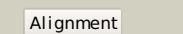
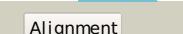
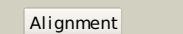
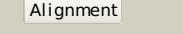
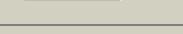
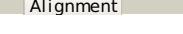


Phyre²

Email	i.a.kelley@imperial.ac.uk
Description	P63883
Date	Thu Jan 5 12:08:11 GMT 2012
Unique Job ID	8822b125cc504c4b

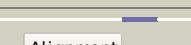
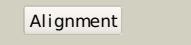
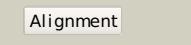
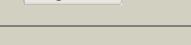
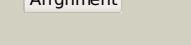
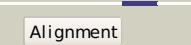
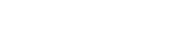
Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c3ne8A_			100.0	38	PDB header: hydrolase Chain: A; PDB Molecule: n-acetyl muramoyl-L-alanine amidase; PDBTitle: the crystal structure of a domain from n-acetyl muramoyl-L-alanine2 amidase of bartonella henselae str. houston-1
2	d1jwqa_			100.0	35	Fold: Phosphorylase/hydrolase-like Superfamily: Zn-dependent exopeptidases Family: N-acetyl muramoyl-L-alanine amidase-like
3	c1xovA_			100.0	16	PDB header: hydrolase Chain: A; PDB Molecule: ply protein; PDBTitle: the crystal structure of the listeria monocytogenes bacteriophage psa2 endolysin plypsa
4	c3czxA_			100.0	21	PDB header: hydrolase Chain: A; PDB Molecule: putative n-acetyl muramoyl-L-alanine amidase; PDBTitle: the crystal structure of the putative n-acetyl muramoyl-L-2 alanine amidase from neisseria meningitidis
5	d1xova2			100.0	19	Fold: Phosphorylase/hydrolase-like Superfamily: Zn-dependent exopeptidases Family: N-acetyl muramoyl-L-alanine amidase-like
6	c3qayC_			100.0	25	PDB header: lyase Chain: C; PDB Molecule: endolysin; PDBTitle: catalytic domain of cd27l endolysin targeting clostridia difficile
7	d2gfqa1			87.2	21	Fold: Phosphorylase/hydrolase-like Superfamily: AF0625-like Family: AF0625-like
8	c2gfqc_			85.0	25	PDB header: structural genomics, unknown function Chain: C; PDB Molecule: upf0204 protein ph0006; PDBTitle: structure of protein of unknown function ph0006 from pyrococcus2 horikoshii
9	c2qvpc_			84.2	15	PDB header: hydrolase Chain: C; PDB Molecule: uncharacterized protein; PDBTitle: crystal structure of a putative metallo peptidase (sama_0725) from shewanella amazonensis sb2b at 2.00 a resolution
10	d1ygeal			82.4	33	Fold: Phosphorylase/hydrolase-like Superfamily: AF0625-like Family: AF0625-like
11	c1c4gb_			61.5	18	PDB header: transferase Chain: B; PDB Molecule: protein (alpha-d-glucose 1-phosphate PDBTitle: phosphoglucomutase vanadate based transition state analog2 complex

12	c2fuvB_			58.8	19	PDB header: isomerase Chain: B: PDB Molecule: phosphoglucumutase; PDBTitle: phosphoglucumutase from salmonella typhimurium.
