






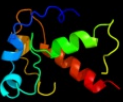











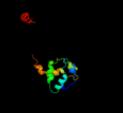




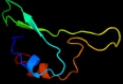








Phyre2

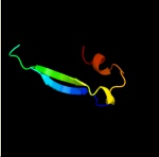
Email	I.a.kelley@imperial.ac.uk
Description	P77536
Date	Thu Jan 5 12:30:20 GMT 2012
Unique Job ID	de4088acefc71732

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c2g40A_	 Alignment		100.0	25	PDB header: unknown function Chain: A: PDB Molecule: conserved hypothetical protein; PDBTitle: crystal structure of a duf162 family protein (dr_1909) from <i>Deinococcus radiodurans</i> at 1.70 Å resolution
2	d2g40a1	 Alignment		100.0	25	Fold: NagB/RpiA/CoA transferase-like Superfamily: NagB/RpiA/CoA transferase-like Family: YkgG-like
3	c2b76N_	 Alignment		99.4	20	PDB header: oxidoreductase Chain: N: PDB Molecule: fumarate reductase iron-sulfur protein; PDBTitle: <i>E. coli</i> quinol fumarate reductase frda e49q mutation
4	c2h89B_	 Alignment		99.3	26	PDB header: oxidoreductase Chain: B: PDB Molecule: succinate dehydrogenase ip subunit; PDBTitle: avian respiratory complex ii with malonate bound
5	d1nekbl	 Alignment		99.3	24	Fold: Globin-like Superfamily: alpha-helical ferredoxin Family: Fumarate reductase/Succinate dehydrogenase iron-sulfur protein, C-terminal domain
6	c1nekB_	 Alignment		99.3	22	PDB header: oxidoreductase/electron transport Chain: B: PDB Molecule: succinate dehydrogenase iron-sulfur protein; PDBTitle: complex ii (succinate dehydrogenase) from <i>E. coli</i> with 2 ubiquinone bound
7	d2bs2b1	 Alignment		99.2	24	Fold: Globin-like Superfamily: alpha-helical ferredoxin Family: Fumarate reductase/Succinate dehydrogenase iron-sulfur protein, C-terminal domain
8	c2bs2E_	 Alignment		99.2	24	PDB header: oxidoreductase Chain: E: PDB Molecule: quinol-fumarate reductase iron-sulfur subunit b; PDBTitle: quinol:fumarate reductase from <i>Wolinella succinogenes</i>
9	d1kf6b1	 Alignment		99.2	19	Fold: Globin-like Superfamily: alpha-helical ferredoxin Family: Fumarate reductase/Succinate dehydrogenase iron-sulfur protein, C-terminal domain
10	c3cf4A_	 Alignment		99.1	23	PDB header: oxidoreductase Chain: A: PDB Molecule: acetyl-coa decarboxylase/synthase alpha subunit; PDBTitle: structure of the codh component of the <i>M. barkeri</i> acds complex
11	d2c42a5	 Alignment		98.0	22	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins

12	d3c8ya3	Alignment		97.8	26	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
13	c1gx7A_	Alignment		97.6	36	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
14	d1xera_	Alignment		97.6	34	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Archaeal ferredoxins
15	c2c3yA_	Alignment		97.5	40	PDB header: oxidoreductase Chain: A: PDB Molecule: pyruvate-ferredoxin oxidoreductase; PDBTitle: crystal structure of the radical form of2 pyruvate:ferredoxin oxidoreductase from desulfovibrio3 africanus
16	d2fug91	Alignment		97.5	25	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
17	c2fugG_	Alignment		97.5	25	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
18	c1c4cA_	Alignment		97.4	20	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
19	c1hfeL_	Alignment		97.4	37	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
20	c1gthD_	Alignment		97.4	41	PDB header: oxidoreductase Chain: D: PDB Molecule: dihydropyrimidine dehydrogenase; PDBTitle: dihydropyrimidine dehydrogenase (dpd) from pig, ternary2 complex with nadph and 5-iodouracil
21	d1gtea5	Alignment	not modelled	97.3	29	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
22	d1jb0c_	Alignment	not modelled	97.2	26	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: 7-Fe ferredoxin
23	c2gmhA_	Alignment	not modelled	97.2	20	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
24	d2fug34	Alignment	not modelled	97.1	22	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
25	d7fd1a_	Alignment	not modelled	97.0	39	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: 7-Fe ferredoxin
26	d1hfeI2	Alignment	not modelled	97.0	37	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
27	c2fugC_	Alignment	not modelled	97.0	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
28	d1clfa_	Alignment	not modelled	96.9	41	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Short-chain ferredoxins
29	c1kpfB	Alignment	not modelled	96.9	29	PDB header: oxidoreductase Chain: B: PDB Molecule: formate dehydrogenase, nitrate-

