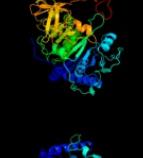
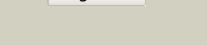
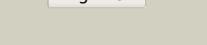
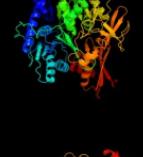
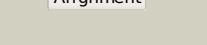
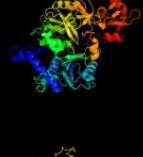
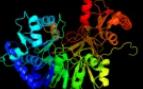
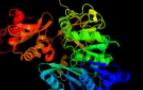


Phyre²

Email	I.a.kelley@imperial.ac.uk
Description	P38135
Date	Thu Jan 5 11:58:04 GMT 2012
Unique Job ID	cbe7af0c3d1ea87

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	d1pg4a_			100.0	23	Fold: Acetyl-CoA synthetase-like Superfamily: Acetyl-CoA synthetase-like Family: Acetyl-CoA synthetase-like
2	d1mdba_			100.0	29	Fold: Acetyl-CoA synthetase-like Superfamily: Acetyl-CoA synthetase-like Family: Acetyl-CoA synthetase-like
3	d1ry2a_			100.0	22	Fold: Acetyl-CoA synthetase-like Superfamily: Acetyl-CoA synthetase-like Family: Acetyl-CoA synthetase-like
4	c3e7wA_			100.0	19	PDB header: ligase Chain: A: PDB Molecule: d-alanine--poly(phosphoribitol) ligase subunit 1; PDBTitle: crystal structure of dltA: implications for the reaction mechanism of non-ribosomal peptide synthetase (nrps)3 adenylation domains
5	c2vsqA_			100.0	24	PDB header: ligase Chain: A: PDB Molecule: surfactin synthetase subunit 3; PDBTitle: structure of surfactin a synthetase c (srfa-c), a2 nonribosomal peptide synthetase termination module
6	d3cw9a1			100.0	21	Fold: Acetyl-CoA synthetase-like Superfamily: Acetyl-CoA synthetase-like Family: Acetyl-CoA synthetase-like
7	c3ni2A_			100.0	26	PDB header: ligase Chain: A: PDB Molecule: 4-coumarate:coa ligase; PDBTitle: crystal structures and enzymatic mechanisms of a populus tomentosa 4-2 coumarate:coa ligase
8	c3etcB_			100.0	24	PDB header: ligase Chain: B: PDB Molecule: amp-binding protein; PDBTitle: 2.1 a structure of acyl-adenylate synthetase from methanoscincus2 acetivorans containing a link between lys256 and cys298
9	c3eynB_			100.0	25	PDB header: ligase Chain: B: PDB Molecule: acyl-coenzyme a synthetase acsm2a; PDBTitle: crystal structure of human acyl-coa synthetase medium-chain2 family member 2a (l64p mutation) in a complex with coa
10	d1amua_			100.0	21	Fold: Acetyl-CoA synthetase-like Superfamily: Acetyl-CoA synthetase-like Family: Acetyl-CoA synthetase-like
11	c2d1tA_			100.0	25	PDB header: oxidoreductase Chain: A: PDB Molecule: luciferin 4-monoxygenase; PDBTitle: crystal structure of the thermostable japanese firefly luciferase red-color emission s286n mutant complexed with 3 high-energy intermediate analogue

12	c1amuB	Alignment		100.0	22	PDB header: peptide synthetase Chain: B: PDB Molecule: gramicidin synthetase 1; PDBTitle: phenylalanine activating domain of gramicidin synthetase 12 in a complex with amp and phenylalanine
13	c3gqwB	Alignment		100.0	22	PDB header: ligase Chain: B: PDB Molecule: fatty acid amp ligase; PDBTitle: crystal structure of a fatty acid amp ligase from e. coli with an acyl2 adenylate product bound
14	c3dhvA	Alignment		100.0	22	PDB header: ligase Chain: A: PDB Molecule: d-alanine-poly(phosphoribitol) ligase; PDBTitle: crystal structure of dltA protein in complex with d-alanine2 adenylate
15	c3kxwA	Alignment		100.0	19	PDB header: ligase Chain: A: PDB Molecule: saframycin mx1 synthetase b; PDBTitle: the crystal structure of fatty acid amp ligase from legionella2 pneumophila
