

Table S1 Genomic information for the 15 eukaryotic and 50 prokaryotic species in this study

Species	Gene Number	CDS length	GC-content
Prokaryote			
<i>Clostridium beijerinckii</i> NCIMB 8052	5020	4766049	0.31
<i>Flavobacterium johnsoniae</i> UW101	5017	5323638	0.35
<i>Bacillus anthracis</i> str. Ames	5328	4234473	0.36
<i>Methanobrevibacter ruminantium</i> M1	2217	2294634	0.36
<i>Sulfolobus solfataricus</i> P2	2977	2529714	0.36
<i>Trichodesmium erythraeum</i> IMS101	4451	4644555	0.37
<i>Cyanothece</i> sp. ATCC 51142	5183	4652331	0.39
<i>Colwellia psychrerythraea</i> 34H	4909	4550352	0.39
<i>Methanococcoides burtonii</i> DSM 6242	2273	2069016	0.42
<i>Methanosarcina barkeri</i> str. Fusaro	3605	3369717	0.42
<i>Nostoc</i> sp. PCC 7120	5357	5267688	0.42
<i>Bacteroides thetaiotaomicron</i> VPI-5482	4778	5607486	0.44
<i>Methanospirillum hungatei</i> JF-1	3138	3051057	0.46
<i>Acaryochloris marina</i> MBIC11017	6254	5467290	0.48
<i>Desulfitobacterium hafniense</i> Y51	5058	4855059	0.48
<i>Archaeoglobus fulgidus</i> DSM 4304	2414	2012157	0.49
<i>Herpetosiphon aurantiacus</i> ATCC 23779	4976	5578155	0.51
<i>Escherichia coli</i> APEC O1	4420	4414359	0.52
<i>Pectobacterium atrosepticum</i> SCRI1043	4460	4348086	0.52

Hahella chejuensis KCTC 2396	6778	6373902	0.55
Geobacter uraniireducens Rf4	4352	4457982	0.55
Rhodopirellula baltica SH 1	7325	6940242	0.55
Pyrobaculum arsenaticum DSM 13514	2299	1841178	0.56
uncultured methanogenic archaeon RC-I	3071	2677245	0.56
Serratia proteamaculans 568	4891	4754613	0.56
Methanosphaerula palustris E1-9c	2652	2460807	0.57
Ochrobactrum anthropi ATCC 49188	4423	4180791	0.57
Chloroflexus aurantiacus J-10-fl	3852	4230195	0.57
Candidatus Koribacter versatilis Ellin345	4777	5052129	0.59
Agrobacterium tumefaciens str. C58	4575	4329933	0.60
Roseiflexus sp. RS-1	4517	4937910	0.61
Rhizobium leguminosarum bv. viciae 3841	4694	4374018	0.62
Arthrobacter aurescens TC1	4041	4058061	0.63
Mesorhizobium loti MAFF303099	6741	6118377	0.63
Pseudomonas entomophila L48	5133	5231007	0.65
Opitutus terrae PB90-1	4611	5275899	0.65
Bradyrhizobium sp. ORS278	6704	6377046	0.66
Haloterrigena turkmenica DSM 5511	3739	3273036	0.67
Ralstonia eutropha H16	6203	6137541	0.67
Delftia acidovorans SPH-1	6039	6080118	0.67
Burkholderia ambifaria AMMD	6565	6535905	0.67

<i>Rhodococcus jostii</i> RHA1	7211	7119942	0.68
<i>Mycobacterium vanbaalenii</i> PYR-1	5979	5941320	0.68
<i>Acidovorax citrulli</i> AAC00-1	4709	4775613	0.69
<i>Myxococcus xanthus</i> DK 1622	7312	8354271	0.69
<i>Salinispora arenicola</i> CNS-205	4916	4981503	0.70
<i>Nocardia farcinica</i> IFM 10152	5683	5445297	0.71
<i>Sorangium cellulosum</i> 'So ce 56'	9255	11175549	0.72
<i>Methylobacterium radiotolerans</i> JCM 2831	5686	5247288	0.72
<i>Frankia alni</i> ACN14a	6707	6493497	0.73
Eukaryote			
<i>Saccharomyces cerevisiae</i>	5859	8734824	0.40
<i>Caenorhabditis elegans</i>	20174	25167498	0.43
<i>Populus trichocarpa</i>	20873	22314732	0.44
<i>Arabidopsis thaliana</i>	27132	33070236	0.44
<i>Vitis vinifera</i>	20934	23707911	0.45
<i>Danio rerio</i>	22829	36558987	0.49
<i>Gallus gallus</i>	13523	21071349	0.50
<i>Ornithorhynchus anatinus</i>	1915	3416376	0.51
<i>Mus musculus</i>	24983	35081493	0.52
<i>Rattus norvegicus</i>	19668	28417368	0.52
<i>Pan troglodytes</i>	22280	28751331	0.52
<i>Homo sapiens</i>	21999	34316601	0.53

<i>Canis familiaris</i>	19184	32008653	0.53
<i>Drosophila melanogaster</i>	13598	21924345	0.53
<i>Oryza sativa</i>	41313	43053666	0.55
