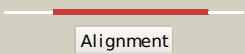

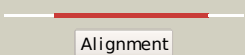

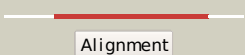

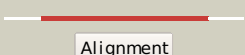

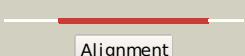



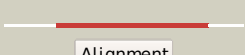

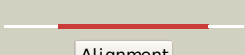





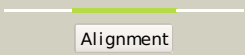












Phyre2

Email	I.a.kelley@imperial.ac.uk
Description	P76421
Date	Thu Jan 5 12:22:55 GMT 2012
Unique Job ID	07b050e9d0a2217c

Detailed template information

#	Template	Alignment Coverage	3D Model	Confidence	% i.d.	Template Information
1	c2wagA_	 Alignment		100.0	35	PDB header: hydrolase Chain: A: PDB Molecule: lysozyme, putative; PDBTitle: the structure of a family 25 glycosyl hydrolase from2 bacillus anthracis.
2	d1jfxa_	 Alignment		100.0	36	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: 1,4-beta-N-acetyl muramini dase
3	c2x8rE_	 Alignment		100.0	31	PDB header: hydrolase Chain: E: PDB Molecule: glycosyl hydrolase; PDBTitle: the structure of a family gh25 lysozyme from aspergillus2 fumigatus
4	c2wwcA_	 Alignment		100.0	19	PDB header: hydrolase Chain: A: PDB Molecule: 1,4-beta-n-acetyl muramini dase; PDBTitle: 3d-structure of the modular autolysin lytc from2 streptococcus pneumoniae in complex with synthetic3 peptidoglycan ligand
5	c2nw0B_	 Alignment		100.0	26	PDB header: hydrolase Chain: B: PDB Molecule: plyb; PDBTitle: crystal structure of a lysin
6	d2j8ga2	 Alignment		100.0	23	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: 1,4-beta-N-acetyl muramini dase
7	c2j8fA_	 Alignment		100.0	23	PDB header: hydrolase Chain: A: PDB Molecule: lysozyme; PDBTitle: crystal structure of the modular cpl-1 endolysin complexed2 with a peptidoglycan analogue (e94q mutant in complex with3 a disaccharide-pentapeptide)
8	d1sfsa_	 Alignment		98.6	19	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: 1,4-beta-N-acetyl muramini dase
9	c1sfsA_	 Alignment		98.6	19	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: hypothetical protein; PDBTitle: 1.07 a crystal structure of an uncharacterized b.2 steartothermophilus protein
10	d1hl9a2	 Alignment		64.4	15	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: Putative alpha-L-fucosidase, catalytic domain
11	d1e4ia_	 Alignment		63.8	24	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: Family 1 of glycosyl hydrolase

