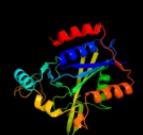
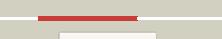
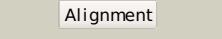
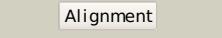
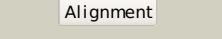


Phyre²

Email	i.a.kelley@imperial.ac.uk
Description	P32099
Date	Thu Jan 5 11:49:06 GMT 2012
Unique Job ID	80d9ec732ac2b1ae

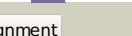
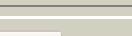
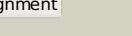
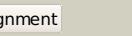
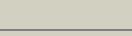
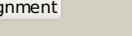
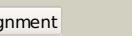
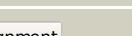
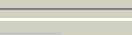
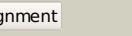
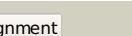
Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c1x2gB_	Alignment		100.0	96	PDB header: ligase Chain: B; PDB Molecule: lipoate-protein ligase a; PDBTitle: crystal structure of lipoate-protein ligase a from2 escherichia coli
2	c1vgqzA_	Alignment		100.0	31	PDB header: ligase Chain: A; PDB Molecule: lipoate-protein ligase, putative; PDBTitle: crystal structure of a putative lipoate-protein ligase a (sp_11602 from streptococcus pneumoniae tigr4 at 1.99 a resolution
3	c2e5aA_	Alignment		100.0	33	PDB header: ligase Chain: A; PDB Molecule: lipoyltransferase 1; PDBTitle: crystal structure of bovine lipoyltransferase in complex2 with lipoyl-amp
4	d1x2ga2	Alignment		100.0	99	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: LplA-like
5	d1vgqza2	Alignment		100.0	36	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: LplA-like
6	d2c8ma1	Alignment		100.0	30	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: LplA-like
7	d2p5ia1	Alignment		100.0	18	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: LplA-like
8	d2p0la1	Alignment		100.0	18	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: LplA-like
9	c2qhsA_	Alignment		100.0	19	PDB header: transferase Chain: A; PDB Molecule: lipoyltransferase; PDBTitle: structural basis of octanoic acid recognition by lipoate-protein2 ligase b
10	c2qhva_	Alignment		100.0	19	PDB header: transferase Chain: A; PDB Molecule: lipoyltransferase; PDBTitle: structural basis of octanoic acid recognition by lipoate-protein2 ligase b
11	d1w66a1	Alignment		100.0	19	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: LplA-like

12	d1x2gal			99.9	98	Fold: SufE/NifU Superfamily: SufE/NifU Family: SP1160 C-terminal domain-like
13	d1vqza1			99.8	18	Fold: SufE/NifU Superfamily: SufE/NifU Family: SP1160 C-terminal domain-like
14	c2eayB_			97.8	18	PDB header: ligase Chain: B: PDB Molecule: biotin [acetyl-coa-carboxylase] ligase; PDBTitle: crystal structure of biotin protein ligase from aquifex2 aeolicus
15	d2zgwa2			97.8	19	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Biotin holoenzyme synthetase
16	c2ej9A_			97.7	16	PDB header: ligase Chain: A: PDB Molecule: putative biotin ligase; PDBTitle: crystal structure of biotin protein ligase from2 methanococcus jannaschii
17	c2ewnA_			97.4	18	PDB header: ligase, transcription Chain: A: PDB Molecule: bira bifunctional protein; PDBTitle: ecoli biotin repressor with co-repressor analog
18	c3bfmA_			97.2	15	PDB header: unknown function Chain: A: PDB Molecule: biotin protein ligase-like protein of unknown function; PDBTitle: crystal structure of a biotin protein ligase-like protein of unknown2 function (tm1040_0394) from silicibacter sp. tm1040 at 1.70 a3 resolution
19	c2dzca			96.7	20	PDB header: ligase Chain: A: PDB Molecule: biotin-[acetyl-coa-carboxylase] ligase; PDBTitle: crystal structure of biotin protein ligase from pyrococcus2 horikoshii, mutation r48a
20	c2cghB_			96.6	14	PDB header: ligase Chain: B: PDB Molecule: biotin ligase; PDBTitle: crystal structure of biotin ligase from mycobacterium2 tuberculosis
21	d1biaa3		not modelled	95.4	23	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: Biotin holoenzyme synthetase
