

## Table S2. Proteomics analysis of *Naegleria flagella*

The *Naegleria* JGI protein ID and the number of peptides with strong confidence. *Naegleria* proteins that also belong to the FM gene set are indicated by a "Yes". The *Chlamydomonas* JGI protein ID for the top blast hit to version 4 of the *Chlamydomonas* genome and the NCBI accession for the top blast hit to the human genome, and corresponding e-values are given. The designation "nf" is used to indicate that no homolog with a e-value less than 1e-5 was identified. Pfam protein domain predictions for the *Naegleria* protein are based on version 24 of the Pfam database using gathering thresholds. For proteins with multiple Pfam domains, domains are listed sequentially, separated by a vertical line.

Naegleria protein ID	No. peptides	FM gene family member	Chlamydomonas top Blast hit	Chlamydomonas e-value	Human top blast hit	Human e-value	Human blast hit description	Naegleria protein Pfam domains
55423	71		129876	3.80E-217	NP_006079.1	1.70E-211	tubulin, beta, 2	PF00091: Tubulin/FtsZ, GTPase   PF03953: Tubulin/FtsZ, C-terminal
39221	38		128523	7.90E-217	NP_006000.2	3.90E-205	tubulin, alpha 1a	PF00091: Tubulin/FtsZ, GTPase   PF03953: Tubulin/FtsZ, C-terminal
80962	22		150766	1.90E-76	NP_904325.2	1.70E-117	kinesin family member 1B isoform alpha	PF00225: Kinesin, motor region   PF00498: Forkhead-associated
56359	22		nf	n/a	NP_003079.1	1.40E-10	fascin 1	PF06268: Fascin
61055	13		24114	1.80E-61	NP_001091.1	3.70E-120	actin, alpha 1, skeletal muscle	PF00022: Actin/actin-like
55913	13		132905	6.30E-89	NP_001393.1	1.10E-170	eukaryotic translation elongation factor 1 alpha 1	PF00009: Protein synthesis factor, GTP-binding   PF03144: Translation elongation factor EFTu/EF1A, domain 2   PF03143: Translation elongation factor EFTu/EF1A, C-terminal
88138	12		24114	1.20E-85	NP_001605.1	4.20E-176	actin, gamma 1 propeptide	PF00022: Actin/actin-like
56300	11		134171	2.20E-299	NP_009057.1	5.40E-302	valosin-containing protein	PF02359: AAA ATPase VAT, N-terminal   PF02933: Cell division protein 48, CDC48, domain 2   PF00004: AAA ATPase, core   PF00004: AAA ATPase, core
50528	11		145401	5.20E-19	NP_997200.1	7.70E-26	zinc finger protein 474	nf
55628	11	Yes	130849	0	XP_002345123.1	0	PREDICTED: dynein, axonemal, heavy chain 17	PF08385: Dynein heavy chain, N-terminal region 1   PF08393: Dynein heavy chain, N-terminal region 2   PF07728: ATPase associated with various cellular activities, AAA-5   PF07728: ATPase associated with various cellular activities, AAA-5   PF03028: Dynein heavy chain
58174	10		196241	7.00E-10	NP_001107829.1	1.30E-10	hypothetical protein LOC441054	nf
56244	10		16794	5.20E-11	NP_116243.2	6.00E-97	coronin 6	PF08953: Domain of unknown function DUF1899   PF00400: WD40 repeat   PF00400: WD40 repeat   PF08954: Domain of unknown function DUF1900
56254	10		24524	8.20E-270	NP_001952.1	3.40E-277	eukaryotic translation elongation factor 2	PF00009: Protein synthesis factor, GTP-binding   PF03144: Translation elongation factor EFTu/EF1A, domain 2   PF03764: Translation elongation factor EFG/EF2, domain IV   PF00679: Translation elongation factor EFG/EF2, C-terminal
35692	9		129809	3.40E-35	NP_150254.1	9.60E-35	ribosomal protein L13	PF01294: Ribosomal protein L13e
78965	9		132719	1.20E-16	NP_659482.3	1.10E-25	coiled-coil domain containing 151	nf
81126	9		nf	n/a	nf	n/a	nf	nf
59363	9		206694	2.30E-201	NP_057392.1	3.00E-42	UMP-CMP kinase 1 isoform a	PF01326: Pyruvate phosphate dikinase, PEP/pyruvate-binding   PF00391: PEP-utilising enzyme, mobile region   PF02896: PEP-utilizing enzyme   PF00406: Adenylate kinase
44741	8		185673	1.60E-211	NP_006588.1	2.40E-221	heat shock 70kDa protein 8 isoform 1	PF00012: Heat shock protein 70
69418	8		342942	1.90E-39	NP_004046.2	9.00E-55	calpain 5	PF00648: Peptidase C2, calpain   PF01067: Peptidase C2, calpain
70087	8		137559	2.00E-23	NP_570967.1	7.40E-28	dynein, light chain, roadblock-type 2	PF03259: Roadblock/LC7
56405	8		185673	2.30E-217	NP_006588.1	1.90E-228	heat shock 70kDa protein 8 isoform 1	PF00012: Heat shock protein 70
82851	7	Yes	97201	3.50E-65	NP_001073847.1	1.30E-60	parkin co-regulated gene protein isoform 2	PF10274: ParcG
35785	7		172406	8.80E-76	NP_150644.1	2.20E-74	ribosomal protein L8	PF00181: Ribosomal protein L2   PF03947: Ribosomal protein L2
30562	7	Yes	103782	3.60E-118	NP_036575.1	1.20E-132	sperm associated antigen 6 isoform 1	PF00514: Armadillo   PF00514: Armadillo   PF02985: HEAT   PF00514: Armadillo
82397	6		96566	4.90E-66	NP_008965.2	1.30E-69	DnaJ (Hsp40) homolog, subfamily B, member 4	PF00226: Heat shock protein DnaJ, N-terminal   PF01556: Chaperone DnaJ, C-terminal
59029	6		nf	n/a	nf	n/a	nf	PF00736: Translation elongation factor EF1B, beta and delta chains, guanine nucleotide exchange
81457	6		408539	4.40E-15	NP_001400.3	3.60E-36	EGF-like-domain, multiple 3	PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF02010: PKD/REJ-like protein
81553	6		nf	n/a	nf	n/a	nf	nf

39465	5		138697	3.20E-46	NP_000967.1	2.20E-53	ribosomal protein L12	PF03946: Ribosomal protein L11   PF00298: Ribosomal protein L11
78704	5	Yes	116240	0	NP_116210.2	0	hydrocephalus inducing isoform a	nf
81047	5	Yes	126286	1.30E-99	NP_060570.2	1.10E-102	EF-hand domain (C-terminal) containing 1	PF06565: Protein of unknown function DUF1126   PF06565: Protein of unknown function DUF1126   PF06565: Protein of unknown function DUF1126
