

S11 Table

Data Set	Species	DOGMA Score [%]	Source - assembly version	Reference [doi]
Vertebrates	<i>Ailuropoda melanoleuca</i>	98,81	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Anas platyrhynchos</i>	88,35	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Anolis carolinensis</i>	92,46	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Astyanax mexicanus</i>	93,18	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Bos taurus</i>	98,81	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Callithrix jacchus</i>	98,48	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Canis familiaris</i>	97,22	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Cavia porcellus</i>	97,62	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Chlorocebus sabaeus</i>	97,02	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Danio rerio</i>	98,21	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Dasypus novemcinctus</i>	96,36	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Dipodomys ordii</i>	86,5	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Echinops telfairi</i>	83,92	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Equus caballus</i>	97,88	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Erinaceus europaeus</i>	77,56	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Felis catus</i>	97,62	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Ficedula albicollis</i>	90,07	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Gadus morhua</i>	96,16	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Gallus gallus</i>	91,66	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Gasterosteus aculeatus</i>	97,02	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Gorilla gorilla</i>	96,69	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Homo sapiens</i>	100	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Ictidomys tridecemlineatus</i>	90,27	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Latimeria chalumnae</i>	93,51	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Lepisosteus oculatus</i>	94,37	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Loxodonta africana</i>	98,01	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Macaca mulatta</i>	96,29	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Macropus eugenii</i>	83,65	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Meleagris gallopavo</i>	82,86	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Microcebus murinus</i>	94,11	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Monodelphis domestica</i>	96,89	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Mus musculus</i>	99,87	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Mus spretus</i>	98,41	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Mustela putorius</i>	95,63	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Myotis lucifugus</i>	96,56	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Nomascus leucogenys</i>	95,43	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Ochotona princeps</i>	85,77	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Oreochromis niloticus</i>	95,63	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Ornithorhynchus anatinus</i>	83,45	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Oryctolagus cuniculus</i>	93,85	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Oryzias latipes</i>	92,98	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Otolemur garnettii</i>	95,43	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Ovis aries</i>	97,95	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Pan troglodytes</i>	95,43	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Papio anubis</i>	95,63	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Pelodiscus sinensis</i>	88,62	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Poecilia formosa</i>	98,48	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Pongo abelii</i>	95,5	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Procavia capensis</i>	85,97	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Pteropus vampyrus</i>	94,24	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Rattus norvegicus</i>	98,54	ensemble v86	10.1093/database/baw093