22	c2qq4A_		not modelled	90.5	18	PDB header: metal binding protein Chain: A: PDB Molecule: iron-sulfur cluster biosynthesis protein iscu; PDBTitle: crystal structure of iron-sulfur cluster biosynthesis2 protein iscu (ttha1736) from thermus thermophilus hb8
23	d1t3qc1		not modelled	84.0	9	Fold: CO dehydrogenase flavoprotein C-domain-like Superfamily: CO dehydrogenase flavoprotein C-terminal domain-like Family: CO dehydrogenase flavoprotein C-terminal domain-like
24	d1jroa3		not modelled	82.9	18	Fold: CO dehydrogenase flavoprotein C-domain-like Superfamily: CO dehydrogenase flavoprotein C-terminal domain-like Family: CO dehydrogenase flavoprotein C-terminal domain-like
25	d1n62c1		not modelled	80.1	14	Fold: CO dehydrogenase flavoprotein C-domain-like Superfamily: CO dehydrogenase flavoprotein C-terminal domain-like Family: CO dehydrogenase flavoprotein C-terminal domain-like
26	d1ffvc1		not modelled	80.1	16	Fold: CO dehydrogenase flavoprotein C-domain-like Superfamily: CO dehydrogenase flavoprotein C-terminal domain-like Family: CO dehydrogenase flavoprotein C-terminal domain-like
27	d1v97a4		not modelled	74.7	11	Fold: CO dehydrogenase flavoprotein C-domain-like Superfamily: CO dehydrogenase flavoprotein C-terminal domain-like Family: CO dehydrogenase flavoprotein C-terminal domain-like
28	d1rm6b1		not modelled	73.7	17	Fold: CO dehydrogenase flavoprotein C-domain-like Superfamily: CO dehydrogenase flavoprotein C-terminal domain-like Family: CO dehydrogenase flavoprotein C-terminal domain-like

29	c2w3rG	Alignment	not modelled	67.0	18	PDB header: oxidoreductase Chain: G; PDB Molecule: xanthine dehydrogenase; PDBTitle: crystal structure of xanthine dehydrogenase (desulfo form)2 from rhodobacter capsulatus in complex with hypoxanthine
30	d1knxa1	Alignment	not modelled	64.6	7	Fold: MurF and HprK N-domain-like Superfamily: HprK N-terminal domain-like Family: HPr kinase/phosphatase HprK N-terminal domain
31	d1xjsa	Alignment	not modelled	54.2	7	Fold: SufE/NifU Superfamily: SufE/NifU Family: NifU/IscU domain
32	d1ko7a1	Alignment	not modelled	51.1	18	Fold: MurF and HprK N-domain-like Superfamily: HprK N-terminal domain-like Family: HPr kinase/phosphatase HprK N-terminal domain
33	c1ybxA	Alignment	not modelled	49.8	13	PDB header: structural genomics, unknown function Chain: A; PDB Molecule: conserved hypothetical protein; PDBTitle: conserved hypothetical protein cth-383 from clostridium thermocellum
34	c3hrdC	Alignment	not modelled	49.7	14	PDB header: oxidoreductase Chain: C; PDB Molecule: nicotinate dehydrogenase fad-subunit; PDBTitle: crystal structure of nicotinate dehydrogenase
35	d1su0b	Alignment	not modelled	48.1	10	Fold: SufE/NifU Superfamily: SufE/NifU Family: NifU/IscU domain
36	c1knxF	Alignment	not modelled	46.9	7	PDB header: transferase/hydrolase Chain: F; PDB Molecule: probable hpr(ser) kinase/phosphatase; PDBTitle: hpr kinase/phosphatase from mycoplasma pneumoniae
37	c1ko7B	Alignment	not modelled	46.8	17	PDB header: transferase,hydrolase Chain: B; PDB Molecule: hpr kinase/phosphatase; PDBTitle: x-ray structure of the hpr kinase/phosphatase from2 staphylococcus xylosus at 1.95 a resolution
38	d1yq9h1	Alignment	not modelled	46.6	25	Fold: HydB/Nqo4-like Superfamily: HydB/Nqo4-like Family: Nickel-iron hydrogenase, large subunit
39	d2brfa1	Alignment	not modelled	44.5	19	Fold: SMAD/FHA domain Superfamily: SMAD/FHA domain Family: FHA domain
40	c2z7eB	Alignment	not modelled	44.4	17	PDB header: biosynthetic protein Chain: B; PDB Molecule: nifu-like protein; PDBTitle: crystal structure of aquifex aeolicus iscu with bound [2fe-2 2s] cluster
41	d1e3db	Alignment	not modelled	43.3	18	Fold: HydB/Nqo4-like Superfamily: HydB/Nqo4-like Family: Nickel-iron hydrogenase, large subunit
42	d1cc1l	Alignment	not modelled	43.3	19	Fold: HydB/Nqo4-like Superfamily: HydB/Nqo4-like Family: Nickel-iron hydrogenase, large subunit
43	d1frfl	Alignment	not modelled	42.9	20	Fold: HydB/Nqo4-like Superfamily: HydB/Nqo4-like Family: Nickel-iron hydrogenase, large subunit
