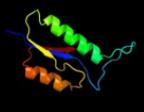
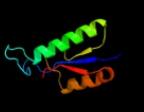
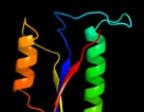
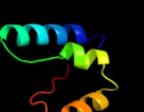
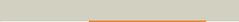
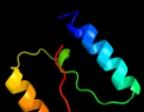
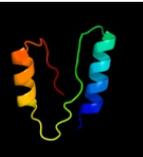
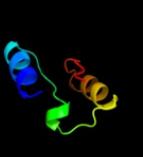
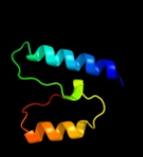
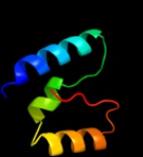


Phyre2

Email	I.a.kelley@imperial.ac.uk
Description	Q1PH25
Date	Thu Jan 5 12:33:27 GMT 2012
Unique Job ID	fa4e939289b68800

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c3ne8A_	 Alignment		99.9	51	PDB header: hydrolase Chain: A: PDB Molecule: n-acetylmuramoyl-L-alanine amidase; PDBTitle: the crystal structure of a domain from n-acetylmuramoyl-L-alanine2 amidase of bartonella henselae str. houston-1
2	d1jwqa_	 Alignment		99.9	47	Fold: Phosphorylase/hydrolase-like Superfamily: Zn-dependent exopeptidases Family: N-acetylmuramoyl-L-alanine amidase-like
3	c3czxA_	 Alignment		99.9	28	PDB header: hydrolase Chain: A: PDB Molecule: putative n-acetylmuramoyl-L-alanine amidase; PDBTitle: the crystal structure of the putative n-acetylmuramoyl-L-2 alanine amidase from neisseria meningitidis
4	c3qayC_	 Alignment		99.8	15	PDB header: lyase Chain: C: PDB Molecule: endolysin; PDBTitle: catalytic domain of cd27I endolysin targeting clostridia difficile
5	c1xovA_	 Alignment		99.8	18	PDB header: hydrolase Chain: A: PDB Molecule: ply protein; PDBTitle: the crystal structure of the listeria monocytogenes bacteriophage psa2 endolysin plypsa
6	d1xova2	 Alignment		99.8	18	Fold: Phosphorylase/hydrolase-like Superfamily: Zn-dependent exopeptidases Family: N-acetylmuramoyl-L-alanine amidase-like
7	d1nyra1	 Alignment		85.2	10	Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
8	d2q4ca1	 Alignment		82.5	9	Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
9	d1g5ha1	 Alignment		81.5	10	Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
10	d1nj1a1	 Alignment		77.6	24	Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
11	d1wu7a1	 Alignment		77.1	20	Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS

12	d1qf6a1	Alignment		75.7	8	Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
13	c1y80A_	Alignment		70.9	24	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: predicted cobalamin binding protein; PDBTitle: structure of a corrinoid (factor iiiiim)-binding protein from2 moorella thermoacetica
14	d1qe0a1	Alignment		70.0	22	Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
15	d1ccwa_	Alignment		69.2	19	Fold: Flavodoxin-like Superfamily: Cobalamin (vitamin B12)-binding domain Family: Cobalamin (vitamin B12)-binding domain
16	d3bula2	Alignment		69.1	17	Fold: Flavodoxin-like Superfamily: Cobalamin (vitamin B12)-binding domain Family: Cobalamin (vitamin B12)-binding domain
17	c1nj2A_	Alignment		67.0	24	PDB header: ligase Chain: A: PDB Molecule: proline-trna synthetase; PDBTitle: crystal structure of prolyl-trna synthetase from methanothermobacter2 thermotrophicus
18	c1u83A_	Alignment		64.2	16	PDB header: lyase Chain: A: PDB Molecule: phosphosulfolactate synthase; PDBTitle: psl synthase from bacillus subtilis
19	d1u83a_	Alignment		64.2	16	Fold: TIM beta/alpha-barrel Superfamily: (2r)-phospho-3-sulfolactate synthase ComA Family: (2r)-phospho-3-sulfolactate synthase ComA
20	c1fyfB_	Alignment		62.9	8	PDB header: ligase Chain: B: PDB Molecule: threonyl-trna synthetase; PDBTitle: crystal structure of a truncated form of threonyl-trna2 synthetase complexed with a seryl adenylate analog
21	c1g5hA_	Alignment	not modelled	62.2	10	PDB header: dna binding protein Chain: A: PDB Molecule: mitochondrial dna polymerase accessory subunit; PDBTitle: crystal structure of the accessory subunit of murine mitochondrial2 polymerase gamma