13	c1wqaB_			47.4	29	PDB header: isomerase Chain: B: PDB Molecule: phospho-sugar mutase; PDBTitle: crystal structure of pyrococcus horikoshii 2 phosphomannomutase/phosphoglucumutase complexed with mg2+
14	d1nyra1			46.0	18	Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
15	c2f7IA_			44.3	24	PDB header: isomerase Chain: A: PDB Molecule: 455aa long hypothetical phospho-sugar mutase; PDBTitle: crystal structure of sulfolobus tokodaii 2 phosphomannomutase/phosphoglucumutase
16	c1wwpA_			43.3	22	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: hypothetical protein ttha0636; PDBTitle: crystal structure of ttk03001694 from thermus thermophilus2 hb8
17	d1fx0b1			40.8	15	Fold: Left-handed superhelix Superfamily: C-terminal domain of alpha and beta subunits of F1 ATP synthase Family: C-terminal domain of alpha and beta subunits of F1 ATP synthase
18	c3i3wB_			40.6	22	PDB header: isomerase Chain: B: PDB Molecule: phosphoglucomutase; PDBTitle: structure of a phosphoglucomutase from francisella tularensis
19	d1kfia2			38.5	21	Fold: Phosphoglucumutase, first 3 domains Superfamily: Phosphoglucumutase, first 3 domains Family: Phosphoglucumutase, first 3 domains
20	c3l2nA_			35.9	18	PDB header: hydrolase Chain: A: PDB Molecule: peptidase m14, carboxypeptidase a; PDBTitle: crystal structure of putative carboxypeptidase a (yp_562911.1) from shewanella denitrificans os-217 at 2.39 a resolution
21	d1skyel		not modelled	35.8	18	Fold: Left-handed superhelix Superfamily: C-terminal domain of alpha and beta subunits of F1 ATP synthase Family: C-terminal domain of alpha and beta subunits of F1 ATP synthase
22	d3pmga2		not modelled	34.2	14	Fold: Phosphoglucumutase, first 3 domains Superfamily: Phosphoglucumutase, first 3 domains Family: Phosphoglucumutase, first 3 domains
23	c3nh8A_		not modelled	33.7	15	PDB header: hydrolase Chain: A: PDB Molecule: aspartoacylase-2; PDBTitle: crystal structure of murine aminoacylase 3 in complex with n-acetyl-s-2 1,2-dichlorovinyl-l-cysteine
24	c3rljB_		not modelled	31.3	16	PDB header: oxidoreductase Chain: B: PDB Molecule: alpha-ketoglutarate-dependent taurine dioxygenase; PDBTitle: crystal structure of alpha-ketoglutarate-dependent taurine dioxygenase2 from mycobacterium avium, native form
25	d1ad1a_		not modelled	29.9	75	Fold: TIM beta/alpha-barrel Superfamily: Dihydropteroate synthetase-like Family: Dihydropteroate synthetase
26	c1nj2A_		not modelled	29.5	23	PDB header: ligase Chain: A: PDB Molecule: proline-trna synthetase; PDBTitle: crystal structure of prolyl-trna synthetase from methanothermobacter2 thermautrophicus
27	d2g4ca1		not modelled	29.4	15	Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
28	c3k2ka_		not modelled	29.2	18	PDB header: hydrolase Chain: A: PDB Molecule: putative carboxypeptidase; PDBTitle: crystal structure of putative carboxypeptidase

					(yp_103406.1) from2 burkholderia mallei atcc 23344 at 2.49 a resolution	
29	c3bghB		Alignment	not modelled	27.6	19 PDB header: structural genomics, unknown function Chain: B; PDB Molecule: putative neuraminyllactose-binding hemagglutinin homolog; PDBTitle: crystal structure of putative neuraminyllactose-binding hemagglutinin2 homolog from helicobacter pylori
30	d1wu7a1		Alignment	not modelled	24.5	18 Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
31	d1nj8a1		Alignment	not modelled	24.3	16 Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
32	d1nj1a1		Alignment	not modelled	23.8	22 Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
33	c2y5sA		Alignment	not modelled	23.8	63 PDB header: transferase Chain: A; PDB Molecule: dihydropteroate synthase; PDBTitle: crystal structure of burkholderia cenocepacia dihydropteroate2 synthase complexed with 7,8-dihydropteroate.
34	d1qf6a1		Alignment	not modelled	23.0	7 Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
35	d1g5hal		Alignment	not modelled	22.4	17 Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
