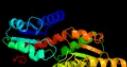
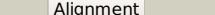
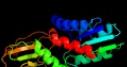
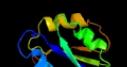
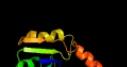
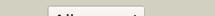
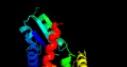
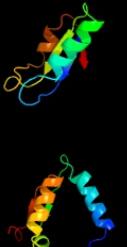
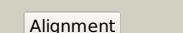
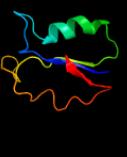
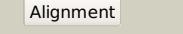
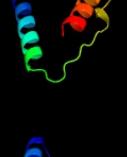
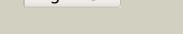
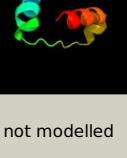
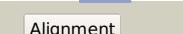
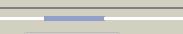
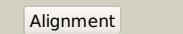


Phyre²

Email	mdejesus@rockefeller.edu
Description	RVBD0259c_(-)_310774_311517
Date	Tue Jul 23 14:50:32 BST 2019
Unique Job ID	f3f1e37a651f42c4

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c5zt7A_			100.0	19	PDB header: biosynthetic protein Chain: A: PDB Molecule: sirohydrochlorin ferrochelatase; PDBTitle: sirb from bacillus subtilis with co2+
2	c2jh3C_			100.0	24	PDB header: ribosomal protein Chain: C: PDB Molecule: ribosomal protein s2-related protein; PDBTitle: the crystal structure of dr2241 from deinococcus2 radiodurans at 1.9 a resolution reveals a multi-domain3 protein with structural similarity to chelatases but also4 with two additional novel domains
3	c2xvzA_			100.0	21	PDB header: metal binding protein Chain: A: PDB Molecule: chelatase, putative; PDBTitle: cobalt chelatase cbik (periplasmatic) from desulvobrio2 vulgaris hildenborough (co-crystallized with cobalt)
4	d1qgoa_			100.0	18	Fold: Chelatase-like Superfamily: Chelatase Family: Cobalt chelatase CbiK
5	c4ccsA_			100.0	21	PDB header: unknown function Chain: A: PDB Molecule: cbix; PDBTitle: the structure of cbix, the terminal enzyme for biosynthesis2 of siroheme in denitrifying bacteria
6	c1tjnA_			99.9	22	PDB header: lyase Chain: A: PDB Molecule: sirohydrochlorin cobaltochelatase; PDBTitle: crystal structure of hypothetical protein af0721 from archaeoglobus2 fulgidus
7	d1tjna_			99.9	22	Fold: Chelatase-like Superfamily: Chelatase Family: CbiX-like
8	d2hk6a1			99.9	16	Fold: Chelatase-like Superfamily: Chelatase Family: Ferrochelatase
9	c3lyhB_			99.9	21	PDB header: lyase Chain: B: PDB Molecule: cobalamin (vitamin b12) biosynthesis cbix protein; PDBTitle: crystal structure of putative cobalamin (vitamin b12) biosynthesis2 cbix protein (yp_958415.1) from marinobacter aquaeolei vt8 at 1.60 a3 resolution
10	d2hrca1			99.8	14	Fold: Chelatase-like Superfamily: Chelatase Family: Ferrochelatase
11	d1lbqa_			99.5	12	Fold: Chelatase-like Superfamily: Chelatase Family: Ferrochelatase

12	d3ct6a1			54.1	9	Fold: PTS system fructose IIA component-like Superfamily: PTS system fructose IIA component-like Family: DhaM-like
13	d2djia1			44.0	14	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Pyruvate oxidase and decarboxylase, middle domain
14	d3b48a1			42.2	14	Fold: PTS system fructose IIA component-like Superfamily: PTS system fructose IIA component-like Family: DhaM-like
15	c2eh6A_			35.0	14	PDB header: transferase Chain: A: PDB Molecule: acetylornithine aminotransferase; PDBTitle: crystal structure of acetylornithine aminotransferase from aquifex2 aeolicus vf5
16	d1ybha1			34.0	21	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Pyruvate oxidase and decarboxylase, middle domain
17	c2uwjE_			30.1	19	PDB header: chaperone Chain: E: PDB Molecule: type iii export protein psce; PDBTitle: structure of the heterotrimeric complex which regulates type iii2 secretion needle formation
18	d2ji7a1			29.4	12	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Pyruvate oxidase and decarboxylase, middle domain
19	d1pvda1			29.3	21	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Pyruvate oxidase and decarboxylase, middle domain
20	d1q6za1			27.0	14	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Pyruvate oxidase and decarboxylase, middle domain
