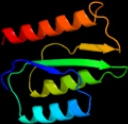
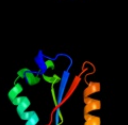
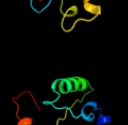


Phyre2

Email	I.a.kelley@imperial.ac.uk
Description	P77668
Date	Thu Jan 5 12:31:30 GMT 2012
Unique Job ID	e7cf5668190340d8

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	d2fug61	 Alignment		100.0	32	Fold: HydA/Nqo6-like Superfamily: HydA/Nqo6-like Family: Nqo6-like
2	d1frfs_	 Alignment		99.9	20	Fold: HydA/Nqo6-like Superfamily: HydA/Nqo6-like Family: Nickel-iron hydrogenase, small subunit
3	d1wuis1	 Alignment		99.9	21	Fold: HydA/Nqo6-like Superfamily: HydA/Nqo6-like Family: Nickel-iron hydrogenase, small subunit
4	d1e3da_	 Alignment		99.9	22	Fold: HydA/Nqo6-like Superfamily: HydA/Nqo6-like Family: Nickel-iron hydrogenase, small subunit
5	c1h2aS_	 Alignment		99.9	21	PDB header: oxidoreductase Chain: S: PDB Molecule: hydrogenase; PDBTitle: single crystals of hydrogenase from desulfovibrio vulgaris
6	c3rgwS_	 Alignment		99.9	17	PDB header: oxidoreductase/oxidoreductase Chain: S: PDB Molecule: membrane-bound hydrogenase (nife) small subunit hoxk; PDBTitle: crystal structure at 1.5 a resolution of an h2-reduced, o2-tolerant2 hydrogenase from ralstonia eutropha unmasks a novel iron-sulfur3 cluster
7	d1yq9a1	 Alignment		99.9	18	Fold: HydA/Nqo6-like Superfamily: HydA/Nqo6-like Family: Nickel-iron hydrogenase, small subunit
8	c3myrE_	 Alignment		99.9	21	PDB header: oxidoreductase Chain: E: PDB Molecule: hydrogenase (nife) small subunit hyda; PDBTitle: crystal structure of [nife] hydrogenase from allochromatium vinosum in2 its ni-a state
9	d1cc1s_	 Alignment		99.9	28	Fold: HydA/Nqo6-like Superfamily: HydA/Nqo6-like Family: Nickel-iron hydrogenase, small subunit
10	c2wpaA_	 Alignment		99.8	23	PDB header: oxidoreductase Chain: A: PDB Molecule: periplasmic [nifese] hydrogenase, small subunit; PDBTitle: structure of the oxidised, as-isolated nifese hydrogenase2 from d. vulgaris hildenborough
11	c2v4jA_	 Alignment		63.5	14	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

12	d2dl da2	Alignment		57.2	15	Fold: Flavodoxin-like Superfamily: Formate/glycerate dehydrogenase catalytic domain-like Family: Formate/glycerate dehydrogenases, substrate-binding domain
13	d1e5da1	Alignment		53.5	15	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Flavodoxin-related
14	c3rl4A_	Alignment		49.9	26	PDB header: hydrolase Chain: A: PDB Molecule: metallophosphoesterase mpped2; PDBTitle: rat metallophosphodiesterase mpped2 g252h mutant
15	c2d3yA_	Alignment		41.8	19	PDB header: hydrolase Chain: A: PDB Molecule: uracil-dna glycosylase; PDBTitle: crystal structure of uracil-dna glycosylase from thermophilus2 hb8
16	c3aerC_	Alignment		38.6	18	PDB header: oxidoreductase Chain: C: PDB Molecule: light-independent protochlorophyllide reductase subunit n; PDBTitle: structure of the light-independent protochlorophyllide reductase2 catalyzing a key reduction for greening in the dark
17	c3trhl_	Alignment		36.7	24	PDB header: lyase Chain: I: PDB Molecule: phosphoribosylaminoimidazole carboxylase PDBTitle: structure of a phosphoribosylaminoimidazole carboxylase catalytic2 subunit (pure) from coxiella burnetii
18	d1sqsa_	Alignment		33.7	15	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Hypothetical protein SP1951
