

**Table S1.** Collection information for species for which transcriptomic libraries were generated in this study.

Species	Locality	Latitude/ Longitude	Tissue
<i>Macracanthorhynchus hirudinaceus</i> <sup>1</sup>	South-Bakony Mountain, Game Park King Mathias, South of Herend and Szentgal, Hungary	47.07866 N/ 017.74976 E	~50mg middle piece, female
<i>Rotaria rotatoria</i>	Harasov lake (littoral benthos), Středočeský kraj, Kokorinsko Protected Area, Czech Republic	50.24441 N/ 014.34150 E	~600 specimen
<i>Lecane inermis</i>	Culture, Institute of Environmental Sciences, Jagiellonian University, Poland	n.a.	~1000 specimen
<i>Gnathostomula paradoxa</i>	List, North Sea island Sylt, Germany	55.02480 N/ 008.43520 E	~10 specimen
<i>Macrodasyus sp.</i>	List, North Sea island Sylt, Germany	55.01534 N/ 008.43618 E	~20 specimen
<i>Dactylopodola baltica</i>	List, North Sea island Sylt, Germany	55.01542 N/ 008.43776 E	~20 specimen
<i>Megadasyus sp.</i>	List, North Sea island Sylt, Germany	55.01534 N/ 008.43618 E	~100 specimen
<i>Lepidodermella squamata</i>	Culture, Carolina Biological Supply Company (Burlington, NC)	n.a.	~500 specimen
<i>Nematoplana coelogygnoporoides</i>	List, North Sea island Sylt, Germany	55.02469 N/ 008.43723 E	~50 specimen
<i>Stylochoplana maculata</i>	North Sea island Helgoland, Germany	54.18902 N/ 007.86986 E	~10 specimen
<i>Cephalothrix linearis</i>	Roscoff, Bretany, France	48.72947 N/ 003.98924 W	1 specimen
<i>Tubulanus polymorphus</i>	Ile Callot, Bretany, France	48.68664 N/ 003.91958 W	small middle piece

<sup>1</sup> Host: wild boar (*Sus Scrofa*), ~16months of age, shot on 13 July 2010

**Table S2.** Information regarding the ESTs libraries used in this study and the taxonomic affiliation of the species. If not generated for this study sources of libraries were NCBI dbEST, trace archive, non-redundant database (nr) or short read archive (SRA) as well as genomes and Wey et al. (2013). Sequencing was done using either Sanger sequencing, 454 pyrosequencing or a Illumina Genome Analyzer IIx (GAIIx) HiSeq 2000 or MiSeq. Assembly was conducted with the pipeline described in Hausdorf et al. (2007) (MGIBlast/CAP3) or the CLC Genomics Workbench (CLC). #reads = number of quality processed reads for assembly.

Group	Subgroup	Species	Source	sequencing	#reads	assembly	#Contigs
<b>Platyzoa</b>							
Syndermata	Acanthocephala	<i>Echinorhynchus truttae</i>	NCBI dbEST	Sanger	1,238	MGIBlast/CAP3	799
		<i>Pomphorhynchus laevis</i>	Wey et al. 2013	Sanger	9,268	MGIBlast/CAP3	4,126
		<i>Macracanthorhynchus hirudinaceus</i>	this study	HiSeq/ MiSeq	110,740,353	CLC	22,822
		<i>Paratenuisentis ambiguus</i>	Wey et al. 2013	454	68,720	MGIBlast/CAP3	9,825
	Seisonidea	<i>Seison sp.</i>	Wey et al. 2013	454	58,239	MGIBlast/CAP3	10,824
	Bdelloidea	<i>Philodina roseola</i>	NCBI dbEST/ trace archive	Sanger	3,171	MGIBlast/CAP3	2,227
		<i>Rotaria rotatoria</i>	this study	HiSeq	72,636,191	CLC	32,179
		<i>Adineta vaga</i>	Wey et al. 2013	454	170,104	MGIBlast/CAP3	18,966
	Monogononta	<i>Brachionus plicatilis</i>	dbEST/trace archive	Sanger	56,040	MGIBlast/CAP3	18,828
		<i>Brachionus manjavacas</i>	Wey et al. 2013	Sanger/454	85,393	MGIBlast/CAP3	11,629
		<i>Lecane inermis</i>	this study	454	41,040	MGIBlast/CAP3	6,637
Gnathostomulida	/	<i>Gnathostomula peregrina</i>	NCBI trace archive	Sanger	3,075	MGIBlast/CAP3	2,108
		<i>Gnathostomula paradoxa</i>	this study	GAIIx	50,624,897	CLC	53,430
Gastrotricha	Macrodasyida	<i>Turbanella ambronensis</i>	NCBI trace archive	Sanger	3,129	MGIBlast/CAP3	814
		<i>Macrodasydys sp.</i>	this study	GAIIx	21,024,813	CLC	28,219
		<i>Dactylopodola baltica</i>	this study	GAIIx	10,521,419	CLC	25,346
		<i>Megadasydys sp.</i>	this study	GAIIx	22,843,936	CLC	52,730
	Chaetonotida	<i>Lepidodermella squamata</i>	this study	GAIIx	22,511,133	CLC	65,056
Platyhelminthes	Cestoda	<i>Echinococcus multilocularis</i>	NCBI dbEST	Sanger	1,168	MGIBlast/CAP3	775
		<i>Echinococcus granulosus</i>	NCBI dbEST	Sanger	9,701	MGIBlast/CAP3	2,723
		<i>Moniezia expansa</i>	NCBI nr				49,605
		<i>Spirometra erinacei</i>	NCBI dbEST	Sanger	6,836	CLC	1,012
		<i>Taenia solium</i>	NCBI dbEST	Sanger	23,245	MGIBlast/CAP3	6,623
		<i>Schistosoma mansoni</i>	Genome				33,704
	"Trematoda" (Digenea)	<i>Schistosoma japonicum</i>	NCBI dbEST	Sanger	96,831	MGIBlast/CAP3	32,405
		<i>Clonorchis sinensis</i>	NCBI dbEST	Sanger	2,908	MGIBlast/CAP3	1,725
		<i>Fasciola gigantica</i>	NCBI dbEST	Sanger	8,395	CLC	797
		<i>Opisthorchis viverrini</i>	NCBI dbEST	Sanger	4,194	MGIBlast/CAP3	1,979
	"Turbellaria" (Tricladida)	<i>Dugesia japonica</i>	NCBI dbEST	Sanger	7,252	MGIBlast/CAP3	3,929
		<i>Dugesia ryukyuensis</i>	NCBI dbEST	Sanger	8,986	MGIBlast/CAP3	3,319
		<i>Schmidtea mediterranea</i>	NCBI dbEST	Sanger	73,760	MGIBlast/CAP3	16,323
	"Turbellaria" (Macrostomida)	<i>Macrostomum lignano</i>	NCBI dbEST	Sanger	7,607	MGIBlast/CAP3	5,534
	"Turbellaria" (Proseriata)	<i>Nematoplanea coelogyneporoides</i>	this study	454	380,401	CLC	3,718
	"Turbellaria" (Polycladida)	<i>Paraplanocera sp.</i>	trace archive	Sanger	3,224	MGIBlast/CAP3	1,485
		<i>Stylochoplana maculata</i>	this study	454	632,726	CLC	23,097

Lophotrochozoa							
Cycliophora	/	<i>Symbion pandora</i>	NCBI trace archive	Sanger	3,763	MGIBlast/CAP3	949
Entoprocta	/	<i>Pedicellina cernua</i>	NCBI trace archive	Sanger	7,777	MGIBlast/CAP3	2,348
		<i>Pedicellina sp.</i>	NCBI trace archive	Sanger	1,907	MGIBlast/CAP3	648
Ectoprocta (Bryozoa)	Phylactolaemata	<i>Criststella mucedo</i>	NCBI trace archive	Sanger	2,981	MGIBlast/CAP3	668
	Gymnolaemata	<i>Bugula neritina</i>	NCBI SRA	454	139,131	CLC	5,142
		<i>Tubulipora sp.</i>	NCBI dbEST	Sanger	2,039	CLC	1,237
		<i>Flustra foliacea</i>	Hausdorf et al. 2007	Sanger	4,074	MGIBlast/CAP3	1,755
		<i>Alcyonidium diaphanum</i>	NCBI dbEST	Sanger	2,331	CLC	1,424
Brachiopoda	Brachiopoda	<i>Terebratalia transversa</i>	NCBI trace archive	Sanger	3,154	MGIBlast/CAP3	1,902
		<i>Lingula anatina</i>	NCBI SRA	454	70,309	CLC	5,748
Nemertea	/	<i>Cephalothrix linearis</i>	this study	GAIIx	23,104,655	CLC	44,041
		<i>Tubulanus polymorphus</i>	this study	GAIIx	13,645	CLC	37,851
Mollusca	Cephalopoda	<i>Euprymna scolopes</i>	NCBI dbEST	Sanger	77,159	MGIBlast/CAP3	27,036
		<i>Idiosepius paradoxus</i>	NCBI dbEST	Sanger	8,811	MGIBlast/CAP3	5,058
	Polyplacophora	<i>Chaetopleura apiculata</i>	NCBI SRA	454	148,345	CLC	7,762
	Neomeniomorpha	<i>Neomenia megaltrapezata</i>	NCBI SRA	GAIIx	54,583,176	CLC	31,371
	Gastropoda	<i>Biomphalaria glabrata</i>	NCBI dbEST	Sanger	52,852	MGIBlast/CAP3	20,079
		<i>Lottia gigantea</i>	Genome				23,851
		<i>Aplysia californica</i>	NCBI dbEST	Sanger	178,146	MGIBlast/CAP3	61,194
	Bivalvia	<i>Crassostrea gigas</i>	NCBI dbEST	Sanger	28,767	MGIBlast/CAP3	17,941
		<i>Mytilus californianus</i>	NCBI dbEST	Sanger	23,688	MGIBlast/CAP3	15,429
Annelida	Clitellata	<i>Helobdella robusta</i>	Genome				23,432
		<i>Lumbricus rubellus</i>	NCBI dbEST	Sanger	19,888	MGIBlast/CAP3	10,422
		<i>Tubifex tubifex</i>	NCBI dbEST	Sanger	17,009	MGIBlast/CAP3	8,008
	"Polychaeta"	<i>Capitella telata</i>	Genome				32,415
		<i>Alvinella pompejana</i>	NCBI dbEST	Sanger	142,322	MGIBlast/CAP3	25,723
Ecdysozoa							
Ecdysozoa	Priapulida	<i>Priapulus caudatus</i>	NCBI dbEST	Sanger	2,281	MGIBlast/CAP3	1,424
	Kinorhyncha	<i>Echinoderes horni</i>	NCBI trace archive	Sanger	3,050	MGIBlast/CAP3	2,277
	Arthropoda	<i>Daphnia pulex</i>	NCBI dbEST	Sanger	152,067	MGIBlast/CAP3	32,206
		<i>Apis mellifera</i>	Genome				25,009

**Table S3.** Information regarding the orthology prediction (Orth.), the exclusion of redundantly assigned sequences (Red.) and the alignment (Align.) and masking (Mask.) procedure. Mean values are also provided. Absolute numbers (#) as well as percentages (%) are given. Pos = positions, Diff = difference.

Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %	Align. #Pos.	Mask. #Pos.	Diff. %
111202	33	32	1 3.0	574	1	99.8
111203	32	31	1 3.1	247	108	56.3
111204	39	39	0 0.0	164	132	19.5
111205	23	23	0 0.0	1253	34	97.3
111206	19	19	0 0.0	607	103	83.0
111207	26	26	0 0.0	504	71	85.9
111208	17	17	0 0.0	1674	1	99.9
111209	23	23	0 0.0	1749	51	97.1
111210	22	22	0 0.0	577	37	93.6
111211	29	29	0 0.0	790	1	99.9
111212	20	20	0 0.0	500	61	87.8
111213	20	20	0 0.0	255	153	40.0
111214	47	41	6 12.8	240	185	22.9
111215	39	38	1 2.6	164	123	25.0
111216	46	46	0 0.0	146	146	0.0
111217	46	46	0 0.0	154	154	0.0
111218	16	16	0 0.0	653	78	88.1
111219	28	28	0 0.0	747	66	91.2
111220	25	25	0 0.0	389	116	70.2
111221	21	21	0 0.0	783	1	99.9
111222	33	33	0 0.0	222	152	31.5
111223	26	26	0 0.0	1019	7	99.3
111224	19	19	0 0.0	1290	1	99.9
111225	18	18	0 0.0	827	104	87.4
111226	16	16	0 0.0	896	1	99.9
111227	21	21	0 0.0	1364	1	99.9
111228	14	14	0 0.0	665	56	91.6
111229	43	43	0 0.0	274	191	30.3
111230	24	24	0 0.0	269	70	74.0
111231	24	24	0 0.0	1429	1	99.9
111232	30	30	0 0.0	307	162	47.2
111233	24	24	0 0.0	497	1	99.8
111234	25	25	0 0.0	336	211	37.2
111235	22	22	0 0.0	511	55	89.2
111236	17	17	0 0.0	1110	1	99.9
111237	27	27	0 0.0	359	195	45.7
111238	28	28	0 0.0	148	91	38.5
111239	23	23	0 0.0	224	135	39.7
111240	20	20	0 0.0	1612	35	97.8
111241	27	27	0 0.0	405	12	97.0
111242	21	21	0 0.0	275	102	62.9
111243	34	34	0 0.0	253	218	13.8
111244	18	18	0 0.0	337	1	99.7
111245	15	15	0 0.0	345	168	51.3
111246	25	25	0 0.0	732	1	99.9
111247	29	29	0 0.0	336	71	78.9
111248	23	23	0 0.0	632	107	83.1
111249	37	36	1 2.7	461	268	41.9
111250	22	22	0 0.0	1091	109	90.0
111251	27	27	0 0.0	282	109	61.3
111252	29	29	0 0.0	940	1	99.9
111253	20	20	0 0.0	517	88	83.0
111254	28	26	2 7.1	447	27	94.0
111255	20	20	0 0.0	825	1	99.9
111256	23	23	0 0.0	810	17	97.9
111257	19	19	0 0.0	969	65	93.3
111258	21	21	0 0.0	670	23	96.6
111259	40	40	0 0.0	210	122	41.9
111260	20	20	0 0.0	489	88	82.0
111261	20	20	0 0.0	430	62	85.6
111262	26	26	0 0.0	458	2	99.6
111263	23	23	0 0.0	183	102	44.3
111264	35	34	1 2.9	4972	1	100.0
111265	29	29	0 0.0	239	72	69.9
111266	40	40	0 0.0	150	85	43.3
111267	19	19	0 0.0	351	187	46.7
111268	22	22	0 0.0	596	99	83.4
111269	27	27	0 0.0	576	157	72.7

Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %	Align. #Pos.	Mask. #Pos.	Diff. %
111270	27	27	0 0.0	443	8	98.2
111271	29	29	0 0.0	288	198	31.3
111272	27	26	1 3.7	472	95	79.9
111273	28	28	0 0.0	474	130	72.6
111274	46	46	0 0.0	162	110	32.1
111275	37	36	1 2.7	239	188	21.3
111276	28	28	0 0.0	183	149	18.6
111277	45	45	0 0.0	163	142	12.9
111278	32	31	1 3.1	443	146	67.0
111279	25	25	0 0.0	781	55	93.0
111280	38	38	0 0.0	554	1	99.8
111281	47	46	1 2.1	181	170	6.1
111282	26	26	0 0.0	557	183	67.1
111283	21	21	0 0.0	226	184	18.6
111284	22	22	0 0.0	1348	99	92.7
111285	24	24	0 0.0	439	39	91.1
111286	49	49	0 0.0	92	92	0.0
111287	36	36	0 0.0	178	126	29.2
111288	18	18	0 0.0	388	114	70.6
111289	12	12	0 0.0	215	177	17.7
111290	27	27	0 0.0	228	204	10.5
111291	26	26	0 0.0	138	101	26.8
111292	27	22	5 18.5	1014	12	98.8
111293	22	22	0 0.0	494	9	98.2
111294	21	21	0 0.0	615	3	99.5
111295	26	26	0 0.0	198	181	8.6
111296	24	24	0 0.0	380	216	43.2
111297	26	26	0 0.0	751	98	87.0
111298	18	18	0 0.0	251	147	41.4
111299	33	33	0 0.0	227	105	53.7
111300	31	31	0 0.0	302	158	47.7
111301	26	26	0 0.0	561	1	99.8
111302	24	24	0 0.0	716	48	93.3
111303	17	17	0 0.0	301	104	65.4
111304	18	17	1 5.6	766	34	95.6
111305	26	26	0 0.0	549	1	99.8
111306	24	24	0 0.0	421	103	75.5
111307	26	26	0 0.0	209	140	33.0
111308	16	16	0 0.0	516	38	92.6
111309	26	26	0 0.0	594	180	69.7
111310	22	22	0 0.0	195	136	30.3
111311	25	25	0 0.0	446	252	43.5
111312	30	30	0 0.0	943	1	99.9
111313	29	29	0 0.0	199	105	47.2
111314	19	19	0 0.0	997	1	99.9
111315	20	20	0 0.0	501	1	99.8
111316	34	34	0 0.0	214	214	0.0
111317	35	35	0 0.0	645	1	99.8
111318	41	41	0 0.0	153	109	28.8
111319	24	24	0 0.0	492	93	81.1
111320	26	26	0 0.0	92	92	0.0
111321	26	26	0 0.0	271	117	56.8
111322	20	20	0 0.0	1088	1	99.9
111323	32	32	0 0.0	654	1	99.8
111324	41	41	0 0.0	347	335	3.5
111325	34	34	0 0.0	748	11	98.5
111326	24	24	0 0.0	489	1	99.8
111327	18	18	0 0.0	912	1	99.9
111328	31	31	0 0.0	160	79	50.6
111329	32	32	0 0.0	405	54	86.7
111330	22	22	0 0.0	224	136	39.3
111331	20	20	0 0.0	295	142	51.9
111332	25	18	7 28.0	584	152	74.0
111333	18	18	0 0.0	507	126	75.1
111334	19	19	0 0.0	523	108	79.3
111335	35	34	1 2.9	294	205	30.3
111336	16	16	0 0.0	497	1	99.8
111337	21	20	1 4.8	430	37	91.4

Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %	Align. #Pos.	Mask. #Pos.	Diff. %
111338	21	21	0 0.0	1815	1	99.9
111339	22	22	0 0.0	398	123	69.1
111340	20	20	0 0.0	426	103	75.8
111341	17	17	0 0.0	532	60	88.7
111342	18	18	0 0.0	1076	9	99.2
111343	30	30	0 0.0	382	45	88.2
111344	21	21	0 0.0	378	51	86.5
111345	23	23	0 0.0	65	64	1.5
111346	26	26	0 0.0	1594	1	99.9
111347	36	36	0 0.0	291	234	19.6
111348	31	31	0 0.0	317	93	70.7
111349	28	28	0 0.0	216	148	31.5
111350	29	29	0 0.0	1096	1	99.9
111351	17	17	0 0.0	651	95	85.4
111352	28	28	0 0.0	1004	77	92.3
111353	12	12	0 0.0	644	126	80.4
111354	14	14	0 0.0	957	1	99.9
111355	30	30	0 0.0	1051	1	99.9
111356	24	24	0 0.0	517	36	93.0
111357	27	27	0 0.0	367	78	78.7
111358	24	24	0 0.0	2460	1	100.0
111359	22	22	0 0.0	129	103	20.2
111360	20	20	0 0.0	603	18	97.0
111361	19	19	0 0.0	1333	61	95.4
111362	19	19	0 0.0	823	1	99.9
111363	22	22	0 0.0	435	105	75.9
111364	21	21	0 0.0	455	171	62.4
111365	35	35	0 0.0	376	289	23.1
111366	20	20	0 0.0	189	116	38.6
111367	31	30	1 3.2	992	28	97.2
111368	25	25	0 0.0	467	49	89.5
111369	28	28	0 0.0	1144	1	99.9
111370	23	23	0 0.0	432	54	87.5
111371	16	16	0 0.0	581	119	79.5
111372	26	26	0 0.0	584	57	90.2
111373	27	26	1 3.7	1169	5	99.6
111374	11	11	0 0.0	882	56	93.7
111375	25	25	0 0.0	229	148	35.4
111376	24	24	0 0.0	502	1	99.8
111377	26	26	0 0.0	562	52	90.7
111378	23	23	0 0.0	870	3	99.7
111379	32	32	0 0.0	148	134	9.5
111380	20	20	0 0.0	1243	1	99.9
111381	19	19	0 0.0	1163	1	99.9
111382	28	27	1 3.6	544	57	89.5
111383	24	24	0 0.0	541	12	97.8
111384	27	27	0 0.0	394	49	87.6
111385	19	19	0 0.0	1004	1	99.9
111386	22	22	0 0.0	606	61	89.9
111387	37	37	0 0.0	442	397	10.2
111388	23	23	0 0.0	267	87	67.4
111389	25	25	0 0.0	511	172	66.3
111390	22	22	0 0.0	264	119	54.9
111391	30	29	1 3.3	583	173	70.3
111392	24	24	0 0.0	775	57	92.6
111393	32	31	1 3.1	338	141	58.3
111394	45	45	0 0.0	195	168	13.8
111395	25	25	0 0.0	452	104	77.0
111396	22	22	0 0.0	695	1	99.9
111397	18	18	0 0.0	1447	1	99.9
111398	16	16	0 0.0	747	42	94.4
111399	25	25	0 0.0	568	56	90.1
111400	18	18	0 0.0	392	16	95.9
111401	31	31	0 0.0	602	119	80.2
111402	24	24	0 0.0	271	181	33.2
111403	24	24	0 0.0	961	55	94.3
111404	32	32	0 0.0	745	63	91.5
111405	32	32	0 0.0	387	232	40.1
111406	21	21	0 0.0	1884	1	99.9
111407	24	24	0 0.0	311	103	66.9
111408	23	23	0 0.0	267	133	50.2
111409	34	34	0 0.0	199	171	14.1
111410	29	29	0 0.0	263	66	74.9
111411	24	24	0 0.0	294	58	80.3
111412	26	26	0 0.0	311	31	90.0

Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %	Align. #Pos.	Mask. #Pos.	Diff. %
111413	33	33	0 0.0	380	251	33.9
111414	37	37	0 0.0	166	142	14.5
111415	26	26	0 0.0	162	104	35.8
111416	31	31	0 0.0	461	1	99.8
111417	19	19	0 0.0	218	158	27.5
111418	26	25	1 3.8	621	118	81.0
111419	34	33	1 2.9	413	150	63.7
111420	22	21	1 4.5	1159	31	97.3
111421	31	31	0 0.0	430	168	60.9
111422	24	24	0 0.0	564	1	99.8
111423	35	35	0 0.0	350	152	56.6
111424	9	9	0 0.0	2201	1	100.0
111425	31	31	0 0.0	335	128	61.8
111426	26	26	0 0.0	314	124	60.5
111427	33	33	0 0.0	511	59	88.5
111428	20	20	0 0.0	156	93	40.4
111429	36	36	0 0.0	194	110	43.3
111430	33	33	0 0.0	159	106	33.3
111431	24	24	0 0.0	1035	77	92.6
111432	38	38	0 0.0	243	183	24.7
111433	34	34	0 0.0	474	52	89.0
111434	27	26	1 3.7	447	129	71.1
111435	42	42	0 0.0	108	82	24.1
111436	25	25	0 0.0	297	105	64.6
111437	25	25	0 0.0	476	1	99.8
111438	18	18	0 0.0	399	54	86.5
111439	28	28	0 0.0	389	235	39.6
111440	33	33	0 0.0	142	111	21.8
111441	31	31	0 0.0	223	204	8.5
111442	24	24	0 0.0	716	1	99.9
111443	18	18	0 0.0	563	82	85.4
111444	31	29	2 6.5	582	34	94.2
111445	24	24	0 0.0	163	66	59.5
111446	18	12	6 33.3	457	28	93.9
111447	23	23	0 0.0	623	109	82.5
111448	31	31	0 0.0	367	79	78.5
111449	22	22	0 0.0	1240	1	99.9
111450	24	23	1 4.2	199	112	43.7
111451	35	25	10 28.6	273	244	10.6
111452	21	21	0 0.0	310	114	63.2
111453	40	40	0 0.0	262	67	74.4
111454	29	29	0 0.0	251	138	45.0
111455	20	20	0 0.0	380	119	68.7
111456	18	13	5 27.8	525	1	99.8
111457	32	32	0 0.0	486	105	78.4
111458	21	21	0 0.0	306	233	23.9
111459	31	30	1 3.2	1266	71	94.4
111460	18	17	1 5.6	1649	1	99.9
111461	23	23	0 0.0	527	102	80.6
111462	30	30	0 0.0	865	1	99.9
111463	29	29	0 0.0	462	88	81.0
111464	17	17	0 0.0	360	77	78.6
111465	19	19	0 0.0	724	1	99.9
111466	53	53	0 0.0	155	155	0.0
111467	24	24	0 0.0	431	76	82.4
111468	21	21	0 0.0	181	115	36.5
111469	27	27	0 0.0	359	268	25.3
111470	25	25	0 0.0	1036	1	99.9
111471	16	16	0 0.0	748	1	99.9
111472	17	17	0 0.0	824	1	99.9
111473	27	27	0 0.0	666	19	97.1
111474	18	18	0 0.0	578	148	74.4
111475	40	40	0 0.0	336	279	17.0
111476	17	17	0 0.0	2145	1	100.0
111477	34	34	0 0.0	1000	1	99.9
111478	32	32	0 0.0	567	7	98.8
111479	24	24	0 0.0	1018	1	99.9
111480	23	23	0 0.0	667	1	99.9
111481	22	21	1 4.5	1341	51	96.2
111482	20	20	0 0.0	972	1	99.9
111483	26	26	0 0.0	141	100	29.1
111484	24	24	0 0.0	252	107	57.5
111485	33	33	0 0.0	291	127	56.4
111486	38	38	0 0.0	136	77	43.4
111487	23	23	0 0.0	735	67	90.9

Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %	Align. #Pos.	Mask. #Pos.	Diff. %
111488	26	26	0 0.0	390	199	49.0
111489	27	27	0 0.0	276	125	54.7
111490	26	26	0 0.0	335	109	67.5
111491	44	44	0 0.0	225	191	15.1
111492	33	33	0 0.0	636	95	85.1
111493	25	25	0 0.0	443	64	85.6
111494	33	33	0 0.0	1062	1	99.9
111495	25	25	0 0.0	387	157	59.4
111496	37	37	0 0.0	233	162	30.5
111497	30	30	0 0.0	97	97	0.0
111498	26	26	0 0.0	1000	53	94.7
111499	40	40	0 0.0	456	42	90.8
111500	15	15	0 0.0	388	153	60.6
111501	23	23	0 0.0	397	111	72.0
111502	22	22	0 0.0	881	32	96.4
111503	28	28	0 0.0	469	84	82.1
111504	33	30	3 9.1	214	158	26.2
111505	29	28	1 3.4	563	61	89.2
111506	21	21	0 0.0	641	203	68.3
111507	23	23	0 0.0	321	117	63.6
111508	21	21	0 0.0	1895	1	99.9
111509	17	17	0 0.0	500	145	71.0
111510	39	39	0 0.0	114	101	11.4
111511	36	34	2 5.6	232	138	40.5
111512	23	23	0 0.0	583	19	96.7
111513	21	20	1 4.8	707	3	99.6
111514	26	26	0 0.0	480	32	93.3
111515	22	22	0 0.0	632	2	99.7
111516	36	36	0 0.0	193	178	7.8
111517	27	27	0 0.0	215	148	31.2
111518	25	25	0 0.0	220	127	42.3
111519	29	28	1 3.4	217	199	8.3
111520	23	21	2 8.7	4669	1	100.0
111521	32	32	0 0.0	199	159	20.1
111522	18	18	0 0.0	810	94	88.4
111523	23	23	0 0.0	550	145	73.6
111524	38	38	0 0.0	342	212	38.0
111525	26	26	0 0.0	321	56	82.6
111526	16	16	0 0.0	1202	1	99.9
111527	45	44	1 2.2	190	165	13.2
111528	23	23	0 0.0	1774	1	99.9
111529	17	17	0 0.0	760	5	99.3
111530	27	26	1 3.7	360	169	53.1
111531	18	18	0 0.0	881	30	96.6
111532	35	35	0 0.0	150	144	4.0
111533	21	21	0 0.0	555	1	99.8
111534	20	18	2 10.0	1152	133	88.5
111535	17	17	0 0.0	631	91	85.6
111536	19	19	0 0.0	1334	1	99.9
111537	23	23	0 0.0	1185	1	99.9
111538	47	44	3 6.4	136	136	0.0
111539	38	38	0 0.0	365	211	42.2
111540	24	24	0 0.0	431	72	83.3
111541	26	26	0 0.0	2671	1	100.0
111542	37	36	1 2.7	413	317	23.2
111543	22	22	0 0.0	486	85	82.5
111544	26	21	5 19.2	869	49	94.4
111545	17	17	0 0.0	1498	1	99.9
111546	49	49	0 0.0	176	167	5.1
111547	21	21	0 0.0	1353	1	99.9
111548	26	26	0 0.0	595	9	98.5
111549	34	34	0 0.0	505	201	60.2
111550	45	43	2 4.4	684	88	87.1
111551	14	14	0 0.0	1029	22	97.9
111552	32	32	0 0.0	756	174	77.0
111553	26	26	0 0.0	426	19	95.5
111554	22	22	0 0.0	211	82	61.1
111555	44	44	0 0.0	103	94	8.7
111556	15	13	2 13.3	729	98	86.6
111557	30	30	0 0.0	456	81	82.2
111558	16	16	0 0.0	203	182	10.3
111559	13	13	0 0.0	762	30	96.1
111560	24	22	2 8.3	767	144	81.2
111561	20	20	0 0.0	650	37	94.3
111562	19	19	0 0.0	1005	1	99.9

Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %	Align. #Pos.	Mask. #Pos.	Diff. %
111563	39	39	0 0.0	447	34	92.4
111564	31	31	0 0.0	891	1	99.9
111565	22	17	5 22.7	1561	1	99.9
111566	36	36	0 0.0	128	115	10.2
111567	30	30	0 0.0	289	136	52.9
111568	33	33	0 0.0	265	168	36.6
111569	22	15	7 31.8	1304	24	98.2
111570	26	26	0 0.0	487	72	85.2
111571	23	23	0 0.0	412	157	61.9
111572	44	44	0 0.0	331	298	10.0
111573	18	18	0 0.0	1035	198	80.9
111574	22	21	1 4.5	969	1	99.9
111575	23	23	0 0.0	699	19	97.3
111576	28	28	0 0.0	248	140	43.5
111577	32	32	0 0.0	930	1	99.9
111578	16	16	0 0.0	1592	1	99.9
111579	37	36	1 2.7	271	165	39.1
111580	25	25	0 0.0	737	61	91.7
111581	20	15	5 25.0	575	1	99.8
111582	30	30	0 0.0	509	180	64.6
111583	25	25	0 0.0	545	180	67.0
111584	18	18	0 0.0	1227	1	99.9
111585	32	32	0 0.0	559	163	70.8
111586	20	20	0 0.0	1247	8	99.4
111587	39	39	0 0.0	204	192	5.9
111588	23	23	0 0.0	237	153	35.4
111589	28	26	2 7.1	592	100	83.1
111590	16	16	0 0.0	1160	41	96.5
111591	24	21	3 12.5	751	116	84.6
111592	18	18	0 0.0	214	91	57.5
111593	21	21	0 0.0	412	98	76.2
111594	23	23	0 0.0	546	1	99.8
111595	40	40	0 0.0	194	183	5.7
111596	41	39	2 4.9	258	176	31.8
111597	20	20	0 0.0	370	109	70.5
111598	32	32	0 0.0	375	262	30.1
111599	43	43	0 0.0	145	145	0.0
111600	26	26	0 0.0	213	110	48.4
111601	25	25	0 0.0	1146	1	99.9
111602	14	14	0 0.0	485	14	97.1
111603	33	33	0 0.0	120	109	9.2
111604	29	29	0 0.0	137	120	12.4
111605	22	22	0 0.0	410	109	73.4
111606	25	22	3 12.0	384	153	60.2
111607	18	18	0 0.0	796	106	86.7
111608	27	27	0 0.0	315	155	50.8
111609	22	22	0 0.0	2636	1	100.0
111610	22	22	0 0.0	1117	1	99.9
111611	22	22	0 0.0	1114	108	90.3
111612	30	30	0 0.0	332	142	57.2
111613	24	23	1 4.2	745	1	99.9
111614	25	25	0 0.0	446	19	95.7
111615	17	17	0 0.0	884	49	94.5
111616	30	28	2 6.7	554	144	74.0
111617	18	18	0 0.0	2130	36	98.3
111618	38	38	0 0.0	218	209	4.1
111619	30	30	0 0.0	269	205	23.8
111620	29	29	0 0.0	400	122	69.5
111621	24	24	0 0.0	1650	1	99.9
111622	49	49	0 0.0	141	117	17.0
111623	36	36	0 0.0	238	202	15.1
111624	22	22	0 0.0	621	48	92.3
111625	26	26	0 0.0	189	170	10.1
111626	37	37	0 0.0	335	293	12.5
111627	26	26	0 0.0	592	1	99.8
111628	30	30	0 0.0	140	114	18.6
111629	33	33	0 0.0	402	199	50.5
111630	21	21	0 0.0	660	174	73.6
111631	30	30	0 0.0	272	263	3.3
111632	21	21	0 0.0	446	13	97.1
111633	19	19	0 0.0	573	1	99.8
111634	34	34	0 0.0	412	178	56.8
111635	26	26	0 0.0	425	54	87.3
111636	26	26	0 0.0	349	248	28.9
111637	26	26	0 0.0	393	59	85.0

Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %	Align. #Pos.	Mask. #Pos.	Diff. %
111638	35	34	1 2.9	248	129	48.0
111639	31	31	0 0.0	155	77	50.3
111640	22	14	8 36.4	783	1	99.9
111641	28	28	0 0.0	492	104	78.9
111642	23	23	0 0.0	813	1	99.9
111643	29	28	1 3.4	463	329	28.9
111644	30	30	0 0.0	565	83	85.3
111645	22	22	0 0.0	880	5	99.4
111646	25	25	0 0.0	1048	59	94.4
111647	17	17	0 0.0	378	111	70.6
111648	30	30	0 0.0	336	166	50.6
111649	15	15	0 0.0	722	36	95.0
111650	20	20	0 0.0	921	5	99.5
111651	22	22	0 0.0	330	92	72.1
111652	20	18	2 10.0	712	57	92.0
111653	27	27	0 0.0	199	124	37.7
111654	27	27	0 0.0	421	97	77.0
111655	26	26	0 0.0	912	26	97.1
111656	17	17	0 0.0	2333	1	100.0
111657	50	50	0 0.0	179	152	15.1
111658	17	17	0 0.0	231	69	70.1
111659	18	18	0 0.0	218	109	50.0
111660	23	23	0 0.0	240	110	54.2
111661	27	27	0 0.0	261	165	36.8
111662	21	21	0 0.0	276	149	46.0
111663	31	30	1 3.2	531	104	80.4
111664	28	24	4 14.3	632	1	99.8
111665	21	21	0 0.0	177	177	0.0
111666	24	24	0 0.0	398	1	99.7
111667	22	21	1 4.5	692	1	99.9
111668	28	28	0 0.0	201	189	6.0
111669	29	29	0 0.0	508	30	94.1
111670	27	27	0 0.0	492	80	83.7
111671	26	26	0 0.0	412	48	88.3
111672	16	16	0 0.0	560	83	85.2
111673	33	33	0 0.0	454	5	98.9
111674	20	20	0 0.0	1135	5	99.6
111675	17	17	0 0.0	474	1	99.8
111676	38	29	9 23.7	217	155	28.6
111677	28	28	0 0.0	396	150	62.1
111678	35	35	0 0.0	146	109	25.3
111679	28	28	0 0.0	900	24	97.3
111680	24	24	0 0.0	402	127	68.4
111681	38	38	0 0.0	630	1	99.8
111682	26	26	0 0.0	840	4	99.5
111683	15	14	1 6.7	724	53	92.7
111684	26	26	0 0.0	883	1	99.9
111685	24	24	0 0.0	586	1	99.8
111686	39	38	1 2.6	362	213	41.2
111687	45	45	0 0.0	458	398	13.1
111688	17	17	0 0.0	1114	1	99.9
111689	39	39	0 0.0	594	55	90.7
111690	24	24	0 0.0	371	72	80.6
111691	19	19	0 0.0	1064	1	99.9
111692	25	22	3 12.0	1417	1	99.9
111693	18	18	0 0.0	425	1	99.8
111694	23	23	0 0.0	669	1	99.9
111695	35	32	3 8.6	689	134	80.6
111696	27	27	0 0.0	872	9	99.0
111697	23	23	0 0.0	808	1	99.9
111698	22	22	0 0.0	437	183	58.1
111699	27	27	0 0.0	188	73	61.2
111700	22	22	0 0.0	619	130	79.0
111701	23	23	0 0.0	1335	1	99.9
111702	39	39	0 0.0	132	132	0.0
111703	30	30	0 0.0	223	119	46.6
111704	23	23	0 0.0	410	141	65.6
111705	27	27	0 0.0	336	186	44.6
111706	23	23	0 0.0	564	55	90.2
111707	21	21	0 0.0	148	91	38.5
111708	22	22	0 0.0	503	11	97.8
111709	27	27	0 0.0	242	98	59.5
111710	21	21	0 0.0	2873	1	100.0
111711	47	46	1 2.1	170	130	23.5
111712	23	23	0 0.0	678	3	99.6

Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %	Align. #Pos.	Mask. #Pos.	Diff. %
111713	26	26	0 0.0	658	29	95.6
111714	38	37	1 2.6	318	195	38.7
111715	23	23	0 0.0	276	148	46.4
111716	13	13	0 0.0	1592	25	98.4
111717	21	21	0 0.0	622	123	80.2
111718	15	15	0 0.0	655	7	98.9
111719	22	22	0 0.0	877	1	99.9
111720	14	14	0 0.0	675	143	78.8
111721	28	28	0 0.0	573	62	89.2
111722	29	29	0 0.0	1251	1	99.9
111723	36	36	0 0.0	348	98	71.8
111724	43	43	0 0.0	191	163	14.7
111725	13	13	0 0.0	831	43	94.8
111726	25	25	0 0.0	1450	1	99.9
111727	23	23	0 0.0	621	37	94.0
111728	26	24	2 7.7	292	202	30.8
111729	20	20	0 0.0	696	115	83.5
111730	35	35	0 0.0	463	317	31.5
111731	36	36	0 0.0	313	193	38.3
111732	36	36	0 0.0	750	93	87.6
111733	37	37	0 0.0	127	115	9.4
111734	32	32	0 0.0	504	35	93.1
111735	26	26	0 0.0	426	67	84.3
111736	25	25	0 0.0	283	138	51.2
111737	22	22	0 0.0	419	9	97.9
111738	30	30	0 0.0	174	163	6.3
111739	25	25	0 0.0	495	82	83.4
111740	24	24	0 0.0	635	1	99.8
111741	35	35	0 0.0	239	147	38.5
111742	26	26	0 0.0	592	70	88.2
111743	14	14	0 0.0	561	35	93.8
111744	47	47	0 0.0	221	213	3.6
111745	23	23	0 0.0	910	1	99.9
111746	19	19	0 0.0	558	134	76.0
111747	27	27	0 0.0	308	136	55.8
111748	20	20	0 0.0	445	170	61.8
111749	25	25	0 0.0	723	72	90.0
111750	18	18	0 0.0	244	73	70.1
111751	19	19	0 0.0	442	80	81.9
111752	36	36	0 0.0	454	269	40.7
111753	24	22	2 8.3	998	28	97.2
111754	30	30	0 0.0	384	109	71.6
111755	23	23	0 0.0	598	1	99.8
111756	21	21	0 0.0	960	1	99.9
111757	26	26	0 0.0	2090	1	100.0
111758	22	22	0 0.0	300	5	98.3
111759	27	27	0 0.0	875	1	99.9
111760	35	35	0 0.0	571	20	96.5
111761	30	29	1 3.3	2416	1	100.0
111762	18	18	0 0.0	1212	1	99.9
111763	40	40	0 0.0	261	218	16.5
111764	32	32	0 0.0	247	183	25.9
111765	22	22	0 0.0	632	23	96.4
111766	27	27	0 0.0	411	34	91.7
111767	26	26	0 0.0	122	113	7.4
111768	34	34	0 0.0	222	174	21.6
111769	28	27	1 3.6	183	99	45.9
111770	24	24	0 0.0	373	84	77.5
111771	31	31	0 0.0	254	164	35.4
111772	20	20	0 0.0	134	109	18.7
111773	33	32	1 3.0	542	20	96.3
111774	32	32	0 0.0	613	30	95.1
111775	42	42	0 0.0	439	279	36.4
111776	40	40	0 0.0	200	177	11.5
111777	34	32	2 5.9	533	1	99.8
111778	29	29	0 0.0	461	123	73.3
111779	24	24	0 0.0	281	189	32.7
111780	22	17	5 22.7	1079	50	95.4
111781	26	26	0 0.0	139	95	31.7
111782	26	26	0 0.0	513	101	80.3
111783	27	27	0 0.0	1146	1	99.9
111784	22	22	0 0.0	385	95	75.3
111785	32	32	0 0.0	102	67	34.3
111786	28	25	3 10.7	340	111	67.4
111787	26	26	0 0.0	222	173	22.1

Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %	Align. #Pos.	Mask. #Pos.	Diff. %
111788	29	29	0 0.0	465	47	89.9
111789	32	32	0 0.0	68	68	0.0
111790	13	13	0 0.0	852	96	88.7
111791	26	26	0 0.0	567	2	99.6
111792	19	19	0 0.0	919	1	99.9
111793	17	17	0 0.0	370	90	75.7
111794	32	31	1 3.1	1038	1	99.9
111795	23	23	0 0.0	920	1	99.9
111796	25	25	0 0.0	148	82	44.6
111797	35	35	0 0.0	83	83	0.0
111798	23	23	0 0.0	925	3	99.7
111799	35	35	0 0.0	406	1	99.8
111800	23	23	0 0.0	355	1	99.7
111801	14	14	0 0.0	1368	1	99.9
111802	22	22	0 0.0	2356	1	100.0
111803	29	29	0 0.0	249	211	15.3
111804	23	23	0 0.0	548	4	99.3
111805	14	14	0 0.0	1003	24	97.6
111806	32	30	2 6.3	694	13	98.1
111807	27	26	1 3.7	177	114	35.6
111808	18	18	0 0.0	373	77	79.4
111809	26	26	0 0.0	198	110	44.4
111810	25	21	4 16.0	992	1	99.9
111811	46	46	0 0.0	172	111	35.5
111812	26	26	0 0.0	502	203	59.6
111813	43	43	0 0.0	291	174	40.2
111814	45	45	0 0.0	196	184	6.1
111815	39	39	0 0.0	131	131	0.0
111816	44	44	0 0.0	111	105	5.4
111817	27	27	0 0.0	261	160	38.7
111818	34	28	6 17.6	822	127	84.5
111819	26	26	0 0.0	808	71	91.2
111820	33	33	0 0.0	272	235	13.6
111821	26	26	0 0.0	459	78	83.0
111822	21	21	0 0.0	965	1	99.9
111823	21	21	0 0.0	527	1	99.8
111824	19	19	0 0.0	681	21	96.9
111825	26	26	0 0.0	290	145	50.0
111826	12	12	0 0.0	1131	14	98.8
111827	29	29	0 0.0	745	101	86.4
111828	21	21	0 0.0	435	37	91.5
111829	41	41	0 0.0	135	104	23.0
111830	42	42	0 0.0	93	85	8.6
111831	24	24	0 0.0	1293	1	99.9
111832	24	24	0 0.0	976	1	99.9
111833	25	25	0 0.0	275	134	51.3
111834	20	20	0 0.0	1043	1	99.9
111835	25	25	0 0.0	1183	26	97.8
111836	21	21	0 0.0	403	117	71.0
111837	22	22	0 0.0	1298	41	96.8
111838	22	22	0 0.0	225	175	22.2
111839	26	26	0 0.0	415	9	97.8
111840	30	30	0 0.0	80	70	12.5
111841	24	24	0 0.0	322	103	68.0
111842	24	24	0 0.0	354	117	66.9
111843	22	22	0 0.0	971	32	96.7
111844	35	35	0 0.0	691	102	85.2
111845	20	20	0 0.0	152	137	9.9
111846	24	24	0 0.0	501	1	99.8
111847	28	28	0 0.0	180	102	43.3
111848	31	31	0 0.0	209	158	24.4
111849	35	35	0 0.0	320	220	31.3
111850	20	20	0 0.0	1217	4	99.7
111851	29	29	0 0.0	479	44	90.8
111852	30	30	0 0.0	1169	1	99.9
111853	25	14	11 44.0	475	5	98.9
111854	24	24	0 0.0	584	1	99.8
111855	23	23	0 0.0	1375	1	99.9
111856	29	29	0 0.0	951	39	95.9
111857	30	29	1 3.3	302	80	73.5
111858	17	17	0 0.0	404	105	74.0
111859	18	18	0 0.0	627	18	97.1
111860	15	15	0 0.0	1427	1	99.9
111861	42	42	0 0.0	164	135	17.7
111862	30	30	0 0.0	200	148	26.0

Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %	Align. #Pos.	Mask. #Pos.	Diff. %
111863	31	31	0 0.0	509	142	72.1
111864	26	26	0 0.0	454	14	96.9
111865	25	24	1 4.0	197	132	33.0
111866	40	40	0 0.0	169	146	13.6
111867	18	18	0 0.0	577	38	93.4
111868	17	17	0 0.0	620	1	99.8
111869	26	26	0 0.0	721	14	98.1
111870	30	30	0 0.0	190	118	37.9
111871	27	27	0 0.0	346	154	55.5
111872	33	26	7 21.2	794	84	89.4
111873	45	45	0 0.0	266	218	18.0
111874	29	29	0 0.0	606	104	82.8
111875	18	16	2 11.1	654	22	96.6
111876	35	35	0 0.0	263	59	77.6
111877	21	21	0 0.0	358	25	93.0
111878	26	26	0 0.0	520	55	89.4
111879	22	22	0 0.0	416	161	61.3
111880	26	26	0 0.0	401	66	83.5
111881	18	18	0 0.0	2044	17	99.2
111882	25	25	0 0.0	852	21	97.5
111883	24	24	0 0.0	322	192	40.4
111884	26	23	3 11.5	837	72	91.4
111885	20	20	0 0.0	402	215	46.5
111886	19	19	0 0.0	1001	9	99.1
111887	24	24	0 0.0	1054	1	99.9
111888	25	21	4 16.0	847	1	99.9
111889	28	28	0 0.0	229	190	17.0
111890	21	21	0 0.0	538	78	85.5
111891	24	24	0 0.0	1064	1	99.9
111892	31	31	0 0.0	484	71	85.3
111893	42	42	0 0.0	67	67	0.0
111894	23	23	0 0.0	387	141	63.6
111895	25	25	0 0.0	640	8	98.8
111896	31	31	0 0.0	271	91	66.4
111897	16	15	1 6.3	731	6	99.2
111898	41	41	0 0.0	245	216	11.8
111899	21	21	0 0.0	586	42	92.8
111900	26	26	0 0.0	197	133	32.5
111901	24	24	0 0.0	405	11	97.3
111902	21	21	0 0.0	580	69	88.1
111903	25	25	0 0.0	750	75	90.0
111904	35	33	2 5.7	574	124	78.4
111905	24	24	0 0.0	353	152	56.9
111906	29	29	0 0.0	598	56	90.6
111907	39	39	0 0.0	313	178	43.1
111908	15	15	0 0.0	949	1	99.9
111909	21	16	5 23.8	1297	58	95.5
111910	17	17	0 0.0	1327	1	99.9
111911	27	26	1 3.7	4373	1	100.0
111912	23	23	0 0.0	316	207	34.5
111913	28	28	0 0.0	626	1	99.8
111914	30	23	7 23.3	394	1	99.7
111915	27	27	0 0.0	812	1	99.9
111916	32	32	0 0.0	537	148	72.4
111917	48	48	0 0.0	164	122	25.6
111918	17	17	0 0.0	590	18	96.9
111919	23	23	0 0.0	307	125	59.3
111920	21	19	2 9.5	2733	1	100.0
111921	28	28	0 0.0	578	1	99.8
111922	20	20	0 0.0	369	179	51.5
111923	28	28	0 0.0	866	56	93.5
111924	23	20	3 13.0	687	102	85.2
111925	35	35	0 0.0	351	121	65.5
111926	30	30	0 0.0	507	49	90.3
111927	27	27	0 0.0	698	1	99.9
111928	28	28	0 0.0	605	1	99.8
111929	35	35	0 0.0	627	3	99.5
111930	34	34	0 0.0	379	33	91.3
111931	34	33	1 2.9	390	107	72.6
111932	27	27	0 0.0	998	1	99.9
111933	24	24	0 0.0	380	72	81.1
111934	19	18	1 5.3	1862	1	99.9
111935	50	50	0 0.0	298	167	44.0
111936	34	34	0 0.0	236	159	32.6
111937	20	20	0 0.0	814	1	99.9



Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %	Align. #Pos.	Mask. #Pos.	Diff. %
111938	30	30	0 0.0	201	112	44.3
111939	31	31	0 0.0	514	177	65.6
111940	26	24	2 7.7	524	99	81.1
111941	19	19	0 0.0	661	38	94.3
111942	24	23	1 4.2	644	48	92.5
111943	21	21	0 0.0	1211	1	99.9
111944	20	20	0 0.0	348	57	83.6
111945	43	43	0 0.0	182	182	0.0
111946	26	26	0 0.0	267	191	28.5
111947	26	26	0 0.0	1233	1	99.9
111948	24	24	0 0.0	364	220	39.6
111949	23	23	0 0.0	1258	1	99.9
111950	26	26	0 0.0	395	127	67.8
111951	22	22	0 0.0	192	133	30.7
111952	30	30	0 0.0	158	60	62.0
111953	31	31	0 0.0	434	162	62.7
111954	22	22	0 0.0	648	45	93.1
111955	18	18	0 0.0	582	127	78.2
111956	44	44	0 0.0	108	101	6.5
111957	25	25	0 0.0	422	103	75.6
111958	29	29	0 0.0	306	203	33.7
111959	32	32	0 0.0	207	156	24.6
111960	31	31	0 0.0	179	166	7.3
111961	26	26	0 0.0	738	28	96.2
111962	34	34	0 0.0	111	111	0.0
111963	21	20	1 4.8	698	141	79.8
111964	21	21	0 0.0	493	197	60.0
111965	21	21	0 0.0	2424	48	98.0
111966	24	24	0 0.0	299	68	77.3
111967	21	21	0 0.0	753	1	99.9
111968	34	32	2 5.9	656	100	84.8
111969	32	32	0 0.0	209	113	45.9
111970	23	23	0 0.0	483	68	85.9
111971	23	23	0 0.0	292	153	47.6
111972	18	18	0 0.0	251	169	32.7
111973	33	33	0 0.0	169	121	28.4
111974	17	17	0 0.0	690	1	99.9
111975	22	22	0 0.0	1002	49	95.1
111976	21	21	0 0.0	741	4	99.5
111977	16	16	0 0.0	1313	1	99.9
111978	23	23	0 0.0	405	15	96.3
111979	18	18	0 0.0	778	22	97.2
111980	20	20	0 0.0	913	1	99.9
111981	32	30	2 6.3	337	220	34.7
111982	17	17	0 0.0	215	146	32.1
111983	29	29	0 0.0	686	115	83.2
111984	31	31	0 0.0	374	178	52.4
111985	22	22	0 0.0	935	33	96.5
111986	27	27	0 0.0	308	38	87.7
111987	24	24	0 0.0	226	86	61.9
111988	40	40	0 0.0	339	248	26.8
111989	46	46	0 0.0	290	250	13.8
111990	19	19	0 0.0	217	101	53.5
111991	24	24	0 0.0	786	83	89.4
111992	21	20	1 4.8	196	139	29.1
111993	16	16	0 0.0	752	1	99.9
111994	18	18	0 0.0	269	137	49.1
111995	32	32	0 0.0	424	161	62.0
111996	33	30	3 9.1	981	7	99.3
111997	24	24	0 0.0	378	173	54.2
111998	38	35	3 7.9	170	142	16.5
111999	24	23	1 4.2	1053	1	99.9
112000	26	25	1 3.8	426	116	72.8
112001	30	30	0 0.0	538	1	99.8
112002	34	34	0 0.0	394	104	73.6
112003	42	42	0 0.0	445	321	27.9
112004	25	25	0 0.0	258	75	70.9
112005	22	22	0 0.0	629	44	93.0
112006	15	15	0 0.0	604	119	80.3
112007	28	28	0 0.0	210	140	33.3
112008	19	19	0 0.0	3537	21	99.4
112009	22	21	1 4.5	761	1	99.9
112010	14	14	0 0.0	565	1	99.8
112011	28	28	0 0.0	400	256	36.0
112012	30	30	0 0.0	458	144	68.6

Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %	Align. #Pos.	Mask. #Pos.	Diff. %
112013	27	26	1 3.7	480	240	50.0
112014	21	21	0 0.0	594	70	88.2
112015	20	20	0 0.0	2738	58	97.9
112016	23	23	0 0.0	346	112	67.6
112017	25	25	0 0.0	632	98	84.5
112018	24	24	0 0.0	383	152	60.3
112019	26	26	0 0.0	991	1	99.9
112020	25	25	0 0.0	208	167	19.7
112021	20	20	0 0.0	408	93	77.2
112022	34	34	0 0.0	557	1	99.8
112023	29	29	0 0.0	660	1	99.8
112024	23	23	0 0.0	567	48	91.5
112025	26	26	0 0.0	1049	1	99.9
112026	23	23	0 0.0	366	138	62.3
112027	15	15	0 0.0	504	25	95.0
112028	24	24	0 0.0	378	123	67.5
112029	29	29	0 0.0	162	121	25.3
112030	19	19	0 0.0	363	74	79.6
112031	19	19	0 0.0	374	186	50.3
112032	36	36	0 0.0	330	39	88.2
112033	19	18	1 5.3	851	76	91.1
112034	45	45	0 0.0	177	154	13.0
112035	19	19	0 0.0	1297	1	99.9
112036	17	17	0 0.0	412	1	99.8
112037	41	41	0 0.0	286	169	40.9
112038	47	47	0 0.0	261	251	3.8
112039	13	13	0 0.0	1243	19	98.5
112040	35	35	0 0.0	193	83	57.0
112041	24	24	0 0.0	518	99	80.9
112042	21	21	0 0.0	258	147	43.0
112043	33	33	0 0.0	679	1	99.9
112044	29	29	0 0.0	327	195	40.4
112045	27	27	0 0.0	311	18	94.2
112046	15	14	1 6.7	394	47	88.1
112047	24	24	0 0.0	814	92	88.7
112048	24	24	0 0.0	274	86	68.6
112049	19	19	0 0.0	462	34	92.6
112050	23	21	2 8.7	1053	140	86.7
112051	25	25	0 0.0	426	82	80.8
112052	33	33	0 0.0	1692	81	95.2
112053	20	20	0 0.0	969	158	83.7
112054	22	22	0 0.0	268	108	59.7
112055	21	20	1 4.8	591	51	91.4
112056	31	31	0 0.0	314	135	57.0
112057	23	21	2 8.7	1176	10	99.1
112058	15	15	0 0.0	858	1	99.9
112059	22	22	0 0.0	530	169	68.1
112060	21	21	0 0.0	460	214	53.5
112061	22	22	0 0.0	614	1	99.8
112062	25	25	0 0.0	1429	47	96.7
112063	16	16	0 0.0	1142	17	98.5
112064	24	13	11 45.8	716	122	83.0
112065	16	16	0 0.0	857	33	96.1
112066	29	28	1 3.4	160	146	8.8
112067	45	45	0 0.0	279	249	10.8
112068	23	23	0 0.0	791	4	99.5
112069	25	23	2 8.0	1190	51	95.7
112070	20	20	0 0.0	476	29	93.9
112071	25	25	0 0.0	133	101	24.1
112072	26	26	0 0.0	436	196	55.0
112073	18	18	0 0.0	602	79	86.9
112074	22	22	0 0.0	767	110	85.7
112075	22	22	0 0.0	424	72	83.0
112076	33	33	0 0.0	241	147	39.0
112077	26	26	0 0.0	407	232	43.0
112078	17	17	0 0.0	820	19	97.7
112079	20	20	0 0.0	361	70	80.6
112080	19	19	0 0.0	616	18	97.1
112081	33	33	0 0.0	340	128	62.4
112082	22	22	0 0.0	373	95	74.5
112083	36	36	0 0.0	408	287	29.7
112084	32	32	0 0.0	692	12	98.3
112085	28	28	0 0.0	651	136	79.1
112086	23	23	0 0.0	534	1	99.8
112087	28	28	0 0.0	350	226	35.4

Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %		Align. #Pos.	Mask. #Pos.	Diff. %
112088	36	36	0	0.0	276	238	13.8
112089	16	16	0	0.0	627	195	68.9
112090	20	20	0	0.0	1269	1	99.9
112091	15	15	0	0.0	937	7	99.3
112092	20	18	2	10.0	657	38	94.2
112093	21	21	0	0.0	400	113	71.8
112094	20	19	1	5.0	431	197	54.3
112095	19	19	0	0.0	948	1	99.9
112096	23	23	0	0.0	895	5	99.4
112097	27	27	0	0.0	458	52	88.6
112098	19	19	0	0.0	700	1	99.9
112099	22	22	0	0.0	1369	1	99.9
112100	25	25	0	0.0	444	118	73.4
112101	26	26	0	0.0	770	1	99.9
112102	42	42	0	0.0	261	145	44.4
112103	23	23	0	0.0	233	141	39.5
112104	23	23	0	0.0	662	50	92.4
112105	31	31	0	0.0	371	101	72.8
112106	35	34	1	2.9	172	150	12.8
112107	38	38	0	0.0	189	153	19.0
112108	38	38	0	0.0	381	259	32.0
112109	23	23	0	0.0	562	83	85.2
112110	29	29	0	0.0	401	168	58.1
112111	27	26	1	3.7	785	152	80.6
112112	24	23	1	4.2	572	17	97.0
112113	31	31	0	0.0	292	161	44.9
112114	19	19	0	0.0	905	161	82.2
112115	48	48	0	0.0	184	132	28.3
112116	21	20	1	4.8	319	43	86.5
112117	22	22	0	0.0	358	200	44.1
112118	26	26	0	0.0	381	149	60.9
112119	21	21	0	0.0	646	45	93.0
112120	23	23	0	0.0	953	1	99.9
112121	27	27	0	0.0	575	154	73.2
112122	29	29	0	0.0	450	17	96.2
112123	39	39	0	0.0	111	65	41.4
112124	32	32	0	0.0	649	251	61.3
112125	28	27	1	3.6	459	24	94.8
112126	31	31	0	0.0	171	140	18.1
112127	33	33	0	0.0	599	1	99.8
112128	15	12	3	20.0	426	47	89.0
112129	34	34	0	0.0	203	154	24.1
112130	36	36	0	0.0	201	196	2.5
112131	27	27	0	0.0	305	92	69.8
112132	14	14	0	0.0	2642	1	100.0
112133	16	16	0	0.0	2263	7	99.7
112134	24	24	0	0.0	999	1	99.9
112135	21	21	0	0.0	903	196	78.3
112136	18	18	0	0.0	1135	1	99.9
112137	28	28	0	0.0	96	74	22.9
112138	32	31	1	3.1	843	1	99.9
112139	43	43	0	0.0	765	3	99.6
112140	31	31	0	0.0	859	1	99.9
112141	35	35	0	0.0	156	133	14.7
112142	36	35	1	2.8	549	64	88.3
112143	21	21	0	0.0	793	83	89.5
112144	33	33	0	0.0	360	135	62.5
112145	34	34	0	0.0	354	91	74.3
112146	13	13	0	0.0	1268	1	99.9
112147	35	35	0	0.0	240	163	32.1
112148	31	31	0	0.0	1276	1	99.9
112149	26	26	0	0.0	181	109	39.8
112150	19	19	0	0.0	386	90	76.7
112151	25	25	0	0.0	287	119	58.5
112152	21	21	0	0.0	644	60	90.7
112153	24	19	5	20.8	2034	1	100.0
112154	19	19	0	0.0	274	141	48.5
112155	17	17	0	0.0	1937	26	98.7
112156	33	33	0	0.0	226	207	8.4
112157	26	26	0	0.0	376	53	85.9
112158	28	28	0	0.0	313	228	27.2
112159	30	29	1	3.3	126	118	6.3
112160	33	33	0	0.0	130	112	13.8
112161	25	25	0	0.0	432	180	58.3
112162	28	28	0	0.0	708	27	96.2

Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %		Align. #Pos.	Mask. #Pos.	Diff. %
112163	29	29	0	0.0	237	160	32.5
112164	36	36	0	0.0	211	176	16.6
112165	14	14	0	0.0	266	98	63.2
112166	22	22	0	0.0	545	26	95.2
112167	21	21	0	0.0	337	225	33.2
112168	32	32	0	0.0	498	258	48.2
112169	35	35	0	0.0	321	171	46.7
112170	25	25	0	0.0	462	88	81.0
112171	20	20	0	0.0	951	1	99.9
112172	16	16	0	0.0	769	1	99.9
112173	31	30	1	3.2	534	82	84.6
112174	28	28	0	0.0	879	104	88.2
112175	33	33	0	0.0	518	1	99.8
112176	33	32	1	3.0	270	141	47.8
112177	15	15	0	0.0	817	1	99.9
112178	37	37	0	0.0	103	51	50.5
112179	20	20	0	0.0	877	33	96.2
112180	21	20	1	4.8	232	107	53.9
112181	42	42	0	0.0	215	194	9.8
112182	30	30	0	0.0	211	137	35.1
112183	33	33	0	0.0	808	71	91.2
112184	26	26	0	0.0	105	82	21.9
112185	19	19	0	0.0	580	12	97.9
112186	35	35	0	0.0	107	100	6.5
112187	38	38	0	0.0	373	66	82.3
112188	19	19	0	0.0	500	44	91.2
112189	22	22	0	0.0	586	6	99.0
112190	21	21	0	0.0	412	50	87.9
112191	27	27	0	0.0	308	58	81.2
112192	21	21	0	0.0	551	1	99.8
112193	14	14	0	0.0	1779	1	99.9
112194	15	15	0	0.0	675	8	98.8
112195	44	44	0	0.0	234	215	8.1
112196	15	15	0	0.0	905	102	88.7
112197	24	24	0	0.0	396	108	72.7
112198	26	26	0	0.0	292	191	34.6
112199	35	34	1	2.9	566	60	89.4
112200	26	26	0	0.0	1094	15	98.6
112201	22	22	0	0.0	162	142	12.3
112202	43	43	0	0.0	157	112	28.7
112203	33	33	0	0.0	451	154	65.9
112204	42	42	0	0.0	309	236	23.6
112205	19	19	0	0.0	865	21	97.6
112206	37	37	0	0.0	229	151	34.1
112207	28	28	0	0.0	481	242	49.7
112208	25	25	0	0.0	584	160	72.6
112209	18	18	0	0.0	506	62	87.7
112210	22	22	0	0.0	335	123	63.3
112211	25	25	0	0.0	673	93	86.2
112212	31	31	0	0.0	450	83	81.6
112213	29	29	0	0.0	1022	48	95.3
112214	32	22	10	31.3	307	236	23.1
112215	34	33	1	2.9	587	1	99.8
112216	22	21	1	4.5	599	45	92.5
112217	27	27	0	0.0	544	1	99.8
112218	25	25	0	0.0	1123	1	99.9
112219	25	24	1	4.0	1216	83	93.2
112220	24	24	0	0.0	781	1	99.9
112221	23	22	1	4.3	508	176	65.4
112222	23	23	0	0.0	680	157	76.9
112223	44	44	0	0.0	205	205	0.0
112224	26	26	0	0.0	291	121	58.4
112225	23	23	0	0.0	1738	1	99.9
112226	27	27	0	0.0	215	174	19.1
112227	23	23	0	0.0	640	172	73.1
112228	18	18	0	0.0	828	34	95.9
112229	40	31	9	22.5	863	1	99.9
112230	20	20	0	0.0	694	1	99.9
112231	25	25	0	0.0	445	32	92.8
112232	15	15	0	0.0	385	57	85.2
112233	26	26	0	0.0	247	115	53.4
112234	31	30	1	3.2	560	43	92.3
112235	29	28	1	3.4	347	192	44.7
112236	28	28	0	0.0	819	199	75.7
112237	27	27	0	0.0	931	14	98.5

Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %	Align. #Pos.	Mask. #Pos.	Diff. %
112238	26	26	0 0.0	691	1	99.9
112239	24	24	0 0.0	180	127	29.4
112240	22	22	0 0.0	268	127	52.6
112241	16	15	1 6.3	854	70	91.8
112242	43	43	0 0.0	199	180	9.5
112243	20	20	0 0.0	719	130	81.9
112244	21	21	0 0.0	665	8	98.8
112245	29	29	0 0.0	471	182	61.4
112246	35	34	1 2.9	649	1	99.8
112247	35	35	0 0.0	364	231	36.5
112248	25	25	0 0.0	1082	5	99.5
112249	25	25	0 0.0	2289	1	100.0
112250	17	17	0 0.0	833	1	99.9
112251	23	23	0 0.0	267	157	41.2
112252	32	26	6 18.8	646	115	82.2
112253	28	28	0 0.0	671	6	99.1
112254	41	40	1 2.4	181	150	17.1
112255	35	34	1 2.9	551	98	82.2
112256	33	33	0 0.0	292	228	21.9
112257	29	29	0 0.0	1265	1	99.9
112258	30	30	0 0.0	1879	1	99.9
112259	27	24	3 11.1	184	165	10.3
112260	21	21	0 0.0	571	49	91.4
112261	28	22	6 21.4	650	25	96.2
112262	34	34	0 0.0	346	109	68.5
112263	26	26	0 0.0	394	78	80.2
112264	19	19	0 0.0	1985	1	99.9
112265	20	20	0 0.0	1613	1	99.9
112266	14	14	0 0.0	2291	1	100.0
112267	18	18	0 0.0	782	1	99.9
112268	27	27	0 0.0	468	116	75.2
112269	22	20	2 9.1	647	63	90.3
112270	21	21	0 0.0	195	125	35.9
112271	28	28	0 0.0	287	242	15.7
112272	25	25	0 0.0	657	43	93.5
112273	22	22	0 0.0	365	26	92.9
112274	21	21	0 0.0	385	74	80.8
112275	22	22	0 0.0	772	103	86.7
112276	30	30	0 0.0	455	101	77.8
112277	17	17	0 0.0	158	85	46.2
112278	26	26	0 0.0	425	64	84.9
112279	29	29	0 0.0	446	70	84.3
112280	38	38	0 0.0	235	162	31.1
112281	35	24	11 31.4	238	182	23.5
112282	21	21	0 0.0	689	61	91.1
112283	18	17	1 5.6	282	104	63.1
112284	41	39	2 4.9	525	81	84.6
112285	38	33	5 13.2	461	1	99.8
112286	41	41	0 0.0	364	166	54.4
112287	24	24	0 0.0	359	56	84.4
112288	25	25	0 0.0	2467	41	98.3
112289	22	22	0 0.0	887	1	99.9
112290	33	33	0 0.0	700	60	91.4
112291	33	33	0 0.0	234	178	23.9
112292	29	29	0 0.0	126	84	33.3
112293	25	25	0 0.0	387	147	62.0
112294	23	23	0 0.0	1317	1	99.9
112295	28	28	0 0.0	699	12	98.3
112296	23	23	0 0.0	613	152	75.2
112297	45	45	0 0.0	346	206	40.5
112298	38	38	0 0.0	214	151	29.4
112299	22	22	0 0.0	397	180	54.7
112300	34	34	0 0.0	423	132	68.8
112301	40	40	0 0.0	107	107	0.0
112302	24	24	0 0.0	365	91	75.1
112303	18	18	0 0.0	671	1	99.9
112304	23	23	0 0.0	1548	1	99.9
112305	17	17	0 0.0	316	56	82.3
112306	18	18	0 0.0	504	71	85.9
112307	24	24	0 0.0	117	103	12.0
112308	23	23	0 0.0	208	72	65.4
112309	24	24	0 0.0	499	30	94.0
112310	35	33	2 5.7	243	117	51.9
112311	31	31	0 0.0	153	109	28.8
112312	29	29	0 0.0	325	180	44.6

Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %	Align. #Pos.	Mask. #Pos.	Diff. %
112313	29	29	0 0.0	408	28	93.1
112314	18	18	0 0.0	846	1	99.9
112315	35	35	0 0.0	496	217	56.3
112316	26	26	0 0.0	713	138	80.6
112317	21	21	0 0.0	733	1	99.9
112318	30	30	0 0.0	1744	8	99.5
112319	27	27	0 0.0	187	143	23.5
112320	28	28	0 0.0	580	10	98.3
112321	34	34	0 0.0	479	40	91.6
112322	53	53	0 0.0	126	104	17.5
112323	31	29	2 6.5	708	25	96.5
112324	31	31	0 0.0	246	175	28.9
112325	18	18	0 0.0	1444	5	99.7
112326	26	26	0 0.0	304	100	67.1
112327	31	31	0 0.0	221	117	47.1
112328	23	23	0 0.0	573	86	85.0
112329	33	33	0 0.0	512	124	75.8
112330	22	22	0 0.0	468	48	89.7
112331	33	33	0 0.0	569	95	83.3
112332	28	28	0 0.0	572	215	62.4
112333	26	22	4 15.4	539	66	87.8
112334	30	30	0 0.0	322	99	69.3
112335	27	27	0 0.0	385	139	63.9
112336	26	26	0 0.0	513	1	99.8
112337	29	28	1 3.4	653	1	99.8
112338	39	38	1 2.6	398	1	99.7
112339	39	39	0 0.0	343	275	19.8
112340	20	20	0 0.0	506	43	91.5
112341	26	24	2 7.7	635	62	90.2
112342	26	26	0 0.0	110	95	13.6
112343	17	17	0 0.0	922	1	99.9
112344	23	23	0 0.0	504	22	95.6
112345	41	41	0 0.0	450	163	63.8
112346	23	23	0 0.0	1151	26	97.7
112347	25	25	0 0.0	1238	1	99.9
112348	32	32	0 0.0	1252	1	99.9
112349	37	37	0 0.0	375	116	69.1
112350	39	39	0 0.0	90	74	17.8
112351	18	18	0 0.0	691	38	94.5
112352	33	25	8 24.2	1006	171	83.0
112353	29	22	7 24.1	683	70	89.8
112354	45	45	0 0.0	143	95	33.6
112355	40	40	0 0.0	218	191	12.4
112356	25	25	0 0.0	771	1	99.9
112357	16	16	0 0.0	578	1	99.8
112358	45	45	0 0.0	125	106	15.2
112359	45	45	0 0.0	235	213	9.4
112360	25	25	0 0.0	150	94	37.3
112361	24	23	1 4.2	375	150	60.0
112362	16	16	0 0.0	871	10	98.9
112363	34	34	0 0.0	641	10	98.4
112364	29	29	0 0.0	133	93	30.1
112365	22	22	0 0.0	329	285	13.4
112366	40	40	0 0.0	475	385	18.9
112367	34	34	0 0.0	249	158	36.5
112368	21	21	0 0.0	858	1	99.9
112369	31	31	0 0.0	287	100	65.2
112370	27	27	0 0.0	446	44	90.1
112371	35	33	2 5.7	674	1	99.9
112372	28	28	0 0.0	750	1	99.9
112373	17	17	0 0.0	995	14	98.6
112374	27	24	3 11.1	292	117	59.9
112375	24	24	0 0.0	307	190	38.1
112376	28	28	0 0.0	97	86	11.3
112377	22	22	0 0.0	2115	1	100.0
112378	22	22	0 0.0	642	33	94.9
112379	27	27	0 0.0	267	208	22.1
112380	39	39	0 0.0	170	93	45.3
112381	37	37	0 0.0	428	172	59.8
112382	31	31	0 0.0	434	224	48.4
112383	26	26	0 0.0	220	159	27.7
112384	17	17	0 0.0	4174	1	100.0
112385	23	23	0 0.0	541	1	99.8
112386	28	28	0 0.0	244	159	34.8
112387	19	19	0 0.0	576	1	99.8

Gene-ID	Orth. #taxa	Red. #taxa	Diff. # %		Align. #Pos.	Mask. #Pos.	Diff. %
112388	21	21	0	0.0	211	131	37.9
112389	32	30	2	6.3	540	112	79.3
112390	30	30	0	0.0	746	73	90.2
112391	35	35	0	0.0	392	278	29.1
112392	32	32	0	0.0	208	177	14.9
112393	23	23	0	0.0	456	1	99.8
112394	41	41	0	0.0	143	87	39.2
112395	34	33	1	2.9	742	53	92.9
112396	20	20	0	0.0	1132	84	92.6
112397	20	20	0	0.0	1403	1	99.9
112398	36	36	0	0.0	542	100	81.5
112399	31	31	0	0.0	374	331	11.5
112400	16	16	0	0.0	1149	1	99.9
112401	30	30	0	0.0	796	1	99.9
112402	26	26	0	0.0	207	104	49.8
112403	25	25	0	0.0	233	90	61.4
112404	25	25	0	0.0	931	7	99.2
112405	24	24	0	0.0	305	181	40.7
112406	27	27	0	0.0	173	114	34.1
112407	46	46	0	0.0	236	129	45.3
112408	21	21	0	0.0	295	96	67.5
112409	26	26	0	0.0	573	1	99.8
112410	21	20	1	4.8	952	40	95.8
112411	17	17	0	0.0	464	18	96.1
112412	16	16	0	0.0	266	105	60.5
112413	30	30	0	0.0	744	68	90.9
112414	41	41	0	0.0	151	112	25.8
112415	30	30	0	0.0	486	153	68.5
112416	35	35	0	0.0	481	206	57.2
112417	36	36	0	0.0	149	135	9.4
112418	32	32	0	0.0	562	1	99.8
112419	23	23	0	0.0	2318	1	100.0
112420	28	27	1	3.6	680	147	78.4
112421	25	25	0	0.0	159	90	43.4
112422	29	29	0	0.0	269	143	46.8
112423	30	26	4	13.3	1115	1	99.9
112424	23	23	0	0.0	463	33	92.9
112425	46	46	0	0.0	147	139	5.4
112426	26	26	0	0.0	919	2	99.8
112427	30	29	1	3.3	190	116	38.9
112428	23	23	0	0.0	555	1	99.8
112429	29	29	0	0.0	616	28	95.5
112430	20	20	0	0.0	659	17	97.4
112431	23	23	0	0.0	324	1	99.7
112432	31	31	0	0.0	191	135	29.3
112433	36	35	1	2.8	171	155	9.4
112434	30	30	0	0.0	1240	94	92.4
112435	20	20	0	0.0	967	1	99.9
112436	47	47	0	0.0	209	179	14.4
112437	35	35	0	0.0	576	116	79.9
112438	35	34	1	2.9	422	181	57.1
112439	32	32	0	0.0	1114	37	96.7
112440	22	22	0	0.0	719	1	99.9
112441	27	27	0	0.0	439	12	97.3
112442	20	19	1	5.0	1205	1	99.9
112443	32	32	0	0.0	422	367	13.0
112444	14	14	0	0.0	620	37	94.0
112445	36	35	1	2.8	162	113	30.2
112446	43	43	0	0.0	175	139	20.6
112447	20	20	0	0.0	250	126	49.6
112448	42	42	0	0.0	123	108	12.2
112449	30	30	0	0.0	263	173	34.2
112450	29	29	0	0.0	380	115	69.7
112451	41	41	0	0.0	90	83	7.8
112452	23	23	0	0.0	363	120	66.9
112453	26	26	0	0.0	317	121	61.8
112454	23	23	0	0.0	537	19	96.5

	Orth.	Red.
mean #taxa/gene	26.7	26.4
gene coverage	41.1	40.6
excluded #taxa/gene		0.3
% of excluded sequences		1.3
Mask.		
mean %masked positions/gene	69.9	
% of all masked positions	85.1	

**Table S4.** Summary of the results of the paralogy screening with respect to clades detected at the different steps and genes affected.

