

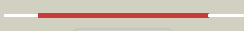






















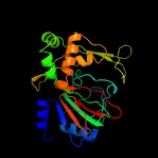




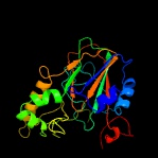


Phyre2

Email	mdejesus@rockefeller.edu
Description	RVBD3406 (-)_3825510_3826397
Date	Fri Aug 9 18:20:07 BST 2019
Unique Job ID	3908a605cf52cdeb

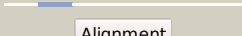
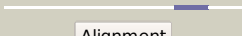


Detailed template
information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c3r1jB_	 Alignment		100.0	83	PDB header: oxidoreductase Chain: B: PDB Molecule: alpha-ketoglutarate-dependent taurine dioxygenase; PDBTitle: crystal structure of alpha-ketoglutarate-dependent taurine dioxygenase2 from mycobacterium avium, native form
2	c5hsxB_	 Alignment		100.0	45	PDB header: oxidoreductase Chain: B: PDB Molecule: putative alpha-ketoglutarate-dependent taurine dioxygenase; PDBTitle: crystal structure of a putative alpha-ketoglutarate-dependent taurine2 dioxygenase from burkholderia xenovorans
3	c4y0eB_	 Alignment		100.0	56	PDB header: oxidoreductase Chain: B: PDB Molecule: putative dioxygenase; PDBTitle: x-ray crystal structure of a putative dioxygenase from mycobacterium2 abscessus
4	d1oiha_	 Alignment		100.0	56	Fold: Double-stranded beta-helix Superfamily: Clavaminate synthase-like Family: TauD/TfdA-like
5	d1otja_	 Alignment		100.0	36	Fold: Double-stranded beta-helix Superfamily: Clavaminate synthase-like Family: TauD/TfdA-like
6	c4j5iH_	 Alignment		100.0	67	PDB header: oxidoreductase Chain: H: PDB Molecule: alpha-ketoglutarate-dependent taurine dioxygenase; PDBTitle: crystal structure of an alpha-ketoglutarate-dependent taurine2 dioxygenase from mycobacterium smegmatis
7	c3pvjB_	 Alignment		100.0	37	PDB header: oxidoreductase Chain: B: PDB Molecule: alpha-ketoglutarate-dependent taurine dioxygenase; PDBTitle: crystal structure of the fe(ii)/alpha-ketoglutarate dependent taurine2 dioxygenase from pseudomonas putida kt2440
8	c6d1oD_	 Alignment		100.0	32	PDB header: oxidoreductase Chain: D: PDB Molecule: (r)-phenoxypropionate/alpha-ketoglutarate-dioxygenase; PDBTitle: ft_5 dioxygenase apoenzyme
9	c5j92B_	 Alignment		100.0	28	PDB header: oxidoreductase Chain: B: PDB Molecule: putative alpha kg dependent 2,4-d dioxygenase; PDBTitle: crystal structure of a putative alpha-ketoglutarate dependent 2,4-d2 dioxygenase from burkholderia xenovorans
10	c5bkeF_	 Alignment		100.0	28	PDB header: oxidoreductase Chain: F: PDB Molecule: alpha-ketoglutarate-dependent 2,4-dichlorophenoxyacetate PDBTitle: crystal structure of aad-2 in complex with mn(ii) and n-oxalylglycine
11	c5vn6B_	 Alignment		100.0	38	PDB header: oxidoreductase Chain: B: PDB Molecule: taurine dioxygenase; PDBTitle: crystal structure of taurine dioxygenase from burkholderia ambifaria

