Supplemental Table 1. All proteins identified in rat IMCD by mass spectrometry. For each fraction, both the number of total peptide IDs (#Ids) and the number of unique peptide IDs (#Peptides) are shown. These values are not normalized by molecular weight.

			4K		17K		200K		Sup	
Protein Name	**Gene Symbol**	**Accession Number**	**#Peptides**	**#Ids**	**#Peptides**	**#Ids**	**#Peptides**	**#Ids**	**#Peptides**	**#Ids**
5-aminoimidazole-4-carboxamide ribonucleotide formyltransferase/IMP cyclohydrolase	Atic	NP_112276.2	0	0	0	0	0	0	2	3
6-pyruvoyl-tetrahydropterin synthase	Pts	NP_058916.1	0	0	0	0	0	0	1	2
abhydrolase domain containing 14b	Abhd14b	NP_001007665.1	0	0	0	0	0	0	1	1
acetyl-coenzyme A carboxylase alpha	Acaca	NP_071529.1	1	1	0	0	0	0	0	0
acid phosphatase 1, soluble	Acp1	NP_067085.1	0	0	0	0	0	0	1	1
acid phosphatase 2, lysosomal	Acp2	NP_058684.1	0	0	1	1	1	1	0	0
acidic ribosomal phosphoprotein P0	Arbp	NP_071797.1	0	0	0	0	2	2	0	0
aconitase 1	Aco1	NP_059017.1	0	0	0	0	0	0	5	14
aconitase 2, mitochondrial	Aco2	NP_077374.2	6	7	0	0	0	0	1	1
actin related protein 2/3 complex, subunit 1B	Arpc1b	NP_062162.1	0	0	0	0	1	1	0	0
actin related protein 2/3 complex, subunit 3	Arpc3	NP_001099403.1	1	1	0	0	1	1	0	0
actin, alpha 1, skeletal muscle	Acta1	NP_062085.1	14	28	11	32	7	12	7	14
actin, beta	Actb	NP_112406.1	4	10	4	5	3	4	5	7
actin, beta-like 2	Actbl2	NP_001099879.1	1	1	0	0	0	0	0	0
actinin, alpha 1	Actn1	NP_112267.1	2	3	0	0	1	1	7	13
acyl-Coenzyme A binding domain containing 3	Acbd3	NP_878263.1	0	0	0	0	0	0	1	2
acyl-Coenzyme A dehydrogenase, long-chain	Acadl	NP_036951.1	1	1	0	0	0	0	0	0
adaptor protein complex AP-1, beta 1 subunit	Ap1b1	NP_058973.1	0	0	0	0	2	3	2	3
adaptor protein complex AP-2, alpha 2 subunit	Ap2a2	NP_112270.2	1	1	0	0	3	3	0	0
adaptor-related protein complex 2, beta 1 subunit	Ap2b1	NP_542150.1	0	0	0	0	1	1	1	1
adenosine kinase	Adk	NP_037027.2	0	0	0	0	0	0	1	1
adenosine monophosphate deaminase 3	Ampd3	NP_113732.1	0	0	0	0	3	3	1	2
adhesion regulating molecule 1	Adrm1	NP_113896.1	0	0	0	0	1	1	0	0
ADP-ribosylation factor 1	Arf1	NP_071963.1	1	1	0	0	0	0	4	6
ADP-ribosylation factor 4	Arf4	NP_077065.1	1	1	0	0	0	0	1	2
ADP-ribosylation factor 5	Arf5	NP_077063.1	1	2	1	2	1	1	0	0
albumin	Alb	NP_599153.2	7	9	13	18	5	5	19	31
aldehyde dehydrogenase 1 family, member L1	Aldh1l1	NP_071992.1	1	1	0	0	1	1	1	1
aldehyde dehydrogenase 9 family, member A1	Aldh9a1	NP_071609.2	0	0	0	0	1	1	0	0
aldehyde dehydrogenase family 1, subfamily A1	Aldh1a1	NP_071852.2	0	0	0	0	2	2	1	1
aldehyde dehydrogenase family 1, subfamily A2	Aldh1a2	NP_446348.1	0	0	0	0	0	0	1	2
aldehyde dehydrogenase family 1, subfamily A3	Aldh1a3	NP_695212.1	0	0	0	0	5	6	6	7
aldehyde dehydrogenase family 1, subfamily A7	Aldh1a7	NP_058968.14	0	0	0	0	1	2	0	0
aldehyde dehydrogenase family 3, subfamily A2	Aldh3a2	NP_113919.1	1	1	1	1	0	0	0	0
aldehyde dehydrogenase family 6, subfamily A1	Aldh6a1	NP_112319.2	4	5	0	0	0	0	0	0
aldehyde reductase 1	Akr1b1	NP_036630.1	7	14	6	15	4	6	12	53
aldo-keto reductase family 1, member B8	Akr1b8	NP_775159.1	0	0	0	0	0	0	3	5
aldo-keto reductase family 7, member A2 (aflatoxin aldehyde reductase)	Akr7a2	NP_599234.1	0	0	0	0	0	0	1	1
aldo-keto reductase family 7, member A3 (aflatoxin aldehyde reductase)	Akr7a3	NP_037347.1	0	0	0	0	0	0	1	1
aldolase A, fructose-bisphosphate	Aldoa	NP_036627.1	1	1	0	0	5	6	4	6
alpha actinin 4	Actn4	NP_113863.2	1	1	0	0	0	0	11	19
alpha isoform of regulatory subunit A, protein phosphatase 2	Ppp2r1a	NP_476481.1	1	1	0	0	1	1	0	0
alpha-spectrin 2	Spna2	NP_741984.2	16	20	12	15	14	17	29	44
aminopeptidase Fxna	Ermp1	NP_908939.2	1	1	0	0	0	0	0	0
aminopeptidase puromycin sensitive	Npepps	NP_536320.1	0	0	0	0	0	0	5	7
annexin A1	Anxa1	NP_037036.1	1	1	4	5	0	0	6	13
annexin A10	Anxa10	NP_001102580.1	0	0	0	0	0	0	1	1
annexin A11	Anxa11	NP_001011918.1	1	1	0	0	0	0	0	0
annexin A2	Anxa2	NP_063970.1	6	18	10	29	4	5	6	19
annexin A4	Anxa4	NP_077069.3	1	1	2	2	0	0	6	12
annexin A5	Anxa5	NP_037264.1	0	0	2	2	0	0	6	14
annexin A6	Anxa6	NP_077070.2	1	1	3	3	0	0	10	12
annexin A7	Anxa7	NP_569100.2	0	0	0	0	0	0	1	1
aplysia ras-related homolog A2	Rhoa	NP_476473.1	0	0	0	0	0	0	4	5
apoptosis-inducing factor, mitochondrion-associated 1	Aifm1	NP_112646.1	4	4	0	0	0	0	0	0
aquaporin 1	Aqp1	NP_036910.1	1	1	0	0	0	0	0	0
aquaporin 2	Aqp2	NP_037041.2	0	0	3	8	1	1	0	0
aquaporin 4	Aqp4	NP_036957.1	0	0	1	1	0	0	0	0
archain	Arcn1	NP_001007663.1	0	0	1	1	2	3	1	1
arginine-tRNA-protein transferase 1	Ate1	NP_001099770.1	0	0	0	0	0	0	1	1
arginyl aminopeptidase (aminopeptidase B)	Rnpep	NP_112359.1	0	0	1	1	0	0	10	12
arginyl-tRNA synthetase	Rars	NP_001099247.2	0	0	0	0	3	3	0	0
aspartyl aminopeptidase	Dnpep	NP_001020050.1	0	0	0	0	2	3	0	0

