
















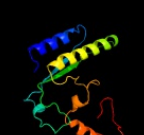






Phyre2

Email	mdejesus@rockefeller.edu
Description	RVBD3351c_(-)_3767517_3768311
Date	Thu Aug 8 16:20:56 BST 2019
Unique Job ID	6d41f11448aae769

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c6f74B_	 Alignment		99.9	17	PDB header: flavoprotein Chain: B: PDB Molecule: alcohol oxidase; PDBTitle: crystal structure of vao-type flavoprotein mtvao713 from2 myceliophthora thermophila c1
2	c6f73B_	 Alignment		99.9	16	PDB header: flavoprotein Chain: B: PDB Molecule: mtvao615; PDBTitle: crystal structure of vao-type flavoprotein mtvao615 at ph 5.0 from2 myceliophthora thermophila c1
3	c3popD_	 Alignment		99.9	16	PDB header: oxidoreductase Chain: D: PDB Molecule: gilr oxidase; PDBTitle: the crystal structure of gilr, an oxidoreductase that catalyzes the2 terminal step of gilvocarcin biosynthesis
4	c2wdwB_	 Alignment		99.9	22	PDB header: oxidoreductase Chain: B: PDB Molecule: putative hexose oxidase; PDBTitle: the native crystal structure of the primary hexose oxidase (2 dbv29) in antibiotic a40926 biosynthesis
5	c5j1wD_	 Alignment		99.8	19	PDB header: oxidoreductase Chain: D: PDB Molecule: crmk; PDBTitle: crystal structure of crmk, a flavoenzyme involved in the shunt product2 recycling mechanism in caerulomycin biosynthesis
6	c2y3rC_	 Alignment		99.8	16	PDB header: oxidoreductase Chain: C: PDB Molecule: taml; PDBTitle: structure of the tirandamycin-bound fad-dependent tirandamycin oxidase2 taml in p21 space group
7	c2ipiD_	 Alignment		99.8	18	PDB header: oxidoreductase Chain: D: PDB Molecule: aclacinomycin oxidoreductase (aknox); PDBTitle: crystal structure of aclacinomycin oxidoreductase
8	c4ud8B_	 Alignment		99.8	16	PDB header: oxidoreductase Chain: B: PDB Molecule: fad-binding and bbe domain-containing protein; PDBTitle: atbbe15
9	c6eo5A_	 Alignment		99.8	21	PDB header: oxidoreductase Chain: A: PDB Molecule: ppbbe-like 1 d396n; PDBTitle: physcomitrella patens bbe-like 1 variant d396n
10	c3vteA_	 Alignment		99.8	15	PDB header: oxidoreductase Chain: A: PDB Molecule: tetrahydrocannabinolic acid synthase; PDBTitle: crystal structure of tetrahydrocannabinolic acid synthase from2 cannabis sativa
11	c3tsjA_	 Alignment		99.8	19	PDB header: allergen, oxidoreductase Chain: A: PDB Molecule: pollen allergen phl p 4; PDBTitle: crystal structure of phl p 4, a grass pollen allergen with glucose2 dehydrogenase activity

12	c3w8wA_	Alignment		99.8	21	PDB header: oxidoreductase Chain: A: PDB Molecule: putative fad-dependent oxygenase encm; PDBTitle: the crystal structure of encm
13	c3d2hA_	Alignment		99.8	16	PDB header: oxidoreductase Chain: A: PDB Molecule: berberine bridge-forming enzyme; PDBTitle: structure of berberine bridge enzyme from eschscholzia californica,2 monoclinic crystal form
14	c5d79B_	Alignment		99.7	19	PDB header: oxidoreductase Chain: B: PDB Molecule: berberine bridge enzyme-like protein; PDBTitle: structure of bbe-like #28 from arabidopsis thaliana
15	c3fwaA_	Alignment		99.7	15	PDB header: flavoprotein Chain: A: PDB Molecule: reticuline oxidase; PDBTitle: structure of berberine bridge enzyme, c166a variant in complex with2 (s)-reticuline