16	c3iteB	Alignment		100.0	20	PDB header: ligase Chain: B: PDB Molecule: sidN siderophore synthetase; PDBTitle: the third adenylation domain of the fungal sidN non-2 ribosomal peptide synthetase
17	d1lcia	Alignment		100.0	23	Fold: Acetyl-CoA synthetase-like Superfamily: Acetyl-CoA synthetase-like Family: Acetyl-CoA synthetase-like
18	c3tsyA	Alignment		100.0	22	PDB header: ligase, transferase Chain: A: PDB Molecule: fusion protein 4-coumarate--coa ligase 1, resveratrol PDBTitle: 4-coumaroyl-coa ligase::stilbene synthase fusion protein
19	c2v7bB	Alignment		100.0	24	PDB header: ligase Chain: B: PDB Molecule: benzoate-coenzyme a ligase; PDBTitle: crystal structures of a benzoate coa ligase from2 burkholderia xenovorans lb400
20	c3l8cA	Alignment		100.0	18	PDB header: ligase Chain: A: PDB Molecule: d-alanine--poly(phosphoribitol) ligase subunit 1; PDBTitle: structure of probable d-alanine--poly(phosphoribitol) ligase2 subunit-1 from streptococcus pyogenes
21	d1v25a	Alignment	not modelled	100.0	24	Fold: Acetyl-CoA synthetase-like Superfamily: Acetyl-CoA synthetase-like Family: Acetyl-CoA synthetase-like
22	c3iplB	Alignment	not modelled	100.0	25	PDB header: ligase Chain: B: PDB Molecule: 2-succinylbenzoate--coa ligase; PDBTitle: crystal structure of o-succinylbenzoic acid-coa ligase from2 staphylococcus aureus subsp. aureus mu50
23	c3nyrA	Alignment	not modelled	100.0	28	PDB header: ligase Chain: A: PDB Molecule: malonyl-coa ligase; PDBTitle: malonyl-coa ligase ternary product complex with malonyl-coa and amp2 bound
24	c3g7sA	Alignment	not modelled	100.0	21	PDB header: ligase Chain: A: PDB Molecule: long-chain-fatty-acid--coa ligase (fadd-1); PDBTitle: crystal structure of a long-chain-fatty-acid-coa ligase2 (fadd1) from archaeoglobus fulgidus
25	c3o82B	Alignment	not modelled	100.0	26	PDB header: ligase Chain: B: PDB Molecule: peptide arylation enzyme; PDBTitle: structure of base n-terminal domain from acinetobacter baumannii bound2 to 5'-o-[n-(2,3-dihydroxybenzoyl)sulfamoyl] adenosine
26	c3o82A	Alignment	not modelled	100.0	25	PDB header: ligase Chain: A: PDB Molecule: peptide arylation enzyme; PDBTitle: structure of base n-terminal domain from acinetobacter baumannii bound2 to 5'-o-[n-(2,3-dihydroxybenzoyl)sulfamoyl] adenosine
27	c3ivrA	Alignment	not modelled	100.0	26	PDB header: ligase Chain: A: PDB Molecule: putative long-chain-fatty-acid coa ligase; PDBTitle: crystal structure of putative long-chain-fatty-acid coa ligase from2 rhodopseudomonas palustris cga009
						PDB header: ligase Chain: A: PDB Molecule: putative long-chain-fatty-acid coa ligase;

28	c3e53A	Alignment	not modelled	100.0	22	Chain: A: PDB Molecule: fatty-acid-coa ligase radd28; PDBTitle: crystal structure of n-terminal domain of a fatty acyl amp2 ligase faal28 from mycobacterium tuberculosis PDB header: ligase
29	c2y4oA	Alignment	not modelled	100.0	18	Chain: A: PDB Molecule: phenylacetate-coenzyme a ligase; PDBTitle: crystal structure of paak2 in complex with phenylacetate adenylate PDB header: ligase
30	c2y27B	Alignment	not modelled	100.0	16	Chain: B: PDB Molecule: phenylacetate-coenzyme a ligase; PDBTitle: crystal structure of paak1 in complex with atp from2 burkholderia cenocepacia PDB header: ligase
31	c3qovD	Alignment	not modelled	100.0	15	Chain: D: PDB Molecule: phenylacetate-coenzyme a ligase; PDBTitle: crystal structure of a hypothetical acyl-coa ligase (bt_0428) from2 bacteroides thetaiotaomicron vpi-5482 at 2.20 a resolution PDB header: ligase
