





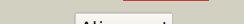









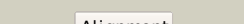

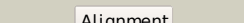

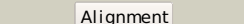





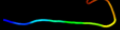






Phyre2

Email	l.a.kelley@imperial.ac.uk
Description	P39160
Date	Thu Jan 5 11:58:16 GMT 2012
Unique Job ID	e586d0cd936b0f91

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c1m2wA_	 Alignment		100.0	38	PDB header: oxidoreductase Chain: A: PDB Molecule: mannitol dehydrogenase; PDBTitle: pseudomonas fluorescens mannitol 2-dehydrogenase ternary complex with 2 nad and d-mannitol
2	c3h2zA_	 Alignment		100.0	24	PDB header: oxidoreductase Chain: A: PDB Molecule: mannitol-1-phosphate 5-dehydrogenase; PDBTitle: the crystal structure of mannitol-1-phosphate dehydrogenase from shigella flexneri
3	d1lj8a4	 Alignment		100.0	41	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: 6-phosphogluconate dehydrogenase-like, N-terminal domain
4	d1lj8a3	 Alignment		100.0	32	Fold: 6-phosphogluconate dehydrogenase C-terminal domain-like Superfamily: 6-phosphogluconate dehydrogenase C-terminal domain-like Family: Mannitol 2-dehydrogenase
5	c2ph5A_	 Alignment		50.5	14	PDB header: transferase Chain: A: PDB Molecule: homospermidine synthase; PDBTitle: crystal structure of the homospermidine synthase hss from legionella pneumophila in complex with nad, northeast structural genomics target3 lgr54
6	c3fggA_	 Alignment		45.0	20	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein bce2196; PDBTitle: crystal structure of putative ecf-type sigma factor negative effector2 from bacillus cereus
7	c2axqA_	 Alignment		41.2	10	PDB header: oxidoreductase Chain: A: PDB Molecule: saccharopine dehydrogenase; PDBTitle: apo histidine-tagged saccharopine dehydrogenase (l-glu2 forming) from saccharomyces cerevisiae
8	d1k4ia_	 Alignment		35.0	16	Fold: YrdC/RibB Superfamily: YrdC/RibB Family: 3,4-dihydroxy-2-butanone 4-phosphate synthase, DHBP synthase, RibB
9	c3euwB_	 Alignment		27.8	16	PDB header: oxidoreductase Chain: B: PDB Molecule: myo-inositol dehydrogenase; PDBTitle: crystal structure of a myo-inositol dehydrogenase from corynebacterium glutamicum atcc 13032
10	d1snna_	 Alignment		27.5	15	Fold: YrdC/RibB Superfamily: YrdC/RibB Family: 3,4-dihydroxy-2-butanone 4-phosphate synthase, DHBP synthase, RibB
11	c3egoB_	 Alignment		25.4	13	PDB header: oxidoreductase Chain: B: PDB Molecule: probable 2-dehydropantoate 2-reductase; PDBTitle: crystal structure of probable 2-dehydropantoate 2-reductase2 pane from bacillus subtilis

