

**Dadvar et al., Supplementary table 1**

Rank	Protein	Acc. Number	MW (kDa)	Specific elution	Nonspecific elution	Lysate
1	<b>Pde5a cGMP-specific 3',5'-cyclic phosphodiesterase</b>	<b>IPI00328073</b>	<b>98 kDa</b>	<b>27</b>	<b>0</b>	<b>0</b>
2	<b>Aldh1a3 Aldehyde dehydrogenase 1A3</b>	<b>IPI00203138</b>	<b>56 kDa</b>	<b>21</b>	<b>0</b>	<b>0</b>
3	Alb Serum albumin precursor	IPI00191737	69 kDa	15	4	29
4	Hspa2 Heat shock-related 70 kDa protein 2	IPI00207355	70 kDa	14	7	13
5	<b>Pdxk Pyridoxal kinase</b>	<b>IPI00208348</b>	<b>35 kDa</b>	<b>13</b>	<b>1</b>	<b>0</b>
6	Glul Glutamine synthetase	IPI00324020	42 kDa	13	5	6
7	Hspa4l_predicted similar to Heat shock 70 kDa protein 4L	IPI00372183	114 kDa	11	0	12
8	<b>Pbp2 phosphatidylethanolamine binding protein 2</b>	<b>IPI00558041</b>	<b>21 kDa</b>	<b>10</b>	<b>0</b>	<b>0</b>
9	Hspa5 78 kDa glucose-regulated protein precursor	IPI00206624	72 kDa	9	0	10
10	Hspca Heat shock protein HSP 90-alpha	IPI00210566	85 kDa	8	1	12
11	Krt2-5 Keratin, type II cytoskeletal 5	IPI00382153	62 kDa	8	6	1
12	Vcp Transitional endoplasmic reticulum ATPase	IPI00212014	90 kDa	7	0	7
13	Gstm2 Glutathione S-transferase Mu 2	IPI00411230	26 kDa	7	1	6
14	Calm1;Calm2;Calm3 Calmodulin	IPI00231955	17 kDa	6	0	1
15	Ybx2_predicted similar to Y-box-binding protein 2	IPI00369907	38 kDa	6	0	5
16	Hspa8 Heat shock cognate 71 kDa protein	IPI00208205	71 kDa	6	0	5
17	<b>Pde1a Phosphodiesterase 1A</b>	<b>IPI00189442</b>	<b>62 kDa</b>	<b>6</b>	<b>2</b>	<b>0</b>
18	Gstm1 Glutathione S-transferase Mu 1	IPI00231639	26 kDa	6	4	7
19	Kb1 Keratin, type II cytoskeletal 1	IPI00421857	65 kDa	6	8	3
20	<b>Pde6d_Retinal rod rhodopsin-sensitive cGMP 3,5-cyclic phosphodiesterase delta-subunit</b>	<b>IPI00367117</b>	<b>17 kDa</b>	<b>5</b>	<b>3</b>	<b>0</b>
21	Krt10 Keratin, type I cytoskeletal 10	IPI00421806	57 kDa	5	5	0
22	Gpx4 Isoform Cytoplasmic of Phospholipid hydroperoxide glutathione peroxidase	IPI00760136	19 kDa	5	6	5
23	Hif1an_predicted similar to hypoxia-inducible factor 1, alpha subunit inhibitor	IPI00370371	40 kDa	4	0	0
24	IgG-2a LOC367586 protein	IPI00361346	51 kDa	4	0	1
25	Rpl7 60S ribosomal protein L7	IPI00199543	30 kDa	4	0	2
26	Akr1b4 Aldose reductase	IPI00231737	36 kDa	4	0	5
27	LOC500180 protein	IPI00388002	26 kDa	4	1	2
28	Actb Actin, cytoplasmic 1	IPI00189819	42 kDa	4	7	10
29	Gnb2l1 Guanine nucleotide-binding protein subunit beta-2-like 1	IPI00231134	35 kDa	3	0	0

Rank	Protein	Acc. Number	MW (kDa)	Specific elution	Nonspecific elution	Lysate
30	Psm3l;Psm3 Proteasome subunit alpha type-3	IPI00476178	28 kDa	3	0	0