Vertebrates	<i>Sarcophilus harrisii</i>	90,14	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Sus scrofa</i>	89,15	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Taeniopygia guttata</i>	87,29	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Takifugu rubripes</i>	95,5	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Tarsius syrichta</i>	78,89	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Tetraodon nigroviridis</i>	93,98	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Tupaia belangeri</i>	81,4	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Tursiops truncatus</i>	95,37	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Xenopus tropicalis</i>	94,97	ensemble v86	10.1093/database/baw093
Vertebrates	<i>Xiphophorus maculatus</i>	96,76	ensemble v86	10.1093/database/baw093
Insects	<i>Acromyrmex echinator</i>	96,6	NCBI - v3.9	10.1101/gr.121392.111
Insects	<i>Acyrtosiphon pisum</i>	89,25	NCBI - v2.0	10.1371/journal.pbio.1000313
Insects	<i>Aedes aegypti</i>	93,74	NCBI - AaegL3	10.1126/science.1138878
Insects	<i>Agrilus planipennis</i>	91,26	NCBI - v1.0	10.1093/jhered/est050
Insects	<i>Anopheles gambiae</i>	99,95	NCBI - AgamP3	10.1186/gb-2007-8-1-r5
Insects	<i>Anoplophora glabripennis</i>	96,62	NCBI - v1.0	10.1093/jhered/est050
Insects	<i>Apis cerana</i>	94,53	NCBI - v2.0	10.1186/1471-2164-16-1
Insects	<i>Apis dorsata</i>	97,38	NCBI - v1.3	
Insects	<i>Apis mellifera</i>	96,11	NCBI - v4.5	10.1016/j.gdata.2015.01.011
Insects	<i>Athalia rosae</i>	97,69	NCBI - v1.0	10.1093/jhered/est050
Insects	<i>Atta cephalotes</i>	94,88	NCBI - v1.0	10.1371/journal.pgen.1002007
Insects	<i>Atta colombica</i>	96,71	NCBI - v1.0	
Insects	<i>Bactrocera cucurbitae</i>	96,71	NCBI - ASM80634v1	
Insects	<i>Bactrocera dorsalis</i>	94,97	NCBI - ASM78921v2	
Insects	<i>Bombus impatiens</i>	100	NCBI - v2.0	10.1186/s13059-015-0623-3
Insects	<i>Bombus terrestris</i>	97,98	NCBI - v1.0	10.1186/s13059-015-0623-4
Insects	<i>Bombyx mori</i>	80,99	NCBI - ASM15162v1	10.1016/j.ibmb.2008.11.004
Insects	<i>Camponotus floridanus</i>	96,59	NCBI - v1.0	10.1126/science.1192428
Insects	<i>Cardiocondyla obscurior</i>	95,27	hymenopteragenome.org - v1.4	10.1093/nar/gkv120810
Insects	<i>Cephus cinctus</i>	97,9	NCBI - v1.0	
Insects	<i>Ceratina calcarata</i>	95,95	NCBI - ASM165200v1	
Insects	<i>Ceratitis capitata</i>	96,73	NCBI - v1.1	10.1093/jhered/est050
Insects	<i>Cimex lectularius</i>	93,33	NCBI - v1.0	10.1038/ncomms10164
Insects	<i>Copidosoma floridanum</i>	91,53	NCBI - v1.0	10.1093/jhered/est050
Insects	<i>Culex quinquefasciatus</i>	89,32	NCBI - v1.0	
Insects	<i>Danaus plexippus</i>	85,67	NCBI - v1.0	10.1016/j.cell.2011.09.052
Insects	<i>Dendroctonus ponderosae</i>	86,63	NCBI - v1.0	10.1186/gb-2013-14-3-r27
Insects	<i>Dinoponera quadricaps</i>	96,82	NCBI - ASM131382v1	
Insects	<i>Diuraphis noxia</i>	84,62	NCBI - v1.0	10.1186/s12864-015-1525-1
Insects	<i>Drosophila ananassae</i>	96,86	NCBI - v1.0	10.1038/nature06341
Insects	<i>Drosophila erecta</i>	96,93	NCBI - v1.0	10.1038/nature06341
Insects	<i>Drosophila grimshawi</i>	96,65	NCBI - v1.0	10.1038/nature06341
Insects	<i>Drosophila melanogaster</i>	99,98	NCBI - v6.0	10.1101/gr.185579.114
Insects	<i>Drosophila mojavensis</i>	95,16	NCBI - v1.0	10.1038/nature06341
Insects	<i>Drosophila persimilis</i>	89,06	NCBI - v1.0	10.1038/nature06341
Insects	<i>Drosophila pseudoobscura</i>	96,22	NCBI - v3.0	10.1101/gr.3059305
Insects	<i>Drosophila sechellia</i>	91,67	NCBI - v1.0	10.1038/nature06341
Insects	<i>Drosophila simulans</i>	81,01	NCBI - ASM75419v2	10.1038/nature06341
Insects	<i>Drosophila virilis</i>	95,81	NCBI - v1.0	10.1038/nature06341
Insects	<i>Drosophila willistoni</i>	97,09	NCBI - v1.0	10.1038/nature06341
Insects	<i>Drosophila yakuba</i>	96,93	NCBI - v1.0	10.1038/nature06341