12	d2o8ra3	Alignment		24.5	33	Fold: Phospholipase D/nuclease Superfamily: Phospholipase D/nuclease Family: Polyphosphate kinase C-terminal domain
13	c3mtjA	Alignment		23.5	11	PDB header: oxidoreductase Chain: A: PDB Molecule: homoserine dehydrogenase; PDBTitle: the crystal structure of a homoserine dehydrogenase from thibacillus2 denitrificans to 2.15a
14	c1ceuA	Alignment		22.6	44	PDB header: viral protein Chain: A: PDB Molecule: protein (hiv-1 regulatory protein n-terminal PDBTitle: nmr structure of the (1-51) n-terminal domain of the hiv-12 regulatory protein
15	c3mioA	Alignment		22.1	24	PDB header: lyase Chain: A: PDB Molecule: 3,4-dihydroxy-2-butanone 4-phosphate synthase; PDBTitle: crystal structure of 3,4-dihydroxy-2-butanone 4-phosphate synthase2 domain from mycobacterium tuberculosis at ph 6.00
16	c2o8rA	Alignment		21.5	36	PDB header: transferase Chain: A: PDB Molecule: polyphosphate kinase; PDBTitle: crystal structure of polyphosphate kinase from2 porphyromonas gingivalis
17	d1r0ka2	Alignment		20.2	10	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Glyceraldehyde-3-phosphate dehydrogenase-like, N-terminal domain
18	c3nt5B	Alignment		19.8	19	PDB header: oxidoreductase Chain: B: PDB Molecule: inositol 2-dehydrogenase/d-chiro-inositol 3-dehydrogenase; PDBTitle: crystal structure of myo-inositol dehydrogenase from bacillus subtilis2 with bound cofactor and product inosose
19	c3h8gC	Alignment		19.7	12	PDB header: hydrolase Chain: C: PDB Molecule: cytosol aminopeptidase; PDBTitle: bestatin complex structure of leucine aminopeptidase from pseudomonas2 putida
20	c1e5lA	Alignment		18.2	11	PDB header: oxidoreductase Chain: A: PDB Molecule: saccharopine reductase; PDBTitle: apo saccharopine reductase from magnaporthe grisea
21	d2oc5a1	Alignment	not modelled	18.0	31	Fold: Ferritin-like Superfamily: Ferritin-like Family: PMT1231-like
22	d1v8fa	Alignment	not modelled	17.1	31	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: Pantothenate synthetase (Pantoate-beta-alanine ligase, PanC)
23	c3ceaA	Alignment	not modelled	17.0	18	PDB header: oxidoreductase Chain: A: PDB Molecule: myo-inositol 2-dehydrogenase; PDBTitle: crystal structure of myo-inositol 2-dehydrogenase (np_786804.1) from2 lactobacillus plantarum at 2.40 a resolution
24	c1z9bA	Alignment	not modelled	15.6	17	PDB header: translation Chain: A: PDB Molecule: translation initiation factor if-2; PDBTitle: solution structure of the c1-subdomain of bacillus2 stearothermophilus translation initiation factor if2
25	c1lanA	Alignment	not modelled	15.4	13	PDB header: hydrolase (alpha-aminoacylpeptide) Chain: A: PDB Molecule: leucine aminopeptidase; PDBTitle: leucine aminopeptidase complex with l-leucinal
26	d1gyta2	Alignment	not modelled	15.1	13	Fold: Phosphorylase/hydrolase-like Superfamily: Zn-dependent exopeptidases Family: Leucine aminopeptidase, C-terminal domain
27	d1uj8a1	Alignment	not modelled	15.1	18	Fold: Another 3-helical bundle Superfamily: IscX-like Family: IscX-like
28	c3docD	Alignment	not modelled	14.8	19	PDB header: oxidoreductase Chain: D: PDB Molecule: glyceraldehyde 3-phosphate dehydrogenase; PDBTitle: crystal structure of trka glyceraldehyde-3-phosphate2 dehydrogenase from brucella melitensis