22	c2yxbA_	Alignment	not modelled	59.0	26	PDB header: isomerase Chain: A: PDB Molecule: coenzyme b12-dependent mutase; PDBTitle: crystal structure of the methylmalonyl-coa mutase alpha-subunit from2 aeropyrum pernix
23	c3netB_	Alignment	not modelled	58.5	19	PDB header: ligase Chain: B: PDB Molecule: histidyl-trna synthetase; PDBTitle: crystal structure of histidyl-trna synthetase from nostoc sp. pcc 7120
24	d1nj8a1	Alignment	not modelled	58.3	16	Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
25	d1fmfa_	Alignment	not modelled	57.0	18	Fold: Flavodoxin-like Superfamily: Cobalamin (vitamin B12)-binding domain Family: Cobalamin (vitamin B12)-binding domain
26	c2vefB_	Alignment	not modelled	55.9	35	PDB header: transferase Chain: B: PDB Molecule: dihydropteroate synthase; PDBTitle: dihydropteroate synthase from streptococcus pneumoniae
27	c2i4lC_	Alignment	not modelled	54.6	17	PDB header: ligase Chain: C: PDB Molecule: proline-trna ligase; PDBTitle: rhodospseudomonas palustris prolyl-trna synthetase
28	c2qvpC_	Alignment	not modelled	53.4	20	PDB header: hydrolase Chain: C: PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of a putative metalloprotease (sama_0725) from2 shewanella amazonensis sb2b at 2.00 a

						resolution
29	c1vmeB_	Alignment	not modelled	53.0	17	PDB header: electron transport Chain: B: PDB Molecule: flavoprotein; PDBTitle: crystal structure of flavoprotein (tm0755) from thermotoga maritima at2 1.80 a resolution
30	c2hqbA_	Alignment	not modelled	51.3	14	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
31	c2j3mA_	Alignment	not modelled	50.3	10	PDB header: ligase Chain: A: PDB Molecule: prolyl-trna synthetase; PDBTitle: prolyl-trna synthetase from enterococcus faecalis complexed2 with atp, manganese and prolinol
32	c3rfqC_	Alignment	not modelled	50.2	18	PDB header: biosynthetic protein Chain: C: PDB Molecule: pterin-4-alpha-carbinolamine dehydratase moab2; PDBTitle: crystal structure of pterin-4-alpha-carbinolamine dehydratase moab22 from mycobacterium marinum
33	c3hriF_	Alignment	not modelled	49.1	18	PDB header: ligase Chain: F: PDB Molecule: histidyl-trna synthetase; PDBTitle: histidyl-trna synthetase (apo) from trypanosoma brucei
34	c3i3wB_	Alignment	not modelled	48.0	30	PDB header: isomerase Chain: B: PDB Molecule: phosphoglucosamine mutase; PDBTitle: structure of a phosphoglucosamine mutase from francisella tularensis
35	c2an1D_	Alignment	not modelled	47.8	16	PDB header: transferase Chain: D: PDB Molecule: putative kinase; PDBTitle: structural genomics, the crystal structure of a putative kinase from2 salmonella typhimurim lt2
36	c1bmtB_	Alignment	not modelled	46.1	17	PDB header: methyltransferase Chain: B: PDB Molecule: methionine synthase; PDBTitle: how a protein binds b12: a 3.0 angstrom x-ray structure of2 the b12-binding domains of methionine synthase
37	c3b2yB_	Alignment	not modelled	45.1	19	PDB header: hydrolase Chain: B: PDB Molecule: metallopeptidase containing co-catalytic metalloactive PDBTitle: crystal structure of a putative metallopeptidase (sden_2526) from2 shewanella denitrificans os217 at 1.74 a resolution
38	c1ggmB_	Alignment	not modelled	44.9	13	PDB header: ligase Chain: B: PDB Molecule: protein (glycyl-trna synthetase); PDBTitle: glycyl-trna synthetase from thermus thermophilus complexed with2 glycyl-adenylate
39	d2naca2	Alignment	not modelled	43.7	24	Fold: Flavodoxin-like Superfamily: Formate/glycerate dehydrogenase catalytic domain-like Family: Formate/glycerate dehydrogenases, substrate-binding domain
40	c1wu7A_	Alignment	not modelled	43.6	20	PDB header: ligase Chain: A: PDB Molecule: histidyl-trna synthetase; PDBTitle: crystal structure of histidyl-trna synthetase from2 thermoplasma acidophilum
41	c2fuvB_	Alignment	not modelled	42.4	25	PDB header: isomerase Chain: B: PDB Molecule: phosphoglucomutase; PDBTitle: phosphoglucomutase from salmonella typhimurium.