44	c1rm6E	Alignment	not modelled	40.9	20	PDB header: oxidoreductase Chain: E; PDB Molecule: 4-hydroxybenzoyl-coa reductase beta subunit; PDBTitle: structure of 4-hydroxybenzoyl-coa reductase from thauera2 aromatica
45	d1wu11	Alignment	not modelled	40.3	21	Fold: HydB/Nqo4-like Superfamily: HydB/Nqo4-like Family: Nickel-iron hydrogenase, large subunit
46	d2ddza1	Alignment	not modelled	38.5	27	Fold: Class II aaRS and biotin synthetases Superfamily: Class II aaRS and biotin synthetases Family: PHO223-like
47	c2grvC	Alignment	not modelled	37.5	9	PDB header: biosynthetic protein Chain: C; PDB Molecule: lpqw; PDBTitle: crystal structure of lpqw
48	c3myrB	Alignment	not modelled	35.0	15	PDB header: oxidoreductase Chain: B; PDB Molecule: nickel-dependent hydrogenase large subunit; PDBTitle: crystal structure of [nife] hydrogenase from allochromatium vinosum in2 its ni-a state
49	d2a1ja1	Alignment	not modelled	34.9	20	Fold: SAM domain-like Superfamily: RuvA domain 2-like Family: Hef domain-like
50	c1ffuF	Alignment	not modelled	33.0	18	PDB header: hydrolase Chain: F; PDB Molecule: cutm, flavoprotein of carbon monoxide PDBTitle: carbon monoxide dehydrogenase from hydrogenophaga2 pseudoflava which lacks the mo-pyranopterin moiety of the3 molybdenum cofactor
51	c1t3qF	Alignment	not modelled	32.6	8	PDB header: oxidoreductase Chain: F; PDB Molecule: quinoline 2-oxidoreductase medium subunit; PDBTitle: crystal structure of quinoline 2-oxidoreductase from pseudomonas2 putida 86
52	c3o6uB	Alignment	not modelled	32.4	30	PDB header: structural genomics, unknown function Chain: B; PDB Molecule: uncharacterized protein cpe2226; PDBTitle: crystal structure of cpe2226 protein from clostridium perfringens.2 northeast structural genomics consortium target cpr195
53	c3ry3B	Alignment	not modelled	31.5	9	PDB header: transport protein Chain: B; PDB Molecule: putative solute-binding protein; PDBTitle: putative solute-binding protein from yersinia pestis.
54	d1xoca1	Aliantment	not modelled	31.2	17	Fold: Periplasmic binding protein-like II Superfamily: Periplasmic binding protein-like II

						Family: Phosphate binding protein-like
55	c3lvuB_	Alignment	not modelled	29.1	21	PDB header: transport protein Chain: B: PDB Molecule: abc transporter, periplasmic substrate-binding protein; PDBTitle: crystal structure of abc transporter, periplasmic substrate-binding2 protein spo2066 from silicibacter pomeroyi
56	c2kzxA_	Alignment	not modelled	27.4	15	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: solution nmr structure of a3dht5 from clostridium thermocellum,2 northeast structural genomics consortium target cmr116
57	d1u07a_	Alignment	not modelled	27.3	15	Fold: TolA/TonB C-terminal domain Superfamily: TolA/TonB C-terminal domain Family: TomB
58	c1h2aL_	Alignment	not modelled	26.3	22	PDB header: oxidoreductase Chain: L: PDB Molecule: hydrogenase; PDBTitle: single crystals of hydrogenase from desulfovibrio vulgaris
59	d1p30a1	Alignment	not modelled	25.0	15	Fold: Nucleoplasmin-like/VP (viral coat and capsid proteins) Superfamily: Group II dsDNA viruses VP Family: Adenovirus hexon
60	c3uotB_	Alignment	not modelled	24.5	13	PDB header: cell cycle Chain: B: PDB Molecule: mediator of dna damage checkpoint protein 1; PDBTitle: crystal structure of mdc1 fha domain in complex with a phosphorylated2 peptide from the mdc1 n-terminus
61	d1zlq1a1	Alignment	not modelled	23.5	9	Fold: Periplasmic binding protein-like II Superfamily: Periplasmic binding protein-like II Family: Phosphate binding protein-like
62	c2o7ja_	Alignment	not modelled	22.8	12	PDB header: sugar binding protein Chain: A: PDB Molecule: oligopeptide abc transporter, periplasmic PDBTitle: the x-ray crystal structure of a thermophilic cellobiose2 binding protein bound with cellobiose
63	c2kkIA_	Alignment	not modelled	22.4	9	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein mb1858; PDBTitle: solution nmr structure of fha domain of mb1858 from2 mycobacterium bovis. northeast structural genomics3 consortium target mbr243c (24-155).
