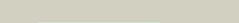
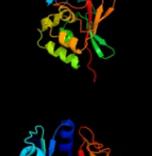
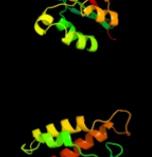
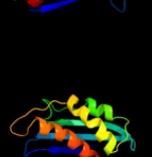
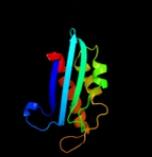
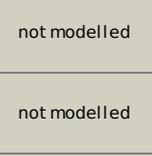


Phyre2

Email	l.a.kelley@imperial.ac.uk
Description	Q46800
Date	Thu Jan 5 12:34:23 GMT 2012
Unique Job ID	a339770d4e879676

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c1n62C_	 Alignment		100.0	28	PDB header: oxidoreductase Chain: C: PDB Molecule: carbon monoxide dehydrogenase medium chain; PDBTitle: crystal structure of the mo,cu-co dehydrogenase (codh), n-2 butylisocyanide-bound state
2	c3hrdC_	 Alignment		100.0	30	PDB header: oxidoreductase Chain: C: PDB Molecule: nicotinate dehydrogenase fad-subunit; PDBTitle: crystal structure of nicotinate dehydrogenase
3	c1t3qF_	 Alignment		100.0	28	PDB header: oxidoreductase Chain: F: PDB Molecule: quinoline 2-oxidoreductase medium subunit; PDBTitle: crystal structure of quinoline 2-oxidoreductase from pseudomonas2 putida 86
4	c1ffuF_	 Alignment		100.0	31	PDB header: hydrolase Chain: F: PDB Molecule: cutm, flavoprotein of carbon monoxide pseudoflava which lacks the mo-pyranopterin moiety of the3 molybdenum cofactor
5	c1rm6E_	 Alignment		100.0	32	PDB header: oxidoreductase Chain: E: PDB Molecule: 4-hydroxybenzoyl-coa reductase beta subunit; PDBTitle: structure of 4-hydroxybenzoyl-coa reductase from thauera2 aromatica
6	c1wygA_	 Alignment		100.0	24	PDB header: oxidoreductase Chain: A: PDB Molecule: xanthine dehydrogenase/oxidase; PDBTitle: crystal structure of a rat xanthine dehydrogenase triple mutant2 (c535a, c992r and c1324s)
7	c2w3rG_	 Alignment		100.0	26	PDB header: oxidoreductase Chain: G: PDB Molecule: xanthine dehydrogenase; PDBTitle: crystal structure of xanthine dehydrogenase (desulfo form)2 from rhodobacter capsulatus in complex with hypoxanthine
8	c3b9jJ_	 Alignment		100.0	24	PDB header: oxidoreductase Chain: J: PDB Molecule: xanthine oxidase; PDBTitle: structure of xanthine oxidase with 2-hydroxy-6-methylpurine
9	c3etrM_	 Alignment		100.0	24	PDB header: oxidoreductase Chain: M: PDB Molecule: xanthine dehydrogenase/oxidase; PDBTitle: crystal structure of xanthine oxidase in complex with2 lumazine
10	d1ffvc2	 Alignment		100.0	35	Fold: FAD-binding/transporter-associated domain-like Superfamily: FAD-binding/transporter-associated domain-like Family: CO dehydrogenase flavoprotein N-terminal domain-like
11	d1n62c2	 Alignment		100.0	31	Fold: FAD-binding/transporter-associated domain-like Superfamily: FAD-binding/transporter-associated domain-like Family: CO dehydrogenase flavoprotein N-terminal domain-like

12	d1t3qc2	Alignment		100.0	30	Fold: FAD-binding/transporter-associated domain-like Superfamily: FAD-binding/transporter-associated domain-like Family: CO dehydrogenase flavoprotein N-terminal domain-like
13	d1rm6b2	Alignment		100.0	40	Fold: FAD-binding/transporter-associated domain-like Superfamily: FAD-binding/transporter-associated domain-like Family: CO dehydrogenase flavoprotein N-terminal domain-like
14	d1v97a6	Alignment		100.0	25	Fold: FAD-binding/transporter-associated domain-like Superfamily: FAD-binding/transporter-associated domain-like Family: CO dehydrogenase flavoprotein N-terminal domain-like