16	c5l6fA_	Alignment		99.7	17	PDB header: oxidoreductase Chain: A: PDB Molecule: fad linked oxidase-like protein; PDBTitle: xylooligosaccharide oxidase from myceliophthora thermophila c1 in2 complex with xylobiose
17	c1zr6A_	Alignment		99.7	18	PDB header: oxidoreductase Chain: A: PDB Molecule: glucooligosaccharide oxidase; PDBTitle: the crystal structure of an acremonium strictum glucooligosaccharide2 oxidase reveals a novel flavinylation
18	c3rjaA_	Alignment		99.6	20	PDB header: oxidoreductase Chain: A: PDB Molecule: carbohydrate oxidase; PDBTitle: crystal structure of a carbohydrate oxidase from microdochium nivale in2 complex with substrate analogue
19	c4ml8C_	Alignment		99.5	11	PDB header: oxidoreductase Chain: C: PDB Molecule: cytokinin oxidase 2; PDBTitle: structure of maize cytokinin oxidase/dehydrogenase 2 (zmcko2)
20	c2bvfa_	Alignment		99.5	12	PDB header: oxidase Chain: A: PDB Molecule: 6-hydroxy-d-nicotine oxidase; PDBTitle: crystal structure of 6-hydroxy-d-nicotine oxidase from2 arthrobacter nicotinovorans. crystal form 3 (p1)
21	c4oa1B_	Alignment	not modelled	99.4	12	PDB header: oxidoreductase Chain: B: PDB Molecule: cytokinin dehydrogenase 4; PDBTitle: crystal structure of maize cytokinin oxidase/dehydrogenase 4 (zmcko4)2 in complex with phenylurea inhibitor cppu in alternative spacegroup
22	c6c80B_	Alignment	not modelled	99.4	13	PDB header: immune system Chain: B: PDB Molecule: cytokinin oxidase luckx1.1; PDBTitle: crystal structure of a flax cytokinin oxidase
23	c3bw7A_	Alignment	not modelled	99.4	16	PDB header: oxidoreductase Chain: A: PDB Molecule: cytokinin dehydrogenase 1; PDBTitle: maize cytokinin oxidase/dehydrogenase complexed with the allenic2 cytokinin analog ha-1
24	c2exrA_	Alignment	not modelled	99.3	13	PDB header: oxidoreductase Chain: A: PDB Molecule: cytokinin dehydrogenase 7; PDBTitle: x-ray structure of cytokinin oxidase/dehydrogenase (ckx) from2 arabidopsis thaliana at5g21482
25	c1wveB_	Alignment	not modelled	99.2	13	PDB header: oxidoreductase Chain: B: PDB Molecule: 4-cresol dehydrogenase [hydroxylating] PDBTitle: p-cresol methylhydroxylase: alteration of the structure of2 the flavoprotein subunit upon its binding to the3 cytochrome subunit
26	c3pm9A_	Alignment	not modelled	99.1	10	PDB header: oxidoreductase Chain: A: PDB Molecule: putative oxidoreductase; PDBTitle: crystal structure of a putative dehydrogenase (rpa1076) from2 rhodospseudomonas palustris cga009 at 2.57 a resolution
27	c4fdoA_	Alignment	not modelled	99.0	19	PDB header: oxidoreductase/oxidoreductase inhibitor Chain: A: PDB Molecule: oxidoreductase dpre1; PDBTitle: mycobacterium tuberculosis dpre1 in complex with ct319
28	c2vfvA_	Alignment	not modelled	99.0	14	PDB header: oxidoreductase Chain: A: PDB Molecule: xyloitol oxidase; PDBTitle: alditol oxidase from streptomyces coelicolor a3(2):

						complex2 with sulphite
29	c4bc9C	Alignment	not modelled	98.9	8	PDB header: transferase Chain: C: PDB Molecule: alkyldihydroxyacetonephosphate synthase, peroxisomal; PDBTitle: mammalian alkyldihydroxyacetonephosphate synthase: wild-type, adduct2 with cyanoethyl
