

Supplementary Table 1 - Proteins from Bovine Milk

Symbol, identification number, name, localization and tentative physiological function are reported. Abbreviations: A, angiogenesis and blood functionality; B, bone maturation; C, cytoplasm; D, cell differentiation; ER, endoplasmic reticulum; ES, extracellular space; G, cell growth/tissue development; GA, Golgi-associated; I, defence/immunity; L, lipid droplet transport/secretion; LY, lysosome; M, gastrointestinal tract maturation; MF, milk fat globule membrane; N, nutrient delivery; NU, nucleus; O, other; P, protein degradation; PM, plasma membrane; S, structure; ST, signal transduction; T, transport; U, unknown; V, nervous system maturation; W, whey; Z, inflammation. Asterisks indicate proteins known resisting against gastrointestinal digestion. Circles indicate proteins identified as human or mouse homologues.

N.	Symbol	Uniprot ID	Name	Reference	Site	Role/Function	Fraction
1.	A1BG	Q2KJF1	Alpha-1-B glycoprotein	2, 5, 10, 12	ES	I	W
2.	A2M	Q7SIH1	Alpha-2-macroglobulin	2, 10	ES	A, I, P	W
3.	A5D7Q2	A5D7Q2	Putative uncharacterized protein	2	U	U	W
4.	ABCG2	Q4GZT4	ATP-binding cassette sub-family G member 2, breast cancer resistance protein	1, 2, 10	PM	A	MF, W
5.	ABTB2	Q8N961	Ankyrin repeat and BTB/POZ domain-containing protein 2	10	U	U	MF
6.	ACACA	Q9TTS3	Acetyl-Coenzyme A carboxylase 1	1, 10, 12, 13	C	L	MF
7.	ACBD3	A4FUI0	ACBD3, Golgi resident protein GCP60	10	GA	G, L, ST, V	W
8.	ACO1	Q0VCU1	Aconitase 1	2, 10	C	O	MF, W
9.	ACPI	P11064	Low molecular weight phosphotyrosine protein phosphatase	13	C	B, I, ST, Z	MF
10.	ACSBG1	Q2KHW5	Long-chain-fatty-acid-CoA ligase ACSBG1, acyl-CoA synthetase bubblegum family member 1	10	C	L	MF
11.	ACSL1	Q0VCZ8	Acyl-CoA synthetase long-chain family member 1	1, 10, 12	C	L	MF
12.	ACTA1	P68138	Actin alpha 1 (skeletal muscle)	12	C	L, S	W
13.	ACTB	P60712	Actin beta (cytoplasmic)	3, 4, 6, 7, 9, 10, 12	C	L, S	MF, W
14.	ACTC1	Q3ZC07	Actin alpha 1 (cardiac muscle)	10	C	L, S	W
15.	ACTG1	P63258	Actin gamma 1	2, 10	C	L, S	W
16.	ACTR3	P61157	Actin-related protein 3, ARP3	3, 12	C	L, S	MF
17.	ADAM1	O77779	Fertilin alpha	10	U	O	W
18.	ADCY5°	O95622	Adenylate cyclase type 5	10	PM	ST	W
19.	AHSG	P12763	Alpha-2-HS-glycoprotein, fetuin A	3, 5, 8, 9, 10, 12	ES	B, D, M, Z	MF, W
20.	AKR1A1	Q3ZCJ2	Alcohol dehydrogenase (NADP ⁺)	6	C	N	MF
21.	ALB	P02769	Albumin	2, 5, 6, 8, 9, 10	ES	L, N, T	MF, W
22.	ALDH2	P20000	Aldehyde dehydrogenase 2 family (mitochondrial)	3, 12	C	O	MF
23.	ALDOB	Q3T0S5	Fructose-bisphosphate aldolase B	13	C	O	MF
24.	ALPI	P19111	Intestinal-type alkaline phosphatase	10, 13	PM	B, I	W, MF
25.	ALPL	P09487	Alkaline phosphatase, tissue-nonspecific isozyme	10	PM	B	W
26.	AMBP	P00978	Alpha-1-microglobulin, protein AMBP, trypstatin	12	ES	I, P, ST, Z	W
27.	AMY2A*	Q3MHH8	Amylase alpha 2A	40	ES	N	W
28.	ANG1	P10152	Angiogenin, RNase A family member 5	2, 5, 10, 12, 13	ES	A, I	MF, W
29.	ANK3	A7Z090	Ankyrin 3, node of Ranvier ankyrin G	3	PM	ST, V	MF
30.	ANKRA2	Q2K179	Ankyrin repeat family A protein 2	4	C	L	MF
31.	ANKRD16	Q0P597	Ankyrin repeat domain 16D	10	C	L	W
32.	ANKRD22	A2VDV1	Ankyrin repeat domain 22	1	C	L	MF
33.	ANXA1	P46193	Annexin A1	3, 4, 10, 12	PM	L	MF
34.	ANXA2	P04272	Annexin A2	3, 4, 6, 12	PM	A, L, P	MF
35.	ANXA3	Q3SWX7	Annexin A3	7	C	L, N	MF
36.	ANXA5	P81287	Annexin A5	2, 4, 7, 9, 10	PM	A, L, N	MF, W
37.	APOA1	P15497	Apolipoprotein A-I	1, 2, 3, 8, 9, 10, 12	ES	L, N	MF, W
38.	APOA2	P81644	Apolipoprotein A-II	8, 10	ES	I, L, N	MF
39.	APOA4	Q32PJ2	Apolipoprotein A-IV	2, 4, 10	ES	L, N	W
40.	APOB°	P04114	Apolipoprotein B	3	ES	I, L, N	MF
41.	APOC3	P19035	Apolipoprotein C-III	8, 10	ES	G, L, N, ST	W
42.	APOE	Q03247	Apolipoprotein E	1, 2, 4, 10, 12	ES	L, N	MF
43.	APOH	P17690	Beta-2-glycoprotein 1, apolipoprotein H	9, 10, 12	ES	L, Z	MF, W
44.	AQPEP°	Q6Q4G3	Aminopeptidase Q, laeverin	10	PM	P, T	W
45.	ARF1	P84080	ADP-ribosylation factor 1	1, 6, 7, 12	C	L, ST, T	MF
46.	ARF4	Q3SZF2	ADP-ribosylation factor 4	7, 10	C	L, ST, T	MF
47.	ARHGDI A	P19803	Rho GDP dissociation inhibitor 1	1, 10, 12	C	ST	MF
48.	ARHGFE F4	Q9NR80	Rho guanine nucleotide exchange factor 4	10	PM	ST	W
49.	ARL15	Q5EA19	ADP-ribosylation factor-like protein 15	1	U	G, ST	MF
50.	ATAD2°	Q6PL18	ATPase family AAA domain-containing protein 2, ANCCA	13	C	B, G	MF
51.	ATP13A3° (includes EG:79572)	Q9H7F0	Cation transporting ATPase type 13A3	1	U	N, T	MF