15	d3b9jb2	Alignment		100.0	24	Fold: FAD-binding/transporter-associated domain-like Superfamily: FAD-binding/transporter-associated domain-like Family: CO dehydrogenase flavoprotein N-terminal domain-like
16	d1jroa4	Alignment		100.0	25	Fold: FAD-binding/transporter-associated domain-like Superfamily: FAD-binding/transporter-associated domain-like Family: CO dehydrogenase flavoprotein N-terminal domain-like
17	d1v97a4	Alignment		99.9	20	Fold: CO dehydrogenase flavoprotein C-domain-like Superfamily: CO dehydrogenase flavoprotein C-terminal domain-like Family: CO dehydrogenase flavoprotein C-terminal domain-like
18	d1jroa3	Alignment		99.9	26	Fold: CO dehydrogenase flavoprotein C-domain-like Superfamily: CO dehydrogenase flavoprotein C-terminal domain-like Family: CO dehydrogenase flavoprotein C-terminal domain-like
19	d1n62c1	Alignment		99.9	22	Fold: CO dehydrogenase flavoprotein C-domain-like Superfamily: CO dehydrogenase flavoprotein C-terminal domain-like Family: CO dehydrogenase flavoprotein C-terminal domain-like
20	d1t3qc1	Alignment		99.9	23	Fold: CO dehydrogenase flavoprotein C-domain-like Superfamily: CO dehydrogenase flavoprotein C-terminal domain-like Family: CO dehydrogenase flavoprotein C-terminal domain-like
21	d1ffvc1	Alignment	not modelled	99.9	24	Fold: CO dehydrogenase flavoprotein C-domain-like Superfamily: CO dehydrogenase flavoprotein C-terminal domain-like Family: CO dehydrogenase flavoprotein C-terminal domain-like
22	d1rm6b1	Alignment	not modelled	99.9	18	Fold: CO dehydrogenase flavoprotein C-domain-like Superfamily: CO dehydrogenase flavoprotein C-terminal domain-like Family: CO dehydrogenase flavoprotein C-terminal domain-like
23	c1hskA_	Alignment	not modelled	97.9	15	PDB header: oxidoreductase Chain: A: PDB Molecule: udp-n-acetylenolpyruvoylglucosamine reductase; PDBTitle: crystal structure of s. aureus murb
24	c1mbbA_	Alignment	not modelled	97.9	18	PDB header: oxidoreductase Chain: A: PDB Molecule: uridine diphospho-n-acetylenolpyruvyglucosamine PDBTitle: oxidoreductase
25	c3i99A_	Alignment	not modelled	97.8	15	PDB header: oxidoreductase Chain: A: PDB Molecule: udp-n-acetylenolpyruvoylglucosamine reductase; PDBTitle: the crystal structure of the udp-n-acetylenolpyruvoylglucosamine2 reductase from the vibrio cholerae o1 biovar tor
26	c1zr6A_	Alignment	not modelled	97.8	11	PDB header: oxidoreductase Chain: A: PDB Molecule: glucosylglucosaccharide oxidase; PDBTitle: the crystal structure of an acremonium strictum glucosylglucosaccharide2 oxidase reveals a novel flavinylation
27	c2wdwB_	Alignment	not modelled	97.7	14	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
28	c2ipiD_	Alignment	not modelled	97.5	12	PDB header: oxidoreductase Chain: D: PDB Molecule: aclacinomycin oxidoreductase (aknox);

						PDBTitle: crystal structure of aclacinomycin oxidoreductase
29	c3fwaA	Alignment	not modelled	97.5	15	PDB header: flavoprotein Chain: A: PDB Molecule: reticuline oxidase; PDBTitle: structure of berberine bridge enzyme, c166a variant in complex with 2 (s)-reticuline
30	dluxy1	Alignment	not modelled	97.5	15	Fold: FAD-binding/transporter-associated domain-like Superfamily: FAD-binding/transporter-associated domain-like Family: Uridine diphospho-N-Acetylenolpyruvylglucosamine reductase (MurB), N-terminal domain
