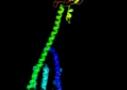


Phyre²

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Description	RVBD3645 (-) _4082986_4084635
Date	Fri Aug 9 18:20:33 BST 2019
Unique Job ID	275a4a82e2a98f1d

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c6fhtB			100.0	30	PDB header: lyase Chain: B; PDB Molecule: bacteriophytochrome,adenylate cyclase; PDBTitle: crystal structure of an artificial phytochrome regulated2 adenylate/guanulate cyclase in its dark adapted pr form
2	c4yusA			100.0	27	PDB header: lyase Chain: A; PDB Molecule: family 3 adenylate cyclase; PDBTitle: crystal structure of photoactivated adenyl cyclase of a2 cyanobacteriaoscillatoria acuminata in hexagonal form
3	c5nbyA			100.0	24	PDB header: lyase Chain: A; PDB Molecule: beta subunit of photoactivated adenyl cyclase; PDBTitle: structure of a bacterial light-regulated adenyl cyclase
4	c6r4oA			100.0	18	PDB header: membrane protein Chain: A; PDB Molecule: adenylate cyclase 9; PDBTitle: structure of a truncated adenyl cyclase bound to mant-gtp, forskolin2 and an activated stimulatory galphas protein
5	c4clIA			100.0	25	PDB header: lyase Chain: A; PDB Molecule: adenylate cyclase type 10; PDBTitle: crystal structure of human soluble adenyl cyclase in complex with2 bicarbonate
6	c5o5kC			100.0	26	PDB header: membrane protein Chain: C; PDB Molecule: adenylate cyclase; PDBTitle: x-ray structure of a bacterial adenyl cyclase soluble domain
7	c6r4pA			100.0	20	PDB header: membrane protein Chain: A; PDB Molecule: adenylate cyclase 9; PDBTitle: structure of a soluble domain of adenyl cyclase bound to an2 activated stimulatory g protein
8	c1y10C			100.0	24	PDB header: lyase Chain: C; PDB Molecule: hypothetical protein rv1264/mt1302; PDBTitle: mycobacterial adenyl cyclase rv1264, holoenzyme, inhibited state
9	c2w01C			100.0	29	PDB header: lyase Chain: C; PDB Molecule: adenylate cyclase; PDBTitle: crystal structure of the guanylyl cyclase cya2
10	c1wc6B			100.0	33	PDB header: lyase Chain: B; PDB Molecule: adenylate cyclase; PDBTitle: soluble adenyl cyclase cyac from s. platensis in complex2 with rp-atpalpha2s in presence of bicarbonate
11	d1wc1a			100.0	33	Fold: Ferredoxin-like Superfamily: Nucleotide cyclase Family: Adenylyl and guanylyl cyclase catalytic domain

12	c1cjkA	Alignment		100.0	19	PDB header: lyase/lyase/signaling protein Chain: A; PDB Molecule: adenylate cyclase, type v; PDBTitle: complex of gs-alpha with the catalytic domains of mammalian adenylyl2 cyclase: complex with adenosine 5'-(alpha thio)-triphosphate (rp),3 mg, and mn
13	c3r5gB	Alignment		100.0	26	PDB header: lyase Chain: B; PDB Molecule: cyab; PDBTitle: crystal structure of the adenylyl cyclase cyab from p. aeruginosa
14	d1azsa	Alignment		100.0	19	Fold: ferredoxin-like Superfamily: Nucleotide cyclase Family: Adenylyl and guanylyl cyclase catalytic domain
15	d1fx2a	Alignment		100.0	20	Fold: ferredoxin-like Superfamily: Nucleotide cyclase Family: Adenylyl and guanylyl cyclase catalytic domain
16	c3uvjC	Alignment		100.0	20	PDB header: lyase Chain: C; PDB Molecule: guanylate cyclase soluble subunit alpha-3; PDBTitle: crystal structure of the catalytic domain of the heterodimeric human2 soluble guanylate cyclase 1.