29	c1kqib_	Alignment	not modelled	96.9	29	inducible, iron-sulfur PDBTitle: formate dehydrogenase n from e. coli
30	d1rgva_	Alignment	not modelled	96.8	30	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Short-chain ferredoxins
31	d1y5ib1	Alignment	not modelled	96.8	30	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
32	c2ivfB_	Alignment	not modelled	96.7	27	PDB header: oxidoreductase Chain: B: PDB Molecule: ethylbenzene dehydrogenase beta-subunit; PDBTitle: ethylbenzene dehydrogenase from aromatoleum aromaticum
33	c2fqoA_	Alignment	not modelled	96.7	28	PDB header: electron transport Chain: A: PDB Molecule: ferredoxin; PDBTitle: structure of the 2[4fe-4s] ferredoxin from pseudomonas2 aeruginosa
34	d1bc6a_	Alignment	not modelled	96.7	36	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: 7-Fe ferredoxin
35	c2zvsB_	Alignment	not modelled	96.6	30	PDB header: electron transport Chain: B: PDB Molecule: uncharacterized ferredoxin-like protein yfh1; PDBTitle: crystal structure of the 2[4fe-4s] ferredoxin from escherichia coli
36	d2fdna_	Alignment	not modelled	96.6	45	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Short-chain ferredoxins
37	d1dura_	Alignment	not modelled	96.4	37	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Short-chain ferredoxins
38	d1blua_	Alignment	not modelled	96.4	24	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Short-chain ferredoxins
39	d1kqfb1	Alignment	not modelled	96.3	31	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
40	d1h98a_	Alignment	not modelled	96.2	41	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: 7-Fe ferredoxin
41	d1fcaa_	Alignment	not modelled	96.1	45	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Short-chain ferredoxins
42	c3gyxl_	Alignment	not modelled	96.1	38	PDB header: oxidoreductase Chain: J: PDB Molecule: adenylylsulfate reductase; PDBTitle: crystal structure of adenylylsulfate reductase from2 desulfovibrio gigas
43	c2v2kB_	Alignment	not modelled	96.1	40	PDB header: electron transport Chain: B: PDB Molecule: ferredoxin; PDBTitle: the crystal structure of fdxa, a 7fe ferredoxin from2 mycobacterium smegmatis
44	d1jnrb_	Alignment	not modelled	96.0	28	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
45	c1ti2F_	Alignment	not modelled	95.9	20	PDB header: oxidoreductase Chain: F: PDB Molecule: pyrogallol hydroxytransferase small subunit; PDBTitle: crystal structure of pyrogallol-phloroglucinol2 transhydroxylase from pelobacter acidigallici
46	d1h0hb_	Alignment	not modelled	95.5	21	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
47	d2gmha3	Alignment	not modelled	95.3	24	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: ETF-QO domain-like
48	c2vdcl_	Alignment	not modelled	95.3	18	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.
49	c1dwIA_	Alignment	not modelled	95.3	26	PDB header: electron transfer Chain: A: PDB Molecule: ferredoxin i; PDBTitle: the ferredoxin-cytochrome complex using heteronuclear nmr2 and docking simulation
50	c3c7bE_	Alignment	not modelled	94.8	19	PDB header: oxidoreductase Chain: E: PDB Molecule: sulfite reductase, dissimilatory-type subunit beta; PDBTitle: structure of the dissimilatory sulfite reductase from archaeoglobus2 fulgidus
51	c2vpyB_	Alignment	not modelled	94.5	46	PDB header: oxidoreductase Chain: B: PDB Molecule: nrfc protein; PDBTitle: polysulfide reductase with bound quinone inhibitor,2 pentachlorophenol (pcp)
52	d1iqza_	Alignment	not modelled	94.5	20	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Single 4Fe-4S cluster ferredoxin
53	c2v4jE_	Alignment	not modelled	94.2	17	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
						Fold: Ferredoxin-like