52.	ATP13A4°	Q8N1Q9	Cation transporting ATPase type 13A4	1, 10	PM	N, T	MF
53.	ATP13A5°	Q8BUP1	Cation transporting ATPase type 13A5	1	PM	N, T	MF
54.	ATP2B2	Q95ML6	Calcium transporting ATPase, plasma membrane	1	PM	N, T	MF
55.	ATP5A1	P19483	Proton transporting ATP synthase subunit alpha (mitochondrial, cardiac muscle)	3, 12	C	G, M, N, O, T	MF
56.	ATP5F1	P13619	Proton transporting ATP synthase subunit beta (mitochondrial)	12	C	N, O, T	MF
57.	ATP6AP1	P40682	V-type proton ATP synthase subunit S1	10	C	B	W
58.	ATP6AP2	P81134	Proton transporting ATP synthase lysosomal accessory protein 2, renin receptor	2	C	L, ST	W
59.	ATXN2L°	Q8WWM7	Ataxin 2-like protein	10	PM	ST, V	W
60.	ATXN7°	O15265	Ataxin 7	10	N	G, V	MF
61.	AUP1	Q3ZC65	Ancient ubiquitous protein 1	10	U	N, O	MF
62.	AZGP1	Q3ZCH5	Zinc-alpha-2-glycoprotein	2, 5, 10, 12	ES	G, L, ST	W
63.	B2M	P01888	Beta-2-microglobulin, lactollin	2, 3, 4, 8, 10, 12	PM	I	MF, W
64.	B4GALT1	P08037	Beta 1,4-galactosyltransferase 1, Beta-1,4-GalTase 1	2, 9	C	N	MF, W
65.	BCHE	P32749	Cholinesterase	13	C	N, V	MF
66.	BRCA1	Q864U1	Breast cancer type 1 susceptibility protein	11	N	G, N, O	MF
67.	BRCA2	Q2NL37	Breast cancer type 2 susceptibility protein, CDKN1A-interacting protein	11	N	G, O	MF
68.	BSG	Q865R3	Basigin	4, 10	PM	G, N, V	MF
69.	BTBD9	A4IFG2	BTB/POZ domain-containing protein 9	10	PM	O	W
70.	BTC	A2VE27	Betacellulin	22	ES	D, G	U
71.	BTD	A6QQ07	Biotinidase	34	ES	N	U
72.	BTN1A1	P18892	Butyrophilin subfamily 1 member A1	1, 2, 3, 5, 6, 7, 9, 10, 11, 13	PM	L	MF, W
73.	C3	Q2UVX4	Complement component 3	2, 4, 5, 8, 10, 12	ES	I	MF, W
74.	C4A	P01030	Complement component 4A	2, 8, 12	ES	I	W
75.	C4BPA	A5D9D2	Complement component 4 binding protein, alpha chain	2	ES	I	W
76.	C5	P12082	Complement component 5a, anaphylatoxin	20, 26	ES	I	W
77.	C7	Q29RQ1	Complement component 7	2, 5, 12	ES	I	MF, W
78.	C8B°	P07358	Complement component 8 beta chain	12	ES	I	W
79.	C9	Q3MHN2	Complement component 9	2, 5, 12	ES	I	W
80.	CA2	P00921	Carbonic anhydrase II	7	C	D, G, L, T	MF
81.	CA6*	P18915	Carbonic anhydrase VI	33	ES	G, D	U
82.	CALCA	P01260	Calcitonin	15	ES	B, G, ST	U
83.	CAMP	P49913	Cathelicidin antimicrobial peptide	3, 10	C	I	MF
84.	CANT1°	Q8WVQ1	Calcium-activated nucleotidase 1, thiamine pyrophosphatase	13	C	I, ST	MF
85.	CANX	Q8HYW3	Calnexin	1, 4	C	I, N, T	MF
86.	CAPN6°	Q9Y6Q1	Calpain 6	4	C	P, S	MF
87.	CAPZA1	A4FUA8	F-actin-capping protein subunit alpha 1	3	C	S	MF
88.	CASP1	A0PCH9	Caspase 1, apoptosis-related cysteine peptidase, interleukin 1beta convertase	10	C	I, P, Z	W
89.	CAT	P00432	Catalase	3, 13	C	G, I, O	MF
90.	CATHL1	P22226	Cathelicidin 1, bactenecin 1, cyclic dodecapeptide	2, 3, 8, 9, 10, 12	ES	I	MF, W
91.	CATHL2	P19660	Cathelicidin 2, bactenecin 5	2, 8	ES	I	W
92.	CATHL3	P19661	Cathelicidin 3, bactenecin 7	8	ES	I	W
93.	CATHL4	P33046	Cathelicidin 4, indolicidin	8	ES	I	W
94.	CAV1	P79132	Caveolin 1, caveolae protein 22 kDa	11	PM	G, I, ST	MF
95.	CD109°	Q6YHK3	CD109 antigen	10	PM	D, G, I	W
96.	CD14	Q95122	CD14 molecule	1, 2, 4, 5, 6, 9, 10, 12, 26	PM	I, L	MF, W
97.	CD36	P26201	CD36 molecule, platelet glycoprotein IV, thrombospondin receptor	1, 2, 3, 4, 9, 10, 11, 13	PM	I, L, Z	MF, W
98.	CD44	Q29423	CD44 antigen	36	PM	G, I, ST	U
99.	CD46	Q6VE48	CD46, membrane cofactor protein, MCP	10	PM	I, L	MF
100.	CD5	P19238	CD5 molecule	5	PM	I	MF, W
101.	CD5L	A6QNW7	CD5 molecule-like	2, 10, 12	PM	I	W
102.	CD79A	P40293	B-cell antigen receptor complex-associated protein alpha chain (IgA)	3, 4, 10	PM	I	MF
103.	CD81	Q3ZCD0	CD81 antigen	4, 10	PM	G, I	MF, W
104.	CD82	A5D7E6	CD82	4	PM	G, I, ST	MF
105.	CD9	P30932	CD9 antigen	1, 4, 10, 12	PM	I, Z	MF
106.	CDC42	B6VAP7	Cell division control protein 42 homolog	4, 10	C	G, ST, V	MF, W
107.	CDC7A	Q32PH1	Cell division cycle-associated protein 7	10	N	G, I	W
108.	CFB	P81187	Complement factor B	2, 10	ES	I	W
109.	CFD	Q3T0A3	Complement factor D, C3 convertase activator, properdin factor D	5, 10, 12	ES	I	W
110.	CFH	Q28085	Complement factor H	2	ES	I	W
111.	CFI	Q32PI4	Complement factor I	10, 12	ES	I	W
112.	CFL1	Q5E9F7	Cofilin-1	1	C	S, ST	MF
113.	CHI3L1	P30922	Chitinase 3-like protein 1, cartilage glycoprotein 39	2	ES	B, D, I, ST	W
114.	CHI3L2	Q15782	Chitinase-3-like protein 2, chondrocyte protein 39	5	C	B, D, I, ST	W
115.	CHP	Q3SYS6	Calcium-binding protein p22	1, 6, 7	C	L, N, ST	MF

