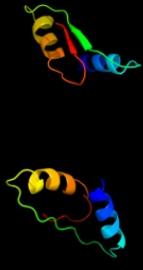
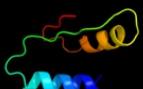
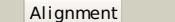
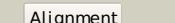
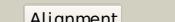
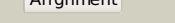
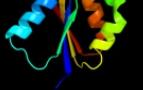
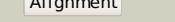
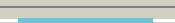
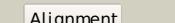


Phyre²

Email	i.a.kelley@imperial.ac.uk
Description	P36881
Date	Thu Jan 5 11:53:56 GMT 2012
Unique Job ID	97d66a7173dae6b9

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	d1pda_			100.0	27	Fold: PTS system fructose IIA component-like Superfamily: PTS system fructose IIA component-like Family: EIIA-man component-like
2	c3iprC_			100.0	26	PDB header: transferase Chain: C: PDB Molecule: pts system, iia component; PDBTitle: crystal structure of the enterococcus faecalis gluconate2 specific elia phosphotransferase system component
3	c3lfhF_			100.0	17	PDB header: transferase Chain: F: PDB Molecule: phosphotransferase system, mannose/fructose-specific PDBTitle: crystal structure of manxa from thermoanaerobacter tengcongensis
4	c3mtqA_			100.0	12	PDB header: transferase Chain: A: PDB Molecule: putative phosphoenolpyruvate-dependent sugar PDBTitle: crystal structure of a putative phosphoenolpyruvate-dependent sugar2 phosphotransferase system (pts) permease (kpn_04802) from klebsiella3 pneumoniae subsp. pneumoniae mgh 78578 at 1.70 a resolution
5	d3beda1			100.0	18	Fold: PTS system fructose IIA component-like Superfamily: PTS system fructose IIA component-like Family: EIIA-man component-like
6	c3gx1A_			99.9	9	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: lin1832 protein; PDBTitle: crystal structure of a domain of lin1832 from listeria innocua
7	d3b48a1			99.8	12	Fold: PTS system fructose IIA component-like Superfamily: PTS system fructose IIA component-like Family: DhaM-like
8	c3gdwA_			99.5	14	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: sigma-54 interaction domain protein; PDBTitle: crystal structure of sigma-54 interaction domain protein from2 enterococcus faecalis
9	d3ct6a1			99.1	11	Fold: PTS system fructose IIA component-like Superfamily: PTS system fructose IIA component-like Family: DhaM-like
10	c2btqB_			90.9	15	PDB header: structural protein Chain: B: PDB Molecule: tubulin btubb; PDBTitle: structure of btubb heterodimer from prosthecobacter2 dejongeii
11	c3edlA_			88.7	13	PDB header: structural protein Chain: A: PDB Molecule: alpha-tubulin; PDBTitle: kinesin13-microtubule ring complex

12	c2p4nB			87.8	12	PDB header: transport protein Chain: B: PDB Molecule: tubulin beta chain; PDBTitle: human monomeric kinesin (1bg2) and bovine tubulin (1jff)2 docked into the 9-angstrom cryo-em map of nucleotide-free3 kinesin complexed to the microtubule
13	c2btoA			87.0	24	PDB header: cytoskeletal protein Chain: A: PDB Molecule: tubulin btuba; PDBTitle: structure of btuba from prosthecobacter dejongeii
14	d2btoa1			85.2	24	Fold: Tubulin nucleotide-binding domain-like Superfamily: Tubulin nucleotide-binding domain-like Family: Tubulin, GTPase domain
15	c1z5wA			84.5	20	PDB header: structural protein Chain: A: PDB Molecule: tubulin gamma-1 chain; PDBTitle: crystal structure of gamma-tubulin bound to gtp
16	d1tuba1			83.3	11	Fold: Tubulin nucleotide-binding domain-like Superfamily: Tubulin nucleotide-binding domain-like Family: Tubulin, GTPase domain
