpha-CP1) (hnRNP-E1)	Pcbp1	56	350	9	13
P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10

Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
Q60716	Prolyl 4-hydroxylase subunit alpha-2 (EC 1.14.11.2) (4-PH alpha-2) (Procollagen-proline,2-oxoglutarate-4-dioxygenase subunit alpha-2)	P4ha2	22	27	8	10
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
Q9R1P0	Proteasome subunit alpha type-4 (EC 3.4.25.1) (Proteasome component C9) (Macropain subunit C9) (Multicatalytic endopeptidase complex subunit C9) (Proteasome subunit L)	Psma4	29	151	14	17
Q9CZY3	Ubiquitin-conjugating enzyme E2 variant 1 (UEV-1) (CROC-1)	Ube2v1 (Croc1)	83	163	166	201
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23

P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
Q9QUR6	Prolyl endopeptidase (PE) (EC 3.4.21.26) (Post-proline cleaving enzyme)	Prep (Pep)	56	20	15	18
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
P54103	DnaJ homolog subfamily C member 2 (Zuotin-related factor 1) (Mouse Id associate 1) (MIDA1)	Dnajc2 (Mida1) (Zrf1)	23	27	11	13
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
Q5SPW0	Vacuolar protein sorting-associated protein 54 (Tumor antigen SLP-8p homolog)	Vps54	36	28	13	15
Q6A4J8	Ubiquitin carboxyl-terminal hydrolase 7 (EC 3.1.2.15) (Ubiquitin thioesterase 7) (Ubiquitin-specific-processing protease 7) (Deubiquitinating enzyme 7) (Herpesvirus-associated ubiquitin-specific protease) (mHAUSP)	Usp7 (Hausp)	27	18	14	16
P97820	Mitogen-activated protein kinase kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P62908	40S ribosomal protein S3	Rps3	778	762	39	44



Q64311	Protein N-terminal asparagine amidohydrolase (EC 3.5.1.-) (Protein NH2-terminal asparagine deamidase) (PNAD) (N-terminal Asn amidase) (NTN-amidase) (Protein NH2-terminal asparagine amidohydrolase) (PNAA)	Ntan1	20	26	8	9
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a) (Stn)	1275	1549	258	285
Q62446	FK506-binding protein 3 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPlase) (Rotamase) (25 kDa FKBP) (FKBP-25) (Rapamycin-selective 25 kDa immunophilin)	Fkbp3 (Fkbp25)	31	31	10	11
O55234	Proteasome subunit beta type-5 (EC 3.4.25.1) (Proteasome epsilon chain) (Macropain epsilon chain) (Multicatalytic endopeptidase complex epsilon chain) (Proteasome subunit X) (Proteasome chain 6)	Psmb5	168	227	10	11
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
P19001	Keratin, type I cytoskeletal 19 (Cytokeratin-19) (CK-19) (Keratin-19) (K19)	Krt19 (Krt1-19)	37	46	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24

P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
P08113	Endoplasmic (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra-1) (Tra1)	221	298	25	27
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
P70398	Probable ubiquitin carboxyl-terminal hydrolase FAF-X (EC 3.1.2.15) (Ubiquitin thioesterase FAF-X) (Ubiquitin-specific-processing protease FAF-X) (Deubiquitinating enzyme FAF-X) (Fat facets protein-related, X-linked) (Ubiquitin-specific protease 9, X chromosome) (Ubiquitin carboxyl-terminal hydrolase FAM) (Fat facets homolog)	Usp9x (Faf1) (Fam)	42	28	57	61
Q9DBR7	Protein phosphatase 1 regulatory subunit 12A (Myosin phosphatase-targeting subunit 1) (Myosin phosphatase target subunit 1)	Ppp1r12a (Mypt1)	88	67	18	19
P62242	40S ribosomal protein S8	Rps8	479	372	18	19
P62281	40S ribosomal protein S11	Rps11	166	132	27	28

Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165
P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5
Q9R1P1	Proteasome subunit beta type-3 (EC 3.4.25.1) (Proteasome theta chain) (Proteasome chain 13) (Proteasome component C10-II)	Psmb3	87	135	7	7
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
O09061	Proteasome subunit beta type-1 (EC 3.4.25.1) (Proteasome component C5) (Macropain subunit C5) (Multicatalytic endopeptidase complex subunit C5) (Proteasome gamma chain)	Psmb1	84	94	11	11
Q9DB77	Cytochrome b-c1 complex subunit 2, mitochondrial (Ubiquinol-cytochrome-c reductase complex core protein 2) (Core protein II) (Complex III subunit 2)	Uqcrc2	29	20	13	13
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126

P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (Csma) (Eif3) (Eif3s10)	199	166	58	56
P16406	Glutamyl aminopeptidase (EC 3.4.11.7) (EAP) (Aminopeptidase A) (APA) (BP-1/6C3 antigen) (CD antigen CD249)	Enpep	98	90	48	46
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
Q6ZPK0	PHD finger protein 21A (BRAF35-HDAC complex protein BHC80) (mBHC80) (BHC80a)	Phf21a (Bhc80) (Kiaa1696) (Pfff1)	28	37	20	19
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q9WTR0	Matrix metalloproteinase-16 (MMP-16) (EC 3.4.24.-) (Membrane-type matrix metalloproteinase 3) (MT-MMP 3) (MTMMP3) (Membrane-type-3 matrix metalloproteinase) (MT3-MMP) (MT3MMP)	Mmp16	17	36	11	10
P03995	Glial fibrillary acidic protein (GFAP)	Gfap	63	90	22	20

Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q9QZH3	Peptidyl-prolyl cis-trans isomerase E (PPIase E) (Rotamase E) (EC 5.2.1.8) (Cyclophilin E) (Cyclophilin-33)	Ppie (Cyp33)	28	35	10	9
P02535	Keratin, type I cytoskeletal 10 (Cytokeratin-10) (CK-10) (Keratin-10) (K10) (56 kDa cytokeratin) (Keratin, type I cytoskeletal 59 kDa)	Krt10 (Krt1-10)	252	152	19	17
Q8BG95	Protein phosphatase 1 regulatory subunit 12B (Myosin phosphatase-targeting subunit 2)	Ppp1r12b (Mypt2)	25	24	25	22
P70195	Proteasome subunit beta type-7 (EC 3.4.25.1) (Proteasome subunit Z) (Macropain chain Z) (Multicatalytic endopeptidase complex chain Z)	Psb7 (Mmc14)	39	40	8	7
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q11011	Puromycin-sensitive aminopeptidase (PSA) (EC 3.4.11.-)	Npepps (Psa)	71	141	30	26
Q9Z1Q9	Valyl-tRNA synthetase (EC 6.1.1.9) (Valine--tRNA ligase) (ValRS) (Protein G7a)	Vars (Bat6) (G7a) (Vars2)	380	302	37	32
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPIase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18

Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
Q64514	Tripeptidyl-peptidase 2 (EC 3.4.14.10) (Tripeptidyl-peptidase II) (TPP-II) (Tripeptidyl aminopeptidase)	Tpp2	54	76	24	20
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
Q62407	Striated muscle-specific serine/threonine protein kinase (EC 2.7.11.1) (Aortic preferentially expressed protein 1) (APEG-1)	Speg (Apeg1) (Kiaa1297)	26	20	31	25

Q9Z2U0	Proteasome subunit alpha type-7 (EC 3.4.25.1) (Proteasome subunit RC6-1)	PsmA7	121	253	15	12
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
P63325	40S ribosomal protein S10	Rps10	468	168	42	33
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
Q3TXS7	26S proteasome non-ATPase regulatory subunit 1 (26S proteasome regulatory subunit RPN2) (26S proteasome regulatory subunit S1)	PsmD1	100	89	16	12
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19

P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptpn (Ptp35)	30	18	14	10
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
Q60692	Proteasome subunit beta type-6 (EC 3.4.25.1) (Proteasome delta chain) (Macropain delta chain) (Multicatalytic endopeptidase complex delta chain) (Proteasome subunit Y)	Psm6 (Lmp19)	33	89	17	12
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
Q7TQI3	Ubiquitin thioesterase OTUB1 (EC 3.1.2.-) (Otubain-1) (OTU domain-containing ubiquitin aldehyde-binding protein 1) (Ubiquitin-specific-processing protease OTUB1) (Deubiquitinating enzyme OTUB1)	Otub1	152	109	10	7
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9



Q80TP3	E3 ubiquitin-protein ligase UBR5 (EC 6.3.2.-) (E3 ubiquitin-protein ligase, HECT domain-containing 1) (Hyperplastic discs protein homolog)	Ubr5 (Edd) (Edd1) (Kiaa0896)	27	17	43	29
Q8C9S8	Cysteine protease ATG4A (EC 3.4.22.-) (Autophagy-related protein 4 homolog A) (Autophagin-2) (Autophagy-related cysteine endopeptidase 2) (AUT-like 2 cysteine endopeptidase)	Atg4a (Apg4a) (Autl2)	26	21	6	4
Q8CAY6	Acetyl-CoA acetyltransferase, cytosolic (EC 2.3.1.9) (Cytosolic acetoacetyl-CoA thiolase)	Acat2	65	18	9	6
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
O70435	Proteasome subunit alpha type-3 (EC 3.4.25.1) (Proteasome component C8) (Macropain subunit C8) (Multicatalytic endopeptidase complex subunit C8) (Proteasome subunit K)	Psma3	95	76	14	9
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (Ubpy)	29	23	24	15
P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
Q8R4K8	Pappalysin-1 (EC 3.4.24.79) (Pregnancy-associated plasma protein A) (PAPP-A) (Insulin-like growth factor-dependent IGF-binding protein 4 protease) (IGF-dependent IGFBP-4 protease) (IGFBP-4ase)	Pappa	41	43	25	15

Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
Q9JI78	Peptide-N(4)-(N-acetyl-beta-glucosaminy)asparagine amidase (PNGase) (mPNGase) (EC 3.5.1.52) (Peptide:N-glycanase) (N-glycanase 1)	Ngly1	29	32	19	11
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
P49722	Proteasome subunit alpha type-2 (EC 3.4.25.1) (Proteasome component C3) (Macropain subunit C3) (Multicatalytic endopeptidase complex subunit C3)	Psma2 (Lmpc3)	188	103	16	9
P97461	40S ribosomal protein S5	Rps5	89	33	32	18

	P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
	Q80UE6	Serine/threonine-protein kinase WNK4 (EC 2.7.11.1) (Protein kinase with no lysine 4) (Protein kinase, lysine-deficient 4)	Wnk4 (Prkwnk4)	23	33	29	15
DNA repair	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22
	Q7TSG3	F-box only protein 5 (Early mitotic inhibitor 1)	Fbxo5 (Emi1)	15	27	5	9
	P56198	Cell death activator CIDE-3 (Cell death-inducing DFFA-like effector protein C) (Fat-specific protein FSP27)	Cidec (Fsp27)	51	39	8	14
	Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
	Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
	Q9ERK4	Exportin-2 (Exp2) (Importin-alpha re-exporter) (Chromosome segregation 1-like protein)	Cse1l (Xpo2)	42	153	26	44
	P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
	Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
	Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11

Q61990	Poly(rC)-binding protein 2 (Alpha-CP2) (Putative heterogeneous nuclear ribonucleoprotein X) (hnRNP X) (CTBP) (CBP)	Pcbp2 (Cbp) (HnrnpX) (Hnrpx)	29	194	7	11
Q8CCP0	Serologically defined colon cancer antigen 1 homolog	Sdccag1	37	31	21	33
P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
Q8BUG5	Calcyphosin-2 (Calcyphosine-2)	Caps2	17	28	8	12
P97868	Retinoblastoma-binding protein 6 (p53-associated cellular protein of testis) (Proliferation potential-related protein) (Protein P2P-R)	Rbbp6 (P2pr) (Pact)	21	29	24	35
P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
Q8BVI4	Dihydropteridine reductase (EC 1.5.1.34) (HDHPR) (Quinoid dihydropteridine reductase)	Qdpr (Dhpr)	144	277	7	10
O35711	Liprin-beta-2 (Protein tyrosine phosphatase receptor type f polypeptide-interacting protein-binding protein 2) (PTPRF-interacting protein-binding protein 2) (Coiled-coil-like protein 1)	Ppfibp2 (Cclp1)	108	79	14	20
Q9WVP9	Interferon-induced GTP-binding protein Mx2 (Myxovirus resistance protein 2)	Mx2	32	22	14	20
P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
Q99M73	Keratin, type II cuticular Hb4 (Type II hair keratin Hb4) (Keratin-84) (K84) (65 kDa type II keratin)	Krt84 (Krt2-16) (Krt84) (K84) (65 kDa type II keratin)	36	74	14	19

Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
Q7TQ07	DNA polymerase nu (EC 2.7.7.7)	Poln	20	39	14	18
Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
P20152	Vimentin	Vim	1749	2397	125	157
Q63ZW7	InaD-like protein (Inadl protein) (Pals1-associated tight junction protein) (Protein associated to tight junctions) (Channel-interacting PDZ domain-containing protein)	Inadl (Cipp) (Patj)	18	30	12	15
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
O35618	Protein Mdm4 (p53-binding protein Mdm4) (Mdm2-like p53-binding protein) (Protein Mdmx) (Double minute 4 protein)	Mdm4 (Mdmx)	17	29	5	6
Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16
P97820	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29

P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
O35973	Period circadian protein homolog 1 (Circadian clock protein PERIOD 1) (Circadian pacemaker protein Rigi) (mPER1)	Per1 (Per) (Rigi)	29	21	27	28
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta11)	27	26	9	9
Q6P5F9	Exportin-1 (Exp1) (Chromosome region maintenance 1 protein homolog)	Xpo1 (Crm1)	19	43	9	9
P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (Csm) (Eif3) (Eif3s10)	199	166	58	56
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
Q99PF4	Cadherin-23 (Otocadherin)	Cdh23	29	32	29	27
Q8CGC6	RNA-binding protein 28 (RNA-binding motif protein 28)	Rbm28	24	41	71	66
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115

P43406	Integrin alpha-V (Vitronectin receptor subunit alpha) (CD antigen CD51) [Cleaved into: Integrin alpha-V heavy chain; Integrin alpha-V light chain]	Itgav	23	35	19	17
Q9QXA7	Tripartite motif-containing protein 44 (Protein DIPB) (Protein Mc7)	Trim44 (Dipb)	28	23	18	16
P26041	Moesin (Membrane-organizing extension spike protein)	Msn	136	127	44	39
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
Q99PG2	Opioid growth factor receptor (OGFr) (Zeta-type opioid receptor)	Ogfr	38	24	8	7
Q924C1	Exportin-5 (Exp5) (Ran-binding protein 21)	Xpo5 (Kiaa1291) (Ranbp21)	20	62	15	13
Q9CYF5	Williams-Beuren syndrome chromosomal region 16 protein homolog	Wbscr16	38	28	7	6
P97784	Cryptochrome-1	Cry1	52	42	21	18
Q9R194	Cryptochrome-2	Cry2 (Kiaa0658)	52	42	21	18
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
Q64514	Tripeptidyl-peptidase 2 (EC 3.4.14.10) (Tripeptidyl-peptidase II) (TPP-II) (Tripeptidyl aminopeptidase)	Tpp2	54	76	24	20
P11531	Dystrophin	Dmd	25	16	66	55
P09405	Nucleolin (Protein C23)	Ncl (Nuc)	775	872	78	65
Q9Z1M8	Protein Red (Protein RER) (IK factor) (Cytokine IK)	Ik (Red) (Rer)	29	23	10	8
Q80UN9	tRNA isopentenyltransferase, mitochondrial (IPTase) (EC 2.5.1.8) (Isopentenyl-diphosphate:tRNA isopentenyltransferase) (IPP transferase) (IPPT)	Trit1 (lpt)	31	24	19	15
P63325	40S ribosomal protein S10	Rps10	468	168	42	33
Q7TMK6	Protein Hook homolog 2	Hook2	33	36	26	20

Q3TXS7	26S proteasome non-ATPase regulatory subunit 1 (26S proteasome regulatory subunit RPN2) (26S proteasome regulatory subunit S1)	Psmc1	100	89	16	12
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
Q99LG2	Transportin-2 (Karyopherin beta-2b)	Tnpo2	42	32	7	5
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptprn (Ptp35)	30	18	14	10
Q03172	Zinc finger protein 40 (Transcription factor alphaA-CRYBP1) (Alpha A-crystallin-binding protein I) (Alpha A-CRYBP1)	Hivep1 (Cryabp1) (Znf40)	25	24	21	15
P08551	Neurofilament light polypeptide (NF-L) (Neurofilament triplet L protein) (68 kDa neurofilament protein)	Nefl (Nf68) (Nfl)	51	36	17	12
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
O88444	Adenylate cyclase type 1 (EC 4.6.1.1) (Adenylate cyclase type I) (ATP pyrophosphate-lyase 1) (Adenylyl cyclase 1) (Ca(2+)/calmodulin-activated adenylyl cyclase)	Adcy1	33	31	26	17
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/Pi cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18



	P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
	Q8K2I9	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5
	Q8BHK0	Paraneoplastic antigen Ma2 homolog	Pnma2	36	22	9	5
	O35664	Interferon-alpha/beta receptor beta chain (Interferon alpha/beta receptor 2) (IFN-alpha-REC) (Type I interferon receptor) (IFN-R)	Ifnar2	37	21	11	6
Cation transport	Q3TCT4	Ectonucleoside triphosphate diphosphohydrolase 7 (NTPDase 7) (EC 3.6.1.-) (Lysosomal apyrase-like protein 1)	Entpd7 (Kiaa4066) (Lalp1)	16	33	42	80
	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	Q64674	Spermidine synthase (SPDSY) (EC 2.5.1.16) (Putrescine aminopropyltransferase)	Srm	55	29	4	7
	O35381	Acidic leucine-rich nuclear phosphoprotein 32 family member A (Potent heat-stable protein phosphatase 2A inhibitor I1PP2A) (Acidic nuclear phosphoprotein pp32) (Leucine-rich acidic nuclear protein)	Anp32a (Anp32) (Lanp)	36	112	8	14
	Q9Z1R2	Large proline-rich protein BAT3 (HLA-B-associated transcript 3)	Bat3	80	49	15	26
	Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
	P63143	Voltage-gated potassium channel subunit beta-1 (K(+)-channel subunit beta-1) (Kv-beta-1)	Kcnab1 (Kvb1)	29	76	12	20

P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78
Q922U2	Keratin, type II cytoskeletal 5 (Cytokeratin-5) (CK-5) (Keratin-5) (K5)	Krt5 (Krt2-5)	396	550	23	38
P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13
Q8VDM4	26S proteasome non-ATPase regulatory subunit 2 (26S proteasome regulatory subunit RPN1) (26S proteasome regulatory subunit S2) (26S proteasome subunit p97)	Psm2	113	157	18	29
Q80Y17	Lethal(2) giant larvae protein homolog 1 (LLGL) (Mlg1) (Mgl-1)	Llg1 (Llg1h)	30	29	7	11
Q9Z1S0	Mitotic checkpoint serine/threonine-protein kinase BUB1 beta (EC 2.7.11.1) (MAD3/BUB1-related protein kinase) (Mitotic checkpoint kinase MAD3L)	Bub1b (Mad3l)	20	41	15	23
P50247	Adenosylhomocysteinase (AdoHcyase) (EC 3.3.1.1) (S-adenosyl-L-homocysteine hydrolase) (Liver copper-binding protein) (CUBP)	Ahcy	90	106	10	15

P83741	Serine/threonine-protein kinase WNK1 (EC 2.7.11.1) (Protein kinase with no lysine 1) (Protein kinase, lysine-deficient 1)	Wnk1 (Prkwnk1)	56	36	18	27
O35711	Liprin-beta-2 (Protein tyrosine phosphatase receptor type f polypeptide-interacting protein-binding protein 2) (PTPRF-interacting protein-binding protein 2) (Coiled-coil-like protein 1)	Ppfibp2 (Cclp1)	108	79	14	20
O08677	Kininogen-1 [Cleaved into: Kininogen-1 heavy chain; Bradykinin; Kininogen-1 light chain]	Kng1 (Kng)	26	21	5	7
P70696	Histone H2B type 1-A (Histone H2B, testis) (Testis-specific histone H2B)	Hist1h2ba (Th2b)	146	378	37	51
Q61789	Laminin subunit alpha-3 (Nicein subunit alpha)	Lama3	26	26	37	50
P35700	Peroxiredoxin-1 (EC 1.11.1.15) (Thioredoxin peroxidase 2) (Thioredoxin-dependent peroxide reductase 2) (Osteoblast-specific factor 3) (OSF-3) (Macrophage 23 kDa stress protein)	Prdx1 (Msp23) (Paga) (Tdp2)	836	1095	75	99
Q61846	Maternal embryonic leucine zipper kinase (EC 2.7.11.1) (Protein kinase PK38) (mPK38)	Melk (Kiaa0175) (Pk38)	28	32	10	13
P20152	Vimentin	Vim	1749	2397	125	157
P17183	Gamma-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Neural enolase) (Neuron-specific enolase) (NSE) (Enolase 2)	Eno2 (Eno-2)	228	181	12	15
Q811J3	Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
Q8R2X8	Golgin-45 (Basic leucine zipper nuclear factor 1)	Blzf1	28	22	13	16

Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
P49025	Citron Rho-interacting kinase (CRIK) (EC 2.7.11.1) (Rho-interacting, serine/threonine-protein kinase 21)	Cit	49	67	67	81
P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
Q8VHS2	Crumbs homolog 1	Crb1	23	28	10	12
P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q8BFY9	Transportin-1 (Importin beta-2) (Karyopherin beta-2)	Tnpo1 (Kpnb2)	54	43	10	12
Q9QUR6	Prolyl endopeptidase (PE) (EC 3.4.21.26) (Post-proline cleaving enzyme)	Prep (Pep)	56	20	15	18
Q9JKF1	Ras GTPase-activating-like protein IQGAP1	Iqgap1	19	81	21	25
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
Q80XA6	RalBP1-associated Eps domain-containing protein 2 (RalBP1-interacting protein 2) (Partner of RalBP1)	Reps2 (Pob1)	33	31	6	7
Q9WUM4	Coronin-1C (Coronin-3)	Coro1c	42	28	18	21
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
Q5SPW0	Vacuolar protein sorting-associated protein 54 (Tumor antigen SLP-8p homolog)	Vps54	36	28	13	15
Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8
Q9Z2K1	Keratin, type I cytoskeletal 16 (Cytokeratin-16) (CK-16) (Keratin-16) (K16)	Krt16 (Krt1-16)	37	37	7	8

P97820	Mitogen-activated protein kinase kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
Q9WUU9	80 kDa MCM3-associated protein (Protein GANP)	Mcm3ap (Ganp) (Map80)	48	32	17	19
Q9WUF3	CASP8-associated protein 2 (FLICE-associated huge protein)	Casp8ap2 (Flash)	28	16	26	29
P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29
Q62446	FK506-binding protein 3 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPlase) (Rotamase) (25 kDa FKBP) (FKBP-25) (Rapamycin-selective 25 kDa immunophilin)	Fkbp3 (Fkbp25)	31	31	10	11
Q9ET77	Junctophilin-3 (Junctophilin type 3) (JP-3)	Jph3 (Jp3)	37	31	20	22
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
P70298	Homeobox protein cut-like 2 (Cut-like 2) (Homeobox protein Cux-2)	Cux2 (Cutl2)	30	22	12	13
Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13

Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
P70398	Probable ubiquitin carboxyl-terminal hydrolase FAF-X (EC 3.1.2.15) (Ubiquitin thioesterase FAF-X) (Ubiquitin-specific-processing protease FAF-X) (Deubiquitinating enzyme FAF-X) (Fat facets protein-related, X-linked) (Ubiquitin-specific protease 9, X chromosome) (Ubiquitin carboxyl-terminal hydrolase FAM) (Fat facets homolog)	Usp9x (Faf1) (Fam)	42	28	57	61
Q920R0	Alsin (Amyotrophic lateral sclerosis protein 2 homolog)	Als2	74	88	72	75
Q6P4S8	Integrator complex subunit 1 (Int1)	Ints1	25	33	26	27
O35973	Period circadian protein homolog 1 (Circadian clock protein PERIOD 1) (Circadian pacemaker protein Rigui) (mPER1)	Per1 (Per) (Rigui)	29	21	27	28
Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165
P26350	Prothymosin alpha [Cleaved into: Thymosin alpha]	Ptma	34	120	2	2
P62141	Serine/threonine-protein phosphatase PP1-beta catalytic subunit (PP-1B) (EC 3.1.3.16)	Ppp1cb	177	57	4	4
Q8VCZ3	THAP domain-containing protein 7	Thap7	26	18	6	6