	Clades with BS $\geq$ 95	# genes
Before filtering	2220	551
After filtering:		
Genus level	1632	518
Conflict	70	51
Subgroup level	373	271
Conflict	166	125
Group level	121	99
Conflict	120	98
Combination of conflict cases:	144	144

**Table S5 continued.**

	NP	P	Diff.	NP	P	Diff.
<i>Seison sp</i>	246	238	8	248	240	8
<i>Spirometra erinacei</i>	105	104	1	108	107	1
<i>Stylochoplana maculata</i>	386	379	7	400	392	8
<i>Symbion pandora</i>	143	137	6	143	137	6
<i>Taenia solium</i>	319	312	7	325	318	7
<i>Terebratalia transversa</i>	187	178	9	188	179	9
<i>Tubifex tubifex</i>	301	292	9	307	298	9
<i>Tubulanus polymorphus</i>	279	275	4	288	284	4
<i>Tubulipora sp</i>	112	108	4	112	108	4
<i>Turbanella ambronensis</i>	68	66	2	na	na	na

**Table S5.** Pruned (P) sequences for the taxa of datasets d01. NP = not pruned, Diff. = difference.

	NP	P	Diff.
<i>Adineta vaga</i>	308	297	11
<i>Alcyonidium diaphanum</i>	120	116	4
<i>Alvinella pompejana</i>	446	440	6
<i>Apis mellifera</i>	555	553	2
<i>Aplysia californica</i>	440	428	12
<i>Biomphalaria glabrata</i>	274	256	18
<i>Brachionus manjavacas</i>	318	310	8
<i>Brachionus plicatilis</i>	485	477	8
<i>Bugula neritina</i>	280	268	12
<i>Capitella teleta</i>	476	476	0
<i>Cephalothrix linearis</i>	257	253	4
<i>Chaetopleura apiculata</i>	225	216	9
<i>Clonorchis sinensis</i>	151	143	8
<i>Crassostrea gigas</i>	402	387	15
<i>Cristatella mucedo</i>	140	139	1
<i>Dactylopodola baltica</i>	346	338	8
<i>Daphnia pulex</i>	485	480	5
<i>Dugesia japonica</i>	226	219	7
<i>Dugesia ryukyuensis</i>	262	252	10
<i>Echinococcus granulosus</i>	237	233	4
<i>Echinococcus multilocularis</i>	104	102	2
<i>Echinoderes horni</i>	142	139	3
<i>Echinorhynchus truttae</i>	88	84	4
<i>Euprymna scolopes</i>	373	360	13
<i>Fasciola gigantica</i>	108	106	2
<i>Flustra foliacea</i>	119	119	0
<i>Gnathostomula paradoxa</i>	308	296	12
<i>Gnathostomula peregrina</i>	136	131	5
<i>Helobdella robusta</i>	505	504	1
<i>Idiosepius paradoxus</i>	154	145	9
<i>Lecane inermis</i>	209	206	3
<i>Lepidodermella squamata</i>	294	285	9
<i>Lingula anatina</i>	186	172	14
<i>Lottia gigantea</i>	508	505	3
<i>Lumbricus rubellus</i>	209	203	6
<i>Macracanthorhynchus hirudinaceus</i>	336	334	2
<i>Macrodasys sp</i>	263	262	1
<i>Macrostomum lignano</i>	194	185	9
<i>Megadasys sp</i>	349	341	8
<i>Moniezia expansa</i>	421	413	8
<i>Mytilus californianus</i>	250	238	12
<i>Nematoplanea coelogyneporoides</i>	58	58	0
<i>Neomenia megatrapezata</i>	423	412	11
<i>Opisthorchis viverrini</i>	138	131	7
<i>Paraplanocera sp</i>	148	140	8
<i>Paratenuisentis ambiguus</i>	318	313	5
<i>Pedicellina cernua</i>	112	109	3
<i>Pedicellina sp</i>	103	99	4
<i>Philodina roseola</i>	173	165	8
<i>Pomphorhynchus laevis</i>	337	328	9
<i>Priapulus caudatus</i>	99	96	3
<i>Rotaria rotatoria</i>	232	226	6
<i>Schistosoma japonicum</i>	459	457	2
<i>Schistosoma mansoni</i>	433	423	10
<i>Schmidtea mediterranea</i>	461	456	5

**Table S6.** Results of the contamination screening using 18S rRNA sequences and taxa, which have been used (see footnotes), to generate the negative and positive sequence reference database for the blast searches of the 559 gene datasets in our study.

Affected species	e-value of 18S-BLAST	Species found in back blast	e-value of back blast	Negative	Positive
<i>Alvinella pompejana</i>	2*e <sup>-54</sup>	<i>Tripyrella</i> sp. (Nematoda)	2*e <sup>-51</sup>	1, 2, 3, 4	5, 6, 7, 8
	7*e <sup>-40</sup>	<i>Ptinus fur</i> (Arthropoda)	3*e <sup>-37</sup>		
	4*e <sup>-27</sup>	Uncultured Acaulospora (Fungi)	1*e <sup>-25</sup>		
<i>Aplysia californica</i>	6*e <sup>-47</sup>	<i>Litus cynipseus</i> (Arthropoda)	9*e <sup>-48</sup>	1, 2	5, 6, 7
<i>Biomphalaria glabrata</i>	7*e <sup>-81</sup>	<i>Anurofeca richardsi</i> (Ichthyospora)	0.0	9, 10	5, 6, 7
	9*e <sup>-55</sup>	<i>Adineta vaga</i> (Syndermata)	0.0		
<i>Capitella teleta</i>	1*e <sup>-58</sup>	<i>Schlegelia violacea</i> (Magnoliophyta)	2*e <sup>-92</sup>	11	1, 2, 6, 7, 8
<i>Crassostrea gigas</i>	2*e <sup>-21</sup>	Thraustochytriidae sp. (Stramenopiles)	2*e <sup>-21</sup>	12	5, 6, 7
<i>Dactylopodola baltica</i>	3*e <sup>-90</sup>	<i>Archaphanostoma macrospiriferum</i> (Acoela)	0.0	4, 12, 13, 14, 15	1, 2, 5, 6, 7, 8, 9, 16
	7*e <sup>-66</sup>	Uncultured Ascomycota (Fungi)	0.0		
	3*e <sup>-49</sup>	Uncultured Distigma (Euglenozoa)	4*e <sup>-65</sup>		
	3*e <sup>-44</sup>	<i>Paralia sulcata</i> (Stramenopiles)	2*e <sup>-104</sup>		
	1*e <sup>-34</sup>	<i>Protostelium arachisporum</i> (Amoebozoa)	1*e <sup>-39</sup>		
<i>Daphnia pulex</i>	2*e <sup>-109</sup>	<i>Vorticella</i> sp. (Alveolata)	0.0	17	1, 5, 6, 7
<i>Gnathostomula paradoxa</i>	2*e <sup>-133</sup>	<i>Turbanella</i> sp. (Gastrotricha)	0.0	4, 12, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24	5, 6, 7, 8, 9, 16
	4*e <sup>-86</sup>	<i>Mesodinium pulex</i> (Alveolata)	0.0		
	1*e <sup>-62</sup>	<i>Amastigomonas trahens</i> (Apusozoa)	4*e <sup>-131</sup>		
	1*e <sup>-51</sup>	<i>Parvamoeba rugata</i> (Amoebozoa)	2*e <sup>-133</sup>		
	3*e <sup>-58</sup>	<i>Caecitellus parvulus</i> (Stramenopiles)	4*e <sup>-136</sup>		
	1*e <sup>-51</sup>	<i>Parvamoeba rugata</i> (Amoebozoa)	2*e <sup>-133</sup>		
	3*e <sup>-48</sup>	<i>Oxnerella micra</i> (Centroheliozoa)	2*e <sup>-107</sup>		
	1*e <sup>-47</sup>	<i>Petalomonas cantuscygni</i> (Euglenozoa)	2*e <sup>-153</sup>		
	4*e <sup>-22</sup>	<i>Chaetospermum camelliae</i> (Fungi)	8*e <sup>-30</sup>		
<i>Helobdella robusta</i>	5*e <sup>-37</sup>	<i>Phycomyces blakesleeana</i> (Fungi)	4*e <sup>-81</sup>	4	1, 2, 5, 7
<i>Lecane inermis</i>	2*e <sup>-56</sup>	<i>Thormora jukesii</i> (Annelida)	2*e <sup>-51</sup>	1, 2, 5, 6, 17	8, 9, 16
	4*e <sup>-43</sup>	<i>Tribolium castaneum</i> (Arthropoda)	5*e <sup>-40</sup>		
	4*e <sup>-38</sup>	<i>Cryptosporidium</i> sp. (Alveolata)	3*e <sup>-41</sup>		
<i>Lepidodermella squamata</i>	3*e <sup>-113</sup>	<i>Cryptomonas paramaecium</i> (Cryptophyta)	0.0	4, 12, 13, 14, 25, 26	1, 2, 5, 6, 7, 8, 9, 16
	7*e <sup>-100</sup>	<i>Spumella</i> sp. (Stramenopiles)	0.0		
	9*e <sup>-49</sup>	<i>Cryptodiffugia operculata</i> (Amoebozoa)	0.0		
	6*e <sup>-41</sup>	<i>Lindgomyces</i> sp. (Fungi)	2*e <sup>-72</sup>		
	2*e <sup>-31</sup>	<i>Entosiphon</i> sp. (Euglenozoa)	0.0		
	4*e <sup>-27</sup>	<i>Diphylleia rotans</i> (Collodictyonidae)	4*e <sup>-134</sup>		
<i>Lumbricus rubellus</i>	2*e <sup>-24</sup>	<i>Monocystis agilis</i> (Alveolata)	2*e <sup>-140</sup>	17	5, 6, 7
<i>Macrodasydys</i> sp.	5*e <sup>-79</sup>	<i>Ceriantheopsis americana</i> (Cnidaria)	0.0	27	1, 2, 5, 6, 7, 8, 9, 16
<i>Megadasydys</i> sp.	5*e <sup>-65</sup>	<i>Chromadoridae</i> sp. (Nematoda)	2*e <sup>-139</sup>	3, 17	5, 6, 7, 8, 9, 16
	2*e <sup>-58</sup>	<i>Gymnodinium eucyaneum</i> (Alveolata)	4*e <sup>-101</sup>		
<i>Nematoplanea coelognoporoides</i>	2*e <sup>-36</sup>	<i>Gyptis pacifica</i> (Annelida)	1*e <sup>-39</sup>	5, 6	8, 9, 16
<i>Rotaria rotatoria</i>	3*e <sup>-86</sup>	<i>Notoplanea australis</i> (Platyhelminthes)	5*e <sup>-179</sup>	8, 13, 16, 27, 28	1, 2, 5, 6, 7, 9
	8*e <sup>-67</sup>	<i>Vannella</i> sp. (Amoebozoa)	0.0		
	8*e <sup>-57</sup>	<i>Trinema lineare</i> (Cercaria)	7*e <sup>-131</sup>		
	6*e <sup>-33</sup>	Heterolobosea sp. (Heterolobosea)	6*e <sup>-138</sup>		
<i>Schistosoma japonica</i>	0.0	<i>Sus scrofa</i> (Mammalia)	0.0	7, 29	5, 6, 8, 9, 16
	3*e <sup>-53</sup>	<i>Truncatella scalaris</i> (Mollusca)	7*e <sup>-84</sup>		
<i>Schistosoma mansoni</i>	2*e <sup>-117</sup>	<i>Adineta vaga</i> (Syndermata)	0.0	1, 2, 9	5, 6, 7, 8
	4*e <sup>-31</sup>	<i>Bradysia tilicola</i> (Hexapoda)	3*e <sup>-83</sup>		
<i>Stylochoplana maculata</i>	7*e <sup>-47</sup>	<i>Platydasys</i> sp. (Gastrotricha)	3*e <sup>-46</sup>	18, 19, 20, 21, 22	1, 2, 5, 6, 7, 8, 9, 16

