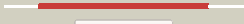



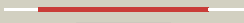





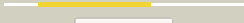
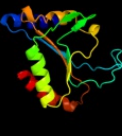









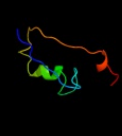




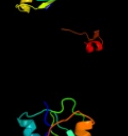



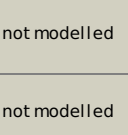


Phyre2

Email	I.a.kelley@imperial.ac.uk
Description	P24197
Date	Thu Jan 5 11:41:08 GMT 2012
Unique Job ID	c618af4b35299999

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	d2pw6a1	 Alignment		100.0	95	Fold: Phosphorylase/hydrolase-like Superfamily: LigB-like Family: LigB-like
2	d1b4ub	 Alignment		100.0	13	Fold: Phosphorylase/hydrolase-like Superfamily: LigB-like Family: LigB-like
3	c3bd0D	 Alignment		99.4	12	PDB header: peptide binding protein Chain: D: PDB Molecule: protein memo1; PDBTitle: crystal structure of memo, form ii
4	c3lp5A	 Alignment		78.9	15	PDB header: hydrolase Chain: A: PDB Molecule: putative cell surface hydrolase; PDBTitle: the crystal structure of the putative cell surface hydrolase from2 lactobacillus plantarum wcfs1
5	d1ja1a2	 Alignment		77.4	9	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Cytochrome p450 reductase N-terminal domain-like
6	d2q7sa1	 Alignment		73.0	15	Fold: Phosphorylase/hydrolase-like Superfamily: Zn-dependent exopeptidases Family: FGase-like
7	d2pjuu1	 Alignment		68.1	14	Fold: Chelatase-like Superfamily: PrpR receptor domain-like Family: PrpR receptor domain-like
8	c2pjuD	 Alignment		67.8	17	PDB header: transcription Chain: D: PDB Molecule: propionate catabolism operon regulatory protein; PDBTitle: crystal structure of propionate catabolism operon2 regulatory protein prp
9	d1bvyyf	 Alignment		61.7	14	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Flavodoxin-related
10	c1bvyyF	 Alignment		61.7	14	PDB header: oxidoreductase Chain: F: PDB Molecule: protein (cytochrome p450 bm-3); PDBTitle: complex of the heme and fmn-binding domains of the2 cytochrome p450(bm-3)
11	c3bmaC	 Alignment		60.6	25	PDB header: ligase Chain: C: PDB Molecule: d-alanyl-lipoteichoic acid synthetase; PDBTitle: crystal structure of d-alanyl-lipoteichoic acid synthetase from2 streptococcus pneumoniae r6