Q8VC28	Aldo-keto reductase family 1 member C13 (EC 1.1.1.-)	Akr1c13	32	23	8	8
Q99LX0	Protein DJ-1 (Parkinson disease protein 7 homolog)	Park7	53	178	9	9
Q9D289	Trafficking protein particle complex subunit 6B	Trappc6b	62	69	9	9
Q61092	Laminin subunit gamma-2 (Laminin 5 gamma 2 subunit) (Kalinin/nicein/epiligrin 100 kDa subunit) (Laminin B2t chain)	Lamc2	33	29	13	13
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q6P8J7	Creatine kinase, sarcomeric mitochondrial (EC 2.7.3.2) (S-MtCK)	Ckmt2	50	66	26	26
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
Q9QXL1	Kinesin-like protein KIF21B (Kinesin-like protein KIF6)	Kif21b (Kif6)	22	45	26	25
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
P30275	Creatine kinase, ubiquitous mitochondrial (EC 2.7.3.2) (U-MtCK) (Acidic-type mitochondrial creatine kinase) (Mia-CK)	Ckmt1	205	121	32	30

Q04447	Creatine kinase B-type (EC 2.7.3.2) (Creatine kinase B chain) (B-CK)	Ckb (Ckbb)	9079	7277	434	406
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q9D6Z1	Nucleolar protein 5A (Nucleolar protein Nop56)	Nol5a (Nop56)	38	39	14	13
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
P03995	Glial fibrillary acidic protein (GFAP)	Gfap	63	90	22	20
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q9QZH3	Peptidyl-prolyl cis-trans isomerase E (PPIase E) (Rotamase E) (EC 5.2.1.8) (Cyclophilin E) (Cyclophilin-33)	Ppie (Cyp33)	28	35	10	9
Q91VX2	Ubiquitin-associated protein 2 (Protein lingerer homolog 1) (MLig-1)	Ubp2 (Lig1)	60	41	10	9
P26041	Moesin (Membrane-organizing extension spike protein)	Msn	136	127	44	39
Q68FD5	Clathrin heavy chain 1	Cltc	944	884	88	78



Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q11011	Puromycin-sensitive aminopeptidase (PSA) (EC 3.4.11.-)	Npepps (Psa)	71	141	30	26
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPIase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6
O88866	Hormonally up-regulated neu tumor-associated kinase (EC 2.7.11.1) (Serine/threonine-protein kinase MAK-V)	Hunk (Makv)	27	21	14	12
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
P11531	Dystrophin	Dmd	25	16	66	55
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64

Q8R429	Sarcoplasmic/endoplasmic reticulum calcium ATPase 1 (SERCA1) (EC 3.6.3.8) (Calcium pump 1) (Calcium-transporting ATPase sarcoplasmic reticulum type, fast twitch skeletal muscle isoform) (SR Ca(2+)-ATPase 1) (Endoplasmic reticulum class 1/2 Ca(2+) ATPase)	Atp2a1	25	17	17	14
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
Q80ZW0	Serine/threonine-protein kinase 35 (EC 2.7.11.1)	Stk35	14	50	21	17
P54923	[Protein ADP-ribosylarginine] hydrolase (ADP-ribosylarginine hydrolase) (EC 3.2.2.19) (ADP-ribose-L-arginine cleaving enzyme)	Adprh (Arh1)	20	41	15	12
P00342	L-lactate dehydrogenase C chain (LDH-C) (EC 1.1.1.27) (LDH testis subunit) (LDH-X)	Ldhc (Ldh-3) (Ldh3)	97	122	15	12
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
P63325	40S ribosomal protein S10	Rps10	468	168	42	33
Q8VHK5	Membrane protein MLC1	Mlc1	35	25	22	17
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
Q9CZW4	Long-chain-fatty-acid--CoA ligase 3 (EC 6.2.1.3) (Long-chain acyl-CoA synthetase 3) (LACS 3)	Acsl3 (Acs3) (FacI3)	41	37	13	10

Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
Q9QYB1	Chloride intracellular channel protein 4 (mc3s5/mtCLIC)	Clic4	28	33	4	3
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
Q3TXS7	26S proteasome non-ATPase regulatory subunit 1 (26S proteasome regulatory subunit RPN2) (26S proteasome regulatory subunit S1)	Psmc1	100	89	16	12
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
Q4VGL6	Roquin (RING finger and C3H zinc finger protein 1) (Protein Sanroque)	Rc3h1 (Gm551) (Kiaa2025)	54	54	23	17
P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8

Q91Z67	SLIT-ROBO Rho GTPase-activating protein 2 (srGAP2) (Formin-binding protein 2) (Formin-binding protein 27) (FBP-27)	Srgap2 (Fbp27) (Fbnp2)	77	48	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
Q8BX70	Vacuolar protein sorting-associated protein 13C	Vps13c (Kiaa3021)	25	17	53	38
Q9CQ65	S-methyl-5'-thioadenosine phosphorylase (EC 2.4.2.28) (5'-methylthioadenosine phosphorylase) (MTA phosphorylase) (MTAPase)	Mtap	48	36	7	5
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptpn (Ptp35)	30	18	14	10
Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
P61294	Ras-related protein Rab-6B	Rab6b (D9Bwg0185e)	18	53	10	7
Q8CD91	SPARC-related modular calcium-binding protein 2 (Secreted modular calcium-binding protein 2) (SMOC-2)	Smoc2	29	16	16	11
P61979	Heterogeneous nuclear ribonucleoprotein K (hnRNP K)	Hnrnpk (Hnrpk)	225	46	18	12
Q9Z0T6	Polycystic kidney disease and receptor for egg jelly-related protein (PKD and REJ homolog)	Pkdrej	32	32	18	12
P61164	Alpha-centractin (Centractin) (Centrosome-associated actin homolog) (Actin-RPV) (ARP1)	Actr1a (Ctrn1)	247	124	27	18
P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7

Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
P16125	L-lactate dehydrogenase B chain (LDH-B) (EC 1.1.1.27) (LDH heart subunit) (LDH-H)	Ldhb (Ldh-2) (Ldh2)	315	214	34	21
Q3UXZ6	Protein FAM81A	Fam81a	22	27	13	8
O35551	Rab GTPase-binding effector protein 1 (Rabaptin-5) (Rabaptin-5alpha)	Rabep1 (Rab5ep) (Rabpt5) (Rabpt5a)	33	26	26	16
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
P26043	Radixin (ESP10)	Rdx	127	106	23	13
P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5

	Q9WTU3	Sodium channel protein type 8 subunit alpha (Sodium channel protein type VIII subunit alpha) (Voltage-gated sodium channel subunit alpha Nav1.6)	Scn8a (Nbna1)	28	19	20	11
	O35664	Interferon-alpha/beta receptor beta chain (Interferon alpha/beta receptor 2) (IFN-alpha-REC) (Type I interferon receptor) (IFN-R)	Ifnar2	37	21	11	6
	Q9WUJ8	Origin recognition complex subunit 6	Orc6l (Orc6)	59	37	13	7
	O88844	Isocitrate dehydrogenase [NADP] cytoplasmic (IDH) (EC 1.1.1.42) (Cytosolic NADP-isocitrate dehydrogenase) (Oxalosuccinate decarboxylase) (NADP(+)-specific ICDH) (IDP)	Idh1	155	163	15	8
MHCII-mediated immunity	P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22
	Q9R117	Non-receptor tyrosine-protein kinase TYK2 (EC 2.7.10.2)	Tyk2	27	30	15	26
	Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
	P63001	Ras-related C3 botulinum toxin substrate 1 (p21-Rac1)	Rac1	31	99	7	11
	Q8K386	Ras-related protein Rab-15	Rab15	44	74	4	6
	Q60695	Ral guanine nucleotide dissociation stimulator-like 1 (RalGDS-like 1)	Rgl1 (Rgl)	26	15	4	6
	Q7TQG1	Pleckstrin homology domain-containing family A member 6 (Phosphoinositol 3-phosphate-binding protein 3) (PEPP-3)	Plekha6 (Pepp3)	17	37	14	21
	Q99K85	Phosphoserine aminotransferase (PSAT) (EC 2.6.1.52) (Phosphohydroxythreonine aminotransferase) (Endometrial progesterone-induced protein) (EPIP)	Psat1 (Psa) (Psat)	162	541	16	24

Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14
P05214	Tubulin alpha-3 chain (Tubulin alpha-3/alpha-7 chain) (Alpha-tubulin 3/7) (Alpha-tubulin isotype M-alpha-3/7)	Tuba3a (Tuba3); Tuba3b (Tuba7)	1112	1288	61	84
Q61937	Nucleophosmin (NPM) (Nucleolar phosphoprotein B23) (Numatrin) (Nucleolar protein NO38)	Npm1	92	66	11	15
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
P05064	Fructose-bisphosphate aldolase A (EC 4.1.2.13) (Muscle-type aldolase) (Aldolase 1)	Aldoa (Aldo1)	211	567	36	46
Q80X50	Ubiquitin-associated protein 2-like	Ubp2l	63	54	4	5
Q60716	Prolyl 4-hydroxylase subunit alpha-2 (EC 1.14.11.2) (4-PH alpha-2) (Procollagen-proline,2-oxoglutarate-4-dioxygenase subunit alpha-2)	P4ha2	22	27	8	10
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
O08908	Phosphatidylinositol 3-kinase regulatory subunit beta (PI3-kinase p85 subunit beta) (PtdIns-3-kinase p85-beta)	Pik3r2	19	25	20	24
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36

Q9ET77	Junctophilin-3 (Junctophilin type 3) (JP-3)	Jph3 (Jp3)	37	31	20	22
Q6P4S8	Integrator complex subunit 1 (Int1)	Ints1	25	33	26	27
P26039	Talin-1	Tln1 (Tln)	123	161	41	42
Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
P07724	Serum albumin	Alb (Alb-1) (Alb1)	550	572	22	21
Q99PF4	Cadherin-23 (Otocadherin)	Cdh23	29	32	29	27
Q9D6Z1	Nucleolar protein 5A (Nucleolar protein Nop56)	Nol5a (Nop56)	38	39	14	13
Q6TXD4	Dynamin-binding protein (Scaffold protein Tuba)	Dnmbp (Kiaa1010)	32	21	13	12
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q99PG2	Opioid growth factor receptor (OGFr) (Zeta-type opioid receptor)	Ogfr	38	24	8	7
P21550	Beta-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Muscle-specific enolase) (MSE) (Skeletal muscle enolase) (Enolase 3)	Eno3 (Eno-3)	313	146	30	26
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
Q91VW5	Golgin subfamily A member 4 (tGolgin-1)	Golga4	41	60	46	39
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
P00342	L-lactate dehydrogenase C chain (LDH-C) (EC 1.1.1.27) (LDH testis subunit) (LDH-X)	Ldhc (Ldh-3) (Ldh3)	97	122	15	12
Q99MD9	Nuclear autoantigenic sperm protein (NASP)	Nasp	365	293	34	27
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35



P97434	Myosin phosphatase Rho-interacting protein (Rho-interacting protein 3) (RIP3) (p116Rip)	Mprip (Kiaa0864) (Mrip) (Rhoip3)	35	23	25	19
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
Q9D8V0	Minor histocompatibility antigen H13 (EC 3.4.23.-) (Signal peptide peptidase) (Presenilin-like protein 3)	Hm13 (H13) (Psl3)	23	29	28	21
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptprn (Ptp35)	30	18	14	10
P29391	Ferritin light chain 1 (Ferritin L subunit 1)	Ftl1 (Ftl) (Ftl-1)	150	159	6	4
Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
Q9D9P2	Coiled-coil domain-containing protein 103	Ccdc103	136	63	12	7
P26043	Radixin (ESP10)	Rdx	127	106	23	13
Q9WTU3	Sodium channel protein type 8 subunit alpha (Sodium channel protein type VIII subunit alpha) (Voltage-gated sodium channel subunit alpha Nav1.6)	Scn8a (Nbna1)	28	19	20	11

Fertilization	P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78
	Q62522	Zona pellucida-binding protein 1 (Sp38)	Zpbp (Zpbp1)	38	42	8	12
	Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
	P63321	Ras-related protein Ral-A	Rala (Ral) (Rala)	25	22	30	39
	O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
	P41230	Histone demethylase JARID1C (EC 1.14.11.-) (Jumonji/ARID domain-containing protein 1C) (Protein SmcX) (Protein Xe169)	Jarid1c (Kiaa0234) (Smcx) (Xe169)	34	32	26	29
	P16858	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) (EC 1.2.1.12)	Gapdh (Gapd)	1514	1781	84	89
	P26350	Prothymosin alpha [Cleaved into: Thymosin alpha]	Ptma	34	120	2	2

	Q8VCZ3	THAP domain-containing protein 7	Thap7	26	18	6	6
	Q99PF4	Cadherin-23 (Otocadherin)	Cdh23	29	32	29	27
	Q8VHE6	Dynein heavy chain 5, axonemal (Axonemal beta dynein heavy chain 5) (Mdnah5) (Ciliary dynein heavy chain 5)	Dnah5 (Dnahc5)	47	44	83	72
	Q8CGK3	Lon protease homolog, mitochondrial (EC 3.4.21.-) (Lon protease-like protein) (LONP) (Mitochondrial ATP-dependent protease Lon) (Serine protease 15)	Lonp1 (Prss15)	21	30	43	33
	O88799	Zonadhesin	Zan	22	26	25	17
	P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
	Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26
	Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
	Q8K2A7	Integrator complex subunit 10 (Int10)	Ints10	32	47	21	12
Glycolysis	P52480	Pyruvate kinase isozymes M1/M2 (EC 2.7.1.40) (Pyruvate kinase muscle isozyme)	Pkm2 (Pk3) (Pykm)	1954	3481	138	233
	P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
	P16045	Galectin-1 (Lectin galactoside-binding soluble 1) (Beta-galactoside-binding lectin L-14-I) (Lactose-binding lectin 1) (S-Lac lectin 1) (Galaptin) (14 kDa lectin)	Lgals1 (Gbp)	79	85	6	9
	P53657	Pyruvate kinase isozymes R/L (EC 2.7.1.40) (L PK)	Pklr	144	270	26	38
	Q921C5	Protein bicaudal D homolog 2 (Bic-D 2)	Bicd2 (Kiaa0699)	31	23	26	34
	P05064	Fructose-bisphosphate aldolase A (EC 4.1.2.13) (Muscle-type aldolase) (Aldolase 1)	Aldoa (Aldo1)	211	567	36	46

O09010	Beta-1,3-N-acetylglucosaminyltransferase lunatic fringe (EC 2.4.1.222) (O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase)	Lfng	33	33	8	10
P17183	Gamma-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Neural enolase) (Neuron-specific enolase) (NSE) (Enolase 2)	Eno2 (Eno-2)	228	181	12	15
Q9JKF1	Ras GTPase-activating-like protein IQGAP1	Iqgap1	19	81	21	25
Q64467	Glyceraldehyde-3-phosphate dehydrogenase, testis-specific (EC 1.2.1.12) (Spermatogenic glyceraldehyde-3-phosphate dehydrogenase) (Spermatogenic cell-specific glyceraldehyde 3-phosphate dehydrogenase 2) (GAPDH-2)	Gapdhs (Gapds) (Gapds)	75	781	26	29
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
Q9R0Q7	Prostaglandin E synthase 3 (EC 5.3.99.3) (Cytosolic prostaglandin E2 synthase) (cPGES) (Telomerase-binding protein p23) (Hsp90 co-chaperone) (Progesterone receptor complex p23) (Sid 3177)	Ptges3 (Sid3177) (Tebp)	124	239	10	11
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
P16858	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) (EC 1.2.1.12)	Gapdh (Gapd)	1514	1781	84	89
Q99LX0	Protein DJ-1 (Parkinson disease protein 7 homolog)	Park7	53	178	9	9
Q80UK8	Integrator complex subunit 2 (Int2)	Ints2 (Kiaa1287)	16	27	24	24

	Q9DBJ1	Phosphoglycerate mutase 1 (EC 5.4.2.1) (EC 5.4.2.4) (EC 3.1.3.13) (Phosphoglycerate mutase isozyme B) (PGAM-B) (BPG-dependent PGAM 1)	Pgam1	612	746	35	31
	P21550	Beta-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Muscle-specific enolase) (MSE) (Skeletal muscle enolase) (Enolase 3)	Eno3 (Eno-3)	313	146	30	26
	Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
	P17182	Alpha-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Non-neural enolase) (NNE) (Enolase 1)	Eno1 (Eno-1)	976	802	62	50
	P00342	L-lactate dehydrogenase C chain (LDH-C) (EC 1.1.1.27) (LDH testis subunit) (LDH-X)	Ldhc (Ldh-3) (Ldh3)	97	122	15	12
	P06151	L-lactate dehydrogenase A chain (LDH-A) (EC 1.1.1.27) (LDH muscle subunit) (LDH-M)	Ldha (Ldh-1) (Ldh1)	1033	421	74	57
	P05063	Fructose-bisphosphate aldolase C (EC 4.1.2.13) (Brain-type aldolase) (Aldolase 3) (Zebrin II) (Scrapie-responsive protein 2)	Aldoc (Aldo3) (Scrg2)	35	51	13	10
	P17751	Triosephosphate isomerase (TIM) (EC 5.3.1.1) (Triose-phosphate isomerase)	Tpi1 (Tpi)	706	519	35	25
	P16125	L-lactate dehydrogenase B chain (LDH-B) (EC 1.1.1.27) (LDH heart subunit) (LDH-H)	Ldhb (Ldh-2) (Ldh2)	315	214	34	21
	P09041	Phosphoglycerate kinase 2 (EC 2.7.2.3) (Phosphoglycerate kinase, testis specific)	Pgk2 (Pgk-2)	162	73	17	10
Oogenesis	Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22

P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
Q5SPW0	Vacuolar protein sorting-associated protein 54 (Tumor antigen SLP-8p homolog)	Vps54	36	28	13	15
Q61599	Rho GDP-dissociation inhibitor 2 (Rho GDI 2) (Rho-GDI beta) (D4)	Arhgdib (Gdid4)	18	25	9	10
Q8VI56	Low-density lipoprotein receptor-related protein 4 (LDLR dan)	Lrp4 (Kiaa0816)	77	30	19	20
P62141	Serine/threonine-protein phosphatase PP1-beta catalytic subunit (PP-1B) (EC 3.1.3.16)	Ppp1cb	177	57	4	4
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
Q63994	Myeloid cell surface antigen CD33 (Sialic acid-binding Ig-like lectin 3) (Siglec-3) (CD antigen CD33)	Cd33 (Siglec3)	34	34	7	6
Q99PT1	Rho GDP-dissociation inhibitor 1 (Rho GDI 1) (Rho-GDI alpha) (GDI-1)	Arhgdia (C87222) (Gdi1)	923	675	37	31

	P09405	Nucleolin (Protein C23)	Ncl (Nuc)	775	872	78	65
	P54923	[Protein ADP-ribosylarginine] hydrolase (ADP-ribosylarginine hydrolase) (EC 3.2.2.19) (ADP-ribose-L-arginine cleaving enzyme)	Adprh (Arh1)	20	41	15	12
	Q9Z2U0	Proteasome subunit alpha type-7 (EC 3.4.25.1) (Proteasome subunit RC6-1)	Psma7	121	253	15	12
	P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
	P40142	Transketolase (TK) (EC 2.2.1.1) (P68)	Tkt	562	250	117	75
	Q68ED2	Metabotropic glutamate receptor 7 (mGluR7)	Grm7 (Gprc1g) (Mglur7)	37	33	13	8
	P62301	40S ribosomal protein S13	Rps13	77	100	23	14
Chromatin packaging and remodeling	Q8BTM8	Filamin-A (Alpha-filamin) (Filamin-1) (Endothelial actin-binding protein) (Actin-binding protein 280) (ABP-280) (Non-muscle filamin)	Flna (Fln) (Fln1)	254	1031	46	86
	Q8CGP2	Histone H2B type 1-P	Hist1h2bp	436	999	46	77

P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78
Q64475	Histone H2B type 1-B (h2B-143)	Hist1h2bb	436	999	46	75
P14824	Annexin A6 (Annexin-6) (Annexin VI) (Lipocortin VI) (p68) (p70) (Protein III) (Chromobindin-20) (67 kDa calelectrin) (Calphobindin-II) (CPB-II)	Anxa6 (Anx6)	168	591	33	51
Q60695	Ral guanine nucleotide dissociation stimulator-like 1 (RalGDS-like 1)	Rgl1 (Rgl)	26	15	4	6
P61982	14-3-3 protein gamma	Ywhag	653	841	53	79
Q3THW5	Histone H2A.V (H2A.F/Z)	H2afv (H2av)	297	426	11	16
P70696	Histone H2B type 1-A (Histone H2B, testis) (Testis-specific histone H2B)	Hist1h2ba (Th2b)	146	378	37	51
Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34
Q07133	Histone H1t (Testicular H1 histone)	Hist1h1t (H1ft) (H1t)	46	72	54	69
P27661	Histone H2A.x (H2a/x)	H2afx (H2a.x) (H2ax) (Hist5-2ax)	301	426	15	19



Q61466	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 1 (SWI/SNF complex 60 kDa subunit) (60 kDa BRG-1/Brm-associated factor subunit A) (BRG1-associated factor 60A) (D15KZ1 protein)	Smarcd1 (Baf60a) (D15Kz1)	27	29	13	16
Q6GSS7	Histone H2A type 2-A (H2A.2) (H2a-614) (H2a-615)	Hist2h2aa1; Hist2h2aa2	505	763	18	21
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
P40124	Adenylyl cyclase-associated protein 1 (CAP 1)	Cap1 (Cap)	22	43	8	9
Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
P30275	Creatine kinase, ubiquitous mitochondrial (EC 2.7.3.2) (U-MtCK) (Acidic-type mitochondrial creatine kinase) (Mia-CK)	Ckmt1	205	121	32	30
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115

	P43277	Histone H1.3 (H1 VAR.4) (H1d)	Hist1h1d (H1f3)	78	99	18	16
	Q68FD5	Clathrin heavy chain 1	Cltc	944	884	88	78
	Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
	P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
	P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
	Q9Z1M8	Protein Red (Protein RER) (IK factor) (Cytokine IK)	Ik (Red) (Rer)	29	23	10	8
	Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
	Q9QYB1	Chloride intracellular channel protein 4 (mc3s5/mtCLIC)	Clic4	28	33	4	3
	Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptprn (Ptp35)	30	18	14	10
	P43275	Histone H1.1 (H1 VAR.3) (H1a)	Hist1h1a (H1f1)	28	90	9	6
	P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
	Q9Z1Q5	Chloride intracellular channel protein 1 (Nuclear chloride ion channel 27) (NCC27)	Clic1	137	139	9	5
Apoptosis	P56198	Cell death activator CIDE-3 (Cell death-inducing DFFA-like effector protein C) (Fat-specific protein FSP27)	Cidec (Fsp27)	51	39	8	14
	Q9Z1R2	Large proline-rich protein BAT3 (HLA-B-associated transcript 3)	Bat3	80	49	15	26

Q61937	Nucleophosmin (NPM) (Nucleolar phosphoprotein B23) (Numatrin) (Nucleolar protein NO38)	Npm1	92	66	11	15
Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53
P63163	Small nuclear ribonucleoprotein-associated protein N (snRNP-N) (Sm protein N) (Sm-N) (SmN) (Sm-D) (Tissue-specific-splicing protein)	Snrpn (Smn)	38	17	7	9
Q80X50	Ubiquitin-associated protein 2-like	Ubp2l	63	54	4	5
O35618	Protein Mdm4 (p53-binding protein Mdm4) (Mdm2-like p53-binding protein) (Protein Mdmx) (Double minute 4 protein)	Mdm4 (Mdmx)	17	29	5	6
Q9WUU9	80 kDa MCM3-associated protein (Protein GANP)	Mcm3ap (Ganp) (Map80)	48	32	17	19
Q9WUF3	CASP8-associated protein 2 (FLICE-associated huge protein)	Casp8ap2 (Flash)	28	16	26	29
P27546	Microtubule-associated protein 4 (MAP-4)	Map4 (Mtap4)	94	41	33	36
P70298	Homeobox protein cut-like 2 (Cut-like 2) (Homeobox protein Cux-2)	Cux2 (Cutl2)	30	22	12	13
P16858	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) (EC 1.2.1.12)	Gapdh (Gapd)	1514	1781	84	89
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
O54951	Semaphorin-6B (Semaphorin VIB) (Sema VIB) (Semaphorin-N) (Sema N)	Sema6b (Seman)	34	25	10	10
Q9WV80	Sorting nexin-1	Snx1	23	49	11	11
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23

Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
Q924C1	Exportin-5 (Exp5) (Ran-binding protein 21)	Xpo5 (Kiaa1291) (Ranbp21)	20	62	15	13
Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
P20357	Microtubule-associated protein 2 (MAP-2)	Map2 (Mtap2)	50	22	30	25
O55103	Periaxin	Prx	19	30	28	23
Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
Q80W68	Kin of IRRE-like protein 1 (Kin of irregular chiasm-like protein 1) (Nephrin-like protein 1)	Kirrel (Kirrel1) (Neph1)	32	38	22	17
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8

Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (Ubpy)	29	23	24	15
Q68ED2	Metabotropic glutamate receptor 7 (mGluR7)	Grm7 (Gprc1g) (Mglur7)	37	33	13	8
Q9QWK5	Baculoviral IAP repeat-containing protein 1a (Neuronal apoptosis inhibitory protein 1)	Naip1 (Birc1a) (Naip)	21	28	20	12
P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (Sl)	16	35	12	7
P97287	Induced myeloid leukemia cell differentiation protein Mcl-1 homolog (Bcl-2-related protein EAT/mcl1)	Mcl1	26	30	7	4
Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
P97461	40S ribosomal protein S5	Rps5	89	33	32	18