ATP synthase, H+ transporting, mitochondrial F0 complex, subunit B1	Atp5f1	NP_599192.1	1	1	2	3	0	0	0	0
ATP synthase, H+ transporting, mitochondrial F0 complex, subunit d	Atp5h	NP_062256.1	2	2	0	0	0	0	0	0
ATP synthase, H+ transporting, mitochondrial F1 complex, alpha subunit 1, cardiac muscle	Atp5a1	NP_075581.1	6	9	1	1	0	0	0	0
ATP synthase, H+ transporting, mitochondrial F1 complex, beta subunit	Atp5b	NP_599191.1	4	5	2	2	0	0	0	0
ATP synthase, H+ transporting, mitochondrial F1 complex, delta subunit precursor	Atp5d	NP_620806.1	1	1	1	1	0	0	0	0
ATP synthase, H+ transporting, mitochondrial F1 complex, gamma subunit	Atp5c1	NP_446277.1	1	1	0	0	0	0	0	0
ATPase, Ca++ transporting, cardiac muscle, slow twitch 2 isoform a	Atp2a2	NP_001104293.1	0	0	1	1	0	0	0	0
ATPase, H transporting, lysosomal V1 subunit A	Atp6v1a1	NP_001101788.1	1	1	3	3	1	1	0	0
ATPase, H transporting, lysosomal V1 subunit B1	Atp6v1b1	NP_001101337.2	0	0	1	1	0	0	0	0
ATPase, H+ transporting, lysosomal V1 subunit H	Atp6v1h	NP_001013951.1	0	0	1	2	1	2	0	0
ATPase, Na+/K+ transporting, alpha 1 polypeptide	Atp1a1	NP_036636.1	12	18	9	21	1	1	0	0
ATPase, Na+/K+ transporting, beta 1 polypeptide	Atp1b1	NP_037245.2	4	4	3	4	0	0	0	0
ATP-binding cassette, sub-family A (ABC1), member 4	Abca4	NP_001101191.1	0	0	0	0	0	0	1	1
ATP-binding cassette, sub-family E (OABP), member 1	Abce1	NP_001101916.1	0	0	1	2	1	2	0	0
basal cell adhesion molecule	Bcam	NP_113940.1	2	5	2	4	1	1	0	0
beta-glo	MGC72973	NP_942071.1	0	0	0	0	0	0	3	5
beta-globin	LOC689064	NP_001104739.1	0	0	1	1	0	0	3	6
brain glycogen phosphorylase	Pygb	NP_037320.1	0	0	0	0	3	3	10	19
calmodulin 2	Calm2	NP_059022.1	2	2	0	0	0	0	0	0
calnexin	Canx	NP_742005.1	2	2	5	9	1	1	0	0
calpain 1, large subunit	Capn1	NP_062025.1	0	0	0	0	0	0	6	8
calpain 2	Capn2	NP_058812.1	1	1	1	2	0	0	7	10
calpain, small subunit 1	Capns1	NP_058814.1	0	0	1	1	1	1	1	2
calponin 3, acidic	Cnn3	NP_062232.1	0	0	1	2	0	0	2	2
calreticulin	Calr	NP_071794.1	3	5	2	4	1	1	2	2
CAP, adenylate cyclase-associated protein 1	Cap1	NP_071778.2	1	1	0	0	8	11	4	6
capping protein (actin filament), gelsolin-like	Capg	NP_001013104.1	0	0	1	1	0	0	4	6
carbonic anhydrase II	Car2	NP_062164.1	0	0	0	0	0	0	2	4
carboxylesterase 2	Ces2	NP_598270.1	1	1	1	2	0	0	0	0
carnitine palmitoyltransferase 1a, liver	Cpt1a	NP_113747.2	1	1	0	0	0	0	0	0
catalase	Cat	NP_036652.1	0	0	1	1	0	0	0	0
catenin (cadherin associated protein), alpha 2	Ctnna2	NP_001100068.1	1	1	2	2	0	0	0	0
catenin (cadherin-associated protein), alpha 1, 102kDa	Ctnna1	NP_001007146.1	1	1	0	0	0	0	0	0
cathepsin B preproprotein	Ctsb	NP_072119.2	1	2	0	0	0	0	0	0
cathepsin D	Ctsd	NP_599161.2	1	1	1	1	0	0	0	0
CD151 molecule (Raph blood group)	Cd151	NP_071968.1	0	0	1	1	0	0	0	0
CD59b moleucle, complement regulatory protein	Cd59b	NP_037057.1	0	0	1	1	0	0	0	0
CD9 antigen	Cd9	NP_444177.1	0	0	1	3	0	0	0	0
Cdc42-binding protein kinase beta	Cdc42bpb	NP_446072.2	0	0	1	1	0	0	0	0
cell death-inducing DFFA-like effector c	Cidec	NP_001019504.1	1	1	0	0	0	0	0	0
cell division cycle 42	Cdc42	NP_741991.3	1	1	1	1	0	0	4	5
ceruloplasmin	Cp	NP_036664.1	1	1	4	5	0	0	0	0
chaperonin containing TCP1, subunit 2 (beta)	Cct2	NP_001005905.1	0	0	0	0	1	1	0	0
chaperonin containing TCP1, subunit 3 (gamma)	Cct3	NP_954522.1	0	0	0	0	5	12	0	0
chaperonin containing TCP1, subunit 5 (epsilon)	Cct5	NP_001004078.1	1	1	0	0	1	1	0	0
chaperonin subunit 4 (delta)	Cct4	NP_877966.1	0	0	0	0	2	2	0	0
chaperonin subunit 6a (zeta)	Cct6a	NP_001028856.1	0	0	0	0	3	3	0	0
chaperonin subunit 7 (eta)	Cct7	NP_001100073.1	0	0	0	0	4	5	0	0
chaperonin subunit 8 (theta)	Cct8	NP_001099367.1	0	0	0	0	2	2	0	0
chloride intracellular channel 1	Clic1	NP_001002807.1	0	0	0	0	0	0	2	2
choline dehydrogenase precursor	Chdh	NP_942026.1	2	2	0	0	0	0	0	0
choline/ethanolamine phosphotransferase 1	Cept1	NP_001007700.1	1	1	0	0	0	0	0	0
chromosome segregation 1-like	Cse1l	NP_001102077.1	0	0	0	0	0	0	1	1
clathrin, heavy polypeptide (Hc)	Cltc	NP_062172.1	1	1	10	10	6	7	38	52
CNDP dipeptidase 2	Cndp2	NP_001010920.1	0	0	0	0	0	0	2	3
coatomer protein complex, subunit beta 1	Copb1	NP_542959.1	0	0	0	0	1	2	0	0
coatomer protein complex, subunit gamma	Copg	NP_001026992.1	0	0	0	0	1	1	0	0
coatomer protein complex, subunit zeta 1	Copz1	NP_001101587.1	0	0	0	0	1	1	0	0
cofilin 1	Cfl1	NP_058843.1	0	0	0	0	0	0	6	8
complement component 3	C3	NP_058690.2	0	0	1	1	0	0	0	0

COP9 (constitutive photomorphogenic) homolog, subunit 5	Cops5	NP_001020866.1	0	0	0	0	1	1	0	0
coronin, actin-binding protein, 1B	Coro1b	NP_062095.1	0	0	0	0	2	3	5	11
corticosteroid-induced protein precursor	Fxyd4	NP_071783.1	0	0	1	1	0	0	0	0
crystallin, alpha B	Cryab	NP_037067.1	2	2	2	3	3	5	2	3
CTD (carboxy-terminal domain, RNA polymerase II, polypeptide A) phosphatase, subunit 1	Ctdp1	NP_001099601.1	0	0	0	0	0	0	1	1
cullin 4B	Cul4b	NP_001100421.1	0	0	0	0	0	0	1	2
cullin associated and neddylation disassociated 1	Cand1	NP_446456.1	0	0	0	0	0	0	1	1
cyclin A1	Ccna1	NP_001011949.1	1	1	0	0	0	0	1	1
cysteine string protein	Dnajc5	NP_077075.1	1	1	0	0	0	0	0	0
cytidine 5'-triphosphate synthase 2	Ctps2	NP_001030170.1	0	0	0	0	0	0	1	1
cytochrome b-5	Cyb5	NP_071581.1	0	0	1	2	0	0	0	0
cytochrome c oxidase subunit II	COX2	AP_004895.1	1	1	0	0	0	0	0	0
cytochrome c oxidase subunit IV isoform 1	Cox4i1	NP_058898.1	0	0	1	2	0	0	0	0
cytochrome c oxidase, subunit Va	Cox5a	NP_665726.1	1	1	0	0	0	0	0	0
cytochrome c, somatic	Cycs	NP_036971.1	2	2	0	0	0	0	0	0
cytoplasmic FMR1 interacting protein 1	Cyfip1	NP_001100987.1	0	0	1	1	0	0	0	0
cytoskeleton-associated protein 4	Ckap4	NP_001102210.1	0	0	1	1	0	0	0	0
D-dopachrome tautomerase	Ddt	NP_077045.1	0	0	0	0	0	0	1	1
DEAD (Asp-Glu-Ala-Asp) box polypeptide 5	Ddx5	NP_001007614.1	0	0	2	2	0	0	0	0
DEAD (Asp-Glu-Ala-Asp) box polypeptide 58	Ddx58	NP_001100115.1	0	0	0	0	0	0	1	1
DEAD/H (Asp-Glu-Ala-Asp/His) box polypeptide 3, X-linked	Ddx3x	NP_001101716.1	0	0	0	0	1	1	0	0
destrin	Dstn	NP_001028838.1	1	2	1	2	0	0	4	5
dihydrolipoamide dehydrogenase	Dld	NP_955417.1	2	2	0	0	0	0	0	0
dihydrolipoamide S-acetyltransferase (E2 component of pyruvate dehydrogenase complex)	Dlat	NP_112287.1	0	0	0	0	1	2	0	0
dihydropyrimidinase-like 2	Dpysl2	NP_001099187.1	0	0	0	0	3	5	1	2
dihydropyrimidinase-like 4	Dpysl4	NP_037065.1	0	0	0	0	1	1	0	0
discs large homolog 1	Dlg1	NP_036920.1	1	2	1	1	0	0	0	0
dolichyl-di-phosphooligosaccharide-protein glycotransferase	Ddost	NP_001012104.1	0	0	1	1	0	0	0	0
drebrin-like	Dbnl	NP_112642.1	1	2	0	0	0	0	0	0
dynactin 1	Dctn1	NP_077044.1	0	0	0	0	1	1	1	1
dynein cytoplasmic 1 heavy chain 1	Dync1h1	NP_062099.3	5	6	2	3	3	4	1	1
dyskeratosis congenita 1, dyskerin	Dkc1	NP_596910.1	1	1	0	0	0	0	0	0
early endosome antigen 1	Eea1	NP_001101556.1	0	0	0	0	0	0	3	4
echinoderm microtubule associated protein like 2	Eml2	NP_620276.1	0	0	0	0	0	0	4	4
EH-domain containing 4	Ehd4	NP_647540.1	1	1	1	1	1	2	0	0
electron transferring flavoprotein, beta polypeptide	Etfb	NP_001004220.1	1	1	0	0	0	0	0	0
endomucin	Emcn	NP_001004228.1	0	0	1	2	0	0	0	0
enolase 1, alpha non-neuron	Eno1	NP_001103378.1	2	2	2	4	3	5	10	25
enolase 2, gamma, neuronal	Eno2	NP_647541.1	0	0	1	2	0	0	1	2
epoxide hydrolase 1	Ephx1	NP_036976.2	0	0	2	2	0	0	0	0
EPS8-like 2	Eps8l2	NP_001101978.1	1	1	0	0	0	0	1	1
erythrocyte protein band 4.1-like 1 isoform S	Epb4.1l1	NP_742087.1	1	2	1	1	1	1	0	0
eukaryotic translation elongation factor 1 alpha 1	Eef1a1	NP_787032.1	2	2	2	2	4	7	0	0
eukaryotic translation elongation factor 1 alpha 2	Eef1a2	NP_036792.2	3	5	5	6	4	9	1	2
eukaryotic translation elongation factor 1 delta	Eef1d	NP_001013122.1	0	0	0	0	1	1	0	0
eukaryotic translation elongation factor 2	Eef2	NP_058941.1	0	0	0	0	0	0	8	9
eukaryotic translation initiation factor 1A, Y-linked	Eif1ay	NP_001100433.1	0	0	1	1	0	0	0	0
eukaryotic translation initiation factor 3, subunit 10 (theta)	Eif3s10	NP_001040552.1	0	0	0	0	1	1	0	0
eukaryotic translation initiation factor 3, subunit 6 interacting protein	Eif3s6ip	NP_001029306.1	0	0	0	0	1	1	0	0
eukaryotic translation initiation factor 3, subunit 9 (eta)	Eif3s9	NP_001026810.1	0	0	0	0	2	2	1	2
eukaryotic translation initiation factor 3, subunit H	Eif3h	NP_942046.1	0	0	1	1	0	0	0	0
eukaryotic translation initiation factor 4H	Eif4h	NP_001006958.1	1	2	1	2	0	0	0	0
eukaryotic translation initiation factor 5A	Eif5a	NP_001028853.1	0	0	0	0	0	0	1	1
ezrin	Ezr	NP_062230.1	1	1	2	2	1	1	0	0
family with sequence similarity 38, member A	Fam38a	NP_001070668.1	1	2	1	1	0	0	0	0
fatty acid binding protein 3, muscle and heart	Fabp3	NP_077076.1	0	0	0	0	0	0	2	2
fatty acid binding protein 5, epidermal	Fabp5	NP_665885.1	0	0	0	0	0	0	1	1
fibrillin 1	Fbn1	NP_114013.1	0	0	13	17	12	16	0	0
fibrillin 2	Fbn2	NP_114014.1	0	0	0	0	1	2	0	0
filamin, beta	Flnb	NP_001100758.1	5	8	7	8	3	3	33	49