12	c6dchA_	Alignment		100.0	21	PDB header: oxidoreductase Chain: A: PDB Molecule: scoe protein; PDBTitle: structure of isonitrile biosynthesis enzyme scoe
13	c3eatX_	Alignment		100.0	19	PDB header: oxidoreductase Chain: X: PDB Molecule: pyoverdine biosynthesis protein pvcb; PDBTitle: crystal structure of the pvcb (pa2255) protein from2 pseudomonas aeruginosa
14	d1nx4a_	Alignment		100.0	21	Fold: Double-stranded beta-helix Superfamily: Clavaminatase synthase-like Family: gamma-Butyrobetaine hydroxylase
15	d1y0za_	Alignment		100.0	13	Fold: Double-stranded beta-helix Superfamily: Clavaminatase synthase-like Family: gamma-Butyrobetaine hydroxylase
16	c3ms5A_	Alignment		100.0	13	PDB header: oxidoreductase Chain: A: PDB Molecule: gamma-butyrobetaine dioxygenase; PDBTitle: crystal structure of human gamma-butyrobetaine,2-oxoglutarate2 dioxygenase 1 (bbox1)
17	c6npcB_	Alignment		100.0	15	PDB header: oxidoreductase Chain: B: PDB Molecule: tmpa, 2-trimethylaminoethylphosphonate hydroxylase; PDBTitle: x-ray crystal structure of tmpa, 2-trimethylaminoethylphosphonate2 hydroxylase, with fe, 2og, and 2-trimethylaminoethylphosphonate
18	c6f6jC_	Alignment		100.0	13	PDB header: oxidoreductase Chain: C: PDB Molecule: l-lysine 3-hydroxylase; PDBTitle: crystal structure of the fe(ii)/alpha-ketoglutarate dependent2 dioxygenase kdo1 with fe(ii)/succinate/(3s)-3-hydroxy-l-lysine
19	d1ds1a_	Alignment		100.0	18	Fold: Double-stranded beta-helix Superfamily: Clavaminatase synthase-like Family: Clavaminatase synthase
20	c2og5A_	Alignment		100.0	18	PDB header: oxidoreductase Chain: A: PDB Molecule: putative oxygenase; PDBTitle: crystal structure of asparagine oxygenase (asno)
21	d1jr7a_	Alignment	not modelled	100.0	15	Fold: Double-stranded beta-helix Superfamily: Clavaminatase synthase-like Family: Gab protein (hypothetical protein YgaT)
22	c4ne0A_	Alignment	not modelled	100.0	18	PDB header: hydrolase Chain: A: PDB Molecule: l-arginine beta-hydroxylase; PDBTitle: crystal structure of non-heme iron oxygenase orfp d157a mutant in2 complex with (3s)-hydroxy-l-arg
23	c2wbqA_	Alignment	not modelled	99.9	21	PDB header: oxidoreductase Chain: A: PDB Molecule: l-arginine beta-hydroxylase; PDBTitle: crystal structure of vioc in complex with (2s,3s)-2 hydroxyarginine
24	c4ne0B_	Alignment	not modelled	99.9	19	PDB header: hydrolase Chain: B: PDB Molecule: l-arginine beta-hydroxylase; PDBTitle: crystal structure of non-heme iron oxygenase orfp d157a mutant in2 complex with (3s)-hydroxy-l-arg
25	c6dawA_	Alignment	not modelled	99.9	16	PDB header: oxidoreductase Chain: A: PDB Molecule: non-heme iron hydroxylase; PDBTitle: x-ray crystal structure of napi l-arginine desaturase bound to fe(ii),2 l-arginine, and acetate
26	c5eqnA_	Alignment	not modelled	99.9	17	PDB header: hydrolase Chain: A: PDB Molecule: frbj; PDBTitle: structure of phosphonate hydroxylase
27	c6exhA_	Alignment	not modelled	99.8	12	PDB header: oxidoreductase Chain: A: PDB Molecule: l-lysine 4-hydroxylase; PDBTitle: crystal structure of the complex fe(ii)/alpha-ketoglutarate dependent2 dioxygenase kdo5 with fe(ii)/succinate/(4r)-4-hydroxy-l-lysine
28	c2opwA_	Alignment	not modelled	97.9	18	PDB header: oxidoreductase Chain: A: PDB Molecule: phyhd1 protein; PDBTitle: crystal structure of human phytanoyl-coa dioxygenase phyhd1 (apo)