#### Enriched Molecular Function by Panther

Term	Accession	Protein names	Genes	prot_score_WT	prot_score_KO	prot_matches_WT	prot_matches_KO
Chaperone	P61982	14-3-3 protein gamma	Ywhag	653	841	53	79
	P68510	14-3-3 protein eta	Ywhah	707	962	58	80
	Q61937	Nucleophosmin (NPM) (Nucleolar phosphoprotein B23) (Numatrin) (Nucleolar protein NO38)	Npm1	92	66	11	15
	O70456	14-3-3 protein sigma (Stratifin)	Sfn (Mkrn3)	573	666	56	71
	P63101	14-3-3 protein zeta/delta (Protein kinase C inhibitor protein 1) (KCIP-1) (SEZ-2)	Ywhaz	1383	1947	96	120
	Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52

P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
P54103	DnaJ homolog subfamily C member 2 (Zuotin-related factor 1) (Mouse Id associate 1) (MIDA1)	Dnajc2 (Mida1) (Zrf1)	23	27	11	13
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q9CQV8	14-3-3 protein beta/alpha (Protein kinase C inhibitor protein 1) (KCIP-1)	Ywhab	983	971	71	80
Q62446	FK506-binding protein 3 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (25 kDa FKBP) (FKBP-25) (Rapamycin-selective 25 kDa immunophilin)	Fkbp3 (Fkbp25)	31	31	10	11
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
P08113	Endoplasmic reticulum chaperone protein (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra-1) (Tra1)	221	298	25	27
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8

P68254	14-3-3 protein theta (14-3-3 protein tau)	Ywhaq	1104	994	92	91
P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
Q9CQN1	Heat shock protein 75 kDa, mitochondrial (HSP 75) (Tumor necrosis factor type 1 receptor-associated protein) (TRAP-1) (TNFR-associated protein 1)	Trap1 (Hsp75)	197	335	13	11
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
P62259	14-3-3 protein epsilon (14-3-3E)	Ywhae	1202	998	116	95
P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q61699	Heat shock protein 105 kDa (Heat shock-related 100 kDa protein E7I) (HSP-E7I) (Heat shock 110 kDa protein) (42 degrees C-HSP)	Hsph1 (Hsp105) (Hsp110) (Kiaa0201)	46	48	18	13
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37

	P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
	P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
Nucleic acid binding	P97311	DNA replication licensing factor MCM6 (Mis5 homolog)	Mcm6 (Mcmd6) (Mis5)	110	395	20	38
	O88705	Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel 3 (Hyperpolarization-activated cation channel 3) (HAC-3)	Hcn3 (Hac3)	75	67	8	15
	P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22
	Q8R3C6	Probable RNA-binding protein 19 (RNA-binding motif protein 19)	Rbm19	26	32	11	20
	Q8BGQ1	Uncharacterized protein C14orf133 homolog		23	28	5	9
	Q99N50	Synaptotagmin-like protein 2 (Exophilin-4)	Syt12 (Slp2)	26	77	10	18
	P56716	Oxygen-regulated protein 1 (Retinitis pigmentosa RP1 protein homolog)	Rp1 (Orp1) (Rp1h)	31	49	58	104
	Q9Z1R2	Large proline-rich protein BAT3 (HLA-B-associated transcript 3)	Bat3	80	49	15	26



Q9D009	Putative octanoyltransferase, mitochondrial (EC 2.3.1.181) (Octanoyl-[acyl-carrier-protein]-protein N-octanoyltransferase) (Lipoyl/octanoyl transferase) (Lipoate-protein ligase B)		38	42	11	19
Q8BFQ9	Kelch domain-containing protein 5	Klhdc5 (Kiaa1340)	30	22	10	17
Q9Z129	ATP-dependent DNA helicase Q1 (EC 3.6.1.-) (DNA-dependent ATPase Q1)	Recql (Recql1)	17	27	13	22
P52480	Pyruvate kinase isozymes M1/M2 (EC 2.7.1.40) (Pyruvate kinase muscle isozyme)	Pkm2 (Pk3) (Pykm)	1954	3481	138	233
Q8CGP2	Histone H2B type 1-P	Hist1h2bp	436	999	46	77
P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
P62960	Nuclease-sensitive element-binding protein 1 (Y-box-binding protein 1) (Y-box transcription factor) (YB-1) (CCAAT-binding transcription factor I subunit A) (CBF-A) (Enhancer factor I subunit A) (EFI-A) (DNA-binding protein B) (DBPB)	Ybx1 (Msy-1) (Msy1) (Nsep1) (Yb1)	56	126	6	10
P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78

Q922U2	Keratin, type II cytoskeletal 5 (Cytokeratin-5) (CK-5) (Keratin-5) (K5)	Krt5 (Krt2-5)	396	550	23	38
Q64475	Histone H2B type 1-B (h2B-143)	Hist1h2bb	436	999	46	75
P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13
Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
Q501J6	Probable ATP-dependent RNA helicase DDX17 (EC 3.6.1.-) (DEAD box protein 17)	Ddx17	90	43	7	11
Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
Q3UDW8	Heparan-alpha-glucosaminide N-acetyltransferase (EC 2.3.1.78) (Transmembrane protein 76)	Hgsnat (D8Ert354e) (Tmem76)	34	22	6	9
Q7TN83	Synaptotagmin-16 (Synaptotagmin XIV-related protein) (Synaptotagmin 14-like protein)	Syt16 (Strep14) (Syt14l) (Syt14r)	20	38	6	9
Q8BUG5	Calcyphosin-2 (Calcyphosine-2)	Caps2	17	28	8	12
Q62522	Zona pellucida-binding protein 1 (Sp38)	Zpbp (Zpbp1)	38	42	8	12
P50247	Adenosylhomocysteinase (AdoHcyase) (EC 3.3.1.1) (S-adenosyl-L-homocysteine hydrolase) (Liver copper-binding protein) (CUBP)	Ahcy	90	106	10	15

P97868	Retinoblastoma-binding protein 6 (p53-associated cellular protein of testis) (Proliferation potential-related protein) (Protein P2P-R)	Rbbp6 (P2pr) (Pact)	21	29	24	35
Q3THW5	Histone H2A.V (H2A.F/Z)	H2afv (H2av)	297	426	11	16
P60335	Poly(rC)-binding protein 1 (Alpha-CP1) (hnRNP-E1)	Pcbp1	56	350	9	13
O70251	Elongation factor 1-beta (EF-1-beta)	Eef1b (Eef1b2)	39	102	7	10
Q9WVP9	Interferon-induced GTP-binding protein Mx2 (Myxovirus resistance protein 2)	Mx2	32	22	14	20
P70696	Histone H2B type 1-A (Histone H2B, testis) (Testis-specific histone H2B)	Hist1h2ba (Th2b)	146	378	37	51
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
P27641	ATP-dependent DNA helicase 2 subunit 2 (EC 3.6.1.-) (ATP-dependent DNA helicase II 80 kDa subunit) (Ku autoantigen protein p86 homolog) (Ku80) (CTC box-binding factor 85 kDa subunit) (CTCBF) (CTC85) (Nuclear factor IV) (DNA repair protein XRCC5)	Xrcc5 (G22p2)	22	29	16	22
Q61937	Nucleophosmin (NPM) (Nucleolar phosphoprotein B23) (Numatrin) (Nucleolar protein NO38)	Npm1	92	66	11	15
Q61789	Laminin subunit alpha-3 (Nicein subunit alpha)	Lama3	26	26	37	50
P47867	Secretogranin-3 (Secretogranin III) (SgIII)	Scg3	21	26	6	8

Q9WTX2	Interferon-inducible double stranded RNA-dependent protein kinase activator A (Protein kinase, interferon-inducible double stranded RNA-dependent activator) (Protein activator of the interferon-induced protein kinase) (PKR-associated protein X) (PKR-associating protein X) (RAX)	Prkra (Rax)	28	39	9	12
Q5SXJ3	Fanconi anemia group J protein homolog (Protein FACJ) (EC 3.6.1.-) (ATP-dependent RNA helicase BRIP1) (BRCA1-interacting protein C-terminal helicase 1) (BRCA1-interacting protein 1) (BRCA1-associated C-terminal helicase 1)	Brip1 (Bach1) (Fancj)	25	18	13	17
Q921C5	Protein bicaudal D homolog 2 (Bic-D 2)	Bicd2 (Kiaa0699)	31	23	26	34
P63163	Small nuclear ribonucleoprotein-associated protein N (snRNP-N) (Sm protein N) (Sm-N) (SmN) (Sm-D) (Tissue-specific-splicing protein)	Snrpn (Smn)	38	17	7	9
Q7TQ07	DNA polymerase nu (EC 2.7.7.7)	Poln	20	39	14	18
Q07133	Histone H1t (Testicular H1 histone)	Hist1h1t (H1ft) (H1t)	46	72	54	69
Q61496	Probable ATP-dependent RNA helicase DDX4 (EC 3.6.1.-) (DEAD box protein 4) (Vasa homolog) (Mvh)	Ddx4 (Vasa)	17	25	44	56
Q923B1	Lariat debranching enzyme (EC 3.1.-.-)	Dbr1	28	29	15	19
P27661	Histone H2A.x (H2a/x)	H2afx (H2a.x) (H2ax) (Hist5-2ax)	301	426	15	19
Q62093	Splicing factor, arginine/serine-rich 2 (Splicing factor SC35) (SC-35) (Splicing component, 35 kDa) (Protein PR264) (Putative myelin regulatory factor 1) (MRF-1)	Sfrs2 (Pr264) (Sfrs10)	184	117	15	19
P20152	Vimentin	Vim	1749	2397	125	157
Q80X50	Ubiquitin-associated protein 2-like	Ubap2l	63	54	4	5

O09010	Beta-1,3-N-acetylglucosaminyltransferase lunatic fringe (EC 2.4.1.222) (O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase)	Lfng	33	33	8	10
P17183	Gamma-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Neural enolase) (Neuron-specific enolase) (NSE) (Enolase 2)	Eno2 (Eno-2)	228	181	12	15
Q63ZW7	InaD-like protein (Inadl protein) (Pals1-associated tight junction protein) (Protein associated to tight junctions) (Channel-interacting PDZ domain-containing protein)	Inadl (Cipp) (Patj)	18	30	12	15
P31001	Desmin	Des	169	224	25	31
Q811J3	Iron-responsive element-binding protein 2 (IREBP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
Q61466	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 1 (SWI/SNF complex 60 kDa subunit) (60 kDa BRG-1/Brm-associated factor subunit A) (BRG1-associated factor 60A) (D15KZ1 protein)	Smarcd1 (Baf60a) (D15Kz1)	27	29	13	16
P59270	Galactosylgalactosylxylosylprotein 3-beta-glucuronosyltransferase 2 (EC 2.4.1.135) (Beta-1,3-glucuronyltransferase 2) (UDP-glucuronosyltransferase-S) (Glucuronosyltransferase-S) (GlcAT-S) (GlcAT-D)	B3gat2 (Glcats)	29	16	9	11
Q8VII8	Mineralocorticoid receptor (MR) (Nuclear receptor subfamily 3 group C member 2)	Nr3c2 (Mlr)	28	22	18	22

Q35618	Protein Mdm4 (p53-binding protein Mdm4) (Mdm2-like p53-binding protein) (Protein Mdmx) (Double minute 4 protein)	Mdm4 (Mdmx)	17	29	5	6
Q6PDM2	Splicing factor, arginine/serine-rich 1 (ASF/SF2)	Sfrs1	24	91	5	6
Q8VHS2	Crumbs homolog 1	Crb1	23	28	10	12
Q60848	Lymphocyte-specific helicase (EC 3.6.1.-) (Proliferation associated SNF2-like protein)	Hells (Lsh) (Pasg)	37	35	10	12
P05784	Keratin, type I cytoskeletal 18 (Cytokeratin-18) (CK-18) (Keratin-18) (K18) (Cytokeratin endo B) (Keratin D)	Krt18 (Kerd) (Krt1-18)	37	46	10	12
P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q9QUR6	Prolyl endopeptidase (PE) (EC 3.4.21.26) (Post-proline cleaving enzyme)	Prep (Pep)	56	20	15	18
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
Q9JKF1	Ras GTPase-activating-like protein IQGAP1	Iqgap1	19	81	21	25
O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
Q61171	Peroxiredoxin-2 (EC 1.11.1.15) (Thioredoxin peroxidase 1) (Thioredoxin-dependent peroxide reductase 1) (Thiol-specific antioxidant protein) (TSA)	Prdx2 (Tdp1) (Tpx)	568	898	47	55
Q80XA6	RalBP1-associated Eps domain-containing protein 2 (RalBP1-interacting protein 2) (Partner of RalBP1)	Reps2 (Pob1)	33	31	6	7

Q6GSS7	Histone H2A type 2-A (H2A.2) (H2a-614) (H2a-615)	Hist2h2aa1; Hist2h2aa2	505	763	18	21
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
Q3UEN2	Protein FAM35	Fam35	21	41	13	15
Q5SPW0	Vacuolar protein sorting-associated protein 54 (Tumor antigen SLP-8p homolog)	Vps54	36	28	13	15
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
Q9JKP5	Muscleblind-like protein 1 (Triplet-expansion RNA-binding protein)	Mbnl1 (Exp) (Mbnl)	45	63	244	281
Q9Z2K1	Keratin, type I cytoskeletal 16 (Cytokeratin-16) (CK-16) (Keratin-16) (K16)	Krt16 (Krt1-16)	37	37	7	8
Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
P40124	Adenylyl cyclase-associated protein 1 (CAP 1)	Cap1 (Cap)	22	43	8	9
Q91X97	Neurocalcin-delta	Ncald (D15Ert412e)	85	82	8	9
Q921M3	Splicing factor 3B subunit 3 (Spliceosome-associated protein 130) (SAP 130) (Pre-mRNA splicing factor SF3b 130 kDa subunit) (SF3b130)	Sf3b3 (Kiaa0017)	16	34	24	27

Q9WUU9	80 kDa MCM3-associated protein (Protein GANP)	Mcm3ap (Ganp) (Map80)	48	32	17	19
Q9WUF3	CASP8-associated protein 2 (FLICE-associated huge protein)	Casp8ap2 (Flash)	28	16	26	29
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
P62631	Elongation factor 1-alpha 2 (EF-1-alpha-2) (Elongation factor 1 A-2) (eEF1A-2) (Statin S1)	Eef1a2 (Eef1a) (Str)	1275	1549	258	285
Q93092	Transaldolase (EC 2.2.1.2)	Taldo1 (Tal) (Taldo)	20	93	10	11
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
Q3THS6	S-adenosylmethionine synthetase isoform type 2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50
P70298	Homeobox protein cut-like 2 (Cut-like 2) (Homeobox protein Cux-2)	Cux2 (Cutl2)	30	22	12	13



P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
P10126	Elongation factor 1-alpha 1 (EF-1-alpha-1) (Elongation factor 1 A-1) (eEF1A-1) (Elongation factor Tu) (EF-Tu)	Eef1a1 (Eef1a)	2004	2344	305	330
P08113	Endoplasmin (Heat shock protein 90 kDa beta member 1) (94 kDa glucose-regulated protein) (GRP94) (ERP99) (Polymorphic tumor rejection antigen 1) (Tumor rejection antigen gp96)	Hsp90b1 (Tra-1) (Tra1)	221	298	25	27
Q9Z104	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily E member 1-related (SMARCE1-related protein) (HMG box-containing protein 20B) (Structural DNA-binding protein BRAF35) (BRCA2-associated factor 35)	Hmg20b (Braf35) (Hmgx2) (Smarce1r)	30	20	14	15
Q8CH62	Oral cancer overexpressed protein 1 homolog	Oraov1	37	31	14	15
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
P70398	Probable ubiquitin carboxyl-terminal hydrolase FAF-X (EC 3.1.2.15) (Ubiquitin thioesterase FAF-X) (Ubiquitin-specific-processing protease FAF-X) (Deubiquitinating enzyme FAF-X) (Fat facets protein-related, X-linked) (Ubiquitin-specific protease 9, X chromosome) (Ubiquitin carboxyl-terminal hydrolase FAM) (Fat facets homolog)	Usp9x (Faf1) (Fam)	42	28	57	61

Q8BKX6	Serine/threonine-protein kinase SMG1 (SMG-1) (EC 2.7.11.1)	Smg1 (Kiaa0421)	33	27	30	32
P16858	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) (EC 1.2.1.12)	Gapdh (Gapd)	1514	1781	84	89
P62242	40S ribosomal protein S8	Rps8	479	372	18	19
Q76MZ3	Serine/threonine-protein phosphatase 2A 65 kDa regulatory subunit A alpha isoform (PP2A, subunit A, PR65-alpha isoform) (PP2A, subunit A, R1-alpha isoform)	Ppp2r1a	142	242	22	23
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
Q62504	Msx2-interacting protein (SPEN homolog) (SMART/HDAC1-associated repressor protein)	Spn (Kiaa0929) (Mint) (Sharp)	27	18	72	75
Q6P4S8	Integrator complex subunit 1 (Int1)	Ints1	25	33	26	27
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
Q8CGM2	Retinitis pigmentosa 1-like 1 protein (Retinitis pigmentosa 1-like protein 1)	Rp111 (Rp1hl1)	30	21	58	60
P09586	Prolactin-3B1 (Chorionic somatomammotropin hormone 2) (Placental lactogen II) (PL-II)	Prl3b1 (Csh2) (PI-2) (PI2)	29	21	2	2
P26350	Prothymosin alpha [Cleaved into: Thymosin alpha]	Ptma	34	120	2	2
P62141	Serine/threonine-protein phosphatase PP1-beta catalytic subunit (PP-1B) (EC 3.1.3.16)	Ppp1cb	177	57	4	4
Q8VCZ3	THAP domain-containing protein 7	Thap7	26	18	6	6
O88693	Ceramide glucosyltransferase (EC 2.4.1.80) (Glucosylceramide synthase) (GCS) (UDP-glucose:N-acylsphingosine D-glucosyltransferase) (UDP-glucose ceramide glucosyltransferase) (GLCT-1)	Ugcg	37	50	7	7

Q9R1P1	Proteasome subunit beta type-3 (EC 3.4.25.1) (Proteasome theta chain) (Proteasome chain 13) (Proteasome component C10-II)	Psmb3	87	135	7	7
Q8VC28	Aldo-keto reductase family 1 member C13 (EC 1.1.1.-)	Akr1c13	32	23	8	8
Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
Q99LX0	Protein DJ-1 (Parkinson disease protein 7 homolog)	Park7	53	178	9	9
Q9D289	Trafficking protein particle complex subunit 6B	Trappc6b	62	69	9	9
Q61781	Keratin, type I cytoskeletal 14 (Cytokeratin-14) (CK-14) (Keratin-14) (K14)	Krt14 (Krt1-14)	38	37	10	10
Q9CQ60	6-phosphogluconolactonase (6PGL) (EC 3.1.1.31)	Pgls	148	41	11	11
Q9WV80	Sorting nexin-1	Snx1	23	49	11	11
Q61092	Laminin subunit gamma-2 (Laminin 5 gamma 2 subunit) (Kalinin/nicein/epiligrin 100 kDa subunit) (Laminin B2t chain)	Lamc2	33	29	13	13
Q9DB77	Cytochrome b-c1 complex subunit 2, mitochondrial (Ubiquinol-cytochrome-c reductase complex core protein 2) (Core protein II) (Complex III subunit 2)	Uqcrc2	29	20	13	13
P25206	DNA replication licensing factor MCM3 (DNA polymerase alpha holoenzyme-associated protein P1) (P1-MCM3)	Mcm3 (Mcmd) (Mcmd3)	74	185	15	15
Q01098	Glutamate [NMDA] receptor subunit epsilon-3 (N-methyl D-aspartate receptor subtype 2C) (NMDAR2C) (NR2C)	Grin2c	18	33	15	15
P30681	High mobility group protein B2 (High mobility group protein 2) (HMG-2)	Hmgb2 (Hmg2)	94	222	24	24
Q80UK8	Integrator complex subunit 2 (Int2)	Ints2 (Kiaa1287)	16	27	24	24

P11499	Heat shock protein HSP 90-beta (HSP 84) (Tumor-specific transplantation 84 kDa antigen) (TSTA)	Hsp90ab1 (Hsp84) (Hsp84-1) (Hspcb)	2943	3523	208	205
P58252	Elongation factor 2 (EF-2)	Eef2	1630	1718	128	126
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (CsmA) (Eif3) (Eif3s10)	199	166	58	56
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S-)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
P54869	Hydroxymethylglutaryl-CoA synthase, mitochondrial (HMG-CoA synthase) (EC 2.3.3.10) (3-hydroxy-3-methylglutaryl coenzyme A synthase)	Hmgcs2	26	23	18	17
P03966	N-myc proto-oncogene protein	Mycn (Nmyc) (Nmyc1)	65	46	18	17
P97412	Lysosomal-trafficking regulator (Beige protein) (CHS1 homolog)	Lyst (Bg) (Chs1)	46	27	33	31
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14

Q99PF4	Cadherin-23 (Otocadherin)	Cdh23	29	32	29	27
Q8CGC6	RNA-binding protein 28 (RNA-binding motif protein 28)	Rbm28	24	41	71	66
Q9D6Z1	Nucleolar protein 5A (Nucleolar protein Nop56)	Nol5a (Nop56)	38	39	14	13
Q8R5G7	Centaurin-delta-3 (Cnt-d3) (Arf-GAP, Rho-GAP, ankyrin repeat and pleckstrin homology domain-containing protein 3) (Dual specificity Rho- and Arf-GTPase-activating protein 1)	Centd3 (Arap3) (Drag1) (Kiaa4097)	21	27	26	24
Q7TMY8	E3 ubiquitin-protein ligase HUWE1 (EC 6.3.2.-) (HECT, UBA and WWE domain-containing protein 1) (Upstream regulatory element-binding protein 1) (URE-binding protein 1) (URE-B1) (E3Histone)	Huwe1 (Kiaa0312) (Ureb1)	33	91	39	36
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
P43277	Histone H1.3 (H1 VAR.4) (H1d)	Hist1h1d (H1f3)	78	99	18	16
Q9QXA7	Tripartite motif-containing protein 44 (Protein DIPB) (Protein Mc7)	Trim44 (Dipb)	28	23	18	16
Q68FD5	Clathrin heavy chain 1	Cltc	944	884	88	78
Q9DBJ1	Phosphoglycerate mutase 1 (EC 5.4.2.1) (EC 5.4.2.4) (EC 3.1.3.13) (Phosphoglycerate mutase isozyme B) (PGAM-B) (BPG-dependent PGAM 1)	Pgam1	612	746	35	31
Q99PG2	Opioid growth factor receptor (OGFr) (Zeta-type opioid receptor)	Ogfr	38	24	8	7
Q924C1	Exportin-5 (Exp5) (Ran-binding protein 21)	Xpo5 (Kiaa1291) (Ranbp21)	20	62	15	13

P21550	Beta-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Muscle-specific enolase) (MSE) (Skeletal muscle enolase) (Enolase 3)	Eno3 (Eno-3)	313	146	30	26
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
Q9CYF5	Williams-Beuren syndrome chromosomal region 16 protein homolog	Wbscr16	38	28	7	6
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
P97784	Cryptochrome-1	Cry1	52	42	21	18
Q9R194	Cryptochrome-2	Cry2 (Kiaa0658)	52	42	21	18
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
Q91VW5	Golgin subfamily A member 4 (tGolgin-1)	Golga4	41	60	46	39
Q9R0L6	Pericentriolar material 1 protein (PCM-1) (mPCM-1)	Pcm1	24	30	19	16
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
P46664	Adenylosuccinate synthetase isozyme 2 (AMPSase 2) (AdSS 2) (EC 6.3.4.4) (Adenylosuccinate synthetase, non-muscle isozyme) (Adenylosuccinate synthetase, acidic isozyme) (IMP--aspartate ligase 2)	Adss (Adss2)	36	66	12	10
Q8R4U0	Stabilin-2 (Fasciclin, EGF-like, laminin-type EGF-like and link domain-containing scavenger receptor 2) (FEEL-2) [Cleaved into: Short form stabilin-2]	Stab2 (Feel2)	25	43	12	10
Q99PP7	E3 ubiquitin-protein ligase TRIM33 (EC 6.3.2.-) (Tripartite motif-containing protein 33) (Transcription intermediary factor 1-gamma) (TIF1-gamma) (Ectodermin homolog)	Trim33 (Kiaa1113)	33	25	12	10