32	c3laxA	Alignment	not modelled	99.6	15	Chain: A: PDB Molecule: phenylacetate-coenzyme a ligase; PDBTitle: the crystal structure of a domain of phenylacetate-coenzyme2 a ligase from bacteroides vulgaris atcc 8482 PDB header: ligase
33	c3hguB	Alignment	not modelled	99.5	17	Chain: B: PDB Molecule: shpf; PDBTitle: structure of phenazine antibiotic biosynthesis protein PDB header: biosynthetic protein
34	d2ayia1	Alignment	not modelled	85.0	20	Fold: Thermophilic metalloprotease-like Superfamily: Thermophilic metalloprotease-like Family: Thermophilic metalloprotease (M29)
35	c3l6ca	Alignment	not modelled	78.8	8	PDB header: isomerase Chain: A: PDB Molecule: serine racemase; PDBTitle: x-ray crystal structure of rat serine racemase in complex with2 malonate a potent inhibitor PDB header: isomerase
36	d1piwa2	Alignment	not modelled	66.2	9	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
37	c3smaD	Alignment	not modelled	58.2	20	PDB header: transferase Chain: D: PDB Molecule: frbf; PDBTitle: a new n-acetyltransferase fold in the structure and mechanism of the2 phosphonate biosynthetic enzyme frbf PDB header: transferase
38	d2nyga1	Alignment	not modelled	53.8	18	Fold: TTHA0583/YokD-like Superfamily: TTHA0583/YokD-like Family: Aminoglycoside 3-N-acetyltransferase-like
39	d1pl8a2	Alignment	not modelled	53.8	14	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
40	d1llua2	Alignment	not modelled	52.8	9	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
41	c3ippA	Alignment	not modelled	52.1	10	PDB header: transferase Chain: A: PDB Molecule: putative thiosulfate sulfurtransferase ynje; PDBTitle: crystal structure of sulfur-free ynje PDB header: transferase
42	d1kola2	Alignment	not modelled	51.5	12	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
43	d1f06a2	Alignment	not modelled	46.8	20	Fold: FwdE/GAPDH domain-like Superfamily: Glyceraldehyde-3-phosphate dehydrogenase-like, C-terminal domain Family: Dihydrodipicolinate reductase-like
44	d1e3ja2	Alignment	not modelled	46.7	13	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
45	c1uarA	Alignment	not modelled	46.3	13	PDB header: transferase Chain: A: PDB Molecule: rhodanese; PDBTitle: crystal structure of rhodanese from thermus thermophilus hb8 PDB header: transferase
46	c3e4fb	Alignment	not modelled	45.6	20	Chain: B: PDB Molecule: aminoglycoside n3-acetyltransferase; PDBTitle: crystal structure of ba2930- a putative aminoglycoside n3-2 acetyltransferase from bacillus anthracis PDB header: transferase
47	d1d1ta2	Alignment	not modelled	43.8	8	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
48	d1z7wa1	Alignment	not modelled	42.7	10	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
49	d1v71a1	Alignment	not modelled	41.0	8	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
50	c3olhA	Alignment	not modelled	39.3	8	PDB header: transferase Chain: A: PDB Molecule: 3-mercaptopropionate sulfurtransferase; PDBTitle: human 3-mercaptopropionate sulfurtransferase PDB header: transferase
51	d1iz0a2	Alignment	not modelled	39.0	11	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
52	d1jvba2	Alignment	not modelled	38.4	8	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
53	c3bcxA	Alignment	not modelled	37.9	9	PDB header: transferase Chain: A: PDB Molecule: cdp-6-deoxy-l-threo-d-glycero-4-hexulose-3-

					PDBTitle: e1 dehydrase
54	d1vika_	Alignment	not modelled	37.4	Fold: beta-Grasp (ubiquitin-like) Superfamily: MoaD/ThiS Family: MoaD