Insects	<i>Dufourea novaeangliae</i>	96,7	NCBI - ASM127255v1	
Insects	<i>Eufriesea mexicana</i>	96,82	NCBI - ASM148370v1	
Insects	<i>Habropoda laboriosa</i>	96,82	NCBI - ASM126327v1	

Insects	Halyomorpha halys	92,92	NCBI - v1.0	
Insects	Harpegnathos saltator	96,86	NCBI - v1.0	10.1126/science.1192428
Insects	Heliconius melpomene	75,93	ensemble metazoa v34	10.1093/database/baw093
Insects	Lasius niger	77,05	NCBI - ASM104565v1	
Insects	Linepithema humile	97,52	NCBI - Lhum_UMD_V04	10.1073/pnas.1008617108
Insects	Lucilia cuprina	85,87	NCBI - ASM118794v1	10.1038/ncomms8344
Insects	Macrotermes natalensis	80,64	ftp://climb.genomics.cn/... pub/10.5524/100001_101000/100057 - v1.2	10.5524/100057
Insects	Megachile rotundata	97,53	NCBI - v1.0	
Insects	Melipona quadrifasciata	86,3	NCBI - ASM127656v1	
Insects	Monomorium pharaonis	96,79	NCBI - v2.0	
Insects	Musca domestica	95,88	NCBI - v2.0.2	10.1186/s13059-014-0466-3
Insects	Nasonia vitripennis	83,83	NCBI - v2.1	10.1126/science.1178028
Insects	Neodiprion lecontei	97,63	NCBI - v1.0	
Insects	Orussus abietinus	96,13	NCBI - v1.0	
Insects	Papilio machaon	89,38	NCBI - v1.0	
Insects	Papilio polytes	84,67	NCBI - v1.0	
Insects	Papilio xuthus	93,36	NCBI - v1.0	
Insects	Pediculus humanus	91,18	NCBI - v1.0	10.1073/pnas.1003379107
Insects	Plutella xylostella	85,68	NCBI - v1.1	10.1038/ng.2524
Insects	Pogonomyrmex barbatus	95,34	NCBI - Pbar_UMD_V03	10.1073/pnas.1007901108
Insects	Polistes canadensis	96,54	NCBI - ASM131383v1	
Insects	Polistes dominula	97,09	NCBI - v1.2	
Insects	Rhagoletis zephyria	96,41	NCBI - v1.0	
Insects	Rhodnius prolixus	80,67	ensemble metazoa v34	10.1093/database/baw093
Insects	Solenopsis invicta	94,83	NCBI - Si_gnG	10.1073/pnas.1009690108
Insects	Stomoxys calcitrans	96,19	NCBI - v1.0.1	
Insects	Tribolium castaneum	100	NCBI - v5.2	10.1038/nature06784
Insects	Zootermopsis nevadensis	84,62	NCBI - v1.0	10.1038/ncomms4636
Fungi	Rhizopus delemar ra 99 880	88,68	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Ustilago maydis	92,85	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Puccinia graminis	89,54	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Serpula lacrymans var lacrymans s7 9	83,12	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Agaricus bisporus var bis- porus	89,21	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Coprinopsis cinerea okayama7 130	92,32	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Schizophyllum commune h4 8	91,20	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Tuber melanosporum	89,94	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Trichoderma reesei	93,85	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Fusarium graminearum	95,10	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Chaetomium globosum cbs 148 51	88,55	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Podospora anserina s mat	92,19	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Botrytis cinerea	95,63	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Coccidioides immitis rs	94,64	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Penicillium chrysogenum	94,84	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Aspergillus fumigatus	93,65	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Aspergillus nidulans	91,40	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Aspergillus flavus	90,21	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	Aspergillus oryzae	89,21	ensemble fungi v33	10.1093/nar/gkv1209