12	c3ozbF_	Alignment		58.0	23	PDB header: transferase Chain: F: PDB Molecule: methylthioadenosine phosphorylase; PDBTitle: crystal structure of 5'-methylthioinosine phosphorylase from2 psedomonas aeruginosa in complex with hypoxanthine
13	c2q5cA_	Alignment		57.9	12	PDB header: transcription Chain: A: PDB Molecule: ntrc family transcriptional regulator; PDBTitle: crystal structure of ntrc family transcriptional regulator from2 clostridium acetobutylicum
14	d2ac7a1	Alignment		54.3	8	Fold: Phosphorylase/hydrolase-like Superfamily: Purine and uridine phosphorylases Family: Purine and uridine phosphorylases
15	c3exaD_	Alignment		52.9	14	PDB header: transferase Chain: D: PDB Molecule: trna delta(2)-isopentenylpyrophosphate PDBTitle: crystal structure of the full-length trna2 isopentenylpyrophosphate transferase (bh2366) from3 bacillus halodurans, northeast structural genomics4 consortium target bhr41.
16	c3n0vD_	Alignment		45.4	15	PDB header: hydrolase Chain: D: PDB Molecule: formyltetrahydrofolate deformylase; PDBTitle: crystal structure of a formyltetrahydrofolate deformylase (pp_0327)2 from pseudomonas putida kt2440 at 2.25 a resolution
17	c3fleB_	Alignment		40.1	15	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: se_1780 protein; PDBTitle: se_1780 protein of unknown function from staphylococcus epidermidis.
18	d1b1ca_	Alignment		37.5	9	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Cytochrome p450 reductase N-terminal domain-like
19	d1ojra_	Alignment		35.6	24	Fold: AraD/HMP-PK domain-like Superfamily: AraD/HMP-PK domain-like Family: AraD-like aldolase/epimerase
20	d1f4pa_	Alignment		35.4	13	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Flavodoxin-related
21	c3tl6B_	Alignment	not modelled	31.2	12	PDB header: transferase Chain: B: PDB Molecule: purine nucleoside phosphorylase; PDBTitle: crystal structure of purine nucleoside phosphorylase from entamoeba2 histolytica
22	d1odma_	Alignment	not modelled	31.0	15	Fold: Double-stranded beta-helix Superfamily: Clavamate synthase-like Family: Penicillin synthase-like
23	c3qpbB_	Alignment	not modelled	30.8	9	PDB header: transferase Chain: B: PDB Molecule: uridine phosphorylase; PDBTitle: crystal structure of streptococcus pyogenes uridine phosphorylase2 reveals a subclass of the np-i superfamily
24	d2gv8a2	Alignment	not modelled	27.3	13	Fold: FAD/NAD(P)-binding domain Superfamily: FAD/NAD(P)-binding domain Family: FAD/NAD-linked reductases, N-terminal and central domains
25	d1vhwa_	Alignment	not modelled	26.6	12	Fold: Phosphorylase/hydrolase-like Superfamily: Purine and uridine phosphorylases Family: Purine and uridine phosphorylases
26	c2gfaC_	Alignment	not modelled	26.3	15	PDB header: structural genomics, unknown function Chain: C: PDB Molecule: upf0204 protein ph0006; PDBTitle: structure of protein of unknown function ph0006 from pyrococcus2 horikoshii
27	d2odfa1	Alignment	not modelled	24.2	15	Fold: Phosphorylase/hydrolase-like Superfamily: Zn-dependent exopeptidases Family: FGase-like
28	c3jrnA_	Alignment	not modelled	22.9	13	PDB header: plant protein Chain: A: PDB Molecule: at1g72930 protein; PDBTitle: crystal structure of tir domain from arabidopsis thaliana
						Fold: AraD/HMP-PK domain-like

