

Nr.Org. Species/strain	Group	Uniprot	Gene name	aa Architecture (Interpro)	Nr.Prot
1 *Bacillus amyloliquefaciens ATCC 23250	F	E1UNE3	BAMF_2816	261 LOV+STAS	1
2 Bacillus amyloliquefaciens CAU-B946	F	H2ABK8	BACAU_2743	261 LOV+STAS	2
3 *Bacillus amyloliquefaciens F2842	F	A727V9	RBAM_027270	261 LOV+STAS	3
4 Bacillus amyloliquefaciens IT-45 GN=KSO_06344	F	HOFR17	KSO_06344	261 LOV+STAS	4
5 Bacillus amyloliquefaciens TA208	F	F4E8V5	BAMTA208_14835	261 LOV+STAS	5
6 Bacillus amyloliquefaciens XH7	F	G0IG25	BAXH7_03042	261 LOV+STAS	6
7 Bacillus amyloliquefaciens (Bacillus velezensis)	F	F4EJR7	LL3_03110	261 LOV+STAS	7
8 *Bacillus atrophaeus str. 1942	F	E3E2E8	BATR1942_12940	263 LOV+STAS	8
9 *Bacillus megaterium ATCC 12872	F	D5DX18	BMQ_3060	260 LOV+STAS	9
10 *Bacillus megaterium DSM 319	F	D5DGT4	BMD_3085	214 LOV+STAS	10
11 Bacillus megaterium WSH-002	F	G2R1N6	BMKSH_2116	260 LOV+STAS	11
12 Bacillus pumilus ATCC 7061	F	B4ANP6	BAT_1252	267 LOV+STAS	12
	F	B4AJ24	BAT_0708	262 LOV+STAS	13
	F	A8FGG2	BPUM_2671	267 LOV+STAS	14
	F	A8FI66	BPUM_3280	262 LOV+STAS	15
13 *Bacillus pumilus SAFR-032	F	D6XXH5	Bse1_0496	256 LOV+STAS	16
14 *Bacillus selenitireducens ATCC 700615	F	E8VHV4	BSn5_06010	261 LOV+STAS	17
15 *Bacillus subtilis BSn5	F	D4G0B4	BSNT_04421	261 LOV+STAS	18
16 Bacillus subtilis subsp. natto BEST195	F	E0TXF2	BSUW23_14705	261 LOV+STAS	19
17 *Bacillus subtilis subsp. spizizenii ATCC 23059	F	D5N263	BSU6633_12812	261 LOV+STAS	20
18 Bacillus subtilis subsp. spizizenii ATCC 6633	F	G4NZQ8	GYO_3285	261 LOV+STAS	21
19 Bacillus subtilis subsp. spizizenii TU-B-10	F	G4P3K6	I33_3089	261 LOV+STAS	22
20 Bacillus subtilis subsp. subtilis RO-NN-1	F	O34627-YtvA	BSU30340	261 LOV+STAS	23
21 *Bacillus subtilis subsp. subtilis str. 168	F	G4ES72	BSSC8_12020	261 LOV+STAS	24
22 Bacillus subtilis subsp. subtilis str. SC-8	F	D7UUG5	HMPREF0556_10926	257 LOV+STAS	25
23 Listeria grayi DSM 20601	F	H1GBU2	HMPREF0557_01479	266 LOV+STAS	26
24 Listeria innocua ATCC 33091	F	Q920M1	lin0792	253 LOV+STAS	27
25 *Listeria innocua Clippi262	F	E325Q4	NT06LT_0949	253 LOV+STAS	28
26 Listeria innocua FSL J1-023	F	E3YX19	NT07LT_1300	253 LOV+STAS	29
27 Listeria innocua FSL S4-378	F	G22DA1	LIV_0732	253 LOV+STAS	30
28 *Listeria ivanovii (strain ATCC BAA-678/ PAM 55)	F	E3YNA7	NT05LM_1002	253 LOV+STAS	31
29 Listeria marthii FSL S4-120	F	G2K4H2	LMRG_00488	253 LOV+STAS	32
30 Listeria monocytogenes 10403S	F	Q4EEF6	LMGH7858_0852	253 LOV+STAS	33
31 Listeria monocytogenes 4b H7858	F	P58724	lmo0799	253 LOV+STAS	34
32 *Listeria monocytogenes EGD-e	F	Q722B8	LMOF2365_0816	253 LOV+STAS	35
33 *Listeria monocytogenes F2365	F	Q4EN15	LMOF6854_0844	253 LOV+STAS	36
34 Listeria monocytogenes F6854	F	C8KA37	LMMG_01434	253 LOV+STAS	37
35 Listeria monocytogenes F6900	F	G2KIU9	LMLG_1638	253 LOV+STAS	38
36 Listeria monocytogenes Finland 1998	F	D4PI54	LMBG_00437	253 LOV+STAS	39
37 Listeria monocytogenes FSL J1-194	F	D3KP16	LMPG_02039	253 LOV+STAS	40
38 Listeria monocytogenes FSL J2-071	F	D7UJ09	LMHG_11823	253 LOV+STAS	41
39 Listeria monocytogenes FSL N1-017	F	C8JWU1	LMIQ_02096	253 LOV+STAS	42
40 Listeria monocytogenes FSL N3-165	F	C8R567	LMJG_02145	253 LOV+STAS	43
41 Listeria monocytogenes FSL R2-503	F	G2R6K4	LMKG_01075	253 LOV+STAS	44
42 Listeria monocytogenes FSL R2-561	F	D4Q0W9	LMSG_00326	253 LOV+STAS	45
43 Listeria monocytogenes HPB2262	F	G2JVV6	LMOG_01933	253 LOV+STAS	46
44 Listeria monocytogenes J0161	F	F3RIF4	LM220_12877	253 LOV+STAS	47
45 Listeria monocytogenes J1-220	F	F3RC23	LM1816_00900	253 LOV+STAS	48
46 Listeria monocytogenes J1816	F	D4PRY3	LMPG_00360	253 LOV+STAS	49
47 Listeria monocytogenes J2818	F	F3YSH3	LMOSA_16870	253 LOV+STAS	50
48 Listeria monocytogenes str. Scott A	F	D2P049	LM5578_0879	253 LOV+STAS	51
49 *Listeria monocytogenes serotype 1/2a 08-5578	F	D2PB38	LM5923_0834	253 LOV+STAS	52
50 *Listeria monocytogenes serotype 1/2a 08-5923	F	B8DQ67	LMHCC_1834	253 LOV+STAS	53
51 *Listeria monocytogenes serotype 4a HCC23	F	F88E06	LMM7_0925	253 LOV+STAS	54
52 *Listeria monocytogenes serotype 4a N7	F	C11168	Lm4b_00815	252 LOV+STAS	55
53 *Listeria monocytogenes serotype 4b Clippi1459	F	R1UEF6	lmo4a_0806	253 LOV+STAS	56
54 *Listeria monocytogenes serotype 4c L99	F	E32ND1	NT03LS_0955	266 LOV+STAS	57
55 Listeria seeligeri FSL N1-067	F	E32X98	NT04LS_0923	253 LOV+STAS	58
56 Listeria seeligeri FSL S4-171	F	D3UL64	lse_0696	253 LOV+STAS	59
57 *Listeria seeligeri serovar 1/2b ATCC 35967	F	A0AGP3	lwe0757	253 LOV+STAS	60
58 *Listeria welshimeri serovar 6b str. SLCC5334	F	Q8ESN8	OB0588	264 LOV+STAS	61
59 *Oceanobacillus ihyensensis HTE831	F	Q8REH5	PPF_00529	825 GAF+LOV+LOV+SpoIII	62
60 *Paenibacillus polymyxa (strain E681)	F	E7RG70	GPDM_07340	282 LOV+STAS	63
61 Planococcus donghaensis MPALU2	F	A1RDS2	AAur_pTC20236	727 LOV+ GGDEF+EAL	64
62 *Arthrobacter aureusens TC1	Ac	C58XV5	Beav_0617	580 LOV+GAF+SpoIIE	65
63 *Beutenbergia cavernae DSM 12333	Ac	H6RWK2	BLASA_2436	762 LOV+GGDEF+EAL	66
64 *Blastococcus saxosidens (strain DD2)	Ac	F4H5H4	Ceif_3792	594 PAS+LOV+SpoIIE	67
65 Cellulomonas fimi DSM 20113	Ac	D5UEA1	Cfia_3709	570 LOV+GAF+SpoIIE	68
