


























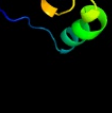
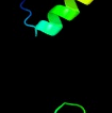
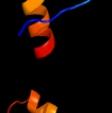
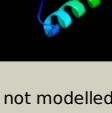


Phyre2

Email	mdejesus@rockefeller.edu
Description	RVBD2871 (-)_3183148_3183405
Date	Wed Aug 7 12:50:54 BST 2019
Unique Job ID	ba943b1ea2457b55

Detailed template
information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c5x3tA_	 Alignment		96.4	31	PDB header: antitoxin/toxin Chain: A: PDB Molecule: antitoxin vapb26; PDBTitle: vapbc from mycobacterium tuberculosis
2	c2bj3D_	 Alignment		94.6	17	PDB header: transcription Chain: D: PDB Molecule: nickel responsive regulator; PDBTitle: nkr-apo
3	d2bsqe1	 Alignment		94.2	16	Fold: Ribbon-helix-helix Superfamily: Ribbon-helix-helix Family: Trafficking protein A-like
4	c1q5vB_	 Alignment		93.7	28	PDB header: transcription Chain: B: PDB Molecule: nickel responsive regulator; PDBTitle: apo-nkr
5	d2bj7a1	 Alignment		93.7	18	Fold: Ribbon-helix-helix Superfamily: Ribbon-helix-helix Family: CopG-like
6	c2ca9B_	 Alignment		93.2	18	PDB header: transcription Chain: B: PDB Molecule: putative nickel-responsive regulator; PDBTitle: apo-nkr from helicobacter pylori in closed trans-2 conformation
7	c2k5jB_	 Alignment		92.6	16	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: uncharacterized protein yiif; PDBTitle: solution structure of protein yiif from shigella flexneri2 serotype 5b (strain 8401) . northeast structural genomics3 consortium target sft1
8	d1p94a_	 Alignment		92.5	30	Fold: Ribbon-helix-helix Superfamily: Ribbon-helix-helix Family: CopG-like
9	c6a7vU_	 Alignment		92.5	39	PDB header: toxin/antitoxin Chain: U: PDB Molecule: antitoxin vapb11; PDBTitle: crystal structure of mycobacterium tuberculosis vapbc11 toxin-2 antitoxin complex
10	c2h1oH_	 Alignment		90.8	12	PDB header: gene regulation/dna complex Chain: H: PDB Molecule: trafficking protein a; PDBTitle: structure of fitab bound to ir36 dna fragment
11	d2hzaa1	 Alignment		90.1	28	Fold: Ribbon-helix-helix Superfamily: Ribbon-helix-helix Family: CopG-like

12	d2hzab1	Alignment		88.3	28	Fold: Ribbon-helix-helix Superfamily: Ribbon-helix-helix Family: CopG-like
13	c2kelB	Alignment		85.5	21	PDB header: transcription repressor Chain: B: PDB Molecule: uncharacterized protein 56b; PDBTitle: structure of the transcription regulator svtr from the2 hyperthermophilic archaeal virus sirv1
14	c6g1nB	Alignment		85.0	23	PDB header: antitoxin Chain: B: PDB Molecule: antitoxin hicb; PDBTitle: crystal structure of the burkholderia pseudomallei antitoxin hicb
15	c4a1qB	Alignment		84.8	26	PDB header: viral protein Chain: B: PDB Molecule: orf e73; PDBTitle: solution structure of e73 protein from sulfolobus spindle-2 shaped virus ragged hills, a hyperthermophilic3 crenarchaeal virus from yellowstone national park
16	c4aaiB	Alignment		84.8	26	PDB header: viral protein Chain: B: PDB Molecule: orf e73; PDBTitle: thermostable protein from hyperthermophilic virus ssv-rh
17	c4p7dA	Alignment		81.5	13	PDB header: toxin Chain: A: PDB Molecule: antitoxin hicb3; PDBTitle: antitoxin hicb3 crystal structure
18	c3kk4B	Alignment		81.1	27	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: uncharacterized protein bp1543; PDBTitle: uncharacterized protein bp1543 from bordetella pertussis tohama i
19	c5yrzC	Alignment		77.4	19	PDB header: antitoxin/hydrolase Chain: C: PDB Molecule: hicb; PDBTitle: toxin-antitoxin complex from streptococcus pneumoniae
20	c2k29A	Alignment		72.5	24	PDB header: transcription Chain: A: PDB Molecule: antitoxin relb; PDBTitle: structure of the dbd domain of e. coli antitoxin relb
21	c6iyaD	Alignment	not modelled	69.6	16	PDB header: antitoxin Chain: D: PDB Molecule: transcriptional regulator copg family; PDBTitle: structure of the dna binding domain of antitoxin copaso
