

Rubrobacter_xylanophilus_DSM_9941_gi_108803856	M	-----	-----	-----	-----	-----
Anabaena_variabilis_ATCC_29413_gi_75907498	M	-----	-----	-----	-----	-----
Fischerella_sp_JSC-11_gi_354566131	M	-----	-----	-----	-----	-----
Nostoc_azollae_0708_gi_298490087	M	-----	-----	-----	-----	-----
Raphidiopsis_brookii_D9_gi_282897015	M	-----	-----	-----	-----	-----
Cylindrospermopsis_raciborskii_CS-505_gi_282899028	M	-----	-----	-----	-----	-----
Oscillatoria_sp_PCC_6506_gi_300868553	M	-----	-----	-----	-----	-----
Microcoleus_vaginatus_FGP-2_gi_334120716	M	-----	-----	-----	-----	-----
REF_Synechococcus_7942_ClpS1_REF	M	-----	-----	-----	-----	-----
Gloeobacter_violaceus_PCC_7421_gi_37520315	M	-----	-----	-----	-----	-----
Oryza_sativa_Japonica_Group_gi_115476544	M	MEAAVPSRVA	LS-ASRLSN	HHHHAV	GGERYAI	YRGR
Oryza_sativa_Japonica_Group_gi_125603506	M	MEAAVPSRCG	---ALREPA	LQPPPP	RGERYAI	YRGR
Zea_mays_gi_195652021	M	MMASVPSRVA	LSAASRLPN	LHAV	AGDRSFI	YKRR
Zea_mays_gi_226506038	M	MEAAVPSRVA	LSAASRLPN	PHAV	TGDRSFI	YKGR
Brachypodium_distachyon_gi_357147864	M	MEAAVPSRIA	LSA-RIMN	HHVVA	AGGRSSI	YRGR
Arabidopsis_thaliana_gi_145326694	M	METAI CGRLA	LA-PS	SLFN SK	SGDKHLV	SKGP
Arabidopsis_lyrata_subsp_lyrata_gi_297841589	M	METAI CGRLA	LA-PS	SLFN SK	SGDKHLV	SKGP
REF_Arabidopsis_thaliana_ClpS_REF	M	METAI CGRLA	LA-PS	SLFN SK	SGDKHLV	SKGP
Populus_trichocarpa_gi_224099343	M	METAI CGRIA	LS-PN	HVFNPK	PGDKNSV	CRGP
Populus_trichocarpa_gi_224111728	M	METAI CGRIA	LS-PN	HVFNPK	PGDKNSV	CRGP
Glycine_max_gi_351723283	M	MKSAI CGRI	LS-PN	HVF	PGDTHSI	CKGP
Medicago_truncatula_gi_357488429	M	MKSAI CRSMG	LS-PN	HLF	SGDRYSE	CKGP
Vitis_vinifera_gi_297737852	M	MENAI CGRLA	LS-PN	HVFNSK	SGDKHSL	LKGP
Vitis_vinifera_gi_225455872	M	METAI CGRVP	LS-PN	HFFTSK	SGDKHSL	SK-Q
Glycine_max_gi_356531226	M	MEALCSALA	LS-PN	OVFNAN	PGDKNVE	LK-Y
Picea_sitchensis_gi_294460817	M	MASVIYSRLI	LP-OB	OLYOOK	SGEKISO	SKGA
Selaginella_moellendorffii_gi_302761288	M	MACTLTQVAH	LW-PST	SOVS RFNTI	FAEADKC	HK
Physcomitrella_patens_gi_121489819	M	MAGSL-RLE	VS-TPAT	ARHFGINGVE	KAOR	
Chlorella_variabilis_gi_307105846	M	MTICV GORLG	GQ	AVAGK	AGDKPPTRGA	WLVPA GATRR
Chlamydomonas_reinhardtii_gi_159467236	M	-----	MTRSPVA	GLPRPCSALO	RSGCT	LOGA
Volvox_carteri_f_nagariensis_gi_302834902	M	MAASVLRPPP	VSVASRAPTA	AL	AVLP	GSACL GW
Ktedonobacter_racemifer_DSM_44963_gi_298245523	M	-----	-----	-----	-----	RRAN
Guillardia_theta_gi_57335897	M	-----	-----	-----	-----	-----
Oscillatoria_sp_PCC_6506_gi_300864591	M	-----	-----	-----	-----	-----
Microcoleus_vaginatus_FGP_2_gi_334119600	M	-----	-----	-----	-----	-----
Anabaena_variabilis_ATCC_29413_gi_75909055	M	-----	-----	-----	-----	-----
Fischerella_sp_JSC-11_gi_354566811	M	-----	-----	-----	-----	-----
Nostoc_azollae_0708_gi_298491120	M	-----	-----	-----	-----	-----
Raphidiopsis_brookii_D9_gi_282895992	M	-----	-----	-----	-----	-----
Cylindrospermopsis_raciborskii_CS_505_gi_282901708	M	-----	-----	-----	-----	-----
REF_Synechococcus_7942_ClpS2_REF	M	-----	-----	-----	-----	-----
Gloeobacter_violaceus_PCC_7421_gi_37521807	M	-----	-----	-----	-----	-----