66 *Cellulomonas flavigena DSM 20109	Ac	G6HC29	FrCN3DRAFT_4030	603 LOV+GAF+SpoIIE	69
67 Frankia sp. CN3	Ac	E3J501	FrEui1c_1385	628 LOV+GAF+SpoIIE	70
68 *Frankia sp. str. Eulic	Ac	D2S7V1	Gobs_5033	760 PAS+LOV+GAF+SpoIIE	71
69 Geodermatophilus obscurus DSM 43160	Ac	A6W47	Krad_4323	743 GGDEF+LOV+EAL	72
70 *Kineococcus radiotolerans SRS30216	Ac	A6W4U8	Krad_0347	723 LOV+GAF+SpoIIE	73
		A6W4X7	Krad_0376	408 LOV+SpoIIE	74
		C8XJ77	Namu_4361	365 PAS+RR+LOV	75
		C8X922	Namu_4845	149 Short-LOV	76
71 *Nakamurella multipartita DSM 44233	Ac	Q1AR29	Rxy1_2919	581 LOV+GAF+SpoIIE	77
72 *Rubrobacter xylanophilus DSM 9941	Ac	F0L3N1	AGROH133_06050	369 LOV+Kinase	78
73 *Agrobacterium sp. (strain H13-3)	P (a)	F0LEX8	AGROH133_13181	589 LOV+GGDEF+EAL	79
	P (a)	HOHAA7	ATSA_12992	369 LOV+Kinase	80
74 Agrobacterium tumefaciens 5A	P (a)	HOHGN3	ATSA_24190	589 LOV+GGDEF+EAL	81
	P (a)	B9K197	Avi_5540	411 LOV+ Kinase	82
75 *Agrobacterium vitis (strain S4 / ATCC BAA-846)	P (a)	E8RN55	Astex_1213	596 LOV+Kinase+RR	83
76 *Asticcacaulis excentricus (strain ATCC 15261)	P (a)	A5EAE7	Bbta_0880	534 LOV+Kinase+RR	84
77 *Bradyrhizobium sp. BTA11	P (a)				

78 <i>Bradyrhizobium</i> sp. ORS 285	P (a)	H0RX89	BRAO285_20003	534 LOV+Kinase+RR	85
79 <i>Bradyrhizobium</i> sp. ORS 375	P (a)	H0SK82	BRAO375_3660003	534 LOV+Kinase+RR	86
80 * <i>Bradyrhizobium</i> sp. ORS278	P (a)	A4A279	BRADO6651	534 LOV+Kinase+RR	87
81 <i>Bradyrhizobium</i> sp. STM 3809	P (a)	H0SY17	BRAS3809_2520015	534 LOV+Kinase+RR	88
82 <i>Brevundimonas</i> sp. BAL3	P (a)	B4MVC5	BBAL3_336	878 LOV+PAS+GAF+Kinase+RR	89
83 * <i>Brucella abortus</i> (strain 2308)	P (a)	Q2YK7	BAB2_0652	463 LOV+PAS+ Kinase	90
84 * <i>Brucella abortus</i> (strain 2308 A)	P (a)	C41VW9	BAAA_7000655	496 LOV+PAS+ Kinase	91
85 <i>Brucella abortus</i> A13334	P (a)	G8T504	BAA13334_1101246	458 LOV+PAS+Kinase	92
86 * <i>Brucella abortus</i> biovar 1 str. 9-941	P (a)	Q57777	BruAb2_0636	458 LOV+PAS+ Kinase	93
87 <i>Brucella abortus</i> bv. 1 str. NI010	P (a)	H3QF83	MIG_02544	489 LOV+Kinase+PAS	94
88 <i>Brucella abortus</i> bv. 1 str. NI016	P (a)	H3QN03	M1I_02546	489 LOV+Kinase+PAS	95
89 <i>Brucella abortus</i> bv. 1 str. NI021	P (a)	H3QX28	M1K_02545	489 LOV+Kinase+PAS	96
90 <i>Brucella abortus</i> bv. 1 str. NI259	P (a)	H3R3M0	M1M_01830	489 LOV+Kinase+PAS	97
91 <i>Brucella abortus</i> bv. 1 str. NI435a	P (a)	H3PC29	M1I_02240	489 LOV+Kinase+PAS	98
92 <i>Brucella abortus</i> bv. 1 str. NI474	P (a)	H3PN01	M19_02548	489 LOV+Kinase+PAS	99
93 <i>Brucella abortus</i> bv. 1 str. NI486	P (a)	H3PT87	M1A_01650	489 LOV+Kinase+PAS	100
94 <i>Brucella abortus</i> bv. 1 str. NI488	P (a)	H3P2J2	M1E_00392	489 LOV+Kinase+PAS	101
95 <i>Brucella abortus</i> bv. 2 str. 86/8/59	P (a)	C9V2E2	BADG_02597	456 LOV+PAS+Kinase	102
96 <i>Brucella abortus</i> bv. 3 str. Tulya	P (a)	C9UTV3	BACG_00618	456 LOV+PAS+Kinase	103
97 <i>Brucella abortus</i> bv. 4 str.292	P (a)	C9UJF2	BABG_00707	179 Short-LOV	104
98 <i>Brucella abortus</i> bv. 5 str. B3196	P (a)	D7H767	BAYG_02353	489 LOV+PAS+Kinase	105
99 <i>Brucella abortus</i> bv. 6 str.870	P (a)	C9U9U0	BAAQ_00500	456 LOV+PAS+Kinase	106
100 <i>Brucella abortus</i> bv. 9 str.C68	P (a)	C9VPV9	BARG_00492	456 LOV+PAS+Kinase	107
101 * <i>Brucella abortus</i> NCTC 8038	P (a)	D0ATW6	BAUG_0669	489 LOV+PAS+Kinase	108
102 * <i>Brucella abortus</i> S19	P (a)	B2SB67	BABs19_II06090	489 LOV+PAS+ Kinase	109
103 * <i>Brucella canis</i> ATCC 23365	P (a)	A9MBM8	BCAN_B0589	463 LOV+PAS+ Kinase	110
104 <i>Brucella canis</i> HSK A52141	P (a)	G8SWF4	BCA52141_II0340	458 LOV+PAS+Kinase	111
105 <i>Brucella ceti</i> B1/94	P (a)	C9VFB0	BAQG_02479	456 LOV+PAS+Kinase	112
106 <i>Brucella ceti</i> M13/05/1	P (a)	C9TAF8	BAJG_00650	456 LOV+PAS+Kinase	113
107 <i>Brucella ceti</i> M490/95/1	P (a)	D1FCF4	BAPG_02017	456 LOV+PAS+Kinase	114
108 <i>Brucella ceti</i> M644/93/1	P (a)	C9T165	BATG_00650	456 LOV+PAS+Kinase	115
109 <i>Brucella ceti</i> str. Cudo	P (a)	C0GBC6	BCETI_7000041	496 LOV+PAS+ Kinase	116
110 * <i>Brucella melitensis</i> (strain M28)	P (a)	F2HYM1	EM28_B0560	458 PAS+LOV+Kinase	117
111 * <i>Brucella melitensis</i> (strain M5-90)	P (a)	F2GXJ4	EM590_B0560	458 LOV+PAS+Kinase	118
112 * <i>Brucella melitensis</i> 16M	P (a)	Q8YCS3	BMEI10679	489 LOV+PAS+ Kinase	119
113 * <i>Brucella melitensis</i> ATCC 23457	P (a)	C0RLA9	BMEA_B0563	463 LOV+PAS+ Kinase	120
114 * <i>Brucella melitensis</i> biotype 1 NCTC 10094	P (a)	D0B724	BAMG_1895	489 LOV+PAS+Kinase	121
115 <i>Brucella melitensis</i> bv. 1 str. Rev.1	P (a)	D1EUC3	BAMG_01899	456 LOV+PAS+Kinase	122
116 * <i>Brucella melitensis</i> bv. 2 str.63/9	P (a)	D0GAX7	BASG_00224	489 PAS+LOV+Kinase	123
117 <i>Brucella melitensis</i> bv. 3 str. Ether	P (a)	D1F3T4	BACG_01787	456 LOV+PAS+Kinase	124
118 <i>Brucella melitensis</i> NI	P (a)	G4PL89	BMNI_II0554	463 LOV+PAS+Kinase	125
119 * <i>Brucella microti</i> CCM 4915	P (a)	C7LI74	BMI_II584	489 LOV+PAS+ Kinase	126
120 <i>Brucella neotomae</i> 5K33	P (a)	C9V5Q3	BANG_02376	456 LOV+PAS+Kinase	127
121 * <i>Brucella ovis</i> ATCC 25840	P (a)	A5VU51	BOV_A0554	463 LOV+PAS+ Kinase	128