83254	5		181887	8.50E-07	nf	n/a	nf	PF00235: Profilin/allergen
56516	5		150605	4.10E-14	NP_055111.1	3.70E-16	calpain 7	PF00648: Peptidase C2, calpain
77087	5		182408	3.70E-52	NP_000420.1	1.40E-56	methionine adenosyltransferase I, alpha	PF02773: S-adenosylmethionine synthetase
58590	5		9715	4.00E-08	NP_002464.1	7.20E-11	myosin, heavy polypeptide 9, non-muscle	nf
80070	5		57302	6.90E-12	NP_001019.1	1.40E-12	ribosomal protein S25	PF03297: S25 ribosomal protein   PF00376: Bacterial regulatory protein, MerR
59812	4		398336	5.20E-16	nf	n/a	nf	nf
60431	4	Yes	188612	1.20E-85	NP_075462.3	4.80E-88	dynein, axonemal, intermediate polypeptide 2	nf
56558	4		106571	5.40E-15	NP_543136.1	5.70E-18	testis-specific gene A2	PF02493: MORN motif   PF02493: MORN motif   PF02493: MORN motif
82967	4		159282	1.20E-53	NP_000969.1	3.40E-55	ribosomal protein L23	PF00238: Ribosomal protein L14b/L23e
80333	4		195598	9.60E-86	NP_000959.2	2.10E-85	ribosomal protein L4	PF00573: Ribosomal protein L4/L1e
83065	4		158129	1.50E-87	NP_005908.1	3.10E-100	cytosolic malate dehydrogenase	PF00056: Lactate/malate dehydrogenase   PF02866: Lactate/malate dehydrogenase
44954	4		54360	1.10E-26	NP_001010892.1	1.50E-35	radial spoke head 4 homolog A isoform 1	PF04712: Radial spokehead-like protein
57391	4		118745	1.20E-92	NP_005712.1	1.50E-118	ARP3 actin-related protein 3 homolog	PF00022: Actin/actin-like
37059	4		60432	0	NP_997320.2	0	dynein, axonemal, heavy chain 10	PF08385: Dynein heavy chain, N-terminal region 1   PF08393: Dynein heavy chain, N-terminal region 2   PF07728: ATPase associated with various cellular activities, AAA-5   PF03028: Dynein heavy chain
49798	4	Yes	24016	1.80E-27	NP_001010892.1	6.20E-23	radial spoke head 4 homolog A isoform 1	PF04712: Radial spokehead-like protein
78488	4		107530	8.30E-95	NP_872270.1	4.70E-90	pyruvate kinase, muscle isoform M1	PF00224: Pyruvate kinase, barrel   PF02887: Pyruvate kinase, alpha/beta
78559	4	Yes	130324	0	NP_056327.4	0	dynein, axonemal, heavy chain 1	PF08393: Dynein heavy chain, N-terminal region 2   PF07728: ATPase associated with various cellular activities, AAA-5   PF07728: ATPase associated with various cellular activities, AAA-5   PF07728: ATPase associated with various cellular activities, AAA-5   PF03028: Dynein heavy chain
44910	4		185571	2.80E-54	NP_000933.1	5.10E-52	peptidylprolyl isomerase B precursor	PF00160: Peptidyl-prolyl cis-trans isomerase, cyclophilin-type
31874	4		129362	9.20E-42	NP_057392.1	7.20E-46	UMP-CMP kinase 1 isoform a	PF00406: Adenylate kinase
82392	4		24114	9.40E-79	NP_001605.1	2.00E-162	actin, gamma 1 propeptide	PF00022: Actin/actin-like
63673	4		nf	n/a	nf	n/a	nf	nf
81845	4	Yes	134599	0	NP_061720.2	0	dynein, axonemal, heavy chain 7	PF08393: Dynein heavy chain, N-terminal region 2   PF07728: ATPase associated with various cellular activities, AAA-5   PF07728: ATPase associated with various cellular activities, AAA-5   PF03028: Dynein heavy chain
78928	4		nf	n/a	nf	n/a	nf	nf
75449	4		128099	1.20E-190	NP_068768.2	1.70E-170	plasma membrane calcium ATPase 3 isoform 3a	PF00122: E1-E2 ATPase-associated region   PF00702: Haloacid dehalogenase-like hydrolase   PF00689: ATPase, P-type cation-transporter, C-terminal
83145	4		179706	3.00E-43	NP_001002.1	9.50E-44	ribosomal protein S7	PF01251: Ribosomal protein S7E
36356	4		195590	2.50E-46	NP_000972.1	2.10E-46	ribosomal protein L19	PF01280: Ribosomal protein L19e
76335	3		nf	n/a	NP_003079.1	2.50E-09	fascin 1	PF06268: Fascin
80069	3		nf	n/a	nf	n/a	nf	nf
80996	3		nf	n/a	nf	n/a	nf	PF00036: Calcium-binding EF-hand
55960	3		195602	2.70E-74	NP_002943.2	1.20E-73	ribosomal protein S2	PF00333: Ribosomal protein S5, N-terminal   PF03719: Ribosomal protein S5, C-terminal
35035	3		174711	5.90E-22	NP_000975.2	3.20E-27	ribosomal protein L23a	PF03939: Ribosomal protein L23, N-terminal   PF00276: Ribosomal protein L25/L23
78595	3		284442	3.40E-08	nf	n/a	nf	nf
36068	3		182408	4.90E-130	NP_005902.1	2.60E-135	methionine adenosyltransferase II, alpha	PF00438: S-adenosylmethionine synthetase   PF02772: S-adenosylmethionine synthetase   PF02773: S-adenosylmethionine synthetase
79456	3	Yes	128761	1.00E-49	NP_004302.1	2.70E-53	ADP-ribosylation factor-like 3	PF00025: ARF/SAR superfamily
80939	3		297279	1.00E-35	NP_003960.1	2.10E-32	ubiquitin-conjugating enzyme E2M	PF00179: Ubiquitin-conjugating enzyme, E2
62019	3		nf	n/a	nf	n/a	nf	nf
56829	3		402056	9.10E-42	NP_006357.1	1.40E-58	adenylyl cyclase-associated protein 2	PF01213: Adenylate cyclase-associated CAP, N-terminal   PF08603: Adenylate cyclase-associated CAP, C-terminal

78686	3		107474	8.60E-156	NP_006421.2	4.10E-153	chaperonin containing TCP1, subunit 4 (delta)	PF00118: Chaperonin Cpn60/TCP-1
2066	3	Yes	192295	5.90E-38	NP_699207.1	2.50E-31	coiled-coil domain containing 96	nf
66931	3		nf	n/a	nf	n/a	nf	nf
78645	3	Yes	101278	7.10E-58	NP_006194.2	4.90E-63	phosphodiesterase 4D isoform 2	PF00233: 3'5'-cyclic nucleotide phosphodiesterase
81548	3	Yes	132719	2.40E-57	NP_689804.1	8.50E-35	coiled-coil domain containing 63	nf
56285	3		188144	5.30E-15	NP_004915.2	2.10E-110	actinin, alpha 4	PF00307: Calponin-like actin-binding   PF00307: Calponin-like actin-binding   PF00435: Spectrin repeat   PF00036: Calcium-binding EF-hand   PF00036: Calcium-binding EF-hand   PF08726: EF-hand, Ca insensitive