29	c4xaaA_	Alignment	not modelled	97.8	19	PDB header: oxidoreductase Chain: A: PDB Molecule: putative oxygenase; PDBTitle: crystal structure of avio1 from streptomyces viridochromogenes tue57
30	c5zm4B_	Alignment	not modelled	97.7	16	PDB header: oxidoreductase Chain: B: PDB Molecule: dioxygenase anda; PDBTitle: fe(ii)/(alpha)ketoglutarate-dependent dioxygenase anda with2 preandiloid c
31	c4zonB_	Alignment	not modelled	97.7	23	PDB header: oxidoreductase/oxidoreductase inhibitor Chain: B: PDB Molecule: verruculogen synthase; PDBTitle: structure of ftmox1 with fumitremorgen b complex
32	c5m0tA_	Alignment	not modelled	97.6	19	PDB header: oxidoreductase Chain: A: PDB Molecule: alpha-ketoglutarate-dependent non-heme iron oxygenase eash; PDBTitle: alpha-ketoglutarate-dependent non-heme iron oxygenase eash
33	c5erlD_	Alignment	not modelled	97.6	20	PDB header: isomerase Chain: D: PDB Molecule: snon,snon; PDBTitle: crystal structure of the epimerase snon in complex with ni2+,2 succinate and nogalamycin ro
34	c4naoA_	Alignment	not modelled	97.6	23	PDB header: oxidoreductase Chain: A: PDB Molecule: putative oxygenase; PDBTitle: crystal structure of eash
35	c5epaE_	Alignment	not modelled	97.2	18	PDB header: lyase Chain: E: PDB Molecule: snok; PDBTitle: crystal structure of non-heme alpha ketoglutarate dependent2 carbocyclase snok from nogalamycin biosynthesis
36	c5ncjB_	Alignment	not modelled	97.2	17	PDB header: oxidoreductase Chain: B: PDB Molecule: leucine hydroxylase; PDBTitle: grie in complex with manganese, succinate and (2s,4r)-5-hydroxyleucine
37	c2rdsA_	Alignment	not modelled	97.0	18	PDB header: oxidoreductase Chain: A: PDB Molecule: 1-deoxypentalenic acid 11-beta hydroxylase; fe(ii)/alpha- PDBTitle: crystal structure of ptlh with fe/oxalylglycine and ent-1-2 deoxypentalenic acid bound
38	d2a1xa1	Alignment	not modelled	96.7	11	Fold: Double-stranded beta-helix Superfamily: Clavaminate synthase-like Family: PhyH-like
39	c4xabA_	Alignment	not modelled	96.7	13	PDB header: oxidoreductase Chain: A: PDB Molecule: evdo2; PDBTitle: crystal structure of evdo2 from micromonospora carbonacea var.2 aurantiaca
40	c5daqA_	Alignment	not modelled	96.6	11	PDB header: oxidoreductase Chain: A: PDB Molecule: phytanoyl-coa dioxygenase family protein (afu_orthologue PDBTitle: fe(ii)/(alpha)ketoglutarate-dependent dioxygenase asqj in complex with2 4-methoxycyclopeptin