122 <i>Brucella pinnipedialis</i> B2/94	P (a)	C9T2H3	BAHG_03010	456 LOV+PAS+Kinase	129
123 <i>Brucella pinnipedialis</i> B2/94	P (a)	F9YN64	BPI_II642	489 LOV+PAS+Kinase	130
124 <i>Brucella pinnipedialis</i> M292/94/1	P (a)	D1ELF4	BALG_02343	456 LOV+PAS+Kinase	131
125 <i>Brucella</i> sp. 83/13	P (a)	D1D1A4	BAKG_02311	456 LOV+PAS+Kinase	132
126 <i>Brucella</i> sp. B01	P (a)	E0DR87	BIBO1_2617	489 LOV+PAS+Kinase	133
127 <i>Brucella</i> sp. B02	P (a)	E2PN86	BIBO2_1546	434 LOV+Kinase	134
128 <i>Brucella</i> sp. F5/99	P (a)	D0REC6	BATG_00643	489 LOV+PAS+Kinase	135
129 <i>Brucella</i> sp. NF 2653	P (a)	E0DXH7	BROD_1835	489 LOV+PAS+Kinase	136
130 <i>Brucella</i> sp. NVSL 07-0026	P (a)	D6LSE0	BAZG_02591	456 LOV+PAS+Kinase	137
131 * <i>Brucella suis</i> 1330	P (a)	Q8FW73	BRAO588, BS1330_II0583	463 LOV+PAS+ Kinase	138
132 * <i>Brucella suis</i> ATCC 23445	P (a)	A9WYQ7	BSUIS_B0585	463 LOV+PAS+ Kinase	139
133 <i>Brucella suis</i> bv. 3 str686	P (a)	D0PFT9	BAPG_00646	456 LOV+PAS+Kinase	140
134 * <i>Brucella suis</i> bv. 4 str. 40	P (a)	D0BGV2	BAVG_2240	489 LOV+PAS+Kinase	141
135 <i>Brucella suis</i> bv. 5 str.513	P (a)	D0P6S3	BAEG_02518	456 LOV+PAS+Kinase	142
136 <i>Brucella suis</i> VB122	P (a)	G8NW88	BSVBI22_B0582	463 LOV+PAS+Kinase	143
137 * <i>Caulobacter crescentus</i> CB15	P (a)	Q9ABE3	CC_0285	449 LOV+ Kinase	144
138 * <i>Caulobacter crescentus</i> (strain NA1000 / CB15N)	P (a)	B8CYE7	CCNA_00287	368 LOV+ Kinase	145
139 * <i>Caulobacter segnis</i> DSM 7131	P (a)	D5VP68	Cseg_3871	366 LOV+Kinase	146
140 * <i>Caulobacter</i> sp. K31	P (a)	B0T3N0	Caul_3297	360 LOV+ Kinase	147
		B0T127	Caul_4555	369 LOV+ Kinase	148
		B0T3N1	Caul_3298	922 LOV+3PAS +Kinase+RR	149
141 * <i>Dinoroseobacter shibae</i> DFL 12	P (a)	A8LHT0	Dshi_1135	338 LOV+ Kinase	150
		A8LNC2	Dshi_1893	920 LOV+PAS+PAS+Kinase+RR	151
		A8LP63	Dshi_2006	139 Short-LOV	152
142 * <i>Erythrobacter litoralis</i> HTCC2594	P (a)	Q2NB98	ELI_04755	225 LOV+HTH	153
		Q2NB77	ELI_04860	346 LOV+ Kinase	154
		Q2N9L9	ELI_07650	362 LOV+ Kinase	155
		Q2NCA3	ELI_02980	360 LOV+ Kinase	156
143 <i>Erythrobacter</i> sp. NAP1	P (a)	A3WAQ8	NAP1_D8065	358 LOV+ Kinase	157
144 <i>Erythrobacter</i> sp. SD-21	P (a)	A5PB07	ED2_29969	359 LOV+ Kinase	158
145 <i>Fulvimarina pelagi</i> HTCC2506	P (a)	Q00496	FPE206_14169	420 LOV+ Kinase	159
146 * <i>Granulibacter thebesdensis</i> CGDN1H1	P (a)	Q08T22	GbcGDNIH1_1132	185 Short-LOV	160
147 * <i>Ketogulonicigenium vulgare</i> str. Y25	P (a)	E3F4V0	EIO_2925	489 LOV+PAS+Kinase	161
148 <i>Ketogulonicigenium vulgare</i> WSH-001	P (a)	F9YAN8	KVU_PA0100	483 LOV+PAS+Kinase	162
149 <i>Labrenzia alexandrii</i> DFL-11	P (a)	B9QX11	SADFL11_5096	124 Short-LOV	163
		B9QXR5	SADFL11_485	369 LOV+ Kinase	164
150 <i>Manganese-oxidizing bacterium</i> (strain SI85-9A1)	P (a)	Q1YFS4	SI85A1_03105	389 LOV+ Kinase	165
		Q1YEU2	SI85A1_03440	415 LOV+ Kinase	166
151 <i>Mesorhizobium australicum</i> WSM2073	P (a)	G4JUE4	MesauDRAFT_0667	382 LOV+Kinase	167
152 <i>Mesorhizobium australicum</i> WSM2074	P (a)	G4JSB6	MesauDRAFT_1279	367 LOV+Kinase	168
153 * <i>Mesorhizobium ciceri</i> bv. <i>biserulae</i> (strain HAMBI 2942)	P (a)	E8TG50	Mesci_3196	382 LOV+Kinase	169
154 * <i>Methylobacterium chloromethanicum</i> CM4	P (a)	B7KUQ2	Mchl_3461	533 LOV+Kinase+RR	170
		B7RW67	Mchl_3604	354 LOV+Kinase	171
		B7RN66	Mchl_4407	366 LOV+Kinase	172

	B7RX89	Mchl_5380	890 LOV+PAS+GAF+Kinase+RR	173
	B7KVX8	Mchl_1931	541 LOV+Kinase+RR	174
	B7L0N0	Mchl_0835	488 LOV+PAS+ Kinase	175
155 *Methylobacterium extorquens AM1	P (α) C5B055	MexAM1_METAIp1543	541 LOV+Kinase+RR	176
	C5AXM1	MexAM1_METAIp3352	533 LOV+Kinase+RR	177
	C5B099	MexAM1_METAIp1590	492 LOV+PAS+K	178
	C5AYD0	MexAM1_METAIp3492	354 LOV+Kinase	179
	C5AVA5	MexAM1_METAIp0643	488 LOV+PAS+Kinase	180
	C5B328	MexAM1_METAIp4427	351 LOV+Kinase	181
156 *Methylobacterium extorquens DM4	P (α) C7CG25	METDI2317	541 LOV+Kinase+RR	182
	C7CC12	METDI3923	533 LOV+Kinase+RR	183
	C7CDA8	METDI1014	488 LOV+PAS+Kinase	184
	C7CCX6	METDI4072	354 LOV+Kinase	185
	C7CJE3	METDI5031	351 LOV+Kinase	186
157 Methylobacterium extorquens DSM 13060	P (α) H1RKG9	MetexDRAFT_1761	488 LOV+PAS+Kinase	187
	H1RRD3	MetexDRAFT_5196	492 LOV+PAS+Kinase	188
	H1RD56	MetexDRAFT_0568	888 LOV+PAS+GAF+Kinase+RR	189
	H1KIH3	MetexDRAFT_2435	541 LOV+Kinase+RR	190
	H1KHY7	MetexDRAFT_2249	366 LOV+Kinase	191
	H1RNL7	MetexDRAFT_4230	354 LOV+Kinase	192
	H1RF02	MetexDRAFT_1214	533 LOV+Kinase+RR	193
158 *Methylobacterium extorquens PA1	P (α) A9VY75	Mext_3139	533 LOV+Kinase+RR	194
	A9W705	Mext_3280	354 LOV+Kinase	195
	A9W8Q8	Mext_4037	366 LOV+Kinase	196
	A9W392	Mext_1649	541 LOV+Kinase+RR	197
	A9W124	Mext_0875	488 LOV+Kinase	198
159 *Methylobacterium nodulans ORS 2060	P (α) B8IAH5	Mnod_6213	559 LOV+Kinase+RR	199
	B8IF91	Mnod_0770	814 LOV+2PAS+Kinase+RR	200
160 *Methylobacterium populi BJ001	P (α) B1Z812	Mpop_0801	488 LOV+PAS+ Kinase	201
	B1ZJK1	Mpop_3336	531 LOV+Kinase+RR	202
	B1ZCH2	Mpop_4105	888 LOV+PAS+GAF+Kinase+RR	203
	B1ZG87	Mpop_1581	541 LOV+Kinase+RR	204
	B1ZKQ8	Mpop_3478	354 LOV+Kinase	205
	B1ZG19	Mpop_4519	366 LOV+Kinase	206
