




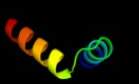





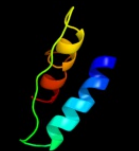











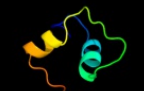
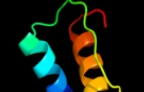


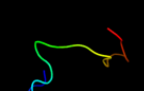





Phyre2

Email	l.a.kelley@imperial.ac.uk
Description	P42626
Date	Thu Jan 5 12:01:57 GMT 2012
Unique Job ID	707af8fcb89e9c7b

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c2hp0A_	 Alignment		98.5	14	PDB header: isomerase Chain: A: PDB Molecule: ids-epimerase; PDBTitle: crystal structure of iminodisuccinate epimerase
2	dlszqa_	 Alignment		98.0	14	Fold: 2-methylcitrate dehydratase PrpD Superfamily: 2-methylcitrate dehydratase PrpD Family: 2-methylcitrate dehydratase PrpD
3	c3u4gA_	 Alignment		56.6	18	PDB header: transferase Chain: A: PDB Molecule: namn:dmb phosphoribosyltransferase; PDBTitle: the structure of cobt from pyrococcus horikoshii
4	c3nepX_	 Alignment		53.0	18	PDB header: oxidoreductase Chain: X: PDB Molecule: malate dehydrogenase; PDBTitle: 1.55a resolution structure of malate dehydrogenase from salinibacter2 ruber
5	d1v59a2	 Alignment		47.3	12	Fold: FAD/NAD(P)-binding domain Superfamily: FAD/NAD(P)-binding domain Family: FAD/NAD-linked reductases, N-terminal and central domains
6	c2o2jA_	 Alignment		38.7	27	PDB header: lyase Chain: A: PDB Molecule: tryptophan synthase beta chain; PDBTitle: mycobacterium tuberculosis tryptophan synthase beta chain2 dimer (apoform)
7	c2klzA_	 Alignment		28.3	57	PDB header: hydrolase Chain: A: PDB Molecule: ataxin-3; PDBTitle: solution structure of the tandem uim domain of ataxin-3 complexed with2 ubiquitin
8	c1x1qA_	 Alignment		23.0	23	PDB header: lyase Chain: A: PDB Molecule: tryptophan synthase beta chain; PDBTitle: crystal structure of tryptophan synthase beta chain from thermus2 thermophilus hb8
9	d1o58a_	 Alignment		20.3	23	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
10	c3l0zC_	 Alignment		19.5	20	PDB header: transferase Chain: C: PDB Molecule: putative nicotinate-nucleotide-dimethylbenzimidazole PDBTitle: crystal structure of a putative nicotinate-nucleotide-2 dimethylbenzimidazole phosphoribosyltransferase from3 methanocaldococcus jannaschii dsm 2661
11	d2hsqa1	 Alignment		18.8	24	Fold: lambda repressor-like DNA-binding domains Superfamily: lambda repressor-like DNA-binding domains Family: GalR/LacI-like bacterial regulator