41	c3emrA_	Alignment	not modelled	96.4	8	PDB header: oxidoreductase Chain: A: PDB Molecule: ectd; PDBTitle: crystal structure analysis of the ectoine hydroxylase ectd from2 salibacillus salexigens
42	c3gjbA_	Alignment	not modelled	96.3	14	PDB header: biosynthetic protein Chain: A: PDB Molecule: cytc3; PDBTitle: cytc3 with fe(ii) and alpha-ketoglutarate
43	c4xbzB_	Alignment	not modelled	96.2	28	PDB header: oxidoreductase Chain: B: PDB Molecule: evdo1; PDBTitle: crystal structure of evdo1 from micromonospora carbonacea var.2 aurantiaca
44	c3nnlB_	Alignment	not modelled	95.5	11	PDB header: biosynthetic protein Chain: B: PDB Molecule: cura; PDBTitle: halogenase domain from cura module (crystal form iii)
45	c6ec3C_	Alignment	not modelled	95.3	16	PDB header: transferase, oxidoreductase Chain: C: PDB Molecule: methyltransferase domain-containing protein; PDBTitle: crystal structure of evdm01
46	c5yboA_	Alignment	not modelled	95.2	21	PDB header: oxidoreductase Chain: A: PDB Molecule: prha; PDBTitle: fe(ii)/(alpha)ketoglutarate-dependent dioxygenase prha in complex with2 preaustinoid a1
47	c4mhuB_	Alignment	not modelled	95.2	12	PDB header: oxidoreductase Chain: B: PDB Molecule: ectoine hydroxylase; PDBTitle: crystal structure of ectd from s. alaskensis with bound fe
48	c4xc9B_	Alignment	not modelled	95.1	14	PDB header: oxidoreductase Chain: B: PDB Molecule: oxidase/hydroxylase; PDBTitle: crystal structure of apo hygx from streptomyces hygrosopicus
49	c4iw3J_	Alignment	not modelled	94.8	14	PDB header: metal binding protein/translation Chain: J: PDB Molecule: putative uncharacterized protein; PDBTitle: crystal structure of a pseudomonas putida prolyl-4-hydroxylase (p4h)2 in complex with elongation factor tu (ef-tu)
50	c5c5tB_	Alignment	not modelled	92.5	16	PDB header: oxidoreductase Chain: B: PDB Molecule: prolyl 4-hydroxylase; PDBTitle: the crystal structure of viral collagen prolyl hydroxylase vcph from2 paramecium bursaria chlorella virus-1 - 2og complex
51	d2fcta1	Alignment	not modelled	89.9	16	Fold: Double-stranded beta-helix Superfamily: Clavaminate synthase-like Family: PhyH-like
52	c6f0wA_	Alignment	not modelled	87.1	11	PDB header: oxidoreductase Chain: A: PDB Molecule: hif prolyl hydroxylase; PDBTitle: prolyl hydroxylase in complex with hypoxia inducible factor oxygen2 degradation domain peptide fragment from trichoplax adhaerens
53	d1wdia_	Alignment	not modelled	82.0	22	Fold: QueA-like Superfamily: QueA-like Family: QueA-like
						PDB header: isomerase