	B1ZH86	Mpop_0309	190 Short-LOV	207
	B1Z110	Mpop_0315	901 LOV+3PAS+GAF+Kinase	208
161 *Methylobacterium radiotolerans ATCC 27329	P (α) B1LND2	Mrad2831_0623	334 LOV+ Kinase	209
	B1LUV7	Mrad2831_3567	539 LOV+Kinase+RR	210
	B1M516	Mrad2831_4511	164 Short-LOV	211
	B1LSK7	Mrad2831_3331	503 LOV+PAS+Kinase	212
	B1M4V9	Mrad2831_3021	812 LOV+2PAS+Kinase+RR	213
162 *Methylobacterium sp. 4-46	P (α) B0UA17	M446_2045	812 LOV+2PAS+Kinase+RR	214
	B0UDD0	M446_4874	544 LOV+Kinase+RR	215
163 Methylocystis sp.ATCC 49242	P (α) E8L191	Met49242DRAFT_1243	149 Short-LOV	216
	E8L553	Met49242DRAFT_2596	150 Short-LOV	217
	E8L7M0	Met49242DRAFT_3463	490 PAS+LOV	218
164 *Novosphingobium aromaticivorans DSM 12444	P (α) Q2G9U0	Saro_2346	364 LOV+ Kinase	219
	Q2G9E7	Saro_1231	223 LOV+HTH	220
165 Oceanibulbus indolifex HEL-45	P (α) A9DXF0	OIHRL45_05225	354 LOV+ Kinase	221
166 Oceanicola granulosis	P (α) Q2CIF5	OG2516_07497	341 LOV+ Kinase	222
167 *Ochrobactrum anthropi ATCC 49188	P (α) A6X554	Oant_3652	491 LOV+PAS+ Kinase	223
168 Ochrobactrum intermedium LMG 3301	P (α) C4WLE3	OINT_2000747	495 LOV+PAS+ Kinase	224
169 *Parvularcula bermudensis HTCC2503	P (α) E0TE19	PB2503_03827	367 LOV+Kinase	225
	E0TH86	PB2503_10774	361 LOV+Kinase	226
170 *Rhizobium leguminosarum bv viciae 3841	P (α) Q1M667	pRll10320	345 LOV+ Kinase	227
171 *Rhizobium leguminosarum bv. trifolii WSM1325	P (α) C6B8Y7	Rleg_5559	342 LOV+ Kinase	228
	C6B7A8	Rleg_6934	375 LOV+ Kinase	229
172 *Rhizobium leguminosarum bv. trifolii WSM2304	P (α) B6A1G8	Rleg2_5263	345 LOV+ Kinase	230
173 *Rhodobacter sphaeroides ATCC 17023	P (α) Q3J4A0	RH0S4_08160	176 Short-LOV	231
174 *Rhodobacter sphaeroides ATCC 17029	P (α) A3P149	Rsph17029_0904	176 Short-LOV	232
175 *Rhodobacter sphaeroides KD131	P (α) B9RPB3	RSKD131_0546	176 Short-LOV	233
176 *Rhodospirillum centenum ATCC 51521 / SW	P (α) B61Q09	RCL_0351	368 LOV+ Kinase	234
177 *Roseobacter denitrificans OCh 114	P (α) Q167W8	RDL_2129	350 LOV+ Kinase	235
178 *Roseobacter litoralis DSM 6996	P (α) F7ZD60	RL0149_c012670	350 LOV+Kinase	236
179 Roseobacter sp. CCS2	P (α) A4EHF4	RCCS2_12009	175 Short-LOV	237
	A4E1F8	RCCS2_13978	181 Short-LOV	238
180 Roseomonas cervicalis ATCC 49957	P (α) D5R8E3	BMR8E3_1731_1553	537 LOV+Kinase+RR	239
181 Roseovarius sp. HTCC2601	P (α) Q0FR10	R2601_18720	182 Short-LOV	240
182 Sagittula stellata E-37	P (α) A3K7J8	SSE37_00760	169 Short-LOV	241
183 Sphingomonas sp. SKA58	P (α) Q1N7J1	SKA58_11268	238 LOV+HTH	242
	Q1NI33	SKA58_00425	570 LOV+Kinase+RR	243
184 Sphingomonas sp.S17	P (α) SUS17_1099	SUS17_1099	524 LOV+Kinase+RR	244
185 *Sphingopyxis alaskensis RB2256	P (α) Q1GUF5	Sala_1000	195 LOV+HTH	245
186 *Accumulibacter phosphatis (strain UN-1)	P (β) C7RJ77	CAP2UW1_3520	143 Short-LOV	246
187 *Acidovorax avenae DSM 7227	P (β) F0QB77	Acav_3475	544 LOV+Kinase+RR	247
188 *Acidovorax avenae sub. citrulli AAC00-1	P (β) A1TT27	Aave_3564	544 LOV+Kinase+RR	248
189 Blood disease bacterium R229	P (β) G2ZKNE	BDB_70024	1178 3PAS+LOV+GGDEF	249
190 Burkholderiales bacterium JOSHI_001	P (β) H5WRX6	BurJ1DRAFT_4637	875 LOV+Kinase+GGDEF+HAMP	250
191 Burkholderia graminis C4D1M	P (β) B1FWL0	BgramDRAFT_1395	1036 PAS+PAS+LOV+ GGDEF+EAL	251
192 *Burkholderia phymatum STM815	P (β) B2JFQ7	Bphy_2357	533 LOV+Kinase+RR	252
	B2JCW5	Bphy_0391	1040 2PAS+LOV+GGDEF+EAL	253
193 *Burkholderia phytofirmans PsJN	P (β) B2SX52	Bphyt_0667	1036 PAS+PAS+LOV+ GGDEF+EAL	254
194 Burkholderia sp. CCGE1001	P (β) E8YMJ9	BC1001_0381	1036 2PAS+LOV+GGDEF+EAL	255
195 *Burkholderia sp. CCGE 1002	P (β) D5WB63	BC1002_0386	1055 2PAS+LOV+GGDEF+EAL	256
196 *Burkholderia sp. CCGE 1003	P (β) E1T757	BC1003_0392	1036 2PAS+LOV+GGDEF+EAL	257
197 Burkholderia sp. H160	P (β) B5WM15	BH160DRAFT_4118	1028 PAS+PAS+LOV+ GGDEF+EAL	258
198 Burkholderia sp.Y123	P (β) G8M3V7	BHY23_A003130	1040 2PAS+LOV+GGDEF+EAL	259
199 *Burkholderia xenovorans LB400	P (β) Q145M2	Bxeno_A0429	1036 PAS+PAS+LOV+ GGDEF+EAL	260
200 *Herbaspirillum seropedical (strain SmR1)	P (β) D8IWD2	Hsero_2453	552 LOV+Kinase+RR	261

201	* <i>Herminiimonas arsenicoxydans</i>	P (β)	A4G7R2 A4G3M6	HEAR2418 HEAR0929	313 LOV+GGDEF 818 RR+PAS+LOV+GGDEF+EAL	262 263
202	<i>Lutiella nitroferum</i> 2002	P (β)	B9Z647	FuraDRAFT_3013	1072 RR+GAF+PAS+LOV+GGDEF+EAL	264
203	* <i>Methylibium petroleiphilum</i> PM1	P (β)	A2SIR0	Mpe_A2494	1317 GAF+3PAS+LOV+2PAS+Kinase+ RR	265
204	* <i>Methylovorvus</i> sp. <i>SIP3-4</i>	P (β)	C6X718	Msp1p4_Z211	821 RR+PAS+LOV+GGDEF+EAL	266
205	* <i>Methylovorvus</i> sp.str. <i>MP688</i>	P (β)	E4QL91	MPQ_2163	821 RR+PAS+LOV+GGDEF+EAL	267
206	* <i>Nitrosospirilla multiformis</i> ATCC 25196	P (β)	Q21837	Nmu1_A1787	152 Short-LOV	268
207	<i>Nitrosomonas</i> sp. <i>AL212</i>	P (β)	F92G01	NAL21_2384	150 Short-LOV	269
208	* <i>Nitrosomonas</i> sp. (strain <i>Is79A3</i>)	P (β)	F8GDY9	Nit79A3_2329	150 Short-LOV	270
209	<i>Oxalobacteraceae bacterium</i> IMCC 9480	P (β)	F1VZ75	IMCC9480_3260	526 LOV+PAS+Kinase	271
210	* <i>Polaramonas naphthalenivorans</i> CJ2	P (β)	AlVS30	Pnap_3160	389 LOV+ Kinase	272
211	* <i>Pseudogulbenkiania</i> sp. (strain <i>NH8B</i>)	P (β)	G21XN9	NH8B_3206	1072 RR+GAF+PAS+LOV+GGDEF+EAL	273