22	c4hv0B	Alignment	not modelled	69.3	19	PDB header: transcription, viral protein Chain: B: PDB Molecule: avtr; PDBTitle: structure and function of avtr, a novel transcriptional regulator from2 a hyperthermophilic archaeal lipothrixvirus
23	d2cpga	Alignment	not modelled	67.8	18	Fold: Ribbon-helix-helix Superfamily: Ribbon-helix-helix Family: CopG-like
24	c1ea4K	Alignment	not modelled	67.7	18	PDB header: gene regulation/dna Chain: K: PDB Molecule: transcriptional repressor copg; PDBTitle: transcriptional repressor copg/22bp dsdna complex
25	d1mnta	Alignment	not modelled	64.3	26	Fold: Ribbon-helix-helix Superfamily: Ribbon-helix-helix Family: Arc/Mnt-like phage repressors
26	c2an7A	Alignment	not modelled	62.9	34	PDB header: dna binding protein Chain: A: PDB Molecule: protein pard; PDBTitle: solution structure of the bacterial antidote pard
27	c2k6lA	Alignment	not modelled	52.6	29	PDB header: unknown function Chain: A: PDB Molecule: putative uncharacterized protein; PDBTitle: the solution structure of xacb0070 from xanthonomas2 axonopodis pv citri reveals this new protein is a member of3 the rhh family of transcriptional repressors
28	c6ajnF	Alignment	not modelled	47.5	18	PDB header: toxin Chain: F: PDB Molecule: duf1778 domain-containing protein; PDBTitle: crystal structure of atatr bound with accoa
						Fold: Ribbon-helix-helix

29	d1y9ba1	Alignment	not modelled	45.5	21	Superfamily: Ribbon-helix-helix Family: VCA0319-like
30	c1xrxD	Alignment	not modelled	40.9	38	PDB header: replication inhibitor Chain: D: PDB Molecule: seqa protein; PDBTitle: crystal structure of a dna-binding protein
31	d1xrx1	Alignment	not modelled	40.9	38	Fold: Ribbon-helix-helix Superfamily: Ribbon-helix-helix Family: SeqA N-terminal domain-like
32	c2rbfB	Alignment	not modelled	39.4	22	PDB header: oxidoreductase/dna Chain: B: PDB Molecule: bifunctional protein puta; PDBTitle: structure of the ribbon-helix-helix domain of escherichia coli puta2 (puta52) complexed with operator dna (o2)
33	c3kxeD	Alignment	not modelled	39.3	15	PDB header: protein binding Chain: D: PDB Molecule: antitoxin protein pard-1; PDBTitle: a conserved mode of protein recognition and binding in a2 pard-pare toxin-antitoxin complex
34	c4fxeB	Alignment	not modelled	37.9	24	PDB header: toxin/toxin inhibitor Chain: B: PDB Molecule: antitoxin relb; PDBTitle: crystal structure of the intact e. coli relbe toxin-antitoxin complex
35	c1u9pA	Alignment	not modelled	37.2	21	PDB header: unknown function Chain: A: PDB Molecule: parc; PDBTitle: permuted single-chain arc
36	c2mdvB	Alignment	not modelled	31.8	19	PDB header: de novo protein Chain: B: PDB Molecule: designed protein; PDBTitle: nmr structure of beta alpha alpha 38
37	d1q9ja2	Alignment	not modelled	30.7	13	Fold: CoA-dependent acyltransferases Superfamily: CoA-dependent acyltransferases Family: NRPS condensation domain (amide synthase)
38	c6bwqB	Alignment	not modelled	30.5	16	PDB header: metal binding protein Chain: B: PDB Molecule: pyridinium-3,5-bisthiocarboxylic acid mononucleotide nickel PDBTitle: larc2, the c-terminal domain of a cyclometallase involved in the2 synthesis of the npn cofactor of lactate racemase, in complex with3 mnctp
39	c6gtsC	Alignment	not modelled	29.7	13	PDB header: transcription Chain: C: PDB Molecule: duf1778 domain-containing protein; PDBTitle: structure of the atat-atar complex bound dna
40	c4pg8B	Alignment	not modelled	26.8	24	PDB header: oxidoreductase Chain: B: PDB Molecule: homoserine dehydrogenase; PDBTitle: crystal structure of s. aureus homoserine dehydrogenase at ph8.5
41	c4q2uM	Alignment	not modelled	26.6	21	PDB header: toxin/toxin repressor Chain: M: PDB Molecule: antitoxin dinj; PDBTitle: crystal structure of the e. coli dinj-yafq toxin-antitoxin complex