30	c5fxpA	Alignment	not modelled	98.8	13	PDB header: oxidoreductase Chain: A: PDB Molecule: eugenol oxidase; PDBTitle: crystal structure of eugenol oxidase in complex with2 vanillin
31	c3js8A	Alignment	not modelled	98.8	18	PDB header: oxidoreductase Chain: A: PDB Molecule: cholesterol oxidase; PDBTitle: solvent-stable cholesterol oxidase
32	cli19B	Alignment	not modelled	98.5	11	PDB header: oxidoreductase Chain: B: PDB Molecule: cholesterol oxidase; PDBTitle: crystal structure of cholesterol oxidase from b.sterolicum
33	c1ahuB	Alignment	not modelled	98.2	15	PDB header: flavoenzyme Chain: B: PDB Molecule: vanillyl-alcohol oxidase; PDBTitle: structure of the octameric flavoenzyme vanillyl-alcohol2 oxidase in complex with p-cresol
34	d1w1oa1	Alignment	not modelled	96.5	18	Fold: Ferredoxin-like Superfamily: FAD-linked oxidases, C-terminal domain Family: Cytokinin dehydrogenase 1
35	d1wvfa1	Alignment	not modelled	95.9	12	Fold: Ferredoxin-like Superfamily: FAD-linked oxidases, C-terminal domain Family: Vanillyl-alcohol oxidase-like
36	c2uuvC	Alignment	not modelled	95.7	8	PDB header: transferase Chain: C: PDB Molecule: alkyldihydroxyacetonephosphate synthase; PDBTitle: alkyldihydroxyacetonephosphate synthase in p1
37	d1e8ga1	Alignment	not modelled	94.6	13	Fold: Ferredoxin-like Superfamily: FAD-linked oxidases, C-terminal domain Family: Vanillyl-alcohol oxidase-like
38	c1f0xA	Alignment	not modelled	81.4	26	PDB header: oxidoreductase Chain: A: PDB Molecule: d-lactate dehydrogenase; PDBTitle: crystal structure of d-lactate dehydrogenase, a peripheral membrane2 respiratory enzyme.
39	d1f0xa1	Alignment	not modelled	73.6	36	Fold: Ferredoxin-like Superfamily: FAD-linked oxidases, C-terminal domain Family: D-lactate dehydrogenase
40	d2i0ka1	Alignment	not modelled	68.3	27	Fold: Ferredoxin-like Superfamily: FAD-linked oxidases, C-terminal domain Family: Cholesterol oxidase
41	d1kx9b	Alignment	not modelled	38.9	29	Fold: alpha-alpha superhelix Superfamily: Chemosensory protein Csp2 Family: Chemosensory protein Csp2
42	c2gvsA	Alignment	not modelled	36.3	36	PDB header: lipid binding protein Chain: A: PDB Molecule: chemosensory protein csp-sg4; PDBTitle: nmr solution structure of cspsg4
43	c5cwsE	Alignment	not modelled	34.3	14	PDB header: protein transport Chain: E: PDB Molecule: nucleoporin nup57; PDBTitle: crystal structure of the intact chaetomium thermophilum nsp1-nup49-2 nup57 channel nucleoporin heterotrimer bound to its nic96 nuclear3 pore complex attachment site
44	d1n8va	Alignment	not modelled	32.5	29	Fold: alpha-alpha superhelix Superfamily: Chemosensory protein Csp2 Family: Chemosensory protein Csp2
45	c4yh5B	Alignment	not modelled	31.6	17	PDB header: transferase Chain: B: PDB Molecule: levoglucosan kinase; PDBTitle: lipomyces starkeyi levoglucosan kinase bound to adp and manganese
46	c4guza	Alignment	not modelled	30.1	19	PDB header: transferase Chain: A: PDB Molecule: probable arylamine n-acetyl transferase; PDBTitle: structure of the arylamine n-acetyltransferase from mycobacterium2 abscessus