17	d1tubb1			72.4	13	Fold: Tubulin nucleotide-binding domain-like Superfamily: Tubulin nucleotide-binding domain-like Family: Tubulin, GTPase domain
18	c3lcmB			68.9	14	PDB header: oxidoreductase Chain: B: PDB Molecule: putative oxidoreductase; PDBTitle: crystal structure of smu.1420 from streptococcus mutans ua159
19	c3lupA			66.5	15	PDB header: structure genomics, unknown function Chain: A: PDB Molecule: degv family protein; PDBTitle: crystal structure of fatty acid binding degv family protein sag13422 from streptococcus agalactiae
20	c2vxyA			59.2	12	PDB header: cell cycle Chain: A: PDB Molecule: cell division protein ftsz; PDBTitle: the structure of ftsz from bacillus subtilis at 1.7a2 resolution
21	d1xm7a		not modelled	51.9	9	Fold: Metallo-dependent phosphatases Superfamily: Metallo-dependent phosphatases Family: Hypothetical protein aq_1666
22	c3rpeA		not modelled	45.8	11	PDB header: oxidoreductase Chain: A: PDB Molecule: modulator of drug activity b; PDBTitle: 1.1 angstrom crystal structure of putative modulator of drug activity2 (mdab) from yersinia pestis co92.
23	d1mgpa		not modelled	41.5	17	Fold: DAK1/DegV-like Superfamily: DAK1/DegV-like Family: DegV-like
24	c1mgpA		not modelled	41.5	17	PDB header: lipid binding protein Chain: A: PDB Molecule: hypothetical protein tm841; PDBTitle: hypothetical protein tm841 from thermotoga maritima reveals2 fatty acid binding function
25	c2g7zB		not modelled	39.9	5	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: conserved hypothetical protein spy1493; PDBTitle: conserved degv-like protein of unknown function from streptococcus2 pyogenes m1 gas binds long-chain fatty acids
26	d1q0qa2		not modelled	37.0	17	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Glyceraldehyde-3-phosphate dehydrogenase-like, N-terminal domain
27	d1t5ba		not modelled	36.8	10	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Quinone reductase
28	d2qwx1		not modelled	35.0	10	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Quinone reductase
29	c3ho6B		not modelled	33.0	17	PDB header: toxin Chain: B: PDB Molecule: toxin a; PDBTitle: structure-function analysis of inositol hexakisphosphate-

30	d1a2za	Alignment	not modelled	32.8	12	2 induced autoprocessing in clostridium difficile toxin a Fold: Phosphorylase/hydrolase-like Superfamily: Pyrrolidone carboxyl peptidase (pyroglutamate aminopeptidase) Family: Pyrrolidone carboxyl peptidase (pyroglutamate aminopeptidase)
31	c4a5oB	Alignment	not modelled	28.8	9	PDB header: oxidoreductase Chain: B: PDB Molecule: bifunctional protein fold; PDBTitle: crystal structure of pseudomonas aeruginosa n5, n10-2 methylenetetrahydrofolate dehydrogenase-cyclohydrolase (fold)
32	c3p2oA	Alignment	not modelled	27.8	9	PDB header: oxidoreductase, hydrolase Chain: A: PDB Molecule: bifunctional protein fold; PDBTitle: crystal structure of fold bifunctional protein from campylobacter2 jejuni
33	d2amha1	Alignment	not modelled	27.5	14	Fold: Anticodon-binding domain-like Superfamily: ITPase-like Family: Maf-like
34	c3I07B	Alignment	not modelled	27.2	6	PDB header: oxidoreductase,hydrolase Chain: B: PDB Molecule: bifunctional protein fold; PDBTitle: methylenetetrahydrofolate dehydrogenase/methenyltetrahydrofolate2 cyclohydrolase, putative bifunctional protein fold from francisella3 tularensis.