fission 1 (mitochondrial outer membrane) homolog	Fis1	NP_001099389.1	1	1	0	0	0	0	0	0
flightless I homolog	Flii	NP_001008280.1	0	0	0	0	0	0	3	3
for proteasomal ATPase (SUG1)	Psmc5	NP_112411.1	0	0	1	1	0	0	0	0
fumarate hydratase 1	Fh1	NP_058701.2	1	1	0	0	0	0	0	0
FXYD domain-containing ion transport regulator 2 isoform a	Fxyd2	NP_663769.1	1	2	0	0	0	0	0	0
G protein pathway suppressor 1	Gps1	NP_446421.2	0	0	0	0	2	2	0	0
G1 to S phase transition 1	Gspt1	NP_001003978.1	0	0	0	0	0	0	1	2
G1 to S phase transition 2	Gspt2	NP_001102789.1	0	0	0	0	0	0	1	2
galactose mutarotase	Galm	NP_001007705.1	0	0	0	0	0	0	2	5
galectin 3	Lgals3	NP_114020.1	0	0	1	1	0	0	0	0
GDP dissociation inhibitor 1	Gdi1	NP_058784.2	0	0	0	0	0	0	4	7
GDP dissociation inhibitor 2	Gdi2	NP_058972.2	1	1	0	0	0	0	1	2
gelsolin	Gsn	NP_001004080.1	1	1	1	1	2	2	7	10
glucose phosphate isomerase	Gpi	NP_997475.1	1	1	0	0	0	0	2	3
glucose-6-phosphate dehydrogenase	G6pdx	NP_058702.1	0	0	0	0	0	0	1	1
glutamate dehydrogenase 1	Glud1	NP_036702.1	4	4	0	0	0	0	0	0
glutamate oxaloacetate transaminase 1, soluble	Got1	NP_036703.1	0	0	0	0	0	0	1	1
glutamate receptor, ionotropic, delta 1	Grid1	NP_077354.1	0	0	0	0	1	1	0	0
glutaminyl-tRNA synthetase	Qars	NP_001007625.1	0	0	0	0	2	3	0	0
glutamyl-prolyl-tRNA synthetase	Eprs	NP_001019409.1	0	0	0	0	2	2	0	0
glutathione reductase	Gsr	NP_446358.1	2	2	0	0	0	0	2	5
glutathione S-transferase omega 2	Gsto2	NP_001012071.1	0	0	0	0	0	0	1	2
glutathione S-transferase, mu 2	Gstm2	NP_803175.1	0	0	0	0	0	0	3	5
glutathione S-transferase, mu 6-like	Gstm6l	NP_001099934.1	0	0	0	0	3	3	0	0
glutathione S-transferase, pi	Gstp1	NP_036709.1	1	1	1	1	0	0	3	5
glyceraldehyde-3-phosphate dehydrogenase	Gapdh	NP_058704.1	3	4	2	2	5	10	4	5
glyceraldehyde-3-phosphate dehydrogenase, spermatogenic	Gapdhs	NP_076454.1	0	0	1	2	3	3	2	2
glycoprotein m6a	Gpm6a	NP_835206.1	0	0	0	0	0	0	1	2
GNAS (guanine nucleotide binding protein, alpha stimulating) complex locus XLalphas	Gnas	NP_068617.4	1	1	0	0	0	0	0	0
golgi apparatus protein 1	Glg1	NP_058907.1	0	0	1	1	0	0	0	0
golgi autoantigen, golgin subfamily b, macrogolgin 1	Golgb1	NP_620240.1	1	1	1	1	0	0	0	0
guanine nucleotide binding protein (G protein), alpha inhibiting 3	Gnai3	NP_037238.1	0	0	1	1	0	0	0	0
guanine nucleotide binding protein, alpha inhibiting 2	Gnai2	NP_112297.1	1	1	1	1	0	0	0	0
guanine nucleotide binding protein, beta polypeptide 2-like 1	Gnb2l1	NP_570090.1	0	0	0	0	2	3	1	1
guanine nucleotide-binding protein, beta 2	Gnb2	NP_112299.1	1	1	2	3	0	0	0	0
guanine nucleotide-binding protein, beta 1 subunit	Gnb1	NP_112249.2	0	0	2	2	0	0	0	0
H2A histone family, member J	H2afj	NP_001103080.1	2	2	0	0	2	2	0	0
H2A histone family, member V	H2afv	NP_001099489.1	1	1	0	0	0	0	0	0
H3 histone, family 3B	H3f3b	NP_446437.1	1	1	0	0	0	0	0	0
heat shock 105kDa/110kDa protein 1	Hsph1	NP_001011901.1	0	0	1	1	0	0	9	14
heat shock 70kD protein 1B	Hspa1b	NP_997669.1	2	2	2	2	0	0	9	14
heat shock 70kD protein 1-like	Hspa1l	NP_997711.1	4	9	5	14	6	11	7	17
heat shock protein 1	Hspb1	NP_114176.3	0	0	1	3	3	6	0	0
heat shock protein 1 (chaperonin)	Hspd1	NP_071565.1	7	10	0	0	1	2	1	2
heat shock protein 2	Hspa2	NP_068635.1	2	2	2	2	3	4	15	26
heat shock protein 4	Hspa4	NP_705893.1	0	0	0	0	0	0	8	11
heat shock protein 5	Hspa5	NP_037215.1	3	4	4	6	0	0	0	0
heat shock protein 8	Hspa8	NP_077327.1	2	2	4	4	1	1	11	16
heat shock protein 9	Hspa9	NP_001094128.1	3	3	1	1	0	0	0	0
heat shock protein 90, alpha (cytosolic), class A member 1	Hsp90aa1	NP_786937.1	1	1	3	3	0	0	6	14
heat shock protein 90kDa alpha (cytosolic), class B member 1	Hsp90ab1	NP_001004082.3	4	6	3	4	2	2	22	40
heat-responsive protein 12	Hrsp12	NP_113902.1	0	0	0	0	0	0	1	1
hemoglobin alpha 1 chain	Hba-a2	NP_037228.1	0	0	0	0	0	0	2	2
hemoglobin beta chain complex	Hbb	NP_150237.1	0	0	0	0	0	0	1	2
heterogeneous nuclear ribonucleoprotein A/B	Hnrnpab	NP_112620.2	0	0	0	0	1	3	1	1
heterogeneous nuclear ribonucleoprotein A1	Hnrnpa1	NP_058944.1	0	0	0	0	1	2	0	0
heterogeneous nuclear ribonucleoprotein A2/B1	Hnrnpa2b1	NP_001098083.1	1	1	0	0	3	3	0	0
heterogeneous nuclear ribonucleoprotein K	Hnrnpk	NP_476482.1	1	1	1	1	3	3	1	3
heterogeneous nuclear ribonucleoprotein U	Hnrnpu	NP_476480.2	1	1	0	0	2	2	0	0
hexokinase 1	Hk1	NP_036866.1	5	7	1	1	0	0	0	0
hexosaminidase B	Hexb	NP_001011946.1	1	1	0	0	0	0	0	0
hexose-6-phosphate dehydrogenase (glucose 1-dehydrogenase)	H6pd	NP_001100168.1	0	0	2	4	0	0	1	2
high density lipoprotein binding protein (vigilin)	Hdlbp	NP_742036.2	0	0	0	0	1	1	1	1
high mobility group box 1	Hmgb1	NP_037095.1	1	1	0	0	0	0	0	0
histone cluster 1, H1d	Hist1h1d	NP_579819.1	1	3	1	1	0	0	0	0
histone cluster 1, H1t	Hist1h1t	NP_036711.1	1	5	0	0	0	0	0	0
histone cluster 1, H2bl	Hist1h2bl	NP_072173.1	0	0	1	2	0	0	0	0
histone cluster 1, H4b	Hist1h4b	NP_073177.1	3	5	2	3	0	0	0	0
histone cluster 3, H2ba	Hist3h2ba	NP_001104597.1	1	3	2	3	0	0	0	0