64	d1wh9a_	Alignment	not modelled	22.3	14	Fold: Alpha-lytic protease prodomain-like Superfamily: Prokaryotic type KH domain (KH-domain type II) Family: Prokaryotic type KH domain (KH-domain type II)
65	c2wpnB_	Alignment	not modelled	22.0	22	PDB header: oxidoreductase Chain: B: PDB Molecule: periplasmic [nifese] hydrogenase, large subunit; PDBTitle: structure of the oxidised, as-isolated nifese hydrogenase2 from d. vulgaris hildenborough
66	c1n62C_	Alignment	not modelled	21.7	14	PDB header: oxidoreductase Chain: C: PDB Molecule: carbon monoxide dehydrogenase medium chain; PDBTitle: crystal structure of the mo,cu-co dehydrogenase (codh), n-2 butylisocyanide-bound state
67	d1puga_	Alignment	not modelled	21.3	14	Fold: YbaB-like Superfamily: YbaB-like Family: YbaB-like
68	d1r9pa_	Alignment	not modelled	20.2	17	Fold: SufE/NifU Superfamily: SufE/NifU Family: NifU/IscU domain
69	c2k9kA_	Alignment	not modelled	17.1	16	PDB header: metal transport Chain: A: PDB Molecule: tonb2; PDBTitle: molecular characterization of the tonb2 protein from vibrio2 anguillarum
70	c3iz5s_	Alignment	not modelled	17.0	12	PDB header: ribosome Chain: S: PDB Molecule: 60s ribosomal protein l18a (l18ae); PDBTitle: localization of the large subunit ribosomal proteins into a 5.5 a2 cryo-em map of triticum aestivum translating 80s ribosome
71	d2gskb1	Alignment	not modelled	16.9	15	Fold: TolA/TonB C-terminal domain Superfamily: TolA/TonB C-terminal domain Family: TomB
72	c3izcs_	Alignment	not modelled	16.3	16	PDB header: ribosome Chain: S: PDB Molecule: 60s ribosomal protein rpl20 (l18ae); PDBTitle: localization of the large subunit ribosomal proteins into a 6.1 a2 cryo-em map of saccharomyces cerevisiae translating 80s ribosome
73	c1wygA_	Alignment	not modelled	16.0	9	PDB header: oxidoreductase Chain: A: PDB Molecule: xanthine dehydrogenase/oxidase; PDBTitle: crystal structure of a rat xanthine dehydrogenase triple mutant2 (c535a, c992r and c1324s)
74	d1j8ba_	Alignment	not modelled	16.0	16	Fold: YbaB-like Superfamily: YbaB-like Family: YbaB-like
75	c1ztyA_	Alignment	not modelled	15.9	13	PDB header: sugar binding protein, signaling protein Chain: A: PDB Molecule: chitin oligosaccharide binding protein; PDBTitle: crystal structure of the chitin oligosaccharide binding2 protein
76	c2hw4A_	Alignment	not modelled	14.9	15	PDB header: structural genomics, hydrolase Chain: A: PDB Molecule: 14 kda phosphohistidine phosphatase; PDBTitle: crystal structure of human phosphohistidine phosphatase
77	c2vqzB_	Alignment	not modelled	14.5	18	PDB header: transcription Chain: B: PDB Molecule: polymerase basic protein 2; PDBTitle: structure of the cap-binding domain of influenza virus2 polymerase subunit pb2 with bound m7gtp
78	d1pugb_	Alignment	not modelled	14.3	14	Fold: YbaB-like Superfamily: YbaB-like Family: YbaB-like
						PDB header: oxidoreductase

79	c2a5wC		Alignment	not modelled	14.2	10	Chain: C: PDB Molecule: sulfite reductase, desulfovirodin-type subunit gamma PDBTitle: crystal structure of the oxidized gamma-subunit of the dissimilatory2 sulfite reductase (dsrc) from archaeoglobus fulgidus
80	d1f0xa2		Alignment	not modelled	14.2	7	Fold: FAD-binding/transporter-associated domain-like Superfamily: FAD-binding/transporter-associated domain-like Family: FAD-linked oxidases, N-terminal domain
81	d2hw4a1		Alignment	not modelled	13.9	15	Fold: PHP14-like Superfamily: PHP14-like Family: Janus/Ocnus
82	c1vjqB		Alignment	not modelled	13.9	19	PDB header: structural genomics, de novo protein Chain: B: PDB Molecule: designed protein; PDBTitle: designed protein based on backbone conformation of2 procarboxypeptidase-a (1aye) with sidechains chosen for maximal3 predicted stability.