19	d1vmea1	Alignment		33.0	8	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Flavodoxin-related
20	c1zvua_	Alignment		32.7	16	PDB header: isomerase Chain: A: PDB Molecule: topoisomerase iv subunit a; PDBTitle: structure of the full-length e. coli parc subunit
21	c2rf4B_	Alignment	not modelled	31.8	29	PDB header: transferase Chain: B: PDB Molecule: dna-directed rna polymerase i subunit rpa4; PDBTitle: crystal structure of the rna polymerase i subcomplex a14/43
22	c3ca8B_	Alignment	not modelled	30.0	18	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: protein ydcf; PDBTitle: crystal structure of escherichia coli ydcf, an s-adenosyl-l-methionine2 utilizing enzyme
23	c1xrsB_	Alignment	not modelled	30.0	25	PDB header: isomerase Chain: B: PDB Molecule: d-lysine 5,6-aminomutase beta subunit; PDBTitle: crystal structure of lysine 5,6-aminomutase in complex with plp,2 cobalamin, and 5'-deoxyadenosine
24	c2q9uB_	Alignment	not modelled	29.6	14	PDB header: oxidoreductase Chain: B: PDB Molecule: a-type flavoprotein; PDBTitle: crystal structure of the flavodiiron protein from giardia2 intestinalis
25	d2hkja2	Alignment	not modelled	29.3	23	Fold: Ribosomal protein S5 domain 2-like Superfamily: Ribosomal protein S5 domain 2-like Family: DNA gyrase/MutL, second domain
26	c1coyA_	Alignment	not modelled	27.0	13	PDB header: oxidoreductase(oxygen receptor) Chain: A: PDB Molecule: cholesterol oxidase; PDBTitle: crystal structure of cholesterol oxidase complexed with a2 steroid substrate. implications for fad dependent alcohol3 oxidases
27	d2f2ab2	Alignment	not modelled	24.1	31	Fold: Glutamine synthetase/guanido kinase Superfamily: Glutamine synthetase/guanido kinase Family: GatB/GatE catalytic domain-like
28	d1nwba_	Alignment	not modelled	22.3	16	Fold: HesB-like domain Superfamily: HesB-like domain Family: HesB-like domain
						PDB header: structural genomics, unknown function

29	c3ikbB_	Alignment	not modelled	22.1	11	Chain: B: PDB Molecule: uncharacterized conserved protein; PDBTitle: the structure of a conserved protein from streptococcus2 mutans ua159.
30	d2ac7a1	Alignment	not modelled	21.4	20	Fold: Phosphorylase/hydrolase-like Superfamily: Purine and uridine phosphorylases Family: Purine and uridine phosphorylases
31	c2z1dA_	Alignment	not modelled	21.0	20	PDB header: metal binding protein Chain: A: PDB Molecule: hydrogenase expression/formation protein hypd; PDBTitle: crystal structure of [nife] hydrogenase maturation protein, hypd from2 thermococcus kodakaraensis
32	d2dlad1	Alignment	not modelled	20.6	12	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Formate/glycerate dehydrogenases, NAD-domain
33	c2ax3A_	Alignment	not modelled	19.9	20	PDB header: transferase Chain: A: PDB Molecule: hypothetical protein tm0922; PDBTitle: crystal structure of a putative carbohydrate kinase (tm0922) from2 thermotoga maritima msb8 at 2.25 a resolution
34	c2gn0A_	Alignment	not modelled	19.6	17	PDB header: lyase Chain: A: PDB Molecule: threonine dehydratase catabolic; PDBTitle: crystal structure of dimeric biodegradative threonine deaminase (tdcb)2 from salmonella typhimurium at 1.7 a resolution (triclinic form with3 one complete subunit built in alternate conformation)