54	c1yy3A_	Alignment	not modelled	81.4	17	Chain: A: PDB Molecule: s-adenosylmethionine:trna ribosyltransferase- PDBTitle: structure of s-adenosylmethionine:trna ribosyltransferase-2 isomerase (quea)
55	c3itqB_	Alignment	not modelled	81.2	17	PDB header: oxidoreductase Chain: B: PDB Molecule: prolyl 4-hydroxylase, alpha subunit domain protein; PDBTitle: crystal structure of a prolyl 4-hydroxylase from bacillus anthracis
56	d1vkya_	Alignment	not modelled	79.2	17	Fold: QueA-like Superfamily: QueA-like Family: QueA-like
57	c2jijA_	Alignment	not modelled	65.4	12	PDB header: hydrolase Chain: A: PDB Molecule: prolyl-4 hydroxylase; PDBTitle: crystal structure of the apo form of chlamydomonas2 reinhardtii prolyl-4 hydroxylase type i
58	c3pl0B_	Alignment	not modelled	58.8	17	PDB header: biosynthetic protein Chain: B: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of a bsma homolog (mpe_a2762) from methylobium2 petroleophilum pm1 at 1.91 a resolution
59	c2g19A_	Alignment	not modelled	50.6	12	PDB header: oxidoreductase Chain: A: PDB Molecule: egl nine homolog 1; PDBTitle: cellular oxygen sensing: crystal structure of hypoxia-inducible factor2 prolyl hydroxylase (phd2)
60	c3ghfA_	Alignment	not modelled	44.0	16	PDB header: cell cycle Chain: A: PDB Molecule: septum site-determining protein minc; PDBTitle: crystal structure of the septum site-determining protein minc from2 salmonella typhimurium
61	c3ouia_	Alignment	not modelled	41.4	9	PDB header: oxidoreductase Chain: A: PDB Molecule: egl nine homolog 1; PDBTitle: phd2-r717 with 40787422
62	d2csga1	Alignment	not modelled	41.3	11	Fold: Double-stranded beta-helix Superfamily: Clavaminate synthase-like Family: YbiU-like
63	d1gp6a_	Alignment	not modelled	40.2	14	Fold: Double-stranded beta-helix Superfamily: Clavaminate synthase-like Family: Penicillin synthase-like
64	d1odma_	Alignment	not modelled	39.1	12	Fold: Double-stranded beta-helix Superfamily: Clavaminate synthase-like Family: Penicillin synthase-like
65	d1dcsa_	Alignment	not modelled	36.4	16	Fold: Double-stranded beta-helix Superfamily: Clavaminate synthase-like Family: Penicillin synthase-like
66	c2a5hC_	Alignment	not modelled	36.0	14	PDB header: isomerase Chain: C: PDB Molecule: l-lysine 2,3-aminomutase; PDBTitle: 2.1 angstrom x-ray crystal structure of lysine-2,3-aminomutase from2 clostridium subterminale sb4, with michaelis analog (l-alpha-lysine3 external aldimine form of pyridoxal-5'-phosphate).
67	d2evra2	Alignment	not modelled	29.2	18	Fold: Cysteine proteinases Superfamily: Cysteine proteinases Family: NlpC/P60
68	c3on7C_	Alignment	not modelled	28.0	4	PDB header: oxidoreductase Chain: C: PDB Molecule: oxidoreductase, iron/ascorbate family; PDBTitle: crystal structure of a putative oxygenase (so_2589) from shewanella2 oneidensis at 2.20 a resolution
69	c5c3qB_	Alignment	not modelled	27.0	8	PDB header: oxidoreductase Chain: B: PDB Molecule: thymine dioxygenase; PDBTitle: crystal structure of the full-length neurospora crassa t7h in complex2 with alpha-kg and thymine (t)
70	c4xaeB_	Alignment	not modelled	24.5	6	PDB header: oxidoreductase Chain: B: PDB Molecule: feruloyl coa ortho-hydroxylase 1; PDBTitle: structure of feruloyl-coa 6-hydroxylase (f6h) from arabidopsis2 thaliana
71	d16pka_	Alignment	not modelled	24.4	33	Fold: Phosphoglycerate kinase Superfamily: Phosphoglycerate kinase Family: Phosphoglycerate kinase
72	c3lfjB_	Alignment	not modelled	24.1	7	PDB header: transferase Chain: B: PDB Molecule: phosphotransferase system, mannose/fructose/n- PDBTitle: crystal structure of manxb from thermoanaerobacter tengcongensis
73	c2xivA_	Alignment	not modelled	23.8	31	PDB header: structural protein Chain: A: PDB Molecule: hypothetical invasion protein; PDBTitle: structure of rv1477, hypothetical invasion protein of mycobacterium2 tuberculosis
74	c3qt2A_	Alignment	not modelled	22.9	25	PDB header: unknown function Chain: A: PDB Molecule: putative uncharacterized protein; PDBTitle: crystal structure of the p60 domain from m. avium paratuberculosis2 antigen map1272c
75	c4i66A_	Alignment	not modelled	22.3	10	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein hoch_4089; PDBTitle: crystal structure of hoch_4089 protein from haliangium ochraceum
76	c2fg0B_	Alignment	not modelled	21.0	15	PDB header: hydrolase Chain: B: PDB Molecule: cog0791: cell wall-associated hydrolases (invasion- PDBTitle: crystal structure of a putative gamma-d-glutamyl-l-diamino acid2 endopeptidase (npun_r0659) from nostoc punctiforme pcc 73102 at 1.793 a resolution
77	c2dbia_	Alignment	not modelled	20.8	13	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: hypothetical protein ybiu; PDBTitle: crystal structure of a hypothetical protein jw0805 from2 escherichia coli
78	d1bvp12	Alignment	not modelled	20.2	21	Fold: Viral protein domain Superfamily: Viral protein domain Family: Top domain of virus capsid protein