12	dlhjq_a	Alignment		62.7	15	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: beta-glycanases
13	dlhjsa	Alignment		62.5	15	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: beta-glycanases
14	c2wvsD	Alignment		57.5	13	PDB header: hydrolase Chain: D: PDB Molecule: alpha-l-fucosidase; PDBTitle: crystal structure of an alpha-l-fucosidase gh29 trapped2 covalent intermediate from bacteroides thetaiotaomicron in3 complex with 2-fluoro-fucosyl fluoride using an e288q4 mutant
15	c3s6dA	Alignment		56.2	21	PDB header: isomerase Chain: A: PDB Molecule: putative triosephosphate isomerase; PDBTitle: crystal structure of a putative triosephosphate isomerase from2 coccidioides immitis
16	c3gzaB	Alignment		54.8	28	PDB header: hydrolase Chain: B: PDB Molecule: putative alpha-l-fucosidase; PDBTitle: crystal structure of putative alpha-l-fucosidase (np_812709.1) from2 bacteroides thetaiotaomicron vpi-5482 at 1.60 a resolution
17	c3ahxC	Alignment		53.4	18	PDB header: hydrolase Chain: C: PDB Molecule: beta-glucosidase a; PDBTitle: crystal structure of beta-glucosidase a from bacterium clostridium2 cellulovorans
18	c1hl8B	Alignment		51.9	15	PDB header: hydrolase Chain: B: PDB Molecule: putative alpha-l-fucosidase; PDBTitle: crystal structure of thermotoga maritima alpha-fucosidase
19	d1euca2	Alignment		50.5	17	Fold: Flavodoxin-like Superfamily: Succinyl-CoA synthetase domains Family: Succinyl-CoA synthetase domains
20	d2j78a1	Alignment		44.6	24	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: Family 1 of glycosyl hydrolase
21	d1tvna1	Alignment	not modelled	44.4	6	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: beta-glycanases
22	c3eypB	Alignment	not modelled	42.2	18	PDB header: structural genomics, unknown function Chain: B: PDB Molecule: putative alpha-l-fucosidase; PDBTitle: crystal structure of putative alpha-l-fucosidase from bacteroides2 thetaiotaomicron
23	c3ebvA	Alignment	not modelled	39.0	18	PDB header: structural genomics, unknown function Chain: A: PDB Molecule: chitinase a; PDBTitle: crystal structure of putative chitinase a from streptomyces2 coelicolor.
24	c2jgqB	Alignment	not modelled	37.5	11	PDB header: isomerase Chain: B: PDB Molecule: triosephosphate isomerase; PDBTitle: kinetics and structural properties of triosephosphate2 isomerase from helicobacter pylori
25	d1egza	Alignment	not modelled	37.0	13	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: beta-glycanases
26	d1foba	Alignment	not modelled	36.6	15	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: beta-glycanases
27	c3mo4B	Alignment	not modelled	34.6	13	PDB header: hydrolase Chain: B: PDB Molecule: alpha-1,3/4-fucosidase; PDBTitle: the crystal structure of an alpha-(1-3,4)-fucosidase from2 bifidobacterium longum subsp. infantis atcc 15697
28	c3th6B	Alignment	not modelled	34.5	16	PDB header: isomerase Chain: B: PDB Molecule: triosephosphate isomerase; PDBTitle: crystal structure of triosephosphate isomerase from rhipicephalus2 (boophilus) microplus.
						PDB header: hydrolase