116.	CIB1	Q17QE5	Calcium and integrin-binding protein 1	10	PM	G, I, Z	W
117.	CIDEA	A4FUX1	Cell death-inducing DFFA-like effector A	1, 10	C	G, I, L, N	MF
118.	CL43	P42916	Collectin 43	10	ES	I	W
119.	CLEC3B	P05452	Tetranectin, C-type lectin domain family 3 member B	5, 10, 12	ES	B, G, I	MF, W
120.	CLIC4	Q9XSA7	Chloride intracellular channel protein 4	4	PM	O, T	MF
121.	CLP1	A2VE01	Polynucleotide kinase Clp1, polyribonucleotide 5'-hydroxyl-kinase Clp1, chitinase-like protein 2	3, 12	N	O	MF
122.	CLTC	P49951	Clathrin heavy chain 1	10	M	L	W
123.	CLU	P17697	Clusterin, apolipoprotein J	2, 4, 9, 10, 12	ES	I, L	W
124.	CNTFR	O18962	Ciliary neurotrophic factor receptor	10	PM	G, V	W
125.	COL11A1	Q28083	Collagen alpha-1(XI) chain	10	ES	B, D	MF
126.	CORO1A	Q92176	Coronin, actin binding protein 1A	3	C	D, G, I, L	MF
127.	CP	Q32P72	Ceruloplasmin, ferroxidase	2	ES	N	W
128.	CPB2	Q2KIG3	Carboxypeptidase B2	2	ES	P	W
129.	CREG1	Q148D9	Cellular repressor of E1A-stimulated genes 1	2, 5, 10, 12	N	D, G	W
130.	CRISP2	Q32LP8	Cysteine-rich secretory protein 2	5, 12	ES	O	W
131.	CRISP3 (includes EG:10321)	Q3ZCL0	Cysteine-rich secretory protein 3	2, 10	ES	I	W
132.	CSF2, GM-CSF	P11052	Granulocyte-monocyte colony-stimulating factor, GM-CSF	29	ES	D, G	U
133.	CSF3	P35833	Granulocyte colony-stimulating factor, G-CSF	10, 29	ES	D, G, I, ST	W
134.	CSN1S1 (includes EG:1446)	P02662	Casein alpha S1	2, 5, 8, 9, 10, 12	ES	B, I, N	MF, W
135.	CSN1S2	P02663	Casein alpha S2	4, 5, 9, 10	ES	B, I, N	MF
136.	CSN2	P02666	Casein beta	1, 5, 8, 10	ES	B, I, N	MF, W
137.	CSN3*	P02668	Casein kappa	1, 2, 5, 8, 9, 10	ES	B, I, N	MF, W
138.	CSNK1A1	Q32L14	Casein kinase 1 alpha 1	3	C	ST	W
139.	CST3	P01035	Cystatin C	35	ES	P	U
140.	CTSB	P07688	Cathepsin B	2	C	P	W
141.	CTSD	P80209	Cathepsin D	2	C	P	W
142.	CTSZ (includes EG:1522)	P05689	Cathepsin Z	2, 10	C	P	W
143.	CXCL1°, GROA°	P09341	Growth-regulated alpha protein, chemokine (C-X-C motif) ligand 1	20	ES	D, G, I, Z	W
144.	CXCL2	Q2KIE5	Chemokine (C-X-C motif) ligand 2	20	ES	I	W
145.	CXCL3°	P19876	Chemokine (C-X-C motif) ligand 3, MIP 2b	20	ES	I	W
146.	CXCL8, IL8	P79255	Chemokine (C-X-C motif) ligand 8, interleukin 8	20, 26	ES	D, G, I, ST, Z	W
147.	CYB5	P00171	Cytochrome b5	13	ER	N, O	MF
148.	CYB5R3	A6H7G0	Cytochrome b5 reductase 3, diaphorase	1, 4, 10, 13	C	O	MF
149.	CYTX	P35478	Stefin-c	10	C	P	W
150.	DDR1	Q0V8Q0	Discoidin domain receptor family member 1	10	PM	G, O	MF
151.	DDX54°	Q8TDD1	DEAD box polypeptide 54, ATP-dependent RNA helicase DDX54	3	N	G	W
152.	DHRS1	Q2KIS4	Dehydrogenase/reductase (SDR family) member 1	10	C	O	MF
153.	DHRS3	O77769	Short-chain dehydrogenase/reductase (SDR family) member 3	1, 12	C	N, O	MF
154.	DKFZp451B1115°	Q86T70	Putative uncharacterized protein DKFZp451B1115	1	U	G, N	MF
155.	DLGAP5	Q08DQ9	Discs large-associated protein 5, placenta and prostate discs large	10	U	D, G	MF
156.	DMBT1°	Q9UGM3	Deleted in malignant brain tumors 1, glycoprotein 340	3	PM	D, I	MF
157.	DMXL2°	Q8TDJ6	DmX-like protein 2, KIAA0856	10	C	L, T, V	W
158.	DNAH10°	Q8IVF4	Dynein heavy chain 10 axonemal, KIAA2017	10	C	S, O	W
159.	DNAJB9°	Q9UBS3	DnaJ homolog subfamily B member 9, Hsp40	5, 12	N	O	W
160.	DSC2	P33545	Desmocollin 2	10	PM	N, S	W
161.	DVL1	A8KC70	DVL1 protein	10	PM	G, V	W
162.	ECHDC1	Q2HJD5	Enoyl-CoA hydratase domain-containing protein 1	2	U	N, O	W
163.	ECM1	A5PJT7	Extracellular matrix protein 1	2	ES	A, D, G	W
164.	EEF1A1	P68103	Elongation factor 1 alpha 1, eukaryotic elongation factor 1 A-1	1, 4, 10, 12	C	G, O	MF
165.	EEF1A2	Q32PH8	Elongation factor 1 alpha 2, eukaryotic elongation factor 1 A-2	10	C	G	MF
166.	EGF	Q866M9	Epidermal growth factor	22	ES	D, G, I, M, ST	W
167.	EHD4	Q9EQP2	EH domain-containing protein 4	1	PM	L	MF
168.	EIF4G2	Q95L46	Eukaryotic translation initiation factor 4 gamma 2	3	C	I, V	W
169.	ELMOD2	Q08DZ3	ELMO domain-containing protein 2	1, 4	U	I, L, ST	MF
170.	ENAH°	Q8N8S7	Protein enabled homolog	10	C	S, O, V	MF
171.	ENO1	Q9XSJ4	Enolase alpha	2, 3, 12	C	A, G, I	MF, W
172.	ENPP3	P15396	Ectonucleotide pyrophosphatase/phosphodiesterase family member 3, phosphodiesterase 1/nucleotide pyrophosphatase 3	1, 2, 6, 10, 13	PM	I, L	MF, W
173.	EZR	P31976	Ezrin, villin 2	2, 3, 4, 10	PM	M, S	MF, W
174.	F13B	Q2TBQ1	Coagulation factor XIII, polypeptide B	2	C	A	W
175.	F2	P00735	Coagulation factor II, prothrombin	2, 9, 10	ES	A, I, P, Z	W

176.	FABP3	P10790	Fatty acid binding protein 3, mammary-derived growth inhibitor	2, 3, 5, 6, 7, 8, 10, 11, 12, 13	C	G, L, N	MF, W
177.	FABP7	Q09139	Fatty acid binding protein 7	1, 12	C	L	MF
178.	FADK	Q9TTI4	Focal adhesion kinase	11	C	A, D, G, V	MF
179.	FARP1	Q9Y4F1	FERM, RhoGEF and pleckstrin domain-containing protein 1	10	C	ST, V	W
180.	FASN	Q71SP7	Fatty acid synthase	1, 4, 6, 9, 10, 12	C	L, N	MF
181.	FBP1	Q3SZB7	Fructose-1,6-bisphosphatase 1	2, 10	C	N	W
182.	FBX034	A2VDK7	F-box protein 34	10	C	U	W
183.	FCGR2B	Q28110	Low affinity IgG Fc region receptor IIb, IgG Fc receptor II, CD32	4, 5, 12	PM	I	MF, W
184.	FCRL5°	Q96RD9	Fc receptor-like protein 5, IRTA 2, CD307	3	U	I	W
185.	FGA	P02672	Fibrinogen alpha chain	2, 3, 5, 12	ES	Z	MF, W
186.	FGB	P02676	Fibrinogen beta chain	2, 3, 8, 9, 12	ES	Z	MF, W
187.	FGF1	P03968	Fibroblast growth factor 1, heparin-binding growth factor 1	22	ES	A, G, M	W
188.	FGF2	P03969	Fibroblast growth factor 2, heparin-binding growth factor 2	22	ES	A, G, M	W
189.	FGFBP1	Q9MZ06	Fibroblast growth factor binding protein 1	2, 5, 10, 12	ES	A, G	W
190.	FGG	P12799	Fibrinogen gamma chain	2, 3, 12	ES	I, Z	W
191.	FN1	P07589	Fibronectin	2, 9, 10	PM	A, G, ST, V	W
192.	FOLH1	A6QLT8	Folate hydrolase 1, glutamate carboxypeptidase 2	4	C	P, N	MF
193.	FOLR1	P02702	Folate receptor alpha	4, 5, 6, 10	PM	L, N	MF, W
194.	FOLR2	Q0VCN9	Folate receptor beta	10	PM	L, N	MF
195.	FUCA1	Q2KIM0	Fucosidase alpha-L-1	2	C	N	W
196.	FYB	A7YWJ7	Fyn-binding protein	10	PM	U	W
197.	G6PC	Q29RU6	Glucose 6-phosphatase	13	C	N	MF
198.	GALM	Q5EA79	Aldose 1-epimerase, galactose mutarotase	2	C	N	W
199.	GANAB	A6QNJ8	Neutral alpha-glucosidase AB	2	C	N	W
200.	GAPDH (includes EG:2597)	P10096	Glyceraldehyde-3-phosphate dehydrogenase	3, 4	C	N	MF
201.	GC	Q3MHN5	Vitamin D-binding protein, group-specific component	2, 5, 10, 12	ES	N	W
202.	GDI1	P21856	Rab GDP dissociation inhibitor alpha, GDP dissociation inhibitor 1	4, 10	C	L, T	MF
203.	GDI2	P50397	Rab GDP dissociation inhibitor beta, GDP dissociation inhibitor 2	2, 6, 9, 10	C	L, T	MF, W
204.	GFAP	Q28115	Glial fibrillary acidic protein	1	C	L, S, V	MF
205.	GGT1°	P19440	Gamma-glutamyl transpeptidase 1, gamma-glutamyltransferase 1	2, 4, 10, 13	C	D, G, N	MF, W
206.	GH	P01246	Somatotropin, growth hormone	15, 16	ES	D, G, M	U
207.	GHRH	P63292	Somatoliberein, growth hormone releasing factor	15	ES	D, G, M	U
208.	GLBI	Q58D55	Beta galactosidase	13	C	L, N	MF
209.	GLYCAM1	P80195	Glycosylation dependent cell adhesion molecule 1, lactophorin, proteose peptone component 3	1, 2, 3, 5, 9, 10, 12	PM	I, L	MF, W
210.	GNA11	P38409	Guanine nucleotide-binding protein alpha 11, G protein subunit alpha-11	6, 12	PM	L, ST	MF
211.	GNA13°	Q14344	Guanine nucleotide-binding protein alpha 13, G protein subunit alpha-13	1, 4, 10	PM	L, ST	MF
212.	GNA14	P38408	Guanine nucleotide-binding protein alpha 14, G protein subunit alpha-14	1, 12	PM	L, ST	MF
213.	GNAI2	A7MBH9	Guanine nucleotide-binding protein G(i) subunit alpha 2	1, 4	PM	L, ST	MF
214.	GNAI3	Q3ZCA7	Guanine nucleotide-binding protein G(k) subunit alpha	10	PM	L, ST	MF
215.	GNAO1	P08239	Guanine nucleotide-binding protein G(o) subunit alpha	4, 7, 10	PM	L, ST	MF
216.	GNAQ	P50148	Guanine nucleotide-binding protein G(q) subunit alpha	4, 10	PM	L, ST	MF
217.	GNAS	P04896	Guanine nucleotide-binding protein G(s) subunit alpha short isoform	1, 6, 10	PM	L, ST	MF
218.	GNB1	P62871	Guanine nucleotide-binding protein G(I)/G(S)/G(T) subunit beta 1	1, 6, 10, 12	PM	L, ST	MF
219.	GNB2	P11017	Guanine nucleotide-binding protein G(I)/G(S)/G(T) subunit beta 2	1, 3, 4, 6, 7, 10, 12	PM	L, ST	MF
220.	GNBL21	P25388	Guanine nucleotide-binding protein subunit beta 2-like 1	1	PM	L, ST	MF
221.	GNG12	Q28024	Guanine nucleotide-binding protein G(I)/G(S)/G(O) subunit gamma 12	4	PM	L, ST	MF
222.	GOLGA7	Q5EA55	Golgin subfamily A member 7, HSPC041 protein	1	GA	L, P	MF
223.	GP2	Q0IIA4	Glycoprotein 2, zymogen granule membrane, pancreatic secretory granule membrane major glycoprotein	2, 10	C	I, L	MF, W
224.	GPAM	Q5GJ77	Glycerol-3-phosphate acyltransferase, mitochondrial	10	C	L, N	MF
225.	GPD1	Q5EA88	Glycerol-3-phosphate dehydrogenase, cytoplasmic	6	C	L, N	MF
226.	GPRC5B	Q1JPD9	G protein-coupled receptor family C group 5 member B	10	PM	L, ST	W
227.	GPRC5C	Q2YDG0	G protein-coupled receptor family C group 5 member C	4	PM	L, ST	MF
228.	GRID1	Q9ULK0	Glutamate receptor delta 1 subunit	3	PM	ST, V	MF
229.	GRP	Q863C3	Bombesin, gastrin-releasing peptide	15	ES	G, V	W
230.	GSN	Q3SX14	Gelsolin, actin-depolymerizing factor	2, 5, 6, 12	ES	L, N, S	W

