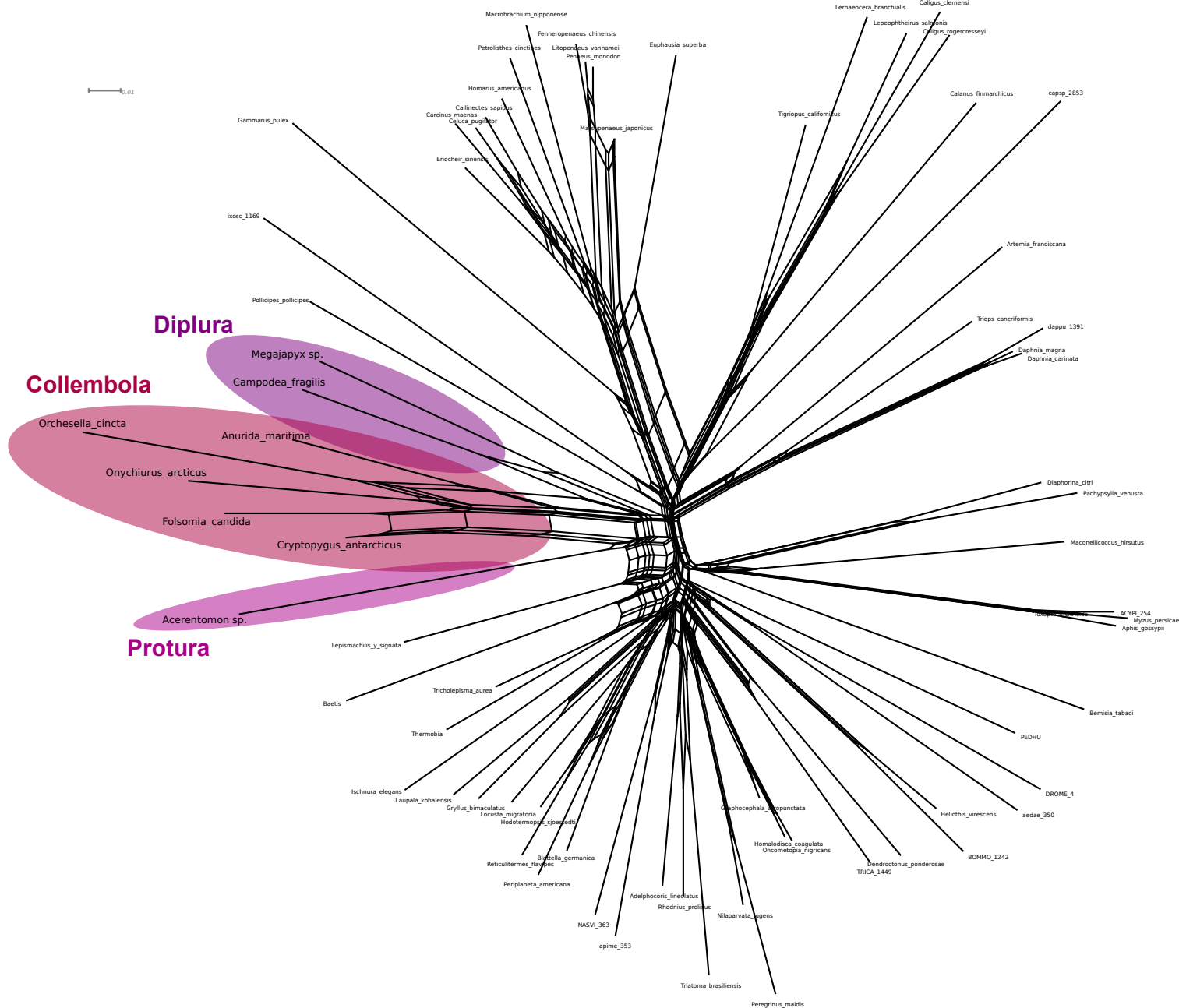


0.01

Diplura

Collembola

Protura



Supplementary table 1. Taxon sampling with number of orthologous genes (OGs) per species in the original supermatrix and in the three data subsets.

In capitals: Species for which we used the official gene set from a genome for orthology assignment; * included as reference species in orthology set *insecta-hmmer3-1*; *M. Ento* is the decisive dataset for inference of relationships among entognathous hexapods, since all OGs are covered by Protura, Diplura and Collembola; SOS and SOS₂ are indecisive to address relationships among entognathous hexapod subgroups. †: *Acerentomon* sp.: erroneously assigned as *A. franci* in Meusemann et al. (2010) and NCBI. SOS: Selected Optimal Subset generated with *mare* 0.1.2-rc (253 OGs, 62 taxa); SOS₂ obtained from SOS by removing all 79 OGs that are covered by Protura, Diplura and Collembola (174 OGs remained); ‡: Assemblies from primarily wingless hexapods used previously in Meusemann et al. (2010) and von Reumont et al. (2012).

Systematic group	Order	Family	Genus Species	Source	Number of contigs in the transcriptome assembly	Number of OGs after orthology assignment	Number of OGs in dataset <i>M. Ento</i>	Number of OGs in dataset SOS	Number of OGs in dataset SOS ₂
Annellida	Capitellida	Capitellidae	<i>CAPITELLA</i> SP.*	JGI 1.0	32,414	1,473	117	253	174
Chelicerata	Toxodida	Toxodidae	<i>IXODES SCAPULARIS</i> *	vectorbase.org 1.1	20,485	1,313	117	253	174
crustaceans	Decapoda	Porcellanidae	<i>Petrolisthes cinctipes</i>	NCBI	27,086	942	106	221	143
crustaceans	Decapoda	Nephropidae	<i>Homarus americanus</i>	NCBI	16,938	977	97	202	132
crustaceans	Decapoda	Ocyropodidae	<i>Celaca pugilator</i>	NCBI	1,482	111	43	-	-
crustaceans	Decapoda	Portunidae	<i>Callinectes sapidus</i>	NCBI	2,239	215	46	79	42
crustaceans	Decapoda	Portunidae	<i>Carcinus maenas</i>	NCBI	4,567	488	57	121	79
crustaceans	Decapoda	Varunidae	<i>Eriocheir sinensis</i>	NCBI	6,054	393	81	155	90
crustaceans	Decapoda	Palaemonidae	<i>Macrobrachium nipponense</i>	NCBI	1,581	218	59	110	59
crustaceans	Decapoda	Penaeidae	<i>Fenneropenaeus chinensis</i>	NCBI	3,458	245	66	111	57
crustaceans	Decapoda	Penaeidae	<i>Litopenaeus vannamei</i>	NCBI	32,718	1,021	99	239	161
crustaceans	Decapoda	Penaeidae	<i>Marisipenaeus japonicus</i>	NCBI	1,963	118	39	-	-
crustaceans	Decapoda	Penaeidae	<i>Penaeus monodon</i>	NCBI	13,143	559	87	190	120
crustaceans	Euphausiacea	Euphausiidae	<i>Euphausia superba</i>	NCBI	1,500	117	56	-	-
crustaceans	Amphipoda	Gammaridae	<i>Gammarus pulex</i>	NCBI	4,241	183	47	88	46
crustaceans	Copepoda	Pennellidae	<i>Lernaeocera brachialis</i>	NCBI	5,538	755	60	153	111
crustaceans	Copepoda	Caligidae	<i>Lepeophtheirus salmonis</i>	NCBI	18,195	1,271	102	228	153
crustaceans	Copepoda	Caligidae	<i>Caligus clemensi</i>	NCBI	5,334	710	73	159	108
crustaceans	Copepoda	Caligidae	<i>Caligus rogercresceyi</i>	NCBI	9,266	932	80	179	123
crustaceans	Copepoda	Calanidae	<i>Calanus finmarchicus</i>	NCBI	8,188	571	44	-	-
crustaceans	Copepoda	Harpacticoidae	<i>Tigriopus californicus</i>	NCBI	2,598	181	43	-	-
crustaceans	Cirripedia	Scalpellidae	<i>Pollitipes pollitipes</i>	NCBI	1,721	215	62	108	53
crustaceans	Notostraca	Triopsidae	<i>Triops cancriformis</i>	NCBI	2,542	277	57	109	56
crustaceans	Anostraca	Artemiidae	<i>Artemia franciscana</i>	NCBI	10,473	736	93	197	124
crustaceans	Diplostroaca	Daphniidae	<i>Daphnia carinata</i>	NCBI	2,808	341	72	141	79
crustaceans	Diplostroaca	Daphniidae	<i>Daphnia magna</i>	NCBI	5,307	482	81	150	84
crustaceans	Diplostroaca	Daphniidae	<i>DAPHNIA PULEX</i> *	JGI 1.0 Frozen	30,939	1,526	117	253	174
Hexapoda	Protura	Acerentomidae	<i>Acerentomon</i> sp.†	NCBF	1,999	117	91	12	64
Hexapoda	Diplura	Campodeidae	<i>Campodea fragilis</i>	NCBF	6,407	370	77	116	64
Hexapoda	Diplura	Japygidae	<i>Mesogypsy</i> sp.	this study	57,602	547	117	164	89
Hexapoda	Collembola	Neururidae	<i>Anurida maritima</i>	NCBF	3,504	328	55	105	60
Hexapoda	Collembola	Onychiuridae	<i>Onychiurus arcticus</i>	NCBI	9,981	795	103	114	114
Hexapoda	Collembola	Isotomidae	<i>Cryptopygus antarcticus</i>	NCBI	1,897	199	49	78	35
Hexapoda	Collembola	Folsomia	<i>Folsomia candida</i>	NCBI	5,967	442	60	122	78
Hexapoda	Collembola	Entomobryidae	<i>Orchesella cincta</i>	NCBI	754	52	10	-	-
Hexapoda	Archaeognatha	Machilidae	<i>Lepismachilis y-signata</i>	NCBF	2,288	270	60	107	54
Hexapoda	Zygentoma	Lepismatidae	<i>Tricholepisma aurea</i>	NCBI	344	54	22	-	-
Hexapoda	Zygentoma	Lepismatidae	<i>Thermobia domestica</i>	this study	45,358	682	96	194	124
Hexapoda	Ephemeroptera	Baetidae	<i>Baetis</i> sp.	NCBI	3,035	247	50	115	76
Hexapoda	Odonata	Coenagrionidae	<i>Ischnura elegans</i>	NCBI	3,194	370	56	116	72
Hexapoda	Orthoptera	Gryllidae	<i>Gryllus bimaculatus</i>	NCBI	3,998	612	93	207	135
Hexapoda	Orthoptera	Gryllidae	<i>Laupala kohalensis</i>	genidx	8,575	702	68	160	113
Hexapoda	Orthoptera	Acrididae	<i>Locusta migratoria</i>	NCBI	12,443	764	103	220	146
Hexapoda	"Blattaria"	Blattellidae	<i>Blattella germanica</i>	NCBI	1,556	164	35	-	-
Hexapoda	"Blattaria"	Blattidae	<i>Periplaneta americana</i>	NCBI	1,577	152	56	86	37
Hexapoda	Isoptera	Rhinotermitidae	<i>Reticulitermes flavipes</i>	NCBI	3,471	347	69	132	76
Hexapoda	Isoptera	Rhinotermitidae	<i>Coptotermes formosanus</i>	NCBI	3,808	89	12	-	-
Hexapoda	Isoptera	Ternopsidae	<i>Hodotermopsis sjostedti</i>	NCBI	1,482	163	52	82	36
Hexapoda	Hemiptera	Miridae	<i>Adelphocoris lineolatus</i>	NCBI	1,454	39	-	-	-
Hexapoda	Hemiptera	Reduviidae	<i>Rhodnius prolixus</i>	NCBI	6,097	361	66	114	59
Hexapoda	Hemiptera	Reduviidae	<i>Triatoma brasiliensis</i>	NCBI	1,897	60	23	-	-
Hexapoda	Hemiptera	Delphacidae	<i>Nilaparvata lugens</i>	NCBI	11,091	933	109	217	141
Hexapoda	Hemiptera	Delphacidae	<i>Perezigrinus maidis</i>	NCBI	15,414	751	98	196	125
Hexapoda	Hemiptera	Cicadellidae	<i>Graphocephala atropunctata</i>	NCBI	1,827	195	61	103	51
Hexapoda	Hemiptera	Cicadellidae	<i>Homalodisca coagulata</i>	NCBI	5,661	531	90	157	89
Hexapoda	Hemiptera	Cicadellidae	<i>Oncometopia nigricans</i>	NCBI	1,772	229	65	99	44
Hexapoda	Hemiptera	Aleyrodidae	<i>Bemisia tabaci</i>	NCBI	4,548	206	73	111	50
Hexapoda	Hemiptera	Aphididae	<i>ACYRTHOSIPHON PISUM</i>	BaylorCollege 1.0	33,706	1,640	109	244	169
Hexapoda	Hemiptera	Aphididae	<i>Aphis gossypii</i>	NCBI	29,123	1,459	109	236	161
Hexapoda	Hemiptera	Aphididae	<i>Myzus persicae</i>	NCBI	9,946	1,177	109	229	154
Hexapoda	Hemiptera	Aphididae	<i>Toxoptera citricida</i>	NCBI	2,196	332	75	140	77
Hexapoda	Hemiptera	Pseudococcidae	<i>Macroleucococcus hirsutus</i>	NCBI	3,929	543	91	170	100
Hexapoda	Hemiptera	Psyllidae	<i>Diuraphis citri</i>	NCBI	6,274	457	86	164	96
Hexapoda	Hemiptera	Psyllidae	<i>Pachypsylla venusta</i>	NCBI	4,631	247	50	92	51
Hexapoda	Phthiraptera	Pediculidae	<i>PEDICULUS HUMANUS</i>	VectorBase 1.2	10,772	1,711	112	244	166
Hexapoda	Hymenoptera	Apidae	<i>AFIS MELLIFERA</i> *	Ensembl 38	13,774	1,886	117	253	174
Hexapoda	Hymenoptera	Pteromalidae	<i>NASONIA UTRIPENNIS</i>	BaylorCollege 1.0	19,799	1,591	111	238	163
Hexapoda	Coleoptera	Curculionidae	<i>Dendroctonus ponderosae</i>	NCBI	16,636	1,339	112	239	162
Hexapoda	Coleoptera	Tenebrionidae	<i>TRIBOLIUM CASTANEUM</i>	Beetlebase 3.0	16,421	1,705	115	241	162
Hexapoda	Lepidoptera	Bombycidae	<i>BOMBYX MORI</i>	SiKDB v2.0	14,622	1,659	112	237	161
Hexapoda	Lepidoptera	Noctuidae	<i>Heliothis virescens</i>	NCBI	25,37	1,067	111	233	155
Hexapoda	Diptera	Drosophilidae	<i>DROSOPHILA MELANOGASTER</i>	Ensembl 52	14,141	1,732	116	251	173
Hexapoda	Diptera	Culicidae	<i>AEDES AEGYPTI</i> *	Ensembl 52	15,418	1,886	117	253	174

Supplementary table 2. Annotation of orthologous genes (OGs) used in this study.

1,886 OGs included in the ortholog set *insecta-hmmer3-1*; 20 OGs were not considered since covered only by reference species (*i.e.*, species of the ortholog set). The remaining 1,866 OGs were the basis for all datasets compiled in this study. Annotations follow official gene sets of *Aedes aegypti* and *Ixodes scapularis*. *M_Ento* is the decisive dataset for inference of relationships among entognathous hexapods, since all OGs are covered by Protura, Diplura and Collembola; SOS: Selected Optimal Subset generated with *mare* 0.1.2-rc (253 OGs, 62 taxa); SOS_u: obtained from SOS by removing decisive OGs, so all 79 OGs that are covered by Protura, Diplura and Collembola (174 OGs remained).

OG ID	Number of taxa	Alignment length [bp] (masked)	included in dataset <i>M_Ento</i> / SOS / SOS _u	Aedes ID	Annotation Aedes annotation	Ixodes ID	Annotation Ixodes annotation
409986	29	170	<i>M_Ento</i>	AAEL014393	lactylglutathione lyase	ISCW021575	glyoxalase, putative
410001	26	172	<i>M_Ento</i>	AAEL012051	conserved hypothetical protein	ISCW020476	conserved hypothetical protein
410014	25	620	<i>M_Ento</i>	AAEL009832	exocyst complex protein exo70	ISCW015640	exocyst complex protein 70, putative
410071	21	800	<i>M_Ento</i>	AAEL001497	vacuolar protein sorting	ISCW021584	vacuolar protein-sorting protein, putative
410092	43	376	<i>M_Ento</i>	AAEL005308	pyruvate dehydrogenase	ISCW019126	pyruvate dehydrogenase, putative
410149	46	315	<i>M_Ento</i>	AAEL013739	electron transport oxidoreductase	ISCW014575	electron transfer flavoprotein, alpha subunit, putative
410191	37	266	<i>M_Ento</i>	AAEL010783	sodium/potassium-dependent ATPase beta-2 subunit	ISCW016921	Na ⁺ /K ⁺ ATPase, beta subunit, putative
410203	39	346	<i>M_Ento</i>	AAEL001593	glycerol-3-phosphate dehydrogenase	ISCW005254	glycerol-3-phosphate dehydrogenase, putative
410274	33	800	<i>M_Ento</i>	AAEL000175	Eukaryotic translation initiation factor 3 subunit C (eIF3c)(Eukaryotic translation initiation factor 3 subunit 8)	ISCW016106	eukaryotic translation initiation factor 3 subunit C, putative
410298	29	497	<i>M_Ento</i>	AAEL001044	tyrosyl-tRNA synthetase	ISCW001421	tyrosyl-tRNA synthetase, putative
410302	29	293	<i>M_Ento</i>	AAEL000955	conserved hypothetical protein	ISCW007083	autophagocytosis-involved protein during starvation, putative
410394	52	410	<i>M_Ento</i>	AAEL004988	phosphoglycerate kinase	ISCW015616	3-phosphoglycerate kinase, putative
410445	33	97	<i>M_Ento</i>	AAEL005965	presenilin enhancer, putative	ISCW017009	membrane protein, putative
410503	48	535	<i>M_Ento</i>	AAEL001715	chaperonin	ISCW011431	chaperonin subunit, putative
410525	53	495	<i>M_Ento</i>	AAEL014913	pyruvate kinase	ISCW020197	pyruvate kinase, putative
410650	20	121	<i>M_Ento</i>	AAEL009109	conserved hypothetical protein	ISCW019603	ubiquitously expressed transcript (UXT), putative
410655	46	479	<i>M_Ento</i>	AAEL009029	aldehyde dehydrogenase	ISCW014613	aldehyde dehydrogenase, putative
410664	42	543	<i>M_Ento</i>	AAEL011584	chaperonin-60kD, ch60	ISCW017824	chaperonin subunit, putative
410706	40	100	<i>M_Ento</i>	AAEL007868	ubiquinol-cytochrome c reductase complex 14 kd protein	ISCW012532	ubiquinol cytochrome C reductase, subunit QCR7, putative
410710	34	316	<i>M_Ento</i>	AAEL011554	adhesion regulating molecule 1 (110 kda cell membrane glycoprotein)	ISCW021801	adhesion regulating molecule, putative
410739	41	153	<i>M_Ento</i>	AAEL011498	Copper-Zinc(Cu-Zn) Superoxide Dismutase.	ISCW008219	superoxide dismutase Cu-Zn
410945	40	446	<i>M_Ento</i>	AAEL010496	conserved hypothetical protein	ISCW019604	Queuine tRNA-ribosyltransferase, putative
411118	30	712	<i>M_Ento</i>	AAEL006834	glutamate semialdehyde dehydrogenase	ISCW005278	pyrroline-5-carboxylate synthetase, putative
411207	53	325	<i>M_Ento</i>	AAEL008166	malate dehydrogenase	ISCW003528	malate dehydrogenase, putative
411318	27	505	<i>M_Ento</i>	AAEL002834	myo-inositol-1 phosphate synthase	ISCW018182	inositol-1-phosphate synthetase, putative
411352	48	493	<i>M_Ento</i>	AAEL009902	Eukaryotic translation initiation factor 3 subunit D (eIF3d)(Eukaryotic translation initiation factor 3 subunit 7)	ISCW009510	eukaryotic translation initiation factor 3 subunit, putative
411401	38	355	<i>M_Ento</i>	AAEL012578	phosphoserine aminotransferase	ISCW020198	phosphoserine aminotransferase, putative
411420	29	205	<i>M_Ento</i>	AAEL007825	conserved hypothetical protein	ISCW003442	mediator of RNA polymerase II transcription subunit, putative
411486	39	289	<i>M_Ento</i>	AAEL008740	synaptic glycoprotein sc2	ISCW002618	steroid reductase, putative
411489	31	335	<i>M_Ento</i>	AAEL005336	d-3-phosphoglycerate dehydrogenase	ISCW015967	D-3-phosphoglycerate dehydrogenase, putative
411562	46	321	<i>M_Ento</i>	AAEL009389	transaldolase	ISCW023506	transaldolase, putative
411589	34	198	<i>M_Ento</i>	AAEL007647	conserved hypothetical protein	ISCW018678	rwd domain-containing protein, putative
411604	29	146	<i>M_Ento</i>	AAEL003165	low molecular weight protein-tyrosine-phosphatase	ISCW015354	protein-tyrosine-phosphatase, putative
411633	55	506	<i>M_Ento</i>	AAEL007702	chaperonin	ISCW007627	chaperonin complex component, TCP-1 delta subunit, putative
411643	34	183	<i>M_Ento</i>	AAEL007760	met-1 protein	ISCW004930	PUA domain-containing RNA-binding protein, putative
411672	33	1053	<i>M_Ento</i>	AAEL004297	ATP-citrate synthase	ISCW009919	ATP-citrate synthase, putative
411761	43	478	<i>M_Ento</i>	AAEL005931	6-phosphogluconate dehydrogenase	ISCW010101	6-phosphogluconate dehydrogenase, putative
411795	33	152	<i>M_Ento</i>	AAEL005976	adenine phosphoribosyltransferase, putative	ISCW010922	adenine phosphoribosyltransferase, putative
409969	57	120	<i>M_Ento</i> , SOS	AAEL009653	40S ribosomal protein S30	ISCW016278	40S ribosomal protein S30, putative

409979	60	170	M_Ento, SOS	AAEL006785	60S ribosomal protein L18a	ISCW010039	ribosomal protein L18A, putative
409987	45	340	M_Ento, SOS	AAEL002417	troponin t, invertebrate	ISCW023441	troponin, putative
410009	67	836	M_Ento, SOS	AAEL004500	eukaryotic translation elongation factor	ISCW015380	elongation factor, putative
410016	53	120	M_Ento, SOS	AAEL006698	60S ribosomal protein L31	ISCW017341	ribosomal protein L31, putative
410022	66	218	M_Ento, SOS	AAEL008103	40S ribosomal protein S8	ISCW015393	ribosomal protein S8, putative
410079	60	134	M_Ento, SOS	AAEL003396	60S ribosomal protein L32	ISCW005648	60S ribosomal protein L32, putative
410080	46	89	M_Ento, SOS	AAEL002813	coupling factor, putative	ISCW019667	F1F0 ATP-synthase subunit Cf6, putative
410081	63	351	M_Ento, SOS	AAEL005766	fructose-bisphosphate aldolase	ISCW011371	fructose 1,6-bisphosphate aldolase, putative
410125	44	443	M_Ento, SOS	AAEL013229	tubulin alpha chain	ISCW003527	alpha tubulin
410178	47	145	M_Ento, SOS	AAEL013320	translocon-associated protein, delta subunit	ISCW010675	signal sequence receptor delta, putative
410209	41	424	M_Ento, SOS	AAEL003106	clathrin coat associated protein ap-50	ISCW011504	clathrin-adaptor protein, putative
410216	51	101	M_Ento, SOS	AAEL003530	acidic ribosomal protein P1, putative	ISCW006538	60S acidic ribosomal protein P1, putative
410235	35	100	M_Ento, SOS	AAEL008492	conserved hypothetical protein	ISCW018296	transmembrane protein, putative
410279	32	127	M_Ento, SOS	AAEL003552	DNA-directed RNA polymerase subunit rpb6	ISCW007471	RNA polymerase subunit K, putative
410300	59	130	M_Ento, SOS	AAEL014838	60S ribosomal protein L27e	ISCW005008	60S ribosomal protein L27, putative
410314	52	185	M_Ento, SOS	AAEL011711	nascent polypeptide associated complex alpha subunit (nac alpha)	ISCW012592	transcription factor containing NAC and TS-N domains, putative
410315	45	346	M_Ento, SOS	AAEL011025	vacuolar ATP synthase subunit ac39	ISCW002101	vacuolar H+ ATPase, putative
410333	56	123	M_Ento, SOS	AAEL014903	40S ribosomal protein S24	ISCW006068	ribosomal protein S24, putative
410336	59	424	M_Ento, SOS	AAEL008341	adenosylhomocysteinase	ISCW015944	S-adenosylhomocysteine hydrolase, putative
410382	56	200	M_Ento, SOS	AAEL005097	cold induced protein (BnC24A), putative	ISCW023068	60S ribosomal protein L13, putative
410392	39	145	M_Ento, SOS	AAEL011544	mago nashi, putative	ISCW015637	exon-exon junction complex, Magoh component, putative
410431	53	197	M_Ento, SOS	AAEL012733	60S ribosomal protein L19	ISCW013810	ribosomal protein L19, putative
410469	67	214	M_Ento, SOS	AAEL002534	60S ribosomal protein L10	ISCW017543	60S ribosomal protein L10, putative
410505	56	103	M_Ento, SOS	AAEL000010	ribosomal protein L36, putative	ISCW011316	60S ribosomal protein L36 [Source:UniProtKB/Swiss-Prot,Acc:Q4PM12]
410586	66	201	M_Ento, SOS	AAEL013625	40S ribosomal protein S5	ISCW012831	40S ribosomal protein S5, putative
410601	42	195	M_Ento, SOS	AAEL004112	ThioredoxinPeroxidase.	ISCW010532	alkyl hydroperoxide reductase, thiol specific antioxidant, putative
410649	64	296	M_Ento, SOS	AAEL004855	ADP,ATP carrier protein	ISCW021754	ADP/ATP translocase, putative
410700	65	304	M_Ento, SOS	AAEL010821	60S acidic ribosomal protein P0	ISCW007303	60S acidic ribosomal protein P0, putative
410709	51	174	M_Ento, SOS	AAEL010032	translocon-associated protein, beta subunit precursor (trap-beta) (signal sequence receptor beta subunit)	ISCW012704	signal sequence receptor beta
410779	54	125	M_Ento, SOS	AAEL004175	40S ribosomal protein S17	ISCW001811	ribosomal protein S17, putative
410807	48	673	M_Ento, SOS	AAEL003877	ubiquitin	ISCW010407	ubiquitin/40S ribosomal protein S27A fusion, putative
410818	43	545	M_Ento, SOS	AAEL012994	glucose-6-phosphate isomerase	ISCW014868	phosphoglucose isomerase, putative
410825	58	105	M_Ento, SOS	AAEL009506	40S ribosomal protein S20	ISCW010752	ribosomal protein S20, putative
410857	62	115	M_Ento, SOS	AAEL012740	ATPase subunit, putative	ISCW010495	ATP synthase C subunit, putative
410863	57	136	M_Ento, SOS	AAEL010299	40S ribosomal protein S12	ISCW017361	40S ribosomal protein S12, putative
410895	47	133	M_Ento, SOS	AAEL009078	NADH-ubiquinone oxidoreductase sgdh subunit	ISCW018634	NADH-ubiquinone oxidoreductase sgdh subunit, putative
410896	43	157	M_Ento, SOS	AAEL008397	GlutathionePeroxidase.	ISCW019584	phospholipid-hydroperoxide glutathione peroxidase, putative
410908	63	185	M_Ento, SOS	AAEL012944	60S ribosomal protein L11	ISCW000476	ribosomal protein L11, putative
410910	52	292	M_Ento, SOS	AAEL013952	prohibitin	ISCW021457	prohibitin, putative
410920	54	99	M_Ento, SOS	AAEL006509	conserved hypothetical protein	ISCW007401	F1F0-type ATP synthase subunit G, putative
410921	64	244	M_Ento, SOS	AAEL000032	40S ribosomal protein S6	ISCW024315	40S ribosomal protein S6, putative
410951	64	193	M_Ento, SOS	AAEL009825	60S ribosomal protein L13a	ISCW019130	ribosomal protein L13A, putative

410959	58	192	M_Ento, SOS	AAEL001759	40S ribosomal protein S9	ISCW023083	40S ribosomal protein S9, putative
410963	62	105	M_Ento, SOS	AAEL004457	cytochrome c	ISCW008740	cytochrome C, putative
411084	39	345	M_Ento, SOS	AAEL000454	isocitrate dehydrogenase	ISCW004116	isocitrate dehydrogenase, putative
411091	38	80	M_Ento, SOS	AAEL008719	Sm protein G, putative	ISCW008104	small nuclear ribonucleoprotein G, putative
411149	50	356	M_Ento, SOS	AAEL004347	Eukaryotic translation initiation factor 3 subunit M (eIF3m)	ISCW005874	dendritic cell protein, putative
411160	62	214	M_Ento, SOS	AAEL013221	60S ribosomal protein L10a	ISCW015602	60S ribosomal protein L10A, putative
411161	58	145	M_Ento, SOS	AAEL005817	60S ribosomal protein L26	ISCW002021	ribosomal protein L26, putative
411173	47	448	M_Ento, SOS	AAEL002956	Probable citrate synthase 1, mitochondrial Precursor (EC 2.3.3.1)	ISCW009586	citrate synthase, putative
411177	65	515	M_Ento, SOS	AAEL012175	ATP synthase alpha subunit mitochondrial	ISCW011988	F0F1-type ATP synthase, alpha subunit, putative
411224	52	107	M_Ento, SOS	AAEL011010	conserved hypothetical protein	ISCW016254	ATP synthase F chain
411264	57	191	M_Ento, SOS	AAEL008481	60S ribosomal protein L18	ISCW021924	60S ribosomal protein L18 [Source:UniProtKB/Swiss-Prot,Acc:Q4PM04]
411272	59	389	M_Ento, SOS	AAEL009994	60S ribosomal protein L4	ISCW007478	ribosomal protein L4, putative
411275	64	188	M_Ento, SOS	AAEL009496	40S ribosomal protein S7	ISCW015731	40S ribosomal protein S7, putative
411288	50	139	M_Ento, SOS	AAEL011447	60S ribosomal protein L14	ISCW000979	60S ribosomal protein L14, putative
411341	61	292	M_Ento, SOS	AAEL004325	60S ribosomal protein L5	ISCW017610	60S ribosomal protein L5, putative
411351	50	121	M_Ento, SOS	AAEL000068	ribosomal protein S25, putative	ISCW020696	ribosomal protein S25, putative
411385	60	161	M_Ento, SOS	AAEL003835	initiation factor 5a	ISCW020373	translation initiation factor 5A
411388	57	281	M_Ento, SOS	AAEL001872	voltage-dependent anion-selective channel	ISCW000781	voltage-dependent anion-selective channel, putative
411391	57	354	M_Ento, SOS	AAEL013458	glutamine synthetase 1, 2 (glutamate-amonia ligase) (gs)	ISCW018771	glutamine synthetase, putative
411410	58	183	M_Ento, SOS	AAEL007699	60S ribosomal protein L9	ISCW015615	60S ribosomal protein L9, putative
411424	54	65	M_Ento, SOS	AAEL012684	conserved hypothetical protein	ISCW016512	ribosome associated membrane protein
411431	56	336	M_Ento, SOS	AAEL011184	mitochondrial phosphate carrier protein	ISCW014488	Der_and-312 phosphate carrier protein, putative
411435	47	393	M_Ento, SOS	AAEL014723	26S protease regulatory subunit	ISCW008741	26S proteasome regulatory complex, ATPase RPT6, putative
411448	53	949	M_Ento, SOS	AAEL006582	calcium-transporting ATPase sarcoplasmic/endoplasmic reticulum type	ISCW009225	E1-E2 ATPase, putative
411487	56	135	M_Ento, SOS	AAEL009151	30S ribosomal protein S8	ISCW015484	ribosomal protein S15Aa, putative
411504	28	97	M_Ento, SOS	AAEL001363	small nuclear ribonucleoprotein Sm D1, putative	ISCW022657	conserved hypothetical protein
411515	47	102	M_Ento, SOS	AAEL001052	heat shock protein, putative	ISCW017823	heat shock protein
411553	42	204	M_Ento, SOS	AAEL000951	elongation factor 1-beta2	ISCW004620	elongation factor 1-beta
411651	64	145	M_Ento, SOS	AAEL011656	40S ribosomal protein S15	ISCW016148	40S ribosomal protein S15, putative
411663	59	143	M_Ento, SOS	AAEL012686	ribosomal protein S12, putative	ISCW012634	40S ribosomal protein S23, putative
411666	57	221	M_Ento, SOS	AAEL008188	60S ribosomal protein L6	ISCW016112	ribosomal protein L6, putative
411675	53	107	M_Ento, SOS	AAEL002832	40S ribosomal protein S26	ISCW013037	ribosomal protein S26, putative
411734	47	81	M_Ento, SOS	AAEL013989	protein translocation complex beta subunit, putative	ISCW014037	Sec61 protein translocation complex beta-subunit, putative
411742	59	204	M_Ento, SOS	AAEL001488	ribosomal protein L15	ISCW008173	ribosomal protein L15, putative
411743	33	151	M_Ento, SOS	AAEL006748	ss-DNA binding protein 12RNP2 precursor, putative	ISCW016642	RNA binding domain-containing protein, putative
411825	52	181	M_Ento, SOS	AAEL007441	translocon-associated protein, gamma subunit	ISCW008596	translocon-associated protein, gamma subunit, putative
409961	42	125	SOS, SOS _n	AAEL009351	thioredoxin, putative	ISCW020805	thioredoxin, putative
409972	49	247	SOS, SOS _n	AAEL011116	14-3-3 protein sigma, gamma, zeta, beta/alpha	ISCW011376	multifunctional chaperone, putative
409976	38	168	SOS, SOS _n	AAEL008179	RAS homologue enriched in brain (RHEB)	ISCW018020	RAS family protein, putative
409984	37	208	SOS, SOS _n	AAEL013528	ThioredoxinPeroxidase.	ISCW015321	thioredoxin-dependent peroxide reductase
409992	25	175	SOS, SOS _n	AAEL003464	conserved hypothetical protein	ISCW010286	conserved hypothetical protein
409999	49	493	SOS, SOS _n	AAEL005798	ATP synthase subunit beta vacuolar	ISCW022132	vacuolar H ⁺ -ATPase V1 sector, subunit B, putative

410005	53	142	SOS, SOS _n	AAEL007439	myosin light chain 1,	ISCW001124	nonmuscle myosin essential light chain
410008	39	200	SOS, SOS _n	AAEL000410	glycoprotein 25l	ISCW001001	glycoprotein 25l, putative
410012	26	165	SOS, SOS _n	AAEL010798	ubiquitin-conjugating enzyme E2 g	ISCW007981	ubiquitin protein ligase, putative
410021	39	189	SOS, SOS _n	AAEL007494	calcineurin b subunit	ISCW017170	calcineurin B, putative
410023	38	153	SOS, SOS _n	AAEL006135	Nuclear cap-binding protein subunit 2 (20 kDa nuclear cap-binding protein)(NCBP 20 kDa subunit)(CBP20)	ISCW017479	Nuclear cap-binding protein subunit 2 (20 kDa nuclear cap-binding protein)(NCBP 20 kDa subunit)(CBP20) [Source:UniProtKB/Swiss-Prot,Acc:B7P877]
410050	47	206	SOS, SOS _n	AAEL006174	proteasome subunit beta type	ISCW006948	20S proteasome, regulatory subunit beta, putative
410063	32	186	SOS, SOS _n	AAEL002377	small nuclear ribonucleoprotein-associated protein	ISCW007743	flagellin silk protein, putative
410075	26	234	SOS, SOS _n	AAEL012134	pur-alpha	ISCW005651	pur-alpha, putative
410083	34	116	SOS, SOS _n	AAEL004263	small nuclear ribonucleoprotein sm d1	ISCW006968	small nuclear ribonucleoprotein Sm D1, putative
410084	26	192	SOS, SOS _n	AAEL004269	hippocalcin	ISCW019379	Ca ²⁺ sensor, putative
410098	41	180	SOS, SOS _n	AAEL000947	microsomal signal peptidase 23 kd subunit (spc22/23)	ISCW016779	signal peptidase, putative
410112	27	132	SOS, SOS _n	AAEL005934	Mediator of RNA polymerase II transcription subunit 22 (Mediator complex subunit 22)	ISCW024624	mediator of RNA polymerase II transcription subunit, putative
410118	29	124	SOS, SOS _n	AAEL000720	Mediator of RNA polymerase II transcription subunit 11 (Mediator complex subunit 11)	ISCW006142	mediator complex subunit, putative
410120	57	174	SOS, SOS _n	AAEL011471	60S ribosomal protein L17	ISCW005425	60S ribosomal protein L17 [Source:UniProtKB/Swiss-Prot,Acc:Q4PM54]
410155	34	220	SOS, SOS _n	AAEL006713	U2 snmp auxiliary factor, small subunit	ISCW019664	U2 snRNP splicing factor, small subunit, putative
410159	42	313	SOS, SOS _n	AAEL006833	succinyl-CoA synthetase small subunit, putative	ISCW020686	succinyl-CoA synthetase, alpha subunit, putative
410162	56	157	SOS, SOS _n	AAEL003957	conserved hypothetical protein	ISCW006326	actin depolymerizing factor, putative
410164	33	169	SOS, SOS _n	AAEL010470	calcineurin b subunit	ISCW016907	calmodulin, putative
410176	43	227	SOS, SOS _n	AAEL005515	heterogeneous nuclear ribonucleoprotein	ISCW007146	RNA-binding protein musashi, putative
410179	51	128	SOS, SOS _n	AAEL005629	ribosomal protein L35, putative	ISCW017219	ribosomal protein L35, putative
410182	59	250	SOS, SOS _n	AAEL005901	40S ribosomal protein S3a	ISCW008069	40S ribosomal protein S3A, putative
410187	50	94	SOS, SOS _n	AAEL013272	60S ribosomal protein L37a	ISCW023173	ribosomal protein L37A, putative
410227	39	155	SOS, SOS _n	AAEL010002	mitochondrial import inner membrane translocase subunit tim17	ISCW019934	import inner membrane translocase subunit tim17, putative
410228	29	173	SOS, SOS _n	AAEL003401	DNA-directed RNA polymerase II 19 kDa polypeptide rpb7	ISCW004820	DNA-directed RNA polymerase subunit E', putative
410229	44	160	SOS, SOS _n	AAEL009770	ubiquitin-conjugating enzyme E2 i	ISCW014937	ubiquitin protein ligase, putative
410237	40	80	SOS, SOS _n	AAEL004284	mitochondrial ATPase inhibitor, putative	ISCW001951	ATPase inhibitor, putative
410271	36	174	SOS, SOS _n	AAEL006743	n-terminal acetyltransferase complex arf1 subunit	ISCW021920	conserved hypothetical protein
410277	16	184	SOS, SOS _n	AAEL003073	DNA-binding protein D-ETS-3 like	ISCW019151	60S ribosomal protein L14, putative
410294	34	183	SOS, SOS _n	AAEL014177	ADP-ribosylation factor, arf	ISCW000919	ADP ribosylation factor 79F, putative
410297	32	70	SOS, SOS _n	AAEL014831	RNA polymerase II subunit Rpb10, putative	ISCW021810	DNA-directed RNA polymerase
410309	61	572	SOS, SOS _n	AAEL010318	polyadenylate-binding protein	ISCW014211	apoptosis-promoting RNA-binding protein TIA-1/TIAR, putative
410356	39	162	SOS, SOS _n	AAEL012359	nucleoside-diphosphate kinase NBR-A, putative	ISCW023074	nucleoside diphosphate kinase, putative
410368	43	1021	SOS, SOS _n	AAEL012062	Na ⁺ /K ⁺ ATPase alpha subunit	ISCW002538	Na ⁺ /K ⁺ ATPase, alpha subunit, putative
410388	34	345	SOS, SOS _n	AAEL004338	pyruvate dehydrogenase	ISCW009219	branched chain alpha-keto acid dehydrogenase, putative
410419	43	145	SOS, SOS _n	AAEL008768	multi-protein bridging factor, putative	ISCW022655	transcription factor Mbf1, putative
410441	27	216	SOS, SOS _n	AAEL006934	Mediator of RNA polymerase II transcription subunit 19 (Mediator complex subunit 19)	ISCW016111	mediator of RNA polymerase II transcription subunit, putative
410442	42	194	SOS, SOS _n	AAEL006922	calponin/transgelin	ISCW021202	calponin, putative
410454	28	82	SOS, SOS _n	AAEL012023	conserved hypothetical protein	ISCW004083	DET1- and DDB1-associated protein, putative
410455	30	72	SOS, SOS _n	AAEL006629	conserved hypothetical protein	ISCW015178	DPY-30 protein, putative
410457	44	407	SOS, SOS _n	AAEL000746	NADP-specific isocitrate dehydrogenase	ISCW003975	NADP-dependent isocitrate dehydrogenase, putative
410474	29	295	SOS, SOS _n	AAEL010465	gpi-anchor transamidase	ISCW000202	tick legumain, putative
410489	29	73	SOS, SOS _n	AAEL008458	conserved hypothetical protein	ISCW010702	conserved hypothetical protein