34423	3		nf	n/a	NP_006127.1	1.70E-44	capping protein (actin filament) muscle Z-line, alpha 2	PF01267: F-actin capping protein, alpha subunit
64186	3		182635	3.70E-08	NP_114122.2	9.30E-08	ropporin 1-like	nf
81906	3		195587	3.20E-55	NP_000966.2	4.70E-58	ribosomal protein L11	PF00281: Ribosomal protein L5   PF00673: Ribosomal protein L5
82992	3		83064	2.30E-91	NP_001966.1	6.50E-84	enolase 2	PF03952: Enolase   PF00113: Enolase
67854	3	Yes	206096	6.90E-44	NP_036469.2	4.20E-29	nasopharyngeal epithelium specific protein 1	nf
58587	3		183782	3.10E-73	NP_000960.2	2.50E-84	ribosomal protein L5	PF00861: Ribosomal protein L18P/L5E
81952	3		192162	2.10E-33	NP_005960.1	4.00E-29	nucleosome assembly protein 1-like 4	PF00956: Nucleosome assembly protein (NAP)
60866	3		136865	3.60E-70	NP_002852.1	1.70E-76	phosphate cytidyltransferase 2, ethanolamine	PF01467: Cytidyltransferase   PF01467: Cytidyltransferase
56310	3		180130	5.50E-35	NP_001006.1	6.80E-34	ribosomal protein S11	PF00366: Ribosomal protein S17
81218	3		132210	1.00E-95	NP_000282.1	4.40E-117	phosphoglycerate kinase 1	PF00162: Phosphoglycerate kinase
35538	3		195613	1.40E-15	NP_003320.2	1.90E-20	thioredoxin	PF00085: Thioredoxin domain
77219	3		138493	5.40E-163	NP_005539.1	1.70E-163	lysyl-tRNA synthetase isoform 2	PF01336: Nucleic acid binding, OB-fold, tRNA/helicase-type   PF00152: Aminoacyl-tRNA synthetase, class II (D, K and N)
82731	3		196567	7.70E-132	NP_002159.2	6.70E-130	isocitrate dehydrogenase 2 (NADP+), mitochondrial precursor	PF00180: Isocitrate/isopropylmalate dehydrogenase
57012	3		168484	9.50E-47	NP_000997.1	6.70E-43	ribosomal protein S3a	PF01015: Ribosomal protein S3Ae
61583	3		nf	n/a	nf	n/a	nf	nf
68583	3		nf	n/a	nf	n/a	nf	nf
59268	3		152943	8.20E-06	nf	n/a	nf	nf
67893	2		nf	n/a	NP_001138890.1	6.60E-10	tetratricopeptide repeat domain 28	nf
77772	2		188942	7.40E-63	NP_037396.3	5.20E-75	DEAD (Asp-Glu-Ala-Asp) box polypeptide 25	PF00270: DNA/RNA helicase, DEAD/DEAH box type, N-terminal   PF00271: DNA/RNA helicase, C-terminal
59931	2		166203	1.90E-13	NP_689993.1	1.10E-06	MAP7 domain containing 2	nf
77735	2		295585	2.30E-66	NP_064502.9	1.40E-264	leucyl-tRNA synthetase	PF09334: Aminoacyl-tRNA synthetase, class I (M)   PF08264: Valyl/Leucyl/Isoleucyl-tRNA synthetase, class I, anticodon-binding
67441	2		nf	n/a	nf	n/a	nf	nf
82648	2		195597	5.40E-12	NP_378669.1	9.80E-10	ribosomal protein L36	PF01158: Ribosomal protein L36E
69163	2		58843	2.00E-110	NP_005897.1	4.50E-108	male germ cell-associated kinase	PF00069: Protein kinase, core
80491	2		nf	n/a	nf	n/a	nf	nf
55929	2		127904	1.40E-178	NP_005989.3	7.00E-174	chaperonin containing TCP1, subunit 3 isoform a	PF00118: Chaperonin Cpn60/TCP-1
70276	2		nf	n/a	NP_115509.4	8.30E-06	Myc-binding protein-associated protein	nf
58709	2		195595	3.80E-11	NP_000986.2	4.90E-08	ribosomal protein L34	PF01199: Ribosomal protein L34e
37563	2		128522	3.00E-82	NP_006316.1	1.80E-90	ras-related nuclear protein	PF00071: Ras
75565	2		187517	6.60E-24	NP_003986.2	7.50E-24	natriuretic peptide receptor B precursor	PF00989: PAS fold   PF00211: Adenylyl cyclase class-3/4/guanylyl cyclase
81386	2		nf	n/a	NP_116164.2	4.30E-08	kelch-like	PF00651: BTB/POZ
82381	2		402056	1.40E-17	NP_006357.1	1.70E-25	adenylyl cyclase-associated protein 2	PF08603: Adenylate cyclase-associated CAP, C-terminal
53883	2		140618	8.70E-108	NP_002037.2	1.30E-110	glyceraldehyde-3-phosphate dehydrogenase	PF00044: Glyceraldehyde 3-phosphate dehydrogenase   PF02800: Glyceraldehyde 3-phosphate dehydrogenase
64917	2		nf	n/a	nf	n/a	nf	nf
74744	2		nf	n/a	nf	n/a	nf	nf
56509	2		77886	2.20E-35	NP_776254.2	9.10E-37	MORN repeat containing 3	PF00225: Kinesin, motor region   PF02493: MORN motif   PF02493: MORN motif   PF02493: MORN motif   PF02493: MORN motif   PF02493: MORN motif   PF02493: MORN motif
72250	2		58944	5.60E-49	NP_001018146.1	1.10E-47	NME1-NME2 protein	PF00334: Nucleoside diphosphate kinase, core
79690	2		395908	2.00E-07	NP_006624.2	3.20E-88	IQ motif containing GTPase activating protein 2	PF00307: Calponin-like actin-binding   PF00630: Filamin/ABP280 repeat   PF00630: Filamin/ABP280 repeat   PF00630: Filamin/ABP280 repeat   PF00630: Filamin/ABP280 repeat   PF00616: Ras GTPase-activating protein   PF03836: RasGAP protein, C-terminal

55664	2		126382	8.30E-190	NP_001684.2	1.40E-198	vacuolar H <sup>+</sup> ATPase B2	PF02874: ATPase, F1/V1/A1 complex, alpha/beta subunit, N-terminal   PF00006: ATPase, F1/V1/A1 complex, alpha/beta subunit, nucleotide-binding   PF00306: ATPase, F1/V1/A1 complex, alpha/beta subunit, C-terminal
77798	2		376980	4.20E-122	NP_004981.2	7.80E-98	methionyl-tRNA synthetase	PF09334: Aminoacyl-tRNA synthetase, class I (M)   PF01588: t-RNA-binding region
64930	2	Yes	138046	1.10E-34	NP_114130.3	6.20E-35	radial spoke 3 homolog	PF06098: Radial spoke 3
46570	2		nf	n/a	nf	n/a	nf	nf
82706	2		188837	1.10E-79	NP_000998.1	1.10E-83	ribosomal protein S4, X-linked X isoform	PF08071: Ribosomal protein S4E, N-terminal   PF01479: RNA-binding S4   PF00900: Ribosomal protein S4E, central   PF00467: KOW
63500	2		342942	2.10E-19	NP_004046.2	1.70E-33	calpain 5	PF00515: Tetratricopeptide TPR_1   PF00648: Peptidase C2, calpain
