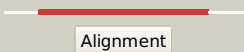

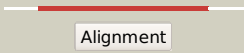
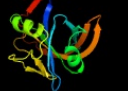


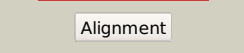



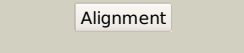

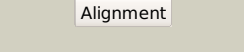



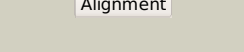

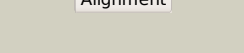

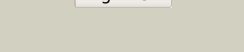



Phyre2

Email	mdejesus@rockefeller.edu
Description	RVBD1939_(-)_2192101_2192616
Date	Mon Aug 5 13:25:03 BST 2019
Unique Job ID	1efae5b32794c7b4

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c3rh7A_	 Alignment		100.0	30	PDB header: oxidoreductase Chain: A: PDB Molecule: hypothetical oxidoreductase; PDBTitle: crystal structure of a putative oxidoreductase (sma0793) from2 sinorhizobium meliloti 1021 at 3.00 a resolution
2	c5zc2B_	 Alignment		100.0	24	PDB header: flavoprotein Chain: B: PDB Molecule: p-hydroxyphenylacetate 3-hydroxylase, reductase component; PDBTitle: acinetobacter baumannii p-hydroxyphenylacetate 3-hydroxylase (hpah),2 reductase component (c1)
3	c3nfwB_	 Alignment		100.0	30	PDB header: oxidoreductase Chain: B: PDB Molecule: flavin reductase-like, fmn-binding protein; PDBTitle: crystal structure of nitrilotriacetate monooxygenase component b2 (a0r521 homolog) from mycobacterium thermoresistibile
4	c3k87B_	 Alignment		100.0	21	PDB header: oxidoreductase Chain: B: PDB Molecule: chlorophenol-4-monooxygenase component 1; PDBTitle: crystal structure of nadh:fad oxidoreductase (tftc) - fad2 complex
5	c4hx6D_	 Alignment		100.0	40	PDB header: oxidoreductase Chain: D: PDB Molecule: oxidoreductase; PDBTitle: streptomyces globisporus c-1027 nadh:fad oxidoreductase sgce6
6	c3pftA_	 Alignment		100.0	50	PDB header: oxidoreductase Chain: A: PDB Molecule: flavin reductase; PDBTitle: crystal structure of untagged c54a mutant flavin reductase (dszd) in2 complex with fmn from mycobacterium goodii
7	c4xhyA_	 Alignment		100.0	31	PDB header: oxidoreductase Chain: A: PDB Molecule: flavin reductase domain protein, fmn-binding protein; PDBTitle: nadh:fmn oxidoreductase from paracoccus denitrificans
8	c2r0xA_	 Alignment		100.0	18	PDB header: oxidoreductase Chain: A: PDB Molecule: possible flavin reductase; PDBTitle: crystal structure of a putative flavin reductase (ycdh, hs_1225) from2 haemophilus somnus 129pt at 1.06 a resolution
9	c2qckA_	 Alignment		100.0	19	PDB header: oxidoreductase Chain: A: PDB Molecule: flavin reductase domain protein; PDBTitle: crystal structure of flavin reductase domain protein (yp_831077.1)2 from arthrobacter sp. fb24 at 1.90 a resolution
10	c4l82D_	 Alignment		100.0	26	PDB header: oxidoreductase Chain: D: PDB Molecule: rifea.00250.a; PDBTitle: structure of a putative oxidoreductase from rickettsia felis
11	c3cb0B_	 Alignment		100.0	23	PDB header: oxidoreductase Chain: B: PDB Molecule: 4-hydroxyphenylacetate 3-monooxygenase; PDBTitle: cobr