35	d1k6ma2	Alignment	not modelled	27.2	19	Fold: Phosphoglycerate mutase-like Superfamily: Phosphoglycerate mutase-like Family: 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase, phosphatase domain
36	c4a26B	Alignment	not modelled	27.2	14	PDB header: oxidoreductase Chain: B: PDB Molecule: putative c-1-tetrahydrofolate synthase, cytoplasmic; PDBTitle: the crystal structure of leishmania major n5,n10-2 methylenetetrahydrofolate dehydrogenase/cyclohydrolase
37	c3p2oB	Alignment	not modelled	26.6	9	PDB header: oxidoreductase, hydrolase Chain: B: PDB Molecule: bifunctional protein fold; PDBTitle: crystal structure of fold bifunctional protein from campylobacter2 jejuni
38	d1bifa2	Alignment	not modelled	23.9	19	Fold: Phosphoglycerate mutase-like Superfamily: Phosphoglycerate mutase-like Family: 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase, phosphatase domain
39	c1mgta	Alignment	not modelled	22.9	11	PDB header: transferase Chain: A: PDB Molecule: protein (o6-methylguanine-dna methyltransferase); PDBTitle: crystal structure of o6-methylguanine-dna methyltransferase from2 hyperthermophilic archaeon pyrococcus kodakaraensis strain kod1
40	c3dnfb	Alignment	not modelled	22.8	17	PDB header: oxidoreductase Chain: B: PDB Molecule: 4-hydroxy-3-methylbut-2-enyl diphosphate reductase; PDBTitle: structure of (e)-4-hydroxy-3-methyl-but-2-enyl diphosphate reductase,2 the terminal enzyme of the non-mevalonate pathway
41	c3ha2B	Alignment	not modelled	22.4	8	PDB header: oxidoreductase Chain: B: PDB Molecule: nadph-quinone reductase; PDBTitle: crystal structure of protein (nadph-quinone reductase) from2 p.pentosaceus, northeast structural genomics consortium target ptr24a
42	c3lyhb	Alignment	not modelled	22.0	12	PDB header: lyase Chain: B: PDB Molecule: cobalamin (vitamin b12) biosynthesis cbix protein; PDBTitle: crystal structure of putative cobalamin (vitamin b12) biosynthesis2 cbix protein (yp_958415.1) from marinobacter aquaeolei vt8 at 1.60 a3 resolution
43	c2dt8A	Alignment	not modelled	21.7	19	PDB header: lipid binding protein Chain: A: PDB Molecule: degv family protein; PDBTitle: fatty acid binding of a degv family protein from thermus thermophilus
44	c2hqba	Alignment	not modelled	20.6	12	PDB header: transcription Chain: A: PDB Molecule: transcriptional activator of comk gene; PDBTitle: crystal structure of a transcriptional activator of comk2 gene from bacillus halodurans
45	d1rtta	Alignment	not modelled	19.1	7	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: NADPH-dependent FMN reductase
46	c2qniA	Alignment	not modelled	18.9	11	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein atu0299; PDBTitle: crystal structure of uncharacterized protein atu0299
47	c3egIC	Alignment	not modelled	17.5	13	PDB header: structural genomics, unknown function Chain: C: PDB Molecule: degv family protein; PDBTitle: crystal structure of degv family protein cg2579 from corynebacterium2 glutamicum
48	d1ul3a	Alignment	not modelled	16.5	16	Fold: Ferredoxin-like Superfamily: GlnB-like Family: Prokaryotic signal transducing protein
49	c2jh3C	Alignment	not modelled	16.2	18	PDB header: ribosomal protein Chain: C: PDB Molecule: ribosomal protein s2-related protein; PDBTitle: the crystal structure of dr241 from deinococcus2 radiodurans at 1.9 a resolution reveals a multi-domain3 protein with structural similarity to chelatases but also4 with two additional novel domains
50	c1b0aA	Alignment	not modelled	15.8	9	PDB header: oxidoreductase,hydrolase Chain: A: PDB Molecule: protein (fold bifunctional protein); PDBTitle: 5,10, methylene-tetrahydropholate2 dehydrogenase/cyclohydrolase from e coli.