54	dlvjwa_	Alignment	not modelled	93.9	30	Superfamily: 4Fe-4S ferredoxins Family: Single 4Fe-4S cluster ferredoxin
55	dlvlfm2	Alignment	not modelled	93.6	23	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
56	dlslja_	Alignment	not modelled	93.2	22	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Single 4Fe-4S cluster ferredoxin
57	dlfxra_	Alignment	not modelled	92.8	21	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Single 4Fe-4S cluster ferredoxin
58	d3c7bb1	Alignment	not modelled	92.3	22	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
59	dlgtea1	Alignment	not modelled	92.3	21	Fold: Globin-like Superfamily: alpha-helical ferredoxin Family: Dihydropyrimidine dehydrogenase, N-terminal domain
60	c2fuga_	Alignment	not modelled	91.7	12	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
61	c2v4ja_	Alignment	not modelled	91.6	43	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
62	c3c7ba_	Alignment	not modelled	89.8	30	PDB header: oxidoreductase Chain: A: PDB Molecule: sulfite reductase, dissimilatory-type subunit alpha; PDBTitle: structure of the dissimilatory sulfite reductase from archaeoglobus2 fulgidus
63	dlu3da2	Alignment	not modelled	86.2	21	Fold: Cryptochrome/photolyase, N-terminal domain Superfamily: Cryptochrome/photolyase, N-terminal domain Family: Cryptochrome/photolyase, N-terminal domain
64	c2lciA_	Alignment	not modelled	81.9	19	PDB header: de novo protein Chain: A: PDB Molecule: protein or36; PDBTitle: solution nmr structure of de novo designed protein, p-loop ntpase2 fold, northeast structural genomics consortium target or36 (casd3 target)
65	d2v4jb1	Alignment		81.5	33	Fold: Ferredoxin-like Superfamily: 4Fe-4S ferredoxins Family: Ferredoxin domains from multidomain proteins
66	dlnp7a2	Alignment	not modelled	72.2	21	Fold: Cryptochrome/photolyase, N-terminal domain Superfamily: Cryptochrome/photolyase, N-terminal domain Family: Cryptochrome/photolyase, N-terminal domain
67	dlowla2	Alignment	not modelled	72.1	24	Fold: Cryptochrome/photolyase, N-terminal domain Superfamily: Cryptochrome/photolyase, N-terminal domain Family: Cryptochrome/photolyase, N-terminal domain
68	c3bk7A_	Alignment	not modelled	60.8	33	PDB header: hydrolyase/translation Chain: A: PDB Molecule: abc transporter atp-binding protein; PDBTitle: structure of the complete abce1/rnaase-l inhibitor protein2 from pyrococcus abyssi
69	clu3cA_	Alignment	not modelled	59.1	21	PDB header: signaling protein Chain: A: PDB Molecule: cryptochrome 1 apoprotein; PDBTitle: crystal structure of the phr domain of cryptochrome 1 from2 arabidopsis thaliana
70	clnp7A_	Alignment	not modelled	57.8	20	PDB header: lyase Chain: A: PDB Molecule: dna photolyase; PDBTitle: crystal structure analysis of synechocystis sp. pcc6803 cryptochrome
71	c2l69A_	Alignment	not modelled	54.5	25	PDB header: de novo protein Chain: A: PDB Molecule: rossmann 2x3 fold protein; PDBTitle: solution nmr structure of de novo designed protein, p-loop ntpase2 fold, northeast structural genomics consortium target or28
72	c2vdcF_	Alignment	not modelled	52.9	38	PDB header: oxidoreductase Chain: F: PDB Molecule: glutamate synthase [nadh] large chain; PDBTitle: the 9.5 a resolution structure of glutamate synthase from2 cryo-electron microscopy and its oligomerization behavior3 in solution: functional implications.
73	cllm1A_	Alignment	not modelled	51.1	38	PDB header: oxidoreductase Chain: A: PDB Molecule: ferredoxin-dependent glutamate synthase; PDBTitle: structural studies on the synchronization of catalytic centers in2 glutamate synthase: native enzyme
74	c2xrza_	Alignment	not modelled	50.4	26	PDB header: lyase/dna Chain: A: PDB Molecule: deoxyribodipyrimidine photolyase; PDBTitle: x-ray structure of archaeal class ii cpd photolyase from2 methanosarcina mazei in complex with intact cpd-lesion
75	cltezB_	Alignment	not modelled	50.3	24	PDB header: lyase/dna Chain: B: PDB Molecule: deoxyribodipyrimidine photolyase; PDBTitle: complex between dna and the dna photolyase from anacystis nidulans
76	clg8jC_	Alignment	not modelled	50.2	20	PDB header: oxidoreductase Chain: C: PDB Molecule: arsenite oxidase; PDBTitle: crystal structure analysis of arsenite oxidase from2 alcaligenes faecalis
77	c3cvvA_	Alignment	not modelled	49.2	10	PDB header: lyase/dna Chain: A: PDB Molecule: re11660p; PDBTitle: drosophila melanogaster (6-4) photolyase bound to repaired2 ds dna