31	c2vfvA	Alignment	not modelled	97.4	15	PDB header: oxidoreductase Chain: A: PDB Molecule: xylitol oxidase; PDBTitle: alditol oxidase from streptomyces coelicolor a3(2); complex 2 with sulphite
32	c2y3rC	Alignment	not modelled	97.3	14	PDB header: oxidoreductase Chain: C: PDB Molecule: tamI; PDBTitle: structure of the tirandamycin-bound fad-dependent 2 tirandamycin oxidase tamI in p21 space group
33	d1hska1	Alignment	not modelled	97.3	16	Fold: FAD-binding/transporter-associated domain-like Superfamily: FAD-binding/transporter-associated domain-like Family: Uridine diphospho-N-Acetylenolpyruvylglucosamine reductase (MurB), N-terminal domain
34	c3d2hA	Alignment	not modelled	97.3	15	PDB header: oxidoreductase Chain: A: PDB Molecule: berberine bridge-forming enzyme; PDBTitle: structure of berberine bridge enzyme from eschscholzia californica, 2 monoclinic crystal form
35	c2gqUA	Alignment	not modelled	97.1	16	PDB header: oxidoreductase Chain: A: PDB Molecule: udp-n-acetylenolpyruvylglucosamine reductase; PDBTitle: crystal structure of udp-n-acetylenolpyruvylglucosamine 2 reductase (murb) from thermus caldophilus
36	c3bw7A	Alignment	not modelled	96.9	15	PDB header: oxidoreductase Chain: A: PDB Molecule: cytokinin dehydrogenase 1; PDBTitle: maize cytokinin oxidase/dehydrogenase complexed with the allenic 2 cytokinin analog ha-1
37	c3pm9A	Alignment	not modelled	96.9	15	PDB header: oxidoreductase Chain: A: PDB Molecule: putative oxidoreductase; PDBTitle: crystal structure of a putative dehydrogenase (rpa1076) from 2 rhodospseudomonas palustris cga009 at 2.57 a resolution
38	c1f0xA	Alignment	not modelled	96.8	20	PDB header: oxidoreductase Chain: A: PDB Molecule: d-lactate dehydrogenase; PDBTitle: crystal structure of d-lactate dehydrogenase, a peripheral 2 membrane respiratory enzyme.
39	c2uuuC	Alignment	not modelled	96.8	14	PDB header: transferase Chain: C: PDB Molecule: alkyl dihydroxyacetonephosphate synthase; PDBTitle: alkyl dihydroxyacetonephosphate synthase in p1
40	d1f0xa2	Alignment	not modelled	96.7	19	Fold: FAD-binding/transporter-associated domain-like Superfamily: FAD-binding/transporter-associated domain-like Family: FAD-linked oxidases, N-terminal domain
41	c3popD	Alignment	not modelled	96.5	23	PDB header: oxidoreductase Chain: D: PDB Molecule: gilr oxidase; PDBTitle: the crystal structure of gilr, an oxidoreductase that catalyzes the 2 terminal step of gilvocarin biosynthesis
42	d2i0ka2	Alignment	not modelled	96.4	15	Fold: FAD-binding/transporter-associated domain-like Superfamily: FAD-binding/transporter-associated domain-like Family: FAD-linked oxidases, N-terminal domain
43	c2bvFA	Alignment	not modelled	96.2	16	PDB header: oxidase Chain: A: PDB Molecule: 6-hydroxy-d-nicotine oxidase; PDBTitle: crystal structure of 6-hydroxy-d-nicotine oxidase from 2 arthrobacter nicotinovrans. crystal form 3 (p1)
44	c2exrA	Alignment	not modelled	96.2	14	PDB header: oxidoreductase Chain: A: PDB Molecule: cytokinin dehydrogenase 7; PDBTitle: x-ray structure of cytokinin oxidase/dehydrogenase (ckx)2 from arabidopsis thaliana at5g21482
45	c1wveB	Alignment	not modelled	96.0	15	PDB header: oxidoreductase Chain: B: PDB Molecule: 4-cresol dehydrogenase [hydroxylating] PDBTitle: p-cresol methylhydroxylase: alteration of the structure of 2 the flavoprotein subunit upon its binding to the 3 cytochrome subunit