12	c1m75B_	Alignment		18.5	39	PDB header: oxidoreductase Chain: B: PDB Molecule: 3-hydroxyacyl-coa dehydrogenase; PDBTitle: crystal structure of the n208s mutant of l-3-hydroxyacyl-2 coa dehydrogenase in complex with nad and acetoacetyl-coa
13	d1efaa1	Alignment		16.7	18	Fold: lambda repressor-like DNA-binding domains Superfamily: lambda repressor-like DNA-binding domains Family: GalR/LacI-like bacterial regulator
14	d1e3ja2	Alignment		15.6	35	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
15	c3e49A_	Alignment		15.0	19	PDB header: metal binding protein Chain: A: PDB Molecule: uncharacterized protein duf849 with a tim barrel fold; PDBTitle: crystal structure of a prokaryotic domain of unknown function (duf849)2 with a tim barrel fold (bx_e_c0966) from burkholderia xenovorans lb4003 at 1.75 a resolution
16	d1v71a1	Alignment		14.8	19	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
17	c2hldH_	Alignment		14.3	25	PDB header: hydrolase Chain: H: PDB Molecule: atp synthase delta chain, mitochondrial; PDBTitle: crystal structure of yeast mitochondrial f1-ATPase
18	d1wfza_	Alignment		13.7	13	Fold: SufE/NifU Superfamily: SufE/NifU Family: NifU/IscU domain
19	d1r4qa_	Alignment		12.2	5	Fold: Ribosome inactivating proteins (RIP) Superfamily: Ribosome inactivating proteins (RIP) Family: Shiga toxin, A-chain
20	d1fcja_	Alignment		12.2	27	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
21	d1nvmb1	Alignment	not modelled	12.1	24	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Glyceraldehyde-3-phosphate dehydrogenase-like, N-terminal domain
22	c3doaA_	Alignment	not modelled	11.6	17	PDB header: protein binding Chain: A: PDB Molecule: fibrinogen binding protein; PDBTitle: the crystal structure of the fibrinogen binding protein from2 staphylococcus aureus
23	c3rfuC_	Alignment	not modelled	11.2	13	PDB header: hydrolase, membrane protein Chain: C: PDB Molecule: copper efflux ATPase; PDBTitle: crystal structure of a copper-transporting pib-type ATPase
24	c3co7C_	Alignment	not modelled	10.9	29	PDB header: transcription/dna Chain: C: PDB Molecule: forkhead box protein o1; PDBTitle: crystal structure of foxo1 dbd bound to dbe2 dna
25	d1j0aa_	Alignment	not modelled	10.7	18	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
26	c3a58A_	Alignment	not modelled	10.6	20	PDB header: protein transport/exocytosis Chain: A: PDB Molecule: exocyst complex component sec3; PDBTitle: crystal structure of sec3p - rho1p complex from2 saccharomyces cerevisiae
27	d3bpya1	Alignment	not modelled	10.6	36	Fold: DNA/RNA-binding 3-helical bundle Superfamily: "Winged helix" DNA-binding domain Family: Forkhead DNA-binding domain
28	c3g73A_	Alignment	not modelled	10.6	29	PDB header: transcription/dna Chain: A: PDB Molecule: forkhead box protein m1; PDBTitle: structure of the foxm1 dna binding