410491	35	199	SOS, SOS _n	AAEL013252	receptor protein tyrosine phosphatase	ISCW013805	RAS-related protein, putative
410492	55	142	SOS, SOS _n	AAEL004378	eukaryotic translation initiation factor 1A (eIF-1A)	ISCW008220	translation initiation factor 1A
410528	30	342	SOS, SOS _n	AAEL002924	conserved hypothetical protein	ISCW004710	protein Mo25, putative
410530	50	376	SOS, SOS _n	AAEL001005	calreticulin	ISCW008184	calreticulin, putative
410531	55	155	SOS, SOS _n	AAEL007715	60S ribosomal protein L21	ISCW017347	ribosomal protein L21, putative
410541	48	172	SOS, SOS _n	AAEL011380	high mobility group B1, putative	ISCW017350	DNA-binding protein, putative
410547	30	126	SOS, SOS _n	AAEL011433	small nuclear ribonucleoprotein sm d3	ISCW011367	small nuclear ribonucleoprotein Sm D3, putative
410550	34	107	SOS, SOS _n	AAEL002154	transcription initiation factor IIA (TFIIA), gamma chain	ISCW010050	transcription initiation factor IIA gamma chain, putative
410576	30	142	SOS, SOS _n	AAEL014375	clathrin coat assembly protein ap17	ISCW011294	clathrin adaptor complex, small subunit
410585	43	122	SOS, SOS _n	AAEL000084	elongin b	ISCW002622	RNA polymerase II transcription elongation factor, putative
410604	49	254	SOS, SOS _n	AAEL005830	proteasome subunit alpha type	ISCW007139	20S proteasome, regulatory subunit alpha type PSMAT7/PRE6, putative
410605	61	99	SOS, SOS _n	AAEL013007	cytochrome c oxidase, subunit VB, putative	ISCW019526	cytochrome C oxidase polypeptide Vb
410609	34	197	SOS, SOS _n	AAEL007697	conserved hypothetical protein	ISCW012131	conserved hypothetical protein
410615	33	103	SOS, SOS _n	AAEL013992	conserved hypothetical protein	ISCW015641	membrane protein, putative
410622	36	91	SOS, SOS _n	AAEL008692	barrier-to-autointegration factor, putative	ISCW000266	DNA-bridging protein BAF, putative
410625	41	327	SOS, SOS _n	AAEL001158	fructose-1,6-bisphosphatase	ISCW005292	fructose-1,6-bisphosphatase, putative
410630	31	77	SOS, SOS _n	AAEL012511	conserved hypothetical protein	ISCW003402	protein NEF1, putative
410631	36	101	SOS, SOS _n	AAEL005354	dynein light chain, putative	ISCW002098	dynein light chain, putative
410637	35	116	SOS, SOS _n	AAEL009914	small nuclear ribonucleoprotein sm d2	ISCW021571	small nuclear ribonucleoprotein sm D2, putative
410657	43	264	SOS, SOS _n	AAEL013533	conserved hypothetical protein	ISCW000126	conserved hypothetical protein
410682	53	139	SOS, SOS _n	AAEL008329	60S ribosomal protein L24	ISCW020506	60S ribosomal protein L24, putative
410692	47	111	SOS, SOS _n	AAEL010843	conserved hypothetical protein	ISCW015374	translation factor Sui1, putative
410703	28	125	SOS, SOS _n	AAEL001831	DNA-directed RNA polymerase II	ISCW007621	RNA polymerase II subunit, putative
410704	29	207	SOS, SOS _n	AAEL000982	Mediator of RNA polymerase II transcription subunit 7 (Mediator complex subunit 7)	ISCW020963	transcriptional coactivator, putative
410738	35	115	SOS, SOS _n	AAEL004691	ring finger	ISCW018511	SCF ubiquitin ligase, Rbx1 component, putative
410740	35	185	SOS, SOS _n	AAEL011832	conserved hypothetical protein	ISCW023560	RNA-binding protein pno1 [Source:UniProtKB/Swiss-Prot;Acc:Q4PMC9]
410745	37	87	SOS, SOS _n	AAEL006251	Ubiquitin-fold modifier 1 Precursor	ISCW016771	ubiquitin fold modifier 1 precursor, putative
410759	37	116	SOS, SOS _n	AAEL014484	conserved hypothetical protein	ISCW012449	conserved hypothetical protein
410760	25	328	SOS, SOS _n	AAEL001058	jun activation domain binding protein	ISCW019527	COP9 signalosome, subunit CSN5, putative
410761	38	86	SOS, SOS _n	AAEL004603	signal peptidase 12kDa subunit, putative	ISCW019568	signal peptidase 12kDa subunit, putative
410772	51	229	SOS, SOS _n	AAEL007049	proteasome subunit beta type	ISCW004008	20S proteasome, regulatory subunit beta, putative
410783	28	1275	SOS, SOS _n	AAEL003605	U2 small nuclear ribonucleoprotein, putative	ISCW009360	splicing factor 3B subunit, putative
410792	27	213	SOS, SOS _n	AAEL010046	maintenance of ploidy protein mob1 (mps1 binder 1)	ISCW013173	conserved hypothetical protein
410800	61	227	SOS, SOS _n	AAEL005610	mitochondrial ATP synthase b chain	ISCW012060	ATP synthase B chain, putative
410806	42	67	SOS, SOS _n	AAEL011320	G-protein, gamma-subunit, putative	ISCW009261	G-protein gamma subunit, putative
410829	38	151	SOS, SOS _n	AAEL002118	ubiquitin-conjugating enzyme rad6	ISCW009979	ubiquitin protein ligase, putative
410832	48	175	SOS, SOS _n	AAEL009604	conserved hypothetical protein	ISCW010157	protein involved in membrane traffic, putative
410835	32	569	SOS, SOS _n	AAEL005744	DEAD box ATP-dependent RNA helicase	ISCW016276	ATP-dependent RNA helicase pitchoune, putative
410869	32	156	SOS, SOS _n	AAEL000983	clathrin coat assembly protein ap19	ISCW006433	clathrin adaptor complex, small subunit, putative
410881	37	223	SOS, SOS _n	AAEL006851	(eIF3g)(Eukaryotic translation initiation factor 3 subunit 4)(Eukaryotic translation initiation factor 3 RNA-binding subunit)(eIF-3 RNA-binding subunit)	ISCW000203	translation initiation factor 3, subunit G, putative
410907	30	119	SOS, SOS _n	AAEL005909	splicing factor SC35, putative	ISCW024082	conserved hypothetical protein
410933	40	127	SOS, SOS _n	AAEL003352	ribosomal protein l7ae	ISCW019216	box H/ACA snoRNP, putative

410961	44	302	SOS, SOS _n	AAEL009275	protein phosphatase-1	ISCW012293	serine/threonine protein phosphatase PP1, putative
410962	56	119	SOS, SOS _n	AAEL005997	allergen, putative	ISCW015316	fatty acid-binding protein FABP, putative
410974	38	203	SOS, SOS _n	AAEL001698	charged multivesicular body protein 4b	ISCW008685	glucose de-repression and pre-vacuolar sorting protein, putative
410982	39	273	SOS, SOS _n	AAEL009345	prohibitin	ISCW001788	prohibitin, putative
410992	38	511	SOS, SOS _n	AAEL003419	conserved hypothetical protein	ISCW013286	conserved hypothetical protein
410998	30	174	SOS, SOS _n	AAEL007822	ubiquitin-conjugating enzyme E2 g	ISCW019512	ubiquitin protein ligase
411019	45	264	SOS, SOS _n	AAEL010168	40S ribosomal protein S2	ISCW003489	40S ribosomal protein, putative
411023	42	109	SOS, SOS _n	AAEL007883	fk506-binding protein	ISCW010191	FKBP-type peptidyl-prolyl cis-trans isomerase, putative
411030	35	194	SOS, SOS _n	AAEL011972	actin binding protein, putative	ISCW009687	membrane protein, putative
411035	42	84	SOS, SOS _n	AAEL003492	ribonuclease, putative	ISCW020648	salivary secreted ribonuclease, putative
411043	41	111	SOS, SOS _n	AAEL004653	elongation factor SIII p15 subunit, putative	ISCW015732	RNA polymerase II transcription elongation factor, putative
411044	47	302	SOS, SOS _n	AAEL011871	cytochrome C1	ISCW016731	cytochrome c1, putative
411060	30	368	SOS, SOS _n	AAEL005579	developmentally regulated GTP-binding protein 1 (drg 1)	ISCW013083	GTP-binding protein DRG2, putative
411064	37	186	SOS, SOS _n	AAEL009026	ubiquitin-conjugating enzyme m	ISCW011884	ubiquitin protein ligase, putative
411074	29	177	SOS, SOS _n	AAEL009373	n-acetyltransferase	ISCW011305	N-acetyltransferase, putative
411077	30	213	SOS, SOS _n	AAEL004266	pre-mRNA cleavage factor im, 25kD subunit	ISCW011864	mRNA cleavage factor I subunit, putative
411089	36	378	SOS, SOS _n	AAEL002188	splicing factor u2af large subunit	ISCW002946	splicing factor u2af large subunit, putative
411093	32	112	SOS, SOS _n	AAEL003695	conserved hypothetical protein	ISCW018236	conserved hypothetical protein
411133	37	156	SOS, SOS _n	AAEL001375	Y-box binding protein	ISCW005281	PIN domain-containing RNA-binding protein, putative
411138	43	394	SOS, SOS _n	AAEL013359	DEAD box ATP-dependent RNA helicase	ISCW015864	translation initiation factor 4F, helicase subunit, putative
411147	57	517	SOS, SOS _n	AAEL002827	ATP synthase beta subunit	ISCW012509	F0F1-type ATP synthase, beta subunit, putative
411156	47	312	SOS, SOS _n	AAEL004733	jun activation domain binding protein	ISCW017120	26S proteasome non-ATPase regulatory subunit, putative
411184	28	124	SOS, SOS _n	AAEL004835	conserved hypothetical protein	ISCW004725	conserved hypothetical protein
411203	29	323	SOS, SOS _n	AAEL007662	casein kinase	ISCW001795	casein kinase, putative
411206	45	390	SOS, SOS _n	AAEL004501	s-adenosylmethionine synthetase	ISCW013817	S-adenosylmethionine synthetase, putative
411217	49	211	SOS, SOS _n	AAEL009287	ran	ISCW023654	GTP-binding nuclear protein RAN1, putative
411219	34	170	SOS, SOS _n	AAEL005968	Ubiquitin-fold modifier-conjugating enzyme 1 (Ufm1-conjugating enzyme 1)	ISCW016178	Ufm1-conjugating enzyme, putative
411229	45	153	SOS, SOS _n	AAEL000291	V-type proton ATPase 16 kDa proteolipid subunit (V-ATPase 16 kDa proteolipid subunit)(Vacuolar proton pump 16 kDa proteolipid subunit)(V-ATPase subunit C)	ISCW018346	vacuolar H ⁺ ATPase
411236	36	179	SOS, SOS _n	AAEL012123	conserved hypothetical protein	ISCW000018	membrane protein, putative
411281	30	271	SOS, SOS _n	AAEL009304	syntaxin _n	ISCW023653	syntaxin, putative
411282	63	242	SOS, SOS _n	AAEL012585	60S ribosomal protein L7	ISCW004030	ribosomal protein, putative
411284	32	125	SOS, SOS _n	AAEL012237	bhlhzip transcription factor max/bigmax	ISCW013570	Upstream transcription factor 2/L-myc-2 protein, putative
411286	47	196	SOS, SOS _n	AAEL013139	GTPase_rho	ISCW016777	Cdc42 protein, putative
411291	50	109	SOS, SOS _n	AAEL003942	60S ribosomal protein L44 L41, putative	ISCW021239	60S ribosomal protein L44, putative
411296	52	88	SOS, SOS _n	AAEL003234	cytochrome c oxidase, subunit VIA, putative	ISCW019235	cytochrome C oxidase, subunit VIa/COX13, putative
411301	37	116	SOS, SOS _n	AAEL001103	prefoldin, subunit, putative	ISCW010951	prefoldin, putative
411303	29	328	SOS, SOS _n	AAEL006311	nucleoporin, putative	ISCW011273	WD-repeat containing protein
411305	27	208	SOS, SOS _n	AAEL001797	endopeptidase clp, putative	ISCW021455	ATP-dependent Clp protease, proteolytic subunit, putative
411312	38	339	SOS, SOS _n	AAEL012094	casein kinase ii, alpha chain (cmgc group iv)	ISCW007259	mitogen-activated protein kinase, putative
411316	45	178	SOS, SOS _n	AAEL000208	copii-coated vesicle membrane protein P24	ISCW001359	cargo transport protein EMP24, putative
411334	31	187	SOS, SOS _n	AAEL007209	ADP-ribosylation factor, putative	ISCW017893	ADP-ribosylation factor, putative
411339	51	143	SOS, SOS _n	AAEL014944	cytochrome c oxidase polypeptide	ISCW008682	cytochrome C oxidase subunit Va

411364	45	78	SOS, SOS _n	AAEL001247	conserved hypothetical protein	ISCW022064	secreted salivary gland peptide, putative
411373	32	210	SOS, SOS _n	AAEL003454	phocein protein, putative	ISCW007016	cell cycle-associated protein, putative
411376	44	226	SOS, SOS _n	AAEL005508	NADH-ubiquinone oxidoreductase 24 kda subunit	ISCW014272	NADH-ubiquinone dehydrogenase, putative
411377	33	333	SOS, SOS _n	AAEL000568	26S proteasome non-ATPase regulatory subunit	ISCW024431	26S proteasome regulatory complex, subunit RPN10/PSMD4, putative
411418	22	299	SOS, SOS _n	AAEL008648	cdk5	ISCW021518	protein kinase, putative
411439	30	98	SOS, SOS _n	AAEL009671	snrp sm protein	ISCW017363	snrp sm protein, putative
411440	37	137	SOS, SOS _n	AAEL011873	ubiquitin-conjugating enzyme	ISCW019147	ubiquitin-conjugating enzyme, putative
411467	30	174	SOS, SOS _n	AAEL005038	ubiquitin-conjugating enzyme E2	ISCW020158	ubiquitin protein ligase, putative
411469	54	122	SOS, SOS _n	AAEL008353	ribosomal protein L28, putative	ISCW002598	ribosomal protein L28, putative
411514	37	110	SOS, SOS _n	AAEL002183	oligosaccharyl transferase, subunit, putative	ISCW024010	defender against cell death
411521	34	210	SOS, SOS _n	AAEL004902	ras-related protein Rab-2A, putative	ISCW018962	RAS-related protein, putative
411522	41	252	SOS, SOS _n	AAEL003871	proteasome subunit alpha type	ISCW005463	proteasome alpha subunit, putative
411539	37	193	SOS, SOS _n	AAEL008543	Cdc42 homolog Precursor	ISCW003614	Cdc42 protein, putative
411544	41	191	SOS, SOS _n	AAEL011755	integral membrane protein, Tmp21-1 (p23), putative	ISCW007906	cop-coated vesicle membrane protein P24, putative
411591	28	183	SOS, SOS _n	AAEL013633	ubiquitin-conjugating enzyme h	ISCW018315	ubiquitin protein ligase, putative
411607	34	192	SOS, SOS _n	AAEL006091	rab6	ISCW010707	RAS-related protein, putative
411614	47	202	SOS, SOS _n	AAEL004823	Manganese-Iron(Mn-Fe) Superoxide Dismutase.	ISCW016585	manganese superoxide dismutase, putative
411619	41	439	SOS, SOS _n	AAEL012095	26S protease regulatory subunit	ISCW018294	ATPase, putative
411625	34	88	SOS, SOS _n	AAEL006688	conserved hypothetical protein	ISCW014561	pre-mRNA splicing factor SF3B 10 kDa subunit, putative
411635	41	90	SOS, SOS _n	AAEL011478	cytoplasmic dynein light chain	ISCW003606	dynein light chain
411655	52	269	SOS, SOS _n	AAEL003193	inorganic pyrophosphatase	ISCW000237	secreted inorganic pyrophosphatase, putative
411659	54	123	SOS, SOS _n	AAEL007771	60S ribosomal protein L22	ISCW011505	ribosomal protein L22, putative
411676	50	67	SOS, SOS _n	AAEL003160	conserved hypothetical protein	ISCW005287	p8 nuclear protein
411694	34	446	SOS, SOS _n	AAEL002851	tubulin beta chain	ISCW017133	beta tubulin
411698	34	118	SOS, SOS _n	AAEL006566	suppressor of ty	ISCW010721	transcription elongation factor SPT4, putative
411709	53	121	SOS, SOS _n	AAEL007184	vacuolar ATP synthase subunit g	ISCW013692	vacuolar H ⁺ -ATPase V1 sector, subunit G, putative
411723	50	183	SOS, SOS _n	AAEL007065	ADP-ribosylation factor, arf	ISCW022927	ADP-ribosylation factor
411731	39	425	SOS, SOS _n	AAEL009882	retinoblastoma-binding protein 4 (rbp4)	ISCW016118	retinoblastoma-binding protein, putative
411744	43	193	SOS, SOS _n	AAEL012113	vacuolar ATP synthase proteolipid subunit	ISCW018464	vacuolar H ⁺ ATPase, putative
411752	35	151	SOS, SOS _n	AAEL014639	ubiquitin conjugating enzyme, putative	ISCW006743	ubiquitin protein ligase, putative
411764	39	82	SOS, SOS _n	AAEL005143	ubiquinone binding protein, putative	ISCW019560	ubiquinol-cytochrome C reductase complex, putative
411766	39	236	SOS, SOS _n	AAEL009808	ATP synthase subunit d	ISCW019075	vacuolar H ⁺ -ATPase V1 sector, subunit D, putative
411774	36	294	SOS, SOS _n	AAEL000270	26S proteasome regulatory subunit 7, psd7	ISCW022113	26S proteasome regulatory subunit 7, psd7, putative
411779	30	183	SOS, SOS _n	AAEL012996	rho guanine dissociation factor	ISCW020878	rho GDP dissociation inhibitor, putative
411784	40	262	SOS, SOS _n	AAEL009101	Eukaryotic translation initiation factor 3 subunit F (eIF3f)(Eukaryotic translation initiation factor 3 subunit 5)	ISCW001816	M0V-34 protein, putative
411789	40	347	SOS, SOS _n	AAEL003179	protein arginine n-methyltransferase 1,	ISCW023973	protein arginine N-methyltransferase PRMT1, putative
411803	35	196	SOS, SOS _n	AAEL013151	orf protein	ISCW009067	conserved hypothetical protein
411804	29	412	SOS, SOS _n	AAEL004668	septin	ISCW018518	septin, putative
411817	43	259	SOS, SOS _n	AAEL010330	succinate dehydrogenase	ISCW018067	succinate dehydrogenase, putative
411828	39	196	SOS, SOS _n	AAEL007845	rab5	ISCW016350	RAS-related protein, putative
411838	27	196	SOS, SOS _n	AAEL004846	conserved hypothetical protein	ISCW002572	receptor targeting protein Lin-7, putative
411839	31	355	SOS, SOS _n	AAEL005512	speckle-type poz protein	ISCW018847	Kruppel-like zinc finger protein, putative

409962	26	533	AAEL006988	transcription initiation factor TFIIID subunit 6	ISCW010253	transcription initiation factor tfii-D, putative
409963	19	191	AAEL014016	breast cancer metastasis-suppressor	ISCW000096	breast cancer metastasis-suppressor, putative
409964	7	336	AAEL012356	GPCRSomatostatin Family	ISCW007666	7 transmembrane receptor, putative
409965	31	933	AAEL011382	116 kda U5 small nuclear ribonucleoprotein component	ISCW015782	U5 snRNP-specific protein, putative
409966	16	780	AAEL010443	membrane associated guanylate kinase inverted 1, mag1	ISCW022604	atrophin 1 interacting protein 1, aip1, putative
409967	35	483	AAEL005617	UTP-glucose-1-phosphate uridylyltransferase 2	ISCW020596	UTP-glucose-1-phosphate uridylyltransferase, putative
409968	32	243	AAEL003151	conserved hypothetical protein	ISCW006698	conserved hypothetical protein
409970	8	209	AAEL013314	calicylin binding protein	ISCW012295	calicyclin-binding protein CacyBP, putative
409971	11	790	AAEL002876	conserved hypothetical protein	ISCW018351	CUB domain-containing protein, putative
409973	29	455	AAEL002428	conserved hypothetical protein	ISCW011302	topoisomerase TOP1-interacting protein BTBD1, putative
409974	11	1565	AAEL012267	macroglobulin/complement	ISCW003089	conserved hypothetical protein
409975	30	187	AAEL006789	tbp-associated factor	ISCW012450	transcription initiation factor TFII-D component, putative
409977	19	241	AAEL006107	mitotic and DNA damage checkpoint protein hus1	ISCW016182	mitotic and DNA damage checkpoint protein hus1, putative
409978	33	451	AAEL009913	DEAD box ATP-dependent RNA helicase	ISCW005709	ATP-dependent RNA helicase, putative
409980	22	530	AAEL000475	conserved hypothetical protein	ISCW017045	conserved hypothetical protein
409981	21	567	AAEL003475	aromatic amino acid decarboxylase	ISCW003015	aromatic amino acid decarboxylase, putative
409982	12	233	AAEL007908	nicotinamide mononucleotide adenylyltransferase	ISCW008048	nicotinamide mononucleotide adenylyltransferase, putative
409983	26	471	AAEL011242	udp-glucose 6-dehydrogenase	ISCW009911	UDP-glucose dehydrogenase, putative
409985	21	575	AAEL010911	Kelch-like protein diablo	ISCW000014	conserved hypothetical protein
409988	19	734	AAEL013334	conserved hypothetical protein	ISCW015144	conserved hypothetical protein
409989	20	414	AAEL014750	pyruvate dehydrogenase	ISCW014874	protein phosphatase 2C, putative
409990	15	386	AAEL010587	conserved hypothetical protein	ISCW017511	conserved hypothetical protein
409991	32	267	AAEL008461	surfeit locus protein acetyltransferase B complex subunit NAA25 homolog	ISCW010081	surfeit 4 protein, putative
409993	15	788	AAEL004142	(N-terminal acetyltransferase B complex subunit MDM20 homolog)	ISCW007346	hypothetical protein
409994	34	1127	AAEL001421	high density lipoprotein binding protein / vigilin	ISCW008601	high-density lipoprotein-binding protein, putative
409995	15	633	AAEL012146	ubiquitin specific protease	ISCW018513	ubiquitin specific protease, putative
409996	25	711	AAEL002810	DNA replication licensing factor MCM5	ISCW020884	DNA replication licensing factor MCM5, putative
409997	21	287	AAEL008174	conserved hypothetical protein	ISCW016520	WD-repeat protein, putative
409998	21	248	AAEL006224	short-chain dehydrogenase	ISCW011478	reductase, putative
410000	28	315	AAEL011848	conserved hypothetical protein	ISCW006914	conserved hypothetical protein
410002	13	870	AAEL007966	glutamate receptor, ionotropic ampa, subunit 1, 2, 3,	ISCW016542	glutamate receptor, putative
410003	29	396	AAEL014965	nova	ISCW019027	RNA-binding protein Nova-1, putative
410004	16	165	AAEL008064	conserved hypothetical protein	ISCW021477	membrane protein, putative
410006	14	310	AAEL000383	beta-1,3-galactosyltransferase brn	ISCW005339	galactosyltransferase, putative
410007	25	318	AAEL011473	chromatin regulatory protein sir2	ISCW014656	chromatin regulatory protein sir2, putative
410010	17	634	AAEL000434	lipid a export ATP-binding/permease protein msha	ISCW008199	multidrug resistance protein, putative
410011	27	1076	AAEL009677	membrane-associated protein gex-3	ISCW009279	membrane-associated protein Hem, putative
410013	29	180	AAEL011379	coenzyme q10 biosynthesis protein	ISCW024637	coenzyme q10 biosynthesis protein, putative
410015	12	415	AAEL009600	Ecdysone receptor (Ecdysteroid receptor)(20-hydroxyecdysone receptor)(20E receptor)(EcRH)(AaeEcR) (Nuclear receptor subfamily 1 group H member 1)	ISCW003147	AamEcRA1, putative
410017	8	120	AAEL004069	mitochondrial 28S ribosomal protein S14 (s14mt)	ISCW020298	ribosomal protein S14, putative
410018	12	577	AAEL010681	sodium/chloride dependent neurotransmitter transporter	ISCW017889	GABA transporter, putative
410019	24	153	AAEL011606	conserved hypothetical protein	ISCW018976	transmembrane protein, putative

410020	27	296	AAEL005203	conserved hypothetical protein	ISCW000691	conserved hypothetical protein
410024	16	789	AAEL010256	E3 ubiquitin ligase	ISCW008410	E3 ubiquitin ligase, putative
410025	23	679	AAEL010359	ATP-dependent transporter	ISCW017659	eIF2-interacting protein ABC50, putative
410026	15	684	AAEL006532	histone transcription regulator	ISCW017799	histone transcription regulator, putative
410027	28	374	AAEL011865	conserved hypothetical protein	ISCW004253	conserved hypothetical protein
410028	32	252	AAEL001496	transcription elongation factor s-ii	ISCW000010	transcription factor S-II, putative
410029	32	887	AAEL004546	coatamer beta subunit	ISCW012850	coatamer beta subunit, putative
410030	35	223	AAEL002597	conserved hypothetical protein	ISCW003803	WW domain-binding protein, putative
410031	24	754	AAEL014534	conserved hypothetical protein	ISCW003250	conserved hypothetical protein
410032	23	335	AAEL010077	xpa-binding protein 1 (mbdin)	ISCW016116	xpa-binding protein, putative
410033	22	726	AAEL001657	DEAD box ATP-dependent RNA helicase	ISCW004825	DEAD box ATP-dependent RNA helicase, putative
410034	37	176	AAEL003704	39S ribosomal protein L13, mitochondrial	ISCW002233	ribosomal protein L13, putative
410035	22	249	AAEL012580	3-hydroxyisobutyrate dehydrogenase	ISCW022143	actin regulatory protein, putative
410036	28	323	AAEL013869	RNA-binding protein	ISCW015573	RNA recognition motif-containing protein
410037	25	204	AAEL002284	Mediator of RNA polymerase II transcription subunit 18 (Mediator complex subunit 18)	ISCW017119	mediator of RNA polymerase II transcription subunit, putative
410038	32	335	AAEL010057	conserved hypothetical protein	ISCW021899	cell division cycle regulator protein, putative
410039	41	777	AAEL000293	ebna2 binding protein P100	ISCW014289	4SNc-Tudor domain protein, putative
410040	13	212	AAEL003501	conserved hypothetical protein	ISCW000405	conserved hypothetical protein
410041	12	891	AAEL008587	glutamate receptor, ionotropic, N-methyl d-aspartate	ISCW010976	glutamate receptor, putative
410042	40	244	AAEL013656	bm-40 precursor	ISCW022231	matricellular protein osteonectin/SPARC/BM-40, putative
410043	25	952	AAEL008741	importin (ran-binding protein)	ISCW015464	importin beta, nuclear transport factor, putative
410044	25	830	AAEL009308	WD-repeat protein	ISCW018126	WD-repeat protein, putative
410045	25	128	AAEL006628	conserved hypothetical protein	ISCW006148	conserved hypothetical protein
410046	25	466	AAEL010246	conserved hypothetical protein	ISCW014909	conserved hypothetical protein
410047	19	494	AAEL004685	succinate semialdehyde dehydrogenase	ISCW007437	succinate semialdehyde dehydrogenase, putative
410048	24	454	AAEL007787	5-aminolevulinic acid synthase	ISCW020754	serine palmitoyltransferase, putative
410049	17	165	AAEL008700	conserved hypothetical protein	ISCW004969	survival motor neuron protein, putative
410051	14	627	AAEL008574	acyl-CoA oxidase	ISCW017262	peroxisomal acyl-CoA oxidase, putative
410052	20	543	AAEL006876	igf2 mRNA binding protein, putative	ISCW009590	conserved hypothetical protein
410053	26	242	AAEL005911	mitochondrial carrier protein	ISCW001666	carrier protein PET8, putative
410054	47	408	AAEL012904	rab gdp-dissociation inhibitor	ISCW017892	GDI-1 GDP dissociation inhibitor, putative
410055	27	700	AAEL003873	glycerol-3-phosphate dehydrogenase	ISCW023707	glycerol-3-phosphate dehydrogenase, putative
410056	22	202	AAEL008508	translin	ISCW007650	secreted salivary gland peptide, putative
410057	37	180	AAEL007549	phosphatidylethanolamine-binding protein	ISCW014710	phosphatidylethanolamine-binding protein, putative
410058	24	853	AAEL009353	ssm4 protein	ISCW007748	ssm4 protein, putative
410059	15	646	AAEL014106	ATP-dependent RNA helicase	ISCW014008	RNA helicase, putative
410060	38	379	AAEL002160	GTP-binding protein	ISCW007252	GTP-binding protein, putative
410061	17	359	AAEL009057	cyclin e	ISCW002491	G2/mitotic-specific cyclin A, putative
410062	29	189	AAEL012451	conserved hypothetical protein	ISCW016216	potassium channel protein, putative
410064	20	1218	AAEL008340	cell adhesion molecule	ISCW020054	neuronal cell adhesion molecule, putative
410065	11	751	AAEL010483	oxysterol binding protein	ISCW002574	cytochrome P450, putative
410066	16	264	AAEL009744	conserved hypothetical protein	ISCW005002	conserved hypothetical protein

410067	24	128	AAEL008223	conserved hypothetical protein	ISCW021334	conserved hypothetical protein
410068	28	177	AAEL015263	RNA and export factor binding protein	ISCW001860	THO complex subunit, putative
410069	17	384	AAEL001870	glycerate kinase	ISCW002423	glycerate kinase, putative
410070	9	217	AAEL008346	achaete-scute complex protein T3, putative	ISCW001920	conserved hypothetical protein
410072	17	1048	AAEL011417	synaptojanin	ISCW017778	synaptojanin, putative
410073	23	1544	AAEL004716	chromodomain helicase DNA binding protein	ISCW004121	chromodomain helicase DNA binding protein, putative
410074	7	430	AAEL000751	Na/Ca exchanger	ISCW010328	Na ⁺ /Ca ²⁺ K ⁺ independent exchanger, putative
410076	17	394	AAEL000004	glycosyltransferase	ISCW001330	glycosyltransferase, putative
410077	17	440	AAEL007457	insect origin recognition complex subunit	ISCW019201	origin recognition complex, second largest subunit ORC2, putative
410078	16	903	AAEL009168	conserved hypothetical protein	ISCW018499	heat shock protein 70 (HSP70)-interacting protein, putative
410082	33	243	AAEL007229	conserved hypothetical protein	ISCW009068	membrane protein, putative
410085	23	364	AAEL011121	CAP10 family protein AAEL011121 Precursor	ISCW013303	conserved hypothetical protein
410086	23	453	AAEL003064	conserved hypothetical protein	ISCW001820	solute carrier, putative
410087	21	342	AAEL005985	conserved hypothetical protein	ISCW018154	conserved hypothetical protein
410088	7	332	AAEL012014	l-lactate dehydrogenase	ISCW016026	NAD-dependent malate dehydrogenase, putative
410089	54	235	AAEL003675	ubiquinol-cytochrome c reductase iron-sulfur subunit	ISCW014071	ubiquinol cytochrome C reductase, subunit RIP1, putative
410090	14	1893	AAEL004720	dedicator of cytokinesis protein 9	ISCW020740	dock-9, putative
410091	31	762	AAEL009839	Nuclear cap-binding protein subunit 1 (80 kDa nuclear cap-binding protein)(NCBP 80 kDa subunit)(CBP80)	ISCW011779	cap binding protein, putative
410093	42	657	AAEL007718	Eukaryotic translation initiation factor 3 subunit B (eIF3b)(Eukaryotic translation initiation factor 3 subunit 9)	ISCW014933	translation initiation factor 3, subunit B, putative
410094	12	602	AAEL005424	actin binding protein, putative	ISCW010216	gigaxonin, putative
410095	15	1209	AAEL009375	plekhh1	ISCW000929	plekhH1, putative
410096	31	1143	AAEL007174	tripeptidyl peptidase ii	ISCW006099	tripeptidyl-peptidase II, putative
410097	29	568	AAEL004514	conserved hypothetical protein	ISCW014219	SEL-1, putative
410099	7	410	AAEL007412	sphingomyelin phosphodiesterase	ISCW005990	acid sphingomyelinase, putative
410100	12	1201	AAEL003438	conserved hypothetical protein	ISCW008405	hypothetical protein
410101	13	1200	AAEL008592	ribonuclease iii	ISCW023600	ribonuclease III, putative
410102	12	931	AAEL000128	P130	ISCW002848	cell cycle regulator p107, putative
410103	32	241	AAEL003344	metaxin	ISCW005144	metaxin, putative
410104	30	231	AAEL005070	conserved hypothetical protein	ISCW015579	molecular chaperone, putative
410105	16	489	AAEL006419	recombining binding protein suppressor of hairless	ISCW010197	recombining binding protein suppressor of hairless, putative
410106	16	309	AAEL011386	conserved hypothetical protein	ISCW021962	conserved hypothetical protein
410107	21	164	AAEL010931	conserved hypothetical protein	ISCW023938	conserved hypothetical protein
410108	25	321	AAEL010045	Protein FAM50 homolog	ISCW012217	XAP-5, putative
410109	22	280	AAEL008096	mitochondrial ornithine transporter	ISCW003704	carnitine-acylcarnitine carrier protein, putative
410110	21	482	AAEL012519	actin binding protein, putative	ISCW007639	conserved hypothetical protein
410111	24	412	AAEL000704	synaptotagmin,	ISCW011463	chr10 synaptotagmin, putative
410113	13	667	AAEL014636	rhoGTPase	ISCW010048	rhoGTPase, putative
410114	22	297	AAEL012117	mitochondrial carrier protein	ISCW010343	oxodicarboxylate carrier protein, putative
410115	13	996	AAEL011792	potassium/chloride symporter, putative	ISCW015065	solute carrier, putative
410116	35	187	AAEL003505	jun	ISCW000545	transcription factor Ap-1, putative
410117	23	472	AAEL015123	n6-adenosine-methyltransferase ime4	ISCW004856	N6-adenosine-methyltransferase 70 kDa subunit, putative
410119	17	1252	AAEL001141	transcriptional regulator ATRX (X-linked helicase II)	ISCW009437	conserved hypothetical protein