79	c5gj9A_	 Alignment	not modelled	20.1	11	PDB header: oxidoreductase Chain: A: PDB Molecule: 1-aminocyclopropane-1-carboxylate oxidase 2; PDBTitle: crystal structure of arabidopsis thaliana aco2 in complex with poa
80	c1zmrA_	 Alignment	not modelled	19.8	23	PDB header: transferase Chain: A: PDB Molecule: phosphoglycerate kinase; PDBTitle: crystal structure of the e. coli phosphoglycerate kinase
81	c2nznA_	 Alignment	not modelled	19.6	28	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: hypothetical protein; PDBTitle: solution structure of the hypothetical protein af2241 from2 archaeoglobus fulgidus
82	d1phpa_	 Alignment	not modelled	18.6	27	Fold: Phosphoglycerate kinase Superfamily: Phosphoglycerate kinase Family: Phosphoglycerate kinase
83	c4rgkA_	 Alignment	not modelled	18.3	13	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of putative phytanoyl-coa dioxygenase family protein2 ybiu from yersinia pestis
84	d1hdia_	 Alignment	not modelled	18.1	27	Fold: Phosphoglycerate kinase Superfamily: Phosphoglycerate kinase Family: Phosphoglycerate kinase
85	d2if6a1	 Alignment	not modelled	18.0	29	Fold: Cysteine proteinases Superfamily: Cysteine proteinases Family: Yiix-like
86	d1e5ra_	 Alignment	not modelled	17.3	25	Fold: Double-stranded beta-helix Superfamily: Clavamate synthase-like Family: Type II Proline 3-hydroxylase (proline oxidase)
87	c3pbiA_	 Alignment	not modelled	17.3	25	PDB header: hydrolase Chain: A: PDB Molecule: invasion protein; PDBTitle: structure of the peptidoglycan hydrolase ripb (rv1478) from2 mycobacterium tuberculosis at 1.6 resolution
88	d1ltkA_	 Alignment	not modelled	16.9	13	Fold: Phosphoglycerate kinase Superfamily: Phosphoglycerate kinase Family: Phosphoglycerate kinase
89	c3rcqA_	 Alignment	not modelled	16.8	25	PDB header: oxidoreductase Chain: A: PDB Molecule: aspartyl/asparaginyl beta-hydroxylase; PDBTitle: crystal structure of human aspartate beta-hydroxylase isoform a
90	d1un7a2	 Alignment	not modelled	16.8	8	Fold: TIM beta/alpha-barrel Superfamily: Metallo-dependent hydrolases Family: N-acetylglucosamine-6-phosphate deacetylase, NagA, catalytic domain
91	d1dt9a3	 Alignment	not modelled	16.5	12	Fold: N-terminal domain of eukaryotic peptide chain release factor subunit 1, ERF1 Superfamily: N-terminal domain of eukaryotic peptide chain release factor subunit 1, ERF1 Family: N-terminal domain of eukaryotic peptide chain release factor subunit 1, ERF1
92	c3zlbA_	 Alignment	not modelled	16.4	23	PDB header: transferase Chain: A: PDB Molecule: phosphoglycerate kinase; PDBTitle: crystal structure of phosphoglycerate kinase from streptococcus2 pneumoniae
93	d1vpea_	 Alignment	not modelled	15.7	20	Fold: Phosphoglycerate kinase Superfamily: Phosphoglycerate kinase Family: Phosphoglycerate kinase
94	d1fw8a_	 Alignment	not modelled	15.2	38	Fold: Phosphoglycerate kinase Superfamily: Phosphoglycerate kinase Family: Phosphoglycerate kinase
95	c2cunA_	 Alignment	not modelled	15.2	38	PDB header: transferase Chain: A: PDB Molecule: phosphoglycerate kinase; PDBTitle: crystal structure of phosphoglycerate kinase from pyrococcus2 horikoshii ot3
96	d1v6sa_	 Alignment	not modelled	15.2	31	Fold: Phosphoglycerate kinase Superfamily: Phosphoglycerate kinase Family: Phosphoglycerate kinase
97	c4lvpP_	 Alignment	not modelled	15.0	12	PDB header: hydrolase/inhibitor/immune system Chain: P: PDB Molecule: subtilisin-like serine protease; PDBTitle: crystal structure of pfsb1-prodomain-nimp.m7 fab complex
98	c6ax6B_	 Alignment	not modelled	14.8	13	PDB header: oxidoreductase Chain: B: PDB Molecule: procollagen lysyl hydroxylase and glycosyltransferase; PDBTitle: the crystal structure of a lysyl hydroxylase from acanthamoeba2 polyphaga mimivirus
99	c5buvC_	 Alignment	not modelled	14.8	33	PDB header: isomerase Chain: C: PDB Molecule: putative epimerase; PDBTitle: x-ray structure of wbca from yersinia enterocolitica