12	c2d38A_	Alignment		100.0	23	PDB header: oxidoreductase Chain: A; PDB Molecule: hypothetical nadh-dependent fmn oxidoreductase; PDBTitle: the crystal structure of flavin reductase hpac complexed with nadp+
13	c2ecrA_	Alignment		100.0	31	PDB header: oxidoreductase Chain: A; PDB Molecule: flavin reductase component (hpac) of 4-hydroxyphenylacetate PDBTitle: crystal structure of the ligand-free form of the flavin reductase2 component (hpac) of 4-hydroxyphenylacetate 3-monooxygenase
14	d1rz0a_	Alignment		100.0	23	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: NADH:FMN oxidoreductase-like
15	d1wgba_	Alignment		100.0	21	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: NADH:FMN oxidoreductase-like
16	c4f07A_	Alignment		100.0	25	PDB header: oxidoreductase Chain: A; PDB Molecule: styrene monooxygenase component 2; PDBTitle: structure of the styrene monooxygenase flavin reductase (smob) from2 pseudomonas putida s12
17	d1i0ra_	Alignment		100.0	17	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: NADH:FMN oxidoreductase-like
18	c3bnkB_	Alignment		100.0	16	PDB header: electron transport Chain: B; PDB Molecule: flavodoxin; PDBTitle: x-ray crystal structure of flavodoxin from methanosarcina2 acetivorans
19	d1ejea_	Alignment		100.0	15	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: NADH:FMN oxidoreductase-like
20	c2r6vA_	Alignment		100.0	19	PDB header: flavoprotein Chain: A; PDB Molecule: uncharacterized protein ph0856; PDBTitle: crystal structure of fmn-binding protein (np_142786.1) from pyrococcus2 horikoshii at 1.35 a resolution
21	c3bpbK_	Alignment	not modelled	100.0	17	PDB header: oxidoreductase Chain: B; PDB Molecule: nitrilotriacetate monooxygenase component b; PDBTitle: crystal structure of nitrilotriacetate monooxygenase component b from2 bacillus cereus
22	d1usca_	Alignment	not modelled	100.0	20	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: NADH:FMN oxidoreductase-like
23	c3hmzA_	Alignment	not modelled	100.0	15	PDB header: oxidoreductase Chain: A; PDB Molecule: flavin reductase domain protein, fmn-binding; PDBTitle: crystal structure of a fmn-binding domain of flavin reductases-like2 enzyme (sba1_0626) from shewanella baltica os155 at 1.50 a resolution
24	c3fgeA_	Alignment	not modelled	100.0	11	PDB header: oxidoreductase Chain: A; PDB Molecule: putative flavin reductase with split barrel domain; PDBTitle: crystal structure of putative flavin reductase with split barrel2 domain (yp_750721.1) from shewanella frigidimarina ncimb 400 at 1.743 a resolution
25	c3e4vA_	Alignment	not modelled	100.0	15	PDB header: flavoprotein Chain: A; PDB Molecule: nadh:fmn oxidoreductase like protein; PDBTitle: crystal structure of nadh:fmn oxidoreductase like protein in complex2 with fmn (yp_544701.1) from methylobacillus flagellatus kt at 1.40 a3 resolution
26	c4z85A_	Alignment	not modelled	100.0	20	PDB header: oxidoreductase Chain: A; PDB Molecule: 2-nitrobenzoate nitroreductase; PDBTitle: crystal structur of pseudomonas fluorescens 2-nitrobenzoate 2-2 nitroreductase nbaa
27	c2d5mA_	Alignment	not modelled	100.0	16	PDB header: electron transport Chain: A; PDB Molecule: flavodoxin; PDBTitle: flavodoxin of desulfovibrio vulgaris (miyazaki f)

