

Supporting Table S4. Assembled 16S rRNA sequences and their closest database matches to environmental clones and cultured isolates. Matches were required to have BLAST alignments to previously identified 16S rRNA genes of 450 nt or longer, with e-value < 1e-7 and 80% or greater sequence identity between query and subject. Part A shows 16S rRNA gene sequences obtained in targeted genomic assemblies. Part B shows additional 16S rRNA gene sequences observed in scaffolds obtained by composite assembly of all Sanger reads.

A

Genome	Scaffold id	16S sequence length	Closest Environmental match	Environ match pct identity	Closest cultured isolate match	Isolate match pct identity
J07HQW1 copy 1	scf56329	1472	GQ374993 - Baj_clone41 (Australia)	99.8	Halognadratum walsbyi DSM 16790	99.1
J07HQW1 copy 2	scf56329	1472	GQ374996 - Baj_clone47 (Australia)	99.0	Halognadratum walsbyi DSM 16790	98.6
J07HQW2 copy 1	scf02443	1473	GQ374961 - Cry7_clone4 (Australia)	99.1	Halognadratum walsbyi DSM 16790	97.5
J07HQW2 copy 2	scf02443	709	GQ374961 - Cry7_clone4 (Australia)	99.3	Halognadratum walsbyi DSM 16790	97.6
J07HQX50	scf01540	1473	GQ375020 - Cry7_clone100 (Australia)	96.9	Halognadratum walsbyi DSM 16790	93.5
J07AB43	scf30744	1479	GQ375009 - Cry7_clone76 (Australia)	99.4	none	-
J07AB56	scf39101	1486	GQ375000 - Cry7_clone54 (Australia)	99.5	none	-
J07HN4	scf01348	1469	GQ374992 - Baj_clone38 (Australia)	96.1	Halonotius pteroides 302698938	96.1
J07HN6	scf01851	1468	FN994966 - SFF1C121 (Tunisia)	97.9	Halonotius pteroides 302698938	95.4
J07HR59	scf01382	1470	GQ375002 - Cry7_clone60 (Australia)	97.4	Halorubrum tebenquichense JCM12290	90.6
J07HX5	scf22092	1468	DQ432537 - WN-FWA-186 (Egypt)	96.0	Halosimplex carlsbadense	91.0
J07HX64	scf96483	1010	GQ375005 - Cry7_clone67	98.0	Halorhabdus utahensis AX-2	92.3

Genome	Scaffold id	16S sequence length	Closest Environmental match	Environ match pct identity	Closest cultured isolate match	Isolate match pct identity
			(Australia)			
J07HB67	scf98878	1360	GQ374972 - Cry7_clone43 (Australia)	99.0	Halobaculum gomorrense str JCM 9908	90.0
J07SB67	scf87461	1495	HQ157666 - TSHNAE18 (Tunisia)	98.2	Salinibacter ruber DSM 13855	97.3

B

Taxonomic group	Scaffold id	16S sequence length	Closest Environmental match	Environ match pct identity	Closest cultured isolate match	Isolate match pct identity
Haloquadratum	scf98861	1474	GQ374961 - Cry7_clone4 (Australia)	99.2	Haloquadratum walsbyi 640715938	98.0
J07AB43	scf98840	1448	GQ375009 - Cry7_clone76 (Australia)	99.7	none	-
J07AB56	scf98837	1383	GQ375000 - Cry7_clone54 (Australia)	99.9	none	-
J07HN4	scf98475	1352	GQ374992 - Baj_clone38 (Australia)	97.3	Halonotius pteroides 302698938	97.1
Haloarcula	scf91856	1295	EU722673 - SA21 (Spain)	97.3	Haloarcula hispanica str HLR2	96.6
J07AB43	scf86038	1039	GQ375009 - Cry7_clone76 (Australia)	95.6	none	-
J07HR59	scf91079	1038	GQ375002 - Cry7_clone60 (Australia)	98.1	Halorubrum tebenquichense JCM12290	92.2
Halorubrum	scf91214	839	GQ375031 - LDS1_clone58 (Australia)	98.5	Halorubrum tebenquichense	96.2
J07HN4	scf98871	796	GQ374959 - Baj_clone12 (Australia)	99.4	Halonotius pteroides 302698938	95.2
J07HX5	scf93563	793	GQ375002 - Cry7_clone60 (Australia)	94.4	Natronomonas pharaonis DSM 2160	90.6

Taxonomic group	Scaffold id	16S sequence length	Closest Environmental match	Environ match pct identity	Closest cultured isolate match	Isolate match pct identity
J07HX5	scf98852	780	GQ375002 - Cry7_clone60 (Australia)	94.0	Halomicrobium mukohataei DSM 12286	91.4
HQX50	scf98854	738	GQ375020 - Cry7_clone100 (Australia)	99.9	Haloquadratum walsbyi DSM 16790	92.0
Haloquadratum	scf98861	712	GQ374961 - Cry7_clone4 (Australia)	99.2	Haloquadratum walsbyi DSM 16790	97.5
HQX50	scf98854	653	GQ374945 - LDS1_clone37 (Australia)	99.7	Haloquadratum walsbyi DSM 16790	95.1
Unclassified	scf93739	650	GQ375041 - LDS1D3.3 (Australia)	100.0	Halorientalis regularis strain TBN19	96.0
Haloarcula	scf84445	631	JN714439 - XKL43 (China)	96.8	Haloarcula hispanica str HLR2	95.5
J07HN6	scf98809	574	FN994966 - SFF1C121 (Tunisia)	99.5	Halonotius pteroides 302698938	95.0
Haloquadratum	scf98859	560	GQ374990 - Baj_clone34 (Australia)	99.8	Haloquadratum walsbyi DSM 16790	99.1
Haloquadratum	scf98874	512	GQ374952 - Baj_clone1 (Australia)	99.6	Haloquadratum walsbyi DSM 16790	98.4
J07HX64	scf98875	480	GQ375005 - Cry7_clone67 (Australia)	98.1	Haloferax zhejiangensis ZJ206	92.1