82819	2		131113	6.20E-185	NP_036205.1	7.10E-181	chaperonin containing TCP1, subunit 5 (epsilon)	PF00118: Chaperonin Cpn60/TCP-1
82964	2		137286	3.00E-130	NP_001885.1	2.20E-122	casein kinase 1 epsilon	PF00069: Protein kinase, core
80991	2		184001	3.00E-178	NP_002794.1	3.40E-174	proteasome 26S ATPase subunit 2	PF00004: AAA ATPase, core
64979	2		143072	1.70E-17	NP_148982.1	1.80E-17	ribosomal protein S24 isoform a	PF01282: Ribosomal protein S24e
60612	2		24114	1.60E-83	NP_001092.1	2.50E-171	beta actin	PF00022: Actin/actin-like
59586	2		129025	6.20E-30	NP_002188.1	2.20E-266	aconitase 1	PF00330: Aconitate hydratase, N-terminal   PF00694: Aconitate hydratase, C-terminal
69699	2		380616	1.00E-120	NP_005947.3	1.30E-117	methylenetetrahydrofolate dehydrogenase 1	PF01268: Formate-tetrahydrofolate ligase, FTHFS
82759	2		195592	3.60E-38	NP_001014.1	3.90E-38	ribosomal protein S20 isoform 2	PF00338: Ribosomal protein S10
36339	2		188144	4.30E-35	NP_008819.1	4.60E-35	calmodulin 1	PF00036: Calcium-binding EF-hand   PF00036: Calcium-binding EF-hand
66723	2		nf	n/a	nf	n/a	nf	PF00612: IQ calmodulin-binding region   PF00612: IQ calmodulin-binding region   PF00612: IQ calmodulin-binding region
57212	2		nf	n/a	nf	n/a	nf	nf
29544	2		138117	1.70E-239	NP_031381.2	5.90E-225	heat shock 90kDa protein 1, beta	PF02518: ATP-binding region, ATPase-like   PF00183: Heat shock protein Hsp90
82184	2		177203	7.80E-36	NP_006400.2	3.00E-72	actin related protein 2/3 complex subunit 1A	PF00400: WD40 repeat   PF00400: WD40 repeat
59485	2		nf	n/a	NP_003881.2	1.70E-07	Fc fragment of IgG binding protein	nf
74041	2		nf	n/a	NP_004230.2	3.30E-11	thyroid hormone receptor interactor 11	nf
70498	2		nf	n/a	nf	n/a	nf	nf
80201	2		nf	n/a	NP_004921.1	1.70E-67	F-actin capping protein beta subunit	PF01115: F-actin capping protein, beta subunit
80999	2		127247	3.10E-25	NP_000987.2	2.60E-25	ribosomal protein L35a	PF01247: Ribosomal protein L35Ae
63284	2		nf	n/a	NP_001034669.1	6.90E-06	aster-associated protein	nf
36352	2		196616	8.10E-192	nf	n/a	nf	PF01326: Pyruvate phosphate dikinase, PEP/pyruvate-binding   PF00391: PEP-utilising enzyme, mobile region   PF02896: PEP-utilizing enzyme
66239	2		188056	4.10E-09	XP_001722448.1	1.80E-32	PREDICTED: hypothetical protein LOC285754	nf
59818	2		185104	5.60E-134	NP_004989.2	1.40E-239	myosin IE	PF00063: Myosin head, motor region   PF06017: Myosin tail 2   PF00018: Src homology-3
69688	2	Yes	295278	1.00E-14	NP_115963.1	4.70E-13	dpy-30-like protein	PF05186: Dpy-30
59838	2		129593	1.00E-152	NP_000678.1	7.70E-129	adenosylhomocysteinase isoform 1	PF05221: S-adenosyl-L-homocysteine hydrolase   PF00670: S-adenosyl-L-homocysteine hydrolase, NAD binding
38656	2		155464	3.10E-64	NP_005800.3	1.00E-71	peroxiredoxin 2 isoform a	PF00578: Alkyl hydroperoxide reductase/ Thiol specific antioxidant/ Mal allergen   PF10417: C-terminal domain of 1-Cys peroxiredoxin
70153	2		24114	1.10E-27	NP_005713.1	1.90E-31	actin-related protein 2 isoform b	PF00022: Actin/actin-like
82072	1		149311	1.70E-22	NP_004805.2	7.70E-10	WD repeat domain 57 (U5 snRNP specific)	PF00400: WD40 repeat   PF00400: WD40 repeat   PF00400: WD40 repeat
49131	1		nf	n/a	nf	n/a	nf	nf
66413	1		nf	n/a	nf	n/a	nf	nf
79795	1		nf	n/a	nf	n/a	nf	PF02845: Ubiquitin system component Cue
63304	1	Yes	158948	3.60E-78	NP_079039.3	2.10E-78	WD repeat domain 78 isoform 1	PF00400: WD40 repeat
78218	1		nf	n/a	NP_620073.2	2.10E-32	guanine nucleotide binding protein, alpha activating polypeptide O isoform b	PF00503: Guanine nucleotide binding protein (G-protein), alpha subunit
80282	1		nf	n/a	NP_001019837.1	1.20E-12	SH3-domain kinase binding protein 1 isoform b	PF00018: Src homology-3   PF00018: Src homology-3
70994	1		97466	2.40E-54	NP_004818.2	1.50E-40	ATP-binding cassette, subfamily G, member 2	PF00005: ABC transporter related   PF01061: ABC-2 type transporter
56722	1		nf	n/a	nf	n/a	nf	PF03114: BAR
59646	1		154307	1.80E-132	nf	n/a	nf	PF08267: Cobalamin (vitamin B12)-independent methionine synthase MetE, N-terminal   PF01717: Methionine synthase, vitamin-B12 independent

82749	1		185012	9.10E-10	NP_077747.1	9.70E-10	AMP-activated protein kinase gamma2 subunit isoform b	PF00571: Cystathionine beta-synthase, core
81242	1		nf	n/a	NP_001014436.1	2.20E-08	drebrin-like isoform b	PF00241: Actin-binding, cofilin/tropomyosin type
81102	1		nf	n/a	nf	n/a	nf	nf
57099	1		159792	7.10E-10	NP_001106673.1	7.50E-12	nascent polypeptide-associated complex alpha subunit isoform b	PF01849: Nascent polypeptide-associated complex NAC
52995	1		nf	n/a	nf	n/a	nf	nf
35679	1		196624	1.80E-17	NP_002618.1	1.00E-13	phosphofructokinase, platelet	PF00365: Phosphofructokinase
49466	1		nf	n/a	NP_001106678.1	4.40E-07	putative thiosulfate sulfurtransferase KAT isoform 1	PF00581: Rhodanese-like
59934	1		144027	2.10E-12	NP_001035982.1	6.10E-46	diaphanous homolog 3 isoform a	PF06367: Diaphanous FH3   PF02181: Actin-binding FH2
59701	1		81593	2.70E-49	NP_002801.1	2.00E-44	proteasome 26S non-ATPase subunit 4	PF02809: Ubiquitin interacting motif
79871	1		nf	n/a	nf	n/a	nf	nf
78090	1		106571	6.50E-26	NP_001093167.1	1.60E-41	radial spoke head 10 homolog B2	PF02493: MORN motif   PF02493: MORN motif   PF02493: MORN motif   PF02493: MORN motif   PF02493: MORN motif   PF02493: MORN motif
56657	1		206446	2.50E-09	NP_055970.1	1.20E-24	La ribonucleoprotein domain family, member 4B	PF05383: RNA-binding protein Lupus La