231.	HBA	P01966	Hemoglobin alpha chain	4	C	A	MF
232.	HEBP1	Q148C9	Heme binding protein 1	10	C	L, N	W
233.	HEXA	Q0V8R6	Beta-hexosaminidase subunit alpha, N-Acetyl- β -D-glucosaminidase	13	C	O	MF
234.	HIST3A	P68432	H3 histone, family 3A	3	N	O	MF
235.	HIST1H2BI	Q2KII5	Histone H2B	2, 10	U	O	W
236.	HIST2H2AB ^o	Q8IUE6	Histone H2A type 2-B	3, 10	N	O	MF
237.	HP	Q2TBU0	Haptoglobin	2, 4, 10	ES	Z	W
238.	HPN	A1L5C6	Hepsin, transmembrane serine protease	4	ES	G, I, P	MF
239.	HPSE	Q9MY00	Heparanase	5, 12	PM	A, G, I, P	MF, W
240.	HPX	Q3SZV7	Hemopexin	10	ES	N	W
241.	HSD17B7	A4FUD2	17-beta hydroxysteroid dehydrogenase	10	PM	L, N	MF
242.	HSD3B7	Q3MHF2	3-beta-hydroxy-delta 5-C27-steroid oxidoreductase	4	C	G, L, N	MF
243.	HSP90AA1	Q76LV2	Heat shock protein 90 kDa alpha, HSPCA	1, 4, 10, 12	C	I, L, O	MF
244.	HSP90AB1	Q76LV1	Heat shock protein 90 kDa beta, HSPCB	10	C	I, L, O	W
245.	HSP90B1	Q29092	Heat shock protein 90 kDa beta member 1, endoplasmic, glucose-regulated 94 kDa protein	3	ER	I, L, O	MF
246.	HSPA13	Q2TBX4	Heat shock 70 kDa protein 13	2	C	I, L, O	W
247.	HSPA1A	Q27975	Heat shock 70 kDa protein 1A	3, 10	C	I, L, O	MF
248.	HSPA1B	Q27965	Heat shock 70 kDa protein 1B	2	C	I, L, O	W
249.	HSPA5	Q0VCX2	Heat shock 70kDa protein 5, glucose-regulated 78 kDa protein	3	C	I, L, O	MF
250.	HSPA8	A8KC76	Heat shock 70kDa protein 8, heat shock cognate 71 kDa protein, HSP7C	2, 3, 4, 6, 7, 9, 10, 12	C	I, L, Z	MF, W
251.	HSPB1	Q3T149	Heat shock protein beta 1, heat shock 27 kDa protein	3, 4, 10	C	I, L, O	MF
252.	IBTK ^o	Q9P2D0	Inhibitor of Bruton tyrosine kinase, KIAA1417	10	C	ST	MF
253.	IDH1	Q9XSG3	Isocitrate dehydrogenase 1 (NADP ⁺)	2, 3, 4, 6, 10, 12	C	L, N	MF, W
254.	IFNG	P07353	Interferon gamma	26, 28	ES	I, ST	W
255.	IGF1	P07455	Insulin-like growth factor I	16, 22	C	D, G, M, ST	W
256.	IGF2	P07456	Insulin-like growth factor II	22	ES	D, G, M, ST	W
257.	IGFBP1	P24591	Insulin-like growth factor-binding protein 1	31	ES	D, G, M, ST	U
258.	IGFBP2	P13384	Insulin-like growth factor-binding protein 2	31	ES	D, G, M, ST	U
259.	IGFBP3	P20959	Insulin-like growth factor-binding protein 3	31	ES	D, G, M, ST	U
260.	IGFBP4	Q05716	Insulin-like growth factor-binding protein 4	31	ES	D, G, M, ST	U
261.	IGHA2 ^{o*}	P01877	Immunoglobulin alpha-2 chain C	4, 5, 12	ES	I	MF
262.	IGHD ^{o*}	P01880	Immunoglobulin delta chain	12	ES	I	MF
263.	IGHG1 ^{o*}	P01857	Immunoglobulin gamma-1 chain C region	2, 4, 5, 10, 12	ES	I	W
264.	IGHG3 ^{o*}	P01860	Immunoglobulin gamma-3 chain C region	5	ES	I	MF, W
265.	IGHM ^{o*}	P01871	Immunoglobulin mu chain C region	1, 2, 5, 10, 12	PM	I	W, MF
266.	IGJ [*]	Q3SYR8	Immunoglobulin J chain, linker protein for immunoglobulin alpha and mu polypeptides	5, 10, 12	ES	I	W
267.	IGK [*]	B0JYP6	Immunoglobulin GK protein	2, 4, 5, 10, 12	ES	I	W
268.	IGLL1 [*]	A4IF10	Immunoglobulin lambda-like chain	2, 5, 10, 12	PM	I	MF, W
269.	IGLL3 [*]	A2NU33	Immunoglobulin lambda L-chain C region	10	PM	I	W
270.	IGL α [*]	Q1RMN8	Immunoglobulin light chain lambda locus	2, 10	N	I	MF, W
271.	IL10	P43480	Interleukin 10	26	ES	G, I, ST, Z	W
272.	IL12	P54349	Interleukin 12	26	ES	G, I, ST, Z	W
273.	IL1A	P08831	Interleukin 1alpha	10	ES	G, I, ST, Z	MF
274.	IL1B	P09428	Interleukin 1beta	20, 26, 27	ES	G, I, ST, Z	W
275.	IL1R2	Q2WFX3	Interleukin 1 receptor 2	25	PM, ES	I, ST	W
276.	IL2	P05016	Interleukin 2	28	ES	G, I, ST	U
277.	IL4	P30367	Interleukin 4	39	ES	I, ST	U
278.	IL6	P26892	Interleukin 6, interferon beta 2	27	ES	D, I, ST, V, Z	U
279.	IMP3	Q3T0M3	U3 small nucleolar ribonucleoprotein protein IMP3	10	N	O	MF
280.	INS	P01317	Insulin	15	ES	G	U
281.	ITIH1	Q0VCM5	Inter-alpha-trypsin inhibitor heavy chain H1	2	ES	L, P, S, Z	W
282.	ITIH2	A5D7R6	Inter-alpha-trypsin inhibitor heavy chain H2	5	ES	L, P, S, Z	W
283.	ITIH4	Q3T052	Inter-alpha-trypsin inhibitor heavy chain H4, plasma kallikrein-sensitive glycoprotein	2, 10	ES	L, P, S, Z	W
284.	JMJDC ^o	Q15652	Probable JmjC domain-containing histone demethylation protein 2C	10	N	G, ST	W
285.	KCNMA1	Q28204	Calcium-activated potassium channel subunit alpha 1	10	PM	ST, T	MF
286.	KIAA0368 ^o	Q5VYK5	Proteasome-associated protein ECM29 homolog, KIAA0368	10	U	U	W
287.	KIAA1486 ^o	Q9P242	Uncharacterized protein KIAA1486	10	U	U	MF
288.	KIAA1586 ^o	Q9HCI6	Uncharacterized protein KIAA1586	3	U	U	MF
289.	KIAA2026 ^o	Q5HYC2	Uncharacterized protein KIAA2026	3	U	U	MF