35	c3d3kD_	Alignment	not modelled	19.5	12	PDB header: protein binding Chain: D: PDB Molecule: enhancer of mrna-decapping protein 3; PDBTitle: crystal structure of human edc3p
36	d1s98a_	Alignment	not modelled	19.2	22	Fold: HesB-like domain Superfamily: HesB-like domain Family: HesB-like domain
37	d1miob_	Alignment	not modelled	18.8	11	Fold: Chelatase-like Superfamily: "Helical backbone" metal receptor Family: Nitrogenase iron-molybdenum protein
38	d1m1la_	Alignment	not modelled	18.3	20	Fold: Suppressor of Fused, N-terminal domain Superfamily: Suppressor of Fused, N-terminal domain Family: Suppressor of Fused, N-terminal domain
39	c2xdqA_	Alignment	not modelled	18.0	24	PDB header: oxidoreductase Chain: A: PDB Molecule: light-independent protochlorophyllide reductase subunit n; PDBTitle: dark operative protochlorophyllide oxidoreductase (chlN-2 chlB)2 complex
40	c3bsfB_	Alignment	not modelled	17.7	11	PDB header: hydrolase Chain: B: PDB Molecule: at4g34840; PDBTitle: crystal structure of the mta/sah nucleosidase
41	d2ax3a2	Alignment	not modelled	17.5	20	Fold: YjeF N-terminal domain-like Superfamily: YjeF N-terminal domain-like Family: YjeF N-terminal domain-like
42	c3na7A_	Alignment	not modelled	17.5	12	PDB header: gene regulation, chaperone Chain: A: PDB Molecule: hp0958; PDBTitle: 2.2 angstrom structure of the hp0958 protein from helicobacter pylori2 ccug 17874
43	d2yt9a2	Alignment	not modelled	17.4	50	Fold: beta-beta-alpha zinc fingers Superfamily: beta-beta-alpha zinc fingers Family: Classic zinc finger, C2H2
44	d1b3qa1	Alignment	not modelled	17.2	19	Fold: ROP-like Superfamily: Homodimeric domain of signal transducing histidine kinase Family: Homodimeric domain of signal transducing histidine kinase
45	c2is8A_	Alignment	not modelled	17.1	24	PDB header: structural protein Chain: A: PDB Molecule: molybdopterin biosynthesis enzyme, moab; PDBTitle: crystal structure of the molybdopterin biosynthesis enzyme moab2 (ttha0341) from thermus thermophilus hb8
46	d1j4aa1	Alignment	not modelled	17.0	10	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Formate/glycerate dehydrogenases, NAD-domain
47	c3nm5B_	Alignment	not modelled	16.9	9	PDB header: hydrolase Chain: B: PDB Molecule: mta/sah nucleosidase; PDBTitle: helicobacter pylori mtan complexed with formycin a
48	c2dg2D_	Alignment	not modelled	16.2	21	PDB header: protein binding Chain: D: PDB Molecule: apolipoprotein a-i binding protein; PDBTitle: crystal structure of mouse apolipoprotein a-i binding2 protein
49	d1jysa_	Alignment	not modelled	15.8	23	Fold: Phosphorylase/hydrolase-like Superfamily: Purine and uridine phosphorylases Family: Purine and uridine phosphorylases
50	c2d1eA_	Alignment	not modelled	15.6	13	PDB header: oxidoreductase Chain: A: PDB Molecule: phycocyanobilin:ferredoxin oxidoreductase; PDBTitle: crystal structure of pcya-biliverdin complex
51	d1j4aa2	Alignment	not modelled	15.5	16	Fold: Flavodoxin-like Superfamily: Formate/glycerate dehydrogenase catalytic domain-like Family: Formate/glycerate dehydrogenases, substrate-binding domain
52	c2wz1A_	Alignment	not modelled	15.2	30	PDB header: viral protein Chain: A: PDB Molecule: phosphoprotein; PDBTitle: the structure of the n-rna binding domain of the mokola2 virus phosphoprotein
