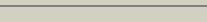


Phyre²

Email	i.a.kelley@imperial.ac.uk
Description	P0AEN1
Date	Thu Jan 5 11:23:45 GMT 2012
Unique Job ID	c8f6a8188fb803e8

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c1qfjD			100.0	100	PDB header: oxidoreductase Chain: D: PDB Molecule: protein (flavin reductase); PDBTitle: crystal structure of nad(p)h:flavin oxidoreductase from escherichia coli
2	c1krhA			100.0	23	PDB header: oxidoreductase Chain: A: PDB Molecule: benzoate 1,2-dioxygenase reductase; PDBTitle: x-ray stucture of benzoate dioxygenase reductase
3	c1gvhA			100.0	17	PDB header: oxidoreductase Chain: A: PDB Molecule: flavohemoprotein; PDBTitle: the x-ray structure of ferric escherichia coli2 flavohemoglobin reveals an unespected geometry of the3 distal heme pocket
4	c2r6hC			100.0	18	PDB header: oxidoreductase Chain: C: PDB Molecule: nadh:ubiquinone oxidoreductase, na translocating, f PDBTitle: crystal structure of the domain comprising the nad binding and the fad2 binding regions of the nadh:ubiquinone oxidoreductase, na3 translocating, f subunit from porphyromonas gingivalis
5	c1tvca			100.0	23	PDB header: oxidoreductase Chain: A: PDB Molecule: methane monooxygenase component c; PDBTitle: fad and nadh binding domain of methane monooxygenase2 reductase from methylococcus capsulatus (bath)
6	c1cqxB			100.0	20	PDB header: lipid binding protein Chain: B: PDB Molecule: flavohemoprotein; PDBTitle: crystal structure of the flavohemoglobin from alcaligenes eutrophus at 2.175 a resolution
7	c2eixA			100.0	21	PDB header: oxidoreductase Chain: A: PDB Molecule: nadh-cytochrome b5 reductase; PDBTitle: the structure of physarum polycephalum cytochrome b5 reductase
8	c1a8pA			100.0	16	PDB header: oxidoreductase Chain: A: PDB Molecule: nadph:ferredoxin oxidoreductase; PDBTitle: ferredoxin reductase from azotobacter vinelandii
9	c2bgjB			100.0	18	PDB header: oxidoreductase Chain: B: PDB Molecule: ferredoxin-nadp(h) reductase; PDBTitle: x-ray structure of the ferredoxin-nadp(h) reductase from rhodobacter capsulatus at 2.1 angstroms
10	c3fpkB			100.0	17	PDB header: flavoprotein, oxidoreductase Chain: B: PDB Molecule: ferredoxin-nadp reductase; PDBTitle: crystal structure of ferredoxin-nadp reductase from salmonella2 typhimurium
11	c2ok8D			100.0	21	PDB header: oxidoreductase Chain: D: PDB Molecule: putative ferredoxin--nadp reductase; PDBTitle: ferredoxin-nadp+ reductase from plasmodium falciparum

