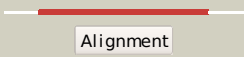

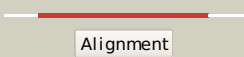

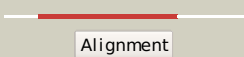

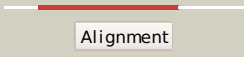

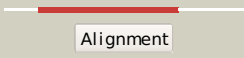

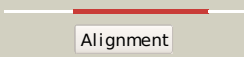

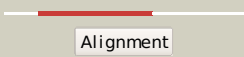

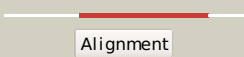

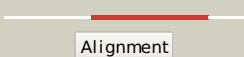

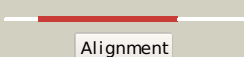

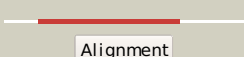




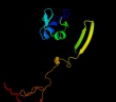




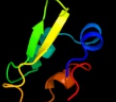


Phyre2

Email	l.a.kelley@imperial.ac.uk
Description	P11349
Date	Thu Jan 5 11:32:35 GMT 2012
Unique Job ID	2081ee5c13e1a6ff

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	d1y5ib1	 Alignment		100.0	100	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
2	c2ivfB_	 Alignment		100.0	41	PDB header: oxidoreductase Chain: B: PDB Molecule: ethylbenzene dehydrogenase beta-subunit; PDBTitle: ethylbenzene dehydrogenase from aromatoleum aromaticum
3	c1ti2F_	 Alignment		100.0	35	PDB header: oxidoreductase Chain: F: PDB Molecule: pyrogallol hydroxytransferase small subunit; PDBTitle: crystal structure of pyrogallol-phloroglucinol2 transhydroxylase from pelobacter acidigallici
4	d1kqfb1	 Alignment		100.0	28	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
5	c2vpyB_	 Alignment		100.0	39	PDB header: oxidoreductase Chain: B: PDB Molecule: nrhc protein; PDBTitle: polysulfide reductase with bound quinone inhibitor,2 pentachlorophenol (pcp)
6	c1hfeL_	 Alignment		100.0	14	PDB header: hydrogenase Chain: L: PDB Molecule: protein (fe-only hydrogenase (e.c.1.18.99.1) PDBTitle: 1.6 a resolution structure of the fe-only hydrogenase from2 desulfovibrio desulfuricans
7	c1kqfB_	 Alignment		100.0	27	PDB header: oxidoreductase Chain: B: PDB Molecule: formate dehydrogenase, nitrate-inducible, iron-sulfur PDBTitle: formate dehydrogenase n from e. coli
8	c1gx7A_	 Alignment		100.0	15	PDB header: oxidoreductase Chain: A: PDB Molecule: periplasmic [fe] hydrogenase large subunit; PDBTitle: best model of the electron transfer complex between2 cytochrome c3 and [fe]-hydrogenase
9	c1c4cA_	 Alignment		100.0	17	PDB header: oxidoreductase Chain: A: PDB Molecule: protein (fe-only hydrogenase); PDBTitle: binding of exogenously added carbon monoxide at the active2 site of the fe-only hydrogenase (cpi) from clostridium3 pasteurianum
10	d1vlfh2	 Alignment		100.0	35	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
11	d1h0hb_	 Alignment		100.0	26	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins

12	d1hfel1	Alignment		99.9	12	Fold: Fe-only hydrogenase Superfamily: Fe-only hydrogenase Family: Fe-only hydrogenase
13	d3c8ya1	Alignment		99.9	13	Fold: Fe-only hydrogenase Superfamily: Fe-only hydrogenase Family: Fe-only hydrogenase
14	c3lx4B_	Alignment		99.9	16	PDB header: oxidoreductase Chain: B: PDB Molecule: fe-hydrogenase; PDBTitle: stepwise [feFe]-hydrogenase h-cluster assembly revealed in the2 structure of hyda(deltaefg)
15	c3gyxl_	Alignment		99.4	19	PDB header: oxidoreductase Chain: J: PDB Molecule: adenylylsulfate reductase; PDBTitle: crystal structure of adenylylsulfate reductase from2 desulfovibrio gigas
16	d1jnrb_	Alignment		99.4	18	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
17	d7fd1a_	Alignment		99.3	26	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: 7-Fe ferredoxin
18	c2v2kB_	Alignment		99.3	21	PDB header: electron transport Chain: B: PDB Molecule: ferredoxin; PDBTitle: the crystal structure of fdxa, a 7fe ferredoxin from2 mycobacterium smegmatis
19	d1h98a_	Alignment		99.3	22	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: 7-Fe ferredoxin
20	d3c7bb1	Alignment		99.2	27	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
21	d1bc6a_	Alignment	not modelled	99.2	25	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: 7-Fe ferredoxin
22	c1gthD_	Alignment	not modelled	99.2	19	PDB header: oxidoreductase Chain: D: PDB Molecule: dihydropyrimidine dehydrogenase; PDBTitle: dihydropyrimidine dehydrogenase (dpd) from pig, ternary2 complex with nadph and 5-iodouracil
23	d1hfel2	Alignment	not modelled	99.1	20	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
24	d1clfa_	Alignment	not modelled	99.0	32	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Short-chain ferredoxins
25	d1fcaa_	Alignment	not modelled	98.9	29	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Short-chain ferredoxins
26	d1dura_	Alignment	not modelled	98.9	30	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Short-chain ferredoxins
27	c2gmhA_	Alignment	not modelled	98.9	21	PDB header: oxidoreductase Chain: A: PDB Molecule: electron transfer flavoprotein-ubiquinone PDBTitle: structure of porcine electron transfer flavoprotein-2 ubiquinone oxidoreductase in complexed with ubiquinone
28	d2fdna_	Alignment	not modelled	98.9	31	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Short-chain ferredoxins
29	d2fug91	Alignment	not modelled	98.9	30	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins

						Family: Ferredoxin domains from multidomain proteins
30	c2fugG_	Alignment	not modelled	98.9	30	PDB header: oxidoreductase Chain: G: PDB Molecule: nadh-quinone oxidoreductase chain 9; PDBTitle: crystal structure of the hydrophilic domain of respiratory complex i2 from thermus thermophilus
31	c3c7bE_	Alignment	not modelled	98.8	25	PDB header: oxidoreductase Chain: E: PDB Molecule: sulfite reductase, dissimilatory-type subunit beta; PDBTitle: structure of the dissimilatory sulfite reductase from archaeoglobus2 fulgidus
32	d2gmha3	Alignment	not modelled	98.8	17	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: ETF-QO domain-like
33	c2zvsB_	Alignment	not modelled	98.8	30	PDB header: electron transport Chain: B: PDB Molecule: uncharacterized ferredoxin-like protein yfhI; PDBTitle: crystal structure of the 2[4fe-4s] ferredoxin from escherichia coli
34	d1gtea5	Alignment	not modelled	98.8	22	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
