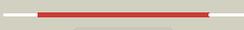
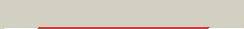
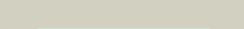
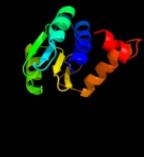
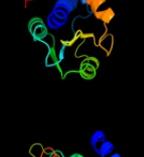
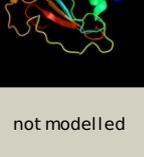


Phyre2

Email	I.a.kelley@imperial.ac.uk
Description	P31120
Date	Thu Jan 5 11:47:07 GMT 2012
Unique Job ID	673d30cb20658c26

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c3pdkB_	 Alignment		100.0	46	PDB header: isomerase Chain: B; PDB Molecule: phosphoglucosamine mutase; PDBTitle: crystal structure of phosphoglucosamine mutase from b. anthracis
2	c1wqaB_	 Alignment		100.0	33	PDB header: isomerase Chain: B; PDB Molecule: phospho-sugar mutase; PDBTitle: crystal structure of pyrococcus horikoshii2 phosphomannomutase/phosphoglucomutase complexed with mg2+
3	c2f71A_	 Alignment		100.0	28	PDB header: isomerase Chain: A; PDB Molecule: 455aa long hypothetical phospho-sugar mutase; PDBTitle: crystal structure of sulfobolus tokodaii2 phosphomannomutase/phosphoglucomutase
4	c3i3wB_	 Alignment		100.0	43	PDB header: isomerase Chain: B; PDB Molecule: phosphoglucosamine mutase; PDBTitle: structure of a phosphoglucosamine mutase from francisella tularensis
5	c3c04A_	 Alignment		100.0	26	PDB header: isomerase Chain: A; PDB Molecule: phosphomannomutase/phosphoglucomutase; PDBTitle: structure of the p368g mutant of pmm/pgm from p. aeruginosa
6	c1tuoA_	 Alignment		100.0	27	PDB header: biosynthetic protein Chain: A; PDB Molecule: putative phosphomannomutase; PDBTitle: crystal structure of putative phosphomannomutase from2 thermus thermophilus hb8
7	c2fuvB_	 Alignment		100.0	21	PDB header: isomerase Chain: B; PDB Molecule: phosphoglucomutase; PDBTitle: phosphoglucomutase from salmonella typhimurium.
8	c1c4gB_	 Alignment		100.0	23	PDB header: transferase Chain: B; PDB Molecule: protein (alpha-d-glucose 1-phosphate PDBTitle: phosphoglucomutase vanadate based transition state analog2 complex
9	c2z0fA_	 Alignment		100.0	22	PDB header: isomerase Chain: A; PDB Molecule: putative phosphoglucomutase; PDBTitle: crystal structure of putative phosphoglucomutase from thermus2 thermophilus hb8
10	c1kfiA_	 Alignment		100.0	20	PDB header: isomerase Chain: A; PDB Molecule: phosphoglucomutase 1; PDBTitle: crystal structure of the exocytosis-sensitive2 phosphoprotein, pp63/parafusin (phosphoglucomutase) from3 paramecium
11	c2dkdA_	 Alignment		100.0	24	PDB header: isomerase Chain: A; PDB Molecule: phosphoacetylglucosamine mutase; PDBTitle: crystal structure of n-acetylglucosamine-phosphate mutase,2 a member of the alpha-d-phosphohexomutase superfamily, in3 the product complex

12	d1p5dx1	Alignment		100.0	26	Fold: Phosphoglucomutase, first 3 domains Superfamily: Phosphoglucomutase, first 3 domains Family: Phosphoglucomutase, first 3 domains