12	c1qgyA		100.0	20	PDB header: oxidoreductase Chain: A: PDB Molecule: ferredoxin--nadp+ reductase; PDBTitle: ferredoxin:nadp+ reductase mutant with lys 75 replaced by glu (k75e)	
13	c1fnca		100.0	20	PDB header: oxidoreductase (nadp+(a),ferredoxin(a)) Chain: A: PDB Molecule: ferredoxin-nadp+ reductase; PDBTitle: refined crystal structure of spinach ferredoxin reductase2 at 1.7 angstroms resolution: oxidized, reduced, and 2'-3 phospho-5'-amp bound states	
14	c2b5oA		100.0	21	PDB header: oxidoreductase Chain: A: PDB Molecule: ferredoxin--nadp reductase; PDBTitle: ferredoxin-nadp reductase	
15	c1umkA		100.0	19	PDB header: oxidoreductase Chain: A: PDB Molecule: nahd-cytochrome b5 reductase; PDBTitle: the structure of human erythrocyte nadh-cytochrome b52 reductase	
16	c2piaA		100.0	16	PDB header: reductase Chain: A: PDB Molecule: phthalate dioxygenase reductase; PDBTitle: phthalate dioxygenase reductase: a modular structure for 2 electron transfer from pyridine nucleotides to [2fe-2s]	
17	c2rc5D		100.0	25	PDB header: oxidoreductase Chain: D: PDB Molecule: ferredoxin-nadp reductase; PDBTitle: refined structure of fnr from leptospira interrogans	
18	c1jb9A		100.0	19	PDB header: oxidoreductase Chain: A: PDB Molecule: ferredoxin-nadp reductase; PDBTitle: crystal structure of the ferredoxin:nadp+ reductase from maize root at 2.1 angstroms	
19	c1cneA		100.0	20	PDB header: oxidoreductase Chain: A: PDB Molecule: nitrate reductase; PDBTitle: structural studies on corn nitrate reductase: refined2 structure of the cytochrome b reductase fragment at 2.53 angstroms, its adp complex and an active site mutant and4 modeling of the cytochrome b domain	
20	c1ep3B		100.0	14	PDB header: oxidoreductase Chain: B: PDB Molecule: dihydroorotate dehydrogenase b (pyrk subunit); PDBTitle: crystal structure of lactococcus lactis dihydroorotate dehydrogenase2 b. data collected under cryogenic conditions.	
21	c2gpjA		not modelled	100.0	13	PDB header: fad-binding protein Chain: A: PDB Molecule: siderophore-interacting protein; PDBTitle: crystal structure of a siderophore-interacting protein (sputcn32_007612 from shewanella putrefaciens cn-32 at 2.20 a resolution
22	d1qfja2		not modelled	100.0	100	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Reductases
23	c1ddiA		not modelled	100.0	20	PDB header: oxidoreductase Chain: A: PDB Molecule: sulfite reductase [nadph] flavoprotein alpha- PDBTitle: crystal structure of sir-fp60
24	c1f20A		not modelled	100.0	20	PDB header: oxidoreductase Chain: A: PDB Molecule: nitric-oxide synthase; PDBTitle: crystal structure of rat neuronal nitric-oxide synthase fad/nadph+2 domain at 1.9a resolution.
25	c3qftA		not modelled	99.9	17	PDB header: oxidoreductase Chain: A: PDB Molecule: nadph--cytochrome p450 reductase; PDBTitle: crystal structure of nadph-cytochrome p450 reductase (fad/nadph domain2 and r457h mutant)
26	c1tlIA		not modelled	99.9	18	PDB header: oxidoreductase Chain: A: PDB Molecule: nitric-oxide synthase, brain; PDBTitle: crystal structure of rat neuronal nitric-oxide synthase2 reductase module at 2.3 a resolution.
27	c1j9zB		not modelled	99.9	18	PDB header: oxidoreductase Chain: B: PDB Molecule: nadph-cytochrome p450 reductase; PDBTitle: cypr-w677g
28	d1tvca2		not modelled	99.9	27	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Aromatic dioxygenase reductase-like

29	c2qta	Alignment	not modelled	99.9	18	PDB header: oxidoreductase Chain: A: PDB Molecule: methionine synthase reductase; PDBTitle: crystal structure of the nadp+-bound fad-containing fnr-like module of2 human methionine synthase reductase
30	d1gvha3	Alignment	not modelled	99.9	15	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Flavohemoglobin, C-terminal domain
31	d1krha2	Alignment	not modelled	99.9	24	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Aromatic dioxygenase reductase-like
32	d1cqxa3	Alignment	not modelled	99.9	23	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Flavohemoglobin, C-terminal domain
33	d1umka2	Alignment	not modelled	99.9	18	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Reductases
34	d1qx4a2	Alignment	not modelled	99.9	19	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Reductases
35	d1a8pa2	Alignment	not modelled	99.9	13	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Reductases
36	c2bpoA	Alignment	not modelled	99.9	16	PDB header: reductase Chain: A: PDB Molecule: nadph-cytochrome p450 reductase; PDBTitle: crystal structure of the yeast cpr triple mutant d74g,2 y75f, k78a.
37	d2bmwa2	Alignment	not modelled	99.9	22	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Reductases
38	d2cnnda2	Alignment	not modelled	99.9	23	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Reductases
39	d1fnnda2	Alignment	not modelled	99.9	21	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Reductases
40	d1fdra2	Alignment	not modelled	99.9	15	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Reductases
41	d1ndha2	Alignment	not modelled	99.8	18	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Reductases
42	d2piaa2	Alignment	not modelled	99.8	16	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Aromatic dioxygenase reductase-like
43	d1gawa2	Alignment	not modelled	99.8	21	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Reductases
44	d1f20a2	Alignment	not modelled	99.8	20	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: NADPH-cytochrome p450 reductase-like
45	d1qfza2	Alignment	not modelled	99.8	21	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Reductases
46	d1sm4a2	Alignment	not modelled	99.8	18	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Reductases
47	c3a1fa	Alignment	not modelled	99.8	18	PDB header: oxidoreductase Chain: A: PDB Molecule: cytochrome b-245 heavy chain; PDBTitle: the crystal structure of nadph binding domain of gp91(phox)
48	d1jb9a2	Alignment	not modelled	99.8	15	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Reductases
49	d1ddga2	Alignment	not modelled	99.8	15	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: NADPH-cytochrome p450 reductase-like
50	d1ja1a3	Alignment	not modelled	99.8	16	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: NADPH-cytochrome p450 reductase-like
51	c3irxC	Alignment	not modelled	99.7	12	PDB header: oxidoreductase Chain: C: PDB Molecule: putative hydrogenase; PDBTitle: crystal structure of the c-terminal domain (residues 78-226)2 of pf1911 hydrogenase from pyrococcus furiosus, northeast structural genomics consortium target pfr246a
52	d1ep3b2	Alignment	not modelled	99.7	16	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Dihydroorotate dehydrogenase B, PyrK subunit
53	d1qfja1	Alignment	not modelled	99.7	100	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
54	d1krha1	Alignment	not modelled	99.6	18	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like