51	c1pd7B	Alignment	not modelled	15.5	0	PDB header: transcription Chain: B: PDB Molecule: mad1; PDBTitle: extended sid of mad1 bound to the pah2 domain of msn3b
52	c3r7aA	Alignment	not modelled	14.8	11	PDB header: transferase Chain: A: PDB Molecule: phosphoglycerate mutase, putative; PDBTitle: crystal structure of phosphoglycerate mutase from

					bacillus anthracis2 str. sterne
53	c3f2vA	Alignment	not modelled	14.7	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: general stress protein 14; PDBTitle: crystal structure of the general stress protein 142 (tde0354) in complex with fmn from treponema denticola,3 northeast structural genomics consortium target tdr58.
54	c3dcyA	Alignment	not modelled	14.4	PDB header: apoptosis regulator Chain: A: PDB Molecule: regulator protein; PDBTitle: crystal structure a tp53-induced glycolysis and apoptosis2 regulator protein from homo sapiens.
55	c3eznB	Alignment	not modelled	14.4	PDB header: isomerase Chain: B: PDB Molecule: 2,3-bisphosphoglycerate-dependent phosphoglycerate mutase; PDBTitle: crystal structure of phosphoglyceromutase from burkholderia2 pseudomallei 1710b
56	c2gi4A	Alignment	not modelled	13.2	PDB header: hydrolase Chain: A: PDB Molecule: possible phosphotyrosine protein phosphatase; PDBTitle: solution structure of the low molecular weight protein2 tyrosine phosphatase from campylobacter jejuni.
57	d1jsca3	Alignment	not modelled	13.2	Fold: Thiamin diphosphate-binding fold (THDP-binding) Superfamily: Thiamin diphosphate-binding fold (THDP-binding) Family: Pyruvate oxidase and decarboxylase PP module
58	c1bifA	Alignment	not modelled	13.2	PDB header: bifunctional enzyme Chain: A: PDB Molecule: 6-phosphofructo-2-kinase/ fructose-2,6-bisphosphatase; PDBTitle: 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase bifunctional2 enzyme complexed with atp-g-s and phosphate
59	d3pgma	Alignment	not modelled	12.9	Fold: Phosphoglycerate mutase-like Superfamily: Phosphoglycerate mutase-like Family: Cofactor-dependent phosphoglycerate mutase
60	c2e0kA	Alignment	not modelled	12.9	PDB header: transferase Chain: A: PDB Molecule: precorrin- c20-methyltransferase; PDBTitle: crystal structure of cbil, a methyltransferase involved in anaerobic2 vitamin b12 biosynthesis
61	c3d8hB	Alignment	not modelled	12.8	PDB header: isomerase Chain: B: PDB Molecule: glycolytic phosphoglycerate mutase; PDBTitle: crystal structure of phosphoglycerate mutase from cryptosporidium2 parvum, cgd7_4270
62	d1qrda	Alignment	not modelled	12.6	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Quinone reductase
63	c3k35D	Alignment	not modelled	12.5	PDB header: hydrolase Chain: D: PDB Molecule: nad-dependent deacetylase sirtuin-6; PDBTitle: crystal structure of human sirt6
64	c3lftA	Alignment	not modelled	12.5	PDB header: structure genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: the crystal structure of the abc domain in complex with l-trp from2 streptococcus pneumonia to 1.35a
65	d1lssa	Alignment	not modelled	12.4	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Potassium channel NAD-binding domain
66	c1k6mA	Alignment	not modelled	11.9	PDB header: transferase, hydrolase Chain: A: PDB Molecule: 6-phosphofructo-2-kinase/fructose-2,6- PDBTitle: crystal structure of human liver 6-phosphofructo-2-2 kinase/fructose-2,6-bisphosphatase