290.	KIF22	A6QPL4	Kinesin-like protein KIF22	10	N	U	W
291.	KNG1 (includes EG:3827)	P01044	Kininogen 1 (includes colostrokinin–released peptide and bradykinin)	2, 5, 9, 10, 12	ES	A	W
292.	KNG2	P01045	Kininogen 2	9	ES	A	W
293.	KRAS ^o	P01116	GTPase KRas	10	PM	G, S, ST, V	MF
294.	KRR1	Q3B7L9	KRR1small subunit processome component homolog	10	N	O	MF
295.	KRT10	P06394	Keratin 10	3	C	L, S	W
296.	KRT6A	A4FV94	Keratin 6	3	PM	L, S	W
297.	KRT9 ^o	P35527	Keratin type I cytoskeletal 9	3	C	L, S	W
298.	LALBA	P00711	Lactalbumin alpha	2, 4, 8, 9, 10	ES	N, I	W
299.	LAP	Q28880	Lingual antimicrobial peptide	32	ES	I	U
300.	LAP3	P00727	Leucine aminopeptidase 3	2	C	P	W
301.	LBP	Q2TBI0	Lipopolysaccharide-binding protein	2, 5, 10, 12, 26	PM	I, L	MF, W
302.	LCN2	P80188	Neutrophil gelatinase-associated lipocalin, lipocalin 2, NGAL	2, 5, 10, 12	ES	I, Z	W
303.	LCPI	Q3ZC00	Lymphocyte cytosolic protein 1, L-plastin	3, 5, 12	C	I	MF, W
304.	LDHA	P19858	Lactate dehydrogenase chain A	10	C	L, N	W
305.	LDHB	Q5E9B1	Lactate dehydrogenase chain B	2	C	L, N	W
306.	LEP	P50595	Leptin	19	ES	G, M, ST	U
307.	LGALS7 ^o	Q6IB87	Galectin 7, lectin galactoside-binding protein 7B	1	C, N, ES	I, ST	MF
308.	LGB*	P02754	Beta-lactoglobulin	2, 5, 6, 7, 8, 9, 10	ES	N, I	MF, W
309.	LHRH	Q0VBW7	Gonadoliberin 1, luteinizing hormone-releasing hormone, GnHRH	15	ES	G, D, I, ST	U
310.	LOC686060	Q15910; Q96L73	Similar to Histone-lysine N-methyltransferase, H3 K36 and H4 K20 specific (H3-K36-HMTase) (H4-K20-HMTase), nuclear receptor binding SET domain containing protein 1	2, 3, 10	U	D, G, V	MF, W
311.	LOC788112	A5PJH7	LOC788112 protein	2	U	I	W
312.	LPL	P11151	Lipoprotein lipase	2, 10	C	L, N	W
313.	LPO*	P80025	Lactoperoxidase	2, 3, 5, 10	ES	I	W
314.	LRG1	Q2KIF2	Leucine-rich alpha-2-glycoprotein 1	2, 10	ES	Z	W
315.	LRRC8A	Q08E42	Leucine-rich repeat-containing protein 8A	1	U	O	MF
316.	LRRC8C ^o	Q8TDW0	Leucine-rich repeat containing protein 8C, AD158	1	C	O	MF
317.	LSS	P84466	Lanosterol synthase	10	C	L, N	MF
318.	LTF	P24627	Lactotransferrin	2, 3, 5, 6, 9, 10	ES	G, I, N	MF, W
319.	LV107 ^o	P06316	Immunoglobulin lambda chain V-1 region BL2	2, 5, 10	ES	I	W
320.	LYSM	Q6B411	Lysozyme C, milk isozyme	40	ES	I	W
321.	MAL2	A2VE13	Protein Mal2, T-cell differentiation protein 2	1	PM	D, I, O	MF
322.	MAN2A2 ^o	P49641	Alpha-mannosidase 2x, mannosidase alpha, class 2A member 2	2	C	L, N	W
323.	MAPK	P46196	Mitogen-activated protein kinase 1	11	C	D, G, ST	MF
324.	MARCKS	P12624	Myristoylated alanine-rich C-kinase substrate	4	PM	L, S, ST	MF
325.	MASP1	Q08DW4	Mannan-binding lectin serine peptidase 1, C4/C2 activating component of Ra-reactive factor	2	ES	I, P	W
326.	MASRA2 ^o	Q8NG23	GTP binding protein Sara	1	GA	L, ST	MF
327.	MBL2	O02659	Mannose-binding protein C, mannose-binding lectin, collectin 1	2	ES	I	W
328.	MDH1	Q3T145	Malate dehydrogenase	6, 10	C	L, N	MF
329.	MESDC1	A6QR18	Mesoderm development candidate 1	10	U	U	W
330.	METTL9	Q0VCJ8	Methyltransferase-like protein 9, DORA reverse strand protein, DREV 1	1	C	ST	MF
331.	MFAP1	Q5EA98	Microfibrillar-associated protein 1	10	ES	S	W
332.	MFGE8*	Q95114	Milk fat globule-EGF factor 8 protein, lactadherin, PAS 6/7	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 13	ES	I, L	MF, W
333.	MGC137014	Q2KIT0	Hibernation-associated plasma protein HP-20-like	10	C	I	W
334.	MGC137211	Q2KIU3	Putative uncharacterized protein MGC137211	10	U	I	W
335.	MGC151921	Q0IIA2	Odorant-binding protein-like	2	ES	T	W
336.	MLLT6 ^o	P55198	Protein AF-17	10	N	G	MF
337.	MPO	A6QPT4	Myeloperoxidase	38	L	G, I	U
338.	MSN	Q2HJ49	Moesin	10	PM	I	W
339.	MSR1	P21758	Macrophage scavenger receptor type I and II	3, 12	PM	I	MF
340.	MTMR8 ^o	Q96EF0	Myotubularin-related protein 8	10	N	V	W
341.	MTN	P10950	Melatonin synthase	15	ES	M, V	U
342.	MUC1	Q8WML4	Mucin 1, cell surface associated, CD227	1, 2, 3, 10, 11, 12, 13	PM	I, L	MF, W
343.	MUC15	A7E340	Mucin 15, cell surface associated, PAS3	1, 2, 9, 10, 13	ES	I, L	MF, W
344.	MUC16 ^o	Q8WXI7	Mucin 16	10	ES	I, L	W
345.	MYEF2	A6QQP0	Myelin expression factor 2	10	N	D, G, V	MF
346.	NAPA	P81125	Alpha-soluble NSF attachment protein	6	PM	L, T	MF
347.	NCLN	Q1LZC3	Nicalin homolog	10	N	D, G	W
348.	NDRG1	Q3SYX0	Protein NDRG1, N-myc downstream-regulated gene 1 protein	10	C	D, G	W
349.	NDUFV2	P04394	NADH dehydrogenase (ubiquinone) flavoprotein 2, 24 kDa protein	3	C	O	W
350.	NEB	Q28140	Nebulin	3	C	O	W