410121	22	247	AAEL010373	dullard protein	ISCW008600	TFII-F-interacting CTD phosphatase, including NLI-interacting factor, putative
410122	22	203	AAEL006839	ring finger protein	ISCW006001	Locus-specific chromosome binding protein, putative
410123	26	123	AAEL008170	conserved hypothetical protein	ISCW015525	conserved hypothetical protein
410124	32	444	AAEL012472	kinesin light chain 1 and	ISCW011646	kinesin light chain, putative
410126	14	414	AAEL010653	alpha-l-fucosidase	ISCW012070	alpha-l-fucosidase, putative
410127	16	184	AAEL006735	conserved hypothetical protein	ISCW008217	gemin2, putative
410128	9	191	AAEL014821	hypothetical protein	ISCW003581	flavonol reductase/cinnamoyl-CoA reductase, putative
410129	21	4570	AAEL007132	dynein heavy chain	ISCW021660	cytoplasmic dynein heavy chain, putative
410130	14	1169	AAEL002850	patched 1,	ISCW001054	patched-2 protein, putative
410131	20	312	AAEL009533	conserved hypothetical protein	ISCW014128	conserved hypothetical protein
410132	26	80	AAEL004879	conserved hypothetical protein	ISCW002106	dolichol-phosphate mannosyltransferase subunit, putative
410133	29	411	AAEL011117	histone deacetylase	ISCW012528	histone deacetylase 1, 2, 3, putative
410134	20	739	AAEL011949	transferrin	ISCW010864	transferrin, putative
410135	33	165	AAEL000297	mitochondrial ribosomal protein S25	ISCW023888	ribosomal protein mRpS25, putative
410136	20	751	AAEL014307	oligophrenin	ISCW015201	Rho GTPase-activating protein, putative
410137	23	124	AAEL010832	Pop5 protein, putative	ISCW006802	ribonuclease P/MRP protein subunit POP5, putative
410138	29	241	AAEL009462	hydroxyacylglutathione hydrolase	ISCW009885	hydroxyacylglutathione hydrolase, putative
410139	21	154	AAEL007034	conserved hypothetical protein	ISCW002129	molecular chaperone, putative
410140	24	568	AAEL007282	syntaxin binding protein-1,2,3	ISCW002599	acetylcholine regulator unc-18, putative
410141	50	380	AAEL010697	3-ketoacyl-coa thiolase, mitochondrial (beta-ketothiolase) (acetyl-coa acyltransferase) (mitochondrial 3-oxoacyl-coa thiolase)	ISCW002623	acetyl-CoA acetyltransferase, putative
410142	19	791	AAEL008134	ABC transporter	ISCW021257	ABC transporter, putative
410143	27	455	AAEL012394	glucosidase ii beta subunit	ISCW013550	protein kinase C substrate, 80 KD protein, heavy chain, putative
410144	25	309	AAEL004952	protein N-terminal asparagine amidohydrolase, putative	ISCW013167	N-terminal Asn amidase, putative
410145	29	129	AAEL001706	p15-2a protein, putative	ISCW009013	p15-2B protein, putative
410146	21	1647	AAEL006082	transcription initiation factor TFIIID subunit 1	ISCW012742	transcription initiation factor tfii-D, putative
410147	36	336	AAEL003285	translocation associated membrane protein	ISCW000550	translocation associated membrane protein, putative
410148	10	283	AAEL012330	tata-box binding protein	ISCW019416	TATA-box binding protein (TBP), component of TFII-D and TFIIIB, putative
410150	21	654	AAEL010317	DEAD box ATP-dependent RNA helicase	ISCW012337	ATP-dependent RNA helicase, putative
410151	17	489	AAEL005484	sorting nexin	ISCW021836	phosphatase/kinase domain-containing protein, putative
410153	26	687	AAEL009169	synaptotagmin, putative	ISCW008893	extended synaptotagmin-2, putative
410154	17	443	AAEL008643	RNA lariat debranching enzyme, putative	ISCW020528	conserved hypothetical protein
410156	19	508	AAEL007738	app binding protein	ISCW010268	amyloid beta precursor protein binding protein, putative
410157	27	213	AAEL006641	conserved hypothetical protein	ISCW016223	conserved hypothetical protein
410158	21	278	AAEL012476	conserved hypothetical protein	ISCW003533	conserved hypothetical protein
410160	22	325	AAEL010543	conserved hypothetical protein	ISCW009124	conserved hypothetical protein
410161	31	290	AAEL007482	Mediator of RNA polymerase II transcription subunit 27 (Mediator complex subunit 27)	ISCW004209	cofactor required for Sp1 transcriptional activation, putative
410163	20	1573	AAEL013012	brefeldin a-inhibited guanine nucleotide-exchange protein	ISCW019522	brefeldin A-inhibited guanine nucleotide-exchange protein, putative
410165	13	345	AAEL014033	conserved hypothetical protein	ISCW010799	conserved hypothetical protein
410166	36	530	AAEL005422	pyrroline-5-carboxylate dehydrogenase	ISCW015982	aldehyde dehydrogenase, putative
410167	28	117	AAEL002503	yippee protein	ISCW013398	Yippee-type zinc-binding protein, putative
410168	14	497	AAEL000899	glycosyltransferase	ISCW012945	glycosyltransferase, putative
410169	8	1168	AAEL008929	C-TypeLectin (CTL) - selectin like.	ISCW022311	furrowed, putative

410170	14	786	AAEL009761	conserved hypothetical protein	ISCW017985	O-linked N-acetylglucosamine transferase, OGT, putative
410171	13	273	AAEL003139	short-chain dehydrogenase	ISCW013705	dehydrogenase, putative
410172	19	500	AAEL005631	conserved hypothetical protein	ISCW005548	lin-9, putative
410173	40	294	AAEL012240	protein transport protein sec13	ISCW007466	vesicle coat complex COPII, subunit SEC13, putative
410174	47	412	AAEL002334	Eukaryotic translation initiation factor 3 subunit E (eIF3e)(Eukaryotic translation initiation factor 3 subunit 6)	ISCW023004	translation initiation factor 3, subunit E, putative
410175	42	507	AAEL006946	chaperonin	ISCW008709	chaperonin complex component, TCP-1 delta subunit, putative
410177	14	365	AAEL004458	Zinc finger CCCH-type with G patch domain-containing protein	ISCW001632	zinc finger protein, putative
410180	14	1060	AAEL015108	conserved hypothetical protein	ISCW007745	conserved hypothetical protein
410181	46	419	AAEL014325	proteasome regulatory subunits	ISCW002593	26S proteasome regulatory complex, subunit RPN5/PSMD12, putative
410183	18	270	AAEL008494	mitochondrial carrier protein ymc	ISCW012133	oxodicarboxylate carrier protein, putative
410184	13	662	AAEL000321	acetyl-coa synthetase	ISCW016681	acetyl-coenzyme A synthetase, cytoplasmic, putative
410185	18	430	AAEL005863	conserved hypothetical protein	ISCW019385	hypothetical protein
410186	35	719	AAEL008171	double-stranded RNA-binding protein zn72d	ISCW007582	zinc finger protein, putative
410188	16	737	AAEL000719	pak-interacting exchange factor, beta-pix/cool-1	ISCW004999	conserved hypothetical protein
410189	22	592	AAEL014523	neuroendocrine convertase	ISCW020499	prohormone convertase, putative
410190	28	105	AAEL002860	conserved hypothetical protein	ISCW015574	conserved hypothetical protein
410192	14	514	AAEL011095	n-acetylgalactosaminyltransferase	ISCW012212	UDP-GalNAc-polypeptide N-acetylgalactosaminyl transferase, putative
410193	39	186	AAEL003418	microsomal signal peptidase 25 kda subunit	ISCW020703	signal peptidase complex, subunit SPC25, putative
410194	22	485	AAEL011857	serine/threonine-protein kinase rio1 (rio kinase 1)	ISCW010270	RIO kinase, putative
410195	16	588	AAEL010343	aryl hydrocarbon receptor nuclear translocator (arnr protein) (hypoxia-inducible factor 1 beta)	ISCW023999	aryl hydrocarbon receptor nuclear translocator, putative
410196	9	199	AAEL005785	MRAS2, putative	ISCW002370	RAS-related protein, putative
410197	29	880	AAEL012410	eukaryotic translation initiation factor 2C	ISCW013378	translation initiation factor 2C, putative
410198	21	1746	AAEL007242	conserved hypothetical protein	ISCW005186	Nipped-B protein, putative
410199	17	1644	AAEL001612	dicer-1	ISCW000890	dicer-1, putative
410200	16	340	AAEL007952	conserved hypothetical protein	ISCW023316	conserved hypothetical protein
410201	27	809	AAEL003287	Serrate RNA effector molecule homolog (Arsenite-resistance protein 2 homolog)	ISCW011341	arsenite-resistance protein, putative
410202	45	436	AAEL007681	NADH-ubiquinone oxidoreductase flavoprotein 1 (ndufv1)	ISCW005985	NADH-ubiquinone oxidoreductase, NDUFV1/51kDa subunit, putative
410204	31	504	AAEL010896	WD-repeat protein	ISCW014661	vesicle coat complex COPI, beta' subunit, putative
410205	25	236	AAEL008942	conserved hypothetical protein	ISCW014020	conserved hypothetical protein
410206	34	274	AAEL013225	NADH-cytochrome B5 reductase	ISCW021232	NADH-cytochrome B5 reductase, putative
410207	37	108	AAEL000245	conserved hypothetical protein	ISCW009129	conserved hypothetical protein
410208	19	610	AAEL003718	glucose transporter	ISCW004700	sugar transporter, putative
410210	14	440	AAEL003345	argininosuccinate lyase	ISCW009296	argininosuccinate lyase, putative
410211	22	459	AAEL003343	chaperone protein DNAj	ISCW007255	RING finger and SPRY domain-containing protein, putative
410212	25	316	AAEL008184	conserved hypothetical protein	ISCW012435	E3 ubiquitin protein ligase NRDP1, putative
410213	7	103	AAEL013709	histone H4	ISCW019498	histone H4, putative
410214	13	543	AAEL008181	alpha6-fucosyltransferase, putative	ISCW003289	glycoprotein 6-alpha-L-fucosyltransferase, putative
410215	18	303	AAEL003532	conserved hypothetical protein	ISCW014242	sprouty protein evh1 domain-containing protein, putative
410217	23	981	AAEL010598	conserved hypothetical protein	ISCW005076	regulator of nonsense transcripts, putative
410218	15	702	AAEL013335	conserved hypothetical protein	ISCW011433	transmembrane protein, putative
410219	17	1145	AAEL007503	m-rdgb2 retinal degeneration protein b	ISCW018571	retinal degeneration B protein, putative
410220	19	459	AAEL003517	conserved hypothetical protein	ISCW003597	ubiquitin-specific protease, putative

410221	22	404	AAEL008932	inwardly rectifying k+ channel,	ISCW016219	Inward rectifier K+ channel, putative
410222	16	292	AAEL009183	cytochrome oxidase biogenesis protein (oxa1 mitochondrial)	ISCW004801	cytochrome oxidase biogenesis protein, putative
410223	23	1615	AAEL001977	conserved hypothetical protein	ISCW018941	integrator complex subunit, putative
410224	13	535	AAEL007104	voltage-gated potassium channel	ISCW001662	voltage-gated potassium channel, putative
410225	22	383	AAEL006236	ddp-glucose 4-6-dehydratase	ISCW000441	ddp-glucose 4-6-dehydratase, putative
410226	19	360	AAEL010254	conserved hypothetical protein	ISCW000899	conserved hypothetical protein
410230	19	514	AAEL013824	calcium/calmodulin dependent protein kinase ii	ISCW015680	Ca2+/calmodulin-dependent protein kinase, putative
410231	21	427	AAEL010723	conserved hypothetical protein	ISCW007299	transcription elongation factor B polypeptide, putative
410232	23	566	AAEL005356	poly a polymerase	ISCW020590	poly(A) polymerase, putative
410233	21	241	AAEL007661	rab-40	ISCW016686	RAS-related protein, putative
410234	18	630	AAEL004936	conserved hypothetical protein	ISCW004355	conserved hypothetical protein
410236	18	594	AAEL004562	DNA polymerase eta	ISCW013842	DNA polymerase eta, putative
410238	15	251	AAEL006366	conserved hypothetical protein	ISCW020562	crhbp corticotropin-releasing factor binding protein, putative
410239	15	310	AAEL003824	conserved hypothetical protein	ISCW016800	conserved hypothetical protein
410240	24	143	AAEL009228	adrenodoxin	ISCW003079	ferredoxin, putative
410241	19	911	AAEL015671	DNA polymerase gamma	ISCW023232	DNA polymerase gamma, putative
410242	26	214	AAEL011934	glutathionetransferase	ISCW023198	glutathione S-transferase, putative
410243	25	387	AAEL002420	conserved hypothetical protein	ISCW009827	protein pellino, putative
410244	37	395	AAEL011973	fumarylacetoacetate hydrolase	ISCW020196	fumarylacetoacetate, putative
410245	19	211	AAEL002129	conserved hypothetical protein	ISCW020591	conserved hypothetical protein
410246	18	184	AAEL007422	cp27, putative	ISCW022150	craniofacial development protein, putative
410247	46	154	AAEL000934	clathrin light chain	ISCW019595	vesicle coat protein clathrin, light chain, putative
410248	31	313	AAEL004307	n-myc downstream regulated	ISCW010241	Misexpression suppressor of KSR, putative
410249	13	763	AAEL005207	nepriysin	ISCW007711	nepriysin, putative
410250	20	475	AAEL013887	conserved hypothetical protein	ISCW013745	hypothetical protein
410251	29	689	AAEL005025	U1 small nuclear ribonucleoprotein, putative	ISCW016604	spliceosomal protein FBP11/splicing factor PRP40, putative
410252	26	666	AAEL004221	glycogen synthase	ISCW006570	glycogen synthase, putative
410253	23	382	AAEL009766	lipoamide acyltransferase component of branched-chain alpha-keto acid dehydrogenase	ISCW018104	dihydrolipoamide transacylase, putative
410254	27	750	AAEL012991	rad25/xp-b DNA repair helicase	ISCW023179	rad25/xp-B DNA repair helicase, putative
410255	28	181	AAEL006006	swiprosin	ISCW003459	EF-Hand domain-containing protein, putative
410256	18	179	AAEL013963	tumor necrosis factor induced protein	ISCW011774	tumor necrosis factor induced protein, putative
410257	15	1209	AAEL005970	conserved hypothetical protein	ISCW020910	conserved hypothetical protein
410258	23	761	AAEL012251	low-density lipoprotein receptor (ldl)	ISCW012572	vitellogenin receptor, putative
410259	31	621	AAEL003976	conserved hypothetical protein	ISCW018465	caldesmon, putative
410260	9	385	AAEL001877	fucosyltransferase 11 (fut11)	ISCW015366	fucosyltransferase, putative
410261	16	1282	AAEL000276	conserved hypothetical protein	ISCW020004	protein VPRBP, putative
410262	15	181	AAEL006872	calponin/transgelin	ISCW004111	calponin, putative
410263	35	263	AAEL012545	proliferating cell nuclear antigen	ISCW022029	DNA polymerase delta processivity factor, putative
410264	14	164	AAEL000152	conserved hypothetical protein	ISCW017675	eppb9, putative
410265	13	1110	AAEL009249	coronin	ISCW016772	coronin, putative
410266	25	587	AAEL014771	conserved hypothetical protein	ISCW019993	RAB GTPase-activating protein, putative
410267	28	141	AAEL004433	mitochondrial ribosomal protein, L14, putative	ISCW014261	ribosomal protein L14, putative

410268	21	316	AAEL01249	Para-hydroxybenzoate-polyprenyltransferase, mitochondrial Precursor (PHB polyprenyltransferase) (EC 2.5.1.-)(Coenzyme Q biosynthesis protein 2)	ISCW020791	para-hydroxybenzoate-polyprenyl transferase, putative
410269	8	2684	AAEL010508	vacuolar protein sorting-associated protein (vps13)	ISCW015570	vacuolar protein-sorting protein, putative
410270	17	1656	AAEL005155	conserved hypothetical protein	ISCW021143	leucine zipper transcription factor, putative
410272	17	636	AAEL010939	group ii plp decarboxylase	ISCW004810	group II PLP decarboxylase, putative
410273	18	194	AAEL001246	Thymidylate kinase, putative	ISCW020200	thymidylate kinase, putative
410275	15	843	AAEL013788	sodium/calcium exchanger	ISCW013236	sodium/calcium exchanger, putative
410276	25	150	AAEL012818	conserved hypothetical protein	ISCW016468	conserved hypothetical protein
410278	15	190	AAEL008454	conserved hypothetical protein	ISCW021274	isochorismatase domain-containing protein, putative
410280	30	508	AAEL010403	past-1	ISCW024633	endocytosis/signaling protein EHD1, putative
410281	28	348	AAEL012841	conserved hypothetical protein	ISCW017582	conserved hypothetical protein
410282	44	572	AAEL006977	serine/threonine protein phosphatase 2a regulatory subunit a	ISCW003443	protein phosphatase 2A regulatory subunit A, putative
410283	20	822	AAEL010815	conserved hypothetical protein	ISCW019630	proline-serine-threonine phosphatase interacting protein, putative
410284	18	524	AAEL002386	conserved hypothetical protein	ISCW005418	conserved hypothetical protein
410285	23	385	AAEL009331	conserved hypothetical protein	ISCW023432	general transcription factor 3C polypeptide, putative
410286	28	485	AAEL000706	serine palmitoyltransferase	ISCW014209	serine palmitoyltransferase, putative
410287	21	299	AAEL003055	conserved hypothetical protein	ISCW020182	leucine zipper EF-Hand containing transmembrane protein, putative
410288	27	431	AAEL011309	orotidine-5'-phosphate decarboxylase, putative	ISCW004439	uridine 5'-monophosphate synthase, putative
410289	20	826	AAEL004791	sorting nexin	ISCW016945	sorting nexin, putative
410290	32	357	AAEL005041	Ribosome biogenesis protein WDR12 homolog	ISCW009002	Ribosome biogenesis protein WDR12 homolog [Source:UniProtKB/Swiss-Prot;Acc:B7PY76]
410291	32	252	AAEL008175	mitochondrial ribosomal protein, L44, putative	ISCW001813	39S ribosomal protein L44, putative
410292	23	144	AAEL003437	Probable cGMP 3',5'-cyclic phosphodiesterase subunit delta	ISCW018635	cGMP-phosphodiesterase, putative
410293	21	688	AAEL003839	conserved hypothetical protein	ISCW005518	sgd1p, putative
410295	32	752	AAEL002887	Armadillo segment polarity protein	ISCW023688	armadillo, putative
410296	19	665	AAEL000810	protein kinase c	ISCW004410	protein kinase C terminal domain-containing protein, putative
410299	24	322	AAEL001378	spermine synthase	ISCW019895	spermidine synthase, putative
410301	15	225	AAEL008401	conserved hypothetical protein	ISCW012989	potassium channel tetramerisation domain-containing protein, putative
410303	33	794	AAEL012918	puromycin-sensitive aminopeptidase	ISCW008629	aminopeptidase, putative
410304	25	279	AAEL012764	conserved hypothetical protein	ISCW020587	glycine N-methyltransferase, putative
410305	27	697	AAEL003623	conserved hypothetical protein	ISCW000475	phosphofurin acidic cluster sorting protein, putative
410306	7	126	AAEL000494	histone H2A	ISCW019497	histone 2A
410307	21	775	AAEL008807	inositol 5-phosphatase	ISCW006454	SAC domain-containing protein, putative
410308	14	579	AAEL008432	high-affinity choline transporter	ISCW017788	high affinity choline transporter, putative
410310	22	160	AAEL013814	phosphomevalonate kinase, putative	ISCW021370	phosphomevalonate kinase, putative
410311	50	351	AAEL006169	Lysosomal aspartic protease Precursor (EC 3.4.23.-)	ISCW023880	aspartic protease, putative
410312	31	260	AAEL000102	conserved hypothetical protein	ISCW008295	peroxisomal phytanoyl-CoA hydroxylase, putative
410313	30	480	AAEL008452	alpha-amylase	ISCW006372	preamylase, putative
410316	26	1006	AAEL004289	stromal antigen	ISCW017188	stromal antigen, putative
410317	18	238	AAEL010809	set	ISCW021350	DNA replication factor/protein phosphatase inhibitor SET/SPR-2, putative
410318	22	236	AAEL014108	aquaporin, putative	ISCW015444	conserved hypothetical protein
410319	11	354	AAEL010668	quinone oxidoreductase	ISCW023109	quinone oxidoreductase, putative
410320	23	238	AAEL004509	conserved hypothetical protein	ISCW007881	arylformamidase, putative
410321	27	292	AAEL011781	peroxisomal biogenesis factor	ISCW013561	peroxisomal biogenesis factor, putative

410322	16	443	AAEL000996	conserved hypothetical protein	ISCW022229	conserved hypothetical protein
410323	14	718	AAEL001097	hypoxia-inducible factor	ISCW023657	hypoxia-inducible factor 1 alpha, putative
410324	20	191	AAEL003972	conserved hypothetical protein	ISCW012128	conserved hypothetical protein
410325	27	214	AAEL011303	cell division protein flsj	ISCW020801	cell division protein FtsJ, putative
410326	31	335	AAEL014037	PAF acetylhydrolase 45 kDa subunit, putative	ISCW004144	pre-rRNA-processing protein IPI3, putative
410327	30	969	AAEL007078	Eukaryotic translation initiation factor 3 subunit A (eIF3a)(Eukaryotic translation initiation factor 3 subunit 10)	ISCW020306	paramyosin, putative
410328	17	208	AAEL013290	conserved hypothetical protein	ISCW023787	transmembrane protein, putative
410329	22	318	AAEL001211	COMPASS component SWD2, putative	ISCW012635	WD-repeat protein, putative
410330	31	478	AAEL002048	histidyl-tRNA synthetase	ISCW002175	histidyl-tRNA synthetase, putative
410331	21	271	AAEL011135	conserved hypothetical protein	ISCW006970	GPN-loop GTPase, putative
410332	23	309	AAEL006554	conserved hypothetical protein	ISCW019708	conserved hypothetical protein
410334	25	848	AAEL014709	methionine-tRNA synthetase	ISCW017452	methionyl-tRNA synthetase, putative
410335	27	174	AAEL014525	conserved hypothetical protein	ISCW020157	conserved hypothetical protein
410337	24	358	AAEL007909	branched-chain amino acid aminotransferase	ISCW015784	branched-chain amino acid aminotransferase, putative
410338	32	367	AAEL000278	poly(p)/ATP NAD kinase	ISCW019567	sugar kinase, putative
410339	19	413	AAEL011250	conserved hypothetical protein	ISCW016197	disks large-associated protein, putative
410340	35	226	AAEL015520	protein-L-isoaspartate o-methyltransferase	ISCW019420	protein-L-isoaspartate(D-aspartate) O-methyltransferase, putative
410341	28	136	AAEL010906	conserved hypothetical protein	ISCW015585	coiled-coil domain-containing protein, putative
410342	22	750	AAEL000081	peroxisome assembly factor-2 (peroxisomal-type ATPase 1)	ISCW018606	conserved hypothetical protein
410343	35	403	AAEL006634	acetyl-coa acetyltransferase, mitochondrial (acetoacetyl-coa thiolase)	ISCW016117	acetyl-CoA acetyltransferase, putative
410344	27	290	AAEL000805	conserved hypothetical protein	ISCW010150	alpha/beta hydrolase, putative
410345	24	970	AAEL003968	helicase	ISCW023393	helicase, putative
410346	11	327	AAEL007169	allatostatin receptor	ISCW001334	allatostatin receptor, putative
410347	16	367	AAEL010516	conserved hypothetical protein	ISCW010488	cysteine protease, putative
410348	9	846	AAEL004290	histone-lysine n-methyltransferase	ISCW005550	histone-lysine N-methyltransferase, setb1, putative
410349	21	494	AAEL000126	molybdopterin cofactor synthesis protein a	ISCW010699	molybdenum cofactor biosynthesis pathway protein, putative
410350	17	1163	AAEL012627	conserved hypothetical protein	ISCW006340	ankyrin repeat containing protein
410351	22	212	AAEL000431	conserved hypothetical protein	ISCW004594	conserved hypothetical protein
410352	48	523	AAEL010063	chaperonin	ISCW000009	chaperonin complex component, TCP-1 gamma subunit, putative
410353	17	373	AAEL010378	conserved hypothetical protein	ISCW004715	harmonin-interacting ankyrin-repeat containing protein (harp), putative
410354	34	408	AAEL011746	succinyl-coa synthetase beta chain	ISCW011750	succinyl-CoA synthetase, beta subunit, putative
410355	26	588	AAEL012171	RNA recognition motif protein split ends	ISCW005052	hypothetical protein
410357	18	391	AAEL005943	ser/thr kinase stk11 (lkb1)	ISCW015294	serine/threonine protein kinase, putative
410358	24	501	AAEL007842	conserved hypothetical protein	ISCW012548	integral membrane protein GPR177-B, putative
410359	29	411	AAEL003670	myelinprotein expression factor	ISCW015373	29 kDa ribonucleoprotein B, putative
410360	24	558	AAEL007042	far upstream (fuse) binding protein	ISCW005319	KH domain RNA binding protein, putative
410361	27	246	AAEL014040	conserved hypothetical protein	ISCW001226	conserved hypothetical protein
410362	28	364	AAEL004076	Ubiquitin-like modifier-activating enzyme 5 (Ubiquitin-activating enzyme 5)	ISCW020154	conserved hypothetical protein
410363	22	376	AAEL000241	conserved hypothetical protein	ISCW023380	transcription-associated recombination protein - Thp1p, putative
410364	34	312	AAEL001251	nsf1 cofactor P47	ISCW017698	protein tyrosine phosphatase, putative
410365	19	364	AAEL012669	DNA polymerase delta small subunit	ISCW002294	DNA polymerase delta small subunit, putative
410366	31	144	AAEL003678	diphosphoinositol polyphosphate phosphohydrolase, putative	ISCW020460	diphosphoinositol polyphosphate phosphohydrolase, putative

410367	14	241	AAEL014054	conserved hypothetical protein	ISCW013680	CUE domain-containing protein, putative
410369	22	118	AAEL015052	conserved hypothetical protein	ISCW017332	steroid receptor RNA activator, putative
410370	22	407	AAEL003367	nucleolar complex protein	ISCW011186	nucleolar complex protein, putative
410371	24	179	AAEL013761	ADP-ribosylation factor, arf	ISCW001558	ADP-ribosylation factor, ARF, putative
410372	35	1630	AAEL013614	clathrin heavy chain	ISCW019441	clathrin heavy chain, putative
410373	20	486	AAEL007858	ran GTPase-activating protein	ISCW016093	Ran GTPase-activating protein, putative
410374	15	237	AAEL003683	conserved hypothetical protein	ISCW011501	pseudouridylylase, putative
410375	19	598	AAEL005811	conserved hypothetical protein	ISCW008047	LMBR1 domain-containing protein 2-B, putative
410376	13	604	AAEL002795	rfx transcription factor	ISCW009030	rfx transcription factor, putative
410377	17	275	AAEL001208	ubiquitin-conjugating enzyme variant	ISCW002059	ubiquitin-conjugating enzyme, putative
410378	7	202	AAEL014759	catrin, putative	ISCW019177	conserved hypothetical protein
410379	26	494	AAEL002522	adenosine deaminase acting on RNA (adar)-2	ISCW018470	double-stranded RNA-specific editase B2, putative
410380	21	362	AAEL000436	conserved hypothetical protein	ISCW000706	SET and MYND domain-containing protein (SMYD), putative
410381	19	453	AAEL010565	hypothetical protein	ISCW002976	forkhead domain-containing protein, putative
410383	13	178	AAEL005140	conserved hypothetical protein	ISCW018339	conserved hypothetical protein
410384	28	283	AAEL008416	pre-mRNA processing factor	ISCW001590	U5 snRNP-associated RNA splicing factor, putative
410385	37	304	AAEL010966	ubiquitin carboxyl-terminal hydrolase isozyme L5	ISCW000206	ubiquitin C-terminal hydrolase, putative
410386	30	441	AAEL001979	membrane traffic protein	ISCW018948	protein kinase C and casein kinase substrate in neurons protein, putative
410387	23	372	AAEL010276	aminomethyltransferase	ISCW001092	aminomethyl transferase, putative
410389	41	107	AAEL008490	NADH dehydrogenase, putative	ISCW019654	NADH:CoQ oxidoreductase subunit B18, putative
410390	21	253	AAEL002165	conserved hypothetical protein	ISCW017424	hydroxypyruvate isomerase, putative
410391	34	237	AAEL000635	cop9 complex subunit 7a	ISCW021443	cop9 complex subunit 7A, putative
410393	16	609	AAEL010569	chondroitin synthase	ISCW008742	chondroitin synthase, putative
410395	11	950	AAEL013105	receptor protein tyrosine phosphatase	ISCW016699	receptor protein tyrosine phosphatase, putative
410396	30	438	AAEL002387	conserved hypothetical protein	ISCW008446	conserved hypothetical protein
410397	43	199	AAEL002401	proteasome subunit beta type	ISCW007217	20S proteasome, regulatory subunit beta, putative
410398	34	76	AAEL002523	mitochondrial inner membrane protein translocase, 9kD-subunit, putative	ISCW024170	mitochondrial import inner membrane translocase subunit Tim9, putative
410400	34	334	AAEL013020	DNA-J/hsp40	ISCW021534	molecular chaperone, putative
410401	24	298	AAEL005208	conserved hypothetical protein	ISCW008108	WD-repeat protein, putative
410402	25	781	AAEL003785	conserved hypothetical protein	ISCW005183	conserved hypothetical protein
410403	27	197	AAEL010753	conserved hypothetical protein	ISCW018633	actin-binding protein Sla2, putative
410404	16	526	AAEL000053	myotubularin	ISCW007951	conserved hypothetical protein
410405	26	733	AAEL003736	sec15	ISCW004817	sec15, putative
410406	34	243	AAEL000210	mitochondrial ribosomal protein L2	ISCW005878	ribosomal protein L2, putative
410407	23	271	AAEL004973	golgi phosphoprotein 3 (coat-protein GPP34)	ISCW014567	golgi protein, putative
410408	24	383	AAEL011912	mannose-1-phosphate guanylyltransferase	ISCW015357	GDP-mannose pyrophosphorylase, putative
410409	25	252	AAEL011276	mitochondrial glutamate carrier protein	ISCW018293	glutamate carrier protein, putative
410410	28	420	AAEL009649	brg-1 associated factor	ISCW019453	brahma/SWI2-related protein BRG-1
410411	11	1034	AAEL005014	transient receptor potential channel	ISCW016812	transient receptor potential channel 4, putative
410413	39	447	AAEL009872	alanine aminotransferase	ISCW013629	tyrosine aminotransferase, putative
410414	32	2113	AAEL009490	carbamoyl-phosphate synthase large chain	ISCW005776	carbamoyl-phosphate synthase large chain, putative
410415	24	86	AAEL002812	conserved hypothetical protein	ISCW013294	growth hormone-inducible soluble protein, putative

410416	23	207	AAEL000629	adenylate kinase 3,	ISCW020183	adenylate kinase, putative
410417	30	1089	AAEL006415	leucyl-tRNA synthetase	ISCW017581	leucyl-tRNA synthetase, putative
410418	16	496	AAEL000256	ClassB Scavenger Receptor (CD36 domain),	ISCW002412	scavenger receptor class B type I, putative
410420	23	509	AAEL003273	cell division cycle	ISCW014216	cell division cycle regulator protein, putative
410421	22	679	AAEL009232	long-chain-fatty-acid coa ligase	ISCW020859	long chain fatty acid CoA ligase, putative
410422	33	354	AAEL006048	interleukin enhancer binding factor	ISCW017579	transcription factor NFAT, subunit NF45, putative
410423	34	660	AAEL007023	estradiol 17 beta-dehydrogenase	ISCW005296	estradiol 17-beta-dehydrogenase, putative
410424	24	513	AAEL008864	conserved hypothetical protein	ISCW018647	conserved hypothetical protein
410425	40	462	AAEL006389	cathepsin 1	ISCW007008	midgut cysteine proteinase, putative
410426	18	623	AAEL002051	sodium/hydrogen exchanger 7, 9 (nhe7, nhe9)	ISCW008652	sodium/proton exchanger, putative
410427	23	309	AAEL013058	mitochondrial peptide chain release factor	ISCW004059	protein releasing factor, putative
410428	26	497	AAEL014528	nuclear protein skip	ISCW021146	ski interacting protein, putative
410429	28	275	AAEL012936	conserved hypothetical protein	ISCW021930	conserved hypothetical protein
410430	15	510	AAEL006801	conserved hypothetical protein	ISCW005356	conserved hypothetical protein
410432	24	473	AAEL005524	adenosylhomocysteinease	ISCW016595	S-adenosylhomocysteine hydrolase, putative
410433	23	1433	AAEL011092	conserved hypothetical protein	ISCW013765	Jumonji/ARID domain-containing protein, putative
410434	24	480	AAEL013028	zinc finger protein	ISCW001725	E3 ubiquitin ligase, putative
410435	28	128	AAEL003752	conserved hypothetical protein	ISCW007914	zinc finger protein, putative
410436	14	760	AAEL013460	ecotropic viral integration site	ISCW021220	ecotropic viral integration site, putative
410437	33	647	AAEL008852	conserved hypothetical protein	ISCW017512	conserved hypothetical protein
410438	19	361	AAEL001472	phosphatidyltransferase	ISCW019797	sn-1,2-diacylglycerol ethanolinamide- and cholinephosphotransferase, putative
410439	18	1195	AAEL005495	phospholipid-transporting ATPase 1 (aminophospholipid flippase 1)	ISCW000685	ATPase, class I, type 8B, putative
410440	19	591	AAEL000949	conserved hypothetical protein	ISCW020967	macoilin short form, putative
410443	13	1217	AAEL013567	ATP-dependent bile acid permease	ISCW019069	ABC transporter, putative
410444	29	331	AAEL003497	farnesyl-pyrophosphate synthetase	ISCW009264	polyprenyl synthetase, putative
410446	26	196	AAEL000844	ad-003	ISCW017218	ad-003, putative
410447	28	293	AAEL007725	reticulocalbin	ISCW002354	calumenin, putative
410448	11	1178	AAEL010379	ATP-binding cassette transporter	ISCW017811	multidrug resistance protein, putative
410449	29	317	AAEL011564	choline-phosphate cytidylyltransferase a, b	ISCW012957	cholinephosphate cytidylyltransferase, putative
410450	25	242	AAEL006776	blastoderm specific protein 25D, putative	ISCW016229	conserved hypothetical protein
410451	35	214	AAEL009829	ARL3, putative	ISCW013711	signal recognition particle receptor, beta subunit, putative
410452	16	771	AAEL009289	eg-34E.4 protein	ISCW005967	conserved hypothetical protein
410453	16	617	AAEL009619	voltage-gated potassium channel	ISCW000826	voltage-gated potassium channel, putative
410456	27	108	AAEL003755	BolA protein, putative	ISCW004806	BolA protein, putative
410458	31	679	AAEL010991	long-chain-fatty-acid coa ligase	ISCW004612	long chain fatty acid CoA ligase, putative
410459	7	127	AAEL006593	conserved hypothetical protein	ISCW005496	homeobox protein MSX-2, putative
410460	18	533	AAEL006062	neuralized	ISCW019576	neuralized, putative
410461	21	436	AAEL012306	ubiquitin-activating enzyme E1c	ISCW015506	ubiquitin-activating enzyme, putative
410462	23	892	AAEL003829	dynamin	ISCW019381	conserved hypothetical protein
410463	23	226	AAEL001013	conserved hypothetical protein	ISCW015528	transmembrane protein, putative
410464	15	503	AAEL000242	voltage-gated potassium channel	ISCW021761	potassium channel, putative
410465	30	339	AAEL009368	lipoic acid synthetase	ISCW005563	lipoic acid synthase, putative

410466	37	469	AAEL012122	26S proteasome regulatory subunit S3	ISCW024379	26S proteasome regulatory subunit S3, putative
410467	11	414	AAEL005945	GPCRDopamine Family	ISCW008552	G-protein coupled octopamine receptor, putative
410468	13	434	AAEL008262	ppa (fragment)	ISCW020389	F-box/LRR-repeat protein, putative
410470	20	1102	AAEL001570	conserved hypothetical protein	ISCW015652	conserved hypothetical protein
410471	14	1214	AAEL000446	tight junction protein	ISCW019818	tight junction protein tama, putative
410472	28	391	AAEL003758	sorting nexin	ISCW000872	sorting nexin, putative
410473	19	704	AAEL013903	gamma-tubulin complex component 2 (gcp-2)	ISCW013617	gamma-tubulin complex component, putative
410475	21	1123	AAEL011480	tpr repeat nuclear phosphoprotein	ISCW003953	tpr repeat nuclear phosphoprotein, putative
410476	15	470	AAEL001119	DNA-binding protein Ewg, putative	ISCW021965	nuclear respiratory factor, putative
410477	15	403	AAEL005468	glycosyltransferase	ISCW020444	phosphatidylinositol biosynthetic protein, putative
410478	25	436	AAEL011662	plasma glutamate carboxypeptidase	ISCW002672	transferrin receptor, putative
410479	13	632	AAEL000962	conserved hypothetical protein	ISCW011396	conserved hypothetical protein
410480	26	243	AAEL005504	conserved hypothetical protein	ISCW001949	conserved hypothetical protein
410481	28	288	AAEL006879	folate carrier protein	ISCW019120	folate carrier protein, putative
410482	24	390	AAEL003674	conserved hypothetical protein	ISCW012780	SET and MYND domain-containing protein, putative
410483	20	397	AAEL009646	conserved hypothetical protein	ISCW018203	RNA-binding protein musashi, putative
410484	22	468	AAEL000134	conserved hypothetical protein	ISCW015959	conserved hypothetical protein
410485	18	750	AAEL008465	gamma-tubulin complex component 3 (gcp-3)	ISCW015861	spindle pole body component alp6, putative
410486	23	192	AAEL015271	rac GTPase	ISCW011749	Cdc42 protein, putative
410487	15	1571	AAEL012583	tuberin	ISCW015140	tuberin, putative
410488	30	218	AAEL009539	acyl-protein thioesterase 1,2 (lysophospholipase i,ii)	ISCW015728	lysophospholipase, putative
410490	25	1061	AAEL003449	structural maintenance of chromosomes smc2	ISCW011536	SMC protein, putative
410493	25	528	AAEL014217	nicotinate phosphoribosyltransferase	ISCW021747	nicotinic acid phosphoribosyltransferase, putative
410494	20	487	AAEL008510	sphingosine kinase a, b	ISCW021926	sphingosine kinase, putative
410495	19	812	AAEL002536	E3 ubiquitin-protein ligase nedd-4	ISCW021604	ubiquitin protein ligase, putative
410496	22	297	AAEL004300	conserved hypothetical protein	ISCW003321	protein lunapark-A, putative
410497	28	284	AAEL005637	vegetabile incompatibility protein HET-E-1, putative	ISCW002765	conserved hypothetical protein
410498	32	501	AAEL006531	heat shock protein 70 (hsp70)-interacting protein	ISCW008890	heat shock protein 70 (HSP70)-interacting protein, putative
410499	11	469	AAEL003145	bestrophin 2,3,4	ISCW008543	bestrophin 2,3,4, putative
410500	16	336	AAEL010043	GPCRCalcitonin/Diuretic Hormone Family	ISCW012970	calcitonin receptor, putative
410501	21	515	AAEL006488	nucleoporin, p88, putative	ISCW022892	nuclear pore complex protein Nup88, putative
410502	26	546	AAEL011759	mRNA capping enzyme	ISCW002352	mRNA capping enzyme, putative
410504	29	692	AAEL000999	DNA replication licensing factor MCM7	ISCW023152	DNA replication licensing factor, putative
410506	23	346	AAEL005478	flavohemoprotein B5/b5r	ISCW022524	flavohemoprotein B5/b5r, putative
410507	21	1001	AAEL010698	importin beta-4	ISCW020336	karyopherin (importin) beta, putative
410508	23	277	AAEL011069	conserved hypothetical protein	ISCW011349	SPRY domain SOCS box-containing protein
410510	23	344	AAEL013260	alpha methylacyl-coa racemase	ISCW008678	alpha-methylacyl-CoA racemase, putative
410511	18	387	AAEL014670	transcription enhancer factor, putative	ISCW001055	transcriptional enhancer factor TEF-1, putative
410512	20	458	AAEL011227	conserved hypothetical protein	ISCW021535	conserved hypothetical protein
410513	23	695	AAEL010135	conserved hypothetical protein	ISCW011879	conserved oligomeric golgi complex subunit, putative
410514	20	418	AAEL004128	conserved hypothetical protein	ISCW019533	WD-repeat protein, putative
410515	17	322	AAEL003203	fatty acid desaturase, putative	ISCW005342	stearoyl-CoA desaturase, putative