78	d1ofda2	Alignment	not modelled	47.6	19	Fold: TIM beta/alpha-barrel Superfamily: FMN-linked oxidoreductases Family: FMN-linked oxidoreductases
79	d2gm3a1	Alignment	not modelled	43.9	15	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Adenine nucleotide alpha hydrolases-like Family: Universal stress protein-like
80	d2j07a2	Alignment	not modelled	42.8	15	Fold: Cryptochrome/photolyase, N-terminal domain Superfamily: Cryptochrome/photolyase, N-terminal domain Family: Cryptochrome/photolyase, N-terminal domain
81	d1zgza1	Alignment	not modelled	40.2	12	Fold: Flavodoxin-like Superfamily: CheY-like Family: CheY-related
82	d1vdha_	Alignment	not modelled	40.0	15	Fold: Ferredoxin-like Superfamily: Dimeric alpha+beta barrel Family: Chlorite dismutase-like
83	d1t0tv_	Alignment	not modelled	36.4	18	Fold: Ferredoxin-like Superfamily: Dimeric alpha+beta barrel Family: Chlorite dismutase-like
84	c3cvjB_	Alignment	not modelled	36.3	13	PDB header: isomerase Chain: B: PDB Molecule: putative phosphoheptose isomerase; PDBTitle: crystal structure of a putative phosphoheptose isomerase (bh3325) from2 bacillus halodurans c-125 at 2.00 a resolution
85	d2abka_	Alignment	not modelled	36.1	30	Fold: DNA-glycosylase Superfamily: DNA-glycosylase Family: Endonuclease III
86	c3fy4C_	Alignment	not modelled	35.3	11	PDB header: lyase Chain: C: PDB Molecule: 6-4 photolyase; PDBTitle: (6-4) photolyase crystal structure
87	d1a77a1	Alignment	not modelled	33.9	20	Fold: SAM domain-like Superfamily: 5' to 3' exonuclease, C-terminal subdomain Family: 5' to 3' exonuclease, C-terminal subdomain
88	c3cg4A_	Alignment	not modelled	33.0	8	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: response regulator receiver domain protein (cheY-like); PDBTitle: crystal structure of response regulator receiver domain protein (cheY-2 like) from methanospirillum hungatei jf-1
89	d1mc8a1	Alignment	not modelled	31.3	15	Fold: SAM domain-like Superfamily: 5' to 3' exonuclease, C-terminal subdomain Family: 5' to 3' exonuclease, C-terminal subdomain
90	d1xhfa1	Alignment	not modelled	30.0	12	Fold: Flavodoxin-like Superfamily: CheY-like Family: CheY-related
91	d1ul1x1	Alignment	not modelled	29.4	26	Fold: SAM domain-like Superfamily: 5' to 3' exonuclease, C-terminal subdomain Family: 5' to 3' exonuclease, C-terminal subdomain
92	d1ea0a2	Alignment	not modelled	28.9	17	Fold: TIM beta/alpha-barrel Superfamily: FMN-linked oxidoreductases Family: FMN-linked oxidoreductases
93	d2fcja1	Alignment	not modelled	28.6	20	Fold: Toprim domain Superfamily: Toprim domain Family: Toprim domain