63046	1		nf	n/a	nf	n/a	nf	nf
80379	1		nf	n/a	nf	n/a	nf	nf
59416	1		54608	4.20E-227	NP_001681.2	1.80E-223	ATPase, H+ transporting, lysosomal V1 subunit A	PF02874: ATPase, F1/V1/A1 complex, alpha/beta subunit, N-terminal   PF00006: ATPase, F1/V1/A1 complex, alpha/beta subunit, nucleotide-binding   PF00306: ATPase, F1/V1/A1 complex, alpha/beta subunit, C-terminal
79158	1		196289	6.70E-23	NP_006338.1	1.10E-18	peptidylprolyl isomerase H	PF00646: Cyclin-like F-box   PF00160: Peptidyl-prolyl cis-trans isomerase, cyclophilin-type
81508	1		nf	n/a	nf	n/a	nf	nf
78159	1		154370	2.30E-07	XP_001719981.1	7.80E-08	PREDICTED: hypothetical protein, partial	nf
66586	1		nf	n/a	nf	n/a	nf	PF02204: Vacuolar sorting protein 9
71918	1		nf	n/a	nf	n/a	nf	nf
66323	1		nf	n/a	nf	n/a	nf	nf
80683	1		195601	1.30E-40	NP_001012.1	4.50E-37	ribosomal protein S17	PF00833: Ribosomal protein S17e
59279	1		142494	1.90E-08	NP_689540.2	1.30E-64	adenylate kinase 7	PF05186: Dpy-30
63128	1		196311	3.40E-43	NP_005613.2	3.80E-56	SA hypertension-associated homolog isoform 1	PF00501: AMP-dependent synthetase and ligase
75988	1		147457	4.30E-18	nf	n/a	nf	PF00211: Adenylyl cyclase class-3/4/guanylyl cyclase
55119	1		302551	1.30E-47	NP_000849.1	2.50E-50	guanylate kinase 1 isoform b	PF00625: Guanylate kinase
79455	1		nf	n/a	nf	n/a	nf	nf
57833	1		117918	1.60E-14	NP_997002.1	5.00E-08	leucine rich repeat containing 20 isoform 1	PF00560: Leucine-rich repeat   PF00560: Leucine-rich repeat   PF00560: Leucine-rich repeat
55855	1		132486	1.10E-139	NP_002711.1	2.00E-146	protein phosphatase 4, catalytic subunit	PF00149: Metallophosphoesterase
46605	1	Yes	196748	9.30E-19	NP_203528.2	1.30E-34	AAT1-alpha	nf
80103	1		60490	2.10E-17	NP_036381.2	9.30E-37	ras-like protein TC10	PF00071: Ras
59104	1		126059	1.80E-59	NP_001012321.1	1.20E-61	ribosomal protein SA	PF00318: Ribosomal protein S2
67954	1		nf	n/a	NP_001395.1	6.30E-15	eukaryotic translation elongation factor 1 gamma	PF00647: Translation elongation factor EF1B, gamma chain, conserved
78187	1		nf	n/a	NP_079413.3	5.40E-34	spatacsin isoform 1	nf
52303	1		283187	9.40E-06	NP_002896.2	4.50E-14	retinol dehydrogenase 5 (11-cis and 9-cis)	nf
80881	1		nf	n/a	NP_859067.2	5.60E-23	proline rich 6	PF04828: Glutathione-dependent formaldehyde-activating, GFA
63912	1		400848	1.50E-34	NP_005709.1	1.70E-53	actin related protein 2/3 complex subunit 4 isoform a	PF05856: ARP23 complex 20 kDa subunit
49678	1		nf	n/a	nf	n/a	nf	PF00036: Calcium-binding EF-hand
81767	1		183518	1.70E-31	NP_000961.2	1.30E-23	ribosomal protein L6	PF01159: Ribosomal protein L6E
36459	1		129742	8.30E-16	NP_001015.1	1.30E-14	ribosomal protein S21	PF01249: Ribosomal protein S21e
71952	1		nf	n/a	nf	n/a	nf	nf
72942	1		342942	2.30E-12	NP_008989.2	2.00E-18	calpain 11	PF00648: Peptidase C2, calpain
78714	1		134846	5.00E-42	NP_000101.2	1.3E-314	dihydropyrimidine dehydrogenase isoform 1	PF07992: FAD-dependent pyridine nucleotide-disulphide oxidoreductase   PF01180: Dihydroorotate dehydrogenase, core   PF00037: 4Fe-4S ferredoxin, iron-sulphur binding   PF00037: 4Fe-4S ferredoxin, iron-sulphur binding
59622	1		115373	2.90E-13	NP_057315.3	2.60E-13	nemo like kinase	PF07714: Tyrosine protein kinase
50704	1		nf	n/a	nf	n/a	nf	nf
60003	1		284442	4.40E-15	NP_115821.2	2.60E-39	multiple EGF-like-domains 11	PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF00053: EGF-like, laminin   PF00053: EGF-like, laminin   PF02010: PKD/REJ-like protein
45594	1		194382	1.00E-159	NP_036558.3	2.90E-287	splicing factor 3b, subunit 3	PF03178: CPSF A subunit, C-terminal
63520	1		nf	n/a	nf	n/a	nf	nf
71766	1		nf	n/a	nf	n/a	nf	nf



4601	1	Yes	195877	5.70E-17	NP_073614.1	4.90E-24	RAB, member RAS oncogene family-like 5 isoform a	nf
83014	1		137945	9.00E-193	NP_002799.3	8.90E-206	proteasome 26S non-ATPase subunit 2	PF01851: Proteasome/cyclosome, regulatory subunit   PF01851: Proteasome/cyclosome, regulatory subunit   PF01851: Proteasome/cyclosome, regulatory subunit   PF01851: Proteasome/cyclosome, regulatory subunit   PF01851: Proteasome/cyclosome, regulatory subunit
49382	1		71905	8.80E-08	NP_115993.3	6.40E-18	abhydrolase domain-containing protein 1	nf
61990	1		147457	1.60E-20	NP_997555.1	7.40E-09	GRIP1 associated protein 1 isoform 2	PF00211: Adenylyl cyclase class-3/4/guanylyl cyclase
48710	1		393582	1.40E-146	NP_006286.1	1.30E-190	valyl-tRNA synthetase	PF00133: Aminoacyl-tRNA synthetase, class Ia   PF08264: Valyl/Leucyl/Isoleucyl-tRNA synthetase, class I, anticodon-binding
62706	1		nf	n/a	NP_003557.2	1.50E-07	early endosome antigen 1, 162kD	PF00169: Pleckstrin-like   PF02759: RUN
51352	1		nf	n/a	NP_981932.1	5.60E-07	iodotyrosine dehalogenase 1	PF00881: Nitroreductase
36164	1		141272	3.60E-158	NP_056988.3	5.70E-168	eukaryotic translation initiation factor 5B	PF00009: Protein synthesis factor, GTP-binding   PF03144: Translation elongation factor EFTu/EF1A, domain 2
45945	1		nf	n/a	nf	n/a	nf	nf
78582	1		nf	n/a	nf	n/a	nf	nf
79908	1		172711	2.30E-12	NP_116200.2	1.00E-17	transforming growth factor beta regulator 1	PF05964: FY-rich, N-terminal   PF05965: FY-rich, C-terminal
45355	1		nf	n/a	nf	n/a	nf	nf
52250	1		150075	2.80E-09	NP_777612.1	9.70E-15	hypothetical protein LOC285555	nf
380	1	Yes	189109	5.20E-94	NP_852091.1	4.40E-101	coiled-coil domain containing 39	nf
