Predicted Antitoxin (Blue Pentagon) Domain ID: D95
-- RefSeq Protein Description: site-specific integrase
-- TADB Annotation: No Hit
-- NCBI-CDD Annotation: Phage_int_SAM_3_DNA_BRE_C superfamily
-- HHpred(Pfam) Annotation: Phage_integr_3; Archaeal phage integrase (97.47%)
-- HHpred(PDB) Annotation: Int protein/DNA Complex (99.04%)

Streptomyces natalensis ATCC 27448 (TA-Like pair: WP 030067605.1 & WP 044367484.1) Anaerococcus rubeinfantis (TA-Like pair: WP 005398206.1 & WP 058990670.1) Paenibacillus massiliensis 2301065 DSM 16942 (TA-Like pair: WP 051091155.1 & WP 018885764.1) Streptomyces longwoodensis (TA-Like pair: WP 067239534.1 & WP 067239535.1) Mycolicibacterium senegalense (TA-Like pair: WP_074244773.1 & WP_076111910.1) Micromonospora globispora (TA-Like pair: WP_109944203.1 & WP_124811961.1) Domibacillus indicus (TA-Like pair: WP 046176512.1 & WP 046176513.1) Actinokineospora inagensis DSM 44258 (TA-Like pair: WP_084467932.1 & WP_035305064.1) Desulfotomaculum arcticum DSM 17038 (TA-Like pair: WP_092467999.1 & WP_092468000.1) Nocardioides immobilis (TA-Like pair: WP 118926592.1 & WP 118926520.1) Krasilnikovia cinnamomea (TA-Like pair: WP_130510344.1 & WP_130510343.1) Thermosporothrix hazakensis (TA-Like pair: WP_111326024.1 & WP_137686224.1) Lentzea jiangxiensis (TA-Like pair: WP 090103295.1 & WP 090103293.1) Dictyobacter vulcani (TA-Like pair: WP 151754458.1 & WP 151754459.1) Geomicrobium halophilum (TA-Like pair: WP_184403733.1 & WP_184403734.1) Nakamurella multipartita DSM 44233 (TA-Like pair: WP 015745812.1 & WP 015745813.1) Pseudonocardia dioxanivorans CB1190 (TA-Like pair: WP 013673315.1 & WP 013673314.1) Actinomycetospora cinnamomea (TA-Like pair: WP 116708278.1 & WP 116708277.1) Extibacter muris (TA-Like pair: WP 132274468.1 & WP 132273726.1) Nocardioides euryhalodurans (TA-Like pair: WP 135078563.1 & WP 135081000.1) Lysinibacillus capsici (TA-Like pair: WP 115673024.1 & WP 115673023.1) Brevibacillus reuszeri (TA-Like pair: WP 049736871.1 & WP 049736872.1) Nocardioides psychrotolerans (TA-Like pair: WP_143099784.1 & WP_170259186.1) Blautia glucerasea (TA-Like pair: WP 118581334.1 & WP 173718608.1) Blautia producta (TA-Like pair: WP 018595768.1 & WP 018595769.1) Eubacterium callanderi (TA-Like pair: WP_013380241.1 & WP_013380242.1) Halanaerobium hydrogeniformans (TA-Like pair: WP 013404638.1 & WP 013404637.1) Desulfovirgula thermocuniculi DSM 16036 (TA-Like pair: WP 051276272.1 & WP 156896739.1) Hungateiclostridium cellulolyticum CD2 (TA-Like pair: WP 010249242.1 & WP 010249244.1) Vallitalea okinawensis (TA-Like pair: WP 105618648.1 & WP 105618650.1) Fusobacterium canifelinum (TA-Like pair: WP 198481269.1 & WP 198481270.1) Ktedonosporobacter rubrisoli (TA-Like pair: WP 165423250.1 & WP 165423249.1) Nitriliruptor alkaliphilus DSM 45188 (TA-Like pair: WP 052665334.1 & WP 052665333.1) Candidatus Microthrix parvicella RN1 (TA-Like pair: WP 012231099.1 & WP 034393753.1) Terrabacter aerolatus (TA-Like pair: WP 147068378.1 & WP 147068377.1) Ktedonosporobacter rubrisoli (TA-Like pair: WP 129891600.1 & WP 165423558.1) Solibacillus silvestris StLB046 (TA-Like pair: WP 014823173.1 & WP 041865705.1) Dictyobacter kobayashii (TA-Like pair: WP 126556743.1 & WP 126556744.1) Bacillus oleivorans (TA-Like pair: WP 097158862.1 & WP 097158863.1) Desnuesiella massiliensis (TA-Like pair: WP 055669428.1 & WP 055669427.1) Ktedonobacter racemifer