351.	NEK3	A41FF6	NEK3 protein	10	U	D, G, ST	W
352.	NELL2	A6QR11	Protein kinase C-binding protein NEL-like 2	2	ES	D, G, V	W
353.	NFKB1	A7Z034	NFKB1 protein	29	N	G, I, ST, Z	U
354.	NME2	Q3T0Q4	Nucleoside diphosphate kinase B	10	C	O	W
355.	NP	P55859	Purine nucleoside phosphorylase	2	N	O	W
356.	NPC2	P79345	Epididymal secretory protein E1, Niemann-Pick disease type C2 protein homolog	5, 8, 10, 12	ES	L, N	MF, W
357.	NSDHL	Q3ZBE9	Sterol-4-alpha-carboxylate 3-dehydrogenase, NAD(P)-dependent steroid dehydrogenase-like	6, 10	C	L, N	MF
358.	NT5E	Q05927	5'-Nucleotidase, CD73	1, 6, 10, 13	PM	L, N	MF
359.	NUCB1	Q0P569	Nucleobindin 1	2, 3, 5, 10, 12	C	I	W
360.	NUCB2	Q0IIH5	Nucleobindin 2, DNA binding protein NEFA	2, 5, 10, 12	N	I	W
361.	OPLAH	Q75WB5	5-Oxoprolinase, ATP-hydrolysing	3	U	L, N	MF
362.	OR2T6°	Q8NHC8	Olfactory receptor 2T6	1, 10	PM	ST	MF
363.	ORM1, AGP	Q3SZR3	Alpha-1-acid glycoprotein, orosomucoid 1	2, 8, 10	ES	I, Z	W
364.	OS9	Q0V8D8	Osteosarcoma amplified protein 9, endoplasmic reticulum lectin	2	N	B, G, P	W
365.	OXT	P01175	Oxytocin	14	ES	G, D, ST	W
366.	P4HA2	Q3SYY3	Prolyl 4-hydroxylase, alpha polypeptide II	3	U	O	MF
367.	P4HB	P05307	Protein disulfide isomerase, prolyl 4-hydroxylase subunit beta (PDIA1)	12	C	I, L, O	MF
368.	PBEF	C5H4R1	Visfatin	30	C	G, I	U
369.	PDCD6IP	Q6NUS1	Programmed cell death 6 interacting protein	4	U	G, I, L	MF
370.	PDE6B	P23439	Rod cGMP-specific 3',5'-cyclic phosphodiesterase subunit beta	10	PM	ST, V	W
371.	PDE6H	P22571	Retinal cone rhodopsin-sensitive cGMP 3',5'-cyclic phosphodiesterase subunit gamma	10	PM	ST, V	W
372.	PDGFA	Q2KJ15	Platelet-derived growth factor alpha	22	ES	D, G, M, ST	W
373.	PDGFB	B1H0W5	Platelet-derived growth factor beta	22	ES	D, G, M, ST	W
374.	PDIA3	P38657	Protein disulfide isomerase family A3	6, 12	C	I, O	MF
375.	PDLIM7	Q3SX40	PDZ and LIM domain protein 7	3, 5	C	B, D, G	MF, W
376.	PDXK	Q0II59	Pyridoxal (pyridoxine, vitamin B6) kinase	2, 6, 10	C	G, O	W
377.	PEBP1	P13696	Phosphatidylethanolamine-binding protein 1	10	C	L, O	W
378.	PER2°	O54943	Period circadian protein homolog 2	10	N	G, O, ST	MF
379.	PFN1	P02584	Profilin 1	1, 12	C	G, S, V	MF
380.	PGAM1	Q3SZ62	Phosphoglycerate mutase 1	2	C	N	W
381.	PGD	Q3ZC14	6-Phosphogluconate dehydrogenase	4	C	N	MF
382.	PGLS	Q2TBQ8	6-Phosphogluconolactonase	1	C	N	MF
383.	PGLYRP1	Q8SPP7	Peptidoglycan recognition protein 1	2, 3, 12	PM	I	W, MF
384.	PHB (includes EG:5245)	Q3T165	Prohibitin	3	N	G, ST	MF
385.	PIGR	P81265	Polymeric immunoglobulin receptor	2, 3, 4, 5, 7, 8, 9, 10, 12	PM	I, L	MF, W
386.	PKHDIL1°	Q86W11	Fibrocystin-L, polycystic kidney and hepatic disease 1-like protein 1	10	PM	O	MF
387.	PLAT	Q28198	Tissue-type plasminogen activator	37	ES	A, D, I, P	U
388.	PLAU	Q05589	Urokinase-type plasminogen activator	37	ES	D, G, I, P	U
389.	PLIN2	Q9TUM6	Perilipin 2, adipophilin, adipose differentiation-related protein	1, 3, 5, 6, 7, 9, 10, 12, 13	PM	L	MF, W
390.	PLIN3	Q3SX32	Perilipin 3, mannose-6-phosphate binding protein 1, Cargo selection protein TIP47	2, 10	PM	L	W
391.	PLMN	P06868	Plasminogen	13, 37	ES	I	MF
392.	PLSCR2	Q3ZBG9	Phospholipid scramblase 1	4	PM	L, N	MF
393.	PNPLA2	Q2K118	Patatin-like phospholipase domain containing protein 2	1	C	L, N	MF
394.	POLDIP3	A7YW33	Polymerase (DNA-directed) delta interacting protein 3	10	N	O	W
395.	POMC	P01190	Pro-opiomelanocortin	10	ES	A, G, V	W
396.	PPA1	P37980	Inorganic pyrophosphatase	13	C	B, L, N	MF
397.	PPAP2C	Q2HJ61	Lipid phosphate phosphohydrolase 2	13	C	L, N	MF
398.	PPARG	O18971	Peroxisome proliferator-activated receptor gamma, coactivator 1 beta	3	N	A, D, G, L	MF, W
399.	PPIA (includes EG:5478)	P62935	Peptidylprolyl cis-trans isomerase A, cyclophilin A, rotamase	1, 2, 4, 6, 10, 12	C	I, L, O, ST	MF, W
400.	PRDX1	Q5E947	Peroxiredoxin 1	4	C	O	MF
401.	PRKAR1A	P00514	cAMP-dependent protein kinase type I-alpha regulatory subunit, kinase PRKA anchor protein 4	12	C	D, ST	MF
402.	PRKCB	P05126	Protein kinase C beta type, diacylglycerol kinase kappa	3	C	M, ST	MF
403.	PRKDC°	P78527	DNA-dependent protein kinase catalytic subunit	10	N	O	W
404.	PRKG1	P21136	cGMP-dependent protein kinase 1	10	C	A, ST	MF
405.	PRL	P01239	Prolactin	16	ES	D, G, I, ST	U
406.	PROM1°	O43490	Prominin, CD133	4	PM	U	MF
407.	PRSS8	Q08DU0	Prostasin, serine protease 8	4, 10	PM	P	MF
408.	PSAP	A1L555	Prosaposin, co-beta glucosidase	2, 5, 9, 10, 12, 13	ES	L, N, V	MF, W
409.	PSEN1	Q9XT97	Presenilin 1	1	PM	P, V	MF