Conexibacter_woesei_DSM_14684_gi_284045641	M	-----	-----	-----	-----	-----
Patulibacter_sp_I11_gi_367468593	M	-----	-----	-----	-----	-----
Gloeobacter_violaceus_PCC_7421_gi_37522100	M	-----	-----	-----	-----	-----

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Rubrobacter_xylanophilus_DSM_9941_gi_108803856	-----	-----	-----	-----	-----	-----
Anabaena_variabilis_ATCC_29413_gi_75907498	-----	-----	-----	-----	-----	-----
Fischerella_sp_JSC-11_gi_354566131	-----	-----	-----	-----	-----	-----
Nostoc_azollae_0708_gi_298490087	-----	-----	-----	-----	-----	-----
Raphidiopsis_brookii_D9_gi_282897015	-----	-----	-----	-----	-----	-----
Cylindrospermopsis_raciborskii_CS-505_gi_282899028	-----	-----	-----	-----	-----	-----
Oscillatoria_sp_PCC_6506_gi_300868553	-----	-----	-----	-----	-----	-----
Microcoleus_vaginatus_FGP-2_gi_334120716	-----	-----	-----	-----	-----	-----
REF_Synechococcus_7942_ClpS1_REF	-----	-----	-----	-----	-----	-----
Gloeobacter_violaceus_PCC_7421_gi_37520315	-----	-----	-----	-----	-----	-----
Oryza_sativa_Japonica_Group_gi_115476544	CPNPAIPM-A	LAAAAAPGK	G-GGVLD	RP-IEKV-TP	GR	-----
Oryza_sativa_Japonica_Group_gi_125603506	CPNPAIPM-A	LAAAAAPGK	G-GGVLD	RP-IEKV-TP	GR	-----
Zea_mays_gi_195652021	CPSL SIPM-A	L-SAAAPGK	G-GGVLD	RP-VEKI-TP	GR	-----
Zea_mays_gi_226506038	COSLAIPM-A	L-SAAAPGK	G-GGVLD	RP-VEKI-TP	GR	-----
Brachypodium_distachyon_gi_357147864	YPNIAIPT-V	VTAA---GK	G-GGVLD	RP-AEKI-SP	GR	-----
Arabidopsis_thaliana_gi_145326694	CVNRSILM-T	LSTSAALGK	G-GGVLD	KPIIEKT-TP	GR	-----
Arabidopsis_lyrata_subsp_lyrata_gi_297841589	CVNRGVLM-T	LSTYAALGK	G-GGVLD	KPIIEKT-TP	GR	-----
REF_Arabidopsis_thaliana_ClpS_REF	CVNRSILM-T	LSTSAALGK	G-GGVLD	KPIIEKT-TP	GR	-----
Populus_trichocarpa_gi_224099343	CANRGILM-A	ISTTCS-GK	G-GGLE	KPVIERT-TP	GR	-----
Populus_trichocarpa_gi_224111728	CASRGILM-S	ISATVS-GKG	GGGG-GGILE	KPVIERT-TP	GR	-----
Glycine_max_gi_351723283	YSNLCVPM-A	VLATGP-GK	G-GGVLD	KPVIEKV-TP	GR	-----
Medicago_truncatula_gi_357488429	YSNLCVPM-A	VLTKGS-GK	G-GGILE	KPVIEKA-TP	GR	-----
Vitis_vinifera_gi_297737852	CTNRSFLM-A	ISASGP-GK	G-GGLE	RPVIEKV-TP	GR	-----
Vitis_vinifera_gi_225455872	WTHRTMLM-T	VSAAAP-GK	G-GGVLD	RPTIERI-MP	GR	-----
Glycine_max_gi_356531226	SKDRSVVM-T	VAATGILGK	G-GGLE	RPTIETT-SP	GR	-----
Picea_sitchensis_gi_294460817	CMNRVFS--A	IRSTSPGGK	G-GGLE	RPTIEKT-TP	GR	-----
Selaginella_moellendorffii_gi_302761288	CFTRIASHA	VRAALPGGL	G-GGVLD	KPAIETAPT	GR	-----
Physcomitrella_patens_gi_121489819	VHNRVNGRYK	INAASGPSO	G-GGVLD	RPTIDKP-TP	GR	-----
Chlorella_variabilis_gi_307105846	SAQRARLHV	--AARSAGK	G-GGVLD	RPGV--LP	GG	-----
Chlamydomonas_reinhardtii_gi_159467236	FG--TFAPQT	TRTFVVTWA	K-GGVM	APTITTO	-----	-----
Volvox_carteri_f_nagariensis_gi_302834902	FGTSTLLSQT	TRICVQMR	GVPGLLD	SPTITS	-----	-----
Ktedonobacter_racemifer_DSM_44963_gi_298245523	-----	-----	-----	-----	-----	-----
Guillardia_theta_gi_57335897	-----	-----	-----	-----	-----	CLGGFKVP
Oscillatoria_sp_PCC_6506_gi_300864591	-----	-----	-----	-----	-----	-----
Microcoleus_vaginatus_FGP_2_gi_334119600	-----	-----	-----	-----	-----	-----