42	c3ezxA_	Alignment	not modelled	39.0	19	PDB header: transferase Chain: A: PDB Molecule: monomethylamine corrinoid protein 1; PDBTitle: structure of methanosarcina barkeri monomethylamine2 corrinoid protein
43	c1atiA_	Alignment	not modelled	38.7	13	PDB header: protein biosynthesis Chain: A: PDB Molecule: glycyl-trna synthetase; PDBTitle: crystal structure of glycyl-trna synthetase from thermus thermophilus
44	c2gx8B_	Alignment	not modelled	36.6	21	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: nif3-related protein; PDBTitle: the crystal structure of bacillus cereus protein related to nif3
45	c3ikmC_	Alignment	not modelled	36.2	7	PDB header: transferase Chain: C: PDB Molecule: dna polymerase subunit gamma-2; PDBTitle: crystal structure of human mitochondrial dna polymerase2 holoenzyme
46	d1hc7a1	Alignment	not modelled	36.1	15	Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
47	c2is8A_	Alignment	not modelled	36.0	13	PDB header: structural protein Chain: A: PDB Molecule: molybdopterin biosynthesis enzyme, moab; PDBTitle: crystal structure of the molybdopterin biosynthesis enzyme moab2 (ttha0341) from thermus thermophilus hb8
48	c1c4gB_	Alignment	not modelled	35.0	23	PDB header: transferase Chain: B: PDB Molecule: protein (alpha-d-glucose 1-phosphate PDBTitle: phosphoglucomutase vanadate based transition state analog2 complex
49	c1qf6A_	Alignment	not modelled	34.7	8	PDB header: ligase/rna Chain: A: PDB Molecule: threonyl-trna synthetase; PDBTitle: structure of e. coli threonyl-trna synthetase complexed with its2 cognate trna
50	c4a26B_	Alignment	not modelled	33.7	18	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
51	d1atia1	Alignment	not modelled	33.0	14	Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
52	c2pjka_	Alignment	not modelled	31.3	16	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: 178aa long hypothetical molybdenum cofactor PDBTitle: structure of hypothetical molybdenum cofactor biosynthesis2 protein b from sulfolobus tokodaii

53	c3hlyA	Alignment	not modelled	30.8	9	PDB header: flavoprotein Chain: A: PDB Molecule: flavodoxin-like domain; PDBTitle: crystal structure of the flavodoxin-like domain from2 synechococcus sp q5mzp6_synp6 protein. northeast structural3 genomics consortium target snr135d.