13	d1kfia1	Alignment		100.0	26	Fold: Phosphoglucomutase, first 3 domains Superfamily: Phosphoglucomutase, first 3 domains Family: Phosphoglucomutase, first 3 domains
14	d3pmga1	Alignment		100.0	27	Fold: Phosphoglucomutase, first 3 domains Superfamily: Phosphoglucomutase, first 3 domains Family: Phosphoglucomutase, first 3 domains
15	d1p5dx3	Alignment		99.9	19	Fold: Phosphoglucomutase, first 3 domains Superfamily: Phosphoglucomutase, first 3 domains Family: Phosphoglucomutase, first 3 domains
16	d3pmga3	Alignment		99.9	17	Fold: Phosphoglucomutase, first 3 domains Superfamily: Phosphoglucomutase, first 3 domains Family: Phosphoglucomutase, first 3 domains
17	d1p5dx2	Alignment		99.9	40	Fold: Phosphoglucomutase, first 3 domains Superfamily: Phosphoglucomutase, first 3 domains Family: Phosphoglucomutase, first 3 domains
18	d1kfia3	Alignment		99.9	18	Fold: Phosphoglucomutase, first 3 domains Superfamily: Phosphoglucomutase, first 3 domains Family: Phosphoglucomutase, first 3 domains
19	d3pmga2	Alignment		99.9	29	Fold: Phosphoglucomutase, first 3 domains Superfamily: Phosphoglucomutase, first 3 domains Family: Phosphoglucomutase, first 3 domains
20	d1kfia2	Alignment		99.8	20	Fold: Phosphoglucomutase, first 3 domains Superfamily: Phosphoglucomutase, first 3 domains Family: Phosphoglucomutase, first 3 domains
21	d1p5dx4	Alignment	not modelled	99.6	19	Fold: TBP-like Superfamily: Phosphoglucomutase, C-terminal domain Family: Phosphoglucomutase, C-terminal domain
22	d1wjwa_	Alignment	not modelled	99.4	18	Fold: TBP-like Superfamily: Phosphoglucomutase, C-terminal domain Family: Phosphoglucomutase, C-terminal domain
23	d1kfia4	Alignment	not modelled	95.2	18	Fold: TBP-like Superfamily: Phosphoglucomutase, C-terminal domain Family: Phosphoglucomutase, C-terminal domain
24	d3pmga4	Alignment	not modelled	94.9	18	Fold: TBP-like Superfamily: Phosphoglucomutase, C-terminal domain Family: Phosphoglucomutase, C-terminal domain
25	c3he8A_	Alignment	not modelled	90.8	30	PDB header: isomerase Chain: A: PDB Molecule: ribose-5-phosphate isomerase; PDBTitle: structural study of clostridium thermocellum ribose-5-phosphate2 isomerase b
26	d1nn4a_	Alignment	not modelled	89.2	28	Fold: Ribose/Galactose isomerase RpiB/AlsB Superfamily: Ribose/Galactose isomerase RpiB/AlsB Family: Ribose/Galactose isomerase RpiB/AlsB
27	c3s5pA_	Alignment	not modelled	89.2	19	PDB header: isomerase Chain: A: PDB Molecule: ribose 5-phosphate isomerase; PDBTitle: crystal structure of ribose-5-phosphate isomerase b rpiB from giardia2 lamblia
28	c3k7pA_	Alignment	not modelled	88.8	24	PDB header: isomerase Chain: A: PDB Molecule: ribose 5-phosphate isomerase; PDBTitle: structure of mutant of ribose 5-phosphate isomerase type b from2 trypanosoma cruzi.