53	d1pwaha_	Alignment	not modelled	15.1	21	Fold: Tryptophan synthase beta subunit-like PLP-dependent enzymes Superfamily: Tryptophan synthase beta subunit-like PLP-dependent enzymes Family: Tryptophan synthase beta subunit-like PLP-dependent enzymes

54	d2h1qa1	Alignment	not modelled	14.9	18	Fold: PLP-dependent transferase-like Superfamily: Dhaf3308-like Family: Dhaf3308-like
55	c1geaA	Alignment	not modelled	14.9	60	PDB header: neuropeptide Chain: A: PDB Molecule: pituitary adenylate cyclase activating PDBTitle: receptor-bound conformation of pacap21
56	c2k4zA	Alignment	not modelled	14.8	6	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: dsrr; PDBTitle: solution nmr structure of all ochromatium vinosum dsrr:2 northeast structural genomics consortium target op5
57	c3bl6A	Alignment	not modelled	14.6	9	PDB header: hydrolase Chain: A: PDB Molecule: 5'-methylthioadenosine nucleosidase/s- PDBTitle: crystal structure of staphylococcus aureus 5'-2 methylthioadenosine/s-adenosylhomocysteine nucleosidase in3 complex with formycin a
58	c2q2eB	Alignment	not modelled	14.6	31	PDB header: isomerase Chain: B: PDB Molecule: type 2 dna topoisomerase 6 subunit b; PDBTitle: crystal structure of the topoisomerase vi holoenzyme from2 methanosarcina mazei
59	c3eeiA	Alignment	not modelled	14.5	11	PDB header: hydrolase Chain: A: PDB Molecule: 5-methylthioadenosine nucleosidase/s- PDBTitle: crystal structure of 5'-methylthioadenosine/s-2 adenosylhomocysteine nucleosidase from neisseria3 meningitidis in complex with methylthio-immucillin-a
60	d1w85a	Alignment	not modelled	14.4	15	Fold: Thiamin diphosphate-binding fold (THDP-binding) Superfamily: Thiamin diphosphate-binding fold (THDP-binding) Family: Branched-chain alpha-keto acid dehydrogenase PP module
61	c1zosE	Alignment	not modelled	14.4	14	PDB header: hydrolase Chain: E: PDB Molecule: 5'-methylthioadenosine / s-adenosylhomocysteine PDBTitle: structure of 5'-methylthionadenosine/s-adenosylhomocysteine2 nucleosidase from s. pneumoniae with a transition-state3 inhibitor mt-imma
62	c3npgD	Alignment	not modelled	14.3	15	PDB header: unknown function Chain: D: PDB Molecule: uncharacterized duf364 family protein; PDBTitle: crystal structure of a protein with unknown function from duf3642 family (ph1506) from pyrococcus horikoshii at 2.70 a resolution
63	c2g5iB	Alignment	not modelled	14.1	26	PDB header: ligase Chain: B: PDB Molecule: aspartyl/glutamyl-trna(asn/gln) amidotransferase PDBTitle: structure of trna-dependent amidotransferase gatcab2 complexed with adp-alf4
64	c1e5dA	Alignment	not modelled	14.1	15	PDB header: oxidoreductase Chain: A: PDB Molecule: rubredoxin;:oxygen oxidoreductase; PDBTitle: rubredoxin oxygen:oxidoreductase (roo) from anaerobe2 desulfovibrio gigas
65	d1xwdb1	Alignment	not modelled	13.7	19	Fold: Cystine-knot cytokines Superfamily: Cystine-knot cytokines Family: Gonadotropin/Follitropin
66	c3pdiB	Alignment	not modelled	13.3	11	PDB header: protein binding Chain: B: PDB Molecule: nitrogenase mofe cofactor biosynthesis protein nifn; PDBTitle: precursor bound nifen
67	d1hcnb	Alignment	not modelled	13.3	25	Fold: Cystine-knot cytokines Superfamily: Cystine-knot cytokines Family: Gonadotropin/Follitropin