28	c3b5mD_	Alignment	not modelled	99.9	12	PDB header: structural genomics, unknown function Chain: D: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of conserved uncharacterized protein from2 rhodopirellula baltica
29	d2imla1	Alignment	not modelled	99.5	16	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: MTH863-like
30	c2ptfB_	Alignment	not modelled	98.9	9	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: uncharacterized protein mth_863; PDBTitle: crystal structure of protein mth_863 from methanobacterium2 thermoautotrophicum bound to fmn
31	d2nr4a1	Alignment	not modelled	98.7	15	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: MTH863-like
32	d2ptfa1	Alignment	not modelled	98.6	12	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: MTH863-like
33	c2q9kA_	Alignment	not modelled	95.4	16	PDB header: oxidoreductase Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of a putative oxidoreductase (exig_1997) from2 exiguobacterium sibiricum 255-15 at 1.59 a resolution
34	d1flma_	Alignment	not modelled	95.3	16	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like
35	c5escD_	Alignment	not modelled	93.7	11	PDB header: oxidoreductase Chain: D: PDB Molecule: hupz; PDBTitle: crystal structure of group a streptococcus hupz
36	c2htdB_	Alignment	not modelled	89.7	12	PDB header: oxidoreductase Chain: B: PDB Molecule: predicted flavin-nucleotide-binding protein from cog3576 PDBTitle: crystal structure of a putative pyridoxamine 5'-phosphate oxidase2 (ldb0262) from lactobacillus delbrueckii subsp. at 1.60 a resolution
37	c3tgvD_	Alignment	not modelled	81.5	10	PDB header: heme binding protein Chain: D: PDB Molecule: heme-binding protein hutz; PDBTitle: crystal structure of hutz,the heme storsge protein from vibrio2 cholerae
38	c2htiA_	Alignment	not modelled	80.2	11	PDB header: fmn-binding protein Chain: A: PDB Molecule: bh0577 protein; PDBTitle: crystal structure of a flavin-nucleotide-binding protein (bh_0577)2 from bacillus halodurans at 2.50 a resolution
39	d2htia1	Alignment	not modelled	80.2	11	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like
40	c3dmbA_	Alignment	not modelled	77.5	9	PDB header: oxidoreductase Chain: A: PDB Molecule: putative general stress protein 26 with a pnp-oxidase like PDBTitle: crystal structure of a putative general stress family protein2 (xcc2264) from xanthomonas campestris pv. campestris at 2.30 a3 resolution
41	d1vl7a_	Alignment	not modelled	77.1	18	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like
42	c3f7eB_	Alignment	not modelled	64.9	13	PDB header: unknown function Chain: B: PDB Molecule: pyridoxamine 5'-phosphate oxidase-related, fmn- PDBTitle: msmeg_3380 f420 reductase
43	c3db0B_	Alignment	not modelled	61.4	13	PDB header: oxidoreductase Chain: B: PDB Molecule: lin2891 protein; PDBTitle: crystal structure of putative pyridoxamine 5'-phosphate oxidase2 (np_472219.1) from listeria innocua at 2.00 a resolution
44	c3u34D_	Alignment	not modelled	60.9	6	PDB header: protein binding Chain: D: PDB Molecule: general stress protein; PDBTitle: crystal structure of the general stress fmn/fad binding protein from2 the phytopathogen xanthomonas citri
45	d1rfea_	Alignment	not modelled	59.7	17	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like
46	d2hq7a1	Alignment	not modelled	54.9	10	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like
47	c3u0iA_	Alignment	not modelled	54.6	11	PDB header: unknown function Chain: A: PDB Molecule: probable fad-binding, putative uncharacterized protein; PDBTitle: crystal structure of a probable fad-binding, putative uncharacterized2 protein from brucella melitensis
48	c3ec6A_	Alignment	not modelled	50.2	12	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: general stress protein 26; PDBTitle: crystal structure of the general stress protein 26 from bacillus2 anthracis str. Sterne
49	d2asfa1	Alignment	not modelled	48.9	9	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like
50	c2ig6B_	Alignment	not modelled	48.1	18	PDB header: oxidoreductase Chain: B: PDB Molecule: nimc/nima family protein; PDBTitle: crystal structure of a nimc/nima family protein (ca_c2569) from2 clostridium acetobutylicum at 1.80 a resolution
51	c2re7A_	Alignment	not modelled	31.6	10	PDB header: oxidoreductase Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of a pyridoxamine 5'-phosphate oxidase related2 protein (psyc_0186) from psychrobacter arcticus 273-4 at 2.50 a3 resolution
52	d2i02a1	Alignment	not modelled	31.1	11	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like