410516	24	331	AAEL003330	conserved hypothetical protein	ISCW019199	conserved hypothetical protein
410517	30	208	AAEL010486	viral IAP-associated factor, putative	ISCW024073	ATP binding protein, putative
410518	44	259	AAEL003993	cyclohex-1-ene-1-carboxyl-CoA hydratase, putative	ISCW012475	enoyl-CoA hydratase, putative
410519	23	592	AAEL010432	exocyst complex-subunit protein, 84kD-subunit, putative	ISCW017660	hypothetical protein
410520	29	624	AAEL004886	rbm25 protein	ISCW020279	ensconsin, putative
410521	12	538	AAEL001367	type IV inositol 5-phosphatase	ISCW000015	type IV inositol 5-phosphatase, putative
410522	33	307	AAEL013116	mitochondrial 39S ribosomal protein L3	ISCW012830	60S ribosomal protein L3, putative
410523	28	393	AAEL008412	mitochondrial import inner membrane translocase subunit tim44	ISCW023127	mitochondrial import inner membrane translocase, subunit TIM44, putative
410524	40	605	AAEL010608	succinate dehydrogenase	ISCW000555	succinate dehydrogenase, putative
410526	33	243	AAEL006845	conserved hypothetical protein	ISCW011087	actin-bundling protein, putative
410527	14	399	AAEL012004	beta-arrestin 1,	ISCW006152	beta-arrestin, putative
410529	17	507	AAEL001525	conserved hypothetical protein	ISCW003107	golgi associated, gamma adaptin ear containing, arf binding protein, putative
410532	49	455	AAEL004523	preprotein translocase secy subunit (sec61)	ISCW020077	protein transport protein SEC61 alpha subunit, putative
410533	13	936	AAEL004982	conserved hypothetical protein	ISCW010152	transmembrane protein 16K, putative
410534	33	387	AAEL003161	adenylosuccinate synthetase	ISCW012299	adenylosuccinate synthetase, putative
410535	26	847	AAEL000217	serine/threonine protein kinase	ISCW014880	serine/threonine protein kinase TAO1, putative
410536	16	418	AAEL007843	symbol, putative	ISCW000072	A-kinase anchor protein, putative
410537	18	959	AAEL013239	bone morphogenetic protein	ISCW016869	conserved hypothetical protein
410538	22	346	AAEL013389	coproporphyrinogen iii oxidase	ISCW010977	coproporphyrinogen III oxidase, putative
410539	31	271	AAEL001030	S-formylglutathione hydrolase, putative	ISCW023289	esterase D, putative
410540	17	552	AAEL005686	conserved hypothetical protein	ISCW004039	Menin, putative
410542	15	1018	AAEL012449	myosin x	ISCW009513	myosin X, putative
410543	26	175	AAEL011790	conserved hypothetical protein	ISCW002576	vacuolar protein-sorting-associated protein, putative
410544	36	114	AAEL009278	conserved hypothetical protein	ISCW019127	brain protein, putative
410545	38	1200	AAEL002709	spliceosomal protein sap	ISCW020447	spliceosomal protein sap, putative
410546	22	324	AAEL008724	conserved hypothetical protein	ISCW016511	conserved hypothetical protein
410548	10	440	AAEL011688	cpg binding protein	ISCW009422	cpg binding protein, putative
410549	7	566	AAEL014581	cyclic-nucleotide-gated cation channel	ISCW013674	cyclic nucleotide-gated channel 2B, putative
410551	19	897	AAEL003754	actin binding	ISCW022677	alpha catenin, putative
410552	14	2642	AAEL010928	fkbp-rapamycin associated protein	ISCW011944	fkbp-rapamycin associated protein, putative
410553	37	220	AAEL008770	proteasome subunit beta type	ISCW022656	proteasome, subunit beta, putative
410554	36	107	AAEL001210	NADH ubiquinone oxidoreductase subunit, putative	ISCW016453	NADH ubiquinone oxidoreductase subunit, putative
410555	13	454	AAEL007574	conserved hypothetical protein	ISCW000705	WD domain and G-beta repeat containing protein, putative
410556	34	473	AAEL006928	dihydroipoamide dehydrogenase	ISCW016077	dihydroipoamide dehydrogenase, putative
410557	24	171	AAEL010794	prenylated rab acceptor	ISCW006473	prenylated Rab acceptor, putative
410558	12	444	AAEL005285	conserved hypothetical protein	ISCW020219	conserved hypothetical protein
410559	30	294	AAEL011776	soluble nsf attachment protein (snap)	ISCW015531	protein required for fusion of vesicles in vesicular transport, alpha-SNAP, putative
410560	38	202	AAEL003130	bcr-associated protein, bap	ISCW009367	B-cell receptor-associated protein, putative
410561	28	514	AAEL014718	shoc2	ISCW005645	lumican, putative
410562	34	241	AAEL009700	beta lactamase domain	ISCW019663	glyoxylase, putative
410563	20	585	AAEL000858	ral guanine nucleotide exchange factor,	ISCW015672	conserved hypothetical protein
410564	30	319	AAEL006788	replication factor C, 37-kDa subunit, putative	ISCW023151	replication factor C, subunit RFC4, putative

410565	20	351	AAEL010791	Autophagy-specific protein, putative	ISCW012477	conserved hypothetical protein
410566	27	944	AAEL009039	conserved hypothetical protein	ISCW005629	AP-3 complex subunit beta-1, putative
410567	24	410	AAEL007672	myst histone acetyltransferase	ISCW020926	myst histone acetyltransferase, putative
410568	18	641	AAEL014329	mixed lineage protein kinase	ISCW000436	conserved hypothetical protein
410569	12	160	AAEL002423	conserved hypothetical protein	ISCW009436	dhand, putative
410570	18	702	AAEL002152	kinesin-associated proteins	ISCW018691	kinesin-associated protein, putative
410571	12	492	AAEL000780	amino acid transporter	ISCW022717	amino acid transporter, putative
410572	26	371	AAEL008078	clk2	ISCW005620	LAMMER dual specificity kinase, putative
410573	23	387	AAEL011568	conserved hypothetical protein	ISCW019111	splicing factor, arginine/serine-rich, putative
410574	23	543	AAEL000262	conserved hypothetical protein	ISCW009704	PAB-dependent poly(A)-specific ribonuclease subunit PAN3, putative
410575	46	522	AAEL000486	chaperonin	ISCW023397	chaperonin complex component, TCP-1 eta subunit, putative
410577	17	737	AAEL013250	conserved hypothetical protein	ISCW022593	located at OATL1, putative
410578	20	322	AAEL006675	RNA-binding protein, putative	ISCW010302	conserved hypothetical protein
410579	23	517	AAEL007429	thyroid receptor interacting protein	ISCW012825	conserved hypothetical protein
410580	28	176	AAEL014760	conserved hypothetical protein	ISCW000355	chromosome 6 open reading frame 106, isoform A, putative
410581	34	134	AAEL010572	late endosomal/lysosomal MP1 interacting protein, putative	ISCW011182	MP1 adaptor interacting protein P14, putative
410582	18	206	AAEL001524	rab23	ISCW019605	RAB-23, putative
410583	20	1037	AAEL009380	phospholipase c beta	ISCW001177	phospholipase C, putative
410584	15	267	AAEL014272	molybdopterin cofactor sulfurase (mosec)	ISCW013595	molybdopterin cofactor sulfurase, putative
410587	42	942	AAEL006721	2-oxoglutarate dehydrogenase	ISCW003165	2-oxoglutarate dehydrogenase, putative
410588	24	270	AAEL006460	par-6 gamma	ISCW002459	conserved hypothetical protein
410589	21	123	AAEL001105	von Hippel-Lindau disease tumor suppressor, putative	ISCW001298	von hippel-lindau protein, putative
410590	33	979	AAEL000758	ubiquitin-activating enzyme E1	ISCW019123	ubiquitin-activating enzyme E1, putative
410591	19	219	AAEL012035	vacuolar ATP synthase subunit e	ISCW012156	vacuolar adenosine triphosphatase subunit E, putative
410592	14	114	AAEL008250	conserved hypothetical protein	ISCW009323	conserved hypothetical protein
410593	45	836	AAEL000703	glycogen phosphorylase	ISCW000885	glycogen phosphorylase, putative
410594	23	541	AAEL007633	dihydropyrimidinase	ISCW010603	Ulip2 protein, putative
410595	29	529	AAEL012980	Pescadillo homolog	ISCW009218	hypothetical protein
410596	18	431	AAEL005201	hydroxymethylglutaryl-coa synthase	ISCW002615	hydroxymethylglutaryl-CoA synthase, putative
410597	20	504	AAEL001200	aspartyl-tRNA synthetase	ISCW013693	aspartyl-tRNA synthetase, putative
410598	13	475	AAEL012884	conserved hypothetical protein	ISCW003346	conserved hypothetical protein
410599	26	256	AAEL011462	conserved hypothetical protein	ISCW007887	transcription initiation factor IIE, beta subunit, putative
410600	16	558	AAEL006074	endoplasmic reticulum mannosyl-oligosaccharide 1,2-alpha-mannosidase	ISCW012200	man(9)-alpha-mannosidase, putative
410602	24	926	AAEL010387	pre-mRNA splicing factor	ISCW022841	pre-mRNA splicing factor, putative
410603	18	1455	AAEL011274	1-phosphatidylinositol-4-phosphate 5-kinase, putative	ISCW016474	FYVE finger-containing phosphoinositide kinase, fyv1, putative
410606	24	338	AAEL009402	map kinase-activated protein kinase (mapkapk)	ISCW001150	MAP kinase-activated protein kinase, putative
410607	28	199	AAEL006779	cytochrome c oxidase assembly protein cox11	ISCW009500	cytochrome C oxidase assembly protein COX11, putative
410608	6	586	AAEL007756	neural stem cell-derived dendrite regulator	ISCW004765	lipase containing protein, putative
410610	22	537	AAEL003071	tRNA pseudouridine synthase D	ISCW022401	tRNA pseudouridine synthase D, putative
410611	38	365	AAEL005165	chaperone protein DNAj	ISCW013384	molecular chaperone, putative
410612	11	334	AAEL008296	neuropeptide y receptor (npy-r) (pr4 receptor)	ISCW020603	neuropeptide Y receptor, putative
410613	32	182	AAEL010361	rer1 protein	ISCW011502	golgi proteininvolved in ER retention, putative

410614	22	452	AAEL010021	serine/threonine-protein kinase 38 (ndr2 protein kinase)	ISCW017707	serine/threonine protein kinase, putative
410616	23	352	AAEL014026	1-acylglycerol-3-phosphate acyltransferase	ISCW003377	1-acylglycerol-3-phosphate acyltransferase, putative
410617	22	294	AAEL003230	conserved hypothetical protein	ISCW006674	conserved hypothetical protein
410618	34	132	AAEL003469	NHP2 protein, putative	ISCW014869	box H/ACA snoRNP, putative
410619	34	323	AAEL007881	conserved hypothetical protein	ISCW021395	lipoate-protein ligase, putative
410620	26	477	AAEL003539	WD-repeat protein	ISCW008840	WD-repeat protein, putative
410621	16	233	AAEL009398	Pep12p, putative	ISCW002586	syntxin, putative
410623	16	443	AAEL009242	conserved hypothetical protein	ISCW003413	hypothetical protein
410624	14	812	AAEL007372	GPCRGABA B Family	ISCW019833	metabotropic GABA-B receptor subtype, putative
410626	19	677	AAEL005993	semaphorin	ISCW016640	Semaphorin-2A, putative
410627	20	757	AAEL008373	dipeptidyl-peptidase	ISCW003960	dipeptidyl-peptidase, putative
410628	19	536	AAEL010441	conserved hypothetical protein	ISCW009963	ankyrin repeat containing protein
410629	21	233	AAEL001249	conserved hypothetical protein	ISCW001326	conserved hypothetical protein
410632	13	665	AAEL002754	nephrin	ISCW023039	irregular chiasm C-roughest protein, putative
410633	7	256	AAEL001255	hypothetical protein	ISCW002072	G protein pathway suppressor, putative
410634	18	308	AAEL014643	UDP-sugar transporter UST74c (fringe connection protein), putative	ISCW009280	solute carrier, putative
410635	22	168	AAEL009879	conserved hypothetical protein	ISCW006792	conserved hypothetical protein
410636	24	89	AAEL001177	signal recognition particle, 14kD, putative	ISCW012442	signal recognition particle 14 kD protein, putative
410638	13	324	AAEL002248	conserved hypothetical protein	ISCW016455	gonadotropin inducible transcription factor, putative
410639	29	1503	AAEL005187	laminin gamma 1 chain	ISCW009943	laminin gamma-1 chain, putative
410640	19	227	AAEL013394	conserved hypothetical protein	ISCW017191	dephospho-CoA kinase domain-containing protein, putative
410641	33	767	AAEL011733	transcription elongation regulator 1 (ca150)	ISCW016536	transcription elongation regulator, putative
410642	12	2187	AAEL002335	atb1	ISCW017915	conserved hypothetical protein
410643	33	190	AAEL005065	ptpla domain protein	ISCW018099	ptpla domain protein, putative
410645	23	453	AAEL005476	hypothetical protein	ISCW005259	conserved hypothetical protein
410646	20	592	AAEL010402	DEAD box ATP-dependent RNA helicase	ISCW022725	ATP-dependent RNA helicase, putative
410647	18	286	AAEL009574	elongase, putative	ISCW017283	fatty acyl-CoA elongase, putative
410648	30	406	AAEL011055	chaperone protein DNAj	ISCW020762	molecular chaperone, putative
410651	15	539	AAEL003562	polypeptide of 976 aa, putative	ISCW014363	conserved hypothetical protein
410652	11	1045	AAEL005082	serrate protein	ISCW006939	protein jagged-2, putative
410653	16	511	AAEL012109	sucrose transport protein	ISCW004633	sucrose transport protein, putative
410654	33	351	AAEL010506	GTP-binding protein alpha subunit, gna	ISCW008109	guanine nucleotide-binding protein G, putative
410656	21	593	AAEL007256	DNA helicase recq1	ISCW023149	DNA helicase recq1, putative
410658	29	543	AAEL006400	elongator component, putative	ISCW007494	conserved hypothetical protein
410659	30	658	AAEL006362	mitochondrial solute carrier	ISCW007479	aspartate/glutamate carrier protein, putative
410660	14	311	AAEL005216	conserved hypothetical protein	ISCW023966	conserved hypothetical protein
410661	19	164	AAEL004107	nucleoside diphosphate kinase, putative	ISCW004145	nucleoside diphosphate kinase, putative
410662	24	705	AAEL001101	ATP-dependent transporter	ISCW006228	elf2-interacting protein ABC50, putative
410663	21	287	AAEL007089	conserved hypothetical protein	ISCW014414	conserved hypothetical protein
410665	28	412	AAEL002852	conserved hypothetical protein	ISCW007630	serine/threonine protein phosphatase 2A regulatory subunit B' subunit gamma, putative
410666	12	1165	AAEL012496	hypothetical protein	ISCW017616	ankyrin repeat containing protein
410667	19	385	AAEL005460	alpha-galactosidase/alpha-n-acetylgalactosaminidase	ISCW018185	alpha-D-galactosidase, putative

410668	30	308	AAEL000091	sumo-1-activating enzyme E1a	ISCW012441	sumo-1-activating enzyme E1a, putative
410669	35	123	AAEL013964	ribosomal protein L20, putative	ISCW012003	ribosomal protein L20, putative
410670	10	1215	AAEL008902	cation-transporting ATPase fly	ISCW023587	cation-transporting ATPase fly, putative
410671	15	1372	AAEL012083	receptor protein-tyrosine phosphatase 10d	ISCW022067	receptor protein-tyrosine phosphatase 10D, putative
410672	22	222	AAEL005659	conserved hypothetical protein	ISCW019787	protein PPRC1, putative
410673	13	262	AAEL010938	l-asparaginase	ISCW000866	asparaginase, putative
410674	24	1051	AAEL001484	chromosome region maintenance protein 1/exportin	ISCW004041	Exportin, putative
410675	31	1167	AAEL003855	flightless-I, putative	ISCW012882	flightless-I, putative
410676	18	247	AAEL008758	F-box/SPRY domain-containing protein 1	ISCW024727	SPRY domain SOCS box-containing protein
410677	14	292	AAEL000266	GPCROrphan/Putative Class A Family	ISCW002641	adenosine A3 receptor, putative
410678	10	303	AAEL001458	heparan sulphate sulfotransferase	ISCW007669	heparan sulfate sulfotransferase, putative
410679	22	1024	AAEL006145	dynactin	ISCW010118	dynactin, putative
410680	27	270	AAEL009217	mitochondrial ribosomal protein, S35, putative	ISCW008744	ribosomal protein S28, putative
410681	36	235	AAEL014798	lung carbonyl reductase	ISCW020246	reductase, putative
410683	21	274	AAEL013382	nudix hydrolase 6	ISCW011736	nudt9 protein, putative
410684	21	171	AAEL000149	Histone deacetylase complex subunit SAP30 homolog	ISCW017351	sap30, putative
410685	20	889	AAEL013147	hypothetical protein	ISCW015049	dystroglycan, putative
410686	19	224	AAEL004168	syntaxin	ISCW000036	syntaxin, putative
410687	27	691	AAEL004471	conserved hypothetical protein	ISCW010714	transmembrane GTPase mfn, putative
410688	12	339	AAEL014333	conserved hypothetical protein	ISCW004247	conserved hypothetical protein
410689	26	469	AAEL011273	uridine cytidine kinase i	ISCW019521	uridine cytidine kinase I, putative
410690	22	431	AAEL005513	mothers against dpp protein	ISCW010869	conserved hypothetical protein
410691	13	227	AAEL007492	conserved hypothetical protein	ISCW008281	RAB GTPase-activating protein, putative
410693	24	273	AAEL012588	Hsp70-interacting protein, putative	ISCW020876	heat shock protein 70 (HSP70)-interacting protein, putative
410694	17	857	AAEL003914	calcium/calmodulin-dependent serine protein kinase membrane-associated guanylate kinase (cask)	ISCW022928	calcium/calmodulin-dependent serine protein kinase membrane-associated guanylate kinase, putative
410695	10	750	AAEL005131	protein kinase c-binding protein nell1	ISCW017565	protein kinase C-binding protein NELL1, putative
410696	26	224	AAEL003682	tropomyosin, putative	ISCW013782	hypothetical protein
410697	26	510	AAEL010793	F-box/leucine rich repeat protein	ISCW008435	conserved hypothetical protein
410698	15	1004	AAEL007268	conserved hypothetical protein	ISCW018167	conserved hypothetical protein
410699	16	190	AAEL009342	glutathionetransferase	ISCW020674	RAS-related protein, putative
410701	28	348	AAEL004121	ubiquitin-conjugating enzyme E2 q	ISCW000642	ubiquitin-conjugating enzyme, putative
410702	18	970	AAEL009371	conserved hypothetical protein	ISCW017809	conserved hypothetical protein
410705	60	136	AAEL006158	histone H3.3	ISCW002300	Core histone H2A/H2B/H3/H4
410707	39	130	AAEL000986	NADH-ubiquinone oxidoreductase ash1 subunit	ISCW009116	NADH-ubiquinone oxidoreductase ash1 subunit, putative
410708	18	367	AAEL013842	conserved hypothetical protein	ISCW022402	conserved hypothetical protein
410711	30	274	AAEL010949	conserved hypothetical protein	ISCW017135	methyltransferase, putative
410712	7	350	AAEL001499	conserved hypothetical protein	ISCW001043	conserved hypothetical protein
410713	19	241	AAEL002945	conserved hypothetical protein	ISCW019652	conserved hypothetical protein
410714	26	353	AAEL007354	pseudouridylyl synthase	ISCW006672	pseudouridylyl synthase, putative
410715	20	1163	AAEL004859	ATP-dependent RNA helicase	ISCW009103	ATP-dependent RNA helicase, putative
410716	16	101	AAEL007990	conserved hypothetical protein	ISCW020127	conserved hypothetical protein
410717	34	438	AAEL002296	trifunctional enzyme beta subunit (tp-beta)	ISCW005457	acetyl-CoA acetyltransferase, putative

410718	26	442	AAEL000424	leucine aminopeptidase	ISCW019719	leucine aminopeptidase, putative
410719	12	801	AAEL014059	ancient conserved domain protein 2 (cyclin m2)	ISCW008270	ancient conserved domain protein
410720	21	772	AAEL009926	conserved hypothetical protein	ISCW006643	exocyst complex component, putative
410721	27	382	AAEL010048	26S proteasome non-ATPase regulatory subunit	ISCW020845	26S proteasome regulatory complex, subunit RPN7/PSMD6, putative
410722	24	366	AAEL010427	beclin	ISCW014200	beclin, putative
410723	16	449	AAEL014992	rab gdp/GTP exchange factor	ISCW018703	vacuolar assembly/sorting protein VPS9, putative
410724	15	338	AAEL007390	UDP-glucose 4-epimerase	ISCW022551	UDP-glucose 4-epimerase/UDP-sulfoquinovose synthase, putative
410725	13	492	AAEL010941	conserved hypothetical protein	ISCW015482	conserved hypothetical protein
410726	23	258	AAEL002084	suppressor of defective silencing	ISCW014399	suppressor of defective silencing, putative
410727	13	1620	AAEL006955	cadherin	ISCW010504	conserved hypothetical protein
410728	29	232	AAEL010141	conserved hypothetical protein	ISCW019217	hypothetical protein
410729	11	992	AAEL002039	NADPH oxidase	ISCW002630	NADPH oxidase, putative
410730	24	358	AAEL009216	cAMP-dependent protein kinase type ii regulatory subunit	ISCW013063	cAMP-dependent protein kinase type II regulatory subunit, putative
410731	16	674	AAEL009161	breast carcinoma amplified sequence	ISCW003113	breast carcinoma AMPlified sequence, putative
410732	27	1836	AAEL002346	plexin a	ISCW007151	plexin A, putative
410733	15	691	AAEL010047	conserved hypothetical protein	ISCW018310	ABC transporter, putative
410734	20	337	AAEL009967	conserved hypothetical protein	ISCW011917	chaperone protein DNAj, putative
410735	11	851	AAEL012347	hypothetical protein	ISCW004070	conserved hypothetical protein
410736	30	162	AAEL010891	conserved hypothetical protein	ISCW014721	conserved hypothetical protein
410737	32	506	AAEL010060	signal recognition particle 68 kda protein	ISCW009475	signal recognition particle 68 kDa protein, putative
410741	33	153	AAEL004067	mitochondrial benzodiazepine receptor, putative	ISCW015009	peripheral-type benzodiazepine receptor, putative
410742	24	595	AAEL002186	conserved hypothetical protein	ISCW002600	conserved hypothetical protein
410743	25	281	AAEL009880	serine/threonine protein kinase	ISCW002690	serine/threonine protein kinase, putative
410744	22	555	AAEL014031	protein phosphatase 2a, regulatory subunit	ISCW003301	protein phosphatase 2A B56 regulatory subunit gamma 3 isoform, putative
410746	37	166	AAEL000942	conserved hypothetical protein	ISCW006586	membrane protein, putative
410747	12	489	AAEL007298	conserved hypothetical protein	ISCW021433	acyl-CoA reductase, putative
410748	32	314	AAEL013199	DNA-J, putative	ISCW004472	molecular chaperone, putative
410749	31	325	AAEL010094	cyclin b	ISCW004656	G2/mitotic-specific cyclin A, putative
410750	13	468	AAEL009596	sterol o-acyltransferase	ISCW007924	sterol O-acyltransferase, putative
410751	23	891	AAEL012489	conserved hypothetical protein	ISCW023939	conserved hypothetical protein
410752	14	990	AAEL001554	PHD finger protein	ISCW022763	bromodomain and PHD finger-containing protein 1, brpf1, putative
410753	27	215	AAEL007247	conserved hypothetical protein	ISCW006296	thioredoxin domain-containing protein, putative
410754	30	583	AAEL002539	fimbrin/plastin	ISCW012584	65-kDa macrophage protein, putative
410755	25	367	AAEL011701	conserved hypothetical protein	ISCW004719	DNA-directed RNA polymerase III subunit RPC5, putative
410756	37	259	AAEL005500	conserved hypothetical protein	ISCW021583	membrane protein, putative
410757	21	125	AAEL011468	protein kinase C inhibitor, putative	ISCW011972	histidine triad (hit) protein, putative
410758	20	89	AAEL010249	conserved hypothetical protein	ISCW003596	conserved hypothetical protein
410762	15	1197	AAEL006958	cell adhesion molecule	ISCW017078	Contactin-5, putative
410763	15	714	AAEL000925	leucine-zipper-like transcriptional regulator 1 (LZTR-1)	ISCW013315	lztr-1, putative
410764	21	490	AAEL007982	glycosyltransferase	ISCW001589	glycosyltransferase, putative
410765	17	280	AAEL001682	nuclear movement protein nude	ISCW023813	nuclear distribution protein NUDC, putative
410766	30	260	AAEL011357	maintenance of killer 16 (mak16) protein	ISCW022678	RNA-binding nuclear protein, putative

410767	31	281	AAEL009400	ccr4-associated factor	ISCW016788	CCR4-associated factor, putative
410768	13	617	AAEL000511	conserved hypothetical protein	ISCW012339	acetylcholinesterase, putative
410769	14	1496	AAEL013378	conserved hypothetical protein	ISCW013405	conserved hypothetical protein
410770	29	182	AAEL005263	U3 small nucleolar ribonucleoprotein protein IMP3 (U3 snoRNP protein IMP3), putative	ISCW011639	U3 small nucleolar ribonucleoprotein (snoRNP) component, putative
410771	18	659	AAEL005975	transcription initiation factor	ISCW011188	transcription initiation factor TFII-D subunit 4B, putative
410773	8	170	AAEL000359	ferritin-precursor, putative	ISCW023334	ferritin, putative
410774	11	206	AAEL005137	tetraspanin, putative	ISCW019831	tetraspanin, putative
410775	14	495	AAEL000104	notum	ISCW007176	notum, putative
410776	10	390	AAEL005834	GPCRDopamine Family	ISCW008775	G-protein coupled receptor, putative
410777	16	815	AAEL005597	DNA helicase recq5	ISCW016114	DNA helicase, putative
410778	26	448	AAEL002879	heterogeneous nuclear ribonucleoprotein r	ISCW004858	G-3-P dehydrogenase, putative
410780	21	283	AAEL007046	mitochondrial brown fat uncoupling protein	ISCW002548	oxoglutarate/malate carrier protein, putative
410781	28	633	AAEL003293	GTP-binding protein	ISCW011628	GTP-binding protein, putative
410782	22	252	AAEL011096	viral IAP-associated factor, putative	ISCW017884	conserved hypothetical protein
410784	32	450	AAEL001627	udp-n-acetylglucosamine pyrophosphorylase	ISCW020094	UDP-N-acetylglucosamine pyrophosphorylase, putative
410785	23	256	AAEL014050	testosterone-regulated protein rp2	ISCW004419	conserved hypothetical protein
410786	25	733	AAEL009469	cell division control protein	ISCW023285	Myb transforming protein, putative
410787	35	503	AAEL002687	sterol carrier protein-2, putative	ISCW022661	3-keto-acyl-CoA thiolase, putative
410788	18	401	AAEL001962	conserved hypothetical protein	ISCW005362	transmembrane protein 184C, putative
410789	23	500	AAEL006343	conserved hypothetical protein	ISCW006297	T-cell immunomodulatory protein, putative
410790	20	1463	AAEL009157	RHO GTPase activator, putative	ISCW015661	conserved hypothetical protein
410791	29	313	AAEL007469	mitotic checkpoint protein bub3	ISCW000999	mRNA export protein, putative
410793	18	333	AAEL005493	septin	ISCW020030	cell division protein, putative
410794	19	496	AAEL006544	nucleoporin P54	ISCW017334	nucleoporin P54, putative
410795	22	569	AAEL003318	oligopeptide transporter	ISCW014503	oligopeptide transporter, putative
410796	32	551	AAEL009883	26S protease (S4) regulatory subunit, putative	ISCW003461	conserved hypothetical protein
410797	17	1178	AAEL003325	niemann-pick C1	ISCW020300	Niemann-Pick type C1 domain-containing protein, putative
410798	15	284	AAEL006262	mitochondrial carrier protein	ISCW014438	secreted salivary gland peptide, putative
410799	14	556	AAEL003400	Dual specificity tyrosine-phosphorylation-regulated kinase	ISCW022190	cyclin T-dependent kinase CDK9, putative
410801	21	520	AAEL002752	anaphase-promoting complex, subunit-5, putative	ISCW005436	anaphase-promoting complex subunit, putative
410802	29	200	AAEL004152	ubiquitin-conjugating enzyme E2-25kD	ISCW018508	ubiquitin protein ligase, putative
410803	30	1185	AAEL004984	cullin-associated NEDD8-dissociated protein 1	ISCW003347	tip120, putative
410804	40	229	AAEL012731	Adenylate kinase 2, mitochondrial (AK 2)(EC 2.7.4.3) (ATP-AMP transphosphorylase 2)	ISCW018064	adenylate kinase, putative
410805	21	301	AAEL004124	mitochondrial glutamate carrier, putative	ISCW023734	folate carrier protein, putative
410808	12	1226	AAEL008915	sodium-and chloride-activated ATP-sensitive potassium channel	ISCW002159	potassium channel, putative
410809	21	108	AAEL011581	conserved hypothetical protein	ISCW021644	p53 and DNA damage-regulated protein, putative
410810	26	334	AAEL002069	malonyl coa-acyl carrier protein transacylase	ISCW010461	malonyl CoA-acyl carrier protein transacylase, putative
410811	36	278	AAEL008291	conserved hypothetical protein	ISCW001465	thioredoxin H2 protein, putative
410812	24	245	AAEL015302	conserved hypothetical protein	ISCW020649	zinc finger protein, putative
410813	25	397	AAEL004287	fas-associated protein	ISCW011870	UBX domain-containing protein, putative
410814	34	414	AAEL008517	elongation factor tu (ef-tu)	ISCW010766	translation elongation factor, putative
410815	25	184	AAEL009377	rap1 and	ISCW010282	RAS protein, putative

410816	18	2709	AAEL000405	odd Oz protein	ISCW016480	type II transmembrane protein, putative
410817	59	150	AAEL012326	calmodulin	ISCW015592	calmodulin, putative
410819	26	486	AAEL014721	mannosyl-oligosaccharide alpha-1,2-mannosidase	ISCW022061	alpha 1,2 mannosidase precursor, putative
410820	22	687	AAEL010837	conserved hypothetical protein	ISCW015268	conserved hypothetical protein
410821	27	154	AAEL003774	conserved hypothetical protein	ISCW016220	COX4 neighbor protein, putative
410822	19	275	AAEL009503	4-nitrophenylphosphatase	ISCW005015	4-nitrophenylphosphatase, putative
410823	41	327	AAEL011112	alcohol dehydrogenase	ISCW022542	sorbitol dehydrogenase, putative
410824	16	1155	AAEL006948	tomosyn	ISCW010700	tomosyn, putative
410826	23	292	AAEL008124	possible RNA methyltransferase, putative	ISCW010265	tRNA (adenine-N(1)-)methyltransferase, putative
410827	26	257	AAEL009713	conserved hypothetical protein	ISCW015693	transmembrane protein 41B, putative
410828	24	219	AAEL008956	conserved hypothetical protein	ISCW001758	conserved hypothetical protein
410830	40	553	AAEL013071	ribophorin	ISCW016170	ribophorin, putative
410831	31	691	AAEL002870	dipeptidyl peptidase iii	ISCW013099	dipeptidyl peptidase III, putative
410833	24	447	AAEL010349	tRNA (guanine-N2-)-methyltransferase, putative	ISCW008910	N2,N2-dimethylguanosine tRNA methyltransferase, putative
410834	24	646	AAEL004567	fermitin, putative	ISCW011051	conserved hypothetical protein
410836	23	127	AAEL009922	conserved hypothetical protein	ISCW007912	coiled-coil domain-containing protein, putative
410837	28	507	AAEL003109	atlastin	ISCW003306	guanylate-binding protein, putative
410838	22	540	AAEL004575	beta-galactosidase	ISCW019676	beta-galactosidase precursor, putative
410839	39	497	AAEL001134	[acylating], mitochondrial Precursor (Malonate-semialdehyde dehydrogenase [acylating])(MMSDH)(EC 1.2.1.27)(EC 1.2.1.18)	ISCW017171	methylmalonate semialdehyde dehydrogenase, putative
410840	29	980	AAEL009241	translation initiation factor if-2	ISCW009538	translation initiation factor if-2, putative
410841	38	361	AAEL000950	conserved hypothetical protein	ISCW018326	conserved hypothetical protein
410842	21	296	AAEL013392	conserved hypothetical protein	ISCW006746	conserved hypothetical protein
410843	26	80	AAEL015236	signal recognition particle, 9kD-subunit, putative	ISCW008988	signal recognition particle, subunit Srp9, putative
410844	6	457	AAEL006283	GPCRMiosuppressin Family	ISCW004636	transmembrane domains-containing protein
410845	17	1575	AAEL006038	WD-repeat protein	ISCW020971	WD-repeat protein, putative
410846	15	558	AAEL010856	dopamine beta hydroxylase	ISCW000229	copper type II, ascorbate-dependent monoxygenase, putative
410847	22	779	AAEL001332	conserved hypothetical protein	ISCW015463	integrator complex subunit, putative
410848	25	472	AAEL012008	cyclophilin	ISCW000776	cyclophilin, putative
410849	24	335	AAEL009868	protein-tyrosine sulfotransferase	ISCW009297	protein-tyrosine sulphotransferase, putative
410850	21	854	AAEL008362	sulfatase-1, sulf-1	ISCW016852	sulfatase-1, sulf-1, putative
410851	33	2590	AAEL006222	talin	ISCW023338	talin, putative
410852	25	238	AAEL010861	Mediator of RNA polymerase II transcription subunit 8 (Mediator complex subunit 8)	ISCW021461	mediator of RNA polymerase II transcription subunit, putative
410853	21	927	AAEL004666	focal adhesion kinase	ISCW017584	focal adhesion kinase, putative
410854	17	985	AAEL009668	conserved hypothetical protein	ISCW000719	hypothetical protein
410855	14	339	AAEL011703	conserved hypothetical protein	ISCW015928	poly(p)/ATP NAD kinase, putative
410856	44	148	AAEL009066	symbol, putative	ISCW022983	NADH:ubiquinone oxidoreductase, NDUFB6/B17 subunit, putative
410858	18	441	AAEL014628	conserved hypothetical protein	ISCW009010	conserved hypothetical protein
410859	28	411	AAEL004041	flotillin-2	ISCW015012	flotillin, putative
410860	20	405	AAEL012269	serine/threonine kinase NLK	ISCW003529	protein kinase, putative
410861	25	308	AAEL012209	ring finger protein	ISCW016231	RING1B protein, putative
410862	21	639	AAEL010007	conserved hypothetical protein	ISCW009216	exosome component, putative
410864	34	370	AAEL006177	histone acetyltransferase type b catalytic subunit	ISCW007480	histone acetyltransferase type B catalytic subunit, putative