- <sup>1</sup> *Apis mellifera* (Arthropoda)
- <sup>2</sup> *Daphnia pulex* (Arthropoda)
- <sup>3</sup> *Caenorhabditis elegans* (Nematoda)
- <sup>4</sup> *Schizosaccharomyces cerevisiae* (Fungi)
- <sup>5</sup> *Capitella teleta* (Annelida)
- <sup>6</sup> *Helobdella robusta* (Annelida)
- <sup>7</sup> *Lottia gigantea* (Mollusca)
- <sup>8</sup> *Schmidtea mediterranea* (Platyhelminthes)
- <sup>9</sup> *Brachionus plicatilis* (Syndermata)
- <sup>10</sup> Ichthyosporea
- <sup>11</sup> *Cabomba aquatica*, *Persea americana*, *Liriodendron tulipifera*, *Nuphar advena* (all Chlorophyta)
- <sup>12</sup> *Phytophthora capsici*, *Albugo candida*, *Blastocystis hominis*, *Pseudochattonella farcimen*, *Phytophthora cactorum*, *Phytophthora infestans*, *Saccharina japonica*, *Ochromonas danica*, *Fragilariopsis cylindrus*, *Ectocarpus siliculosus*, *Pythium ultimum*, *Phaeodactylum tricornutum* (all Stramenopiles)
- <sup>13</sup> *Entamoeba histolytica*, *Dictyostelium purpureum*, *Dictyostelium discoideum*, *Physarum polycephalum*, *Mastigamoeba balamuthi*, *Vermamoeba vermiformis*, *Acanthamoeba castellanii* (all Amoebozoa)
- <sup>14</sup> *Trypanosoma cruzi*, *Trypanosoma congolense*, *Trypanosoma brucei*, *Trypanosoma rangeli*, *Euglena longa*, *Euglena gracilis*, *Diplonema papillatum*, *Leishmania chagasi*, *Leishmania major* (all Euglenozoa)
- <sup>15</sup> Acoelomorpha
- <sup>16</sup> *Schistosoma mansoni* (Platyhelminthes)
- <sup>17</sup> *Eimeria tenella*, *Eimeria maxima*, *Eimeria acervulina*, *Oxyrrhis marina*, *Plasmodium berghei*, *Plasmodium falciparum*, *Plasmodium yoelii*, *Plasmodium vivax*, *Babesia equi*, *Alexandrium minutum*, *Alexandrium tamarense*, *Anophryoides haemophila*, *Cryptosporidium parvum*, *Cryptosporidium muris*, *Theileria orientalis*, *Theileria annulata*, *Sterkiella histriomuscorum*, *Symbiodinium sp.*, *Tetrahymena thermophila*, *Perkinsus marinus*, *Karenia brevis*, *Polyplastron multivesiculatum*, *Paramecium tetraurelia*, *Ichthyophthirius multifiliis*, *Karlodinium micrum*, *Toxoplasma gondii*, *Lingulodinium polyedrum*, *Neospora caninum* (all Alveolata)
- <sup>18</sup> *Megadasys sp.* (Gastrotricha)
- <sup>19</sup> *Dactylopodola baltica* (Gastrotricha)
- <sup>20</sup> *Lepidodermella squamata* (Gastrotricha)
- <sup>21</sup> *Megadasys sp.* (Gastrotricha)
- <sup>22</sup> *Turbanella ambronensis* (Gastrotricha)
- <sup>23</sup> Apusozoa
- <sup>24</sup> Centroheliozoa
- <sup>25</sup> Cryptophyta
- <sup>26</sup> Collodictyonidae
- <sup>27</sup> *Nematostella vectensis* (Cnidaria)
- <sup>27</sup> Cercozoa
- <sup>28</sup> Heterolobosea
- <sup>29</sup> *Macaca fascicularis* (Mammalia)

**Table S7.** Results of the contamination screening against the 559 gene datasets in our study using three different pruning strategies. Sequences were pruned either (1) when the best hit was a hit against a negative reference sequence, (2) when the best hit was a hit against a negative reference sequence and the e-value was at least one magnitude lower than the best positive hit or (3) when the best hit was a hit against a negative reference sequence and the e-value was at least four magnitudes lower than the best positive hit.

Affected taxon	Paralogy screening #	Best hit		Pruning strategy			
		#	%	1 magnitude		4 magnitudes	
		#	%	#	%	#	%
<i>Alvinella pompejana</i>	453	42	9.27	32	7.06	11	2.43
<i>Aplysia californica</i>	439	39	8.88	30	6.83	11	2.51
<i>Biomphalaria glabrata</i>	263	15	5.70	12	4.56	6	2.28
<i>Capitella teleta</i>	492	2	0.41	1	0.20	1	0.20
<i>Crassostrea gigas</i>	399	3	0.75	3	0.75	0	0.00
<i>Dactylopodola baltica</i>	347	57	16.43	51	14.70	42	12.10
<i>Daphnia pulex</i>	498	13	2.61	13	2.61	4	0.80
<i>Gnathostomula paradoxa</i>	306	87	28.43	77	25.16	28	9.15
<i>Helobdella robusta</i>	520	0	0.00	0	0.00	0	0.00
<i>Lecane inermis</i>	210	30	14.29	29	13.81	17	8.10
<i>Lepidodermella squamata</i>	296	74	25.00	71	23.99	52	17.57
<i>Lumbricus rubellus</i>	206	3	1.46	3	1.46	0	0.00
<i>Macrodasys sp.</i>	272	39	14.34	26	9.56	15	5.51
<i>Megadasys sp.</i>	355	70	19.72	60	16.90	30	8.45
<i>Nematoplana coelogygnoporoides</i>	58	26	44.83	17	29.31	7	12.07
<i>Rotaria rotatoria</i>	232	16	6.90	12	5.17	3	1.29
<i>Schistosoma japonicum</i>	470	34	7.23	27	5.74	9	1.91
<i>Schistosoma mansoni</i>	437	79	18.08	60	13.73	10	2.29
<i>Stylochoplanea maculata</i>	392	29	7.40	20	5.10	1	0.26



**Table S8.** Summary of the effect of pruning after the paralogy and additionally contamination screening on gene and sequence coverage for the dataset d01. NP = not pruned, PS = pruning after paralogy screening, CS = pruning after additionally contamination screening.

GeneID	#taxa		
	NP	PS	CS
111203	31	31	29
111204	39	39	38
111206	19	19	17
111213	20	20	19
111214	41	41	36
111215	38	38	32
111216	46	46	44
111217	46	46	43
111222	33	33	30
111229	43	33	31
111232	30	30	28
111234	25	25	24
111237	27	27	27
111238	28	28	27
111239	23	23	22
111243	34	34	34
111247	29	29	27
111249	36	36	36
111251	27	27	25
111259	40	40	40
111260	20	20	16
111265	29	29	29
111266	40	40	38
111267	19	19	19
111268	22	22	16
111269	27	27	24
111271	29	27	27
111272	26	26	20
111273	28	25	24
111274	46	46	43
111275	36	36	36
111276	28	28	27
111277	45	45	41
111278	31	31	29
111281	46	46	43
111282	26	14	8
111283	21	21	21
111284	22	22	17
111286	49	49	48
111287	36	36	30
111290	27	27	27
111291	26	26	25
111295	26	26	26
111296	24	24	20
111298	18	18	18
111299	33	31	32
111300	31	31	28
111309	26	26	22
111313	29	29	29
111316	34	34	32
111318	41	41	36
111319	24	24	22
111320	26	26	21
111321	26	26	25
111324	41	41	40
111328	31	31	30
111329	32	32	25
111335	34	34	32
111345	23	23	21
111347	36	36	34
111348	31	31	31
111349	28	28	27
111352	28	17	15
111357	27	25	21
111359	22	22	19
111365	35	35	34
111375	25	25	25
111379	32	28	27

GeneID	#taxa		
	NP	PS	CS
111387	37	34	34
111388	23	23	23
111391	29	29	28
111393	31	31	30
111394	45	45	44
111399	25	25	18
111401	31	31	24
111402	24	24	24
111404	32	30	24
111405	32	32	30
111409	34	34	34
111413	33	33	32
111414	37	30	24
111415	26	26	25
111418	25	23	18
111419	33	33	32
111421	31	31	30
111423	35	35	35
111425	31	26	24
111426	26	26	25
111427	33	31	26
111428	20	20	16
111429	36	36	34
111430	33	33	32
111431	24	19	15
111432	38	38	37
111433	34	23	19
111435	42	39	35
111436	25	25	24
111439	28	28	27
111440	33	33	28
111441	31	31	28
111447	23	23	22
111448	31	31	22
111450	23	23	23
111451	25	25	24
111453	40	40	40
111454	29	29	29
111457	32	32	28
111458	21	21	21
111459	30	25	20
111463	29	29	28
111464	17	17	14
111466	53	53	47
111468	21	21	20
111469	27	27	26
111475	40	40	38
111483	26	26	25
111484	24	17	17
111485	33	33	28
111486	38	38	37
111487	23	23	20
111488	26	26	26
111489	27	27	26
111490	26	26	24
111491	44	44	40
111492	33	33	26
111495	25	25	25
111496	37	34	35
111497	30	30	28
111504	30	28	26
111506	21	21	19
111507	23	17	21
111510	39	39	37
111511	34	34	34
111516	36	36	36
111517	27	27	23
111518	25	25	25

GeneID	#taxa		
	NP	PS	CS
111519	28	28	27
111521	32	32	31
111524	38	38	38
111527	44	42	43
111530	26	26	24
111532	35	35	32
111538	44	44	41
111539	38	38	38
111542	36	36	36
111546	49	49	43
111549	34	32	33
111550	43	43	40
111552	32	32	22
111554	22	22	22
111555	44	44	40
111558	16	16	16
111560	22	22	19
111566	36	36	32
111567	30	30	30
111568	33	33	30
111570	26	26	22
111571	23	23	21
111572	44	40	38
111573	18	18	17
111576	28	28	24
111579	36	36	34
111580	25	25	20
111582	30	30	25
111583	25	25	24
111585	32	32	29
111587	39	37	34
111588	23	23	23
111589	26	22	21
111591	21	21	19
111595	40	40	39
111596	39	27	24
111598	32	30	31
111599	43	43	38
111600	26	26	26
111603	33	33	32
111604	29	29	28
111606	22	22	21
111608	27	27	25
111611	22	22	17
111616	28	28	19
111618	38	38	37
111619	30	28	26
111620	29	29	28
111622	49	49	45
111623	36	36	36
111625	26	26	25
111626	37	37	35
111628	30	30	27
111629	33	33	33
111631	30	30	28
111634	34	34	31
111636	26	26	25
111638	34	34	34
111639	31	31	31
111641	28	28	23
111643	28	28	27
111644	30	23	18
111648	30	30	29
111653	27	27	27
111654	27	27	25
111657	50	46	38
111660	23	13	13
111661	27	27	27

GeneID	#taxa		
	NP	PS	CS
111662	21	21	17
111663	30	22	16
111665	21	21	21
111668	28	28	24
111670	27	27	23
111676	29	29	25
111677	28	28	28
111678	35	35	33
111680	24	24	22
111686	38	38	33
111687	45	45	44
111689	39	39	30
111695	32	27	28
111698	22	22	22
111699	27	27	27
111700	22	22	20
111702	39	39	37
111703	30	30	30
111704	23	23	21
111711	46	46	41
111714	37	37	37
111715	23	23	22
111721	28	25	22
111723	36	27	23
111724	43	37	36
111728	24	24	24
111730	35	35	33
111731	36	36	34
111732	36	36	33
111733	37	37	34
111736	25	25	24
111738	30	30	24
111739	25	25	23
111741	35	35	27
111742	26	18	15
111744	47	47	45
111747	27	27	24
111748	20	20	20
111749	25	25	19
111751	19	19	16
111752	36	36	35
111754	30	30	28
111763	40	40	39
111764	32	32	32
111767	26	26	25
111768	34	34	33
111769	27	27	24
111770	24	24	20
111772	20	20	20
111775	42	42	41
111776	40	38	32
111778	29	27	25
111779	24	24	23
111781	26	26	26
111784	22	22	21
111785	32	32	30
111787	26	26	25
111789	32	32	29
111796	25	25	24
111797	35	35	34
111803	29	29	28
111807	26	18	18
111811	46	46	45
111812	26	26	23
111813	43	43	43
111814	45	43	41
111815	39	39	36
111816	44	44	41

GeneID	#taxa		
	NP	PS	CS
111818	28	28	23
111820	33	30	22
111821	26	26	23
111825	26	26	26
111827	29	27	26
111829	41	41	39
111830	42	42	40
111838	22	22	22
111840	30	30	30
111845	20	20	18
111847	28	23	21
111848	31	31	27
111849	35	35	31
111861	42	36	27
111862	30	30	29
111863	31	26	24
111865	24	24	24
111866	40	40	32
111870	30	30	28
111871	27	21	20
111873	45	45	43
111874	29	29	24
111876	35	31	23
111879	22	22	21
111884	23	23	20
111889	28	28	27
111890	21	19	14
111892	31	25	21
111893	42	42	42
111894	23	23	18
111898	41	41	41
111900	26	26	25
111902	21	21	19
111903	25	25	20
111904	33	33	27
111905	24	24	23
111907	39	39	39
111912	23	23	22
111916	32	32	32
111917	48	48	46
111919	23	23	23
111923	28	28	20
111924	20	20	15
111925	35	35	32
111931	33	33	29
111935	50	50	45
111936	34	34	33
111938	30	30	26
111939	31	31	31
111945	43	43	39
111946	26	26	26
111948	24	24	22
111950	26	26	24
111951	22	22	22
111952	30	30	28
111953	31	29	20
111956	44	44	39
111957	25	25	24
111958	29	27	27
111959	32	32	29
111960	31	31	31
111962	34	34	30
111964	21	21	20
111968	32	27	22
111969	32	32	29
111970	23	23	17
111971	23	19	23
111973	33	33	32
111981	30	30	27
111984	31	31	30
111987	24	24	20
111988	40	40	37
111989	46	46	37
111992	20	20	19
111995	32	32	31

GeneID	#taxa		
	NP	PS	CS
111997	24	24	23
111998	35	33	33
112002	34	23	21
112003	42	42	41
112007	28	28	28
112011	28	28	27
112012	30	28	29
112013	26	26	26
112018	24	24	24
112020	25	25	24
112021	20	20	19
112028	24	24	23
112029	29	29	29
112030	19	19	18
112034	45	45	42
112037	41	41	38
112038	47	47	43
112040	35	35	33
112041	24	24	22
112044	29	29	27
112047	24	24	19
112050	21	21	17
112052	33	31	31
112053	20	18	17
112056	31	31	29
112059	22	22	20
112060	21	21	21
112066	28	26	26
112067	45	45	43
112071	25	25	25
112072	26	26	26
112076	33	33	33
112077	26	26	26
112081	33	33	29
112083	36	36	35
112085	28	28	28
112087	28	24	23
112088	36	36	32
112093	21	21	19
112094	19	19	19
112102	42	42	38
112105	31	31	29
112106	34	23	23
112107	38	38	33
112108	38	38	35
112110	29	29	26
112111	26	26	22
112113	31	27	27
112115	48	48	42
112117	22	22	22
112118	26	26	22
112121	27	23	21
112123	39	39	39
112124	32	28	27
112126	31	31	30
112129	34	34	34
112130	36	36	34
112135	21	21	19
112137	28	28	24
112141	35	35	32
112142	35	35	28
112144	33	33	31
112145	34	34	30
112147	35	35	32
112149	26	26	26
112151	25	25	25
112152	21	21	20
112156	33	33	31
112157	26	26	21
112158	28	28	27
112159	29	29	26
112160	33	33	33
112163	29	29	26
112164	36	36	35
112167	21	21	21