29	c3m1nA_	Alignment	not modelled	87.5	24	PDB header: isomerase Chain: A: PDB Molecule: ribose 5-phosphate isomerase;

29	c3m1pA	Alignment	not modelled	87.3	24	PDBTitle: structure of ribose 5-phosphate isomerase type b from trypanosoma2 cruzi, soaked with alllose-6-phosphate
30	d3bula2	Alignment	not modelled	86.6	14	Fold: Flavodoxin-like Superfamily: Cobalamin (vitamin B12)-binding domain Family: Cobalamin (vitamin B12)-binding domain
31	d2vvp1	Alignment	not modelled	84.2	28	Fold: Ribose/Galactose isomerase RpiB/AlsB Superfamily: Ribose/Galactose isomerase RpiB/AlsB Family: Ribose/Galactose isomerase RpiB/AlsB
32	c3qayC	Alignment	not modelled	77.5	18	PDB header: lyase Chain: C: PDB Molecule: endolysin; PDBTitle: catalytic domain of cd271 endolysin targeting clostridia difficile
33	c1k98A	Alignment	not modelled	75.9	15	PDB header: transferase Chain: A: PDB Molecule: methionine synthase; PDBTitle: adomet complex of meth c-terminal fragment
34	c2g04B	Alignment	not modelled	72.4	30	PDB header: isomerase Chain: B: PDB Molecule: probable fatty-acid-coa racemase far; PDBTitle: crystal structure of fatty acid-coa racemase from mycobacterium2 tuberculosis h37rv
35	c2yxbA	Alignment	not modelled	71.4	16	PDB header: isomerase Chain: A: PDB Molecule: coenzyme b12-dependent mutase; PDBTitle: crystal structure of the methylmalonyl-coa mutase alpha-subunit from2 aeropyrum pernix
36	d1ycga1	Alignment	not modelled	71.1	27	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Flavodoxin-related
37	d1o1xa	Alignment	not modelled	71.0	25	Fold: Ribose/Galactose isomerase RpiB/AlsB Superfamily: Ribose/Galactose isomerase RpiB/AlsB Family: Ribose/Galactose isomerase RpiB/AlsB
38	d1ccwa	Alignment	not modelled	69.7	18	Fold: Flavodoxin-like Superfamily: Cobalamin (vitamin B12)-binding domain Family: Cobalamin (vitamin B12)-binding domain
39	d1x74a1	Alignment	not modelled	68.3	39	Fold: CoA-transferase family III (CaiB/BaiF) Superfamily: CoA-transferase family III (CaiB/BaiF) Family: CoA-transferase family III (CaiB/BaiF)
40	c1bmtB	Alignment	not modelled	67.4	13	PDB header: methyltransferase Chain: B: PDB Molecule: methionine synthase; PDBTitle: how a protein binds b12: a 3.0 angstrom x-ray structure of 2 the b12-binding domains of methionine synthase
41	c3sz8D	Alignment	not modelled	66.6	9	PDB header: transferase Chain: D: PDB Molecule: 2-dehydro-3-deoxyphosphoocotate aldolase 2; PDBTitle: crystal structure of 2-dehydro-3-deoxyphosphoocotate aldolase from2 burkholderia pseudomallei
42	d1xk7a1	Alignment	not modelled	66.3	33	Fold: CoA-transferase family III (CaiB/BaiF) Superfamily: CoA-transferase family III (CaiB/BaiF) Family: CoA-transferase family III (CaiB/BaiF)
43	c2i2xD	Alignment	not modelled	64.0	13	PDB header: transferase Chain: D: PDB Molecule: methyltransferase 1; PDBTitle: crystal structure of methanol:cobalamin methyltransferase complex2 mtabc from methanosarcina barkeri
44	c3hlyA	Alignment	not modelled	63.3	14	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.