29	c3qr3B_	Alignment	not modelled	29.2	8	Chain: B: PDB Molecule: endoglucanase eg-ii; PDBTitle: crystal structure of cel5a (eg2) from hypocrea jecorina (trichoderma2 reesei)
30	d1o5xa_	Alignment	not modelled	28.4	18	Fold: TIM beta/alpha-barrel Superfamily: Triosephosphate isomerase (TIM) Family: Triosephosphate isomerase (TIM)
31	c3krsB_	Alignment	not modelled	28.2	12	PDB header: isomerase Chain: B: PDB Molecule: triosephosphate isomerase; PDBTitle: structure of triosephosphate isomerase from cryptosporidium parvum at2 1.55a resolution
32	d1ur4a_	Alignment	not modelled	27.5	15	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: beta-glycanases
33	c3ianA_	Alignment	not modelled	25.4	21	PDB header: hydrolase Chain: A: PDB Molecule: chitinase; PDBTitle: crystal structure of a chitinase from lactococcus lactis2 subsp. lactis
34	d1wkya2	Alignment	not modelled	21.0	10	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: beta-glycanases
35	c2xucA_	Alignment	not modelled	20.4	19	PDB header: hydrolase Chain: A: PDB Molecule: chitinase; PDBTitle: natural product-guided discovery of a fungal chitinase2 inhibitor
36	c3c65A_	Alignment	not modelled	20.3	26	PDB header: hydrolase Chain: A: PDB Molecule: uvrabc system protein c; PDBTitle: crystal structure of bacillus stearothermophilus uvr c 5'2 endonuclease domain
37	d1gnxa_	Alignment	not modelled	19.9	17	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: Family 1 of glycosyl hydrolase
38	d1f61a_	Alignment	not modelled	17.3	12	Fold: TIM beta/alpha-barrel Superfamily: Phosphoenolpyruvate/pyruvate domain Family: Phosphoenolpyruvate mutase/isocitrate lyase-like
39	c3e5bB_	Alignment	not modelled	16.9	13	PDB header: lyase Chain: B: PDB Molecule: isocitrate lyase; PDBTitle: 2.4 a crystal structure of isocitrate lyase from brucella2 melitensis
40	d1ktba2	Alignment	not modelled	16.2	18	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: Amylase, catalytic domain
41	c2g3nA_	Alignment	not modelled	15.6	10	PDB header: hydrolase Chain: A: PDB Molecule: alpha-glucosidase; PDBTitle: crystal structure of the sulfolobus solfataricus alpha-2 glucosidase mala in complex with beta-octyl-glucopyranoside
42	c2pt7G_	Alignment	not modelled	15.3	12	PDB header: hydrolase/protein binding Chain: G: PDB Molecule: hypothetical protein; PDBTitle: crystal structure of cag virb11 (hp0525) and an inhibitory protein2 (hp1451)
43	d1b9ba_	Alignment	not modelled	13.6	14	Fold: TIM beta/alpha-barrel Superfamily: Triosephosphate isomerase (TIM) Family: Triosephosphate isomerase (TIM)
44	c3mmwB_	Alignment	not modelled	13.3	18	PDB header: hydrolase Chain: B: PDB Molecule: endoglucanase; PDBTitle: crystal structure of endoglucanase cel5a from the hyperthermophilic2 thermotoga maritima
45	d1q1ra3	Alignment	not modelled	13.3	22	Fold: CO dehydrogenase flavoprotein C-domain-like Superfamily: FAD/NAD-linked reductases, dimerisation (C-terminal) domain Family: FAD/NAD-linked reductases, dimerisation (C-terminal) domain
46	c2dskA_	Alignment	not modelled	13.1	14	PDB header: hydrolase Chain: A: PDB Molecule: chitinase; PDBTitle: crystal structure of catalytic domain of hyperthermophilic chitinase2 from pyrococcus furiosus
47	d1qcrd2	Alignment	not modelled	13.0	22	Fold: Cytochrome c Superfamily: Cytochrome c Family: Cytochrome bc1 domain
48	d1mo0a_	Alignment	not modelled	12.3	16	Fold: TIM beta/alpha-barrel Superfamily: Triosephosphate isomerase (TIM) Family: Triosephosphate isomerase (TIM)
49	c3ffjA_	Alignment	not modelled	12.2	7	PDB header: hydrolase Chain: A: PDB Molecule: glycosyl hydrolase (family 31); PDBTitle: the crystal structure of the glycosyl hydrolase (family 31) from2 ruminococcus obeum atcc 29174
50	c2qmjA_	Alignment	not modelled	12.0	12	PDB header: hydrolase Chain: A: PDB Molecule: maltase-glucoamylase, intestinal; PDBTitle: crystal structure of the n-terminal subunit of human maltase-2 glucoamylase in complex with acarbose
51	c3lecA_	Alignment	not modelled	11.9	18	PDB header: structure genomics, unknown function Chain: A: PDB Molecule: nadb-rossmann superfamily protein; PDBTitle: the crystal structure of a protein in the nadb-rossmann2 superfamily from streptococcus agalactiae to 1.8a
52	d1trea_	Alignment	not modelled	11.6	19	Fold: TIM beta/alpha-barrel Superfamily: Triosephosphate isomerase (TIM) Family: Triosephosphate isomerase (TIM)
53	d1o0sa2	Alignment	not modelled	11.6	28	Fold: Aminoacid dehydrogenase-like, N-terminal domain Superfamily: Aminoacid dehydrogenase-like, N-terminal domain Family: Malic enzyme N-domain
54	c1qcrD_	Alignment	not modelled	11.5	21	PDB header: PDB COMPND:
55	d1suxa_	Alignment	not modelled	11.2	11	Fold: TIM beta/alpha-barrel Superfamily: Triosephosphate isomerase (TIM)