46	c1i19B	Alignment	not modelled	95.8	16	PDB header: oxidoreductase Chain: B: PDB Molecule: cholesterol oxidase; PDBTitle: crystal structure of cholesterol oxidase from b.sterolicum
47	c3js8A	Alignment	not modelled	95.7	10	PDB header: oxidoreductase Chain: A: PDB Molecule: cholesterol oxidase; PDBTitle: solvent-stable cholesterol oxidase
48	d1wvfa2	Alignment	not modelled	95.5	15	Fold: FAD-binding/transporter-associated domain-like Superfamily: FAD-binding/transporter-associated domain-like Family: FAD-linked oxidases, N-terminal domain
49	c1ahuB	Alignment	not modelled	94.5	12	PDB header: flavoenzyme Chain: B: PDB Molecule: vanillyl-alcohol oxidase; PDBTitle: structure of the octameric flavoenzyme vanillyl-alcohol 2 oxidase in complex with p-cresol
50	d1w1oa2	Alignment	not modelled	93.9	13	Fold: FAD-binding/transporter-associated domain-like Superfamily: FAD-binding/transporter-associated domain-like Family: FAD-linked oxidases, N-terminal domain
51	d1e8ga2	Alignment	not modelled	92.8	10	Fold: FAD-binding/transporter-associated domain-like Superfamily: FAD-binding/transporter-associated domain-like Family: FAD-linked oxidases, N-terminal domain
52	d1x2ga1	Alignment	not modelled	89.9	16	Fold: SufE/NifU Superfamily: SufE/NifU Family: SP1160 C-terminal domain-like
53	d1vqza1	Alignment	not modelled	89.6	2	Fold: SufE/NifU Superfamily: SufE/NifU Family: SP1160 C-terminal domain-like
						PDB header: ligase

54	c2e5aA	Alignment	not modelled	75.4	9	Chain: A: PDB Molecule: lipoyltransferase 1; PDBTitle: crystal structure of bovine lipoyltransferase in complex2 with lipoyl-amp
55	c1x2gB	Alignment	not modelled	75.0	18	PDB header: ligase Chain: B: PDB Molecule: lipoate-protein ligase a; PDBTitle: crystal structure of lipoate-protein ligase a from2 escherichia coli
56	d1su0b	Alignment	not modelled	69.2	14	Fold: SufE/NifU Superfamily: SufE/NifU Family: NifU/IscU domain
57	d1li4a2	Alignment	not modelled	67.0	13	Fold: Flavodoxin-like Superfamily: Formate/glycerate dehydrogenase catalytic domain-like Family: S-adenosylhomocystein hydrolase
58	d1xjsa	Alignment	not modelled	65.7	13	Fold: SufE/NifU Superfamily: SufE/NifU Family: NifU/IscU domain
59	c1vqzA	Alignment	not modelled	63.1	2	PDB header: ligase Chain: A: PDB Molecule: lipoate-protein ligase, putative; PDBTitle: crystal structure of a putative lipoate-protein ligase a (sp_1160)2 from streptococcus pneumoniae tigr4 at 1.99 a resolution
60	c2yvsA	Alignment	not modelled	59.6	14	PDB header: oxidoreductase Chain: A: PDB Molecule: glycolate oxidase subunit glce; PDBTitle: crystal structure of glycolate oxidase subunit glce from thermus2 thermophilus hb8
61	d1v8ba2	Alignment	not modelled	56.1	16	Fold: Flavodoxin-like Superfamily: Formate/glycerate dehydrogenase catalytic domain-like Family: S-adenosylhomocystein hydrolase
62	c2qq4A	Alignment	not modelled	50.3	10	PDB header: metal binding protein Chain: A: PDB Molecule: iron-sulfur cluster biosynthesis protein iscu; PDBTitle: crystal structure of iron-sulfur cluster biosynthesis2 protein iscu (tha1736) from thermus thermophilus hb8
63	c3d64A	Alignment	not modelled	44.5	14	PDB header: hydrolase Chain: A: PDB Molecule: adenosylhomocysteinase; PDBTitle: crystal structure of s-adenosyl-l-homocysteine hydrolase from2 burkholderia pseudomallei