hydroxysteroid (17-beta) dehydrogenase 10	Hsd17b10	NP_113870.1	1	1	0	0	0	0	0	0
hypothetical protein LOC290818	RGD1562638	NP_001094414.1	1	1	0	0	0	0	0	0
hypothetical protein LOC296179	RGD1306816	NP_001099985.1	0	0	0	0	0	0	1	2
hypothetical protein LOC301742	RGD1566215	NP_001100399.1	0	0	0	0	1	1	0	0
hypothetical protein LOC361118	RGD1309676	NP_001014162.1	1	1	0	0	0	0	0	0
hypothetical protein LOC362107	RGD1305081	NP_001102048.1	1	1	0	0	0	0	0	0
hypothetical protein LOC362643	RGD1310427	NP_001102160.1	1	2	1	2	0	0	0	0
hypothetical protein LOC365554	RGD1560350	NP_001102401.1	0	0	0	0	1	3	0	0
hypothetical protein LOC498129	RGD1563425	NP_001102529.1	0	0	1	1	0	0	0	0
hypothetical protein LOC499782	LOC499782	NP_001102668.1	1	1	0	0	1	1	0	0
hypothetical protein LOC500991	LOC500991	NP_001020226.1	1	1	1	2	0	0	0	0
hypothetical protein LOC690660	LOC690660	NP_001103077.1	1	1	0	0	0	0	1	1
hypothetical protein LOC691496	LOC691496	NP_001103112.1	0	0	1	1	0	0	0	0
hypoxanthine guanine phosphoribosyl transferase 1	Hprt1	NP_036715.1	0	0	0	0	0	0	1	1
inner membrane protein, mitochondrial	Immt	NP_001030100.1	3	3	0	0	0	0	0	0
Inositol (myo)-1(or 4)-monophosphatase 1	Impa1	NP_114446.1	0	0	0	0	0	0	2	4
integrin beta 1	Itgb1	NP_058718.2	4	4	5	6	0	0	0	0
isocitrate dehydrogenase 1 (NADP+), soluble	Idh1	NP_113698.1	1	1	0	0	0	0	2	3
isocitrate dehydrogenase 2 (NADP+), mitochondrial	Idh2	NP_001014183.1	3	3	0	0	0	0	1	2
isovaleryl Coenzyme A dehydrogenase	Ivd	NP_036724.1	1	1	0	0	0	0	0	0
JTV1	Jtv1	NP_001032425.1	0	0	0	0	1	1	0	0
junction plakoglobin	Jup	NP_112309.2	0	0	1	1	0	0	0	0
junctophilin 3	Jph3	NP_001100907.1	0	0	0	0	0	0	1	1
karyopherin (importin) beta 1	Kpnb1	NP_058759.1	0	0	0	0	0	0	2	3
keratin 10	Krt10	NP_001008804.1	1	2	3	5	1	1	6	11
keratin 18	Krt18	NP_446428.1	6	8	6	7	3	3	1	1
keratin 19	Krt19	NP_955792.1	0	0	7	11	4	5	2	3
keratin 7	Krt7	NP_001041335.1	0	0	1	1	1	1	0	0
keratin 8	Krt8	NP_955402.1	4	5	3	5	6	6	3	3
kinesin 13B	kif13B	NP_998791.1	0	0	0	0	0	0	1	2
kinesin family member 2C isoform 1	Kif2c	NP_001078838.1	1	1	0	0	0	0	0	0
kinesin family member 5C	Kif5c	NP_001101200.1	1	1	0	0	1	1	0	0
L-3-hydroxyacyl-Coenzyme A dehydrogenase	Hadh	NP_476534.1	1	1	0	0	0	0	0	0
lactate dehydrogenase A	Ldha	NP_058721.1	3	6	6	10	8	16	9	13
lactate dehydrogenase B	Ldhb	NP_036727.1	0	0	1	1	0	0	2	3
lamin A isoform C2	Lmna	NP_001002016.1	3	5	0	0	0	0	0	0
lamin B1	Lmnb1	NP_446357.1	1	2	0	0	0	0	0	0
laminin receptor 1	Rpsa	NP_058834.1	1	2	1	1	1	1	2	2
laminin, beta 2	Lamb2	NP_037106.1	2	2	1	1	1	2	0	0
lectin, mannose-binding, 1	Lman1	NP_446338.1	1	1	0	0	0	0	0	0
leucine rich repeat (in FLII) interacting protein 1	Lrrfip1	NP_001014291.1	0	0	0	0	0	0	1	1
leucine zipper-EF-hand containing transmembrane protein 1	Letm1	NP_001005884.1	1	1	0	0	0	0	0	0
leucyl/cystinyl aminopeptidase isoform 1	Lnpep	NP_001106874.1	0	0	3	3	0	0	0	0
leukotriene A4 hydrolase	Lta4h	NP_001025202.1	0	0	0	0	0	0	8	12
leukotriene B4 12-hydroxydehydrogenase	Ltb4dh	NP_620218.1	0	0	0	0	2	2	4	4
LIM domain only 7	Lmo7	NP_001001515.1	1	3	1	1	1	1	0	0
lin-7 homolog C	Lin7c	NP_068623.1	1	1	0	0	0	0	0	0
liver glycogen phosphorylase	Pygl	NP_071604.1	0	0	0	0	1	1	8	8
LPS-responsive beige-like anchor	Lrba	NP_001102025.1	1	1	0	0	0	0	14	30
LUC7-like 2	Luc7l2	NP_001101323.1	0	0	0	0	1	1	0	0
lymphocyte cytosolic protein 1	Lcp1	NP_001012044.1	0	0	0	0	1	1	4	6
lysosomal trafficking regulator	Lyst	NP_445970.1	0	0	0	0	0	0	1	2
lysosomal-associated membrane protein 1	Lamp1	NP_036989.1	2	4	3	4	1	2	1	1
macrophage migration inhibitory factor	Mif	NP_112313.1	0	0	0	0	0	0	1	2
magnesium-dependent phosphatase 1	Mdp-1	NP_001099509.1	0	0	0	0	0	0	1	1
major vault protein	Mvp	NP_073206.2	0	0	0	0	5	5	0	0
MAL2 proteolipid protein	Mal2	NP_942081.2	0	0	1	2	0	0	0	0
malate dehydrogenase 1, NAD (soluble)	Mdh1	NP_150238.1	0	0	1	1	0	0	3	5
malate dehydrogenase, mitochondrial	Mdh2	NP_112413.2	1	1	0	0	0	0	0	0
malic enzyme 1	Me1	NP_036732.2	0	0	0	0	2	3	6	7
mannosidase, beta A, lysosomal	Manba	NP_001026825.1	1	1	0	0	0	0	0	0
matrin 3	Matr3	NP_062022.2	1	1	0	0	0	0	0	0
membrane bound C2 domain containing protein	Mbc2	NP_058945.2	1	1	1	1	0	0	0	0
methylenetetrahydrofolate dehydrogenase (NADP+ dependent), methenyltetrahydrofolate cyclohydrolase, formyltetrahydrofolate synthase	Mthfd1	NP_071953.1	0	0	0	0	1	1	0	0
microfibrillar-associated protein 2	Mfap2	NP_001101459.1	0	0	1	1	0	0	0	0
microtubule-associated protein 2	Mtap2	NP_037198.1	0	0	0	0	1	1	0	0
microtubule-associated protein 4	Mtap4	NP_001019449.1	0	0	0	0	1	1	0	0
mitochondrial ATP synthase, O subunit	Atp5o	NP_620238.1	1	1	1	1	0	0	0	0
mitochondrial trifunctional protein, alpha subunit	Hadha	NP_570839.2	2	2	0	0	0	0	0	0

mitochondrial trifunctional protein, beta subunit	Hadhb	NP_598302.1	1	1	0	0	0	0	0	0
moesin	Msn	NP_110490.1	0	0	0	0	0	0	1	2
Munc13-4 protein	Unc13d	NP_620199.1	0	0	1	1	0	0	0	0
myo-inositol 1-phosphate synthase A1	Isyna1	NP_001013902.1	0	0	0	0	2	2	7	15
myosin light chain, regulatory B	Mrlcb	NP_059039.1	0	0	1	1	0	0	0	0
myosin, heavy polypeptide 10, non-muscle	Myh10	NP_113708.1	19	25	14	16	13	15	12	17
myosin, heavy polypeptide 9	Myh9	NP_037326.1	13	19	9	10	6	6	8	13
myosin, light polypeptide 6, alkali, smooth muscle and non-muscle-like	Myl6l	NP_001094453.1	2	2	2	2	1	2	0	0
myxovirus (influenza virus) resistance 2	Mx2	NP_599177.2	2	3	0	0	1	1	1	1
Na+/K+ -ATPase alpha 3 subunit	Atp1a3	NP_036638.1	5	10	8	19	2	2	0	0
N-acetylneuraminic acid synthase	Nans	NP_001100125.2	0	0	0	0	0	0	1	2
NADH dehydrogenase (ubiquinone) 1 alpha subcomplex, 12	Ndufa12	NP_001100251.2	1	1	0	0	0	0	0	0
NADH dehydrogenase (ubiquinone) Fe-S protein 2	Ndufs2	NP_001011907.1	2	3	1	1	0	0	0	0
NADH dehydrogenase (ubiquinone) Fe-S protein 4	Ndufs4	NP_001020317.1	1	1	0	0	0	0	0	0
nascent-polypeptide-associated complex alpha polypeptide	Naca	NP_001099409.1	0	0	0	0	0	0	1	1
N-ethylmaleimide sensitive fusion protein attachment protein alpha	Napa	NP_542152.1	0	0	1	1	0	0	0	0
niban protein	Niban	NP_071578.1	0	0	0	0	0	0	1	1
nicotinamide nucleotide transhydrogenase	Nnt	NP_001013175.1	1	2	0	0	0	0	0	0
nitrilase 1 isoform b	Nit1	NP_001076049.1	0	0	0	0	0	0	1	1
N-myc downstream regulated gene 1	Ndrg1	NP_001011991.1	0	0	1	1	0	0	0	0
non-metastatic cells 2, protein (NM23B) expressed in	Nme2	NP_114021.2	0	0	0	0	0	0	2	2
NonO/p54nrb homolog	Sfpq	NP_001020442.1	1	1	0	0	0	0	0	0
nuclear protein in testis	Nut	NP_001102427.1	1	1	0	0	0	0	0	0
nucleolin	Ncl	NP_036881.2	0	0	0	0	0	0	1	1
nucleoporin 205	Nup205	NP_001102090.1	0	0	0	0	0	0	1	1
nudix-type motif 4	Nudt4	NP_446050.1	0	0	0	0	0	0	1	2
NUF2, NDC80 kinetochore complex component, homolog	Nuf2	NP_001012028.1	1	1	1	1	0	0	0	0
Parkinson disease protein 7	Park7	NP_476484.1	0	0	0	0	0	0	1	1
peptidylprolyl isomerase A	Ppia	NP_058797.1	3	3	1	2	1	2	6	16
periplakin	Ppl	NP_001100446.1	7	9	7	8	3	3	13	16
peroxiredoxin 1	Prdx1	NP_476455.1	1	1	1	1	0	0	2	2
peroxiredoxin 3	Prdx3	NP_071985.1	1	1	0	0	0	0	0	0
peroxiredoxin 5 precursor	Prdx5	NP_446062.1	0	0	0	0	0	0	4	5
peroxiredoxin 6	Prdx6	NP_446028.1	0	0	0	0	0	0	2	2
PHD finger protein 10	Phf10	NP_001019918.1	1	1	0	0	0	0	0	0
phosphatidate cytidylyltransferase 2	Cds2	NP_446095.1	1	1	1	2	0	0	0	0
phosphatidic acid phosphatase type 2c	Ppap2c	NP_640345.1	0	0	1	1	0	0	0	0
phosphatidylethanolamine binding protein	Pebp1	NP_058932.1	1	1	1	1	0	0	3	4
phosphodiesterase 1A	Pde1a	NP_110498.1	0	0	0	0	0	0	1	1
phosphofructokinase, liver, B-type	Pfkl	NP_037322.1	0	0	0	0	0	0	1	1
phosphofructokinase, muscle	Pfkm	NP_113903.1	0	0	0	0	3	3	1	1
phosphoglucomutase 1	Pgm1	NP_058729.2	0	0	0	0	0	0	7	9
phosphoglucomutase 2	Pgm2	NP_001099477.1	0	0	0	0	0	0	1	1
phosphoglucomutase 3	Pgm3	NP_001102242.1	0	0	0	0	0	0	1	1
phosphoglycerate kinase 1	Pgk1	NP_445743.2	0	0	0	0	0	0	5	9
phosphoglycerate mutase 1	Pgam1	NP_445742.1	0	0	0	0	0	0	1	2
phosphoribosylformylglycinamidine synthase (FGAR amidotransferase)	Pfas	NP_001099261.1	0	0	0	0	0	0	1	2
phosphoserine aminotransferase 1	Psat1	NP_942033.2	0	0	0	0	0	0	3	8
plasma glutamate carboxypeptidase	Pgcp	NP_113828.1	1	2	0	0	0	0	0	0
plastin 1 (I isoform)	Pls1	NP_001101648.1	0	0	0	0	0	0	5	6
plectin 1	Plec1	NP_071796.1	13	14	4	5	5	7	13	18
plexin B2	Plxnb2	NP_001101576.1	0	0	2	2	0	0	0	0
poly(A)-specific ribonuclease (PARN)-like domain containing 1	Pnldc1	NP_001020895.1	0	0	0	0	0	0	1	1
polymerase I and transcript release factor	Ptrf	NP_001099311.1	1	1	0	0	0	0	0	0
polypyrimidine tract binding protein 1 isoform b	Ptbp1	NP_071961.1	1	1	0	0	0	0	0	0
post-GPI attachment to proteins 1	Pgap1	NP_973719.1	0	0	1	2	0	0	0	0
PREDICTED: hypothetical protein	LOC688274	XP_001081727.1	0	0	1	2	0	0	1	1
PREDICTED: similar to 3-oxoacid CoA transferase 1 isoform 1	LOC678860	XP_001053611.1	3	3	0	0	0	0	0	0
PREDICTED: similar to 40S ribosomal protein S16	RGD1559743	XP_001077121.1	0	0	0	0	1	1	0	0
PREDICTED: similar to 40S ribosomal protein S17	RGD1559955	XP_001071140.1	0	0	0	0	2	2	0	0
PREDICTED: similar to 60 kDa heat shock protein, mitochondrial precursor (Hsp60) (60 kDa chaperonin) (CPN60) (Heat shock protein 60) (HSP-60) (Mitochondrial matrix protein P1) (HSP-65)	LOC684747	XP_001071820.1	1	1	0	0	1	1	0	0
PREDICTED: similar to 60S ribosomal protein L7	RGD1564645	XP_001064059.1	0	0	0	0	1	1	0	0
PREDICTED: similar to 60S ribosomal protein L7a	RGD1559149	XP_225356.3	0	0	0	0	1	1	0	0