29	c2c9lZ_	Alignment	not modelled	14.5	33	PDB header: viral protein Chain: Z: PDB Molecule: bzlf1 trans-activator protein; PDBTitle: structure of the epstein-barr virus zebra protein
30	c3guzB_	Alignment	not modelled	14.5	17	PDB header: ligase Chain: B: PDB Molecule: pantothenate synthetase; PDBTitle: structural and substrate-binding studies of pantothenate2 synthenate (ps)provide insights into homotropic inhibition3 by pantoate in ps's
31	c1dvpA_	Alignment	not modelled	14.0	13	PDB header: transferase Chain: A: PDB Molecule: hepatocyte growth factor-regulated tyrosine PDBTitle: crystal structure of the vhs and fyve tandem domains of hrs,2 a protein involved in membrane trafficking and signal3 transduction
32	c3ketA_	Alignment	not modelled	13.9	25	PDB header: transcription/dna Chain: A: PDB Molecule: redox-sensing transcriptional repressor rex; PDBTitle: crystal structure of a rex-family transcriptional regulatory protein2 from streptococcus agalactiae bound to a palindromic operator
33	c1gytG_	Alignment	not modelled	13.4	13	PDB header: hydrolase Chain: G: PDB Molecule: cytosol aminopeptidase; PDBTitle: e. coli aminopeptidase a (pepa)
34	c3kzwD_	Alignment	not modelled	13.1	15	PDB header: hydrolase Chain: D: PDB Molecule: cytosol aminopeptidase; PDBTitle: crystal structure of cytosol aminopeptidase from staphylococcus aureus2 col
35	d2py6a1	Alignment	not modelled	13.0	25	Fold: S-adenosyl-L-methionine-dependent methyltransferases Superfamily: S-adenosyl-L-methionine-dependent methyltransferases Family: FkbM-like
36	c3omdB_	Alignment	not modelled	12.1	14	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of unknown function protein from leptospirillum2 rubarum
37	d2v0fa1	Alignment	not modelled	11.9	46	Fold: GYF/BRK domain-like Superfamily: BRK domain-like Family: BRK domain-like
38	d1k8kg_	Alignment	not modelled	11.8	15	Fold: alpha-alpha superhelix Superfamily: Arp2/3 complex 16 kDa subunit ARPC5 Family: Arp2/3 complex 16 kDa subunit ARPC5
39	d1qusa_	Alignment	not modelled	11.6	14	Fold: Lysozyme-like Superfamily: Lysozyme-like Family: Bacterial muramidase, catalytic domain
40	c3n8hA_	Alignment	not modelled	11.4	27	PDB header: ligase Chain: A: PDB Molecule: pantothenate synthetase; PDBTitle: crystal structure of pantoate-beta-alanine ligase from francisella2 tularensis
41	d2cu2a2	Alignment	not modelled	11.2	12	Fold: Nucleotide-diphospho-sugar transferases Superfamily: Nucleotide-diphospho-sugar transferases Family: mannose-1-phosphate guanylyl transferase
42	d1lama1	Alignment	not modelled	11.2	14	Fold: Phosphorylase/hydrolase-like Superfamily: Zn-dependent exopeptidases Family: Leucine aminopeptidase, C-terminal domain
43	c3q2kB_	Alignment	not modelled	10.9	13	PDB header: oxidoreductase Chain: B: PDB Molecule: oxidoreductase; PDBTitle: crystal structure of the wlba dehydrogenase from bordetella pertussis2 in complex with nadh and udp-glcna
44	d1dvp1	Alignment	not modelled	10.7	14	Fold: alpha-alpha superhelix Superfamily: ENTH/VHS domain Family: VHS domain
45	d2dt5a2	Alignment	not modelled	10.7	19	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Transcriptional repressor Rex, C-terminal domain
46	d1xdpa3	Alignment	not modelled	10.6	50	Fold: Phospholipase D/nuclease Superfamily: Phospholipase D/nuclease Family: Polyphosphate kinase C-terminal domain
47	d1gzsb_	Alignment	not modelled	10.3	18	Fold: SopE-like GEF domain Superfamily: SopE-like GEF domain Family: SopE-like GEF domain
48	d1q7ra_	Alignment	not modelled	10.2	24	Fold: Flavodoxin-like Superfamily: Class I glutamine amidotransferase-like Family: Class I glutamine amidotransferases (GAT)
49	c1fi0A_	Alignment	not modelled	9.8	44	PDB header: viral protein Chain: A: PDB Molecule: vpr protein; PDBTitle: solution structure of hiv-1 vpr (13-33) peptide in micells
50	c3bjrA_	Alignment	not modelled	9.8	8	PDB header: hydrolase Chain: A: PDB Molecule: putative carboxylesterase; PDBTitle: crystal structure of a putative carboxylesterase (lp_1002) from2 lactobacillus plantarum wcfs1 at 2.09 a resolution
51	d1au7a2	Alignment	not modelled	9.7	19	Fold: lambda repressor-like DNA-binding domains Superfamily: lambda repressor-like DNA-binding domains Family: POU-specific domain
52	c2ejcA_	Alignment	not modelled	9.4	19	PDB header: ligase Chain: A: PDB Molecule: pantoate--beta-alanine ligase; PDBTitle: crystal structure of pantoate--beta-alanine ligase (panc)2 from thermotoga maritima
53	c3innB_	Alignment	not modelled	9.3	19	PDB header: ligase Chain: B: PDB Molecule: pantothenate synthetase; PDBTitle: crystal structure of pantoate-beta-alanine-ligase in complex2 with atp at low occupancy at 2.1 a resolution
54	d1o7fa1	Alignment	not modelled	9.3	22	Fold: DNA/RNA-binding 3-helical bundle Superfamily: "Winged helix" DNA-binding domain