55	d1e3ia2	Alignment	not modelled	37.2	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
56	c2jwIB_	Alignment	not modelled	35.4	PDB header: membrane protein Chain: B: PDB Molecule: protein tolR; PDBTitle: solution structure of periplasmic domain of tolR from h.2 influenzae with sxs data
57	d1p0fa2	Alignment	not modelled	33.8	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
58	d1uufa2	Alignment	not modelled	33.4	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
59	d1ykfa2	Alignment	not modelled	32.5	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
60	c2ywIA_	Alignment	not modelled	31.6	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: hypothetical conserved protein; PDBTitle: crystal structure of uncharacterized conserved protein from2 geobacillus kaustophilus
61	c3pc3A_	Alignment	not modelled	30.4	PDB header: lyase Chain: A: PDB Molecule: cg1753, isoform a; PDBTitle: full length structure of cystathionine beta-synthase from drosophila2 in complex with aminoacrylate
62	c2zy3A_	Alignment	not modelled	29.8	PDB header: lyase Chain: A: PDB Molecule: l-aspartate beta-decarboxylase; PDBTitle: dodecameric l-aspartate beta-decarboxylase
63	d1uara2	Alignment	not modelled	29.5	Fold: Rhodanese/Cell cycle control phosphatase Superfamily: Rhodanese/Cell cycle control phosphatase Family: Multidomain sulfurtransferase (rhodanese)
64	d1jqba2	Alignment	not modelled	29.2	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
65	d1rjwa2	Alignment	not modelled	28.4	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
66	d2fzwa2	Alignment	not modelled	26.2	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
67	d1udxa3	Alignment	not modelled	25.6	Fold: Obg GTP-binding protein C-terminal domain Superfamily: Obg GTP-binding protein C-terminal domain Family: Obg GTP-binding protein C-terminal domain
68	d1zjca1	Alignment	not modelled	25.5	Fold: Thermophilic metalloprotease-like Superfamily: Thermophilic metalloprotease-like Family: Thermophilic metalloprotease (M29)
69	d1ja1a1	Alignment	not modelled	25.4	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: NADPH-cytochrome p450 reductase FAD-binding domain-like
70	d1liua3	Alignment	not modelled	25.4	Fold: Pyruvate kinase C-terminal domain-like Superfamily: PK C-terminal domain-like Family: Pyruvate kinase, C-terminal domain
71	d1okga1	Alignment	not modelled	25.2	Fold: Rhodanese/Cell cycle control phosphatase Superfamily: Rhodanese/Cell cycle control phosphatase Family: Multidomain sulfurtransferase (rhodanese)
72	c3aaxB_	Alignment	not modelled	24.9	PDB header: transferase Chain: B: PDB Molecule: putative thiosulfate sulfurtransferase; PDBTitle: crystal structure of probable thiosulfate sulfurtransferase2 cysa3 (rv3117) from mycobacterium tuberculosis: monoclinic3 form
73	d2jhfa2	Alignment	not modelled	24.4	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
74	d1uaaa2	Alignment	not modelled	23.4	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Tandem AAA-ATPase domain
75	d1f20a1	Alignment	not modelled	22.2	Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: NADPH-cytochrome p450 reductase FAD-binding domain-like
76	d1qora2	Alignment	not modelled	22.1	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
77	d1wkva1	Alignment	not modelled	21.8	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
78	d1cdoa2	Alignment	not modelled	21.7	Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