410865	34	845	AAEL008216	aconitase	ISCW013457	RNA-binding translational regulator IRP, putative
410866	20	735	AAEL001507	conserved hypothetical protein	ISCW008333	conserved hypothetical protein
410867	18	940	AAEL015560	integrin alpha-ps	ISCW005672	integrin alpha-ps, putative
410868	22	475	AAEL003528	cdc73 domain protein	ISCW008023	parafibromin, putative
410870	33	510	AAEL009507	glucose-6-phosphate 1-dehydrogenase	ISCW010043	glucose 6-phosphate dehydrogenase, putative
410871	15	443	AAEL008816	vesicular monoamine transporter, putative	ISCW008269	synaptic vesicle amine transporter, putative
410872	20	1271	AAEL001716	THO complex subunit 2 (Tho2)	ISCW018150	tho2 protein, putative
410873	31	179	AAEL000435	THO complex, putative	ISCW011624	THO complex subunit, putative
410874	14	342	AAEL013546	estrogen-related receptor (ERR)	ISCW021172	estrogen receptor beta, putative
410875	17	621	AAEL015320	striatin	ISCW012130	striatin, putative
410876	18	627	AAEL008105	glutamate cysteine ligase	ISCW005918	gamma-glutamylcysteine synthetase, putative
410877	17	157	AAEL008674	conserved hypothetical protein	ISCW013934	presqualene diphosphate phosphatase, putative
410878	18	292	AAEL005102	conserved hypothetical protein	ISCW010336	conserved hypothetical protein
410879	24	663	AAEL007904	cleavage and polyadenylation specificity factor	ISCW001170	cleavage and polyadenylation specificity factor, putative
410880	27	1028	AAEL001516	vesicle associated protein, putative	ISCW017083	protein transport protein Sec31A, putative
410882	27	256	AAEL011995	conserved hypothetical protein	ISCW000788	thioredoxin domain-containing protein, putative
410883	26	270	AAEL000143	conserved hypothetical protein	ISCW017251	carbon-nitrogen hydrolase, putative
410884	27	225	AAEL007936	conserved hypothetical protein	ISCW002104	transmembrane protein, putative
410885	31	311	AAEL002833	cathepsin I	ISCW009204	cathepsin-like protease, putative
410886	25	753	AAEL000404	DNA repair helicase rad3/xp-d	ISCW000859	DNA repair helicase rad3/xp-D, putative
410887	11	258	AAEL010898	conserved hypothetical protein	ISCW006182	conserved hypothetical protein
410888	29	475	AAEL006155	conserved hypothetical protein	ISCW021549	Nicalin-1, putative
410889	16	692	AAEL005249	ABC transporter	ISCW021682	lipid exporter ABCA1, putative
410890	22	681	AAEL006881	multiple C2 domain and transmembrane region protein, putative	ISCW005839	multiple C2 and transmembrane domain-containing protein, putative
410891	8	255	AAEL004930	carbonic anhydrase	ISCW015100	carbonic anhydrase, putative
410892	27	697	AAEL015410	AMP deaminase	ISCW020690	adenosine monophosphate deaminase, putative
410893	28	707	AAEL010742	Elongation factor G1, mitochondrial Precursor (EF-Gmt) (Elongation factor G1, mitochondrial)(mEF-G 1) (Elongation factor G1)	ISCW006097	translation elongation factor G, putative
410894	17	314	AAEL011072	conserved hypothetical protein	ISCW019642	hypothetical protein
410897	16	651	AAEL002468	lipid a export ATP-binding/permease protein msha	ISCW005908	SMDR1, putative
410898	13	1227	AAEL001165	ras GTP exchange factor, son of sevenless	ISCW006011	ras GTP exchange factor, son of sevenless, putative
410899	23	1662	AAEL010069	esr1 protein	ISCW019790	conserved hypothetical protein
410900	25	206	AAEL014142	phosphatidylinositol synthase	ISCW012887	phosphatidylinositol synthase, putative
410901	17	230	AAEL007797	conserved hypothetical protein	ISCW010996	conserved hypothetical protein
410902	23	585	AAEL013274	n-acetylgalactosaminyltransferase	ISCW006788	UDP-GalNAc-polypeptide N-acetylgalactosaminyl transferase, putative
410903	26	1433	AAEL012584	DNA topoisomerase/gyrase	ISCW016225	DNA topoisomerase II, putative
410904	15	709	AAEL005453	conserved hypothetical protein	ISCW017518	hypothetical protein
410905	29	107	AAEL006647	dynein light chain, putative	ISCW011818	dynein light chain, putative
410906	20	1330	AAEL000376	HemePeroxidase.	ISCW022537	peroxidase, putative
410909	18	364	AAEL002835	conserved hypothetical protein	ISCW021265	oxidative stress-induced growth inhibitor, putative
410911	26	100	AAEL013232	conserved hypothetical protein	ISCW023864	cysteine-rich PDZ-binding protein, putative
410912	6	682	AAEL005481	alpha-glucosidase	ISCW004435	conserved hypothetical protein
410913	23	137	AAEL005735	conserved hypothetical protein	ISCW003303	conserved hypothetical protein

410914	19	1260	AAEL004320	WOC protein, putative	ISCW020075	woc protein, putative
410915	25	159	AAEL001952	28 kDa heat- and acid-stable phosphoprotein (PDGF-associated protein), putative	ISCW006172	phosphoprotein/coiled-coil protein, putative
410916	19	640	AAEL003402	sphingomyelin phosphodiesterase	ISCW018870	sphingomyelin phosphodiesterase, putative
410917	16	613	AAEL007387	conserved hypothetical protein	ISCW021035	ubiquitin associated and SH3 domain-containing protein B, putative
410918	33	460	AAEL015244	splicing factor 3a	ISCW010835	splicing factor 3A, putative
410919	20	321	AAEL003013	dual specificity mitogen-activated protein kinase kinase 4 MAPKK4	ISCW023081	mitogen-activated protein kinase kinase MKK4, putative
410922	27	404	AAEL013685	WD-repeat protein	ISCW013815	vesicle coat complex COPI, beta' subunit, putative
410923	25	851	AAEL007288	dynamain	ISCW005274	dynamain, putative
410924	30	220	AAEL002874	apolipoprotein a binding protein	ISCW022186	apolipoprotein A-I-binding protein, putative
410925	28	281	AAEL010071	spermidine synthase	ISCW018699	spermidine synthase, putative
410926	18	1989	AAEL005284	receptor tyrosine phosphatase type r2a	ISCW020666	receptor tyrosine phosphatase type r2a, putative
410927	14	1035	AAEL000466	voltage and ligand gated potassium channel	ISCW023781	ELK channel, putative
410928	24	95	AAEL003985	small nuclear ribonucleoprotein, core, putative	ISCW005877	small nuclear ribonucleoprotein (snRNP) splicing factor
410929	34	821	AAEL004364	conserved hypothetical protein	ISCW014204	beta transducin Trp-Asp domain-containing protein, putative
410930	29	469	AAEL007153	5'-AMP-activated protein kinase, catalytic alpha-1 chain	ISCW020637	serine/threonine protein kinase, putative
410931	16	1053	AAEL013920	disheveled associated activator of morphogenesis	ISCW018883	disheveled associated activator of morphogenesis, putative
410932	24	284	AAEL013248	oxysterol binding protein	ISCW002749	Cdk activating kinase, putative
410934	17	463	AAEL008067	conserved hypothetical protein	ISCW020304	transmembrane and coiled-coil domains protein, putative
410935	22	501	AAEL013723	polypyrimidine tract binding protein	ISCW018130	polypyrimidine tract binding protein, putative
410936	15	573	AAEL000654	n-acetylgalactosaminyltransferase	ISCW008344	pp-GalNAc-transferase, putative
410937	23	186	AAEL002935	conserved hypothetical protein	ISCW013317	conserved hypothetical protein
410938	9	694	AAEL002640	discoidin domain receptor	ISCW022772	discoidin domain receptor, putative
410939	15	640	AAEL014796	translation elongation factor g	ISCW014192	translation elongation factor G, putative
410940	22	546	AAEL007578	shk1 kinase-binding protein	ISCW012935	Shk1 kinase-binding protein (Skb1), putative
410941	30	558	AAEL007470	staufen	ISCW004051	staufen, putative
410942	14	493	AAEL001434	coronin	ISCW001121	Coronin, putative
410943	10	638	AAEL004533	GPCR/Metabotropic glutamate Family	ISCW010068	conserved hypothetical protein
410944	30	221	AAEL012832	cytochrome B561	ISCW005388	cytochrome B561, putative
410946	24	209	AAEL001845	short-chain dehydrogenase	ISCW002953	reductase, putative
410947	35	327	AAEL002277	cAMP-dependent protein kinase type I-beta regulatory subunit	ISCW002971	cAMP-dependent protein kinase type I-beta regulatory subunit, putative
410948	21	102	AAEL008736	p31A, putative	ISCW016888	single-stranded DNA binding protein P9, putative
410949	22	1129	AAEL010904	rothmund-thomson syndrome DNA helicase reqq4	ISCW023733	rothmund-thomson syndrome DNA helicase reqq4, putative
410950	17	330	AAEL003443	threonine dehydrogenase	ISCW020011	threonine dehydrogenase, putative
410952	21	511	AAEL010206	xylulose kinase	ISCW003924	carbohydrate kinase, putative
410953	13	285	AAEL002116	supercoiling factor, putative	ISCW020366	reticulocalbin, putative
410954	21	396	AAEL009857	conserved hypothetical protein	ISCW022329	steroidogenic acute regulatory protein, putative
410955	26	237	AAEL007761	chloride intracellular channel	ISCW002122	chloride channel, putative
410956	42	2409	AAEL015065	spectrin	ISCW000012	spectrin alpha chain, putative
410957	23	829	AAEL010086	DNA replication licensing factor MCM4	ISCW019440	DNA replication licensing factor, MCM4 component, putative
410958	24	274	AAEL001778	zinc finger protein, putative	ISCW023200	RING finger motif containing protein
410960	20	127	AAEL003174	translation initiation factor 1A, putative	ISCW002071	conserved hypothetical protein
410964	33	148	AAEL011979	calmodulin	ISCW009738	calmodulin, putative

410965	29	403	AAEL000770	platelet-activating factor acetylhydrolase isoform 1b alpha subunit	ISCW007420	U3 snoRNP-associated protein, putative
410966	29	618	AAEL000301	heat shock protein	ISCW009087	heat shock protein, putative
410967	24	537	AAEL013896	smad4	ISCW018468	conserved hypothetical protein
410968	26	61	AAEL007431	conserved hypothetical protein	ISCW018892	H/ACA ribonucleoprotein complex protein, putative
410969	24	288	AAEL004333	pax neighbour protein	ISCW022566	elongator complex protein, putative
410970	29	413	AAEL002107	sulfide quinone reductase	ISCW010340	sulfide quinone oxidoreductase/flavo-binding protein, putative
410971	26	360	AAEL010107	conserved hypothetical protein	ISCW009262	DNA methyltransferase 1-associated protein-1, putative
410972	16	612	AAEL013905	conserved hypothetical protein	ISCW007765	phosphorylated CTD-interacting factor, putative
410973	22	273	AAEL014753	mitochondrial solute carrier protein, putative	ISCW008998	solute carrier protein, putative
410975	37	115	AAEL001354	conserved hypothetical protein	ISCW006146	conserved hypothetical protein
410976	19	425	AAEL011993	conserved hypothetical protein	ISCW001518	conserved hypothetical protein
410977	40	442	AAEL002978	leucyl aminopeptidase, putative	ISCW003100	conserved hypothetical protein
410978	22	497	AAEL001395	suppression of tumorigenicity	ISCW002742	suppression of tumorigenicity, putative
410979	14	1261	AAEL008607	tep3	ISCW020822	thioester-containing protein, putative
410980	38	2244	AAEL005845	beta chain spectrin	ISCW021585	spectrin beta chain, putative
410981	23	499	AAEL008906	conserved hypothetical protein	ISCW011181	SGT1 protein, putative
410984	30	206	AAEL015202	conserved hypothetical protein	ISCW018735	membrane protein, putative
410985	19	469	AAEL009652	activin receptor type ii	ISCW001127	activin receptor type II, putative
410986	23	383	AAEL013304	conserved hypothetical protein	ISCW023064	conserved hypothetical protein
410987	29	330	AAEL000708	hiv-1 rev binding protein	ISCW001948	rRNA processing protein, putative
410988	18	937	AAEL003292	slit-robo rho GTPase activating protein 1,3	ISCW022762	slit-robo Rho GTPase activating protein 1,3, putative
410989	20	572	AAEL000248	GTP binding protein	ISCW023091	translation elongation factor EF-1 alpha/Tu, putative
410990	41	340	AAEL009414	NADH:ubiquinone oxidoreductase 39 kda subunit	ISCW023912	NADH:ubiquinone oxidoreductase, NDUFA9/39kDa subunit, putative
410991	22	335	AAEL002415	pinch	ISCW008655	LIM domain-containing protein, putative
410993	22	614	AAEL014540	hypoxia associated factor	ISCW019414	hypoxia-associated factor, putative
410994	25	128	AAEL010797	Mediator of RNA polymerase II transcription subunit 21 (Mediator complex subunit 21)	ISCW019442	mediator of RNA polymerase II transcription subunit, putative
410995	23	397	AAEL007891	xtp3-transactivated protein b	ISCW019023	secreted protein, putative
410996	32	144	AAEL012629	deoxyuridine 5'-triphosphate nucleotidohydrolase	ISCW021273	deoxyuridine 5'-triphosphate nucleotidohydrolase, putative
410997	44	329	AAEL007546	actin-related protein 2/3 complex subunit 1A	ISCW011129	conserved hypothetical protein
410999	30	921	AAEL014426	glycine dehydrogenase	ISCW006033	glycine dehydrogenase, putative
411000	16	225	AAEL001412	conserved hypothetical protein	ISCW008471	YrdC domain-containing protein
411001	42	131	AAEL008002	mitochondrial NADH:ubiquinone oxidoreductase ESSS subunit, putative	ISCW018306	conserved hypothetical protein
411002	31	314	AAEL009406	n(4)-(beta-n-acetylglucosaminy)-l-asparaginase	ISCW001950	asparaginase, putative
411003	21	534	AAEL009326	fragile X mental retardation syndrome-related protein 1, putative	ISCW002912	HyFMR1 protein, putative
411004	44	466	AAEL008167	aspartate ammonia lyase	ISCW020593	fumarase, putative
411005	14	1689	AAEL011258	dedicator of cytokinesis (dock)	ISCW021297	dedicator of cytokinesis protein, putative
411006	19	1070	AAEL013644	ubiquitously transcribed sex (x/y) chromosome tetratricopeptide repeat protein	ISCW011899	histone demethylase, putative
411007	24	539	AAEL007915	Moesin/ezrin/radixin homolog 1	ISCW021858	radixin, moesin, putative
411008	11	492	AAEL007146	voltage-gated potassium channel	ISCW006705	voltage-gated channel, putative
411009	16	179	AAEL004568	ADP-ribosylation factor, arf	ISCW018586	conserved hypothetical protein
411010	19	724	AAEL001616	vesicular-fusion protein nsf	ISCW007723	hypothetical protein
411011	6	144	AAEL011906	histone H1, putative	ISCW016230	histone H1, putative

411012	27	638	AAEL013968	conserved hypothetical protein	ISCW003251	tRNA (cytosine-5-)-methyltransferase NSUN2, putative
411013	21	2002	AAEL001583	conserved hypothetical protein	ISCW020122	protein dopey-1, putative
411014	25	591	AAEL007536	carnitine o-acyltransferase	ISCW023345	carnitine palmitoyltransferase II, putative
411015	19	1717	AAEL005712	microtubule associated protein xmap215	ISCW000916	microtubule-associated protein CP224, putative
411016	22	273	AAEL001143	conserved hypothetical protein	ISCW013592	conserved hypothetical protein
411017	10	805	AAEL005186	tmc3 protein	ISCW019054	conserved hypothetical protein
411018	25	926	AAEL009888	bumetanide-sensitive Na-K-Cl cotransport protein, putative	ISCW001819	conserved hypothetical protein
411020	28	433	AAEL004480	cell division cycle 20 (cdc20) (fizzy)	ISCW015653	WD-repeat protein, putative
411021	30	344	AAEL007581	Rfc5p, putative	ISCW003705	replication factor C, subunit RFC3, putative
411022	25	263	AAEL005391	syntenin	ISCW005775	syntenin, putative
411024	22	256	AAEL012932	conserved hypothetical protein	ISCW021394	methyltransferase, putative
411025	14	536	AAEL000008	WD and tetratricopeptide repeat protein	ISCW015563	WD and tetratricopeptide repeats containing protein, putative
411026	21	308	AAEL008100	conserved hypothetical protein	ISCW000354	pre-mRNA 3'-end-processing factor FIP1, putative
411027	21	430	AAEL004931	beta-hexosaminidase b	ISCW004208	beta-N-acetylhexosaminidase, putative
411028	43	390	AAEL013642	acyl-CoA dehydrogenase	ISCW010793	glutaryl-CoA dehydrogenase, putative
411029	46	585	AAEL000006	phosphoenolpyruvate carboxykinase	ISCW001902	phosphoenolpyruvate carboxykinase, putative
411031	19	236	AAEL001800	hsp70 binding protein	ISCW006573	HSP70 binding protein, putative
411032	26	172	AAEL010953	Protein OPI10 homolog	ISCW009277	conserved hypothetical protein
411033	27	412	AAEL009686	red protein (ik factor) (cytokine ik)	ISCW018510	IK cytokine down-regulator of HLA class II, putative
411034	24	351	AAEL009572	cyclin B3	ISCW007081	G2/mitotic-specific cyclin A, putative
411036	34	217	AAEL008837	ubiquitin-conjugating enzyme E2r	ISCW001107	ubiquitin protein ligase, putative
411037	16	1927	AAEL008244	thyroid hormone receptor-associated protein	ISCW006114	thyroid hormone receptor-associated protein, putative
411038	39	171	AAEL014889	NADH:ubiquinone dehydrogenase, putative	ISCW013963	NADH dehydrogenase, putative
411039	21	275	AAEL009399	conserved hypothetical protein	ISCW021169	nucleoporin Nup37, putative
411040	36	117	AAEL005914	conserved hypothetical protein	ISCW004724	molecular chaperone, putative
411041	19	986	AAEL006687	exportin	ISCW015575	exportin, putative
411042	19	434	AAEL002775	conserved hypothetical protein	ISCW009213	conserved hypothetical protein
411045	31	237	AAEL009497	phosphomannomutase	ISCW014574	phosphomannomutase, putative
411046	17	592	AAEL010942	kinesin-like protein KIF3A	ISCW008807	kinesin, putative
411047	28	940	AAEL006469	conserved hypothetical protein	ISCW000912	N-acetyltransferase, putative
411048	10	415	AAEL006649	tnf receptor associated factor	ISCW002862	tnf receptor associated factor, putative
411049	20	408	AAEL011317	actin	ISCW009848	actin, putative
411050	24	304	AAEL007356	conserved hypothetical protein	ISCW012565	secreted protein, putative
411051	21	134	AAEL011377	conserved hypothetical protein	ISCW001929	conserved hypothetical protein
411052	32	201	AAEL001916	eukaryotic translation initiation factor 4e	ISCW021213	translation initiation factor 4F, cap-binding subunit, putative
411053	22	298	AAEL005736	conserved hypothetical protein	ISCW008407	zinc finger protein, putative
411054	31	232	AAEL011627	ribose-5-phosphate isomerase	ISCW012092	ribose-5-phosphate isomerase, putative
411055	19	283	AAEL009174	beta-1,3-glucuronyltransferase	ISCW006942	galactosylgalactosylxyloprotein 3-beta-glucuronosyltransferase, putative
411056	23	2598	AAEL010215	filamin, putative	ISCW006929	conserved hypothetical protein
411057	25	213	AAEL003650	inhibitor of growth protein, ing1	ISCW019557	inhibitor of growth protein, putative
411058	31	378	AAEL004351	casein kinase	ISCW009144	casein kinase, putative
411059	19	479	AAEL000324	tyrosine-protein kinase dkl	ISCW009358	tyrosine kinase, putative

411061	30	385	AAEL014536	embryonic ectoderm development protein	ISCW022648	embryonic ectoderm development protein, putative
411062	31	2159	AAEL009884	ran-binding protein	ISCW015975	ran-binding protein (RanBP), putative
411063	29	395	AAEL008468	cysteine synthase	ISCW013852	cysteine synthase, putative
411065	20	351	AAEL002888	williams-beuren syndrome critical region protein	ISCW005713	williams-beuren syndrome critical region protein, putative
411066	14	595	AAEL000433	glypican	ISCW019448	glypican, putative
411067	21	713	AAEL000922	polyribonucleotide nucleotidyltransferase	ISCW009086	polyribonucleotide nucleotidyltransferase, putative
411068	27	290	AAEL002065	hydroxymethylglutaryl-coa lyase	ISCW015386	hydroxymethylglutaryl-CoA lyase, putative
411069	21	286	AAEL008653	engulfment and cell motility protein	ISCW008995	engulfment and cell motility, putative
411070	31	359	AAEL005415	ferrochelatase	ISCW016187	ferrochelatase, putative
411071	29	193	AAEL008316	mitotic spindle assembly checkpoint protein mad2	ISCW001444	mitotic spindle assembly checkpoint protein MAD2A, putative
411072	27	720	AAEL007353	cullin	ISCW023865	cullin, putative
411073	23	335	AAEL001942	o-sialoglycoprotein endopeptidase	ISCW006830	O-sialoglycoprotein endopeptidase, putative
411075	30	244	AAEL014630	cytochrome C1 heme lyase	ISCW018129	holocytochrome C synthase/heme-lyase, putative
411076	35	262	AAEL009042	ubiquitin fusion degradaton protein	ISCW013756	ubiquitin fusion-degradation protein, putative
411078	22	300	AAEL006462	TFIID subunit TAFII55, putative	ISCW000718	transcription initiation factor TFIID subunit, putative
411079	26	641	AAEL014070	vacuolar protein sorting	ISCW015564	vacuolar protein-sorting protein, putative
411080	19	697	AAEL004200	DNA replication licensing factor MCM8	ISCW013018	DNA binding protein Mcm
411081	31	268	AAEL002050	conserved hypothetical protein	ISCW017590	nitric oxide synthase interacting protein, putative
411082	18	153	AAEL004854	conserved hypothetical protein	ISCW003164	DAZ-associated protein, putative
411083	21	179	AAEL010694	5-formyltetrahydrofolate cyclo-ligase	ISCW021606	5-formyltetrahydrofolate cyclo-ligase, putative
411085	19	363	AAEL010473	NAD dependent epimerase/dehydratase	ISCW001131	C-3 sterol dehydrogenase/3-beta-hydroxysteroid dehydrogenase, putative
411086	12	971	AAEL001473	dynammin-associated protein	ISCW007884	intersectin, putative
411087	34	389	AAEL000185	eukaryotic translation initiation factor	ISCW013537	eukaryotic translation initiation factor, putative
411088	30	1055	AAEL014178	DNA polymerase delta catalytic subunit	ISCW002578	DNA polymerase delta catalytic subunit, putative
411090	15	737	AAEL007409	xylosyltransferase	ISCW015483	xylosyltransferase 1, putative
411092	29	493	AAEL010900	importin alpha	ISCW015584	karyopherin (importin) alpha, putative
411094	27	250	AAEL007710	conserved hypothetical protein	ISCW023231	OTU domain, ubiquitin aldehyde binding protein, putative
411095	16	443	AAEL013881	voltage-dependent calcium channel	ISCW011557	voltage-gated calcium channel, putative
411096	33	314	AAEL007560	core 1 udp-galactose:n-acetylgalactosamine-alpha-r beta 1,3- galactosyltransferase	ISCW016807	core 1 UDP-galactose:N-acetylgalactosamine-alpha-r beta 1,3- galactosyltransferase, putative
411097	16	759	AAEL009738	conserved hypothetical protein	ISCW000805	conserved hypothetical protein
411098	19	835	AAEL011603	prokaryotic DNA topoisomerase	ISCW010954	topoisomerase I, putative
411099	22	375	AAEL015081	tRNA (5-methylaminomethyl-2-thiouridylate)-methyltransferase	ISCW008832	tRNA (5-methylaminomethyl-2-thiouridylate)-methyltransferase, putative
411100	38	188	AAEL004081	dj-1 protein (park7)	ISCW014259	transcriptional regulator DJ-1, putative
411101	11	255	AAEL008685	lim homeobox protein	ISCW022561	lim homeobox protein, putative
411102	16	655	AAEL000822	kinesin-like protein KLP68D	ISCW020631	kinesin, putative
411103	26	114	AAEL008169	30S ribosomal protein S12	ISCW002308	30S ribosomal protein S12, putative
411104	30	190	AAEL014749	ral	ISCW014484	RAS, putative
411105	15	489	AAEL003387	cationic amino acid transporter	ISCW022258	amino acid transporter, putative
411106	21	694	AAEL003908	nuclear pore complex protein nup107	ISCW023177	nuclear pore complex protein nup107, putative
411107	29	691	AAEL013769	exocyst complex component sec6	ISCW000780	exocyst complex component sec6, putative
411108	33	371	AAEL000001	bystin	ISCW021806	cell adhesion complex protein bystin, putative
411109	26	1138	AAEL007226	nidogen	ISCW013475	lipophorin receptor, putative

411110	19	396	AAEL002113	3-oxoacyl-[acyl-carrier-protein] synthase	ISCW011150	3-oxoacyl-(acyl-carrier-protein) synthase, putative
411111	26	145	AAEL012816	conserved hypothetical protein	ISCW018066	conserved hypothetical protein
411112	18	313	AAEL002493	short-chain dehydrogenase	ISCW014201	dehydrogenase, putative
411113	13	725	AAEL002250	terminal deoxycytidyl transferase rev1	ISCW012860	terminal deoxycytidyl transferase rev1, putative
411114	27	137	AAEL006049	mitochondrial ribosomal protein, S10, putative	ISCW012124	ribosomal protein S10, putative
411115	18	167	AAEL001563	conserved hypothetical protein	ISCW012542	conserved hypothetical protein
411116	30	212	AAEL002135	tubulin-specific chaperone b (tubulin folding cofactor b)	ISCW008984	tubulin-specific chaperone B, putative
411117	17	1431	AAEL013134	DNA-directed RNA polymerase I largest subunit	ISCW015926	DNA-directed RNA polymerase I largest subunit, putative
411119	27	322	AAEL005221	internalin A, putative	ISCW009450	leucine rich domain-containing protein, putative
411120	18	347	AAEL015466	conserved hypothetical protein	ISCW014737	zinc finger protein, putative
411121	18	821	AAEL002663	kuzbanian	ISCW014660	disintegrin-metalloprotease, putative
411122	29	110	AAEL012218	mitochondria associated granulocyte macrophage csf signaling molecule	ISCW020914	granulocyte macrophage csf signaling molecule, putative
411124	20	350	AAEL009635	conserved hypothetical protein	ISCW003406	conserved hypothetical protein
411125	21	714	AAEL012479	mannosyl-oligosaccharide glucosidase	ISCW022122	mannosyl-oligosaccharide glucosidase, putative
411126	37	316	AAEL003453	failed axon connections protein, putative	ISCW008291	failed axon connections, putative
411127	28	101	AAEL006133	cofactor A, putative	ISCW013433	tubulin-specific chaperone A, putative
411128	26	1588	AAEL010526	conserved hypothetical protein	ISCW009446	nuclear pore complex protein Nup205, putative
411129	27	677	AAEL014051	nop14	ISCW015189	nop14, putative
411130	24	281	AAEL011193	steroid dehydrogenase	ISCW004704	17 beta-hydroxysteroid dehydrogenase, putative
411131	13	928	AAEL004441	importin 9 (imp9) (ran-binding protein 9)	ISCW016169	importin, putative
411132	27	242	AAEL000258	conserved hypothetical protein	ISCW006004	conserved hypothetical protein
411134	23	571	AAEL006725	U2 small nuclear ribonucleoprotein, putative	ISCW006575	splicing factor 3B subunit, putative
411135	16	645	AAEL011049	condensin, XCAP-G'-subunit, putative	ISCW005983	condensin complex subunit, putative
411136	40	472	AAEL013407	Catalase	ISCW017124	catalase, putative
411137	12	546	AAEL004240	gamma glutamyl transpeptidases	ISCW003297	gamma-glutamyltransferase, putative
411139	28	750	AAEL009311	3-hydroxy-3-methylglutaryl-coenzyme A reductase	ISCW009466	hydroxymethylglutaryl-coA reductase, putative
411140	41	172	AAEL004427	prefoldin subunit	ISCW016281	prefoldin, putative
411141	20	297	AAEL008850	cak assembly factor	ISCW021099	CDK-activating kinase assembly factor MAT1, putative
411143	35	233	AAEL000701	50S ribosomal protein L4	ISCW016414	ribosomal protein L4, putative
411144	53	205	AAEL001779	bax inhibitor	ISCW018655	Bax-mediated apoptosis inhibitor TEGT/BI-1, putative
411145	27	185	AAEL008605	inosine triphosphate pyrophosphatase (tpase) (inosine triphosphatase)	ISCW022372	inosine triphosphate pyrophosphatase, putative
411146	26	195	AAEL010012	GTP-binding protein sar1	ISCW004922	vesicle coat complex COPII, GTPase subunit SAR1, putative
411148	26	422	AAEL010704	clathrin coat assembly protein ap-1	ISCW021445	clathrin coat assembly protein, putative
411151	26	192	AAEL011006	guanylate kinase	ISCW011552	guanylate kinase, putative
411153	18	529	AAEL013237	pom1	ISCW006569	twinkle protein, putative
411154	18	351	AAEL006710	nucleolysin tia-1	ISCW016601	apoptosis-promoting RNA-binding protein TIA-1/TIAR, putative
411155	39	423	AAEL002938	skd/vacuolar sorting	ISCW007889	vacuolar sorting protein, putative
411157	27	45	AAEL013457	RNA polymerase small Zn-binding subunit, putative	ISCW023350	RNA polymerases I, II and III shared polypeptide, putative
411158	15	1167	AAEL013398	conserved hypothetical protein	ISCW003490	conserved hypothetical protein
411159	13	605	AAEL001492	cgmp-dependent 3,5-cyclic phosphodiesterase	ISCW011071	cyclic nucleotide phosphodiesterase, putative
411162	29	231	AAEL009272	KTI12 protein, putative	ISCW021272	DRL1 protein, putative
411163	44	1324	AAEL005801	bifunctional aminoacyl-tRNA synthetase	ISCW018719	glutamyl-tRNA synthetase, cytoplasmic, putative

411164	11	582	AAEL001571	conserved hypothetical protein	ISCW010448	RAS related protein, putative
411165	19	251	AAEL007105	conserved hypothetical protein	ISCW011291	potassium channel tetramerization domain-containing protein, putative
411166	40	179	AAEL001852	conserved hypothetical protein	ISCW004474	mitochondrial import inner membrane translocase, subunit TIM23, putative
411167	22	766	AAEL000707	cell cycle control protein cwf22	ISCW020150	cell cycle control protein cwf22, putative
411168	7	229	AAEL009252	conserved hypothetical protein	ISCW016445	conserved hypothetical protein
411169	30	693	AAEL004345	cysteinyl-tRNA synthetase	ISCW018842	cysteinyl-tRNA synthetase, putative
411170	12	570	AAEL006778	GPCRfrizzled/Smoothened Family	ISCW003177	transmembrane receptor, putative
411171	18	369	AAEL004087	conserved hypothetical protein	ISCW013802	chromosome 9 open reading frame, putative
411172	27	175	AAEL001619	conserved hypothetical protein	ISCW007521	exosomal 3'-5' exoribonuclease complex, subunit ski4, putative
411174	15	427	AAEL000065	conserved hypothetical protein	ISCW024604	zinc finger protein, putative
411175	26	345	AAEL000290	conserved hypothetical protein	ISCW019534	conserved hypothetical protein
411176	43	367	AAEL002764	dihydroipoamide succinyltransferase component of 2-oxoglutarate dehydrogenase	ISCW008731	dihydroipoamide acetyltransferase, putative
411178	11	243	AAEL003301	MRAS2, putative	ISCW006471	GTP-binding protein Rhes, putative
411179	23	356	AAEL009401	conserved hypothetical protein	ISCW007419	conserved hypothetical protein
411180	35	371	AAEL014452	acyl-coa dehydrogenase	ISCW001274	medium-chain acyl-CoA dehydrogenase, putative
411181	30	293	AAEL005054	pap-inositol-1,4-phosphatase	ISCW002395	nucleotidase 4F8, putative
411182	20	523	AAEL010730	conserved hypothetical protein	ISCW018874	CCR4-NOT transcription complex subunit, putative
411183	18	1211	AAEL005643	guanine nucleotide exchange factor	ISCW014925	pdz domain-containing guanine nucleotide exchange factor, pdz-gef, putative
411185	25	1253	AAEL000212	conserved hypothetical protein	ISCW020035	conserved hypothetical protein
411186	33	665	AAEL001206	threonyl-tRNA synthetase	ISCW012932	threonyl-tRNA synthetase, putative
411187	25	1684	AAEL003658	laminin beta-2 chain	ISCW014125	laminin beta 1 chain, putative
411188	15	273	AAEL003224	myostatin	ISCW005998	univin protein, putative
411189	13	371	AAEL000839	O-fucosyltransferase, putative	ISCW015119	GDP-fucose protein O-fucosyltransferase, putative
411190	20	466	AAEL007309	conserved hypothetical protein	ISCW013992	conserved hypothetical protein
411191	29	891	AAEL011650	coatomer, gamma-subunit, putative	ISCW011108	AP-2 complex subunit beta-1, putative
411192	24	157	AAEL008514	ubiquitin conjugating enzyme E2, putative	ISCW019323	ubiquitin conjugating enzyme, putative
411193	13	2695	AAEL000700	cadherin	ISCW000378	protocadherin-16, putative
411194	16	750	AAEL013867	beta-mannosidase	ISCW005511	beta-mannosidase, putative
411195	37	1137	AAEL013098	coatomer	ISCW006283	coatomer, alpha chain, putative
411196	14	544	AAEL001014	vacuolar protein sorting-associated	ISCW010411	vacuolar protein-sorting protein, putative
411198	20	628	AAEL015110	dipeptidyl-peptidase	ISCW023102	dipeptidyl peptidase IV, putative
411199	24	606	AAEL003926	GTP-binding protein lepa	ISCW003920	conserved hypothetical protein
411200	31	179	AAEL008417	conserved hypothetical protein	ISCW011313	coiled-coil domain-containing protein, putative
411201	38	318	AAEL006899	DNA-J/hsp40	ISCW020633	molecular chaperone, putative
411202	26	199	AAEL013620	ras-related protein Rab, putative	ISCW015757	zinc finger protein, putative
411205	23	370	AAEL006033	dihydroorotate dehydrogenase	ISCW020699	dihydroorotate dehydrogenase, putative
411208	23	379	AAEL003493	GDI interacting protein, putative	ISCW002422	UBX domain-containing protein, putative
411209	30	163	AAEL003397	mitochondrial ribosomal protein L17	ISCW012633	ribosomal protein L17, putative
411210	22	693	AAEL007884	conserved membrane protein at 44E, putative	ISCW003004	transmembrane protein cmp44E, putative
411211	32	2098	AAEL011187	U520	ISCW018611	antiviral helicase Slh1, putative
411212	21	163	AAEL005313	conserved hypothetical protein	ISCW003467	conserved hypothetical protein
411213	17	962	AAEL008301	eph receptor tyrosine kinase	ISCW022934	eph receptor tyrosine kinase, putative

411214	37	153	AAEL005413	mitochondrial ribosomal protein, S11, putative	ISCW004120	ribosomal protein S11, putative
411215	35	187	AAEL008131	cytidylate kinase	ISCW012446	cytidylate kinase, putative
411216	17	507	AAEL010570	acetylcholine receptor, beta-type subunit invertebrate	ISCW008451	beta-1 subunit of nicotinic acetylcholine receptor, putative
411218	33	119	AAEL001109	glutaredoxin	ISCW013876	secreted protein, putative
411220	18	1594	AAEL009357	myosin v	ISCW021017	myosin heavy chain, putative
411221	8	387	AAEL004059	cystathionine beta-lyase	ISCW007691	cystathionase, putative
411222	35	225	AAEL012264	mitochondrial ribosomal protein L24	ISCW004115	ribosomal protein L24, putative
411223	11	122	AAEL012227	conserved hypothetical protein	ISCW013653	conserved hypothetical protein
411225	21	605	AAEL010663	cleavage and polyadenylation specificity factor	ISCW000353	cleavage and polyadenylation specificity factor, putative
411226	16	179	AAEL006515	conserved hypothetical protein	ISCW015970	conserved hypothetical protein
411227	24	571	AAEL001629	cAMP-specific 3,5-cyclic phosphodiesterase	ISCW020114	cyclic nucleotide phosphodiesterase, putative
411228	23	420	AAEL000399	conserved hypothetical protein	ISCW011128	conserved hypothetical protein
411230	36	219	AAEL002108	nucleolar essential protein 1 (nep1)	ISCW001309	C2 factor (C2F), putative
411231	30	428	AAEL003746	4-Hydroxybutyrate CoA-transferase, putative	ISCW023591	acetyl-CoA hydrolase, putative
411232	37	324	AAEL011989	signal peptide peptidase	ISCW006186	signal peptide peptidase, putative
411233	21	98	AAEL001403	conserved hypothetical protein	ISCW017217	conserved hypothetical protein
411234	25	239	AAEL006523	crk	ISCW020669	adaptor protein Crk, putative
411235	22	361	AAEL005904	conserved hypothetical protein	ISCW006276	RNA polymerase II protein ral transcription factor BTF3, putative
411237	25	207	AAEL006945	golgi SNAP receptor complex member, putative	ISCW020319	golgi SNAP receptor complex member, putative
411238	19	431	AAEL012692	sigma DNA polymerase, putative	ISCW014870	PAP-associated domain-containing protein, putative
411239	35	127	AAEL000467	mitochondrial ribosomal protein, L49, putative	ISCW013100	39S ribosomal protein L49, putative
411240	26	537	AAEL011637	fms interacting protein	ISCW018722	coiled-coil protein, putative
411241	24	888	AAEL014734	vacuolar ATP synthase subunit e	ISCW008489	lysine-ketoglutarate reductase, putative
411242	22	331	AAEL011575	conserved hypothetical protein	ISCW016475	cysteine and histidine-rich protein 1B, putative
411243	28	451	AAEL009154	glutathione synthetase	ISCW003088	glutathione synthetase, putative
411244	23	938	AAEL013985	DEAD box ATP-dependent RNA helicase	ISCW010217	ATP-dependent RNA helicase, putative
411245	34	472	AAEL011255	GTP-binding protein-invertebrate	ISCW019324	GTP-binding protein, putative
411246	18	428	AAEL007496	DNA-directed RNA polymerase III, 62-kS-subunit, putative	ISCW018945	conserved hypothetical protein
411247	23	1267	AAEL000832	cleavage and polyadenylation specificity factor epsf	ISCW001347	cleavage and polyadenylation specificity factor, putative
411248	18	847	AAEL011134	esophageal cancer associated protein	ISCW021132	esophageal cancer associated protein, putative
411249	22	342	AAEL000395	Ultraspiracle/isoform A, nuclear receptor	ISCW005340	retinoid X receptor, putative
411250	32	211	AAEL002324	conserved hypothetical protein	ISCW008001	vacuolar sorting protein VPS28, putative
411251	23	406	AAEL011326	conserved hypothetical protein	ISCW001387	RAB GTPase-activating protein, putative
411252	16	1221	AAEL008247	DNA polymerase alpha catalytic subunit	ISCW012960	DNA polymerase alpha catalytic subunit, putative
411253	18	297	AAEL002675	arginase	ISCW012689	arginase, putative
411254	18	504	AAEL008161	abnormal oocyte, putative	ISCW008557	conserved hypothetical protein
411255	24	313	AAEL001176	s-adenosylmethionine decarboxylase	ISCW018876	S-adenosylmethionine decarboxylase, putative
411256	14	712	AAEL011396	neurogenic locus delta protein	ISCW013622	neurogenic locus protein delta, putative
411257	19	493	AAEL004048	UNC93A protein, putative	ISCW024462	potassium channel, putative
411258	22	411	AAEL014345	conserved hypothetical protein	ISCW004576	coiled-coil domain-containing protein, putative
411259	17	627	AAEL007462	conserved hypothetical protein	ISCW023090	RAD50-interacting protein, putative
411260	36	622	AAEL011105	adducin	ISCW000621	protein hu-li tai shao, putative