Q05816	Fatty acid-binding protein, epidermal (E-FABP) (Fatty acid-binding protein 5) (Psoriasis-associated fatty acid-binding protein homolog) (PA-FABP) (Keratinocyte lipid-binding protein)	Fabp5 (Fabpe) (Klbp) (Mal1)	331	206	18	15
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
P09405	Nucleolin (Protein C23)	Ncl (Nuc)	775	872	78	65
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9
Q6ZQ38	Cullin-associated NEDD8-dissociated protein 1 (Cullin-associated and neddylation-dissociated protein 1) (p120 CAND1)	Cand1 (D10Erd516e) (Kiaa0829)	221	246	33	27
P42227	Signal transducer and activator of transcription 3 (Acute-phase response factor)	Stat3 (Aprf)	16	28	33	27
Q569Z5	Probable ATP-dependent RNA helicase DDX46 (EC 3.6.1.-) (DEAD box protein 46)	Ddx46 (Kiaa0801)	25	17	21	17
P17182	Alpha-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Non-neural enolase) (NNE) (Enolase 1)	Eno1 (Eno-1)	976	802	62	50
Q924C6	Lysyl oxidase homolog 4 (EC 1.4.3.-) (Lysyl oxidase-like protein 4) (Lysyl oxidase-related protein C)	Loxl4 (Loxc)	15	28	5	4
Q5XJY5	Coatomer subunit delta (Delta-coat protein) (Delta-COP) (Archain)	Arcn1 (Copd)	61	45	10	8
Q9Z1M8	Protein Red (Protein RER) (IK factor) (Cytokine IK)	Ik (Red) (Rer)	29	23	10	8

Q9Z2U0	Proteasome subunit alpha type-7 (EC 3.4.25.1) (Proteasome subunit RC6-1)	Psm7	121	253	15	12
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q99MD9	Nuclear autoantigenic sperm protein (NASP)	Nasp	365	293	34	27
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
P63325	40S ribosomal protein S10	Rps10	468	168	42	33
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
Q6A078	Centrosomal protein of 290 kDa (Cep290) (Nephrocystin-6)	Cep290 (Kiaa0373) (Nphp6)	32	57	85	66
P06151	L-lactate dehydrogenase A chain (LDH-A) (EC 1.1.1.27) (LDH muscle subunit) (LDH-M)	Ldha (Ldh-1) (Ldh1)	1033	421	74	57
P62748	Hippocalcin-like protein 1 (Visinin-like protein 3) (VILIP-3) (Neural visinin-like protein 3) (NVL-3) (NVP-3)	Hpcal1	59	97	13	10
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
Q8JZQ2	AFG3-like protein 2 (EC 3.4.24.-)	Afg3l2	15	27	17	13
Q8BHS8	Syntabulin (Syntaxin-1-binding protein) (Golgi-localized syntaphilin-related protein) (m-Golsyn)	Sybu (Golsyn) (Kiaa1472)	32	19	17	13
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35



P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
Q9QYB1	Chloride intracellular channel protein 4 (mc3s5/mtCLIC)	Clic4	28	33	4	3
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
P25233	Necdin	Ndn	30	23	16	12
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
Q9D8V0	Minor histocompatibility antigen H13 (EC 3.4.23.-) (Signal peptide peptidase) (Presenilin-like protein 3)	Hm13 (H13) (Psi3)	23	29	28	21
Q8R5F3	Uncharacterized protein C6orf130 homolog		64	29	31	23
Q4VGL6	Roquin (RING finger and C3H zinc finger protein 1) (Protein Sanroque)	Rc3h1 (Gm551) (Kiaa2025)	54	54	23	17
P58681	Toll-like receptor 7	Tlr7	27	33	23	17
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
Q61656	Probable ATP-dependent RNA helicase DDX5 (EC 3.6.1.-) (DEAD box protein 5) (RNA helicase p68) (DEAD box RNA helicase DEAD1) (mDEAD1)	Ddx5 (Tnz2)	90	43	11	8
Q91Z67	SLIT-ROBO Rho GTPase-activating protein 2 (srGAP2) (Formin-binding protein 2) (Formin-binding protein 27) (FBP-27)	Srgap2 (Fbp27) (Fnbp2)	77	48	11	8

P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
Q9CQ65	S-methyl-5'-thioadenosine phosphorylase (EC 2.4.2.28) (5'-methylthioadenosine phosphorylase) (MTA phosphorylase) (MTAPase)	Mtap	48	36	7	5
Q99LG2	Transportin-2 (Karyopherin beta-2b)	Tnpo2	42	32	7	5
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptpn (Ptp35)	30	18	14	10
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
Q03172	Zinc finger protein 40 (Transcription factor alphaA-CRYBP1) (Alpha A-crystallin-binding protein I) (Alpha A-CRYBP1)	Hivep1 (Cryabp1) (Znf40)	25	24	21	15
P17751	Triosephosphate isomerase (TIM) (EC 5.3.1.1) (Triose-phosphate isomerase)	Tpi1 (Tpi)	706	519	35	25
P08551	Neurofilament light polypeptide (NF-L) (Neurofilament triplet L protein) (68 kDa neurofilament protein)	Nefl (Nf68) (Nfl)	51	36	17	12
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q6ZQ12	Ninein-like protein	Nlp (Kiaa0980)	15	34	23	16
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9

Q64707	U2 small nuclear ribonucleoprotein auxiliary factor 35 kDa subunit-related protein 1 (U2(RNU2) small nuclear RNA auxiliary factor 1-like 1) (CCCH type zinc finger, RNA-binding motif and serine/arginine rich protein 1) (SP2)	Zrsr1 (Sp2) (Sp2-7) (U2af1rs1) (U2af111)	34	22	13	9
Q52KI8	Serine/arginine repetitive matrix protein 1 (Plenty-of-prolines 101)	Srrm1 (Pop101)	22	73	29	20
Q99PV0	Pre-mRNA-processing-splicing factor 8 (Splicing factor Prp8)	Prpf8 (Prp8)	28	29	51	35
P68040	Guanine nucleotide-binding protein subunit beta-2-like 1 (Receptor of activated protein kinase C 1) (RACK1) (Receptor for activated C kinase) (p205) (12-3)	Gnb2l1 (Gnb2-rs1)	541	153	35	24
Q9QYC1	Pecanex-like protein 1 (Pecanex homolog)	Pcnx (Kiaa0805) (Pcnx1)	26	21	25	17
P29391	Ferritin light chain 1 (Ferritin L subunit 1)	Ftl1 (Ftl) (Ftl-1)	150	159	6	4
P43275	Histone H1.1 (H1 VAR.3) (H1a)	Hist1h1a (H1f1)	28	90	9	6
P61979	Heterogeneous nuclear ribonucleoprotein K (hnRNP K)	Hnrnpk (Hnrpk)	225	46	18	12
Q9Z0T6	Polycystic kidney disease and receptor for egg jelly-related protein (PKD and REJ homolog)	Pkdrej	32	32	18	12
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
Q924W6	Tripartite motif-containing protein 66 (Transcriptional intermediary factor 1 delta)	Trim66 (Tif1d)	28	18	23	15
P40142	Transketolase (TK) (EC 2.2.1.1) (P68)	Tkt	562	250	117	75
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
Q8CG48	Structural maintenance of chromosomes protein 2 (Chromosome-associated protein E) (XCAP-E homolog) (FGF-inducible protein 16)	Smc2 (Cape) (Fin16) (Smc2l1)	32	36	41	26

Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
Q9QZ09	Putative homeodomain transcription factor 1	Phtf1 (Phtf)	29	24	8	5
Q8C7H1	Methylmalonic aciduria type A homolog, mitochondrial	Mmaa	31	37	16	10
Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (Ubpy)	29	23	24	15
P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
Q3UXZ6	Protein FAM81A	Fam81a	22	27	13	8
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
O08709	Peroxiredoxin-6 (EC 1.11.1.15) (Antioxidant protein 2) (1-Cys peroxiredoxin) (1-Cys PRX) (Acidic calcium-independent phospholipase A2) (aiPLA2) (EC 3.1.1.-) (Non-selenium glutathione peroxidase) (NSGPx) (EC 1.11.1.7)	Prdx6 (Aop2) (Ltw4) (Prdx5)	56	29	5	3
Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
P26040	Ezrin (p81) (Cytovillin) (Villin-2)	Ezr (Vil2)	127	106	27	16

P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
P09041	Phosphoglycerate kinase 2 (EC 2.7.2.3) (Phosphoglycerate kinase, testis specific)	Pgk2 (Pgk-2)	162	73	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
P53762	Aryl hydrocarbon receptor nuclear translocator (ARNT protein) (Dioxin receptor, nuclear translocator) (Hypoxia-inducible factor 1 beta) (HIF-1 beta)	Arnt	25	22	7	4
Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
P26043	Radixin (ESP10)	Rdx	127	106	23	13
P49722	Proteasome subunit alpha type-2 (EC 3.4.25.1) (Proteasome component C3) (Macropain subunit C3) (Multicatalytic endopeptidase complex subunit C3)	Psm2 (Lmpc3)	188	103	16	9
Q9R1X4	Protein timeless homolog (mTim)	Timeless (Tim1) (Timeless1)	22	25	16	9
P97461	40S ribosomal protein S5	Rps5	89	33	32	18
Q8K219	F-box only protein 18 (EC 3.6.1.-) (F-box DNA helicase 1)	Fbxo18 (Fbh1) (Fbx18)	30	23	9	5

P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5	
Q8BYH8	Chromodomain-helicase-DNA-binding protein 9 (CHD-9) (EC 3.6.1.-) (ATP-dependent helicase CHD9) (Peroxisomal proliferator-activated receptor A-interacting complex 320 kDa protein) (PPAR-alpha-interacting complex protein 320 kDa)	Chd9 (Kiaa0308) (Pric320)	39	27	49	27	
P17918	Proliferating cell nuclear antigen (PCNA) (Cyclin)	Pcna	273	207	20	11	
Q9WTU3	Sodium channel protein type 8 subunit alpha (Sodium channel protein type VIII subunit alpha) (Voltage-gated sodium channel subunit alpha Nav1.6)	Scn8a (Nbna1)	28	19	20	11	
Q9WUJ8	Origin recognition complex subunit 6	Orc6l (Orc6)	59	37	13	7	
O88844	Isocitrate dehydrogenase [NADP] cytoplasmic (IDH) (EC 1.1.1.42) (Cytosolic NADP-isocitrate dehydrogenase) (Oxalosuccinate decarboxylase) (NADP(+)-specific ICDH) (IDP)	Idh1	155	163	15	8	
P11103	Poly [ADP-ribose] polymerase 1 (PARP-1) (EC 2.4.2.30) (ADPRT) (NAD(+) ADP-ribosyltransferase 1) (Poly[ADP-ribose] synthetase 1) (msPARP)	Parp1 (Adprp) (Adprt) (Adprt1)	21	26	17	9	
P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26	
Transferase	P10639	Thioredoxin (Trx) (ATL-derived factor) (ADF)	Txn (Txn1)	169	914	22	42
	Q3TCT4	Ectonucleoside triphosphate diphosphohydrolase 7 (NTPDase 7) (EC 3.6.1.-) (Lysosomal apyrase-like protein 1)	Entpd7 (Kiaa4066) (Lalp1)	16	33	42	80
	Q9CQE1	Protein NipSnap homolog 3A (NipSnap3A) (NipSnap-related protein)	Nipsnap3a (Nipsnap3b)	15	25	16	29
	P56716	Oxygen-regulated protein 1 (Retinitis pigmentosa RP1 protein homolog)	Rp1 (Orp1) (Rp1h)	31	49	58	104
	Q8K2P1	Uncharacterized protein C9orf150 homolog	D4Bwg0951e	21	32	51	91

Q8BYC6	Serine/threonine-protein kinase TAO3 (EC 2.7.11.1) (Thousand and one amino acid protein 3)	Taok3	32	38	9	16
Q64674	Spermidine synthase (SPDSY) (EC 2.5.1.16) (Putrescine aminopropyltransferase)	Srm	55	29	4	7
P56198	Cell death activator CIDE-3 (Cell death-inducing DFFA-like effector protein C) (Fat-specific protein FSP27)	Cidec (Fsp27)	51	39	8	14
Q8QZR5	Alanine aminotransferase 1 (ALT1) (EC 2.6.1.2) (Glutamic--pyruvic transaminase 1) (Glutamate pyruvate transaminase 1) (GPT 1) (Glutamic--alanine transaminase 1)	Gpt (Gpt1)	25	20	15	26
Q9D009	Putative octanoyltransferase, mitochondrial (EC 2.3.1.181) (Octanoyl-[acyl-carrier-protein]-protein N-octanoyltransferase) (Lipoyl/octanoyl transferase) (Lipoate-protein ligase B)		38	42	11	19
P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78

P15532	Nucleoside diphosphate kinase A (NDP kinase A) (NDK A) (EC 2.7.4.6) (Tumor metastatic process-associated protein) (Metastasis inhibition factor NM23) (NDPK-A) (nm23-M1)	Nme1 (Nm23)	150	261	8	13
P19157	Glutathione S-transferase P 1 (Gst P1) (EC 2.5.1.18) (GST YF-YF) (GST-piB) (GST class-pi) (Preadipocyte growth factor)	Gstp1 (Gstpib)	473	572	10	16
Q8BGT5	Alanine aminotransferase 2 (ALT2) (EC 2.6.1.2) (Glutamic--pyruvic transaminase 2) (Glutamate pyruvate transaminase 2) (GPT 2) (Glutamic--alanine transaminase 2)	Gpt2 (Aat2)	25	20	15	24
Q61990	Poly(rC)-binding protein 2 (Alpha-CP2) (Putative heterogeneous nuclear ribonucleoprotein X) (hnRNP X) (CTBP) (CBP)	Pcbp2 (Cbp) (HnrnpX) (Hnrpx)	29	194	7	11
P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
Q9CQY5	Magnesium transporter protein 1 (MagT1) (Implantation-associated protein) (IAP)	Magt1 (Iag2)	26	22	8	12
Q99K85	Phosphoserine aminotransferase (PSAT) (EC 2.6.1.52) (Phosphohydroxythreonine aminotransferase) (Endometrial progesterone-induced protein) (EPIP)	Psat1 (Psa) (Psat)	162	541	16	24
Q9QZ39	Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 1 (EC 2.4.99.3) (GalNAc alpha-2,6-sialyltransferase I) (ST6GalNAc I) (Sialyltransferase 7A)	St6galnac1 (Siat7a)	27	18	11	16
P60335	Poly(rC)-binding protein 1 (Alpha-CP1) (hnRNP-E1)	Pcbp1	56	350	9	13
P12813	Nuclear receptor subfamily 4 group A member 1 (Orphan nuclear receptor HMR) (Nuclear hormone receptor NUR/77) (N10 nuclear protein)	Nr4a1 (Gfrp) (Hmr) (N10) (Nur77)	61	31	7	10



Q99M73	Keratin, type II cuticular Hb4 (Type II hair keratin Hb4) (Keratin-84) (K84) (65 kDa type II keratin)	Krt84 (Krt2-16) (Krt84) (Krt84) (Krt84)	36	74	14	19
P70338	Zinc finger protein Gfi-1 (Growth factor independent protein 1)	Gfi1 (Gfi-1)	45	39	17	23
Q6P8J2	Diamine acetyltransferase 2 (EC 2.3.1.57) (Spermidine/spermine N(1)-acetyltransferase 2) (Polyamine N-acetyltransferase 2)	Sat2 (Ssat2)	33	23	6	8
P47867	Secretogranin-3 (Secretogranin III) (SgIII)	Scg3	21	26	6	8
Q9WTX2	Interferon-inducible double stranded RNA-dependent protein kinase activator A (Protein kinase, interferon-inducible double stranded RNA-dependent activator) (Protein activator of the interferon-induced protein kinase) (PKR-associated protein X) (PKR-associating protein X) (RAX)	Prkra (Rax)	28	39	9	12
Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34
Q7TQ07	DNA polymerase nu (EC 2.7.7.7)	Poln	20	39	14	18
O70456	14-3-3 protein sigma (Stratifin)	Sfn (Mkrn3)	573	666	56	71
Q923B1	Lariat debranching enzyme (EC 3.1.-.-)	Dbr1	28	29	15	19
Q60716	Prolyl 4-hydroxylase subunit alpha-2 (EC 1.14.11.2) (4-PH alpha-2) (Procollagen-proline,2-oxoglutarate-4-dioxygenase subunit alpha-2)	P4ha2	22	27	8	10
P59270	Galactosylgalactosylxylosylprotein 3-beta-glucuronosyltransferase 2 (EC 2.4.1.135) (Beta-1,3-glucuronyltransferase 2) (UDP-glucuronosyltransferase-S) (Glucuronosyltransferase-S) (GlcAT-S) (GlcAT-D)	B3gat2 (Glcats)	29	16	9	11

Q9R1P0	Proteasome subunit alpha type-4 (EC 3.4.25.1) (Proteasome component C9) (Macropain subunit C9) (Multicatalytic endopeptidase complex subunit C9) (Proteasome subunit L)	Psma4	29	151	14	17
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
Q9EQC4	Elongation of very long chain fatty acids protein 4	Elov14	25	18	5	6
O35618	Protein Mdm4 (p53-binding protein Mdm4) (Mdm2-like p53-binding protein) (Protein Mdmx) (Double minute 4 protein)	Mdm4 (Mdmx)	17	29	5	6
P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q8BFY9	Transportin-1 (Importin beta-2) (Karyopherin beta-2)	Tnpo1 (Kpnb2)	54	43	10	12
Q80XA6	RalBP1-associated Eps domain-containing protein 2 (RalBP1-interacting protein 2) (Partner of RalBP1)	Reps2 (Pob1)	33	31	6	7
P55821	Stathmin-2 (Superior cervical ganglion-10 protein) (Protein SCG10)	Stmn2 (Scg10) (Scgn10) (Stmb2)	74	73	6	7
Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16

P97820	Mitogen-activated protein kinase kinase kinase kinase 4 (EC 2.7.11.1) (MAPK/ERK kinase kinase kinase 4) (MEK kinase kinase 4) (MEKKK 4) (HPK/GCK-like kinase HGK) (Nck-interacting kinase)	Map4k4 (Nik)	65	54	15	17
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
Q93092	Transaldolase (EC 2.2.1.2)	Taldo1 (Tal) (Taldo)	20	93	10	11
Q3THS6	S-adenosylmethionine synthetase isoform type 2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
Q9DBR7	Protein phosphatase 1 regulatory subunit 12A (Myosin phosphatase-targeting subunit 1) (Myosin phosphatase target subunit 1)	Ppp1r12a (Mypt1)	88	67	18	19
Q62504	Msx2-interacting protein (SPEN homolog) (SMART/HDAC1-associated repressor protein)	Spen (Kiaa0929) (Mint) (Sharp)	27	18	72	75
O88693	Ceramide glucosyltransferase (EC 2.4.1.80) (Glucosylceramide synthase) (GCS) (UDP-glucose:N-acylsphingosine D-glucosyltransferase) (UDP-glucose ceramide glucosyltransferase) (GLCT-1)	Ugcg	37	50	7	7
Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
Q61092	Laminin subunit gamma-2 (Laminin 5 gamma 2 subunit) (Kalinin/nicein/epiligrin 100 kDa subunit) (Laminin B2t chain)	Lamc2	33	29	13	13

Q9QYX7	Protein piccolo (Aczonin) (Multidomain presynaptic cytomatrix protein) (Brain-derived HLMN protein)	Pclo (Acz)	101	117	114	114
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
P03995	Glial fibrillary acidic protein (GFAP)	Gfap	63	90	22	20
Q8R4U7	Leucine zipper protein 1 (Leucine zipper motif-containing protein)	Luzp1 (Luzp)	31	32	22	20
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q9QXA7	Tripartite motif-containing protein 44 (Protein DIPB) (Protein Mc7)	Trim44 (Dipb)	28	23	18	16
Q68FD5	Clathrin heavy chain 1	Cltc	944	884	88	78
Q02053	Ubiquitin-like modifier-activating enzyme 1 (Ubiquitin-activating enzyme E1) (Ubiquitin-like modifier-activating enzyme 1 X) (Ubiquitin-activating enzyme E1 X)	Uba1 (Sbx) (Ube1) (Ube1ax) (Ube1x)	660	1086	63	55
Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62

Q9JM52	Misshapen-like kinase 1 (EC 2.7.11.1) (Mitogen-activated protein kinase kinase kinase 6) (MAPK/ERK kinase kinase 6) (MEK kinase kinase 6) (MEKKK 6) (Misshapen/NIK-related kinase) (GCK family kinase MiNK)	Mink1 (Map4k6) (Mink)	18	54	13	11
P46664	Adenylosuccinate synthetase isozyme 2 (AMPSase 2) (AdSS 2) (EC 6.3.4.4) (Adenylosuccinate synthetase, non-muscle isozyme) (Adenylosuccinate synthetase, acidic isozyme) (IMP--aspartate ligase 2)	Adss (Adss2)	36	66	12	10
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
P19096	Fatty acid synthase (EC 2.3.1.85) [Includes: [Acyl-carrier-protein] S-acetyltransferase (EC 2.3.1.38); [Acyl-carrier-protein] S-malonyltransferase (EC 2.3.1.39); 3-oxoacyl-[acyl-carrier-protein] synthase (EC 2.3.1.41); 3-oxoacyl-[acyl-carrier-protein] reductase (EC 1.1.1.100); 3-hydroxypalmitoyl-[acyl-carrier-protein] dehydratase (EC 4.2.1.61); Enoyl-[acyl-carrier-protein] reductase (EC 1.3.1.10); Oleoyl [acyl-carrier-protein] hydrolase (EC 3.1.2.14)]	Fasn	1869	1524	163	135
P42227	Signal transducer and activator of transcription 3 (Acute-phase response factor)	Stat3 (Aprf)	16	28	33	27
Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100

Q80UN9	tRNA isopentenyltransferase, mitochondrial (IPTase) (EC 2.5.1.8) (Isopentenyl-diphosphate:tRNA isopentenyltransferase) (IPP transferase) (IPPT)	Trit1 (lpt)	31	24	19	15
P31254	Ubiquitin-like modifier-activating enzyme 1 Y (Ubiquitin-activating enzyme E1 Y) (Ubiquitin-activating enzyme E1)	Ube1ay (Sby) (Ube1y) (Ube1y1)	161	77	22	17
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
P47856	Glucosamine--fructose-6-phosphate aminotransferase [isomerizing] 1 (EC 2.6.1.16) (Glutamine:fructose 6 phosphate amidotransferase 1) (GFAT 1) (GFAT1) (D-fructose-6-phosphate amidotransferase 1) (Hexosephosphate aminotransferase 1)	Gfpt1 (Gfpt)	17	29	17	13
P58043	Sestrin-2	Sesn2 (Sest2)	21	34	4	3
Q9DBG5	Mannose-6-phosphate receptor-binding protein 1 (Cargo selection protein TIP47)	M6prbp1 (Tip47)	25	22	8	6
Q8K045	Serine/threonine-protein kinase N3 (EC 2.7.11.13) (Protein kinase PKN-beta) (Protein-kinase C-related kinase 3)	Pkn3 (Pknbeta)	130	126	36	27
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
Q9CQ65	S-methyl-5'-thioadenosine phosphorylase (EC 2.4.2.28) (5'-methylthioadenosine phosphorylase) (MTA phosphorylase) (MTAPase)	Mtap	48	36	7	5
Q03172	Zinc finger protein 40 (Transcription factor alphaA-CRYBP1) (Alpha A-crystallin-binding protein I) (Alpha A-CRYBP1)	Hivep1 (Cryabp1) (Znf40)	25	24	21	15
Q99LD8	N(G),N(G)-dimethylarginine dimethylaminohydrolase 2 (Dimethylarginine dimethylaminohydrolase 2) (DDAH-2) (EC 3.5.3.18) (DDAHII) (Dimethylargininase-2)	Ddah2	103	92	9	6

Q8CAY6	Acetyl-CoA acetyltransferase, cytosolic (EC 2.3.1.9) (Cytosolic acetoacetyl-CoA thiolase)	Acat2	65	18	9	6
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
P40142	Transketolase (TK) (EC 2.2.1.1) (P68)	Tkt	562	250	117	75
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
P63042	Stathmin-4 (Stathmin-like protein B3) (RB3)	Stmn4	74	53	8	5
Q68ED2	Metabotropic glutamate receptor 7 (mGluR7)	Grm7 (Gprc1g) (Mglur7)	37	33	13	8
Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
Q9QWK5	Baculoviral IAP repeat-containing protein 1a (Neuronal apoptosis inhibitory protein 1)	Naip1 (Birc1a) (Naip)	21	28	20	12
Q8R4K8	Pappalysin-1 (EC 3.4.24.79) (Pregnancy-associated plasma protein A) (PAPP-A) (Insulin-like growth factor-dependent IGF-binding protein 4 protease) (IGF-dependent IGFBP-4 protease) (IGFBP-4ase)	Pappa	41	43	25	15
P09041	Phosphoglycerate kinase 2 (EC 2.7.2.3) (Phosphoglycerate kinase, testis specific)	Pgk2 (Pgk-2)	162	73	17	10
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (Sl)	16	35	12	7