						Family: Triosephosphate isomerase (TIM)
56	c2rirA	Alignment	not modelled	10.9	12	PDB header: oxidoreductase Chain: A: PDB Molecule: dipicolinate synthase, a chain; PDBTitle: crystal structure of dipicolinate synthase, a chain, from bacillus2 subtilis
57	c3lppA	Alignment	not modelled	10.8	10	PDB header: hydrolase Chain: A: PDB Molecule: sucrase-isomaltase; PDBTitle: crystal complex of n-terminal sucrase-isomaltase with kotalanol
58	d1qoxa	Alignment	not modelled	10.8	32	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: Family 1 of glycosyl hydrolase
59	d1aw1a	Alignment	not modelled	10.7	15	Fold: TIM beta/alpha-barrel Superfamily: Triosephosphate isomerase (TIM) Family: Triosephosphate isomerase (TIM)
60	c3gnoA	Alignment	not modelled	10.6	26	PDB header: hydrolase Chain: A: PDB Molecule: os03g0212800 protein; PDBTitle: crystal structure of a rice os3glu6 beta-glucosidase
61	d1nqua	Alignment	not modelled	10.2	14	Fold: Lumazine synthase Superfamily: Lumazine synthase Family: Lumazine synthase
62	d1pj3a2	Alignment	not modelled	10.2	18	Fold: Aminoacid dehydrogenase-like, N-terminal domain Superfamily: Aminoacid dehydrogenase-like, N-terminal domain Family: Malic enzyme N-domain
63	d1neya	Alignment	not modelled	10.1	14	Fold: TIM beta/alpha-barrel Superfamily: Triosephosphate isomerase (TIM) Family: Triosephosphate isomerase (TIM)
64	c2dp3A	Alignment	not modelled	10.0	16	PDB header: isomerase Chain: A: PDB Molecule: triosephosphate isomerase; PDBTitle: crystal structure of a double mutant (c202a/a198v) of triosephosphate2 isomerase from giardia lamblia
65	d1eg7a	Alignment	not modelled	9.9	13	Fold: P-loop containing nucleoside triphosphate hydrolases Superfamily: P-loop containing nucleoside triphosphate hydrolases Family: Nitrogenase iron protein-like
66	d1kv5a	Alignment	not modelled	9.7	10	Fold: TIM beta/alpha-barrel Superfamily: Triosephosphate isomerase (TIM) Family: Triosephosphate isomerase (TIM)
67	c2rgmA	Alignment	not modelled	9.5	34	PDB header: hydrolase Chain: A: PDB Molecule: beta-glucosidase; PDBTitle: rice bglu1 beta-glucosidase, a plant exoglucanase/beta-glucosidase
68	c3kxqB	Alignment	not modelled	9.4	11	PDB header: isomerase Chain: B: PDB Molecule: triosephosphate isomerase; PDBTitle: crystal structure of triosephosphate isomerase from bartonella2 henselae at 1.6a resolution
69	d2btma	Alignment	not modelled	9.3	13	Fold: TIM beta/alpha-barrel Superfamily: Triosephosphate isomerase (TIM) Family: Triosephosphate isomerase (TIM)
70	c3civA	Alignment	not modelled	9.2	18	PDB header: hydrolase Chain: A: PDB Molecule: endo-beta-1,4-mannanase; PDBTitle: crystal structure of the endo-beta-1,4-mannanase from2 alicyclobacillus acidocaldarius
71	c2h6rG	Alignment	not modelled	8.9	15	PDB header: isomerase Chain: G: PDB Molecule: triosephosphate isomerase; PDBTitle: crystal structure of triosephosphate isomerase (tim) from2 methanocaldococcus jannaschii
72	c2j75A	Alignment	not modelled	8.8	34	PDB header: hydrolase Chain: A: PDB Molecule: beta-glucosidase a; PDBTitle: beta-glucosidase from thermotoga maritima in complex with2 noeuromycin
73	d2ebna	Alignment	not modelled	8.8	10	Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: Type II chitinase
74	c2r94B	Alignment	not modelled	8.6	11	PDB header: lyase Chain: B: PDB Molecule: 2-keto-3-deoxy-(6-phospho-)gluconate aldolase; PDBTitle: crystal structure of kd(p)ga from t.tenax
75	c1yyaA	Alignment	not modelled	8.5	17	PDB header: isomerase Chain: A: PDB Molecule: triosephosphate isomerase; PDBTitle: crystal structure of tt0473, putative triosephosphate isomerase from2 thermus thermophilus hb8
76	c3bghB	Alignment	not modelled	8.5	35	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
77	c3d4oA	Alignment	not modelled	8.1	19	PDB header: oxidoreductase Chain: A: PDB Molecule: dipicolinate synthase subunit a; PDBTitle: crystal structure of dipicolinate synthase subunit a (np_243269.1)2 from bacillus halodurans at 2.10 a resolution
78	c1zrtD	Alignment	not modelled	8.1	19	PDB header: oxidoreductase/metal transport Chain: D: PDB Molecule: cytochrome c1; PDBTitle: rhodobacter capsulatus cytochrome bc1 complex with2 stigmatellin bound
79	c3jugA	Alignment	not modelled	8.1	11	PDB header: hydrolase Chain: A: PDB Molecule: beta-mannanase; PDBTitle: crystal structure of endo-beta-1,4-mannanase from the alkaliphilic2 bacillus sp. n16-5
80	c2nrzB	Alignment	not modelled	8.0	50	PDB header: hydrolase Chain: B: PDB Molecule: uvrabc system protein c; PDBTitle: crystal structure of the c-terminal half of uvrC bound to2 its catalytic divalent cation
81	c3cz8A	Alignment	not modelled	7.9	10	PDB header: hydrolase Chain: A: PDB Molecule: putative sporulation-specific glycosylase ydhg;