17	d1fx4a	Alignment		100.0	20	Fold: ferredoxin-like Superfamily: Nucleotide cyclase Family: Adenylyl and guanylyl cyclase catalytic domain
18	c3et6A	Alignment		100.0	24	PDB header: lyase Chain: A; PDB Molecule: soluble guanylyl cyclase beta; PDBTitle: the crystal structure of the catalytic domain of a eukaryotic2 guanylate cyclase
19	c3mr7B	Alignment		100.0	24	PDB header: hydrolase Chain: B; PDB Molecule: adenylate/guanylate cyclase/hydrolase, alpha/beta fold PDBTitle: crystal structure of adenylate/guanylate cyclase/hydrolase from2 silicibacter pomeroyi
20	c2wz1B	Alignment		100.0	22	PDB header: lyase Chain: B; PDB Molecule: guanylate cyclase soluble subunit beta-1; PDBTitle: structure of the catalytic domain of human soluble guanylate cyclase 12 beta 3.
21	c1ybuA	Alignment	not modelled	100.0	28	PDB header: hydrolase Chain: A; PDB Molecule: lipj; PDBTitle: mycobacterium tuberculosis adenylyl cyclase rv1900c chd, in complex2 with a substrate analog.
22	d1azsb	Alignment	not modelled	100.0	19	Fold: ferredoxin-like Superfamily: Nucleotide cyclase Family: Adenylyl and guanylyl cyclase catalytic domain
23	c1yk9A	Alignment	not modelled	100.0	25	PDB header: lyase Chain: A; PDB Molecule: adenylate cyclase; PDBTitle: crystal structure of a mutant form of the mycobacterial2 adenylyl cyclase rv1625c
24	c4wp3E	Alignment	not modelled	100.0	26	PDB header: lyase Chain: E; PDB Molecule: ma1120; PDBTitle: crystal structure of adenylyl cyclase from mycobacterium avium ma11202 wild type
25	c6aoaA	Alignment	not modelled	100.0	24	PDB header: lyase Chain: A; PDB Molecule: bacterio-rhodopsin/guanylyl cyclase 1 fusion protein; PDBTitle: monomeric crystal structure of the e497/c566d double mutant of the2 guanylyl cyclase domain of the rhgc fusion protein from the aquatic3 fungus blastocladiella emersonii
26	c5jefA	Alignment	not modelled	99.2	18	PDB header: transferase Chain: A; PDB Molecule: nitrate/nitrite sensor protein narq; PDBTitle: fragment of nitrate/nitrite sensor histidine kinase narq (wt) in2 asymmetric holo state
27	c4gn0D	Alignment	not modelled	99.1	18	PDB header: signaling protein Chain: D; PDB Molecule: hamp domain of af1503; PDBTitle: de novo phasing of a hamp-complex using an improved arcimboldo method
28	c3lnrA	Alignment	not modelled	98.6	17	PDB header: signaling protein Chain: A; PDB Molecule: aerotaxis transducer aer2; PDBTitle: crystal structure of poly-hamp domains from the p. aeruginosa soluble2 receptor aer2

29	c3zx6A		Alignment	not modelled	98.4	23	PDB header: signaling Chain: A: PDB Molecule: hamp, methyl-accepting chemotaxis protein i; PDBTitle: structure of hamp(af1503)-tsr fusion - hamp (a291v) mutant
30	d2asxa1		Alignment	not modelled	98.4	24	Fold: HAMP domain-like Superfamily: HAMP domain-like Family: HAMP domain
31	c3zrwB		Alignment	not modelled	98.1	24	PDB header: signaling protein Chain: B: PDB Molecule: af1503 protein, osmolarity sensor protein envz; PDBTitle: the structure of the dimeric hamp-dhp fusion a291v mutant
32	c4i5sA		Alignment	not modelled	98.0	21	PDB header: transferase Chain: A: PDB Molecule: putative histidine kinase covs; vick-like protein; PDBTitle: structure and function of sensor histidine kinase
33	c4ctiA		Alignment	not modelled	97.4	23	PDB header: signaling protein Chain: A: PDB Molecule: osmolarity sensor protein envz, af1503; PDBTitle: escherichia coli envz histidine kinase catalytic part fused to2 archaeoglobus fulgidus af1503 hamp domain
34	c4biuB		Alignment	not modelled	97.3	26	PDB header: transferase Chain: B: PDB Molecule: sensor protein cpxa; PDBTitle: crystal structure of cpxahdc (orthorhombic form 1)