21	d1ovma1		not modelled	26.2	8	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Pyruvate oxidase and decarboxylase, middle domain
22	d3clsc1		not modelled	26.2	14	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Adenine nucleotide alpha hydrolases-like Family: ETFP subunits
23	d2ez9a1		not modelled	25.6	17	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Pyruvate oxidase and decarboxylase, middle domain
24	d1ozha1		not modelled	22.4	11	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Pyruvate oxidase and decarboxylase, middle domain
25	c2e85B_		not modelled	21.0	11	PDB header: hydrolase Chain: B: PDB Molecule: hydrogenase 3 maturation protease; PDBTitle: crystal structure of the hydrogenase 3 maturation protease
26	c5ow0B_		not modelled	19.4	20	PDB header: electron transport Chain: B: PDB Molecule: electron transfer flavoprotein, beta subunit; PDBTitle: crystal structure of an electron transfer flavoprotein from 2 geobacillus metallireducens
27	d1vhna_		not modelled	18.3	14	Fold: TIM beta/alpha-barrel Superfamily: FMN-linked oxidoreductases Family: FMN-linked oxidoreductases
28	d2a5la1		not modelled	17.2	18	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: WrbA-like
						PDB header: flavoprotein

29	c5ol2E	Alignment	not modelled	16.9	19	Chain: E: PDB Molecule: electron transfer flavoprotein small subunit; PDBTitle: the electron transferring flavoprotein/butyryl-coa dehydrogenase2 complex from clostridium difficile
30	d1zpdal	Alignment	not modelled	16.8	4	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Pyruvate oxidase and decarboxylase, middle domain
31	c5ganD	Alignment	not modelled	16.5	15	PDB header: transcription Chain: D: PDB Molecule: spliceosomal protein dib1; PDBTitle: the overall structure of the yeast spliceosomal u4/u6.u5 tri-snrrp at2 3.7 angstrom
32	c2gruB	Alignment	not modelled	16.2	6	PDB header: lyase Chain: B: PDB Molecule: 2-deoxy-scyllo-inosose synthase; PDBTitle: crystal structure of 2-deoxy-scyllo-inosose synthase2 complexed with carbaglucose-6-phosphate, nad+ and co2+
33	c6nkeA	Alignment	not modelled	16.0	9	PDB header: transferase Chain: A: PDB Molecule: geranylgeranylglycerol phosphate synthase; PDBTitle: wild-type ggpps from thermoplasma volcanium
34	c4gijC	Alignment	not modelled	14.1	11	PDB header: hydrolase Chain: C: PDB Molecule: pseudouridine-5'-phosphate glycosidase; PDBTitle: crystal structure of pseudouridine monophosphate glycosidase complexed2 with sulfate
35	c5mx2r	Alignment	not modelled	13.8	33	PDB header: oxidoreductase Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: photosystem ii depleted of the mn4cao5 cluster at 2.55 a resolution
36	d2ihta1	Alignment	not modelled	13.4	16	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Pyruvate oxidase and decarboxylase, middle domain
37	c4kpuB	Alignment	not modelled	13.3	22	PDB header: electron transport Chain: B: PDB Molecule: electron transfer flavoprotein alpha/beta-subunit; PDBTitle: electron transferring flavoprotein of acidaminococcus fermentans:2 towards a mechanism of flavin-based electron bifurcation
38	c4ub6R	Alignment	not modelled	13.3	33	PDB header: electron transport, photosynthesis Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: native structure of photosystem ii (dataset-1) by a femtosecond x-ray2 laser
39	c5tisr	Alignment	not modelled	13.3	33	PDB header: photosynthesis Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: room temperature xfel structure of the native, doubly-illuminated2 photosystem ii complex
40	c5gthR	Alignment	not modelled	13.3	33	PDB header: photosynthesis Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: native xfel structure of photosystem ii (dark dataset)
41	c5ws6R	Alignment	not modelled	13.3	33	PDB header: photosynthesis Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: native xfel structure of photosystem ii (preflash two-flash dataset)