82341	1		155455	3.00E-34	NP_000981.1	1.10E-31	ribosomal protein L27a	PF00256: Ribosomal protein L15
63901	1		nf	n/a	nf	n/a	nf	PF01063: Aminotransferase, class IV
81857	1		nf	n/a	NP_060795.1	2.10E-15	hypothetical protein LOC203228 isoform a	nf
45002	1	Yes	98642	7.80E-36	NP_060480.1	1.30E-46	estrogen-related receptor beta like 1	PF10498: Intra-flagellar transport protein 57
32656	1		196947	8.00E-98	NP_004659.2	9.10E-126	maltase-glucoamylase	PF01055: Glycoside hydrolase, family 31
80100	1		nf	n/a	nf	n/a	nf	nf
32474	1		287617	1.80E-80	NP_036450.1	7.00E-64	leucine zipper-EF-hand containing transmembrane protein 1	PF07766: LETM1-like   PF00036: Calcium-binding EF-hand
66832	1		168908	1.70E-54	NP_001034842.2	2.50E-71	echinoderm microtubule associated protein like 6	PF00400: WD40 repeat   PF00400: WD40 repeat
39446	1		191758	2.80E-24	NP_000985.1	1.50E-22	ribosomal protein L32	PF01655: Ribosomal protein L32e
63764	1	Yes	183240	1.4e-310	NP_056477.1	1.30E-298	selective LIM binding factor homolog	nf
64367	1		nf	n/a	nf	n/a	nf	nf
70007	1		nf	n/a	NP_002060.4	2.80E-30	guanine nucleotide binding protein (G protein), alpha inhibiting activity polypeptide 1	PF00503: Guanine nucleotide binding protein (G-protein), alpha subunit
66643	1	Yes	114106	3.70E-45	NP_002517.1	7.20E-35	5' nucleotidase, ecto	PF00149: Metallophosphoesterase   PF02872: 5'-Nucleotidase, C-terminal
50077	1		nf	n/a	nf	n/a	nf	nf
83081	1		nf	n/a	nf	n/a	nf	nf
36700	1		131550	6.10E-18	NP_005125.1	2.70E-63	protein phosphatase 4, regulatory subunit 1 isoform b	PF02985: HEAT   PF02985: HEAT   PF02985: HEAT   PF02985: HEAT   PF02985: HEAT
60892	1		421037	8.40E-39	NP_742128.1	8.70E-34	potassium voltage-gated channel, shaker-related subfamily, beta member 2 isoform 2	PF00248: Aldo/keto reductase
79521	1		145485	1.30E-19	NP_056377.1	9.80E-29	UBX domain containing 7	PF02809: Ubiquitin interacting motif   PF00789: UBX
54755	1		140045	8.90E-67	NP_066289.2	1.60E-66	ubiquitin C	PF00240: Ubiquitin   PF00240: Ubiquitin
79700	1		148829	1.30E-96	NP_006411.2	1.30E-181	ADP-ribosylation factor guanine nucleotide-exchange factor 2	PF01369: SEC7-like   PF09324: Protein of unknown function DUF1981, SEC7 associated
71591	1		nf	n/a	NP_976328.2	8.10E-16	E2F transcription factor 7	PF02319: Transcription factor E2F/dimerisation partner (TDP)   PF02319: Transcription factor E2F/dimerisation partner (TDP)
70051	1	Yes	193577	2.50E-31	NP_872383.1	3.50E-11	outer dense fiber of sperm tails 3-like 2	nf
63598	1		nf	n/a	nf	n/a	nf	nf
78148	1		419259	2.30E-33	nf	n/a	nf	PF00082: Peptidase S8 and S53, subtilisin, kexin, sedolisin
80259	1	Yes	130394	1.20E-20	NP_057092.2	1.50E-29	dynein 2 light intermediate chain isoform 1	nf
73968	1		297357	8.60E-14	NP_114162.2	3.40E-18	tetratricopeptide repeat domain 29	nf
49224	1		nf	n/a	nf	n/a	nf	nf

63235	1		284442	6.40E-21	NP_002151.2	7.70E-49	tenascin C precursor	PF01436: NHL repeat   PF01436: NHL repeat   PF01436: NHL repeat   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular
59012	1		nf	n/a	NP_061897.1	9.70E-26	HEAT repeat containing 5B	nf
51044	1		nf	n/a	nf	n/a	nf	nf
78215	1		191319	2.10E-129	NP_001484.1	3.50E-133	GDP dissociation inhibitor 1	PF00996: Rab GTPase activator
79232	1	Yes	188612	1.70E-102	NP_075462.3	7.90E-111	dynein, axonemal, intermediate polypeptide 2	nf
29188	1	Yes	145396	2.40E-99	NP_653269.3	6.70E-98	WD repeat domain 66	nf
79626	1	Yes	185392	1.10E-23	NP_056465.2	9.00E-29	TNF receptor-associated factor 3 interacting protein 1 isoform 1	PF10243: Microtubule-binding protein MIP-T3
83175	1		162845	4.40E-42	NP_036555.1	5.80E-44	ribosomal protein L13a	PF00572: Ribosomal protein L13
80363	1		120423	1.50E-09	NP_004954.2	2.30E-06	guanylate cyclase 2C	PF08376: Nitrate and nitrite sensing   PF00211: Adenylyl cyclase class-3/4/guanylyl cyclase
83261	1		380549	1.80E-22	NP_055112.2	1.30E-53	ETHE1 protein	PF00753: Beta-lactamase-like
74980	1		nf	n/a	NP_006176.2	3.50E-09	nuclear mitotic apparatus protein 1	nf
34772	1		179025	7.10E-42	NP_258412.1	4.40E-39	inosine triphosphatase isoform a	PF01725: Ham1-like protein
78103	1		2332	4.80E-06	NP_620073.2	1.10E-63	guanine nucleotide binding protein, alpha activating polypeptide O isoform b	PF00503: Guanine nucleotide binding protein (G-protein), alpha subunit
52811	1		nf	n/a	nf	n/a	nf	nf
76504	1		120079	8.60E-08	NP_085096.1	2.20E-51	sirtuin 2 isoform 2	PF02146: Silent information regulator protein Sir2
47729	1		nf	n/a	nf	n/a	nf	nf
79803	1		nf	n/a	nf	n/a	nf	nf
82900	1		126528	3.20E-101	NP_037473.3	3.20E-107	Obg-like ATPase 1 isoform 1	PF01926: GTP-binding protein, HSR1-related   PF06071: Protein of unknown function DUF933
74757	1		184661	8.50E-08	NP_037534.3	5.80E-09	fatty acid desaturase 1	PF00173: Cytochrome b5
80180	1		186878	7.50E-41	NP_001129521.2	7.20E-21	leishmanolysin-like isoform 1	PF01457: Peptidase M8, leishmanolysin
45058	1		24512	1.40E-58	NP_079143.3	4.70E-37	KPL2 protein isoform 1	nf
59665	1		78109	2.70E-10	NP_000984.1	1.10E-12	ribosomal protein L31 isoform 1	PF01198: Ribosomal protein L31e
67195	1		nf	n/a	nf	n/a	nf	nf
77359	1		nf	n/a	nf	n/a	nf	nf
80987	1		64643	3.60E-14	NP_751943.1	8.80E-14	kelch domain containing 1	PF01344: Kelch repeat type 1   PF01344: Kelch repeat type 1   PF01344: Kelch repeat type 1   PF07646: Kelch repeat type 2   PF01344: Kelch repeat type 1