35	c2qv6D		Alignment	not modelled	96.8	14	PDB header: hydrolase Chain: D: PDB Molecule: gtp cyclohydrolase iii; PDBTitle: gtp cyclohydrolase iii from m. jannaschii (mj0145)2 complexed with gtp and metal ions
36	c2rm8A		Alignment	not modelled	96.1	21	PDB header: signaling protein Chain: A: PDB Molecule: sensory rhodopsin ii transducer; PDBTitle: the solution structure of phototactic transducer protein2 htrii linker region from natronomonas pharaonis
37	c5llxB		Alignment	not modelled	95.9	19	PDB header: signaling protein Chain: B: PDB Molecule: diguanylate cyclase (ggdef) domain-containing protein; PDBTitle: bacteriophytocrome activated diguanylyl cyclase from idiomarina2 species a281 with gtp bound
38	c1w25B		Alignment	not modelled	95.6	16	PDB header: signaling protein Chain: B: PDB Molecule: stalked-cell differentiation controlling protein; PDBTitle: response regulator pled in complex with c-digmp
39	c4wxoA		Alignment	not modelled	95.0	14	PDB header: transferase Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: sadc (300-487) from pseudomonas aeruginosa pao1
40	c4zmuD		Alignment	not modelled	94.9	15	PDB header: lyase Chain: D: PDB Molecule: diguanylate cyclase; PDBTitle: dcsbis, a diguanylate cyclase from pseudomonas aeruginosa
41	c3i5aA		Alignment	not modelled	94.9	14	PDB header: signaling protein Chain: A: PDB Molecule: response regulator/ggdef domain protein; PDBTitle: crystal structure of full-length wpsr from pseudomonas syringae
42	c3mtkA		Alignment	not modelled	94.5	16	PDB header: transferase Chain: A: PDB Molecule: diguanylate cyclase/phosphodiesterase; PDBTitle: x-ray structure of diguanylate cyclase/phosphodiesterase from2 caldicellulosiruptor saccharolyticus, northeast structural genomics3 consortium target clr27c
43	c3ezuA		Alignment	not modelled	94.1	18	PDB header: signaling protein Chain: A: PDB Molecule: ggdef domain protein; PDBTitle: crystal structure of multidomain protein of unknown function with2 ggdef-domain (np_951600.1) from geobacter sulfurreducens at 1.95 a3 resolution
44	c6d9mA		Alignment	not modelled	94.1	18	PDB header: hydrolase Chain: A: PDB Molecule: fusion protein of endolysin,response receiver sensor PDBTitle: t4-lysozyme fusion to geobacter ggdef
45	c3breA		Alignment	not modelled	92.4	14	PDB header: signaling protein Chain: A: PDB Molecule: probable two-component response regulator; PDBTitle: crystal structure of p.aeruginosa pa3702
46	c3ignA		Alignment	not modelled	92.2	14	PDB header: transferase Chain: A: PDB Molecule: diguanylate cyclase; PDBTitle: crystal structure of the ggdef domain from marinobacter aquaeolei2 diguanylate cyclase complexed with c-di-gmp - northeast structural3 genomics consortium target mqr89a
47	c3i5cA		Alignment	not modelled	91.8	18	PDB header: signaling protein Chain: A: PDB Molecule: fusion of general control protein gcn4 and wspr response PDBTitle: crystal structure of a fusion protein containing the leucine zipper of2 gcn4 and the ggdef domain of wspr from pseudomonas aeruginosa
48	c3hvwA		Alignment	not modelled	91.7	13	PDB header: lyase Chain: A: PDB Molecule: diguanylate-cyclase (dgc); PDBTitle: crystal structure of the ggdef domain of the pa2567 protein from2 pseudomonas aeruginosa, northeast structural genomics consortium3 target par365c
49	c3ungC		Alignment	not modelled	91.4	23	PDB header: unknown function Chain: C: PDB Molecule: cmr2dhd; PDBTitle: structure of the cmr2 subunit of the crisper rna silencing complex
