

| | | 782 | 830 |
|-----------------------------|------------------------------|---|---|
| Xanthomonadales | Stenotrophomonas maltophilia | 194366403 | PKSLLRHKLAVSTLDELANGEFQHLIGD ANADAKKVKRVVLCSGKVVYVD |
| | Stenotrophomonas sp. SKA14 | 254522086 | -----K---I-P DA--P-H---I-M-A----- |
| | Xylella fastidiosa | 9106591 | -----E---D-Q---P -K--S----- |
| | Xanthomonas campestris | 188992180 | -----S-E---D-Q---P -K--A----- |
| | Xanthomonas fuscans | 294625477 | -----S-E---D-Q---P -K--A-R----- |
| | Xanthomonas axonopodis | 77748592 | -----S-E---E-----P -K--A----- |
| | Xanthomonas oryzae | 188577095 | -----S-K---D-----P SK-EP-----IA----- |
| | Xanthomonas albilineans | 285018444 | -----S-E---D-----P -K--A----- |
| | Xanthomonas vesicatoria | 325914050 | -----S-E---E-----P -K--G----- |
| | Xanthomonas gardneri | 325919392 | -----S-E---D-Q---P -K--A----- |
| | Xanthomonas perforans | 325925702 | -----S-E-M-E-Q---P PK--P-----A-A----- |
| | Pseudoxanthomonas spadix | 357417263 | -----S-E-M-E-Q---P -S----- |
| | Pseudoxanthomonas suwonensis | 319787382 | -----S-LV-E H RALA----- |
| | Rhodanobacter sp. 2APBS1 | 352081385 | -----S-TV-DE V DQINKAD-T-L--G----- |
| | Acinetobacter haemolyticus | 294651214 | -----P---K-E---E-T-NA-E I DAL-P-G----F----- |
| | Aeromonas salmonicida | 145299313 | -----P---SME-V-T-TV-E I DEL-P-----M-A----- |
| | Aggregatibacter aphrophilus | 251792222 | -----K-T-S-ED-H-T-HSVLD- L -DL-S--I---M----- |
| | Alcanivorax borkumensis | 110834357 | -----PM---S-E---E-K-HNV-E I DDI-P-N----M----- |
| | Alteromonas macleodii | 239993976 | -----P---S-E-----QV-SE V DSI----- |
| | Arsenophonus nasoniae | 284007862 | -----P-T-S-----T-PA-E I DPLN--ID--LI----- |
| Candidatus Regiella | 304414842 | -----E-T--ED--R-EMVLP- Q GKR--ES----- | |
| Chromohalobacter salexigens | 92113343 | -----P---S---A-PA-E V DEL-PQG----M----- | |
| Citrobacter koseri | 157146668 | -----P-----A-PA-E V DEL-PQG----A----- | |
| Cronobacter turicensis | 260597124 | -----P--T-----Q-PA-E I DEL-P-A----- | |
| Dickeya dadantii | 307130097 | -----P--I-S-E---Q-S-PA-E I DPI-PQ-----M----- | |
| Edwardsiella tarda | 294637434 | -----E---Q-Q-TV-PE I DQL-NNQ-T-L--G----- | |
| Enhydrobacter aerosaccus | 257453551 | -----P---S-----T-LPA-E I DEL-P-G----M----- | |
| Enterobacter cancerogenus | 261341312 | -----P---S-E---A-PA-E I DALE-S----- | |
| Erwinia tasmaniensis | 188534431 | -----P---S-E---T-LPA-E I DEL-P-G----M----- | |
| Escherichia coli | 43019 | -----P---S---I-T-TV-E I DELAP-D----M----- | |
| Haemophilus influenzae | 145633339 | -----P---EM-D-DHG-NA-E I DDLNP-----F----- | |
| Idiomarina loihiensis | 56460609 | -----P---SM-----T-MPA-E I DEL-PQA----- | |
| Klebsiella pneumoniae | 206575964 | -----P---S---I-S-NV-E L D-I-P-Q-----M----- | |
| Mannheimia haemolytica | 254361862 | -----P--I-S-S---D-T-NI-E I DTL-SAQ-----M-----F- | |
| Moritella sp. PE36 | 149911921 | -----ST-----Q-T-LV-DE I DAL-SGQMR-II-----F- | |
| Nitrococcus mobilis | 88811364 | -----P--I-----S-PA-E V DDL-PQG----- | |
| Pantoea sp. aB | 304395707 | -----P---SM---I-K-NV-PE V DAL-P-Q-R--M----- | |
| Pasteurella dagmatis | 260914173 | -----P--I-S-----S-PA-E V EEL-PAA----- | |
| Pectobacterium atrosepticum | 50120300 | -----P-CI-M-----T-AA-DE V DAL-PTQ-----F----- | |
| Photobacterium damsela | 269103075 | -----P---S-----K-TV-E A DEL-P-D----- | |
| Photorhabdus asymbiotica | 253990448 | -----P---S-----D-K-LPV-E L DELNPAD----M----- | |
| Proteus mirabilis | 197284466 | -----P---SM-----S-PV-E I DEINP-D----M----- | |
| Providencia alcalifaciens | 212712445 | -----I---ED---S-TV-PE I DSL-P--D----- | |
| Pseudomonas aeruginosa | 152984422 | -----P-T-S-----T-LPA-E I DDL-P-A----- | |
| Serratia proteamaculans | 157369510 | -----P---S-E---T-LPA-E I DEL-P-G----M----- | |
| Shigella boydii | 82543153 | -----P-I-S-----SM-PA-E V DDI-PQG-----M----- | |
| Sodalis glossinidius | 85058854 | -----P-CT--E---E-N-SA-PE I DAL-P-Q-----F-----F- | |
| Vibrio fischeri | 59711430 | -----P---S-----K-EPV-E I DAL-P-G----- | |
| Xenorhabdus bovienii | 290474111 | -----P--T-S-----S-LPA-E I DEL-P-GI---M----- | |
| Yersinia pestis | 22126943 | | |

Figure S24

Partial sequence alignment of a conserved region of 2-oxoglutarate-dehydrogenase E1 component showing a 1 aa deletion that is commonly present in subclade of Xanthomonadales except *Rhodanobacter* sp. 2APBS1