54	d2a5la1	Alignment	not modelled	30.5	16	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: WrbA-like
55	d1vmea1	Alignment	not modelled	28.8	11	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Flavodoxin-related
56	c3a32A	Alignment	not modelled	28.3	15	PDB header: ligase Chain: A: PDB Molecule: probable threonyl-trna synthetase 1; PDBTitle: crystal structure of putative threonyl-trna synthetase2 thrs-1 from aeropyrum pernix
57	d2g2ca1	Alignment	not modelled	28.0	9	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MogA-like
58	c2pmfA	Alignment	not modelled	27.4	18	PDB header: ligase Chain: A: PDB Molecule: glycyl-trna synthetase; PDBTitle: the crystal structure of a human glycyl-trna synthetase mutant
59	c1nyqA	Alignment	not modelled	27.4	11	PDB header: ligase Chain: A: PDB Molecule: threonyl-trna synthetase 1; PDBTitle: structure of staphylococcus aureus threonyl-trna synthetase2 complexed with an analogue of threonyl adenylate
60	d1a9xa3	Alignment	not modelled	27.0	25	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: BC N-terminal domain-like
61	d2gx8a1	Alignment	not modelled	26.4	21	Fold: NIF3 (NGG1p interacting factor 3)-like Superfamily: NIF3 (NGG1p interacting factor 3)-like Family: NIF3 (NGG1p interacting factor 3)-like
62	d1kmma1	Alignment	not modelled	26.4	18	Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
63	c1qe0B	Alignment	not modelled	26.3	22	PDB header: ligase Chain: B: PDB Molecule: histidyl-trna synthetase; PDBTitle: crystal structure of apo s. aureus histidyl-trna synthetase
64	d1kjna	Alignment	not modelled	26.3	15	Fold: Hypothetical protein MTH777 (MT0777) Superfamily: Hypothetical protein MTH777 (MT0777) Family: Hypothetical protein MTH777 (MT0777)
65	d1h4vb1	Alignment	not modelled	25.9	21	Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
66	c1nj8C	Alignment	not modelled	25.7	16	PDB header: ligase Chain: C: PDB Molecule: proline-trna synthetase; PDBTitle: crystal structure of prolyl-trna synthetase from2 methanocaldococcus janaschii
67	d1vkha	Alignment	not modelled	25.6	12	Fold: alpha/beta-Hydrolases Superfamily: alpha/beta-Hydrolases Family: Putative serine hydrolase Ydr428c
68	c2g4rB	Alignment	not modelled	25.4	16	PDB header: biosynthetic protein Chain: B: PDB Molecule: molybdopterin biosynthesis mog protein; PDBTitle: anomalous substructure of moga
69	d7reqa2	Alignment	not modelled	24.9	16	Fold: Flavodoxin-like Superfamily: Cobalamin (vitamin B12)-binding domain Family: Cobalamin (vitamin B12)-binding domain
70	c2i2xD	Alignment	not modelled	24.6	15	PDB header: transferase Chain: D: PDB Molecule: methyltransferase 1; PDBTitle: crystal structure of methanol:cobalamin methyltransferase complex2 mtabc from methanosarcina barkeri
71	d1mkza	Alignment	not modelled	24.4	7	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MogA-like
72	c3fniA	Alignment	not modelled	24.3	9	PDB header: oxidoreductase Chain: A: PDB Molecule: putative diflavin flavoprotein a 3; PDBTitle: crystal structure of a diflavin flavoprotein a3 (all3895) from nostoc2 sp., northeast structural genomics consortium target nsr431a
73	d1xi8a3	Alignment	not modelled	24.2	11	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MoeA central domain-like
74	d1xhfa1	Alignment	not modelled	24.1	19	Fold: Flavodoxin-like Superfamily: CheY-like Family: CheY-related
75	d2f7wa1	Alignment	not modelled	24.0	9	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MogA-like
76	d1p5dx2	Alignment	not modelled	23.7	21	Fold: Phosphoglucomutase, first 3 domains Superfamily: Phosphoglucomutase, first 3 domains Family: Phosphoglucomutase, first 3 domains
77	d1kfia2	Alignment	not modelled	23.3	29	Fold: Phosphoglucomutase, first 3 domains Superfamily: Phosphoglucomutase, first 3 domains Family: Phosphoglucomutase, first 3 domains
78	d2fywa1	Alignment	not modelled	23.0	29	Fold: NIF3 (NGG1p interacting factor 3)-like Superfamily: NIF3 (NGG1p interacting factor 3)-like Family: NIF3 (NGG1p interacting factor 3)-like