						Family: DEP domain
55	c2cu2A	Alignment	not modelled	9.1	11	PDB header: transferase Chain: A: PDB Molecule: putative mannose-1-phosphate guanylyl transferase; PDBTitle: crystal structure of mannose-1-phosphate geranyltransferase from2 thermus thermophilus hb8
56	c2hc9A	Alignment	not modelled	9.1	13	PDB header: hydrolase Chain: A: PDB Molecule: leucine aminopeptidase 1; PDBTitle: structure of caenorhabditis elegans leucine aminopeptidase-zinc2 complex (lap1)
57	c1x5bA	Alignment	not modelled	8.9	12	PDB header: protein binding Chain: A: PDB Molecule: signal transducing adaptor molecule 2; PDBTitle: the solution structure of the vhs domain of human signal2 transducing adaptor molecule 2
58	c3moiA	Alignment	not modelled	8.7	21	PDB header: oxidoreductase Chain: A: PDB Molecule: probable dehydrogenase; PDBTitle: the crystal structure of the putative dehydrogenase from bordetella2 bronchiseptica rb50
59	d2higa1	Alignment	not modelled	8.5	16	Fold: Ferredoxin-like Superfamily: Dimeric alpha+beta barrel Family: Hypothetical protein YdhR
60	c2qytA	Alignment	not modelled	8.5	19	PDB header: oxidoreductase Chain: A: PDB Molecule: 2-dehydropantoate 2-reductase; PDBTitle: crystal structure of 2-dehydropantoate 2-reductase from porphyromonas2 gingivalis w83
61	c3t38B	Alignment	not modelled	8.4	7	PDB header: oxidoreductase Chain: B: PDB Molecule: arsenate reductase; PDBTitle: corynebacterium glutamicum thioredoxin-dependent arsenate reductase2 cg_arsc1'
62	c3dapB	Alignment	not modelled	8.2	17	PDB header: oxidoreductase Chain: B: PDB Molecule: diaminopimelic acid dehydrogenase; PDBTitle: c. glutamicum dap dehydrogenase in complex with nadp+ and2 the inhibitor 5s-isoxazoline
63	d1gtra2	Alignment	not modelled	8.0	11	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: Class I aminoacyl-tRNA synthetases (RS), catalytic domain
64	d1f06a1	Alignment	not modelled	7.9	14	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Glyceraldehyde-3-phosphate dehydrogenase-like, N-terminal domain
65	c1lw7A	Alignment	not modelled	7.6	13	PDB header: transferase Chain: A: PDB Molecule: transcriptional regulator nadr; PDBTitle: nadr protein from haemophilus influenzae
66	c3ag5A	Alignment	not modelled	7.6	31	PDB header: ligase Chain: A: PDB Molecule: pantothenate synthetase; PDBTitle: crystal structure of pantothenate synthetase from staphylococcus2 aureus