83	d2gmha2		Alignment	not modelled	13.7	17	Fold: FAD-linked reductases, C-terminal domain Superfamily: FAD-linked reductases, C-terminal domain Family: Electron transfer flavoprotein-ubiquinone oxidoreductase-like
84	c2jpeA		Alignment	not modelled	13.7	16	PDB header: transcription Chain: A: PDB Molecule: nuclear inhibitor of protein phosphatase 1; PDBTitle: fha domain of nipp1
85	d1wfza		Alignment	not modelled	13.3	22	Fold: SufE/NifU Superfamily: SufE/NifU Family: NifU/lscU domain
86	c3t66A		Alignment	not modelled	12.6	11	PDB header: transport protein Chain: A: PDB Molecule: nickel abc transporter (nickel-binding protein); PDBTitle: crystal structure of nickel abc transporter from bacillus halodurans
87	d1yjma1		Alignment	not modelled	12.3	18	Fold: SMAD/FHA domain Superfamily: SMAD/FHA domain Family: FHA domain
88	c2kzwA		Alignment	not modelled	12.1	31	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: uncharacterized protein; PDBTitle: solution nmr structure of q8psa4 from methanoscincus maezi, northeast2 structural genomics consortium target mar143a
89	c3ftoA		Alignment	not modelled	11.8	10	PDB header: peptide binding protein Chain: A: PDB Molecule: oligopeptide-binding protein oppa; PDBTitle: crystal structure of oppa in an open conformation
90	d2ji7a1		Alignment	not modelled	11.6	12	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Pyruvate oxidase and decarboxylase, middle domain
91	c2x8xX		Alignment	not modelled	11.1	21	PDB header: chaperone Chain: X: PDB Molecule: tir1789 protein; PDBTitle: structure of the n-terminal domain of omp85 from the2 thermophilic cyanobacterium thermosynechococcus elongatus
92	d1b4ra		Alignment	not modelled	11.0	21	Fold: Immunoglobulin-like beta-sandwich Superfamily: PKD domain Family: PKD domain
93	d2q4ma1		Alignment	not modelled	10.9	15	Fold: Tubby C-terminal domain-like Superfamily: Tubby C-terminal domain-like Family: At5g01750-like
94	c1zxuA		Alignment	not modelled	10.9	15	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: at5g01750 protein; PDBTitle: x-ray structure of protein from arabidopsis thaliana2 at5g01750
95	c2pmvB		Alignment	not modelled	10.6	13	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: ras and ef-hand domain-containing protein; PDBTitle: ef-hand domain of human rasef
96	c2grxC		Alignment	not modelled	10.5	16	PDB header: metal transport Chain: C: PDB Molecule: protein tonb; PDBTitle: crystal structure of tonb in complex with fhua, e. coli2 outer membrane receptor for ferrichrome
97	c3dcIC		Alignment	not modelled	10.3	27	PDB header: structural genomics, unknown function Chain: C: PDB Molecule: tm1086; PDBTitle: crystal structure of tm1086
98	c1yj5C		Alignment	not modelled	10.2	17	PDB header: transferase Chain: C: PDB Molecule: 5' polynucleotide kinase-3' phosphatase fha domain; PDBTitle: molecular architecture of mammalian polynucleotide kinase, a dna2 repair enzyme
99	d2ihfa1		Alignment	not modelled	9.5	12	Fold: DHS-like NAD/FAD-binding domain Superfamily: DHS-like NAD/FAD-binding domain Family: Pyruvate oxidase and decarboxylase, middle domain