Fungi	<i>Aspergillus terreus</i>	89.21	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	<i>Aspergillus niger</i>	90.60	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	<i>Zymoseptoria tritici</i>	92.19	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	<i>Phaeosphaeria nodorum</i>	91.53	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	<i>Yarrowia lipolytica</i>	95.63	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	<i>Candida albicans</i> sc5314	92.85	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	<i>Debaryomyces hansenii</i> cbs767	95.70	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	<i>Ashbya gossypii</i>	96.23	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	<i>Candida glabrata</i>	97.62	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	<i>Saccharomyces eubayanus</i>	96.69	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	<i>Saccharomyces cerevisiae</i>	100.00	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	<i>Schizosaccharomyces japonicus</i>	92.79	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	<i>Schizosaccharomyces pombe</i>	94.18	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	<i>Schizosaccharomyces octosporus</i>	93.98	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	<i>Schizosaccharomyces cryophilus</i>	93.58	ensemble fungi v33	10.1093/nar/gkv1209
Fungi	<i>Spizellomyces punctatus</i> daom br117	92.92	ensemble fungi v33	10.1093/nar/gkv1209
Dicots	<i>Arabidopsis lyrata</i>	98.15	ensemble plants v33	10.1093/nar/gkv1209
Dicots	<i>Arabidopsis thaliana</i>	100.00	ensemble plants v33	10.1093/nar/gkv1209
Dicots	<i>Beta vulgaris</i>	97.15	ensemble plants v33	10.1093/nar/gkv1209
Dicots	<i>Brassica napus</i>	98.87	ensemble plants v33	10.1093/nar/gkv1209
Dicots	<i>Brassica oleracea</i>	98.01	ensemble plants v33	10.1093/nar/gkv1209
Dicots	<i>Brassica rapa</i>	98.15	ensemble plants v33	10.1093/nar/gkv1209
Dicots	<i>Carica papaya</i>	83.72	Cpapaya.113	10.1038/nature06856
Dicots	<i>Glycine max</i>	98.94	ensemble plants v33	10.1093/nar/gkv1209
Dicots	<i>Medicago truncatula</i>	98.15	ensemble plants v33	10.1093/nar/gkv1209
Dicots	<i>Populus trichocarpa</i>	97.02	ensemble plants v33	10.1093/nar/gkv1209
Dicots	<i>Prunus persica</i>	96.43	ensemble plants v33	10.1093/nar/gkv1209
Dicots	<i>Ricinus communis</i>	99.93	TIGR/JCVI v0.1	10.1038/nbt.1674
Dicots	<i>Solanum lycopersicum</i>	97.15	ensemble plants v33	10.1093/nar/gkv1209
Dicots	<i>Solanum tuberosum</i>	79.75	ensemble plants v33	10.1093/nar/gkv1209
Monocots	<i>Aegilops tauschii</i>	87.76	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Brachypodium distachyon</i>	96.89	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Hordeum vulgare</i>	85.04	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Leersia perrieri</i>	95.57	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Musa acuminata</i>	96.29	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Oryza barthii</i>	94.84	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Oryza brachyantha</i>	95.43	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Oryza glaberrima</i>	91.59	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Oryza glumaepatula</i>	94.64	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Oryza indica</i>	96.29	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Oryza longistaminata</i>	91.79	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Oryza meridionalis</i>	86.43	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Oryza nivara</i>	95.30	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Oryza punctata</i>	95.50	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Oryza rufipogon</i>	94.90	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Oryza sativa</i>	89.48	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Setaria italica</i>	97.02	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Sorghum bicolor</i>	94.31	ensemble plants v33	10.1093/nar/gkv1208
Monocots	<i>Triticum aestivum</i>	97.88	ensemble plants v33	10.1093/nar/gkv1208

Monocots	Triticum urartu	87.49	ensemble plants v33	10.1093/nar/gkv1208
Outgroups	Arabidopsis thaliana	100	ensemble v86	10.1093/database/baw093
Outgroups	Caenorhabditis elegans	99.93	ensemble v86	10.1093/database/baw093
Outgroups	Drosophila melanogaster	99.93	ensemble v86	10.1093/database/baw093
Outgroups	Homo sapiens	100	ensemble v86	10.1093/database/baw093
Outgroups	Saccharomyces cerevisiae	100	ensemble v86	10.1093/database/baw093
Outgroups	Strigamia maritima	92.06	ensemble metazoa v34	10.1093/database/baw093