69338	1		nf	n/a	nf	n/a	nf	nf
73610	1		nf	n/a	nf	n/a	nf	nf
65812	1		nf	n/a	nf	n/a	nf	nf
56351	1		159554	4.00E-55	NP_004057.1	5.40E-57	centrin 1	PF00036: Calcium-binding EF-hand   PF00036: Calcium-binding EF-hand   PF00036: Calcium-binding EF-hand   PF00036: Calcium-binding EF-hand
81954	1		nf	n/a	nf	n/a	nf	nf
81194	1		nf	n/a	nf	n/a	nf	nf
78039	1		nf	n/a	NP_071345.2	2.20E-09	PBX/knotted 1 homeobox 2	nf
34640	1		174103	8.40E-55	NP_066952.1	3.00E-12	pyrophosphatase 1	PF00719: Inorganic pyrophosphatase
80494	1		194063	1.00E-97	NP_078836.1	1.80E-145	acyl-CoA synthetase short-chain family member 3	PF00501: AMP-dependent synthetase and ligase
81635	1		nf	n/a	nf	n/a	nf	nf
80249	1		190633	1.50E-13	NP_078934.3	3.40E-71	importin 4	PF03810: Importin-beta, N-terminal   PF02985: HEAT   PF02985: HEAT   PF02985: HEAT   PF02985: HEAT
78612	1		141319	4.20E-147	NP_001055.1	3.00E-30	transketolase isoform 1	PF00456: Transketolase, N-terminal   PF02779: Transketolase, central region   PF02780: Transketolase, C-terminal
78847	1		421068	1.80E-126	NP_004651.2	6.50E-124	DEAD (Asp-Glu-Ala-Asp) box polypeptide 3, Y-linked	PF00270: DNA/RNA helicase, DEAD/DEAH box type, N-terminal   PF00271: DNA/RNA helicase, C-terminal
79189	1		195584	1.70E-72	NP_006004.2	9.70E-74	ribosomal protein L10	PF00252: Ribosomal protein L16
81288	1		nf	n/a	NP_004300.1	1.30E-28	Rho GDP dissociation inhibitor (GDI) alpha	PF02115: RHO protein GDP dissociation inhibitor
50947	1		nf	n/a	NP_055111.1	1.20E-07	calpain 7	nf
34873	1		181887	5.20E-07	nf	n/a	nf	PF00235: Profilin/allergen
77826	1		nf	n/a	NP_056000.1	8.60E-14	Cdc42 guanine exchange factor 9	nf
71179	1		nf	n/a	nf	n/a	nf	nf
78273	1		82172	1.00E-17	NP_000994.1	1.30E-14	ribosomal protein P1 isoform 1	PF00428: Ribosomal protein 60S
55791	1		140045	2.10E-74	NP_066289.2	2.10E-151	ubiquitin C	PF00240: Ubiquitin   PF00240: Ubiquitin   PF00240: Ubiquitin   PF00240: Ubiquitin
75436	1		nf	n/a	nf	n/a	nf	nf



59637	1	Yes	128114	3.90E-144	NP_659491.4	1.30E-135	WD40-repeat protein upregulated in HCC isoform b	PF00400: WD40 repeat   PF00400: WD40 repeat   PF00400: WD40 repeat
61455	1		189584	8.10E-06	nf	n/a	nf	PF02197: cAMP-dependent protein kinase regulator, type II PKA R subunit
71175	1		400743	6.70E-19	NP_849172.2	4.70E-26	NOD3 protein	PF00560: Leucine-rich repeat
54734	1		188942	1.20E-46	NP_001958.2	1.30E-48	eukaryotic translation initiation factor 4A2	PF00270: DNA/RNA helicase, DEAD/DEAH box type, N-terminal
51975	1		nf	n/a	nf	n/a	nf	nf
38344	1		376728	2.50E-117	NP_003671.1	4.10E-43	tyrosyl-tRNA synthetase	PF00579: Aminoacyl-tRNA synthetase, class Ib
37722	1		191903	2.40E-224	NP_695012.1	3.30E-270	ubiquitin-activating enzyme E1	PF00899: UBA/THIF-type NAD/FAD binding fold   PF00899: UBA/THIF-type NAD/FAD binding fold   PF10585: Ubiquitin-activating enzyme active site   PF02134: Ubiquitin-activating enzyme repeat   PF02134: Ubiquitin-activating enzyme repeat   PF09358: Ubiquitin-activating enzyme e1 C-terminal domain
79747	1		nf	n/a	NP_758953.1	2.40E-12	hypothetical protein LOC145376	nf
51126	1		nf	n/a	nf	n/a	nf	nf
60048	1		195585	2.50E-55	NP_009035.3	2.50E-59	ribosomal protein L10a	PF00687: Ribosomal protein L1
68988	1		nf	n/a	nf	n/a	nf	nf
66818	1		nf	n/a	NP_149101.1	1.30E-16	AIG2-like domain 1	PF06094: AIG2-like
69743	1		nf	n/a	nf	n/a	nf	nf
53120	1		nf	n/a	NP_001129396.1	1.50E-12	von Willebrand factor D and EGF domains	PF00188: SCP-like extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular   PF07974: EGF, extracellular
81941	1		193661	7.80E-20	NP_055300.1	3.10E-13	prostaglandin-D synthase	PF02798: Glutathione S-transferase, N-terminal   PF00043: Glutathione S-transferase, C-terminal
36951	1		184170	1.20E-37	NP_002873.1	3.20E-36	RAN binding protein 1	PF00638: Ran Binding Protein 1
73592	1		nf	n/a	nf	n/a	nf	nf
73783	1		392133	2.90E-08	nf	n/a	nf	nf
39045	1		191776	1.00E-74	NP_001000.2	2.00E-73	ribosomal protein S5	PF00177: Ribosomal protein S7
78491	1		420861	6.70E-149	NP_055568.3	3.60E-151	BMS1-like, ribosome assembly protein	PF08142: AARP2CN   PF04950: Protein of unknown function DUF663
67649	1		121702	2.60E-11	NP_001128582.1	8.90E-10	DnaJ (Hsp40) homolog, subfamily A, member 3 isoform 2	PF00226: Heat shock protein DnaJ, N-terminal
71354	1		nf	n/a	nf	n/a	nf	nf
55551	1		184847	8.00E-82	NP_002781.2	6.20E-79	proteasome alpha 5 subunit	PF10584: Proteasome subunit A N-terminal signature   PF00227: 20S proteasome, A and B subunits
44967	1	Yes	152806	9.70E-38	NP_060835.1	1.20E-41	meiosis-specific nuclear structural 1	nf
64053	1	Yes	138649	1.90E-18	NP_113661.2	1.20E-29	intraflagellar transport 81-like isoform 2	nf
82821	1		114649	3.20E-85	NP_003959.3	1.40E-99	ubiquitin-activating enzyme 3 isoform 1	PF00899: UBA/THIF-type NAD/FAD binding fold   PF02134: Ubiquitin-activating enzyme repeat   PF08825: E2 binding
56360	1		152438	5.30E-14	NP_000837.3	4.60E-12	glutathione S-transferase alpha 2	PF02798: Glutathione S-transferase, N-terminal   PF00043: Glutathione S-transferase, C-terminal
70637	1		nf	n/a	NP_001035197.1	1.60E-11	mutL homolog 3 isoform 1	PF08676: MutL, C-terminal, dimerisation
61077	1		nf	n/a	nf	n/a	nf	PF00651: BTB/POZ
66714	1		nf	n/a	nf	n/a	nf	nf
67163	1		195613	1.30E-17	NP_003320.2	4.30E-23	thioredoxin	PF00085: Thioredoxin domain   PF00789: UBX