50	c5euhA		Alignment	not modelled	89.0	18	PDB header: membrane protein Chain: A: PDB Molecule: putative ggdef domain membrane protein; PDBTitle: crystal structure of the c-di-gmp-bound ggdef domain of p. fluorescens2 gcbc
51	c3i5bA		Alignment	not modelled	88.5	17	PDB header: signaling protein Chain: A: PDB Molecule: wspr response regulator; PDBTitle: crystal structure of the isolated ggdef domain of wpsr from2 pseudomonas aeruginosa
52	c4h54B		Alignment	not modelled	88.0	12	PDB header: transferase Chain: B: PDB Molecule: diguanylate cyclase ydeh; PDBTitle: crystal structure of the diguanylate cyclase dgc2

53	c4dmzB	Alignment	not modelled	87.7	9	PDB header: nucleotide-binding protein Chain: B: PDB Molecule: putative uncharacterized protein peld; PDBTitle: peld 156-455 from pseudomonas aeruginosa pa14, apo form
54	c4ymeA	Alignment	not modelled	86.8	20	PDB header: lyase Chain: A: PDB Molecule: sensory box/ggdef family protein; PDBTitle: crystal structure of a sensory box/ggdef family protein (cc_0091) from2 caulobacter crescentus cb15 at 1.40 a resolution (psi community3 target, shapiro)
55	c4zvhB	Alignment	not modelled	86.2	13	PDB header: signaling protein Chain: B: PDB Molecule: diguanylate cyclase dscs; PDBTitle: crystal structure of ggdef domain of the e. coli dscs - form iv
56	d1w25a3	Alignment	not modelled	85.6	16	Fold: Ferredoxin-like Superfamily: Nucleotide cyclase Family: GGDEF domain
57	c5m3cB	Alignment	not modelled	84.7	15	PDB header: hydrolase Chain: B: PDB Molecule: diguanylate cyclase; PDBTitle: structure of the hybrid domain (ggdef-eal) of pa0575 from pseudomonas2 aeruginosa pao1 at 2.8 ang. with gtp and ca2+ bound to the active3 site of the ggdef domain
58	c3hvaA	Alignment	not modelled	83.4	21	PDB header: transferase Chain: A: PDB Molecule: protein fimx; PDBTitle: crystal structure of fimx ggdef domain from pseudomonas aeruginosa
59	c3hlsE	Alignment	not modelled	81.9	22	PDB header: signaling protein Chain: E: PDB Molecule: guanylate cyclase soluble subunit beta-1; PDBTitle: crystal structure of the signaling helix coiled-coil doimain2 of the beta-1 subunit of the soluble guanylyl cyclase
60	c4w8yA	Alignment	not modelled	81.8	23	PDB header: rna binding protein Chain: A: PDB Molecule: crispr system cmr subunit cmr2; PDBTitle: structure of full length cmr2 from pyrococcus furiosus (manganese2 bound form)
61	c3pjwA	Alignment	not modelled	81.6	14	PDB header: lyase Chain: A: PDB Molecule: cyclic dimeric gmp binding protein; PDBTitle: structure of pseudomonas fluorescence lapd ggdef-eal dual domain, i23
62	c5xgdA	Alignment	not modelled	81.5	16	PDB header: transcription Chain: A: PDB Molecule: uncharacterized protein pa0861; PDBTitle: crystal structure of the pas-ggdef-eal domain of pa0861 from2 pseudomonas aeruginosa in complex with gtp
63	c3qyyB	Alignment	not modelled	80.8	11	PDB header: signaling protein/inhibitor Chain: B: PDB Molecule: response regulator; PDBTitle: a novel interaction mode between a microbial ggdef domain and the bis-2 (3, 5)-cyclic di-gmp
64	c4urgB	Alignment	not modelled	80.2	22	PDB header: lyase Chain: B: PDB Molecule: diguanylate cyclase; PDBTitle: crystal structure of ggdef domain from t.maritima (active-like dimer)
65	c3icIA	Alignment	not modelled	79.9	18	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: eal/ggdef domain protein; PDBTitle: x-ray structure of protein (eal/ggdef domain protein) from2 m.capsulatus, northeast structural genomics consortium target mcr174c
66	c6eibC	Alignment	not modelled	79.3	13	PDB header: transferase Chain: C: PDB Molecule: sensory box/ggdef family protein; PDBTitle: structure of the active ggeef domain of a diguanylate cyclase from2 vibrio cholerae.