29	d1pvta_	Alignment	not modelled	22.3	29	Superfamily: AraD/HMP-PK domain-like Family: AraD-like aldolase/epimerase
30	d1w4xa2	Alignment	not modelled	22.2	6	Fold: FAD/NAD(P)-binding domain Superfamily: FAD/NAD(P)-binding domain Family: FAD/NAD-linked reductases, N-terminal and central domains
31	c3eufC_	Alignment	not modelled	22.0	18	PDB header: transferase Chain: C: PDB Molecule: uridine phosphorylase 1; PDBTitle: crystal structure of bau-bound human uridine phosphorylase 1
32	d1jw9b_	Alignment	not modelled	22.0	26	Fold: Activating enzymes of the ubiquitin-like proteins Superfamily: Activating enzymes of the ubiquitin-like proteins Family: Molybdenum cofactor biosynthesis protein MoeB
33	c3i0pA_	Alignment	not modelled	21.9	19	PDB header: oxidoreductase Chain: A: PDB Molecule: malate dehydrogenase; PDBTitle: crystal structure of malate dehydrogenase from entamoeba histolytica
34	d1odka_	Alignment	not modelled	20.8	11	Fold: Phosphorylase/hydrolase-like Superfamily: Purine and uridine phosphorylases Family: Purine and uridine phosphorylases
35	d1rxya_	Alignment	not modelled	20.1	13	Fold: Phosphorylase/hydrolase-like Superfamily: Purine and uridine phosphorylases Family: Purine and uridine phosphorylases
36	c1tjnA_	Alignment	not modelled	19.7	26	PDB header: lyase Chain: A: PDB Molecule: sirohydrochlorin cobaltochelate; PDBTitle: crystal structure of hypothetical protein af0721 from archaeoglobus2 fulgidus
37	d1tjna_	Alignment	not modelled	19.7	26	Fold: Chelatase-like Superfamily: Chelatase Family: CbiX-like
38	d1cqxa3	Alignment	not modelled	19.3	14	Fold: Ferredoxin reductase-like, C-terminal NADP-linked domain Superfamily: Ferredoxin reductase-like, C-terminal NADP-linked domain Family: Flavo-hemoglobin, C-terminal domain
39	d1npya1	Alignment	not modelled	18.6	14	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Amino acid dehydrogenase-like, C-terminal domain
40	d2h1ia1	Alignment	not modelled	18.4	17	Fold: alpha/beta-Hydrolases Superfamily: alpha/beta-Hydrolases Family: Carboxylesterase/thioesterase 1
41	c2cdh1_	Alignment	not modelled	18.4	13	PDB header: transferase Chain: 1: PDB Molecule: enoyl reductase; PDBTitle: architecture of the thermomyces lanuginosus fungal fatty2 acid synthase at 5 angstrom resolution.
42	c1zfnA_	Alignment	not modelled	18.4	16	PDB header: transferase Chain: A: PDB Molecule: adenylyltransferase thif; PDBTitle: structural analysis of escherichia coli thif
43	d2i9ca1	Alignment	not modelled	18.2	16	Fold: alpha-alpha superhelix Superfamily: ARM repeat Family: RPA1889-like
44	d1np3a2	Alignment	not modelled	17.9	12	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: 6-phosphogluconate dehydrogenase-like, N-terminal domain
45	c1y8qD_	Alignment	not modelled	17.4	16	PDB header: ligase Chain: D: PDB Molecule: ubiquitin-like 2 activating enzyme e1b; PDBTitle: sumo e1 activating enzyme sae1-sae2-mg-atp complex
46	d1p77a1	Alignment	not modelled	17.4	7	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Amino acid dehydrogenase-like, C-terminal domain
47	d1wyza1	Alignment	not modelled	17.2	16	Fold: Tetrapyrrole methylase Superfamily: Tetrapyrrole methylase Family: Tetrapyrrole methylase
48	c3k3qB_	Alignment	not modelled	17.1	13	PDB header: transferase Chain: B: PDB Molecule: trna delta(2)-isopentenylpyrophosphate PDBTitle: crystal structure of trna delta(2)-isopentenylpyrophosphate2 transferase (se0981) from staphylococcus epidermidis.3 northeast structural genomics consortium target ser100
49	d1t8sa_	Alignment	not modelled	16.7	12	Fold: Phosphorylase/hydrolase-like Superfamily: Purine and uridine phosphorylases Family: Purine and uridine phosphorylases
50	d1vkza2	Alignment	not modelled	16.6	25	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: BC N-terminal domain-like
51	d2fuea1	Alignment	not modelled	16.3	28	Fold: HAD-like Superfamily: HAD-like Family: Predicted hydrolases Cof
52	c3k35D_	Alignment	not modelled	16.3	11	PDB header: hydrolase Chain: D: PDB Molecule: nad-dependent deacetylase sirtuin-6; PDBTitle: crystal structure of human sirt6
53	c3pkiF_	Alignment	not modelled	16.3	11	PDB header: hydrolase Chain: F: PDB Molecule: nad-dependent deacetylase sirtuin-6; PDBTitle: human sirt6 crystal structure in complex with adp ribose
54	d1uala_	Alignment	not modelled	16.2	9	Fold: alpha/beta knot Superfamily: alpha/beta knot Family: tRNA(m1G37)-methyltransferase TrmD
55	d1iiba_	Alignment	not modelled	16.2	23	Fold: Phosphotyrosine protein phosphatases I-like Superfamily: PTS system IIB component-like Family: PTS system, Lactose/Cellulose specific IIB subunit