42	d1rkt2	Alignment	not modelled	25.1	18	Fold: Tetracyclin repressor-like, C-terminal domain Superfamily: Tetracyclin repressor-like, C-terminal domain Family: Tetracyclin repressor-like, C-terminal domain
43	c3fmtF	Alignment	not modelled	21.3	35	PDB header: replication inhibitor/dna Chain: F: PDB Molecule: protein seqa; PDBTitle: crystal structure of seqa bound to dna
44	d1vh1b	Alignment	not modelled	18.8	28	Fold: Ferredoxin-like Superfamily: Viral DNA-binding domain Family: Viral DNA-binding domain
45	c3mtjA	Alignment	not modelled	17.1	26	PDB header: oxidoreductase Chain: A: PDB Molecule: homoserine dehydrogenase; PDBTitle: the crystal structure of a homoserine dehydrogenase from thiobacillus2 denitrificans to 2.15a
46	c6dzsD	Alignment	not modelled	17.1	16	PDB header: oxidoreductase Chain: D: PDB Molecule: homoserine dehydrogenase; PDBTitle: mycobacterial homoserine dehydrogenase thra in complex with nadp
47	c1x93B	Alignment	not modelled	16.6	17	PDB header: transcription Chain: B: PDB Molecule: hypothetical protein hp0222; PDBTitle: nmr structure of helicobacter pylori hp0222
48	c6a6xC	Alignment	not modelled	16.3	23	PDB header: toxin Chain: C: PDB Molecule: antitoxin maze7; PDBTitle: the crystal structure of the mtb maze-mazf-mt9 complex
49	d1x93a1	Alignment	not modelled	15.9	16	Fold: Ribbon-helix-helix Superfamily: Ribbon-helix-helix Family: CopG-like
50	c3qoqC	Alignment	not modelled	15.6	11	PDB header: transcription/dna Chain: C: PDB Molecule: alginate and motility regulator z; PDBTitle: crystal structure of the transcription factor amr3 in complex with the2 18 base pair amr1 binding site
51	c5cegC	Alignment	not modelled	15.4	11	PDB header: toxin Chain: C: PDB Molecule: addiction module antidote protein, copg/arc/metj family; PDBTitle: x-ray structure of toxin/anti-toxin complex from mesorhizobium2 opportunistum
52	d1b3ta	Alignment	not modelled	15.3	28	Fold: Ferredoxin-like Superfamily: Viral DNA-binding domain Family: Viral DNA-binding domain
53	c3do5A	Alignment	not modelled	15.2	15	PDB header: oxidoreductase Chain: A: PDB Molecule: homoserine dehydrogenase; PDBTitle: crystal structure of putative homoserine dehydrogenase (np_069768.1)2 from archaeoglobus fulgidus at 2.20 a resolution
54	d2ve8a1	Alignment	not modelled	14.2	26	Fold: DNA/RNA-binding 3-helical bundle Superfamily: "Winged helix" DNA-binding domain Family: FtsK C-terminal domain-like
						Fold: Ribbon-helix-helix

55	dlirqa_	Alignment	not modelled	14.1	24	Superfamily: Ribbon-helix-helix Family: Omega transcriptional repressor
56	clirqB_	Alignment	not modelled	13.9	24	PDB header: gene regulation Chain: B: PDB Molecule: omega transcriptional repressor; PDBTitle: crystal structure of omega transcriptional repressor at2 1.5a resolution
57	dlebfa2	Alignment	not modelled	13.8	20	Fold: FwdE/GAPDH domain-like Superfamily: Glyceraldehyde-3-phosphate dehydrogenase-like, C-terminal domain Family: Homoserine dehydrogenase-like
58	c2lxmB_	Alignment	not modelled	13.3	27	PDB header: protein transport Chain: B: PDB Molecule: charged multivesicular body protein 5; PDBTitle: lip5-chmp5
59	dlvrpa1	Alignment	not modelled	11.8	21	Fold: Guanido kinase N-terminal domain Superfamily: Guanido kinase N-terminal domain Family: Guanido kinase N-terminal domain
60	c3h87D_	Alignment	not modelled	11.8	18	PDB header: toxin/antitoxin Chain: D: PDB Molecule: putative uncharacterized protein; PDBTitle: rv0301 rv0300 toxin antitoxin complex from mycobacterium tuberculosis
61	c2khvA_	Alignment	not modelled	11.7	20	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: phage integrase; PDBTitle: solution nmr structure of protein nmul_a0922 from2 nitrosospira multiformis. northeast structural genomics3 consortium target nmr38b.