PREDICTED: similar to AHNAK nucleoprotein isoform 1 isoform 4	Ahnak	XP_001078113.1	9	14	5	8	4	7	2	2
PREDICTED: similar to alanyl-tRNA synthetase	Aars	XP_001077503.1	0	0	0	0	0	0	1	1
PREDICTED: similar to Alpha-1,3-mannosyltransferase ALG2 (GDP-Man:Man(1)GlcNAc(2)-PP-dolichol mannosyltransferase)	Alg2	XP_001055088.1	1	1	1	1	0	0	0	0
PREDICTED: similar to AP-1 complex subunit gamma-1 (Adapter-related protein complex 1 gamma-1 subunit) (Gamma-adaptin) (Adaptor protein complex AP-1 gamma-1 subunit) (Golgi adaptor HA1/AP1 adaptin subunit gamma-1) (Clathrin assembly protein complex 1 gamma-1 ...	Ap1g1	XP_001075367.1	0	0	0	0	0	0	1	2
PREDICTED: similar to Beta-2-syntrophin (59 kDa dystrophin-associated protein A1, basic component 2) (Syntrophin 3) (SNT3) (Syntrophin-like) (SNTL) isoform 1	LOC689421	XP_001071003.1	1	1	0	0	0	0	0	0
PREDICTED: similar to Calcium-binding mitochondrial carrier protein Aralar2 (Mitochondrial aspartate glutamate carrier 2) (Solute carrier family 25 member 13) (Citrin)	RGD1565889	XP_001054092.1	1	1	0	0	0	0	0	0
PREDICTED: similar to cell adhesion molecule with homology to L1CAM	Chl1	XP_001077843.1	1	1	0	0	0	0	0	0
PREDICTED: similar to centromere autoantigen H	LOC684611	XP_001071235.1	1	1	0	0	1	1	0	0
PREDICTED: similar to Cingulin	Cgn	XP_001059265.1	1	1	0	0	0	0	0	0
PREDICTED: similar to coiled-coil domain containing 13	LOC687047	XP_001078641.1	0	0	0	0	1	1	0	0
PREDICTED: similar to coiled-coil domain containing 22	Ccdc22	XP_001060019.1	0	0	0	0	1	1	0	0
PREDICTED: similar to Collagen alpha-1(XVIII) chain precursor	Col18a1	XP_001079576.1	0	0	0	0	1	1	0	0
PREDICTED: similar to Contactin-associated protein-like 3 precursor (Cell recognition molecule Caspr3)	RGD1563615	XP_001064593.1	0	0	0	0	1	1	0	0
PREDICTED: similar to DNA polymerase alpha catalytic subunit	Pola1	XP_001064735.1	0	0	0	0	0	0	1	1
PREDICTED: similar to Exocyst complex component 4 (Exocyst complex component Sec8) (rSec8) isoform 1	Exoc4	XP_001063828.1	1	1	1	2	0	0	0	0
PREDICTED: similar to F35D11.11d	RGD1308523	XP_001070834.1	1	1	0	0	0	0	0	0
PREDICTED: similar to family with sequence similarity 98, member B	RGD1560464	XP_001070294.1	0	0	0	0	1	1	0	0
PREDICTED: similar to Filamin-A (Alpha-filamin) (Filamin-1) (Endothelial actin-binding protein) (Actin-binding protein 280) (ABP-280) (Nonmuscle filamin)	Flna	XP_238167.4	2	3	2	2	2	2	7	11
PREDICTED: similar to Fras1 related extracellular matrix protein 2	Frem2	XP_001057556.1	0	0	2	3	1	1	0	0
PREDICTED: similar to Galectin-5 (RL-18)	LOC682182	XP_001060304.1	0	0	0	0	0	0	1	2
PREDICTED: similar to GCN1 general control of amino-acid synthesis 1-like 1	Gcn1l1	XP_001080241.1	0	0	1	1	0	0	1	1
PREDICTED: similar to glucan (1,4-alpha-), branching enzyme 1	Gbe1	XP_001064453.1	0	0	0	0	0	0	1	1
PREDICTED: similar to glyceraldehyde-3-phosphate dehydrogenase	RGD1565368	XP_001065101.1	1	1	0	0	1	2	1	1
PREDICTED: similar to Glycolipid transfer protein (GLTP)	Gltp	XP_001080376.1	0	0	0	0	0	0	1	1
PREDICTED: similar to glycyl-tRNA synthetase	Gars	XP_216152.4	0	0	0	0	0	0	3	5
PREDICTED: similar to heterogeneous nuclear ribonucleoprotein L	Hnrpl	XP_001074287.1	0	0	0	0	1	2	0	0
PREDICTED: similar to Hook-related protein 1	RGD1306694	XP_001065246.1	0	0	0	0	0	0	1	2
PREDICTED: similar to Integrin alpha-2 precursor (Platelet membrane glycoprotein Ia) (GPIa) (Collagen receptor) (VLA-2 alpha chain) (CD49b antigen)	Itga2	XP_001075558.1	0	0	1	1	0	0	0	0
PREDICTED: similar to IQ motif and WD repeats 1 isoform a	RGD1561961	XP_001071288.1	0	0	0	0	0	0	1	1
PREDICTED: similar to keratin Kb40	Kb40	XP_001067238.1	0	0	1	2	0	0	1	1
PREDICTED: similar to KIAA1822 protein	RGD1311698	XP_343108.3	1	2	1	2	0	0	0	0
PREDICTED: similar to kinectin 1	Ktn1	XP_001073656.1	2	4	1	2	0	0	0	0
PREDICTED: similar to Laminin alpha-5 chain precursor	Lama5	XP_001060527.1	3	7	2	2	1	1	0	0
PREDICTED: similar to Laminin gamma-1 chain precursor (Laminin B2 chain)	Lamc1	XP_001071300.1	3	5	0	0	0	0	1	1