67	d2bo3a1	Alignment	not modelled	11.5	Fold: HP0242-like Superfamily: HP0242-like Family: HP0242-like
68	c2i1vB	Alignment	not modelled	11.4	PDB header: transferase, hydrolase Chain: B: PDB Molecule: 6-phosphofructo-2-kinase/fructose-2,6- PDBTitle: crystal structure of pfkb3 in complex with adp and2 fructose-2,6-bisphosphate
69	c3pkfF	Alignment	not modelled	11.2	PDB header: hydrolase Chain: F: PDB Molecule: nad-dependent deacetylase sirtuin-6; PDBTitle: human sirt6 crystal structure in complex with adp ribose
70	d1tipa	Alignment	not modelled	11.2	Fold: Phosphoglycerate mutase-like Superfamily: Phosphoglycerate mutase-like Family: 6-phosphofructo-2-kinase/fructose-2,6-bisphosphatase, phosphatase domain
71	c2c2xB	Alignment	not modelled	11.1	PDB header: oxidoreductase Chain: B: PDB Molecule: methylenetetrahydrofolate dehydrogenase- PDBTitle: three dimensional structure of bifunctional2 methylenetetrahydrofolate dehydrogenase-cyclohydrolase3 from mycobacterium tuberculosis
72	c3gpiA	Alignment	not modelled	10.9	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: nad-dependent epimerase/dehydratase; PDBTitle: structure of putative nad-dependent epimerase/dehydratase2 from methyllobacillus flagellatus
73	c3etjB	Alignment	not modelled	10.8	PDB header: lyase Chain: B: PDB Molecule: phosphoribosylaminoimidazole carboxylase atpase PDBTitle: crystal structure e. coli purk in complex with mg, adp, and2 pi
74	d2nu7b1	Alignment	not modelled	10.7	Fold: Flavodoxin-like Superfamily: Succinyl-CoA synthetase domains Family: Succinyl-CoA synthetase domains
75	c3czcA	Alignment	not modelled	10.6	PDB header: transferase Chain: A: PDB Molecule: rmpb; PDBTitle: the crystal structure of a putative pts iiib(ptxb) from2 streptococcus mutans
76	d1vk4a	Alignment	not modelled	10.5	Fold: Ribokinase-like Superfamily: Ribokinase-like Family: Ribokinase-like
					PDB header: isomerase Chain: B: PDB Molecule: riosephosphate isomerase;

77	c3m9yB	Alignment	not modelled	10.3	11	PDBTitle: crystal structure of triosephosphate isomerase from methicillin2 resistant staphylococcus aureus at 1.9 angstrom resolution
78	c3icra	Alignment	not modelled	10.1	20	PDB header: oxidoreductase Chain: A: PDB Molecule: coenzyme a-disulfide reductase; PDBTitle: crystal structure of oxidized bacillus anthracis coadr-rhd
79	d2hmva1	Alignment	not modelled	9.9	10	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Potassium channel NAD-binding domain
80	d1h2ea	Alignment	not modelled	9.8	17	Fold: Phosphoglycerate mutase-like Superfamily: Phosphoglycerate mutase-like Family: Cofactor-dependent phosphoglycerate mutase
81	d2b8na1	Alignment	not modelled	9.5	17	Fold: GckA/TtuD-like Superfamily: GckA/TtuD-like Family: GckA/TtuD-like
82	c1a4iB	Alignment	not modelled	9.3	5	PDB header: oxidoreductase Chain: B: PDB Molecule: methylenetetrahydrofolate dehydrogenase / PDBTitle: human tetrahydrofolate dehydrogenase / cyclohydrolase
83	d1nnsa	Alignment	not modelled	9.2	16	Fold: Glutaminase/Asparaginase Superfamily: Glutaminase/Asparaginase Family: Glutaminase/Asparaginase
84	d1fzta	Alignment	not modelled	9.1	18	Fold: Phosphoglycerate mutase-like Superfamily: Phosphoglycerate mutase-like Family: Cofactor-dependent phosphoglycerate mutase