35	d1blua_	Alignment	not modelled	98.7	26	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Short-chain ferredoxins
36	c2c3yA_	Alignment	not modelled	98.7	29	PDB header: oxidoreductase Chain: A: PDB Molecule: pyruvate-ferredoxin oxidoreductase; PDBTitle: crystal structure of the radical form of2 pyruvate:ferredoxin oxidoreductase from desulfovibrio3 africanus
37	c2fgoA_	Alignment	not modelled	98.7	28	PDB header: electron transport Chain: A: PDB Molecule: ferredoxin; PDBTitle: structure of the 2[4fe-4s] ferredoxin from pseudomonas2 aeruginosa
38	d1xera_	Alignment	not modelled	98.7	27	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Archaeal ferredoxins
39	d2c42a5	Alignment	not modelled	98.6	24	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
40	d1rgva_	Alignment	not modelled	98.6	34	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Short-chain ferredoxins
41	d1jb0c_	Alignment	not modelled	98.6	25	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: 7-Fe ferredoxin
42	c2v4jE_	Alignment	not modelled	98.6	23	PDB header: oxidoreductase Chain: E: PDB Molecule: sulfite reductase, dissimilatory-type subunit PDBTitle: the crystal structure of desulfovibrio vulgaris2 dissimilatory sulfite reductase bound to dsrC provides3 novel insights into the mechanism of sulfate respiration
43	c3bk7A_	Alignment	not modelled	98.5	35	PDB header: hydrolase/translation Chain: A: PDB Molecule: abc transporter atp-binding protein; PDBTitle: structure of the complete abc1/rnaase-l inhibitor protein2 from pyrococcus abyssi
44	d1vjwa_	Alignment	not modelled	98.4	17	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Single 4Fe-4S cluster ferredoxin
45	c2v4jA_	Alignment	not modelled	98.4	20	PDB header: oxidoreductase Chain: A: PDB Molecule: sulfite reductase, dissimilatory-type subunit PDBTitle: the crystal structure of desulfovibrio vulgaris2 dissimilatory sulfite reductase bound to dsrC provides3 novel insights into the mechanism of sulfate respiration
46	c3c7bA_	Alignment	not modelled	98.4	26	PDB header: oxidoreductase Chain: A: PDB Molecule: sulfite reductase, dissimilatory-type subunit alpha; PDBTitle: structure of the dissimilatory sulfite reductase from archaeoglobus2 fulgidus
47	d3c8ya3	Alignment	not modelled	98.3	19	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
48	d1iqza_	Alignment	not modelled	97.9	24	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Single 4Fe-4S cluster ferredoxin
49	d2fug34	Alignment	not modelled	97.9	14	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
50	c1dwlA_	Alignment	not modelled	97.8	21	PDB header: electron transfer Chain: A: PDB Molecule: ferredoxin i; PDBTitle: the ferredoxin-cytochrome complex using heteronuclear nmr2 and docking simulation
51	c2fugC_	Alignment	not modelled	97.6	26	PDB header: oxidoreductase Chain: C: PDB Molecule: nadh-quinone oxidoreductase chain 3; PDBTitle: crystal structure of the hydrophilic domain of respiratory complex i2 from thermus thermophilus
52	d1fxra_	Alignment	not modelled	97.5	18	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Single 4Fe-4S cluster ferredoxin
53	d1sj1a_	Alignment	not modelled	97.4	16	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Single 4Fe-4S cluster ferredoxin
54	d2v4jb1	Alignment	not modelled	97.4	33	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins

						Family: Ferredoxin domains from multidomain proteins
55	c3cf4A_	Alignment	not modelled	97.0	28	PDB header: oxidoreductase Chain: A: PDB Molecule: acetyl-coa decarboxylase/synthase alpha subunit; PDBTitle: structure of the codh component of the m. barkeri acds complex
56	d2bs2b1	Alignment	not modelled	95.9	20	Fold: Globin-like Superfamily: alpha-helical ferredoxin Family: Fumarate reductase/Succinate dehydrogenase iron-sulfur protein, C-terminal domain
57	d1kf6b1	Alignment	not modelled	95.6	25	Fold: Globin-like Superfamily: alpha-helical ferredoxin Family: Fumarate reductase/Succinate dehydrogenase iron-sulfur protein, C-terminal domain
58	d1nekb1	Alignment	not modelled	95.5	28	Fold: Globin-like Superfamily: alpha-helical ferredoxin Family: Fumarate reductase/Succinate dehydrogenase iron-sulfur protein, C-terminal domain
59	c2bs2E_	Alignment	not modelled	95.3	20	PDB header: oxidoreductase Chain: E: PDB Molecule: quinol-fumarate reductase iron-sulfur subunit b; PDBTitle: quinol:fumarate reductase from wolinetella succinogenes
60	c1nekB_	Alignment	not modelled	95.2	24	PDB header: oxidoreductase/electron transport Chain: B: PDB Molecule: succinate dehydrogenase iron-sulfur protein; PDBTitle: complex ii (succinate dehydrogenase) from e. coli with2 ubiquinone bound
61	c2b76N_	Alignment	not modelled	94.8	19	PDB header: oxidoreductase Chain: N: PDB Molecule: fumarate reductase iron-sulfur protein; PDBTitle: e. coli quinol fumarate reductase frda e49q mutation
62	c2h89B_	Alignment	not modelled	94.5	20	PDB header: oxidoreductase Chain: B: PDB Molecule: succinate dehydrogenase ip subunit; PDBTitle: avian respiratory complex ii with malonate bound
63	d2v4ja1	Alignment	not modelled	93.8	29	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
64	d3c7ba1	Alignment	not modelled	93.3	35	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
65	c2vdcl_	Alignment	not modelled	90.6	23	PDB header: oxidoreductase Chain: I: PDB Molecule: glutamate synthase [nadh] small chain; PDBTitle: the 9.5 a resolution structure of glutamate synthase from2 cryo-electron microscopy and its oligomerization behavior3 in solution: functional implications.
66	d1ugpa_	Alignment	not modelled	69.9	31	Fold: Nitrile hydratase alpha chain Superfamily: Nitrile hydratase alpha chain Family: Nitrile hydratase alpha chain
67	d1gtea1	Alignment	not modelled	65.9	31	Fold: Globin-like Superfamily: alpha-helical ferredoxin Family: Dihydropyrimidine dehydrogenase, N-terminal domain
68	d2d6fc2	Alignment	not modelled	64.4	26	Fold: DCoH-like Superfamily: GAD domain-like Family: GAD domain
69	d1oe4a_	Alignment	not modelled	60.9	19	Fold: Uracil-DNA glycosylase-like Superfamily: Uracil-DNA glycosylase-like Family: Single-strand selective monofunctional uracil-DNA glycosylase SMUG1
70	d1zq1c2	Alignment	not modelled	59.3	25	Fold: DCoH-like Superfamily: GAD domain-like Family: GAD domain
71	c2z6vA_	Alignment	not modelled	50.9	31	PDB header: unknown function Chain: A: PDB Molecule: putative uncharacterized protein; PDBTitle: crystal structure of sulfotransferase stf9 from2 mycobacterium avium
72	c2dxbR_	Alignment	not modelled	46.3	31	PDB header: hydrolase Chain: R: PDB Molecule: thiocyanate hydrolase subunit gamma; PDBTitle: recombinant thiocyanate hydrolase comprising partially-modified cobalt2 centers
73	c2d6fC_	Alignment	not modelled	37.9	20	PDB header: ligase/rna Chain: C: PDB Molecule: glutamyl-trna(gln) amidotransferase subunit e; PDBTitle: crystal structure of glu-trna(gln) amidotransferase in the2 complex with trna(gln)
74	c3qyhG_	Alignment	not modelled	35.3	18	PDB header: lyase Chain: G: PDB Molecule: co-type nitrile hydratase alpha subunit; PDBTitle: crystal structure of co-type nitrile hydratase beta-h711 from2 pseudomonas putida.
75	d1ujpa_	Alignment	not modelled	34.5	14	Fold: TIM beta/alpha-barrel Superfamily: Ribulose-phosphate binding barrel Family: Tryptophan biosynthesis enzymes
76	c1m2oA_	Alignment	not modelled	33.0	25	PDB header: protein transport/signaling protein Chain: A: PDB Molecule: protein transport protein sec23; PDBTitle: crystal structure of the sec23-sar1 complex
77	c1g8jC_	Alignment	not modelled	31.9	26	PDB header: oxidoreductase Chain: C: PDB Molecule: arsenite oxidase; PDBTitle: crystal structure analysis of arsenite oxidase from2 alcaligenes faecalis
78	c3ktwA_	Alignment	not modelled	25.2	17	PDB header: rna/rna binding protein Chain: A: PDB Molecule: signal recognition particle 19 kda protein; PDBTitle: crystal structure of the srp19/s-domain srp rna complex of sulfobus2 solfataricus
79	d1brwa2	Alignment	not modelled	24.0	12	Fold: Nucleoside phosphorylase/phosphoribosyltransferase catalytic domain Superfamily: Nucleoside phosphorylase/phosphoribosyltransferase catalytic domain