68	c1qfwB	Alignment	not modelled	13.1	25	PDB header: immune system Chain: B: PDB Molecule: gonadotrophin beta subunit; PDBTitle: ternary complex of human chorionic gonadotropin with fv anti alpha2 subunit and fv anti beta subunit
69	c2zkbB	Alignment	not modelled	12.9	19	PDB header: isomerase Chain: B: PDB Molecule: type 2 dna topoisomerase 6 subunit b; PDBTitle: crystal structure of an intact type ii dna topoisomerase:2 insights into dna transfer mechanisms
70	c1vmeB	Alignment	not modelled	12.8	11	PDB header: electron transport Chain: B: PDB Molecule: flavoprotein; PDBTitle: crystal structure of flavoprotein (tm0755) from thermotoga maritima at2 1.80 a resolution
71	c1ychD	Alignment	not modelled	12.4	25	PDB header: oxidoreductase Chain: D: PDB Molecule: nitric oxide reductase; PDBTitle: x-ray crystal structures of moorella thermoacetica fpra.2 novel diiron site structure and mechanistic insights into3 a scavenging nitric oxide reductase
72	d1fyja	Alignment	not modelled	12.0	57	Fold: S15/NS1 RNA-binding domain Superfamily: S15/NS1 RNA-binding domain Family: a tRNA synthase domain
73	d1fmfa	Alignment	not modelled	12.0	18	Fold: Flavodoxin-like Superfamily: Cobalamin (vitamin B12)-binding domain Family: Cobalamin (vitamin B12)-binding domain
74	c2rmzA	Alignment	not modelled	12.0	24	PDB header: cell adhesion Chain: A: PDB Molecule: integrin beta-3; PDBTitle: bicelle-embedded integrin beta3 transmembrane segment
75	d1vyia	Alignment	not modelled	11.9	30	Fold: Phosphoprotein M1, C-terminal domain Superfamily: Phosphoprotein M1, C-terminal domain Family: Phosphoprotein M1, C-terminal domain
76	c3k1yE	Alignment	not modelled	11.8	9	PDB header: oxidoreductase Chain: E: PDB Molecule: oxidoreductase; PDBTitle: x-ray structure of oxidoreductase from corynebacterium2 diphtheriae. orthorhombic crystal form, northeast structural3 genomics consortium target cdr100d
77	c3dp9A	Alignment	not modelled	11.7	14	PDB header: hydrolase Chain: A: PDB Molecule: mta/sah nucleosidase; PDBTitle: crystal structure of vibrio cholerae 5'-methylthioadenosine/s-adenosyl2 homocysteine nucleosidase (mtan) complexed with butylthio-dadme-3 immucillin a

78	d1sc6a1	Alignment	not modelled	11.4	5	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Formate/glycerate dehydrogenases, NAD-domain
79	c3tl6B_	Alignment	not modelled	11.4	14	PDB header: transferase Chain: B: PDB Molecule: purine nucleoside phosphorylase; PDBTitle: crystal structure of purine nucleoside phosphorylase from entamoeba2 histolytica
80	c3oa1B_	Alignment	not modelled	11.2	26	PDB header: chaperone Chain: B: PDB Molecule: phosphoprotein; PDBTitle: crystal structure of phosphoprotein/protein p/protein m1 residues 69-2 297 from rabies virus reveals degradation to c-terminal domain only
81	d1th5a1	Alignment	not modelled	11.0	14	Fold: Alpha-lytic protease prodomain-like Superfamily: Fe-S cluster assembly (FSCA) domain-like Family: NifU C-terminal domain-like
82	d1umda_	Alignment	not modelled	10.9	8	Fold: Thiamin diphosphate-binding fold (THDP-binding) Superfamily: Thiamin diphosphate-binding fold (THDP-binding) Family: Branched-chain alpha-keto acid dehydrogenase PP module
83	d2bfda1	Alignment	not modelled	10.8	11	Fold: Thiamin diphosphate-binding fold (THDP-binding) Superfamily: Thiamin diphosphate-binding fold (THDP-binding) Family: Branched-chain alpha-keto acid dehydrogenase PP module