85	c3rqzC	Alignment	not modelled	9.0	22	PDB header: hydrolase Chain: C: PDB Molecule: metallophosphoesterase; PDBTitle: crystal structure of metallophosphoesterase from sphaerobacter2 thermophilus
86	c3eozb	Alignment	not modelled	9.0	17	PDB header: isomerase Chain: B: PDB Molecule: putative phosphoglycerate mutase; PDBTitle: crystal structure of phosphoglycerate mutase from plasmidom2 falciparum, pfd0660w
87	c2gamA	Alignment	not modelled	8.9	11	PDB header: transferase Chain: A: PDB Molecule: beta-1,6-n-acetylglucosaminyltransferase; PDBTitle: x-ray crystal structure of murine leukocyte-type core 2 b1,2 6-n-acetylglucosaminyltransferase (c2gnt-l) in complex3 with galb1,3galnac
88	c2ps3A	Alignment	not modelled	8.7	9	PDB header: metal transport Chain: A: PDB Molecule: high-affinity zinc uptake system protein znuu; PDBTitle: structure and metal binding properties of znuu, a2 periplasmic zinc transporter from escherichia coli
89	c2q1yB	Alignment	not modelled	8.6	9	PDB header: cell cycle, signaling protein Chain: B: PDB Molecule: cell division protein ftsz; PDBTitle: crystal structure of cell division protein ftsz from mycobacterium2 tuberculosis in complex with gtp-gamma-s
90	c3e0zb	Alignment	not modelled	8.3	6	PDB header: unknown function Chain: B: PDB Molecule: protein of unknown function; PDBTitle: crystal structure of a putative imidazole glycerol phosphate synthase2 homolog (eubrec_1070) from eubacterium rectale at 1.75 a resolution
91	d1t0ia	Alignment	not modelled	8.2	11	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: NADPH-dependent FMN reductase
92	c2qaiA	Alignment	not modelled	8.2	15	PDB header: hydrolase Chain: A: PDB Molecule: v-type atp synthase subunit f; PDBTitle: crystal structure of the v-type atp synthase subunit f from2 pyrococcus furiosus. nesg target pfr7.
93	d1vjt1	Alignment	not modelled	8.2	8	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: LDH N-terminal domain-like
94	c1nw6A	Alignment	not modelled	8.2	12	PDB header: transferase Chain: A: PDB Molecule: modification methylase rsri; PDBTitle: structure of the beta class n6-adenine dna methyltransferase rsri2 bound to sinefungin
95	d2jfga2	Alignment	not modelled	8.1	9	Fold: MurD-like peptide ligases, peptide-binding domain Superfamily: MurD-like peptide ligases, peptide-binding domain Family: MurCDEF C-terminal domain
96	c3crqA	Alignment	not modelled	8.1	12	PDB header: transferase Chain: A: PDB Molecule: tRNA delta(2)-isopentenyl pyrophosphate PDBTitle: structure of tRNA dimethylallyltransferase: rna2 modification through a channel
97	c3hzua	Alignment	not modelled	8.1	6	PDB header: transferase Chain: A: PDB Molecule: thiosulfate sulfurtransferase ssea; PDBTitle: crystal structure of probable thiosulfate sulfurtransferase ssea2 (rhodanese) from mycobacterium tuberculosis
98	d1j3kc	Alignment	not modelled	8.0	24	Fold: Thymidylate synthase/dCMP hydroxymethylase Superfamily: Thymidylate synthase/dCMP hydroxymethylase Family: Thymidylate synthase/dCMP hydroxymethylase
99	c2qhpa	Alignment	not modelled	7.9	30	PDB header: transferase Chain: A: PDB Molecule: fructokinase; PDBTitle: crystal structure of fructokinase (np_810670.1) from bacteroides2 thet iotaomicron vpi-5482 at 1.80 a resolution