36	c3l80A		Alignment	not modelled	21.8	14 PDB header: hydrolase Chain: A; PDB Molecule: putative uncharacterized protein smu.1393c; PDBTitle: crystal structure of smu.1393c from streptococcus mutans ua159
37	c2dzaA		Alignment	not modelled	21.5	63 PDB header: transferase Chain: A; PDB Molecule: dihydropteroate synthase; PDBTitle: crystal structure of dihydropteroate synthase from thermus2 thermophilus hb8 in complex with 4-aminobenzoate
38	d1p5dx2		Alignment	not modelled	21.5	34 Fold: Phosphoglucomutase, first 3 domains Superfamily: Phosphoglucomutase, first 3 domains Family: Phosphoglucomutase, first 3 domains
39	d1kija1		Alignment	not modelled	20.2	13 Fold: Ribosomal protein S5 domain 2-like Superfamily: Ribosomal protein S5 domain 2-like Family: DNA gyrase/MutL, second domain
40	d1u83a		Alignment	not modelled	18.9	24 Fold: TIM beta/alpha-barrel Superfamily: (2r)-phospho-3-sulfolactate synthase ComA Family: (2r)-phospho-3-sulfolactate synthase ComA
41	c1u83A		Alignment	not modelled	18.9	24 PDB header: lyase Chain: A; PDB Molecule: phosphosulfolactate synthase; PDBTitle: psl synthase from bacillus subtilis
42	d1eyeA		Alignment	not modelled	18.7	44 Fold: TIM beta/alpha-barrel Superfamily: Dihydropteroate synthetase-like Family: Dihydropteroate synthetase
43	c1kf1A		Alignment	not modelled	18.4	21 PDB header: isomerase Chain: A; PDB Molecule: phosphoglucomutase 1; PDBTitle: crystal structure of the exocytosis-sensitive2 phosphoprotein, pp63/parafusin (phosphoglucomutase) from3 paramecium
44	c2vp8A		Alignment	not modelled	18.1	38 PDB header: transferase Chain: A; PDB Molecule: dihydropteroate synthase 2; PDBTitle: structure of mycobacterium tuberculosis rv1207
45	c2ae3A		Alignment	not modelled	17.9	14 PDB header: hydrolase Chain: A; PDB Molecule: glutaryl 7-aminocephalosporanic acid acylase; PDBTitle: glutaryl 7-aminocephalosporanic acid acylase: mutational study of 2 activation mechanism
46	c2ronA		Alignment	not modelled	17.8	15 PDB header: hydrolase Chain: A; PDB Molecule: surfactin synthetase thioesterase subunit; PDBTitle: the external thioesterase of the surfactin-synthetase
47	c2gx8B		Alignment	not modelled	17.8	23 PDB header: structural genomics, unknown function Chain: B; PDB Molecule: nif3-related protein; PDBTitle: the crystal stucture of bacillus cereus protein related to nif3
48	d1tx2a		Alignment	not modelled	17.8	47 Fold: TIM beta/alpha-barrel Superfamily: Dihydropteroate synthetase-like Family: Dihydropteroate synthetase
49	c1tx2A		Alignment	not modelled	17.8	47 PDB header: transferase Chain: A; PDB Molecule: dhps, dihydropteroate synthase; PDBTitle: dihydropteroate synthetase, with bound inhibitor manic, from bacillus2 anthracis
50	d2b3ya2		Alignment	not modelled	17.5	20 Fold: Aconitase iron-sulfur domain Superfamily: Aconitase iron-sulfur domain Family: Aconitase iron-sulfur domain
51	c2e85B		Alignment	not modelled	17.3	17 PDB header: hydrolase Chain: B; PDB Molecule: hydrogenase 3 maturation protease; PDBTitle: crystal structure of the hydrogenase 3 maturation protease
52	c3ibtA		Alignment	not modelled	16.4	18 PDB header: oxidoreductase Chain: A; PDB Molecule: 1h-3-hydroxy-4-oxoquinoline 2,4-dioxygenase; PDBTitle: structure of 1h-3-hydroxy-4-oxoquinoline 2,4-dioxygenase (qdo)
53	d1ei1a1		Alignment	not modelled	15.7	19 Fold: Ribosomal protein S5 domain 2-like Superfamily: Ribosomal protein S5 domain 2-like Family: DNA gyrase/MutL, second domain

54	c1k8wA	Alignment	not modelled	15.6	55	PDB header: lyase/rna Chain: A: PDB Molecule: tRNA pseudouridine synthase b; PDBTitle: crystal structure of the e. coli pseudouridine synthase2 trub bound to a t stem-loop rna
55	d1ccwa	Alignment	not modelled	15.4	17	Fold: Flavodoxin-like Superfamily: Cobalamin (vitamin B12)-binding domain Family: Cobalamin (vitamin B12)-binding domain
56	c2vf7B	Alignment	not modelled	15.4	28	PDB header: dna-binding protein Chain: B: PDB Molecule: excinuclease abc, subunit a.; PDBTitle: crystal structure of uvra2 from deinococcus radiodurans
57	d2gx8a1	Alignment	not modelled	14.7	23	Fold: NIF3 (NGG1p interacting factor 3)-like Superfamily: NIF3 (NGG1p interacting factor 3)-like Family: NIF3 (NGG1p interacting factor 3)-like