Anabaena_variabilis_ATCC_29413_gi_75909055	-----	-----	-----	-----	-----	V
Fischerella_sp_JSC-11_gi_354566811	-----	-----	-----	-----	-----	I
Nostoc_azollae_0708_gi_298491120	-----	-----	-----	-----	-----	E
Raphidiopsis_brookii_D9_gi_282895992	-----	-----	-----	-----	-----	K
Cylindrospermopsis_raciborskii_CS_505_gi_282901708	-----	-----	-----	-----	-----	K
REF_Synechococcus_7942_ClpS2_REF	-----	-----	-----	-----	-----	DDAFVL
Gloeobacter_violaceus_PCC_7421_gi_37521807	-----	-----	-----	-----	-----	-----
Conexibacter_woesei_DSM_14684_gi_284045641	-----	-----	-----	-----	-----	-----
Patulibacter_sp_I11_gi_367468593	-----	-----	-----	-----	-----	-----
Gloeobacter_violaceus_PCC_7421_gi_37522100	-----	-----	-----	-----	-----	YPHASMER

Rubrobacter_xylanophilus_DSM_9941_gi_108803856	-----	-----	VGS	LTRDIRCSAA	TKTAPARK	TRRAPSPREP
Anabaena_variabilis_ATCC_29413_gi_75907498	-----	-----	-----	-----	SVETIEK	RSTSRLKAP
Fischerella_sp_JSC-11_gi_354566131	-----	-----	-----	-----	SVETOOK	RSTSRLKAP
Nostoc_azollae_0708_gi_298490087	-----	-----	-----	-----	SVETIEK	RSTTRKLAP
Raphidiopsis_brookii_D9_gi_282897015	-----	-----	-----	-----	SVETIEK	PSTTRKLAP
Cylindrospermopsis_raciborskii_CS-505_gi_282899028	-----	-----	-----	-----	SVETIEK	PSTTRKLAP
Oscillatoria_sp_PCC_6506_gi_300868553	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Microcoleus_vaginatus_FGP-2_gi_334120716	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
REF_Synechococcus_7942_ClpS1_REF	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Gloeobacter_violaceus_PCC_7421_gi_37520315	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Oryza_sativa_Japonica_Group_gi_115476544	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Oryza_sativa_Japonica_Group_gi_125603506	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Zea_mays_gi_195652021	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Zea_mays_gi_226506038	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Brachypodium_distachyon_gi_357147864	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Arabidopsis_thaliana_gi_145326694	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Arabidopsis_lyrata_subsp_lyrata_gi_297841589	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
REF_Arabidopsis_thaliana_ClpS_REF	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Populus_trichocarpa_gi_224099343	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Populus_trichocarpa_gi_224111728	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Glycine_max_gi_351723283	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Medicago_truncatula_gi_357488429	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Vitis_vinifera_gi_297737852	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Vitis_vinifera_gi_225455872	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Glycine_max_gi_356531226	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Picea_sitchensis_gi_294460817	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Selaginella_moellendorffii_gi_302761288	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Physcomitrella_patens_gi_121489819	