

Additional File 2. Publicly available genomes used in this study (Source: <https://gold.jgi.doe.gov/>).

IMG Genome Name / Sample Name	IMG Genome ID	Sequencing Status	Genome size (bp)	Gene Count	16SrRNA GenBank accession number	Isolation source
<i>Algibacter wandonensis</i> CECT 8301	2772190795	Draft	4,707,503	4004	KC987358	sediment
<i>Alteromonas macleodii</i> ATCC 27126	2554235747	Finished	4,653,851	3941	CP003841	seawater
<i>Anabaena</i> sp. PCC 7108	2506485002	Permanent Draft	5,886,741	5227	AJWF01000009	seawater
<i>Arenibacter echinorum</i> DSM 23522	2593339296	Permanent Draft	5,193,588	4393	EF536748	sea urchin
<i>Bizionia echini</i> DSM 23925	2622736504	Draft	3,314,721	3072	FJ716799	sea urchin
<i>Candidatus Pelagibacter ubique</i> SAR11 HTCC1062	637000058	Finished	1,308,759	1394	CP000084	seawater
<i>Cellulophaga fucicola</i> DSM 24786	2595699004	Draft	3,922,041	3495	AJ005973	algae
<i>Cellulophaga lytica</i> LIM-21, DSM 7489	649633032	Finished	3,765,936	3358	AB517706	sediment
<i>Cellulophaga tyrosinoxydans</i> DSM 21164	2595698249	Permanent Draft	3,555,791	3209	EU443205	seawater
<i>Crocospaera watsonii</i> WH 8501	2623620439	Draft	6,291,599	6836	AADV02000003	seawater
<i>Dokdonia pacifica</i> DSM 25597	2724679821	Draft	5,520,745	4968	KP862606	seawater
<i>Dokdonia</i> sp. PRO95	2597489917	Finished	3,305,093	3038	FJ627052	seawater
<i>Eudoraea adriatica</i> DSM 19308	2522572201	Permanent Draft	3,906,474	3579	AM745437	seawater
<i>Flavobacterium branchiophilum</i> FL-15	2561511155	Finished	3,563,292	2925	FQ859183	fish pathogen
<i>Flavobacterium columnare</i> ATCC 49512	2511231122	Finished	3,162,865	2735	CP003222	fish pathogen
<i>Flavobacterium indicum</i> GPTSA100-9	2540341066	Finished	2,993,089	2738	HE774682	spring water
<i>Flavobacterium johnsoniae</i> UW101, ATCC 17061	644736369	Finished	6,096,872	5099	CP000685	soil/freshwater
<i>Flavobacterium psychrophilum</i> JIP02/86	640753027	Finished	2,861,988	2505	AM398681	fish pathogen
<i>Formosa agariphila</i> KMM 3901	2585427664	Permanent Draft	4,228,350	3630	AY187688	algae