47	d1w4ta1	Alignment	not modelled	26.1	32	Fold: Cysteine proteinases Superfamily: Cysteine proteinases Family: Arylamine N-acetyltransferase
48	c3lnbA	Alignment	not modelled	25.4	18	PDB header: transferase Chain: A: PDB Molecule: n-acetyltransferase family protein; PDBTitle: crystal structure analysis of arylamine n-acetyltransferase c from2 bacillus anthracis
49	d1w5ra1	Alignment	not modelled	24.1	20	Fold: Cysteine proteinases Superfamily: Cysteine proteinases Family: Arylamine N-acetyltransferase
50	c2vfbA	Alignment	not modelled	24.1	23	PDB header: transferase Chain: A: PDB Molecule: arylamine n-acetyltransferase; PDBTitle: the structure of mycobacterium marinum arylamine n-2 acetyltransferase
51	d1e2ta	Alignment	not modelled	24.0	30	Fold: Cysteine proteinases Superfamily: Cysteine proteinases Family: Arylamine N-acetyltransferase
52	d1g7sa2	Alignment	not modelled	23.7	25	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Translation proteins Family: Elongation factors
53	d2bsza1	Alignment	not modelled	22.4	29	Fold: Cysteine proteinases Superfamily: Cysteine proteinases Family: Arylamine N-acetyltransferase
54	c4dmoB	Alignment	not modelled	21.6	20	PDB header: transferase Chain: B: PDB Molecule: n-hydroxyarylamine o-acetyltransferase; PDBTitle: crystal structure of the (baccr)nat3 arylamine n-acetyltransferase2 from bacillus cereus reveals a unique cys-his-glu catalytic triad

55	c2pfrB	Alignment	not modelled	21.4	20	PDB header: transferase Chain: B: PDB Molecule: arylamine n-acetyltransferase 2; PDBTitle: human n-acetyltransferase 2
56	c2dt7A	Alignment	not modelled	19.9	18	PDB header: rna binding protein Chain: A: PDB Molecule: splicing factor 3a subunit 3; PDBTitle: solution structure of the second surp domain of human2 splicing factor sf3a120 in complex with a fragment of3 human splicing factor sf3a60
57	c3cwyA	Alignment	not modelled	19.3	26	PDB header: unknown function Chain: A: PDB Molecule: protein cagd; PDBTitle: structure of cagd from h. pylori pathogenicity island crystallized in2 the presence of cu(ii) ions
58	c3d9wA	Alignment	not modelled	18.2	21	PDB header: transferase Chain: A: PDB Molecule: putative acetyltransferase; PDBTitle: crystal structure analysis of nocardia farcinica arylamine n-2 acetyltransferase
59	d1e89a	Alignment	not modelled	16.6	25	Fold: alpha/beta-Hydrolases Superfamily: alpha/beta-Hydrolases Family: Hydroxynitrile lyase-like
60	c2hcuA	Alignment	not modelled	16.4	33	PDB header: lyase Chain: A: PDB Molecule: 3-isopropylmalate dehydratase small subunit; PDBTitle: crystal structure of smu.1381 (or leud) from streptococcus mutans
61	c3h5jA	Alignment	not modelled	16.3	36	PDB header: lyase Chain: A: PDB Molecule: 3-isopropylmalate dehydratase small subunit; PDBTitle: leud_1-168 small subunit of isopropylmalate isomerase (rv2987c) from2 mycobacterium tuberculosis
62	c3q3wB	Alignment	not modelled	15.2	30	PDB header: transferase Chain: B: PDB Molecule: 3-isopropylmalate dehydratase small subunit; PDBTitle: isopropylmalate isomerase small subunit from campylobacter jejuni.