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Chlorella_variabilis_gi_307105846	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Chlamydomonas_reinhardtii_gi_159467236	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Volvox_carteri_f_nagariensis_gi_302834902	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Ktedonobacter_racemifer_DSM_44963_gi_298245523	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Guillardia_theta_gi_57335897	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Oscillatoria_sp_PCC_6506_gi_300864591	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Microcoleus_vaginatus_FGP_2_gi_334119600	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Anabaena_variabilis_ATCC_29413_gi_75909055	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Fischerella_sp_JSC-11_gi_354566811	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Nostoc_azollae_0708_gi_298491120	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Raphidiopsis_brookii_D9_gi_282895992	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Cylindrospermopsis_raciborskii_CS_505_gi_282901708	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
REF_Synechococcus_7942_ClpS2_REF	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Gloeobacter_violaceus_PCC_7421_gi_37521807	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Conexibacter_woesei_DSM_14684_gi_284045641	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Patulibacter_sp_I11_gi_367468593	-----	-----	-----	-----	SVETIEK	RSTVRKIAP
Gloeobacter_violaceus_PCC_7421_gi_37522100	-----	-----	-----	-----	SVETIEK	RSTVRKIAP

Rubrobacter_xylanophilus_DSM_9941_gi_108803856	RYRVILHND	DWTPMDHVVA	ALMKVVPRLS	LRRAVSIMLE	AHTKGOAVVT
Anabaena_variabilis_ATCC_29413_gi_75907498	RYRVLLHND	DYNSMEYVVO	VLITTTVPSLT	OPQAVSIMME	AHTNGLALVI
Fischerella_sp_JSC-11_gi_354566131	QYRVLLHND	DYNSMEYVVO	VLLTTVPISLT	OPQAVSIMME	AHNSGLALVI
Nostoc_azollae_0708_gi_298490087	QYRVLLHND	DYNSMEYVVO	VLMTSVPSIT	OPQAVSIMME	AHNSGLALVI
Raphidiopsis_brookii_D9_gi_282897015	RYRVLLHND	DYNSMEYVVO	VLLSTIPISLT	OPQAVSIMME	AHNSGLALVI
Cylindrospermopsis_raciborskii_CS-505_gi_282899028	RYRVLLHND	DYNSMEYVVO	VLLSTIPISLT	OPQAVSIMME	AHNSGLALVI
Oscillatoria_sp_PCC_6506_gi_300868553	RYRVLLHND	DFNSMEYVVO	TLMHTVPSLT	OPQAVSIMME	AHTNGLAVVI
Microcoleus_vaginatus_FGP-2_gi_334120716	RYRVLLHND	DFNPMEYVVO	TLMATVPSLT	OPQAVSIMME	AHTNGLAVVI
REF_Synechococcus_7942_ClpS1_REF	RYRVLLHND	DFNPMEYVVO	TLMATVPSLT	OPQAVSIMME	AHTNGLAVVI
Gloeobacter_violaceus_PCC_7421_gi_37520315	LYKVLLHND	DHTPMNYVIE	VLMKTIPKMQ	PSKARKIMLE	AHNGGVAVVI
Oryza_sativa_Japonica_Group_gi_115476544	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Oryza_sativa_Japonica_Group_gi_125603506	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Zea_mays_gi_195652021	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Zea_mays_gi_226506038	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Brachypodium_distachyon_gi_357147864	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Arabidopsis_thaliana_gi_145326694	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Arabidopsis_lyrata_subsp_lyrata_gi_297841589	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