411261	23	1016	AAEL008462	apl5 protein (spac144.06 protein)	ISCW018459	AP-3 complex subunit delta-1, putative
411262	22	207	AAEL000670	methionine sulfoxide reductase	ISCW008195	peptide methionine sulfoxide reductase, putative
411263	21	153	AAEL010177	conserved hypothetical protein	ISCW011120	COMM domain-containing protein, putative
411265	22	569	AAEL011819	Cohesin loading complex subunit SCC4 homolog	ISCW010639	conserved hypothetical protein
411266	21	301	AAEL004773	leucine carboxyl methyltransferase	ISCW006147	carboxymethyl transferase, putative
411267	46	195	AAEL006115	Eukaryotic translation initiation factor 3 subunit K (eIF3k)(eIF-3 p25)	ISCW021577	conserved hypothetical protein
411268	17	395	AAEL005068	S-phase kinase-associated protein 2 (skp2), putative	ISCW018128	skp2, putative
411269	38	468	AAEL006516	vacuolar ATP synthase subunit h	ISCW013948	vacuolar H ⁺ -ATPase V1 sector, subunit H, putative
411270	32	317	AAEL007701	conserved hypothetical protein	ISCW003403	conserved hypothetical protein
411271	26	251	AAEL001670	conserved hypothetical protein	ISCW008365	conserved hypothetical protein
411273	40	340	AAEL010691	ribonucleoside-diphosphate reductase small chain	ISCW016837	ribonucleotide reductase, beta subunit, putative
411274	12	144	AAEL002484	conserved hypothetical protein	ISCW006035	secreted protein, putative
411276	24	471	AAEL002886	thioredoxin reductase	ISCW007974	thioredoxin reductase, putative
411277	28	176	AAEL007820	conserved hypothetical protein	ISCW006950	conserved hypothetical protein
411278	33	242	AAEL009579	NBP2b protein, putative	ISCW020956	conserved hypothetical protein
411279	18	315	AAEL013795	spliceosome associated protein	ISCW010601	spliceosome associated protein, putative
411280	28	404	AAEL010065	protein disulfide-isomerase A6 precursor	ISCW002080	protein disulfide isomerase 1, putative
411283	26	210	AAEL006560	cop-coated vesicle membrane protein P24	ISCW011849	cargo transport protein EMP24, putative
411285	27	901	AAEL011693	mitotic control protein dis3	ISCW012183	salivary protein Is3, putative
411287	27	283	AAEL015607	conserved hypothetical protein	ISCW015751	mRNA-decapping enzyme, putative
411289	20	468	AAEL012750	transcription factor TFIIF-subunit, putative	ISCW021770	general transcription factor IIE (TFIIE) subunit, putative
411290	22	530	AAEL013431	proline oxidase	ISCW000787	proline oxidase, putative
411292	30	415	AAEL008500	DEAD box ATP-dependent RNA helicase	ISCW012290	ribosomal DEAD box protein, putative
411293	21	267	AAEL014762	zinc transporter	ISCW008437	zinc transporter, putative
411294	13	999	AAEL006806	atrial natriuretic peptide receptor	ISCW017463	natriuretic peptides receptor, putative
411295	20	778	AAEL010374	tyrosine-protein kinase transmembrane receptor	ISCW010222	tyrosine kinase orphan receptor, putative
411297	20	574	AAEL006110	g protein-coupled receptor kinase 6 and	ISCW004541	cAMP-dependent protein kinase catalytic subunit, putative
411298	16	409	AAEL013333	testican	ISCW022173	conserved hypothetical protein
411299	24	877	AAEL011815	poly [ADP-ribose] polymerase	ISCW019519	poly [ADP-ribose] polymerase, putative
411300	16	460	AAEL001711	activin receptor type 1, putative	ISCW022003	transforming growth factor-beta receptor type 1, putative
411302	19	385	AAEL014842	multiple inositol polyphosphate phosphatase	ISCW003591	secreted multiple inositol polyphosphate phosphatase, putative
411304	19	1588	AAEL000815	conserved hypothetical protein	ISCW020904	proteasome activator complex subunit, putative
411306	23	248	AAEL000738	conserved hypothetical protein	ISCW005790	leucine zipper containing transcription factor, putative
411307	23	748	AAEL004918	brat protein	ISCW011089	xnf7, putative
411308	30	225	AAEL012313	charged multivesicular body protein 5	ISCW023077	vacuolar protein-sorting protein, putative
411309	25	366	AAEL007799	regulator of chromosome condensation	ISCW010923	regulator of chromosome condensation, putative
411310	31	321	AAEL014159	PAF acetylhydrolase 45 kDa subunit, putative	ISCW017622	U4/U6 small nuclear ribonucleoprotein Prp4, putative
411311	19	511	AAEL012925	carbon catabolite repressor protein	ISCW012907	carbon catabolite repressor protein, putative
411313	28	327	AAEL002912	Probable cytosolic iron-sulfur protein assembly protein Cio1	ISCW023049	Probable cytosolic iron-sulfur protein assembly protein [Source:UniProtKB/Swiss-Prot;Acc:B7QKS1]
411314	25	136	AAEL011293	vitamin-K-epoxide reductase (warfarin-sensitive), putative	ISCW024282	vitamin K epoxide reductase complex subunit 1 precursor
411315	31	195	AAEL012276	survival motor neuron protein	ISCW001190	splicing factor SPF30, putative
411317	24	113	AAEL006621	conserved hypothetical protein	ISCW022266	guanine nucleotide exchange factor mss4, putative

411319	25	692	AAEL001317	DEAD box ATP-dependent RNA helicase	ISCW003183	ATP-dependent RNA helicase, putative
411320	13	475	AAEL008638	cytochromeP450	ISCW001527	cytochrome P450, putative
411321	12	649	AAEL007083	conserved hypothetical protein	ISCW018108	conserved hypothetical protein
411322	21	142	AAEL013369	conserved hypothetical protein	ISCW024218	trafficking protein particle complex subunit, putative
411323	17	315	AAEL009190	conserved hypothetical protein	ISCW023304	conserved hypothetical protein
411324	35	864	AAEL006040	coatmer	ISCW022112	vesicle coat complex COPI, beta' subunit, putative
411325	24	170	AAEL006270	conserved hypothetical protein	ISCW009552	conserved hypothetical protein
411326	29	609	AAEL007067	WD-repeat protein	ISCW022714	guanine nucleotide-binding protein, putative
411327	28	748	AAEL008062	thrombospondin	ISCW006623	thrombospondin, putative
411328	14	359	AAEL004138	signal peptide peptidase	ISCW018713	conserved hypothetical protein
411329	14	216	AAEL010679	monocyte to macrophage differentiation protein	ISCW002967	monocyte to macrophage differentiation protein, putative
411330	26	167	AAEL006654	conserved hypothetical protein	ISCW022933	RWD domain-containing protein 4A, putative
411331	19	497	AAEL006744	exonuclease nef-sp	ISCW000182	exonuclease nef-sp, putative
411332	45	152	AAEL001865	conserved hypothetical protein	ISCW023078	NADH-ubiquinone oxidoreductase, subunit NDUFB10/PDSW, putative
411333	28	1113	AAEL000388	isoleucyl tRNA synthetase	ISCW013321	isoleucyl-tRNA synthetase, putative
411335	15	1108	AAEL007651	phosphorylase b kinase	ISCW016891	phosphorylase kinase, putative
411336	19	488	AAEL005346	conserved hypothetical protein	ISCW023649	rasf, putative
411337	22	344	AAEL008379	P38 mapk	ISCW021966	mitogen-activated protein kinase, putative
411338	33	664	AAEL003413	F-spondin	ISCW012675	F-spondin, putative
411340	20	461	AAEL013230	coatmer delta subunit	ISCW007988	coatmer delta subunit, putative
411342	16	1008	AAEL005303	beta-tubulin cofactor d	ISCW018204	beta-tubulin cofactor D, putative
411343	20	291	AAEL007768	TOLLpathway signalling.	ISCW008802	myd88, putative
411344	25	414	AAEL012260	WD-repeat protein	ISCW005880	U3 snoRNP-associated protein, putative
411345	29	720	AAEL003466	cullin	ISCW006143	cullin, putative
411346	23	109	AAEL004350	janus A, putative	ISCW016163	janus-A, putative
411347	22	497	AAEL009273	inosine-5-monophosphate dehydrogenase	ISCW001657	IMP dehydrogenase, putative
411348	20	456	AAEL002785	DNA polymerase epsilon subunit b	ISCW023804	DNA polymerase epsilon subunit B, putative
411349	18	122	AAEL004517	conserved hypothetical protein	ISCW000217	conserved hypothetical protein
411350	22	519	AAEL008559	glutaminase	ISCW020515	glutaminase, putative
411353	31	337	AAEL007617	serine/threonine-protein kinase vrk	ISCW015175	protein kinase, putative
411354	25	670	AAEL005852	oxysterol-binding protein 1,	ISCW021784	oxysterol-binding protein 1, putative
411355	38	244	AAEL006611	conserved hypothetical protein	ISCW022478	protein pob, putative
411356	26	361	AAEL004663	pseudouridylylate synthase	ISCW011539	pseudouridylylate synthase, putative
411357	24	665	AAEL013213	enhancer of zeste, ezh	ISCW020151	enhancer of zeste, ezh, putative
411358	36	994	AAEL009080	importin 7,	ISCW000557	Ran-binding protein, putative
411359	36	153	AAEL003180	prefoldin subunit	ISCW022328	prefoldin, putative
411360	46	868	AAEL007306	alpha-actinin	ISCW013566	alpha-actinin, putative
411361	21	567	AAEL002215	conserved hypothetical protein	ISCW012050	bromodomain-containing protein, putative
411362	24	741	AAEL012546	DNA replication licensing factor MCM6	ISCW019158	Mcm2/3, putative
411363	9	247	AAEL000414	six/sine homebox transcription factors	ISCW007609	SIX/SINE homebox transcription factor, putative
411365	18	416	AAEL009085	rho/rac/cdc GTPase-activating protein	ISCW007913	conserved hypothetical protein
411366	32	437	AAEL014042	protein phosphatase pp2a regulatory subunit b	ISCW008442	protein phosphatase, putative

411367	21	405	AAEL008963	tyrosine aminotransferase	ISCW014463	tyrosine aminotransferase, putative
411368	17	94	AAEL009969	axonemal dynein light chain	ISCW022309	dynein light chain, putative
411369	23	171	AAEL008865	oligoribonuclease, mitochondrial	ISCW008878	YJER protein, putative
411370	8	566	AAEL010314	F-box/Irr protein fragment	ISCW018961	F-box/leucine rich repeat protein, putative
411371	8	357	AAEL003473	GPCRGastrin/Bombesin Family	ISCW015075	bombesin receptor subtype-3, putative
411372	13	284	AAEL004995	caspase-activated nuclease, putative	ISCW018943	DNA fragmentation factor, putative
411374	13	1126	AAEL011246	WD-repeat protein	ISCW020007	WD-repeat containing protein
411375	32	747	AAEL011811	DNA replication licensing factor MCM3	ISCW023354	DNA replication licensing factor, putative
411378	17	173	AAEL009221	conserved hypothetical protein	ISCW024001	2-aminoethanethiol dioxygenase, putative
411379	39	104	AAEL006557	conserved hypothetical protein	ISCW006407	programmed cell death, putative
411381	20	142	AAEL011200	conserved hypothetical protein	ISCW019650	adenylate cyclase, putative
411382	36	405	AAEL010743	cysteine desulfurylase	ISCW004705	aminotransferase, putative
411383	8	473	AAEL012609	4-aminobutyrate aminotransferase	ISCW019639	4-aminobutyrate aminotransferase, putative
411384	7	612	AAEL001812	organic anion transporter	ISCW000594	solute carrier organic anion transporter, putative
411386	8	126	AAEL015677	histone H2B	ISCW019496	histone H2B, putative
411387	12	300	AAEL001345	conserved hypothetical protein	ISCW004824	conserved hypothetical protein
411389	33	180	AAEL004438	conserved hypothetical protein	ISCW005818	grpe protein, putative
411390	13	205	AAEL014058	copper homeostasis protein	ISCW017296	copper homeostasis protein, putative
411392	23	231	AAEL011057	DNA-repair protein complementing XP-A cells homolog	ISCW010408	xpaxc2 protein, putative
411393	17	710	AAEL013319	conserved hypothetical protein	ISCW019098	protein phosphatase PP2A, putative
411394	28	659	AAEL011425	structure-specific recognition protein	ISCW020032	structure-specific recognition protein, putative
411395	16	806	AAEL009893	conserved hypothetical protein	ISCW009345	zinc finger protein, putative
411396	18	244	AAEL001413	conserved hypothetical protein	ISCW020641	poly, putative
411397	27	263	AAEL008687	tar RNA binding protein (trbp)	ISCW023181	tar RNA-binding protein, putative
411399	14	325	AAEL010808	conserved hypothetical protein	ISCW012896	leucine rich domain-containing protein, putative
411400	22	720	AAEL004419	ATP-dependent RNA helicase	ISCW002555	RNA helicase, putative
411402	24	570	AAEL008728	DEAD box ATP-dependent RNA helicase	ISCW018065	RNA helicase, putative
411403	24	353	AAEL006363	ribose-phosphate pyrophosphokinase 1,2	ISCW009506	phosphoribosylpyrophosphate synthetase-associated protein, putative
411404	28	517	AAEL000674	RNA m5u methyltransferase	ISCW018423	tRNA uracil-5-methyltransferase, putative
411405	59	194	AAEL010823	ATP synthase delta chain	ISCW021200	F1F0-ATP synthase, subunit OSCP/ATP5, putative
411406	18	1056	AAEL003555	ribosome biogenesis protein	ISCW018621	ribosome biogenesis protein bms1, putative
411407	48	322	AAEL007707	malate dehydrogenase	ISCW007624	malate dehydrogenase, putative
411408	22	764	AAEL001752	chloride channel protein 3	ISCW016088	chloride channel, putative
411409	18	425	AAEL012514	translation initiation factor 2b, delta subunit	ISCW011151	guanine nucleotide exchange factor, putative
411411	28	215	AAEL012525	YEATS domain containing protein 4	ISCW009798	transcription initiation factor IIF, auxiliary subunit, putative
411412	25	437	AAEL004589	small calcium-binding mitochondrial carrier, putative	ISCW023295	ADP/ATP translocase, putative
411413	21	291	AAEL003346	heparan sulphate 2-o-sulfotransferase	ISCW000208	heparan sulfate 2-O-sulfotransferase, putative
411414	15	379	AAEL000634	ceramide glucosyltransferase	ISCW015936	ceramide glucosyltransferase, putative
411415	19	640	AAEL011827	conserved hypothetical protein	ISCW019119	conserved hypothetical protein
411416	43	470	AAEL002083	DEAD box ATP-dependent RNA helicase	ISCW002703	ATP-dependent helicase (DEAD box), putative
411417	20	562	AAEL008578	conserved hypothetical protein	ISCW023066	polycomb protein suz12, putative
411419	35	262	AAEL006951	protein phosphatase 2c	ISCW011375	serine/threonine protein phosphatase, putative

411421	13	662	AAEL006466	chondroitin synthase	ISCW013435	chondroitin synthase, putative
411422	30	142	AAEL003912	trafficking protein particle complex subunit 6b	ISCW019484	trafficking protein particle complex subunit 6B, putative
411423	23	1082	AAEL011876	conserved hypothetical protein	ISCW004234	FACT complex subunit spt16, putative
411425	10	335	AAEL011325	gonadotropin-releasing hormone receptor	ISCW011612	seven transmembrane receptor, putative
411426	14	270	AAEL014339	conserved hypothetical protein	ISCW011193	conserved hypothetical protein
411427	29	575	AAEL000825	eukaryotic peptide chain release factor GTP-binding subunit (erf2) (translation release factor 3) (erf3) (erf-3)	ISCW011989	translation elongation factor EF-1 alpha/Tu, putative
411428	24	412	AAEL013066	checkpoint kinase	ISCW012009	checkpoint kinase, putative
411430	25	741	AAEL007865	conserved hypothetical protein	ISCW006739	conserved hypothetical protein
411432	13	380	AAEL002866	cyclin 1	ISCW020365	cyclin, putative
411433	26	459	AAEL005666	matrix metalloproteinase	ISCW006136	matrix metalloproteinase, putative
411434	20	275	AAEL003510	ribonuclease hi large subunit	ISCW001993	ribonuclease HI large subunit, putative
411436	27	293	AAEL008664	conserved hypothetical protein	ISCW008036	abhydrolase domain-containing protein, putative
411437	41	286	AAEL001946	four and a half lim domains	ISCW016762	LIM domain-containing protein, putative
411438	22	84	AAEL000903	Enhancer of yellow 2 transcription factor	ISCW020673	transcription factor E(Y)2, putative
411441	35	250	AAEL009324	hydroxyacyl dehydrogenase	ISCW018873	short-chain alcohol dehydrogenase, putative
411442	25	203	AAEL000465	conserved hypothetical protein	ISCW000892	calcium-dependent cysteine protease, putative
411443	20	845	AAEL005429	2-oxoglutarate dehydrogenase	ISCW021407	2-oxoglutarate dehydrogenase, putative
411444	21	885	AAEL004520	cAMP/cgmp cyclic nucleotide phosphodiesterase	ISCW023601	cyclic nucleotide phosphodiesterase, putative
411445	24	813	AAEL007007	DNA replication licensing factor MCM2	ISCW016696	MCM2 protein, putative
411446	21	330	AAEL009584	elg, drosophila	ISCW019666	GA-binding protein alpha chain, putative
411447	20	573	AAEL001853	rac-GTP binding protein	ISCW002009	Rho, putative
411449	25	390	AAEL001574	septin	ISCW018169	cell division protein, putative
411450	16	545	AAEL002944	conserved hypothetical protein	ISCW009579	conserved hypothetical protein
411451	28	149	AAEL010245	chloride channel, putative	ISCW002915	chloride ion current inducer protein, putative
411452	18	611	AAEL012965	WD and tetratricopeptide repeat protein	ISCW020123	nuclear receptor interaction protein, putative
411453	24	480	AAEL006150	brca1-associated protein (brap2)	ISCW021786	brca1-associated protein, putative
411454	17	796	AAEL010555	sterol regulatory element-binding protein	ISCW018168	sterol regulatory element-binding protein, putative
411455	38	142	AAEL010258	zinc finger protein	ISCW016186	zinc finger protein, putative
411456	21	387	AAEL009306	conserved hypothetical protein	ISCW015190	conserved hypothetical protein
411457	26	266	AAEL009218	mitochondrial carrier protein, putative	ISCW009503	oxodicarboxylate carrier protein, putative
411458	30	223	AAEL000226	conserved hypothetical protein	ISCW013814	DNAJ protein, putative
411459	20	331	AAEL015356	conserved hypothetical protein	ISCW021967	transmembrane protein 194A, putative
411460	27	202	AAEL002891	conserved hypothetical protein	ISCW015392	N-acetyltransferase, putative
411461	29	315	AAEL006063	U3 small nucleolar ribonucleoprotein protein imp4	ISCW000262	U3 small nucleolar ribonucleoprotein imp4, putative
411462	21	145	AAEL006775	conserved hypothetical protein	ISCW024450	tbp-1 interacting protein, putative
411463	33	221	AAEL007713	viral IAP-associated factor, putative	ISCW014857	ATP binding protein, putative
411464	33	177	AAEL013890	26S proteasome non-ATPase regulatory subunit	ISCW018679	26S proteasome non-ATPase regulatory subunit, putative
411465	27	507	AAEL010464	glutamate dehydrogenase	ISCW000393	glutamate dehydrogenase, putative
411466	17	302	AAEL005239	gh regulated tbc protein-1	ISCW019456	growth hormone regulated Tbc protein, putative
411468	30	160	AAEL013591	dynactin, p27-subunit, putative	ISCW022243	dynactin subunit, putative
411470	23	561	AAEL005367	myotubularin-related protein 2	ISCW009978	conserved hypothetical protein
411471	33	557	AAEL001091	malic enzyme	ISCW011260	NADP-dependent malic enzyme, putative

411472	28	115	AAEL008486	protein kinase C inhibitor, putative	ISCW016833	histidine triad nucleotide binding protein, putative
411473	28	586	AAEL011744	DEAD box ATP-dependent RNA helicase	ISCW016533	DEAD box protein abstract, putative
411474	17	840	AAEL002260	conserved hypothetical protein	ISCW000071	conserved hypothetical protein
411475	23	474	AAEL002766	glutamyl-tRNA(Gln) amidotransferase subunit A	ISCW003184	glutamyl-tRNA(Gln) amidotransferase subunit A, putative
411476	17	658	AAEL003461	mitochondrial intermediate peptidase	ISCW016804	intermediate peptidase, putative
411477	22	496	AAEL013211	conserved hypothetical protein	ISCW007233	dihydroxyacetone kinase, putative
411478	37	114	AAEL003944	conserved hypothetical protein	ISCW020693	conserved hypothetical protein
411479	15	776	AAEL004494	conserved hypothetical protein	ISCW011947	NAV2 protein, putative
411480	21	202	AAEL000174	retinal protein	ISCW018709	retinal protein, putative
411481	22	235	AAEL010661	phospholipid scramblase 1,	ISCW011984	phospholipid scramblase 1, putative
411482	21	732	AAEL011146	conserved hypothetical protein	ISCW015586	USP16, putative
411483	24	2043	AAEL014768	glutamate synthase	ISCW005873	ferredoxin-glutamate synthase, putative
411484	22	2326	AAEL009824	ubiquitin specific protease 9/faf	ISCW009097	ubiquitin specific protease, putative
411485	14	738	AAEL004243	S1 RNA binding domain protein, putative	ISCW020255	conserved hypothetical protein
411488	17	255	AAEL007033	pyrroline-5-carboxylate reductase	ISCW020302	pyrroline-5-carboxylate reductase, putative
411490	17	402	AAEL008788	es2 protein	ISCW004308	conserved hypothetical protein
411491	25	242	AAEL013113	metallo-beta-lactamase, putative	ISCW011020	conserved hypothetical protein
411492	25	1016	AAEL011147	conserved hypothetical protein	ISCW005794	integrator complex subunit, putative
411493	24	556	AAEL001480	phosphoglucomutase	ISCW021522	phosphoglucomutase/phosphomannomutase, putative
411494	31	457	AAEL004686	RuvB-like helicase 1 (EC 3.6.4.12)(Pontin)	ISCW020079	conserved hypothetical protein
411495	10	397	AAEL009282	peptidyl-prolyl cis-trans isomerase (cyclophilin)	ISCW009283	peptidyl-prolyl cis-trans isomerase, putative
411496	27	1087	AAEL005561	plasma membrane calcium-transporting ATPase 3 (pmca3)	ISCW010968	plasma membrane ca-ATPase B2, putative
411497	18	692	AAEL009692	JAKSTAT pathway signalling, Signal-Transducer and Activator of Transcription 1 (STAT1).	ISCW005692	Stat3, putative
411498	16	198	AAEL006819	conserved hypothetical protein	ISCW000954	exosomal 3'-5' exoribonuclease complex, subunit Rrp41, putative
411499	28	438	AAEL011578	serine/threonine protein kinase	ISCW022925	phosphoenolpyruvate carboxylase kinase, putative
411500	14	200	AAEL005072	MRAS2, putative	ISCW003409	GTP-binding protein di-Ras2, putative
411501	21	180	AAEL005829	conserved hypothetical protein	ISCW023117	protein big brother, putative
411502	22	856	AAEL005902	conserved hypothetical protein	ISCW015446	protein CLEC16A, putative
411503	28	308	AAEL007656	receptor for activated C kinase, putative	ISCW023084	U3 snoRNP-associated protein, putative
411505	13	516	AAEL010462	vesamicol binding protein, putative	ISCW022169	vesamicol binding protein, putative
411506	21	222	AAEL010467	heterogeneous nuclear ribonucleoprotein	ISCW011438	RNA-binding protein musashi, putative
411507	26	374	AAEL010284	aliphatic nitrilase, putative	ISCW011368	beta-ureidopropionase, putative
411508	42	781	AAEL006315	26S proteasome regulatory subunit rpn1	ISCW021692	26S proteasome regulatory subunit rpn1, putative
411509	16	834	AAEL005752	lysosomal alpha-mannosidase (mannosidase alpha class 2b member 1)	ISCW012835	lysosomal alpha-mannosidase, putative
411510	15	1707	AAEL006809	voltage-gated ion channel	ISCW004615	voltage-gated ion channel, putative
411511	22	1066	AAEL010187	conserved hypothetical protein	ISCW016448	fh1/fh2 domains-containing protein, putative
411512	15	347	AAEL002244	conserved hypothetical protein	ISCW018951	conserved hypothetical protein
411513	19	438	AAEL012256	lung seven transmembrane receptor	ISCW018766	seven transmembrane receptor, putative
411516	18	290	AAEL012065	cytoplasmic polyadenylation element binding protein (cpeb)	ISCW010113	cytoplasmic polyadenylation element binding protein, putative
411517	36	554	AAEL003377	signal recognition particle	ISCW017299	signal recognition particle protein, putative
411518	56	384	AAEL012026	translation initiation factor 5C, putative	ISCW005690	hb2 protein, putative
411519	14	1066	AAEL000798	sterol regulatory element binding protein cleavage-activating protein (sreb cleavage-activating protein) (scap)	ISCW009641	sterol response element binding protein cleavage-activating protein, putative

411520	16	301	AAEL001876	decapentaplegic, deca	ISCW023553	bone morphogenetic protein, putative
411523	16	460	AAEL005477	amidase	ISCW022298	fatty-acid amide hydrolase 2-A, putative
411524	32	442	AAEL007637	AAA ATPase	ISCW015571	katanin, putative
411525	27	181	AAEL001439	mitochondrial ribosomal protein, L22, putative	ISCW000095	ribosomal protein L22, putative
411526	23	205	AAEL010423	ARL3, putative	ISCW020461	conserved hypothetical protein
411527	22	408	AAEL015557	alpha methylacyl-coa racemase	ISCW019410	L-carnitine dehydratase, putative
411528	24	1598	AAEL006956	suppressor of ty	ISCW020442	S1 RNA binding domain-containing protein, putative
411529	32	772	AAEL005175	lipin	ISCW006345	lipin, putative
411530	22	650	AAEL007753	conserved hypothetical protein	ISCW014267	conserved hypothetical protein
411531	20	347	AAEL011570	acidic fibroblast growth factor intracellular binding protein	ISCW017008	acidic fibroblast growth factor intracellular binding protein, putative
411532	45	129	AAEL005538	mitochondrial NADH:ubiquinone oxidoreductase B16.6 subunit, putative	ISCW005224	NADH:ubiquinone oxidoreductase, B16.6 subunit/cell death-regulatory protein, putative
411533	28	978	AAEL007157	conserved hypothetical protein	ISCW018588	jumonji domain-containing protein, putative
411534	29	632	AAEL003349	NADPH cytochrome P450	ISCW020316	cytochrome P450, putative
411535	28	427	AAEL013132	6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase short form	ISCW008488	6-phosphofructo-2-kinase/fructose 2,6-bisphosphatase, putative
411536	23	859	AAEL009027	Mediator of RNA polymerase II transcription subunit 24 (Mediator complex subunit 24)	ISCW020128	mediator of RNA polymerase II transcription subunit, putative
411537	29	363	AAEL011556	conserved hypothetical protein	ISCW012741	vacuolar protein-sorting protein, putative
411538	24	711	AAEL011682	nuclear pore complex protein nup93 (nucleoporin nup93) (dead eye protein)	ISCW023557	nuclear pore complex protein Nup93, putative
411540	31	1088	AAEL002407	DNA repair protein xp-e	ISCW004025	DNA repair protein xp-E, putative
411541	20	696	AAEL008302	glutamine-dependent NAD(+) synthetase	ISCW004036	glutamine-dependent NAD synthetase, putative
411542	45	435	AAEL011381	NADH:ubiquinone oxidoreductase fe-s protein 2 (ndufs2)	ISCW017643	NADH:ubiquinone oxidoreductase, NDUFS2/49 kDa subunit, putative
411543	27	495	AAEL011137	succinyl-coa:3-ketoacid-coenzyme a transferase	ISCW002707	3-oxoacid CoA-transferase, putative
411545	12	1141	AAEL002317	Insulin-like receptor Precursor (MIR)(EC 2.7.10.1) [Contains Insulin-like receptor alpha chain;Insulin-like receptor beta chain]	ISCW023666	insulin receptor, putative
411546	26	628	AAEL007100	conserved hypothetical protein	ISCW017265	conserved hypothetical protein
411547	23	412	AAEL012140	tRNA-dihydrouridine synthase	ISCW007722	tRNA-dihydrouridine synthase, putative
411548	31	534	AAEL003415	lamin	ISCW000339	lamin, putative
411549	32	561	AAEL008854	conserved hypothetical protein	ISCW003817	RING finger protein, putative
411550	12	1847	AAEL005861	vacuolar sorting protein (vps)	ISCW016499	low-density lipoprotein receptor, putative
411551	31	147	AAEL009059	arp2/3 complex 16 kd subunit (P16-arc)	ISCW017220	arp2/3 complex 16 kd subunit, putative
411552	24	667	AAEL004083	WD-repeat protein	ISCW010263	WD-repeat containing protein
411554	18	388	AAEL002819	conserved hypothetical protein	ISCW017885	conserved hypothetical protein
411555	37	130	AAEL010230	NADH:ubiquinone dehydrogenase, putative	ISCW023093	NADH:ubiquinone oxidoreductase, NDUFB9/B22 subunit, putative
411556	19	217	AAEL002318	conserved hypothetical protein	ISCW020076	hepatocellular carcinoma-associated antigen, putative
411557	25	621	AAEL004818	conserved hypothetical protein	ISCW011532	conserved hypothetical protein
411558	13	386	AAEL010744	lim homeobox protein	ISCW004213	lhx3, putative
411559	30	182	AAEL012830	anti-silencing protein	ISCW013556	anti-silencing protein, putative
411560	16	684	AAEL006978	protein-glutamine gamma-glutamyltransferase	ISCW013869	protein-glutamine gamma-glutamyltransferase, putative
411561	30	117	AAEL012507	prefoldin, subunit, putative	ISCW013910	prefoldin, putative
411563	39	151	AAEL013309	high-affinity copper uptake protein	ISCW000386	copper transporter, putative
411564	22	1370	AAEL013736	conserved hypothetical protein	ISCW002671	DNA2/nam7 helicase, putative
411565	25	398	AAEL005400	2-hydroxyacid dehydrogenase	ISCW010116	glyoxylate/hydroxypyruvate reductase, putative
411566	18	379	AAEL013755	phosphorylase kinase, gamma	ISCW015509	phosphorylase kinase gamma subunit, putative
411567	31	185	AAEL002701	mannosyltransferase	ISCW000489	conserved hypothetical protein

411568	26	241	AAEL000394	U2 small nuclear ribonucleoprotein, putative	ISCW017352	splicing factor 3A subunit, putative
411569	35	387	AAEL004137	acyl-coa dehydrogenase	ISCW002863	medium-chain acyl-CoA dehydrogenase, putative
411570	12	866	AAEL014856	DNA mismatch repair protein spellechecker 1	ISCW016721	DNA Mismatch Repair (MMR) protein MutS, putative
411571	13	2968	AAEL000246	GPCRFrizzled/Smoothened Family	ISCW022151	conserved hypothetical protein
411572	31	525	AAEL015100	calnexin	ISCW003709	calnexin, putative
411573	29	188	AAEL014836	28S ribosomal protein S15, mitochondrial precursor	ISCW020518	28S ribosomal protein S15, putative
411574	35	158	AAEL001798	protein tyrosine phosphatase prl	ISCW015996	protein-tyrosine phosphatase, putative
411575	29	385	AAEL005655	sorting nexin	ISCW021592	sorting nexin, putative
411576	18	137	AAEL005205	conserved hypothetical protein	ISCW018637	conserved hypothetical protein
411577	20	603	AAEL008138	ABC transporter	ISCW006658	ABC transporter, putative
411578	26	90	AAEL008899	conserved hypothetical protein	ISCW008625	conserved hypothetical protein
411579	30	483	AAEL013808	fascin	ISCW004404	fascin, putative
411580	20	580	AAEL005160	sulphate transporter	ISCW023239	sulfate/anion exchanger, putative
411581	17	521	AAEL012246	conserved hypothetical protein	ISCW004091	conserved hypothetical protein
411582	19	342	AAEL011196	conserved hypothetical protein	ISCW012582	WD-repeat protein, putative
411583	22	1169	AAEL014491	sin3b	ISCW011278	sin3b, putative
411584	15	656	AAEL014181	conserved hypothetical protein	ISCW018133	tyrosine phosphatase epsilon, putative
411585	30	540	AAEL004232	pre-mRNA splicing factor prp17	ISCW007638	mRNA splicing factor, putative
411586	26	163	AAEL007762	mitochondrial ribosomal protein, L40, putative	ISCW024335	ribosomal protein L28, putative
411587	23	1067	AAEL009636	conserved hypothetical protein	ISCW017761	Exportin-7-A, putative
411588	17	225	AAEL006976	conserved hypothetical protein	ISCW019141	negative effector of RNA polymerase III synthesis, putative
411590	12	409	AAEL014365	chromaffin granule amine transporter, putative	ISCW015275	vesicular amine transporter, putative
411592	9	627	AAEL007299	cadherin, putative	ISCW016805	protocadherin beta-6, putative
411593	29	174	AAEL007871	anaphase-promoting complex	ISCW008070	anaphase-promoting complex, subunit, putative
411594	23	323	AAEL006075	WD-repeat protein	ISCW014203	THO complex subunit, putative
411595	23	353	AAEL013955	conserved hypothetical protein	ISCW019114	conserved hypothetical protein
411596	22	445	AAEL001848	conserved hypothetical protein	ISCW014140	nuclear receptor-binding protein, putative
411597	43	599	AAEL010977	ATP-dependent transporter	ISCW009589	ABC transporter, putative
411598	24	403	AAEL000594	conserved hypothetical protein	ISCW002145	microsphere protein, putative
411599	19	374	AAEL002836	carbon catabolite repressor protein	ISCW000895	conserved hypothetical protein
411601	16	182	AAEL012352	conserved hypothetical protein	ISCW016918	low-density lipoprotein receptor, putative
411602	23	466	AAEL003964	conserved hypothetical protein	ISCW012178	zinc transporter, putative
411603	22	503	AAEL006640	DEAD box ATP-dependent RNA helicase	ISCW018778	ATP-dependent RNA helicase, putative
411605	20	876	AAEL000483	exostosin-2	ISCW011872	exostosin-3, putative
411606	24	355	AAEL011251	RNA binding motif protein	ISCW021094	RNA-binding protein, putative
411608	29	351	AAEL007066	mitotic checkpoint protein and poly(a) ⁺ RNA export protein	ISCW017853	mRNA export protein, putative
411609	17	662	AAEL003026	regulator of g protein signaling	ISCW021951	regulator of G-protein signalling, putative
411610	20	671	AAEL003819	conserved hypothetical protein	ISCW007457	conserved hypothetical protein
411611	18	580	AAEL001191	conserved hypothetical protein	ISCW014194	transmembrane protein, putative
411612	24	261	AAEL013128	elongase, putative	ISCW022216	fatty acyl-CoA elongase, putative
411613	24	297	AAEL011881	conserved hypothetical protein	ISCW009689	heat shock protein 70 (HSP70)-interacting protein, putative
411615	35	217	AAEL012875	snare protein sec22	ISCW000412	synaptobrevin 1-2, putative