212	<i>Ralstonia solanacearum</i> (<i>Pseudomonas solanacearum</i>)	P (β)	D8P2A9	RCFRP_mp10255	1178 HAMP+PAS+LOV+GGDEF+EAL	274
			D8NG57	CMR15_mp10227	1178 HAMP+PAS+LOV+GGDEF+EAL	275
			B5SBH9	RSIPO_03509	1178 HAMP+PAS+LOV+GGDEF+EAL	276
			B5RXV5	RSMK04858	1178 HAMP+PAS+LOV+GGDEF+EAL	277
213	* <i>Ralstonia solanacearum</i> <i>GMI1000</i>	P (β)	Q8XT61	RSp0254	1178 HAMP+2PAS+LOV+GGDEF+EAL	278
214	<i>Ralstonia solanacearum</i> <i>PS107</i>	P (β)	D8MY29	RPSP107_mp0220	1178 3PAS+LOV+GGDEF+EAL	279
215	* <i>Ralstonia solanacearum</i> str. <i>Po82</i>	P (β)	F6G7G0	RSPO_m00255	1234 HAMP+PAS+LOV+GGDEF+EAL	280
216	* <i>Ralstonia solanacearum</i> <i>UW551</i>	P (β)	A3RW12	RRSL_01709	1234 HAMP+2PAS+LOV+GGDEF+EAL	281
217	<i>Ralstonia syzygii</i> <i>R24</i>	P (β)	G3A8G2	RALSYS_mp10051	1178 3PAS+LOV+GGDEF	282
218	* <i>Ramlibacter tataouinensis</i> <i>DSM14655</i>	P (β)	F5Y2K4	Rt_a_12790	537 LOV+Kinase+RR	283
219	<i>Rubrivivax benzoatilyticus</i> <i>JAZ</i>	P (β)	F3LSW2	RBXJA2T_13919	687 LOV+PAS+GGDEF+EAL	284
			F3LLJ8	RBXJA2T_02757	856 2PAS+LOV+PAS+Kinase	285
220	<i>Acidithiobacillus caldus</i> ATCC 51756	P (γ)	C6NR21	ACA_2866	913 GAF+LOV+PAS+GGDEF+EAL	286
221	* <i>Acidithiobacillus caldus</i> str. <i>SM-1</i>	P (γ)	F9ZQB1	Atc_0232	913 GAF+LOV+PAS+GGDEF+EAL	287
222	* <i>Acidithiobacillus ferrooxidans</i> ATCC 23270	P (γ)	B7JB43	AFE_1707	1057 GAF+LOV+PAS+GAF+GGDEF+EAL	288
223	<i>Acidithiobacillus</i> sp. <i>GG1-221</i>	P (γ)	F8XM97	GG11_02937	677 LOV+PAS+GAF+GGDEF	289
224	<i>Acinetobacter lwoffii</i> <i>SH145</i>	P (γ)	D0SMD2	HMPREF0017_01606	859 GAF+LOV+PAS+GGDEF+EAL	290
225	<i>Acinetobacter radioresistens</i> <i>SH164</i>	P (γ)	D0T5K2	HMPREF0018_01548	855 GAF+PAS+LOV+GGDEF	291
226	<i>Acinetobacter radioresistens</i> <i>SR82</i>	P (γ)	C6RJR5	ACTRA0001_0759	855 GAF+PAS+LOV+GGDEF+EAL	292
227	<i>Alishewanella jeogalli</i> <i>KCTC 22429</i>	P (γ)	H3ZFY5	AJ_E_11009	1590 PAS+GAF+PAS+LOV+GGDEF+EAL+RR	293
228	* <i>Alteromonas macleodii</i> <i>DSM 17117</i> <i>DeePecotype</i>	P (γ)	F2GAK1	MADL_1004320	959 PAS+LOV+Kinase+RR	294
229	* <i>Alteromonas</i> sp. (strain <i>SN2</i>)	P (γ)	F5Z4R5	ambm_14440	956 PAS+LOV+Kinase+RR	295
230	<i>Bermanella marisrubri</i>	P (γ)	Q1N482	BEDE65_14842	938 LOV+ Kinase+RR+RR	296
231	* <i>Chromohalobacter salexigens</i> <i>DSM 3043</i>	P (γ)	Q1QUF0	Csa1_2561	836 LOV+2PAS+ GGDEF+EAL	297
			Q1QU87	Csa1_2624	144 Short-LOV	298
232	<i>Ectothiorhodospira</i> sp. <i>PHS-1</i>	P (γ)	H1G106	ECTPHS_03562	159 Short-LOV	299
			H1G084	ECTPHS_00934	150 Short-LOV	300
233	* <i>Glaciecola nitratireducens</i> (strain <i>JCM 12485</i>)	P (γ)	G4QH06	GNIT_1651	408 LOV+SpoIIE	301
234	<i>Halomonas boliviensis</i> <i>LCL1</i>	P (γ)	G9EBS6	KUC_1328	931 3PAS+LOV+GGDEF+EAL	302
			G9EDB9	KUC_2342	139 Short-LOV	303
235	<i>Halomonas</i> sp. <i>GFAJ-1</i>	P (γ)	H0J093	MOY_05225	874 LOV+PAS+GGDEF+EAL	304
			H0J025	MOY_04699	145 Short-LOV	305
			H0J119	MOY_07487	815 2PAS+LOV+GGDEF+EAL	306
236	<i>Halomonas</i> sp. <i>HALL1</i>	P (γ)	G4FAF4	HALL1_16941	709 PAS+LOV+2GGDEF	307
			G4F2H5	HALL1_02857	927 3PAS+LOV+ GGDEF+EAL	308
			G4FB10	HALL1_18821	144 Short-LOV	309
237	<i>Halomonas</i> sp. <i>TD01</i>	P (γ)	F7SNC3	GME_09981	816 2PAS+LOV+GGDEF+EAL	310
			F7S1Y3	GME_02209	145 Short-LOV	311
238	* <i>Halothiobacillus neapolitanus</i> (strain <i>ATCC23641</i>)	P (γ)	D0L135	Hneap_1578	151 Short-LOV	312
239	<i>Idiomarinasp.</i> <i>A28L</i>	P (γ)	F7R210	A28LD_1496	880 GAF+PAS+LOV+GGDEF+EAL	313
240	* <i>Kangliella koreensis</i> <i>DSM 16069</i>	P (γ)	C7R727	Kkor_0358	887 GAF+PAS+LOV+GGDEF+EAL	314
241	<i>Marichromatium purpuratum</i> <i>984</i>	P (γ)	F9TYW6	MarpuDRAFT_1146	152 Short-LOV	315
242	* <i>Marinobacter adhaerens</i> (strain <i>HP15</i>)	P (γ)	F9TWS1	MarpuDRAFT_0378	1118 3PAS+LOV+Kinase+RR	316
243	<i>Marinobacter algicola</i> <i>DG893</i>	P (γ)	E4PM86	HP15_4150	552 LOV+GGDEF+EAL	317
244	<i>Methylobacter tundripaludum</i> <i>SV96</i>	P (γ)	A6E2P7	MDG893_14188	858 GAF+PAS+LOV+GGDEF+EAL	318
245	* <i>Methylococcus capsulatus</i> str. <i>Bath</i>	P (γ)	C3J1D6	Mettu_4161	738 RR+LOV+LOV+PAS+Kinase	319
246	* <i>Methylomonas methanica</i> (strain <i>MC09</i>)	P (γ)	Q60762_METCA	MCa1683	853 PAS+LOV+3PAS+SpoIIE	320
247	* <i>Methylomicrobium alcaliphilum</i> (strain <i>DSM 19304</i>)	P (γ)	G0ALQ1	Metme_1694	150 Short-LOV	321
			G4T2M2	MEAL2_3085	164 Short-LOV	322
			G4T2L9	MEAL2_3082	148 Short-LOV	323
			G4T0F8	SYNGTI_2116	1418 Kinase+2RR+LOV+4PAS+Kinase+RR	324
248	* <i>Nitrosococcus halophilus</i> (strain <i>Nc4</i>)	P (γ)	D5BVD1	Nha1_0365	149 Short-LOV	325
249	<i>Nitrosococcus oceani</i> <i>AFC27</i>	P (γ)	B6C5R4	NOC27_2959	150 Short-LOV	326
250	* <i>Nitrosococcus oceani</i> ATCC 19707	P (γ)	Q3J6W8	Noc_2986	150 Short-LOV	327
251	* <i>Nitrosococcus watsoni</i> (strain <i>C-113</i>)	P (γ)	D8KC92	Nwat_3041	150 Short-LOV	328
252	<i>Pseudoalteromonas</i> sp. <i>BS120495</i>	P (γ)	G7G480	P20495_2715	1098 PAS+LOV+Kinase+2RR	329
253	* <i>Pseudoalteromonas</i> sp. (strain <i>SM9913</i>)	P (γ)	E6R8N1	PSM_A0944	1101 PAS+LOV+Kinase+2EAL	330