<i>Formosa spongicola</i> DSM 22637	2595698203	Permanent Draft	3,155,334	2961	FJ348469	sponge
<i>Gaetbulibacter saemankumensis</i> DSM 17032	2524614665	Permanent Draft	3,089,149	2746	AY883937	sediment
<i>Galbibacter marinus</i> ck-l2-15	2519899576	Permanent Draft	3,572,447	3138	EU928746	sediment
<i>Idiomarina loihiensis</i> GSL 199	2554235415	Finished	2,839,759	2717	CP005964	seawater
<i>Imtechella halotolerans</i> K1	2534681666	Permanent Draft	3,086,951	2734	FR774044	brackish water
<i>Joostella marina</i> DSM 19592	2509276026	Permanent Draft	4,508,243	4004	EF660761	seawater
<i>Kordia algicida</i> OT-1	641380434	Permanent Draft	5,019,836	4584	AY195836	seawater
<i>Kordia periserrulae</i> DSM 25731	2734482288	Draft	4,725,576	4128	GU233518	polychaete
<i>Kriegella aquimaris</i> DSM 19886	2622736525	Draft	6,057,242	5014	AB084262	seawater
<i>Lacinutrix</i> sp. Hel_I_90	2582581868	Permanent Draft	3,819,763	3506	JX854138	seawater
<i>Lacinutrix venerupis</i> DOK2-8	2751185745	Draft	3,192,399	2890	CP019352	seawater
<i>Lutibacter maritimus</i> DSM 24450	2622736611	Draft	3,484,703	3147	FJ598048	sediment
<i>Maribacter arcticus</i> DSM 23546	2595698209	Permanent Draft	4,211,145	3760	AY771762	sediment
<i>Maribacter polysiphoniae</i> DSM 23514	2595698208	Permanent Draft	5,129,962	4489	AM497875	algae
<i>Maribacter spongiicola</i> DSM 25233	2731957517	Draft	4,455,565	3894	JX050191	sponge
<i>Maribacter vaceletii</i> DSM 25230	2734482098	Draft	3,889,815	3392	JX050190	sponge
<i>Muricauda antarctica</i> DSM 26351	2619619048	Draft	4,482,831	4102	JN166984	seawater
<i>Muricauda pacifica</i> DSM 25027	2731639122	Draft	4,376,054	4153	JN118551	seawater
<i>Muriicola jejuensis</i> DSM 21206	2724679820	Draft	3,299,848	3040	EU443206	seawater
<i>Nonlabens spongiae</i> JCM 13191	2751185769	Draft	3,393,335	3097	DQ064789	sponge
<i>Nonlabens ulvanivorans</i> DSM 22727	2593339289	Permanent Draft	3,177,440	2918	GU902979	algae
<i>Polaribacter haliotis</i> RA4-7	2788500510	Draft	3,780,569	3361	KX450477	abalone
<i>Polaribacter</i> sp. MED152	638341218	Finished	2,967,100	2723	CP004349	seawater

<i>Prochlorococcus marinus</i> MIT9515	640069324	Finished	1,704,176	1968	CP000552	seawater
<i>Psychroserpens</i> sp. Hel_I_66	2585427602	Permanent Draft	3,842,990	3475	JUGU01000001	seawater
<i>Pustulibacterium marinum</i> CGMCC 1.12333	2663762752	Draft	4,209,902	3796	FPBK01000031	seawater
<i>Robiginitalea myxolifaciens</i> DSM 21019	2636416043	Draft	3,206,962	2897	AB270585	sediment
<i>Roseobacter litoralis</i> Och 149	2510065042	Finished	4,745,450	4577	CP002623	macroalgae
<i>Ruegeria pomeroyi</i> DSS-3	637000267	Finished	4,601,053	4355	CP000031	seawater
<i>Sinomicrobium oceani</i> CGMCC 1.12145	2596583572	Draft	5,026,272	4281	FPJE01000054	sediment
<i>Synechococcus</i> sp. WH 8016	2507262052	Finished	2,706,690	3046	AGIK01000004	seawater
<i>Tamlana sedimentorum</i> JCM 19808	2636415452	Draft	3,961,353	3504	AB894238	sediment
<i>Tenacibaculum adriaticum</i> DSM 18961	2756170228	Draft	3,211,939	2987	AM412314	bryozoan
<i>Tenacibaculum mesophilum</i> DSM 13764	2695420951	Draft	3,286,619	3059	AB032501	sponge
<i>Trichodesmium erythraeum</i> IMS101	637000329	Finished	7,750,108	5156	CP000393	seawater
<i>Winogradskyella arenosi</i> CECT 7958	2770939486	Draft	3,675,157	3253	AB438962	sediment
<i>Winogradskyella eximia</i> CECT 7946	2770939573	Draft	4,242,526	3742	AY521225	algae
<i>Winogradskyella jejuensis</i> DSM 25330	2695420983	Draft	3,033,897	2864	JF820844	algae
<i>Winogradskyella</i> sp. J14-2	2751185740	Draft	3,349,669	3049	CP019388	seawater
<i>Zobellia galactanivorans</i> DsijT	2619619092	Draft	5,521,712	4563	AF208293	algae