31	Psm4 Proteasome subunit beta type-4 precursor	IPI00191505	29 kDa	3	0	0
32	Ptgds Prostaglandin-H2 D-isomerase precursor	IPI00203102	21 kDa	3	0	0
33	Rpl18 60S ribosomal protein L18	IPI00230917	22 kDa	3	0	2
34	Ces3 Carboxylesterase 3 precursor	IPI00326972	62 kDa	3	0	4
35	Tra1_predicted 93 kDa protein	IPI00365985	93 kDa	3	0	10
36	LOC684270 similar to isochorismatase domain containing 2 isoform 1	IPI00763564	25 kDa	3	2	0
37	Kb2 Keratin, type II cytoskeletal 2 epidermal	IPI00551558	69 kDa	3	2	0
38	Krt1-14 Keratin, type I cytoskeletal 14	IPI00421855	53 kDa	3	5	0
39	Psap Sulfated glycoprotein 1 precursor	IPI00195160	61 kDa	3	7	0
40	Eef1a1 Elongation factor 1-alpha 1	IPI00195372	50 kDa	3	7	6
41	Tubb2c Tubulin beta-2C chain	IPI00400573	50 kDa	3	16	18
42	Rpl7a_predicted 60S ribosomal protein L7a	IPI00363949	30 kDa	2	0	0
43	Psm2 Proteasome subunit alpha type-2	IPI00231757	26 kDa	2	0	0
44	RGD1306952 Carboxymethylglutaminase homolog	IPI00214052	28 kDa	2	0	0
45	Ka22 Keratin, type I cytoskeletal 42	IPI00421791	50 kDa	2	0	0
46	Psm5 similar to proteasome (prosome, macropain) subunit, beta type 5	IPI00230992	29 kDa	2	0	0
47	58 kDa protein (nucleolin*)	IPI00198884	58 kDa	2	0	0
48	Pzp Alpha-1-macroglobulin precursor	IPI00326140	167 kDa	2	0	0
49	Psm4 Proteasome subunit alpha type-4	IPI00231046	29 kDa	2	0	0
50	LOC688114 hypothetical protein LOC689890	IPI00763477	28 kDa	2	0	0
51	Rps21 40S ribosomal protein S21	IPI00202725	9 kDa	2	0	0
52	Igh-1a protein	IPI00202440	51 kDa	2	0	1
53	Psm6 Proteasome subunit alpha type-6	IPI00191501	27 kDa	2	0	1
54	Acsbg1 Gonadotropin-regulated long chain acyl-CoA synthetase	IPI00204896	81 kDa	2	0	1
55	25 kDa protein(proteasome subunit beta type 6-like* )	IPI00188686	25 kDa	2	0	1
56	Cct8_predicted similar to T-complex protein 1 subunit theta	IPI00370815	60 kDa	2	0	8
57	Dcd Dermcidin	IPI00421832	11 kDa	2	1	0
58	Gcdh_predicted similar to Glutaryl-CoA dehydrogenase	IPI00360501	49 kDa	2	1	0
59	64 kDa protein (LOC366747 protein*)	IPI00781399	64 kDa	2	2	0
60	Krt2-8 Keratin, type II cytoskeletal 8	IPI00389571	54 kDa	2	2	0
61	Ppt1 Palmitoyl-protein thioesterase 1	IPI00208382	34 kDa	2	4	1

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63	Gm2a-GM2 ganglioside activator protein	IPI00470260	21 kDa	2	5	0
64	Hba-a1 Hemoglobin subunit alpha-1/2	IPI00287835	15 kDa	2	8	6
65	Hbb Hemoglobin subunit beta-1	IPI00230897	16 kDa	2	9	10
66	RGD1311026 Dihydroxyacetone kinase	IPI00372498	59 kDa	2	16	2
67	Calr Calreticulin precursor	IPI00191728	48 kDa	1	0	2
68	14 kDa protein (Histidine triad nucleotide-binding protein*)	IPI00358226	14 kDa	1	0	2