53	d1w9aa_	Alignment	not modelled	29.4	17	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like
54	d2arza1	Alignment	not modelled	21.8	16	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like
55	d2fhqa1	Alignment	not modelled	20.3	9	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like
56	c5uvnB_	Alignment	not modelled	18.4	16	PDB header: transport protein Chain: B: PDB Molecule: paraquat-inducible protein b; PDBTitle: structure of e. coli mce protein pqib, periplasmic domain
57	c5uvnF_	Alignment	not modelled	18.4	16	PDB header: transport protein Chain: F: PDB Molecule: paraquat-inducible protein b; PDBTitle: structure of e. coli mce protein pqib, periplasmic domain
58	c5uvnC_	Alignment	not modelled	18.4	16	PDB header: transport protein Chain: C: PDB Molecule: paraquat-inducible protein b; PDBTitle: structure of e. coli mce protein pqib, periplasmic domain
59	c5uvnA_	Alignment	not modelled	18.4	16	PDB header: transport protein Chain: A: PDB Molecule: paraquat-inducible protein b; PDBTitle: structure of e. coli mce protein pqib, periplasmic domain
60	c5uvnE_	Alignment	not modelled	18.4	16	PDB header: transport protein Chain: E: PDB Molecule: paraquat-inducible protein b; PDBTitle: structure of e. coli mce protein pqib, periplasmic domain
61	c5uvnD_	Alignment	not modelled	18.4	16	PDB header: transport protein Chain: D: PDB Molecule: paraquat-inducible protein b; PDBTitle: structure of e. coli mce protein pqib, periplasmic domain
62	d1ty9a_	Alignment	not modelled	13.5	15	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like
63	c2ou5B_	Alignment	not modelled	12.0	11	PDB header: flavoprotein Chain: B: PDB Molecule: pyridoxamine 5'-phosphate oxidase-related, fmn-binding; PDBTitle: crystal structure of a pyridoxamine 5'-phosphate oxidase-related fmn-2 binding protein (jann_0254) from jannaschia sp. ccs1 at 1.60 a3 resolution
64	d2hq9a1	Alignment	not modelled	11.0	17	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like
65	d2fura1	Alignment	not modelled	10.7	10	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like
66	c2hhzA_	Alignment	not modelled	10.0	6	PDB header: oxidoreductase Chain: A: PDB Molecule: pyridoxamine 5'-phosphate oxidase-related; PDBTitle: crystal structure of a pyridoxamine 5'-phosphate oxidase-related2 protein (ssuidraft_2804) from streptococcus suis 89/1591 at 2.00 a3 resolution
67	d2fg9a1	Alignment	not modelled	9.9	6	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like
68	d1t9ma_	Alignment	not modelled	9.9	11	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like
69	d2a2ja1	Alignment	not modelled	9.7	16	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like
70	c3dnhB_	Alignment	not modelled	9.0	15	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: uncharacterized protein atu2129; PDBTitle: the crystal structure of the protein atu2129 (unknown function) from2 agrobacterium tumefaciens str. c58
71	c5bncB_	Alignment	not modelled	8.0	13	PDB header: heme binding protein Chain: B: PDB Molecule: heme binding protein msmeg_6519; PDBTitle: structure of heme binding protein msmeg_6519 from mycobacterium2 smegmatis
72	c4ybnB_	Alignment	not modelled	7.6	19	PDB header: oxidoreductase Chain: B: PDB Molecule: flavin-nucleotide-binding protein; PDBTitle: structure of the fad and heme binding protein msmeg_4975 from2 mycobacterium smegmatis
73	d1dmla2	Alignment	not modelled	7.1	18	Fold: DNA clamp Superfamily: DNA clamp Family: DNA polymerase processivity factor
74	c2a2jA_	Alignment	not modelled	6.8	16	PDB header: oxidoreductase Chain: A: PDB Molecule: pyridoxamine 5'-phosphate oxidase; PDBTitle: crystal structure of a putative pyridoxine 5'-phosphate oxidase2 (rv2607) from mycobacterium tuberculosis
75	d1mkya3	Alignment	not modelled	6.4	14	Fold: Alpha-lytic protease prodomain-like Superfamily: Probable GTPase Der, C-terminal domain Family: Probable GTPase Der, C-terminal domain
76	d1hywa_	Alignment	not modelled	6.0	18	Fold: gpW/XkdW-like Superfamily: Head-to-tail joining protein W, gpW Family: Head-to-tail joining protein W, gpW
77	d1dnla_	Alignment	not modelled	5.9	13	Fold: Split barrel-like Superfamily: FMN-binding split barrel Family: PNP-oxidase like
78	c4x8wE_	Alignment	not modelled	5.5	12	PDB header: gene regulation Chain: E: PDB Molecule: loquacious, isoform b; PDBTitle: dsrbd3 of loquacious
						PDB header: fad-binding protein

79	c6eciQ_	Alignment	not modelled	5.1	11	Chain: Q: PDB Molecule: pyridoxamine 5'-phosphate oxidase-related, fmn-binding PDBTitle: structure of the fad binding protein msmeg_5243 from mycobacterium2 smegmatis
----	-------------------------	-----------	--------------	-----	----	--