62	dlpuga_	Alignment	not modelled	11.7	17	Fold: YbaB-like Superfamily: YbaB-like Family: YbaB-like
63	dlrfma_	Alignment	not modelled	11.6	20	Fold: L-sulfolactate dehydrogenase-like Superfamily: L-sulfolactate dehydrogenase-like Family: L-sulfolactate dehydrogenase-like
64	c2cw1A_	Alignment	not modelled	11.6	21	PDB header: de novo protein Chain: A: PDB Molecule: sn4m; PDBTitle: solution structure of the de novo-designed lambda cro fold2 protein
65	c3opyE_	Alignment	not modelled	10.6	11	PDB header: transferase Chain: E: PDB Molecule: 6-phosphofructo-1-kinase alpha-subunit; PDBTitle: crystal structure of pichia pastoris phosphofructokinase in the t-2 state
66	c3c8mA_	Alignment	not modelled	10.3	21	PDB header: oxidoreductase Chain: A: PDB Molecule: homoserine dehydrogenase; PDBTitle: crystal structure of homoserine dehydrogenase from thermoplasma2 volcanium
67	d2ay0a1	Alignment	not modelled	9.8	24	Fold: Ribbon-helix-helix Superfamily: Ribbon-helix-helix Family: PutA pre-N-terminal region-like
68	dlu6ra1	Alignment	not modelled	9.7	29	Fold: Guanido kinase N-terminal domain Superfamily: Guanido kinase N-terminal domain Family: Guanido kinase N-terminal domain
69	dlcrka1	Alignment	not modelled	9.7	14	Fold: Guanido kinase N-terminal domain Superfamily: Guanido kinase N-terminal domain Family: Guanido kinase N-terminal domain
70	c3ingA_	Alignment	not modelled	9.5	28	PDB header: oxidoreductase Chain: A: PDB Molecule: homoserine dehydrogenase; PDBTitle: crystal structure of homoserine dehydrogenase (np_394635.1) from2 thermoplasma acidophilum at 1.95 a resolution
71	c2ejwB_	Alignment	not modelled	9.4	33	PDB header: oxidoreductase Chain: B: PDB Molecule: homoserine dehydrogenase; PDBTitle: homoserine dehydrogenase from thermus thermophilus hb8
72	dli0ea1	Alignment	not modelled	9.3	36	Fold: Guanido kinase N-terminal domain Superfamily: Guanido kinase N-terminal domain Family: Guanido kinase N-terminal domain
73	d2g3ba2	Alignment	not modelled	9.1	21	Fold: Tetracyclin repressor-like, C-terminal domain Superfamily: Tetracyclin repressor-like, C-terminal domain Family: Tetracyclin repressor-like, C-terminal domain
74	c3c19A_	Alignment	not modelled	9.1	12	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein mk0293; PDBTitle: crystal structure of protein mk0293 from methanopyrus kandleri av19
75	dlg0wa1	Alignment	not modelled	8.7	43	Fold: Guanido kinase N-terminal domain Superfamily: Guanido kinase N-terminal domain Family: Guanido kinase N-terminal domain
76	d2j5pa1	Alignment	not modelled	8.7	15	Fold: DNA/RNA-binding 3-helical bundle Superfamily: "Winged helix" DNA-binding domain Family: FtsK C-terminal domain-like
77	clrrbA_	Alignment	not modelled	8.6	22	PDB header: transferase Chain: A: PDB Molecule: raf proto-oncogene serine/threonine-protein PDBTitle: the ras-binding domain of raf-1 from rat, nmr, 1 structure