69	Rpl13 60S ribosomal protein L13	IPI00230916	24 kDa	1	0	2
70	Rpsa 40S ribosomal protein SA	IPI00215107	33 kDa	1	0	2
71	Rps8 40S ribosomal protein S8	IPI00231202	24 kDa	1	0	2
72	Psm1 Proteasome subunit alpha type-1	IPI00191748	30 kDa	1	0	3
73	Smcp Sperm mitochondrial-associated cysteine-rich protein	IPI00211031	15 kDa	1	0	3
74	Gsta2;Gsta3;Yc2 Glutathione S-transferase alpha (Fragment)	IPI00231150	26 kDa	1	0	4
75	Park7 Protein DJ-1	IPI00212523	20 kDa	1	0	4
76	Ywhaz 14-3-3 protein zeta/delta	IPI00324893	28 kDa	1	0	8
77	Ywhab Isoform Long of 14-3-3 protein beta/alpha	IPI00230837	28 kDa	1	1	4
78	RGD1564767_predicted Histone H2a	IPI00188688	14 kDa	1	2	0
79	Eef1g Elongation factor 1-gamma	IPI00470317	50 kDa	1	2	5
80	LOC682665;LOC680312 hypothetical protein LOC680312	IPI00190348	14 kDa	1	3	0
81	Srp54 Signal recognition particle 54 kDa protein	IPI00391089	56 kDa	1	3	0
82	MGC72973;Hbb;LOC689064 Hemoglobin subunit beta-2	IPI00231192	16 kDa	1	4	3
83	LOC500319;Tuba3b;RGD1565155_predicted;Tuba3a Tubulin alpha-3 chain	IPI00471523	50 kDa	1	11	7
84	Eif4a2 Eukaryotic initiation factor 4A-II	IPI00193595	46 kDa	0	0	2
85	LOC290651 Similar to myo-inositol 1-phosphate synthase A1	IPI00202154	61 kDa	0	0	2
86	Tcp11 T-complex protein 11	IPI00360454	63 kDa	0	0	2
87	Nme2 Nucleoside diphosphate kinase B	IPI00325189	17 kDa	0	0	2
88	Hpx Hemopexin precursor	IPI00195516	51 kDa	0	0	2
89	Hnrpk Hnrpk protein	IPI00194974	51 kDa	0	0	2
90	RGD1307773_predicted similar to pyridoxal (pyridoxine, vitamin B6) phosphatase	IPI00369235	44 kDa	0	0	2
91	Aldh9a1 4-trimethylaminobutyraldehyde dehydrogenase	IPI00203690	56 kDa	0	0	2
92	Eif5a Eukaryotic translation initiation factor 5A-1	IPI00211216	17 kDa	0	0	2
93	Oxct2a 3-oxoacid CoA transferase 2A	IPI00359138	57 kDa	0	0	2
94	Hmgb2 similar to High mobility group protein 2	IPI00231701	37 kDa	0	0	2

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95	Mif Macrophage migration inhibitory factor	IPI00230907	12 kDa	0	0	2
96	Tubb3 Tubulin beta-3 chain	IPI00362160	50 kDa	0	0	2
97	Ddx39 ATP-dependent RNA helicase DDX39	IPI00325144	49 kDa	0	0	2
98	Tpm3 Isoform 2 of Tropomyosin alpha-3 chain	IPI00210941	29 kDa	0	0	2
99	Fga Isoform 1 of Fibrinogen alpha chain	IPI00202651	87 kDa	0	0	2
100	Pfn1 Profilin-1	IPI00231358	15 kDa	0	0	2
101	Hspd1 60 kDa heat shock protein	IPI00339148	61 kDa	0	0	2
102	Ube1y1 Ubiquitin-activating enzyme E1	IPI00207115	118 kDa	0	0	2
103	Spink2 Serine protease inhibitor Kazal-type 2	IPI00454467	10 kDa	0	0	2
104	27 kDa protein (diablo*)	IPI00197640	27 kDa	0	0	2
