

TABLE S1. Operational Taxonomic Unit (OTU) determination, representative clone number, number of clones with percent of clone library, and phylogenetic grouping for the five clone libraries constructed for this study.

Clone Library	OTU	Sequenced clone no.	No. of clones (% of library)	Phylogenetic Grouping ¹
PV-601_b18 (UHO)	1	6 & 16	18 (36.0)	Nitrospira
	2	2 & 21	4 (8.0)	ζ - <i>Proteobacteria</i>
	3	150	3 (6.0)	ϵ - <i>Proteobacteria</i>
	4	158	3 (6.0)	γ - <i>Proteobacteria</i>
	5	202	3 (6.0)	Chloroflexi
	6	209	2 (4.0)	ϵ - <i>Proteobacteria</i>
	7	65	2 (4.0)	ϵ - <i>Proteobacteria</i>
	8	125	2 (4.0)	ϵ - <i>Proteobacteria</i>
	9	34	2 (4.0)	Chloroflexi
	16	139	1 (2.0)	ϵ - <i>Proteobacteria</i>
PV-602_b14 (SPL)	1	10	8 (16.0)	ζ - <i>Proteobacteria</i>
	2	25	6 (12.0)	ζ - <i>Proteobacteria</i>
	3	216	4 (8.0)	Flavobacteria
	4	116	4 (8.0)	α - <i>Proteobacteria</i>
	5	40	3 (6.0)	Actinobacteria
	6	17	3 (6.0)	Chloroflexi
	7	22	3 (6.0)	ζ - <i>Proteobacteria</i>
	8	7	3 (6.0)	δ - <i>Proteobacteria</i>
	9	5	2 (4.0)	γ - <i>Proteobacteria</i>
	10	28	2 (4.0)	Nitrospira
	11	31	2 (4.0)	ζ - <i>Proteobacteria</i>
	12	69	1 (2.0)	unclassified <i>Proteobacteria</i>
J2-308_redgreen (UNH)	1	113	14 (12.4)	Nitrospira
	2	6	10 (8.8)	unclassified Nitrospira
	3	77	8 (7.1)	α - <i>Proteobacteria</i>
	4	22	6 (5.3)	unclassified <i>Proteobacteria</i>
	5	136	6 (5.3)	δ - <i>Proteobacteria</i>
	6	30	6 (5.3)	Chloroflexi
	7	34	6 (5.3)	Chloroflexi
	8	110	5 (4.4)	α - <i>Proteobacteria</i>
	9	141	5 (4.4)	Actinobacteria
	10	75	4 (3.5)	Acidobacteria
	11	114	4 (3.5)	α - <i>Proteobacteria</i>
	12	27	2 (1.8)	ζ - <i>Proteobacteria</i>
	13	95	2 (1.8)	ζ - <i>Proteobacteria</i>
	14	118	2 (1.8)	WS3
	16	122	2 (1.8)	ζ - <i>Proteobacteria</i>

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TABLE S1. Operational Taxonomic Unit (OTU) determination, representative clone number, number of clones with percent of clone library, and phylogenetic grouping for the five clone libraries constructed for this study. (*Continued*)

Clone Library	OTU	Sequenced clone no.	No. of clones (% of library)	Phylogenetic Grouping ¹
J2-310_bluered (ULoh)	1	110	23 (15.6)	Actinobacteria
	2	159	9 (6.1)	WS3
	3	87	9 (6.1)	unclassified <i>Proteobacteria</i>
	4	160	8 (5.4)	δ - <i>Proteobacteria</i>
	5	48	7 (4.8)	δ - <i>Proteobacteria</i>
	6	161	6 (4.1)	unclassified Nitrospira
	7	177	6 (4.1)	δ - <i>Proteobacteria</i>
	8	191	8 (5.4)	ζ - <i>Proteobacteria</i>
	9	187	5 (3.4)	TM7
	10	123	5 (3.4)	α - <i>Proteobacteria</i>
	11	68	4 (2.7)	δ - <i>Proteobacteria</i>
	12	2	3 (2.0)	Actinobacteria
	13	84	3 (2.0)	unclassified Bacteria
	20	55	2 (1.4)	ζ - <i>Proteobacteria</i>
	22	69	2 (1.4)	ζ - <i>Proteobacteria</i>
	39	94	1 (0.7)	ζ - <i>Proteobacteria</i>
	J2-373_scoop1 (Poh)	1	9, 67, & 74	24 (28.6)
2		12, 27, & 89	21 (25.0)	ζ - <i>Proteobacteria</i>
3		24	7 (8.3)	Acidobacteria
4		76	4 (4.8)	γ - <i>Proteobacteria</i>
5		48	3 (3.6)	Acidobacteria
6		78	3 (3.6)	ζ - <i>Proteobacteria</i>
7		34	3 (3.6)	ζ - <i>Proteobacteria</i>
8		10	2 (2.4)	γ - <i>Proteobacteria</i>
9		82	2 (2.4)	γ - <i>Proteobacteria</i>
10		1	2 (2.4)	ζ - <i>Proteobacteria</i>
11		68	2 (2.4)	ζ - <i>Proteobacteria</i>
13		3	1 (1.2)	ζ - <i>Proteobacteria</i>
14		5	1 (1.2)	ζ - <i>Proteobacteria</i>
15		52	1 (1.2)	ζ - <i>Proteobacteria</i>
16		64	1 (1.2)	ζ - <i>Proteobacteria</i>

¹As determined by Ribosomal Database Project (RDP) release 10.22.