254	* <i>Pseudomonas brassicacearum</i> (strain <i>NFM421</i>)	P (γ)	F2KL83	PSBR_a4707	157 Short-LOV	331
255	<i>Pseudomonas fluorescens</i> <i>F113</i>	P (γ)	G8QB22	PSF113_4873	157 Short-LOV	332
256	* <i>Pseudomonas fluorescens</i> <i>PF0-1</i>	P (γ)	Q3RHW7	Pf101_0896	158 Short-LOV	333
257	* <i>Pseudomonas fluorescens</i> <i>PF-5</i>	P (γ)	Q4KI48	PFL_0954	152 Short-LOV	334
258	* <i>Pseudomonas fluorescens</i> (strain <i>SBW25</i>)	P (γ)	C3K1W0	PFLU_5153	155 Short-LOV	335
259	<i>Pseudomonas fluorescens</i> <i>NH6</i>	P (γ)	E2XTK3	PFWH6_3353	519 LOV+Kinase+RR	336
			E2XXX1	PFWH6_4893	155 Short-LOV	337
260	* <i>Pseudomonas fulva</i> (strain <i>12-X</i>)	P (γ)	F6ACW6	Psefu_1195	534 LOV+Kinase+RR	338
			F6AEJ4	Psefu_1351	150 Short-LOV	339
261	* <i>Pseudomonas mendocina</i> (strain <i>NK-01</i>)	P (γ)	F4DSG2	MDS_3586	148 Short-LOV	340
262	* <i>Pseudomonas mendocina</i> <i>ymp</i>	P (γ)	F4DZM3	MDS_0420	1274 MASE1+PAS+LOV+PAS+GGDEF+EAL	341
			A4XPF8	Pmen_0361	1254 MASE1+LOV+2PAS+ GGDEF+EAL	342
			A4XXH1	Pmen_3284	148 Short-LOV	343
263	<i>Pseudomonas psychrotolerans</i> <i>L19</i>	P (γ)	H0JJH7	PPL19_22624	537 LOV+Kinase+RR	344
			H0J8E5	PPL19_03020	538 LOV+Kinase+RR	345
264	<i>Pseudomonas putida</i> (<i>Arthrobacter siderocapsulatus</i>)	P (γ)	B5SN27		148 Short-LOV	346
265	* <i>Pseudomonas putida</i> <i>F1</i>	P (γ)	A5W8Z9	Pput_4489	142 Short-LOV	347
			A5W4T2	Pput_3014	148 Short-LOV	348

266	*Pseudomonas putida GB-1	P (Y)	B0RGV4	PputGB1_4613	142 Short-LOV	349
267	*Pseudomonas putida KT2440	P (Y)	Q88E39 Q88JB0	PP_4629 PP_2739	142 Short-LOV 151 Short-LOV	350 351
268	Pseudomonas putida S16	P (Y)	F8G2U7 F8G5Y7	PPS_2207 PPS_4455	148 Short-LOV 142 Short-LOV	352 353
269	*Pseudomonas putida (strain BIRD-1)	P (Y)	E4R4W4 E4R1J5	PPUBIRD1_4323 PPUBIRD1_2935	142 Short-LOV 148 Short-LOV	354 355
270	*Pseudomonas putida W619	P (Y)	B1JAC4 B1J3B5	PputW619_3170 PputW619_0812	148 Short-LOV 152 Short-LOV	356 357
271	Pseudomonas savastanoi pv. savastanoi NCPPB 3335	P (Y)	D7HZQ3	PSA3335_2392	534 LOV+Kinase+RR	358
272	Pseudomonas sp.TJI-51	P (Y)	F0EAJ0 F0E265 F0EAK5	G1E_22960 G1E_07964 G1E_23035	382 LOV+Kinase 142 Short-LOV 148 Short-LOV	359 360 361
273	*Pseudomonas stutzeri DSM 4166	P (Y)	F2MYU4	PSTAA_1998	146 Short-LOV	362
274	*Pseudomonas stutzeri DSM 5190	P (Y)	F8H9C5	PSTAB_1866	148 Short-LOV	363
275	*Pseudomonas stutzeri (strain A1501)	P (Y)	A4VKZ3	PST_1970	146 Short-LOV	364
276	Pseudomonas syringae Cit 7	P (Y)	F3H4Y3	PSYCI7_22756	266 LOV+Kinase	365
277	Pseudomonas syringae pv. aceris str.M302273PT	P (Y)	F3JEB1	PSYAR_06644	502 LOV+Kinase+RR	366
278	Pseudomonas syringae pv. syringae B728a	P (Y)	F311F9	PSYAC_11056	534 LOV+Kinase+RR	367
279	Pseudomonas syringae pv. Actinidiae str.M302091	P (Y)	F3DLV9	PSYAE_25835	446 LOV+Kinase+RR	368
280	Pseudomonas syringae pv. glyciniae str. B076	P (Y)	E7P672	PsgB076_14067	534 LOV+Kinase+RR	369
281	Pseudomonas syringae pv. glyciniae str. race 4	P (Y)	E7PNV8	Pgy4_42359	534 LOV+Kinase+RR	370
282	Pseudomonas syringae pv. japonica str. M301072PT	P (Y)	F3FF68	PSYJA_07713	534 LOV+Kinase	371
283	Pseudomonas syringae pv. Maculicola str.E54326	P (Y)	F3HHL5	PMA4326_08380	534 LOV+Kinase+RR	372
284	Pseudomonas syringae pv. mori str. 301020	P (Y)	F3F0F6	PSYMO_20423	254 LOV+Kinase	373
285	Pseudomonas syringae pv. morsprunorum str. M302280PT	P (Y)	F3D2S0	PSYMP_19044	534 LOV+Kinase	374
286	Pseudomonas syringae pv. oryzae str. _1_6	P (Y)	F2ZC84	POR16_00542	534 LOV+Kinase+RR	375
287	*Pseudomonas syringae pv. phaseolicola 1448A	P (Y)	Q48IV1	PSPPH_2483	507 LOV+Kinase+RR	376
288	Pseudomonas syringae pv. pisi str. 1704B	P (Y)	F3GBZ9	PSYPI_18571	534 LOV+Kinase	377
289	*Pseudomonas syringae pv. syringae B728a	P (Y)	Q4ZS73	Payr_2700	534 LOV+Kinase+RR	378
290	Pseudomonas syringae pv. tabaci ATCC 11528	P (Y)	F3JTS8	PSYTB_00799	534 LOV+Kinase+RR	379
291	*Pseudomonas syringae pv. tomato DC3000	P (Y)	Q881J7	PSPTO_2896	534 LOV+Kinase+RR	380
292	Pseudomonas syringae pv. tomato T1	P (Y)	E2M7E9	PSPTOT1_2276	534 LOV+Kinase	381
293	Salinisphaera shabanensis ELL3A	P (Y)	F7QDZ2	SSPSH_19791	333 LOV+GGDEF	382
294	*Serratia plymuthica AS9	P (Y)	G0B7B1	SerAS9_1932	310 LOV+GGDEF	383
295	Serratia sp.AS12	P (Y)	G0BP57	SerAS12_1932	310 LOV+GGDEF	384
296	Serratia sp.AS13	P (Y)	G0C2A2	SerAS13_1933	310 LOV+GGDEF	385
297	Shewanella baltica BA175	P (Y)	G0AVH5	Sbal1175_4170	1215 MASE+CHASE+PAS+LOV+GGDEF+EAL	386
298	Shewanella baltica OS 117	P (Y)	G0DM57	Sbal117_0168	1215 MASE+CHASE+PAS+LOV+GGDEF+EAL	387
299	Shewanella baltica OS 183	P (Y)	H1YLW6	Sbal183_0123	1215 MASE+CHASE+PAS+LOV+GGDEF+EAL	388
300	*Shewanella baltica OS185	P (Y)	A6WU43	Shew185_4216	1215 MASE1+CHASE+PAS+LOV+GGDEF+EAL	389
301	*Shewanella baltica OS223	P (Y)	B8ECQ3	Sbal223_4144	1215 MASE1+CHASE+PAS+LOV+GGDEF+EAL	390
302	*Shewanella putrefaciens CN-32	P (Y)	A4YCT9	Sputcn32_3856	1216 MASE1+CHASE+PAS+LOV+GGDEF+EAL	391
303	*Shewanella sp. ANA-3	P (Y)	A0L2H7	Shewana3_4029	1228 MASE1+CHASE+PAS+LOV+GGDEF+EAL	392
304	Shewanella sp. HN_41	P (Y)	F7RU72	SOHN41_03947	1209 MASE+CHASE+PAS+LOV+GGDEF+EAL	393
