

	Xanthomonas oryzae	166711938	ESLQKALRGLETGKIGLDPT	G	LDLSSIEDDIAALKRELKAPGPERLFYVADAFRAG
	Xanthomonas fuscans	294666705	-----	-	-----T-----
	Xanthomonas campestris	289668839	-----S-----	-	-----T-----
	Xanthomonas axonopodis	161485715	-----	-	-----T-----
	Xanthomonas albilineans	285018123	-----	-	---RN---L---RH-----
	Xanthomonas gardneri	325922458	-----	-	-----
Xanthomonadales	Xanthomonas perforans	325925176	-----	-	-----T-----
	Xanthomonas vesicatoria	325915492	-----	-	---G-E-M-----
	Pseudoxanthomonas spadix	357417417	-----V-----	-	---G---M-S-R-----G-----
	Pseudoxanthomonas suwonensis	319787363	--V-----V-F--	-	---AD-E-L-T-R-----
	Rhodanobacter sp. 2APBS1	352082139	-----I--T--N--	-	---GTD-GL-V---RE-R-D-V-HL-----
	Stenotrophomonas sp. SKA14	254524347	--V-----V-F--	-	---AN-E-LQT-R-----F-----
	Stenotrophomonas maltophilia	194365589	--M-----V-F--	-	---TN---LQT-R-----F-----
	Xylella fastidiosa	15837709	-----V-----V-E--	-	-----LVV-----A-----
	Marinobacter sp. ELB17	126664879	-----V-SD-F-EM	L	SEFD--ESRQT-T---NV--A--IW-IG-----
	Aeromonas hydrophila	117618944	---H-----T-F--M	-	V--NAP-SLTRIRH--QDA-A--I--I-----
Aeromonas salmonicida	145298639	---H---S---T-F--M	-	V--NAP-SLTRIRH--QDA-CD-IW-I-----	
Arsenophonus nasoniae	284006380	--M-----VAAT-F--K	-	V--DEF-SLTKIR---DA-A--IW-I-----	
Azotobacter vinelandii	226946317	--V-----V-VS-F--K	-	--PGNPEAGSI---TV--A--IW-----	
Candidatus Hamiltonella	238897353	-----V-AT---K	-	VS-NDPEA-TSIR---DA-G--IW-I-----	
Candidatus Regiella	304414251	-----V-AT---K	-	VN-DDPQALSKIR---EA-A--IW-I-----	
Cellvibrio japonicus	192362421	-----V-SA-FESK	-	V-YTT-EGA-KVR---TTA-A--IW-G---M-	
Citrobacter youngae	283835095	-----V-AT-F--K	-	VS-DDPEALTKIR---DA-A--IW-I-----	
Cronobacter sakazakii	156935438	--M-----V-AT-F--K	-	VS-DDPEALTKIR---DA-A--IW-I-----	
Dickeya dadantii	307132640	-----V-AT-F--K	-	V--DDPEALTKIR---DA-GD-IW-L-----	
Edwardsiella ictaluri	238918633	-----V-AS-F--K	-	VN-DDPQALTKIR---DA-A--IW-I-----	
Enterobacter cancerogenus	261338962	-----V-AT-F--K	-	VS-DDPEALTKIR---DA-A--IW-I-----	
Erwinia tasmaniensis	188532866	--M-----V-AN-F--K	-	V--NDPEALTTIR---DA-SD-IW-I-----	
Escherichia coli	110640245	-----V-AT-F--K	-	VS-DDPEALTKIR---DA-A--IW-I-----	
Idiomarina loihiensis	56460088	--M-----L-AS-F--I	-	V--EAK-ARSKVI---E--A--IW-I---L-	
Klebsiella pneumoniae	206579070	-----V-AT-F--K	-	VS-DDPEALTKIR---DA-A--IW-I-----	
Marinobacter algicola	149375766	-----M---V-SD-FEEK	-	V--NTT-GQET-TQ--NV--A--W-IG-----	
Marinomonas sp. MWYL1	152998030	-----V-SD-FN-Q	-	--FAE-NSKEK-AY--QS--SD-IW-IG---S-	
Moritella sp. PE36	149908713	--M---I---I--N-F--E	-	VN-ND-SAA-KIRQ--TEA-A--I--I--Y-I-	
Nitrosococcus oceani	77166030	-----S---TD-FNEK	-	V--AA--VVET-RYQ-RV-SAD-IY-L-----	
Oceanospirillum sp. MED92	89095225	-----V-AT-F--I	-	I-IT--ARSTIV--M-E--A--IW-LG---M-	
Pantoea ananatis	291616228	--V-----V-AN-F--K	-	VH-DDAEALTRIR---DA-SD-IW-I-----	
Pectobacterium carotovorum	227327742	-----V-AT-F--K	-	V--DDPEALTKIR---DA-A--IW-I-----	
Photobacterium asymbiotica	253988043	-----V-AT-F--K	-	V--DDPEALTKIR---DA-G--IW-I-----	
Proteus mirabilis	227358194	--M-----V-AT-F--K	-	VN-DDPEALTKIR---EA-SD-IW-I-----	
Providencia stuartii	183601001	--M-----F-AT-F--K	-	VSQDDPEALTRIR---DA-A--IW-I-----	
Pseudomonas aeruginosa	15599950	--V-----V-AT-F--K	-	---NDPEADSI---TV-SA-VW-----	
Saccharophagus degradans	90022373	-----V-SA-FE-R	-	V--TGDNALELIR-D-ST--A--IW-----	
Salmonella enterica	161504813	-----V-AT-F--K	-	VS-DDPEALTKIR---DA-A--IW-I-----	
Serratia odorifera	270263912	-----V-AT-F--K	-	VN-DDPEALTKIR---DA-CD-IW-I-----	
Serratia proteamaculans	157368959	-----V-AT-F--K	-	VS-DDPEALTKIR---DA-SD-IW-I-----	
Shewanella amazonensis	119775635	--V-----VSRN-F--I	-	V--DA-ALQKIRH---E--AD-IW-IG-----	
Shigella sonnei	74310651	-----V-AT-F--K	-	VS-DDPEALTKIR---DA-A--IW-I-----	
Sodalis glossinidius	85058398	-----V-AS-F--K	-	VN-DDPEALTT-R---DA-G--IW-----	
Teredinibacter turnerae	254787220	-----V-SA-FE-R	-	---T-D-A-DRIRHD-AT--A--IW-IG-----	
Vibrio shilonii	149190314	-----V-AT-F-EM	-	V--DAP-ALSKIRH---EA-A--IW-I-----	
Xenorhabdus bovienii	290474746	--M-----V-VT-F--K	-	VN-DDPQSLTKIRS---SA-A--IW-----	
Yersinia enterocolitica	123440986	-----V-AT-F--K	-	VS-DDPEALTKIR---EA-SD-IW-I-----	

Figure S15

Partial sequence alignment of a conserved region of carbamoyl phosphate synthase large subunit a 1 aa insert that is present in all Xanthomonadales. The CSI has also been found to be shared by *Marinobacter* sp. ELB17.