

Supplementary Information

Table S1. Summary of bioinformatic survey of LuxI homologues in sequenced roseobacter genomes.

Locus Tag ^{1,2}	LuxI AA Seq Length	Species
C357_10192	211	<i>Citricella</i> sp. 357
CSE45_4054	211	<i>Citricella</i> sp. SE45
Dshi_4152	211	<i>Dinoroseobacter shibae</i> DFL-12, DSM 16493
Dshi_2851	206	<i>Dinoroseobacter shibae</i> DFL-12, DSM 16493
Dshi_0312	195	<i>Dinoroseobacter shibae</i> DFL-12, DSM 16493
Jann_0620	195	<i>Jannaschia</i> sp. CCS1
Leiaq_00074	213	<i>Leisingera aquimarina</i> DSM 24565 (scaffold version)
Leiaq_04264	190	<i>Leisingera aquimarina</i> DSM 24565 (scaffold version)
Leime_1139	213	<i>Leisingera methylohalidivorans</i> MB2, DSM 14336
Leime_2648	221	<i>Leisingera methylohalidivorans</i> MB2, DSM 14336
Leina_00212	266	<i>Leisingera nanhaiensis</i> NH52F, DSM 24252 (scaffold version)
Leina_03458	212	<i>Leisingera nanhaiensis</i> NH52F, DSM 24252 (scaffold version)
LSE62_0617	211	<i>Loktanella</i> sp. SE62
LSE62_3231	224	<i>Loktanella</i> sp. SE62
H147DRAFT_00614	224	<i>Loktanella vestfoldensis</i> DSM 16212
SKA53_05830	212	<i>Loktanella vestfoldensis</i> SKA53
RB2654_09014	213	<i>Maritimibacter alkaliphilus</i> HTCC2654
RB2654_20048	195	<i>Maritimibacter alkaliphilus</i> HTCC2654
B139DRAFT_0037	195	<i>Maritimibacter</i> sp. HL-12
B139DRAFT_2385	215	<i>Maritimibacter</i> sp. HL-12
RR11_2017	200	<i>Nautella italica</i> R11
RR11_2520	213	<i>Nautella italica</i> R11
OIHEL45_00955	279	<i>Oceanibulbus indolifex</i> HEL-45
OG2516_02294	214	<i>Oceanicola granulosus</i> HTCC2516
OCGS_2461	196	<i>Oceaniovalibus guishaninsula</i> JLT2003
OAN307_c21810	208	<i>Octadecabacter antarcticus</i> 307
OAN307_c41320	212	<i>Octadecabacter antarcticus</i> 307
OA238_2886	134	<i>Octadecabacter arcticus</i> 238, DSM 13978
Phaar_01741	193	<i>Phaeobacter arcticus</i> DSM 23566
Phaar_02924	213	<i>Phaeobacter arcticus</i> DSM 23566
Phaar_00769	200	<i>Phaeobacter arcticus</i> DSM 23566
PhacaeDRAFT_0324	190	<i>Phaeobacter caeruleus</i> 13, DSM 24564
PhacaeDRAFT_1367	213	<i>Phaeobacter caeruleus</i> 13, DSM 24564
PhacaeDRAFT_2710	221	<i>Phaeobacter caeruleus</i> 13, DSM 24564
PhacaeDRAFT_3752	208	<i>Phaeobacter caeruleus</i> 13, DSM 24564
PhacaeDRAFT_4672	212	<i>Phaeobacter caeruleus</i> 13, DSM 24564
Phada_01951	213	<i>Phaeobacter daeponensis</i> TF-218, DSM 23529 (scaffold version)
Phada_03339	221	<i>Phaeobacter daeponensis</i> TF-218, DSM 23529 (scaffold version)
PGA1_c07680	202	<i>Phaeobacter gallaeciensis</i> DSM 17395
PGA2_c03440	213	<i>Phaeobacter gallaeciensis</i> 2.10
PGA2_c07460	249	<i>Phaeobacter gallaeciensis</i> 2.10

Table S1. Cont.