29	d1kq8a_	Alignment	not modelled	10.5	43	Fold: DNA/RNA-binding 3-helical bundle Superfamily: "Winged helix" DNA-binding domain Family: Forkhead DNA-binding domain
30	c1kq8A_	Alignment	not modelled	10.5	43	PDB header: transcription Chain: A: PDB Molecule: hepatocyte nuclear factor 3 forkhead homolog 1; PDBTitle: solution structure of winged helix protein hfh-1
31	d2dx7a1	Alignment	not modelled	10.5	23	Fold: ATC-like Superfamily: Aspartate/glutamate racemase Family: Aspartate/glutamate racemase
32	d1tyza_	Alignment	not modelled	10.5	11	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
33	c3c1zA_	Alignment	not modelled	10.4	17	PDB header: dna binding protein Chain: A: PDB Molecule: dna integrity scanning protein disa; PDBTitle: structure of the ligand-free form of a bacterial dna damage2 sensor protein
34	d1ve1a1	Alignment	not modelled	10.2	26	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
35	d2ldxa1	Alignment	not modelled	10.2	27	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: LDH N-terminal domain-like
36	d2bjca1	Alignment	not modelled	10.2	18	Fold: lambda repressor-like DNA-binding domains Superfamily: lambda repressor-like DNA-binding domains Family: GalR/LacI-like bacterial regulator
37	d1j6ua3	Alignment	not modelled	10.0	20	Fold: Ribokinese-like Superfamily: MurD-like peptide ligases, catalytic domain Family: MurCDEF
38	d2a07f1	Alignment	not modelled	10.0	29	Fold: DNA/RNA-binding 3-helical bundle Superfamily: "Winged helix" DNA-binding domain Family: Forkhead DNA-binding domain
39	d2hfha_	Alignment	not modelled	9.8	29	Fold: DNA/RNA-binding 3-helical bundle Superfamily: "Winged helix" DNA-binding domain Family: Forkhead DNA-binding domain
40	c1e17A_	Alignment	not modelled	9.7	36	PDB header: dna binding domain Chain: A: PDB Molecule: afx; PDBTitle: solution structure of the dna binding domain of the human2 forkhead transcription factor afx (foxo4)
41	d1ijwc_	Alignment	not modelled	9.5	18	Fold: DNA/RNA-binding 3-helical bundle Superfamily: Homeodomain-like Family: Recombinase DNA-binding domain
42	d1kn1b_	Alignment	not modelled	9.4	23	Fold: Globin-like Superfamily: Globin-like Family: Phycocyanin-like phycobilisome proteins
43	d1pgja2	Alignment	not modelled	9.2	24	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: 6-phosphogluconate dehydrogenase-like, N-terminal domain
44	c3imoC_	Alignment	not modelled	9.1	33	PDB header: unknown function Chain: C: PDB Molecule: integron cassette protein; PDBTitle: structure from the mobile metagenome of vibrio cholerae.2 integron cassette protein vch_cass14
45	d2vnud2	Alignment	not modelled	8.9	44	Fold: OB-fold Superfamily: Nucleic acid-binding proteins Family: Cold shock DNA-binding domain-like
46	d1wkva1	Alignment	not modelled	8.8	11	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
47	c2okvC_	Alignment	not modelled	8.7	9	PDB header: hydrolase Chain: C: PDB Molecule: probable d-tyrosyl-trna(tyr) deacylase 1; PDBTitle: c-myc dna unwinding element binding protein
48	d1dxla2	Alignment	not modelled	8.7	15	Fold: FAD/NAD(P)-binding domain Superfamily: FAD/NAD(P)-binding domain Family: FAD/NAD-linked reductases, N-terminal and central domains
49	d1k1xa3	Alignment	not modelled	8.7	15	Fold: 7-stranded beta/alpha barrel Superfamily: Glycoside hydrolase/deacetylase Family: 4-alpha-glucanotransferase, N-terminal domain
50	c3mogA_	Alignment	not modelled	8.6	39	PDB header: oxidoreductase Chain: A: PDB Molecule: probable 3-hydroxybutyryl-coa dehydrogenase; PDBTitle: crystal structure of 3-hydroxybutyryl-coa dehydrogenase from2 escherichia coli k12 substr. mg1655
51	c3sqgF_	Alignment	not modelled	8.6	26	PDB header: transferase Chain: F: PDB Molecule: methyl-coenzyme m reductase, gamma subunit; PDBTitle: crystal structure of a methyl-coenzyme m reductase purified from black2 sea mats
52	d2bhsa1	Alignment	not modelled	8.4	28	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