67	c2hz7A	Alignment	not modelled	7.5	15	PDB header: ligase Chain: A: PDB Molecule: glutaminyl-trna synthetase; PDBTitle: crystal structure of the glutaminyl-trna synthetase from2 deinococcus radiodurans
68	c2k2iB	Alignment	not modelled	7.4	55	PDB header: cell cycle Chain: B: PDB Molecule: sfi1 peptide; PDBTitle: nmr solution structure of the c-terminal domain (t94-y172)2 of the human centrin 2 in complex with a repeat sequence of3 human sfi1 (r641-t660)
69	d1hcia1	Alignment	not modelled	7.3	21	Fold: Spectrin repeat-like Superfamily: Spectrin repeat Family: Spectrin repeat
70	d1zh8a1	Alignment	not modelled	7.3	17	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Glyceraldehyde-3-phosphate dehydrogenase-like, N-terminal domain
71	c1iq5B	Alignment	not modelled	7.3	67	PDB header: metal binding protein/protein binding Chain: B: PDB Molecule: ca2+/calmodulin dependent kinase kinase; PDBTitle: calmodulin/nematode ca2+/calmodulin dependent kinase kinase2 fragment
72	d1f0xa1	Alignment	not modelled	7.2	50	Fold: Ferredoxin-like Superfamily: FAD-linked oxidases, C-terminal domain Family: D-lactate dehydrogenase
73	c3b20R	Alignment	not modelled	7.1	15	PDB header: oxidoreductase Chain: R: PDB Molecule: glyceraldehyde 3-phosphate dehydrogenase (nadp+); PDBTitle: crystal structure analysis of dehydrogenase complexed with nad
74	c1u2iC	Alignment	not modelled	6.9	29	PDB header: oxidoreductase Chain: C: PDB Molecule: peroxidase/catalase hpi; PDBTitle: crystal structure of the c-terminal domain from the2 catalase-peroxidase katg of escherichia coli (p21 21 21)
75	c3jruB	Alignment	not modelled	6.7	13	PDB header: hydrolase Chain: B: PDB Molecule: probable cytosol aminopeptidase; PDBTitle: crystal structure of leucyl aminopeptidase (pepa) from xoo0834,2 xanthomonas oryzae pv. oryzae kacc10331
76	d1u2ka	Alignment	not modelled	6.7	29	Fold: Heme-dependent peroxidases Superfamily: Heme-dependent peroxidases Family: Catalase-peroxidase KatG
77	c3r24A	Alignment	not modelled	6.6	37	PDB header: transferase, viral protein Chain: A: PDB Molecule: 2'-o-methyl transferase; PDBTitle: crystal structure of nsp10/nsp16 complex of sars coronavirus" if2 possible
78	c3dwlg	Alignment	not modelled	6.6	10	PDB header: structural protein Chain: G: PDB Molecule: actin-related protein 2/3 complex subunit 5; PDBTitle: crystal structure of fission yeast arp2/3 complex lacking the arp22 subunit
						PDB header: transcription Chain: A: PDB Molecule: putative apha-like transcription factor;