410.	PSMB1	Q2TBX6	Proteasome subunit beta type 1	2	C	P	W
411.	PTGDS	O02853	Prostaglandin-H2 D-isomerase	10	ER	A, L, Z	MF
412.	PTHLH	P58073	Parathyroid hormone-related protein	15	ES	B, D, G	U
413.	PTX3°	P26022	Pentraxin-related protein PTX3	21	ES	I, Z	U
414.	Q9XS94	Q9XS94	Major fibrous sheath protein, kinase A anchor protein 4	1	C	O, S	MF
415.	QSOX1	A6QQA8	Sulfhydryl oxidase 1, quiescin Q6	5, 10, 12, 13	GA	G, L	MF, W
416.	RAB10	A6QLS9	Ras-related protein Rab10	1	C	L, N, ST, T	MF
417.	RAB11A	Q2TA29	Ras-related protein Rab11a	1, 2, 4, 10	C	G, L, N, ST, T	MF, W
418.	RAB11B	Q3MHP2	Ras-related protein Rab11b	1, 4, 7	C	G, L, N, ST, T	MF
419.	RAB13	Q58DS5	Ras-related protein Rab13	1	PM	L, N, ST, T	MF
420.	RAB18	Q0IIG8	Ras-related protein Rab18	1, 4, 6, 7, 10	C	G, L, N, ST, T	MF
421.	RAB1A	A1L528	Ras-related protein Rab1a	1, 2, 4, 10	C	L, N, ST	MF, W
422.	RAB1B (includes EG:81876)	Q2HJH2	Ras-related protein Rab1b	6, 7	C	L, N, ST, T	MF
423.	RAB21	Q17R06	Ras-related protein Rab21	4	C	L, N, ST, T	MF
424.	RAB22A	A5PPJ3	Ras-related protein Rab22a	1	C	L, N, ST, T	MF
425.	RAB27B	Q8HZJ5	Ras-related protein Rab27b	1, 12	C	L, N, ST, T	MF
426.	RAB2A	Q148J4	Ras-related protein Rab2a	1, 4, 10	C	L, N, ST, T	MF
427.	RAB35	A5D7E0	Ras-related protein Rab35	1, 4	C	L, N, ST, T	MF
428.	RAB3A	P11023	Ras-related protein Rab3a	1, 4, 12	C	L, N, ST, T, V	MF
429.	RAB3B	P10948	Ras-related protein Rab3b	1, 12	C	L, N, ST, T	MF
430.	RAB3C	P10949	Ras-related protein Rab3c	1, 12	C	L, N, ST, T	MF
431.	RAB5A	Q0IIG7	Ras-related protein Rab5a	4	C	L, N, ST, T	MF
432.	RAB5B°	Q8IXL2	Ras-related protein Rab5b	1	C	L, N, ST, T	MF
433.	RAB5C	Q58DS9	Ras-related protein Rab5c	1	C	L, N, ST, T	MF
434.	RAB7A	Q3T0F5	Ras-related protein Rab7a	1, 2, 4, 10	C	L, N, ST, T	MF, W
435.	RAB8B	Q2HJI8	Ras-related protein Rab8B	4	C	L, N, ST, T	MF
436.	RAC1	P62998	Ras-related C3 botulinum toxin substrate 1, Rho family, small GTP binding protein Rac1	4, 10	C	A, L, S, V	MF
437.	RALA	Q1JPH2	Ras-related v-ral simian leukemia viral oncogene homolog A	4	PM	L, S, ST, V	MF
438.	RALB	A5D977	Ras-related v-ral simian leukemia viral oncogene homolog B	1	C	L, ST	MF
439.	RAP1A	P62833	Ras-related protein Rap-1A, GTP-binding protein smg p21A	1, 4, 10, 12	C	L, ST	MF
440.	RAP1B	P61223	Ras-related protein Rap-1B, GTP-binding protein smg p21B	1, 2, 6, 10, 12	C	G, L, ST	MF, W
441.	RARS2	Q0P5H7	Probable arginyl-tRNA synthetase, mitochondrial	10	M	O	MF
442.	RBP4	Q32L14	Retinol binding protein 4	2	ES	D, G, L, N, V	W
443.	RECS1	Q6QRN7	Responsive to centrifugal force and shear, PP1201 protein	1	PM	O	MF
444.	RHEB	Q56JV3	Ras homolog enriched in brain, GTP-binding protein Rheb	1	PM	L, ST	MF
445.	RHOA	P61585	Ras homolog gene family member A, transforming protein RhoA	1, 4, 7, 10, 12	C	L, ST	MF
446.	RHOC	Q1RMJ6	Ras homolog gene family member C, GTP-binding protein Rho C	1	PM	L, ST	MF
447.	RHOF	Q3SZA1	Ras homolog gene family member F, GTP-binding protein Rho F	1	C	L, ST	MF
448.	RHOG	Q1RMI2	Ras homolog gene family member G, Rho G	4	PM	L, ST	MF
449.	RIT1°	Q92963	GTP-binding protein Rit1, Ras-like without CAAX protein 1	1, 10, 12	PM	ST	MF
450.	RNASE1	P61823	Ribonuclease pancreatic, RNase family member 1	10, 13	ES	O	W
451.	RNASE4	P15467	Ribonuclease 4, RNase family member 4	2, 10, 12	ES	O	W
452.	RNF123°	Q5XPI4	E3 ubiquitin-protein ligase RNF123	10	C	P	W
453.	RPL7A	Q2TBQ5	60S ribosomal protein L7a	3	U	O	W
454.	RUNDC3B	Q08E29	RUN domain-containing protein 3B	41	U	O	U
455.	S100A11°	P31949	S100 calcium-binding protein A11, calgizzarin	3	C, N	I, Z	MF
456.	S100A12	P79105	S100 calcium-binding protein A12, calgranulin C	3, 8, 12	C	I, ST, Z	MF
457.	S100A9	P28783	S100 calcium-binding protein A9, calgranulin B	3, 12	C	I, ST, Z	MF
458.	S100B	P02638	S100 calcium-binding protein B	10	C	D, G, N, V	W
459.	S100PBP°	Q96BU1	S100P binding protein Riken	3	U	N	W
460.	SAA1	P35541	Serum amyloid A1 protein	1, 3, 4, 26	ES	Z	MF
461.	SAA3P°	P22614	Serum amyloid A3 protein	12	U	Z	MF
462.	SAO	Q29437	Primary amine oxidase, liver isozyme	10	ES	O	W
463.	SAR1A	Q3T0D7	GTP-binding protein SAR1a	7, 10	C	L, ST	MF
464.	SAR1B	Q3T0T7	GTP-binding protein SAR1b	1, 6, 7, 12	C	L, ST	MF
465.	SCAMP2	A6QR35	Secretory carrier membrane protein 2	1	C	L, T	MF
466.	SCCPDH	Q3T067	CGI 49 protein, saccharopine dehydrogenase	1, 4	C	N, P	MF
467.	SCGB1D2	A0JNP2	Secretoglobin family 1D member 2, lipophilin B	2, 10	ES	N, L	W
468.	SCGB2A2 (includes EG:4250)	A6QPK0	Secretoglobin family 2A member 2	2	ES	L, N, T	W
469.	SCYL2	A6QLN8	SCY1-like 2	3	U	O	MF
470.	SDF4	Q3ZBZ1	Calcium-binding 45 kDa protein, stromal cell derived factor 4	2, 10	C	D	W
471.	SELENBP1°	Q13228	Selenium-binding protein 1	10	N	N, T	MF
472.	SEP15	A8YXY3	15 kDa selenoprotein	10	ER	O	MF
473.	SERPINA 3-7	A2I7N3/ Q5J801	Serpin peptidase inhibitor clade A member 7, endopin 2b	2, 5, 10, 12	ES	P	W
474.	SERPINA1*	P34955	Alpha-1-antitrypsin, serpin peptidase inhibitor clade A member 1	2, 3, 8, 10, 12	ES	I, N, P, Z	W