						Family: Nucleoside phosphorylase/phosphoribosyltransferase catalytic domain
80	d1jida_	Alignment	not modelled	23.4	13	Fold: SRP19 Superfamily: SRP19 Family: SRP19
81	d2phpa1	Alignment	not modelled	22.9	18	Fold: AraD/HMP-PK domain-like Superfamily: AraD/HMP-PK domain-like Family: Phosphomethylpyrimidine kinase C-terminal domain-like
82	c3eg9B_	Alignment	not modelled	22.7	25	PDB header: protein transport Chain: B: PDB Molecule: sec24 related gene family, member d; PDBTitle: crystal structure of the mammalian copii-coat protein2 sec23/24 bound to the transport signal sequence of membrin
83	d1djqa3	Alignment	not modelled	22.5	45	Fold: Nucleotide-binding domain Superfamily: Nucleotide-binding domain Family: N-terminal domain of adrenodoxin reductase-like
84	d2nyga1	Alignment	not modelled	22.3	14	Fold: TTHA0583/YokD-like Superfamily: TTHA0583/YokD-like Family: Aminoglycoside 3-N-acetyltransferase-like
85	d1a9xa1	Alignment	not modelled	21.8	15	Fold: Carbamoyl phosphate synthetase, large subunit connection domain Superfamily: Carbamoyl phosphate synthetase, large subunit connection domain Family: Carbamoyl phosphate synthetase, large subunit connection domain
86	d1fxda_	Alignment	not modelled	21.4	29	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Single 4Fe-4S cluster ferredoxin
87	c3gxgA_	Alignment	not modelled	20.6	18	PDB header: hydrolase Chain: A: PDB Molecule: putative phosphatase (duf442); PDBTitle: crystal structure of putative phosphatase (duf442) (yp_001181608.1)2 from shewanella putrefaciens cn-32 at 1.60 a resolution
88	c2fugA_	Alignment	not modelled	18.6	27	PDB header: oxidoreductase Chain: A: PDB Molecule: nadh-quinone oxidoreductase chain 1; PDBTitle: crystal structure of the hydrophilic domain of respiratory complex i2 from thermus thermophilus
89	d1uoua2	Alignment	not modelled	17.2	10	Fold: Nucleoside phosphorylase/phosphoribosyltransferase catalytic domain Superfamily: Nucleoside phosphorylase/phosphoribosyltransferase catalytic domain Family: Nucleoside phosphorylase/phosphoribosyltransferase catalytic domain
90	c3dluA_	Alignment	not modelled	17.0	16	PDB header: rna binding protein Chain: A: PDB Molecule: signal recognition particle 19 kda protein; PDBTitle: structures of srp54 and srp19, the two proteins assembling2 the ribonucleic core of the signal recognition particle3 from the archaeon pyrococcus furiosus.
91	c3fpnA_	Alignment	not modelled	16.9	16	PDB header: dna binding protein Chain: A: PDB Molecule: geobacillus stearothermophilus uvra interaction PDBTitle: crystal structure of uvra-uvrb interaction domains
92	c3a5iB_	Alignment	not modelled	16.6	14	PDB header: protein transport Chain: B: PDB Molecule: flagellar biosynthesis protein flha; PDBTitle: structure of the cytoplasmic domain of flha
93	c3c6fD_	Alignment	not modelled	15.6	15	PDB header: structural genomics, unknown function Chain: D: PDB Molecule: yettf protein; PDBTitle: crystal structure of protein bsu07140 from bacillus subtilis
94	d1ddfa_	Alignment	not modelled	15.5	18	Fold: DEATH domain Superfamily: DEATH domain Family: DEATH domain, DD
95	c2wj8N_	Alignment	not modelled	15.0	20	PDB header: rna binding protein/rna Chain: N: PDB Molecule: nucleoprotein; PDBTitle: respiratory syncytial virus ribonucleoprotein
96	c1z63A_	Alignment	not modelled	14.9	10	PDB header: hydrolase/dna complex Chain: A: PDB Molecule: helicase of the snf2/rad54 hamily; PDBTitle: sulfolobus solfataricus swi2/snf2 atpase core in complex2 with dsdna
97	c2x49A_	Alignment	not modelled	14.8	14	PDB header: protein transport Chain: A: PDB Molecule: invasion protein inva; PDBTitle: crystal structure of the c-terminal domain of inva
98	c1m2vB_	Alignment	not modelled	14.5	26	PDB header: protein transport Chain: B: PDB Molecule: protein transport protein sec24; PDBTitle: crystal structure of the yeast sec23/24 heterodimer
99	c1moxB_	Alignment	not modelled	14.1	24	PDB header: transferase/growth factor Chain: B: PDB Molecule: epidermal growth factor receptor; PDBTitle: crystal structure of human epidermal growth factor receptor (residues2 1-501) in complex with tgf-alpha