94	c3c3mA_	Alignment	not modelled	27.5	8	PDB header: signaling protein Chain: A: PDB Molecule: response regulator receiver protein; PDBTitle: crystal structure of the n-terminal domain of response regulator2 receiver protein from methanoculleus marisnigri jr1
95	d1dnpa2	Alignment	not modelled	26.8	14	Fold: Cryptochrome/photolyase, N-terminal domain Superfamily: Cryptochrome/photolyase, N-terminal domain Family: Cryptochrome/photolyase, N-terminal domain
96	d1b43a1	Alignment	not modelled	26.6	20	Fold: SAM domain-like Superfamily: 5' to 3' exonuclease, C-terminal subdomain Family: 5' to 3' exonuclease, C-terminal subdomain
97	c1m6vE_	Alignment	not modelled	25.7	20	PDB header: ligase Chain: E: PDB Molecule: carbamoyl phosphate synthetase large chain; PDBTitle: crystal structure of the g359f (small subunit) point mutant of2 carbamoyl phosphate synthetase
98	c1visA_	Alignment	not modelled	24.8	11	PDB header: lyase Chain: A: PDB Molecule: adenylosuccinate lyase; PDBTitle: structural genomics of caenorhabditis elegans: adenylosuccinate lyase
99	c2kvga_	Alignment	not modelled	24.2	32	PDB header: transcription Chain: A: PDB Molecule: zinc finger and btb domain-containing protein 32; PDBTitle: structure of the three-cys2his2 domain of mouse testis zinc2 finger protein
100	d2nu7b1	Alignment	not modelled	24.0	13	Fold: Flavodoxin-like Superfamily: Succinyl-CoA synthetase domains Family: Succinyl-CoA synthetase domains
101	c3qq5A_	Alignment	not modelled	23.4	57	PDB header: oxidoreductase Chain: A: PDB Molecule: small gtp-binding protein; PDBTitle: crystal structure of the [feFe]-hydrogenase maturation protein hydf
102	c2rdmB_	Alignment	not modelled	21.9	14	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: response regulator receiver protein; PDBTitle: crystal structure of response regulator receiver protein from2 sinorhizobium medicae wsm419
103	d2naca2	Alignment	not modelled	21.9	21	Fold: Flavodoxin-like Superfamily: Formate/glycerate dehydrogenase catalytic domain-like Family: Formate/glycerate dehydrogenases, substrate-binding domain

104	d1zh2a1	<div>Alignment</div>	not modelled	21.7	16	Fold: Flavodoxin-like Superfamily: CheY-like Family: CheY-related
105	c3hdgE	<div>Alignment</div>	not modelled	21.5	11	PDB header: structural genomics, unknown function Chain: E: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of the n-terminal domain of an2 uncharacterized protein (ws1339) from wolinella3 succinogenes
106	c3hbrD	<div>Alignment</div>	not modelled	21.2	19	PDB header: hydrolase Chain: D: PDB Molecule: oxa-48; PDBTitle: crystal structure of oxa-48 beta-lactamase