					Family: Ferredoxin reductase FAD-binding domain-like
55	d1fdra1	Alignment	not modelled	99.6	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
56	d1tvca1	Alignment	not modelled	99.5	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
57	d1sm4a1	Alignment	not modelled	99.5	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
58	d1ep3b1	Alignment	not modelled	99.5	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
59	d2piaa1	Alignment	not modelled	99.5	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
60	d1a8pa1	Alignment	not modelled	99.5	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
61	d2cnida1	Alignment	not modelled	99.4	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
62	d1qfza1	Alignment	not modelled	99.4	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
63	d1fnida1	Alignment	not modelled	99.4	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
64	d2bmwa1	Alignment	not modelled	99.4	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
65	d1gawa1	Alignment	not modelled	99.4	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
66	d1gvha2	Alignment	not modelled	99.4	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
67	d1qx4a1	Alignment	not modelled	99.4	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
68	d1umka1	Alignment	not modelled	99.3	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
69	d1jb9a1	Alignment	not modelled	99.3	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
70	d1ndha1	Alignment	not modelled	99.2	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
71	d1cqxa2	Alignment	not modelled	99.2	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: Ferredoxin reductase FAD-binding domain-like
72	d1ddga1	Alignment	not modelled	97.2	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: NADPH-cytochrome p450 reductase FAD-binding domain-like
73	d1f20a1	Alignment	not modelled	96.5	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: NADPH-cytochrome p450 reductase FAD-binding domain-like
74	d1jalaa1	Alignment	not modelled	87.8	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: NADPH-cytochrome p450 reductase FAD-binding domain-like
75	d1f0ka_	Alignment	not modelled	78.6	Fold: UDP-Glycosyltransferase/glycogen phosphorylase Superfamily: UDP-Glycosyltransferase/glycogen phosphorylase Family: Peptidoglycan biosynthesis glycosyltransferase MurG
76	d1o5za1	Alignment	not modelled	76.3	Fold: MurD-like peptide ligases, peptide-binding domain Superfamily: MurD-like peptide ligases, peptide-binding domain Family: Fatty polyglutamate synthetase, C-terminal domain
77	d2gc6a1	Alignment	not modelled	58.7	Fold: MurD-like peptide ligases, peptide-binding domain Superfamily: MurD-like peptide ligases, peptide-binding domain Family: Fatty polyglutamate synthetase, C-terminal domain
78	d1v43a2	Alignment	not modelled	51.9	Fold: OB-fold Superfamily: MOP-like Family: ABC-transporter additional domain
79	c2pnyA_	Alignment	not modelled	39.4	PDB header: isomerase Chain: A: PDB Molecule: isopentenyl-diphosphate delta-isomerase 2; PDB Title: structure of human isopentenyl-diphosphate delta-isomerase 2
80	d1g2914	Alignment	not modelled	38.1	Fold: OB-fold Superfamily: MOP-like Family: ABC-transporter additional domain
81	c3t5sA_	Alignment	not modelled	33.4	PDB header: immune system Chain: A: PDB Molecule: macrophage migration inhibitory factor; PDB Title: structure of macrophage migration inhibitory factor from