45	c2ppwA	Alignment	not modelled	63.2	12	PDB header: isomerase Chain: A: PDB Molecule: conserved domain protein; PDBTitle: the crystal structure of uncharacterized ribose 5-phosphate isomerase2 rpib from streptococcus pneumoniae
46	c2ohiB	Alignment	not modelled	63.0	12	PDB header: oxidoreductase Chain: B: PDB Molecule: type a flavoprotein fpra; PDBTitle: crystal structure of coenzyme f420h2 oxidase (fpra), a diiron2 flavoprotein, reduced state
47	c1xa3B	Alignment	not modelled	62.8	33	PDB header: transferase Chain: B: PDB Molecule: crotonobetainyl-coa:carnitine coa-transferase; PDBTitle: crystal structure of caib, a type iii coa transferase in2 carnitine metabolism
48	c3qd5B	Alignment	not modelled	62.7	26	PDB header: isomerase Chain: B: PDB Molecule: putative ribose-5-phosphate isomerase; PDBTitle: crystal structure of a putative ribose-5-phosphate isomerase from2 coccidioides immitis solved by combined iodide ion sad and mr
49	d2vjma1	Alignment	not modelled	60.5	30	Fold: CoA-transferase family III (CaiB/BaiF) Superfamily: CoA-transferase family III (CaiB/BaiF) Family: CoA-transferase family III (CaiB/BaiF)
50	d1e5da1	Alignment	not modelled	58.8	20	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Flavodoxin-related
51	c1y80A	Alignment	not modelled	58.3	13	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: predicted cobalamin binding protein; PDBTitle: structure of a corrinoid (factor iiii)-binding protein from2 moorella thermoacetica
52	d1q7ea	Alignment	not modelled	57.9	30	Fold: CoA-transferase family III (CaiB/BaiF) Superfamily: CoA-transferase family III (CaiB/BaiF) Family: CoA-transferase family III (CaiB/BaiF)
53	c3c5yD	Alignment	not modelled	56.5	17	PDB header: isomerase Chain: D: PDB Molecule: ribose/galactose isomerase; PDBTitle: crystal structure of a putative ribose 5-phosphate isomerase2 (saro_3514) from novosphingobium aromaticivorans dsm at 1.81 a3 resolution
54	c3ne8A	Alignment	not modelled	54.0	17	PDB header: hydrolase Chain: A: PDB Molecule: n-acetylmuramoyl-l-alanine amidase; PDBTitle: the crystal structure of a domain from n-acetylmuramoyl-

						I-alanine2 amidase of bartonella henselae str. houston-1 PDB header: oxidoreductase Chain: B: PDB Molecule: a-type flavoprotein; PDBTitle: crystal structure of the flavodii iron protein from giardia2 intestinalis
55	c2q9uB_	Alignment	not modelled	53.4	15	
56	c3nvtA_	Alignment	not modelled	49.1	12	PDB header: transferase/isomerase Chain: A: PDB Molecule: 3-deoxy-d-arabino-heptulosonate 7-phosphate synthase; PDBTitle: 1.95 angstrom crystal structure of a bifunctional 3-deoxy-7-2 phosphoheptulonate synthase/chorismate mutase (aroa) from listeria3 monocytogenes egd-e
57	d1b1ca_	Alignment	not modelled	48.1	10	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Cytochrome p450 reductase N-terminal domain-like
58	c2yh5A_	Alignment	not modelled	46.0	13	PDB header: lipid binding protein Chain: A: PDB Molecule: dapx protein; PDBTitle: structure of the c-terminal domain of bamc
59	d1dxha2	Alignment	not modelled	43.8	15	Fold: ATC-like Superfamily: Aspartate/ornithine carbamoyltransferase Family: Aspartate/ornithine carbamoyltransferase
60	c1e5dA_	Alignment	not modelled	42.9	15	PDB header: oxidoreductase Chain: A: PDB Molecule: rubredoxin);oxygen oxidoreductase; PDBTitle: rubredoxin oxygen:oxidoreductase (roo) from anaerobe2 desulfovibrio gigas
61	d1d9ea_	Alignment	not modelled	41.6	9	Fold: TIM beta/alpha-barrel Superfamily: Aldolase Family: Class I DAHP synthetase