53	d1hcra_	Alignment	not modelled	8.3	18	Fold: DNA/RNA-binding 3-helical bundle Superfamily: Homeodomain-like Family: Recombinase DNA-binding domain
54	d1b74a2	Alignment	not modelled	8.3	19	Fold: ATC-like Superfamily: Aspartate/glutamate racemase Family: Aspartate/glutamate racemase
55	d2f1ka2	Alignment	not modelled	8.2	23	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: 6-phosphogluconate dehydrogenase-like, N-terminal domain
56	c3dt5A_	Alignment	not modelled	8.1	25	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein af_0924; PDBTitle: c_terminal domain of protein of unknown function af_0924 from2 archaeoglobus fulgidus.
57	d1j7ga_	Alignment	not modelled	8.1	19	Fold: DTD-like Superfamily: DTD-like Family: DTD-like
58	d1f2da_	Alignment	not modelled	7.9	14	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
59	d2gv8a2	Alignment	not modelled	7.9	21	Fold: FAD/NAD(P)-binding domain Superfamily: FAD/NAD(P)-binding domain Family: FAD/NAD-linked reductases, N-terminal and central domains
60	d1qpza1	Alignment	not modelled	7.7	14	Fold: lambda repressor-like DNA-binding domains Superfamily: lambda repressor-like DNA-binding domains Family: GalR/LacI-like bacterial regulator
61	c2yqfA_	Alignment	not modelled	7.7	35	PDB header: protein binding Chain: A: PDB Molecule: ankyrin-1; PDBTitle: solution structure of the death domain of ankyrin-1
62	c3kg4A_	Alignment	not modelled	7.7	14	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of an uncharacterized protein from mannheimia2 succiniciproducens
63	d1gv4a2	Alignment	not modelled	7.5	19	Fold: FAD/NAD(P)-binding domain Superfamily: FAD/NAD(P)-binding domain Family: FAD/NAD-linked reductases, N-terminal and central domains
64	c2pqmA_	Alignment	not modelled	7.4	27	PDB header: lyase Chain: A: PDB Molecule: cysteine synthase; PDBTitle: crystal structure of cysteine synthase (oass) from entamoeba2 histolytica at 1.86 a resolution
65	c1nvmB_	Alignment	not modelled	7.4	24	PDB header: lyase/oxidoreductase Chain: B: PDB Molecule: acetaldehyde dehydrogenase (acylating); PDBTitle: crystal structure of a bifunctional aldolase-dehydrogenase :2 sequestering a reactive and volatile intermediate
66	d1iioa_	Alignment	not modelled	7.3	28	Fold: EF Hand-like Superfamily: Hypothetical protein MTH865 Family: Hypothetical protein MTH865
67	d2c6ya1	Alignment	not modelled	7.2	21	Fold: DNA/RNA-binding 3-helical bundle Superfamily: "Winged helix" DNA-binding domain Family: Forkhead DNA-binding domain
68	c2zskA_	Alignment	not modelled	7.1	100	PDB header: unknown function Chain: A: PDB Molecule: 226aa long hypothetical aspartate racemase; PDBTitle: crystal structure of ph1733, an aspartate racemase2 homologue, from pyrococcus horikoshii ot3
69	c1i7mD_	Alignment	not modelled	7.1	15	PDB header: lyase Chain: D: PDB Molecule: s-adenosylmethionine decarboxylase beta chain; PDBTitle: human s-adenosylmethionine decarboxylase with covalently bound2 pyruvoyl group and complexed with 4-amidinoinidan-1-one-2'-3 amidinohydrazone
70	c3j08A_	Alignment	not modelled	7.0	13	PDB header: hydrolase, metal transport Chain: A: PDB Molecule: copper-exporting p-type atpase a; PDBTitle: high resolution helical reconstruction of the bacterial p-type atpase2 copper transporter copa
71	c2vmlA_	Alignment	not modelled	7.0	20	PDB header: photosynthesis Chain: A: PDB Molecule: phycocyanin alpha chain; PDBTitle: the monoclinic structure of phycocyanin from gloeobacter2 violaceus
72	d1dlja2	Alignment	not modelled	6.9	25	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: 6-phosphogluconate dehydrogenase-like, N-terminal domain
73	d1jsca3	Alignment	not modelled	6.9	17	Fold: Thiamin diphosphate-binding fold (THDP-binding) Superfamily: Thiamin diphosphate-binding fold (THDP-binding) Family: Pyruvate oxidase and decarboxylase PP module
74	c1dliA_	Alignment	not modelled	6.9	25	PDB header: oxidoreductase Chain: A: PDB Molecule: udp-glucose dehydrogenase; PDBTitle: the first structure of udp-glucose dehydrogenase (udpgdh) reveals the2 catalytic residues necessary for the two-fold oxidation
75	d1d5va_	Alignment	not modelled	6.9	29	Fold: DNA/RNA-binding 3-helical bundle Superfamily: "Winged helix" DNA-binding domain Family: Forkhead DNA-binding domain
76	c2jfbB_	Alignment	not modelled	6.8	80	PDB header: isomerase Chain: B: PDB Molecule: glutamate racemase; PDBTitle: crystal structure of helicobacter pylori glutamate racemase2 in complex with d-glutamate and an inhibitor
77	c1p8cD_	Alignment	not modelled	6.7	28	PDB header: structural genomics, unknown function Chain: D: PDB Molecule: conserved hypothetical protein; PDBTitle: crystal structure of tm1620 (apc4843) from thermotoga2 maritima