PREDICTED: similar to mannosidase, beta A, lysosomal-like	MGC109145	XP_001067976.1	0	0	1	2	0	0	0	0
PREDICTED: similar to mucin 1, transmembrane	Muc1	XP_342282.3	1	1	0	0	0	0	0	0
PREDICTED: similar to mucin 4	Muc4	XP_001072593.1	1	1	0	0	1	1	0	0
PREDICTED: similar to Myeloid/lymphoid or mixed-lineage leukemia protein 2 (ALL1-related protein)	Mll2	XP_001062568.1	1	1	0	0	0	0	0	0
PREDICTED: similar to myoferlin isoform b	RGD1564216	XP_001080627.1	0	0	5	6	0	0	0	0
PREDICTED: similar to Myosin heavy chain, cardiac muscle alpha isoform (MyHC-alpha)	RGD1565858	XP_001064527.1	0	0	0	0	0	0	1	1
PREDICTED: similar to myosin XVIIIa	LOC360570	XP_001080824.1	1	1	1	1	0	0	0	0
PREDICTED: similar to Myosin-6 (Myosin VI)	RGD1560646	XP_001061392.1	0	0	0	0	1	1	4	16
PREDICTED: similar to neuropathy target esterase	RGD1564611	XP_001057249.1	0	0	1	1	0	0	0	0
PREDICTED: similar to nuclear mitotic apparatus protein 1 isoform 1	Numa1	XP_001068048.1	0	0	0	0	1	1	0	0
PREDICTED: similar to oxidation resistance 1	Oxr1	XP_001061721.1	0	0	0	0	0	0	1	2
PREDICTED: similar to phosphoglucomutase 5	LOC687552	XP_001080072.1	0	0	0	0	0	0	1	1
PREDICTED: similar to Plastin-3 (T-plastin)	Pls3	XP_001057538.1	1	1	1	2	1	1	7	9
PREDICTED: similar to Probable ubiquitin carboxyl-terminal hydrolase FAF-X (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 c...	Usp9x	XP_001056701.1	0	0	0	0	0	0	4	6
PREDICTED: similar to processing of precursors 1 homolog isoform 2	Pop1	XP_001058648.1	0	0	1	1	0	0	0	0
PREDICTED: similar to proteasome 26S non-ATPase subunit 8	Psmd8	XP_001075072.1	0	0	0	0	1	1	0	0
PREDICTED: similar to Protein CXorf17 homolog	LOC679485	XP_001056595.1	0	0	0	0	1	1	0	0
PREDICTED: similar to Putative deoxyribose-phosphate aldolase (Phosphodeoxyriboaldolase) (Deoxyriboaldolase) (DERA)	LOC686184	XP_001071552.1	0	0	0	0	1	1	0	0
PREDICTED: similar to Putative pre-mRNA-splicing factor ATP-dependent RNA helicase DHX15 (DEAH box protein 15)	Dhx15	XP_001054651.1	0	0	0	0	0	0	2	2
PREDICTED: similar to Putative RNA-binding protein 15 (RNA-binding motif protein 15) (One-twenty two protein)	LOC684233	XP_001068152.1	0	0	1	1	0	0	0	0
PREDICTED: similar to pyruvate kinase 3 isoform 1	RGD1561681	XP_001054015.1	0	0	1	1	1	1	4	7
PREDICTED: similar to RAN binding protein 3 isoform RANBP3-b	LOC501281	XP_576696.2	0	0	0	0	0	0	1	1
PREDICTED: similar to Ras-GTPase-activating protein binding protein 1 (ATP dependent DNA helicase VIII) (GAP SH3-domain binding protein 1) (G3BP-1) (HDH-VIII)	G3bp	XP_340803.2	0	0	0	0	1	1	0	0
PREDICTED: similar to rho guanine nucleotide exchange factor 5 isoform 1	Arhgef5	XP_342677.2	0	0	1	1	0	0	0	0
PREDICTED: similar to ribosomal protein L21	LOC679392	XP_001056134.1	0	0	0	0	0	0	1	1
PREDICTED: similar to Ribosome-binding protein 1 (Ribosome receptor protein) (mRRp) isoform 2	Rrbp1	XP_001053614.1	1	1	0	0	0	0	0	0
PREDICTED: similar to RIKEN cDNA 5730590G19-like	RGD1308541	XP_001065296.1	0	0	0	0	0	0	1	2
PREDICTED: similar to RNA binding motif protein 15B	Rbm15b	XP_001074007.1	0	0	0	0	0	0	1	1
PREDICTED: similar to secreted nidogen domain protein	Sned1	XP_001068874.1	1	2	0	0	0	0	0	0
PREDICTED: similar to serine/threonine kinase	LOC365107	XP_001063111.1	1	1	0	0	0	0	0	0
PREDICTED: similar to SET domain-containing protein	LOC689820	XP_001072149.1	0	0	0	0	0	0	1	1
PREDICTED: similar to signal peptidase complex subunit 2 homolog	Spcs2	XP_001066421.1	1	1	2	2	1	2	0	0
PREDICTED: similar to solute carrier family 25 (mitochondrial carrier, Aralar), member 12	RGD1561141	XP_230015.2	1	2	0	0	0	0	0	0
PREDICTED: similar to SON protein	Son	XP_001068992.1	0	0	0	0	0	0	1	1
PREDICTED: similar to Sorting nexin-9	LOC683687	XP_001067064.1	1	1	1	2	1	2	2	3
PREDICTED: similar to Succinyl-CoA ligase	Suclg2	XP_001074487.1	2	2	0	0	0	0	0	0
PREDICTED: similar to Talin-1	Tln1	XP_001069865.1	0	0	0	0	1	1	9	13

PREDICTED: similar to Talin-2 isoform 1	RGD1565416	XP_001056519.1	1	2	0	0	1	1	0	0
PREDICTED: similar to tensin	Tns	XP_001055943.1	1	1	0	0	0	0	0	0
PREDICTED: similar to Transcriptional activator protein Pur-alpha (Purine-rich single-stranded DNA-binding protein alpha)	Pura	XP_001063244.1	0	0	0	0	1	1	0	0
PREDICTED: similar to Tripartite motif protein 56	LOC687035	XP_001076813.1	0	0	0	0	1	1	0	0
PREDICTED: similar to tripartite motif protein TRIM5 isoform alpha	RGD1563970	XP_001073792.1	0	0	0	0	1	1	0	0
PREDICTED: similar to tubulin-specific chaperone d	LOC363309	XP_001081857.1	0	0	0	0	0	0	1	1
PREDICTED: similar to very large G-protein coupled receptor 1	LOC362068	XP_001056150.1	0	0	0	0	0	0	1	1
PREDICTED: similar to Vomeronasal secretory protein 2 precursor (Vomeronasal secretory protein II) (VNSP II) (Lipocalin-4)	LOC681375	XP_001061474.1	0	0	0	0	1	1	0	0
PREDICTED: similar to Y-box-binding protein 2 (Germ cell-specific Y-box-binding protein) (FRGY2 homolog)	Ybx2	XP_001079683.1	0	0	0	0	0	0	1	1
PREDICTED: similar to Zinc finger protein 208	LOC682206	XP_001060419.1	0	0	0	0	0	0	1	1
PREDICTED: similar to Zinc finger protein GLI3	Gli3	XP_001054276.1	0	0	1	1	0	0	0	0
profilin 1	Pfn1	NP_071956.2	0	0	0	0	0	0	7	13
profilin 2	Pfn2	NP_110500.1	0	0	0	0	0	0	1	1
programmed cell death 6 interacting protein	Pdcd6ip	NP_001025081.1	0	0	0	0	0	0	1	2
prohibitin 2	Phb2	NP_001013053.1	2	3	0	0	0	0	0	0
prolyl 4-hydroxylase, beta polypeptide	P4hb	NP_037130.1	7	8	2	2	0	0	1	1
prolyl endopeptidase	Prep	NP_112614.1	0	0	0	0	0	0	1	1
propionyl Coenzyme A carboxylase, beta polypeptide	Pccb	NP_058726.2	1	1	0	0	0	0	0	0
propionyl-coenzyme A carboxylase, alpha polypeptide	Pcca	NP_062203.1	1	1	0	0	0	0	0	0
prostaglandin-endoperoxide synthase 1	Ptgs1	NP_058739.3	3	4	1	2	0	0	0	0
protease (prosome, macropain) 28 subunit, alpha	Psme1	NP_058960.2	0	0	1	1	2	3	1	2
proteasome (prosome, macropain) 26S subunit, ATPase 2	Psmc2	NP_150239.1	0	0	0	0	1	2	1	1
proteasome (prosome, macropain) 26S subunit, non-ATPase, 1	Psmd1	NP_114184.1	0	0	0	0	1	1	0	0
proteasome (prosome, macropain) 26S subunit, non-ATPase, 13	Psmd13	NP_001102395.1	0	0	0	0	1	1	0	0
proteasome (prosome, macropain) 26S subunit, non-ATPase, 2	Psmd2	NP_001026809.1	0	0	0	0	2	3	0	0
proteasome (prosome, macropain) subunit, alpha type 1	Psma1	NP_058974.1	0	0	1	1	1	1	0	0
proteasome (prosome, macropain) subunit, alpha type 2	Psma2	NP_058975.1	0	0	0	0	1	1	0	0
proteasome (prosome, macropain) subunit, alpha type 3	Psma3	NP_058976.1	0	0	0	0	1	1	0	0
proteasome (prosome, macropain) subunit, alpha type 4	Psma4	NP_058977.1	0	0	0	0	1	1	0	0
proteasome (prosome, macropain) subunit, alpha type 6	Psma6	NP_058979.1	0	0	0	0	1	2	0	0
proteasome (prosome, macropain) subunit, alpha type 7	Psma7	NP_001008218.1	0	0	0	0	1	1	0	0
proteasome (prosome, macropain) subunit, beta type 1	Psmb1	NP_446042.1	0	0	0	0	1	1	0	0
proteasome (prosome, macropain) subunit, beta type 2	Psmb2	NP_058980.1	0	0	0	0	1	1	0	0
proteasome (prosome, macropain) subunit, beta type 5	Psmb5	NP_001099197.2	0	0	0	0	1	1	0	0
proteasome (prosome, macropain) subunit, beta type 6	Psmb6	NP_476440.2	0	0	0	0	2	3	0	0
proteasome activator subunit 2	Psme2	NP_058953.1	0	0	0	0	2	2	0	0
protein disulfide isomerase associated 3	Pdia3	NP_059015.1	6	8	4	5	3	3	2	3
protein disulfide isomerase associated 6	Pdia6	NP_001004442.1	1	1	1	1	0	0	0	0
protein kinase C and casein kinase substrate in neurons 2	Pacsin2	NP_570096.2	0	0	0	0	0	0	2	2
protein kinase C substrate 80K-H	Prkcsh	NP_001100276.1	2	3	1	1	0	0	1	1
protein phosphatase 1, catalytic subunit, beta	Ppp1cb	NP_037197.1	0	0	1	1	0	0	1	1
protein phosphatase 2 (formerly 2A), regulatory subunit A (PR 65), beta isoform	Ppp2r1b	NP_001020589.1	0	0	0	0	0	0	1	1
protein phosphatase 4, regulatory subunit 2	Ppp4r2	NP_001100083.1	0	0	0	0	0	0	2	3
protein regulator of cytokinesis 1	Prc1	NP_001100999.1	0	0	1	1	0	0	0	0
protein tyrosine phosphatase, non-receptor type 12	Ptpn12	NP_476456.2	0	0	1	1	0	0	0	0
protein tyrosine phosphatase, receptor type, f polypeptide (PTPRF), interacting protein (liprin), alpha 2	Ppfia2	NP_001102215.1	0	0	0	0	0	0	1	1
proteolipid protein 2	Plp2	NP_997484.1	0	0	2	4	0	0	0	0