79	c2rkha_	Alignment	not modelled	6.6	24	PDBTitle: crystal structure of a putative apha-like transcription factor2 (zp_00208345.1) from magnetospirillum magnetotacticum ms-1 at 2.00 a3 resolution
80	c3euhB_	Alignment	not modelled	6.6	15	PDB header: cell cycle Chain: B: PDB Molecule: chromosome partition protein mukf; PDBTitle: crystal structure of the muke-mukf complex
81	c3tsuA_	Alignment	not modelled	6.5	29	PDB header: transferase Chain: A: PDB Molecule: transcriptional regulatory protein; PDBTitle: crystal structure of e. coli hypf with amp-pnp and carbamoyl phosphate
82	d1m9fd_	Alignment	not modelled	6.5	25	Fold: Retrovirus capsid protein, N-terminal core domain Superfamily: Retrovirus capsid protein, N-terminal core domain Family: Retrovirus capsid protein, N-terminal core domain
83	c3hn2A_	Alignment	not modelled	6.5	13	PDB header: oxidoreductase Chain: A: PDB Molecule: 2-dehydropantoate 2-reductase; PDBTitle: crystal structure of 2-dehydropantoate 2-reductase from geobacter2 metallireducens gs-15
84	c3ghyA_	Alignment	not modelled	6.4	13	PDB header: oxidoreductase Chain: A: PDB Molecule: ketopantoate reductase protein; PDBTitle: crystal structure of a putative ketopantoate reductase from ralstonia2 solanacearum molk2
85	d1ebfa1	Alignment	not modelled	6.4	9	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Glyceraldehyde-3-phosphate dehydrogenase-like, N-terminal domain
86	d2a84a1	Alignment	not modelled	6.3	27	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: Pantothenate synthetase (Pantoate-beta-alanine ligase, PanC)
87	c3ij3A_	Alignment	not modelled	6.3	18	PDB header: hydrolase Chain: A: PDB Molecule: cytosol aminopeptidase; PDBTitle: 1.8 angstrom resolution crystal structure of cytosol aminopeptidase2 from coxiella burnetii
88	c1s6cB_	Alignment	not modelled	6.2	38	PDB header: transport protein Chain: B: PDB Molecule: potassium voltage-gated channel subfamily d member 2; PDBTitle: crystal structure of the complex between kchip1 and kv4.2 n1-30
89	c2gzdC_	Alignment	not modelled	6.2	33	PDB header: protein transport Chain: C: PDB Molecule: rab11 family-interacting protein 2; PDBTitle: crystal structure of rab11 in complex with rab11-fip2
90	d1ekxa2	Alignment	not modelled	6.2	16	Fold: ATC-like Superfamily: Aspartate/ornithine carbamoyltransferase Family: Aspartate/ornithine carbamoyltransferase
91	d2pxrc1	Alignment	not modelled	6.2	25	Fold: Retrovirus capsid protein, N-terminal core domain Superfamily: Retrovirus capsid protein, N-terminal core domain Family: Retrovirus capsid protein, N-terminal core domain
92	d1mbsa_	Alignment	not modelled	6.1	11	Fold: Globin-like Superfamily: Globin-like Family: Globins
93	d1mrza2	Alignment	not modelled	6.0	28	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Nucleotidyl transferase Family: Adenyltransferase
94	c2h8oA_	Alignment	not modelled	6.0	19	PDB header: transferase Chain: A: PDB Molecule: geranyltranstransferase; PDBTitle: the 1.6a crystal structure of the geranyltransferase from2 agrobacterium tumefaciens
95	c2q4eB_	Alignment	not modelled	6.0	11	PDB header: oxidoreductase Chain: B: PDB Molecule: probable oxidoreductase at4g09670; PDBTitle: ensemble refinement of the protein crystal structure of gene product2 from arabidopsis thaliana at4g09670
96	c1r0ID_	Alignment	not modelled	6.0	18	PDB header: oxidoreductase Chain: D: PDB Molecule: 1-deoxy-d-xylulose 5-phosphate reductoisomerase; PDBTitle: 1-deoxy-d-xylulose 5-phosphate reductoisomerase from2 zymomonas mobilis in complex with nadph
97	c2x5sB_	Alignment	not modelled	6.0	8	PDB header: transferase Chain: B: PDB Molecule: mannose-1-phosphate guanylyltransferase; PDBTitle: crystal structure of t. maritima gdp-mannose2 pyrophosphorylase in apo state.
98	d1ccda_	Alignment	not modelled	6.0	25	Fold: Uteroglobin-like Superfamily: Uteroglobin-like Family: Uteroglobin-like
99	d1r6ea_	Alignment	not modelled	5.9	21	Fold: SopE-like GEF domain Superfamily: SopE-like GEF domain Family: SopE-like GEF domain