105	LOC682787 similar to SMT3 suppressor of mif two 3 homolog 2 isoform 2	IPI00200762	11 kDa	0	0	2
106	Kpnb1 Importin subunit beta-1	IPI00204261	97 kDa	0	0	2
107	Ruvbl2 RuvB-like 2	IPI00364340	51 kDa	0	0	2
108	Sfpq Splicing factor proline/glutamine rich	IPI00627068	75 kDa	0	0	2
109	Xpnpep1 Xaa-Pro aminopeptidase 1	IPI00200054	70 kDa	0	0	2
110	Dbi Acyl-CoA-binding protein	IPI00231069	10 kDa	0	0	3
111	RGD1563391_predicted hypothetical protein LOC499688	IPI00197371	26 kDa	0	0	3
112	Cct5 T-complex protein 1 subunit epsilon	IPI00470301	60 kDa	0	0	3
113	Gc Vitamin D-binding protein precursor	IPI00194097	54 kDa	0	0	3
114	Lrrc46 Leucine-rich repeat-containing protein 46	IPI00464640	36 kDa	0	0	3
115	Tbca Tubulin-specific chaperone A	IPI00421723	13 kDa	0	0	3
116	Trim28 similar to Transcription intermediary factor 1-beta	IPI00194567	89 kDa	0	0	3
117	Ran GTP-binding nuclear protein Ran	IPI00212796	24 kDa	0	0	3
118	Cap1 Adenylyl cyclase-associated protein 1	IPI00555187	52 kDa	0	0	3
119	RGD1307822 Hypothetical LOC293544	IPI00208537	68 kDa	0	0	3
120	Mdh1 Malate dehydrogenase, cytoplasmic	IPI00198717	36 kDa	0	0	3
121	Rpl4 60S ribosomal protein L4	IPI00202512	47 kDa	0	0	3
122	Pgam2 Phosphoglycerate mutase 2	IPI00231506	29 kDa	0	0	3
123	Cltc Clathrin heavy chain	IPI00193983	192 kDa	0	0	3
124	Tpi1 Triosephosphate isomerase	IPI00231767	27 kDa	0	0	3
125	Phgdh D-3-phosphoglycerate dehydrogenase	IPI00475835	56 kDa	0	0	3
126	Hp Isoform 2 of Haptoglobin	IPI00382202	42 kDa	0	0	3

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127	Ahsg Alpha-2-HS-glycoprotein	IPI00327469	38 kDa	0	0	4
128	Serpina3k Serine protease inhibitor A3K	IPI00200593	47 kDa	0	0	4
129	Tcp1 T-complex protein 1 subunit alpha	IPI00200847	60 kDa	0	0	4
130	Gstm5 Glutathione S-transferase Mu 5	IPI00208636	27 kDa	0	0	4
131	Thop1 thimet oligopeptidase 1	IPI00564198	78 kDa	0	0	4
132	Ranbp5_predicted similar to RAN binding protein 5	IPI00373722	124 kDa	0	0	4
133	Cfl1 Cofilin-1	IPI00327144	19 kDa	0	0	4
134	Cbr1 Carbonyl reductase [NADPH] 1	IPI00331856	31 kDa	0	0	4
135	Serpina1 Alpha-1-antiproteinase	IPI00324019	46 kDa	0	0	5
136	Eno1 Alpha-enolase	IPI00464815	47 kDa	0	0	5
137	Ywhae 14-3-3 protein epsilon	IPI00325135	29 kDa	0	0	5
138	Spata20 Spermatogenesis-associated protein 20	IPI00400745	88 kDa	0	0	5
139	Hspcb Heat shock protein HSP 90-beta	IPI00471584	83 kDa	0	0	5
140	C3 Complement C3 (Fragment)	IPI00480639	186 kDa	0	0	5
141	Dnpep Aspartyl aminopeptidase	IPI00358059	53 kDa	0	0	5
142	Pabpc1 Polyadenylate-binding protein 1	IPI00189074	71 kDa	0	0	6
143	Hspa1l Heat shock 70 kDa protein 1L	IPI00213546	71 kDa	0	0	6