305	*Shewanella sp. W3-18-1	P (Y)	A1RE55	Sputw3181_0097	1216 MASE1+CHASE+PAS+LOV+GGDEF+EAL	394
306	Thioalkalimicrobium aerophilum AL3	P (Y)	G4D8R7	ThiaeDRAFT_0528	147 Short-LOV	395
307	*Thioalkalimicrobium cyclicum DSM 14477	P (Y)	F6D9J9	Thicy_0180	148 Short-LOV	396
308	*Thioalkalivibrio sp. (strain HL-EbGR7)	P (Y)	B8GRG0	Tgr7_1429	148 Short-LOV	397
309	*Thioalkalivibrio sp. (strain K90m1x)	P (Y)	D3S9U5	TK90_1292	147 Short-LOV	398
310	Thioalkalivibrio thiocyanoxidans ARh4	P (Y)	G4DMF8	ThithDRAFT_3256	150 Short-LOV	399
311	Thiocapsa marina5811	P (Y)	F90H4V	ThimaDRAFT_1356	153 Short-LOV	400
312	Thiocystis violascens DSM 198	P (Y)	G4DVH5	ThiviDRAFT_2613	515 LOV+PAS+Kinase	401
313	*Thiomicrospira denitrificans ATCC 33889	P (Y)	Q3ON80	Suden_2087	240 HTH+ LOV	402
314	Thiorhodospira sibirica ATCC 700588	P (Y)	G4E1E1	ThiSiDRAFT_0320	1042 LOV+4PAS+Kinase+RR	403
315	Vibrio parahaemolyticus 16	P (Y)	B8K9Y9	VPMS16_755	1594 HAMP+LOV+3PAS+Kinase+RR+Hpt	404
316	*Xanthomonas sibirica (strain GPE PC73)	P (Y)	D2JAU2	XALc_1637	544 LOV+Kinase+RR	405
317	*Xanthomonas axonopodis pv. citri str.306	P (Y)	Q8P3H6	XALc_1637	540 LOV+Kinase+RR	406
318	Xanthomonas axonopodis pv. citrulo F1	P (Y)	C2LW44	XALCM_2536	540 LOV+Kinase+RR	407
319	Xanthomonas axonopodis pv. punicea str. IMG 859	P (Y)	H1XK46	XALPC_2237	540 LOV+Kinase+RR	408
320	*Xanthomonas campestris pv campestris 8004	P (Y)	Q4UW16	XC_1691	540 LOV+Kinase+RR	409
321	*Xanthomonas campestris pv campestris ATCC 33913	P (Y)	Q8P827	XCC2421	540 LOV+Kinase+RR	410
322	*Xanthomonas campestris pv. campestris B100	P (Y)	B0RR11	xcc-b100_1744	540 LOV+Kinase+RR	411
323	Xanthomonas campestris pv. raphani 756C	P (Y)	G0C1S2	XCR_2724	540 LOV+Kinase+RR	412
324	*Xanthomonas campestris pv. vesicatoria 85-10	P (Y)	Q3BRX8	XCV2754	540 LOV+Kinase+RR	413
325	Xanthomonas fuscans subsp. aurantifolii str. ICPB 10535	P (Y)	D4TB06	XAUC_35160	540 LOV+Kinase+RR	414
326	Xanthomonas fuscans subsp. aurantifolii str. ICPB 11122	P (Y)	D4SVY4	XAUB_22570	540 LOV+Kinase+RR	415
327	Xanthomonas gardneri ATCC 19865	P (Y)	F0C0O5	XGA_0163	180 Short-LOV	416
328	*Xanthomonas oryzae pv. oryzae MAFF 311018	P (Y)	Q2P134	XOO2988	540 LOV+Kinase+RR	417
329	*Xanthomonas oryzae pv. oryzae PXO99A	P (Y)	B2SUI2	FXO_01426	507 LOV+Kinase+RR	418
330	Xanthomonas oryzae pv. oryzicola BLS256	P (Y)	G7TAT9	XOC_1897	502 LOV+Kinase+RR	419
331	Xanthomonas perforans 91-118	P (Y)	F0BMU4	XPE_0426	540 LOV+Kinase+RR	420
332	Xanthomonas vesicatoria ATCC 35937	P (Y)	F0BB91	XVE_1360	519 LOV+Kinase+RR	421
333	*Chloroflexus aggregans DSM 9485	Chl	B8GA79	Cagg_3753	913 LOV+PAS+PAS+Kinase+RR	422
334	*Chloroflexus aurantiacus ATCC 29364	Chl	B9LB78	Chy400_3356	915 LOV +2PAS +Kinase+RR+Hpt	423
335	*Chloroflexus aurantiacus J-10-f1	Chl	A9WH11	Caur_3108	915 LOV +2PAS+Kinase+RR+Hpt	424
336	*Chloroherpeton thalassium ATCC35110	Chl	B3Q5S9_CHLT3	Ctha_1545	1333 3PAS+LOV+GAF+PAS+Kinase+RR	425
337	*Herpetosiphon aurantiacus ATCC 23779	Chl	A9B110	Haur_1217	1877 HAMP+GAF+LOV+4PAS+GAF+Kinase	426
338	*Acaryochloris marina MBIC 11017	Cya	B0C6M6	AM1_1416	935 PAS+LOV+2PAS+GGDEF+EAL	427
339	*Anabaena variabilis ATCC 29413	Cya	Q3M6B3	Ava_3868	1021 LOV+2PAS+GGDEF+EAL	428
			Q3MEB3	Ava_1029	1820 PAS+LOV+3PAS+GAF+Kinase+ 2RR+Hpt	429
340	Arthrospira maxima CS-328	Cya	B5W5T2	AmxDRAFT_4131	1276 PAS+GAF+LOV+GAF+PAS+GGDEF+EAL	430
			B5VY09	AmxDRAFT_1401	1184 GAF+PAS+LOV+PAS+GAF+Kinase	431
341	Arthrospira platensis NIES-39	Cya	D5A2C5	NIES39_C01090	501 RR+LOV+GGDEF	432
			D5A3S6	NIES39_C03530	1276 PAS+GAF+LOV+GAF+GGDEF+EAL	433
			D5A1P6	NIES39_M00920	1240 GAF+2PAS+LOV+GAF+Kinase	434
342	Arthrospira sp. PCC 8005	Cya	H1WBC0	ARTHRO_1500006	542 RR+LOV+GGDEF	435

		H1WBU5	ARTHRO_1530033	1279 PAS+GAF+LOV+GAF+PAS+EAL	436
		H1WDU3	ARTHRO_210039	1240 GAF+2LOV+PAS+2GAF+Kinase	437
343 <i>Crocospaera watsonii</i> WH 8501	Cya	Q4BW45	CwatDRAFT_0939	297 RR+LOV	438
344 <i>Crocospaera watsonii</i> WH 0003	Cya	G5JC80	CWATWH0003_5040	483 RR+LOV+GGDEF	439
345 * <i>Cyanothece</i> ATCC 51142	Cya	B1WPX1	cce_3938	483 RR+LOV+GGDEF	440
346 * <i>Cyanothece</i> PCC 8801/ <i>Synechococcus</i> sp. PCC 8801	Cya	B7JZ07	PCC8801_2052	481 RR+LOV+GGDEF	441
347 <i>Cyanothece</i> sp. CCY0110	Cya	A3IMW4	CY0110_24941	483 RR+LOV+GGDEF	442
348 * <i>Cyanothece</i> sp. PCC 8802	Cya	C7QX31	Cyan8802_2076	481 RR+LOV+GGDEF	443
349 <i>Cyanothece</i> sp. ATCC51472	Cya	G6GZ93	Cy51472DRAFT_4260	483 RR+LOV+GGDEF	444
350 <i>Lyngbya</i> sp. PCC 8106	Cya	A0VY17	L8106_21734	477 RR+LOV+GGDEF	445
		A0YYE1	L8106_15709	1090 PAS+LOV+PAS+GGDEF+EAL	446
		A0YS28	L8106_20058	1261 RR+RR+LOV+PAS+GAF+Kinase+RR	447
		A0YI13	L8106_04436	1006 PAS+LOV+3PAS+GAF+GGDEF	448
		A0YJV6	L8106_15270	1211 GAF+PAS+LOV+PAS+GAF+Kinase	449
		A0YYE8	L8106_15744	990 PAS+GAF+LOV+GGDEF+EAL	450
351 <i>Microcoleus chthonoplastes</i> PCC 7420 (<i>Coleofasciculus chthonoplastes</i> PCC 7420)	Cya	B4VK29	MCT420_2971	2020 2PAS+LOV+4PAS+2GAF+Kinase+ 2RR	451
		B4VK96	MCT420_3198	483 PAS+LOV+Cyclase	452
		B4VSY1	MCT420_670	1145 RR+GAF+LOV+2PAS+GAF+Kinase	453
		B4VJB8	MCT420_7699	776 LOV+GAF+Kinase	454
		B4VY11	MCT420_4357	1393 2PAS+GAF+LOV+2PAS+GGDEF+EAL	455