DSM 44963 (TA-Like pair: WP_007908471.1 & WP 007908472.1) Enterococcus faecalis V583 (TA-Like pair: WP 002355366.1 & WP 002358446.1) Ruminococcus bicirculans (TA-Like pair: WP 181984028.1 & WP 195221030.1) Candidatus Saccharimonas aalborgensis (TA-Like pair: WP 128569640.1 & WP 015641524.1) Psychrobacillus soli (TA-Like pair: WP 142607371.1 & WP 142607372.1) Candidatus Avimonas faecium (TA-Like pair: WP 191547034.1 & WP 191547033.1) Bacillus massilioanorexius (TA-Like pair: WP 019240556.1 & WP 019240555.1) Eubacterium limosum (TA-Like pair: WP 133965289.1 & WP 133965290.1) Anaerolactibacter massiliensis (TA-Like pair: WP 105304963.1 & WP 105304598.1) Eubacterium limosum (TA-Like pair: WP 133966673.1 & WP 133966672.1) Pseudoflavonifractor capillosus ATCC 29799 (TA-Like pair: WP 083870432.1 & WP 006573622.1) Aeromicrobium fastidiosum (TA-Like pair: WP 129183832.1 & WP 129183830.1) Paenibacillus psychroresistens (TA-Like pair: WP 155702671.1 & WP 155702672.1) Desulfovirgula thermocuniculi DSM 16036 (TA-Like pair: WP 027716958.1 & WP 027716959.1) Anaerobacillus arseniciselenatis (TA-Like pair: WP 071312918.1 & WP 071312917.1) Marinilactibacillus piezotolerans (TA-Like pair: WP 091897386.1 & WP 177206368.1) Oscillibacter valericigenes Sjm18 20 (TA-Like pair: WP 014120016.1 & WP 014120015.1) Lysinibacillus parviboronicapiens (TA-Like pair: WP 107949293.1 & WP 107949294.1) Pseudobacteroides cellulosolvens ATCC 35603 DSM 2933 (TA-Like pair: WP_036942399.1 & WP_036942396.1) Pectinatus frisingensis (TA-Like pair: WP 196589985.1 & WP 196589986.1) Syntrophomonas wolfei subsp wolfei str Goettingen G311 (TA-Like pair: WP 041427578.1 & WP 011641642.1) Gemmiger formicilis (TA-Like pair: WP 113998761.1 & WP 078784589.1) Desulfofundulus thermobenzoicus (TA-Like pair: WP 152944951.1 & WP 152944950.1) Actinomarinicola tropica (TA-Like pair: WP 153758198.1 & WP 153758197.1) Ruminococcus bromii (TA-Like pair: WP 101070431.1 & WP 195230166.1) Anaerotruncus massiliensis (TA-Like pair: WP 158595653.1 & WP 121587095.1) Traorella massiliensis (TA-Like pair: WP 071441502.1 & WP 071441503.1) Clostridium methoxybenzovorans SR3 (TA-Like pair: WP 084496267.1 & WP 051153115.1) Desulfosporosinus acididurans (TA-Like pair: WP 047812002.1 & WP 047812003.1) Sporobacter termitidis DSM 10068 (TA-Like pair: WP 159435324.1 & WP 073075904.1) Ktedonobacter racemifer DSM 44963 (TA-Like pair: WP 157507235.1 & WP 007910749.1) Alkalibacterium olivapovliticus (TA-Like pair: WP 106196195.1 & WP 106196193.1) Clostridium indicum (TA-Like pair: WP 117420077.1 & WP 117420078.1) Deinococcus phoenicis (TA-Like pair: WP 034360634.1 & WP 034360632.1) Succinispira mobilis DSM 6222 (TA-Like pair: WP 019880178.1 & WP 019880179.1) Anaeroarcus burkinensis DSM 6283 (TA-Like pair: WP_027938014.1 & WP_027938015.1) Blautia faecis (TA-Like pair: WP 117854336.1 & WP 187564881.1) Pelolinea submarina (TA-Like pair: WP 116224516.1 & WP 116224515.1)

** For the description of flanking genes, please check this link: http://130.235.240.53/NetFlax/T8 pdfs/D127.txt

Predicted Toxin (Red Pentagon) Domain ID: D127
-- RefSeq Protein Description: helix-turn-helix domain-containing protein

-- TADB Annotation: No Hit

- -- NCBI-CDD Annotation: HTH_17
 -- HHpred(Pfam) Annotation: DUF3853; Protein of unknown function (DUF3853) (95.77%)
- -- HHpred(PDB) Annotation: Excisionase from transposon Tn916 (96.33%)