58	c1ze2B	Alignment	not modelled	14.5	58	PDB header: lyase/rna Chain: B: PDB Molecule: tRNA pseudouridine synthase b; PDBTitle: conformational change of pseudouridine 55 synthase upon its2 association with rna substrate
59	c3netB	Alignment	not modelled	14.2	15	PDB header: ligase Chain: B: PDB Molecule: histidyl-tRNA synthetase; PDBTitle: crystal structure of histidyl-tRNA synthetase from nostoc sp. pcc 7120
60	c3t4cD	Alignment	not modelled	14.0	21	PDB header: transferase Chain: D: PDB Molecule: 2-dehydro-3-deoxyphosphooctonate aldolase 1; PDBTitle: crystal structure of 2-dehydro-3-deoxyphosphooctonate aldolase from Burkholderia ambifaria
61	d1qe0a1	Alignment	not modelled	13.7	13	Fold: Anticodon-binding domain-like Superfamily: Class II aaRS ABD-related Family: Anticodon-binding domain of Class II aaRS
62	c3cwvB	Alignment	not modelled	13.7	3	PDB header: isomerase Chain: B: PDB Molecule: dNA gyrase, b subunit, truncated; PDBTitle: crystal structure of b-subunit of the dna gyrase from myxococcus2 xanthus
63	c2qj8B	Alignment	not modelled	13.6	19	PDB header: hydrolase Chain: B: PDB Molecule: mlr6093 protein; PDBTitle: crystal structure of an aspartoacylase family protein (mlr6093) from mesorhizobium loti maff303099 at 2.00 a resolution
64	d3bula2	Alignment	not modelled	13.4	17	Fold: Flavodoxin-like Superfamily: Cobalamin (vitamin B12)-binding domain Family: Cobalamin (vitamin B12)-binding domain
65	c2i4IC	Alignment	not modelled	13.2	11	PDB header: ligase Chain: C: PDB Molecule: proline-tRNA ligase; PDBTitle: rhodopseudomonas palustris prolyl-tRNA synthetase
66	c5acnA	Alignment	not modelled	13.2	20	PDB header: lyase(carbon-oxygen) Chain: A: PDB Molecule: aconitase; PDBTitle: structure of activated aconitase. formation of the (4fe-4s)2 cluster in the crystal
67	d1c4xa	Alignment	not modelled	13.0	17	Fold: alpha/beta-Hydrolases Superfamily: alpha/beta-Hydrolases Family: Carbon-carbon bond hydrolase
68	c2yxbA	Alignment	not modelled	12.9	18	PDB header: isomerase Chain: A: PDB Molecule: coenzyme b12-dependent mutase; PDBTitle: crystal structure of the methylmalonyl-coa mutase alpha-subunit from aeropyrum pernix
69	d1acoa2	Alignment	not modelled	12.8	20	Fold: Aconitase iron-sulfur domain Superfamily: Aconitase iron-sulfur domain Family: Aconitase iron-sulfur domain
70	d2bodx1	Alignment	not modelled	12.7	29	Fold: 7-stranded beta/alpha barrel Superfamily: Glycosyl hydrolases family 6, cellulases Family: Glycosyl hydrolases family 6, cellulases
71	d2fsja1	Alignment	not modelled	12.4	19	Fold: Ribonuclease H-like motif Superfamily: Actin-like ATPase domain Family: Ta0583-like
72	d1joga	Alignment	not modelled	12.3	25	Fold: Four-helical up-and-down bundle Superfamily: Nucleotidyltransferase substrate binding subunit/domain Family: Family 1 bi-partite nucleotidyltransferase subunit
73	d1cr5a2	Alignment	not modelled	12.2	21	Fold: Cdc48 domain 2-like Superfamily: Cdc48 domain 2-like Family: Cdc48 domain 2-like
74	c2wj4B	Alignment	not modelled	11.9	26	PDB header: oxidoreductase Chain: B: PDB Molecule: 1-h-3-hydroxy-4-oxoquininaldine 2,4-dioxygenase; PDBTitle: crystal structure of the cofactor-devoid 1-h-3-hydroxy-4-2-oxoquininaldine 2,4-dioxygenase (hod) from arthrobacter3 nitroguajacolicus ru61a anaerobically complexed with its4 natural substrate 1-h-3-hydroxy-4-oxoquininaldine
75	d2ey4a2	Alignment	not modelled	11.8	55	Fold: Pseudouridine synthase Superfamily: Pseudouridine synthase Family: Pseudouridine synthase II TruB
76	c1g5hA	Alignment	not modelled	11.5	17	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
77	d1kjna	Alignment	not modelled	11.4	20	Fold: Hypothetical protein MTH777 (MT0777) Superfamily: Hypothetical protein MTH777 (MT0777) Family: Hypothetical protein MTH777 (MT0777)
78	d1ifya	Alignment	not modelled	11.3	12	Fold: RuvA C-terminal domain-like Superfamily: UBA-like Family: UBA domain
						PDB header: hydrolase