411616	27	965	AAEL001273	Sec24B protein, putative	ISCW016134	protein transport protein Sec24A, putative
411617	25	327	AAEL009465	replication factor c / DNA polymerase iii gamma-tau subunit	ISCW022932	replication factor C, subunit RFC2, putative
411618	22	563	AAEL009814	autophagy protein	ISCW008151	autophagy protein, putative
411620	38	503	AAEL002748	aspartyl-tRNA synthetase	ISCW008099	aspartyl-tRNA synthetase, putative
411621	24	233	AAEL013749	conserved hypothetical protein	ISCW019461	conserved hypothetical protein
411622	30	1072	AAEL010159	importin beta-3	ISCW016612	Ran-binding protein, putative
411623	16	836	AAEL012539	heparan sulphate n-deacetylase/n-sulfotransferase	ISCW023605	heparan sulfate N-deacetylase/N-sulfotransferase, putative
411624	28	198	AAEL006450	integral membrane protein, putative	ISCW007759	protein YIPF6, putative
411626	14	462	AAEL001770	transcription factor CP2B, putative	ISCW002484	transcription factor, putative
411627	29	190	AAEL005796	eukaryotic translation initiation factor 4e type	ISCW006138	initiation factor 4E, putative
411628	24	337	AAEL005819	L-allo-threonine aldolase	ISCW008580	L-allo-threonine aldolase, putative
411629	30	363	AAEL005870	flap endonuclease-1	ISCW020250	endonuclease, putative
411630	13	982	AAEL003487	development and differentiation-enhancing factor, ddef	ISCW021009	conserved hypothetical protein
411631	21	174	AAEL000487	hypothetical protein	ISCW016509	conserved hypothetical protein
411632	24	344	AAEL008875	conserved hypothetical protein	ISCW002950	GPI mannosyltransferase, putative
411634	23	276	AAEL009448	conserved hypothetical protein	ISCW014696	histone acetyltransferase SAGA associated factor SGF29, putative
411636	49	475	AAEL001432	protein disulfide isomerase	ISCW016161	protein disulfide isomerase, putative
411637	26	219	AAEL011272	nmda receptor glutamate-binding chain	ISCW004793	N-methyl-D-aspartate receptor associated protein, putative
411638	20	339	AAEL000077	cation efflux protein/ zinc transporter	ISCW015929	Zn ²⁺ transporter, putative
411639	31	294	AAEL004997	U3 small nucleolar ribonucleoprotein protein imp4	ISCW018100	U3 small nucleolar ribonucleoprotein imp4, putative
411640	9	979	AAEL005011	roundabout 1	ISCW000069	conserved hypothetical protein
411641	36	216	AAEL004527	mitochondrial ribosomal protein S7	ISCW019788	ribosomal protein S7, putative
411642	20	433	AAEL002182	t-diRNAhydrouridine synthase	ISCW019221	tRNA-dihydrouridine synthase, putative
411644	25	143	AAEL000847	conserved hypothetical protein	ISCW024210	conserved hypothetical protein
411645	24	572	AAEL005455	CTP synthase	ISCW017186	cytidine 5'-triphosphate synthase (CTPS), putative
411646	17	337	AAEL009754	endophilin b	ISCW000293	endophilin-B1, putative
411647	16	905	AAEL004875	F-box only protein	ISCW003305	F-box containing protein, putative
411648	11	354	AAEL007476	makorin	ISCW010382	makorin, putative
411649	24	1009	AAEL000264	phospholipase d	ISCW005663	phospholipase D, putative
411650	29	395	AAEL002784	zinc finger protein	ISCW013458	zinc finger protein, putative
411653	26	192	AAEL006221	o-sialoglycoprotein endopeptidase	ISCW008686	serine/threonine protein kinase, putative
411654	22	725	AAEL005241	Lateral signaling target protein 2 homolog	ISCW001994	zinc finger protein, putative
411656	15	863	AAEL006008	ubiquitin-protein ligase	ISCW006608	ubiquitin protein ligase, putative
411657	12	512	AAEL014664	AMP dependent coa ligase	ISCW001345	acyl-CoA synthetase, putative
411658	17	524	AAEL004328	origin recognition complex subunit	ISCW019131	origin recognition complex subunit, putative
411660	18	221	AAEL013581	valacyclovir hydrolase	ISCW002326	valacyclovir hydrolase, putative
411661	32	225	AAEL011216	conserved hypothetical protein	ISCW008198	transmembrane protein 55B, putative
411662	31	339	AAEL013997	guanine nucleotide-binding protein beta 3 (g protein beta3)	ISCW009711	THO complex subunit, putative
411664	27	2180	AAEL007326	ccr4-not transcription complex	ISCW022114	CCR4-not transcription complex, putative
411665	27	585	AAEL008073	scaffold attachment factor B, putative	ISCW022523	conserved hypothetical protein
411667	19	582	AAEL013316	smile protein	ISCW014790	O-linked N-acetylglucosamine transferase, OGT, putative
411668	17	644	AAEL012969	conserved hypothetical protein	ISCW018598	conserved hypothetical protein

411669	25	1428	AAEL005043	ATP-dependent bile acid permease	ISCW021900	multidrug resistance protein, putative
411670	21	211	AAEL004053	conserved hypothetical protein	ISCW008169	conserved hypothetical protein
411671	33	513	AAEL012234	cytoplasmic dynein intermediate chain, (dhic)	ISCW020745	cytoplasmic dynein 1 intermediate chain, putative
411673	32	357	AAEL005410	erythroblast macrophage protein emp	ISCW010117	E3 ubiquitin ligase, putative
411674	17	813	AAEL003907	ubiquitination factor E4a	ISCW012014	ubiquitination factor E4a, putative
411677	34	162	AAEL004195	membrane associated progesterone receptor	ISCW018528	steroid membrane receptor Hpr6.6/25-Dx, putative
411678	20	372	AAEL007501	nikI, nikkomycin biosynthesis protein P6, putative	ISCW020096	2-oxoglutarate and iron-dependent oxygenase domain-containing protein, putative
411679	17	366	AAEL010728	sphingosine-1-phosphate phosphohydrolase	ISCW021109	sphingosine-1-phosphate phosphohydrolase, putative
411680	25	895	AAEL004358	conserved hypothetical protein	ISCW014432	SWI/SNF complex subunit SMARCC2, putative
411681	15	732	AAEL005291	UPF0518 protein AAEL005291	ISCW015193	conserved hypothetical protein
411682	33	1376	AAEL000444	udp-glucose glycoprotein:glucosyltransferase	ISCW004613	killer toxin-resistance protein, putative
411683	13	161	AAEL003807	conserved hypothetical protein	ISCW022670	conserved hypothetical protein
411684	26	169	AAEL002993	39S ribosomal protein L43	ISCW000124	ribosomal protein L43, putative
411685	26	994	AAEL006910	ubiquitination factor E4	ISCW017102	ubiquitin conjugation factor E4 B, putative
411686	32	411	AAEL010491	fk506-binding protein	ISCW006566	FK506 binding protein (FKBP), putative
411687	39	662	AAEL009510	glucosamine-fructose-6-phosphate aminotransferase	ISCW009866	glutamine: fructose-6-phosphate aminotransferase, putative
411688	24	477	AAEL003913	methionine-tRNA synthetase	ISCW023765	methionyl-tRNA synthetase, putative
411689	23	370	AAEL003989	GTP-binding protein alpha subunit, gna	ISCW019433	guanine nucleotide-binding protein, putative
411690	35	407	AAEL014220	conserved hypothetical protein	ISCW018290	zinc finger protein, putative
411691	26	133	AAEL012010	conserved hypothetical protein	ISCW014738	conserved hypothetical protein
411692	43	601	AAEL009859	nucleolar GTP-binding protein	ISCW017457	GTP-binding protein CRFG/NOG1, putative
411693	24	424	AAEL012261	Probable cytosolic Fe-S cluster assembly factor AAEL012261	ISCW002766	conserved hypothetical protein
411695	14	545	AAEL002394	conserved hypothetical protein	ISCW022658	conserved hypothetical protein
411696	31	179	AAEL007566	dynactin subunit P25	ISCW010831	dynactin subunit P25, putative
411697	15	519	AAEL004669	conserved hypothetical protein	ISCW011496	amyloid beta A4 precursor protein (APP)-binding protein, putative
411699	22	289	AAEL005877	conserved hypothetical protein	ISCW019428	activator of 90 kDa heat shock protein ATPase, putative
411700	22	166	AAEL014722	coilin-interacting nuclear ATPase protein, putative	ISCW024694	TATA box binding protein (TBP)-associated factor
411701	23	118	AAEL009639	conserved hypothetical protein	ISCW000161	conserved hypothetical protein
411702	23	397	AAEL012318	2-amino-3-ketobutyrate coenzyme a ligase	ISCW015295	glycine C-acetyltransferase/2-amino-3-ketobutyrate-CoA ligase, putative
411703	21	230	AAEL003430	conserved hypothetical protein	ISCW022261	conserved hypothetical protein
411704	34	171	AAEL005910	programmed cell death protein	ISCW004616	programmed cell death-involved protein, putative
411705	36	427	AAEL000807	tetratricopeptide repeat protein, putative	ISCW016514	conserved hypothetical protein
411706	21	116	AAEL014251	Inhibitor of Apoptosis (IAP), containing Baculoviral IAP Repeat(s) (BIR domains).	ISCW012508	survivin, putative
411707	30	108	AAEL009608	28S ribosomal protein S16, mitochondrial	ISCW016884	ribosomal protein S16, putative
411708	16	900	AAEL003518	calcium-transporting ATPase 2 (ATPase 2)	ISCW007742	E1-E2 ATPase, putative
411710	8	374	AAEL002137	transcriptional adaptor 2 (ada2)	ISCW008979	transcriptional adaptor, putative
411711	13	516	AAEL001867	sodium-dependent phosphate transporter	ISCW002570	sodium/phosphate cotransporter, putative
411712	23	485	AAEL011629	tyrosyl-DNA phosphodiesterase	ISCW007304	tyrosyl-DNA phosphodiesterase, putative
411713	19	137	AAEL010519	succinate dehydrogenase, putative	ISCW012012	succinate-ubiquinone reductase cytochrome B small subunit, putative
411714	25	2449	AAEL006187	translational activator gen1	ISCW009790	conserved hypothetical protein
411715	40	132	AAEL015450	ribonuclease UK114, putative	ISCW017587	translation initiation inhibitor UK114/IBM1, putative
411716	15	539	AAEL004330	conserved hypothetical protein	ISCW012355	conserved hypothetical protein

411717	23	573	AAEL002450	conserved hypothetical protein	ISCW017834	negative elongation factor C/D, putative
411718	16	458	AAEL011376	mitosis inhibitor protein kinase	ISCW009524	conserved hypothetical protein
411719	14	353	AAEL010446	protein phosphatase 2c	ISCW022585	protein phosphatase 2C, putative
411720	25	413	AAEL012851	WD-repeat protein	ISCW021332	WD-repeat protein, putative
411724	26	361	AAEL002815	conserved hypothetical protein	ISCW002296	Dentin matrix protein, putative
411725	43	258	AAEL003431	proteasome subunit beta type 7,10	ISCW006222	proteasome beta2 subunit, putative
411726	13	381	AAEL007996	centaurin alpha	ISCW021122	centaurin alpha, putative
411727	26	357	AAEL007375	pyruvate dehydrogenase	ISCW013649	dehydrogenase kinase, putative
411728	10	390	AAEL008292	GPCRDiuretic Insect Hormone/Kinin/CRF Family	ISCW007612	corticotropin-releasing factor receptor type, putative
411729	20	203	AAEL009657	lipote-protein ligase b	ISCW015462	lipote-protein ligase B, putative
411730	23	215	AAEL006267	ras-related protein Rab-3C, putative	ISCW018125	synaptic vesicle-associated GTP-binding protein, putative
411732	18	735	AAEL012247	conserved hypothetical protein	ISCW006568	conserved hypothetical protein
411733	20	851	AAEL007639	conserved hypothetical protein	ISCW000678	conserved hypothetical protein
411735	23	662	AAEL004453	DEAD box ATP-dependent RNA helicase	ISCW019100	DEAD box ATP-dependent RNA helicase, putative
411736	20	321	AAEL002995	pyrazinamidase/nicotinamidase	ISCW022272	pyrazinamidase/nicotinamidase, putative
411737	11	409	AAEL005204	conserved hypothetical protein	ISCW022805	conserved hypothetical protein
411738	15	257	AAEL001564	taz protein (tafazzin)	ISCW017038	phosphate acyltransferase, putative
411739	27	251	AAEL007203	conserved hypothetical protein	ISCW000177	conserved hypothetical protein
411740	9	387	AAEL005148	conserved hypothetical protein	ISCW013298	conserved hypothetical protein
411741	19	174	AAEL010530	dual-specificity protein phosphatase, putative	ISCW012011	dual specificity phosphatase, putative
411745	26	606	AAEL006244	cyclophilin	ISCW009230	cyclophilin, putative
411746	22	871	AAEL006474	ATP-dependent Lon protease, putative	ISCW000683	ATP-dependent protease PIM1/LON, putative
411747	37	1809	AAEL013136	chromodomain helicase DNA binding protein	ISCW005933	chromodomain helicase DNA binding protein, putative
411748	11	304	AAEL005103	conserved hypothetical protein	ISCW007258	conserved hypothetical protein
411749	30	114	AAEL011739	MAFF protein, putative	ISCW019222	transcription factor MaFG, putative
411750	58	452	AAEL005435	mitochondrial processing peptidase beta subunit	ISCW001592	processing peptidase beta subunit, putative
411751	26	739	AAEL001709	cytochrome c oxidase, subunit VB, putative	ISCW003700	vesicle coat complex AP-3, delta subunit, putative
411753	25	437	AAEL007284	serine/threonine-protein kinase pk61c	ISCW021115	cAMP-dependent protein kinase catalytic subunit, putative
411754	24	694	AAEL009061	rrm/mp domain	ISCW015614	RNA recognition rrm/mp domain, putative
411755	12	1067	AAEL002724	munc13-4	ISCW005596	munc13-4, putative
411756	23	180	AAEL001871	conserved hypothetical protein	ISCW019128	N(6)-adenine-specific DNA methyltransferase, putative
411757	10	428	AAEL005519	synaptotagmin-14	ISCW019969	synaptotagmin-14, putative
411758	13	343	AAEL014550	homeobox protein pknox1	ISCW011271	homeobox protein Pknox1, putative
411759	17	1082	AAEL006960	calpain	ISCW017525	calcium-dependent cysteine protease, putative
411760	25	199	AAEL001033	methyl-cpg binding protein, mbd	ISCW010143	methyl-CpG binding transcription regulator, putative
411762	19	509	AAEL005071	GTP binding protein	ISCW015120	GTP-binding protein, putative
411763	29	115	AAEL002418	mitochondrial ribosomal protein, L27, putative	ISCW016242	ribosomal protein L27, putative
411765	24	247	AAEL004426	Syntaxin 18, putative	ISCW014722	syntaxin-18, putative
411767	18	587	AAEL002419	sarcolemmal associated protein-2, putative	ISCW013341	FYVE-finger containing protein, putative
411768	13	634	AAEL005858	DNA mismatch repair protein mlh1	ISCW007938	DNA mismatch repair protein mlh1, putative
411769	26	421	AAEL007092	conserved hypothetical protein	ISCW020185	secreted protein, putative
411770	21	350	AAEL002469	endophilin a,	ISCW008555	lysophosphatidic acid acyltransferase endophilin, putative

411771	17	222	AAEL010419	translin associated factor x	ISCW012919	translin associated factor X, putative
411772	19	383	AAEL005383	Adenosine monophosphate-protein transferase FICD homolog (EC 2.7.7.n1)	ISCW013554	FIC domain-containing protein, putative
411773	7	442	AAEL002082	latent nuclear antigen, putative	ISCW001944	conserved hypothetical protein
411775	23	106	AAEL004276	conserved hypothetical protein	ISCW017127	protein C10, putative
411776	32	124	AAEL000330	conserved hypothetical protein	ISCW002471	conserved hypothetical protein
411777	21	306	AAEL006413	ubiquitin-conjugating enzyme morgue	ISCW009130	ubiquitin-conjugating enzyme, putative
411778	24	298	AAEL007568	DNA-directed RNA polymerase	ISCW011293	transferase, putative
411780	26	705	AAEL001169	Ribosome biogenesis protein BOP1 homolog	ISCW020702	block of proliferation protein, putative
411781	24	202	AAEL010844	ubiquitin-conjugating enzyme E2 j2	ISCW020955	ubiquitin protein ligase, putative
411782	8	510	AAEL013094	lim domain binding protein	ISCW010935	Lim domain-binding protein, putative
411783	7	407	AAEL000119	AMP dependent coa ligase	ISCW002964	acyl-CoA synthetase, putative
411785	13	434	AAEL010710	gamma-aminobutyric-acid receptor a beta subunit 1, 2, 3,	ISCW021469	Gaba-gated chloride channel, putative
411786	24	192	AAEL009538	conserved hypothetical protein	ISCW014862	conserved hypothetical protein
411787	20	165	AAEL004779	cyclophilin-10	ISCW018767	cyclophilin type peptidyl-prolyl cis-trans isomerase, putative
411788	34	553	AAEL009764	xaa-pro aminopeptidase	ISCW005124	aminopeptidase, putative
411790	28	738	AAEL001144	conserved hypothetical protein	ISCW002601	vacuolar protein-sorting protein, putative
411791	20	660	AAEL004802	conserved hypothetical protein	ISCW018139	conserved hypothetical protein
411792	21	291	AAEL011659	conserved hypothetical protein	ISCW018750	conserved hypothetical protein
411793	33	382	AAEL010574	conserved hypothetical protein	ISCW020321	conserved hypothetical protein
411794	18	274	AAEL013564	conserved hypothetical protein	ISCW012065	coiled-coil domain-containing protein 109A, putative
411796	6	319	AAEL009765	choline/ethanolamine kinase	ISCW001946	ethanolamine kinase, putative
411797	8	732	AAEL006738	breast cancer anti-estrogen resistance 1, putative	ISCW018964	docking protein, putative
411798	17	1107	AAEL010738	sodium bicarbonate cotransporter	ISCW000340	sodium bicarbonate cotransporter, putative
411800	20	592	AAEL008591	zinc finger protein, putative	ISCW019192	ring canal protein, putative
411801	24	456	AAEL000640	alanine-glyoxylate aminotransferase	ISCW020823	ornithine aminotransferase, putative
411802	22	395	AAEL002487	P53 regulated pa26 nuclear protein sestrin	ISCW002773	P53 regulated pa26 nuclear protein sestrin, putative
411805	17	304	AAEL003664	lupus la ribonucleoprotein	ISCW014366	La/SS-B, putative
411806	30	181	AAEL015437	conserved hypothetical protein	ISCW018630	calcium release-activated calcium channel protein, putative
411807	24	309	AAEL008853	choline/ethanolamine kinase	ISCW017614	ethanolamine kinase, putative
411808	19	423	AAEL014958	galactokinase	ISCW005368	galactokinase, putative
411809	26	84	AAEL010819	vacuolar ATP synthase subunit H	ISCW018653	vacuolar H ⁺ ATPase, putative
411810	24	397	AAEL005342	conserved hypothetical protein	ISCW009536	conserved hypothetical protein
411811	22	130	AAEL008671	conserved hypothetical protein	ISCW007186	tetratricopeptide repeat protein, putative
411812	22	901	AAEL004469	adaptin, alpha/gamma/epsilon	ISCW018035	AP-2 complex subunit alpha-1, putative
411813	20	622	AAEL002913	peroxisomal membrane protein 70 abcd3	ISCW008186	peroxisomal membrane protein, putative
411814	21	398	AAEL000448	conserved hypothetical protein	ISCW021968	OTU domain-containing protein, putative
411815	24	513	AAEL008645	conserved hypothetical protein	ISCW021328	Domain in SPLa and the ryanodine receptor, putative
411816	18	725	AAEL002918	centaurin beta	ISCW017663	centaurin beta, putative
411818	18	376	AAEL008634	jnk	ISCW020577	Jun-N-terminal kinase, putative
411819	13	1012	AAEL004777	GlycoproteinHormone Family	ISCW015788	leucine-rich repeat-containing G-protein coupled receptor, lgr, putative
411820	16	507	AAEL004916	conserved hypothetical protein	ISCW009723	D-glucuronyl C5-epimerase, putative
411821	29	139	AAEL012924	mitochondrial ribosomal protein, S24, putative	ISCW004921	28S ribosomal protein S24, putative

411822	21	150	AAEL006859	Myb-interacting protein, putative	ISCW010041	conserved hypothetical protein
411823	22	1056	AAEL003433	copper-transporting ATPase 1, 2 (copper pump 1, 2)	ISCW016768	copper-transporting ATPase 1, putative
411824	21	387	AAEL002756	synaptotagmin-4,	ISCW009095	synaptotagmin, putative
411826	27	204	AAEL005305	conserved hypothetical protein	ISCW010256	conserved hypothetical protein
411827	20	324	AAEL003238	conserved hypothetical protein	ISCW017297	zinc finger protein, putative
411829	32	271	AAEL002678	ras suppressor protein 1, rsu1	ISCW001027	lumican, putative
411830	25	672	AAEL003536	E3 UFM1-protein ligase 1 homolog (EC 6.3.2.-)	ISCW018871	conserved hypothetical protein
411831	17	264	AAEL000716	chondroitin 4-sulfotransferase	ISCW012005	chondroitin 4-sulfotransferase, putative
411832	45	401	AAEL002174	dolichyl-diphosphooligosaccharide protein glycosyltransferase	ISCW017658	dolichyl-di-phosphooligosaccharide protein glycotransferase, putative
411833	18	310	AAEL003288	mitochondrial uncoupling protein, putative	ISCW010186	solute carrier protein, putative
411834	20	1982	AAEL013561	conserved hypothetical protein	ISCW022896	conserved hypothetical protein
411835	33	281	AAEL012185	ribosome biogenesis regulatory protein	ISCW003281	regulator of ribosome synthesis, putative
411836	18	298	AAEL004900	geranylgeranyl pyrophosphate synthase	ISCW023301	geranylgeranyl diphosphate synthase, putative
411837	28	752	AAEL007484	protein transport protein sec23	ISCW016963	vesicle coat complex COPII, subunit SEC23, putative
411840	7	595	AAEL002294	sulphate transporter	ISCW019766	sulfate/bicarbonate/oxalate exchanger SAT-1, putative
411841	15	981	AAEL010401	conserved hypothetical protein	ISCW000123	hypothetical protein
411842	17	1982	AAEL012147	conserved hypothetical protein	ISCW015277	conserved hypothetical protein
411843	25	369	AAEL000579	conserved hypothetical protein	ISCW012356	conserved hypothetical protein
411844	24	192	AAEL013243	conserved hypothetical protein	ISCW024722	conserved hypothetical protein
411845	30	537	AAEL006577	aspartyl-tRNA synthetase	ISCW014576	asparaginyl-tRNA synthetase, putative
411846	18	493	AAEL007038	prolyl 4-hydroxylase alpha subunit 1,	ISCW001441	prolyl 4-hydroxylase alpha subunit, putative
410152	excluded		AAEL009723	fibrinogen and fibronectin	ISCW024686	ixoderin precursor, putative
410399	excluded		AAEL009172	ubiquitin ligase E3 alpha	ISCW021163	ubiquitin ligase E3 alpha, putative
410412	excluded		AAEL008627	ABC transporter	ISCW007580	ABC transporter, putative
410509	excluded		AAEL002780	conserved hypothetical protein	ISCW013027	vesicle coat complex COPII, subunit SFB3, putative
410644	excluded		AAEL006439	testis/ skeletal muscle dual specificity phosphatase	ISCW009547	dual specificity phosphatase, putative
410983	excluded		AAEL003108	protein-tyrosine phosphatase, non-receptor type nt5	ISCW009496	protein tyrosine phosphatase, non-receptor type nt6, putative
411123	excluded		AAEL001549	protein kinase c	ISCW011060	protein kinase, putative
411142	excluded		AAEL003134	conserved hypothetical protein	ISCW020978	neuroligin, putative
411150	excluded		AAEL014224	GPCROctopamine/Tyramine Family	ISCW003835	octopamine receptor oamb, putative
411152	excluded		AAEL002461	RNA-binding protein, putative	ISCW009356	RNA recognition motif-containing protein
411197	excluded		AAEL010170	ras-related protein Rab-8A, putative	ISCW024874	bhlh transcription factor, putative
411204	excluded		AAEL005386	collagen alpha chain, anopheles	ISCW022619	glycine rich secreted cement protein, putative
411380	excluded		AAEL015357	conserved hypothetical protein	ISCW012684	conserved hypothetical protein
411398	excluded		AAEL006322	conserved hypothetical protein	ISCW010386	ferric-chelate reductase, putative
411429	excluded		AAEL002565	titin	ISCW023694	conserved hypothetical protein
411600	excluded		AAEL006880	rab32	ISCW001188	GTP-binding protein RAB-32, putative
411652	excluded		AAEL014730	neurobeachin	ISCW018526	neurobeachin, putative
411721	excluded		AAEL014104	conserved hypothetical protein	ISCW002827	NEFA-interacting nuclear protein NIP30, putative
411722	excluded		AAEL006117	mitochondrial 60S ribosomal protein L7/L12	ISCW016042	ribosomal protein L7/L1, putative
411799	excluded		AAEL011089	ribonucleoprotein	ISCW001427	E1b-55kD-associated protein, putative

Supplementary table 3. Treelikeness of orthologous genes (OGs) included in the dataset SOS.

Treelikeness values represent the information content for each gene analyzed with the extended geometry quartet mapping approach (refer to the *mare* manual). The last column indicates whether the OG is included in *M_Ento* or *SOS_o*, which do not share any OG; *SOS*: Selected Optimal Subset generated with *mare* 0.1.2-rc (253 OGs, 62 taxa); *SOS_o*: obtained from *SOS* by removing all 79 OGs that included sequences from Protura, Diplura and Collembola (174 OGs remained).

OG ID	Number of taxa (SOS dataset)	treelikeness (SOS dataset) analyzed with <i>mare</i>	included in dataset <i>M_Ento</i> / <i>SOS_o</i>
409969	52	0.4024	<i>M_Ento</i>
409979	54	0.5921	<i>M_Ento</i>
409987	42	0.4488	<i>M_Ento</i>
410009	59	0.38525	<i>M_Ento</i>
410016	50	0.4744	<i>M_Ento</i>
410022	60	0.4434	<i>M_Ento</i>
410079	56	0.54405	<i>M_Ento</i>
410080	44	0.33635	<i>M_Ento</i>
410081	59	0.33875	<i>M_Ento</i>
410125	39	0.4874	<i>M_Ento</i>
410178	45	0.36275	<i>M_Ento</i>
410209	39	0.344	<i>M_Ento</i>
410216	49	0.66855	<i>M_Ento</i>
410235	34	0.38815	<i>M_Ento</i>
410279	31	0.49195	<i>M_Ento</i>
410300	52	0.51575	<i>M_Ento</i>
410314	48	0.3894	<i>M_Ento</i>
410315	44	0.4393	<i>M_Ento</i>
410333	52	0.7449	<i>M_Ento</i>
410336	51	0.3307	<i>M_Ento</i>
410382	52	0.43925	<i>M_Ento</i>
410392	38	0.6925	<i>M_Ento</i>
410431	49	0.6002	<i>M_Ento</i>
410469	58	0.5472	<i>M_Ento</i>
410505	51	0.6088	<i>M_Ento</i>
410586	59	0.8101	<i>M_Ento</i>
410601	40	0.41225	<i>M_Ento</i>
410649	60	0.47805	<i>M_Ento</i>
410700	59	0.46055	<i>M_Ento</i>
410709	50	0.32135	<i>M_Ento</i>
410779	51	0.67615	<i>M_Ento</i>
410807	45	0.39605	<i>M_Ento</i>
410818	42	0.34995	<i>M_Ento</i>
410825	53	0.7465	<i>M_Ento</i>
410857	57	0.6521	<i>M_Ento</i>
410863	51	0.4812	<i>M_Ento</i>
410895	46	0.2845	<i>M_Ento</i>
410896	42	0.36795	<i>M_Ento</i>
410908	57	0.71205	<i>M_Ento</i>
410910	49	0.44765	<i>M_Ento</i>
410920	50	0.3068	<i>M_Ento</i>
410921	60	0.43125	<i>M_Ento</i>
410951	58	0.3911	<i>M_Ento</i>
410959	55	0.72195	<i>M_Ento</i>

Supplementary table 3. Treelikeness of orthologous genes (OGs) included in the dataset SOS.

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OG ID	Number of taxa (SOS dataset)	treelikeness (SOS dataset) analyzed with <i>mare</i>	included in dataset <i>M_Ento</i> / <i>SOS_o</i>
410963	57	0.55285	<i>M_Ento</i>
411084	38	0.3565	<i>M_Ento</i>
411091	37	0.495	<i>M_Ento</i>
411149	47	0.3113	<i>M_Ento</i>
411160	57	0.49925	<i>M_Ento</i>
411161	53	0.61205	<i>M_Ento</i>
411173	45	0.2954	<i>M_Ento</i>
411177	57	0.2886	<i>M_Ento</i>
411224	48	0.3819	<i>M_Ento</i>
411264	54	0.41535	<i>M_Ento</i>
411272	53	0.35245	<i>M_Ento</i>
411275	59	0.61305	<i>M_Ento</i>
411288	46	0.3095	<i>M_Ento</i>
411341	55	0.48085	<i>M_Ento</i>
411351	46	0.70335	<i>M_Ento</i>
411385	55	0.7452	<i>M_Ento</i>
411388	54	0.2835	<i>M_Ento</i>
411391	53	0.39835	<i>M_Ento</i>
411410	53	0.57915	<i>M_Ento</i>
411424	53	0.645	<i>M_Ento</i>
411431	53	0.33365	<i>M_Ento</i>
411435	45	0.3892	<i>M_Ento</i>
411448	48	0.2926	<i>M_Ento</i>
411487	51	0.7317	<i>M_Ento</i>
411504	28	0.79955	<i>M_Ento</i>
411515	46	0.4445	<i>M_Ento</i>
411553	42	0.3269	<i>M_Ento</i>
411651	57	0.67405	<i>M_Ento</i>
411663	51	0.86645	<i>M_Ento</i>
411666	53	0.3245	<i>M_Ento</i>
411675	50	0.76325	<i>M_Ento</i>
411734	44	0.58695	<i>M_Ento</i>
411742	55	0.46855	<i>M_Ento</i>
411743	33	0.4618	<i>M_Ento</i>
411825	50	0.40295	<i>M_Ento</i>
409961	41	0.51085	<i>SOS_o</i>
409972	46	0.4465	<i>SOS_o</i>
409976	38	0.4046	<i>SOS_o</i>
409984	37	0.3675	<i>SOS_o</i>
409992	25	0.61249	<i>SOS_o</i>
409999	47	0.3733	<i>SOS_o</i>
410005	49	0.4333	<i>SOS_o</i>
410008	38	0.518	<i>SOS_o</i>
410012	26	0.75344	<i>SOS_o</i>
410021	39	0.47505	<i>SOS_o</i>
410023	37	0.4067	<i>SOS_o</i>
410050	45	0.40645	<i>SOS_o</i>
410063	31	0.51875	<i>SOS_o</i>

Supplementary table 3. Treelikeness of orthologous genes (OGs) included in the dataset SOS.

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OG ID	Number of taxa (SOS dataset)	treelikeness (SOS dataset) analyzed with <i>mare</i>	included in dataset <i>M_Ento</i> / <i>SOS_o</i>
410075	25	0.57157	SOS _o
410083	31	0.74945	SOS _o
410084	24	0.73739	SOS _o
410098	40	0.41205	SOS _o
410112	27	0.58063	SOS _o
410118	28	0.50825	SOS _o
410120	54	0.57755	SOS _o
410155	34	0.6075	SOS _o
410159	39	0.4669	SOS _o
410162	53	0.7728	SOS _o
410164	33	0.7301	SOS _o
410176	41	0.3697	SOS _o
410179	49	0.46745	SOS _o
410182	55	0.58495	SOS _o
410187	45	0.6731	SOS _o
410227	38	0.4952	SOS _o
410228	29	0.5003	SOS _o
410229	44	0.5809	SOS _o
410237	40	0.39075	SOS _o
410271	36	0.6517	SOS _o
410277	16	0.82253	SOS _o
410294	34	0.59155	SOS _o
410297	32	0.6605	SOS _o
410309	57	0.28205	SOS _o
410356	37	0.4192	SOS _o
410368	40	0.41995	SOS _o
410388	32	0.41935	SOS _o
410419	42	0.4073	SOS _o
410441	27	0.54028	SOS _o
410442	40	0.4097	SOS _o
410454	28	0.54245	SOS _o
410455	29	0.47165	SOS _o
410457	42	0.3255	SOS _o
410474	29	0.67085	SOS _o
410489	29	0.7336	SOS _o
410491	35	0.59885	SOS _o
410492	51	0.80245	SOS _o
410528	30	0.45565	SOS _o
410530	47	0.3199	SOS _o
410531	50	0.4617	SOS _o
410541	45	0.4246	SOS _o
410547	30	0.68385	SOS _o
410550	33	0.48865	SOS _o
410576	30	0.5939	SOS _o
410585	42	0.3337	SOS _o
410604	48	0.4789	SOS _o
410605	55	0.3795	SOS _o
410609	34	0.43645	SOS _o
410615	33	0.60725	SOS _o

Supplementary table 3. Treelikeness of orthologous genes (OGs) included in the dataset SOS.

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OG ID	Number of taxa (SOS dataset)	treelikeness (SOS dataset) analyzed with <i>mare</i>	included in dataset <i>M_Ento</i> / <i>SOS_o</i>
410622	35	0.4301	SOS _o
410625	41	0.39485	SOS _o
410630	30	0.60025	SOS _o
410631	36	0.63185	SOS _o
410637	35	0.74465	SOS _o
410657	41	0.4578	SOS _o
410682	50	0.58935	SOS _o
410692	44	0.78175	SOS _o
410703	27	0.5766	SOS _o
410704	29	0.52335	SOS _o
410738	35	0.72815	SOS _o
410740	34	0.44095	SOS _o
410745	36	0.773	SOS _o
410759	37	0.50165	SOS _o
410760	24	0.60704	SOS _o
410761	37	0.5522	SOS _o
410772	48	0.3261	SOS _o
410783	27	0.5284	SOS _o
410792	27	0.67151	SOS _o
410800	56	0.25025	SOS _o
410806	41	0.6001	SOS _o
410829	38	0.72005	SOS _o
410832	47	0.31485	SOS _o
410835	32	0.40775	SOS _o
410869	32	0.8404	SOS _o
410881	35	0.37545	SOS _o
410907	30	0.6234	SOS _o
410933	38	0.5295	SOS _o
410961	43	0.5777	SOS _o
410962	51	0.399	SOS _o
410974	37	0.39295	SOS _o
410982	39	0.4348	SOS _o
410992	36	0.6017	SOS _o
410998	30	0.70545	SOS _o
411019	43	0.56425	SOS _o
411023	40	0.63925	SOS _o
411030	35	0.44665	SOS _o
411035	42	0.3575	SOS _o
411043	40	0.6689	SOS _o
411044	44	0.44745	SOS _o
411060	30	0.53525	SOS _o
411064	36	0.6481	SOS _o
411074	27	0.5054	SOS _o
411077	30	0.61565	SOS _o
411089	35	0.3923	SOS _o
411093	30	0.59435	SOS _o
411133	36	0.5259	SOS _o
411138	37	0.47185	SOS _o

Supplementary table 3. Treelikeness of orthologous genes (OGs) included in the dataset SOS.

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OG ID	Number of taxa (SOS dataset)	treelikeness (SOS dataset) analyzed with <i>mare</i>	included in dataset <i>M_Ento</i> / <i>SOS_o</i>
411147	52	0.43385	SOS _o
411156	46	0.4386	SOS _o
411184	27	0.64075	SOS _o
411203	28	0.47085	SOS _o
411206	43	0.43535	SOS _o
411217	46	0.62995	SOS _o
411219	34	0.57785	SOS _o
411229	43	0.59985	SOS _o
411236	36	0.5354	SOS _o
411281	28	0.49195	SOS _o
411282	57	0.3834	SOS _o
411284	32	0.51085	SOS _o
411286	43	0.7677	SOS _o
411291	46	0.7725	SOS _o
411296	48	0.42555	SOS _o
411301	37	0.35265	SOS _o
411303	28	0.5042	SOS _o
411305	27	0.49236	SOS _o
411312	36	0.3871	SOS _o
411316	43	0.416	SOS _o
411334	31	0.74465	SOS _o
411339	50	0.4491	SOS _o
411364	42	0.527	SOS _o
411373	32	0.41825	SOS _o
411376	43	0.3102	SOS _o
411377	33	0.3942	SOS _o
411418	22	0.63267	SOS _o
411439	29	0.6445	SOS _o
411440	36	0.57265	SOS _o
411467	29	0.631	SOS _o
411469	48	0.33775	SOS _o
411514	36	0.4809	SOS _o
411521	33	0.5494	SOS _o
411522	39	0.4259	SOS _o
411539	35	0.5577	SOS _o
411544	40	0.38365	SOS _o
411591	28	0.6867	SOS _o
411607	33	0.569	SOS _o
411614	44	0.31205	SOS _o
411619	40	0.4546	SOS _o
411625	33	0.68585	SOS _o
411635	41	0.64755	SOS _o
411655	48	0.40215	SOS _o
411659	50	0.27355	SOS _o
411676	47	0.5274	SOS _o
411694	32	0.6093	SOS _o
411698	33	0.50285	SOS _o
411709	50	0.4618	SOS _o
411723	48	0.6803	SOS _o

Supplementary table 3. Treelikeness of orthologous genes (OGs) included in the dataset SOS.

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OG ID	Number of taxa (SOS dataset)	treelikeness (SOS dataset) analyzed with <i>mare</i>	included in dataset <i>M_Ento</i> / <i>SOS_o</i>
411731	38	0.4569	<i>SOS_o</i>
411744	42	0.4038	<i>SOS_o</i>
411752	35	0.88725	<i>SOS_o</i>
411764	36	0.36255	<i>SOS_o</i>
411766	38	0.67885	<i>SOS_o</i>
411774	35	0.48815	<i>SOS_o</i>
411779	30	0.5629	<i>SOS_o</i>
411784	39	0.34605	<i>SOS_o</i>
411789	38	0.36145	<i>SOS_o</i>
411803	35	0.6936	<i>SOS_o</i>
411804	28	0.4918	<i>SOS_o</i>
411817	42	0.40315	<i>SOS_o</i>
411828	39	0.6377	<i>SOS_o</i>
411838	27	0.5408	<i>SOS_o</i>
411839	29	0.46665	<i>SOS_o</i>

Supplementary table 4. Results of the *FcLM* for each OG included in the decisive dataset *M_Ento*.

Proportion of quartets [%] that show predominant support for T₁, T₂ or T₃, and quartets that prefer neither T₁, T₂ nor T₃; *Italics*: largest proportion of quartets [%]; OG-ID: ID of orthologous genes. T₁: (Protura,Diplura) – (Collembola,remaining taxa); T₂: (Protura,Collembola) – (Diplura,remaining taxa); T₃: (Diplura,Collembola) – (Protura,remaining taxa).