Supplementary Material (ESI) for Molecular BioSystems

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475.	SERPINA3*	Q9TTE1	Alpha-1-antichymotrypsin, serpin peptidase inhibitor, clade A member 3, endopin 1a	2, 5, 10, 12	ES	I, N, P, Z	MF, W
476.	SERPINA4°	P29622	Serpin peptidase inhibitor clade A member 4, kallistatin	10, 12	ES	P	W
477.	SERPINA5	Q9N2I2	Serpin peptidase inhibitor clade A member 5, plasma serine protease inhibitor	10, 12	ES	P	MF, W
478.	SERPINC1	P41361	Serpin peptidase inhibitor clade C member 1, antithrombin III	2, 5, 10, 12	ES	P	W
479.	SERPIND1	A6QPP2	Serpin peptidase inhibitor clade D member 1	2	ES	P	W
480.	SERPING1°	P05155	Serpin peptidase inhibitor clade G member 1, plasma protease C1 inhibitor	2, 5, 9, 10, 12	ES	I, N, P	W
481.	SFN	Q0VC36	14-3-3 sigma, stratifin	5	ES, N, C	ST	W
482.	SFP4	P81019	Seminal plasma protein BSP-30 kDa	4	ES	O	MF
483.	SFT2D2	A6QPB4	SFT2D2 protein	10	PM	L	MF
484.	SGK1	A7MB74	Serine/threonine-protein kinase Sgk1	10	C	O, ST	W
485.	SGLT1	Q8MKB7	Sodium/glucose cotransporter	1	PM	T	MF
486.	SIL1	Q32KV6	Nucleotide exchange factor SIL1, endoplasmic reticulum chaperone homolog	2, 10	C	T	W
487.	SIRPA	O46631	Tyrosine-protein phosphatase non-receptor type substrate 1	10	PM	I, V	W
488.	SLC16A1	Q3MHW6	Solute carrier family 16 (monocarboxylate transporter) member 1	4	PM	L, T	MF
489.	SLC1A1	A7MB31	Solute carrier family 1 (neuronal/epithelial high affinity glutamate/excitatory amino acid transporter) member 1	1, 4, 12	PM	L, T	MF
490.	SLC27A6	A6QQD5	Acyl-CoA synthetase long-chain family member 6	4	C	L, T	MF
491.	SLC28A1°	O00337	Solute carrier family 28 (sodium-nucleoside cotransporter) member 1	4	PM	L, T	MF
492.	SLC28A3	A4UQU5	Solute carrier family 28 (concentrative sodium-nucleoside cotransporter) member 3	10	PM	L, T	MF
493.	SLC29A1	Q3ZC83	Solute carrier family 29 (nucleoside transporter) member 1	10	PM	L, T	MF
494.	SLC2A3	P58352	Solute carrier family 2 (facilitated glucose transporter) member 3	4	PM	L, T	MF
495.	SLC34A2	Q27960	Solute carrier family 34 (sodium-dependent phosphate transport protein 2B) member 2	2, 3, 9, 10, 12	PM	L, T	MF, W
496.	SLC3A2	Q5EA54	Solute carrier family 3 (activators of dibasic and neutral amino acid transport) member 2	4	PM	L, T	MF
497.	SLC5A1	A5HNF2	Solute carrier family 5 member 1	4, 10, 12	PM	L, T	MF
498.	SLC6A14	Q9UN76	Solute carrier family 6 (sodium and chloride-dependent neutral and basic amino acid transporter) member 14	4	PM	L, T	MF
499.	SLC6A8	O18875	Solute carrier family 6 (sodium and chloride-dependent creatine transporter) member 8	1, 12	C	L, T	MF
500.	SLC8A3	P57103	Sodium/calcium exchanger 3	10	PM	L, T	W
501.	SNAP23	Q2T9M8	Synaptosomal-associated 23k Da protein	1, 10	PM	L, V	MF
502.	SND1	Q863B3	Staphylococcal nuclease/tudor domain-containing protein 1	1	N	I, ST	MF
503.	SORL1°	Q92673	Sortilin-related receptor	10	PM	L	W
504.	SOX18	Q0VC26	SRY (Sex determining region Y)-box 18	10	N	A, D	MF
505.	SPEG	Q2HJ82	SPEG protein	10	U	A, G	W
506.	SPP1	P31096	Osteopontin, secreted phosphoprotein 1	2, 5, 9, 10, 12	ES	B, I, ST	W
507.	SPPL2A°	Q8TCT8	Signal peptide peptidase-like 2A	4	ES	P	MF
508.	SRRM2	A7E374	SRRM2 protein	10	N	O	W
509.	SSR1	A6QLP7	Translocon associated protein alpha, signal sequence receptor subunit alpha	1, 12	C	L, N, T	MF
510.	SST	P26917	Somatostatin	15	ES	D, G, ST	U
511.	ST8SIA5	O15466	Alpha-2,8-sialyltransferase 8E	10	GA	D, V	MF
512.	STAG2°	Q8N3U4	Cohesin subunit SA-2	10	N	D, G	W
513.	STAT5B	Q9TUM3	Signal transducer and activator of transcription 5B	1, 29	N	A, D, G, ST	MF
514.	STC1	Q9N0T1	Stanniocalcin 1	18	ES	B, G	U
515.	STOM	A8E4P3	Stomatin	1, 4	PM	L	MF
516.	STX3	A6QLH3	Syntaxin 3	1, 4, 10	PM	L, T, V	MF
517.	STXBP2	Q2NL10	Syntaxin binding protein 2	4	PM	I, L	MF
518.	SYNE1	A6QQJ0	Spectrin repeat containing nuclear envelope protein 1	2	N	S	W
519.	TCN1*	P20061	Transcobalamin I, vitamin B12-binding protein, haptocorrin	17	C	I, N	U
520.	TCP1	Q32L40	T-complex protein 1 subunit alpha	6	C	I	MF
521.	TF	Q29443	Transferrin	2, 3, 8, 9, 10, 12	ES	I, N	W
522.	TGFA	Q7M304	Transforming growth factor alpha	26	ES	D, G, M, ST	W
523.	TGFB1	P18341	Transforming growth factor beta 1	22, 26	ES	B, D, G, I, ST, Z	W
524.	TGFB2	P21214	Transforming growth factor beta 2	22, 26	ES	G, I, ST	W
525.	TKT	A5PJ79	Transketolase	2, 10	C	G, N	W
526.	TLR2	Q95LA9	Toll-like receptor 2	1, 4, 10, 12	PM	I	MF
527.	TLR4	Q9GL65	Toll-like receptor 4	1, 4, 12	PM	I	MF
528.	TM4SF18	Q3T110	Transmembrane 4 L6 family member 18	1	U	O	MF
529.	TNFA	Q06599	Tumor necrosis factor alpha	20, 27	PM	D, G, I, Z	W
530.	TNFRSF6B	A6QPW7	Tumor necrosis factor receptor superfamily member 6B	2	PM	ST	W
531.	TOX4	Q0P5K4	TOX high mobility group box family member 4	10	N	O	W

532.	TPP1	Q0V8B6	Tripeptidyl peptidase I	2	C	P	W
533.	TPT1	Q5E984	Translationally-controlled tumor protein	6	C	L, N, S	MF
534.	TRIM11	A0JN74	Tripartite motif-containing protein 11	10	C	O	MF
535.	TRIM68 ^o	Q6AZZ1	E3 ubiquitin-protein ligase TRIM68, tripartite motif-containing protein 68	1	C	O	MF
536.	TRIP12	Q0P5M6	TRIP12 protein	10	C	P	W
537.	TRY	P00760	Cationic trypsin, alpha trypsin 1	2	ES	P	W
538.	TSHB	P01223	Thyroid stimulating hormone subunit beta	15	ES	D, G, ST	U
539.	TTN	Q8WZ42	Titin, connectin	10	C	L, S, ST	MF
540.	TTR	O46375	Transthyretin	2, 5, 8, 10, 12	ES	G, N, T, V	MF, W
541.	TTYH1	Q2KJ98	Protein tweety homolog 1	4	PM	T	MF
542.	TUBA3C	Q13748	Tubulin alpha 3C/D chain, tubulin alpha 2 chain	4	C	S	MF
543.	TUBB2C	Q3MHM5	Tubulin beta 2C chain	3	C	S	MF
544.	TULP1	O00294	Tubby-related protein 1	10	C	V	MF
545.	UBB	P62990	Ubiquitin B, ribosomal protein S27a	4, 10	C	P	MF
546.	UBL3 ^o	O95164	Ubiquitin-like protein 3, membrane-anchored ubiquitin-fold protein	1	ES	P	W
547.	UGP2	Q07130	UDP-glucose-1-phosphate uridylyltransferase, UDP-glucose pyrophosphorylase	2	C	N, O	MF, W
548.	UMOD	P48733	Uromodulin	1	ES	I, L, N	MF
549.	VAMP2	P63026	Vesicle-associated membrane protein 2, synaptobrevin 2, cellubrevin	1	PM	L, N	MF
550.	VAMP8	Q3T0Y8	Vesicle-associated membrane protein 8, endobrevin	1, 10	PM	L, N	MF
551.	VAT1 ^o	Q99536	Synaptic vesicle membrane protein VAT-1 homolog, vesicle amine transport protein 1 homolog	1, 4, 10	PM	L, N	MF
552.	VCP	Q3ZBT1	Transitional endoplasmic reticulum ATPase, TER ATPase	6	C	L, N	MF
553.	VDAC1	P45879	Voltage-dependent anion-selective channel protein 1	3	C	T, V	MF
554.	VIM	P48616	Vimentin	3	C	L, S	MF
555.	VPS28	Q3T178	Vacuolar protein sorting-associated protein 28	4	PM	P, T	MF
556.	VPS4B	Q0VD48	Vacuolar protein sorting factor 4 B	4	PM	G, T	MF
557.	WARS	P17248	Tryptophanyl-tRNA synthetase	6	C	S, ST	MF
558.	WC1	B6UM01	WC1	3	PM	I, ST	U
559.	XDH	P80457	Xanthine dehydrogenase/oxidase	1, 2, 3, 5, 6, 7, 9, 10, 11, 13	C	I, L	MF, W
560.	YKT6	Q3T000	Synaptobrevin homolog YKT6, YKT6 v-SNARE homolog	1, 2, 4	C	L, N, T	MF, W
561.	YWHAB	P68250	14-3-3 protein gamma beta/alpha, protein kinase C inhibitor	1, 12	C	ST	MF
562.	YWHAE	P62261	14-3-3 protein epsilon, protein kinase C inhibitor	12	C	ST	W
563.	YWHAG	P68252	14-3-3 protein gamma, protein kinase C inhibitor	1, 12	C	ST	MF
564.	YWHAZ	P63103	14-3-3 protein gamma zeta/delta, protein kinase C inhibitor	3, 12	C	ST	MF
565.	ZC3H13	Q0VCM8	Zinc finger CCCH-type containing 13, similar to KIAA0853	3	U	O	W
566.	ZMAT1 ^o	Q5H9K5	Zinc finger matrin-type protein 1	10	N	O	W
567.	ZMPSTE24 ^o	O75844	CAAX prenyl protease 1 homolog, zinc metallopeptidase STE24 homolog	3	N	P	W
568.	ZNF297 ^o , ZBTB22 ^o	O15209	Zinc finger and BTB domain-containing protein 22	10	N	O	W
569.	ZNF479 ^o	Q96JC4	Zinc finger protein 479	3	C	O	W
570.	ZNF641 ^o	Q96N77	Zinc finger protein 641	10	N	O	W
571.	ZNF668	Q2TA17	Zinc finger protein 668	3	C	O	W
572.	ZNF822, ATMIN	O43313	ATM interactor, ATM/ATR-substrate CHK2-interacting zinc finger protein	10	N	O	MF
573.	ZO1	Q95M47	Tight junction protein 1	1, 12	C	S	MF

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Papers in the field with redundant protein entries

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