62	c3ezxA_	Alignment	not modelled	40.5	12	PDB header: transferase Chain: A: PDB Molecule: monomethylamine corrinoid protein 1; PDBTitle: structure of methanosarcina barkeri monomethylamine2 corrinoid protein
63	c3fniA_	Alignment	not modelled	38.7	15	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
64	d3eeqa2	Alignment	not modelled	38.2	10	Fold: CbiG N-terminal domain-like Superfamily: CbiG N-terminal domain-like Family: CbiG N-terminal domain-like
65	d1xrsb1	Alignment	not modelled	37.5	13	Fold: Flavodoxin-like Superfamily: Cobalamin (vitamin B12)-binding domain Family: Cobalamin (vitamin B12)-binding domain
66	d1vmea1	Alignment	not modelled	35.2	9	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: Flavodoxin-related
67	c2pfsA_	Alignment	not modelled	34.3	10	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: universal stress protein; PDBTitle: crystal structure of universal stress protein from nitrosomonas2 europaea
68	c1xrsB_	Alignment	not modelled	33.6	13	PDB header: isomerase Chain: B: PDB Molecule: d-lysine 5,6-aminomutase beta subunit; PDBTitle: crystal structure of lysine 5,6-aminomutase in complex with plp,2 cobalamin, and 5'-deoxyadenosine
69	c3onoA_	Alignment	not modelled	32.4	8	PDB header: isomerase Chain: A: PDB Molecule: ribose/galactose isomerase; PDBTitle: crystal structure of ribose-5-phosphate isomerase lacab_rpiB from2 vibrio parahaemolyticus
70	c3lopA_	Alignment	not modelled	32.1	16	PDB header: substrate binding protein Chain: A: PDB Molecule: substrate binding periplasmic protein; PDBTitle: crystal structure of substrate-binding periplasmic protein2 (pbp) from ralstonia solanacearum
71	c2rejA_	Alignment	not modelled	31.6	6	PDB header: choline-binding protein Chain: A: PDB Molecule: putative glycine betaine abc transporter protein; PDBTitle: abc-transporter choline binding protein in unliganded semi-2 closed conformation
72	d7reqa2	Alignment	not modelled	31.0	10	Fold: Flavodoxin-like Superfamily: Cobalamin (vitamin B12)-binding domain Family: Cobalamin (vitamin B12)-binding domain
73	c3n0wA_	Alignment	not modelled	30.6	13	PDB header: transport protein Chain: A: PDB Molecule: abc branched chain amino acid family transporter, PDBTitle: crystal structure of a branched chain amino acid abc transporter2 periplasmic ligand-binding protein (bx_e_c0949) from burkholderia3 xenovorans lb400 at 1.88 a resolution
74	c2zkiH_	Alignment	not modelled	30.2	16	PDB header: transcription Chain: H: PDB Molecule: 199aa long hypothetical trp repressor binding PDBTitle: crystal structure of hypothetical trp repressor binding2 protein from sul folobus tokodaii (st0872)
75	d2cc0a1	Alignment	not modelled	29.0	20	Fold: 7-stranded beta/alpha barrel Superfamily: Glycoside hydrolase/deacetylase Family: NodB-like polysaccharide deacetylase
76	d1fmfa_	Alignment	not modelled	28.0	22	Fold: Flavodoxin-like Superfamily: Cobalamin (vitamin B12)-binding domain Family: Cobalamin (vitamin B12)-binding domain
77	d1ws6a1	Alignment	not modelled	27.1	18	Fold: S-adenosyl-L-methionine-dependent methyltransferases Superfamily: S-adenosyl-L-methionine-dependent methyltransferases Family: YhhF-like
78	d1tubb1	Alignment	not modelled	27.0	4	Fold: Tubulin nucleotide-binding domain-like Superfamily: Tubulin nucleotide-binding domain-like Family: Tubulin, GTPase domain
79	c2zfaA_	Alignment	not modelled	27.0	9	PDB header: structural protein Chain: A: PDB Molecule: component of sodium-driven polar

79	c2z10A	Alignment	not modelled	27.0	9	flagellar motor; PDBTitle: crystal structure of motY