	P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
	P53762	Aryl hydrocarbon receptor nuclear translocator (ARNT protein) (Dioxin receptor, nuclear translocator) (Hypoxia-inducible factor 1 beta) (HIF-1 beta)	Arnt	25	22	7	4
	Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
	P17918	Proliferating cell nuclear antigen (PCNA) (Cyclin)	Pcna	273	207	20	11
	P11103	Poly [ADP-ribose] polymerase 1 (PARP-1) (EC 2.4.2.30) (ADPRT) (NAD(+) ADP-ribosyltransferase 1) (Poly[ADP-ribose] synthetase 1) (msPARP)	Parp1 (Adprp) (Adprt) (Adprt1)	21	26	17	9
	P10649	Glutathione S-transferase Mu 1 (EC 2.5.1.18) (GST class-mu 1) (Glutathione S-transferase GT8.7) (pmGT10) (GST 1-1)	Gstm1	1081	522	61	31
Non-motor actin binding protein	P04104	Keratin, type II cytoskeletal 1 (Cytokeratin-1) (CK-1) (Keratin-1) (K1) (67 kDa cyto keratin) (Krt1 protein)	Krt1 (Krt2-1)	87	124	14	27
	Q3TCT4	Ectonucleoside triphosphate diphosphohydrolase 7 (NTPDase 7) (EC 3.6.1.1) (Lysosomal apyrase-like protein 1)	Entpd7 (Kiaa4066) (Lalp1)	16	33	42	80
	Q8BTM8	Filamin-A (Alpha-filamin) (Filamin-1) (Endothelial actin-binding protein) (Actin-binding protein 280) (ABP-280) (Non-muscle filamin)	Flna (Fln) (Fln1)	254	1031	46	86
	Q8R3C6	Probable RNA-binding protein 19 (RNA-binding motif protein 19)	Rbm19	26	32	11	20
	Q99N50	Synaptotagmin-like protein 2 (Exophilin-4)	Syt12 (Slp2)	26	77	10	18
	P03987	Ig gamma-3 chain C region		30	34	4	7
	P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
	P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
	Q9Z309	Calcium and integrin-binding family member 2 (Kinase-interacting protein 2) (KIP 2)	Cib2 (Kip2)	31	17	3	5
	Q64475	Histone H2B type 1-B (h2B-143)	Hist1h2bb	436	999	46	75



Q8VDM4	26S proteasome non-ATPase regulatory subunit 2 (26S proteasome regulatory subunit RPN1) (26S proteasome regulatory subunit S2) (26S proteasome subunit p97)	Psm2	113	157	18	29
Q9D8W5	26S proteasome non-ATPase regulatory subunit 12 (26S proteasome regulatory subunit p55)	Psm12	67	78	7	11
O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
Q9D1H6	Protein HRPAP20 (Hormone-regulated proliferation-associated protein of 20 kDa homolog)	Hrpap20	70	38	6	9
P16045	Galectin-1 (Lectin galactoside-binding soluble 1) (Beta-galactoside-binding lectin L-14-I) (Lactose-binding lectin 1) (S-Lac lectin 1) (Galaptin) (14 kDa lectin)	Lgals1 (Gbp)	79	85	6	9
Q8VHX6	Filamin-C (Gamma-filamin) (Filamin-2) (FLN-C) (Actin-binding-like protein) (ABP-L) (ABP-280-like protein)	Fln1 (Abpl) (Fln2)	33	115	18	25
Q61937	Nucleophosmin (NPM) (Nucleolar phosphoprotein B23) (Numatrin) (Nucleolar protein NO38)	Npm1	92	66	11	15
O08807	Peroxiredoxin-4 (EC 1.11.1.15) (Prx-IV) (Thioredoxin peroxidase AO372) (Thioredoxin-independent peroxide reductase A0372) (Antioxidant enzyme AOE372)	Prdx4	273	421	25	34
P70338	Zinc finger protein Gfi-1 (Growth factor independent protein 1)	Gfi1 (Gfi-1)	45	39	17	23
Q6P8J2	Diamine acetyltransferase 2 (EC 2.3.1.57) (Spermidine/spermine N(1)-acetyltransferase 2) (Polyamine N-acetyltransferase 2)	Sat2 (Ssat2)	33	23	6	8
Q640P2	Angiopoietin-related protein 1 (Angiopoietin-like 1)	Angptl1	55	41	21	28

P70296	Phosphatidylethanolamine-binding protein 1 (PEBP-1) (HCNPPp) [Cleaved into: Hippocampal cholinergic neurostimulating peptide (HCNP)]	Pebp1 (Pbp) (Pebp)	532	730	25	33
Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34
Q8CIM1	Leucine-rich repeat-containing protein 45	Lrrc45	33	71	27	35
P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
Q80X90	Filamin-B (FLN-B) (Beta-filamin) (Actin-binding like protein) (ABP-280-like protein)	Flnb	63	279	32	41
P20152	Vimentin	Vim	1749	2397	125	157
O09010	Beta-1,3-N-acetylglucosaminyltransferase lunatic fringe (EC 2.4.1.222) (O-fucosylpeptide 3-beta-N-acetylglucosaminyltransferase)	Lfng	33	33	8	10
Q60716	Prolyl 4-hydroxylase subunit alpha-2 (EC 1.14.11.2) (4-PH alpha-2) (Procollagen-proline,2-oxoglutarate-4-dioxygenase subunit alpha-2)	P4ha2	22	27	8	10
Q811J3	Iron-responsive element-binding protein 2 (IRE BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q61316	Heat shock 70 kDa protein 4 (Heat shock 70-related protein APG-2)	Hspa4 (Apg2) (Hsp110)	379	792	42	52
Q8R2X8	Golgin-45 (Basic leucine zipper nuclear factor 1)	Blzf1	28	22	13	16
P51880	Fatty acid-binding protein, brain (B-FABP) (Fatty acid-binding protein 7) (Brain lipid-binding protein) (BLBP)	Fabp7 (Blbp)	933	856	31	38
P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
Q9JKF1	Ras GTPase-activating-like protein IQGAP1	Iqgap1	19	81	21	25

O08810	116 kDa U5 small nuclear ribonucleoprotein component (U5 snRNP-specific protein, 116 kDa) (U5-116 kDa) (Elongation factor Tu GTP-binding domain-containing protein 2)	Eftud2 (Snrp116)	80	68	21	25
Q9WUM4	Coronin-1C (Coronin-3)	Coro1c	42	28	18	21
Q5SPW0	Vacuolar protein sorting-associated protein 54 (Tumor antigen SLP-8p homolog)	Vps54	36	28	13	15
Q9JKP5	Muscleblind-like protein 1 (Triplet-expansion RNA-binding protein)	Mbnl1 (Exp) (Mbnl)	45	63	244	281
Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbnl (Abp1) (Sh3p7)	24	39	7	8
Q9Z2K1	Keratin, type I cytoskeletal 16 (Cytokeratin-16) (CK-16) (Keratin-16) (K16)	Krt16 (Krt1-16)	37	37	7	8
Q6A4J8	Ubiquitin carboxyl-terminal hydrolase 7 (EC 3.1.2.15) (Ubiquitin thioesterase 7) (Ubiquitin-specific-processing protease 7) (Deubiquitinating enzyme 7) (Herpesvirus-associated ubiquitin-specific protease) (mHAUSP)	Usp7 (Hausp)	27	18	14	16
P58660	Caspase recruitment domain-containing protein 10 (Bcl10-interacting MAGUK protein 1) (Bimp1)	Card10 (Bimp1)	33	23	15	17
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
Q6P9Z1	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 3 (60 kDa BRG-1/Brm-associated factor subunit C) (BRG1-associated factor 60C) (mBAF60c)	Smarcd3 (Baf60c)	29	19	46	50

P38647	Stress-70 protein, mitochondrial (75 kDa glucose-regulated protein) (GRP 75) (Heat shock 70 kDa protein 9) (Peptide-binding protein 74) (PBP74) (P66 MOT) (Mortalin)	Hspa9 (Grp75) (Hsp74) (Hspa9a)	33	33	12	13
P70398	Probable ubiquitin carboxyl-terminal hydrolase FAF-X (EC 3.1.2.15) (Ubiquitin thioesterase FAF-X) (Ubiquitin-specific-processing protease FAF-X) (Deubiquitinating enzyme FAF-X) (Fat facets protein-related, X-linked) (Ubiquitin-specific protease 9, X chromosome) (Ubiquitin carboxyl-terminal hydrolase FAM) (Fat facets homolog)	Usp9x (Faf1) (Fam)	42	28	57	61
P16858	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) (EC 1.2.1.12)	Gapdh (Gapd)	1514	1781	84	89
Q9DBR7	Protein phosphatase 1 regulatory subunit 12A (Myosin phosphatase-targeting subunit 1) (Myosin phosphatase target subunit 1)	Ppp1r12a (Mypt1)	88	67	18	19
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
Q60865	Caprin-1 (Cytoplasmic activation- and proliferation-associated protein 1) (GPI-anchored membrane protein 1) (GPI-anchored protein p137) (p137GPI) (Membrane component chromosome 11 surface marker 1)	Caprin1 (Gpiap) (Gpiap1) (Gpip137) (M11s1) (G5E5)	20	26	5	5
Q8VCZ3	THAP domain-containing protein 7	Thap7	26	18	6	6
Q61781	Keratin, type I cytoskeletal 14 (Cytokeratin-14) (CK-14) (Keratin-14) (K14)	Krt14 (Krt1-14)	38	37	10	10
O54951	Semaphorin-6B (Semaphorin VIB) (Sema VIB) (Semaphorin-N) (Sema N)	Sema6b (Seman)	34	25	10	10
Q8BSS9	Liprin-alpha-2 (Protein tyrosine phosphatase receptor type f polypeptide-interacting protein alpha-2) (PTPRF-interacting protein alpha-2)	Ppfia2	36	21	22	22

Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Spnb-2) (Spnb2) (Sptb2)	56	54	48	48
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
P45591	Cofilin-2 (Cofilin, muscle isoform)	Cfl2	528	431	39	38
P16406	Glutamyl aminopeptidase (EC 3.4.11.7) (EAP) (Aminopeptidase A) (APA) (BP-1/6C3 antigen) (CD antigen CD249)	Enpep	98	90	48	46
P97412	Lysosomal-trafficking regulator (Beige protein) (CHS1 homolog)	Lyst (Bg) (Chs1)	46	27	33	31
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q99PF4	Cadherin-23 (Otocadherin)	Cdh23	29	32	29	27
Q9D6Z1	Nucleolar protein 5A (Nucleolar protein Nop56)	Nol5a (Nop56)	38	39	14	13
O35206	Collagen alpha-1(XV) chain [Cleaved into: Endostatin (Endostatin-XV)]	Col15a1	31	37	12	11
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q925Q8	Dachshund homolog 2 (Dach2)	Dach2	22	30	9	8
P43277	Histone H1.3 (H1 VAR.4) (H1d)	Hist1h1d (H1f3)	78	99	18	16
Q68FD5	Clathrin heavy chain 1	Cltc	944	884	88	78
Q8BG95	Protein phosphatase 1 regulatory subunit 12B (Myosin phosphatase-targeting subunit 2)	Ppp1r12b (Mypt2)	25	24	25	22
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
Q91VW5	Golgin subfamily A member 4 (tGolgin-1)	Golga4	41	60	46	39

Q9R0L6	Pericentriolar material 1 protein (PCM-1) (mPCM-1)	Pcm1	24	30	19	16
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
Q9ES17	Interleukin-21 (IL-21)	Il21	22	25	6	5
Q8R4U0	Stabilin-2 (Fasciclin, EGF-like, laminin-type EGF-like and link domain-containing scavenger receptor 2) (FEEL-2) [Cleaved into: Short form stabilin-2]	Stab2 (Feel2)	25	43	12	10
Q05816	Fatty acid-binding protein, epidermal (E-FABP) (Fatty acid-binding protein 5) (Psoriasis-associated fatty acid-binding protein homolog) (PA-FABP) (Keratinocyte lipid-binding protein)	Fabp5 (Fabpe) (Klbp) (Mal1)	331	206	18	15
P11531	Dystrophin	Dmd	25	16	66	55
P09405	Nucleolin (Protein C23)	Ncl (Nuc)	775	872	78	65
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
P17182	Alpha-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Non-neural enolase) (NNE) (Enolase 1)	Eno1 (Eno-1)	976	802	62	50
P54923	[Protein ADP-ribosylarginine] hydrolase (ADP-ribosylarginine hydrolase) (EC 3.2.2.19) (ADP-ribose-L-arginine cleaving enzyme)	Adprh (Arh1)	20	41	15	12
Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31

Q99MD9	Nuclear autoantigenic sperm protein (NASP)	Nasp	365	293	34	27
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
P06151	L-lactate dehydrogenase A chain (LDH-A) (EC 1.1.1.27) (LDH muscle subunit) (LDH-M)	Ldha (Ldh-1) (Ldh1)	1033	421	74	57
Q7TMK6	Protein Hook homolog 2	Hook2	33	36	26	20
P47856	Glucosamine--fructose-6-phosphate aminotransferase [isomerizing] 1 (EC 2.6.1.16) (Glutamine:fructose 6 phosphate amidotransferase 1) (GFAT 1) (GFAT1) (D-fructose-6-phosphate amidotransferase 1) (Hexosephosphate aminotransferase 1)	Gfpt1 (Gfpt)	17	29	17	13
P97434	Myosin phosphatase Rho-interacting protein (Rho-interacting protein 3) (RIP3) (p116Rip)	Mrip (Kiaa0864) (Mrip) (Rhoip3)	35	23	25	19
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
P25233	Necdin	Ndn	30	23	16	12
Q9D8V0	Minor histocompatibility antigen H13 (EC 3.4.23.-) (Signal peptide peptidase) (Presenilin-like protein 3)	Hm13 (H13) (Psl3)	23	29	28	21
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19

Q80TS7	Dendrin	Ddn (Gm748) (Kiaa0749)	31	24	11	8
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
Q8BX70	Vacuolar protein sorting-associated protein 13C	Vps13c (Kiaa3021)	25	17	53	38
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptpn (Ptp35)	30	18	14	10
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
P17751	Triosephosphate isomerase (TIM) (EC 5.3.1.1) (Triose-phosphate isomerase)	Tpi1 (Tpi)	706	519	35	25
Q920E5	Farnesyl pyrophosphate synthetase (FPP synthetase) (FPS) (Farnesyl diphosphate synthetase) (Cholesterol-regulated 39 kDa protein) (CR 39) [Includes: Dimethylallyltranstransferase (EC 2.5.1.1); Geranyltranstransferase (EC 2.5.1.10)]	Fdps	107	43	17	12
P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q62168	Keratin, type I cuticular Ha2 (Hair keratin, type I Ha2) (Keratin-32) (K32)	Krt32 (Hka2) (Krt1-2) (Krtha2)	39	36	9	6
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7



	Q8BGR5	Protein FAM53B	Fam53b	47	41	19	12
	Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (UbpY)	29	23	24	15
	P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
	P16125	L-lactate dehydrogenase B chain (LDH-B) (EC 1.1.1.27) (LDH heart subunit) (LDH-H)	Ldhb (Ldh-2) (Ldh2)	315	214	34	21
	Q68ED2	Metabotropic glutamate receptor 7 (mGluR7)	Grm7 (Gprc1g) (Mglur7)	37	33	13	8
	O35551	Rab GTPase-binding effector protein 1 (Rabaptin-5) (Rabaptin-5alpha)	Rabep1 (Rab5ep) (Rabpt5) (Rabpt5a)	33	26	26	16
	Q9Z0P5	Twinfilin-2 (Twinfilin-1-like protein) (A6-related protein) (mA6RP)	Twf2 (Ptk9I)	29	32	10	6
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
	P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4
	Q8BHK0	Paraneoplastic antigen Ma2 homolog	Pnma2	36	22	9	5
	O88844	Isocitrate dehydrogenase [NADP] cytoplasmic (IDH) (EC 1.1.1.42) (Cytosolic NADP-isocitrate dehydrogenase) (Oxalosuccinate decarboxylase) (NADP(+)-specific ICDH) (IDP)	Idh1	155	163	15	8
KRAB box transcription factor	P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22

P56716	Oxygen-regulated protein 1 (Retinitis pigmentosa RP1 protein homolog)	Rp1 (Orp1) (Rp1h)	31	49	58	104
P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
Q8BFQ9	Kelch domain-containing protein 5	Klhdc5 (Kiaa1340)	30	22	10	17
Q9ERK4	Exportin-2 (Exp2) (Importin-alpha re-exporter) (Chromosome segregation 1-like protein)	Cse1l (Xpo2)	42	153	26	44
P57776	Elongation factor 1-delta (EF-1-delta)	Eef1d	109	35	3	5
P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78
Q922U2	Keratin, type II cytoskeletal 5 (Cytokeratin-5) (CK-5) (Keratin-5) (K5)	Krt5 (Krt2-5)	396	550	23	38
Q64475	Histone H2B type 1-B (h2B-143)	Hist1h2bb	436	999	46	75
Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
Q8VDM4	26S proteasome non-ATPase regulatory subunit 2 (26S proteasome regulatory subunit RPN1) (26S proteasome regulatory subunit S2) (26S proteasome subunit p97)	Psm2	113	157	18	29
Q8CCP0	Serologically defined colon cancer antigen 1 homolog	Sdccag1	37	31	21	33

Q7TN83	Synaptotagmin-16 (Synaptotagmin XIV-related protein) (Synaptotagmin 14-like protein)	Syt16 (Strep14) (Syt14l) (Syt14r)	20	38	6	9
Q8BUG5	Calcyphosin-2 (Calcyphosine-2)	Caps2	17	28	8	12
Q9CQY5	Magnesium transporter protein 1 (MagT1) (Implantation-associated protein) (IAP)	Magt1 (Iag2)	26	22	8	12
Q62522	Zona pellucida-binding protein 1 (Sp38)	Zpbp (Zpbp1)	38	42	8	12
Q99K85	Phosphoserine aminotransferase (PSAT) (EC 2.6.1.52) (Phosphohydroxythreonine aminotransferase) (Endometrial progesterone-induced protein) (EPIP)	Psat1 (Psa) (Psat)	162	541	16	24
P61982	14-3-3 protein gamma	Ywhag	653	841	53	79
P53657	Pyruvate kinase isozymes R/L (EC 2.7.1.40) (L PK)	Pklr	144	270	26	38
P99026	Proteasome subunit beta type-4 (Proteasome beta chain) (EC 3.4.25.1) (Macropain beta chain) (Multicatalytic endopeptidase complex beta chain) (Proteasome chain 3)	Psmb4 (Lmp3)	93	289	11	16
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
O08807	Peroxiredoxin-4 (EC 1.11.1.15) (Prx-IV) (Thioredoxin peroxidase AO372) (Thioredoxin-independent peroxide reductase A0372) (Antioxidant enzyme AOE372)	Prdx4	273	421	25	34
Q6P8J2	Diamine acetyltransferase 2 (EC 2.3.1.57) (Spermidine/spermine N(1)-acetyltransferase 2) (Polyamine N-acetyltransferase 2)	Sat2 (Ssat2)	33	23	6	8
Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53

P35700	Peroxiredoxin-1 (EC 1.11.1.15) (Thioredoxin peroxidase 2) (Thioredoxin-dependent peroxide reductase 2) (Osteoblast-specific factor 3) (OSF-3) (Macrophage 23 kDa stress protein)	Prdx1 (Msp23) (Paga) (Tdp2)	836	1095	75	99
Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34
Q80X50	Ubiquitin-associated protein 2-like	Ubp2l	63	54	4	5
P17183	Gamma-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Neural enolase) (Neuron-specific enolase) (NSE) (Enolase 2)	Eno2 (Eno-2)	228	181	12	15
Q80Z38	SH3 and multiple ankyrin repeat domains protein 2 (Shank2) (Cortactin-binding protein 1) (CortBP1)	Shank2 (Cortbp1) (Kiaa1022)	41	57	21	26
P51880	Fatty acid-binding protein, brain (B-FABP) (Fatty acid-binding protein 7) (Brain lipid-binding protein) (BLBP)	Fabp7 (Blbp)	933	856	31	38
P59270	Galactosylgalactosylxylosylprotein 3-beta-glucuronosyltransferase 2 (EC 2.4.1.135) (Beta-1,3-glucuronyltransferase 2) (UDP-glucuronosyltransferase-S) (Glucuronosyltransferase-S) (GlcAT-S) (GlcAT-D)	B3gat2 (Glcats)	29	16	9	11
Q9R1P0	Proteasome subunit alpha type-4 (EC 3.4.25.1) (Proteasome component C9) (Macropain subunit C9) (Multicatalytic endopeptidase complex subunit C9) (Proteasome subunit L)	Psma4	29	151	14	17
Q8BFY9	Transportin-1 (Importin beta-2) (Karyopherin beta-2)	Tnpo1 (Kpnb2)	54	43	10	12
Q60575	Kinesin-like protein KIF1B	Kif1b	45	95	30	36

P54103	DnaJ homolog subfamily C member 2 (Zuotin-related factor 1) (Mouse Id associate 1) (MIDA1)	Dnajc2 (Mida1) (Zrf1)	23	27	11	13
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q61171	Peroxiredoxin-2 (EC 1.11.1.15) (Thioredoxin peroxidase 1) (Thioredoxin-dependent peroxide reductase 1) (Thiol-specific antioxidant protein) (TSA)	Prdx2 (Tdp1) (Tpx)	568	898	47	55
Q61122	NGFI-A-binding protein 1 (EGR-1-binding protein 1)	Nab1	30	25	6	7
Q6GSS7	Histone H2A type 2-A (H2A.2) (H2a-614) (H2a-615)	Hist2h2aa1; Hist2h2aa2	505	763	18	21
P48754	Breast cancer type 1 susceptibility protein homolog	Brca1	28	25	26	30
Q9Z2K1	Keratin, type I cytoskeletal 16 (Cytokeratin-16) (CK-16) (Keratin-16) (K16)	Krt16 (Krt1-16)	37	37	7	8
Q6A4J8	Ubiquitin carboxyl-terminal hydrolase 7 (EC 3.1.2.15) (Ubiquitin thioesterase 7) (Ubiquitin-specific-processing protease 7) (Deubiquitinating enzyme 7) (Herpesvirus-associated ubiquitin-specific protease) (mHAUSP)	Usp7 (Hausp)	27	18	14	16
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
Q9WUU9	80 kDa MCM3-associated protein (Protein GANP)	Mcm3ap (Ganp) (Map80)	48	32	17	19
Q9WUF3	CASP8-associated protein 2 (FLICE-associated huge protein)	Casp8ap2 (Flash)	28	16	26	29
P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178

Q91ZT5	FYVE, RhoGEF and PH domain-containing protein 4 (Actin filament-binding protein frabin) (FGD1-related F-actin-binding protein)	Fgd4	29	19	10	11
O55234	Proteasome subunit beta type-5 (EC 3.4.25.1) (Proteasome epsilon chain) (Macropain epsilon chain) (Multicatalytic endopeptidase complex epsilon chain) (Proteasome subunit X) (Proteasome chain 6)	Psmb5	168	227	10	11
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
Q3TY86	Apoptosis-inducing factor 3 (EC 1.-.-) (Apoptosis-inducing factor-like protein)	Aifm3 (Aifl)	42	26	28	30
Q8VI56	Low-density lipoprotein receptor-related protein 4 (LDLR dan)	Lrp4 (Kiaa0816)	77	30	19	20
P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
O35973	Period circadian protein homolog 1 (Circadian clock protein PERIOD 1) (Circadian pacemaker protein Rigui) (mPER1)	Per1 (Per) (Rigui)	29	21	27	28
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
Q8R0W0	Epiplakin	Eppk1	48	25	49	50

P26350	Prothymosin alpha [Cleaved into: Thymosin alpha]	Ptma	34	120	2	2
Q60865	Caprin-1 (Cytoplasmic activation- and proliferation-associated protein 1) (GPI-anchored membrane protein 1) (GPI-anchored protein p137) (p137GPI) (Membrane component chromosome 11 surface marker 1)	Caprin1 (Gpiap) (Gpiap1) (Gpip137) (M11s1) (G5E5)	20	26	5	5
P12367	cAMP-dependent protein kinase type II-alpha regulatory subunit	Prkar2a	33	23	5	5
Q3TXZ1	Zinc finger protein 575	Znf575 (Zfp575)	30	25	5	5
Q6P5F9	Exportin-1 (Exp1) (Chromosome region maintenance 1 protein homolog)	Xpo1 (Crm1)	19	43	9	9
Q9DAI4	Zinc finger and BTB domain-containing protein 43 (Zinc finger protein 297B)	Zbtb43 (Kiaa0414) (Zfp297b) (Znf297b)	23	51	9	9
Q9CQ60	6-phosphogluconolactonase (6PGL) (EC 3.1.1.31)	Pgls	148	41	11	11
Q9QYX7	Protein piccolo (Aczonin) (Multidomain presynaptic cytomatrix protein) (Brain-derived HLMN protein)	Pclo (Acz)	101	117	114	114
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
P07724	Serum albumin	Alb (Alb-1) (Alb1)	550	572	22	21