56	d1a9xa3	Alignment	not modelled	16.1	25	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: BC N-terminal domain-like
57	c3cmmA_	Alignment	not modelled	14.8	24	PDB header: ligase/protein binding Chain: A: PDB Molecule: ubiquitin-activating enzyme e1 1; PDBTitle: crystal structure of the uba1-ubiquitin complex
58	d1q1ra2	Alignment	not modelled	14.6	19	Fold: FAD/NAD(P)-binding domain Superfamily: FAD/NAD(P)-binding domain Family: FAD/NAD-linked reductases, N-terminal and central domains
59	d1nvtA1	Alignment	not modelled	14.3	13	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Aminoacid dehydrogenase-like, C-terminal domain
60	c3h9gA_	Alignment	not modelled	14.3	11	PDB header: transferase/antibiotic Chain: A: PDB Molecule: mccb protein; PDBTitle: crystal structure of e. coli mccb + mcca-n7isoasn
61	c3kydB_	Alignment	not modelled	14.2	16	PDB header: ligase Chain: B: PDB Molecule: sumo-activating enzyme subunit 2; PDBTitle: human sumo e1~sumo1-amp tetrahedral intermediate mimic
62	d1nxua_	Alignment	not modelled	14.1	28	Fold: L-sulfolactate dehydrogenase-like Superfamily: L-sulfolactate dehydrogenase-like Family: L-sulfolactate dehydrogenase-like
63	c1wb4A_	Alignment	not modelled	14.1	18	PDB header: hydrolase Chain: A: PDB Molecule: endo-1,4-beta-xylanase y; PDBTitle: s954a mutant of the feruloyl esterase module from2 clostridium thermocellum complexed with sinapinate
64	c1z2iA_	Alignment	not modelled	14.0	23	PDB header: oxidoreductase Chain: A: PDB Molecule: malate dehydrogenase; PDBTitle: crystal structure of agrobacterium tumefaciens malate2 dehydrogenase, new york structural genomics consortium
65	d2csua2	Alignment	not modelled	13.9	13	Fold: Flavodoxin-like Superfamily: Succinyl-CoA synthetase domains Family: Succinyl-CoA synthetase domains
66	d1ykga1	Alignment	not modelled	13.8	14	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Cytochrome p450 reductase N-terminal domain-like
67	d2bida_	Alignment	not modelled	13.6	18	Fold: Toxins' membrane translocation domains Superfamily: Bcl-2 inhibitors of programmed cell death Family: Bcl-2 inhibitors of programmed cell death
68	d1gsoa2	Alignment	not modelled	13.6	17	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: BC N-terminal domain-like
69	c2rgwD_	Alignment	not modelled	13.5	15	PDB header: transferase Chain: D: PDB Molecule: aspartate carbamoyltransferase; PDBTitle: catalytic subunit of m. jannaschii aspartate2 transcarbamoylase
70	d1wb4a1	Alignment	not modelled	13.5	23	Fold: alpha/beta-Hydrolases Superfamily: alpha/beta-Hydrolases Family: Carboxylesterase
71	d1nhpa2	Alignment	not modelled	13.0	15	Fold: FAD/NAD(P)-binding domain Superfamily: FAD/NAD(P)-binding domain Family: FAD/NAD-linked reductases, N-terminal and central domains
72	d1vi2a1	Alignment	not modelled	12.9	13	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Aminoacid dehydrogenase-like, C-terminal domain
73	c3louB_	Alignment	not modelled	12.8	14	PDB header: hydrolase Chain: B: PDB Molecule: formyltetrahydrofolate deformylase; PDBTitle: crystal structure of formyltetrahydrofolate deformylase (yp_105254.1)2 from burkholderia mallei atcc 23344 at 1.90 a resolution
74	c3vh1A_	Alignment	not modelled	12.7	18	PDB header: metal binding protein Chain: A: PDB Molecule: ubiquitin-like modifier-activating enzyme atg7; PDBTitle: crystal structure of saccharomyces cerevisiae atg7 (1-595)
75	d1vdca2	Alignment	not modelled	12.6	14	Fold: FAD/NAD(P)-binding domain Superfamily: FAD/NAD(P)-binding domain Family: FAD/NAD-linked reductases, N-terminal and central domains
76	c3gucB_	Alignment	not modelled	12.2	27	PDB header: transferase Chain: B: PDB Molecule: ubiquitin-like modifier-activating enzyme 5; PDBTitle: human ubiquitin-activating enzyme 5 in complex with amppnp
77	c3nbmA_	Alignment	not modelled	12.1	9	PDB header: transferase Chain: A: PDB Molecule: pts system, lactose-specific iibc components; PDBTitle: the lactose-specific iib component domain structure of the2 phosphoenolpyruvate:carbohydrate phosphotransferase system (pts) from3 streptococcus pneumoniae.
78	d1a9xa4	Alignment	not modelled	11.9	36	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: BC N-terminal domain-like
79	c3h16A_	Alignment	not modelled	11.8	10	PDB header: signaling protein Chain: A: PDB Molecule: tir protein; PDBTitle: crystal structure of a bacteria tir domain, pdtir from2 paracoccus denitrificans
80	c2l2qA_	Alignment	not modelled	11.8	27	PDB header: transferase Chain: A: PDB Molecule: pts system, cellobiose-specific iib component (cela); PDBTitle: solution structure of cellobiose-specific phosphotransferase iib2 component protein from borrelia burgdorferi

