Predicted Antitoxin (Blue Pentagon) Domain ID: D148

- -- RefSeq Protein Description: Arc family DNA-binding protein
- -- TADB Annotation: No Hit
- -- NCBI-CDD Annotation: PRK13982 superfamily
- -- HHpred(Pfam) Annotation: RHH\_7; Transcriptional regulator, RHH-like, CopG (87.89%)
- -- HHpred(PDB) Annotation: TRAFFICKING PROTEIN B, TRAFFICKING PROTEIN (96.39%)

Brasilonema sennae CENA114 (TA-Like pair: WP 169262989.1 & WP 169262988.1) Ochrobactrum tritici (TA-Like pair: WP\_176038693.1 & WP\_176038692.1) Maribius salinus (TA-Like pair: WP 073128443.1 & WP 073128442.1) Nocardiopsis baichengensis YIM 90130 (TA-Like pair: WP 017559228.1 & WP 017559227.1) Azospirillum baldaniorum (TA-Like pair: WP\_014238689.1 & WP\_144019070.1) Deferrisoma camini S3R1 (TA-Like pair: WP 025321621.1 & WP 025321622.1) Nitrospira moscoviensis (TA-Like pair: WP 053380260.1 & WP 053380261.1) Nitrospirillum amazonense CBAmc (TA-Like pair: WP\_145727596.1 & WP\_088872336.1) Roseicella frigidaeris (TA-Like pair: WP 111470760.1 & WP 165838915.1) Pirellulimonas nuda (TA-Like pair: WP 197527265.1 & WP 197527264.1) Defluviicoccus vanus (TA-Like pair: WP 190260929.1 & WP 190260928.1) Roseiarcus fermentans (TA-Like pair: WP 113893042.1 & WP 170153423.1) Kaistia hirudinis (TA-Like pair: WP 183396766.1 & WP 183396765.1) Paracraurococcus ruber (TA-Like pair: WP 133219690.1 & WP 133219689.1) Roseiarcus fermentans (TA-Like pair: WP 113891955.1 & WP 113891956.1) Hephaestia caeni (TA-Like pair: WP 037491284.1 & WP 037491286.1) Desulfuromonas acetexigens (TA-Like pair: WP 092056322.1 & WP 092056324.1) Fimbriimonas ginsengisoli Gsoil 348 (TA-Like pair: WP\_025228742.1 & WP\_025228743.1) Salisaeta longa DSM 21114 (TA-Like pair: WP 022835473.1 & WP 022835472.1) Rubrivirga marina (TA-Like pair: WP 143537777.1 & WP 095512521.1) Roseovarius pacificus (TA-Like pair: WP 073037158.1 & WP 073037156.1) Desulfovibrio sulfodismutans DSM 3696 (TA-Like pair: WP 163303446.1 & WP 163303445.1) Duganella levis (TA-Like pair: WP 161057314.1 & WP 161057315.1) Tepidiforma bonchosmolovskayae (TA-Like pair: WP 158066440.1 & WP 158066441.1) Belnapia moabensis DSM 16746 (TA-Like pair: WP 084112908.1 & WP 043342456.1) Tautonia plasticadhaerens (TA-Like pair: WP 145279601.1 & WP 145279600.1) Pleomorphomonas carboxyditropha (TA-Like pair: WP 100082148.1 & WP 100082147.1) Gloeobacter kilaueensis JS1 (TA-Like pair: WP 023173689.1 & WP 023173690.1) Rhodopila globiformis (TA-Like pair: WP\_104517247.1 & WP\_104517248.1) Roseivivax marinus (TA-Like pair: WP\_092814020.1 & WP\_092814018.1) Niveispirillum irakense DSM 11586 (TA-Like pair: WP 154667260.1 & WP 029012139.1) Azospirillum halopraeferens DSM 3675 (TA-Like pair: WP\_029011022.1 & WP\_051341458.1) Mesorhizobium oceanicum (TA-Like pair: WP 072601583.1 & WP 072601584.1) Azospirillum thermophilum (TA-Like pair: WP 109328665.1 & WP 109328667.1) Jannaschia formosa (TA-Like pair: WP\_115383389.1 & WP\_167767144.1) Thiocystis violascens DSM 198 (TA-Like pair: WP 041447052.1 & WP 014779512.1) Hasllibacter halocynthiae (TA-Like pair: WP 158259432.1 & WP 158259433.1) cf Phormidesmis sp LEGE 11477 (TA-Like pair: WP\_193857720.1 & WP\_193857719.1) Caenispirillum salinarum AK4 (TA-Like pair: WP 009539567.1 & WP 009539566.1) Nitrospirillum iridis (TA-Like pair: WP 184806611.1 & WP 184806609.1)

Predicted Toxin (Red Pentagon) Domain ID: D169

- -- RefSeq Protein Description: type II toxin-antitoxin system VapC family toxin
- -- TADB Annotation: VapC PAE0151; PubMed: 22539524
- -- NCBI-CDD Annotation: PIN Pae0151-like
- -- HHpred(Pfam) Annotation: PIN; PIN domain (96.66%)
- -- HHpred(PDB) Annotation: VapC toxin, VapB antitoxin (96.60%)

2 303	4 ( 151
306	4
	4 397 6
11	4 29 611
	4 4 3
5 29	4 67 4
234 234 234	4 263
119	97 2
5 195	4 470 19 19
542 541 550 36	279)
159 24	4 332 332
471 601 131 628 11	4 34 59
54 82 11 21 21 31 32 32 32 32 32 32 32 32 32 32 32 32 32	4 28 516 515
72 3 3 61	4 81
72	4
	4 (113) 266
93	4 \ 148
371 28	4 319 (
348 (349	4 15 213 2
416	4
18 41	2
123	4 564 28
35 35 19	4 33 559
	4 4
37 221	4 70
6	4 599 327
	4 35
3 142 414 567	4 6 75 61
17 137 42	4
203	4 287 11
	463
349 348 510 133	4 48 274 527
359	4 30 2 22
39 7	4
661 660 3	4 662 61
59 33 27	4 352 2
11	4 47

<sup>\*\*</sup> For the description of flanking genes, please check this link: http://130.235.240.53/NetFlax/T8\_pdfs/D169.txt