					giardia2_lamblia
82	d1pn3a	Alignment	not modelled	32.8	8 Fold: UDP-Glycosyltransferase/glycogen phosphorylase Superfamily: UDP-Glycosyltransferase/glycogen phosphorylase Family: Gtf glycosyltransferase
83	c2ppvA	Alignment	not modelled	26.9	36 PDB header: transferase Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of a protein belonging to the upf0052 (se_0549) from2 staphylococcus epidermidis atcc 12228 at 2.00 a resolution
84	c3fwtA	Alignment	not modelled	26.5	11 PDB header: cytokine Chain: A: PDB Molecule: macrophage migration inhibitory factor-like PDBTitle: crystal structure of leishmania major mif2
85	d2hzba1	Alignment	not modelled	25.9	27 Fold: CofD-like Superfamily: CofD-like Family: CofD-like
86	d1fima	Alignment	not modelled	24.4	14 Fold: Tautomerase/MIF Superfamily: Tautomerase/MIF Family: MIF-related
87	d2gdga1	Alignment	not modelled	23.2	14 Fold: Tautomerase/MIF Superfamily: Tautomerase/MIF Family: MIF-related
88	cluwvA	Alignment	not modelled	22.4	17 PDB header: transferase Chain: A: PDB Molecule: 23s rrna (uracil-5-)methyltransferase ruma; PDBTitle: crystal structure of ruma, the iron-sulfur cluster2 containing e. coli 23s ribosomal rna 5-methyluridine3 methyltransferase
89	d1iira	Alignment	not modelled	22.2	13 Fold: UDP-Glycosyltransferase/glycogen phosphorylase Superfamily: UDP-Glycosyltransferase/glycogen phosphorylase Family: Gtf glycosyltransferase
90	d1hfoa	Alignment	not modelled	21.9	7 Fold: Tautomerase/MIF Superfamily: Tautomerase/MIF Family: MIF-related
91	c2i6kA	Alignment	not modelled	21.7	6 PDB header: isomerase Chain: A: PDB Molecule: isopentenyl-diphosphate delta-isomerase 1; PDBTitle: crystal structure of human type i ipp isomerase complexed2 with a substrate analog
92	c2q7xA	Alignment	not modelled	21.3	44 PDB header: transferase Chain: A: PDB Molecule: upf0052 protein sp_1565; PDBTitle: crystal structure of a putative phospho transferase (sp_1565) from2 streptococcus pneumoniae tigr4 at 2.00 a resolution
93	c3b64A	Alignment	not modelled	21.1	21 PDB header: cytokine Chain: A: PDB Molecule: macrophage migration inhibitory factor-like PDBTitle: macrophage migration inhibitory factor (mif) from2 /leishmania major
94	c3h75A	Alignment	not modelled	20.5	10 PDB header: sugar binding protein Chain: A: PDB Molecule: periplasmic sugar-binding domain protein; PDBTitle: crystal structure of a periplasmic sugar-binding protein from2 pseudomonas fluorescens
95	c2p0yA	Alignment	not modelled	20.0	27 PDB header: structural genomics, unknown function Chain: A: PDB Molecule: hypothetical protein lp_0780; PDBTitle: crystal structure of q88yi3_lacpl from lactobacillus2 plantarum. northeast structural genomics consortium target3 lpr6
96	d1nl1a	Alignment	not modelled	19.3	19 Fold: S-adenosyl-L-methionine-dependent methyltransferases Superfamily: S-adenosyl-L-methionine-dependent methyltransferases Family: Spermidine synthase
97	c2iiIA	Alignment	not modelled	18.8	23 PDB header: lyase Chain: A: PDB Molecule: s-adenosylmethionine decarboxylase proenzyme; PDBTitle: crystal structure of the adenosylmethionine decarboxylase (aq_254)2 from aquifex aeolicus vf5
98	c3gacD	Alignment	not modelled	18.5	7 PDB header: cytokine Chain: D: PDB Molecule: macrophage migration inhibitory factor-like PDBTitle: structure of mif with hpp
99	d1gd0a	Alignment	not modelled	18.2	14 Fold: Tautomerase/MIF Superfamily: Tautomerase/MIF Family: MIF-related