67	c4iobA	Alignment	not modelled	77.3	16	PDB header: lyase Chain: A: PDB Molecule: diguanylate cyclase tpbb; PDBTitle: crystal structure of the ggdef domain of pa1120 (yfin or tpbb) from2 pseudomonas aeruginosa at 2.7 ang.
68	c3tvkA	Alignment	not modelled	71.6	16	PDB header: transferase Chain: A: PDB Molecule: diguanylate cyclase dgcz; PDBTitle: diguanylate cyclase domain of dgcz
69	c4zmmB	Alignment	not modelled	54.9	14	PDB header: transferase Chain: B: PDB Molecule: diguanylate cyclase; PDBTitle: ggdef domain of dcsbs complexed with c-di-gmp
70	c4euva	Alignment	not modelled	48.4	11	PDB header: signaling protein Chain: A: PDB Molecule: peld; PDBTitle: crystal structure of peld 158-ct from pseudomonas aeruginosa pao1, in2 complex with c-di-gmp, form 1
71	c4b03D	Alignment	not modelled	46.9	20	PDB header: virus Chain: D: PDB Molecule: dengue virus 1 prm protein; PDBTitle: 6a electron cryomicroscopy structure of immature dengue virus serotype2 1
72	c6ifnA	Alignment	not modelled	34.3	22	PDB header: rna binding protein Chain: A: PDB Molecule: type iii-a crisper-associated protein csm1; PDBTitle: crystal structure of type iii-a crisper csm complex
73	c5buzC	Alignment	not modelled	30.8	29	PDB header: transport protein Chain: C: PDB Molecule: snap receptor-like protein; PDBTitle: crystal structure of a complex between the snare vam3 and the hops2 vps33-vps16 subcomplex from chaetomium thermophilum
74	c4rnha	Alignment	not modelled	30.7	19	PDB header: transferase, hydrolase Chain: A: PDB Molecule: motility regulator; PDBTitle: pamora tandem diguanylate cyclase - phosphodiesterase, c-di-gmp2 complex
75	c3j2pD	Alignment	not modelled	29.0	17	PDB header: viral protein Chain: D: PDB Molecule: small envelope protein m; PDBTitle: cryoem structure of dengue virus envelope protein heterotetramer
76	c2x5eA	Alignment	not modelled	25.0	15	PDB header: unknown function Chain: A: PDB Molecule: upf0271 protein pa4511; PDBTitle: crystal structure of the hypothetical protein pa4511 from2 pseudomonas aeruginosa
77	c6abeC	Alignment	not modelled	23.1	26	PDB header: viral protein/rna Chain: C: PDB Molecule: polymerase pb2; PDBTitle: structure of influenza d virus polymerase bound to vrna promoter in2 mode b conformation (class b2)

78	c5wsnD	Alignment	not modelled	22.7	23	PDB header: virus Chain: D: PDB Molecule: m protein; PDBTitle: structure of japanese encephalitis virus
79	c5ireD	Alignment	not modelled	21.8	20	PDB header: virus Chain: D: PDB Molecule: m protein; PDBTitle: the cryo-em structure of zika virus
80	c5azdA	Alignment	not modelled	20.9	18	PDB header: transport protein Chain: A: PDB Molecule: bacteriorhodopsin; PDBTitle: crystal structure of thermophilic rhodopsin.