79	c2ilxD	Alignment	not modelled	22.9	16	PDB header: transferase Chain: D: PDB Molecule: 2-succinyl-5-enolpyruvyl-6-hydroxy-3-cyclohexene

79	c2j1dD_	Alignment	not modelled	22.9	10	PDBTitle: crystal structure of e.coli mend, 2-succinyl-5-enolpyruvyl-2-6-hydroxy-3-cyclohexadiene-1-carboxylate synthase - semet3 protein
80	c3c3mA_	Alignment	not modelled	22.6	17	PDB header: signaling protein Chain: A: PDB Molecule: response regulator receiver protein; PDBTitle: crystal structure of the n-terminal domain of response regulator2 receiver protein from methanoculleus marisnigri jr1
81	c3maxB_	Alignment	not modelled	22.5	23	PDB header: hydrolase Chain: B: PDB Molecule: histone deacetylase 2; PDBTitle: crystal structure of human hdac2 complexed with an n-(2-aminophenyl)2 benzamide
82	d1qnaa1	Alignment	not modelled	21.6	19	Fold: TBP-like Superfamily: TATA-box binding protein-like Family: TATA-box binding protein (TBP), C-terminal domain
83	d1b74a1	Alignment	not modelled	21.6	27	Fold: ATC-like Superfamily: Aspartate/glutamate racemase Family: Aspartate/glutamate racemase
84	d1iowa1	Alignment	not modelled	21.3	35	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: D-Alanine ligase N-terminal domain
85	d2pl1a1	Alignment	not modelled	21.2	10	Fold: Flavodoxin-like Superfamily: CheY-like Family: CheY-related
86	d1xrsb1	Alignment	not modelled	20.9	24	Fold: Flavodoxin-like Superfamily: Cobalamin (vitamin B12)-binding domain Family: Cobalamin (vitamin B12)-binding domain
87	c2vavL_	Alignment	not modelled	20.5	13	PDB header: transferase Chain: L: PDB Molecule: acetyl-coa--deacetylcephalosporin c PDBTitle: crystal structure of deacetylcephalosporin c acetyltransferase (dac-soak)
88	c2nydB_	Alignment	not modelled	20.4	12	PDB header: unknown function Chain: B: PDB Molecule: upf0135 protein sa1388; PDBTitle: crystal structure of staphylococcus aureus hypothetical protein sa1388
89	d1y5ea1	Alignment	not modelled	20.0	11	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MogA-like
90	d1uz5a3	Alignment	not modelled	19.9	14	Fold: Molybdenum cofactor biosynthesis proteins Superfamily: Molybdenum cofactor biosynthesis proteins Family: MoeA central domain-like
91	d1qwga_	Alignment	not modelled	19.4	26	Fold: TIM beta/alpha-barrel Superfamily: (2r)-phospho-3-sulfolactate synthase ComA Family: (2r)-phospho-3-sulfolactate synthase ComA
92	d1o2da_	Alignment	not modelled	19.2	13	Fold: Dehydroquinate synthase-like Superfamily: Dehydroquinate synthase-like Family: Iron-containing alcohol dehydrogenase
93	c1e5dA_	Alignment	not modelled	19.1	19	PDB header: oxidoreductase Chain: A: PDB Molecule: rubredoxin);oxygen oxidoreductase; PDBTitle: rubredoxin oxygen:oxidoreductase (roo) from anaerobe2 desulfovibrio gigas
94	c1cg2D_	Alignment	not modelled	19.1	18	PDB header: metallocarboxypeptidase Chain: D: PDB Molecule: carboxypeptidase g2; PDBTitle: carboxypeptidase g2
95	d2grea2	Alignment	not modelled	18.6	9	Fold: Phosphorylase/hydrolase-like Superfamily: Zn-dependent exopeptidases Family: Bacterial dinuclear zinc exopeptidases
96	c3f6sI_	Alignment	not modelled	17.6	17	PDB header: electron transport Chain: I: PDB Molecule: flavodoxin; PDBTitle: desulfovibrio desulfuricans (atcc 29577) oxidized flavodoxin2 alternate conformers
97	c3k5pA_	Alignment	not modelled	17.6	21	PDB header: oxidoreductase Chain: A: PDB Molecule: d-3-phosphoglycerate dehydrogenase; PDBTitle: crystal structure of amino acid-binding act: d-isomer specific 2-2 hydroxyacid dehydrogenase catalytic domain from brucella melitensis
98	d1cg2a1	Alignment	not modelled	17.4	18	Fold: Phosphorylase/hydrolase-like Superfamily: Zn-dependent exopeptidases Family: Bacterial dinuclear zinc exopeptidases
99	d1fmta2	Alignment	not modelled	17.3	13	Fold: Formyltransferase Superfamily: Formyltransferase Family: Formyltransferase