42	c5tisR	Alignment	not modelled	13.3	33	PDB header: photosynthesis Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: room temperature xfel structure of the native, doubly-illuminated2 photosystem ii complex
43	c5kaiR	Alignment	not modelled	13.3	33	PDB header: electron transport Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: nh3-bound rt xfel structure of photosystem ii 500 ms after the 2nd2 illumination (2f) at 2.8 a resolution
44	c5ws5R	Alignment	not modelled	13.3	33	PDB header: photosynthesis Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: native xfel structure of photosystem ii (preflash dark dataset)
45	c5gtiR	Alignment	not modelled	13.3	33	PDB header: photosynthesis Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: native xfel structure of photosystem ii (two flash dataset)
46	c4pj0R	Alignment	not modelled	13.3	33	PDB header: oxidoreductase, electron transport Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: structure of t.elongatus photosystem ii, rows of dimers crystal2 packing
47	c3i4jC	Alignment	not modelled	13.3	15	PDB header: transferase Chain: C: PDB Molecule: aminotransferase, class iii; PDBTitle: crystal structure of aminotransferase, class iii from deinococcus2 radiodurans
48	c5mx2R	Alignment	not modelled	13.2	33	PDB header: oxidoreductase Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: photosystem ii depleted of the mn4cao5 cluster at 2.55 a resolution
49	d1s0aa	Alignment	not modelled	12.4	15	Fold: PLP-dependent transferase-like Superfamily: PLP-dependent transferases Family: GABA-aminotransferase-like
50	c3iwpK	Alignment	not modelled	12.2	17	PDB header: metal binding protein Chain: K: PDB Molecule: copper homeostasis protein cutc homolog; PDBTitle: crystal structure of human copper homeostasis protein cutc
51	c5kair	Alignment	not modelled	12.0	33	PDB header: electron transport Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: nh3-bound rt xfel structure of photosystem ii 500 ms after the 2nd2 illumination (2f) at 2.8 a resolution
52	c4ub8R	Alignment	not modelled	12.0	33	PDB header: electron transport, photosynthesis Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: native structure of photosystem ii (dataset-2) by a femtosecond x-ray2 laser
53	c4il6R	Alignment	not modelled	12.0	33	PDB header: electron transport Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: structure of sr-substituted photosystem ii
54	c5kafr	Alignment	not modelled	12.0	33	PDB header: electron transport Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: rt xfel structure of photosystem ii in the dark state at 3.0

					a2 resolution
55	c5kafR_	Alignment	not modelled	12.0	PDB header: electron transport Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: rt xfel structure of photosystem ii in the dark state at 3.0 a2 resolution
56	c4pj0r_	Alignment	not modelled	12.0	PDB header: oxidoreductase, electron transport Chain: R: PDB Molecule: photosystem ii protein y; PDBTitle: structure of t.elongatus photosystem ii, rows of dimers crystal2 packing
57	c3iprC_	Alignment	not modelled	11.6	PDB header: transferase Chain: C: PDB Molecule: pts system, iia component; PDBTitle: crystal structure of the enterococcus faecalis gluconate2 specific eiia phosphotransferase system component
58	c5ti8A_	Alignment	not modelled	11.0	PDB header: transferase Chain: A: PDB Molecule: aminotransferase; PDBTitle: crystal structure of an aspartate aminotransferase from pseudomonas
59	d3beda1	Alignment	not modelled	10.6	Fold: PTS system fructose IIA component-like Superfamily: PTS system fructose IIA component-like Family: EIIA-man component-like
60	d2gsaa_	Alignment	not modelled	10.1	Fold: PLP-dependent transferase-like Superfamily: PLP-dependent transferases Family: GABA-aminotransferase-like
61	c6d6zA_	Alignment	not modelled	9.8	PDB header: isomerase Chain: A: PDB Molecule: nickel-dependent lactate racemase; PDBTitle: structure of the 2nd lactate racemase homolog apoprotein from2 thermoanaerobacterium thermosaccharolyticum