OG ID	Number of taxa included	Proportion [%] of quartets with				Proportion [%] of quartets (quartets with no support for either T1, T2 or T3 not considered) with		
		predominant support for T ₁	predominant support for T ₂	predominant support for T ₃	no support for T ₁ , T ₂ or T ₃	predominant support for T ₁	predominant support for T ₂	predominant support for T ₃
409987	45	31,40	11,60	10,90	46,10	58,26	21,52	20,22
410022	66	43,10	2,70	12,80	41,40	73,55	4,61	21,84
410079	60	36,40	11,50	11,80	40,30	60,97	19,26	19,77
410092	43	43,20	7,60	37,20	12,00	49,09	8,64	42,27
410191	37	58,30	0,00	2,80	38,90	95,42	0,00	4,58
410216	51	51,50	6,60	12,00	29,90	73,47	9,42	17,12
410235	35	22,80	16,80	1,70	58,70	55,21	40,68	4,12
410382	56	58,20	0,90	3,90	37,00	92,38	1,43	6,19
410392	39	11,70	11,00	8,20	69,10	37,86	35,60	26,54
410394	52	48,20	0,00	16,30	35,50	74,73	0,00	25,27
410431	53	41,50	9,40	12,90	36,20	65,05	14,73	20,22
410445	33	57,20	28,60	0,00	14,20	66,67	33,33	0,00
410503	48	56,10	1,90	6,80	35,20	86,57	2,93	10,49
410505	56	12,00	10,10	2,40	75,50	48,98	41,22	9,80
410650	20	52,90	0,00	11,80	35,30	81,76	0,00	18,24
410655	46	32,40	8,60	11,60	47,40	61,60	16,35	22,05
410664	42	15,70	1,60	9,20	73,50	59,25	6,04	34,72
410706	40	35,80	7,50	2,70	54,00	77,83	16,30	5,87
410739	41	21,90	6,50	10,20	61,40	56,74	16,84	26,42
410818	43	30,30	3,70	4,00	62,00	79,74	9,74	10,53
410825	58	54,20	0,50	0,00	45,30	99,09	0,91	0,00
410895	47	14,90	5,00	0,00	80,10	74,87	25,13	0,00
410896	43	58,00	0,00	18,40	23,60	75,92	0,00	24,08
410920	54	49,00	13,50	0,00	37,50	78,40	21,60	0,00
410959	58	31,30	15,90	2,60	50,20	62,85	31,93	5,22
411084	39	67,00	0,00	3,10	29,90	95,58	0,00	4,42
411118	30	21,00	15,40	15,00	48,60	40,86	29,96	29,18
411161	58	31,10	10,80	10,00	48,10	59,92	20,81	19,27
411224	52	25,90	4,20	6,20	63,70	71,35	11,57	17,08
411264	57	67,80	3,90	4,80	23,50	88,63	5,10	6,27
411272	59	21,90	5,80	12,70	59,60	54,21	14,36	31,44
411341	61	30,70	20,10	19,30	29,90	43,79	28,67	27,53
411351	50	20,50	16,50	14,10	48,90	40,12	32,29	27,59
411385	60	28,60	13,20	10,40	47,80	54,79	25,29	19,92
411388	57	83,10	0,60	3,00	13,30	95,85	0,69	3,46
411401	38	42,30	23,80	3,30	30,60	60,95	34,29	4,76
411420	29	56,90	7,80	0,00	35,30	87,94	12,06	0,00
411431	56	29,20	9,70	8,90	52,20	61,09	20,29	18,62
411486	39	60,50	20,30	0,00	19,20	74,88	25,12	0,00
411487	56	80,00	0,50	0,00	19,50	99,38	0,62	0,00
411489	31	56,60	23,10	0,00	20,30	71,02	28,98	0,00
411504	28	2,00	0,00	1,90	96,10	51,28	0,00	48,72
411553	42	12,90	5,30	10,20	71,60	45,42	18,66	35,92
411633	55	28,20	15,10	12,20	44,50	50,81	27,21	21,98
411643	34	79,90	3,30	0,00	16,80	96,03	3,97	0,00
411651	64	63,60	5,20	8,00	23,20	82,81	6,77	10,42
411666	57	13,50	10,60	4,00	71,90	48,04	37,72	14,23
411734	47	20,90	7,10	0,00	72,00	74,64	25,36	0,00
411742	59	51,90	0,00	25,00	23,10	67,49	0,00	32,51
411761	43	12,00	10,60	8,10	69,30	39,09	34,53	26,38
411825	52	44,90	7,90	4,90	42,30	77,82	13,69	8,49
409969	57	3,70	50,10	9,70	36,50	5,83	78,90	15,28
409986	29	4,00	70,10	1,80	24,10	5,27	92,36	2,37
410009	67	7,50	40,60	24,10	27,80	10,39	56,23	33,38
410014	25	2,30	19,10	16,90	61,70	6,01	49,87	44,13
410071	21	5,90	26,50	2,90	64,70	16,71	75,07	8,22
410081	63	7,80	37,60	28,10	26,50	10,61	51,16	38,23
410149	46	8,50	21,30	14,80	55,40	19,06	47,76	33,18
410209	41	5,80	26,90	7,20	60,10	14,54	67,42	18,05
410298	29	20,10	25,60	6,20	48,10	38,73	49,33	11,95
410302	29	0,00	65,20	8,20	26,60	0,00	88,83	11,17
410314	52	1,10	19,70	0,00	79,20	5,29	94,71	0,00
410315	45	2,70	55,50	7,30	34,50	4,12	84,73	11,15
410586	66	2,70	23,30	1,60	72,40	9,78	84,42	5,80
410601	42	0,00	27,70	12,00	60,30	0,00	69,77	30,23
410649	64	32,20	39,80	4,20	23,80	42,26	52,23	5,51
410700	65	17,60	27,30	22,50	32,60	26,11	40,50	33,38
410709	51	1,50	44,50	1,70	52,30	3,14	93,29	3,56
410779	54	35,90	39,90	0,00	24,20	47,36	52,64	0,00
410863	57	14,30	24,60	7,00	54,10	31,15	53,59	15,25
410910	52	0,00	51,00	41,10	7,90	0,00	55,37	44,63
410921	64	2,10	29,00	27,50	41,40	3,58	49,49	46,93
410945	40	5,60	22,20	5,80	66,40	16,67	66,07	17,26

411149	50	25,70	52,70	0,00	21,60	32,78	67,22	0,00
411160	62	12,40	31,00	9,70	46,90	23,35	58,38	18,27
411173	47	29,30	34,10	9,60	27,00	40,14	46,71	13,15
411177	65	3,30	44,90	6,70	45,10	6,01	81,79	12,20
411275	64	16,00	36,30	3,20	44,50	28,83	65,41	5,77
411318	27	8,30	46,30	0,00	45,40	15,20	84,80	0,00
411352	48	6,90	32,90	11,90	48,30	13,35	63,64	23,02
411448	53	21,90	36,20	4,50	37,40	34,98	57,83	7,19
411589	34	3,50	20,10	0,00	76,40	14,83	85,17	0,00
411663	59	0,00	24,10	23,60	52,30	0,00	50,52	49,48
411675	53	4,30	19,40	1,40	74,90	17,13	77,29	5,58
411743	33	0,00	47,90	8,80	43,30	0,00	84,48	15,52
411795	33	0,00	16,70	3,50	79,80	0,00	82,67	17,33
409979	60	0,00	10,80	42,40	46,80	0,00	20,30	79,70
410001	26	14,20	9,30	28,90	47,60	27,10	17,75	55,15
410016	53	0,00	2,00	32,30	65,70	0,00	5,83	94,17
410080	46	8,00	12,50	36,60	42,90	14,01	21,89	64,10
410125	44	10,90	2,80	24,40	61,90	28,61	7,35	64,04
410178	47	15,70	11,10	31,00	42,20	27,16	19,20	53,63
410203	39	24,70	7,80	25,90	41,60	42,29	13,36	44,35
410274	33	0,00	0,00	46,40	53,60	0,00	0,00	100,00
410279	32	9,10	1,70	44,10	45,10	16,58	3,10	80,33
410300	59	0,50	8,80	42,20	48,50	0,97	17,09	81,94
410333	56	5,10	10,80	49,70	34,40	7,77	16,46	75,76
410336	59	17,50	2,90	43,60	36,00	27,34	4,53	68,13
410469	67	0,30	22,50	60,00	17,20	0,36	27,17	72,46
410525	53	0,00	4,50	86,30	9,20	0,00	4,96	95,04
410710	34	0,00	0,00	49,10	50,90	0,00	0,00	100,00
410807	48	8,20	18,10	25,30	48,40	15,89	35,08	49,03
410857	62	26,90	6,90	37,30	28,90	37,83	9,70	52,46
410908	63	5,70	2,40	16,00	75,90	23,65	9,96	66,39
410951	64	4,20	16,50	30,30	49,00	8,24	32,35	59,41
410963	62	22,90	1,00	48,40	27,70	31,67	1,38	66,94
411091	38	9,30	0,00	11,70	79,00	44,29	0,00	55,71
411207	53	17,40	7,00	41,60	34,00	26,36	10,61	63,03
411288	50	32,90	0,00	39,70	27,40	45,32	0,00	54,68
411391	57	15,90	16,00	25,30	42,80	27,80	27,97	44,23
411410	58	0,00	23,90	39,60	36,50	0,00	37,64	62,36
411424	54	2,80	10,50	39,80	46,90	5,27	19,77	74,95
411435	47	11,30	8,10	19,70	60,90	28,90	20,72	50,38
411515	47	17,80	0,00	40,00	42,20	30,80	0,00	69,20
411562	46	1,50	13,20	20,70	64,60	4,24	37,29	58,47
411604	29	4,20	2,00	14,80	79,00	20,00	9,52	70,48
411672	33	28,60	7,20	34,00	30,20	40,97	10,32	48,71

Supplementary table 5. Functional KOG categories of orthologous genes (OGs) included in dataset *M_Ento*.

Functional annotation according to the COG database (Tatusov et al. 2003) with *KOGnitor* (<http://www.ncbi.nlm.nih.gov/COG/grace/kognitor.html>). Query: unmasked amino acid sequences of *Aedes aegypti*. OG ID: orthologous gene ID.

OG ID	predominant support	<i>Aedes aegypti</i> annotation ID	annotation <i>Aedes aegypti</i>	KOG	CATEGORY	Explanation of category	
410503	Protura+Diplura	AAEL001715	chaperonin	KOG0357 Chaperonin complex component TCP-1 epsilon subunit (CCT5)	O	Posttranslational modification, protein turnover, chaperones	Cellular processes and signaling
410664	Protura+Diplura	AAEL011584	chaperonin-60kD ch60	KOG0356 Mitochondrial chaperonin Cpn60/Hsp60p	O	Posttranslational modification, protein turnover, chaperones	Cellular processes and signaling
410896	Protura+Diplura	AAEL008397	GlutathionePeroxidase	KOG1651 Glutathione peroxidase	O	Posttranslational modification, protein turnover, chaperones	Cellular processes and signaling
411633	Protura+Diplura	AAEL007702	chaperonin	KOG0358 Chaperonin complex component TCP-1 delta subunit (CCT4)	O	Posttranslational modification, protein turnover, chaperones	Cellular processes and signaling
411734	Protura+Diplura	AAEL013989	protein translocation complex beta subunit putative	KOG3457 SecE1 protein translocation complex beta subunit	O	Posttranslational modification, protein turnover, chaperones	Cellular processes and signaling
411825	Protura+Diplura	AAEL007441	translocon-associated protein gamma subunit	KOG4490 Translocon-associated complex TRAP gamma subunit U	U	Intracellular trafficking, secretion, and vesicular transport	Cellular processes and signaling
409987	Protura+Diplura	AAEL002417	troponin t invertebrate	KOG3634 Troponin	Z	Cytoskeleton	Cellular processes and signaling
410392	Protura+Diplura	AAEL011544	mago nashi putative	KOG3392 Exon-exon junction complex Magoh component	A	RNA processing and modification	Information storage and processing
411272	Protura+Diplura	AAEL009994	60S ribosomal protein L4	KOG1475 Ribosomal protein RPL1/RPL2/RL4L4	A	RNA processing and modification	Information storage and processing
411504	Protura+Diplura	AAEL001363	small nuclear ribonucleoprotein Sm D1 putative	KOG3448 Predicted snRNP core protein	A	RNA processing and modification	Information storage and processing
410022	Protura+Diplura	AAEL008103	40S ribosomal protein S8	KOG3283 40S ribosomal protein S8	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410079	Protura+Diplura	AAEL003396	60S ribosomal protein L32	KOG0878 60S ribosomal protein L32	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410216	Protura+Diplura	AAEL003530	acidic ribosomal protein P1 putative	KOG1762 60s acidic ribosomal protein P1	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410382	Protura+Diplura	AAEL005097	cold induced protein (BnC24A) putative	KOG3295 60S Ribosomal protein L13	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410431	Protura+Diplura	AAEL012733	60S ribosomal protein L19	KOG1696 60s ribosomal protein L19	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410505	Protura+Diplura	AAEL000010	ribosomal protein L36 putative	KOG3452 60S ribosomal protein L36	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410825	Protura+Diplura	AAEL009506	40S ribosomal protein S20	KOG0900 40S ribosomal protein S20	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410959	Protura+Diplura	AAEL001759	40S ribosomal protein S9	KOG3301 Ribosomal protein S4	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411161	Protura+Diplura	AAEL005817	60S ribosomal protein L26	KOG3401 60S ribosomal protein L26	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411264	Protura+Diplura	AAEL008481	60S ribosomal protein L18	KOG1714 60s ribosomal protein L18	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411341	Protura+Diplura	AAEL004325	60S ribosomal protein L5	KOG0875 60S ribosomal protein L5	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411351	Protura+Diplura	AAEL000068	ribosomal protein S25 putative	KOG1767 40S ribosomal protein S25	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411385	Protura+Diplura	AAEL003835	initiation factor 5a	KOG3271 Translation initiation factor 5A (eIF-5A)	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411487	Protura+Diplura	AAEL009151	30S ribosomal protein S8	KOG1754 40S ribosomal protein S15/S22	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411643	Protura+Diplura	AAEL007760	mct-1 protein	KOG2523 Predicted RNA-binding protein with PUA domain	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411651	Protura+Diplura	AAEL011656	40S ribosomal protein S15	KOG0898 40S ribosomal protein S15	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411666	Protura+Diplura	AAEL008188	60S ribosomal protein L6	KOG1694 60s ribosomal protein L6	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411742	Protura+Diplura	AAEL001488	ribosomal protein L15	KOG1678 60s ribosomal protein L15	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410650	Protura+Diplura	AAEL009109	conserved hypothetical protein	KOG3047 Predicted transcriptional regulator UXT	K	Transcription	Information storage and processing
411420	Protura+Diplura	AAEL007825	conserved hypothetical protein	KOG3169 RNA polymerase II transcriptional regulation mediator	K	Transcription	Information storage and processing
411553	Protura+Diplura	AAEL000951	elongation factor 1-beta2	KOG1668 Elongation factor 1 beta/delta chain	K	Transcription	Information storage and processing
410092	Protura+Diplura	AAEL005308	pyruvate dehydrogenase	KOG0225 Pyruvate dehydrogenase E1 alpha subunit	C	Energy production and conversion	Metabolism
410655	Protura+Diplura	AAEL009029	aldehyde dehydrogenase	KOG2450 Aldehyde dehydrogenase	C	Energy production and conversion	Metabolism
410706	Protura+Diplura	AAEL007868	ubiquinol-cytochrome c reductase complex 14 kd protein	KOG3440 Ubiquinol cytochrome c reductase subunit QCR7 KOG4632 NADH:ubiquinone oxidoreductase NDUFB5/SGDH subunit	C	Energy production and conversion	Metabolism
410895	Protura+Diplura	AAEL009078	NADH-ubiquinone oxidoreductase sgdh subunit		C	Energy production and conversion	Metabolism

410920	Protura+Diplura	AAEL006509		KOG4103 Mitochondrial F1F0-ATP synthase subunit g/ATP20	C	Energy production and conversion	Metabolism
411224	Protura+Diplura	AAEL011010	conserved hypothetical protein	KOG4092 Mitochondrial F1F0-ATP synthase subunit f	C	Energy production and conversion	Metabolism
411431	Protura+Diplura	AAEL011184	mitochondrial phosphate carrier protein	KOG0767 Mitochondrial phosphate carrier protein	C	Energy production and conversion	Metabolism
411084	Protura+Diplura	AAEL000454	isocitrate dehydrogenase	KOG0785 Isocitrate dehydrogenase alpha subunit	E	Amino acid transport and metabolism	Metabolism
411118	Protura+Diplura	AAEL006834	glutamate semialdehyde dehydrogenase	KOG4165 Gamma-glutamyl phosphate reductase	E	Amino acid transport and metabolism	Metabolism
411489	Protura+Diplura	AAEL005336	d-3-phosphoglycerate dehydrogenase	KOG0068 D-3-phosphoglycerate dehydrogenase D-isomer-specific 2-hydroxy acid dehydrogenase superfamily	E	Amino acid transport and metabolism	Metabolism
410394	Protura+Diplura	AAEL004988	phosphoglycerate kinase	KOG1367 3-phosphoglycerate kinase	G	Carbohydrate transport and metabolism	Metabolism
410818	Protura+Diplura	AAEL012994	glucose-6-phosphate isomerase	KOG2446 Glucose-6-phosphate isomerase	G	Carbohydrate transport and metabolism	Metabolism
411761	Protura+Diplura	AAEL005931	6-phosphogluconate dehydrogenase	KOG2653 6-phosphogluconate dehydrogenase	G	Carbohydrate transport and metabolism	Metabolism
411486	Protura+Diplura	AAEL008740	synaptic glycoprotein sc2	KOG1639 Steroid reductase required for elongation of the very long chain fatty acids	I	Lipid transport and metabolism	Metabolism
410191	Protura+Diplura	AAEL010783	sodium/potassium-dependent ATPase beta-2 subunit	KOG3927 Na ⁺ /K ⁺ ATPase beta subunit	P	Inorganic ion transport and metabolism	Metabolism
410739	Protura+Diplura	AAEL011498	Copper-Zinc(Cu-Zn) Superoxide Dismutase	KOG0441 Cu ²⁺ /Zn ²⁺ superoxide dismutase SOD1	P	Inorganic ion transport and metabolism	Metabolism
411388	Protura+Diplura	AAEL001872	voltage-dependent anion-selective channel	KOG3126 Porin/voltage-dependent anion-selective channel protein	P	Inorganic ion transport and metabolism Coenzyme transport and metabolism	Metabolism
411401	Protura+Diplura	AAEL012578	phosphoserine aminotransferase	KOG2790 Phosphoserine aminotransferase	H,E	Amino acid transport and metabolism	Metabolism
410235	Protura+Diplura	AAEL008492	conserved hypothetical protein	KOG3918 Predicted membrane protein	S	Function unknown	poorly characterised
410445	Protura+Diplura	AAEL005965	presenilin enhancer putative	KOG3402 Predicted membrane protein	S	Function unknown	poorly characterised
410601	Protura+Collembola	AAEL004112	ThioredoxinPeroxidase	KOG0852 Alkyl hydroperoxide reductase thiol specific antioxidant and related enzymes	O	Posttranslational modification, protein turnover, chaperones	Cellular processes and signaling
410910	Protura+Collembola	AAEL013952	prohibitin	KOG3090 Prohibitin-like protein	O	Posttranslational modification, protein turnover, chaperones	Cellular processes and signaling
410945	Protura+Collembola	AAEL010496	conserved hypothetical protein	KOG1872 Ubiquitin-specific protease	O	Posttranslational modification, protein turnover, chaperones	Cellular processes and signaling
410014	Protura+Collembola	AAEL009832	exocyst complex protein exo70	KOG2344 Exocyst component protein and related proteins	U	Intracellular trafficking, secretion, and vesicular transport	Cellular processes and signaling
410071	Protura+Collembola	AAEL001497	vacuolar protein sorting	KOG2115 Vacuolar sorting protein VPS45	U	Intracellular trafficking, secretion, and vesicular transport	Cellular processes and signaling
410209	Protura+Collembola	AAEL003106	clathrin coat associated protein ap-50	KOG0938 Adaptor complexes medium subunit family	U	Intracellular trafficking, secretion, and vesicular transport	Cellular processes and signaling
410709	Protura+Collembola	AAEL010032	translocon-associated protein beta subunit precursor (trap-beta) (signal sequ	KOG3317 Translocon-associated complex TRAP beta subunit	U	Intracellular trafficking, secretion, and vesicular transport	Cellular processes and signaling
410009	Protura+Collembola	AAEL004500	eukaryotic translation elongation factor	KOG0469 Elongation factor 2	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410298	Protura+Collembola	AAEL001044	tyrosyl-tRNA synthetase	KOG2144 Tyrosyl-tRNA synthetase cytoplasmic	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410586	Protura+Collembola	AAEL013625	40S ribosomal protein S5	KOG3291 Ribosomal protein S7	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410700	Protura+Collembola	AAEL010821	60S acidic ribosomal protein P0	KOG0815 60S acidic ribosomal protein P0	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410779	Protura+Collembola	AAEL004175	40S ribosomal protein S17	KOG0187 40S ribosomal protein S17	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410863	Protura+Collembola	AAEL010299	40S ribosomal protein S12	KOG3406 40S ribosomal protein S12	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410921	Protura+Collembola	AAEL000032	40S ribosomal protein S6	KOG1646 40S ribosomal protein S6	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411160	Protura+Collembola	AAEL013221	60S ribosomal protein L10a	KOG1570 60S ribosomal protein L10A	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411275	Protura+Collembola	AAEL009496	40S ribosomal protein S7	KOG3320 40S ribosomal protein S7	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411352	Protura+Collembola	AAEL009902	Eukaryotic translation initiation factor 3 subunit D (eIF3d)(Eukaryotic transl	KOG2479 Translation initiation factor 3 subunit d (eIF-3d)	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411663	Protura+Collembola	AAEL012686	ribosomal protein S12 putative	KOG1749 40S ribosomal protein S23	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411675	Protura+Collembola	AAEL002832	40S ribosomal protein S26	KOG1768 40s ribosomal protein S26	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410314	Protura+Collembola	AAEL011711	nascent polypeptide associated complex alpha subunit (nac alpha)	KOG2239 Transcription factor containing NAC and TS-N domains	K	Transcription	Information storage and processing
409969	Protura+Collembola	AAEL009653	40S ribosomal protein S30	KOG0009 Ubiquitin-like/40S ribosomal S30 protein fusion	J,O	Translation, ribosomal structure and biogenesis Posttranslational modification, protein turnover, chaperones	Information storage and processes
410149	Protura+Collembola	AAEL013739	electron transport oxidoreductase	KOG3954 Electron transfer flavoprotein alpha subunit	C	Energy production and conversion	Metabolism
410315	Protura+Collembola	AAEL011025	vacuolar ATP synthase subunit ac39	KOG2957 Vacuolar H ⁺ -ATPase V0 sector subunit d	C	Energy production and conversion	Metabolism

410649	Protura+Collembola	AAEL004855	ADP ATP carrier protein	KOG0749 Mitochondrial ADP/ATP carrier proteins	C	Energy production and conversion	Metabolism
411173	Protura+Collembola	AAEL002956	Probable citrate synthase 1 mitochondrial Precursor (EC 2.3.3.1)	KOG2617 Citrate synthase	C	Energy production and conversion	Metabolism
411177	Protura+Collembola	AAEL012175	ATP synthase alpha subunit mitochondrial	KOG1353 F0F1-type ATP synthase alpha subunit	C	Energy production and conversion	Metabolism
411795	Protura+Collembola	AAEL005976	adenine phosphoribosyltransferase putative	KOG1712 Adenine phosphoribosyl transferases	F	Nucleotide transport and metabolism	Metabolism
409986	Protura+Collembola	AAEL014393	lactylglutathione lyase	KOG2944 Glyoxalase	G	Carbohydrate transport and metabolism	Metabolism
410081	Protura+Collembola	AAEL005766	fructose-bisphosphate aldolase	KOG1557 Fructose-bisphosphate aldolase	G	Carbohydrate transport and metabolism	Metabolism
411318	Protura+Collembola	AAEL002834	myo-inositol-1 phosphate synthase	KOG0693 Myo-inositol-1-phosphate synthase	I	Lipid transport and metabolism	Metabolism
411448	Protura+Collembola	AAEL006582	calcium-transporting ATPase sarcoplasmic/endoplasmic reticulum type	KOG0202 Ca2+ transporting ATPase	P	Inorganic ion transport and metabolism	Metabolism
410302	Protura+Collembola	AAEL000955	conserved hypothetical protein	KOG2981 Protein involved in autophagocytosis during starvation	R	General function prediction only	poorly characterised
411149	Protura+Collembola	AAEL004347	Eukaryotic translation initiation factor 3 subunit M (eIF3m)	KOG2753 Uncharacterized conserved protein contains PCI domain	R	General function prediction only	poorly characterised
411743	Protura+Collembola	AAEL006748	ss-DNA binding protein 12RNP2 precursor putative	KOG0130 RNA-binding protein RBM8/Tsunagi (RRM superfamily)	R	General function prediction only	poorly characterised
411589	Protura+Collembola	AAEL007647	conserved hypothetical protein	KOG4018 Uncharacterized conserved protein contains RWD domain	S	Function unknown	poorly characterised
411435	Diplura+Collembola	AAEL014723	26S protease regulatory subunit	KOG0728 26S proteasome regulatory complex ATPase RPT6	O	Posttranslational modification, protein turnover, chaperones	Cellular processes and signaling
411515	Diplura+Collembola	AAEL001052	heat shock protein putative	KOG1641 Mitochondrial chaperonin	O	Posttranslational modification, protein turnover, chaperones	Cellular processes and signaling
411604	Diplura+Collembola	AAEL003165	low molecular weight protein-tyrosine-phosphatase	KOG3217 Protein tyrosine phosphatase	T	Signal transduction mechanisms	Cellular processes and signaling
410178	Diplura+Collembola	AAEL013320	translocon-associated protein delta subunit	KOG4088 Translocon-associated complex TRAP delta subunit	U	Intracellular trafficking, secretion, and vesicular transport	Cellular processes and signaling
410125	Diplura+Collembola	AAEL013229	tubulin alpha chain	KOG1376 Alpha tubulin	Z	Cytoskeleton	Cellular processes and signaling
410807	Diplura+Collembola	AAEL003877	ubiquitin	KOG0001 Ubiquitin and ubiquitin-like proteins	O,R	Posttranslational modification, protein turnover, chaperones General function prediction only	Cellular processes and signaling poorly characterised
411091	Diplura+Collembola	AAEL008719	Sm protein G putative	KOG1780 Small Nuclear ribonucleoprotein G	A	RNA processing and modification	Information storage and processing
409979	Diplura+Collembola	AAEL006785	60S ribosomal protein L18a	KOG0829 60S ribosomal protein L18A	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410016	Diplura+Collembola	AAEL006698	60S ribosomal protein L31	KOG0893 60S ribosomal protein L31	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410274	Diplura+Collembola	AAEL000175	Eukaryotic translation initiation factor 3 subunit C (eIF3c)(Eukaryotic transla	KOG1076 Translation initiation factor 3 subunit c (eIF-3c)	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410300	Diplura+Collembola	AAEL014838	60S ribosomal protein L27c	KOG3418 60S ribosomal protein L27	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410333	Diplura+Collembola	AAEL014903	40S ribosomal protein S24	KOG3424 40S ribosomal protein S24	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410469	Diplura+Collembola	AAEL002534	60S ribosomal protein L10	KOG0857 60s ribosomal protein L10	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410908	Diplura+Collembola	AAEL012944	60S ribosomal protein L11	KOG0397 60S ribosomal protein L11	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410951	Diplura+Collembola	AAEL009825	60S ribosomal protein L13a	KOG3204 60S ribosomal protein L13a	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411288	Diplura+Collembola	AAEL011447	60S ribosomal protein L14	KOG3421 60S ribosomal protein L14	J	Translation, ribosomal structure and biogenesis	Information storage and processing
411410	Diplura+Collembola	AAEL007699	60S ribosomal protein L9	KOG3255 60S ribosomal protein L9	J	Translation, ribosomal structure and biogenesis	Information storage and processing
410279	Diplura+Collembola	AAEL003552	DNA-directed RNA polymerase subunit rp6	KOG3405 RNA polymerase subunit K NO related KOG KOG4634 Mitochondrial F1F0-ATP synthase subunit C6 (coupling factor 6)	K	Transcription	Information storage and processing
410080	Diplura+Collembola	AAEL002813	coupling factor putative	KOG2711 Glycerol-3-phosphate dehydrogenase/dihydroxyacetone 3-phosphate reductase	C	Energy production and conversion	Metabolism
410203	Diplura+Collembola	AAEL001593	glycerol-3-phosphate dehydrogenase	KOG3025 Mitochondrial F1F0-ATP synthase subunit c/ATP9/protolipid	C	Energy production and conversion	Metabolism
410857	Diplura+Collembola	AAEL012740	ATPase subunit putative		C	Energy production and conversion	Metabolism
410963	Diplura+Collembola	AAEL004457	cytochrome c	KOG3453 Cytochrome c	C	Energy production and conversion	Metabolism
411207	Diplura+Collembola	AAEL008166	malate dehydrogenase	KOG1494 NAD-dependent malate dehydrogenase	C	Energy production and conversion	Metabolism
411672	Diplura+Collembola	AAEL004297	ATP-citrate synthase	KOG1254 ATP-citrate lyase	C	Energy production and conversion	Metabolism
411391	Diplura+Collembola	AAEL013458	glutamine synthetase 1 2 (glutamate-amonia ligase) (gs)	KOG0683 Glutamine synthetase	E	Amino acid transport and metabolism	Metabolism
410525	Diplura+Collembola	AAEL014913	pyruvate kinase	KOG2323 Pyruvate kinase	G	Carbohydrate transport and metabolism	Metabolism
411562	Diplura+Collembola	AAEL009389	transaldolase	KOG2772 Transaldolase	G	Carbohydrate transport and metabolism	Metabolism

410336	Diplura+Collembola	AAEL008341	adenosylhomocysteinase	KOG1370 S-adenosylhomocysteine hydrolase	H	Coenzyme transport and metabolism	Metabolism
410001	Diplura+Collembola	AAEL012051	conserved hypothetical protein	KOG4272 Predicted GTP-binding protein	R	General function prediction only	poorly characterised
410710	Diplura+Collembola	AAEL011554	adhesion regulating molecule 1 (110 kda cell membrane glycoprotein)	KOG3037 Cell membrane glycoprotein	R	General function prediction only	poorly characterised
411424	Diplura+Collembola	AAEL012684	conserved hypothetical protein	KOG3491 Predicted membrane protein	S	Function unknown	poorly characterised

Supplementary table 6. List of the best substitution model per orthologous gene (OG).

Best models are selected upon the Bayesian Information criterion (BIC) and used for the partitioned ML analyses. Gamma shape parameters are given in +G{alpha}. Proportions of invariable sites are given +I{p_invar}.

OG ID	selected Model	OG ID	selected Model	OG ID	selected Model
411435	JTT+G{0.3703}	410298	LG+G{0.5703}	410216	WAG+G{1.241}
411515	LG+G{1.003}	410586	JTTDCMut+G{0.7641}	410382	LG+G{0.6523}
411604	WAG+I{0.06966}+G{1.478}	410700	LG+I{0.1059}+G{0.8504}	410431	LG+G{0.5505}
410178	LG+I{0.03723}+G{1.6}	410779	JTT+G{0.5464}	410505	LG+G{0.6884}
410125	PMB+G{1.017}	410863	LG+G{0.811}	410825	JTT+G{0.4412}
410807	VT+G{0.4155}	410921	LG+G{0.6468}	410959	JTT+I{0.1328}+G{0.3858}
411091	LG+G{0.7632}	411160	LG+I{0.113}+G{0.5503}	411161	LG+G{0.6947}
409979	LG+G{0.6705}	411275	LG+G{0.6521}	411264	LG+I{0.1232}+G{0.7608}
410016	LG+G{0.7379}	411352	LG+G{0.6339}	411341	LG+I{0.141}+G{0.89}
410274	LG+G{0.602}	411663	JTTDCMut+G{1.362}	411351	DCMut+G{0.5604}
410300	LG+G{1.039}	411675	LG+G{0.3497}	411385	LG+G{0.5394}
410333	LG+G{0.906}	410314	JTT+G{0.6035}	411487	LG+G{0.3191}
410469	LG+I{0.3674}+G{0.6225}	409969	LG+I{0.08716}+G{0.698}	411643	LG+G{0.6954}
410908	LG+G{0.3324}	410149	LG+I{0.1716}+G{0.9045}	411651	LG+G{0.5165}
410951	LG+I{0.06891}+G{0.9895}	410315	LG+G{0.5463}	411666	WAG+I{0.07086}+G{1.194}
411288	LG+G{1.257}	410649	LG+G{0.4284}	411742	LG+G{0.71}
411410	LG+I{0.1799}+G{0.8467}	411173	LG+I{0.1612}+G{0.63}	410650	LG+I{0.04445}+G{2.231}
410279	JTT+G{0.4555}	411177	LG+I{0.1725}+G{0.3307}	411420	JTT+G{0.7518}
410080	LG+I{0.05779}+G{1.925}	411795	LG+G{0.8633}	411553	WAG+G{0.8494}
410203	LG+G{0.5265}	409986	LG+G{0.5662}	410092	LG+I{0.1465}+G{0.9071}
410857	LG+G{0.3241}	410081	LG+G{0.4647}	410655	LG+G{0.6538}
410963	WAG+G{0.5103}	411318	LG+G{0.5357}	410706	LG+I{0.1019}+G{1.478}
411207	LG+I{0.1665}+G{0.7987}	411448	LG+G{0.2838}	410895	LG+I{0.03404}+G{1.272}
411672	LG+I{0.1059}+G{0.4498}	410302	JTTDCMut+G{0.6341}	410920	LG+G{1.064}
411391	LG+I{0.1139}+G{0.8554}	411149	LG+G{0.9638}	411224	LG+G{0.987}
410525	LG+I{0.1762}+G{0.743}	411743	LG+G{0.7476}	411431	LG+I{0.2938}+G{0.9413}
411562	LG+G{0.4764}	411589	LG+G{0.7395}	411084	LG+G{0.3318}
410336	LG+G{0.4974}	410503	LG+I{0.1696}+G{0.657}	411118	LG+G{0.5074}
410001	LG+G{0.6715}	410664	LG+G{0.3759}	411489	LG+G{0.7252}
410710	JTT+G{1.003}	410896	LG+G{0.9842}	410394	WAG+G{0.5872}
411424	LG+G{0.6483}	411633	LG+G{0.6189}	410818	LG+G{0.5568}
410601	WAG+I{0.2108}+G{1.002}	411734	JTT+G{0.5201}	411761	WAG+G{0.4653}
410910	LG+G{0.5505}	411825	LG+G{0.8536}	411486	LG+I{0.1536}+G{1.049}
410945	LG+G{0.7405}	409987	LG+G{0.4313}	410191	LG+G{0.8955}
410014	LG+G{1.43}	410392	JTTDCMut+I{0.2919}+G{0.3725}	410739	WAG+G{0.6491}
410071	LG+G{1.212}	411272	LG+G{0.5453}	411388	LG+G{1.514}
410209	LG+G{0.6742}	411504	LG+G{0.3111}	411401	LG+G{0.7667}
410709	LG+G{0.9771}	410022	LG+G{0.5321}	410235	mtZOA+G{1.012}
410009	LG+I{0.2964}+G{0.6169}	410079	LG+I{0.1021}+G{0.6463}	410445	LG+G{0.9405}

Supplementary table 7. Results from rogue taxa analyses.

(a) Rogue taxa events: ImprovCons: accumulated bootstrap support (AS) that is added to the consensus tree by pruning the rogue taxon from the bootstrap trees; - : no increase of the bootstrap support of bipartitions in the ML trees; ImprovMLtree: AS in the ML tree after pruning rogues. Above a cutoff of $\text{improvCons} > 0.3$ we pruned taxa from the dataset.

taxon	dataset	ImprovCons [%]	ImprovMLtree [%]
<i>Coptotermes formosanus</i> *	<i>M_Ento</i>	213.1	239.3
<i>Coptotermes formosanus</i> *	<i>M_Nono</i>	205.5	175.4
<i>Ischnura elegans</i>	<i>M_Nono</i>	23.9	-
<i>Carcinus maenas</i>	<i>M_Nono</i>	9.6	-
<i>Pollicipes pollicipes</i>	<i>M_Nono</i>	2.6	-
<i>Orchesella cincta</i> *	<i>M_Elli</i>	211.4	198.7
<i>Coptotermes formosanus</i> *	<i>M_Elli</i>	153.2	60.1
<i>Baetis</i> sp.*	<i>M_Elli</i>	72.1	30.8
<i>Macrobrachium nipponense</i>	<i>M_Elli</i>	10.1	NA
<i>Pediculus humanus</i>	<i>M_Elli</i>	2.1	NA
<i>Celuca pugilator</i>	<i>M_Elli</i>	0.9	NA
<i>Coptotermes formosanus</i> *	<i>M_DiCo</i>	211.3	146.6
<i>Pollicipes pollicipes</i> *	<i>M_DiCo</i>	63.4	25.5
<i>Pediculus humanus</i> *	<i>M_DiCo</i>	61.1	-
<i>Baetis</i> sp.*	<i>M_DiCo</i>	43.7	30.9
<i>Ischnura elegans</i>	<i>M_DiCo</i>	14.1	-
<i>Orchesella cincta</i>	<i>M_DiCo</i>	13.5	-

Supplementary table 7. Results from rogue taxa analyses.

(b) BS support for selected clades before and after pruning rogues: Rogue taxa were pruned from the alignment and tree reconstructions were repeated. For identified rogues see supplementary table 7a.

selected clade	<i>M_Ento</i>		<i>M_Nono</i>		<i>M_Elli</i>		<i>M_DiCo</i>	
	original	rogues pruned	original	rogues pruned	original	rogues pruned	original	rogues pruned
Hexapoda	92	100	-	72	-	100	99	100
Ellipura	-	-	-	-	-	100	-	-
Nonoculata	88	91	100	100	-	-	-	-
Diplura	100	100	100	100	100	100	100	100
Collembola	100	100	100	100	-	100	100	100
Ectognatha	89	100	-	100	88	100	95	95
(Diplura,Collembola)	-	-	-	-	-	-	99	99
(Nonoculata,Ectognatha)	68	80	-	98	-	-	-	-
(Diplura,Ectognatha)	-	-	-	-	59	66	-	-
((Diplura,Collembola),Ectognatha)	-	-	-	-	-	-	59	60
Dicondylia	83	97	-	52	53	89	81	82
Zygentoma	100	100	83	83	100	100	84	89