81	c4biyD	Alignment	not modelled	20.2	15	PDB header: transferase Chain: D: PDB Molecule: sensor protein cpxa; PDBTitle: crystal structure of cpxahdc (monoclinic form 2)
82	c6abfC	Alignment	not modelled	18.2	26	PDB header: viral protein/rna Chain: C: PDB Molecule: polymerase pb2; PDBTitle: structure of influenza d virus polymerase bound to vrna promoter in2 mode b conformation (class b1)
83	c2d9dA	Alignment	not modelled	17.2	25	PDB header: chaperone Chain: A: PDB Molecule: bag family molecular chaperone regulator 5; PDBTitle: solution structure of the bag domain (275-350) of bag-family2 molecular chaperone regulator-5
84	d1tlha	Alignment	not modelled	16.8	36	Fold: Anti-sigma factor AsiA Superfamily: Anti-sigma factor AsiA Family: Anti-sigma factor AsiA
85	c1p58E	Alignment	not modelled	16.1	14	PDB header: virus Chain: E: PDB Molecule: envelope protein m; PDBTitle: complex organization of dengue virus membrane proteins as revealed by 2.9 angstrom cryo-em reconstruction
86	c3dcaC	Alignment	not modelled	15.4	26	PDB header: structural genomics, unknown function Chain: C: PDB Molecule: rpa0582; PDBTitle: crystal structure of the rpa0582- protein of unknown2 function from rhodopseudomonas palustris- a structural3 genomics target
87	d1veha	Alignment	not modelled	15.4	31	Fold: Alpha-lytic protease prodomain-like Superfamily: Fe-S cluster assembly (FSCA) domain-like Family: NifU C-terminal domain-like
88	c5b2nA	Alignment	not modelled	14.7	14	PDB header: transport protein Chain: A: PDB Molecule: chloride pumping rhodopsin; PDBTitle: crystal structure of the light-driven chloride ion-pumping rhodopsin,2 clp, from nonlabens marinus
89	c2w6bA	Alignment	not modelled	14.3	21	PDB header: signaling protein Chain: A: PDB Molecule: rho guanine nucleotide exchange factor 7; PDBTitle: crystal structure of the trimeric beta-pix coiled-coil2 domain
90	d1q8ka2	Alignment	not modelled	14.1	16	Fold: Ferredoxin-like Superfamily: eIF-2-alpha, C-terminal domain Family: eIF-2-alpha, C-terminal domain
91	d1u7la	Alignment	not modelled	13.5	30	Fold: Vacuolar ATP synthase subunit C Superfamily: Vacuolar ATP synthase subunit C Family: Vacuolar ATP synthase subunit C
92	d1zbxbl	Alignment	not modelled	12.1	7	Fold: ORC1-binding domain Superfamily: ORC1-binding domain Family: ORC1-binding domain
93	c4wrtC	Alignment	not modelled	11.9	26	PDB header: transferase/rna Chain: C: PDB Molecule: pb2; PDBTitle: crystal structure of influenza b polymerase with bound vrna promoter2 (form flub2)
94	c6c5wA	Alignment	not modelled	11.5	9	PDB header: membrane protein Chain: A: PDB Molecule: calcium uniporter; PDBTitle: crystal structure of the mitochondrial calcium uniporter
95	d2dfa1	Alignment	not modelled	11.3	22	Fold: 7-stranded beta/alpha barrel Superfamily: Glycoside hydrolase/deacetylase Family: LamB/YcsF-like
96	c1z5sD	Alignment	not modelled	10.8	30	PDB header: ligase Chain: D: PDB Molecule: ran-binding protein 2; PDBTitle: crystal structure of a complex between ubc9, sumo-1,2 rangap1 and nup358/ranbp2
97	d1f6ga	Alignment	not modelled	10.7	15	Fold: Voltage-gated potassium channels Superfamily: Voltage-gated potassium channels Family: Voltage-gated potassium channels
98	d1v6ta	Alignment	not modelled	10.6	14	Fold: 7-stranded beta/alpha barrel Superfamily: Glycoside hydrolase/deacetylase Family: LamB/YcsF-like
99	c2vg2C	Alignment	not modelled	10.5	14	PDB header: transferase Chain: C: PDB Molecule: undecaprenyl pyrophosphate synthetase; PDBTitle: rv2361 with ipp