Locus Tag ^{1,2}	LuxI AA Seq Length	Species
PGA2_c18960	235	<i>Phaeobacter gallaeciensis</i> 2.10
RGBS107_08956	213	<i>Phaeobacter gallaeciensis</i> DSM 17395
PhainDRAFT_0507	235	<i>Phaeobacter inhibens</i> T5, DSM 16374
PhainDRAFT_1820	190	<i>Phaeobacter inhibens</i> T5, DSM 16374
PhainDRAFT_2120	213	<i>Phaeobacter inhibens</i> T5, DSM 16374
PhainDRAFT_1688	202	<i>Phaeobacter inhibens</i> T5, DSM 16374
RB41_3464	221	<i>Phaeobacter</i> sp. Y41.
RB41_3631	213	<i>Phaeobacter</i> sp. Y41.
ANG1_1315	213	<i>Phaeobacter gallaeciensis</i> ANG1
D516_1373	210	<i>Rhodobacter</i> sp. AKP1
RB2083_730	207	Rhodobacterales sp. HTCC2083
RB2083_3255	259	Rhodobacterales sp. HTCC2083
RB2150_11291	213	Rhodobacterales sp. HTCC2150
RB2150_14421	205	Rhodobacterales sp. HTCC2150
RD1_1639	212	<i>Roseobacter denitrificans</i> OCh 114
RLO149_c030680	212	<i>Roseobacter litoralis</i> Och 149
RLO149_c036210	210	<i>Roseobacter litoralis</i> Och 149
RLO149_c036590	214	<i>Roseobacter litoralis</i> Och 149
RAZWK3B_04275	212	<i>Roseobacter</i> sp. AzwK-3b
RAZWK3B_19371	248	<i>Roseobacter</i> sp. AzwK-3b
MED193_10423	213	<i>Roseobacter</i> sp. MED193
MED193_08053	200	<i>Roseobacter</i> sp. MED193
R2A57_2404	212	<i>Roseobacter</i> sp. R2A57
RSK20926_22084	221	<i>Roseobacter</i> sp. SK209-2-6
RSK20926_15131	246	<i>Roseobacter</i> sp. SK209-2-6
RCCS2_02078	224	<i>Roseobacter</i> sp. CCS2
ROS217_18267	264	<i>Roseovarius</i> sp. 217
ROS217_01410	221	<i>Roseovarius</i> sp. 217
RTM1035_10485	264	<i>Roseovarius</i> sp. TM1035
ISM_03755	201	<i>Roseovarius nubinhibens</i> ISM
SPO0372	212	<i>Ruegeria pomeroyi</i> DSS-3
SPO2287	286	<i>Ruegeria pomeroyi</i> DSS-3
RKLH11_260	212	<i>Ruegeria</i> sp. KLH11
RKLH11_2275	284	<i>Ruegeria</i> sp. KLH11
RKLh11	214	<i>Ruegeria</i> sp. KLH11
SCH4B_1938	210	<i>Silicibacter</i> sp. TrichCH4B
RTW15_010100005486	200	<i>Ruegeria</i> sp. TW15
RTW15_010100013872	284	<i>Ruegeria</i> sp. TW15
RTW15_010100017784	212	<i>Ruegeria</i> sp. TW15
SSE37_11164	212	<i>Sagittula stellata</i> E-37
SL1157_0612	212	<i>Ruegeria lacuscaerulensis</i> ITI-1157
SL1157_1706	221	<i>Ruegeria lacuscaerulensis</i> ITI-1157
SL1157_2476	284	<i>Ruegeria lacuscaerulensis</i> ITI-1157

Table S1. Cont.

Locus Tag ^{1,2}	LuxI AA Seq Length	Species
EE36_01635	242	<i>Sulfitobacter</i> sp. EE-36
RGAI101_1101	248	<i>Sulfitobacter</i> sp. GAI101
RGAI101_3395	211	<i>Sulfitobacter</i> sp. GAI101
NAS141_00695	242	<i>Sulfitobacter</i> sp. NAS-14.1
NAS141_01136 (is not used for tree thus 96sequenced)	121	<i>Sulfitobacter</i> sp. NAS-14.1
TR2A62_3166	220	<i>Thalassibium</i> sp. R2A62
		<i>Loktanella hongkongensis</i> DSM 17492 ³
		<i>Oceanicola batsensis</i> HTCC2597 ³
		<i>Pelagibaca bermudensis</i> HTCC2601 ³
		<i>Rhodobacterales</i> sp. HTCC2255 ³
		<i>Ruegeria</i> sp. TM1040 ³
		<i>Pseudovibrio</i> sp. JE062 ³
		<i>Pseudovibrio</i> sp. FO-BEG1 ³

¹ All the homologues belong to the family of Pfam00765; ² Bold indicates LuxI solo; ³ The sequenced genomes that do not have LuxI homologue.

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