62	c3ckvA_	Alignment	not modelled	9.6	PDB header: unknown function Chain: A: PDB Molecule: putative uncharacterized protein; PDBTitle: crystal structure of a mycobacterial protein
63	c3lv2A_	Alignment	not modelled	9.5	PDB header: transferase Chain: A: PDB Molecule: adenosylmethionine-8-amino-7-oxononanoate aminotransferase; PDBTitle: crystal structure of mycobacterium tuberculosis 7,8-diaminopelargonic2 acid synthase in complex with substrate analog sinefungin
64	d1pdoa_	Alignment	not modelled	9.2	Fold: PTS system fructose IIA component-like Superfamily: PTS system fructose IIA component-like Family: EIIA-man component-like
65	c3wqtB_	Alignment	not modelled	9.0	PDB header: structural genomics Chain: B: PDB Molecule: cell division protein ftsa; PDBTitle: staphylococcus aureus ftsa complexed with amppnp
66	d1vkma_	Alignment	not modelled	8.9	Fold: Indigoindine synthase A-like Superfamily: Indigoindine synthase A-like Family: Indigoindine synthase A-like
67	d1nh8a2	Alignment	not modelled	8.8	Fold: Ferrodoxin-like Superfamily: GlnB-like Family: ATP phosphoribosyltransferase (ATP-PRTase, HisG), regulatory C-terminal domain
68	d1qgva_	Alignment	not modelled	8.7	Fold: Thioredoxin fold Superfamily: Thioredoxin-like Family: spliceosomal protein U5-15Kd
69	c5vyeA_	Alignment	not modelled	8.5	PDB header: lyase Chain: A: PDB Molecule: l-threonine aldolase; PDBTitle: crystal structure of l-threonine aldolase from pseudomonas putida
70	c2vbgB_	Alignment	not modelled	8.3	PDB header: lyase Chain: B: PDB Molecule: branched-chain alpha-ketoacid decarboxylase; PDBTitle: the complex structure of the branched-chain keto acid2 decarboxylase (kd2) from lactococcus lactis with 2r-1-3 hydroxyethyl-deazathdp
71	d1u7na_	Alignment	not modelled	7.9	Fold: Isocitrate/Isopropylmalate dehydrogenase-like Superfamily: Isocitrate/Isopropylmalate dehydrogenase-like Family: PlsX-like
72	c2h90A_	Alignment	not modelled	7.6	PDB header: oxidoreductase Chain: A: PDB Molecule: xenobiotic reductase a; PDBTitle: xenobiotic reductase a in complex with coumarin
73	c3mtqA_	Alignment	not modelled	7.5	PDB header: transferase Chain: A: PDB Molecule: putative phosphoenolpyruvate-dependent sugar PDBTitle: crystal structure of a putative phosphoenolpyruvate-dependent sugar2 phosphotransferase system (pts) permease (kpn_04802) from klebsiella3 pneumoniae subsp. pneumoniae mgh 78578 at 1.70 a resolution
74	d1qopa_	Alignment	not modelled	7.4	Fold: TIM beta/alpha-barrel Superfamily: Ribulose-phosphate binding barrel Family: Tryptophan biosynthesis enzymes
75	c3dodA_	Alignment	not modelled	7.3	PDB header: transferase Chain: A: PDB Molecule: adenosylmethionine-8-amino-7-oxononanoate aminotransferase; PDBTitle: crystal structure of plp bound 7,8-diaminopelargonic acid synthase2 bacillus subtilis
76	c3gr7A_	Alignment	not modelled	7.1	PDB header: oxidoreductase Chain: A: PDB Molecule: nadph dehydrogenase; PDBTitle: structure of oye from geobacillus kaustophilus, hexagonal crystal form
77	c4jicB_	Alignment	not modelled	7.1	PDB header: oxidoreductase Chain: B: PDB Molecule: gtn reductase; PDBTitle: glycerol trinitrate reductase nera from agrobacterium radiobacter
78	d2nlya1	Alignment	not modelled	7.0	Fold: 7-stranded beta/alpha barrel Superfamily: Glycoside hydrolase/deacetylase Family: Divergent polysaccharide deacetylase
					Fold: Phosphoglycerate kinase

79	d1vpea	Alignment	not modelled	6.9	16	Superfamily: Phosphoglycerate kinase Family: Phosphoglycerate kinase
80	c6fmgC	Alignment	not modelled	6.9	20	PDB header: transferase Chain: C: PDB Molecule: pts system mannose-specific transporter subunit iia; PDBTitle: structure of the mannose transporter iia domain from streptococcus2 pneumoniae
81	c4tkzA	Alignment	not modelled	6.9	26	PDB header: transferase Chain: A: PDB Molecule: putative uncharacterized protein gbs1890; PDBTitle: crystal structure of phosphotransferase system component eiia from2 streptococcus agalactiae