prothymosin alpha	Ptma	NP_068508.1	2	3	1	1	0	0	0	0
pyruvate dehydrogenase E1 alpha 1	Pdha1	NP_001004072.2	1	1	0	0	0	0	0	0
pyruvate kinase, liver and red blood cell	Pklr	NP_036756.2	1	1	0	0	1	2	1	2
pyruvate kinase, muscle	Pkm2	NP_445749.1	4	5	4	4	14	20	24	51
RAB10, member RAS oncogene family	Rab10	NP_059055.2	2	3	2	4	1	1	0	0
RAB11a, member RAS oncogene family	Rab11a	NP_112414.1	1	1	1	2	1	1	0	0
RAB25, member RAS oncogene family	Rab25	NP_001101157.2	0	0	1	1	0	0	0	0
RAB2A, member RAS oncogene family	Rab2a	NP_113906.1	0	0	1	1	0	0	0	0
RAB5A, member RAS oncogene family	Rab5a	NP_073183.1	0	0	2	2	0	0	0	0
RAB5B, member RAS oncogene family	Rab5b	NP_001073405.1	0	0	1	1	0	0	0	0
RAB5C, member RAS oncogene family	Rab5c	NP_001099310.1	1	2	1	1	0	0	0	0
RAB8A, member RAS oncogene family	Rab8a	NP_446450.2	0	0	1	2	0	0	0	0
RAN, member RAS oncogene family	Ran	NP_445891.1	0	0	0	0	0	0	2	3
ras homolog gene family, member B	Rhob	NP_071987.1	0	0	0	0	0	0	1	1
ras homolog gene family, member C	Rhoc	NP_001099931.1	0	0	0	0	0	0	1	1
ras homolog gene family, member Q	Rhoq	NP_445974.1	0	0	1	2	0	0	1	1
RAS related protein 1b	Rap1b	NP_599173.2	0	0	1	1	0	0	0	0
ras-related C3 botulinum toxin substrate 1 (rho family, small GTP binding protein Rac1)	Rac1	NP_599193.1	1	1	0	0	0	0	1	1
reticulocalbin 3, EF-hand calcium binding domain	Rcn3	NP_001008694.1	0	0	1	1	0	0	0	0
reticulon 3 isoform A1	Rtn3	NP_001009953.2	1	1	0	0	0	0	0	0
reticulon 4	Rtn4	NP_114019.1	2	3	2	2	1	1	0	0
retinoic acid induced 14	Rai14	NP_001011947.1	0	0	1	1	0	0	0	0
Rho GDP dissociation inhibitor (GDI) alpha	Arhgdia	NP_001007006.1	0	0	0	0	0	0	1	1
Rho GTPase activating protein 12	Arhgap12	NP_001100827.1	1	1	1	1	0	0	1	1
Rho, GDP dissociation inhibitor (GDI) beta	Arhgdib	NP_001009600.1	0	0	0	0	0	0	1	1
ribonuclease/angiogenin inhibitor 1	Rnh1	NP_620805.1	0	0	0	0	0	0	2	4
ribophorin I	Rpn1	NP_037199.1	0	0	3	5	0	0	0	0
ribophorin II	Rpn2	NP_113886.1	0	0	1	2	0	0	0	0
ribosomal protein L13	Rpl13	NP_112363.1	0	0	1	2	1	2	0	0
ribosomal protein L13A	Rpl13a	NP_775462.2	1	1	1	1	0	0	0	0
ribosomal protein L18	Rpl18	NP_112364.1	0	0	0	0	1	1	0	0
ribosomal protein L19	Rpl19	NP_112365.1	0	0	0	0	1	1	0	0
ribosomal protein L21	Rpl21	NP_445782.1	0	0	0	0	1	2	0	0
ribosomal protein L3	Rpl3	NP_942048.1	0	0	0	0	3	3	0	0
ribosomal protein L32	Rpl32	NP_037358.1	0	0	1	1	0	0	0	0
ribosomal protein L6	Rpl6	NP_446423.2	0	0	0	0	2	3	0	0
ribosomal protein L9	Rpl9	NP_001007599.3	1	2	1	2	2	2	0	0
ribosomal protein S11	Rps11	NP_112372.1	0	0	0	0	1	1	1	1
ribosomal protein S13	Rps13	NP_569116.1	0	0	0	0	1	1	0	0
ribosomal protein S14	Rps14	NP_073163.1	0	0	0	0	1	1	0	0
ribosomal protein S18	Rps18	NP_998722.1	0	0	0	0	1	1	0	0
ribosomal protein S23	Rps23	NP_511172.1	0	0	0	0	1	2	0	0
ribosomal protein S26	Rps26	NP_037356.1	0	0	0	0	1	1	0	0
ribosomal protein S3	Rps3	NP_001009239.1	0	0	0	0	1	1	0	0
ribosomal protein S4, X-linked	Rps4x	NP_001007601.1	0	0	0	0	1	2	0	0
ribosomal protein S8	Rps8	NP_113894.1	0	0	0	0	1	2	0	0
ribosomal protein S9	Rps9	NP_112370.2	0	0	0	0	2	2	0	0
ribosomal protein, large, P1	Rplp1	NP_001007605.1	0	0	0	0	1	1	0	0
ring finger protein 25	Rnf25	NP_001012004.2	0	0	0	0	0	0	1	2
RNA binding motif and ELMO/CED-12 domain 1	Rbed1	NP_001013105.1	0	0	0	0	0	0	1	1
RNA binding motif protein 20	Rbm20	NP_001101081.1	0	0	0	0	0	0	1	1
RNA binding motif protein, X chromosome	Rbmx	NP_001020834.1	0	0	0	0	1	1	0	0
RNA polymerase II transcriptional coactivator	Sub1	NP_001009618.1	0	0	0	0	0	0	1	2
S100 calcium binding protein A11	S100a11	NP_001004095.1	0	0	0	0	0	0	1	2
S100 calcium binding protein A16	S100a16	NP_001102027.1	0	0	0	0	0	0	1	1
SAC1 (supressor of actin mutations 1, homolog)-like	Sacm1l	NP_446250.1	1	1	1	1	0	0	0	0
S-adenosylhomocysteine hydrolase	Ahcy	NP_058897.1	2	2	1	1	0	0	4	4
S-adenosylhomocysteine hydrolase-like 1	Ahcyl1	NP_001102031.1	0	0	0	0	1	1	1	1
scavenger receptor class B, member 2	Scarb2	NP_446453.1	0	0	0	0	1	1	0	0
scinderin	Scin	NP_942043.1	0	0	0	0	0	0	4	5
SEC31 homolog A	Sec31a	NP_148981.1	0	0	1	1	0	0	0	0
Sec61 alpha subunit homolog	Sec61a1	NP_954865.1	0	0	1	2	0	0	0	0
septin 11	11-Sep	NP_001100678.1	0	0	1	1	0	0	0	0
sequestosome 1 isoform 1	Sqstm1	NP_787037.2	0	0	0	0	0	0	1	4
serine (or cysteine) peptidase inhibitor, clade H, member 1	Serpinh1	NP_058869.1	1	1	0	0	0	0	0	0
serine/threonine kinase 2	Slk	NP_062222.2	0	0	1	1	0	0	1	2
signal transducer and activator of transcription 1 isoform beta	Stat1	NP_001029336.1	0	0	0	0	0	0	2	3
sirtuin 4	Sirt4	NP_001100617.1	0	0	0	0	0	0	1	1
Sjogren syndrome antigen B	Ssb	NP_112381.2	1	1	0	0	1	1	0	0

solute carrier family 14 (urea transporter), member 2 isoform 1	Slc14a2	NP_062220.2	0	0	1	1	0	0	0	0
solute carrier family 25, member 4	Slc25a4	NP_445967.1	1	2	1	1	0	0	0	0
solute carrier family 25, member 5	Slc25a5	NP_476443.1	1	3	1	1	0	0	0	0
sorting nexin 1	Snx1	NP_445863.1	0	0	0	0	0	0	1	1
spectrin beta 2	Spnb2	NP_001013148.1	1	1	1	1	1	2	1	3
spectrin beta 3	Spnb3	NP_062040.1	13	17	4	7	10	14	14	19
S-phase kinase-associated protein 1A	Skp1a	NP_001007609.1	0	0	0	0	1	1	0	0
stress-induced phosphoprotein 1	Stip1	NP_620266.1	0	0	0	0	1	1	3	4
succinate dehydrogenase complex, subunit A, flavoprotein (Fp)	Sdha	NP_569112.1	3	4	2	2	0	0	0	0
succinate-Coenzyme A ligase, ADP-forming, beta subunit	Sucla2	NP_001101857.2	1	1	0	0	0	0	0	0
superoxide dismutase 1, soluble	Sod1	NP_058746.1	1	1	0	0	0	0	3	4
suppression of tumorigenicity 13	St13	NP_112384.1	0	0	0	0	0	0	1	1
SWA-70 protein	Swap70	NP_001099758.1	0	0	1	1	0	0	1	2
synapse associated protein 1	Syap1	NP_001004253.1	0	0	0	0	0	0	1	1
synaptogyrin 2	Syngr2	NP_446005.1	0	0	1	3	1	1	0	0
syntaxin 7	Stx7	NP_068641.2	1	1	1	1	1	1	0	0
t-complex protein 1	Tcp1	NP_036802.1	0	0	0	0	3	4	0	0
thimet oligopeptidase 1	Thop1	NP_742072.2	0	0	0	0	0	0	1	1
thioredoxin	Txn1	NP_446252.1	0	0	0	0	0	0	1	1
thioredoxin domain containing 4 (endoplasmic reticulum)	Txndc4	NP_001008318.1	2	2	1	2	0	0	0	0
thioredoxin reductase 1	Txnrd1	NP_113802.2	1	1	0	0	0	0	2	4
tight junction protein 1	Tjp1	NP_001099736.1	1	1	0	0	0	0	0	0
TNF receptor-associated protein 1	Trap1	NP_001034090.1	2	2	0	0	0	0	0	0
trafficking protein particle complex 3	Trappc3	NP_001008377.1	0	0	0	0	1	1	0	0
transaldolase 1	Taldo1	NP_113999.2	0	0	0	0	0	0	1	1
transferrin	Trf	NP_001013128.1	0	0	0	0	0	0	2	4
transgelin 2	Tagln2	NP_001013145.1	1	1	0	0	0	0	3	5
transgelin 3	Tagln3	NP_113864.2	0	0	1	1	0	0	0	0
transglutaminase 2, C polypeptide	Tgm2	NP_062259.2	2	2	1	1	2	2	20	48
transketolase	Tkt	NP_072114.1	0	0	0	0	5	9	14	26
transmembrane 9 superfamily member 2	Tm9sf2	NP_001005554.1	0	0	1	1	0	0	0	0
transmembrane 9 superfamily protein member 4	Tm9sf4	NP_001020820.1	1	1	1	1	0	0	0	0
transmembrane emp24 protein transport domain containing 4	Tmed4	NP_001100708.1	0	0	1	1	0	0	0	0
transmembrane emp24 protein transport domain containing 9	Tmed9	NP_001009703.1	0	0	1	1	0	0	0	0
transmembrane protein 33 isoform 2	Tmem33	NP_001029370.1	0	0	1	1	0	0	0	0
triosephosphate isomerase 1	Tpi1	NP_075211.2	0	0	1	3	1	1	3	3
tripartite motif-containing 39	Trim39	NP_998727.1	0	0	0	0	1	2	0	0
tripeptidyl peptidase II	Tpp2	NP_112399.1	0	0	0	0	1	1	0	0
tropomyosin 1, alpha isoform h	Tpm1	NP_001029246.1	1	2	0	0	0	0	1	1
tropomyosin 4	Tpm4	NP_036810.1	0	0	0	0	0	0	1	1
tryptophanyl-tRNA synthetase	Wars	NP_001013188.2	0	0	0	0	0	0	1	2
Tu translation elongation factor, mitochondrial	Tufm	NP_001099765.1	1	1	0	0	0	0	0	0
tubulin, alpha 1B	Tuba1b	NP_001037735.1	2	3	2	2	0	0	7	16
tubulin, alpha 4A	Tuba4a	NP_001007005.1	0	0	0	0	0	0	1	1
tubulin, beta 2a	Tubb2a	NP_001102589.1	1	2	1	1	1	1	4	5
tubulin, beta 2b	Tubb2b	NP_001013908.2	0	0	0	0	0	0	1	1
tubulin, beta 2c	Tubb2c	NP_954525.1	0	0	0	0	1	2	1	2
tubulin, beta 4	Tubb4	NP_543158.1	4	5	2	3	0	0	10	19
tubulin, beta 5	Tubb5	NP_775125.1	0	0	0	0	0	0	2	2
tumor rejection antigen gp96	Tra1	NP_001012197.1	3	3	3	3	0	0	0	0
tumor-associated calcium signal transducer 1	Tacstd1	NP_612550.1	0	0	2	4	0	0	0	0
tyrosine 3-monooxgenase/tryptophan 5-monooxgenase activation protein, beta polypeptide	Ywhab	NP_062250.1	1	1	2	3	1	2	2	4
tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein	Ywhae	NP_113791.1	1	1	0	0	1	1	1	2
tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, eta polypeptide	Ywhah	NP_037184.1	0	0	0	0	0	0	1	2
tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, gamma polypeptide	Ywhag	NP_062249.1	0	0	1	1	0	0	3	19
tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, theta polypeptide	Ywhaq	NP_037185.1	1	1	1	1	1	1	2	5
tyrosine 3-monooxygenase/tryptophan 5-monooxygenase activation protein, zeta polypeptide	Ywhaz	NP_037143.2	1	1	1	1	2	3	2	3
U1 small nuclear ribonucleoprotein polypeptide A	Snrp70	NP_001101953.1	0	0	0	0	1	1	0	0
ubiquinol cytochrome c reductase core protein 2	Uqcrc2	NP_001006971.1	4	4	1	1	0	0	0	0
ubiquinol-cytochrome c reductase core protein 1	Uqcrc1	NP_001004250.1	4	5	1	1	0	0	0	0
ubiquinol-cytochrome c reductase, Rieske iron-sulfur polypeptide 1	Uqcrfs1	NP_001008888.1	1	1	0	0	0	0	0	0
ubiquitin A-52 residue ribosomal protein fusion product 1	Uba52	NP_113875.1	0	0	0	0	1	2	1	1
ubiquitin specific peptidase 14	Usp14	NP_001008302.1	0	0	0	0	3	5	0	0
ubiquitin specific peptidase 5 (isopeptidase T)	Usp5	NP_001100089.1	0	0	0	0	0	0	1	1