63	c5a4aA	Alignment	not modelled	14.7	20	PDB header: rna binding protein Chain: A: PDB Molecule: maternal effect protein oskar; PDBTitle: crystal structure of the osk domain of drosophila oskar
64	c3wwoA	Alignment	not modelled	14.0	21	PDB header: lyase Chain: A: PDB Molecule: (s)-hydroxynitrile lyase; PDBTitle: s-selective hydroxynitrile lyase from baliospermum montanum (apo1)
65	c5g1mA	Alignment	not modelled	13.9	26	PDB header: hydrolase Chain: A: PDB Molecule: beta-hexosaminidase; PDBTitle: crystal structure of nagz from pseudomonas aeruginosa
66	c3dqzB	Alignment	not modelled	13.4	25	PDB header: lyase Chain: B: PDB Molecule: alpha-hydroxynitrile lyase-like protein; PDBTitle: structure of the hydroxynitrile lyase from arabidopsis thaliana
67	c6nvoA	Alignment	not modelled	11.9	26	PDB header: dna binding protein Chain: A: PDB Molecule: nuclease mpe; PDBTitle: crystal structure of pseudomonas putida nuclease mpe
68	c2luyA	Alignment	not modelled	11.7	19	PDB header: dna binding protein Chain: A: PDB Molecule: meiotic chromosome segregation protein p8b7.28c; PDBTitle: solution structure of the tandem zinc finger domain of fission yeast2 stc1
69	c6fsiA	Alignment	not modelled	11.7	11	PDB header: electron transport Chain: A: PDB Molecule: flavodoxin; PDBTitle: crystal structure of semiquinone flavodoxin 1 from bacillus cereus2 (1.32 a resolution)
70	c3p2mA	Alignment	not modelled	11.7	18	PDB header: hydrolase Chain: A: PDB Molecule: possible hydrolase; PDBTitle: crystal structure of a novel esterase rv0045c from mycobacterium2 tuberculosis
71	c5iobC	Alignment	not modelled	11.7	25	PDB header: hydrolase Chain: C: PDB Molecule: beta-glucosidase-related glycosidases; PDBTitle: crystal structure of beta-n-acetylglucosaminidase-like protein from2 corynebacterium glutamicum
72	c4gvqB	Alignment	not modelled	11.1	19	PDB header: hydrolase Chain: B: PDB Molecule: beta-hexosaminidase; PDBTitle: crystal structure of salmonella typhimurium family 3 glycoside2 hydrolase (nagz)
73	d1vfsa2	Alignment	not modelled	10.8	13	Fold: TIM beta/alpha-barrel Superfamily: PLP-binding barrel Family: Alanine racemase-like, N-terminal domain
74	c3stxB	Alignment	not modelled	9.8	8	PDB header: hydrolase Chain: B: PDB Molecule: methylketone synthase 1; PDBTitle: crystal structure of tomato methylketone synthase i h243a variant2 complexed with beta-ketoheptanoate
75	c6gwjK	Alignment	not modelled	9.8	9	PDB header: rna binding protein Chain: K: PDB Molecule: probable trna n6-adenosine threonylcarbamoyltransferase; PDBTitle: protein complex
76	c4em8A	Alignment	not modelled	9.5	67	PDB header: isomerase Chain: A: PDB Molecule: ribose 5-phosphate isomerase b; PDBTitle: the structure of ribose 5-phosphate isomerase b from anaplasma2 phagocytophilum
77	c3qd5B	Alignment	not modelled	9.5	44	PDB header: isomerase Chain: B: PDB Molecule: putative ribose-5-phosphate isomerase; PDBTitle: crystal structure of a putative ribose-5-phosphate isomerase from2 coccidioides immitis solved by combined iodide ion sad and mr
78	d1e5da1	Alignment	not modelled	9.4	8	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Flavodoxin-related
79	c4lfnD	Alignment	not modelled	9.4	56	PDB header: isomerase Chain: D: PDB Molecule: galactose-6-phosphate isomerase subunit b;

						PDBTitle: crystal structure of d-galactose-6-phosphate isomerase in complex with2 d-ribose
80	d1nn4a_	Alignment	not modelled	9.4	33	Fold: Ribose/Galactose isomerase RpiB/AlsB Superfamily: Ribose/Galactose isomerase RpiB/AlsB Family: Ribose/Galactose isomerase RpiB/AlsB
81	c6ahuK_	Alignment	not modelled	9.2	38	PDB header: hydrolase/rna Chain: K: PDB Molecule: ribonuclease p protein subunit p21; PDBTitle: cryo-em structure of human ribonuclease p with mature trna
