

Additional data file 3: List of sulphur metabolising and methanogenic archaea with details

Metabolic Adaptation	Phyla	Thermal adaptation	Organism name	Abbr.	Size (Mb)	GC (%)
Sulphur-metabolism	Crenarchaeota	Hyperthermophilic	<i>Caldivirga maquilingensis</i> IC-167	C.maq	2.1	43.1
			<i>Hyperthermus butylicus</i> DSM 5456	H.but	1.7	53.7
			<i>Ignicoccus hospitalis</i> KIN4/I	I.hos	1.3	56.5
			<i>Pyrobaculum arsenaticum</i> DSM 13514	P.ars	2.1	55.1
			<i>Staphylothermus marinus</i> F1	S.mar	1.6	35.7
			<i>Sulfolobus islandicus</i> L.S.2.15	S.isl	2.7	35.1
			<i>Sulfolobus islandicus</i> M.14.25	S.isa	2.6	35.1
			<i>Sulfolobus islandicus</i> M.16.27	S.isn	2.7	35.0
			<i>Sulfolobus islandicus</i> M.16.4	S.isd	2.6	35.0
			<i>Sulfolobus islandicus</i> Y.G.57.14	S.isi	2.7	35.4
			<i>Sulfolobus islandicus</i> Y.N.15.51	S.isc	2.8	35.3
			<i>Thermoproteus neutrophilus</i> V24Sta	T.neu	1.8	59.9
			<i>Thermofilum pendens</i> Hrk 5	T.pen	1.8	57.6
	Euryarchaeota	Thermophilic	<i>Metallosphaera sedula</i> DSM 5348	M.sed	2.2	46.2
			<i>Pyrobaculum islandicum</i> DSM 4184	P.isl	1.8	49.6
			<i>Sulfolobus acidocaldarius</i> DSM 639	S.aci	2.2	36.7
			<i>Sulfolobus solfataricus</i> P2	S.sol	3.0	35.8
			<i>Sulfolobus tokodaii</i> str. 7	S.tok	2.7	32.8
			<i>Pyrococcus abyssi</i> GE5	P.abby	1.8	44.7
			<i>Pyrococcus horikoshii</i> OT3	P.hor	1.7	41.9
			<i>Pyrococcus furiosus</i> DSM 3638	P.fur	1.9	40.8
		Hyper-thermophilic	<i>Thermococcus gammatolerans</i> EJ3	T.gam	2.0	51.3
			<i>Thermococcus kodakarensis</i> KOD1	T.kod	2.1	52.0
			<i>Thermococcus onnurineus</i> NA1	T.onn	1.8	51.3
			<i>Thermococcus sibiricus</i> MM 739	T.sib	1.8	40.0
			<i>Archaeoglobus fulgidus</i> DSM 4304	A.ful	2.2	49.0

Metabolic adaptation	Phyla	Thermal adaptation	Organism name	Abbr.	Size (MB)	GC (%)
Methanogen	Euryarchaeota	Mesophilic	<i>Methanosarcina acetivorans</i> C2A	M.ace	5.7	42.7
			<i>Methanosarcina mazei</i> Go1	M.maz	4.1	41.5
			<i>Methanococcus maripaludis</i> S2	M.mar	1.7	33.1
			<i>Methanococcus aeolicus</i> Nankai-3	M.aeo	1.6	30.0
			<i>Methanococcus maripaludis</i> C6	M.mac	1.7	33.4
			<i>Methanococcus vannielii</i> SB	M.van	1.7	31.3
			<i>Methanobrevibacter smithii</i> ATCC 35061	M.smi	1.9	31.0
			<i>Methanococcoides burtonii</i> DSM 6242	M.bur	2.6	40.8
			<i>Methanocorpusculum labreanum</i> Z	M.lab	1.8	50.0
			<i>Methanoculleus marisnigri</i> JR1	M.maj	2.5	62.1
			<i>Methanosarcina barkeri</i> str. Fusaro	M.bar	4.8	39.2
			<i>Methanosphaera stadtmanae</i> DSM 3091	M.sta	1.8	27.6
			<i>Methanosphaerula palustris</i> E1-9c	M.pal	2.9	55.4
			<i>Methanospirillum hungatei</i> JF-1	M.hun	3.5	45.1
			Uncultured methanogenic archaeon RC-I	M.arc	3.2	54.6
			<i>Candidatus Methanoregula boonei</i> 6A8	M.boa	2.5	54.5
			<i>Methanococcus maripaludis</i> C5	M.mai	1.8	33.0
			<i>Methanococcus maripaludis</i> C7	M.mal	1.8	33.3
			<i>Methanocella paludicola</i> SANA E	M.pas	3.0	54.9
		Thermophilic	<i>Methanocaldococcus fervens</i> AG86	M.fer	1.5	32.0
			<i>Methanocaldococcus jannaschii</i> DSM 2661	M.jan	1.8	31.3
			<i>Methanothermobacter thermautotrophicus</i> str. Delta H	M.del	1.8	49.5
			<i>Methanosaeta thermophila</i> PT	M.the	1.9	53.5
			<i>Methanopyrus kandleri</i> AV19	M.kan	1.7	61.2
			<i>Methanocaldococcus vulcanius</i> M7	M.vul	1.7	31.6