84	d3cxeb1	Alignment	not modelled	10.8	83	Fold: 4-helical cytokines Superfamily: 4-helical cytokines Family: Short-chain cytokines
85	d2b0ja2	Alignment	not modelled	10.6	22	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: 6-phosphogluconate dehydrogenase-like, N-terminal domain
86	c2d2aA_	Alignment	not modelled	10.6	21	PDB header: metal transport Chain: A: PDB Molecule: sufa protein; PDBTitle: crystal structure of escherichia coli sufa involved in2 biosynthesis of iron-sulfur clusters
87	c3klbA_	Alignment	not modelled	10.5	18	PDB header: flavoprotein Chain: A: PDB Molecule: putative flavoprotein; PDBTitle: crystal structure of putative flavoprotein in complex with frn2 (yp_213683.1) from bacteroides fragilis nctc 9343 at 1.75 a3 resolution
88	c1z34A_	Alignment	not modelled	10.5	23	PDB header: transferase Chain: A: PDB Molecule: purine nucleoside phosphorylase; PDBTitle: crystal structure of trichomonas vaginalis purine nucleoside2 phosphorylase complexed with 2-fluoro-2'-deoxyadenosine
89	c3pdiG_	Alignment	not modelled	10.4	18	PDB header: protein binding Chain: G: PDB Molecule: nitrogenase mofe cofactor biosynthesis protein nife; PDBTitle: precursor bound nifen
90	d1k9sa_	Alignment	not modelled	10.2	14	Fold: Phosphorylase/hydrolase-like Superfamily: Purine and uridine phosphorylases Family: Purine and uridine phosphorylases
91	c3rfqC_	Alignment	not modelled	10.2	24	PDB header: biosynthetic protein Chain: C: PDB Molecule: pterin-4-alpha-carbinolamine dehydratase moab2; PDBTitle: crystal structure of pterin-4-alpha-carbinolamine dehydratase moab22 from mycobacterium marinum
92	c2apnA_	Alignment	not modelled	10.1	14	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: protein hi1723; PDBTitle: hi1723 solution structure
93	c2dmlA_	Alignment	not modelled	10.0	26	PDB header: isomerase Chain: A: PDB Molecule: protein disulfide-isomerase a6; PDBTitle: the solution structure of the first thioredoxin domain of2 mouse protein disulfide-isomerase a6
94	c3c7bA_	Alignment	not modelled	9.9	15	PDB header: oxidoreductase Chain: A: PDB Molecule: sulfite reductase, dissimilatory-type subunit alpha; PDBTitle: structure of the dissimilatory sulfite reductase from archaeoglobus2 fulgidus
95	c3h0mE_	Alignment	not modelled	9.8	23	PDB header: ligase Chain: E: PDB Molecule: aspartyl/glutamyl-trna(asn/gln) amidotransferase PDBTitle: structure of trna-dependent amidotransferase gatcab from2 aquifex aeolicus
96	d2fug71	Alignment	not modelled	9.8	71	Fold: N domain of copper amine oxidase-like Superfamily: Frataxin/Nqo15-like Family: Nqo15-like
97	c2o2kA_	Alignment	not modelled	9.7	23	PDB header: transferase Chain: A: PDB Molecule: methionine synthase; PDBTitle: crystal structure of the activation domain of human2 methionine synthase isoform/mutant d963e/k1071n
98	c1vddC_	Alignment	not modelled	9.6	33	PDB header: recombination Chain: C: PDB Molecule: recombination protein recr; PDBTitle: crystal structure of recombinational repair protein recr
99	d1r0ka3	Alignment	not modelled	9.6	33	Fold: FwdE/GAPDH domain-like Superfamily: Glyceraldehyde-3-phosphate dehydrogenase-like, C-terminal domain Family: Dihydrodipicolinate reductase-like