P97412	Lysosomal-trafficking regulator (Beige protein) (CHS1 homolog)	Lyst (Bg) (Chs1)	46	27	33	31
Q99PF4	Cadherin-23 (Otocadherin)	Cdh23	29	32	29	27
Q8CGC6	RNA-binding protein 28 (RNA-binding motif protein 28)	Rbm28	24	41	71	66
Q9D6Z1	Nucleolar protein 5A (Nucleolar protein Nop56)	Nol5a (Nop56)	38	39	14	13
Q6TXD4	Dynamamin-binding protein (Scaffold protein Tuba)	Dnmbp (Kiaa1010)	32	21	13	12
Q8R5G7	Centaurin-delta-3 (Cnt-d3) (Arf-GAP, Rho-GAP, ankyrin repeat and pleckstrin homology domain-containing protein 3) (Dual specificity Rho- and Arf-GTPase-activating protein 1)	Centd3 (Arap3) (Drag1) (Kiaa4097)	21	27	26	24
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
Q9WTR0	Matrix metalloproteinase-16 (MMP-16) (EC 3.4.24.-) (Membrane-type matrix metalloproteinase 3) (MT-MMP 3) (MTMMP3) (Membrane-type-3 matrix metalloproteinase) (MT3-MMP) (MT3MMP)	Mmp16	17	36	11	10
Q8R4U7	Leucine zipper protein 1 (Leucine zipper motif-containing protein)	Luzp1 (Luzp)	31	32	22	20
P43406	Integrin alpha-V (Vitronectin receptor subunit alpha) (CD antigen CD51) [Cleaved into: Integrin alpha-V heavy chain; Integrin alpha-V light chain]	Itgav	23	35	19	17
Q9DBJ1	Phosphoglycerate mutase 1 (EC 5.4.2.1) (EC 5.4.2.4) (EC 3.1.3.13) (Phosphoglycerate mutase isozyme B) (PGAM-B) (BPG-dependent PGAM 1)	Pgam1	612	746	35	31



Q61147	Ceruloplasmin (EC 1.16.3.1) (Ferroxidase)	Cp	24	27	41	36
Q99PG2	Opioid growth factor receptor (OGFr) (Zeta-type opioid receptor)	Ogfr	38	24	8	7
P70195	Proteasome subunit beta type-7 (EC 3.4.25.1) (Proteasome subunit Z) (Macropain chain Z) (Multicatalytic endopeptidase complex chain Z)	Psmb7 (Mmc14)	39	40	8	7
Q924C1	Exportin-5 (Exp5) (Ran-binding protein 21)	Xpo5 (Kiaa1291) (Ranbp21)	20	62	15	13
Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPIase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6
Q9CYF5	Williams-Beuren syndrome chromosomal region 16 protein homolog	Wbscr16	38	28	7	6
P11881	Inositol 1,4,5-trisphosphate receptor type 1 (Type 1 inositol 1,4,5-trisphosphate receptor) (Type 1 InsP3 receptor) (IP3 receptor isoform 1) (InsP3R1) (Inositol 1,4,5-trisphosphate-binding protein P400) (Purkinje cell protein 1) (Protein PCD-6)	Itpr1 (Insp3r) (Pcd6) (Pcp1)	37	42	48	41
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
Q91VW5	Golgin subfamily A member 4 (tGolgin-1)	Golga4	41	60	46	39
Q9R0L6	Pericentriolar material 1 protein (PCM-1) (mPCM-1)	Pcm1	24	30	19	16
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
Q80TB8	Probable oxidoreductase KIAA1576 (EC 1.1.1.1)	Kiaa1576	25	14	25	21
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15
P09405	Nucleolin (Protein C23)	Ncl (Nuc)	775	872	78	65

Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
P17182	Alpha-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Non-neural enolase) (NNE) (Enolase 1)	Eno1 (Eno-1)	976	802	62	50
Q924C6	Lysyl oxidase homolog 4 (EC 1.4.3.-) (Lysyl oxidase-like protein 4) (Lysyl oxidase-related protein C)	Loxl4 (Loxc)	15	28	5	4
Q9Z1M8	Protein Red (Protein RER) (IK factor) (Cytokine IK)	Ik (Red) (Rer)	29	23	10	8
P54923	[Protein ADP-ribosylarginine] hydrolase (ADP-ribosylarginine hydrolase) (EC 3.2.2.19) (ADP-ribose-L-arginine cleaving enzyme)	Adprh (Arh1)	20	41	15	12
P62852	40S ribosomal protein S25	Rps25	101	100	15	12
Q8VI47	Canalicular multispecific organic anion transporter 1 (ATP-binding cassette sub-family C member 2)	Abcc2	31	38	39	31
Q99MD9	Nuclear autoantigenic sperm protein (NASP)	Nasp	365	293	34	27
Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100
Q9QWL7	Keratin, type I cytoskeletal 17 (Cytokeratin-17) (CK-17) (Keratin-17) (K17)	Krt17 (Krt1-17)	38	46	14	11

Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
P06151	L-lactate dehydrogenase A chain (LDH-A) (EC 1.1.1.27) (LDH muscle subunit) (LDH-M)	Ldha (Ldh-1) (Ldh1)	1033	421	74	57
Q7TMK6	Protein Hook homolog 2	Hook2	33	36	26	20
P47856	Glucosamine--fructose-6-phosphate aminotransferase [isomerizing] 1 (EC 2.6.1.16) (Glutamine:fructose 6 phosphate amidotransferase 1) (GFAT 1) (GFAT1) (D-fructose-6-phosphate amidotransferase 1) (Hexosephosphate aminotransferase 1)	Gfpt1 (Gfpt)	17	29	17	13
Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
P39447	Tight junction protein ZO-1 (Zonula occludens protein 1) (Zona occludens protein 1) (Tight junction protein 1)	Tjp1 (Zo1)	36	15	21	16
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
P97434	Myosin phosphatase Rho-interacting protein (Rho-interacting protein 3) (RIP3) (p116Rip)	Mrip (Kiaa0864) (Mrip) (Rhoip3)	35	23	25	19
P70670	Nascent polypeptide-associated complex subunit alpha, muscle-specific form (Alpha-NAC, muscle-specific form)	Naca (Gm1878)	22	130	29	22

P16627	Heat shock 70 kDa protein 1L (Heat shock 70 kDa protein 1-like) (Heat shock 70 kDa-like protein 1) (Spermatid-specific heat shock protein 70)	Hspa1l (Hsc70t)	319	238	33	25
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
Q3TXS7	26S proteasome non-ATPase regulatory subunit 1 (26S proteasome regulatory subunit RPN2) (26S proteasome regulatory subunit S1)	Psmd1	100	89	16	12
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
Q8K1F9	Lactase-like protein (Klotho/lactase-phlorizin hydrolase-related protein)	Lctl (Klph)	27	21	24	18
Q9D8V0	Minor histocompatibility antigen H13 (EC 3.4.23.-) (Signal peptide peptidase) (Presenilin-like protein 3)	Hm13 (H13) (Psl3)	23	29	28	21
Q8R5F3	Uncharacterized protein C6orf130 homolog		64	29	31	23
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
Q80TS7	Dendrin	Ddn (Gm748) (Kiaa0749)	31	24	11	8
Q91Z67	SLIT-ROBO Rho GTPase-activating protein 2 (srGAP2) (Formin-binding protein 2) (Formin-binding protein 27) (FBP-27)	Srgap2 (Fbp27) (Fbnp2)	77	48	11	8
Q61696	Heat shock 70 kDa protein 1A (Heat shock 70 kDa protein 3) (HSP70.3) (Hsp68)	Hspa1a (Hsp70-3) (Hsp70A1)	266	236	33	24
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptprn (Ptp35)	30	18	14	10
P17751	Triosephosphate isomerase (TIM) (EC 5.3.1.1) (Triose-phosphate isomerase)	Tpi1 (Tpi)	706	519	35	25

Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q9QYC1	Pecanex-like protein 1 (Pecanex homolog)	Pcnx (Kiaa0805) (Pcnx1)	26	21	25	17
O88799	Zonadhesin	Zan	22	26	25	17
P29391	Ferritin light chain 1 (Ferritin L subunit 1)	Ftl1 (Ftl) (Ftl-1)	150	159	6	4
P61979	Heterogeneous nuclear ribonucleoprotein K (hnRNP K)	Hnrnpk (Hnrpk)	225	46	18	12
Q9Z0T6	Polycystic kidney disease and receptor for egg jelly-related protein (PKD and REJ homolog)	Pkdrej	32	32	18	12
Q3UXZ6	Protein FAM81A	Fam81a	22	27	13	8
P62301	40S ribosomal protein S13	Rps13	77	100	23	14
O08709	Peroxiredoxin-6 (EC 1.11.1.15) (Antioxidant protein 2) (1-Cys peroxiredoxin) (1-Cys PRX) (Acidic calcium-independent phospholipase A2) (aiPLA2) (EC 3.1.1.-) (Non-selenium glutathione peroxidase) (NSGPx) (EC 1.11.1.7)	Prdx6 (Aop2) (Ltw4) (Prdx5)	56	29	5	3
O88291	Zinc finger protein 326 (Zinc finger protein-associated with nuclear matrix of 75 kDa)	Znf326 (Zan75) (Zfp326)	41	55	5	3
P63038	60 kDa heat shock protein, mitochondrial (Heat shock protein 60) (HSP-60) (Hsp60) (60 kDa chaperonin) (Chaperonin 60) (CPN60) (Mitochondrial matrix protein P1) (HSP-65)	Hspd1 (Hsp60)	15	32	22	13
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
P26043	Radixin (ESP10)	Rdx	127	106	23	13

	P49722	Proteasome subunit alpha type-2 (EC 3.4.25.1) (Proteasome component C3) (Macropain subunit C3) (Multicatalytic endopeptidase complex subunit C3)	Psma2 (Lmpc3)	188	103	16	9
	Q9Z1Q5	Chloride intracellular channel protein 1 (Nuclear chloride ion channel 27) (NCC27)	Clic1	137	139	9	5
	Q64105	Sepiapterin reductase (SPR) (EC 1.1.1.153)	Spr	43	27	9	5
	Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
Other transporter	Q9Z1R2	Large proline-rich protein BAT3 (HLA-B-associated transcript 3)	Bat3	80	49	15	26
	Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
	P63158	High mobility group protein B1 (High mobility group protein 1) (HMG-1)	Hmgb1 (Hmg-1) (Hmg1)	153	405	25	38
	Q62522	Zona pellucida-binding protein 1 (Sp38)	Zpbp (Zpbp1)	38	42	8	12
	Q9WVP9	Interferon-induced GTP-binding protein Mx2 (Myxovirus resistance protein 2)	Mx2	32	22	14	20
	Q9EPL8	Importin-7 (Imp7) (Ran-binding protein 7) (RanBP7)	Ipo7 (Ranbp7)	25	121	9	12
	Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53
	P70168	Importin subunit beta-1 (Karyopherin subunit beta-1) (Nuclear factor P97) (Pore targeting complex 97 kDa subunit) (PTAC97) (SCG)	Kpnb1 (Impnb)	48	17	13	17
	Q921C5	Protein bicaudal D homolog 2 (Bic-D 2)	Bicd2 (Kiaa0699)	31	23	26	34
	P20152	Vimentin	Vim	1749	2397	125	157
	P17183	Gamma-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Neural enolase) (Neuron-specific enolase) (NSE) (Enolase 2)	Eno2 (Eno-2)	228	181	12	15

P31001	Desmin	Des	169	224	25	31
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF-4B)	Eif4b	238	306	13	16
O08648	Mitogen-activated protein kinase kinase kinase 4 (EC 2.7.11.25) (MAPK/ERK kinase kinase 4) (MEK kinase 4) (MEKK 4)	Map3k4 (Mekk4)	37	16	19	23
Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
P55200	Histone-lysine N-methyltransferase HRX (EC 2.1.1.43) (Zinc finger protein HRX) (ALL-1)	Mll (All1) (Hrx) (Mll1)	67	26	39	44
Q62446	FK506-binding protein 3 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (25 kDa FKBP) (FKBP-25) (Rapamycin-selective 25 kDa immunophilin)	Fkbp3 (Fkbp25)	31	31	10	11
Q99KK9	Probable histidyl-tRNA synthetase, mitochondrial (EC 6.1.1.21) (Histidine--tRNA ligase) (HisRS) (Histidine--tRNA ligase-like)	Hars2 (Harsl)	20	41	22	24
Q8BKX6	Serine/threonine-protein kinase SMG1 (SMG-1) (EC 2.7.11.1)	Smg1 (Kiaa0421)	33	27	30	32
P16858	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) (EC 1.2.1.12)	Gapdh (Gapd)	1514	1781	84	89
Q6P4S8	Integrator complex subunit 1 (Int1)	Ints1	25	33	26	27
Q60865	Caprin-1 (Cytoplasmic activation- and proliferation-associated protein 1) (GPI-anchored membrane protein 1) (GPI-anchored protein p137) (p137GPI) (Membrane component chromosome 11 surface marker 1)	Caprin1 (Gpiap) (Gpiap1) (Gpip137) (M11s1) (G5E5)	20	26	5	5

P30416	FK506-binding protein 4 (EC 5.2.1.8) (Peptidyl-prolyl cis-trans isomerase) (PPIase) (Rotamase) (HSP-binding immunophilin) (HBI) (FKBP52 protein) (52 kDa FK506-binding protein) (FKBP59) (p59 protein)	Fkbp4	40	62	8	8
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
P03966	N-myc proto-oncogene protein	Mycn (Nmyc) (Nmyc1)	65	46	18	17
P35969	Vascular endothelial growth factor receptor 1 (VEGFR-1) (EC 2.7.10.1) (Tyrosine-protein kinase receptor FLT) (FLT-1) (Embryonic receptor kinase 2)	Flt1 (Emrk2) (Flt)	29	36	35	32
P07310	Creatine kinase M-type (EC 2.7.3.2) (Creatine kinase M chain) (M-CK)	Ckm (Ckmm)	73	107	31	28
Q924C1	Exportin-5 (Exp5) (Ran-binding protein 21)	Xpo5 (Kiaa1291) (Ranbp21)	20	62	15	13
P21550	Beta-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Muscle-specific enolase) (MSE) (Skeletal muscle enolase) (Enolase 3)	Eno3 (Eno-3)	313	146	30	26
Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
Q921E2	Ras-related protein Rab-31	Rab31	18	29	7	6
Q91VW5	Golgin subfamily A member 4 (tGolgin-1)	Golga4	41	60	46	39
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
Q8BHS8	Syntabulin (Syntaxin-1-binding protein) (Golgi-localized syntaphilin-related protein) (m-Golsyn)	Sybu (Golsyn) (Kiaa1472)	32	19	17	13



Q569Z6	Thyroid hormone receptor-associated protein 3 (Thyroid hormone receptor-associated protein complex 150 kDa component) (Trap150)	Thrap3 (Trap150)	29	48	21	16
Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q920E5	Farnesyl pyrophosphate synthetase (FPP synthetase) (FPS) (Farnesyl diphosphate synthetase) (Cholesterol-regulated 39 kDa protein) (CR 39) [Includes: Dimethylallyltransferase (EC 2.5.1.1); Geranyltransferase (EC 2.5.1.10)]	Fdps	107	43	17	12
Q9WV07	Epidermis-type lipoxygenase 3 (e-LOX-3) (EC 1.13.11.-)	Aloxe3	25	22	9	6
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
P17156	Heat shock-related 70 kDa protein 2 (Heat shock protein 70.2)	Hspa2 (Hcp70.2) (Hsp70-2)	964	544	60	37
O35551	Rab GTPase-binding effector protein 1 (Rabaptin-5) (Rabaptin-5alpha)	Rabep1 (Rab5ep) (Rabpt5) (Rabpt5a)	33	26	26	16

	P05532	Mast/stem cell growth factor receptor (SCFR) (EC 2.7.10.1) (Proto-oncogene tyrosine-protein kinase Kit) (c-kit) (CD antigen CD117)	Kit (SI)	16	35	12	7
Translation initiation factor	Q3TCT4	Ectonucleoside triphosphate diphosphohydrolase 7 (NTPDase 7) (EC 3.6.1.-) (Lysosomal apyrase-like protein 1)	Entpd7 (Kiaa4066) (Lalp1)	16	33	42	80
	P17742	Peptidyl-prolyl cis-trans isomerase A (PPIase A) (Rotamase A) (EC 5.2.1.8) (Cyclophilin A) (Cyclosporin A-binding protein) (SP18)	Ppia	855	1549	38	66
	Q8R1S0	Ubiquinone biosynthesis monooxygenase COQ6 (EC 1.14.13.-)	Coq6	42	92	10	17
	P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78
	Q6ZWX6	Eukaryotic translation initiation factor 2 subunit 1 (Eukaryotic translation initiation factor 2 subunit alpha) (eIF-2-alpha) (EIF-2alpha) (EIF-2A)	Eif2s1 (Eif2a)	27	177	7	11
	O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
	Q9Z1F9	SUMO-activating enzyme subunit 2 (EC 6.3.2.-) (Ubiquitin-like 1-activating enzyme E1B) (Anthracycline-associated resistance ARX)	Uba2 (Sae2) (Uble1b)	62	77	10	14

Q921C5	Protein bicaudal D homolog 2 (Bic-D 2)	Bicd2 (Kiaa0699)	31	23	26	34
Q8CIM1	Leucine-rich repeat-containing protein 45	Lrrc45	33	71	27	35
Q91YK0	Leucine-rich repeat-containing protein 49 (Tubulin polyglutamylase complex subunit 4) (PGs4) (p79)	Lrrc49	27	27	18	23
P05064	Fructose-bisphosphate aldolase A (EC 4.1.2.13) (Muscle-type aldolase) (Aldolase 1)	Aldoa (Aldo1)	211	567	36	46
O70456	14-3-3 protein sigma (Stratifin)	Sfn (Mkrn3)	573	666	56	71
Q80X50	Ubiquitin-associated protein 2-like	Ubap2l	63	54	4	5
Q60716	Prolyl 4-hydroxylase subunit alpha-2 (EC 1.14.11.2) (4-PH alpha-2) (Procollagen- proline,2-oxoglutarate-4-dioxygenase subunit alpha-2)	P4ha2	22	27	8	10
Q8R2X8	Golgin-45 (Basic leucine zipper nuclear factor 1)	Blzf1	28	22	13	16
Q8BGD9	Eukaryotic translation initiation factor 4B (eIF- 4B)	Eif4b	238	306	13	16
Q5SPW0	Vacuolar protein sorting-associated protein 54 (Tumor antigen SLP-8p homolog)	Vps54	36	28	13	15
Q9WUF3	CASP8-associated protein 2 (FLICE- associated huge protein)	Casp8ap2 (Flash)	28	16	26	29
Q9R0Q7	Prostaglandin E synthase 3 (EC 5.3.99.3) (Cytosolic prostaglandin E2 synthase) (cPGES) (Telomerase-binding protein p23) (Hsp90 co-chaperone) (Progesterone receptor complex p23) (Sid 3177)	Ptges3 (Sid3177) (Tebp)	124	239	10	11
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12
P07901	Heat shock protein HSP 90-alpha (HSP 86) (Tumor-specific transplantation 86 kDa antigen) (TSTA)	Hsp90aa1 (Hsp86) (Hsp86-1) (Hspca)	1529	2324	134	146
P62242	40S ribosomal protein S8	Rps8	479	372	18	19

O35973	Period circadian protein homolog 1 (Circadian clock protein PERIOD 1) (Circadian pacemaker protein Rigui) (mPER1)	Per1 (Per) (Rigui)	29	21	27	28
P62141	Serine/threonine-protein phosphatase PP1-beta catalytic subunit (PP-1B) (EC 3.1.3.16)	Ppp1cb	177	57	4	4
P30681	High mobility group protein B2 (High mobility group protein 2) (HMG-2)	Hmgb2 (Hmg2)	94	222	24	24
P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (CsmA) (Eif3) (Eif3s10)	199	166	58	56
Q8R1B4	Eukaryotic translation initiation factor 3 subunit C (eIF3c) (Eukaryotic translation initiation factor 3 subunit 8) (eIF3 p110)	Eif3c (Eif3s8)	34	63	22	21
Q99PF4	Cadherin-23 (Otocadherin)	Cdh23	29	32	29	27
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPlase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6
Q9CYF5	Williams-Beuren syndrome chromosomal region 16 protein homolog	Wbscr16	38	28	7	6
Q91VW5	Golgin subfamily A member 4 (tGolgin-1)	Golga4	41	60	46	39
Q9R0L6	Pericentriolar material 1 protein (PCM-1) (mPCM-1)	Pcm1	24	30	19	16
Q9ES17	Interleukin-21 (IL-21)	Il21	22	25	6	5
P46664	Adenylosuccinate synthetase isozyme 2 (AMPSase 2) (AdSS 2) (EC 6.3.4.4) (Adenylosuccinate synthetase, non-muscle isozyme) (Adenylosuccinate synthetase, acidic isozyme) (IMP--aspartate ligase 2)	Adss (Adss2)	36	66	12	10
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64

Q6ZQ38	Cullin-associated NEDD8-dissociated protein 1 (Cullin-associated and neddylation-dissociated protein 1) (p120 CAND1)	Cand1 (D10Ert516e) (Kiaa0829)	221	246	33	27
Q9Z1M8	Protein Red (Protein RER) (IK factor) (Cytokine IK)	Ik (Red) (Rer)	29	23	10	8
Q8C196	Carbamoyl-phosphate synthase [ammonia], mitochondrial (EC 6.3.4.16) (Carbamoyl-phosphate synthetase I) (CPSase I)	Cps1	22	25	19	15
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
P63325	40S ribosomal protein S10	Rps10	468	168	42	33
P06151	L-lactate dehydrogenase A chain (LDH-A) (EC 1.1.1.27) (LDH muscle subunit) (LDH-M)	Ldha (Ldh-1) (Ldh1)	1033	421	74	57
P56480	ATP synthase subunit beta, mitochondrial (EC 3.6.3.14)	Atp5b	31	50	8	6
Q02956	Protein kinase C zeta type (EC 2.7.11.13) (nPKC-zeta)	Prkcz (PkcZ)	29	15	8	6
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9
Q64707	U2 small nuclear ribonucleoprotein auxiliary factor 35 kDa subunit-related protein 1 (U2(RNU2) small nuclear RNA auxiliary factor 1-like 1) (CCCH type zinc finger, RNA-binding motif and serine/arginine rich protein 1) (SP2)	Zrsr1 (Sp2) (Sp2-7) (U2af1rs1) (U2af111)	34	22	13	9
P61979	Heterogeneous nuclear ribonucleoprotein K (hnRNP K)	Hnrnpk (Hnrpk)	225	46	18	12
O35551	Rab GTPase-binding effector protein 1 (Rabaptin-5) (Rabaptin-5alpha)	Rabep1 (Rab5ep) (Rabpt5) (Rabpt5a)	33	26	26	16

	Q6NZJ6	Eukaryotic translation initiation factor 4 gamma 1 (eIF-4-gamma 1) (eIF-4G 1) (eIF-4G1)	Eif4g1	47	113	30	18
	P26040	Ezrin (p81) (Cytovillin) (Villin-2)	Ezr (Vil2)	127	106	27	16
	P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
	P10630	Eukaryotic initiation factor 4A-II (eIF-4A-II) (eIF4A-II) (EC 3.6.1.-) (ATP-dependent RNA helicase eIF4A-2)	Eif4a2 (Ddx2b)	194	78	17	10
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	P63073	Eukaryotic translation initiation factor 4E (eIF-4E) (eIF4E) (mRNA cap-binding protein) (eIF-4F 25 kDa subunit)	Eif4e	110	25	9	5
Ribosomal protein	Q99N50	Synaptotagmin-like protein 2 (Exophilin-4)	Syt2 (Slp2)	26	77	10	18
	P35980	60S ribosomal protein L18	Rpl18	32	22	51	85
	P62082	40S ribosomal protein S7	Rps7	104	126	9	14
	O55142	60S ribosomal protein L35a	Rpl35a	24	50	4	6
	Q9D1H6	Protein HRPAP20 (Hormone-regulated proliferation-associated protein of 20 kDa homolog)	Hrpap20	70	38	6	9
	P17183	Gamma-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Neural enolase) (Neuron-specific enolase) (NSE) (Enolase 2)	Eno2 (Eno-2)	228	181	12	15
	Q9QWY8	130 kDa phosphatidylinositol 4,5-biphosphate-dependent ARF1 GTPase-activating protein (PIP2-dependent ARF1 GAP) (ADP-ribosylation factor-directed GTPase-activating protein 1) (ARF GTPase-activating protein 1) (Development and differentiation-enhancing factor 1) (Differentiation-enhancing factor 1) (DEF-1)	Ddef1 (Asap1) (Kiaa1249) (Shag1)	26	23	14	16
	P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17