REF_Arabidopsis_thaliana_ClpS_REF	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Populus_trichocarpa_gi_224099343	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Populus_trichocarpa_gi_224111728	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Glycine_max_gi_351723283	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Medicago_truncatula_gi_357488429	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Vitis_vinifera_gi_297737852	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Vitis_vinifera_gi_225455872	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Glycine_max_gi_356531226	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Picea_sitchensis_gi_294460817	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Selaginella_moellendorffii_gi_302761288	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Physcomitrella_patens_gi_121489819	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Chlorella_variabilis_gi_307105846	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Chlamydomonas_reinhardtii_gi_159467236	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Volvox_carteri_f_nagariensis_gi_302834902	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Ktedonobacter_racemifer_DSM_44963_gi_298245523	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Guillardia_theta_gi_57335897	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Oscillatoria_sp_PCC_6506_gi_300864591	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Microcoleus_vaginatus_FGP_2_gi_334119600	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Anabaena_variabilis_ATCC_29413_gi_75909055	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Fischerella_sp_JSC-11_gi_354566811	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Nostoc_azollae_0708_gi_298491120	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Raphidiopsis_brookii_D9_gi_282895992	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Cylindrospermopsis_raciborskii_CS_505_gi_282901708	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
REF_Synechococcus_7942_ClpS2_REF	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Gloeobacter_violaceus_PCC_7421_gi_37521807	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Conexibacter_woesei_DSM_14684_gi_284045641	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Patulibacter_sp_I11_gi_367468593	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI
Gloeobacter_violaceus_PCC_7421_gi_37522100	PYRVLLHND	NYNRREYVVO	VLMKVIPGMT	VDNAVNIMOE	AHVNGLSVVI

Rubrobacter_xylanophilus_DSM_9941_gi_108803856	RCHRELAELY	REGLKAELI	ST-IEPDG	--	-----
Anabaena_variabilis_ATCC_29413_gi_75907498	TCAQEHAEFY	CETLKDHGLS	ST-IEPD	---	-----E
Fischerella_sp_JSC-11_gi_354566131	TCAQEPAEFY	CETLKNHGLT	ST-IEPE	---	-----E
Nostoc_azollae_0708_gi_298490087	TCAQEHAEFY	CETLKGHGLS	ST-IEPD	---	-----
Raphidiopsis_brookii_D9_gi_282897015	SCALEHAIFY	CESLNNHGLT	ST-IEPD	---	-----D
Cylindrospermopsis_raciborskii_CS-505_gi_282899028	SCALEHAIFY	CESLNNYGLT	ST-IEPD	---	-----D