78	c4xb1B_	Alignment	not modelled	8.5	25	PDB header: oxidoreductase Chain: B: PDB Molecule: 319aa long hypothetical homoserine dehydrogenase; PDBTitle: hyperthermophilic archaeal homoserine dehydrogenase in complex with2 nadph
79	dlm15a1	Alignment	not modelled	8.5	21	Fold: Guanido kinase N-terminal domain Superfamily: Guanido kinase N-terminal domain Family: Guanido kinase N-terminal domain
80	dlqh4a1	Alignment	not modelled	8.0	25	Fold: Guanido kinase N-terminal domain Superfamily: Guanido kinase N-terminal domain Family: Guanido kinase N-terminal domain
81	c6qeqD_	Alignment	not modelled	7.0	16	PDB header: dna binding protein Chain: D: PDB Molecule: pcff;

						PDBTitle: pcff from enterococcus faecalis pcf10
82	d1hwxa2	Alignment	not modelled	7.0	30	Fold: Aminoacid dehydrogenase-like, N-terminal domain Superfamily: Aminoacid dehydrogenase-like, N-terminal domain Family: Aminoacid dehydrogenases
83	c3i12A	Alignment	not modelled	6.8	13	PDB header: ligase Chain: A; PDB Molecule: d-alanine-d-alanine ligase a; PDBTitle: the crystal structure of the d-alanyl-alanine synthetase a from 2 salmonella enterica subsp. enterica serovar typhimurium str. lt2
84	d1qk1a1	Alignment	not modelled	6.6	18	Fold: Guanido kinase N-terminal domain Superfamily: Guanido kinase N-terminal domain Family: Guanido kinase N-terminal domain
85	c6noyB	Alignment	not modelled	6.4	33	PDB header: structural protein Chain: B; PDB Molecule: maintenance of carboxysome positioning b protein, mcsb; PDBTitle: structure of cyanothecce mcdb
86	d2outa1	Alignment	not modelled	6.4	29	Fold: LEM/SAP HeH motif Superfamily: Rho N-terminal domain-like Family: YqbF C-terminal domain-like
87	c5t81A	Alignment	not modelled	6.0	11	PDB header: biosynthetic protein Chain: A; PDB Molecule: epob; PDBTitle: rhombohedral crystal form of the epob nrps cyclization-docking2 bidomain from sorangium cellulosum
88	d1y88a1	Alignment	not modelled	5.8	50	Fold: SAM domain-like Superfamily: Rad51 N-terminal domain-like Family: Hypothetical protein AF1548, C-terminal domain
89	c3o8oC	Alignment	not modelled	5.4	7	PDB header: transferase Chain: C; PDB Molecule: 6-phosphofructokinase subunit alpha; PDBTitle: structure of phosphofructokinase from saccharomyces cerevisiae
90	d1v71a1	Alignment	not modelled	5.2	23	Fold: Tryptophan synthase beta subunit-like PLP-dependent enzymes Superfamily: Tryptophan synthase beta subunit-like PLP-dependent enzymes Family: Tryptophan synthase beta subunit-like PLP-dependent enzymes
91	c3d3kD	Alignment	not modelled	5.2	17	PDB header: protein binding Chain: D; PDB Molecule: enhancer of mrna-decapping protein 3; PDBTitle: crystal structure of human edc3p
92	d1gtma2	Alignment	not modelled	5.1	50	Fold: Aminoacid dehydrogenase-like, N-terminal domain Superfamily: Aminoacid dehydrogenase-like, N-terminal domain Family: Aminoacid dehydrogenases
93	c5k12F	Alignment	not modelled	5.1	33	PDB header: oxidoreductase Chain: F; PDB Molecule: glutamate dehydrogenase 1, mitochondrial; PDBTitle: cryo-em structure of glutamate dehydrogenase at 1.8 a resolution