GeneID	#taxa		
	NP	PS	CS
112168	32	32	28
112169	35	33	31
112173	30	30	26
112174	28	28	24
112176	32	32	29
112178	37	35	35
112180	20	20	20
112181	42	42	35
112182	30	30	30
112183	33	31	27
112184	26	26	26
112186	35	35	32
112187	38	38	30
112195	44	44	41
112197	24	24	23
112199	34	34	28
112201	22	22	21
112202	43	43	41
112203	33	30	29
112204	42	40	40
112206	37	35	36
112207	28	28	28
112211	25	25	24
112214	22	22	22
112219	24	24	20
112221	22	22	19
112222	23	17	16
112223	44	44	40
112224	26	26	26
112226	27	27	27
112227	23	23	22
112235	28	28	28
112240	22	22	22
112242	43	43	42
112243	20	11	10
112247	35	35	33
112251	23	23	22
112252	26	26	23
112254	40	40	38
112255	34	34	24
112256	33	33	32
112259	24	24	24
112263	26	21	17
112268	27	27	27
112270	21	21	21
112271	28	28	28
112275	22	22	19
112279	29	29	26
112280	38	38	38
112281	24	19	14
112284	39	39	32
112286	41	41	41
112291	33	33	33
112292	29	29	29
112293	25	22	22
112297	45	43	43
112298	38	38	38
112299	22	22	22
112300	34	34	29
112301	40	40	37
112307	24	24	24
112308	23	23	22
112310	33	31	30
112311	31	31	29
112312	29	29	29
112315	35	35	30
112316	26	22	21
112319	27	27	26
112322	53	53	51
112324	31	31	29
112327	31	31	31
112329	33	33	29
112332	28	28	28
112334	30	30	28
112335	27	27	27

GeneID	#taxa		
	NP	PS	CS
112339	39	39	39
112341	24	24	22
112342	26	26	24
112345	41	41	40
112349	37	37	37
112350	39	30	28
112352	25	23	21
112354	45	45	40
112355	40	40	37
112358	45	45	42
112359	45	45	43
112360	25	25	23
112364	29	29	28
112365	22	22	21
112366	40	40	39
112367	34	34	29
112369	31	28	28
112375	24	24	24
112376	28	28	27
112379	27	27	27
112380	39	31	31
112381	37	35	35
112382	31	31	29
112383	26	26	25
112386	28	28	25
112388	21	21	20
112389	30	30	26
112390	30	28	24
112391	35	35	35
112392	32	32	31
112394	41	41	37
112395	33	33	25
112399	31	24	23
112402	26	26	25
112403	25	25	23
112405	24	18	17
112406	27	22	19
112407	46	46	46
112414	41	41	38
112415	30	30	28
112416	35	35	33
112417	36	34	32
112420	27	27	23
112421	25	23	23
112422	29	29	28
112425	46	44	36
112427	29	27	24
112432	31	31	31
112433	35	35	35
112434	30	30	26
112436	47	47	41
112437	35	35	27
112438	34	34	33
112443	32	32	32
112445	35	35	35
112446	43	43	41
112447	20	20	19
112448	42	42	41
112449	30	30	29
112450	29	27	27
112451	41	41	36
112452	23	23	21

#taxa	NP	PS	CS
mean #taxa/gene	31	30.3	28.2
gene coverage	47.7	46.5	43.3
sum of sequences	17,329	16,913	15,737
# pruned sequences		416	1,176
% pruned sequences		2.4	7.0

#positions	NP	PS	CS
# characters	2,187,530	2,143,203	2,045,827
# possible characters	5,340,530	5,340,530	5,340,530
sequence coverage	41.0	40.1	38.3
#pruned characters		44,327	97,376
% pruned characters		2.0	4.5

**Table S9.** Information regarding the datasets after data partitioning.

<b>Dataset</b>	<b>Partition</b>	<b>#genes</b>	<b>gene coverage</b>	<b>#positions</b>	<b>sequence coverage</b>
<i>d01</i>	<i>MARE setting: d value = 0.5</i>	559	43.3	82,162	38.3
<i>d02</i>	<i>low degrees of missing data</i>	232	51.9	36,513	46.1
<i>d03</i>	<i>low to medium-high degrees of missing data</i>	413	46.3	61,059	41.2
<i>d04</i>	<i>MARE setting: d value = 1.0</i>	340	47.3	53,080	42.0
<i>d05</i>	<i>MARE setting: d value = 1.5</i>	235	50.1	37,779	44.5
<i>d06</i>	<i>MARE setting: d value = 2.0</i>	174	52.4	27,596	46.9
<i>d07</i>	<i>low base composition heterogeneity</i>	217	48.8	37,907	43.2
<i>d08</i>	<i>low branch length heterogeneity</i>	187	44.1	29,133	39.7
<i>d09</i>	<i>70% confidence interval</i>	446	42.4	67,275	37.4
<i>d10</i>	<i>95% confidence interval</i>	537	43.3	79,786	38.3

**Table S10.** Leaf stability indices for platyzoan taxa in the analyses of dataset d01.

Leaf stability indices	
<i>Paraplanocera sp</i>	0.9845
<i>Stylochoplana maculata</i>	0.9845
<i>Macrostomum lignano</i>	0.9843
<i>Spirometra erinacei</i>	0.9838
<i>Moniezia expansa</i>	0.9838
<i>Taenia solium</i>	0.9838
<i>Echinococcus granulosus</i>	0.9838
<i>Echinococcus multilocularis</i>	0.9838
<i>Opisthorchis viverrini</i>	0.9838
<i>Clonorchis sinensis</i>	0.9838
<i>Fasciola gigantica</i>	0.9838
<i>Schistosoma japonicum</i>	0.9838
<i>Schistosoma mansoni</i>	0.9838
<i>Schmidtea mediterranea</i>	0.9817
<i>Dugesia ryukyuensis</i>	0.9817
<i>Dugesia japonica</i>	0.9817
<i>Macracanthorhynchus hirudinaceus</i>	0.9767
<i>Paratenuisentis ambiguus</i>	0.9767
<i>Echinorhynchus truttae</i>	0.9767
<i>Pomphorhynchus laevis</i>	0.9767
<i>Rotaria rotatoria</i>	0.9767
<i>Philodina roseola</i>	0.9767
<i>Adineta vaga</i>	0.9767
<i>Brachionus manjavacas</i>	0.9758
<i>Brachionus plicatilis</i>	0.9758
<i>Lecane inermis</i>	0.9758
<i>Nematoplanea coelognoporoides</i>	0.9757
<i>Megadasys sp</i>	0.9722
<i>Macrodasys sp</i>	0.9722
<i>Turbanella ambronensis</i>	0.9722
<i>Seison sp</i>	0.9706
<i>Dactylopodola baltica</i>	0.9693
<i>Gnathostomula peregrina</i>	0.9409
<i>Gnathostomula paradoxa</i>	0.9409
<i>Lepidodermella squamata</i>	0.8760

**Table S11.** LB scores in the analyses of dataset d01.

LB scores	
<i>Tubulanus polymorphus</i>	-20,3
<i>Cephalothrix linearis</i>	-18,6
<i>Capitella teleta</i>	-18,5
<i>Alvinella pompejana</i>	-18,2
<i>Terebratalia transversa</i>	-17,4
<i>Crassostrea gigas</i>	-17,1
<i>Lottia gigantea</i>	-16,9
<i>Chaetopleura apiculata</i>	-16,9
<i>Tubifex tubifex</i>	-15,3
<i>Lingula anatina</i>	-15,2
<i>Aplysia californica</i>	-14,8
<i>Cristatella mucedo</i>	-14,0
<i>Lumbricus rubellus</i>	-13,6
<i>Neomenia megatrapezata</i>	-13,4
<i>Idiosepius paradoxus</i>	-13,3
<i>Euprymna scolopes</i>	-12,9
<i>Biomphalaria glabrata</i>	-12,4
<i>Priapulus caudatus</i>	-11,2
<i>Mytilus californianus</i>	-11,2
<i>Helobdella robusta</i>	-11,0
<i>Daphnia pulex</i>	-10,0
<i>Apis mellifera</i>	-9,3
<i>Pedicellina cernua</i>	-9,0
<i>Pedicellina sp</i>	-8,3
<i>Bugula neritina</i>	-7,2
<i>Stylochoplana maculata</i>	-7,0
<i>Brachionus plicatilis</i>	-6,6
<i>Paraplanocera sp</i>	-5,3
<i>Flustra foliacea</i>	-5,0
<i>Brachionus manjavacas</i>	-4,6
<i>Lecane inermis</i>	-4,2
<i>Megadasys sp</i>	-3,9
<i>Echinoderes horni</i>	-3,2
<i>Macrodasys sp</i>	-1,7
<i>Nematoplanea coelognoporoides</i>	0,6
<i>Turbanella ambronensis</i>	1,0
<i>Tubulipora sp</i>	1,1
<i>Schistosoma mansoni</i>	2,1
<i>Schistosoma japonicum</i>	2,8
<i>Schmidtea mediterranea</i>	3,7
<i>Rotaria rotatoria</i>	4,0
<i>Spirometra erinacei</i>	5,4
<i>Philodina roseola</i>	5,5
<i>Dugesia ryukyuensis</i>	5,6
<i>Echinococcus granulosus</i>	6,9
<i>Echinococcus multilocularis</i>	7,2
<i>Alcyonidium diaphanum</i>	7,3
<i>Clonorchis sinensis</i>	7,5
<i>Opisthorchis viverrini</i>	7,6
<i>Dugesia japonica</i>	7,7
<i>Taenia solium</i>	8,2
<i>Fasciola gigantica</i>	9,6
<i>Dactylopodola baltica</i>	9,6
<i>Symbion pandora</i>	9,6
<i>Adineta vaga</i>	10,8
<i>Macrostomum lignano</i>	11,8
<i>Lepidodermella squamata</i>	13,2
<i>Moniezia expansa</i>	13,7
<i>Macracanthorhynchus hirudinaceus</i>	14,4
<i>Gnathostomula paradoxa</i>	16,9
<i>Gnathostomula peregrina</i>	23,3
<i>Seison sp</i>	37,9
<i>Pomphorhynchus laevis</i>	40,8
<i>Echinorhynchus truttae</i>	42,6
<i>Paratenuisentis ambiguus</i>	49,3

**Table S12.** Results for the principal component analyses of the gene properties of the 559 of the dataset d01. PC = principal component.

<b>Loading matrix</b>	<b>PC1</b>	<b>PC2</b>	<b>PC3</b>	<b>PC4</b>	<b>PC5</b>
<b>Proportion of hydrophobic amino acids</b>	-0.3872	0.2117	-0.7060	-0.5388	0.1288
<b>Base composition heterogeneity</b>	0.6328	0.2469	-0.3703	-0.0238	-0.6331
<b>Proportion of missing data</b>	-0.6544	0.2188	-0.0140	0.4367	-0.5770
<b>Branch length heterogeneity</b>	-0.0544	0.5574	0.5920	-0.5564	-0.1624
<b>Evolutionary rate</b>	0.1356	0.7319	-0.1175	0.4570	0.4725
<b>Summary</b>					
<b>Variance</b>	1.5501	1.3390	0.9868	0.7204	0.4038
<b>Relative variance</b>	0.3100	0.2678	0.1974	0.1441	0.0808
<b>Cumulative relative variance</b>	0.3100	0.5778	0.7752	0.9192	1.0000

**Table S13.** Presence of the 559 genes of dataset d01 found across the different partitioned datasets d02 through d10 numbered 2 to 10.

Gene-ID	2	3	4	5	6	7	8	9	10
111203	0	0	1	0	0	0	0	1	1
111204	1	1	1	1	1	1	0	1	1
111206	0	0	0	0	0	0	0	1	1
111213	0	0	0	0	0	0	0	1	1
111214	0	1	1	1	1	1	0	1	1
111215	1	1	1	1	1	1	0	1	1
111216	1	1	1	1	1	1	0	0	1
111217	1	1	1	1	1	1	0	0	1
111222	0	0	1	1	1	1	0	1	1
111229	1	1	1	1	1	1	0	1	1
111232	0	0	0	0	0	0	0	1	1
111234	0	0	0	0	0	1	0	1	1
111237	1	1	0	0	0	0	1	1	1
111238	1	1	1	0	0	0	0	1	1
111239	0	1	0	0	0	0	1	1	1
111243	1	1	1	1	1	1	0	1	1
111247	0	1	0	0	0	0	0	1	1
111249	1	1	1	0	0	1	0	1	1
111251	0	1	0	0	0	0	1	1	1
111259	1	1	1	1	1	1	0	0	1
111260	0	0	0	0	0	1	1	0	1
111265	0	1	0	0	0	0	1	1	1
111266	1	1	1	1	1	1	0	1	1
111267	0	0	0	0	0	0	1	1	1
111268	0	0	0	0	0	0	0	1	1
111269	0	0	0	0	0	0	0	1	1
111271	1	1	0	0	0	1	0	1	1
111272	1	1	1	0	0	0	0	1	1
111273	0	0	1	0	0	1	0	1	1
111274	1	1	1	1	1	1	0	0	1
111275	1	1	1	1	1	1	0	1	1
111276	1	1	0	0	0	0	1	1	1
111277	1	1	1	1	1	1	1	0	1
111278	1	1	0	0	0	0	0	0	1
111281	1	1	1	1	1	1	0	0	1
111282	0	0	1	0	0	0	0	0	0
111283	0	0	0	0	0	1	1	1	1
111284	0	0	0	0	0	0	0	0	0
111286	1	1	1	1	1	1	0	0	1
111287	1	1	1	1	1	1	0	1	1
111290	0	1	1	0	0	1	0	1	1
111291	0	1	0	0	0	0	0	1	1
111295	1	1	1	1	1	1	0	1	1
111296	0	0	1	1	0	1	0	0	1
111298	0	1	1	0	0	0	0	1	1
111299	0	1	1	1	0	0	0	1	1
111300	1	1	1	1	0	0	0	1	1
111309	1	1	0	0	0	1	1	1	1
111313	0	1	1	1	0	0	1	1	1
111316	1	1	1	1	1	1	0	1	1

Gene-ID	2	3	4	5	6	7	8	9	10
111318	1	1	1	1	0	0	1	0	1
111319	0	0	0	0	0	0	1	1	1
111320	0	0	0	0	0	0	1	1	1
111321	0	1	1	0	0	0	1	1	1
111324	1	1	1	1	0	1	1	1	1
111328	1	1	1	1	1	0	1	1	1
111329	0	1	0	0	0	0	0	1	1
111335	1	1	1	1	1	1	0	1	1
111345	0	1	1	0	0	0	1	1	1
111347	1	1	1	1	1	1	1	1	1
111348	0	1	0	0	0	0	0	1	1
111349	0	0	1	1	1	1	0	1	1
111352	0	1	0	0	0	0	1	0	1
111357	0	0	1	0	0	0	0	1	1
111359	1	1	0	0	0	0	0	1	1
111365	1	1	1	1	1	1	0	1	1
111375	0	0	0	0	0	1	0	1	1
111379	0	1	1	1	1	1	0	1	1
111387	1	1	1	1	0	0	1	1	1
111388	0	1	0	0	0	0	0	0	1
111391	0	0	0	0	0	0	0	1	1
111393	0	0	1	0	0	0	0	1	1
111394	1	1	1	1	1	1	1	0	1
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112159	0	1	0	0	0	1	1	1	1

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112299	0	1	0	0	0	0	0	1	1
112300	1	1	1	0	0	0	0	1	1
112301	1	1	1	1	1	1	0	0	1
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112310	0	1	1	0	0	0	0	1	1
112311	1	1	1	1	1	1	0	1	1
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112315	0	1	1	1	0	0	1	1	1
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112319	0	0	0	0	0	0	1	1	1
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112360	0	1	1	0	0	0	0	1	1
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112380	1	1	1	1	1	0	1	1	1
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