64	c3dhyc	Alignment	not modelled	43.0	17	PDB header: hydrolase Chain: C: PDB Molecule: adenosylhomocysteinase; PDBTitle: crystal structures of mycobacterium tuberculosis s-adenosyl-l-2 homocysteine hydrolase in ternary complex with substrate and3 inhibitors
65	c1v8bA	Alignment	not modelled	42.7	16	PDB header: hydrolase Chain: A: PDB Molecule: adenosylhomocysteinase; PDBTitle: crystal structure of a hydrolase
66	c3oneA	Alignment	not modelled	41.1	16	PDB header: hydrolase/hydrolase substrate Chain: A: PDB Molecule: adenosylhomocysteinase; PDBTitle: crystal structure of lupinus luteus s-adenosyl-l-homocysteine2 hydrolase in complex with adenine
67	d1wfsa	Alignment	not modelled	35.9	13	Fold: SufE/NifU Superfamily: SufE/NifU Family: NifU/IscU domain
68	d1r9pa	Alignment	not modelled	35.5	13	Fold: SufE/NifU Superfamily: SufE/NifU Family: NifU/IscU domain
69	c3n58D	Alignment	not modelled	32.7	19	PDB header: hydrolase Chain: D: PDB Molecule: adenosylhomocysteinase; PDBTitle: crystal structure of s-adenosyl-l-homocysteine hydrolase from brucella2 melitensis in ternary complex with nad and adenosine, orthorhombic3 form
70	d1frfl	Alignment	not modelled	31.7	13	Fold: HydB/Nqo4-like Superfamily: HydB/Nqo4-like Family: Nickel-iron hydrogenase, large subunit
71	d1e3db	Alignment	not modelled	29.8	17	Fold: HydB/Nqo4-like Superfamily: HydB/Nqo4-like Family: Nickel-iron hydrogenase, large subunit
72	d1wuil1	Alignment	not modelled	28.0	13	Fold: HydB/Nqo4-like Superfamily: HydB/Nqo4-like Family: Nickel-iron hydrogenase, large subunit
73	c2z7eB	Alignment	not modelled	25.8	9	PDB header: biosynthetic protein Chain: B: PDB Molecule: nifu-like protein; PDBTitle: crystal structure of aquifex aeolicus iscu with bound [2fe-2 2s] cluster
74	c2wpsB	Alignment	not modelled	23.4	7	PDB header: oxidoreductase Chain: B: PDB Molecule: periplasmic [nifese] hydrogenase, large subunit, PDBTitle: structure of the oxidised, as-isolated nifese hydrogenase2 from d. vulgaris hildenborough
75	d1yq9h1	Alignment	not modelled	22.8	15	Fold: HydB/Nqo4-like Superfamily: HydB/Nqo4-like Family: Nickel-iron hydrogenase, large subunit
76	c1h2aL	Alignment	not modelled	22.1	14	PDB header: oxidoreductase Chain: L: PDB Molecule: hydrogenase; PDBTitle: single crystals of hydrogenase from desulfovibrio vulgaris
77	d1j3ka	Alignment	not modelled	20.1	24	Fold: Dihydrofolate reductase-like Superfamily: Dihydrofolate reductase-like Family: Dihydrofolate reductases
78	c3ix9B	Alignment	not modelled	19.3	7	PDB header: oxidoreductase Chain: B: PDB Molecule: dihydrofolate reductase; PDBTitle: crystal structure of streptococcus pneumoniae dihydrofolate2 reductase - sp9 mutant
						PDB header: oxidoreductase, transferase Chain: B: PDB Molecule: bifunctional dihydrofolate reductase-

79	c3dg8B_	Alignment	not modelled	18.8	24	thymidylate PDBTitle: quadruple mutant (n51i+c59r+s108n+i164l) plasmodium2 falciparum dihydrofolate reductase-thymidylate synthase3 (pfdhfr-ts) complexed with rjf670, nadph, and dump
80	d2ji7a1	Alignment	not modelled	18.7	17	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Pyruvate oxidase and decarboxylase, middle domain
81	d1fma1	Alignment	not modelled	18.0	13	Fold: FMT C-terminal domain-like Superfamily: FMT C-terminal domain-like Family: Post formyltransferase domain