79	c3cdxB		Alignment	not modelled	11.2	20	Chain: B: PDB Molecule: succinylglutamatedesuccinylase/aspartoacylase; PDBTitle: crystal structure of2 succinylglutamatedesuccinylase/aspartoacylase from3 rhodobacter sphaerooides
80	c3InuA		Alignment	not modelled	11.1	6	PDB header: isomerase Chain: A: PDB Molecule: topoisomerase iv subunit b; PDBTitle: crystal structure of pare subunit
81	d2fywa1		Alignment	not modelled	10.9	28	Fold: NIF3 (NGG1p interacting factor 3)-like Superfamily: NIF3 (NGG1p interacting factor 3)-like Family: NIF3 (NGG1p interacting factor 3)-like
82	c3dyvA		Alignment	not modelled	10.9	31	PDB header: hydrolase Chain: A: PDB Molecule: esterase d; PDBTitle: snapshots of esterase d from lactobacillus rhamnosus:2 insights into a rotation driven catalytic mechanism
83	c2b3yB		Alignment	not modelled	10.9	20	PDB header: lyase Chain: B: PDB Molecule: iron-responsive element binding protein 1; PDBTitle: structure of a monoclinic crystal form of human cytosolic aconitase2 (irp1)
84	d1sgva2		Alignment	not modelled	10.8	55	Fold: Pseudouridine synthase Superfamily: Pseudouridine synthase Family: Pseudouridine synthase II TruB
85	d1uoza		Alignment	not modelled	10.4	31	Fold: 7-stranded beta/alpha barrel Superfamily: Glycosyl hydrolases family 6, cellulases Family: Glycosyl hydrolases family 6, cellulases
86	d1uuqa		Alignment	not modelled	10.3	14	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: beta-glycanases
87	c1uz4A		Alignment	not modelled	10.3	14	PDB header: hydrolase Chain: A: PDB Molecule: man5a; PDBTitle: common inhibition of beta-glucosidase and beta-mannosidase2 by isofagomine lactam reflects different conformational3 intineraries for glucoside and mannose hydrolysis
88	d2apoa2		Alignment	not modelled	10.3	55	Fold: Pseudouridine synthase Superfamily: Pseudouridine synthase Family: Pseudouridine synthase II TruB
89	d1k8wa5		Alignment	not modelled	10.0	55	Fold: Pseudouridine synthase Superfamily: Pseudouridine synthase Family: Pseudouridine synthase II TruB
90	d1r3ea2		Alignment	not modelled	10.0	64	Fold: Pseudouridine synthase Superfamily: Pseudouridine synthase Family: Pseudouridine synthase II TruB
91	c3qvmA		Alignment	not modelled	10.0	20	PDB header: hydrolase Chain: A: PDB Molecule: olei00960; PDBTitle: the structure of olei00960, a hydrolase from oleispira antarctica
92	c2dlnA		Alignment	not modelled	9.9	18	PDB header: ligase(peptidoglycan synthesis) Chain: A: PDB Molecule: d-alanine-d-alanine ligase; PDBTitle: vancomycin resistance: structure of d-alanine:d-alanine2 ligase at 2.3 angstroms resolution
93	c3a64A		Alignment	not modelled	9.8	38	PDB header: hydrolase Chain: A: PDB Molecule: cellobiohydrolase; PDBTitle: crystal structure of cccel6c, a glycoside hydrolase family 62 enzyme, from coprinopsis cinerea
94	c2i9oA		Alignment	not modelled	9.7	21	PDB header: de novo protein Chain: A: PDB Molecule: mhb8a peptide; PDBTitle: design of bivalent miniprotein consisting of two2 independent elements, a b-hairpin peptide and a-helix3 peptide, tethered by eight glycines
95	c2daiA		Alignment	not modelled	9.5	16	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: ubiquitin associated domain containing 1; PDBTitle: solution structure of the first uba domain in the human2 ubiquitin associated domain containing 1 (ubadc1)
96	c1y37A		Alignment	not modelled	9.5	20	PDB header: hydrolase Chain: A: PDB Molecule: fluoroacetate dehalogenase; PDBTitle: structure of fluoroacetate dehalogenase from burkholderia sp. fa1
97	c1y80A		Alignment	not modelled	9.4	22	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: predicted cobalamin binding protein; PDBTitle: structure of a corrinoid (factor iiim)-binding protein from moorella thermoacetica
98	d1s16a1		Alignment	not modelled	9.4	10	Fold: Ribosomal protein S5 domain 2-like Superfamily: Ribosomal protein S5 domain 2-like Family: DNA gyrase/MutL, second domain
99	c3pdkB		Alignment	not modelled	9.3	17	PDB header: isomerase Chain: B: PDB Molecule: phosphoglucosamine mutase; PDBTitle: crystal structure of phosphoglucosamine mutase from b. anthracis