81	c3vh3A_	Alignment	not modelled	11.7	18	PDB header: metal binding protein/protein transport Chain: A: PDB Molecule: ubiquitin-like modifier-activating enzyme atg7; PDBTitle: crystal structure of atg7ctd-atg8 complex
82	d1pvlA_	Alignment	not modelled	11.6	27	Fold: alpha/beta-Hydrolases Superfamily: alpha/beta-Hydrolases Family: Hypothetical esterase YJL068C
83	d5pntA_	Alignment	not modelled	11.5	25	Fold: Phosphotyrosine protein phosphatases I-like Superfamily: Phosphotyrosine protein phosphatases I Family: Low-molecular-weight phosphotyrosine protein phosphatases
84	d1dg9A_	Alignment	not modelled	11.3	25	Fold: Phosphotyrosine protein phosphatases I-like Superfamily: Phosphotyrosine protein phosphatases I Family: Low-molecular-weight phosphotyrosine protein phosphatases
85	d1k9sA_	Alignment	not modelled	11.2	11	Fold: Phosphorylase/hydrolase-like Superfamily: Purine and uridine phosphorylases Family: Purine and uridine phosphorylases
86	c2wmyH_	Alignment	not modelled	11.1	27	PDB header: hydrolase Chain: H: PDB Molecule: putative acid phosphatase wzb; PDBTitle: crystal structure of the tyrosine phosphatase wzb from2 escherichia coli k30 in complex with sulphate.
87	d1yqea1	Alignment	not modelled	11.0	23	Fold: Phosphorylase/hydrolase-like Superfamily: AF0625-like Family: AF0625-like
88	d1gpja2	Alignment	not modelled	10.9	32	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Aminoacid dehydrogenase-like, C-terminal domain
89	c2rduA_	Alignment	not modelled	10.8	23	PDB header: oxidoreductase Chain: A: PDB Molecule: hydroxyacid oxidase 1; PDBTitle: crystal structure of human glycolate oxidase in complex with2 glyoxylate
90	c1w4xA_	Alignment	not modelled	10.7	7	PDB header: oxygenase Chain: A: PDB Molecule: phenylacetone monooxygenase; PDBTitle: phenylacetone monooxygenase, a baeyer-villiger2 monooxygenase
91	c2g8yB_	Alignment	not modelled	10.6	21	PDB header: oxidoreductase Chain: B: PDB Molecule: malate/l-lactate dehydrogenases; PDBTitle: the structure of a putative malate/lactate dehydrogenase from e. coli.
92	c2gi4A_	Alignment	not modelled	10.6	27	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.
93	c3nvbA_	Alignment	not modelled	10.6	12	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of n-terminal part of the protein bf1531 from2 bacteroides fragilis containing phosphatase domain complexed with mg3 and tungstate
94	c3hbaA_	Alignment	not modelled	10.4	21	PDB header: isomerase Chain: A: PDB Molecule: putative phosphosugar isomerase; PDBTitle: crystal structure of a putative phosphosugar isomerase (sden_2705)2 from shewanella denitrificans os217 at 2.00 a resolution
95	d2gfga1	Alignment	not modelled	10.4	14	Fold: Phosphorylase/hydrolase-like Superfamily: AF0625-like Family: AF0625-like
96	d1trba2	Alignment	not modelled	10.3	21	Fold: FAD/NAD(P)-binding domain Superfamily: FAD/NAD(P)-binding domain Family: FAD/NAD-linked reductases, N-terminal and central domains
97	c3t38B_	Alignment	not modelled	10.1	16	PDB header: oxidoreductase Chain: B: PDB Molecule: arsenate reductase; PDBTitle: corynebacterium glutamicum thioredoxin-dependent arsenate reductase2 cg_arsc1'
98	d1fl2a2	Alignment	not modelled	9.9	13	Fold: FAD/NAD(P)-binding domain Superfamily: FAD/NAD(P)-binding domain Family: FAD/NAD-linked reductases, N-terminal and central domains
99	c1np3B_	Alignment	not modelled	9.8	12	PDB header: oxidoreductase Chain: B: PDB Molecule: ketol-acid reductoisomerase; PDBTitle: crystal structure of class i acetohydroxy acid isomereductase from2 pseudomonas aeruginosa