P62908	40S ribosomal protein S3	Rps3	778	762	39	44
P19253	60S ribosomal protein L13a (Transplantation antigen P198) (Tum-P198 antigen)	Rpl13a (P198) (Tstap198-7)	27	65	9	10
P16858	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) (EC 1.2.1.12)	Gapdh (Gapd)	1514	1781	84	89
P62242	40S ribosomal protein S8	Rps8	479	372	18	19
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
Q9CPR4	60S ribosomal protein L17	Rpl17	187	135	15	14
Q01853	Transitional endoplasmic reticulum ATPase (TER ATPase) (15S Mg(2+)-ATPase p97 subunit) (Valosin-containing protein) (VCP)	Vcp	691	699	56	51
P67984	60S ribosomal protein L22 (Heparin-binding protein HBp15)	Rpl22	59	48	7	6
P35979	60S ribosomal protein L12	Rpl12	208	389	14	12
Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
Q9ES17	Interleukin-21 (IL-21)	Il21	22	25	6	5
P19096	Fatty acid synthase (EC 2.3.1.85) [Includes: [Acyl-carrier-protein] S-acetyltransferase (EC 2.3.1.38); [Acyl-carrier-protein] S-malonyltransferase (EC 2.3.1.39); 3-oxoacyl-[acyl-carrier-protein] synthase (EC 2.3.1.41); 3-oxoacyl-[acyl-carrier-protein] reductase (EC 1.1.1.100); 3-hydroxypalmitoyl-[acyl-carrier-protein] dehydratase (EC 4.2.1.61); Enoyl-[acyl-carrier-protein] reductase (EC 1.3.1.10); Oleoyl [acyl-carrier-protein] hydrolase (EC 3.1.2.14)]	Fasn	1869	1524	163	135
P14206	40S ribosomal protein SA (Laminin receptor 1) (p40) (34/67 kDa laminin receptor) (37 kDa oncofetal antigen) (OFA/iLRP)	Rpsa (Lamr1) (P40-8)	131	112	11	9

Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
P17182	Alpha-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Non-neural enolase) (NNE) (Enolase 1)	Eno1 (Eno-1)	976	802	62	50
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
P62852	40S ribosomal protein S25	Rps25	101	100	15	12
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
P63325	40S ribosomal protein S10	Rps10	468	168	42	33
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23
P97434	Myosin phosphatase Rho-interacting protein (Rho-interacting protein 3) (RIP3) (p116Rip)	Mrip (Kiaa0864) (Mrip) (Rhoip3)	35	23	25	19
O70228	Probable phospholipid-transporting ATPase IIA (EC 3.6.3.1) (ATPase class II type 9A)	Atp9a	31	29	37	28
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
Q8CDN8	Coiled-coil domain-containing protein 38	Ccdc38	45	95	15	11
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
P14148	60S ribosomal protein L7	Rpl7	145	52	14	10



	P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
	P51410	60S ribosomal protein L9	Rpl9	187	212	17	12
	Q8BMJ2	Leucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.4) (Leucine--tRNA ligase) (LeuRS)	Lars	52	45	47	33
	Q9CXW4	60S ribosomal protein L11	Rpl11	72	79	11	7
	P62717	60S ribosomal protein L18a	Rpl18a	242	62	21	13
	P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
	P62301	40S ribosomal protein S13	Rps13	77	100	23	14
	O35344	Importin subunit alpha-3 (Karyopherin subunit alpha-3) (Importin alpha Q2) (Qip2)	Kpna3 (Qip2)	24	28	10	6
	Q9D1R9	60S ribosomal protein L34	Rpl34	34	32	10	6
	P62900	60S ribosomal protein L31	Rpl31	124	62	12	7
	P41105	60S ribosomal protein L28	Rpl28	49	41	19	11
	Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
	P47963	60S ribosomal protein L13 (A52)	Rpl13	744	379	47	27
	P97461	40S ribosomal protein S5	Rps5	89	33	32	18
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
Actin binding cytoskeletal protein	Q8BTM8	Filamin-A (Alpha-filamin) (Filamin-1) (Endothelial actin-binding protein) (Actin-binding protein 280) (ABP-280) (Non-muscle filamin)	Flna (Fln) (Fln1)	254	1031	46	86
	P06745	Glucose-6-phosphate isomerase (GPI) (EC 5.3.1.9) (Phosphoglucose isomerase) (PGI) (Phosphohexose isomerase) (PHI) (Neuroleukin) (NLK)	Gpi (Gpi1)	39	107	12	22
	P56716	Oxygen-regulated protein 1 (Retinitis pigmentosa RP1 protein homolog)	Rp1 (Orp1) (Rp1h)	31	49	58	104
	P62962	Profilin-1 (Profilin I)	Pfn1	30	93	4	7
	P18760	Cofilin-1 (Cofilin, non-muscle isoform)	Cfl1	959	2552	70	122
	Q64475	Histone H2B type 1-B (h2B-143)	Hist1h2bb	436	999	46	75
	Q9D8W5	26S proteasome non-ATPase regulatory subunit 12 (26S proteasome regulatory subunit p55)	Psm12	67	78	7	11
	Q8VHX6	Filamin-C (Gamma-filamin) (Filamin-2) (FLN-C) (Actin-binding-like protein) (ABP-L) (ABP-280-like protein)	Flnc (Abpl) (Fln2)	33	115	18	25

P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11
Q9Z277	Bromodomain adjacent to zinc finger domain protein 1B (Williams-Beuren syndrome chromosomal region 9 protein homolog) (WBRS9)	Baz1b (Wbscr9)	43	17	26	34
Q8CIM1	Leucine-rich repeat-containing protein 45	Lrrc45	33	71	27	35
P47753	F-actin-capping protein subunit alpha-1 (CapZ alpha-1)	Capza1 (Cappa1)	60	33	7	9
Q80X90	Filamin-B (FLN-B) (Beta-filamin) (Actin-binding like protein) (ABP-280-like protein)	Flnb	63	279	32	41
P20152	Vimentin	Vim	1749	2397	125	157
Q61466	SWI/SNF-related matrix-associated actin-dependent regulator of chromatin subfamily D member 1 (SWI/SNF complex 60 kDa subunit) (60 kDa BRG-1/Brm-associated factor subunit A) (BRG1-associated factor 60A) (D15KZ1 protein)	Smarcd1 (Baf60a) (D15Kz1)	27	29	13	16
P47754	F-actin-capping protein subunit alpha-2 (CapZ alpha-2)	Capza2 (Cappa2)	60	33	5	6
Q8BFY9	Transportin-1 (Importin beta-2) (Karyopherin beta-2)	Tnp1 (Kpnb2)	54	43	10	12
Q9WUM4	Coronin-1C (Coronin-3)	Coro1c	42	28	18	21
Q62418	Drebrin-like protein (SH3 domain-containing protein 7) (Actin-binding protein 1)	Dbn1 (Abp1) (Sh3p7)	24	39	7	8
Q93092	Transaldolase (EC 2.2.1.2)	Taldo1 (Tal) (Taldo)	20	93	10	11
Q9D8N0	Elongation factor 1-gamma (EF-1-gamma) (eEF-1B gamma)	Eef1g	31	85	11	12
Q3THS6	S-adenosylmethionine synthetase isoform type 2 (AdoMet synthetase 2) (EC 2.5.1.6) (Methionine adenosyltransferase 2)	Mat2a	26	42	11	12

P16546	Spectrin alpha chain, brain (Spectrin, non-erythroid alpha chain) (Alpha-II spectrin) (Fodrin alpha chain)	Sptan1 (Spna2) (Spta2)	68	86	66	69
P26039	Talin-1	Tln1 (Tln)	123	161	41	42
Q8BSS9	Liprin-alpha-2 (Protein tyrosine phosphatase receptor type f polypeptide-interacting protein alpha-2) (PTPRF-interacting protein alpha-2)	Ppfia2	36	21	22	22
Q62261	Spectrin beta chain, brain 1 (Spectrin, non-erythroid beta chain 1) (Beta-II spectrin) (Fodrin beta chain) (Embryonic liver fodrin)	Sptbn1 (Elf) (Sptnb-2) (Sptnb2) (Sptb2)	56	54	48	48
P45591	Cofilin-2 (Cofilin, muscle isoform)	Cfl2	528	431	39	38
O08638	Myosin-11 (Myosin heavy chain 11) (Myosin heavy chain, smooth muscle isoform) (SMMHC)	Myh11	211	221	79	76
P03995	Glial fibrillary acidic protein (GFAP)	Gfap	63	90	22	20
Q8VDD5	Myosin-9 (Myosin heavy chain 9) (Myosin heavy chain, non-muscle IIa) (Non-muscle myosin heavy chain IIa) (NMMHC II-a) (NMMHC-IIA) (Cellular myosin heavy chain, type A) (Non-muscle myosin heavy chain-A) (NMMHC-A)	Myh9	780	839	127	115
Q91VX2	Ubiquitin-associated protein 2 (Protein lingerer homolog 1) (MLig-1)	Ubap2 (Lig1)	60	41	10	9
P26041	Moesin (Membrane-organizing extension spike protein)	Msn	136	127	44	39
Q99104	Myosin-Va (Dilute myosin heavy chain, non-muscle)	Myo5a (Dilute)	28	34	35	31
Q9R0P5	Destrin (Actin-depolymerizing factor) (ADF) (Sid 23)	Dstn (Dsn) (Sid23)	61	81	8	7
Q8CJ27	Abnormal spindle-like microcephaly-associated protein homolog (Spindle and hydroxyurea checkpoint abnormal protein) (Calmodulin-binding protein Sha1) (Calmodulin binding protein 1)	Aspm (Calmbp1) (Sha1)	35	23	55	48

P21550	Beta-enolase (EC 4.2.1.11) (2-phospho-D-glycerate hydro-lyase) (Muscle-specific enolase) (MSE) (Skeletal muscle enolase) (Enolase 3)	Eno3 (Eno-3)	313	146	30	26
Q9CYF5	Williams-Beuren syndrome chromosomal region 16 protein homolog	Wbscr16	38	28	7	6
Q91VW5	Golgin subfamily A member 4 (tGolgin-1)	Golga4	41	60	46	39
P11531	Dystrophin	Dmd	25	16	66	55
Q91XQ0	Dynein heavy chain 8, axonemal (Axonemal beta dynein heavy chain 8) (Ciliary dynein heavy chain 8)	Dnahc8	47	51	77	64
Q6URW6	Myosin-14 (Myosin heavy chain 14) (Myosin heavy chain, non-muscle IIc) (Non-muscle myosin heavy chain IIc) (NMHC II-C)	Myh14	60	48	53	44
Q6DFV7	Nuclear receptor coactivator 7	Ncoa7	25	16	11	9
Q9JHU4	Cytoplasmic dynein 1 heavy chain 1 (Cytoplasmic dynein heavy chain 1) (Dynein heavy chain, cytosolic)	Dync1h1 (Dhc1) (Dnch1) (Dnchc1) (Dyhc)	822	395	157	123
P97434	Myosin phosphatase Rho-interacting protein (Rho-interacting protein 3) (RIP3) (p116Rip)	Mrip (Kiaa0864) (Mrip) (Rhoip3)	35	23	25	19
Q9D8V0	Minor histocompatibility antigen H13 (EC 3.4.23.-) (Signal peptide peptidase) (Presenilin-like protein 3)	Hm13 (H13) (Psl3)	23	29	28	21
P60710	Actin, cytoplasmic 1 (Beta-actin)	Actb	5140	4496	282	208
Q80TS7	Dendrin	Ddn (Gm748) (Kiaa0749)	31	24	11	8
Q99LG2	Transportin-2 (Karyopherin beta-2b)	Tnpo2	42	32	7	5
Q8K4L3	Supervillin (Archvillin) (p205/p250)	Svil	25	22	18	12
P61164	Alpha-centractin (Centractin) (Centrosome-associated actin homolog) (Actin-RPV) (ARP1)	Actr1a (Ctrn1)	247	124	27	18

	P68033	Actin, alpha cardiac muscle 1 (Alpha-cardiac actin)	Actc1 (Actc)	3948	2726	234	155
	P61161	Actin-related protein 2 (Actin-like protein 2)	Actr2 (Arp2)	247	124	28	18
	Q8BGR5	Protein FAM53B	Fam53b	47	41	19	12
	Q61879	Myosin-10 (Myosin heavy chain 10) (Myosin heavy chain, non-muscle IIb) (Non-muscle myosin heavy chain IIb) (NMMHC II-b) (NMMHC-IIB) (Cellular myosin heavy chain, type B) (Non-muscle myosin heavy chain-B) (NMMHC-B)	Myh10	122	101	65	40
	Q9Z0P5	Twinfilin-2 (Twinfilin-1-like protein) (A6-related protein) (mA6RP)	Twf2 (Ptk9l)	29	32	10	6
	P26040	Ezrin (p81) (Cytovillin) (Villin-2)	Ezr (Vil2)	127	106	27	16
	P47757	F-actin-capping protein subunit beta (CapZ beta)	Capzb (Cappb1)	107	68	7	4
	P26043	Radixin (ESP10)	Rdx	127	106	23	13
Other cell junction protein	P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
	Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
	O35711	Liprin-beta-2 (Protein tyrosine phosphatase receptor type f polypeptide-interacting protein-binding protein 2) (PTPRF-interacting protein-binding protein 2) (Coiled-coil-like protein 1)	Ppfibp2 (Cclp1)	108	79	14	20
	Q63ZW7	InaD-like protein (Inadl protein) (Pals1-associated tight junction protein) (Protein associated to tight junctions) (Channel-interacting PDZ domain-containing protein)	Inadl (Cipp) (Patj)	18	30	12	15
	Q9JKP5	Muscleblind-like protein 1 (Triplet-expansion RNA-binding protein)	Mbnl1 (Exp) (Mbnl)	45	63	244	281

	Q9WUF3	CASP8-associated protein 2 (FLICE-associated huge protein)	Casp8ap2 (Flash)	28	16	26	29
	P26618	Alpha-type platelet-derived growth factor receptor (EC 2.7.10.1) (PDGF-R-alpha) (CD140 antigen-like family member A) (CD antigen CD140a)	Pdgfra	37	73	160	178
	Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
	Q8BSS9	Liprin-alpha-2 (Protein tyrosine phosphatase receptor type f polypeptide-interacting protein alpha-2) (PTPRF-interacting protein alpha-2)	Ppfia2	36	21	22	22
	O35206	Collagen alpha-1(XV) chain [Cleaved into: Endostatin (Endostatin-XV)]	Col15a1	31	37	12	11
	Q9CZM2	60S ribosomal protein L15	Rpl15	225	107	21	18
	Q8VBX6	Multiple PDZ domain protein (Multi-PDZ domain protein 1)	Mpdz (Mupp1)	17	29	38	28
	P26040	Ezrin (p81) (Cytovillin) (Villin-2)	Ezr (Vil2)	127	106	27	16
	P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
	Q9WV89	Syntaxin-binding protein 4 (Syntaxin 4-interacting protein) (Synip) (STX4-interacting protein)	Stxbp4	41	19	11	6
Exoribonuclea se	P56716	Oxygen-regulated protein 1 (Retinitis pigmentosa RP1 protein homolog)	Rp1 (Orp1) (Rp1h)	31	49	58	104
	P17742	Peptidyl-prolyl cis-trans isomerase A (PPIase A) (Rotamase A) (EC 5.2.1.8) (Cyclophilin A) (Cyclosporin A-binding protein) (SP18)	Ppia	855	1549	38	66
	P62082	40S ribosomal protein S7	Rps7	104	126	9	14
	P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13

Q9R1P0	Proteasome subunit alpha type-4 (EC 3.4.25.1) (Proteasome component C9) (Macropain subunit C9) (Multicatalytic endopeptidase complex subunit C9) (Proteasome subunit L)	Psma4	29	151	14	17
P62270	40S ribosomal protein S18 (Ke-3) (Ke3)	Rps18	210	209	15	17
P62908	40S ribosomal protein S3	Rps3	778	762	39	44
P62242	40S ribosomal protein S8	Rps8	479	372	18	19
P62281	40S ribosomal protein S11	Rps11	166	132	27	28
Q60865	Caprin-1 (Cytoplasmic activation- and proliferation-associated protein 1) (GPI-anchored membrane protein 1) (GPI-anchored protein p137) (p137GPI) (Membrane component chromosome 11 surface marker 1)	Caprin1 (Gpiap) (Gpiap1) (Gpip137) (M11s1) (G5E5)	20	26	5	5
Q80YV4	Pantothenate kinase 4 (EC 2.7.1.33) (Pantothenic acid kinase 4) (mPanK4)	Pank4	23	28	13	13
Q8R5G7	Centaurin-delta-3 (Cnt-d3) (Arf-GAP, Rho-GAP, ankyrin repeat and pleckstrin homology domain-containing protein 3) (Dual specificity Rho- and Arf-GTPase-activating protein 1)	Centd3 (Arap3) (Drag1) (Kiaa4097)	21	27	26	24
Q9DBJ1	Phosphoglycerate mutase 1 (EC 5.4.2.1) (EC 5.4.2.4) (EC 3.1.3.13) (Phosphoglycerate mutase isozyme B) (PGAM-B) (BPG-dependent PGAM 1)	Pgam1	612	746	35	31
Q6ZWN5	40S ribosomal protein S9	Rps9	459	248	47	40
P14131	40S ribosomal protein S16	Rps16	160	126	19	16
P62852	40S ribosomal protein S25	Rps25	101	100	15	12
Q80T14	Extracellular matrix protein FRAS1	Fras1 (Kiaa1500)	48	109	24	19
P62754	40S ribosomal protein S6 (Phosphoprotein NP33)	Rps6	127	283	19	15
P63325	40S ribosomal protein S10	Rps10	468	168	42	33
P62702	40S ribosomal protein S4, X isoform	Rps4x (Rps4)	402	304	30	23

	Q99MY8	Probable histone-lysine N-methyltransferase ASH1L (EC 2.1.1.43) (Absent small and homeotic disks protein 1 homolog) (ASH1-like protein)	Ash1l	19	31	46	35
	P62264	40S ribosomal protein S14	Rps14	163	166	15	11
	P25444	40S ribosomal protein S2 (S4) (LLRep3 protein)	Rps2 (Llrep3) (Rps4)	217	50	26	19
	P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
	Q80TP3	E3 ubiquitin-protein ligase UBR5 (EC 6.3.2.-) (E3 ubiquitin-protein ligase, HECT domain-containing 1) (Hyperplastic discs protein homolog)	Ubr5 (Edd) (Edd1) (Kiaa0896)	27	17	43	29
	P62301	40S ribosomal protein S13	Rps13	77	100	23	14
	Q9CZX8	40S ribosomal protein S19	Rps19	206	146	19	11
	P97461	40S ribosomal protein S5	Rps5	89	33	32	18
	P11103	Poly [ADP-ribose] polymerase 1 (PARP-1) (EC 2.4.2.30) (ADPRT) (NAD(+) ADP-ribosyltransferase 1) (Poly[ADP-ribose] synthetase 1) (msPARP)	Parp1 (Adprp) (Adprt) (Adprt1)	21	26	17	9
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
Serine protease inhibitor	O88705	Potassium/sodium hyperpolarization-activated cyclic nucleotide-gated channel 3 (Hyperpolarization-activated cation channel 3) (HAC-3)	Hcn3 (Hac3)	75	67	8	15
	P56716	Oxygen-regulated protein 1 (Retinitis pigmentosa RP1 protein homolog)	Rp1 (Orp1) (Rp1h)	31	49	58	104



P62806	Histone H4	Hist1h4a; Hist1h4b (H4-53); Hist1h4c (H4-12); Hist1h4d; Hist1h4f; Hist1h4h; Hist1h4i; Hist1h4j; Hist1h4k; Hist1h4m; Hist2h4a (Hist2h4); Hist4h4	815	1617	47	78
Q8BHG1	Nardilysin (EC 3.4.24.61) (N-arginine dibasic convertase) (NRD convertase) (NRD-C)	Nrd1	53	54	13	21
Q8VDM4	26S proteasome non-ATPase regulatory subunit 2 (26S proteasome regulatory subunit RPN1) (26S proteasome regulatory subunit S2) (26S proteasome subunit p97)	Psm2	113	157	18	29
Q61990	Poly(rC)-binding protein 2 (Alpha-CP2) (Putative heterogeneous nuclear ribonucleoprotein X) (hnRNP X) (CTBP) (CBP)	Pcbp2 (Cbp) (HnrnpX) (Hnrpx)	29	194	7	11
Q9D8W5	26S proteasome non-ATPase regulatory subunit 12 (26S proteasome regulatory subunit p55)	Psm12	67	78	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
Q3UDW8	Heparan-alpha-glucosaminide N-acetyltransferase (EC 2.3.1.78) (Transmembrane protein 76)	Hgsnat (D8Erd354e) (Tmem76)	34	22	6	9
P16045	Galectin-1 (Lectin galactoside-binding soluble 1) (Beta-galactoside-binding lectin L-14-l) (Lactose-binding lectin 1) (S-Lac lectin 1) (Galaptin) (14 kDa lectin)	Lgals1 (Gbp)	79	85	6	9

Q9CQY5	Magnesium transporter protein 1 (MagT1) (Implantation-associated protein) (IAP)	Magt1 (Iag2)	26	22	8	12
Q99K85	Phosphoserine aminotransferase (PSAT) (EC 2.6.1.52) (Phosphohydroxythreonine aminotransferase) (Endometrial progesterone-induced protein) (EPIP)	Psat1 (Psa) (Psat)	162	541	16	24
P53657	Pyruvate kinase isozymes R/L (EC 2.7.1.40) (L PK)	Pklr	144	270	26	38
P99026	Proteasome subunit beta type-4 (Proteasome beta chain) (EC 3.4.25.1) (Macropain beta chain) (Multicatalytic endopeptidase complex beta chain) (Proteasome chain 3)	Psmb4 (Lmp3)	93	289	11	16
Q00342	FL cytokine receptor (EC 2.7.10.1) (Tyrosine-protein kinase receptor flk-2) (Fetal liver kinase 2) (Tyrosine-protein kinase FLT3) (CD antigen CD135)	Flt3 (Flk-2) (Flt3)	17	34	7	10
O35711	Liprin-beta-2 (Protein tyrosine phosphatase receptor type f polypeptide-interacting protein-binding protein 2) (PTPRF-interacting protein-binding protein 2) (Coiled-coil-like protein 1)	Ppfibp2 (Cclp1)	108	79	14	20
P70696	Histone H2B type 1-A (Histone H2B, testis) (Testis-specific histone H2B)	Hist1h2ba (Th2b)	146	378	37	51
Q640P2	Angiopoietin-related protein 1 (Angiopoietin-like 1)	Angptl1	55	41	21	28
P70168	Importin subunit beta-1 (Karyopherin subunit beta-1) (Nuclear factor P97) (Pore targeting complex 97 kDa subunit) (PTAC97) (SCG)	Kpnb1 (Impnb)	48	17	13	17
Q61753	D-3-phosphoglycerate dehydrogenase (3-PGDH) (EC 1.1.1.95) (A10)	Phgdh	105	158	14	18
P63101	14-3-3 protein zeta/delta (Protein kinase C inhibitor protein 1) (KCIP-1) (SEZ-2)	Ywhaz	1383	1947	96	120
Q8VII8	Mineralocorticoid receptor (MR) (Nuclear receptor subfamily 3 group C member 2)	Nr3c2 (Mlr)	28	22	18	22

Q9R1P0	Proteasome subunit alpha type-4 (EC 3.4.25.1) (Proteasome component C9) (Macropain subunit C9) (Multicatalytic endopeptidase complex subunit C9) (Proteasome subunit L)	Psma4	29	151	14	17
P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q9QUR6	Prolyl endopeptidase (PE) (EC 3.4.21.26) (Post-proline cleaving enzyme)	Prep (Pep)	56	20	15	18
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
O08908	Phosphatidylinositol 3-kinase regulatory subunit beta (PI3-kinase p85 subunit beta) (PtdIns-3-kinase p85-beta)	Pik3r2	19	25	20	24
P54103	DnaJ homolog subfamily C member 2 (Zuotin-related factor 1) (Mouse Id associate 1) (MIDA1)	Dnajc2 (Mida1) (Zrf1)	23	27	11	13
Q91ZT5	FYVE, RhoGEF and PH domain-containing protein 4 (Actin filament-binding protein frabin) (FGD1-related F-actin-binding protein)	Fgd4	29	19	10	11
O55234	Proteasome subunit beta type-5 (EC 3.4.25.1) (Proteasome epsilon chain) (Macropain epsilon chain) (Multicatalytic endopeptidase complex epsilon chain) (Proteasome subunit X) (Proteasome chain 6)	Psmb5	168	227	10	11
Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
P62242	40S ribosomal protein S8	Rps8	479	372	18	19

Q9R1P1	Proteasome subunit beta type-3 (EC 3.4.25.1) (Proteasome theta chain) (Proteasome chain 13) (Proteasome component C10-II)	Psmb3	87	135	7	7
Q9R190	Metastasis-associated protein MTA2 (Metastasis-associated 1-like 1)	Mta2 (Mta111)	27	26	9	9
O09061	Proteasome subunit beta type-1 (EC 3.4.25.1) (Proteasome component C5) (Macropain subunit C5) (Multicatalytic endopeptidase complex subunit C5) (Proteasome gamma chain)	Psmb1	84	94	11	11
Q9WV80	Sorting nexin-1	Snx1	23	49	11	11
Q9DB77	Cytochrome b-c1 complex subunit 2, mitochondrial (Ubiquinol-cytochrome-c reductase complex core protein 2) (Core protein II) (Complex III subunit 2)	Uqcrc2	29	20	13	13
Q9JIF7	Coatomer subunit beta (Beta-coat protein) (Beta-COP)	Copb1 (Copb)	37	22	15	15
Q8BSS9	Liprin-alpha-2 (Protein tyrosine phosphatase receptor type f polypeptide-interacting protein alpha-2) (PTPRF-interacting protein alpha-2)	Ppfia2	36	21	22	22
Q80UK8	Integrator complex subunit 2 (Int2)	Ints2 (Kiaa1287)	16	27	24	24
Q8K4E0	Alstrom syndrome protein 1 homolog	Alms1 (Kiaa0328)	29	30	86	86
Q8R4B8	NACHT, LRR and PYD domains-containing protein 3 (Cold autoinflammatory syndrome 1 protein homolog) (Cryopyrin) (PYRIN-containing APAF1-like protein 1) (Mast cell maturation-associated-inducible protein 1)	Nlrp3 (Cias1) (Mmig1) (Nalp3) (Pypaf1)	30	20	24	23
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22