352 <i>Microcoleus vaginatus</i> FGP-2	Cya	F5UC16	MicvaDRAFT_3862	1102 LOV+4PAS+Kinase	456
		F5UNN6	MicvaDRAFT_5191	1113 LOV+4PAS+GAF+Kinase	457
		F5UBU5	MicvaDRAFT_4497	1024 LOV+4PAS+GGDEF+EAL	458
		F5UC58	MicvaDRAFT_4632	1375 PAS+GAF+LOV+GAF+PAS+2EAL	459
353 * <i>Nostoc punctiforme</i> PCC 73102	Cya	B2JA05	Npum_AR143	1043 LOV+2PAS+GGDEF+EAL	460
		B2JB84	Npum_F2363	1403 PAS+LOV+PAS+GAF+Kinase+2RR+Hpt	461
354 * <i>Nostoc</i> sp. PCC 7120	Cya	Q8YSB9	alr3170	1021 LOV+2PAS+GGDEF+EAL	462
		Q8YTS1	al12875	1817 PAS+LOV+3PAS+GAF+Kinase+ 2RR+Hpt	463
355 <i>Oscillatoria</i> sp. PCC6506	Cya	D8FYX3	OSCI_2090009	631 PAS+LOV+Kinase	464
		D8G8N3	OSCI_3960019	1041 LOV+GAF+PAS+GGDEF+2EAL	465
		D8FU68	OSCI_340030	1432 GAF+LOV+PAS+LOV+PAS+2GAF+Kinase	466
		D8G759	OSCI_3790005	1140 LOV+3PAS+GGDEF+2EAL	467
356 * <i>Synechococcus</i> sp. PCC 6301	Cya	Q5N2F7	syc1323_c	578 LOV+GGDEF+EAL	468
		Q5N5M8	syc0200_d	929 RR+PAS+PAS+LOV+ GGDEF+EAL	469
357 <i>Synechocystis</i> sp. PCC 6803 substr. PCC-P	Cya	HOPFN3	SYNPCCP_2115	1244 GAF+LOV+3PAS+GGDEF+EAL	470
		HOPAQ0	SYNPCCN_2115	1244 GAF+LOV+3PAS+GGDEF+EAL	471
358 <i>Synechocystis</i> sp. PCC 6803 substr. GT-I	Cya	H0NY98	SYNGTI_2116	1244 GAF+LOV+3PAS+GGDEF+EAL	472
359 * <i>Synechococcus</i> sp. PCC 7002	Cya	B1XLQ8	SYNPCC7002_A1355	780 GAF+LOV+PAS+GGDEF	473
360 * <i>Synechococcus</i> sp. PCC 7942	Cya	Q31RU9	Synpcc7942_0188	578 LOV+GGDEF+EAL	474
		Q31N14	Synpcc7942_1355	929 RR+PAS+PAS+LOV+ GGDEF+EAL	475
		Q55576	s1r0359	1244 GAF+LOV+3PAS+GGDEF+EAL	476
361 * <i>Synechocystis</i> sp. PCC 6803	Cya	F7URV3	SYNGT8_2117	1244 GAF+LOV+3PAS+GGDEF+EAL	477
		Q8DJE3	t111282	1353 GAF+PAS+LOV+2GAF +Kinase+ RR	478
362 * <i>Thermosynechococcus elongatus</i> BP-1	Pl	Q7USG5	RB4511	1637 CHEB+CHER+PAS+LOV+PAS+Kinase+ RR	479
363 <i>Rhodospirillum baltica</i> SH1	Pl	F2B0L3	RBWH47_00113	1637 RR+CHER+CHEB+3PAS+LOV+Kinase	480
364 <i>Rhodospirillum baltica</i> WH47	Pl	C6HUQ3	UBAL3_69480047	1354 2PAS+GAF+LOV+GGDEF+Globin	481
365 <i>Leptospirillum ferrodiszotrophum</i>	Nit	C6HW67	UBAL3_80290047	1369 PAS+2GAF+PAS+LOV+GGDEF+Globin	482
		C6HYK0	UBAL3_94240076	496 PAS+LOV+Kinase	483
		A3ERH5	UBAL2_79310143	1036 GAF+LOV+PAS+GGDEF+EAL	484
366 <i>Leptospirillum</i> sp. GrouPII UBA	Nit	B6AQW0	CGL2_11068007	1035 GAF+LOV+PAS+GGDEF+EAL	485
367 <i>Leptospirillum</i> sp. GrouPII '5-way CG'	Bact	B8X7C4	Acix9_4408	519 LOV+kinase	486
368 <i>Acidobacterium</i> sp. (strain MP5ACTX9)	Bact	E6KEC5	CeLal_2939	1083 3PAS+LOV+GAF+Kinase	487
369 <i>Cellulophaga algicola</i> DSM 14237	Bact	B3QWA0	Ctha_0744	190 Short-LOV	488
370 * <i>Chloroherpeton thalassium</i> ATCC 35110	Bact	G8NP03	Acix8_2800	519 LOV+Kinase	489
371 * <i>Granulicella mallensis</i> DSM 23137	Bact	G2PRN8	Murru_0433	848 PAS+LOV+GAF+Kinase	490
372 * <i>Muricauda rustringensis</i> (strain DSM 13258)	Bact	A6E9H1	PBAL39_15294	512 LOV+PAS+Kinase	491
373 <i>Pedobacter</i> sp. BAL39	Bact	F4CCK0	Sph21_5130	520 LOV+PAS+Kinase	492
374 * <i>Sphingobacterium</i> sp. (strain 21)	DeTh	D3PRD8	Mrub_1259	578 LOV+2PAS+Kinase	493
375 * <i>Meiothermus ruber</i> ATCC 35948	DeTh	D7CV48	Trad_2773	465 LOV+PAS+Kinase	494
376 * <i>Truepera radiovictrix</i> DSM 17093	DeTh	D7CR11	Trad_0271	530 LOV+PAS+Kinase	495
		E4U0H9	Sulku_1635	239 RR+LOV	496
377 * <i>Sulfuricurvum kujiense</i> DSM 16994	(P)	E7QV78	ZOD2009_13571	621 PAS+LOV+GAF+HTH	1
1 <i>Haladaptatus paucihalophilus</i> DX253	Eu A	D8J3G3	HacjB3_09435	531 PAS+LOV+GAF+HTH	2
2 * <i>Halaalkalicoccus jeotgali</i> DSM 18796	Eu A	G0HBRB1	HAR_1487	748 RR+PAS+LOV+GAF+ Kinase	3
3 * <i>Haloarcula hispanica</i> DSM 4426	Eu A	G0HVV3	HAR_0833	726 RR+PAS+LOV+PAS+Kinase	4
		Q5UWI7	rrnB0180	2306 GAF+LOV+GAF+PAS+Kinase	5
		Q5V5P7	rrnAC0075	726 RR+PAS+LOV+PAS+Kinase	6
		Q5V3S3	rrnAC0848	748 RR+PAS+LOV+GAF+Kinase	7
5 * <i>Haloferax volcanii</i> DSM 3757	Eu A	D4GU42	HVO_2030	652 RR+PAS+LOV+Kinase	8
		D4GSN6	HVO_0632	858 PAS+LOV+PAS+Kinase	9
		D4GZU7	HVO_0318	658 PAS+LOV+GAF+HTH	10
6 <i>Halophilic archaeon</i> DL31	Eu A	G2MKJ0	Halar_1182	400 PAS+LOV+Kinase	11
7 * <i>Halopiger xanaduensis</i> DSM 18323	Eu A	F8D4L2	Halxa_1709	658 PAS+LOV+GAF+HTH	12
8 <i>Halorhabdus tiamatea</i> SARL4B	Eu A	F7PMY2	HLRTI_14125	677 RR+PAS+LOV+GAF+HTH	13
9 * <i>Halorhabdus utahensis</i> DSM 12940	Eu A	C7NQP5	Huta_0317	680 RR+PAS+LOV+GAF+HTH	14
10 * <i>Halorubrum lacusprofundi</i> ATCC 49239	Eu A	B9LXB3	Hlac_3597	587 PAS+LOV+PAS+kinase	15
		B9LPK0	Hlac_1704	294 PAS+LOV+Kinase	16
		D2RWH0	Htur_0662	644 PAS+LOV+GAF+HTH	17
		D2RZP8	Htur_3223	654 GAF+PAS+LOV+Kinase	18
11 * <i>Haloterrigena turkmenica</i> DSM 5511	Eu A	D3SVK4	Nmag_2042	477 RR+PAS+LOV+Kinase	19
12 * <i>Natrialba magadii</i> ATCC 43099	Eu A	G4GFC3	NatpeDRAFT_1163	627 PAS+LOV+GAF+HTH	20
13 <i>Natrinema pellirubrum</i> DSM 15624	Eu A	G4GC46	NatgrDRAFT_3704	616 PAS+LOV+GAF+HTH	21
14 <i>Natronobacterium gregoryi</i> SP2	Eu A	G4G5E5	NatgrDRAFT_1352	1517 GAF+PAS+LOV+PAS+HTH	22

15 **Natronomonas pharaonis* DSM 2160

EuA Q3ITW5
Q3IM51

NP_0654A
NP6064A

681 RR+PAS+LOV+HTH
596 PAS+LOV+Kinase

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