82	d1z41a1	Alignment	not modelled	6.7	9	Fold: TIM beta/alpha-barrel Superfamily: FMN-linked oxidoreductases Family: FMN-linked oxidoreductases
83	c5zbyA	Alignment	not modelled	6.4	14	PDB header: hydrolase Chain: A: PDB Molecule: hydrogenase maturation protease hyci; PDBTitle: crystal structure of a [nife] hydrogenase maturation protease hyci2 from thermococcus kodakarensis kod1
84	c4rfB	Alignment	not modelled	6.4	15	PDB header: oxidoreductase Chain: B: PDB Molecule: glycerol-1-phosphate dehydrogenase [nad(p)+]; PDBTitle: crystal structure of g1pdh with nadph from methanocaldococcus2 jannaschii
85	c4xfrB	Alignment	not modelled	6.2	23	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of a domain of unknown function (duf1537) from2 bordetella bronchiseptica (bb3215), target efi-511620, with bound3 citrate, domain swapped dimer, space group p6522
86	c5m99A	Alignment	not modelled	6.1	19	PDB header: hydrolase Chain: A: PDB Molecule: alpha-amylase; PDBTitle: functional characterization and crystal structure of thermostable2 amylase from thermotoga petrophila, reveals high thermostability and3 an archaic form of dimerization
87	c3h75A	Alignment	not modelled	6.1	11	PDB header: sugar binding protein Chain: A: PDB Molecule: periplasmic sugar-binding domain protein; PDBTitle: crystal structure of a periplasmic sugar-binding protein from the2 pseudomonas fluorescens
88	d1v6sa	Alignment	not modelled	5.9	13	Fold: Phosphoglycerate kinase Superfamily: Phosphoglycerate kinase Family: Phosphoglycerate kinase
89	d1dqja1	Alignment	not modelled	5.7	13	Fold: TIM beta/alpha-barrel Superfamily: FMN-linked oxidoreductases Family: FMN-linked oxidoreductases
90	c3s99A	Alignment	not modelled	5.6	17	PDB header: lipid binding protein Chain: A: PDB Molecule: basic membrane lipoprotein; PDBTitle: crystal structure of a basic membrane lipoprotein from brucella2 melitensis, iodide soak
91	c5kinC	Alignment	not modelled	5.5	22	PDB header: lyase Chain: C: PDB Molecule: tryptophan synthase alpha chain; PDBTitle: crystal structure of tryptophan synthase alpha beta complex from2 streptococcus pneumoniae
92	c5t3uA	Alignment	not modelled	5.4	9	PDB header: transport protein Chain: A: PDB Molecule: pts system, iia component; PDBTitle: crystal structure of the pts iia protein associated with the fucose2 utilization operon from streptococcus pneumoniae
93	c3vndD	Alignment	not modelled	5.3	17	PDB header: lyase Chain: D: PDB Molecule: tryptophan synthase alpha chain; PDBTitle: crystal structure of tryptophan synthase alpha-subunit from the2 psychrophile shewanella frigidimarina k14-2
94	c4r9nA	Alignment	not modelled	5.2	10	PDB header: transcription Chain: A: PDB Molecule: lm0547 protein; PDBTitle: deoR family transcriptional regulator from listeria monocytogenes.
95	d1ydha	Alignment	not modelled	5.2	11	Fold: MCP/YpsA-like Superfamily: MCP/YpsA-like Family: MoCo carrier protein-like
96	c2kc8B	Alignment	not modelled	5.1	48	PDB header: toxin/toxin repressor Chain: B: PDB Molecule: antitoxin relB; PDBTitle: structure of e. coli toxin relE (r81a/r83a) mutant in2 complex with antitoxin relB (k47-l79) peptide
97	c6erkB	Alignment	not modelled	5.1	11	PDB header: transferase Chain: B: PDB Molecule: aminotransferase; PDBTitle: crystal structure of diaminopelargonic acid aminotransferase from2 psychrobacter cryohalolentis
98	c3cf4G	Alignment	not modelled	5.1	13	PDB header: oxidoreductase Chain: G: PDB Molecule: acetyl-coa decarboxylase/synthase epsilon subunit; PDBTitle: structure of the codH component of the m. barkeri acds complex
99	c2kvca	Alignment	not modelled	5.1	13	PDB header: unknown function Chain: A: PDB Molecule: putative uncharacterized protein; PDBTitle: solution structure of the mycobacterium tuberculosis protein rv0543c,2 a member of the duf3349 superfamily. seattle structural genomics3 center for infectious disease target mytuD.17112.a