P54869	Hydroxymethylglutaryl-CoA synthase, mitochondrial (HMG-CoA synthase) (EC 2.3.3.10) (3-hydroxy-3-methylglutaryl coenzyme A synthase)	Hmgcs2	26	23	18	17
P03995	Glial fibrillary acidic protein (GFAP)	Gfap	63	90	22	20
P70195	Proteasome subunit beta type-7 (EC 3.4.25.1) (Proteasome subunit Z) (Macropain chain Z) (Multicatalytic endopeptidase complex chain Z)	Psmb7 (Mmc14)	39	40	8	7
Q11011	Puromycin-sensitive aminopeptidase (PSA) (EC 3.4.11.-)	Npepps (Psa)	71	141	30	26
Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
P11881	Inositol 1,4,5-trisphosphate receptor type 1 (Type 1 inositol 1,4,5-trisphosphate receptor) (Type 1 InsP3 receptor) (IP3 receptor isoform 1) (InsP3R1) (Inositol 1,4,5-trisphosphate-binding protein P400) (Purkinje cell protein 1) (Protein PCD-6)	Itpr1 (Insp3r) (Pcd6) (Pcp1)	37	42	48	41
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
Q99PT1	Rho GDP-dissociation inhibitor 1 (Rho GDI 1) (Rho-GDI alpha) (GDI-1)	Arhgdia (C87222) (Gdi1)	923	675	37	31
Q64514	Tripeptidyl-peptidase 2 (EC 3.4.14.10) (Tripeptidyl-peptidase II) (TPP-II) (Tripeptidyl aminopeptidase)	Tpp2	54	76	24	20
Q924C6	Lysyl oxidase homolog 4 (EC 1.4.3.-) (Lysyl oxidase-like protein 4) (Lysyl oxidase-related protein C)	Loxl4 (Loxc)	15	28	5	4
P00342	L-lactate dehydrogenase C chain (LDH-C) (EC 1.1.1.27) (LDH testis subunit) (LDH-X)	Ldhc (Ldh-3) (Ldh3)	97	122	15	12

Q9Z2U0	Proteasome subunit alpha type-7 (EC 3.4.25.1) (Proteasome subunit RC6-1)	Psma7	121	253	15	12
P70670	Nascent polypeptide-associated complex subunit alpha, muscle-specific form (Alpha-NAC, muscle-specific form)	Naca (Gm1878)	22	130	29	22
Q9DBG5	Mannose-6-phosphate receptor-binding protein 1 (Cargo selection protein TIP47)	M6prbp1 (Tip47)	25	22	8	6
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
P62991	Ubiquitin	Rps27a (Uba80) (Ubcep1); Uba52 (Ubcep2); Ubb; Ubc	61	54	11	8
P27659	60S ribosomal protein L3 (J1 protein)	Rpl3	192	75	25	18
Q60692	Proteasome subunit beta type-6 (EC 3.4.25.1) (Proteasome delta chain) (Macropain delta chain) (Multicatalytic endopeptidase complex delta chain) (Proteasome subunit Y)	Psm6 (Lmp19)	33	89	17	12
Q8CAY6	Acetyl-CoA acetyltransferase, cytosolic (EC 2.3.1.9) (Cytosolic acetoacetyl-CoA thiolase)	Acat2	65	18	9	6
O70435	Proteasome subunit alpha type-3 (EC 3.4.25.1) (Proteasome component C8) (Macropain subunit C8) (Multicatalytic endopeptidase complex subunit C8) (Proteasome subunit K)	Psma3	95	76	14	9

	Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
	O88291	Zinc finger protein 326 (Zinc finger protein-associated with nuclear matrix of 75 kDa)	Znf326 (Zan75) (Zfp326)	41	55	5	3
	P26040	Ezrin (p81) (Cytovillin) (Villin-2)	Ezr (Vil2)	127	106	27	16
	Q9D9P2	Coiled-coil domain-containing protein 103	Ccdc103	136	63	12	7
	P49722	Proteasome subunit alpha type-2 (EC 3.4.25.1) (Proteasome component C3) (Macropain subunit C3) (Multicatalytic endopeptidase complex subunit C3)	Psm2 (Lmpc3)	188	103	16	9
	Q64105	Sepiapterin reductase (SPR) (EC 1.1.1.153)	Spr	43	27	9	5
	Q9WV89	Syntaxin-binding protein 4 (Syntaxin 4-interacting protein) (Synip) (STX4-interacting protein)	Stxbp4	41	19	11	6
	P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26
Other G-protein modulator	Q99N50	Synaptotagmin-like protein 2 (Exophilin-4)	Syt12 (Slp2)	26	77	10	18
	Q8QZR5	Alanine aminotransferase 1 (ALT1) (EC 2.6.1.2) (Glutamic--pyruvic transaminase 1) (Glutamate pyruvate transaminase 1) (GPT 1) (Glutamic--alanine transaminase 1)	Gpt (Gpt1)	25	20	15	26
	Q9Z1R2	Large proline-rich protein BAT3 (HLA-B-associated transcript 3)	Bat3	80	49	15	26
	P52480	Pyruvate kinase isozymes M1/M2 (EC 2.7.1.40) (Pyruvate kinase muscle isozyme)	Pkm2 (Pk3) (Pykm)	1954	3481	138	233
	Q8BYW1	Rho GTPase-activating protein 25 (Rho-type GTPase-activating protein 25)	Arhgap25 (Kiaa0053)	30	26	6	10

Q61990	Poly(rC)-binding protein 2 (Alpha-CP2) (Putative heterogeneous nuclear ribonucleoprotein X) (hnRNP X) (CTBP) (CBP)	Pcbp2 (Cbp) (HnrnpX) (Hnrpx)	29	194	7	11
Q9D8W5	26S proteasome non-ATPase regulatory subunit 12 (26S proteasome regulatory subunit p55)	Psmc12	67	78	7	11
P62082	40S ribosomal protein S7	Rps7	104	126	9	14
Q3UDW8	Heparan-alpha-glucosaminide N-acetyltransferase (EC 2.3.1.78) (Transmembrane protein 76)	Hgsnat (D8Ert354e) (Tmem76)	34	22	6	9
Q8BUG5	Calcyphosin-2 (Calcyphosine-2)	Caps2	17	28	8	12
P50247	Adenosylhomocysteinase (AdoHcyase) (EC 3.3.1.1) (S-adenosyl-L-homocysteine hydrolase) (Liver copper-binding protein) (CUBP)	Ahcy	90	106	10	15
P99026	Proteasome subunit beta type-4 (Proteasome beta chain) (EC 3.4.25.1) (Macropain beta chain) (Multicatalytic endopeptidase complex beta chain) (Proteasome chain 3)	Psmc4 (Lmp3)	93	289	11	16
Q9QZ39	Alpha-N-acetylgalactosaminide alpha-2,6-sialyltransferase 1 (EC 2.4.99.3) (GalNAc alpha-2,6-sialyltransferase I) (ST6GalNAc I) (Sialyltransferase 7A)	St6galnac1 (Siat7a)	27	18	11	16
P35761	Dual specificity protein kinase TTK (ESK) (PYT) (EC 2.7.12.1)	Ttk (Esk)	14	34	9	13
Q8BVI4	Dihydropteridine reductase (EC 1.5.1.34) (HDHPR) (Quinoid dihydropteridine reductase)	Qdpr (Dhpr)	144	277	7	10
P17047	Lysosome-associated membrane glycoprotein 2 (LAMP-2) (Lysosomal membrane glycoprotein type B) (LGP-B) (CD107 antigen-like family member B) (CD antigen CD107b)	Lamp2 (Lamp-2)	26	29	8	11



O08807	Peroxiredoxin-4 (EC 1.11.1.15) (Prx-IV) (Thioredoxin peroxidase AO372) (Thioredoxin-independent peroxide reductase A0372) (Antioxidant enzyme AOE372)	Prdx4	273	421	25	34
Q9ERU9	E3 SUMO-protein ligase RanBP2 (Ran-binding protein 2)	Ranbp2	56	49	40	53
P28271	Cytoplasmic aconitate hydratase (Aconitase) (EC 4.2.1.3) (Citrate hydro-lyase) (Iron-responsive element-binding protein 1) (IRE-BP 1) (Iron regulatory protein 1) (IRP1)	Aco1 (Ireb1) (Irebp)	77	122	147	184
Q811J3	Iron-responsive element-binding protein 2 (IRE-BP 2) (Iron regulatory protein 2) (IRP2)	Ireb2 (Irp2)	69	119	142	176
Q8BU30	Isoleucyl-tRNA synthetase, cytoplasmic (EC 6.1.1.5) (Isoleucine--tRNA ligase) (IleRS) (IRS)	Iars	85	46	30	37
P51880	Fatty acid-binding protein, brain (B-FABP) (Fatty acid-binding protein 7) (Brain lipid-binding protein) (BLBP)	Fabp7 (Blbp)	933	856	31	38
P05784	Keratin, type I cytoskeletal 18 (Cytokeratin-18) (CK-18) (Keratin-18) (K18) (Cytokeratin endo B) (Keratin D)	Krt18 (Kerd) (Krt1-18)	37	46	10	12
P54227	Stathmin (Phosphoprotein p19) (pp19) (Leukemia-associated phosphoprotein p18) (Oncoprotein 18) (Op18) (pp17) (Prosolin) (Metablastin) (Protein Pr22) (Leukemia-associated gene protein)	Stmn1 (Lag) (Lap18) (Pr22)	121	120	10	12
Q9QUR6	Prolyl endopeptidase (PE) (EC 3.4.21.26) (Post-proline cleaving enzyme)	Prep (Pep)	56	20	15	18
P80315	T-complex protein 1 subunit delta (TCP-1-delta) (CCT-delta) (A45)	Cct4 (Cctd)	61	59	15	18
O08908	Phosphatidylinositol 3-kinase regulatory subunit beta (PI3-kinase p85 subunit beta) (PtdIns-3-kinase p85-beta)	Pik3r2	19	25	20	24
Q9JKF1	Ras GTPase-activating-like protein IQGAP1	Iqgap1	19	81	21	25

Q9R0K7	Plasma membrane calcium-transporting ATPase 2 (PMCA2) (EC 3.6.3.8) (Plasma membrane calcium ATPase isoform 2) (Plasma membrane calcium pump isoform 2)	Atp2b2 (Pmca2)	32	27	70	83
P80313	T-complex protein 1 subunit eta (TCP-1-eta) (CCT-eta)	Cct7 (Ccth)	49	50	11	13
Q8C3X4	GTP-binding protein GUF1 homolog	Guf1	311	506	412	483
P49718	DNA replication licensing factor MCM5 (CDC46 homolog) (P1-CDC46)	Mcm5 (Cdc46) (Mcmd5)	40	20	18	21
Q5SPW0	Vacuolar protein sorting-associated protein 54 (Tumor antigen SLP-8p homolog)	Vps54	36	28	13	15
Q6A4J8	Ubiquitin carboxyl-terminal hydrolase 7 (EC 3.1.2.15) (Ubiquitin thioesterase 7) (Ubiquitin-specific-processing protease 7) (Deubiquitinating enzyme 7) (Herpesvirus-associated ubiquitin-specific protease) (mHAUSP)	Usp7 (Hausp)	27	18	14	16
P40124	Adenylyl cyclase-associated protein 1 (CAP 1)	Cap1 (Cap)	22	43	8	9
Q64311	Protein N-terminal asparagine amidohydrolase (EC 3.5.1.-) (Protein NH2-terminal asparagine deamidase) (PNAD) (N-terminal Asn amidase) (NTN-amidase) (Protein NH2-terminal asparagine amidohydrolase) (PNAA)	Ntan1	20	26	8	9
Q64467	Glyceraldehyde-3-phosphate dehydrogenase, testis-specific (EC 1.2.1.12) (Spermatogenic glyceraldehyde-3-phosphate dehydrogenase) (Spermatogenic cell-specific glyceraldehyde 3-phosphate dehydrogenase 2) (GAPDH-2)	Gapdhs (Gapds) (Gapds)	75	781	26	29
P49717	DNA replication licensing factor MCM4 (CDC21 homolog) (P1-CDC21)	Mcm4 (Cdc21) (Mcmd4)	29	18	11	12

Q8BKC5	Importin-5 (Imp5) (Importin subunit beta-3) (Karyopherin beta-3) (Ran-binding protein 5) (RanBP5)	Ipo5 (Kpnb3) (Ranbp5)	185	91	12	13
P11984	T-complex protein 1 subunit alpha A (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1A) (TCP-1-A)	Cct1 (Ccta) (Tcp1)	29	66	14	15
P16858	Glyceraldehyde-3-phosphate dehydrogenase (GAPDH) (EC 1.2.1.12)	Gapdh (Gapd)	1514	1781	84	89
Q8VI56	Low-density lipoprotein receptor-related protein 4 (LDLR dan)	Lrp4 (Kiaa0816)	77	30	19	20
Q62504	Msx2-interacting protein (SPEN homolog) (SMART/HDAC1-associated repressor protein)	Spn (Kiaa0929) (Mint) (Sharp)	27	18	72	75
Q9JM05	E3 SUMO-protein ligase PIAS4 (Protein inhibitor of activated STAT protein 4) (Protein inhibitor of activated STAT protein gamma) (PIAS-gamma) (PIASy)	Pias4 (Piasg)	26	29	162	165
Q6P5F9	Exportin-1 (Exp1) (Chromosome region maintenance 1 protein homolog)	Xpo1 (Crm1)	19	43	9	9
Q9CQ60	6-phosphogluconolactonase (6PGL) (EC 3.1.1.31)	Pgls	148	41	11	11
Q9WV80	Sorting nexin-1	Snx1	23	49	11	11
Q8R4K2	Interleukin-1 receptor-associated kinase 4 (IRAK-4) (EC 2.7.11.1)	Irak4	32	47	22	22
Q80UK8	Integrator complex subunit 2 (Int2)	Ints2 (Kiaa1287)	16	27	24	24
Q91YE5	Bromodomain adjacent to zinc finger domain protein 2A (Transcription termination factor I-interacting protein 5) (TTF-I-interacting protein 5) (Tip5)	Baz2a (Tip5)	36	15	56	55
P23116	Eukaryotic translation initiation factor 3 subunit A (eIF3a) (Eukaryotic translation initiation factor 3 subunit 10) (eIF-3-theta) (eIF3 p167) (eIF3 p180) (eIF3 p185) (p162) (Centrosomin)	Eif3a (Csma) (Eif3) (Eif3s10)	199	166	58	56

Q9QXL1	Kinesin-like protein KIF21B (Kinesin-like protein KIF6)	Kif21b (Kif6)	22	45	26	25
Q8BGQ7	Alanyl-tRNA synthetase, cytoplasmic (EC 6.1.1.7) (Alanine--tRNA ligase) (AlaRS)	Aars	179	216	23	22
Q91V92	ATP-citrate synthase (EC 2.3.3.8) (ATP-citrate (pro-S-)-lyase) (Citrate cleavage enzyme)	Acly	349	488	45	43
Q9D6Z1	Nucleolar protein 5A (Nucleolar protein Nop56)	Nol5a (Nop56)	38	39	14	13
P08730	Keratin, type I cytoskeletal 13 (Cytokeratin-13) (CK-13) (Keratin-13) (K13) (47 kDa cytokeratin)	Krt13 (Krt1-13)	37	46	13	12
Q8CGC7	Bifunctional aminoacyl-tRNA synthetase [Includes: Glutamyl-tRNA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase); Prolyl-tRNA synthetase (EC 6.1.1.15) (Proline--tRNA ligase)]	Eprs (Qprs)	130	102	32	29
Q9QXA7	Tripartite motif-containing protein 44 (Protein DIPB) (Protein Mc7)	Trim44 (Dipb)	28	23	18	16
Q8CJ27	Abnormal spindle-like microcephaly-associated protein homolog (Spindle and hydroxyurea checkpoint abnormal protein) (Calmodulin-binding protein Sha1) (Calmodulin binding protein 1)	Aspm (Calmbp1) (Sha1)	35	23	55	48
Q9JJK8	Serine/threonine-protein kinase ATR (EC 2.7.11.1) (Ataxia telangiectasia and Rad3-related protein)	Atr	20	25	72	62
Q9D868	Peptidyl-prolyl cis-trans isomerase H (PPlase H) (Rotamase H) (EC 5.2.1.8)	Ppih	55	31	7	6
P20029	78 kDa glucose-regulated protein (GRP 78) (Heat shock 70 kDa protein 5) (Immunoglobulin heavy chain-binding protein) (BiP)	Hspa5 (Grp78)	262	312	25	21
P11983	T-complex protein 1 subunit alpha B (TCP-1-alpha) (CCT-alpha) (Tailless complex polypeptide 1B) (TCP-1-B)	Cct1 (Ccta) (Tcp1)	29	66	18	15

P19096	Fatty acid synthase (EC 2.3.1.85) [Includes: [Acyl-carrier-protein] S-acetyltransferase (EC 2.3.1.38); [Acyl-carrier-protein] S-malonyltransferase (EC 2.3.1.39); 3-oxoacyl-[acyl-carrier-protein] synthase (EC 2.3.1.41); 3-oxoacyl-[acyl-carrier-protein] reductase (EC 1.1.1.100); 3-hydroxypalmitoyl-[acyl-carrier-protein] dehydratase (EC 4.2.1.61); Enoyl-[acyl-carrier-protein] reductase (EC 1.3.1.10); Oleoyl [acyl-carrier-protein] hydrolase (EC 3.1.2.14)]	Fasn	1869	1524	163	135
P80316	T-complex protein 1 subunit epsilon (TCP-1-epsilon) (CCT-epsilon)	Cct5 (Ccte) (Kiaa0098)	239	102	17	14
Q64512	Tyrosine-protein phosphatase non-receptor type 13 (EC 3.1.3.48) (Protein tyrosine phosphatase PTP-BL) (Protein-tyrosine phosphatase RIP) (Protein tyrosine phosphatase DPZPTP) (PTP36)	Ptpn13 (Ptp14)	28	27	26	21
Q5XJY5	Coatomer subunit delta (Delta-coat protein) (Delta-COP) (Archain)	Arcn1 (Copd)	61	45	10	8
P12970	60S ribosomal protein L7a (Surfeit locus protein 3)	Rpl7a (Surf-3) (Surf3)	111	31	15	12
Q99MD9	Nuclear autoantigenic sperm protein (NASP)	Nasp	365	293	34	27
Q91ZU6	Bullous pemphigoid antigen 1, isoforms 1/2/3/4 (BPA) (Hemidesmosomal plaque protein) (Dystonia musculorum protein) (Dystonin)	Dst (Bpag1)	78	38	126	100
Q8BP67	60S ribosomal protein L24	Rpl24	354	214	24	19
Q80ZI6	E3 ubiquitin-protein ligase LRSAM1 (EC 6.3.2.-) (Leucine-rich repeat and sterile alpha motif-containing protein 1) (Tsg101-associated ligase)	Lrsam1	19	35	19	15
P63325	40S ribosomal protein S10	Rps10	468	168	42	33

P97434	Myosin phosphatase Rho-interacting protein (Rho-interacting protein 3) (RIP3) (p116Rip)	Mprip (Kiaa0864) (Mrip) (Rhoip3)	35	23	25	19
Q9QYB1	Chloride intracellular channel protein 4 (mc3s5/mtCLIC)	Clic4	28	33	4	3
Q9DBP5	UMP-CMP kinase (EC 2.7.4.14) (Cytidylate kinase) (Deoxycytidylate kinase) (Cytidine monophosphate kinase) (Uridine monophosphate kinase) (Uridine monophosphate/cytidine monophosphate kinase) (UMP/CMP kinase) (UMP/CMPK)	Cmpk1 (Cmk) (Cmpk) (Uck) (Umk) (Umpk)	107	93	12	9
P62751	60S ribosomal protein L23a	Rpl23a	75	49	16	12
O54887	Testis-specific serine kinase substrate (Testis-specific kinase substrate) (STK22 substrate 1)	Stk22s1 (Tsks)	50	21	16	12
Q9D8V0	Minor histocompatibility antigen H13 (EC 3.4.23.-) (Signal peptide peptidase) (Presenilin-like protein 3)	Hm13 (H13) (Psl3)	23	29	28	21
P62264	40S ribosomal protein S14	Rps14	163	166	15	11
Q91Z67	SLIT-ROBO Rho GTPase-activating protein 2 (srGAP2) (Formin-binding protein 2) (Formin-binding protein 27) (FBP-27)	Srgap2 (Fbp27) (Fnbp2)	77	48	11	8
Q9CR57	60S ribosomal protein L14	Rpl14	508	391	33	24
Q8BX70	Vacuolar protein sorting-associated protein 13C	Vps13c (Kiaa3021)	25	17	53	38
Q60673	Receptor-type tyrosine-protein phosphatase-like N (R-PTP-N) (PTP IA-2)	Ptpn (Ptp35)	30	18	14	10
Q6PFD5	Disks large-associated protein 3 (DAP-3) (SAP90/PSD-95-associated protein 3) (SAPAP3) (PSD-95/SAP90-binding protein 3)	Dlgap3 (Dap3)	28	21	21	15
P14869	60S acidic ribosomal protein P0 (L10E)	Rplp0 (Arbp)	115	334	28	20
Q91YJ5	Translation initiation factor IF-2, mitochondrial (IF-2Mt) (IF2(mt)) (IF-2(Mt))	Mtif2	29	23	13	9

P29391	Ferritin light chain 1 (Ferritin L subunit 1)	Ftl1 (Ftl) (Ftl-1)	150	159	6	4
P42932	T-complex protein 1 subunit theta (TCP-1-theta) (CCT-theta)	Cct8 (Cctq)	197	57	23	15
P40142	Transketolase (TK) (EC 2.2.1.1) (P68)	Tkt	562	250	117	75
Q61983	Sodium-dependent phosphate transport protein 1 (Sodium/phosphate cotransporter 1) (Na(+)/PI cotransporter 1) (Solute carrier family 17 member 1) (Renal sodium-dependent phosphate transport protein 1) (Renal sodium-phosphate transport protein 1) (Renal Na(+)-dependent phosphate cotransporter 1)	Slc17a1 (Npt1)	31	33	8	5
Q80U87	Ubiquitin carboxyl-terminal hydrolase 8 (EC 3.1.2.15) (Ubiquitin thioesterase 8) (Ubiquitin-specific-processing protease 8) (Deubiquitinating enzyme 8) (mUBPy)	Usp8 (Kiaa0055) (Ubpy)	29	23	24	15
Q3UXZ6	Protein FAM81A	Fam81a	22	27	13	8
P84099	60S ribosomal protein L19	Rpl19	39	47	13	8
O08709	Peroxiredoxin-6 (EC 1.11.1.15) (Antioxidant protein 2) (1-Cys peroxiredoxin) (1-Cys PRX) (Acidic calcium-independent phospholipase A2) (aiPLA2) (EC 3.1.1.-) (Non-selenium glutathione peroxidase) (NSGPx) (EC 1.11.1.7)	Prdx6 (Aop2) (Ltw4) (Prdx5)	56	29	5	3
P80317	T-complex protein 1 subunit zeta (TCP-1-zeta) (CCT-zeta) (CCT-zeta-1)	Cct6a (Cct6) (Cctz) (Cctz1)	160	52	22	13
P63017	Heat shock cognate 71 kDa protein (Heat shock 70 kDa protein 8)	Hspa8 (Hsc70) (Hsc73)	1719	959	119	70
Q9JI78	Peptide-N(4)-(N-acetyl-beta-glucosaminy)asparagine amidase (PNGase) (mPNGase) (EC 3.5.1.52) (Peptide:N-glycanase) (N-glycanase 1)	Ngly1	29	32	19	11

P53762	Aryl hydrocarbon receptor nuclear translocator (ARNT protein) (Dioxin receptor, nuclear translocator) (Hypoxia-inducible factor 1 beta) (HIF-1 beta)	Arnt	25	22	7	4
P97287	Induced myeloid leukemia cell differentiation protein Mcl-1 homolog (Bcl-2-related protein EAT/mcl1)	Mcl1	26	30	7	4
Q9QUK4	Baculoviral IAP repeat-containing protein 1b (Neuronal apoptosis inhibitory protein 2)	Naip2 (Birc1b) (Naip-rs6)	21	28	14	8
Q9D8N3	Transmembrane protein 86A	Tmem86a	38	27	30	17
Q9WUJ8	Origin recognition complex subunit 6	Orc6l (Orc6)	59	37	13	7
Q61390	T-complex protein 1 subunit zeta-2 (TCP-1-zeta-2) (CCT-zeta-2) (Cctz-2)	Cct6b	55	52	15	8
P97351	40S ribosomal protein S3a	Rps3a	899	392	50	26