78	c3d3kD_	Alignment	not modelled	6.6	14	PDB header: protein binding Chain: D: PDB Molecule: enhancer of mrna-decapping protein 3; PDBTitle: crystal structure of human edc3p
79	d7mdha1	Alignment	not modelled	6.4	26	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: LDH N-terminal domain-like
80	c2pwzG_	Alignment	not modelled	6.4	22	PDB header: oxidoreductase Chain: G: PDB Molecule: malate dehydrogenase; PDBTitle: crystal structure of the apo form of e.coli malate dehydrogenase
81	c2q2kA_	Alignment	not modelled	6.4	24	PDB header: dna binding protein/dna Chain: A: PDB Molecule: hypothetical protein; PDBTitle: structure of nucleic-acid binding protein
82	d1dd3a1	Alignment	not modelled	6.3	12	Fold: Ribosomal protein L7/12, oligomerisation (N-terminal) domain Superfamily: Ribosomal protein L7/12, oligomerisation (N-terminal) domain Family: Ribosomal protein L7/12, oligomerisation (N-terminal) domain
83	c2kdtA_	Alignment	not modelled	6.2	21	PDB header: protein transport Chain: A: PDB Molecule: neuroendocrine convertase 1; PDBTitle: pc1/3 dcsg sorting domain structure in dpc
84	d1allb_	Alignment	not modelled	6.2	19	Fold: Globin-like Superfamily: Globin-like Family: Phycocyanin-like phycobilisome proteins
85	c1o7dA_	Alignment	not modelled	6.1	12	PDB header: hydrolase Chain: A: PDB Molecule: lysosomal alpha-mannosidase; PDBTitle: the structure of the bovine lysosomal a-mannosidase2 suggests a novel mechanism for low ph activation
86	c3m9hB_	Alignment	not modelled	6.1	44	PDB header: chaperone Chain: B: PDB Molecule: proteasome-associated atpase; PDBTitle: crystal structure of the amino terminal coiled coil domain of the2 mycobacterium tuberculosis proteasomal atpase mpa
87	d1poia_	Alignment	not modelled	6.0	22	Fold: NagB/RpiA/CoA transferase-like Superfamily: NagB/RpiA/CoA transferase-like Family: CoA transferase alpha subunit-like
88	d2nmla1	Alignment	not modelled	6.0	8	Fold: ERH-like Superfamily: ERH-like Family: ERH-like
89	d3bvua3	Alignment	not modelled	6.0	12	Fold: 7-stranded beta/alpha barrel Superfamily: Glycoside hydrolase/deacetylase Family: alpha-mannosidase
90	d1v8za1	Alignment	not modelled	6.0	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
91	d1neka1	Alignment	not modelled	6.0	9	Fold: Spectrin repeat-like Superfamily: Succinate dehydrogenase/fumarate reductase flavoprotein C-terminal domain Family: Succinate dehydrogenase/fumarate reductase flavoprotein C-terminal domain
92	c3jvfc_	Alignment	not modelled	6.0	44	PDB header: signaling protein / cytokine Chain: C: PDB Molecule: interleukin-17 receptor a; PDBTitle: crystal structure of an interleukin-17 receptor complex
93	c2jnhA_	Alignment	not modelled	5.9	33	PDB header: ligase Chain: A: PDB Molecule: e3 ubiquitin-protein ligase cbl-b; PDBTitle: solution structure of the uba domain from cbl-b
94	c1p5jA_	Alignment	not modelled	5.9	21	PDB header: lyase Chain: A: PDB Molecule: l-serine dehydratase; PDBTitle: crystal structure analysis of human serine dehydratase
95	d1p5ja_	Alignment	not modelled	5.9	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
96	d1ez4a1	Alignment	not modelled	5.9	25	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: LDH N-terminal domain-like
97	c2jfnA_	Alignment	not modelled	5.9	80	PDB header: isomerase Chain: A: PDB Molecule: glutamate racemase; PDBTitle: crystal structure of escherichia coli glutamate racemase2 in complex with l-glutamate and activator udp-murnac-ala
98	c1b74A_	Alignment	not modelled	5.8	80	PDB header: isomerase Chain: A: PDB Molecule: glutamate racemase; PDBTitle: glutamate racemase from aquifex pyrophilus
99	c3a3jA_	Alignment	not modelled	5.8	16	PDB header: hydrolase Chain: A: PDB Molecule: pbp5; PDBTitle: crystal structures of penicillin binding protein 5 from2 haemophilus influenzae