82	d1g8ka2	Alignment	not modelled	9.2	12	Fold: Formate dehydrogenase/DMSO reductase, domains 1-3 Superfamily: Formate dehydrogenase/DMSO reductase, domains 1-3 Family: Formate dehydrogenase/DMSO reductase, domains 1-3
83	d1dmra2	Alignment	not modelled	9.0	15	Fold: Formate dehydrogenase/DMSO reductase, domains 1-3 Superfamily: Formate dehydrogenase/DMSO reductase, domains 1-3 Family: Formate dehydrogenase/DMSO reductase, domains 1-3
84	c4uuuC_	Alignment	not modelled	9.0	29	PDB header: dna binding protein Chain: C: PDB Molecule: dna replication licensing factor mcm2; PDBTitle: mcm2-histone complex
85	c6mu0A_	Alignment	not modelled	8.9	22	PDB header: isomerase Chain: A: PDB Molecule: probable ribose-5-phosphate isomerase b; PDBTitle: crystal structure of ribose-5-phosphate isomerase b from mycoplasma2 genitalium with bound ribulose-5-phosphate
86	c1jjoB_	Alignment	not modelled	8.8	19	PDB header: signaling protein Chain: B: PDB Molecule: neuroserpin; PDBTitle: crystal structure of mouse neuroserpin (cleaved form)
87	c4lfmA_	Alignment	not modelled	8.6	11	PDB header: isomerase Chain: A: PDB Molecule: galactose-6-phosphate isomerase subunit a; PDBTitle: crystal structure of d-galactose-6-phosphate isomerase in complex with2 d-psicose
88	d3c70a1	Alignment	not modelled	8.4	24	Fold: alpha/beta-Hydrolases Superfamily: alpha/beta-Hydrolases Family: Hydroxynitrile lyase-like
89	c2pkpA_	Alignment	not modelled	8.2	22	PDB header: lyase Chain: A: PDB Molecule: homoaconitase small subunit; PDBTitle: crystal structure of 3-isopropylmalate dehydratase (leud)2 from methanocaldococcus jannaschii dsm2661 (mj1271)
90	c3m1pA_	Alignment	not modelled	8.2	56	PDB header: isomerase Chain: A: PDB Molecule: ribose 5-phosphate isomerase; PDBTitle: structure of ribose 5-phosphate isomerase type b from trypanosoma2 cruzi, soaked with allose-6-phosphate
91	c3k7pA_	Alignment	not modelled	8.2	56	PDB header: isomerase Chain: A: PDB Molecule: ribose 5-phosphate isomerase; PDBTitle: structure of mutant of ribose 5-phosphate isomerase type b from2 trypanosoma cruzi.
92	c6ah3K_	Alignment	not modelled	8.1	10	PDB header: hydrolase/rna Chain: K: PDB Molecule: ribonuclease p protein subunit rpr2; PDBTitle: cryo-em structure of yeast ribonuclease p with pre-trna substrate
93	c6fxwA_	Alignment	not modelled	8.1	67	PDB header: isomerase Chain: A: PDB Molecule: putative ribose 5-phosphate isomerase; PDBTitle: structure of leishmania infantum type b ribose 5-phosphate isomerase
94	c1g8jC_	Alignment	not modelled	8.1	10	PDB header: oxidoreductase Chain: C: PDB Molecule: arsenite oxidase; PDBTitle: crystal structure analysis of arsenite oxidase from2 alcaligenes faecalis
95	c3he8A_	Alignment	not modelled	8.0	56	PDB header: isomerase Chain: A: PDB Molecule: ribose-5-phosphate isomerase; PDBTitle: structural study of clostridium thermocellum ribose-5-phosphate2 isomerase b
96	c3vbaE_	Alignment	not modelled	8.0	31	PDB header: lyase Chain: E: PDB Molecule: isopropylmalate/citramalate isomerase small subunit; PDBTitle: crystal structure of methanogen 3-isopropylmalate isomerase small2 subunit
97	c3s5pA_	Alignment	not modelled	7.9	67	PDB header: isomerase Chain: A: PDB Molecule: ribose 5-phosphate isomerase; PDBTitle: crystal structure of ribose-5-phosphate isomerase b rpib from giardia2 lamblia
98	c4lidA_	Alignment	not modelled	7.8	21	PDB header: viral protein Chain: A: PDB Molecule: a-100; PDBTitle: a100, a dna binding scaffold from sulfobolus spindle-shape virus 1
99	c3j20F_	Alignment	not modelled	7.8	26	PDB header: ribosome Chain: F: PDB Molecule: 30s ribosomal protein s5p; PDBTitle: promiscuous behavior of proteins in archaeal ribosomes revealed by2 cryo-em: implications for evolution of eukaryotic ribosomes (30s3 ribosomal subunit)