144	Sod1 Superoxide dismutase	IPI00231643	16 kDa	0	0	6
145	Pgk2 Phosphoglycerate kinase	IPI00371769	45 kDa	0	0	6
146	Ppia Peptidyl-prolyl cis-trans isomerase A	IPI00387771	18 kDa	0	0	6
147	Eef2 Elongation factor 2	IPI00203214	95 kDa	0	0	6
148	Prdx6 Peroxiredoxin-6	IPI00231260	25 kDa	0	0	6
149	Ldhc L-lactate dehydrogenase	IPI00464822	36 kDa	0	0	7
150	LOC299282 Liver regeneration protein Irryan	IPI00392216	68 kDa	0	0	7
151	Nasp Nuclear autoantigenic sperm protein	IPI00365215	84 kDa	0	0	7
152	Asrgl1 L-asparaginase	IPI00207252	34 kDa	0	0	7
153	Ldhb L-lactate dehydrogenase B chain	IPI00231783	37 kDa	0	0	7
154	Mug1 164 kDa protein	IPI00780167	164 kDa	0	0	9
155	Pdia3 Protein disulfide-isomerase A3 precursor	IPI00324741	57 kDa	0	0	9
156	Pebp1 Phosphatidylethanolamine-binding protein 1	IPI00230937	21 kDa	0	0	10
157	Srprb 77 kDa protein (transferrin*)	IPI00476177	77 kDa	0	0	13
158	MGC72973 Zero beta-1 globin	IPI00207146	16 kDa	0	1	2

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159	Pkm2 Isoform M1 of Pyruvate kinase isozymes M1/M2	IPI00231929	58 kDa	0	1	7
160	Hadhb Trifunctional enzyme subunit beta	IPI00198467	51 kDa	0	2	0
161	Sccpdh Probable saccharopine dehydrogenase	IPI00372804	47 kDa	0	2	0
162	Chchd5_predicted coiled-coil-helix-coiled-coil-helix domain containing 5	IPI00373116	12 kDa	0	2	0
163	Anp32b Acidic leucine-rich nuclear phosphoprotein 32 family member B	IPI00192336	31 kDa	0	2	0
164	Col1a1 Collagen alpha-1(I) chain	IPI00188909	138 kDa	0	2	0
165	Hnrpu SP120	IPI00210090	88 kDa	0	2	0
166	Asah1 N-acylsphingosine amidohydrolase 1	IPI00421601	44 kDa	0	2	0
167	12 kDa protein (c-myc binding protein -mouse*)	IPI00365235	12 kDa	0	2	0
168	Cse1l_predicted chromosome segregation 1-like	IPI00193247	110 kDa	0	2	0
169	Lrrc59 Leucine-rich repeat-containing protein 59	IPI00206020	35 kDa	0	2	0
170	mt-Co2 Cytochrome c oxidase subunit 2	IPI00209908	26 kDa	0	2	0
171	Hpca similar to Neuron-specific calcium-binding protein hippocalin	IPI00763673	31 kDa	0	2	0
172	LOC688320 similar to Lung carbonyl reductase	IPI00765446	28 kDa	0	2	0
173	Ptrf_predicted Polymerase I and transcript release factor	IPI00201300	44 kDa	0	2	0
174	Apoa2 Apolipoprotein A-II precursor	IPI00197700	11 kDa	0	2	0
175	Anp32a Acidic leucine-rich nuclear phosphoprotein 32 family member A	IPI00199114	29 kDa	0	2	0
176	Gnb1 Guanine nucleotide-binding protein G(I)/G(S)/G(T) subunit beta-1	IPI00212655	37 kDa	0	2	0
177	RGD1309676 Uncharacterized protein C10orf58 homolog	IPI00364616	26 kDa	0	2	0
178	RGD1303232 -oxidoreductase C10orf33 homolog	IPI00470325	63 kDa	0	2	0