					PDBTitle: crystal structure of putative sporulation-specific glycosylase ydh2 from bacillus subtilis
82	c2dgaA_	Alignment	not modelled	7.6	26 PDB header: hydrolase Chain: A: PDB Molecule: beta-glucosidase; PDBTitle: crystal structure of hexameric beta-glucosidase in wheat
83	d1oa3a_	Alignment	not modelled	7.5	19 Fold: Concanavalin A-like lectins/glucanases Superfamily: Concanavalin A-like lectins/glucanases Family: Xylanase/endoglucanase 11/12
84	c3d5hA_	Alignment	not modelled	7.2	14 PDB header: protein binding Chain: A: PDB Molecule: haementhin; PDBTitle: crystal structure of haementhin from haemanthus multiflorus2 at 2.0a resolution: formation of a novel loop on a tim3 barrel fold and its functional significance
85	d1pbga_	Alignment	not modelled	7.2	21 Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: Family 1 of glycosyl hydrolase
86	d2i9ia1	Alignment	not modelled	7.1	19 Fold: Anticodon-binding domain-like Superfamily: XCC0632-like Family: NLBH-like
87	c2i9iA_	Alignment	not modelled	7.1	19 PDB header: structural genomics, unknown function Chain: A: PDB Molecule: hypothetical protein; PDBTitle: crystal structure of helicobacter pylori protein hp0492
88	c1wkyA_	Alignment	not modelled	7.1	10 PDB header: hydrolase Chain: A: PDB Molecule: endo-beta-1,4-mannanase; PDBTitle: crystal structure of alkaline mannanase from bacillus sp. strain jamb-2 602: catalytic domain and its carbohydrate binding module
89	d1u83a_	Alignment	not modelled	7.1	17 Fold: TIM beta/alpha-barrel Superfamily: (2r)-phospho-3-sulfolactate synthase ComA Family: (2r)-phospho-3-sulfolactate synthase ComA
90	c1u83A_	Alignment	not modelled	7.1	17 PDB header: lyase Chain: A: PDB Molecule: phosphosulfolactate synthase; PDBTitle: psl synthase from bacillus subtilis
91	d1ta3a_	Alignment	not modelled	7.0	12 Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: Type II chitinase
92	c2fpgA_	Alignment	not modelled	6.9	14 PDB header: ligase Chain: A: PDB Molecule: succinyl-coa ligase [gdp-forming] alpha-chain, PDBTitle: crystal structure of pig gtp-specific succinyl-coa2 synthetase in complex with gdp
93	d1ledta_	Alignment	not modelled	6.9	10 Fold: TIM beta/alpha-barrel Superfamily: (Trans)glycosidases Family: Type II chitinase
94	d1rvv1_	Alignment	not modelled	6.7	14 Fold: Lumazine synthase Superfamily: Lumazine synthase Family: Lumazine synthase
95	d1r2ra_	Alignment	not modelled	6.6	14 Fold: TIM beta/alpha-barrel Superfamily: Triosephosphate isomerase (TIM) Family: Triosephosphate isomerase (TIM)
96	c2uy2A_	Alignment	not modelled	6.6	19 PDB header: hydrolase Chain: A: PDB Molecule: endochitinase; PDBTitle: sccts1_apo crystal structure
97	d1m6ja_	Alignment	not modelled	6.6	11 Fold: TIM beta/alpha-barrel Superfamily: Triosephosphate isomerase (TIM) Family: Triosephosphate isomerase (TIM)
98	c3thdD_	Alignment	not modelled	6.6	14 PDB header: hydrolase Chain: D: PDB Molecule: beta-galactosidase; PDBTitle: crystal structure of human beta-galactosidase in complex with 1-2 deoxygalactonojirimycin
99	c3topA_	Alignment	not modelled	6.6	6 PDB header: hydrolase/hydrolase inhibitor Chain: A: PDB Molecule: maltase-glucoamylase, intestinal; PDBTitle: crystal structure of the c-terminal subunit of human maltase-2 glucoamylase in complex with acarbose