82	c2blcA_	Alignment	not modelled	17.7	21	PDB header: oxidoreductase Chain: A: PDB Molecule: di hydrofolate reductase-thymidylate synthase; PDBTitle: sp21 double mutant p. vivax dihydrofolate reductase in2 complex with des-chloropyrimethamine
83	c1zdrB_	Alignment	not modelled	17.7	14	PDB header: oxidoreductase Chain: B: PDB Molecule: di hydrofolate reductase; PDBTitle: dhfr from bacillus stearotherophilus
84	d2qdya1	Alignment	not modelled	17.5	20	Fold: Nitrile hydratase alpha chain Superfamily: Nitrile hydratase alpha chain Family: Nitrile hydratase alpha chain
85	c2qyaA_	Alignment	not modelled	17.4	12	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized conserved protein; PDBTitle: crystal structure of an uncharacterized conserved protein2 from methanopyrus kandleri
86	c1d4fD_	Alignment	not modelled	14.8	14	PDB header: hydrolase Chain: D: PDB Molecule: s-adenosylhomocysteine hydrolase; PDBTitle: crystal structure of recombinant rat-liver d244e mutant s-2 adenosylhomocysteine hydrolase
87	c3qyhG_	Alignment	not modelled	14.5	11	PDB header: lyase Chain: G: PDB Molecule: co-type nitrile hydratase alpha subunit; PDBTitle: crystal structure of co-type nitrile hydratase beta-h71l from2 pseudomonas putida.
88	d1ozha1	Alignment	not modelled	14.2	17	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Pyruvate oxidase and decarboxylase, middle domain
89	d2djia1	Alignment	not modelled	13.8	26	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Pyruvate oxidase and decarboxylase, middle domain
90	d1aoea_	Alignment	not modelled	13.0	21	Fold: Dihydrofolate reductase-like Superfamily: Dihydrofolate reductase-like Family: Dihydrofolate reductases
91	d1oj7a_	Alignment	not modelled	12.8	18	Fold: Dehydroquinase synthase-like Superfamily: Dehydroquinase synthase-like Family: Iron-containing alcohol dehydrogenase
92	c2dyoB_	Alignment	not modelled	12.3	56	PDB header: protein turnover/protein turnover Chain: B: PDB Molecule: autophagy protein 16; PDBTitle: the crystal structure of saccharomyces cerevisiae atg5-2 atg16(1-57) complex
93	d1cc1l_	Alignment	not modelled	12.2	10	Fold: HydB/Nqo4-like Superfamily: HydB/Nqo4-like Family: Nickel-iron hydrogenase, large subunit
94	d1jr1a4	Alignment	not modelled	12.0	29	Fold: CBS-domain pair Superfamily: CBS-domain pair Family: CBS-domain pair
95	c3gxxB_	Alignment	not modelled	11.9	13	PDB header: transcription Chain: B: PDB Molecule: transcription elongation factor spt6; PDBTitle: structure of the sh2 domain of the candida glabrata2 transcription elongation factor spt6, crystal form b
96	d2fug41	Alignment	not modelled	11.2	11	Fold: HydB/Nqo4-like Superfamily: HydB/Nqo4-like Family: Nqo4-like
97	c2fug4_	Alignment	not modelled	11.2	11	PDB header: oxidoreductase Chain: 4: PDB Molecule: nadh-quinone oxidoreductase chain 4; PDBTitle: crystal structure of the hydrophilic domain of respiratory complex i2 from thermus thermophilus
98	d1ybha1	Alignment	not modelled	11.0	22	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Pyruvate oxidase and decarboxylase, middle domain
99	c1b7gO_	Alignment	not modelled	11.0	19	PDB header: oxidoreductase Chain: O: PDB Molecule: protein (glyceraldehyde 3-phosphate dehydrogenase); PDBTitle: glyceraldehyde 3-phosphate dehydrogenase