ubiquitin-activating enzyme E1	Uba1	NP_001014102.1	0	0	0	0	0	0	10	16
ubiquitin-conjugating enzyme E2 variant 1	Ube2v1	NP_001103815.1	0	0	0	0	0	0	1	1
ubiquitin-conjugating enzyme E2D 2	Ube2d2	NP_001032369.1	0	0	0	0	0	0	1	2
ubiquitin-conjugating enzyme E2N	Ube2n	NP_446380.1	0	0	2	2	0	0	1	2
UDP-glucose ceramide glucosyltransferase-like 1	Ugcgl1	NP_598280.1	0	0	1	1	0	0	0	0
USO1 homolog, vesicle docking protein	Uso1	NP_062252.1	0	0	0	0	0	0	2	2
utrophin	Utrn	NP_037202.1	3	3	1	1	0	0	0	0
vacuolar H+ ATPase E1	Atp6v1e1	NP_942040.1	0	0	0	0	1	1	0	0
vacuolar H+ATPase B2	Atp6v1b2	NP_476561.1	0	0	0	0	2	2	0	0
vacuolar protein sorting 29	Vps29	NP_001099402.1	0	0	0	0	0	0	1	2
valosin-containing protein	Vcp	NP_446316.1	1	2	0	0	3	5	1	1
vesicle-associated membrane protein 3	Vamp3	NP_476438.1	0	0	0	0	1	1	0	0
vesicle-associated membrane protein 7	Vamp7	NP_445983.1	0	0	1	1	0	0	0	0
vimentin	Vim	NP_112402.1	1	1	0	0	0	0	0	0
vinculin	Vcl	NP_001100718.1	0	0	2	2	0	0	9	14
voltage-dependent anion channel 1	Vdac1	NP_112643.1	1	1	1	1	0	0	0	0
voltage-dependent anion channel 3	Vdac3	NP_112645.1	1	1	0	0	0	0	0	0
WD repeat domain 1	Wdr1	NP_001014157.1	0	0	0	0	0	0	2	3
Wolfram syndrome 1	Wfs1	NP_114011.1	2	2	1	1	0	0	0	0
Y box protein 1	Ybx1	NP_113751.3	1	1	0	0	3	4	0	0
zinc finger, CCHC domain containing 11	Zcchc11	NP_001101423.1	0	0	0	0	0	0	1	1

Calculation of fraction of 17,000 *g* protein that is derived from plasma membranes:

Spectral counts of all proteins were divided by their respective molecular weights to obtain normalized spectral counts. Plasma membrane proteins were selected using Gene Ontology *Cell Component* terms and literature inspection.

Total protein spectral counts - 973.366
Plasma membrane spectral count – 105.612
Percentage plasma membrane – 11%

Plasma Membrane Proteins Identified in 17K Pellet:

Gene ID	*Protein*	*Count*
Aqp2	aquaporin 2	10.36963
Aqp4	aquaporin 4	2.900219
Rnpep	arginyl aminopeptidase (aminopeptidase B)	1.381738
Atp1a1	ATPase, Na+/K+ transporting, alpha 1 polypeptide	7.960778
Atp1b1	ATPase, Na+/K+ transporting, beta 1 polypeptide	8.522342
Bcam	basal cell adhesion molecule	2.962449
Cd151	CD151 molecule (Raph blood group)	3.526684
Cd59b	CD59b moleucle, complement regulatory protein	7.251495
Cd9	CD9 antigen	3.965909
Fxyd4	corticosteroid-induced protein precursor	11.00874
Emcn	endomucin	3.771326
Itgb1	integrin beta 1	5.659664
Lnpep	leucyl/cystinyl aminopeptidase isoform 1	2.559696
Lamp1	lysosomal-associated membrane protein 1	6.82297
Mal2	MAL2 proteolipid protein	5.209522
Atp1a3	Na+/K+ -ATPase alpha 3 subunit	7.159761
Itga2	PREDICTED: similar to Integrin alpha-2 precursor (Platelet membrane glycoprotein Ia) (GPIa) (Collagen receptor) (VLA-2 alpha chain) (CD49b antigen)	0.776164
Slc14a2	solute carrier family 14 (urea transporter), member 2 isoform 1	0.981375
Syngr2	synaptogyrin 2	3.889685
Tacstd1	tumor-associated calcium signal transducer 1	5.680626
Vdac1	voltage-dependent anion channel 1	3.25145

Calculation of fraction of 200,000 *g* protein that is derived from plasma membranes:

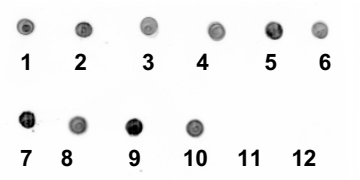
The same calculation method was utilized for this fraction as for the 17K fraction.

Total protein spectral counts – 926.811
Plasma membrane spectral count – 15.023
Percentage plasma membrane – 2%

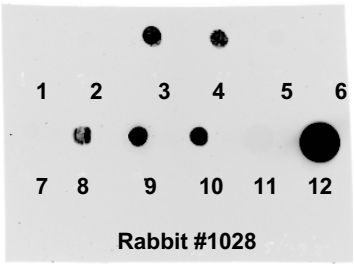
Plasma Membrane Proteins Identified in 200K Pellet:

Gene ID	*Protein*	*Count*
Aqp2	aquaporin 2	3.456544
Atp1a1	ATPase, Na+/K+ transporting, alpha 1 polypeptide	0.884531
Bcam	basal cell adhesion molecule	1.481225
Grid1	glutamate receptor, ionotropic, delta 1	0.891862
Lamp1	lysosomal-associated membrane protein 1	2.274323
Atp1a3	Na+/K+ -ATPase alpha 3 subunit	1.78994
Muc4	PREDICTED: similar to mucin 4	0.354701
Syngr2	synaptogyrin 2	3.889685

Dotblot of the new anti-pS261-AQP2 (#1028) antibody



streptavidin-800

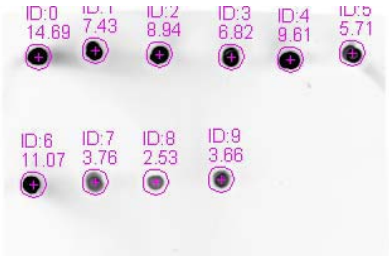


anti-pS261-AQP2

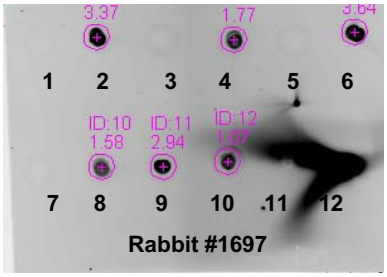
Spot #	Peptide
1	non-phospho
2	pS256
3	pS261
4	pS256/pS261
5	pS269
6	pS256/pS269
7	pS264
8	pS256/pS261/pS264
9	pS256/pS261/pS264/pS269
10	pS256/pS261/pS269
11	antigen peptide (– phospho)
12	antigen peptide (+ phospho)

Result: Anti-pS261-AQP2 antibody recognizes only AQP2 peptides phosphorylated at S261. (Peptides 1-10 were biotinylated and could therefore be detected using a streptavidin conjugate as a control for loading.)

Dotblot of the new anti-pS256-AQP2 (#1697) antibody



streptavidin-800



anti-pS256-AQP2

Spot #	Peptide
1	non-phospho
2	pS256
3	pS261
4	pS256/pS261
5	pS269
6	pS256/pS269
7	pS264
8	pS256/pS261/pS264
9	pS256/pS261/pS264/pS269
10	pS256/pS261/pS269
11	antigen peptide (– phospho)
12	antigen peptide (+ phospho)

Result: Anti-pS256-AQP2 antibody recognizes only AQP2 peptides phosphorylated at S256. (Peptides 1-10 were biotinylated and could therefore be detected using a streptavidin conjugate as a control for loading.)