79	d1y7la1	Alignment	not modelled	21.1	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
80	d1u3wa2	Alignment	not modelled	21.1	9 Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
81	d2g50a3	Alignment	not modelled	21.0	14 Fold: Pyruvate kinase C-terminal domain-like Superfamily: PK C-terminal domain-like Family: Pyruvate kinase, C-terminal domain
82	c1okgA	Alignment	not modelled	20.5	12 PDB header: transferase Chain: A: PDB Molecule: possible 3-mercaptoproprate sulfurtransferase; PDBTitle: 3-mercaptoproprate sulfurtransferase from leishmania major
83	c1l9xA	Alignment	not modelled	20.4	17 PDB header: hydrolase Chain: A: PDB Molecule: gamma-glutamyl hydrolase; PDBTitle: structure of gamma-glutamyl hydrolase
84	d1l9xa	Alignment	not modelled	20.4	17 Fold: Flavodoxin-like Superfamily: Class I glutamine amidotransferase-like Family: Class I glutamine amidotransferases (GAT)
85	c3hjtB	Alignment	not modelled	20.2	9 PDB header: cell adhesion, transport protein Chain: B: PDB Molecule: imb; PDBTitle: structure of laminin binding protein (Imb) of streptococcus2 agalactiae a bifunctional protein with adhesin and metal3 transporting activity
86	d2gy9p1	Alignment	not modelled	19.6	17 Fold: Ribosomal protein S16 Superfamily: Ribosomal protein S16 Family: Ribosomal protein S16
87	d1aisa1	Alignment	not modelled	19.4	16 Fold: TBP-like Superfamily: TATA-box binding protein-like Family: TATA-box binding protein (TBP), C-terminal domain
88	c2qjIA	Alignment	not modelled	18.9	19 PDB header: signaling protein Chain: A: PDB Molecule: ubiquitin-related modifier 1; PDBTitle: crystal structure of urm1
89	d1f8fa2	Alignment	not modelled	18.8	10 Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
90	d1m5wa	Alignment	not modelled	18.6	8 Fold: TIM beta/alpha-barrel Superfamily: Pyridoxine 5'-phosphate synthase Family: Pyridoxine 5'-phosphate synthase
91	c3iauA	Alignment	not modelled	18.4	12 PDB header: lyase Chain: A: PDB Molecule: threonine deaminase; PDBTitle: the structure of the processed form of threonine deaminase isoform 22 from solanum lycopersicum
92	d1pwha	Alignment	not modelled	18.3	10 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
93	c1aqfB	Alignment	not modelled	18.3	15 PDB header: transferase Chain: B: PDB Molecule: pyruvate kinase; PDBTitle: pyruvate kinase from rabbit muscle with mg, k, and l-2 phospholactate
94	d1k92a1	Alignment	not modelled	18.2	25 Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Adenine nucleotide alpha hydrolases-like Family: N-type ATP pyrophosphatases
95	d1nula	Alignment	not modelled	18.1	20 Fold: PRTase-like Superfamily: PRTase-like Family: Phosphoribosyltransferases (PRTases)
96	c3a2kB	Alignment	not modelled	17.8	14 PDB header: ligase/rna Chain: B: PDB Molecule: tRNA(ile)-lysidine synthase; PDBTitle: crystal structure of tils complexed with tRNA
97	d1yb5a2	Alignment	not modelled	17.7	8 Fold: NAD(P)-binding Rossmann-fold domains Superfamily: NAD(P)-binding Rossmann-fold domains Family: Alcohol dehydrogenase-like, C-terminal domain
98	d1o69a	Alignment	not modelled	17.2	14 Fold: PLP-dependent transferase-like Superfamily: PLP-dependent transferases Family: GABA-aminotransferase-like
99	d1ddga1	Alignment	not modelled	17.1	12 Fold: Reductase/isomerase/elongation factor common domain Superfamily: Riboflavin synthase domain-like Family: NADPH-cytochrome p450 reductase FAD-binding domain-like