Oscillatoria_sp_PCC_6506_gi_300868553	ICAQEHAEFY	SETLNNHGLI	ST-IEPD	---	-----E
Microcoleus_vaginatus_FGP-2_gi_334120716	VCALEHAIFY	AETLNNHGLS	SS-IEPD	---	-----D
REF_Synechococcus_7942_ClpS1_REF	TCDIEPAIFY	CEOLKSHGLE	OO-----	-----	H
Gloeobacter_violaceus_PCC_7421_gi_37520315	VCALEHAIFY	SESLNRHNL	ST-YEPD	---	-----C
Oryza_sativa_Japonica_Group_gi_115476544	ICSQSEAEFH	CTSLRGNGLR	SS-IEPASGG	---	-----C
Oryza_sativa_Japonica_Group_gi_125603506	ICSQSEAEFH	CTSLRGNGLR	SS-IEPASGG	---	-----C
Zea_mays_gi_195652021	VCSQSEAEFH	CTSLRGNGLR	SS-IEPASGG	---	-----C
Zea_mays_gi_226506038	VCSQSEAEFH	CTSLRGNGLR	SS-IEPASGG	---	-----C
Brachypodium_distachyon_gi_357147864	VCSQSEAEFH	CTSLRGNGLR	SS-IEPASGG	---	-----C
Arabidopsis_thaliana_gi_145326694	----ADAEOH	CMOLRGNLL	SS-VEPDGG	---	-----C
Arabidopsis_lyrata_subsp_lyrata_gi_297841589	VCAQADAEFH	CMOLRGNLL	SS-VEPDGG	---	-----C
REF_Arabidopsis_thaliana_ClpS_REF	VCAQADAEFH	CMOLRGNLL	SS-VEPDGG	---	-----C
Populus_trichocarpa_gi_224099343	ICAQADAEFH	CMOLRGNLL	SS-IEPASGG	---	-----C
Populus_trichocarpa_gi_224111728	ICTQADAEFH	CMOLRGNLL	SS-IEPASGG	---	-----C
Glycine_max_gi_351723283	ICDOADAEDH	CTOLRGNLL	SS-IEPASGG	---	-----C
Medicago_truncatula_gi_357488429	ICAQADAEFH	CMOLRGNLL	SS-IEPASGG	---	-----C
Vitis_vinifera_gi_297737852	----ADAEDH	CMOLRGNLL	SS-IEPASGG	---	-----C
Vitis_vinifera_gi_225455872	ICAQVDAEDH	CMOLRGNLL	SS-IEPASGG	---	-----C
Glycine_max_gi_356531226	VCAQVDAEDH	CMOLRGNLL	SS-IEPADGG	G-----	
Picea_sitchensis_gi_294460817	ICAQVDAEEH	CTOLRGNLL	SS-IEPASGG	---	-----C
Selaginella_moellendorffii_gi_302761288	VCSQEDAEFH	CTOLRANGL	SS-IEPASGG	S-----	
Physcomitrella_patens_gi_121489819	VCPOEDAEDY	CMOLRTNGL	SS-IEPAS	---	-----C
Chlorella_variabilis_gi_307105846	CCAQDKAELY	CESLRLNGLI	AT-IEPAGTG	GSDGTSSS	
Chlamydomonas_reinhardtii_gi_159467236	ACPODNAERY	CEGLRLNGLT	ST-IEPGG	---	-----C
Volvox_carteri_f_nagariensis_gi_302834902	ACPODNAERY	CEGLRLNGLT	ST-IEPAG	---	-----R
Ktedonobacter_racemifer_DSM_44963_gi_298245523	VCPHELAEHY	QERLLGYALT	VT-IEPE	---	-----
Guillardia_theta_gi_57335897	VWVMEAEAY	SDVLRSAGLR	SD-IDPE	---	-----
Oscillatoria_sp_PCC_6506_gi_300864591	VGPOEOAELY	HMOLSRAGLT	MAPLEQA	---	-----
Microcoleus_vaginatus_FGP_2_gi_334119600	VGPOEOAELY	HMOLSRAGLT	MAPLEST	---	-----
Anabaena_variabilis_ATCC_29413_gi_75909055	VGPOEPAELY	HQOLRRAGLT	MAPLEAA	---	-----
Fischerella_sp_JSC-11_gi_354566811	TGPOEPAELY	HQOLRRAGLT	MAPLEAA	---	-----
Nostoc_azollae_0708_gi_298491120	VGPOEPAELY	HQOLRRAGLT	MAPLEGA	---	-----
Raphidiopsis_brookii_D9_gi_282895992	VGPOEPAELY	HQOLRRAGLT	MAPLEAA	---	-----
Cylindrospermopsis_raciborskii_CS_505_gi_282901708	VGPOEPAELY	HQOLRRAGLT	MAPLEAA	---	-----
REF_Synechococcus_7942_ClpS2_REF	SGPOEPAELY	HEOLRREGLT	MAPLEAA	---	-----
Gloeobacter_violaceus_PCC_7421_gi_37521807	VGPLEPAELY	HEOLSRAGLT	MAPLEQA	---	-----
Conexibacter_woesei_DSM_14684_gi_284045641	SGOREVAELY	WEOLGAGLT	MAPLEQG	---	-----
Patulibacter_sp_111_gi_367468593	TGHKELAEHY	WEOLRDAGLT	MAPLEQA	---	-----
Gloeobacter_violaceus_PCC_7421_gi_37522100	QGPREVAELV	CEKLVDRGLI	SDCCES	---	-----