73943	1		347422	9.30E-13	NP_006401.3	1.60E-17	HIV-1 Tat interactive protein 2, 30kDa isoform b	nf
75841	1		nf	n/a	nf	n/a	nf	nf
59795	1		nf	n/a	NP_001034200.1	7.70E-14	tripartite motif-containing 71	PF00643: Zinc finger, B-box   PF01436: NHL repeat   PF01436: NHL repeat   PF01436: NHL repeat   PF01436: NHL repeat
83064	1	Yes	77703	4.90E-27	NP_056468.1	1.20E-29	RIB43A domain with coiled-coils 2	PF05914: RIB43A
62763	1		293546	3.40E-35	NP_742128.1	1.60E-32	potassium voltage-gated channel, shaker-related subfamily, beta member 2 isoform 2	PF00248: Aldo/keto reductase
63237	1		nf	n/a	nf	n/a	nf	nf
58925	1		nf	n/a	NP_055191.2	3.40E-165	cytoplasmic FMR1 interacting protein 2	PF05994: Cytoplasmic fragile X mental retardation protein interacting protein
54368	1		120324	5.20E-13	NP_057062.1	2.10E-13	TNNI3 interacting kinase isoform b	PF07714: Tyrosine protein kinase
79448	1		126189	3.80E-123	NP_000958.1	1.40E-127	ribosomal protein L3 isoform a	PF00297: Ribosomal protein L3
65473	1		nf	n/a	NP_001129955.1	1.60E-06	hypothetical protein LOC284067	nf
62234	1		nf	n/a	nf	n/a	nf	nf
76540	1		196612	6.70E-36	nf	n/a	nf	PF01293: Phosphoenolpyruvate carboxykinase, ATP-utilising
69737	1		nf	n/a	NP_653303.2	3.50E-08	hypothetical protein LOC149499	nf
79230	1		nf	n/a	nf	n/a	nf	nf
56305	1		127172	1.60E-06	nf	n/a	nf	PF01459: Porin, eukaryotic type
80937	1		nf	n/a	nf	n/a	nf	PF00646: Cyclin-like F-box
69783	1		nf	n/a	nf	n/a	nf	nf
72989	1		114898	1.60E-07	NP_115737.1	2.00E-07	THO complex 3	PF00400: WD40 repeat   PF00400: WD40 repeat
38811	1		320624	1.80E-13	NP_057216.2	2.60E-11	myelin expression factor 2	PF00076: RNA recognition motif, RNP-1
76059	1		nf	n/a	nf	n/a	nf	nf
65386	1		nf	n/a	nf	n/a	nf	nf

63280	1	Yes	24421	4.70E-132	NP_006522.2	3.00E-127	intraflagellar transport 88 homolog isoform 2	PF00515: Tetratricopeptide TPR_1   PF00515: Tetratricopeptide TPR_1   PF00515: Tetratricopeptide TPR_1   PF00515: Tetratricopeptide TPR_1   PF00515: Tetratricopeptide TPR_1
62959	1	Yes	192170	1.20E-87	NP_065930.2	1.40E-51	coiled-coil domain containing 146	nf
45350	1		413646	2.00E-18	NP_000050.2	5.50E-51	breast cancer 2, early onset	PF09169: BRCA2, helical   PF09103: BRCA2, oligonucleotide/oligosaccharide-binding 1
80902	1		nf	n/a	nf	n/a	nf	nf
79216	1		nf	n/a	nf	n/a	nf	nf
62660	1		60490	6.50E-16	NP_001782.1	2.50E-43	cell division cycle 42 isoform 1	PF00071: Ras
67392	1		nf	n/a	nf	n/a	nf	nf
78419	1		380622	4.90E-120	NP_001986.2	1.20E-114	acyl-CoA synthetase long-chain family member 1	PF00501: AMP-dependent synthetase and ligase
67691	1		nf	n/a	NP_079228.4	8.60E-25	hypothetical protein LOC80017 isoform a	nf
88119	1		283552	1.50E-40	NP_060887.2	2.40E-23	adenylate cyclase 10	PF00211: Adenylyl cyclase class-3/4/guanylyl cyclase
58163	1		nf	n/a	nf	n/a	nf	PF02205: Actin-binding WH2
61418	1		77886	1.40E-35	NP_776254.2	5.50E-37	MORN repeat containing 3	PF00225: Kinesin, motor region   PF02493: MORN motif   PF02493: MORN motif   PF02493: MORN motif   PF02493: MORN motif   PF02493: MORN motif   PF02493: MORN motif   PF03671: Ubiquitin-like, Ufm1
81993	1		185792	2.50E-19	NP_543136.1	3.10E-14	testis-specific gene A2	PF04969: CS   PF02493: MORN motif   PF02493: MORN motif   PF02493: MORN motif   PF02493: MORN motif
59962	1		378877	5.90E-22	NP_005498.1	1.20E-18	cofilin 1 (non-muscle)	PF00241: Actin-binding, cofilin/tropomyosin type
33131	1		195599	2.30E-43	NP_000963.1	1.10E-51	ribosomal protein L7a	PF01248: Ribosomal protein L7Ae/L30e/S12e/Gadd45
52838	1		188144	3.90E-14	NP_008819.1	2.10E-14	calmodulin 1	nf
80067	1		nf	n/a	nf	n/a	nf	nf
63091	1	Yes	107835	9.20E-33	NP_659484.3	5.60E-46	oxidored-nitro domain-containing protein isoform 1	PF10188: Organic solute transport protein 1
59552	1		nf	n/a	nf	n/a	nf	nf
35893	1		152525	1.70E-33	NP_003330.1	6.30E-31	ubiquitin-conjugating enzyme E2D 2 isoform 1	PF00179: Ubiquitin-conjugating enzyme, E2
82965	1		206048	4.80E-52	NP_003784.2	8.00E-63	cathepsin F	PF08246: Proteinase inhibitor I29, cathepsin propeptide   PF00112: Peptidase C1A, papain C-terminal
73911	1		106046	1.40E-31	NP_000897.3	9.20E-37	natriuretic peptide receptor 1	PF00989: PAS fold   PF00211: Adenylyl cyclase class-3/4/guanylyl cyclase
88122	1		81259	5.30E-08	NP_001782.1	6.50E-29	cell division cycle 42 isoform 1	PF00071: Ras
29287	1		26265	6.40E-57	NP_000356.1	6.20E-56	triosephosphate isomerase 1 isoform 1	PF00121: Triosephosphate isomerase
39155	1		377723	2.50E-85	NP_075266.1	7.00E-103	acyl-CoA synthetase long-chain family member 4 isoform 2	PF00501: AMP-dependent synthetase and ligase
44726	1		206042	7.70E-116	NP_006829.1	9.50E-115	methionyl aminopeptidase 2	PF00557: Peptidase M24, catalytic core
34303	1		182183	9.80E-13	NP_036465.2	2.60E-16	c-myc binding protein	nf
74109	1		nf	n/a	nf	n/a	nf	PF00043: Glutathione S-transferase, C-terminal
66740	1		nf	n/a	nf	n/a	nf	nf
53758	1		nf	n/a	nf	n/a	nf	nf
35026	1		184701	3.10E-167	NP_006422.1	2.70E-165	chaperonin containing TCP1, subunit 2	PF00118: Chaperonin Cpn60/TCP-1
33387	1		24114	1.50E-80	NP_001605.1	1.40E-154	actin, gamma 1 propeptide	PF00022: Actin/actin-like
81437	1		nf	n/a	nf	n/a	nf	nf
59723	1		nf	n/a	XP_002344344.1	1.50E-07	PREDICTED: hypothetical protein, partial	nf
82086	1		nf	n/a	nf	n/a	nf	nf
55800	1		205854	5.70E-56	NP_001016.1	9.40E-60	ribosomal protein S23	PF00164: Ribosomal protein S12/S23
73065	1		nf	n/a	nf	n/a	nf	nf