80	d2p1ra1	Alignment	not modelled	24.7	17	Fold: NAD kinase/diacylglycerol kinase-like Superfamily: NAD kinase/diacylglycerol kinase-like Family: Diacylglycerol kinase-like
81	c3k6qB	Alignment	not modelled	24.5	13	PDB header: ligand binding protein Chain: B: PDB Molecule: putative ligand binding protein; PDBTitle: crystal structure of an antitoxin part of a putative toxin/antitoxin2 system (swol_0700) from syntrophomonas wolfei subsp. wolfei at 1.80 a3 resolution
82	c3qqzA	Alignment	not modelled	24.3	0	PDB header: metal binding protein Chain: A: PDB Molecule: putative uncharacterized protein yjik; PDBTitle: crystal structure of the c-terminal domain of the yjik protein from2 escherichia coli cft073
83	d1duvg2	Alignment	not modelled	23.9	14	Fold: ATC-like Superfamily: Aspartate/ornithine carbamoyltransferase Family: Aspartate/ornithine carbamoyltransferase
84	d2ebfx2	Alignment	not modelled	22.5	10	Fold: EreA/ChaN-like Superfamily: EreA/ChaN-like Family: PMT domain-like
85	d2btoa1	Alignment	not modelled	22.5	10	Fold: Tubulin nucleotide-binding domain-like Superfamily: Tubulin nucleotide-binding domain-like Family: Tubulin, GTPase domain
86	d1ml4a2	Alignment	not modelled	22.2	17	Fold: ATC-like Superfamily: Aspartate/ornithine carbamoyltransferase Family: Aspartate/ornithine carbamoyltransferase
87	d1qo0a	Alignment	not modelled	22.2	14	Fold: Periplasmic binding protein-like I Superfamily: Periplasmic binding protein-like I Family: L-arabinose binding protein-like
88	d1q77a	Alignment	not modelled	21.8	4	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Adenine nucleotide alpha hydrolases-like Family: Universal stress protein-like
89	c3ff1B	Alignment	not modelled	21.4	13	PDB header: isomerase Chain: B: PDB Molecule: glucose-6-phosphate isomerase; PDBTitle: structure of glucose 6-phosphate isomerase from staphylococcus aureus
90	d1a9xa4	Alignment	not modelled	21.4	25	Fold: PreATP-grasp domain Superfamily: PreATP-grasp domain Family: BC N-terminal domain-like
91	c3hjtB	Alignment	not modelled	21.3	15	PDB header: cell adhesion, transport protein Chain: B: PDB Molecule: lmb; PDBTitle: structure of laminin binding protein (lmb) of streptococcus2 agalactiae a bifunctional protein with adhesion and metal3 transporting activity
92	d2a5la1	Alignment	not modelled	21.1	16	Fold: Flavodoxin-like Superfamily: Flavoproteins Family: WrbA-like
93	c3s3tD	Alignment	not modelled	20.6	5	PDB header: chaperone Chain: D: PDB Molecule: nucleotide-binding protein, universal stress protein uspa PDBTitle: universal stress protein uspa from lactobacillus plantarum
94	d2z3va1	Alignment	not modelled	20.3	13	Fold: Adenine nucleotide alpha hydrolase-like Superfamily: Adenine nucleotide alpha hydrolases-like Family: Universal stress protein-like
95	d1yt8a4	Alignment	not modelled	19.9	13	Fold: Rhodanese/Cell cycle control phosphatase Superfamily: Rhodanese/Cell cycle control phosphatase Family: Multi-domain sulfurtransferase (rhodanese)
96	d1vp8a	Alignment	not modelled	19.8	20	Fold: Pyruvate kinase C-terminal domain-like Superfamily: PK C-terminal domain-like Family: MTH1675-like
97	c2x41A	Alignment	not modelled	19.7	17	PDB header: hydrolase Chain: A: PDB Molecule: beta-glucosidase; PDBTitle: structure of beta-glucosidase 3b from thermotoga neapolitana2 in complex with glucose
98	d1of8a	Alignment	not modelled	19.7	17	Fold: TIM beta/alpha-barrel Superfamily: Aldolase Family: Class I DAHP synthetase
99	d1ak2a1	Alignment	not modelled	19.5	13	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nucleotide and nucleoside kinases