179	MGC105830;Rab1b RAB1B, member RAS oncogene family	IPI00480673	22 kDa	0	2	0
180	Aco2 Aconitate hydratase	IPI00421539	85 kDa	0	2	1
181	Tubb5 Isoform 1 of Tubulin beta-5 chain	IPI00197579	50 kDa	0	2	2
182	Cct4 T-complex protein 1 subunit delta	IPI00337168	58 kDa	0	2	2
183	Cct2 T-complex protein 1 subunit beta	IPI00366218	57 kDa	0	2	3
184	Prdx1 Peroxiredoxin-1	IPI00211779	22 kDa	0	2	4
185	RGD1565368_glyceraldehyde-3-phosphate dehydrogenase	IPI00554039	36 kDa	0	2	5
186	Fabp9 Testis lipid-binding protein	IPI00213531	15 kDa	0	2	6
187	Cct3 T-complex protein 1 subunit gamma	IPI00372388	61 kDa	0	2	8
188	Hadha Trifunctional enzyme subunit alpha	IPI00212622	83 kDa	0	3	0
189	Tgm2 Transglutaminase 2, C polypeptide	IPI00205135	77 kDa	0	3	0
190	Api5_predicted similar to apoptosis inhibitor 5	IPI00373651	59 kDa	0	3	0

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191	RGD1305387 RIKEN cDNA 2610207116	IPI00367240	58 kDa	0	3	0
192	LOC690632 GCN1 general control of amino-acid synthesis 1-like 1 isoform 2	IPI00767139	293 kDa	0	3	0
193	Akap4 A-kinase anchor protein 4 precursor	IPI00212365	93 kDa	0	3	1
194	Atp5b ATP synthase subunit beta	IPI00551812	56 kDa	0	3	2
195	Aldh2 Protein	IPI00778252	53 kDa	0	3	3
196	Pc Pyruvate carboxylase	IPI00210435	130 kDa	0	4	0
197	11 kDa protein (RGD1359202 protein*)	IPI00231340	11 kDa	0	4	0
198	Apoa1 Apolipoprotein A-I precursor	IPI00197703	30 kDa	0	4	0
199	Rab11b Ras-related protein Rab-11B	IPI00210381	24 kDa	0	4	0
200	RGD1311107 Interferon-inducible GTPase 5	IPI00367045	51 kDa	0	4	0
201	RGD1562732_predicted similar to glutathione S-transferase, theta 3	IPI00568810	28 kDa	0	5	0
202	Ppig Peptidyl-prolyl cis-trans isomerase G	IPI00194996	88 kDa	0	5	0
203	Cpt2 Carnitine O-palmitoyltransferase 2	IPI00195593	74 kDa	0	5	0
204	Cct7_predicted chaperonin subunit 7	IPI00364286	60 kDa	0	5	3
205	ApoE Apolipoprotein E precursor	IPI00190701	36 kDa	0	6	0
206	Kb25 Type II keratin Kb25	IPI00200792	56 kDa	0	6	0
207	RGD1306249 Type I hair keratin KA27	IPI00551773	46 kDa	0	6	0
208	Cyp11a1 Cytochrome P450 11A	IPI00325713	61 kDa	0	6	0
209	Atp5a1 ATP synthase subunit alpha	IPI00396910	60 kDa	0	6	0
210	RGD1561445_Protein KIAA1210	IPI00358424	190 kDa	0	7	0
211	Srrm2_serine/arginine repetitive matrix 2	IPI00368692	296 kDa	0	7	0
212	Thrap3 Thyroid hormone receptor-associated protein 3	IPI00359323	108 kDa	0	8	0
213	Scp2 Isoform SCPx of Non-specific lipid-transfer protein	IPI00325136	59 kDa	0	10	0
214	Hsd17b4 Hsd17b4 protein	IPI00326948	81 kDa	0	28	0

\* Identified protein by Blast search against non redundant protein sequences